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

Type I Data Package for Olin Corporation

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

SDG# OLN15

Project: Olin Wilmington, MA Superfund Site/6107090016
Soil and Water Samples
Collected on 08/18/09-08/21/09

GROUP	SAMPLE NUMBERS
1158425	5754467-5754471
1158426	5754472-5754477
1158830	5757305-5757314

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

Prepared by CAchwarz

Reviewed by Dorothy M Dave

Date 9/17/09

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Sample Reference List for SDG Number OLN15 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
5754467	W4126	OC-SB-412-6.0/7.0-XXX Grab Soil
5754468	W4206	OC-SB-420-6.5/8.5-XXX Grab Soil
5754469	W4168	OC-SB-416-8.0/9.0-XXX Grab Soil
5754470	W4218	OC-SB-421-8.0/10-XXX Grab Soil
5754471	W4256	OC-SB-425-6.0/8.0-XXX Grab Soil
5754472	W4120	OC-SB-412-0.0/1.0-XXX Grab Soil
5754473	W4160	OC-SB-416-0.0/1.0-XXX Grab Soil
5754474	WEB01	OC-EBK-001 Grab Water
5754475	W4210	OC-SB-421-0.0/1.0-XXX Grab Soil
5754476	W4240	OC-SB-424-0.0/1.0-XXX Grab Soil
5754477	WEB02	OC-EBK-002 Grab Water
5757305	W4193	OC-SB-419-3.0/5.0-XXX Grab Soil
5757306	W426D	OC-SB-426-5.0/7.0-DUP Grab Soil
5757307	W4265	OC-SB-426-5.0/7.0-XXX Grab Soil
5757308	W4265	OC-SB-426-5.0/7.0-XMS Grab Soil
5757309	W4265	OC-SB-426-5.0/7.0-MSD Grab Soil
5757310	W4317	OC-SB-431-7.0/9.0-XXX Grab Soil
5757311	W4366	OC-SB-436-6.0/8.0-XXX Grab Soil
5757312	W4458	OC-SB-445-8.0/10-XXX Grab Soil
5757313	W4436	OC-SB-443-6.0/8.0-XXX Grab Soil
5757314	W4375	OC-SB-437-5.0/7.0-XXX Grab Soil

Acct# 12670
Grp# 1158425

Sample# 5754467-71 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:	423-336-4166
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 Corporation

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: 423-336-4514 Email None

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-001	8/18/2009 8:30:00 AM	T	FS	BW	G	2								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

By: _____ Date: _____

Relinquished: [signature] Date: 8/19/09 Time: 1700 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ___ Received: [signature] Date: 8 20 09 Time: 905

Acct# 12670 Grp# 1158425 Sample# 5754467-71
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 Corporation	
Cleveland, TN 37312	Reports Sent To: Steve Morrow	Company Contact: ERG Accounts Payable	
Phone: 423 336 4511 Fax: 423-336-4166	Email SGMorrow@olin.com Email Rpt:___	Address: Same as Client	
Requested Turnaround Time (SPECIFY)	Regulatory Programs: MADEP MCP___ Superfund ___	Phone: 423-336-4514 Email None	
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) 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	<--Preservative Type (4) / <--Bottle Type (5)	Comments (Special Instructions)
OC-SB-412-0.0/1.0-XXX	8/18/2009 12:45:00	T	FS	SO	G	1							1			Cat1
OC-SB-412-12/13-XXX	8/18/2009 1:10:00 PM	T	FS	SO	G	1							1			HOLD Analysis Pending Cat3
OC-SB-412-6.0/7.0-XXX	8/18/2009 12:55:00	T	FS	SO	G	1							1			5-Day RUSH TAT Cat2
OC-SB-420-12/14-XXX	8/18/2009 4:25:00 PM	T	FS	SO	G	1							1			HOLD Analysis Pending Cat3
OC-SB-420-6.5/8.5-XXX	8/18/2009 4:10:00 PM	T	FS	SO	G	1							1			5-Day RUSH TAT Cat2

See Attached Sheet for Sampling Categories:
Cat1 Cat3
Cat2

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.

Fed Ex Tracking # 8372 3852 1684
1 Cooler

Acct# 12670 Grp# 1158425 Sample# 5754467-71

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:** 8/19/09 **Time:** 1700 **Received:** _____ **Date:** __/__/__ **Time:** _

Relinquished: _____ **Date:** __/__/__ **Time:** ____ **Received:** [signature] **Date:** 8/20/09 **Time:** 905

Print Draft | Print Final and Close

0104025 0004

Acct# 12670
Grp# 1158425

Sample# 5754467-71
Lancaster - Soil

Client: Olin Corporation
Address: 3855 North Ocoee St. Suite 200
Cleveland, TN 37312
Phone: 423 336 4511 Fax: 423-336-4166 Email SGMorrow@olin.com Email Rpt:___

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

INVOICE INFO — Shaded Areas for office use only
Company Name: Olin Corporation
Company Contact: ERG Accounts Payable
Address: Same as Client
Phone: 423-336-4514 Email None

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-SB-416-0.0/1.0-XXX	8/18/2009 10:35:00	T	FS	SO	G	1							1		Cat 1
OC-SB-416-13/14-XXX	8/18/2009 11:05:00	T	FS	SO	G	1							1		Hold Analysis Pending Cat 3
OC-SB-416-8.0/9.0-XXX	8/18/2009 10:45:00	T	FS	SO	G	1							1		RUSH TURN Cat 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,

Acct# 12670 Grp# 1158425 Sample# 5754467-71

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:** 8 / 19 / 09 **Time:** 1700 **Received:** _____ **Date:** __ / __ / __ **Time:** _

Relinquished: _____ **Date:** __ / __ / __ **Time:** _ **Received:** [signature] **Date:** 8 / 20 / 09 **Time:** 905

Print Draft | Print Final and Close

01MA15 00005

Acct#12670
Grp#1158425

Sample# 5754467-71
Lancaster - Soil

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

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-421-0.0/1.0-XXX	8/19/2009 7:40:00 AM	T	FS	SO	G	1							1		Cat1
OC-SB-421-10.5/12.5-XXX	8/19/2009 8:05:00 AM	T	FS	SO	G	1							1		Cat3
OC-SB-421-8.0/10-XXX	8/19/2009 7:45:00 AM	T	FS	SO	G	1							1		Cat2
OC-SB-424-0.0/1.0-XXX	8/19/2009 11:35:00	T	FS	SO	G	1							1		Cat1
OC-SB-425-18/20-XXX	8/19/2009 10:25:00	T	FS	SO	G	1							1		Cat3
OC-SB-425-6.0/8.0-XXX	8/19/2009 10:05:00	T	FS	SO	G	1							1		Cat2

See attached Sheet for Sampling Categories: Cat1 Cat2 Cat3

Special Instructions For Lab

0 1 2 3 4 5 6 7 8 9 0

Acct# 12670
Grp# ~~1582~~ 1158425 ③ KMZ 8-20-09 Sample# 5754467-71

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:** 8 / 19 / 09 **Time:** 1700 **Received:** _____ **Date:** / / **Time:** _

Relinquished: _____ **Date:** / / **Time:** _____ **Received:** [signature] **Date:** 8 / 20 / 09 **Time:** 905

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0000 5710

Acct# 12670
Grp# 1158425

Sample# 5754467-71
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-002	8/19/2009 9:30:00 AM	T	EB	BW	G	2								2	Cat 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: 8/19/09	Time: 1700	Received:		Date: / /	Time:
Relinquished:		Date: / /	Time:	Received:	[signature]	Date: 8/20/09	Time: 905

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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 Corp

Date of Receipt: 8/20/09

Time of Receipt: 905

Source Code: 501

Unpacker Emp. No.: 2316

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

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

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	0427583	4.3°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	8/20/09	1030	Unpacking / to Storage
Kristin Leigh	8-20-09	1049	Place in Storage or Entry
			Entry
			Entry

2174.04

Acct# 12670 Grp# 1158426 Sample# 5754472-77
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: 423-336-4166	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 Corporation

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: 423-336-4514 Email None

Job # ____ Quote # ____

Lab SDG # ____ PO # ____

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Opex / Kemporte (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	AV	<--Preservative Type (4) / <--Bottle Type (5)
OC-SB-412-0.0/1.0-XXX	8/18/2009 12:45:00	T	FS	SO	G	1							1		Cat1
OC-SB-412-12/13-XXX	8/18/2009 1:10:00 PM	T	FS	SO	G	1							1		HOLD Analysis Pending Cat3
OC-SB-412-6.0/7.0-XXX	8/18/2009 12:55:00	T	FS	SO	G	1							1		5-Day RUSH TAT Cat 2
OC-SB-420-12/14-XXX	8/18/2009 4:25:00 PM	T	FS	SO	G	1							1		HOLD Analysis Pending Cat 3
OC-SB-420-6.5/8.5-XXX	8/18/2009 4:10:00 PM	T	FS	SO	G	1							1		5-Day RUSH TAT Cat 2

See Attached Sheet for Sampling Categories:
Cat1
Cat2 Cat3

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,

Fed Ex Tracking # 8372 3852 1684
1 Cooler

Acct# 12670 Grp# 1158426 Sample# 5754472-77

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: 8/19/09 Time: 1700 Received: _____ Date: __/__/__ Time: _

Relinquished: _____ Date: __/__/__ Time: ___ Received: [signature] Date: 8/20/09 Time: 905

Print Draft | Print Final and Close

01415 0003

Acct# 12670
Grp# 1158426

Sample# 5754472-77 Lancaster - Soil

Client: Olin Corporation
Address: 3855 North Ocoee St. Suite 200
Cleveland, TN 37312
Phone: 423 336 4511 Fax: 423-336-4166 Email SGMorrow@olin.com Email Rpt:

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

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 Corporation
Company Contact: ERG Accounts Payable
Address: Same as Client
Phone: 423-336-4514 Email None

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)
<--Preservative Type (4)							-	-	-	-	-	-	-	Zn	
<--Bottle Type (5)							G	P	G	V	V	V	AG	AV	
OC-SB-416-0.0/1.0-XXX	8/18/2009 10:35:00	T	FS	SO	G	1							1		Cat 1
OC-SB-416-13/14-XXX	8/18/2009 11:05:00	T	FS	SO	G	1							1		Hold Analysis Pending Cat 3
OC-SB-416-8.0/9.0-XXX	8/18/2009 10:45:00	T	FS	SO	G	1							1		RUSH TURN Cat 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.

Acct#12670 Grp#1158426 Sample# 5754472-77

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:** 8 / 19 / 09 **Time:** 1700 **Received:** _____ **Date:** __ / __ / __ **Time:** _

Relinquished: _____ **Date:** __ / __ / __ **Time:** _____ **Received:** [signature] **Date:** 8 / 20 / 09 **Time:** 905

Print Draft | Print Final and Close

CLN15 0015

Acct# 12670
Grp# 1158426

Sample# 5754472-77 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: 423-336-4166	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 Corporation

Company Contact: ERG Accounts Payable

Address: Same as Client

Phone: 423-336-4514 Email None

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-001	8/18/2009 8:30:00 AM	T	FS	BW	G	2								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

By: _____ Date: _____

Relinquished: [signature] Date: 8/19/09 Time: 1700 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: ____ Received: [signature] Date: 8/20/10 Time: 905

Acct# 12670
Grp# 1158426

Sample# 5754472-77
Lancaster - Soil

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

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)	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-421-0.0/1.0-XXX	8/19/2009 7:40:00 AM	T	FS	SO	G	1							1		Cat1
OC-SB-421-10.5/12.5-XXX	8/19/2009 8:05:00 AM	T	FS	SO	G	1							1		Cat3
OC-SB-421-8.0/10-XXX	8/19/2009 7:45:00 AM	T	FS	SO	G	1							1		Cat2
OC-SB-424-0.0/1.0-XXX	8/19/2009 11:35:00	T	FS	SO	G	1							1		Cat1
OC-SB-425-18/20-XXX	8/19/2009 10:25:00	T	FS	SO	G	1							1		Cat3
OC-SB-425-6.0/8.0-XXX	8/19/2009 10:05:00	T	FS	SO	G	1							1		Cat2

See attached Sheet for Sampling Categories: Cat1 Cat2 Cat3

Special Instructions For Lab

Acct# 12670
Grp# 1158426

Sample# 5754472-77

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: 8 / 19 / 09 Time: 1700 Received: Date: / / Time:

Relinquished: Date: / / Time: Received: [signature] Date: 8 / 20 / 09 Time: 905

Print Draft | Print Final and Close

0HN15 0068

Acct # 12670
Grp # 1158426

Sample # 5754472-2277 ① KMZ 8-20-09
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

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-002	8/19/2009 9:30:00 AM	T	EB	BW	G	2								2	Cat 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) | MADEP Requirement Samples Iced? Y / N (Y)

Temp @ receipt: 4.3 Deg C

Preservation / pH checked? Y / N

By: _____ Date: _____

Relinquished: [signature] Date: 8/19/09 Time: 1700 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 8/20/09 Time: 905

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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 Corp

Date of Receipt: 8/20/09

Time of Receipt: 905

Source Code: 50-1

Unpacker Emp. No.: 2316

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

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

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	0427583	4.3°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	8/20/09	1030	Unpacking / to Storage
Kristin Leigh	8-20-09	1049	Place in Storage or Entry
			Entry
			Entry

Acct # 12670
Grp # 1158830

Sample # 5757305-14
Lancaster Lab - Soil

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

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-SB-419-17/19-XXX	8/19/2009 4:40:00 PM	T	FS	SO	G	1							1		Category 3 (see attached sheet for categories)
OC-SB-419-3.0/5.0-XXX	8/19/2009 4:05:00 PM	T	FS	SO	G	1							1		Category 2 (see attached sheet for categories)
OC-SB-426-0.0/1.0-XXX	8/19/2009 2:15:00 PM	T	FS	SO	G	1							1		Category 1 (see attached sheet for categories)
OC-SB-426-13/15-XXX	8/19/2009 2:35:00 PM	T	FS	SO	G	1							1		Category 3
OC-SB-426-5.0/7.0-DUP	8/19/2009 2:25:00 PM	T	FD	SO	G	1							1		Category 2
OC-SB-426-5.0/7.0-XMS	8/19/2009 2:25:00 PM	T	MS	SO	G	1							1		Category 2
OC-SB-426-5.0/7.0-XXX	8/19/2009 2:25:00 PM	T	FS	SO	G	1							1		Category 2
OC-SB-431-0.0/1.0-XXX	8/20/2009 10:15:00	T	FS	SO	G	1							1		Category 1
OC-SB-431-7.0/9.0-XXX	8/20/2009 10:25:00	T	FS	SO	G	1							1		Category 2
OC-SB-436-0.0/1.0-XXX	8/20/2009 1:05:00 PM	T	FS	SO	G	1							1		Category 1

Fedex Tracking # ~~0044~~ 8372 3852 1700

Acct #12670
Grp # 1158830
Sample # 5757305-14

Sample ID	Date/Time Collected	Fraction	QC Code	Matrix	Grab	Containers (#)	Hydrazine MMH, UDMH	Comments (Special Instructions)
OC-SB-436-13/15-XXX	8/20/2009 1:25:00 PM	T	FS	SO	G	1	1	Category 3
OC-SB-436-6.0/8.0-XXX	8/20/2009 1:10:00 PM	T	FS	SO	G	1	1	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: 5 Deg C
Preservation / pH checked? Y / N
By: Date: N/A

Relinquished: [signature] **Date:** 8/21/09 **Time:** 1525 **Received:** _____ **Date:** __/__/__ **Time:** _

Relinquished: _____ **Date:** __/__/__ **Time:** _____ **Received:** Kacie Hart **Date:** 8/22/09 **Time:** 6:10

Print Draft | Print Final and Close

01445 0023

Acct# 12670
Grp# 1158830
Sample# 5757305-14

Lancaster — Soil

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
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)	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-445-0.0/1.0-XXX	8/21/2009 9:00:00 AM	T	FS	SO	G	1																			1				Category 1
OC-SB-445-25/27-XXX	8/21/2009 10:15:00	T	FS	SO	G	1																			1				Category 3
OC-SB-445-8.0/10-XXX	8/21/2009 9:10:00 AM	T	FS	SO	G	1																			1				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.

01M15 8874

Acct # 12670
Grp # 1158830
Sample # 5757305-14

Lancaster Lab - soil

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

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-SB-432-0.0/1.0-XXX	8/20/2009 2:35:00 PM	T	FS	SO	G	1							1		Category 1 (see attached sheet for explanation)
OC-SB-432-14/16-XXX	8/20/2009 3:15:00 PM	T	FS	SO	G	1							1		Category 1
OC-SB-432-5.0/7.0-XXX	8/20/2009 2:41:00 PM	T	FS	SO	G	1							1		Category 1
OC-SB-443-0.0/1.0-XXX	8/20/2009 4:35:00 PM	T	FS	SO	G	1							1		Category 1
OC-SB-443-18/20-XXX	8/20/2009 5:20:00 PM	T	FS	SO	G	1							1		Category 3 (see attached sheet for explanation)
OC-SB-443-6.8/8.0-XXX	8/20/2009 4:40:00 PM	T	FS	SO	G	1							1		Category 2 (see attached sheet for explanation)

Special Instructions For Lab

01M15 0025

Acct# 12670
Grp# 1158830
Sample# 5757305-14

Lancaster-Soil

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

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)
							-	-	-	-	-	-	-	Zn	<--Preservative Type (4)
							G	P	G	V	V	V	AG	AV	<--Bottle Type (5)
OC-SB-437-0.0/1.0-XXX	8/21/2009 12:30:00	T	FS	SO	G	1							1		Category 1
OC-SB-437-21/23-XXX	8/21/2009 1:10:00 PM	T	FS	SO	G	1							1		Category 3
OC-SB-437-5.0/7.0-XXX	8/21/2009 12:40:00	T	FS	SO	G	1							1		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,

Acct# 12670
Grp# 1158830
Sample# 5757305-14

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

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-003	8/21/2009 7:15:00 AM	T	EB	BW	G	2								2	Category 1 (see attached sheet)

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

Relinquished: [signature] Date: 8/21/09 Time: ~~0900~~ 1525 (Tc) Received: _____ Date: __/__/__ Time: _____
Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 8/22/09 Time: 1000

Print Draft | Print Final and Close

0 0 1 0 5 5 1 0 0 0 2 2

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Mactec

Date of Receipt: 8/22/09

Time of Receipt: 10:10

Source Code: 501

Unpacker Emp. No.: 2114

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

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

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	042995	5.1	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:

-OC-SB-432 5.0/7.0 -xx Sample says 14:40

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Kevin Hawthorne	8/22/09	11:00	Unpacking / to storage
Kristin Zeigler	8-22-09	1144	Place in Storage or Entry
			Entry
			Entry

2174.04

Supplemental Instructions to Laboratory
Soil Samples
Olin Chemical Superfund Site

LABORATORY: Lancaster Laboratories

Lab SDG / Work Order #	MACTEC Field Sample ID	Lab Sample ID	Sample Date	Sample Category on the COC	Analyte/ Method	Action Item/Comments
OLN15	OC-SB-412-12/13-XXX	TBD	08/18/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
OLN15	OC-SB-416-13/14-XXX	TBD	08/18/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
OLN15	OC-SB-420-12/14-XXX	TBD	08/18/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
OLN15	OC-SB-421-10.5/12.5-XXX	TBD	08/19/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
OLN15	OC-SB-425-18/20-XXX	TBD	08/19/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC

Tige Cunningham

Sample Manager
MACTEC Engineering & Consulting, Inc.

8/28/09
Date

P:\6107090015 - Olin Wilmington CSS 2009\3.0 Field and Site Characterization\3.6 Databases\Prelim EDDs\
OLN15 Hydrazine, ds, Analysis Pending Samples

Supplemental Instructions to Laboratory
Soil Samples
Olin Chemical Superfund Site

LABORATORY: Lancaster Laboratories

Lab Group No.	MACTEC Field Sample ID	Lab Sample ID	Sample Date	Sample Category on the COC	Analyte/ Method	Action Item/Comments
1158830	OC-SB-419-17/19-XXX	TBD	08/19/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1158830	OC-SB-426-13/15-XXX	TBD	08/19/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1158830	OC-SB-436-13/15-XXX	TBD	08/20/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1158830	OC-SB-437-21/23-XXX	TBD	08/21/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1158830	OC-SB-443-18/20-XXX	TBD	08/20/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC
1158830	OC-SB-445-25/27-XXX	TBD	08/21/09	Category 3	Hydrazines	Cancel Previously Requested Hydrazine Analysis on COC

Tige Cunningham

Sample Manager
MACTEC Engineering & Consulting, Inc.

9-1-09
Date

P:\6107090016 - Olin Wilmington CSS 2009\3.0 Field and Site Characterization\3.6 Databases\Prelim EDDs\
CLN15-12 thru 19 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

August 27, 2009

SAMPLE GROUP

The sample group for this submittal is 1158425. Samples arrived at the laboratory on Thursday, August 20, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-412-6.0/7.0-XXX Grab Soil	5754467
OC-SB-420-6.5/8.5-XXX Grab Soil	5754468
OC-SB-416-8.0/9.0-XXX Grab Soil	5754469
OC-SB-421-8.0/10-XXX Grab Soil	5754470
OC-SB-425-6.0/8.0-XXX Grab Soil	5754471

METHODOLOGY

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

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

OLN15 0032

Lancaster Laboratories, Inc.
2425 New Holland Pike
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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,

Matthew E. Barton
Senior Specialist

OLM15 0033

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.

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 5754467

Group No. 1158425
MA

OC-SB-412-6.0/7.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/18/2009 12:55

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/27/2009 at 09:55
Discard: 09/11/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4126 SDG#: OLN15-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.3	5.7	1
10346	Hydrazine	302-01-2	0.71	J	0.57	2.3	1
10346	Methylhydrazine	60-34-4	N.D.		2.3	5.7	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	12.4		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	0923610056268	08/25/2009 01:51	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09232820005B	08/20/2009 18:44	Scott W Freisher	1

OLN15 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 5754468

Group No. 1158425
MA

OC-SB-420-6.5/8.5-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/18/2009 16:10

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/27/2009 at 09:55
Discard: 09/11/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4206 SDG#: OLN15-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.3	1
10346	Hydrazine	302-01-2	N.D.	0.53	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.3	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	6.0	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	0923610056268	08/25/2009 02:09	Jia Wang	1
00111	Moisture	SM20 2540 G	2	09233820001A	08/21/2009 15:14	Scott W Freisher	1

OLN15 0036

*=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 5754469

Group No. 1158425
MA

OC-SB-416-8.0/9.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/18/2009 10:45

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/27/2009 at 09:55
Discard: 09/11/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4168 SDG#: OLN15-03

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.	2.1	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.	5.3	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	0923610056268	08/25/2009 02:28	Jia Wang	1
00111	Moisture	SM20 2540 G	2	09233820001B	08/21/2009 15:14	Scott W Freisher	1

OLN15 0037

*=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 5754470

Group No. 1158425
MA

OC-SB-421-8.0/10-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 07:45

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/27/2009 at 09:55
Discard: 09/11/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4218 SDG#: OLN15-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.2	5.5	1
10346	Hydrazine	302-01-2	0.58	J	0.55	2.2	1
10346	Methylhydrazine	60-34-4	N.D.		2.2	5.5	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	8.4		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	0923610056268	08/25/2009 02:47	Jia Wang	1
00111	Moisture	SM20 2540 G	2	09233820002A	08/21/2009 14:51	Scott W Freisher	1

OLN15 0038

*=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 5754471

Group No. 1158425
MA

OC-SB-425-6.0/8.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 10:05

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/27/2009 at 09:55
Discard: 09/11/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4256 SDG#: OLN15-05

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.		2.2	5.5	1
10346	Hydrazine	302-01-2	0.70	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.	9.2		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	0923610056268	08/25/2009 03:06	Jia Wang	1
00111	Moisture	SM20 2540 G	2	09233820002B	08/21/2009 14:51	Scott W Freisher	1

OLN15 0039

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

Lancaster Laboratories, Inc.
2425 New Holland Pike
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Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

423-336-4000

Prepared by:

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

August 28, 2009

SAMPLE GROUP

The sample group for this submittal is 1158426. Samples arrived at the laboratory on Thursday, August 20, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-412-0.0/1.0-XXX Grab Soil	5754472
OC-SB-416-0.0/1.0-XXX Grab Soil	5754473
OC-EBK-001 Grab Water	5754474
OC-SB-421-0.0/1.0-XXX Grab Soil	5754475
OC-SB-424-0.0/1.0-XXX Grab Soil	5754476
OC-EBK-002 Grab Water	5754477

METHODOLOGY

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

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

01M15 8848

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

OLM15 0841

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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 5754472

Group No. 1158426
MA

OC-SB-412-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/18/2009 12:45

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/28/2009 at 14:28
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4120 SDG#: OLN15-06

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	5.2	1
10346	Hydrazine	302-01-2	N.D.	0.52	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.2	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	3.3	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	0923610056268	08/25/2009 03:24	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820001A	08/24/2009 16:49	Scott W Freisher	1

OLN15 8643

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5754473

Group No. 1158426
MA

OC-SB-416-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/18/2009 10:35

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/28/2009 at 14:28
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4160 SDG#: OLN15-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.2	1
10346	Hydrazine	302-01-2	N.D.	0.52	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.2	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	3.2	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	0923610056268	08/25/2009 03:43	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820001A	08/24/2009 16:49	Scott W Freisher	1

OLN15 0044

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 5754474

Group No. 1158426
MA

OC-EBK-001 Grab Water
Wilmington MA Superfund Site

Collected: 08/18/2009 08:30

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/28/2009 at 14:28
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

WEB01 SDG#: OLN15-08EB

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	0923810056274	08/26/2009 21:09	Jia Wang	1

OLN15 P045

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5754475

Group No. 1158426
MA

OC-SB-421-0.0/1.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 07:40

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/28/2009 at 14:28
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4210 SDG#: OLN15-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.1	5.2	1
10346	Hydrazine	302-01-2	N.D.	0.52	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.2	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	4.6	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	0923610056268	08/25/2009 04:21	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820001A	08/24/2009 16:49	Scott W Freisher	1

OLN15 0046

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5754476

Group No. 1158426
MA

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

Collected: 08/19/2009 11:35

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/28/2009 at 14:28
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4240 SDG#: OLN15-10

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.	2.1	5.2	1
10346	Hydrazine	302-01-2	N.D.	0.52	2.1	1
10346	Methylhydrazine	60-34-4	N.D.	2.1	5.2	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	3.2	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	0923610056268	08/25/2009 04:39	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820001A	08/24/2009 16:49	Scott W Freisher	1

OLN15 0047

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 5754477

Group No. 1158426
MA

OC-EBK-002 Grab Water
Wilmington MA Superfund Site

Collected: 08/19/2009 09:30

Account Number: 12670

Submitted: 08/20/2009 09:05
Reported: 08/28/2009 at 14:28
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

WEB02 SDG#: OLN15-11EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
			ug/l	ug/l	ug/l	
Misc. Organics	**SW-846 8315A modified**					
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	0923810056274	08/26/2009 21:28	Jia Wang	1

OLN15 8048

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

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Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Olin Corporation
Suite 200
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Cleveland TN 37312

423-336-4000

Prepared by:

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

August 28, 2009

SAMPLE GROUP

The sample group for this submittal is 1158830. Samples arrived at the laboratory on Saturday, August 22, 2009. The PO# for this group is REWI0012 and the release number is ERRE9813.

Client Description	Lancaster Labs Number
OC-SB-419-3.0/5.0-XXX Grab Soil	5757305
OC-SB-426-5.0/7.0-DUP Grab Soil	5757306
OC-SB-426-5.0/7.0-XXX Grab Soil	5757307
OC-SB-426-5.0/7.0-XMS Grab Soil	5757308
OC-SB-426-5.0/7.0-MSD Grab Soil	5757309
OC-SB-431-7.0/9.0-XXX Grab Soil	5757310
OC-SB-436-6.0/8.0-XXX Grab Soil	5757311
OC-SB-445-8.0/10-XXX Grab Soil	5757312
OC-SB-443-6.0/8.0-XXX Grab Soil	5757313
OC-SB-437-5.0/7.0-XXX Grab Soil	5757314

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
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OLN15 0049

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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

01N15 0050

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5757305

Group No. 1158830
MA

OC-SB-419-3.0/5.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 16:05

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4193 SDG#: OLN15-12

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics		**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine		57-14-7	N.D.	2.1	5.2	1
10346	Hydrazine		302-01-2	N.D.	0.52	2.1	1
10346	Methylhydrazine		60-34-4	N.D.	2.1	5.2	1
Wet Chemistry		**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture		n.a.	3.9	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	0923610056268	08/25/2009 04:58	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0051

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

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5757306

Group No. 1158830
MA

OC-SB-426-5.0/7.0-DUP Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 14:25

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W426D SDG#: OLN15-13FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.4	5.9	1
10346	Hydrazine	302-01-2	N.D.	0.59	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	2.4	5.9	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.2	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	0923610056268	08/24/2009 22:25	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0052

*=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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5757307

Group No. 1158830
MA

OC-SB-426-5.0/7.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 14:25

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4265 SDG#: OLN15-14BKG

CAT No.	Analysis Name		CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics		**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine		57-14-7	N.D.		2.4	5.9	1
10346	Hydrazine		302-01-2	0.69	J	0.59	2.4	1
10346	Methylhydrazine		60-34-4	N.D.		2.4	5.9	1
Wet Chemistry		**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture		n.a.	14.9		0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	0923610056268	08/24/2009 22:43	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0053

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5757308

Group No. 1158830
MA

OC-SB-426-5.0/7.0-XMS Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 14:25

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4265 SDG#: OLN15-14MS

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	680	2.4	5.9	1
10346	Hydrazine	302-01-2	61	0.59	2.4	1
10346	Methylhydrazine	60-34-4	530	2.4	5.9	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00118	Moisture	n.a.	14.9	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	0923610056268	08/24/2009 23:02	Jia Wang	1
00118	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0054

*=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 5757309

Group No. 1158830
MA

OC-SB-426-5.0/7.0-MSD Grab Soil
Wilmington MA Superfund Site

Collected: 08/19/2009 14:25

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4265 SDG#: OLN15-14MSD

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	700	2.4	5.9	1
10346	Hydrazine	302-01-2	50	0.59	2.4	1
10346	Methylhydrazine	60-34-4	460	2.4	5.9	1
Wet Chemistry	**SM20 2540 G**		%	%	%	
00118	Moisture	n.a.	14.9	0.50	0.50	1
00121	Moisture Duplicate	n.a.	15.4	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	0923610056268	08/24/2009 23:21	Jia Wang	1
00118	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1
00121	Moisture Duplicate	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0055

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

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5757310

Group No. 1158830
MA

OC-SB-431-7.0/9.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/20/2009 10:25

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4317 SDG#: OLN15-15

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.2	5.5	1
10346	Hydrazine	302-01-2	N.D.	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.	9.0	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	0923610056268	08/25/2009 05:17	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0056

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

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5757311

Group No. 1158830
MA

OC-SB-436-6.0/8.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/20/2009 13:10

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4366 SDG#: OLN15-16

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.2	5.4	1
10346	Hydrazine	302-01-2	0.80	J	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.	8.0		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	0923610056268	08/25/2009 05:36	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0057

Lancaster Laboratories, Inc.
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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 5757312

Group No. 1158830
MA

OC-SB-445-8.0/10-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/21/2009 09:10

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4458 SDG#: OLN15-17

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**		**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.		2.4	6.0	1
10346	Hydrazine	302-01-2	0.65	J	0.60	2.4	1
10346	Methylhydrazine	60-34-4	N.D.		2.4	6.0	1
Wet Chemistry	**SM20 2540 G**		**%**		**%**	**%**	
00111	Moisture	n.a.	16.4		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	0923610056268	08/25/2009 05:54	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0058

Lancaster Laboratories, Inc.
2425 New Holland Pike
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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 5757313

Group No. 1158830
MA

OC-SB-443-6.0/8.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/20/2009 16:40

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4436 SDG#: OLN15-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.4	6.0	1
10346	Hydrazine	302-01-2	N.D.	0.60	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	2.4	6.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	16.2	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	0923610056268	08/25/2009 06:13	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0059

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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 5757314

Group No. 1158830
MA

OC-SB-437-5.0/7.0-XXX Grab Soil
Wilmington MA Superfund Site

Collected: 08/21/2009 12:40

Account Number: 12670

Submitted: 08/22/2009 10:10
Reported: 08/28/2009 at 15:19
Discard: 09/12/2009

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

W4375 SDG#: OLN15-19*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	2.3	5.7	1
10346	Hydrazine	302-01-2	N.D.	0.57	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	2.3	5.7	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	12.6	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	0923610056268	08/25/2009 06:32	Jia Wang	1
00111	Moisture	SM20 2540 G	1	09236820002A	08/24/2009 16:37	Scott W Freisher	1

OLN15 0060

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

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Miscellaneous Organics Data

OLM15 8861

Case Narrative
Conformance/Nonconformance
Summary

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CASE NARRATIVE

Client: Olin Corporation
SDG#: OLN15

LANCASTER LABORATORIES
MISCELLANEOUS ORGANICS DATA

SAMPLE NUMBER(S)

LL #'s	Sample Code	Matrix Soil	Matrix Water	Comments
5754467	W4126	X		
5754468	W4206	X		
5754469	W4168	X		
5754470	W4218	X		
5754471	W4256	X		
5754472	W4120	X		
5754473	W4160	X		
5754474	WEB01		X	
5754475	W4210	X		
5754476	W4240	X		
5754477	WEB02		X	
5757305	W4193	X		
5757306	W426D	X		
5757307	W4265	X		Unspiked
5757308MS	W4265	X		Matrix Spike
5757309MSD	W4265	X		Matrix Spike Dup
5757310	W4317	X		
5757311	W4366	X		
5757312	W4458	X		
5757313	W4436	X		
5757314	W4375	X		

LABORATORY SUBMITTED QC:

Blank	Aug 24	X		Method Blank
Blank	Aug 26		X	Method Blank
5760570			X	Unspiked
5760570MS			X	Matrix Spike
5760570MSD			X	Matrix Spike Dup

Case Narrative (continued)
SDG: OLN15

LABORATORY SUBMITTED QC continued:

LL #'s		Sample Code	Soil	Water	Comments
LSC	Aug 24		X		Lab Control Sample
LCSD	Aug 24		X		Lab Control Sample Dup
LSC	Aug 26			X	Lab Control Sample
LCSD	Aug 26			X	Lab Control Sample Dup

SAMPLE PREPARATION:

Samples were derivatized with benzaldehyde prior to analysis.

ANALYSIS:

No problems were encountered during the analysis of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

The recovery for 1,1-dimethylhydrazine in 5757308MS and 5757309MSD was outside QC limits.

DATA INTERPRETATION:

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

The LCS serves as the ICV second source check for the water method.

Abbreviation Key

NC = Not calculated
NF = Not found

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Case Narrative (continued)
SDG: OLN15

Case Narrative Reviewed and Approved by:

Dorothy M Love for Date: 9/17/09
Dana M. Kauffman
Manager, Data Deliverables

OLN15 0065

QC Summary

Lancaster Laboratories

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

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 24Aug-100562-70-27
MSD File Name: 24Aug-100562-70-28
Batch No.: 0923610056268
MS Injected: 8/24/2009
MS Injected: 8/24/2009
Workbook: TQU01408-24Aug2009-1
MS ID: 5757308MS
MSD ID: 5757309MSD
Dilution Factor: 1

Compound	Specified Spike Level	BKG	MS Conc.	MSD Conc.	MS Recovery	MSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	0.59	51.54	42.30	41	33	11-102	20	30
1,1-Dimethylhydrazine	625	0	581.52	591.85	93	95	10-92	2	30
Monomethylhydrazine	625	0	446.83	395.01	71	63	10-116	12	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: 24Aug-100562-70-13
LCSD File Name: 24Aug-100562-70-14
Batch No.: 0923610056268
LCS Injected: 8/24/2009
LCSD Injected: 8/24/2009
Workbook: TQU01408-24Aug2009-1
LCS ID: LCS
LCSD ID: LCSD
Dilution Factor: 1

Compound	Spike Level	LCS Conc.	LCSD Conc.	LCS Recovery	LCSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/g)	(ng/g)	(ng/g)	(%)	(%)	(%)	(%)	(%)
Hydrazine	125	99.69	101.85	80	81	70-130	2	30
1,1-Dimethylhydrazine	625	669.27	642.32	107	103	70-130	4	30
Monomethylhydrazine	625	694.34	680.23	111	109	70-130	2	30

Comments:

Analyst: JW 1543 8/25/2009
Reviewed by: [illegible] 9/26/09

Lancaster Laboratories

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

Matrix Spike Recovery

Instrument No.: TQU01408
MS File Name: 26Aug-100562-74-17
MSD File Name: 26Aug-100562-74-18
Batch No.: 0923810056274
MS Injected: 8/26/2009
MS Injected: 8/26/2009
Workbook: TQU01408-26Aug2009-1
MS ID: 5760570MS
MSD ID: 5760570MSD
Dilution Factor: 1

Compound	Specified Spike Level	BKG	MS Conc.	MSD Conc.	MS Recovery	MSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/mL)	(ng/mL)	(ng/mL)	(ng/mL)	(%)	(%)	(%)	(%)	(%)
Hydrazine	12.5	0	11.652	11.980	93	96	70-130	3	30
1,1-Dimethylhydrazine	62.5	0	76.041	77.259	122	124	70-130	2	30
Monomethylhydrazine	62.5	0	78.252	79.107	125	127	70-130	1	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 Aqueous Samples

Laboratory Control Sample Recovery

Instrument No.: TQU01408
LCS File Name: 26Aug-100562-74-11
LCSD File Name: 26Aug-100562-74-12
Batch No.: 0923810056274
LCS Injected: 8/26/2009
LCSD Injected: 8/26/2009
Workbook: TQU01408-26Aug2009-1
LCS ID: LCS
LCSD ID: LCSD
Dilution Factor: 1

Compound	Spike Level	LCS Conc.	LCSD Conc.	LCS Recovery	LCSD Recovery	Recovery Range	RPD	RPD MAX
	(ng/mL)	(ng/mL)	(ng/mL)	(%)	(%)	(%)	(%)	(%)
Hydrazine	12.5	11.935	12.168	95	97	70-130	2	30
1,1-Dimethylhydrazine	62.5	74.819	74.637	120	119	70-130	0	30
Monomethylhydrazine	62.5	77.778	78.877	124	126	70-130	1	30

Comments:

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

Sample Data

OLM15 6071

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-24Aug2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
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	203	0.173	ng/mL		
1,1-Dimethylhydrazine	Conditioner2	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	MDL	Unknown	Method Settings	6676	0.363	ng/mL		
1,1-Dimethylhydrazine	Conditioner3	Unknown	Method Settings	613	0.185	ng/mL		
1,1-Dimethylhydrazine	Conditioner4	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Conditioner5	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	Blank	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757306FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757307BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757308MS	Unknown	Method Settings	1983114	58.152	ng/mL	581.52	ng/g
1,1-Dimethylhydrazine	~~5757309MDS~~	Unknown	Method Settings	2018458	59.185	ng/mL	591.85	ng/g
1,1-Dimethylhydrazine	LCS	Unknown	Method Settings	2283246	66.927	ng/mL	669.27	ng/g
1,1-Dimethylhydrazine	LCSD	Unknown	Method Settings	2191080	64.232	ng/mL	642.32	ng/g
1,1-Dimethylhydrazine	ICV	Unknown	Method Settings	2356296	69.063	ng/mL		
1,1-Dimethylhydrazine	Spike Check	Unknown	Method Settings	2493664	73.080	ng/mL		
1,1-Dimethylhydrazine	Conditioner6	Unknown	Method Settings	179	0.173	ng/mL		
1,1-Dimethylhydrazine	Conditioner7	Unknown	Method Settings	NF	NC	ng/mL		
1,1-Dimethylhydrazine	5754467	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754468	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754469	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754470	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754471	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754472	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754473	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754475	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5754476	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757305	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757310	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757311	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757312	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757313	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
1,1-Dimethylhydrazine	5757314	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g

