FILE COPY

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Type I Data Package

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED

Project: Olin Wilmington, MA Superfund Site/6107090016
Water Samples
Collected on 06/06/11

SDG# OLN69

GROUP	SAMPLE NUMBERS
1250152	6308055-6308060

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-08A-TX

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** 06/28/2011

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Nicole Maljovec at Ext. 1537.

Total Number of Pages 231

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Table of Contents for SDG# OLN69

1. Sample Reference List 1

2. Analysis Request, Field Chain-of-Custody Record 2

3. Methodology Summary/Reference 5

4. Analysis Reports 6

5. Kempore Data 15

   a. Case Narrative-Conformance/Nonconform. Summary 16

   b. Quality Control and Calibration Summary Forms 19

   c. Sample Data 40

   d. Standards Data 54

   e. Raw QC Data 76

   f. Extraction/Distillation/Digestion Logs 99

6. Opex Data 101

   a. Case Narrative-Conformance/Nonconform. Summary 102

   b. Quality Control and Calibration Summary Forms 105

   c. Sample Data 124

   d. Standards Data 138

   e. Raw QC Data 158

   f. Extraction/Distillation/Digestion Logs 181

SDG# OLN69

7. Hydrazines by LC/MS/MS Data 183

a. Case Narrative-Conformance/Nonconform. Summary 184

b. QC Summary 187

c. Sample Data 192

d. Standards Data 201

e. Raw QC Data 224

f. Preparation Logs 230

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Sample Reference List for SDG Number OLN69
with a Data Package Type of I
12670 - Olin Corporation
Project: Olin Wilmington, MA Superfund Site/6107090016

Lab Sample Number	Lab Sample Code	Client Sample Description
6308055	ISC1-	OC-SW-ISCO-1-XXX Grab Water
6308056	ISC1-	OC-SW-ISCO-1-XMS Grab Water
6308057	ISC1-	OC-SW-ISCO-1-MSD Grab Water
6308058	ISC1D	OC-SW-ISCO-1-DUP Grab Water
6308059	ISC2-	OC-SW-ISCO-2-XXX Grab Water
6308060	SWD10	OC-SW-MMB-SW/SD-10-XXX Grab Water

Client:	Olin Corporation	Client Project #:	6107090016
Address:	3855 North Ocoee St. Suite 200	Work Site ID:	Wilmington, MA
	Cleveland, TN 37312	Reports Sent To:	Steve Morrow
Phone:	423-336-4511	Fax: 423-336-1466	Email SGMorrow@olin.com Email Rpt:___

Requested Turnaround Time (SPECIFY): Standard_____ Rush_____ (Lab Approval Required)

Regulatory Programs: MADEP MCP____ Superfund _____

Report Requirements Level IV Package ____ Level II Package ____

EDD Requirements: MACTEC EQUIS EZ EDD _____

INVOICE INFO — Shaded Areas for office use only

Company Name: Olin Corp 12670/125015 2/630805-60

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: Email

Lancaster Page 1 of 2

Job # _____ Quote # _____

Lab SDG # _____ PO # _____

MACTEC

<--Preservative Type (4)

<--Bottle Type (5)

Fed Ex Tracking # 8673 8250 3790

Shipped 1 Cooler w/ice Fed Ex P1

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	NDMA/NDPA (Mod 521)	Alkylphenols (MS-MS-0010)*	Cr+6 (3060A / 7199)	DMF (Mod 8033 - GC/NPD)	Phthalic Anhydride (acid) (Mod 8000 - HPLC)*	Formaldehyde/Acetaldehyde (SW-846 8315A)*	Opex / Kemporte (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							AG	SA AG	G	V	AG	AG	P	V	V	Zn AV	G	AG	
OC-SW-ISCO-1-DUP	6/6/2011 2:35:00 PM	T	FD	SW	G	4								X		X			
OC-SW-ISCO-1-MSD	6/6/2011 2:35:00 PM	T	MS	SW	G	4								X		X			
OC-SW-ISCO-1-XMS	6/6/2011 2:35:00 PM	T	MS	SW	G	4								X		X			
OC-SW-ISCO-1-XXX	6/6/2011 2:35:00 PM	T	FS	SW	G	4								X		X			
OC-SW-ISCO-2-XXX	6/6/2011 11:00:00	T	FS	SW	G	4								X		X			
OC-SW-MMB-SW/SD-10-XXX	6/6/2011 3:20:00 PM	T	FS	SW	G	2										X			
OC-SW-MMB-SW/SD-1-DUP	6/6/2011 1:00:00 PM	T	FD	SW	G	2										X			

Special Instructions For Lab

Notes:

1.) Fraction: T = Total, D = Dissolved, S = SPLP, C = TCLP, N = Not Applicable

2.) QC Codes: FS = Field Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike, MSD = Matrix Spike Duplicate, PE = Performance Evaluation Sample, FB = Field Blank

3.) Sample Matrix: GW = Groundwater, SW = Surface Water, DW = Drinking Water, SO = Soil, SD = Sediment, BW = Blank Water, NAL = Non-Aqueous Liquid, PR = Product, O = Oil

4.) Preservation Type: HA = Hydrochloric Acid, NI = Nitric Acid, SA = Sulfuric Acid, SH = Sodium Hydroxide, Zn = Zinc Acetate, ME = Methanol, DI = DI Water

5.) Bottle Type: G = Glass, P = Plastic, V = 40mL VOA Glass Vial, AG = Amber Glass, AV = 40mL VOA Amber Glass Vial,

Cr+6 = 24 hour hold time

Formaldehyde = 3 day hold time

Cooler ? Y / N — MADEP Requirement Samples Iced Y / N

Temp @ receipt: 2.0 Deg C

Preservation / pH checked? Y / N

By: _____ Date: 6/6/11

Relinquished: [signature] *Date:* 6/6/11 *Time:* 1730 *Received:* _____ *Date:* __/__/__ *Time:* _

Relinquished: _____ *Date:* __/__/__ *Time:* ____ *Received:* [signature] *Date:* 6/7/11 *Time:* 10:15

NLM 6/10/11

MACTEC

<--Preservative Type (4)
<--Bottle Type (5)

12670/1250152/6308055-60

Lancaster
Page 2 of 2

Comments (Special Instructions)

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	NDMA/NDPA (Mod 521)	Alkylphenols (MS MS-0010)*	Cr+6 (3060A / 7199)	DMF (Mod 8033 - GC/NPD)	Phthalic Anhydride (acid) (Mod 8000 - HPLC)*	Formaldehyde/Acetaldehyde (SW 846 8315A)*	Organochlorine Pesticides (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)				
							AG	SA AG	G	V	AG	AG	P	V	V	Zn AV	G	AG				
OC-SW-MMB-SW/SD-1-MSD	6/6/2011 1:00:00 PM	T	MS	SW	G	2										X						
OC-SW-MMB-SW/SD-1-XMS	6/6/2011 1:00:00 PM	T	MS	SW	G	2										X						
OC-SW-MMB-SW/SD-1-XXX	6/6/2011 1:00:00 PM	T	FS	SW	G	2										X						
OC-SW-MMB-SW/SD-4-XXX	6/6/2011 4:00:00 PM	T	FS	SW	G	2										X						
OC-SW-MMB-SW/SD-9-XXX	6/6/2011 11:00:00	T	FS	SW	G	2										X						
OC-SW-PZ-16RR-XXX	6/6/2011 1:05:00 PM	T	FS	SW	G	4								X		X						
OC-SW-PZ-17RR-XXX	6/6/2011 1:45:00 PM	T	FS	SW	G	4								X		X						
OC-SW-SD-1-XXX	6/6/2011 12:15:00	T	FS	SW	G	4								X		X						

Special Instructions For Lab

Notes:

1.) Fraction: T = Total, D = Dissolved, S = SPLP, C = TCLP, N = Not Applicable

2.) QC Codes: FS = Field Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike, MSD = Matrix Spike Duplicate, PE = Performance Evaluation Sample, FB = Field Blank

3.) Sample Matrix: GW = Groundwater, SW = Surface Water, DW = Drinking Water, SO = Soil, SD = Sediment, BW = Blank Water, NAL = Non-Aqueous Liquid, PR = Product, O = Oil

4.) Preservation Type: HA = Hydrochloric Acid, NI = Nitric Acid, SA = Sulfuric Acid, SH = Sodium Hydroxide, Zn = Zinc Acetate, ME = Methanol, DI = DI Water

5.) Bottle Type: G = Glass, P = Plastic, V = 40mL VOA Glass Vial, AG = Amber Glass, AV = 40mL VOA Amber Glass Vial

Cr+6 = 24 hour hold time

Formaldehyde = 3 day hold time

Cooler Y / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 2.6 Deg C	
Preservation / pH checked? Y / N	
By: _____ Date: 6/7/11	

Relinquished: [signature] Date: 6/6/11 Time: 1730 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 6/7/11 Time: 10:15

NM 6/10/11

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: MACTEC

Date of Receipt: 6/7/11

Time of Receipt: 1015

Source Code: 50-1

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	9429951	2.8	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: 1454 **Date/Time:** 6/7/11 / 1135

Issued by Dept. 6042 Management

2174.06

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02726 Opex in Water

Water samples are pH adjusted to 9 with hydroxide solution. Filtration is performed followed by HPLC analysis. Separation is accomplished using a C18 column and ACN/phosphate buffer mobile phase. A UV detector at 230 nm is used for quantitation.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8000B, December 1996.

02727 Kempore in Water

Water samples are analyzed using a solid phase cleanup procedure followed by filtration and HPLC analysis. Separation is accomplished using a C18 column and phosphate buffer mobile phase. A UV detector at 230 nm is used for quantitation.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8000B, December 1996.

10342 Hydrazines in Water

An aliquot of the sample is derivatized and directly analyzed by HPLC/MS/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8315A modified, December 1996.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

June 17, 2011

Project: Olin Wilmington, MA Superfund Site/6107090016

Submittal Date: 06/07/2011
Group Number: 1250152
SDG: OLN69
PO Number: REWI0012
Release Number: ERRE9813
State of Sample Origin: MA

Client Sample Description	Lancaster Labs (LLI) #
OC-SW-ISCO-1-XXX Grab Water	6308055
OC-SW-ISCO-1-XMS Grab Water	6308056
OC-SW-ISCO-1-MSD Grab Water	6308057
OC-SW-ISCO-1-DUP Grab Water	6308058
OC-SW-ISCO-2-XXX Grab Water	6308059
OC-SW-MMB-SW/SD-10-XXX Grab Water	6308060

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	MACTEC	Attn: Kelly Chatterton
ELECTRONIC COPY TO	MACTEC	Attn: Chris Ricardi
ELECTRONIC COPY TO	Olin Chemicals	Attn: James Cashwell
1 COPY TO	Data Package Group	

OLN69: 0006

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717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Questions? Contact your Client Services Representative
Nicole L Maljovec at (717) 656-2300 Ext. 1537

Respectfully Submitted,

Dorothy M. Love

Dorothy M. Love
Group Leader

0LN69 8887

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Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Analysis Report

Lancaster Laboratories

Sample Description: OC-SW-ISCO-1-XXX Grab Water
Wilmington MA Superfund Site

LLI Sample # WW 6308055
LLI Group # 1250152
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 06/06/2011 14:35

Submitted: 06/07/2011 10:15
Reported: 06/17/2011 12:43

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

ISC1- SDG#: OLN69-01BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
HPLC Organics	**SW-846 8000B**		**ug/l**	**ug/l**	**ug/l**	
02727	Kempore in Water	123-77-3	N.D.	1,000	600	1
	The project QA/QC requirements were not met. The individual response in one or more of the continuing calibration standards is outside the 15%D criteria on one of the analytical columns. The response on the second column meets the %D criteria, and therefore all data is reported from this column (primary). The sample raw data identifies the column used to report the analyte. When there is a detection on the primary column and no detection on the confirmation column, the reporting limit is raised since the confirmation column has a low response for the continuing calibration standard. This effect is attributed to the sample matrix.					
02726	Opex in Water	101-25-7	N.D.	100	20	1
Misc. Organics	**SW-846 8315A modified**		**ug/l**	**ug/l**	**ug/l**	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.50	0.25	1
10342	Hydrazine	302-01-2	N.D.	0.10	0.050	1
10342	Methylhydrazine	60-34-4	N.D.	0.50	0.25	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02727	Kempore in Water	SW-846 8000B	1	111580040A	06/09/2011 20:19	Michele D Hamilton	1
02726	Opex in Water	SW-846 8000B	1	111610022A	06/10/2011 21:30	James H Place	1
10342	Hydrazines in Water	SW-846 8315A modified	1	11161002	06/11/2011 06:45	Meng Yu	1

OLN69 0009

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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

Sample Description: OC-SW-ISCO-1-XMS Grab Water
Wilmington MA Superfund Site

LLI Sample # WW 6308056
LLI Group # 1250152
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 06/06/2011 14:35

Submitted: 06/07/2011 10:15
Reported: 06/17/2011 12:43

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

ISC1- SDG#: OLN69-01MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
HPLC Organics	**SW-846 8000B**		**ug/l**	**ug/l**	**ug/l**	
02727	Kempore in Water	123-77-3	19,000	1,000	230	1
02726	Opex in Water	101-25-7	140	100	20	1
Misc. Organics	**SW-846 8315A modified**		**ug/l**	**ug/l**	**ug/l**	
10342	1,1-Dimethylhydrazine	57-14-7	44	0.50	0.25	1
10342	Hydrazine	302-01-2	11	0.10	0.050	1
10342	Methylhydrazine	60-34-4	45	0.50	0.25	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02727	Kempore in Water	SW-846 8000B	1	111580040A	06/09/2011 20:25	Michele D Hamilton	1
02726	Opex in Water	SW-846 8000B	1	111610022A	06/10/2011 21:36	James H Place	1
10342	Hydrazines in Water	SW-846 8315A modified	1	11161002	06/11/2011 07:32	Meng Yu	1

OLN69 0018

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Analysis Report

Lancaster Laboratories

Sample Description: OC-SW-ISCO-1-MSD Grab Water
Wilmington MA Superfund Site

LLI Sample # WW 6308057
LLI Group # 1250152
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 06/06/2011 14:35

Submitted: 06/07/2011 10:15
Reported: 06/17/2011 12:43

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

ISC1- SDG#: OLN69-01MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
HPLC Organics	**SW-846 8000B**		ug/l	ug/l	ug/l	
02727	Kempore in Water	123-77-3	16,000	1,000	230	1
02726	Opex in Water	101-25-7	160	100	20	1
Misc. Organics	**SW-846 8315A modified**		ug/l	ug/l	ug/l	
10342	1,1-Dimethylhydrazine	57-14-7	47	0.50	0.25	1
10342	Hydrazine	302-01-2	11	0.10	0.050	1
10342	Methylhydrazine	60-34-4	46	0.50	0.25	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02727	Kempore in Water	SW-846 8000B	1	111580040A	06/09/2011 20:31	Michele D Hamilton	1
02726	Opex in Water	SW-846 8000B	1	111610022A	06/10/2011 21:43	James H Place	1
10342	Hydrazines in Water	SW-846 8315A modified	1	11161002	06/11/2011 07:48	Meng Yu	1

OLN69 8611

*=This limit was used in the evaluation of the final result

Analysis Report

Lancaster Laboratories

Sample Description: OC-SW-ISCO-1-DUP Grab Water
Wilmington MA Superfund Site

LLI Sample # WW 6308058
LLI Group # 1250152
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 06/06/2011 14:35

Submitted: 06/07/2011 10:15
Reported: 06/17/2011 12:43

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

ISC1D SDG#: OLN69-02FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
HPLC Organics	**SW-846 8000B**		**ug/l**	**ug/l**	**ug/l**	
02727	Kempore in Water	123-77-3	N.D.	1,000	680	1
	The project QA/QC requirements were not met. The individual response in one or more of the continuing calibration standards is outside the 15%D criteria on one of the analytical columns. The response on the second column meets the %D criteria, and therefore all data is reported from this column (primary). The sample raw data identifies the column used to report the analyte. When there is a detection on the primary column and no detection on the confirmation column, the reporting limit is raised since the confirmation column has a low response for the continuing calibration standard. This effect is attributed to the sample matrix.					
02726	Opex in Water	101-25-7	N.D.	100	20	1
Misc. Organics	**SW-846 8315A modified**		**ug/l**	**ug/l**	**ug/l**	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.50	0.25	1
10342	Hydrazine	302-01-2	N.D.	0.10	0.050	1
10342	Methylhydrazine	60-34-4	N.D.	0.50	0.25	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02727	Kempore in Water	SW-846 8000B	1	111580040A	06/09/2011 20:37	Michele D Hamilton	1
02726	Opex in Water	SW-846 8000B	1	111610022A	06/10/2011 21:50	James H Place	1
10342	Hydrazines in Water	SW-846 8315A modified	1	11161002	06/11/2011 08:35	Meng Yu	1

OLN69 0012

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Analysis Report

Lancaster Laboratories

Sample Description: OC-SW-ISCO-2-XXX Grab Water
Wilmington MA Superfund Site

LLI Sample # WW 6308059
LLI Group # 1250152
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 06/06/2011 11:00

Submitted: 06/07/2011 10:15
Reported: 06/17/2011 12:43

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

ISC2- SDG#: OLN69-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
HPLC Organics	**SW-846 8000B**		ug/l	ug/l	ug/l	
02727	Kempore in Water	123-77-3	1,200	1,000	230	1
02726	Opex in Water	101-25-7	N.D.	100	20	1
Misc. Organics	**SW-846 8315A modified**		ug/l	ug/l	ug/l	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.50	0.25	1
10342	Hydrazine	302-01-2	0.080 J	0.10	0.050	1
10342	Methylhydrazine	60-34-4	N.D.	0.50	0.25	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02727	Kempore in Water	SW-846 8000B	1	111580040A	06/09/2011 20:50	Michele D Hamilton	1
02726	Opex in Water	SW-846 8000B	1	111610022A	06/10/2011 21:57	James H Place	1
10342	Hydrazines in Water	SW-846 8315A modified	1	11161002	06/11/2011 08:51	Meng Yu	1

OLN69 0013

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

Sample Description: OC-SW-MMB-SW/SD-10-XXX Grab Water
Wilmington MA Superfund Site

LLI Sample # WW 6308060
LLI Group # 1250152
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 06/06/2011 15:20

Submitted: 06/07/2011 10:15
Reported: 06/17/2011 12:43

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SWD10 SDG#: OLN69-04*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Dilution Factor
Misc. Organics	SW-846 8315A modified		ug/l	ug/l	ug/l	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.50	0.25	1
10342	Hydrazine	302-01-2	N.D.	0.10	0.050	1
10342	Methylhydrazine	60-34-4	N.D.	0.50	0.25	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10342	Hydrazines in Water	SW-846 8315A modified	1	11161002	06/11/2011 09:06	Meng Yu	1

OLN69 0814

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Kempore Data

OLN69 0015

Case Narrative Conformance/Nonconformance Summary

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN69

Pesticide Residue Analysis
Fraction: Kempore

Kempore in Water

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
6308055	OC-SW-ISCO-1-XXX	X		Unspiked
6308056	OC-SW-ISCO-1-XMS	X		Matrix Spike
6308057	OC-SW-ISCO-1-MSD	X		Matrix Spike Duplicate
6308058	OC-SW-ISCO-1-DUP	X		Field Duplicate Sample
6308059	OC-SW-ISCO-2-XXX	X		

See QC Reference List for Associated Batch QC Samples

Note: Form 10s could not be printed for LCS40158 and LCSD40158.

SAMPLE PREPARATION:

No problems were encountered with the preparation of the samples.

ANALYSIS:

There were no dilutions performed for analyses associated with samples in this SDG.

(Sample number(s): 6308055, 6308058: Analysis: 02727)
The project QA/QC requirements were not met. The individual response in one or more of the continuing calibration standards is outside the %D criteria on one of the analytical columns. The response on the second column meets the %D criteria, and therefore all data is reported from this column (primary). The sample raw data identifies the column used to report the analyte. When there is a detection on the primary column and no detection on the confirmation column, the reporting limit is raised since the confirmation column has a low response for the continuing calibration standard. This effect is attributed to the sample matrix.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

All other QC is within specification.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

OLN69 0017

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN69

Pesticide Residue Analysis

Fraction: Kempore

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Narrative Reviewed and Approved 6/23/2011 (Date) by M. Susan Kreider
M. SUSAN KREIDER
SENIOR SPECIALIST

OLN69 BR18

Quality Control and Calibration Summary Forms

Lancaster Laboratories

Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Olin Corporation
SDG: OLN69

Fraction: Kempore

Analysis	Batch Number	Sample Number	Analysis Date
Kempore in Water	111580040A	PBLK40158	06/09/2011 19:41:00
		LCS40158	06/09/2011 19:47:00
		LCSD40158	06/09/2011 19:54:00
		6308055 UNSPK	06/09/2011 20:19:00
		6308056 MS	06/09/2011 20:25:00
		6308057 MSD	06/09/2011 20:31:00
		6308058	06/09/2011 20:37:00
		6308059	06/09/2011 20:50:00

OLN69 0020

6/23/2011 7:16:56 PM

Lancaster Laboratories

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: OLN69
Matrix: LIQUID

Fraction: Kempore

111580040 / PBLK40158 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Kempore in Water	06/09/11	N.D.	ug/l	230	1000

OLN69 0021

Lancaster Laboratories

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: OLN69
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Kempore

LCS: LCS40158 LCSD: LCSD40158	Batch: **111580040A** (Sample number(s): 6308055-6308059)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Kempore in Water	9500	8000	8300	84	87	70-130	4	30

OLN69 0025

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: OLN69
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Kempore

UNSPK: 6308055 MS: 6308056 MSD: 6308057 **Analyte**	Batch: **111580040A** (Sample number(s): 6308055-6308059)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Kempore in Water	9500	N.D.	19000.	16000.	200 *	168 *	70-130	17	30

OLN69 0023

Results are being reported on an as received basis.

6/23/2011 7:16:42 PM

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: X3593A
Calibration File: 1K11160
GC Column (1) : SUP PAH
ID: 250 (mm)
Update File:
Date(s) Analyzed: 6/9/2011 6/9/2011

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	~~MIDPOINT~~ Level 1 RT	RT WINDOW FROM	TO
Kempore	2.06	2.05	2.08	2.10	2.13	2.06	1.91	2.21

AR566 6/10/11

01H69 0024

FORM VI-1

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X3593A Calibration File: 1K11160

GC Column (1) : SUP PAH ID: 250 (mm) Date(s) Analyzed: 6/9/2011 6/9/2011

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
Kempore	4.90E-01	5.54E-01	6.40E-01	7.56E-01	5.68E-01	6.01E-01	16.9

Average % RSD: 16.9

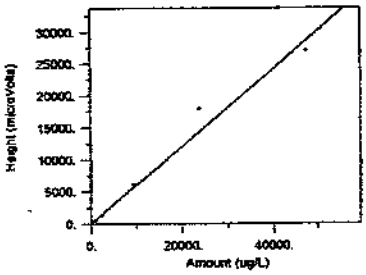
01A65 0025

FORM VI-2

Calibration File Name: **C:\CPWIN\DATA1\1K11160.CAL** Version = 8
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
1 components with 5 levels each

1 Kempore
Retention time = 2.060 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by height

Level	Amount	Height	Height/Amt	Source	Date and time
1	950.600	465.3	0.4895011	1K11160.08A	6/9/2011 7:34:45
2	2376.500	1316.6	0.5540047	1K11160.07A	6/9/2011 7:29:04
3	9506.000	6082.4	0.6398451	1K11160.06A	6/9/2011 7:28:40
4	23765.000	17960.2	0.7557403	1K11160.05A	6/9/2011 7:28:17
5	47530.000	27003.1	0.5681264	1K11160.04A	6/9/2011 7:27:53



Calibration formula: Y = 0.601 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9697, Average error = 12.82%
Average CF = 0.6014 with RSD = 16.87%

01M69 0026

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: X3593B
Calibration File: 1K11160B
GC Column (2) : CapCell CN
ID: 250 (mm)
Update File:
Date(s) Analyzed: 6/9/2011 6/9/2011

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	~~MIDPOINT~~ Level 1 RT	RT WINDOW FROM	TO
Kempore	4.75	4.71	4.70	4.63	4.57	4.75	4.60	4.90

JRSC 6/10/11

GLN65 0027

FORM VI-1

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: X3593B
Calibration File: 1K11160B
GC Column (2) : CapCell CN
ID: 250 (mm)
Date(s) Analyzed: 6/9/2011 6/9/2011

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
Kempore	3.50E-01	3.93E-01	5.22E-01	6.55E-01	5.73E-01	4.99E-01	25.3

-Linear

Average % RSD: 25.3

JP 1566
6/10/11

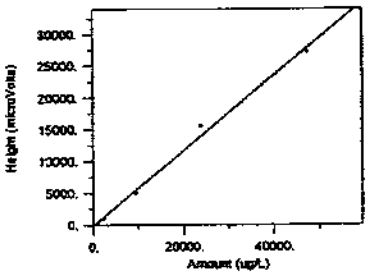
01H69 0028

FORM VI-2

Calibration File Name: **C:\CPWIN\DATA1\1K11160B.CAL** Version = 15
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
1 components with 5 levels each

1 Kempore
Retention time = 4.745 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by height

Level	Amount	Height	Height/Amt	Source	Date and time
1	950.600	333.1	0.3503657	1K11160B.08A	6/9/2011 7:35:00
2	2376.500	934.4	0.3931739	1K11160B.07A	6/9/2011 7:29:19
3	9506.000	4962.9	0.5220817	1K11160B.06A	6/9/2011 7:28:54
4	23765.000	15560.3	0.6547587	1K11160B.05A	6/9/2011 7:28:32
5	47530.000	27219.8	0.572687	1K11160B.04A	6/9/2011 7:28:08



Calibration formula: Y = 0.59 X + -130.763
Fit type = Linear with equal weighting
Coefficient of determination = 0.9931, Average error = 14.62%
Average CF = 0.4986 with RSD = 25.27%

01H69 0829

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: X3593A
Init. Calib Date(s): 06/09/11 06/09/11
GC Column (1) : SUP PAH ID: 250 (mm)
Date Analyzed: 06/09/11
Lab File ID: 1K11160.20R
Time Analyzed: 20:43
Lab Standard ID: KEMP3EO
Initial Calibration: 1K11160

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Kempore	2.03	1.91	2.21	9074.31	9506.00	-4.5

Average of %D: 4.5

OLM69 8838

FORM VII

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: X3593B
Init. Calib Date(s): 06/09/11 06/09/11
GC Column (2) : CapCell CN ID: 250 (mm)
Date Analyzed: 06/09/11
Time Analyzed: 20:43
Lab File ID: 1K11160B.20R
Initial Calibration: 1K11160B
Lab Standard ID: KEMP3EO

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Kempore	4.90	4.60	4.90	7827.94	9506.00	-17.7

Average of %D: 17.7

01N69 0031

FORM VII

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: X3593A Init. Calib Date(s): 06/09/11 06/09/11
GC Column (1) : SUP PAH ID: 250 (mm) Date Analyzed: 06/09/11
Lab File ID: 1K11160.31R Time Analyzed: 21:52
Lab Standard ID: KEMP3EP Initial Calibration: 1K11160

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Kempore	2.02	1.91	2.21	8562.45	9506.00	-9.9

Average of %D: 9.9

0LN69 0032

FORM VII

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X3593B Init. Calib Date(s): 06/09/11 06/09/11

GC Column (2) : CapCell CN ID: 250 (mm) Date Analyzed: 06/09/11

Lab File ID: 1K11160B.31R Time Analyzed: 21:52

Lab Standard ID: KEMP3EP Initial Calibration: 1K11160B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Kempore	4.93	4.60	4.90	7381.07	9506.00	-22.4

Average of %D: 22.4

01H69 8833

FORM VII

8D
ANALYTICAL SEQUENCE

Sequence: 1K11160 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: SUP PAH ID: 250

Instrument: X3593A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

Missing 3 conditioners @ beginning of sequence
NSK 3
6/23/11

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001	KEMP5AA	KEMP51124C	06/09/2011	19:04:31	1K11160
002	KEMP4AA	KEMP41124C	06/09/2011	19:10:43	1K11160
003	KEMP3AA	KEMP31124C	06/09/2011	19:16:56	1K11160
004	KEMP2AA	KEMP21124C	06/09/2011	19:23:08	1K11160
005	KEMP1AA	KEMP11124C	06/09/2011	19:29:20	1K11160
006	MDKRXAA	MDKRX1124C	06/09/2011	19:35:32	1K11160
007	PBLK40158	BLANKA	06/09/2011	19:41:44	1K11160
008	LCS40158	LCSA	06/09/2011	19:47:57	1K11160
009	LCSD40158	LCSDA	06/09/2011	19:54:10	1K11160
010	PBLK26160	BLANKA	06/09/2011	20:00:23	1K11160
011	LCS26160	LCSA	06/09/2011	20:06:35	1K11160
012	LCSD26160	LCSDA	06/09/2011	20:12:48	1K11160
013	ISC1-	6308055	06/09/2011	20:19:01	1K11160
014	ISC1-	6308056	06/09/2011	20:25:13	1K11160
015	ISC1-	6308057	06/09/2011	20:31:26	1K11160
016	ISC1D	6308058	06/09/2011	20:37:38	1K11160
017	KEMP3EO	KEMP31124C	06/09/2011	20:43:51	1K11160
018	ISC2-	6308059	06/09/2011	20:50:04	1K11160
019	PZ16R	6308074	06/09/2011	20:56:17	1K11160
020	PZ17R	6308075	06/09/2011	21:02:30	1K11160
021	-SD-1	6308076	06/09/2011	21:08:44	1K11160
022	5-XXX	6309550	06/09/2011	21:14:57	1K11160
023	1-XXX	6309553	06/09/2011	21:21:10	1K11160
024	2-XXX	6309554	06/09/2011	21:27:23	1K11160
025	S-XXX	6309555	06/09/2011	21:33:37	1K11160
026	EDSD0	6310720	06/09/2011	21:39:50	1K11160
027	EDSD1	6310721	06/09/2011	21:46:03	1K11160
028	KEMP3EP	KEMP31124C	06/09/2011	21:52:16	1K11160
029	EDSD2	6310722	06/09/2011	21:58:29	1K11160
030	EDSD5	6310723	06/09/2011	22:04:43	1K11160
031	MMB-2	6310724	06/09/2011	22:10:56	1K11160
032	KEMP3EQ	KEMP31124C	06/09/2011	22:17:09	1K11160

8D
ANALYTICAL SEQUENCE

Sequence: 1K11160B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CapCell CN ID: 250

Instrument: X3593B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001		CONDITIONER	06/09/2011	18:45:54	1K11160B
002		CONDITIONER	06/09/2011	18:52:06	1K11160B
003		CONDITIONER	06/09/2011	18:58:19	1K11160B
004	KEMP5AA	KEMP51124C	06/09/2011	19:04:31	1K11160B
005	KEMP4AA	KEMP41124C	06/09/2011	19:10:43	1K11160B
006	KEMP3AA	KEMP31124C	06/09/2011	19:16:56	1K11160B
007	KEMP2AA	KEMP21124C	06/09/2011	19:23:08	1K11160B
008	KEMP1AA	KEMP11124C	06/09/2011	19:29:20	1K11160B
009	MDKRXAA	MDKRX1124C	06/09/2011	19:35:32	1K11160B
010	PBLK40158	BLANKA	06/09/2011	19:41:44	1K11160B
011	LCS40158	LCSA	06/09/2011	19:47:57	1K11160B
012	LCSD40158	LCSDA	06/09/2011	19:54:10	1K11160B
013	PBLK26160	BLANKA	06/09/2011	20:00:23	1K11160B
014	LCS26160	LCSA	06/09/2011	20:06:35	1K11160B
015	LCSD26160	LCSDA	06/09/2011	20:12:48	1K11160B
016	ISC1-	6308055	06/09/2011	20:19:01	1K11160B
017	ISC1-	6308056	06/09/2011	20:25:13	1K11160B
018	ISC1-	6308057	06/09/2011	20:31:26	1K11160B
019	ISC1D	6308058	06/09/2011	20:37:38	1K11160B
020	KEMP3EO	KEMP31124C	06/09/2011	20:43:51	1K11160B
021	ISC2-	6308059	06/09/2011	20:50:04	1K11160B
022	PZ16R	6308074	06/09/2011	20:56:17	1K11160B
023	PZ17R	6308075	06/09/2011	21:02:30	1K11160B
024	-SD-1	6308076	06/09/2011	21:08:44	1K11160B
025	5-XXX	6309550	06/09/2011	21:14:57	1K11160B
026	1-XXX	6309553	06/09/2011	21:21:10	1K11160B
027	2-XXX	6309554	06/09/2011	21:27:23	1K11160B
028	S-XXX	6309555	06/09/2011	21:33:37	1K11160B
029	EDSD0	6310720	06/09/2011	21:39:50	1K11160B
030	EDSD1	6310721	06/09/2011	21:46:03	1K11160B
031	KEMP3EP	KEMP31124C	06/09/2011	21:52:16	1K11160B
032	EDSD2	6310722	06/09/2011	21:58:29	1K11160B
033	EDSD5	6310723	06/09/2011	22:04:43	1K11160B

8D
ANALYTICAL SEQUENCE

Sequence: 1K11160B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CapCell CN ID: 250

Instrument: X3593B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
034	MMB-2	6310724	06/09/2011	22:10:56	1K11160B
035	KEMP3EQ	KEMP31124C	06/09/2011	22:17:09	1K11160B

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

ISC2-

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Lab Sample ID: 6308059 **Date(s) Analyzed:** 6/7/2011 6/9/2011

Instrument ID (1): X3593A **Instrument ID (2):** X3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Kempore	1	2.14	1.91	2.21	1200	
	2	4.64	4.60	4.90	1100	8.7

OLN69 0837

FORM X PEST - 1

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

ISC1-MS

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Lab Sample ID: 6308056 **Date(s) Analyzed:** 6/7/2011 6/9/2011

Instrument ID (1): X3593A **Instrument ID (2):** X3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Kempore	1	2.07	1.91	2.21	19000	
	2	4.73	4.60	4.90	17000	11.1

OLN69 8638

FORM X PEST - 1

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

ISC1- MSD

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Lab Sample ID: 6308057 **Date(s) Analyzed:** 6/7/2011 6/9/2011

Instrument ID (1): X3593A **Instrument ID (2):** X3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Kempore	1	2.07	1.91	2.21	16000	
	2	4.69	4.60	4.90	15000	6.5

OLN69 8839

FORM X PEST - 1

Sample Data

OLH69 0040

Lancaster Laboratories

LOQ/MDL Summary
Pesticide Residue Analysis

SDG: OLN69

Fraction: Kempore

02727: Kempore in Water Analyte Name	Default MDL	Default LOQ	Units
Kempore in Water	230	1,000	ug/l

OLN69 0041

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1-

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308055

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.16R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	600	U

OLN69 0042

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: 6308055 RI ISC1- Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02727 10342

Analysis Report (A)

Injected on	: JUN 09, 2011 20:19:01
Instrument	: CP09--X3593A
Result file	: 1K11160.16R
Calibration file	: 1K11160.CAL
Method file	: KEMP.MET

Analysis Report (B)

Injected on	: JUN 09, 2011 20:19:01
Instrument	: CP09--X3593B
Result file	: 1K11160B.16R
Calibration file	: 1K11160B.CAL
Method file	: KEMPB.MET

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.12	2.21	357	594.148743

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore			<1000	<230			we <60 a-1-B

Units: ug/l

Reviewed by: [signature] Verified by: [signature]

Date: 6/16/11 Date: JUN 17 2011

Valerie Tomayko
Senior Specialist

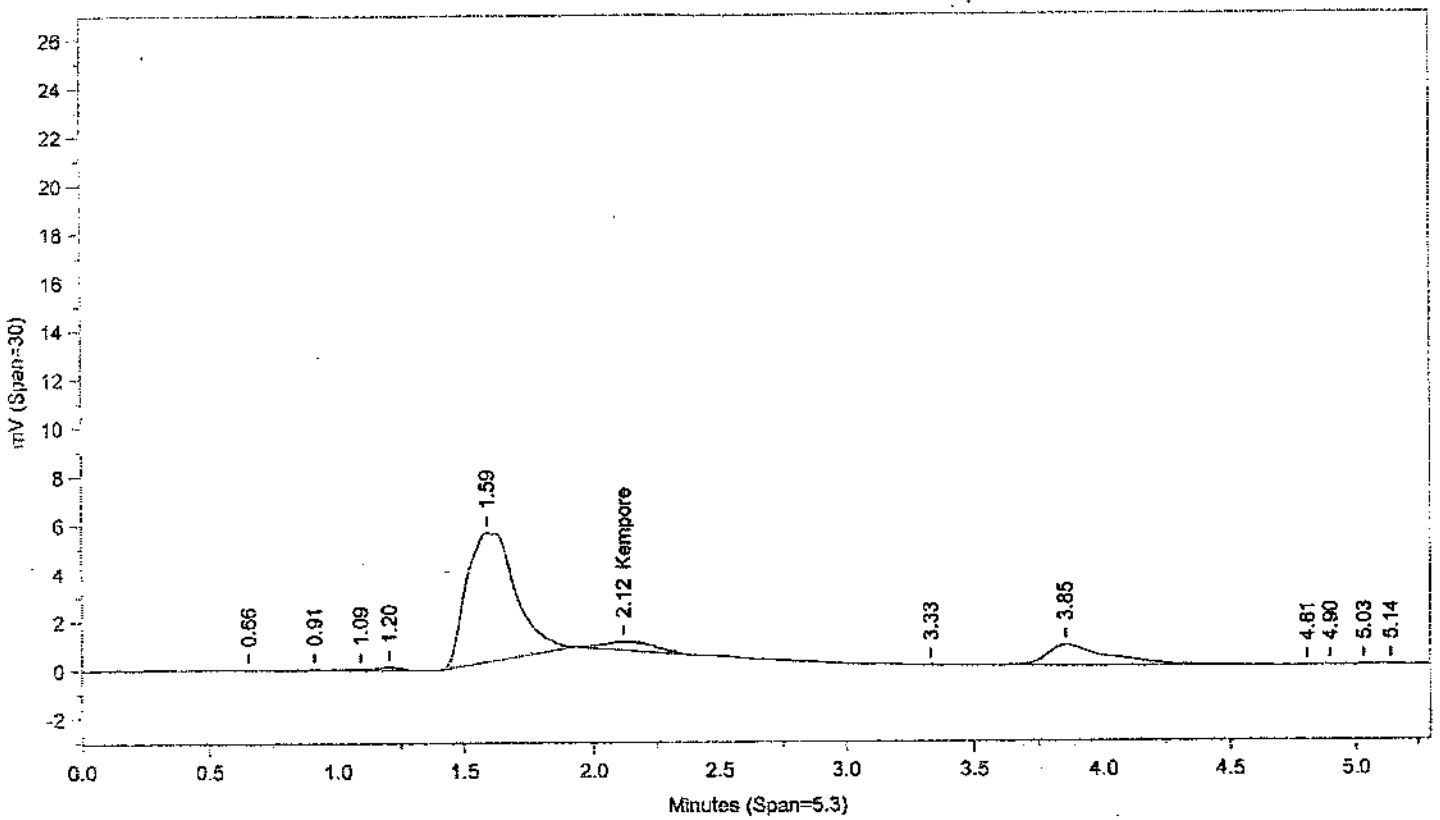
OLN69 0043

%Difference = High - Low Amount divided by the Average times 100

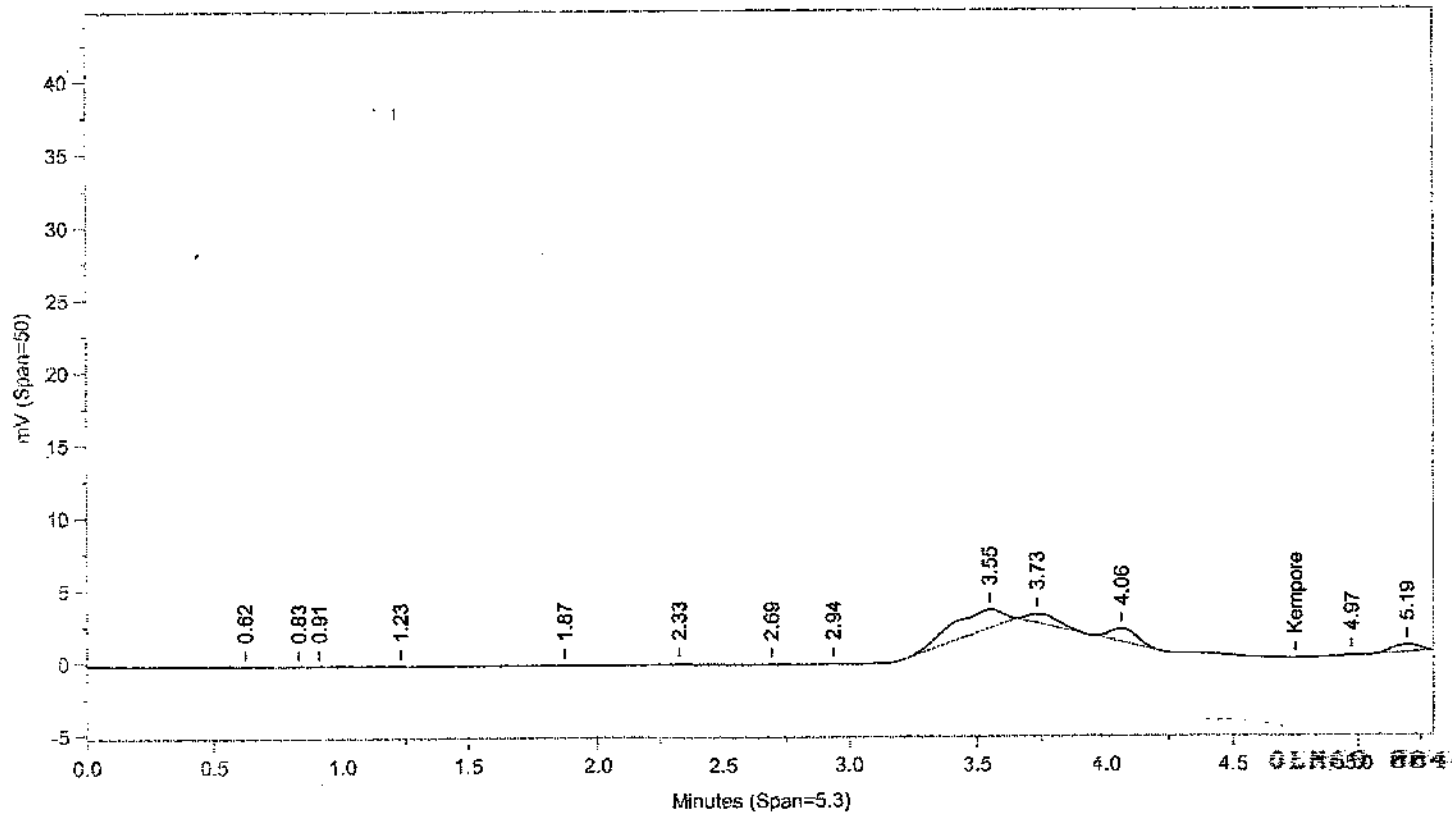
* Recovery outside QC Limits

Printed on: 6/10/11 16:50:50

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.16R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:19:00 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:19:00 PM Column ID: Capcell CN, 250mmX4.6mmX5um

OLN650 0044

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.118	357	594.149	Kempore			0	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.16A
Area File: C:\CPWIN\DATA1\1K11160B.16A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:24:24 PM
File Reported On: 6/9/2011 at 8:24:34 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1D

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308058

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.19R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	680	U

OLN69 0046

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: 6308058 RI ISC1D Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02727 10342

Analysis Report (A)

Injected on	: JUN 09, 2011 20:37:38
Instrument	: CP09--X3593A
Result file	: 1K11160.19R
Calibration file	: 1K11160.CAL
Method file	: KEMP.MET

Analysis Report (B)

Injected on	: JUN 09, 2011 20:37:38
Instrument	: CP09--X3593B
Result file	: 1K11160B.19R
Calibration file	: 1K11160B.CAL
Method file	: KEMPB.MET

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.06	2.21	403	670.173706

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore			<1000	<230			WC 2680 ~~auto~~ auto B

Units: ug/l

Reviewed by: [signature] Verified by: [signature]
Date: 6/16/11 Date: JUN 17 2011

Valerie Tomayko
Senior Specialist

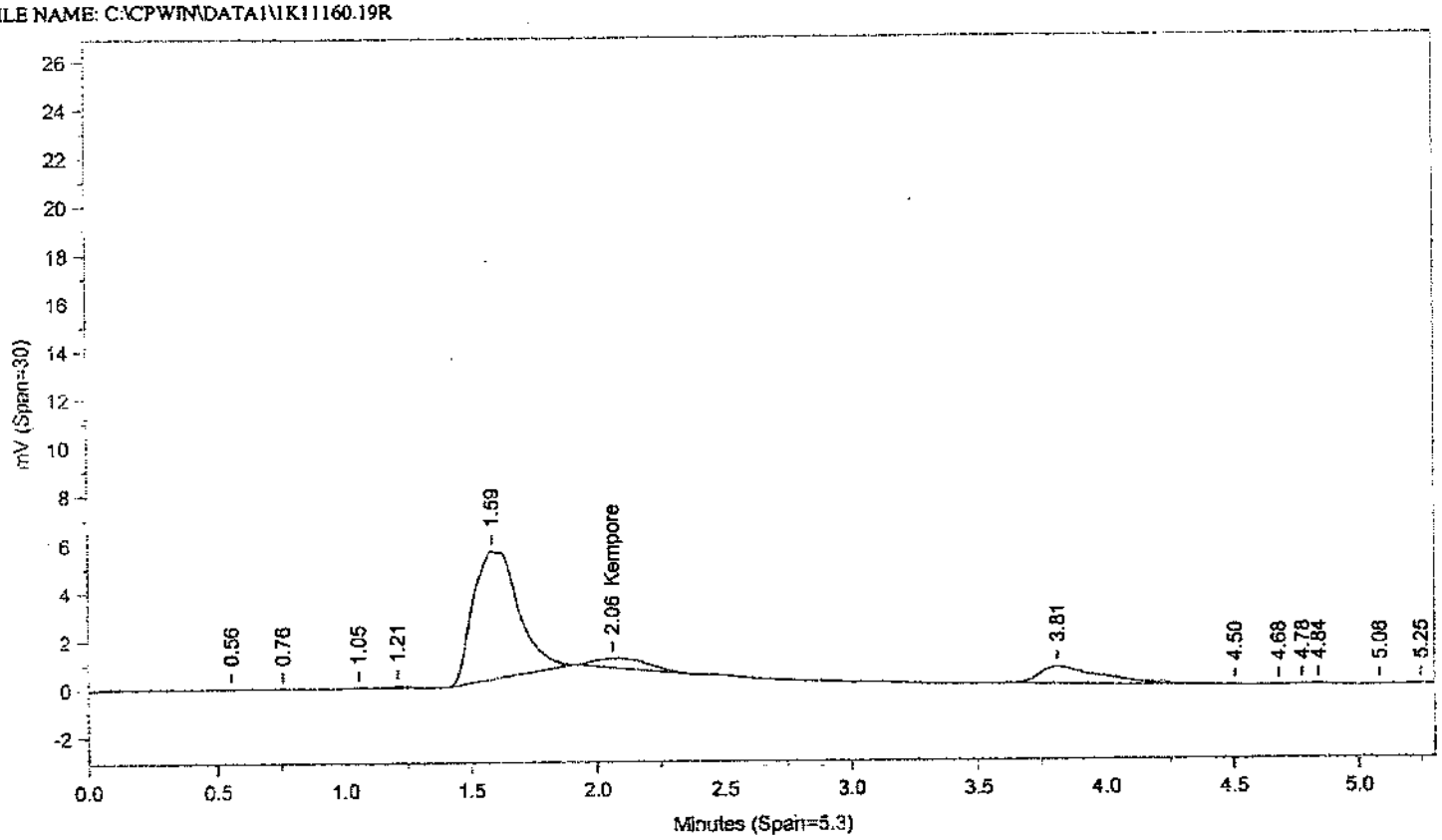
OLN69: 0847

%Difference = High - Low Amount divided by the Average times 100

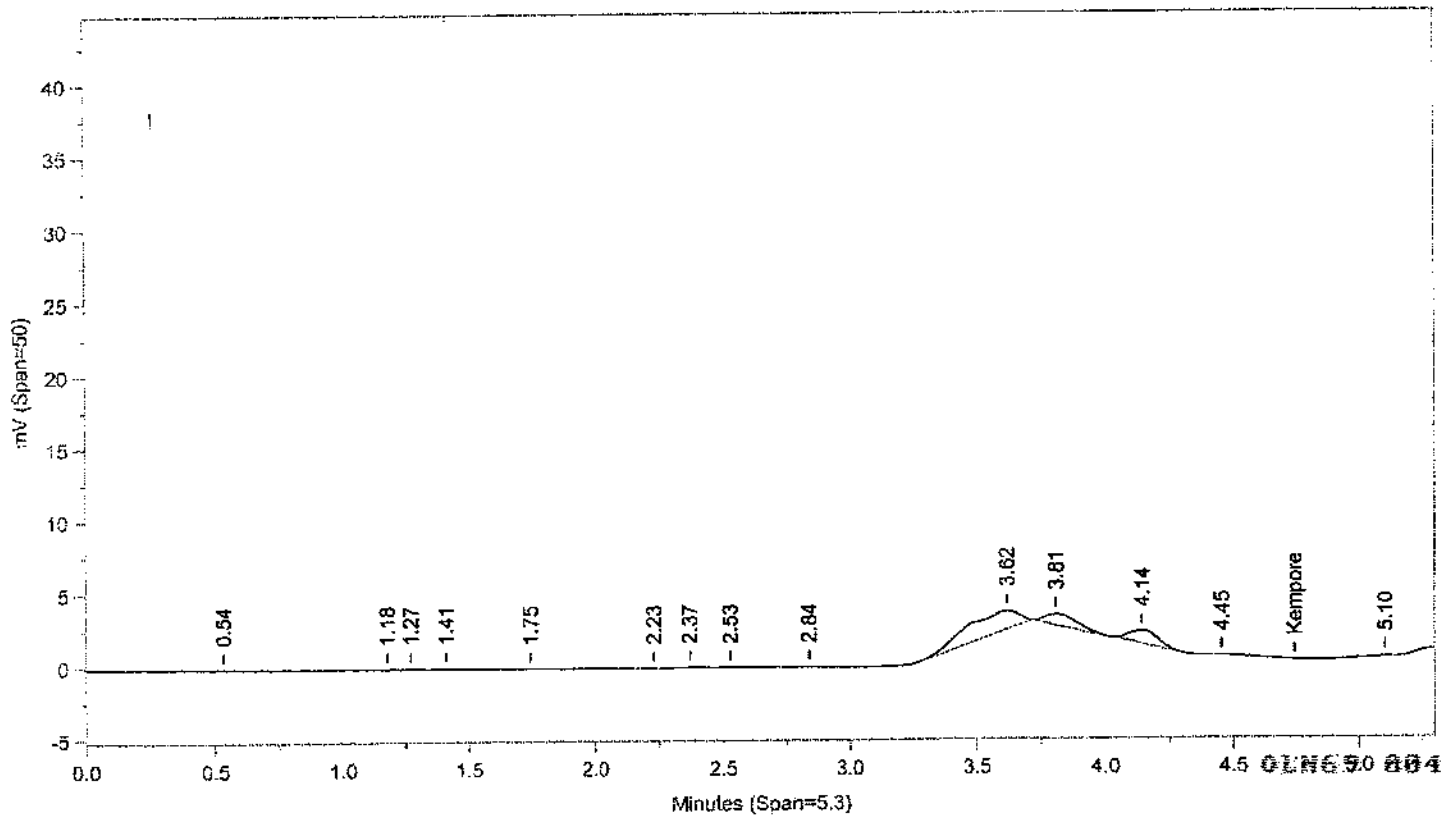
* Recovery outside QC Limits

Printed on: 6/10/11 16:51:45

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.19R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:37:37 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:37:37 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.063	403	670.174	Kempore			0	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.19A
Area File: C:\CPWIN\DATA1\1K11160B.19A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:43:02 PM
File Reported On: 6/9/2011 at 8:43:11 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC2-

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308059

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.21R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	1200	

OLN69 8850

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: 6308059 RI ISC2- Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02727 10342

Analysis Report (A)

Injected on : JUN 09, 2011 20:50:04
Instrument : CP09-X3593A
Result file : 1K11160.21R
Calibration file : 1K11160.CAL
Method file : KEMP.MET

Analysis Report (B)

Injected on : JUN 09, 2011 20:50:04
Instrument : CP09-X3593B
Result file : 1K11160B.21R
Calibration file : 1K11160B.CAL
Method file : KEMPB.MET

Peak name	Min	R.T.	Max	Height	Amount	Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.14	2.21	740	1229.963623	Kempore	4.60	4.64	4.90	527	1113.658203

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore	(1)	1230	<1000	<230			

Units: ug/l

Reviewed by: [signature]
Date: 6/16/11

Verified by: Valerie Tomayko
Date: JUN 17 2011

Valerie Tomayko
Senior Specialist

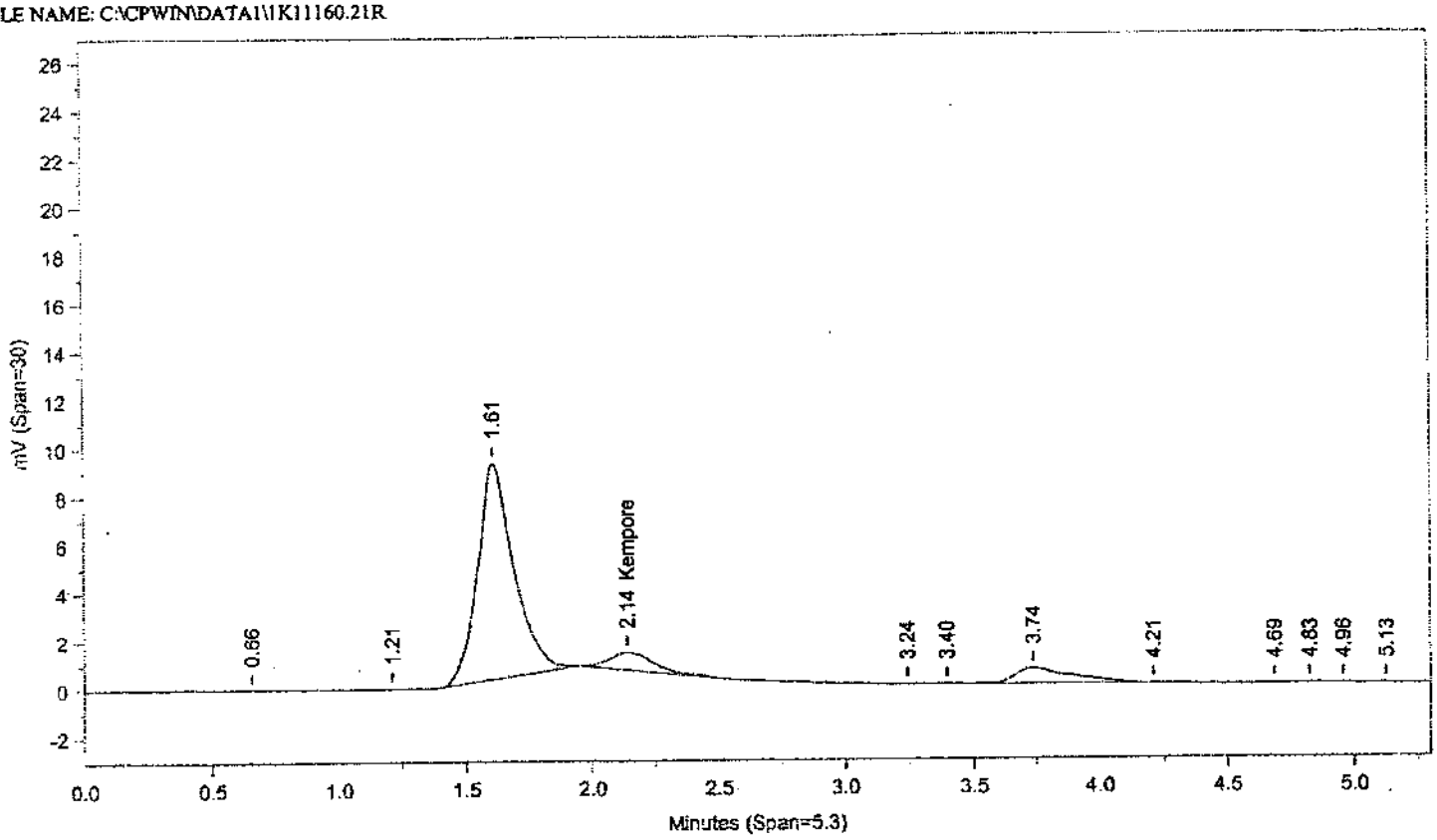
OLN69 0051

%Difference = High - Low Amount divided by the Average times 100

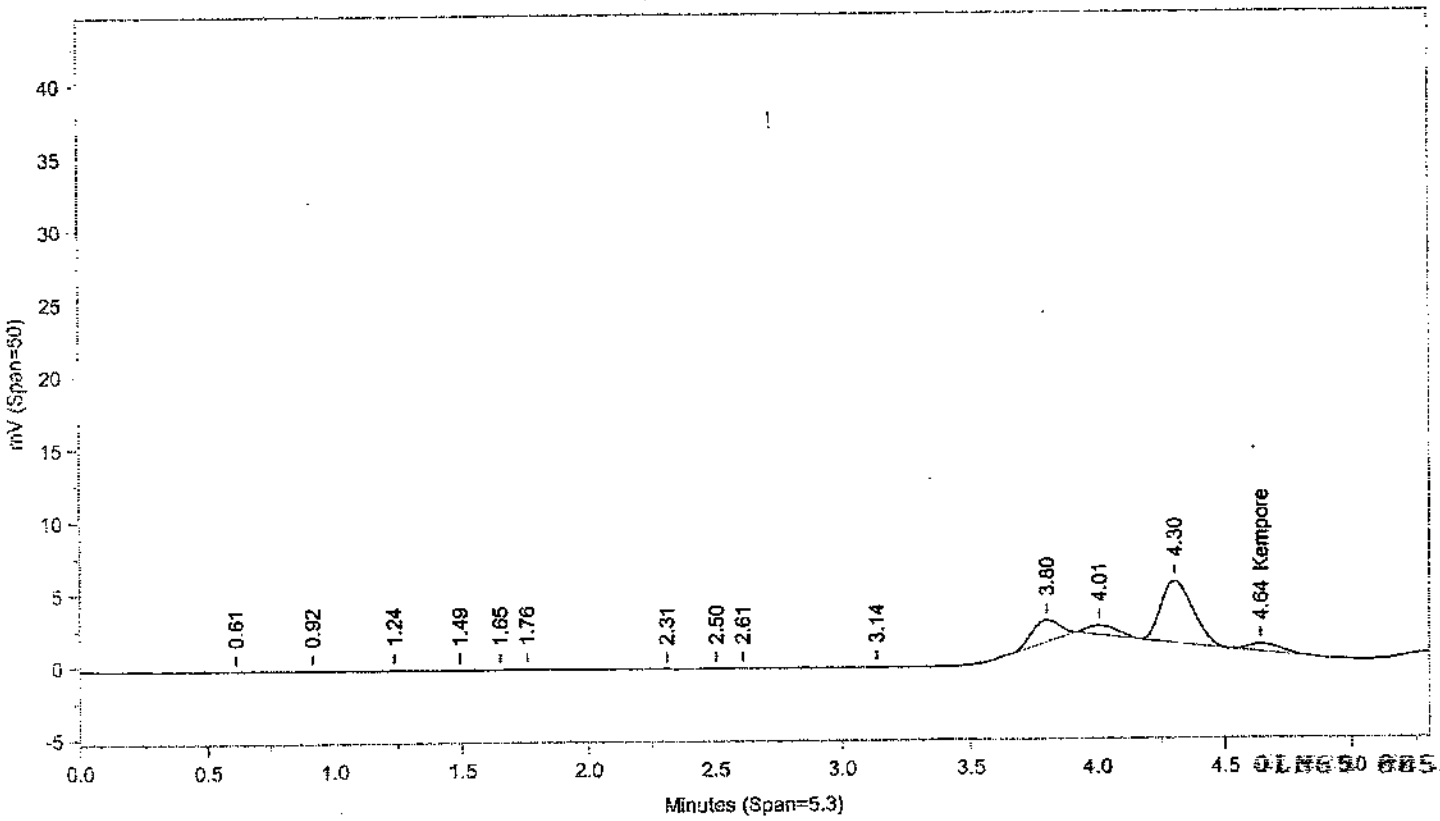
* Recovery outside QC Limits

Printed on: 6/10/11 16:52:11

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.21R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:50:03 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:50:03 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.141	740	1229.964	Kempore	4.642	527	1113.658	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.21A
Area File: C:\CPWIN\DATA1\1K11160B.21A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:55:28 PM
File Reported On: 6/9/2011 at 8:55:37 PM

Standards Data

OLM69 00054

Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp9\C-Drive\CPWIN\data1\1K11160.seq

