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# OLN20

Project: Olin Wilmington, MA Superfund Site/6107090016
Soil and Water Samples
Collected on 08/31/09-09/10/09

GROUP	SAMPLE NUMBERS
1160158	5766212-5766218
1161210	5772546-5772549
1161211	5772550
1161543	5774702

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

Prepared by _____

Reviewed by _____

Date 10/9/09

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Sample Reference List for SDG Number OLN20 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
5766212	O442D	OC-SB-442-8.0/10-DUP Grab Soil
5766213	O4428	OC-SB-442-8.0/10-XXX Grab Soil
5766214	O4428	OC-SB-442-8.0/10-XMS Grab Soil
5766215	O4428	OC-SB-442-8.0/10-MSD Grab Soil
5766216	O4525	OC-SB-452-5.0/7.0-XXX Grab Soil
5766217	O4636	OC-SB-463-6.0/8.0-XXX Grab Soil
5766218	O4642	OC-SB-464-5.0/7.0-XXX Grab Soil
5772546	O4500	OC-SB-450-0.0/1.0-XXX Grab Soil
5772547	O4663	OC-SB-466-30/32-XXX Grab Soil
5772548	O4666	OC-SB-466-6.0/8.0-XXX Grab Soil
5772549	OEB08	OC-EBK-008 Grab Water
5772550	O4508	OC-SB-450-8.0/10-XXX Grab Soil
5774702	O4347	OC-SB-434-7.0/9.0-XXX Grab Soil

Shipped Tuesday 9/1/09

Acct # 12670 Grp # 1160158

Lancaster-Soil Sample # 5766212-18

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

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) G	Cr+6 (7199) P	DMF (Mod 8033 - GC/NPD) G	DMF (Mod 8033 - GC/NPD) V	Opex / Kempore (8000B - HPLC) V	Perchlorate (6850) V	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS) AG	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS) Zn AV	Comments (Special Instructions)
															<--Preservative Type (4)
															<--Bottle Type (5)
OC-SB-442-0.0/1.0-XXX	8/31/2009 12:00:00	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: 4.3 Deg C

Preservation / pH checked? Y / N

By: ____ Date: ____

Relinquished: [signature] Date: 09/01/09 Time: 1800 Received: ____ Date: __/__/__ Time: ____

Relinquished: ____ Date: __/__/__ Time: ____ Received: [signature] Date: 9/2/09 Time: 0910

Lancaster-Soil

Acct#12670
Grp# 1160158
Sample# 5766212-18

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-442-20/22-XXX	8/31/2009 1:20:00 PM	T	FS	SO	G	1							X		Category 3
OC-SB-442-8.0/10-DUP	8/31/2009 12:10:00	T	FD	SO	G	1							X		Category 2
OC-SB-442-8.0/10-MSD	8/31/2009 12:10:00	T	MS	SO	G	1							X		Category 2
OC-SB-442-8.0/10-XMS	8/31/2009 12:10:00	T	MS	SO	G	1							X		Category 2
OC-SB-442-8.0/10-XXX	8/31/2009 12:10:00	T	FS	SO	G	1							X		Category 2
OC-SB-452-0.0/1.0-XXX	8/31/2009 10:30:00	T	FS	SO	G	1							X		Category 1
OC-SB-452-13/15-XXX	8/31/2009 11:00:00	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: 4.3 Deg C	
Preservation / pH checked? Y / N	
By:	Date:

Relinquished: [signature] **Date:** 09/01/09 **Time:** 1800 **Received:** _____ **Date:** __/__/__ **Time:** _____

Relinquished: _____ **Date:** __/__/__ **Time:** _____ **Received:** [signature] **Date:** 9/2/09 **Time:** 0910

C880 SZ4D

Lancaster-Soil

Acct # 12670
Grp # 1160158
Sample # 5766212-18

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-452-5.0/7.0-XXX	8/31/2009 10:45:00	T	FS	SO	G	1																				X				Category 2

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: 4.3 Deg C	
Preservation / pH checked? Y / N (N)	
By: _____ Date: _____	

Relinquished: [signature] Date: 09/01/09 Time: 1800 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/2/09 Time: 0910

Lancaster - Soil

Acct # 12670
Grp # 1160158
Sample # 5766212-18

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-463-28/30-XXX	9/1/2009 2:50:00 PM	T	FS	SO	G	1																			X				Category 3
OC-SB-463-6.0/8.0-XXX	9/1/2009 1:10:00 PM	T	FS	SO	G	1																			X				Category 2
OC-SB-464-0.0/1.0-XXX	9/1/2009 3:50:00 PM	T	FS	SO	G	1																			X				Category 1
OC-SB-464-26/28-XXX	9/1/2009 4:50:00 PM	T	FS	SO	G	1																			X				Category 2
OC-SB-464-5.0/7.0-XXX	9/1/2009 4:50:00 PM	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: 4.3 Deg C	
Preservation / pH checked? Y (N)	
By: _____	Date: _____

Relinquished: [signature] **Date:** 09/01/09 **Time:** 1800 **Received:** _____ **Date:** __/__/__ **Time:** _____

Relinquished: _____ **Date:** __/__/__ **Time:** _____ **Received:** [signature] **Date:** 9/2/09 **Time:** 0910

Lancaster-Soil

Acct# 12670
Grp# 1160158
Sample# 5766212-18

Client: Olin Corporation	Client Project #: 6107090016	INVOICE INFO	Bracket Area for Lab 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	AV			<--Preservative Type (4)
																										Zn			<--Bottle Type (5)
OC-SB-458-0.0/1.0-XXX	8/31/2009 3:30:00 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: 4.3 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] Date: 09/01/09 Time: 1800 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: Deborah Neal Date: 9/2/09 Time: 0910

Lancaster- Soil

Acct# 12670
Grp# 1160158
Sample# 5766212-18

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)
<--Preservative Type (4)													Zn		
<--Bottle Type (5)							G	P	G	V	V	V	AG	AV	
OC-SB-463-0.0/1.0-XXX	9/1/2009 1:00:00 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: 4.3 Deg C

Preservation / pH checked? Y / (N)

By: _____ Date: _____

Relinquished: [signature] Date: 09/01/09 Time: 1800 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 9/2/09 Time: 0910

Acct#12670
Grp# 1160158
Sample# 5766212-18

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

Company Name: Olin Corp

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: Email

Shaded Areas for Office Use only

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-006	8/31/2009 2:15:00 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: 4.3 Deg C

Preservation / pH checked? Y / (N)

By: _____ Date: _____

Relinquished: [signature] Date: 09/01/09 Time: 1800 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: Deborah Neill Date: 9/2/09 Time: 0910

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: Olin

Date of Receipt: 9/2/09

Time of Receipt: 0910

Source Code: 50-1

Unpacker Emp. No.: 208

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	0429951	4.3	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
D Ahrelund	9/2/09	0935	Unpacking / to Storage
Kristin Leigh	9-2-09	1022	Place in Storage or (Entry)
			Entry
			Entry

shipped on 9/9/09 Wed

Acct# 12670
Grp# 1161210
Sample# 5772546-49 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 / Kemmpore (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-450-0.0/1.0-XXX	9/9/2009 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: 1.5 Deg C

Preservation / pH checked? Y / N

By: _____ Date: _____

Relinquished: [signature] Date: 9/9/09 Time: 1745 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: Mary Bayles Date: 9/10/09 Time: 0910

Fed Ex P1 tracking # = 8372-3852-1802

Acct # 12670
Grp# 1161210 ③ KMZ 9-10-09
Sample # ~~S~~ 5572546-49 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) G	Cr+6 (7199) P	DMF (Mod 8033 - GC/NPD) G	DMF (Mod 8033 - GC/NPD) V	Opex / Kempore (8000B - HPLC) V	Perchlorate (6850) V	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS) AG	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS) Zn AV	Comments (Special Instructions)
													<--Preservative Type (4)		
													<--Bottle Type (5)		
OC-SB-450-33/35-XXX	9/9/2009 4:55:00 PM	T	FS	SO	G	1							X		Category 3
OC-SB-450-8.0/10-XXX	9/9/2009 1:55:00 PM	T	FS	SO	G	1							X		Category 2
OC-SB-466-30/32-XXX	9/8/2009 3:50:00 PM	T	FS	SO	G	1							X		Category 1
OC-SB-466-6.0/8.0-XXX	9/8/2009 1:50:00 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 (Y circled) | MADEP Requirement Samples Iced? Y / N (Y circled)

Temp @ receipt: 1.5 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 9/9/09 Time: 1745 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ____ Received: Mary Butler Date: 9/10/09 Time: 0910

Acct# 12670
Grp# 116210
Sample# 5772546-49

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-008	9/8/2009 11:00:00	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: 9/9/09 Time: 1745 Received: _____ Date: __/__/____ Time: _____

Relinquished: _____ Date: __/__/____ Time: _____ Received: Mary Beth Leo Date: 9/10/09 Time: 0910

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

Temp @ receipt: 1.5 Deg C

Preservation / pH checked? Y / N

By: _____ Date: _____

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: Mactec

Date of Receipt: 9/10/09

Time of Receipt: 0910

Source Code: 50-1

Unpacker Emp. No.: 1607

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	0429951	1.5°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Mary Beth Reed	9/10/09	1000	Unpacking / to storage
Kristin Leigh	9-10-09	1041	Place in Storage or Entry
			Entry
			Entry

Acct # 12670
Grp # 1161211
Sample # 5772550

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-450-33/35-XXX	9/9/2009 4:55:00 PM	T	FS	SO	G	1																			X				Category 3
OC-SB-450-8.0/10-XXX	9/9/2009 1:55:00 PM	T	FS	SO	G	1																			X				Category 2
OC-SB-466-30/32-XXX	9/8/2009 3:50:00 PM	T	FS	SO	G	1																			X				Category 1
OC-SB-466-6.0/8.0-XXX	9/8/2009 1:50:00 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: 1.5 Deg C

Preservation / pH checked? Y / N

By: _____ Date: _____

Relinquished: [signature] **Date:** 9/9/09 **Time:** 1745 **Received:** _____ **Date:** __/__/__ **Time:** _

Relinquished: _____ **Date:** __/__/__ **Time:** ____ **Received:** Mary Bethlea **Date:** 9/10/09 **Time:** 0910

shipped on 9/9/09 Wed

Acct# 12670
Grp# 1161211
Sample# 5772550

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:___

INVOICE INFO — Shaded Areas for office use only

Company Name: Olin Corp
Company Contact: ERG Accounts Payable
Address: Same as Client
Phone: Email

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 _____

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	AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SB-450-0.0/1.0-XXX	9/9/2009 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: 1.5 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 9/9/09 Time: 1745 Received: _____ Date: __/__/__ Time: _____
Relinquished: _____ Date: __/__/__ Time: _____ Received: Mary Boyle Date: 9/10/09 Time: 0910

Fed Ex P1 tracking # = 8372-3852-1802

Acct# 12670
Grp# 1161211
Sample# 5772550

Lancaster- Water

Client: Olin Corporation
Address: 3855 North Ocoee St. Suite 200
Cleveland, TN 37312
Phone: 423-336-4511 Fax: 423-336-1466 Email SGMorrow@olin.com Email Rpt:____

Client Project #: 6107090016
Work Site ID: Wilmington, MA
Reports Sent To: Steve Morrow

INVOICE INFO
Company Name: Olin Corp
Company Contact: ERG Accounts Payable
Address: Same as Client
Phone: Email

Shaded Areas for office use only

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 _____

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	AV	<--Preservative Type (4) / <--Bottle Type (5)
OC-EBK-008	9/8/2009 11:00:00	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: 1.5 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 9/9/09 Time: 1745 Received: _____ Date: __/__/__ Time: _____
Relinquished: _____ Date: __/__/__ Time: _____ Received: Mary Beth [signature] Date: 9/10/09 Time: 0910

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: Mactec

Date of Receipt: 9/10/09

Time of Receipt: 0910

Source Code: 50-1

Unpacker Emp. No.: 1607

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	0429951	1.5°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Mary Beth Reed	9/10/09	1000	Unpacking to Storage
Kristin Zeigler	9-10-09	1041	Place in Storage or Entry
			Entry
			Entry

Acct # 12670
Grp # 1161543
Sample # 5774702

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: 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

shipped on Friday 9/11/09

Acct# 12670
Grp# 1161543
Sample# 5774702 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:	

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 #

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 _____

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# 1161543
Sample# 5774702

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	-	-	-	-	-	-	-	-	-	-	-	-	-	Zn	-	-	<--Preservative Type (4)
																									AG	AV			<--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:** Katie Hawthe **Date:** 9 / 12 / 09 **Time:** 10:00

Acct # 12670
Grp # 1161543
Sample # 5774702

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)
							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Zn	-	-	<--Preservative Type (4)
							G	P	G	V	V	V													AG	AV			<--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 # 1161543
Sample # 5774702

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Zn	-	<--Preservative Type (4)
																									AG	AV			<--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:** Katie Hartley **Date:** 9 / 12 / 09 **Time:** 1800

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.

OLN28 0866

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: 50-1

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	042997S	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

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-463-28/30-XXX	9/1/2009 2:50:00 PM	T	FS	SO	G	1							X		Category 3
OC-SB-463-6.0/8.0-XXX	9/1/2009 1:10:00 PM	T	FS	SO	G	1							X		Category 2
OC-SB-464-0.0/1.0-XXX	9/1/2009 3:50:00 PM	T	FS	SO	G	1							X		Category 1
OC-SB-464-26/28-XXX	9/1/2009 4:50:00 PM	T	FS	SO	G	1							X		Category 2
OC-SB-464-5.0/7.0-XXX	9/1/2009 4:50:00 PM	T	FS	SO	G	1							X		Category 3

Change to Category 3 TC 9/2/09

Change to Category 2 TC 9/2/09

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: _____ Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] Date: 09/01/09 Time: 1800 Received: _____ Date: __/__/__ Time: __

Relinquished: _____ Date: __/__/__ Time: ____ Received: _____ Date: __/__/__ Time: __

9:25 AM 9/2/09

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
1160158	OC-SB-442-20/22-XXX	TBD	08/31/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1160158	OC-SB-452-13/15-XXX	TBD	08/31/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1160158	OC-SB-463-28/30-XXX	TBD	09/01/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1160158	OC-SB-464-26/28-XXX	TBD	09/01/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC

Tige Cunningham

Sample Manager
MACTEC Engineering & Consulting, Inc.

9-16-09
Date

P:\6107090016 - Olin Wilmington CSS 2009\3.0 Field and Site Characterization\3.6 Databases\Prelim EDDs\
IN20-01 thru 05 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 10, 2009

SAMPLE GROUP

The sample group for this submittal is 1160158. Samples arrived at the laboratory on Wednesday, September 02, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-442-8.0/10-DUP Grab Soil	5766212
OC-SB-442-8.0/10-XXX Grab Soil	5766213
OC-SB-442-8.0/10-XMS Grab Soil	5766214
OC-SB-442-8.0/10-MSD Grab Soil	5766215
OC-SB-452-5.0/7.0-XXX Grab Soil	5766216
OC-SB-463-6.0/8.0-XXX Grab Soil	5766217
OC-SB-464-5.0/7.0-XXX Grab Soil	5766218

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	

OLN28 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

OLN28 8031

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	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

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

> greater than

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

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

ppb parts per billion

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

Analytical test results 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 order 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 5766212

Group No. 1160158
MA

OC-SB-442-8.0/10-DUP Grab Soil
Wilmington MA Superfund Site

Collected: 08/31/2009 12:10

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

0442D SDG#: OLN20-01FD

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	5.6	1
10346	Hydrazine		302-01-2	4.4	0.56	2.3	1
10346	Methylhydrazine		60-34-4	N.D.	2.3	5.6	1
Wet Chemistry		**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture		n.a.	11.3	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	0925110610808	09/08/2009 19:18	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09246820002B	09/03/2009 18:29	Scott W Freisher	1

OLN20 0033

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 5766213

Group No. 1160158
MA

OC-SB-442-8.0/10-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/31/2009 12:10

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4428 SDG#: OLN20-02BKG

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	3.4	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.	13.4	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	0925110610808	09/08/2009 19:37	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09246820002B	09/03/2009 18:29	Scott W Freisher	1

OLN20 0034

*=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 5766214

Group No. 1160158
MA

OC-SB-442-8.0/10-XMS Grab Soil
Wilmington MA Superfund Site

Collected: 08/31/2009 12:10

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04428 SDG#: OLN20-02MS

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	2.3	5.8	1
10346	Hydrazine	302-01-2	83	0.58	2.3	1
10346	Methylhydrazine	60-34-4	460	2.3	5.8	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00118	Moisture	n.a.	13.4	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	0925110610808	09/08/2009 19:56	Jia Wang	1
00118	Moisture	SM20 2540 G	1	09246820002B	09/03/2009 18:29	Scott W Freisher	1

OLN20 0035

*=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 5766215

Group No. 1160158
MA

OC-SB-442-8.0/10-MSD Grab Soil
Wilmington MA Superfund Site

Collected: 08/31/2009 12:10

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4428 SDG#: OLN20-02MSD

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	660	2.3	5.8	1
10346	Hydrazine	302-01-2	86	0.58	2.3	1
10346	Methylhydrazine	60-34-4	490	2.3	5.8	1
Wet Chemistry	**SM20 2540 G**		%	%	%	
00118	Moisture	n.a.	13.4	0.50	0.50	1
00121	Moisture Duplicate	n.a.	11.8	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	0925110610808	09/08/2009 20:15	Jia Wang	1
00118	Moisture	SM20 2540 G	1	09246820002B	09/03/2009 18:29	Scott W Freisher	1
00121	Moisture Duplicate	SM20 2540 G	1	09246820002B	09/03/2009 18:29	Scott W Freisher	1

OLN20 0836

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

Lancaster Laboratories, Inc.
2425 New Holland Pike
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5766216

Group No. 1160158
MA

OC-SB-452-5.0/7.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/31/2009 10:45

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4525 SDG#: OLN20-03

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.	2.4	6.0	1
10346	Hydrazine	302-01-2	3.2	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	0925110610808	09/08/2009 22:44	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09246820002B	09/03/2009 18:29	Scott W Freisher	1

OLN20 8837

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

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5766217

Group No. 1160158
MA

OC-SB-463-6.0/8.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/01/2009 13:10

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04636 SDG#: OLN20-04

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.	2.4	6.1	1
10346	Hydrazine	302-01-2	4.5	0.61	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	2.4	6.1	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	17.8	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	0925110610808	09/08/2009 23:03	Jia Wang	1
00111	Moisture	SM20 2540 G	2	09247820002A	09/04/2009 17:09	Scott W Freisher	1

OLN20 0030

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

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5766218

Group No. 1160158
MA

OC-SB-464-5.0/7.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/01/2009 16:50

Account Number: 12670

Submitted: 09/02/2009 09:10
Reported: 09/10/2009 at 16:01
Discard: 09/25/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04642 SDG#: OLN20-05

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.	13.0	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	0925110610808	09/08/2009 23:22	Jia Wang	1
00111	Moisture	SM20 2540 G	2	09247820002B	09/04/2009 17:09	Scott W Freisher	1

OLN20 0039

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

Lancaster Laboratories, Inc.
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717-656-2300 Fax: 717-656-2681

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 21, 2009

SAMPLE GROUP

The sample group for this submittal is 1161210. Samples arrived at the laboratory on Thursday, September 10, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-450-0.0/1.0-XXX Grab Soil	5772546
OC-SB-466-30/32-XXX Grab Soil	5772547
OC-SB-466-6.0/8.0-XXX Grab Soil	5772548
OC-EBK-008 Grab Water	5772549

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	

GLN28 8849

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

Lancaster Laboratories

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

Respectfully Submitted,

Charles J. Neslund
Manager

OLN20 8841

Lancaster Laboratories, Inc.
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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	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

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

> greater than

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

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

ppb parts per billion

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

Analytical test results 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 5772546

Group No. 1161210
MA

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

Collected: 09/09/2009 13:40

Account Number: 12670

Submitted: 09/10/2009 09:10
Reported: 09/21/2009 at 19:45
Discard: 10/06/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04500 SDG#: OLN20-06

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.	5.6	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	0925310610813	09/11/2009 08:41	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09257820001B	09/14/2009 15:03	Scott W Freisher	1

OLN2B 3843

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 5772547

Group No. 1161210
MA

OC-SB-466-30/32-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/08/2009 15:50

Account Number: 12670

Submitted: 09/10/2009 09:10
Reported: 09/21/2009 at 19:45
Discard: 10/06/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04663 SDG#: OLN20-07

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.		2.2	5.5	1
10346	Hydrazine	302-01-2	1.2	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.	9.4		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	0925310610813	09/11/2009 09:00	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09257820001B	09/14/2009 15:03	Scott W Freisher	1

OLN2B 3044

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

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5772548

Group No. 1161210
MA

OC-SB-466-6.0/8.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/08/2009 13:50

Account Number: 12670

Submitted: 09/10/2009 09:10
Reported: 09/21/2009 at 19:45
Discard: 10/06/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04666 SDG#: OLN20-08

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	5.4	1
10346	Hydrazine	302-01-2	N.D.	0.54	2.2	1
10346	Methylhydrazine	60-34-4	N.D.	2.2	5.4	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	8.1	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	0925310610813	09/11/2009 09:19	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09257820001B	09/14/2009 15:03	Scott W Freisher	1

OLN20 0845

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 5772549

Group No. 1161210
MA

OC-EBK-008 Grab Water
Wilmington MA Superfund Site

Collected: 09/08/2009 11:00

Account Number: 12670

Submitted: 09/10/2009 09:10
Reported: 09/21/2009 at 19:45
Discard: 10/06/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

OEB08 SDG#: OLN20-09EB

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	0925810610826	09/17/2009 02:00	Jia Wang	1

OLN28 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 16, 2009

SAMPLE GROUP

The sample group for this submittal is 1161211. Samples arrived at the laboratory on Thursday, September 10, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-450-8.0/10-XXX Grab Soil	5772550

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	

OLN20 0047

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

0LNZ0 8048

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 5772550

Group No. 1161211
MA

OC-SB-450-8.0/10-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/09/2009 13:55

Account Number: 12670

Submitted: 09/10/2009 09:10
Reported: 09/16/2009 at 14:50
Discard: 10/01/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

04508 SDG#: OLN20-10

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	5.8	1
10346	Hydrazine	302-01-2	0.67	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	0925310610813	09/11/2009 09:38	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09254820001B	09/11/2009 17:36	Scott W Freisher	1

OLN20 0049

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

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

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 1161543. 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-434-7.0/9.0-XXX Grab Soil	5774702

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	

OLN28 0050

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Lancaster Laboratories

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

Respectfully Submitted,

Charles J. Neslund
Manager

0LN28 8851

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Lancaster Laboratories
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Explanation of Symbols and Abbreviations

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

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

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

> greater than

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

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

ppb parts per billion

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

Analytical test results 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 5774702

Group No. 1161543
MA

OC-SB-434-7.0/9.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 09/10/2009 08:15

Account Number: 12670

Submitted: 09/12/2009 10:00
Reported: 09/22/2009 at 15:55
Discard: 10/07/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

O4347 SDG#: OLN20-11*

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.	2.2	5.4	1
10346	Hydrazine	302-01-2	N.D.	0.54	2.2	1
10346	Methylhydrazine	60-34-4	N.D.	2.2	5.4	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	7.0	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 22:34	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09258820004B	09/15/2009 18:18	Scott W Freisher	1

OLN20 0053

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

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Miscellaneous Organics Data

Case Narrative Conformance/Nonconformance Summary

Lancaster Laboratories
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CASE NARRATIVE

Client: Olin Corporation
SDG#: OLN20

LANCASTER LABORATORIES
MISCELLANEOUS ORGANICS DATA

SAMPLE NUMBER(S)

LL #'s	Sample Code	Matrix Soil	Matrix Water	Comments
5766212	O441D	X		
5766213	O4428	X		Unspiked
5766214MS	O4428	X		Matrix Spike
5766215MSD	O4428	X		Matrix Spike Dup
5766216	O4525	X		
5766217	O4636	X		
5766218	O4642	X		
5772546	O4500	X		
5772547	O4663	X		
5772548	O4666	X		
5772549	OEB0B		X	Unspiked
5772549MS	OEB0B		X	Matrix Spike
5772549MSD	OEB0B		X	Matrix Spike Dup
5772550	O4508	X		
5775702	O4347	X		

LABORATORY SUBMITTED QC:

Blank	Sep 08	X		Method Blank
Blank2	Sep 10	X		Method Blank
Blank1	Sep 16	X		Method Blank
Blank2	Sep 16		X	Method Blank
LCS	Sep 08	X		Lab Control Sample
LCSD	Sep 08	X		Lab Control Sample Dup
LCS2	Sep 10	X		Lab Control Sample
LCSD2	Sep 10	X		Lab Control Sample Dup
LCS1	Sep 16	X		Lab Control Sample
LCSD1	Sep 16	X		Lab Control Sample Dup
ICV/LCS2	Sep 16		X	Lab Control Sample
LCSD2	Sep 16		X	Lab Control Sample Dup

Case Narrative (continued)
SDG: OLN20

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:

All QC was within specifications.

DATA INTERPRETATION:

Method blank forms could not be generated. None of the reported compounds were detected in the method blanks.

The LCS serves as the ICV second source check for the water method in the water batch of this SDG.

Abbreviation Key

NC = Not calculated
NF = Not found

Case Narrative Reviewed and Approved by:

Dorothy M Rae

Date: 10/9/09

Dana M. Kauffman
Manager, Data Deliverables

OLN28 0057

QC Summary

OLN2B 885S

Lancaster Laboratories

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

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 08Sep2009-19
MSD File Name: 08Sep2009-20
Batch No.: 0925110610808
MS Injected: 9/8/2009
MS Injected: 9/8/2009
Workbook: TQU01408-08Sep2009-1
MS ID: 5766214MS
MSD ID: 5766215MSD
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	2.98	71.52	74.12	55	57	11-102	4	30
1,1-Dimethylhydrazine	625	0	549.58	573.36	88	92	10-92	4	30
Monomethylhydrazine	625	0	399.32	421.25	64	67	10-116	5	30

Comments:

Analyst: JW 1543 9/9/2009

Reviewed by: [illegible] 9/10/09

Lancaster Laboratories

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

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 08Sep2009-21
LCSD File Name: 08Sep2009-22
Batch No.: 0925110610808
LCS Injected: 9/08/2009
LCSD Injected: 9/8/2009
Workbook: TQU01408-08Sep2009-1
LCS ID: LCS
LCSD ID: LCSD
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	99.91	96.13	80	77	70-130	4	30
1,1-Dimethylhydrazine	625	639.59	691.78	102	111	70-130	8	30
Monomethylhydrazine	625	653.55	669.97	105	107	70-130	2	30

Comments:

Analyst: JW 1543 9/9/2009

Reviewed by: [illegible] 9/10/09

Recovery calculation using specified spiking solution concentration

Lancaster Laboratories

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

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 10Sep2009-41
LCSD File Name: 10Sep2009-42
Batch No.: 0925310610813
LCS Injected: 9/11/2009
LCSD Injected: 9/11/2009
Workbook: TQU01408-10Sep2009-3
LCS ID: LCS2
LCSD ID: LCSD2
Dilution Factor: 2

Compound	Spike Level	LCS Found	LCSD Found	LCS Recovery	LCSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	104.25	103.10	83	82	70-130	1	30
1,1-Dimethylhydrazine	625	669.37	687.40	107	110	70-130	3	30
Monomethylhydrazine	625	670.38	702.86	107	112	70-130	5	30

Comments:

Analyst: JW 1543 9/11/2009

Reviewed by: [illegible] 9/11/09

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 Aqueous Samples

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 16Sep2009-40
MSD File Name: 16Sep2009-41
Batch No.: 0925810610826
MS Injected: 9/17/2009
MS Injected: 9/17/2009
Workbook: TQU01408-16Sep2009-1
MS ID: 5772549MS
MSD ID: 5772549MSD
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	11.405	11.421	91	91	70-130	0	30
1,1-Dimethylhydrazine	62.5	0	80.142	79.290	128	127	70-130	1	30
Monomethylhydrazine	62.5	0	76.886	73.367	123	117	70-130	5	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 Aqueous Samples

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 16Sep2009-42
LCSD File Name: 16Sep2009-43
Batch No.: 0925810610826
LCS Injected: 9/17/2009
LCSD Injected: 9/17/2009
Workbook: TQU01408-16Sep2009-1
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	11.791	11.238	94	90	70-130	5	30
1,1-Dimethylhydrazine	62.5	75.350	78.093	121	125	70-130	4	30
Monomethylhydrazine	62.5	71.962	71.964	115	115	70-130	0	30

Comments:

Analyst: JW 1543 9/17/2009

Reviewed by: [illegible] 9/21/09

Sample Data

01N20 8865

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-08Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
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	43	0.108	ng/mL		
1,1-Dimethylhydrazine	MDL	Unknown	Method Settings	6668	0.320	ng/mL		
1,1-Dimethylhydrazine	Conditioner3	Unknown	Method Settings	779	0.131	ng/mL		
1,1-Dimethylhydrazine	Conditioner4	Unknown	Method Settings	129	0.111	ng/mL		
1,1-Dimethylhydrazine	Conditioner5	Unknown	Method Settings	21	0.107	ng/mL		
1,1-Dimethylhydrazine	Blank	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5766212FD	Unknown	Method Settings	38	0.108	ng/mL	1.08	ng/g
1,1-Dimethylhydrazine	5766213BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5766214MS	Unknown	Method Settings	1710694	54.958	ng/mL	549.58	ng/g
1,1-Dimethylhydrazine	5766215MSD	Unknown	Method Settings	1784887	57.336	ng/mL	573.36	ng/g
1,1-Dimethylhydrazine	LCS	Unknown	Method Settings	1991438	63.959	ng/mL	639.59	ng/g
1,1-Dimethylhydrazine	LCSD	Unknown	Method Settings	2154194	69.178	ng/mL	691.78	ng/g
1,1-Dimethylhydrazine	ICV	Unknown	Method Settings	2337645	75.060	ng/mL		
1,1-Dimethylhydrazine	Spike Check	Unknown	Method Settings	2313899	74.298	ng/mL		
1,1-Dimethylhydrazine	Conditioner6	Unknown	Method Settings	195	0.113	ng/mL		
1,1-Dimethylhydrazine	Conditioner7	Unknown	Method Settings	67	0.109	ng/mL		
1,1-Dimethylhydrazine	5766216	Unknown	Method Settings	49	0.108	ng/mL	1.08	ng/g
1,1-Dimethylhydrazine	5766217	Unknown	Method Settings	77	0.109	ng/mL	1.09	ng/g
1,1-Dimethylhydrazine	5766218	Unknown	Method Settings	60	0.108	ng/mL	1.08	ng/g
1,1-Dimethylhydrazine	5769167	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5769168	Unknown	Method Settings	84	0.109	ng/mL	1.09	ng/g
1,1-Dimethylhydrazine	5769169	Unknown	Method Settings	90	0.109	ng/mL	1.09	ng/g
1,1-Dimethylhydrazine	5769170	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g

Analyst : JW 1543 9/8/2009
[illegible] 9/10/09

OLN20 6666

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-08Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units		
Hydrazine	Conditioner1	Unknown	Method Settings	433	-0.006	ng/mL		
Hydrazine	Conditioner2	Unknown	Method Settings	71	-0.009	ng/mL		
Hydrazine	MDL	Unknown	Method Settings	10590	0.073	ng/mL		
Hydrazine	Conditioner3	Unknown	Method Settings	3068	0.014	ng/mL		
Hydrazine	Conditioner4	Unknown	Method Settings	371	-0.007	ng/mL		
Hydrazine	Conditioner5	Unknown	Method Settings	140	-0.009	ng/mL		
Hydrazine	Blank	Unknown	Method Settings	3487	0.017	ng/mL	0.17	ng/g
Hydrazine	5766212FD	Unknown	Method Settings	50816	0.386	ng/mL	3.86	ng/g
Hydrazine	5766213BKG	Unknown	Method Settings	39506	0.298	ng/mL	2.98	ng/g
Hydrazine	5766214MS	Unknown	Method Settings	919175	7.152	ng/mL	71.52	ng/g
Hydrazine	5766215MSD	Unknown	Method Settings	952637	7.412	ng/mL	74.12	ng/g
Hydrazine	LCS	Unknown	Method Settings	1283614	9.991	ng/mL	99.91	ng/g
Hydrazine	LCSD	Unknown	Method Settings	1235045	9.613	ng/mL	96.13	ng/g
Hydrazine	ICV	Unknown	Method Settings	1546251	12.037	ng/mL		
Hydrazine	Spike Check	Unknown	Method Settings	1378553	10.731	ng/mL		
Hydrazine	Conditioner6	Unknown	Method Settings	1418	0.001	ng/mL		
Hydrazine	Conditioner7	Unknown	Method Settings	345	-0.007	ng/mL		
Hydrazine	5766216	Unknown	Method Settings	35671	0.268	ng/mL	2.68	ng/g
Hydrazine	5766217	Unknown	Method Settings	49004	0.372	ng/mL	3.72	ng/g
Hydrazine	5766218	Unknown	Method Settings	32066	0.240	ng/mL	2.40	ng/g
Hydrazine	5769167	Unknown	Method Settings	4583	0.026	ng/mL	0.26	ng/g
Hydrazine	5769168	Unknown	Method Settings	87282	0.670	ng/mL	6.70	ng/g
Hydrazine	5769169	Unknown	Method Settings	2866117	22.321	ng/mL	223.21	ng/g
Hydrazine	5769170	Unknown	Method Settings	12670	0.089	ng/mL	0.89	ng/g

Analyst: JW 1543 9/9/2009
[illegible] 9/10/09

OLN28 8867

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-08Sep2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	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	8621	0.388	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	Blank	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5766212FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5766213BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5766214MS	Unknown	Method Settings	1251782	39.932	ng/mL	399.32	ng/g
Monomethylhydrazine	5766215MSD	Unknown	Method Settings	1320736	42.125	ng/mL	421.25	ng/g
Monomethylhydrazine	LCS	Unknown	Method Settings	2051025	65.355	ng/mL	653.55	ng/g
Monomethylhydrazine	LCSD	Unknown	Method Settings	2102664	66.997	ng/mL	669.97	ng/g
Monomethylhydrazine	ICV	Unknown	Method Settings	2330361	74.240	ng/mL		
Monomethylhydrazine	Spike Check	Unknown	Method Settings	2261586	72.052	ng/mL		
Monomethylhydrazine	Conditioner6	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner7	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5766216	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5766217	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5766218	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769167	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769168	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769169	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769170	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g

Analyst : JW 1543 9/9/2009
9/10/09

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-10Sep2009-3
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
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	18	0.137	ng/mL		
1,1-Dimethylhydrazine	Conditioner2	Unknown	Method Settings	19	0.137	ng/mL		
1,1-Dimethylhydrazine	MDL	Unknown	Method Settings	6640	0.344	ng/mL		
1,1-Dimethylhydrazine	Conditioner3	Unknown	Method Settings	612	0.155	ng/mL		
1,1-Dimethylhydrazine	Conditioner4	Unknown	Method Settings	58	0.138	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	5769175FD	Unknown	Method Settings	139	0.141	ng/mL	1.41	ng/g
1,1-Dimethylhydrazine	5769176BKG	Unknown	Method Settings	49	0.138	ng/mL	1.38	ng/g
1,1-Dimethylhydrazine	5769177MS	Unknown	Method Settings	1692242	53.052	ng/mL	530.52	ng/g
1,1-Dimethylhydrazine	5769178MSD	Unknown	Method Settings	1676230	52.551	ng/mL	525.51	ng/g
1,1-Dimethylhydrazine	LCS1	Unknown	Method Settings	1988756	62.324	ng/mL	623.24	ng/g
1,1-Dimethylhydrazine	LCSD1	Unknown	Method Settings	1975112	61.897	ng/mL	618.97	ng/g
1,1-Dimethylhydrazine	ICV	Unknown	Method Settings	2343538	73.418	ng/mL		
1,1-Dimethylhydrazine	Spike Check	Unknown	Method Settings	2304481	72.197	ng/mL		
1,1-Dimethylhydrazine	Conditioner6	Unknown	Method Settings	337	0.147	ng/mL		
1,1-Dimethylhydrazine	Conditioner7	Unknown	Method Settings	79	0.139	ng/mL		
1,1-Dimethylhydrazine	5769179	Unknown	Method Settings	47	0.138	ng/mL	1.38	ng/g
1,1-Dimethylhydrazine	5769180	Unknown	Method Settings	29	0.137	ng/mL	1.37	ng/g
1,1-Dimethylhydrazine	5770779	Unknown	Method Settings	63	0.138	ng/mL	1.38	ng/g
1,1-Dimethylhydrazine	5770780	Unknown	Method Settings	40	0.137	ng/mL	1.37	ng/g
1,1-Dimethylhydrazine	5770781	Unknown	Method Settings	46	0.138	ng/mL	1.38	ng/g
1,1-Dimethylhydrazine	Conditioner8	Unknown	Method Settings	45	0.138	ng/mL		
1,1-Dimethylhydrazine	Conditioner9	Unknown	Method Settings	11	0.137	ng/mL		
1,1-Dimethylhydrazine	Blank2	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5769171FD	Unknown	Method Settings	89	0.139	ng/mL	1.39	ng/g
1,1-Dimethylhydrazine	5769172BKG	Unknown	Method Settings	63	0.138	ng/mL	1.38	ng/g
1,1-Dimethylhydrazine	5769173MS	Unknown	Method Settings	1315409	41.269	ng/mL	412.69	ng/g
1,1-Dimethylhydrazine	5769174MSD	Unknown	Method Settings	1460823	45.816	ng/mL	458.16	ng/g
1,1-Dimethylhydrazine	LCS2	Unknown	Method Settings	2136290	66.937	ng/mL	669.37	ng/g
1,1-Dimethylhydrazine	LCSD2	Unknown	Method Settings	2193936	68.740	ng/mL	687.40	ng/g
1,1-Dimethylhydrazine	Conditioner10	Unknown	Method Settings	228	0.143	ng/mL		
1,1-Dimethylhydrazine	Conditioner11	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	5772546	Unknown	Method Settings	138	0.141	ng/mL	1.41	ng/g
1,1-Dimethylhydrazine	5772547	Unknown	Method Settings	207	0.143	ng/mL	1.43	ng/g
1,1-Dimethylhydrazine	5772548	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5772550	Unknown	Method Settings	38	0.137	ng/mL	1.37	ng/g

Analyst: JW 1543 2/11/2009
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Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-10Sep2009-3
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
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	NF	NC	ng/mL		
Hydrazine	Conditioner2	Unknown	Method Settings	34	-0.001	ng/mL		
Hydrazine	MDL	Unknown	Method Settings	8471	0.063	ng/mL		
Hydrazine	Conditioner3	Unknown	Method Settings	3438	0.025	ng/mL		
Hydrazine	Conditioner4	Unknown	Method Settings	308	0.001	ng/mL		
Hydrazine	Conditioner5	Unknown	Method Settings	124	-0.001	ng/mL		
Hydrazine	Blank1	Unknown	Method Settings	3491	0.025	ng/mL	0.25	ng/g
Hydrazine	5769175FD	Unknown	Method Settings	2254937	17.282	ng/mL	172.82	ng/g
Hydrazine	5769176BKG	Unknown	Method Settings	2435731	18.668	ng/mL	186.68	ng/g
Hydrazine	5769177MS	Unknown	Method Settings	3178316	24.360	ng/mL	243.60	ng/g
Hydrazine	5769178MSD	Unknown	Method Settings	3708721	28.426	ng/mL	284.26	ng/g
Hydrazine	LCS1	Unknown	Method Settings	1360841	10.429	ng/mL	104.29	ng/g
Hydrazine	LCSD1	Unknown	Method Settings	1283764	9.838	ng/mL	98.38	ng/g
Hydrazine	ICV	Unknown	Method Settings	1584757	12.145	ng/mL		
Hydrazine	Spike Check	Unknown	Method Settings	1469617	11.263	ng/mL		
Hydrazine	Conditioner6	Unknown	Method Settings	1980	0.013	ng/mL		
Hydrazine	Conditioner7	Unknown	Method Settings	498	0.002	ng/mL		
Hydrazine	5769179	Unknown	Method Settings	3202043	24.542	ng/mL	245.42	ng/g
Hydrazine	5769180	Unknown	Method Settings	22249	0.169	ng/mL	1.69	ng/g
Hydrazine	5770779	Unknown	Method Settings	6535	0.048	ng/mL	0.48	ng/g
Hydrazine	5770780	Unknown	Method Settings	37741	0.288	ng/mL	2.88	ng/g
Hydrazine	5770781	Unknown	Method Settings	8189	0.061	ng/mL	0.61	ng/g
Hydrazine	Conditioner8	Unknown	Method Settings	633	0.003	ng/mL		
Hydrazine	Conditioner9	Unknown	Method Settings	236	0.000	ng/mL		
Hydrazine	Blank2	Unknown	Method Settings	4200	0.030	ng/mL	0.30	ng/g
Hydrazine	5769171FD	Unknown	Method Settings	85556	0.654	ng/mL	6.54	ng/g
Hydrazine	5769172BKG	Unknown	Method Settings	98748	0.755	ng/mL	7.55	ng/g
Hydrazine	5769173MS	Unknown	Method Settings	332913	2.550	ng/mL	25.50	ng/g
Hydrazine	5769174MSD	Unknown	Method Settings	343002	2.627	ng/mL	26.27	ng/g
Hydrazine	LCS2	Unknown	Method Settings	1360308	10.425	ng/mL	104.25	ng/g
Hydrazine	LCSD2	Unknown	Method Settings	1345354	10.310	ng/mL	103.10	ng/g
Hydrazine	Conditioner10	Unknown	Method Settings	1402	0.009	ng/mL		
Hydrazine	Conditioner11	Unknown	Method Settings	335	0.001	ng/mL		
Hydrazine	5772546	Unknown	Method Settings	4276	0.031	ng/mL	0.31	ng/g
Hydrazine	5772547	Unknown	Method Settings	14679	0.111	ng/mL	1.11	ng/g
Hydrazine	5772548	Unknown	Method Settings	4109	0.030	ng/mL	0.30	ng/g
Hydrazine	5772550	Unknown	Method Settings	7819	0.058	ng/mL	0.58	ng/g

Analyst: JW 1543 9/11/2009
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Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-10Sep2009-3
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
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	7880	0.406	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	5769175FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769176BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769177MS	Unknown	Method Settings	994013	31.220	ng/mL	312.20	ng/g
Monomethylhydrazine	5769178MSD	Unknown	Method Settings	916937	28.812	ng/mL	288.12	ng/g
Monomethylhydrazine	LCS1	Unknown	Method Settings	1953160	61.192	ng/mL	611.92	ng/g
Monomethylhydrazine	LCSD1	Unknown	Method Settings	1984204	62.162	ng/mL	621.62	ng/g
Monomethylhydrazine	ICV	Unknown	Method Settings	2340916	73.309	ng/mL		
Monomethylhydrazine	Spike Check	Unknown	Method Settings	2327216	72.880	ng/mL		
Monomethylhydrazine	Conditioner6	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner7	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5769179	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769180	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5770779	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5770780	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5770781	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	NC	ng/g
Monomethylhydrazine	5769171FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769172BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5769173MS	Unknown	Method Settings	391192	12.383	ng/mL	123.83	ng/g
Monomethylhydrazine	5769174MSD	Unknown	Method Settings	427657	13.523	ng/mL	135.23	ng/g
Monomethylhydrazine	LCS2	Unknown	Method Settings	2140237	67.038	ng/mL	670.38	ng/g
Monomethylhydrazine	LCSD2	Unknown	Method Settings	2244180	70.286	ng/mL	702.86	ng/g
Monomethylhydrazine	Conditioner10	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner11	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5772546	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5772547	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5772548	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5772550	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g

Analyze : JW 1543 9/11/2009
9/11/09

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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		

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

OLN23 8872

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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		

OLR20 8073

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		

OLN28 8874

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

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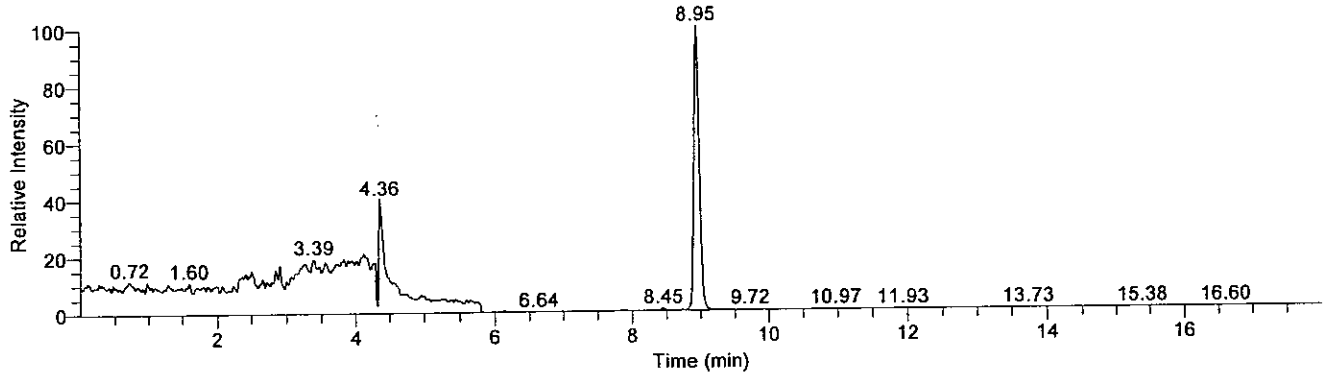
Printed: Wednesday, September 09, 2009, 10:40:33

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-17.raw
Sample ID:	5766212FD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 7:18:49 PM
Vial:	D:11
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-17 - TIC RT: 0.00 - 17.99 NL: 9.31E3

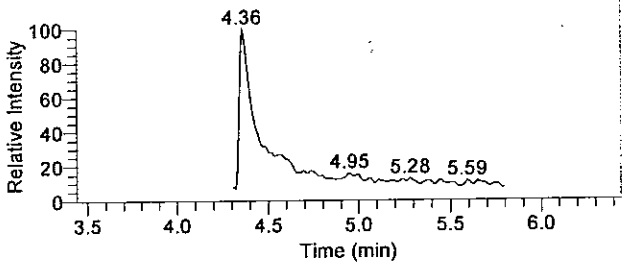


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:11, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-17, Comments: Soil Prep, ID: 5766212FD

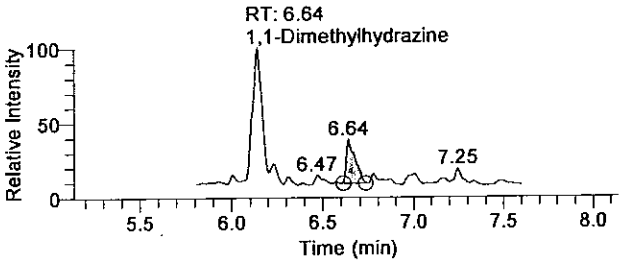
Monomethylhydrazine

08Sep2009-17 - TIC RT: 3.44 - 6.44 NL: 3.70E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



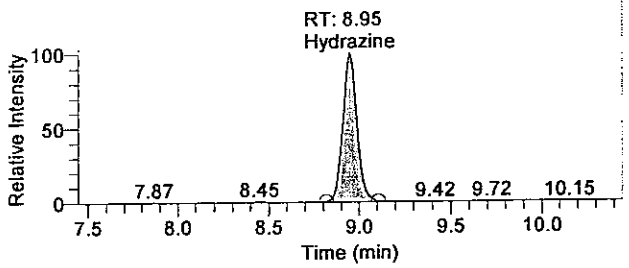
1,1-Dimethylhydrazine

08Sep2009-17 - TIC RT: 5.14 - 8.14 NL: 3.93E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-17 - TIC RT: 7.45 - 10.45 NL: 9.31E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN20 0075

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5766212FD	Method Settings	Hydrazine	8.95	50816	0.386	ng/mL
5766212FD	Method Settings	1,1-Dimethylhydrazine	6.64	38	0.108	ng/mL
5766212FD	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/9/2009
[illegible] 9/10/09

OLN20 0076

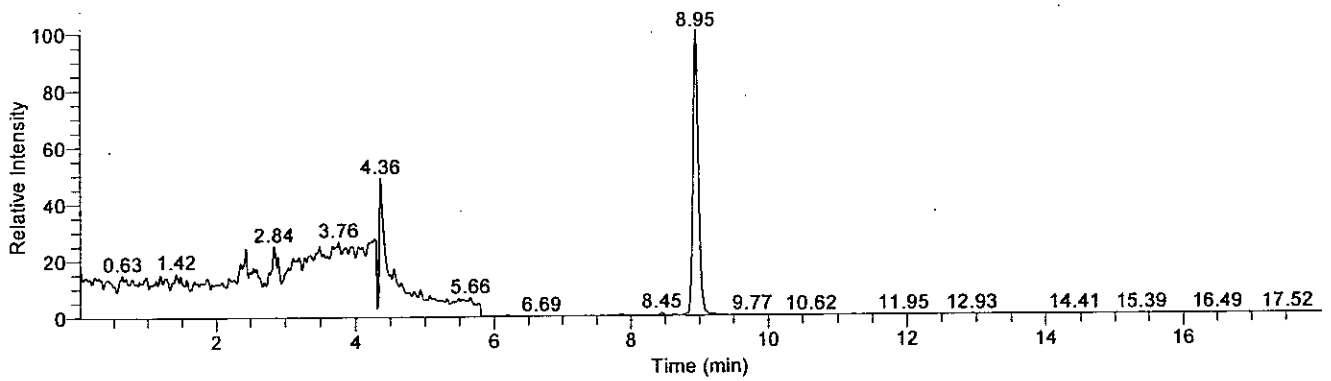
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-18.raw
Sample ID:	5766213BKG
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 7:37:33 PM
Vial:	D:12
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-18 - TIC RT: 0.00 - 18.00 NL: 7.12E3

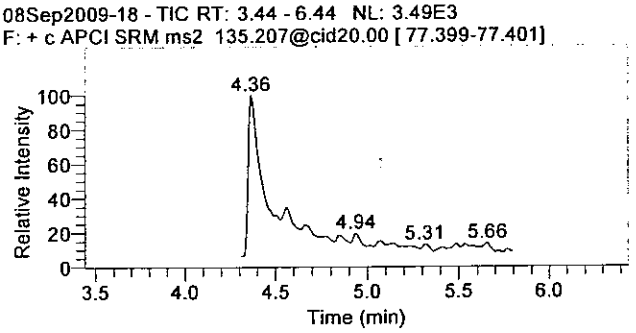


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:12, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-18, Comments: Soil Prep, ID: 5766213BKG

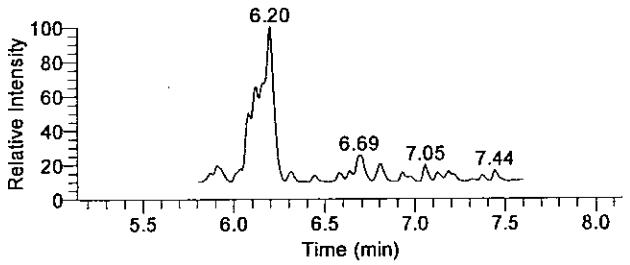
Monomethylhydrazine

08Sep2009-18 - TIC RT: 3.44 - 6.44 NL: 3.49E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



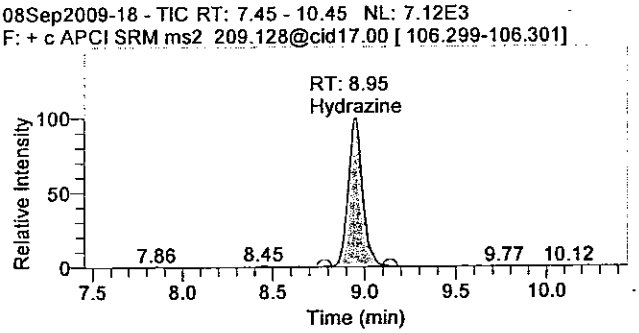
1,1-Dimethylhydrazine

08Sep2009-18 - TIC RT: 5.14 - 8.14 NL: 3.20E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-18 - TIC RT: 7.45 - 10.45 NL: 7.12E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLR20 0877

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5766213BKG	Method Settings	Hydrazine	8.95	39506	0.298	ng/mL
5766213BKG	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5766213BKG	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/9/2009
[illegible] 9/10/09

OLN28 8878

There is no signature data to report.

