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

Type I Data Package

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:
4/29/2011

Project: Olin Wilmington, MA Superfund Site/6107090016
Sediment Samples
Collected on 12/01/10-12/03/10

SDG# OLN51

GROUP	SAMPLE NUMBERS
1223808	6155356-6155366
1223901	6155981-6155983

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

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

Authorized by: Luz C Torres

Luz C Torres
Group Leader

Date 1/6/11

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

Total Number of Pages 91

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Sample Reference List for SDG Number OLN51 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
6155356	SSD10	OC-SD-MMB-SW/SD-10-XXX Grab Sediment
6155357	SSD01	OC-SD-MMB-SW/SD-1-XXX Grab Sediment
6155358	SSD04	OC-SD-MMB-SW/SD-4-XXX Grab Sediment
6155359	SSD05	OC-SD-MMB-SW/SD-5-XXX Grab Sediment
6155360	SSD8D	OC-SD-MMB-SW/SD-8-DUP Grab Sediment
6155361	SSD08	OC-SD-MMB-SW/SD-8-XXX Grab Sediment
6155362	SSD08	OC-SD-MMB-SW/SD-8-XMS Grab Sediment
6155363	SSD08	OC-SD-MMB-SW/SD-8-MSD Grab Sediment
6155364	SSD09	OC-SD-MMB-SW/SD-9-XXX Grab Sediment
6155365	SSD11	OC-SD-MMB-SW/SD-11-XXX Grab Sediment
6155366	SSD8A	OC-SD-MMB-SW/SD-8A-XXX Grab Sediment
6155981	SD--2	OC-SD-MMB-SW/SD-2-XXX Grab Sediment
6155982	SD--3	OC-SD-MMB-SW/SD-3-XXX Grab Sediment
6155983	SD--6	OC-SD-MMB-SW/SD-6-XXX Grab Sediment

Thursday Shipment Dec 2

Lancaster Sediment

12620 ~~1223806~~ 6155356-66
1223808
NLM 12/6/10

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

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V													AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SD-MMB-SW/SD-10-XXX	12/2/2010 9:25:00 AM	T	FS	SED	G	1																			X				

Special Instructions For Lab

Notes:

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

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

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

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

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

Cooler ? (Y) / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 4.5 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] **Date:** 12/2/10 **Time:** 1700 **Received:** _____ **Date:** __/__/__ **Time:** _____

Relinquished: _____ **Date:** __/__/__ **Time:** ____ **Received:** [signature] **Date:** 12/13/10 **Time:** 910

NLM 12/6/10

12670 12238068 6155356-66
NLM12/6/10

Thursday Shipment Dec 2

Lancaster Sediment

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-SD-MMB-SW/SD-1-XXX	12/1/2010 3:00:00 PM	T	FS	SED	G	1							X		
OC-SD-MMB-SW/SD-4-XXX	12/2/2010 10:15:00	T	FS	SED	G	1							X		
OC-SD-MMB-SW/SD-5-XXX	12/2/2010 1:15:00 PM	T	FS	SED	G	1							X		
OC-SD-MMB-SW/SD-8-DUP	12/2/2010 1:00:00 PM	T	FD	SED	G	1							X		
OC-SD-MMB-SW/SD-8-MSD	12/2/2010 1:00 00 PM	T	MSD	SED	G	~~1~~ 0							X		MSD in the same jar as MS
OC-SD-MMB-SW/SD-8-XMS	12/2/2010 1:00:00 PM	T	MS	SED	G	1							X		Matrix Spike only
OC-SD-MMB-SW/SD-8-XXX	12/2/2010 1:00:00 PM	T	FS	SED	G	1							X		

Special Instructions For Lab

Notes:

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

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

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

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

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

Cooler ? Y / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 4.5 Deg C	
Preservation / pH checked? Y / N	
By: _____ Date: _____	

Relinquished: [signature] **Date:** 12/2/10 **Time:** 1700 **Received:** _____ **Date:** __/__/__ **Time:** _____

Relinquished: _____ **Date:** __/__/__ **Time:** _____ **Received:** [signature] **Date:** 12/3/10 **Time:** 910

NLM12/6/10

12670 12238068 6155356-66
NLM12/6/10

Thursday Shipment Dec 2nd Lancaster Sediment

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V												AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SD-MMB-SW/SD-9-XXX	12/1/2010 12:50 00	T	FS	SED	G	1																		X				

Special Instructions For Lab

Notes:

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

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

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

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

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

Cooler ? Y / N	MADEP Requirement
	Samples Iced? Y / N
Temp @ receipt: 4.5 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Relinquished: [signature] **Date:** 12 / 2 / 10 **Time:** 1700 **Received:** _____ **Date:** __ / __ / __ **Time:** _____

Relinquished: _____ **Date:** __ / __ / __ **Time:** _____ **Received:** [signature] **Date:** 12 / 3 / 10 **Time:** 910

12670 12238068 6155356-66
NLM12/6/10

Thursday shipment Dec 2 Lancaster Sediment

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)
							G	P	G	V	V	V	-	-	-	-	-	-	-	-	-	-	-	AG	Zn AV	-	-	<--Preservative Type (4) <--Bottle Type (5)
OC-SD-MMB-SW/SD-11-XXX	12/2/2010 3:45:00 PM	T	FS	SED	G	1																		X				

Special Instructions For Lab

Notes:
1.) Fraction: T = Total D = Dissolved, S = SPLP, C = TCLP, N = Not Applicable
2.) QC Codes: FS = Field Sample, TB = Trip Blank, FD = Field Duplicate LB = 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: 4.5 Deg C
Preservation / pH checked? Y / N
By: _____ Date: _____

Relinquished: [signature] Date: 12/2/10 Time: 1700 Received: _____ Date: __/__/__ Time: _____
Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 12/3/10 Time: 910

12670 ~~1223808~~ 6155356-66

Thursday Shipment Dec 2 Lancaster Sediment 1223808 NLM12/6/10 Page 5 of 5

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)												Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special Instructions)
							G	P	G	V	V	V												AG	Zn AV			<--Preservative Type (4) <--Bottle Type (5)
OC-SD-MMB-SW/SD-8A-XXX	12/2/2010 3:10:00 PM	T	FS	SED	G	1																		X				

Special Instructions For Lab

Notes:

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

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

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

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

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

Relinquished: [signature] Date: 12/2/10 Time: 1700 Received: _____ Date: __/__/__ Time: _____

Relinquished: _____ Date: __/__/__ Time: _____ Received: [signature] Date: 12/3/10 Time: 910

Cooler? Y / N	MADEP Requirement Samples Iced? Y / N
Temp @ receipt: 4.5 Deg C	
Preservation / pH checked? Y / N	
By: _____	Date: _____

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Dion Corp

Date of Receipt: 12/3/10

Time of Receipt: 910

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	9473	4.5°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
MM	12/3/10	955	Unpacking
Annelise H. Owen	12/3/10	1015	Place in Storage or Entry
			Entry
			Entry

Issued by Dept. 6042 Management
2174.05

Lancaster

Sed.

2 of 3

12670/1223901/6155981-83

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

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Comments (Special Instructions)
							G	P	G	V	V	V	AG	Zn AV	<--Preservative Type (4) <--Bottle Type (5)
OC-SD-MMB-SW/SD-2-XXX	12/3/2010 10:15:00	T	FS	SED	G	1							X		

Special Instructions For Lab

Notes:

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

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

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

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

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

Cooler ? Y / N	MADEP Requirement
Y	Samples Iced? (Y) / N
	Temp @ receipt: 4.2 Deg C
	Preservation / pH checked? Y / N (NA)
	By: ___ Date: 12/4/10

Relinquished: [signature] Date: 12/3/10 Time: 1700 Received: FedEx Date: 12/3/10 Time: 17

Relinquished: ___ Date: __/__/__ Time: ___ Received: [signature] Date: 12/4/10 Time: 1000

Lancaster

Sed
12670/1223901/6155981-93

MACTEC

Sample ID	Date/Time Collected	Fraction (1)	QC Code (2)	Sample Matrix (3)	Composite (C) or Grab (G)	Total # of Containers	Cr+6 (3060A / 7199)	Cr+6 (7199)	DMF (Mod 8033 - GC/NPD)	DMF (Mod 8033 - GC/NPD)	Dpex / Kempore (8000B - HPLC)	Perchlorate (6850)													Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)	Hydrazine, MMH, UDMH (Mod 8315 LC/MS/MS)			Comments (Special instructions)
							G	P	G	V	V	V	-	-	-	-	-	-	-	-	-	-	-	-	-	AG	Zn AV	-	-	<--Preservative Type (4) <--Bottle Type (5)
OC-SD-MMB-SW/SD-3-XXX	12/3/2010 9:30:00 AM	T	FS	SED	G	1																			X				
OC-SD-MMB-SW/SD-6-XXX	12/3/2010 12:00:00	T	FS	SED	G	1																			X				

Special Instructions For Lab

Notes:

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

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

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

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

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

Cooler ? Y / N	MADEP Requirement
Y	Samples Iced? Y / N
	Temp @ receipt: 4.2 Deg C
	Preservation / pH checked? Y / N (NA)
	By: [illegible] Date: 12-4-10

Relinquished: [signature] **Date:** 12/3/10 **Time:** 1700 **Received:** FedEx **Date:** 12/3/10 **Time:** 1700

Relinquished: _____ **Date:** __/__/__ **Time:** ____ **Received:** [signature] **Date:** 12/4/10 **Time:** 1000

0 NST 5885

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Mactec

Date of Receipt: 12-4-10

Time of Receipt: 1000

Source Code: 50-1

Unpacker Emp. No.: 2719

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	9493	4.2°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

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

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	12-4-10	10:53	Unpacking to Storage
[illegible]	12-4-10	11:00	Place in Storage or Entry
			Entry
			Entry

Issued by Dept. 6042 Management
2174.05

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

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 by:

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

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

December 13, 2010

Project: Olin Wilmington, MA Superfund Site/6107090016

Submittal Date: 12/03/2010
Group Number: 1223808
SDG: OLN51
PO Number: REWI0012
Release Number: ERRE9813
State of Sample Origin: MA

Client Sample Description	Lancaster Labs (LLI) #
OC-SD-MMB-SW/SD-10-XXX Grab Sediment	6155356
OC-SD-MMB-SW/SD-1-XXX Grab Sediment	6155357
OC-SD-MMB-SW/SD-4-XXX Grab Sediment	6155358
OC-SD-MMB-SW/SD-5-XXX Grab Sediment	6155359
OC-SD-MMB-SW/SD-8-DUP Grab Sediment	6155360
OC-SD-MMB-SW/SD-8-XXX Grab Sediment	6155361
OC-SD-MMB-SW/SD-8-XMS Grab Sediment	6155362
OC-SD-MMB-SW/SD-8-MSD Grab Sediment	6155363
OC-SD-MMB-SW/SD-9-XXX Grab Sediment	6155364
OC-SD-MMB-SW/SD-11-XXX Grab Sediment	6155365
OC-SD-MMB-SW/SD-8A-XXX Grab Sediment	6155366

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

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

OLN51 0012

Lancaster Laboratories, Inc.
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Lancaster Laboratories

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

Respectfully Submitted,

Dorothy M. Love

Dorothy M. Love
Group Leader

OLN51 0813

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

LLI Sample # SW 6155356
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 09:25

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD10 SDG#: OLN51-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		ng/g	ng/g	ng/g	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	36	14	1
10346	Hydrazine	302-01-2	N.D.	14	3.6	1
10346	Methylhydrazine	60-34-4	N.D.	36	14	1
Wet Chemistry	**SM20 2540 G**		%	%	%	
00111	Moisture	n.a.	86.2	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	10341003	12/08/2010 12:29	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 8815

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-1-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155357
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/01/2010 15:00

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD01 SDG#: OLN51-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	7.2	2.9	1
10346	Hydrazine	302-01-2	N.D.	2.9	0.72	1
10346	Methylhydrazine	60-34-4	N.D.	7.2	2.9	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	30.5	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	10341003	12/08/2010 12:50	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0016

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-4-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155358
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 10:15

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD04 SDG#: OLN51-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	33	13	1
10346	Hydrazine	302-01-2	N.D.	13	3.3	1
10346	Methylhydrazine	60-34-4	N.D.	33	13	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	85.0	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	10341003	12/08/2010 13:10	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0017

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-5-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155359
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 13:15

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD05 SDG#: OLN51-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	37	15	1
10346	Hydrazine	302-01-2	N.D.	15	3.7	1
10346	Methylhydrazine	60-34-4	N.D.	37	15	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	86.6	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	10341003	12/08/2010 13:30	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0010

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-8-DUP Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155360
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 13:00

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD8D SDG#: OLN51-05FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	22	9.0	1
10346	Hydrazine	302-01-2	N.D.	9.0	2.2	1
10346	Methylhydrazine	60-34-4	N.D.	22	9.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	77.7	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	10341003	12/08/2010 13:50	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 5819

*=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

Sample Description: OC-SD-MMB-SW/SD-8-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155361
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 13:00

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD08 SDG#: OLN51-06BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	23	9.0	1
10346	Hydrazine	302-01-2	N.D.	9.0	2.3	1
10346	Methylhydrazine	60-34-4	N.D.	23	9.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	77.9	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	10341003	12/08/2010 09:47	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0028

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-8-XMS Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155362
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 13:00

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD08 SDG#: OLN51-06MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	1,100	23	9.0	1
10346	Hydrazine	302-01-2	94	9.0	2.3	1
10346	Methylhydrazine	60-34-4	600	23	9.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00118	Moisture	n.a.	77.9	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	10341003	12/08/2010 11:29	Meng Yu	1
00118	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0021

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-8-MSD Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155363
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 13:00

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD08 SDG#: OLN51-06MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	1,400	23	9.0	1
10346	Hydrazine	302-01-2	100	9.0	2.3	1
10346	Methylhydrazine	60-34-4	640	23	9.0	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00118	Moisture	n.a.	77.9	0.50	0.50	1
00121	Moisture Duplicate	n.a.	77.3	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	10341003	12/08/2010 11:49	Meng Yu	1
00118	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1
00121	Moisture Duplicate	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0022

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

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

Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-9-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155364
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/01/2010 12:50

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD09 SDG#: OLN51-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	6.8	2.7	1
10346	Hydrazine	302-01-2	N.D.	2.7	0.68	1
10346	Methylhydrazine	60-34-4	N.D.	6.8	2.7	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	26.0	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	10341003	12/08/2010 14:51	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0023

*=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

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-11-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155365
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 15:45

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD11 SDG#: OLN51-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	41	16	1
10346	Hydrazine	302-01-2	N.D.	16	4.1	1
10346	Methylhydrazine	60-34-4	N.D.	41	16	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	87.7	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	10341003	12/08/2010 15:11	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 0624

*=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

Sample Description: OC-SD-MMB-SW/SD-8A-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155366
LLI Group # 1223808
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/02/2010 15:10

Submitted: 12/03/2010 09:10
Reported: 12/13/2010 09:40

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SSD8A SDG#: OLN51-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	35	14	1
10346	Hydrazine	302-01-2	N.D.	14	3.5	1
10346	Methylhydrazine	60-34-4	N.D.	35	14	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	85.9	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	10341003	12/08/2010 15:32	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10341820004B	12/07/2010 19:18	Scott W Freisher	1

OLN51 8825

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

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

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

December 13, 2010

Project: Olin Wilmington, MA Superfund Site/6107090016

Submittal Date: 12/04/2010
Group Number: 1223901
SDG: OLN51
PO Number: REWI0012
Release Number: ERRE9813
State of Sample Origin: MA

Client Sample Description	Lancaster Labs (LLI) #
OC-SD-MMB-SW/SD-2-XXX Grab Sediment	6155981
OC-SD-MMB-SW/SD-3-XXX Grab Sediment	6155982
OC-SD-MMB-SW/SD-6-XXX Grab Sediment	6155983

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

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

OLN51 6826

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Lancaster Laboratories

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

Respectfully Submitted,

Dorothy M. Love

Dorothy M. Love
Group Leader

OLN51 8827

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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 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

Sample Description: OC-SD-MMB-SW/SD-2-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155981
LLI Group # 1223901
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/03/2010 10:15

Submitted: 12/04/2010 10:00
Reported: 12/13/2010 09:42

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SD--2 SDG#: OLN51-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	39	16	1
10346	Hydrazine	302-01-2	N.D.	16	3.9	1
10346	Methylhydrazine	60-34-4	N.D.	39	16	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	87.1	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	10341003	12/08/2010 15:52	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10343820001A	12/09/2010 09:17	William C Schwebel	1

OLN51 0029

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

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Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-3-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155982
LLI Group # 1223901
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/03/2010 09:30

Submitted: 12/04/2010 10:00
Reported: 12/13/2010 09:42

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SD--3 SDG#: OLN51-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	49	20	1
10346	Hydrazine	302-01-2	N.D.	20	4.9	1
10346	Methylhydrazine	60-34-4	N.D.	49	20	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	89.8	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	10341003	12/08/2010 16:12	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10343820001A	12/09/2010 09:17	William C Schwebel	1

OLN51 0030

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

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Analysis Report

Lancaster Laboratories

Sample Description: OC-SD-MMB-SW/SD-6-XXX Grab Sediment
Wilmington MA Superfund Site

LLI Sample # SW 6155983
LLI Group # 1223901
Account # 12670

Project Name: Olin Wilmington, MA Superfund Site/6107090016

Collected: 12/03/2010 12:00

Submitted: 12/04/2010 10:00
Reported: 12/13/2010 09:42

Olin Corporation
Suite 200
3855 North Ocoee Street
Cleveland TN 37312

SD--6 SDG#: OLN51-12*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
Misc. Organics	**SW-846 8315A modified**		**ng/g**	**ng/g**	**ng/g**	
10346	1,1-Dimethylhydrazine	57-14-7	N.D.	24	9.8	1
10346	Hydrazine	302-01-2	N.D.	9.8	2.4	1
10346	Methylhydrazine	60-34-4	N.D.	24	9.8	1
Wet Chemistry	**SM20 2540 G**		**%**	**%**	**%**	
00111	Moisture	n.a.	79.5	0.50	0.50	1

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

General Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10346	Hydrazines in Soil	SW-846 8315A modified	1	10341003	12/08/2010 16:33	Meng Yu	1
00111	Moisture	SM20 2540 G	1	10343820001A	12/09/2010 09:17	William C Schwebel	1

OLN51 9831

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

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Miscellaneous Organics Data

Case Narrative Conformance/Nonconformance Summary

EE08 15M10 0133

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CASE NARRATIVE
Client: Olin Corporation
SDG #: OLN51

LANCASTER LABORATORIES
MISCELLANEOUS ORGANICS DATA

SAMPLE NUMBER(S) :

LL #'s	Sample Code	Matrix Soil	Matrix Water	Comments
6155356	SSD10	X		
6155357	SSD01	X		
6155358	SSD04	X		
6155359	SSD05	X		
6155360	SSD8D	X		
6155361	SSD08	X		Unspiked
6155362MS	SSD08MS	X		Matrix Spike
6155363MSD	SSD08MSD	X		Matrix Spike Dup
6155364	SSD09	X		
6155365	SSD11	X		
6155366	SSD8A	X		
6155981	SD--2	X		
6155982	SD--3	X		
6155983	SD--6	X		

LABORATORY SUBMITTED QC:

BLANKA	X	Method Blank
BLANKB	X	Method Blank
LCS	X	Lab Control Sample
LCSD	X	Lab Control Sample Dup

SAMPLE PREPARATION:

Samples were derivatized with benzaldehyde prior to analysis.

Case Narrative (continued)
SDG: OLN51

ANALYSIS:

No problems were encountered during the analysis of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC was within specifications.

DATA INTERPRETATION:

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

Abbreviation Key

NC = Not calculated
NF = Not found

Case Narrative Reviewed and Approved by:

Dana M. Kauffman
Manager, Data Deliverables

Date: 1/6/11

OLN51 0035

QC Summary

Lancaster Laboratories

Quality Control Summary

SDG# OLN51

Matrix Spike/Matrix Spike Duplicate

Specialty Services Group

Batchnumber: 10341003
Matrix: SOLID
Analysis: 10346 Hydrazines in Soil

Compound	Spike Added ng/g	Unspiked Conc ng/g	MS Conc ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limit
Hydrazine	120.000	N.D.	94	100	17	19	11-102	10	30
Methylhydrazine	600.000	N.D.	600	640	22	24	10-92	7	30
1,1-Dimethylhydrazine	600.000	N.D.	1,100	1,400	42	52	10-116	22	30

* = Value outside quality control limits

OLN51 0037

Lancaster Laboratories

Quality Control Summary

SDG# OLN51

Lab Control/Lab Control Duplicate

Specialty Services Group

Batchnumber: 10341003

Matrix: SOLID

Analysis: 10346 Hydrazines in Soil

Compound	Spike Added ng/g	LCS Conc ng/g	LCSD Conc ng/g	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limit
Hydrazine	120.000	130	110	106	92	70-130	14	30
Methylhydrazine	600.000	580	600	96	99	70-130	3	30
1,1-Dimethylhydrazine	600.000	630	600	105	101	70-130	4	30

* = Value outside quality control limits.