Chromatography Directory: \\cp9\C-Drive\CPWIN\data1

Method Directory: \\cp9\C-Drive\CPWIN\data1

Number of Entries: 35

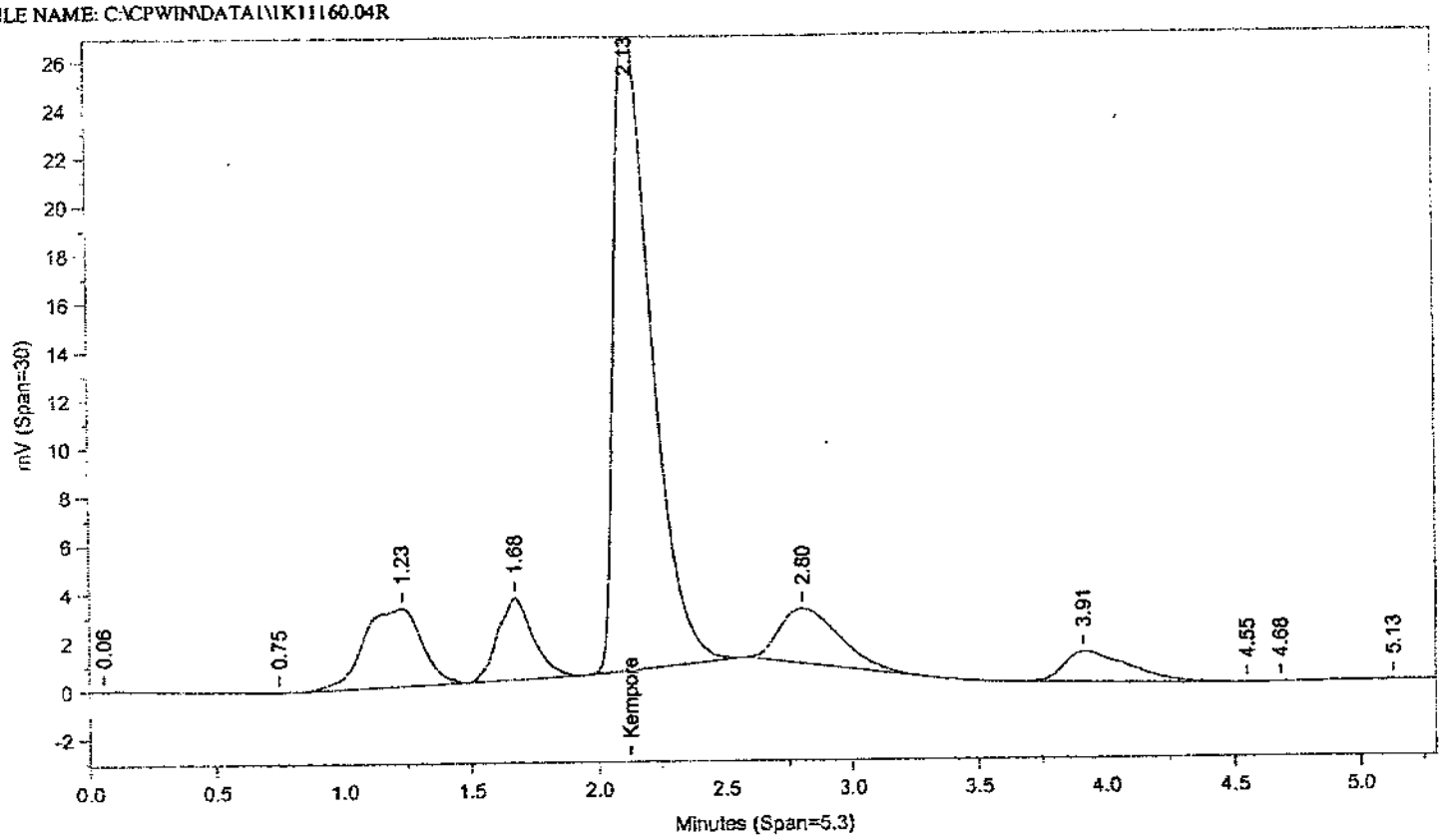
	Samplename	Code	ID	FileName	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	MISC	AA	1K11160.01R	KEMP.MET	1	1	1	0	1115999999	
2	CONDITIONER	MISC	AA	1K11160.02R	KEMP.MET	1	1	1	0	1115999999	
3	CONDITIONER	MISC	AA	1K11160.03R	KEMP.MET	1	1	1	0	1115999999	
4	KEMP51124C	ICAL	AA	1K11160.04R	KEMP.MET	1	1	1	5	1115999999	
5	KEMP41124C	ICAL	AA	1K11160.05R	KEMP.MET	1	1	1	4	1115999999	
6	KEMP31124C	ICAL	AA	1K11160.06R	KEMP.MET	1	1	1	3	1115999999	
7	KEMP21124C	ICAL	AA	1K11160.07R	KEMP.MET	1	1	1	2	1115999999	
8	KEMP11124C	ICAL	AA	1K11160.08R	KEMP.MET	1	1	1	1	1115999999	
9	MDKRX1124C	ICAL	AA	1K11160.09R	KEMP.MET	1	1	1	0	1115999999	
10	BLANKA 6/7/11 RI	BLK	AA	1K11160.10R	KEMP.MET	10	10	1	0	111580040A	02727
11	LCSA 6/7/11 RI	LCS	AA	1K11160.11R	KEMP.MET	10	10	1	0	111580040A	02727
12	LCSDA 6/7/11 RI	LCSD	AA	1K11160.12R	KEMP.MET	10	10	1	0	111580040A	02727
13	BLANKA 6/9/11	BLK	AA	1K11160.13R	KEMP.MET	10	10	1	0	111600026A	02727
14	LCSA 6/9/11	LCS	AA	1K11160.14R	KEMP.MET	10	10	1	0	111600026A	02727
15	LCSDA 6/9/11	LCSD	AA	1K11160.15R	KEMP.MET	10	10	1	0	111600026A	02727
16	6308055 RI	T	AA	1K11160.16R	KEMP.MET	10	10	1	0	111580040A	02727
17	6308056MS RI	MS	AA	1K11160.17R	KEMP.MET	10	10	1	0	111580040A	02727
18	6308057MSD RI	MSD	AA	1K11160.18R	KEMP.MET	10	10	1	0	111580040A	02727
19	6308058 RI	T	AA	1K11160.19R	KEMP.MET	10	10	1	0	111580040A	02727
20	KEMP31124C	CCAL	EO	1K11160.20R	KEMP.MET	1	1	1	0	1115999999	
21	6308059 RI	T	AA	1K11160.21R	KEMP.MET	10	10	1	0	111580040A	02727
22	6308074 RI	T	AA	1K11160.22R	KEMP.MET	10	10	1	0	111580040A	02727
23	6308075 RI	T	AA	1K11160.23R	KEMP.MET	10	10	1	0	111580040A	02727
24	6308076 RI	T	AA	1K11160.24R	KEMP.MET	10	10	1	0	111580040A	02727
25	6309550	T	AA	1K11160.25R	KEMP.MET	10	10	1	0	111600026A	02727
26	6309553	T	AA	1K11160.26R	KEMP.MET	10	10	1	0	111600026A	02727
27	6309554	T	AA	1K11160.27R	KEMP.MET	10	10	1	0	111600026A	02727
28	6309555	T	AA	1K11160.28R	KEMP.MET	10	10	1	0	111600026A	02727
29	6310720	T	AA	1K11160.29R	KEMP.MET	10	10	1	0	111600026A	02727
30	6310721	T	AA	1K11160.30R	KEMP.MET	10	10	1	0	111600026A	02727
31	KEMP31124C	CCAL	EP	1K11160.31R	KEMP.MET	1	1	1	0	1115999999	
32	6310722	T	AA	1K11160.32R	KEMP.MET	10	10	1	0	111600026A	02727
33	6310723	T	AA	1K11160.33R	KEMP.MET	10	10	1	0	111600026A	02727
34	6310724	T	AA	1K11160.34R	KEMP.MET	10	10	1	0	111600026A	02727
35	KEMP31124C	CCAL	EQ	1K11160.35R	KEMP.MET	1	1	1	0	1115999999	

OLN69: 0855

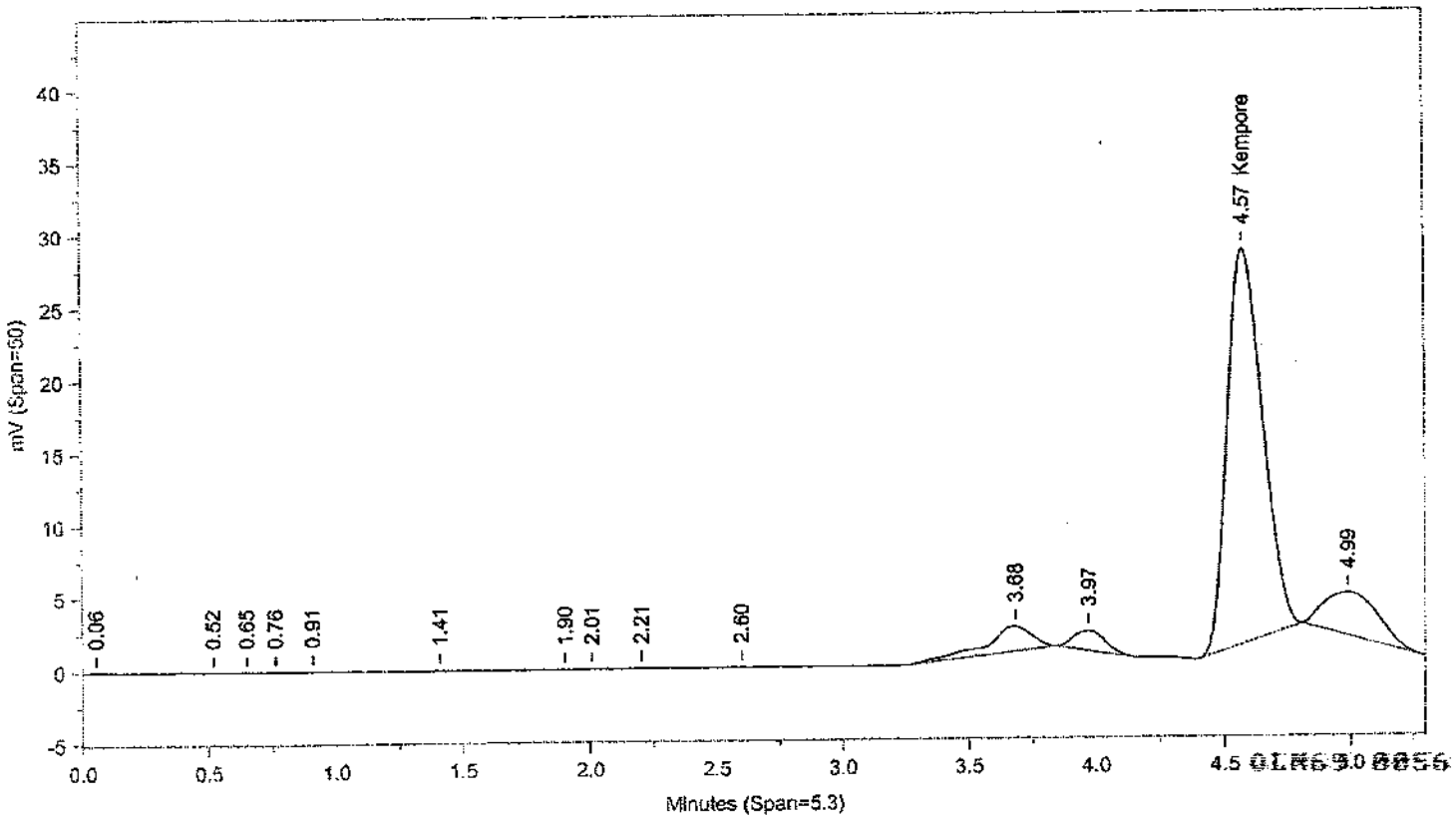
Set-up by: [signature] Date: 6/10/11

6/9/2011

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.04R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:04:30 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:04:30 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

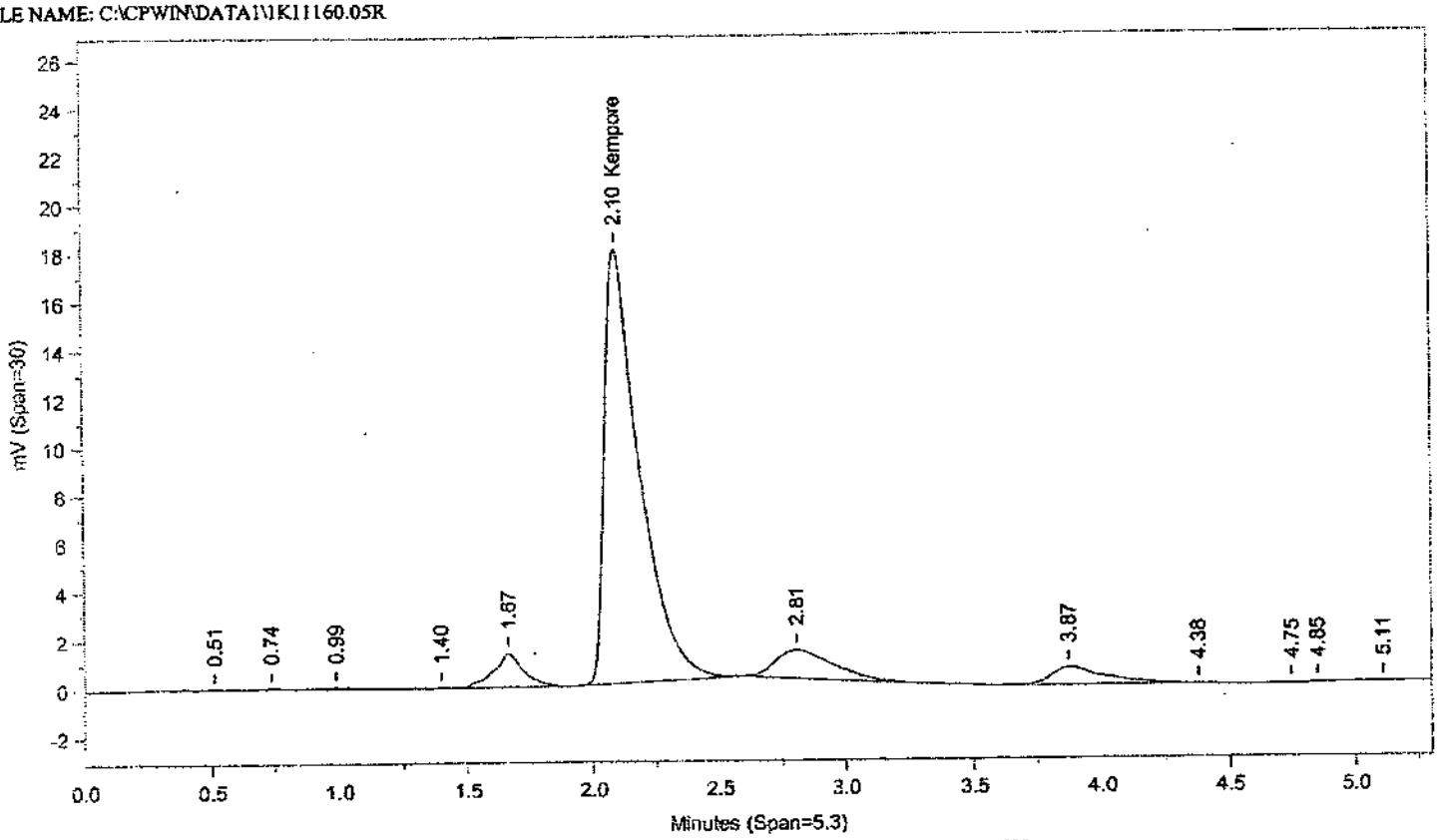
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

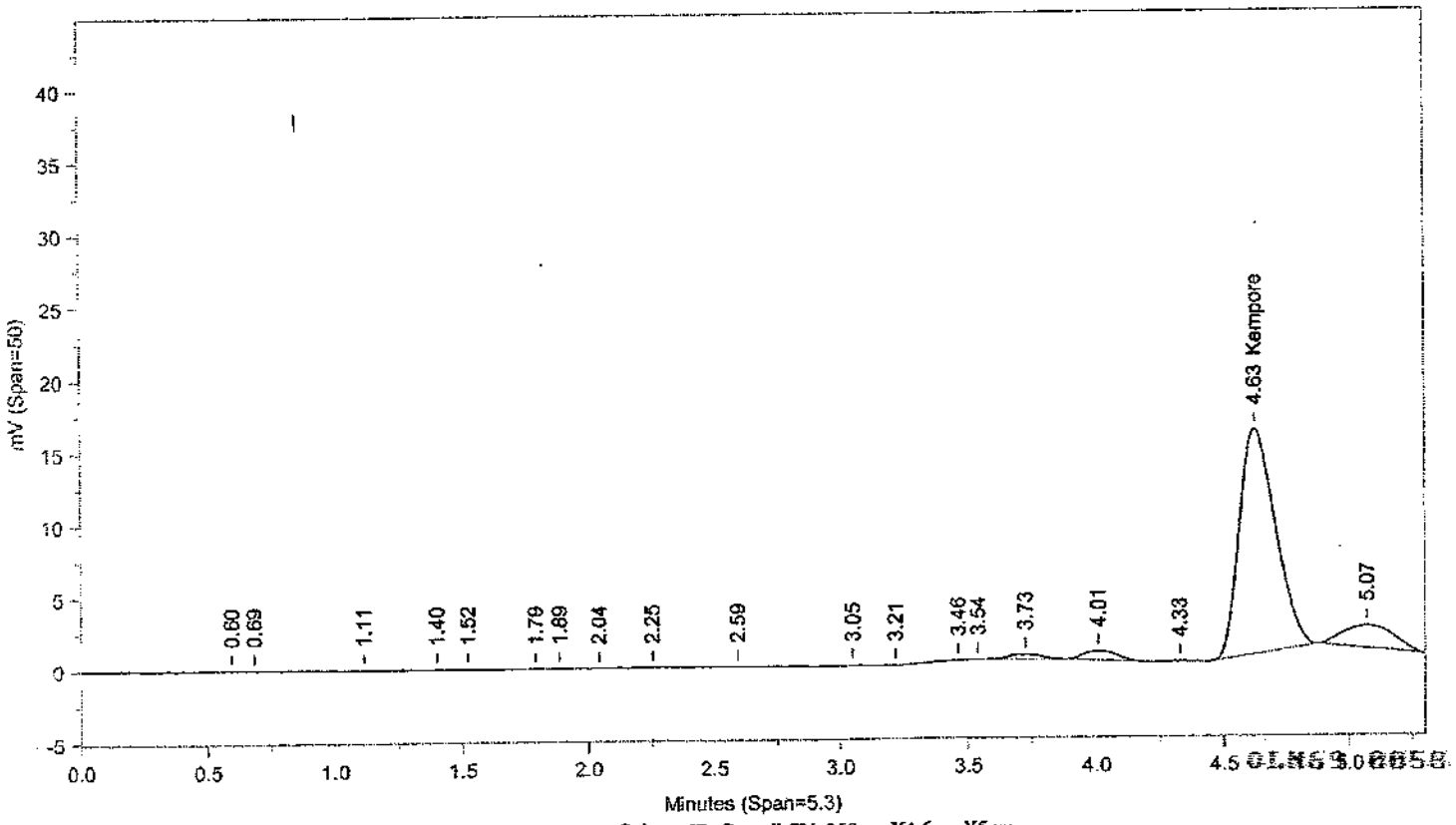
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.127	27003	63905.8	Kempore	4.574	27220	46987.33	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.04A
Area File: C:\CPWIN\DATA1\1K11160B.04A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 7:27:52 PM
File Reported On: 6/9/2011 at 7:28:04 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.05R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:10:42 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:10:42 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

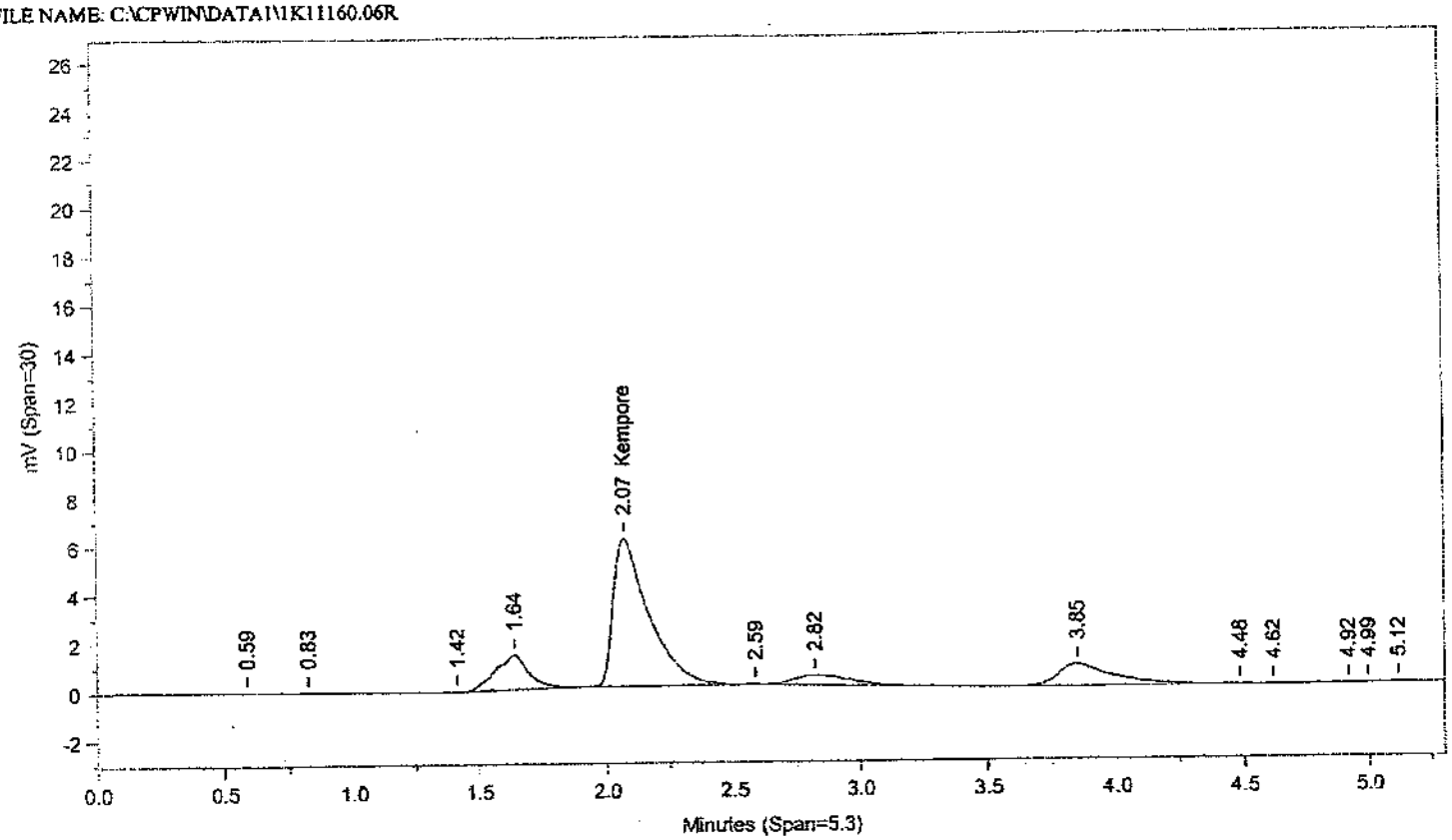
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

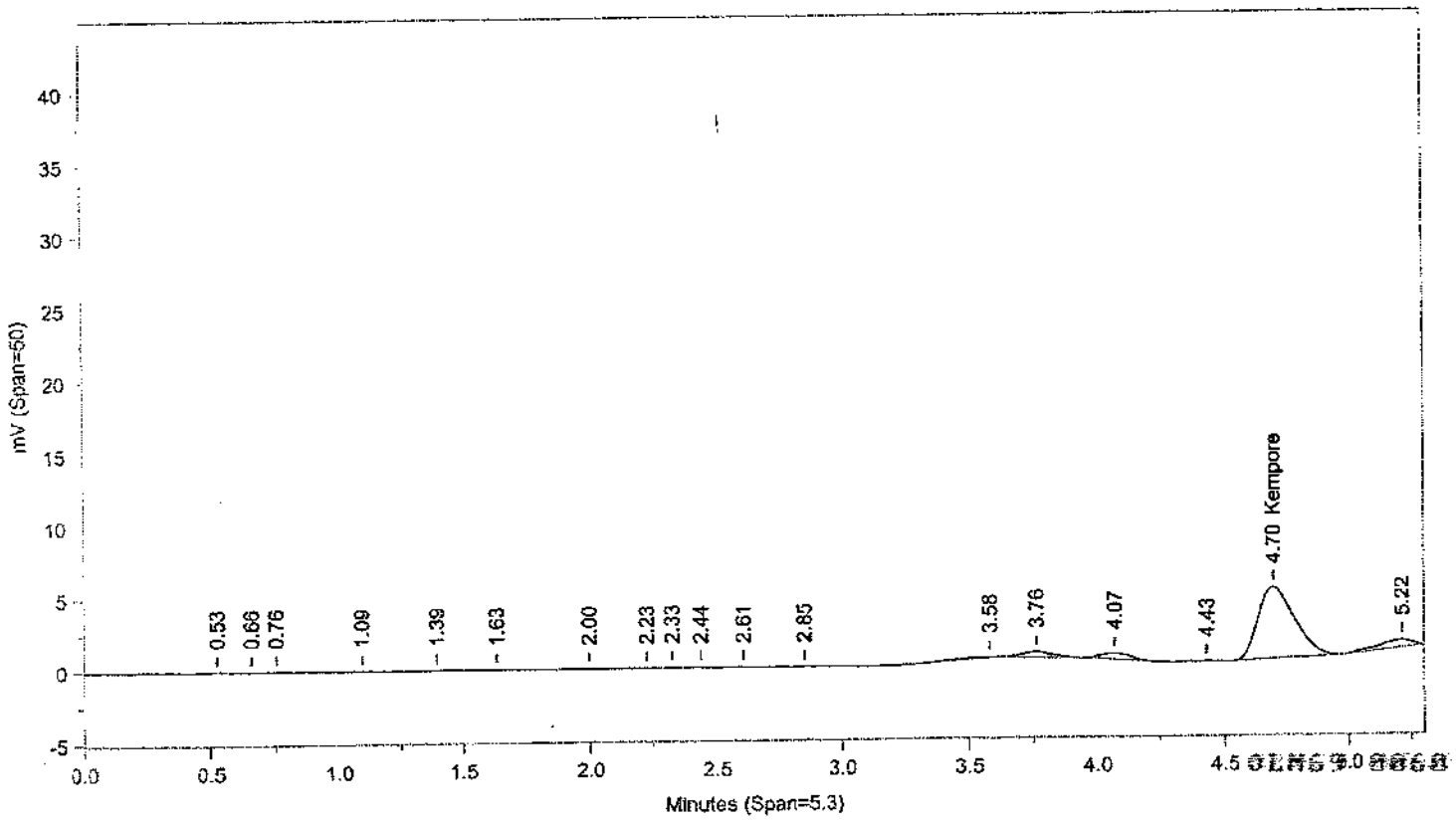
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.097	17960	32644.14	Kempore	4.626	15560	25758.51	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.05A
Area File: C:\CPWIN\DATA1\1K11160B.05A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 7:28:16 PM
File Reported On: 6/9/2011 at 7:28:27 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.06R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:16:55 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:16:55 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

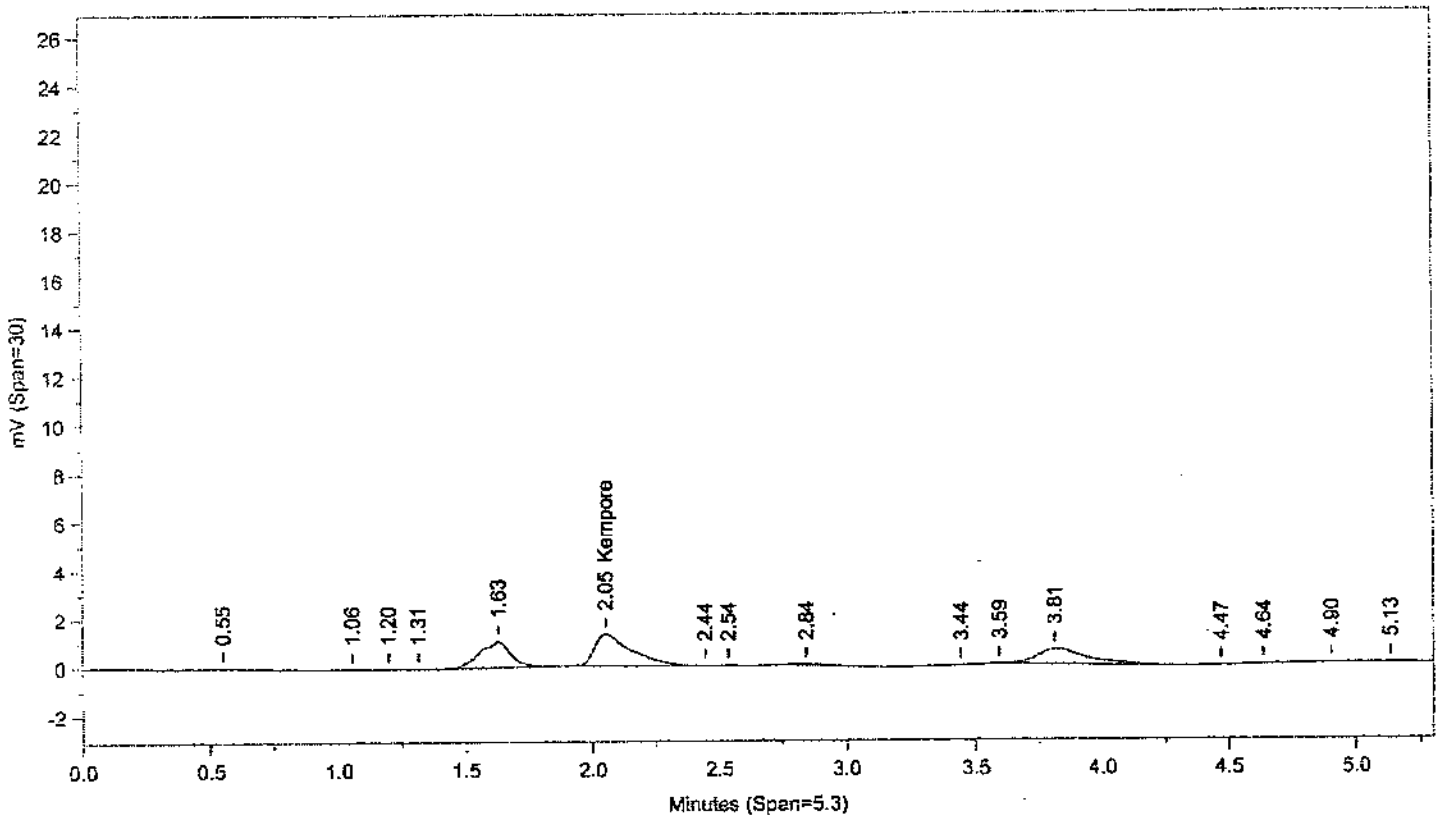
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

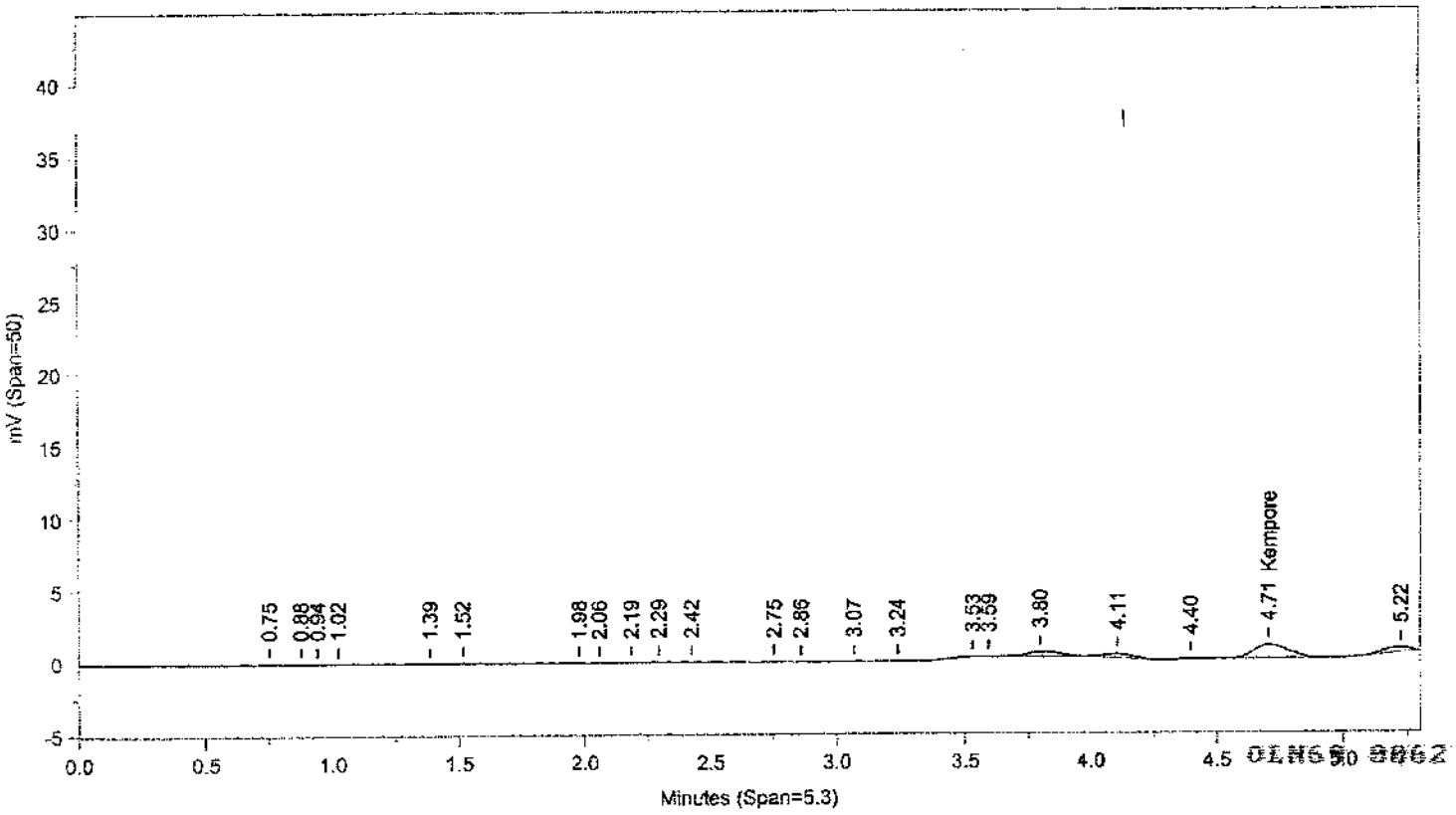
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.075	6082	10045.97	Kempore	4.697	4963	6463.396	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.06A
Area File: C:\CPWIN\DATA1\1K11160B.06A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 7:28:40 PM
File Reported On: 6/9/2011 at 7:28:49 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.07R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:23:07 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:23:07 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

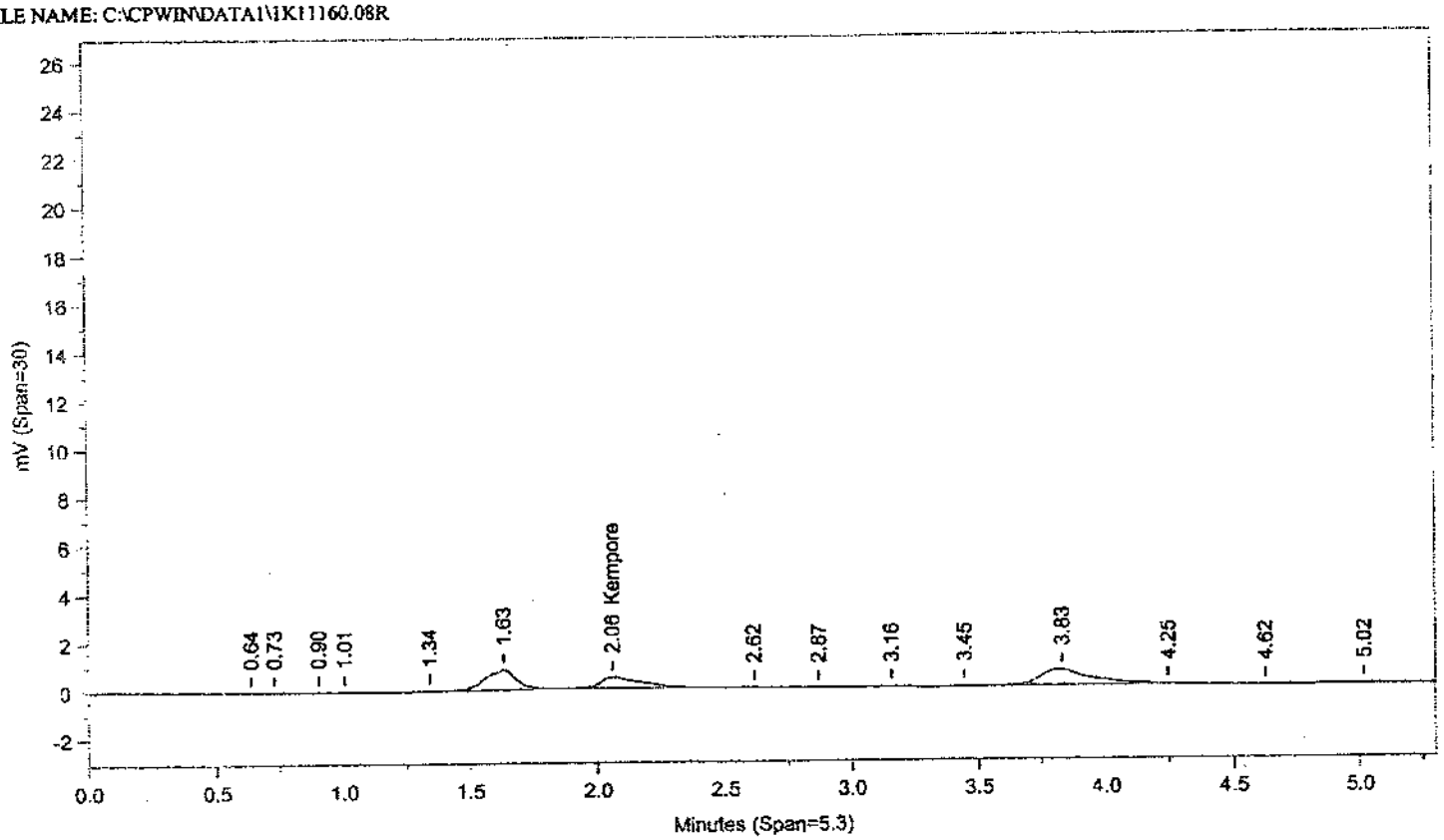
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

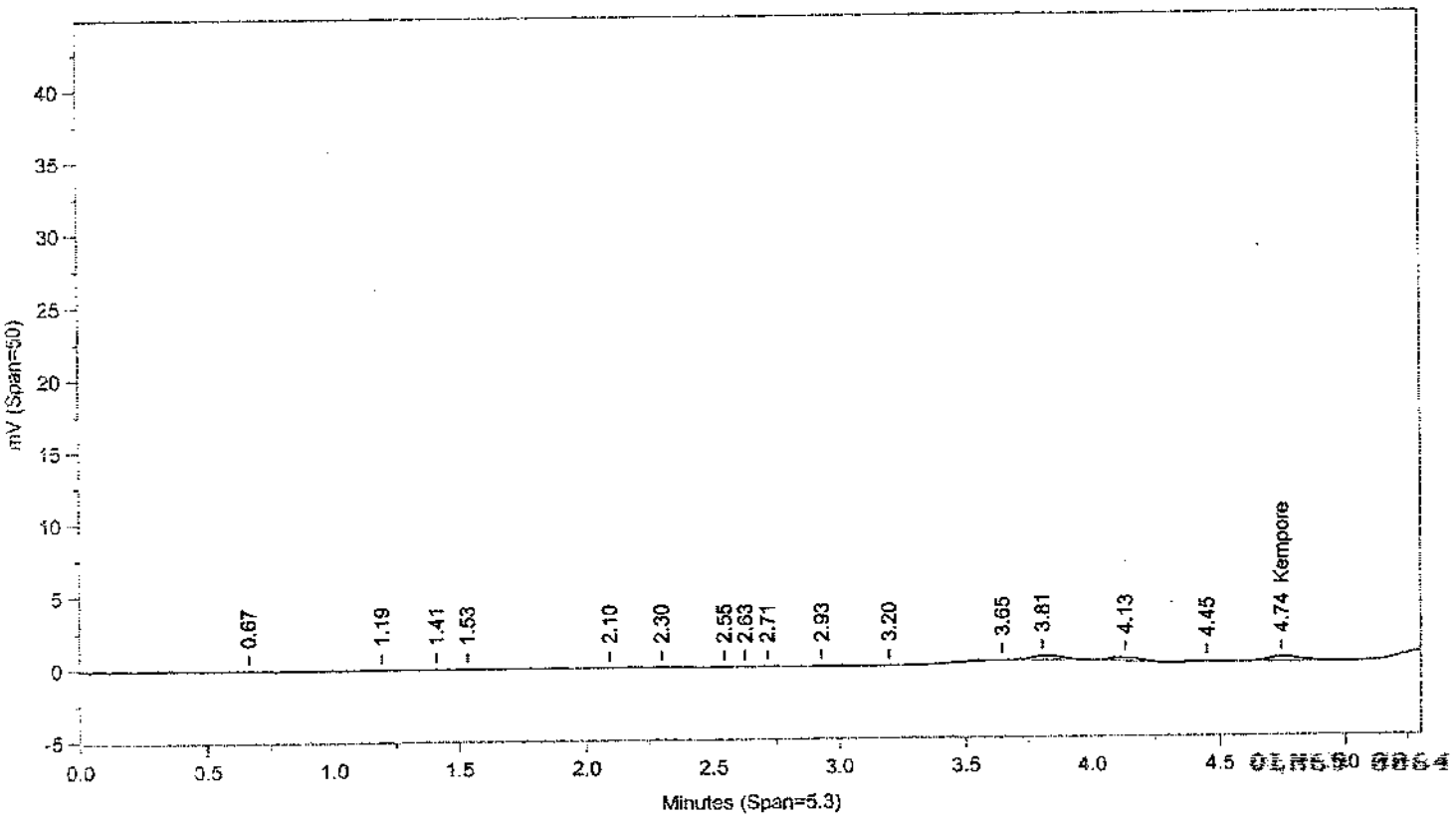
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.054	1317	1447.677	Kempore	4.705	934	-871.494	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.07A
Area File: C:\CPWIN\DATA1\1K11160B.07A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 7:29:02 PM
File Reported On: 6/9/2011 at 7:29:14 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.08R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:29:19 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:29:19 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

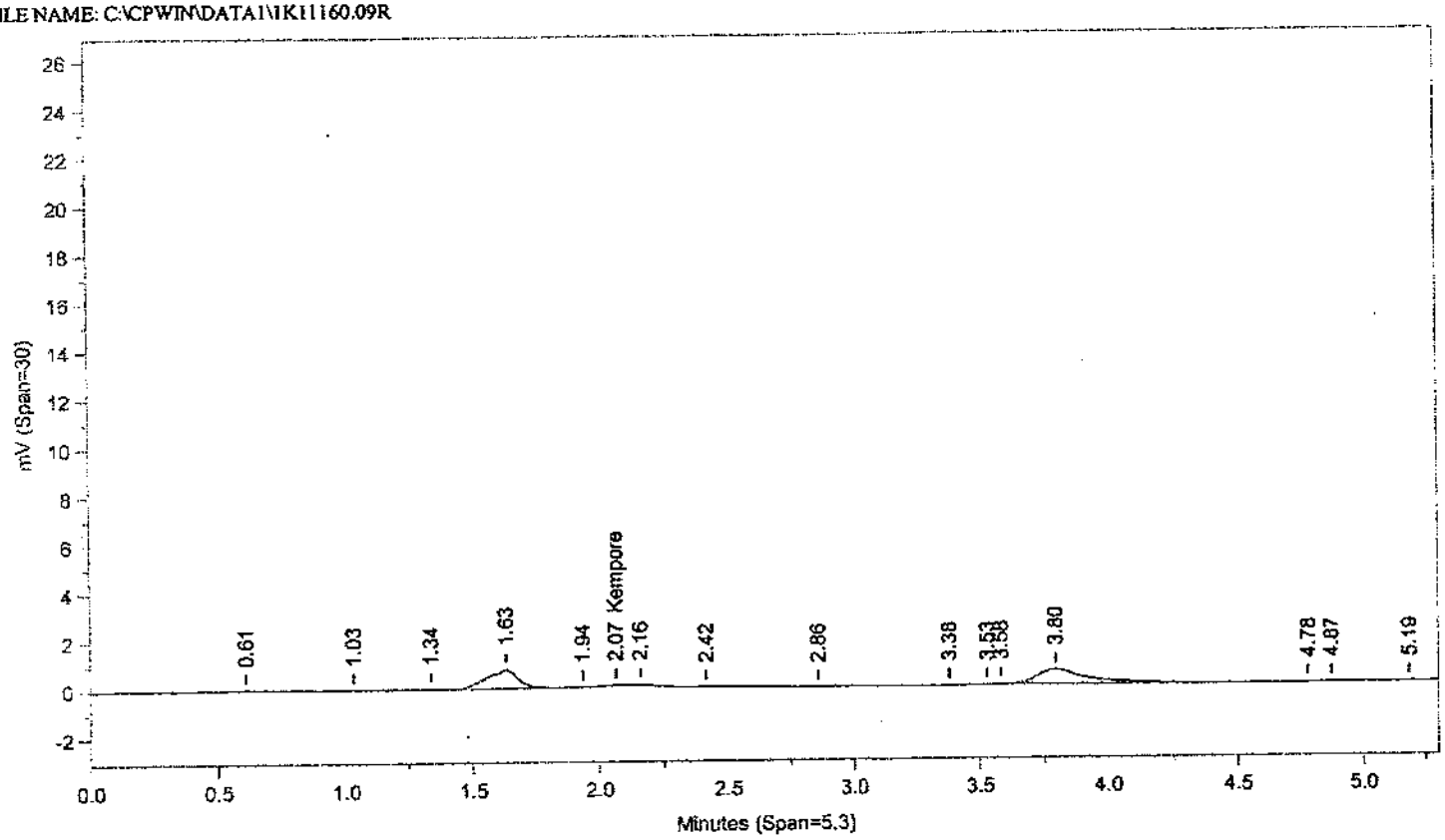
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

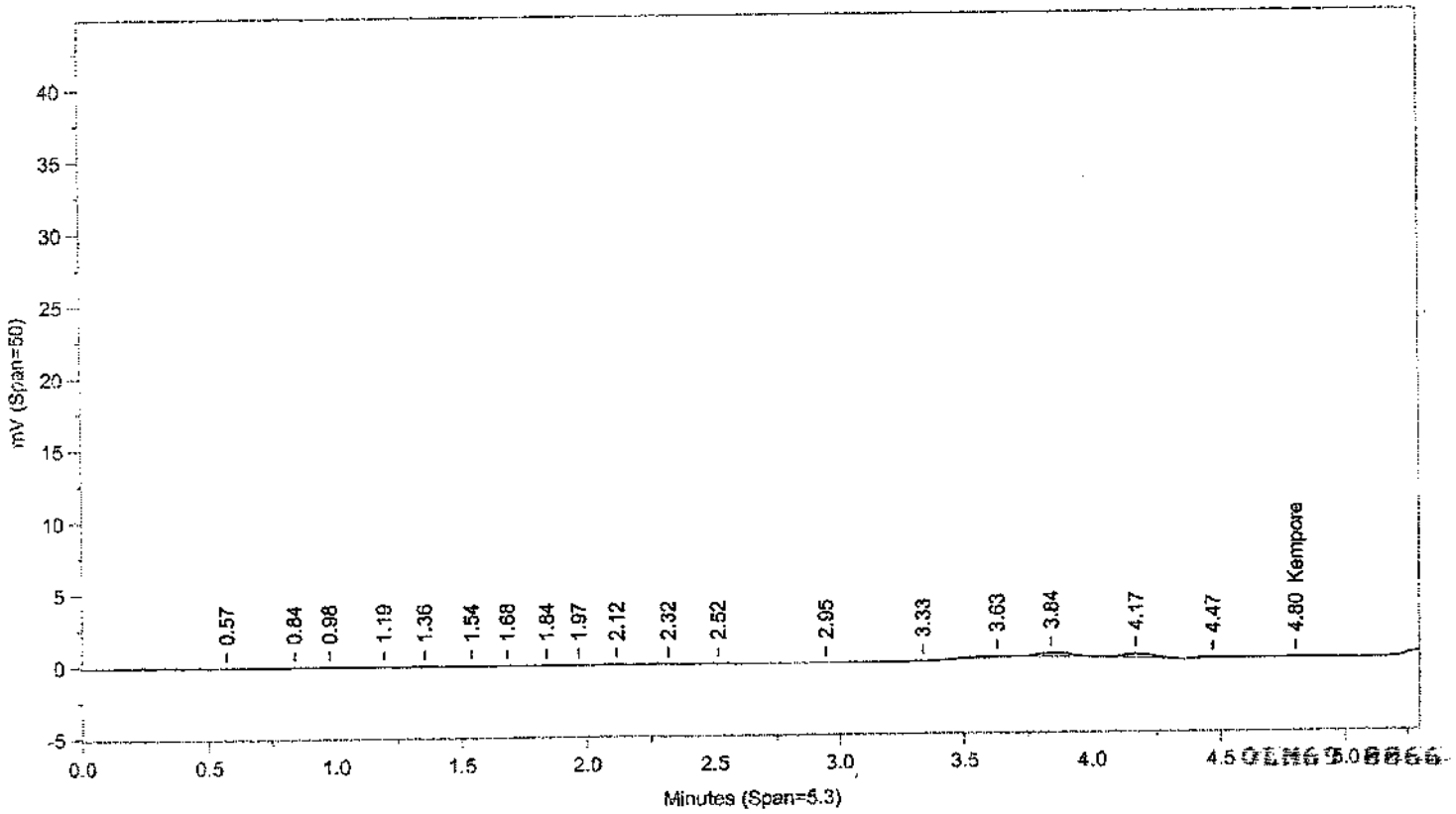
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.06	465	-276.825	Kempore	4.745	333	640.206	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.08A
Area File: C:\CPWIN\DATA1\1K11160B.08A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 7:34:44 PM
File Reported On: 6/9/2011 at 7:34:55 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.09R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:35:31 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:35:31 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

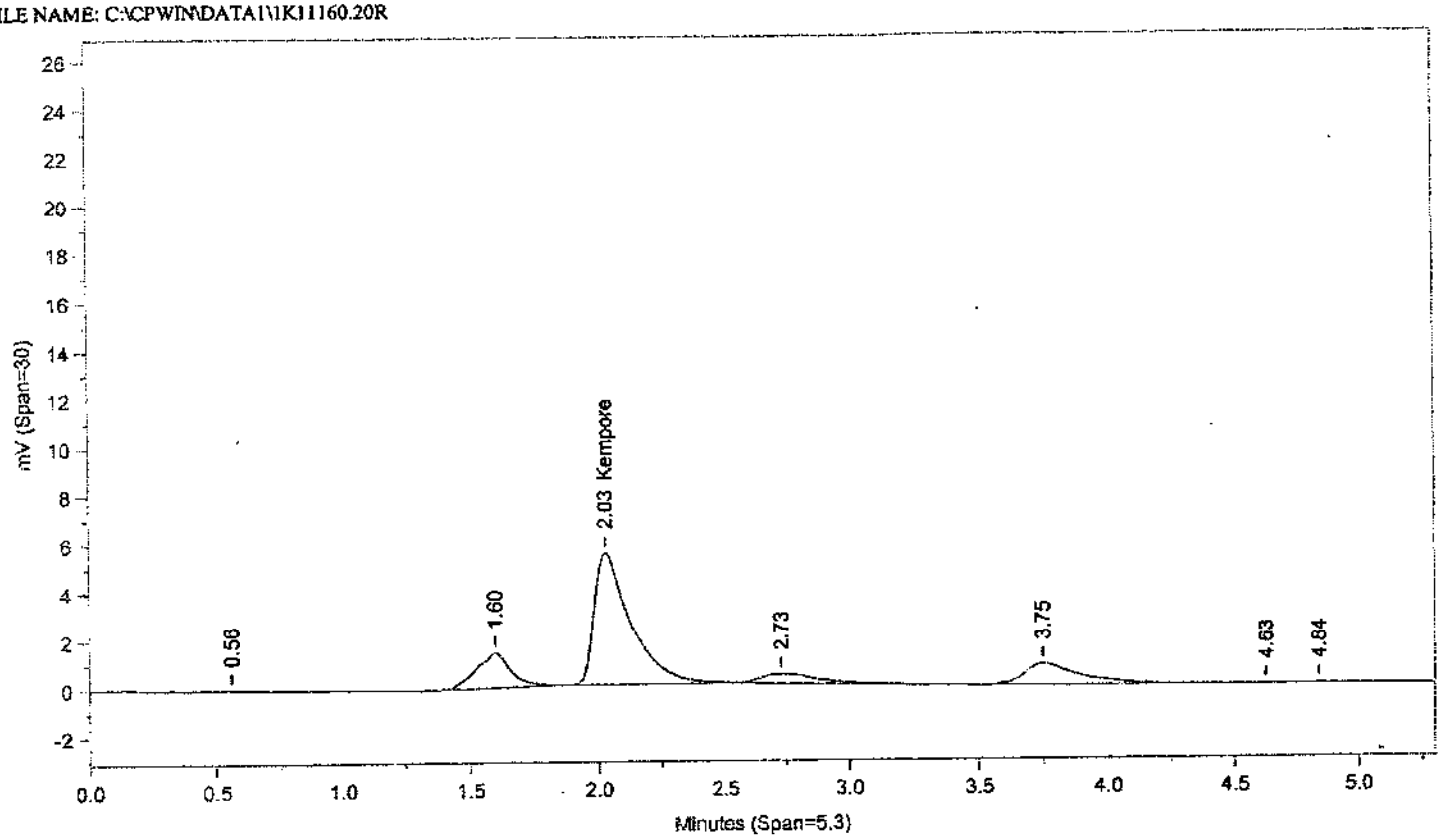
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

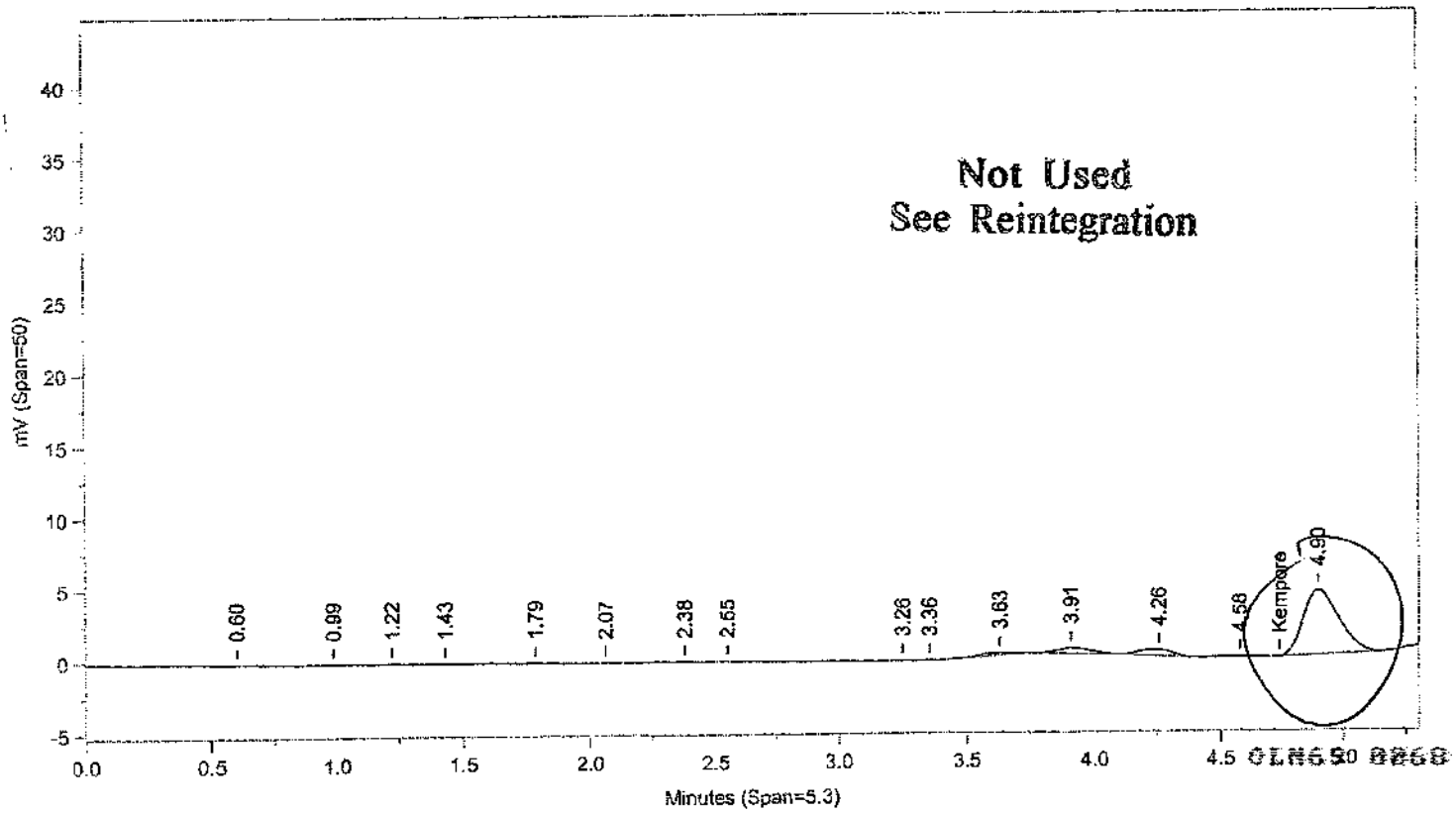
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.067	34	56.509	Kempore	4.799	66	332.655	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.09A
Area File: C:\CPWIN\DATA1\1K11160B.09A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:04:18 PM
File Reported On: 6/9/2011 at 8:04:27 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.20R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:43:50 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:43:50 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

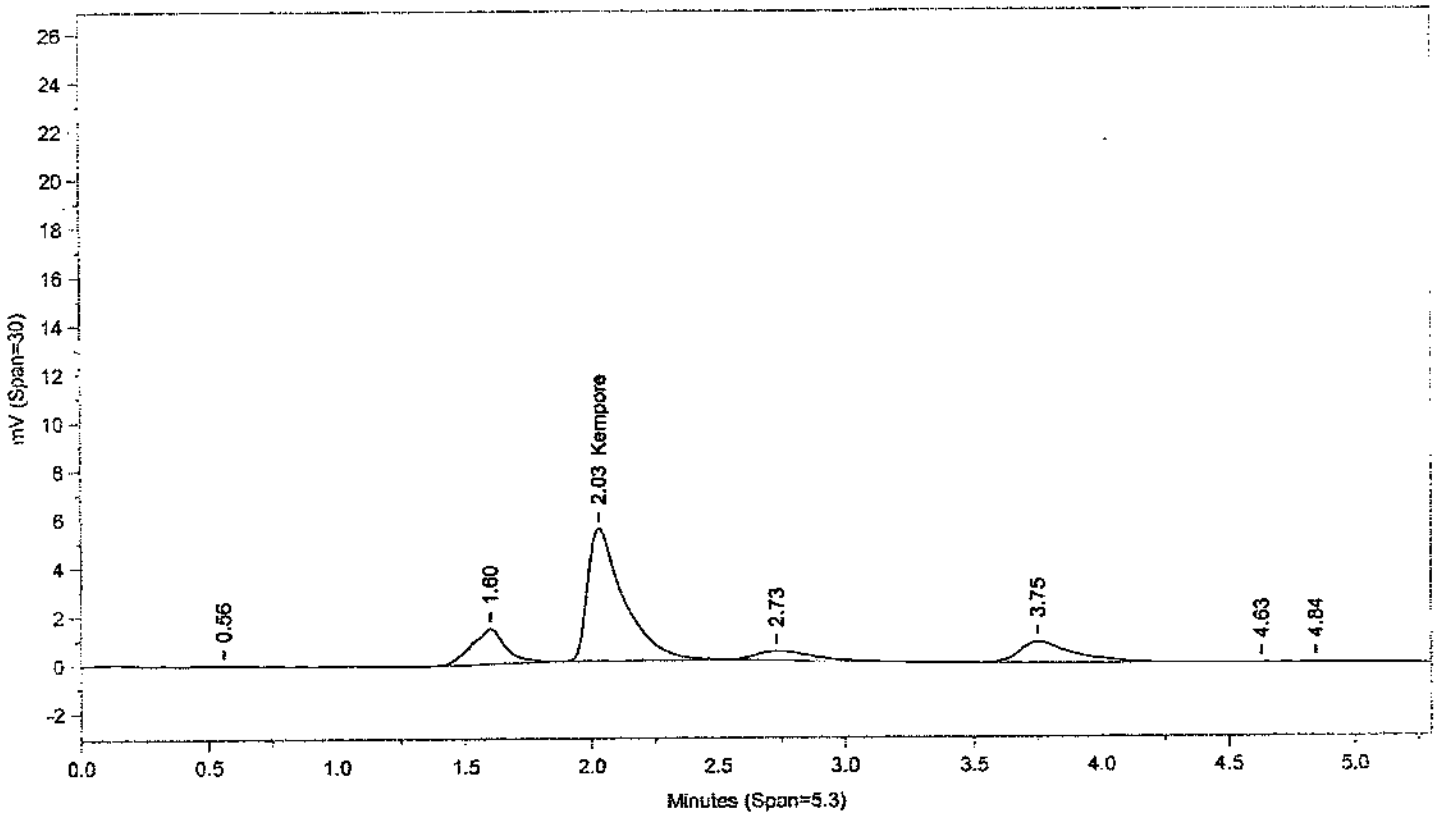
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

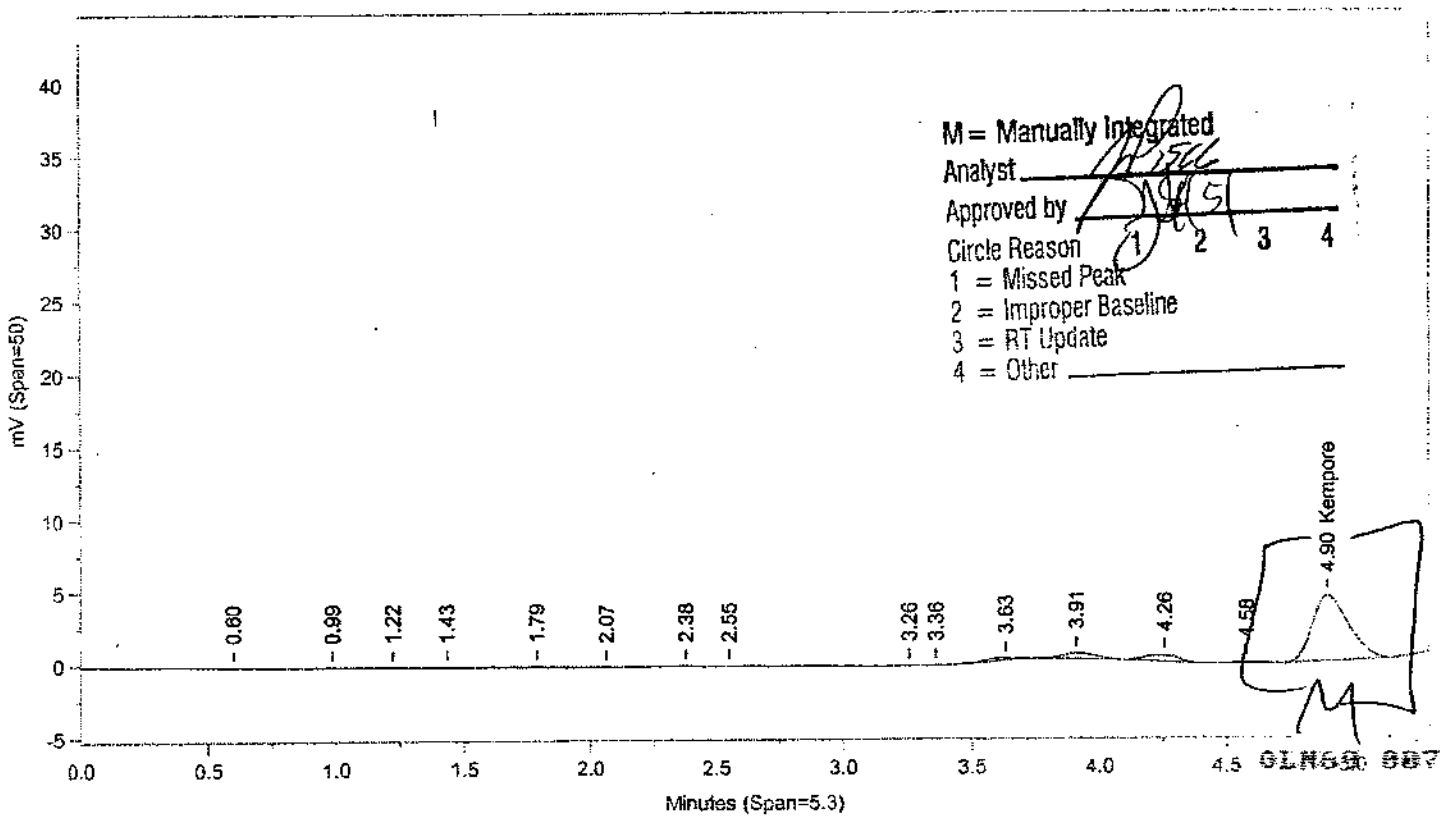
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.031	5458	9074.311	Kempore			0	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.20A
Area File: C:\CPWIN\DATA1\1K11160B.20A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:49:16 PM
File Reported On: 6/9/2011 at 8:49:25 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.20R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:43:50 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:43:50 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

