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

FILE COPY

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY: 2-16-11

Type I Data Package for Olin Corporation

SDG# OLN23

Project: Olin Wilmington, MA Superfund Site/6107090016
Soil and Water Samples
Collected on 09/10/09-09/17/09

GROUP	SAMPLE NUMBERS
1161544	5774703-5774712
1162387	5779940
1162388	5779941-5779955

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

Prepared by

Reviewed by

Date 10/22/09

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Sample Reference List for SDG Number OLN23 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
5774703	O4270	OC-SB-427-0.0/1.0-XXX Grab Soil
5774704	O4340	OC-SB-434-0.0/1.0-XXX Grab Soil
5774705	O4560	OC-SB-456-0.0/1.0-XXX Grab Soil
5774706	O4561	OC-SB-456-16/18-XXX Grab Soil
5774707	O456D	OC-SB-456-7.0/9.0-DUP Grab Soil
5774708	O4567	OC-SB-456-7.0/9.0-XXX Grab Soil
5774709	O4567	OC-SB-456-7.0/9.0-XMS Grab Soil
5774710	O4567	OC-SB-456-7.0/9.0-MSD Grab Soil
5774711	O4570	OC-SB-457-0.0/1.0-XXX Grab Soil
5774712	O4578	OC-SB-457-8.0/10-XXX Grab Soil
5779940	O4131	OC-SB-413-1.0/5.0-XXX Grab Soil
5779941	O4572	OC-SB-457-28/30-XXX Grab Soil
5779942	O4200	OC-SS-420-0.0/1.0-XXX Grab Soil
5779943	O4221	OC-SS-422-0.0/1.0-XXX Grab Soil
5779944	O4240	OC-SS-424-0.0/1.0-XXX Grab Soil
5779945	O4271	OC-SS-427-0.0/1.0-XXX Grab Soil
5779946	O4290	OC-SS-429-0.0/1.0-XXX Grab Soil
5779947	O4310	OC-SS-431-0.0/1.0-XXX Grab Soil
5779948	O4341	OC-SS-434-0.0/1.0-XXX Grab Soil
5779949	O4400	OC-SS-440-0.0/1.0-XXX Grab Soil
5779950	O4501	OC-SS-450-0.0/1.0-XXX Grab Soil
5779951	O4550	OC-SS-455-0.0/1.0-XXX Grab Soil
5779952	O4600	OC-SS-460-0.0/1.0-XXX Grab Soil
5779953	O4130	OC-SB-413-0.0/1.0-XXX Grab Soil
5779954	OEB10	OC-EBK-010 Grab Water
5779955	OEB11	OC-EBK-011 Grab Water

shipped on Friday 9/11/09

Acct#12670
Grp#1161544
Sample#5774703-12 Lancaster - Soil

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

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: Email

Job # ____ Quote # ____

Lab SDG # ____ PO # ____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) / <--Bottle Type (5)
OC-SB-427-0.0/1.0-XXX	9/10/2009 1:40:00 PM	T	FS	SO	G	1							X		Category 1

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,

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

Temp @ receipt: 1.8 Deg C

Preservation / pH checked? Y / N

By: ____ Date: ____

Relinquished: [signature] Date: 9/11/09 Time: 1500 Received: ____ Date: / / Time: ____

Relinquished: ____ Date: / / Time: ____ Received: [signature] Date: 9/12/09 Time: 10:00

Fed Ex tracking # 8372 3852 1824

Acct # 12670
Grp # 1161544
Sample # 5774703-12

Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V													AG	AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-427-17/19-XXX	9/10/2009 3:05:00 PM	T	FS	SO	G	1																			X				Category 3
OC-SB-434-0.0/1.0-XXX	9/10/2009 7:50:00 AM	T	FS	SO	G	1																			X				Category 1
OC-SB-434-15/16-XXX	9/10/2009 9:35:00 AM	T	FS	SO	G	1																			X				Category 3
OC-SB-434-7.0/9.0-XXX	9/10/2009 8:15:00 AM	T	FS	SO	G	1																			X				Category 2
OC-SB-456-0.0/1.0-XXX	9/11/2009 8:30:00 AM	T	FS	SO	G	1																			X				Category 1
OC-SB-456-16/18-XXX	9/11/2009 10:40:00	T	FS	SO	G	1																			X				Category 1
OC-SB-456-7.0/9.0-DUP	9/11/2009 9:00:00 AM	T	FD	SO	G	1																			X				Category 1

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,

Cooler ? Y / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 15 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] Date: 9/11/09 Time: 1500 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/12/09 Time: 10:00

Acct # 12670
Grp# 1161544
Sample# 5774703-12 Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V													AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-456-7.0/9.0-MSD	9/11/2009 9:00:00 AM	T	MS	SO	G	1																			X				Category 1
OC-SB-456-7.0/9.0-XMS	9/11/2009 9:00:00 AM	T	MS	SO	G	1																			X				Category 1
OC-SB-456-7.0/9.0-XXX	9/11/2009 9:00:00 AM	T	FS	SO	G	1																			X				Category 1

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,

Cooler ? Y / N	MADEP Requirement Samples Iced? Y N
	Temp @ receipt: 1.8 Deg C
	Preservation / pH checked? Y / N
	By: _____ Date: _____

Relinquished: [signature] Date: 9/11/09 Time: 1500 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: [signature] Date: 9/12/09 Time: 10:00

Acct # 12670
Grp # 1161544
Sample # 5774703-12 Lancaster- Soil

Client: Olin Corporation	Client Project #: 6107090016	INVOICE INFO	(Shaded Areas For Office Use Only)
Address: 3855 North Ocoee St. Suite 200	Work Site ID: Wilmington, MA	Company Name: Olin Corp	
Cleveland, TN 37312	Reports Sent To: Steve Morrow	Company Contact: ERG Accounts Payable	
Phone: 423-336-4511 Fax: 423-336-1466	Email SGMorrow@olin.com Email Rpt:____	Address: Same as Client	
Requested Turnaround Time (SPECIFY)	Regulatory Programs: MADEP MCP____ Superfund ____	Phone:	Email
Standard_____ Rush_____ (Lab Approval Required)	Report Requirements Level IV Package ____ Level II Package ____		
	EDD Requirements: MACTEC EQUIS EZ EDD _____	Job # _____	Quote # _____
		Lab SDG # _____	PO # _____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kemporte (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V												AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-457-0.0/1.0-XXX	9/11/2009 1:10:00 PM	T	FS	SO	G	1																		X				Category 1

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.

Cooler ? Y / N	MADEP Requirement
	Samples Iced (Y) / N
	Temp @ receipt: 18 Deg C
	Preservation / pH checked? Y / N
	By: _____ Date: _____

Relinquished: [signature] Date: 9 / 11 / 09 Time: 1500 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: [signature] Date: 9 / 12 / 09 Time: 10:00

Acct# 12670
Grp# 1161544
Sample# 5774703-12 Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V													AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-457-8.0/10-XXX	9/11/2009 1:20:00 PM	T	FS	SO	G	1																			X				Category 1

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,

Cooler ? Y / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 1.8 Deg C	
Preservation / pH checked? Y / N	
By: _____ Date: _____	

Relinquished: [signature] Date: 9/11/09 Time: 1500 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/12/09 Time: 1000

Olin Wilmington OU1 Soil Sampling Categories

There will be three categories of samples submitted to the laboratories during the soil sampling program based primarily on the depth of soil locations. These categories will be indentified in notes provided with the chain of custody submitted with samples. The following categories are included:

Category 1

Soil boring samples 0'-1': request that all samples are analyzed and reported in the normal project turnaround time (TAT).

Category 2

Soil boring samples from the 1'-10' interval: All samples are analyzed. Rush TAT is requested on a subset of analyses as indicated below:

VOCs: rush 7-day TAT
SVOCs: NDMA, and phthalic anhydride: normal 30-day TAT
DMF: normal 21-day TAT
Hydrazine: rush 7 day TAT
Metals: normal 30-day TAT (except mercury)
Mercury: 10 day TAT
Hexavalent Chromium: 10 day TAT
Formaldehyde/acetaldehyde: normal TAT
Anions: normal TAT
Ammonia: normal TAT

Category 3

Soil boring samples from >10 ft: Sample are held with analysis pending. For a subset of analyses the samples will be extracted and held by the lab pending instructions from MACTEC-Olin.

VOCs: hold pending results of Category 2
SVOCs: extract and hold pending results of Category 2
NDMA: extract and hold pending results of Category 2
DMF: extract and hold pending results of Category 2
Hydrazine: hold pending results of Category 2
Metals: hold pending results of Category 2
Mercury: hold pending results of Category 2
Hexavalent Chromium: hold pending results of Category 2
Phthalic anhydride: extract and hold pending results of Category 2
Formaldehyde/acetaldehyde: run normal TAT
Anions: run normal TAT
Ammonia: run normal TAT

For rush TAT samples the laboratory will provide preliminary results with a narrative and sample results summary report. The lab will also provide data on a preliminary data EDD. Final result and supporting data packages will be provided in the normal TAT for the project.

OLN23 0067

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: MACTEC

Date of Receipt: 9/12/09

Time of Receipt: 10:00

Source Code: 501

Unpacker Emp. No.: 2114

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	0429975	1.8	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:

- 456-7.0-9.0-MSD *XMS rcvd in same container,
456-7.0-9.0 XMS/MSD

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Katie Hartline	9/12/09	10:30	Unpacking / to Storage
Kristin Zeigler	9-12-09	1124	Place in Storage or Entry
			Entry
			Entry

Acct#12670
Grp# 1162387
Sample# 5779940

Lancaster-Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V	-	-	-	-	-	-	-	-	-	-	-	AG	Zn AV	-	-	<--Preservative Type (4) <--Bottle Type (5)
OC-SB-413-1.0/5.0-XXX	9/17/2009 10:20:00	T	FS	SO	G	1																		X				Category 2
OC-SB-413-10/12-XXX	9/17/2009 10:50:00	T	FS	SO	G	1																		X				Category 3

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

Cooler ? Y N | MADEP Requirement Samples Iced? Y N

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: / / Time:

Relinquished: Date: / / Time: Received: [signature] Date: 9/18/09 Time: 930

Shipped Thursday 9/17/09

Acct #12670
Grp# 1162387
Sample# 5779940 Lancaster - Soil

Client: Olin Corporation	Client Project #: 6107090016	INVOICE INFO	Shaded Areas for office use only
Address: 3855 North Ocoee St. Suite 200	Work Site ID: Wilmington, MA	Company Name: Olin Corp	
Cleveland, TN 37312	Reports Sent To: Steve Morrow	Company Contact: ERG Accounts Payable	
Phone: 423-336-4511 Fax: 423-336-1466	Email SGMorrow@olin.com Email Rpt: ___	Address: Same as Client	
Requested Turnaround Time (SPECIFY)	Regulatory Programs: MADEP MCP ___ Superfund ___	Phone: Email	
Standard ___ Rush ___ (Lab Approval Required)	Report Requirements Level IV Package ___ Level II Package ___		
	EDD Requirements: MACTEC EQUIS EZ EDD ___	Job # ___	Quote # ___
		Lab SDG # ___	PO # ___

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) / <--Bottle Type (5)
OC-SB-457-28/30-XXX	9/14/2009 11:30:00	T	FS	SO	G	1							X		Category 1

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,

Cooler ? Y / N	MADEP Requirement Samples Iced? Y N
Temp @ receipt: 4.1 Deg C	
Preservation / pH checked? Y / N	
By: ___ Date: ___	

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: ___ Date: / / Time: ___

Relinquished: ___ Date: / / Time: ___ Received: [signature] Date: 9/18/09 Time: ___

Acct# 12670
Grp# 1162387
Sample# 5779940

Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) <--Bottle Type (5)
OC-SS-420-0.0/1.0-XXX	9/15/2009 3:25:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-422-0.0/1.0-XXX	9/15/2009 4:30:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-424-0.0/1.0-XXX	9/15/2009 5:20:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-427-0.0/1.0-XXX	9/16/2009 9:40:00 AM	T	FS	SO	G	1							X		Category 1
OC-SS-429-0.0/1.0-XXX	9/16/2009 10:25:00	T	FS	SO	G	1							X		Category 1
OC-SS-431-0.0/1.0-XXX	9/16/2009 11:35:00	T	FS	SO	G	1							X		Category 1
OC-SS-434-0.0/1.0-XXX	9/16/2009 4:15:00 PM	T	FS	SO	G	1							X		Category 1

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,

Cooler ? Y / N | MADEP Requirement: Samples Iced? Y / N

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: / / Time: _

Relinquished: _____ Date: / / Time: _____ Received: [signature] Date: 9/18/09 Time: 930

Acct# 12670
Grp# 1162387
Sample# 5779940

Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V													AG	AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SS-440-0.0/1.0-XXX	9/16/2009 1:45:00 PM	T	FS	SO	G	1																			X				Category 1
OC-SS-450-0.0/1.0-XXX	9/16/2009 3:55:00 PM	T	FS	SO	G	1																			X				Category 1
OC-SS-455-0.0/1.0-XXX	9/16/2009 5:50:00 PM	T	FS	SO	G	1																			X				Category 1
OC-SS-460-0.0/1.0-XXX	9/16/2009 5:30:00 PM	T	FS	SO	G	1																			X				Category 1

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,

Cooler ? Y / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 4.1 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/18/09 Time: 930

Acct# 12670
Grp# 1162387
Sample# 5779940

Lancaster - Soil

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

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: Email

Job # _____ Quote # _____

Lab SDG # _____ PO # _____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) <--Bottle Type (5)
OC-SB-413-0.0/1.0-XXX	9/17/2009 11:10:00	T	FS	SO	G	1							X		Category 1

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,

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

Temp @ receipt: 4.1 Deg C

Preservation / pH checked? Y / N

By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/18/09 Time: 930

Acct # 12670
Grp# 1162387
Sample# 5779940

Lancaster - Water

Client: Olin Corporation	Client Project #: 6107090016	INVOICE INFO	Shaded Areas for office use only
Address: 3855 North Ocoee St. Suite 200	Work Site ID: Wilmington, MA	Company Name: Olin Corp	
Cleveland, TN 37312	Reports Sent To: Steve Morrow	Company Contact: ERG Accounts Payable	
Phone: 423-336-4511 Fax: 423-336-1466	Email SGMorrow@olin.com Email Rpt:___	Address: Same as Client	
Requested Turnaround Time (SPECIFY)	Regulatory Programs: MADEP MCP____ Superfund ____	Phone: Email	
Standard_____ Rush_____ (Lab Approval Required)	Report Requirements Level IV Package ____ Level II Package ____		
	EDD Requirements: MACTEC EQUIS EZ EDD _____	Job # _____	Quote # _____
		Lab SDG # _____	PO # _____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V	-	-	-	-	-	-	-	-	-	-	-	-	AG	Zn AV	-	-	<--Preservative Type (4) <--Bottle Type (5)
OC-EBK-010	9/14/2009 1:00:00 PM	T	EB	BW	G	2																				X			Category 1

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,

Cooler ? Y / N	MADEP Requirement Samples Iced? Y / N
Temp @ receipt: 4.1 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: ~~_____~~ Date: ~~__/__/__~~ Time: ~~____~~

Relinquished: ~~_____~~ Date: ~~__/__/__~~ Time: ~~____~~ Received: [signature] Date: 9/18/09 Time: 930

Acct# 12670
Grp# 1162387
Sample #5779940

Lancaster - 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

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: Email

Job # _____ Quote # _____

Lab SDG # _____ PO # _____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) / <--Bottle Type (5)
OC-EBK-011	9/16/2009 8:35:00 AM	T	EB	BW	G	2								X	Category 1

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,

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

Temp @ receipt: 4.1 Deg C

Preservation / pH checked? Y / N

By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/18/09 Time: 930

Olin Wilmington OU1 Soil Sampling Categories

There will be three categories of samples submitted to the laboratories during the soil sampling program based primarily on the depth of soil locations. These categories will be indentified in notes provided with the chain of custody submitted with samples. The following categories are included:

Category 1

Soil boring samples 0'-1': request that all samples are analyzed and reported in the normal project turnaround time (TAT).

Category 2

Soil boring samples from the 1'-10' interval: All samples are analyzed. Rush TAT is requested on a subset of analyses as indicated below:

VOCs: rush 7-day TAT
SVOCs: NDMA, and phthalic anhydride: normal 30-day TAT
DMF: normal 21-day TAT
Hydrazine: rush 7 day TAT
Metals: normal 30-day TAT (except mercury)
Mercury: 10 day TAT
Hexavalent Chromium: 10 day TAT
Formaldehyde/acetaldehyde: normal TAT
Anions: normal TAT
Ammonia: normal TAT

Category 3

Soil boring samples from >10 ft: Sample are held with analysis pending. For a subset of analyses the samples will be extracted and held by the lab pending instructions from MACTEC-Olin.

VOCs: hold pending results of Category 2
SVOCs: extract and hold pending results of Category 2
NDMA: extract and hold pending results of Category 2
DMF: extract and hold pending results of Category 2
Hydrazine: hold pending results of Category 2
Metals: hold pending results of Category 2
Mercury: hold pending results of Category 2
Hexavalent Chromium: hold pending results of Category 2
Phthalic anhydride: extract and hold pending results of Category 2
Formaldehyde/acetaldehyde: run normal TAT
Anions: run normal TAT
Ammonia: run normal TAT

For rush TAT samples the laboratory will provide preliminary results with a narrative and sample results summary report. The lab will also provide data on a preliminary data EDD. Final result and supporting data packages will be provided in the normal TAT for the project.

OLN23 0316

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Olin

Date of Receipt: 9/18/09

Time of Receipt: 930

Source Code: 50-1

Unpacker Emp. No.: 2316

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	0420773	4.1°C	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:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	9/18/09	1010	Unpacking / to storage
Kristin Zeigler	9-18-09	1107	Place in Storage or (Entry)
			Entry
			Entry

2174.04

shipped Thursday 9/17/09

Acct #12670
Grp# 1162388
Sample# 5779941-55 Lancaster - Soil

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

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: Email

Job # _____ Quote # _____

Lab SDG # _____ PO # _____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V												AG	Zr AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-457-28/30-XXX	9/14/2009 11:30:00	T	FS	SO	G	1																		X				Category 1

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,

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

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/18/09 Time: 0930

Acct# 12670
Grp# 1162388
Sample# 5779941-55

Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	AV	<--Preservative Type (4) <--Bottle Type (5)
OC-SS-420-0.0/1.0-XXX	9/15/2009 3:25:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-422-0.0/1.0-XXX	9/15/2009 4:30:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-424-0.0/1.0-XXX	9/15/2009 5:20:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-427-0.0/1.0-XXX	9/16/2009 9:40:00 AM	T	FS	SO	G	1							X		Category 1
OC-SS-429-0.0/1.0-XXX	9/16/2009 10:25:00	T	FS	SO	G	1							X		Category 1
OC-SS-431-0.0/1.0-XXX	9/16/2009 11:35:00	T	FS	SO	G	1							X		Category 1
OC-SS-434-0.0/1.0-XXX	9/16/2009 4:15:00 PM	T	FS	SO	G	1							X		Category 1

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.

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

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: / / Time: _____

Relinquished: _____ Date: / / Time: _____ Received: [signature] Date: 9/18/09 Time: 930

6100 6210

Acct# 12670
Grp# 1162388
Sample# 5779941-55

Lancaster - Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) <--Bottle Type (5)
OC-SS-440-0.0/1.0-XXX	9/16/2009 1:45:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-450-0.0/1.0-XXX	9/16/2009 3:55:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-455-0.0/1.0-XXX	9/16/2009 5:50:00 PM	T	FS	SO	G	1							X		Category 1
OC-SS-460-0.0/1.0-XXX	9/16/2009 5:30:00 PM	T	FS	SO	G	1							X		Category 1

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.

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

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/18/09 Time: 930

9286 EZUP

Acct# 12670
Grp# 1162388
Sample# 5779941-55

Lancaster - Soil

Client: Olin Corporation	Client Project #: 6107090016	INVOICE INFO	Shaded Areas for office use only
Address: 3855 North Ocoee St. Suite 200	Work Site ID: Wilmington, MA	Company Name: Olin Corp	
Cleveland, TN 37312	Reports Sent To: Steve Morrow	Company Contact: ERG Accounts Payable	
Phone: 423-336-4511 Fax: 423-336-1466	Email SGMorrow@olin.com Email Rpt:___	Address: Same as Client	
Requested Turnaround Time (SPECIFY)	Regulatory Programs: MADEP MCP____ Superfund _____	Phone:	Email
Standard_____ Rush_____ (Lab Approval Required)	Report Requirements Level IV Package ____ Level II Package _____		
	EDD Requirements: MACTEC EQUIS EZ EDD _____	Job # _____	Quote # _____
		Lab SDG #_____	PO #_____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) <--Bottle Type (5)
OC-SB-413-0.0/1.0-XXX	9/17/2009 11:10:00	T	FS	SO	G	1							X		Category 1

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,

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

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/18/09 Time: 930

Acct # 12670
Grp# 1162388
Sample# 5779941-55

Lancaster - 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	
Company Contact: ERG Accounts Payable	
Address: Same as Client	
Phone: Email	
Job # _____	Quote # _____
Lab SDG # _____	PO # _____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V												AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-EBK-010	9/14/2009 1:00:00 PM	T	EB	BW	G	2																			X			Category 1

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,

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: [signature] Date: 9/18/09 Time: 930

Cooler ? Y / N	MADEP Requirement Samples Iced? Y / N
Temp @ receipt: 4.1 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Acct# 12670
Grp# 1162388
Sample # 5779941-55

Lancaster - Water

Client: Olin Corporation
Address: 3855 North Ocoee St. Suite 200
Cleveland, TN 37312
Phone: 423-336-4511 Fax: 423-336-1466

Client Project #: 6107090016
Work Site ID: Wilmington, MA
Reports Sent To: Steve Morrow
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
Company Contact: ERG Accounts Payable
Address: Same as Client
Phone: Email
Job # _____ Quote # _____
Lab SDG #_____ PO #_____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) <--Bottle Type (5)
OC-EBK-011	9/16/2009 8:35:00 AM	T	EB	BW	G	2								X	Category 1

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,

Cooler ? Y / N
MADEP Requirement Samples Iced? Y / N
Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 09/17/09 Time: 1530 Received: _____ Date: __/__/__ Time:
Relinquished: _____ Date: __/__/__ Time: Received: [signature] Date: 9/18/09 Time: 930

EZ98 6227

Acct#12670
Grp# 1162388
Sample# 5779941-55

Lancaster-Soil

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kempore (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V												AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-413-1.0/5.0-XXX	9/17/2009 10:20:00	T	FS	SO	G	1																		X				Category 2
OC-SB-413-10/12-XXX	9/17/2009 10:50:00	T	FS	SO	G	1																		X				Category 3

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.

Cooler ? (Y) N | MADEP Requirement Samples Iced? (Y) N

Temp @ receipt: 4.1 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] **Date:** 09/17/09 **Time:** 1530 **Received:** _____ **Date:** / / **Time:**

Relinquished: _____ **Date:** / / **Time:** **Received:** [signature] **Date:** 9/18/09 **Time:** 930

5799 0024

Olin Wilmington OU1 Soil Sampling Categories

There will be three categories of samples submitted to the laboratories during the soil sampling program based primarily on the depth of soil locations. These categories will be indentified in notes provided with the chain of custody submitted with samples. The following categories are included:

Category 1

Soil boring samples 0'-1': request that all samples are analyzed and reported in the normal project turnaround time (TAT).

Category 2

Soil boring samples from the 1'-10' interval: All samples are analyzed. Rush TAT is requested on a subset of analyses as indicated below:

VOCs: rush 7-day TAT
SVOCs: NDMA, and phthalic anhydride: normal 30-day TAT
DMF: normal 21-day TAT
Hydrazine: rush 7 day TAT
Metals: normal 30-day TAT (except mercury)
Mercury: 10 day TAT
Hexavalent Chromium: 10 day TAT
Formaldehyde/acetaldehyde: normal TAT
Anions: normal TAT
Ammonia: normal TAT

Category 3

Soil boring samples from >10 ft: Sample are held with analysis pending. For a subset of analyses the samples will be extracted and held by the lab pending instructions from MACTEC-Olin.

VOCs: hold pending results of Category 2
SVOCs: extract and hold pending results of Category 2
NDMA: extract and hold pending results of Category 2
DMF: extract and hold pending results of Category 2
Hydrazine: hold pending results of Category 2
Metals: hold pending results of Category 2
Mercury: hold pending results of Category 2
Hexavalent Chromium: hold pending results of Category 2
Phthalic anhydride: extract and hold pending results of Category 2
Formaldehyde/acetaldehyde: run normal TAT
Anions: run normal TAT
Ammonia: run normal TAT

For rush TAT samples the laboratory will provide preliminary results with a narrative and sample results summary report. The lab will also provide data on a preliminary data EDD. Final result and supporting data packages will be provided in the normal TAT for the project.

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Oin

Date of Receipt: 9/18/09

Time of Receipt: 930

Source Code: 50-1

Unpacker Emp. No.: 2316

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	042TTS	4.1°C	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:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	9/18/09	1040	Unpacking (to storage
Kristin Zeigler	9-18-09	1107	Place in Storage or (Entry)
			Entry
			Entry

2174.04

Supplemental Instructions to Laboratory
Soil Samples
Olin Chemical Superfund Site

OLN23 0027

LABORATORY: Lancaster Laboratories

Lab Comp No.	Olin Client Sample ID	Olin Sample ID	Sample Date	Sample Category for Olin QC	Analytical Method	Analysis Requested/Comments
1161543	OC-SB-434-15/16-XXX	TBD	09/10/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC

Tige Cunningham

Sample Manager
MACTEC Engineering & Consulting, Inc.

9/25/09
Date

P:\6107090016 - Olin Wilmington CSS 2008\3.0 Field and Site Characterization\3.6 Databases\Prelim EDDs\
OLN20-11 Hydrazine.xls, Analysis Pending Samples

Supplemental Instructions to Laboratory
Soil Samples
Olin Chemical Superfund Site

LABORATORY: Lancaster Laboratories

Lab Group No.	MACTEC Field Sample ID	Lab Sample ID	Sample Date	Sample Category on the COC	Analyte/ Method	Action Item/Comments
1162387	OC-SB-413-10/12-XXX	TBD	09/17/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC

Tige Cunningham

Sample Manager
MACTEC Engineering & Consulting, Inc.

9-28-09
Date

P:\6107090016 - Olin Wilmington CSS 2009\3.0 Field and Site Characterization\3.6 Databases\Prelim EDDs\
OLM23-09 Hydrazine.xls, Analysis Pending Samples

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

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.

10346 Hydrazines in Soil

The soil is extracted with a buffer solution of known pH. An aliquot of the supernatant is derivatized and directly analyzed by HPLC/MS/MS.

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

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

423-336-4000

Prepared by:

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

September 22, 2009

SAMPLE GROUP

The sample group for this submittal is 1161544. Samples arrived at the laboratory on Saturday, September 12, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-427-0.0/1.0-XXX Grab Soil	5774703
OC-SB-434-0.0/1.0-XXX Grab Soil	5774704
OC-SB-456-0.0/1.0-XXX Grab Soil	5774705
OC-SB-456-16/18-XXX Grab Soil	5774706
OC-SB-456-7.0/9.0-DUP Grab Soil	5774707
OC-SB-456-7.0/9.0-XXX Grab Soil	5774708
OC-SB-456-7.0/9.0-XMS Grab Soil	5774709
OC-SB-456-7.0/9.0-MSD Grab Soil	5774710
OC-SB-457-0.0/1.0-XXX Grab Soil	5774711
OC-SB-457-8.0/10-XXX Grab Soil	5774712

METHODOLOGY

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

ELECTRONIC COPY TO	Olin Corporation	Attn: Steve Morrow
ELECTRONIC COPY TO	MACTEC	Attn: Kelly Chatterton
ELECTRONIC COPY TO	MACTEC	Attn: Chris Ricardi
1 COPY TO	Data Package Group	

OLN23 0030

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

Lancaster Laboratories

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

Respectfully Submitted,

Charles J. Neslund
Manager

0LN23 0031

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

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

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		
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 for methods listed on the laboratories' accreditation scope 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 contract for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774703

Group No. 1161544
MA

OC-SB-427-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/10/2009 13:40

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4270 SDG#: OLN23-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.3	1
10346	Hydrazine	302-01-2	N.D.	0.53	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	6.5	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 22:53	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0033

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

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774704

Group No. 1161544
MA

OC-SB-434-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/10/2009 07:50

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4340 SDG#: OLN23-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.3	1
10346	Hydrazine	302-01-2	200	0.53	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	5.8	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 23:12	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0034

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

Lancaster Laboratories Sample No. SW 5774705

Group No. 1161544
MA

OC-SB-456-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 08:30

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4560 SDG#: OLN23-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.0	5.1	1
10346	Hydrazine	302-01-2	0.65	J	0.51	2.0	1
10346	Methylhydrazine	60-34-4	N.D.		2.0	5.1	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	2.4		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 23:31	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0035

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

Lancaster Laboratories Sample No. SW 5774706

Group No. 1161544
MA

OC-SB-456-16/18-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 10:40

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04561 SDG#: OLN23-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.2	5.5	1
10346	Hydrazine	302-01-2	0.58	J	0.55	2.2	1
10346	Methylhydrazine	60-34-4	N.D.		2.2	5.5	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	8.8		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 23:49	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0836

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2425 New Holland Pike
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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774707

Group No. 1161544
MA

OC-SB-456-7.0/9.0-DUP Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 09:00

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O456D SDG#: OLN23-05FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.1	5.3	1
10346	Hydrazine	302-01-2	1.7	J	0.53	2.1	1
10346	Methylhydrazine	60-34-4	N.D.		2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	5.3		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 19:08	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 5837

Lancaster Laboratories, Inc.
2425 New Holland Pike
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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774708

Group No. 1161544
MA

OC-SB-456-7.0/9.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 09:00

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4567 SDG#: OLN23-06BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.3	1
10346	Hydrazine	302-01-2	2.7	0.53	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	6.0	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 19:27	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0638

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2425 New Holland Pike
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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774709

Group No. 1161544
MA

OC-SB-456-7.0/9.0-XMS Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 09:00

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4567 SDG#: OLN23-06MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	630	2.1	5.3	1
10346	Hydrazine	302-01-2	88	0.53	2.1	1
10346	Methylhydrazine	60-34-4	570	2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00118	Moisture	n.a.	6.0	0.50	0.50	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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 19:46	Jia Wang	1
00118	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0039

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2425 New Holland Pike
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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774710

Group No. 1161544
MA

OC-SB-456-7.0/9.0-MSD Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 09:00

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4567 SDG#: OLN23-06MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	630	2.1	5.3	1
10346	Hydrazine	302-01-2	93	0.53	2.1	1
10346	Methylhydrazine	60-34-4	570	2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00118	Moisture	n.a.	6.0	0.50	0.50	1
00121	Moisture Duplicate	n.a.	6.2	0.50	0.50	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/16/2009 20:04	Jia Wang	1
00118	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1
00121	Moisture Duplicate	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0640

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774711

Group No. 1161544
MA

OC-SB-457-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 13:10

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4570 SDG#: OLN23-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.2	1
10346	Hydrazine	302-01-2	N.D.	0.52	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.2	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	4.4	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/17/2009 00:08	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0041

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5774712

Group No. 1161544
MA

OC-SB-457-8.0/10-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/11/2009 13:20

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:58
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4578 SDG#: OLN23-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.2	5.5	1
10346	Hydrazine	302-01-2	52	0.55	2.2	1
10346	Methylhydrazine	60-34-4	N.D.	2.2	5.5	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	8.5	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0925810610819	09/17/2009 00:27	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN23 0042

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

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Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

423-336-4000

Prepared by:

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

September 25, 2009

SAMPLE GROUP

The sample group for this submittal is 1162387. Samples arrived at the laboratory on Friday, September 18, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-413-1.0/5.0-XXX Grab Soil	5779940

METHODOLOGY

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

ELECTRONIC COPY TO	Olin Corporation	Attn: Steve Morrow
ELECTRONIC COPY TO	MACTEC	Attn: Kelly Chatterton
ELECTRONIC COPY TO	MACTEC	Attn: Chris Ricardi
1 COPY TO	Data Package Group	

OLN23 8843

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

Lancaster Laboratories

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

Respectfully Submitted,

Charles J. Neslund
Manager

0LN23 0044

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

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

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		
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 for methods listed on the laboratories' accreditation scope 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.

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779940

Group No. 1162387
MA

OC-SB-413-1.0/5.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/17/2009 10:20

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/25/2009 at 14:50
Discard: 10/10/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4131 SDG#: OLN23-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.3	5.7	1
10346	Hydrazine	302-01-2	N.D.	0.57	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	2.3	5.7	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	12.0	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 17:47	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0046

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

ANALYTICAL RESULTS

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

423-336-4000

Prepared by:

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

September 24, 2009

SAMPLE GROUP

The sample group for this submittal is 1162388. Samples arrived at the laboratory on Friday, September 18, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-457-28/30-XXX Grab Soil	5779941
OC-SS-420-0.0/1.0-XXX Grab Soil	5779942
OC-SS-422-0.0/1.0-XXX Grab Soil	5779943
OC-SS-424-0.0/1.0-XXX Grab Soil	5779944
OC-SS-427-0.0/1.0-XXX Grab Soil	5779945
OC-SS-429-0.0/1.0-XXX Grab Soil	5779946
OC-SS-431-0.0/1.0-XXX Grab Soil	5779947
OC-SS-434-0.0/1.0-XXX Grab Soil	5779948
OC-SS-440-0.0/1.0-XXX Grab Soil	5779949
OC-SS-450-0.0/1.0-XXX Grab Soil	5779950
OC-SS-455-0.0/1.0-XXX Grab Soil	5779951
OC-SS-460-0.0/1.0-XXX Grab Soil	5779952
OC-SB-413-0.0/1.0-XXX Grab Soil	5779953
OC-EBK-010 Grab Water	5779954
OC-EBK-011 Grab Water	5779955

METHODOLOGY

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

ELECTRONIC COPY TO Olin Corporation Attn: Steve Morrow

OLN23 0047

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
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Lancaster Laboratories

ELECTRONIC COPY TO	MACTEC	Attn: Kelly Chatterton
ELECTRONIC COPY TO	MACTEC	Attn: Chris Ricardi
1 COPY TO	Data Package Group	

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

Respectfully Submitted,

Charles J. Neslund
Manager

OLN23 0848

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

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

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		
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 for methods listed on the laboratories' accreditation scope 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.

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779941

Group No. 1162388
MA

OC-SB-457-28/30-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/14/2009 11:30

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4572 SDG#: OLN23-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.3	5.7	1
10346	Hydrazine	302-01-2	2.8	0.57	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	2.3	5.7	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	12.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 20:55	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0050

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779942

Group No. 1162388
MA

OC-SS-420-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/15/2009 15:25

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4200 SDG#: OLN23-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.3	5.8	1
10346	Hydrazine	302-01-2	N.D.	0.58	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	2.3	5.8	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	14.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 21:13	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0051

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2425 New Holland Pike
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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779943

Group No. 1162388
MA

OC-SS-422-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/15/2009 16:30

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04221 SDG#: OLN23-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.3	5.8	1
10346	Hydrazine	302-01-2	4.1	0.58	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	2.3	5.8	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	13.1	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 21:32	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0052

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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779944

Group No. 1162388
MA

OC-SS-424-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/15/2009 17:20

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4240 SDG#: OLN23-13

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.3	5.8	1
10346	Hydrazine	302-01-2	2.0	J	0.58	2.3	1
10346	Methylhydrazine	60-34-4	N.D.		2.3	5.8	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	13.5		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 21:51	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0053

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PO Box 12425
Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779945

Group No. 1162388
MA

OC-SS-427-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 09:40

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4271 SDG#: OLN23-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.4	6.0	1
10346	Hydrazine	302-01-2	N.D.	0.60	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	2.4	6.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	17.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 22:10	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 #854

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779946

Group No. 1162388
MA

OC-SS-429-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 10:25

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4290 SDG#: OLN23-15

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.4	6.0	1
10346	Hydrazine	302-01-2	0.62	J	0.60	2.4	1
10346	Methylhydrazine	60-34-4	N.D.		2.4	6.0	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	16.5		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 22:28	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0055

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779947

Group No. 1162388
MA

OC-SS-431-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 11:35

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4310 SDG#: OLN23-16

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.3	5.7	1
10346	Hydrazine	302-01-2	1.6	J	0.57	2.3	1
10346	Methylhydrazine	60-34-4	N.D.		2.3	5.7	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	12.7		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 22:47	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0056

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779948

Group No. 1162388
MA

OC-SS-434-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 16:15

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04341 SDG#: OLN23-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.4	6.0	1
10346	Hydrazine	302-01-2	N.D.	0.60	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	2.4	6.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	17.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 23:06	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0057

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2425 New Holland Pike
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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779949

Group No. 1162388
MA

OC-SS-440-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 13:45

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4400 SDG#: OLN23-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	3.5	8.8	1
10346	Hydrazine	302-01-2	N.D.	0.88	3.5	1
10346	Methylhydrazine	60-34-4	N.D.	3.5	8.8	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	43.3	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/22/2009 23:43	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0058

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779950

Group No. 1162388
MA

OC-SS-450-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 15:55

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04501 SDG#: OLN23-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	3.2	7.9	1
10346	Hydrazine	302-01-2	N.D.	0.79	3.2	1
10346	Methylhydrazine	60-34-4	N.D.	3.2	7.9	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	36.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/23/2009 00:02	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0059

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779951

Group No. 1162388
MA

OC-SS-455-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 17:50

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04550 SDG#: OLN23-20

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.3	5.7	1
10346	Hydrazine	302-01-2	N.D.	0.57	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	2.3	5.7	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	12.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/23/2009 00:21	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0060

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5779952

Group No. 1162388
MA

OC-SS-460-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/16/2009 17:30

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4600 SDG#: OLN23-21

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.4	5.9	1
10346	Hydrazine	302-01-2	N.D.	0.59	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	2.4	5.9	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/23/2009 00:40	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002A	09/22/2009 16:51	Scott W Freisher	1

OLN23 0061

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

Lancaster Laboratories Sample No. SW 5779953

Group No. 1162388
MA

OC-SB-413-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/17/2009 11:10

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4130 SDG#: OLN23-22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.7	6.8	1
10346	Hydrazine	302-01-2	N.D.	0.68	2.7	1
10346	Methylhydrazine	60-34-4	N.D.	2.7	6.8	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	26.7	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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
10346	Hydrazines in Soil	SW-846 8315A modified	1	0926510610833	09/23/2009 00:58	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09265820002B	09/22/2009 16:51	Scott W Freisher	1

OLN23 0062

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

Lancaster Laboratories Sample No. WW 5779954

Group No. 1162388
MA

OC-EBK-010 Grab Water
Wilmington MA Superfund Site

Collected: 09/14/2009 13:00

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

OEB10 SDG#: OLN23-23EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ug/l**	**ug/l**	**ug/l**	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.25	0.50	1
10342	Hydrazine	302-01-2	N.D.	0.050	0.20	1
10342	Methylhydrazine	60-34-4	N.D.	0.25	0.50	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	0926510610837	09/23/2009 02:32	Jia Wang	1

OLN23 0063

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

Lancaster Laboratories Sample No. WW 5779955

Group No. 1162388
MA

OC-EBK-011 Grab Water
Wilmington MA Superfund Site

Collected: 09/16/2009 08:35

Account Number: 12670

Submitted: 09/18/2009 09:30
Reported: 09/24/2009 at 19:13
Discard: 10/09/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

OEB11 SDG#: OLN23-24EB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ug/l**	**ug/l**	**ug/l**	
10342	1,1-Dimethylhydrazine	57-14-7	N.D.	0.25	0.50	1
10342	Hydrazine	302-01-2	N.D.	0.050	0.20	1
10342	Methylhydrazine	60-34-4	N.D.	0.25	0.50	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	0926510610837	09/23/2009 03:09	Jia Wang	1

OLN23 0064

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

Miscellaneous Organics Data

Case Narrative Conformance/Nonconformance Summary

OLN23 6866

Lancaster Laboratories
Where quality is a science.

CASE NARRATIVE
Client: Olin Corporation
SDG#: OLN23

LANCASTER LABORATORIES
MISCELLANEOUS ORGANICS DATA

SAMPLE NUMBER(S)

LL #'s	Sample Code	Matrix Soil	Matrix Water	Comments
5774703	O4270	X		
5774704	O4340	X		
5774705	O4560	X		
5774706	O4561	X		
5774707	O456D	X		
5774708	O4567	X		Unspiked
5774709MS	O4567	X		Matrix Spike
5774710MSD	O4567	X		Matrix Spike Dup
5774711	O4570	X		
5774712	O4578	X		
5779940	O4131	X		Unspiked
5779940MS	O4131	X		Matrix Spike
5779940MSD	O4131	X		Matrix Spike Dup
5779941	O4572	X		
5779942	O4200	X		
5779943	O4221	X		
5779944	O4240	X		
5779945	O4271	X		
5779946	O4290	X		
5779947	O4310	X		
5779948	O4341	X		
5779949	O4400	X		
5779950	O4501	X		
5779951	O4550	X		
5779952	O4600	X		
5779953	O4130	X		
5779954	OEB10		X	
5779955	OEB11		X	

Case Narrative (continued)
SDG: OLN23

LABORATORY SUBMITTED QC:

Blank1 Sep 16	X		Method Blank
Blank1 Sep 22	X		Method Blank
Blank2 Sep 22		X	Method Blank
5781382		X	Unspiked
5781382MS		X	Matrix Spike
5781382MSD		X	Matrix Spike Dup
LCS1 Sep 16	X		Lab Control Sample
LCSD1 Sep 16	X		Lab Control Sample Dup
LCS1 Sep 22	X		Lab Control Sample
LCSD1 Sep 22	X		Lab Control Sample Dup
ICV/LCS2 Sep 22		X	Lab Control Sample
LCSD2 Sep 22		X	Lab Control Sample Dup

SAMPLE PREPARATION:

Samples were derivatized with benzaldehyde prior to analysis.

ANALYSIS:

No problems were encountered during the analysis of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

The QC recovery for 1,1-dimethylhydrazine was above QC limits in 5774709MS and 5774710MSD.

The QC recoveries for hydrazine and monomethylhydrazine in 5779940MS and 5779940MSD were below QC limits.

DATA INTERPRETATION:

A method blank form could not be generated. None of the reported compounds were detected in the method blank.

OLN23 0060

Case Narrative (continued)
SDG: OLN23

ICV/ LCS2 serves as the ICV second source check for the water method, as well as, the LCS. ,

Abbreviation Key

NC = Not calculated
NF = Not found

Case Narrative Reviewed and Approved by:

Dana M. Kauffman for Date: 10/22/09

Dana M. Kauffman
Manager, Data Deliverables

OLN23 0069

QC Summary

Lancaster Laboratories

Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Soil Samples

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 16Sep2009-19
MSD File Name: 16Sep2009-20
Batch No.: 0925810610819
MS Injected: 9/16/2009
MS Injected: 9/16/2009
Workbook: TQU01408-16Sep2009-1
MS ID: 5774709MS
MSD ID: 5774710MSD
Dilution Factor: 1

Compound	Specified Spike Level	BKG	MS Found	MSD Found	MS Recovery	MSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	2.52	82.88	87.81	64	68	11-102	6	30
1,1-Dimethylhydrazine	625	0	591.77	589.30	95	94	10-92	0	30
Monomethylhydrazine	625	0	535.27	531.59	86	85	10-116	1	30

Comments:

Analyst: JW 1543 9/17/2009

Reviewed by: [illegible] 9/21/09

Lancaster Laboratories

Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Soil Samples

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 16Sep2009-21
LCSD File Name: 16Sep2009-22
Batch No.: 0925810610819
LCS Injected: 9/16/2009
LCSD Injected: 9/16/2009
Workbook: TQU01408-16Sep2009-1
LCS ID: LCS1
LCSD ID: LCSD1
Dilution Factor: 1

Compound	Spike Level	LCS Found	LCSD Found	LCS Recovery	LCSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	91.04	87.71	73	70	70-130	4	30
1,1-Dimethylhydrazine	625	629.71	652.90	101	104	70-130	4	30
Monomethylhydrazine	625	648.49	632.72	104	101	70-130	2	30

Comments:

Analyst: JW 1543 9/17/2009

Reviewed by: [illegible] 9/22/09

Lancaster Laboratories

Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Soil Samples

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 22Sep2009-18
MSD File Name: 22Sep2009-19
Batch No.: 0926510610833
MS Injected: 9/22/2009
MS Injected: 9/22/2009
Workbook: TQU01408-22Sep2009-1
MS ID: 5779940MS
MSD ID: 5779940MSD
Dilution Factor: 1

Compound	Specified Spike Level	BKG	MS Found	MSD Found	MS Recovery	MSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	0	10.85	12.05	9	10	11-102	10	30
1,1-Dimethylhydrazine	625	0	348.45	343.20	56	55	10-92	2	30
Monomethylhydrazine	625	0	35.40	34.87	6	6	10-116	2	30

Comments:

Analyst: JW 1543 9/24/2009

Reviewed by: [illegible] 9/24/09

Lancaster Laboratories

Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Soil Samples

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 22Sep2009-20
LCSD File Name: 22Sep2009-21
Batch No.: 0926510610833
LCS Injected: 9/22/2009
LCSD Injected: 9/22/2009
Workbook: TQU01408-22Sep2009-1
LCS ID: LCS1
LCSD ID: LCSD1
Dilution Factor: 1

Compound	Spike Level	LCS Found	LCSD Found	LCS Recovery	LCSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	97.57	119.56	78	96	70-130	20	30
1,1-Dimethylhydrazine	625	656.08	690.53	105	110	70-130	5	30
Monomethylhydrazine	625	557.17	670.14	89	107	70-130	18	30

Comments:

Analyst: JW 1543 9/24/2009

Reviewed by: [illegible] 9/24/09

Lancaster Laboratories

Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Aqueous Samples

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 22Sep2009-49
MSD File Name: 22Sep2009-50
Batch No.: 0926510610837
MS Injected: 9/23/2009
MS Injected: 9/23/2009
Workbook: TQU01408-22Sep2009-1
MS ID: 5781382MS
MSD ID: 5781382MSD
Dilution Factor: 1

Compound	Specified Spike Level	BKG	MS Found	MSD Found	MS Recovery	MSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/mL)	(ng/mL)	(ng/mL)	(ng/mL)	(%)	(%)	(%)	(%)	(%)
Hydrazine	12.5	0	11.307	11.043	90	88	70-130	2	30
1,1-Dimethylhydrazine	62.5	0	73.991	79.000	118	126	70-130	7	30
Monomethylhydrazine	62.5	0	72.988	73.197	117	117	70-130	0	30

Comments:

Analyst: JJ 1543 9/24/2009

Reviewed by: /nz 9/24/09

Lancaster Laboratories

Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Aqueous Samples

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 22Sep2009-51
LCSD File Name: 22Sep2009-52
Batch No.: 0926510610837
LCS Injected: 9/23/2009
LCSD Injected: 9/23/2009
Workbook: TQU01408-22Sep2009-1
LCS ID: ICV/LCS2
LCSD ID: LCSD2
Dilution Factor: 1

Compound	Spike Level	LCS Found	LCSD Found	LCS Recovery	LCSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/mL)	(ng/mL)	(ng/mL)	(%)	(%)	(%)	(%)	(%)
Hydrazine	12.5	11.147	10.850	89	87	70-130	3	30
1,1-Dimethylhydrazine	62.5	74.223	78.920	119	126	70-130	6	30
Monomethylhydrazine	62.5	70.797	73.368	113	117	70-130	4	30

Comments:

Analyst: JW 1543 9/24/2009

Reviewed by: [illegible] 9/24/09

Sample Data

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-16Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units	Calc Amt	Units
1,1-Dimethylhydrazine	Conditioner1	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Conditioner2	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	MDL	Unknown	Method Settings	5813	0.355	ng/mL		
1,1-Dimethylhydrazine	Conditioner3	Unknown	Method Settings	600	0.183	ng/mL		
1,1-Dimethylhydrazine	Conditioner4	Unknown	Method Settings	37	0.164	ng/mL		
1,1-Dimethylhydrazine	Conditioner5	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Blank1	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5774707FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5774708BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5774709MS	Unknown	Method Settings	1788702	59.177	ng/mL	591.77	ng/g
1,1-Dimethylhydrazine	5774710MSD	Unknown	Method Settings	1781218	58.930	ng/mL	589.30	ng/g
1,1-Dimethylhydrazine	LCS1	Unknown	Method Settings	1903680	62.971	ng/mL	629.71	ng/g
1,1-Dimethylhydrazine	LCSD1	Unknown	Method Settings	1973973	65.290	ng/mL	652.90	ng/g
1,1-Dimethylhydrazine	ICV	Unknown	Method Settings	2219172	73.380	ng/mL		
1,1-Dimethylhydrazine	Spike Check	Unknown	Method Settings	2105026	69.614	ng/mL		
1,1-Dimethylhydrazine	Conditioner6	Unknown	Method Settings	291	0.173	ng/mL		
1,1-Dimethylhydrazine	Conditioner7	Unknown	Method Settings	53	0.165	ng/mL		
1,1-Dimethylhydrazine	5774702	Unknown	Method Settings	54	0.165	ng/mL	1.65	ng/g
1,1-Dimethylhydrazine	5774703	Unknown	Method Settings	38	0.164	ng/mL	1.64	ng/g
1,1-Dimethylhydrazine	5774704	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5774705	Unknown	Method Settings	23	0.164	ng/mL	1.64	ng/g
1,1-Dimethylhydrazine	5774706	Unknown	Method Settings	39	0.164	ng/mL	1.64	ng/g
1,1-Dimethylhydrazine	5774711	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5774712	Unknown	Method Settings	28	0.164	ng/mL	1.64	ng/g
1,1-Dimethylhydrazine	Conditioner8	Unknown	Method Settings	84	0.166	ng/mL		
1,1-Dimethylhydrazine	Conditioner9	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Blank2	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	5772549	Unknown	Method Settings	12	0.163	ng/mL		
1,1-Dimethylhydrazine	5772549MS	Unknown	Method Settings	2424144	80.142	ng/mL		
1,1-Dimethylhydrazine	5772549MSD	Unknown	Method Settings	2398320	79.290	ng/mL		
1,1-Dimethylhydrazine	ICV/LCS2	Unknown	Method Settings	2278888	75.350	ng/mL		
1,1-Dimethylhydrazine	LCSD2	Unknown	Method Settings	2362038	78.093	ng/mL		

GLN23 6878

Analyst : JW 1543 9/17/2009
9/22 9/22/09

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-16Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units	Calc Amt	Units
Hydrazine	Conditioner1	Unknown	Method Settings	409	0.005	ng/mL		
Hydrazine	Conditioner2	Unknown	Method Settings	59	0.003	ng/mL		
Hydrazine	MDL	Unknown	Method Settings	9058	0.068	ng/mL		
Hydrazine	Conditioner3	Unknown	Method Settings	3614	0.029	ng/mL		
Hydrazine	Conditioner4	Unknown	Method Settings	334	0.005	ng/mL		
Hydrazine	Conditioner5	Unknown	Method Settings	212	0.004	ng/mL		
Hydrazine	Blank1	Unknown	Method Settings	4305	0.034	ng/mL	0.34	ng/g
Hydrazine	5774707FD	Unknown	Method Settings	21492	0.159	ng/mL	1.59	ng/g
Hydrazine	5774708BKG	Unknown	Method Settings	34289	0.252	ng/mL	2.52	ng/g
Hydrazine	5774709MS	Unknown	Method Settings	1139500	8.288	ng/mL	82.88	ng/g
Hydrazine	5774710MSD	Unknown	Method Settings	1207356	8.781	ng/mL	87.81	ng/g
Hydrazine	LCS1	Unknown	Method Settings	1251717	9.104	ng/mL	91.04	ng/g
Hydrazine	LCSD1	Unknown	Method Settings	1205985	8.771	ng/mL	87.71	ng/g
Hydrazine	ICV	Unknown	Method Settings	1501559	10.920	ng/mL		
Hydrazine	Spike Check	Unknown	Method Settings	1471495	10.702	ng/mL		
Hydrazine	Conditioner6	Unknown	Method Settings	1486	0.013	ng/mL		
Hydrazine	Conditioner7	Unknown	Method Settings	336	0.005	ng/mL		
Hydrazine	5774702	Unknown	Method Settings	5025	0.039	ng/mL	0.39	ng/g
Hydrazine	5774703	Unknown	Method Settings	3984	0.031	ng/mL	0.31	ng/g
Hydrazine	5774704	Unknown	Method Settings	2533220	18.422	ng/mL	184.22	ng/g
Hydrazine	5774705	Unknown	Method Settings	8276	0.063	ng/mL	0.63	ng/g
Hydrazine	5774706	Unknown	Method Settings	6905	0.053	ng/mL	0.53	ng/g
Hydrazine	5774711	Unknown	Method Settings	6155	0.047	ng/mL	0.47	ng/g
Hydrazine	5774712	Unknown	Method Settings	654073	4.758	ng/mL	47.58	ng/g
Hydrazine	Conditioner8	Unknown	Method Settings	421	0.005	ng/mL		
Hydrazine	Conditioner9	Unknown	Method Settings	147	0.003	ng/mL		
Hydrazine	Blank2	Unknown	Method Settings	4593	0.036	ng/mL		
Hydrazine	5772549	Unknown	Method Settings	2903	0.023	ng/mL		
Hydrazine	5772549MS	Unknown	Method Settings	1568259	11.405	ng/mL		
Hydrazine	5772549MSD	Unknown	Method Settings	1570481	11.421	ng/mL		
Hydrazine	ICV/LCS2	Unknown	Method Settings	1621246	11.791	ng/mL		
Hydrazine	LCSD2	Unknown	Method Settings	1545225	11.238	ng/mL		