OLN51 0030

Sample Data

Lancaster Laboratories

LOQ and MDL by Analysis Number

COMPONENT NAME	MDL	LOQ	DEFAULT UNITS
10346: Hydrazines in Soil			
Hydrazine	0.50	2.0	ng/g
1,1-Dimethylhydrazine	2.0	5.0	ng/g
Methylhydrazine	2.0	5.0	ng/g

OLN51 0048

Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Component Name: **Monomethylhydrazine**

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
Conditioner	A10342003_01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conditioner	A10342003_02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDL	A10342003_03	2169.62	N/A	2169.617	N/A	3.46201ug/kg	N/A	N/A
CAL1	A10342003_04	5242.17	N/A	5242.174	5	5.63872ug/kg	12.77	N/A
CAL2	A10342003_05	11344.06	N/A	11344.055	10	9.96149ug/kg	-0.39	N/A
CAL3	A10342003_06	31766.39	N/A	31766.389	25	24.42936ug/kg	-2.28	N/A
CAL4	A10342003_07	63164.32	N/A	63164.323	50	46.67272ug/kg	-6.65	N/A
CAL5	A10342003_08	334152.77	N/A	334152.768	250	238.65006ug/kg	-4.54	N/A
CAL6	A10342003_09	698150.82	N/A	698150.818	500	496.51855ug/kg	-0.70	N/A
CAL7	A10342003_10	1432405.54	N/A	1432405.538	1000	1016.68933ug/kg	1.67	N/A
CAL8	A10342003_11	1763770.98	N/A	1763770.978	1250	1251.43977ug/kg	0.12	N/A
Conditioner	A10342003_12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conditioner	A10342003_13	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLKA (reagent)	A10342003_14	N/A	N/A	N/A	0	N/A	N/A	N/A
BLKB (Sand)	A10342003_15	N/A	N/A	N/A	0	N/A	N/A	N/A
6155361(BKG)	A10342003_16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV1	A10342003_17	29586.77	N/A	29586.767	25	22.88525ug/kg	-8.46	N/A
ICV	A10342003_18	774666.48	N/A	774666.477	N/A	550.72482ug/kg	N/A	N/A
LCS	A10342003_19	813791.16	N/A	813791.161	N/A	578.44206ug/kg	N/A	N/A
LCSD	A10342003_20	838307.85	N/A	838307.851	N/A	595.81051ug/kg	N/A	N/A
6155362(MS)	A10342003_21	184228.16	N/A	184228.161	N/A	132.43842ug/kg	N/A	N/A
6155363(MSD)	A10342003_22	197527.22	N/A	197527.224	N/A	141.85992ug/kg	N/A	N/A
CCV2	A10342003_23	67736.34	N/A	67736.340	50	49.91169ug/kg	-0.18	N/A
6155356	A10342003_24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155357	A10342003_25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155358	A10342003_26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155359	A10342003_27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155360	A10342003_28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	A10342003_29	325241.26	N/A	325241.263	250	232.33685ug/kg	-7.07	N/A
Conditioner	A10342003_30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155364	A10342003_31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155365	A10342003_32	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155366	A10342003_33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155981	A10342003_34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155982	A10342003_35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155983	A10342003_36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV4	A10342003_37	765340.31	N/A	765340.307	500	544.11784ug/kg	8.82	N/A

Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Component Name: **1,1-Dimethylhydrazine**

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
Conditioner	A10342003_01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conditioner	A10342003_02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDL	A10342003_03	2179.53	N/A	2179.533	N/A	3.19670ug/kg	N/A	N/A
CAL1	A10342003_04	6406.92	N/A	6406.920	5	5.74453ug/kg	14.89	N/A
CAL2	A10342003_05	13075.19	N/A	13075.192	10	9.76348ug/kg	-2.37	N/A
CAL3	A10342003_06	36017.47	N/A	36017.472	25	23.59070ug/kg	-5.64	N/A
CAL4	A10342003_07	73796.76	N/A	73796.763	50	46.36013ug/kg	-7.28	N/A
CAL5	A10342003_08	387678.37	N/A	387678.372	250	235.53535ug/kg	-5.79	N/A
CAL6	A10342003_09	914033.26	N/A	914033.263	500	552.76738ug/kg	10.55	N/A
CAL7	A10342003_10	1517111.99	N/A	1517111.990	1000	916.24056ug/kg	-8.38	N/A
CAL8	A10342003_11	2153846.37	N/A	2153846.375	1250	1299.99788ug/kg	4.00	N/A
Conditioner	A10342003_12	447.49	N/A	447.487	N/A	2.15281ug/kg	N/A	N/A
Conditioner	A10342003_13	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLKA (reagent)	A10342003_14	N/A	N/A	N/A	0	N/A	N/A	N/A
BLKB (Sand)	A10342003_15	N/A	N/A	N/A	0	N/A	N/A	N/A
6155361(BKG)	A10342003_16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV1	A10342003_17	34089.98	N/A	34089.977	25	22.42900ug/kg	-10.28	N/A
ICV	A10342003_18	917792.91	N/A	917792.911	N/A	555.03330ug/kg	N/A	N/A
LCS	A10342003_19	1041551.89	N/A	1041551.885	N/A	629.62235ug/kg	N/A	N/A
LCSD	A10342003_20	998151.71	N/A	998151.710	N/A	603.46523ug/kg	N/A	N/A
6155362(MS)	A10342003_21	416602.35	N/A	416602.353	N/A	252.96772ug/kg	N/A	N/A
6155363(MSD)	A10342003_22	518414.62	N/A	518414.615	N/A	314.32957ug/kg	N/A	N/A
CCV2	A10342003_23	75396.27	N/A	75396.265	50	47.32414ug/kg	-5.35	N/A
6155356	A10342003_24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155357	A10342003_25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155358	A10342003_26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155359	A10342003_27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155360	A10342003_28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	A10342003_29	380015.11	N/A	380015.109	250	230.91673ug/kg	-7.63	N/A
Conditioner	A10342003_30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155364	A10342003_31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155365	A10342003_32	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155366	A10342003_33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155981	A10342003_34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155982	A10342003_35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155983	A10342003_36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV4	A10342003_37	887336.78	N/A	887336.781	500	536.67751ug/kg	7.34	N/A

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LCMSMS ANALYSIS REPORT

Component Name: **Hydrazine**

Summary of Quan Results

Sample ID	Data File Name	Area	ISTD Area	Area Ratio	Specified Amount	Calculated Amount	% Diff	Excluded
Conditioner	A10342003_01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conditioner	A10342003_02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDL	A10342003_03	1081.69	N/A	1081.693	N/A	0.71855ug/kg	N/A	N/A
CAL1	A10342003_04	2785.40	N/A	2785.400	1	1.23007ug/kg	23.01	N/A
CAL2	A10342003_05	3979.19	N/A	3979.186	2	1.58849ug/kg	-20.58	N/A
CAL3	A10342003_06	15117.35	N/A	15117.348	5	4.93260ug/kg	-1.35	N/A
CAL4	A10342003_07	32338.86	N/A	32338.865	10	10.10318ug/kg	1.03	N/A
CAL5	A10342003_08	154362.09	N/A	154362.086	50	46.73933ug/kg	-6.52	N/A
CAL6	A10342003_09	355256.47	N/A	355256.474	100	107.05571ug/kg	7.06	N/A
CAL7	A10342003_10	625201.37	N/A	625201.372	200	188.10375ug/kg	-5.95	N/A
CAL8	A10342003_11	858825.46	N/A	858825.461	250	258.24687ug/kg	3.30	N/A
Conditioner	A10342003_12	924.51	N/A	924.509	N/A	0.67136ug/kg	N/A	N/A
Conditioner	A10342003_13	332.47	N/A	332.471	N/A	0.49360ug/kg	N/A	N/A
BLKA (reagent)	A10342003_14	N/A	N/A	N/A	0	N/A	N/A	N/A
BLKB (Sand)	A10342003_15	N/A	N/A	N/A	0	N/A	N/A	N/A
6155361(BKG)	A10342003_16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV1	A10342003_17	13649.71	N/A	13649.708	5	4.49196ug/kg	-10.16	N/A
ICV	A10342003_18	377572.56	N/A	377572.559	N/A	113.75587ug/kg	N/A	N/A
LCS	A10342003_19	421301.73	N/A	421301.728	N/A	126.88508ug/kg	N/A	N/A
LCSD	A10342003_20	367118.18	N/A	367118.184	N/A	110.61706ug/kg	N/A	N/A
6155362(MS)	A10342003_21	67905.25	N/A	67905.254	N/A	20.78160ug/kg	N/A	N/A
6155363(MSD)	A10342003_22	75000.59	N/A	75000.586	N/A	22.91190ug/kg	N/A	N/A
CCV2	A10342003_23	27639.30	N/A	27639.299	10	8.69218ug/kg	-13.08	N/A
6155356	A10342003_24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155357	A10342003_25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155358	A10342003_26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155359	A10342003_27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155360	A10342003_28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV3	A10342003_29	152860.93	N/A	152860.927	50	46.28863ug/kg	-7.42	N/A
Conditioner	A10342003_30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155364	A10342003_31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155365	A10342003_32	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155366	A10342003_33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155981	A10342003_34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155982	A10342003_35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6155983	A10342003_36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCV4	A10342003_37	348602.34	N/A	348602.345	100	105.05788ug/kg	5.06	N/A

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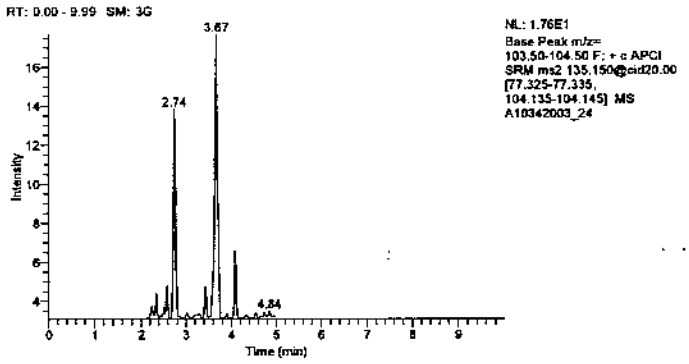
LCMSMS ANALYSIS REPORT

Sample Name:	6155356		
Data File:	A10342003_24	Acquisition Date:	12/08/10 12:29:53 PM
Sample Type:	Unknown	Sample ID:	6155356
Run Time(min):	9.99	Vial:	d:9
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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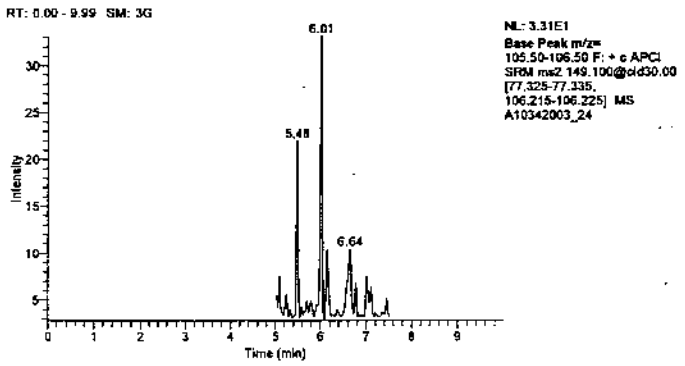

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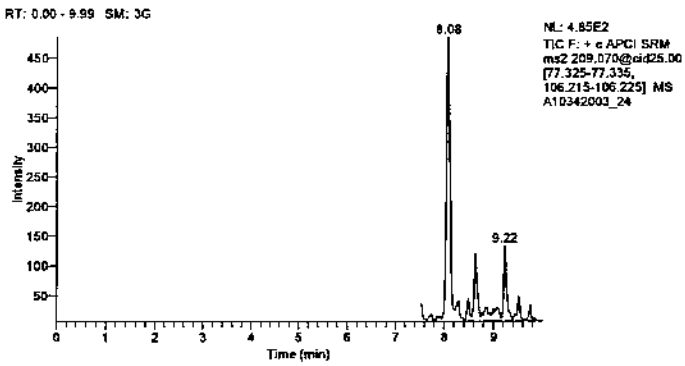

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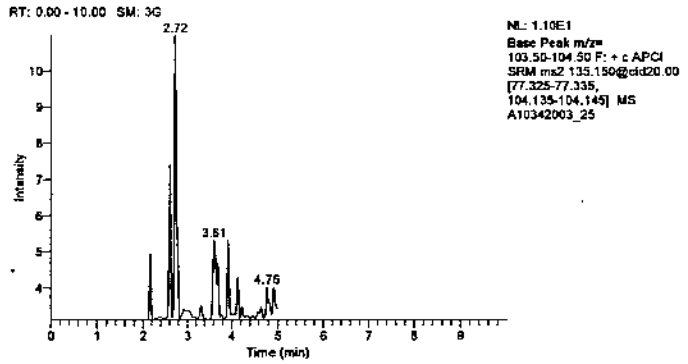
LCMSMS ANALYSIS REPORT

Sample Name:	6155357		
Data File:	A10342003_25	Acquisition Date:	12/08/10 12:50:10 PM
Sample Type:	Unknown	Sample ID:	6155357
Run Time(min):	9.99	Vial:	D:10
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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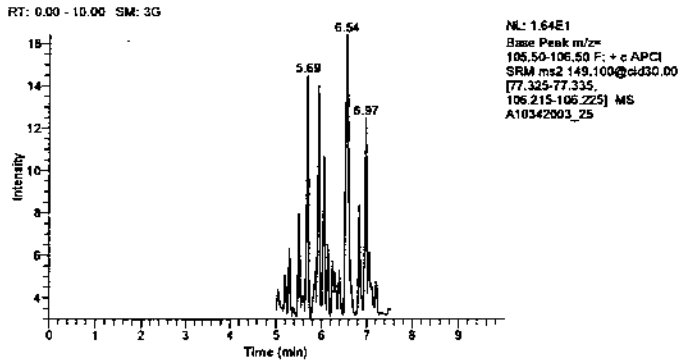

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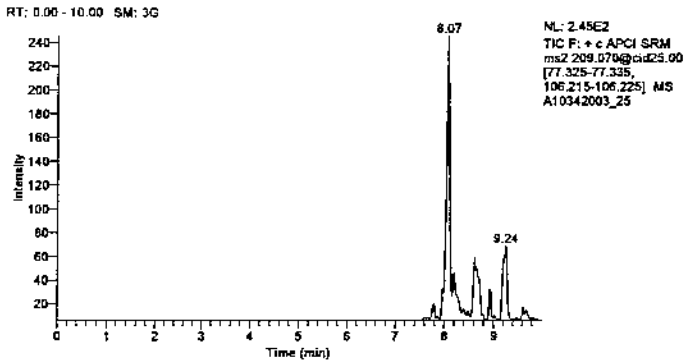

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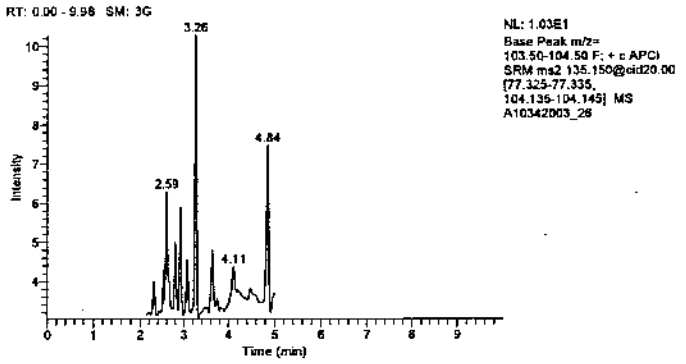
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155358		
Data File:	A10342003_26	Acquisition Date:	12/08/10 01:10:27 PM
Sample Type:	Unknown	Sample ID:	6155358
Run Time(min):	9.98	Vial:	D:11
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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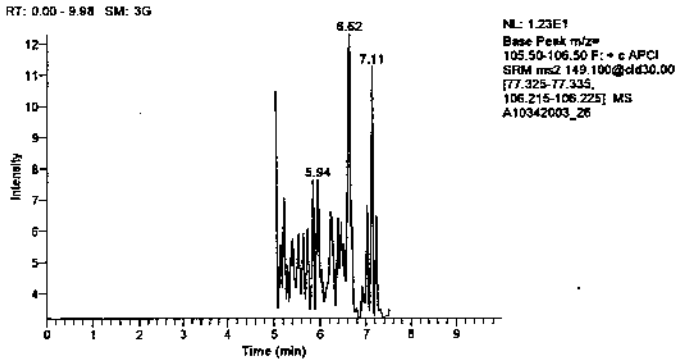

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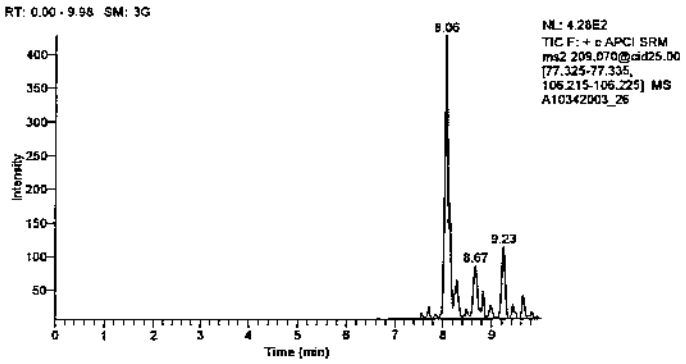

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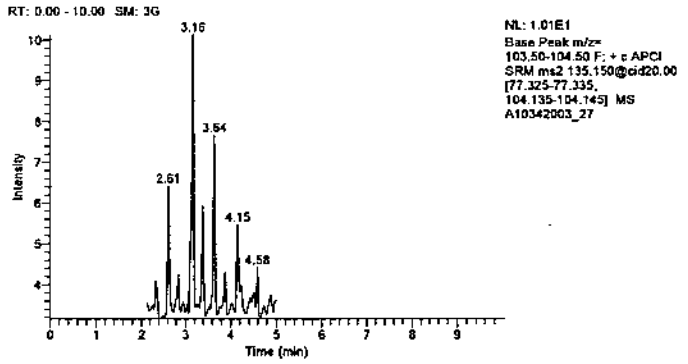
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155359		
Data File:	A10342003_27	Acquisition Date:	12/08/10 01:30:40 PM
Sample Type:	Unknown	Sample ID:	6155359
Run Time(min):	9.99	Vial:	D:12
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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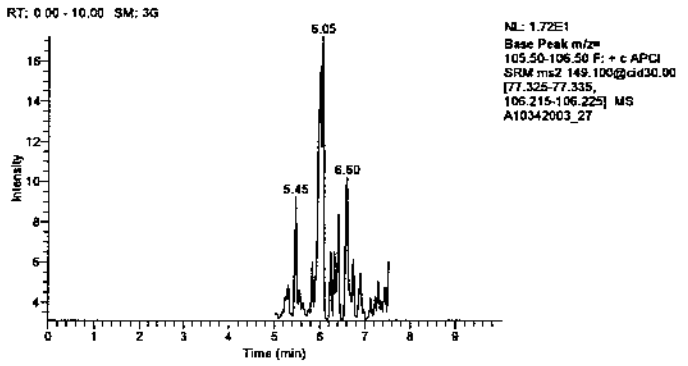

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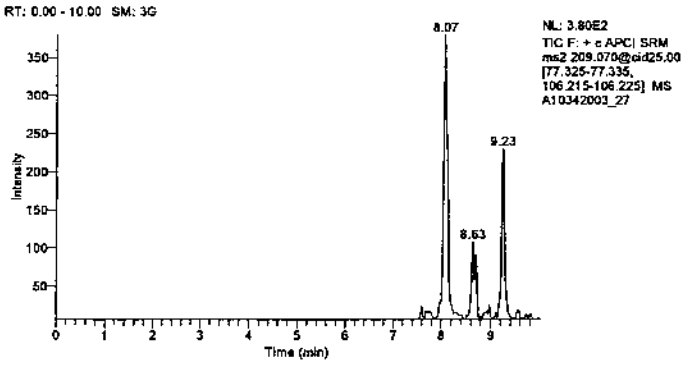

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Thursday, December 09, 2010, 09:39:45

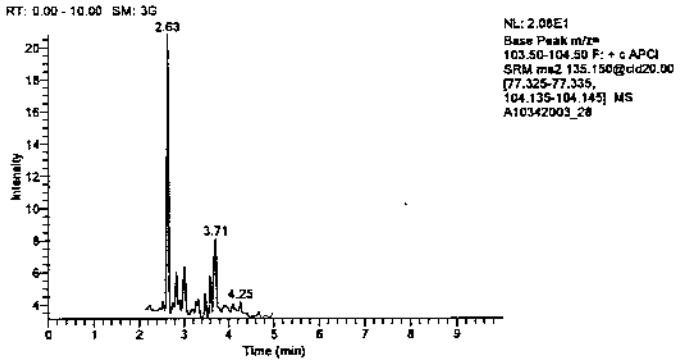
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155360		
Data File:	A10342003_28	Acquisition Date:	12/08/10 01:50:57 PM
Sample Type:	Unknown	Sample ID:	6155360
Run Time(min):	9.99	Vial:	D:13
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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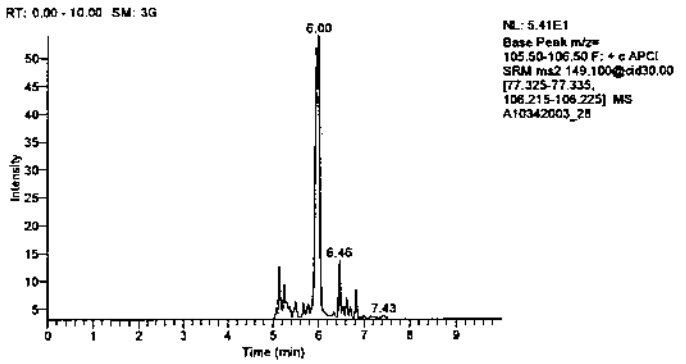

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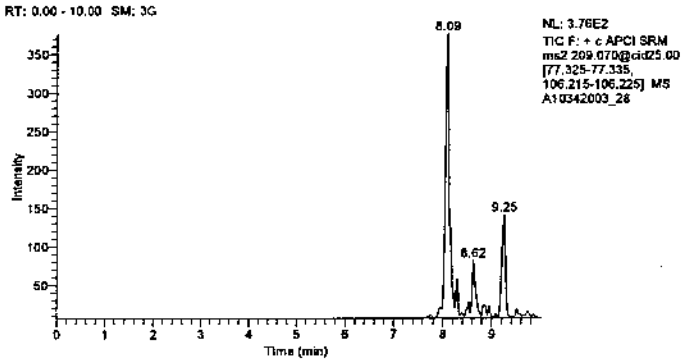

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Thursday, December 09, 2010, 09:39:46

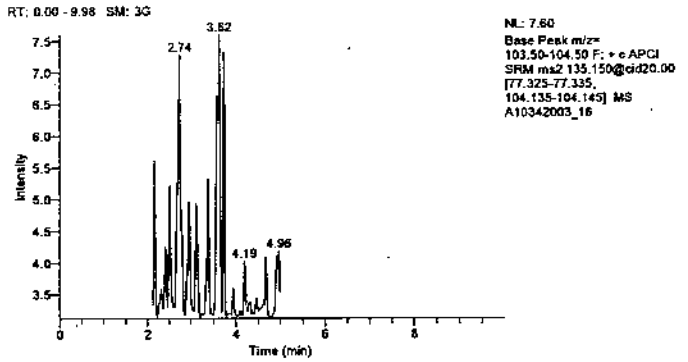
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155361(BKG)		
Data File:	A10342003_16	Acquisition Date:	12/08/10 09:47:57 AM
Sample Type:	Unknown	Sample ID:	6155361(BKG)
Run Time(min):	9.98	Vial:	D:3
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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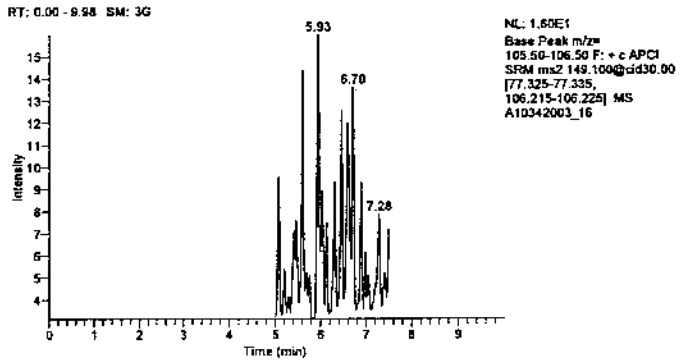

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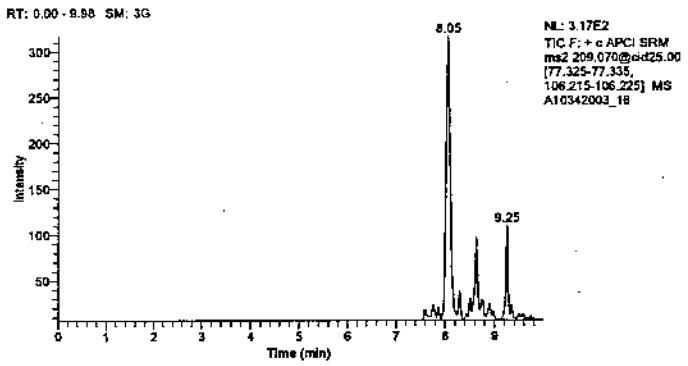

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Thursday, December 09, 2010, 09:39:37

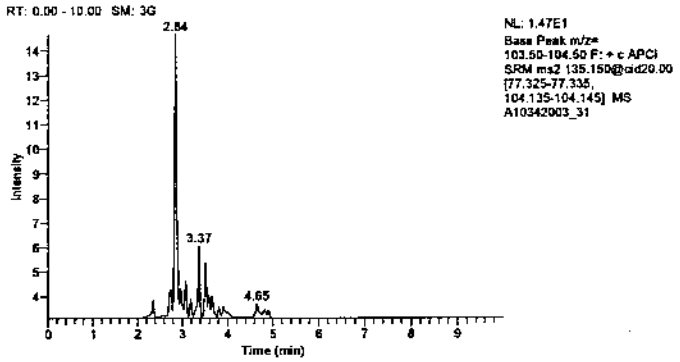
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155364		
Data File:	A10342003_31	Acquisition Date:	12/08/10 02:51:42 PM
Sample Type:	Unknown	Sample ID:	6155364
Run Time(min):	9.99	Vial:	D:14
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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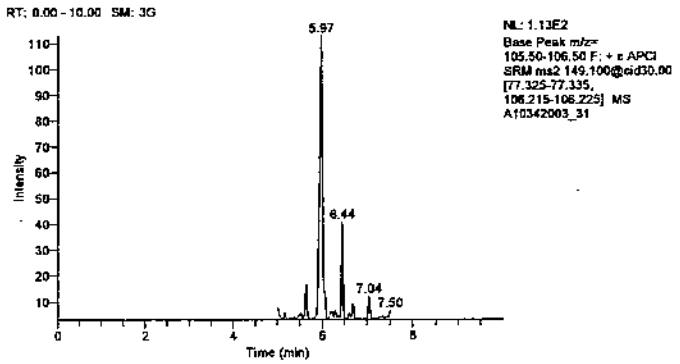

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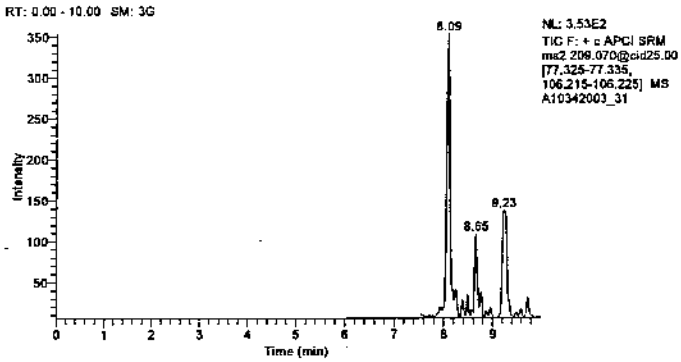

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Thursday, December 09, 2010, 09:39:47

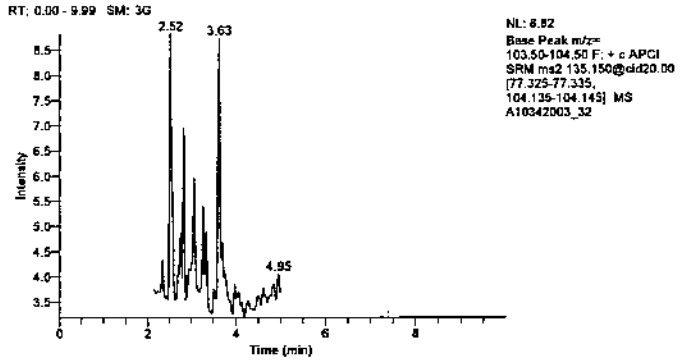
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155365		
Data File:	A10342003_32	Acquisition Date:	12/08/10 03:11:55 PM
Sample Type:	Unknown	Sample ID:	6155365
Run Time(min):	9.99	Vial:	D:15
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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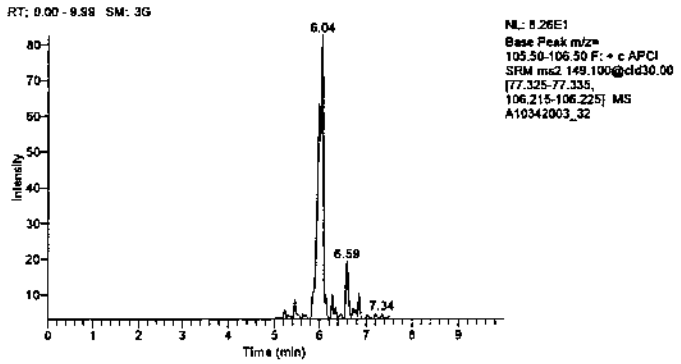

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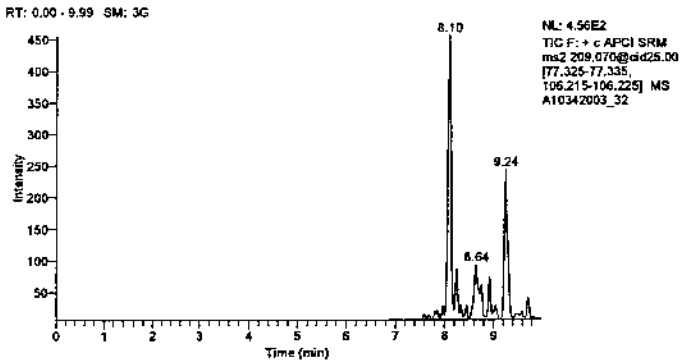

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Thursday, December 09, 2010, 09:39:48

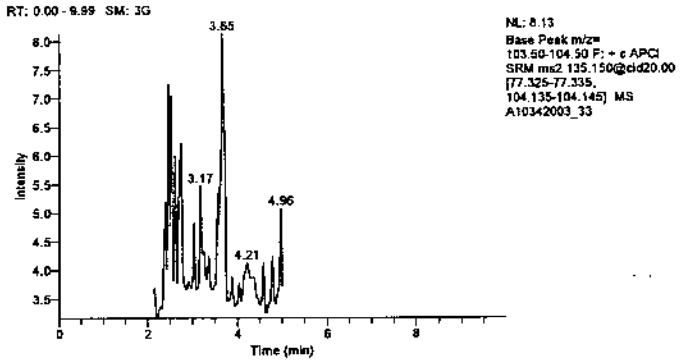
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155366		
Data File:	A10342003_33	Acquisition Date:	12/08/10 03:32:11 PM
Sample Type:	Unknown	Sample ID:	6155366
Run Time(min):	9.98	Vial:	D:16
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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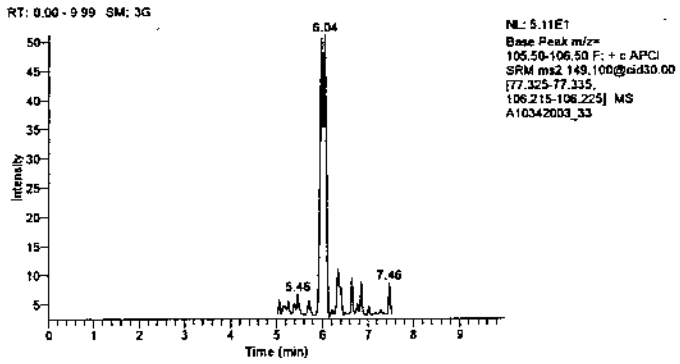

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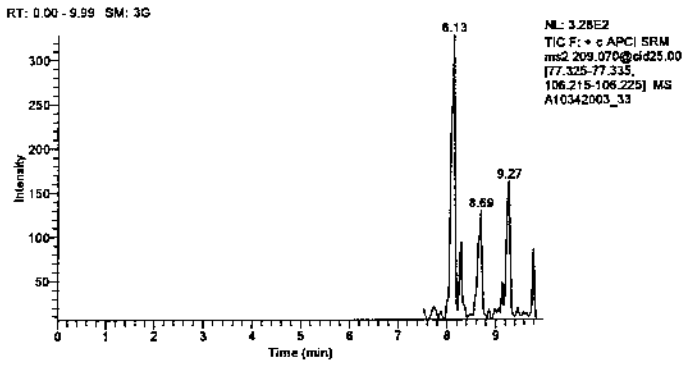


There's no data available to display this graphic object.

Thursday, December 09, 2010, 09:39:49

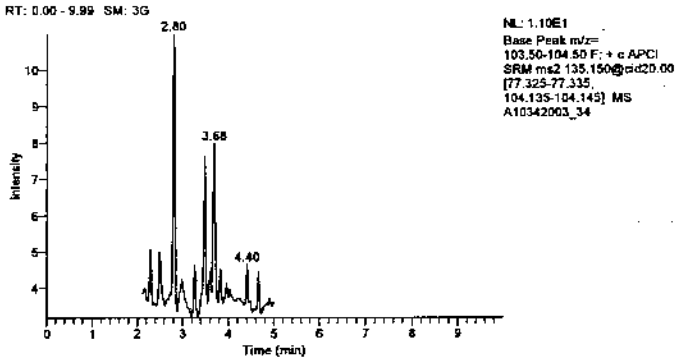
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

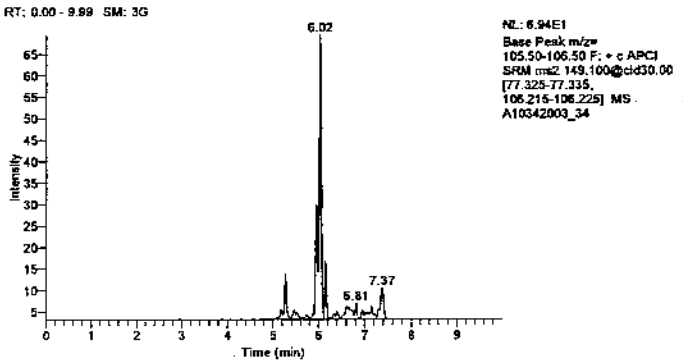
Sample Name:	6155981		
Data File:	A10342003_34	Acquisition Date:	12/08/10 03:52:30 PM
Sample Type:	Unknown	Sample ID:	6155981
Run Time(min):	9.98	Vial:	D:17
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

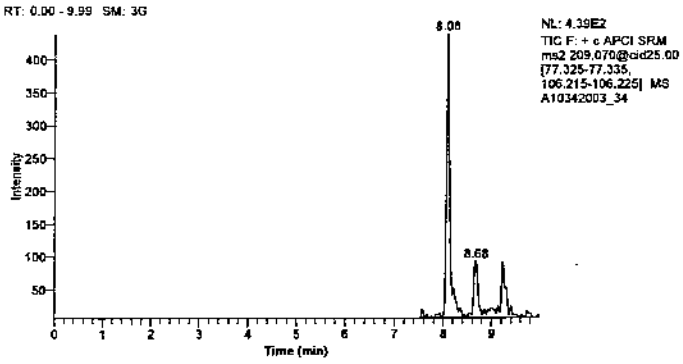
Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



There's no data available to display this graphic object.



There's no data available to display this graphic object.



There's no data available to display this graphic object.

OLNSL 0853

Thursday, December 09, 2010, 09:39:50

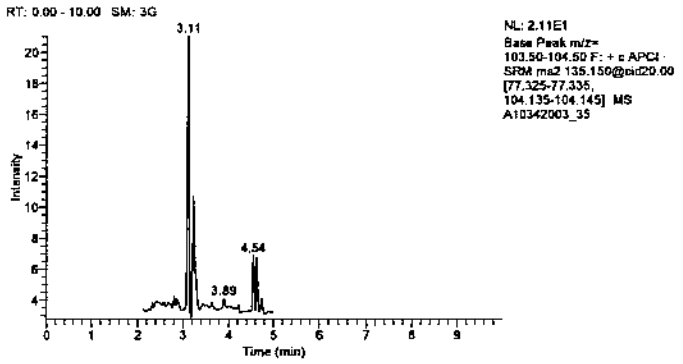
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	6155982		
Data File:	A10342003_35	Acquisition Date:	12/08/10 04:12:47 PM
Sample Type:	Unknown	Sample ID:	6155982
Run Time(min):	9.99	Vial:	D:18
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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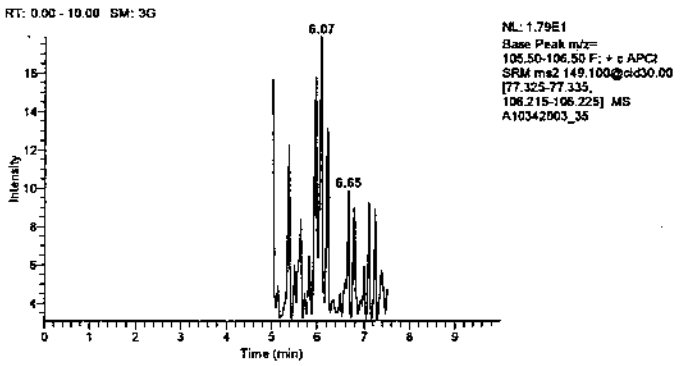

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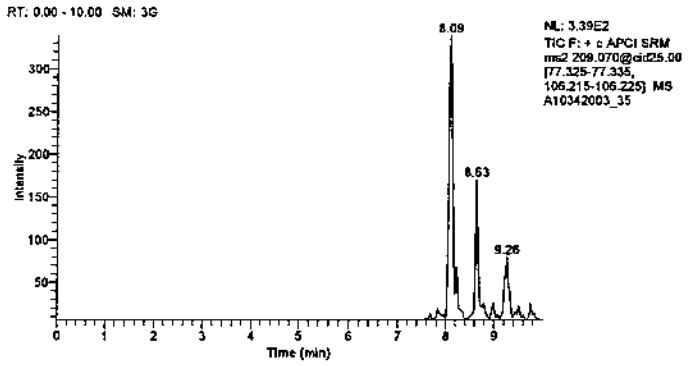


There's no data available to display this graphic object.

OLM51 0054

Thursday, December 09, 2010, 09:39:51

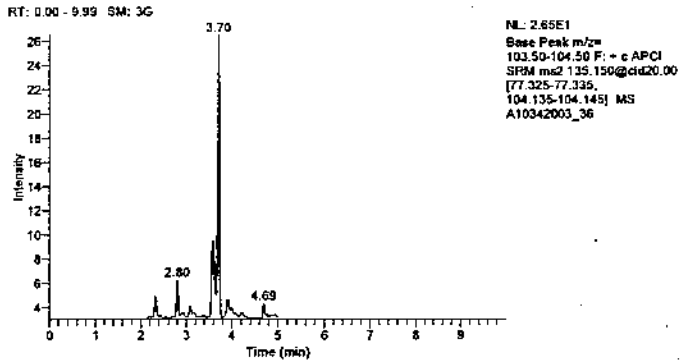
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

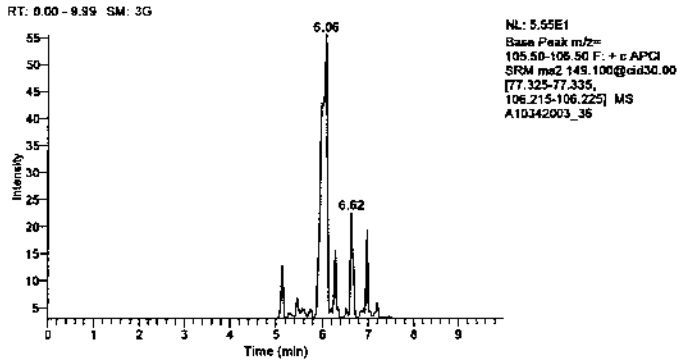
Sample Name:	6155983		
Data File:	A10342003_36	Acquisition Date:	12/08/10 04:33:03 PM
Sample Type:	Unknown	Sample ID:	6155983
Run Time(min):	9.98	Vial:	D:19
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

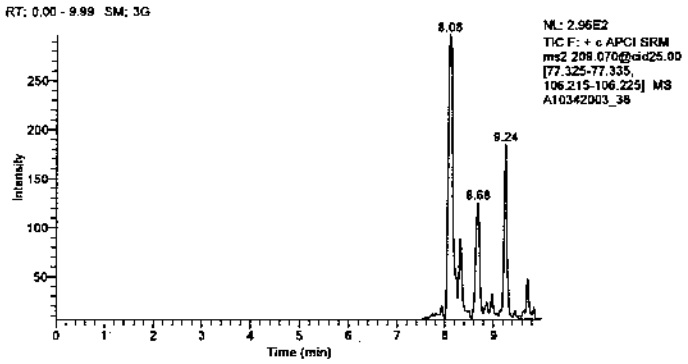
Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



There's no data available to display this graphic object.



There's no data available to display this graphic object.



There's no data available to display this graphic object.

OLN51 8855

Thursday, December 09, 2010, 09:39:52

Standards Data

OLNSI 6056

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Sequence Table

File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
A10342003_01	Conditioner	Unknown	N/A	B:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_02	Conditioner	Unknown	N/A	B:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_03	MDL	Unknown	N/A	B:2	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_04	CAL1	Std Bracket	1	B:3	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_05	CAL2	Std Bracket	2	B:4	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_06	CAL3	Std Bracket	3	B:5	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_07	CAL4	Std Bracket	4	B:6	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_08	CAL5	Std Bracket	5	B:7	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_09	CAL6	Std Bracket	6	B:8	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_10	CAL7	Std Bracket	7	B:9	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_11	CAL8	Std Bracket	8	B:10	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_12	Conditioner	Unknown	N/A	B:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_13	Conditioner	Unknown	N/A	B:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_14	BLKA (reagent)	Blank	N/A	d:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil

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File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
A10342003_15	BLKB (Sand)	Blank	N/A	D:2	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_16	6155361(BKG)	Unknown	N/A	D:3	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_17	CCV1	QC	1	B:5	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_18	ICV	Unknown	N/A	d:4	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_19	LCS	Unknown	N/A	D:5	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_20	LCSD	Unknown	N/A	D:6	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_21	6155362(MS)	Unknown	N/A	D:7	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_22	6155363(MSD)	Unknown	N/A	D:8	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_23	CCV2	QC	2	B:6	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_24	6155356	Unknown	N/A	d:9	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_25	6155357	Unknown	N/A	D:10	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_26	6155358	Unknown	N/A	D:11	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_27	6155359	Unknown	N/A	D:12	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_28	6155360	Unknown	N/A	D:13	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_29	CCV3	QC	3	B:7	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil

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File Name	Sample ID	Sample Type	Level	Vial	Inj Vol	Dil Factor	Path	Inst Method	Proc Method
A10342003_30	Conditioner	Unknown	N/A	b:1	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_31	6155364	Unknown	N/A	D:14	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_32	6155365	Unknown	N/A	D:15	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_33	6155366	Unknown	N/A	D:16	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_34	6155981	Unknown	N/A	D:17	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_35	6155982	Unknown	N/A	D:18	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_36	6155983	Unknown	N/A	D:19	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil
A10342003_37	CCV4	QC	4	B:8	5.0	1.000	C:\XCalibur\Hydrazine Analysis\2010Dec	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	C:\XCalibur\Hydrazine Analysis\Processing Methods\Hydraz_soil

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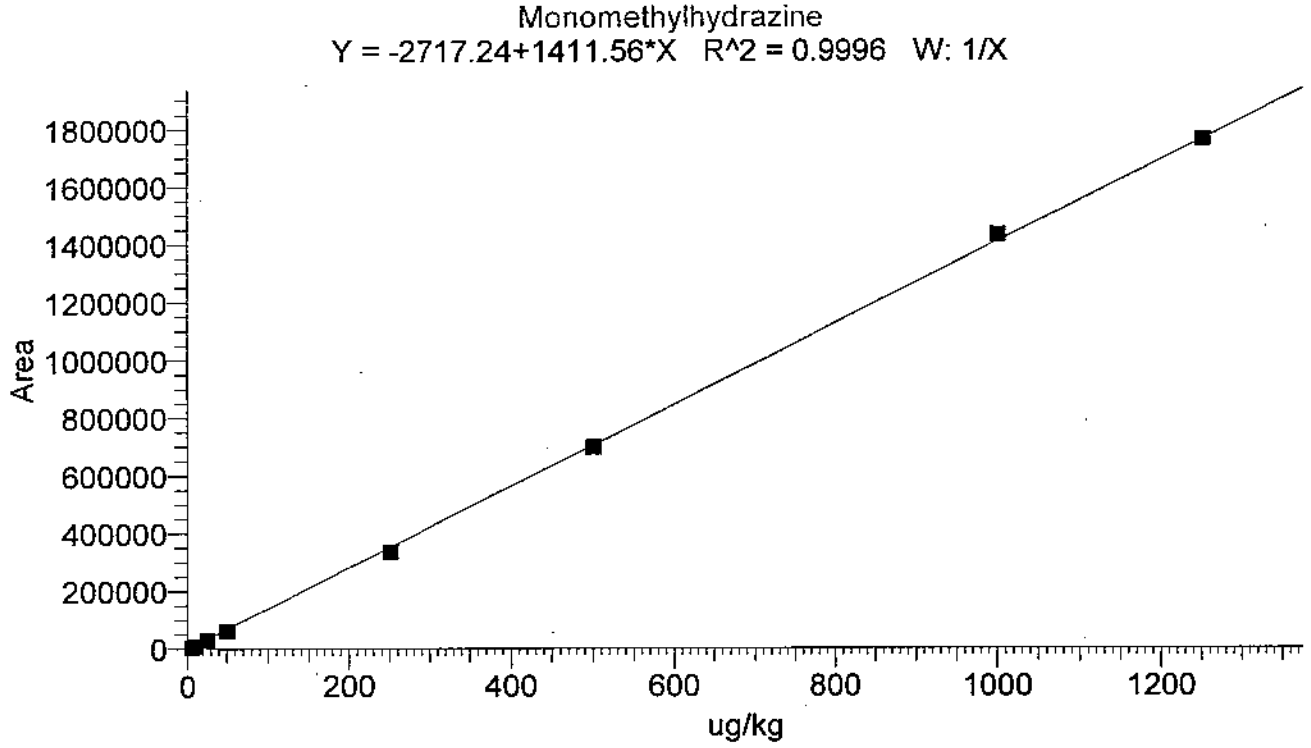
LCMSMS ANALYSIS REPORT

Component Name: **Monomethylhydrazine**



Identification		Component Name:	Monomethylhydrazine
Filter:	+ c APCI SRM ms2 135.15@cid20.00 [77.33-77.33, 104.14-104.15]	1st Trace Type:	Base Peak
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):	104		
Retention Time		Expected RT (min):	3.46000
Window (sec):	30.00000	View Width (min):	2.50000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
		ICIS Peak Integration	
ICIS Smoothing Points:	3	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
		Internal Standard	
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:		Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ug/kg
Number of Cal. Levels:	8	Number of QC Levels:	4
		Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Limit ScanRange (nm):	N/A		

01N51 0060

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LCMSMS ANALYSIS REPORT

Component Cal Level Table

Cal Level	Amount
1	5.000
2	10.000
3	25.000
4	50.000
5	250.000
6	500.000
7	1000.000
8	1250.000

Component QC Level Table

QC Level	Amount
1	25.000
2	50.000
3	250.000
4	500.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	% Diff
CAL1	A10342003_04	5.63872ug/kg	5242.17	12.77
CAL2	A10342003_05	9.96149ug/kg	11344.06	-0.39
CAL3	A10342003_06	24.42936ug/kg	31766.39	-2.28
CAL4	A10342003_07	46.67272ug/kg	63164.32	-6.65
CAL5	A10342003_08	238.65006ug/kg	334152.77	-4.54
CAL6	A10342003_09	496.51855ug/kg	698150.82	-0.70
CAL7	A10342003_10	1016.68933ug/kg	1432405.54	1.67
CAL8	A10342003_11	1251.43977ug/kg	1763770.98	0.12
CCV1	A10342003_17	22.88525ug/kg	29586.77	-8.46
CCV2	A10342003_23	49.91169ug/kg	67736.34	-0.18
CCV3	A10342003_29	232.33685ug/kg	325241.26	-7.07
CCV4	A10342003_37	544.11784ug/kg	765340.31	8.82

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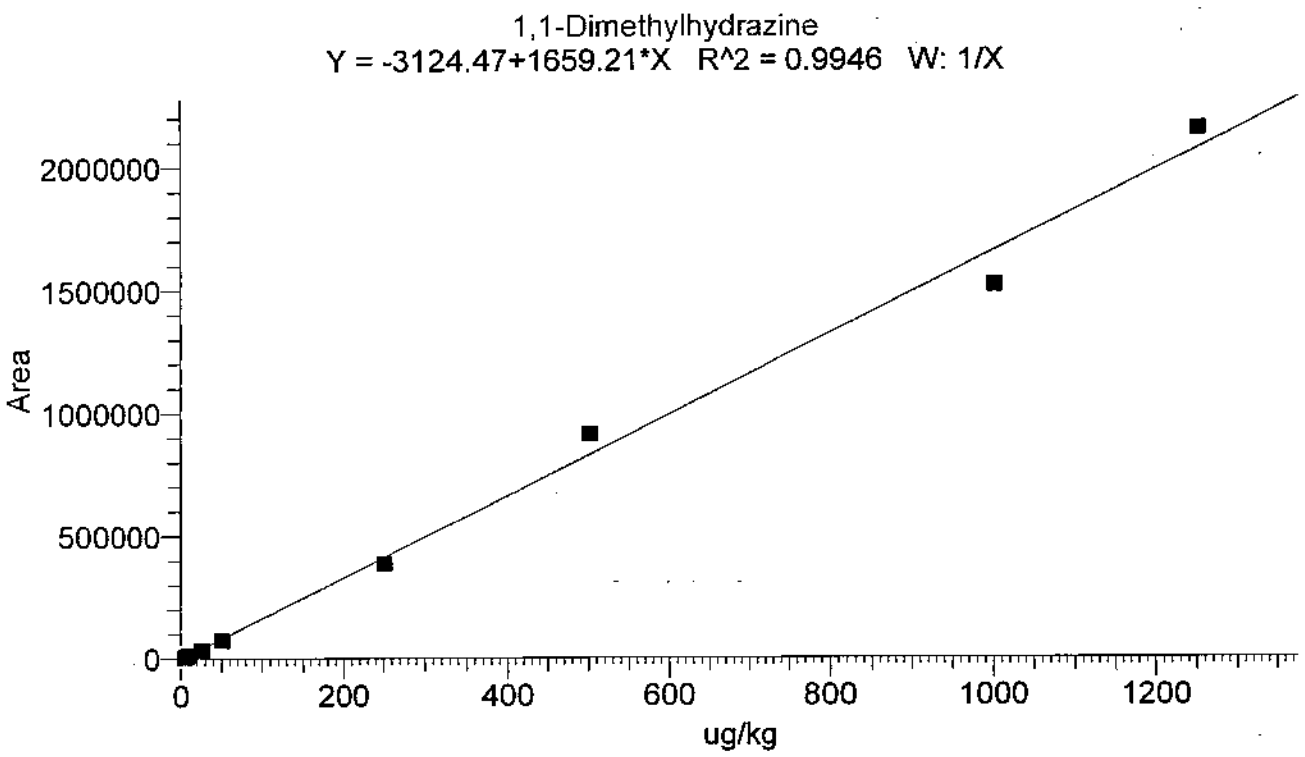
LCMSMS ANALYSIS REPORT

Component Name: **1,1-Dimethylhydrazine**



Identification		Component Name:	1,1-Dimethylhydrazine
Filter:	+ c APCI SRM ms2 149.10@cid30.00 [77.33-77.33, 106.22-106.22]	1st Trace Type:	Base Peak
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):	106		
Retention Time		Expected RT (min):	6.49000
Window (sec):	30.00000	View Width (min):	2.50000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
		ICIS Peak Integration	
ICIS Smoothing Points:	3	Baseline Window:	75
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	50.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
		Internal Standard	
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:		Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ug/kg
Number of Cal. Levels:	8	Number of QC Levels:	4
		Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Limit ScanRange (nm):	N/A		

OLN51 2062

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LCMSMS ANALYSIS REPORT

Component Cal Level Table

Cal Level	Amount
1	5.000
2	10.000
3	25.000
4	50.000
5	250.000
6	500.000
7	1000.000
8	1250.000

Component QC Level Table

QC Level	Amount
1	25.000
2	50.000
3	250.000
4	500.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	% Diff
CAL1	A10342003_04	5.74453ug/kg	6406.92	14.89
CAL2	A10342003_05	9.76348ug/kg	13075.19	-2.37
CAL3	A10342003_06	23.59070ug/kg	36017.47	-5.64
CAL4	A10342003_07	46.36013ug/kg	73796.76	-7.28
CAL5	A10342003_08	235.53535ug/kg	387678.37	-5.79
CAL6	A10342003_09	552.76738ug/kg	914033.26	10.55
CAL7	A10342003_10	916.24056ug/kg	1517111.99	-8.38
CAL8	A10342003_11	1299.99788ug/kg	2153846.37	4.00
CCV1	A10342003_17	22.42900ug/kg	34089.98	-10.28
CCV2	A10342003_23	47.32414ug/kg	75396.27	-5.35
CCV3	A10342003_29	230.91673ug/kg	380015.11	-7.63
CCV4	A10342003_37	536.67751ug/kg	887336.78	7.34

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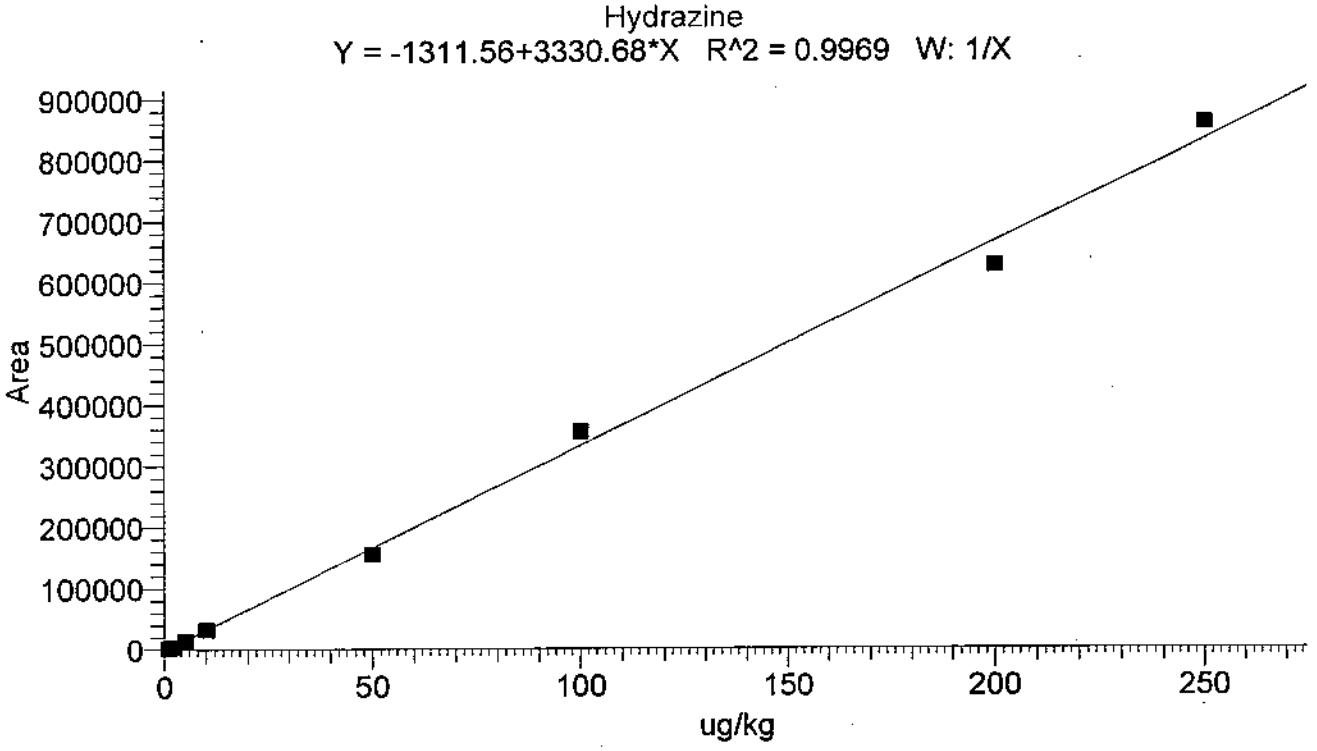
LCMSMS ANALYSIS REPORT

Component Name: **Hydrazine**



Identification		Component Name:	Hydrazine
Filter:	+ c APCI SRM ms2 209.07@cid25.00 [77.33-77.33, 106.22-106.22]	1st Trace Type:	TIC
2nd Trace Type:	N/A	Mass Range 1 (m/z):	
Mass Range 2 (m/z):		Wavelength Range 2 (nm):	N/A
Base Peak(BP):			
Retention Time		Expected RT (min):	9.10000
Window (sec):	30.00000	View Width (min):	2.00000
RT Reference:	No	Adjust Expected RT:	No
Adjust Using:	N/A		
Detection Options		Peak Detection Algorithm:	ICIS
		ICIS Peak Integration	
ICIS Smoothing Points:	3	Baseline Window:	100
Area Noise Factor:	5	Peak Noise Factor:	10
ICIS Constrain Peak Width:	No	ICIS Peak Height (%):	N/A
ICIS Tailing Factor:	N/A		
ICIS Peak Detection		ICIS Identify By:	Nearest RT
ICIS Minimum Peak Height (S/N):	35.0	ICIS Ion Ratio Confirmation:	N/A
ICIS Window %:	N/A	ICIS Qualifier Ion Coelution (min):	N/A
		ICIS Spectrum Thresholds	
ICIS Forward:	N/A	ICIS Reverse:	N/A
ICIS Match:	N/A		
ICIS Advanced Parameters		Noise Method:	Incos
Minimum Peak Width:	3	Multiplet Resolution:	10
Area Tail Extension:	5	Area Scan Window:	0
		Calibration	
Component Type:	Target Compound	%RSD Calculation Method:	Use calculated amounts
		Internal Standard	
ISTD Amount:	N/A	ISTD Units:	N/A
		Target Compounds	
ISTD:		Weighting:	OneOverX
Origin:	IgnoreOrigin	Response:	Area
Calibration Curve:	Linear	Target Units:	ug/kg
Number of Cal. Levels:	8	Number of QC Levels:	4
		Peak Purity Options	
Scan Threshold (mAU):	N/A	Peak Coverage (%):	N/A
Limit ScanRange (nm):	N/A		

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LCMSMS ANALYSIS REPORT

Component Cal Level Table

Cal Level	Amount
1	1.000
2	2.000
3	5.000
4	10.000
5	50.000
6	100.000
7	200.000
8	250.000

Component QC Level Table

QC Level	Amount
1	5.000
2	10.000
3	50.000
4	100.000

ICV & CCV Result Table

Sample ID	Data File Name	Calculated Amount	Area	% Diff
CAL1	A10342003_04	1.23007ug/kg	2785.40	23.01
CAL2	A10342003_05	1.58849ug/kg	3979.19	-20.58
CAL3	A10342003_06	4.93260ug/kg	15117.35	-1.35
CAL4	A10342003_07	10.10318ug/kg	32338.86	1.03
CAL5	A10342003_08	46.73933ug/kg	154362.09	-6.52
CAL6	A10342003_09	107.05571ug/kg	355256.47	7.06
CAL7	A10342003_10	188.10375ug/kg	625201.37	-5.95
CAL8	A10342003_11	258.24687ug/kg	858825.46	3.30
CCV1	A10342003_17	4.49196ug/kg	13649.71	-10.16
CCV2	A10342003_23	8.69218ug/kg	27639.30	-13.08
CCV3	A10342003_29	46.28863ug/kg	152860.93	-7.42
CCV4	A10342003_37	105.05788ug/kg	348602.34	5.06

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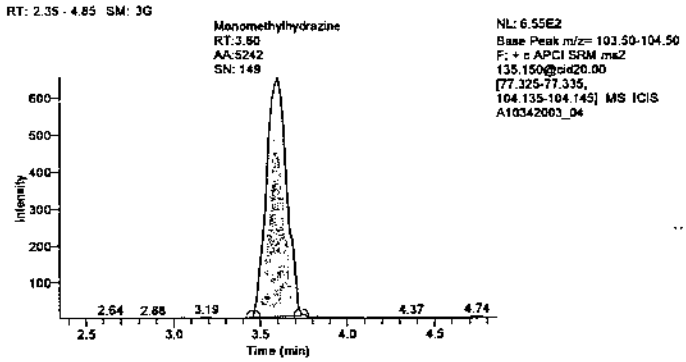
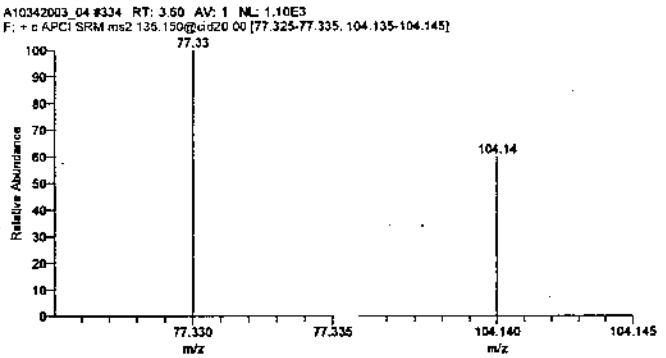
LCMSMS ANALYSIS REPORT

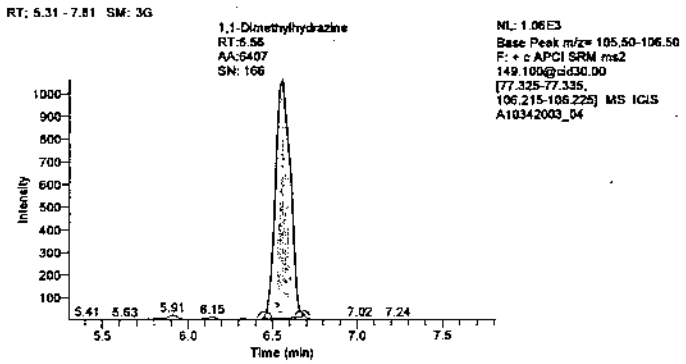
Sample Name:	CAL1		
Data File:	A10342003_04	Acquisition Date:	12/08/10 05:18:10 AM
Sample Type:	Std Bracket	Sample ID:	CAL1
Run Time(min):	9.99	Vial:	B:3
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

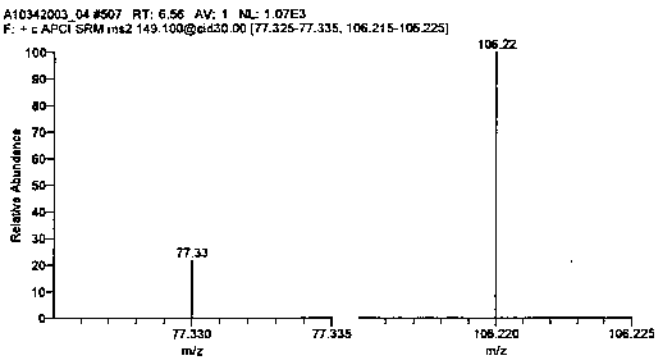
Quan Peak Table

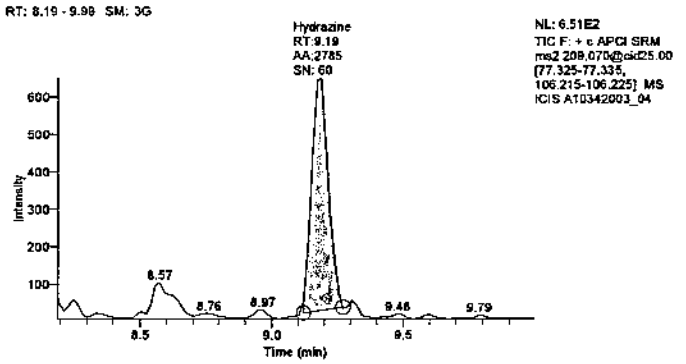
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	5.639	ug/kg	5242.174	3.60
1,1-Dimethylhydrazine	5.745	ug/kg	6406.920	6.56
Hydrazine	1.230	ug/kg	2785.400	9.19

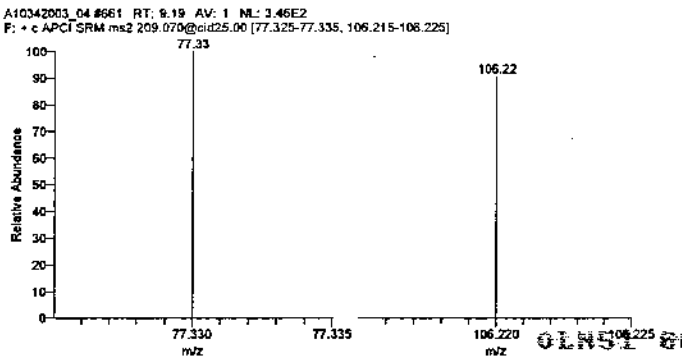












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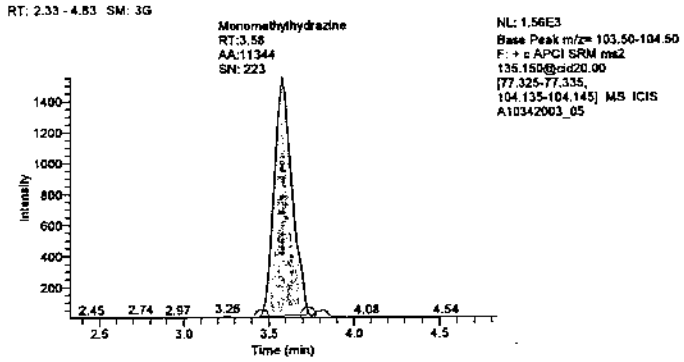
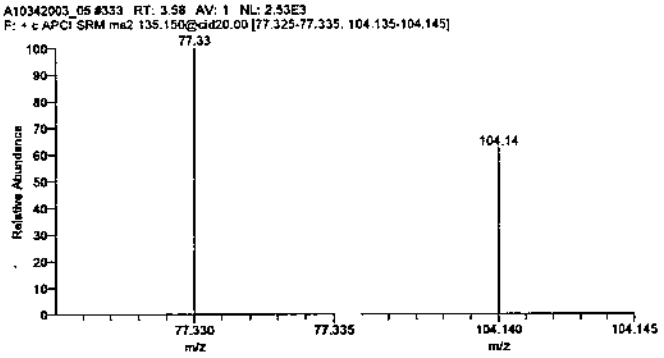
LCMSMS ANALYSIS REPORT

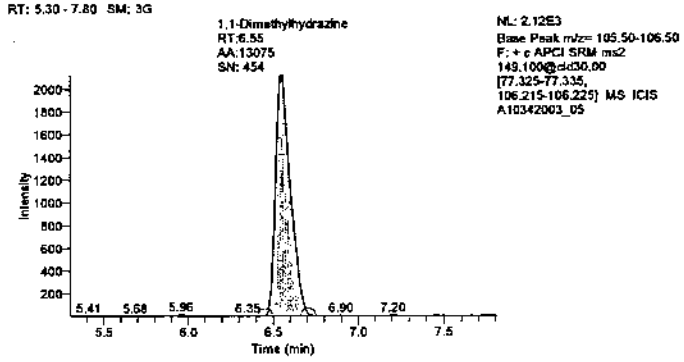
Sample Name:	CAL2		
Data File:	A10342003_05	Acquisition Date:	12/08/10 05:38:23 AM
Sample Type:	Std Bracket	Sample ID:	CAL2
Run Time(min):	9.99	Vial:	B:4
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

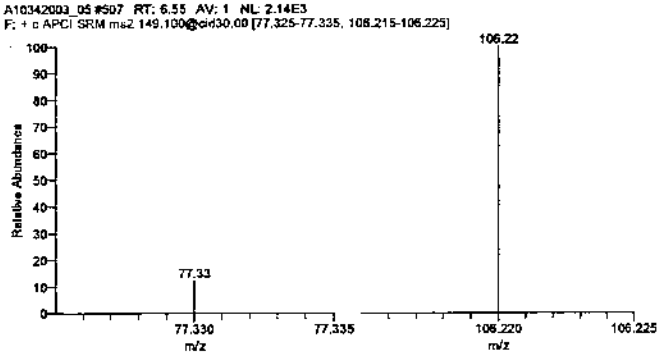
Quan Peak Table

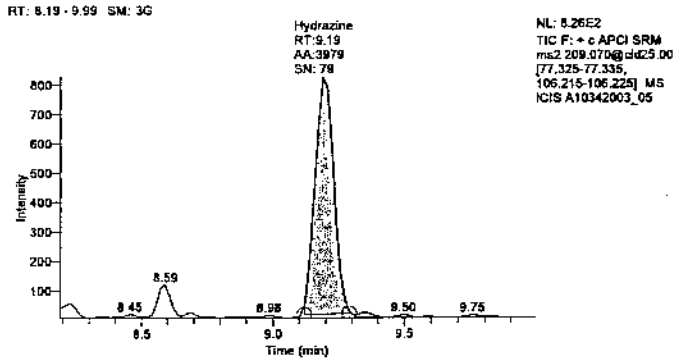
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	9.961	ug/kg	11344.055	3.58
1,1-Dimethylhydrazine	9.763	ug/kg	13075.192	6.55
Hydrazine	1.588	ug/kg	3979.186	9.19

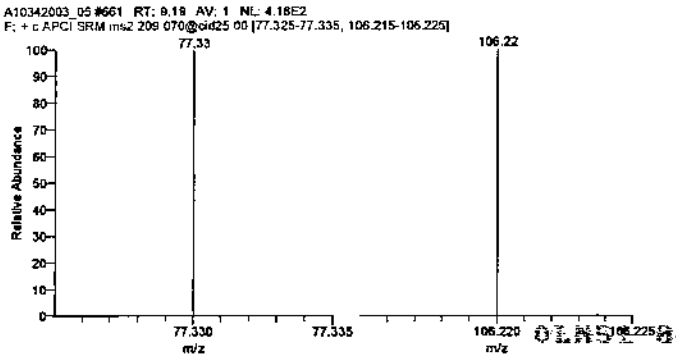












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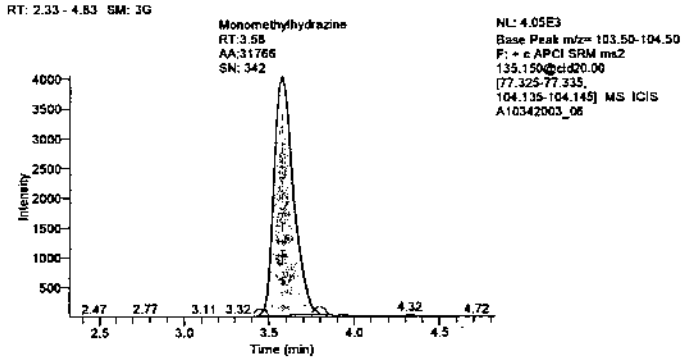
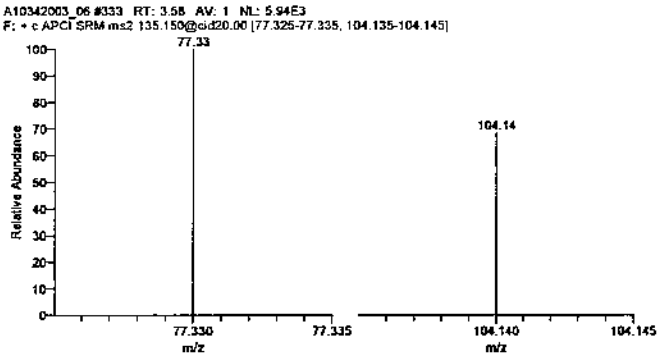
LCMSMS ANALYSIS REPORT

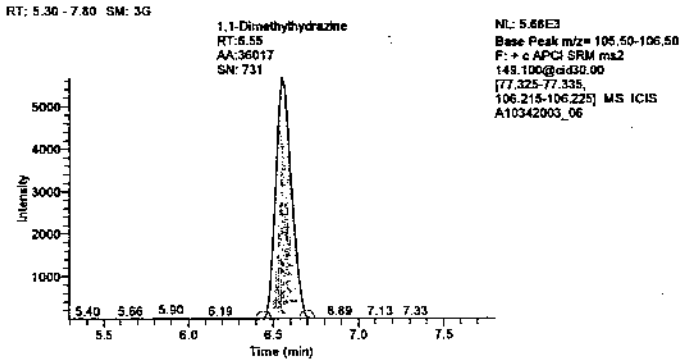
Sample Name:	CAL3		
Data File:	A10342003_06	Acquisition Date:	12/08/10 05:58:36 AM
Sample Type:	Std Bracket	Sample ID:	CAL3
Run Time(min):	9.99	Vial:	B:5
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

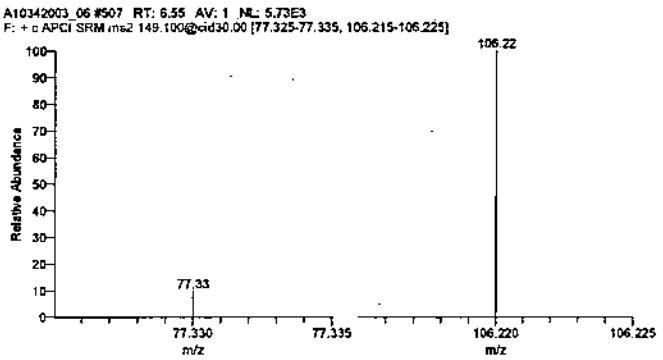
Quan Peak Table

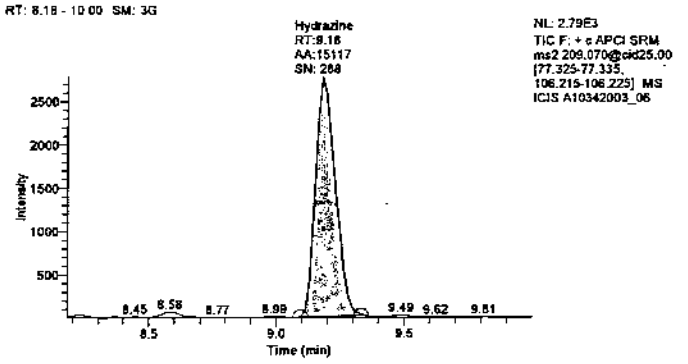
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	24.429	ug/kg	31766.389	3.58
1,1-Dimethylhydrazine	23.591	ug/kg	36017.472	6.55
Hydrazine	4.933	ug/kg	15117.348	9.18

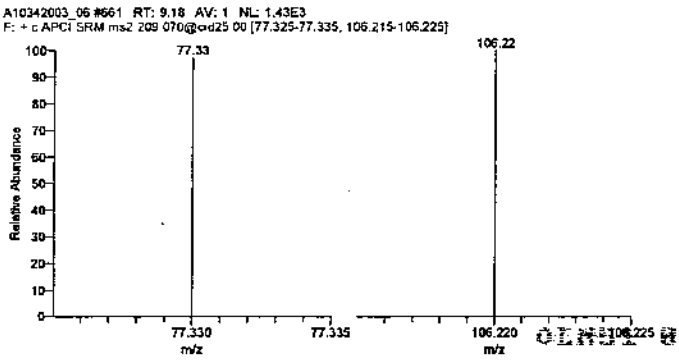












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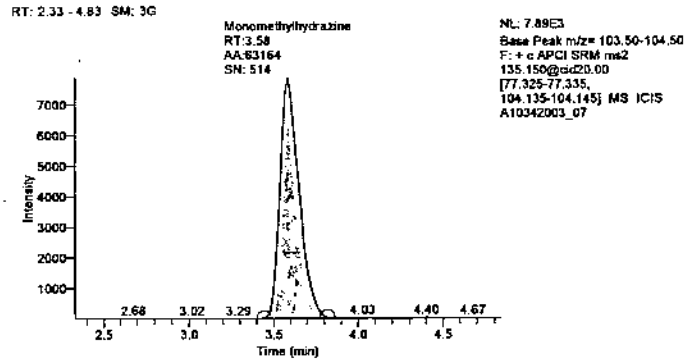
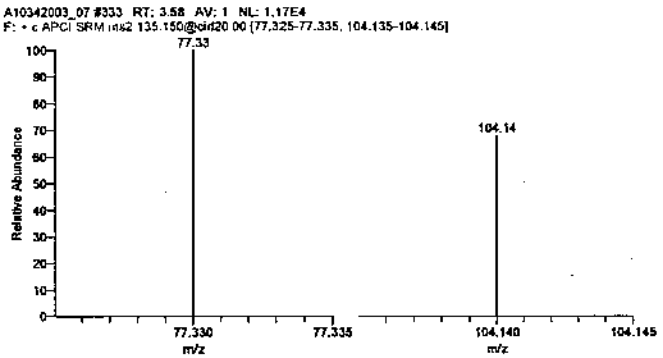
LCMSMS ANALYSIS REPORT

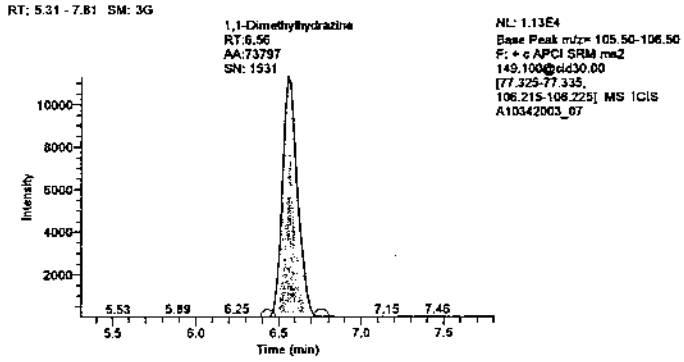
Sample Name:	CAL4		
Data File:	A10342003_07	Acquisition Date:	12/08/10 06:18:48 AM
Sample Type:	Std Bracket	Sample ID:	CAL4
Run Time(min):	9.98	Vial:	B:6
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

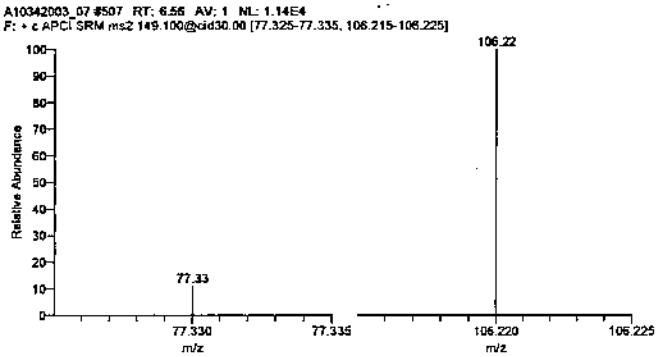
Quan Peak Table

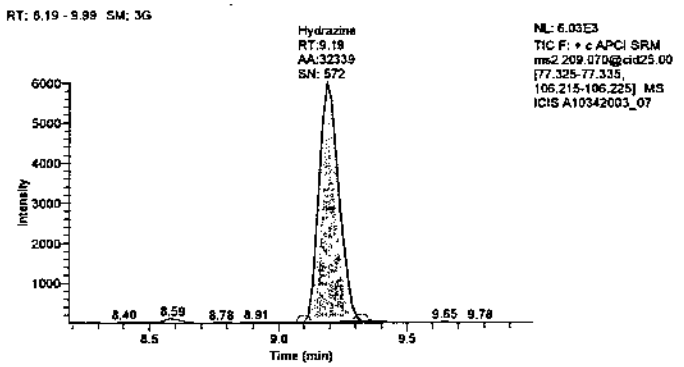
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	46.673	ug/kg	63164.323	3.58
1,1-Dimethylhydrazine	46.360	ug/kg	73796.763	6.56
Hydrazine	10.103	ug/kg	32338.865	9.19

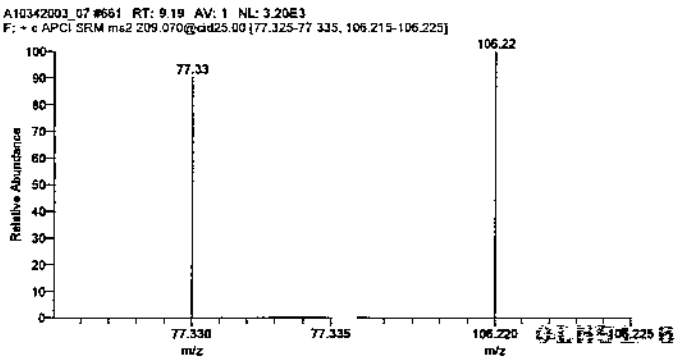












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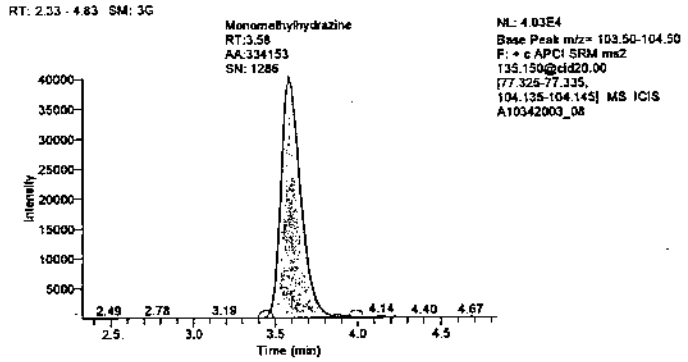
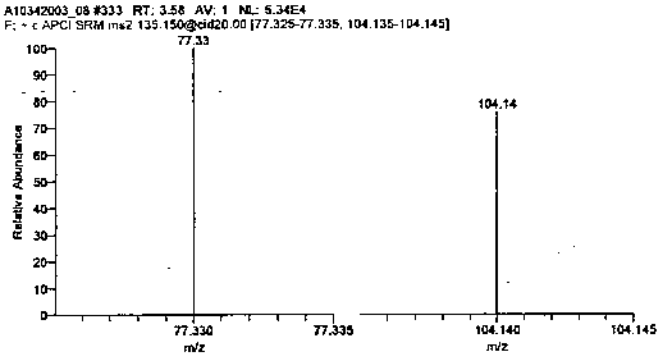
LCMSMS ANALYSIS REPORT

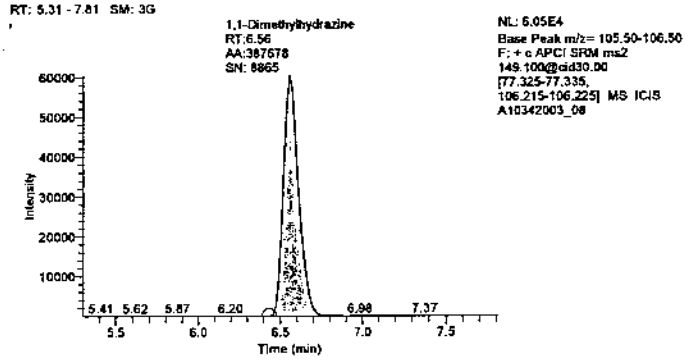
Sample Name:	CAL5		
Data File:	A10342003_08	Acquisition Date:	12/08/10 06:39:01 AM
Sample Type:	Std Bracket	Sample ID:	CAL5
Run Time(min):	9.99	Vial:	B:7
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

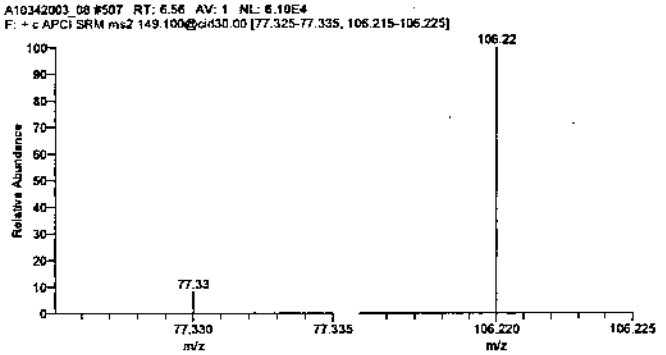
Quan Peak Table

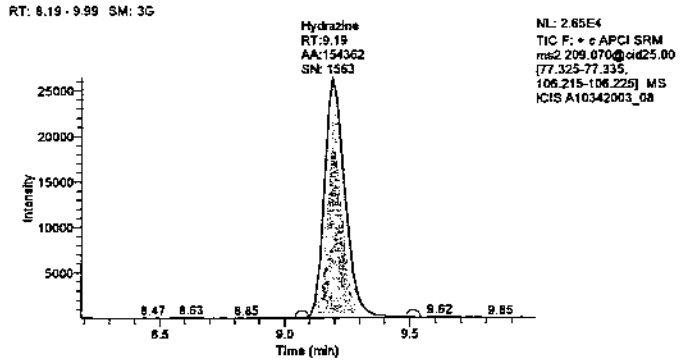
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	238.650	ug/kg	334152.768	3.58
1,1-Dimethylhydrazine	235.535	ug/kg	387678.372	6.56
Hydrazine	46.739	ug/kg	154362.086	9.19

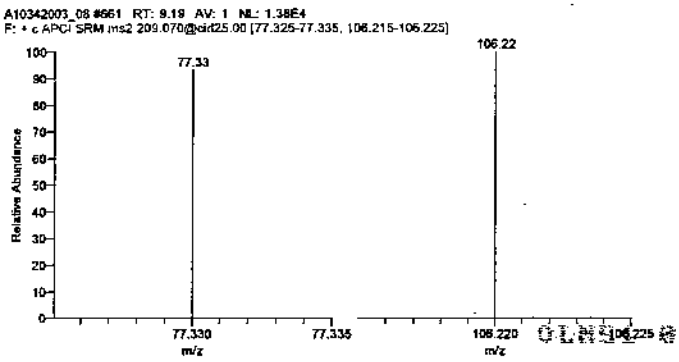












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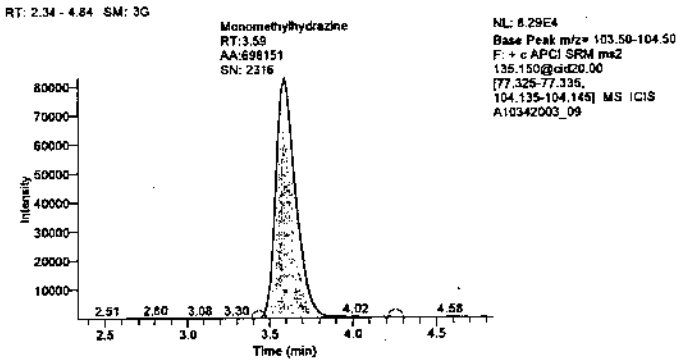
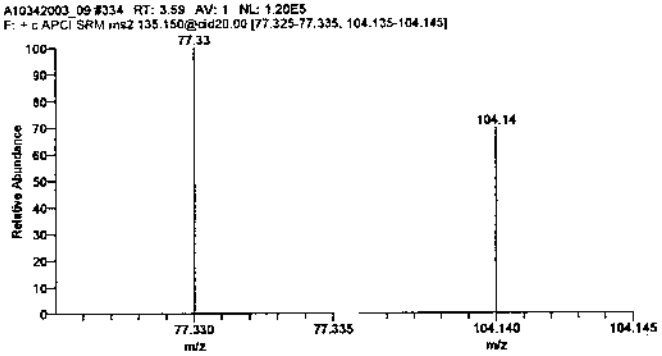
LCMSMS ANALYSIS REPORT

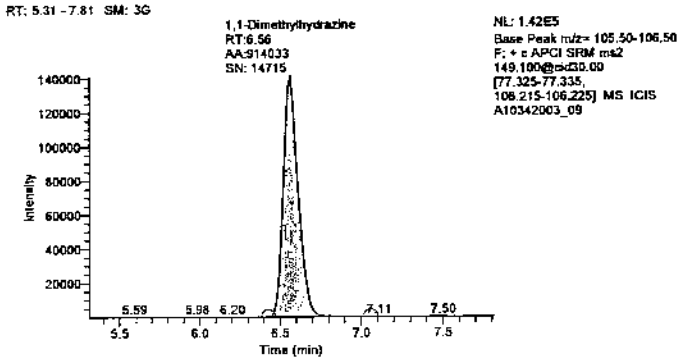
Sample Name:	CAL6		
Data File:	A10342003_09	Acquisition Date:	12/08/10 06:59:18 AM
Sample Type:	Std Bracket	Sample ID:	CAL6
Run Time(min):	9.99	Vial:	B:8
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

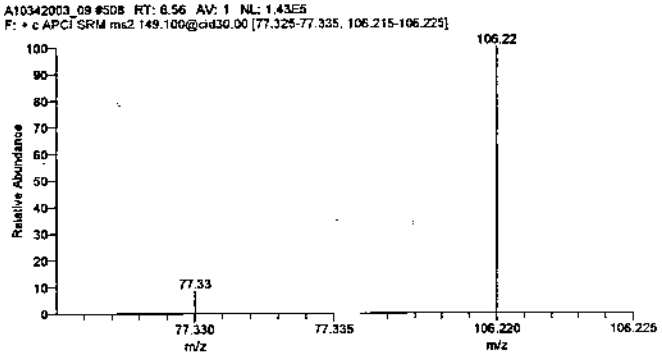
Quan Peak Table

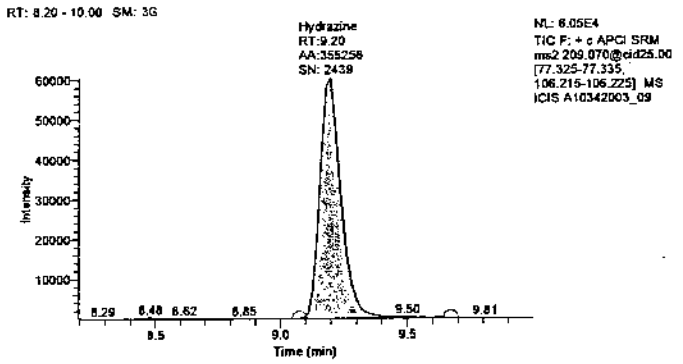
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	496.519	ug/kg	698150.818	3.59
1,1-Dimethylhydrazine	552.767	ug/kg	914033.263	6.56
Hydrazine	107.056	ug/kg	355256.474	9.20

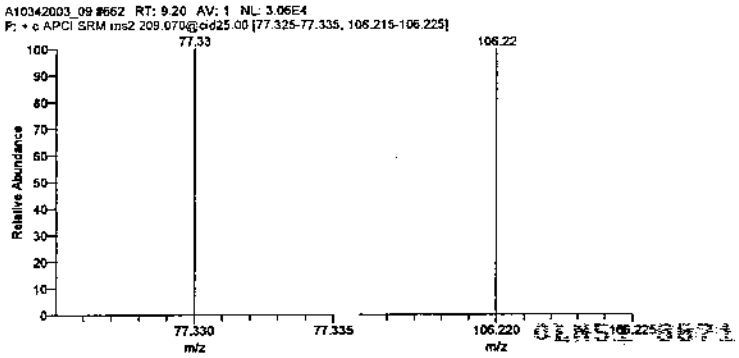












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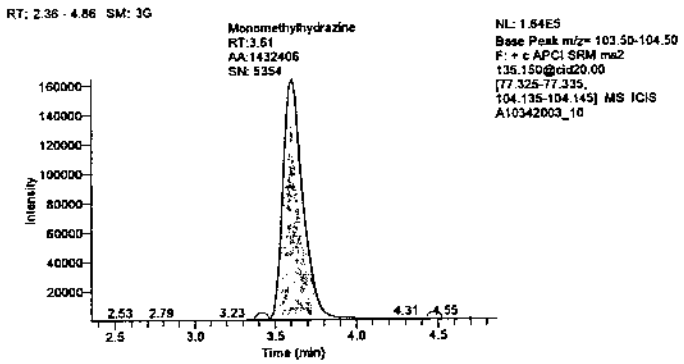
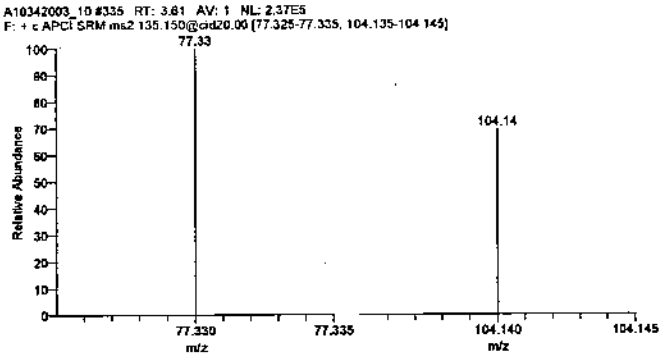
LCMSMS ANALYSIS REPORT

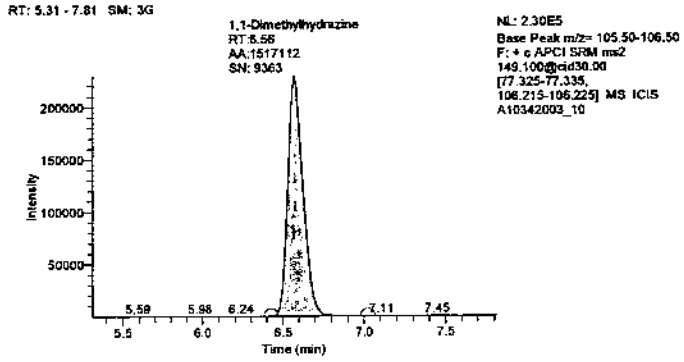
Sample Name:	CAL7		
Data File:	A10342003_10	Acquisition Date:	12/08/10 07:19:35 AM
Sample Type:	Std Bracket	Sample ID:	CAL7
Run Time(min):	9.99	Vial:	B:9
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

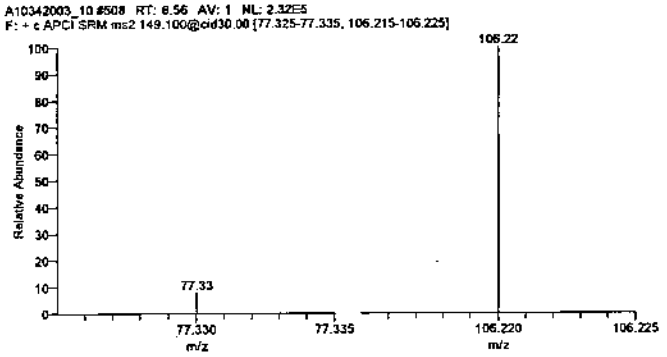
Quan Peak Table

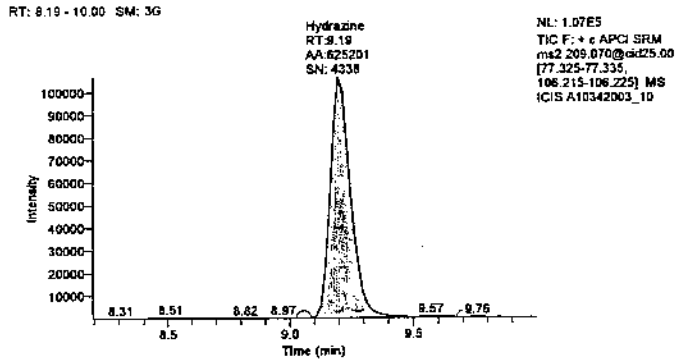
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	1016.689	ug/kg	1432405.538	3.61
1,1-Dimethylhydrazine	916.241	ug/kg	1517111.990	6.56
Hydrazine	188.104	ug/kg	625201.372	9.19

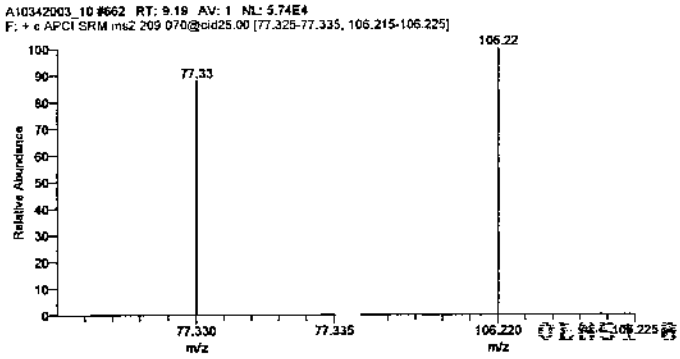












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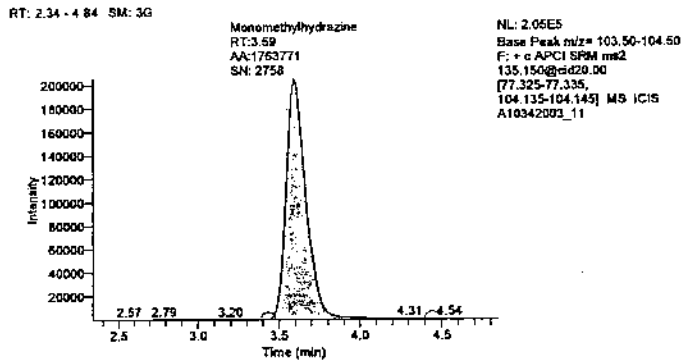
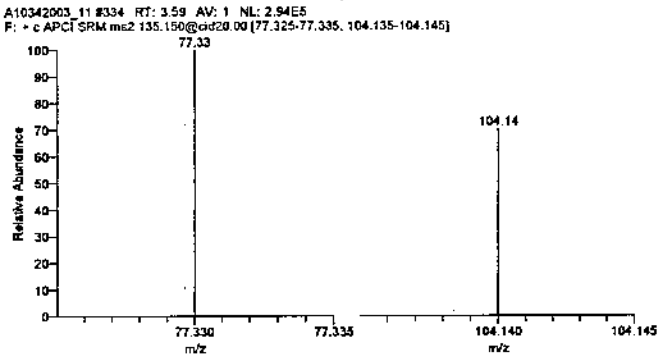
LCMSMS ANALYSIS REPORT

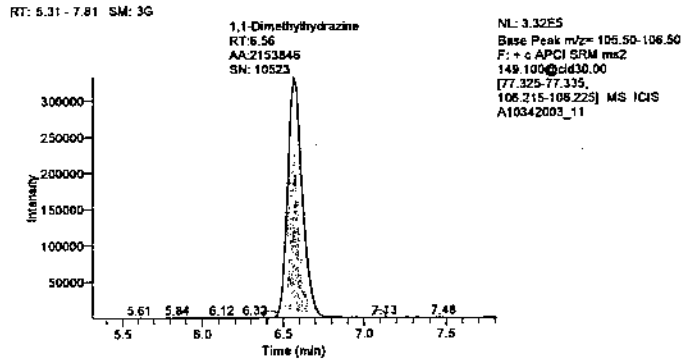
Sample Name:	CAL8		
Data File:	A10342003_11	Acquisition Date:	12/08/10 07:39:47 AM
Sample Type:	Std Bracket	Sample ID:	CAL8
Run Time(min):	9.99	Vial:	B:10
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

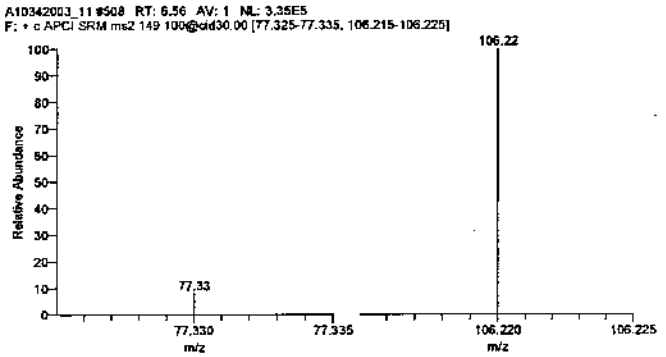
Quan Peak Table

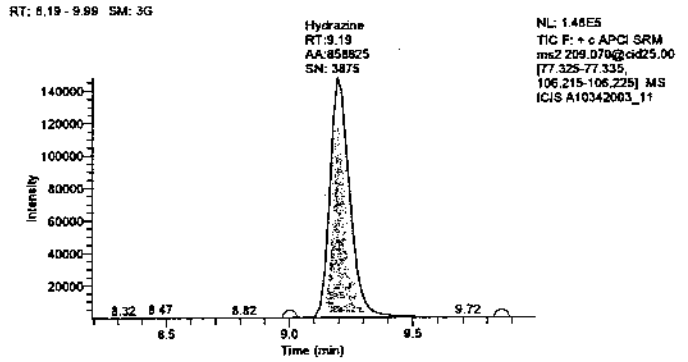
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	1251.440	ug/kg	1763770.978	3.59
1,1-Dimethylhydrazine	1299.998	ug/kg	2153846.375	6.56
Hydrazine	258.247	ug/kg	858825.461	9.19

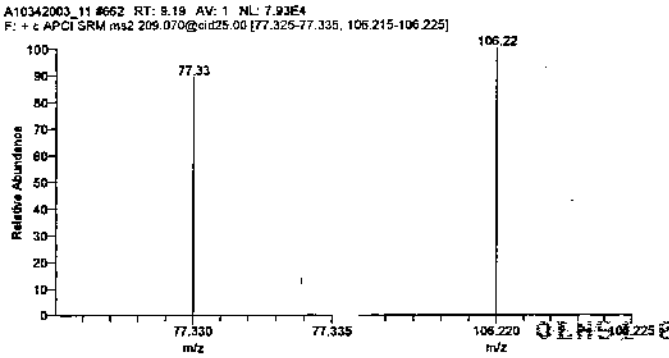












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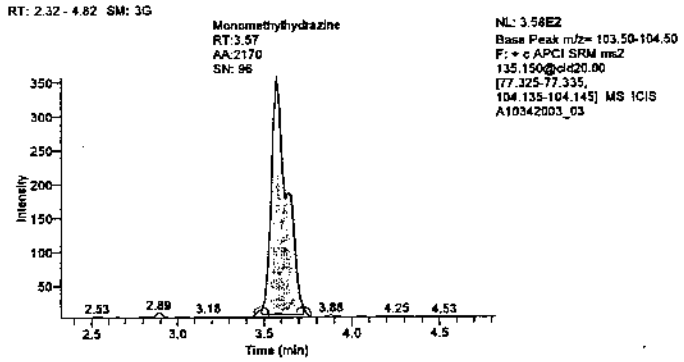
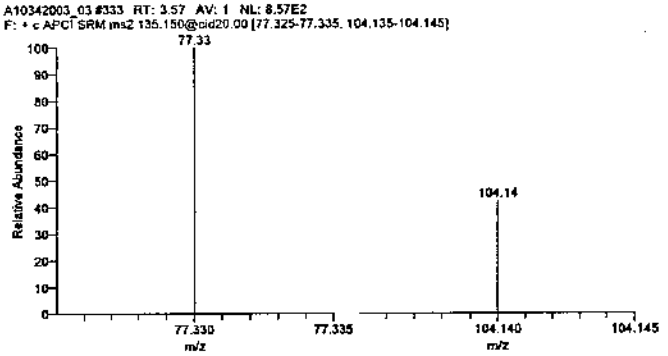
LCMSMS ANALYSIS REPORT

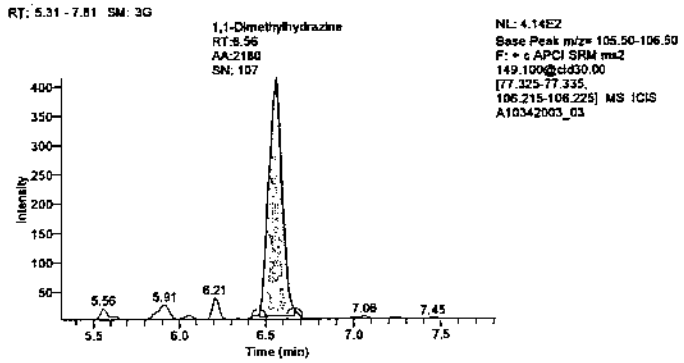
Sample Name:	MDL		
Data File:	A10342003_03	Acquisition Date:	12/08/10 04:57:58 AM
Sample Type:	Unknown	Sample ID:	MDL
Run Time(min):	9.99	Vial:	B:2
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

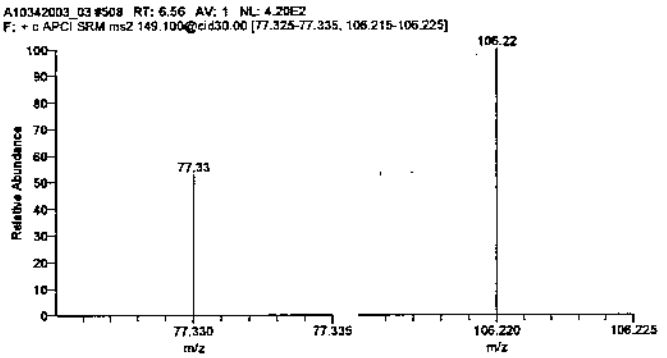
Quan Peak Table

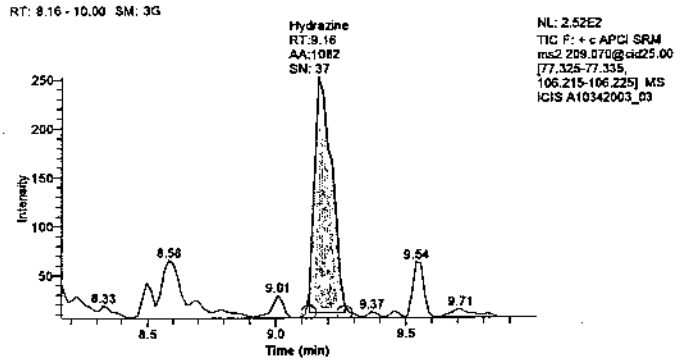
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	3.462	ug/kg	2169.617	3.57
1,1-Dimethylhydrazine	3.197	ug/kg	2179.533	6.56
Hydrazine	0.719	ug/kg	1081.693	9.16

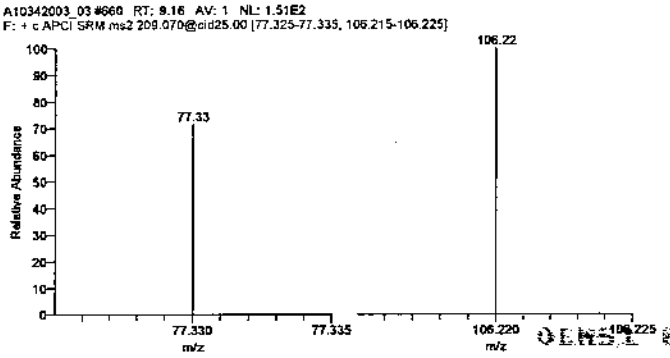












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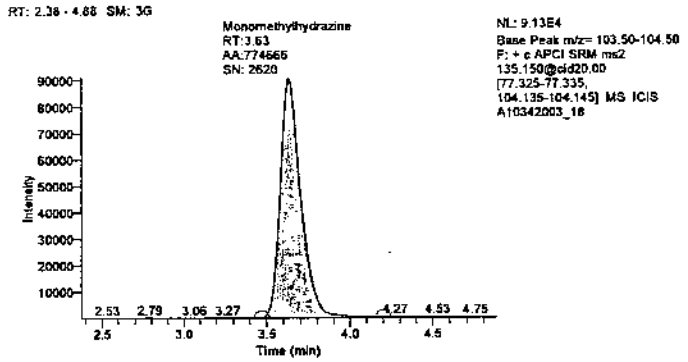
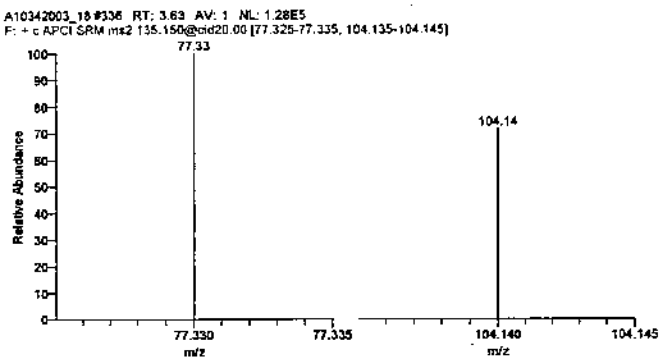
LCMSMS ANALYSIS REPORT

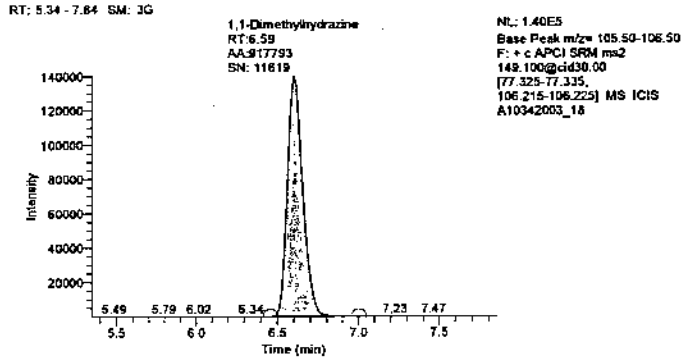
Sample Name:	ICV		
Data File:	A10342003_18	Acquisition Date:	12/08/10 10:28:31 AM
Sample Type:	Unknown	Sample ID:	ICV
Run Time(min):	9.99	Vial:	d:4
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

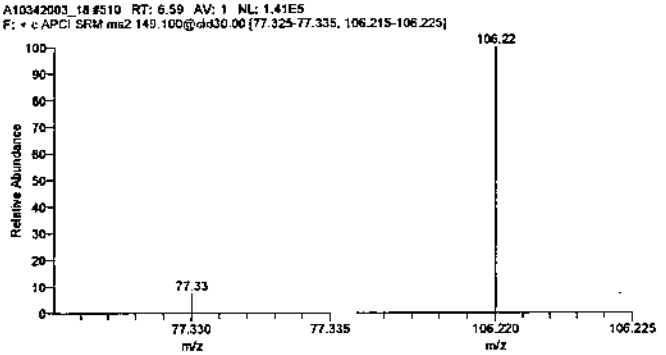
Quan Peak Table

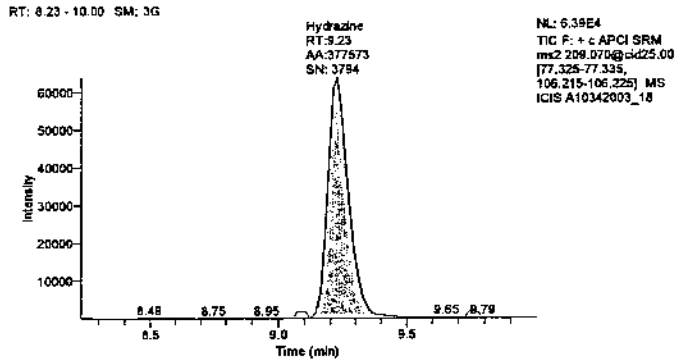
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	550.725	ug/kg	774666.477	3.63
1,1-Dimethylhydrazine	555.033	ug/kg	917792.911	6.59
Hydrazine	113.756	ug/kg	377572.559	9.23

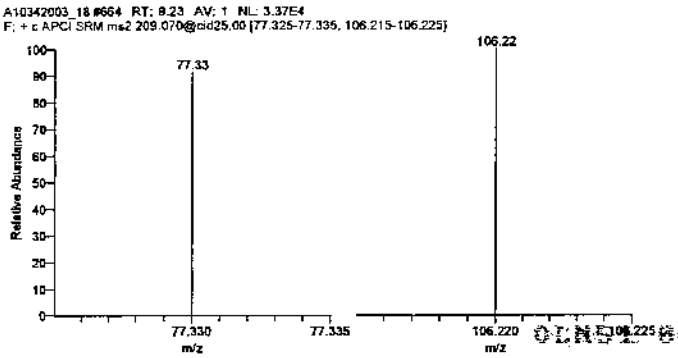












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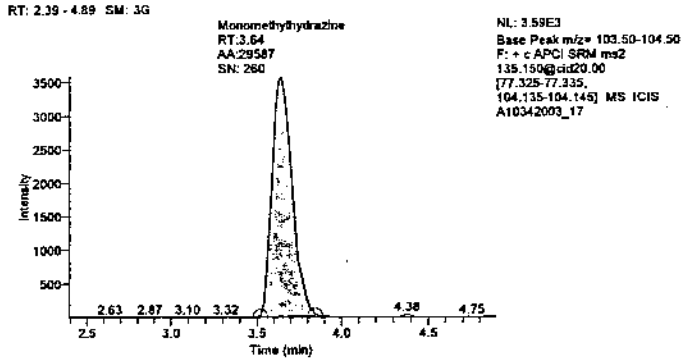
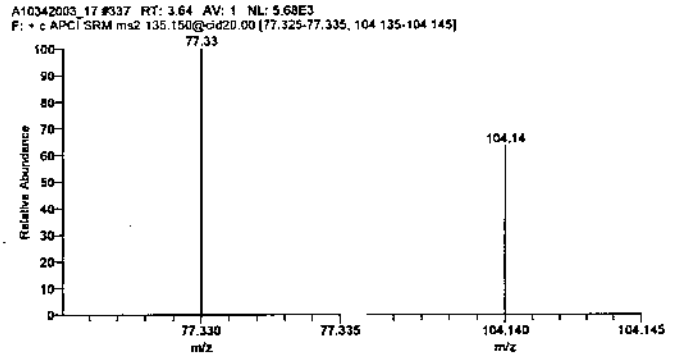
LCMSMS ANALYSIS REPORT

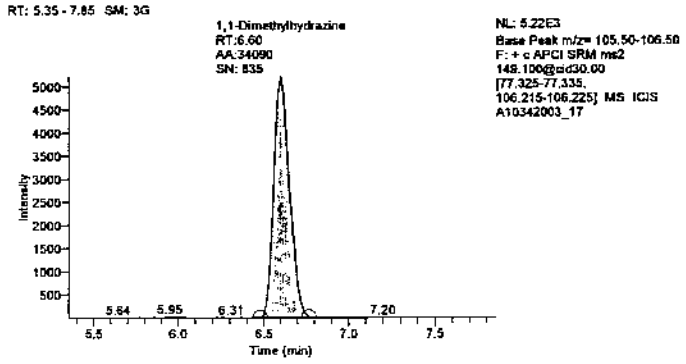
Sample Name:	CCV1		
Data File:	A10342003_17	Acquisition Date:	12/08/10 10:08:13 AM
Sample Type:	QC	Sample ID:	CCV1
Run Time(min):	9.98	Vial:	B:5
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

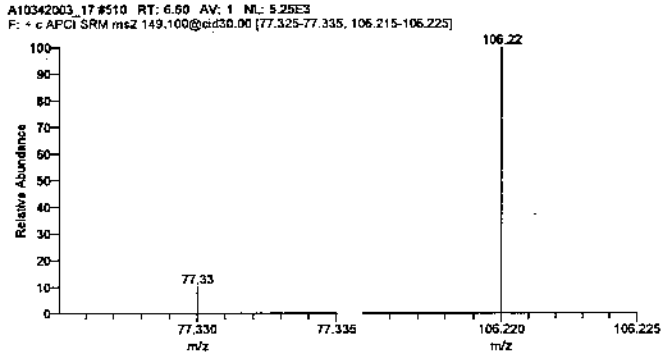
Quan Peak Table

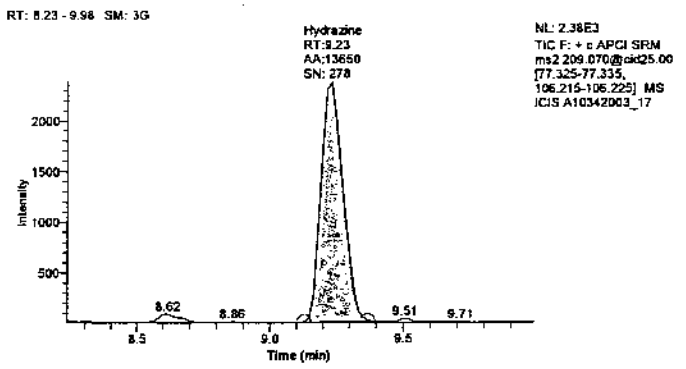
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	22.885	ug/kg	29586.767	3.64
1,1-Dimethylhydrazine	22.429	ug/kg	34089.977	6.60
Hydrazine	4.492	ug/kg	13649.708	9.23

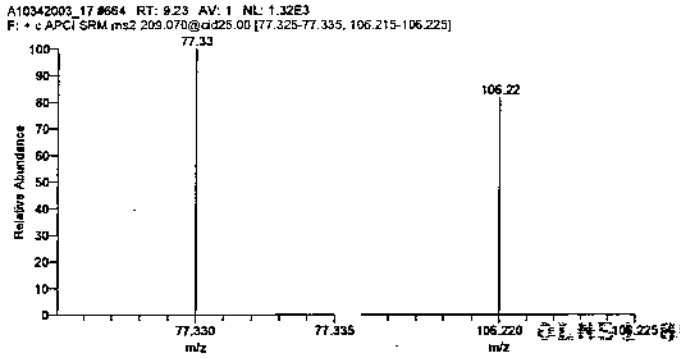












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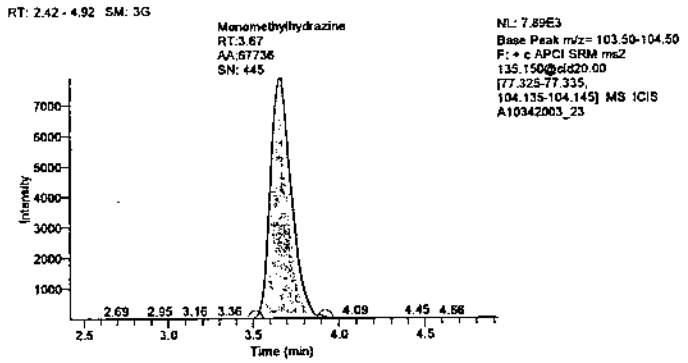
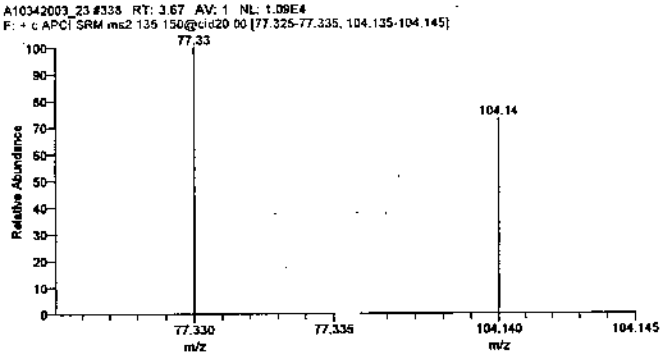
LCMSMS ANALYSIS REPORT

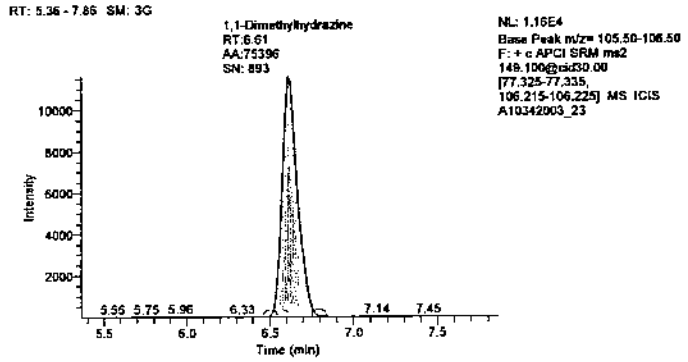
Sample Name:	CCV2		
Data File:	A10342003_23	Acquisition Date:	12/08/10 12:09:37 PM
Sample Type:	QC	Sample ID:	CCV2
Run Time(min):	9.99	Vial:	B:6
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

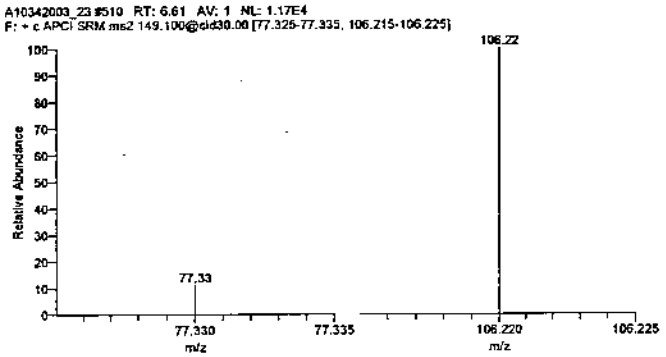
Quan Peak Table

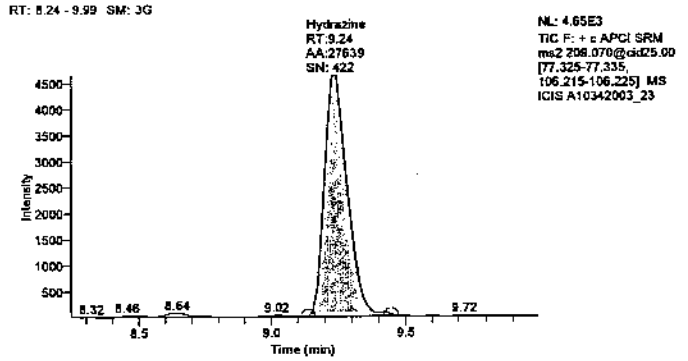
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	49.912	ug/kg	67736.340	3.67
1,1-Dimethylhydrazine	47.324	ug/kg	75396.265	6.61
Hydrazine	8.692	ug/kg	27639.299	9.24

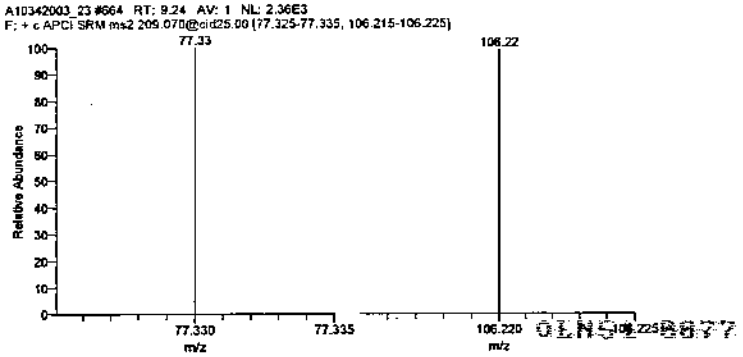












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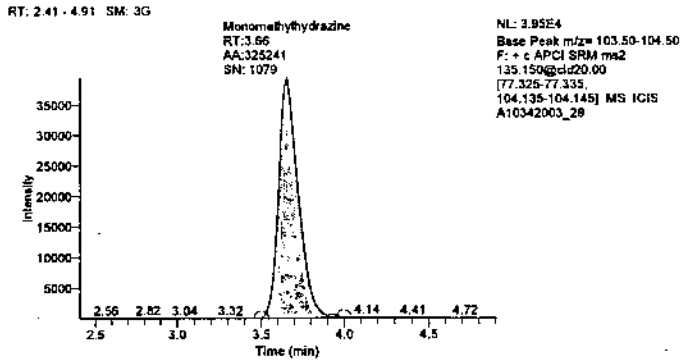
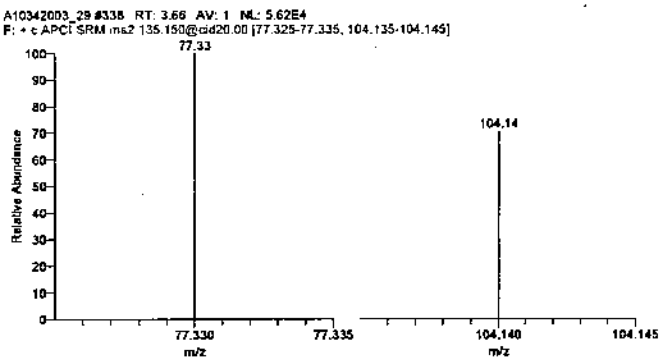
LCMSMS ANALYSIS REPORT

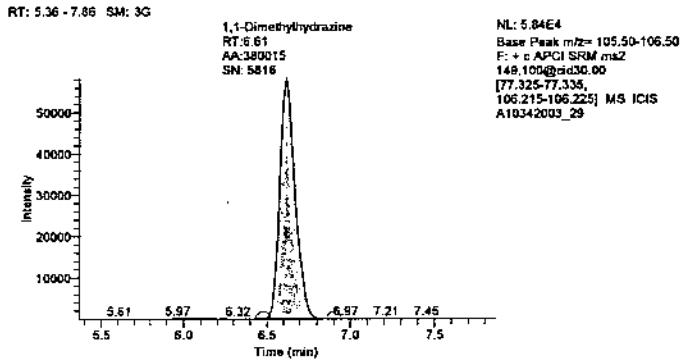
Sample Name:	CCV3		
Data File:	A10342003_29	Acquisition Date:	12/08/10 02:11:12 PM
Sample Type:	QC	Sample ID:	CCV3
Run Time(min):	9.99	Vial:	B:7
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

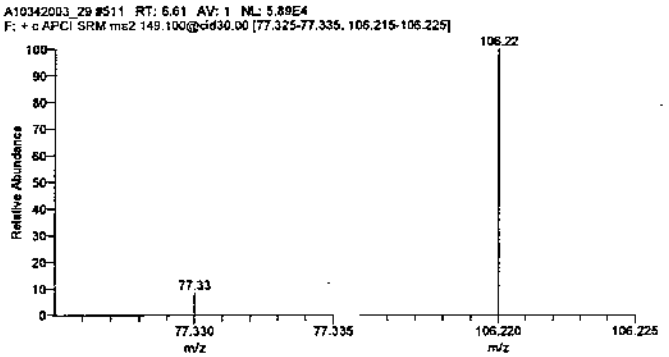
Quan Peak Table

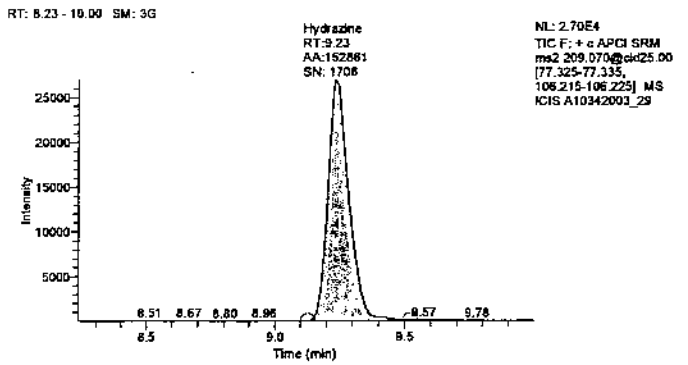
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	232.337	ug/kg	325241.263	3.66
1,1-Dimethylhydrazine	230.917	ug/kg	380015.109	6.61
Hydrazine	46.289	ug/kg	152860.927	9.23

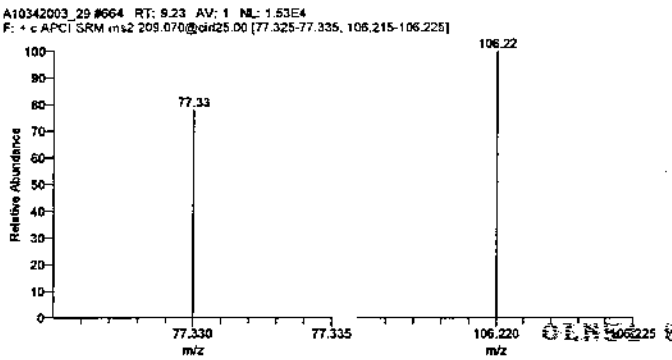












Thursday, December 09, 2010, 09:39:33

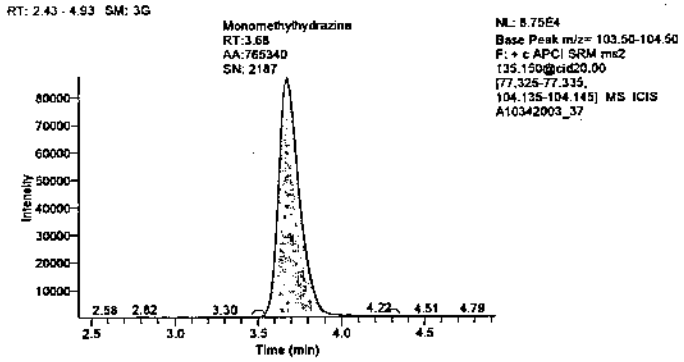
Lancaster Laboratories

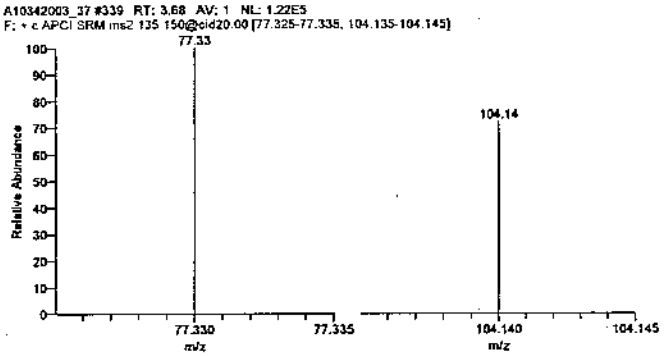
LCMSMS ANALYSIS REPORT

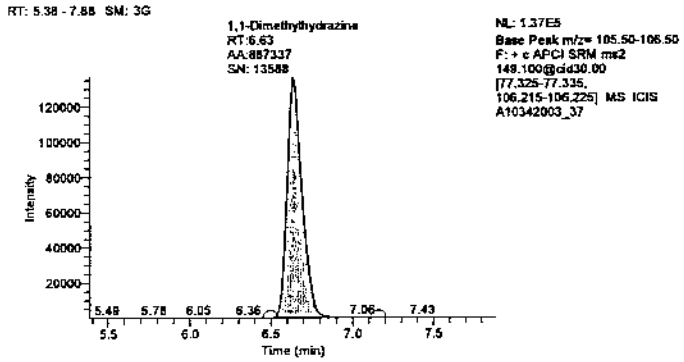
Sample Name:	CCV4		
Data File:	A10342003_37	Acquisition Date:	12/08/10 04:53:22 PM
Sample Type:	QC	Sample ID:	CCV4
Run Time(min):	9.99	Vial:	B:8
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

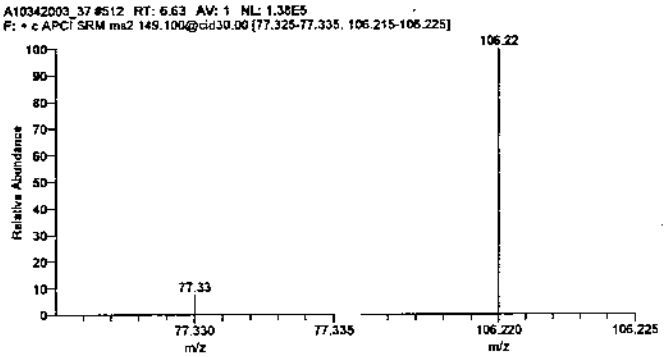
Quan Peak Table

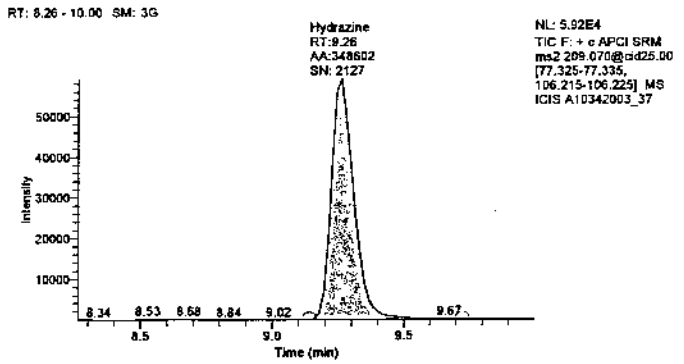
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	544.118	ug/kg	765340.307	3.68
1,1-Dimethylhydrazine	536.678	ug/kg	887336.781	6.63
Hydrazine	105.058	ug/kg	348602.345	9.26

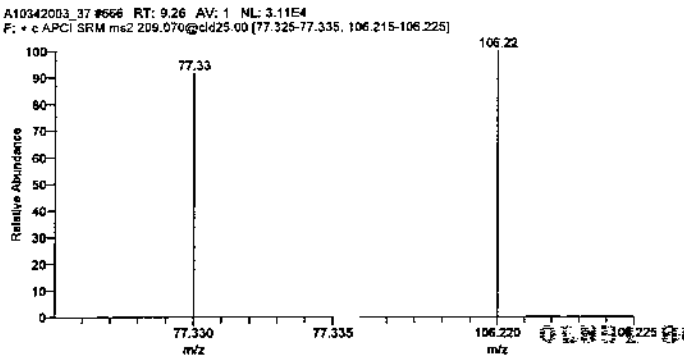












Thursday, December 09, 2010, 09:39:34

Raw QC Data

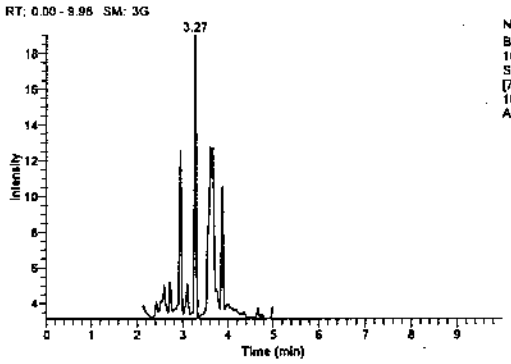
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	BLKA (reagent)		
Data File:	A10342003_14	Acquisition Date:	12/08/10 08:40:34 AM
Sample Type:	Blank	Sample ID:	BLKA (reagent)
Run Time(min):	9.98	Vial:	d:1
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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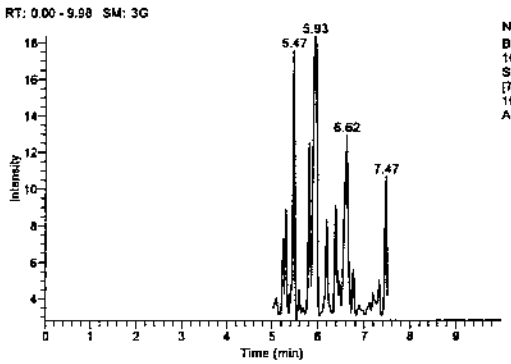

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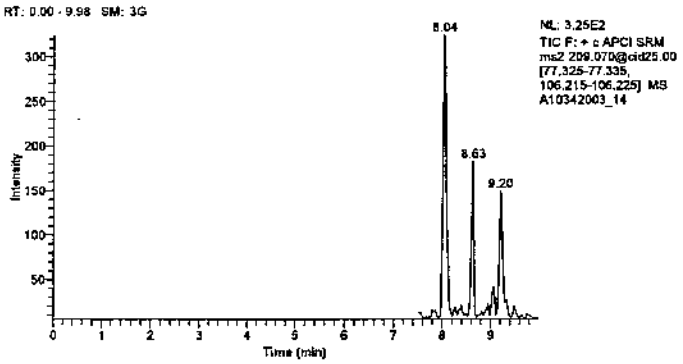

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Thursday, December 09, 2010, 09:39:34

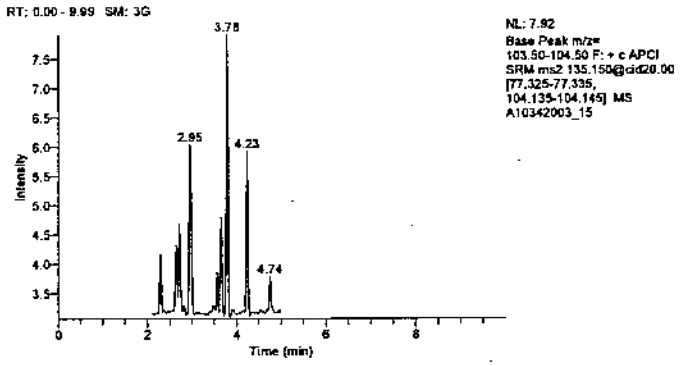
Lancaster Laboratories

LCMSMS ANALYSIS REPORT

Sample Name:	BLKB (Sand)		
Data File:	A10342003_15	Acquisition Date:	12/08/10 09:27:11 AM
Sample Type:	Blank	Sample ID:	BLKB (Sand)
Run Time(min):	9.99	Vial:	D:2
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

Quan Peak Table

Component Name	Calculated Amount	Units	Response Ratio	RT
Hydrazine	N/A	ug/kg	N/A	N/A
1,1-Dimethylhydrazine	N/A	ug/kg	N/A	N/A
Monomethylhydrazine	N/A	ug/kg	N/A	N/A



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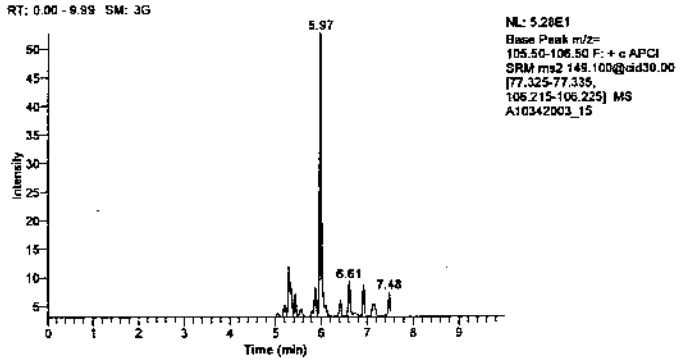

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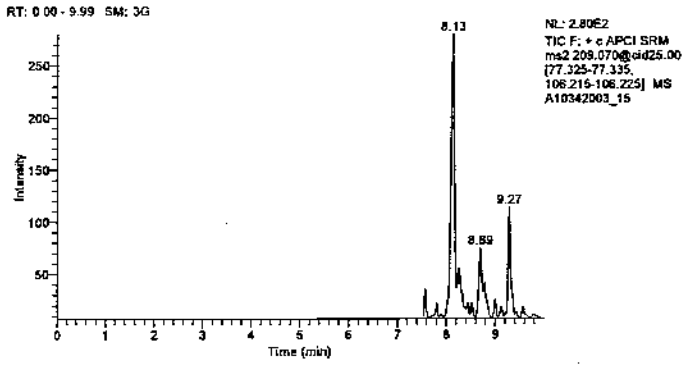

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OLN51 9H92

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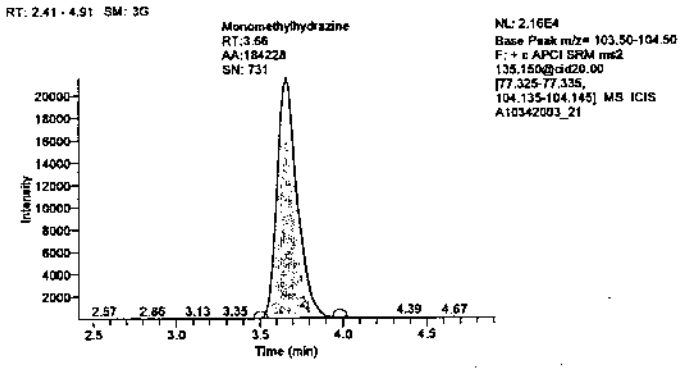
Lancaster Laboratories

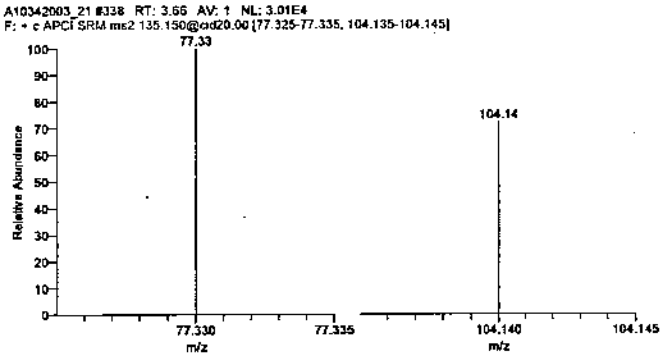
LCMSMS ANALYSIS REPORT

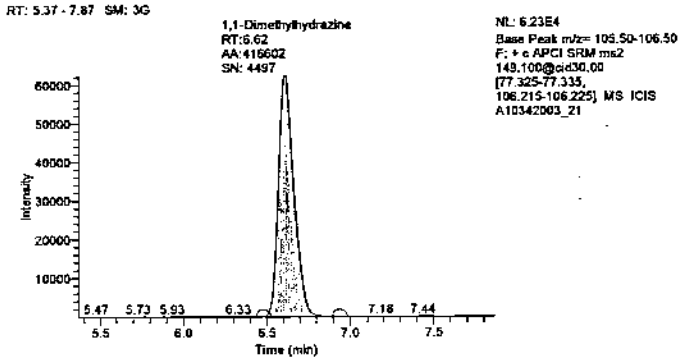
Sample Name:	6155362(MS)		
Data File:	A10342003_21	Acquisition Date:	12/08/10 11:29:11 AM
Sample Type:	Unknown	Sample ID:	6155362(MS)
Run Time(min):	9.99	Vial:	D:7
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

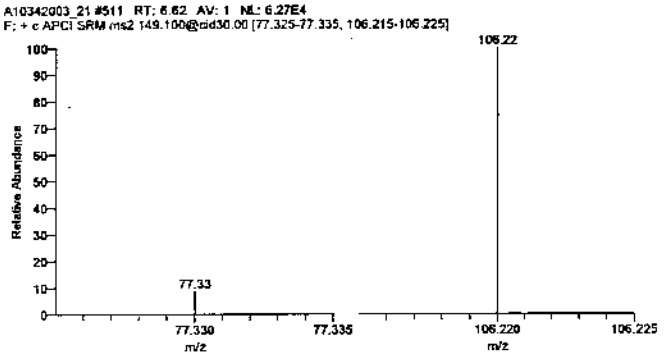
Quan Peak Table

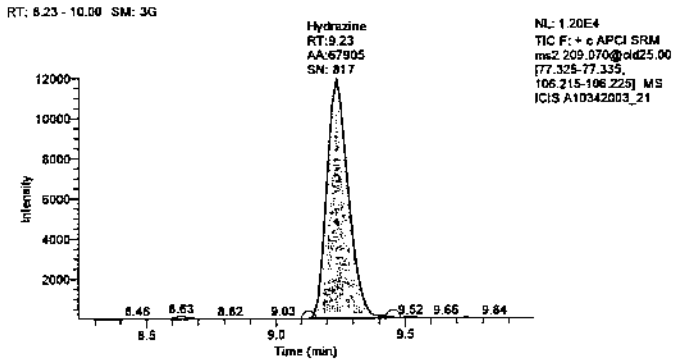
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	132.438	ug/kg	184228.161	3.66
1,1-Dimethylhydrazine	252.968	ug/kg	416602.353	6.62
Hydrazine	20.782	ug/kg	67905.254	9.23

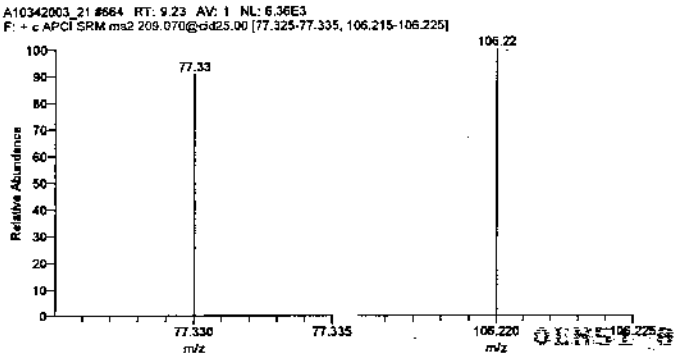












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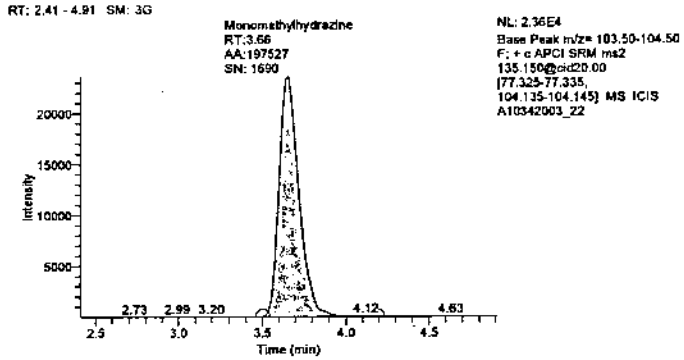
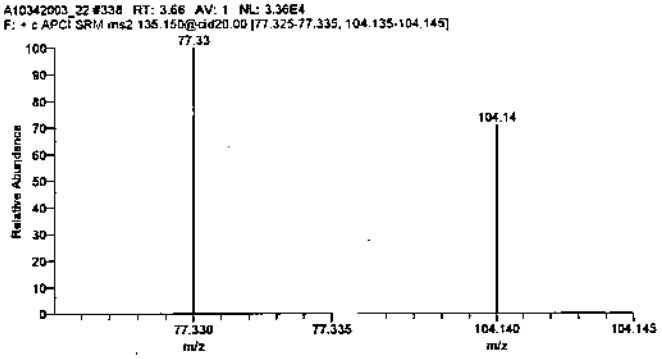
LCMSMS ANALYSIS REPORT

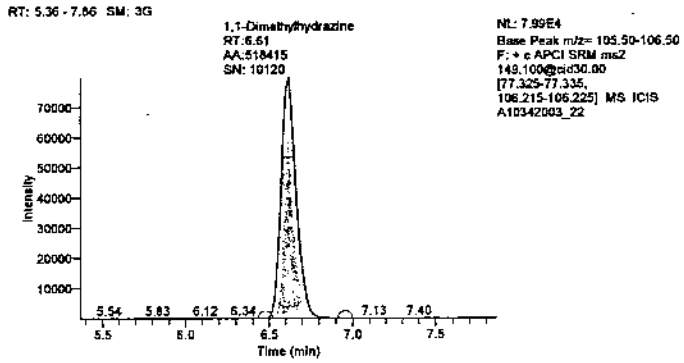
Sample Name:	6155363(MSD)		
Data File:	A10342003_22	Acquisition Date:	12/08/10 11:49:24 AM
Sample Type:	Unknown	Sample ID:	6155363(MSD)
Run Time(min):	9.99	Vial:	D:8
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

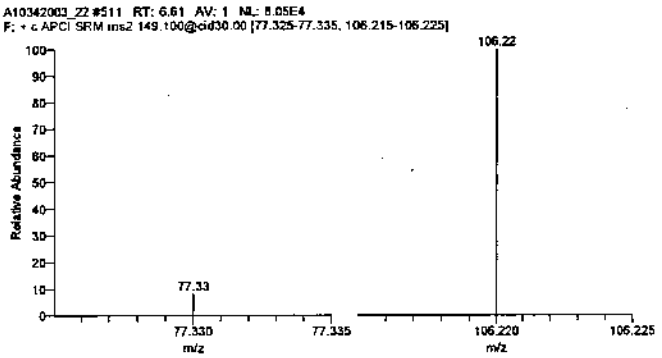
Quan Peak Table

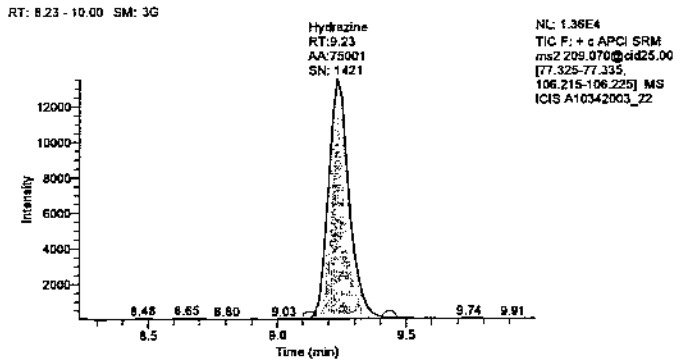
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	141.860	ug/kg	197527.224	3.66
1,1-Dimethylhydrazine	314.330	ug/kg	518414.615	6.61
Hydrazine	22.912	ug/kg	75000.586	9.23

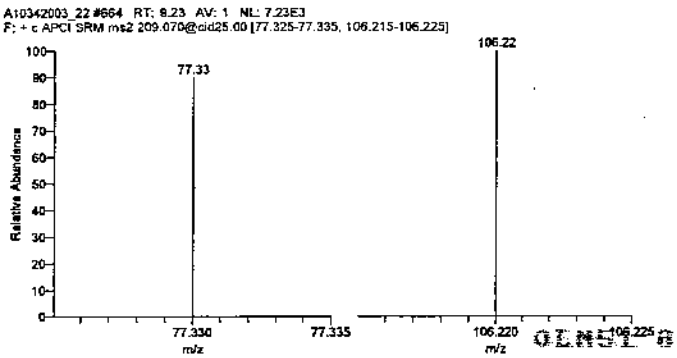












Thursday, December 09, 2010, 09:39:42

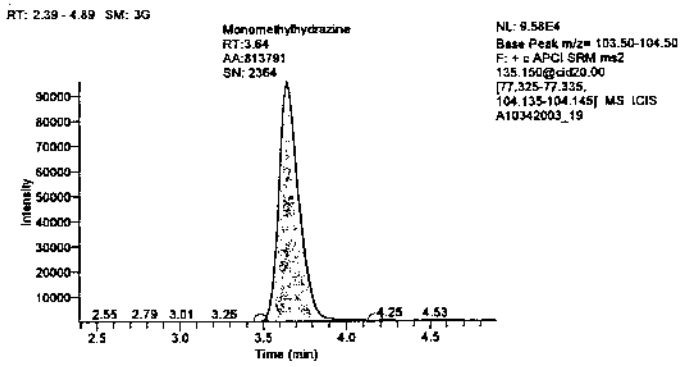
Lancaster Laboratories

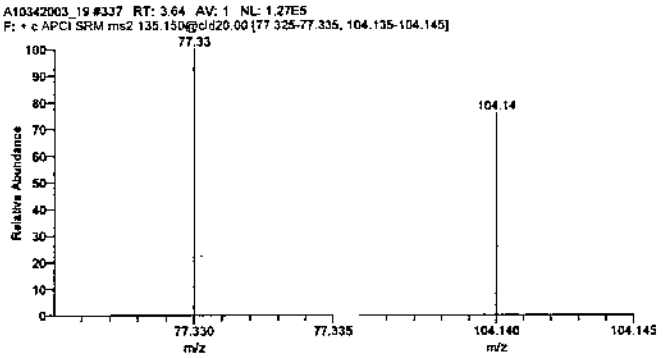
LCMSMS ANALYSIS REPORT

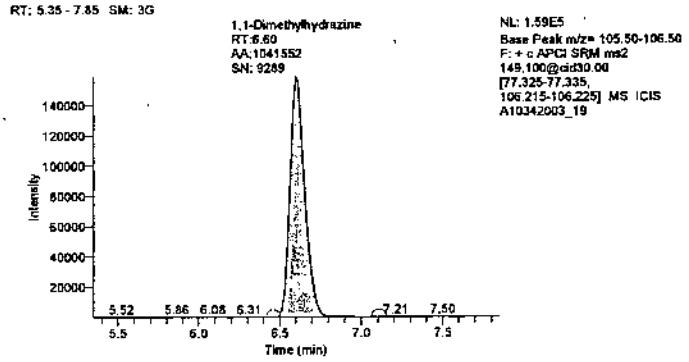
Sample Name:	LCS		
Data File:	A10342003_19	Acquisition Date:	12/08/10 10:48:46 AM
Sample Type:	Unknown	Sample ID:	LCS
Run Time(min):	9.99	Vial:	D:5
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

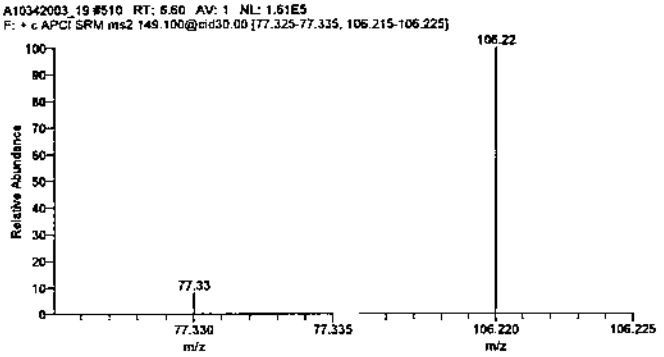
Quan Peak Table

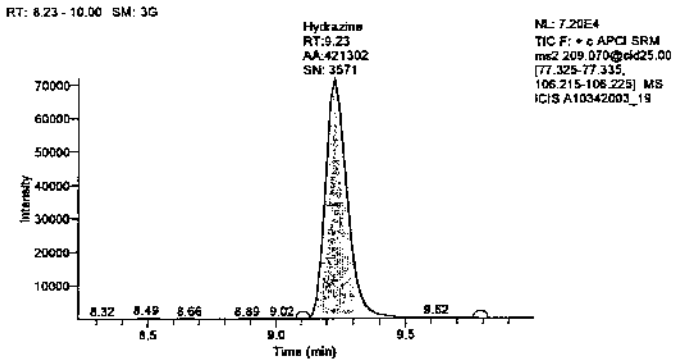
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	578.442	ug/kg	813791.161	3.64
1,1-Dimethylhydrazine	629.622	ug/kg	1041551.885	6.60
Hydrazine	126.885	ug/kg	421301.728	9.23

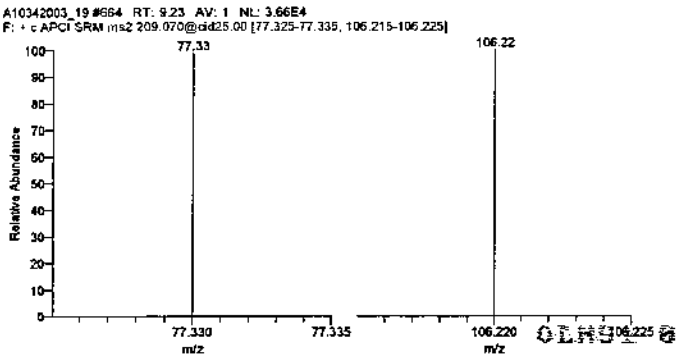












Thursday, December 09, 2010, 09:39:39

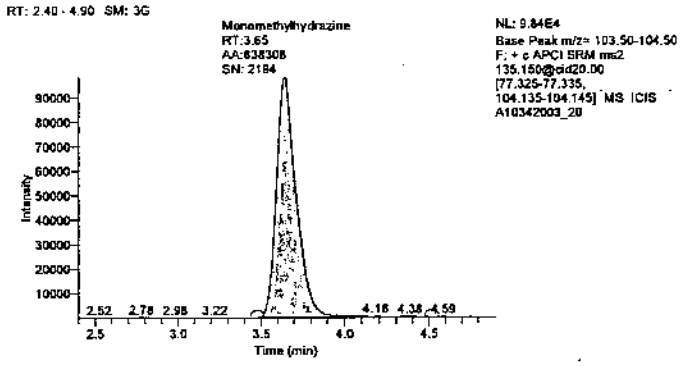
Lancaster Laboratories

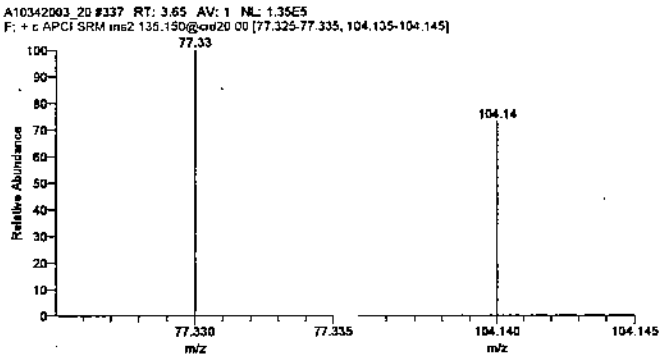
LCMSMS ANALYSIS REPORT

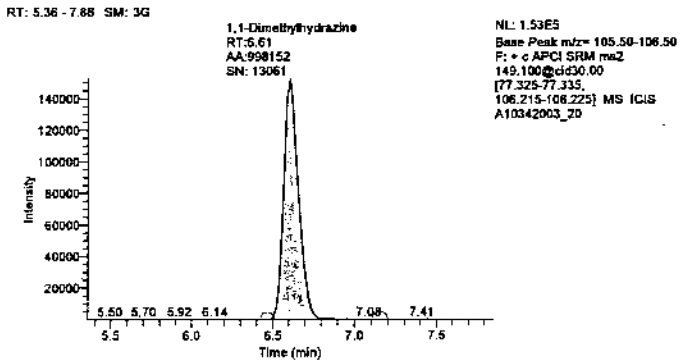
Sample Name:	LCSD		
Data File:	A10342003_20	Acquisition Date:	12/08/10 11:08:59 AM
Sample Type:	Unknown	Sample ID:	LCSD
Run Time(min):	9.98	Vial:	D:6
Injection Volume(µl):	5.00	Instrument Software Version:	1.4.1
Dilution Factor:	1.00	Instrument Name:	Quantum
Instrument Model:	TSQ Quantum Access	Instrument Serial Number:	TQU01408
Instrument Method:	C:\XCalibur\Hydrazine Analysis\Hydraz_soil	Original Data Path:	C:\XCalibur\Hydrazine Analysis\2010Dec
Operator:	Quantum		

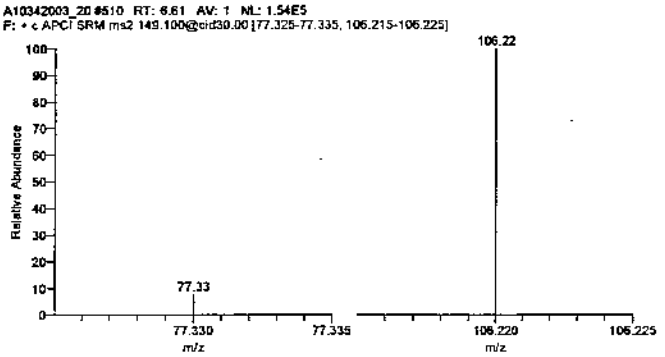
Quan Peak Table

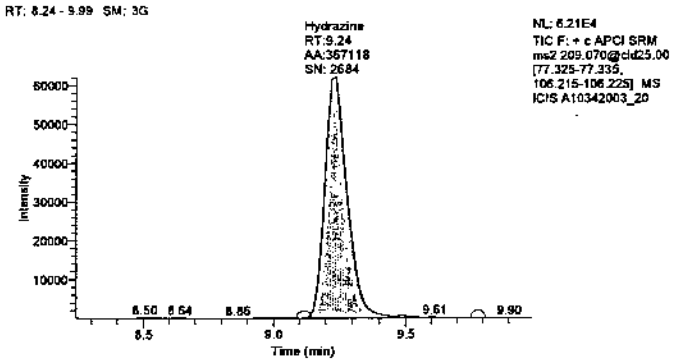
Component Name	Calculated Amount	Units	Response Ratio	RT
Monomethylhydrazine	595.811	ug/kg	838307.851	3.65
1,1-Dimethylhydrazine	603.465	ug/kg	998151.710	6.61
Hydrazine	110.617	ug/kg	367118.184	9.24

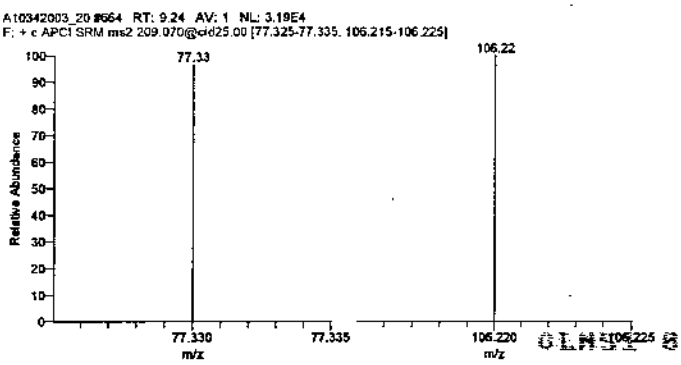












Thursday, December 09, 2010, 09:39:40

Preparation Logs

Organic Extraction Batchlog Assigned to: 2628 Meng Yu

Reviewed by: [illegible] Start Date: 12/07/10 Start time: 1500

10341003

Tech 1: MY 2628 Tech 2:

Dept: 37 Prep Analysis: 00000 Hydrazines in Soil

QC	Sample Code	Amt (g)/mL	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments 1% Benz
6155362MS	SSD08	1.0	NA	NA	119647-66B	0.01	1.5	5	–	49a	0.5 mL
6155363MSD	SSD08										
BLANKA					NA	NA					
BLANKB	Sand				NA	NA					
LCSA											
LCSDA											

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments 1% Benz	Analyses	Due Date	Prio
1 6155356	SSD10	1.0	NA	NA	1.5	5		49a	0.5 mL	10346	12/15/2010	P
2 6155357	SSD01									10346	12/15/2010	P
3 6155358	SSD04									10346	12/15/2010	P
4 6155359	SSD05									10346	12/15/2010	P
5 6155360	SSD8D									10346	12/15/2010	P
6 6155361BKG	SSD08									10346	12/15/2010	P
7 6155364	SSD09									10346	12/15/2010	P
8 6155365	SSD11									10346	12/15/2010	P
9 6155366	SSD8A									10346	12/15/2010	P
10 6155981	SD--2									10346	12/16/2010	P
11 6155982	SD--3									10346	12/16/2010	P
12 6155983	SD--6									10346	12/16/2010	P

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	10341003

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Moisture Data

OLNS1 0009

Lancaster Laboratories

CLIENT: Olin Corporation
SDG: OLN51

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
6155356	SSD10
6155357	SSD01
6155358	SSD04
6155359	SSD05
6155360	SSD8DFD
6155361	SSD08BKG
6155362	SSD08MS
6155363	SSD08MSD
6155364	SSD09
6155365	SSD11
6155366	SSD8A
6155981	SD--2
6155982	SD--3
6155983	SD--6

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 10341820004B	Sample number(s): 6155356-6155366				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Batch number: 10343820001A	Sample number(s): 6155981-6155983				
Moisture	100		99-101		

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 10341820004B	Sample number(s): 6155356-6155366			
Moisture	77.9	77.3	1	15
Moisture	77.9	77.3	1	15
Moisture Duplicate	77.9	77.3	1	15
Batch number: 10343820001A	Sample number(s): 6155981-6155983			
Moisture	9.9	9.2	7	15

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

OLN51 0090

Lancaster Laboratories

MOISTURE

CLIENT: Olin Corporation
SDG: OLN51

Moisture Data Report

Batch #: 10341820004

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0756	5.0457	1.6254	89.10	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155356	B	00111	1.0630	7.3166	2.0743	86.18	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155357	B	00111	1.0726	8.1677	6.7521	30.46	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155358	B	00111	1.0866	7.8068	2.2559	85.02	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155359	B	00111	1.0709	6.5455	1.9487	86.59	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155360FD	B	00111	1.0697	6.5851	2.5377	77.71	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155361BKG	B	00111	1.0784	8.7678	3.0144	77.92	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155362MS	B	00118				77.92	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155363MSD	B	00118				77.92	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155363MSD	B	00121	1.0743	8.8278	3.0787	77.29	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155364	B	00111	1.0715	5.6496	5.2543	25.96	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155365	B	00111	1.0697	6.1418	1.8237	87.72	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)
6155366	B	00111	1.0766	6.2205	1.9541	85.89	12/ 7/10 (1201/SWF)	12/ 8/10 (0236/CW)

Batch #: 10343820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0649	5.0101	1.5955	89.41	12/ 9/10 (0189/WCS)	12/10/10 (0236/CW)
6155981	A	00111	1.0833	6.8196	1.9600	87.14	12/ 9/10 (0189/WCS)	12/10/10 (0236/CW)
6155982	A	00111	1.0810	7.7592	1.8705	89.82	12/ 9/10 (0189/WCS)	12/10/10 (0236/CW)
6155983	A	00111	1.0780	6.5298	2.4156	79.52	12/ 9/10 (0189/WCS)	12/10/10 (0236/CW)
P158351BKG	A	00111	1.0604	8.0078	8.2785	9.86	12/ 9/10 (0189/WCS)	12/10/10 (0236/CW)
P158351DUP	A	00111	1.0734	6.6206	7.0857	9.19	12/ 9/10 (0189/WCS)	12/10/10 (0236/CW)

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