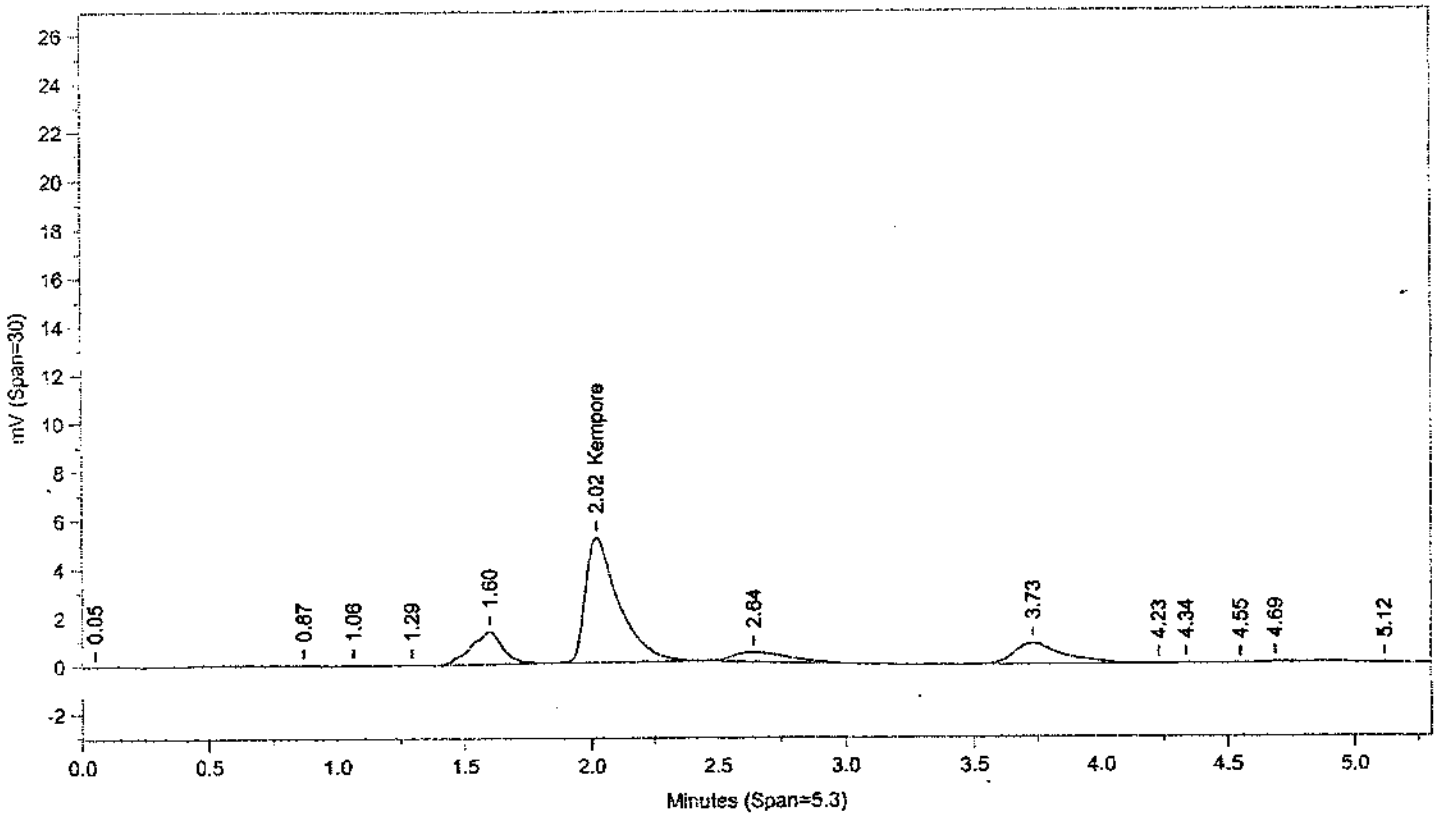
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

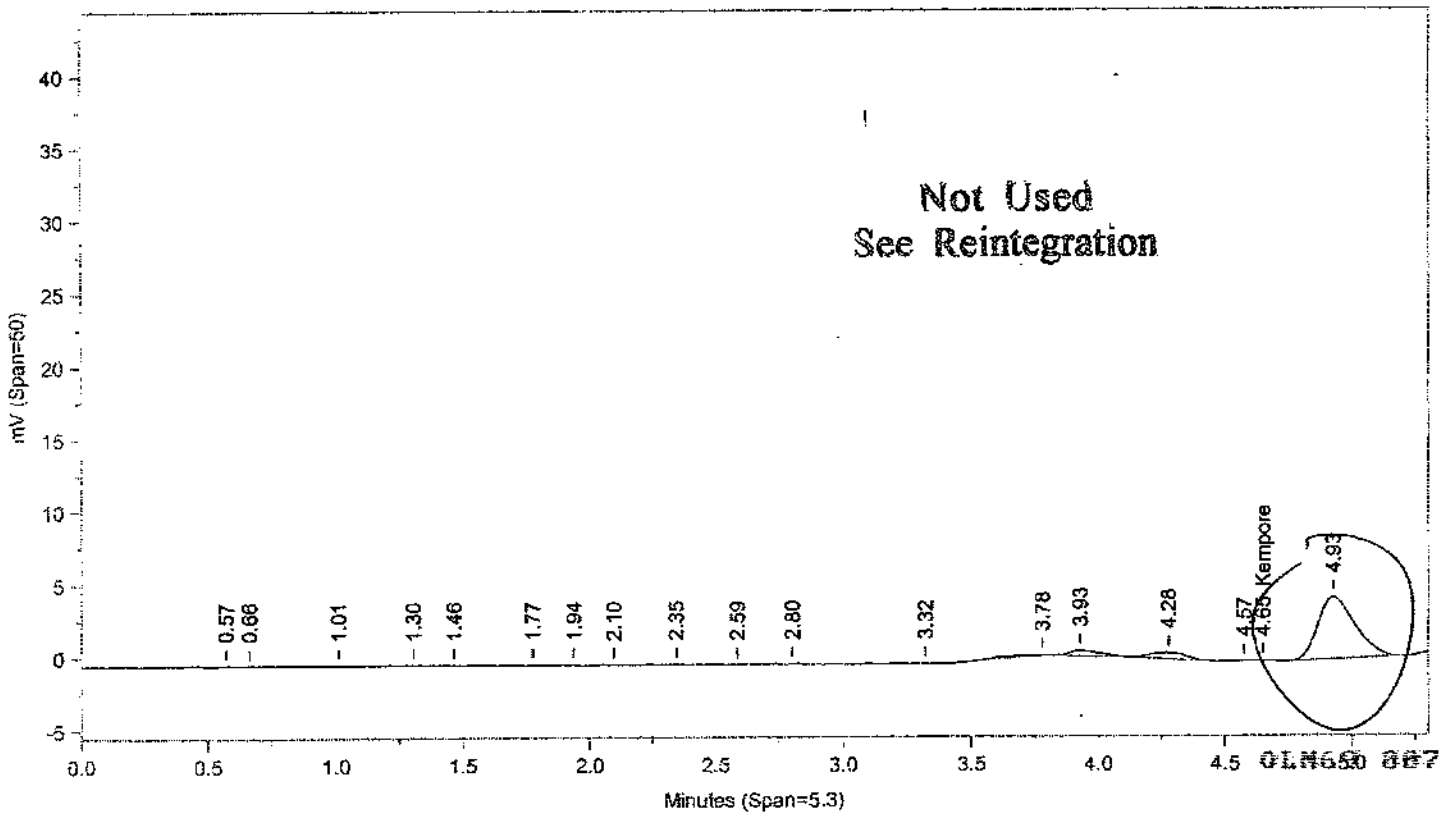
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.031	5458	9074.311	Kempore	4.901	4490	7827.937	Kempore

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/10/2011 4:40:02 PM
File Reported On: 6/10/2011 at 4:40:00 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\K11160.31R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 9:52:15 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 9:52:15 PM Column ID: Capcell CN, 250mmX4.6mmX5um

OLN650 0072

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.021	5150	8562.453	Kempore	4.65	52	309.856	Kempore

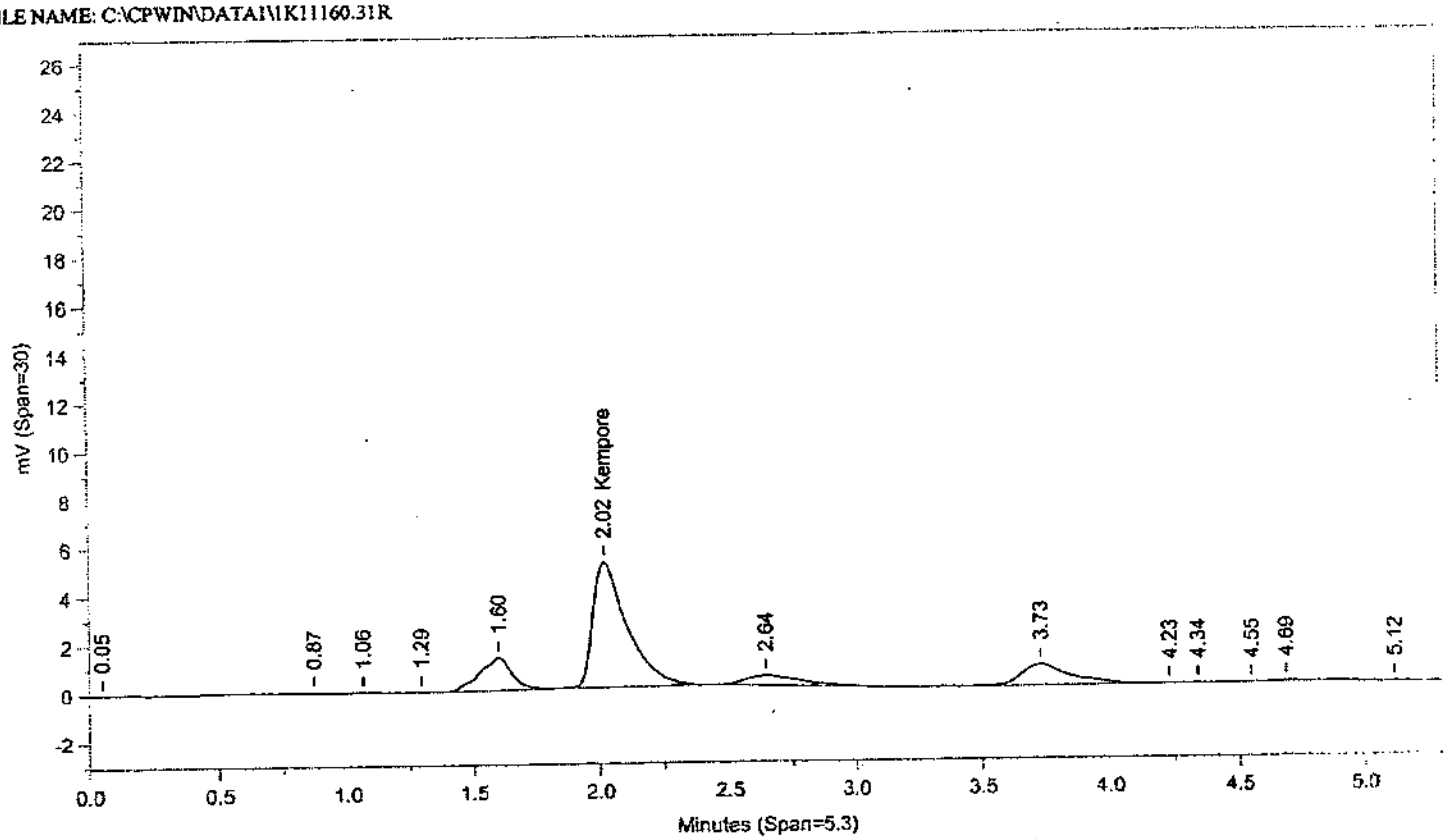
Files:
Area File: C:\CPWIN\DATA1\1K11160.31A
Area File: C:\CPWIN\DATA1\1K11160B.31A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 9:57:40 PM
File Reported On: 6/9/2011 at 9:57:48 PM

Not Used
See Reintegration

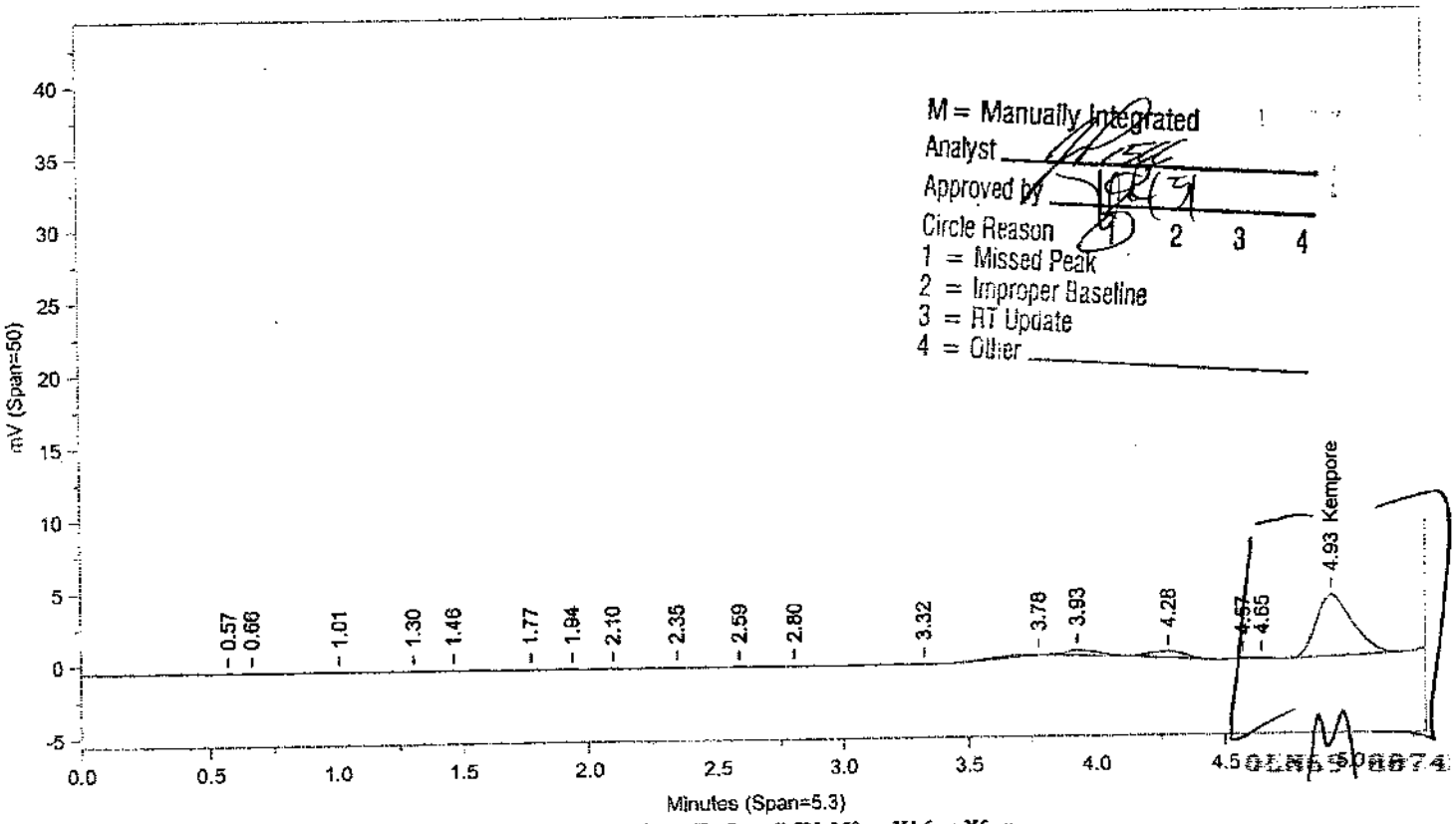
KEMP31124C EPKEMP3EP CCAL 1115999999

LANCASTER LABORATORIES

FILE NAME: C:\CPWIN\DATA1\1K11160.31R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 9:52:15 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP09--X3593B Injected On: 6/9/2011 9:52:15 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.021	5150	8562.453	Kempore	4.928	4227	7381.069	Kempore

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\!K11160.CAL
Calibration File B: C:\CPWIN\DATA1\!K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/10/2011 4:42:00 PM
File Reported On: 6/10/2011 at 4:41:59 PM

Raw QC Data

01LN69 0876

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

PBLK40158

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** BLANKA

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.10R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	230	U

OLM69 0877

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 6/7/11 RI PBLK40158Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 02727 10342

Analysis Report (A)

Injected on	: JUN 09, 2011 19:41:44
Instrument	: CP09–X3593A
Result file	: 1K11160.10R
Calibration file	: 1K11160.CAL
Method file	: KEMP.MET

Analysis Report (B)

Injected on	: JUN 09, 2011 19:41:44
Instrument	: CP09–X3593B
Result file	: 1K11160B.10R
Calibration file	: 1K11160B.CAL
Method file	: KEMPB.MET

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.12	2.21	108	180.264862

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore			<1000	<230			

Units: ug/l

Reviewed by: [signature]
Date: 6/16/11

Verified by: Valerie Tomayko
JUN 17 2011
Date:
Valerie Tomayko
Senior Specialist

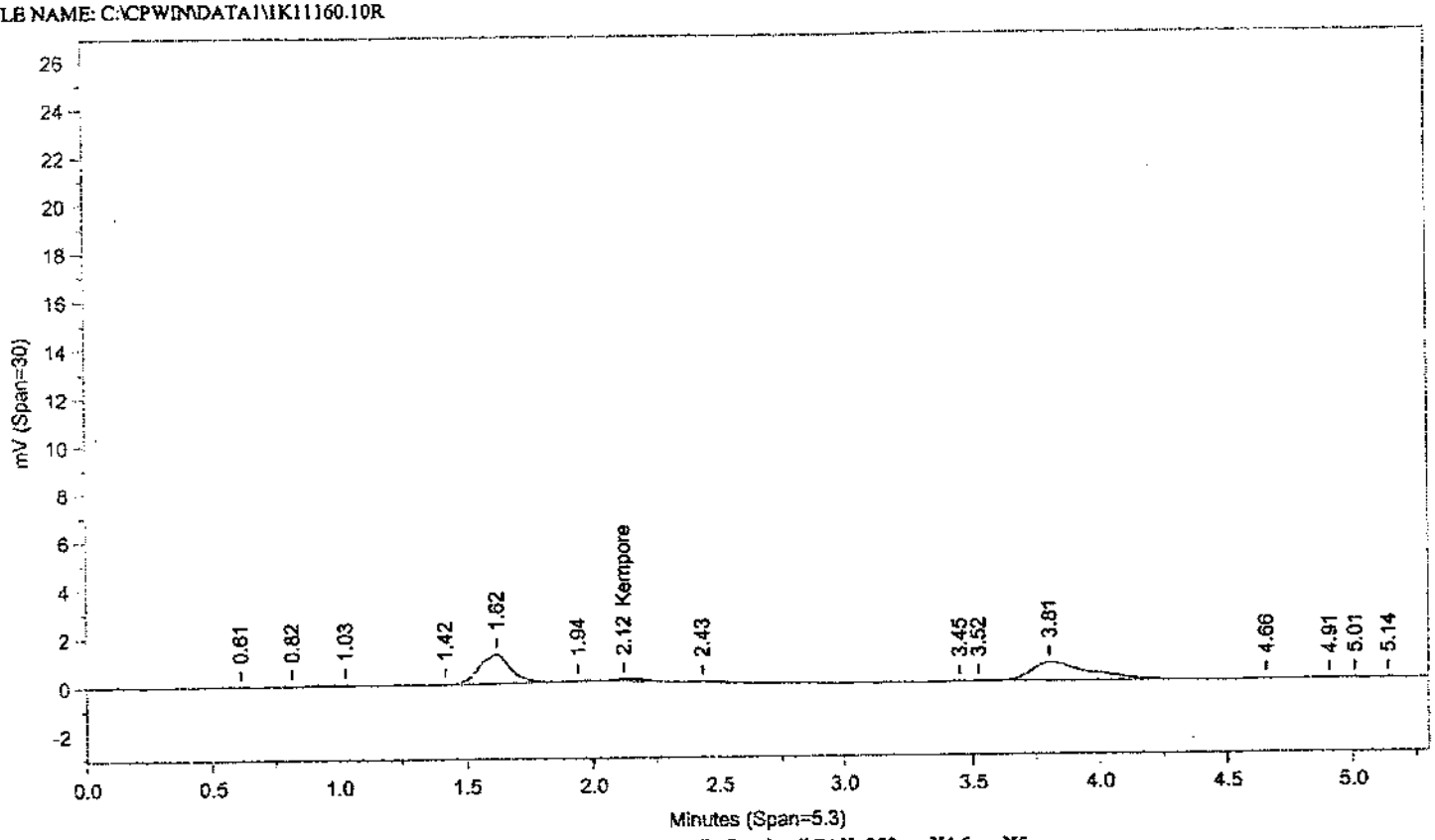
0LN69 0079

%Difference = High - Low Amount divided by the Average times 100

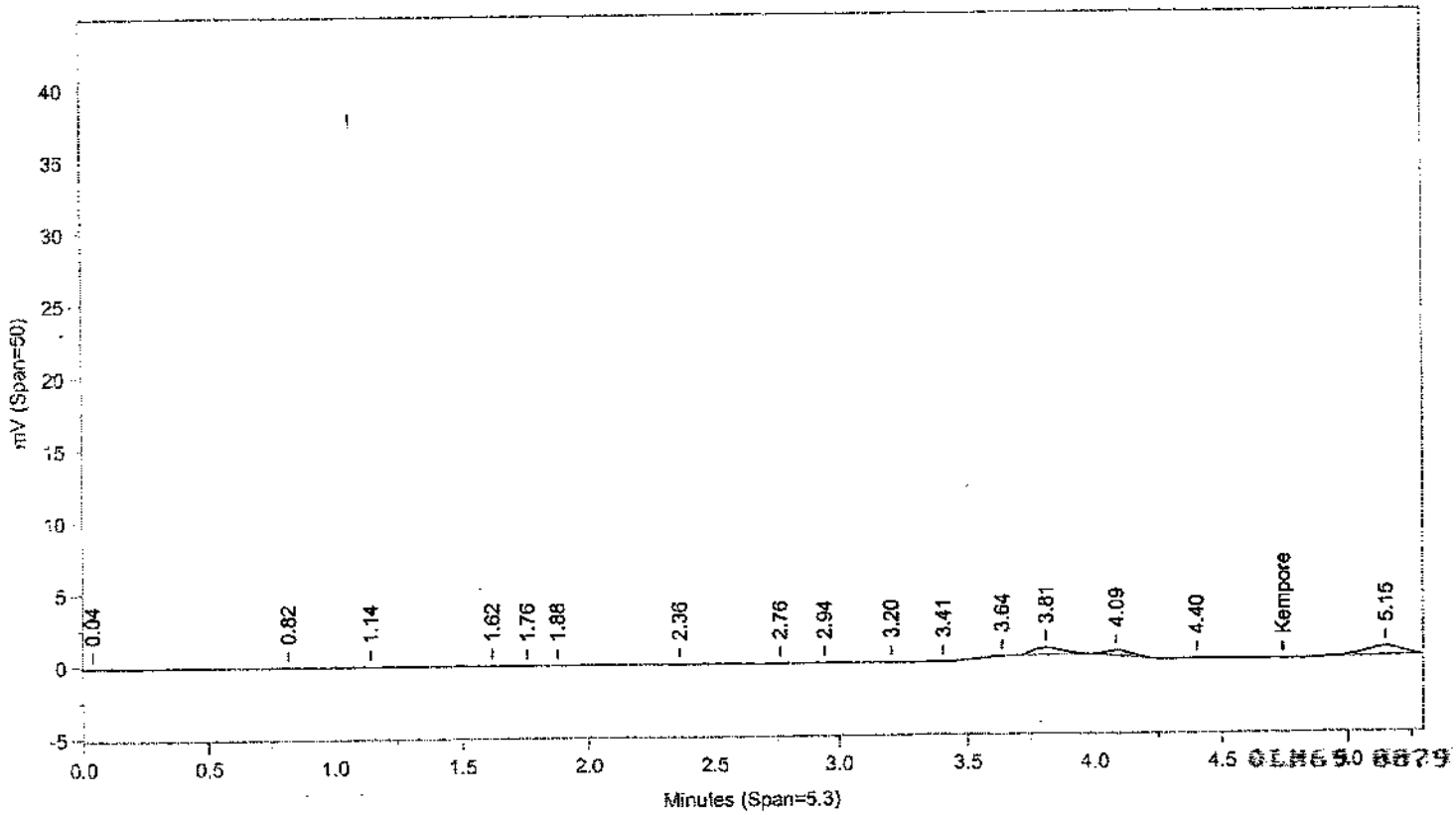
* Recovery outside QC Limits

Printed on: 6/10/11 16:49:02

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\IK11160.10R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:41:43 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:41:43 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.123	108	180.265	Kempore			0	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.10A
Area File: C:\CPWIN\DATA1\1K11160B.10A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:04:38 PM
File Reported On: 6/9/2011 at 8:04:47 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

LCS40158

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** LCSA

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.11R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	8000	P

01N69' 8881

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 6/7/11 RI LCS40158 Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 02727 10342

Analysis Report (A)

Injected on : JUN 09, 2011 19:47:57
Instrument : CP09-X3593A
Result file : 1K11160.11R
Calibration file : 1K11160.CAL
Method file : KEMP.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.13	2.21	4798	7977.625977

Analysis Report (B)

Injected on : JUN 09, 2011 19:47:57
Instrument : CP09-X3593B
Result file : 1K11160B.11R
Calibration file : 1K11160B.CAL
Method file : KEMPB.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	4.60	4.56	4.90	4685	8157.018066

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore	(A)	7978	<1000	<230			

Units: ug/l

Reviewed by: [signature]
Date: 6/16/11

Verified by: Valerie Tomayko
Date: JUN 17 2011

Valerie Tomayko
Senior Specialist

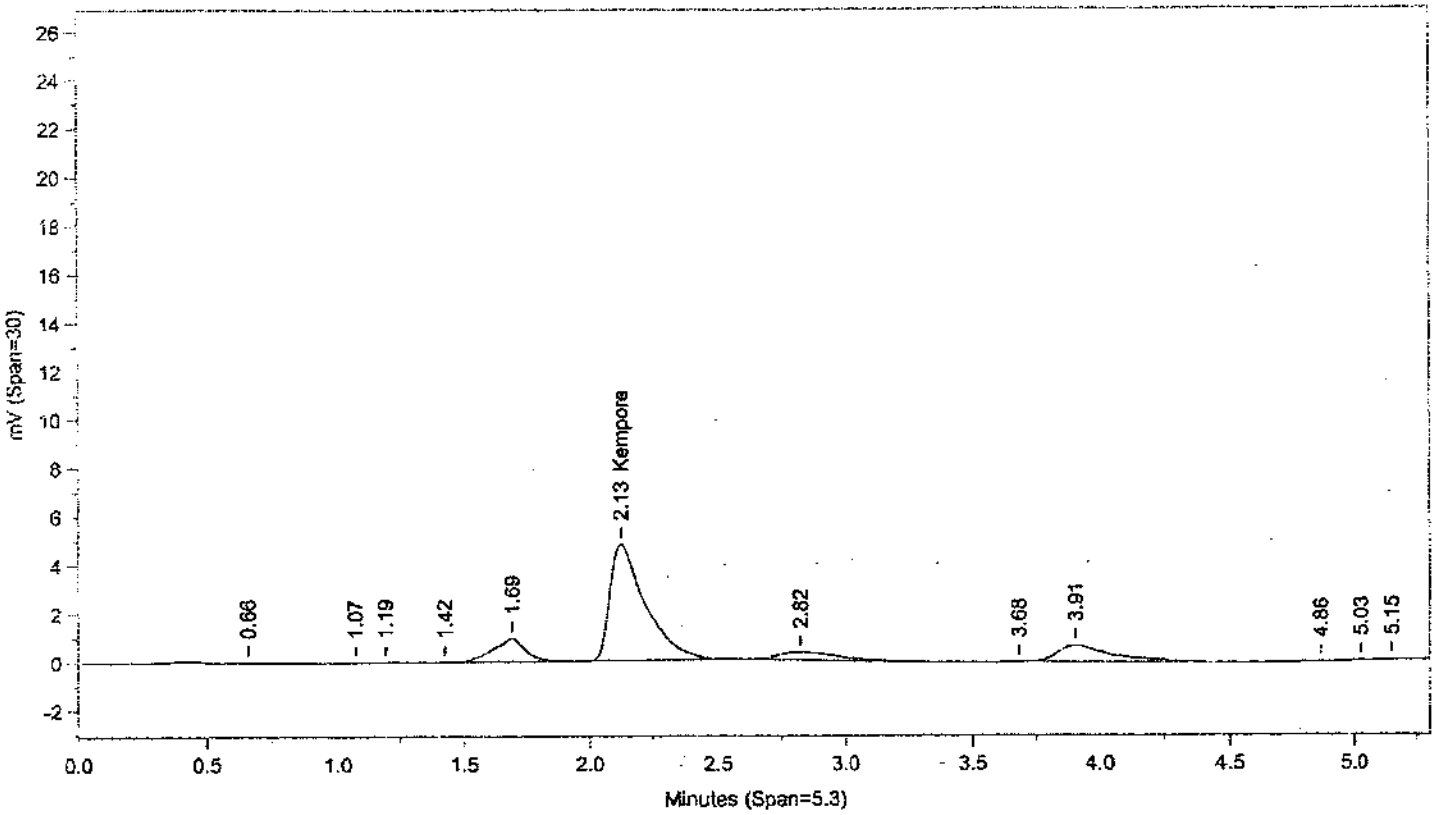
01869 0062

%Difference = High - Low Amount divided by the Average times 100

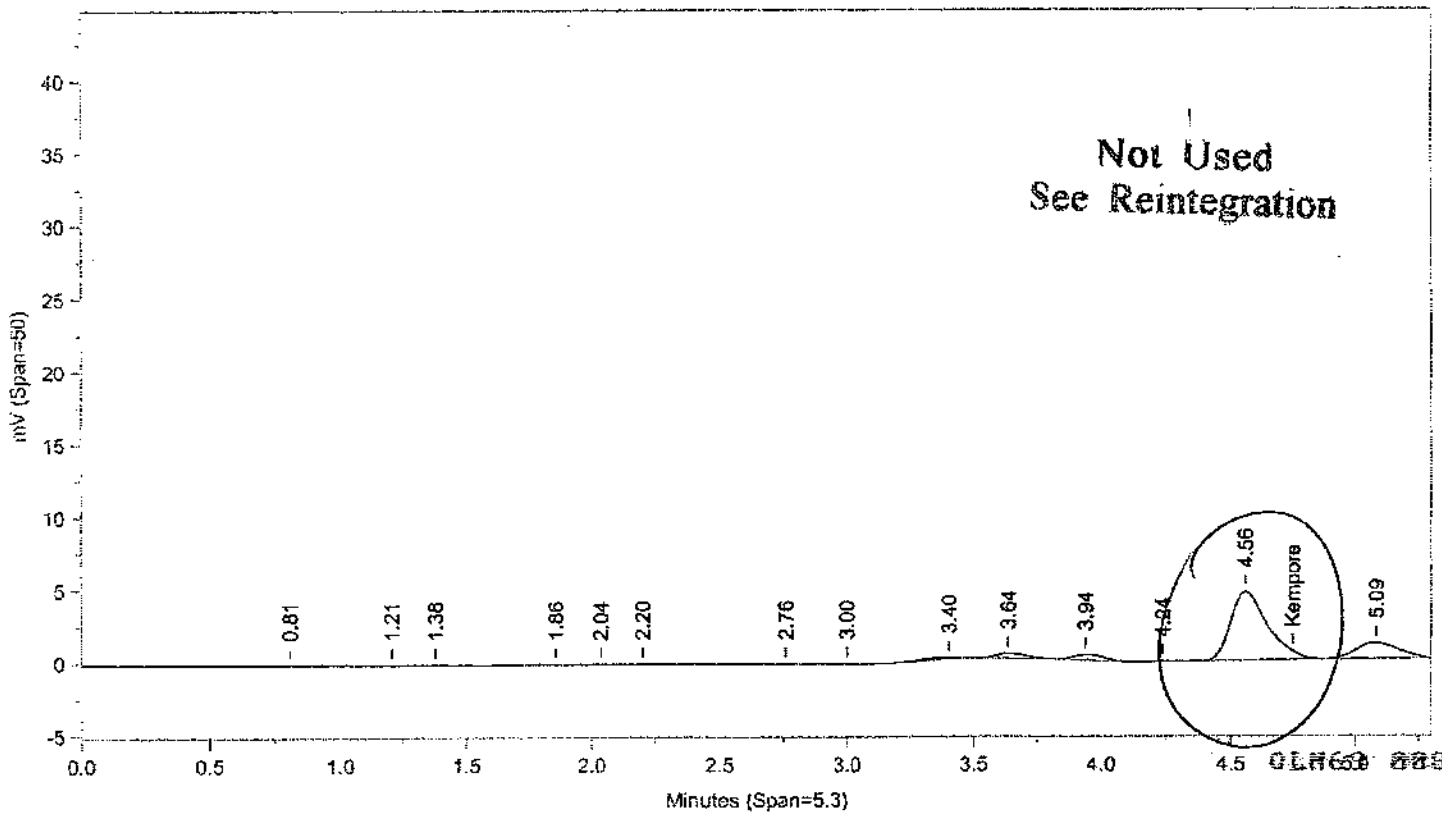
* Recovery outside QC Limits

Printed on: 6/10/11 16:49:21

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.11R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:47:56 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:47:56 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

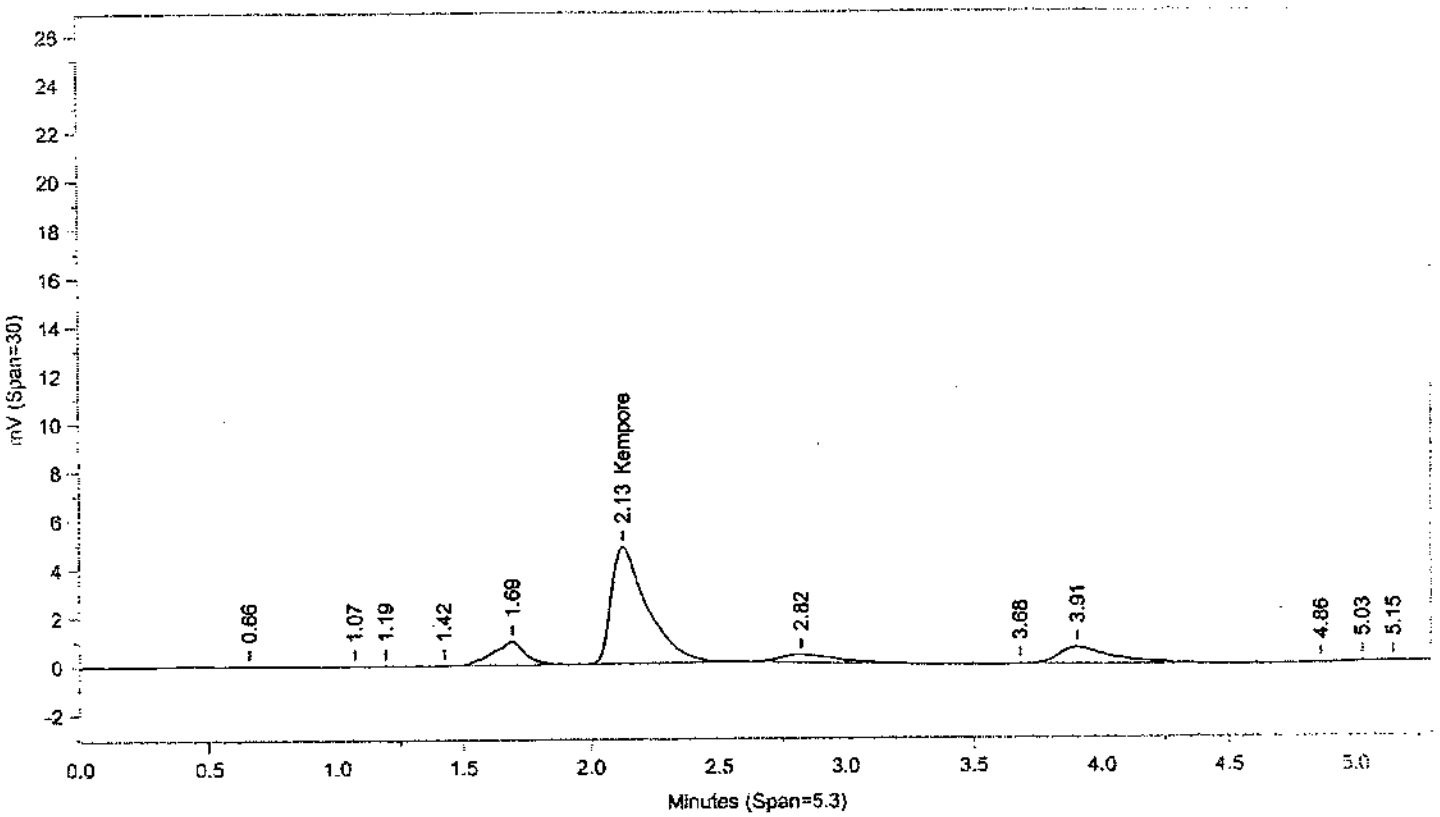
Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.126	4798	7977.626	Kempore			0	Kempore

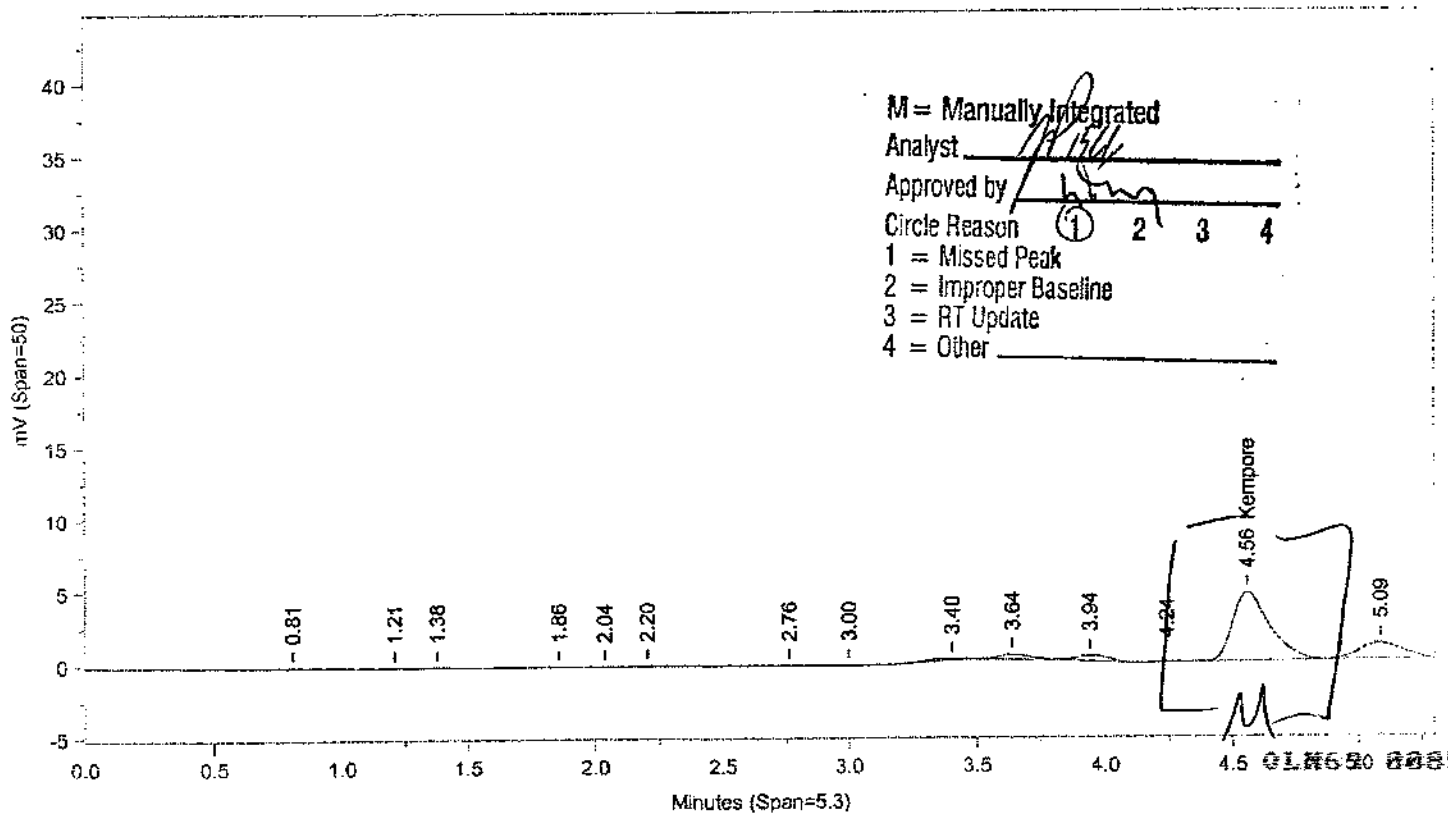
Files:
Area File: C:\CPWIN\DATA1\1K11160.11A
Area File: C:\CPWIN\DATA1\1K11160B.11A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:04:58 PM
File Reported On: 6/9/2011 at 8:05:07 PM

Not Used
See Reintegration

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.11R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:47:56 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:47:56 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.126	4798	7977.626	Kempore	4.558	4685	8157.018	Kempore

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/10/2011 4:18:28 PM
File Reported On: 6/10/2011 at 4:18:27 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

LCSD40158

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** LCSDA

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.12R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	8300	P

01M69 0087

FORM I

Lancaster Laboratories Single Component Data Summary

Sample Name: LCSDA 6/7/11 RI LCSD40158 Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 02727 10342

Analysis Report (A)

Injected on : JUN 09, 2011 19:54:10
Instrument : CP09--X3593A
Result file : 1K11160.12R
Calibration file : 1K11160.CAL
Method file : KEMP.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.08	2.21	4985	8289.089844

Analysis Report (B)

Injected on : JUN 09, 2011 19:54:10
Instrument : CP09--X3593B
Result file : 1K11160B.12R
Calibration file : 1K11160B.CAL
Method file : KEMPB.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	4.60	4.74	4.90	4608	8027.290527

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore	(A)	8289	<1000	<230			

Units: ug/l

Reviewed by: [signature]
Date: 6/16/11

Verified by: Valerie Tomayko
Date: JUN 17 2011

Valerie Tomayko
Senior Specialist

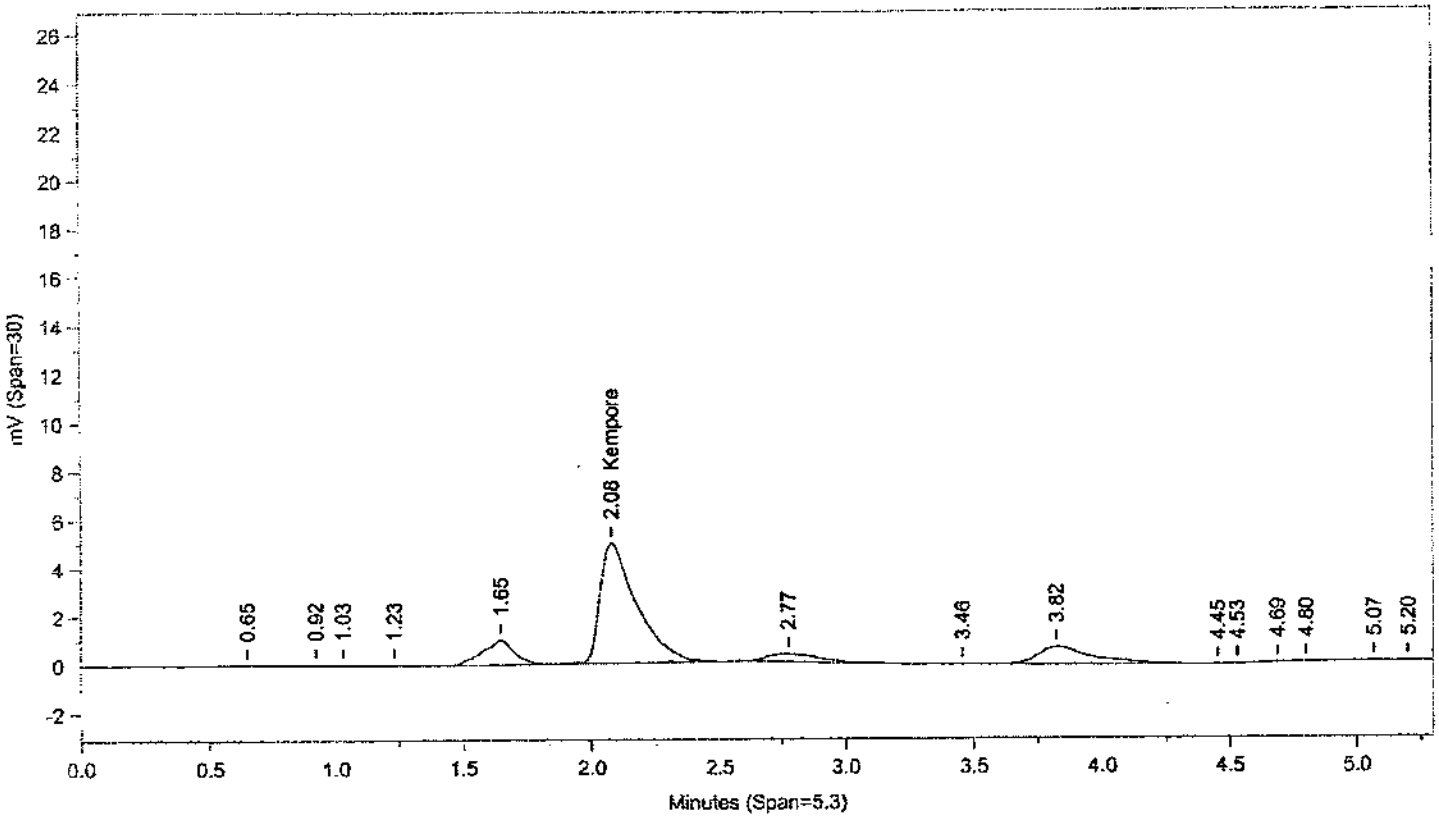
01N69 0888

%Difference = High - Low Amount divided by the Average times 100

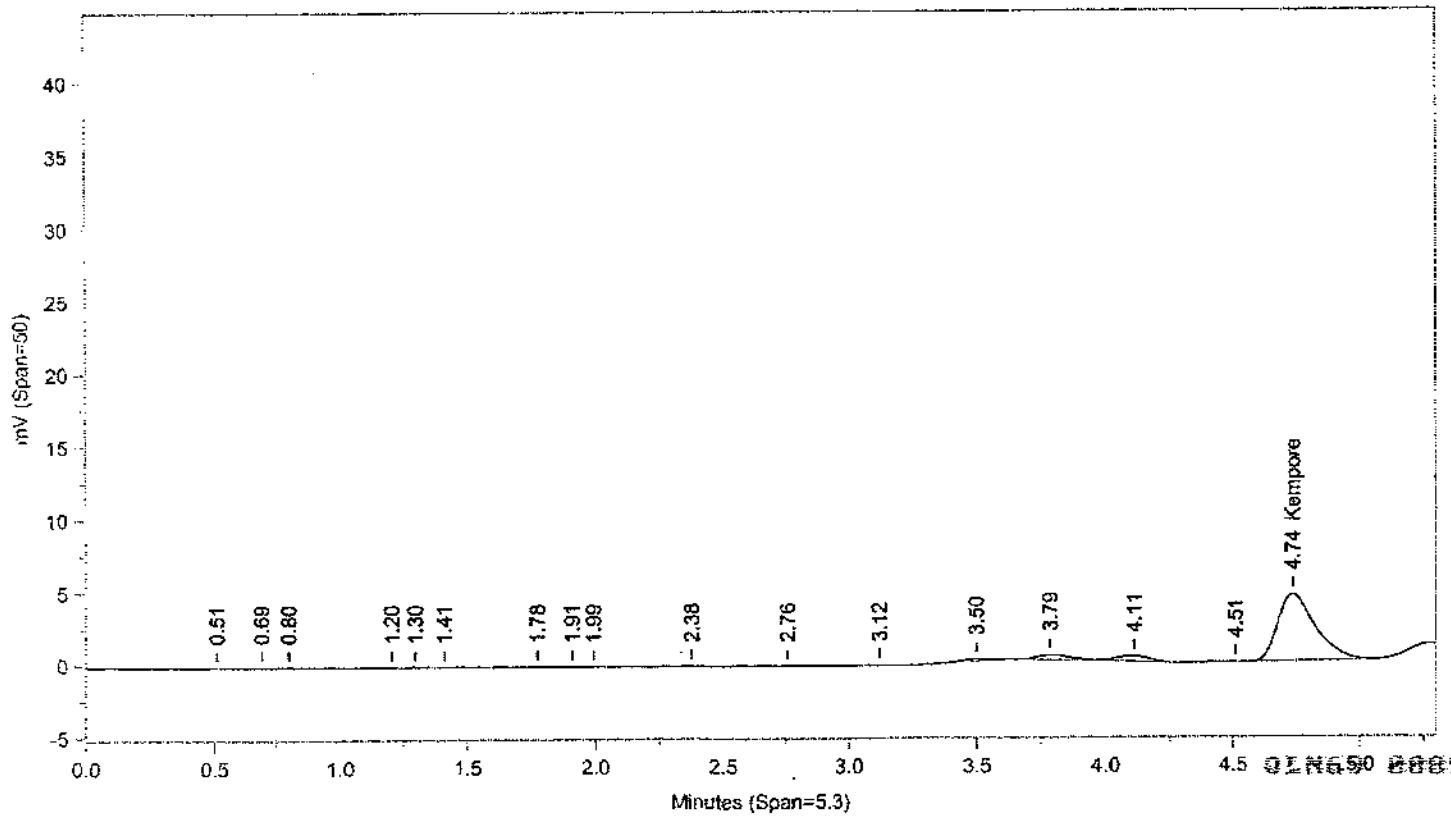
* Recovery outside QC Limits

Printed on: 6/10/11 16:49:39

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.12R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 7:54:09 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 7:54:09 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.08	4985	8289.09	Kempore	4.738	4608	8027.291	Kempore

Files:
Area File: C:\CPWIN\DATA1\1K11160.12A
Area File: C:\CPWIN\DATA1\1K11160B.12A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\1K11160.CAL
Calibration File B: C:\CPWIN\DATA1\1K11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:05:22 PM
File Reported On: 6/9/2011 at 8:05:31 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1- MS

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308056

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.17R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	19000	

OLN69 8891

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: **6308056** MS RI ISC1- Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02727 10342

Analysis Report (A)

Injected on : JUN 09, 2011 20:25:13
Instrument : CP09-X3593A
Result file : 1K11160.17R
Calibration file : 1K11160.CAL
Method file : KEMP.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.07	2.21	11281	18757.314453

Analysis Report (B)

Injected on : JUN 09, 2011 20:25:13
Instrument : CP09-X3593B
Result file : 1K11160B.17R
Calibration file : 1K11160B.CAL
Method file : KEMPB.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	4.60	4.73	4.90	9739	16717.941406

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore	A	18757.31	<1000	<230			

Units: ug/l

Reviewed by: [signature] Verified by: Valerie Tomayko

Date: 6/16/11 Date: JUN 17 2011

Valerie Tomayko
Senior Specialist

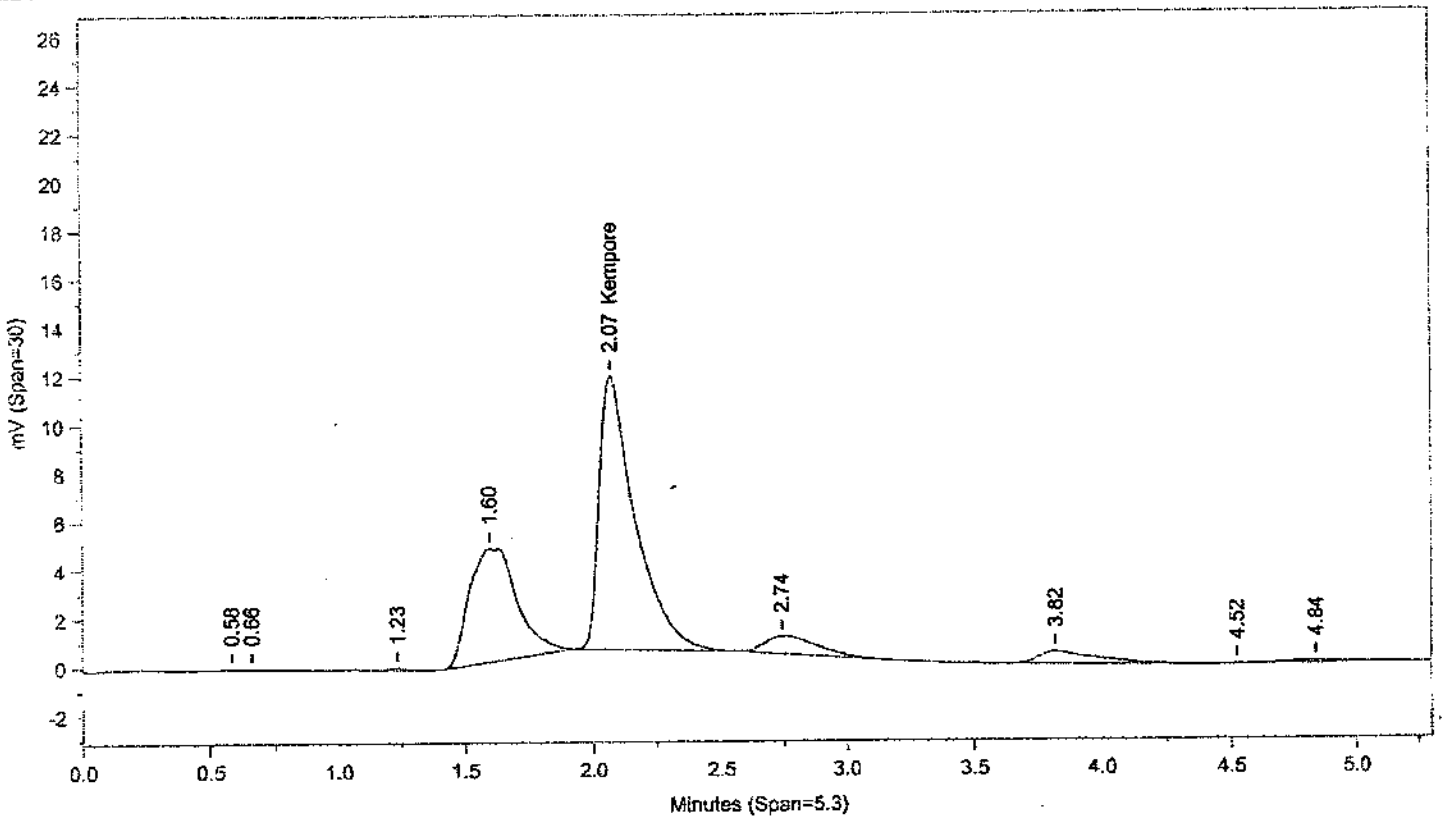
OLN69 0092

%Difference = High - Low Amount divided by the Average times 100

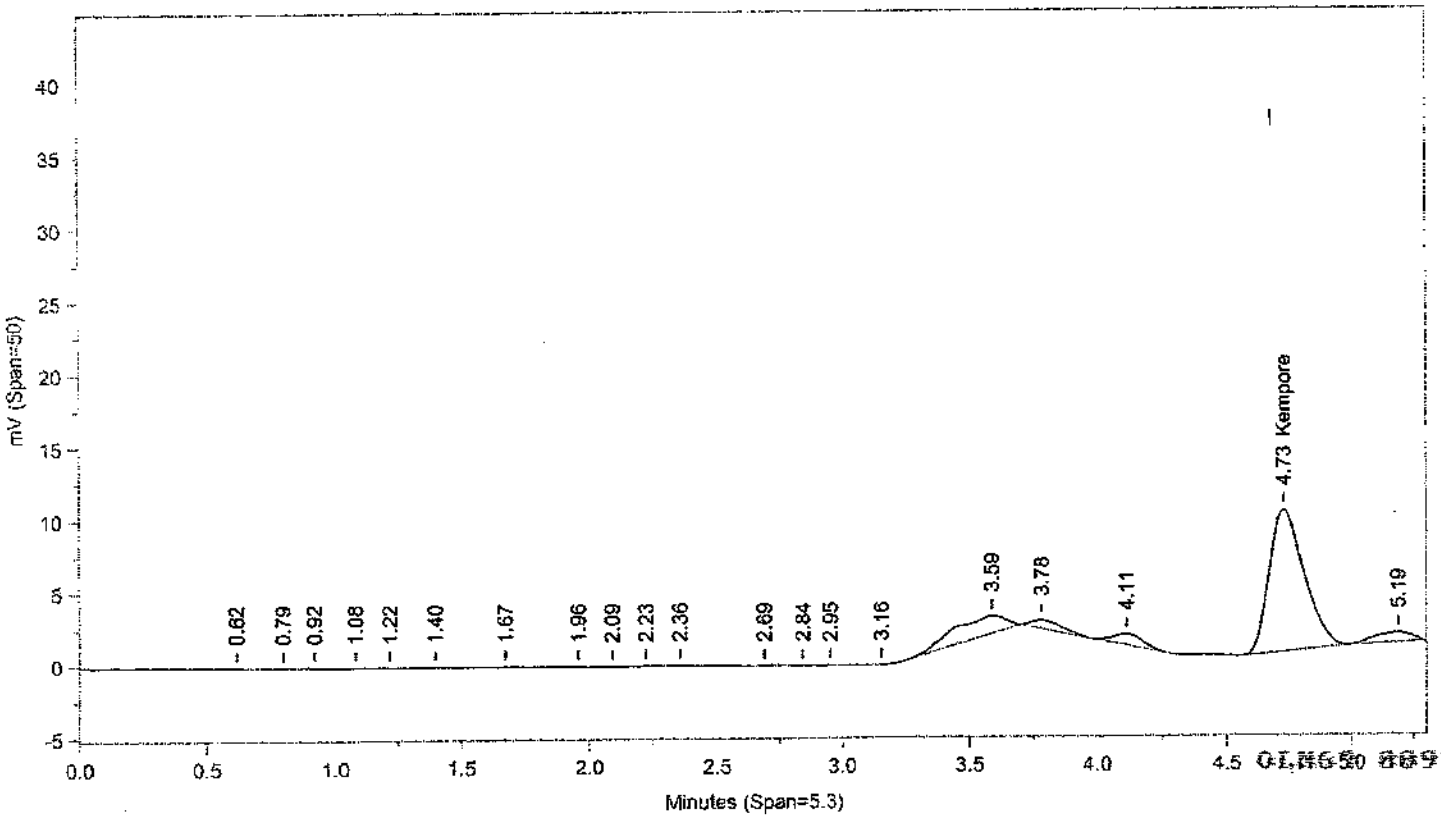
* Recovery outside QC Limits

Printed on: 6/10/11 16:51:08

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.17R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:25:12 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:25:12 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.075	11281	18757.31	Kempore	4.729	9739	16717.94	Kempore

Files:
Area File: C:\CPWIN\DATA1\IK11160.17A
Area File: C:\CPWIN\DATA1\IK11160B.17A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\IK11160.CAL
Calibration File B: C:\CPWIN\DATA1\IK11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:30:38 PM
File Reported On: 6/9/2011 at 8:30:46 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1- MSD

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111580040A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308057

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1K11160.18R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/7/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/9/2011

Injection Volume: 35 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
123-77-3	Kempore	16000	

OLN69 0095

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: **6308057** MSD RI !SC1- Sample ID: AA **Batchnumber: 111580040A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02727 10342

Analysis Report (A)

Injected on : JUN 09, 2011 20:31:26
Instrument : CP09--X3593A
Result file : 1K11160.18R
Calibration file : 1K11160.CAL
Method file : KEMP.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	1.91	2.07	2.21	9917	16488.925781

Analysis Report (B)

Injected on : JUN 09, 2011 20:31:26
Instrument : CP09--X3593B
Result file : 1K11160B.18R
Calibration file : 1K11160B.CAL
Method file : KEMPB.MET
%SSR(Kempore) :

Peak name	Min	R.T.	Max	Height	Amount
Kempore	4.60	4.69	4.90	8560	14720.937500

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Kempore	(A)	16489	<1000	<230			

Units: ug/l

Reviewed by: [signature]
Date: 6/16/11

Verified by: Valerie Tomayko JUN 17 2011
Date:
Valerie Tomayko
Senior Specialist

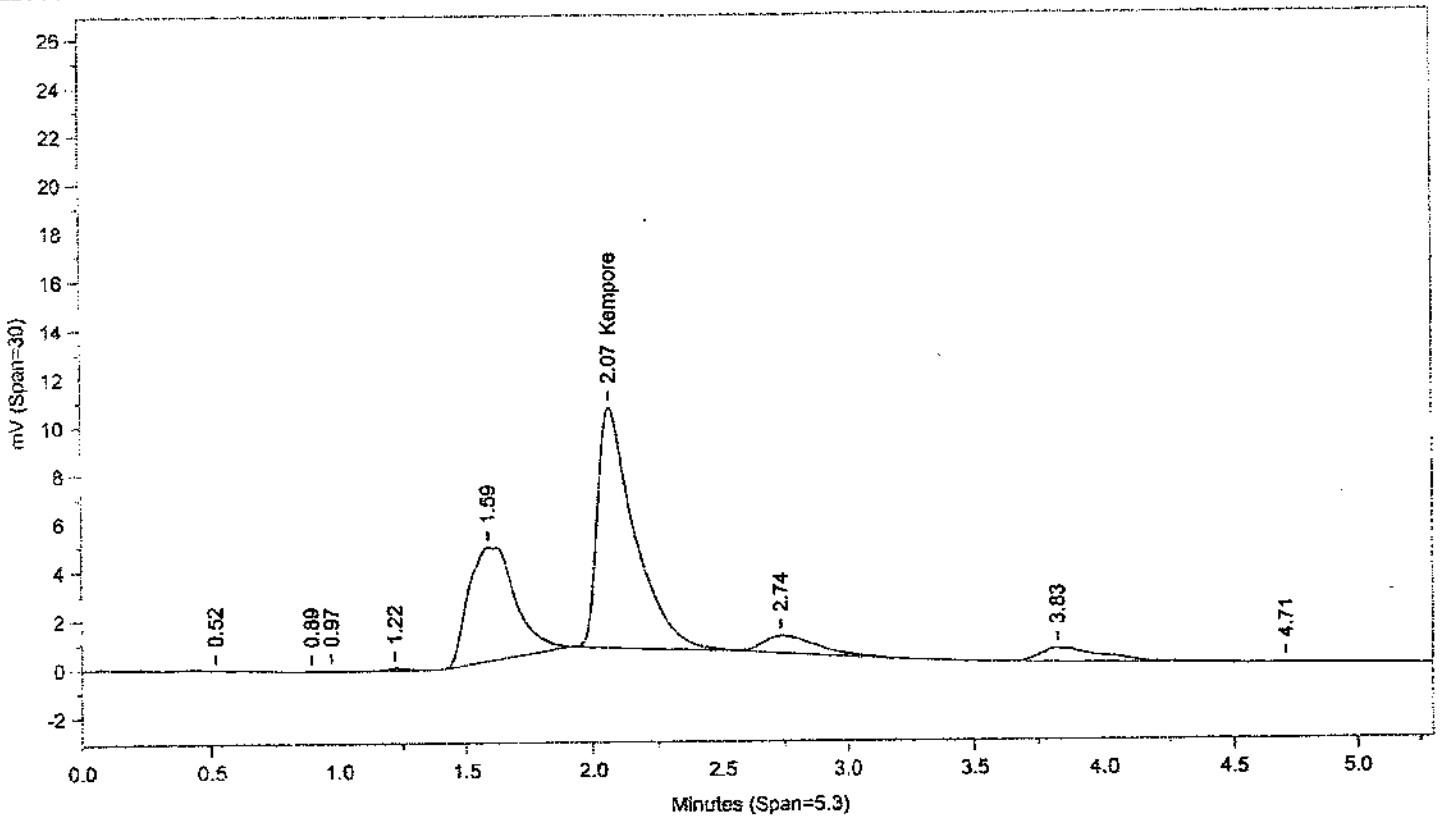
OLN69 8296

%Difference = High - Low Amount divided by the Average times 100

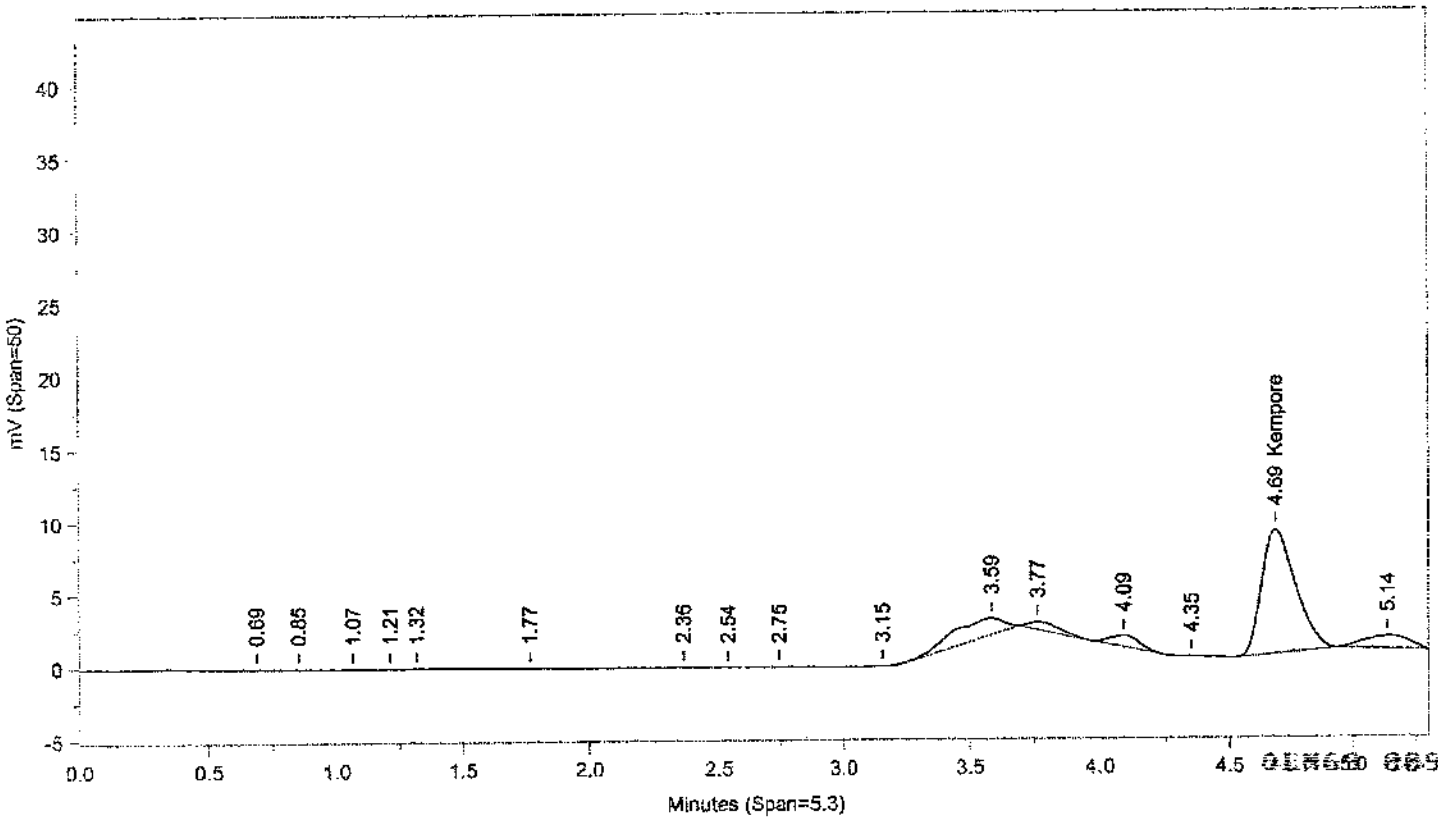
* Recovery outside QC Limits

Printed on: 6/10/11 16:51:27

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1K11160.18R



Instrument ID: CP09--X3593A Injected On: 6/9/2011 8:31:25 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--X3593B Injected On: 6/9/2011 8:31:25 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 100% Phosphate Buffer

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.07	9917	16488.93	Kempore	4.689	8560	14720.94	Kempore

Files:
Area File: C:\CPWIN\DATA1\IK11160.18A
Area File: C:\CPWIN\DATA1\IK11160B.18A
Method A: C:\CPWIN\DATA1\KEMP.MET
Method B: C:\CPWIN\DATA1\KEMPB.MET
Calibration File A: C:\CPWIN\DATA1\IK11160.CAL
Calibration File B: C:\CPWIN\DATA1\IK11160B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/9/2011 8:36:50 PM
File Reported On: 6/9/2011 at 8:36:59 PM

Extraction/Distillation/Digestion Logs

QLH69 8899

Organic Extraction Batchlog Assigned to: 1566 James Place

Reviewed by: NZT|047 Start Date: 6/7/11 Start time: 6:00pm

111580040A

Tech 1: [illegible] Tech 2:

Dept: 24	Prep Analysis: 00000										Kempore In Water
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
6308056MS	ISC1-	10			ST1114324A	1.0	10				Yellowish
6308057MSD	ISC1-	10			⊥	1.0	10				⊥
BLANKA	PBLK40158	10					10			N/C	
LCSA	LCS40158	10			ST1114324A	1.0	10			⊥	
LCSDA	LCSD40158	10			⊥	1.0	10			⊥	

ST1114324A - Kempore Stock

Sample #		Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	Due Date	Prio
1	6308055BKG	ISC1-	10			10				Yellowish	02727	06/17/2011	P
2	6308058	ISC1D	10			10				⊥	02727	06/17/2011	P
3	6308059	ISC2-	10			10					02727	06/17/2011	P
4	6308074	PZ16R	10			10				Sediment	02727	06/17/2011	P
5	6308075	PZ17R	10			10				⊥	02727	06/17/2011	P
6	6308076	-SD-1	10			10				⊥	02727	06/17/2011	P

Rack ID: 46		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	111580040A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Opex Data

GLN69 8181

Case Narrative Conformance/Nonconformance Summary

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN69

Pesticide Residue Analysis
Fraction: Opex

Opex in Water

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
6308055	OC-SW-ISCO-1-XXX	X		Unspiked
6308056	OC-SW-ISCO-1-XMS	X		Matrix Spike
6308057	OC-SW-ISCO-1-MSD	X		Matrix Spike Duplicate
6308058	OC-SW-ISCO-1-DUP	X		Field Duplicate Sample
6308059	OC-SW-ISCO-2-XXX	X		

See QC Reference List for Associated Batch QC Samples

SAMPLE PREPARATION:

No problems were encountered with the preparation of the samples.