Lancaster Laboratories

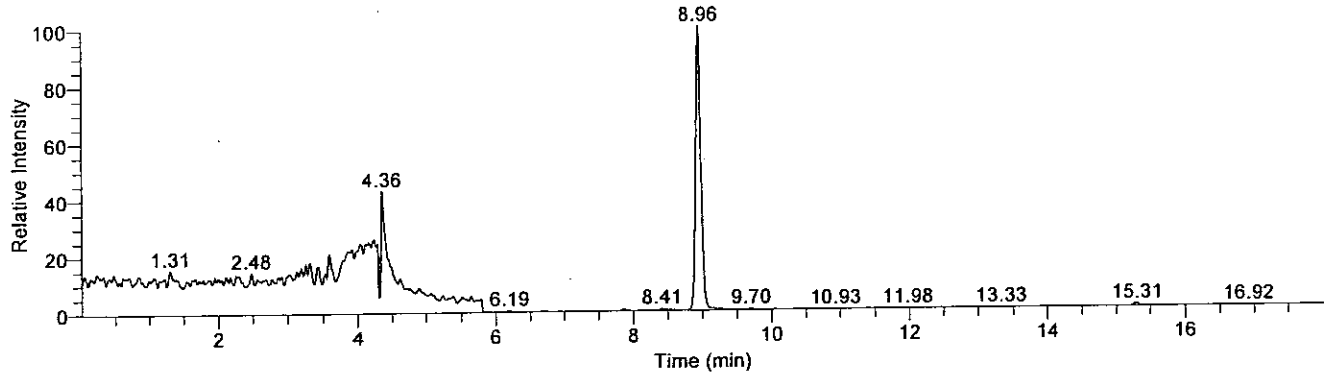
Printed: Wednesday, September 09, 2009, 10:40:35

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-28.raw
Sample ID:	5766216
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 10:44:52 PM
Vial:	D:19
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-28 - TIC RT: 0.00 - 17.99 NL: 6.85E3

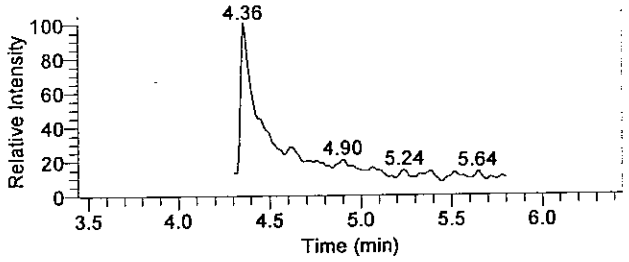


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:19, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-28, Comments: Soil Prep, ID: 5766216

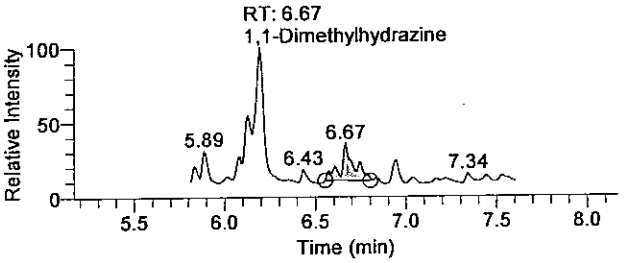
Monomethylhydrazine

08Sep2009-28 - TIC RT: 3.44 - 6.44 NL: 2.95E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



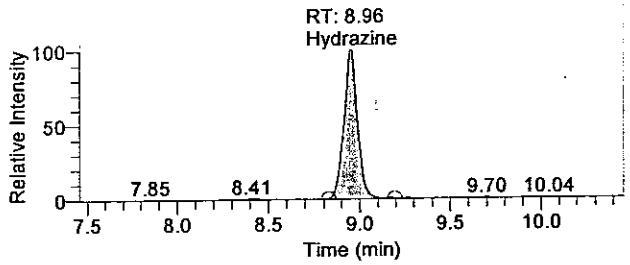
1,1-Dimethylhydrazine

08Sep2009-28 - TIC RT: 5.17 - 8.17 NL: 3.80E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-28 - TIC RT: 7.46 - 10.46 NL: 6.85E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLNZB 6879

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5766216	Method Settings	Hydrazine	8.96	35671	0.268	ng/mL
5766216	Method Settings	1,1-Dimethylhydrazine	6.67	49	0.108	ng/mL
5766216	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/9/2009

9/10/09

There is no signature data to report.

Lancaster Laboratories

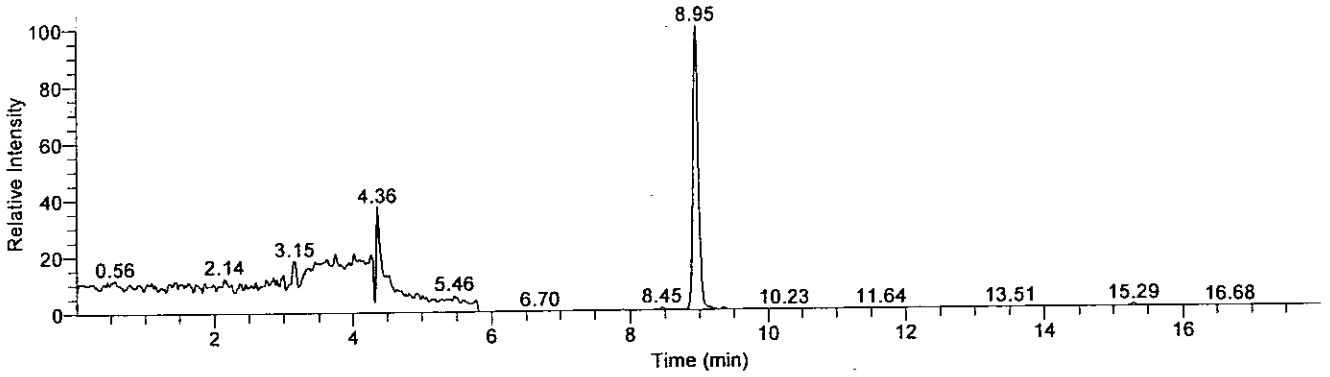
Printed: Wednesday, September 09, 2009, 10:40:35

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-29.raw
Sample ID:	5766217
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 11:03:36 PM
Vial:	D:20
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-29 - TIC RT: 0.00 - 17.99 NL: 9.02E3

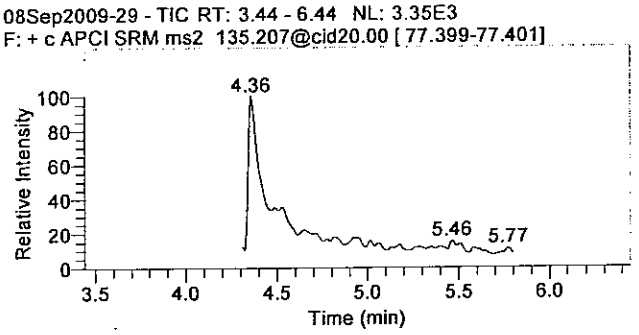


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:20, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-29, Comments: Soil Prep, ID: 5766217

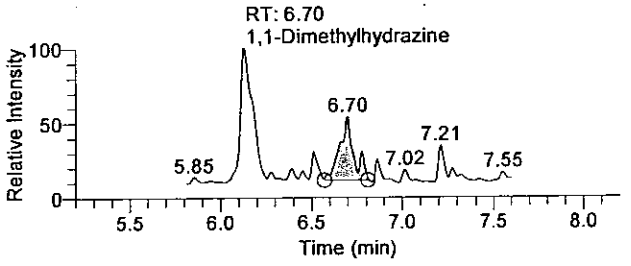
Monomethylhydrazine

08Sep2009-29 - TIC RT: 3.44 - 6.44 NL: 3.35E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



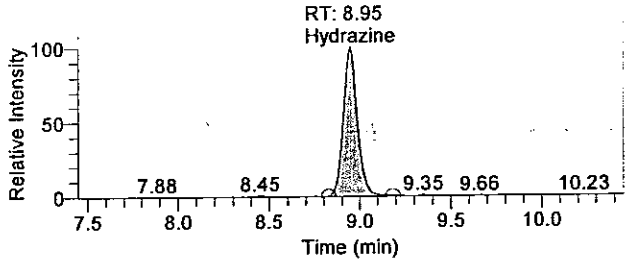
1,1-Dimethylhydrazine

08Sep2009-29 - TIC RT: 5.20 - 8.20 NL: 3.29E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-29 - TIC RT: 7.45 - 10.45 NL: 9.02E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLNZB 0091

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5766217	Method Settings	Hydrazine	8.95	49004	0.372	ng/mL
5766217	Method Settings	1,1-Dimethylhydrazine	6.70	77	0.109	ng/mL
5766217	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 P/P/2004
C/1-2 9/15/09

There is no signature data to report.

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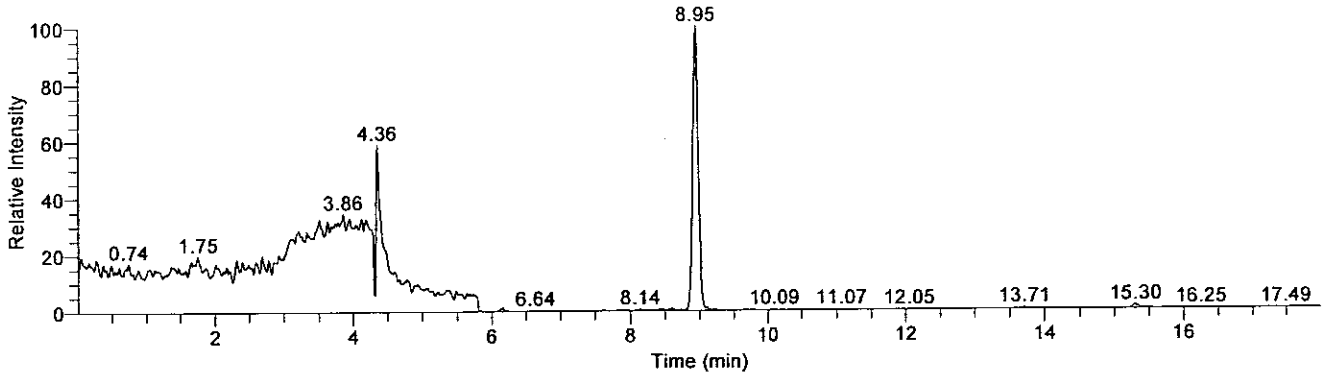
Printed: Wednesday, September 09, 2009, 10:40:35

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-30.raw
Sample ID:	5766218
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 11:22:22 PM
Vial:	D:21
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-30 - TIC RT: 0.00 - 17.99 NL: 5.93E3

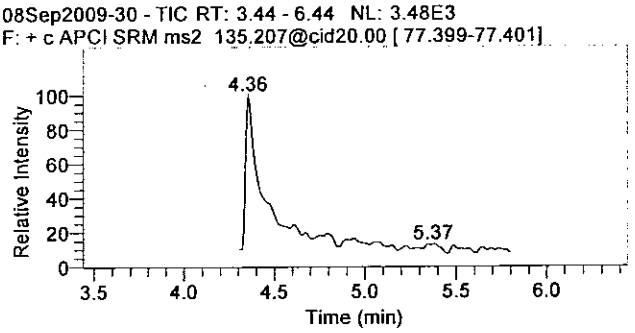


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:21, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-30, Comments: Soil Prep, ID: 5766218

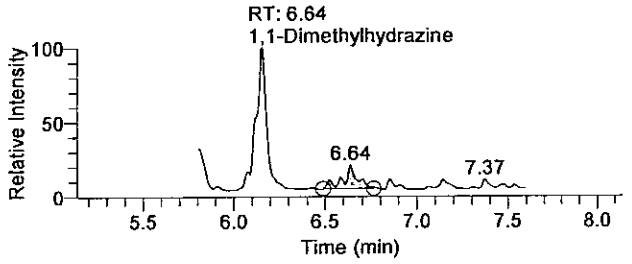
Monomethylhydrazine

08Sep2009-30 - TIC RT: 3.44 - 6.44 NL: 3.48E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



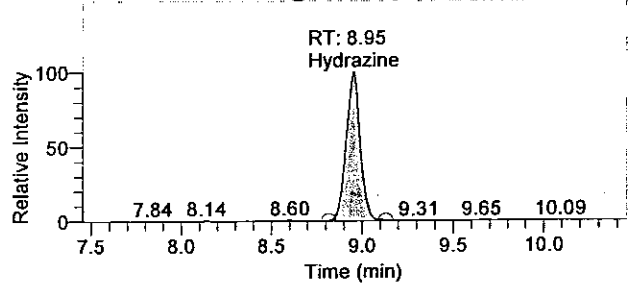
1,1-Dimethylhydrazine

08Sep2009-30 - TIC RT: 5.14 - 8.14 NL: 7.23E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-30 - TIC RT: 7.45 - 10.45 NL: 5.93E3
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
5766218	Method Settings	Hydrazine	8.95	32066	0.240	ng/mL
5766218	Method Settings	1,1-Dimethylhydrazine	6.64	60	0.108	ng/mL
5766218	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/9/2009
[illegible] 9/10/09

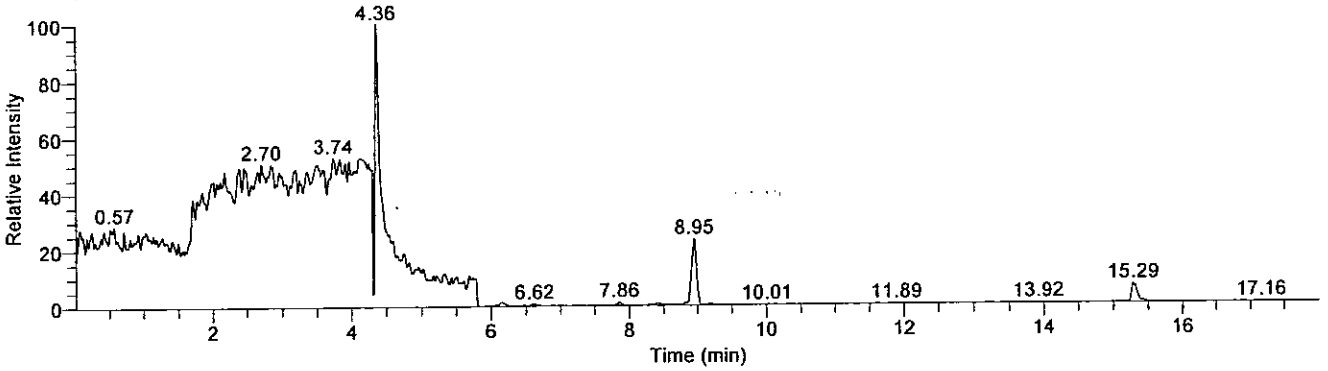
OLR28 6884

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-46.raw
Sample ID:	5772546
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 8:41:55 AM
Vial:	E:37
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-46 - TIC RT: 0.00 - 18.00 NL: 3.61E3

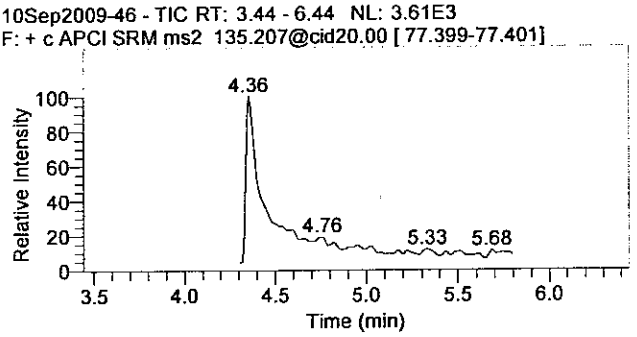


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:37, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-46, Comments: Soil prep, ID: 5772546

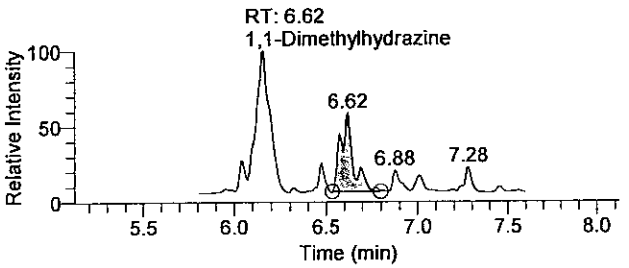
Monomethylhydrazine

10Sep2009-46 - TIC RT: 3.44 - 6.44 NL: 3.61E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



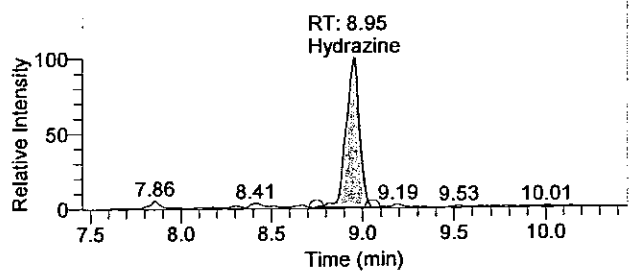
1,1-Dimethylhydrazine

10Sep2009-46 - TIC RT: 5.12 - 8.12 NL: 5.44E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-46 - TIC RT: 7.45 - 10.45 NL: 8.48E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN20 0005

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5772546	Method Settings	Hydrazine	8.95	4276	0.031	ng/mL
5772546	Method Settings	1,1-Dimethylhydrazine	6.62	138	0.141	ng/mL
5772546	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/11/2009
[illegible] 9/11/09

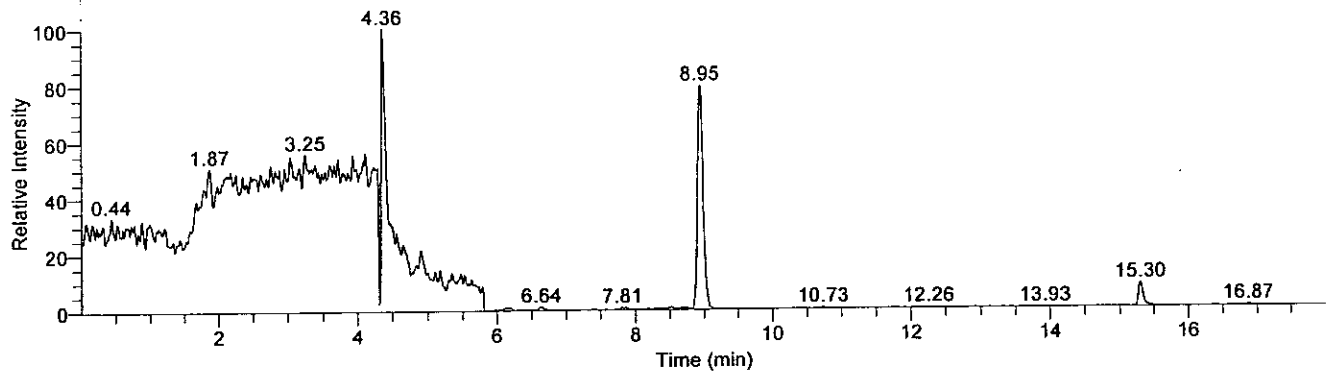
OLN28 9886

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-47.raw
Sample ID:	5772547
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 9:00:40 AM
Vial:	E:38
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-47 - TIC RT: 0.00 - 17.99 NL: 3.39E3

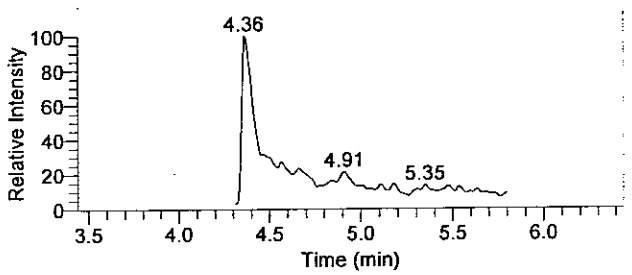


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:38, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-47, Comments: Soil prep, ID: 5772547

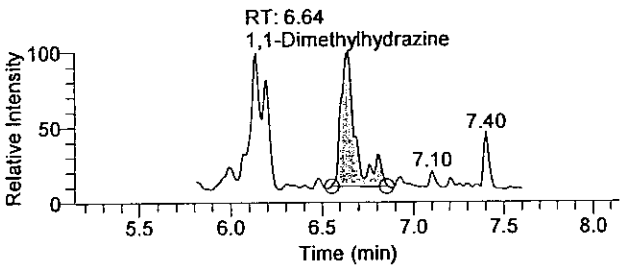
Monomethylhydrazine

10Sep2009-47 - TIC RT: 3.44 - 6.44 NL: 3.39E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



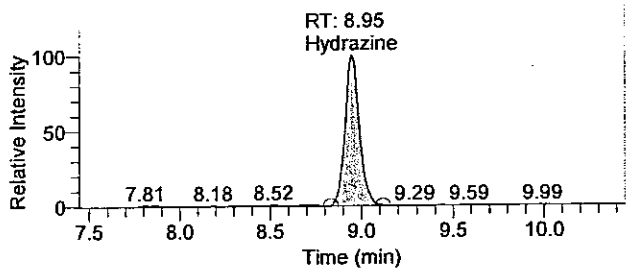
1,1-Dimethylhydrazine

10Sep2009-47 - TIC RT: 5.14 - 8.14 NL: 4.20E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-47 - TIC RT: 7.45 - 10.45 NL: 2.69E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8887

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5772547	Method Settings	Hydrazine	8.95	14679	0.111	ng/mL
5772547	Method Settings	1,1-Dimethylhydrazine	6.64	207	0.143	ng/mL
5772547	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/11/2009
9/11/09

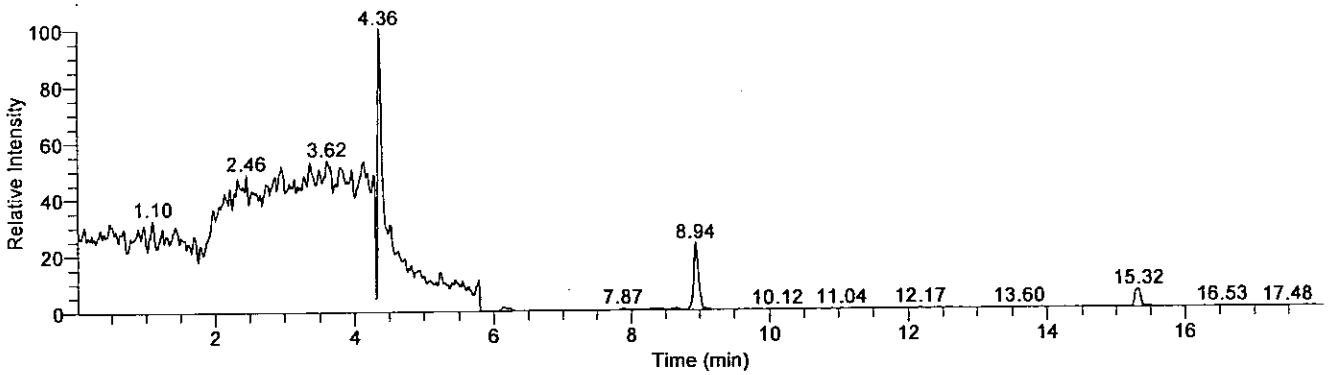
OLN28 8888

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-48.raw
Sample ID:	5772548
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 9:19:26 AM
Vial:	E:39
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-48 - TIC RT: 0.00 - 18.00 NL: 3.56E3

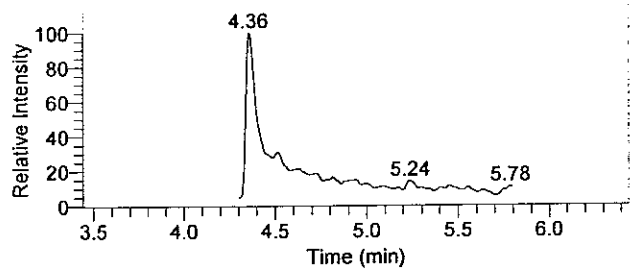


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:39, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-48, Comments: Soil prep, ID: 5772548

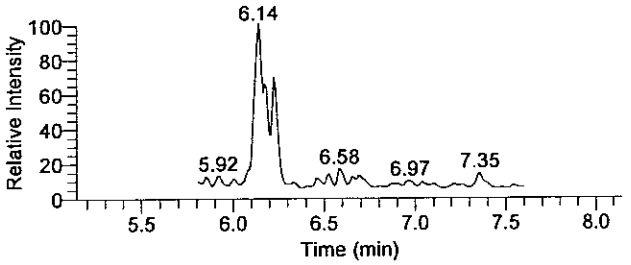
Monomethylhydrazine

10Sep2009-48 - TIC RT: 3.44 - 6.44 NL: 3.56E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



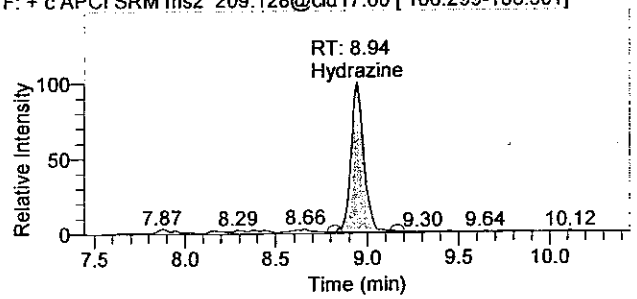
1,1-Dimethylhydrazine

10Sep2009-48 - TIC RT: 5.14 - 8.14 NL: 5.60E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-48 - TIC RT: 7.44 - 10.44 NL: 8.39E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8889

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5772548	Method Settings	Hydrazine	8.94	4109	0.030	ng/mL
5772548	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5772548	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/11/2009
9/11/09

01N28 0898

There is no signature data to report.

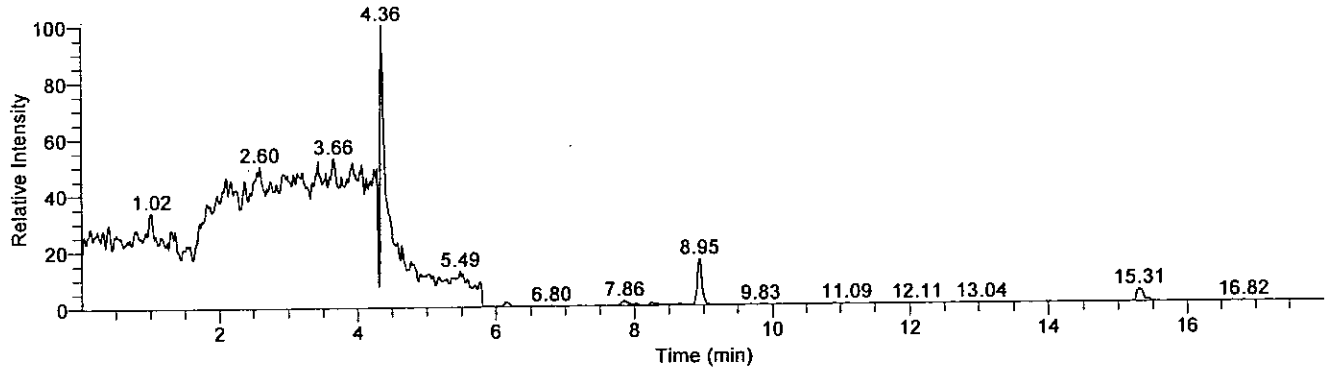
Lancaster Laboratories

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.	0925810610826
Data File:	16Sep2009-39.raw
Sample ID:	5772549
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 2:00:51 AM
Vial:	D:27
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-39 - TIC RT: 0.00 - 17.99 NL: 3.84E3

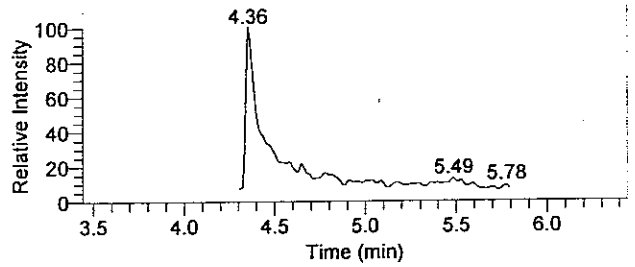


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:27, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-39, Comments: Water Prep, ID: 5772549

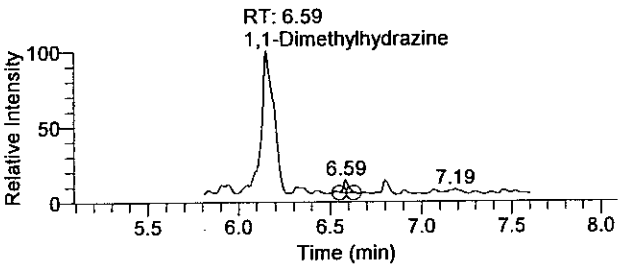
Monomethylhydrazine

16Sep2009-39 - TIC RT: 3.44 - 6.44 NL: 3.84E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



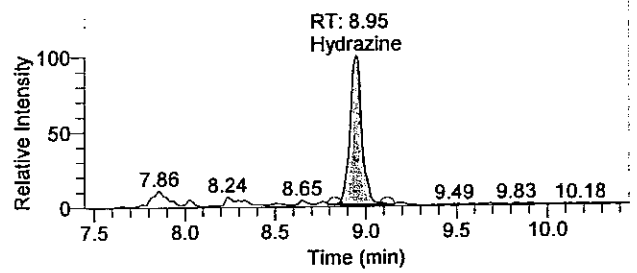
1,1-Dimethylhydrazine

16Sep2009-39 - TIC RT: 5.09 - 8.09 NL: 6.74E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-39 - TIC RT: 7.45 - 10.45 NL: 6.26E2
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
5772549	Method Settings	Hydrazine	8.95	2903	0.023	ng/mL
5772549	Method Settings	1,1-Dimethylhydrazine	6.59	12	0.163	ng/mL
5772549	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

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

OLN20 8832

There is no signature data to report.

Lancaster Laboratories

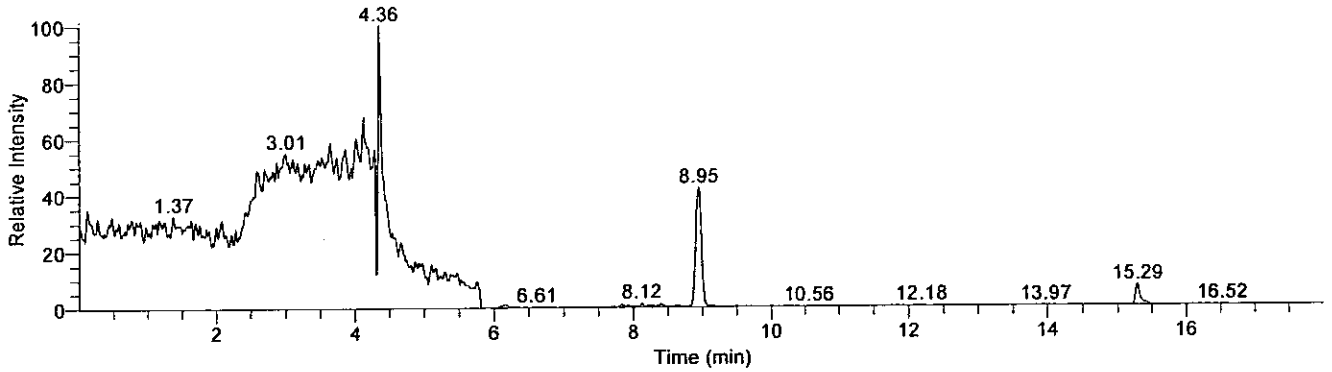
Printed: Friday, September 11, 2009, 10:25:13

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-49.raw
Sample ID:	5772550
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 9:38:12 AM
Vial:	E:40
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-49 - TIC RT: 0.00 - 18.00 NL: 3.30E3

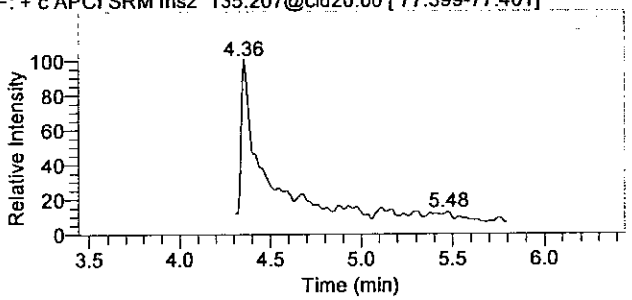


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:40, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-49, Comments: Soil prep, ID: 5772550

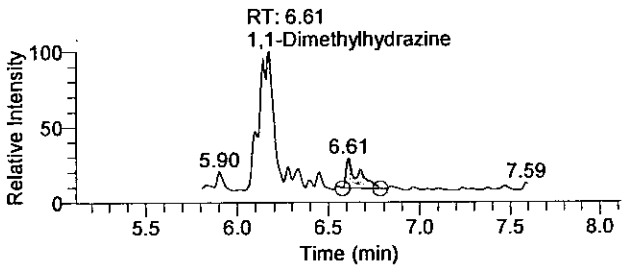
Monomethylhydrazine

10Sep2009-49 - TIC RT: 3.44 - 6.44 NL: 3.30E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



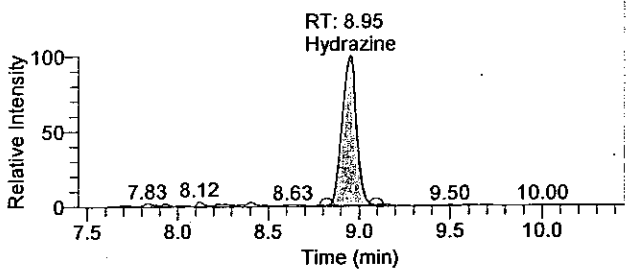
1,1-Dimethylhydrazine

10Sep2009-49 - TIC RT: 5.11 - 8.11 NL: 4.09E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-49 - TIC RT: 7.45 - 10.45 NL: 1.39E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N28 0893

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5772550	Method Settings	Hydrazine	8.95	7819	0.058	ng/mL
5772550	Method Settings	1,1-Dimethylhydrazine	6.61	38	0.137	ng/mL
5772550	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

OLN28 0894

There is no signature data to report.

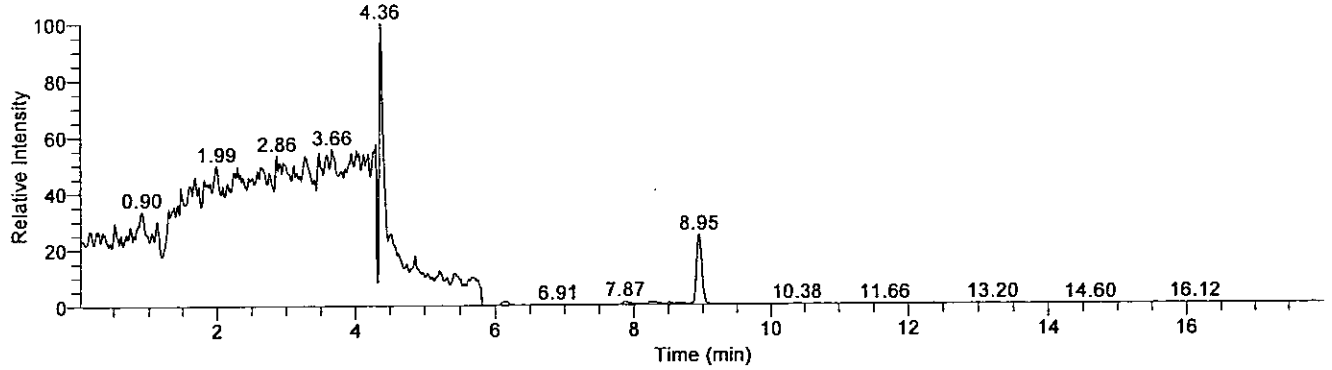
Lancaster Laboratories

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:	16Sep2009-28.raw
Sample ID:	5774702
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, September 16, 2009 10:34:55 PM
Vial:	D:19
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-28 - TIC RT: 0.00 - 17.99 NL: 3.95E3

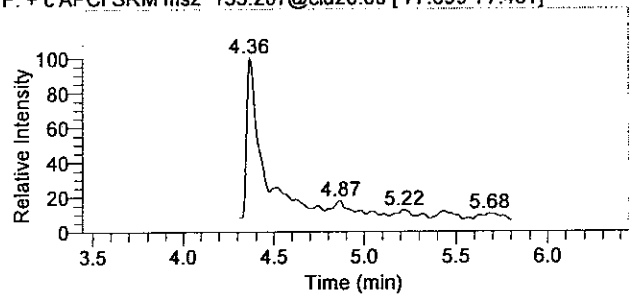


Compound Graphics

Date: 16-Sep-2009, Instrument: Quantum, Vial: D:19, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-28, Comments: Soil Prep, ID: 5774702

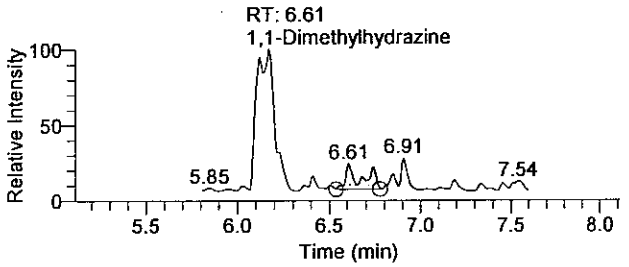
Monomethylhydrazine

16Sep2009-28 - TIC RT: 3.44 - 6.44 NL: 3.95E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



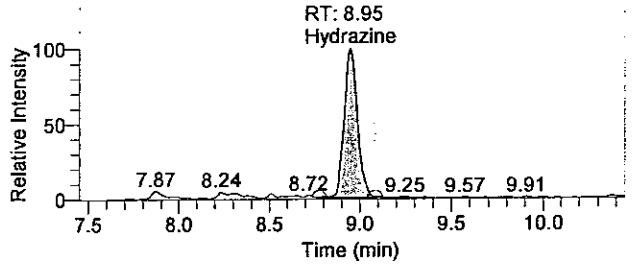
1,1-Dimethylhydrazine

16Sep2009-28 - TIC RT: 5.11 - 8.11 NL: 5.22E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-28 - TIC RT: 7.45 - 10.45 NL: 9.82E2
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
5774702	Method Settings	Hydrazine	8.95	5025	0.039	ng/mL
5774702	Method Settings	1,1-Dimethylhydrazine	6.61	54	0.165	ng/mL
5774702	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/17/2009

9/22/09

OLN28 8896

There is no signature data to report.

Standards Data

OLN20 8837

Lancaster Laboratories

Workbook Name: TQU01408-08Sep2009-1
Instrument No. TQU01408
Analyst JW01543

Sequence Table

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner1	08Sep2009-1	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner2	08Sep2009-2	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
MDL	08Sep2009-3	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:1	10.00	N/A
Cal1	08Sep2009-4	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:2	10.00	N/A
Cal2	08Sep2009-5	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:3	10.00	N/A
Cal3	08Sep2009-6	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:4	10.00	N/A
Cal4	08Sep2009-7	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:5	10.00	N/A
Cal5	08Sep2009-8	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:6	10.00	N/A
Cal6	08Sep2009-9	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:7	10.00	N/A
Cal7	08Sep2009-10	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:8	10.00	N/A
Cal8	08Sep2009-11	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:9	10.00	N/A
Conditioner3	08Sep2009-12	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
Cal3asQC1a	08Sep2009-13	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:4	10.00	N/A
Conditioner4	08Sep2009-14	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner5	08Sep2009-15	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
Blank	08Sep2009-16	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:10	10.00	0925110610808
5766212FD	08Sep2009-17	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:11	10.00	0925110610808
5766213BKG	08Sep2009-18	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:12	10.00	0925110610808
5766214MS	08Sep2009-19	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:13	10.00	0925110610808
5766215MSD	08Sep2009-20	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:14	10.00	0925110610808
LCS	08Sep2009-21	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:15	10.00	0925110610808
LCSD	08Sep2009-22	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:16	10.00	0925110610808
ICV	08Sep2009-23	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:17	10.00	N/A
Cal4asQC2a	08Sep2009-24	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:5	10.00	N/A
Spike Check	08Sep2009-25	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:18	10.00	N/A
Conditioner6	08Sep2009-26	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
Conditioner7	08Sep2009-27	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	E:1	10.00	N/A
5766216	08Sep2009-28	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:19	10.00	0925110610808
5766217	08Sep2009-29	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:20	10.00	0925110610808
5766218	08Sep2009-30	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:21	10.00	0925110610808
5769167	08Sep2009-31	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:22	10.00	0925110610808
5769168	08Sep2009-32	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:23	10.00	0925110610808
5769169	08Sep2009-33	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:24	10.00	0925110610808

There is no signature data to report.