OLN15.0072

Analyst: JW 1543 8/25/2009

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-24Aug2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
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	1246	-0.024	ng/mL		
Hydrazine	Conditioner2	Unknown	Method Settings	189	-0.031	ng/mL		
Hydrazine	MDL	Unknown	Method Settings	14138	0.067	ng/mL		
Hydrazine	Conditioner3	Unknown	Method Settings	3545	-0.008	ng/mL		
Hydrazine	Conditioner4	Unknown	Method Settings	301	-0.030	ng/mL		
Hydrazine	Conditioner5	Unknown	Method Settings	162	-0.031	ng/mL		
Hydrazine	Blank	Unknown	Method Settings	6106	0.010	ng/mL	0.10	ng/g
Hydrazine	5757306FD	Unknown	Method Settings	11009	0.045	ng/mL	0.45	ng/g
Hydrazine	5757307BKG	Unknown	Method Settings	13044	0.059	ng/mL	0.59	ng/g
Hydrazine	5757308MS	Unknown	Method Settings	738520	5.154	ng/mL	51.54	ng/g
Hydrazine 5757301MSD	~~5757309MDS~~	Unknown	Method Settings	606980	4.230	ng/mL	42.30	ng/g
Hydrazine	LCS	Unknown	Method Settings	1424161	9.969	ng/mL	99.69	ng/g
Hydrazine	LCSD	Unknown	Method Settings	1454915	10.185	ng/mL	101.85	ng/g
Hydrazine	ICV	Unknown	Method Settings	1744655	12.219	ng/mL		
Hydrazine	Spike Check	Unknown	Method Settings	1501490	10.512	ng/mL		
Hydrazine	Conditioner6	Unknown	Method Settings	1591	-0.021	ng/mL		
Hydrazine	Conditioner7	Unknown	Method Settings	397	-0.030	ng/mL		
Hydrazine	5754467	Unknown	Method Settings	13499	0.062	ng/mL	0.62	ng/g
Hydrazine	5754468	Unknown	Method Settings	10928	0.044	ng/mL	0.44	ng/g
Hydrazine	5754469	Unknown	Method Settings	6990	0.017	ng/mL	0.17	ng/g
Hydrazine	5754470	Unknown	Method Settings	12202	0.053	ng/mL	0.53	ng/g
Hydrazine	5754471	Unknown	Method Settings	13754	0.064	ng/mL	0.64	ng/g
Hydrazine	5754472	Unknown	Method Settings	7412	0.020	ng/mL	0.20	ng/g
Hydrazine	5754473	Unknown	Method Settings	6872	0.016	ng/mL	0.16	ng/g
Hydrazine	5754475	Unknown	Method Settings	8651	0.028	ng/mL	0.28	ng/g
Hydrazine	5754476	Unknown	Method Settings	7906	0.023	ng/mL	0.23	ng/g
Hydrazine	5757305	Unknown	Method Settings	6175	0.011	ng/mL	0.11	ng/g
Hydrazine	5757310	Unknown	Method Settings	8652	0.028	ng/mL	0.28	ng/g
Hydrazine	5757311	Unknown	Method Settings	15175	0.074	ng/mL	0.74	ng/g
Hydrazine	5757312	Unknown	Method Settings	12320	0.054	ng/mL	0.54	ng/g
Hydrazine	5757313	Unknown	Method Settings	8246	0.025	ng/mL	0.25	ng/g
Hydrazine	5757314	Unknown	Method Settings	10377	0.040	ng/mL	0.40	ng/g

Analyst : JW 1543 8/25/2009

Lancaster Laboratories
Quan Summary Report

Workbook Name: TQU01408-24Aug2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
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	9177	0.413	ng/mL		
Monomethylhydrazine	Conditioner3	Unknown	Method Settings	63	0.162	ng/mL		
Monomethylhydrazine	Conditioner4	Unknown	Method Settings	135	0.164	ng/mL		
Monomethylhydrazine	Conditioner5	Unknown	Method Settings	164	0.165	ng/mL		
Monomethylhydrazine	Blank	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5757306FD	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5757307BKG	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5757308MS	Unknown	Method Settings	1617546	44.683	ng/mL	446.83	ng/g
Monomethylhydrazine	~~5757309MDS~~ 5757309MSD	Unknown	Method Settings	1429278	39.501	ng/mL	395.01	ng/g
Monomethylhydrazine	LCS	Unknown	Method Settings	2516764	69.434	ng/mL	694.34	ng/g
Monomethylhydrazine	LCSD	Unknown	Method Settings	2465509	68.023	ng/mL	680.23	ng/g
Monomethylhydrazine	ICV	Unknown	Method Settings	2651820	73.151	ng/mL		
Monomethylhydrazine	Spike Check	Unknown	Method Settings	2774215	76.520	ng/mL		
Monomethylhydrazine	Conditioner6	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	Conditioner7	Unknown	Method Settings	NF	NC	ng/mL		
Monomethylhydrazine	5754467	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5754468	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5754469	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5754470	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5754471	Unknown	Method Settings	560	0.176	ng/mL	1.76	ng/g
Monomethylhydrazine	5754472	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5754473	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5754475	Unknown	Method Settings	437	0.172	ng/mL	1.72	ng/g
Monomethylhydrazine	5754476	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5757305	Unknown	Method Settings	347	0.170	ng/mL	1.70	ng/g
Monomethylhydrazine	5757310	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5757311	Unknown	Method Settings	218	0.166	ng/mL	1.66	ng/g
Monomethylhydrazine	5757312	Unknown	Method Settings	NF	NC	ng/mL	NC	ng/g
Monomethylhydrazine	5757313	Unknown	Method Settings	109	0.163	ng/mL	1.63	ng/g
Monomethylhydrazine	5757314	Unknown	Method Settings	804	0.182	ng/mL	1.82	ng/g

Analyst: JW 1543 8/25/2009
8/26/09

OLM15 0074

Lancaster Laboratories

Quan Summary Report

Workbook Name: TQU01408-26Aug2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	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	7263	0.386	ng/mL
1,1-Dimethylhydrazine	Conditioner3	Unknown	Method Settings	398	0.178	ng/mL
1,1-Dimethylhydrazine	Conditioner4	Unknown	Method Settings	46	0.168	ng/mL
1,1-Dimethylhydrazine	Conditioner5	Unknown	Method Settings	45	0.168	ng/mL
1,1-Dimethylhydrazine	Blank	Unknown	Method Settings	31	0.167	ng/mL
1,1-Dimethylhydrazine	5754474	Unknown	Method Settings	62	0.168	ng/mL
1,1-Dimethylhydrazine	5754477	Unknown	Method Settings	NF	NC	ng/mL
1,1-Dimethylhydrazine	5757324	Unknown	Method Settings	NF	NC	ng/mL
1,1-Dimethylhydrazine	5760570	Unknown	Method Settings	NF	NC	ng/mL
1,1-Dimethylhydrazine	5760570MS	Unknown	Method Settings	2506200	76.041	ng/mL
1,1-Dimethylhydrazine	5760570MSD	Unknown	Method Settings	2546430	77.259	ng/mL
1,1-Dimethylhydrazine	ICV/LCS	Unknown	Method Settings	2465821	74.819	ng/mL
1,1-Dimethylhydrazine	LCSD	Unknown	Method Settings	2459824	74.637	ng/mL

Analyst : JW 1543 8/27/2009
[illegible] 8/28/09

OLM15 0075

There is no signature data to report.

Lancaster Laboratories

Quan Summary Report

Workbook Name: TQU01408-26Aug2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Instrument No. TQU01408
Analyst JW01543

Component Name	Sample ID	Sample Type	Integration Type	Response	Calc Amt	Units
Hydrazine	Conditioner1	Unknown	Method Settings	469	-0.042	ng/mL
Hydrazine	Conditioner2	Unknown	Method Settings	69	-0.045	ng/mL
Hydrazine	MDL	Unknown	Method Settings	14503	0.058	ng/mL
Hydrazine	Conditioner3	Unknown	Method Settings	3284	-0.022	ng/mL
Hydrazine	Conditioner4	Unknown	Method Settings	303	-0.043	ng/mL
Hydrazine	Conditioner5	Unknown	Method Settings	187	-0.044	ng/mL
Hydrazine	Blank	Unknown	Method Settings	9528	0.022	ng/mL
Hydrazine	5754474	Unknown	Method Settings	8392	0.014	ng/mL
Hydrazine	5754477	Unknown	Method Settings	8472	0.015	ng/mL
Hydrazine	5757324	Unknown	Method Settings	8329	0.014	ng/mL
Hydrazine	5760570	Unknown	Method Settings	9237	0.020	ng/mL
Hydrazine	5760570MS	Unknown	Method Settings	1641562	11.652	ng/mL
Hydrazine	5760570MSD	Unknown	Method Settings	1687648	11.980	ng/mL
Hydrazine	ICV/LCS	Unknown	Method Settings	1681326	11.935	ng/mL
Hydrazine	LCSD	Unknown	Method Settings	1713944	12.168	ng/mL

Analyst : JW 1543 8/27/2009

8/28/09

OLN15 0076

There is no signature data to report.

Lancaster Laboratories

Quan Summary Report

Workbook Name: TQU01408-26Aug2009-1
Current Workbook Path: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
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	9000	0.381	ng/mL
Monomethylhydrazine	Conditioner3	Unknown	Method Settings	525	0.141	ng/mL
Monomethylhydrazine	Conditioner4	Unknown	Method Settings	153	0.131	ng/mL
Monomethylhydrazine	Conditioner5	Unknown	Method Settings	NF	NC	ng/mL
Monomethylhydrazine	Blank	Unknown	Method Settings	NF	NC	ng/mL
Monomethylhydrazine	5754474	Unknown	Method Settings	NF	NC	ng/mL
Monomethylhydrazine	5754477	Unknown	Method Settings	NF	NC	ng/mL
Monomethylhydrazine	5757324	Unknown	Method Settings	NF	NC	ng/mL
Monomethylhydrazine	5760570	Unknown	Method Settings	NF	NC	ng/mL
Monomethylhydrazine	5760570MS	Unknown	Method Settings	2757438	78.252	ng/mL
Monomethylhydrazine	5760570MSD	Unknown	Method Settings	2787612	79.107	ng/mL
Monomethylhydrazine	ICV/LCS	Unknown	Method Settings	2740714	77.778	ng/mL
Monomethylhydrazine	LCSD	Unknown	Method Settings	2779495	78.877	ng/mL

Analyst : JW 1543 8/27/2009

8/28/09

GLM15 0827

There is no signature data to report.

Lancaster Laboratories

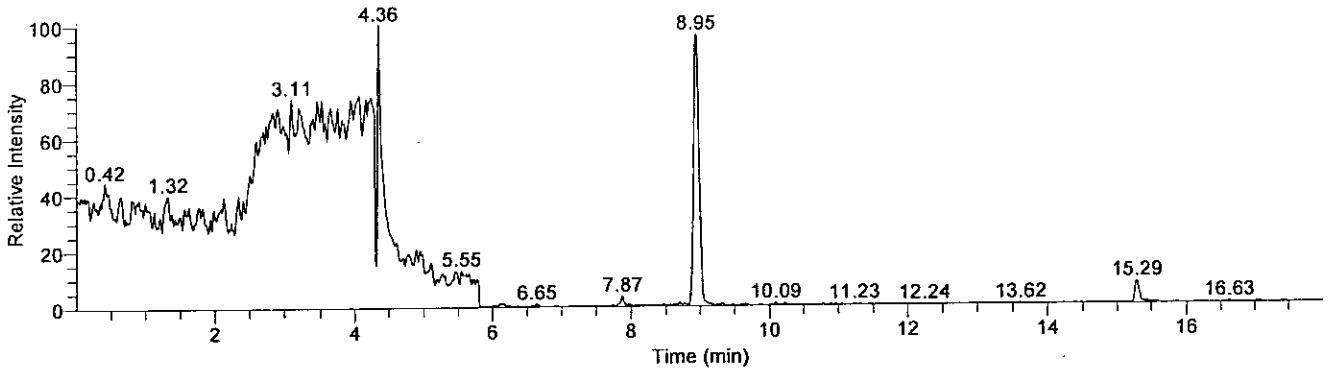
Printed: Tuesday, August 25, 2009, 09:38:01

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-15.raw
Sample ID:	5754467
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 1:51:01 AM
Vial:	E:26
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-15 - TIC RT: 0.01 - 17.99 NL: 2.54E3

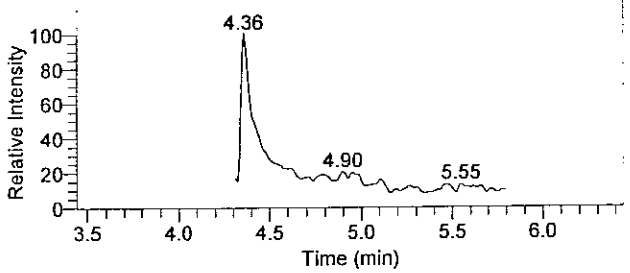


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:26, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-15, Comments: , ID: 5754467

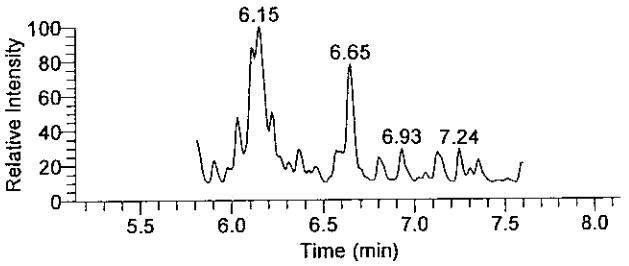
Monomethylhydrazine

24Aug-100562-70-15 - TIC RT: 3.44 - 6.44 NL: 2.54E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



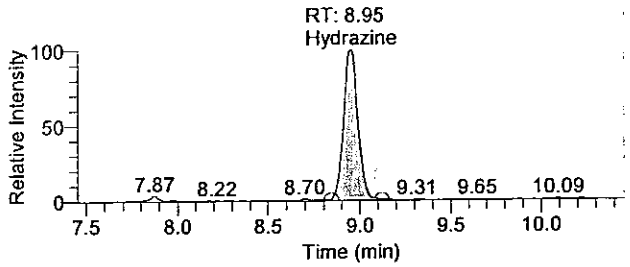
1,1-Dimethylhydrazine

24Aug-100562-70-15 - TIC RT: 5.14 - 8.14 NL: 3.36E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-15 - TIC RT: 7.45 - 10.45 NL: 2.44E3
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
5754467	Method Settings	Hydrazine	8.95	13499	0.062	ng/mL
5754467	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754467	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

There is no signature data to report.

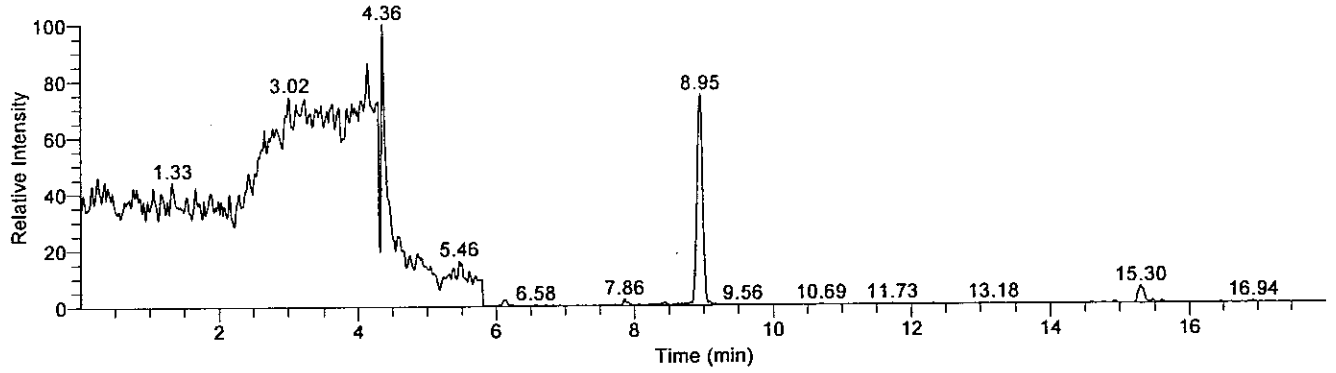
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:01
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-16.raw
Sample ID:	5754468
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 2:09:45 AM
Vial:	E:27
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-16 - TIC RT: 0.00 - 17.99 NL: 2.60E3

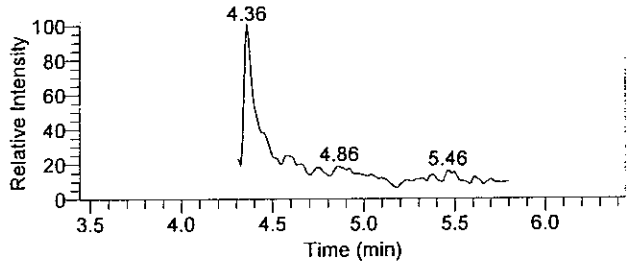


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:27, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-16, Comments: , ID: 5754468

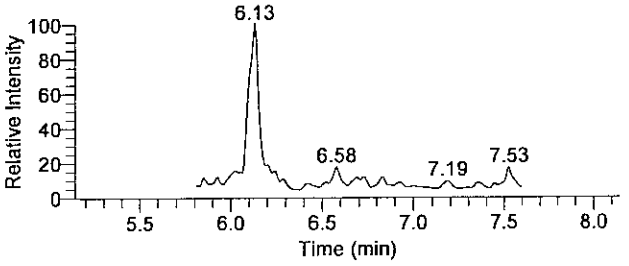
Monomethylhydrazine

24Aug-100562-70-16 - TIC RT: 3.44 - 6.44 NL: 2.60E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



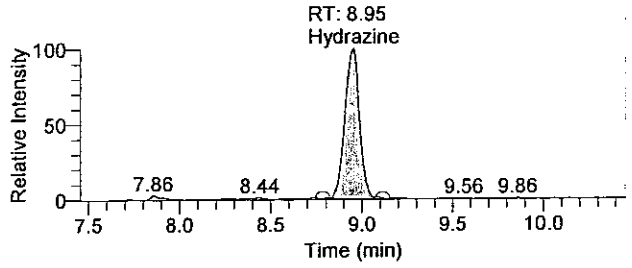
1,1-Dimethylhydrazine

24Aug-100562-70-16 - TIC RT: 5.14 - 8.14 NL: 6.56E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-16 - TIC RT: 7.45 - 10.45 NL: 1.94E3
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
5754468	Method Settings	Hydrazine	8.95	10928	0.044	ng/mL
5754468	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754468	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009
[illegible] 8/26/09

There is no signature data to report.

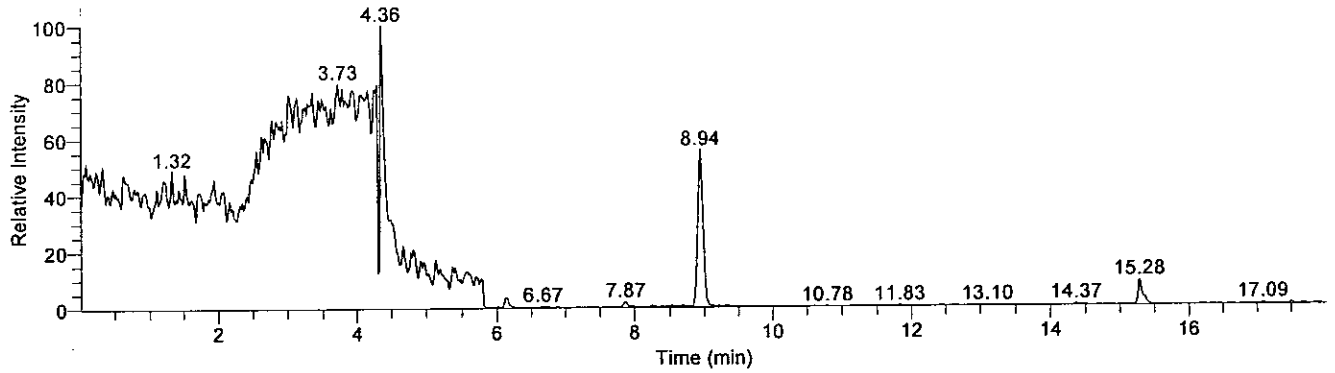
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:02
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-17.raw
Sample ID:	5754469
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 2:28:29 AM
Vial:	E:28
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-17 - TIC RT: 0.00 - 17.99 NL: 2.43E3

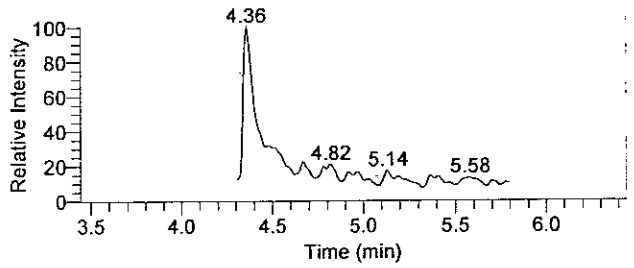


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:28, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-17, Comments: , ID: 5754469

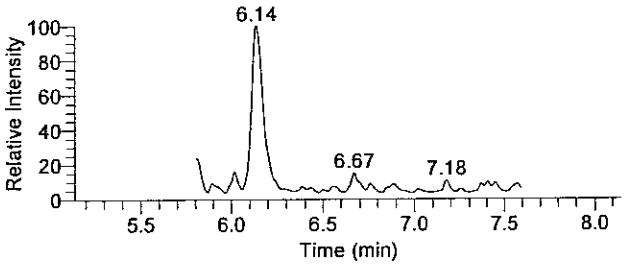
Monomethylhydrazine

24Aug-100562-70-17 - TIC RT: 3.44 - 6.44 NL: 2.43E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



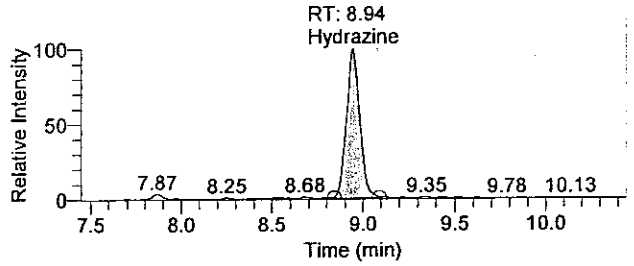
1,1-Dimethylhydrazine

24Aug-100562-70-17 - TIC RT: 5.14 - 8.14 NL: 9.36E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-17 - TIC RT: 7.44 - 10.44 NL: 1.35E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0882

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754469	Method Settings	Hydrazine	8.94	6990	0.017	ng/mL
5754469	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754469	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25 /2009

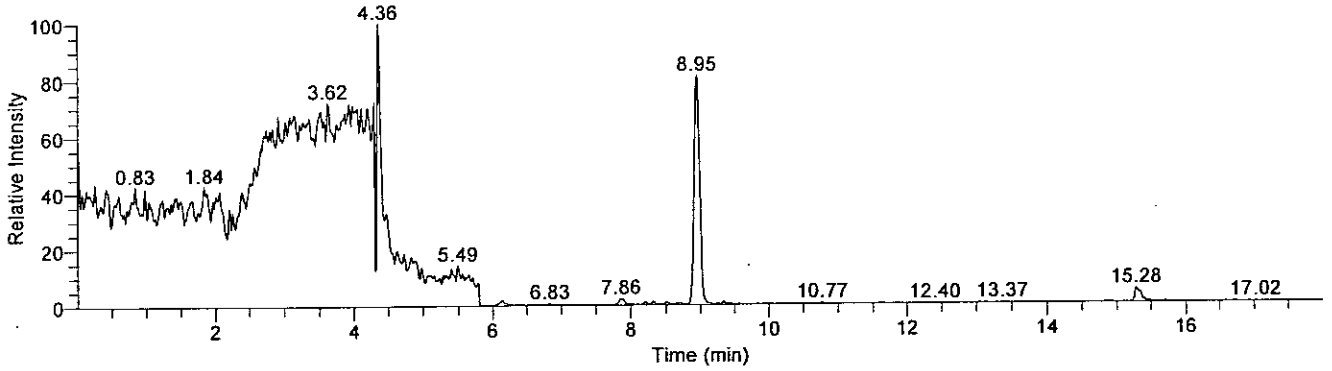
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-18.raw
Sample ID:	5754470
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 2:47:17 AM
Vial:	E:29
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-18 - TIC RT: 0.00 - 17.99 NL: 2.74E3

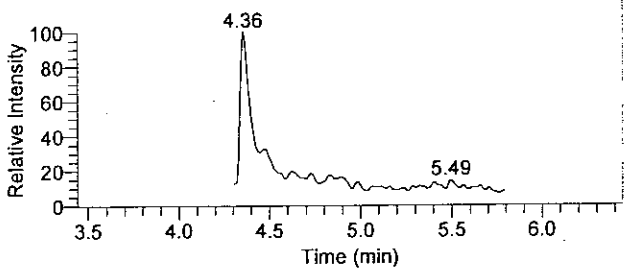


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:29, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-18, Comments: , ID: 5754470

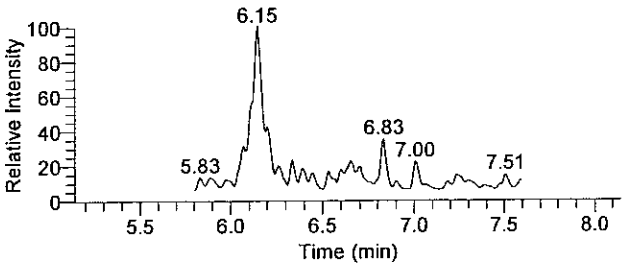
Monomethylhydrazine

24Aug-100562-70-18 - TIC RT: 3.44 - 6.44 NL: 2.74E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



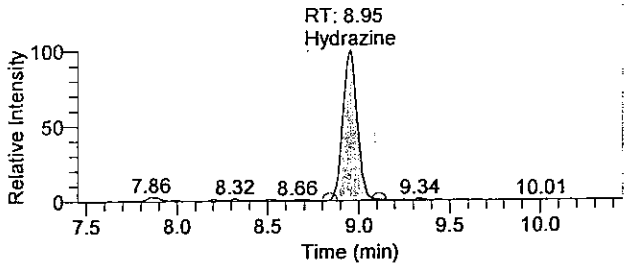
1,1-Dimethylhydrazine

24Aug-100562-70-18 - TIC RT: 5.14 - 8.14 NL: 5.45E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-18 - TIC RT: 7.45 - 10.45 NL: 2.22E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 6884

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754470	Method Settings	Hydrazine	8.95	12202	0.053	ng/mL
5754470	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754470	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

Sr/ 8/26/09

There is no signature data to report.

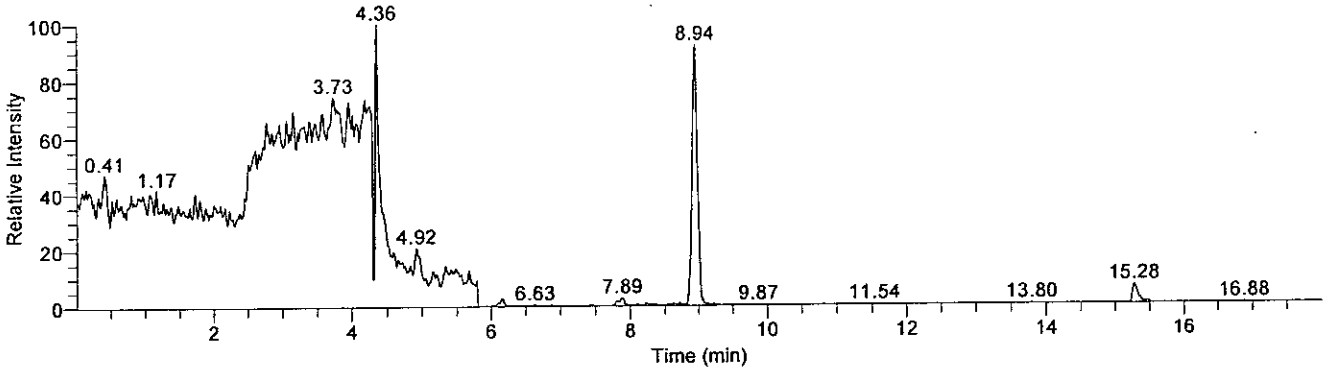
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:02
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-19.raw
Sample ID:	5754471
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 3:06:00 AM
Vial:	E:30
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-19 - TIC RT: 0.01 - 18.00 NL: 2.72E3

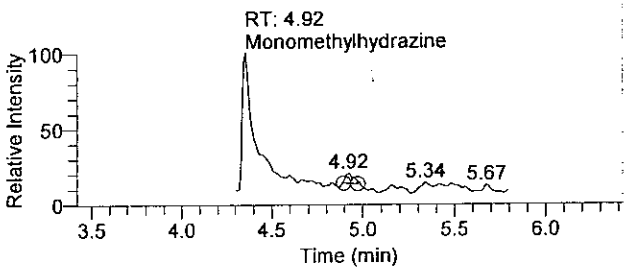


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:30, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-19, Comments: , ID: 5754471

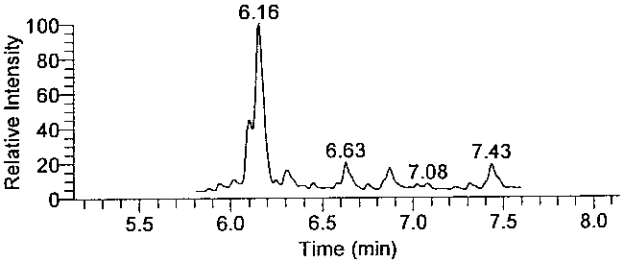
Monomethylhydrazine

24Aug-100562-70-19 - TIC RT: 3.42 - 6.42 NL: 2.72E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



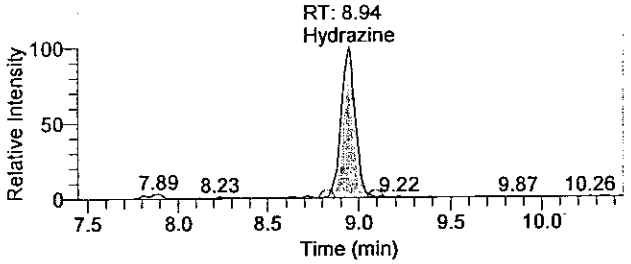
1,1-Dimethylhydrazine

24Aug-100562-70-19 - TIC RT: 5.14 - 8.14 NL: 7.72E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-19 - TIC RT: 7.44 - 10.44 NL: 2.51E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15. P086

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754471	Method Settings	Hydrazine	8.94	13754	0.064	ng/mL
5754471	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754471	Method Settings	Monomethylhydrazine	4.92	560	0.176	ng/mL

Analyst : JW 1543 8/25/2009

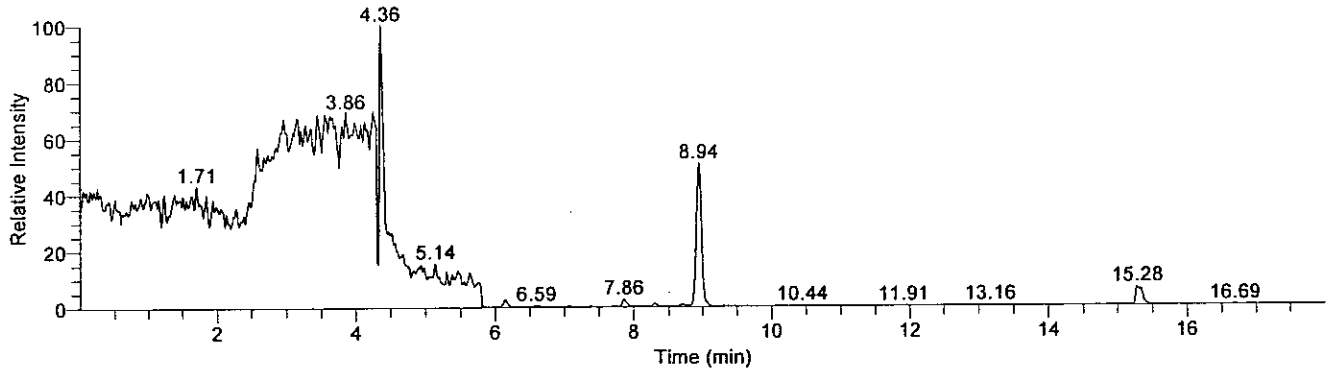
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-20.raw
Sample ID:	5754472
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 3:24:45 AM
Vial:	E:31
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-20 - TIC RT: 0.00 - 17.99 NL: 2.72E3

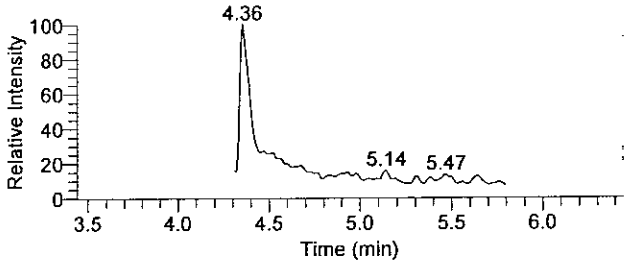


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:31, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-20, Comments: , ID: 5754472

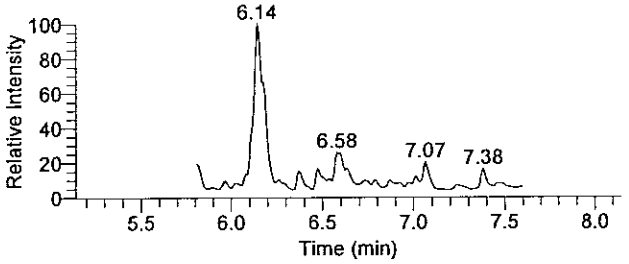
Monomethylhydrazine

24Aug-100562-70-20 - TIC RT: 3.44 - 6.44 NL: 2.72E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



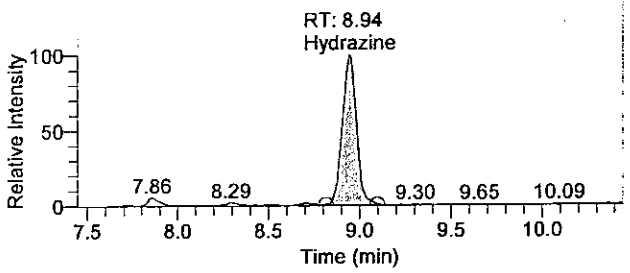
1,1-Dimethylhydrazine

24Aug-100562-70-20 - TIC RT: 5.14 - 8.14 NL: 7.79E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-20 - TIC RT: 7.44 - 10.44 NL: 1.38E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 8880

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754472	Method Settings	Hydrazine	8.94	7412	0.020	ng/mL
5754472	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754472	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 8/25/2009

8/26/09

There is no signature data to report.

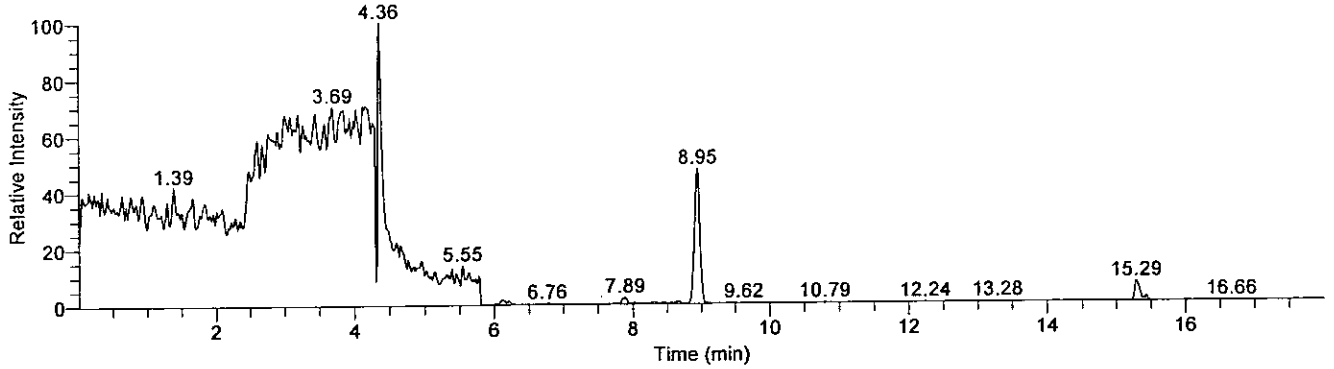
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:02
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-21.raw
Sample ID:	5754473
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 3:43:31 AM
Vial:	E:32
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-21 - TIC RT: 0.00 - 18.00 NL: 2.66E3

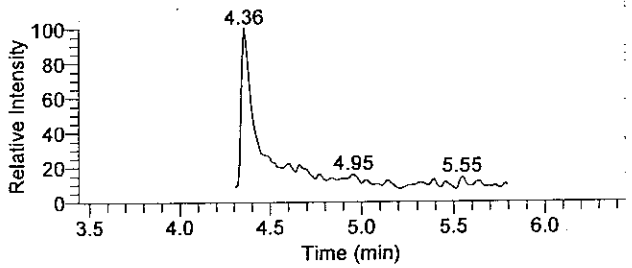


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:32, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-21, Comments: , ID: 5754473

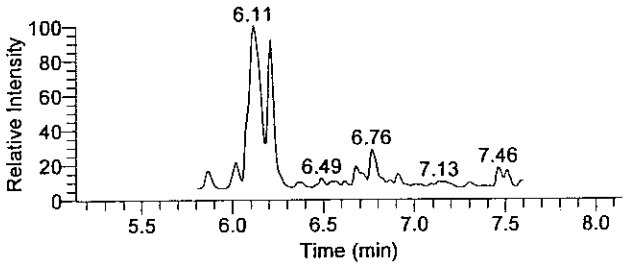
Monomethylhydrazine

24Aug-100562-70-21 - TIC RT: 3.44 - 6.44 NL: 2.66E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



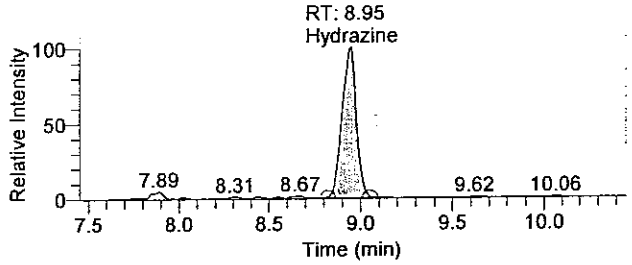
1,1-Dimethylhydrazine

24Aug-100562-70-21 - TIC RT: 5.14 - 8.14 NL: 4.94E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-21 - TIC RT: 7.45 - 10.45 NL: 1.27E3
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
5754473	Method Settings	Hydrazine	8.95	6872	0.016	ng/mL
5754473	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754473	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst: JW 1543 8/25/2009

8/26/09

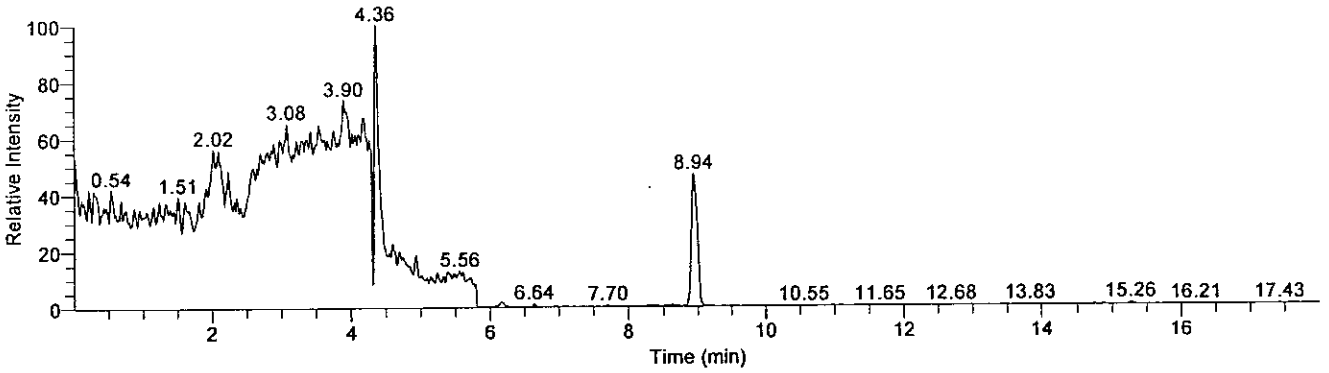
01N15 0091

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-13.raw
Sample ID:	5754474
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 9:09:23 PM
Vial:	B:11
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-13 - TIC RT: 0.00 - 18.00 NL: 3.01E3

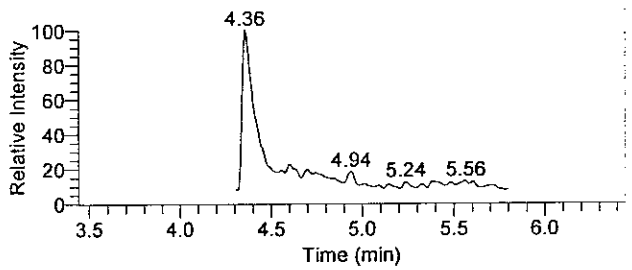


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:11, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-13, Comments: , ID: 5754474

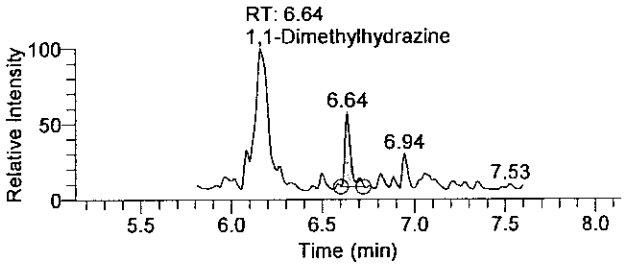
Monomethylhydrazine

26Aug-100562-74-13 - TIC RT: 3.44 - 6.44 NL: 3.01E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