ANALYSIS:

There were no dilutions performed for analyses associated with samples in this SDG.

No problems were encountered with the analysis of the samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

All QC is within specification.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	
LCSD = Lab Control Sample Duplicate	* = Out of Specification

OLN69 0103

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN69

Pesticide Residue Analysis
Fraction: Opex

Narrative Reviewed and Approved 6/23/2011 by M. Susan Kreider
(Date)
M. SUSAN KREIDER
SENIOR SPECIALIST

OLN69 0184

Quality Control and Calibration Summary Forms

Lancaster Laboratories

Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Olin Corporation
SDG: OLN69

Fraction: Opex

Analysis	Batch Number	Sample Number	Analysis Date
Opex in Water	111610022A	PBLK22161	06/10/2011 21:09:00
		LCS22161	06/10/2011 21:16:00
		LCSD22161	06/10/2011 21:23:00
		6308055 UNSPK	06/10/2011 21:30:00
		6308056 MS	06/10/2011 21:36:00
		6308057 MSD	06/10/2011 21:43:00
		6308058	06/10/2011 21:50:00
		6308059	06/10/2011 21:57:00

OLN69 0106

Lancaster Laboratories

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: OLN69
Matrix: LIQUID

Fraction: Opex

111610022 / PBLK22161 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Opex in Water	06/10/11	N.D.	ug/l	20	100

OLN69 0187

Lancaster Laboratories

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: OLN69
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Opex

LCS: LCS22161 LCSD: LCSD22161 **Analyte**	Batch: **111610022A** (Sample number(s): 6308055-6308059)							
	Spike Added ug/l	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Opex in Water	740	690	690	93	93	70-130	0	30

OLN69 8188

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: OLN69
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Opex

UNSPK: 6308055 MS: 6308056 MSD: 6308057 **Analyte**	Batch: **111610022A** (Sample number(s): 6308055-6308059)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Opex in Water	740	N.D.	140.	160.	19 *	22 *	70-130	13	30

OLN69 0189

Results are being reported on an as received basis.

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: K3593A
Calibration File: 1X11161
GC Column (1) : SUP-PAH
ID: 4.6 (mm)
Update File:
Date(s) Analyzed: 6/10/2011 6/10/2011

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	~~MIDPOINT~~ Level 2 RT	RT WINDOW FROM	TO
Opex	2.12	2.11	2.12	2.13	2.13	2.12	2.02	2.22

JH 566
6/14/11

FORM VI-1

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: K3593A Calibration File: 1X11161

GC Column (1) : SUP-PAH ID: 4.6 (mm) Date(s) Analyzed: 6/10/2011 6/10/2011

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
Opex	6.71E+00	5.31E+00	4.59E+00	4.46E+00	4.32E+00	5.08E+00	19.4

Linear

Average % RSD: 19.4

1566
6/14/11

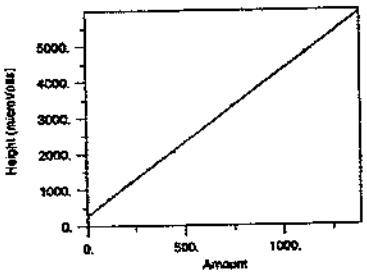
OLN69 8121

FORM VI-2

Calibration File Name: **C:\CPWIN\DATA1\1X11161.CAL** Version = 19
External standard calibration
No injection volume correction
No sample weight correction
Area reject threshold = 100
Reference peak area reject threshold = 1000
Amount units =
1 components with 5 levels each

1 Opex
Retention time = 2.120 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by height

Level	Amount	Height	Height/Amt	Source	Date and time
1	111.000	744.5	6.706909	1X11161.08A	6/14/2011 6:47:5
2	222.000	1178.8	5.309752	1X11161.07A	6/14/2011 6:47:3
3	444.000	2039.2	4.592723	1X11161.06A	6/14/2011 6:47:0
4	740.000	3302.1	4.462337	1X11161.05A	6/14/2011 6:46:4
5	1110.000	4793.2	4.318211	1X11161.04A	6/14/2011 6:46:1



Calibration formula: Y = 4.07 X + 273.425
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 1.08%
Average CF = 5.0780 with RSD = 19.44%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: K3593B
Calibration File: 1X11161B
GC Column (2) : CAPCELL-CN ID: 4.6 (mm)
Update File:
Date(s) Analyzed: 6/10/2011 6/10/2011

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	~~MIDPOINT~~ Level 1 RT	RT WINDOW FROM	TO
Opex	5.31	5.34	5.33	5.25	5.25	5.31	5.21	5.41

6/14/11

0LN69 0113

FORM VI-1

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: K3593B
Calibration File: 1X11161B
GC Column (2) : CAPCELL-CN ID: 4.6 (mm)
Date(s) Analyzed: 6/10/2011 6/10/2011

COMPOUND	CALIBRATION FACTORS						%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	MEAN	
Opex	3.41E+00	2.79E+00	2.33E+00	2.13E+00	2.01E+00	2.53E+00	22.5 — Linear

Average % RSD: 22.5

JP 1566
6/14/11

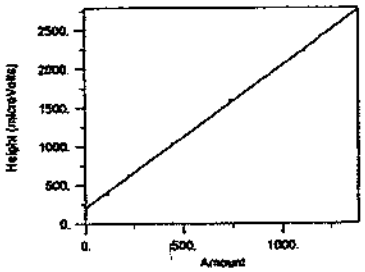
01N69 0114

FORM VI-2

Calibration File Name: **C:\CPWIN\DATA1\1X11161B.CAL** Version = 21
External standard calibration
No injection volume correction
No sample weight correction
Area reject threshold = 100
Reference peak area reject threshold = 1000
Amount units =
1 components with 5 levels each

1 Opex
Retention time = 5.311 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by height

Level	Amount	Height	Height/Amt	Source	Date and time
1	111.000	378.0	3.405406	Manual	6/14/2011 6:52:1
2	222.000	619.5	2.790514	1X11161B.07A	6/14/2011 6:47:4
3	444.000	1034.2	2.329351	1X11161B.06A	6/14/2011 6:47:2
4	740.000	1576.4	2.130264	1X11161B.05A	6/14/2011 6:46:5
5	1110.000	2232.3	2.011071	1X11161B.04A	6/14/2011 6:46:3



Calibration formula: Y = 1.845 X + 198.64
Fit type = Linear with equal weighting
Coefficient of determination = 0.9994, Average error = 2.24%
Average CF = 2.5333 with RSD = 22.53%

GLN69 8115

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code:
Case No.:
SAS No.:
SDG No.:
Instrument: K3593A
Init. Calib Date(s): 06/10/11 06/10/11
GC Column (1) : SUP-PAH ID: 4.6 (mm)
Date Analyzed: 06/10/11
Lab File ID: 1X11161.19R
Time Analyzed: 22:11
Lab Standard ID: OPEX3DW
Initial Calibration: 1X11161

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Opex	2.18	2.02	2.22	388.85	444.00	-12.4

Average of %D: 12.4

GLM69 8116

FORM VII

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: K3593B Init. Calib Date(s): 06/10/11 06/10/11

GC Column (2) : CAPCELL-CN ID: 4.6 (mm) Date Analyzed: 06/10/11

Lab File ID: 1X11161B.19R Time Analyzed: 22:11

Lab Standard ID: OPEX3DW Initial Calibration: 1X11161B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Opex	5.10	5.21	5.41	435.98	444.00	-1.8

Average of %D: 1.8

OLN69 8117

FORM VII

8D
ANALYTICAL SEQUENCE

Sequence: 1X11161 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: SUP-PAH ID: 4.6

Instrument: K3593A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001		CONDITIONER	06/10/2011	20:07:47	1X11161
002		CONDITIONER	06/10/2011	20:14:38	1X11161
003		CONDITIONER	06/10/2011	20:21:30	1X11161
004	OPEX5AA	OPEX51124C	06/10/2011	20:28:21	1X11161
005	OPEX4AA	OPEX41124C	06/10/2011	20:35:12	1X11161
006	OPEX3AA	OPEX31124C	06/10/2011	20:42:03	1X11161
007	OPEX2AA	OPEX21124C	06/10/2011	20:48:55	1X11161
008	OPEX1AA	OPEX11124C	06/10/2011	20:55:46	1X11161
009	MDOXXAA	MDOXX1124C	06/10/2011	21:02:38	1X11161
010	PBLK22161	BLANKA	06/10/2011	21:09:29	1X11161
011	LCS22161	LCSA	06/10/2011	21:16:20	1X11161
012	LCSD22161	LCSDA	06/10/2011	21:23:12	1X11161
013	ISC1-	6308055	06/10/2011	21:30:04	1X11161
014	ISC1-	6308056	06/10/2011	21:36:55	1X11161
015	ISC1-	6308057	06/10/2011	21:43:47	1X11161
016	ISC1D	6308058	06/10/2011	21:50:39	1X11161
017	ISC2-	6308059	06/10/2011	21:57:31	1X11161
018	PZ16R	6308074	06/10/2011	22:04:22	1X11161
019	OPEX3DW	OPEX31124C	06/10/2011	22:11:14	1X11161
020	PZ17R	6308075	06/10/2011	22:18:05	1X11161
021	-SD-1	6308076	06/10/2011	22:24:57	1X11161
022	5-XXX	6309550	06/10/2011	22:31:49	1X11161
023	1-XXX	6309553	06/10/2011	22:38:41	1X11161
024	2-XXX	6309554	06/10/2011	22:45:34	1X11161
025	S-XXX	6309555	06/10/2011	22:52:26	1X11161
026	EDSD0	6310720	06/10/2011	22:59:18	1X11161
027	EDSD1	6310721	06/10/2011	23:06:10	1X11161
028	EDSD2	6310722	06/10/2011	23:13:03	1X11161
029	EDSD5	6310723	06/10/2011	23:19:55	1X11161
030	OPEX3DX	OPEX31124C	06/10/2011	23:26:47	1X11161
031	MMB-2	6310724	06/10/2011	23:33:39	1X11161
032	OPEX3DY	OPEX31124C	06/10/2011	23:40:32	1X11161

8D
ANALYTICAL SEQUENCE

Sequence: 1X11161B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL-CN ID: 4.6

Instrument: K3593B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001		CONDITIONER	06/10/2011	20:07:47	1X11161B
002		CONDITIONER	06/10/2011	20:14:38	1X11161B
003		CONDITIONER	06/10/2011	20:21:30	1X11161B
004	OPEX5AA	OPEX51124C	06/10/2011	20:28:21	1X11161B
005	OPEX4AA	OPEX41124C	06/10/2011	20:35:12	1X11161B
006	OPEX3AA	OPEX31124C	06/10/2011	20:42:03	1X11161B
007	OPEX2AA	OPEX21124C	06/10/2011	20:48:55	1X11161B
008	OPEX1AA	OPEX11124C	06/10/2011	20:55:46	1X11161B
009	MDOXXAA	MDOXX1124C	06/10/2011	21:02:38	1X11161B
010	PBLK22161	BLANKA	06/10/2011	21:09:29	1X11161B
011	LCS22161	LCSA	06/10/2011	21:16:20	1X11161B
012	LCSD22161	LCSDA	06/10/2011	21:23:12	1X11161B
013	ISC1-	6308055	06/10/2011	21:30:04	1X11161B
014	ISC1-	6308056	06/10/2011	21:36:55	1X11161B
015	ISC1-	6308057	06/10/2011	21:43:47	1X11161B
016	ISC1D	6308058	06/10/2011	21:50:39	1X11161B
017	ISC2-	6308059	06/10/2011	21:57:31	1X11161B
018	PZ16R	6308074	06/10/2011	22:04:22	1X11161B
019	OPEX3DW	OPEX31124C	06/10/2011	22:11:14	1X11161B
020	PZ17R	6308075	06/10/2011	22:18:05	1X11161B
021	-SD-1	6308076	06/10/2011	22:24:57	1X11161B
022	5-XXX	6309550	06/10/2011	22:31:49	1X11161B
023	1-XXX	6309553	06/10/2011	22:38:41	1X11161B
024	2-XXX	6309554	06/10/2011	22:45:34	1X11161B
025	S-XXX	6309555	06/10/2011	22:52:26	1X11161B
026	EDSD0	6310720	06/10/2011	22:59:18	1X11161B
027	EDSD1	6310721	06/10/2011	23:06:10	1X11161B
028	EDSD2	6310722	06/10/2011	23:13:03	1X11161B
029	EDSD5	6310723	06/10/2011	23:19:55	1X11161B
030	OPEX3DX	OPEX31124C	06/10/2011	23:26:47	1X11161B
031	MMB-2	6310724	06/10/2011	23:33:39	1X11161B
032	OPEX3DY	OPEX31124C	06/10/2011	23:40:32	1X11161B

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

LCS22161

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Lab Sample ID: LCSA **Date(s) Analyzed:** 6/10/2011 6/10/2011

Instrument ID (1): K3593A **Instrument ID (2):** K3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Opex	1	2.11	2.02	2.22	690	
	2	5.32	5.21	5.41	690	0.0

OLN69 0128

FORM X PEST - 1

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

LCSD22161

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Lab Sample ID: LCSDA **Date(s) Analyzed:** 6/10/2011 6/10/2011

Instrument ID (1): K3593A **Instrument ID (2):** K3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Opex	1	2.13	2.02	2.22	690	
	2	5.24	5.21	5.41	690	0.0

01N69 8121

FORM X PEST - 1

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

ISC1- MS

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Lab Sample ID: 6308056 **Date(s) Analyzed:** 6/10/2011 6/10/2011

Instrument ID (1): K3593A **Instrument ID (2):** K3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Opex	1	2.06	2.02	2.22	140	
	2	5.45	5.21	5.41	240	52.6

OLN69 8122

FORM X PEST - 1

10A

IDENTIFICATION SUMMARY

SAMPLE CODE NO.

ISC1-MSD

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Lab Sample ID: 6308057 **Date(s) Analyzed:** 6/10/2011 6/10/2011

Instrument ID (1): K3593A **Instrument ID (2):** K3593B

GC Column (1): **ID:** **(mm)** **GC Column (2):** **ID:** **(mm)**

ANALYTE	COL	RT	FROM	TO	CONCENTRATION	%D
Opex	1	2.06	2.02	2.22	160	
	2	5.34	5.21	5.41	280	54.5

OLN69 0123

FORM X PEST - 1

Sample Data

OLN69 8124

Lancaster Laboratories

LOQ/MDL Summary
Pesticide Residue Analysis

SDG: OLN69

Fraction: Opex

02726: Opex in Water Analyte Name	Default MDL	Default LOQ	Units
Opex in Water	20	100	ug/l

OLN69 0125

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1-

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308055

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.13R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	20	U

OLN69 0126

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: 6308055 ISC1- Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02726 10342

Analysis Report (A)

Injected on	: JUN 10, 2011 21:30:04
Instrument	: CP09--K3593A
Result file	: 1X11161.13R
Calibration file	: 1X11161.CAL
Method file	: OPEX.MET

Analysis Report (B)

Injected on	: JUN 10, 2011 21:30:04
Instrument	: CP09--K3593B
Result file	: 1X11161B.13R
Calibration file	: 1X11161B.CAL
Method file	: OPEXB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			no pk on confirm

Units: ug/l

Reviewed by: [signature] Date: 6/15/11

Verified by: Valerie Tomayko Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

OLN69 0127

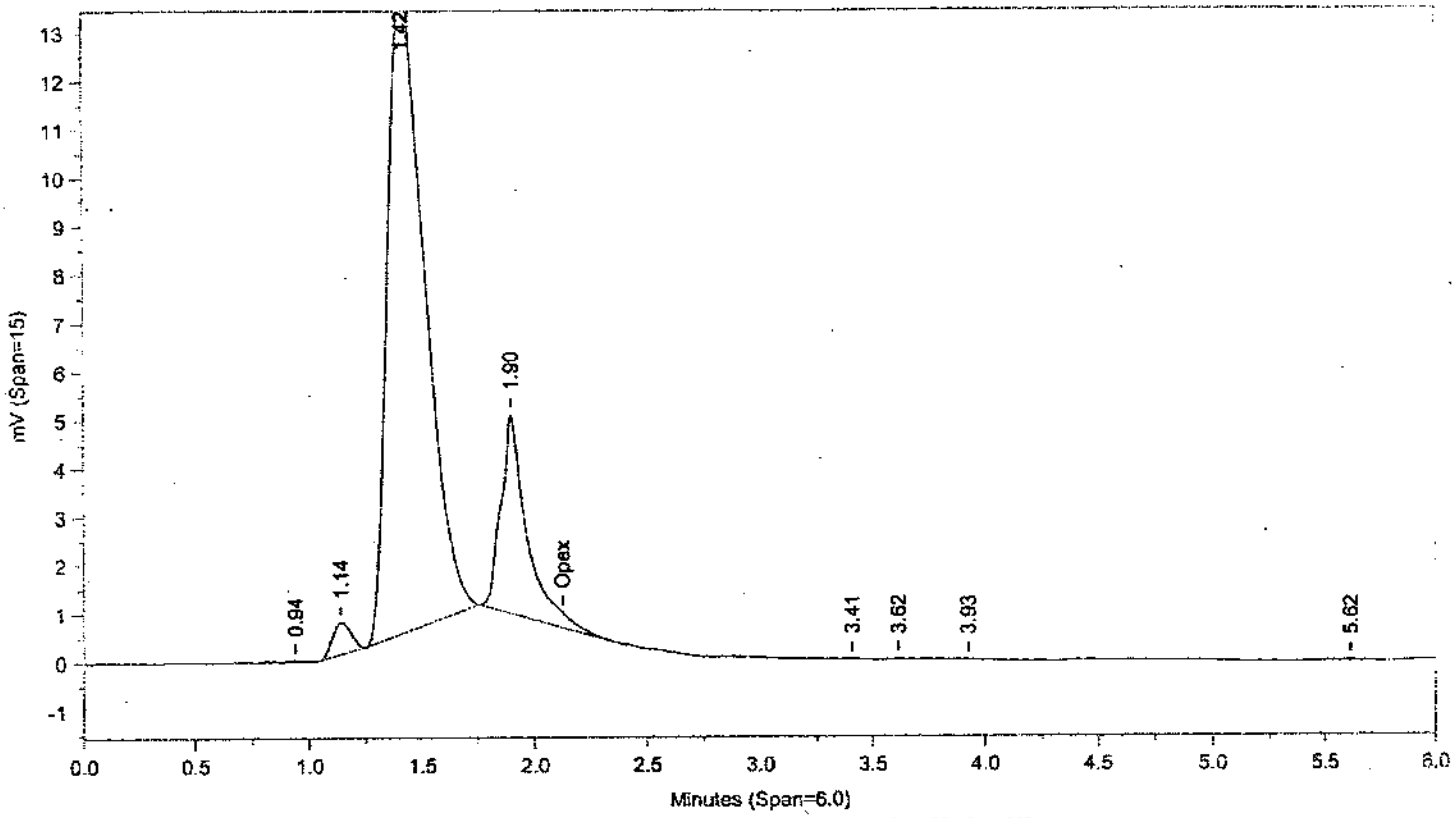
%Difference = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

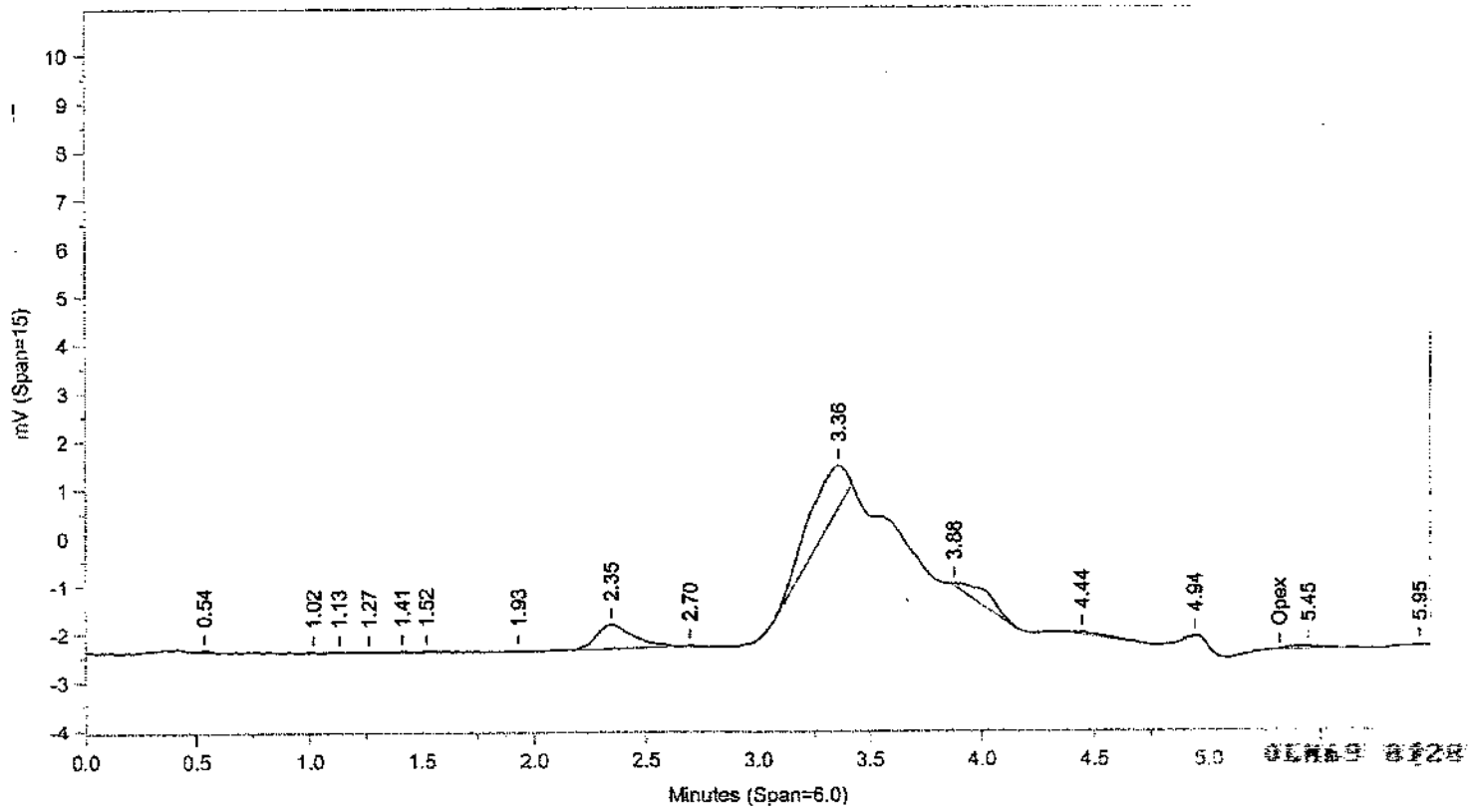
Printed on: 6/14/11 19:22:28

LANCASTER LABORATORIES

FILE NAME: C:\CPWIN\DATA1\1X11161.13R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:30:03 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:30:03 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B

Files:
Area File: C:\CPWIN\DATA1\1X11161.13A
Area File: C:\CPWIN\DATA1\1X11161B.13A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:54:42 PM
File Reported On: 6/14/2011 at 6:54:51 PM

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.
ISC1D

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308058

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.16R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	20	U

OLN69 0138

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: 6308058 ISC1D Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02726 10342

Analysis Report (A)

Injected on	: JUN 10, 2011 21:50:39
Instrument	: CP09--K3593A
Result file	: 1X11161.16R
Calibration file	: 1X11161.CAL
Method file	: OPEX.MET

Analysis Report (B)

Injected on	: JUN 10, 2011 21:50:39
Instrument	: CP09--K3593B
Result file	: 1X11161B.16R
Calibration file	: 1X11161B.CAL
Method file	: OPEXB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			no PK on confirm

Units: ug/l

Reviewed by: 6/16/11 Verified by: Valerie Tomayko

Date: 6/16/11 Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

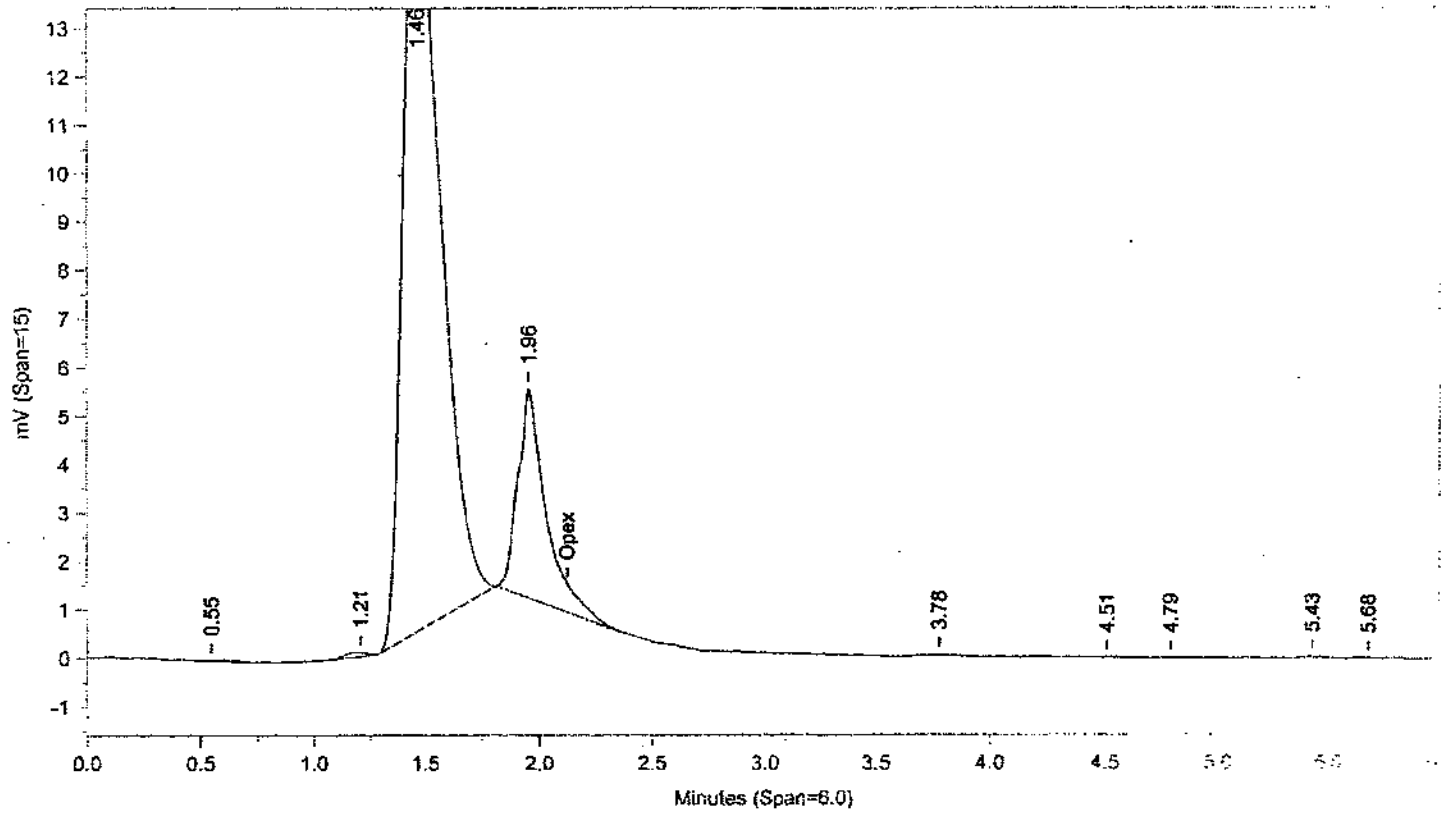
OLN69 0131

%Difference = High - Low Amount divided by the Average times 100

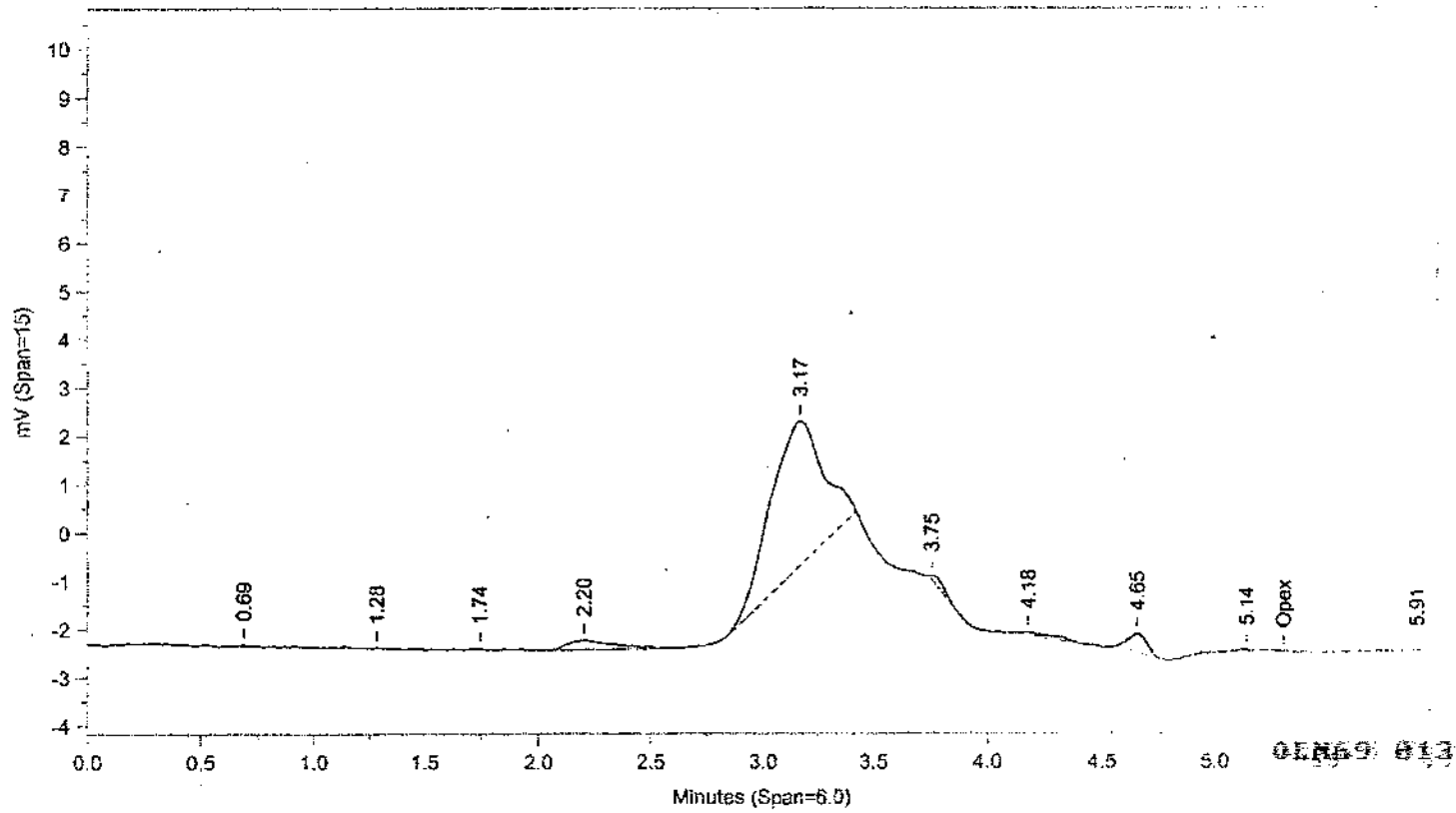
* Recovery outside QC Limits

Printed on: 6/14/11 19:23:24

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.16R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:50:38 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:50:38 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B

Files:
Area File: C:\CPWIN\DATA1\1X11161.16A
Area File: C:\CPWIN\DATA1\1X11161B.16A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:55:42 PM
File Reported On: 6/14/2011 at 6:55:51 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC2-

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308059

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.17R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	20	U

OLN69 0134

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: 6308059 ISC2- Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02726 10342

Analysis Report (A)

Injected on	: JUN 10, 2011 21:57:31
Instrument	: CP09--K3593A
Result file	: 1X11161.17R
Calibration file	: 1X11161.CAL
Method file	: OPEX.MET

Analysis Report (B)

Injected on	: JUN 10, 2011 21:57:31
Instrument	: CP09--K3593B
Result file	: 1X11161B.17R
Calibration file	: 1X11161B.CAL
Method file	: OPEXB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			no pk confirmed

Units: ug/l

Reviewed by: [signature] Date: 6/15/11

Verified by: Valerie Tomayko Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

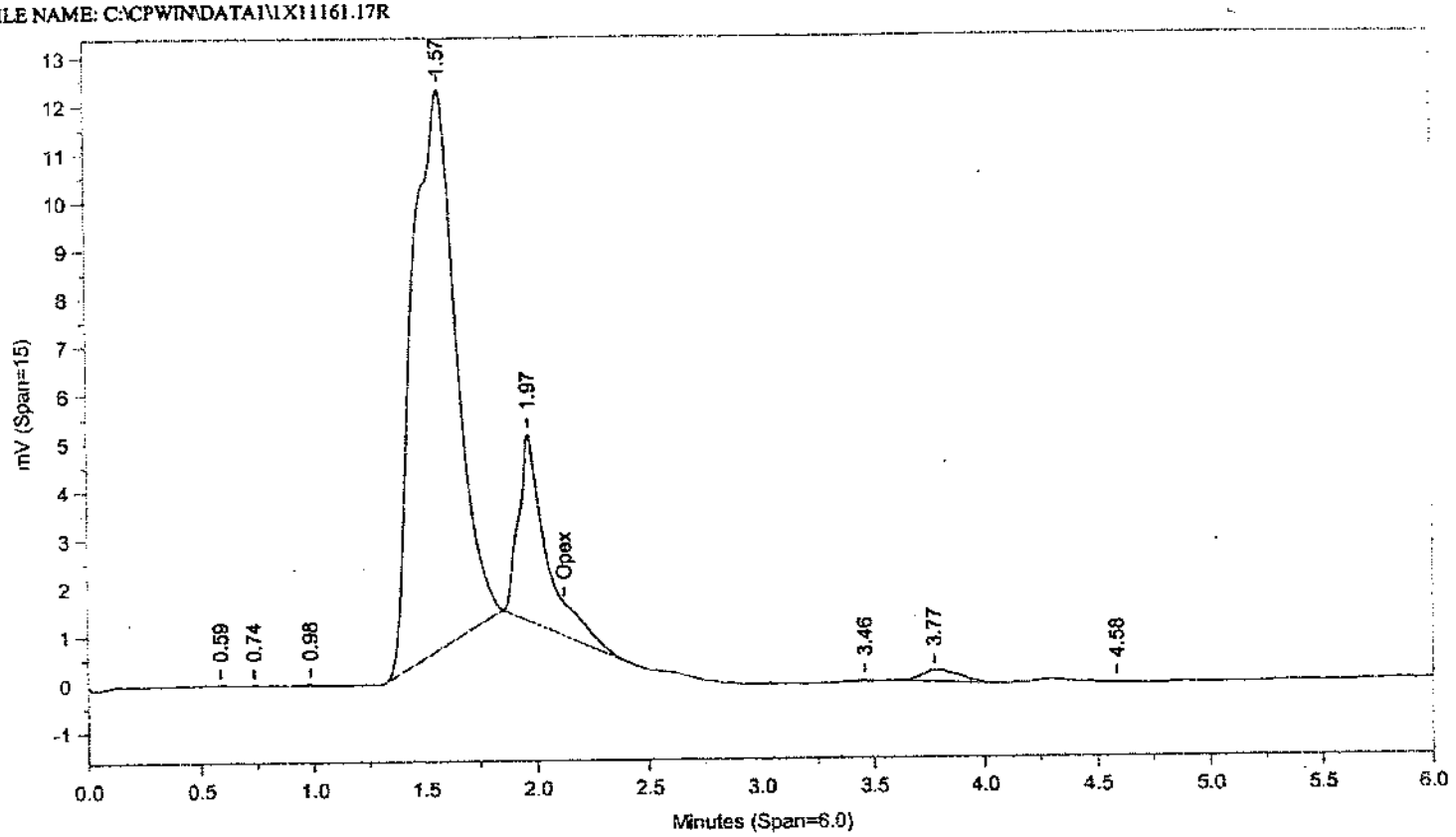
OLN69 0135

%Difference = High - Low Amount divided by the Average times 100

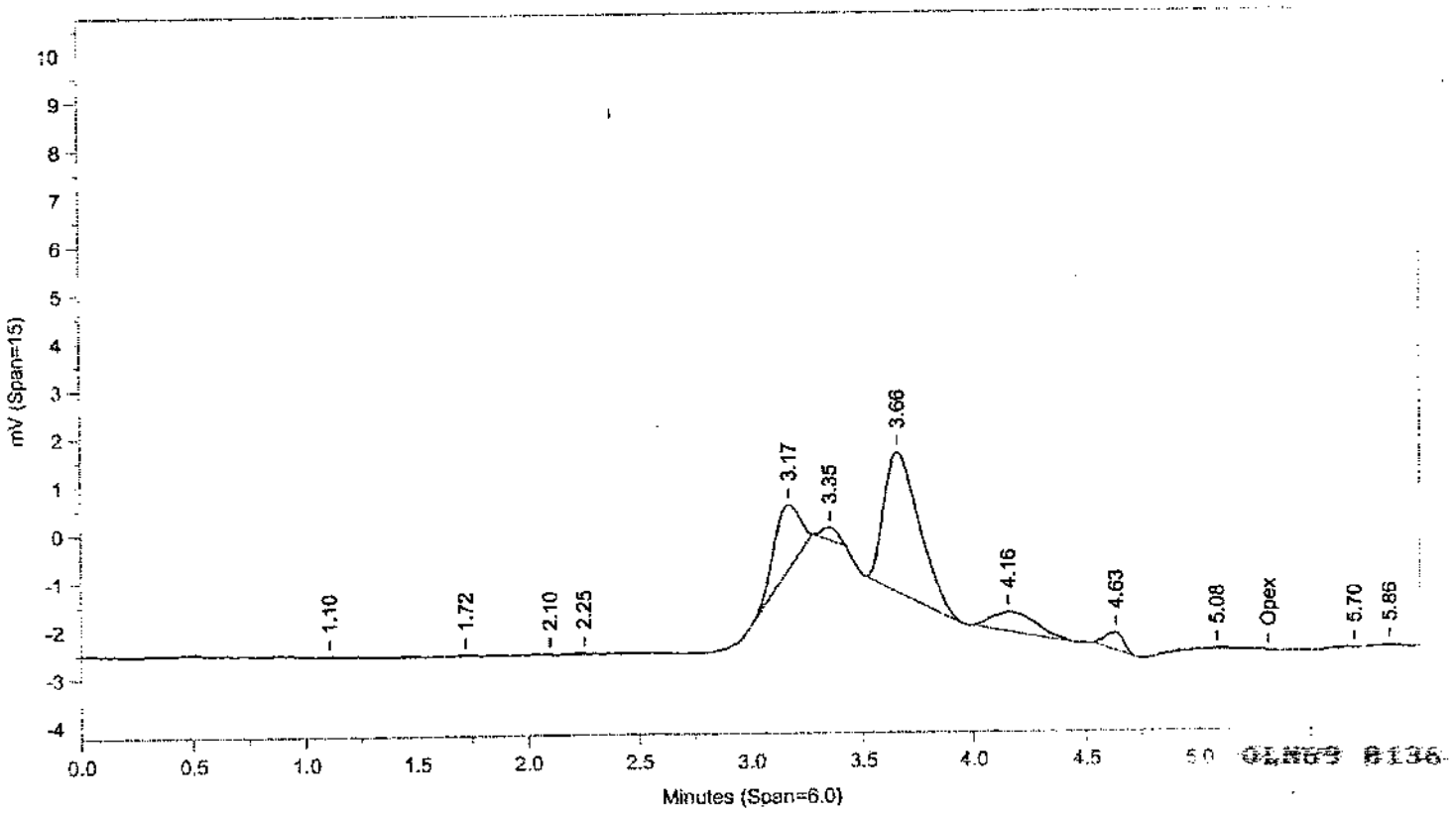
* Recovery outside QC Limits

Printed on: 6/14/11 19:23:43

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.17R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:57:30 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:57:30 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B

Files:
Area File: C:\CPWIN\DATA1\1X11161.17A
Area File: C:\CPWIN\DATA1\1X11161B.17A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:56:02 PM
File Reported On: 6/14/2011 at 6:56:11 PM

Standards Data

0LN69 8138

Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp9\C-Drive\CPWIN\DATA1\1x11161.seq

Chromatography Directory: \\cp9\C-Drive\CPWIN\data1

Method Directory: \\cp9\C-Drive\CPWIN\data1

Number of Entries: 32

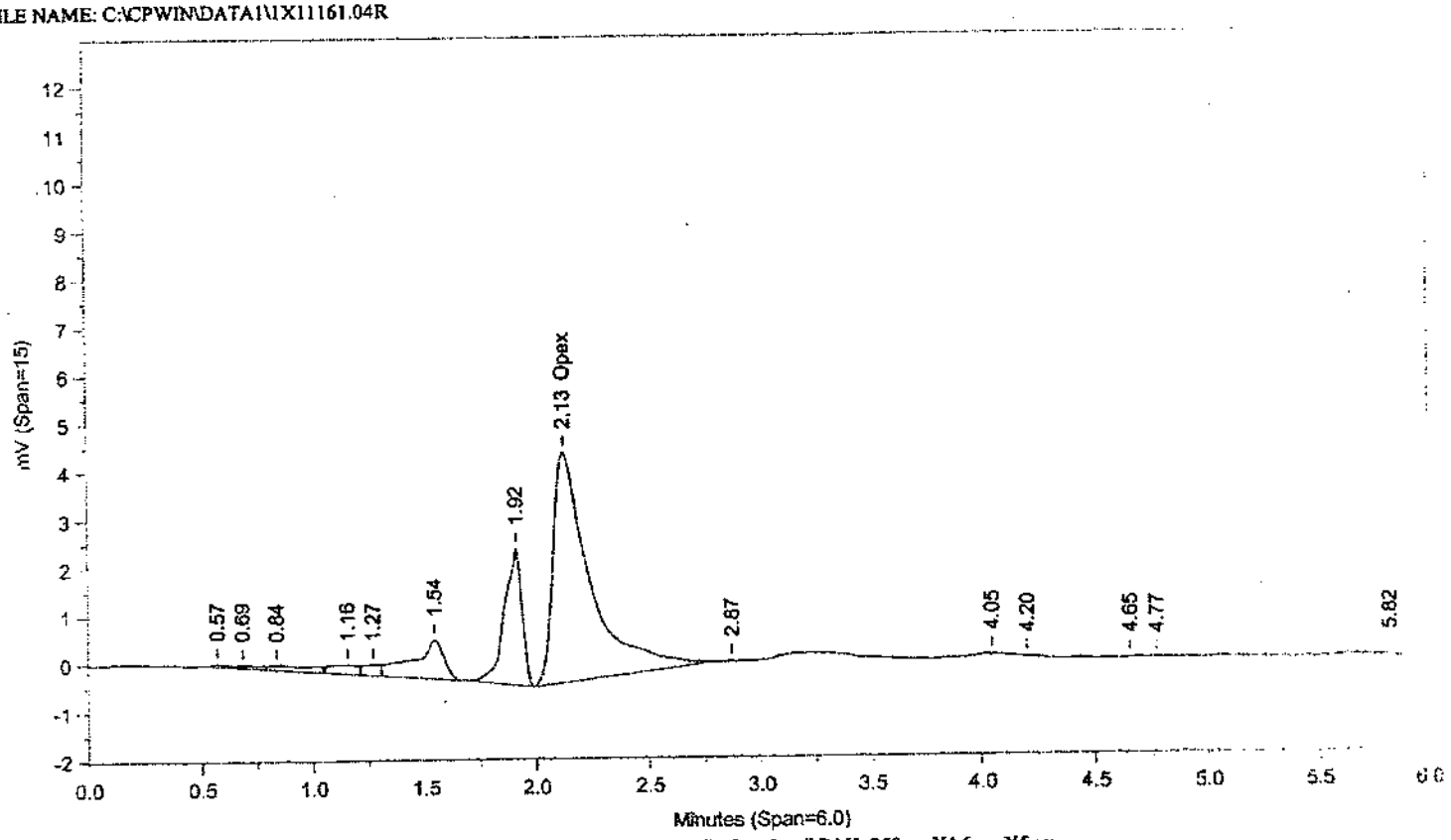
	Samplename	Code	ID	FileName	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	MISC	AA	1x11161.01R	OPEX.MET	1	1	1	0	1116099999	
2	CONDITIONER	MISC	AA	1x11161.02R	OPEX.MET	1	1	1	0	1116099999	
3	CONDITIONER	MISC	AA	1x11161.03R	OPEX.MET	1	1	1	0	1116099999	
4	OPEX51124C	ICAL	AA	1x11161.04R	OPEX.MET	1	1	1	5	1116099999	
5	OPEX41124C	ICAL	AA	1x11161.05R	OPEX.MET	1	1	1	4	1116099999	
6	OPEX31124C	ICAL	AA	1x11161.06R	OPEX.MET	1	1	1	3	1116099999	
7	OPEX21124C	ICAL	AA	1x11161.07R	OPEX.MET	1	1	1	2	1116099999	
8	OPEX11124C	ICAL	AA	1x11161.08R	OPEX.MET	1	1	1	1	1116099999	
9	MDOXX1124C	ICAL	AA	1x11161.09R	OPEX.MET	1	1	1	0	1116099999	
10	BLANKA 6/10/11	BLK	AA	1x11161.10R	OPEX.MET	10	10	1	0	111610022A	02726
11	LCSA 6/10/11	LCS	AA	1x11161.11R	OPEX.MET	10	10	1	0	111610022A	02726
12	LCSDA 6/10/11	LCSD	AA	1x11161.12R	OPEX.MET	10	10	1	0	111610022A	02726
13	6308055	T	AA	1x11161.13R	OPEX.MET	10	10	1	0	111610022A	02726
14	6308056MS	MS	AA	1x11161.14R	OPEX.MET	10	10	1	0	111610022A	02726
15	6308057MSD	MSD	AA	1x11161.15R	OPEX.MET	10	10	1	0	111610022A	02726
16	6308058	T	AA	1x11161.16R	OPEX.MET	10	10	1	0	111610022A	02726
17	6308059	T	AA	1x11161.17R	OPEX.MET	10	10	1	0	111610022A	02726
18	6308074	T	AA	1x11161.18R	OPEX.MET	10	10	1	0	111610022A	02726
19	OPEX31124C	CCAL	DT	1x11161.19R	OPEX.MET	1	1	1	0	1116099999	
20	6308075	T	AA	1x11161.20R	OPEX.MET	10	10	1	0	111610022A	02726
21	6308076	T	AA	1x11161.21R	OPEX.MET	10	10	1	0	111610022A	02726
22	6309550	T	AA	1x11161.22R	OPEX.MET	10	10	1	0	111610022A	02726
23	6309553	T	AA	1x11161.23R	OPEX.MET	10	10	1	0	111610022A	02726
24	6309554	T	AA	1x11161.24R	OPEX.MET	10	10	1	0	111610022A	02726
25	6309555	T	AA	1x11161.25R	OPEX.MET	10	10	1	0	111610022A	02726
26	6310720	T	AA	1x11161.26R	OPEX.MET	10	10	1	0	111610022A	02726
27	6310721	T	AA	1x11161.27R	OPEX.MET	10	10	1	0	111610022A	02726
28	6310722	T	AA	1x11161.28R	OPEX.MET	10	10	1	0	111610022A	02726
29	6310723	T	AA	1x11161.29R	OPEX.MET	10	10	1	0	111610022A	02726
30	OPEX31124C	CCAL	DU	1x11161.30R	OPEX.MET	1	1	1	0	1116099999	
31	6310724	T	AA	1x11161.31R	OPEX.MET	10	10	1	0	111610022A	02726
32	OPEX31124C	CCAL	DV	1x11161.32R	OPEX.MET	1	1	1	0	1116099999	

GLN69 #139

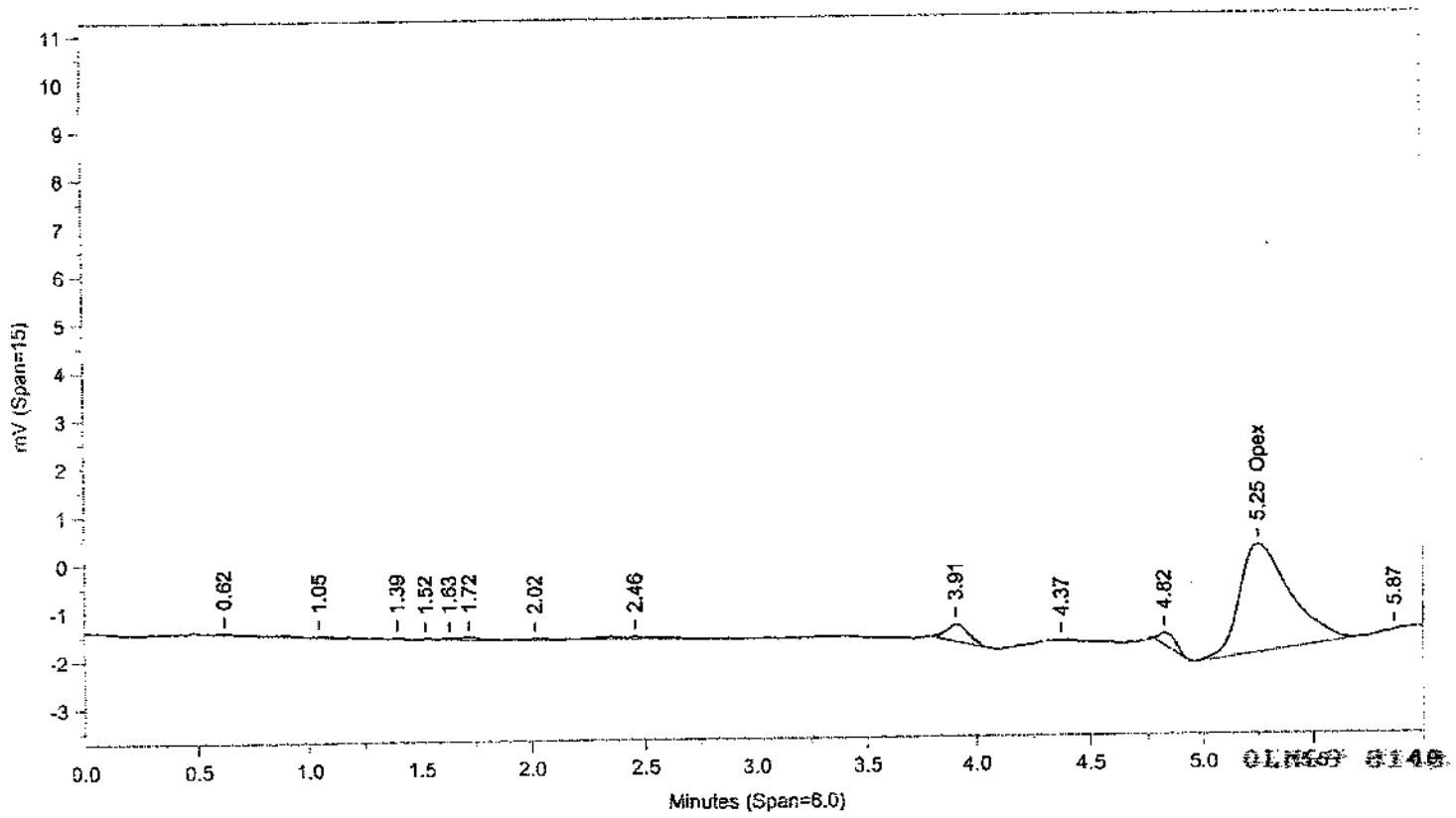
Set-up by: _____ Date: 6/10/11

6/10/2011

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.04R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 8:28:20 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 8:28:20 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

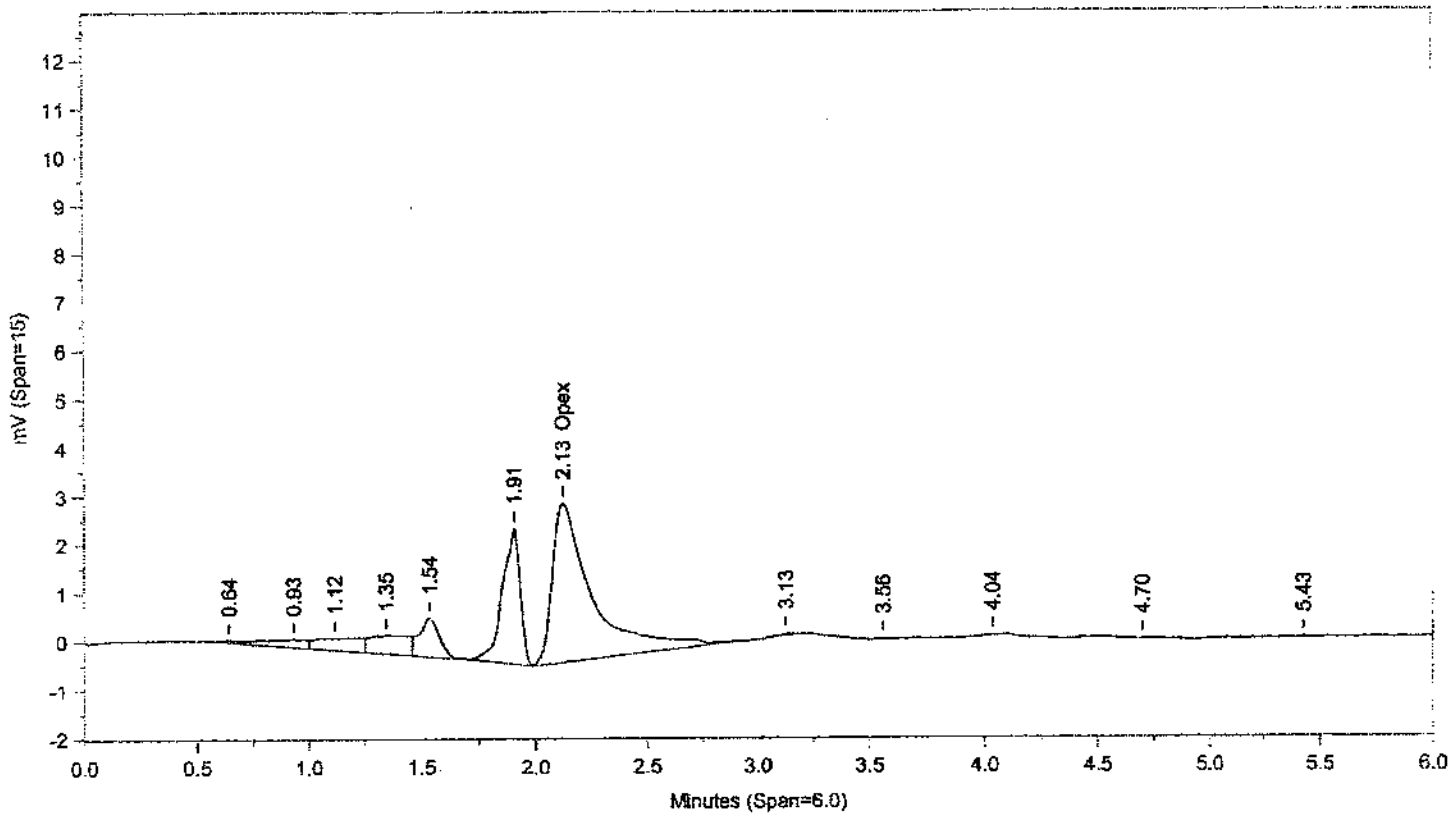
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