Lancaster Laboratories

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
5769170	08Sep2009-34	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:25	10.00	0925110610808
Cal5asQC3a	08Sep2009-35	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles	D:6	10.00	N/A

Analyst: JW 1543 9/9/2009
[illegible] 9/10/09

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-08Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
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

OLN20 6188

There is no signature data to report.

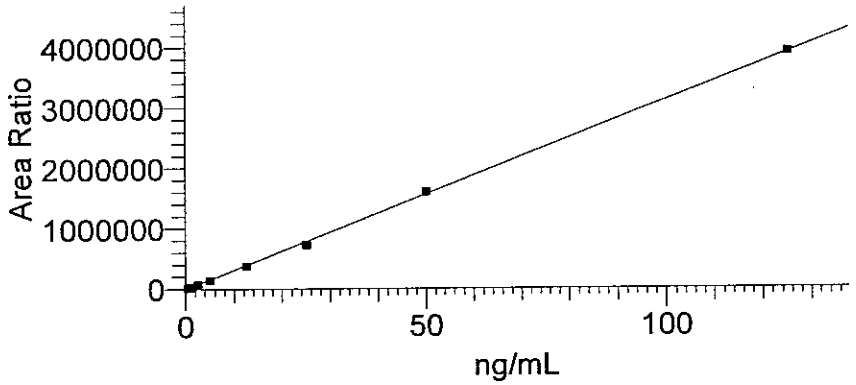
Lancaster Laboratories

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 = -3318.87+31188*X R^2 = 0.9992 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	14059	0.500	ng/mL	0.557	11.44
Cal2	Standard	2	N/A	Method Settings	28759	1.000	ng/mL	1.029	2.85
Cal3	Standard	3	N/A	Method Settings	70057	2.500	ng/mL	2.353	-5.89
Cal4	Standard	4	N/A	Method Settings	146528	5.000	ng/mL	4.805	-3.91
Cal5	Standard	5	N/A	Method Settings	380970	12.500	ng/mL	12.322	-1.43
Cal6	Standard	6	N/A	Method Settings	726774	25.000	ng/mL	23.409	-6.36
Cal7	Standard	7	N/A	Method Settings	1599617	50.000	ng/mL	51.396	2.79
Cal8	Standard	8	N/A	Method Settings	3914817	125.000	ng/mL	125.630	0.50
Cal3asQC1a	QC	CCV1	N/A	Method Settings	71436	2.500	ng/mL	2.397	-4.12
Cal4asQC2a	QC	CCV2	N/A	Method Settings	154081	5.000	ng/mL	5.047	0.94
Cal5asQC3a	QC	CCV3	N/A	Method Settings	382242	12.500	ng/mL	12.363	-1.10

Analyst: JW 1543 8/8/2009
[illegible] 8/15/09

OLN28 8101

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-08Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
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

OLN28-0182

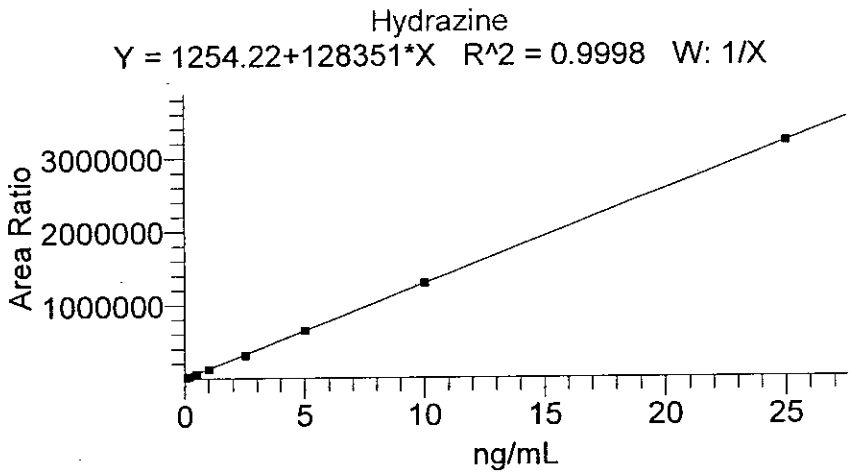
There is no signature data to report.

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	15510	0.100	ng/mL	0.111	11.07
Cal2	Standard	2	N/A	Method Settings	27321	0.200	ng/mL	0.203	1.55
Cal3	Standard	3	N/A	Method Settings	60411	0.500	ng/mL	0.461	-7.82
Cal4	Standard	4	N/A	Method Settings	124789	1.000	ng/mL	0.962	-3.75
Cal5	Standard	5	N/A	Method Settings	312984	2.500	ng/mL	2.429	-2.85
Cal6	Standard	6	N/A	Method Settings	649660	5.000	ng/mL	5.052	1.04
Cal7	Standard	7	N/A	Method Settings	1294183	10.000	ng/mL	10.073	0.73
Cal8	Standard	8	N/A	Method Settings	3211103	25.000	ng/mL	25.008	0.03
Cal3asQC1a	QC	CCV1	N/A	Method Settings	64980	0.500	ng/mL	0.496	-0.70
Cal4asQC2a	QC	CCV2	N/A	Method Settings	130740	1.000	ng/mL	1.009	0.88
Cal5asQC3a	QC	CCV3	N/A	Method Settings	336542	2.500	ng/mL	2.612	4.49

Analyst : JW 1543 P/P/WOP
[illegible] 7/15/09

OLN28 0183

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-08Sep2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
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

01H28 8384

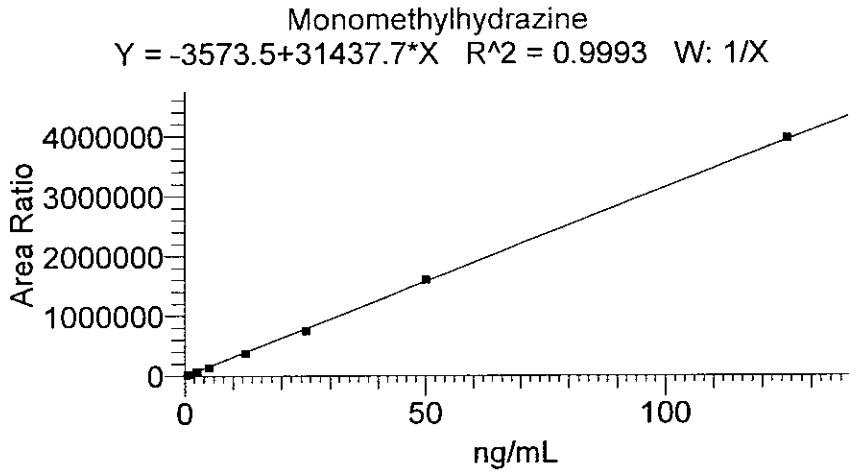
There is no signature data to report.

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	15236	0.500	ng/mL	0.598	19.66
Cal2	Standard	2	N/A	Method Settings	27323	1.000	ng/mL	0.983	-1.72
Cal3	Standard	3	N/A	Method Settings	70201	2.500	ng/mL	2.347	-6.13
Cal4	Standard	4	N/A	Method Settings	142902	5.000	ng/mL	4.659	-6.82
Cal5	Standard	5	N/A	Method Settings	378188	12.500	ng/mL	12.143	-2.85
Cal6	Standard	6	N/A	Method Settings	743731	25.000	ng/mL	23.771	-4.92
Cal7	Standard	7	N/A	Method Settings	1599127	50.000	ng/mL	50.980	1.96
Cal8	Standard	8	N/A	Method Settings	3958144	125.000	ng/mL	126.018	0.81
Cal3asQC1a	QC	CCV1	N/A	Method Settings	77126	2.500	ng/mL	2.567	2.68
Cal4asQC2a	QC	CCV2	N/A	Method Settings	152927	5.000	ng/mL	4.978	-0.44
Cal5asQC3a	QC	CCV3	N/A	Method Settings	440296	12.500	ng/mL	14.119	12.95

Analyst : JW 1543 9/9/2009
[illegible] 9/10/09

0LN28 0185

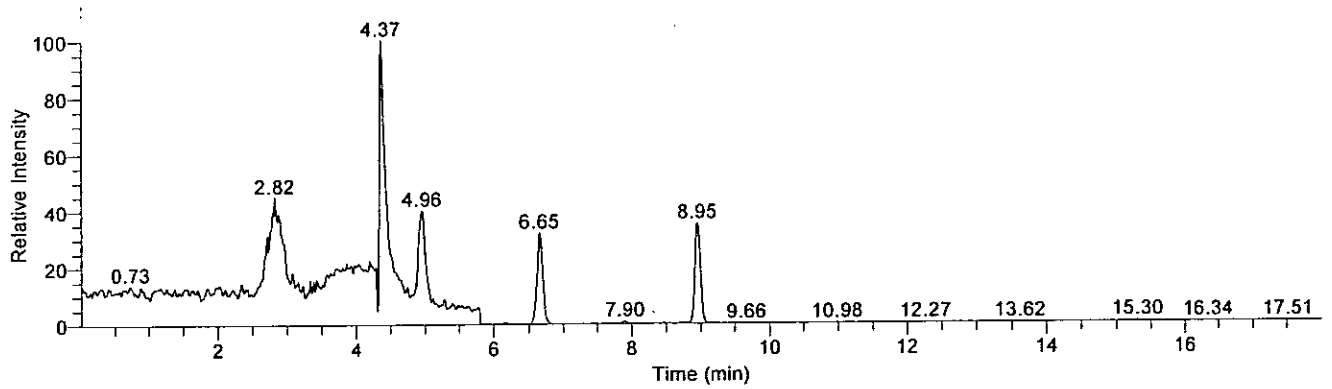
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-4.raw
Sample ID:	Cal1
Sample Type:	Standard
Level:	1
Acquisition Date:	Tuesday, September 08, 2009 3:15:22 PM
Vial:	D:2
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-4 - TIC RT: 0.00 - 18.00 NL: 7.67E3

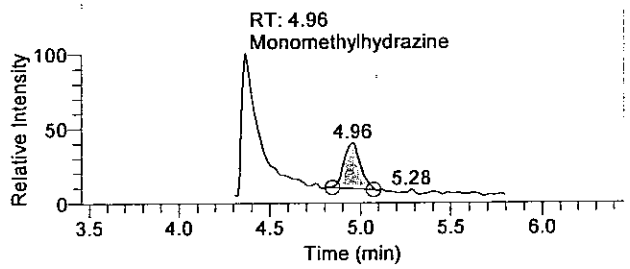


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:2, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-4, Comments: Soil Prep, ID: Cal1

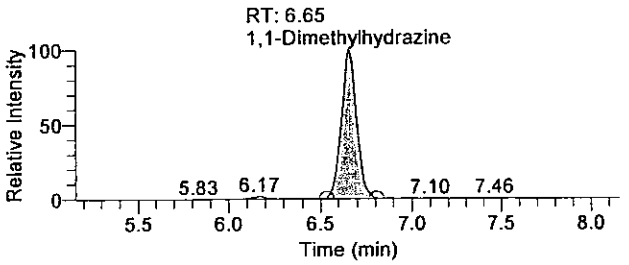
Monomethylhydrazine

08Sep2009-4 - TIC RT: 3.46 - 6.46 NL: 7.67E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



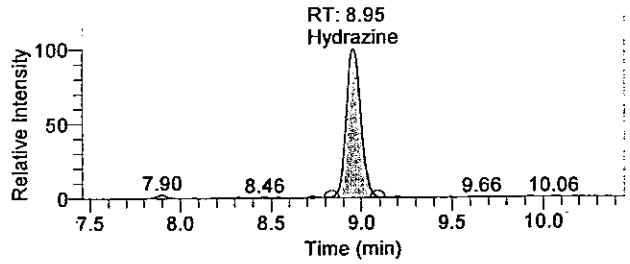
1,1-Dimethylhydrazine

08Sep2009-4 - TIC RT: 5.15 - 8.15 NL: 2.46E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-4 - TIC RT: 7.45 - 10.45 NL: 2.71E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0186

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	15510	0.111	ng/mL
Cal1	Method Settings	1,1-Dimethylhydrazine	6.65	14059	0.557	ng/mL
Cal1	Method Settings	Monomethylhydrazine	4.96	15236	0.598	ng/mL

Analyst: JW 1543 9/9/2009
[illegible] 9/15/09

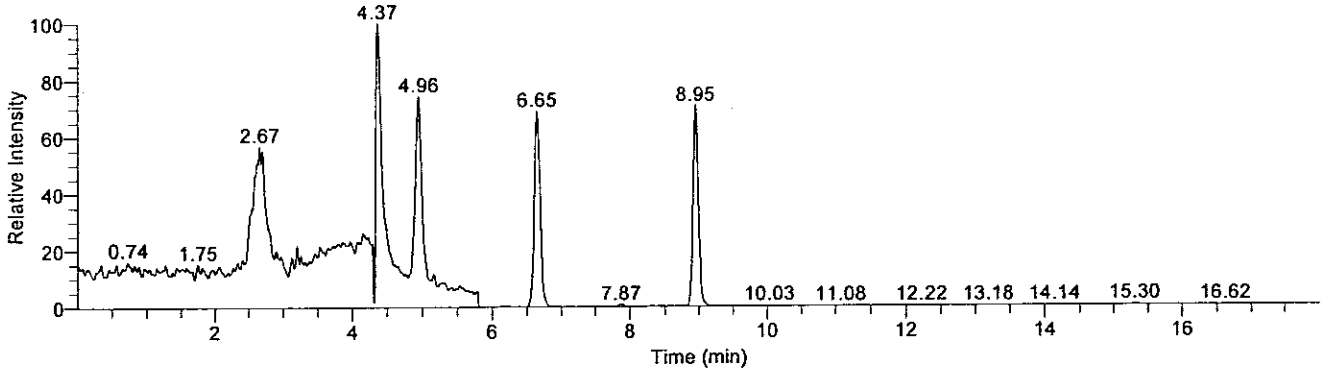
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-5.raw
Sample ID:	Cal2
Sample Type:	Standard
Level:	2
Acquisition Date:	Tuesday, September 08, 2009 3:34:06 PM
Vial:	D:3
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-5 - TIC RT: 0.00 - 17.99 NL: 7.10E3

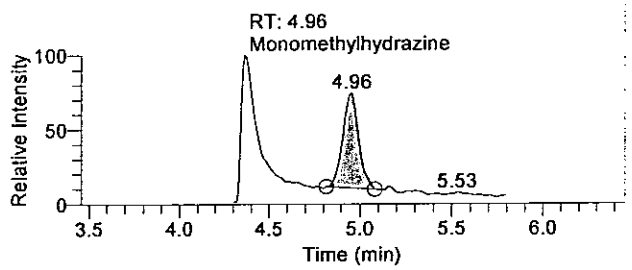


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:3, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-5, Comments: Soil Prep, ID: Cal2

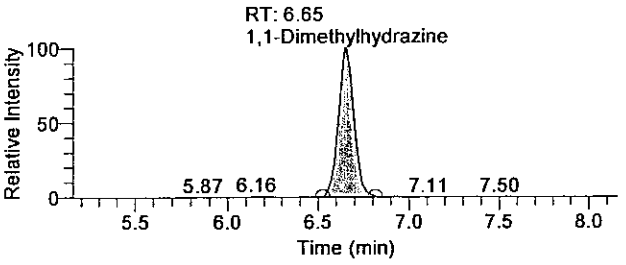
Monomethylhydrazine

08Sep2009-5 - TIC RT: 3.46 - 6.46 NL: 7.10E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



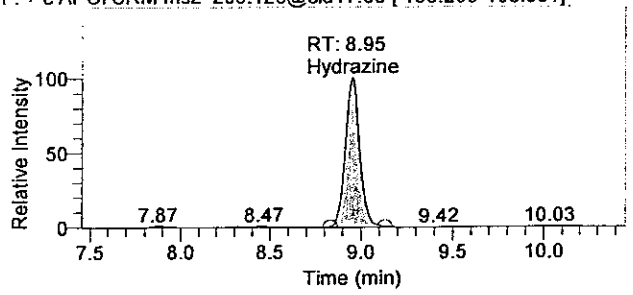
1,1-Dimethylhydrazine

08Sep2009-5 - TIC RT: 5.15 - 8.15 NL: 4.89E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-5 - TIC RT: 7.45 - 10.45 NL: 5.01E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN26 8188

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	27321	0.203	ng/mL
Cal2	Method Settings	1,1-Dimethylhydrazine	6.65	28759	1.029	ng/mL
Cal2	Method Settings	Monomethylhydrazine	4.96	27323	0.983	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

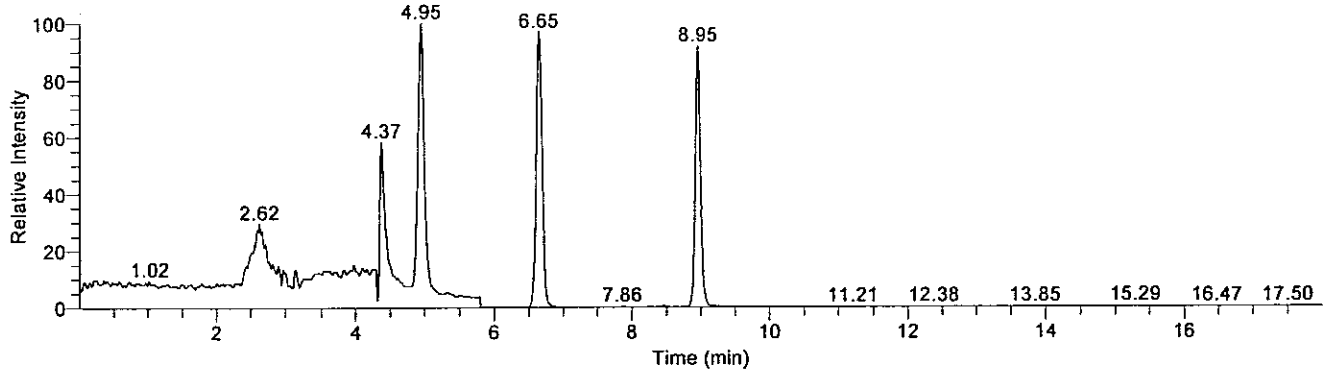
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-6.raw
Sample ID:	Cal3
Sample Type:	Standard
Level:	3
Acquisition Date:	Tuesday, September 08, 2009 3:52:51 PM
Vial:	D:4
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-6 - TIC RT: 0.00 - 17.99 NL: 1.23E4

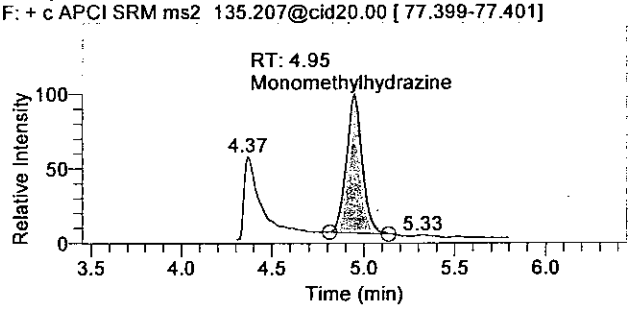


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:4, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-6, Comments: Soil Prep, ID: Cal3

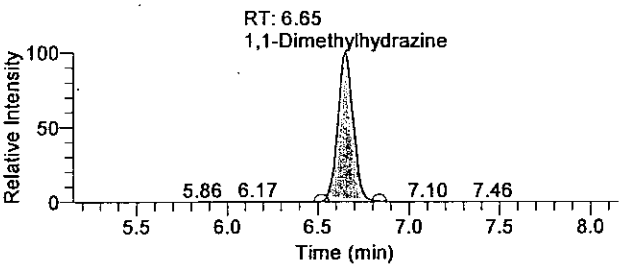
Monomethylhydrazine

08Sep2009-6 - TIC RT: 3.45 - 6.45 NL: 1.23E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



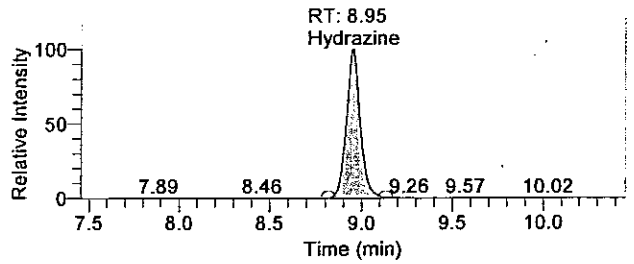
1,1-Dimethylhydrazine

08Sep2009-6 - TIC RT: 5.15 - 8.15 NL: 1.20E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-6 - TIC RT: 7.45 - 10.45 NL: 1.13E4
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
Cal3	Method Settings	Hydrazine	8.95	60411	0.461	ng/mL
Cal3	Method Settings	1,1-Dimethylhydrazine	6.65	70057	2.353	ng/mL
Cal3	Method Settings	Monomethylhydrazine	4.95	70201	2.347	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

OLN20 0111

There is no signature data to report.

Lancaster Laboratories

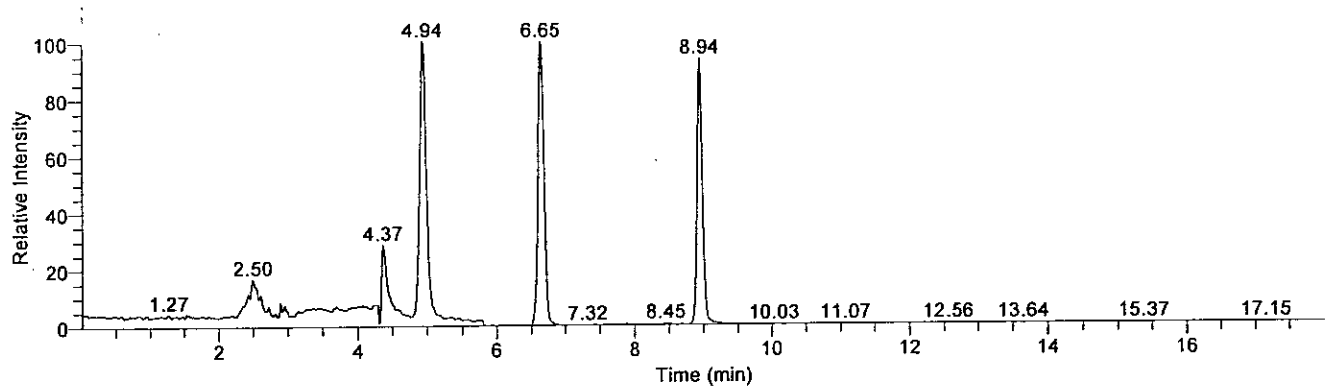
Printed: Wednesday, September 09, 2009, 10:40:31

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-7.raw
Sample ID:	Cal4
Sample Type:	Standard
Level:	4
Acquisition Date:	Tuesday, September 08, 2009 4:11:32 PM
Vial:	D:5
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-7 - TIC RT: 0.00 - 18.00 NL: 2.43E4

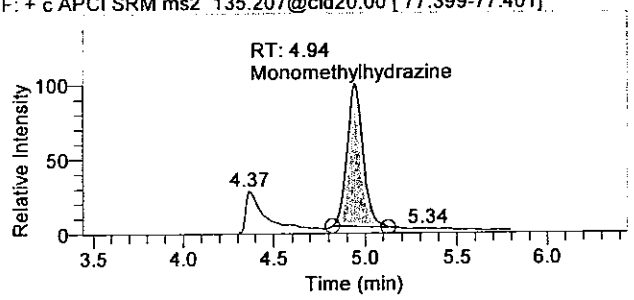


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-7, Comments: Soil Prep, ID: Cal4

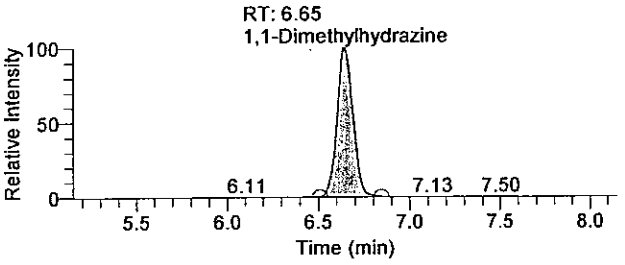
Monomethylhydrazine

08Sep2009-7 - TIC RT: 3.44 - 6.44 NL: 2.43E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



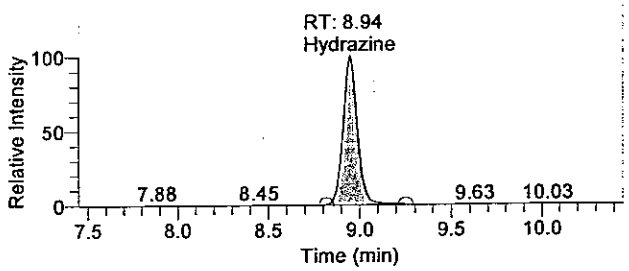
1,1-Dimethylhydrazine

08Sep2009-7 - TIC RT: 5.15 - 8.15 NL: 2.42E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-7 - TIC RT: 7.44 - 10.44 NL: 2.27E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8112

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	124789	0.962	ng/mL
Cal4	Method Settings	1,1-Dimethylhydrazine	6.65	146528	4.805	ng/mL
Cal4	Method Settings	Monomethylhydrazine	4.94	142902	4.659	ng/mL

Analyst : JW 1543 9/9/2009
9/10/09

OLN28 8113

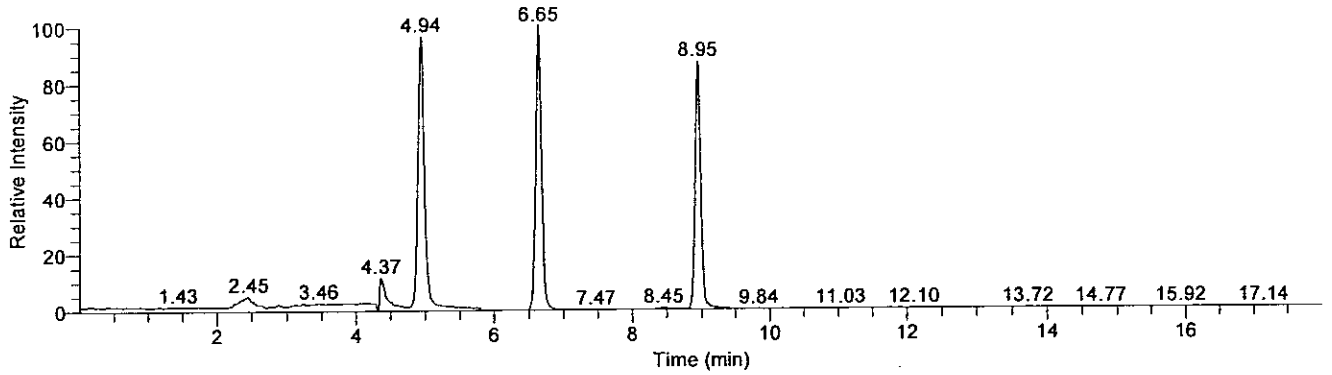
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-8.raw
Sample ID:	Cal5
Sample Type:	Standard
Level:	5
Acquisition Date:	Tuesday, September 08, 2009 4:30:16 PM
Vial:	D:6
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-8 - TIC RT: 0.00 - 17.99 NL: 6.36E4

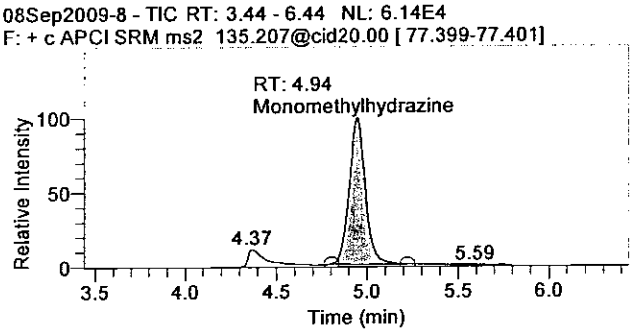


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-8, Comments: Soil Prep, ID: Cal5

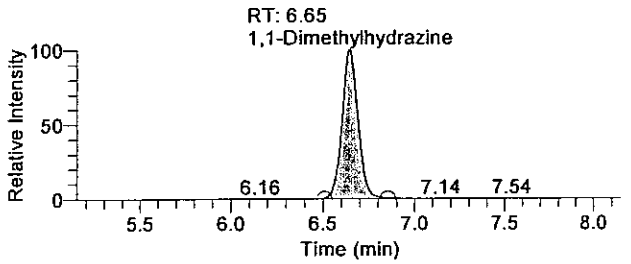
Monomethylhydrazine

08Sep2009-8 - TIC RT: 3.44 - 6.44 NL: 6.14E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



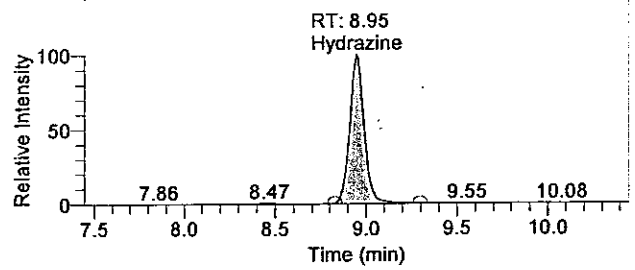
1,1-Dimethylhydrazine

08Sep2009-8 - TIC RT: 5.15 - 8.15 NL: 6.36E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-8 - TIC RT: 7.45 - 10.45 NL: 5.55E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8114

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	8.95	312984	2.429	ng/mL
Cal5	Method Settings	1,1-Dimethylhydrazine	6.65	380970	12.322	ng/mL
Cal5	Method Settings	Monomethylhydrazine	4.94	378188	12.143	ng/mL

Analyst : JW 1543 9/9/2009
[illegible] 9/10/09

OLNZ0 0115

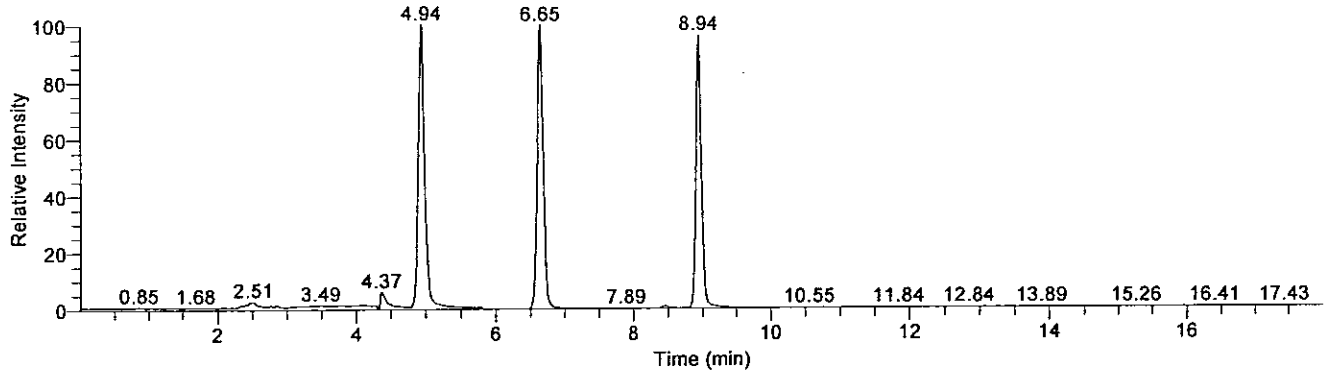
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-9.raw
Sample ID:	Cal6
Sample Type:	Standard
Level:	6
Acquisition Date:	Tuesday, September 08, 2009 4:49:02 PM
Vial:	D:7
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-9 - TIC RT: 0.00 - 17.99 NL: 1.21E5

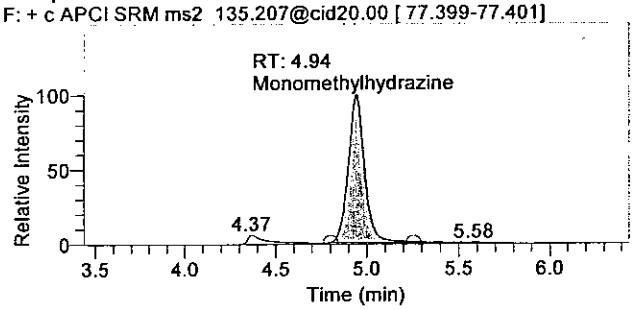


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:7, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-9, Comments: Soil Prep, ID: Cal6

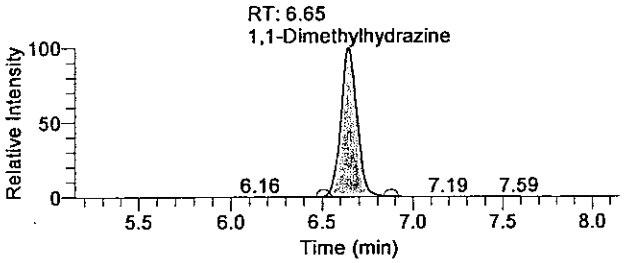
Monomethylhydrazine

08Sep2009-9 - TIC RT: 3.44 - 6.44 NL: 1.21E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



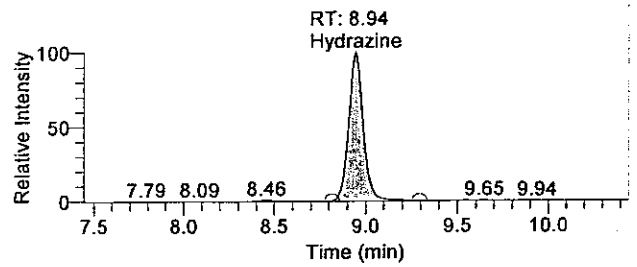
1,1-Dimethylhydrazine

08Sep2009-9 - TIC RT: 5.15 - 8.15 NL: 1.20E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-9 - TIC RT: 7.44 - 10.44 NL: 1.16E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0116

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	649660	5.052	ng/mL
Cal6	Method Settings	1,1-Dimethylhydrazine	6.65	726774	23.409	ng/mL
Cal6	Method Settings	Monomethylhydrazine	4.94	743731	23.771	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

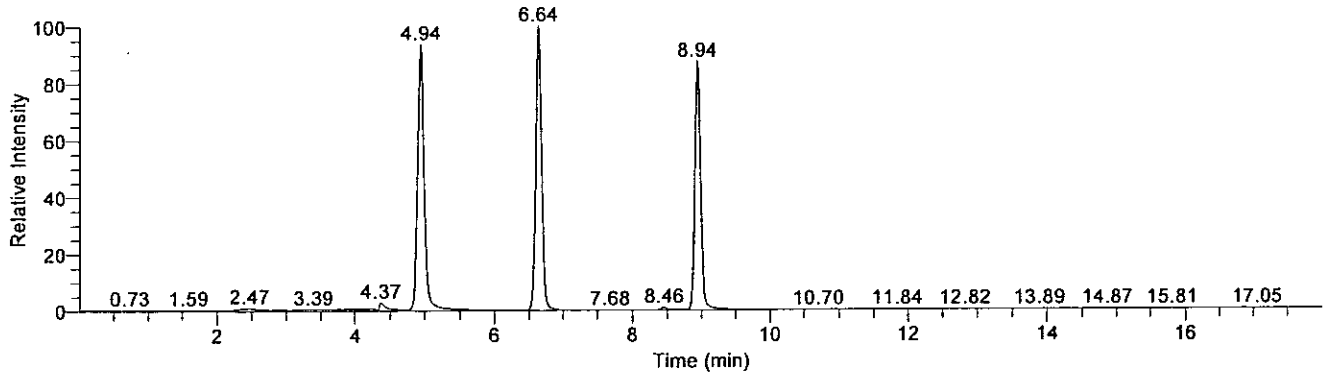
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-10.raw
Sample ID:	Cal7
Sample Type:	Standard
Level:	7
Acquisition Date:	Tuesday, September 08, 2009 5:07:47 PM
Vial:	D:8
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-10 - TIC RT: 0.00 - 17.99 NL: 2.65E5

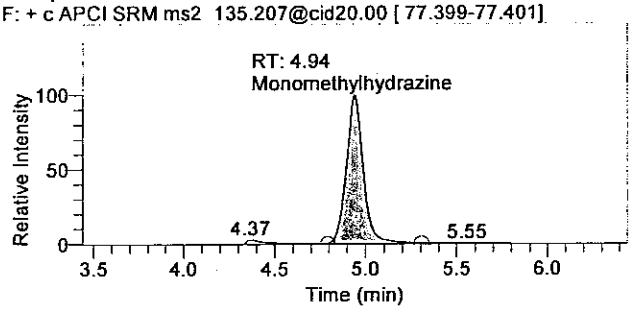


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:8, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-10, Comments: Soil Prep, ID: Cal7

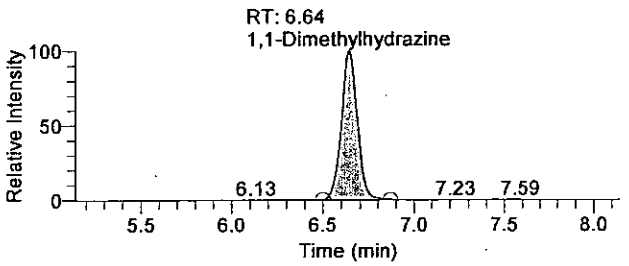
Monomethylhydrazine

08Sep2009-10 - TIC RT: 3.44 - 6.44 NL: 2.48E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



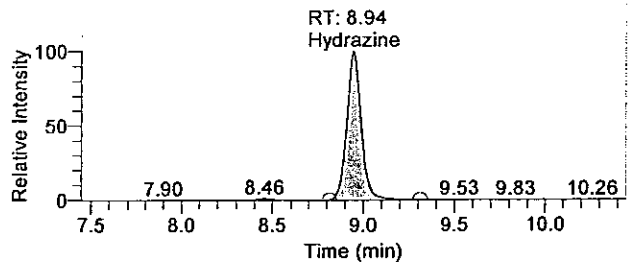
1,1-Dimethylhydrazine

08Sep2009-10 - TIC RT: 5.14 - 8.14 NL: 2.65E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-10 - TIC RT: 7.44 - 10.44 NL: 2.31E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8118

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	1294183	10.073	ng/mL
Cal7	Method Settings	1,1-Dimethylhydrazine	6.64	1599617	51.396	ng/mL
Cal7	Method Settings	Monomethylhydrazine	4.94	1599127	50.980	ng/mL

Analyst : JW 1543 9/9/2009
[illegible] 9/15/09

OLN28 8119

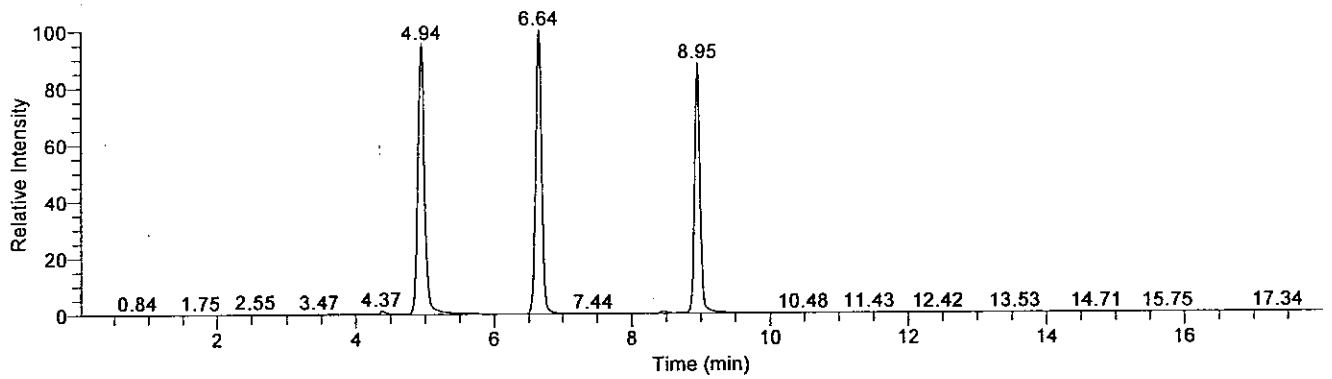
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-11.raw
Sample ID:	Cal8
Sample Type:	Standard
Level:	8
Acquisition Date:	Tuesday, September 08, 2009 5:26:33 PM
Vial:	D:9
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-11 - TIC RT: 0.00 - 17.99 NL: 6.47E5

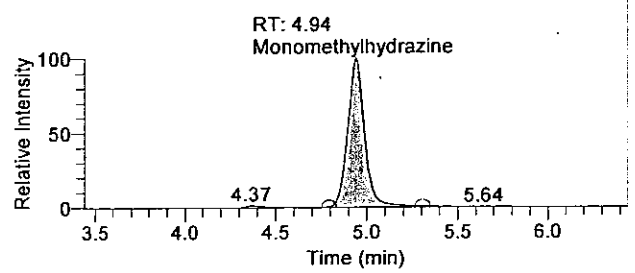


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:9, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-11, Comments: Soil Prep, ID: Cal8

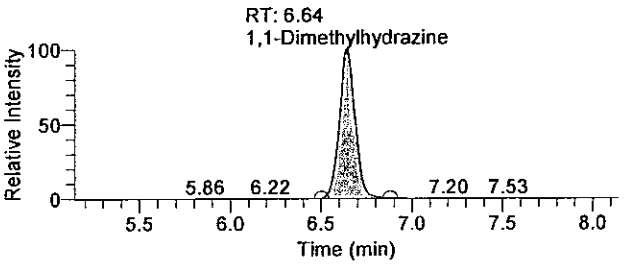
Monomethylhydrazine

08Sep2009-11 - TIC RT: 3.44 - 6.44 NL: 6.15E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



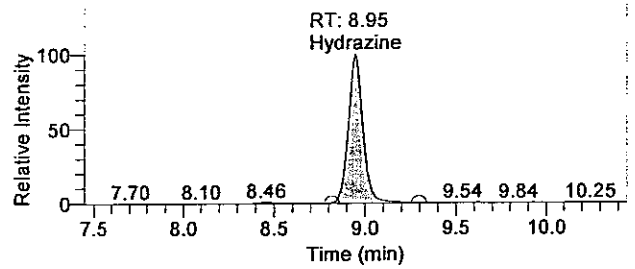
1,1-Dimethylhydrazine

08Sep2009-11 - TIC RT: 5.14 - 8.14 NL: 6.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-11 - TIC RT: 7.45 - 10.45 NL: 5.70E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8128

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	8.95	3211103	25.008	ng/mL
Cal8	Method Settings	1,1-Dimethylhydrazine	6.64	3914817	125.630	ng/mL
Cal8	Method Settings	Monomethylhydrazine	4.94	3958144	126.018	ng/mL

Analyst : JW 1543 9/9/2009
9/12 9/15/09

OLK28 8121

There is no signature data to report.

Lancaster Laboratories

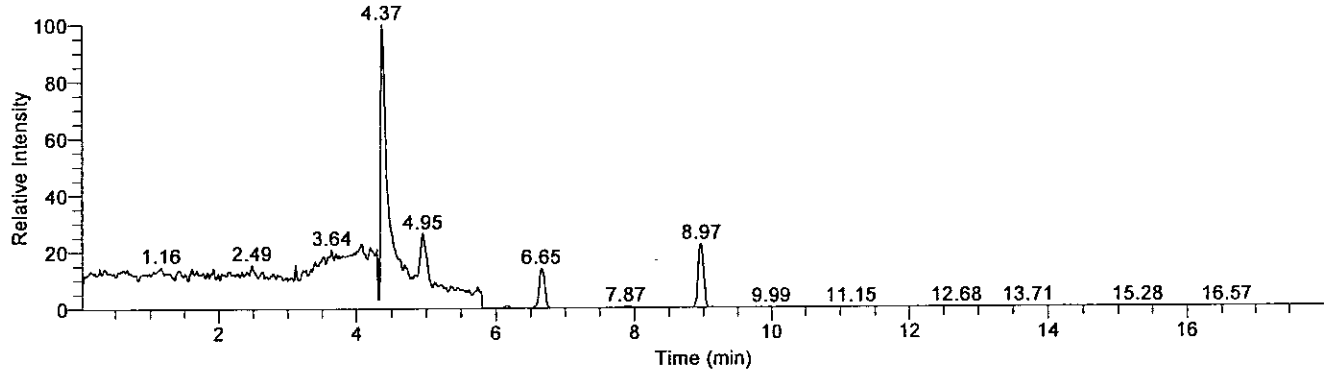
Printed: Wednesday, September 09, 2009, 10:40:30

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-3.raw
Sample ID:	MDL
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 2:56:36 PM
Vial:	D:1
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-3 - TIC RT: 0.01 - 17.99 NL: 8.69E3

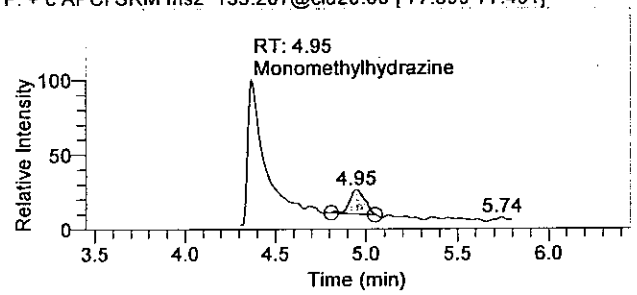


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:1, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-3, Comments: Soil Prep, ID: MDL

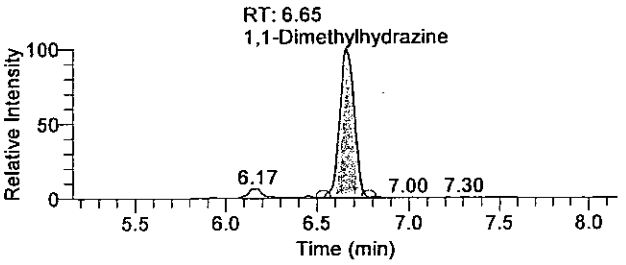
Monomethylhydrazine

08Sep2009-3 - TIC RT: 3.45 - 6.45 NL: 8.69E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



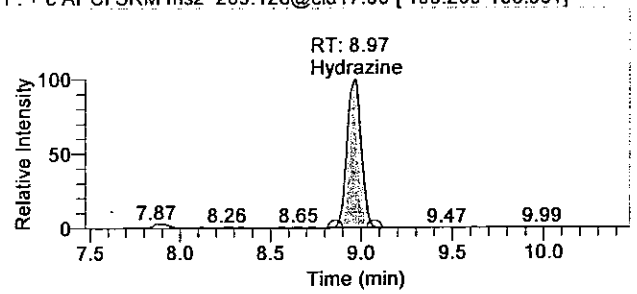
1,1-Dimethylhydrazine

08Sep2009-3 - TIC RT: 5.15 - 8.15 NL: 1.21E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-3 - TIC RT: 7.47 - 10.47 NL: 1.95E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N28 0122

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	10590	0.073	ng/mL
MDL	Method Settings	1,1-Dimethylhydrazine	6.65	6668	0.320	ng/mL
MDL	Method Settings	Monomethylhydrazine	4.95	8621	0.388	ng/mL

Analyst : JW 1543 9/9/2009

9/15/09

OLN28 8123

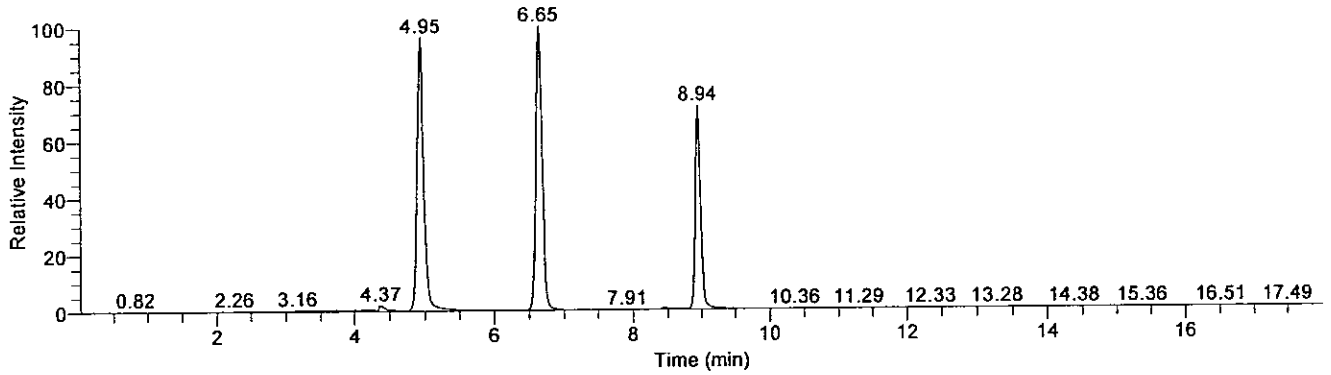
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-23.raw
Sample ID:	ICV
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 9:11:19 PM
Vial:	D:17
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-23 - TIC RT: 0.00 - 17.99 NL: 3.82E5

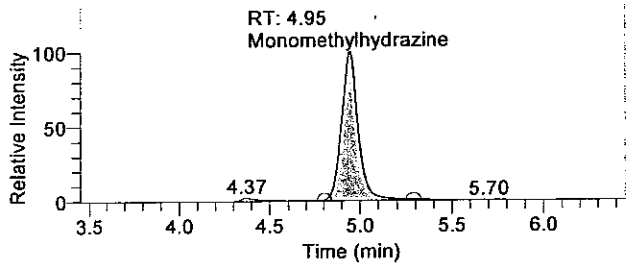


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:17, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-23, Comments: Soil Prep, ID: ICV

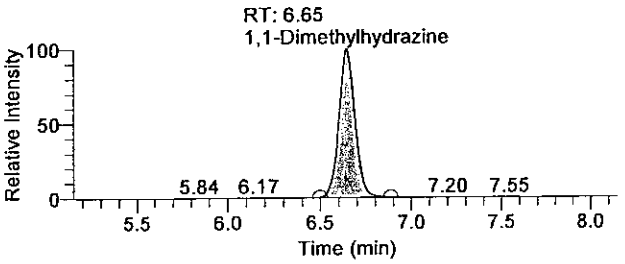
Monomethylhydrazine

08Sep2009-23 - TIC RT: 3.45 - 6.45 NL: 3.67E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



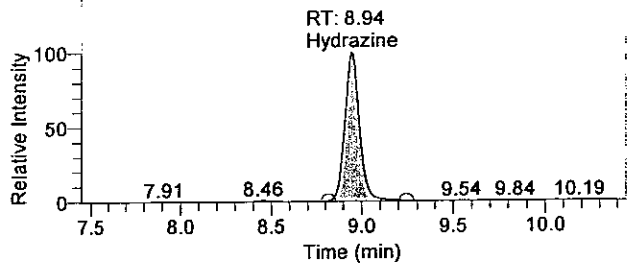
1,1-Dimethylhydrazine

08Sep2009-23 - TIC RT: 5.15 - 8.15 NL: 3.82E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-23 - TIC RT: 7.44 - 10.44 NL: 2.74E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0124

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	1546251	12.037	ng/mL
ICV	Method Settings	1,1-Dimethylhydrazine	6.65	2337645	75.060	ng/mL
ICV	Method Settings	Monomethylhydrazine	4.95	2330361	74.240	ng/mL

Analyst: JW 1543 9/9/2009

9/10/09

OLN28 0125

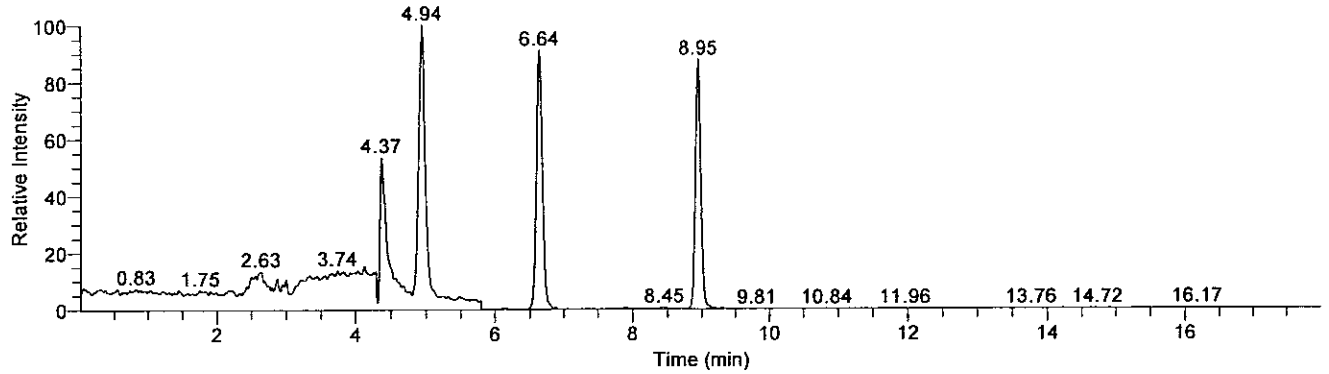
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-13.raw
Sample ID:	Cal3asQC1a
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Tuesday, September 08, 2009 6:03:57 PM
Vial:	D:4
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-13 - TIC RT: 0.00 - 17.99 NL: 1.32E4

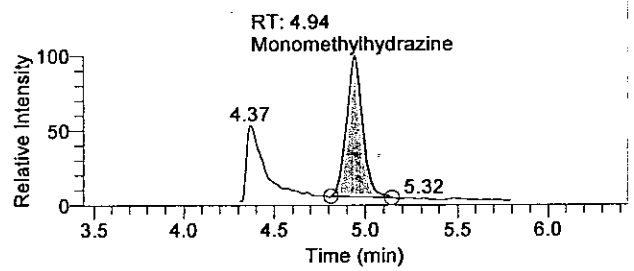


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:4, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-13, Comments: , ID: Cal3asQC1a

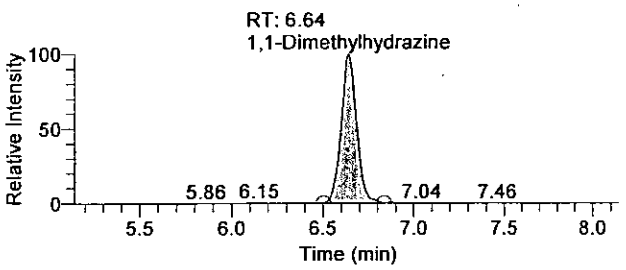
Monomethylhydrazine

08Sep2009-13 - TIC RT: 3.44 - 6.44 NL: 1.32E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



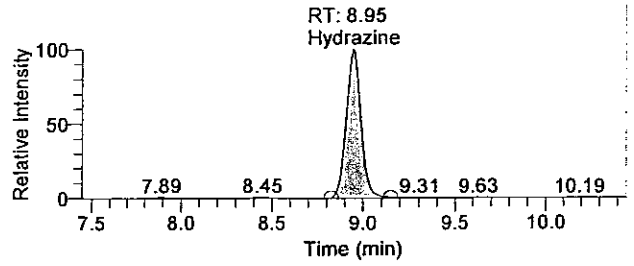
1,1-Dimethylhydrazine

08Sep2009-13 - TIC RT: 5.14 - 8.14 NL: 1.21E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-13 - TIC RT: 7.45 - 10.45 NL: 1.16E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN28 6126

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	8.95	64980	0.496	ng/mL
Cal3asQC1a	Method Settings	1,1-Dimethylhydrazine	6.64	71436	2.397	ng/mL
Cal3asQC1a	Method Settings	Monomethylhydrazine	4.94	77126	2.567	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

OLN20 8127

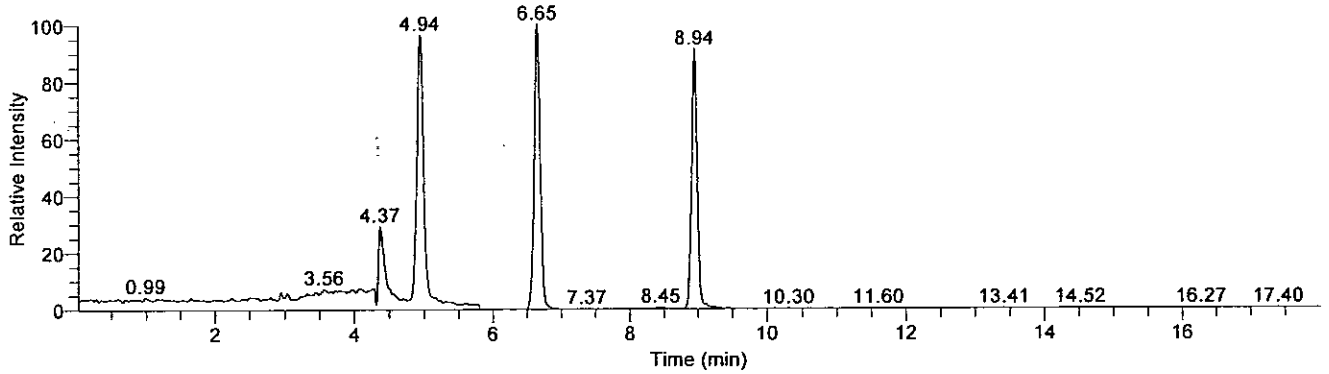
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-24.raw
Sample ID:	Cal4asQC2a
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Tuesday, September 08, 2009 9:30:04 PM
Vial:	D:5
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-24 - TIC RT: 0.00 - 18.00 NL: 2.51E4

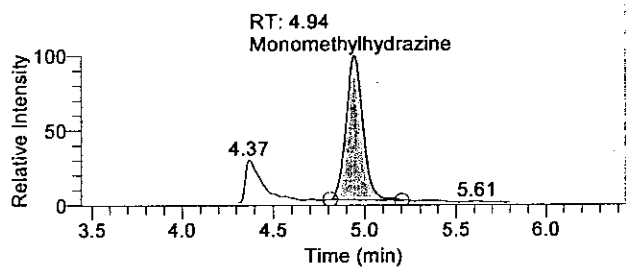


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:5, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-24, Comments: , ID: Cal4asQC2a

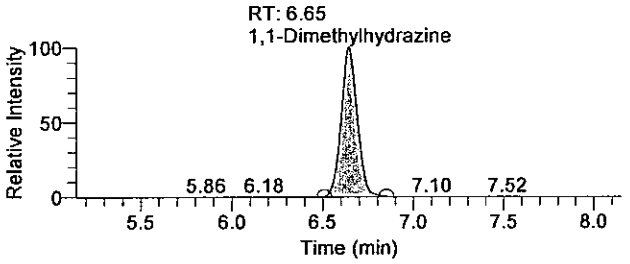
Monomethylhydrazine

08Sep2009-24 - TIC RT: 3.44 - 6.44 NL: 2.42E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



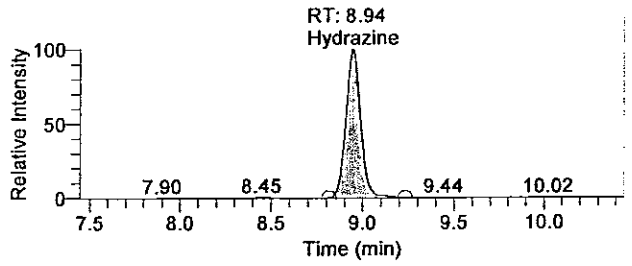
1,1-Dimethylhydrazine

08Sep2009-24 - TIC RT: 5.15 - 8.15 NL: 2.51E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-24 - TIC RT: 7.44 - 10.44 NL: 2.29E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN28 8128

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	130740	1.009	ng/mL
Cal4asQC2a	Method Settings	1,1-Dimethylhydrazine	6.65	154081	5.047	ng/mL
Cal4asQC2a	Method Settings	Monomethylhydrazine	4.94	152927	4.978	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

OLNZB 8129

There is no signature data to report.

Lancaster Laboratories

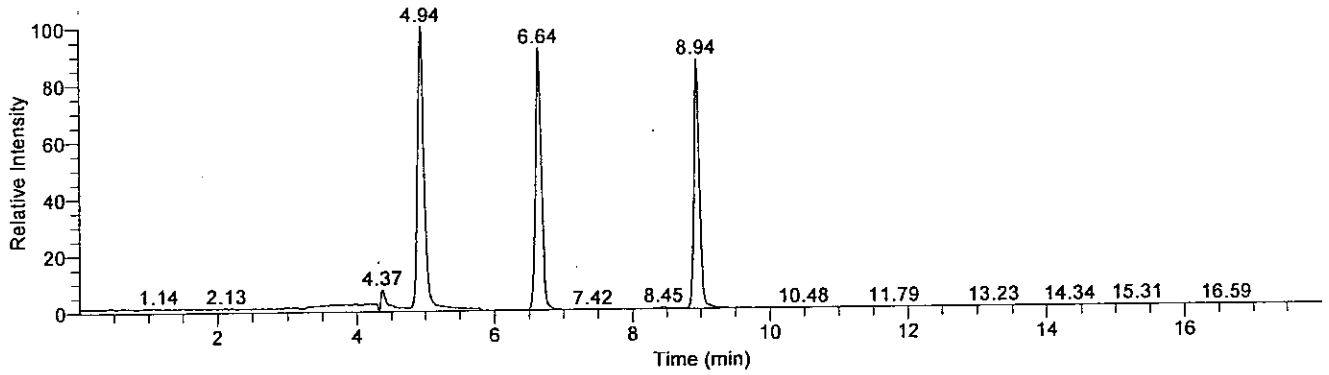
Printed: Wednesday, September 09, 2009, 10:40:36

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	08Sep2009-35.raw
Sample ID:	Cal5asQC3a
Sample Type:	QC
Level:	CCV3
Acquisition Date:	Wednesday, September 09, 2009 12:56:03 AM
Vial:	D:6
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-35 - TIC RT: 0.00 - 18.00 NL: 6.85E4

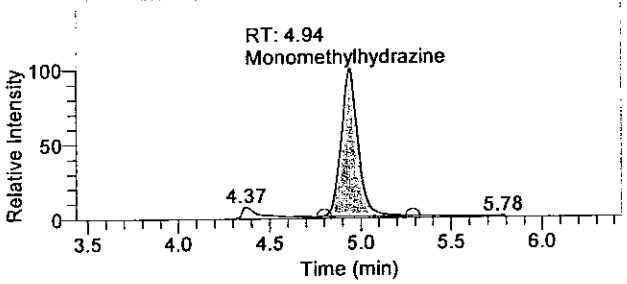


Compound Graphics

Date: 09-Sep-2009, Instrument: Quantum, Vial: D:6, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-35, Comments: , ID: Cal5asQC3a

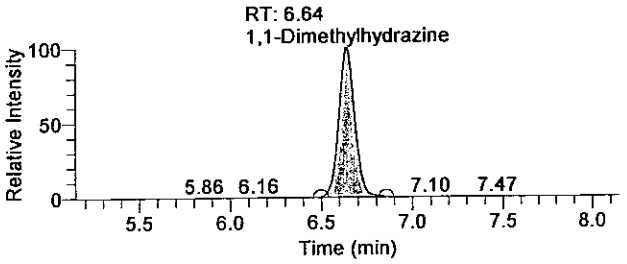
Monomethylhydrazine

08Sep2009-35 - TIC RT: 3.44 - 6.44 NL: 6.85E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



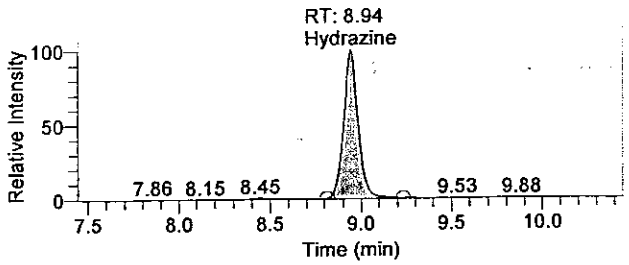
1,1-Dimethylhydrazine

08Sep2009-35 - TIC RT: 5.14 - 8.14 NL: 6.31E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-35 - TIC RT: 7.44 - 10.44 NL: 6.00E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0130

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	8.94	336542	2.612	ng/mL
Cal5asQC3a	Method Settings	1,1-Dimethylhydrazine	6.64	382242	12.363	ng/mL
Cal5asQC3a	Method Settings	Monomethylhydrazine	4.94	440296	14.119	ng/mL

Analyst : JW 1543 9/9/2009
9/10/09

QLN28 8131

There is no signature data to report.

Lancaster Laboratories

Workbook Name: TQU01408-10Sep2009-3
Instrument No. TQU01408
Analyst JW01543

Sequence Table

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner1	10Sep2009-1	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Conditioner2	10Sep2009-2	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
MDL	10Sep2009-3	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:7	10.00	N/A
Cal1	10Sep2009-4	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:8	10.00	N/A
Cal2	10Sep2009-5	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:9	10.00	N/A
Cal3	10Sep2009-6	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:10	10.00	N/A
Cal4	10Sep2009-7	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:11	10.00	N/A
Cal5	10Sep2009-8	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:12	10.00	N/A
Cal6	10Sep2009-9	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:13	10.00	N/A
Cal7	10Sep2009-10	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:14	10.00	N/A
Cal8	10Sep2009-11	Standard	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:15	10.00	N/A
Conditioner3	10Sep2009-12	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Cal3asQC1a	10Sep2009-13	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:10	10.00	N/A
Conditioner4	10Sep2009-14	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Conditioner5	10Sep2009-15	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Blank1	10Sep2009-16	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:16	10.00	0925310610812
5769175FD	10Sep2009-17	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:17	10.00	0925310610812
5769176BKG	10Sep2009-18	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:18	10.00	0925310610812
5769177MS	10Sep2009-19	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:19	10.00	0925310610812
5769178MSD	10Sep2009-20	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:20	10.00	0925310610812
LCS1	10Sep2009-21	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:21	10.00	0925310610812
LCSD1	10Sep2009-22	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:22	10.00	0925310610812
ICV	10Sep2009-23	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:23	10.00	N/A
Cal4asQC2a	10Sep2009-24	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:11	10.00	N/A
Spike Check	10Sep2009-25	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:24	10.00	N/A
Conditioner6	10Sep2009-26	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Conditioner7	10Sep2009-27	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
5769179	10Sep2009-28	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:25	10.00	0925310610812
5769180	10Sep2009-29	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:26	10.00	0925310610812
5770779	10Sep2009-30	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:27	10.00	0925310610812
5770780	10Sep2009-31	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:28	10.00	0925310610812
5770781	10Sep2009-32	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:29	10.00	0925310610812
Cal5asQC3a	10Sep2009-33	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:12	10.00	N/A

There is no signature data to report.

Lancaster Laboratories

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner8	10Sep2009-34	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Conditioner9	10Sep2009-35	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Blank2	10Sep2009-36	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:30	10.00	0925310610813
5769171FD	10Sep2009-37	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:31	10.00	0925310610813
5769172BKG	10Sep2009-38	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:32	10.00	0925310610813
5769173MS	10Sep2009-39	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:33	10.00	0925310610813
5769174MSD	10Sep2009-40	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:34	10.00	0925310610813
LCS2	10Sep2009-41	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:35	10.00	0925310610813
LCSD2	10Sep2009-42	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:36	10.00	0925310610813
Conditioner10	10Sep2009-44	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
Cal3asQC1b	10Sep2009-43	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:10	10.00	N/A
Conditioner11	10Sep2009-45	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:1	10.00	N/A
5772546	10Sep2009-46	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:37	10.00	0925310610813
5772547	10Sep2009-47	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:38	10.00	0925310610813
5772548	10Sep2009-48	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:39	10.00	0925310610813
5772550	10Sep2009-49	Unknown	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:40	10.00	0925310610813
Cal4asQC2b	10Sep2009-50	QC	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles	E:11	10.00	N/A

Analyst: JW 1543 9/11/2009

9/11/09

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-10Sep2009-3
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
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

OLN28 8134

There is no signature data to report.

Lancaster Laboratories

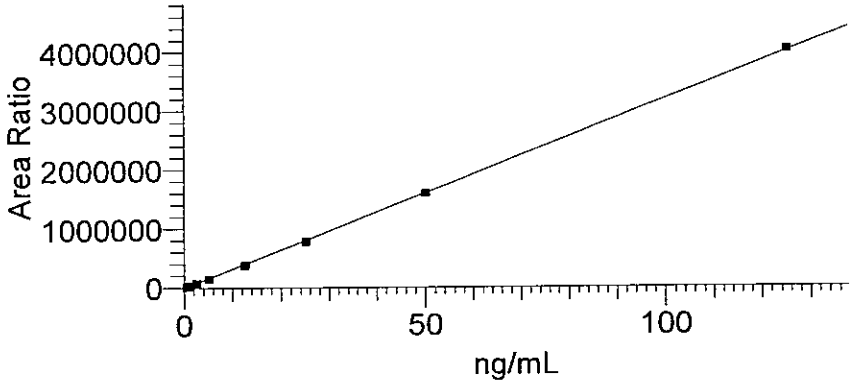
ISTD:	
Weighting:	1/X
Origin:	IgnoreOrigin
Response:	Area
Calibration Curve:	Linear
Target Units:	ng/mL
Number of Cal. Levels:	8
Number of QC Levels:	3

Options

Calibration By:	External Standard

1,1-Dimethylhydrazine

Y = -4357.1+31979.9*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	13677	0.500	ng/mL	0.564	12.79
Cal2	Standard	2	N/A	Method Settings	28523	1.000	ng/mL	1.028	2.82
Cal3	Standard	3	N/A	Method Settings	71234	2.500	ng/mL	2.364	-5.45
Cal4	Standard	4	N/A	Method Settings	147261	5.000	ng/mL	4.741	-5.18
Cal5	Standard	5	N/A	Method Settings	378540	12.500	ng/mL	11.973	-4.22
Cal6	Standard	6	N/A	Method Settings	777656	25.000	ng/mL	24.453	-2.19
Cal7	Standard	7	N/A	Method Settings	1603389	50.000	ng/mL	50.274	0.55
Cal8	Standard	8	N/A	Method Settings	4028402	125.000	ng/mL	126.103	0.88
Cal3asQC1a	QC	CCV1	N/A	Method Settings	77854	2.500	ng/mL	2.571	2.83
Cal4asQC2a	QC	CCV2	N/A	Method Settings	161008	5.000	ng/mL	5.171	3.42
Cal5asQC3a	QC	CCV3	N/A	Method Settings	371248	12.500	ng/mL	11.745	-6.04
Cal3asQC1b	QC	CCV1	N/A	Method Settings	68122	2.500	ng/mL	2.266	-9.34
Cal4asQC2b	QC	CCV2	N/A	Method Settings	161117	5.000	ng/mL	5.174	3.49

Analyst: JW 1543 9/11/2009
[illegible] 9/11/09

OLN28 0135

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-10Sep2009-3
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
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

01N29 8136

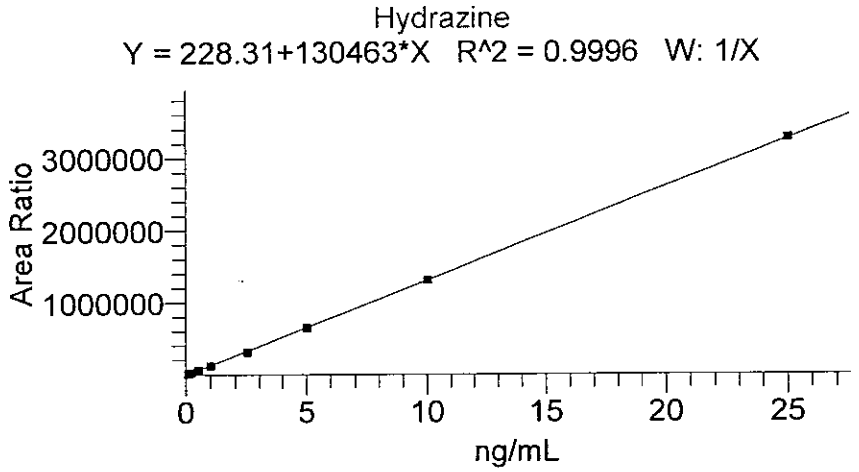
There is no signature data to report.

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	15120	0.100	ng/mL	0.114	14.14
Cal2	Standard	2	N/A	Method Settings	26987	0.200	ng/mL	0.205	2.55
Cal3	Standard	3	N/A	Method Settings	59953	0.500	ng/mL	0.458	-8.44
Cal4	Standard	4	N/A	Method Settings	124436	1.000	ng/mL	0.952	-4.80
Cal5	Standard	5	N/A	Method Settings	311178	2.500	ng/mL	2.383	-4.66
Cal6	Standard	6	N/A	Method Settings	652953	5.000	ng/mL	5.003	0.06
Cal7	Standard	7	N/A	Method Settings	1313640	10.000	ng/mL	10.067	0.67
Cal8	Standard	8	N/A	Method Settings	3277070	25.000	ng/mL	25.117	0.47
Cal3asQC1a	QC	CCV1	N/A	Method Settings	65003	0.500	ng/mL	0.496	-0.70
Cal4asQC2a	QC	CCV2	N/A	Method Settings	135875	1.000	ng/mL	1.040	3.97
Cal5asQC3a	QC	CCV3	N/A	Method Settings	344666	2.500	ng/mL	2.640	5.60
Cal3asQC1b	QC	CCV1	N/A	Method Settings	66329	0.500	ng/mL	0.507	1.33
Cal4asQC2b	QC	CCV2	N/A	Method Settings	131140	1.000	ng/mL	1.003	0.34

Analyst: JW 1543 9/11/2009
SJ/112 9/11/09

OLN28 8137

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-10Sep2009-3
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
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

OLW29 0130

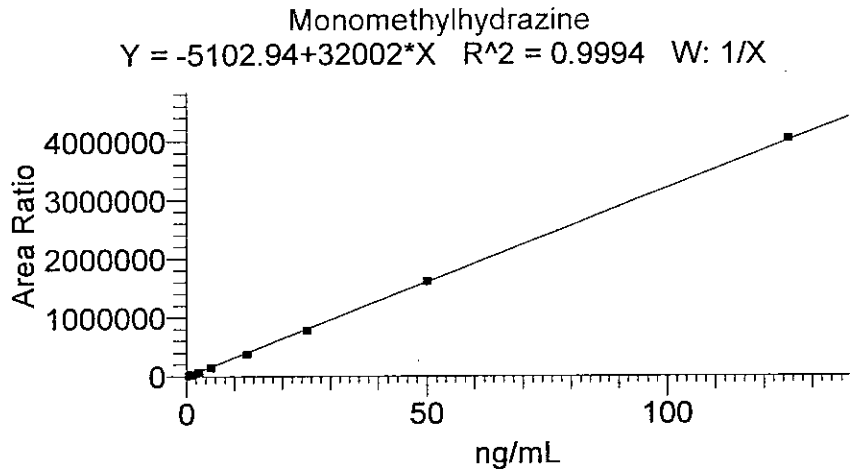
There is no signature data to report.

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	13776	0.500	ng/mL	0.590	17.99
Cal2	Standard	2	N/A	Method Settings	27466	1.000	ng/mL	1.018	1.77
Cal3	Standard	3	N/A	Method Settings	69806	2.500	ng/mL	2.341	-6.37
Cal4	Standard	4	N/A	Method Settings	142905	5.000	ng/mL	4.625	-7.50
Cal5	Standard	5	N/A	Method Settings	373444	12.500	ng/mL	11.829	-5.37
Cal6	Standard	6	N/A	Method Settings	775008	25.000	ng/mL	24.377	-2.49
Cal7	Standard	7	N/A	Method Settings	1610871	50.000	ng/mL	50.496	0.99
Cal8	Standard	8	N/A	Method Settings	4034344	125.000	ng/mL	126.225	0.98
Cal3asQC1a	QC	CCV1	N/A	Method Settings	77187	2.500	ng/mL	2.571	2.86
Cal4asQC2a	QC	CCV2	N/A	Method Settings	165181	5.000	ng/mL	5.321	6.42
Cal5asQC3a	QC	CCV3	N/A	Method Settings	421613	12.500	ng/mL	13.334	6.67
Cal3asQC1b	QC	CCV1	N/A	Method Settings	78414	2.500	ng/mL	2.610	4.39
Cal4asQC2b	QC	CCV2	N/A	Method Settings	165085	5.000	ng/mL	5.318	6.36

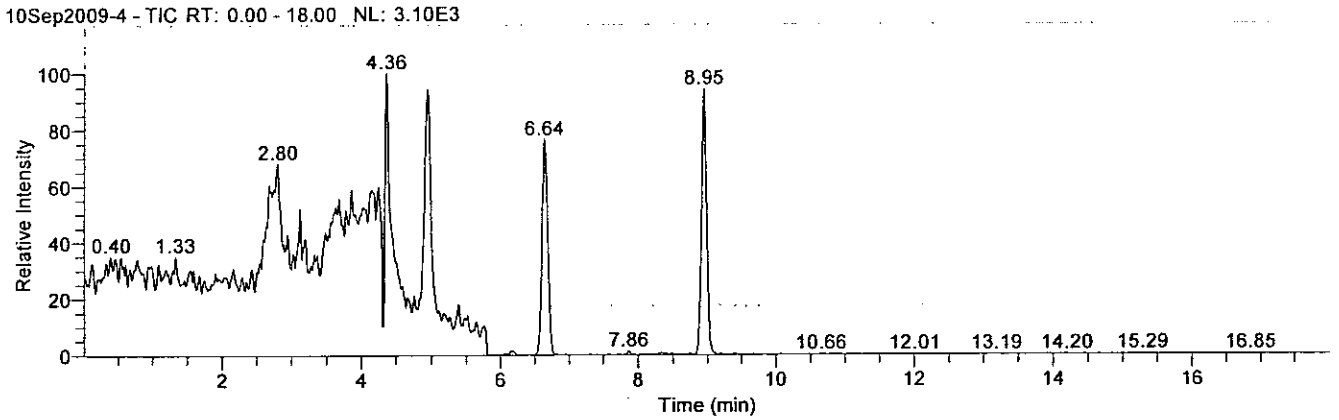
Analyst : JW 1543 9/11/2009
9/11/2 9/11/09

OLN28 8139

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-4.raw
Sample ID:	Cal1
Sample Type:	Standard
Level:	1
Acquisition Date:	Thursday, September 10, 2009 7:34:41 PM
Vial:	E:8
Dilution Factor:	1.00000

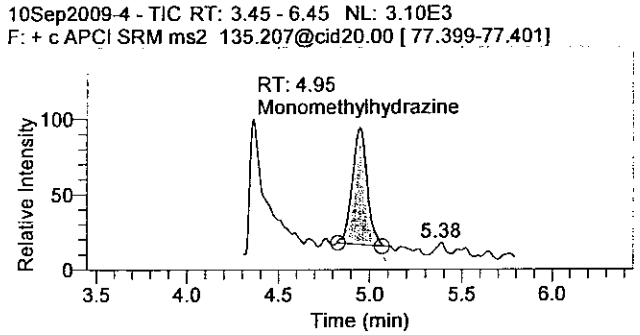
Sample Chromatogram



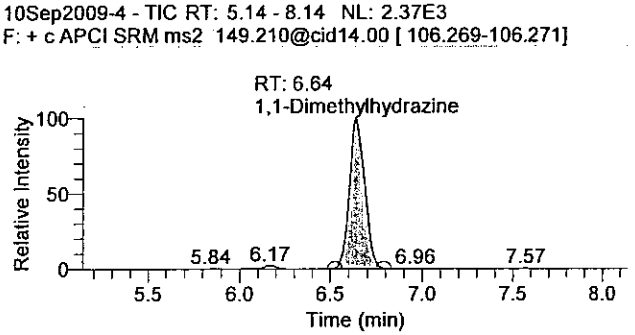
Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:8, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-4, Comments: , ID: Cal1

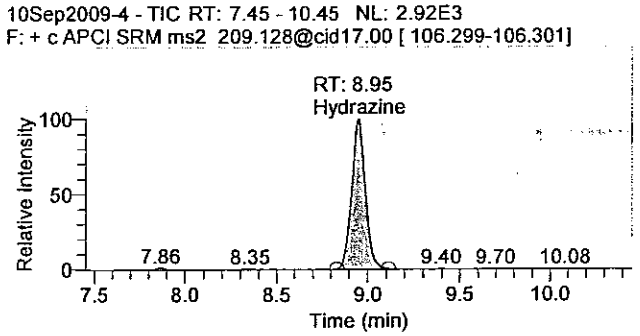
Monomethylhydrazine



1,1-Dimethylhydrazine



Hydrazine



OLN20 8148

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	15120	0.114	ng/mL
Cal1	Method Settings	1,1-Dimethylhydrazine	6.64	13677	0.564	ng/mL
Cal1	Method Settings	Monomethylhydrazine	4.95	13776	0.590	ng/mL

Analyst : JW 1543 9/11/2009

9/11/09

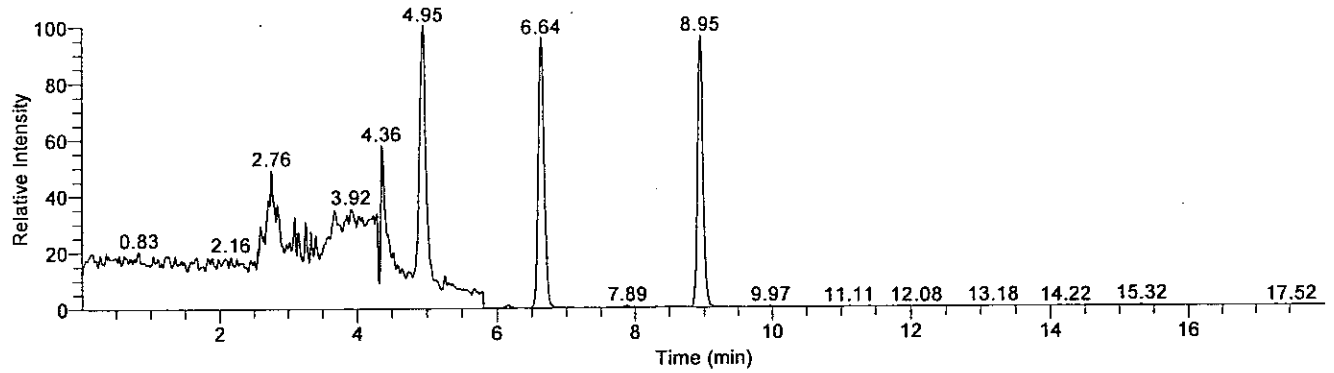
GLN28 9141

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-5.raw
Sample ID:	Cal2
Sample Type:	Standard
Level:	2
Acquisition Date:	Thursday, September 10, 2009 7:53:25 PM
Vial:	E:9
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-5 - TIC RT: 0.00 - 18.00 NL: 5.13E3

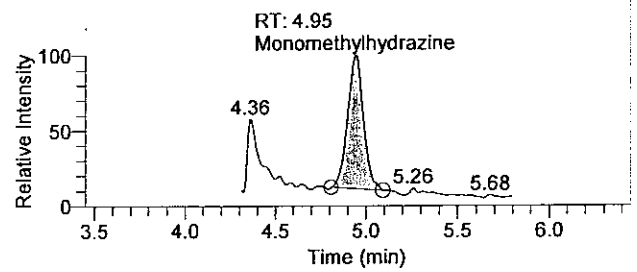


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:9, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-5, Comments: , ID: Cal2

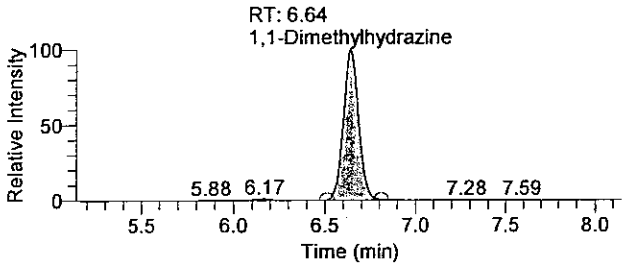
Monomethylhydrazine

10Sep2009-5 - TIC RT: 3.45 - 6.45 NL: 5.13E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



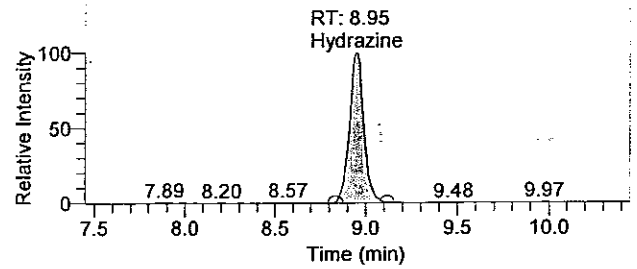
1,1-Dimethylhydrazine

10Sep2009-5 - TIC RT: 5.14 - 8.14 NL: 4.89E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-5 - TIC RT: 7.45 - 10.45 NL: 4.92E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0142

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal2	Method Settings	Hydrazine	8.95	26987	0.205	ng/mL
Cal2	Method Settings	1,1-Dimethylhydrazine	6.64	28523	1.028	ng/mL
Cal2	Method Settings	Monomethylhydrazine	4.95	27466	1.018	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

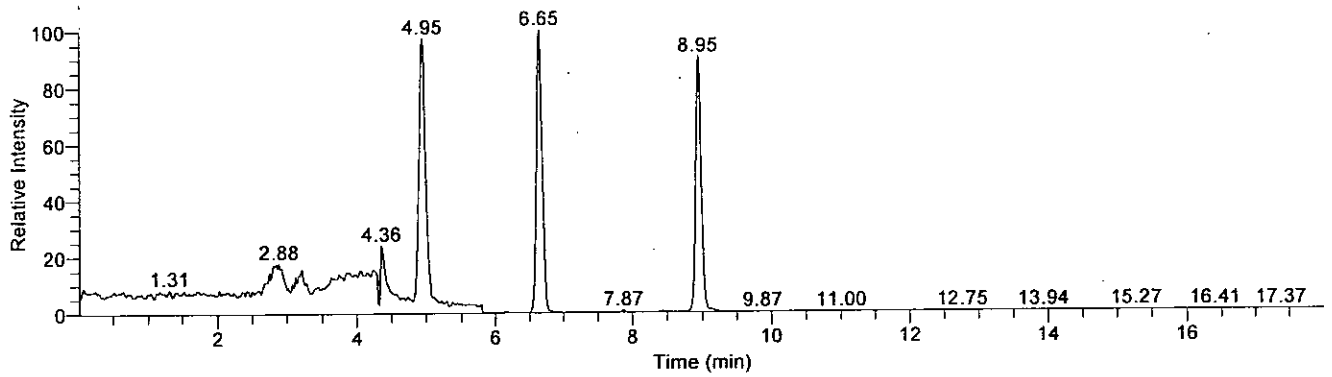
OLN28 0143

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-6.raw
Sample ID:	Cal3
Sample Type:	Standard
Level:	3
Acquisition Date:	Thursday, September 10, 2009 8:12:11 PM
Vial:	E:10
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-6 - TIC RT: 0.00 - 17.99 NL: 1.20E4

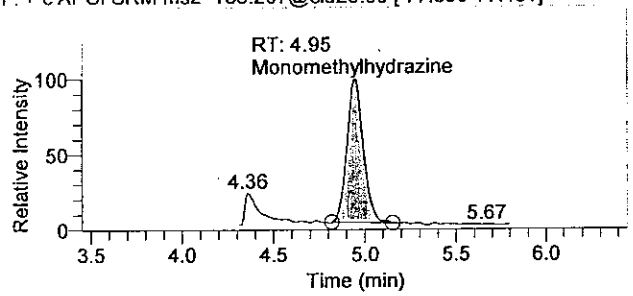


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:10, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-6, Comments: , ID: Cal3

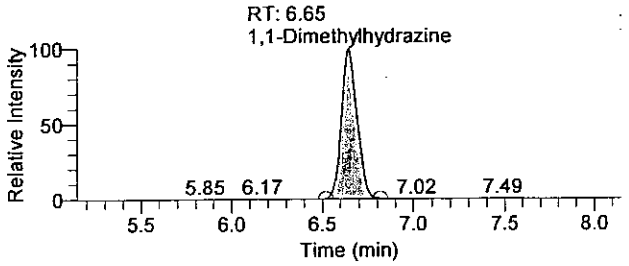
Monomethylhydrazine

10Sep2009-6 - TIC RT: 3.45 - 6.45 NL: 1.17E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



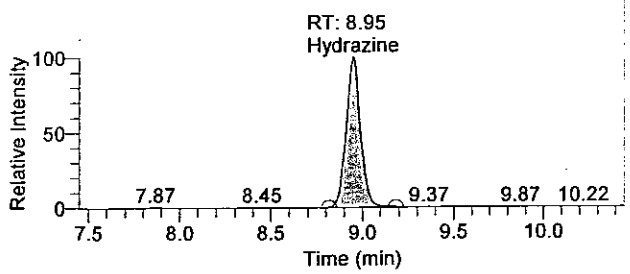
1,1-Dimethylhydrazine

10Sep2009-6 - TIC RT: 5.15 - 8.15 NL: 1.20E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-6 - TIC RT: 7.45 - 10.45 NL: 1.08E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM29 0144

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3	Method Settings	Hydrazine	8.95	59953	0.458	ng/mL
Cal3	Method Settings	1,1-Dimethylhydrazine	6.65	71234	2.364	ng/mL
Cal3	Method Settings	Monomethylhydrazine	4.95	69806	2.341	ng/mL

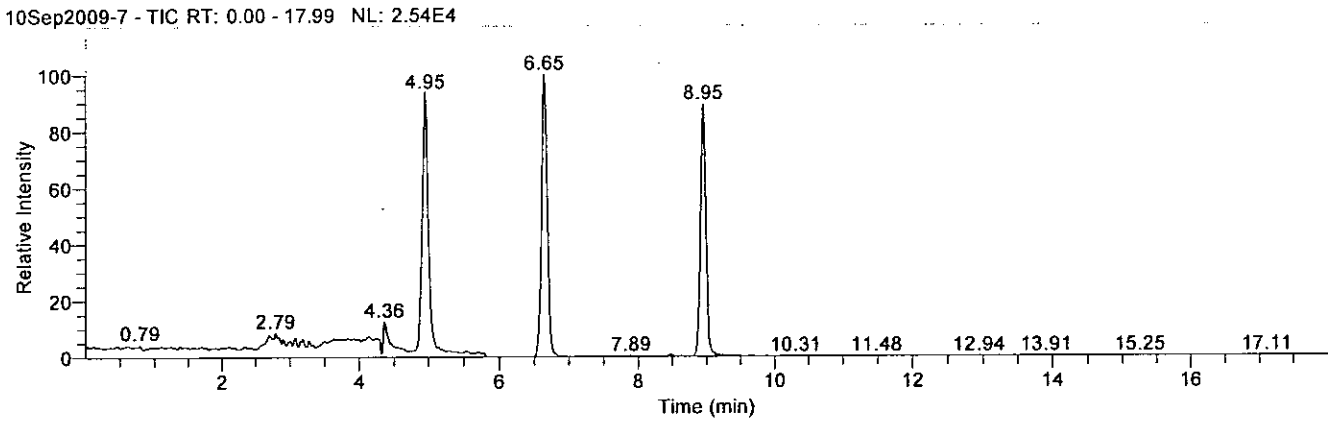
Analyst: JW 1543 9/11/2009
9/11/09

OLR28 0145

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-7.raw
Sample ID:	Cal4
Sample Type:	Standard
Level:	4
Acquisition Date:	Thursday, September 10, 2009 8:30:55 PM
Vial:	E:11
Dilution Factor:	1.00000

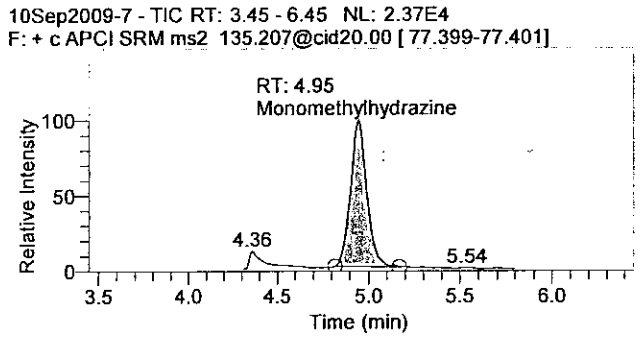
Sample Chromatogram



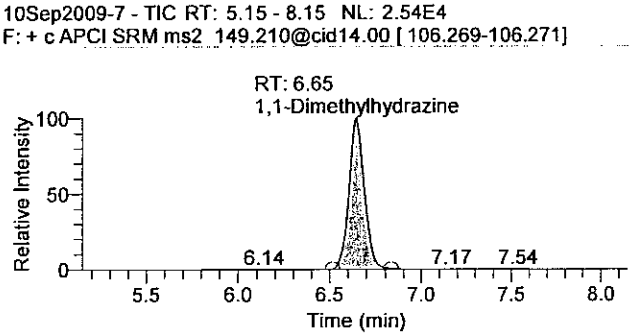
Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:11, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-7, Comments: , ID: Cal4

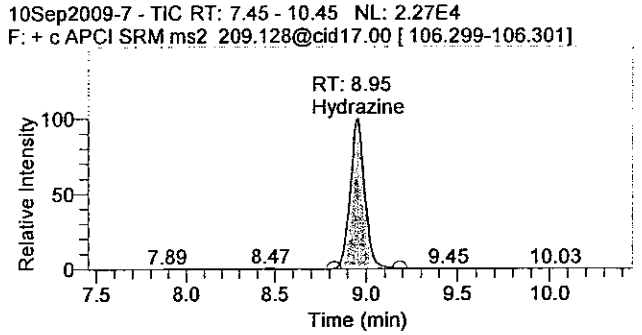
Monomethylhydrazine



1,1-Dimethylhydrazine



Hydrazine



OLN20 8546

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4	Method Settings	Hydrazine	8.95	124436	0.952	ng/mL
Cal4	Method Settings	1,1-Dimethylhydrazine	6.65	147261	4.741	ng/mL
Cal4	Method Settings	Monomethylhydrazine	4.95	142905	4.625	ng/mL

Analyst : JW 1543 9/11/2009

9/11/09

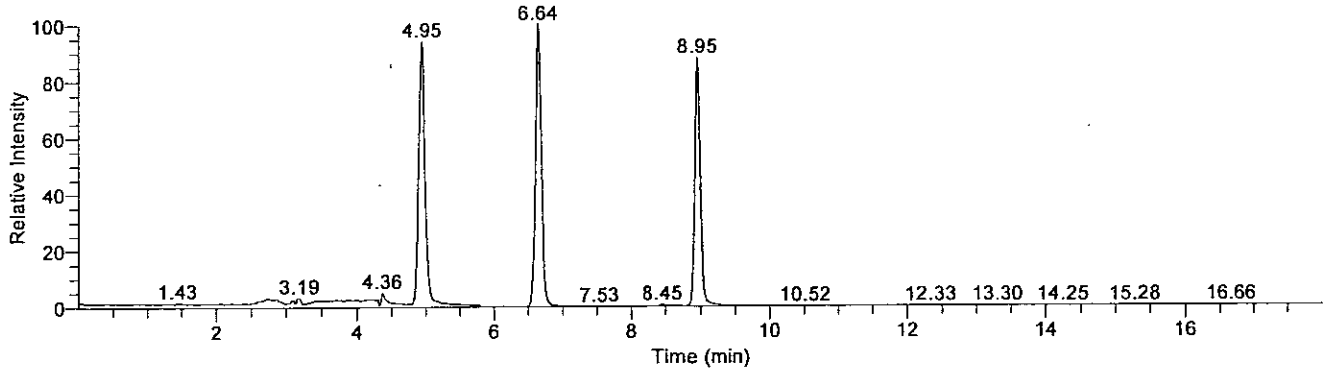
01N28 0147

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-8.raw
Sample ID:	Cal5
Sample Type:	Standard
Level:	5
Acquisition Date:	Thursday, September 10, 2009 8:49:42 PM
Vial:	E:12
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-8 - TIC RT: 0.00 - 18.00 NL: 6.37E4

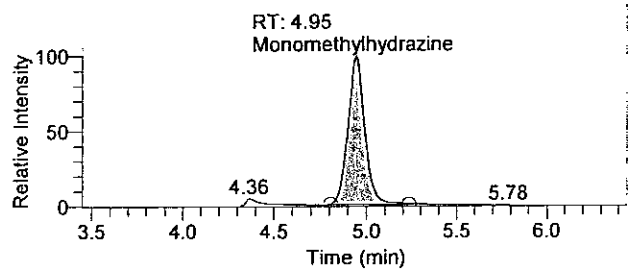


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:12, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-8, Comments: , ID: Cal5

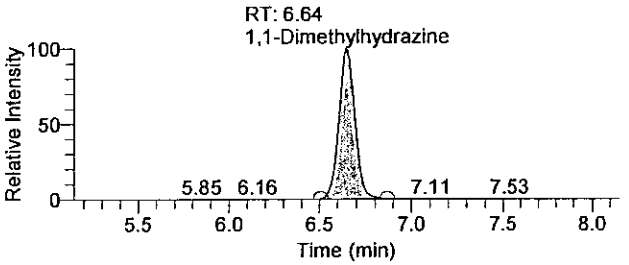
Monomethylhydrazine

10Sep2009-8 - TIC RT: 3.45 - 6.45 NL: 5.98E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



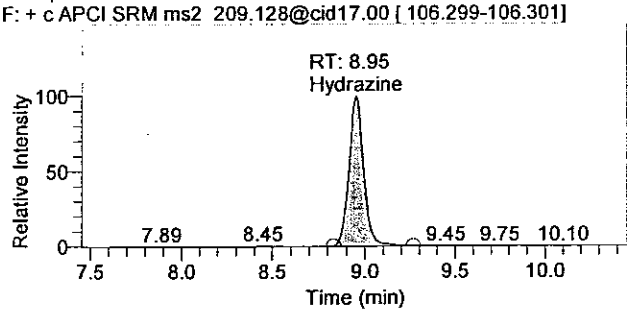
1,1-Dimethylhydrazine

10Sep2009-8 - TIC RT: 5.14 - 8.14 NL: 6.37E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-8 - TIC RT: 7.45 - 10.45 NL: 5.60E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN28-8148

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	8.95	311178	2.383	ng/mL
Cal5	Method Settings	1,1-Dimethylhydrazine	6.64	378540	11.973	ng/mL
Cal5	Method Settings	Monomethylhydrazine	4.95	373444	11.829	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

OLN28 8149

There is no signature data to report.

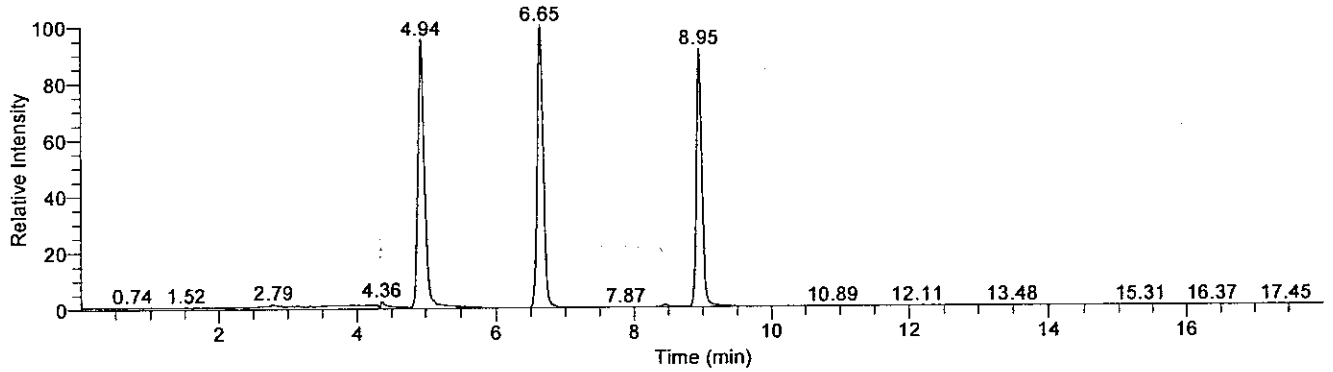
Lancaster Laboratories

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-9.raw
Sample ID:	Cal6
Sample Type:	Standard
Level:	6
Acquisition Date:	Thursday, September 10, 2009 9:08:26 PM
Vial:	E:13
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-9 - TIC RT: 0.01 - 17.99 NL: 1.29E5

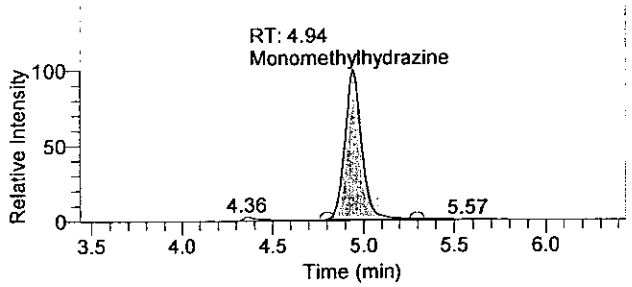


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:13, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-9, Comments: , ID: Cal6

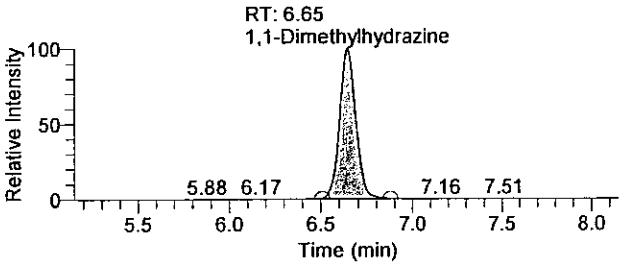
Monomethylhydrazine

10Sep2009-9 - TIC RT: 3.44 - 6.44 NL: 1.22E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



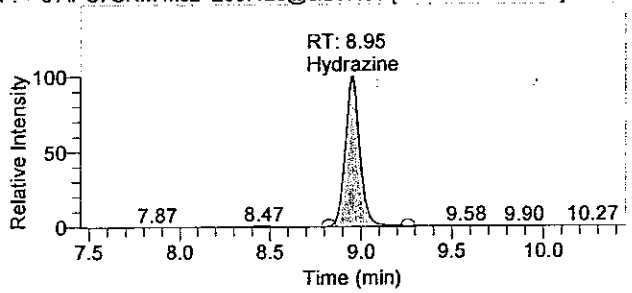
1,1-Dimethylhydrazine

10Sep2009-9 - TIC RT: 5.15 - 8.15 NL: 1.29E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-9 - TIC RT: 7.45 - 10.45 NL: 1.17E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0158

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal6	Method Settings	Hydrazine	8.95	652953	5.003	ng/mL
Cal6	Method Settings	1,1-Dimethylhydrazine	6.65	777656	24.453	ng/mL
Cal6	Method Settings	Monomethylhydrazine	4.94	775008	24.377	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

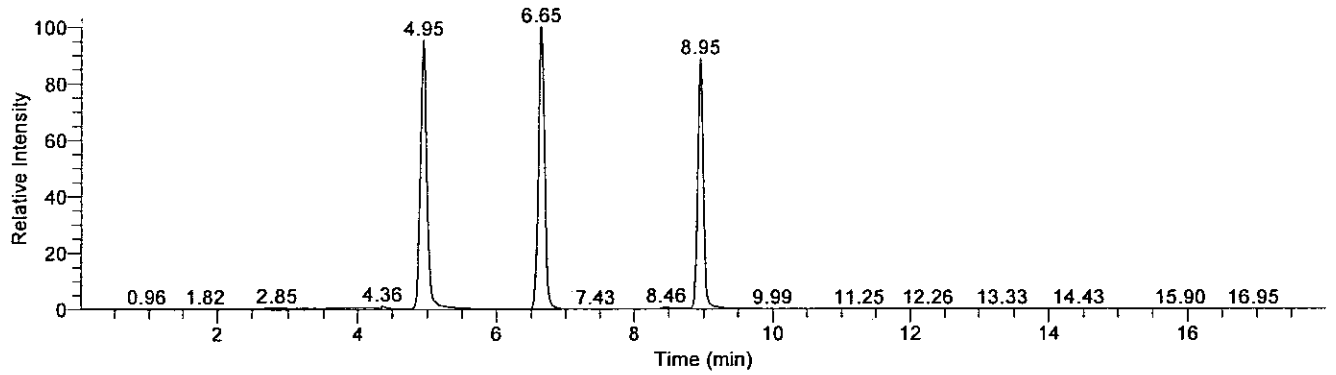
OLN2B 0151

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-10.raw
Sample ID:	Cal7
Sample Type:	Standard
Level:	7
Acquisition Date:	Thursday, September 10, 2009 9:27:10 PM
Vial:	E:14
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-10 - TIC RT: 0.00 - 17.99 NL: 2.61E5

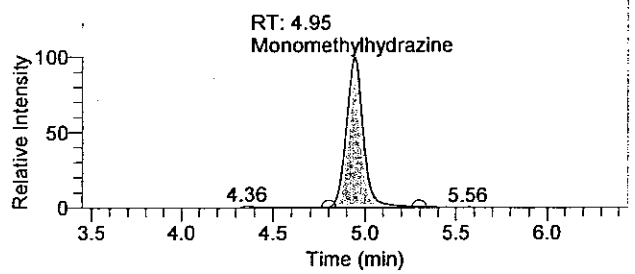


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:14, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-10, Comments: , ID: Cal7

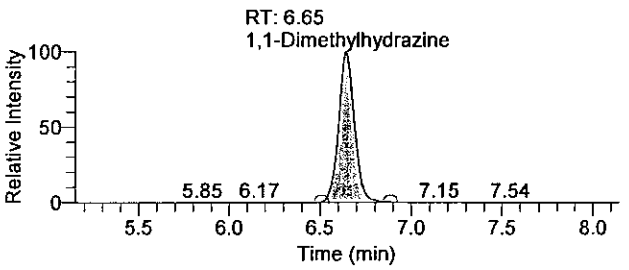
Monomethylhydrazine

10Sep2009-10 - TIC RT: 3.45 - 6.45 NL: 2.49E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



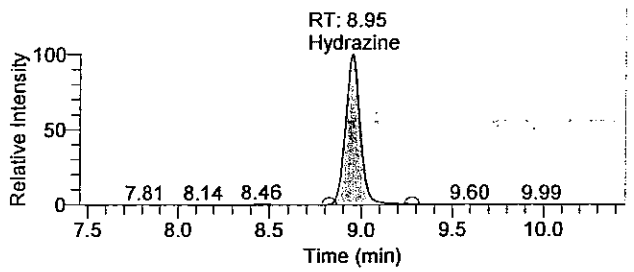
1,1-Dimethylhydrazine

10Sep2009-10 - TIC RT: 5.15 - 8.15 NL: 2.61E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-10 - TIC RT: 7.45 - 10.45 NL: 2.31E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN29 0152

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	1313640	10.067	ng/mL
Cal7	Method Settings	1,1-Dimethylhydrazine	6.65	1603389	50.274	ng/mL
Cal7	Method Settings	Monomethylhydrazine	4.95	1610871	50.496	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

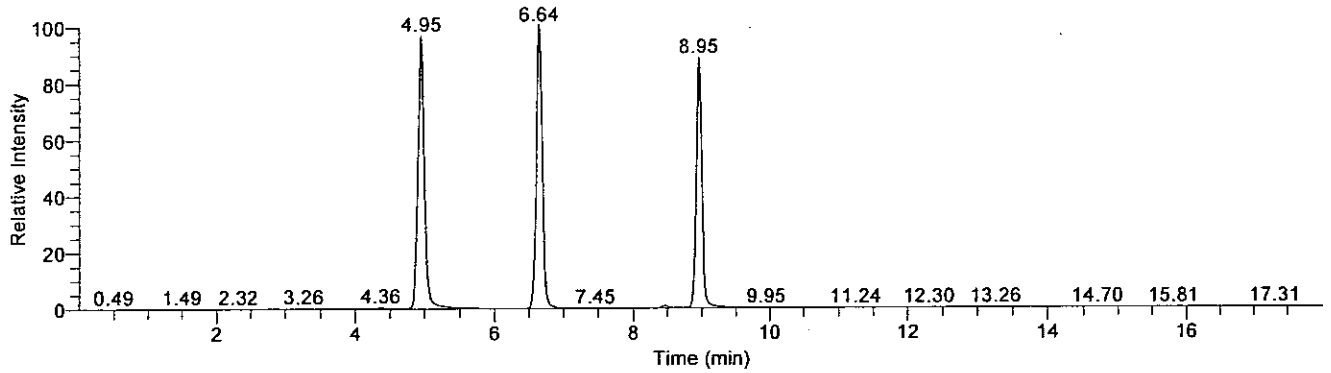
OLN28 8153

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-11.raw
Sample ID:	Cal8
Sample Type:	Standard
Level:	8
Acquisition Date:	Thursday, September 10, 2009 9:45:56 PM
Vial:	E:15
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-11 - TIC RT: 0.00 - 17.99 NL: 6.55E5

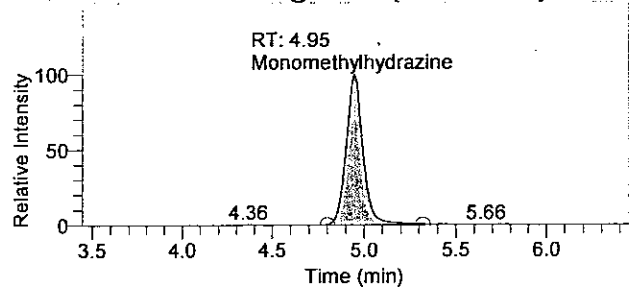


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:15, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-11, Comments: , ID: Cal8

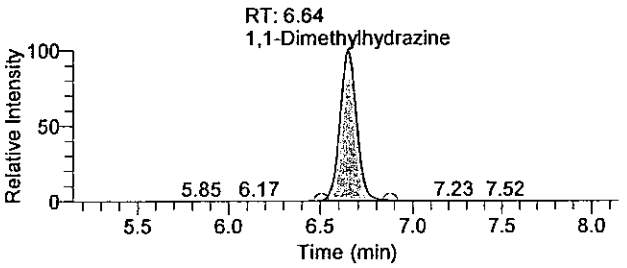
Monomethylhydrazine

10Sep2009-11 - TIC RT: 3.45 - 6.45 NL: 6.34E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



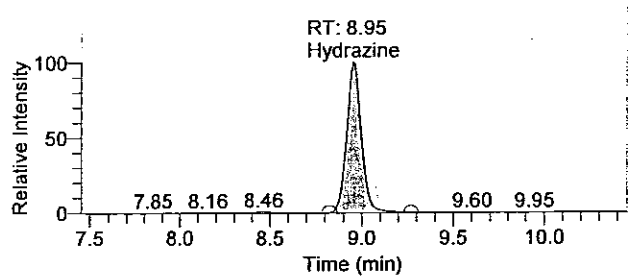
1,1-Dimethylhydrazine

10Sep2009-11 - TIC RT: 5.14 - 8.14 NL: 6.55E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-11 - TIC RT: 7.45 - 10.45 NL: 5.79E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN20 8154

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	3277070	25.117	ng/mL
Cal8	Method Settings	1,1-Dimethylhydrazine	6.64	4028402	126.103	ng/mL
Cal8	Method Settings	Monomethylhydrazine	4.95	4034344	126.225	ng/mL

Analyst : JW 1543 9/11/2009
9/11/09

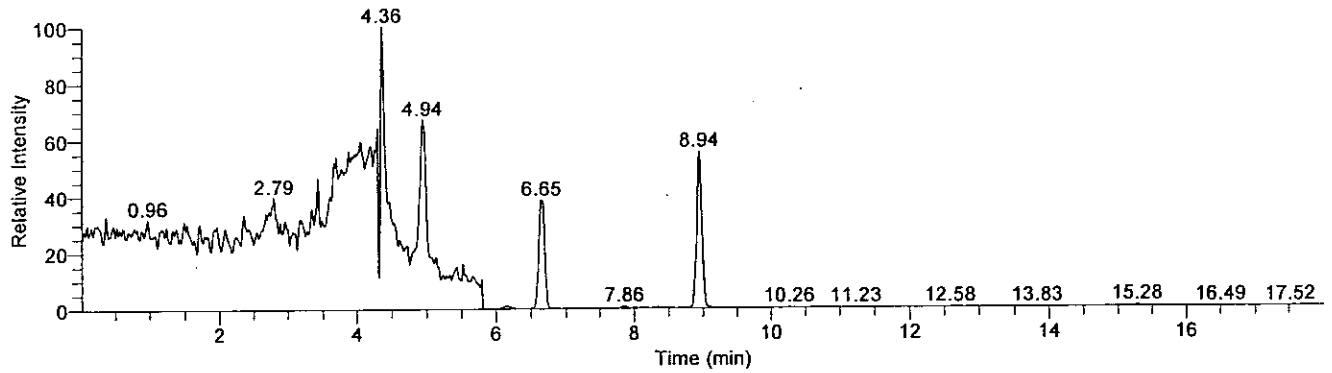
OLN28 8155

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-3.raw
Sample ID:	MDL
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 10, 2009 7:15:59 PM
Vial:	E:7
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-3 - TIC RT: 0.00 - 18.00 NL: 3.01E3

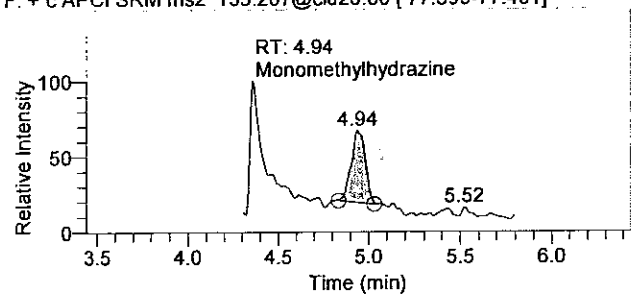


Compound Graphics

Date: 10-Sep-2009, Instrument: Quantum, Vial: E:7, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-3, Comments: , ID: MDL

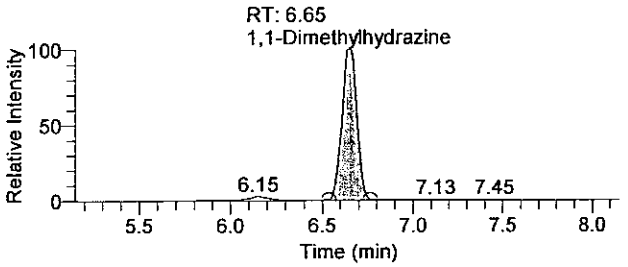
Monomethylhydrazine

10Sep2009-3 - TIC RT: 3.44 - 6.44 NL: 3.01E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



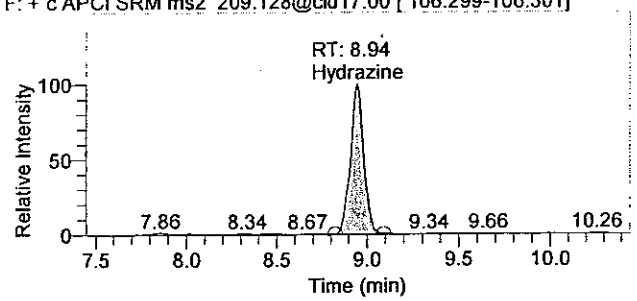
1,1-Dimethylhydrazine

10Sep2009-3 - TIC RT: 5.15 - 8.15 NL: 1.16E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-3 - TIC RT: 7.44 - 10.44 NL: 1.68E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8156

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
MDL	Method Settings	Hydrazine	8.94	8471	0.063	ng/mL
MDL	Method Settings	1,1-Dimethylhydrazine	6.65	6640	0.344	ng/mL
MDL	Method Settings	Monomethylhydrazine	4.94	7880	0.406	ng/mL

Analyst: JW 1543 9/11/2009

OLN28 8157

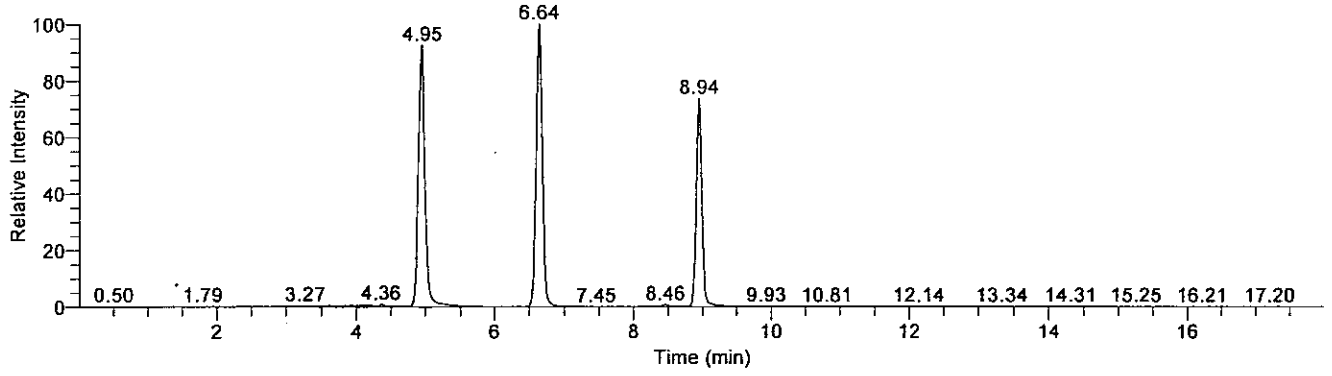
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-23.raw
Sample ID:	ICV
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 1:30:44 AM
Vial:	E:23
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-23 - TIC RT: 0.00 - 17.99 NL: 3.83E5

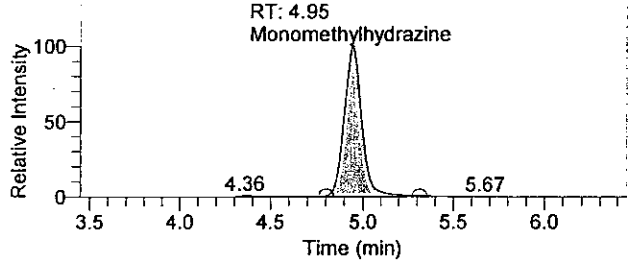


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:23, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-23, Comments: , ID: ICV

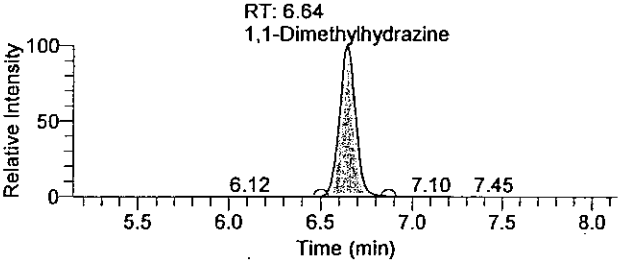
Monomethylhydrazine

10Sep2009-23 - TIC RT: 3.45 - 6.45 NL: 3.54E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



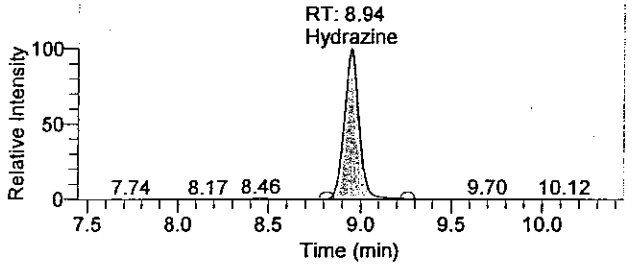
1,1-Dimethylhydrazine

10Sep2009-23 - TIC RT: 5.14 - 8.14 NL: 3.83E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-23 - TIC RT: 7.44 - 10.44 NL: 2.81E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8158

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	1584757	12.145	ng/mL
ICV	Method Settings	1,1-Dimethylhydrazine	6.64	2343538	73.418	ng/mL
ICV	Method Settings	Monomethylhydrazine	4.95	2340916	73.309	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

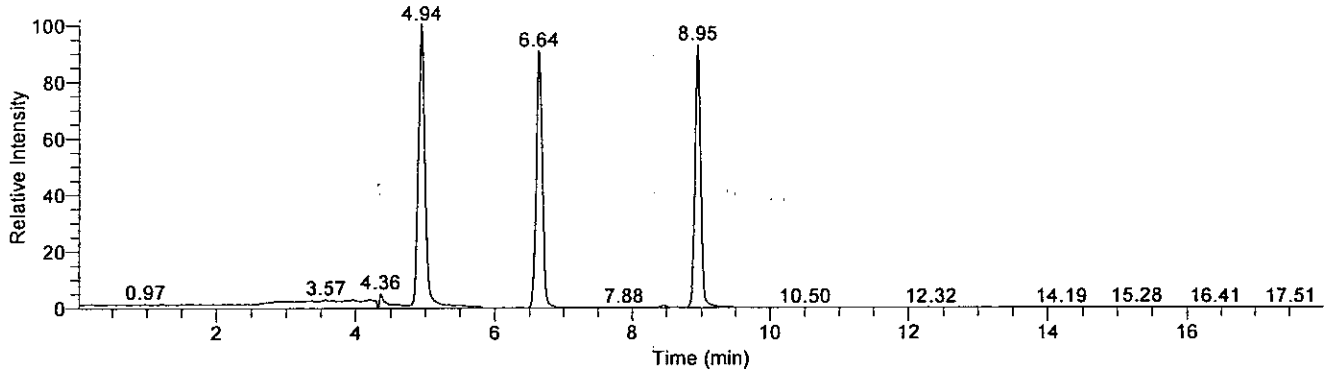
01N28 8159

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-33.raw
Sample ID:	Cal5asQC3a
Sample Type:	QC
Level:	CCV3
Acquisition Date:	Friday, September 11, 2009 4:38:10 AM
Vial:	E:12
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-33 - TIC RT: 0.00 - 17.99 NL: 6.59E4

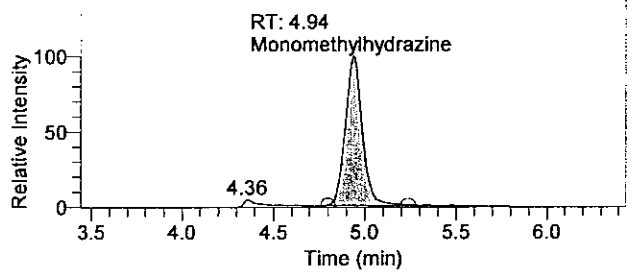


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:12, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-33, Comments: , ID: Cal5asQC3a

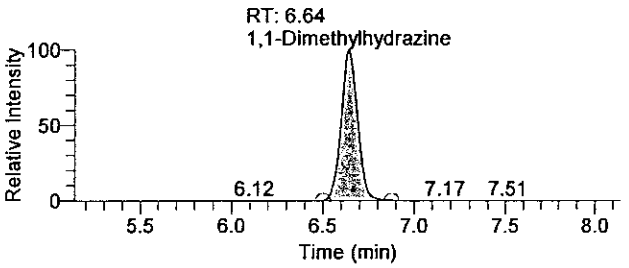
Monomethylhydrazine

10Sep2009-33 - TIC RT: 3.44 - 6.44 NL: 6.59E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



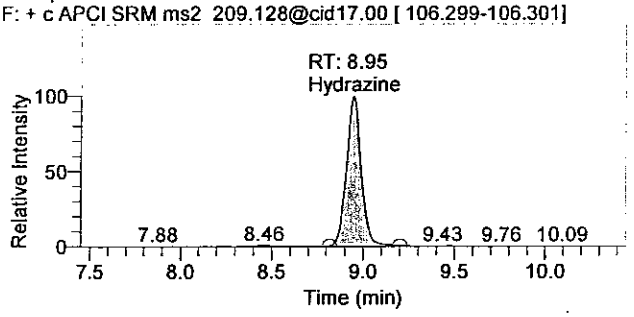
1,1-Dimethylhydrazine

10Sep2009-33 - TIC RT: 5.14 - 8.14 NL: 5.97E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-33 - TIC RT: 7.45 - 10.45 NL: 6.12E4
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
Cal5asQC3a	Method Settings	Hydrazine	8.95	344666	2.640	ng/mL
Cal5asQC3a	Method Settings	1,1-Dimethylhydrazine	6.64	371248	11.745	ng/mL
Cal5asQC3a	Method Settings	Monomethylhydrazine	4.94	421613	13.334	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

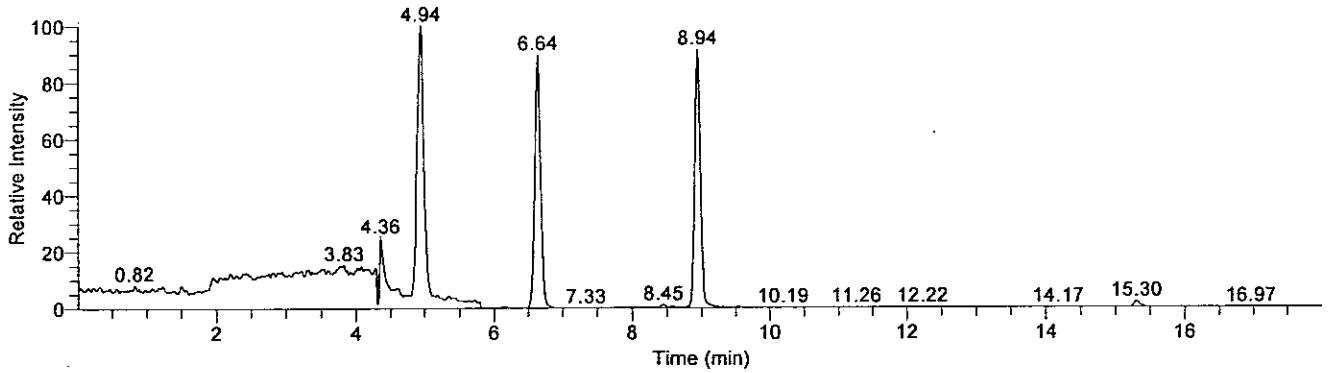
OLM2B-B161

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-43.raw
Sample ID:	Cal3asQC1b
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Friday, September 11, 2009 8:04:26 AM
Vial:	E:10
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-43 - TIC RT: 0.01 - 17.99 NL: 1.29E4

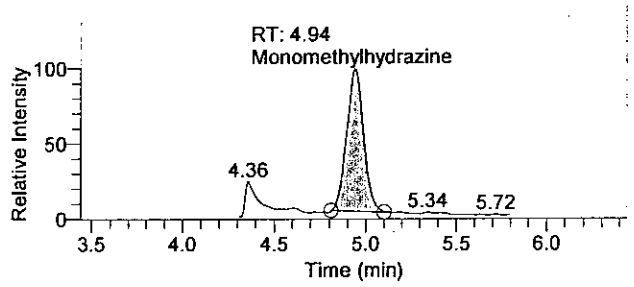


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:10, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-43, Comments: , ID: Cal3asQC1b

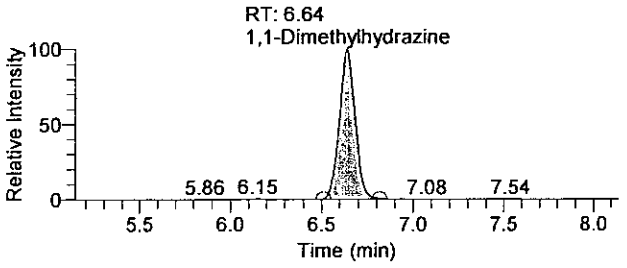
Monomethylhydrazine

10Sep2009-43 - TIC RT: 3.44 - 6.44 NL: 1.29E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



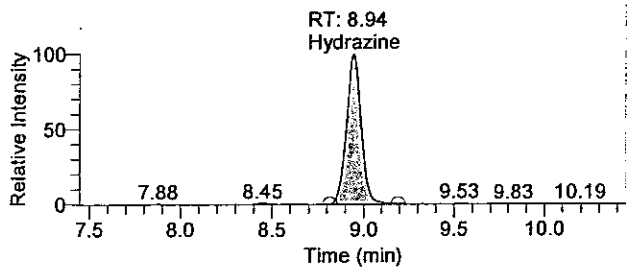
1,1-Dimethylhydrazine

10Sep2009-43 - TIC RT: 5.14 - 8.14 NL: 1.16E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-43 - TIC RT: 7.44 - 10.44 NL: 1.18E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantitation Results

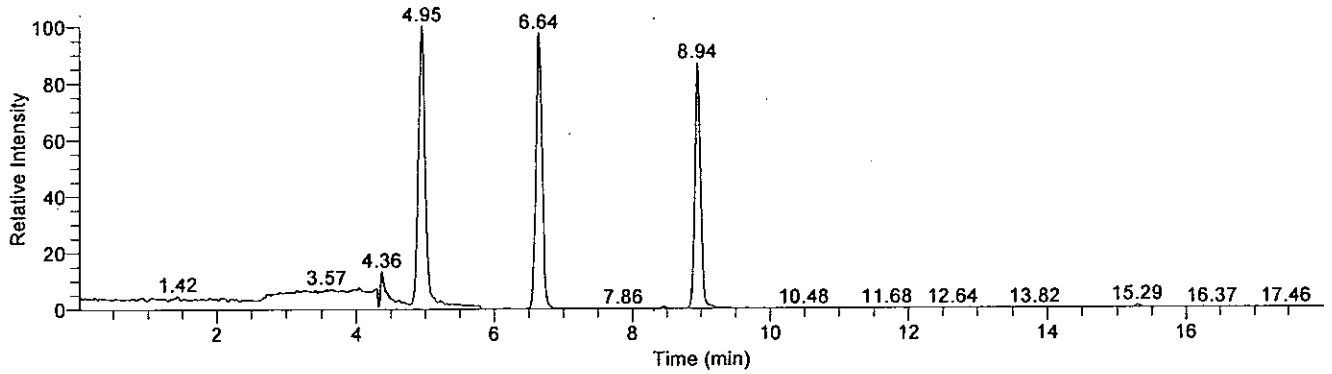
Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1b	Method Settings	Hydrazine	8.94	66329	0.507	ng/mL
Cal3asQC1b	Method Settings	1,1-Dimethylhydrazine	6.64	68122	2.266	ng/mL
Cal3asQC1b	Method Settings	Monomethylhydrazine	4.94	78414	2.610	ng/mL

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	10Sep2009-50.raw
Sample ID:	Cal4asQC2b
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Friday, September 11, 2009 9:57:01 AM
Vial:	E:11
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-50 - TIC RT: 0.00 - 18.00 NL: 2.63E4

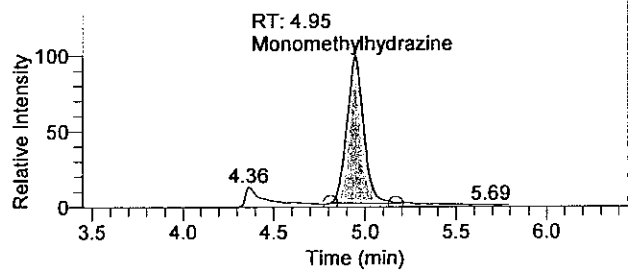


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:11, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-50, Comments: , ID: Cal4asQC2b

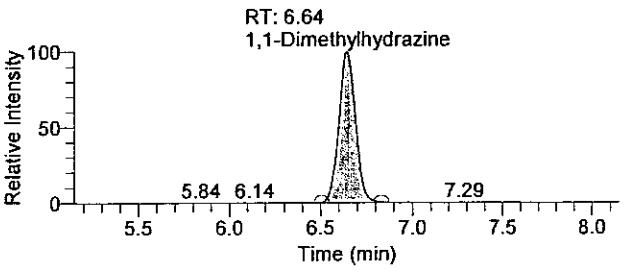
Monomethylhydrazine

10Sep2009-50 - TIC RT: 3.45 - 6.45 NL: 2.63E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



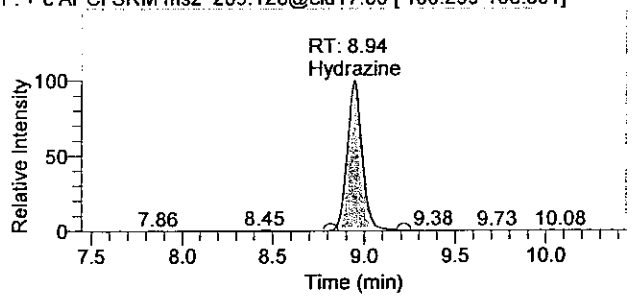
1,1-Dimethylhydrazine

10Sep2009-50 - TIC RT: 5.14 - 8.14 NL: 2.56E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-50 - TIC RT: 7.44 - 10.44 NL: 2.28E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N26 8164

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4asQC2b	Method Settings	Hydrazine	8.94	131140	1.003	ng/mL
Cal4asQC2b	Method Settings	1,1-Dimethylhydrazine	6.64	161117	5.174	ng/mL
Cal4asQC2b	Method Settings	Monomethylhydrazine	4.95	165085	5.318	ng/mL

Analyst : JCV 1543 9/11/2009
9/11/09

OLN28 8165

There is no signature data to report.

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 P/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

OLN29 P169

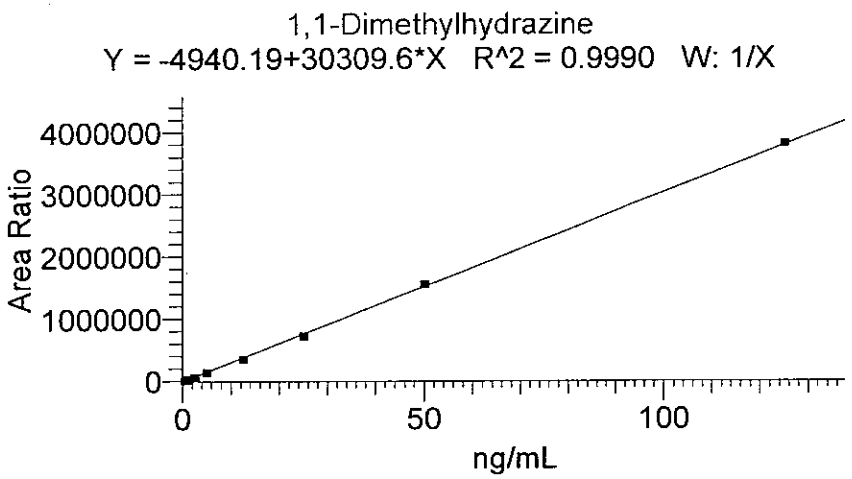
There is no signature data to report.

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] 9/22/09

OLN28 8169

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

OLN28 8170

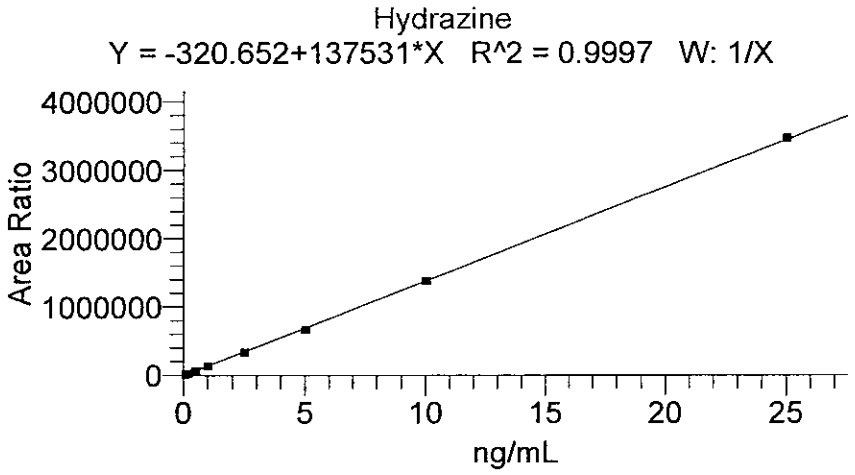
There is no signature data to report.

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 pH 7 Loop
9/22/09

OLN20 8171

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

01N28 8172

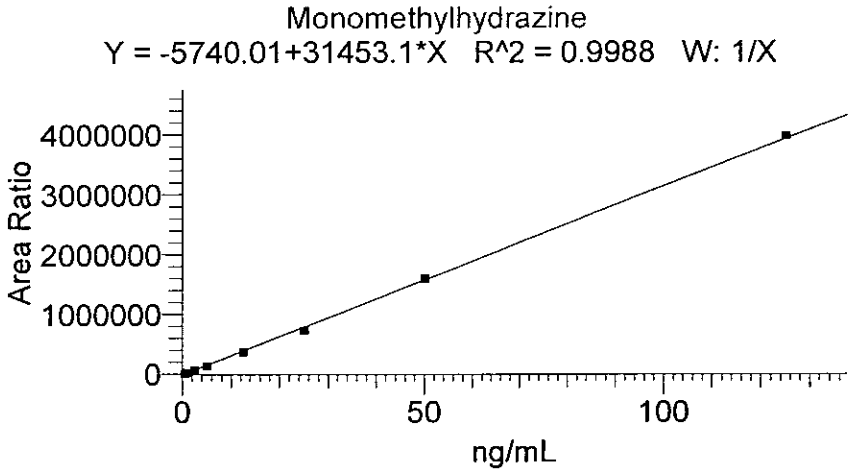
There is no signature data to report.

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 9/17/2009
[illegible] 9/22/09

OLN29 0173

There is no signature data to report.

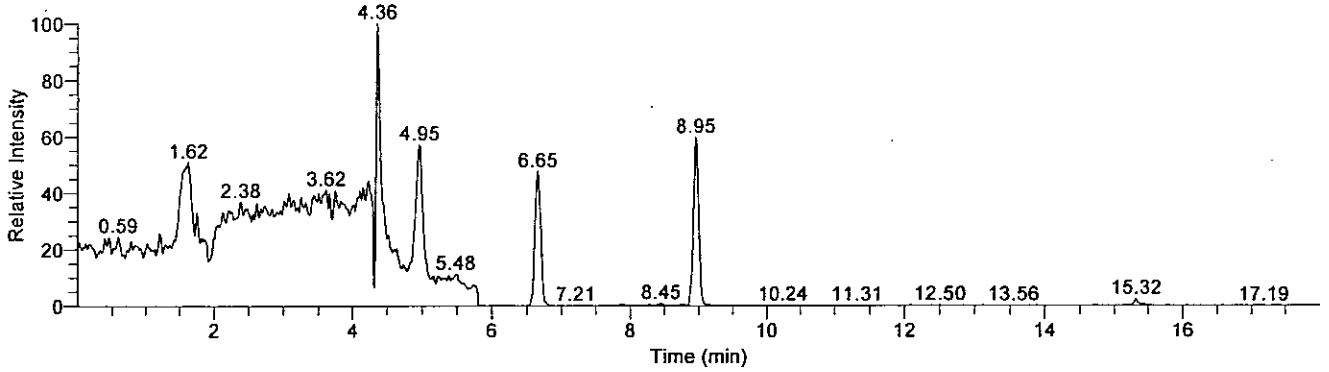
Lancaster Laboratories

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:	16Sep2009-4.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

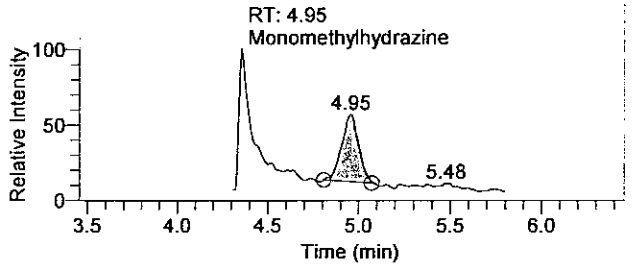


Compound Graphics

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

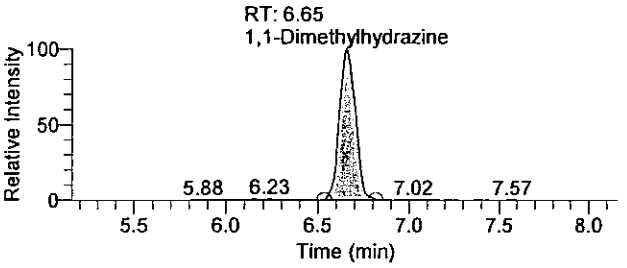
Monomethylhydrazine

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



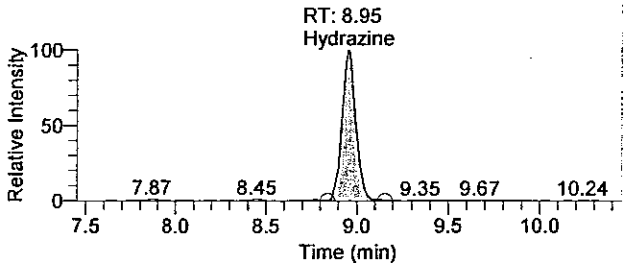
1,1-Dimethylhydrazine

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]



OLN28 8174

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
[illegible] 9/22/09

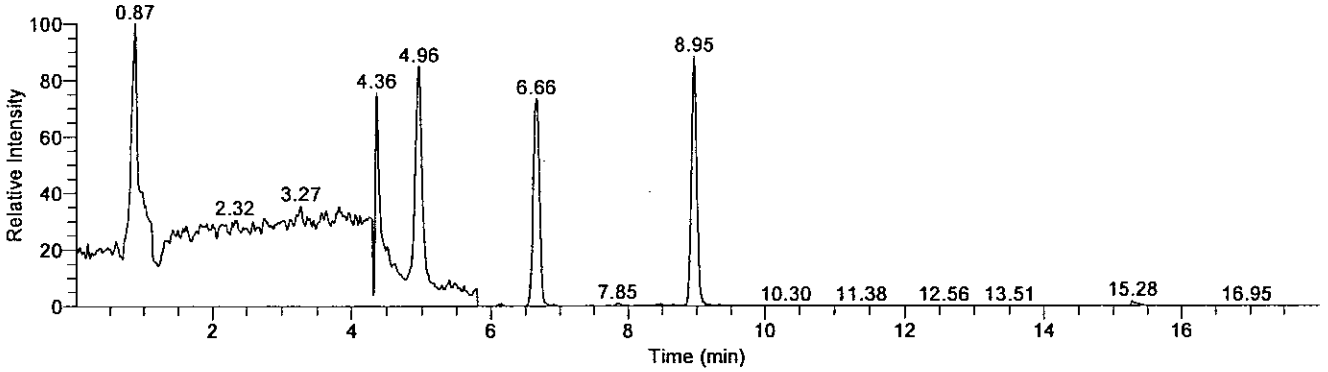
OLN28 8175

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

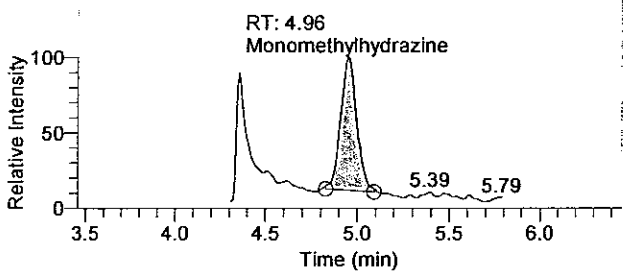


Compound Graphics

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

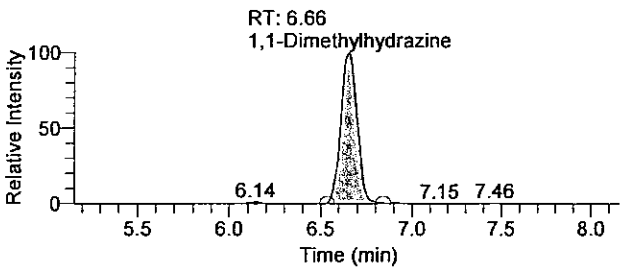
Monomethylhydrazine

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



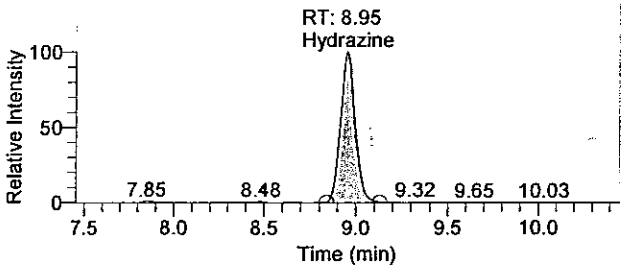
1,1-Dimethylhydrazine

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]



01N28 0176

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
[illegible]/112 9/22/09

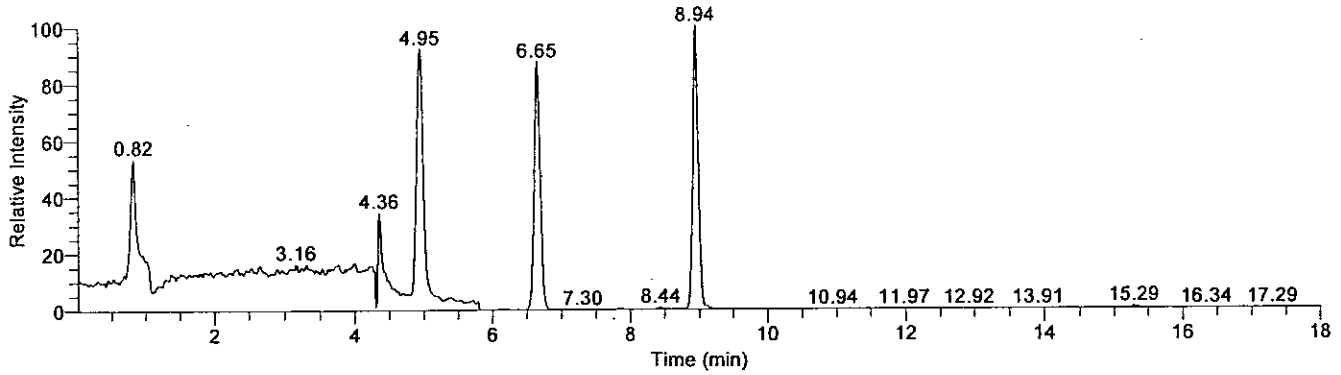
OLN28 0177

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

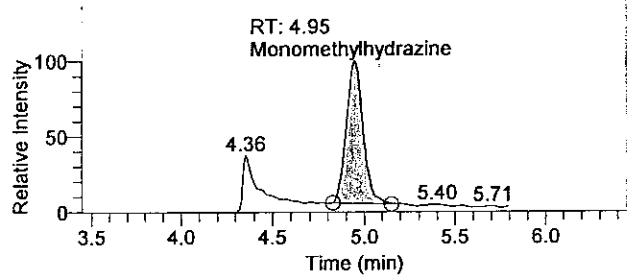


Compound Graphics

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

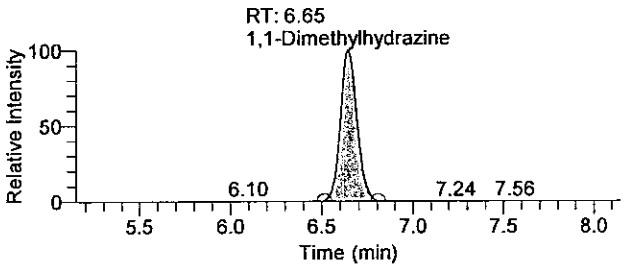
Monomethylhydrazine

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



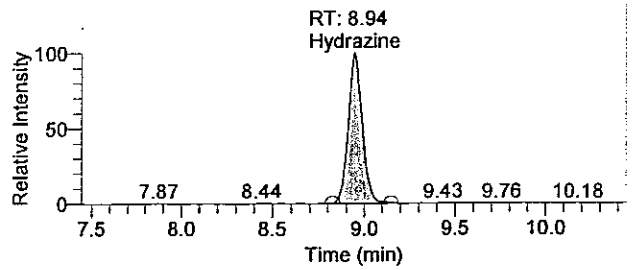
1,1-Dimethylhydrazine

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]



01N26 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	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

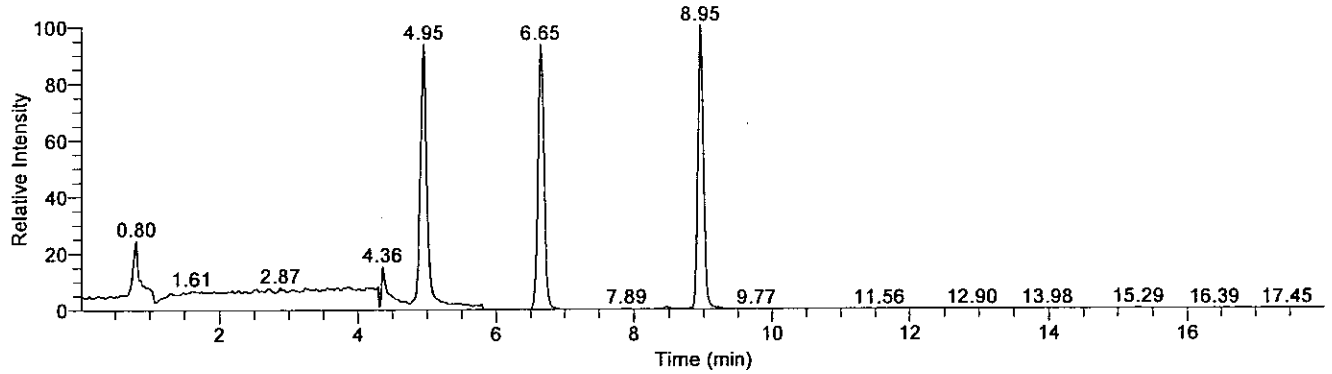
OLH28-8129

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

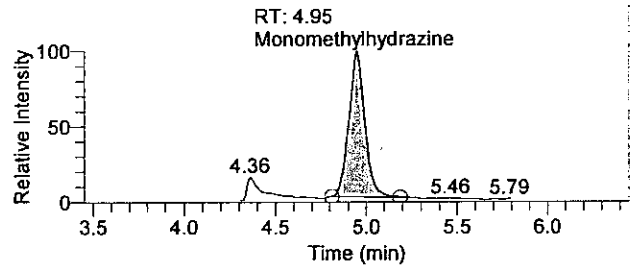


Compound Graphics

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

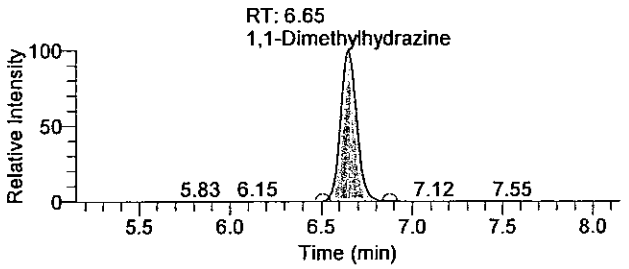
Monomethylhydrazine

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



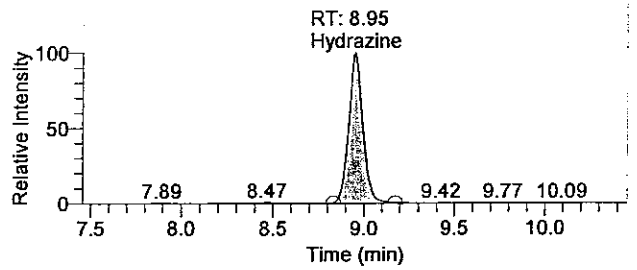
1,1-Dimethylhydrazine

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]



OLN29 0189

There is no signature data to 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

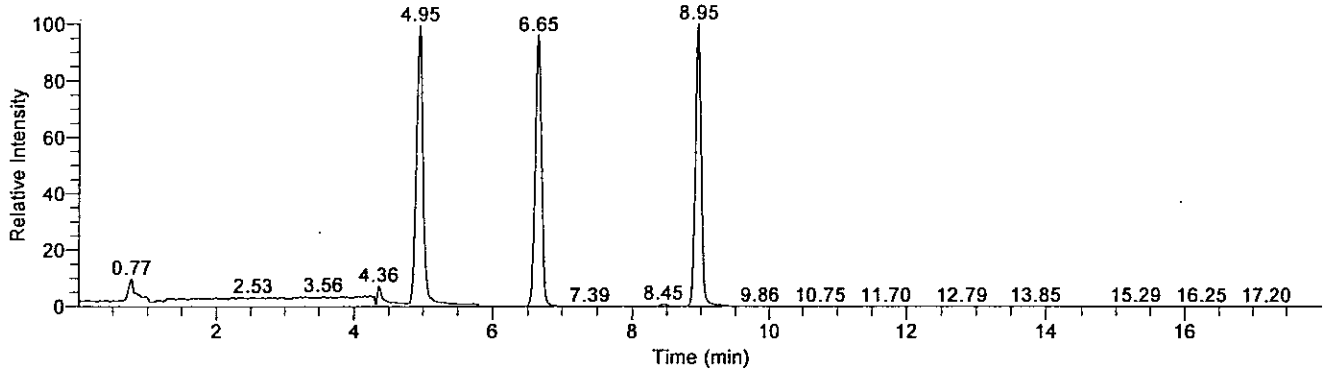
Analyst: JW 1543 9/17/2009
[illegible] 9/22/09

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.	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

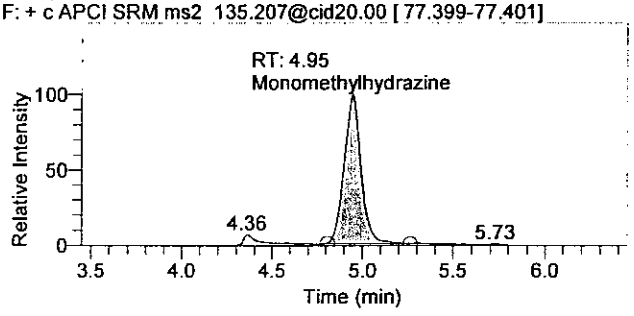


Compound Graphics

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

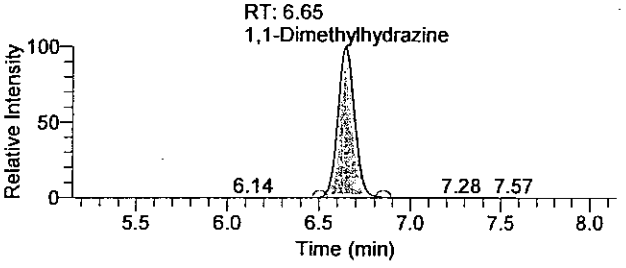
Monomethylhydrazine

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



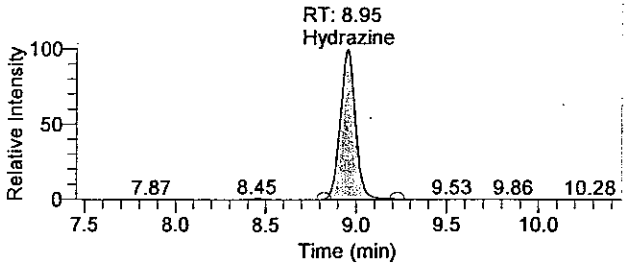
1,1-Dimethylhydrazine

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]



OLN28 6182

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	8.95	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

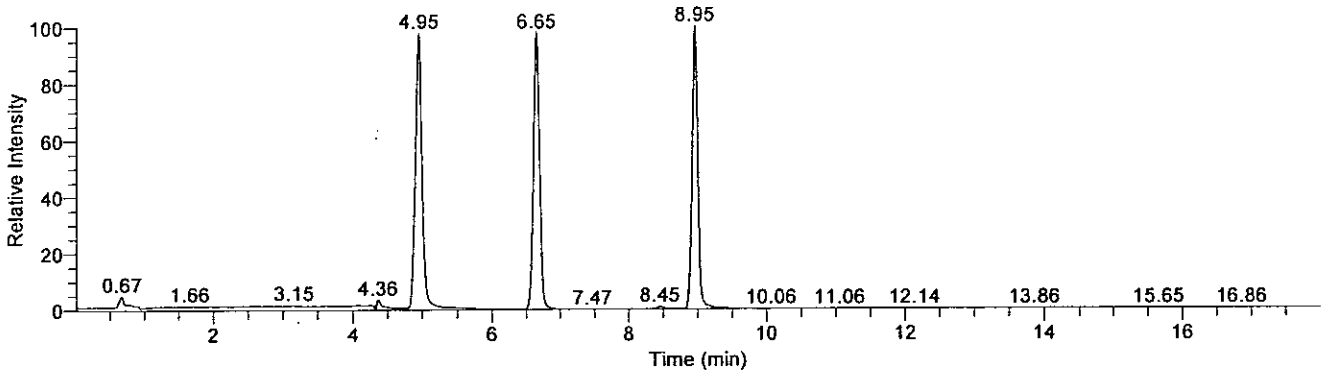
OLNZB 0103

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

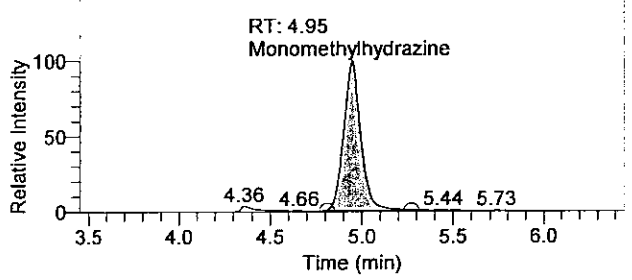


Compound Graphics

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

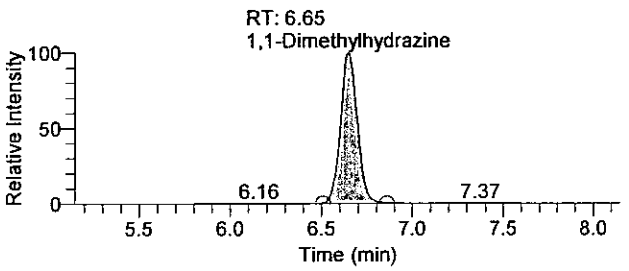
Monomethylhydrazine

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



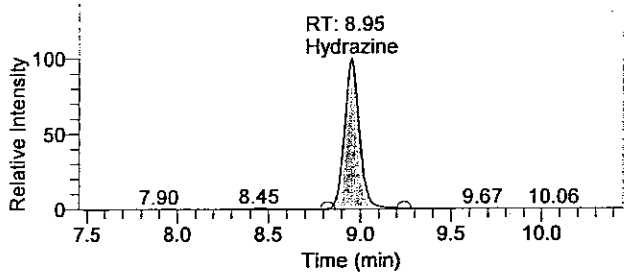
1,1-Dimethylhydrazine

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]



OLW28 9184

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
[illegible] 9/22/09

OLN20 8165

There is no signature data to report.

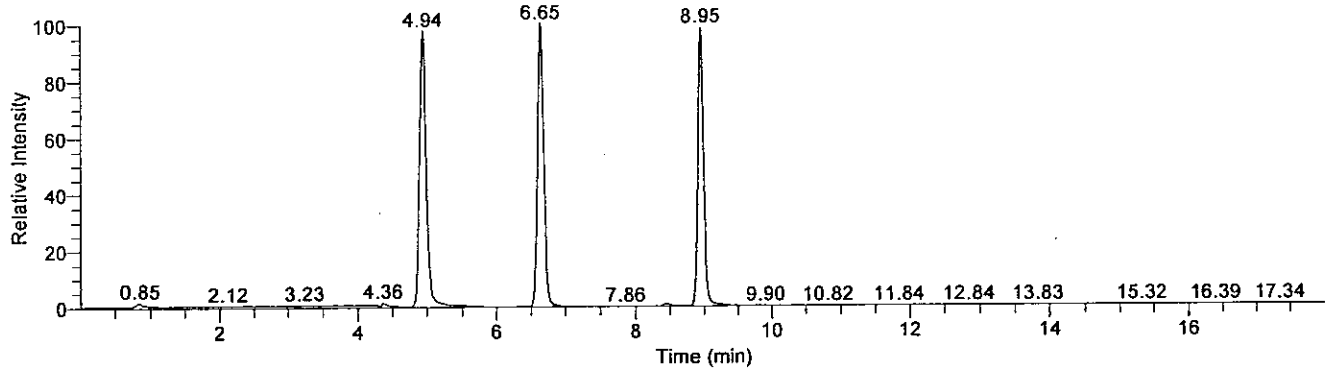
Lancaster Laboratories

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:	16Sep2009-10.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

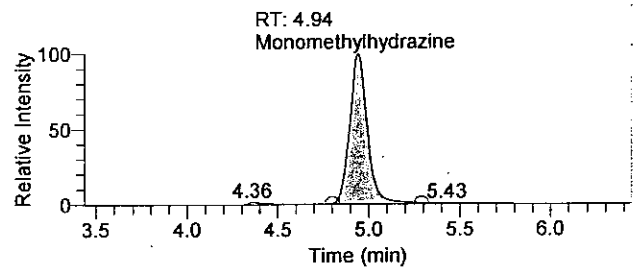


Compound Graphics

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

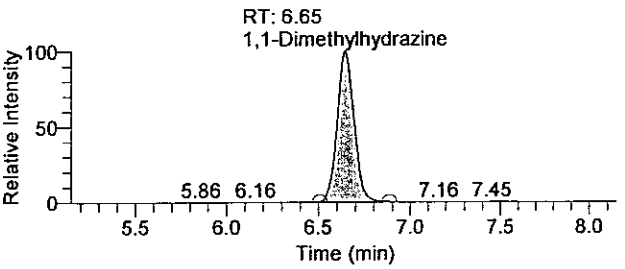
Monomethylhydrazine

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



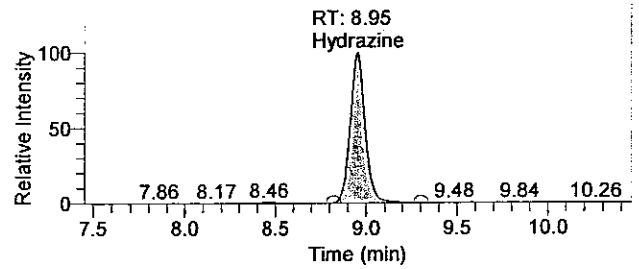
1,1-Dimethylhydrazine

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]



There is no signature data to 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

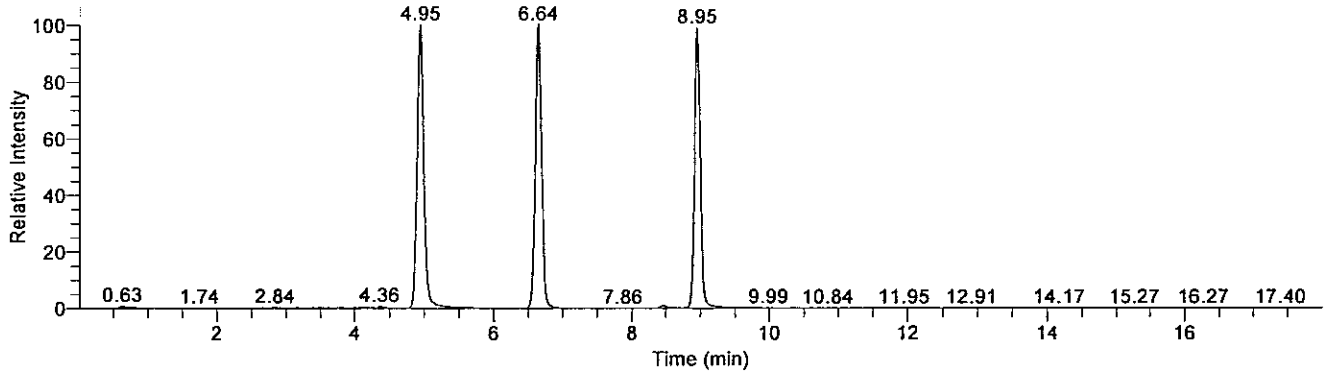
OLN28 8187

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

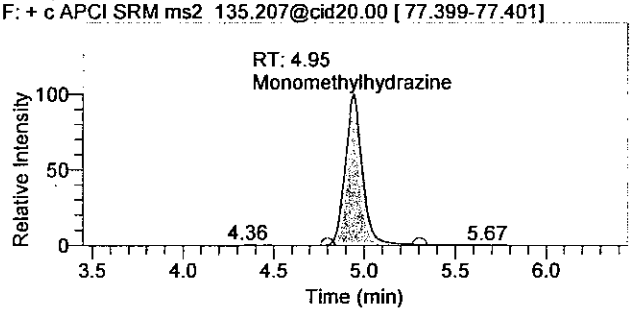


Compound Graphics

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

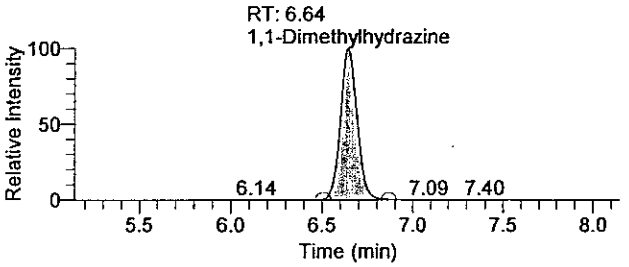
Monomethylhydrazine

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



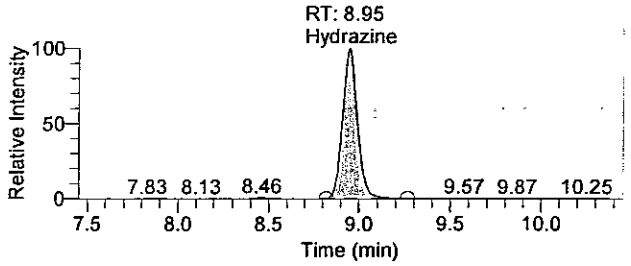
1,1-Dimethylhydrazine

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]



OLN20 8188

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	8.95	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
[illegible] 9/22/09

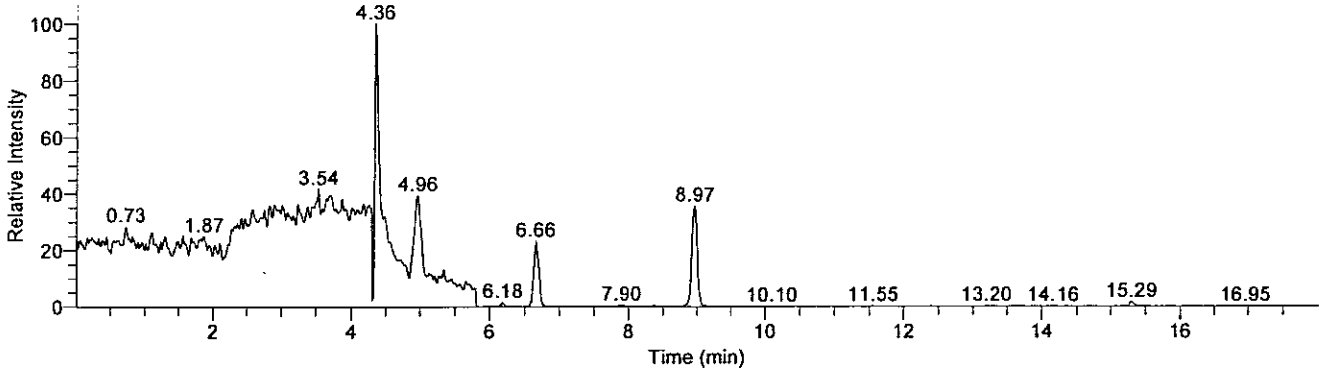
OLN28 8189

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

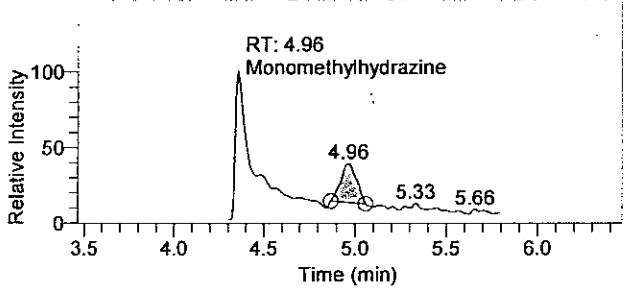


Compound Graphics

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

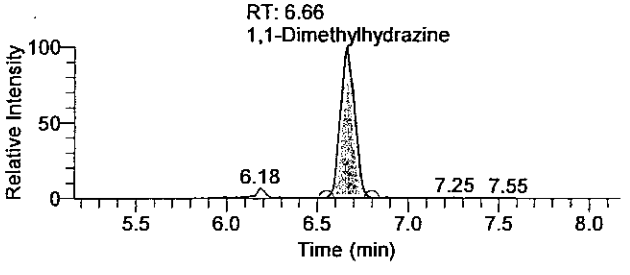
Monomethylhydrazine

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



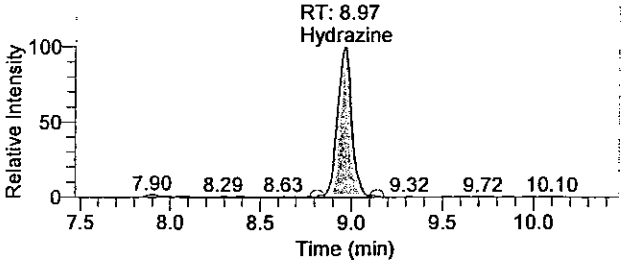
1,1-Dimethylhydrazine

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]



OLN20 8198

There is no signature data to 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

OLN28 8191

There is no signature data to report.

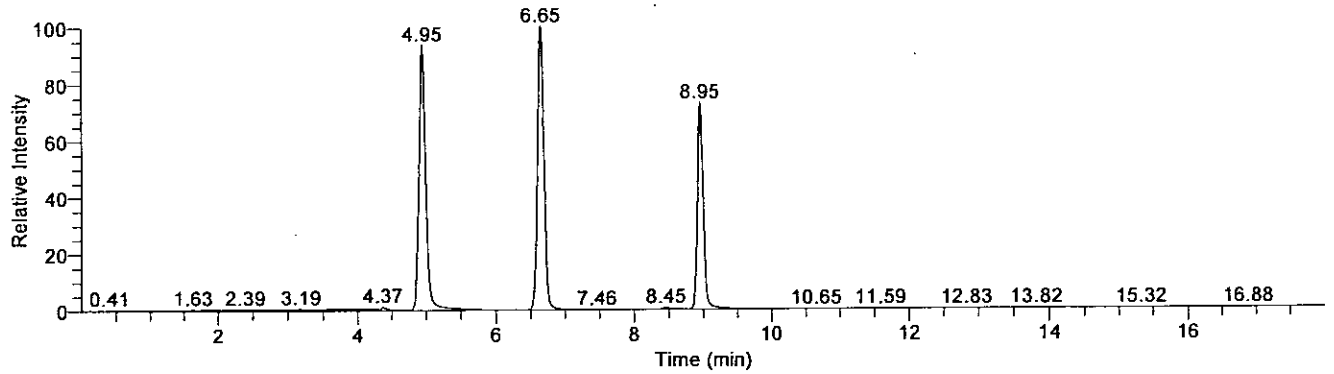
Lancaster Laboratories

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:	16Sep2009-23.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

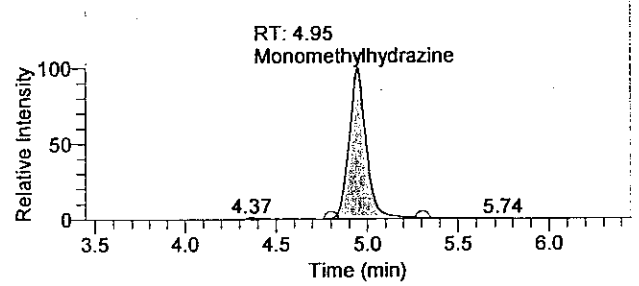


Compound Graphics

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

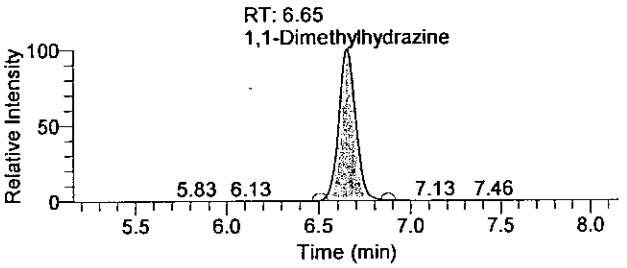
Monomethylhydrazine

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



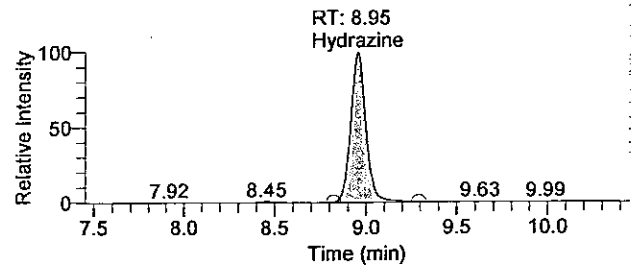
1,1-Dimethylhydrazine

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]



OLN20 9192

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

OLN28 8193

There is no signature data to report.

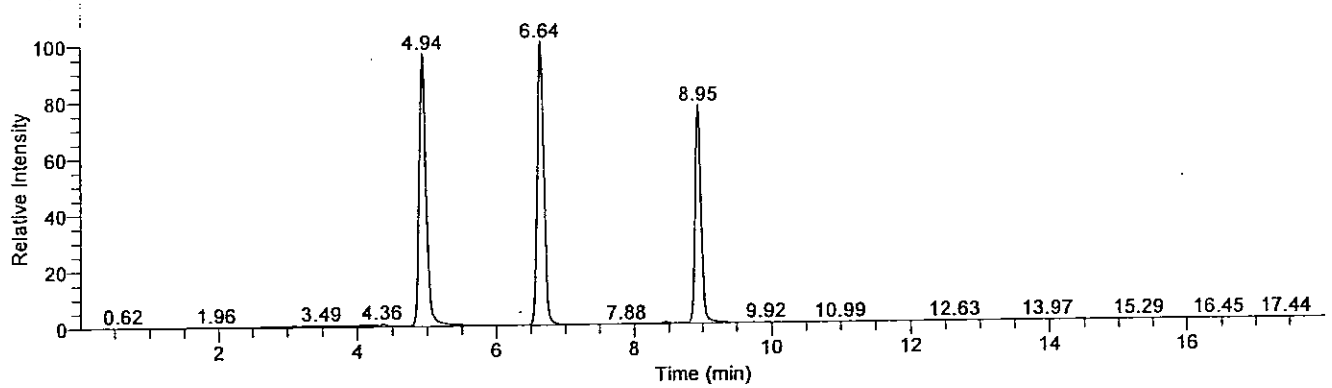
Lancaster Laboratories

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.	0925810610826
Data File:	16Sep2009-42.raw
Sample ID:	ICV/LCS2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 2:57:08 AM
Vial:	D:30
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-42 - TIC RT: 0.00 - 17.99 NL: 3.47E5

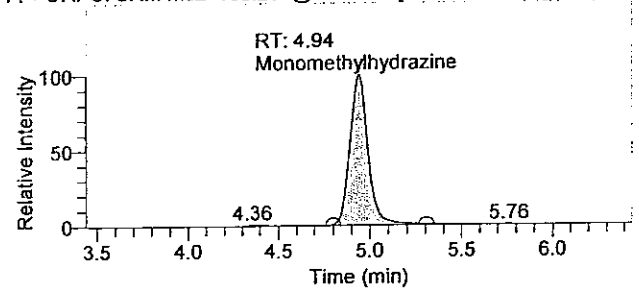


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:30, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-42, Comments: Water Prep, ID: ICV/LCS2

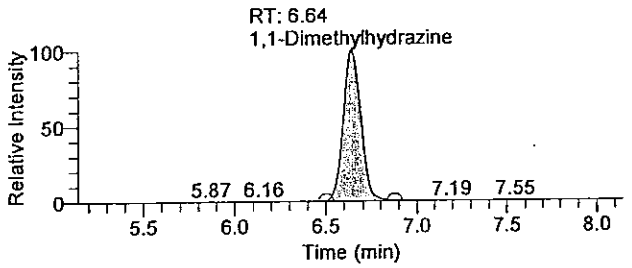
Monomethylhydrazine

16Sep2009-42 - TIC RT: 3.44 - 6.44 NL: 3.34E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



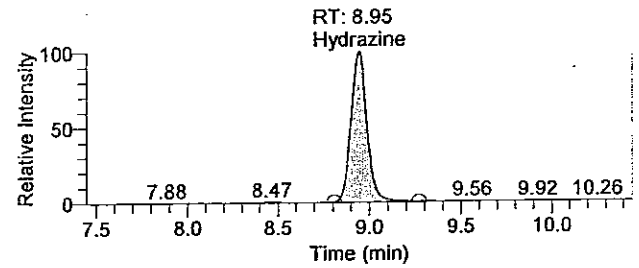
1,1-Dimethylhydrazine

16Sep2009-42 - TIC RT: 5.14 - 8.14 NL: 3.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-42 - TIC RT: 7.45 - 10.45 NL: 2.67E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLR28 8194

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	1621246	11.791	ng/mL
ICV/LCS2	Method Settings	1,1-Dimethylhydrazine	6.64	2278888	75.350	ng/mL
ICV/LCS2	Method Settings	Monomethylhydrazine	4.94	2257686	71.962	ng/mL

Analyst: JW 1543 9/17/2009
[illegible]/02 9/22/09

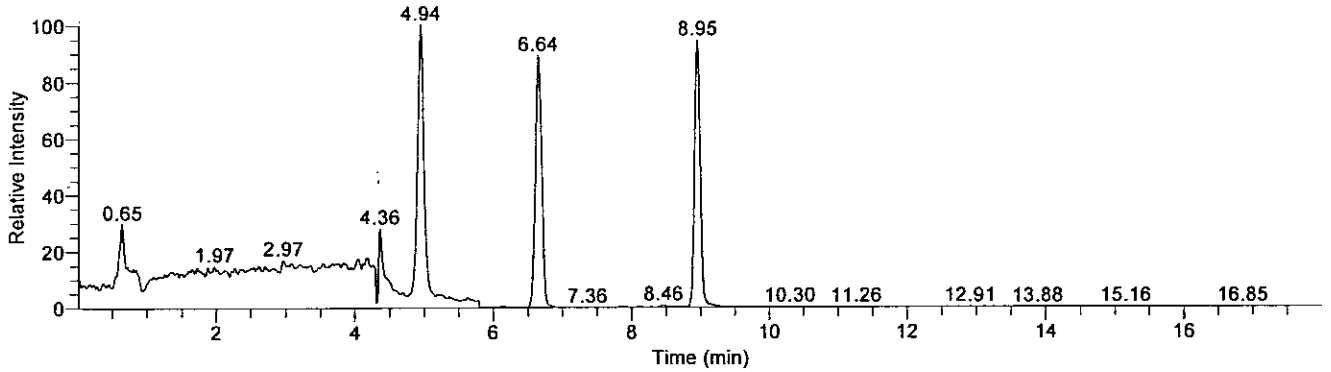
OLN20 0195

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

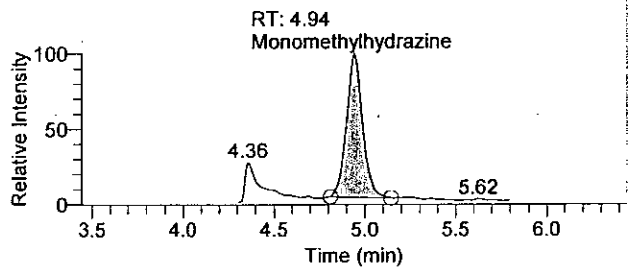


Compound Graphics

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

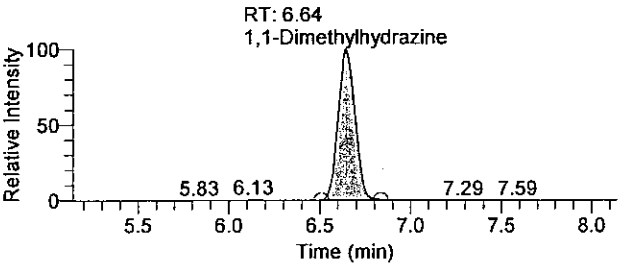
Monomethylhydrazine

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



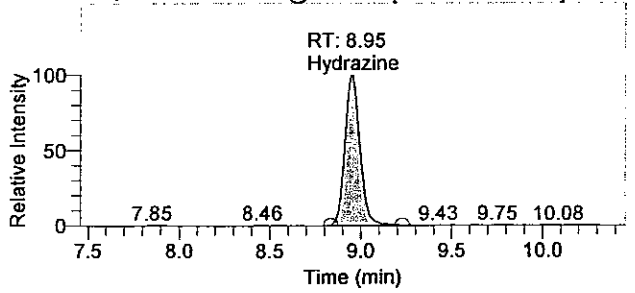
1,1-Dimethylhydrazine

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]



OLN28 8196

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	8.95	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
9/22/09

There is no signature data to report.

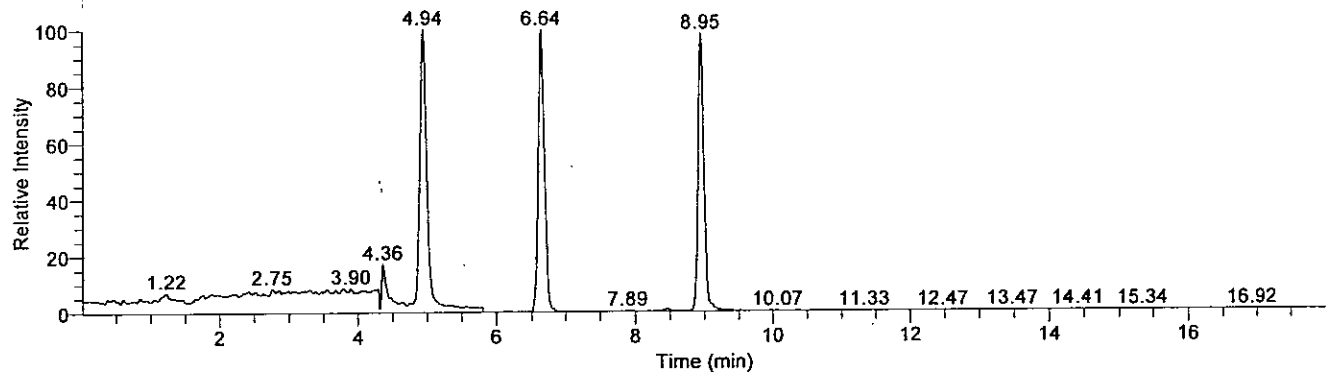
Lancaster Laboratories

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.	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

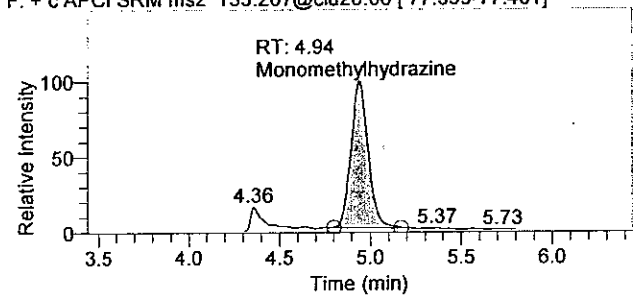


Compound Graphics

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

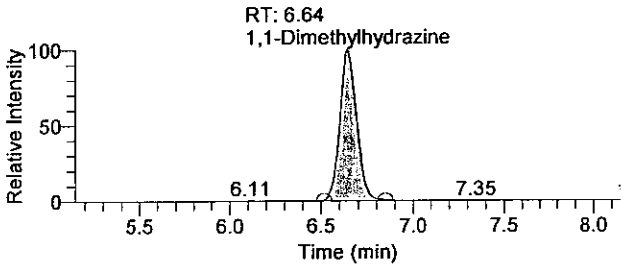
Monomethylhydrazine

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



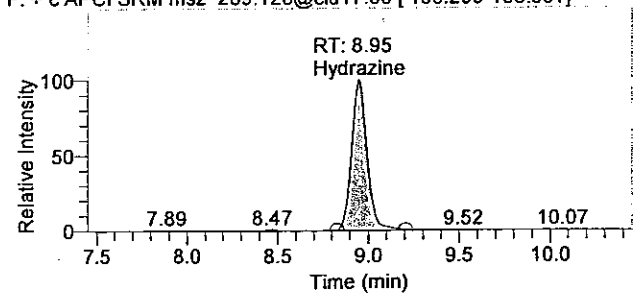
1,1-Dimethylhydrazine

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]



OLN28 8198

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

01N28 8199

There is no signature data to report.