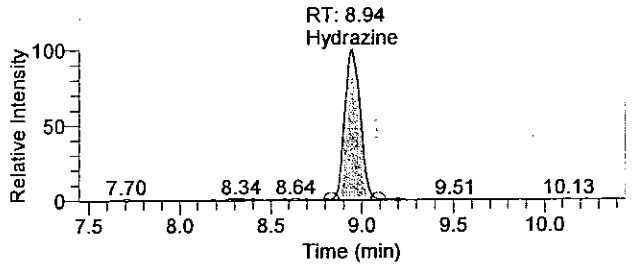
1,1-Dimethylhydrazine

26Aug-100562-74-13 - TIC RT: 5.14 - 8.14 NL: 5.68E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-13 - TIC RT: 7.44 - 10.44 NL: 1.41E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0092

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754474	Method Settings	Hydrazine	8.94	8392	0.014	ng/mL
5754474	Method Settings	1,1-Dimethylhydrazine	6.64	62	0.168	ng/mL
5754474	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/27/2009
8/27/09

01M15 0093

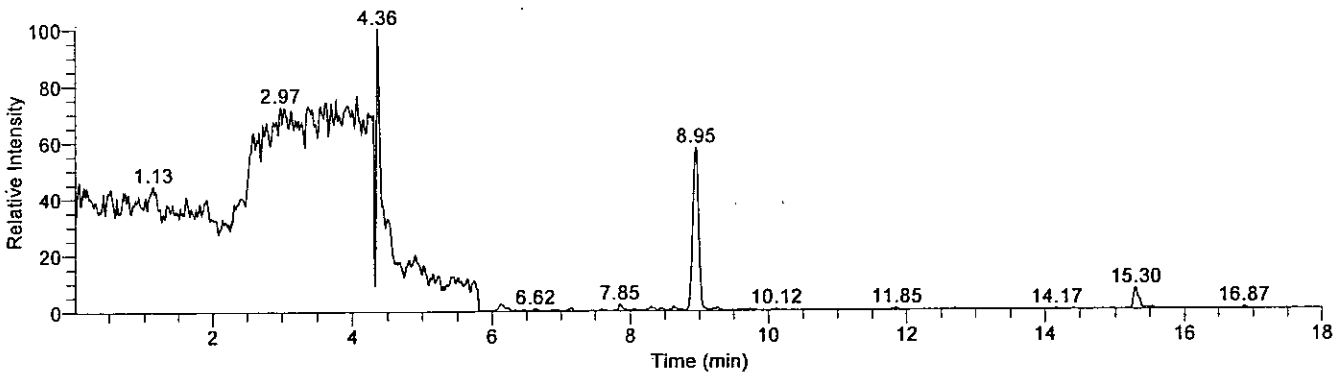
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-22.raw
Sample ID:	5754475
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 4:21:00 AM
Vial:	E:33
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-22 - TIC RT: 0.01 - 18.00 NL: 2.56E3

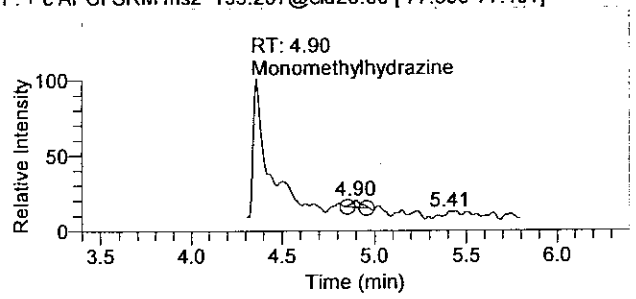


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:33, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-22, Comments: , ID: 5754475

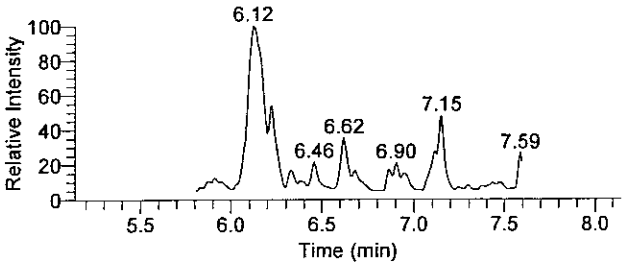
Monomethylhydrazine

24Aug-100562-70-22 - TIC RT: 3.40 - 6.40 NL: 2.56E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



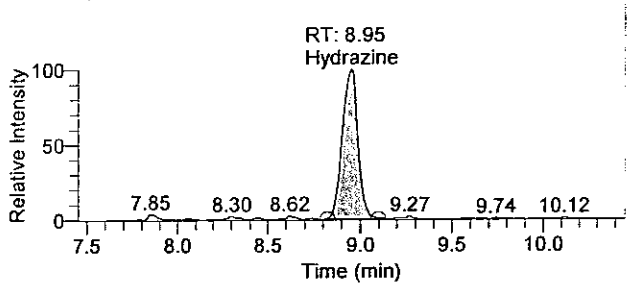
1,1-Dimethylhydrazine

24Aug-100562-70-22 - TIC RT: 5.14 - 8.14 NL: 6.64E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-22 - TIC RT: 7.45 - 10.45 NL: 1.48E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 8094

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754475	Method Settings	Hydrazine	8.95	8651	0.028	ng/mL
5754475	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754475	Method Settings	Monomethylhydrazine	4.90	437	0.172	ng/mL

Analyst : JW 1543 8/25/2009

01M15 0095

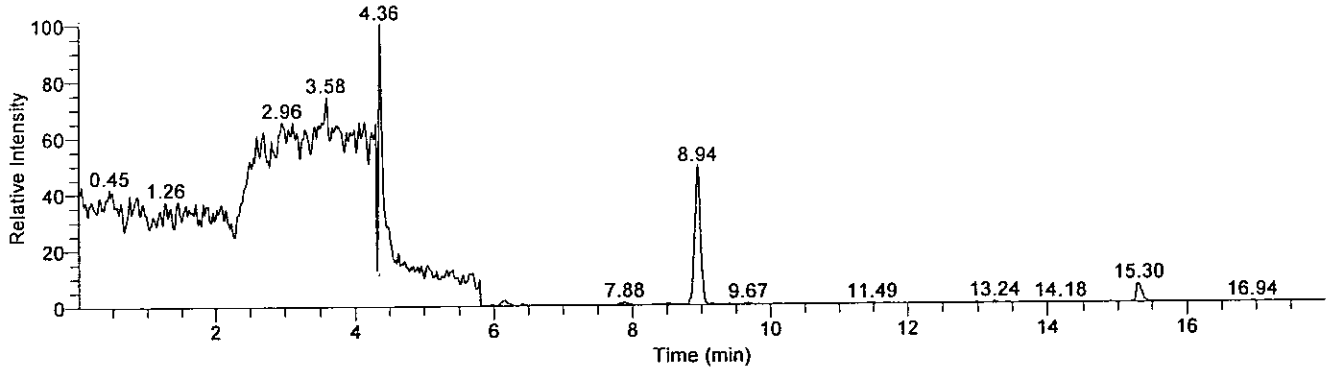
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-23.raw
Sample ID:	5754476
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 4:39:46 AM
Vial:	E:34
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-23 - TIC RT: 0.00 - 18.00 NL: 2.79E3

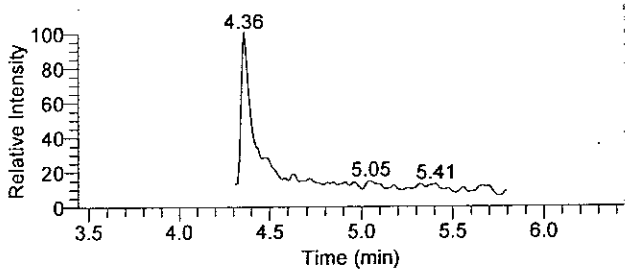


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:34, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-23, Comments: , ID: 5754476

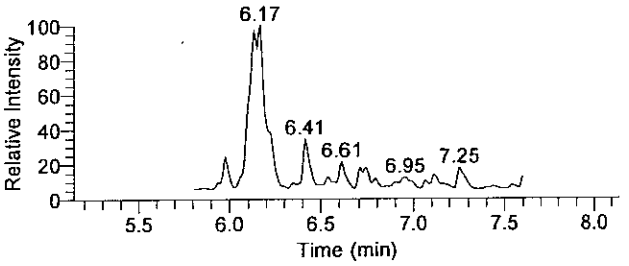
Monomethylhydrazine

24Aug-100562-70-23 - TIC RT: 3.44 - 6.44 NL: 2.79E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



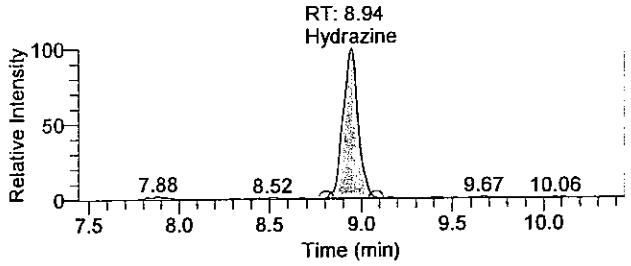
1,1-Dimethylhydrazine

24Aug-100562-70-23 - TIC RT: 5.14 - 8.14 NL: 5.77E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-23 - TIC RT: 7.44 - 10.44 NL: 1.38E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 8896

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5754476	Method Settings	Hydrazine	8.94	7906	0.023	ng/mL
5754476	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754476	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

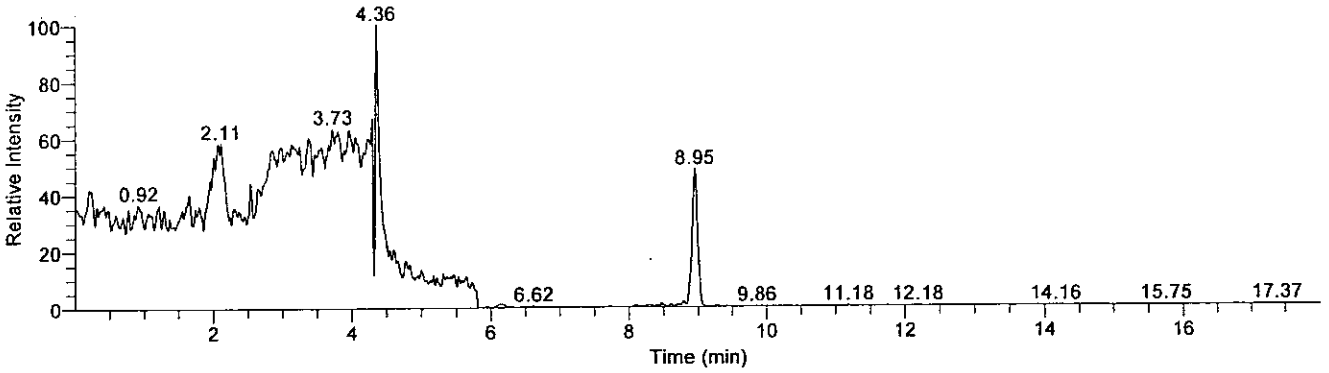
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-14.raw
Sample ID:	5754477
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 9:28:08 PM
Vial:	B:12
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-14 - TIC RT: 0.00 - 18.00 NL: 3.06E3

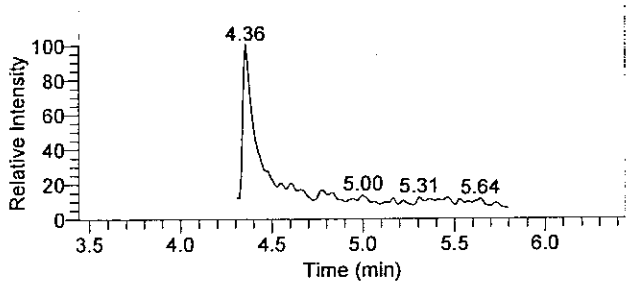


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:12, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-14, Comments: , ID: 5754477

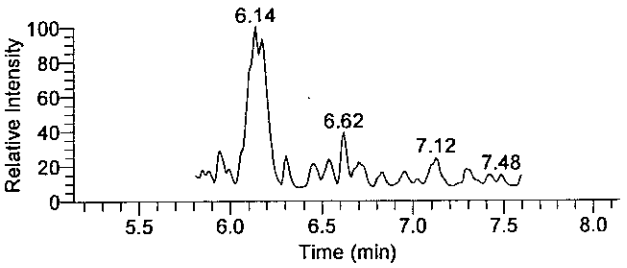
Monomethylhydrazine

26Aug-100562-74-14 - TIC RT: 3.44 - 6.44 NL: 3.06E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



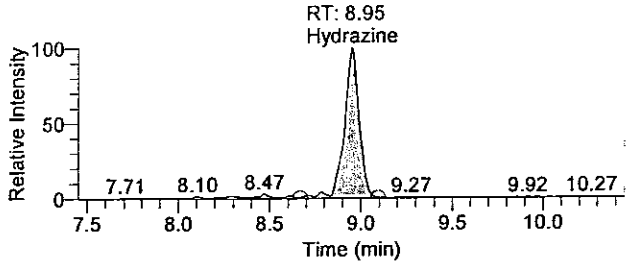
1,1-Dimethylhydrazine

26Aug-100562-74-14 - TIC RT: 5.14 - 8.14 NL: 4.08E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-14 - TIC RT: 7.45 - 10.45 NL: 1.49E3
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
5754477	Method Settings	Hydrazine	8.95	8472	0.015	ng/mL
5754477	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5754477	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/27/2009
8/28/09

01H15 8899

There is no signature data to report.

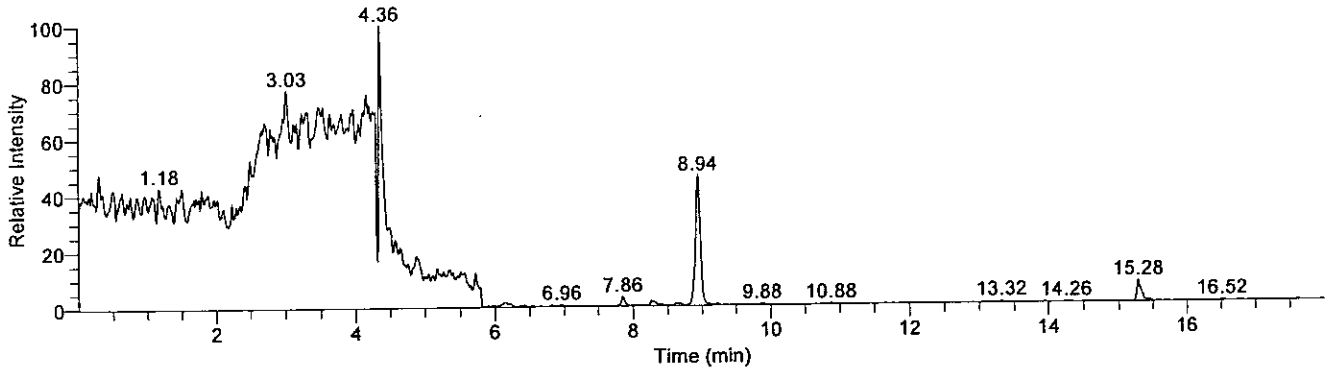
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:03
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-24.raw
Sample ID:	5757305
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 4:58:30 AM
Vial:	E:35
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-24 - TIC RT: 0.00 - 18.00 NL: 2.64E3

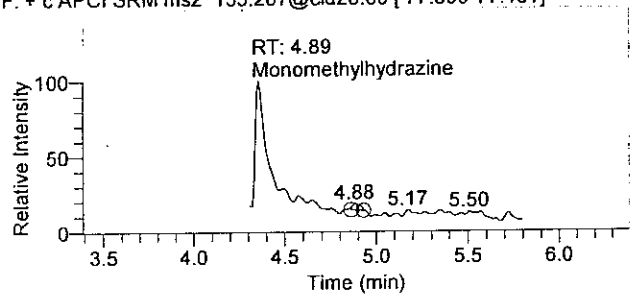


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:35, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-24, Comments: , ID: 5757305

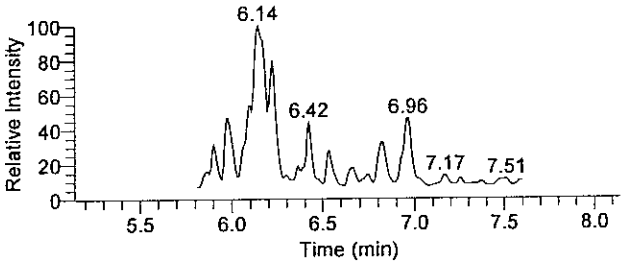
Monomethylhydrazine

24Aug-100562-70-24 - TIC RT: 3.39 - 6.39 NL: 2.64E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



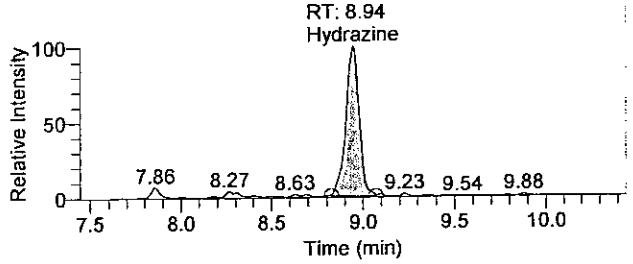
1,1-Dimethylhydrazine

24Aug-100562-70-24 - TIC RT: 5.14 - 8.14 NL: 4.60E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-24 - TIC RT: 7.44 - 10.44 NL: 1.22E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0100

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757305	Method Settings	Hydrazine	8.94	6175	0.011	ng/mL
5757305	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757305	Method Settings	Monomethylhydrazine	4.89	347	0.170	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

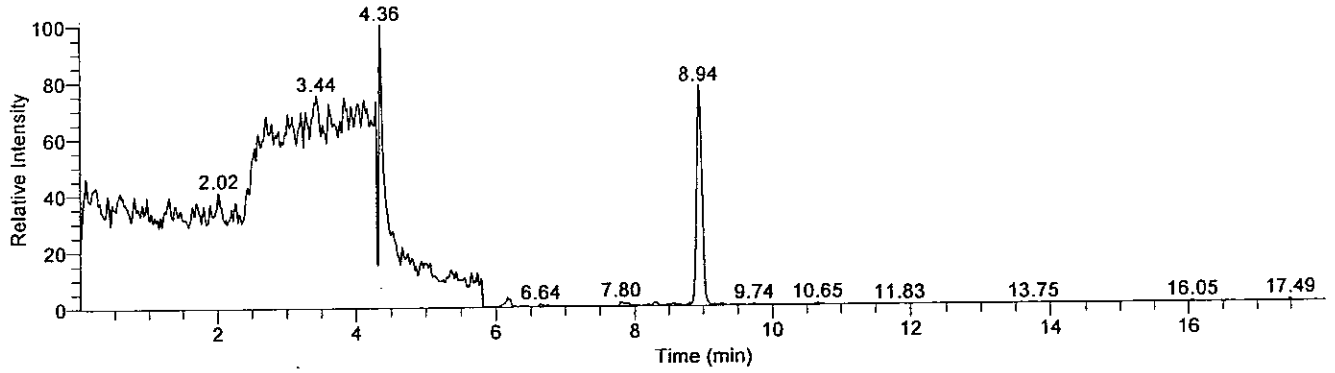
OLN15 0181

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-25.raw
Sample ID:	5757306FD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 10:25:02 PM
Vial:	E:18
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-25 - TIC RT: 0.00 - 18.00 NL: 2.61E3

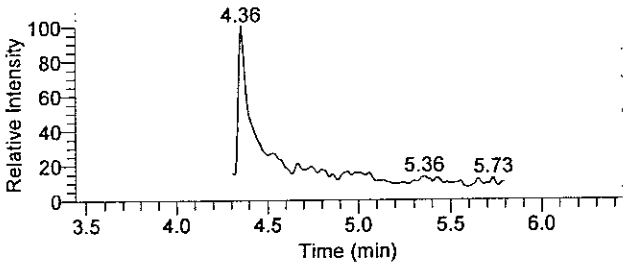


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:18, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-25, Comments: , ID: 5757306FD

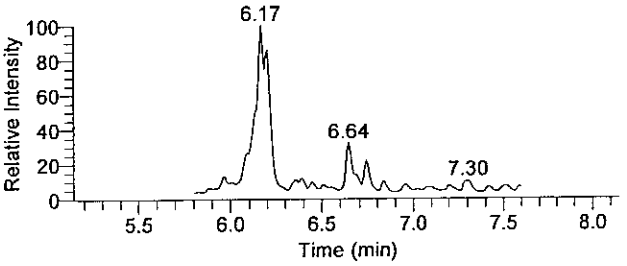
Monomethylhydrazine

24Aug-100562-70-25 - TIC RT: 3.44 - 6.44 NL: 2.61E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



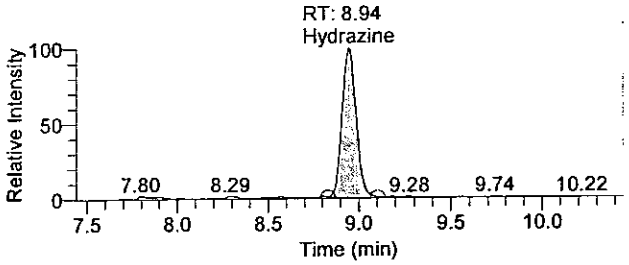
1,1-Dimethylhydrazine

24Aug-100562-70-25 - TIC RT: 5.14 - 8.14 NL: 8.77E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-25 - TIC RT: 7.44 - 10.44 NL: 2.03E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0102

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757306FD	Method Settings	Hydrazine	8.94	11009	0.045	ng/mL
5757306FD	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757306FD	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

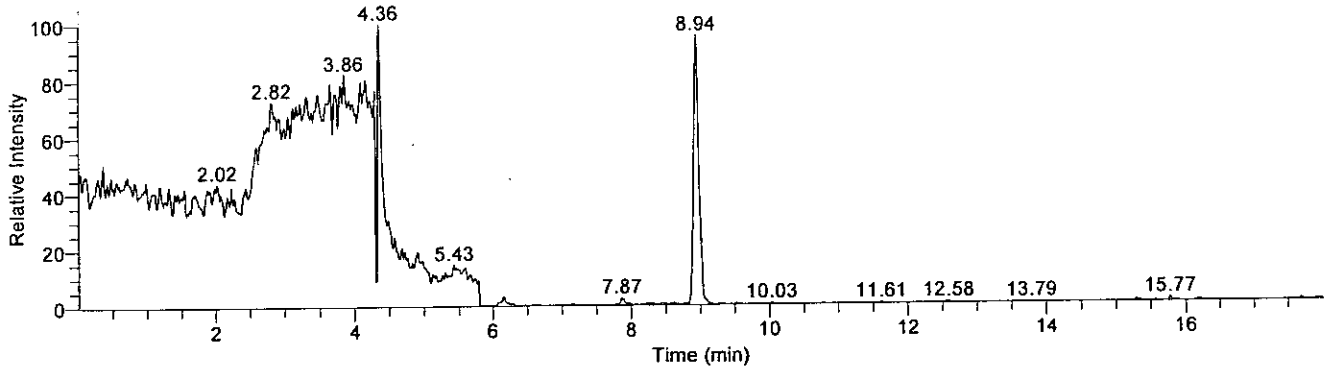
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-26.raw
Sample ID:	5757307BKG
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 10:43:48 PM
Vial:	E:19
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-26 - TIC RT: 0.00 - 18.00 NL: 2.55E3

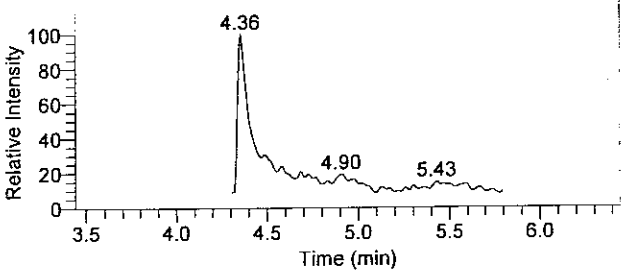


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:19, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-26, Comments: , ID: 5757307BKG

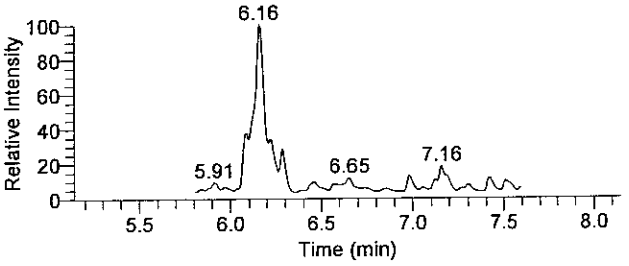
Monomethylhydrazine

24Aug-100562-70-26 - TIC RT: 3.44 - 6.44 NL: 2.55E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



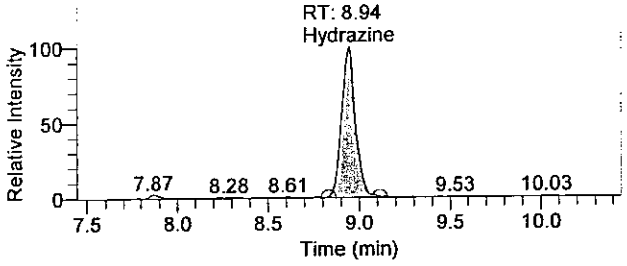
1,1-Dimethylhydrazine

24Aug-100562-70-26 - TIC RT: 5.14 - 8.14 NL: 8.48E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-26 - TIC RT: 7.44 - 10.44 NL: 2.43E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 0184

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757307BKG	Method Settings	Hydrazine	8.94	13044	0.059	ng/mL
5757307BKG	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757307BKG	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

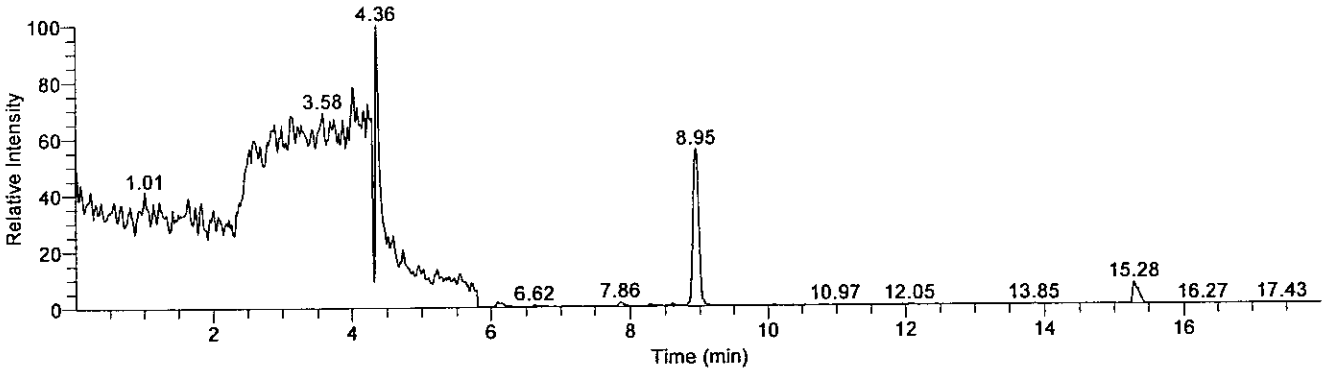
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0923610056268
Data File:	24Aug-100562-70-29.raw
Sample ID:	5757310
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 5:17:17 AM
Vial:	E:36
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-29 - TIC RT: 0.00 - 17.99 NL: 2.71E3

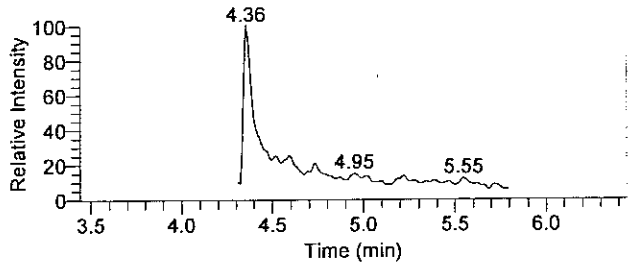


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:36, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-29, Comments: , ID: 5757310

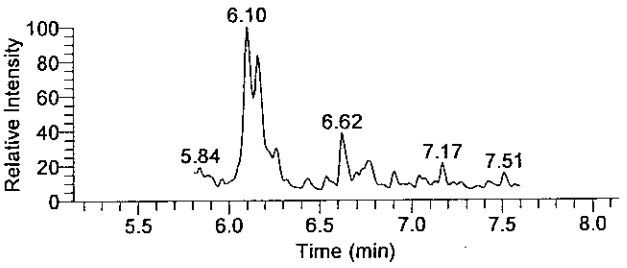
Monomethylhydrazine

24Aug-100562-70-29 - TIC RT: 3.44 - 6.44 NL: 2.71E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



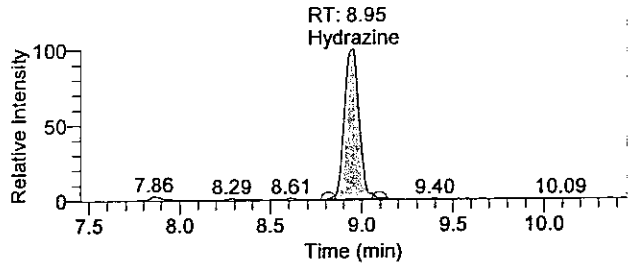
1,1-Dimethylhydrazine

24Aug-100562-70-29 - TIC RT: 5.14 - 8.14 NL: 5.12E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-29 - TIC RT: 7.45 - 10.45 NL: 1.51E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0186

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757310	Method Settings	Hydrazine	8.95	8652	0.028	ng/mL
5757310	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757310	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

OLN15 0107

There is no signature data to report.

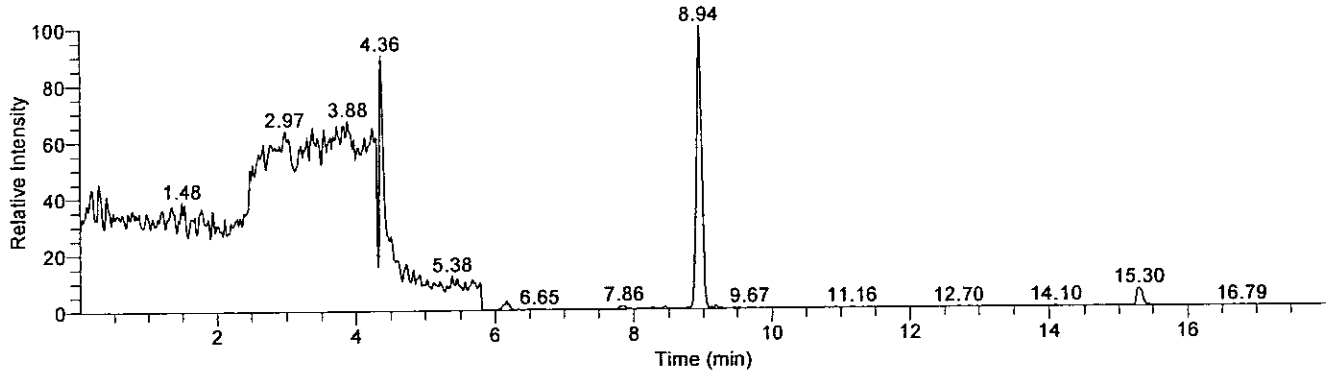
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:04
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0923610056268
Data File:	24Aug-100562-70-30.raw
Sample ID:	5757311
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 5:36:05 AM
Vial:	E:37
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-30 - TIC RT: 0.00 - 17.99 NL: 2.87E3

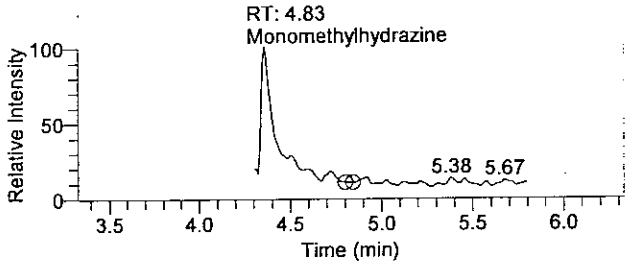


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:37, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-30, Comments: , ID: 5757311

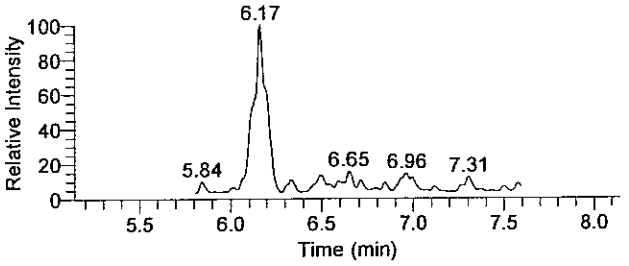
Monomethylhydrazine

24Aug-100562-70-30 - TIC RT: 3.33 - 6.33 NL: 2.59E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



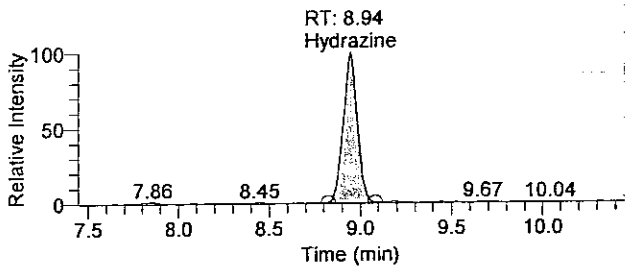
1,1-Dimethylhydrazine

24Aug-100562-70-30 - TIC RT: 5.14 - 8.14 NL: 9.21E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-30 - TIC RT: 7.44 - 10.44 NL: 2.87E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 0188

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757311	Method Settings	Hydrazine	8.94	15175	0.074	ng/mL
5757311	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757311	Method Settings	Monomethylhydrazine	4.83	218	0.166	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

There is no signature data to report.

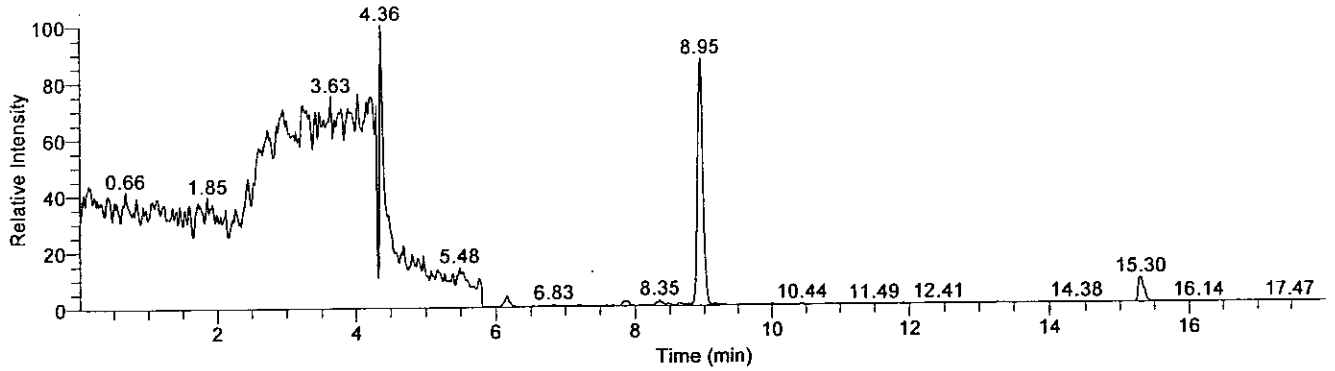
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:04
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0923610056268
Data File:	24Aug-100562-70-31.raw
Sample ID:	5757312
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 5:54:52 AM
Vial:	E:38
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-31 - TIC RT: 0.00 - 17.99 NL: 2.63E3

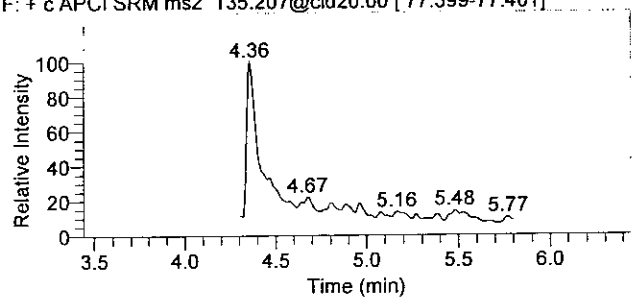


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:38, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-31, Comments: , ID: 5757312

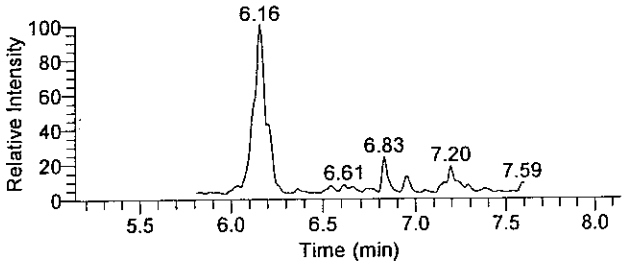
Monomethylhydrazine

24Aug-100562-70-31 - TIC RT: 3.44 - 6.44 NL: 2.63E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



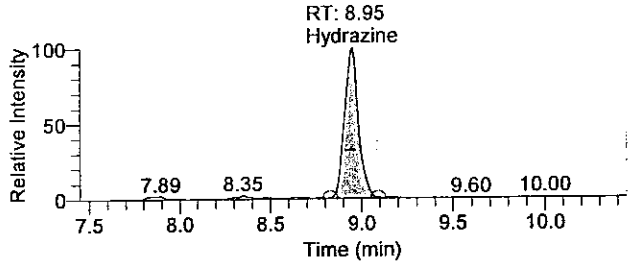
1,1-Dimethylhydrazine

24Aug-100562-70-31 - TIC RT: 5.14 - 8.14 NL: 1.07E2
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-31 - TIC RT: 7.45 - 10.45 NL: 2.30E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 8110

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757312	Method Settings	Hydrazine	8.95	12320	0.054	ng/mL
5757312	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757312	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/25/2009

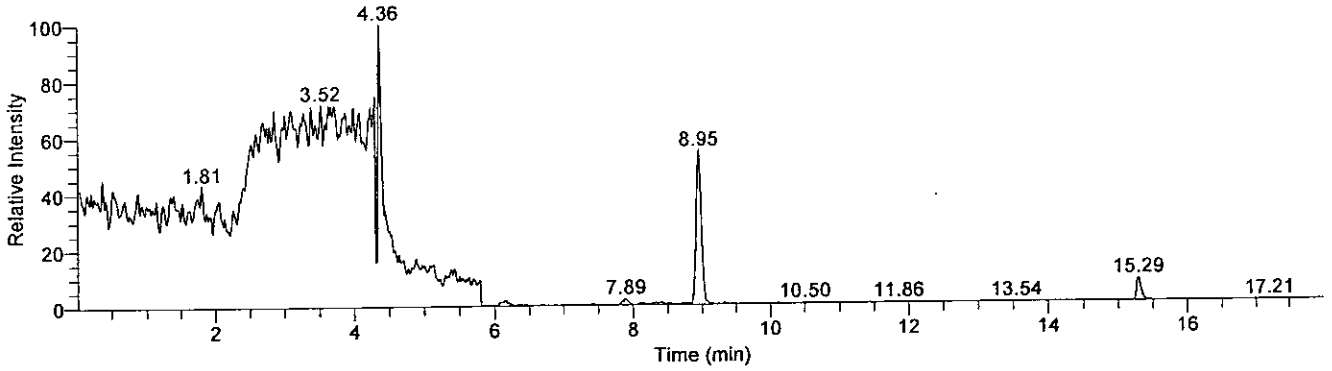
[illegible] 8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0923610056268
Data File:	24Aug-100562-70-32.raw
Sample ID:	5757313
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 6:13:36 AM
Vial:	E:39
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-32 - TIC RT: 0.00 - 17.99 NL: 2.77E3

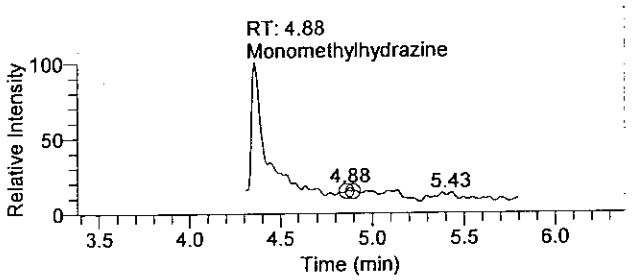


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:39, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-32, Comments: , ID: 5757313

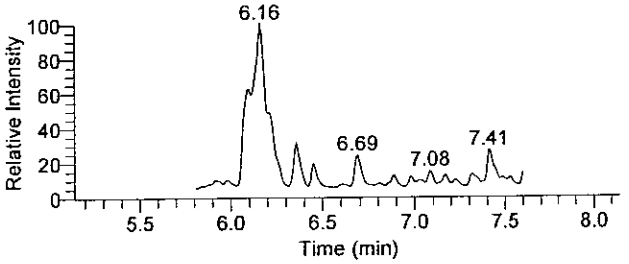
Monomethylhydrazine

24Aug-100562-70-32 - TIC RT: 3.38 - 6.38 NL: 2.77E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



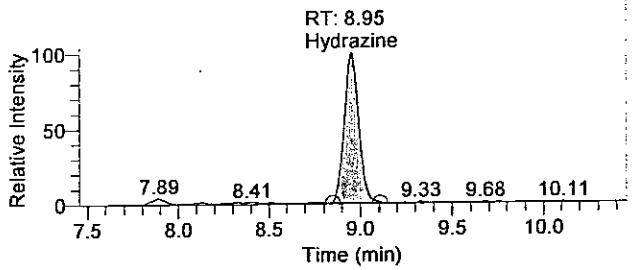
1,1-Dimethylhydrazine

24Aug-100562-70-32 - TIC RT: 5.14 - 8.14 NL: 5.53E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-32 - TIC RT: 7.45 - 10.45 NL: 1.51E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 0112

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757313	Method Settings	Hydrazine	8.95	8246	0.025	ng/mL
5757313	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757313	Method Settings	Monomethylhydrazine	4.88	109	0.163	ng/mL

Analyst : JW 1543 8/25/2009

01N15 0113

There is no signature data to report.

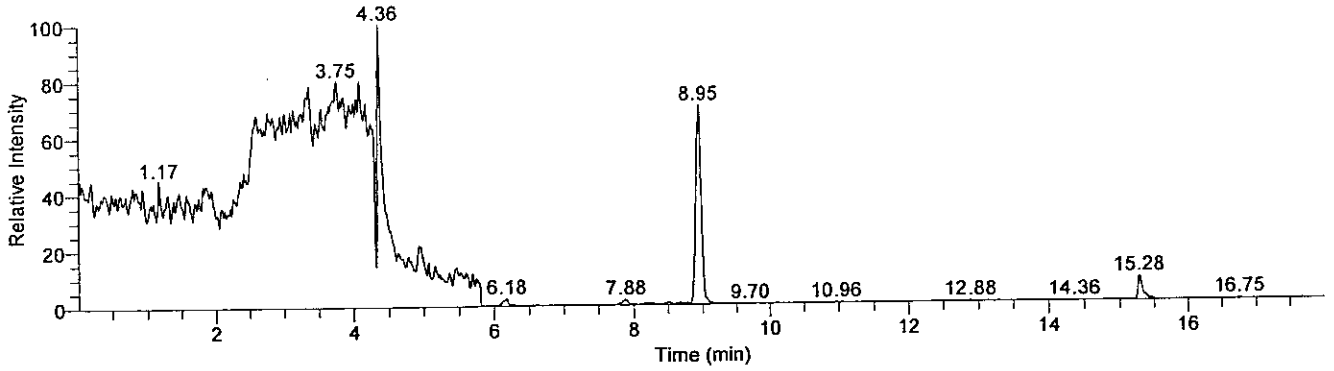
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:04
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	123456
Batch No.	0923610056268
Data File:	24Aug-100562-70-33.raw
Sample ID:	5757314
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 6:32:23 AM
Vial:	E:40
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-33 - TIC RT: 0.00 - 17.99 NL: 2.63E3

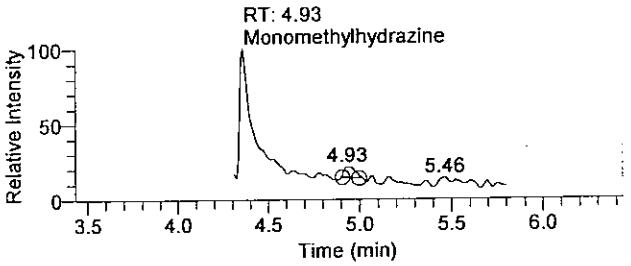


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:40, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-33, Comments: , ID: 5757314

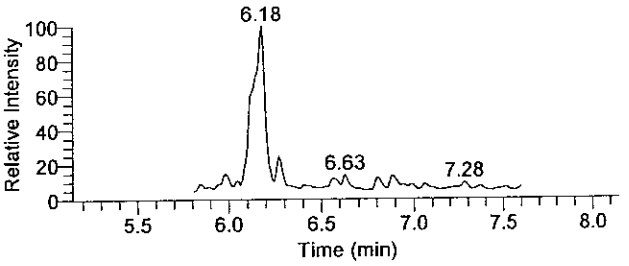
Monomethylhydrazine

24Aug-100562-70-33 - TIC RT: 3.43 - 6.43 NL: 2.63E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



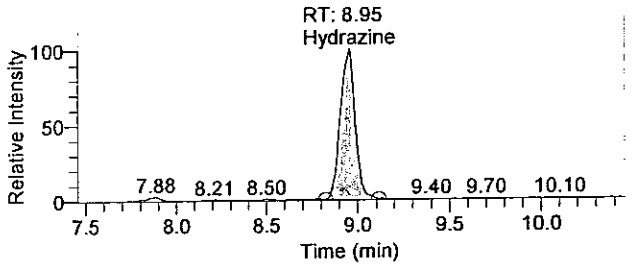
1,1-Dimethylhydrazine

24Aug-100562-70-33 - TIC RT: 5.14 - 8.14 NL: 7.26E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-33 - TIC RT: 7.45 - 10.45 NL: 1.85E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 0114

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757314	Method Settings	Hydrazine	8.95	10377	0.040	ng/mL
5757314	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5757314	Method Settings	Monomethylhydrazine	4.93	804	0.182	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

OLH15 0115

There is no signature data to report.

Standards Data

OLN15 0116

Lancaster Laboratories

Workbook Name: TQU01408-24Aug2009-1
Instrument No. TQU01408
Analyst JW01543

Sequence Table

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner1	24Aug-Methaonl1	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
Conditioner2	24Aug-Methaonl2	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
MDL	24Aug-100562-70-1	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:8	10.00	N/A
Cal1	24Aug-100562-70-2	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:9	10.00	N/A
Cal2	24Aug-100562-70-3	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:10	10.00	N/A
Cal3	24Aug-100562-70-4	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:11	10.00	N/A
Cal4	24Aug-100562-70-5	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:12	10.00	N/A
Cal5	24Aug-100562-70-6	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:13	10.00	N/A
Cal6	24Aug-100562-70-7	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:14	10.00	N/A
Cal7	24Aug-100562-70-8	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:15	10.00	N/A
Cal8	24Aug-100562-70-9	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:16	10.00	N/A
Conditioner3	24Aug-Methaonl3	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
Cal3asQC1a	24Aug-100562-70-4QCa	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:11	10.00	N/A
Conditioner4	24Aug-Methaonl4	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
Conditioner5	24Aug-Methaonl5	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
Blank	24Aug-100562-70-12	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:17	10.00	0923610056268
5757306FD	24Aug-100562-70-25	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:18	10.00	0923610056268
5757307BKG	24Aug-100562-70-26	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:19	10.00	0923610056268
5757308MS	24Aug-100562-70-27	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:20	10.00	0923610056268
5757309MDS	24Aug-100562-70-28	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:21	10.00	0923610056268
LCS	24Aug-100562-70-13	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:22	10.00	0923610056268
LCSD	24Aug-100562-70-14	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:23	10.00	0923610056268
ICV	24Aug-100562-70-10	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:24	10.00	N/A
Cal4asQC2a	24Aug-100562-70-5QCa	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:12	10.00	N/A
Spike Check	24Aug-100562-70-11	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:25	10.00	N/A
Conditioner6	24Aug-Methaonl6	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
Conditioner7	24Aug-Methaonl7	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:1	10.00	N/A
5754467	24Aug-100562-70-15	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:26	10.00	0923610056268
5754468	24Aug-100562-70-16	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:27	10.00	0923610056268
5754469	24Aug-100562-70-17	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:28	10.00	0923610056268
5754470	24Aug-100562-70-18	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:29	10.00	0923610056268
5754471	24Aug-100562-70-19	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:30	10.00	0923610056268
5754472	24Aug-100562-70-20	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:31	10.00	0923610056268

There is no signature data to report.

Lancaster Laboratories

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
5754473	24Aug-100562-70-21	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:32	10.00	0923610056268
Cal5asQC3a	24Aug-100562-70-6QCa	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:13	10.00	N/A
5754475	24Aug-100562-70-22	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:33	10.00	0923610056268
5754476	24Aug-100562-70-23	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:34	10.00	0923610056268
5757305	24Aug-100562-70-24	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:35	10.00	0923610056268
5757310	24Aug-100562-70-29	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\	E:36	10.00	0923610056268
5757311	24Aug-100562-70-30	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\	E:37	10.00	0923610056268
5757312	24Aug-100562-70-31	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\	E:38	10.00	0923610056268
5757313	24Aug-100562-70-32	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\	E:39	10.00	0923610056268
5757314	24Aug-100562-70-33	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\	E:40	10.00	0923610056268
Cal3asQC1b	24Aug-100562-70-4QCb	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles	E:11	10.00	N/A

Analyst: JW 1543 8/25/2009
[illegible] 8/26/09

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-24Aug2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
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

OLN15 0019

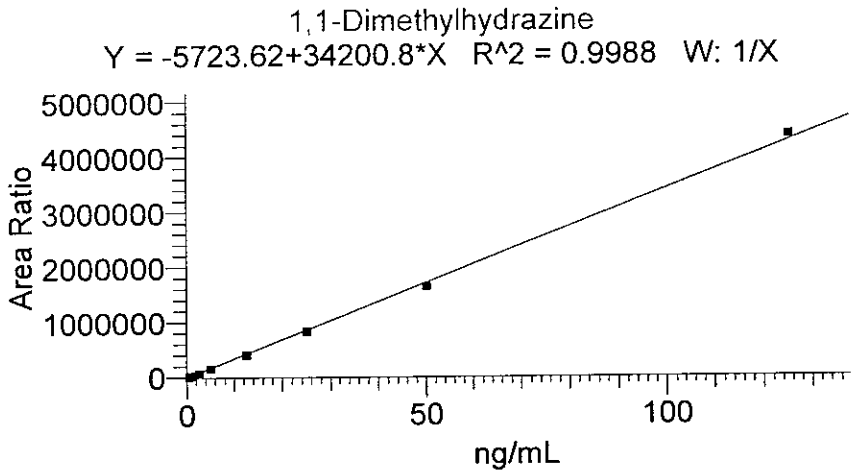
There is no signature data to report.

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	13982	0.500	ng/mL	0.576	15.23
Cal2	Standard	2	N/A	Method Settings	30996	1.000	ng/mL	1.074	7.37
Cal3	Standard	3	N/A	Method Settings	70777	2.500	ng/mL	2.237	-10.53
Cal4	Standard	4	N/A	Method Settings	156953	5.000	ng/mL	4.757	-4.87
Cal5	Standard	5	N/A	Method Settings	405403	12.500	ng/mL	12.021	-3.83
Cal6	Standard	6	N/A	Method Settings	831154	25.000	ng/mL	24.470	-2.12
Cal7	Standard	7	N/A	Method Settings	1637595	50.000	ng/mL	48.049	-3.90
Cal8	Standard	8	N/A	Method Settings	4382835	125.000	ng/mL	128.317	2.65
Cal3asQC1a	QC	CCV1	N/A	Method Settings	70412	2.500	ng/mL	2.226	-10.95
Cal4asQC2a	QC	CCV2	N/A	Method Settings	168336	5.000	ng/mL	5.089	1.79
Cal5asQC3a	QC	CCV3	N/A	Method Settings	451604	12.500	ng/mL	13.372	6.97
Cal3asQC1b	QC	CCV1	N/A	Method Settings	74835	2.500	ng/mL	2.355	-5.78

Analyst : JW 1543 8/25/2009

8/26/09

OLN15 #120

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-24Aug2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
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):	8.94000
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	0.100 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

01N15 8121

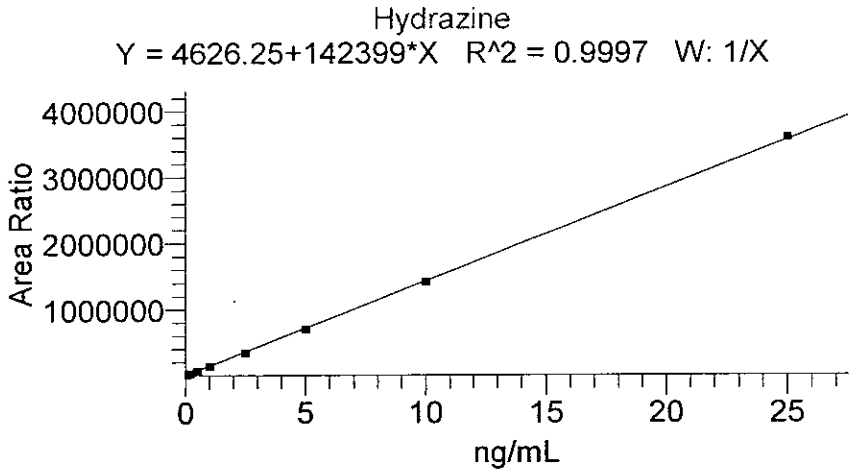
There is no signature data to report.

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	20078	0.100	ng/mL	0.109	8.51
Cal2	Standard	2	N/A	Method Settings	34164	0.200	ng/mL	0.207	3.72
Cal3	Standard	3	N/A	Method Settings	73508	0.500	ng/mL	0.484	-3.25
Cal4	Standard	4	N/A	Method Settings	142595	1.000	ng/mL	0.969	-3.11
Cal5	Standard	5	N/A	Method Settings	344733	2.500	ng/mL	2.388	-4.46
Cal6	Standard	6	N/A	Method Settings	701484	5.000	ng/mL	4.894	-2.13
Cal7	Standard	7	N/A	Method Settings	1422158	10.000	ng/mL	9.955	-0.45
Cal8	Standard	8	N/A	Method Settings	3606544	25.000	ng/mL	25.295	1.18
Cal3asQC1a	QC	CCV1	N/A	Method Settings	77486	0.500	ng/mL	0.512	2.33
Cal4asQC2a	QC	CCV2	N/A	Method Settings	150968	1.000	ng/mL	1.028	2.77
Cal5asQC3a	QC	CCV3	N/A	Method Settings	353531	2.500	ng/mL	2.450	-1.99
Cal3asQC1b	QC	CCV1	N/A	Method Settings	74888	0.500	ng/mL	0.493	-1.32

Analyst : JW 1543 8/25/2009

8/26/09

OLN15 8122

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-24Aug2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
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):	0.50
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

01N15 0123

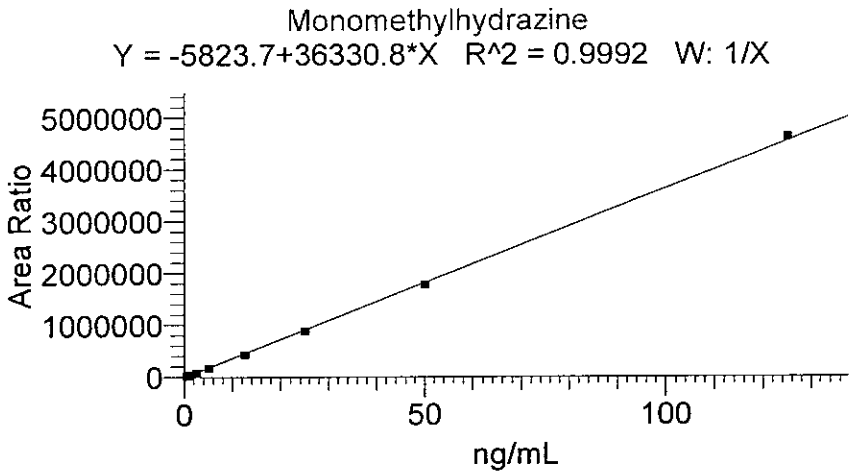
There is no signature data to report.

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	15330	0.500	ng/mL	0.582	16.45
Cal2	Standard	2	N/A	Method Settings	32290	1.000	ng/mL	1.049	4.91
Cal3	Standard	3	N/A	Method Settings	76651	2.500	ng/mL	2.270	-9.20
Cal4	Standard	4	N/A	Method Settings	166840	5.000	ng/mL	4.753	-4.95
Cal5	Standard	5	N/A	Method Settings	426493	12.500	ng/mL	11.899	-4.80
Cal6	Standard	6	N/A	Method Settings	877892	25.000	ng/mL	24.324	-2.70
Cal7	Standard	7	N/A	Method Settings	1780317	50.000	ng/mL	49.163	-1.67
Cal8	Standard	8	N/A	Method Settings	4624875	125.000	ng/mL	127.459	1.97
Cal3asQC1a	QC	CCV1	N/A	Method Settings	72449	2.500	ng/mL	2.154	-13.82
Cal4asQC2a	QC	CCV2	N/A	Method Settings	179632	5.000	ng/mL	5.105	2.09
Cal5asQC3a	QC	CCV3	N/A	Method Settings	474188	12.500	ng/mL	13.212	5.70
Cal3asQC1b	QC	CCV1	N/A	Method Settings	77450	2.500	ng/mL	2.292	-8.32

Analyst: JW 1543 8/25/2009

8/26/09

OLM15 0124

There is no signature data to report.

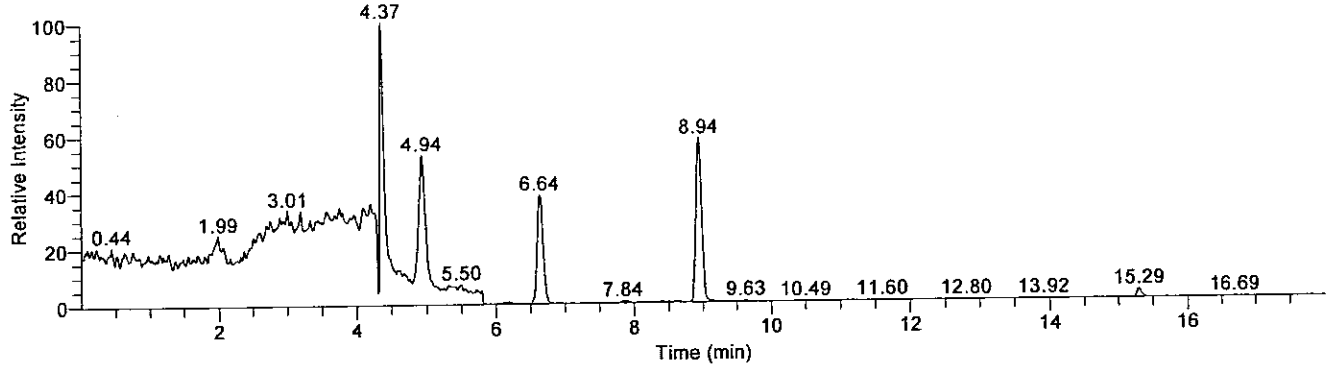
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:37:56
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-2.raw
Sample ID:	Cal1
Sample Type:	Standard
Level:	1
Acquisition Date:	Monday, August 24, 2009 6:21:24 PM
Vial:	E:9
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-2 - TIC RT: 0.00 - 18.00 NL: 5.91E3

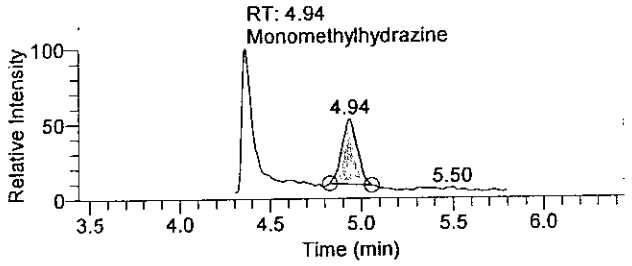


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:9, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-2, Comments: , ID: Cal1

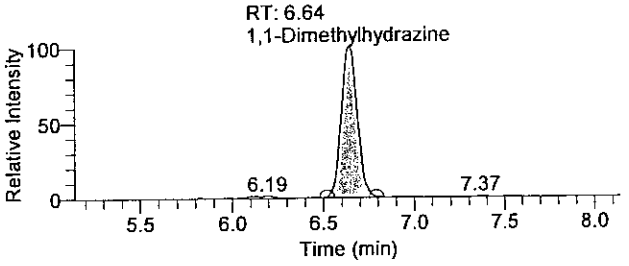
Monomethylhydrazine

24Aug-100562-70-2 - TIC RT: 3.44 - 6.44 NL: 5.91E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



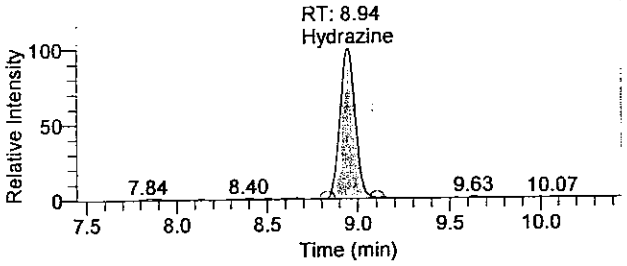
1,1-Dimethylhydrazine

24Aug-100562-70-2 - TIC RT: 5.14 - 8.14 NL: 2.27E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-2 - TIC RT: 7.44 - 10.44 NL: 3.43E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15. 0125

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal1	Method Settings	Hydrazine	8.94	20078	0.109	ng/mL
Cal1	Method Settings	1,1-Dimethylhydrazine	6.64	13982	0.576	ng/mL
Cal1	Method Settings	Monomethylhydrazine	4.94	15330	0.582	ng/mL

Analyst : JW 1543 8/25/2009

GM 8/26/09

01M15 0126

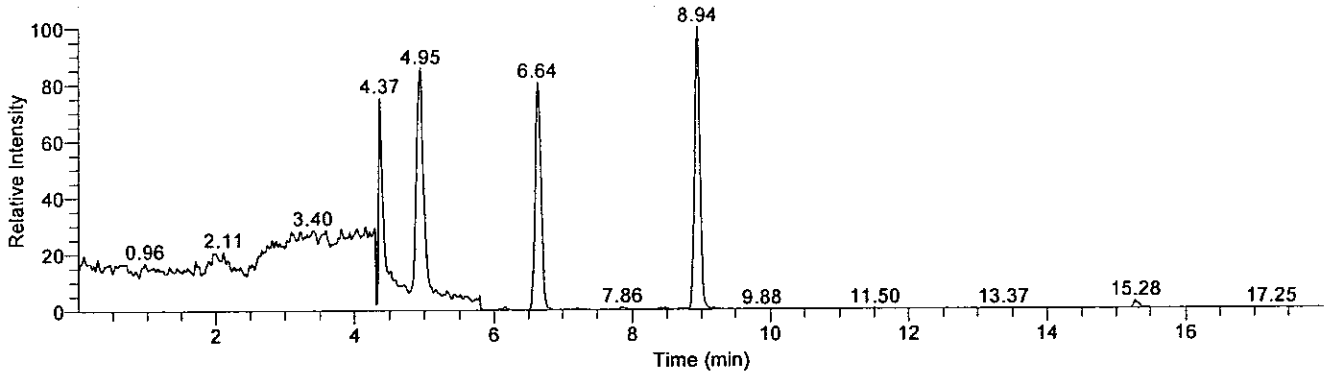
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-3.raw
Sample ID:	Cal2
Sample Type:	Standard
Level:	2
Acquisition Date:	Monday, August 24, 2009 6:40:10 PM
Vial:	E:10
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-3 - TIC RT: 0.00 - 17.99 NL: 6.39E3

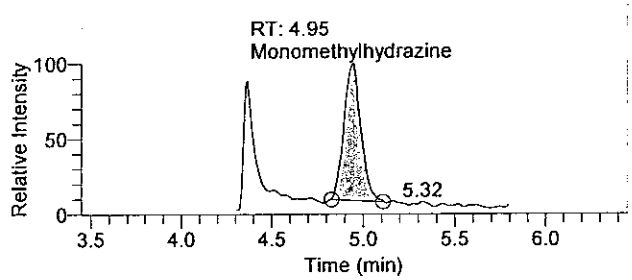


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:10, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-3, Comments: , ID: Cal2

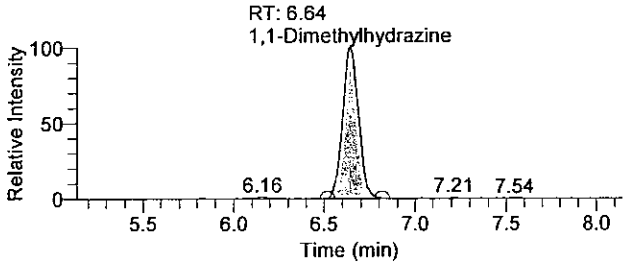
Monomethylhydrazine

24Aug-100562-70-3 - TIC RT: 3.45 - 6.45 NL: 5.46E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



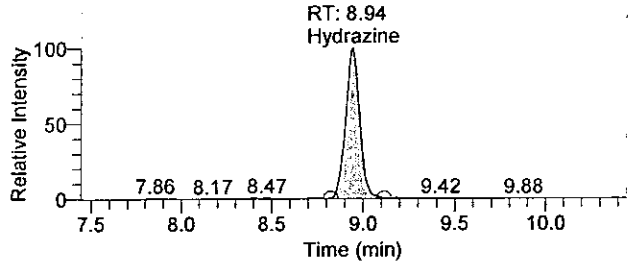
1,1-Dimethylhydrazine

24Aug-100562-70-3 - TIC RT: 5.14 - 8.14 NL: 5.14E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-3 - TIC RT: 7.44 - 10.44 NL: 6.39E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01M15 0127

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal2	Method Settings	Hydrazine	8.94	34164	0.207	ng/mL
Cal2	Method Settings	1,1-Dimethylhydrazine	6.64	30996	1.074	ng/mL
Cal2	Method Settings	Monomethylhydrazine	4.95	32290	1.049	ng/mL

Analyst : JW 1543 8/25/2009
8/26/09

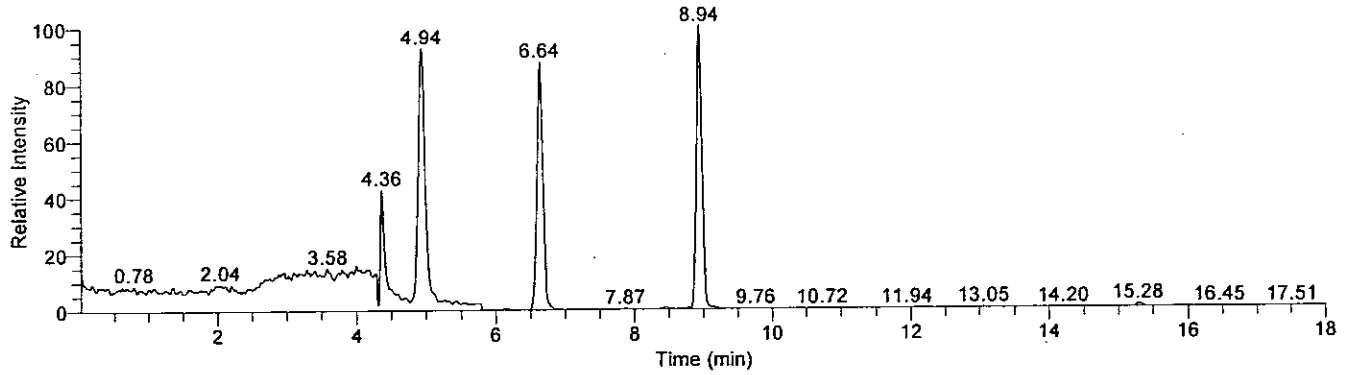
OLN15 0128

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-4.raw
Sample ID:	Cal3
Sample Type:	Standard
Level:	3
Acquisition Date:	Monday, August 24, 2009 6:58:56 PM
Vial:	E:11
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-4 - TIC RT: 0.00 - 18.00 NL: 1.32E4

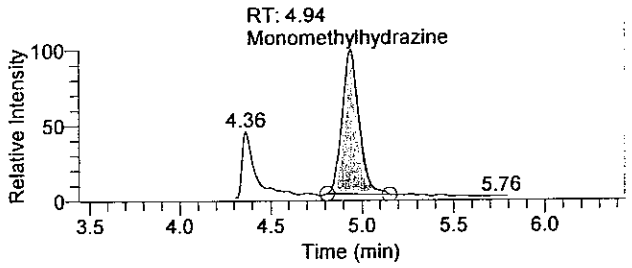


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:11, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-4, Comments: , ID: Cal3

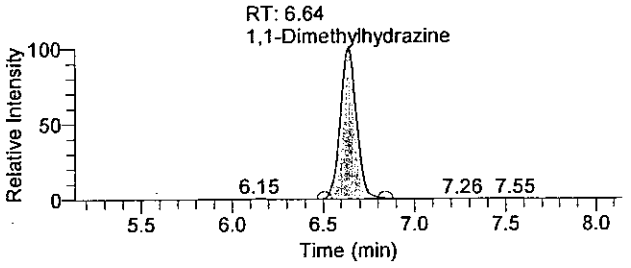
Monomethylhydrazine

24Aug-100562-70-4 - TIC RT: 3.44 - 6.44 NL: 1.23E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



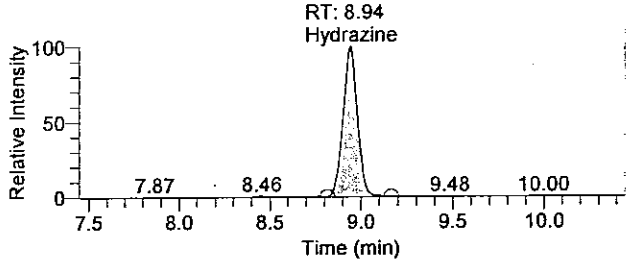
1,1-Dimethylhydrazine

24Aug-100562-70-4 - TIC RT: 5.14 - 8.14 NL: 1.16E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-4 - TIC RT: 7.44 - 10.44 NL: 1.32E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 8129

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3	Method Settings	Hydrazine	8.94	73508	0.484	ng/mL
Cal3	Method Settings	1,1-Dimethylhydrazine	6.64	70777	2.237	ng/mL
Cal3	Method Settings	Monomethylhydrazine	4.94	76651	2.270	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

01M15 0130

There is no signature data to report.

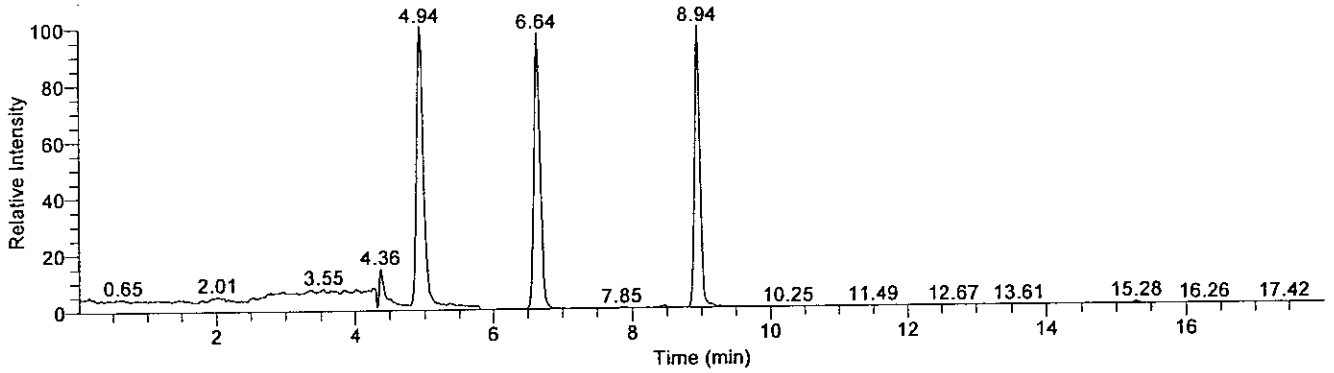
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:37:57
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-5.raw
Sample ID:	Cal4
Sample Type:	Standard
Level:	4
Acquisition Date:	Monday, August 24, 2009 7:17:40 PM
Vial:	E:12
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-5 - TIC RT: 0.00 - 18.00 NL: 2.60E4

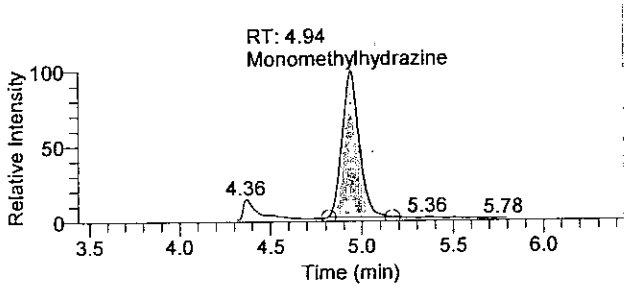


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:12, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-5, Comments: , ID: Cal4

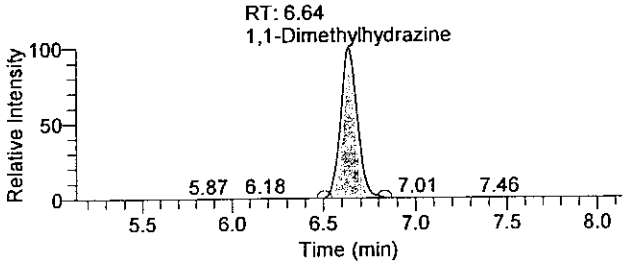
Monomethylhydrazine

24Aug-100562-70-5 - TIC RT: 3.44 - 6.44 NL: 2.60E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



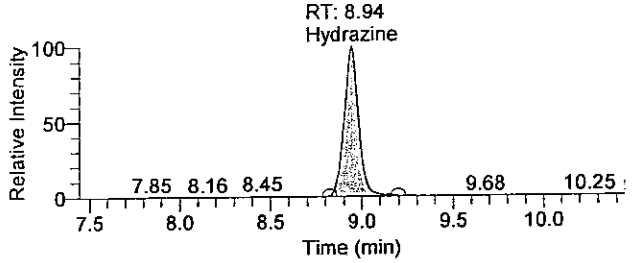
1,1-Dimethylhydrazine

24Aug-100562-70-5 - TIC RT: 5.14 - 8.14 NL: 2.53E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-5 - TIC RT: 7.44 - 10.44 NL: 2.58E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 8131

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4	Method Settings	Hydrazine	8.94	142595	0.969	ng/mL
Cal4	Method Settings	1,1-Dimethylhydrazine	6.64	156953	4.757	ng/mL
Cal4	Method Settings	Monomethylhydrazine	4.94	166840	4.753	ng/mL

Analyst : JW 1543 8/25/2009

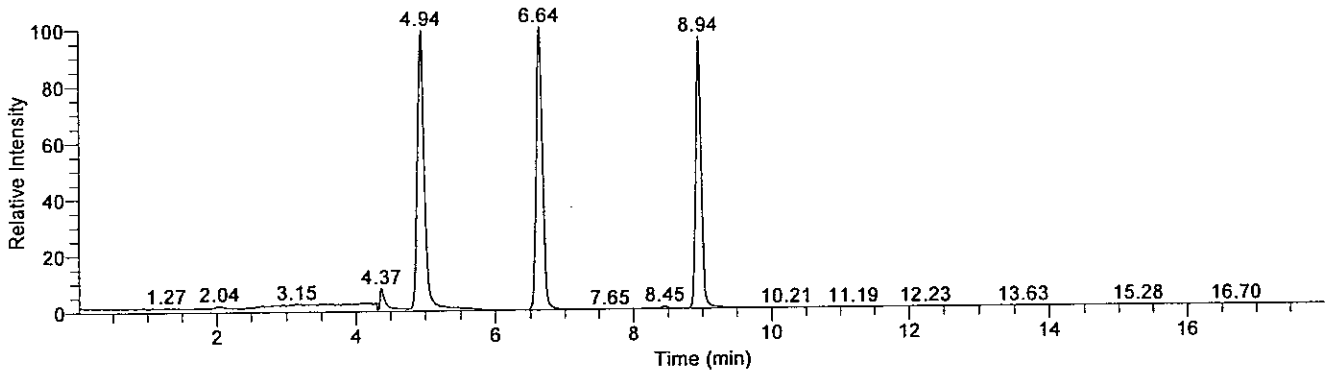
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-6.raw
Sample ID:	Cal5
Sample Type:	Standard
Level:	5
Acquisition Date:	Monday, August 24, 2009 7:36:26 PM
Vial:	E:13
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-6 - TIC RT: 0.00 - 17.99 NL: 6.50E4

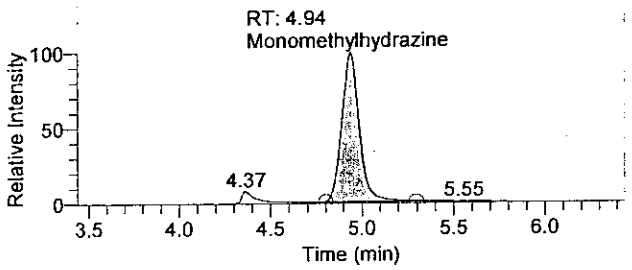


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:13, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-6, Comments: , ID: Cal5

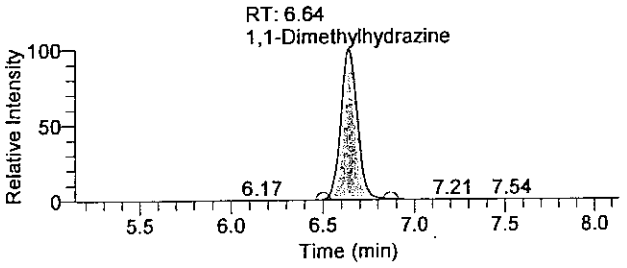
Monomethylhydrazine

24Aug-100562-70-6 - TIC RT: 3.44 - 6.44 NL: 6.45E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



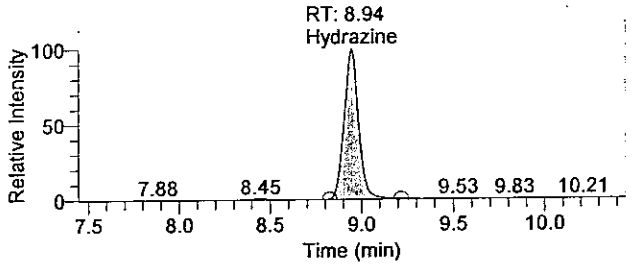
1,1-Dimethylhydrazine

24Aug-100562-70-6 - TIC RT: 5.14 - 8.14 NL: 6.50E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-6 - TIC RT: 7.44 - 10.44 NL: 6.24E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 R133

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5	Method Settings	Hydrazine	8.94	344733	2.388	ng/mL
Cal5	Method Settings	1,1-Dimethylhydrazine	6.64	405403	12.021	ng/mL
Cal5	Method Settings	Monomethylhydrazine	4.94	426493	11.899	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

01M15 0134

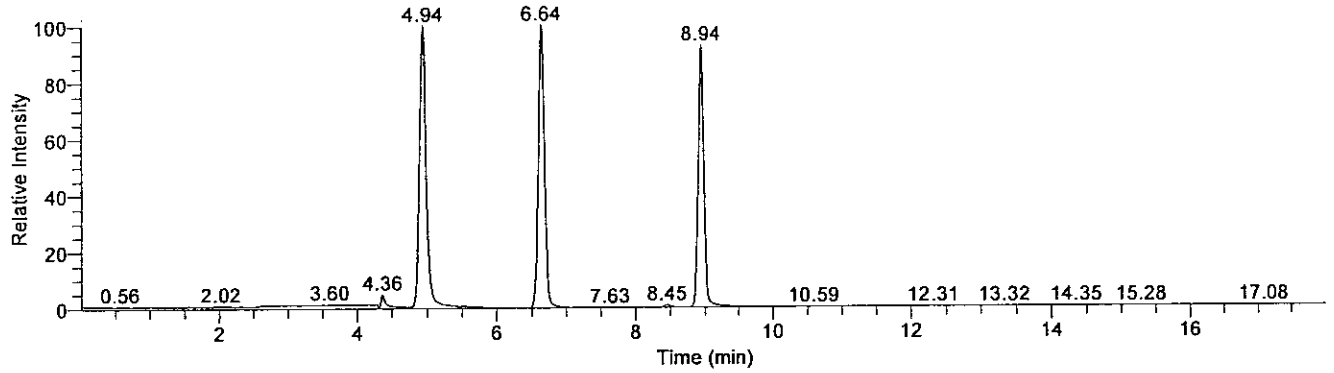
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-7.raw
Sample ID:	Cal6
Sample Type:	Standard
Level:	6
Acquisition Date:	Monday, August 24, 2009 7:55:11 PM
Vial:	E:14
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-7 - TIC RT: 0.00 - 18.00 NL: 1.34E5

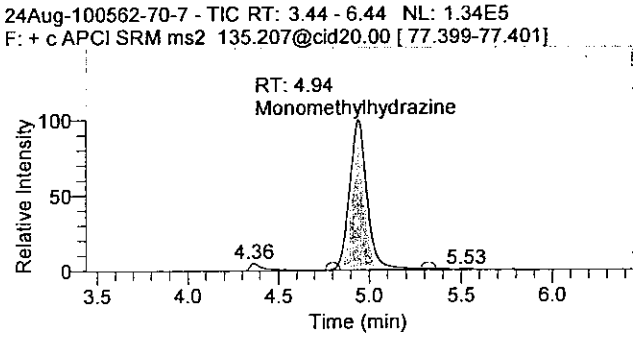


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:14, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-7, Comments: , ID: Cal6

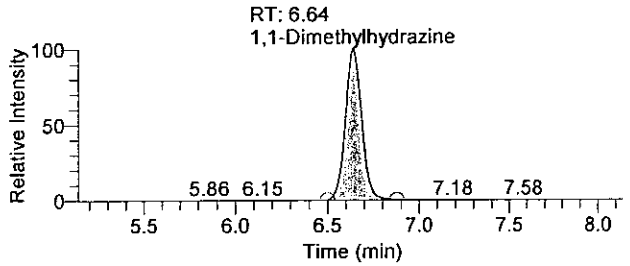
Monomethylhydrazine

24Aug-100562-70-7 - TIC RT: 3.44 - 6.44 NL: 1.34E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



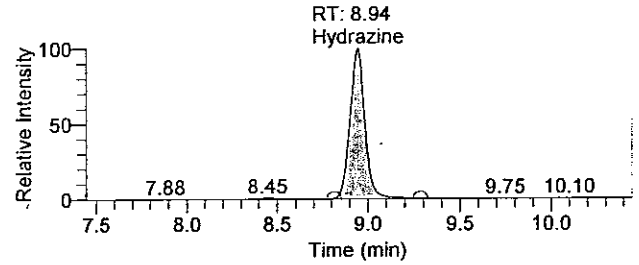
1,1-Dimethylhydrazine

24Aug-100562-70-7 - TIC RT: 5.14 - 8.14 NL: 1.34E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-7 - TIC RT: 7.44 - 10.44 NL: 1.24E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 0135

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	701484	4.894	ng/mL
Cal6	Method Settings	1,1-Dimethylhydrazine	6.64	831154	24.470	ng/mL
Cal6	Method Settings	Monomethylhydrazine	4.94	877892	24.324	ng/mL

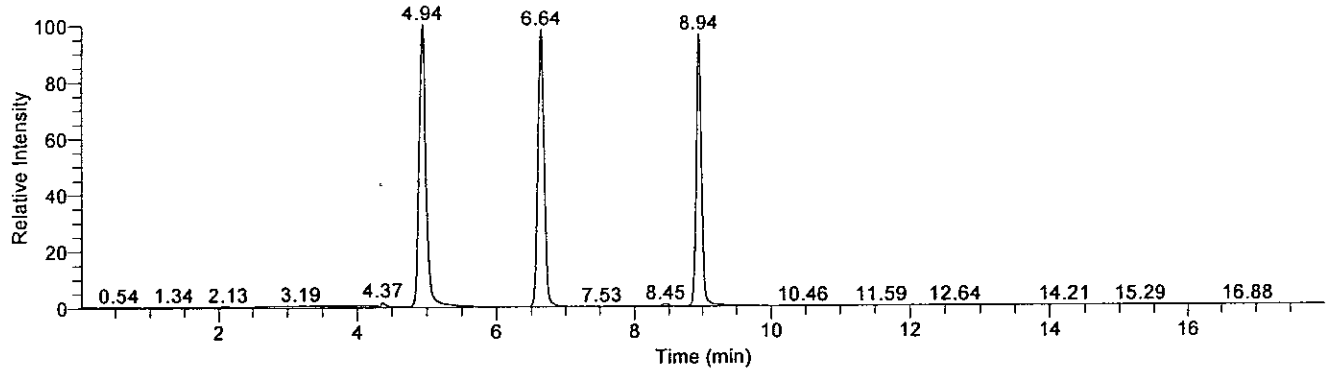
Analyst : JW 1543 8/25/2009

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-8.raw
Sample ID:	Cal7
Sample Type:	Standard
Level:	7
Acquisition Date:	Monday, August 24, 2009 8:13:55 PM
Vial:	E:15
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-8 - TIC RT: 0.00 - 18.00 NL: 2.65E5

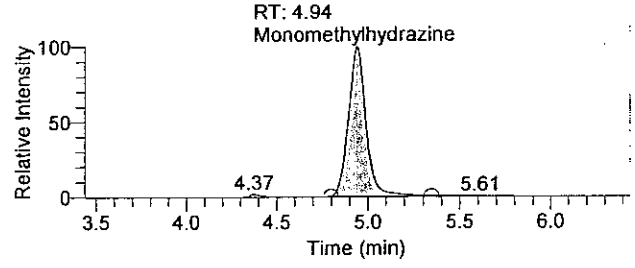


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:15, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-8, Comments: , ID: Cal7

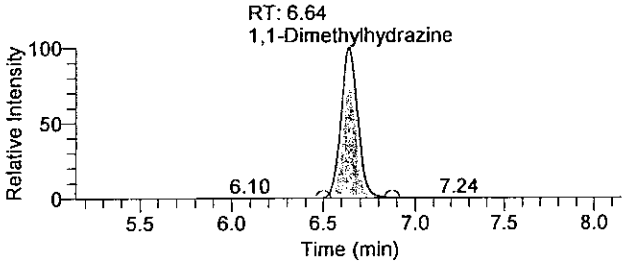
Monomethylhydrazine

24Aug-100562-70-8 - TIC RT: 3.44 - 6.44 NL: 2.65E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



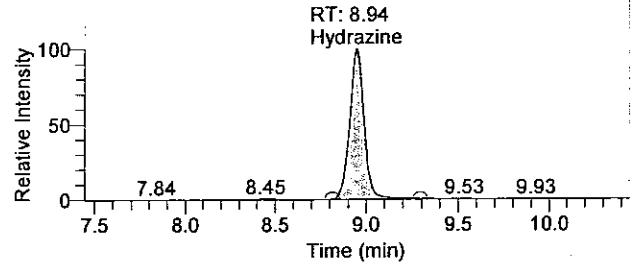
1,1-Dimethylhydrazine

24Aug-100562-70-8 - TIC RT: 5.14 - 8.14 NL: 2.59E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-8 - TIC RT: 7.44 - 10.44 NL: 2.55E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 0137

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal7	Method Settings	Hydrazine	8.94	1422158	9.955	ng/mL
Cal7	Method Settings	1,1-Dimethylhydrazine	6.64	1637595	48.049	ng/mL
Cal7	Method Settings	Monomethylhydrazine	4.94	1780317	49.163	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

OLM15 0138

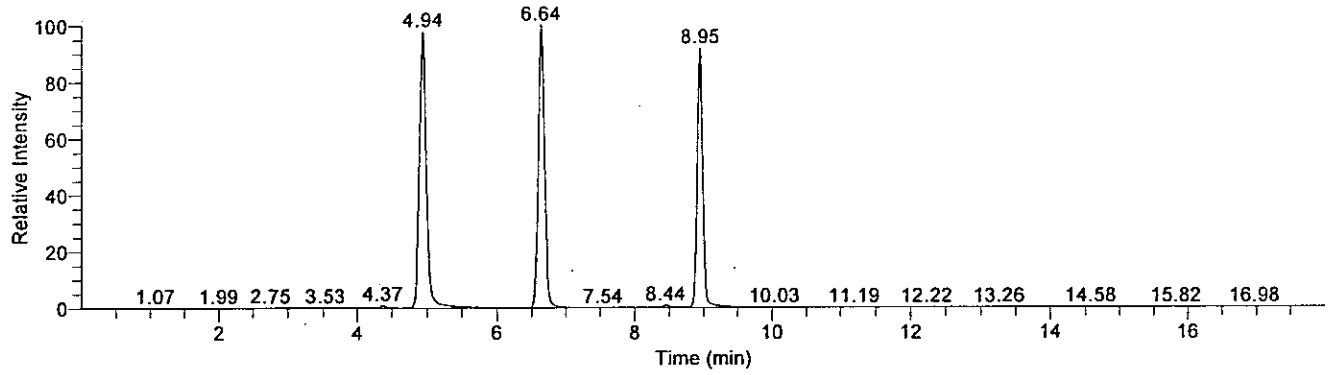
There is no signature data to report.

Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-9.raw
Sample ID:	Cal8
Sample Type:	Standard
Level:	8
Acquisition Date:	Monday, August 24, 2009 8:32:41 PM
Vial:	E:16
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-9 - TIC RT: 0.00 - 17.99 NL: 6.99E5

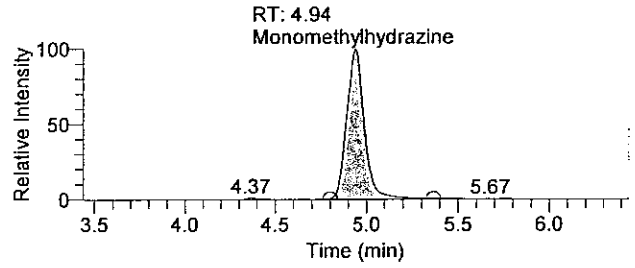


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:16, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-9, Comments: , ID: Cal8

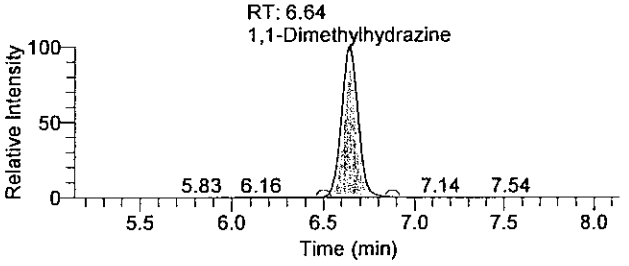
Monomethylhydrazine

24Aug-100562-70-9 - TIC RT: 3.44 - 6.44 NL: 6.84E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



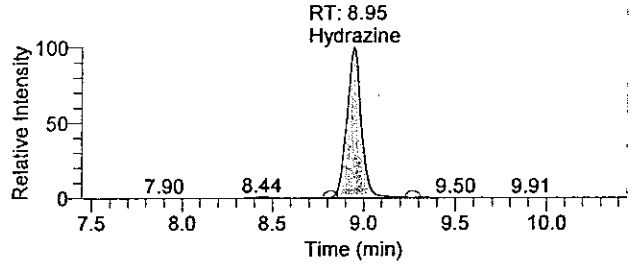
1,1-Dimethylhydrazine

24Aug-100562-70-9 - TIC RT: 5.14 - 8.14 NL: 6.99E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-9 - TIC RT: 7.45 - 10.45 NL: 6.41E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0139

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	3606544	25.295	ng/mL
Cal8	Method Settings	1,1-Dimethylhydrazine	6.64	4382835	128.317	ng/mL
Cal8	Method Settings	Monomethylhydrazine	4.94	4624875	127.459	ng/mL

Analyst : JW 1543 8/25/2009
8/26/09

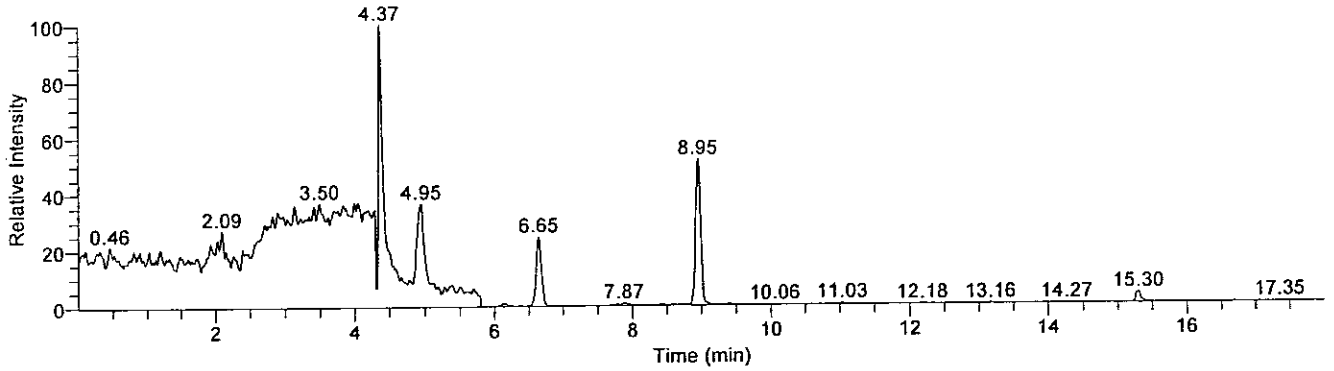
OLM15 B140

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-1.raw
Sample ID:	MDL
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 6:02:40 PM
Vial:	E:8
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-1 - TIC RT: 0.00 - 17.99 NL: 5.14E3

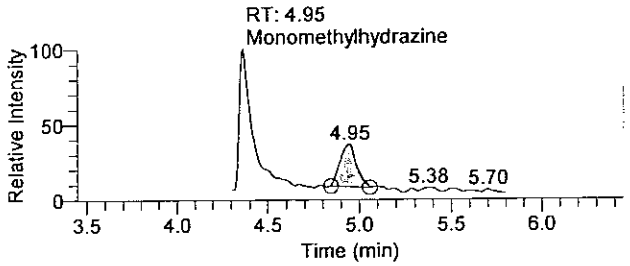


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:8, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-1, Comments: , ID: MDL

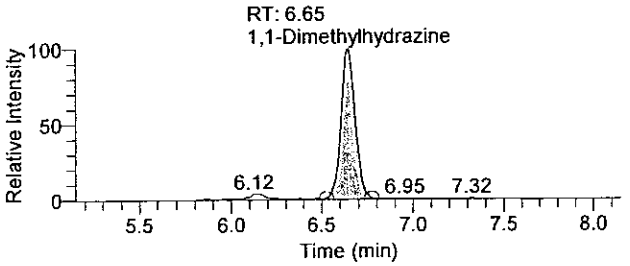
Monomethylhydrazine

24Aug-100562-70-1 - TIC RT: 3.45 - 6.45 NL: 5.14E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



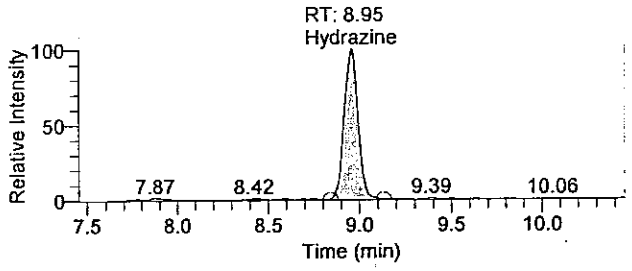
1,1-Dimethylhydrazine

24Aug-100562-70-1 - TIC RT: 5.15 - 8.15 NL: 1.26E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-1 - TIC RT: 7.45 - 10.45 NL: 2.66E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLM15 R241

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
MDL	Method Settings	Hydrazine	8.95	14138	0.067	ng/mL
MDL	Method Settings	1,1-Dimethylhydrazine	6.65	6676	0.363	ng/mL
MDL	Method Settings	Monomethylhydrazine	4.95	9177	0.413	ng/mL

Analyst : JW 1543 8/25/2009

8/25/09 26 (HS) 8/26/09

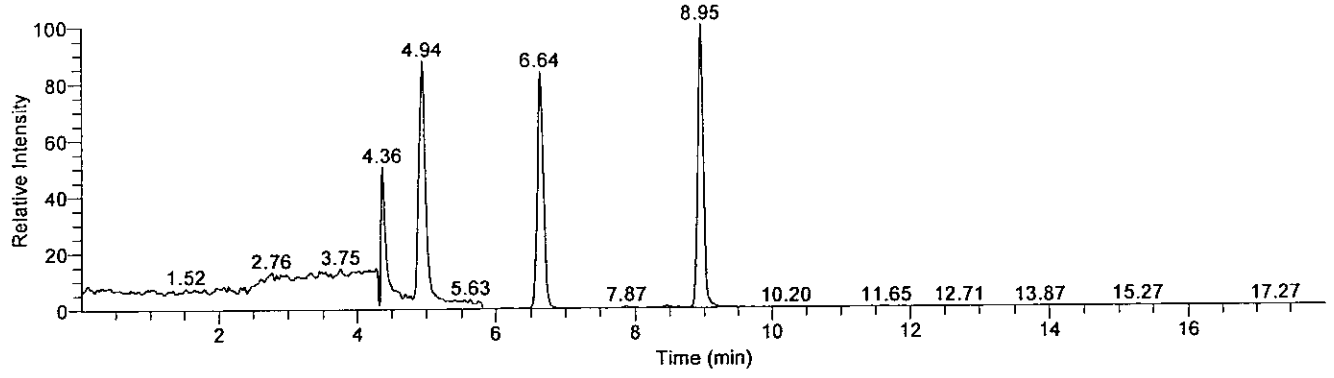
OLN15 0142

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-4QCa.raw
Sample ID:	Cal3asQC1a
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Monday, August 24, 2009 9:10:07 PM
Vial:	E:11
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-4QCa - TIC RT: 0.00 - 17.99 NL: 1.37E4

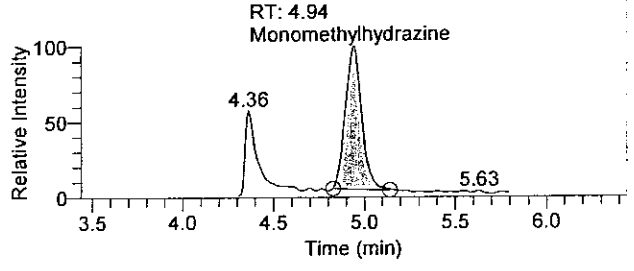


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:11, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-4QCa, Comments: , ID: Cal3asQC1a

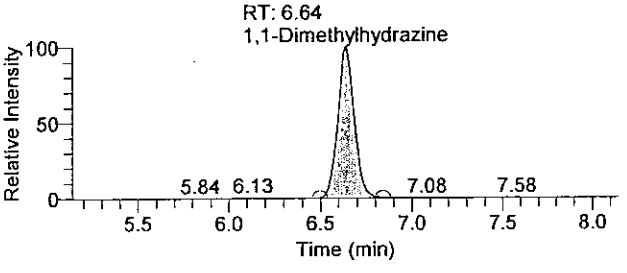
Monomethylhydrazine

24Aug-100562-70-4QCa - TIC RT: 3.44 - 6.44 NL: 1.20E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



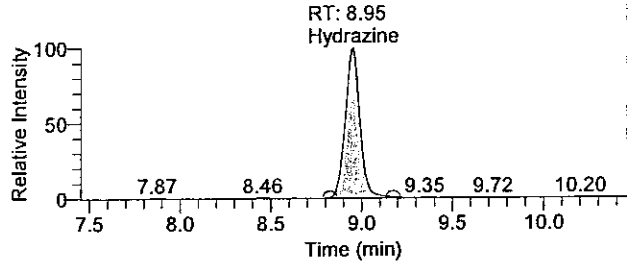
1,1-Dimethylhydrazine

24Aug-100562-70-4QCa - TIC RT: 5.14 - 8.14 NL: 1.15E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-4QCa - TIC RT: 7.45 - 10.45 NL: 1.37E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0143

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1a	Method Settings	Hydrazine	8.95	77486	0.512	ng/mL
Cal3asQC1a	Method Settings	1,1-Dimethylhydrazine	6.64	70412	2.226	ng/mL
Cal3asQC1a	Method Settings	Monomethylhydrazine	4.94	72449	2.154	ng/mL

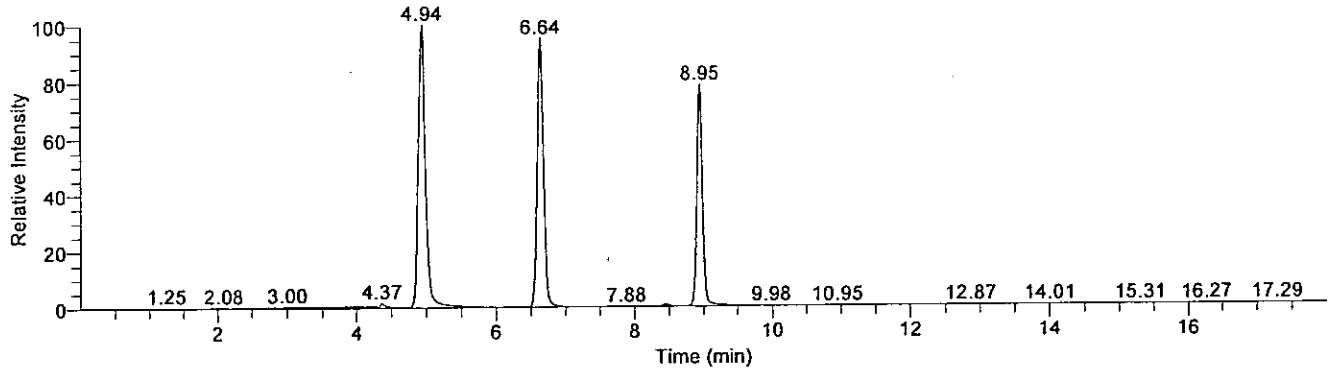
Analyst : JW 1543 8/25/2009
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-10.raw
Sample ID:	ICV
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Tuesday, August 25, 2009 12:17:24 AM
Vial:	E:24
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-10 - TIC RT: 0.00 - 18.00 NL: 3.90E5

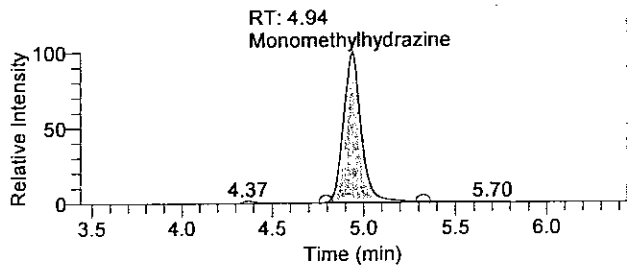


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:24, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-10, Comments: , ID: ICV

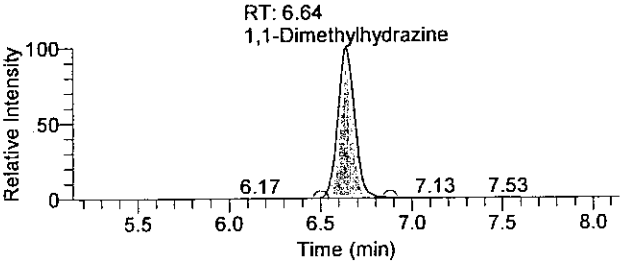
Monomethylhydrazine

24Aug-100562-70-10 - TIC RT: 3.44 - 6.44 NL: 3.90E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



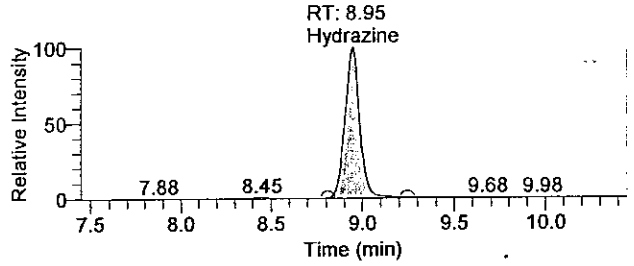
1,1-Dimethylhydrazine

24Aug-100562-70-10 - TIC RT: 5.14 - 8.14 NL: 3.71E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-10 - TIC RT: 7.45 - 10.45 NL: 3.06E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
ICV	Method Settings	Hydrazine	8.95	1744655	12.219	ng/mL
ICV	Method Settings	1,1-Dimethylhydrazine	6.64	2356296	69.063	ng/mL
ICV	Method Settings	Monomethylhydrazine	4.94	2651820	73.151	ng/mL

Analyst : JW 1543 8/25/2009
8/26 8/26/09

OLN15 8146

There is no signature data to report.

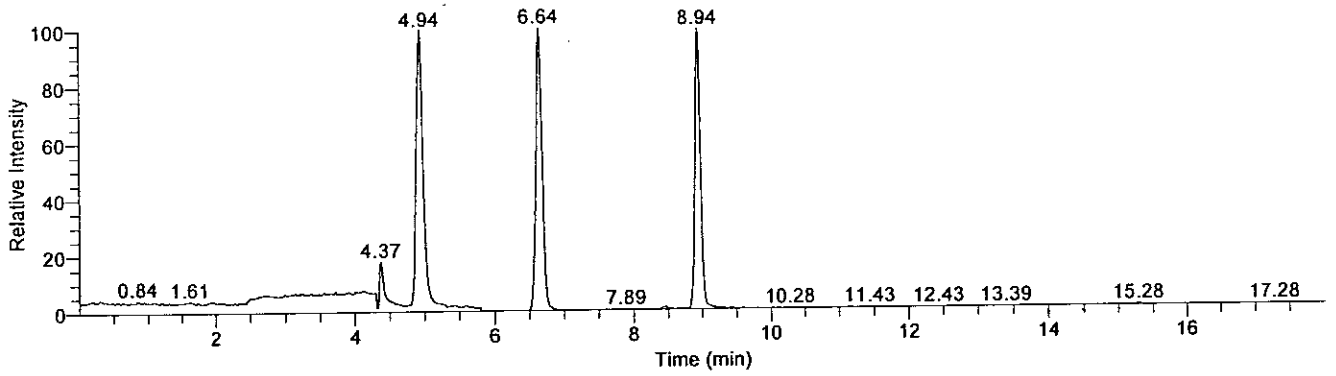
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:00
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-5QCa.raw
Sample ID:	Cal4asQC2a
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Tuesday, August 25, 2009 12:36:08 AM
Vial:	E:12
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-5QCa - TIC RT: 0.00 - 18.00 NL: 2.68E4

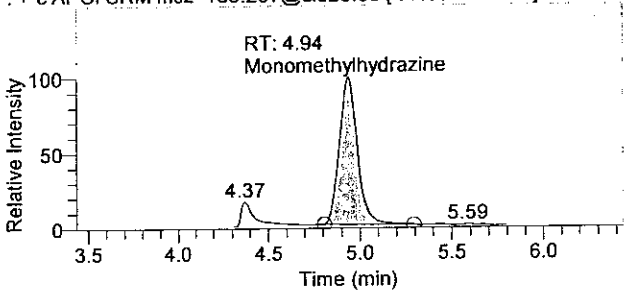


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:12, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-5QCa, Comments: , ID: Cal4asQC2a

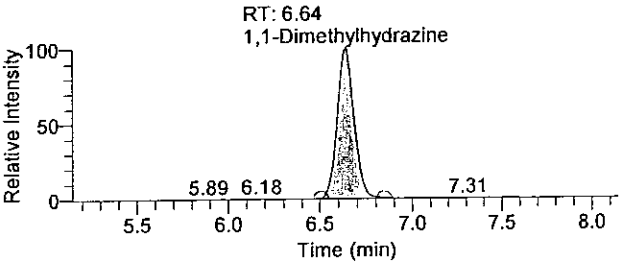
Monomethylhydrazine

24Aug-100562-70-5QCa - TIC RT: 3.44 - 6.44 NL: 2.67E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



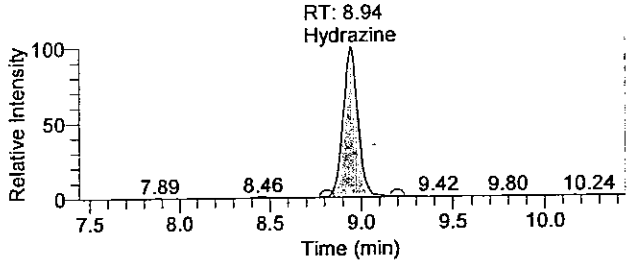
1,1-Dimethylhydrazine

24Aug-100562-70-5QCa - TIC RT: 5.14 - 8.14 NL: 2.68E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-5QCa - TIC RT: 7.44 - 10.44 NL: 2.66E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0147

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	150968	1.028	ng/mL
Cal4asQC2a	Method Settings	1,1-Dimethylhydrazine	6.64	168336	5.089	ng/mL
Cal4asQC2a	Method Settings	Monomethylhydrazine	4.94	179632	5.105	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

OLM15 0148

There is no signature data to report.

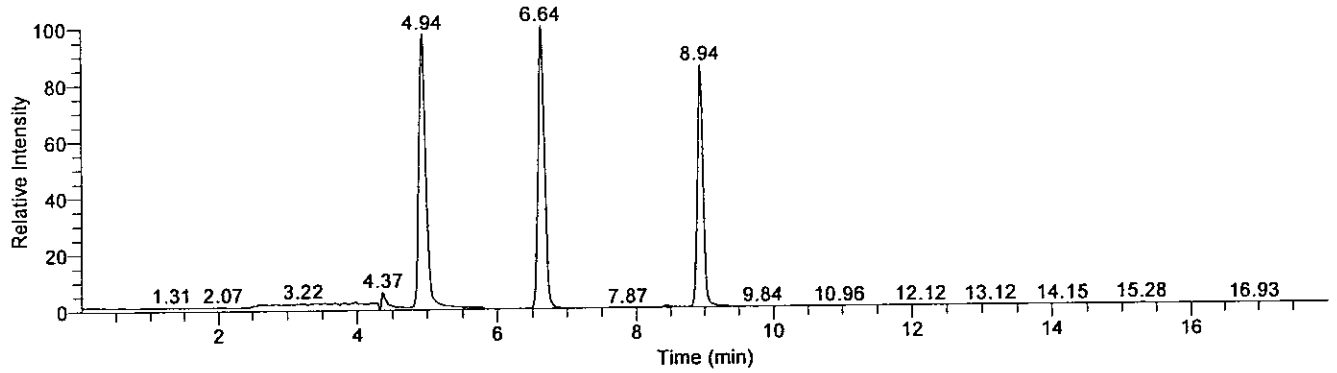
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:03
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-6QCa.raw
Sample ID:	Cal5asQC3a
Sample Type:	QC
Level:	CCV3
Acquisition Date:	Tuesday, August 25, 2009 4:02:15 AM
Vial:	E:13
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-6QCa - TIC RT: 0.00 - 17.99 NL: 7.16E4

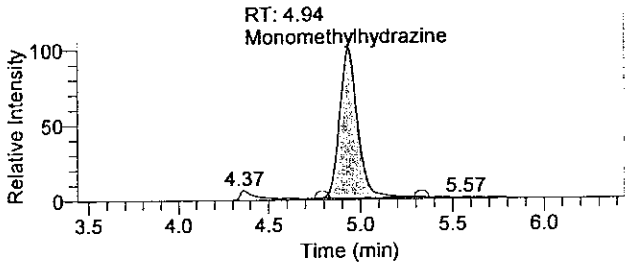


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:13, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-6QCa, Comments: , ID: Cal5asQC3a

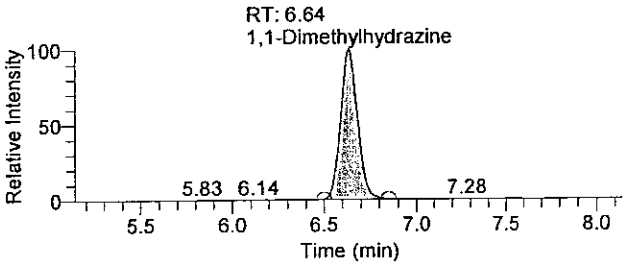
Monomethylhydrazine

24Aug-100562-70-6QCa - TIC RT: 3.44 - 6.44 NL: 6.98E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



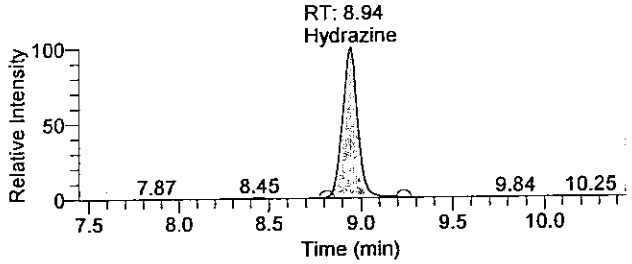
1,1-Dimethylhydrazine

24Aug-100562-70-6QCa - TIC RT: 5.14 - 8.14 NL: 7.16E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-6QCa - TIC RT: 7.44 - 10.44 NL: 6.13E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 R149

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	353531	2.450	ng/mL
Cal5asQC3a	Method Settings	1,1-Dimethylhydrazine	6.64	451604	13.372	ng/mL
Cal5asQC3a	Method Settings	Monomethylhydrazine	4.94	474188	13.212	ng/mL

Analyst: JW 1543 8/25/2009

8/26/09

01N15 0150

There is no signature data to report.

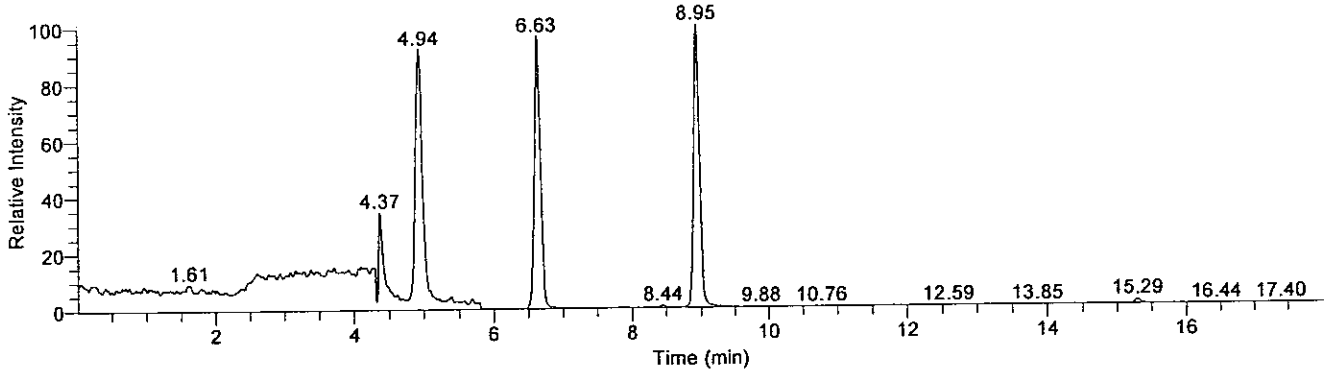
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:05
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-70-4QCb.raw
Sample ID:	Cal3asQC1b
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Tuesday, August 25, 2009 6:51:11 AM
Vial:	E:11
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-4QCb - TIC RT: 0.00 - 17.99 NL: 1.29E4

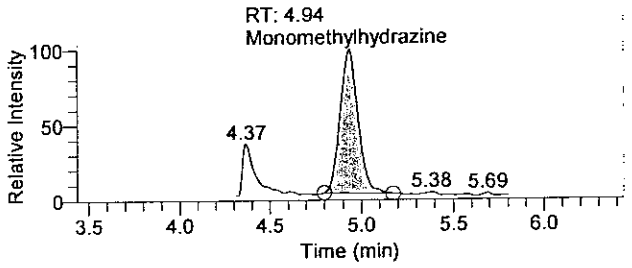


Compound Graphics

Date: 25-Aug-2009, Instrument: Quantum, Vial: E:11, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-4QCb, Comments: , ID: Cal3asQC1b

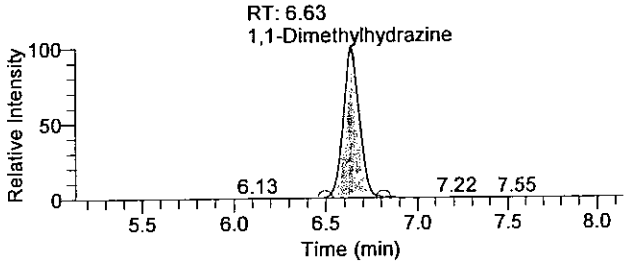
Monomethylhydrazine

24Aug-100562-70-4QCb - TIC RT: 3.44 - 6.44 NL: 1.19E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



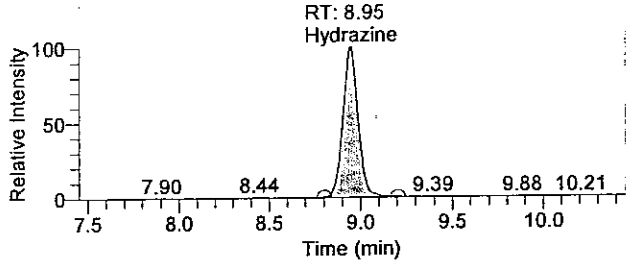
1,1-Dimethylhydrazine

24Aug-100562-70-4QCb - TIC RT: 5.13 - 8.13 NL: 1.24E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-4QCb - TIC RT: 7.45 - 10.45 NL: 1.29E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01H15 0151

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1b	Method Settings	Hydrazine	8.95	74888	0.493	ng/mL
Cal3asQC1b	Method Settings	1,1-Dimethylhydrazine	6.63	74835	2.355	ng/mL
Cal3asQC1b	Method Settings	Monomethylhydrazine	4.94	77450	2.292	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

OLN15 #152

There is no signature data to report.

Lancaster Laboratories

Workbook Name: TQU01408-26Aug2009-1
Instrument No. TQU01408
Analyst JW01543

Sequence Table

Sample ID	File Name	Sample Type	Path	Position	Inj Vol	Batch No.
Conditioner1	26Aug-Methaonl1	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	E:1	10.00	N/A
Conditioner2	26Aug-Methaonl2	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	E:1	10.00	N/A
MDL	26Aug-100562-74-1	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:1	10.00	N/A
Cal1	26Aug-100562-74-2	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:2	10.00	N/A
Cal2	26Aug-100562-74-3	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:3	10.00	N/A
Cal3	26Aug-100562-74-4	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:4	10.00	N/A
Cal4	26Aug-100562-74-5	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:5	10.00	N/A
Cal5	26Aug-100562-74-6	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:6	10.00	N/A
Cal6	26Aug-100562-74-7	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:7	10.00	N/A
Cal7	26Aug-100562-74-8	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:8	10.00	N/A
Cal8	26Aug-100562-74-9	Standard	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:9	10.00	N/A
Conditioner3	26Aug-Methaonl3	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	E:1	10.00	N/A
Cal3asQC1	26Aug-100562-74-4QC	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:4	10.00	N/A
Conditioner4	26Aug-Methaonl4	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	E:1	10.00	N/A
Conditioner5	26Aug-Methaonl5	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	E:1	10.00	N/A
Blank	26Aug-100562-74-10	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:10	10.00	0923810056274
5754474	26Aug-100562-74-13	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:11	10.00	0923810056274
5754477	26Aug-100562-74-14	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:12	10.00	0923810056274
5757324	26Aug-100562-74-15	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:13	10.00	0923810056274
5760570	26Aug-100562-74-16	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:14	10.00	0923810056274
5760570MS	26Aug-100562-74-17	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:15	10.00	0923810056274
5760570MSD	26Aug-100562-74-18	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:16	10.00	0923810056274
ICV/LCS	26Aug-100562-74-11	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:17	10.00	0923810056274
Cal4asQC2	26Aug-100562-74-5QC	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:5	10.00	N/A
LCSD	26Aug-100562-74-12	Unknown	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:18	10.00	0923810056274
Cal5asQC3	24Aug-100562-74-6QC	QC	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles	B:6	10.00	N/A

Analyst : JW 1543 8/27/2009
[illegible] 8/25/09

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-26Aug2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
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

OLN15 0154

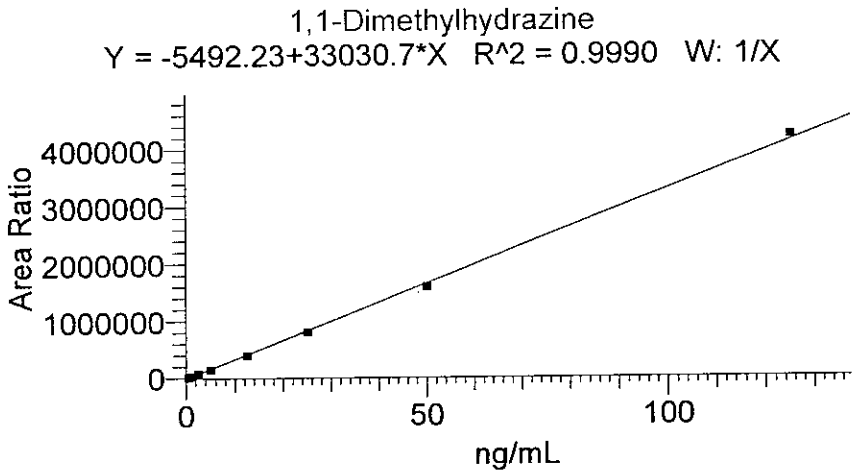
There is no signature data to report.

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	13298	0.500	ng/mL	0.569	13.77
Cal2	Standard	2	N/A	Method Settings	29159	1.000	ng/mL	1.049	4.91
Cal3	Standard	3	N/A	Method Settings	72488	2.500	ng/mL	2.361	-5.57
Cal4	Standard	4	N/A	Method Settings	148904	5.000	ng/mL	4.674	-6.51
Cal5	Standard	5	N/A	Method Settings	394767	12.500	ng/mL	12.118	-3.06
Cal6	Standard	6	N/A	Method Settings	800052	25.000	ng/mL	24.388	-2.45
Cal7	Standard	7	N/A	Method Settings	1586374	50.000	ng/mL	48.194	-3.61
Cal8	Standard	8	N/A	Method Settings	4227313	125.000	ng/mL	128.148	2.52
Cal3asQC1	QC	CCV1	N/A	Method Settings	70276	2.500	ng/mL	2.294	-8.24
Cal4asQC2	QC	CCV2	N/A	Method Settings	151064	5.000	ng/mL	4.740	-5.21
Cal5asQC3	QC	CCV3	N/A	Method Settings	404847	12.500	ng/mL	12.423	-0.62

Analyst : JW 1543 8/27/2008
[illegible] 8/28/08

01N15 8155

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-26Aug2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
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):	8.94000
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	0.100 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

01815 0156

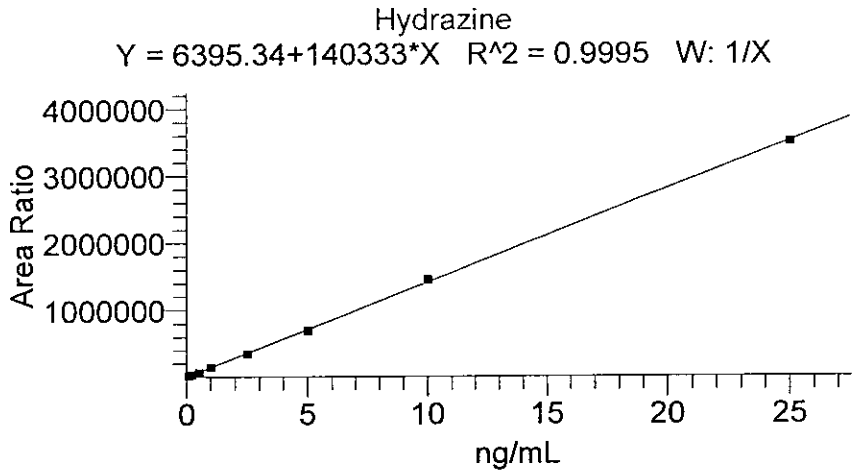
There is no signature data to report.

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	21696	0.100	ng/mL	0.109	9.03
Cal2	Standard	2	N/A	Method Settings	35084	0.200	ng/mL	0.204	2.22
Cal3	Standard	3	N/A	Method Settings	69603	0.500	ng/mL	0.450	-9.92
Cal4	Standard	4	N/A	Method Settings	148182	1.000	ng/mL	1.010	1.04
Cal5	Standard	5	N/A	Method Settings	345949	2.500	ng/mL	2.420	-3.22
Cal6	Standard	6	N/A	Method Settings	696327	5.000	ng/mL	4.916	-1.67
Cal7	Standard	7	N/A	Method Settings	1451004	10.000	ng/mL	10.294	2.94
Cal8	Standard	8	N/A	Method Settings	3500086	25.000	ng/mL	24.896	-0.42
Cal3asQC1	QC	CCV1	N/A	Method Settings	78500	0.500	ng/mL	0.514	2.76
Cal4asQC2	QC	CCV2	N/A	Method Settings	154572	1.000	ng/mL	1.056	5.59
Cal5asQC3	QC	CCV3	N/A	Method Settings	370167	2.500	ng/mL	2.592	3.69

Analyst : JW 1543 8/27/2015
[illegible] 8/28/15

01N15 0157

There is no signature data to report.

Lancaster Laboratories

Component Calibration and Continuing Calibration Verification (CCV) Report

Workbook Name:	TQU01408-26Aug2009-1
Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
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):	0.50
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

OLN15 0158

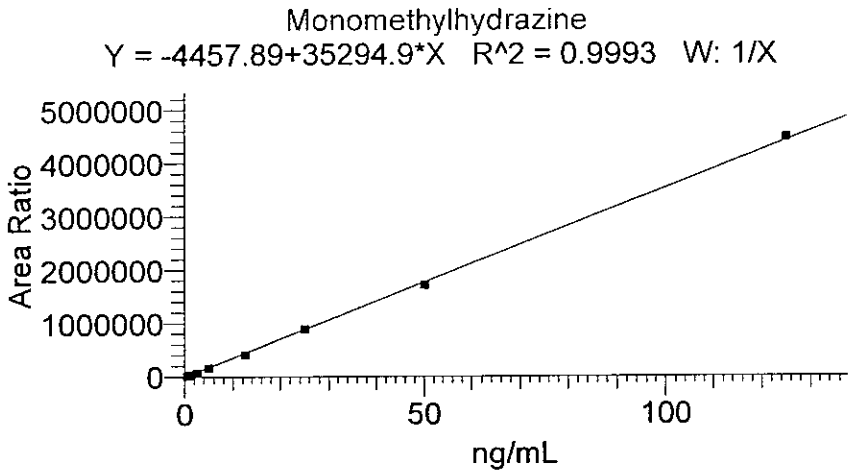
There is no signature data to report.

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	15746	0.500	ng/mL	0.572	14.49
Cal2	Standard	2	N/A	Method Settings	32496	1.000	ng/mL	1.047	4.70
Cal3	Standard	3	N/A	Method Settings	73967	2.500	ng/mL	2.222	-11.12
Cal4	Standard	4	N/A	Method Settings	166789	5.000	ng/mL	4.852	-2.96
Cal5	Standard	5	N/A	Method Settings	414606	12.500	ng/mL	11.873	-5.01
Cal6	Standard	6	N/A	Method Settings	886283	25.000	ng/mL	25.237	0.95
Cal7	Standard	7	N/A	Method Settings	1713356	50.000	ng/mL	48.670	-2.66
Cal8	Standard	8	N/A	Method Settings	4478911	125.000	ng/mL	127.026	1.62
Cal3asQC1	QC	CCV1	N/A	Method Settings	80914	2.500	ng/mL	2.419	-3.25
Cal4asQC2	QC	CCV2	N/A	Method Settings	173082	5.000	ng/mL	5.030	0.60
Cal5asQC3	QC	CCV3	N/A	Method Settings	448008	12.500	ng/mL	12.820	2.56

Analyst : JW 1543 8/27/2009
[illegible] 8/28/09

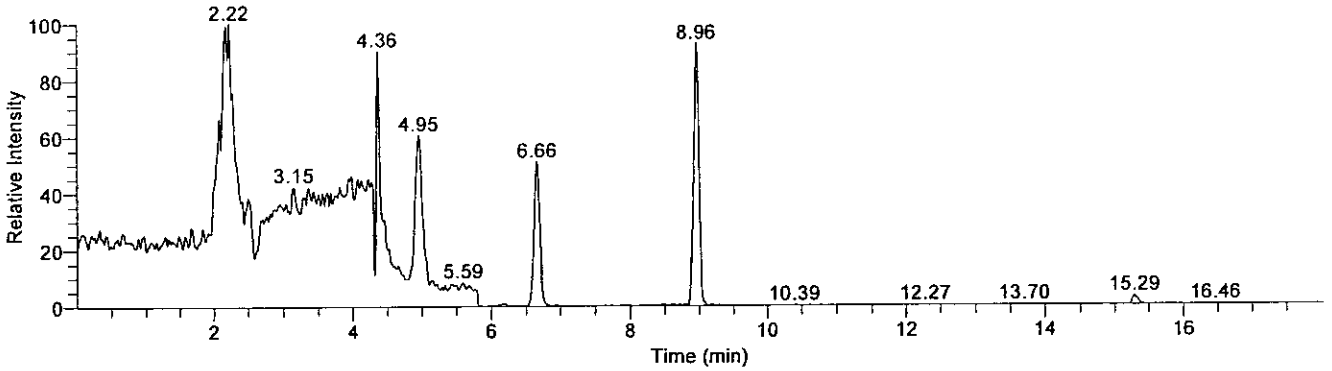
OLN15 0159

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-2.raw
Sample ID:	Cal1
Sample Type:	Standard
Level:	1
Acquisition Date:	Wednesday, August 26, 2009 5:05:37 PM
Vial:	B:2
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-2 - TIC RT: 0.00 - 18.00 NL: 4.41E3

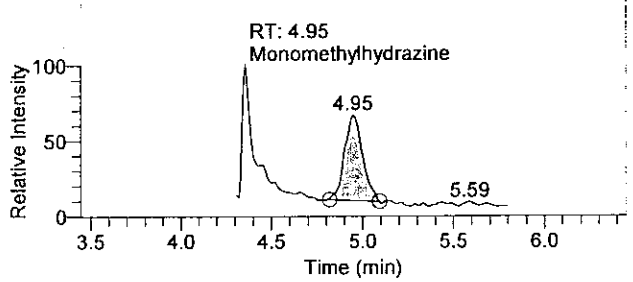


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:2, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-2, Comments: , ID: Cal1

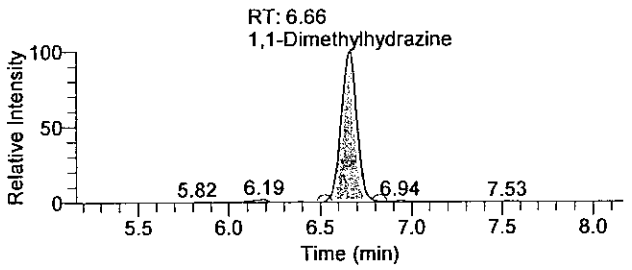
Monomethylhydrazine

26Aug-100562-74-2 - TIC RT: 3.45 - 6.45 NL: 3.98E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



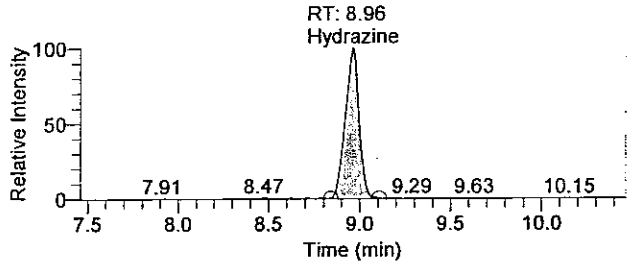
1,1-Dimethylhydrazine

26Aug-100562-74-2 - TIC RT: 5.16 - 8.16 NL: 2.25E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-2 - TIC RT: 7.46 - 10.46 NL: 4.08E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 8160

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal1	Method Settings	Hydrazine	8.96	21696	0.109	ng/mL
Cal1	Method Settings	1,1-Dimethylhydrazine	6.66	13298	0.569	ng/mL
Cal1	Method Settings	Monomethylhydrazine	4.95	15746	0.572	ng/mL

Analyst : JW 1543 8/27/2009

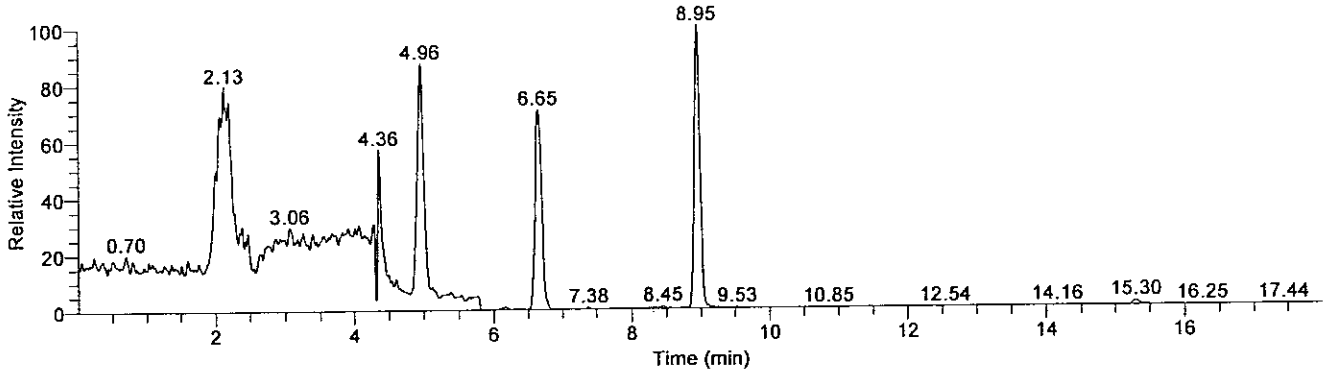
8/28/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-3.raw
Sample ID:	Cal2
Sample Type:	Standard
Level:	2
Acquisition Date:	Wednesday, August 26, 2009 5:24:22 PM
Vial:	B:3
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-3 - TIC RT: 0.01 - 17.99 NL: 6.20E3

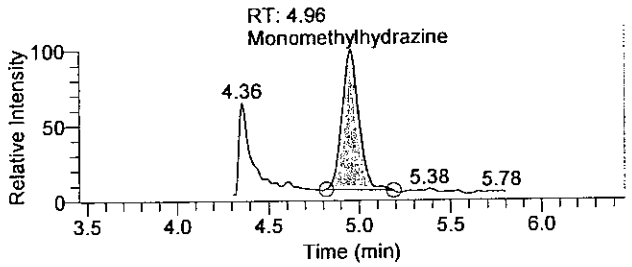


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:3, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-3, Comments: , ID: Cal2

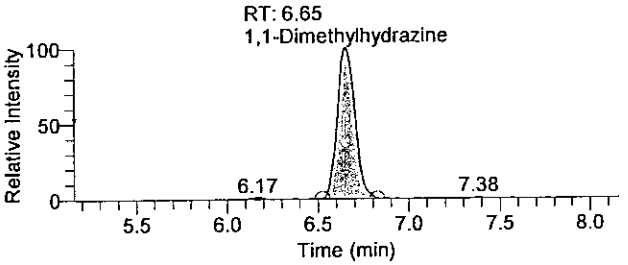
Monomethylhydrazine

26Aug-100562-74-3 - TIC RT: 3.46 - 6.46 NL: 5.41E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



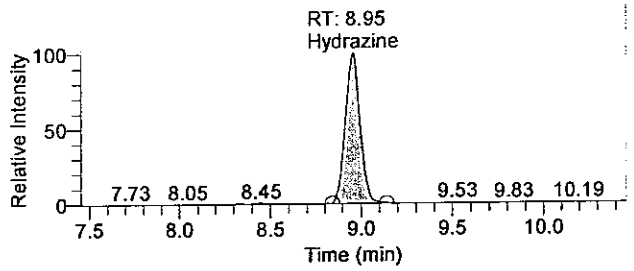
1,1-Dimethylhydrazine

26Aug-100562-74-3 - TIC RT: 5.15 - 8.15 NL: 4.38E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-3 - TIC RT: 7.45 - 10.45 NL: 6.20E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 B162

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	35084	0.204	ng/mL
Cal2	Method Settings	1,1-Dimethylhydrazine	6.65	29159	1.049	ng/mL
Cal2	Method Settings	Monomethylhydrazine	4.96	32496	1.047	ng/mL

Analyst : JJJ 1543 8/27/2009

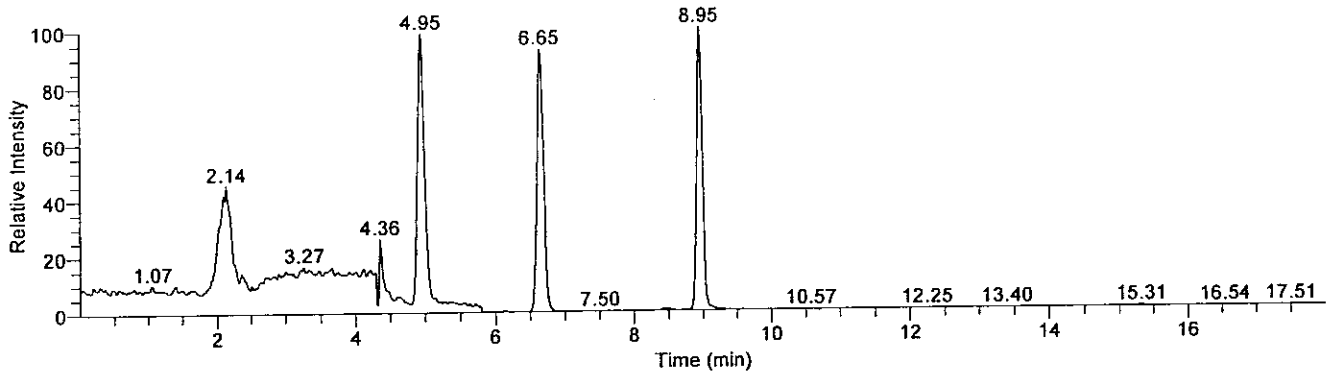
8/28/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-4.raw
Sample ID:	Cal3
Sample Type:	Standard
Level:	3
Acquisition Date:	Wednesday, August 26, 2009 5:43:08 PM
Vial:	B:4
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-4 - TIC RT: 0.00 - 17.99 NL: 1.20E4

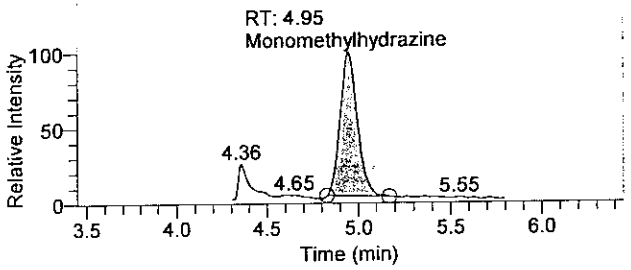


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:4, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-4, Comments: , ID: Cal3

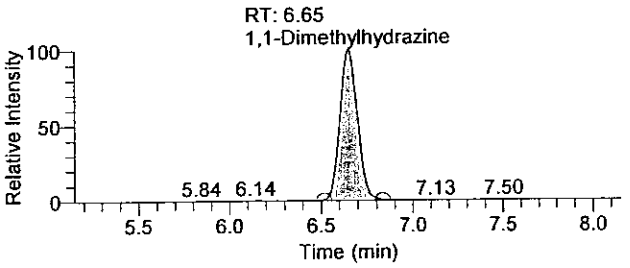
Monomethylhydrazine

26Aug-100562-74-4 - TIC RT: 3.45 - 6.45 NL: 1.18E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



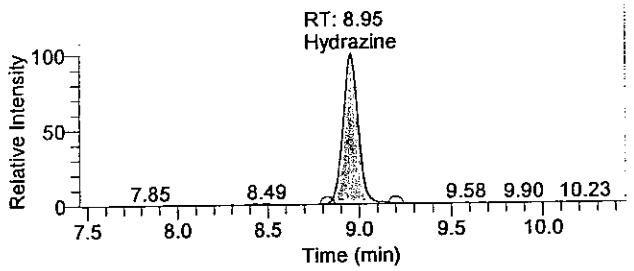
1,1-Dimethylhydrazine

26Aug-100562-74-4 - TIC RT: 5.15 - 8.15 NL: 1.11E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-4 - TIC RT: 7.45 - 10.45 NL: 1.20E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0164

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	69603	0.450	ng/mL
Cal3	Method Settings	1,1-Dimethylhydrazine	6.65	72488	2.361	ng/mL
Cal3	Method Settings	Monomethylhydrazine	4.95	73967	2.222	ng/mL

Analyst : JW 1543 8/27/2009

8/28/09

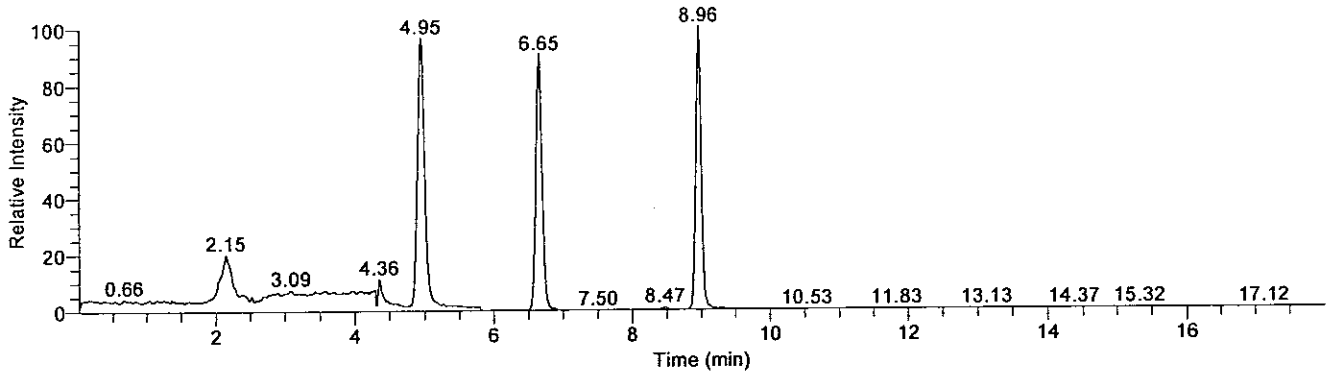
OLM15 0165

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-5.raw
Sample ID:	Cal4
Sample Type:	Standard
Level:	4
Acquisition Date:	Wednesday, August 26, 2009 6:01:52 PM
Vial:	B:5
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-5 - TIC RT: 0.00 - 18.00 NL: 2.60E4

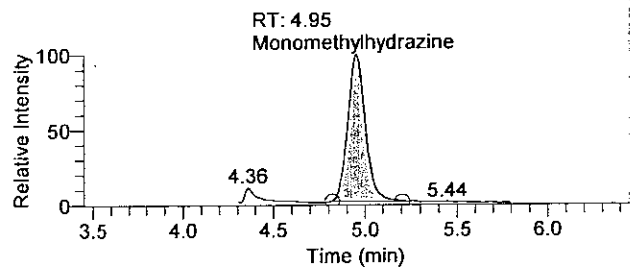


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:5, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-5, Comments: , ID: Cal4

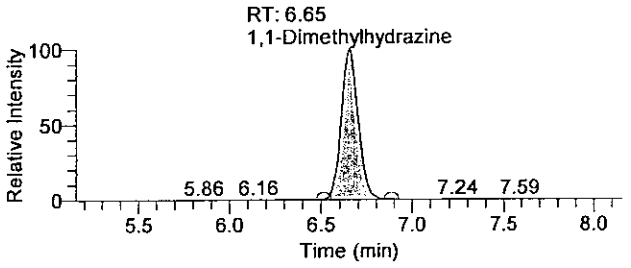
Monomethylhydrazine

26Aug-100562-74-5 - TIC RT: 3.45 - 6.45 NL: 2.50E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



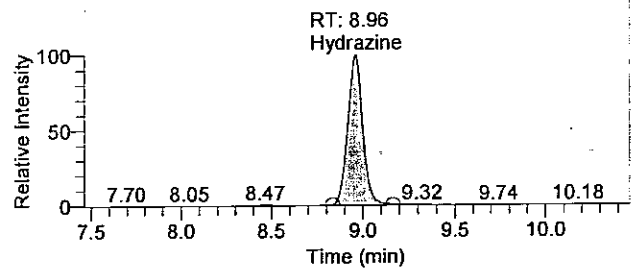
1,1-Dimethylhydrazine

26Aug-100562-74-5 - TIC RT: 5.15 - 8.15 NL: 2.35E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-5 - TIC RT: 7.46 - 10.46 NL: 2.60E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 8166

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4	Method Settings	Hydrazine	8.96	148182	1.010	ng/mL
Cal4	Method Settings	1,1-Dimethylhydrazine	6.65	148904	4.674	ng/mL
Cal4	Method Settings	Monomethylhydrazine	4.95	166789	4.852	ng/mL

Analyst : JW 1543 8/27/2009
8/28/09

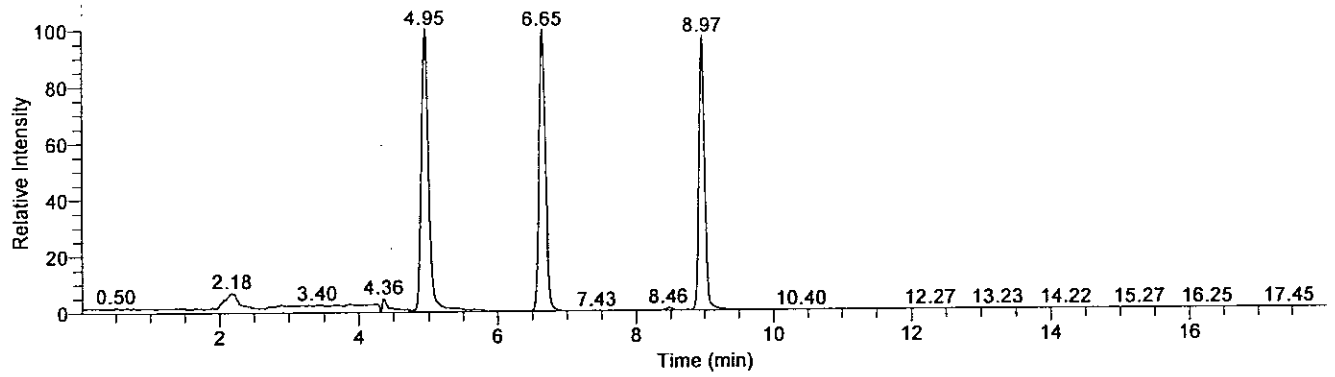
01N15 0167

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-6.raw
Sample ID:	Cal5
Sample Type:	Standard
Level:	5
Acquisition Date:	Wednesday, August 26, 2009 6:20:38 PM
Vial:	B:6
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-6 - TIC RT: 0.00 - 18.00 NL: 6.18E4

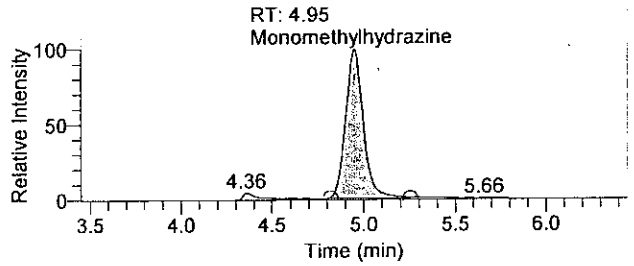


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:6, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-6, Comments: , ID: Cal5

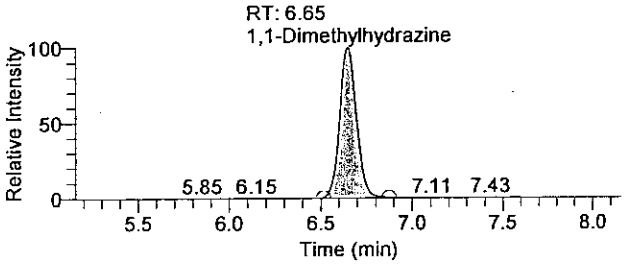
Monomethylhydrazine

26Aug-100562-74-6 - TIC RT: 3.45 - 6.45 NL: 6.18E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



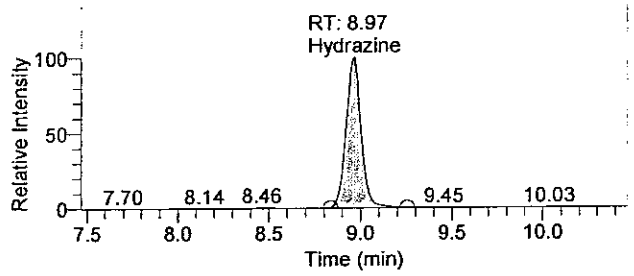
1,1-Dimethylhydrazine

26Aug-100562-74-6 - TIC RT: 5.15 - 8.15 NL: 6.14E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-6 - TIC RT: 7.47 - 10.47 NL: 5.99E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0169

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5	Method Settings	Hydrazine	8.97	345949	2.420	ng/mL
Cal5	Method Settings	1,1-Dimethylhydrazine	6.65	394767	12.118	ng/mL
Cal5	Method Settings	Monomethylhydrazine	4.95	414606	11.873	ng/mL

Analyst : JW 1543 8/27/2009

8/25/09

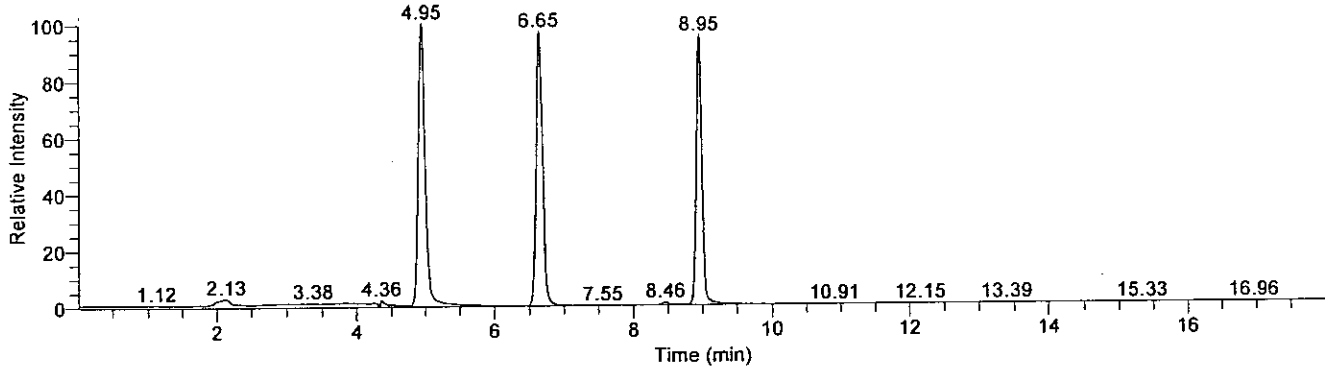
01N15 0169

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-7.raw
Sample ID:	Cal6
Sample Type:	Standard
Level:	6
Acquisition Date:	Wednesday, August 26, 2009 6:39:22 PM
Vial:	B:7
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-7 - TIC RT: 0.00 - 17.99 NL: 1.28E5

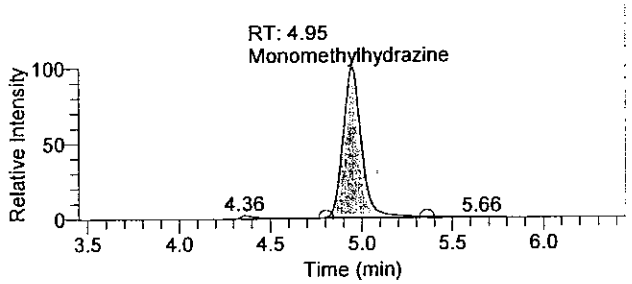


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:7, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-7, Comments: , ID: Cal6

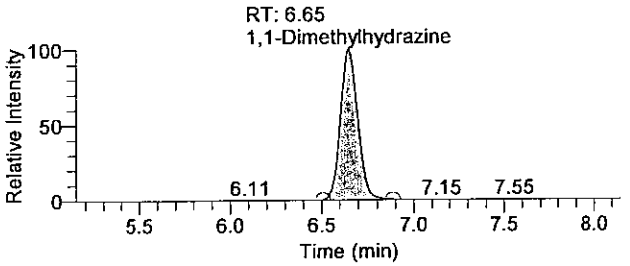
Monomethylhydrazine

26Aug-100562-74-7 - TIC RT: 3.45 - 6.45 NL: 1.28E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



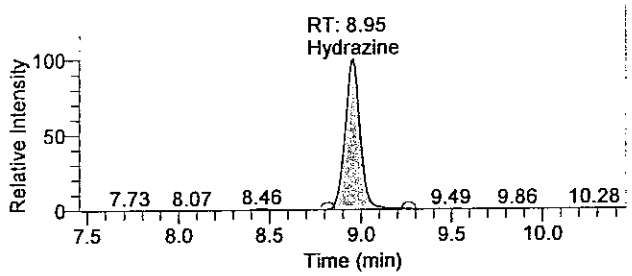
1,1-Dimethylhydrazine

26Aug-100562-74-7 - TIC RT: 5.15 - 8.15 NL: 1.24E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-7 - TIC RT: 7.45 - 10.45 NL: 1.22E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0170

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	696327	4.916	ng/mL
Cal6	Method Settings	1,1-Dimethylhydrazine	6.65	800052	24.388	ng/mL
Cal6	Method Settings	Monomethylhydrazine	4.95	886283	25.237	ng/mL

Analyst : JW 1543 8/27/2009
8/28/09

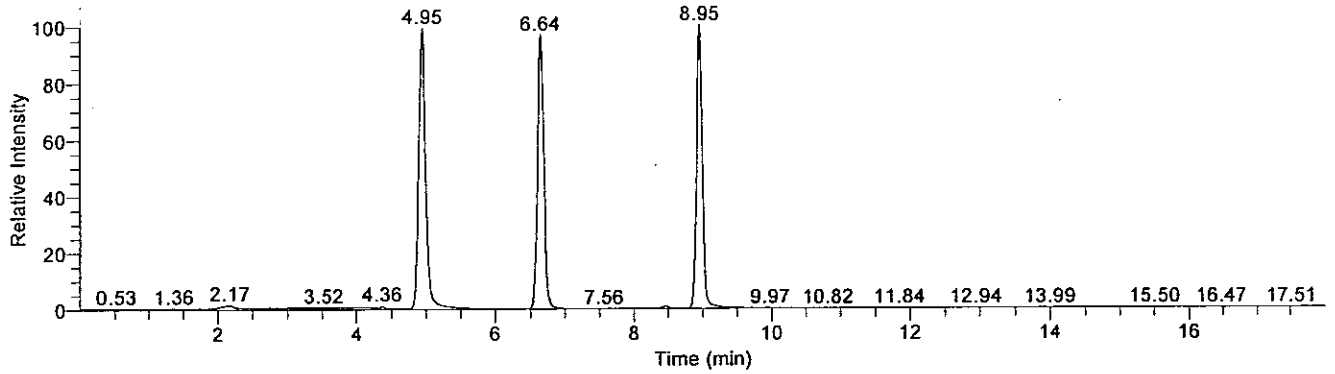
OLM15.8171

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-8.raw
Sample ID:	Cal7
Sample Type:	Standard
Level:	7
Acquisition Date:	Wednesday, August 26, 2009 6:58:09 PM
Vial:	B:8
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-8 - TIC RT: 0.00 - 18.00 NL: 2.55E5

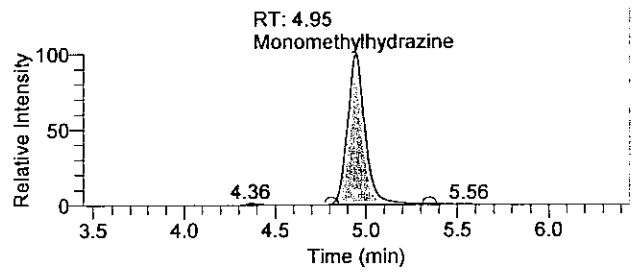


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:8, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-8, Comments: , ID: Cal7

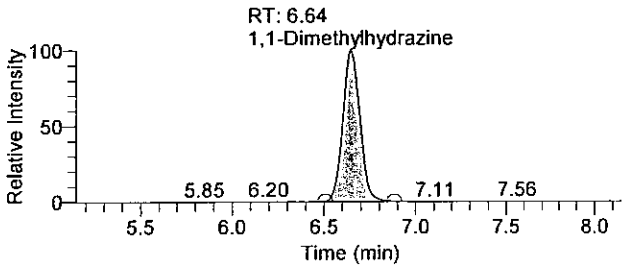
Monomethylhydrazine

26Aug-100562-74-8 - TIC RT: 3.45 - 6.45 NL: 2.54E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



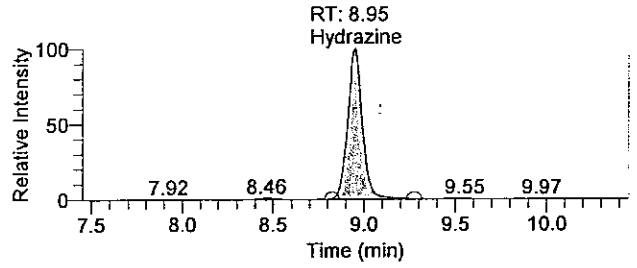
1,1-Dimethylhydrazine

26Aug-100562-74-8 - TIC RT: 5.14 - 8.14 NL: 2.47E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-8 - TIC RT: 7.45 - 10.45 NL: 2.55E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0172

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	1451004	10.294	ng/mL
Cal7	Method Settings	1,1-Dimethylhydrazine	6.64	1586374	48.194	ng/mL
Cal7	Method Settings	Monomethylhydrazine	4.95	1713356	48.670	ng/mL

Analyst : JW 1543 8/27/2009
[illegible] 8/28/09

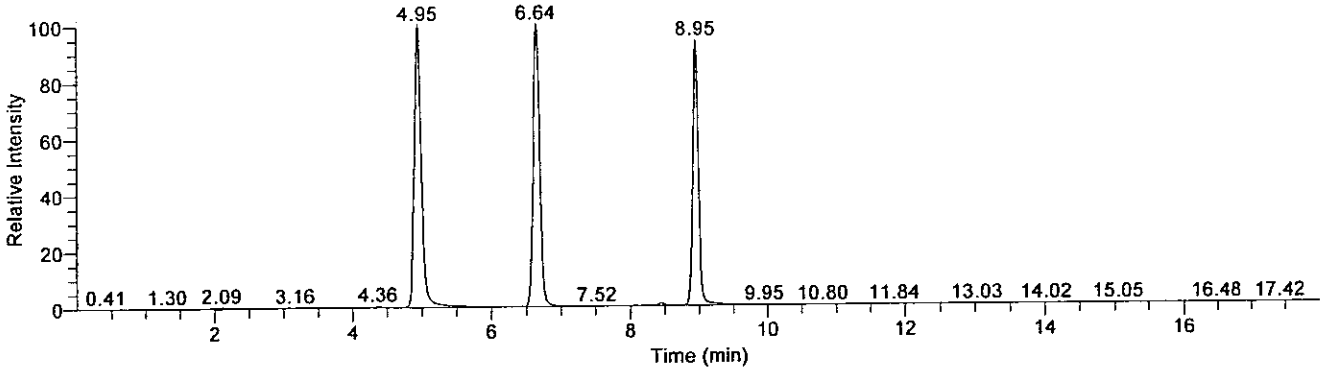
01R15 3173

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-9.raw
Sample ID:	Cal8
Sample Type:	Standard
Level:	8
Acquisition Date:	Wednesday, August 26, 2009 7:16:52 PM
Vial:	B:9
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-9 - TIC RT: 0.00 - 17.99 NL: 6.51E5

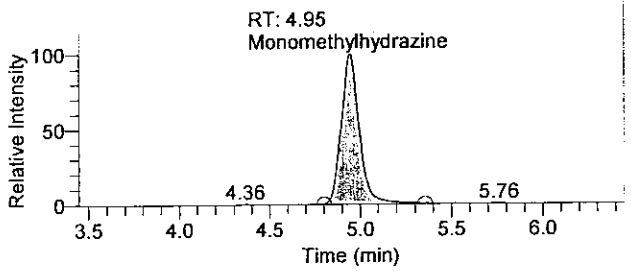


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:9, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-9, Comments: , ID: Cal8

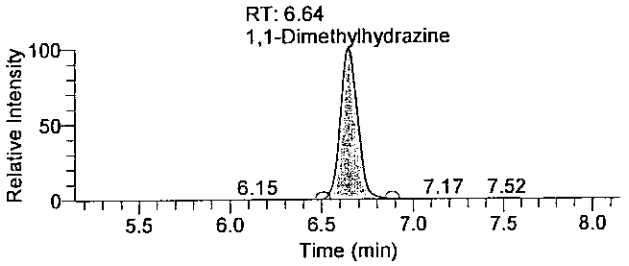
Monomethylhydrazine

26Aug-100562-74-9 - TIC RT: 3.45 - 6.45 NL: 6.51E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



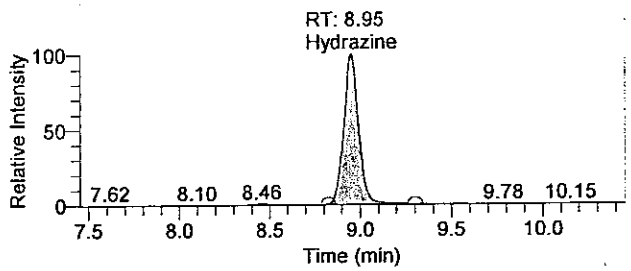
1,1-Dimethylhydrazine

26Aug-100562-74-9 - TIC RT: 5.14 - 8.14 NL: 6.51E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-9 - TIC RT: 7.45 - 10.45 NL: 6.12E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0174

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	3500086	24.896	ng/mL
Cal8	Method Settings	1,1-Dimethylhydrazine	6.64	4227313	128.148	ng/mL
Cal8	Method Settings	Monomethylhydrazine	4.95	4478911	127.026	ng/mL

Analyst : JW 1543 8/27/2009
8/28/09

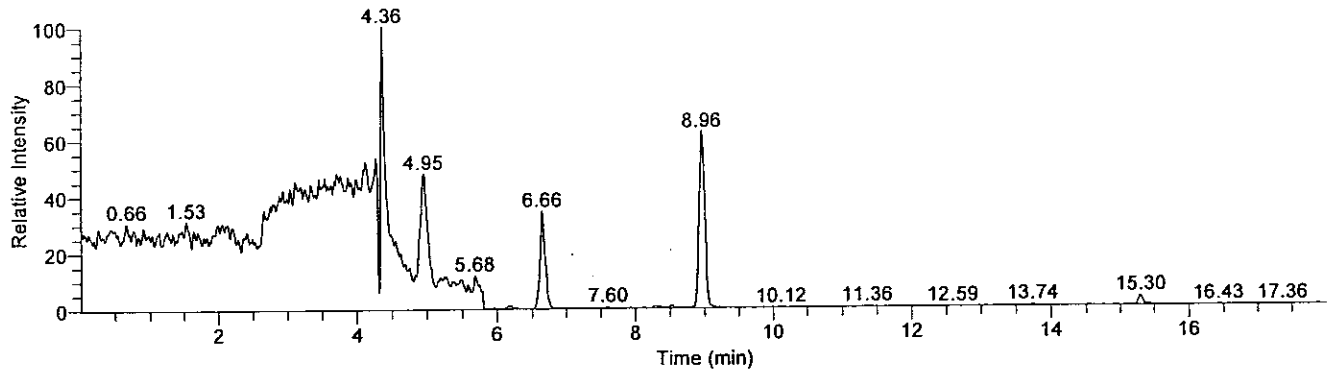
01N15 0175

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-1.raw
Sample ID:	MDL
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 4:46:53 PM
Vial:	B:1
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-1 - TIC RT: 0.00 - 17.99 NL: 4.09E3

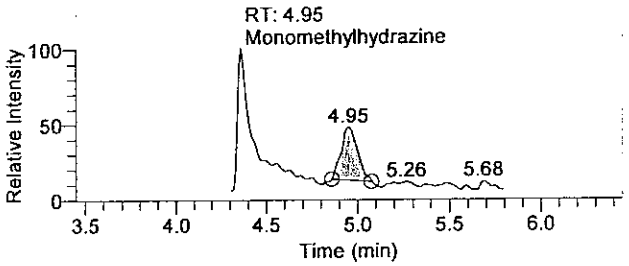


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:1, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-1, Comments: , ID: MDL

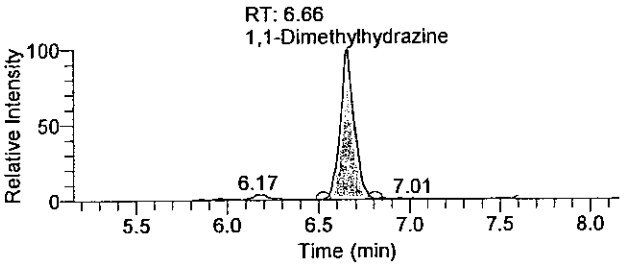
Monomethylhydrazine

26Aug-100562-74-1 - TIC RT: 3.45 - 6.45 NL: 4.09E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



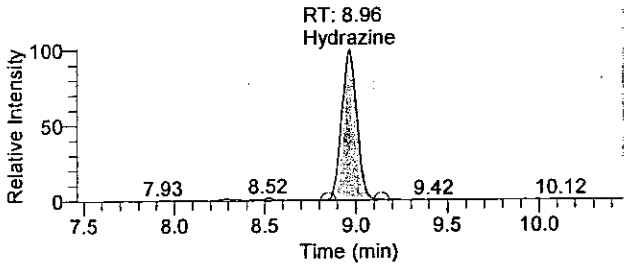
1,1-Dimethylhydrazine

26Aug-100562-74-1 - TIC RT: 5.16 - 8.16 NL: 1.41E3
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-1 - TIC RT: 7.46 - 10.46 NL: 2.54E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0176

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
MDL	Method Settings	Hydrazine	8.96	14503	0.058	ng/mL
MDL	Method Settings	1,1-Dimethylhydrazine	6.66	7263	0.386	ng/mL
MDL	Method Settings	Monomethylhydrazine	4.95	9000	0.381	ng/mL

Analyst : JW 1543 8/27/2009

8/28/09

OLN15 8177

There is no signature data to report.

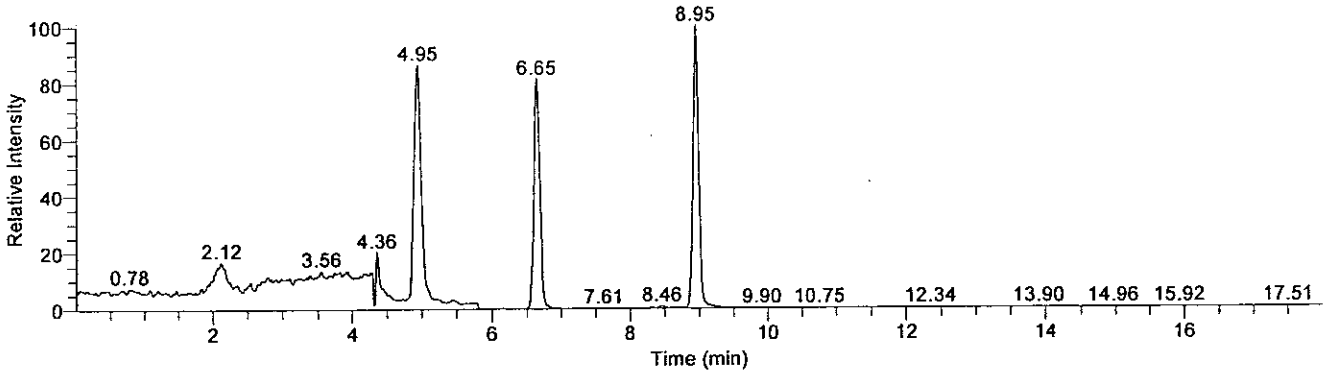
Lancaster Laboratories

Printed: Thursday, August 27, 2009, 15:54:53
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-4QC.raw
Sample ID:	Cal3asQC1
Sample Type:	QC
Level:	CCV1
Acquisition Date:	Wednesday, August 26, 2009 7:54:22 PM
Vial:	B:4
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-4QC - TIC RT: 0.01 - 17.99 NL: 1.38E4

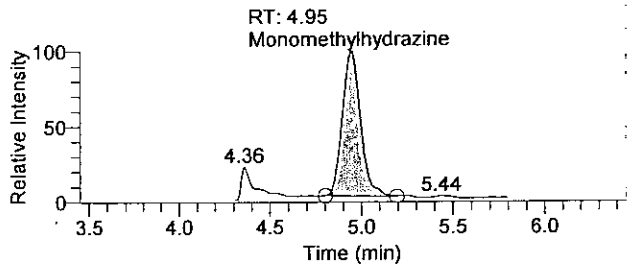


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:4, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-4QC, Comments: , ID: Cal3asQC1

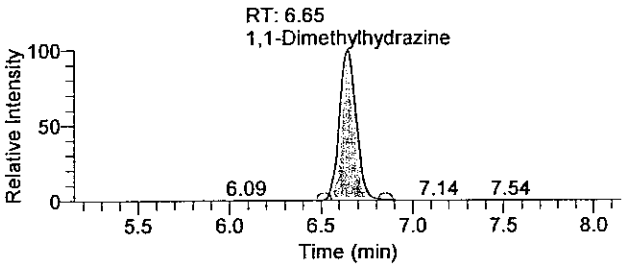
Monomethylhydrazine

26Aug-100562-74-4QC - TIC RT: 3.45 - 6.45 NL: 1.19E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



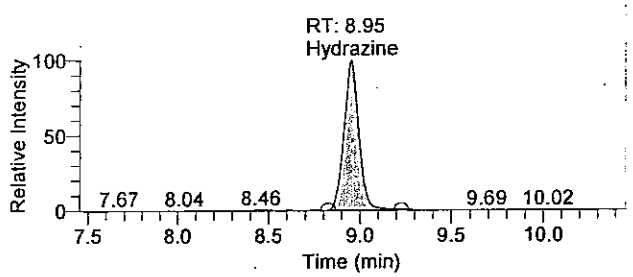
1,1-Dimethylhydrazine

26Aug-100562-74-4QC - TIC RT: 5.15 - 8.15 NL: 1.12E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-4QC - TIC RT: 7.45 - 10.45 NL: 1.38E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0178

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal3asQC1	Method Settings	Hydrazine	8.95	78500	0.514	ng/mL
Cal3asQC1	Method Settings	1,1-Dimethylhydrazine	6.65	70276	2.294	ng/mL
Cal3asQC1	Method Settings	Monomethylhydrazine	4.95	80914	2.419	ng/mL

Analyst : JW 1543 8/27/2009
8/28/09

OLM15 0179

There is no signature data to report.

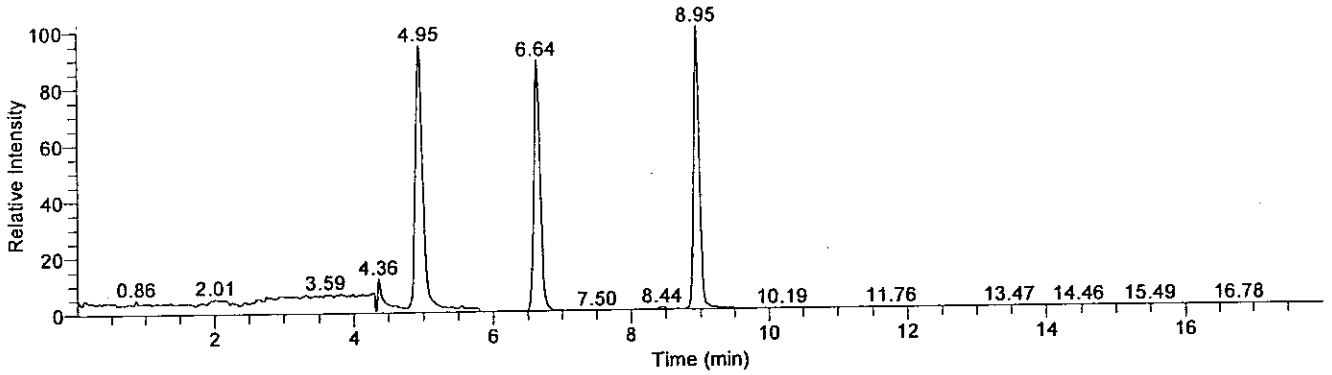
Lancaster Laboratories

Printed: Thursday, August 27, 2009, 15:54:55
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	26Aug-100562-74-5QC.raw
Sample ID:	Cal4asQC2
Sample Type:	QC
Level:	CCV2
Acquisition Date:	Wednesday, August 26, 2009 11:20:39 PM
Vial:	B:5
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-5QC - TIC RT: 0.00 - 17.99 NL: 2.69E4

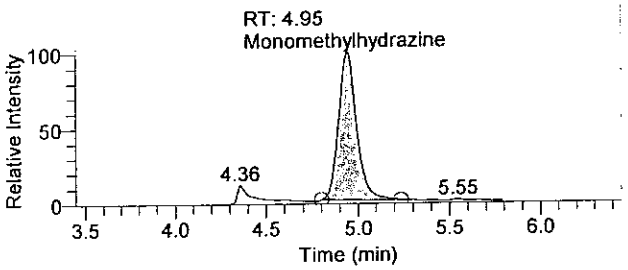


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:5, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-5QC, Comments: , ID: Cal4asQC2

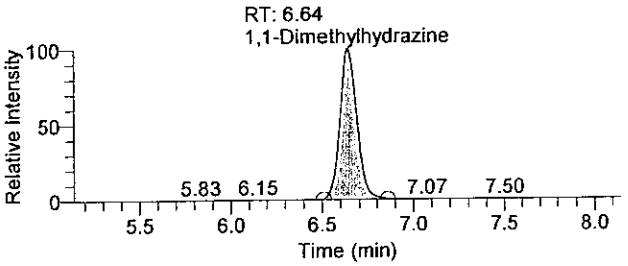
Monomethylhydrazine

26Aug-100562-74-5QC - TIC RT: 3.45 - 6.45 NL: 2.54E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



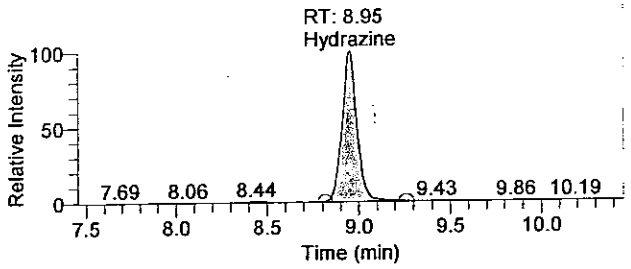
1,1-Dimethylhydrazine

26Aug-100562-74-5QC - TIC RT: 5.14 - 8.14 NL: 2.38E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-5QC - TIC RT: 7.45 - 10.45 NL: 2.69E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0180

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal4asQC2	Method Settings	Hydrazine	8.95	154572	1.056	ng/mL
Cal4asQC2	Method Settings	1,1-Dimethylhydrazine	6.64	151064	4.740	ng/mL
Cal4asQC2	Method Settings	Monomethylhydrazine	4.95	173082	5.030	ng/mL

Analyst : JW 1543 8/27/2009

8/28/09

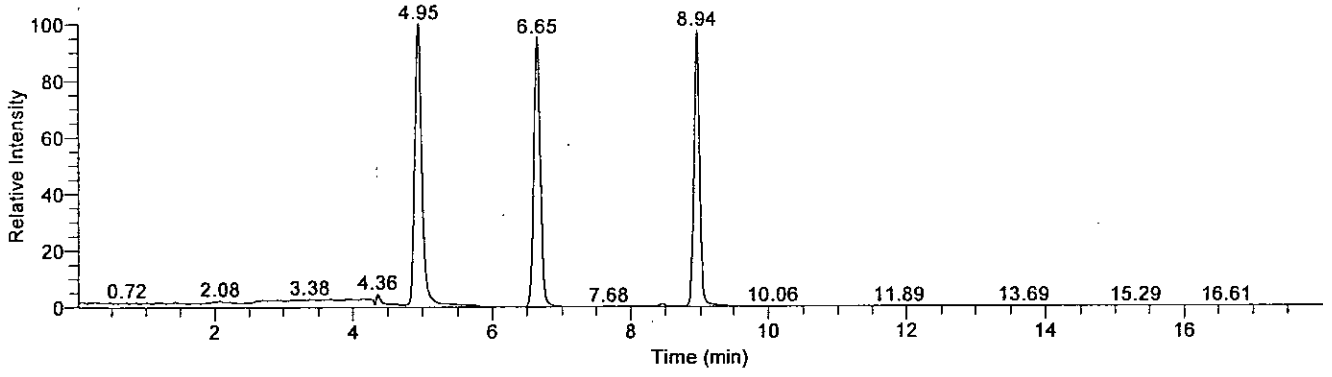
OLN15 0181

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	N/A
Data File:	24Aug-100562-74-6QC.raw
Sample ID:	Cal5asQC3
Sample Type:	QC
Level:	CCV3
Acquisition Date:	Wednesday, August 26, 2009 11:58:09 PM
Vial:	B:6
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-74-6QC - TIC RT: 0.00 - 18.00 NL: 6.55E4

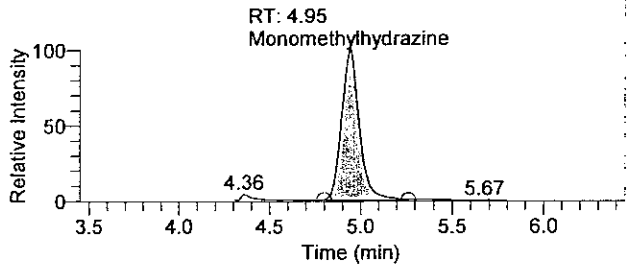


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:6, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\24Aug-100562-74-6QC, Comments: , ID: Cal5asQC3

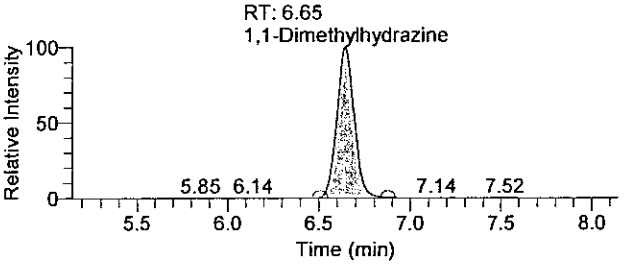
Monomethylhydrazine

24Aug-100562-74-6QC - TIC RT: 3.45 - 6.45 NL: 6.55E4
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



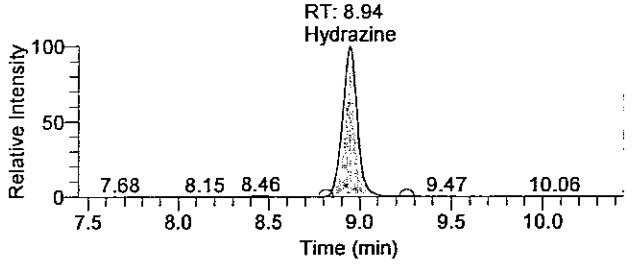
1,1-Dimethylhydrazine

24Aug-100562-74-6QC - TIC RT: 5.15 - 8.15 NL: 6.23E4
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-74-6QC - TIC RT: 7.44 - 10.44 NL: 6.39E4
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0182

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Cal5asQC3	Method Settings	Hydrazine	8.94	370167	2.592	ng/mL
Cal5asQC3	Method Settings	1,1-Dimethylhydrazine	6.65	404847	12.423	ng/mL
Cal5asQC3	Method Settings	Monomethylhydrazine	4.95	448008	12.820	ng/mL

Analyst : JW 1543 8/27/2009

8/28/09

OLN15 0183

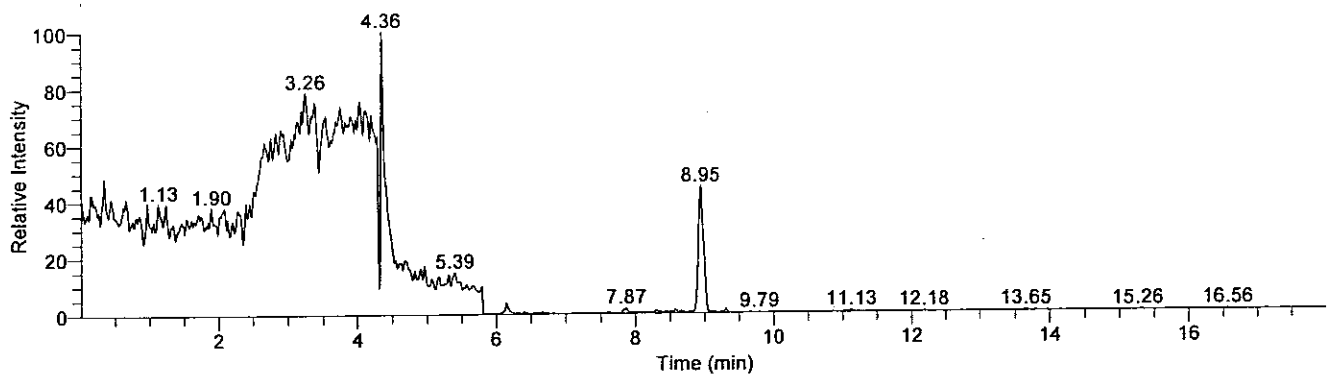
There is no signature data to report.

Raw QC Data

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-12.raw
Sample ID:	Blank
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 10:06:18 PM
Vial:	E:17
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-12 - TIC RT: 0.00 - 17.99 NL: 2.59E3

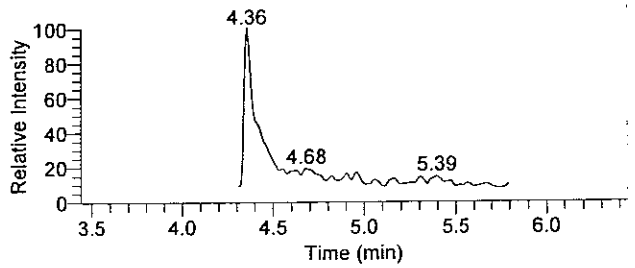


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:17, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-12, Comments: , ID: Blank

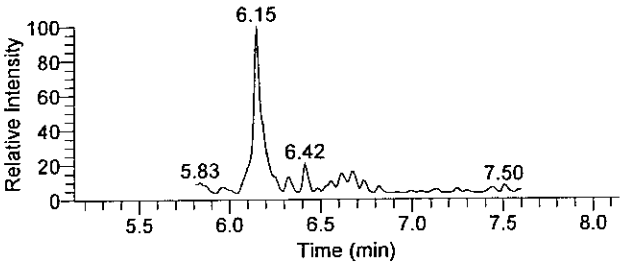
Monomethylhydrazine

24Aug-100562-70-12 - TIC RT: 3.44 - 6.44 NL: 2.59E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



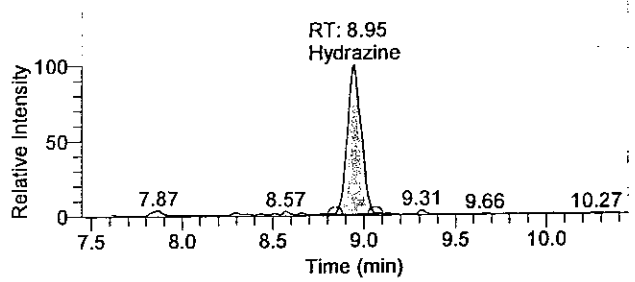
1,1-Dimethylhydrazine

24Aug-100562-70-12 - TIC RT: 5.14 - 8.14 NL: 1.04E2
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-12 - TIC RT: 7.45 - 10.45 NL: 1.16E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0185

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	8.95	6106	0.010	ng/mL
Blank	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
Blank	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

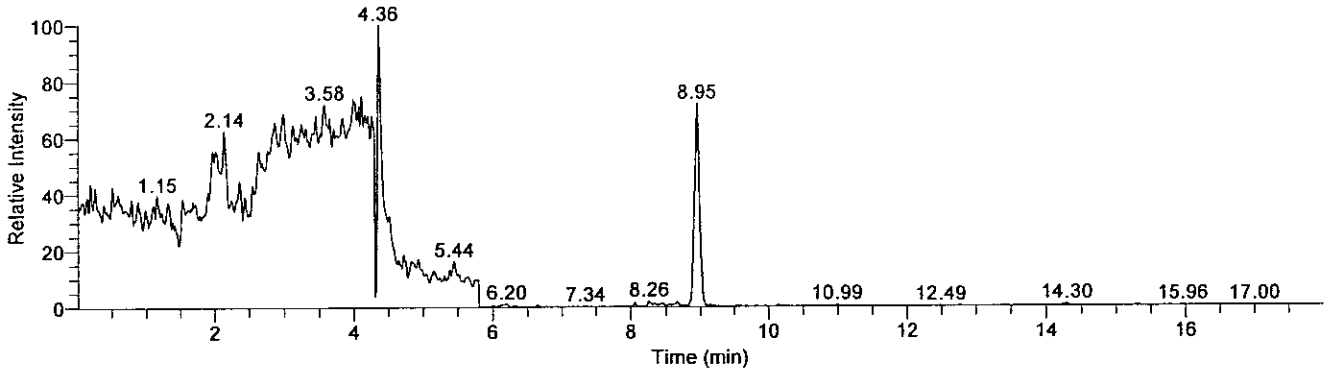
Analyst: JW 1543 8/25/2009
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-10.raw
Sample ID:	Blank
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 8:50:38 PM
Vial:	B:10
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-10 - TIC RT: 0.00 - 17.99 NL: 2.56E3

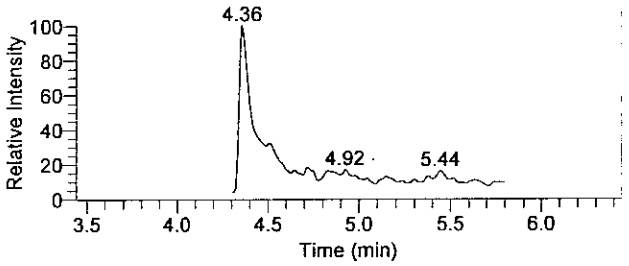


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:10, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-10, Comments: , ID: Blank

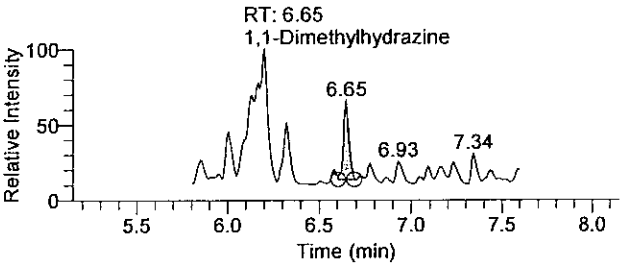
Monomethylhydrazine

26Aug-100562-74-10 - TIC RT: 3.44 - 6.44 NL: 2.56E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



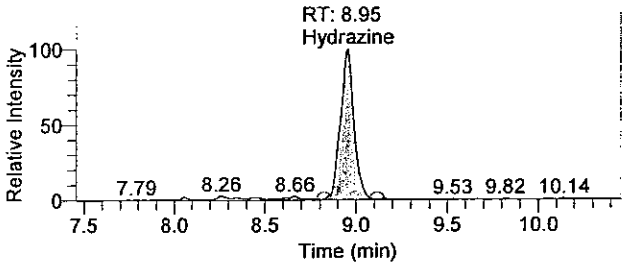
1,1-Dimethylhydrazine

26Aug-100562-74-10 - TIC RT: 5.15 - 8.15 NL: 2.96E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-10 - TIC RT: 7.45 - 10.45 NL: 1.84E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 0187

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
Blank	Method Settings	Hydrazine	8.95	9528	0.022	ng/mL
Blank	Method Settings	1,1-Dimethylhydrazine	6.65	31	0.167	ng/mL
Blank	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/27/2009
8/27/09

OLN15 8188

There is no signature data to report.

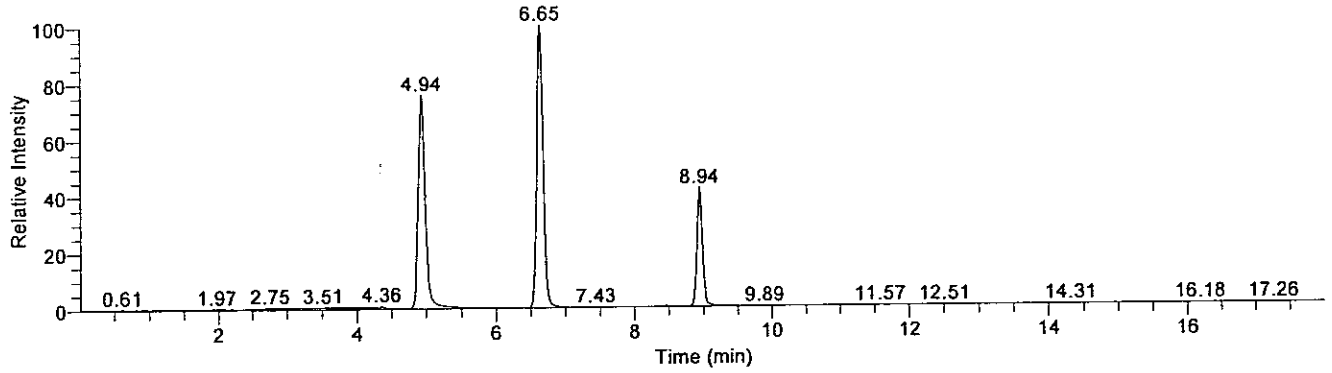
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:37:59
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-27.raw
Sample ID:	5757308MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 11:02:32 PM
Vial:	E:20
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-27 - TIC RT: 0.01 - 17.99 NL: 3.12E5

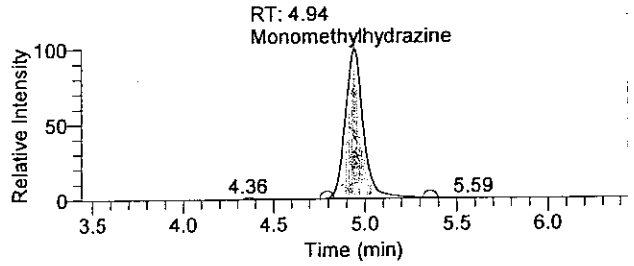


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:20, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-27, Comments: , ID: 5757308MS

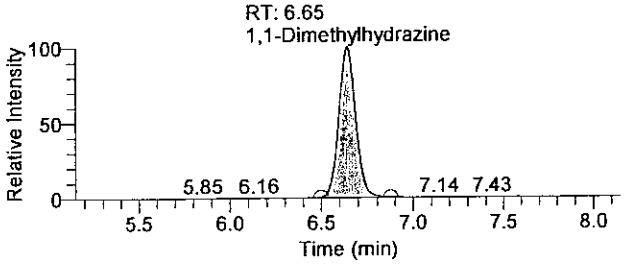
Monomethylhydrazine

24Aug-100562-70-27 - TIC RT: 3.44 - 6.44 NL: 2.36E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



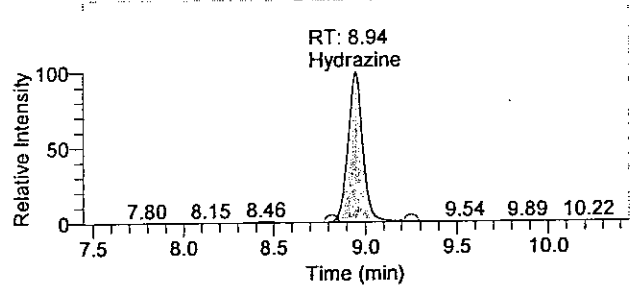
1,1-Dimethylhydrazine

24Aug-100562-70-27 - TIC RT: 5.15 - 8.15 NL: 3.12E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-27 - TIC RT: 7.44 - 10.44 NL: 1.31E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 8189

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757308MS	Method Settings	Hydrazine	8.94	738520	5.154	ng/mL
5757308MS	Method Settings	1,1-Dimethylhydrazine	6.65	1983114	58.152	ng/mL
5757308MS	Method Settings	Monomethylhydrazine	4.94	1617546	44.683	ng/mL

Analyst : JW 1543 8/25/2009

01N15 0190

There is no signature data to report.

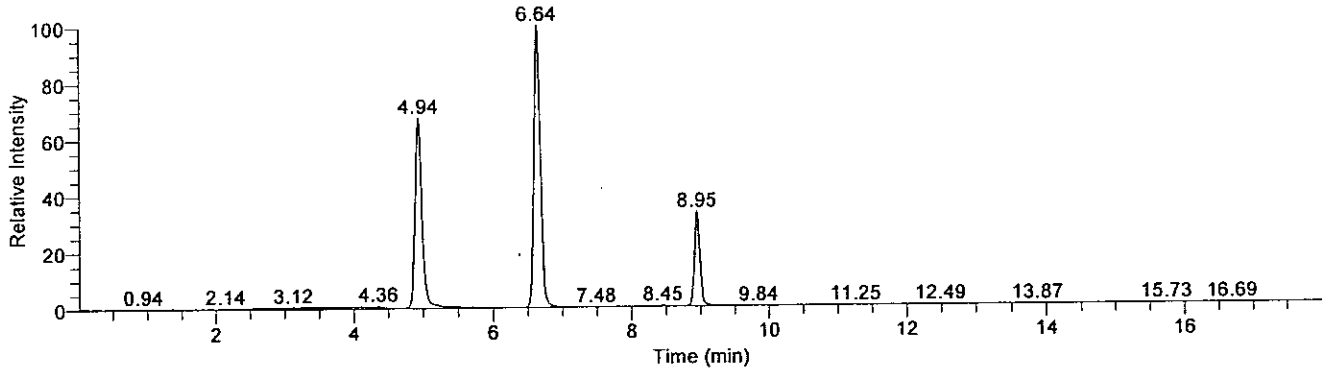
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:37:59
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-28.raw
Sample ID:	~~5757309MDS~~ 5757307 MSD
Sample Type:	Unknown 3 Jw 8/24/09
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 11:21:18 PM
Vial:	E:21
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-28 - TIC RT: 0.01 - 18.00 NL: 3.16E5

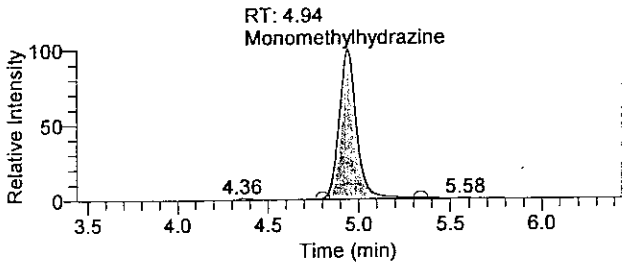


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:21, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-28, Comments: , ID: 5757309MDS

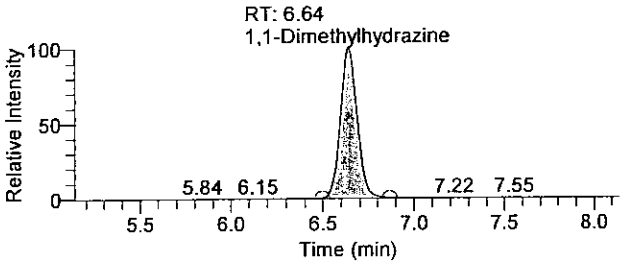
Monomethylhydrazine

24Aug-100562-70-28 - TIC RT: 3.44 - 6.44 NL: 2.13E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



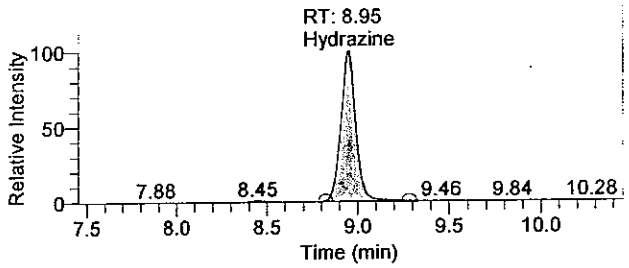
1,1-Dimethylhydrazine

24Aug-100562-70-28 - TIC RT: 5.14 - 8.14 NL: 3.16E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-28 - TIC RT: 7.45 - 10.45 NL: 1.06E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 8191

There is no signature data to report.

Quantify Sample Report

Quantitation Results

	Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5757309MSD	~~5757309MDS~~ ③JW 8/11/09	Method Settings	Hydrazine	8.95	606980	4.230	ng/mL
5757309MSD	~~5757309MDS~~ ③JW 8/11/09	Method Settings	1,1-Dimethylhydrazine	6.64	2018458	59.185	ng/mL
5757309MSD	~~5757309MDS~~ ③JW 8/11/09	Method Settings	Monomethylhydrazine	4.94	1429278	39.501	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

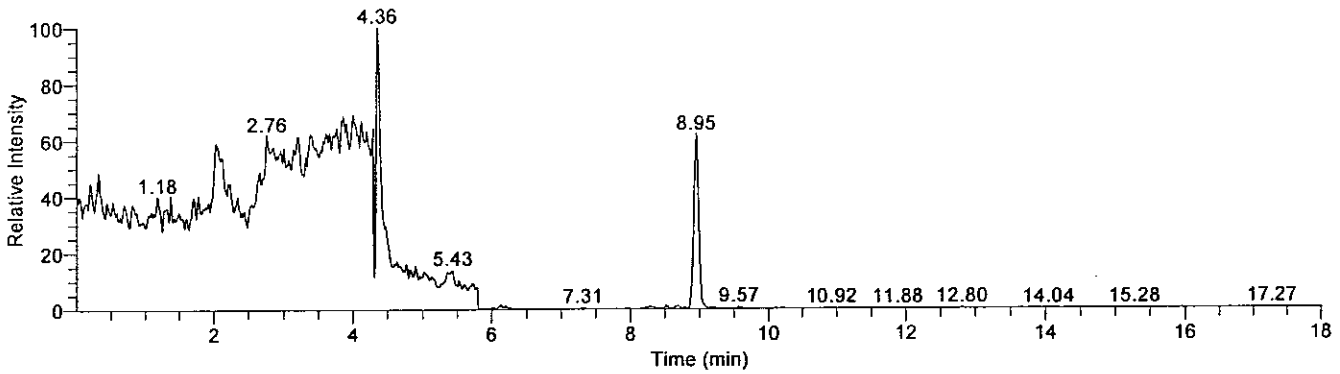
01N15 0192

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-16.raw
Sample ID:	5760570
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 10:05:38 PM
Vial:	B:14
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-16 - TIC RT: 0.00 - 18.00 NL: 2.99E3

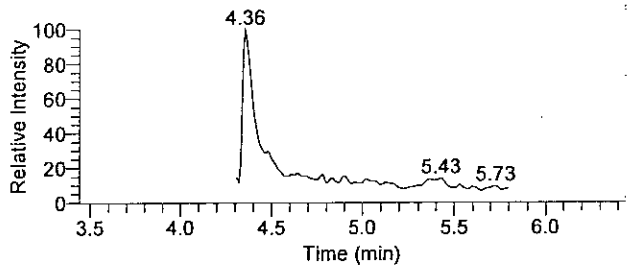


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:14, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-16, Comments: , ID: 5760570

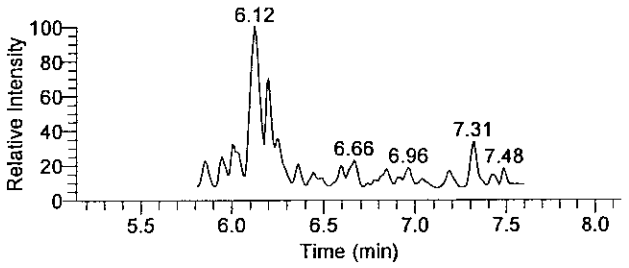
Monomethylhydrazine

26Aug-100562-74-16 - TIC RT: 3.44 - 6.44 NL: 2.99E3
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



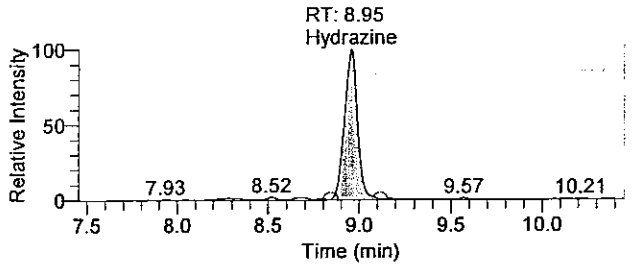
1,1-Dimethylhydrazine

26Aug-100562-74-16 - TIC RT: 5.14 - 8.14 NL: 4.81E1
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-16 - TIC RT: 7.45 - 10.45 NL: 1.85E3
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 8193

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5760570	Method Settings	Hydrazine	8.95	9237	0.020	ng/mL
5760570	Method Settings	1,1-Dimethylhydrazine	N/A	NF	NC	ng/mL
5760570	Method Settings	Monomethylhydrazine	N/A	NF	NC	ng/mL

Analyst : JW 1543 8/27/2009
8/28/09

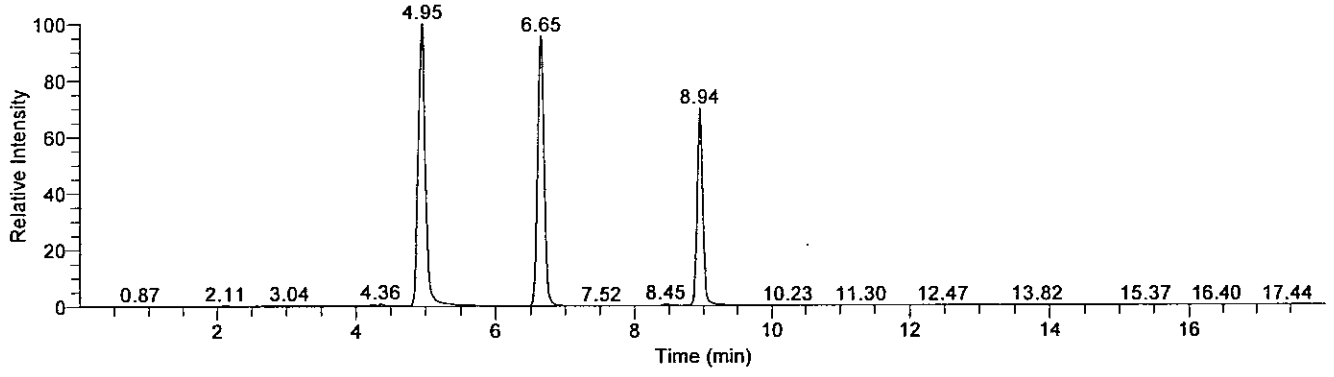
01M15 P194

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-17.raw
Sample ID:	5760570MS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 10:24:25 PM
Vial:	B:15
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-17 - TIC RT: 0.00 - 17.99 NL: 4.03E5

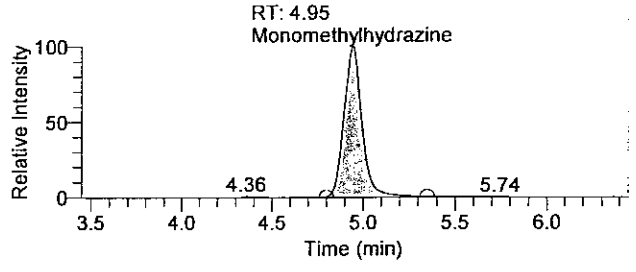


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:15, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-17, Comments: , ID: 5760570MS

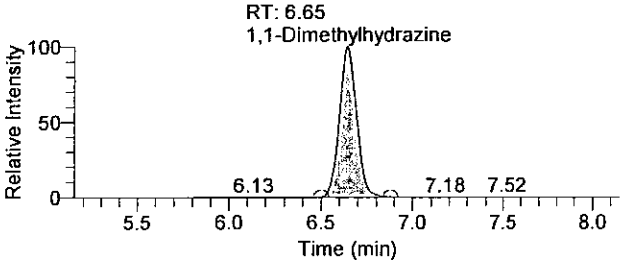
Monomethylhydrazine

26Aug-100562-74-17 - TIC RT: 3.45 - 6.45 NL: 4.03E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



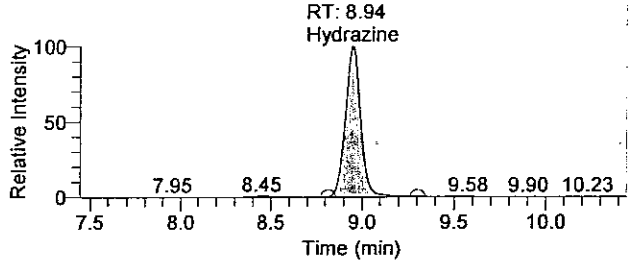
1,1-Dimethylhydrazine

26Aug-100562-74-17 - TIC RT: 5.15 - 8.15 NL: 3.85E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-17 - TIC RT: 7.44 - 10.44 NL: 2.81E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLR15 0195

There is no signature data to report.

Quantify Sample Report

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5760570MS	Method Settings	Hydrazine	8.94	1641562	11.652	ng/mL
5760570MS	Method Settings	1,1-Dimethylhydrazine	6.65	2506200	76.041	ng/mL
5760570MS	Method Settings	Monomethylhydrazine	4.95	2757438	78.252	ng/mL

Analyst : JW 1543 8/27/2009

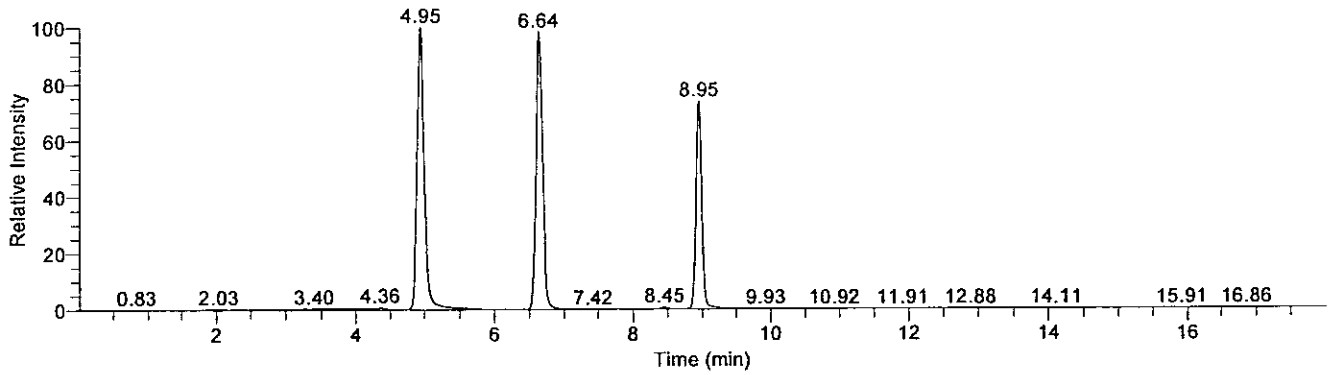
8/25/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-18.raw
Sample ID:	5760570MSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 10:43:08 PM
Vial:	B:16
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-18 - TIC RT: 0.00 - 18.00 NL: 3.98E5

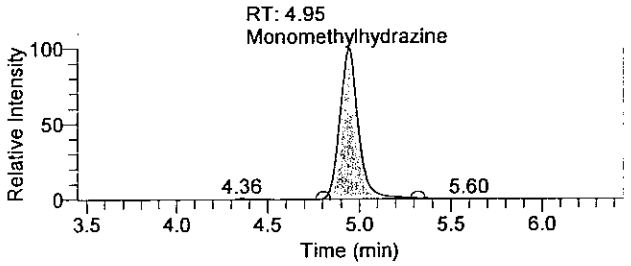


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:16, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-18, Comments: , ID: 5760570MSD

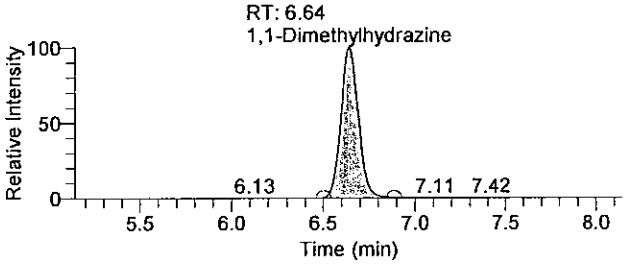
Monomethylhydrazine

26Aug-100562-74-18 - TIC RT: 3.45 - 6.45 NL: 3.98E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



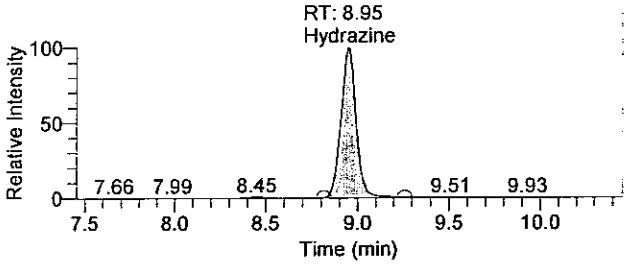
1,1-Dimethylhydrazine

26Aug-100562-74-18 - TIC RT: 5.14 - 8.14 NL: 3.91E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-18 - TIC RT: 7.45 - 10.45 NL: 2.93E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



OLN15 8197

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
5760570MSD	Method Settings	Hydrazine	8.95	1687648	11.980	ng/mL
5760570MSD	Method Settings	1,1-Dimethylhydrazine	6.64	2546430	77.259	ng/mL
5760570MSD	Method Settings	Monomethylhydrazine	4.95	2787612	79.107	ng/mL

Analyst : JW 1543 8/27/2009

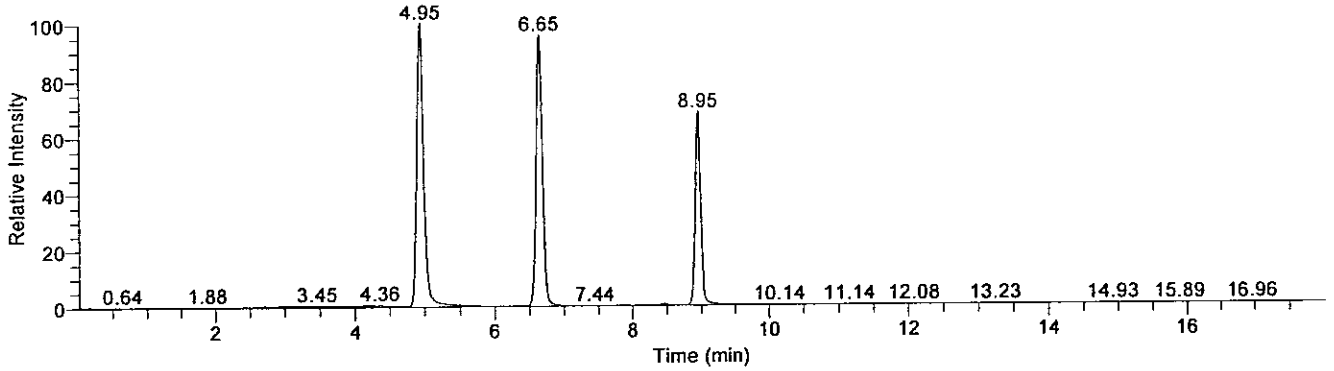
OLR15 0198

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-13.raw
Sample ID:	LCS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 11:40:02 PM
Vial:	E:22
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-13 - TIC RT: 0.00 - 18.00 NL: 3.74E5

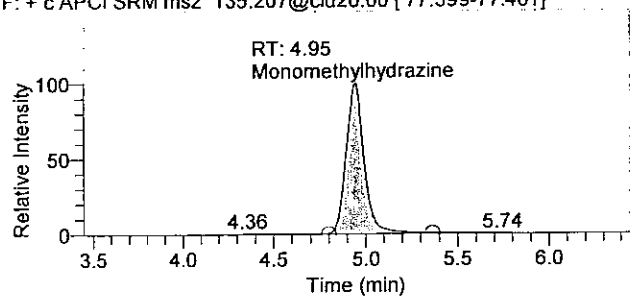


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:22, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-13, Comments: , ID: LCS

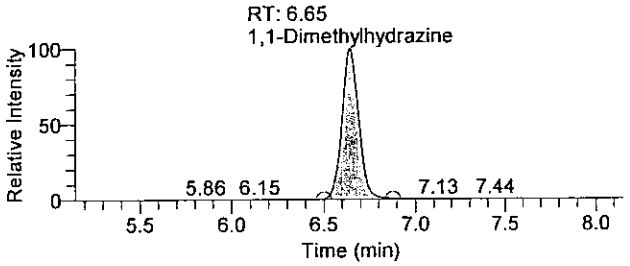
Monomethylhydrazine

24Aug-100562-70-13 - TIC RT: 3.45 - 6.45 NL: 3.74E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



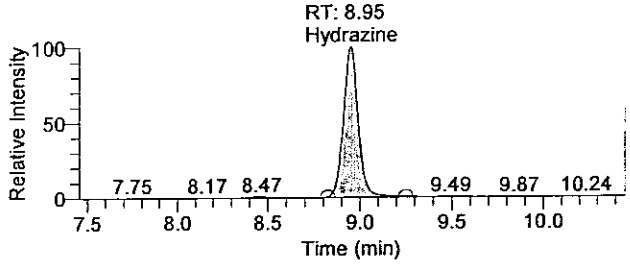
1,1-Dimethylhydrazine

24Aug-100562-70-13 - TIC RT: 5.15 - 8.15 NL: 3.58E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-13 - TIC RT: 7.45 - 10.45 NL: 2.55E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0199

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCS	Method Settings	Hydrazine	8.95	1424161	9.969	ng/mL
LCS	Method Settings	1,1-Dimethylhydrazine	6.65	2283246	66.927	ng/mL
LCS	Method Settings	Monomethylhydrazine	4.95	2516764	69.434	ng/mL

Analyst : JW 1543 8/25/2009

8/26/09

GLN15 0200

There is no signature data to report.

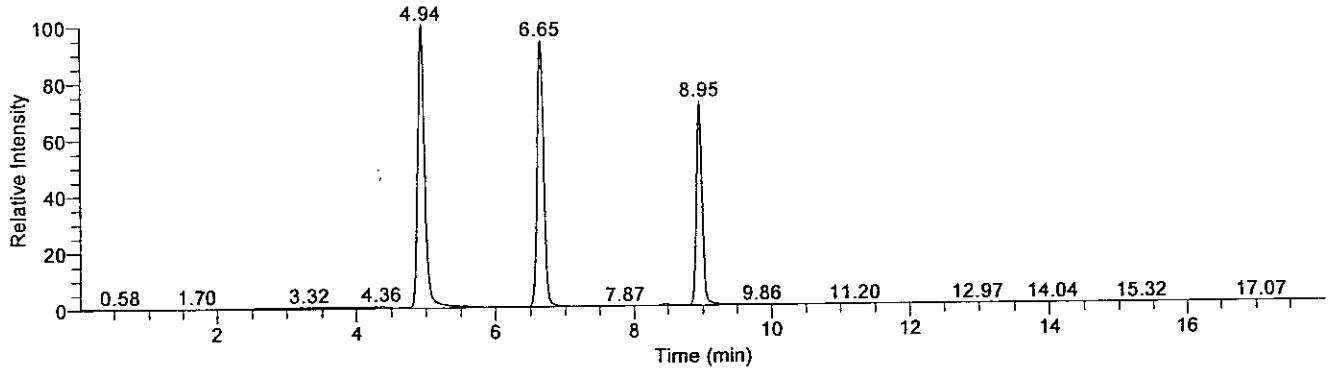
Lancaster Laboratories

Printed: Tuesday, August 25, 2009, 09:38:00
Quantify Sample Report

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1
Workbook Name:	TQU01408-24Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923610056268
Data File:	24Aug-100562-70-14.raw
Sample ID:	LCSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Monday, August 24, 2009 11:58:42 PM
Vial:	E:23
Dilution Factor:	1.00000

Sample Chromatogram

24Aug-100562-70-14 - TIC RT: 0.00 - 18.00 NL: 3.59E5

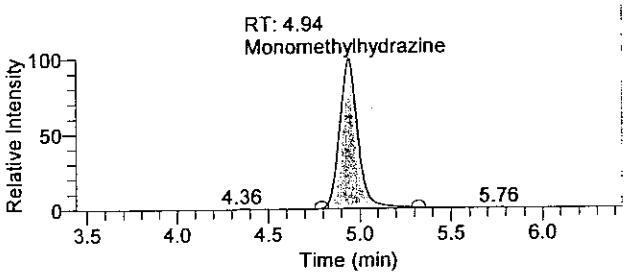


Compound Graphics

Date: 24-Aug-2009, Instrument: Quantum, Vial: E:23, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-24Aug2009-1\Rawfiles\24Aug-100562-70-14, Comments: , ID: LCSD

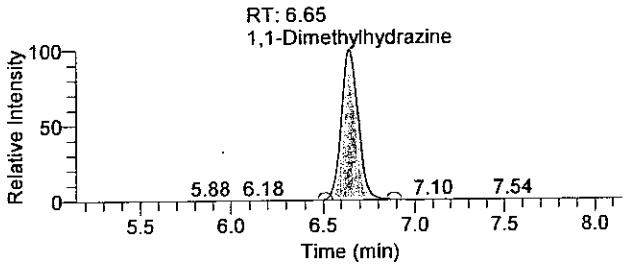
Monomethylhydrazine

24Aug-100562-70-14 - TIC RT: 3.44 - 6.44 NL: 3.59E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



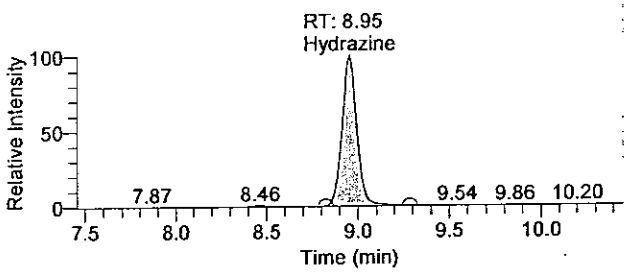
1,1-Dimethylhydrazine

24Aug-100562-70-14 - TIC RT: 5.15 - 8.15 NL: 3.37E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

24Aug-100562-70-14 - TIC RT: 7.45 - 10.45 NL: 2.58E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



QLN15 0281

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD	Method Settings	Hydrazine	8.95	1454915	10.185	ng/mL
LCSD	Method Settings	1,1-Dimethylhydrazine	6.65	2191080	64.232	ng/mL
LCSD	Method Settings	Monomethylhydrazine	4.94	2465509	68.023	ng/mL

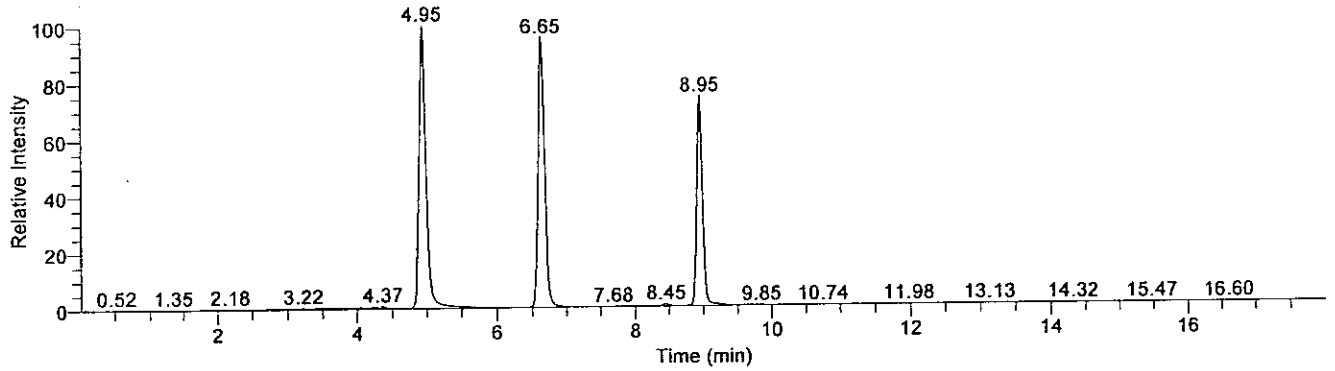
Analyst : JW 1543 8/25/2009
8/26/09

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-11.raw
Sample ID:	ICV/LCS
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 11:01:54 PM
Vial:	B:17
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-11 - TIC RT: 0.00 - 17.99 NL: 3.94E5

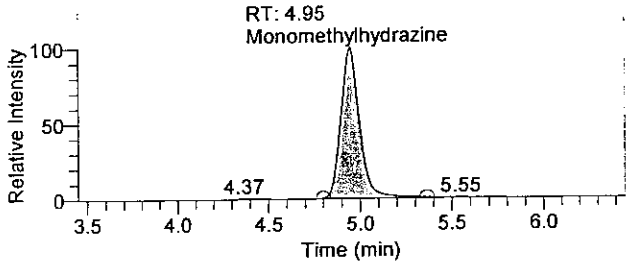


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:17, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-11, Comments: , ID: ICV/LCS

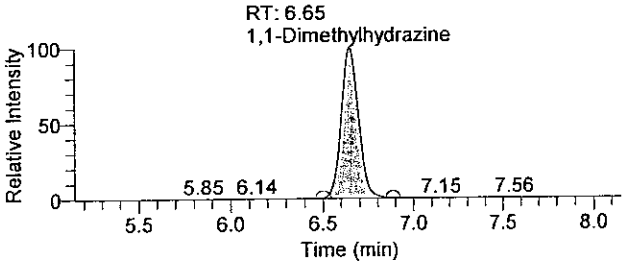
Monomethylhydrazine

26Aug-100562-74-11 - TIC RT: 3.45 - 6.45 NL: 3.94E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



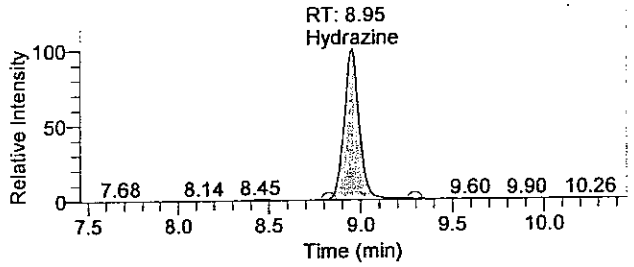
1,1-Dimethylhydrazine

26Aug-100562-74-11 - TIC RT: 5.15 - 8.15 NL: 3.75E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-11 - TIC RT: 7.45 - 10.45 NL: 2.92E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0203

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
ICV/LCS	Method Settings	Hydrazine	8.95	1681326	11.935	ng/mL
ICV/LCS	Method Settings	1,1-Dimethylhydrazine	6.65	2465821	74.819	ng/mL
ICV/LCS	Method Settings	Monomethylhydrazine	4.95	2740714	77.778	ng/mL

Anlpt : JW 1543 8/27/2009

8/28/09

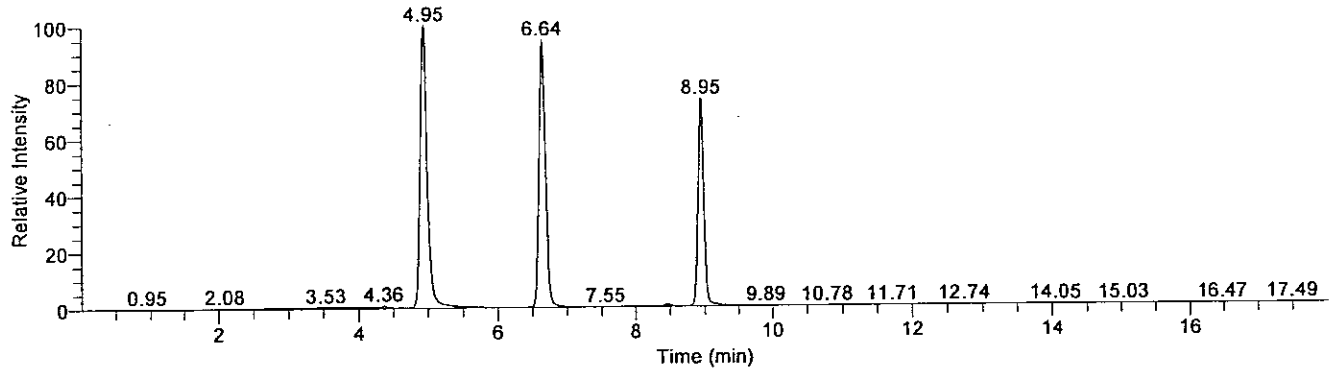
01N15 0284

There is no signature data to report.

Current Workbook Path:	C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1
Workbook Name:	TQU01408-26Aug2009-1
Analyst	JW01543
Instrument No.	TQU01408
Batch No.	0923810056274
Data File:	26Aug-100562-74-12.raw
Sample ID:	LCSD
Sample Type:	Unknown
Level:	N/A
Acquisition Date:	Wednesday, August 26, 2009 11:39:26 PM
Vial:	B:18
Dilution Factor:	1.00000

Sample Chromatogram

26Aug-100562-74-12 - TIC RT: 0.00 - 18.00 NL: 3.98E5

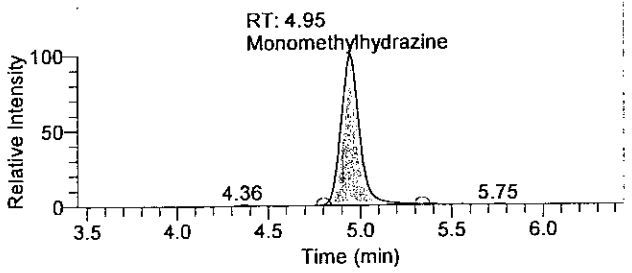


Compound Graphics

Date: 26-Aug-2009, Instrument: Quantum, Vial: B:18, Name: C:\XCalibur\Hydrazine Analysis\Aug 2009\TQU01408-26Aug2009-1\Rawfiles\26Aug-100562-74-12, Comments: , ID: LCSD

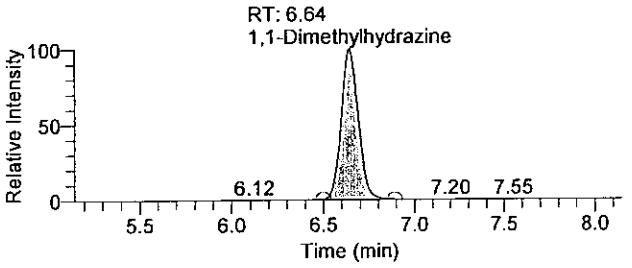
Monomethylhydrazine

26Aug-100562-74-12 - TIC RT: 3.45 - 6.45 NL: 3.98E5
F: + c APCI SRM ms2 135.207@cid20.00 [77.399-77.401]



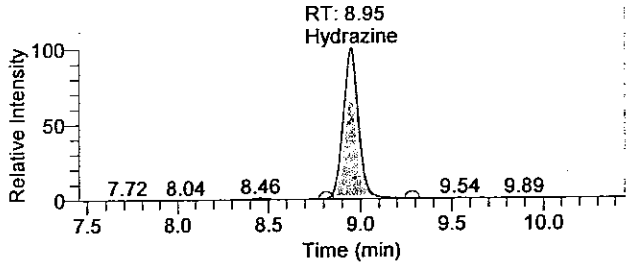
1,1-Dimethylhydrazine

26Aug-100562-74-12 - TIC RT: 5.14 - 8.14 NL: 3.76E5
F: + c APCI SRM ms2 149.210@cid14.00 [106.269-106.271]



Hydrazine

26Aug-100562-74-12 - TIC RT: 7.45 - 10.45 NL: 2.92E5
F: + c APCI SRM ms2 209.128@cid17.00 [106.299-106.301]



01N15 0265

There is no signature data to report.

Quantitation Results

Sample ID	Integration Type	Component Name	RT	Response	Calculated Conc	Units
LCSD	Method Settings	Hydrazine	8.95	1713944	12.168	ng/mL
LCSD	Method Settings	1,1-Dimethylhydrazine	6.64	2459824	74.637	ng/mL
LCSD	Method Settings	Monomethylhydrazine	4.95	2779495	78.877	ng/mL

Analyst : JW 1543 8/27/2009

OLN15 6286

There is no signature data to report.

Sample Preparation

OLN15 8287

SOP Analysis # 1034b, Rev 01, eff 2/10/2009
Title: Determination of Hydrazine, Monomethylhydrazine and 1,1-Dimethylhydrazine in Soil Samples by LC/MS/MS
Date: 8/24/2009
From: Notebook 100562, pg 66

1 Pipette Calibration
Pipette: Rainin, POS D, 10-100 uL, S/N G0778427 L

Volume (uL)	Balance Reading (mg)
50	49.48

Pipette: Rainin, POS D 1-10 uL, S/N 20731749 L

Volume (uL)	Balance Reading (mg)
10	9.82

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

Volume (mL)	Balance Reading (g)
10	10.02290

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

Volume (mL)	Balance Reading (g)
0.5	0.49508

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

Volume (mL)	Balance Reading (g)
1	0.99417

Balance: 4854, cal. due 11/09, qual. due 8/09
All the pipettes passed the calibration check

2 Prepare 1M hexylamine sol'n 100562-67-1
0.66 mL hexylamine + 0.66 mL hexylamine → 10 mL volumetric flask. Brought to volume with methanol, mixed well.

3 Prepare extraction fluid (10 mM hexylamine sol'n) 100562-67-2
Transfered 1 M hexylamine sol'n 100562-67-1 into 1000 mL volumetric flask. Used MilliQ water to rinse the 10 mL volumetric flask six times and transfered the sol'n into 1000 mL volumetric flask

OLM15.0288

4056.01 [illegible] 8/25/2009

8/24/2008

From: Notebook 100562, pg: 67

3. Cont'd

Brought to volume with MiliQ water, mixed well.

4. Prepare 1% (v/v) benzaldehyde sol'n 100562-68-1

200.0 ml of benzaldehyde + 20 ml methanol measured by graduated cylinder → glass vials, mixed well.

5. Client samples

5754467 → 5754473

5754475 → 5754476

5757305 → 5757306

5757308 → 5757314

5757307 and 5757308 is the same jar.

6. Weigh Ottawa sand and soil samples into extraction vials. Batch# GP236100562668

Blank (Ottawa sand): 1.0011 g

LCS (Ottawa sand): 0.9999 g

LCSD (Ottawa sand): 1.0017 g

5754467: 1.0012 g

5754468: 1.0014 g

5754469: 0.9988 g

5754470: 1.0023 g

5754471: 1.0046 g

5754472: 1.0032 g

5754473: 0.9985 g

5754475: 0.9982 g

5754476: 1.0035 g

5757305: 1.0034 g

5757306: 1.0019 g FD

5757308: 0.9975 g MS

5757309: 1.0014 g MSD

5757310: 0.9993 g

③ JW 8/24/08 ~~5757312~~: 5757311: 1.0034 g

③ JW 8/24/08 ~~5757313~~ 5757312: 0.9991 g

③ JW 8/24/08 ~~5757314~~ 5757313: 0.9974 g

OLM15.0209

4056.01 JWing 8/25/2008

8/24/2007

From: Notebook 100562, pg 68

6. Cont'd
~~100562~~ ③ JW 8/24/2007

5757314: 6 19833
5757307: 6 19843 BKG
Batch # 07236 100562068

7. Prepare 2nd source monomethylhydrazine stock sol'n 100562-67-1
Conc. 425 mg/mL
Monomethylhydrazine 9.25 mg → 10 mL volumetric flask containing ~ 5 mL methanol. Brought to volume with methanol, mixed well.

8. Prepare 2nd source LCS spiking soln 100562-67-2
Added 2nd source
hydrazine stock sol'n 100562-58-1 : 67.3 mL
monomethylhydrazine stock sol'n 100562-67-1 : 67.6
1,1-dimethylhydrazine stock sol'n 100562-43-4 : 77.2 mL
into 10 mL volumetric flask. Brought to volume with methanol, mixed well.
In this sol'n, hydrazine 1.25 mg/mL
Monomethylhydrazine and 1,1-dimethylhydrazine 6.25 mg/mL

9. Spike 2nd source LCS spiking sol'n 100562-67-2 into LCS, LCSD, 5757308 (MS) and 5757307 (MSD)
100.0 mL of 100562-67-2 was added to LCS, LCSD, MS and MSD, respectively.

10. Added 10.0 mL of extraction fluid 100562-67-2 into the 22 samples in Batch # 07236 100562068:
Blank, LCS, LCSD, 5754467 → 5754473, 5754475 → 5754476, and 5757305 → 5757314, respectively.

11. Placed the extraction vials in the platform shaker and agitated at 300 rpm for 10 min.

12. Placed the extraction vials in a centrifuge at 2700 rpm for 10 min at room temperature.

OLM15 0210

4056.01 JeWay 8/25/2007

8/24/2009

From : Notebook 100562, pg 69

13. Derivatization of MDL and calibration standards with benzaldehyde

Derivative sol'n	Standards	1 M Hexylamine sol'n 100562-37-1	Benzaldehyde sol'n 100562-68-1	Level
100562-70-1	100562-55-1, 1.0 mL	10.0 mL	0.5 mL	MDL
100562-70-2	100562-55-2, 1.0 mL	↓	↓	Cal 1
↓	↓	↓	↓	↓
100562-70-9	100562-55-9, 1.0 mL	↓	↓	Cal 8

14. Derivatization of ICV and 2nd source LCS spiking sol'n with benzaldehyde

Derivative sol'n	0.2M acetate buffer 100562-54-5	1 M Hexylamine sol'n 100562-37-1	sol'n 10.0 mL	Benzaldehyde sol'n 100562-68-1
100562-70-10 (ICV)	1.0 mL	10.0 mL	100562-59-1	0.5 mL
100562-70-11 (spike check)	↓	↓	100562-69-2	↓

15. Derivatization of the 22 samples in Batch # 09236 100562 68

Derivative sol'n	Supernant of extract 1.0 mL	5 M acetate buffer 100562-14-3	Benzaldehyde sol'n 100562-68-1
100562-70-12	Blank	40.0 mL	0.5 mL
100562-70-13	LCS	↓	↓
100562-70-14	LCSD	↓	↓
100562-70-15	5754467	↓	↓
↓	↓	↓	↓
100562-70-21	5754473	↓	↓
100562-70-22	5754475	↓	↓
100562-70-23	5754476	↓	↓
100562-70-24	5757305	↓	↓
↓	↓	↓	↓
100562-70-33	5757314	↓	↓

OLM15 B201

4056.01 [illegible] 8/25/2009

8/24/2007

From : Notebook 100562, pg. 70

15. Cont'd

To make each derivative soln, added the corresponding soln according to the table on pg. 70 into glass vials, mixed well. Placed the glass vials in a sample shaker with heated (40°C) water bath for 1hr. Filtered the soln into autosampler vials.

End of batch preparation.

16. Run workbook : TQU01408 - 24Aug2007 - 1

under : C:\XCalibur\Hydrazine Analysis\Aug 2007

Samples : 100562 - 70 - 1 → 100562 - 70 - 33

17. 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, L/N P154, S/N 03813651

Sample shaker with heated water bath : Lancaster Labs Asset # 15722

Thermometer : Cal. due 7/2010, NB 103345/17

~~Centrifuge : Beckman, GS-6, LAB - LZNE, from Dept. 07~~ JW 8/24/2007

Orbit Shaker : No Asset #, LAB - LZNE, from Dept. 07

Centrifuge : Beckman, GS-6, Lancaster Labs Asset # 6527, qual. due 6/2010

Syringe : 3 mL, SUN - SRL, L/N 00077188

Acrodisc CR syringe filter : PALL, with 0.45 um PTFE membrane, L/N 21722067

Balance : 5554, cal. due 11/07, qual. due 3/2010

Methanol : Fisher Scientific, Optima, L/N 070571, exp. 4/8/2014

Milli Q water : 6647, dispensed 8/24/2007

Benzaldehyde : Aldrich, ≥ 99.5%, Batch # 09616DJ, exp. 6/1/2013

Hexylamine : Acros Organics, L/N A0247212, re-eval. 8/24/2010

Ottawa sand : L/N 503010 - AA, baked 4/28/2007, exp. 4/28/2010

Pipette : Eppendorf Research Pro, 5 - 100 uL, S/N 24-1, from Dept. 24
Calibrated by Dept. 24

Methylhydrazine (2nd source) : Chem Service, 99.1%, L/N 414-156B, exp. 01/12

MDL and calibration standards : 100562 - 55 - 1 → 100562 - 55 - 7 : see Notebook 100562, pg. 55 OLN15 0212

2nd source ICV spiking soln 100562 - 57 - 1 : See Notebook 100562, pg. 57

8/24/2002

From: Notebook 100562, pg. 71

17. Cont'd

2nd source hydrazine stock soln 100562-58-1: 180.4 mg/mL, see Notebook 100562, pg. 58

2nd source 1,1-dimethylhydrazine 100562-43-4: 810 mg/mL, see Notebook 100562, pg. 43

OLN15 0213

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: 8/26/2008
From: Notebook 100562, pg. 12

1. Pipette Calibration
Pipette: Rainin, 1-10 mL, S/N 207317497
Volume (mL) Balance Reading (mg)
10 9.74

Pipette: Eppendorf Research, 100-1000 mL, S/N 2778567
Volume (mL) Balance Reading (g)
500 0.49712

Pipette: Eppendorf Research, 100-1000 mL, S/N 1467845
Volume (mL) Balance Reading (g)
1000 0.99539

All pipettes passed calibration check.

2. Client Samples
5754474: 145A 5754477: 145A
5757324: 145A 5760570: 145A

3. Check the pH of client samples
5754474: pH 5
5754477: pH 5
5757324: pH 5
5760570: pH 5

4. Prepare 1% (v/v) benzaldehyde soln 100562-73-1
120.0 mL of benzaldehyde + 12 mL methanol measured with graduated cylinder → glass vial, mixed well.

OEM15 #214

4056.01 [illegible] 8/27/2008

8/26/2009

From : Notebook 100562, pg. 73

5. Derivatization of MDL and calibration standards with benzaldehyde

Derivative sol'n	Standards	Benzaldehyde sol'n
100562-74-1 (MDL)	100562-55-1, 1.0 mL	100562-73-1, 0.5 mL
100562-74-2 (Cal. 1)	100562-55-2, 1.0 mL	↓
↓	↓	
100562-74-9 (Cal. 8)	100562-55-9, 1.0 mL	

6. Derivatization of Blank, ICV/LCS, LCSD, client samples, matrix spike and matrix spike duplicate with benzaldehyde

Batch # : 0F2338 100562 74

Derivative sol'n	0.2 M acetate buffer 100562-54-5	Spiking soln 100562-59-1	Benzaldehyde sol'n 100562-73-1
100562-74-10 (Blank)	1.0 mL	Not added	0.5 mL
100562-74-11 (ICV/LCS)	↓	10.0 mL	↓
100562-74-12 (LCSD)		10.0 mL	

Derivative sol'n	Client Sample 1.0 mL	Spiking sol'n 100562-59-1	Benzaldehyde sol'n 100562-73-1
100562-74-13	5754474	Not added	0.5 mL
100562-74-14	5754477	↓	↓
100562-74-15	5757324		
100562-74-16	5760570		
100562-74-17 (MS)	↓	10.0 mL	↓
100562-74-18 (MSD)		10.0 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 the sample shaker with heated (40°C) water bath for 1hr. Filtered the sol'n into autosampler vials.

End of batch sample preparation.

OLN15 0215

4056.01 Jiawei 8/27/2009

8/26/2009

From: Notebook 100562, pg: 74

7. Run workbook: TQU01408 - 26 Aug 2009 - 1 under C:\X Calibur\Hydrazine Analysis\Aug2009

Samples: 100562 - 74 - 1 → 100562 - 74 - 18

8. 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
Balance: 6424, cal. Due 11/06, qual. Due 7/2010
Methanol: Fisher Scientific, Optima, L/N 090571, exp. 4/8/2014
Milli Q Water: 6647, dispensed 8/26/2009
Benzaldehyde: Aldrich, ≥ 99.5%, Batch #. 99696DJ, exp. 6/1/2013
pH paper 4.0-7.0 – EMD Chemicals, L/N HC891160
MDL and calibration standards: 100562-55-1 to 100562-55-9, see notebook: 100562, pg. 55
2nd source ICV spiking solution 100562-59-1: see notebook 100562, pg. 59

OLN15 B216

Moisture Data

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN15

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
5754467	W4126
5754468	W4206
5754469	W4168
5754470	W4218
5754471	W4256
5754472	W4120
5754473	W4160
5754475	W4210
5754476	W4240
5757305	W4193
5757306	W426DFD
5757307	W4265BKG
5757308	W4265MS
5757309	W4265MSD
5757310	W4317
5757311	W4366
5757312	W4458
5757313	W4436
5757314	W4375

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 09232820005B	Sample number(s): 5754467				
Moisture	100		99-101		
Batch number: 09233820001A	Sample number(s): 5754468				
Moisture	100		99-101		
Batch number: 09233820001B	Sample number(s): 5754469				
Moisture	100		99-101		
Batch number: 09233820002A	Sample number(s): 5754470				
Moisture	100		99-101		
Batch number: 09233820002B	Sample number(s): 5754471				
Moisture	100		99-101		
Batch number: 09236820001A	Sample number(s): 5754472-5754473, 5754475-5754476				
Moisture	100		99-101		
Batch number: 09236820002A	Sample number(s): 5757305-5757314				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		

OLN15 0218

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN15

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 09232820005B	Sample number(s): 5754467			
Moisture	22.8	23.4	3	15
Batch number: 09233820001A	Sample number(s): 5754468			
Moisture	6.0	5.0	18*	15
Batch number: 09233820001B	Sample number(s): 5754469			
Moisture	5.3	4.8	10	15
Batch number: 09233820002A	Sample number(s): 5754470			
Moisture	8.4	8.8	5	15
Batch number: 09233820002B	Sample number(s): 5754471			
Moisture	9.2	9.3	1	15
Batch number: 09236820001A	Sample number(s): 5754472-5754473, 5754475-5754476			
Moisture	31.9	31.5	1	15
Batch number: 09236820002A	Sample number(s): 5757305-5757314			
Moisture	14.9	15.4	4	15
Moisture	14.9	15.4	4	15
Moisture Duplicate	14.9	15.4	4	15

* - Outside of specification

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

OLN15 0219

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN15

Moisture Data Report

Batch #: 09232820005

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1282	5.0174	1.6659	89.28	8/20/09 (1201/SWF)	8/21/09 (0236/CW)
5754467	B	00111	1.0866	8.4556	8.4911	12.43	8/20/09 (1201/SWF)	8/21/09 (0236/CW)
P754103BKG	B	00111	1.1120	8.7535	7.8714	22.78	8/20/09 (1201/SWF)	8/21/09 (0236/CW)
P754103DUP	B	00111	1.0890	8.1208	7.3089	23.41	8/20/09 (1201/SWF)	8/21/09 (0236/CW)

Batch #: 09233820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1011	5.0262	1.6307	89.46	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754468BKG	A	00111	1.0895	6.2747	6.9876	6.00	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754468DUP	A	00111	1.1048	6.0307	6.8340	5.00	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754469BKG	B	00111	1.1124	8.5840	9.2434	5.28	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754469DUP	B	00111	1.1107	8.5647	9.2654	4.79	8/21/09 (1201/SWF)	8/24/09 (0236/CW)

Batch #: 09233820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1199	5.0357	1.6497	89.48	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754470BKG	A	00111	1.1018	7.3726	7.8527	8.43	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754470DUP	A	00111	1.1210	7.2862	7.7632	8.84	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754471BKG	B	00111	1.1006	8.3473	8.6790	9.21	8/21/09 (1201/SWF)	8/24/09 (0236/CW)
5754471DUP	B	00111	1.1197	8.9100	9.2020	9.29	8/21/09 (1201/SWF)	8/24/09 (0236/CW)

Batch #: 09236820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1189	5.0383	1.6512	89.43	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5754472	A	00111	1.1065	9.0641	9.8751	3.26	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5754473	A	00111	1.1002	8.5313	9.3609	3.17	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5754475	A	00111	1.1100	7.3967	8.1698	4.55	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5754476	A	00111	1.0923	7.5049	8.3544	3.24	8/24/09 (1201/SWF)	8/25/09 (0236/CW)

Batch #: 09236820002

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1232	5.0282	1.6603	89.32	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757305	A	00111	1.0821	7.6190	8.4045	3.89	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757306FD	A	00111	1.1174	8.1468	8.0247	15.21	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757307BKG	A	00111	1.1231	8.2020	8.1055	14.87	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757308MS	A	00118				14.87	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757309MSD	A	00118				14.87	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757309MSD	A	00121	1.1116	8.6942	8.4641	15.43	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757310	A	00111	1.1438	8.6477	9.0096	9.04	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757311	A	00111	1.1208	8.0959	8.5660	8.04	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757312	A	00111	1.0907	8.0222	7.7940	16.44	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757313	A	00111	1.1239	9.2158	8.8455	16.21	8/24/09 (1201/SWF)	8/25/09 (0236/CW)
5757314	A	00111	1.0982	8.2546	8.3159	12.56	8/24/09 (1201/SWF)	8/25/09 (0236/CW)

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