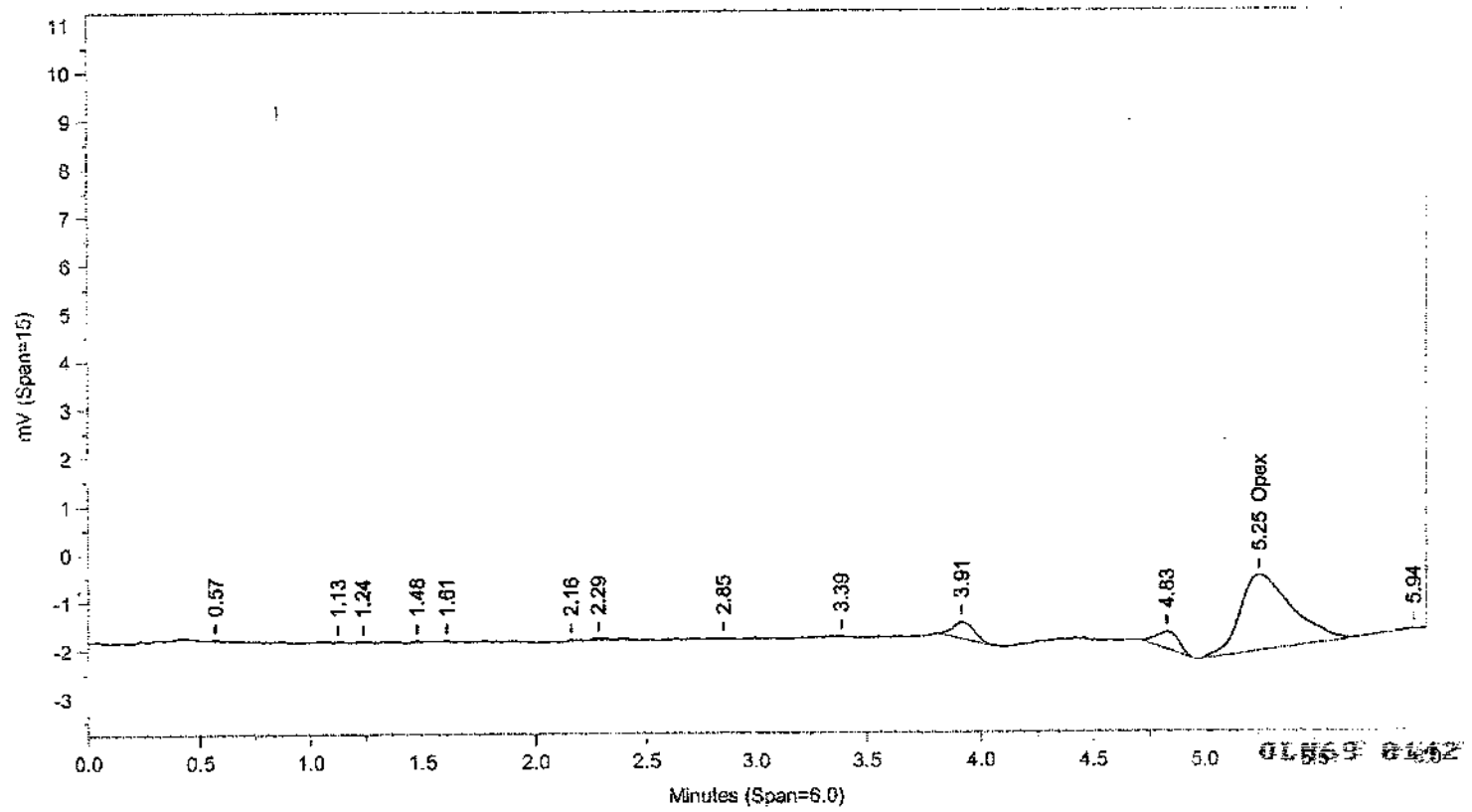
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.131	4793	1110.619	Opex	5.248	2232	1102.247	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.04A
Area File: C:\CPWIN\DATA1\1X11161B.04A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:46:14 PM
File Reported On: 6/14/2011 at 6:46:27 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.05R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 8:35:11 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 8:35:11 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.126	3302	740.489	Opex	5.254	1576	746.657	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.05A
Area File: C:\CPWIN\DATA1\1X11161B.05A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:46:40 PM
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LANCASTER LABORATORIES
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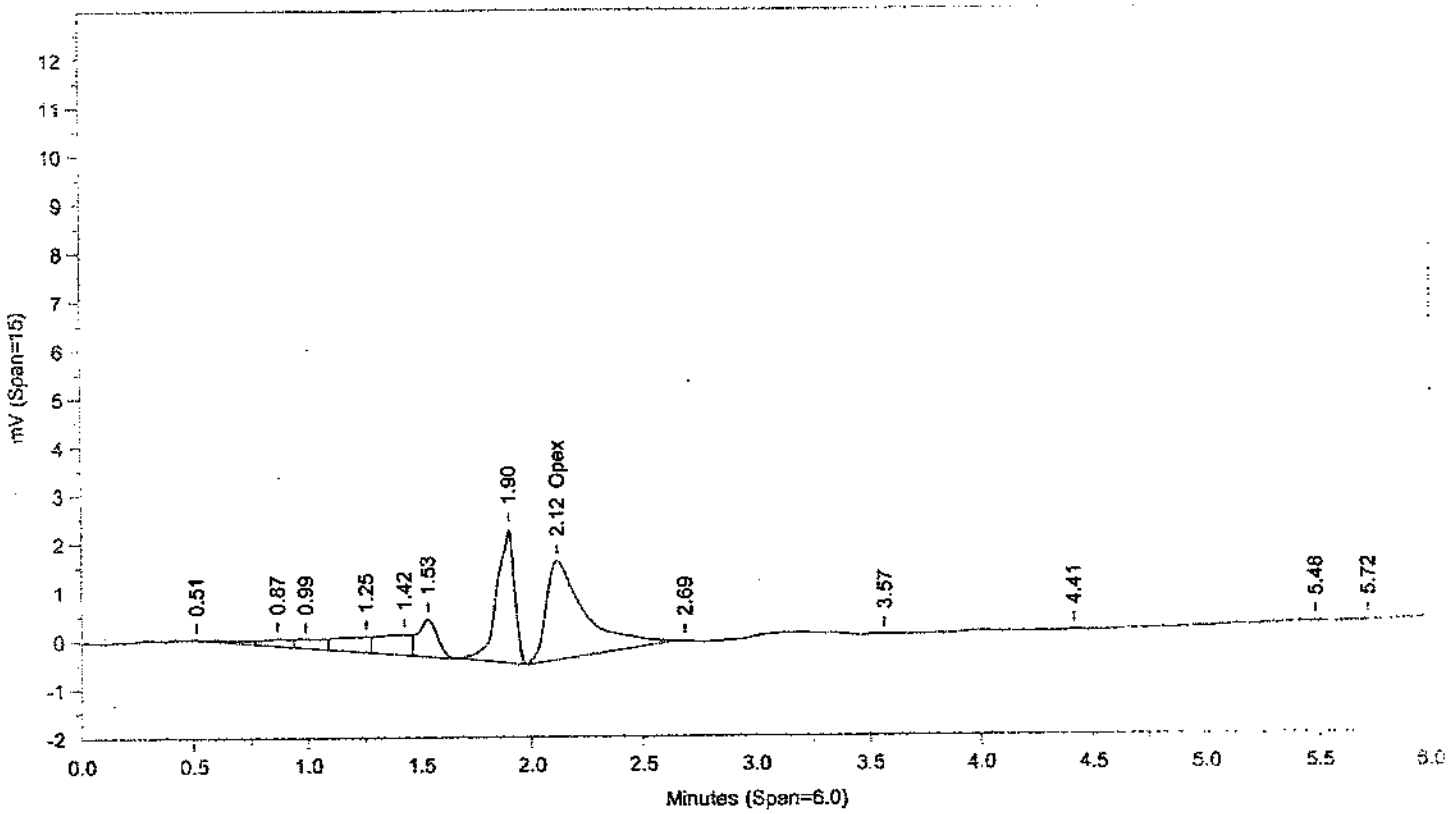
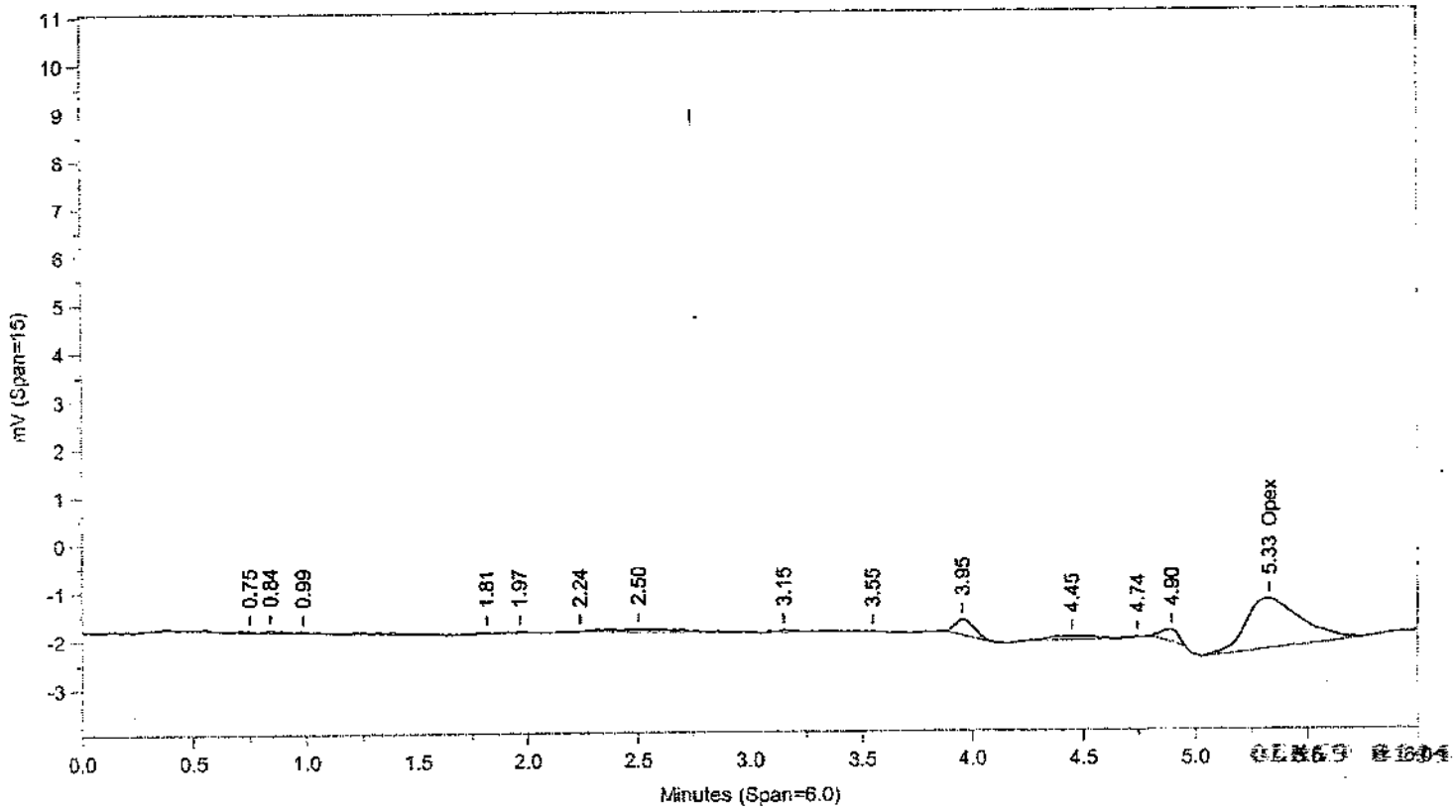


Instrument ID: CP09--K3593A Injected On: 6/10/2011 8:42:02 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 8:42:02 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

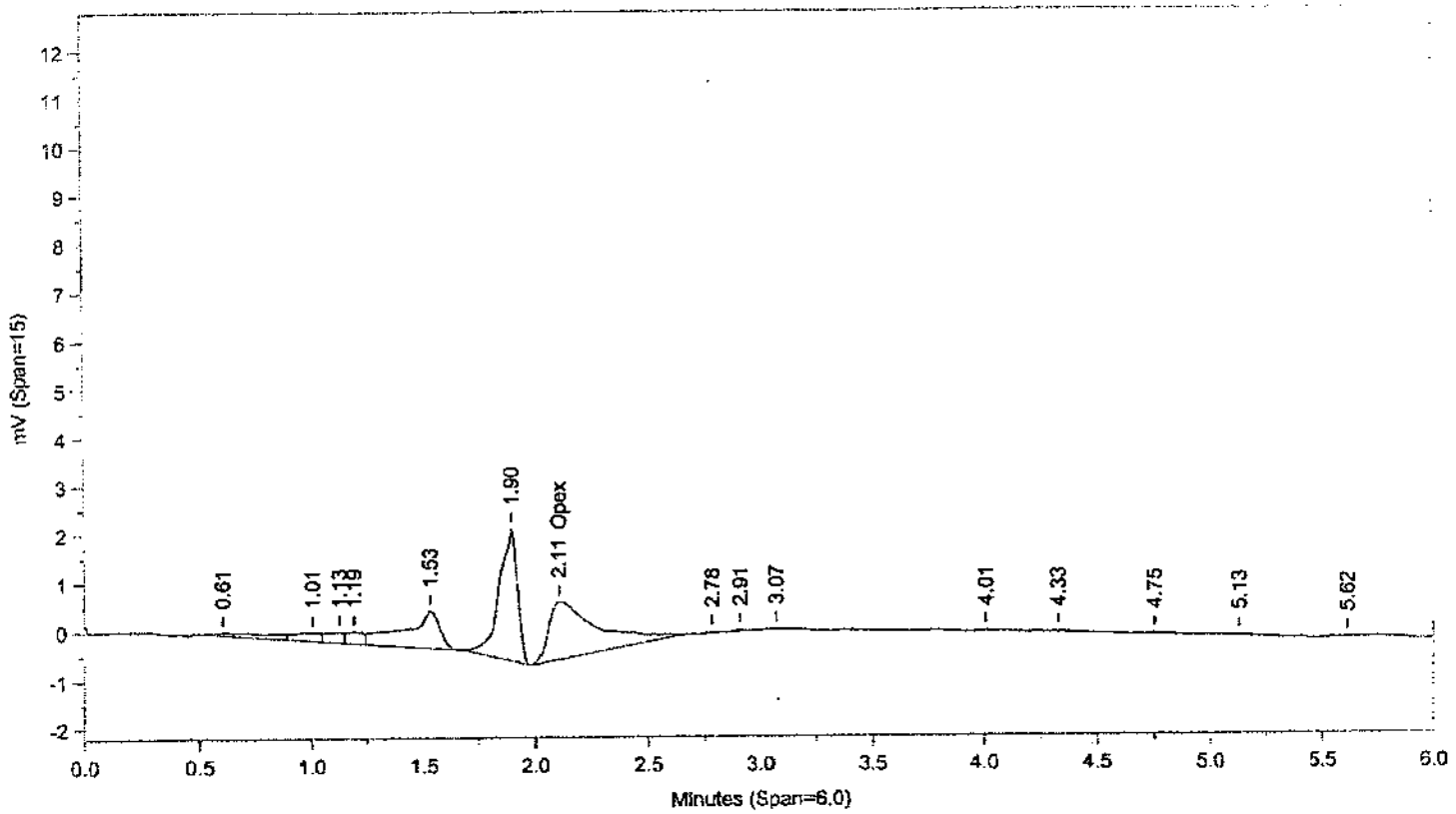
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

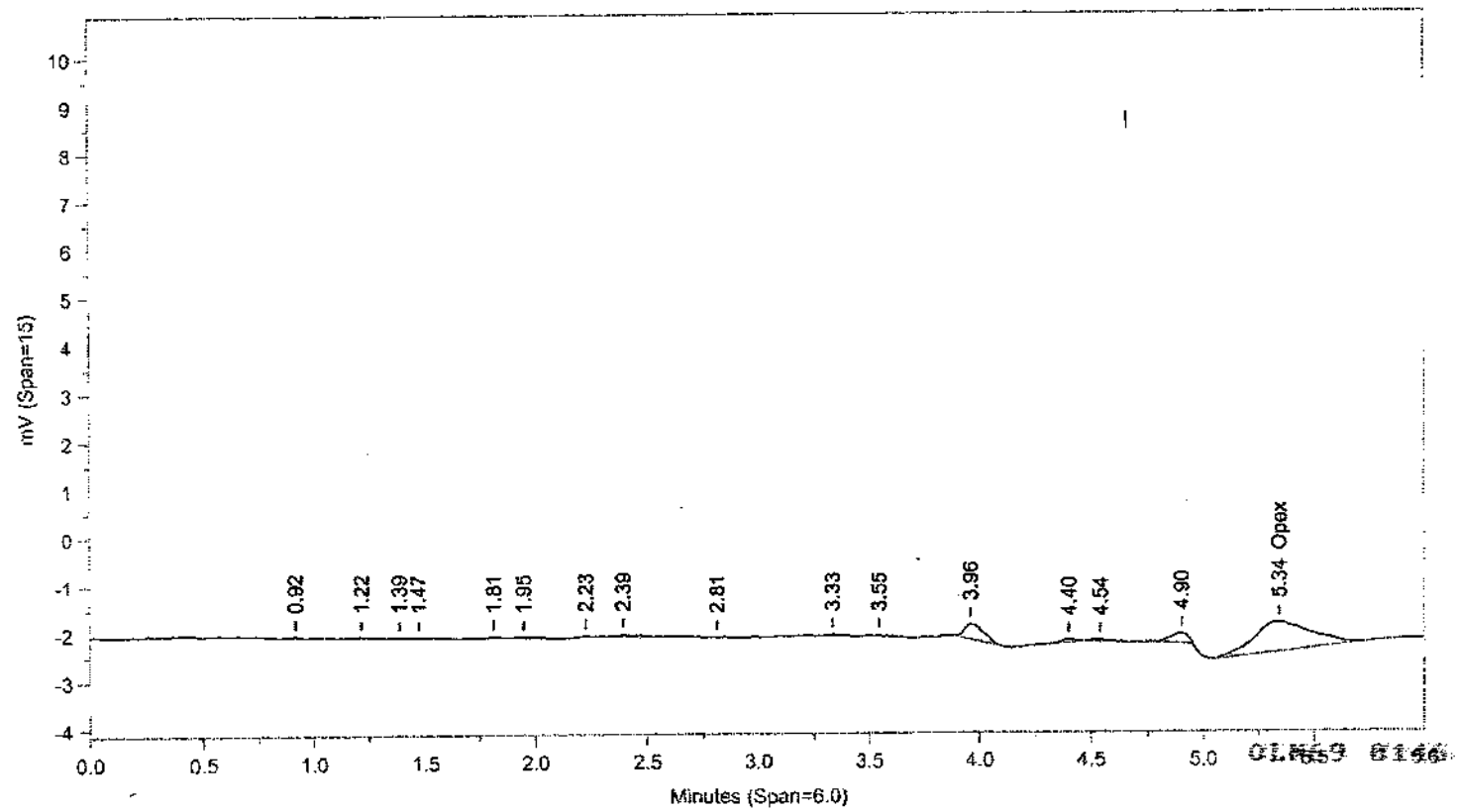
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.117	2039	425.197	Opex	5.328	1034	452.725	Opex

Files:
Area File: C:\CPWIN\DATA1\IX11161.06A
Area File: C:\CPWIN\DATA1\IX11161B.06A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\IX11161.CAL
Calibration File B: C:\CPWIN\DATA1\IX11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:47:06 PM
File Reported On: 6/14/2011 at 6:47:17 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.07R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 8:48:54 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 8:48:54 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

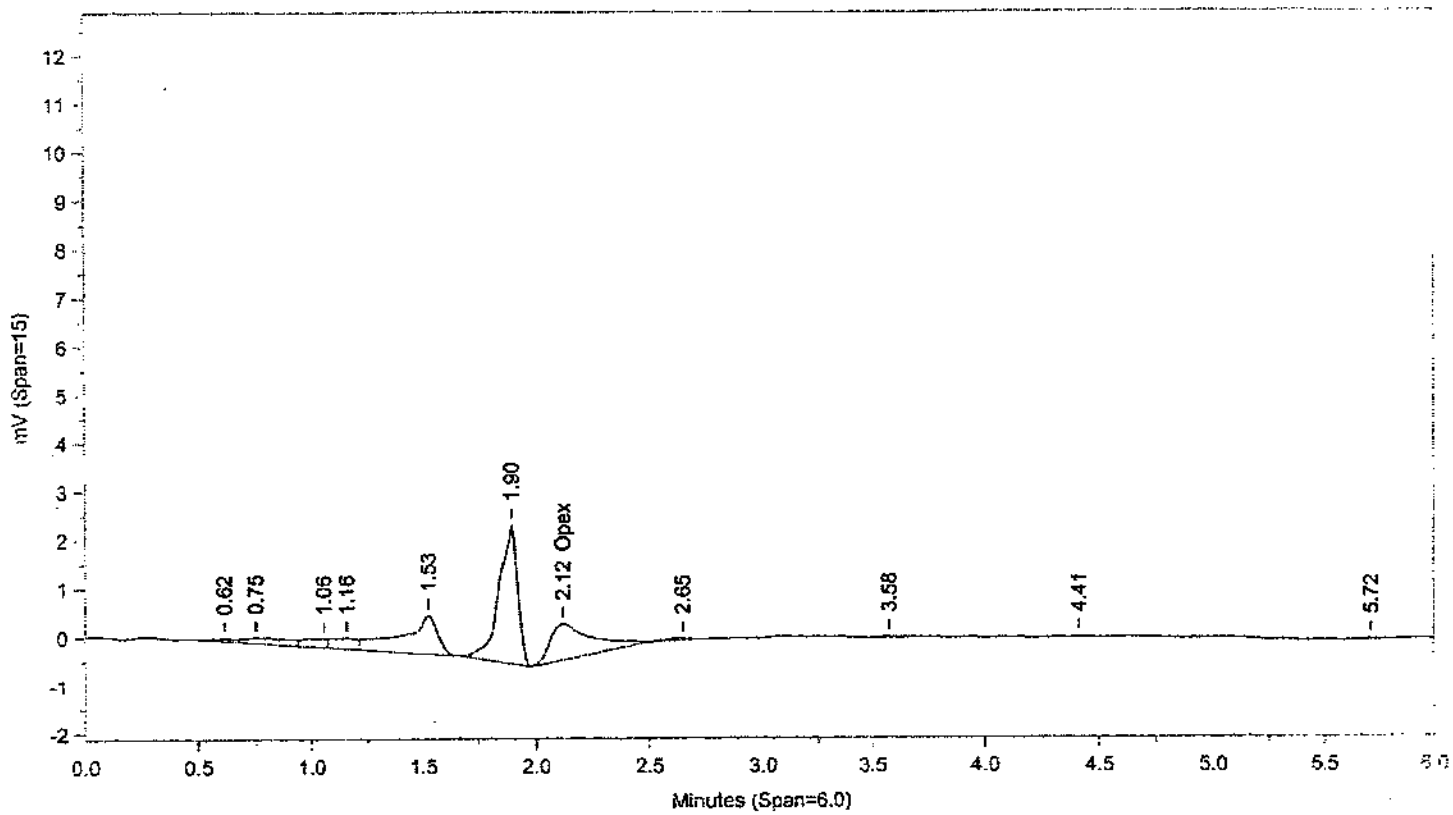
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

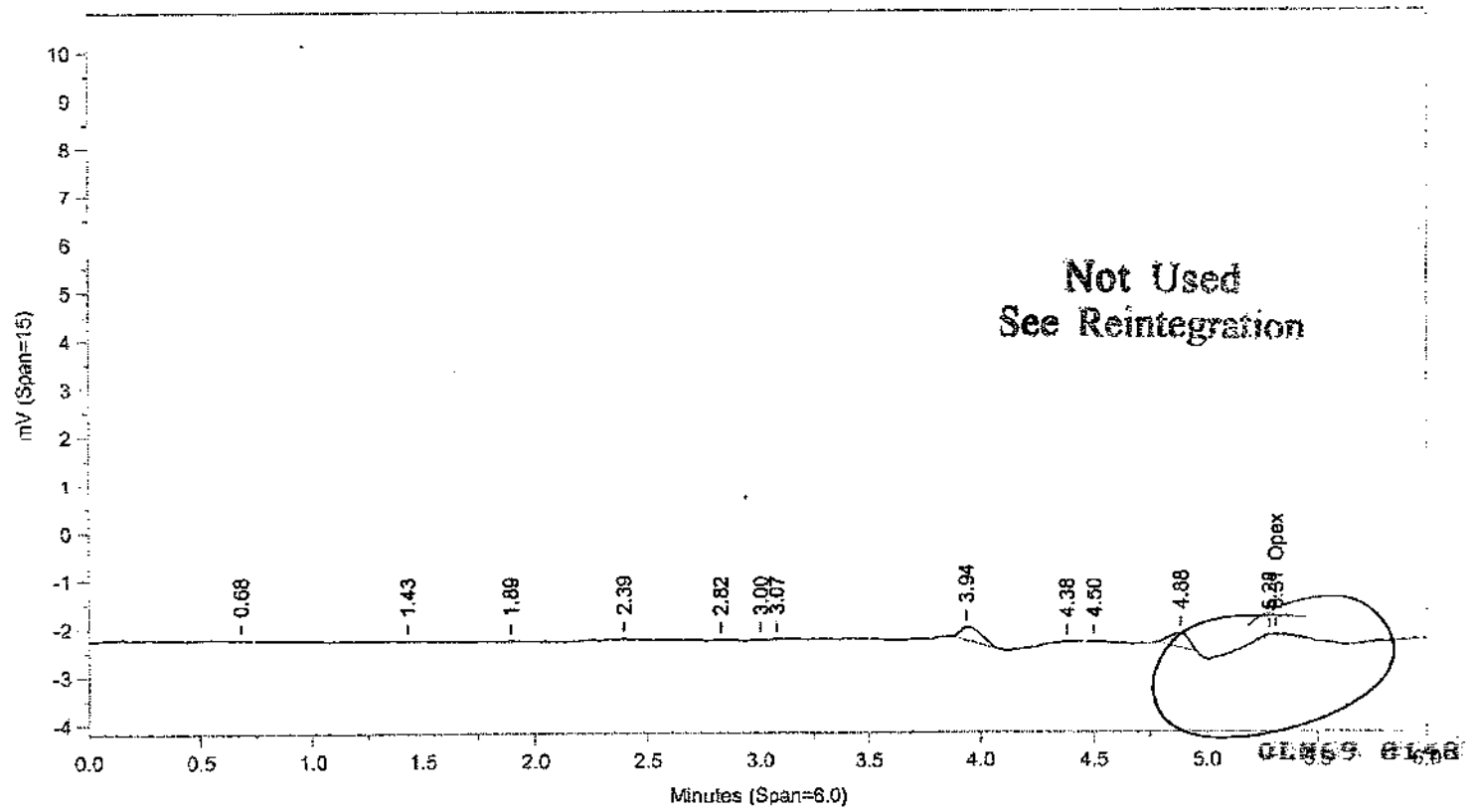
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.109	1179	211.87	Opex	5.343	619	227.877	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.07A
Area File: C:\CPWIN\DATA1\1X11161B.07A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:47:30 PM
File Reported On: 6/14/2011 at 6:47:42 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.08R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 8:55:45 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 8:55:45 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 1
Analyst: 1566

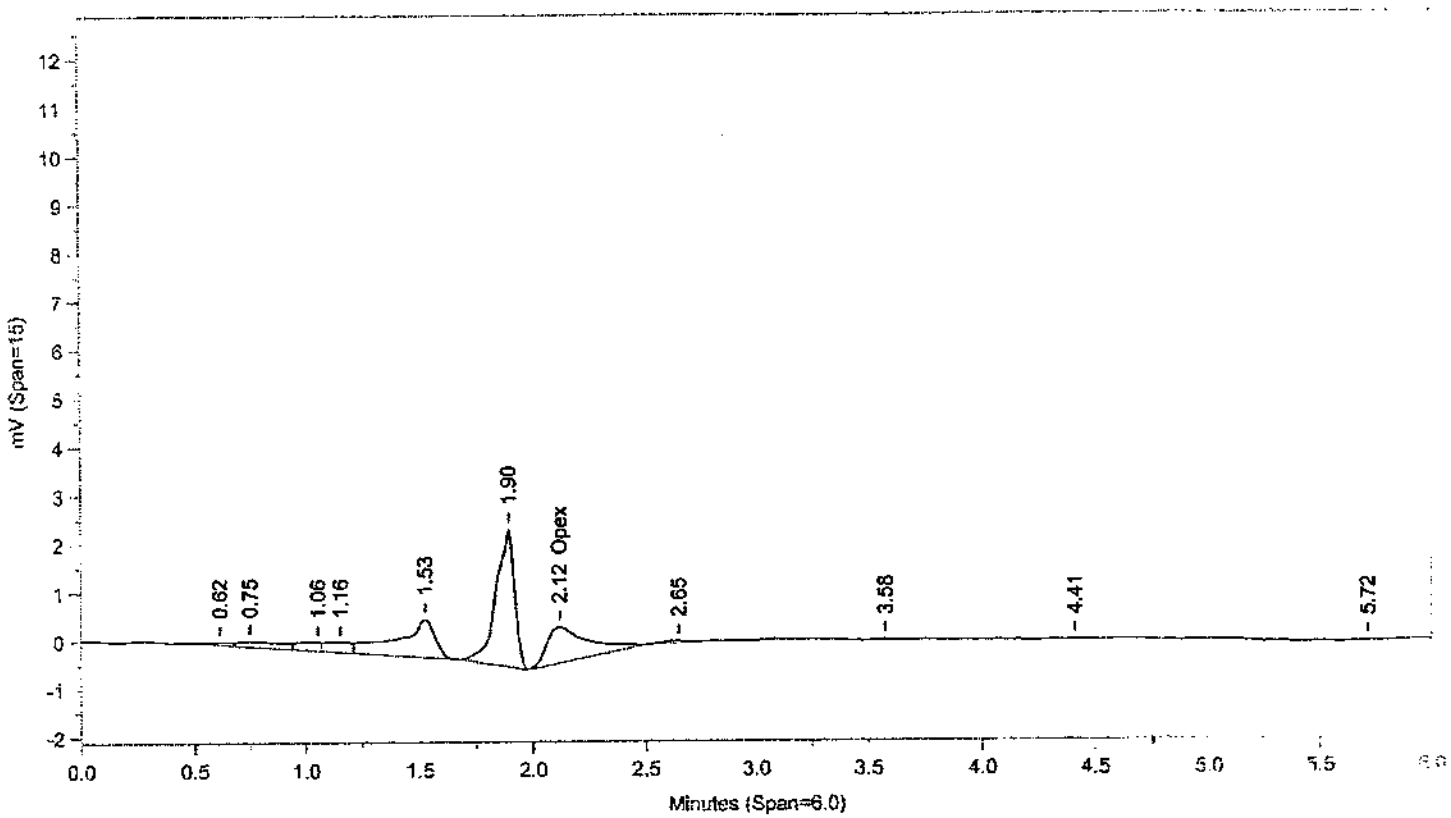
Dilution Factor: 1

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.12	744	107.925	Opex	5.311	35	-89.016	Opex

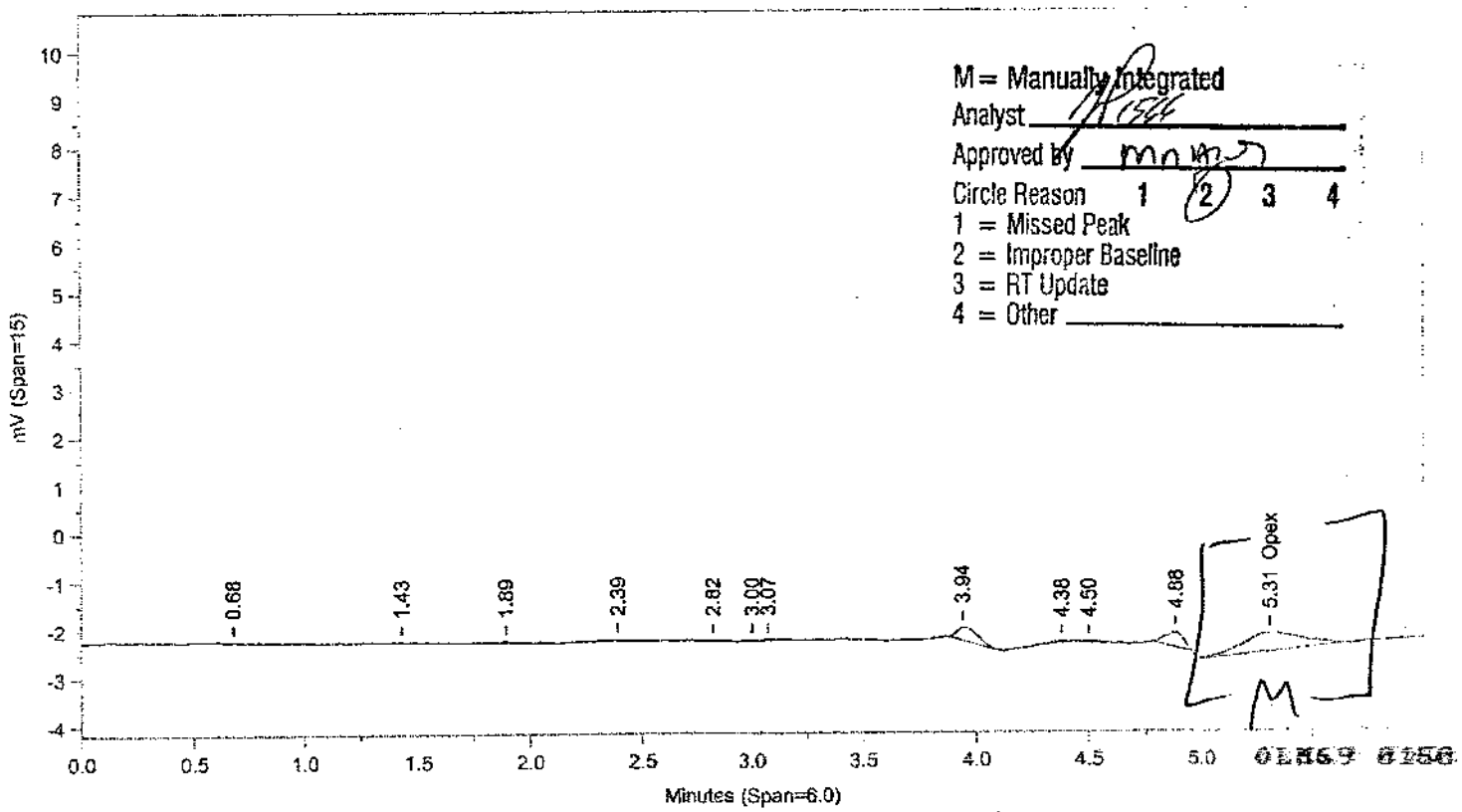
Files:
Area File: C:\CPWIN\DATA1\1X11161.08A
Area File: C:\CPWIN\DATA1\1X11161B.08A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:47:56 PM
File Reported On: 6/14/2011 at 6:48:06 PM

Not Used
See Reintegration

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.08R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 8:55:45 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 8:55:45 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

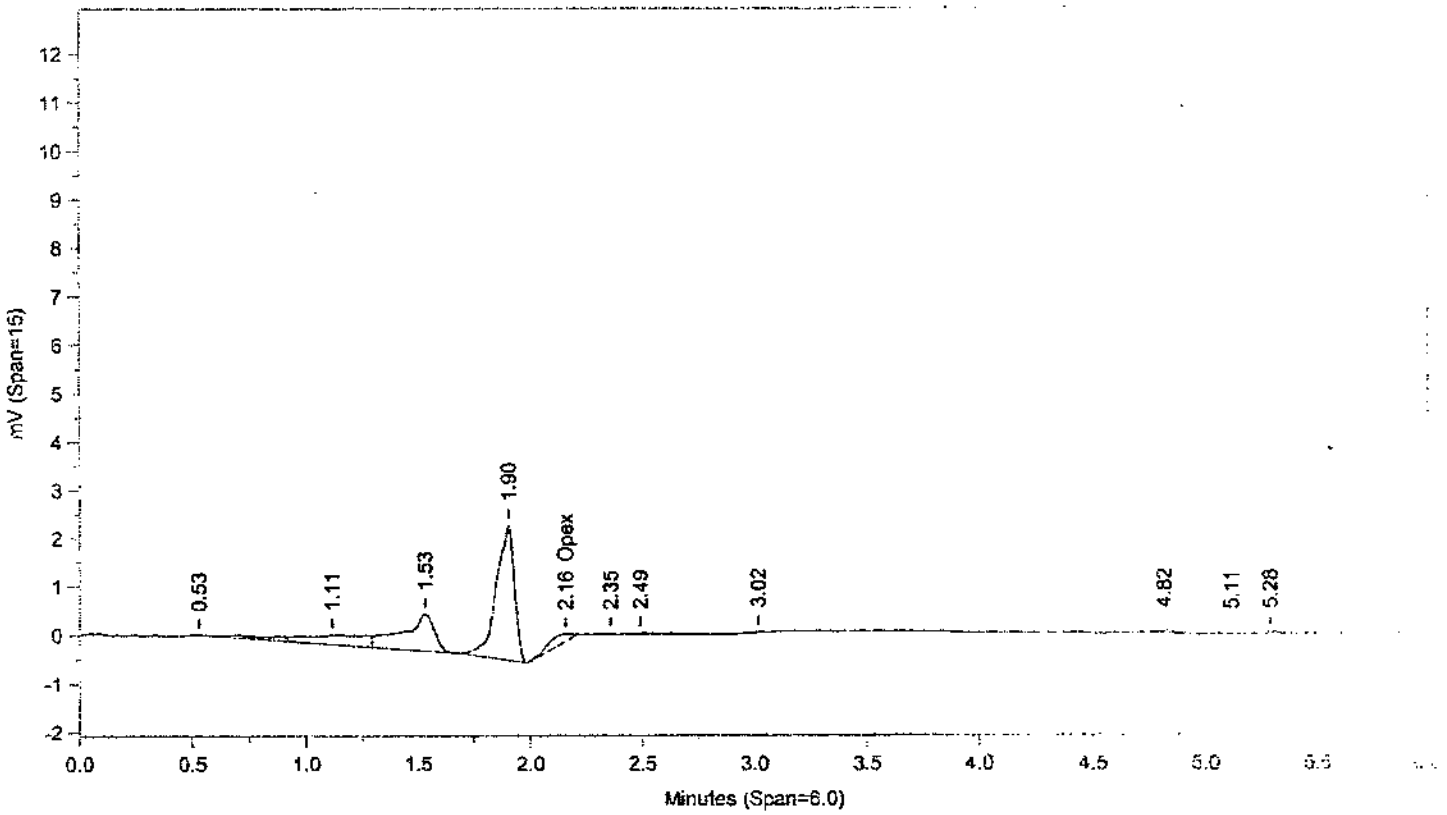
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

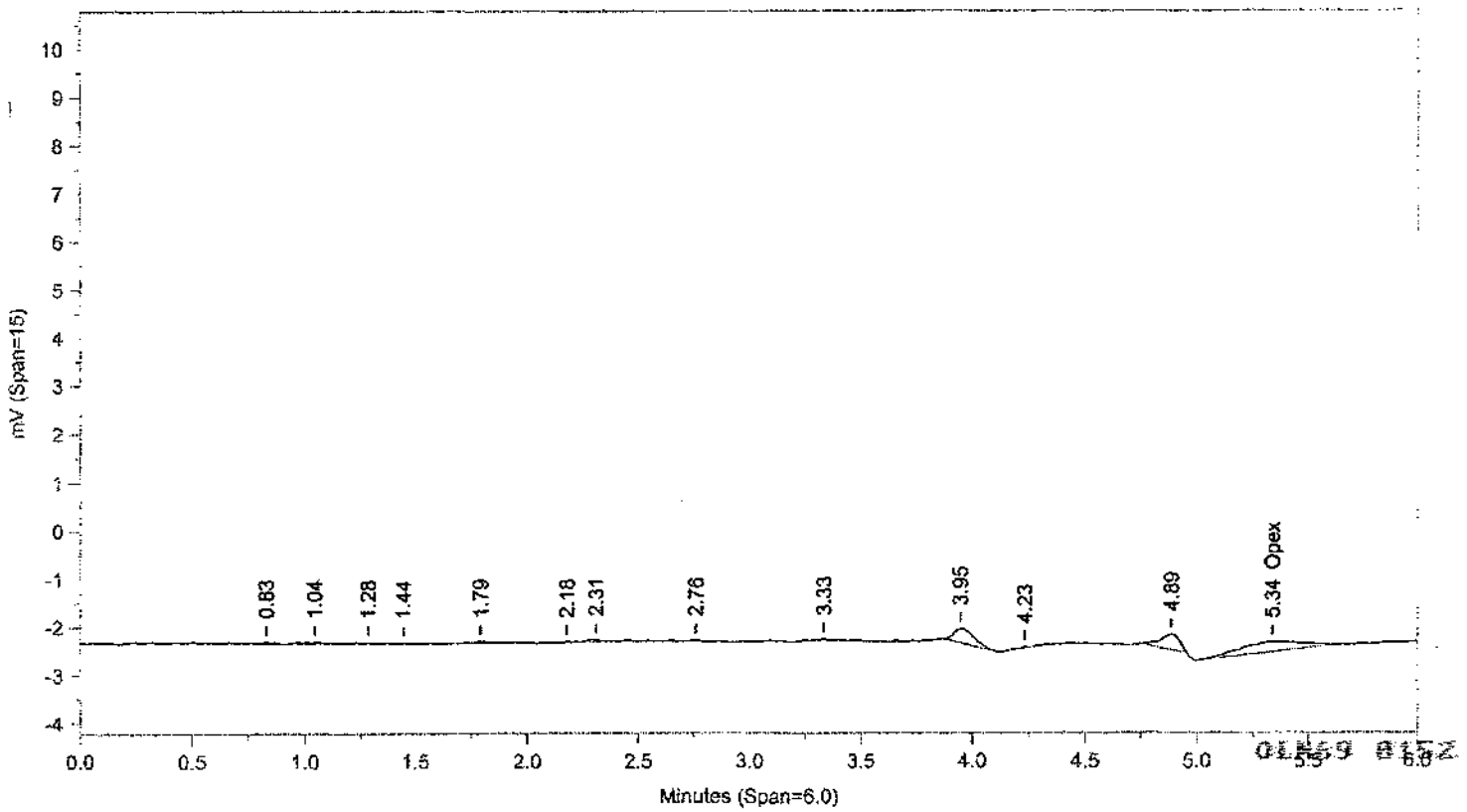
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.12	744	115.749	Opex	5.311	378	175.509	Opex

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:51:02 PM
File Reported On: 6/14/2011 at 6:51:02 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.09R



Instrument ID: CP09-K3593A Injected On: 6/10/2011 9:02:37 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09-K3593B Injected On: 6/10/2011 9:02:37 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

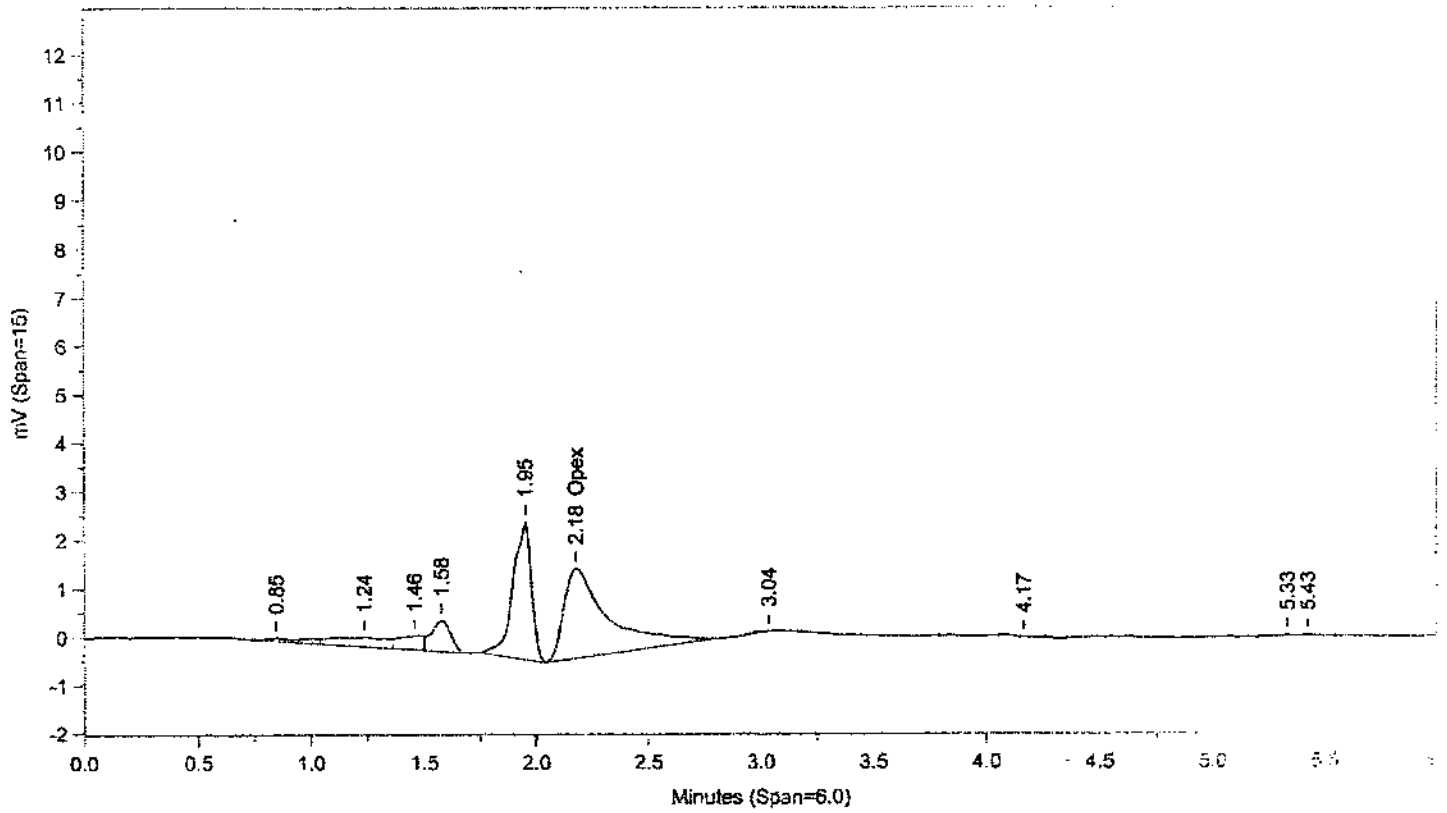
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

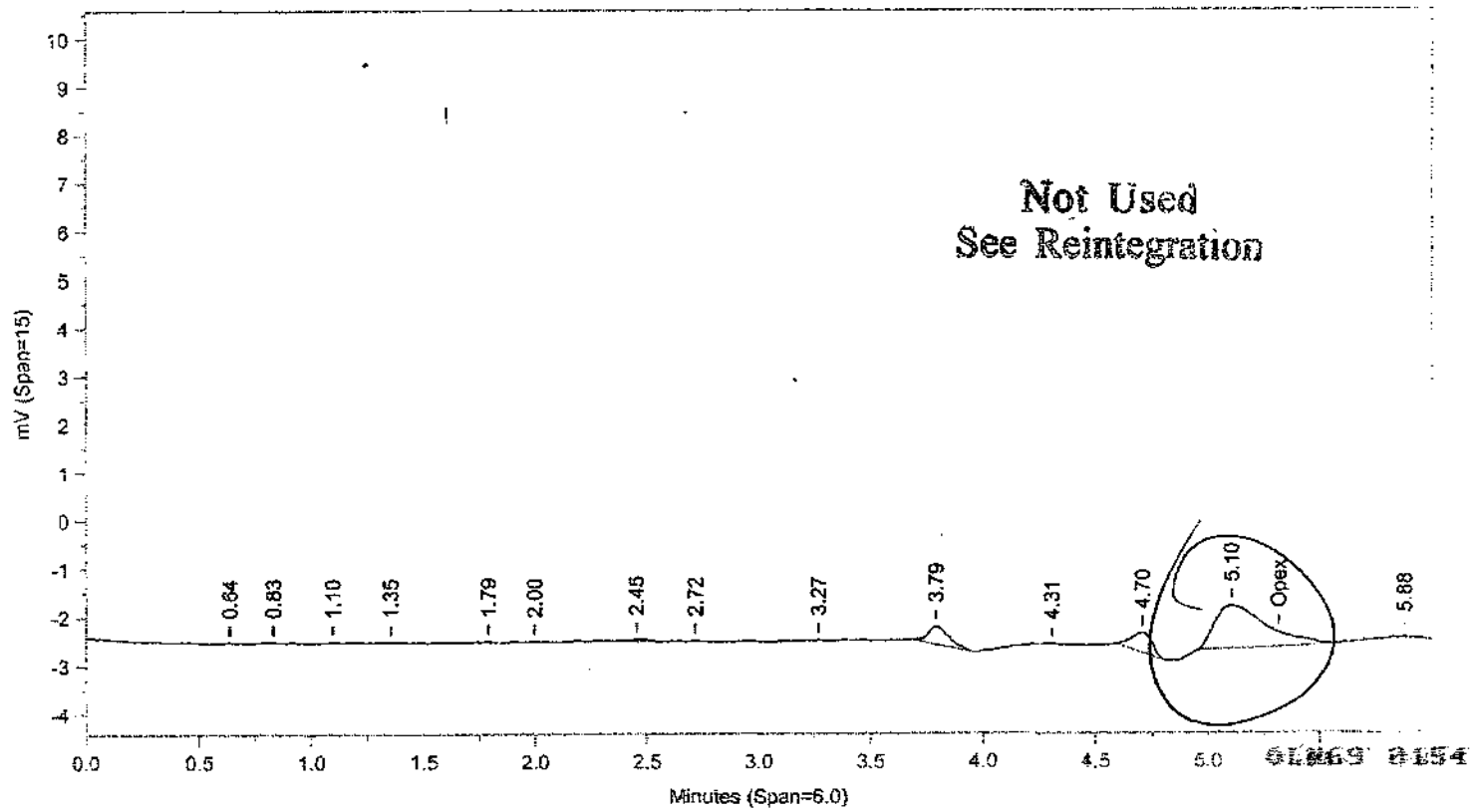
RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.156	154	-29.234	Opex	5.336	212	7.276	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.09A
Area File: C:\CPWIN\DATA1\1X11161B.09A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:53:22 PM
File Reported On: 6/14/2011 at 6:53:30 PM

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.19R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 10:11:13 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 10:11:13 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 1
Analyst: 1566

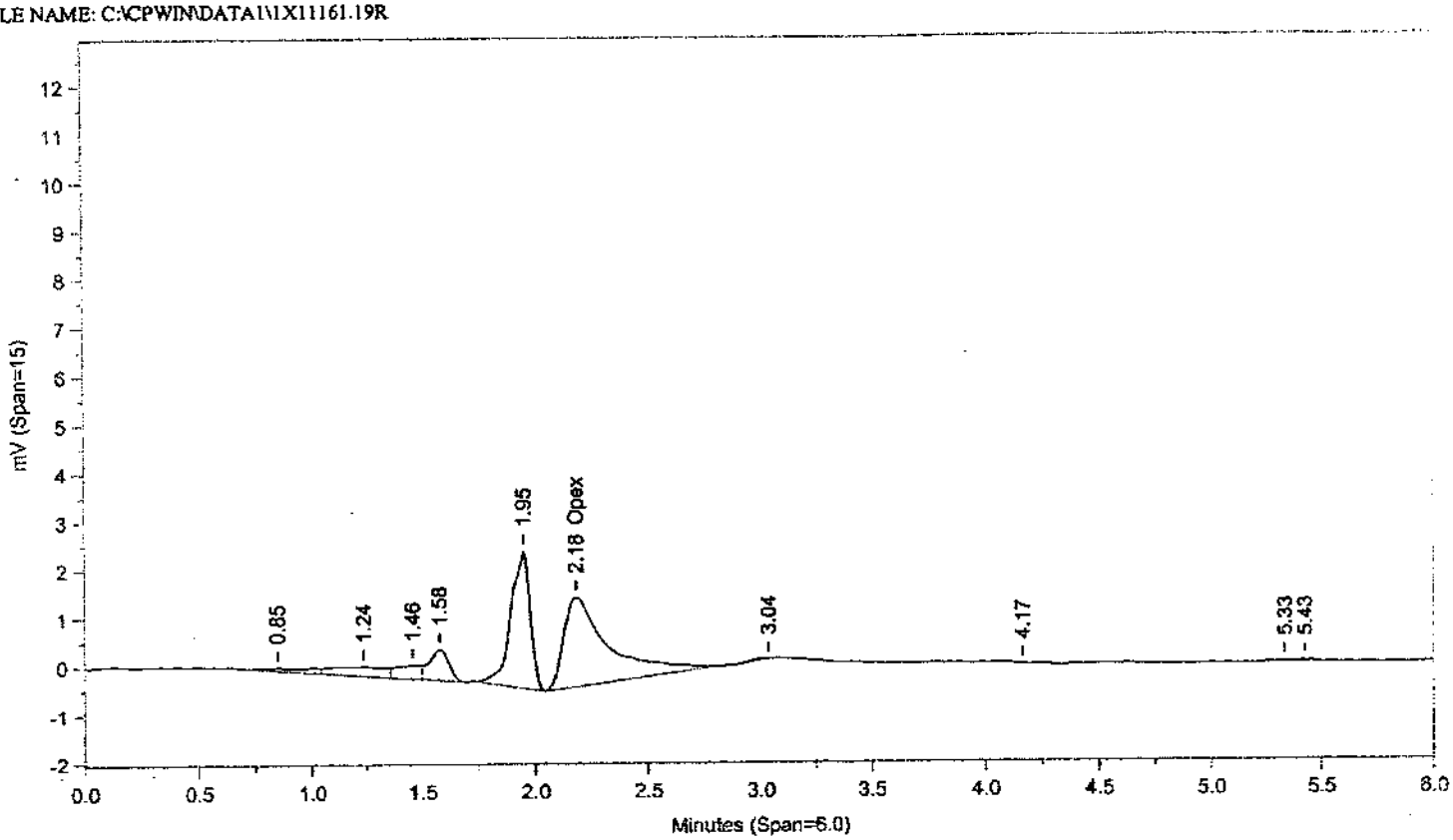
Dilution Factor: 1

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.18	1856	388.854	Opex	.	0	.	Opex

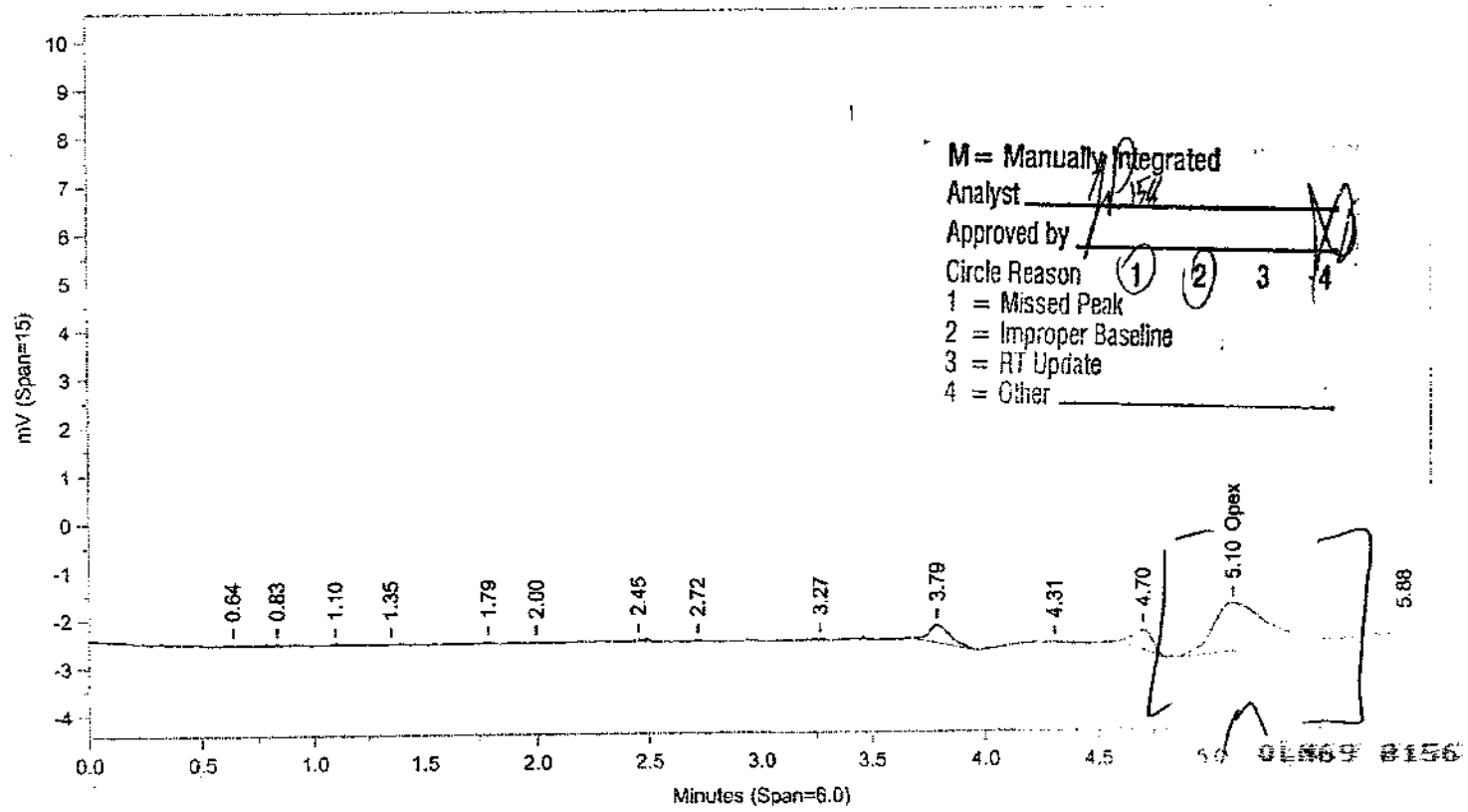
Files:
Area File: C:\CPWIN\DATA1\IX11161.19A
Area File: C:\CPWIN\DATA1\IX11161B.19A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\IX11161.CAL
Calibration File B: C:\CPWIN\DATA1\IX11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:56:42 PM
File Reported On: 6/14/2011 at 6:56:51 PM

Not Used
See Reintegration

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.19R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 10:11:13 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP09--K3593B Injected On: 6/10/2011 10:11:13 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.18	1856	388.854	Opex	5.102	1003	435.977	Opex

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 7:06:06 PM
File Reported On: 6/14/2011 at 7:06:04 PM

Raw QC Data

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

PBLK22161

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** BLANKA

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.10R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	20	U

0LN69 8159

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 6/10/11 PBLK22161 Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 02726 10342

Analysis Report (A)

Injected on	: JUN 10, 2011 21:09:29
Instrument	: CP09--K3593A
Result file	: 1X11161.10R
Calibration file	: 1X11161.CAL
Method file	: OPEX.MET

Analysis Report (B)

Injected on	: JUN 10, 2011 21:09:29
Instrument	: CP09--K3593B
Result file	: 1X11161B.10R
Calibration file	: 1X11161B.CAL
Method file	: OPEXB.MET