OLN23 6879

Analyst : JW 1543 9/17/2009
9/21/09

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-16Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units	Calc Amt	Units
Monomethylhydrazine	Conditioner1	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner2	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	MDL	Unknown	Method Settings	7338	0.416	ng/mL		
Monomethylhydrazine	Conditioner3	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner4	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner5	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Blank1	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774707FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774708BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774709MS	Unknown	Method Settings	1677837	53.527	ng/mL	535.27	ng/g
Monomethylhydrazine	5774710MSD	Unknown	Method Settings	1666290	53.159	ng/mL	531.59	ng/g
Monomethylhydrazine	LCS1	Unknown	Method Settings	2033973	64.849	ng/mL	648.49	ng/g
Monomethylhydrazine	LCSD1	Unknown	Method Settings	1984365	63.272	ng/mL	632.72	ng/g
Monomethylhydrazine	ICV	Unknown	Method Settings	2133668	68.019	ng/mL		
Monomethylhydrazine	Spike Check	Unknown	Method Settings	2289215	72.964	ng/mL		
Monomethylhydrazine	Conditioner6	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner7	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5774702	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774703	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774704	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774705	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774706	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774711	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5774712	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	Conditioner8	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner9	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Blank2	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5772549	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5772549MS	Unknown	Method Settings	2412552	76.886	ng/mL		
Monomethylhydrazine	5772549MSD	Unknown	Method Settings	2301868	73.367	ng/mL		
Monomethylhydrazine	ICV/LCS2	Unknown	Method Settings	2257686	71.962	ng/mL		
Monomethylhydrazine	LCSD2	Unknown	Method Settings	2257735	71.964	ng/mL		

OLNZ3 8888

Analyst : JW 1543 P 1/7 /2009
9/21/09

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-22Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units	Calc Amt	Units
1,1-Dimethylhydrazine	Conditioner1	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Conditioner2	Unknown	Method Settings	25	0.092	ng/mL		
1,1-Dimethylhydrazine	MDL	Unknown	Method Settings	7176	0.316	ng/mL		
1,1-Dimethylhydrazine	Conditioner3	Unknown	Method Settings	561	0.109	ng/mL		
1,1-Dimethylhydrazine	Conditioner4	Unknown	Method Settings	36	0.092	ng/mL		
1,1-Dimethylhydrazine	Conditioner5	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Blank1	Unknown	Method Settings	95	0.094	ng/mL	0.94	ng/g
1,1-Dimethylhydrazine	5779940BKG	Unknown	Method Settings	22	0.092	ng/mL	0.92	ng/g
1,1-Dimethylhydrazine	5779940MS	Unknown	Method Settings	1108073	34.845	ng/mL	348.45	ng/g
1,1-Dimethylhydrazine	5779940MSD	Unknown	Method Settings	1091328	34.320	ng/mL	343.20	ng/g
1,1-Dimethylhydrazine	LCS1	Unknown	Method Settings	2088863	65.608	ng/mL	656.08	ng/g
1,1-Dimethylhydrazine	LCSD1	Unknown	Method Settings	2198705	69.053	ng/mL	690.53	ng/g
1,1-Dimethylhydrazine	ICV	Unknown	Method Settings	1872053	58.808	ng/mL		
1,1-Dimethylhydrazine	Spike Check	Unknown	Method Settings	2282415	71.678	ng/mL		
1,1-Dimethylhydrazine	Conditioner6	Unknown	Method Settings	218	0.098	ng/mL		
1,1-Dimethylhydrazine	Conditioner7	Unknown	Method Settings	59	0.093	ng/mL		
1,1-Dimethylhydrazine	5779941	Unknown	Method Settings	66	0.093	ng/mL	0.93	ng/g
1,1-Dimethylhydrazine	5779942	Unknown	Method Settings	43	0.092	ng/mL	0.92	ng/g
1,1-Dimethylhydrazine	5779943	Unknown	Method Settings	34	0.092	ng/mL	0.92	ng/g
1,1-Dimethylhydrazine	5779944	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5779945	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5779946	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5779947	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5779948	Unknown	Method Settings	29	0.092	ng/mL	0.92	ng/g
1,1-Dimethylhydrazine	5779949	Unknown	Method Settings	100	0.094	ng/mL	0.94	ng/g
1,1-Dimethylhydrazine	5779950	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5779951	Unknown	Method Settings	69	0.093	ng/mL	0.93	ng/g
1,1-Dimethylhydrazine	5779952	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5779953	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5781371	Unknown	Method Settings	27	0.092	ng/mL	0.92	ng/g
1,1-Dimethylhydrazine	Conditioner8	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Conditioner9	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Blank2	Unknown	Method Settings	16	0.091	ng/mL		
1,1-Dimethylhydrazine	5779954	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	5779955	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	5781382BKG	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	5781382MS	Unknown	Method Settings	2356140	73.991	ng/mL		
1,1-Dimethylhydrazine	5781382MSD	Unknown	Method Settings	2515839	79.000	ng/mL		
1,1-Dimethylhydrazine	ICV/LCS2	Unknown	Method Settings	2363540	74.223	ng/mL		
1,1-Dimethylhydrazine	LCSD2	Unknown	Method Settings	2513311	78.920	ng/mL		

Analyst: JW 1543 9/24/2009
9/24/09

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-22Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units	Calc Amt	Units
Hydrazine	Conditioner1	Unknown	Method Settings	1880	0.001	ng/mL		
Hydrazine	Conditioner2	Unknown	Method Settings	1002	-0.006	ng/mL		
Hydrazine	MDL	Unknown	Method Settings	11420	0.069	ng/mL		
Hydrazine	Conditioner3	Unknown	Method Settings	4306	0.018	ng/mL		
Hydrazine	Conditioner4	Unknown	Method Settings	697	-0.008	ng/mL		
Hydrazine	Conditioner5	Unknown	Method Settings	522	-0.009	ng/mL		
Hydrazine	Blank1	Unknown	Method Settings	4313	0.018	ng/mL	0.18	ng/g
Hydrazine	5779940BKG	Unknown	Method Settings	3967	0.016	ng/mL	0.16	ng/g
Hydrazine	5779940MS	Unknown	Method Settings	152673	1.085	ng/mL	10.85	ng/g
Hydrazine	5779940MSD	Unknown	Method Settings	169349	1.205	ng/mL	12.05	ng/g
Hydrazine	LCS1	Unknown	Method Settings	1357992	9.757	ng/mL	97.57	ng/g
Hydrazine	LCSD1	Unknown	Method Settings	1663600	11.956	ng/mL	119.56	ng/g
Hydrazine	ICV	Unknown	Method Settings	1305225	9.377	ng/mL		
Hydrazine	Spike Check	Unknown	Method Settings	1727330	12.414	ng/mL		
Hydrazine	Conditioner6	Unknown	Method Settings	1401	-0.003	ng/mL		
Hydrazine	Conditioner7	Unknown	Method Settings	754	-0.007	ng/mL		
Hydrazine	5779941	Unknown	Method Settings	35769	0.244	ng/mL	2.44	ng/g
Hydrazine	5779942	Unknown	Method Settings	5033	0.023	ng/mL	0.23	ng/g
Hydrazine	5779943	Unknown	Method Settings	51311	0.356	ng/mL	3.56	ng/g
Hydrazine	5779944	Unknown	Method Settings	26032	0.174	ng/mL	1.74	ng/g
Hydrazine	5779945	Unknown	Method Settings	4743	0.021	ng/mL	0.21	ng/g
Hydrazine	5779946	Unknown	Method Settings	8982	0.052	ng/mL	0.52	ng/g
Hydrazine	5779947	Unknown	Method Settings	21575	0.142	ng/mL	1.42	ng/g
Hydrazine	5779948	Unknown	Method Settings	4634	0.020	ng/mL	0.20	ng/g
Hydrazine	5779949	Unknown	Method Settings	5865	0.029	ng/mL	0.29	ng/g
Hydrazine	5779950	Unknown	Method Settings	3652	0.013	ng/mL	0.13	ng/g
Hydrazine	5779951	Unknown	Method Settings	4377	0.019	ng/mL	0.19	ng/g
Hydrazine	5779952	Unknown	Method Settings	4490	0.019	ng/mL	0.19	ng/g
Hydrazine	5779953	Unknown	Method Settings	4037	0.016	ng/mL	0.16	ng/g
Hydrazine	5781371	Unknown	Method Settings	4481	0.019	ng/mL	0.19	ng/g
Hydrazine	Conditioner8	Unknown	Method Settings	320	-0.011	ng/mL		
Hydrazine	Conditioner9	Unknown	Method Settings	291	-0.011	ng/mL		
Hydrazine	Blank2	Unknown	Method Settings	4013	0.016	ng/mL		
Hydrazine	5779954	Unknown	Method Settings	4059	0.016	ng/mL		
Hydrazine	5779955	Unknown	Method Settings	3848	0.015	ng/mL		
Hydrazine	5781382BKG	Unknown	Method Settings	3110	0.009	ng/mL		
Hydrazine	5781382MS	Unknown	Method Settings	1573422	11.307	ng/mL		
Hydrazine	5781382MSD	Unknown	Method Settings	1536757	11.043	ng/mL		
Hydrazine	ICV/LCS2	Unknown	Method Settings	1551219	11.147	ng/mL		
Hydrazine	LCSD2	Unknown	Method Settings	1509911	10.850	ng/mL		

Analyst : JW 1543 9/24/09
9/24/09

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-22Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units	Calc Amt	Units
Monomethylhydrazine	Conditioner1	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner2	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	MDL	Unknown	Method Settings	8543	0.363	ng/mL		
Monomethylhydrazine	Conditioner3	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner4	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner5	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Blank1	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779940BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779940MS	Unknown	Method Settings	112733	3.540	ng/mL	35.40	ng/g
Monomethylhydrazine	5779940MSD	Unknown	Method Settings	111001	3.487	ng/mL	34.87	ng/g
Monomethylhydrazine	LCS1	Unknown	Method Settings	1824347	55.717	ng/mL	557.17	ng/g
Monomethylhydrazine	LCSD1	Unknown	Method Settings	2194926	67.014	ng/mL	670.14	ng/g
Monomethylhydrazine	ICV	Unknown	Method Settings	1889107	57.692	ng/mL		
Monomethylhydrazine	Spike Check	Unknown	Method Settings	2238341	68.338	ng/mL		
Monomethylhydrazine	Conditioner6	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner7	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5779941	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779942	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779943	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779944	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779945	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779946	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779947	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779948	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779949	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779950	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779951	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779952	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5779953	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5781371	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	Conditioner8	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner9	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Blank2	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5779954	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5779955	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5781382BKG	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5781382MS	Unknown	Method Settings	2390867	72.988	ng/mL		
Monomethylhydrazine	5781382MSD	Unknown	Method Settings	2397723	73.197	ng/mL		
Monomethylhydrazine	ICV/LCS2	Unknown	Method Settings	2319021	70.797	ng/mL		
Monomethylhydrazine	LCSD2	Unknown	Method Settings	2403336	73.368	ng/mL		

Analyst: JW 1543 9/24/09
9/24/09

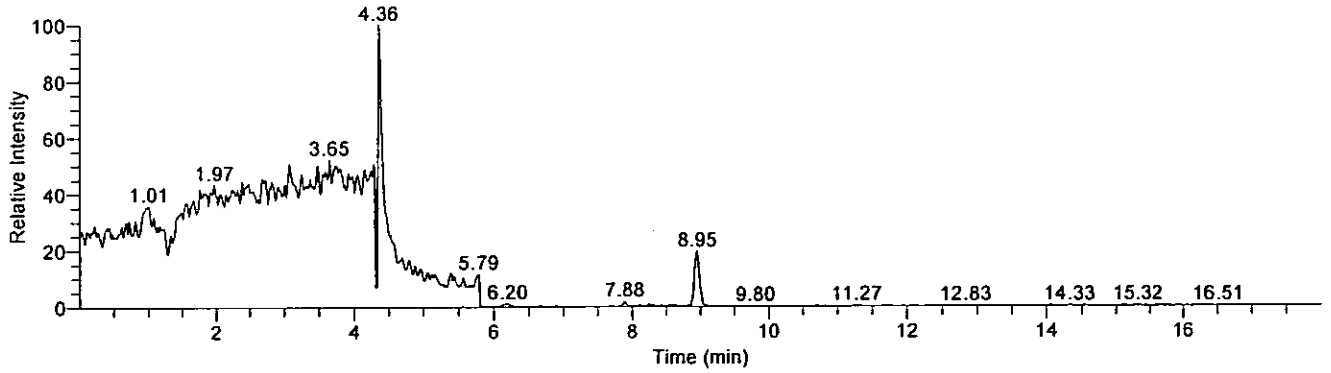
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-29.raw
Sample ID:	5774703
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 10:53:44 PM
Vial:	D:20
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-29 - TIC RT: 0.00 - 17.99 NL: 3.90E3

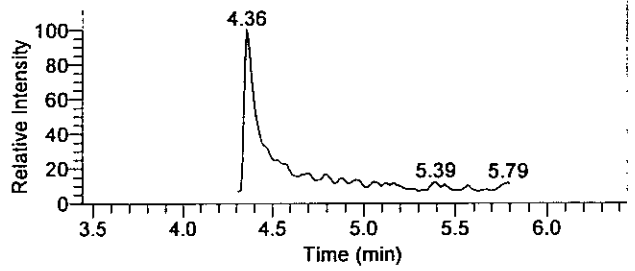


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:20, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-29, Comments: Soil Prep, ID: 5774703

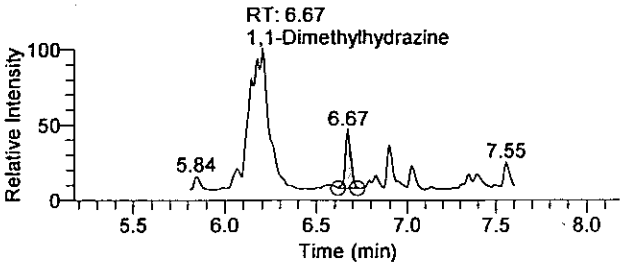
Monomethylhydrazine

16Sep2009-29 - TIC RT: 3.44 - 6.44 NL: 3.90E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



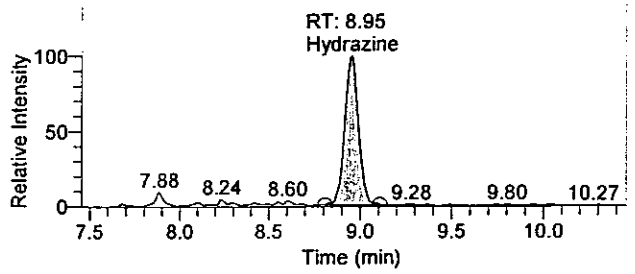
1,1-Dimethylhydrazine

16Sep2009-29 - TIC RT: 5.17 - 8.17 NL: 4.52E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-29 - TIC RT: 7.45 - 10.45 NL: 7.63E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0004

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774703	Method Settings	Hydrazine	8.95	3984	0.031	ng/mL
5774703	Method Settings	1,1-Dimethylhydrazine	6.67	38	0.164	ng/mL
5774703	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

There is no signature data to report.

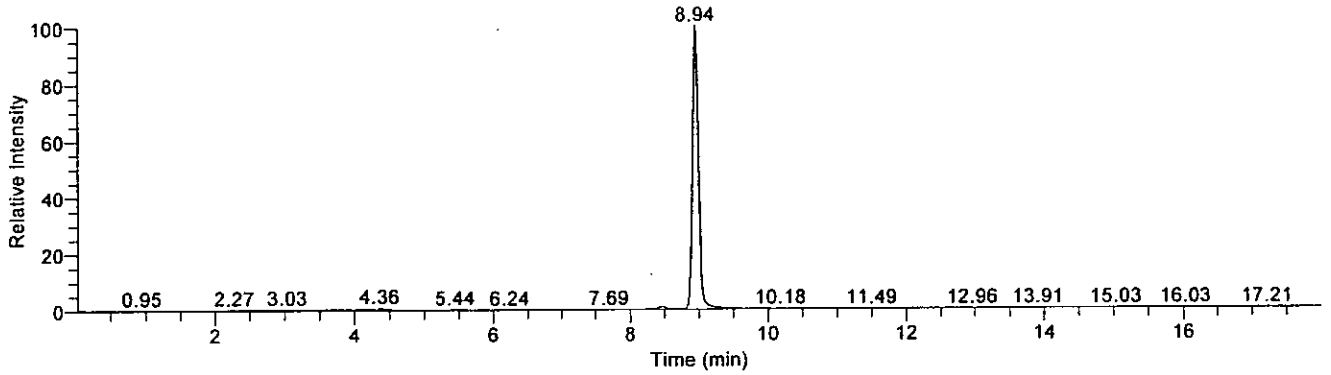
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-30.raw
Sample ID:	5774704
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 11:12:28 PM
Vial:	D:21
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-30 - TIC RT: 0.00 - 17.99 NL: 4.23E5

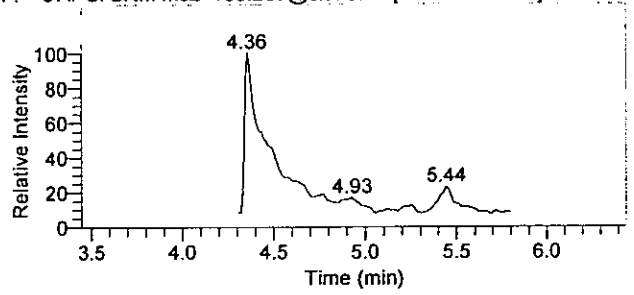


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:21, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-30, Comments: Soil Prep, ID: 5774704

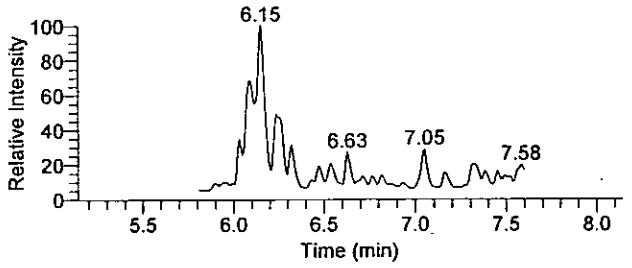
Monomethylhydrazine

16Sep2009-30 - TIC RT: 3.44 - 6.44 NL: 4.04E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



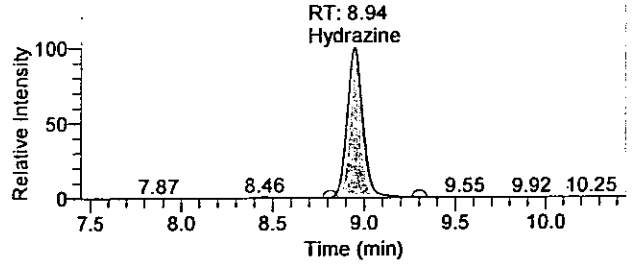
1,1-Dimethylhydrazine

16Sep2009-30 - TIC RT: 5.14 - 8.14 NL: 5.72E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-30 - TIC RT: 7.44 - 10.44 NL: 4.23E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0006

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774704	Method Settings	Hydrazine	8.94	2533220	18.422	ng/mL
5774704	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5774704	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

OLN23 0087

There is no signature data to report.

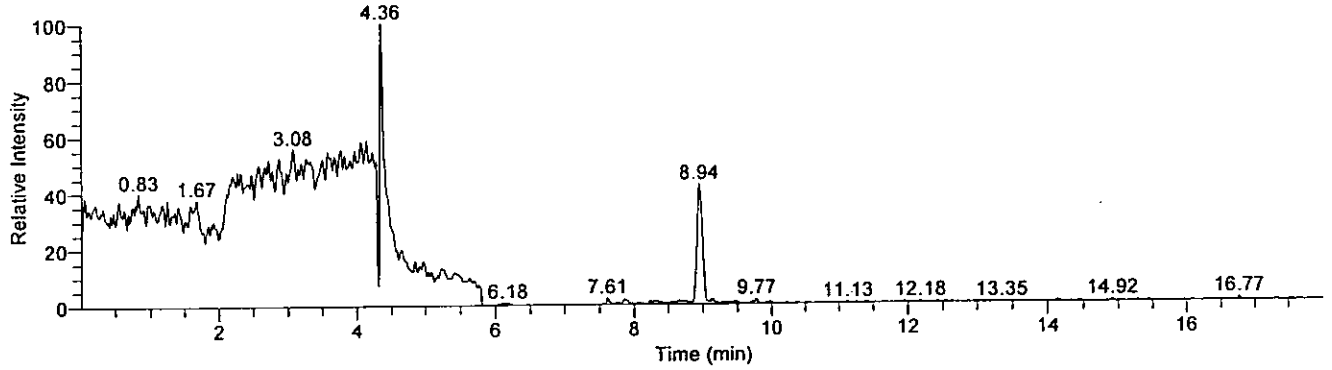
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-31.raw
Sample ID:	5774705
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 11:31:10 PM
Vial:	D:22
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-31 - TIC RT: 0.01 - 18.00 NL: 3.47E3

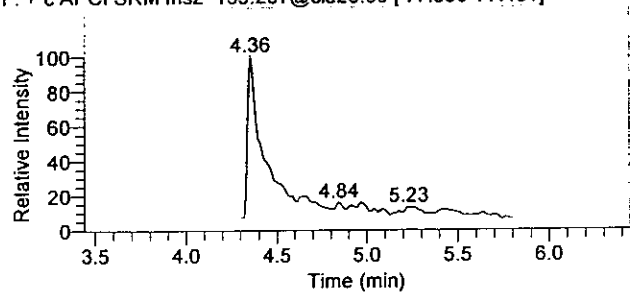


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:22, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-31, Comments: Soil Prep, ID: 5774705

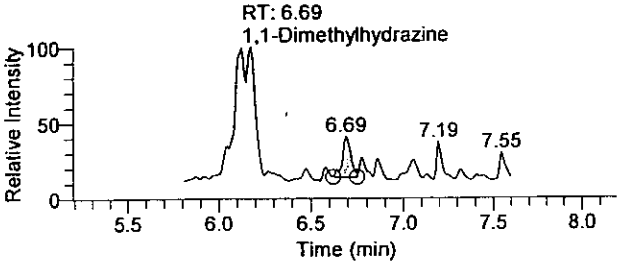
Monomethylhydrazine

16Sep2009-31 - TIC RT: 3.44 - 6.44 NL: 3.47E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



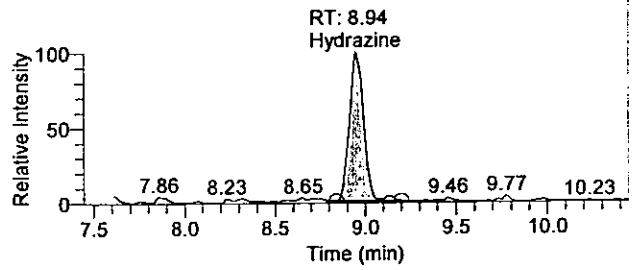
1,1-Dimethylhydrazine

16Sep2009-31 - TIC RT: 5.19 - 8.19 NL: 2.69E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-31 - TIC RT: 7.44 - 10.44 NL: 1.48E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLR23 0088

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774705	Method Settings	Hydrazine	8.94	8276	0.063	ng/mL
5774705	Method Settings	1,1-Dimethylhydrazine	6.69	23	0.164	ng/mL
5774705	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

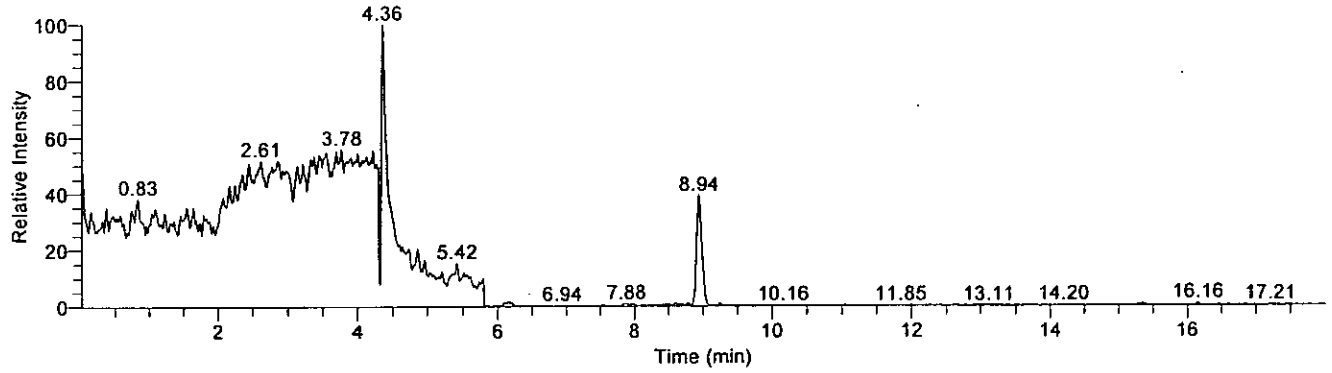
OLN23 8889

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-32.raw
Sample ID:	5774706
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 11:49:54 PM
Vial:	D:23
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-32 - TIC RT: 0.00 - 17.99 NL: 3.38E3

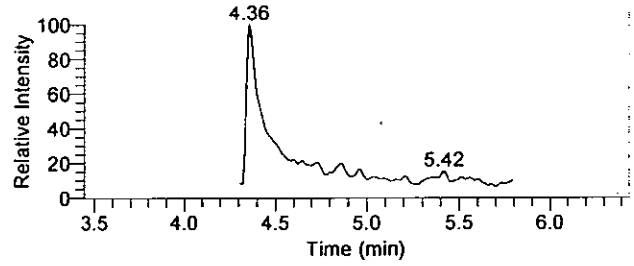


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:23, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-32, Comments: Soil Prep, ID: 5774706

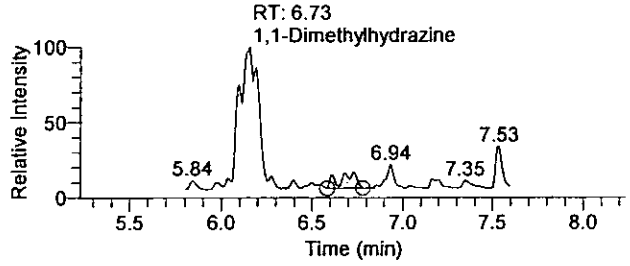
Monomethylhydrazine

16Sep2009-32 - TIC RT: 3.44 - 6.44 NL: 3.38E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



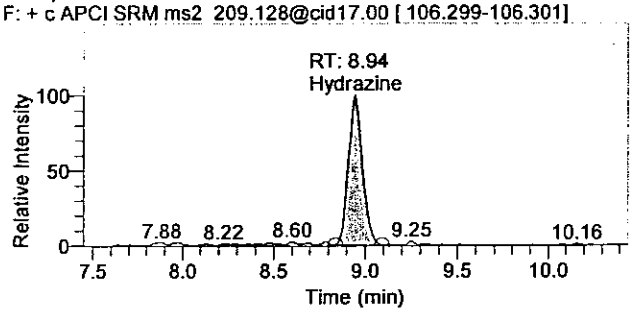
1,1-Dimethylhydrazine

16Sep2009-32 - TIC RT: 5.23 - 8.23 NL: 5.63E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-32 - TIC RT: 7.44 - 10.44 NL: 1.32E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774706	Method Settings	Hydrazine	8.94	6905	0.053	ng/mL
5774706	Method Settings	1,1-Dimethylhydrazine	6.73	39	0.164	ng/mL
5774706	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

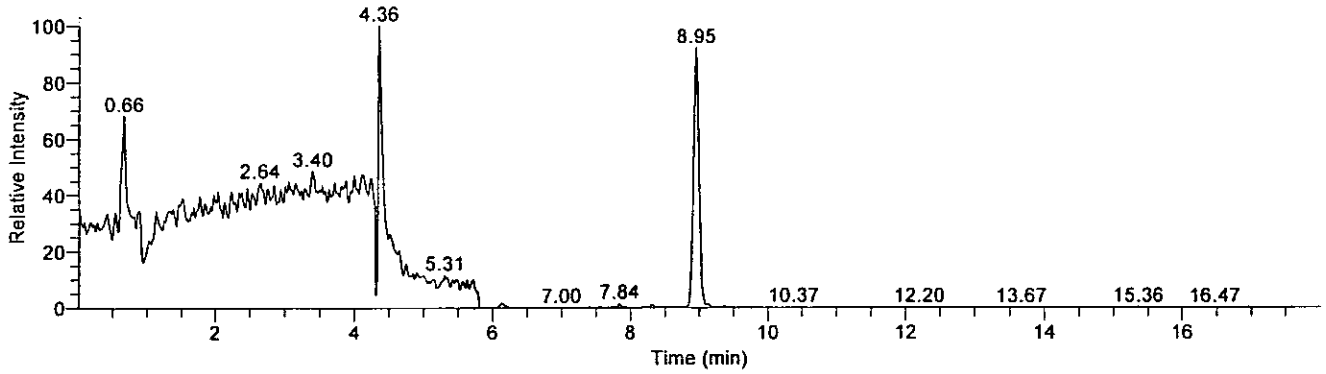
OLN23: 8891

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-17.raw
Sample ID:	5774707FD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 7:08:43 PM
Vial:	D:11
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-17 - TIC RT: 0.01 - 17.99 NL: 4.09E3

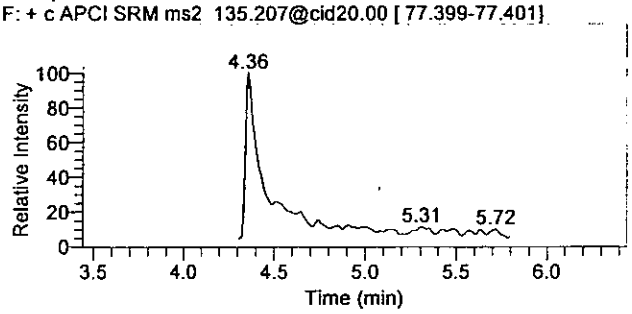


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:11, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-17, Comments: Soil Prep, ID: 5774707FD

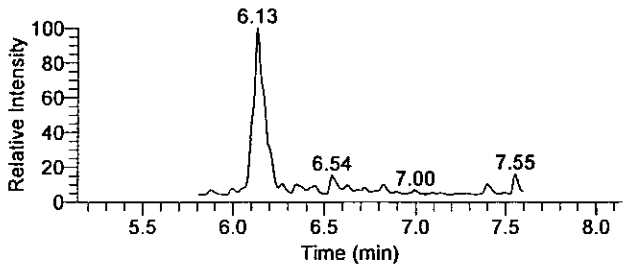
Monomethylhydrazine

16Sep2009-17 - TIC RT: 3.44 - 6.44 NL: 4.09E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



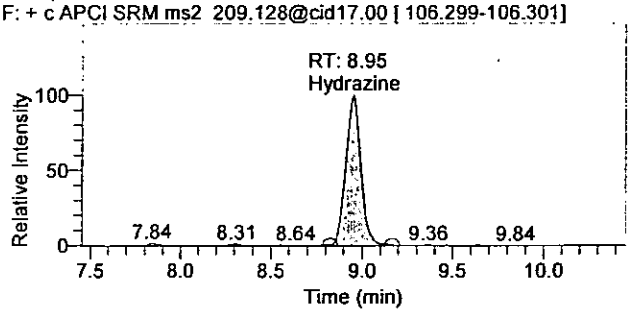
1,1-Dimethylhydrazine

16Sep2009-17 - TIC RT: 5.14 - 8.14 NL: 7.22E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-17 - TIC RT: 7.45 - 10.45 NL: 3.76E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774707FD	Method Settings	Hydrazine	8.95	21492	0.159	ng/mL
5774707FD	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5774707FD	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/17/2009
[illegible] 9/22/09

OLN23 8893

There is no signature data to report.

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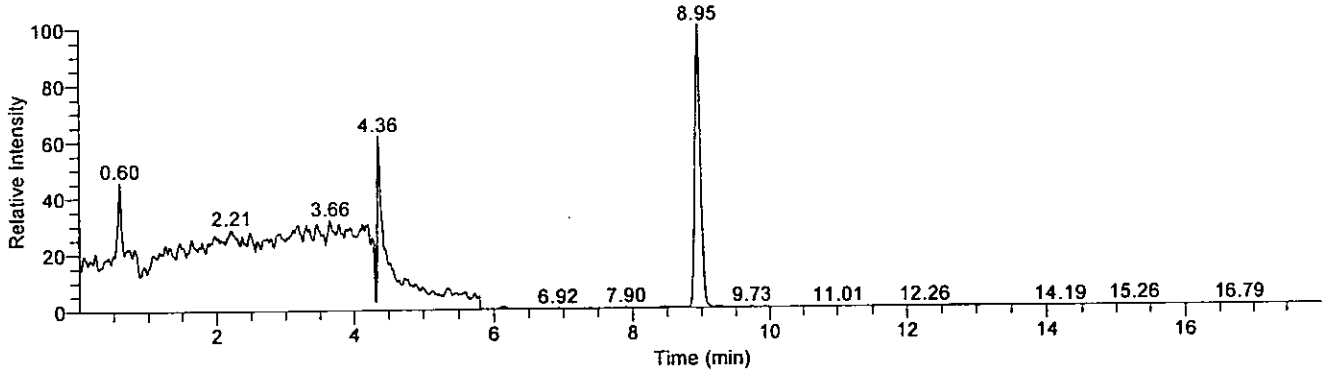
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-18.raw
Sample ID:	5774708BKG
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 7:27:27 PM
Vial:	D:12
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-18 - TIC RT: 0.00 - 17.99 NL: 6.20E3

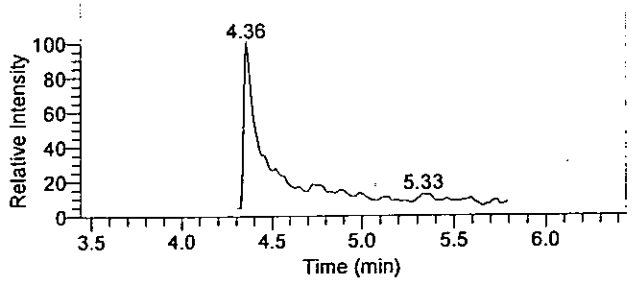


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:12, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-18, Comments: Soil Prep, ID: 5774708BKG

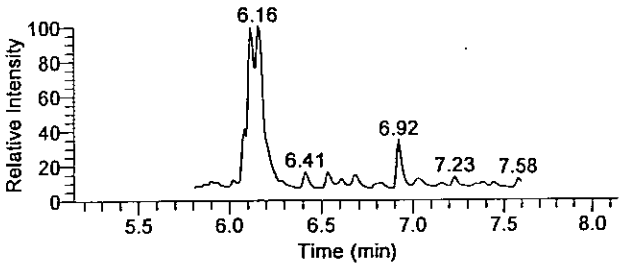
Monomethylhydrazine

16Sep2009-18 - TIC RT: 3.44 - 6.44 NL: 3.81E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



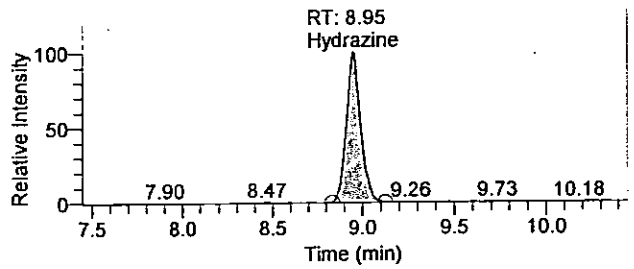
1,1-Dimethylhydrazine

16Sep2009-18 - TIC RT: 5.14 - 8.14 NL: 4.86E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-18 - TIC RT: 7.45 - 10.45 NL: 6.20E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0094

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774708BKG	Method Settings	Hydrazine	8.95	34289	0.252	ng/mL
5774708BKG	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5774708BKG	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

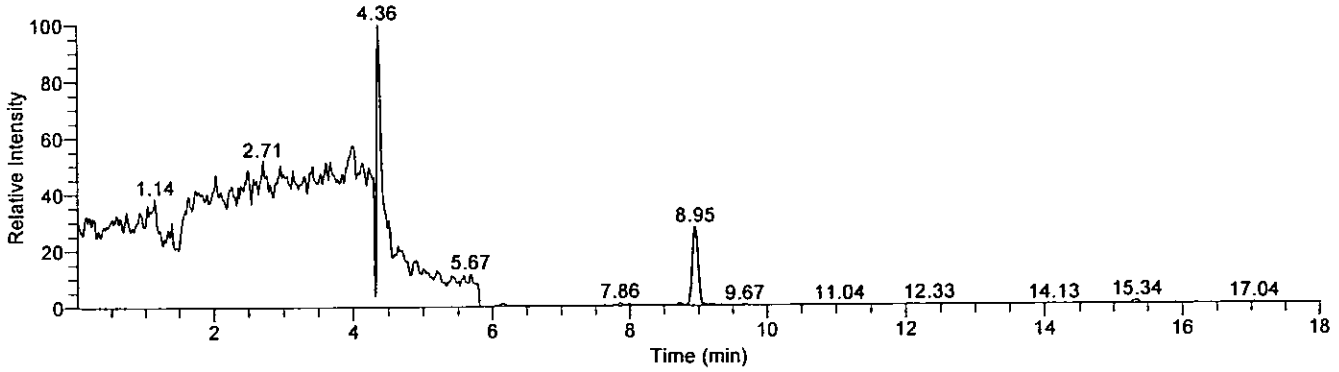
OLA23 0095

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-33.raw
Sample ID:	5774711
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 12:08:34 AM
Vial:	D:24
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-33 - TIC RT: 0.00 - 18.00 NL: 3.81E3

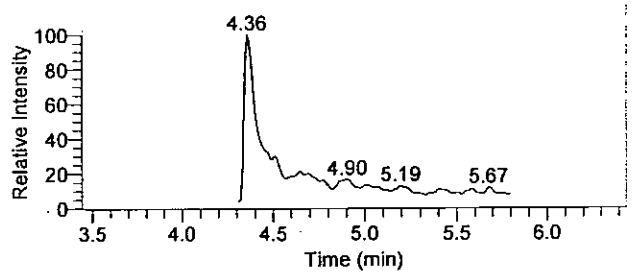


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:24, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-33, Comments: Soil Prep, ID: 5774711

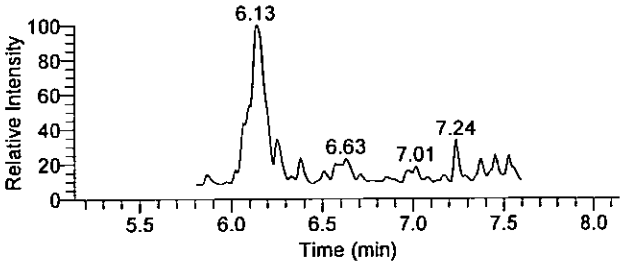
Monomethylhydrazine

16Sep2009-33 - TIC RT: 3.44 - 6.44 NL: 3.81E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



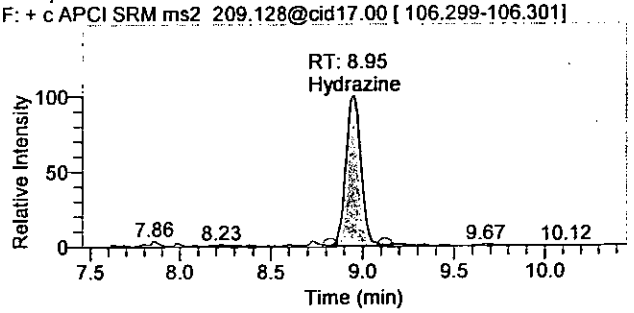
1,1-Dimethylhydrazine

16Sep2009-33 - TIC RT: 5.14 - 8.14 NL: 3.69E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-33 - TIC RT: 7.45 - 10.45 NL: 1.06E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LR23 8896

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774711	Method Settings	Hydrazine	8.95	6155	0.047	ng/mL
5774711	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5774711	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/17/2009
9/22/09

OLN23 0897

There is no signature data to report.

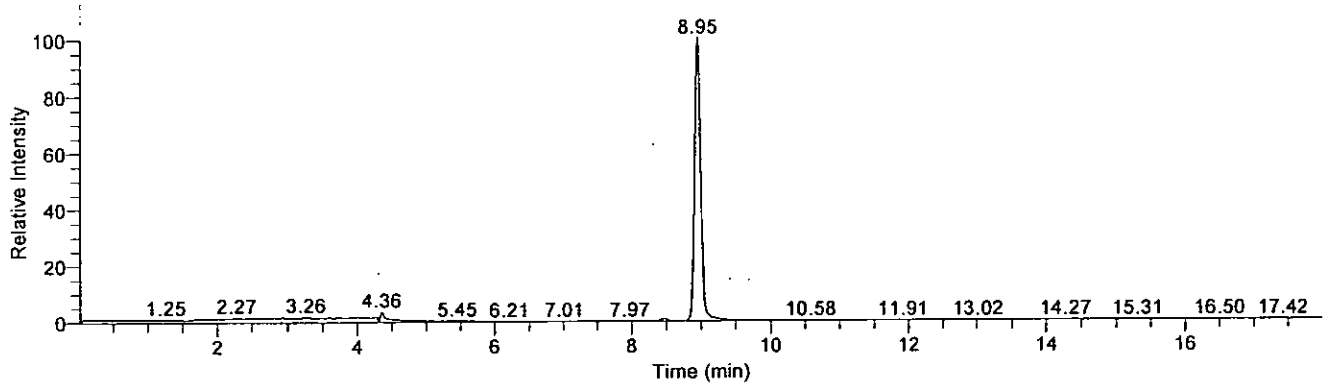
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-34.raw
Sample ID:	5774712
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 12:27:16 AM
Vial:	D:25
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-34 - TIC RT: 0.00 - 18.00 NL: 1.06E5

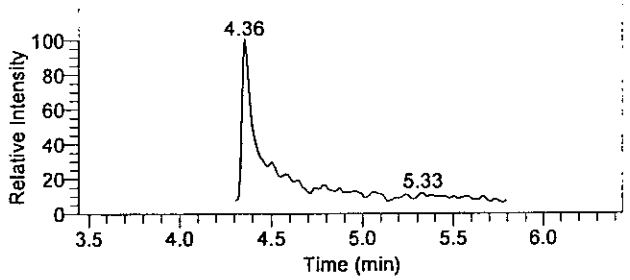


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:25, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-34, Comments: Soil Prep, ID: 5774712

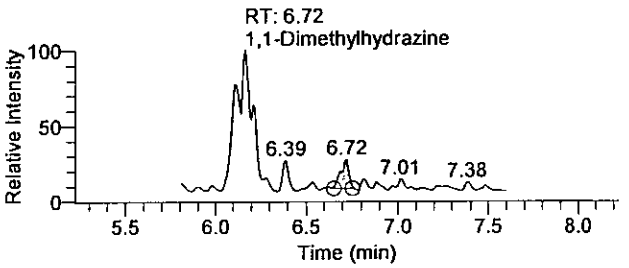
Monomethylhydrazine

16Sep2009-34 - TIC RT: 3.44 - 6.44 NL: 3.79E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



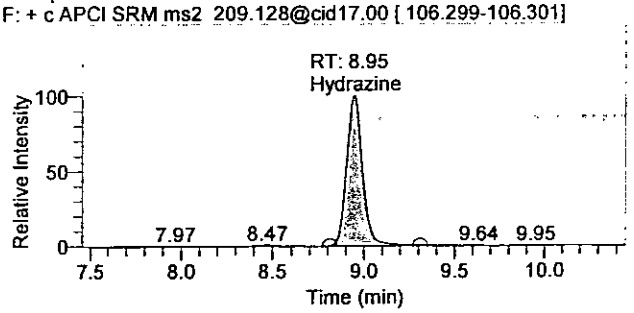
1,1-Dimethylhydrazine

16Sep2009-34 - TIC RT: 5.22 - 8.22 NL: 4.64E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-34 - TIC RT: 7.45 - 10.45 NL: 1.06E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774712	Method Settings	Hydrazine	8.95	654073	4.758	ng/mL
5774712	Method Settings	1,1-Dimethylhydrazine	6.72	28	0.164	ng/mL
5774712	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

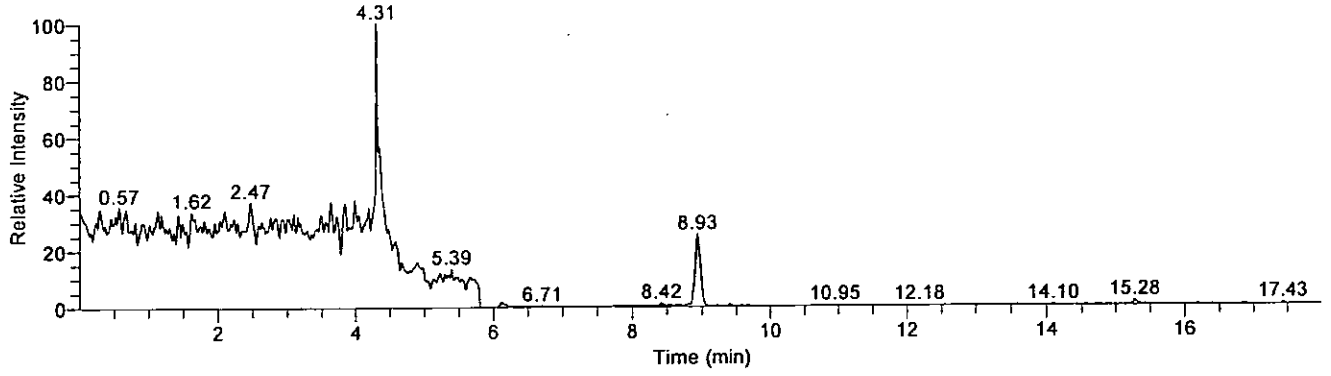
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-17.raw
Sample ID:	5779940BKG
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 5:47:40 PM
Vial:	E:12
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-17 - TIC RT: 0.00 - 18.00 NL: 2.84E3

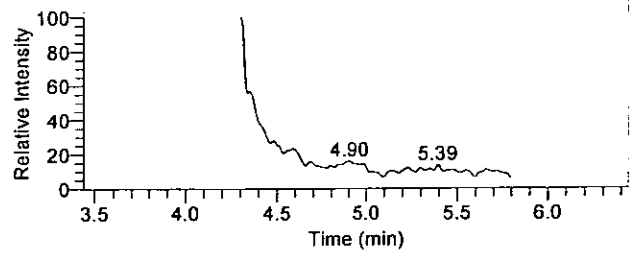


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:12, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-17, Comments: Soil prep, ID: 5779940BKG

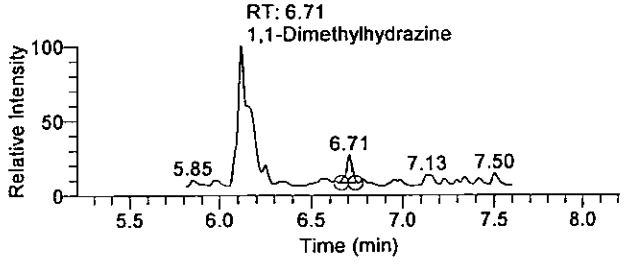
Monomethylhydrazine

22Sep2009-17 - TIC RT: 3.44 - 6.44 NL: 2.84E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



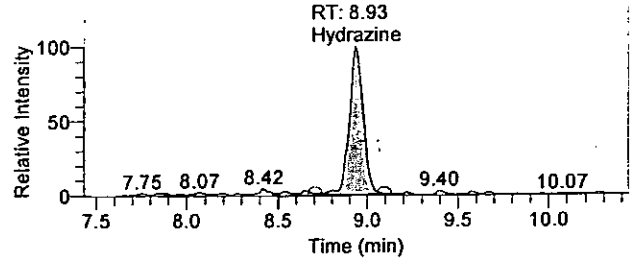
1,1-Dimethylhydrazine

22Sep2009-17 - TIC RT: 5.21 - 8.21 NL: 5.07E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-17 - TIC RT: 7.43 - 10.43 NL: 7.22E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779940BKG	Method Settings	Hydrazine	8.93	3967	0.016	ng/mL
5779940BKG	Method Settings	1,1-Dimethylhydrazine	6.71	22	0.092	ng/mL
5779940BKG	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 8/24/2009
[illegible] 8/24/09

01N23 0101

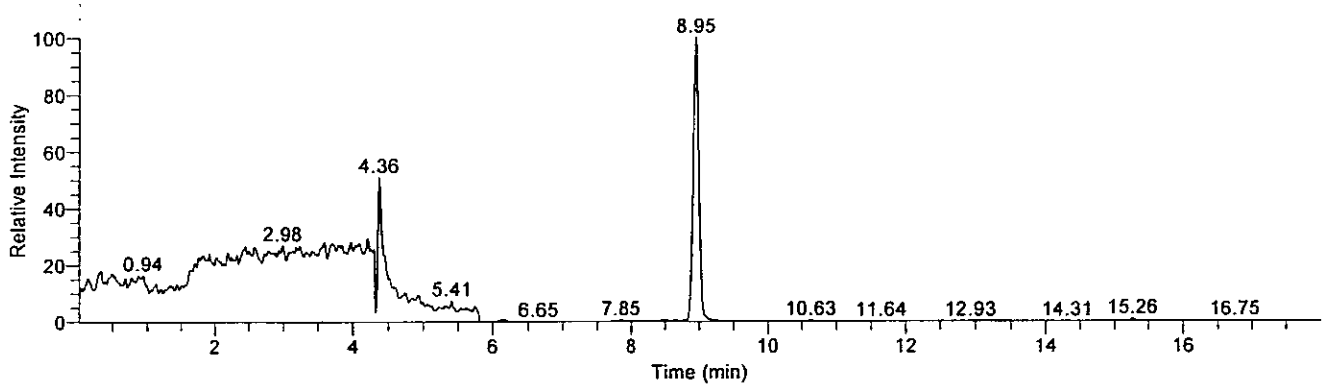
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-27.raw
Sample ID:	5779941
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 8:55:06 PM
Vial:	E:19
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-27 - TIC RT: 0.00 - 18.00 NL: 6.19E3

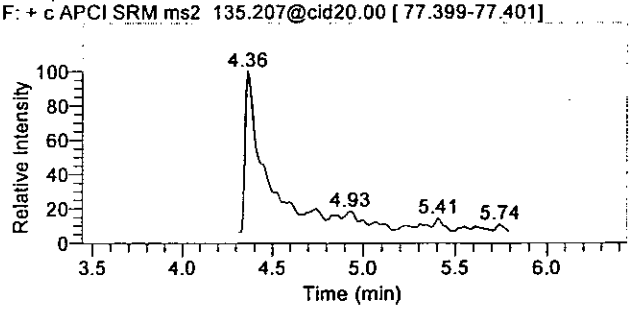


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:19, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-27, Comments: Soil prep, ID: 5779941

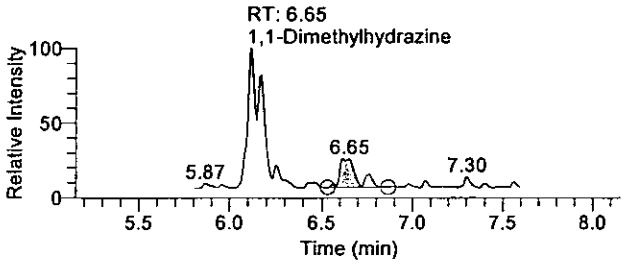
Monomethylhydrazine

22Sep2009-27 - TIC RT: 3.44 - 6.44 NL: 3.15E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



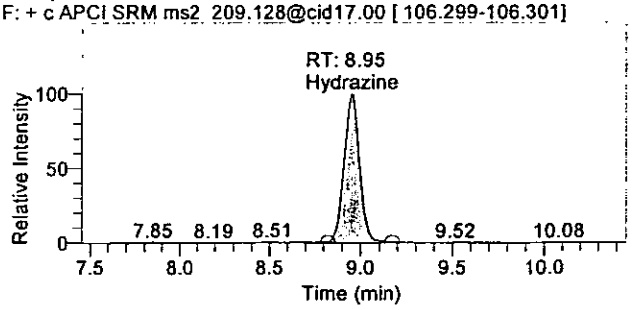
1,1-Dimethylhydrazine

22Sep2009-27 - TIC RT: 5.15 - 8.15 NL: 4.90E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-27 - TIC RT: 7.45 - 10.45 NL: 6.19E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LMZ3 0182

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779941	Method Settings	Hydrazine	8.95	35769	0.244	ng/mL
5779941	Method Settings	1,1-Dimethylhydrazine	6.65	66	0.093	ng/mL
5779941	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009
[illegible] 9/24/09

OLN23 0183

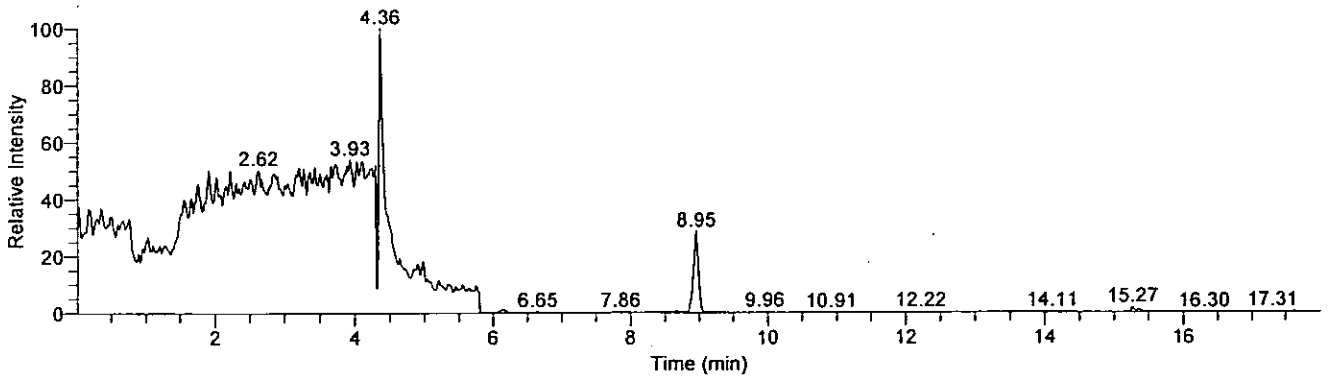
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-28.raw
Sample ID:	5779942
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 9:13:50 PM
Vial:	E:20
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-28 - TIC RT: 0.00 - 17.99 NL: 3.53E3

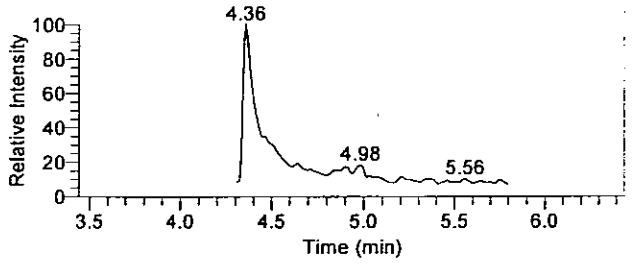


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:20, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-28, Comments: Soil prep, ID: 5779942

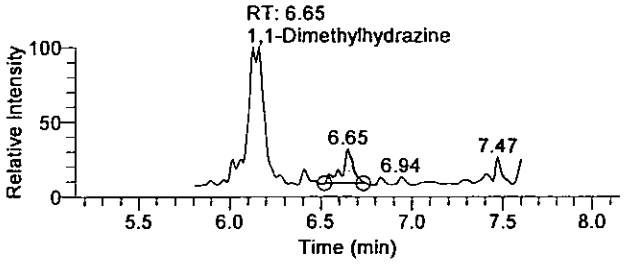
Monomethylhydrazine

22Sep2009-28 - TIC RT: 3.44 - 6.44 NL: 3.53E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



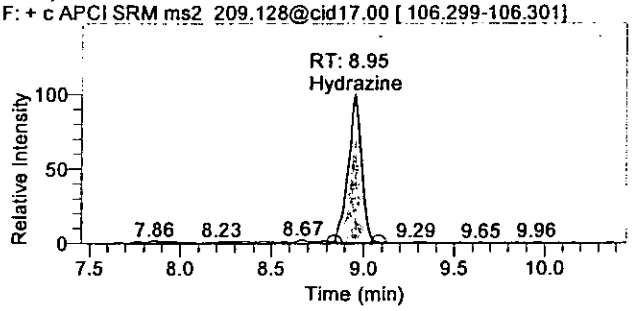
1,1-Dimethylhydrazine

22Sep2009-28 - TIC RT: 5.15 - 8.15 NL: 4.08E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-28 - TIC RT: 7.45 - 10.45 NL: 1.01E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLH23 0184

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779942	Method Settings	Hydrazine	8.95	5033	0.023	ng/mL
5779942	Method Settings	1,1-Dimethylhydrazine	6.65	43	0.092	ng/mL
5779942	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 P/24 /2009

9/24/09

GLN23 0105

There is no signature data to report.

Lancaster Laboratories

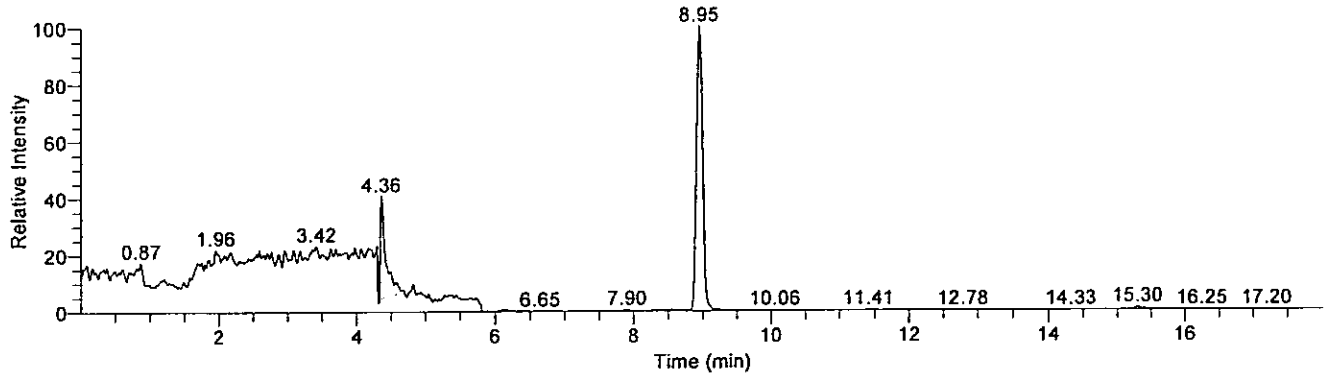
Printed: Wednesday, September 23, 2009, 09:27:11

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-29.raw
Sample ID:	5779943
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 9:32:37 PM
Vial:	E:21
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-29 - TIC RT: 0.00 - 17.99 NL: 8.24E3

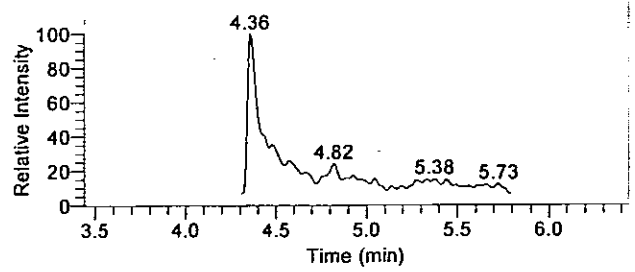


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:21, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-29, Comments: Soil prep, ID: 5779943

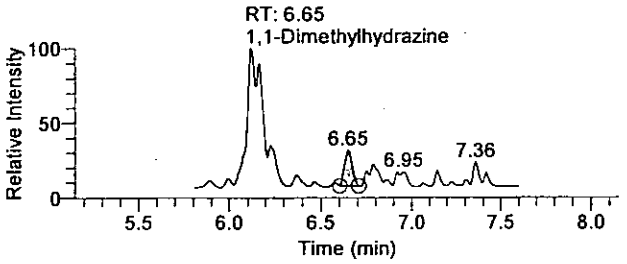
Monomethylhydrazine

22Sep2009-29 - TIC RT: 3.44 - 6.44 NL: 3.35E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



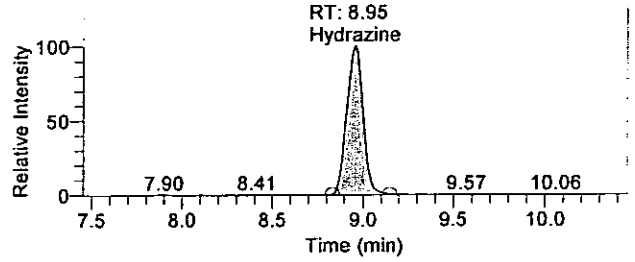
1,1-Dimethylhydrazine

22Sep2009-29 - TIC RT: 5.15 - 8.15 NL: 4.87E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-29 - TIC RT: 7.45 - 10.45 NL: 8.24E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN23 0186

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779943	Method Settings	Hydrazine	8.95	51311	0.356	ng/mL
5779943	Method Settings	1,1-Dimethylhydrazine	6.65	34	0.092	ng/mL
5779943	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009
9/24/09

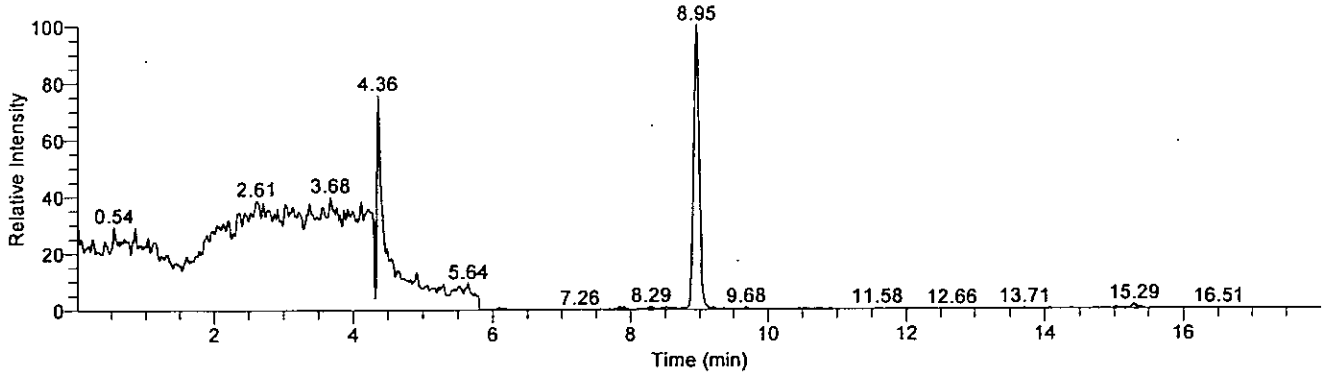
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-30.raw
Sample ID:	5779944
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 9:51:21 PM
Vial:	E:22
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-30 - TIC RT: 0.00 - 17.99 NL: 4.51E3

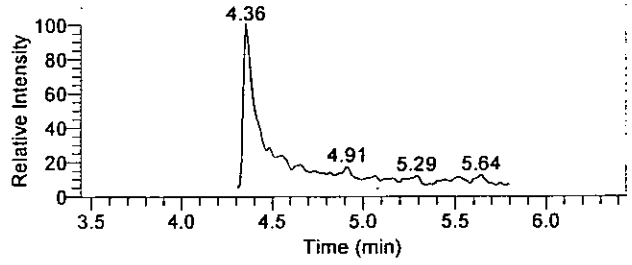


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:22, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-30, Comments: Soil prep, ID: 5779944

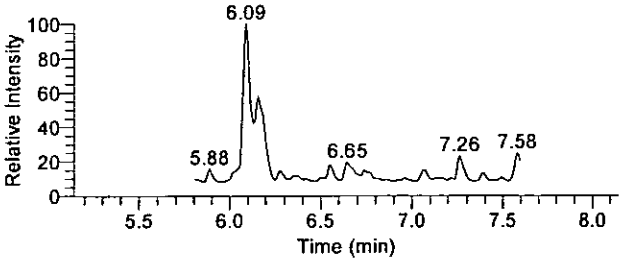
Monomethylhydrazine

22Sep2009-30 - TIC RT: 3.44 - 6.44 NL: 3.41E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



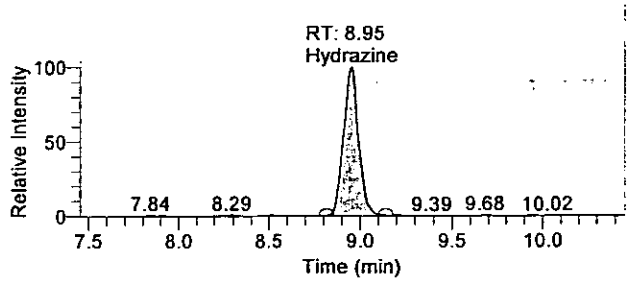
1,1-Dimethylhydrazine

22Sep2009-30 - TIC RT: 5.14 - 8.14 NL: 3.79E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-30 - TIC RT: 7.45 - 10.45 NL: 4.51E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM23 0168

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779944	Method Settings	Hydrazine	8.95	26032	0.174	ng/mL
5779944	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779944	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009

9/22/09

OLN23 0189

There is no signature data to report.

Lancaster Laboratories

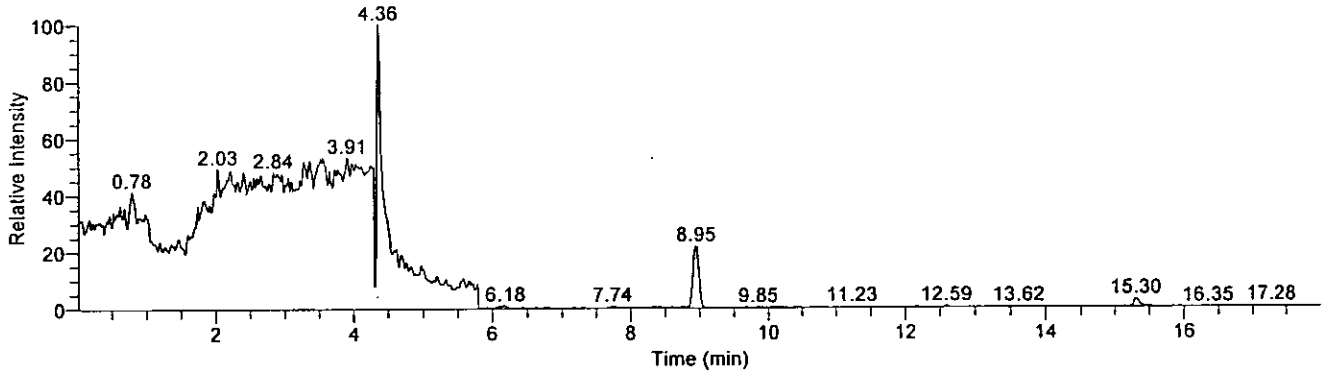
Printed: Wednesday, September 23, 2009, 09:27:12

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-31.raw
Sample ID:	5779945
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 10:10:01 PM
Vial:	E:23
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-31 - TIC RT: 0.01 - 18.00 NL: 3.54E3

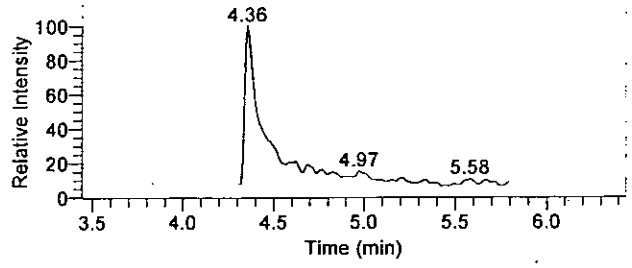


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:23, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-31, Comments: Soil prep, ID: 5779945

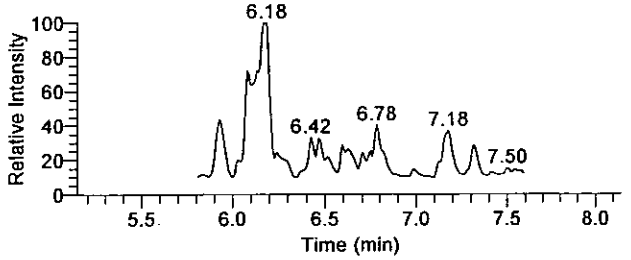
Monomethylhydrazine

22Sep2009-31 - TIC RT: 3.44 - 6.44 NL: 3.54E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



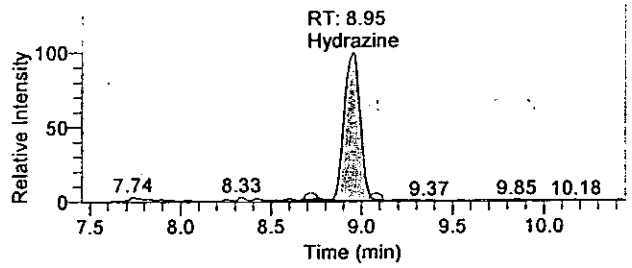
1,1-Dimethylhydrazine

22Sep2009-31 - TIC RT: 5.14 - 8.14 NL: 3.50E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-31 - TIC RT: 7.45 - 10.45 NL: 7.74E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8116

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779945	Method Settings	Hydrazine	8.95	4743	0.021	ng/mL
5779945	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779945	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009

9/24/09

OLM23 0111

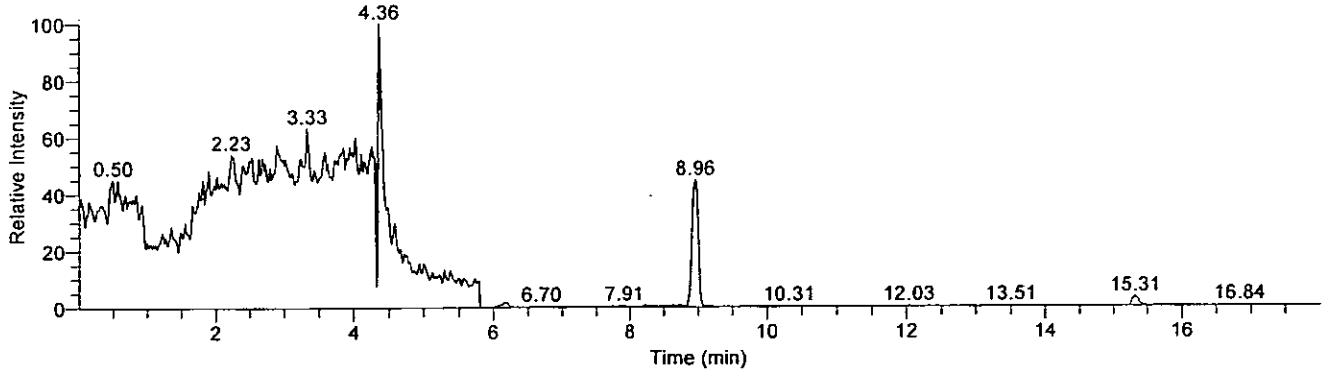
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0926510610833
Data File:	22Sep2009-32.raw
Sample ID:	5779946
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 10:28:48 PM
Vial:	E:24
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-32 - TIC RT: 0.00 - 17.99 NL: 3.24E3

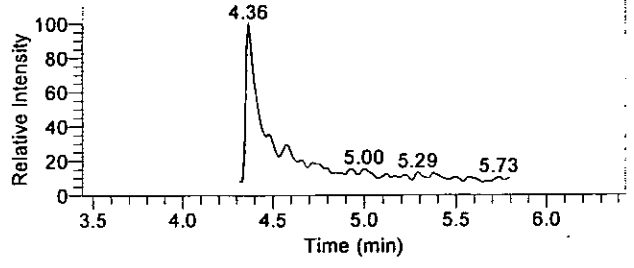


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:24, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-32, Comments: Soil prep, ID: 5779946

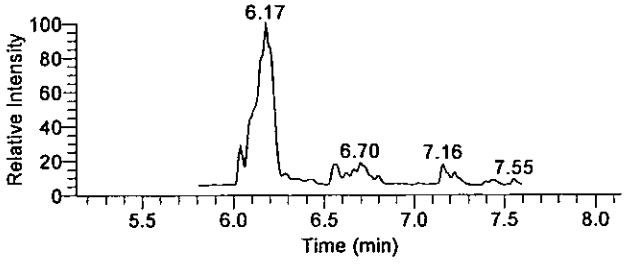
Monomethylhydrazine

22Sep2009-32 - TIC RT: 3.44 - 6.44 NL: 3.24E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



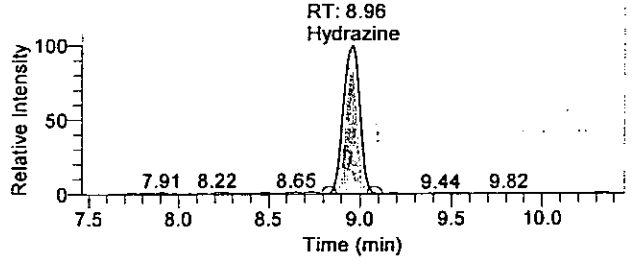
1,1-Dimethylhydrazine

22Sep2009-32 - TIC RT: 5.14 - 8.14 NL: 5.77E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-32 - TIC RT: 7.46 - 10.46 NL: 1.45E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0112

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779946	Method Settings	Hydrazine	8.96	8982	0.052	ng/mL
5779946	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779946	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : Jiv 1543 p/24 /200 p
1.2 9/24/09

0LN23 0113

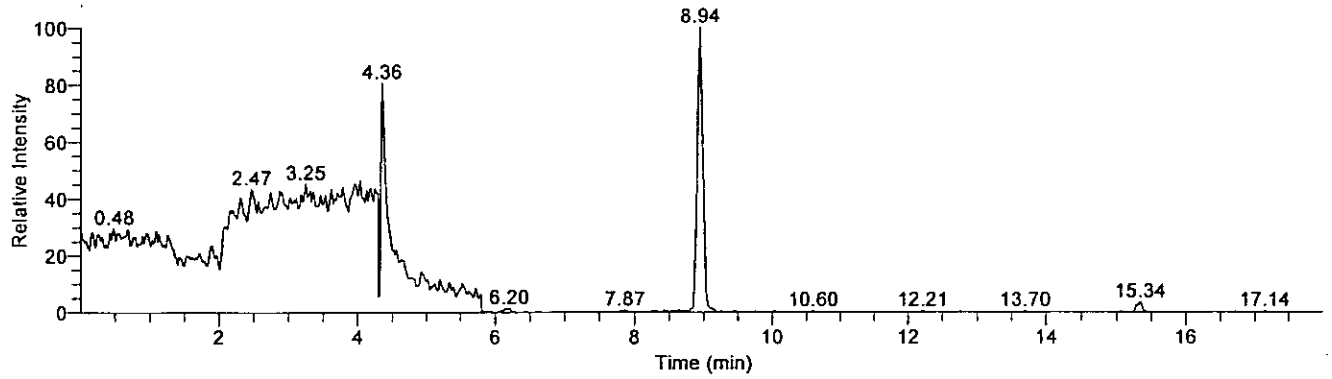
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0926510610833
Data File:	22Sep2009-33.raw
Sample ID:	5779947
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 10:47:33 PM
Vial:	E:25
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-33 - TIC RT: 0.00 - 18.00 NL: 3.88E3

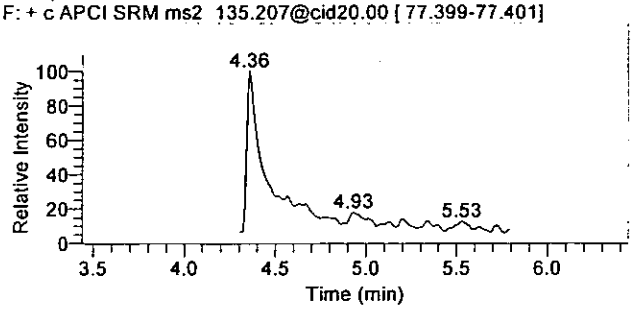


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:25, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-33, Comments: Soil prep, ID: 5779947

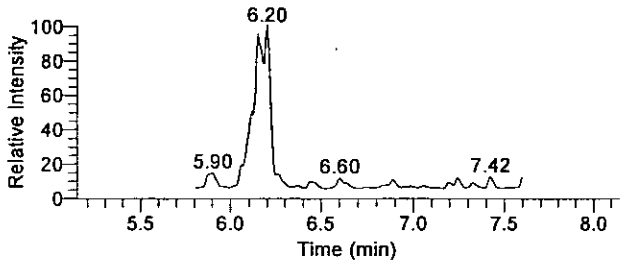
Monomethylhydrazine

22Sep2009-33 - TIC RT: 3.44 - 6.44 NL: 3.13E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



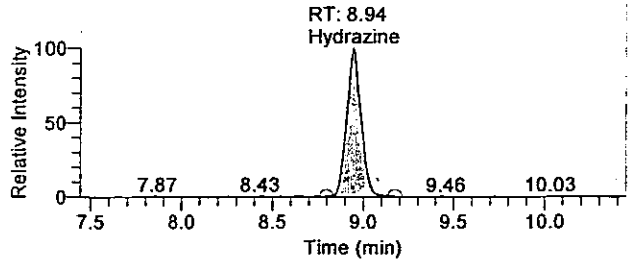
1,1-Dimethylhydrazine

22Sep2009-33 - TIC RT: 5.14 - 8.14 NL: 5.44E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-33 - TIC RT: 7.44 - 10.44 NL: 3.88E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0214

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779947	Method Settings	Hydrazine	8.94	21575	0.142	ng/mL
5779947	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779947	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009

9/24/09

OLN23 0115

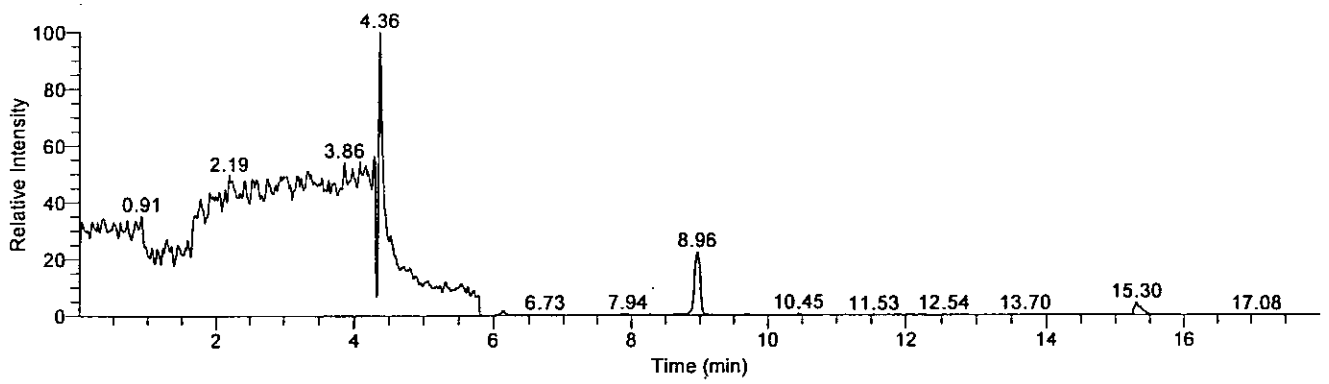
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-34.raw
Sample ID:	5779948
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 11:06:17 PM
Vial:	E:26
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-34 - TIC RT: 0.00 - 18.00 NL: 3.57E3

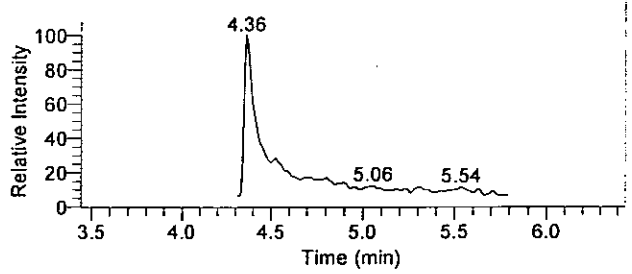


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:26, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-34, Comments: Soil prep, ID: 5779948

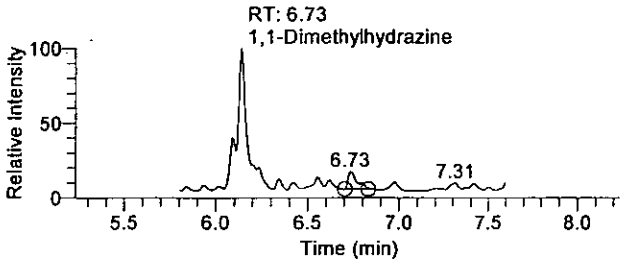
Monomethylhydrazine

22Sep2009-34 - TIC RT: 3.44 - 6.44 NL: 3.57E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



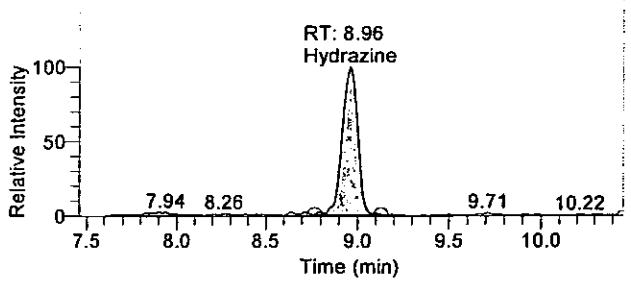
1,1-Dimethylhydrazine

22Sep2009-34 - TIC RT: 5.23 - 8.23 NL: 6.89E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-34 - TIC RT: 7.46 - 10.46 NL: 8.00E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 6116

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779948	Method Settings	Hydrazine	8.96	4634	0.020	ng/mL
5779948	Method Settings	1,1-Dimethylhydrazine	6.73	29	0.092	ng/mL
5779948	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009
[illegible] 9/24/09

OEM23 0117

There is no signature data to report.

Lancaster Laboratories

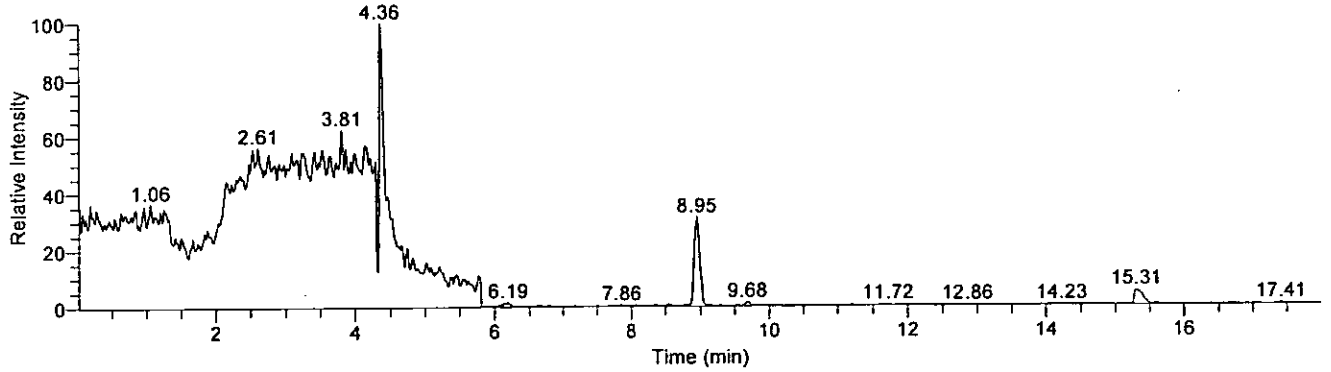
Printed: Wednesday, September 23, 2009, 09:27:13

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-36.raw
Sample ID:	5779949
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 11:43:48 PM
Vial:	E:27
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-36 - TIC RT: 0.00 - 17.99 NL: 3.32E3

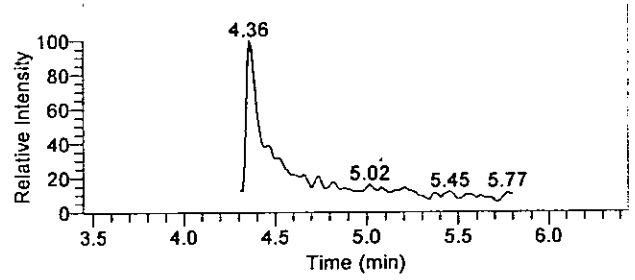


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:27, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-36, Comments: Soil prep, ID: 5779949

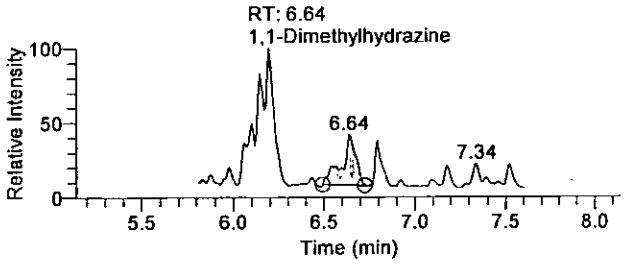
Monomethylhydrazine

22Sep2009-36 - TIC RT: 3.44 - 6.44 NL: 3.32E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



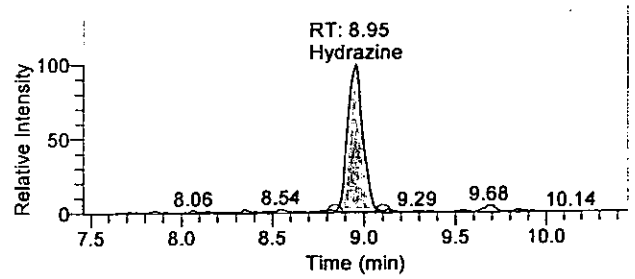
1,1-Dimethylhydrazine

22Sep2009-36 - TIC RT: 5.14 - 8.14 NL: 5.36E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-36 - TIC RT: 7.45 - 10.45 NL: 1.04E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779949	Method Settings	Hydrazine	8.95	5865	0.029	ng/mL
5779949	Method Settings	1,1-Dimethylhydrazine	6.64	100	0.094	ng/mL
5779949	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JCW 1543 P/24 /2009

OLM23 8119

There is no signature data to report.

Lancaster Laboratories

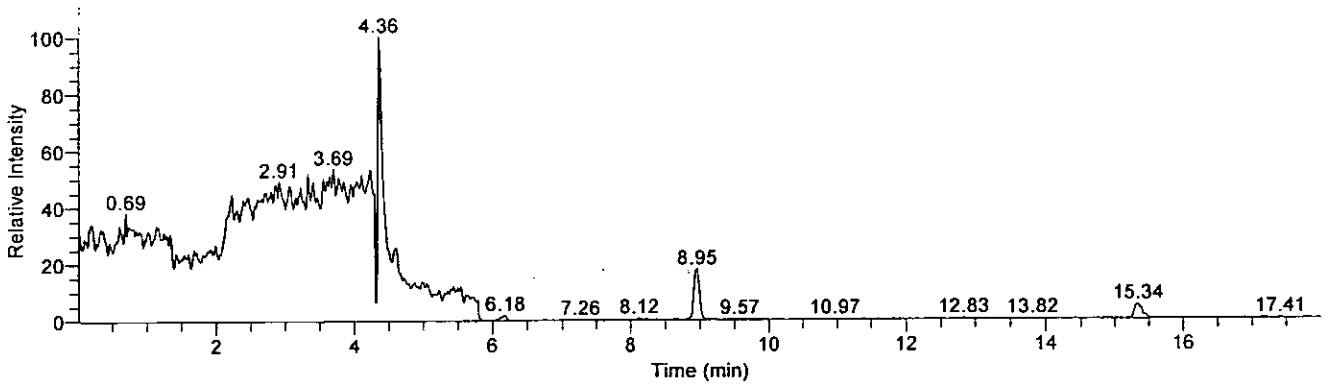
Printed: Wednesday, September 23, 2009, 09:27:13

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-37.raw
Sample ID:	5779950
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 12:02:33 AM
Vial:	E:28
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-37 - TIC RT: 0.00 - 17.99 NL: 3.58E3

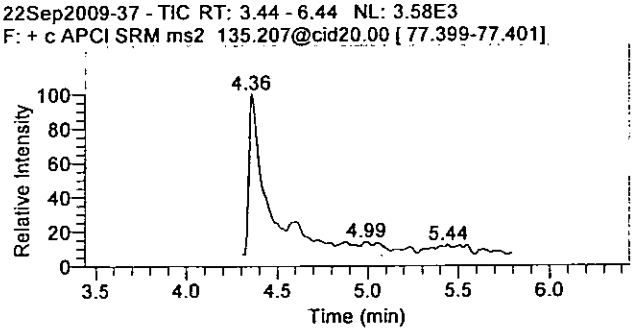


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:28, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-37, Comments: Soil prep, ID: 5779950

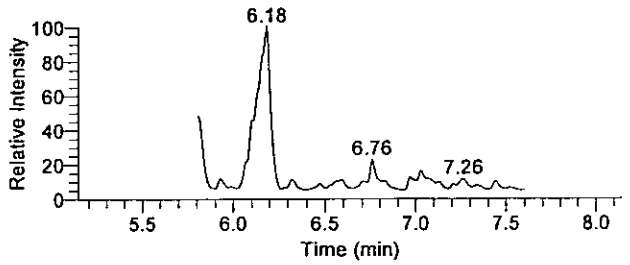
Monomethylhydrazine

22Sep2009-37 - TIC RT: 3.44 - 6.44 NL: 3.58E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



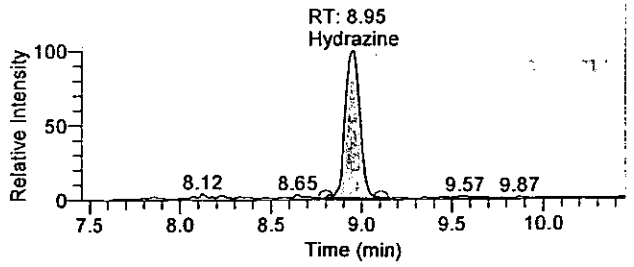
1,1-Dimethylhydrazine

22Sep2009-37 - TIC RT: 5.14 - 8.14 NL: 6.72E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-37 - TIC RT: 7.45 - 10.45 NL: 6.43E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0128

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779950	Method Settings	Hydrazine	8.95	3652	0.013	ng/mL
5779950	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779950	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009

9/24/09

0EN23 8121

There is no signature data to report.

Lancaster Laboratories

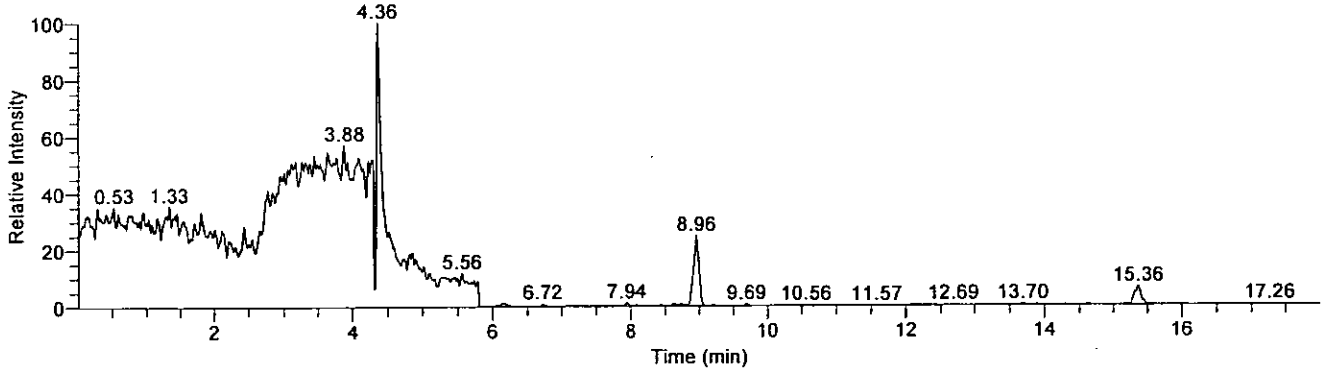
Printed: Wednesday, September 23, 2009, 09:27:13

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-38.raw
Sample ID:	5779951
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 12:21:17 AM
Vial:	E:29
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-38 - TIC RT: 0.00 - 17.99 NL: 3.23E3

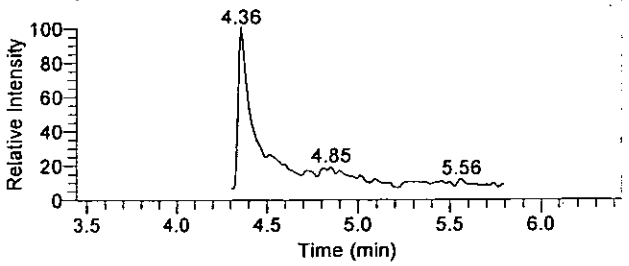


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:29, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-38, Comments: Soil prep, ID: 5779951

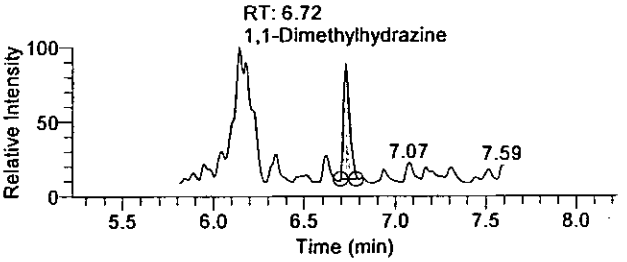
Monomethylhydrazine

22Sep2009-38 - TIC RT: 3.44 - 6.44 NL: 3.23E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



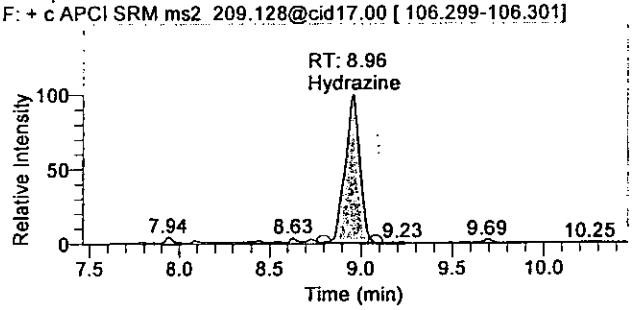
1,1-Dimethylhydrazine

22Sep2009-38 - TIC RT: 5.22 - 8.22 NL: 3.74E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-38 - TIC RT: 7.46 - 10.46 NL: 8.02E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0122

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779951	Method Settings	Hydrazine	8.96	4377	0.019	ng/mL
5779951	Method Settings	1,1-Dimethylhydrazine	6.72	69	0.093	ng/mL
5779951	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009
[illegible] 9/24/09

OLNZ3 0123

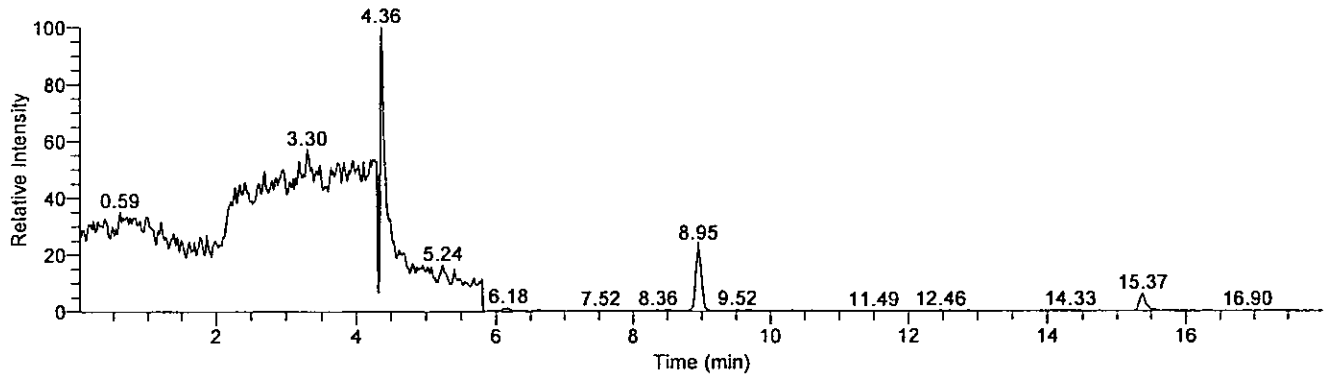
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-39.raw
Sample ID:	5779952
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 12:40:03 AM
Vial:	E:30
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-39 - TIC RT: 0.01 - 17.99 NL: 3.42E3

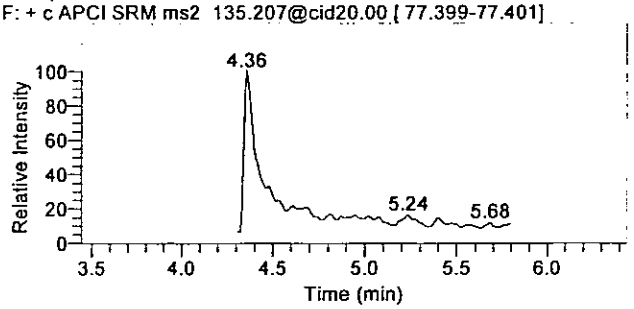


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:30, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-39, Comments: Soil prep, ID: 5779952

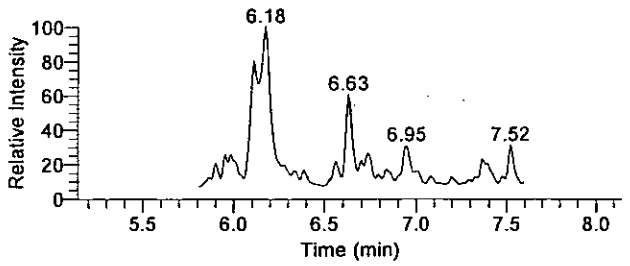
Monomethylhydrazine

22Sep2009-39 - TIC RT: 3.44 - 6.44 NL: 3.42E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



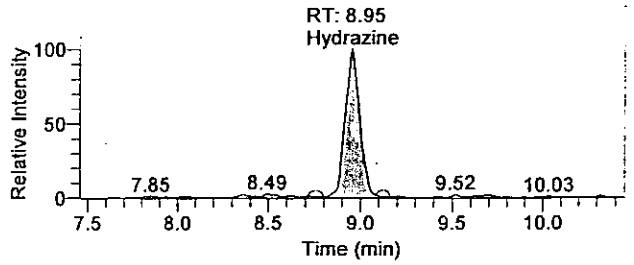
1,1-Dimethylhydrazine

22Sep2009-39 - TIC RT: 5.14 - 8.14 NL: 4.44E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-39 - TIC RT: 7.45 - 10.45 NL: 8.08E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779952	Method Settings	Hydrazine	8.95	4490	0.019	ng/mL
5779952	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779952	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009

9/24/09

OLN23 #125

There is no signature data to report.

Lancaster Laboratories

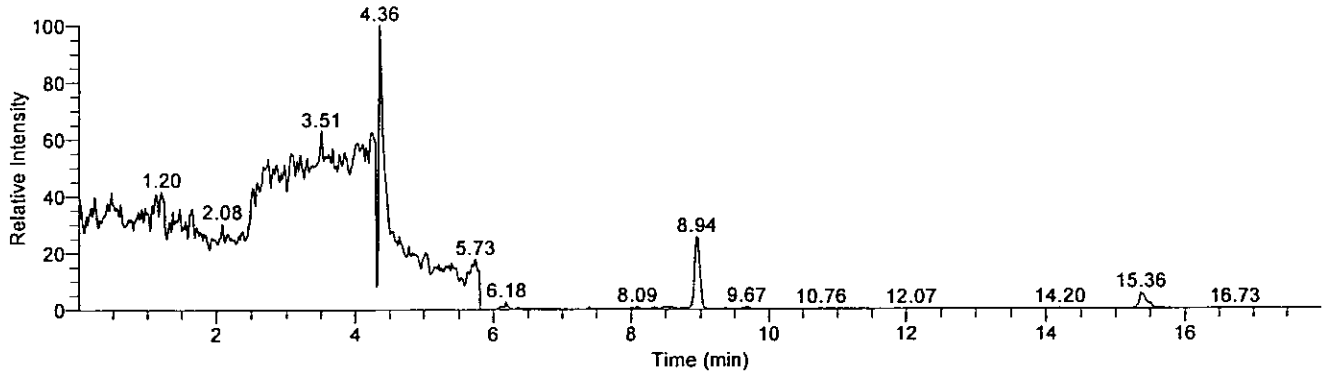
Printed: Wednesday, September 23, 2009, 09:27:14

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-40.raw
Sample ID:	5779953
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 12:58:47 AM
Vial:	E:31
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-40 - TIC RT: 0.00 - 17.99 NL: 2.95E3

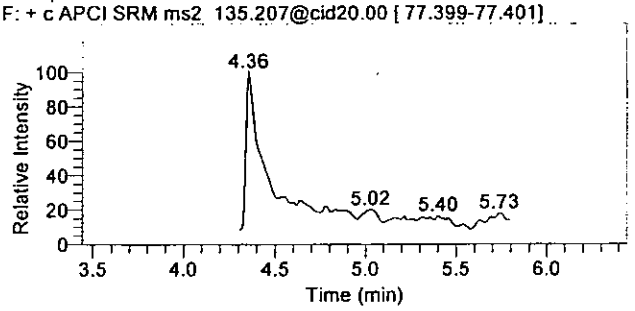


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:31, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-40, Comments: Soil prep, ID: 5779953

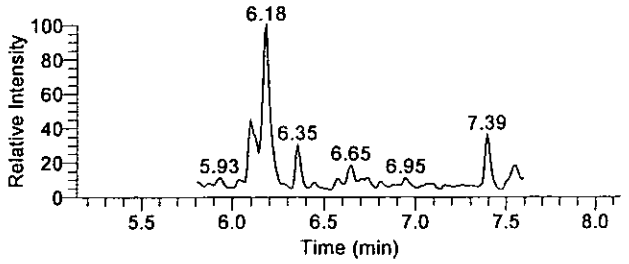
Monomethylhydrazine

22Sep2009-40 - TIC RT: 3.44 - 6.44 NL: 2.95E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



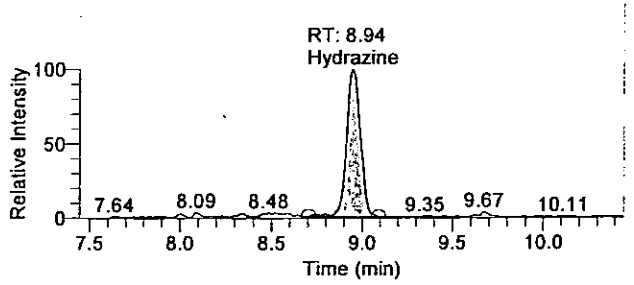
1,1-Dimethylhydrazine

22Sep2009-40 - TIC RT: 5.14 - 8.14 NL: 7.72E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-40 - TIC RT: 7.44 - 10.44 NL: 7.53E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23: 8126

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779953	Method Settings	Hydrazine	8.94	4037	0.016	ng/mL
5779953	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779953	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009
[illegible] 9/24/09

OLN23 0127

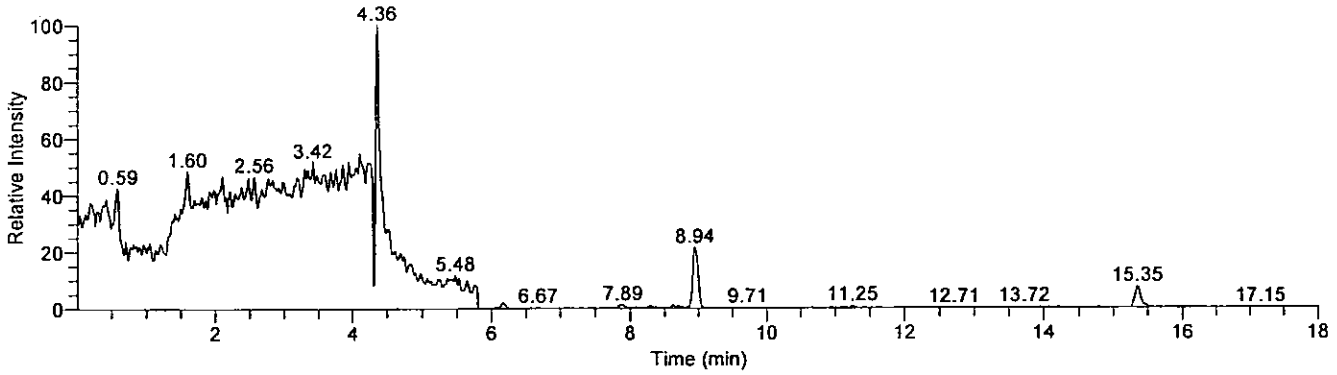
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-45.raw
Sample ID:	5779954
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 2:32:28 AM
Vial:	E:34
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-45 - TIC RT: 0.00 - 18.00 NL: 3.49E3

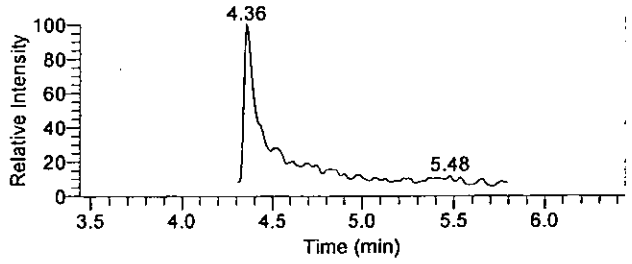


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:34, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-45, Comments: Water prep, ID: 5779954

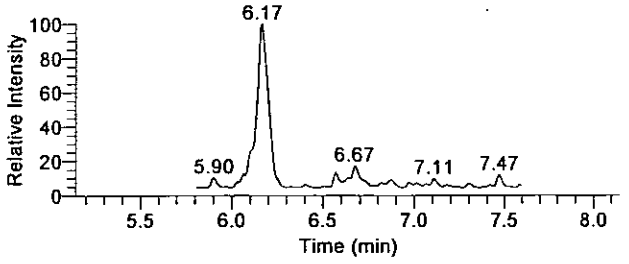
Monomethylhydrazine

22Sep2009-45 - TIC RT: 3.44 - 6.44 NL: 3.49E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



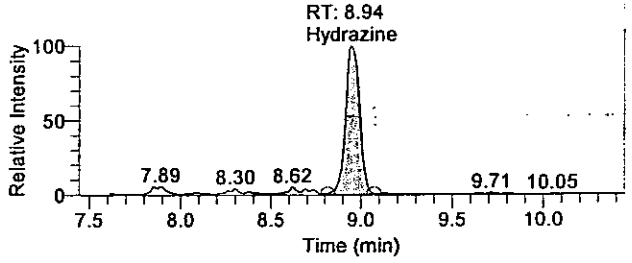
1,1-Dimethylhydrazine

22Sep2009-45 - TIC RT: 5.14 - 8.14 NL: 7.23E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-45 - TIC RT: 7.44 - 10.44 NL: 7.42E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779954	Method Settings	Hydrazine	8.94	4059	0.016	ng/mL
5779954	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779954	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009
[illegible] 9/24/09

OLN23 0129

There is no signature data to report.

Lancaster Laboratories

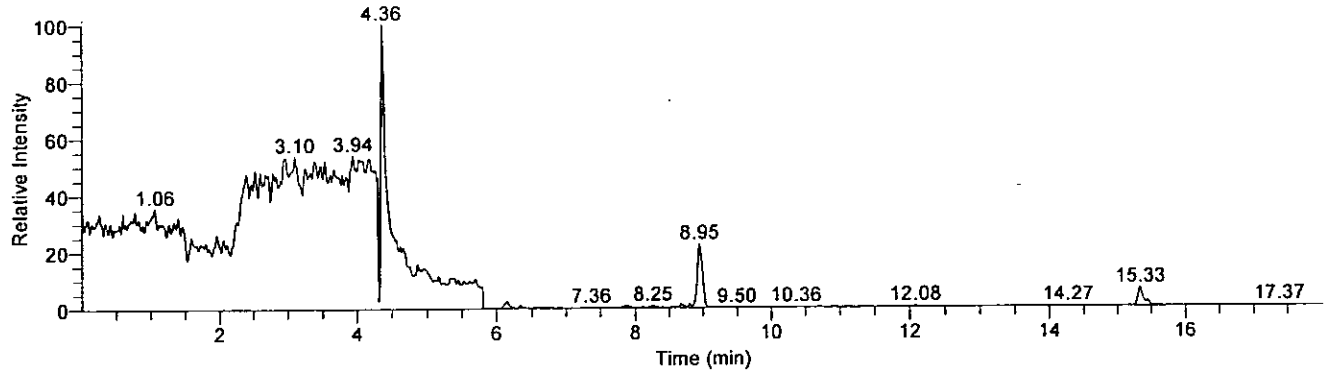
Printed: Wednesday, September 23, 2009, 09:27:16

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-47.raw
Sample ID:	5779955
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 3:09:58 AM
Vial:	E:35
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-47 - TIC RT: 0.00 - 18.00 NL: 3.26E3

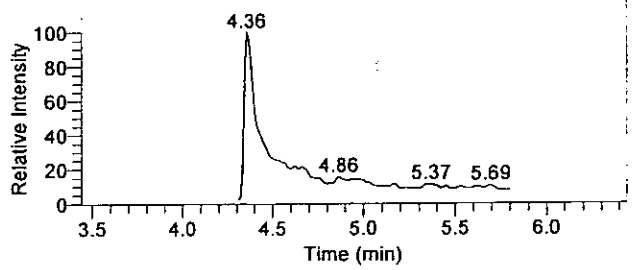


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:35, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-47, Comments: Water prep, ID: 5779955

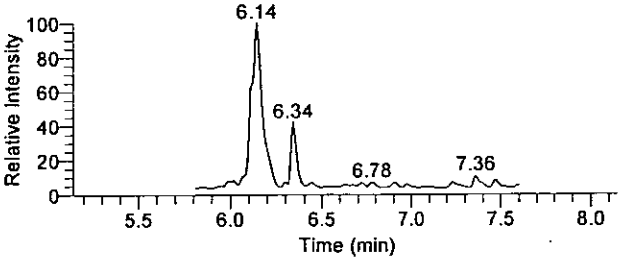
Monomethylhydrazine

22Sep2009-47 - TIC RT: 3.44 - 6.44 NL: 3.26E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



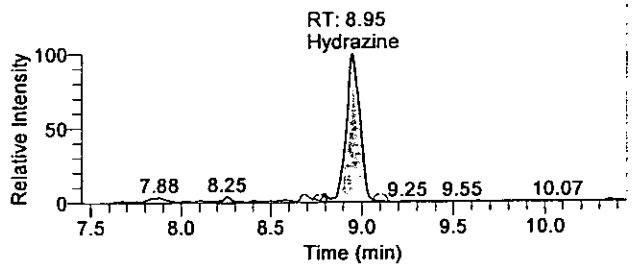
1,1-Dimethylhydrazine

22Sep2009-47 - TIC RT: 5.14 - 8.14 NL: 8.33E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-47 - TIC RT: 7.45 - 10.45 NL: 7.29E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 6130

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779955	Method Settings	Hydrazine	8.95	3848	0.015	ng/mL
5779955	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5779955	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JIV 1543 9/24/2009
[illegible] 9/24/09

OLN23 0131

There is no signature data to report.

Standards Data

OLN23 6132

Lancaster Laboratories

Workbook Name: TQU01408-16Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Sequence Table

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner1	16Sep2009-1	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner2	16Sep2009-2	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
MDL	16Sep2009-3	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:1	10.00	N/A
Cal1	16Sep2009-4	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:2	10.00	N/A
Cal2	16Sep2009-5	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:3	10.00	N/A
Cal3	16Sep2009-6	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:4	10.00	N/A
Cal4	16Sep2009-7	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:5	10.00	N/A
Cal5	16Sep2009-8	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:6	10.00	N/A
Cal6	16Sep2009-9	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:7	10.00	N/A
Cal7	16Sep2009-10	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:8	10.00	N/A
Cal8	16Sep2009-11	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:9	10.00	N/A
Conditioner3	16Sep2009-12	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Cal3asQC1a	16Sep2009-13	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:4	10.00	N/A
Conditioner4	16Sep2009-14	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner5	16Sep2009-15	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Blank1	16Sep2009-16	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:10	10.00	0925810610819
5774707FD	16Sep2009-17	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:11	10.00	0925810610819
5774708BKG	16Sep2009-18	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:12	10.00	0925810610819
5774709MS	16Sep2009-19	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:13	10.00	0925810610819
5774710MSD	16Sep2009-20	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:14	10.00	0925810610819
LCS1	16Sep2009-21	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:15	10.00	0925810610819
LCSD1	16Sep2009-22	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:16	10.00	0925810610819
ICV	16Sep2009-23	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:17	10.00	N/A
Cal4asQC2a	16Sep2009-24	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:5	10.00	N/A
Spike Check	16Sep2009-25	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:18	10.00	N/A
Conditioner6	16Sep2009-26	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner7	16Sep2009-27	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
5774702	16Sep2009-28	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:19	10.00	0925810610819
5774703	16Sep2009-29	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:20	10.00	0925810610819
5774704	16Sep2009-30	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:21	10.00	0925810610819
5774705	16Sep2009-31	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:22	10.00	0925810610819
5774706	16Sep2009-32	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:23	10.00	0925810610819
5774711	16Sep2009-33	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:24	10.00	0925810610819

There is no signature data to report.

Lancaster Laboratories

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
5774712	16Sep2009-34	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:25	10.00	0925810610819
Cal5asQC3a	16Sep2009-35	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:6	10.00	N/A
Conditioner8	16Sep2009-36	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner9	16Sep2009-37	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Blank2	16Sep2009-38	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:26	10.00	0925810610826
5772549	16Sep2009-39	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:27	10.00	0925810610826
5772549MS	16Sep2009-40	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	D:28	10.00	0925810610826
5772549MSD	16Sep2009-41	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	D:29	10.00	0925810610826
ICV/LCS2	16Sep2009-42	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	D:30	10.00	0925810610826
LCSD2	16Sep2009-43	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	D:31	10.00	0925810610826
Cal3asQC1b	16Sep2009-44	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:4	10.00	N/A
Conditioner10	16Sep2009-45	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner11	16Sep2009-46	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
106108-24-1	16Sep2009-47	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	A:1	10.00	N/A
106108-24-2	16Sep2009-48	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:2	10.00	N/A
106108-24-3	16Sep2009-49	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:3	10.00	N/A
106108-24-4	16Sep2009-50	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:4	10.00	N/A
106108-24-5	16Sep2009-51	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:5	10.00	N/A
Conditioner12	16Sep2009-52	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner13	16Sep2009-53	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	E:1	10.00	N/A
106108-24-6	16Sep2009-54	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	A:6	10.00	N/A
Cal4asQC2b	16Sep2009-55	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:5	10.00	N/A
106108-24-7	16Sep2009-56	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	A:7	10.00	N/A
106108-24-8	16Sep2009-57	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:8	10.00	N/A
106108-24-9	16Sep2009-58	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:9	10.00	N/A
106108-24-10	16Sep2009-59	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\	A:10	10.00	N/A
Cal5asQC3b	16Sep2009-60	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles	D:6	10.00	N/A

Analyst : JW 1543 9/16/2009

9/22/09

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-16Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Instrument No.	TQU01408
Analyst	JW01543

Identification

Component Name:	1,1-Dimethylhydrazine
Detector Type:	MS
Filter:	+ c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]
1st Trace Type:	TIC
Operator:	None
2nd Trace Type:	N/A
Mass Range 1 (m/z):	N/A
Mass Range 2 (m/z):	N/A
Base Peak(BP):	N/A
Mass Range(MR):	N/A

Retention Time

Expected RT (min):	6.64000
Window (sec):	20.00000
View Width (min):	3.00000
RT Reference:	No
Adjust Expected RT:	No
Adjust Using:	N/A

Detection Options

Peak Detection Algorithm:	Genesis
Smoothing Points:	1

Genesis Peak Integration

S/N Threshold:	1.00
Valley Detection:	Disabled
Expected Peak Width (sec):	N/A
Genesis Constrain Peak Width:	No
Genesis Peak Height (%):	N/A
Genesis Tailing Factor:	N/A

Genesis Peak Detection

Genesis Identify By:	Nearest RT
Genesis Minimum Peak Height (S/N):	3.00
Genesis Ion Ratio Confirmation:	No
Genesis Window %:	N/A
Genesis Qualifier Ion Coelution (min):	N/A

Genesis Advanced Detection Options

Baseline (Global)

Baseline Noise Tolerance (%):	10.0
Minimum Number of Scans in Baseline:	16
Baseline Noise Rejection Factor:	2.0

Calibration

Component Type:	Target Compound

Internal Standard

ISTD Amount:	N/A
ISTD Units:	N/A

Target Compounds

Concentration of Calibration Standards

Level	Amount
1	0.500 ng/mL
2	1.000 ng/mL
3	2.500 ng/mL
4	5.000 ng/mL
5	12.500 ng/mL
6	25.000 ng/mL
7	50.000 ng/mL
8	125.000 ng/mL

Concentration of CCV Standards

Level	Amount
CCV1	2.500 ng/mL
CCV2	5.000 ng/mL
CCV3	12.500 ng/mL

OLN23 #135

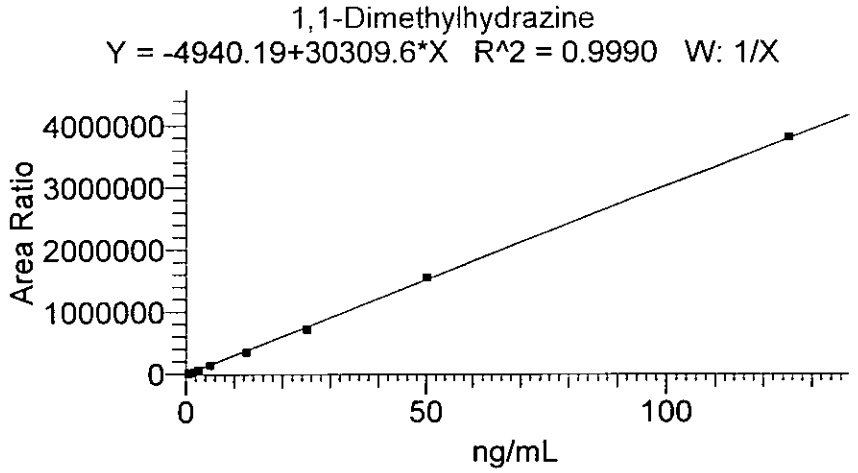
There is no signature data to report.

Lancaster Laboratories

ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By: External Standard



Sample ID	Sample Type	Level	Exclude	Integration Type	Response	Specified Conc	Units	Calc Amt	% Diff
Cal1	Standard	1	N/A	Method Settings	12924	0.500	ng/mL	0.589	17.88
Cal2	Standard	2	N/A	Method Settings	26318	1.000	ng/mL	1.031	3.13
Cal3	Standard	3	N/A	Method Settings	63860	2.500	ng/mL	2.270	-9.20
Cal4	Standard	4	N/A	Method Settings	140558	5.000	ng/mL	4.800	-3.99
Cal5	Standard	5	N/A	Method Settings	348916	12.500	ng/mL	11.675	-6.60
Cal6	Standard	6	N/A	Method Settings	717311	25.000	ng/mL	23.829	-4.68
Cal7	Standard	7	N/A	Method Settings	1551675	50.000	ng/mL	51.357	2.71
Cal8	Standard	8	N/A	Method Settings	3812500	125.000	ng/mL	125.948	0.76
Cal3asQC1a	QC	CCV1	N/A	Method Settings	70376	2.500	ng/mL	2.485	-0.60
Cal4asQC2a	QC	CCV2	N/A	Method Settings	147396	5.000	ng/mL	5.026	0.52
Cal5asQC3a	QC	CCV3	N/A	Method Settings	369883	12.500	ng/mL	12.366	-1.07
Cal3asQC1b	QC	CCV1	N/A	Method Settings	76081	2.500	ng/mL	2.673	6.93
Cal4asQC2b	QC	CCV2	N/A	Method Settings	165206	5.000	ng/mL	5.614	12.27
Cal5asQC3b	QC	CCV3	N/A	Method Settings	406311	12.500	ng/mL	13.568	8.55

Analyst: JW 1543 P/17 Prep
[illegible] 2/22/19

OLN23 0136

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-16Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Instrument No.	TQU01408
Analyst	JW01543

Identification

Component Name:	Hydrazine
Detector Type:	MS
Filter:	+ c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]
1st Trace Type:	TIC
Operator:	None
2nd Trace Type:	N/A
Mass Range 1 (m/z):	N/A
Mass Range 2 (m/z):	N/A
Base Peak(BP):	N/A
Mass Range(MR):	N/A

Retention Time

Expected RT (min):	8.95000
Window (sec):	20.00000
View Width (min):	3.00000
RT Reference:	No
Adjust Expected RT:	No
Adjust Using:	N/A

Detection Options

Peak Detection Algorithm:	Genesis
Smoothing Points:	1

Genesis Peak Integration

S/N Threshold:	1.00
Valley Detection:	Disabled
Expected Peak Width (sec):	N/A
Genesis Constrain Peak Width:	No
Genesis Peak Height (%):	N/A
Genesis Tailing Factor:	N/A

Genesis Peak Detection

Genesis Identify By:	Nearest RT
Genesis Minimum Peak Height (S/N):	3.00
Genesis Ion Ratio Confirmation:	No
Genesis Window %:	N/A
Genesis Qualifier Ion Coelution (min):	N/A

Genesis Advanced Detection Options

Baseline (Global)

Baseline Noise Tolerance (%):	10.0
Minimum Number of Scans in Baseline:	16
Baseline Noise Rejection Factor:	2.0

Calibration

Component Type:	Target Compound

Internal Standard

ISTD Amount:	N/A
ISTD Units:	N/A

Target Compounds

Concentration of Calibration Standards

Level	Amount
1	0.100 ng/mL
2	0.200 ng/mL
3	0.500 ng/mL
4	1.000 ng/mL
5	2.500 ng/mL
6	5.000 ng/mL
7	10.000 ng/mL
8	25.000 ng/mL

Concentration of CCV Standards

Level	Amount
CCV1	0.500 ng/mL
CCV2	1.000 ng/mL
CCV3	2.500 ng/mL

GLN23 8137

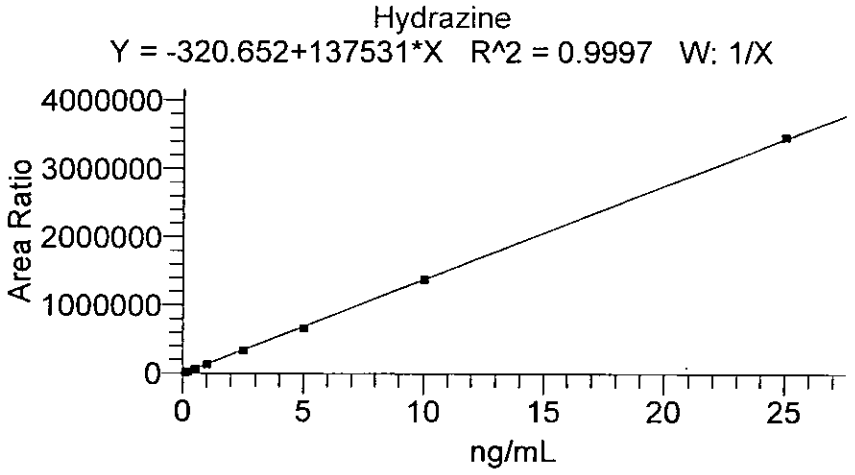
There is no signature data to report.

Lancaster Laboratories

ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By:	External Standard



Sample ID	Sample Type	Level	Exclude	Integration Type	Response	Specified Conc	Units	Calc Amt	% Diff
Cal1	Standard	1	N/A	Method Settings	14321	0.100	ng/mL	0.106	6.46
Cal2	Standard	2	N/A	Method Settings	28412	0.200	ng/mL	0.209	4.46
Cal3	Standard	3	N/A	Method Settings	64619	0.500	ng/mL	0.472	-5.56
Cal4	Standard	4	N/A	Method Settings	134893	1.000	ng/mL	0.983	-1.69
Cal5	Standard	5	N/A	Method Settings	338055	2.500	ng/mL	2.460	-1.59
Cal6	Standard	6	N/A	Method Settings	664196	5.000	ng/mL	4.832	-3.36
Cal7	Standard	7	N/A	Method Settings	1382548	10.000	ng/mL	10.055	0.55
Cal8	Standard	8	N/A	Method Settings	3463020	25.000	ng/mL	25.182	0.73
Cal3asQC1a	QC	CCV1	N/A	Method Settings	68571	0.500	ng/mL	0.501	0.18
Cal4asQC2a	QC	CCV2	N/A	Method Settings	135529	1.000	ng/mL	0.988	-1.22
Cal5asQC3a	QC	CCV3	N/A	Method Settings	325453	2.500	ng/mL	2.369	-5.25
Cal3asQC1b	QC	CCV1	N/A	Method Settings	71393	0.500	ng/mL	0.521	4.29
Cal4asQC2b	QC	CCV2	N/A	Method Settings	135636	1.000	ng/mL	0.989	-1.15
Cal5asQC3b	QC	CCV3	N/A	Method Settings	343384	2.500	ng/mL	2.499	-0.04

Analyst: JW 1543 P/17 Prep
[illegible] 9/22/09

OLN23 0138

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-16Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Instrument No.	TQU01408
Analyst	JW01543

Identification

Component Name:	Monomethylhydrazine
Detector Type:	MS
Filter:	+ c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]
1st Trace Type:	TIC
Operator:	None
2nd Trace Type:	N/A
Mass Range 1 (m/z):	N/A
Mass Range 2 (m/z):	N/A
Base Peak(BP):	N/A
Mass Range(MR):	N/A

Retention Time

Expected RT (min):	4.94000
Window (sec):	20.00000
View Width (min):	3.00000
RT Reference:	No
Adjust Expected RT:	No
Adjust Using:	N/A

Detection Options

Peak Detection Algorithm:	Genesis
Smoothing Points:	1

Genesis Peak Integration

S/N Threshold:	1.00
Valley Detection:	Disabled
Expected Peak Width (sec):	N/A
Genesis Constrain Peak Width:	No
Genesis Peak Height (%):	N/A
Genesis Tailing Factor:	N/A

Genesis Peak Detection

Genesis Identify By:	Nearest RT
Genesis Minimum Peak Height (S/N):	3.00
Genesis Ion Ratio Confirmation:	No
Genesis Window %:	N/A
Genesis Qualifier Ion Coelution (min):	N/A

Genesis Advanced Detection Options

Baseline (Global)

Baseline Noise Tolerance (%):	10.0
Minimum Number of Scans in Baseline:	16
Baseline Noise Rejection Factor:	2.0

Calibration

Component Type:	Target Compound

Internal Standard

ISTD Amount:	N/A
ISTD Units:	N/A

Target Compounds

Concentration of Calibration Standards

Level	Amount
1	0.500 ng/mL
2	1.000 ng/mL
3	2.500 ng/mL
4	5.000 ng/mL
5	12.500 ng/mL
6	25.000 ng/mL
7	50.000 ng/mL
8	125.000 ng/mL

Concentration of CCV Standards

Level	Amount
CCV1	2.500 ng/mL
CCV2	5.000 ng/mL
CCV3	12.500 ng/mL

OLN23 8139

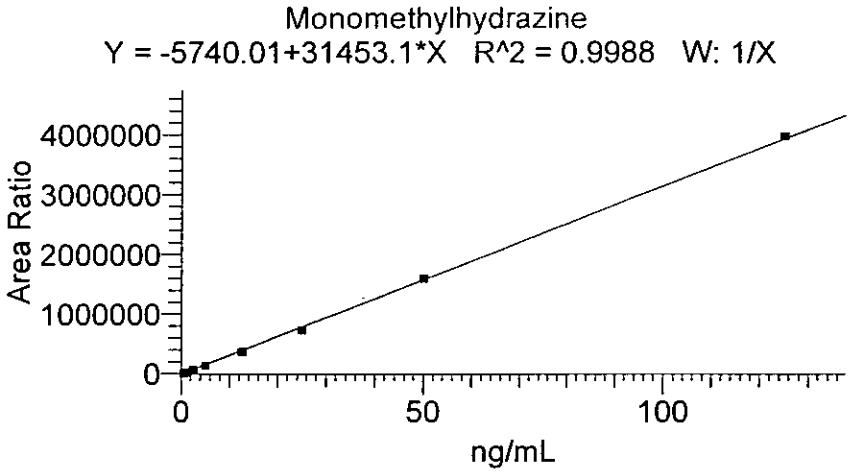
There is no signature data to report.

Lancaster Laboratories

ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By:	External Standard



Sample ID	Sample Type	Level	Exclude	Integration Type	Response	Specified Conc	Units	Calc Amt	% Diff
Cal1	Standard	1	N/A	Method Settings	13335	0.500	ng/mL	0.606	21.29
Cal2	Standard	2	N/A	Method Settings	26609	1.000	ng/mL	1.028	2.85
Cal3	Standard	3	N/A	Method Settings	67058	2.500	ng/mL	2.314	-7.42
Cal4	Standard	4	N/A	Method Settings	137778	5.000	ng/mL	4.563	-8.74
Cal5	Standard	5	N/A	Method Settings	368745	12.500	ng/mL	11.906	-4.75
Cal6	Standard	6	N/A	Method Settings	729165	25.000	ng/mL	23.365	-6.54
Cal7	Standard	7	N/A	Method Settings	1596738	50.000	ng/mL	50.948	1.90
Cal8	Standard	8	N/A	Method Settings	3981509	125.000	ng/mL	126.768	1.41
Cal3asQC1a	QC	CCV1	N/A	Method Settings	73640	2.500	ng/mL	2.524	0.95
Cal4asQC2a	QC	CCV2	N/A	Method Settings	150203	5.000	ng/mL	4.958	-0.84
Cal5asQC3a	QC	CCV3	N/A	Method Settings	374518	12.500	ng/mL	12.090	-3.28
Cal3asQC1b	QC	CCV1	N/A	Method Settings	73315	2.500	ng/mL	2.513	0.54
Cal4asQC2b	QC	CCV2	N/A	Method Settings	167363	5.000	ng/mL	5.504	10.07
Cal5asQC3b	QC	CCV3	N/A	Method Settings	415952	12.500	ng/mL	13.407	7.26

Analyst : JW 1543 P/17/2019
9/22/89

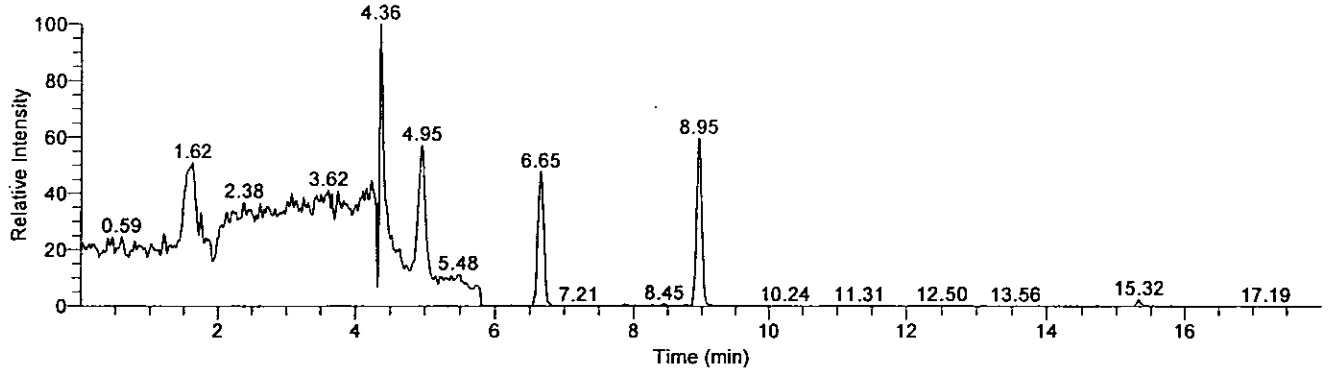
OLN23 8140

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-4.raw
Sample ID:	Cal1
Sample Type:	Standard
Level:	1
Acquisition Date:	Wednesday, September 16, 2009 3:05:05 PM
Vial:	D:2
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-4 - TIC RT: 0.00 - 18.00 NL: 4.53E3

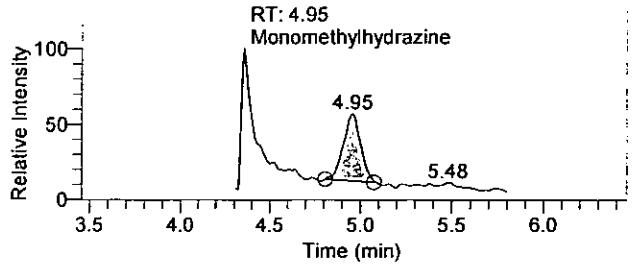


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:2, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-4, Comments: Soil Prep, ID: Cal1

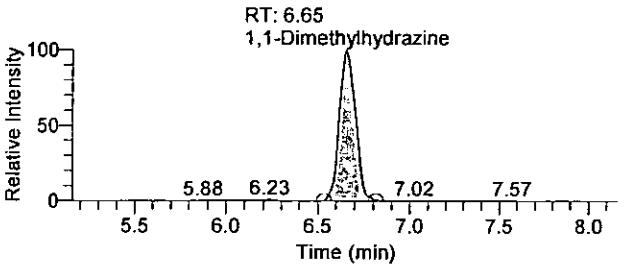
Monomethylhydrazine

16Sep2009-4 - TIC RT: 3.45 - 6.45 NL: 4.53E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



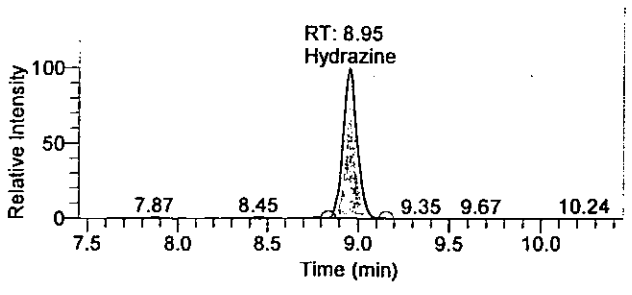
1,1-Dimethylhydrazine

16Sep2009-4 - TIC RT: 5.15 - 8.15 NL: 2.16E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-4 - TIC RT: 7.45 - 10.45 NL: 2.70E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0141

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal1	Method Settings	Hydrazine	8.95	14321	0.106	ng/mL
Cal1	Method Settings	1,1-Dimethylhydrazine	6.65	12924	0.589	ng/mL
Cal1	Method Settings	Monomethylhydrazine	4.95	13335	0.606	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

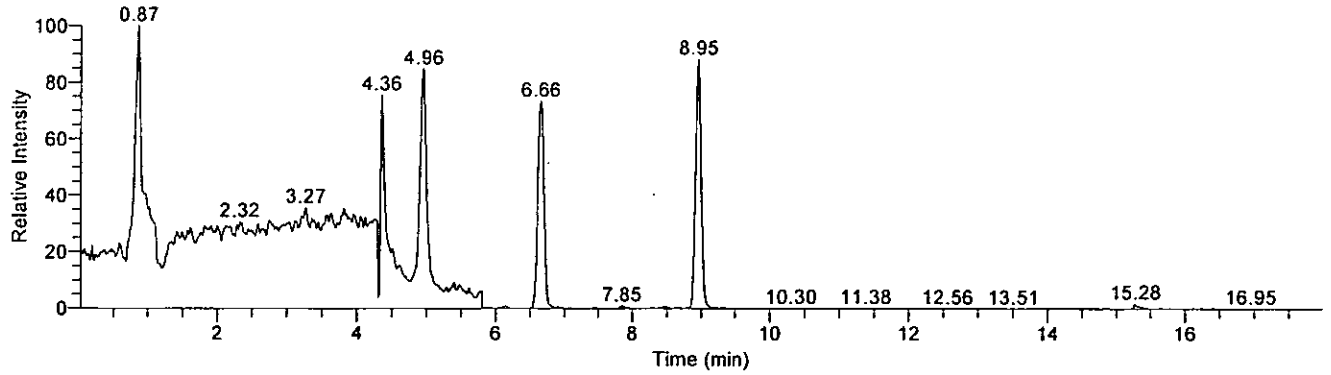
QLN23 B14Z

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-5.raw
Sample ID:	Cal2
Sample Type:	Standard
Level:	2
Acquisition Date:	Wednesday, September 16, 2009 3:23:51 PM
Vial:	D:3
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-5 - TIC RT: 0.00 - 18.00 NL: 5.79E3

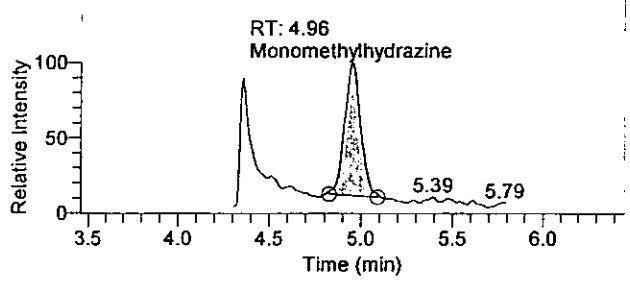


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:3, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-5, Comments: Soil Prep, ID: Cal2

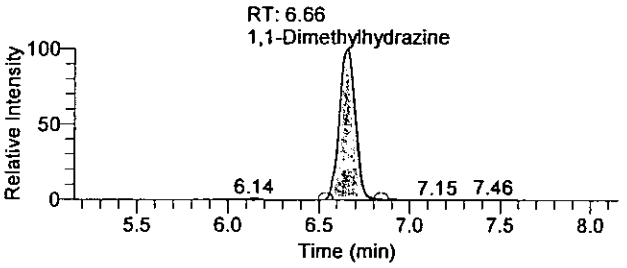
Monomethylhydrazine

16Sep2009-5 - TIC RT: 3.46 - 6.46 NL: 4.90E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



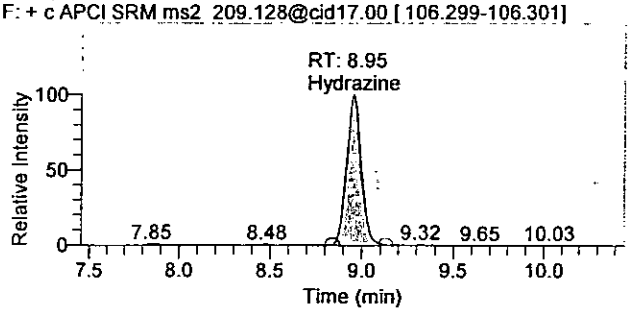
1,1-Dimethylhydrazine

16Sep2009-5 - TIC RT: 5.16 - 8.16 NL: 4.24E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-5 - TIC RT: 7.45 - 10.45 NL: 5.10E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0143

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal2	Method Settings	Hydrazine	8.95	28412	0.209	ng/mL
Cal2	Method Settings	1,1-Dimethylhydrazine	6.66	26318	1.031	ng/mL
Cal2	Method Settings	Monomethylhydrazine	4.96	26609	1.028	ng/mL

Analyst: JW 1543 9/17/2009
SJ/112 9/22/09

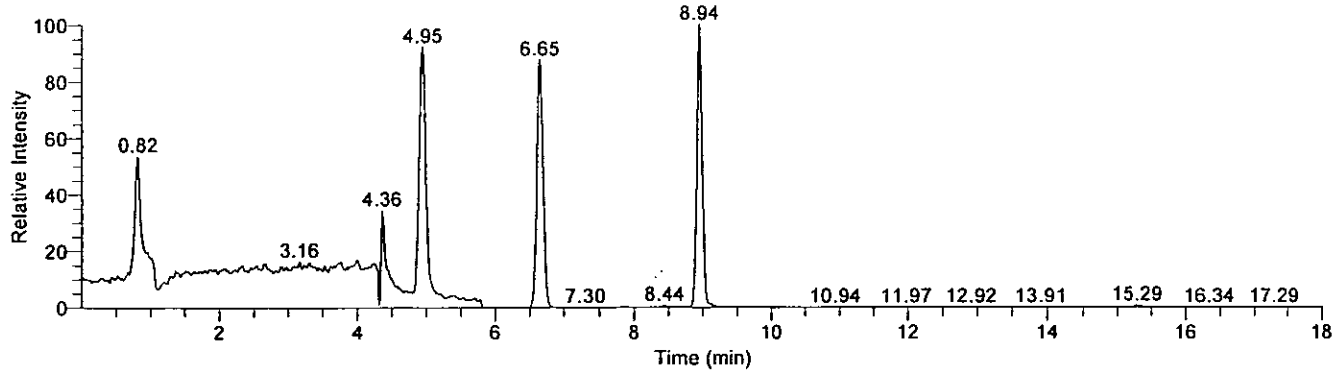
OLN23 0144

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-6.raw
Sample ID:	Cal3
Sample Type:	Standard
Level:	3
Acquisition Date:	Wednesday, September 16, 2009 3:42:35 PM
Vial:	D:4
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-6 - TIC RT: 0.00 - 18.00 NL: 1.19E4

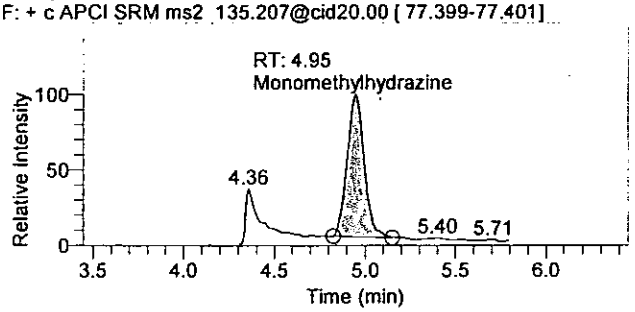


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:4, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-6, Comments: Soil Prep, ID: Cal3

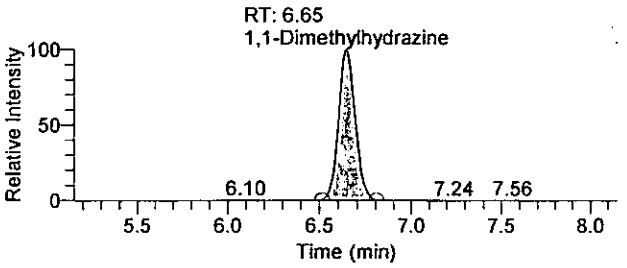
Monomethylhydrazine

16Sep2009-6 - TIC RT: 3.45 - 6.45 NL: 1.10E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



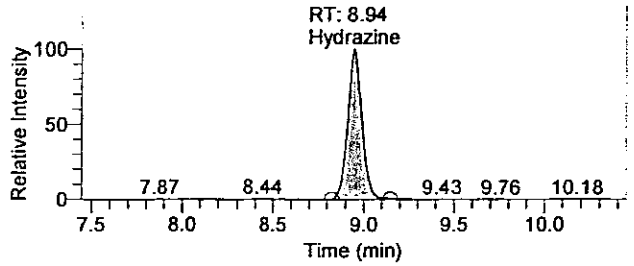
1,1-Dimethylhydrazine

16Sep2009-6 - TIC RT: 5.15 - 8.15 NL: 1.04E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-6 - TIC RT: 7.44 - 10.44 NL: 1.19E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0145

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3	Method Settings	Hydrazine	8.94	64619	0.472	ng/mL
Cal3	Method Settings	1,1-Dimethylhydrazine	6.65	63860	2.270	ng/mL
Cal3	Method Settings	Monomethylhydrazine	4.95	67058	2.314	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

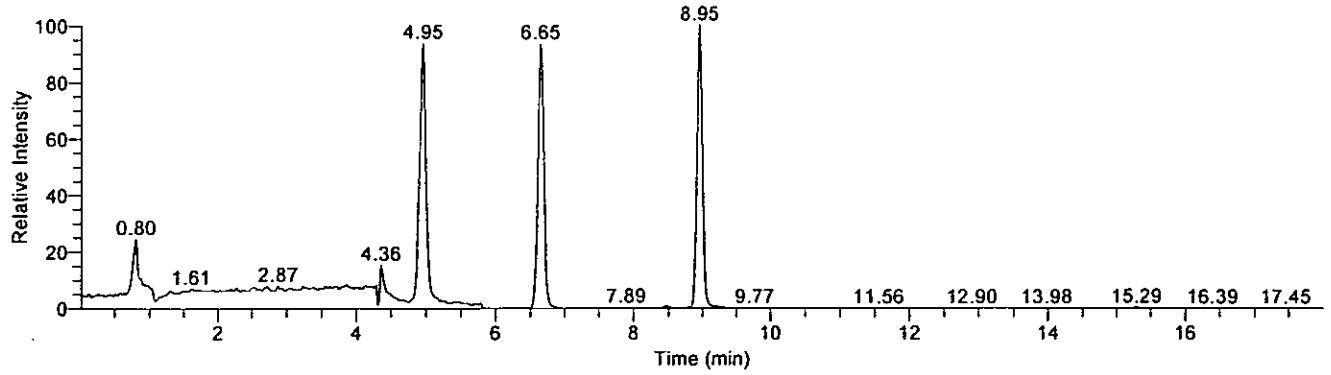
OLN23 0146

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-7.raw
Sample ID:	Cal4
Sample Type:	Standard
Level:	4
Acquisition Date:	Wednesday, September 16, 2009 4:01:17 PM
Vial:	D:5
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-7 - TIC RT: 0.00 - 17.99 NL: 2.45E4

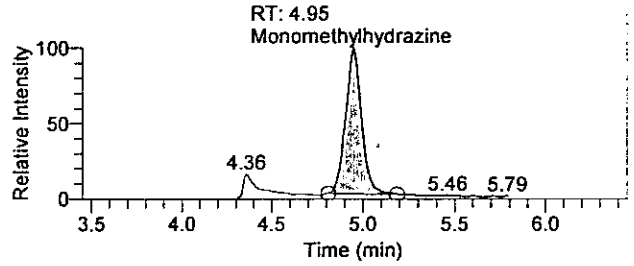


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-7, Comments: Soil Prep, ID: Cal4

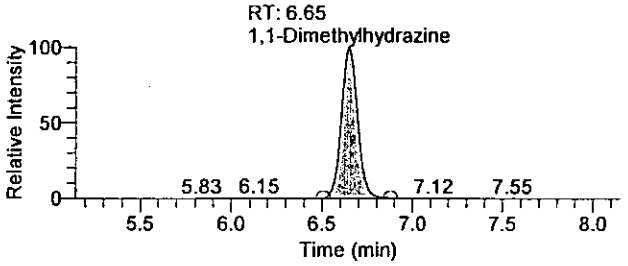
Monomethylhydrazine

16Sep2009-7 - TIC RT: 3.45 - 6.45 NL: 2.30E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



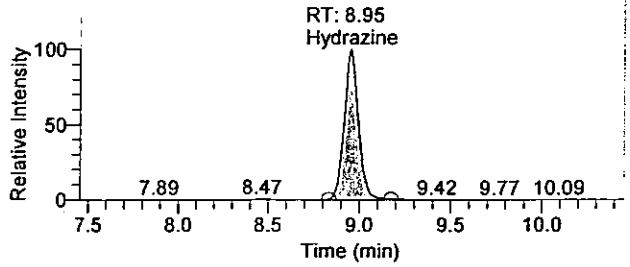
1,1-Dimethylhydrazine

16Sep2009-7 - TIC RT: 5.15 - 8.15 NL: 2.29E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-7 - TIC RT: 7.45 - 10.45 NL: 2.45E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0147

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4	Method Settings	Hydrazine	8.95	134893	0.983	ng/mL
Cal4	Method Settings	1,1-Dimethylhydrazine	6.65	140558	4.800	ng/mL
Cal4	Method Settings	Monomethylhydrazine	4.95	137778	4.563	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

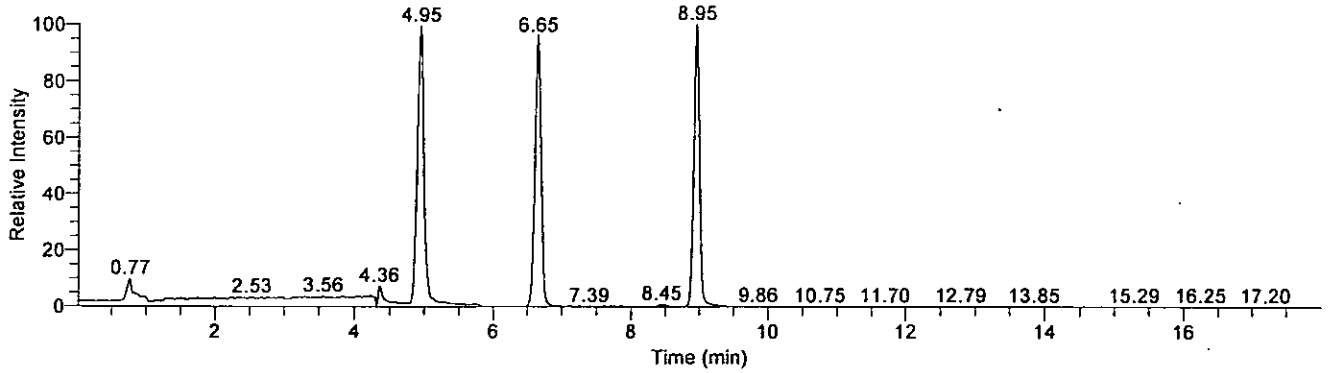
GLM23 0140

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-8.raw
Sample ID:	Cal5
Sample Type:	Standard
Level:	5
Acquisition Date:	Wednesday, September 16, 2009 4:20:02 PM
Vial:	D:6
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-8 - TIC RT: 0.00 - 18.00 NL: 5.83E4

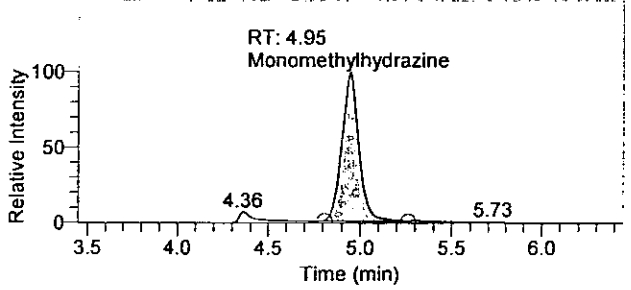


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-8, Comments: Soil Prep, ID: Cal5

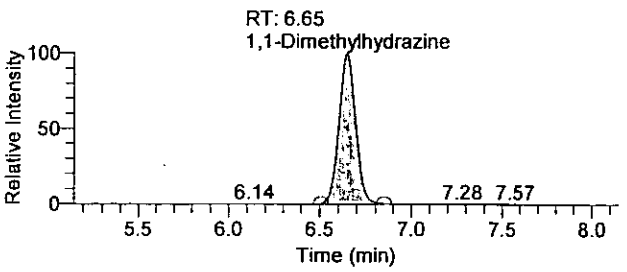
Monomethylhydrazine

16Sep2009-8 - TIC RT: 3.45 - 6.45 NL: 5.80E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



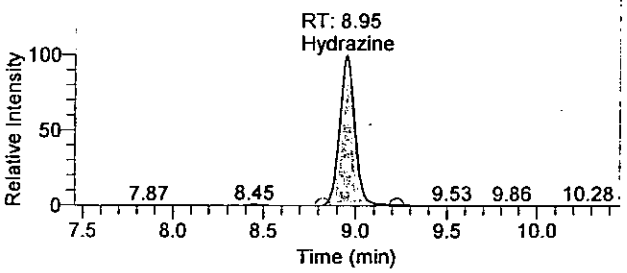
1,1-Dimethylhydrazine

16Sep2009-8 - TIC RT: 5.15 - 8.15 NL: 5.58E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-8 - TIC RT: 7.45 - 10.45 NL: 5.83E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8149

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5	Method Settings	Hydrazine	8.95	338055	2.460	ng/mL
Cal5	Method Settings	1,1-Dimethylhydrazine	6.65	348916	11.675	ng/mL
Cal5	Method Settings	Monomethylhydrazine	4.95	368745	11.906	ng/mL

Analyst : JW 1543 9/17/2009
[illegible] 9/22/09

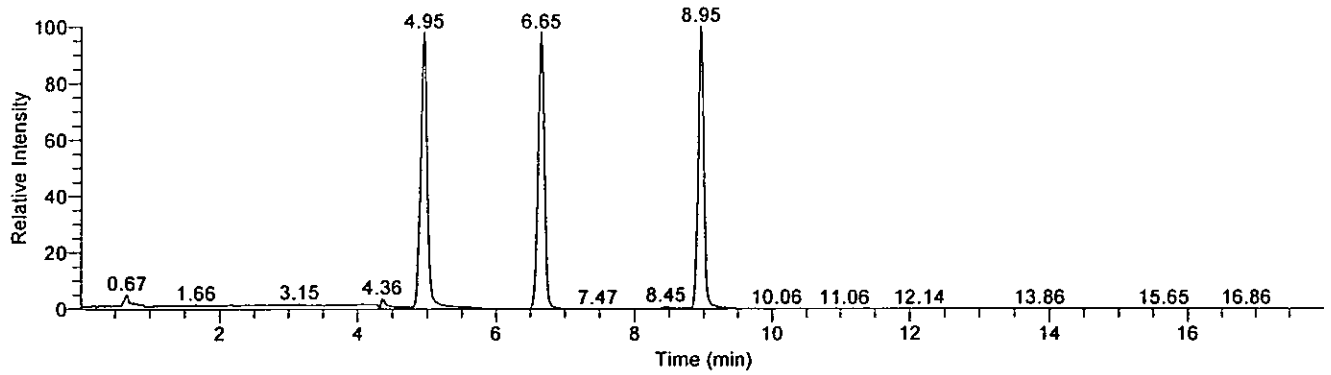
OLN23 0150

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-9.raw
Sample ID:	Cal6
Sample Type:	Standard
Level:	6
Acquisition Date:	Wednesday, September 16, 2009 4:38:46 PM
Vial:	D:7
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-9 - TIC RT: 0.00 - 18.00 NL: 1.17E5

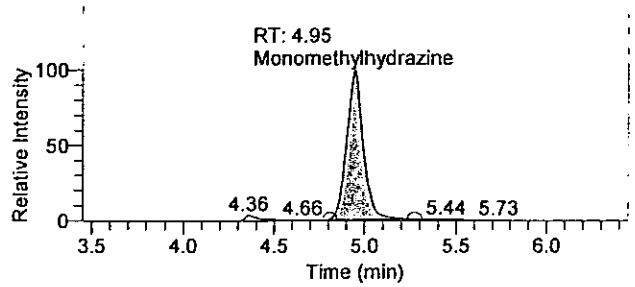


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:7, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-9, Comments: Soil Prep, ID: Cal6

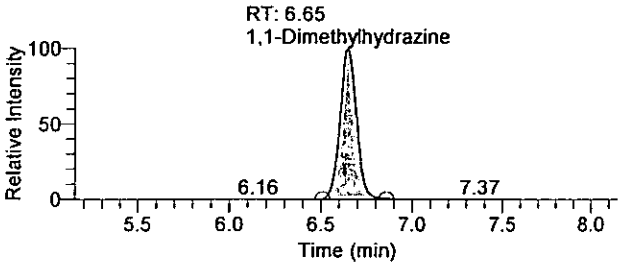
Monomethylhydrazine

16Sep2009-9 - TIC RT: 3.45 - 6.45 NL: 1.14E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



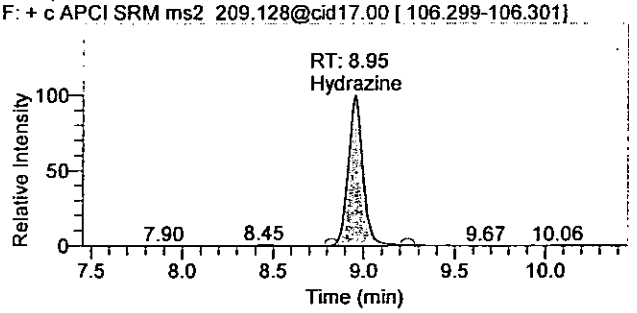
1,1-Dimethylhydrazine

16Sep2009-9 - TIC RT: 5.15 - 8.15 NL: 1.14E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-9 - TIC RT: 7.45 - 10.45 NL: 1.17E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM23 0151

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal6	Method Settings	Hydrazine	8.95	664196	4.832	ng/mL
Cal6	Method Settings	1,1-Dimethylhydrazine	6.65	717311	23.829	ng/mL
Cal6	Method Settings	Monomethylhydrazine	4.95	729165	23.365	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

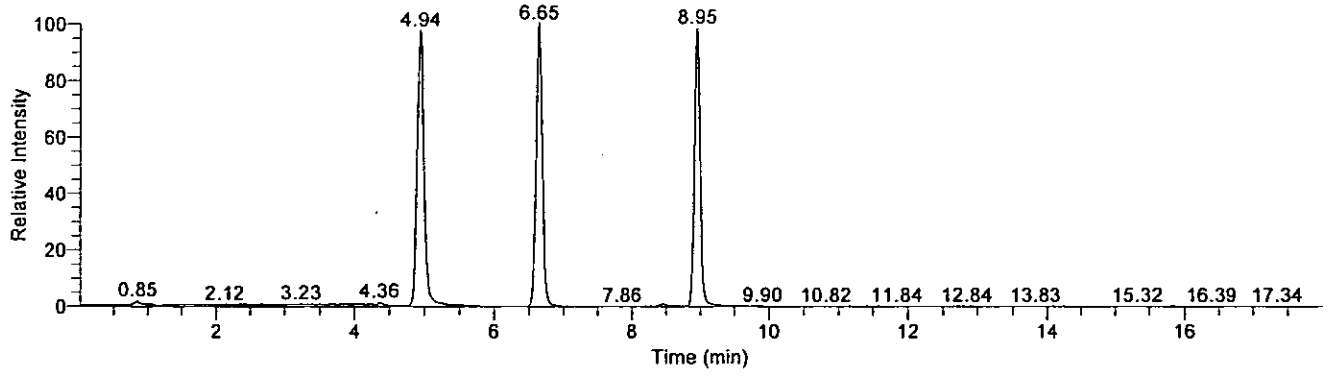
QLN23 8152

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-10.raw
Sample ID:	Cal7
Sample Type:	Standard
Level:	7
Acquisition Date:	Wednesday, September 16, 2009 4:57:31 PM
Vial:	D:8
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-10 - TIC RT: 0.00 - 17.99 NL: 2.48E5

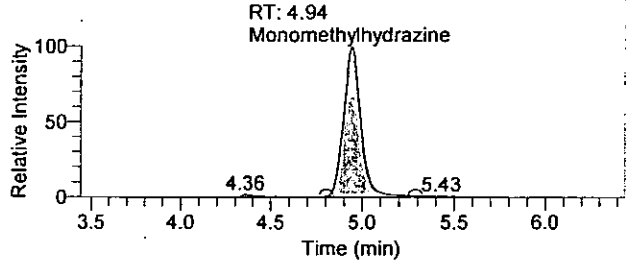


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:8, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-10, Comments: Soil Prep, ID: Cal7

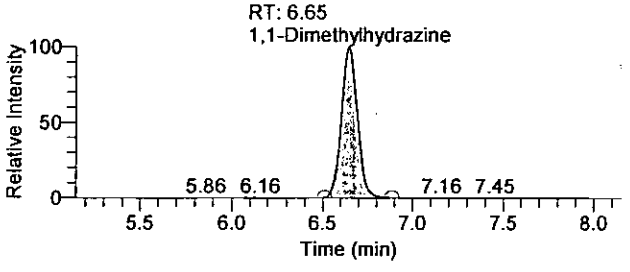
Monomethylhydrazine

16Sep2009-10 - TIC RT: 3.44 - 6.44 NL: 2.42E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



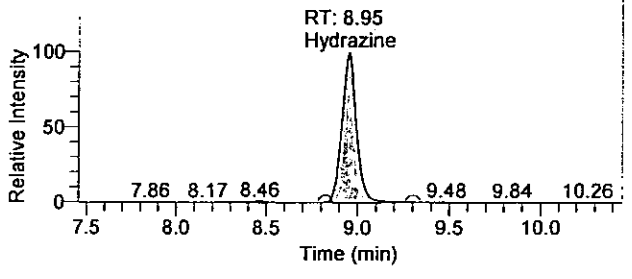
1,1-Dimethylhydrazine

16Sep2009-10 - TIC RT: 5.15 - 8.15 NL: 2.48E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-10 - TIC RT: 7.45 - 10.45 NL: 2.44E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



QLN23 0153

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal7	Method Settings	Hydrazine	8.95	1382548	10.055	ng/mL
Cal7	Method Settings	1,1-Dimethylhydrazine	6.65	1551675	51.357	ng/mL
Cal7	Method Settings	Monomethylhydrazine	4.94	1596738	50.948	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

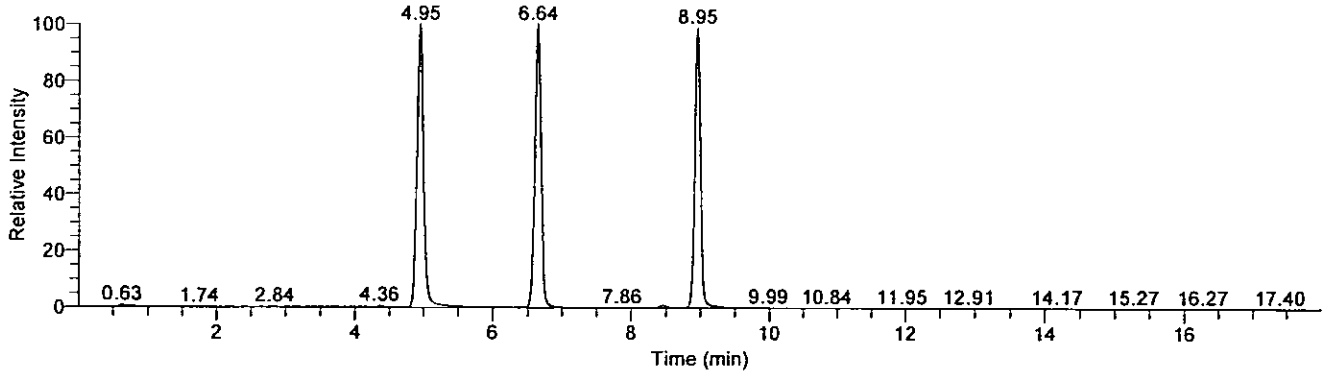
OLH23 0154

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-11.raw
Sample ID:	Cal8
Sample Type:	Standard
Level:	8
Acquisition Date:	Wednesday, September 16, 2009 5:16:17 PM
Vial:	D:9
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-11 - TIC RT: 0.00 - 18.00 NL: 6.07E5

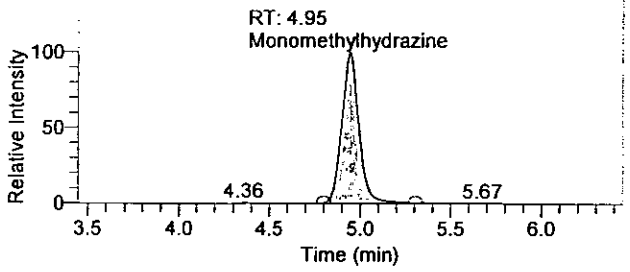


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:9, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-11, Comments: Soil Prep, ID: Cal8

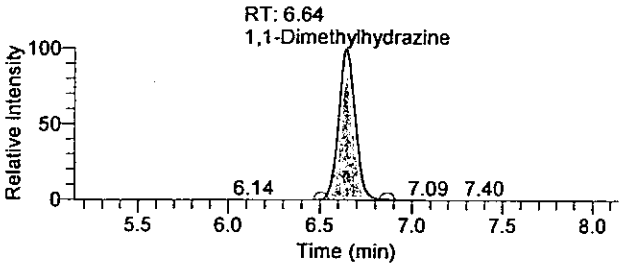
Monomethylhydrazine

16Sep2009-11 - TIC RT: 3.45 - 6.45 NL: 6.07E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



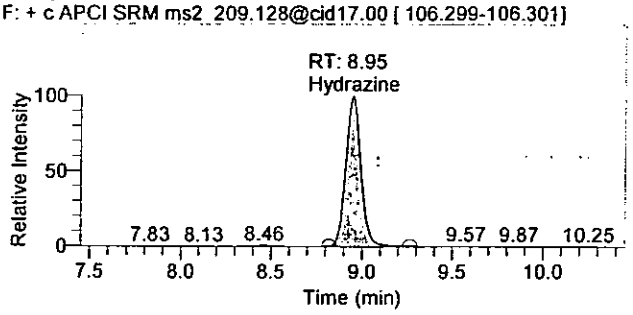
1,1-Dimethylhydrazine

16Sep2009-11 - TIC RT: 5.14 - 8.14 NL: 6.06E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-11 - TIC RT: 7.45 - 10.45 NL: 5.99E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8155

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal8	Method Settings	Hydrazine	8.95	3463020	25.182	ng/mL
Cal8	Method Settings	1,1-Dimethylhydrazine	6.64	3812500	125.948	ng/mL
Cal8	Method Settings	Monomethylhydrazine	4.95	3981509	126.768	ng/mL

Analyst : JW 1543 9/17/2009
9/22/09

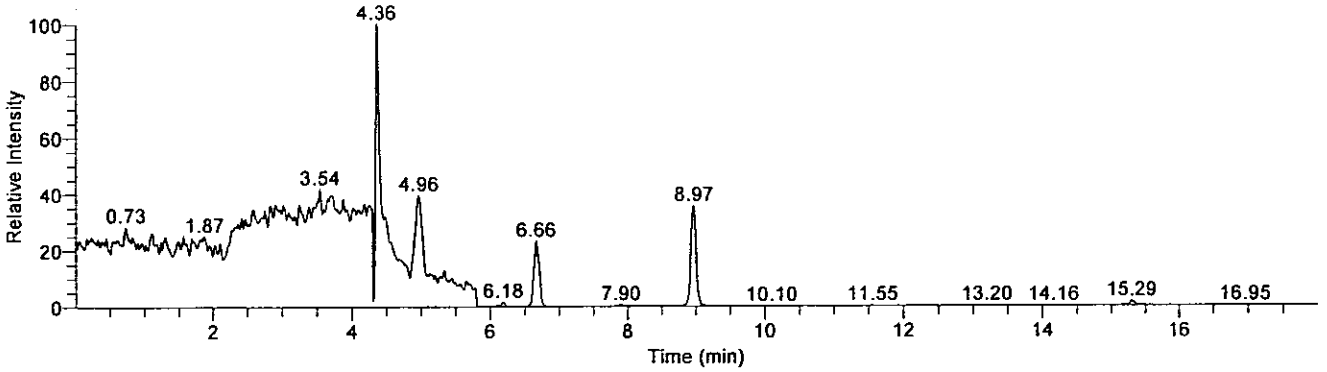
OLA23 8156

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-3.raw
Sample ID:	MDL
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 2:46:21 PM
Vial:	D:1
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-3 - TIC RT: 0.00 - 18.00 NL: 4.72E3

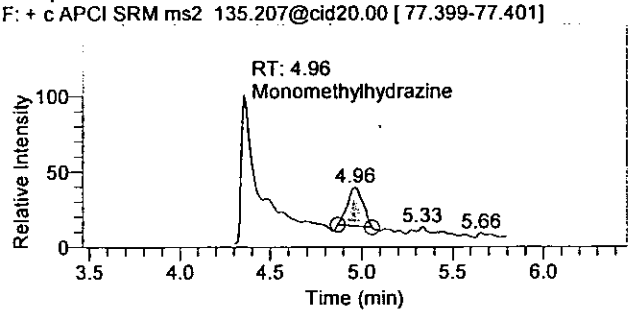


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:1, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-3, Comments: Soil Prep, ID: MDL

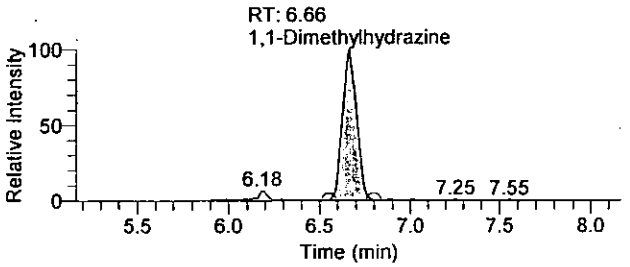
Monomethylhydrazine

16Sep2009-3 - TIC RT: 3.46 - 6.46 NL: 4.72E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



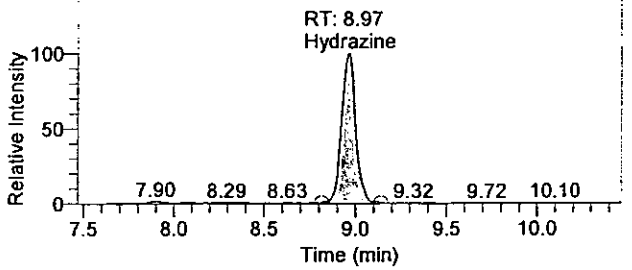
1,1-Dimethylhydrazine

16Sep2009-3 - TIC RT: 5.16 - 8.16 NL: 1.10E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-3 - TIC RT: 7.47 - 10.47 NL: 1.68E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N23 8157

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
MDL	Method Settings	Hydrazine	8.97	9058	0.068	ng/mL
MDL	Method Settings	1,1-Dimethylhydrazine	6.66	5813	0.355	ng/mL
MDL	Method Settings	Monomethylhydrazine	4.96	7338	0.416	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

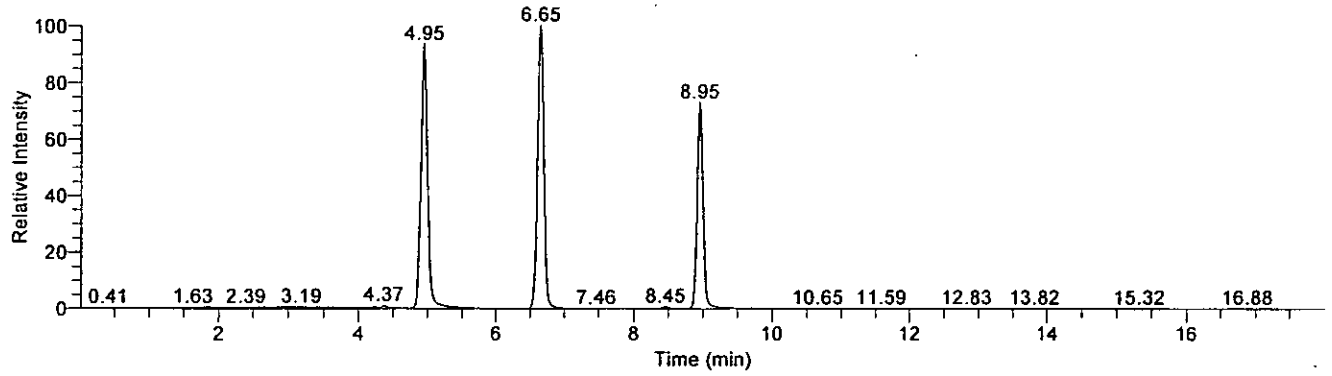
OLN23 0158

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-23.raw
Sample ID:	ICV
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 9:01:12 PM
Vial:	D:17
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-23 - TIC RT: 0.00 - 18.00 NL: 3.48E5

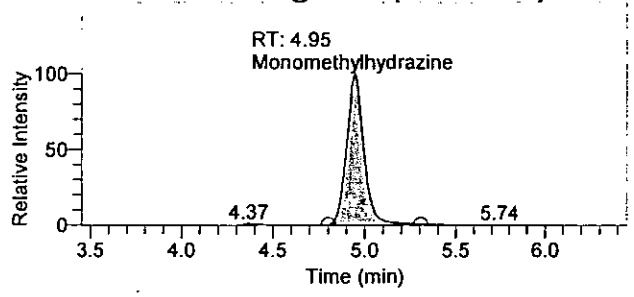


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:17, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-23, Comments: Soil Prep, ID: ICV

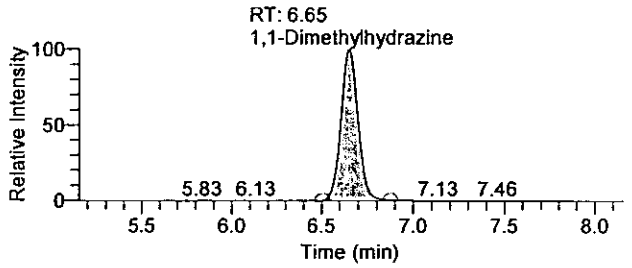
Monomethylhydrazine

16Sep2009-23 - TIC RT: 3.45 - 6.45 NL: 3.25E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



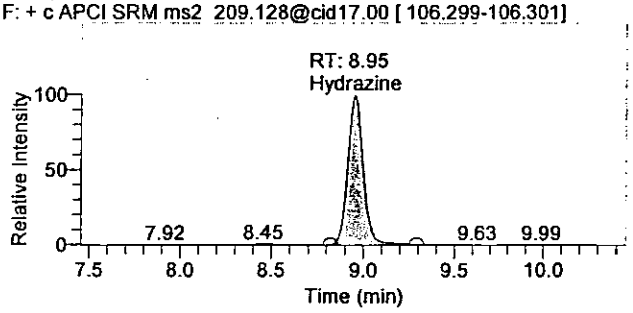
1,1-Dimethylhydrazine

16Sep2009-23 - TIC RT: 5.15 - 8.15 NL: 3.48E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-23 - TIC RT: 7.45 - 10.45 NL: 2.54E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN23 0159

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
ICV	Method Settings	Hydrazine	8.95	1501559	10.920	ng/mL
ICV	Method Settings	1,1-Dimethylhydrazine	6.65	2219172	73.380	ng/mL
ICV	Method Settings	Monomethylhydrazine	4.95	2133668	68.019	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

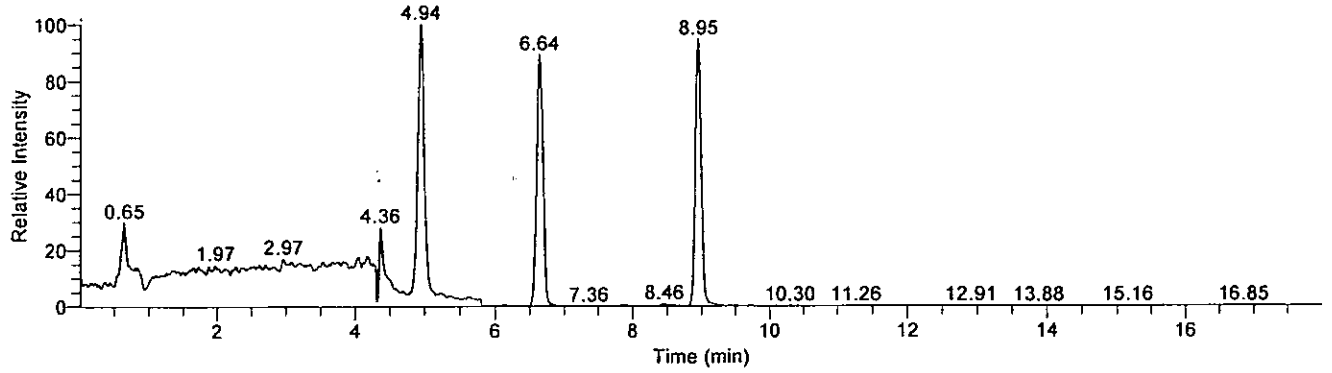
OLN23 0168

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-13.raw
Sample ID:	Cal3asQC1a
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Wednesday, September 16, 2009 5:53:41 PM
Vial:	D:4
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-13 - TIC RT: 0.00 - 17.99 NL: 1.25E4

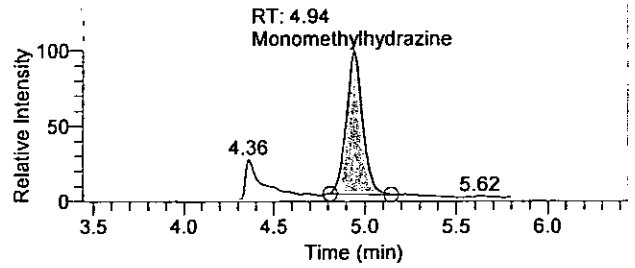


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:4, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-13, Comments: , ID: Cal3asQC1a

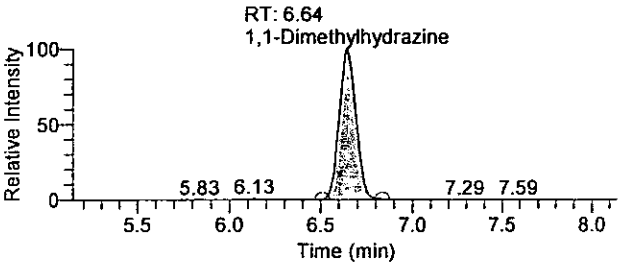
Monomethylhydrazine

16Sep2009-13 - TIC RT: 3.44 - 6.44 NL: 1.25E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



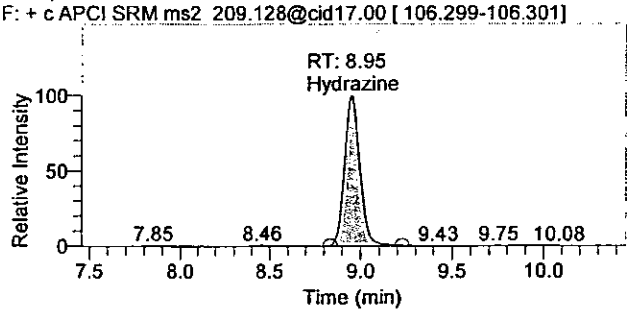
1,1-Dimethylhydrazine

16Sep2009-13 - TIC RT: 5.14 - 8.14 NL: 1.11E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-13 - TIC RT: 7.45 - 10.45 NL: 1.18E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0161

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1a	Method Settings	Hydrazine	8.95	68571	0.501	ng/mL
Cal3asQC1a	Method Settings	1,1-Dimethylhydrazine	6.64	70376	2.485	ng/mL
Cal3asQC1a	Method Settings	Monomethylhydrazine	4.94	73640	2.524	ng/mL

Analyst : JW 1543 9/17/2009
[illegible]/112 9/22/09

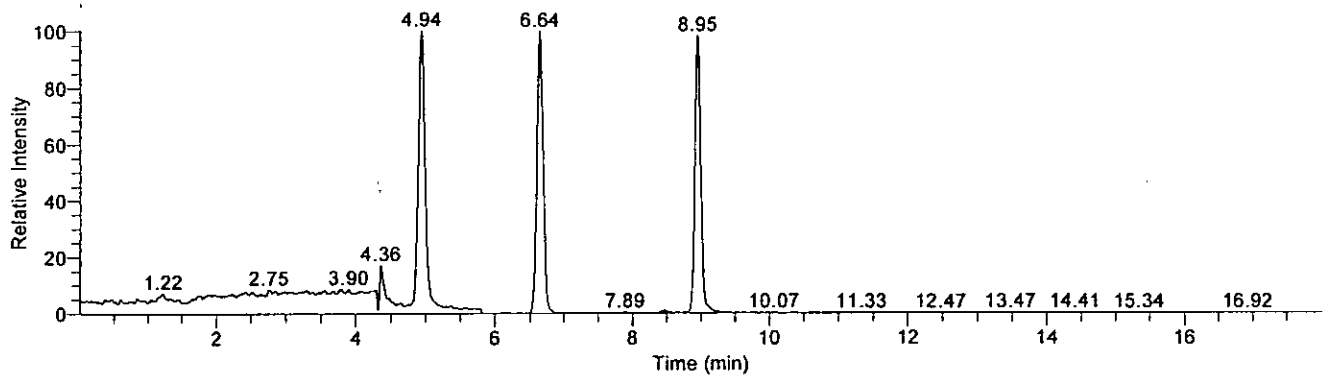
OLN23 0162

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-24.raw
Sample ID:	Cal4asQC2a
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Wednesday, September 16, 2009 9:19:59 PM
Vial:	D:5
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-24 - TIC RT: 0.00 - 18.00 NL: 2.36E4

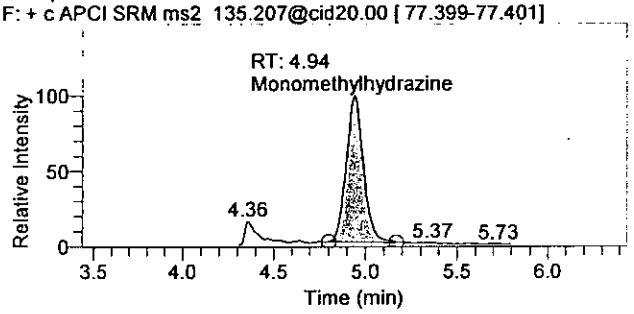


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-24, Comments: , ID: Cal4asQC2a

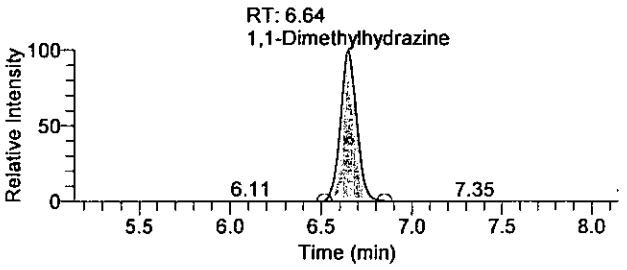
Monomethylhydrazine

16Sep2009-24 - TIC RT: 3.44 - 6.44 NL: 2.36E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



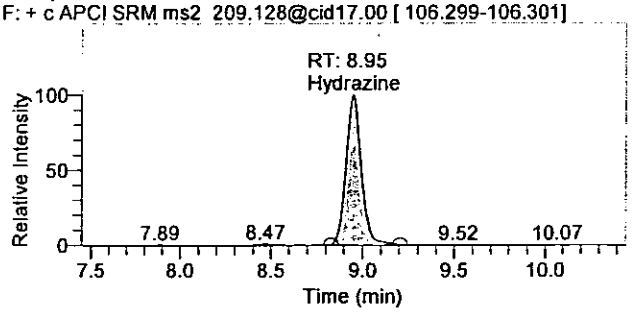
1,1-Dimethylhydrazine

16Sep2009-24 - TIC RT: 5.14 - 8.14 NL: 2.35E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-24 - TIC RT: 7.45 - 10.45 NL: 2.31E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8163

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4asQC2a	Method Settings	Hydrazine	8.95	135529	0.988	ng/mL
Cal4asQC2a	Method Settings	1,1-Dimethylhydrazine	6.64	147396	5.026	ng/mL
Cal4asQC2a	Method Settings	Monomethylhydrazine	4.94	150203	4.958	ng/mL

Analyst: JW 1543 9/17/2009

There is no signature data to report.

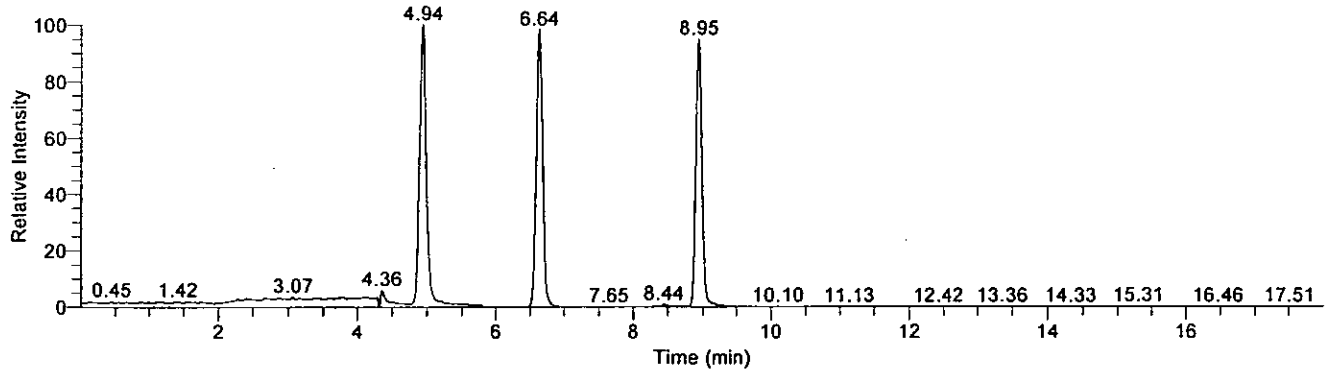
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	16Sep2009-35.raw
Sample ID:	Cal5asQC3a
Sample Type:	QC
Level:	CCV3
Acquisition Date:	Thursday, September 17, 2009 12:46:00 AM
Vial:	D:6
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-35 - TIC RT: 0.00 - 18.00 NL: 5.73E4

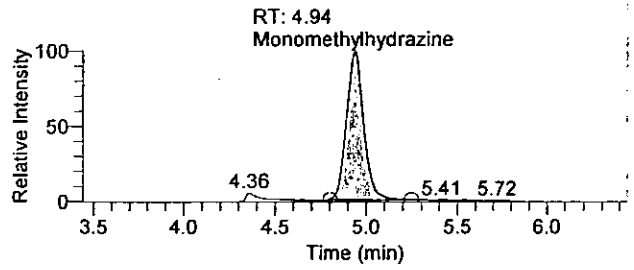


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-35, Comments: , ID: Cal5asQC3a

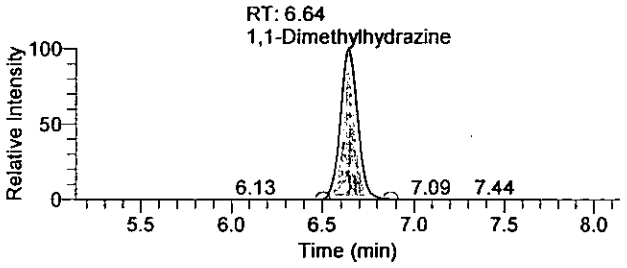
Monomethylhydrazine

16Sep2009-35 - TIC RT: 3.44 - 6.44 NL: 5.73E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



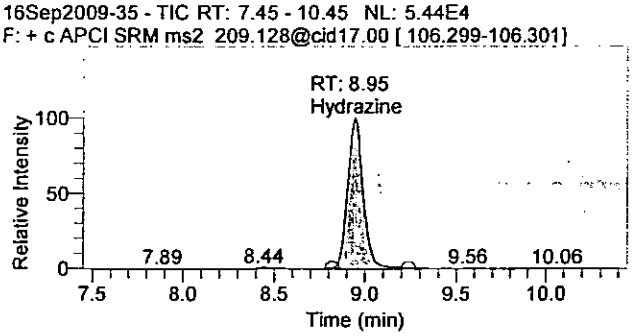
1,1-Dimethylhydrazine

16Sep2009-35 - TIC RT: 5.14 - 8.14 NL: 5.62E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-35 - TIC RT: 7.45 - 10.45 NL: 5.44E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8165

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5asQC3a	Method Settings	Hydrazine	8.95	325453	2.369	ng/mL
Cal5asQC3a	Method Settings	1,1-Dimethylhydrazine	6.64	369883	12.366	ng/mL
Cal5asQC3a	Method Settings	Monomethylhydrazine	4.94	374518	12.090	ng/mL

Analyst : JW 1543 9/17/2009
9/22/09

OLN23 0166

There is no signature data to report.

Lancaster Laboratories

Workbook Name: TQU01408-22Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Sequence Table

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner1	22Sep2009-1	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner2	22Sep2009-2	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
MDL	22Sep2009-3	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:2	10.00	N/A
Cal1	22Sep2009-4	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:3	10.00	N/A
Cal2	22Sep2009-5	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:4	10.00	N/A
Cal3	22Sep2009-6	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:5	10.00	N/A
Cal4	22Sep2009-7	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:6	10.00	N/A
Cal5	22Sep2009-8	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:7	10.00	N/A
Cal6	22Sep2009-9	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:8	10.00	N/A
Cal7	22Sep2009-10	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:9	10.00	N/A
Cal8	22Sep2009-11	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:10	10.00	N/A
Conditioner3	22Sep2009-12	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Cal3asQC1a	22Sep2009-13	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:5	10.00	N/A
Conditioner4	22Sep2009-14	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner5	22Sep2009-15	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Blank1	22Sep2009-16	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:11	10.00	0926510610833
5779940BKG	22Sep2009-17	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:12	10.00	0926510610833
5779940MS	22Sep2009-18	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:13	10.00	0926510610833
5779940MSD	22Sep2009-19	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:14	10.00	0926510610833
LCS1	22Sep2009-20	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:15	10.00	0926510610833
LCSD1	22Sep2009-21	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:16	10.00	0926510610833
ICV	22Sep2009-22	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:17	10.00	N/A
Spike Check	22Sep2009-23	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:18	10.00	N/A
Cal4asQC2a	22Sep2009-24	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:6	10.00	N/A
Conditioner6	22Sep2009-25	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner7	22Sep2009-26	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
5779941	22Sep2009-27	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:19	10.00	0926510610833
5779942	22Sep2009-28	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:20	10.00	0926510610833
5779943	22Sep2009-29	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:21	10.00	0926510610833
5779944	22Sep2009-30	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:22	10.00	0926510610833
5779945	22Sep2009-31	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:23	10.00	0926510610833
5779946	22Sep2009-32	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\	E:24	10.00	0926510610833
5779947	22Sep2009-33	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\	E:25	10.00	0926510610833

There is no signature data to report.

Lancaster Laboratories

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
5779948	22Sep2009-34	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:26	10.00	0926510610833
Cal5asQC3a	22Sep2009-35	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:7	10.00	N/A
5779949	22Sep2009-36	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:27	10.00	0926510610833
5779950	22Sep2009-37	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:28	10.00	0926510610833
5779951	22Sep2009-38	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:29	10.00	0926510610833
5779952	22Sep2009-39	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:30	10.00	0926510610833
5779953	22Sep2009-40	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:31	10.00	0926510610833
5781371	22Sep2009-41	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:32	10.00	0926510610833
Conditioner8	22Sep2009-42	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner9	22Sep2009-43	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:1	10.00	N/A
Blank2	22Sep2009-44	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:33	10.00	0926510610837
5779954	22Sep2009-45	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:34	10.00	0926510610837
Cal3asQC1b	22Sep2009-46	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:5	10.00	N/A
5779955	22Sep2009-47	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:35	10.00	0926510610837
5781382BKG	22Sep2009-48	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:36	10.00	0926510610837
5781382MS	22Sep2009-49	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:37	10.00	0926510610837
5781382MSD	22Sep2009-50	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:38	10.00	0926510610837
ICV/LCS2	22Sep2009-51	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:39	10.00	0926510610837
LCSD2	22Sep2009-52	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:40	10.00	0926510610837
Cal4asQC2b	22Sep2009-53	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles	E:6	10.00	N/A

Analyst: JW 1543 9/24/2009

9/24/09

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-22Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Instrument No.	TQU01408
Analyst	JW01543

Identification

Component Name:	1,1-Dimethylhydrazine
Detector Type:	MS
Filter:	+ c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]
1st Trace Type:	TIC
Operator:	None
2nd Trace Type:	N/A
Mass Range 1 (m/z):	N/A
Mass Range 2 (m/z):	N/A
Base Peak(BP):	N/A
Mass Range(MR):	N/A

Retention Time

Expected RT (min):	6.64000
Window (sec):	20.00000
View Width (min):	3.00000
RT Reference:	No
Adjust Expected RT:	No
Adjust Using:	N/A

Detection Options

Peak Detection Algorithm:	Genesis
Smoothing Points:	1

Genesis Peak Integration

S/N Threshold:	1.00
Valley Detection:	Disabled
Expected Peak Width (sec):	N/A
Genesis Constrain Peak Width:	No
Genesis Peak Height (%):	N/A
Genesis Tailing Factor:	N/A

Genesis Peak Detection

Genesis Identify By:	Nearest RT
Genesis Minimum Peak Height (S/N):	3.00
Genesis Ion Ratio Confirmation:	No
Genesis Window %:	N/A
Genesis Qualifier Ion Coelution (min):	N/A

Genesis Advanced Detection Options

Baseline (Global)

Baseline Noise Tolerance (%):	10.0
Minimum Number of Scans in Baseline:	16
Baseline Noise Rejection Factor:	2.0

Calibration

Component Type:	Target Compound

Internal Standard

ISTD Amount:	N/A
ISTD Units:	N/A

Target Compounds

Concentration of Calibration Standards

Level	Amount
1	0.500 ng/mL
2	1.000 ng/mL
3	2.500 ng/mL
4	5.000 ng/mL
5	12.500 ng/mL
6	25.000 ng/mL
7	50.000 ng/mL
8	125.000 ng/mL

Concentration of CCV Standards

Level	Amount
CCV1	2.500 ng/mL
CCV2	5.000 ng/mL
CCV3	12.500 ng/mL

GLM23 0169

There is no signature data to report.

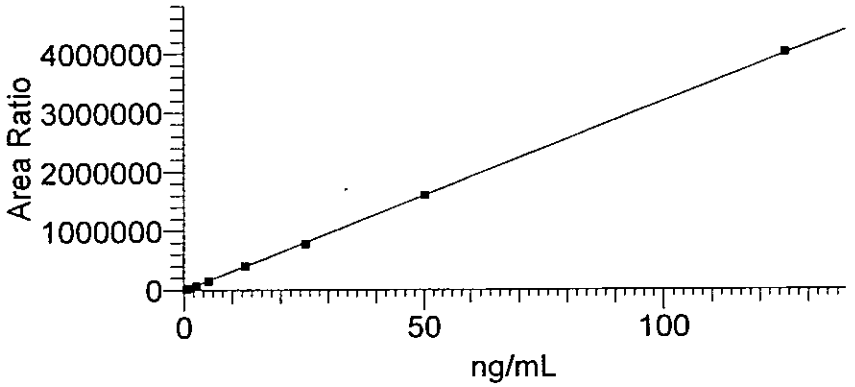
Lancaster Laboratories

ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By:	External Standard

1,1-Dimethylhydrazine
Y = -2900.06+31882.9*X R^2 = 0.9996 W: 1/X



Sample ID	Sample Type	Level	Exclude	Integration Type	Response	Specified Conc	Units	Calc Amt	% Diff
Cal1	Standard	1	N/A	Method Settings	14115	0.500	ng/mL	0.534	6.74
Cal2	Standard	2	N/A	Method Settings	31271	1.000	ng/mL	1.072	7.18
Cal3	Standard	3	N/A	Method Settings	69548	2.500	ng/mL	2.272	-9.11
Cal4	Standard	4	N/A	Method Settings	150172	5.000	ng/mL	4.801	-3.98
Cal5	Standard	5	N/A	Method Settings	402272	12.500	ng/mL	12.708	1.67
Cal6	Standard	6	N/A	Method Settings	765719	25.000	ng/mL	24.108	-3.57
Cal7	Standard	7	N/A	Method Settings	1598480	50.000	ng/mL	50.227	0.45
Cal8	Standard	8	N/A	Method Settings	4007276	125.000	ng/mL	125.778	0.62
Cal3asQC1a	QC	CCV1	N/A	Method Settings	75026	2.500	ng/mL	2.444	-2.23
Cal4asQC2a	QC	CCV2	N/A	Method Settings	166124	5.000	ng/mL	5.301	6.03
Cal5asQC3a	QC	CCV3	N/A	Method Settings	419251	12.500	ng/mL	13.241	5.93
Cal3asQC1b	QC	CCV1	N/A	Method Settings	76699	2.500	ng/mL	2.497	-0.14
Cal4asQC2b	QC	CCV2	N/A	Method Settings	173680	5.000	ng/mL	5.538	10.77

Analyst: JW 1543 9/24/2009
[illegible] 9/24/09

OLH23 0170

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-22Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Instrument No.	TQU01408
Analyst	JW01543

Identification

Component Name:	Hydrazine
Detector Type:	MS
Filter:	+ c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]
1st Trace Type:	TIC
Operator:	None
2nd Trace Type:	N/A
Mass Range 1 (m/z):	N/A
Mass Range 2 (m/z):	N/A
Base Peak(BP):	N/A
Mass Range(MR):	N/A

Retention Time

Expected RT (min):	8.95000
Window (sec):	20.00000
View Width (min):	3.00000
RT Reference:	No
Adjust Expected RT:	No
Adjust Using:	N/A

Detection Options

Peak Detection Algorithm:	Genesis
Smoothing Points:	1

Genesis Peak Integration

S/N Threshold:	1.00
Valley Detection:	Disabled
Expected Peak Width (sec):	N/A
Genesis Constrain Peak Width:	No
Genesis Peak Height (%):	N/A
Genesis Tailing Factor:	N/A

Genesis Peak Detection

Genesis Identify By:	Nearest RT
Genesis Minimum Peak Height (S/N):	3.00
Genesis Ion Ratio Confirmation:	No
Genesis Window %:	N/A
Genesis Qualifier Ion Coelution (min):	N/A

Genesis Advanced Detection Options

Baseline (Global)

Baseline Noise Tolerance (%):	10.0
Minimum Number of Scans in Baseline:	16
Baseline Noise Rejection Factor:	2.0

Calibration

Component Type:	Target Compound

Internal Standard

ISTD Amount:	N/A
ISTD Units:	N/A

Target Compounds

Concentration of Calibration Standards

Level	Amount
1	0.100 ng/mL
2	0.200 ng/mL
3	0.500 ng/mL
4	1.000 ng/mL
5	2.500 ng/mL
6	5.000 ng/mL
7	10.000 ng/mL
8	25.000 ng/mL

Concentration of CCV Standards

Level	Amount
CCV1	0.500 ng/mL
CCV2	1.000 ng/mL
CCV3	2.500 ng/mL

OLN23 0171

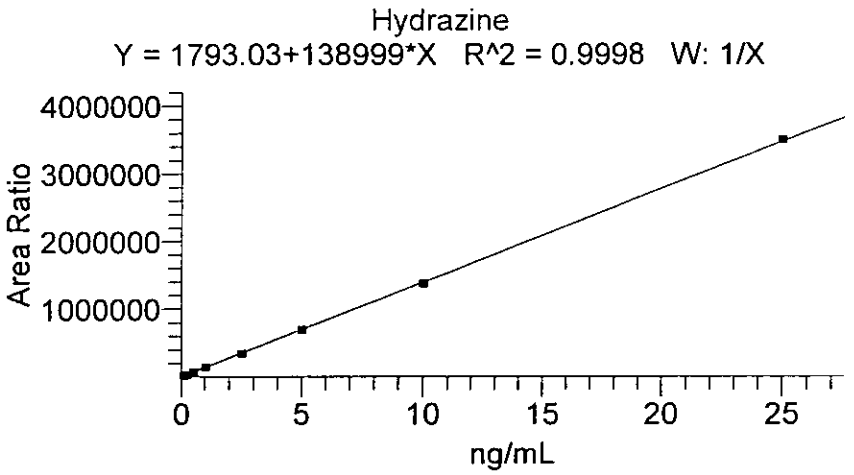
There is no signature data to report.

Lancaster Laboratories

ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By:	External Standard



Sample ID	Sample Type	Level	Exclude	Integration Type	Response	Specified Conc	Units	Calc Amt	% Diff
Cal1	Standard	1	N/A	Method Settings	17478	0.100	ng/mL	0.113	12.84
Cal2	Standard	2	N/A	Method Settings	29177	0.200	ng/mL	0.197	-1.50
Cal3	Standard	3	N/A	Method Settings	66020	0.500	ng/mL	0.462	-7.59
Cal4	Standard	4	N/A	Method Settings	138023	1.000	ng/mL	0.980	-1.99
Cal5	Standard	5	N/A	Method Settings	344066	2.500	ng/mL	2.462	-1.50
Cal6	Standard	6	N/A	Method Settings	696044	5.000	ng/mL	4.995	-0.11
Cal7	Standard	7	N/A	Method Settings	1379766	10.000	ng/mL	9.914	-0.86
Cal8	Standard	8	N/A	Method Settings	3501440	25.000	ng/mL	25.177	0.71
Cal3asQC1a	QC	CCV1	N/A	Method Settings	70168	0.500	ng/mL	0.492	-1.62
Cal4asQC2a	QC	CCV2	N/A	Method Settings	138281	1.000	ng/mL	0.982	-1.81
Cal5asQC3a	QC	CCV3	N/A	Method Settings	331653	2.500	ng/mL	2.373	-5.08
Cal3asQC1b	QC	CCV1	N/A	Method Settings	65320	0.500	ng/mL	0.457	-8.59
Cal4asQC2b	QC	CCV2	N/A	Method Settings	133481	1.000	ng/mL	0.947	-5.26

Analyst: JW 1543 9/24/2004
9/24/04

0LN23 0172

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-22Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Instrument No.	TQU01408
Analyst	JW01543

Identification

Component Name:	Monomethylhydrazine
Detector Type:	MS
Filter:	+ c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]
1st Trace Type:	TIC
Operator:	None
2nd Trace Type:	N/A
Mass Range 1 (m/z):	N/A
Mass Range 2 (m/z):	N/A
Base Peak(BP):	N/A
Mass Range(MR):	N/A

Retention Time

Expected RT (min):	4.94000
Window (sec):	20.00000
View Width (min):	3.00000
RT Reference:	No
Adjust Expected RT:	No
Adjust Using:	N/A

Detection Options

Peak Detection Algorithm:	Genesis
Smoothing Points:	1

Genesis Peak Integration

S/N Threshold:	1.00
Valley Detection:	Disabled
Expected Peak Width (sec):	N/A
Genesis Constrain Peak Width:	No
Genesis Peak Height (%):	N/A
Genesis Tailing Factor:	N/A

Genesis Peak Detection

Genesis Identify By:	Nearest RT
Genesis Minimum Peak Height (S/N):	3.00
Genesis Ion Ratio Confirmation:	No
Genesis Window %:	N/A
Genesis Qualifier Ion Coelution (min):	N/A

Genesis Advanced Detection Options

Baseline (Global)

Baseline Noise Tolerance (%):	10.0
Minimum Number of Scans in Baseline:	16
Baseline Noise Rejection Factor:	2.0

Calibration

Component Type:	Target Compound

Internal Standard

ISTD Amount:	N/A
ISTD Units:	N/A

Target Compounds

Concentration of Calibration Standards

Level	Amount
1	0.500 ng/mL
2	1.000 ng/mL
3	2.500 ng/mL
4	5.000 ng/mL
5	12.500 ng/mL
6	25.000 ng/mL
7	50.000 ng/mL
8	125.000 ng/mL

Concentration of CCV Standards

Level	Amount
CCV1	2.500 ng/mL
CCV2	5.000 ng/mL
CCV3	12.500 ng/mL

OLN23 0173

There is no signature data to report.

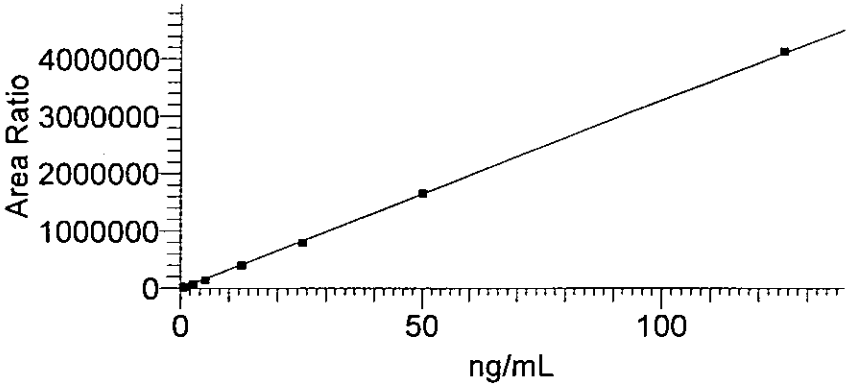
Lancaster Laboratories

ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By:	External Standard

Monomethylhydrazine
Y = -3374.99+32803.4*X R^2 = 0.9994 W: 1/X



Sample ID	Sample Type	Level	Exclude	Integration Type	Response	Specified Conc	Units	Calc Amt	% Diff
Cal1	Standard	1	N/A	Method Settings	15029	0.500	ng/mL	0.561	12.21
Cal2	Standard	2	N/A	Method Settings	31158	1.000	ng/mL	1.053	5.27
Cal3	Standard	3	N/A	Method Settings	75193	2.500	ng/mL	2.395	-4.20
Cal4	Standard	4	N/A	Method Settings	144141	5.000	ng/mL	4.497	-10.06
Cal5	Standard	5	N/A	Method Settings	400220	12.500	ng/mL	12.303	-1.57
Cal6	Standard	6	N/A	Method Settings	787106	25.000	ng/mL	24.098	-3.61
Cal7	Standard	7	N/A	Method Settings	1655472	50.000	ng/mL	50.569	1.14
Cal8	Standard	8	N/A	Method Settings	4130637	125.000	ng/mL	126.024	0.82
Cal3asQC1a	QC	CCV1	N/A	Method Settings	75401	2.500	ng/mL	2.401	-3.94
Cal4asQC2a	QC	CCV2	N/A	Method Settings	151649	5.000	ng/mL	4.726	-5.48
Cal5asQC3a	QC	CCV3	N/A	Method Settings	402501	12.500	ng/mL	12.373	-1.02
Cal3asQC1b	QC	CCV1	N/A	Method Settings	82178	2.500	ng/mL	2.608	4.32
Cal4asQC2b	QC	CCV2	N/A	Method Settings	161906	5.000	ng/mL	5.039	0.77

Analyst : JW 1543 9/24/2009
[illegible] 9/24/09

GLN23 6174

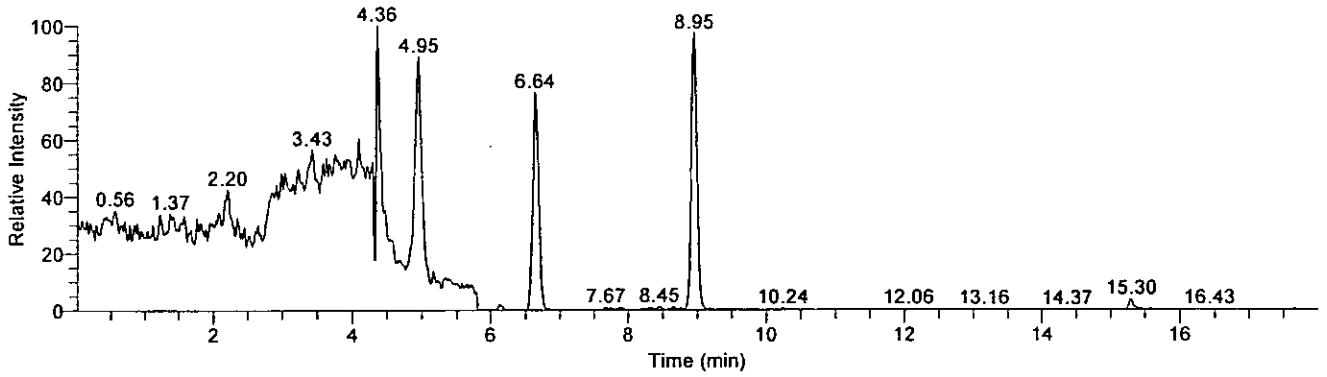
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-4.raw
Sample ID:	Cal1
Sample Type:	Standard
Level:	1
Acquisition Date:	Tuesday, September 22, 2009 1:44:06 PM
Vial:	E:3
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-4 - TIC RT: 0.00 - 17.99 NL: 3.13E3

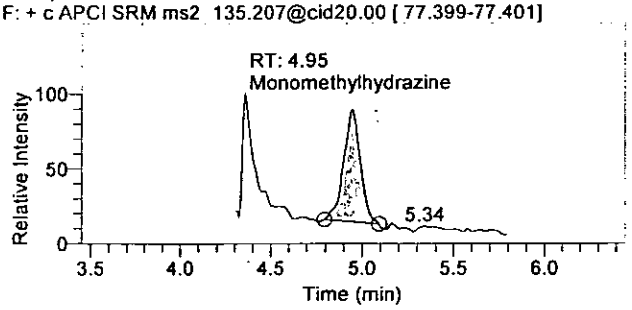


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:3, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-4, Comments: , ID: Cal1

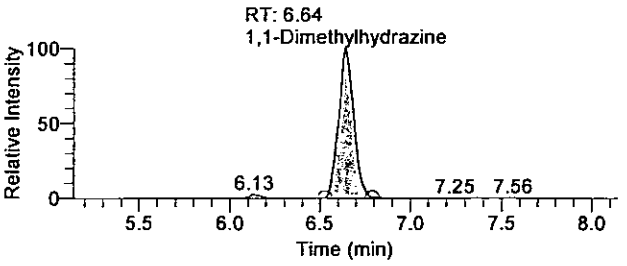
Monomethylhydrazine

22Sep2009-4 - TIC RT: 3.45 - 6.45 NL: 3.13E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



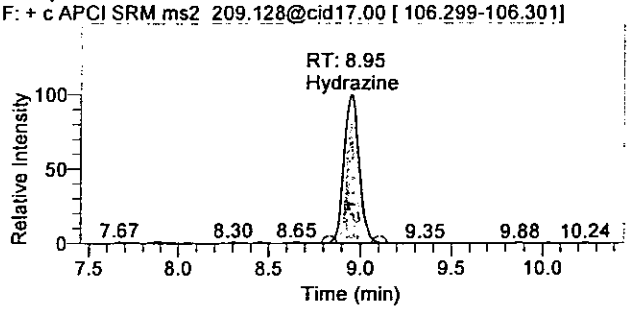
1,1-Dimethylhydrazine

22Sep2009-4 - TIC RT: 5.14 - 8.14 NL: 2.40E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-4 - TIC RT: 7.45 - 10.45 NL: 3.04E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0175

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal1	Method Settings	Hydrazine	8.95	17478	0.113	ng/mL
Cal1	Method Settings	1,1-Dimethylhydrazine	6.64	14115	0.534	ng/mL
Cal1	Method Settings	Monomethylhydrazine	4.95	15029	0.561	ng/mL

Analyst: JW 1543 9/24/2009
[illegible]/112 9/24/09

There is no signature data to report.

Lancaster Laboratories

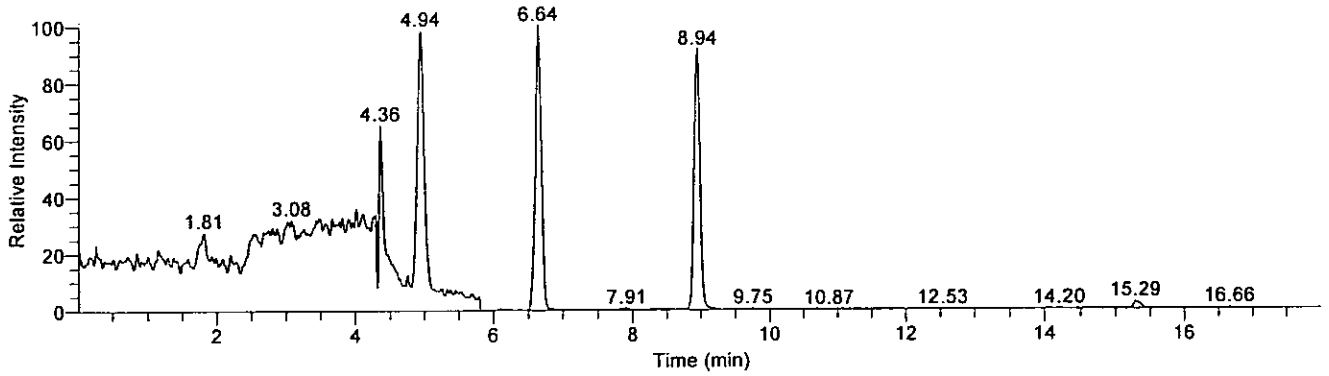
Printed: Wednesday, September 23, 2009, 09:27:05

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-5.raw
Sample ID:	Cal2
Sample Type:	Standard
Level:	2
Acquisition Date:	Tuesday, September 22, 2009 2:02:50 PM
Vial:	E:4
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-5 - TIC RT: 0.00 - 18.00 NL: 5.21E3

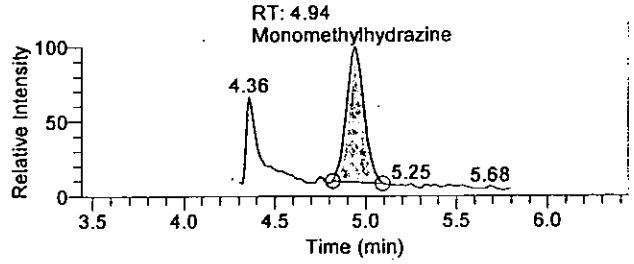


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:4, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-5, Comments: , ID: Cal2

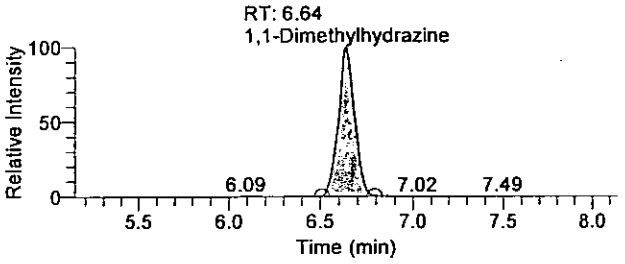
Monomethylhydrazine

22Sep2009-5 - TIC RT: 3.44 - 6.44 NL: 5.12E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



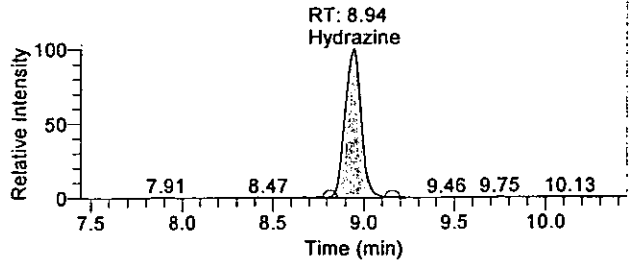
1,1-Dimethylhydrazine

22Sep2009-5 - TIC RT: 5.14 - 8.14 NL: 5.21E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-5 - TIC RT: 7.44 - 10.44 NL: 4.76E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLH23 0377

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal2	Method Settings	Hydrazine	8.94	29177	0.197	ng/mL
Cal2	Method Settings	1,1-Dimethylhydrazine	6.64	31271	1.072	ng/mL
Cal2	Method Settings	Monomethylhydrazine	4.94	31158	1.053	ng/mL

Analyst : JW 1543 9/24/2009
9/24/09

OLH23 0170

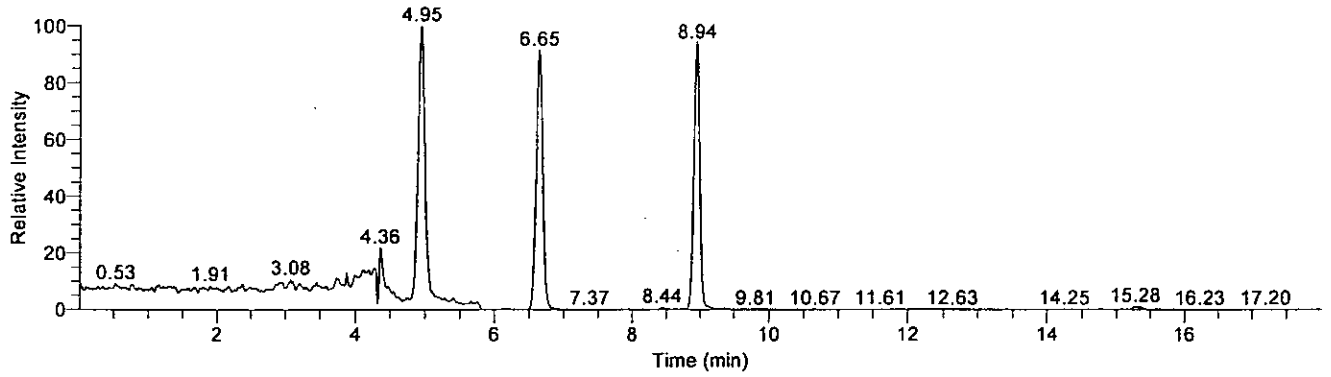
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-6.raw
Sample ID:	Cal3
Sample Type:	Standard
Level:	3
Acquisition Date:	Tuesday, September 22, 2009 2:21:33 PM
Vial:	E:5
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-6 - TIC RT: 0.00 - 18.00 NL: 1.16E4

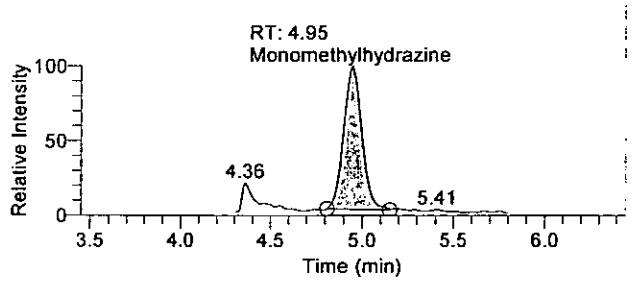


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-6, Comments: , ID: Cal3

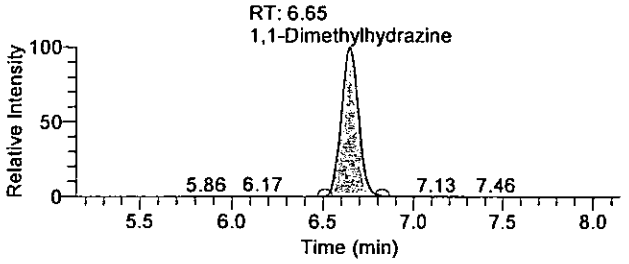
Monomethylhydrazine

22Sep2009-6 - TIC RT: 3.45 - 6.45 NL: 1.16E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



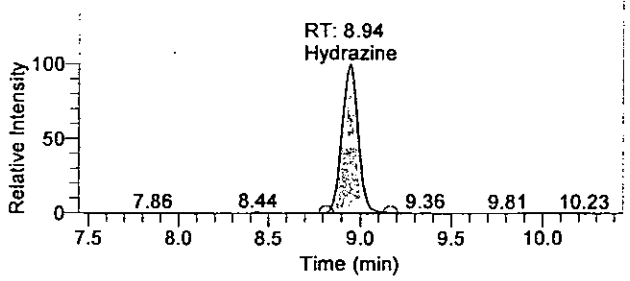
1,1-Dimethylhydrazine

22Sep2009-6 - TIC RT: 5.15 - 8.15 NL: 1.06E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-6 - TIC RT: 7.44 - 10.44 NL: 1.09E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLR23 0179

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3	Method Settings	Hydrazine	8.94	66020	0.462	ng/mL
Cal3	Method Settings	1,1-Dimethylhydrazine	6.65	69548	2.272	ng/mL
Cal3	Method Settings	Monomethylhydrazine	4.95	75193	2.395	ng/mL

Analyst: JW 1543 9/24/2009
9/24/09

01N23 0180

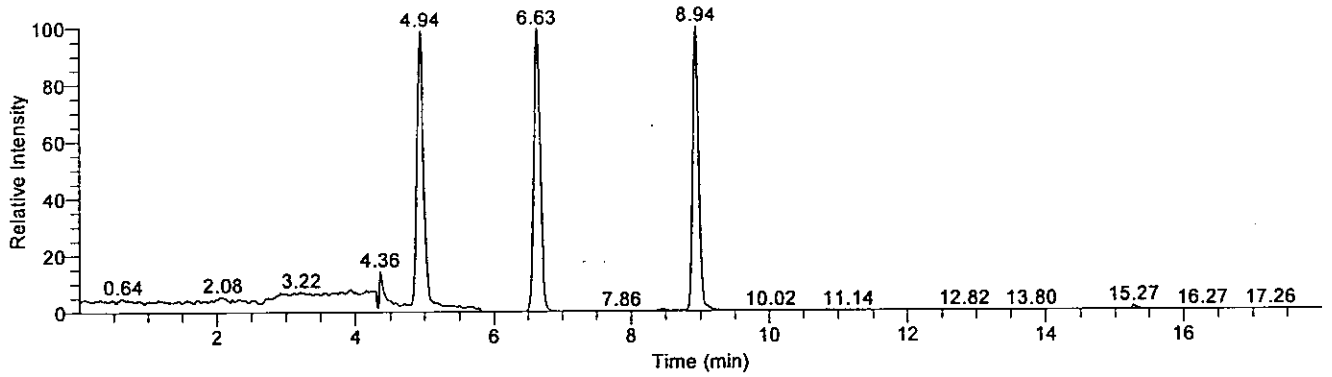
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-7.raw
Sample ID:	Cal4
Sample Type:	Standard
Level:	4
Acquisition Date:	Tuesday, September 22, 2009 2:40:17 PM
Vial:	E:6
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-7 - TIC RT: 0.00 - 17.99 NL: 2.31E4

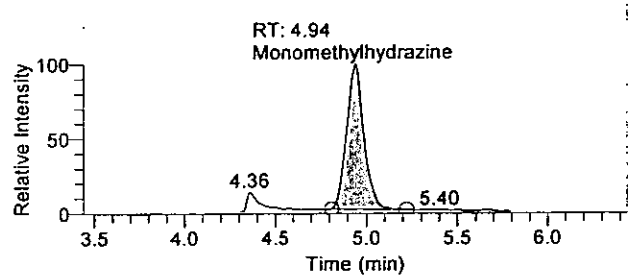


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-7, Comments: , ID: Cal4

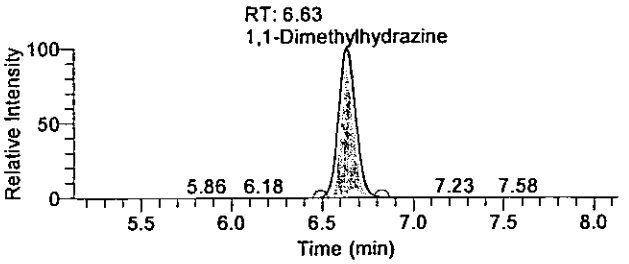
Monomethylhydrazine

22Sep2009-7 - TIC RT: 3.44 - 6.44 NL: 2.27E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



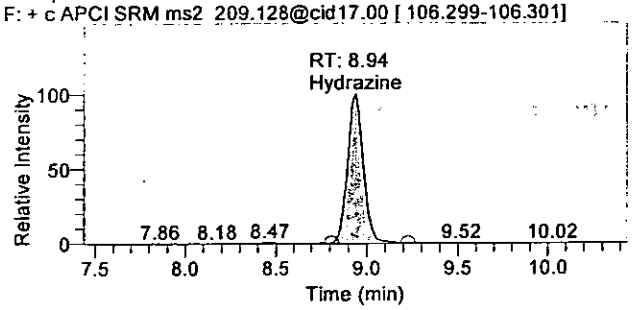
1,1-Dimethylhydrazine

22Sep2009-7 - TIC RT: 5.13 - 8.13 NL: 2.29E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-7 - TIC RT: 7.44 - 10.44 NL: 2.31E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0181

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4	Method Settings	Hydrazine	8.94	138023	0.980	ng/mL
Cal4	Method Settings	1,1-Dimethylhydrazine	6.63	150172	4.801	ng/mL
Cal4	Method Settings	Monomethylhydrazine	4.94	144141	4.497	ng/mL

Analyst: JW 1543 9/24/2009
9/24/09

There is no signature data to report.

Lancaster Laboratories

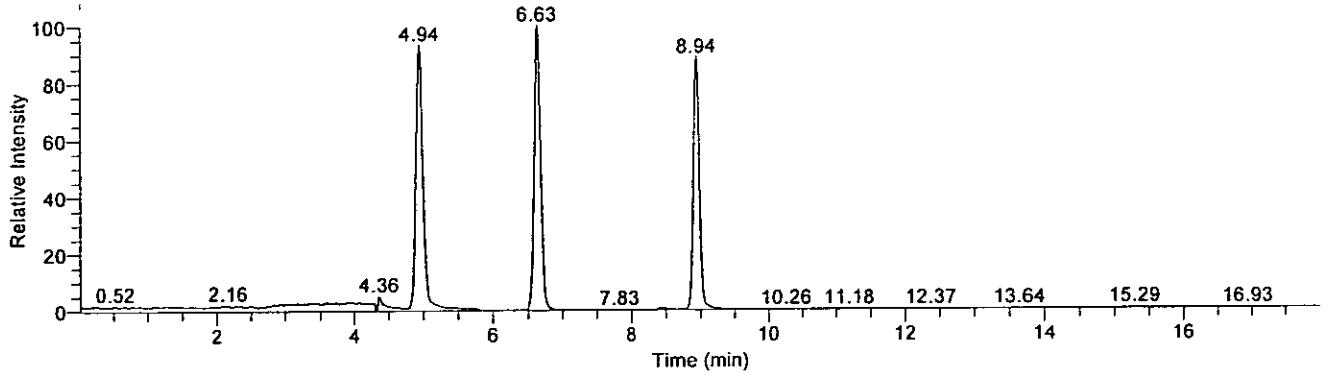
Printed: Wednesday, September 23, 2009, 09:27:06

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-8.raw
Sample ID:	Cal5
Sample Type:	Standard
Level:	5
Acquisition Date:	Tuesday, September 22, 2009 2:59:01 PM
Vial:	E:7
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-8 - TIC RT: 0.00 - 18.00 NL: 6.31E4

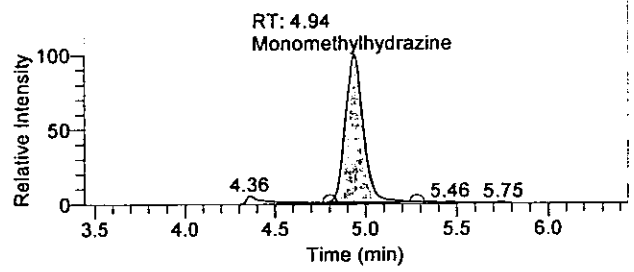


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:7, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-8, Comments: , ID: Cal5

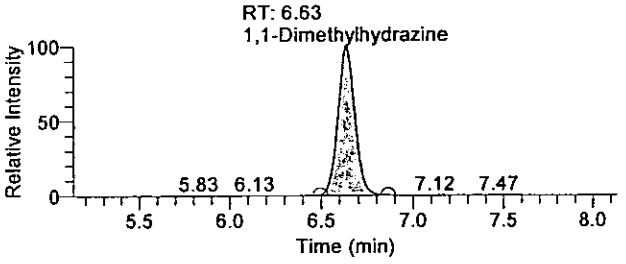
Monomethylhydrazine

22Sep2009-8 - TIC RT: 3.44 - 6.44 NL: 5.88E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



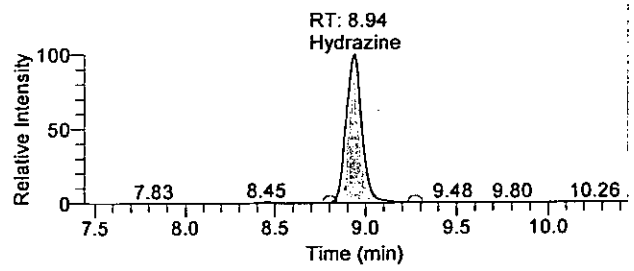
1,1-Dimethylhydrazine

22Sep2009-8 - TIC RT: 5.13 - 8.13 NL: 6.31E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-8 - TIC RT: 7.44 - 10.44 NL: 5.59E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N23 0183

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5	Method Settings	Hydrazine	8.94	344066	2.462	ng/mL
Cal5	Method Settings	1,1-Dimethylhydrazine	6.63	402272	12.708	ng/mL
Cal5	Method Settings	Monomethylhydrazine	4.94	400220	12.303	ng/mL

Analyst : JW 1543 9/24/2009
9/24/09

OLHZ3 0184

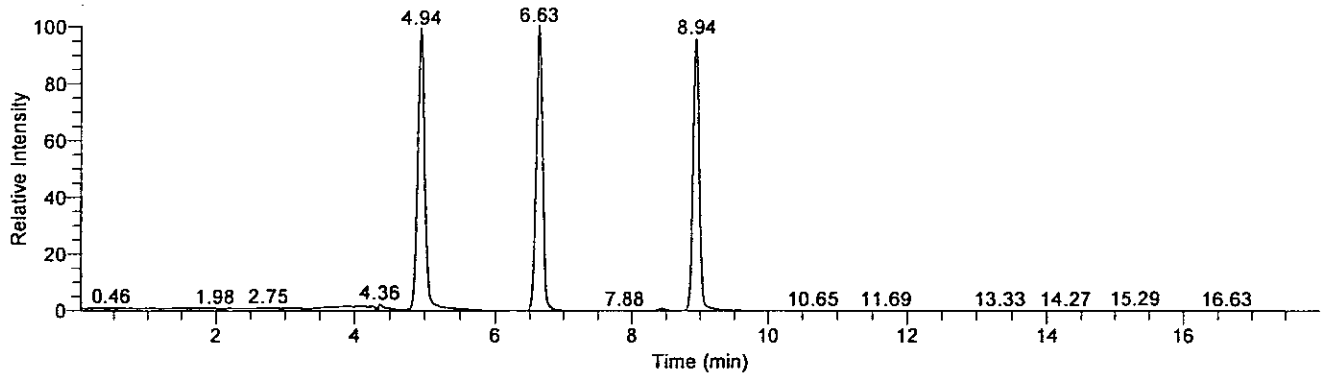
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-9.raw
Sample ID:	Cal6
Sample Type:	Standard
Level:	6
Acquisition Date:	Tuesday, September 22, 2009 3:17:47 PM
Vial:	E:8
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-9 - TIC RT: 0.00 - 17.99 NL: 1.15E5

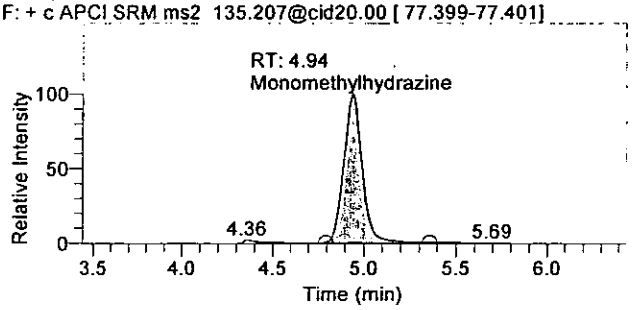


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:8, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-9, Comments: , ID: Cal6

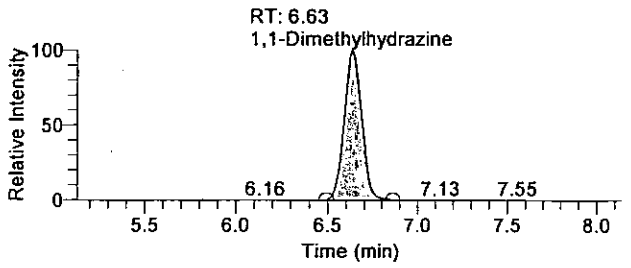
Monomethylhydrazine

22Sep2009-9 - TIC RT: 3.44 - 6.44 NL: 1.14E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



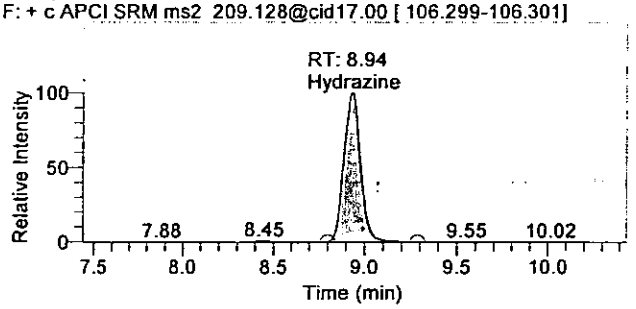
1,1-Dimethylhydrazine

22Sep2009-9 - TIC RT: 5.13 - 8.13 NL: 1.15E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-9 - TIC RT: 7.44 - 10.44 NL: 1.11E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 6185

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal6	Method Settings	Hydrazine	8.94	696044	4.995	ng/mL
Cal6	Method Settings	1,1-Dimethylhydrazine	6.63	765719	24.108	ng/mL
Cal6	Method Settings	Monomethylhydrazine	4.94	787106	24.098	ng/mL

Analyst: JW 1543 9/24/2009
9/24/09

GLN23 0186

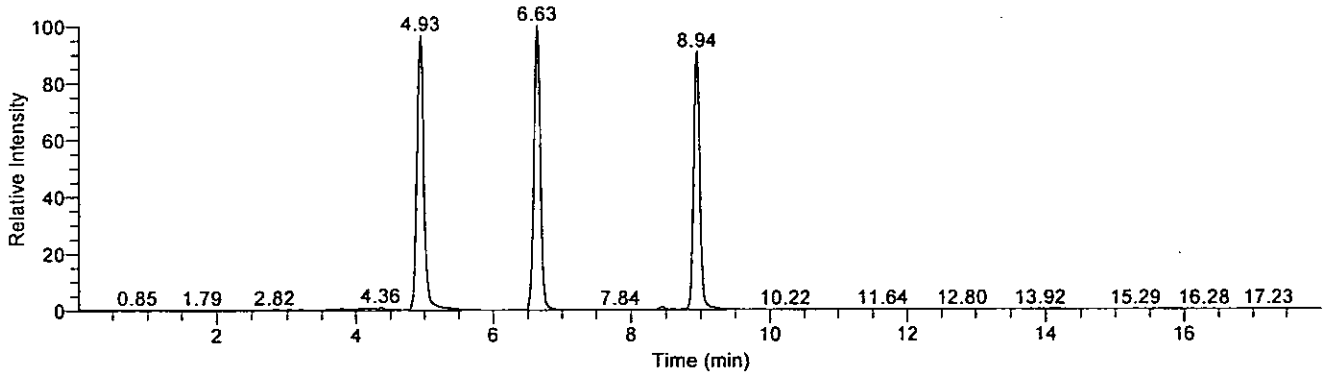
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-10.raw
Sample ID:	Cal7
Sample Type:	Standard
Level:	7
Acquisition Date:	Tuesday, September 22, 2009 3:36:31 PM
Vial:	E:9
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-10 - TIC RT: 0.00 - 18.00 NL: 2.45E5

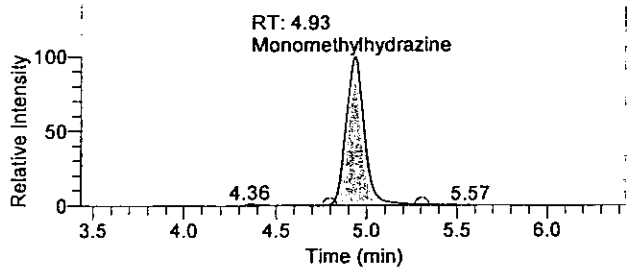


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:9, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-10, Comments: , ID: Cal7

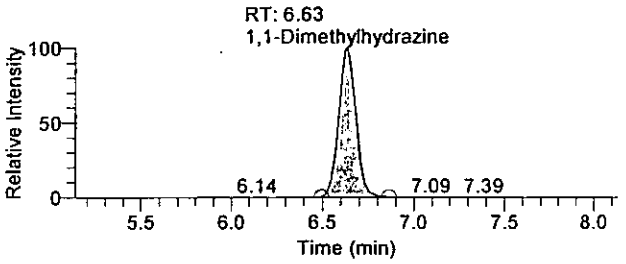
Monomethylhydrazine

22Sep2009-10 - TIC RT: 3.43 - 6.43 NL: 2.37E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



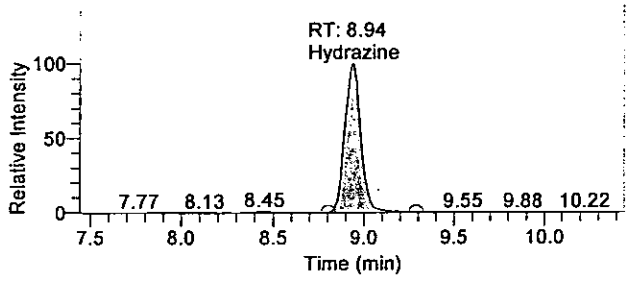
1,1-Dimethylhydrazine

22Sep2009-10 - TIC RT: 5.13 - 8.13 NL: 2.45E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-10 - TIC RT: 7.44 - 10.44 NL: 2.22E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0187

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal7	Method Settings	Hydrazine	8.94	1379766	9.914	ng/mL
Cal7	Method Settings	1,1-Dimethylhydrazine	6.63	1598480	50.227	ng/mL
Cal7	Method Settings	Monomethylhydrazine	4.93	1655472	50.569	ng/mL

Analyst : JW 1543 9/24/2009

9/24/09

OLR23 0188

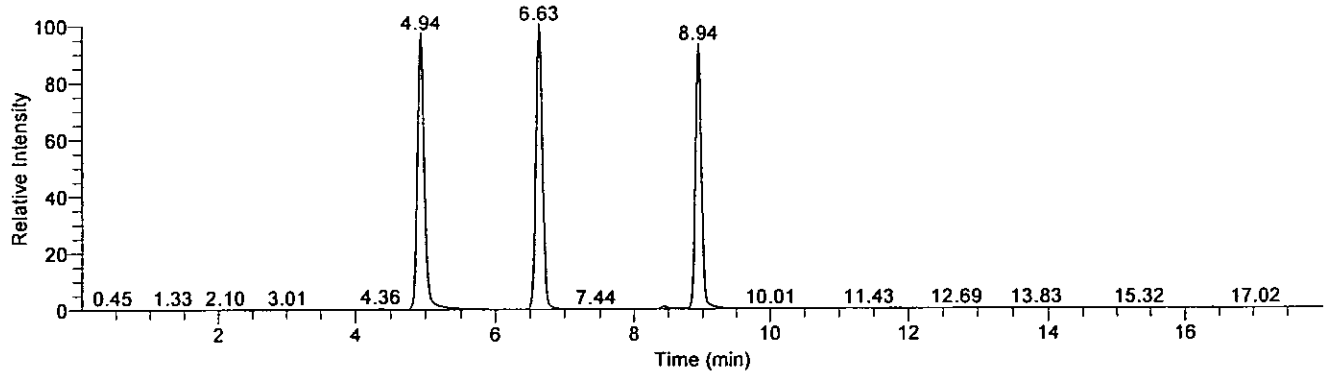
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-11.raw
Sample ID:	Cal8
Sample Type:	Standard
Level:	8
Acquisition Date:	Tuesday, September 22, 2009 3:55:17 PM
Vial:	E:10
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-11 - TIC RT: 0.00 - 18.00 NL: 6.12E5

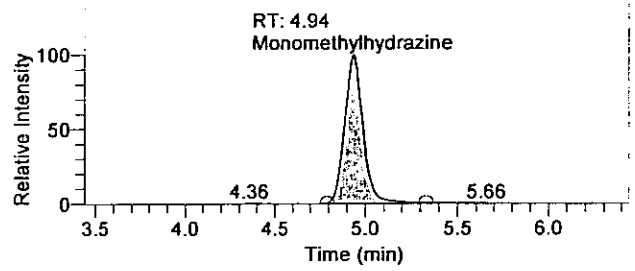


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:10, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-11, Comments: , ID: Cal8

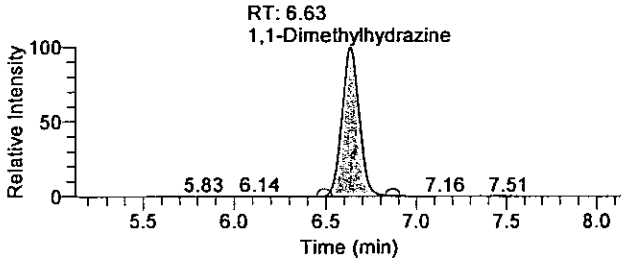
Monomethylhydrazine

22Sep2009-11 - TIC RT: 3.44 - 6.44 NL: 5.93E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



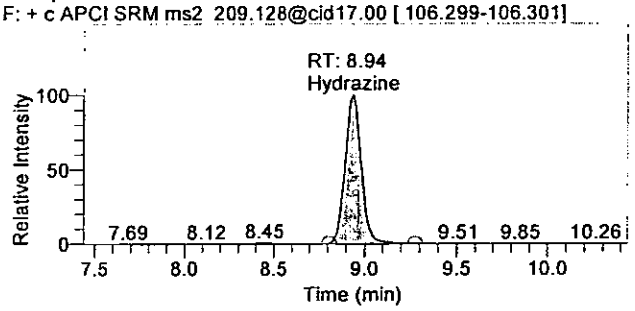
1,1-Dimethylhydrazine

22Sep2009-11 - TIC RT: 5.13 - 8.13 NL: 6.12E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-11 - TIC RT: 7.44 - 10.44 NL: 5.69E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 6189

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal8	Method Settings	Hydrazine	8.94	3501440	25.177	ng/mL
Cal8	Method Settings	1,1-Dimethylhydrazine	6.63	4007276	125.778	ng/mL
Cal8	Method Settings	Monomethylhydrazine	4.94	4130637	126.024	ng/mL

Analyst : JiV 1543 9/24/2009

9/24/09

OLN23 0198

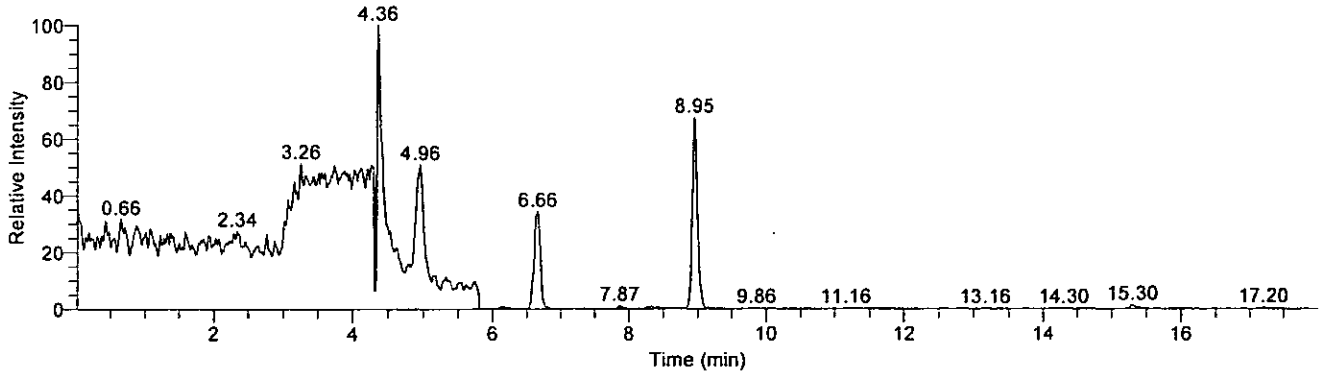
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-3.raw
Sample ID:	MDL
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 1:25:20 PM
Vial:	E:2
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-3 - TIC RT: 0.01 - 17.99 NL: 3.31E3

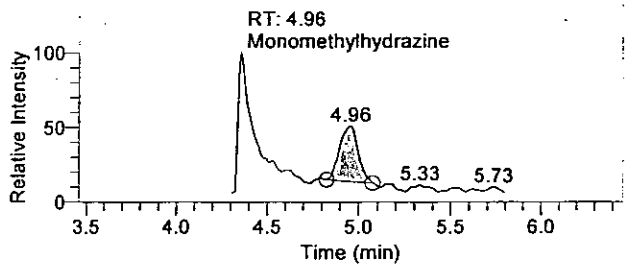


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:2, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-3, Comments: , ID: MDL

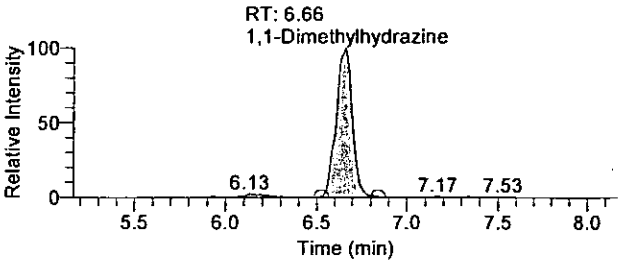
Monomethylhydrazine

22Sep2009-3 - TIC RT: 3.46 - 6.46 NL: 3.31E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



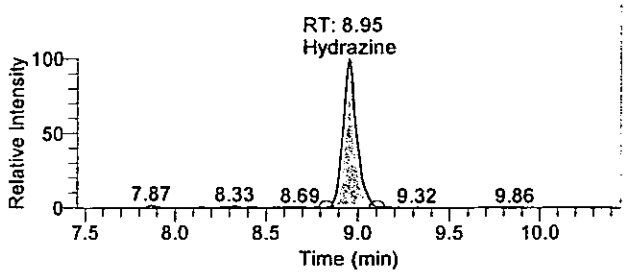
1,1-Dimethylhydrazine

22Sep2009-3 - TIC RT: 5.16 - 8.16 NL: 1.14E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-3 - TIC RT: 7.45 - 10.45 NL: 2.23E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8191

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
MDL	Method Settings	Hydrazine	8.95	11420	0.069	ng/mL
MDL	Method Settings	1,1-Dimethylhydrazine	6.66	7176	0.316	ng/mL
MDL	Method Settings	Monomethylhydrazine	4.96	8543	0.363	ng/mL

Analyst : JW 1543 9/24/2009

9/24/09

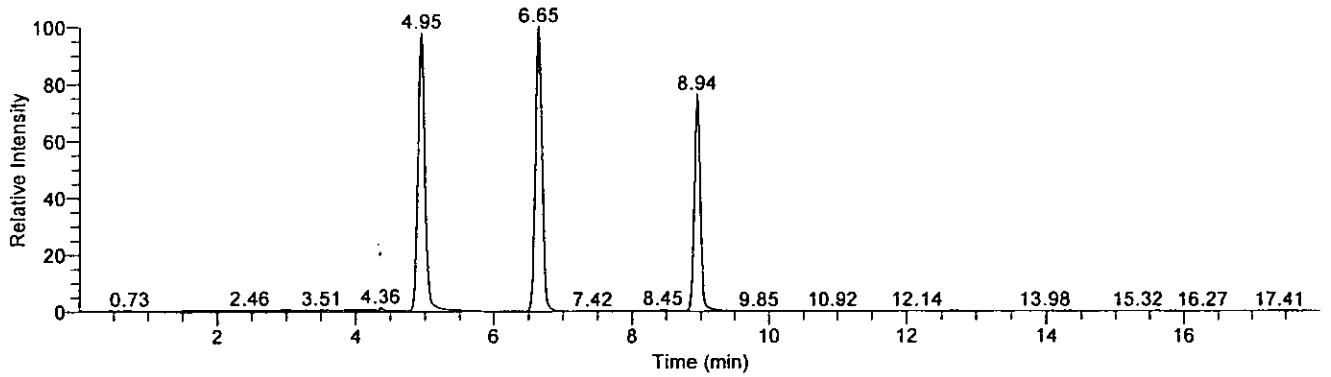
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-22.raw
Sample ID:	ICV
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 7:21:25 PM
Vial:	E:17
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-22 - TIC RT: 0.00 - 18.00 NL: 2.82E5

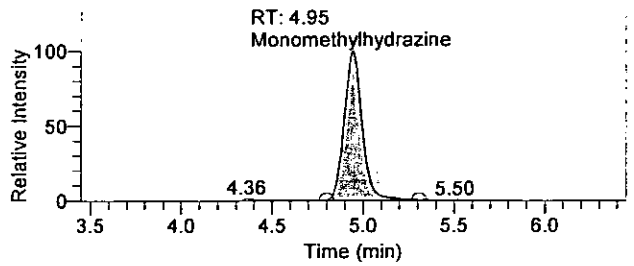


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:17, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-22, Comments: , ID: ICV

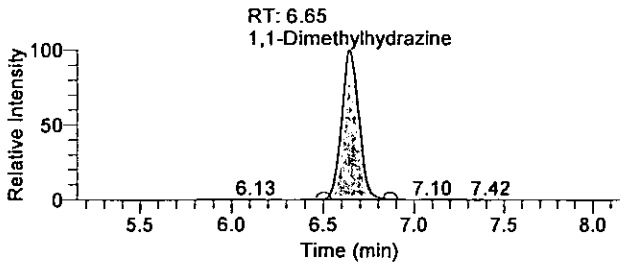
Monomethylhydrazine

22Sep2009-22 - TIC RT: 3.45 - 6.45 NL: 2.76E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



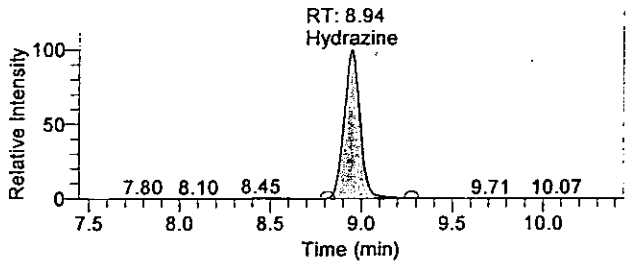
1,1-Dimethylhydrazine

22Sep2009-22 - TIC RT: 5.15 - 8.15 NL: 2.82E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-22 - TIC RT: 7.44 - 10.44 NL: 2.14E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0193

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
ICV	Method Settings	Hydrazine	8.94	1305225	9.377	ng/mL
ICV	Method Settings	1,1-Dimethylhydrazine	6.65	1872053	58.808	ng/mL
ICV	Method Settings	Monomethylhydrazine	4.95	1889107	57.692	ng/mL

Analyst: JW 1543 9/24/2009

9/24/09

GLN23 8194

There is no signature data to report.

Lancaster Laboratories

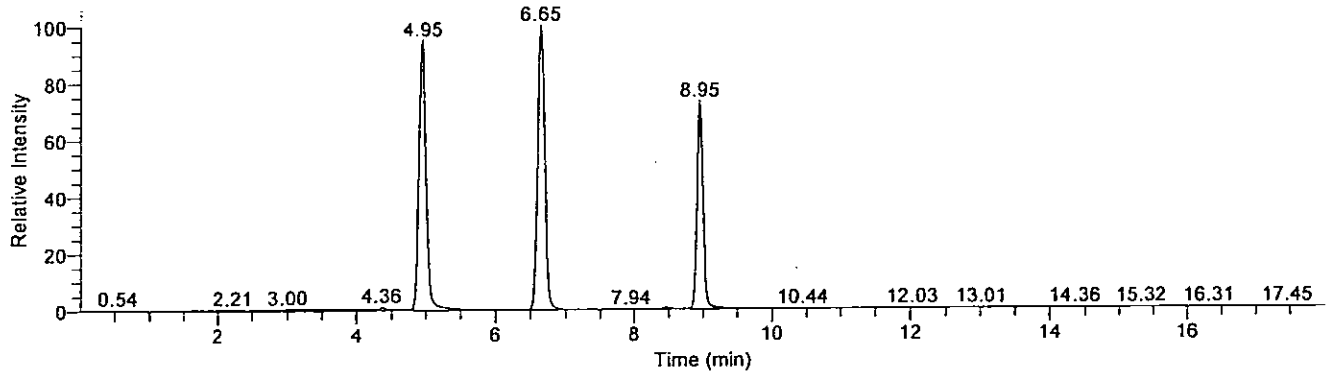
Printed: Wednesday, September 23, 2009, 09:27:17

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-51.raw
Sample ID:	ICV/LCS2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 4:24:58 AM
Vial:	E:39
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-51 - TIC RT: 0.01 - 17.99 NL: 3.47E5

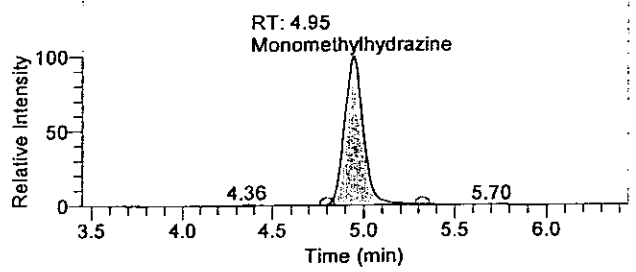


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:39, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-51, Comments: Water prep, ID: ICV/LCS2

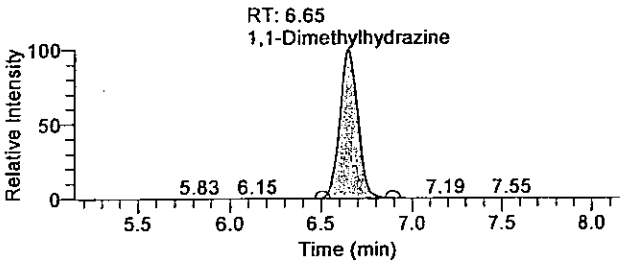
Monomethylhydrazine

22Sep2009-51 - TIC RT: 3.45 - 6.45 NL: 3.29E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



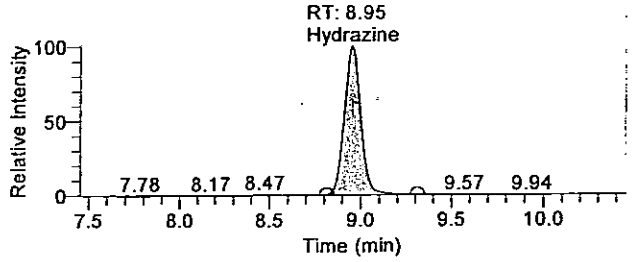
1,1-Dimethylhydrazine

22Sep2009-51 - TIC RT: 5.15 - 8.15 NL: 3.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-51 - TIC RT: 7.45 - 10.45 NL: 2.53E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0195

There is no signature data to report.

Lancaster Laboratories

Printed: Wednesday, September 23, 2009, 09:27:17

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
ICV/LCS2	Method Settings	Hydrazine	8.95	1551219	11.147	ng/mL
ICV/LCS2	Method Settings	1,1-Dimethylhydrazine	6.65	2363540	74.223	ng/mL
ICV/LCS2	Method Settings	Monomethylhydrazine	4.95	2319021	70.797	ng/mL

Analyst : JW 1543 9/24/2009
9/24/09

OLH23 0196

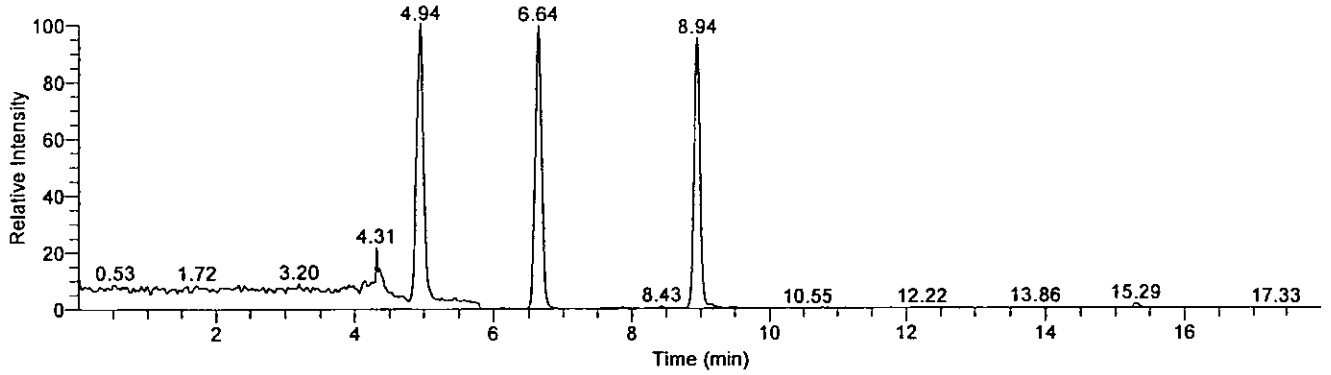
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-13.raw
Sample ID:	Cal3asQC1a
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Tuesday, September 22, 2009 4:32:47 PM
Vial:	E:5
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-13 - TIC RT: 0.00 - 17.99 NL: 1.16E4

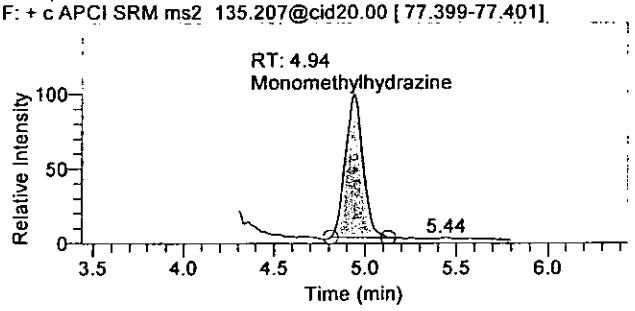


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-13, Comments: , ID: Cal3asQC1a

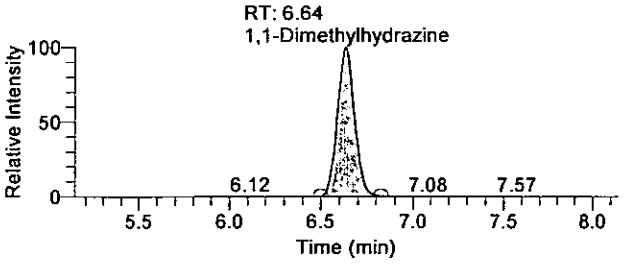
Monomethylhydrazine

22Sep2009-13 - TIC RT: 3.44 - 6.44 NL: 1.16E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



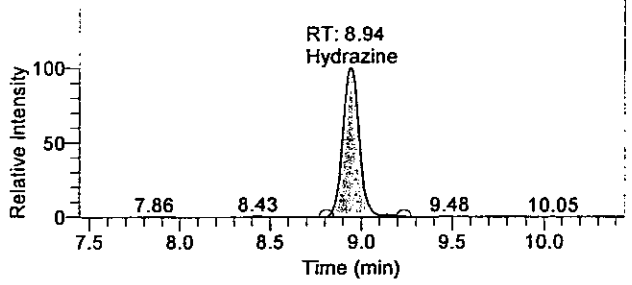
1,1-Dimethylhydrazine

22Sep2009-13 - TIC RT: 5.14 - 8.14 NL: 1.16E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-13 - TIC RT: 7.44 - 10.44 NL: 1.11E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8197

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1a	Method Settings	Hydrazine	8.94	70168	0.492	ng/mL
Cal3asQC1a	Method Settings	1,1-Dimethylhydrazine	6.64	75026	2.444	ng/mL
Cal3asQC1a	Method Settings	Monomethylhydrazine	4.94	75401	2.401	ng/mL

Analyst: JLV 1543 9/24/2009
9/24/09

OLN23 8198

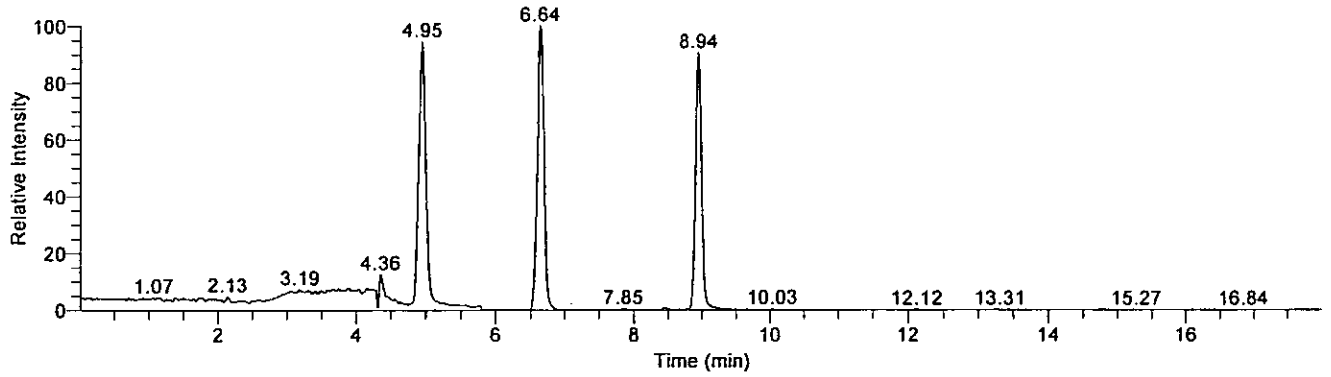
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-24.raw
Sample ID:	Cal4asQC2a
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Tuesday, September 22, 2009 7:58:56 PM
Vial:	E:6
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-24 - TIC RT: 0.00 - 17.99 NL: 2.46E4

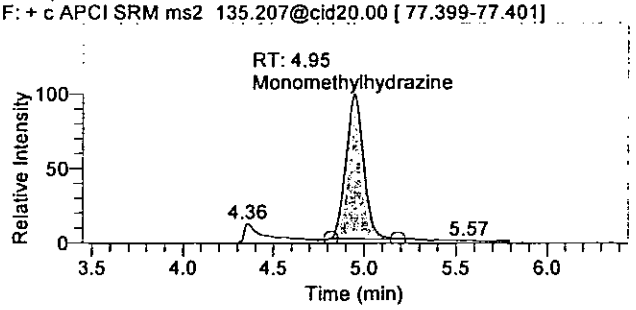


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-24, Comments: , ID: Cal4asQC2a

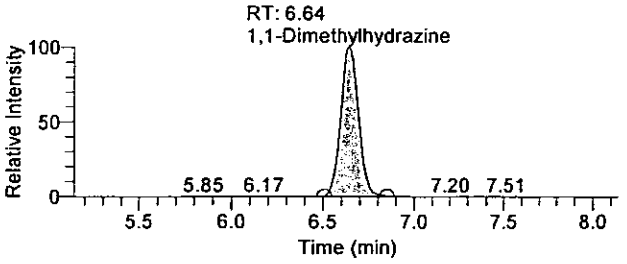
Monomethylhydrazine

22Sep2009-24 - TIC RT: 3.45 - 6.45 NL: 2.32E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



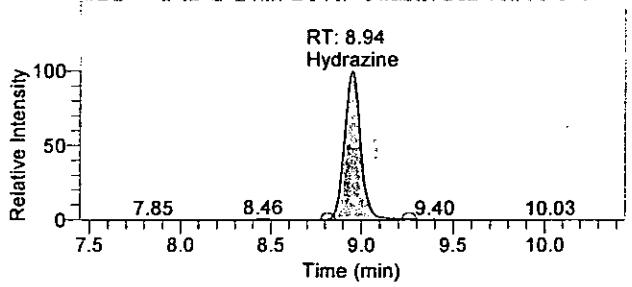
1,1-Dimethylhydrazine

22Sep2009-24 - TIC RT: 5.14 - 8.14 NL: 2.46E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-24 - TIC RT: 7.44 - 10.44 NL: 2.22E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN23 8199

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4asQC2a	Method Settings	Hydrazine	8.94	138281	0.982	ng/mL
Cal4asQC2a	Method Settings	1,1-Dimethylhydrazine	6.64	166124	5.301	ng/mL
Cal4asQC2a	Method Settings	Monomethylhydrazine	4.95	151649	4.726	ng/mL

Analyst : JW 1543 9/24/2009

9/24/09

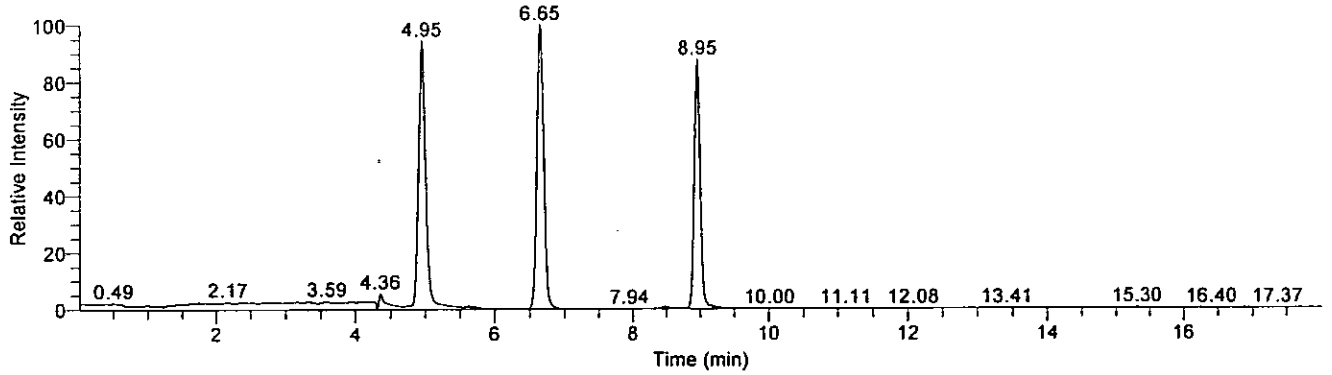
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-35.raw
Sample ID:	Cal5asQC3a
Sample Type:	QC
Level:	CCV3
Acquisition Date:	Tuesday, September 22, 2009 11:25:02 PM
Vial:	E:7
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-35 - TIC RT: 0.00 - 18.00 NL: 6.18E4

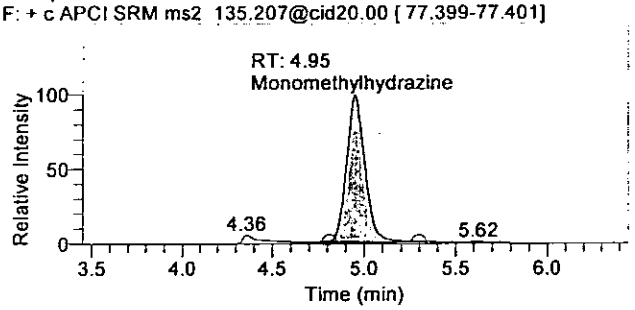


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:7, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-35, Comments: , ID: Cal5asQC3a

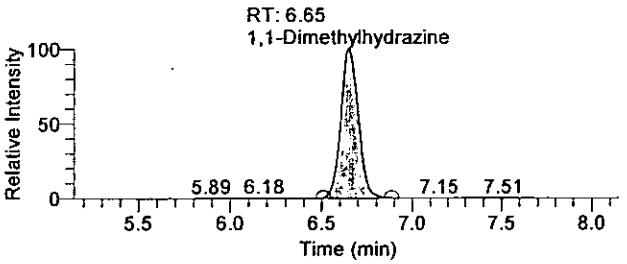
Monomethylhydrazine

22Sep2009-35 - TIC RT: 3.45 - 6.45 NL: 5.83E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



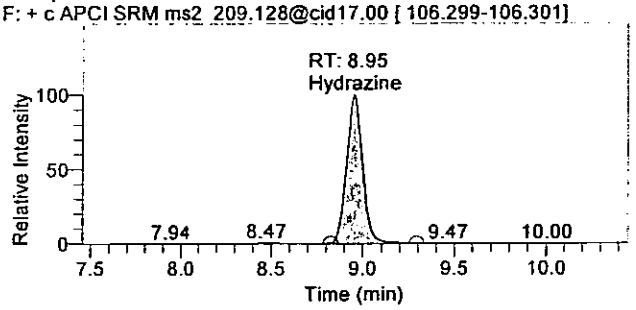
1,1-Dimethylhydrazine

22Sep2009-35 - TIC RT: 5.15 - 8.15 NL: 6.18E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-35 - TIC RT: 7.45 - 10.45 NL: 5.42E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8261

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5asQC3a	Method Settings	Hydrazine	8.95	331653	2.373	ng/mL
Cal5asQC3a	Method Settings	1,1-Dimethylhydrazine	6.65	419251	13.241	ng/mL
Cal5asQC3a	Method Settings	Monomethylhydrazine	4.95	402501	12.373	ng/mL

Analyst : JW 1543 8/24 hoop
[illegible] 8/24/09

OLN23 0202

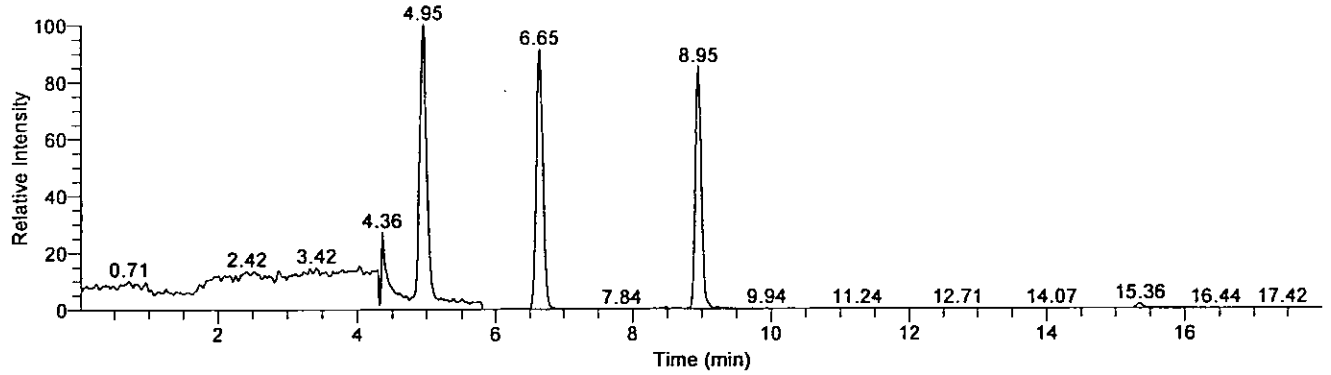
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-46.raw
Sample ID:	Cal3asQC1b
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Wednesday, September 23, 2009 2:51:14 AM
Vial:	E:5
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-46 - TIC RT: 0.00 - 17.99 NL: 1.27E4

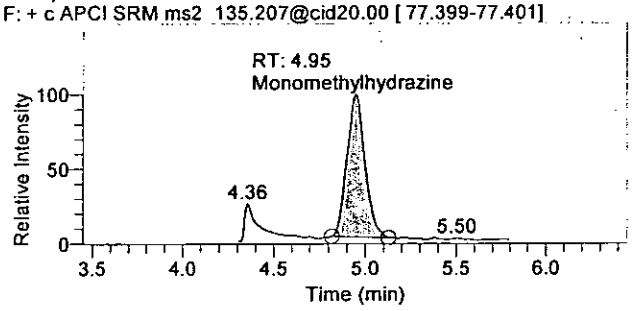


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-46, Comments: , ID: Cal3asQC1b

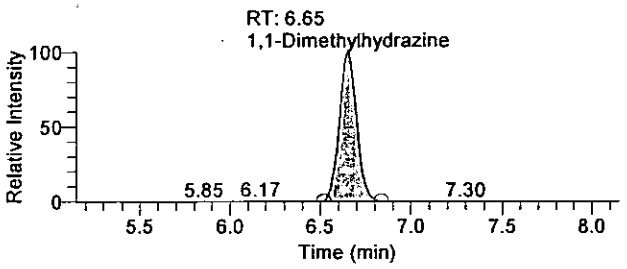
Monomethylhydrazine

22Sep2009-46 - TIC RT: 3.45 - 6.45 NL: 1.27E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



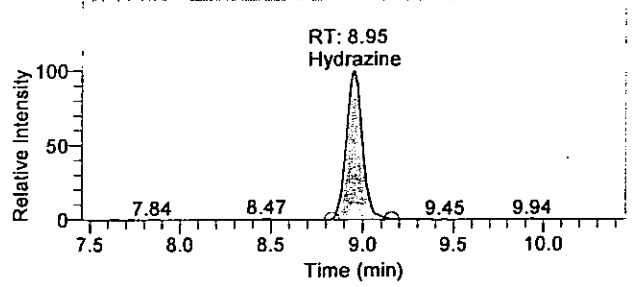
1,1-Dimethylhydrazine

22Sep2009-46 - TIC RT: 5.15 - 8.15 NL: 1.15E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-46 - TIC RT: 7.45 - 10.45 NL: 1.07E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 6283

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1b	Method Settings	Hydrazine	8.95	65320	0.457	ng/mL
Cal3asQC1b	Method Settings	1,1-Dimethylhydrazine	6.65	76699	2.497	ng/mL
Cal3asQC1b	Method Settings	Monomethylhydrazine	4.95	82178	2.608	ng/mL

Analyst : JJV 1543 9/24/2009
8/112 9/24/09

OLN23 0204

There is no signature data to report.

Lancaster Laboratories

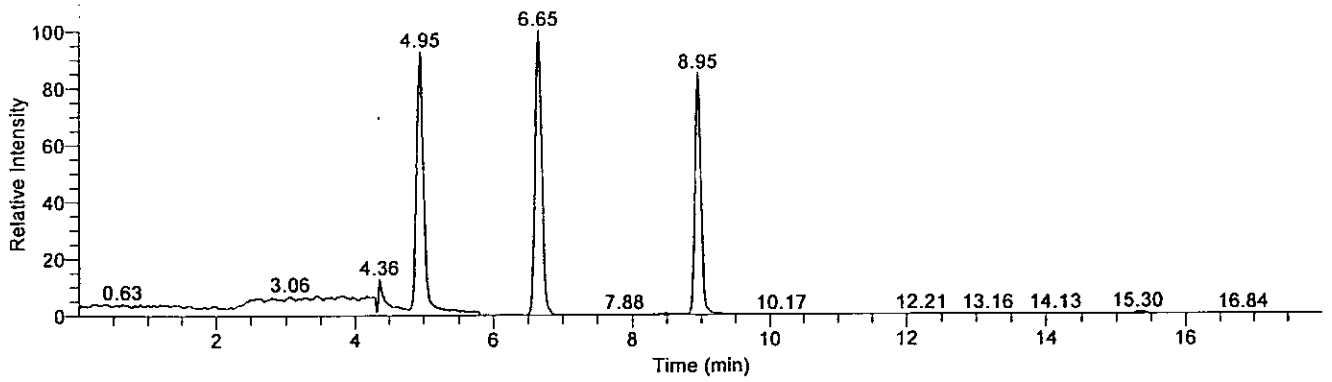
Printed: Wednesday, September 23, 2009, 09:27:17

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	22Sep2009-53.raw
Sample ID:	Cal4asQC2b
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Wednesday, September 23, 2009 5:02:28 AM
Vial:	E:6
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-53 - TIC RT: 0.00 - 17.99 NL: 2.59E4

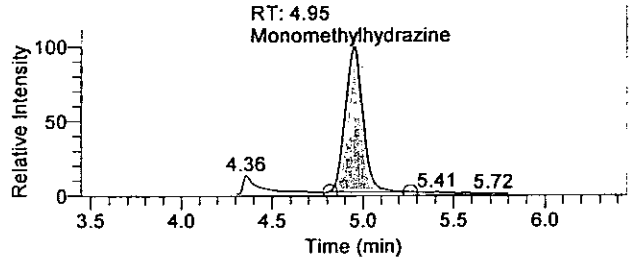


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-53, Comments: , ID: Cal4asQC2b

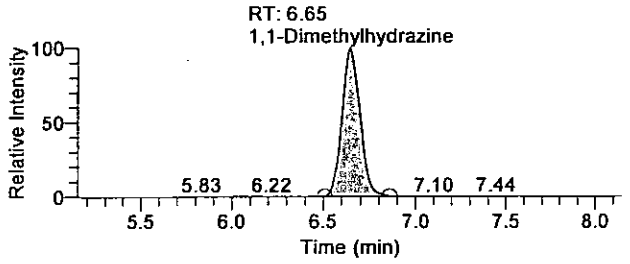
Monomethylhydrazine

22Sep2009-53 - TIC RT: 3.45 - 6.45 NL: 2.40E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



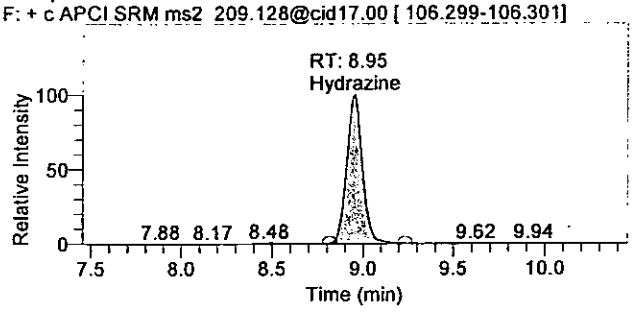
1,1-Dimethylhydrazine

22Sep2009-53 - TIC RT: 5.15 - 8.15 NL: 2.59E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-53 - TIC RT: 7.45 - 10.45 NL: 2.20E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLNZ3 8285

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4asQC2b	Method Settings	Hydrazine	8.95	133481	0.947	ng/mL
Cal4asQC2b	Method Settings	1,1-Dimethylhydrazine	6.65	173680	5.538	ng/mL
Cal4asQC2b	Method Settings	Monomethylhydrazine	4.95	161906	5.039	ng/mL

Analyst: JW 1543 9/24/2009
9/24/09

OLN23 0286

There is no signature data to report.

Raw QC Data

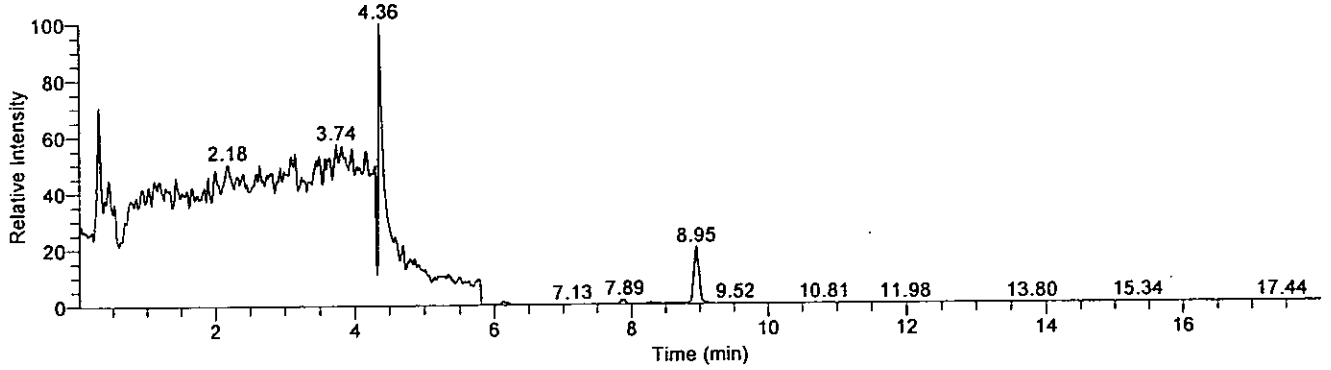
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-16.raw
Sample ID:	Blank1
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 6:49:56 PM
Vial:	D:10
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-16 - TIC RT: 0.00 - 17.99 NL: 3.77E3

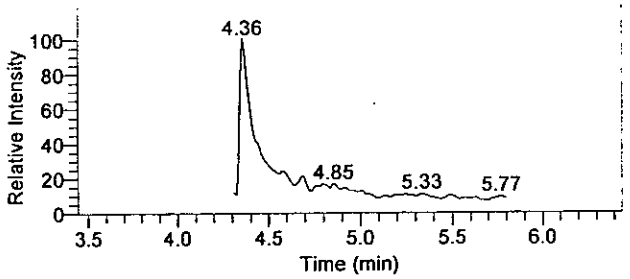


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:10, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-16, Comments: Soil Prep, ID: Blank1

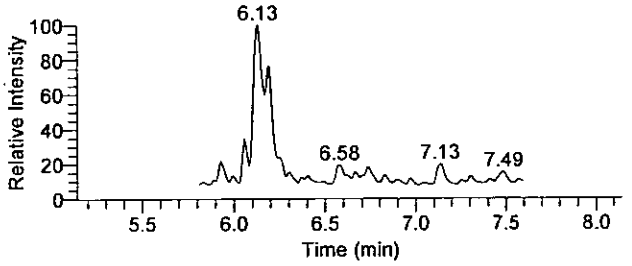
Monomethylhydrazine

16Sep2009-16 - TIC RT: 3.44 - 6.44 NL: 3.77E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



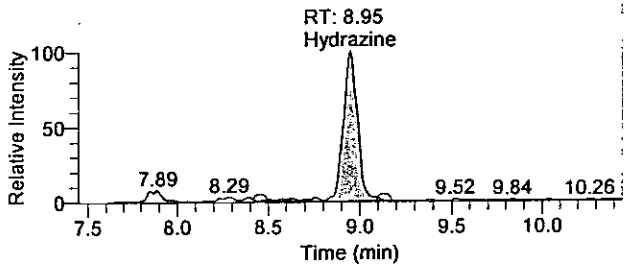
1,1-Dimethylhydrazine

16Sep2009-16 - TIC RT: 5.14 - 8.14 NL: 4.38E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-16 - TIC RT: 7.45 - 10.45 NL: 7.61E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0308

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Blank1	Method Settings	Hydrazine	8.95	4305	0.034	ng/mL
Blank1	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
Blank1	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

OLK23 0209

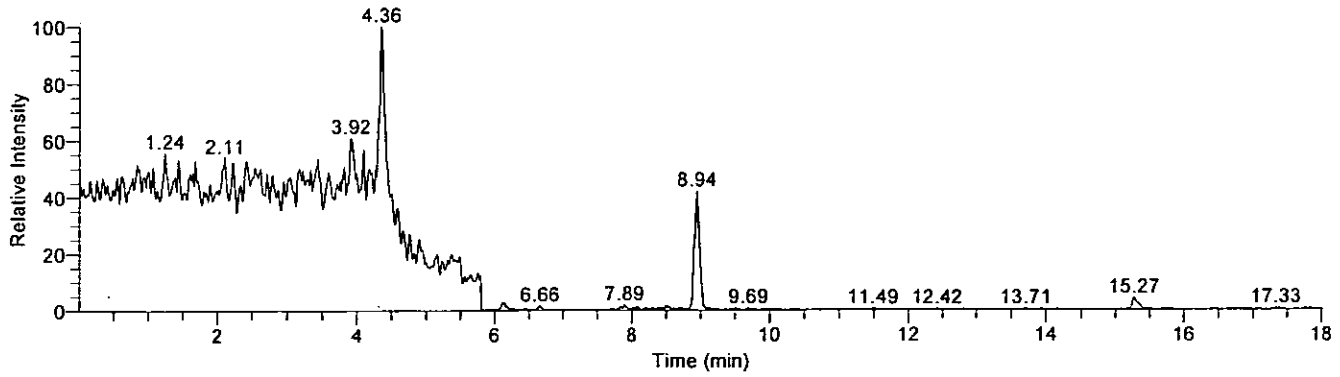
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-16.raw
Sample ID:	Blank1
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 5:28:55 PM
Vial:	E:11
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-16 - TIC RT: 0.00 - 18.00 NL: 1.88E3

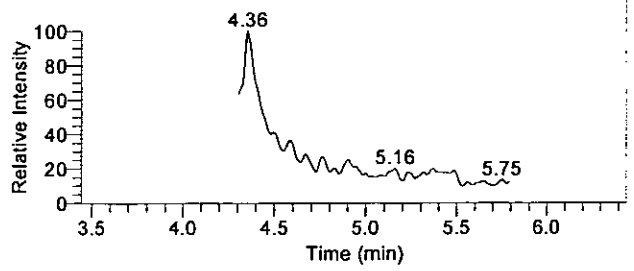


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:11, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-16, Comments: Soil prep, ID: Blank1

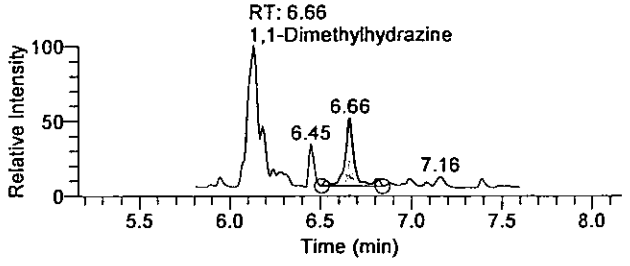
Monomethylhydrazine

22Sep2009-16 - TIC RT: 3.44 - 6.44 NL: 1.88E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



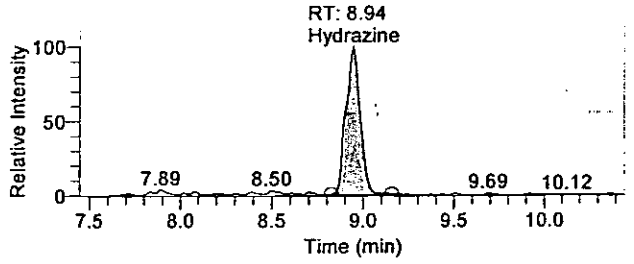
1,1-Dimethylhydrazine

22Sep2009-16 - TIC RT: 5.16 - 8.16 NL: 5.67E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-16 - TIC RT: 7.44 - 10.44 NL: 7.87E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Blank1	Method Settings	Hydrazine	8.94	4313	0.018	ng/mL
Blank1	Method Settings	1,1-Dimethylhydrazine	6.66	95	0.094	ng/mL
Blank1	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/24/2009
[illegible] 9/24/09

OLN23 0211

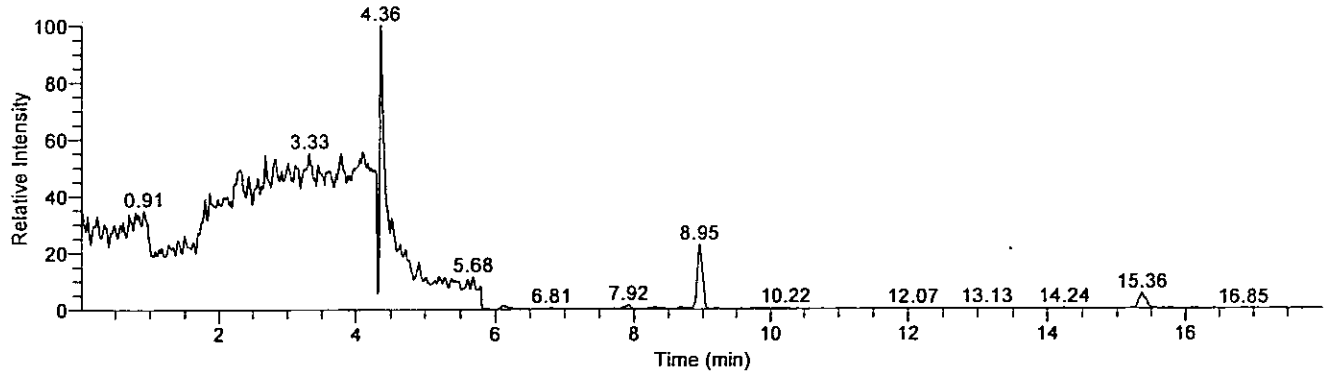
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-44.raw
Sample ID:	Blank2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 2:13:44 AM
Vial:	E:33
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-44 - TIC RT: 0.00 - 17.99 NL: 3.31E3

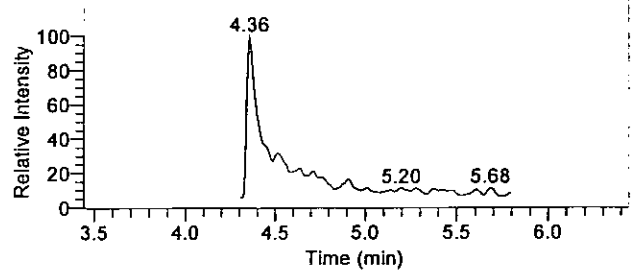


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:33, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-44, Comments: Water prep, ID: Blank2

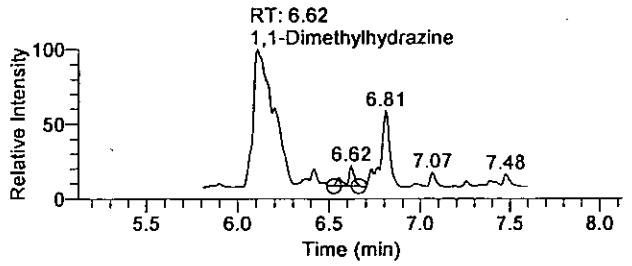
Monomethylhydrazine

22Sep2009-44 - TIC RT: 3.44 - 6.44 NL: 3.31E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



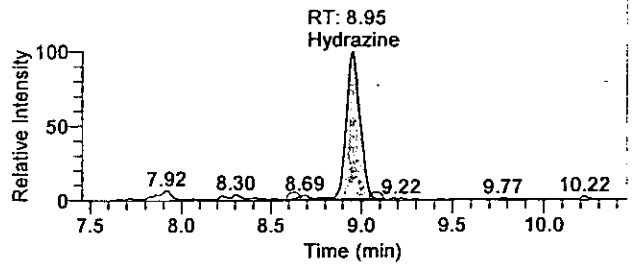
1,1-Dimethylhydrazine

22Sep2009-44 - TIC RT: 5.12 - 8.12 NL: 4.02E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-44 - TIC RT: 7.45 - 10.45 NL: 7.53E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0212

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Blank2	Method Settings	Hydrazine	8.95	4013	0.016	ng/mL
Blank2	Method Settings	1,1-Dimethylhydrazine	6.62	16	0.091	ng/mL
Blank2	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009

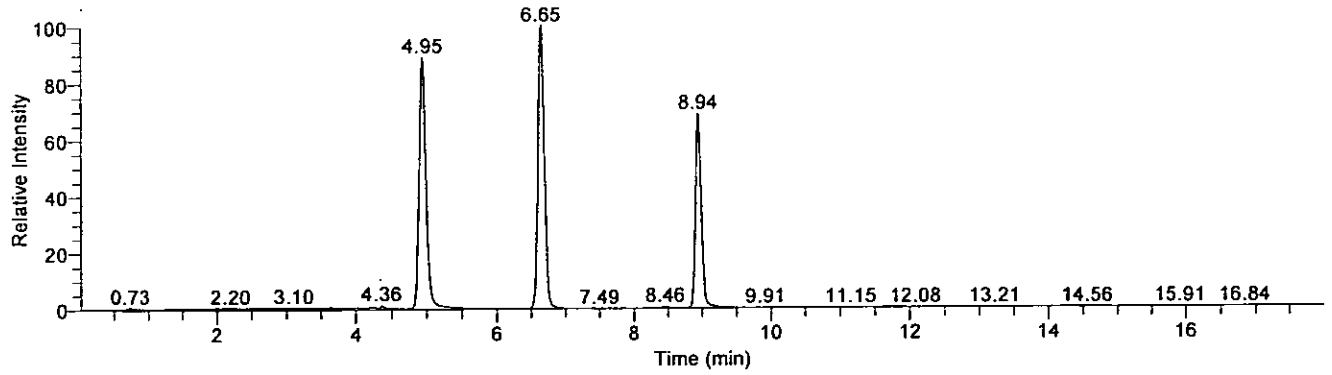
9/24/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-19.raw
Sample ID:	5774709MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 7:46:11 PM
Vial:	D:13
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-19 - TIC RT: 0.01 - 18.00 NL: 2.81E5

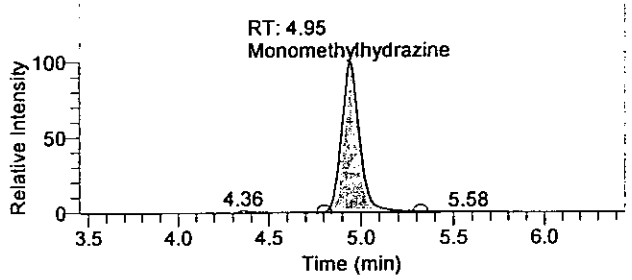


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:13, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-19, Comments: Soil Prep, ID: 5774709MS

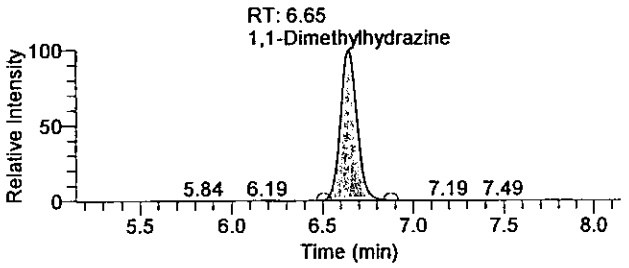
Monomethylhydrazine

16Sep2009-19 - TIC RT: 3.45 - 6.45 NL: 2.51E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



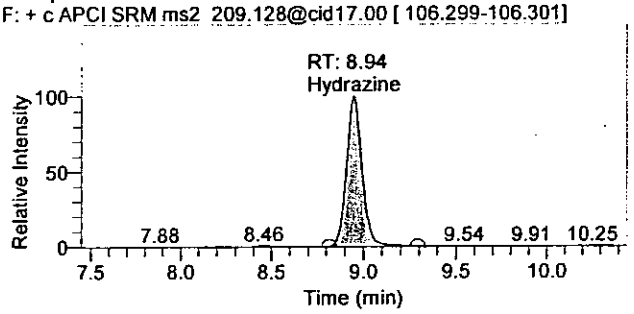
1,1-Dimethylhydrazine

16Sep2009-19 - TIC RT: 5.15 - 8.15 NL: 2.81E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-19 - TIC RT: 7.44 - 10.44 NL: 1.94E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN23 8214

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774709MS	Method Settings	Hydrazine	8.94	1139500	8.288	ng/mL
5774709MS	Method Settings	1,1-Dimethylhydrazine	6.65	1788702	59.177	ng/mL
5774709MS	Method Settings	Monomethylhydrazine	4.95	1677837	53.527	ng/mL

Analyst: JIV 1543 9/17/2009
9/22/09

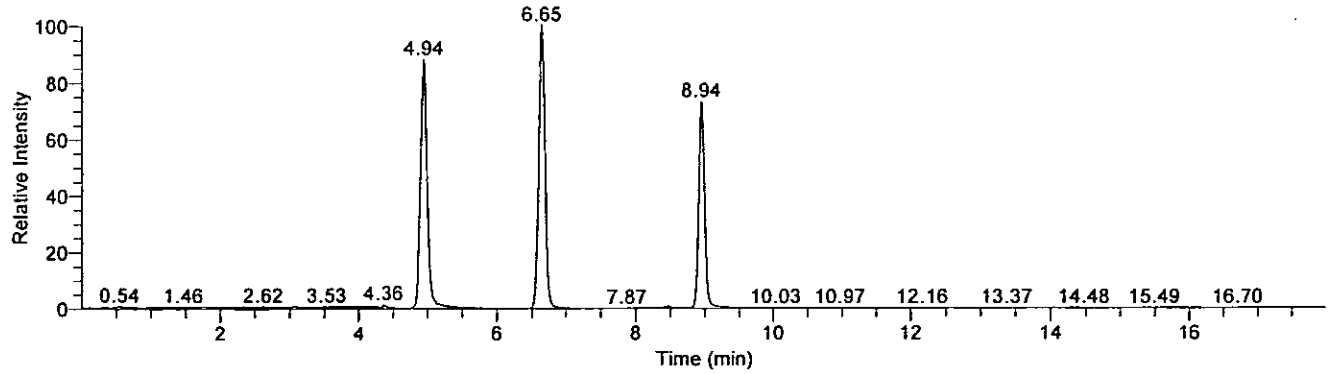
OLN23 0215

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-20.raw
Sample ID:	5774710MSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 8:04:58 PM
Vial:	D:14
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-20 - TIC RT: 0.00 - 17.99 NL: 2.81E5

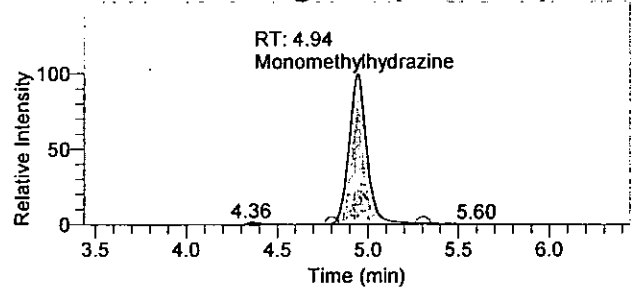


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:14, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-20, Comments: Soil Prep, ID: 5774710MSD

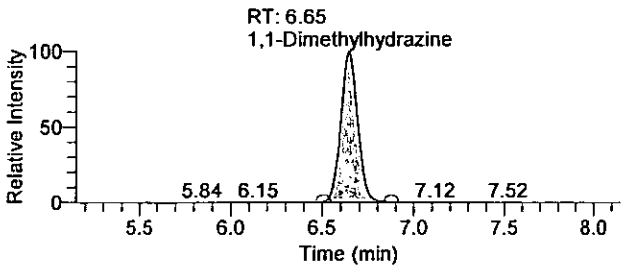
Monomethylhydrazine

16Sep2009-20 - TIC RT: 3.44 - 6.44 NL: 2.47E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



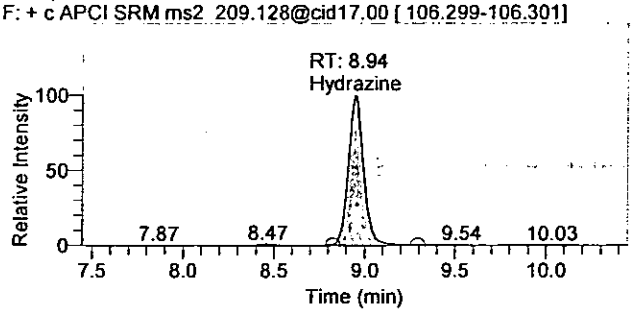
1,1-Dimethylhydrazine

16Sep2009-20 - TIC RT: 5.15 - 8.15 NL: 2.81E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-20 - TIC RT: 7.44 - 10.44 NL: 2.05E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 8216

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5774710MSD	Method Settings	Hydrazine	8.94	1207356	8.781	ng/mL
5774710MSD	Method Settings	1,1-Dimethylhydrazine	6.65	1781218	58.930	ng/mL
5774710MSD	Method Settings	Monomethylhydrazine	4.94	1666290	53.159	ng/mL

Analyst: JIV 1543 9/17/2009
[illegible] 9/22/09

OLN23 8217

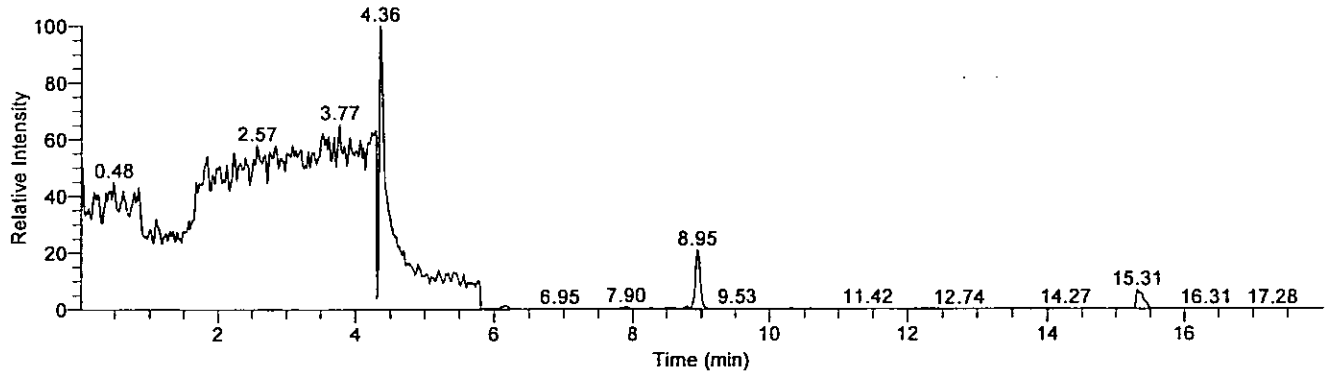
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-48.raw
Sample ID:	5781382BKG
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 3:28:43 AM
Vial:	E:36
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-48 - TIC RT: 0.00 - 18.00 NL: 3.08E3

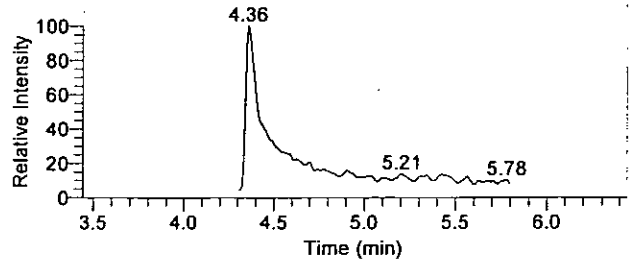


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:36, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-48, Comments: Water prep, ID: 5781382BKG

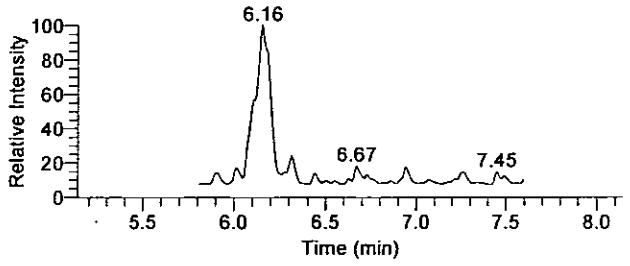
Monomethylhydrazine

22Sep2009-48 - TIC RT: 3.44 - 6.44 NL: 3.08E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



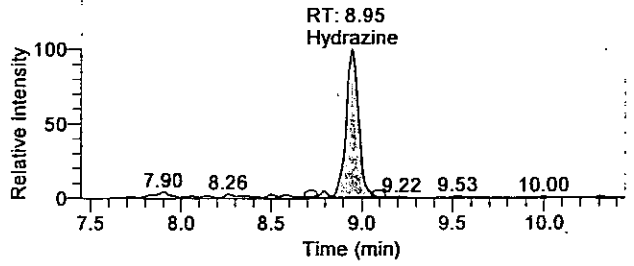
1,1-Dimethylhydrazine

22Sep2009-48 - TIC RT: 5.14 - 8.14 NL: 4.27E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-48 - TIC RT: 7.45 - 10.45 NL: 6.43E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0213

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5781382BKG	Method Settings	Hydrazine	8.95	3110	0.009	ng/mL
5781382BKG	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5781382BKG	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/24/2009
[illegible] 9/24/09

OLN23 #219

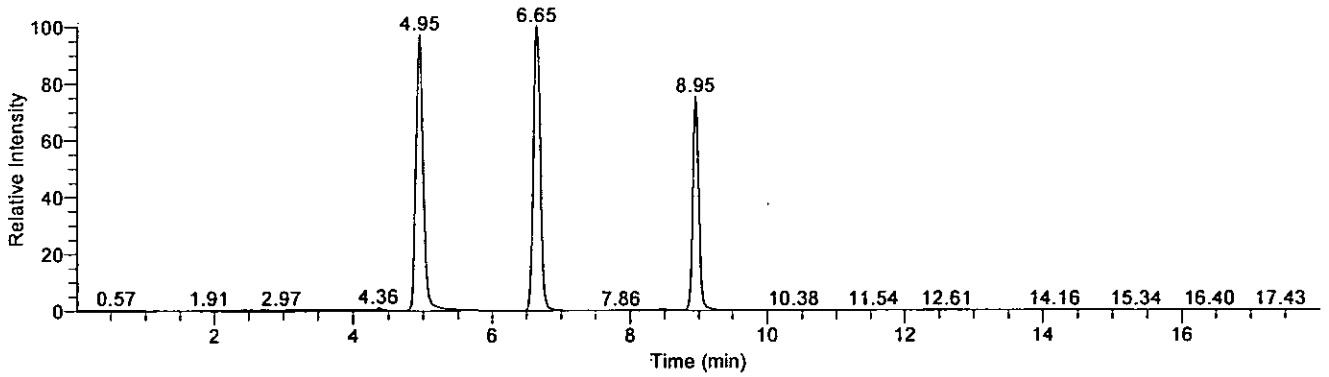
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-49.raw
Sample ID:	5781382MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 3:47:29 AM
Vial:	E:37
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-49 - TIC RT: 0.00 - 17.99 NL: 3.45E5

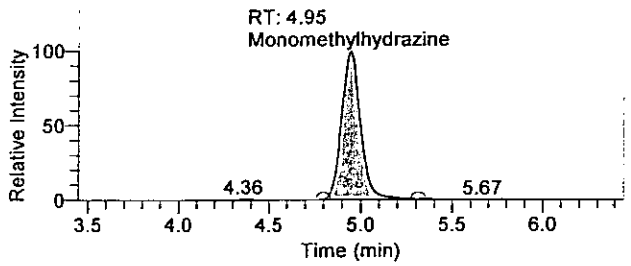


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:37, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-49, Comments: Water prep, ID: 5781382MS

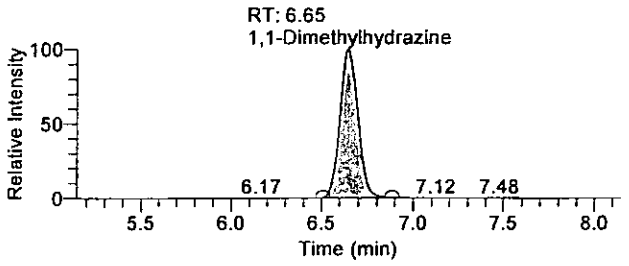
Monomethylhydrazine

22Sep2009-49 - TIC RT: 3.45 - 6.45 NL: 3.35E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



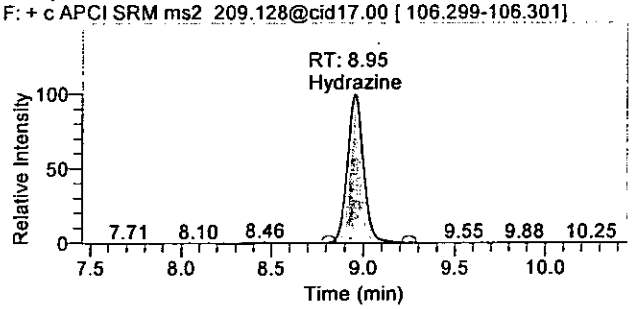
1,1-Dimethylhydrazine

22Sep2009-49 - TIC RT: 5.15 - 8.15 NL: 3.45E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-49 - TIC RT: 7.45 - 10.45 NL: 2.59E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5781382MS	Method Settings	Hydrazine	8.95	1573422	11.307	ng/mL
5781382MS	Method Settings	1,1-Dimethylhydrazine	6.65	2356140	73.991	ng/mL
5781382MS	Method Settings	Monomethylhydrazine	4.95	2390867	72.988	ng/mL

Analyst : JLV 1543 P/24 hosp
[illegible] 9/24/09

GLN23 0221

There is no signature data to report.

Lancaster Laboratories

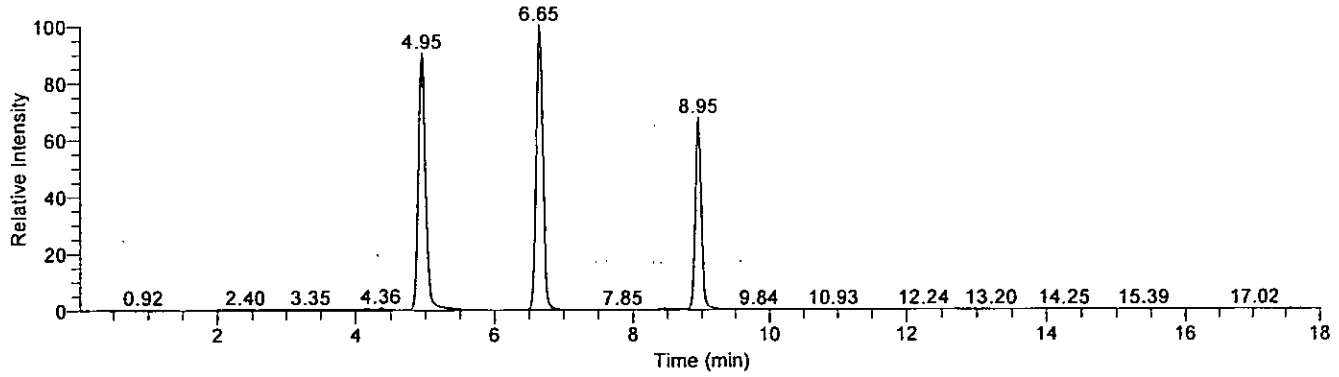
Printed: Wednesday, September 23, 2009, 09:27:16

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-50.raw
Sample ID:	5781382MSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 4:06:13 AM
Vial:	E:38
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-50 - TIC RT: 0.00 - 18.00 NL: 3.71E5

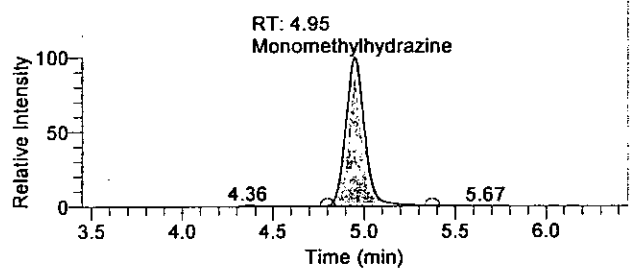


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:38, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-50, Comments: Water prep, ID: 5781382MSD

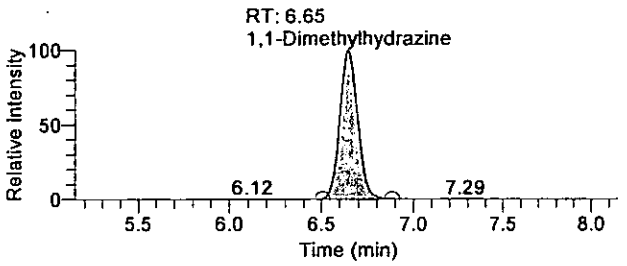
Monomethylhydrazine

22Sep2009-50 - TIC RT: 3.45 - 6.45 NL: 3.35E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



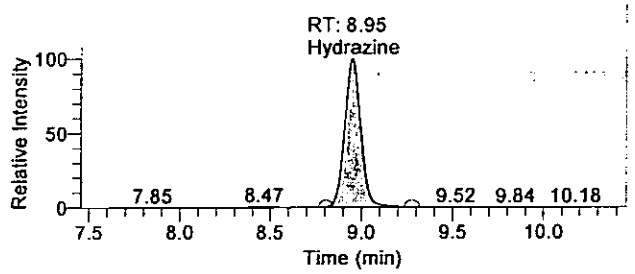
1,1-Dimethylhydrazine

22Sep2009-50 - TIC RT: 5.15 - 8.15 NL: 3.71E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-50 - TIC RT: 7.45 - 10.45 NL: 2.50E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN23 0222

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5781382MSD	Method Settings	Hydrazine	8.95	1536757	11.043	ng/mL
5781382MSD	Method Settings	1,1-Dimethylhydrazine	6.65	2515839	79.000	ng/mL
5781382MSD	Method Settings	Monomethylhydrazine	4.95	2397723	73.197	ng/mL

Analyst : JW 1543 p 1/24/2009
[illegible] 9/24/09

OLN23 0223

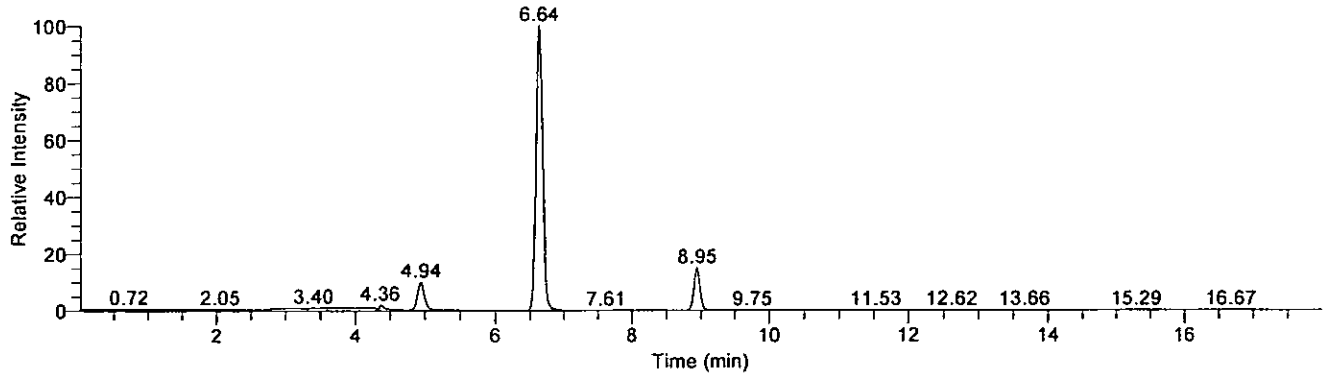
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-18.raw
Sample ID:	5779940MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 6:06:24 PM
Vial:	E:13
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-18 - TIC RT: 0.00 - 17.99 NL: 1.66E5

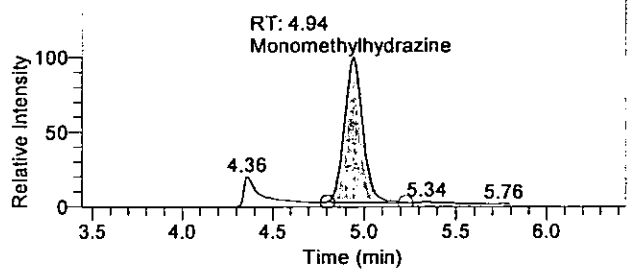


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:13, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-18, Comments: Soil prep, ID: 5779940MS

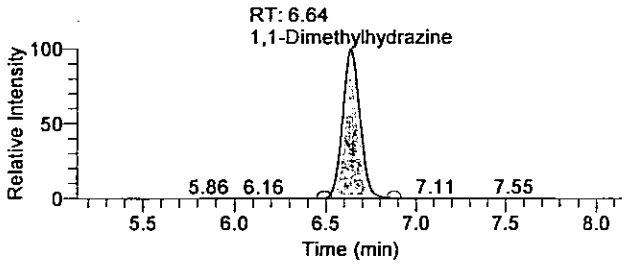
Monomethylhydrazine

22Sep2009-18 - TIC RT: 3.44 - 6.44 NL: 1.68E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



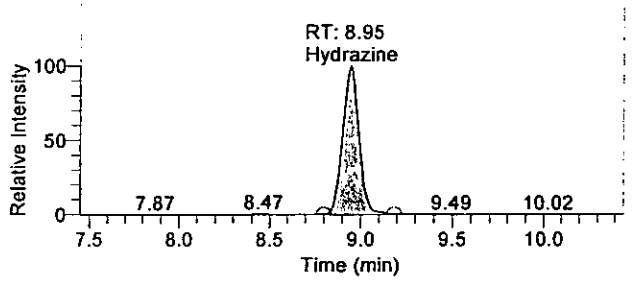
1,1-Dimethylhydrazine

22Sep2009-18 - TIC RT: 5.14 - 8.14 NL: 1.66E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-18 - TIC RT: 7.45 - 10.45 NL: 2.48E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0224

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779940MS	Method Settings	Hydrazine	8.95	152673	1.085	ng/mL
5779940MS	Method Settings	1,1-Dimethylhydrazine	6.64	1108073	34.845	ng/mL
5779940MS	Method Settings	Monomethylhydrazine	4.94	112733	3.540	ng/mL

Analyst: JW 1543 9/24/2009
9/22 9/24/09

GLH23 0225

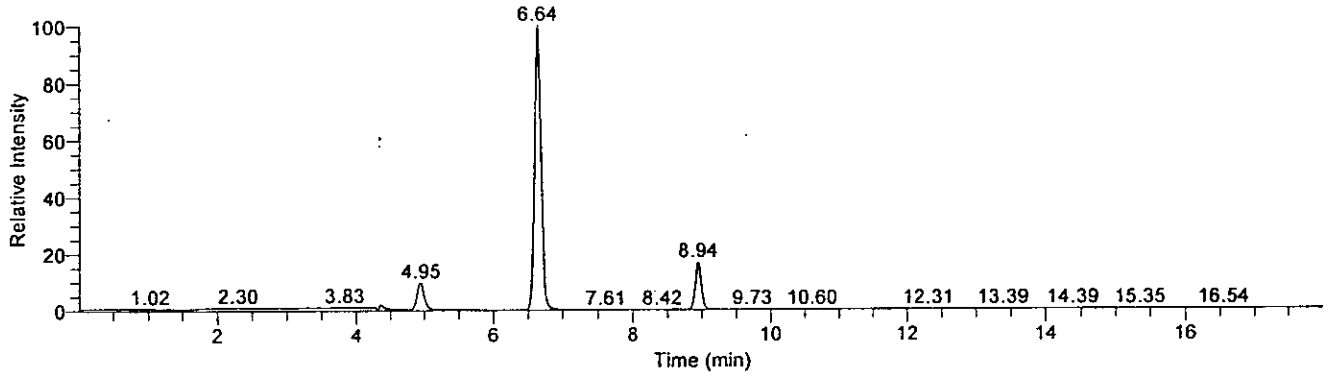
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-19.raw
Sample ID:	5779940MSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 6:25:10 PM
Vial:	E:14
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-19 - TIC RT: 0.00 - 18.00 NL: 1.65E5

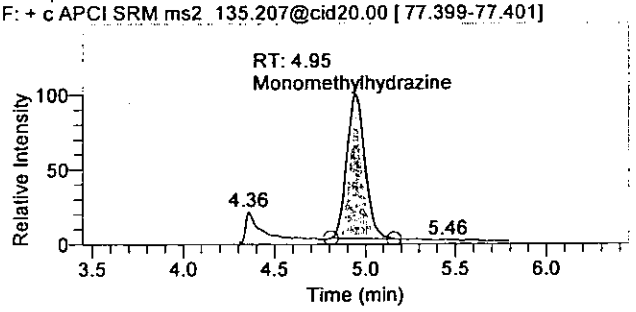


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:14, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-19, Comments: Soil prep, ID: 5779940MSD

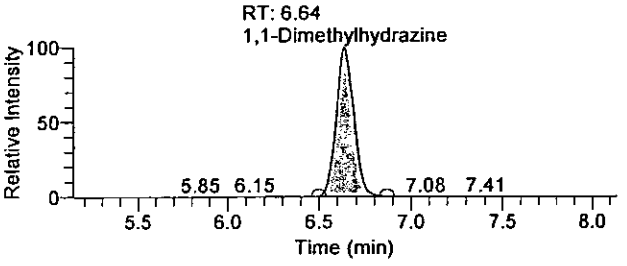
Monomethylhydrazine

22Sep2009-19 - TIC RT: 3.45 - 6.45 NL: 1.62E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



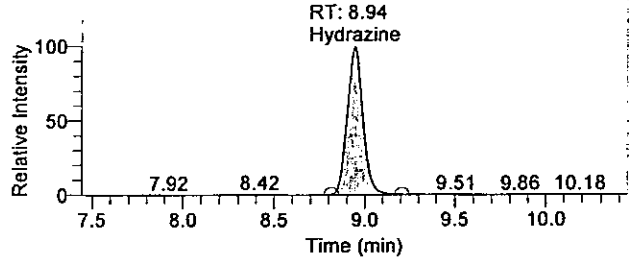
1,1-Dimethylhydrazine

22Sep2009-19 - TIC RT: 5.14 - 8.14 NL: 1.65E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-19 - TIC RT: 7.44 - 10.44 NL: 2.77E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0226

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5779940MSD	Method Settings	Hydrazine	8.94	169349	1.205	ng/mL
5779940MSD	Method Settings	1,1-Dimethylhydrazine	6.64	1091328	34.320	ng/mL
5779940MSD	Method Settings	Monomethylhydrazine	4.95	111001	3.487	ng/mL

Analyst: JCV 1543 f/24 /wop
9/24/09

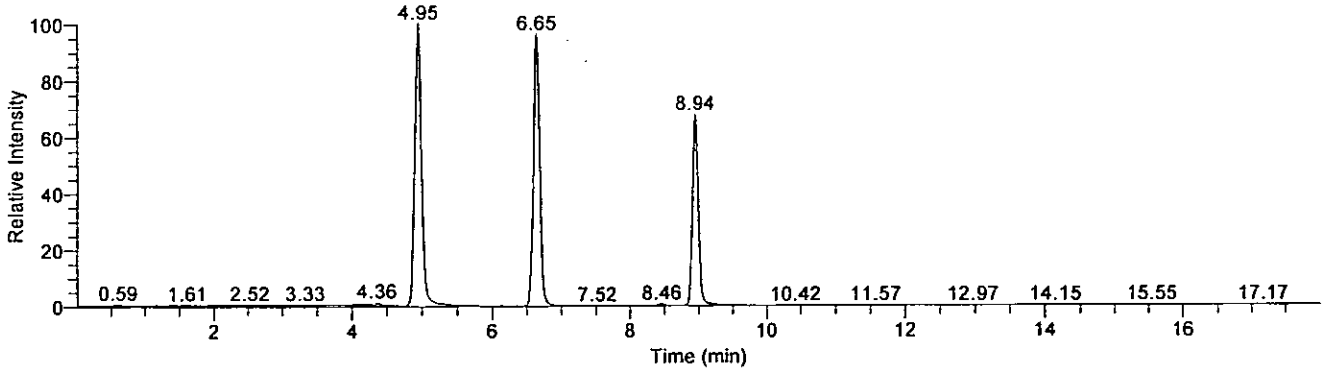
OLN23 6227

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-21.raw
Sample ID:	LCS1
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 8:23:42 PM
Vial:	D:15
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-21 - TIC RT: 0.00 - 17.99 NL: 3.10E5

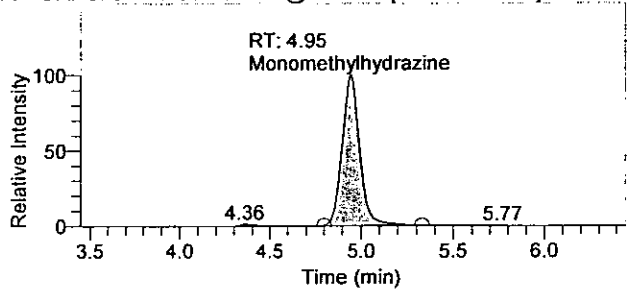


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:15, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-21, Comments: Soil Prep, ID: LCS1

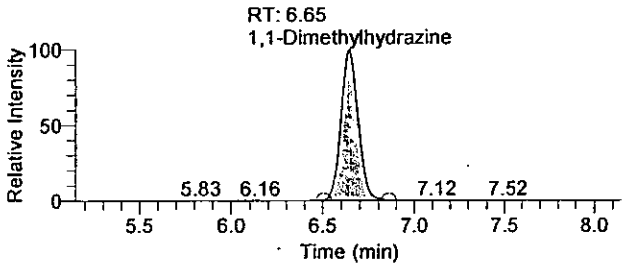
Monomethylhydrazine

16Sep2009-21 - TIC RT: 3.45 - 6.45 NL: 3.10E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



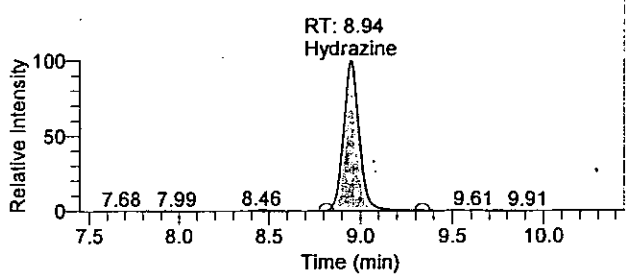
1,1-Dimethylhydrazine

16Sep2009-21 - TIC RT: 5.15 - 8.15 NL: 2.98E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-21 - TIC RT: 7.44 - 10.44 NL: 2.10E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCS1	Method Settings	Hydrazine	8.94	1251717	9.104	ng/mL
LCS1	Method Settings	1,1-Dimethylhydrazine	6.65	1903680	62.971	ng/mL
LCS1	Method Settings	Monomethylhydrazine	4.95	2033973	64.849	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

OLN23 8829

There is no signature data to report.

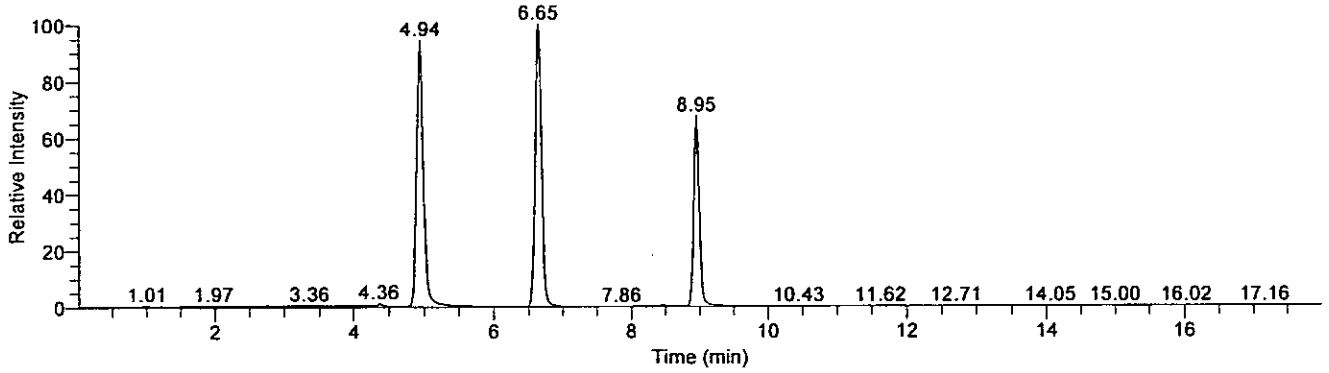
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1
Workbook Name:	TQU01408-16Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925810610819
Data File:	16Sep2009-22.raw
Sample ID:	LCSD1
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 8:42:28 PM
Vial:	D:16
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-22 - TIC RT: 0.00 - 17.99 NL: 3.12E5

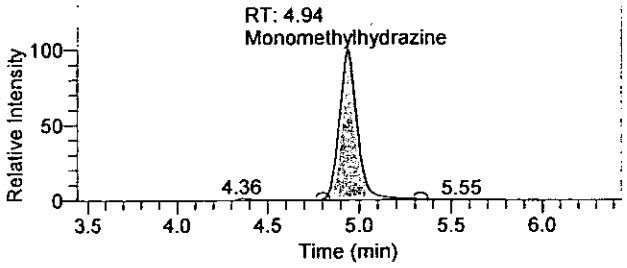


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:16, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-22, Comments: Soil Prep, ID: LCSD1

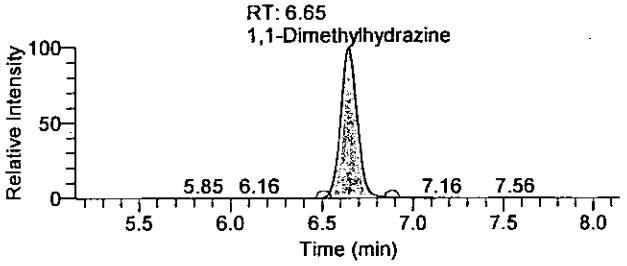
Monomethylhydrazine

16Sep2009-22 - TIC RT: 3.44 - 6.44 NL: 2.94E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



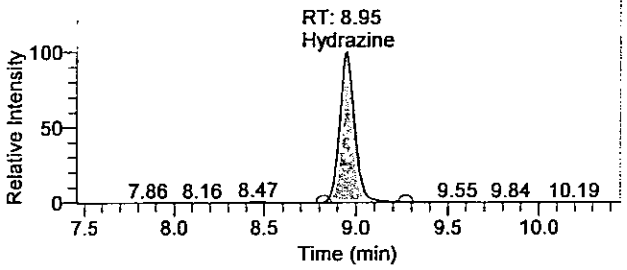
1,1-Dimethylhydrazine

16Sep2009-22 - TIC RT: 5.15 - 8.15 NL: 3.12E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-22 - TIC RT: 7.45 - 10.45 NL: 2.10E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLA23 8238

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD1	Method Settings	Hydrazine	8.95	1205985	8.771	ng/mL
LCSD1	Method Settings	1,1-Dimethylhydrazine	6.65	1973973	65.290	ng/mL
LCSD1	Method Settings	Monomethylhydrazine	4.94	1984365	63.272	ng/mL

Analyst: JW 1543 9/17/2009
9/22/09

OLN23 9231

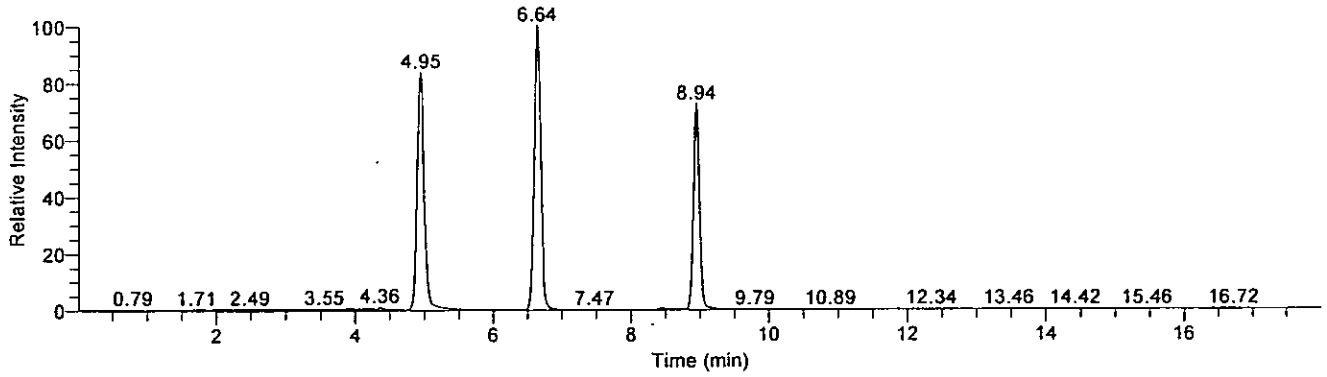
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-20.raw
Sample ID:	LCS1
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 6:43:55 PM
Vial:	E:15
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-20 - TIC RT: 0.00 - 18.00 NL: 3.11E5

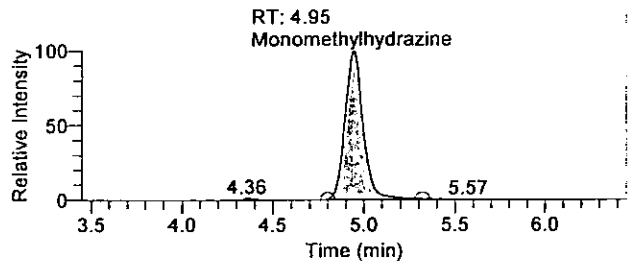


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:15, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-20, Comments: Soil prep, ID: LCS1

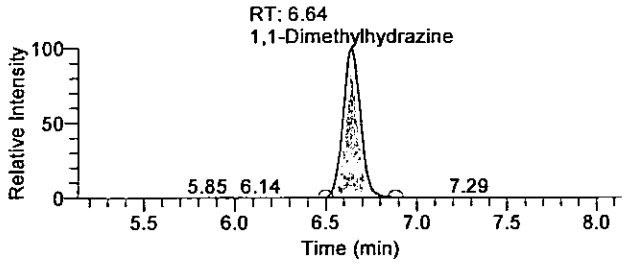
Monomethylhydrazine

22Sep2009-20 - TIC RT: 3.45 - 6.45 NL: 2.60E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



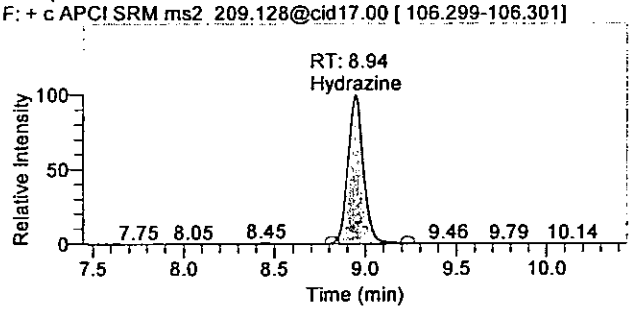
1,1-Dimethylhydrazine

22Sep2009-20 - TIC RT: 5.14 - 8.14 NL: 3.11E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-20 - TIC RT: 7.44 - 10.44 NL: 2.25E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0232

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCS1	Method Settings	Hydrazine	8.94	1357992	9.757	ng/mL
LCS1	Method Settings	1,1-Dimethylhydrazine	6.64	2088863	65.608	ng/mL
LCS1	Method Settings	Monomethylhydrazine	4.95	1824347	55.717	ng/mL

Analyst: JW 1543 9/24/2009

9/24/09

OLN23 0233

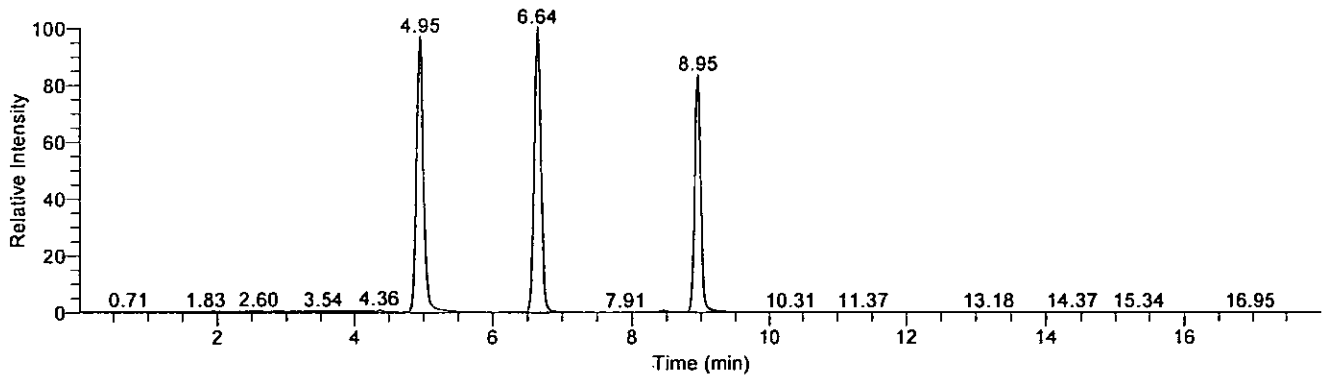
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610833
Data File:	22Sep2009-21.raw
Sample ID:	LCSD1
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 22, 2009 7:02:39 PM
Vial:	E:16
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-21 - TIC RT: 0.00 - 18.00 NL: 3.25E5

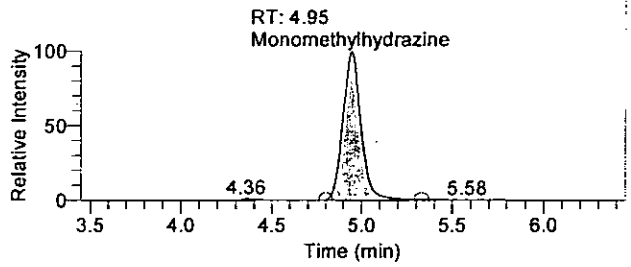


Compound Graphics

Date: 22-Sep-2009, Instrument: Quantum, Vial: E:16, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-21, Comments: Soil prep, ID: LCSD1

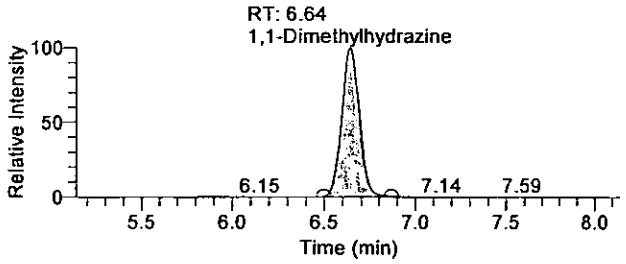
Monomethylhydrazine

22Sep2009-21 - TIC RT: 3.45 - 6.45 NL: 3.15E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



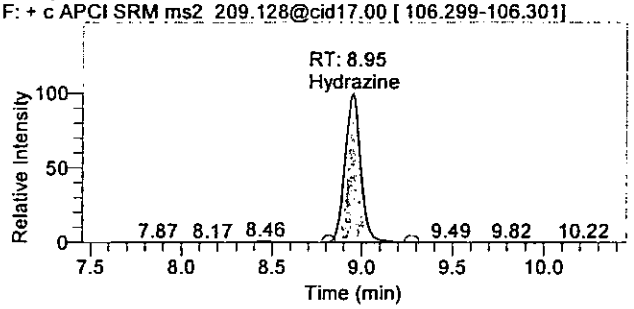
1,1-Dimethylhydrazine

22Sep2009-21 - TIC RT: 5.14 - 8.14 NL: 3.25E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-21 - TIC RT: 7.45 - 10.45 NL: 2.71E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0234

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD1	Method Settings	Hydrazine	8.95	1663600	11.956	ng/mL
LCSD1	Method Settings	1,1-Dimethylhydrazine	6.64	2198705	69.053	ng/mL
LCSD1	Method Settings	Monomethylhydrazine	4.95	2194926	67.014	ng/mL

Analyst : JW 1543 9/24/2009
[illegible] 9/24/09

OLN23 8235

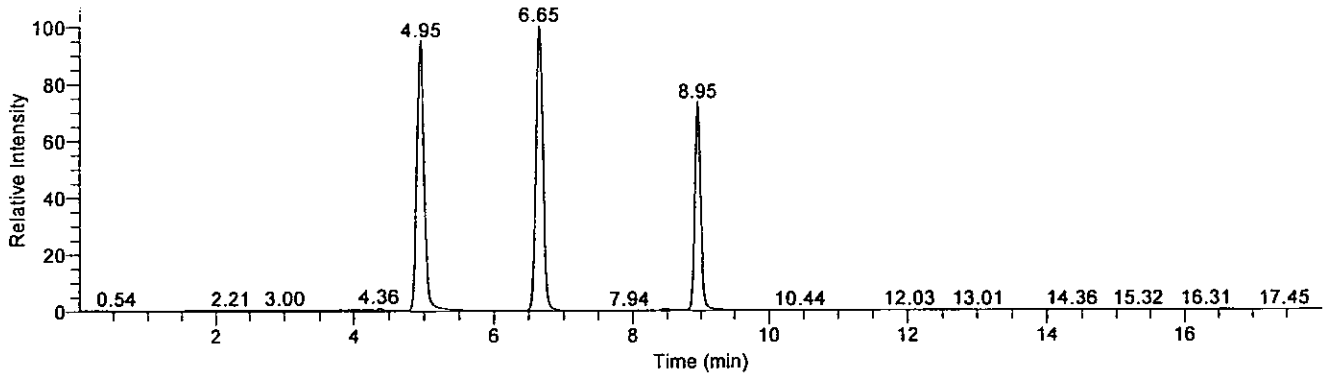
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-51.raw
Sample ID:	ICV/LCS2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 4:24:58 AM
Vial:	E:39
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-51 - TIC RT: 0.01 - 17.99 NL: 3.47E5

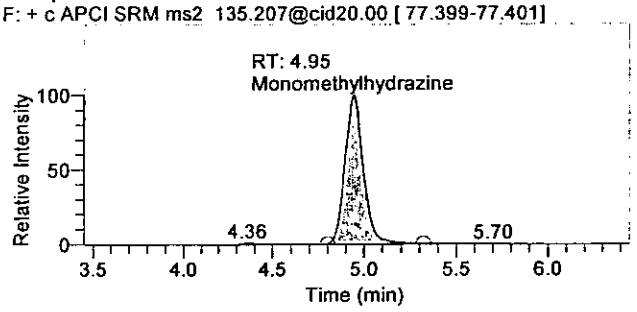


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:39, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-51, Comments: Water prep, ID: ICV/LCS2

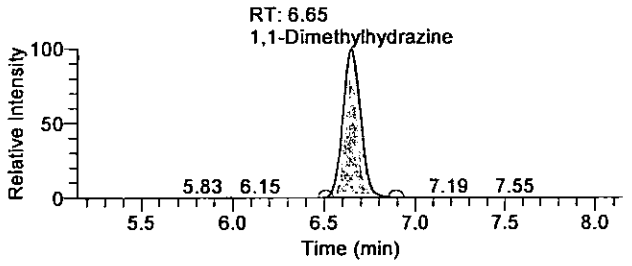
Monomethylhydrazine

22Sep2009-51 - TIC RT: 3.45 - 6.45 NL: 3.29E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



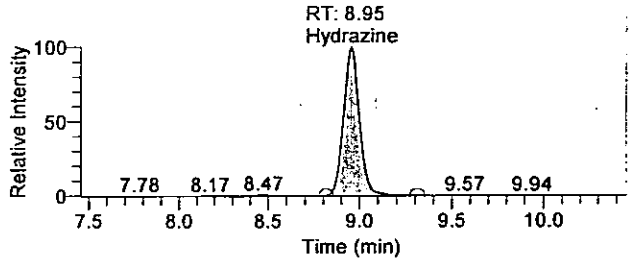
1,1-Dimethylhydrazine

22Sep2009-51 - TIC RT: 5.15 - 8.15 NL: 3.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-51 - TIC RT: 7.45 - 10.45 NL: 2.53E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN23 0Z36

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
ICV/LCS2	Method Settings	Hydrazine	8.95	1551219	11.147	ng/mL
ICV/LCS2	Method Settings	1,1-Dimethylhydrazine	6.65	2363540	74.223	ng/mL
ICV/LCS2	Method Settings	Monomethylhydrazine	4.95	2319021	70.797	ng/mL

Analyst : JW 1543 9/24/2009

9/24/09

OLN23 8237

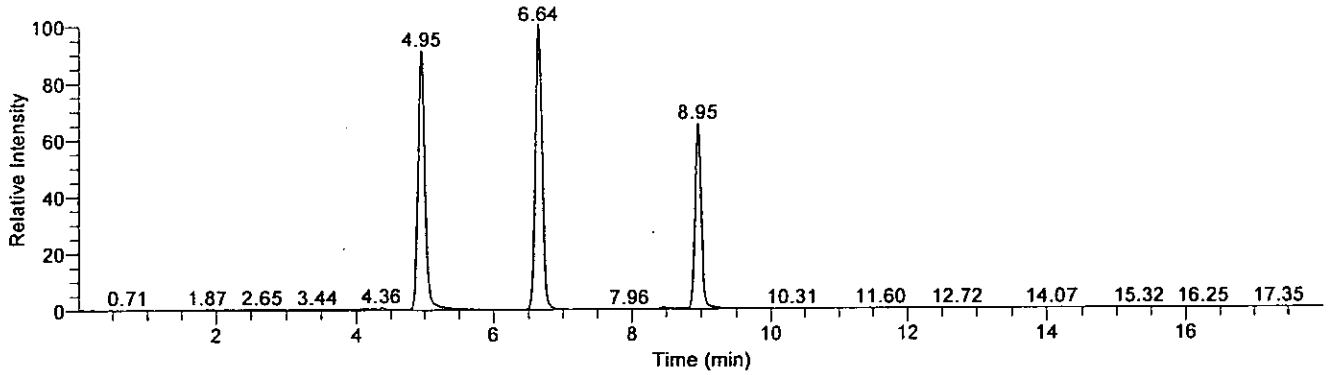
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1
Workbook Name:	TQU01408-22Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0926510610837
Data File:	22Sep2009-52.raw
Sample ID:	LCSD2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 23, 2009 4:43:44 AM
Vial:	E:40
Dilution Factor:	1.00000

Sample Chromatogram

22Sep2009-52 - TIC RT: 0.00 - 18.00 NL: 3.71E5

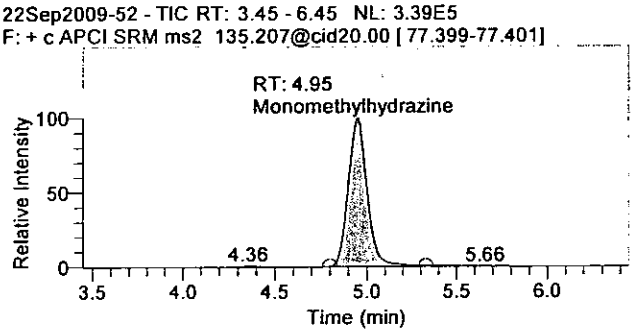


Compound Graphics

Date: 23-Sep-2009, Instrument: Quantum, Vial: E:40, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-22Sep2009-1\Rawfiles\22Sep2009-52, Comments: , ID: LCSD2

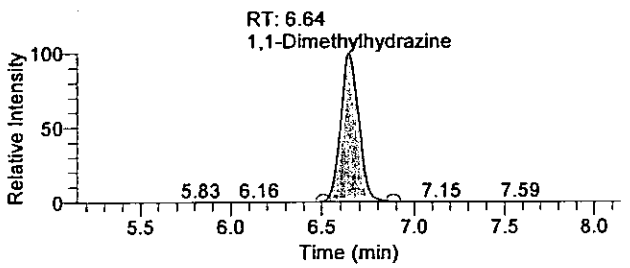
Monomethylhydrazine

22Sep2009-52 - TIC RT: 3.45 - 6.45 NL: 3.39E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



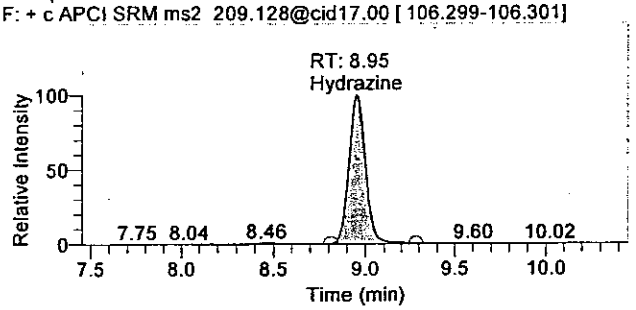
1,1-Dimethylhydrazine

22Sep2009-52 - TIC RT: 5.14 - 8.14 NL: 3.71E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

22Sep2009-52 - TIC RT: 7.45 - 10.45 NL: 2.42E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN23 0238

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD2	Method Settings	Hydrazine	8.95	1509911	10.850	ng/mL
LCSD2	Method Settings	1,1-Dimethylhydrazine	6.64	2513311	78.920	ng/mL
LCSD2	Method Settings	Monomethylhydrazine	4.95	2403336	73.368	ng/mL

Analyst : JLV 1543 9/24/2009

9/24/09

OLNZ3 0239

There is no signature data to report.

Sample Preparation

OLN23 #240

SOP Analysis # 10346, Rev. 01, eff. 2/10/2009
Title: Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhdrazine in Soil Samples by LC/MS/MS
From: Notebook 106108, pg. 18
Date: 9-16-09

1. Pipette calibration

Pipette: Rainin, 10-100 uL, S/N G0798427I

Volume (uL)	Balance Reading (mg)
50	49.59

Pipette: Rainin, 1-10 uL, S/N I0731749I

Volume (uL)	Balance Reading (mg)
10	9.72

Pipette: Eppendorf Reference, 10-100 uL, S/N 4037-1

Volume (uL)	Balance Reading (mg)
40	40.06

Pipette: Eppendorf Research, 100-1000uL, S/N 2778567

Volume (uL)	Balance Reading (g)
500	0.49405

Pipette: Eppendorf Research, 100-1000uL, S/N 1467845

Volume (uL)	Balance Reading (g)
1000	0.99169

Pipette: Rainin, 1-10 mL, S/N C0822978A

Volume (mL)	Balance Reading (g)
10	10.07748

All pipettes passed calibration check. Jenway 9/16/2009

2. Weigh Ottawa Sand and soil samples
Batch # 09258106 10819
Blank 1 : 1.0036g
LCS 1 : 1.0025g
LSD 1 : 1.0025g
5774702 : 1.0012g
5774703 : 1.0006g
5774704 : 1.0011g
5774705 : 1.0004g
5774706 : 1.0009g

OLNZ3 8241

Jenway 9/16/2009

4056.01 Maria Davenport 9-16-09

9-16-09
From: Notebook 106108 pg. 19

2. Cont'd
5774707FD: 1.0009g
5774708 Bkg: 1.0004g
5774709 MS: 1.0000g
5774710 MSD: 1.0003g
5774711: 1.0014g
5774712: 1.0008g

3. Prepare 1% benzaldehyde Sol'n
9-16-09 MD ③ ~~200.0ul of~~ 240.0ul of benzaldehyde + 24ml methanol
measured with graduated cylinder → glass vial. mixed well.

4. Prepare 2nd source monomethylhydrazine Sol'n
Conc. 869 ug/ml
monomethylhydrazine 8.69mg → 10ml volumetric flask.
Brought to volume with methanol. mixed well

5. Prepare 2nd source LCS spiking sol'n
Added 2nd source
hydrazine stock sol'n 100562-58-1 69.3ul
monomethylhydrazine stock sol'n 71.9ul
1,1-dimethylhydrazine stock sol'n 100562-43-4 77.2ul
into 10ml volumetric flask. Brought to volume with methanol
mixed well

6. Added 100.0ul of LCS spiking sol'n into QC samples
Added 10.0ml of extraction fluid into all samples in
Batch# 092581061081 9.
Placed all samples at the shaker at 300ppm for 10min.
Centrifuged all samples at 2970 rpm for 10mins.

OLN23 8Z42

9-16-09
From: Notebook 106108 pg. 20

7. Derivitization of MDL and calibration standards

1m Hexylamine Sol'n 106108-13-1	Standards	Benzaldehyde Sol'n
10.0 ul	1.0 ml	0.5 ml

8. Derivitization of ICV and 2nd source LCS spiking sol'n

1m Hexylamine Sol'n	0.2m acetate buffer	Spiking Sol'n	Benzaldehyde Sol'n
106108-13-1	100562-54-5	106108-5-2 10.0 ul	0.5 ml
↓	↓	2nd Source LCS spiking sol'n 10.0 ul	↓

9. Derivitization of all samples in Batch # 092581061081 9

Supernant of extract	5m Acetate buffer 100562-14-3	Benzaldehyde Sol'n
1.0 ml	40.0 ul	0.5 ml

To make each derivative sol'n added the corresponding sol'n according to the table above into glass vials, mixed well. Placed the glass vials in a sample shaker with heated water bath (40°C) for 1hr. Filtered the Sol'n into autosampler vials.
end of Batch preparation.
Maria Davenport 9-16-09

10 Run workbook : TQUC1408 - 16 Sep 2009 - 1
under : C:\X Calibur\Hydrazine Analysis\Sep 2009
Samples : All the samples prepared today which include
MDL and calibration standards derivative sol'n
ICV and 2nd source LCS spiking sol'n derivative sol'n
All samples in Batch # 092581061081 9
All samples in Batch # 092581061081 26
Samples 106108-24-1 → 106108-24-10

OLN23 8243

Fanday 9/16/2009

4056.01 Maria Davenport 9-16-09

9/16/2009

From: Notebook 106108, pg. 21

11. Reagents + Equipment
LC pump: Thermo Electron Corporation, Accela, S/N 83181
LC autosampler: Thermo Electron Corporation, Accela, S/N 82612
Mass Spectrometer: Thermo Scientific, TSQ Quantum Access, S/N TQU 01408
HPLC column: Thermo Scientific, Hypersil Gold, 3um, Part No. 25003-052130, L/N 9154, S/N 0381365T
Sample shaker with heated water bath: Lancaster Labs Asset# 15722
Thermometer: cal. Due 7/2010, NB 103345/17, cal. Range 18.05 °C to 50.00 °C
Centrifuge: Beckman, GS-6, Lancaster Labs Asset # 6529, qual. Due 6/2010
Orbit Shaker: No Asset #, LAB-LINE, Maxium 400 rpm, from Dept. 09
Ottawa sand: L/N 503010-AA, Baked 4/28/2009, Exp. 4/28/2010
Syringe: 3mL, SUN-SRI Cat. No. 400 044, L/N 00077198
Acrodisc CR syringe filter: PALL, with 0.45um PTFE membrane, L/N 21722067
Methanol: Fisher Scientific, Optima, L/N 090571, exp. 4/8/2014
Benzaldehyde: Aldrich, ≥ 99.5%, Batch #. 99696DJ, exp. 6/1/2013
Balance: 6424, cal. Due 11/09, qual. Due 7/2010 (weighing monomethylhydrazine)
Balance: 5554, cal. Due 11/09, qual. Due 3/2010 (for pipette calibration)
Balance: 9983, cal. Due 11/09 (for weighing Ottawa sand and soil samples)
MDL and calibration standards: 100562-55-1 to 100562-55-9, see notebook: 100562, pg. 55
2nd source hydrazine stock solution 100562-58-1: 180.4 ug/mL, see notebook 100562, pg. 58
2nd source 1,1-dimethylhydrazine stock solution 100562-43-4: 810 ug/mL, see notebook 100562, pg. 43
2nd source monomethylhydrazine neat material: Chem Service, 99.1%, L/N 414-156B, exp. 01/12
2nd source ICV spiking solution: 106108-5-2, see notebook 106108, pg. 5. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL
2nd source LCS spiking solution is prepared daily. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL

OLH23 0244

4056.01 F. Way 9/16/2009

SOP Analysis # 10346, Rev. 01, eff. 2/10/2009
Title: Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhdrazine in Soil Samples by LC/MS/MS
From: Notebook 106108, pg. 32
Date: 9/22/2009

1. Pipette calibration

Pipette: Rainin, 10-100 uL, S/N G0798427I

Volume (uL)	Balance Reading (mg)
50	49.74

Pipette: Rainin, 1-10 uL, S/N I0731749I

Volume (uL)	Balance Reading (mg)
10	9.73

Pipette: Eppendorf Reference, 10-100 uL, S/N 4037-1

Volume (uL)	Balance Reading (mg)
40	39.46

Pipette: Eppendorf Research, 100-1000uL, S/N 2778567

Volume (uL)	Balance Reading (g)
500	0.49551

Pipette: Eppendorf Research, 100-1000uL, S/N 1467845

Volume (uL)	Balance Reading (g)
1000	0.99631

Pipette: Rainin, 1-10 mL, S/N C0822978A

Volume (mL)	Balance Reading (g)
10	10.03494

All the pipettes passed calibration check. J.Wing 9/22/2009

2. Weigh ottawa Sand and soil samples
Batch # 09265706108 33
Blank1: 1.0007g
LCS1: 1.0009g
LCSD1: 1.0006g
5779940 Bkg: 1.0004g
5779940 MS: 1.0002g
5779940 MSD: 1.0007g
5779941: 1.0003g
5779942: 1.0007g

GEN23 8245

J.Wing 9/22/2009

4056.01 Maria Davenport 9-22-09

9-22-09
From: Notebook 106108 pg. 33

2. Cont'd
5779943: 1.0002g
5779944: 1.0002g
5779945: 1.0001g
5779946: 1.0006g
5779947: 1.0005g
5779948: 1.0000g
5779949: 1.0007g
5779950: 1.0003g
5779951: 1.0006g
5779952: 1.0002g
5779953: 1.0007g
5781371: 1.0003g

3. Prepare 1% benzaldehyde sol'n.
220.0 ul of benzaldehyde + 22ml methanol measured with graduated cylinder → glass vial mixed well.

4. Prepare 2nd source monomethylhydrazine stock sol'n
Conc. 1037 ug/ml
monomethylhydrazine 10.37 mg → 10ml volumetric flask.
Brought to volume with methanol. mixed well.

5. Prepare 2nd source LCS spiking sol'n
Added 2nd source
hydrazine stock sol'n 106108-28-1 66.1 ul
monomethylhydrazine stock sol'n 60.3 ul
1,1-dimethylhydrazine stock sol'n 100562-43-4 77.2 ul
into 10ml volumetric flask. Brought to volume with methanol.
mixed well.

6. Added 100.0 ul LCS spiking sol'n into QC samples
Add 10.0ml extraction sol'n into all samples
Shake samples at 300 rpm 9-22-09 for 10 mins
centrifuge samples at 2950 rpm for 10 mins

4056.01 Maria Davenport 9-22-09

9-22-09
From: Notebook 106108 pg. 34

7. Derivatization of MDL and Calibration Stds

1m hexylamine Sol'n 106108-13-1	Standards	Benzaldehyde Sol'n
10.0ul	1.0ml	0.5ml

8. Derivatization of ICV and 2nd source LCS spiking sol'n

1m hexylamine Sol'n	0.2m Acetate buffer	spiking sol'n	Benzaldehyde sol'n
106108-13-1	100562-54-5	10.0ul	
10.0ul	1.0ml	ICV 106108-5-2	0.5ml
↓	↓	2nd source LCS spiking Sol'n	↓

9. Derivatization of all samples in Batch #09265106108 33

Supernant of extract	5m Acetate Buffer 100562-14-3	Benzaldehyde Sol'n
1.0ml	40.0ul	0.5ml

To make each derivative sol'n added the corresponding sol'n according to the table above into glass vials, mixed well. Placed the glass vials in a sample shaker with heated (40°c) water bath for 1hr. Filtered the sol'n into autosampler vials.
End of batch preparation
Maria Davenport 9-22-09

ic Run workbook: TQUC1408-22 Sep 2009-1
under: L:\X Calibur\Hydrazine Analysis\Sep 2009
Samples: All the samples prepared today. From Notebook 106108 pg. 33 to pg 38
There are two batches of samples.
Batch # 09265106108 33
Batch # 09265106108 37

OLN23 8247

J.Wang 9/22/2009

4056.01 Maria Davenport 9-22-09

SOP Analysis # 10342 Rev. 01, eff. 10/28/2008

Title: Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Aqueous Samples by LC/MS/MS

Date 7/16/2009

Exam: Notebook 106108 pg 25

1. Pipette Calibration

Pipette calibration was performed this morning. See Notebook 106108, pg 19

2. Check the pH of client samples

577254P: pH 5

3. Prepare 1% benzaldehyde: prepared this morning. See Notebook 106108, pg 20

4. Derivatization of MDL and calibration standards with benzaldehyde: performed when conducting soil sample preparation this morning. See Notebook 106108, pg 21

5. Derivatization of Blank, ICV/LCS, LCSD, client sample, MS and MSD with benzaldehyde

Batch #: 07258 106108 26

Derivative soln	1M hexylamine soln	0.2M acetate buffer	Spiking soln	Benzaldehyde soln
	106108-13-1	~~106108~~ 100542 2-54-5 ① Jw 7/16/09	106108-5-2	
Blank 2	10.0 uL	1.0 mL	Not added	0.5 mL
ICV/LCS2	↓	↓	10.0 uL	↓
LCSD2			↓	

Derivative soln	1M hexylamine soln	Client Samples ① Jw 7/16/09 ~~0.2M acetate buffer~~	Spiking soln	Benzaldehyde soln
577254P	106108-13-1, 10.0 uL	577254P, 1.0 mL	Not added	0.5 mL
577254P MS	↓	↓	106108-5-2, 10.0 uL	↓
577254P MSD			↓	

To make each derivative soln, added the corresponding soln according to the table above into glass vials, mixed well. Placed the glass vials in a sample shaker with heated (40°C) water bath for 1hr.

VERIFIED

106108

4056.01 Jw 7/16/2009

9/16/2009

From: Notebook 106108, pg. 26

5. cont'd

Filtered the soln into autosampler vials.

End of batch sample preparation.

6. Run workbook: TQU01408-16 Sep 2009-1

under: C:\X Calibur\Hydrazine Analysis\Sep 2009

Samples: All the samples prepared today which include

MDL and calibration standards derivative soln

ICV and 2nd source spiking soln derivative soln

All the samples in Batch # 09258106108 1P

All the samples in Batch # 09258106108 26

Samples 106108-24-1 → 106108-24-10

7. Reagents + Equipment
LC pump: Thermo Electron Corporation, Accela, S/N 83181
LC autosampler: Thermo Electron Corporation, Accela, S/N 82612
Mass Spectrometer: Thermo Scientific, TSQ Quantum Access, S/N TQU 01408
HPLC column: Thermo Scientific, Hypersil Gold, 3um, Part No. 25003-052130, L/N 9154, S/N 0381365T
Sample shaker with heated water bath: Lancaster Labs Asset# 15722
Thermometer: cal. Due 7/2010, NB 103345/17, cal. Range 18.05 °C to 50.00 °C
Syringe: 3mL, SUN-SRI Cat. No. 400 044, L/N 00077198
Acrodisc CR syringe filter: PALL, with 0.45um PTFE membrane, L/N 21722067
Methanol: Fisher Scientific, Optima, L/N 090571, exp. 4/8/2014
Benzaldehyde: Aldrich, ≥ 99.5%, Batch #. 99696DJ, exp. 6/1/2013
Balance: 6424, cal. Due 11/09, qual. Due 7/2010 (weighing monomethylhydrazine)
Balance: 5554, cal. Due 11/09, qual. Due 3/2010 (for pipette calibration)
MDL and calibration standards: 100562-55-1 to 100562-55-9, see notebook: 100562, pg. 55
2nd source hydrazine stock solution 100562-58-1: 180.4 ug/mL, see notebook 100562, pg. 58
2nd source 1,1-dimethylhydrazine stock solution 100562-43-4: 810 ug/mL, see notebook 100562, pg. 43
2nd source monomethylhydrazine neat material: Chem Service, 99.1%, L/N 414-156B, exp. 01/12
2nd source ICV spiking solution: 106108-5-2, see notebook 106108, pg. 5. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL
2nd source LCS spiking solution is prepared daily. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL

OLN23 0249

9/22/2009

From: Notebook 106108, pg. 35

11. Reagents + Equipment
LC pump: Thermo Electron Corporation, Accela, S/N 83181
LC autosampler: Thermo Electron Corporation, Accela, S/N 82612
Mass Spectrometer: Thermo Scientific, TSQ Quantum Access, S/N TQU 01408
HPLC column: Thermo Scientific, Hypersil Gold, 3um, Part No. 25003-052130, L/N 9154, S/N 0381365T
Sample shaker with heated water bath: Lancaster Labs Asset# 15722
Thermometer: cal. Due 7/2010, NB 103345/17, cal. Range 18.05 °C to 50.00 °C
Centrifuge: Thermo Electron Corporation, Sorvall Legend T centrifuge, Lancaster Labs Asset # 16867
Orbit Shaker: No Asset #, LAB-LINE, Maxium 400 rpm, from Dept. 09
Ottawa sand: L/N 503010-AA, Baked 4/28/2009, Exp. 4/28/2010
Syringe: 3mL, SUN-SRI Cat. No. 400 044, L/N 00077198
Acrodisc CR syringe filter: PALL, with 0.45um PTFE membrane, L/N 21722067
Methanol: Fisher Scientific, Optima, L/N 090571, exp. 4/8/2014
Benzaldehyde: Aldrich, ≥ 99.5%, Batch #. 99696DJ, exp. 6/1/2013
Balance: 6424, cal. Due 11/09, qual. Due 7/2010 (for pipette calibration and weighing monomethylhydrazine)
Balance: 9983, cal. Due 11/09 (for weighing Ottawa sand and soil samples)
MDL and calibration standards: 100562-55-1 to 100562-55-9, see notebook: 100562, pg. 55
2nd source hydrazine stock solution 106108-28-1: 189.2 ug/mL, see notebook 106108, pg. 28
2nd source 1,1-dimethylhydrazine stock solution 100562-43-4: 810 ug/mL, see notebook 100562, pg. 43
2nd source monomethylhydrazine neat material: Chem Service, 99.1%, L/N 414-156B, exp. 01/12
2nd source ICV spiking solution: 106108-5-2, see notebook 106108, pg. 5. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL
2nd source LCS spiking solution is prepared daily. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL

12. Prepare 1M hexylamine sol'n 106108-36-1
0.66 mL hexylamine → ~~10~~ 5 mL volumetric flask. Brought to volume with methanol. mixed well
JW 9/22/09

3. Prepare extraction fluid (10 mM hexylamine sol'n) 106108-36-2
Transfered the entire 1M hexylamine sol'n 106108-36-1 → 500 mL volumetric flask. Used Milli Q water to rinse the 5 mL volumetric flask eight times and transfered the rinse sol'n into 500 mL volumetric flask. Brought to volume with Milli Q water. mixed well
Extraction fluid expires on 10/6/2009
Milli Q water: 6647, dispensed 9/22/2009
Hexylamine: Acros Organics, Cat. No. 204720050, L/N A0249212. re-eval. ~~01/23~~ 8/24/2010

4056.01 JW 9/22/2009

SOP Analysis # 10342, Rev. 01, eff. 10/29/2003

Title: Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Aqueous Samples by LC/MS/MS

Date: 7/22/2004

From: Notebook 106108, pg 36

1. Pipette calibration

Pipette calibration was performed this morning before performing soil sample preparation. See Notebook 106108, pg. 33.

2. Check the pH of client samples

5779954: pH 5

5779955: pH 5

5781382: pH 5

3. Prepare 1% benzaldehyde soln

1% benzaldehyde soln was prepared this morning. See Notebook 106108, pg. 34

4. Derivatization of MDL and calibration standards with benzaldehyde was performed when performing soil sample preparation today. See Notebook 106108, pg 35.

5. Derivatization of Blank, LCS, LCSD, client samples, MS and MSD with benzaldehyde

Batch #: 0P265106108 37 [illegible] 7/22/04

Derivative soln	0.2M acetate buffer	2nd source LCV spiking soln	Benzaldehyde soln
	~~106502-54-5~~ JW 7/22/04	~~106108-5-2~~ JW 7/22/04	

Derivative soln	1M hexylamine soln	0.2M acetate buffer	2nd source LCV spiking soln	Benzaldehyde soln
LCV/LCS2	106108-13-1, 10.0 mL	100502-54-5, 1.0 mL	106108-5-2, 10.0 mL	0.5 mL
LCSD2	↓	↓	↓	↓
Blank			Not added	

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4056.01 JW 7/22/2004

106108 37

9/22/2009

From Notebook 106108, pg. 37

5 Cont'd

Derivative soln	1M hexylamine soln	Client Sample	2nd source ICV spiking soln	Benzaldehyde soln
	106108-13-1	1.0 mL	106108-5-2	
5779954	10.0 mL	5779954	Not added	0.5 mL
5779955	↓	5779955	↓	↓
5781382 BKG	↓	5781382	↓	↓
5781382 MS	↓	↓	10.0 mL	↓
5781382 MSD	↓	↓	↓	↓

To make each derivative soln, added the corresponding soln according to the table above into glass vials, mixed well. Placed the glass vials in a sample shaker with heated water bath (40°C) for 1 hr. Filtered the soln into autosampler vials.
End of batch sample preparation.

6. Run workbook: TQU 01408 - 22 Sep 2009 - 1
under: C:\Xcalibur\Hydrazine Analysis\Sep 2009
Sample: All the samples prepared today from Notebook 106108, pg 33 to pg 38.
There are two batches of samples
Batch # 09265106108 33
Batch # 09265106108 37

7. Reagents + Equipment
LC pump: Thermo Electron Corporation, Accela, S/N 83181
LC autosampler: Thermo Electron Corporation, Accela, S/N 82612
Mass Spectrometer: Thermo Scientific, TSQ Quantum Access, S/N TQU 01408
HPLC column: Thermo Scientific, Hypersil Gold, 3um, L/N 9154, S/N 0381365T
Sample shaker with heated water bath: Lancaster Labs Asset# 15722
Thermometer: cal. Due 7/2010, NB 103345/17, cal. Range 18.05 °C to 50.00 °C
Syringe: 3mL, SUN-SRI Cat. No. 400 044, L/N 00077198
Acrodisc CR syringe filter: PALL, with 0.45um PTFE membrane, L/N 21722067
Methanol: Fisher Scientific, Optima, L/N 090571, exp. 4/8/2014
Benzaldehyde: Aldrich, ≥ 99.5%, Batch #. 99696DJ, exp. 6/1/2013
Balance: 6424, cal. Due 11/09, qual. Due 7/2010 (for pipette calibration)
MDL and calibration standards: 100562-55-1 to 100562-55-9, see notebook: 100562, pg. 55
2nd source ICV spiking solution: 106108-5-2, see notebook 106108, pg. 5. In this solution, hydrazine 1.25 ug/mL, monomethylhydrazine and 1,1-dimethylhydrazine 6.25 ug/mL

01N23 0252

Moisture Data

OLN23 0253

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN23

SAMPLE NUMBERS:

Sample #	Sample Code
5774703	O4270
5774704	O4340
5774705	O4560
5774706	O4561
5774707	O456DFD
5774708	O4567BKG
5774709	O4567MS
5774710	O4567MSD
5774711	O4570
5774712	O4578
5779940	O4131
5779941	O4572
5779942	O4200
5779943	O4221
5779944	O4240
5779945	O4271
5779946	O4290
5779947	O4310
5779948	O4341
5779949	O4400
5779950	O4501
5779951	O4550
5779952	O4600
5779953	O4130

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 09258820004B	Sample number(s): 5774703-5774712				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 09265820002A	Sample number(s): 5779940-5779952				
Moisture	100		99-101		
Batch number: 09265820002B	Sample number(s): 5779953				
Moisture	100		99-101		

OLN23 6254

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN23

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 09258820004B	Sample number(s): 5774703-5774712			
Moisture	6.0	6.2	3	15
Moisture	6.0	6.2	3	15
Moisture Duplicate	6.0	6.2	3	15
Batch number: 09265820002A	Sample number(s): 5779940-5779952			
Moisture	14.2	14.1	1	15
Batch number: 09265820002B	Sample number(s): 5779953			
Moisture	26.7	26.8	0	15

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 09258820004

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0952	5.0065	1.6320	89.28	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774703	B	00111	1.0732	6.4227	7.0795	6.48	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774704	B	00111	1.0252	8.7006	9.2197	5.82	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774705	B	00111	1.0630	7.0439	7.9395	2.38	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774706	B	00111	1.0542	8.0139	8.3632	8.80	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774707FD	B	00111	1.0716	6.5721	7.2929	5.34	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774708BKG	B	00111	1.0841	7.8828	8.4906	6.04	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774709MS	B	00118				6.04	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774710MSD	B	00118				6.04	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774710MSD	B	00121	1.0512	7.7048	8.2748	6.25	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774711	B	00111	1.0940	8.2274	8.9589	4.41	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
5774712	B	00111	1.0894	7.0397	7.5289	8.53	9/15/09 (1201/SWF)	9/16/09 (0236/CW)

Batch #: 09265820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1081	5.0453	1.6472	89.31	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779940	A	00111	1.1275	8.8635	8.9268	12.01	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779941	A	00111	1.0964	8.5779	8.6236	12.25	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779942BKG	A	00111	1.0913	7.2867	7.3408	14.23	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779942DUP	A	00111	1.1032	7.7916	7.7934	14.14	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779943	A	00111	1.1237	6.9133	7.1284	13.14	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779944	A	00111	1.1034	9.1581	9.0219	13.54	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779945	A	00111	1.0810	7.3384	7.1554	17.22	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779946	A	00111	1.1170	7.7910	7.6255	16.46	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779947	A	00111	1.1010	9.0140	8.9688	12.72	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779948	A	00111	1.0911	6.4284	6.4158	17.17	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779949	A	00111	1.1265	8.3074	5.8366	43.30	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779950	A	00111	1.0903	6.7921	5.3784	36.87	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779951	A	00111	1.1117	7.0296	7.2345	12.90	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779952	A	00111	1.1041	6.6884	6.7272	15.93	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779953BKG	B	00111	1.1311	6.7937	6.1087	26.73	9/22/09 (1201/SWF)	9/23/09 (0236/CW)
5779953DUP	B	00111	1.1128	6.0211	5.5232	26.75	9/22/09 (1201/SWF)	9/23/09 (0236/CW)