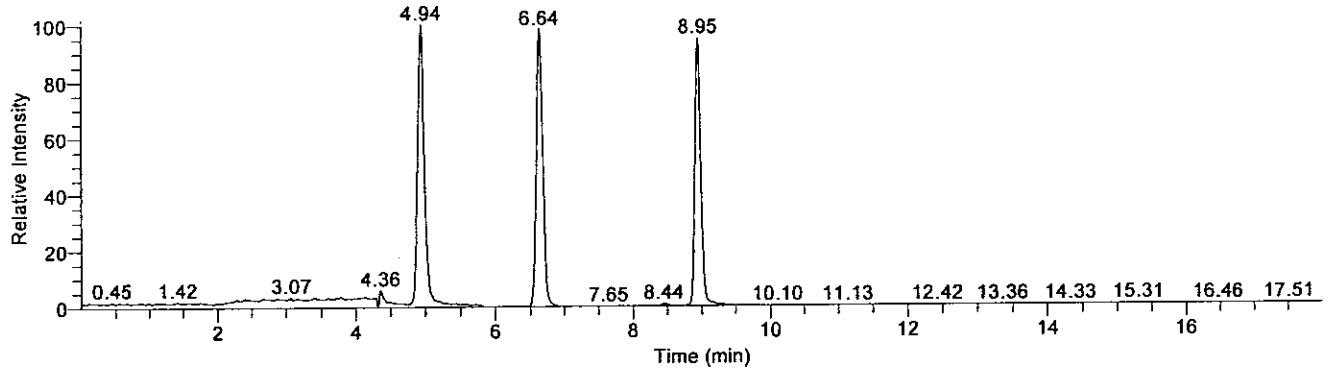
Lancaster Laboratories

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

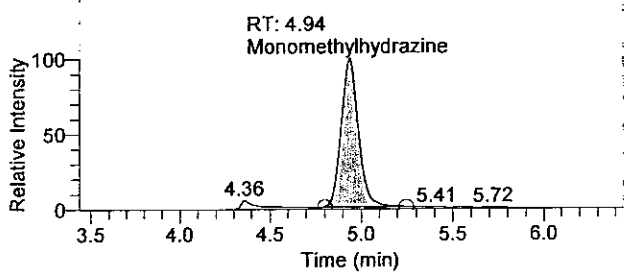


Compound Graphics

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

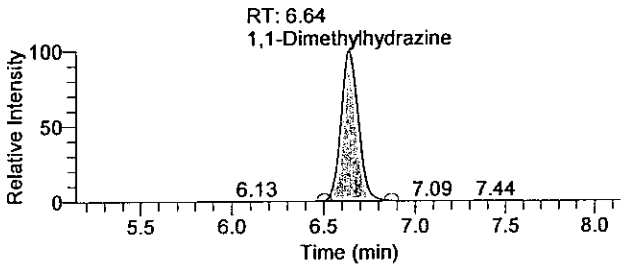
Monomethylhydrazine

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



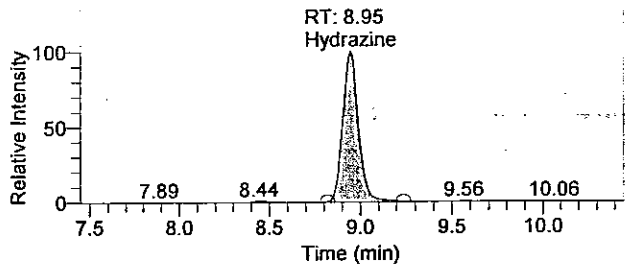
1,1-Dimethylhydrazine

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]



OLN28 ≥280

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 [illegible]
[illegible] 9/22/09

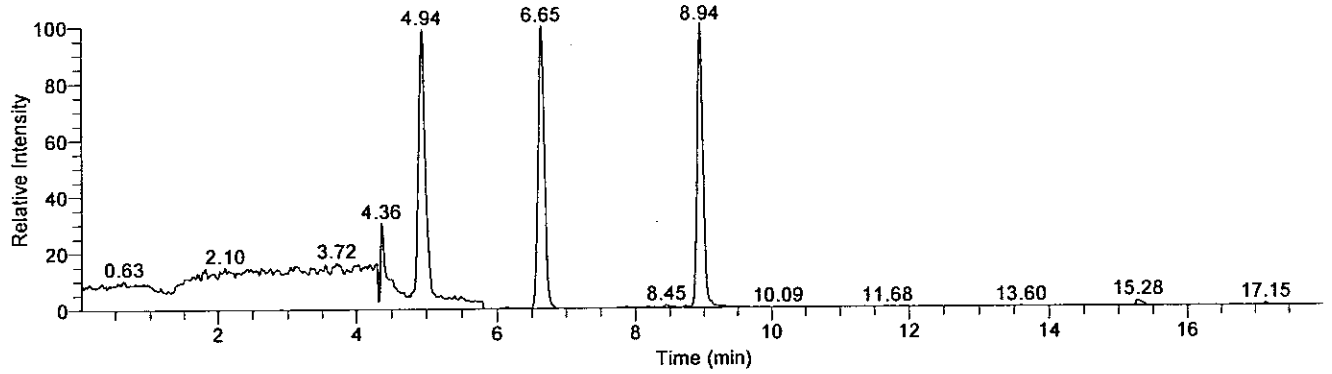
OLN28 6281

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:	16Sep2009-44.raw
Sample ID:	Cal3asQC1b
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Thursday, September 17, 2009 3:34:38 AM
Vial:	D:4
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-44 - TIC RT: 0.00 - 17.99 NL: 1.20E4

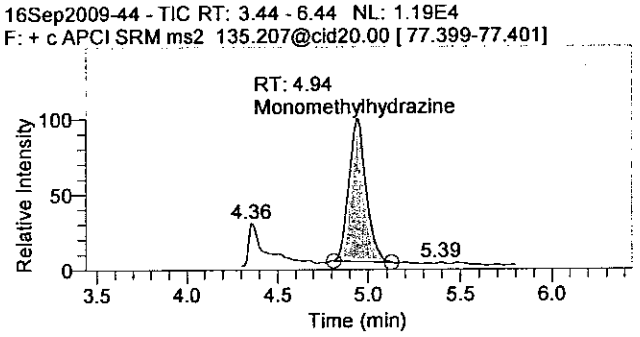


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:4, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-44, Comments: , ID: Cal3asQC1b

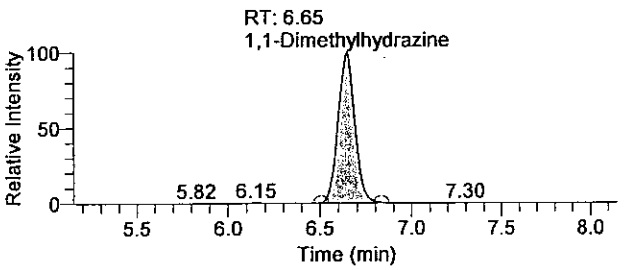
Monomethylhydrazine

16Sep2009-44 - TIC RT: 3.44 - 6.44 NL: 1.19E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



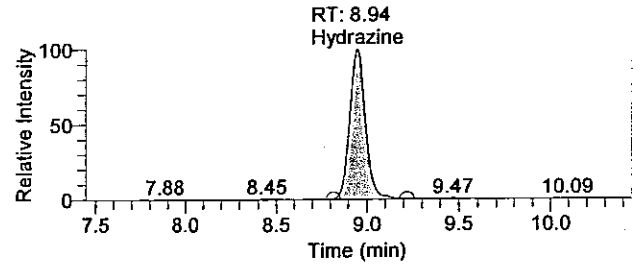
1,1-Dimethylhydrazine

16Sep2009-44 - TIC RT: 5.15 - 8.15 NL: 1.20E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-44 - TIC RT: 7.44 - 10.44 NL: 1.20E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



GLN28 5282

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1b	Method Settings	Hydrazine	8.94	71393	0.521	ng/mL
Cal3asQC1b	Method Settings	1,1-Dimethylhydrazine	6.65	76081	2.673	ng/mL
Cal3asQC1b	Method Settings	Monomethylhydrazine	4.94	73315	2.513	ng/mL

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

OLN28 6283

There is no signature data to report.

Raw QC Data

Lancaster Laboratories

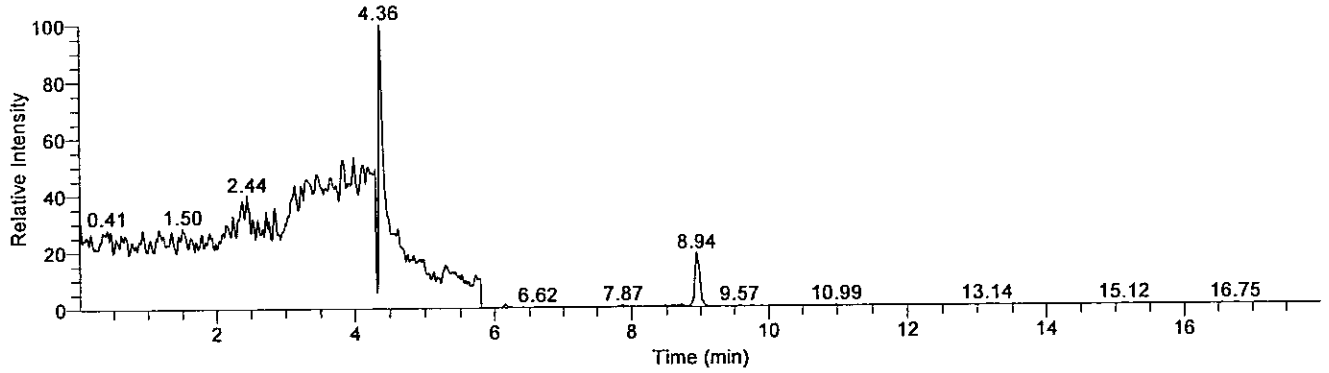
Printed: Wednesday, September 09, 2009, 10:40:33

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-16.raw
Sample ID:	Blank
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 7:00:03 PM
Vial:	D:10
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-16 - TIC RT: 0.00 - 17.99 NL: 3.60E3

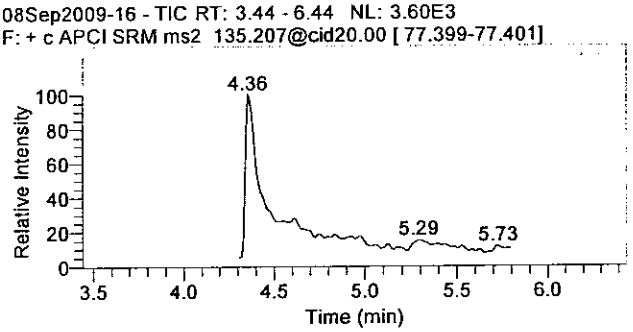


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:10, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-16, Comments: Soil Prep, ID: Blank

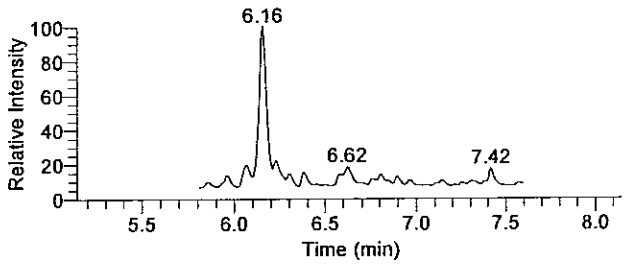
Monomethylhydrazine

08Sep2009-16 - TIC RT: 3.44 - 6.44 NL: 3.60E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



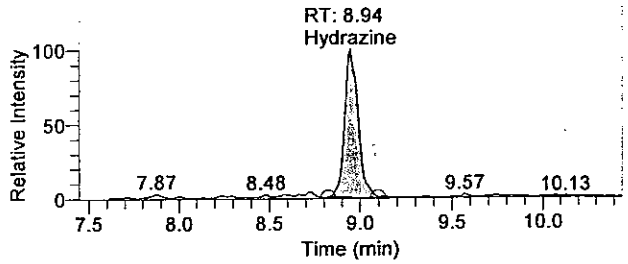
1,1-Dimethylhydrazine

08Sep2009-16 - TIC RT: 5.14 - 8.14 NL: 4.53E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-16 - TIC RT: 7.44 - 10.44 NL: 6.77E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN26 8285

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Blank	Method Settings	Hydrazine	8.94	3487	0.017	ng/mL
Blank	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
Blank	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 9/9/2009
[illegible]/112 9/15/09

OLN20 8286

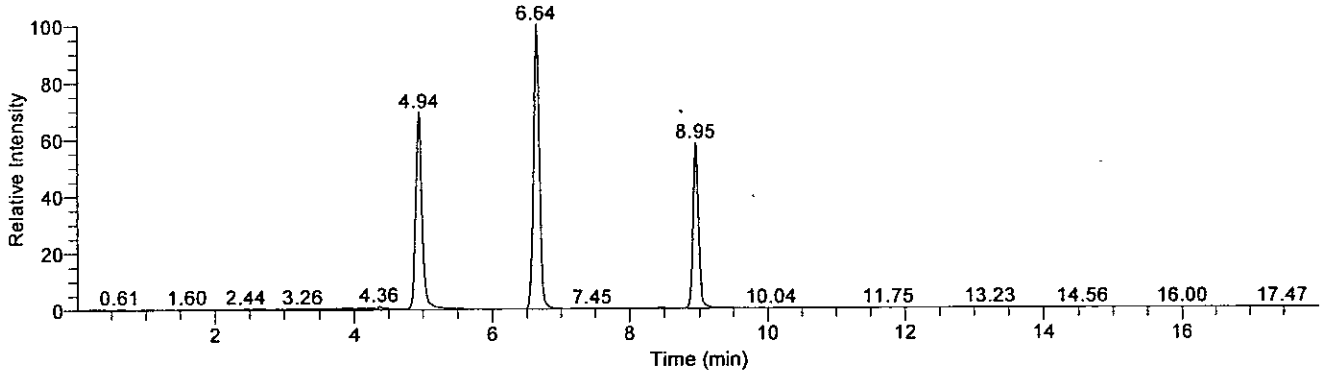
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-19.raw
Sample ID:	5766214MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 7:56:20 PM
Vial:	D:13
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-19 - TIC RT: 0.00 - 17.99 NL: 2.85E5

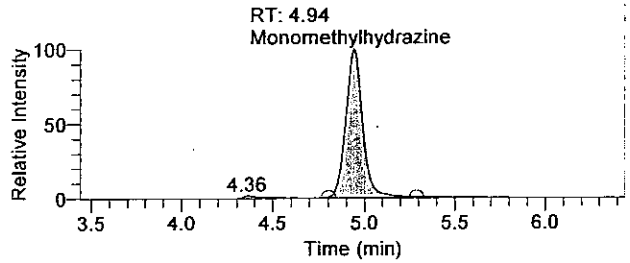


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:13, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-19, Comments: Soil Prep, ID: 5766214MS

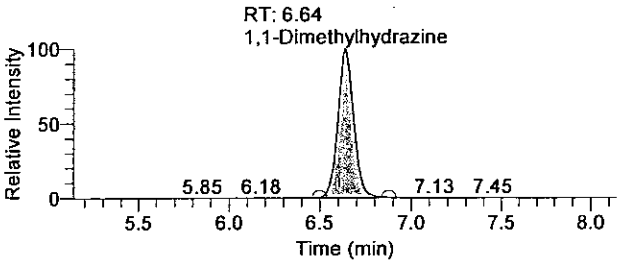
Monomethylhydrazine

08Sep2009-19 - TIC RT: 3.44 - 6.44 NL: 1.97E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



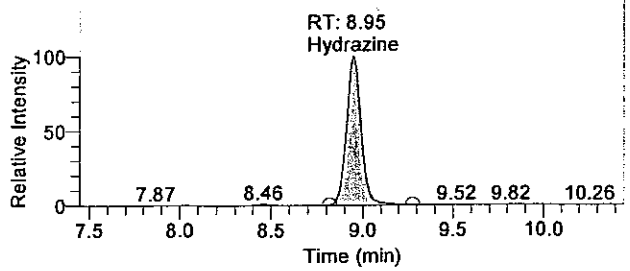
1,1-Dimethylhydrazine

08Sep2009-19 - TIC RT: 5.14 - 8.14 NL: 2.85E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-19 - TIC RT: 7.45 - 10.45 NL: 1.65E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN20 8287

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5766214MS	Method Settings	Hydrazine	8.95	919175	7.152	ng/mL
5766214MS	Method Settings	1,1-Dimethylhydrazine	6.64	1710694	54.958	ng/mL
5766214MS	Method Settings	Monomethylhydrazine	4.94	1251782	39.932	ng/mL

Analyst : JW 1543 9/9/2009
[illegible] 9/10/09

01N28 8288

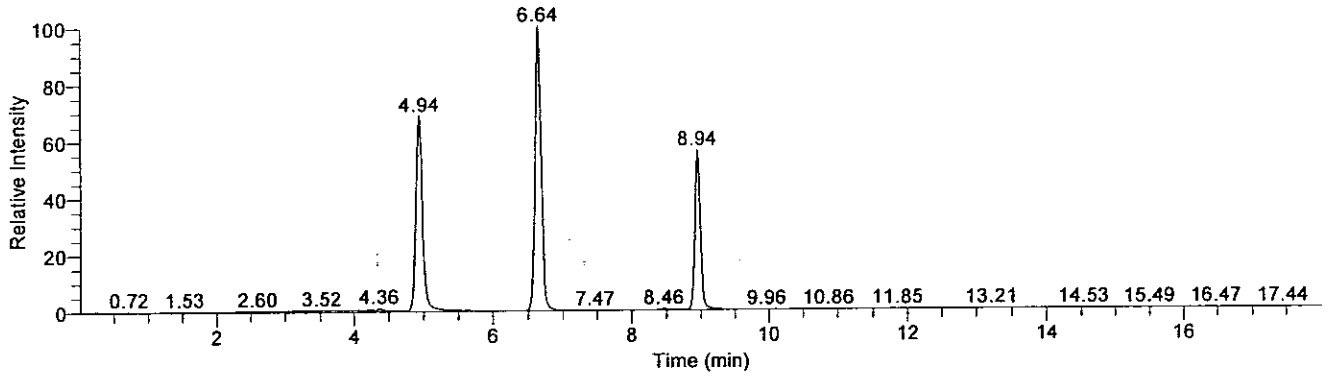
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-20.raw
Sample ID:	5766215MSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 8:15:04 PM
Vial:	D:14
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-20 - TIC RT: 0.01 - 18.00 NL: 2.97E5

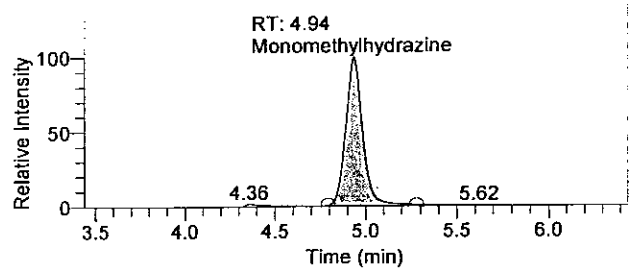


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:14, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-20, Comments: Soil Prep, ID: 5766215MSD

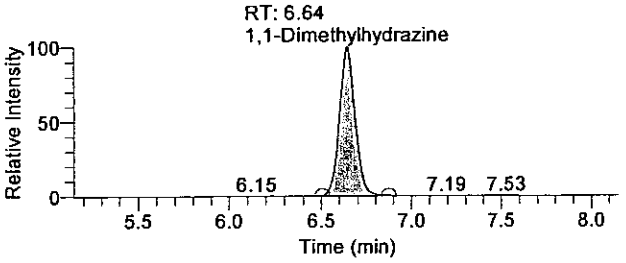
Monomethylhydrazine

08Sep2009-20 - TIC RT: 3.44 - 6.44 NL: 2.04E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



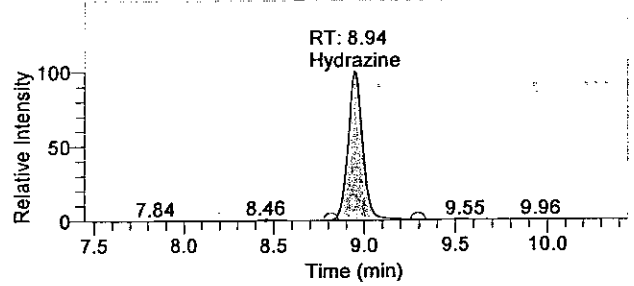
1,1-Dimethylhydrazine

08Sep2009-20 - TIC RT: 5.14 - 8.14 NL: 2.97E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-20 - TIC RT: 7.44 - 10.44 NL: 1.67E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN29 9289

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5766215MSD	Method Settings	Hydrazine	8.94	952637	7.412	ng/mL
5766215MSD	Method Settings	1,1-Dimethylhydrazine	6.64	1784887	57.336	ng/mL
5766215MSD	Method Settings	Monomethylhydrazine	4.94	1320736	42.125	ng/mL

Analyst: JW 1543 9/9/2009

9/12 9/13/09

OLN20 6210

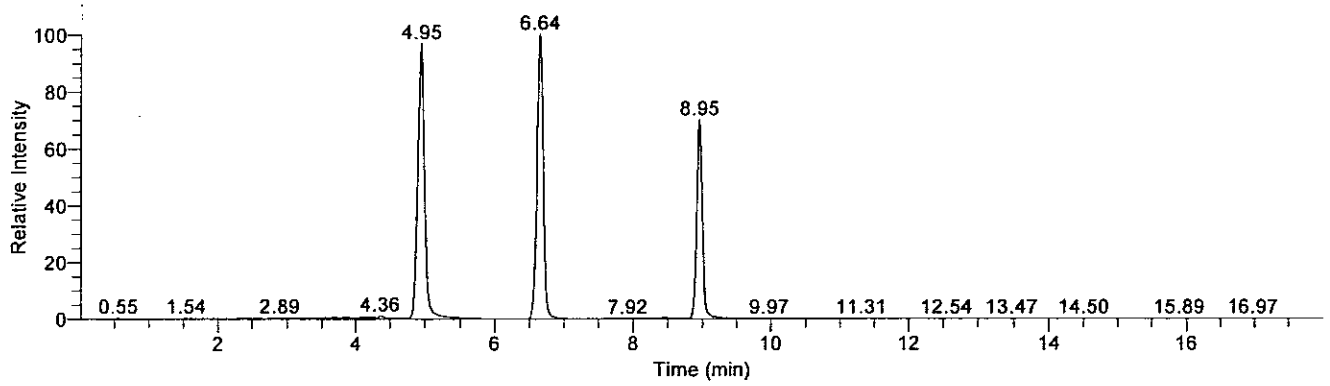
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-21.raw
Sample ID:	LCS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 8:33:48 PM
Vial:	D:15
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-21 - TIC RT: 0.00 - 17.99 NL: 3.25E5

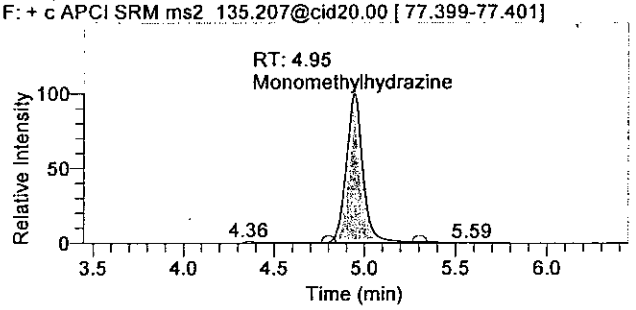


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:15, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-21, Comments: Soil Prep, ID: LCS

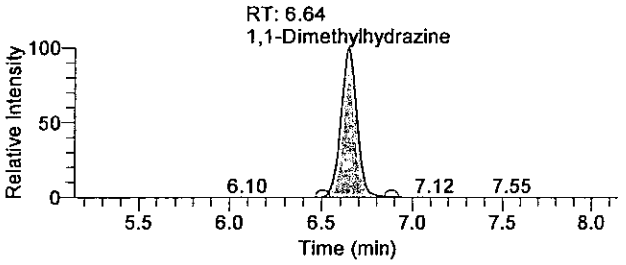
Monomethylhydrazine

08Sep2009-21 - TIC RT: 3.45 - 6.45 NL: 3.14E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



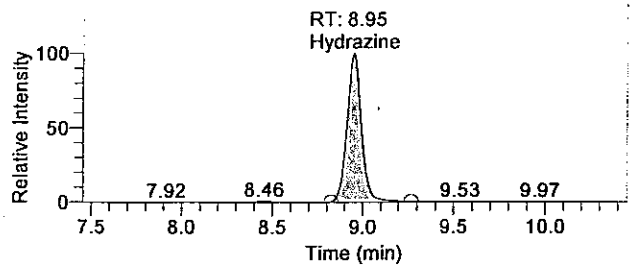
1,1-Dimethylhydrazine

08Sep2009-21 - TIC RT: 5.14 - 8.14 NL: 3.25E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-21 - TIC RT: 7.45 - 10.45 NL: 2.27E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0211

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCS	Method Settings	Hydrazine	8.95	1283614	9.991	ng/mL
LCS	Method Settings	1,1-Dimethylhydrazine	6.64	1991438	63.959	ng/mL
LCS	Method Settings	Monomethylhydrazine	4.95	2051025	65.355	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

OLR26 8212

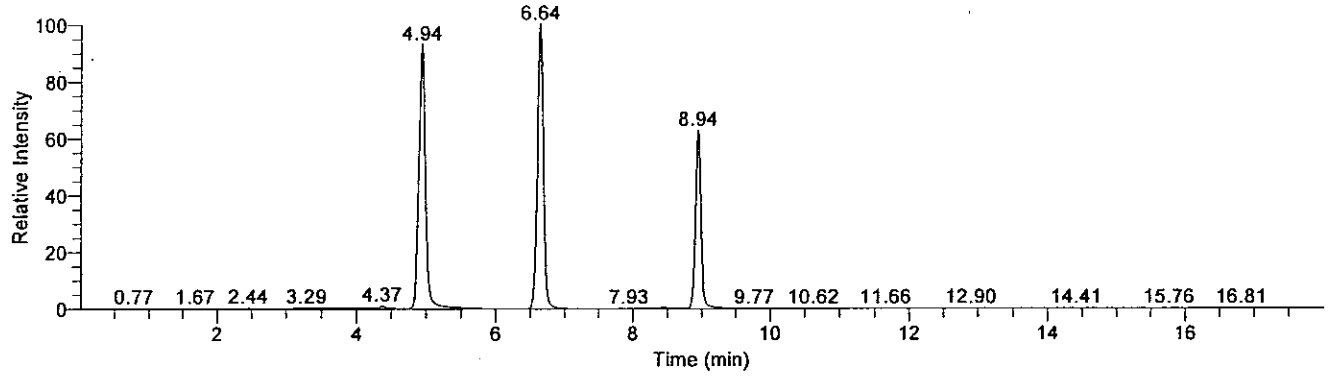
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1
Workbook Name:	TQU01408-08Sep2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925110610808
Data File:	08Sep2009-22.raw
Sample ID:	LCSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, September 08, 2009 8:52:35 PM
Vial:	D:16
Dilution Factor:	1.00000

Sample Chromatogram

08Sep2009-22 - TIC RT: 0.00 - 17.99 NL: 3.50E5

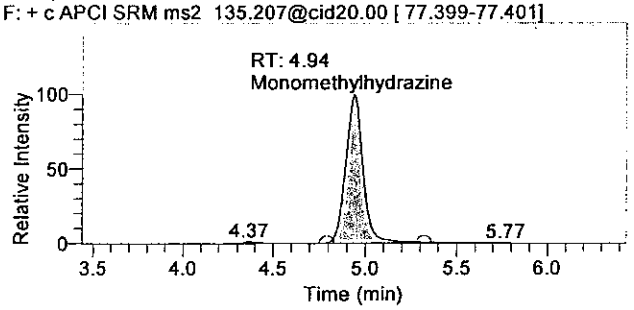


Compound Graphics

Date: 08-Sep-2009, Instrument: Quantum, Vial: D:16, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-08Sep2009-1\Rawfiles\08Sep2009-22, Comments: Soil Prep, ID: LCSD

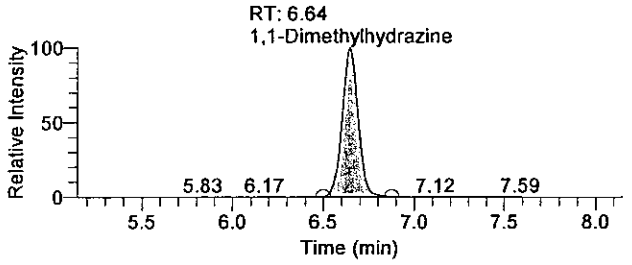
Monomethylhydrazine

08Sep2009-22 - TIC RT: 3.44 - 6.44 NL: 3.25E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



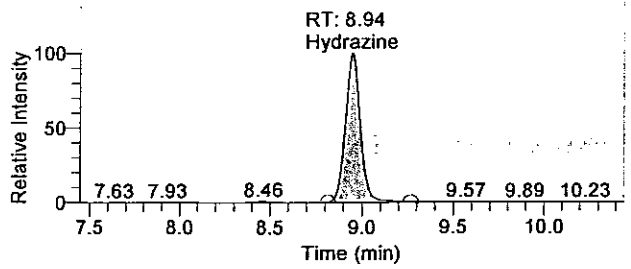
1,1-Dimethylhydrazine

08Sep2009-22 - TIC RT: 5.14 - 8.14 NL: 3.50E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

08Sep2009-22 - TIC RT: 7.44 - 10.44 NL: 2.19E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 6213

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD	Method Settings	Hydrazine	8.94	1235045	9.613	ng/mL
LCSD	Method Settings	1,1-Dimethylhydrazine	6.64	2154194	69.178	ng/mL
LCSD	Method Settings	Monomethylhydrazine	4.94	2102664	66.997	ng/mL

Analyst: JW 1543 9/9/2009
9/10/09

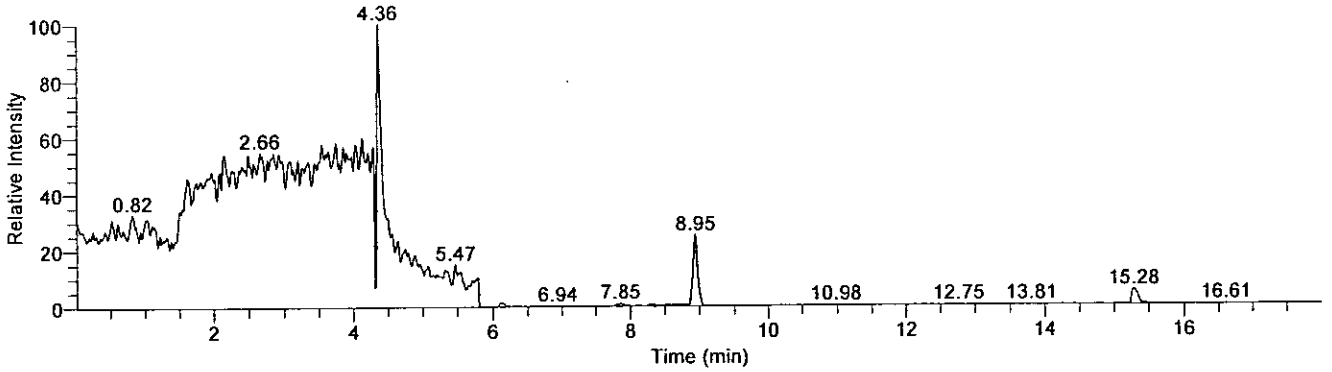
OLN28 9214

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-36.raw
Sample ID:	Blank2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 5:34:25 AM
Vial:	E:30
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-36 - TIC RT: 0.00 - 17.99 NL: 3.34E3

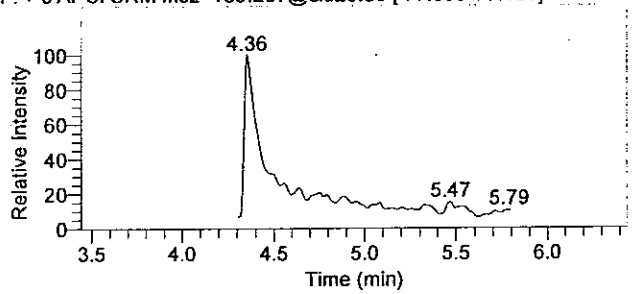


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:30, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-36, Comments: Soil prep, ID: Blank2

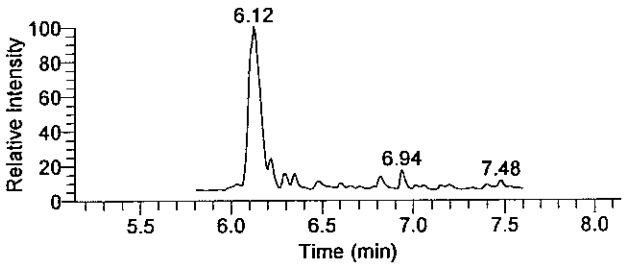
Monomethylhydrazine

10Sep2009-36 - TIC RT: 3.44 - 6.44 NL: 3.34E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



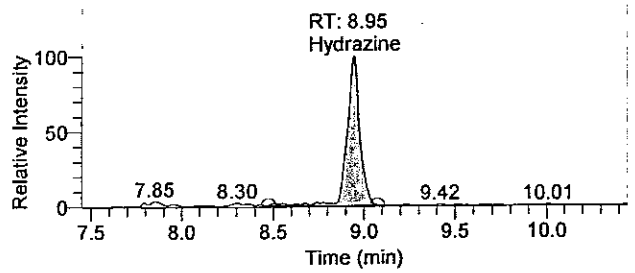
1,1-Dimethylhydrazine

10Sep2009-36 - TIC RT: 5.14 - 8.14 NL: 5.45E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-36 - TIC RT: 7.45 - 10.45 NL: 8.39E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0215

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	4200	0.030	ng/mL
Blank2	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
Blank2	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 9/11/2009
[illegible] 9/11/09

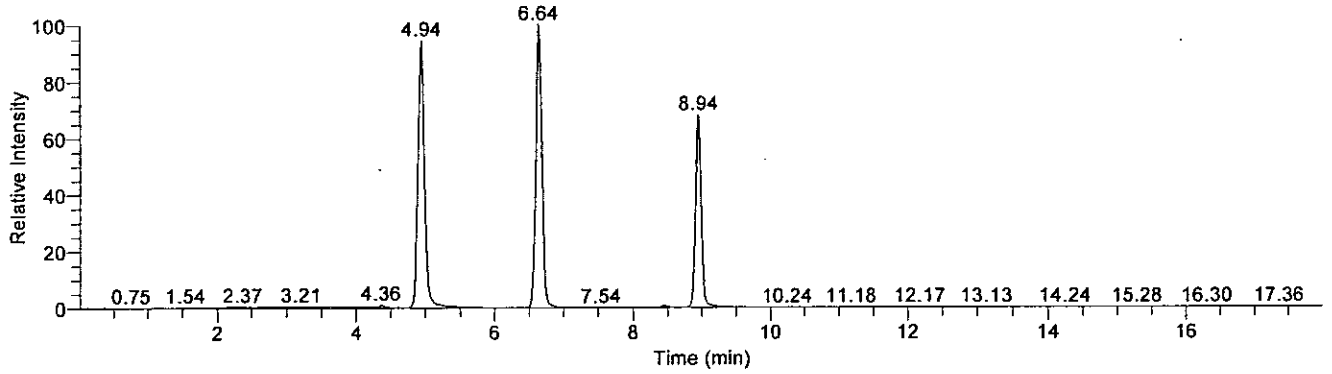
OLNZB 8216

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-41.raw
Sample ID:	LCS2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 7:08:09 AM
Vial:	E:35
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-41 - TIC RT: 0.00 - 17.99 NL: 3.47E5

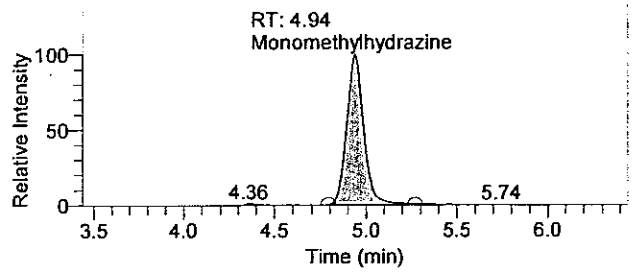


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:35, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-41, Comments: Soil prep, ID: LCS2

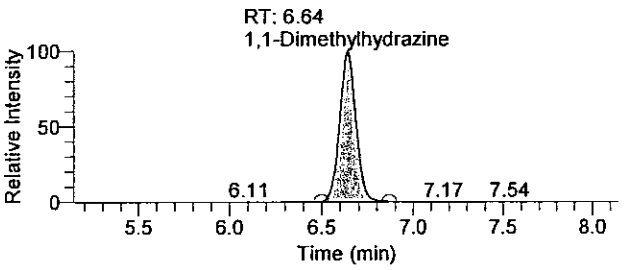
Monomethylhydrazine

10Sep2009-41 - TIC RT: 3.44 - 6.44 NL: 3.28E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



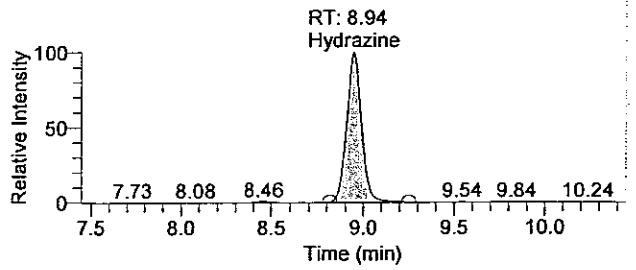
1,1-Dimethylhydrazine

10Sep2009-41 - TIC RT: 5.14 - 8.14 NL: 3.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-41 - TIC RT: 7.44 - 10.44 NL: 2.36E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N28 0217

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCS2	Method Settings	Hydrazine	8.94	1360308	10.425	ng/mL
LCS2	Method Settings	1,1-Dimethylhydrazine	6.64	2136290	66.937	ng/mL
LCS2	Method Settings	Monomethylhydrazine	4.94	2140237	67.038	ng/mL

Analyst: JW 1543 9/11/2009
9/11/09

OLN26 6219

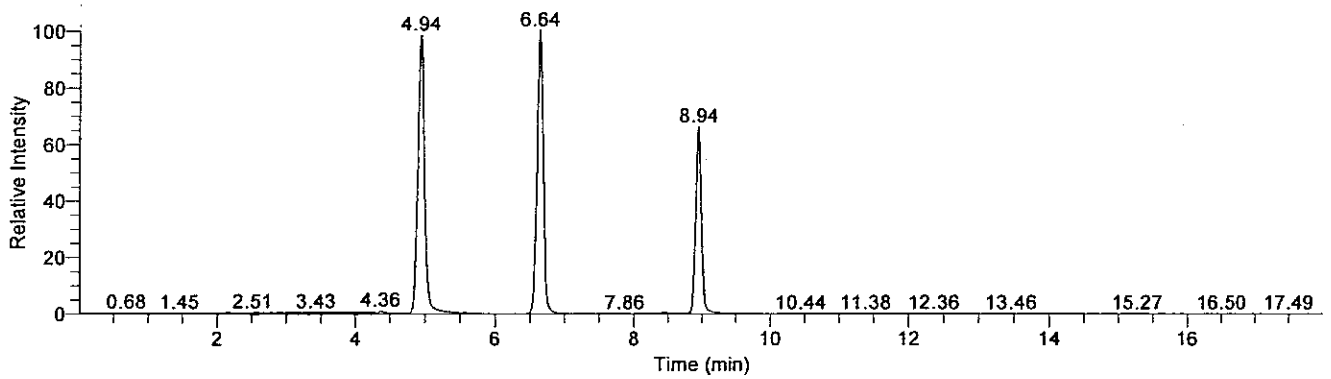
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3
Workbook Name:	TQU01408-10Sep2009-3
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0925310610813
Data File:	10Sep2009-42.raw
Sample ID:	LCSD2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Friday, September 11, 2009 7:26:55 AM
Vial:	E:36
Dilution Factor:	1.00000

Sample Chromatogram

10Sep2009-42 - TIC RT: 0.00 - 18.00 NL: 3.49E5

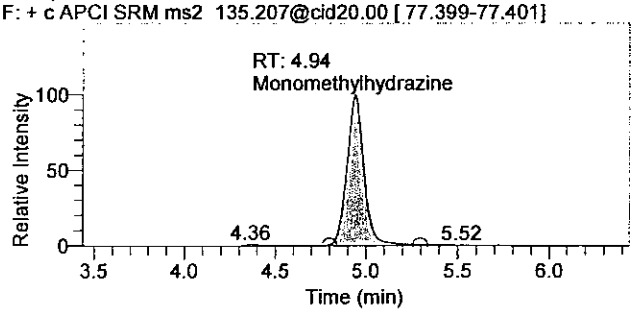


Compound Graphics

Date: 11-Sep-2009, Instrument: Quantum, Vial: E:36, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-10Sep2009-3\Rawfiles\10Sep2009-42, Comments: Soil prep, ID: LCSD2

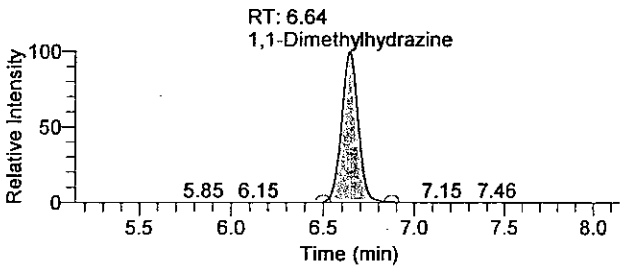
Monomethylhydrazine

10Sep2009-42 - TIC RT: 3.44 - 6.44 NL: 3.44E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



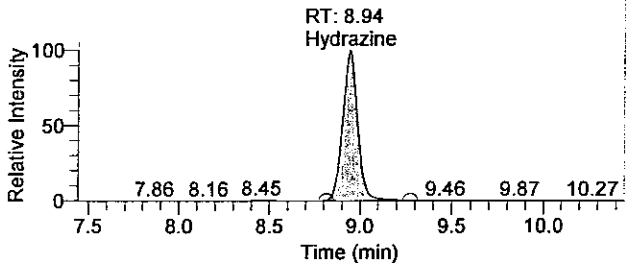
1,1-Dimethylhydrazine

10Sep2009-42 - TIC RT: 5.14 - 8.14 NL: 3.49E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

10Sep2009-42 - TIC RT: 7.44 - 10.44 NL: 2.30E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8219

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD2	Method Settings	Hydrazine	8.94	1345354	10.310	ng/mL
LCSD2	Method Settings	1,1-Dimethylhydrazine	6.64	2193936	68.740	ng/mL
LCSD2	Method Settings	Monomethylhydrazine	4.94	2244180	70.286	ng/mL

Analyst : JW 1543 9/11/2009

9/11/09

OLN28 8228

There is no signature data to report.

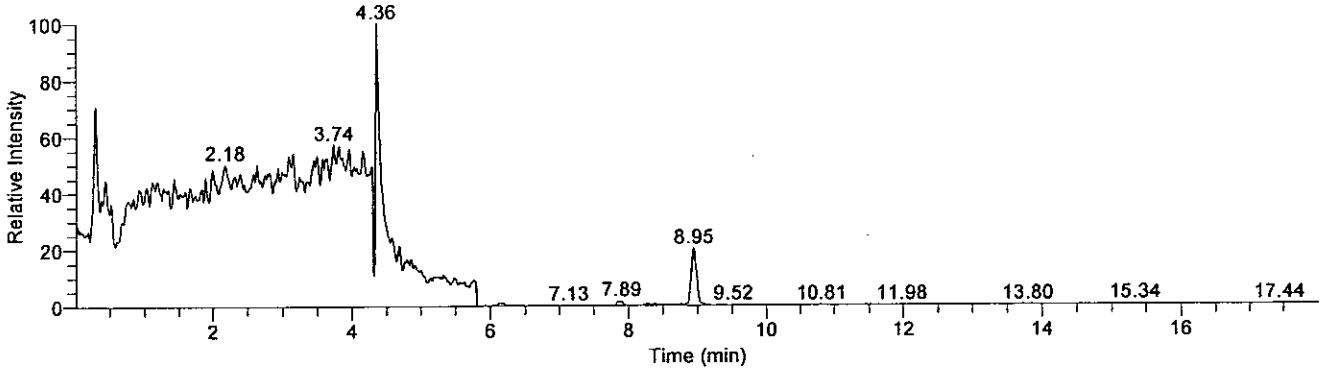
Lancaster Laboratories

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:	16Sep2009-16.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

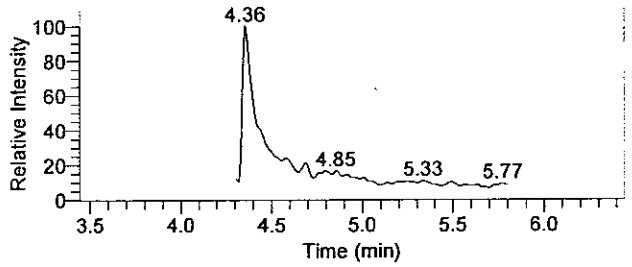


Compound Graphics

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

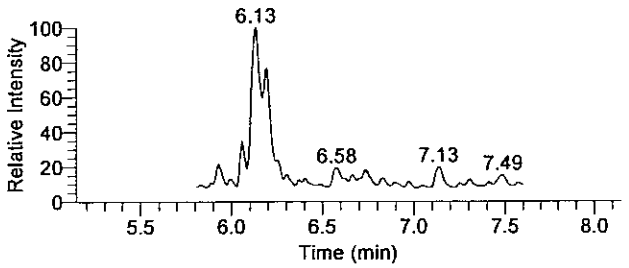
Monomethylhydrazine

16Sep2009-16 - TIC RT: 3.44 - 6.44 NL: 3.77E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



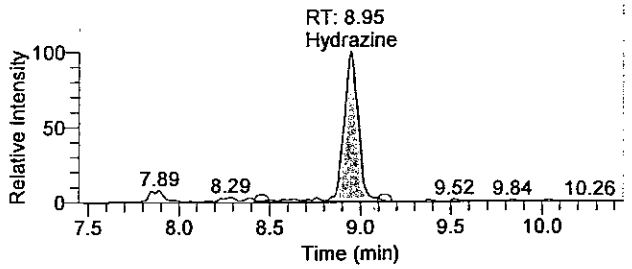
1,1-Dimethylhydrazine

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]



OLR25 8221

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]/112 9/22/09

OLN28 8222

There is no signature data to report.

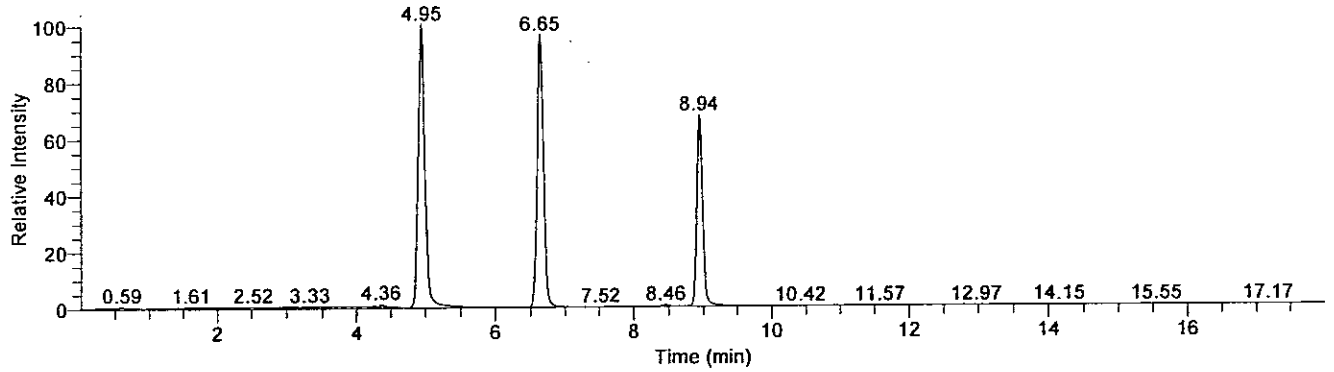
Lancaster Laboratories

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:	16Sep2009-21.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

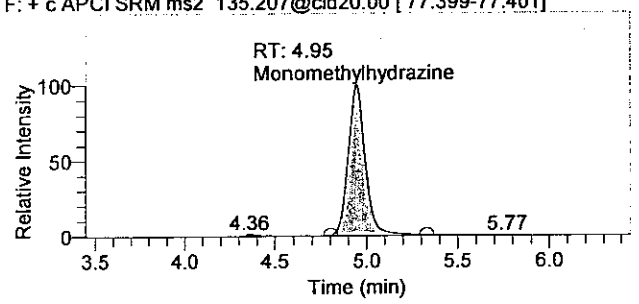


Compound Graphics

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

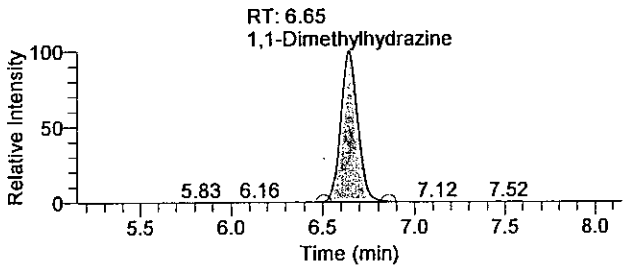
Monomethylhydrazine

16Sep2009-21 - TIC RT: 3.45 - 6.45 NL: 3.10E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



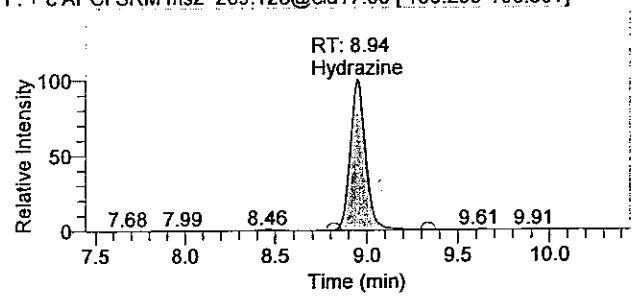
1,1-Dimethylhydrazine

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]



OLN28 0223

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 pH 7 buf
9/22 9/22/09

OLN28 8224

There is no signature data to report.

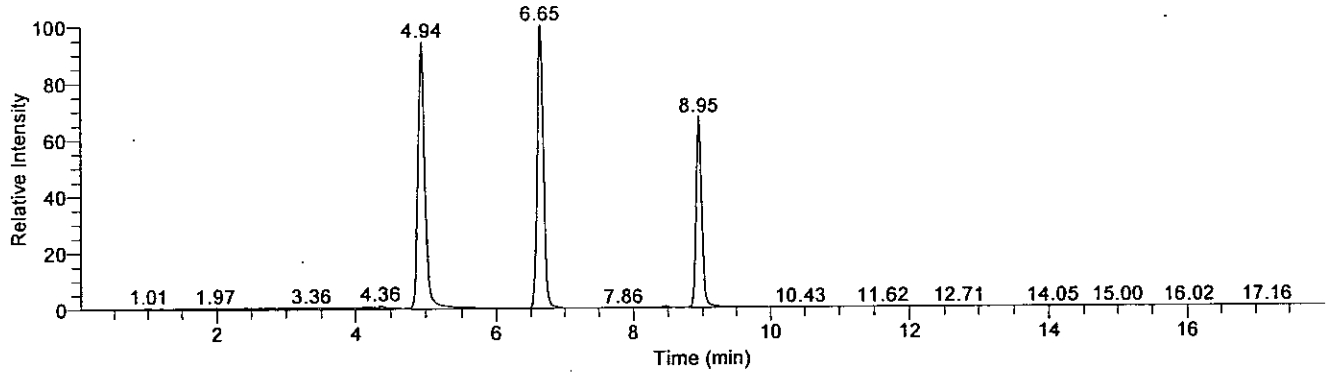
Lancaster Laboratories

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

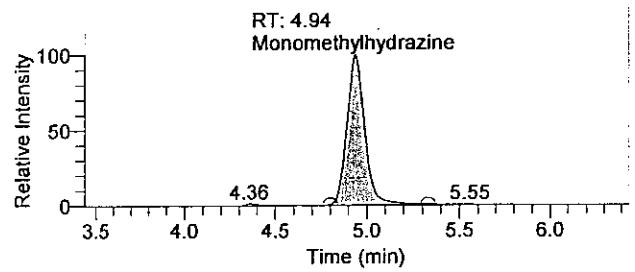


Compound Graphics

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

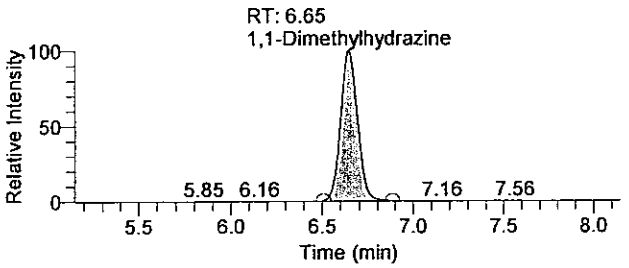
Monomethylhydrazine

16Sep2009-22 - TIC RT: 3.44 - 6.44 NL: 2.94E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



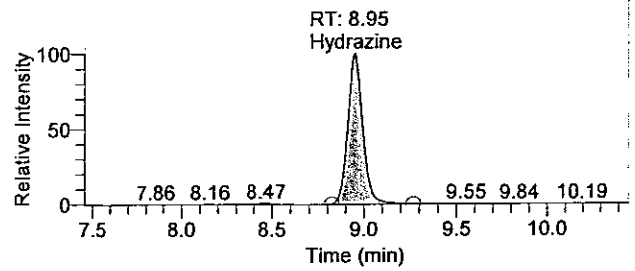
1,1-Dimethylhydrazine

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]



OLM26 0225

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

OLN28 0226

There is no signature data to report.

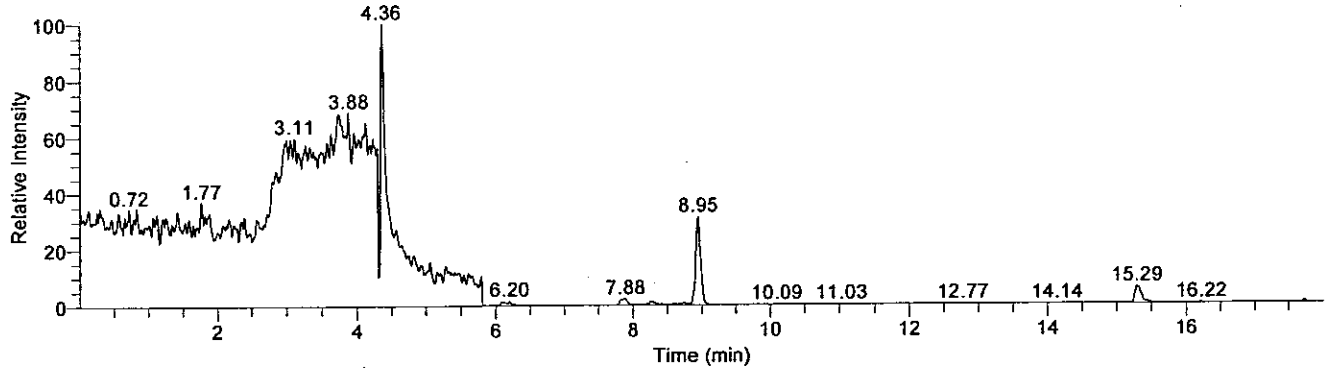
Lancaster Laboratories

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.	0925810610826
Data File:	16Sep2009-38.raw
Sample ID:	Blank2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 1:42:07 AM
Vial:	D:26
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-38 - TIC RT: 0.00 - 17.99 NL: 2.97E3

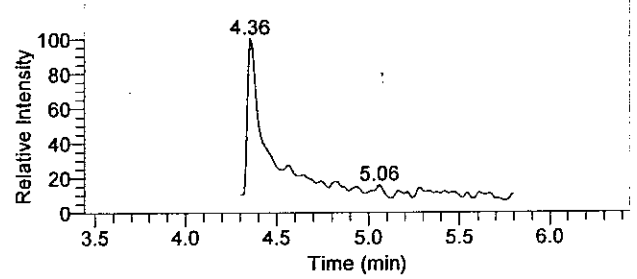


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:26, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-38, Comments: Water Prep, ID: Blank2

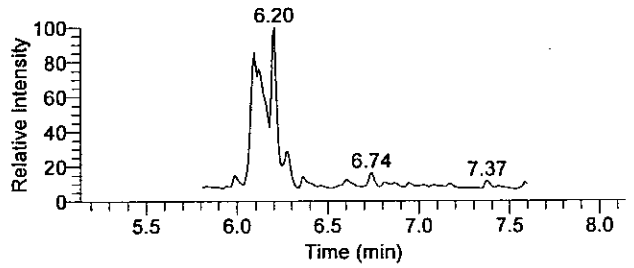
Monomethylhydrazine

16Sep2009-38 - TIC RT: 3.44 - 6.44 NL: 2.97E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



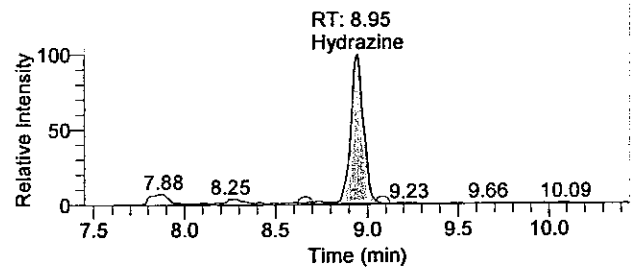
1,1-Dimethylhydrazine

16Sep2009-38 - TIC RT: 5.14 - 8.14 NL: 4.95E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-38 - TIC RT: 7.45 - 10.45 NL: 9.30E2
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN28 8227

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	4593	0.036	ng/mL
Blank2	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
Blank2	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

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

OLM28 8228

There is no signature data to report.

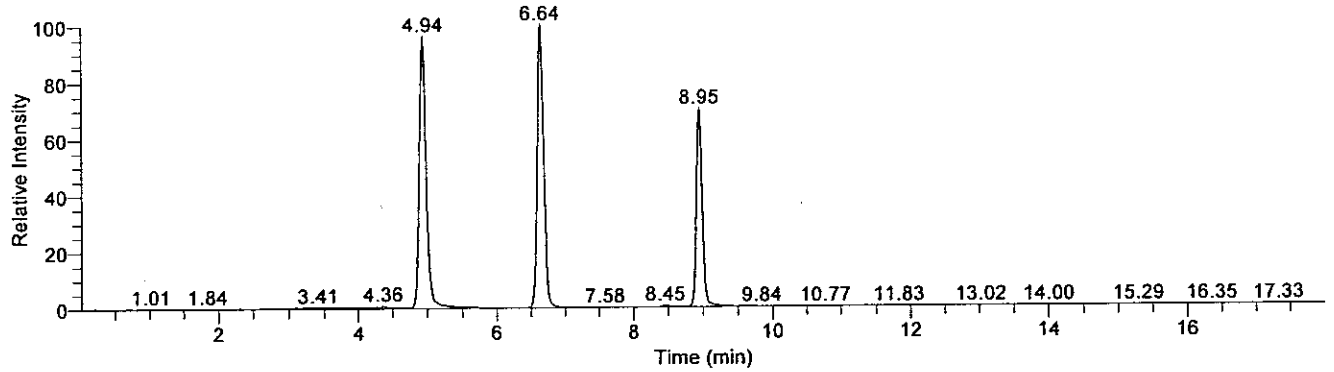
Lancaster Laboratories

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.	0925810610826
Data File:	16Sep2009-40.raw
Sample ID:	5772549MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 2:19:36 AM
Vial:	D:28
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-40 - TIC RT: 0.00 - 17.99 NL: 3.72E5

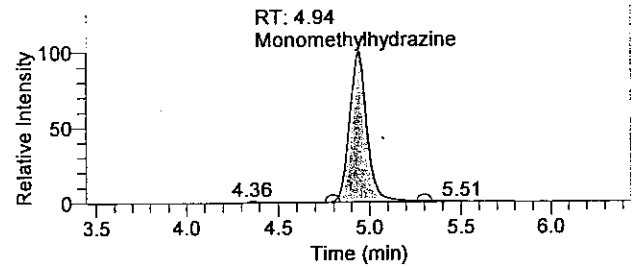


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:28, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-40, Comments: Water Prep, ID: 5772549MS

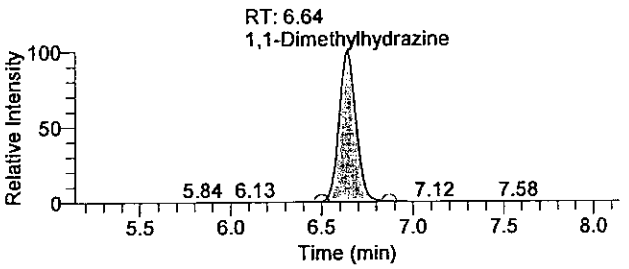
Monomethylhydrazine

16Sep2009-40 - TIC RT: 3.44 - 6.44 NL: 3.58E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



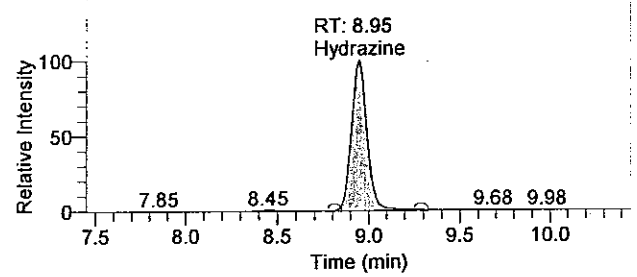
1,1-Dimethylhydrazine

16Sep2009-40 - TIC RT: 5.14 - 8.14 NL: 3.72E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-40 - TIC RT: 7.45 - 10.45 NL: 2.61E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28: 8229

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5772549MS	Method Settings	Hydrazine	8.95	1568259	11.405	ng/mL
5772549MS	Method Settings	1,1-Dimethylhydrazine	6.64	2424144	80.142	ng/mL
5772549MS	Method Settings	Monomethylhydrazine	4.94	2412552	76.886	ng/mL

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

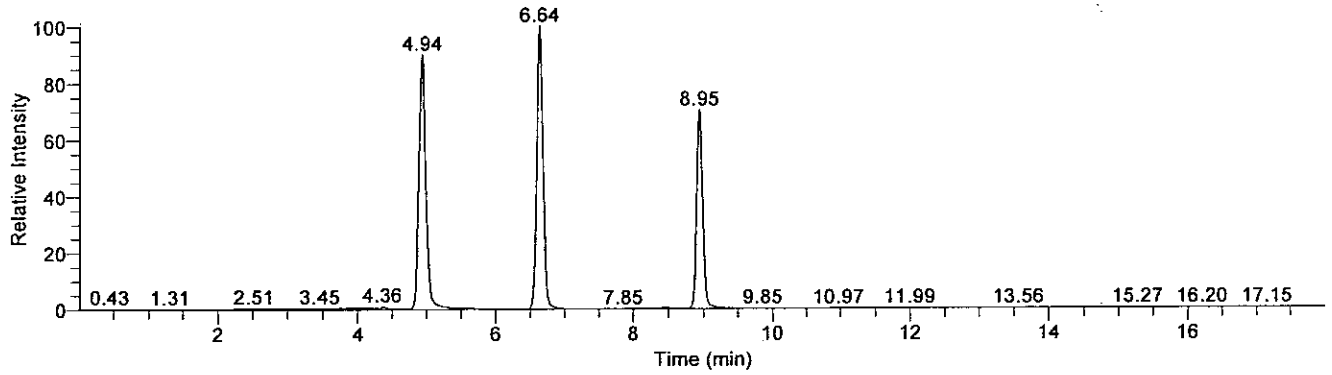
OLN29 8238

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.	0925810610826
Data File:	16Sep2009-41.raw
Sample ID:	5772549MSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 2:38:23 AM
Vial:	D:29
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-41 - TIC RT: 0.00 - 17.99 NL: 3.73E5

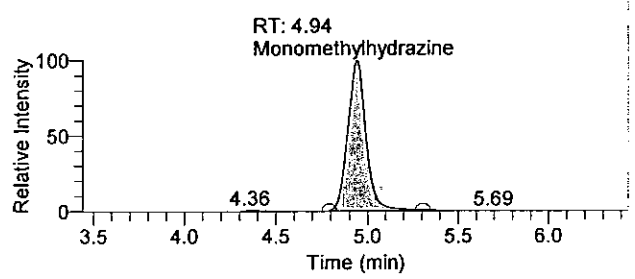


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:29, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-41, Comments: Water Prep, ID: 5772549MSD

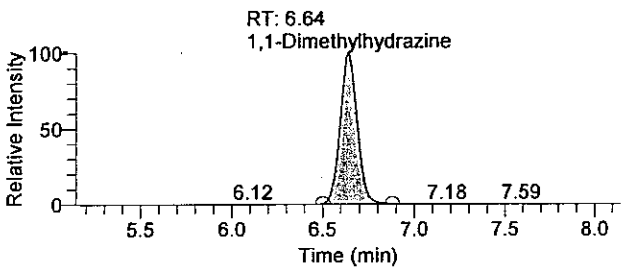
Monomethylhydrazine

16Sep2009-41 - TIC RT: 3.44 - 6.44 NL: 3.35E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



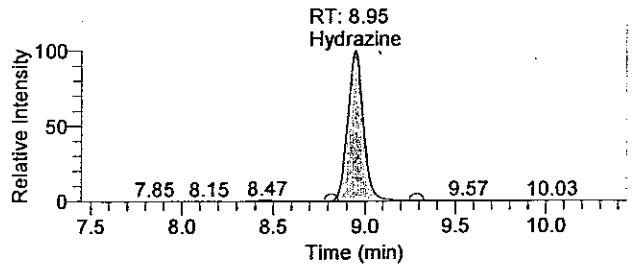
1,1-Dimethylhydrazine

16Sep2009-41 - TIC RT: 5.14 - 8.14 NL: 3.73E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-41 - TIC RT: 7.45 - 10.45 NL: 2.62E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



0LN20 0231

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5772549MSD	Method Settings	Hydrazine	8.95	1570481	11.421	ng/mL
5772549MSD	Method Settings	1,1-Dimethylhydrazine	6.64	2398320	79.290	ng/mL
5772549MSD	Method Settings	Monomethylhydrazine	4.94	2301868	73.367	ng/mL

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

OLH29 0232

There is no signature data to report.

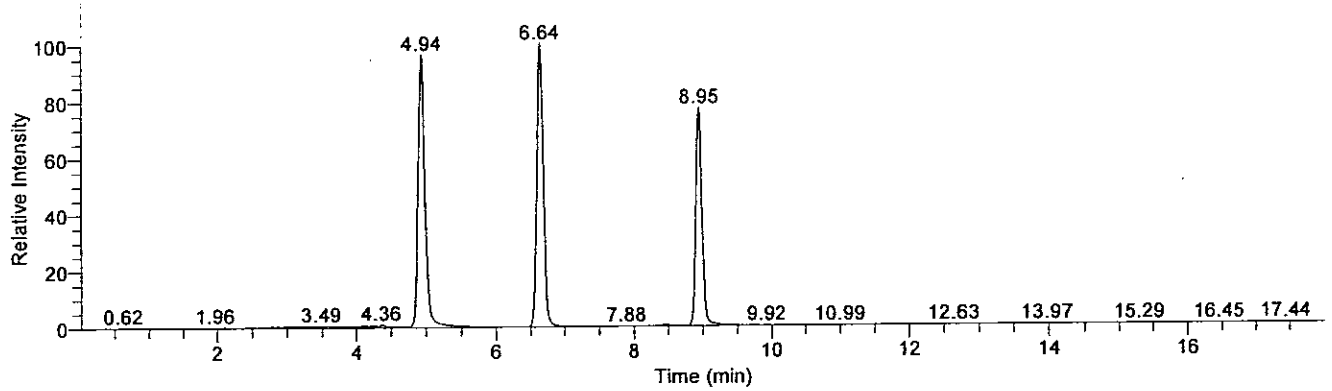
Lancaster Laboratories

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.	0925810610826
Data File:	16Sep2009-42.raw
Sample ID:	ICV/LCS2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 2:57:08 AM
Vial:	D:30
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-42 - TIC RT: 0.00 - 17.99 NL: 3.47E5

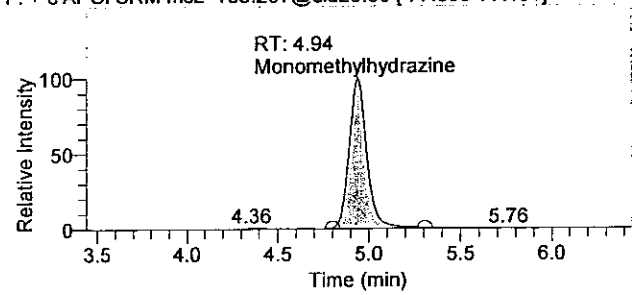


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:30, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-42, Comments: Water Prep, ID: ICV/LCS2

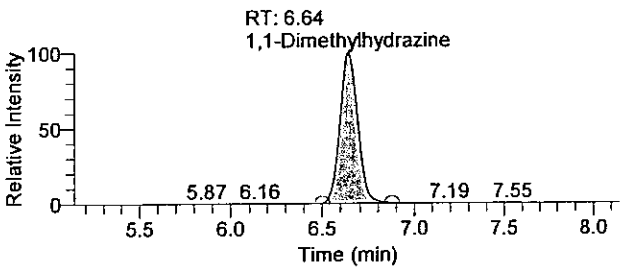
Monomethylhydrazine

16Sep2009-42 - TIC RT: 3.44 - 6.44 NL: 3.34E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



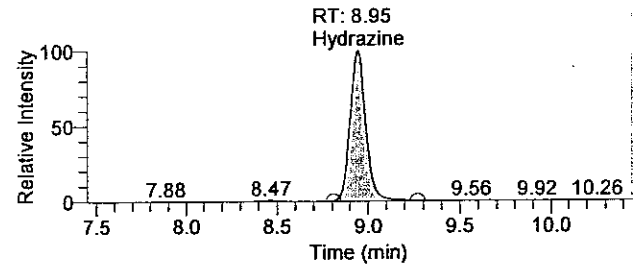
1,1-Dimethylhydrazine

16Sep2009-42 - TIC RT: 5.14 - 8.14 NL: 3.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-42 - TIC RT: 7.45 - 10.45 NL: 2.67E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 8233

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	1621246	11.791	ng/mL
ICV/LCS2	Method Settings	1,1-Dimethylhydrazine	6.64	2278888	75.350	ng/mL
ICV/LCS2	Method Settings	Monomethylhydrazine	4.94	2257686	71.962	ng/mL

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

OLN20 0234

There is no signature data to report.

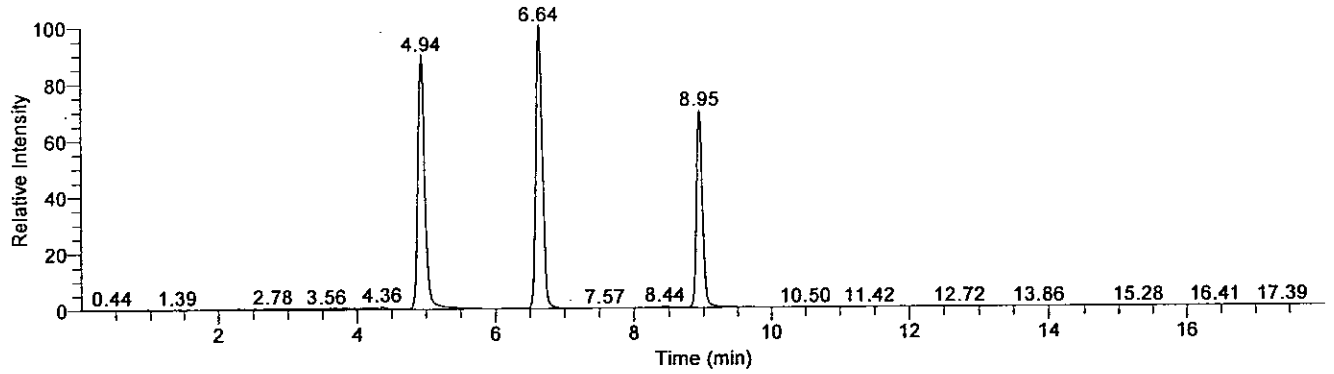
Lancaster Laboratories

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.	0925810610826
Data File:	16Sep2009-43.raw
Sample ID:	LCSD2
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Thursday, September 17, 2009 3:15:52 AM
Vial:	D:31
Dilution Factor:	1.00000

Sample Chromatogram

16Sep2009-43 - TIC RT: 0.00 - 17.99 NL: 3.65E5

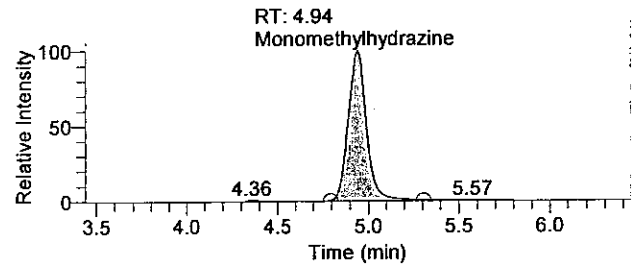


Compound Graphics

Date: 17-Sep-2009, Instrument: Quantum, Vial: D:31, Name: C:\XCalibur\Hydrazine Analysis\Sep 2009\TQU01408-16Sep2009-1\Rawfiles\16Sep2009-43, Comments: Water Prep, ID: LCSD2

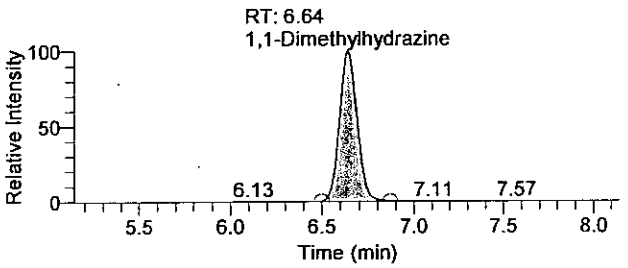
Monomethylhydrazine

16Sep2009-43 - TIC RT: 3.44 - 6.44 NL: 3.28E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



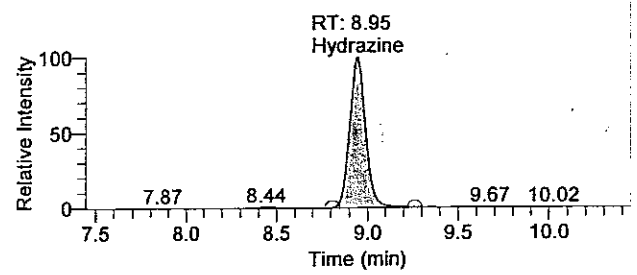
1,1-Dimethylhydrazine

16Sep2009-43 - TIC RT: 5.14 - 8.14 NL: 3.65E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

16Sep2009-43 - TIC RT: 7.45 - 10.45 NL: 2.55E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN28 0235

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	1545225	11.238	ng/mL
LCSD2	Method Settings	1,1-Dimethylhydrazine	6.64	2362038	78.093	ng/mL
LCSD2	Method Settings	Monomethylhydrazine	4.94	2257735	71.964	ng/mL

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

OLN28 8236

There is no signature data to report.

Sample Preparation

OLM28 0237

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. 7
Date: 9/8/2009

1. Pipette calibration

Pipette: Rainin, 10-100 uL, S/N G0798427I

Volume (uL)	Balance Reading (mg)
50	49.48

Pipette: Rainin, 1-10 uL, S/N 10731749I

Volume (uL)	Balance Reading (mg)
10	9.76

Pipette: Eppendorf Reference, 10-100 uL, S/N 4037-1

Volume (uL)	Balance Reading (mg)
40	39.37

Pipette: Eppendorf Research, 100-1000uL, S/N 2778567

Volume (uL)	Balance Reading (g)
500	0.49550

Pipette: Eppendorf Research, 100-1000uL, S/N 1467845

Volume (uL)	Balance Reading (g)
1000	0.98696

Pipette: Rainin, 1-10 mL, S/N C0822978A

Volume (mL)	Balance Reading (g)
10	10.08028

All the pipettes passed calibration check.

2. Weigh Ottawa sand and soil samples

Batch #	09251106108C8	
Blank	0.99933	
LCS	0.99909	
LCSD	1.00029	
5766212	1.00379	FD
5766213	0.99813	BKG
5766214	0.99829	MS
5766215	0.99743	MSD
5766216	1.00219	
5766217	1.00079	

OLM29.0238

4056.01 Jewing 9/8/2009

9/8/2008

From: Notebook 106108, pg 8

2. Cont'd

576621B 0.19913
576916J 1.00392
576916B 1.00143
576916F 1.00373
576917O 1.00026

3. Prepare 1% (v/v) benzaldehyde soln
200.0 mL of benzaldehyde + 20 mL methanol measured with graduated cylinder → glass vial. mixed well.

4. Prepare 2nd source monomethylhydrazine stock soln 106108-9-1
Conc. 960 mg/mL
Monomethylhydrazine 9.60 mg → 10 mL volumetric flask. Brought to volume with methanol. mixed well.

5. Prepare 2nd source LCS spiking soln 106108-9-2
Added 2nd source
hydrazine stock soln 100562-58-1: 89.3 mL
monomethylhydrazine stock soln: 65.1 mL
1,1-dimethylhydrazine stock soln 100562-43-4: 77.2 mL
into 10 mL volumetric flask. Brought to volume with methanol. mixed well.
In this soln, hydrazine 1.25 mg/mL, monomethylhydrazine and
1,1-dimethylhydrazine 6.25 mg/mL.

6. Added 100.0 mL of 2nd source spiking soln prepared above 106108-9-2 into QC samples (LCS, LCSD, MS, MSD).

7. Added 10.0 mL extraction fluid 100562-94-2 into all the samples.

8. Placed the samples in a shaker and agitated at 300 rpm for 10 min at room temperature

OLN28 8239

9. Centrifuged the samples at 2900 rpm for 10 min.

4056.01 Jaw 9/8/2008

106108 9

9/8/2009

From: Notebook 106108 pg 7

10. Derivatization of MDL and calibration standards with benzaldehyde

Standards 1 M hexylamine sol'n 100562-37-1 Benzaldehyde sol'n
1.0 mL 10.0 mL 0.5 mL

11. Derivatization of 2ev and 2nd source LCS spiking sol'n

1 M hexylamine sol'n 0.2 M acetate buffer spiking sol'n Benzaldehyde sol'n
100562-37-1 100562-54-5 10.0 mL
10.0 mL 1.0 mL 106108-5-2 0.5 mL
↓ ↓ 106108-7-2 ↓

11. Derivatization of all the samples in Batch # 0725i 106108 08

Supernant of extract 5 M acetate buffer 100562-14-3 Benzaldehyde sol'n
1.0 mL 40.0 mL 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 (40°C) water bath for 1hr. Filtered the sol'n into auto sampler vials.
End of batch sample preparation.

12 Run workbook TQU01408 - 08Sep2009-1
under: C:\XCalibur\Hydrazine Analysis\Sep 2009
Samples: All the samples prepared today.

OLR20 8240

4056.01 Jawing 9/8/2009

0 106108

7/8/2008

From: Notebook 106108, pg 10

13. 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/~~06~~ 09, qual. Due 7/2010 (weighing monomethylhydrazine)
Balance: 5554, cal. Due 11/09, qual. Due 3/2010 (for pipette calibration and weigh 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

OLN28 8241

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. 11
Date: 9/10/2009

1. Pipette calibration

Pipette: Rainin, 10-100 uL, S/N G0798427I

Volume (uL)	Balance Reading (mg)
50	49.58

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	39.31

Pipette: Eppendorf Research, 100-1000uL, S/N 2778567

Volume (uL)	Balance Reading (g)
500	0.49484

Pipette: Eppendorf Research, 100-1000uL, S/N 1467845

Volume (uL)	Balance Reading (g)
1000	0.99215

Pipette: Rainin, 1-10 mL, S/N C0822978A

Volume (mL)	Balance Reading (g)	Balance Reading (g)
10	~~0.49484~~ 9.9 9/10/09 ③ recorded in the wrong place	10.05684

All the pipettes passed calibration check.

2. Weigh Ottawa sand and soil samples into extraction vials

Batch # 09253 10610812

Blank 1	0.99829
LCS 1	1.00179
LCSD 1	0.99999
576P175 FD	0.99779
576P176 BKG	1.00049
576P177 MS	0.99979
576P178 MSD	0.99999
576P179	1.00069
576P180	0.99839

~~01H28 8342~~

4056.01 9/11/2009

9/10/2008

From: Notebook 106108 pg. 12

2. Cont'd

5770779 0.9979 g
5770780 0.9976 g
5770781 1.0017 g

3. Weigh Ottawa sand and soil samples into extraction vials

Batch # OP255 106108B13

Blank 2 1.0029 g
LCS 2 1.0009 g
LCSD 2 0.9994 g
5769171 FD 0.9999 g
5769172 ~~MS~~ D3w photo? BKG 1.0028 g
5769173 MS 1.0007 g
5769174 MSD 1.0024 g
5772546 1.0017 g
5772547 1.0037 g
5772548 0.9986 g
5772550 1.0004 g

4. There are two batches that will be prepared today.

5. Prepare 1M hexylamine soln 106108-13-1

0.264 mL hexylamine → ~~10~~ 2 mL D3w photo? volumetric flask. Brought to volume with methanol. mixed well.

6. Prepare 1% (v/v) benzaldehyde soln

200.0 mL of benzaldehyde + 20 mL methanol measured with graduated cylinder → glass vial. mixed well

7. Prepare 2nd source monomethylhydrazine stock soln

Monomethylhydrazine 9.07 mg → 10 mL volumetric flask. Brought to volume with methanol. mixed well

Conc. 907 mg/mL

OLNZ0 0243

9/10/2007

From: Notebook 106108 pg. 13

8. Prepare 2nd source LCS spiking soln 106108-14-1

Added 2nd source

hydrazine stock soln 100582-58-1: 68.3 mL

monomethylhydrazine stock soln: 68.8 mL

1,1-dimethylhydrazine stock soln 100582-43-4: 77.3 mL

into 10 mL volumetric flask. Brought to volume with methanol, mixed well.

In this soln, hydrazine 1.25 mg/mL

Monomethylhydrazine and 1,1-dimethylhydrazine 6.25 mg/mL

9. Added 100 mL of LCS spiking soln into QC samples (LCS1, LCSD1, ~~MSt~~ MS and MSD) in Batch # 0F253106108 12.

10. Added 100 mL of extraction fluid into all samples in Batch # 0F253106108 12

11. Added 100 mL of LCS spiking soln into QC samples (LCS2, LCS2, MS and MSD) in Batch # 0F253106108 13.

12. Added 100 mL of extraction fluid into all samples in Batch # 0F253106108 13.

13. Placed all samples in Batch # 0F253106108 12 and Batch # 0F253106108 13 at the shaker and agitated at 300 rpm for 10 min.

Centrifuged all samples in the above two batches at 2950 rpm for 10 min.

OLN2B 8244

4056.01 [illegible] 9/11/2007

9/10/2008

From: Notebook 106108, pg 14

14. Derivatization of MDL and calibration standards with benzaldehyde

1M hexylamine sol'n 106108-13-1	Standards	Benzaldehyde sol'n
10.0 mL	1.0 mL	0.5 mL

15. Derivatization of 2VC 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~~ ③ Jw 9/10/08 10.0 mL	
10.0 mL	1.0 mL	106108-5-2	0.5 mL
↓	↓	106108-14-1	↓

16. Derivatization of all the samples in Batch # 0J253 106108 12

Supernant of extract	5M acetate buffer	Benzaldehyde sol'n
1.0 mL	40.0 mL	0.5 mL

100562-14-3 ~~100562-14-4~~ ③ Jw 9/10/08

17. Derivatization of all the samples in Batch # 0J253 106108 13

Supernant of extract	5M acetate buffer 100562-14-3	Benzaldehyde sol'n
1.0 mL	40.0 mL	0.5 mL

To make each derivative sol'n, added the corresponding sol'n according to the table above into ~~glass~~ ③ Jw 9/10/08 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 auto sampler vials

18. Run workbook: TQU 01408-10 Sep 2008-3
under: C:\X Calibur\ Hydrazine Analysis\ Sep 2008
Samples: All the samples prepared today
Two batches of soil samples were prepared today

OLN28 0245

9/10/2009

From Notebook 106108 pg. 15

19. 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/~~06~~ 09, qual. Due 7/2010 (weighing monomethylhydrazine)
Balance: 5554, cal. Due 11/09, qual. Due 3/2010 (for pipette calibration and weigh 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
Hexylamine: Acros Organics, Cat. No. 204720050, L/N A0249212, re-eval. 8/24/2010

OLN23 9246

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. Jeway 9/16/2009

2. Weigh Ottawa Sand and soil samples
Batch # 09258106 10819
Blank 1 : 1.00369
LCS 1 : 1.00259
LSD 1 : 1.00259
5774702 : 1.00129
5774703 : 1.00069
5774704 : 1.00119
5774705 : 1.00049
5774706 : 1.00099

Jeway 9/16/2009

4056.01 Maria Davenport 9-16-09

9-16-09
From: Notebook 106108 pg. 19

2. Cont'd
5774707FO: 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 MS ③ ~~200.0 ul of~~ 240.0 ul 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.

OLNZB BZ88

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 10.0ul	0.5 ml
↓	↓	2nd Source LCS spiking sol'n 10.0ul	↓

9. Derivitization of all samples in Batch # 09258106108 19

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

In Run workbook : TQUC1408 - 16 Sep 2008 - 1
under : C:\X Calibur\Hydrazine Analysis\Sep 2008
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 # 08258106108 18
All samples in Batch # 08258106108 26
Samples 106108-24-1 → 106108-24-10

OLN28 8249

Finding p/it proof

4056.01 Maria Davenport 9-16-09

9/16/2009
From: Notebook 106109. 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

OLN29 0256

4056.01 J. Way 9/16/2009

SOP Analysis # 10342, Rev. 01, eff. 10/29/2008
Title: Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Aqueous Samples by LC/MS/MS
Date 9/16/2009
From: 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, LCV/LCS, LCSD, client sample, MS and MSD with benzaldehyde
Batch #: 09258 106108 26

Derivative soln	1M hexylamine soln	0.2M acetate buffer	Spiking soln	Benzaldehyde soln
	106108-13-1	100542 ~~106108~~ 2-54-5 ③ JW 9/16/09	106108-5-2	
Blank 2	10.0 mL	1.0 mL	Not added	0.5 mL
LCV/LCS2	↓	↓	10.0 mL ↓	↓
LCSD2				

Derivative soln	1M hexylamine soln	Client Samples ③ JW 9/16/09 ~~0.2M acetate buffer~~	Spiking soln	Benzaldehyde soln
577254P	106108-13-1, 10.0 mL	577254P, 1.0 mL	Not added	0.5 mL
577254P MS	↓	↓	106108-5-2, 10.0 mL ↓	↓
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.

OLN25 8251

4056.01 JW 9/16/09

106108

9/16/2009

From : Notebook 106108. pg. 26

5 Cont'd

Filtered the sol'n 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 sol'n

ICV and 2nd source spiking sol'n derivative sol'n

All the samples in Batch # 09258 106108 1P

All the samples in Batch # 09258 106108 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

OLN28 8252

Moisture Data

OLN20 0253

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN20

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
5766212	O442DFD
5766213	O4428BKG
5766214	O4428MS
5766215	O4428MSD
5766216	O4525
5766217	O4636
5766218	O4642
5772546	O4500
5772547	O4663
5772548	O4666
5772550	O4508
5774702	O4347

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 09246820002B	Sample number(s): 5766212-5766216				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 09247820002A	Sample number(s): 5766217				
Moisture	100		99-101		
Batch number: 09247820002B	Sample number(s): 5766218				
Moisture	100		99-101		
Batch number: 09254820001B	Sample number(s): 5772550				
Moisture	100		99-101		
Batch number: 09257820001B	Sample number(s): 5772546-5772548				
Moisture	100		99-101		
Batch number: 09258820004B	Sample number(s): 5774702				
Moisture	100		99-101		

OLN20 0254

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN20

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 09246820002B	Sample number(s): 5766212-5766216			
Moisture	13.4	11.8	13	15
Moisture	13.4	11.8	13	15
Moisture Duplicate	13.4	11.8	13	15
Batch number: 09247820002A	Sample number(s): 5766217			
Moisture	17.8	17.8	0	15
Batch number: 09247820002B	Sample number(s): 5766218			
Moisture	13.0	13.6	4	15
Batch number: 09254820001B	Sample number(s): 5772550			
Moisture	13.5	13.2	3	15
Batch number: 09257820001B	Sample number(s): 5772546-5772548			
Moisture	18.4	17.0	8	15
Batch number: 09258820004B	Sample number(s): 5774702			
Moisture	6.0	6.2	3	15

* - Outside of specification
(1) - The result for one or both determinations was less than five times the LOQ.

OLN20-0255

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN20

Moisture Data Report

Batch #: 09246820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1029	5.0080	1.6374	89.33	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)
5766212FD	B	00111	1.0874	7.8083	8.0133	11.30	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)
5766213BKG	B	00111	1.0747	9.3254	9.1515	13.39	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)
5766214MS	B	00118				13.39	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)
5766215MSD	B	00118				13.39	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)
5766215MSD	B	00121	1.0659	9.6847	9.6104	11.77	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)
5766216	B	00111	1.1083	7.2643	7.1238	17.19	9/ 3/09 (1201/SWF)	9/ 4/09 (0236/CW)

Batch #: 09247820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1197	5.0408	1.6539	89.40	9/ 4/09 (1201/SWF)	9/ 8/09 (0943/LJC)
5766217BKG	A	00111	1.0829	8.8727	8.3792	17.77	9/ 4/09 (1201/SWF)	9/ 8/09 (0943/LJC)
5766217DUP	A	00111	1.1245	8.7312	8.3025	17.79	9/ 4/09 (1201/SWF)	9/ 8/09 (0943/LJC)
5766218BKG	B	00111	1.1058	7.9832	8.0497	13.02	9/ 4/09 (1201/SWF)	9/ 8/09 (0943/LJC)
5766218DUP	B	00111	1.0974	7.9514	7.9701	13.57	9/ 4/09 (1201/SWF)	9/ 8/09 (0943/LJC)

Batch #: 09254820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0751	5.0425	1.6110	89.37	9/11/09 (1201/SWF)	9/16/09 (0236/CW)
5772550BKG	B	00111	1.0791	6.2359	6.4705	13.54	9/11/09 (1201/SWF)	9/16/09 (0236/CW)
5772550DUP	B	00111	1.1020	6.5934	6.8259	13.19	9/11/09 (1201/SWF)	9/16/09 (0236/CW)

Batch #: 09257820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0610	5.0181	1.5905	89.45	9/14/09 (1201/SWF)	9/16/09 (0236/CW)
5772546	B	00111	1.0524	8.6551	9.2241	5.59	9/14/09 (1201/SWF)	9/16/09 (0236/CW)
5772547	B	00111	1.0716	7.9937	8.3169	9.36	9/14/09 (1201/SWF)	9/16/09 (0236/CW)
5772548	B	00111	1.0408	6.8333	7.3174	8.15	9/14/09 (1201/SWF)	9/16/09 (0236/CW)
P772024BKG	B	00111	1.0480	8.0177	7.5907	18.40	9/14/09 (1201/SWF)	9/16/09 (0236/CW)
P772024DUP	B	00111	1.0790	8.7073	8.3074	16.98	9/14/09 (1201/SWF)	9/16/09 (0236/CW)

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)
5774702	B	00111	1.0890	8.5804	9.0690	7.00	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
P774708BKG	B	00111	1.0841	7.8828	8.4906	6.04	9/15/09 (1201/SWF)	9/16/09 (0236/CW)
P774708DUP	B	00111	1.0512	7.7048	8.2748	6.25	9/15/09 (1201/SWF)	9/16/09 (0236/CW)

OLN26 9256