Peak name	Min	R.T.	Max	Height	Amount
Opex	2.02	2.18	2.22	45	-56.032379

Peak name	Min	R.T.	Max	Height	Amount
Opex	5.21	5.30	5.41	35	-88.792419

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			

Units: ug/l

Reviewed by: [signature] Verified by: Valerie Tomayko

Date: 6/15/11 Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

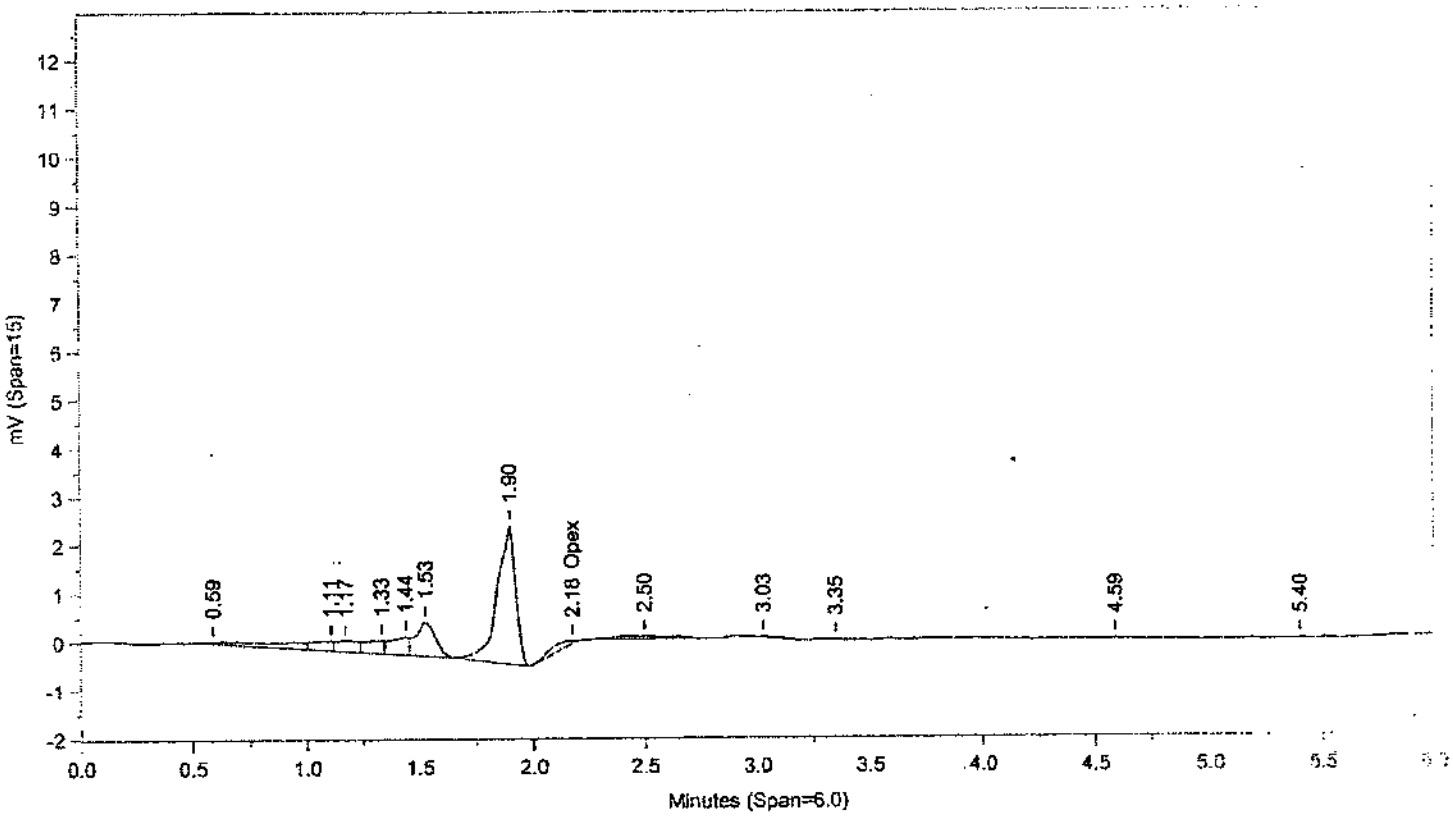
OLM69 6168

%Difference = High - Low Amount divided by the Average times 100

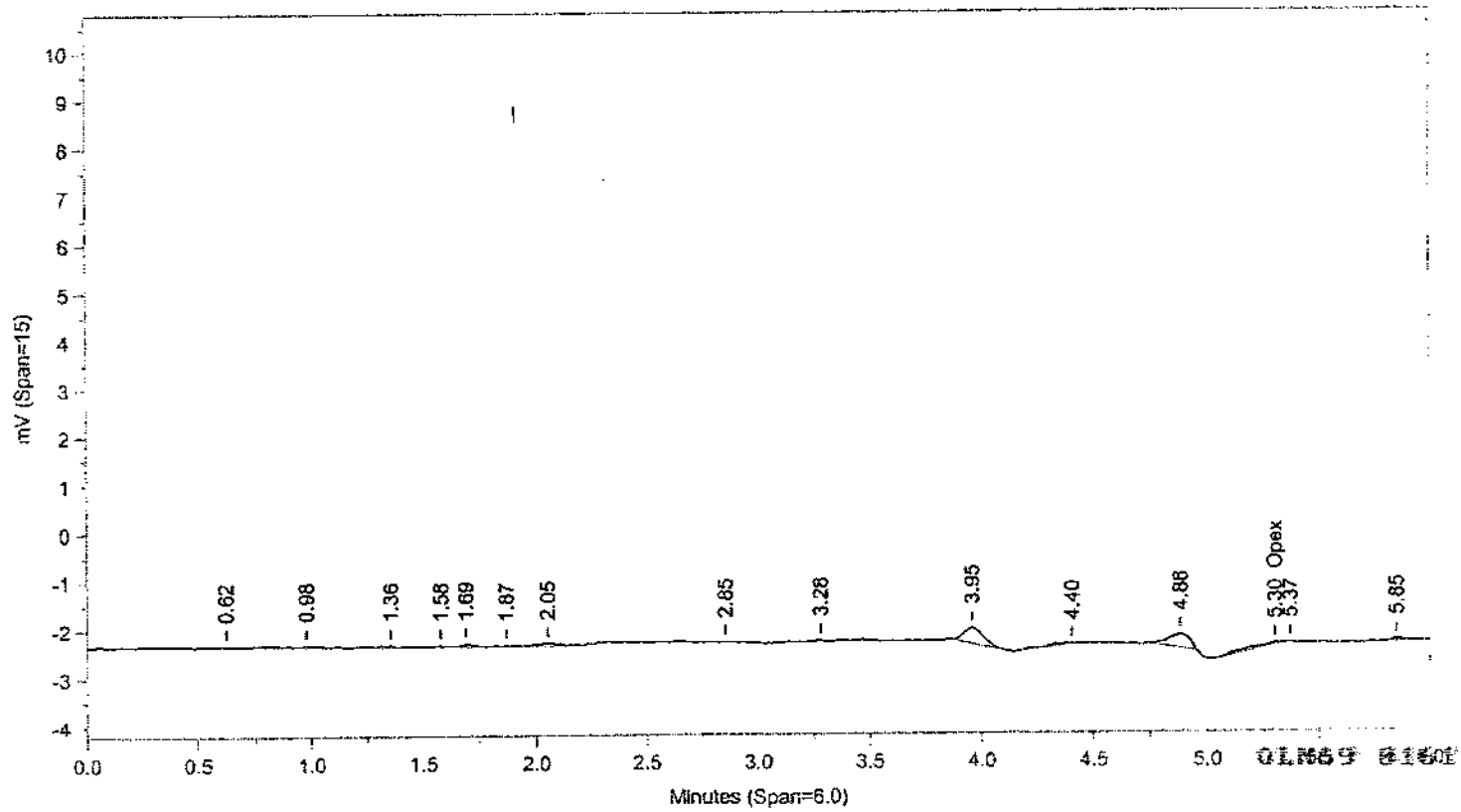
* Recovery outside QC Limits

Printed on: 6/14/11 19:21:24

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.10R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:09:28 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:09:28 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.176	45	-56.032	Opex	5.298	35	-88.792	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.10A
Area File: C:\CPWIN\DATA1\1X11161B.10A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:53:42 PM
File Reported On: 6/14/2011 at 6:53:50 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

LCS22161

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** LCSA

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.11R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	690	

01N69 8163

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 6/10/11 LCS22161 Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 02726 10342

Analysis Report (A)

Injected on : JUN 10, 2011 21:16:20
Instrument : CP09--K3593A
Result file : 1X11161.11R
Calibration file : 1X11161.CAL
Method file : OPEX.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	2.02	2.11	2.22	3067	686.423096

Analysis Report (B)

Injected on : JUN 10, 2011 21:16:20
Instrument : CP09--K3593B
Result file : 1X11161B.11R
Calibration file : 1X11161B.CAL
Method file : OPEXB.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	5.21	5.32	5.41	1472	690.061340

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			

Units: ug/l

Reviewed by: _____
Date: 6/13/11

Verified by: Valerie Tomayko
Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

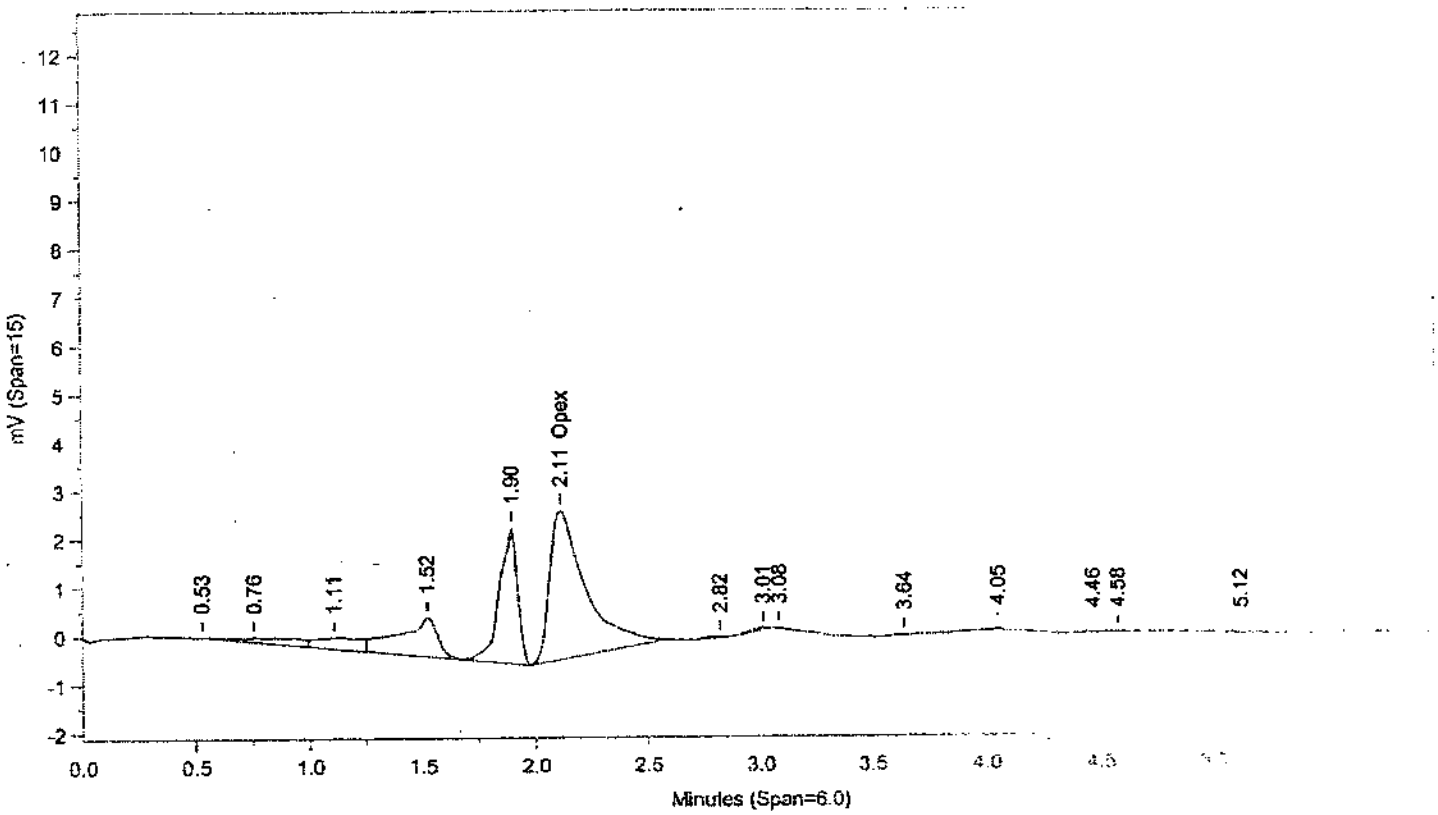
OLM69 8164

%Difference = High - Low Amount divided by the Average times 100

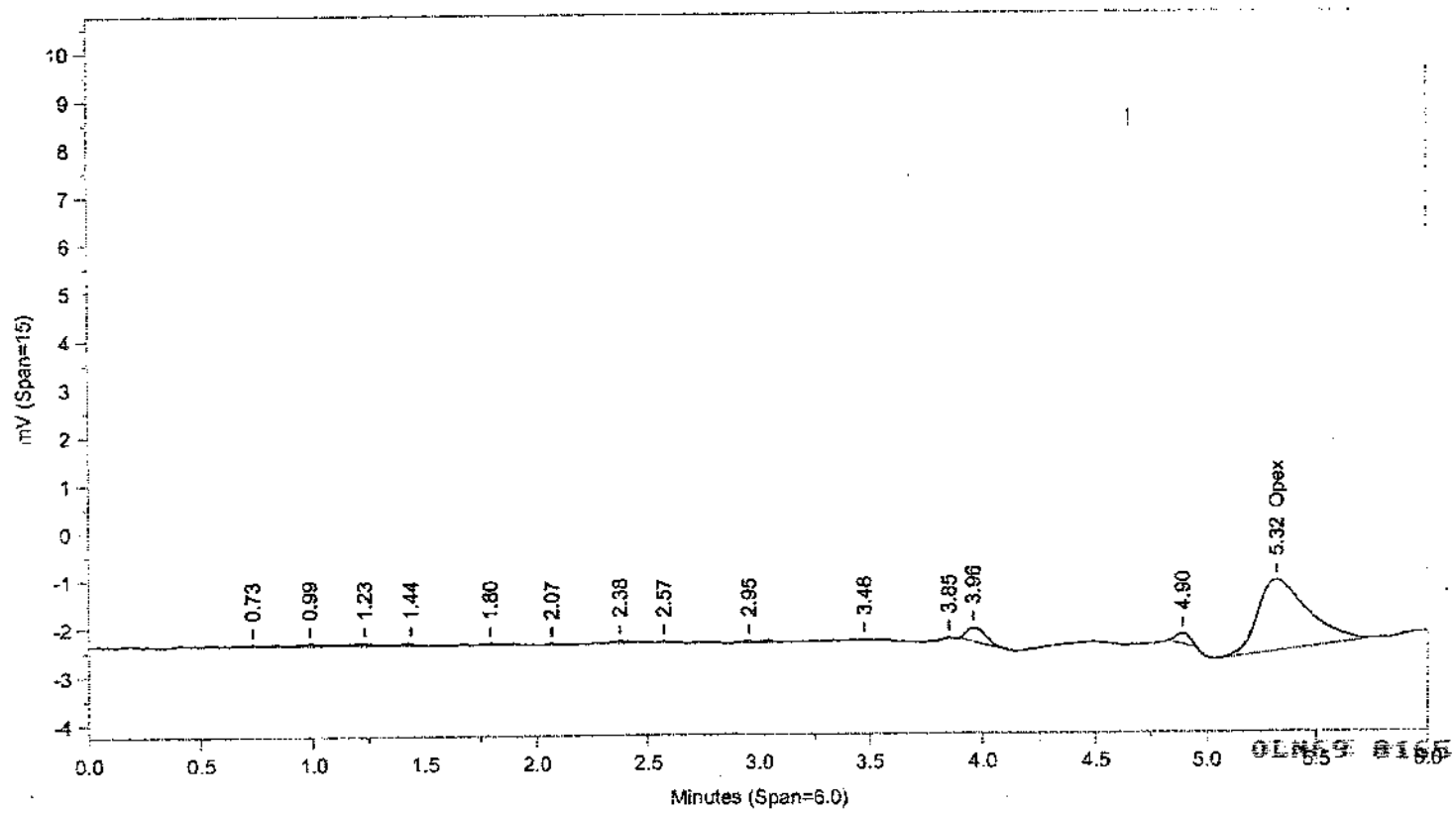
* Recovery outside QC Limits

Printed on: 6/14/11 19:21:47

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.11R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:16:19 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:16:19 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.114	3067	686.423	Opex	5.323	1472	690.061	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.11A
Area File: C:\CPWIN\DATA1\1X11161B.11A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:54:02 PM
File Reported On: 6/14/2011 at 6:54:11 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

LCSD22161

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER

Sample wt/vol: 10 **(g/ml)** ml

% Moisture: **Decanted: (Y/N)**

Extraction: (SepF/Cont/Sonc) Direct Injection

Concentrated Extract Volume: 10000 **(uL)**

Injection Volume: 30 **(uL)**

GPC Cleanup: (Y/N) N **pH:**

Lab Sample ID: LCSDA

Lab File ID: 1X11161.12R

Date Received:

Date Extracted: 6/10/2011

Date Analyzed: 6/10/2011

Dilution Factor: 1

Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	690	

01N69 8167

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSDA 6/10/11 LCSD22161Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 02726 10342

Analysis Report (A)

Injected on : JUN 10, 2011 21:23:12
Instrument : CP09--K3593A
Result file : 1X11161.12R
Calibration file : 1X11161.CAL
Method file : OPEX.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	2.02	2.13	2.22	3092	692.608765

Analysis Report (B)

Injected on : JUN 10, 2011 21:23:12
Instrument : CP09--K3593B
Result file : 1X11161B.12R
Calibration file : 1X11161B.CAL
Method file : OPEXB.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	5.21	5.24	5.41	1476	692.493103

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			

Units: ug/l

Reviewed by: [signature] Date: 6/16/11

Verified by: Valerie Tomayko Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

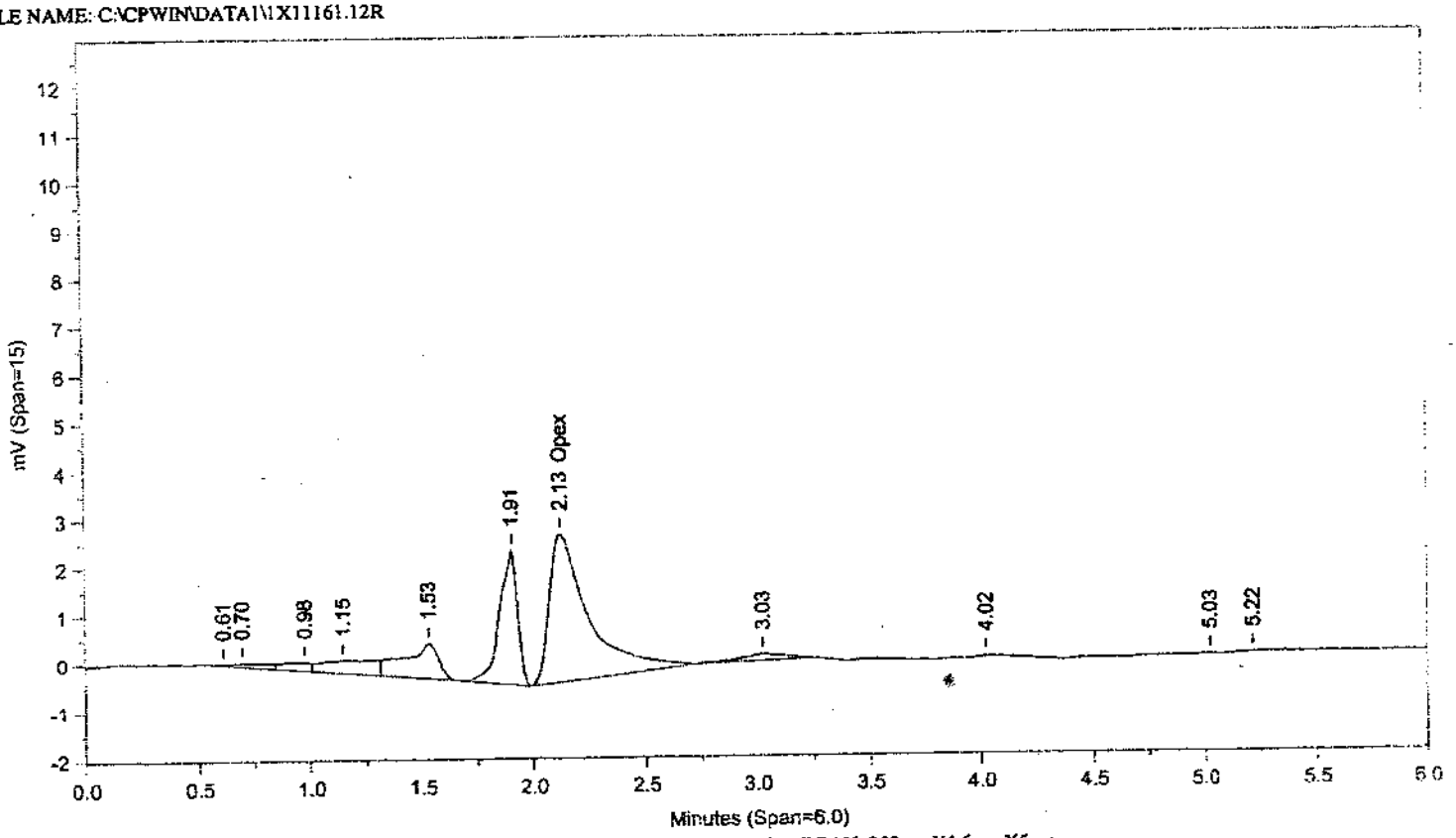
GLN69 0168

%Difference = High - Low Amount divided by the Average times 100

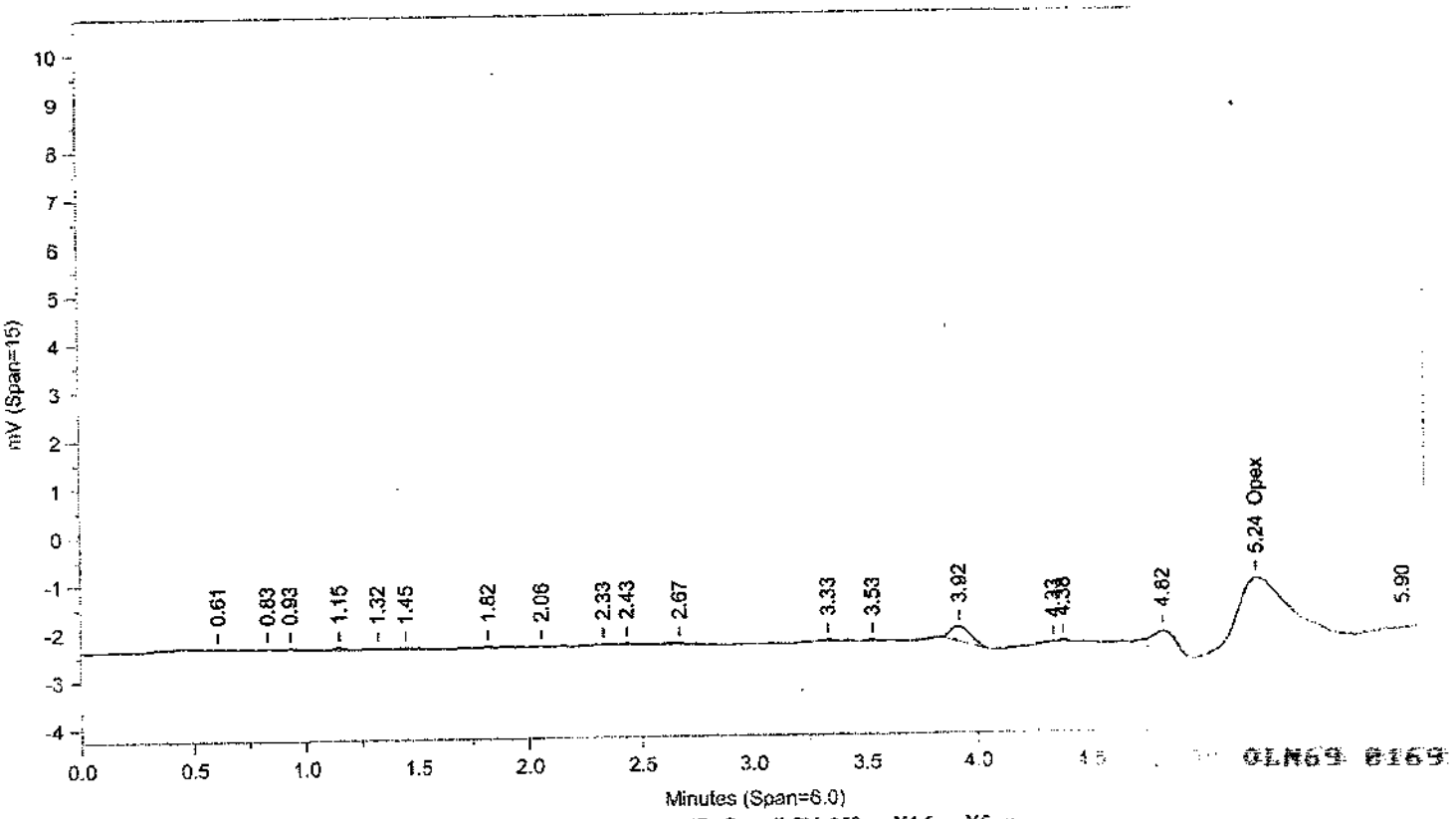
* Recovery outside QC Limits

Printed on: 6/14/11 19:22:08

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.12R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:23:11 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:23:11 PM Column ID: Capcell CN, 250mmX4.6mmX5um

OLN69 0169

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.126	3092	692.609	Opex	5.243	1476	692.493	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.12A
Area File: C:\CPWIN\DATA1\1X11161B.12A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:54:22 PM
File Reported On: 6/14/2011 at 6:54:31 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1- MS

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308056

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.14R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	140	P

OLN69 0171

FORM I

Lancaster Laboratories-Single Component Data Summary

Sample Name: **6308056** MS ISC1- Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02726 10342

Analysis Report (A)

Injected on : JUN 10, 2011 21:36:55
Instrument : CP09--K3593A
Result file : 1X11161.14R
Calibration file : 1X11161.CAL
Method file : OPEX.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	2.02	2.06	2.22	841	139.564117

Analysis Report (B)

Injected on : JUN 10, 2011 21:36:55
Instrument : CP09--K3593B
Result file : 1X11161B.14R
Calibration file : 1X11161B.CAL
Method file : OPEXB.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	5.21	5.45	5.41	650	244.782013

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			

Units: ug/l

Reviewed by: _____
Date: 6/16/11

Verified by: Valerie Tomayko
Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

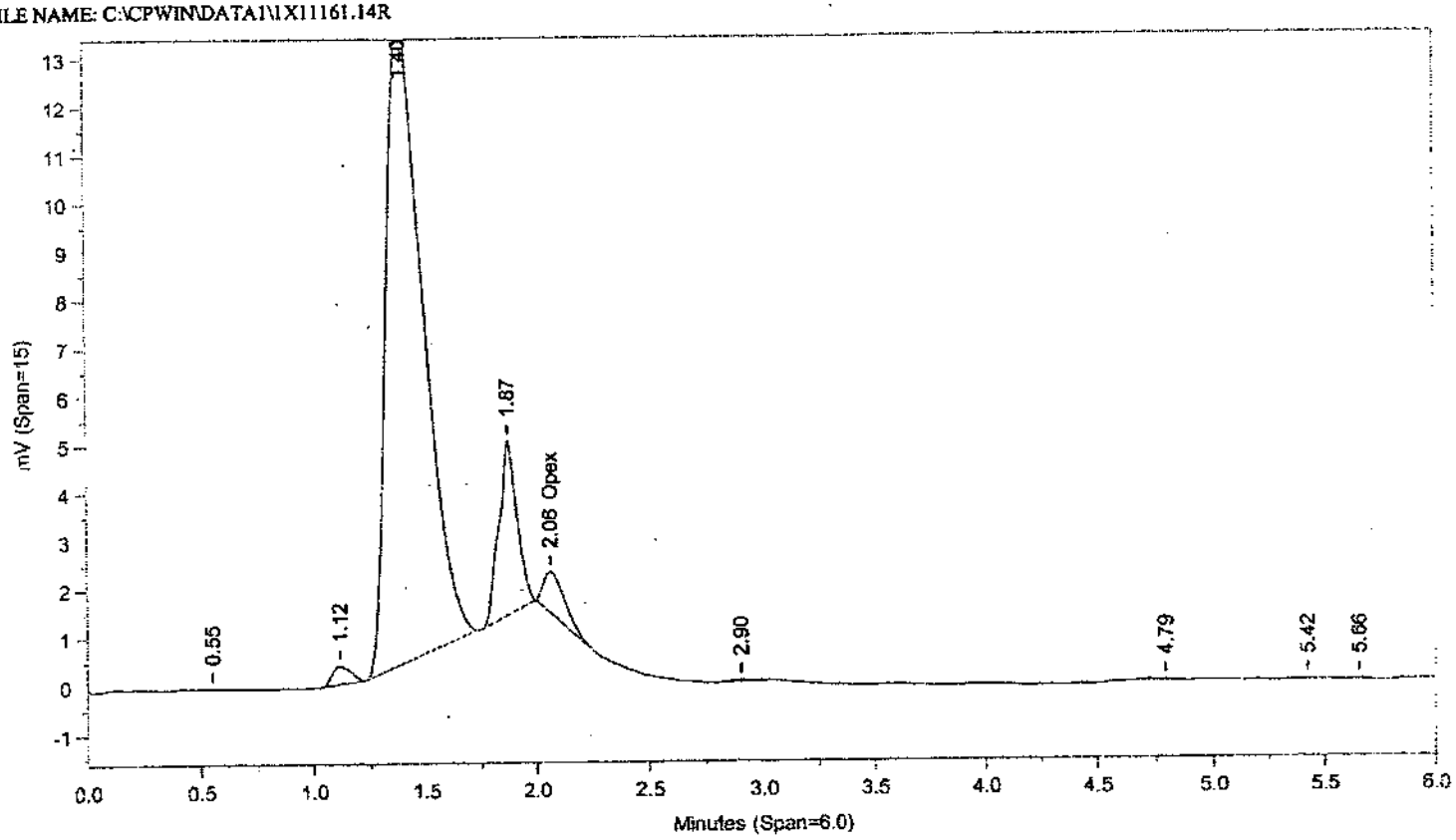
OLN69 8172

%Difference = High - Low Amount divided by the Average times 100

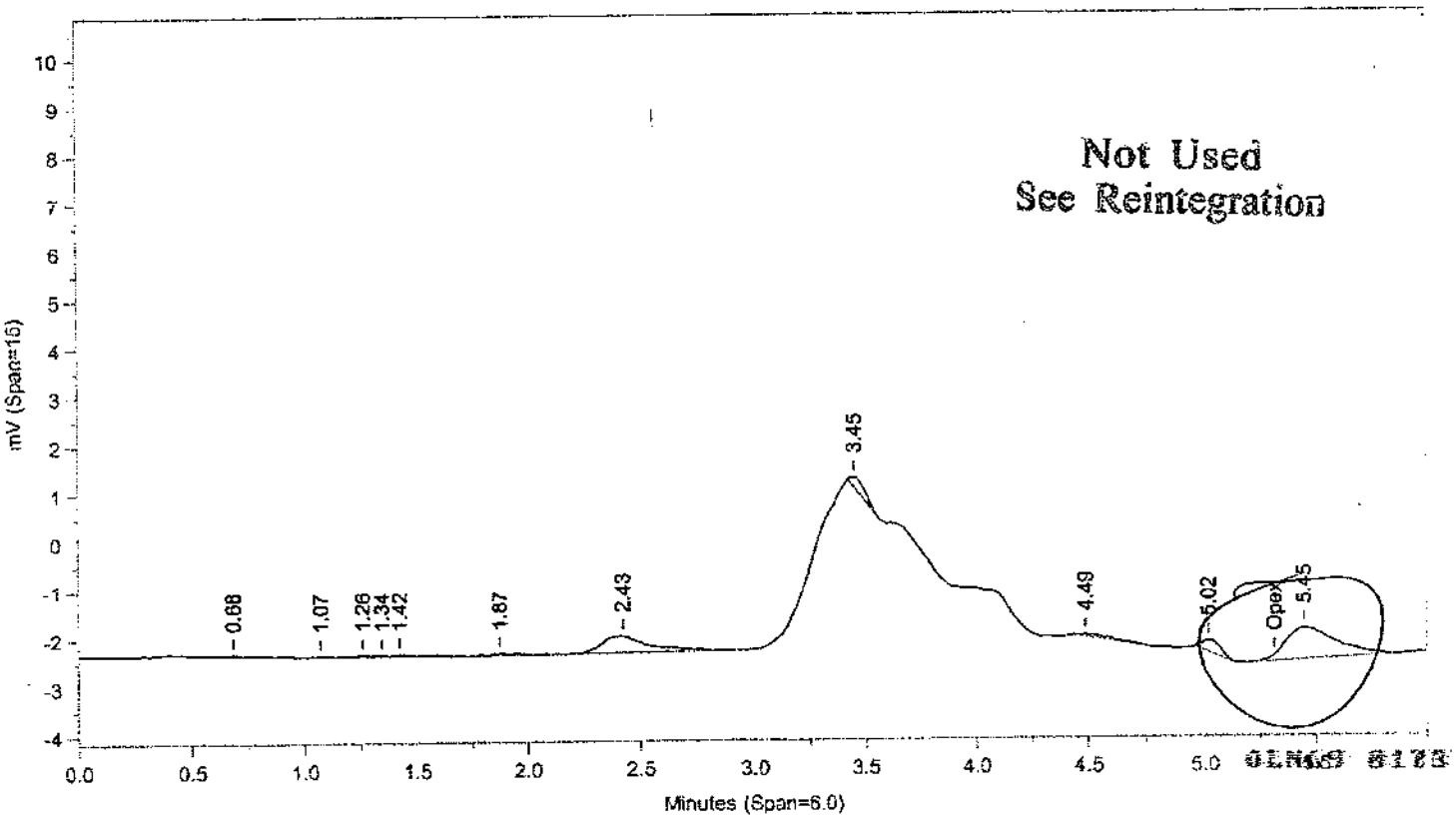
* Recovery outside QC Limits

Printed on: 6/14/11 19:22:47

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.14R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:36:54 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:36:54 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Sample Weight: 10
Analyst: 1566

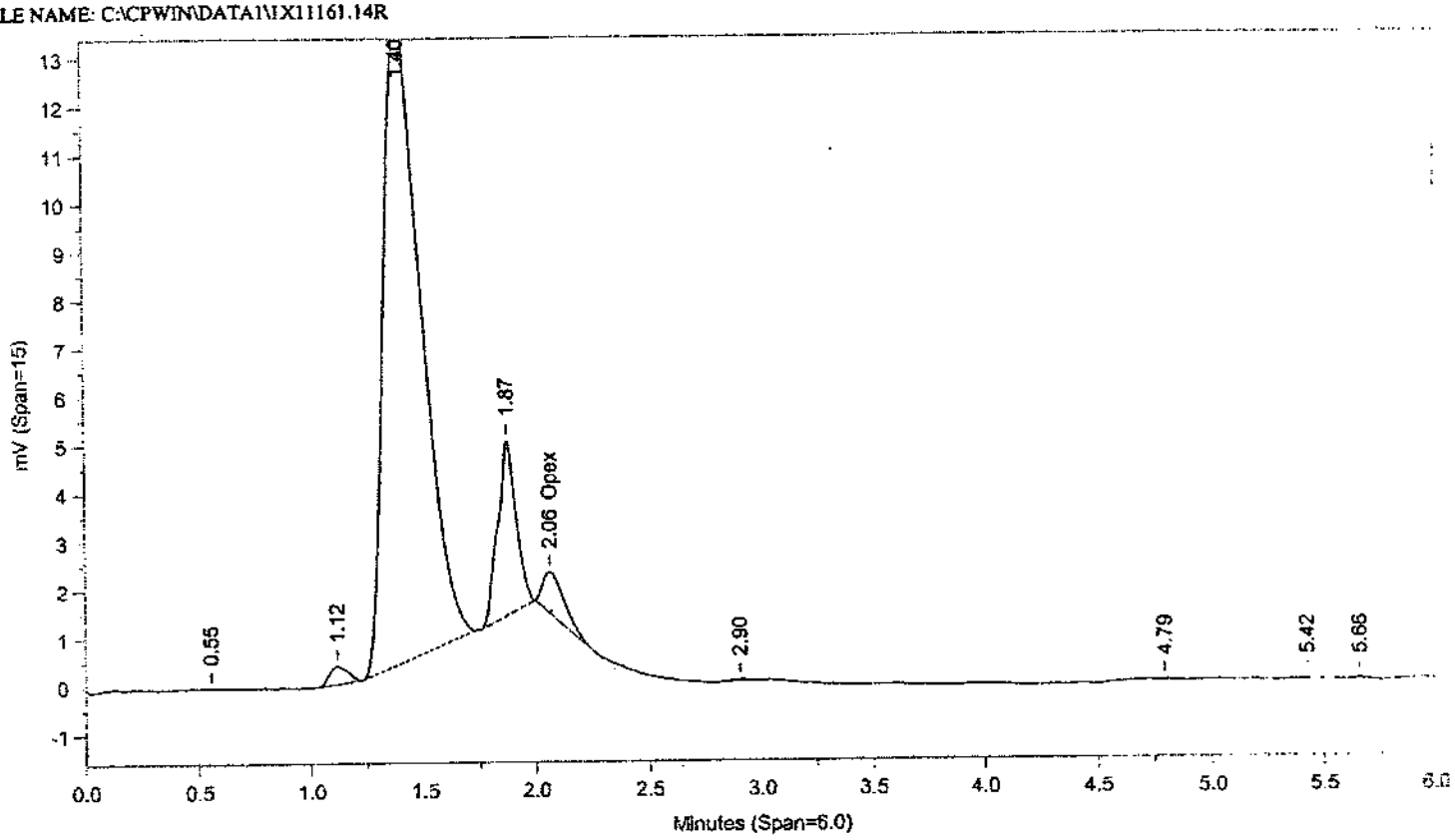
Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.065	841	139.564	Opex			0	Opex

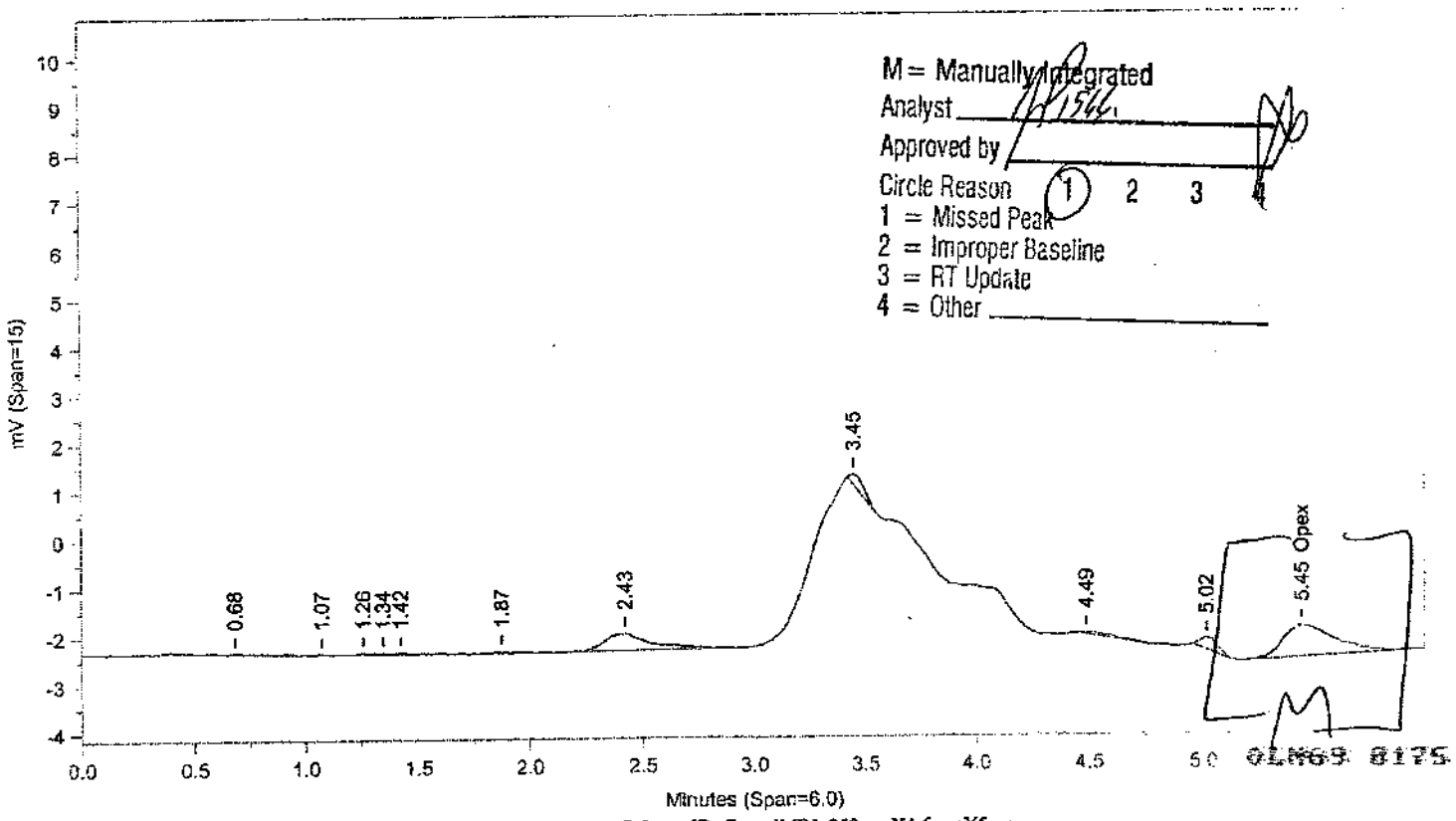
Files:
Area File: C:\CPWIN\DATA1\1X11161.14A
Area File: C:\CPWIN\DATA1\1X11161B.14A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:55:02 PM
File Reported On: 6/14/2011 at 6:55:11 PM

Not Used
See Reintegration

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\IX11161.14R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:36:54 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:36:54 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.065	841	139.564	Opex	5.447	650	244.782	Opex

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 7:04:20 PM
File Reported On: 6/14/2011 at 7:04:19 PM

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO.

ISC1- MSD

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 111610022A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:** OLN69

Matrix: (soil/water) WATER **Lab Sample ID:** 6308057

Sample wt/vol: 10 **(g/ml)** ml **Lab File ID:** 1X11161.15R

% Moisture: **Decanted: (Y/N)** **Date Received:** 6/7/2011

Extraction: (SepF/Cont/Sonc) Direct Injection **Date Extracted:** 6/10/2011

Concentrated Extract Volume: 10000 **(uL)** **Date Analyzed:** 6/10/2011

Injection Volume: 30 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
101-25-7	Opex	160	P

OLN69 8177

FORM I

Lancaster Laboratories Single Component Data Summary

Sample Name: **6308057** MSD ISC1- Sample ID: AA **Batchnumber: 111610022A**
Sample Amount: 10 ml Total Volume: 10 ml Analyst: 1566 SDG: OLN69 State: MA
Analyses: 02726 10342

Analysis Report (A)

Injected on : JUN 10, 2011 21:43:47
Instrument : CP09--K3593A
Result file : 1X11161.15R
Calibration file : 1X11161.CAL
Method file : OPEX.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	2.02	2.06	2.22	916	157.826355

Analysis Report (B)

Injected on : JUN 10, 2011 21:43:47
Instrument : CP09--K3593B
Result file : 1X11161B.15R
Calibration file : 1X11161B.CAL
Method file : OPEXB.MET
%SSR(Opex) :

Peak name	Min	R.T.	Max	Height	Amount
Opex	5.21	5.34	5.41	712	278.168701

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%Difference	Comments
☑ Opex			<100	<20			

Units: ug/l

Reviewed by: _____ Date: 6/15/11

Verified by: Valerie Tomayko Date: JUN 16 2011

Valerie Tomayko
Senior Specialist

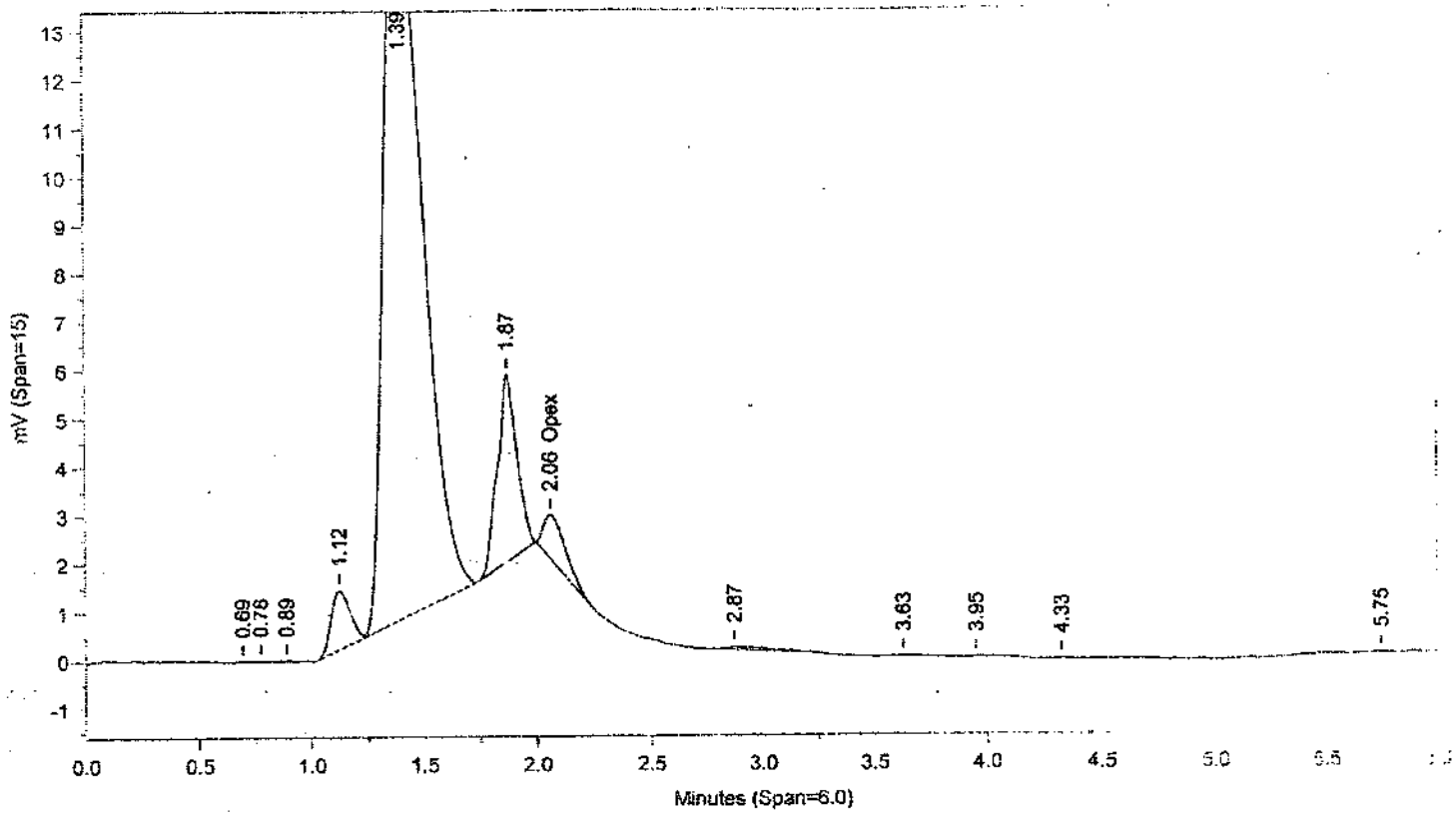
OLN69 0178

%Difference = High - Low Amount divided by the Average times 100

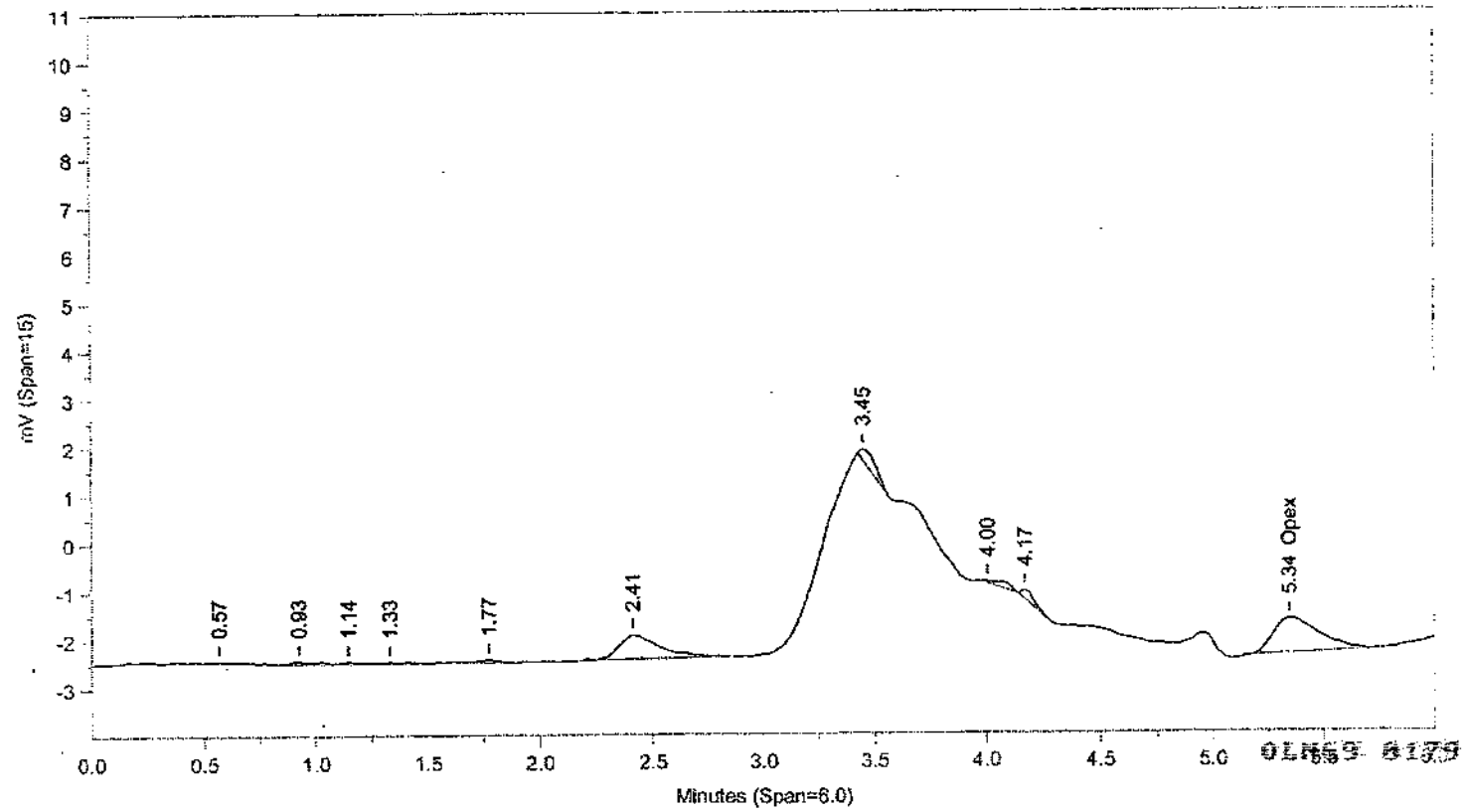
* Recovery outside QC Limits

Printed on: 6/14/11 19:23:05

LANCASTER LABORATORIES
FILE NAME: C:\CPWIN\DATA1\1X11161.15R



Instrument ID: CP09--K3593A Injected On: 6/10/2011 9:43:46 PM Column ID: Supelcosil PAH, 250mmX4.6mmX5um



Instrument ID: CP09--K3593B Injected On: 6/10/2011 9:43:46 PM Column ID: Capcell CN, 250mmX4.6mmX5um

Oven Parameters: 75% Phosphate Buffer : 25% ACN

Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantitation: Height

Detector B Parameters:
Threshold: -4 Width: 0.1
Calibration Type: External

Area Reject: 100
Quantiation: Height

Sample Weight: 10
Analyst: 1566

Dilution Factor: 10

RT A	Height A	Amount A	Compound A	RT B	Height B	Amount B	Compound B
2.06	916	157.826	Opex	5.343	712	278.169	Opex

Files:
Area File: C:\CPWIN\DATA1\1X11161.15A
Area File: C:\CPWIN\DATA1\1X11161B.15A
Method A: C:\CPWIN\DATA1\OPEX.MET
Method B: C:\CPWIN\DATA1\OPEXB.MET
Calibration File A: C:\CPWIN\DATA1\1X11161.CAL
Calibration File B: C:\CPWIN\DATA1\1X11161B.CAL
Format A: C:\CPWIN\DATA1\OPEXD.FMTA
Format B: C:\CPWIN\DATA1\OPEXD.FMTB
Area File Created On: 6/14/2011 6:55:22 PM
File Reported On: 6/14/2011 at 6:55:31 PM

Extraction/Distillation/Digestion Logs

OLN69 7181

Organic Extraction Batchlog Assigned to: 1566 James Place

Reviewed by: _____ Start Date: 6/10/11 Start time: 7:00pm

111610022A

Tech 1: [illegible] Tech 2: _____

Dept: 24	Prep Analysis: 00000										Opex In Water
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
6308056MS	ISC1-	10			ST11143248	0.1	10	6.57	9.72	178A	Yellowish
6308057MSD	ISC1-	10			↓	0.1	10	6.62	9.34	↓	↓
BLANKA	PBLK22161	10					10			N/C	
LCSA	LCS22161	10			ST11143248	0.1	10			↓	
LCSDA	LCSD22161	10			↓	0.1	10			↓	

ST11143248 – Opex stock

Sample #		Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	Due Date	Prio
1	6308055BKG	ISC1-	10			10	6.51	9.42	178A	Yellowish	02726	06/17/2011	P
2	6308058	ISC1D	10			10	6.62	9.70		Yellowish	02726	06/17/2011	P
3	6308059	ISC2-	10			10	6.88	9.22			02726	06/17/2011	P
4	6308074	PZ16R	10			10	6.15	9.73		Orangish sediment	02726	06/17/2011	P
5	6308075	PZ17R	10			10	5.10	9.12			02726	06/17/2011	P
6	6308076	-SD-1	10			10	7.08	9.30			02726	06/17/2011	P
7	6309550	5-XXX	10			10	7.04	9.59		Yellowish w/sediment	02726	06/20/2011	P
8	6309553	1-XXX	10			10	5.84	9.66		Orange sediment	02726	06/20/2011	P
9	6309554	2-XXX	10			10	6.48	9.59			02726	06/20/2011	P
10	6309555	S-XXX	10			10	6.57	9.28			02726	06/20/2011	P
11	6310720	EDSD0	10			10	6.53	9.69			02726	06/21/2011	P
12	6310721	EDSD1	10			10	7.26	9.64			02726	06/21/2011	P
13	6310722	EDSD2	10			10	7.05	9.15			02726	06/21/2011	P
14	6310723	EDSD5	10			10	7.19	9.58			02726	06/21/2011	P
15	6310724	MMB-2	10			10	7.33	9.82			02726	06/21/2011	P

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	111610022A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Hydrazines by LC/MS/MS

01M69 0103

Case Narrative Conformance/Nonconformance Summary

0LH69 8164

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN69

Specialty Services Group
Fraction: Hydrazines by LC/MS/MS

Hydrazines in Water

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
6308055	OC-SW-ISCO-1-XXX	X		Unspiked
6308056	OC-SW-ISCO-1-XMS	X		Matrix Spike
6308057	OC-SW-ISCO-1-MSD	X		Matrix Spike Duplicate
6308058	OC-SW-ISCO-1-DUP	X		Field Duplicate Sample
6308059	OC-SW-ISCO-2-XXX	X		
6308060	OC-SW-MMB-SW/SD-10-XXX	X		

See QC Reference List for Associated Batch QC Samples

SAMPLE PREPARATION:

Samples were derivatized with benzaldehyde prior to analysis.

ANALYSIS:

There were no dilutions performed for analyses associated with samples in this SDG.

No problems were encountered with the analysis of the samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

DATA INTERPRETATION:

The LCS serves as the ICV second source check.

OLN69 0185

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN69

Specialty Services Group
Fraction: Hydrazines by LC/MS/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	
LCSD = Lab Control Sample Duplicate	* = Out of Specification
NC = Not calculated	NF = Not found

Narrative Reviewed and Approved 6/28/11 (Date) by

Luz C Torres
Group Leader

OLN69 0186

QC Summary

Lancaster Laboratories

Quality Control Reference List
Specialty Services Group

CLIENT: Olin Corporation
SDG: OLN69

Fraction: Hydrazines by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
Hydrazines in Water	11161002	BLK	06/11/2011 06:14:00
		LCS	06/11/2011 07:01:00
		LCSD	06/11/2011 07:16:00
		6308055 UNSPK	06/11/2011 06:45:00
		6308056 MS	06/11/2011 07:32:00
		6308057 MSD	06/11/2011 07:48:00
		6308058	06/11/2011 08:35:00
		6308059	06/11/2011 08:51:00
		6308060	06/11/2011 09:06:00

OLN69 0109

Lancaster Laboratories

Quality Control Summary
Method Blank
Specialty Services Group
SDG: OLN69
Matrix: LIQUID

Fraction: Hydrazines by LC/MS/MS

11161002 / BLK Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Hydrazine	06/11/11	N.D.	ug/l	0.050	0.10
Methylhydrazine	06/11/11	N.D.	ug/l	0.25	0.50
1,1-Dimethylhydrazine	06/11/11	N.D.	ug/l	0.25	0.50

OLN69 0189

Lancaster Laboratories

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: OLN69
Matrix: LIQUID

Specialty Services Group
Fraction: Hydrazines by LC/MS/MS

UNSPK: 6308055 MS: 6308056 MSD: 6308057 **Analyte**	Batch: **11161002** (Sample number(s): 6308055-6308060)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Hydrazine	12	N.D.	11.03	11.04	92	92	70-130	0	25
Methylhydrazine	60	N.D.	45.48	46.04	76	77	70-130	1	25
1,1-Dimethylhydrazine	60	N.D.	44.13	46.75	74	78	70-130	6	25

OLN69 B198

Results are being reported on an as received basis.

Lancaster Laboratories

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: OLN69
Matrix: LIQUID

Specialty Services Group
Fraction: Hydrazines by LC/MS/MS

LCS LCSD **Analyte**	Batch: **11161002** (Sample number(s): 6308055-6308060)							
	Spike Added ug/l	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Hydrazine	12	12.2	11.79	102	98	70-130	3	25
Methylhydrazine	60	60.17	60.13	100	100	70-130	0	25
1,1-Dimethylhydrazine	60	59.97	60.33	100	101	70-130	1	25

OLN69 0191

Sample Data

OLN69 #192

Lancaster Laboratories

LOQ/MDL Summary
Specialty Services Group

SDG: OLN69

Fraction: Hydrazines by LC/MS/MS

10342: Hydrazines in Water Analyte Name	Default MDL	Default LOQ	Units
Hydrazine	0.050	0.10	ug/l
Methylhydrazine	0.25	0.50	ug/l
1,1-Dimethylhydrazine	0.25	0.50	ug/l

OLN69 0193

Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Component Name: **Monomethylhydrazine**

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
conditioner	A11161002_01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
conditioner	A11161002_02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYS(MDL)	A11161002_03	71083.46	N/A	71083.464	N/A	0.23724ug/L	N/A	N/A
CAL1	A11161002_04	149776.03	N/A	149776.030	0.5	0.50978ug/L	1.96	N/A
CAL2	A11161002_05	301791.28	N/A	301791.280	1	1.03627ug/L	3.63	N/A
CAL3	A11161002_06	729348.75	N/A	729348.753	2.5	2.51707ug/L	0.68	N/A
CAL4	A11161002_07	1400143.10	N/A	1400143.099	5	4.84030ug/L	-3.19	N/A
CAL5	A11161002_08	6943529.62	N/A	6943529.620	25	24.03923ug/L	-3.84	N/A
CAL6	A11161002_09	14603043.71	N/A	14603043.707	50	50.56716ug/L	1.13	N/A
CAL7	A11161002_10	27784339.72	N/A	27784339.720	100	96.21919ug/L	-3.78	N/A
CAL8	A11161002_11	37327522.75	N/A	37327522.753	125	129.27100ug/L	3.42	N/A
Conditioner	A11161002_12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conditioner	A11161002_13	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLK (reagent)	A11161002_14	N/A	N/A	N/A	0	N/A	N/A	N/A
CCV1	A11161002_15	709229.13	N/A	709229.128	2.5	2.44739ug/L	-2.10	N/A
6308055(BKG)	A11161002_16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ICV/LCS	A11161002_17	17375794.26	N/A	17375794.265	N/A	60.17029ug/L	N/A	N/A
ICV/LCSD	A11161002_18	17364107.58	N/A	17364107.581	N/A	60.12981ug/L	N/A	N/A
6308056MS	A11161002_19	13135054.41	N/A	13135054.414	N/A	45.48293ug/L	N/A	N/A
6308057MSD	A11161002_20	13296462.88	N/A	13296462.877	N/A	46.04195ug/L	N/A	N/A
CCV2	A11161002_21	1500846.24	N/A	1500846.245	5	5.18907ug/L	3.78	N/A
Conditioner	A11161002_22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308058	A11161002_23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308059	A11161002_24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308060	A11161002_25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	A11161002_26	6990998.15	N/A	6990998.147	25	24.20364ug/L	-3.19	N/A
CCV4	A11161002_27	14280172.67	N/A	14280172.668	50	49.44893ug/L	-1.10	N/A

Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Component Name: **1,1-Dimethylhydrazine**

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
conditioner	A11161002_01	3513.63	N/A	3513.627	N/A	0.23067ug/L	N/A	N/A
conditioner	A11161002_02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYS(MDL)	A11161002_03	17929.67	N/A	17929.673	N/A	0.35415ug/L	N/A	N/A
CAL1	A11161002_04	38440.58	N/A	38440.578	0.5	0.52983ug/L	5.97	N/A
CAL2	A11161002_05	92300.85	N/A	92300.848	1	0.99116ug/L	-0.88	N/A
CAL3	A11161002_06	263751.17	N/A	263751.166	2.5	2.45969ug/L	-1.61	N/A
CAL4	A11161002_07	551660.92	N/A	551660.923	5	4.92572ug/L	-1.49	N/A
CAL5	A11161002_08	2829480.25	N/A	2829480.251	25	24.43591ug/L	-2.26	N/A
CAL6	A11161002_09	5753338.73	N/A	5753338.731	50	49.47961ug/L	-1.04	N/A
CAL7	A11161002_10	11867528.17	N/A	11867528.169	100	101.84944ug/L	1.85	N/A
CAL8	A11161002_11	14491980.85	N/A	14491980.852	125	124.32864ug/L	-0.54	N/A
Conditioner	A11161002_12	12814.18	N/A	12814.184	N/A	0.31034ug/L	N/A	N/A
Conditioner	A11161002_13	2130.42	N/A	2130.424	N/A	0.21883ug/L	N/A	N/A
BLK (reagent)	A11161002_14	1367.09	N/A	1367.092	0	0.21229ug/L < MDL	N/A	N/A
CCV1	A11161002_15	285864.33	N/A	285864.326	2.5	2.64909ug/L	5.96	N/A
6308055(BKG)	A11161002_16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ICV/LCS	A11161002_17	6978288.48	N/A	6978288.479	N/A	59.97167ug/L	N/A	N/A
ICV/LCSD	A11161002_18	7019964.66	N/A	7019964.664	N/A	60.32863ug/L	N/A	N/A
6308056MS	A11161002_19	5128692.25	N/A	5128692.249	N/A	44.12933ug/L	N/A	N/A
6308057MSD	A11161002_20	5434381.09	N/A	5434381.092	N/A	46.74765ug/L	N/A	N/A
CCV2	A11161002_21	559771.72	N/A	559771.721	5	4.99519ug/L	-0.10	N/A
Conditioner	A11161002_22	1198.85	N/A	1198.846	N/A	0.21085ug/L	N/A	N/A
6308058	A11161002_23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308059	A11161002_24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308060	A11161002_25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	A11161002_26	2830074.15	N/A	2830074.149	25	24.44099ug/L	-2.24	N/A
CCV4	A11161002_27	5875190.93	N/A	5875190.927	50	50.52331ug/L	1.05	N/A

MY 26 6/13/11

Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Component Name: **Hydrazine**

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
conditioner	A11161002_01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
conditioner	A11161002_02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYS(MDL)	A11161002_03	9515.74	N/A	9515.745	N/A	0.06864ug/L	N/A	N/A
CAL1	A11161002_04	15587.15	N/A	15587.154	0.1	0.11091ug/L	10.91	N/A
CAL2	A11161002_05	27582.24	N/A	27582.235	0.2	0.19441ug/L	-2.79	N/A
CAL3	A11161002_06	66560.37	N/A	66560.375	0.5	0.46576ug/L	-6.85	N/A
CAL4	A11161002_07	143170.57	N/A	143170.568	1	0.99910ug/L	-0.09	N/A
CAL5	A11161002_08	703274.72	N/A	703274.715	5	4.89833ug/L	-2.03	N/A
CAL6	A11161002_09	1439217.78	N/A	1439217.777	10	10.02169ug/L	0.22	N/A
CAL7	A11161002_10	2901360.82	N/A	2901360.820	20	20.20058ug/L	1.00	N/A
CAL8	A11161002_11	3577731.57	N/A	3577731.567	25	24.90922ug/L	-0.36	N/A
Conditioner	A11161002_12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conditioner	A11161002_13	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLK (reagent)	A11161002_14	N/A	N/A	N/A	0	N/A	N/A	N/A
CCV1	A11161002_15	68589.68	N/A	68589.680	0.5	0.47989ug/L	-4.02	N/A
6308055(BKG)	A11161002_16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ICV/LCS	A11161002_17	1752142.59	N/A	1752142.586	N/A	12.20015ug/L	N/A	N/A
ICV/LCSD	A11161002_18	1693002.22	N/A	1693002.219	N/A	11.78844ug/L	N/A	N/A
6308056MS	A11161002_19	1584076.64	N/A	1584076.642	N/A	11.03014ug/L	N/A	N/A
6308057MSD	A11161002_20	1585626.94	N/A	1585626.936	N/A	11.04094ug/L	N/A	N/A
CCV2	A11161002_21	139320.77	N/A	139320.773	1	0.97229ug/L	-2.77	N/A
Conditioner	A11161002_22	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308058	A11161002_23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6308059	A11161002_24	11131.52	N/A	11131.523	N/A	0.07989ug/L	N/A	N/A
6308060	A11161002_25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	A11161002_26	684905.02	N/A	684905.023	5	4.77045ug/L	-4.59	N/A
CCV4	A11161002_27	1418364.29	N/A	1418364.294	10	9.87652ug/L	-1.23	N/A

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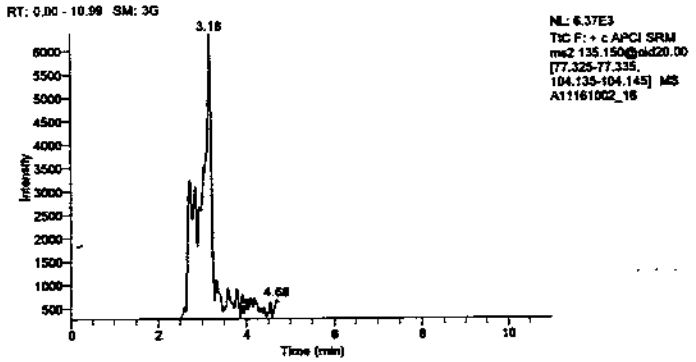
LCMSMS ANALYSIS REPORT

Sample Name:	6308055(BKG)		
Data File:	A11161002_16	Acquisition Date:	06/11/11 06:45:29 AM
Sample Type:	Unknown	Sample ID:	6308055(BKG)
Run Time(min):	10.98	Vial:	b:7
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A



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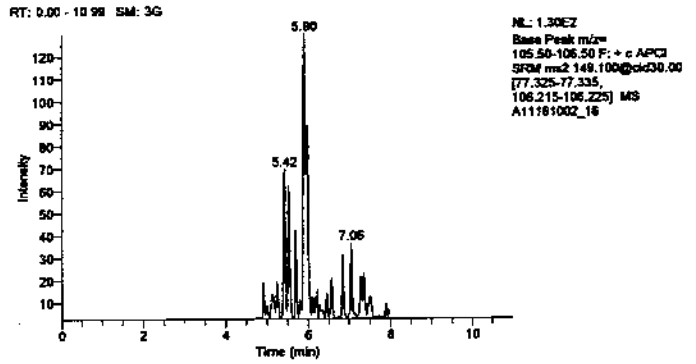

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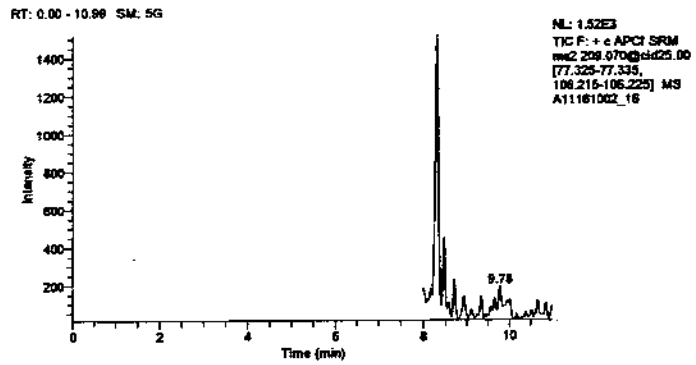

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Monday, June 13, 2011, 15:22:28

6/14/2011

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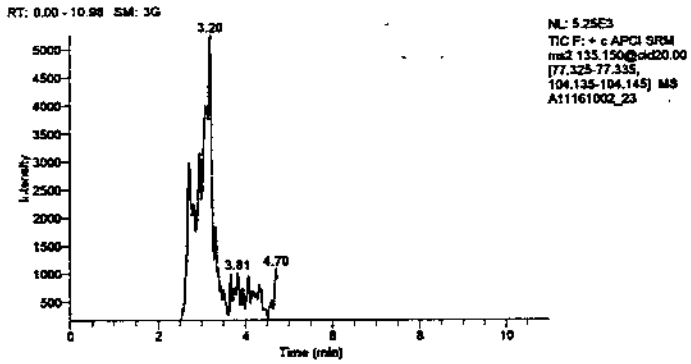
LCMSMS ANALYSIS REPORT

Sample Name:	6308058		
Data File:	A11161002_23	Acquisition Date:	06/11/11 08:35:32 AM
Sample Type:	Unknown	Sample ID:	6308058
Run Time(min):	10.98	Vial:	b:8
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A



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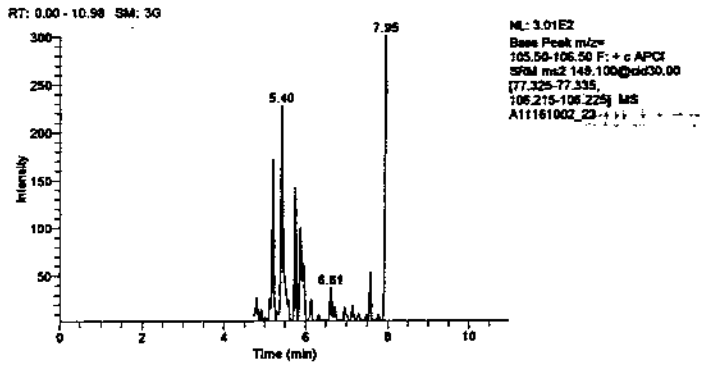

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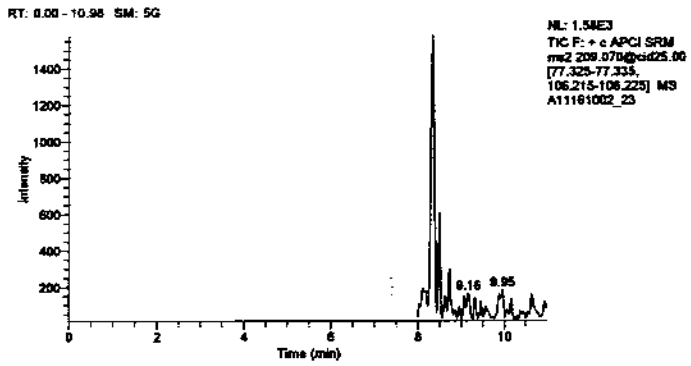

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Monday, June 13, 2011, 15:22:32

6/14/2011

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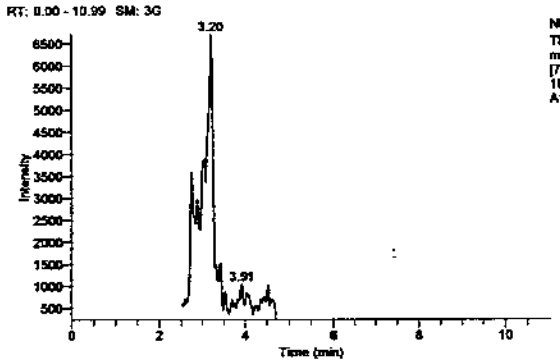
LCMSMS ANALYSIS REPORT

Sample Name:	6308059		
Data File:	A11161002_24	Acquisition Date:	06/11/11 08:51:16 AM
Sample Type:	Unknown	Sample ID:	6308059
Run Time(min):	10.99	Vial:	b:9
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A
Hydrazine	0.080	ug/L	11131.523	8.34



NL: 6.72E3
TIC F: + c APCI SRM ms2 135.150@cid20.00 [77.325-77.335, 104.135-104.145] MS A11161002_24

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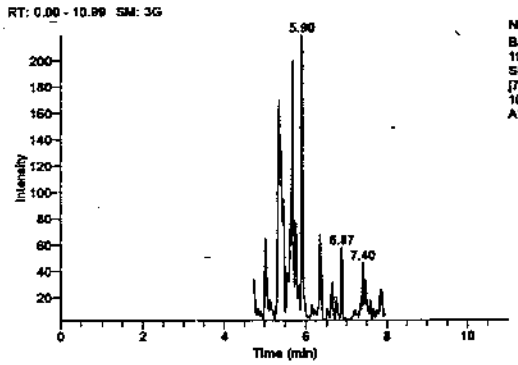

NL: 2.18E2
Base Peak m/z= 105.50-106.50 F: + c APCI SRM ms2 148.100@cid30.00 [77.325-77.335, 106.215-106.225] MS A11161002_24

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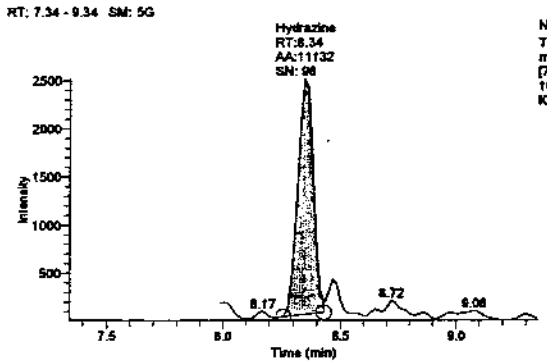
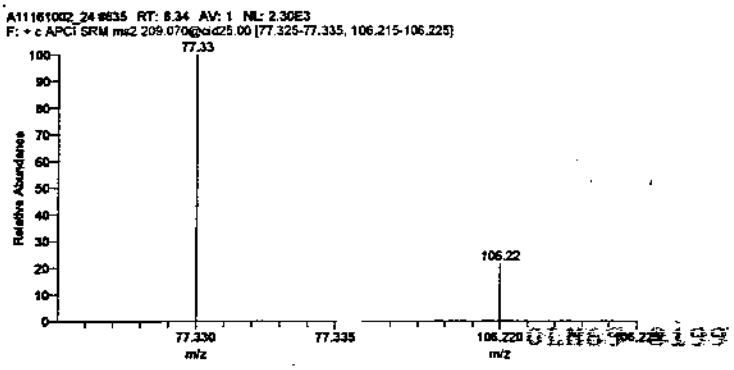


NL: 2.52E3
TIC F: + c APCI SRM ms2 209.070@cid25.00 [77.325-77.335, 106.215-106.225] MS ICIS A11161002_24



01N69 28199

6/14/2011

Monday, June 13, 2011, 15:22:32

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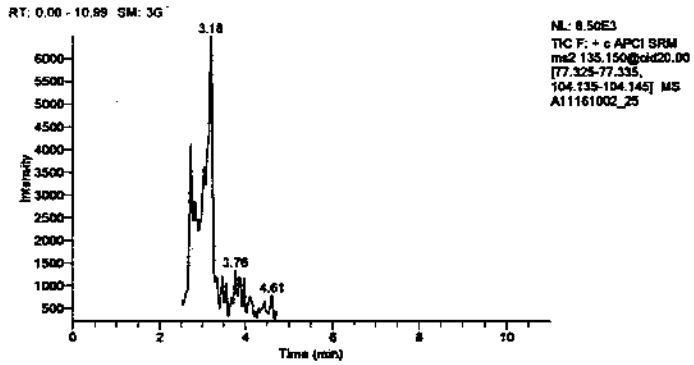
LCMSMS ANALYSIS REPORT

Sample Name:	6308060		
Data File:	A11161002_25	Acquisition Date:	06/11/11 09:06:58 AM
Sample Type:	Unknown	Sample ID:	6308060
Run Time(min):	10.98	Vial:	b:10
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A



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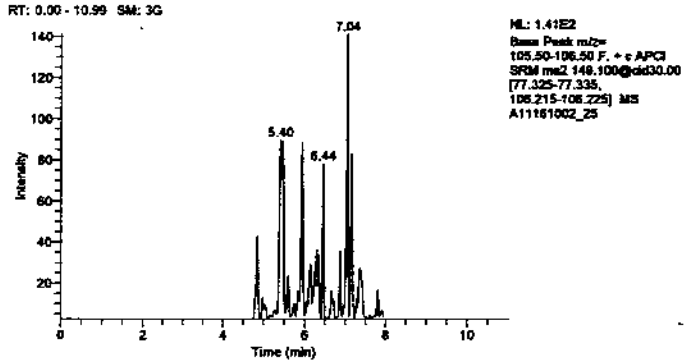

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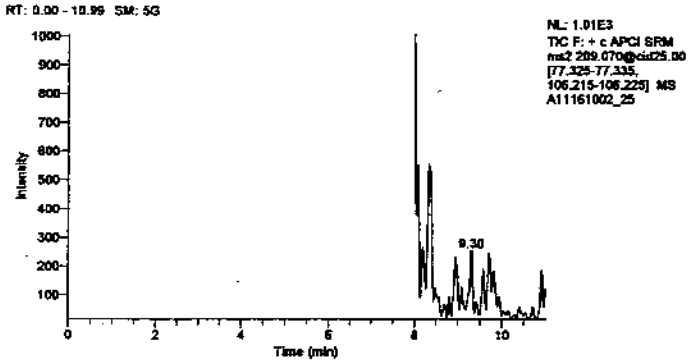

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Monday, June 13, 2011, 15:22:33

Standards Data

01N69 0281

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Sequence Table

File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
A11161002_01	conditioner	Unknown	N/A	A:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_02	conditioner	Unknown	N/A	A:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_03	SYS(MDL)	Unknown	N/A	A:2	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_04	CAL1	Std Bracket	1	A:3	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_05	CAL2	Std Bracket	2	A:4	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_06	CAL3	Std Bracket	3	A:5	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_07	CAL4	Std Bracket	4	A:6	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_08	CAL5	Std Bracket	5	A:7	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_09	CAL6	Std Bracket	6	A:8	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_10	CAL7	Std Bracket	7	A:9	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_11	CAL8	Std Bracket	8	A:10	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_12	Conditioner	Unknown	N/A	b:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_13	Conditioner	Unknown	N/A	b:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_14	BLK (reagent)	Blank	N/A	b:2	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_15	CCV1	QC	1	a:5	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_16	6308055(BKG)	Unknown	N/A	b:7	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_17	ICV/LCS	Unknown	N/A	b:3	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_18	ICV/LCSD	Unknown	N/A	b:4	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_19	6308056MS	Unknown	N/A	b:5	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_20	6308057MSD	Unknown	N/A	b:6	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_21	CCV2	QC	2	a:6	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_22	Conditioner	Unknown	N/A	b:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz

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File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
A11161002_23	6308058	Unknown	N/A	b:8	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_24	6308059	Unknown	N/A	b:9	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_25	6308060	Unknown	N/A	b:10	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_26	CCV3	QC	3	a:7	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz
A11161002_27	CCV4	QC	4	A:8	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2011June	C:\XCalibur\Hydrazine Analysis\Hydraz_02	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz

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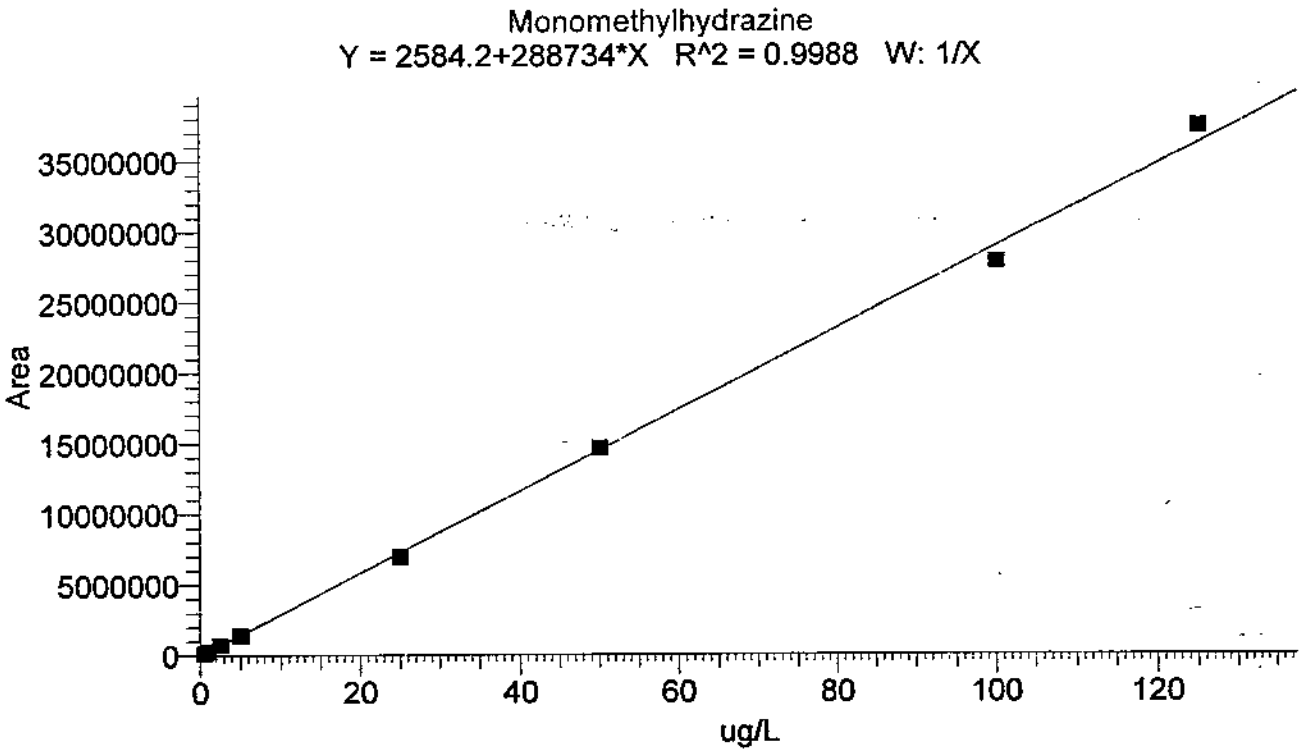
LCMSMS ANALYSIS REPORT

Component Name: **Monomethylhydrazine**



Identification		Component Name:	Monomethylhydrazine
Filter:	+ c APCI SRM ms2 135.15@cid20.00 [77.33-77.33, 104.14-104.15]	1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):			
Retention Time		Expected RT (min):	3.80000
Window (sec):	30.00000	View Width (min):	2.50000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
		ICIS Peak Integration	
ICIS Smoothing Points:	3	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
		Internal Standard	
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:		Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ug/L
Number of Cal. Levels:	8	Number of QC Levels:	4
		Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Limit ScanRange (nm):	N/A		

6/14/2011
OLM69 8284

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LCMSMS ANALYSIS REPORT

Component Cal Level Table

Cal Level	Amount
1	0.500
2	1.000
3	2.500
4	5.000
5	25.000
6	50.000
7	100.000
8	125.000

Component QC Level Table

QC Level	Amount
1	2.500
2	5.000
3	25.000
4	50.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	% Diff
CAL1	A11161002_04	0.50978ug/L	149776.03	1.96
CAL2	A11161002_05	1.03627ug/L	301791.28	3.63
CAL3	A11161002_06	2.51707ug/L	729348.75	0.68
CAL4	A11161002_07	4.84030ug/L	1400143.10	-3.19
CAL5	A11161002_08	24.03923ug/L	6943529.62	-3.84
CAL6	A11161002_09	50.56716ug/L	14603043.71	1.13
CAL7	A11161002_10	96.21919ug/L	27784339.72	-3.78
CAL8	A11161002_11	129.27100ug/L	37327522.75	3.42
CCV1	A11161002_15	2.44739ug/L	709229.13	-2.10
CCV2	A11161002_21	5.18907ug/L	1500846.24	3.78
CCV3	A11161002_26	24.20364ug/L	6990998.15	-3.19
CCV4	A11161002_27	49.44893ug/L	14280172.67	-1.10

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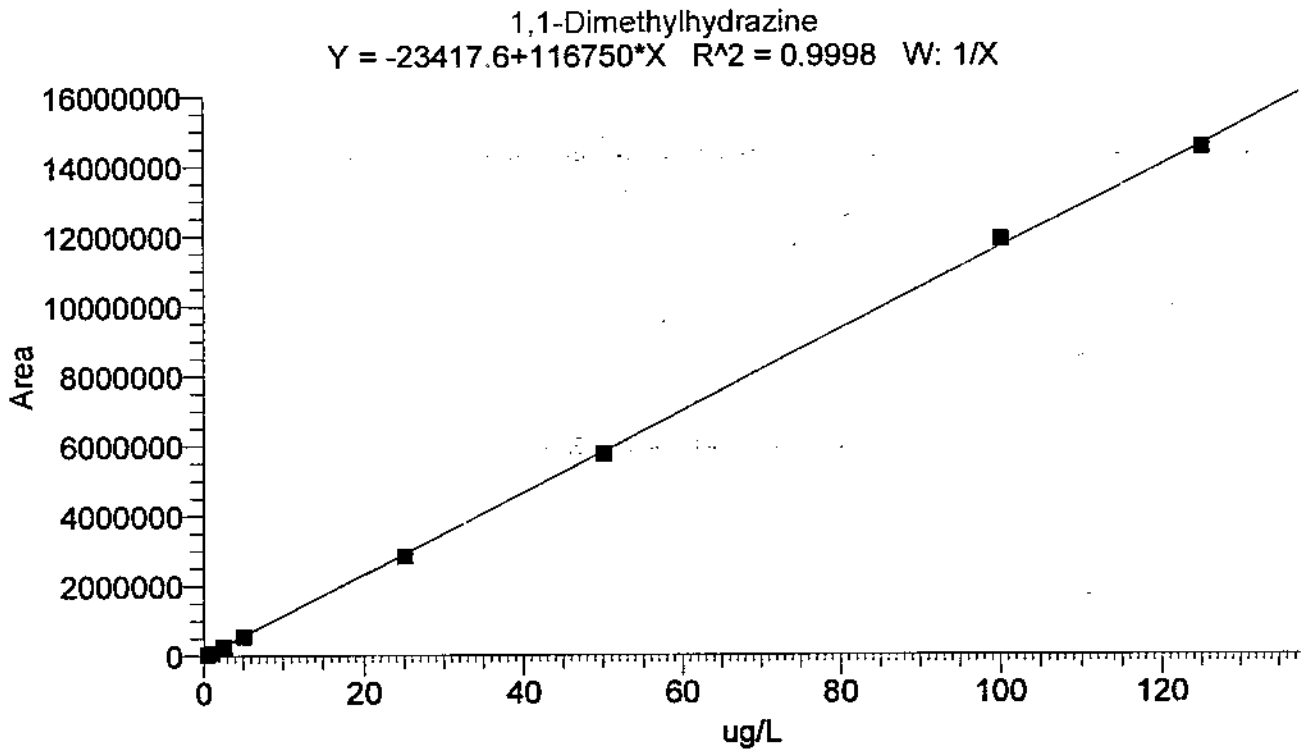
LCMSMS ANALYSIS REPORT

Component Name: **1,1-Dimethylhydrazine**



Identification		Component Name:	1,1-Dimethylhydrazine
Filter:	+ c APCI SRM ms2 149.10@cid30.00 [77.33-77.33, 106.22-106.22]	1st Trace Type:	Base Peak
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):	106		
Retention Time		Expected RT (min):	5.87000
Window (sec):	30.00000	View Width (min):	2.50000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
		ICIS Peak Integration	
ICIS Smoothing Points:	3	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
		Internal Standard	
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:		Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ug/L
Number of Cal. Levels:	8	Number of QC Levels:	4
		Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Limit ScanRange (nm):	N/A		

6/14/2011

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LCMSMS ANALYSIS REPORT

Component Cal Level Table

Cal Level	Amount
1	0.500
2	1.000
3	2.500
4	5.000
5	25.000
6	50.000
7	100.000
8	125.000

Component QC Level Table

QC Level	Amount
1	2.500
2	5.000
3	25.000
4	50.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	% Diff
CAL1	A11161002_04	0.52983ug/L	38440.58	5.97
CAL2	A11161002_05	0.99116ug/L	92300.85	-0.88
CAL3	A11161002_06	2.45969ug/L	263751.17	-1.61
CAL4	A11161002_07	4.92572ug/L	551660.92	-1.49
CAL5	A11161002_08	24.43591ug/L	2829480.25	-2.26
CAL6	A11161002_09	49.47961ug/L	5753338.73	-1.04
CAL7	A11161002_10	101.84944ug/L	11867528.17	1.85
CAL8	A11161002_11	124.32864ug/L	14491980.85	-0.54
CCV1	A11161002_15	2.64909ug/L	285864.33	5.96
CCV2	A11161002_21	4.99519ug/L	559771.72	-0.10
CCV3	A11161002_26	24.44099ug/L	2830074.15	-2.24
CCV4	A11161002_27	50.52331ug/L	5875190.93	1.05

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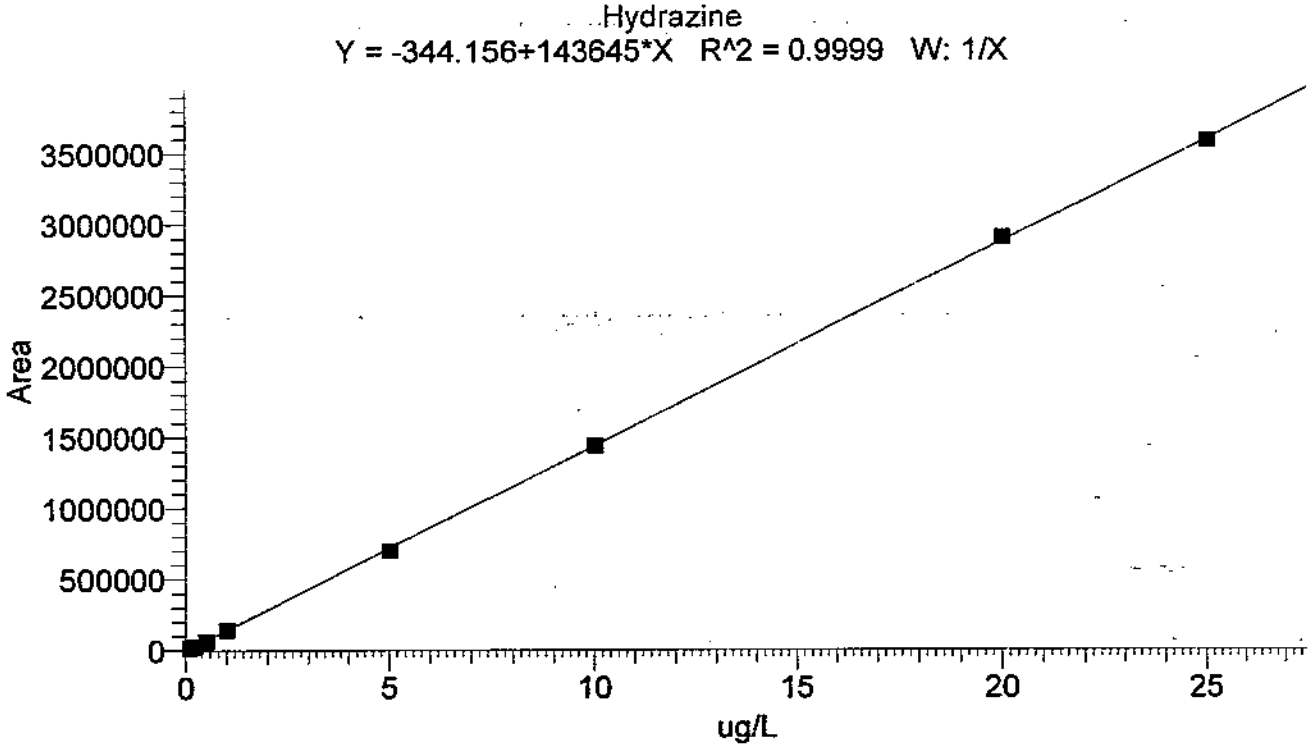
LCMSMS ANALYSIS REPORT

Component Name: **Hydrazine**



Identification		Component Name:	Hydrazine
Filter:	+ c APCI SRM ms2 209.07@cid25.00 [77.33-77.33, 106.22-106.22]	1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):			
Retention Time		Expected RT (min):	8.31000
Window (sec):	30.00000	View Width (min):	2.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
		ICIS Peak Integration	
ICIS Smoothing Points:	5	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor.	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
		Internal Standard	
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:		Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ug/L
Number of Cal. Levels:	8	Number of QC Levels:	4
		Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Limit ScanRange (nm):	N/A		

6/14/2011

01N69 8288

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LCMSMS ANALYSIS REPORT

Component Cal Level Table

Cal Level	Amount
1	0.100
2	0.200
3	0.500
4	1.000
5	5.000
6	10.000
7	20.000
8	25.000

Component QC Level Table

QC Level	Amount
1	0.500
2	1.000
3	5.000
4	10.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	% Diff
CAL1	A11161002_04	0.11091ug/L	15587.15	10.91
CAL2	A11161002_05	0.19441ug/L	27582.24	-2.79
CAL3	A11161002_06	0.46576ug/L	66560.37	-6.85
CAL4	A11161002_07	0.99910ug/L	143170.57	-0.09
CAL5	A11161002_08	4.89833ug/L	703274.72	-2.03
CAL6	A11161002_09	10.02169ug/L	1439217.78	0.22
CAL7	A11161002_10	20.20058ug/L	2901360.82	1.00
CAL8	A11161002_11	24.90922ug/L	3577731.57	-0.36
CCV1	A11161002_15	0.47989ug/L	68589.68	-4.02
CCV2	A11161002_21	0.97229ug/L	139320.77	-2.77
CCV3	A11161002_26	4.77045ug/L	684905.02	-4.59
CCV4	A11161002_27	9.87652ug/L	1418364.29	-1.23

6/14/2011

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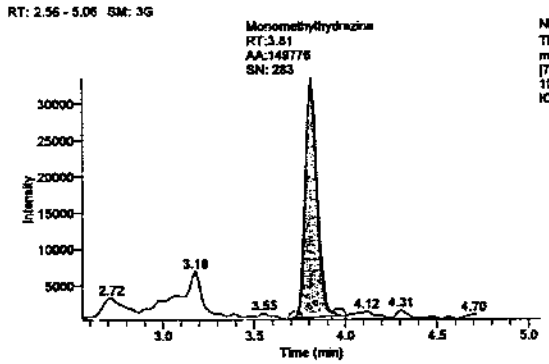
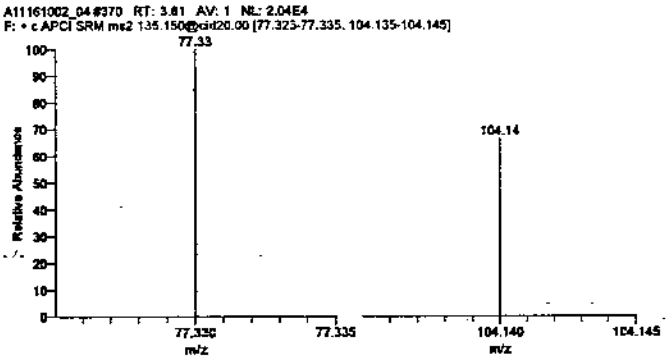
LCMSMS ANALYSIS REPORT

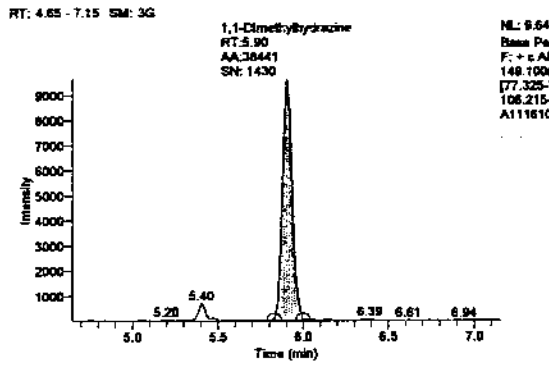
Sample Name:	CAL1		
Data File:	A11161002_04	Acquisition Date:	06/11/11 03:36:46 AM
Sample Type:	Std Bracket	Sample ID:	CAL1
Run Time(min):	10.98	Vial:	A:3
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

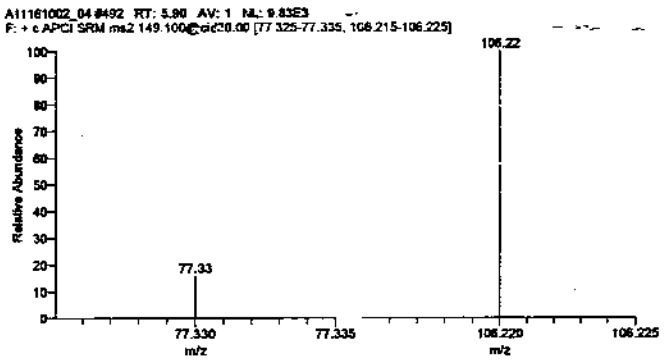
Quan Peak Table

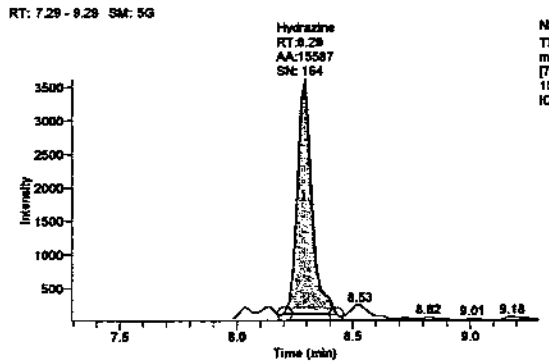
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	0.510	ug/L	149776.030	3.81
1,1-Dimethylhydrazine	0.530	ug/L	38440.578	5.90
Hydrazine	0.111	ug/L	15587.154	8.29

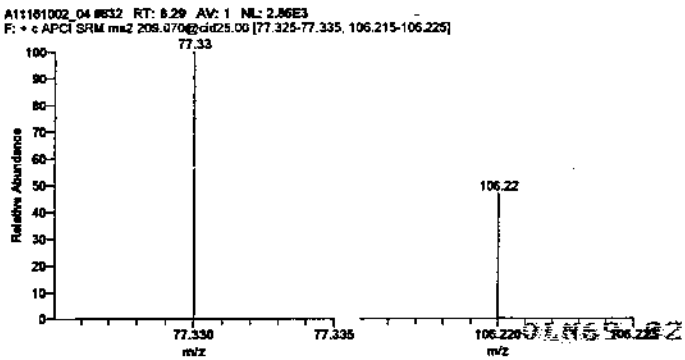












Monday, June 13, 2011, 15:22:16

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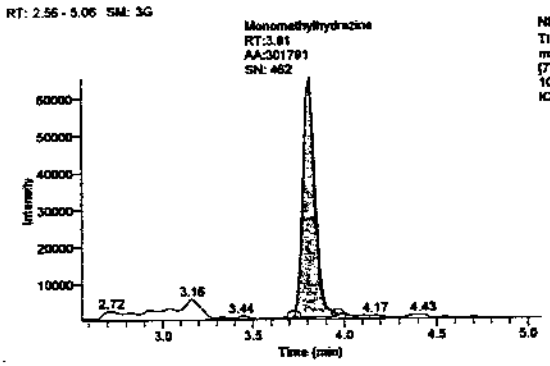
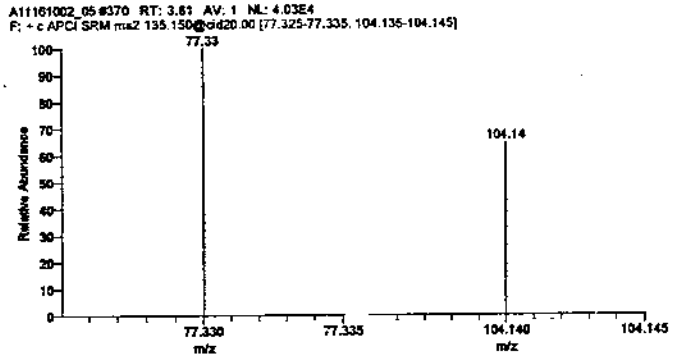
LCMSMS ANALYSIS REPORT

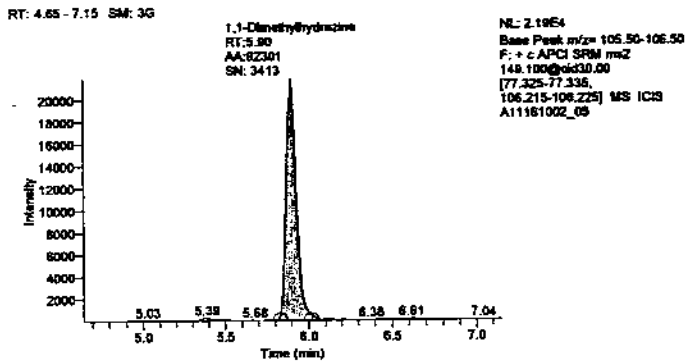
Sample Name:	CAL2		
Data File:	A11161002_05	Acquisition Date:	06/11/11 03:52:30 AM
Sample Type:	Std Bracket	Sample ID:	CAL2
Run Time(min):	10.98	Vial:	A:4
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

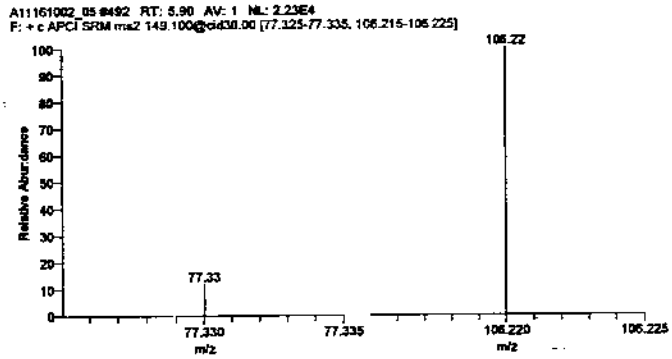
Quan Peak Table

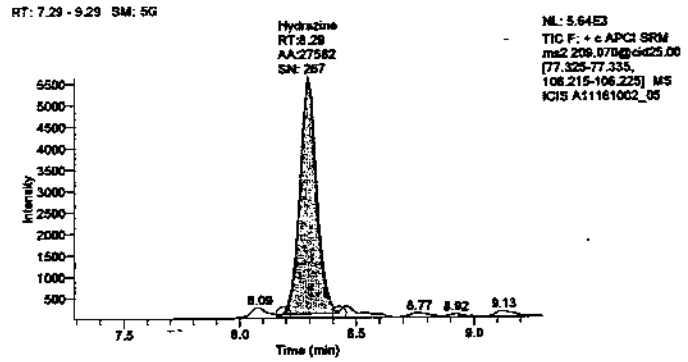
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	1.036	ug/L	301791.280	3.81
1,1-Dimethylhydrazine	0.991	ug/L	92300.848	5.90
Hydrazine	0.194	ug/L	27582.235	8.29

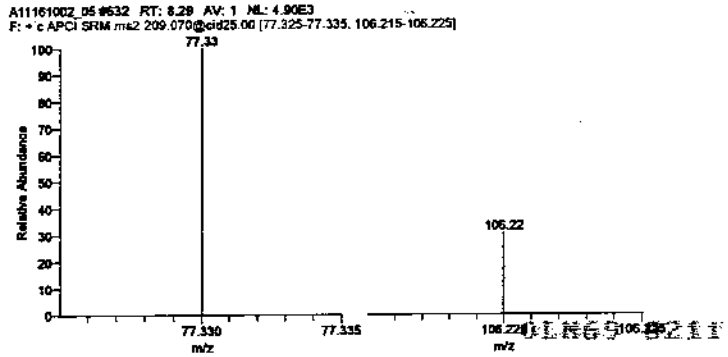












Monday, June 13, 2011, 15:22:17

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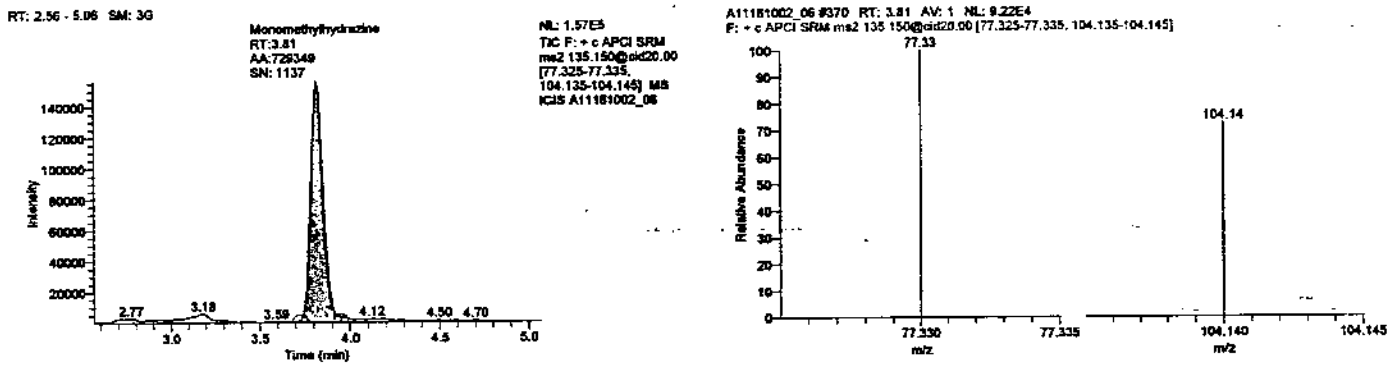
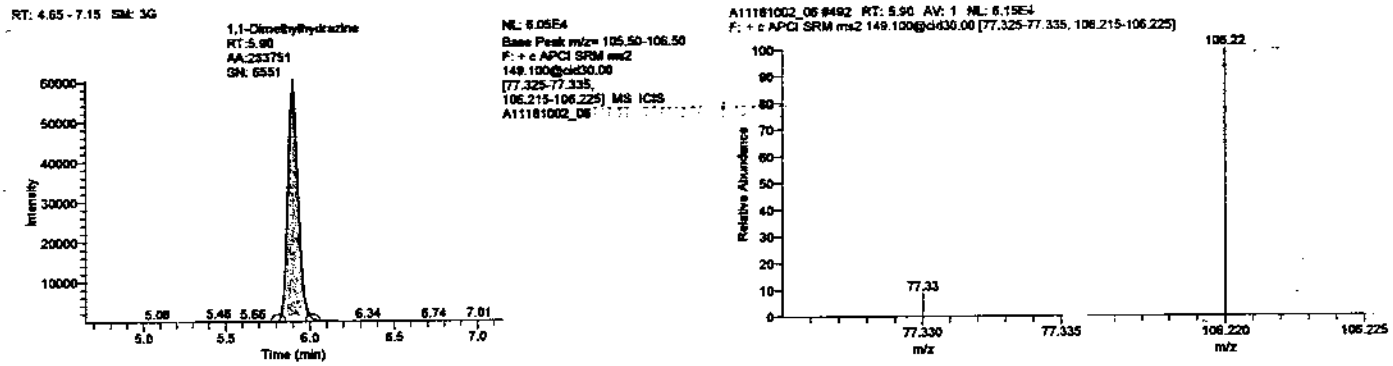
LCMSMS ANALYSIS REPORT

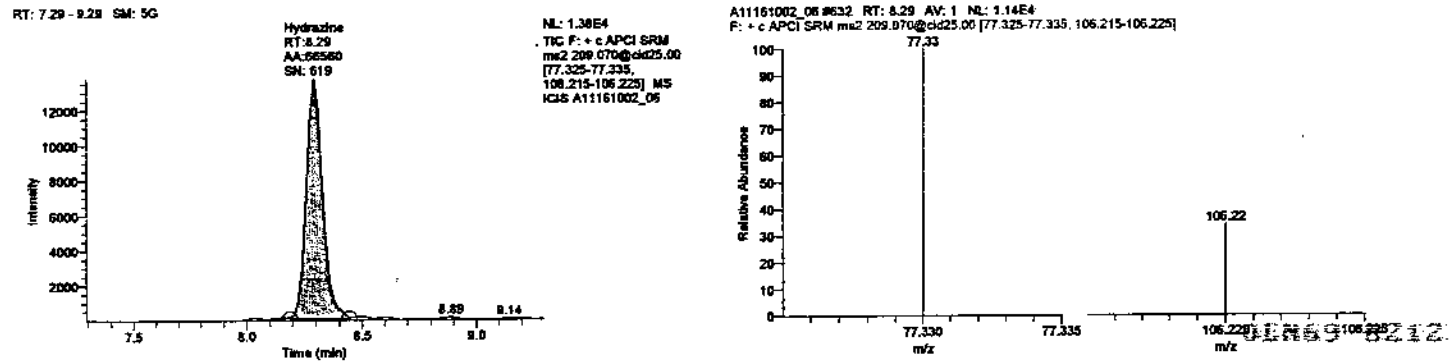
Sample Name:	CAL3		
Data File:	A11161002_06	Acquisition Date:	06/11/11 04:08:14 AM
Sample Type:	Std Bracket	Sample ID:	CAL3
Run Time(min):	10.98	Vial:	A:5
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	2.517	ug/L	729348.753	3.81
1,1-Dimethylhydrazine	2.460	ug/L	263751.166	5.90
Hydrazine	0.466	ug/L	66560.375	8.29







Monday, June 13, 2011, 15:22:18

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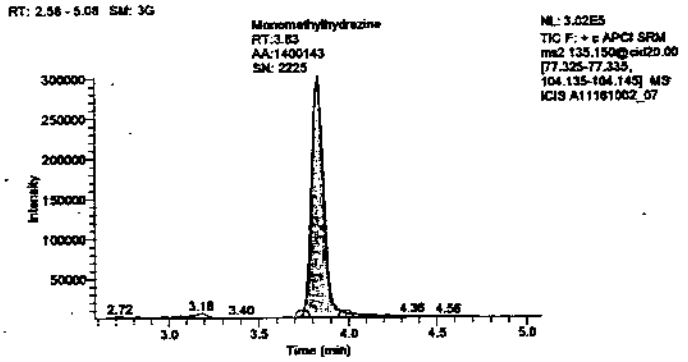
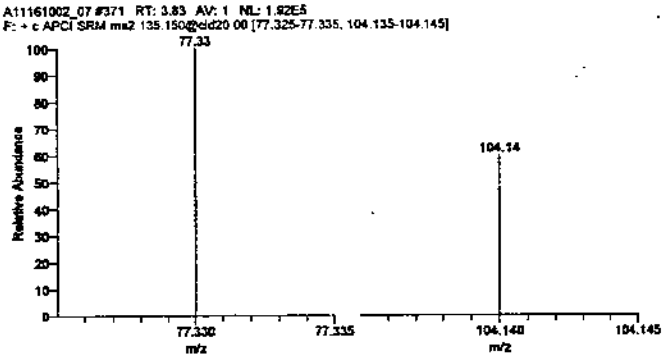
LCMSMS ANALYSIS REPORT

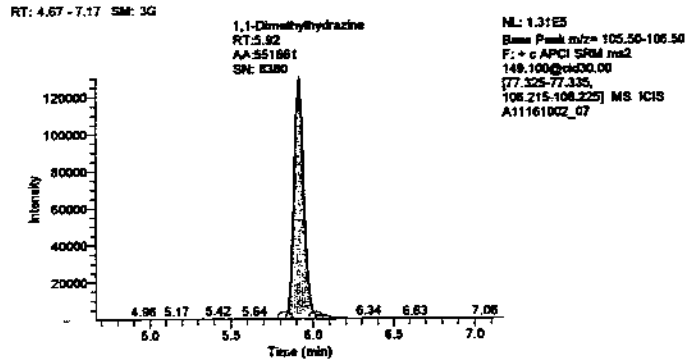
Sample Name:	CAL4		
Data File:	A11161002_07	Acquisition Date:	06/11/11 04:23:57 AM
Sample Type:	Std Bracket	Sample ID:	CAL4
Run Time(min):	10.98	Vial:	A:6
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

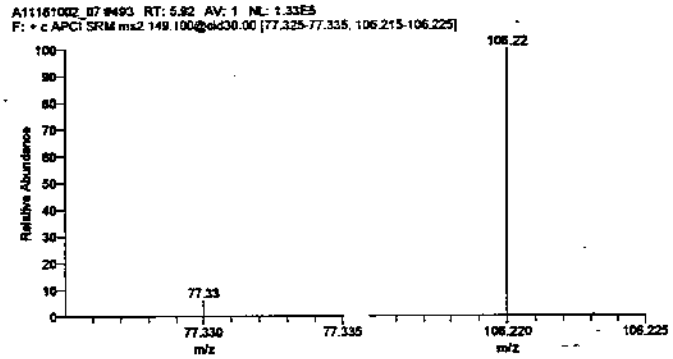
Quan Peak Table

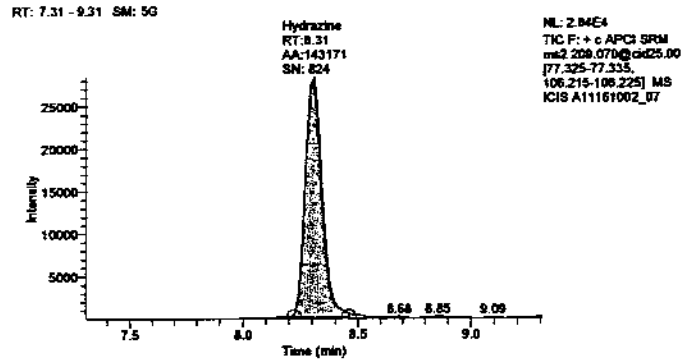
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	4.840	ug/L	1400143.099	3.83
1,1-Dimethylhydrazine	4.926	ug/L	551660.923	5.92
Hydrazine	0.999	ug/L	143170.568	8.31

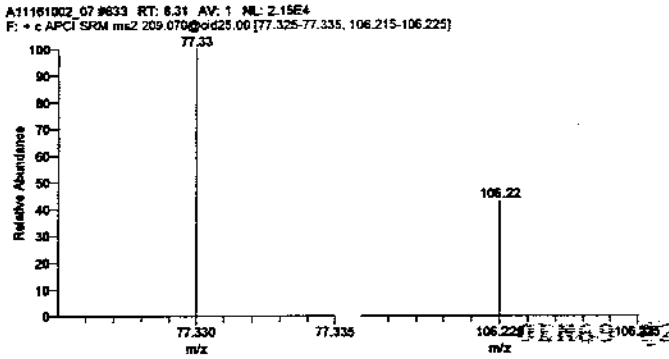












Monday, June 13, 2011, 15:22:19

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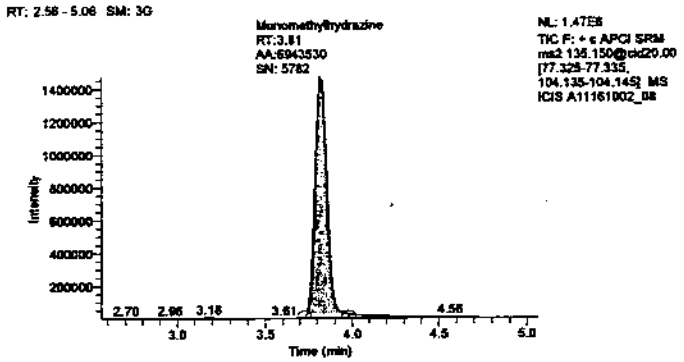
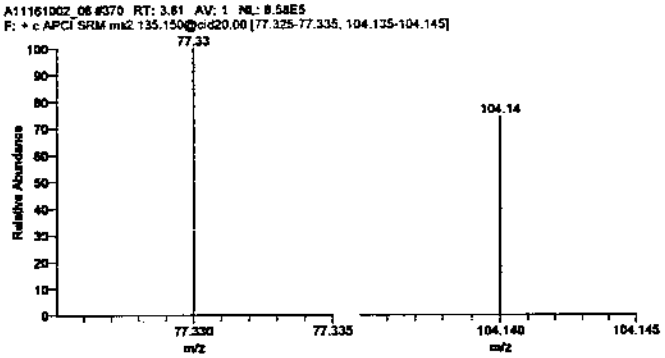
LCMSMS ANALYSIS REPORT

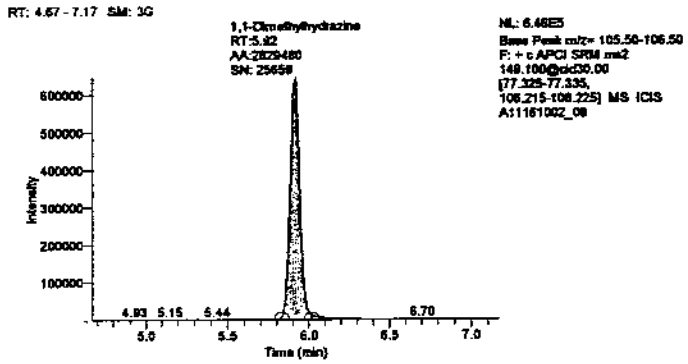
Sample Name:	CAL5		
Data File:	A11161002_08	Acquisition Date:	06/11/11 04:39:41 AM
Sample Type:	Std Bracket	Sample ID:	CAL5
Run Time(min):	10.99	Vial:	A:7
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

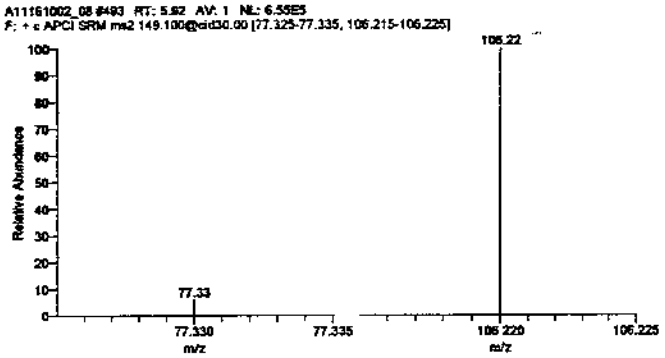
Quan Peak Table

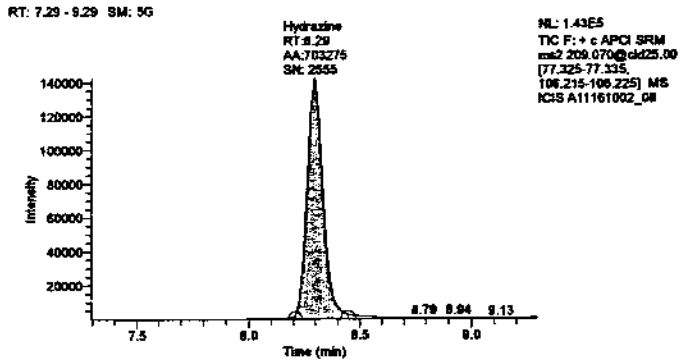
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	24.039	ug/L	6943529.620	3.81
1,1-Dimethylhydrazine	24.436	ug/L	2829480.251	5.92
Hydrazine	4.898	ug/L	703274.715	8.29

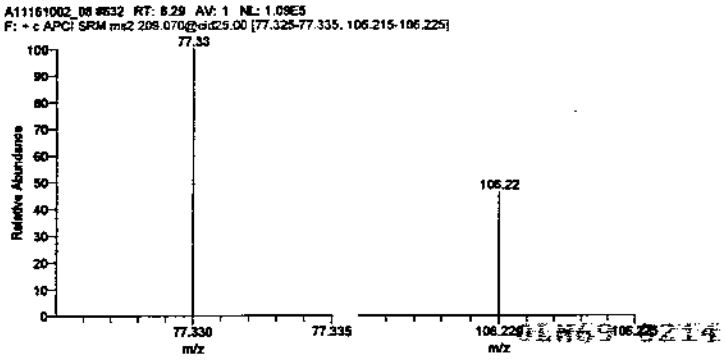












Monday, June 13, 2011, 15:22:19

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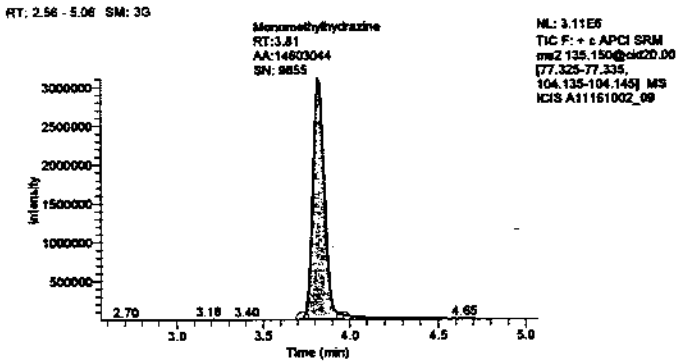
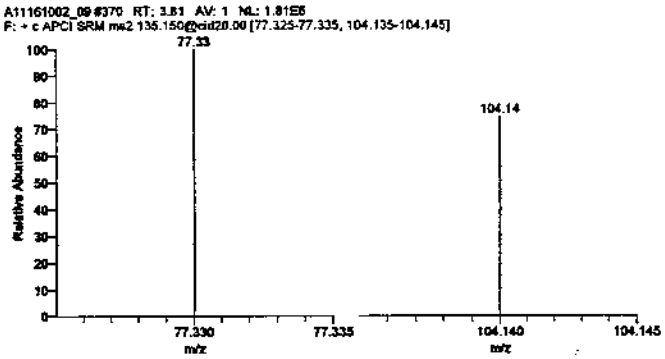
LCMSMS ANALYSIS REPORT

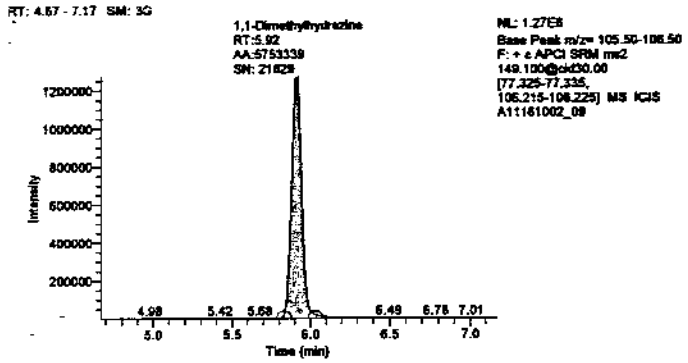
Sample Name:	CAL6		
Data File:	A11161002_09	Acquisition Date:	06/11/11 04:55:25 AM
Sample Type:	Std Bracket	Sample ID:	CAL6
Run Time(min):	10.98	Vial:	A:8
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

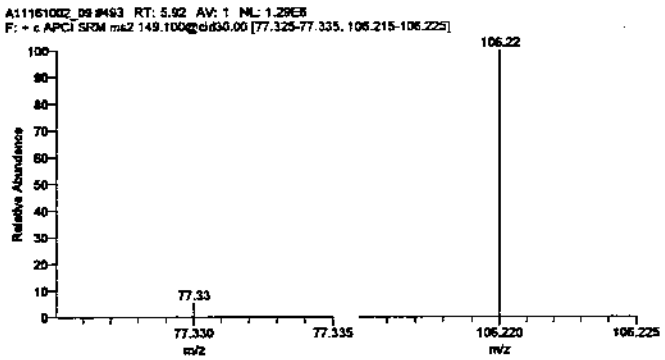
Quan Peak Table

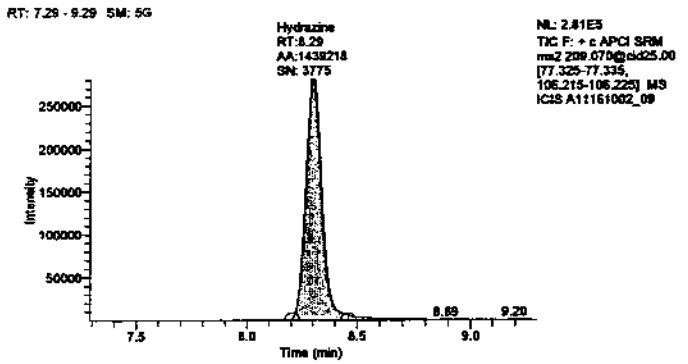
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	50.567	ug/L	14603043.707	3.81
1,1-Dimethylhydrazine	49.480	ug/L	5753338.731	5.92
Hydrazine	10.022	ug/L	1439217.777	8.29

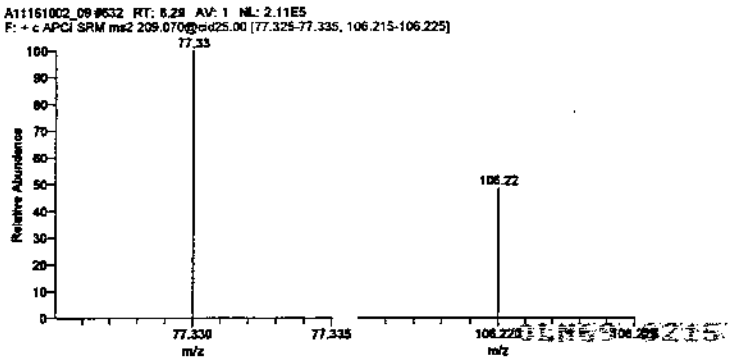












Monday, June 13, 2011, 15:22:20

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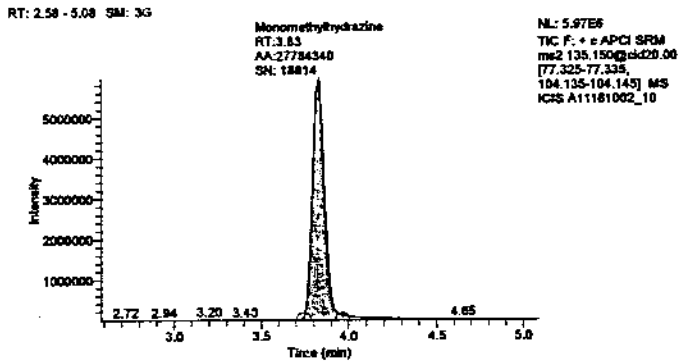
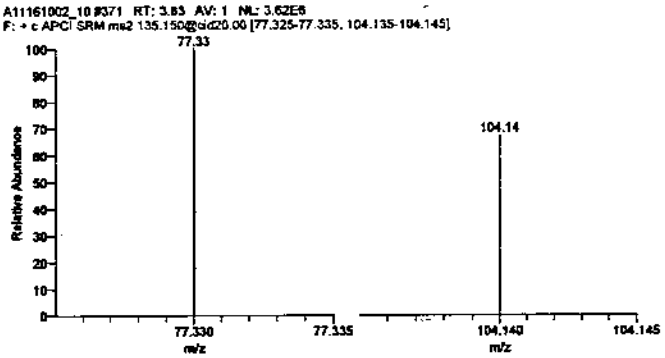
LCMSMS ANALYSIS REPORT

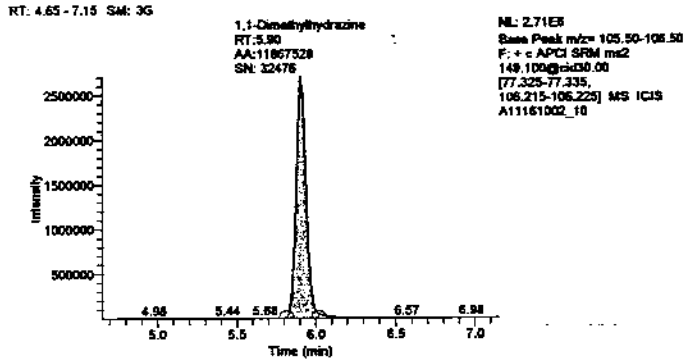
Sample Name:	CAL7		
Data File:	A11161002_10	Acquisition Date:	06/11/11 05:11:07 AM
Sample Type:	Std Bracket	Sample ID:	CAL7
Run Time(min):	10.99	Vial:	A:9
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

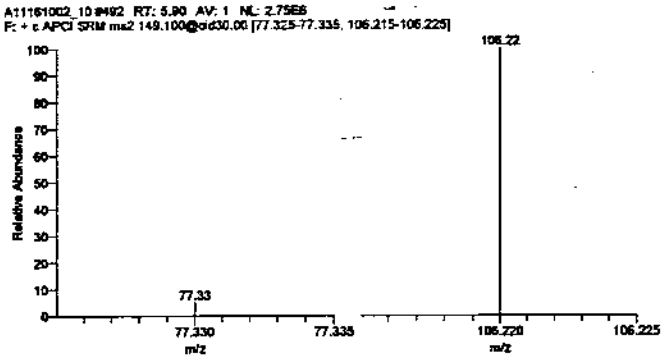
Quan Peak Table

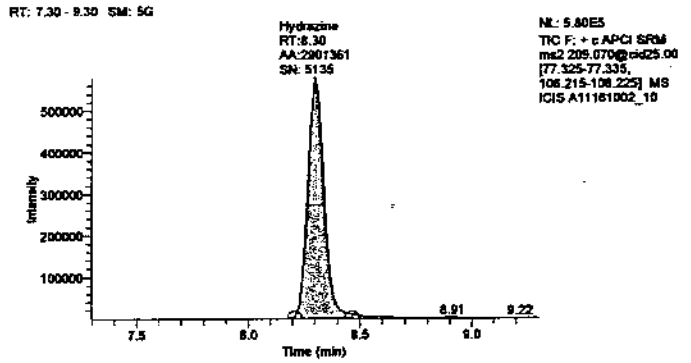
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	96.219	ug/L	27784339.720	3.83
1,1-Dimethylhydrazine	101.849	ug/L	11867528.169	5.90
Hydrazine	20.201	ug/L	2901360.820	8.30

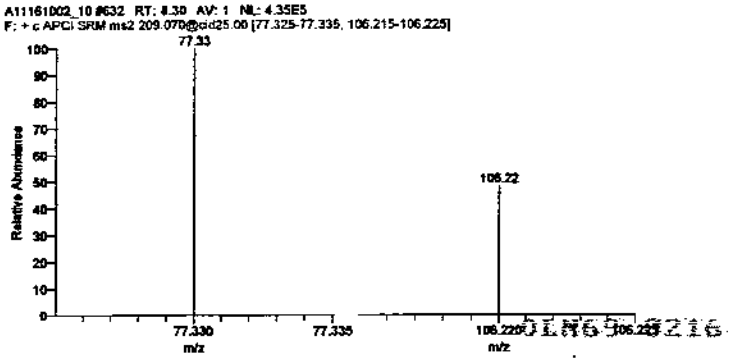












Monday, June 13, 2011, 15:22:21

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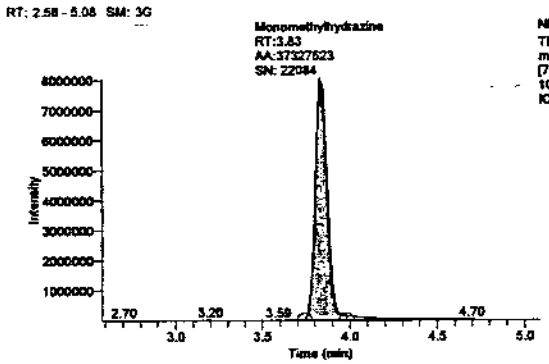
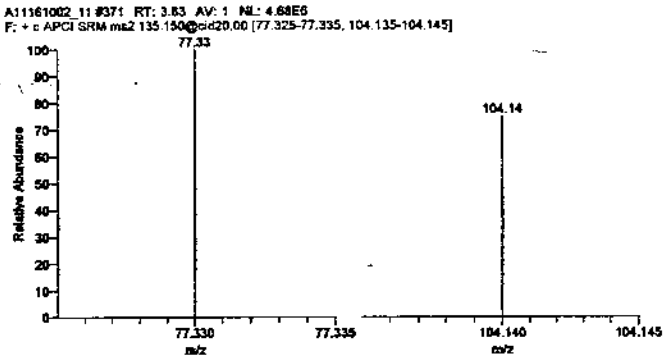
LCMSMS ANALYSIS REPORT

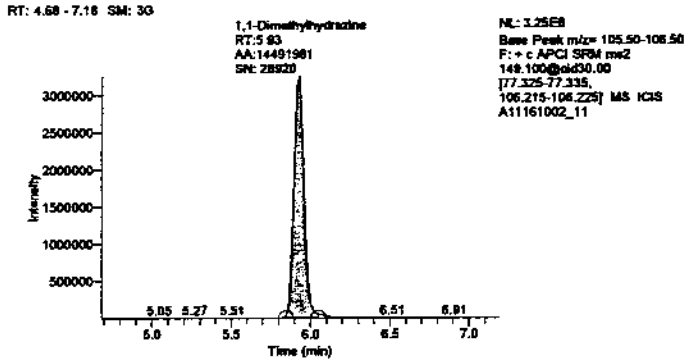
Sample Name:	CAL8		
Data File:	A11161002_11	Acquisition Date:	06/11/11 05:26:50 AM
Sample Type:	Std Bracket	Sample ID:	CAL8
Run Time(min):	10.99	Vial:	A:10
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

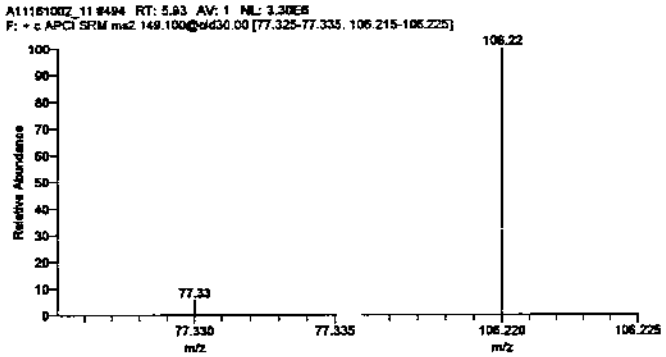
Quan Peak Table

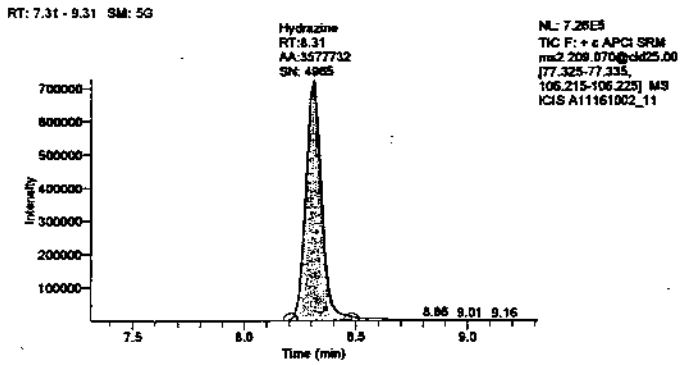
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	129.271	ug/L	37327522.753	3.83
1,1-Dimethylhydrazine	124.329	ug/L	14491980.852	5.93
Hydrazine	24.909	ug/L	3577731.567	8.31

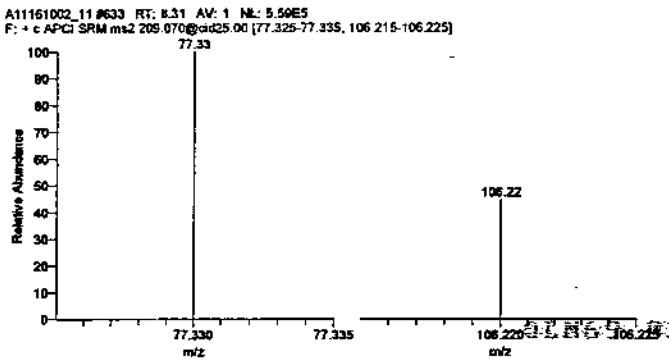












Monday, June 13, 2011, 15:22:22

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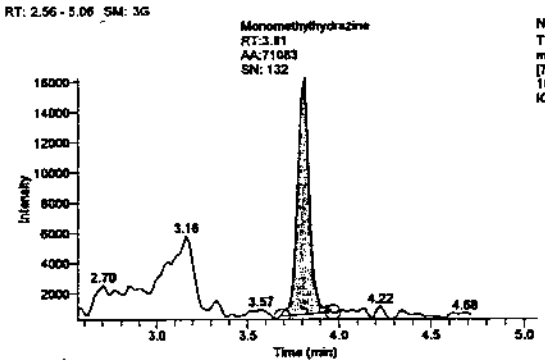
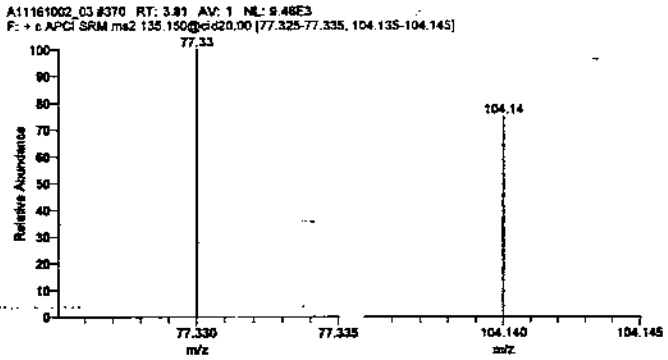
LCMSMS ANALYSIS REPORT

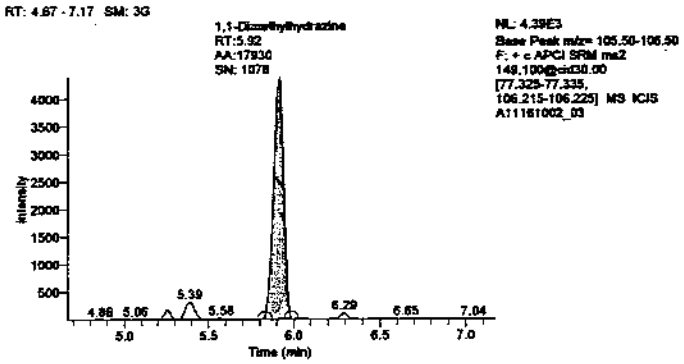
Sample Name:	SYS(MDL)		
Data File:	A11161002_03	Acquisition Date:	06/11/11 03:21:03 AM
Sample Type:	Unknown	Sample ID:	SYS(MDL)
Run Time(min):	10.99	Vial:	A:2
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

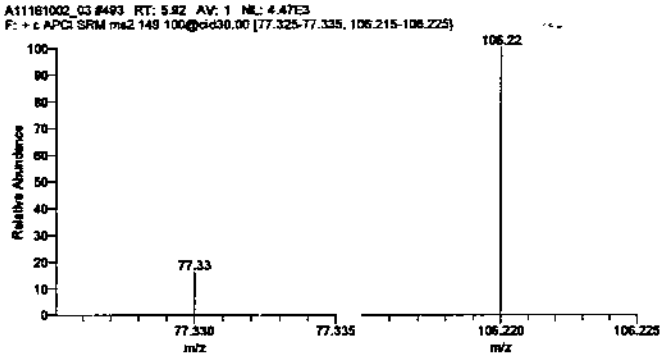
Quan Peak Table

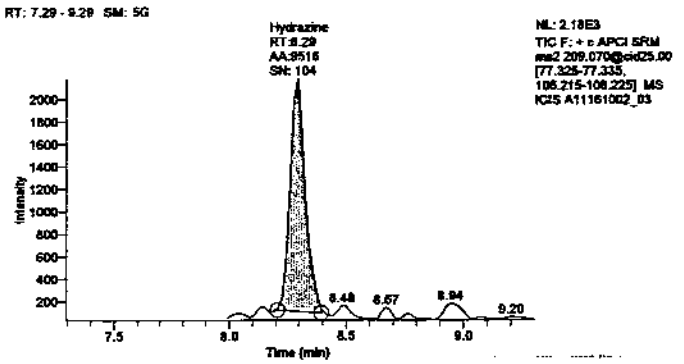
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	0.237	ug/L	71083.464	3.81
1,1-Dimethylhydrazine	0.354	ug/L	17929.673	5.92
Hydrazine	0.069	ug/L	9515.745	8.29

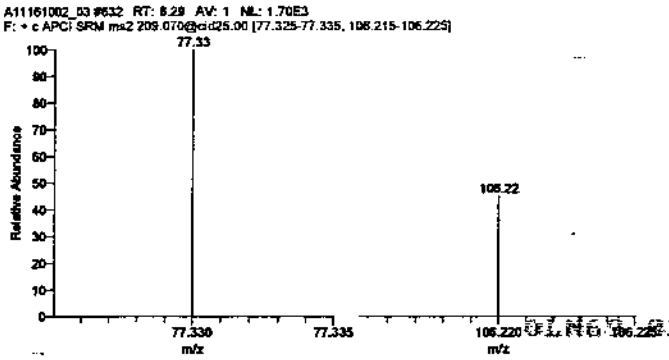












Monday, June 13, 2011, 15:22:27

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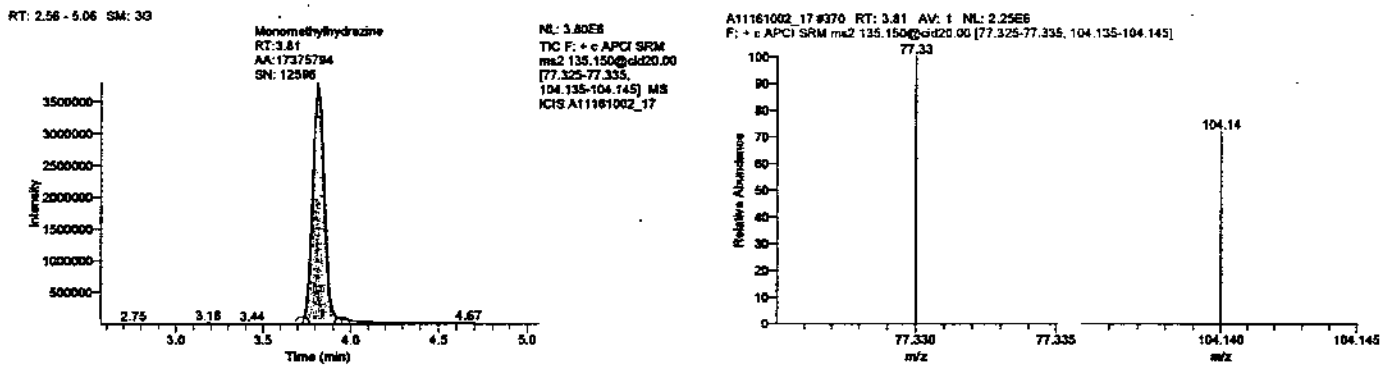
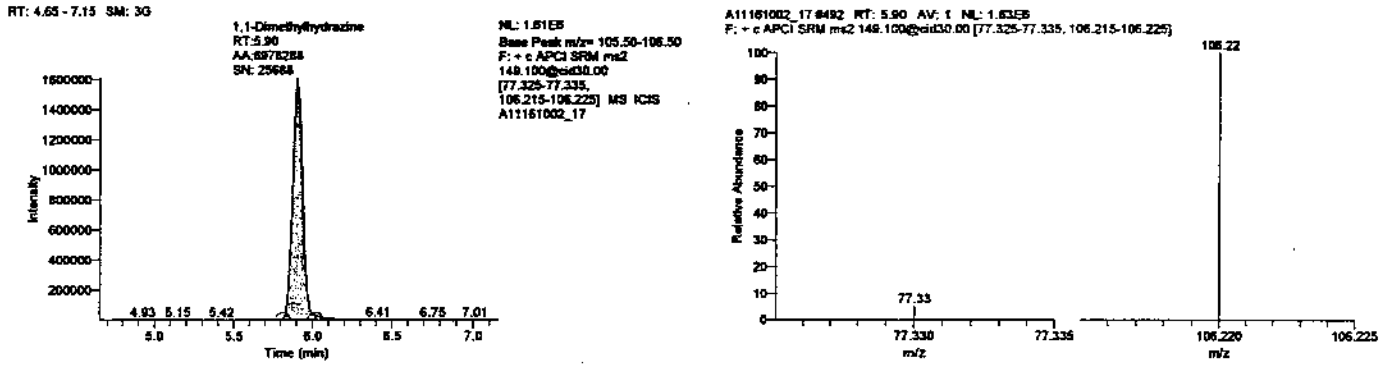
LCMSMS ANALYSIS REPORT

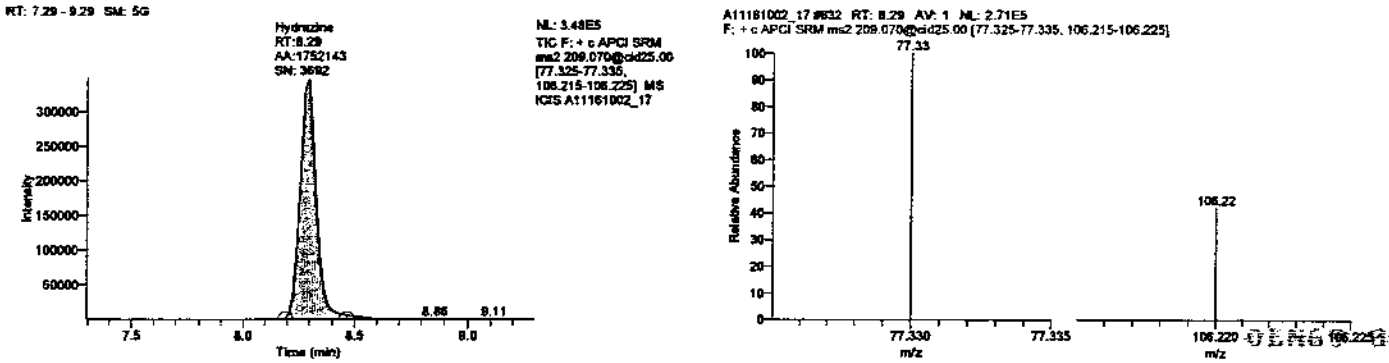
Sample Name:	ICV/LCS		
Data File:	A11161002_17	Acquisition Date:	06/11/11 07:01:10 AM
Sample Type:	Unknown	Sample ID:	ICV/LCS
Run Time(min):	10.99	Vial:	b:3
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	60.170	ug/L	17375794.265	3.81
1,1-Dimethylhydrazine	59.972	ug/L	6978288.479	5.90
Hydrazine	12.200	ug/L	1752142.586	8.29







Monday, June 13, 2011, 15:22:29

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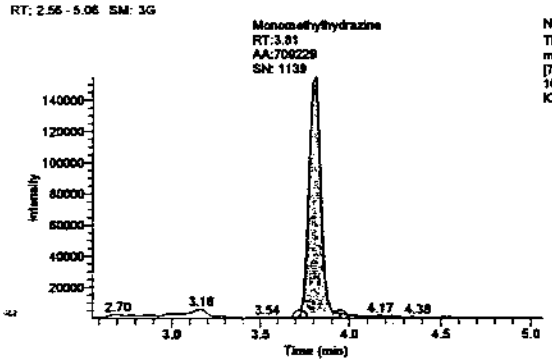
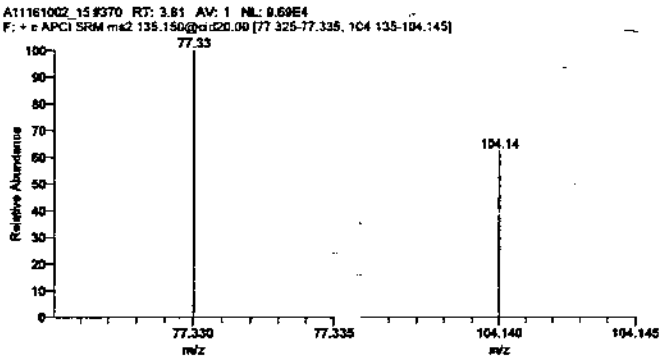
LCMSMS ANALYSIS REPORT

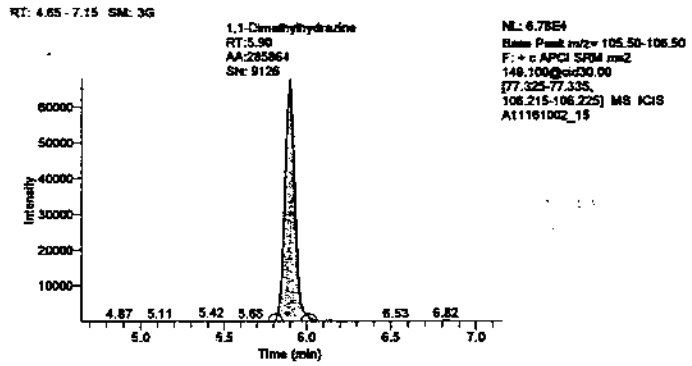
Sample Name:	CCV1		
Data File:	A11161002_15	Acquisition Date:	06/11/11 06:29:45 AM
Sample Type:	QC	Sample ID:	CCV1
Run Time(min):	10.98	Vial:	a:5
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

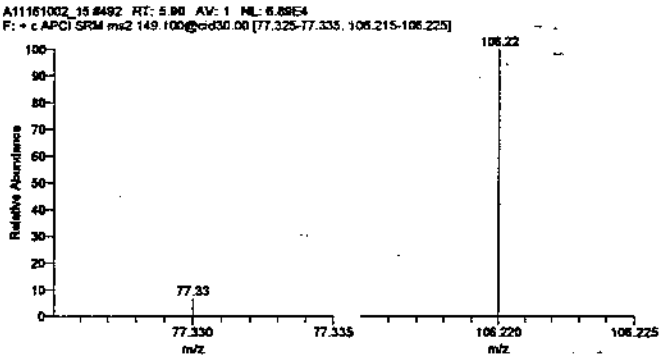
Quan Peak Table

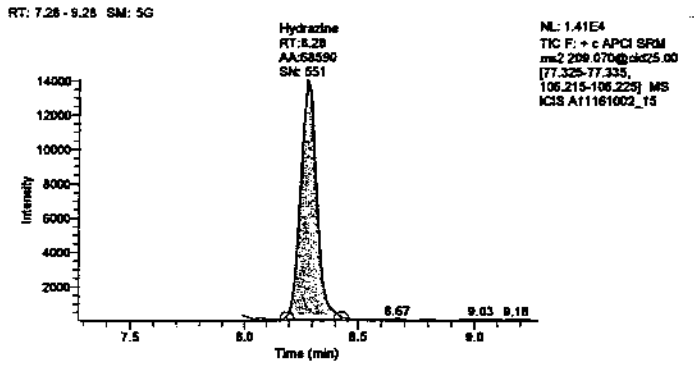
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	2.447	ug/L	709229.128	3.81
1,1-Dimethylhydrazine	2.649	ug/L	285864.326	5.90
Hydrazine	0.480	ug/L	68589.680	8.28

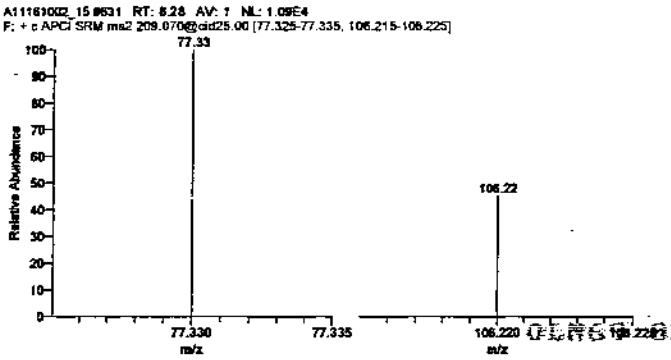












Monday, June 13, 2011, 15:22:23

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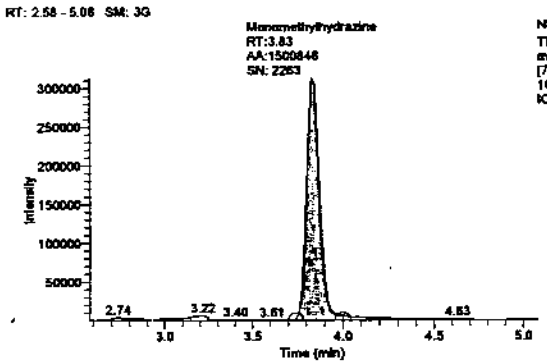
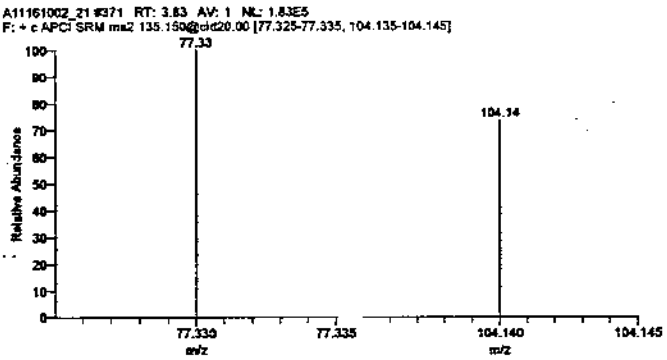
LCMSMS ANALYSIS REPORT

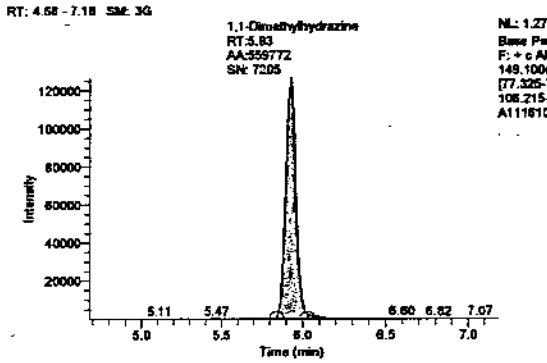
Sample Name:	CCV2		
Data File:	A11161002_21	Acquisition Date:	06/11/11 08:04:05 AM
Sample Type:	QC	Sample ID:	CCV2
Run Time(min):	10.98	Vial:	a:6
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

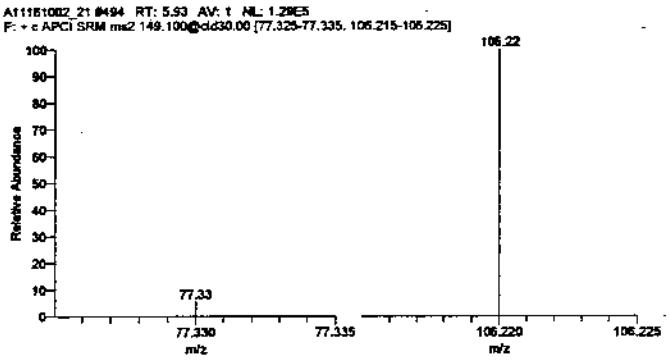
Quan Peak Table

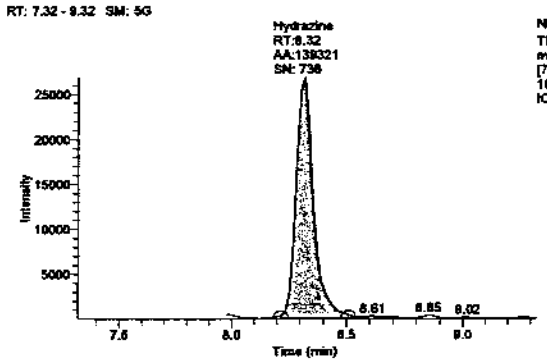
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	5.189	ug/L	1500846.245	3.83
1,1-Dimethylhydrazine	4.995	ug/L	559771.721	5.93
Hydrazine	0.972	ug/L	139320.773	8.32

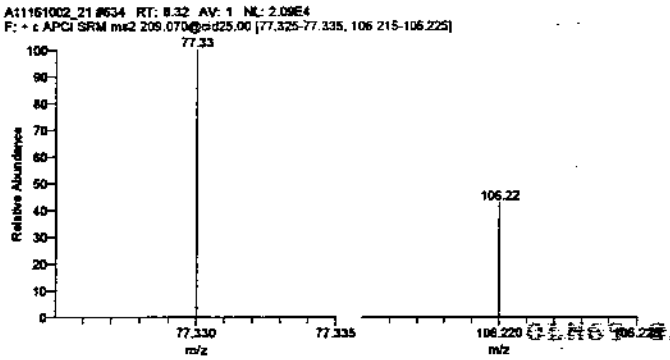












Monday, June 13, 2011, 15:22:24

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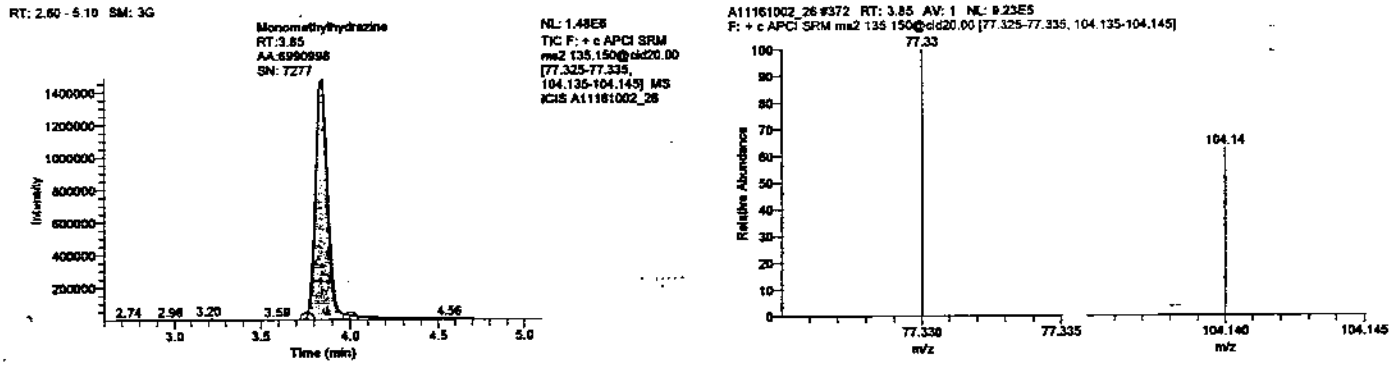
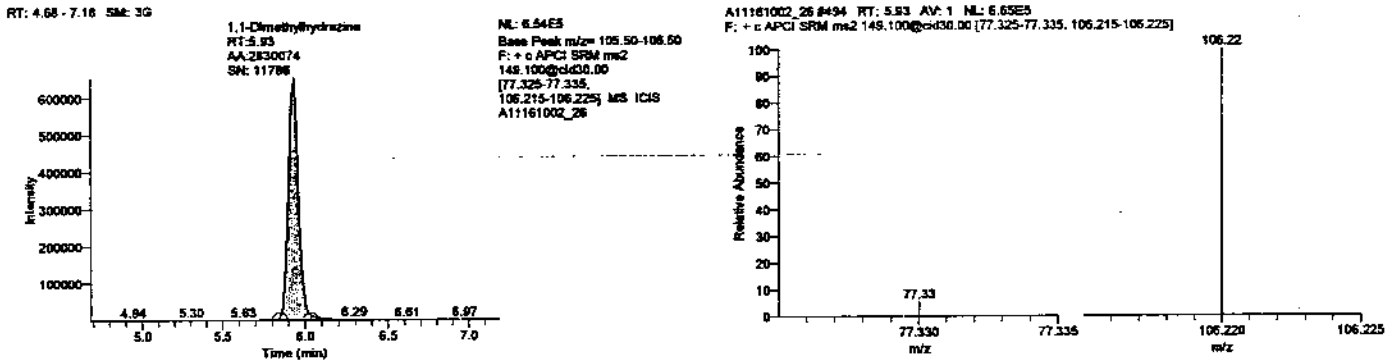
LCMSMS ANALYSIS REPORT

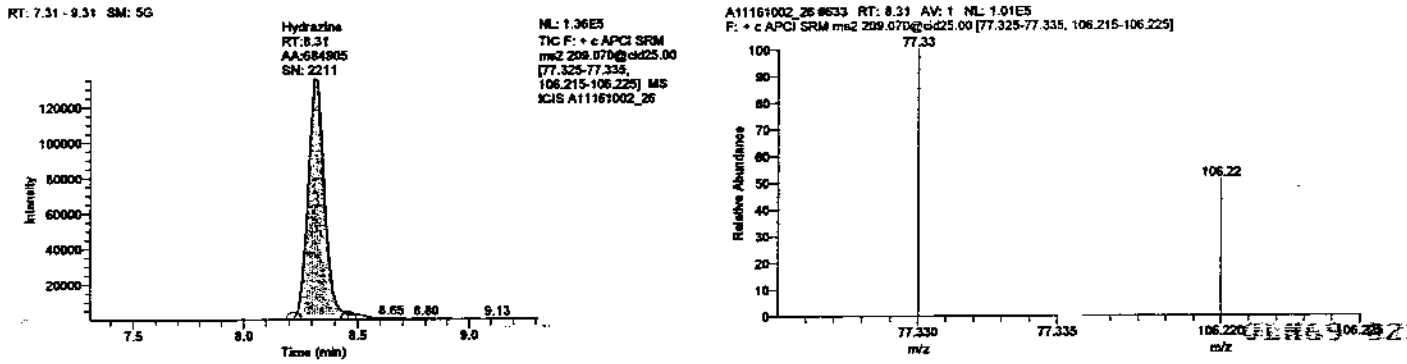
Sample Name:	CCV3		
Data File:	A11161002_26	Acquisition Date:	06/11/11 09:22:42 AM
Sample Type:	QC	Sample ID:	CCV3
Run Time(min):	10.98	Vial:	a:7
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	24.204	ug/L	6990998.147	3.85
1,1-Dimethylhydrazine	24.441	ug/L	2830074.149	5.93
Hydrazine	4.770	ug/L	684905.023	8.31







Monday, June 13, 2011, 15:22:25

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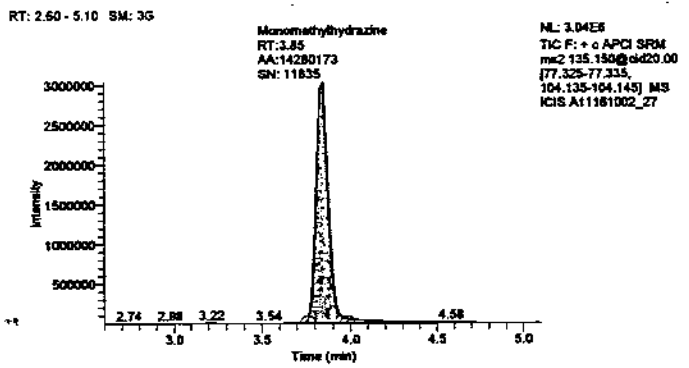
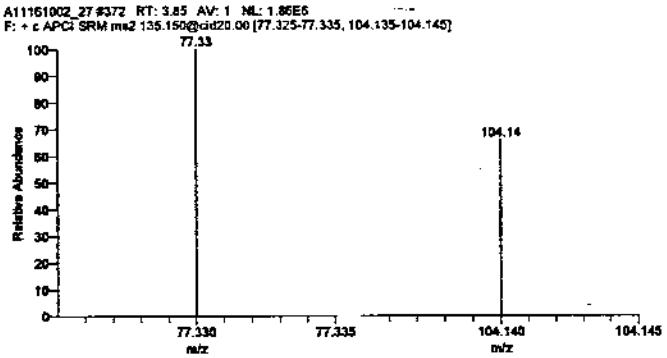
LCMSMS ANALYSIS REPORT

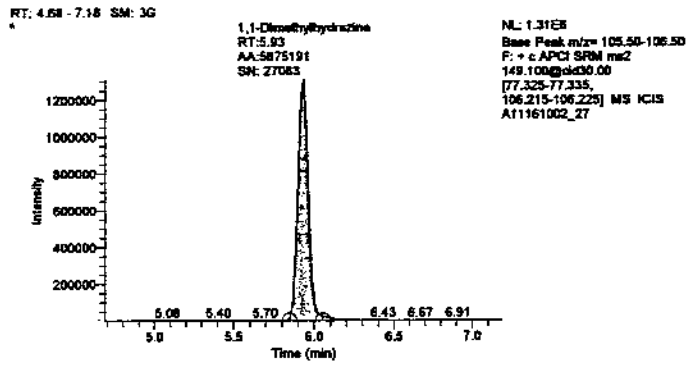
Sample Name:	CCV4		
Data File:	A11161002_27	Acquisition Date:	06/11/11 09:38:25 AM
Sample Type:	QC	Sample ID:	CCV4
Run Time(min):	10.99	Vial:	A:8
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

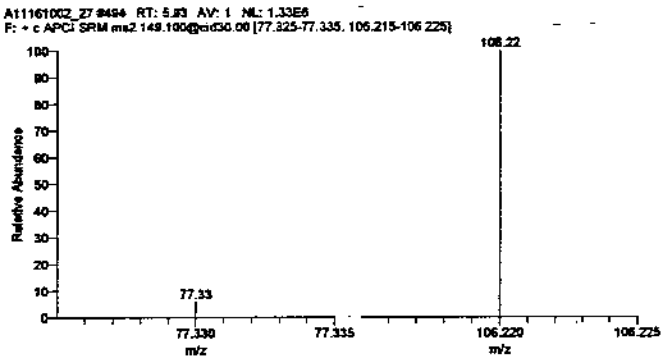
Quan Peak Table

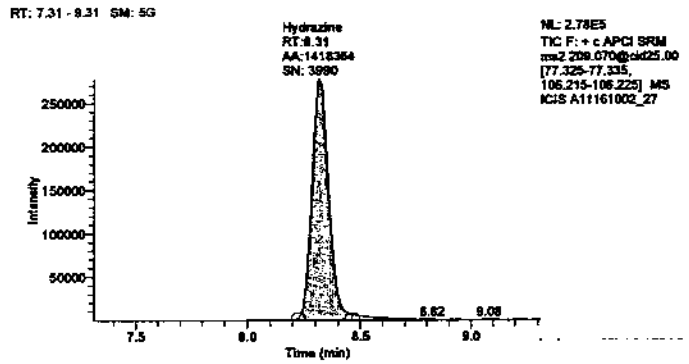
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	49.449	ug/L	14280172.668	3.85
1,1-Dimethylhydrazine	50.523	ug/L	5875190.927	5.93
Hydrazine	9.877	ug/L	1418364.294	8.31

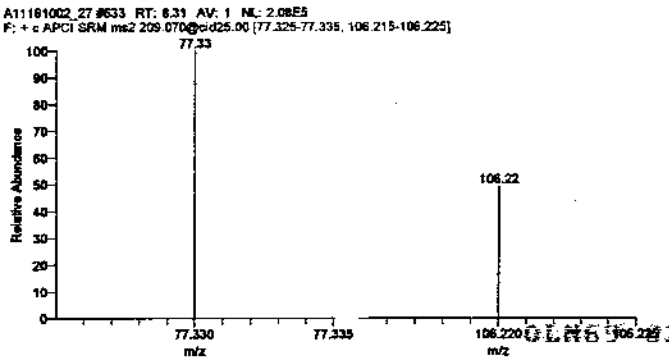












Monday, June 13, 2011, 15:22:25

Raw QC Data

GLN69 0224

Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	BLK (reagent)		
Data File:	A11161002_14	Acquisition Date:	06/11/11 06:14:01 AM
Sample Type:	Blank	Sample ID:	BLK (reagent)
Run Time(min):	10.98	Vial:	b:2
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/L	N/A	N/A
Monomethylhydrazine	N/A	ug/L	N/A	N/A
1,1-Dimethylhydrazine	0.212	ug/L	1367.092	5.90

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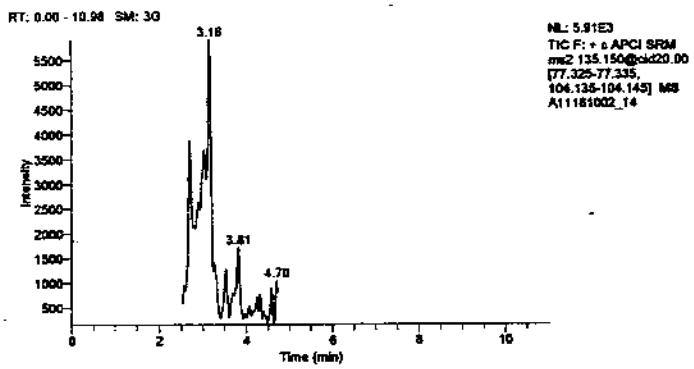

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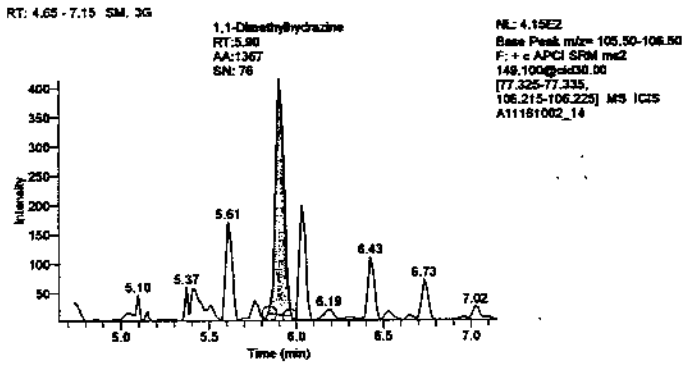

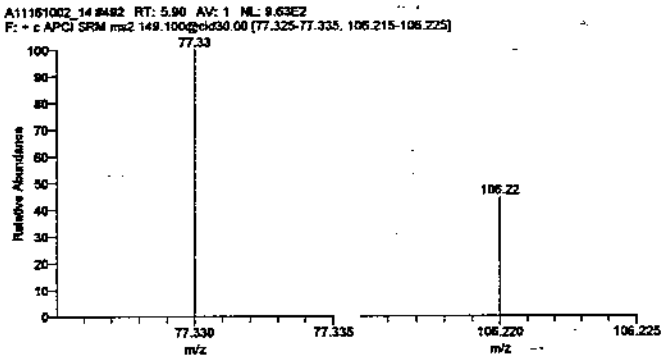

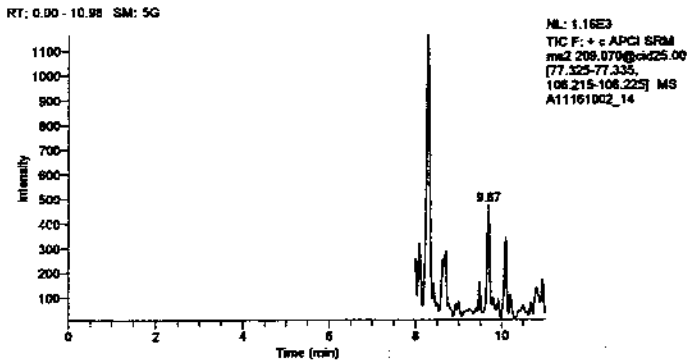

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OLN63 8225

6/17/2011

Monday, June 13, 2011, 15:22:26

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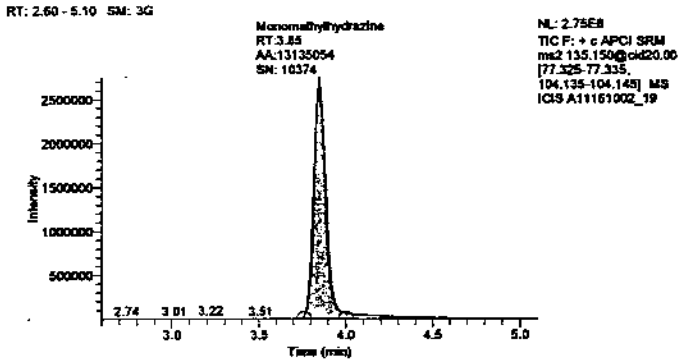
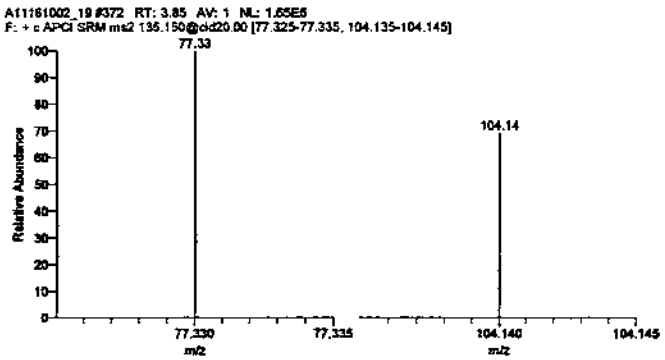
LCMSMS ANALYSIS REPORT

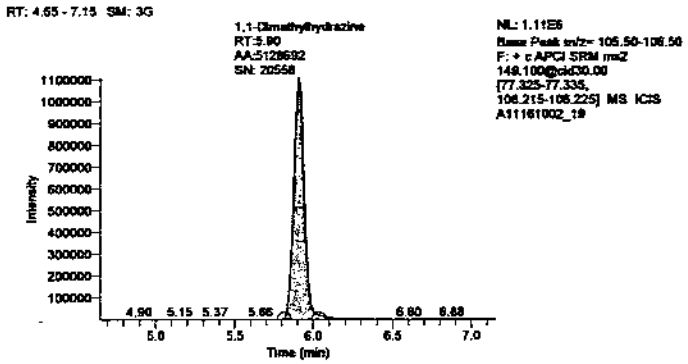
Sample Name:	6308056MS		
Data File:	A11161002_19	Acquisition Date:	06/11/11 07:32:30 AM
Sample Type:	Unknown	Sample ID:	6308056MS
Run Time(min):	10.99	Vial:	b:5
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

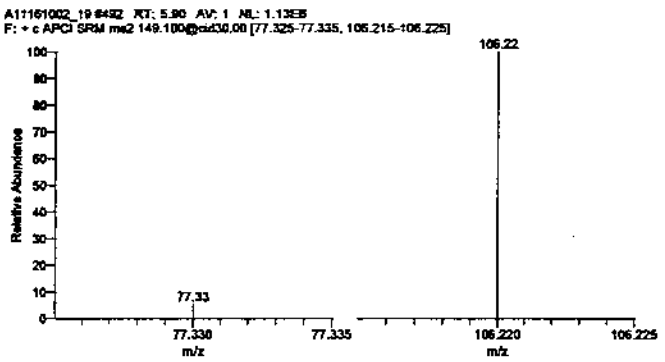
Quan Peak Table

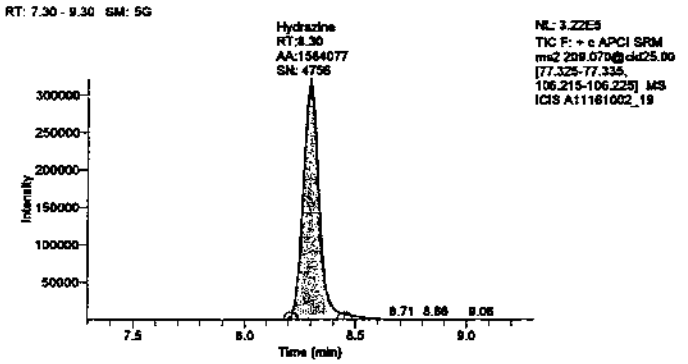
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	45.483	ug/L	13135054.414	3.85
1,1-Dimethylhydrazine	44.129	ug/L	5128692.249	5.90
Hydrazine	11.030	ug/L	1584076.642	8.30

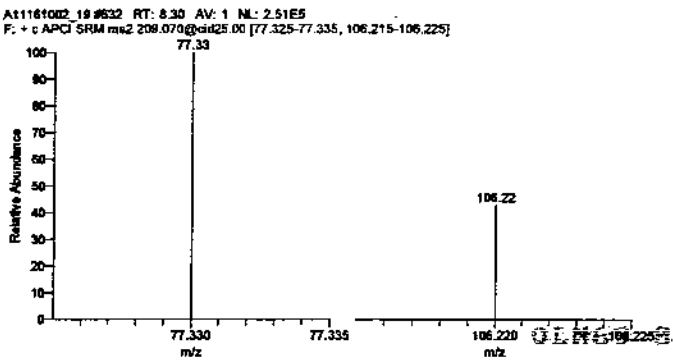












6/14/2011

Monday, June 13, 2011, 15:26:20

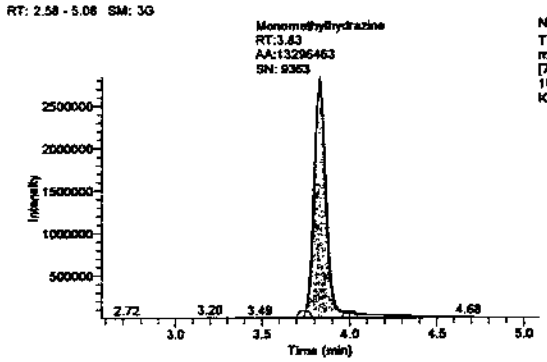
Lancaster Laboratories

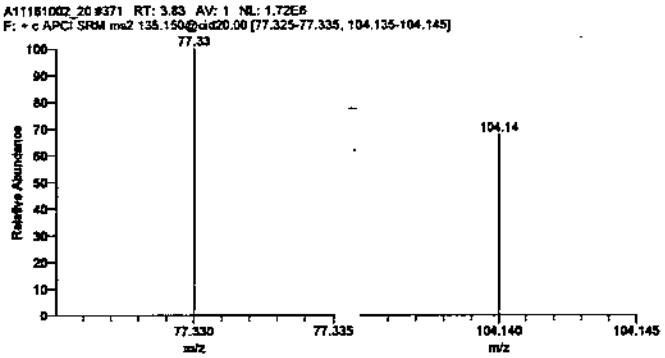
LCMSMS ANALYSIS REPORT

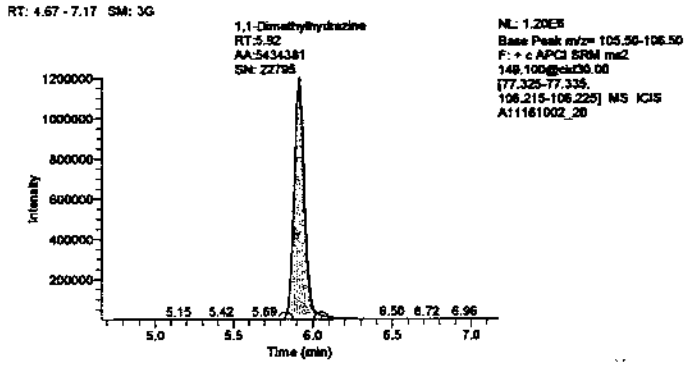
Sample Name:	6308057MSD		
Data File:	A11161002_20	Acquisition Date:	06/11/11 07:48:22 AM
Sample Type:	Unknown	Sample ID:	6308057MSD
Run Time(min):	10.99	Vial:	b:6
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

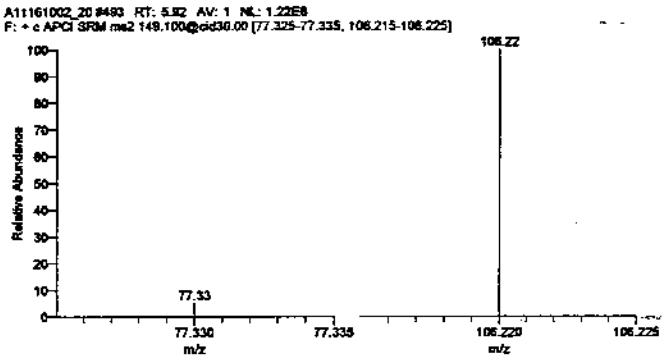
Quan Peak Table

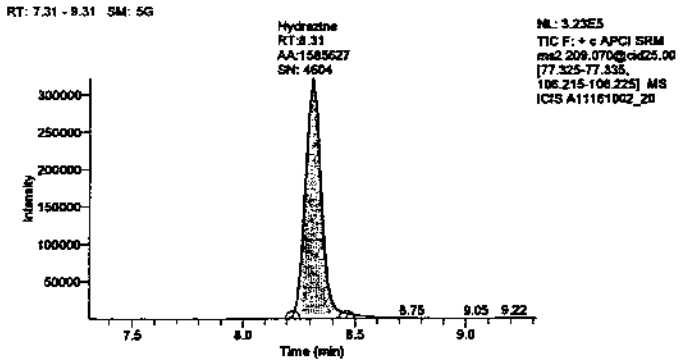
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	46.042	ug/L	13296462.877	3.83
1,1-Dimethylhydrazine	46.748	ug/L	5434381.092	5.92
Hydrazine	11.041	ug/L	1585626.936	8.31

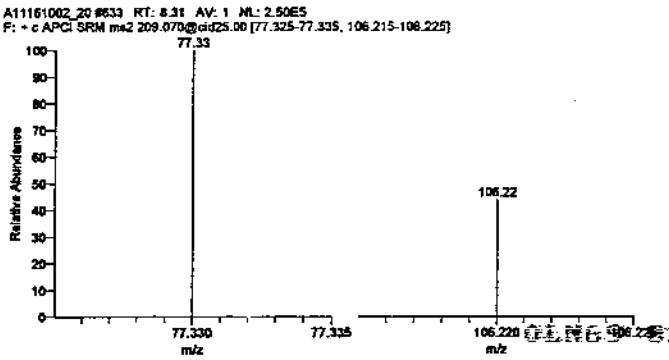












6/14/2011

Monday, June 13, 2011, 15:26:28

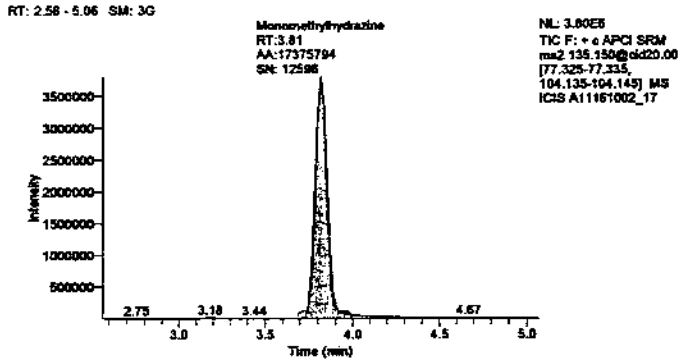
Lancaster Laboratories

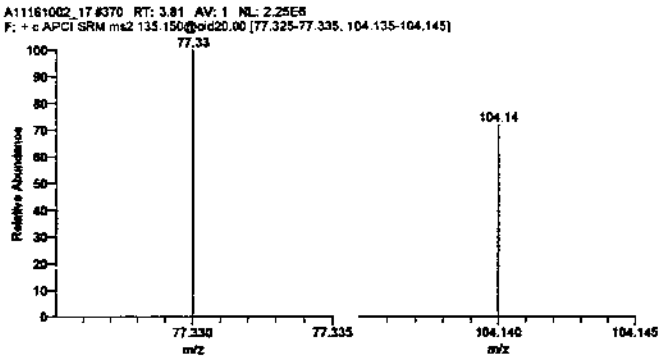
LCMSMS ANALYSIS REPORT

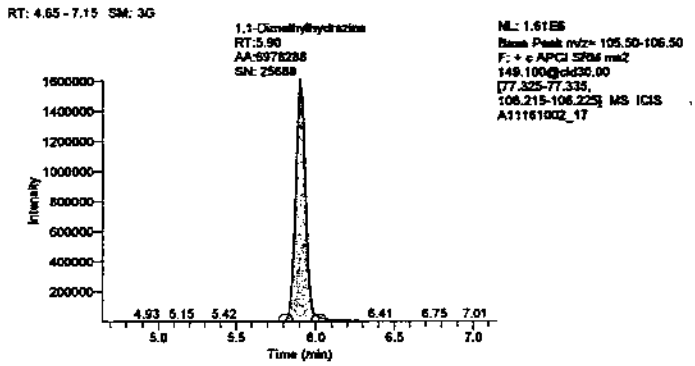
Sample Name:	ICV/LCS		
Data File:	A11161002_17	Acquisition Date:	06/11/11 07:01:10 AM
Sample Type:	Unknown	Sample ID:	ICV/LCS
Run Time(min):	10.99	Vial:	b:3
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

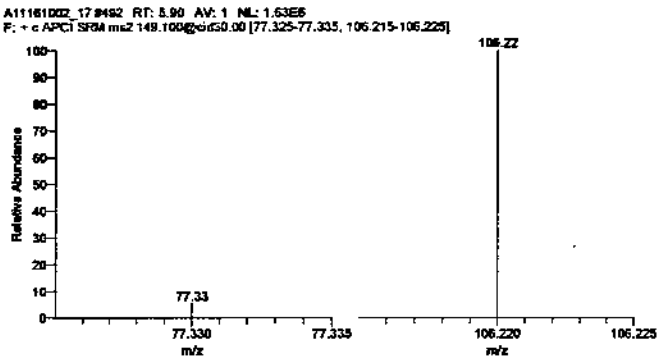
Quan Peak Table

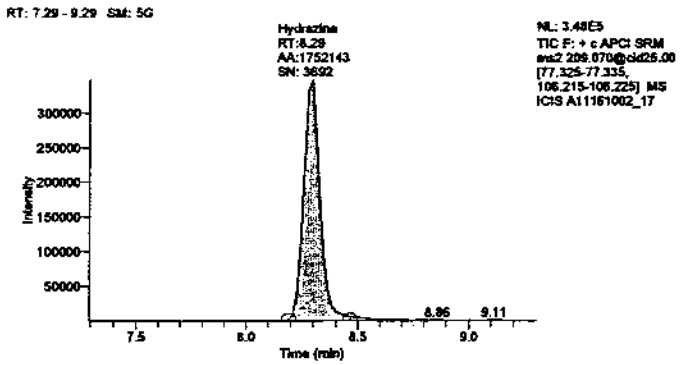
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	60.170	ug/L	17375794.265	3.81
1,1-Dimethylhydrazine	59.972	ug/L	6978288.479	5.90
Hydrazine	12.200	ug/L	1752142.586	8.29

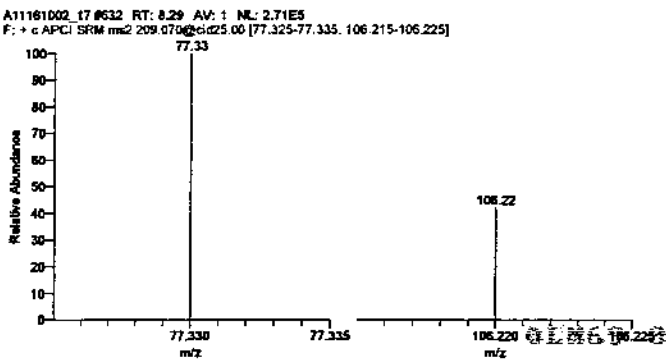












Monday, June 13, 2011, 15:22:29

6/14/2011

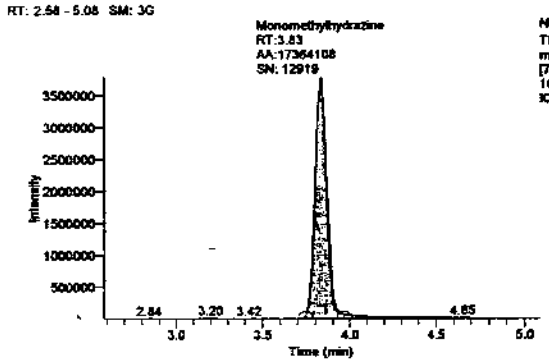
Lancaster Laboratories

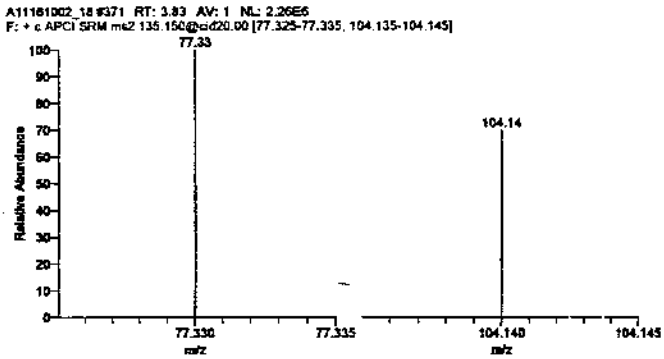
LCMSMS ANALYSIS REPORT

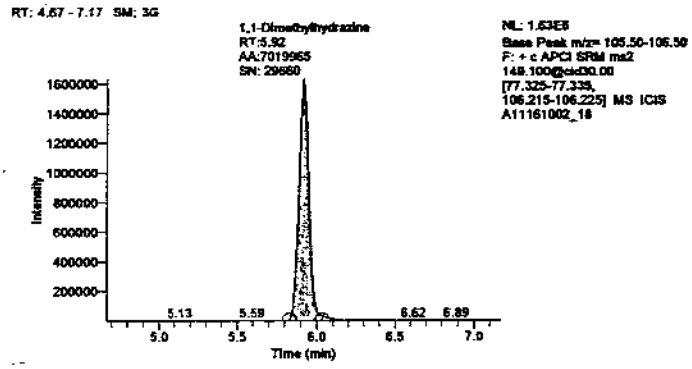
Sample Name:	ICV/LCSD		
Data File:	A11161002_18	Acquisition Date:	06/11/11 07:16:54 AM
Sample Type:	Unknown	Sample ID:	ICV/LCSD
Run Time(min):	10.99	Vial:	b:4
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_02	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2011June
Operator:	Quantum		

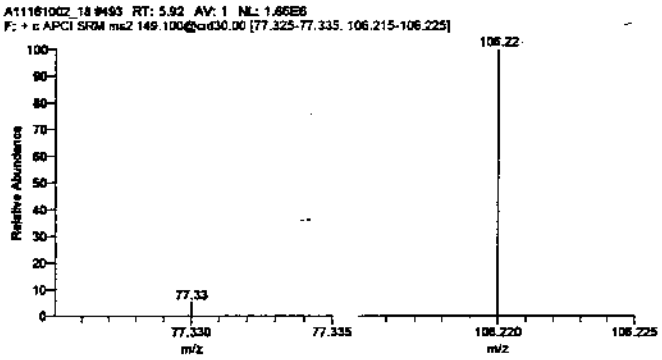
Quan Peak Table

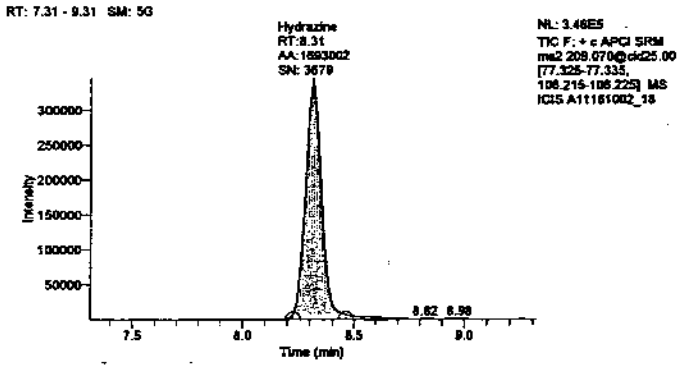
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	60.130	ug/L	17364107.581	3.83
1,1-Dimethylhydrazine	60.329	ug/L	7019964.664	5.92
Hydrazine	11.788	ug/L	1693002.219	8.31

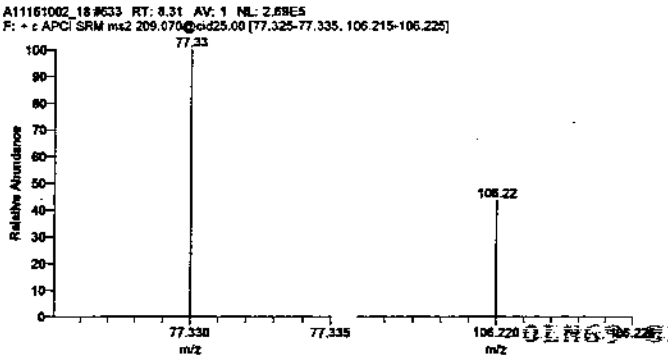












Monday, June 13, 2011, 15:22:30

Preparation Logs

01N69 0238

Organic Extraction Batchlog Assigned to: 2628 Meng Yu

Reviewed by: [illegible] Start Date: 6/10/11 Start time: 1200

11161002

Tech 1: MY 2628 Tech 2:

Dept: 37	Prep Analysis: 00000									Hydrazines in Water	
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
6308056MS	ISC1-	1	NA	NA	125952-16	0.01	1.5	5		145a	
6308057MSD	ISC1-	1	✓	✓	✓	0.01	1.5	5		✓	
BLANKA	BLK161002	1	✓	✓	NA	NA	1.5	5		NA	
LCSA	OPR161002	1	✓	✓	125952-16e	0.01	1.5	5		NA	
LCSDA		1	✓	✓	✓	0.01	1.5	5		NA	

Sample #		Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	Due Date	Prio
1	6308055BKG	ISC1-	1	NA	NA	1.5	5		145a		10342	06/17/2011	P
2	6308058	ISC1D	1	✓	✓	1.5	5		✓		10342	06/17/2011	P
3	6308059	ISC2-	1	✓	✓	1.5	5		✓		10342	06/17/2011	P
4	6308060	SWD10	1	✓	✓	1.5	5		✓		10342	06/17/2011	P

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	11161002

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume