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ANALYSIS: Explosives METHOD NO.: 8330A

ARDL Report(s) #: 6555+6556 MATRIX: Octopus

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	By:	Date:
Package Preparation	JRC	11/15/13
Analytical Review	JW	11/20/13
Final Review	BT	11/21/13
QA Review	BSD	11/26/13

Rev. 1.0

Organic Package Review Checklist

Rev. 1.0

ORGANIC PACKAGE REVIEW CHECKLIST

METHOD: 8330A

	Initial	Date
Case Narrative and/or Nonconformance Reports		
Case Narrative / Analyst Comment Sheets	GD	11/21/13
Nonconformance / Noncompliance Reports (if applicable)	NA	
Chain-Of-Custody Information		
Copies of Original Chain-of-Custody Forms	GD	11/20/13
Cooler Receipt Form and Airbills	✓	✓
Phone Messages (If applicable)	NA	
Sample Form 1s		
QC Summary Forms		
Form 2 (Surrogate Summary, if applicable)	NA	
Form 3 (Spike and/or MS Summary, if applicable)	GD	11/20/13
Blank Form 1(s) & Form 4 (Blank Summary, if applicable)	NA	
Form 8 (ISTD Area Summary, if applicable)	NA	
Sample Preparation Information (if applicable)		
Total Solids Determination (If applicable)	NA	
Extraction Log (If applicable)	GD	11/20/13
Extraction Notebook Pages (If applicable)		
Spiking Solutions Notebook Pages		
MS/MSD's		
Surrogate/ISTDs		
Spiking Solutions Certificates Of Analyses		
MS/MSD's		
Surrogates/ISTDs		
Certificates of Analysis (Vendor)	✓	✓
Standard Preparation Information		
Instrument Logs/Analysis Notebook Pages	GD	11/20/13
Certificates of Analysis (Vendor)	✓	✓
Analytical Run Number 1		
Calibration Information	GD	11/20/13
Tune Data	NA	
Initial Calibration	GD	11/20/13
Continuing Calibration		
Instrument Logs/Analysis Notebook Pages		
Blank/Sample/Field QC Data	✓	✓
Analytical Run Number 2 (if required)		
Calibration Information	GD	11/20/13
Tune Data	NA	
Initial Calibration	GD	11/20/13
Continuing Calibration		
Instrument Logs/Analysis Notebook Pages		
Blank/Sample/Field QC Data	✓	✓

Rev. 1.0

ORGANIC PACKAGE REVIEW CHECKLIST (Continued)

METHOD: 8330A

	Initial	Date
Analytical Run Number 3 (if required)		
Calibration Information	NA	
Tune Data		
Initial Calibration		
Continuing Calibration		
Instrument Logs/Analysis Notebook Pages		
Blank/Sample/Field QC Data		
Analytical Run Number 4 (if required)		
Calibration Information		
Tune Data		
Initial Calibration		
Continuing Calibration		
Instrument Logs/Analysis Notebook Pages		
Blank/Sample/Field QC Data		
Analytical Run Number 5 (if required)		
Calibration Information		
Tune Data		
Initial Calibration		
Continuing Calibration		
Instrument Logs/Analysis Notebook Pages		
Blank/Sample/Field QC Data		
Analytical Run Number 6 (if required)		
Calibration Information		
Tune Data		
Initial Calibration		
Continuing Calibration		
Instrument Logs/Analysis Notebook Pages		
Blank/Sample/Field QC Data		
Example Calculation		
Example Calculation Sheet	JO	11/20/13
Miscellaneous Additional Data (if applicable)	NA	

NA = Not Applicable

I have checked this package for completeness and verify the following:

1. Pencils, whiteout, whiteout tape, and dark highlighters were not used. ✓
2. All notebook pages are signed. ✓
3. All corrections contain the original data "struck through" with initials and date. ✓
4. All comments found throughout the data are defined as required. ✓
5. All pages are legible. ✓
6. Manual integrations, if applicable, are printed out and include an explanation with signature of the analyst and date. NA

Package Completeness Checked By/Date: JO 11/20/13

Rev. 1.0

Case Narrative and/or Nonconformance Reports

Rev. 1.0

ORGANIC ANALYSIS CASE NARRATIVE

Corps of Engineers – ERDC, Vicksburg **Date: 11/21/13**

ARDL Report No.: 6555, 6556 **Lab Name: ARDL, Inc.**

Project Name: MAKAU MILITARY RESERVATION OAHU (OCTOPUS)

Samples Received at ARDL: 10/23/2013

Lab ID No.	Sample ID No.	Date Collected	Date Extracted	Analysis Requested
006555-01	MAK001O	09/09/2013	11/04/13	EXPLOSIVES
006555-02	MAK002O	09/09/2013	11/04/13	EXPLOSIVES
006555-03	MAK003O	09/09/2013	11/04/13	EXPLOSIVES
006555-04	MAK004O	09/11/2013	11/04/13	EXPLOSIVES
006555-05	MAK005O	09/11/2013	11/04/13	EXPLOSIVES
006555-06	MAK006O	09/11/2013	11/04/13	EXPLOSIVES
006555-07	MAK021O	09/23/2013	11/04/13	EXPLOSIVES
006555-08	MAK008O	09/11/2013	11/04/13	EXPLOSIVES
006555-09	MAK009O	09/13/2013	11/04/13	EXPLOSIVES
006555-10	MAK010O	09/16/2013	11/04/13	EXPLOSIVES
006555-11	MAK011O	09/16/2013	11/04/13	EXPLOSIVES
006555-12	MAK012O	09/22/2013	11/04/13	EXPLOSIVES
006555-13	MAK013O	09/22/2013	11/04/13	EXPLOSIVES
006555-14	MAK014O	09/23/2013	10/31/13	EXPLOSIVES
006555-15	MAK015O	09/22/2013	10/31/13	EXPLOSIVES
006555-16	MAK016O	09/22/2013	10/31/13	EXPLOSIVES
006555-17	MAK017O	09/22/2013	10/31/13	EXPLOSIVES
006555-18	MAK018O	09/22/2013	10/31/13	EXPLOSIVES
006555-19	MAK019O	09/23/2013	10/31/13	EXPLOSIVES
006555-20	MAK020O	09/23/2013	10/31/13	EXPLOSIVES
006556-01	MAK007O	09/11/2013	10/31/13	EXPLOSIVES
006556-02	MAK022O	09/23/2013	10/31/13	EXPLOSIVES
006556-03	MAK023O	09/23/2013	10/31/13	EXPLOSIVES
006556-04	MAK024O	09/27/2013	10/31/13	EXPLOSIVES

EXPLOSIVES FRACTION – METHOD 8330A

Twenty five (25) tissue (octopus) samples were received by ARDL, Inc. on October 23, 2013, for 8330A analysis. One sample, MB-SO-HEE000-TEST, was provided for evaluation of test methods only.

This project required analysis for only three target analytes (2,4-Dinitrotoluene, RDX and Nitroglycerine). HPLC analysis for Nitroglycerine required a modification in the standard method UV wavelength of 254 nm. to 205 nm. The samples were not dried prior to extraction.

INITIAL CALIBRATION

The initial calibration was performed using five calibration points and passed method criteria.

CONTINUING CALIBRATIONS

Continuing calibration was performed after the analysis of 10 samples or less. All calibration criteria were met.

SURROGATE

All samples passed surrogate recovery criteria.

ORGANIC ANALYSIS CASE NARRATIVE

Corps of Engineers – ERDC, Vicksburg **Date: 11/21/13**

ARDL Report No.: 6555, 6556 **Lab Name: ARDL, Inc.**

Project Name: MAKAU MILITARY RESERVATION OAHU (OCTOPUS)

Samples Received at ARDL: 10/23/2013

INTERNAL STANDARD

Not applicable.

LCS

The LCS analyses passed the recovery limits supplied.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The MS/MSD analyses were performed on samples MAK006O and MAK007O and passed the recovery criteria supplied.

METHOD BLANKS

No target analytes were detected in the method blanks above the method limit.

ORGANIC DATA REPORTING QUALIFIERS

The following organic data reporting qualifiers are used as required.

ND- Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. This flag is used when estimating a concentration of a compound that meets identification criteria but the result is less than the quantitation or reporting limit but greater than the method detection limit.

P - This flag is used for any two column confirmation methodology when there is greater than 40% difference for detected concentrations between the two columns. The primary column value is reported on the Form 1 and flagged with a "P".

B - This flag is used when the analyte is found above the reporting limit in the blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Release of the data contained in this package has been authorized by the Technical Services Manager or his designee as verified by the following signature.

Dean S. Dickerson
Technical Services Manager

Chain-Of-Custody Information

Rev. 1.0

Megerall in 6556
dlc
10-23-13

ARDL, Inc

P.O. Box 1566, 400 Aviation Drive, Mount Vernon, Illinois 62864
Phone (618) 244-3235, Fax (618) 244-1149

CHAIN OF CUSTODY RECORD

Project
ARDL / Makau Military Reservation Oahu, Hawaii Project

SAMPLERS (Signature)

SAMPLE NUMBER	DATE	TIME	Comp	Grab	# of Containers	Purgeable Organics 8260B	Explosives 8330	OCPs 8081	SVCOs 8270C	Continuing Cal								ARDL, Inc Remarks or Sample Location	PRESERVATION ICED	PRESERVATION Specify Chemicals added and final pH if known
MAK009O	9/13/2013	1248		x	1	x	x	x	x									Octopus	x	
MAK010O	9/16/2013	1025		x	1	x	x	x	x									Octopus	x	
MAK011O	9/16/2013	1110		x	1	x	x	x	x									Octopus	x	
MAK012O	9/22/2013	1315		x	1	x	x	x	x									Octopus	x	
MAK013O	9/22/2013	1400		x	1	x	x	x	x									Octopus	x	
MAK014O	9/23/2013	820		x	1	x	x	x	x									Octopus	x	
MAK015O	9/22/2013	830		x	1	x	x	x	x									Octopus	x	
MAK016O	9/22/2013	1115		x	1	x	x	x	x									Octopus	x	
MAK017O	9/22/2013	1140		x	1	x	x	x	x									Octopus	x	
MAK018O	9/22/2013	1206		x	1	x	x	x	x									Octopus	x	
MAK019O	9/23/2013	833		x	1	x	x	x	x									Octopus	x	
MAK020O	9/23/2013	855		x	1	x	x	x	x									Octopus	x	
MAK021O	9/23/2013	927		x	1	x	x	x	x									Octopus	x	
MAK022O	9/23/2013	1020		x	1	x	x	x	x									Octopus	x	
MAK023O	9/23/2013	1136		x	1	x	x	x	x									Octopus	x	
MAK024O	9/27/2013	828		x	1	x	x	x	x									Octopus	x	
Trip Blank	10/8/2013			x	2	x													x	
Temp Blank																			x	

6555 dlc 10-23-13
6556

Relinquished by: (Signature)	Date	Time	Relinquished by: (Signature)
	10/22/13	1600	
Relinquished by: (Signature)	Date	Time	Relinquished by: (Signature)
Received for Laboratory by: (Signature)	Date	Time	Shipping Ticket No.
	10/23/13	0910	

REMARKS / SPECIAL INSTRUCTIONS:

Test samples - please process this group before or with the accompanying project samples.

Please send level 4 hardcopy report and excel edd to: Dean Dickerson, c/o ARDL, Inc. 400 Aviation Drive, Mount Vernon, IL 62864. Email questons to ddickerson@ardlinc.com.

original w 6556
dlc
10-23-13

ARDL, Inc

P.O. Box 1566, 400 Aviation Drive, Mount Vernon, Illinois 62864
Phone (618) 244-3235, Fax (618) 244-1149

CHAIN OF CUSTODY RECORD

Project
ARDL / Makau Military Reservation Oahu, Hawaii Project

SAMPLERS (Signature)

SAMPLE NUMBER	DATE	TIME	Comp	Grab	# of Containers	Purgeable Organics 8260B	Explosives 8330	OCPs 8081	SVCOs 8270C	Containers Sent								Remarks or Sample Location (ARDL, Inc)	PRESERVATION: ICED	PRESERVATION: Specify Chemicals added and final pH if known
MAK001O	9/9/2013	1104		x	1	x	x	x	x	1								Octopus	x	
MAK002O	9/9/2013	1215		x	1	x	x	x	x	1								Octopus	x	
MAK003O	9/9/2013	1505		x	1	x	x	x	x	1								Octopus	x	
MAK004O	9/11/2013	1011		x	1	x	x	x	x	1								Octopus	x	
MAK005O	9/11/2013	1035		x	1	x	x	x	x	1								Octopus	x	
MAK006O	9/11/2013	1055		x	1	x	x	x	x	3	Extra Volume							Octopus	x	
6556-1 MAK007O	9/11/2013	1125		x	1	x	x	x	x	3	↓		↓					Octopus	x	
MAK008O	9/11/2013	1210		x	1	x	x	x	x	1								Octopus	x	

6555
dlc 10/23/13

Relinquished by: (Signature)	Date	Time	Relinquished by: (Signature)
	10/22/13	1600	
Relinquished by: (Signature)	Date	Time	Relinquished by: (Signature)
Received for Laboratory by: (Signature)	Date	Time	Shipping Ticket No.
	10/23/13	0910	

REMARKS / SPECIAL INSTRUCTIONS:

Project Samples. Please treat each matrix separately.

Please send level 4 hardcopy report and excel edd to: Dean Dickerson, c/o ARDL, Inc. 400 Aviation Drive, Mount Vernon, IL 62864. Email questons to ddickerson@ardlinc.com.

original 6558
dle
10-23-13

COOLER RECEIPT REPORT
ARDL, INC.

ARDL #: 6555-6558

Cooler # NONE (1 of 2)
Number of Coolers in Shipment: 2

Project: MAKALL Military Reservation Oahu

Date Received: 10-23-13

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler was opened: 10-23-13 (Signature) [signature]

1. Did cooler come with a shipping slip (airbill, etc.)? ..... (YES) NO
   If YES, enter carrier name and airbill number here: Fed 9325 1887 7914
2. Were custody seals on outside of cooler? ..... YES (NO) N/A
   How many and where? _____ ,Seal Date: _____ ,Seal Name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO (N/A)
4. Did you screen samples for radioactivity using a Geiger Counter? ..... (YES) NO
5. Were custody papers sealed in a plastic bag ~~and taped inside to the lid~~? dle 10/23/13 ..... (YES) NO
6. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO N/A
7. Were custody papers signed in appropriate place by ARDL personnel? ..... (YES) NO N/A
8. Was project identifiable from custody papers? If YES, enter project name at the top of this form ..... (YES) NO N/A
9. Was a separate container provided for measuring temperature? YES ____ NO ✓ Cooler Temp. -15.0 C

B. **LOG-IN PHASE:** Date samples were logged-in: 10-23-13 (Signature) [signature]

10. Describe type of packing in cooler: ice/bubble pack
11. Were all bottles ~~sealed~~ in separate plastic bags? dle 10/23/13 ..... (YES) NO N/A
12. Did all bottles arrive unbroken and were labels in good condition? ..... (YES) NO
13. Were bottle labels complete? ..... (YES) NO
14. Did all bottle labels agree with custody papers? ..... (YES) NO
15. Were correct containers used for the tests indicated? ..... (YES) NO
16. Was pH correct on preserved water samples? ..... YES NO (N/A)
17. Was a sufficient amount of sample sent for tests indicated? ..... (YES) NO
18. Were bubbles absent in VOA samples? If NO, list by sample #: _____ YES NO (N/A)
19. Was the ARDL project coordinator notified of any deficiencies? ..... YES NO (N/A)

Comments and/or Corrective Action:
(By: Signature) Date:

Sample Transfer	
Fraction: all	Fraction:
Area #: Freezer	Area #:
By: dle	By:
On: 10-23-12	On:

M:\ADMIN\FORMS\COOLER RECEIPT REPORT.doc Rev. 05/07/07

COOLER RECEIPT REPORT
ARDL, INC.

Original in 6558 dlc 10-23-13

ARDL #: 6555-6558

Cooler # 2 of 2
Number of Coolers in Shipment: 2

Project: MAKAU Military Reservation Oahu

Date Received: 10-23-13

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler was opened: 10-23-13 (Signature) LA Stearns

1. Did cooler come with a shipping slip (airbill, etc.)? ..... (YES) NO
   If YES, enter carrier name and airbill number here: FED-EX TRK# 9325 1887 7888
2. Were custody seals on outside of cooler? ..... YES (NO) N/A
   How many and where? NA, Seal Date: NA, Seal Name: NA
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO (NA)
4. Did you screen samples for radioactivity using a Geiger Counter? ..... (YES) NO
5. Were custody papers sealed in a plastic bag and taped inside to the lid? ..... YES (NO)
6. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO (N/A)
7. Were custody papers signed in appropriate place by ARDL personnel? ..... YES NO (N/A)
8. Was project identifiable from custody papers? If YES, enter project name at the top of this form ..... YES NO (N/A)
9. Was a separate container provided for measuring temperature? YES____ NO ✓ Cooler Temp. 10.4 C

B. **LOG-IN PHASE:** Date samples were logged-in: 10-23-13 (Signature) LA Stearns

10. Describe type of packing in cooler: dry ice, bubble pack + bubble bags
11. Were all bottles sealed in separate plastic bags? ..... (YES) NO N/A
12. Did all bottles arrive unbroken and were labels in good condition? ..... (YES) NO
13. Were bottle labels complete? ..... (YES) NO
14. Did all bottle labels agree with custody papers? ..... See #5 ..... YES NO (NA)
15. Were correct containers used for the tests indicated? ..... (YES) NO
16. Was pH correct on preserved water samples? ..... YES NO (N/A)
17. Was a sufficient amount of sample sent for tests indicated? ..... (YES) NO
18. Were bubbles absent in VOA samples? If NO, list by sample #: _____ YES NO (N/A)
19. Was the ARDL project coordinator notified of any deficiencies? ..... YES NO (N/A)

Comments and/or Corrective Action:
(By: Signature) Date:

Sample Transfer	
Fraction: ALL	Fraction:
Area #: Freezer	Area #:
By: Das	By:
On: 10-23-13	On:

M:\ADMIN\FORMS\COOLER RECEIPT REPORT.doc Rev. 05/07/07

Dispatch 6558
dlc
10-23-13

ORIGIN ID:GRBA (920) 469-2436
SHIPPING
PACE ANALYTICAL
1241 BELLEVUE

GREEN BAY, WI 54302
UNITED STATES US

SHIP DATE: 22OCT13
ACTWGT: 25.0 LB MAN
CAD: 255289/CAFE2704

DRY ICE: 4.5 KGS
BILL THIRD PARTY

TO DEAN DICKERSON
ARDL
400 AVIATION DRIVE
P.O BOX 1566
MOUNT VERNON IL 62864
(618) 244-3235
REF:
INV:
PO:
DEPT:

51BC1/ABIB/6F03

FedEx Express

J131113052301 26

TRK# 0201 9325 1887 7914

WED - 23 OCT AA
STANDARD OVERNIGHT
ICE

NA MVNA

62864
IL-US STL

Part # 156148-434 RIT2 03/12

ORIGIN ID:GRBA (920) 469-2436
SHIPPING
PACE ANALYTICAL
1241 BELLEVUE

GREEN BAY, WI 54302
UNITED STATES US

SHIP DATE: 22OCT13
ACTWGT: 35.0 LB MAN
CAD: 255289/CAFE2704

DRY ICE: 4.5 KGS
BILL THIRD PARTY

TO DEAN DICKERSON
ARDL
400 AVIATION DRIVE
P.O BOX 1566
MOUNT VERNON IL 62864
(618) 244-3235
DEPT: INT BILL REF 1301-9501

51BC1/ABIB/6F03

FedEx Express

J131113052301 26

TRK# 0201 9325 1887 7888

WED - 23 OCT AA
STANDARD OVERNIGHT
ICE

NA MVNA

62864
IL-US STL

Part # 156148-434 RIT2 03/12

Field Sample
Form 1s

Rev. 1.0

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK001O	ARDL Lab No.:	006555-01
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/09/2013	Received Date:	10/23/2013
Sample Time:	1104	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK002O	ARDL Lab No.:	006555-02
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/09/2013	Received Date:	10/23/2013
Sample Time:	1215	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	95%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK003O	ARDL Lab No.:	006555-03
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/09/2013	Received Date:	10/23/2013
Sample Time:	1505	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	99%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK004O	ARDL Lab No.:	006555-04
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1011	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	93%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK005O	ARDL Lab No.:	006555-05
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1035	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-05, 8330, EXPLOSIVES

Page 1 of 1

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK006O	ARDL Lab No.:	006555-06
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1055	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	95%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK021O	ARDL Lab No.:	006555-07
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0927	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK008O	ARDL Lab No.:	006555-08
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1210	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	94%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
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Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK009O	ARDL Lab No.:	006555-09
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/13/2013	Received Date:	10/23/2013
Sample Time:	1248	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
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Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK010O	ARDL Lab No.:	006555-10
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/16/2013	Received Date:	10/23/2013
Sample Time:	1025	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	92%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
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Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK011O	ARDL Lab No.:	006555-11
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/16/2013	Received Date:	10/23/2013
Sample Time:	1110	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK012O	ARDL Lab No.:	006555-12
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1315	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	93%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK013O	ARDL Lab No.:	006555-13
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1400	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	94%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK014O	ARDL Lab No.:	006555-14
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0820	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-14, 8330, EXPLOSIVES

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK015O	ARDL Lab No.:	006555-15
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	0830	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK016O	ARDL Lab No.:	006555-16
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1115	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-16, 8330, EXPLOSIVES

Page 1 of 1

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK017O	ARDL Lab No.:	006555-17
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1140	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	99%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK018O	ARDL Lab No.:	006555-18
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1206	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-18, 8330, EXPLOSIVES

Page 1 of 1

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK019O	ARDL Lab No.:	006555-19
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0833	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK020O	ARDL Lab No.:	006555-20
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0855	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK007O	ARDL Lab No.:	006556-01
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1125	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	96%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK022O	ARDL Lab No.:	006556-02
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	1020	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006556-02, 8330, EXPLOSIVES

Page 1 of 1

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK023O	ARDL Lab No.:	006556-03
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	1136	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	99%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

ARDL, INC.
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Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK024O	ARDL Lab No.:	006556-04
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/27/2013	Received Date:	10/23/2013
Sample Time:	0828	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006556-04, 8330, EXPLOSIVES

QC Summary Forms

Form 2 (Surrogate Summary, if applicable)

Form 3 (Spike and/or MS Summary, if applicable)

Blank Form 1(s) & Form 4 (Blank Summary, if applicable)

Form 8 (ISTD Area Summary, if applicable)

Rev. 1.0

BLANK SPIKE/SPIKE DUPLICATE REPORT

ARDL, INC. 400 Aviation Drive; P.O. Box 1566 Mt. Vernon, IL 62864

Lab Report No: 006555

Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O
Project No.:

Analysis: 8330, EXPLOSIVES

Analytical Method: 8330
Prep Method: METHOD

Matrix: QC Material
Amount Used: 2 g

QC Batch: B6638
Level: LOW

Prep. Date: 11/04/2013
Analysis Date: 11/05/2013

Parameter	Spike Result	Spike Level	Spike % Rec	Duplicate Result	Duplicate Level	Duplicate % Rec	Recovery Limits	RPD	RPD Limit
2,4-Dinitrotoluene	3900	4000	97	--	--	--	56-122	--	--
Hexahydro-trinitro-triazine (RDX)	4280	4000	107	--	--	--	44-123	--	--
Nitroglycerine	4360	4000	109	--	--	--	50-150	--	--

SURROGATE RECOVERIES:	Spike %R	Duplicate %R	%R Limits
1,4-Dinitrobenzene	104.5	--	50-150

'*' indicates a recovery outside of standard limits.
Spike Blanks for 006555-06, 8330, EXPLOSIVES

Page 1 of 1

MATRIX SPIKE/SPIKE DUPLICATE REPORT

ARDL, INC. 400 Aviation Drive; P.O. Box 1566 Mt. Vernon, IL 62864

Lab Report No: 006555

Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O
Project No.:

Analysis: 8330, EXPLOSIVES

Analytical Method: 8330
Prep Method: METHOD

Field ID: MAK006O
Desc/Location: MAKAU MILITARY RESERV OAH
Sample Date: 09/11/2013
Sample Time: 1055
Matrix: TISSUE

Prep. Date: 11/04/2013
Amount Used: 2 g
% Moisture: No Moisture Present
QC Batch: B6638
Level: LOW

ARDL Lab No.: 006555-06
Lab Filename:
Received Date: 10/23/2013
Analysis Date: 11/05/2013

Parameter	Sample Result	MS Result	MS Level	MS % Rec	MSD Result	MSD Level	MSD % Rec	% Rec Limits	RPD	RPD Limit
2,4-Dinitrotoluene	ND	3540	4000	88.5	3520	4000	88	62-126	0.5	25
Hexahydro-trinitro-triazine (RDX)	ND	3850	4000	96.3	3820	4000	95.6	63-133	0.7	25
Nitroglycerine	ND	4010	4000	100.2	3910	4000	97.9	50-150	2.3	25

SURROGATE RECOVERIES:	MS %R	MSD %R	%R Limits
1,4-Dinitrobenzene	104	94	50-150

'nc' indicates sample >4X spike level.
'*' indicates a recovery outside of standard limits.
Matrix Spikes for 006555-06, 8330, EXPLOSIVES

Page 1 of 1

BLANK SPIKE/SPIKE DUPLICATE REPORT

ARDL, INC. 400 Aviation Drive; P.O. Box 1566 Mt. Vernon, IL 62864

Lab Report No: 006556

Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O
Project No.:

Analysis: 8330, EXPLOSIVES

Analytical Method: 8330
Prep Method: METHOD

Matrix: QC Material
Amount Used: 2 g

QC Batch: B6637
Level: LOW

Prep. Date: 10/31/2013
Analysis Date: 11/01/2013

Parameter	Spike Result	Spike Level	Spike % Rec	Duplicate Result	Duplicate Level	Duplicate % Rec	Recovery Limits	RPD	RPD Limit
2,4-Dinitrotoluene	4000	4000	100	--	--	--	56-122	--	--
Hexahydro-trinitro-triazine (RDX)	4460	4000	112	--	--	--	44-123	--	--
Nitroglycerine	4380	4000	109	--	--	--	50-150	--	--

SURROGATE RECOVERIES:	Spike %R	Duplicate %R	%R Limits
1,4-Dinitrobenzene	108.9	--	50-150

'*' indicates a recovery outside of standard limits.
Spike Blanks for 006556-01, 8330, EXPLOSIVES

Page 1 of 1

MATRIX SPIKE/SPIKE DUPLICATE REPORT

ARDL, INC. 400 Aviation Drive; P.O. Box 1566 Mt. Vernon, IL 62864

Lab Report No: 006556

Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O
Project No.:

Analysis: 8330, EXPLOSIVES

Analytical Method: 8330
Prep Method: METHOD

Field ID: MAK007O
Desc/Location: MAKAU MILITARY RESERV OAH
Sample Date: 09/11/2013
Sample Time: 1125
Matrix: TISSUE

Prep. Date: 10/31/2013
Amount Used: 2 g
% Moisture: No Moisture Present
QC Batch: B6637
Level: LOW

ARDL Lab No.: 006556-01
Lab Filename:
Received Date: 10/23/2013
Analysis Date: 11/01/2013

Parameter	Sample Result	MS Result	MS Level	MS % Rec	MSD Result	MSD Level	MSD % Rec	% Rec Limits	RPD	RPD Limit
2,4-Dinitrotoluene	ND	3550	4000	88.8	3540	4000	88.6	62-126	0.2	25
Hexahydro-trinitro-triazine (RDX)	ND	3860	4000	96.6	3860	4000	96.5	63-133	0.1	25
Nitroglycerine	ND	3930	4000	98.2	3920	4000	98.1	50-150	0.1	25

SURROGATE RECOVERIES:	MS %R	MSD %R	%R Limits
1,4-Dinitrobenzene	98	97	50-150

'nc' indicates sample >4X spike level.
'*' indicates a recovery outside of standard limits.
Matrix Spikes for 006556-01, 8330, EXPLOSIVES

Page 1 of 1

METHOD BLANK REPORT

ARDL, Inc. 400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	NA	ARDL Lab No.:	006556-01B1
Desc/Location:	NA	Lab Filename:	
Sample Date:	NA	Received Date:	NA
Sample Time:	NA	Prep. Date:	10/31/2013
Matrix:	QC Material	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	NA	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units
2,4-Dinitrotoluene	100	500	ND		UG/KG
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG
Nitroglycerine	300	500	ND		UG/KG

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	106%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Blank for Run B6637, 8330, EXPLOSIVES

Page 1 of 1

METHOD BLANK REPORT
ARDL, Inc. 400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	NA	ARDL Lab No.:	006555-06B1
Desc/Location:	NA	Lab Filename:	
Sample Date:	NA	Received Date:	NA
Sample Time:	NA	Prep. Date:	11/04/2013
Matrix:	QC Material	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	NA	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units
2,4-Dinitrotoluene	100	500	ND		UG/KG
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG
Nitroglycerine	300	500	ND		UG/KG

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	109%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Blank for Run B6638, 8330, EXPLOSIVES

Sample Preparation Information

(Not Applicable for VOA Purge and Trap Method)

Rev. 1.0

SW 846
8330 EXPLOSIVES
TISSUES

DATE : 10 / 31 / 2013 **BATCH # B10116**

CUST: Makau Military Reservation Oahu **ARDL # 6555, 6556**

SAMPLES: BLK; SPK BLK; 6555-14 thru 20; 6556-1 thru 5
QC SAMPLE: 6556-1ms/msd

SOLVENT USED: ACETONITRILE_# 091099
REAGENT USED: CALCIUM CHLORIDE SOL'N # 1211

SURROGATE # 1007927 CONC 16 PPM __X__ AMOUNT 500 uL __X__
SPIKE # 1008025 CONC 8 PPM __X__ AMOUNT 1.0 mL __X__

EXTRACTION METHOD: SONICATION_____X____SEP. FUNNEL _____ DILUTION_____

FINAL VOLUME 10 mL

EXTRACTION PERSONNEL SMN, JAD, JD

SPIKER: SMN **WITNESS: JD**

SAMPLE #	WEIGHT / g	Vf	DIL		SAMPLE #	WEIGHT / g	Vf	DIL
BLK	2.00 g	10 mL	2X		6556-4	2.00 g	10 mL	2X
SPK BLK	"	"	"		6556-5	"	"	"
6555-14	"	"	"					
6555-15	"	"	"					
6555-16	"	"	"					
6555-17	"	"	"					
6555-18	"	"	"					
6555-19	"	"	"					
6555-20	"	"	"					
6556-1	"	"	"					
6556-1ms	"	"	"					
6556-1msd	"	"	"					
6556-2	"	"	"					
6556-3	"	"	"					

RECEIVED BY: _____ **DELIVERED BY:** SMN

DATE: 11/1/13 DATE: 11/1/13

B10116 8330 - Explosives - Tissues

Sample I.D.	Wt	Vf	Dil.	Date ON:	Time ON:
BlK	2.00g	10mL	2X	10/31/13	15:00
SpBlK	2.00g	10mL	2X		
6555-14	2.00g	10mL	2X	Date OFF:	Time OFF:
-15	2.00g	10mL	2X		
-16	2.00g	10mL	2X	11/1/13	09:00
-17	2.00g	10mL	2X		
-18	2.00g	10mL	2X		
-19	2.00g	10mL	2X		
-20	2.00g	10mL	2X		
6556-1	2.00g	10mL	2X		
-1MS	2.00g	10mL	2X		
-1MSD	2.00g	10mL	2X		
-2	2.00g	10mL	2X		
-3	2.00g	10mL	2X		
-4	2.00g	10mL	2X		
-5	2.00g	10mL	2X		

All samples contain 500 uL of surrogate # 1007927 (16 ppm).

SpBlk, MS, MSD contain 1 mL of spike # 1003025 (8 ppm).

Solvent Used: Acetonitrile # 091099

Reagent Used: $CaCl_2$ ~~#~~ sol'n # 1211 10/31/13

Spiker Smd Witness

Read and Understood By

Steve Thurwood 10/31/13 Signed Date

Signed 10/31/13 Date

Continued on Page

SW 846
8330 EXPLOSIVES
TISSUES

DATE : 11 / 04 / 2013 **BATCH # B10119**

CUST: Makau Military Reservation Oahu **ARDL # 6555**

SAMPLES: BLK; SPK BLK; 6555-1 thru 13
QC SAMPLE: 6555-6ms/msd

SOLVENT USED: ACETONITRILE_# 091099
REAGENT USED: CALCIUM CHLORIDE SOL'N # 1211

JRC 11/14/13

SURROGATE # 10078046 CONC 16 PPM __X__ AMOUNT 500 uL __X__
SPIKE # 1008025 CONC 8 PPM __X__ AMOUNT 1.0 mL __X__

EXTRACTION METHOD: SONICATION_____X____SEP. FUNNEL _____ DILUTION_____

FINAL VOLUME 10 mL

EXTRACTION PERSONNEL SMN, JAD

SPIKER: SMN **WITNESS: JAD**

SAMPLE #	WEIGHT / g	Vf	DIL		SAMPLE #	WEIGHT / g	Vf	DIL
BLK	2.00 g	10 mL	2X		6555-11	2.00 g	10 mL	2X
SPK BLK	"	"	"		6555-12	"	"	"
6555-1	"	"	"		6555-13	"	"	"
6555-2	"	"	"					
6555-3	"	"	"					
6555-4	"	"	"					
6555-5	"	"	"					
6555-6	"	"	"					
6555-6ms	"	"	"					
6555-6msd	"	"	"					
6555-7	"	"	"					
6555-8	"	"	"					
6555-9	"	"	"					
6555-10	"	"	"					

RECEIVED BY: GD
DATE: 11/5/13

DELIVERED BY: SMN
DATE: 11/5/13

B10119 8330 - Explosives - Tissues

Sample I.D.	Wt	Vf	Dil.	Date ON:	Time ON:
BlK	2.00g	10mL	2X	11/4/13	12:00
SpBlK	2.00g	10mL	2X		
6555-1	2.00g	10mL	2X	Date OFF:	Time OFF:
-2	2.00g	10mL	2X		
-3	2.00g	10mL	2X	11/5/13	06:00
-4	2.00g	10mL	2X		
-5	2.00g	10mL	2X		
-6	2.00g	10mL	2X		
-6MS	2.00g	10mL	2X		
-6MSD	2.00g	10mL	2X		
-7	2.00g	10mL	2X		
-8	2.00g	10mL	2X		
-9	2.00g	10mL	2X		
-10	2.00g	10mL	2X		
-11	2.00g	10mL	2X		
-12	2.00g	10mL	2X		
-13	2.00g	10mL	2X		

All samples contain 500uL of surrogate # 1008046 (16ppm).

SpBlK, MS, MSD contain 1mL of spike # 1008025 (8ppm).

Solvent Used: Acetonitrile #091099.

Reagent Used: $CaCl_2$ sol'n #1211.

Spiker JMW Witness JAO

Continued on Page

Read and Understood By

Steve Mercado 11/4/13 Signed Date

JO 11/4/13 Signed Date

PROJECT

Continued From Page

1007924 AR1242 SPIKE/QC

STOCK 1007923 1000ppm AR1242 exp 06/28/22

1000ug/ml X 0.05 ml / 5 ml Acetone (Baker K5102) = 10ppm AR1242

exp 01/22/14 AJ 07/22/13

1007925 AR1248

Part #: 90127 Laboratory Use Only - See MSDS
Lot #: 060812 Exp: 060822 Storage 20 °C
Aroclor 1248
1000 ug/mL in hexane 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

opened 07/22/13 AJ

1007926 AR1248 SPIKE/QC

STOCK 1007925 1000ppm AR1248 exp 06/08/22

1000ug/ml X 0.05 ml / 5 ml Acetone (Baker K5102) = 10ppm AR1248

exp 01/22/14 AJ 07/22/14

1007927 EXPLOS / Surr

0.160 mL of 1007915 (1,000 ppm) Xp 04/2015
QS ACN / Fisher 091099
10.0 mL Volumetrically = 16 µg/mL

GO 7/22/13 exp 1/22/14

AJ 07/23/13

Continued on Page

Read and Understood By

AJ 07/23/13 Signed Date

GO 7/27/13 Signed Date

PROJECT

Continued From Page

1007915

Part #: 70912
Lot #: 042910
Laboratory Use Only - See MSDS
Exp: 042915 Storage 4 °C
1,4-Dinitrobenzene / Surr.
1000 ug/mL in methanol 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

7/22/13

1007916 EXPLOS – "A" Spike

40 µL HMX Cert/H (1,000 ppm) Lot 051210-01 Exp 05/2015
40 µL RDX Abst " " 111408 " 11/2013
40 µL 1,3,5 TNB #1007777 1,000 ppm " 01/2017
40 µL NB #1007536 (Abs) 1,000 " 08/2014
2,6-DNT Cert/H (1,000 ppm) ER121908-03 " 12/2013
2,4-DNT #1007912 (1,000 ppm) 11/2015
2-NT Cert/H (1,000 ppm) ER052904-02 " 08/2013
4-NT 1007914 (1,000) " 11/2015
3-NT Abs (1000 ppm) Lot 11/05/10 XP " 11/2015
40 µL Nitroglycerin #1007911 (1,000) 12/2017
40 µL TNT #1007913 (1,000) " 07/2017
40 µL 1,4DNB (Surr) 1,000 ppm #1007915 " 04/2015
5.0 mL Vol
0/8.0 µg/mL 7/22/13 XP. 11/30/2013

1007917 ~~AR1221/AR1254~~ AR1221

Part #: 90124
Lot #: 081012
Laboratory Use Only - See MSDS
Exp: 081022 Storage 20 °C
Aroclor 1221
1000 ug/mL in hexane 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

opened 07/22/13

1007918 AR 1254

Part #: 90128
Lot #: 071612
Laboratory Use Only - See MSDS
Exp: 071622 Storage 20 °C
Aroclor 1254
1000 ug/mL in hexane 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

opened 07/22/13

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
	07/22/13		7/28/13

1008046 8330 Surr - Spike

0.400 mL of 1008045 (1000 ppm) exp 04/2015
QS ACN
25.0 mL Volum. of 16.0 µg/mL
GD 11/1/13 exp 5/1/14

1008047 8330 CCV STD GD 11/1/13

0.200 mL of 1008041 (10 µg/mL) exp 11/~~30~~ 14/13
QS Diluent
5.0 mL of 400 µg/L GD 11/1/13 exp 11/2/13

1008048 HIW (Spike) Special

240 µL of 1008026 - 2,4-DNT (100 µg/mL)
240 µL 1008027 RDX (1000 µg/mL
24 µL 1008028 NG (1,000 µg/mL)
2,496 µL ACN
3,000 µL of 8.0 µg/mL each
GD 11/1/13 exp

1008049 8330 CCV Std

0.200 mL of 1008041 (10 µg/mL) exp 11/~~30~~ 14/13 GD 11/5/13
QS Dilut
5.00 mL of 400 µg/L GD 11/5/13 exp 11/6/13

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
GD	11/5/13	BR	11-12-13

1008042 HI ICAL STDS

To 5 mL

C Blank	mLs of 1008041	Diluent	Final µg/L
50	0.025	5.0 mL	50
100	0.050		100
200	0.100		200
400	0.200		400
800	0.400 mLs	5.0	800
1,000			

GD 10/24/13 exp 10/25/13

1008043 HI EXPLOS (ICV)

250µL of 8.0 ppm # 1008025 (8.0 µg/mL) exp 4/21/14
QS Diluent 1007782
5.0 mL of 400 µg/L

GD 10/24/13 exp 10/25/13

1008044-4 Post Cal Stds
1007982-4 0.25 ppm exp 12/12/13

0.25 ug/ml × 0.5 ml / 1.0 ml Hex (Baker 14961) = 0.125 ppm
0.25 ug/ml × 0.1 ml / 1 = 0.025 ppm
exp 12/12/13 GD 10/24/13

1,4 DNB (8330 Surr) Stock

1008045-A6

Part #: 70912 Laboratory Use Only - See MSDS
Lot #: 042910 Exp: 042915 Storage 4 °C
1,4-Dinitrobenzene
1000 ug/mL in methanol 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

exp 11/1/13
Recd 11/15/12

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
GD	11/1/13	BR	11-12-13

1008024 OSP Cal Stds

STOCK 1007843 10-40ppm OSP exp 02/14/14

10-40 ug/ml x 0.5/5 ml MeCl (Baker 4556-4) = 1.0 ppm OSP
x 0.4 = 0.8
x 0.3 = 0.6
x 0.2 = 0.4
x 0.1 = 0.2

exp 02/14/14 BT 10/17/13

1008025 EXPLOS SPIKE (HI Tissues)

0.800 mL 2,4 DNT # 1008026 – 100 µg/mL
0.800 mL RDX # 1008027 – 100 µg/mL
0.080 mL Nitroglycerine # 1008028 – 1,000 µg/mL
} Accu STD

Acetonitrile Fisher Lot 091089
10.0 mL @ 8.0 µg/mL each GD 10/21/13 exp 4/21/14

2,4-DNT Stock

1008026 –

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

M-8330-02-0.1X 1 mL
2,4-Dinitrotoluene
100 µg/mL in MeOH:AcCN (1:1)
Lot: 211031352
Exp. Mar 28, 2021
HIGHLY FLAMMABLE

Opened 10/21/13 GD

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Refrig (0-5° C)
2 Danger

1008027

RDX Stock

AccuStandard® 125 Market St. • New Haven, CT 0 Tel. 203-786-5290 • www.accusta

M-8330-05-0.1X
RDX
100 µg/mL in MeOH:AcCN (1:1)
Lot: 211111333-01
Exp. Jun 18, 2015
HIGHLY FLAMMABLE

Opened 10/21/13 GD 10/21/13

NG Stock

1008028 –

AccuStandard® 125 Market St. • New Haven, CT 06513 • US Tel. 203-786-5290 • www.accustandard.co

M-8330-ADD-1-10X 1 mL
Nitroglycerin
1000 µg/mL in EtOH:MeOH (97:3)
Lot: 213031341
Exp. May 9, 2015
HIGHLY FLAMMABLE

Opened 10/21/13 GD

Continued on Page

Read and Understood By

GD 10/21/13 GD 10/28/13

Signed Date Signed Date

CERTIFIED WEIGHT REPORT

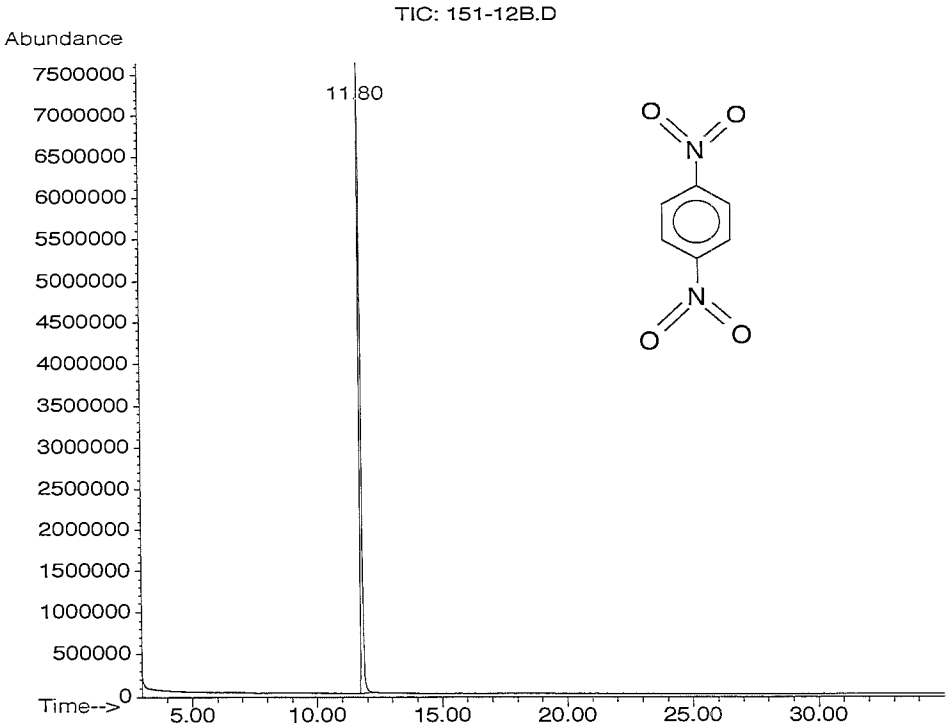
Part Number:	70912	**Solvent(s):**	Lot # 49162	Methanol
Lot Number:	042910			
Description:	1,4-Dinitrobenzene			
Expiration Date:	042915			
Storage:	4 °C			
Nominal Concentration (µg/mL):	1000			
			5E-05	Balance Uncertainty
Weight(s) shown below were combined and diluted to:	100.0		0.012	Flask Uncertainty

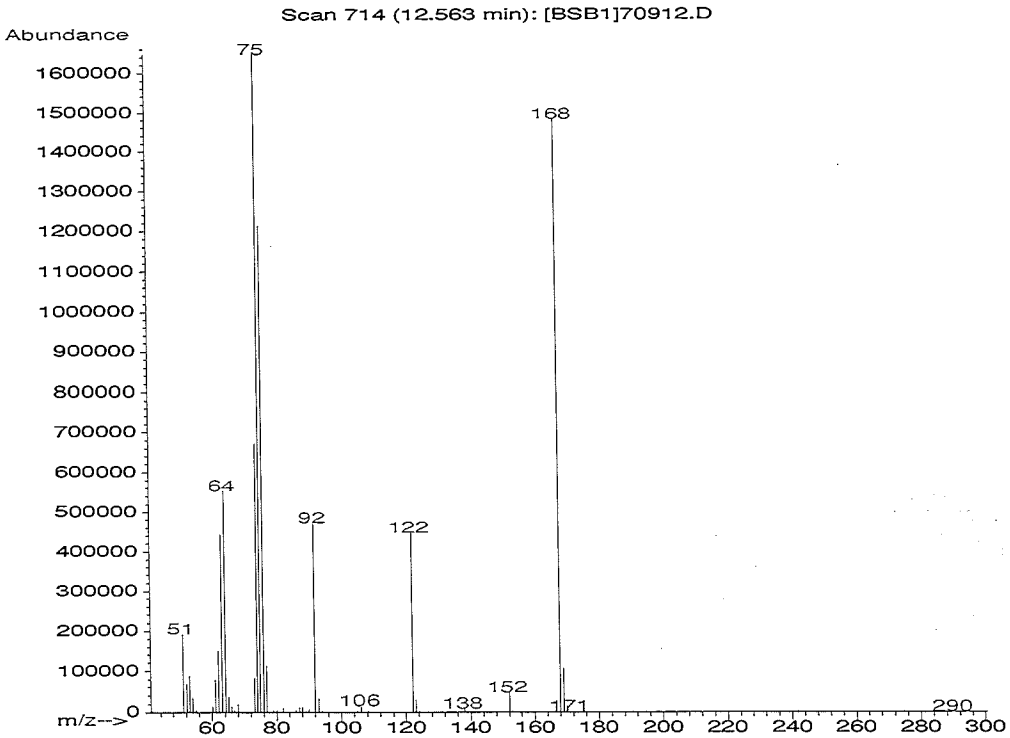
Formulated By:	Justin Dippold	042910 DATE
Reviewed By:	Pedro L. Rentas	042910 DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

	Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1.	1,4-Dinitrobenzene	912	04003AM	1000	98	0.2	0.10208	0.10245	1003.6	0.00420	00100-25-4	1mg/m3/8H (skin)	N/A

Method GC8MSD-3.M: Column: SPB-5 (30m X 0.25mm ID X 0.25µm film thickness), Temp 1 = 50°C (1min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 300°C. Analysis performed by Nicole Davis.





125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-02-0.1X
Description: 2,4-Dinitrotoluene

Date Certified: Mar 28, 2011
Expiration: Mar 28, 2021
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

		Ratio
Lot:	211031352	
Solvent:	Acetonitrile	50
	Methanol	50

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
2,4-Dinitrotoluene	121-14-2	100	100.0	100.0

AccuStandard follows U.S. conventions in reporting numerical values on both certificates and labels:

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

1. All weights are traceable through NIST, Test No.822/272103-05
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.
3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

See reverse side for additional information
Refer to the MSDS for additional safety information

Certified by: R. Cooper
Russ Cooper, QC Manager

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-05-0.1X
Description: RDX

Lot: 211111333-01

Solvent:		Ratio
	Acetonitrile	50
	Methanol	50

Date Certified: Jun 18, 2013
Expiration: Jun 18, 2015
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
RDX	121-82-4	98.6	100.3	98.9

AccuStandard follows U.S. conventions in reporting numerical values on both certificates and labels:

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

1. All weights are traceable through NIST, Test No.822-275872-11
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.
3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

See reverse side for additional information
Refer to the MSDS for additional safety information

Certified by: R. Cooper
Russ Cooper, QC Manager

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

125 Market Street
New Haven, CT 06513
USA

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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-1-10X
Description: Nitroglycerin

Date Certified: May 9, 2013
Expiration: May 9, 2015
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

Lot: 213031341

Solvent:		Ratio
	Ethanol	97
	Methanol	3

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Nitroglycerin	55-63-0	99.4	1003	997

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1. All weights are traceable through NIST, Test No.822-275872-11
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.
3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

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Russ Cooper, QC Manager

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Standards Preparation Information

Rev. 1.0

PROJECT

Continued From Page

1008042 HI ICAL STDS

To 5 mL

C Blank	0 mLs of 1008041	Diluent	Final µg/L
50	0.025	5.0 mL	50
100	0.050		100
200	0.100		200
400	0.200		400
800	0.400 mLs	5.0	800
1,000	Not made		

gb 10/24/13 exp 10/25/13

1008043 HI EXPLOS (ICV)

250µL of 8.0 ppm # 1008025 (8.0 µg/mL) exp 4/21/14
QS Diluent 1007782
5.0 mL of 400 µg/L

gb 10/24/13 exp 10/25/13

1008044-4 Post Cal Stds
1007982-4 0.25 ppm exp 12/12/13

0.25 ug/ml × 0.5 ml / 1.0 ml Hexane (Baker 14961) = 0.125 ppm
0.25 ug/ml × 0.1 ml / 2 = 0.025 ppm
exp 12/12/13 LDT 10/24/13

1,4 DNB (8330 Surr) Stock

1008045-A6

Part #: 70912 Laboratory Use Only - See MSDS
Lot #: 042910 Exp: 042915 Storage 4 °C
1,4-Dinitrobenzene
1000 ug/mL in methanol 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

opened 11/1/13
Recd 11/15/12

Continued on Page

Read and Understood By

gb 11/1/13 BR 11-12-13
Signed Date Signed Date

1008038 OCP SURROGATE STOCK

1007977 200ppm OCP surrogate exp 02/02/17

200ug/ml X 0.25ml / 5ml Hex (Baker 14961) = 10ppm OCP surrogate

exp 01/22/14 [illegible] 10/22/13

1008039 PEST 2° STOCK (HAWAII)

1008037 10ppm PEST (HAWAII) exp 01/22/14
1008038 10ppm OCP Surrogate exp 01/22/14

10ug/ml x 0.5 ml each / 5ml Hex (Baker 14961) = 1.0 ppm

exp 01/22/14 [illegible] 10/22/13

1008040 PEST CAL STDS (HAWAII

1008039 1.0ppm PEST (HAWAII) exp 01/22/13

1.0 ug/ml X = 0.25 ppm PST (HAWAII)
= 0.2
= 0.125
= 0.1
= 0.05
= 0.025
= 0.01 in Hex (Baker 14961)

exp 01/22/14 [illegible] 10/22/13

1008041 HI Explos-Cal 2° STD

50 µL RDX Absolut (1000 ppm) Lot 111408 exp 11/2013
1,4 DNB (Surr) 1,000 ppm ID No. 1007915 exp 04/2015
Nitroglycerine (1,000 ppm) ID No. 1007911-A exp 10/2017
50 µL 2,4-DNT (1,000 ppm) ID No. 1007912-AB 11/2015
0.5 Acetonitrile (Fisher 091099)
5.00 mL of 10 µg/mL each [illegible] 10/24/13

Continued on Page 14 [illegible] 11/14/13

Read and Understood By exp. 11/30/2013

[illegible] 10/24/13 [illegible] 10/28/13
Signed Date Signed Date

11/13/13

PROJECT

Continued From Page

1007915

Part #: 70912 Laboratory Use Only - See MSDS
Lot #: 042910 Exp: 042915 Storage 4 °C
1,4-Dinitrobenzene / Surr.
1000 ug/mL in methanol 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

7/22/13

1007916 EXPLOS – "A" Spike

40 µL HMX Cert/H (1,000 ppm) Lot 051210-01 Exp 05/2015
40 µL RDX Abst " " 111408 " 11/2013
40 µL 1,3,5 TNB #1007777 1,000 ppm " 01/2017
40 µL NB #1007536 (Abs) 1,000 " 08/2014
2,6-DNT Cert/H (1,000 ppm) ER121908-03 " 12/2013
2,4-DNT #1007912 (1,000 ppm) 11/2015
2-NT Cert/H (1,000 ppm) ER052904-02 " 08/2013
4-NT 1007914 (1,000) " 11/2015
3-NT Abs (1000 ppm) Lot 11/05/10 Xp " 11/2015
40 µL Nitroglycerin #1007911 (1,000) 12/2017
40 µL TNT #1007913 (1,000) " 07/2017
40 µL 1,4DNB (Surr) 1,000 ppm #1007915 " 04/2015
5.0 mL Vol
of 8.0 µg/mL 7/22/13 Xp. 11/30/2013

1007917 ~~AR1221/AR1254~~ AR1221

Part #: 90124 Laboratory Use Only - See MSDS
Lot #: 081012 Exp: 081022 Storage 20 °C
Aroclor 1221
1000 ug/mL in hexane 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

opened 07/22/13

1007918 AR 1254

Part #: 90128 Laboratory Use Only - See MSDS
Lot #: 071612 Exp: 071622 Storage 20 °C
Aroclor 1254
1000 ug/mL in hexane 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

opened 07/22/13

Continued on Page

Read and Understood By

Signed 07/22/13 Date Signed 7/28/13 Date

1007911-R NG - Stock

RESTEK 110 Benner Circle Bellefonte, PA 16823 Made in USA
Catalog # 31498 1007911
Nitroglycerin Standard
1000 ug/mL each in Methanol Recd 4/18/13
Lot# A092411 Exp. Date: 12/2017 Store: 10°C or colder

Opend 7/22/13 GO

1007912-AB 2,4 DNT Stock

Part #: 79072 Laboratory Use Only - See MSDS
Lot #: 110510 Exp: 110515 Storage 0 °C
EPA Method 8330 Analyte
2,4-Dinitrotoluene
1000 ug/mL in acetonitrile 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

GO 7/22/13

1007913-AB TNT - Stock

Part #: 79082 Laboratory Use Only - See MSDS
Lot #: 070612 Exp: 070617 Storage 0 °C
EPA Method 8330 Analyte
2,4,6-Trinitrotoluene
1000 ug/mL in acetonitrile 1 mL
ABSOLUTE STANDARDS, INC. • 800-368-1131

GO 7/22/13

1007914-AB 4 - NT Stock

Part #: 79078 Laboratory Use Only - See MSDS
Lot #: 110510 Exp: 110515 Storage 4 °C
EPA Method 8330 Analyte
4-Nitrotoluene
1000 ug/mL in acetonitrile 1 mL
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GO 7/22/13

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
GO	7/22/13	AJ	07/26/13

1008024 OSP Cal Stds

STOCK 1007843 10-40 ppm OSP exp 02/14/14

10-40 ug/ml x 0.5/5 ml MeCl (Baker 4556-4) = 1.0 ppm OSP
x 0.4 = 0.8
x 0.3 = 0.6
x 0.2 = 0.4
x 0.1 = 0.2

exp 02/14/14 BS 10/17/13

1008025 EXPLOS SPIKE (HI Tissues)

0.800 mL 2,4 DNT # 1008026 – 100 µg/mL
0.800 mL RDX # 1008027 – 100 µg/mL
0.080 mL Nitroglycerine # 1008028 – 1,000 µg/mL
} AccuSTD
Acetonitrile Fisher Lot 091099
10.0 mL of 8.0 µg/mL each GD 10/21/13 exp 4/21/14

2,4-DNT STOCK

1008026 –

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
M-8330-02-0.1X 1 mL
2,4-Dinitrotoluene
100 µg/mL in MeOH:AcCN (1:1)
Lot: 211031352
Exp. Mar 28, 2021
HIGHLY FLAMMABLE
Opened 10/21/13 GD
FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Refrig (0-5° C)
2 Danger

1008027 RDX Stock

AccuStandard® 125 Market St. • New Haven, CT 0 Tel. 203-786-5290 • www.accusta
M-8330-05-0.1X
RDX
100 µg/mL in MeOH:AcCN (1:1)
Lot: 211111333-01
Exp. Jun 18, 2015
HIGHLY FLAMMABLE
Oped 10/21/13 GD 10/21/13

NG Stock

1008028 –

AccuStandard® 125 Market St. • New Haven, CT 06513 • US Tel. 203-786-5290 • www.accustandard.co
M-8330-ADD-1-10X 1 mL
Nitroglycerin
1000 µg/mL in EtOH:MeOH (97:3)
Lot: 213031341
Exp. May 9, 2015
HIGHLY FLAMMABLE
Oped 10/21/13 GD

Continued on Page

Read and Understood By

GD 10/21/13 GD 10/28/13
Signed Date Signed/BK Date 11/12/13

1008046 8330 Surr - Spike

0.400 mL of 1008045 (1000 ppm) exp 04/2015
QS ACN Fisher 091099
25.0 mL Volum. of 16.0 µg/mL
GO 11/7/13 exp 5/1/14

1008047 8330 CCV STD GO 11/1/13

0.200 mL of 1008041 (10 µg/mL) exp 11/30/13
QS Diluent
5.0 mL of 400 µg/L GO 11/1/13 exp 11/2/13

1008048 HIW (Spike) Special

240 µL of 1008026 - 2,4-DNT (100 µg/mL)
240 µL 1008027 RDX (1000 µg/mL
24 µL 1008028 NG (1,000 µg/mL)
2,496 µL ACN Fish. 091099
3,000 µL of 8.0 µg/mL each
GO 11/1/13 exp 5/1/14

1008049 8330 CCV Std

0.200 mL of 1008041 (10 µg/mL) exp 11/30/13 GO 11/5/13
QS Diluent
5.00 mL of 400 µg/L GO 11/5/13 exp 11/6/13

Continued on Page

Read and Understood By

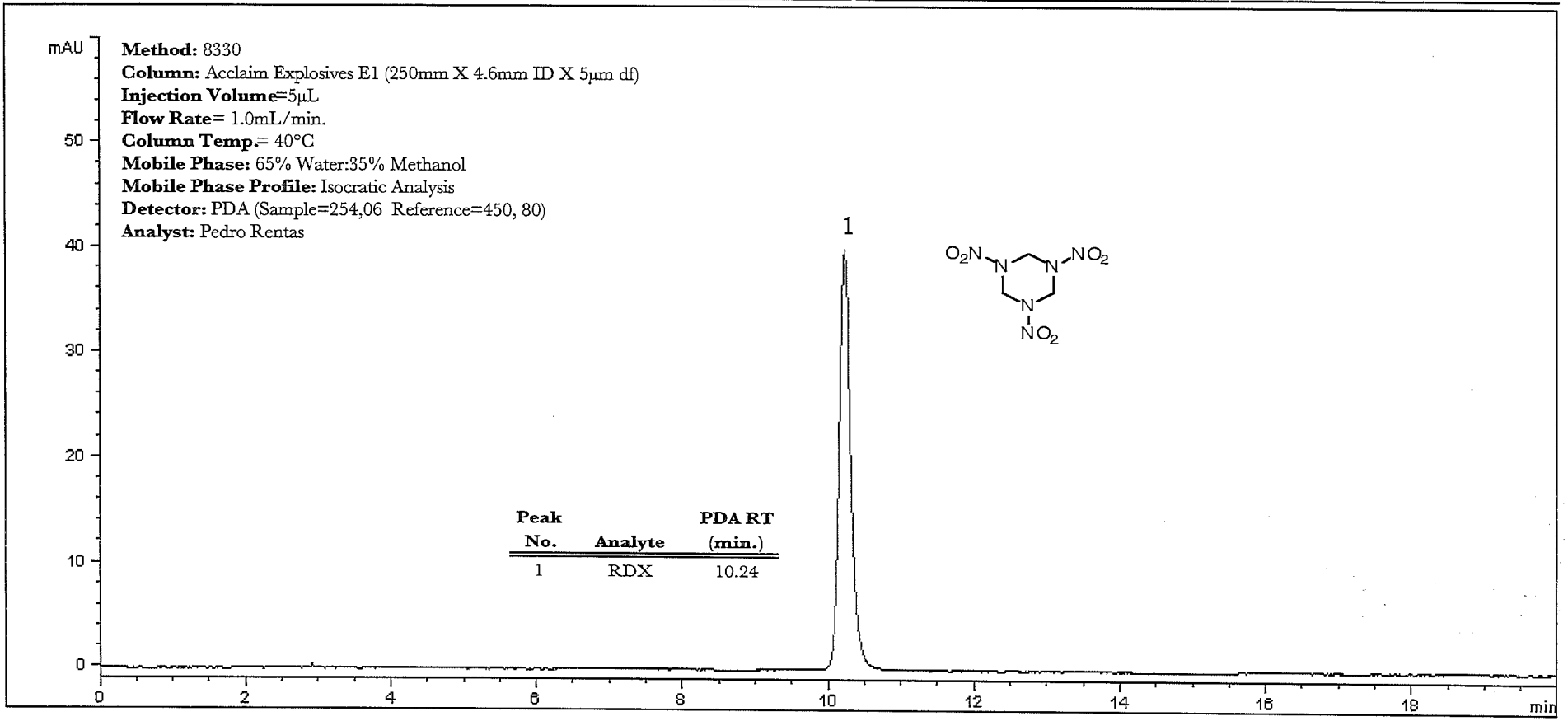
Signed	Date	Signed	Date
GO	11/5/13	BR	11-12-13

CERTIFIED WEIGHT REPORT

				Lot #	
Part Number:	79079	**Solvent(s):**	J087	Acetonitrile	
Lot Number:	111408				
Description:	RDX				
Expiration Date:	111413				
		Storage:	0	°C	
Nominal Concentration (µg/mL):	1000				
			5E-05	Balance Uncertainty	
Weight(s) shown below were combined and diluted to:			25.0	0.004	Flask Uncertainty

		111408
Formulated By:	Vincent K. Criscio, Jr.	DATE
		111408
Reviewed By:	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. RDX	1429	ER091406-03	1000	99	0.2	0.02527	0.02532	1001.9	0.0057	00121-82-4	N/A	N/A



CERTIFIED WEIGHT REPORT

Part Number: 70912
Lot Number: 042910
Description: 1,4-Dinitrobenzene

Expiration Date: 042915

Storage: 4 °C

Nominal Concentration (μg/mL): 1000

Weight(s) shown below were combined and diluted to: 100.0

Solvent(s): Lot # 49162 Methanol

5E-05 Balance Uncertainty
0.012 Flask Uncertainty

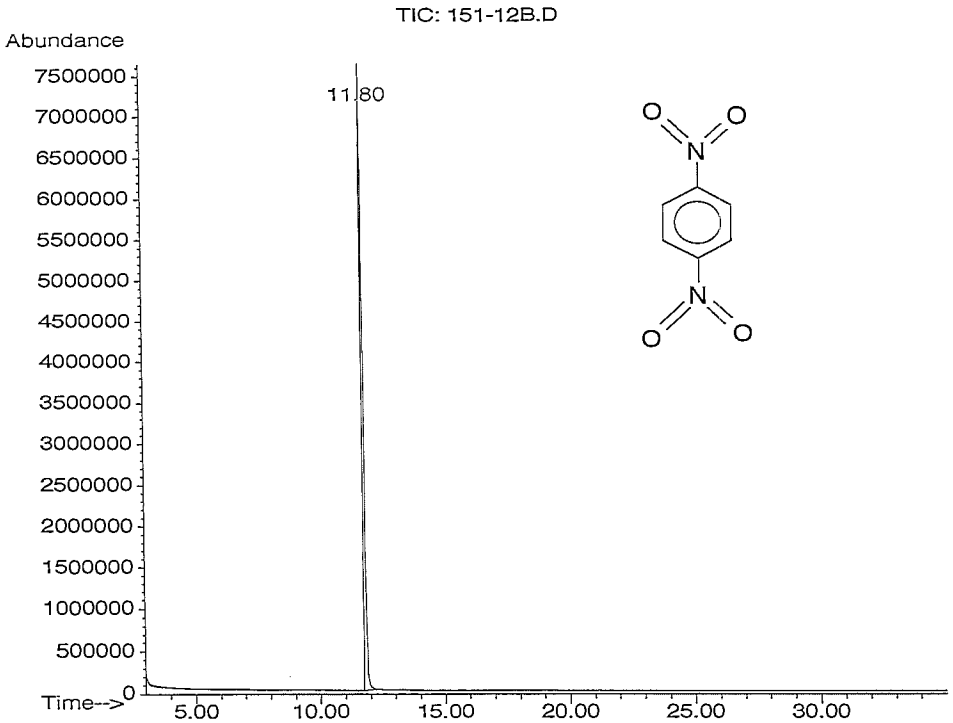
Formulated By: Justin Dippold — DATE 042910

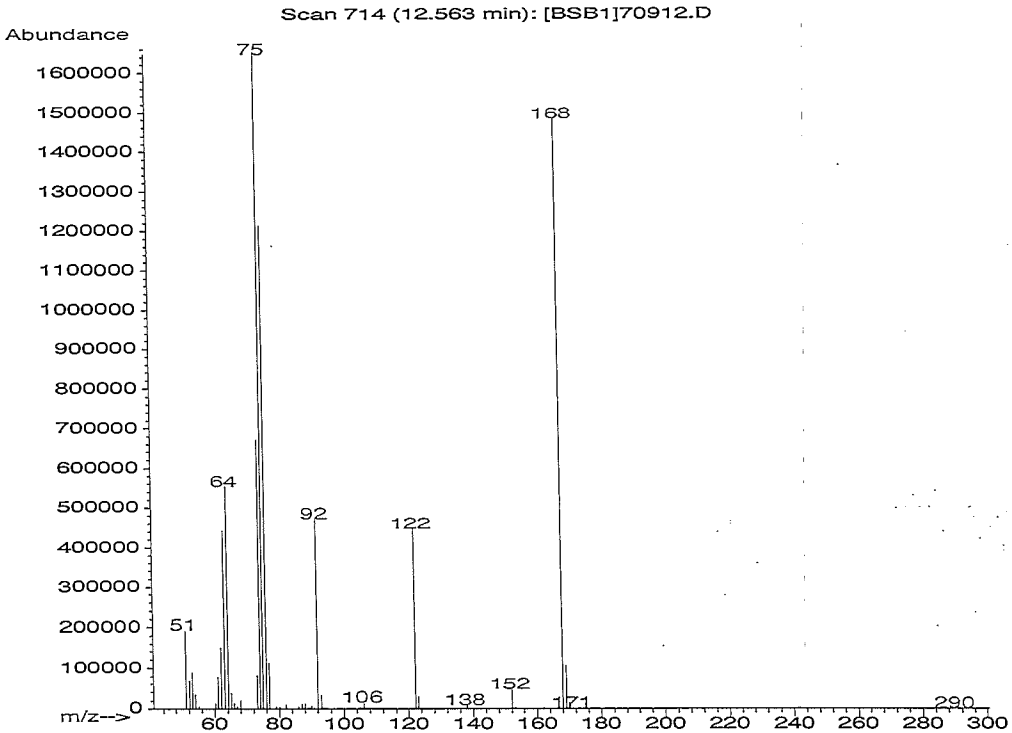
Reviewed By: Pedro L. Rentas — DATE 042910

MSDS Information
(Solvent Safety Info. On Attached pg.)

	Compound	RM#	Lot Number	Nominal Conc (μg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(μg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1.	1,4-Dinitrobenzene	912	04003AM	1000	98	0.2	0.10208	0.10245	1003.6	0.00420	00100-25-4	1mg/m3/8H (skin)	N/A

Method GC8MSD-3.M: Column: SPB-5 (30m X 0.25mm ID X 0.25μm film thickness), Temp 1 = 50°C (1min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 300°C. Analysis performed by Nicole Davis.





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Bellefonte, PA 16823-8812
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ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31498 **Lot No.:** A092411

Description : Nitroglycerin Standard

1000µg/mL, Methanol, 1mL/ampul *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 2017 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	1,000.0 µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 55-63-0		+/- 32.1907	µg/mL	Unstressed
	Purity 99%		+/- 44.7599	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

CERTIFIED WEIGHT REPORT

Part Number:	79072	**Solvent(s):**	Lot # L140AN	Acetonitrile
Lot Number:	110510			
Description:	2,4-Dinitrotoluene			
	EPA Method 8330 Analyte			
Expiration Date:	110515			
		Storage:	0 °C	
Nominal Concentration (µg/mL):	1000			

5E-05 Balance Uncertainty

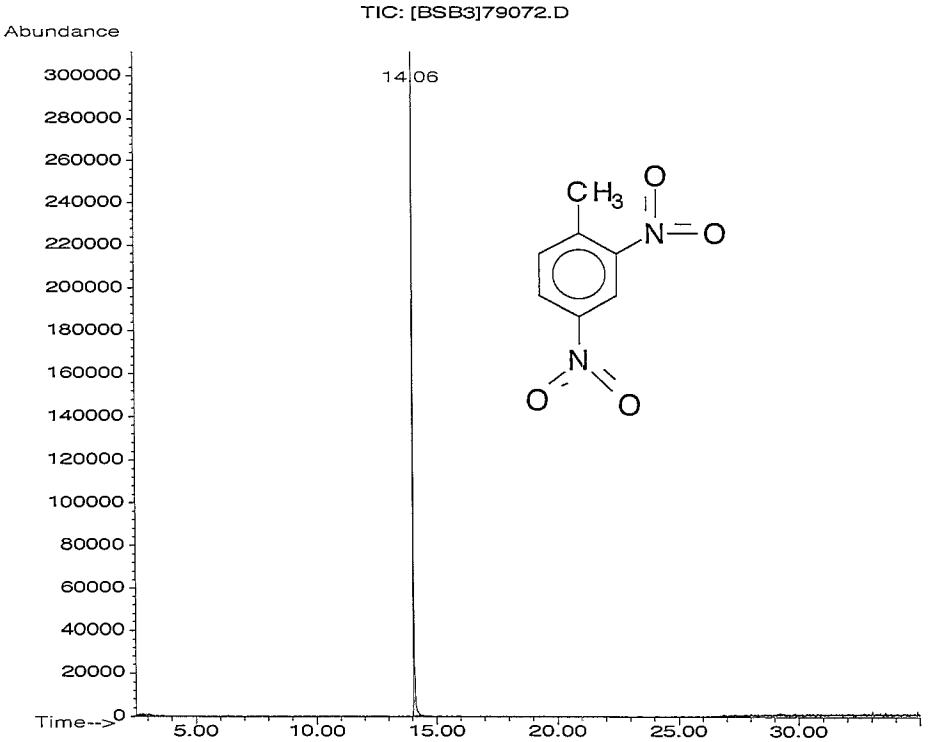
Weight(s) shown below were combined and diluted to: 100.0 0.002 Flask Uncertainty

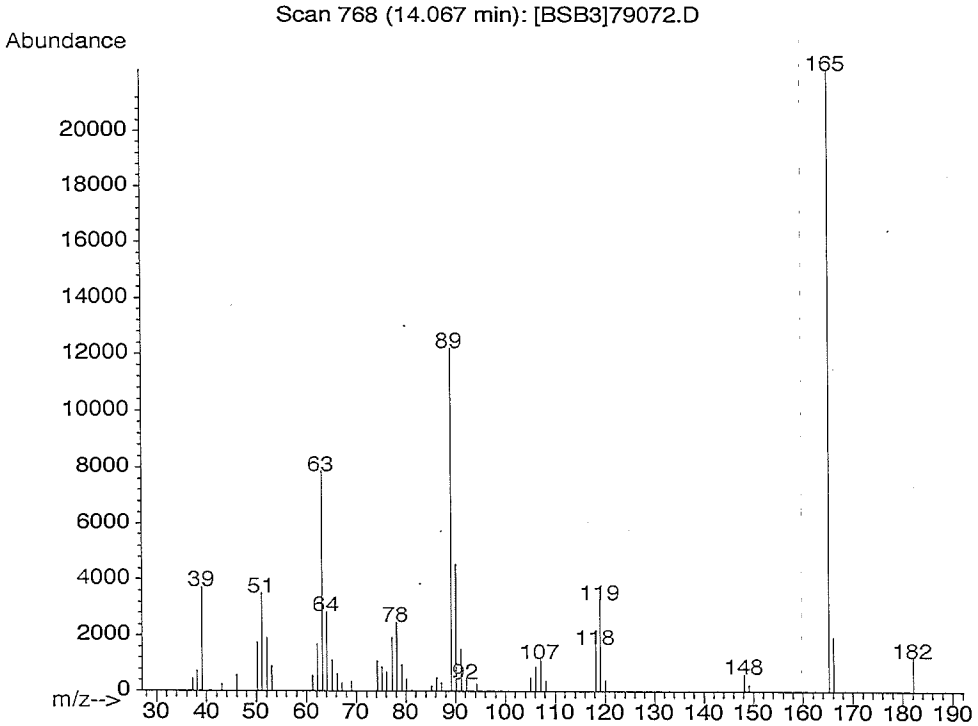
Pat Scaturchio	110510
Formulated By: Pat Scaturchio	DATE
Pedro Rentas	110510
Reviewed By: Pedro L. Rentas	DATE

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. 2,4-Dinitrotoluene	160	00913MP	1000	97	0.2	0.10308	0.10318	1001.0	0.00424	00121-14-2	1.5mg/m3/8H (skin)	orl-rat 268mg/kg

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 300°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Nicole Poisson.





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USA

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-02-0.1X
Description: 2,4-Dinitrotoluene

Date Certified: Mar 28, 2011
Expiration: Mar 28, 2021
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

		Ratio
Lot:	211031352	
Solvent:	Acetonitrile	50
	Methanol	50

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
2,4-Dinitrotoluene	121-14-2	100	100.0	100.0

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A period (.) is used as a decimal place marker.

1. All weights are traceable through NIST, Test No.822/272103-05
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.
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For use in routine laboratory analysis.

See reverse side for additional information
Refer to the MSDS for additional safety information

Certified by: R. Cooper
Russ Cooper, QC Manager

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-05-0.1X
Description: RDX

Date Certified: Jun 18, 2013
Expiration: Jun 18, 2015
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

Lot: 211111333-01

Solvent:	Ratio
Acetonitrile	50
Methanol	50

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
RDX	121-82-4	98.6	100.3	98.9

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2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.
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See reverse side for additional information
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Certified by: R. Cooper
Russ Cooper, QC Manager

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Rev. 7/11

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New Haven, CT 06513
USA

AccuStandard® Inc.

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-1-10X
Description: Nitroglycerin

Date Certified: May 9, 2013
Expiration: May 9, 2015
Sample Size: 1 mL
Storage Condition: Refrig (0-5° C)
Hazards: HIGHLY FLAMMABLE

Lot: 213031341

Solvent:		Ratio
	Ethanol	97
	Methanol	3

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Nitroglycerin	55-63-0	99.4	1003	997

AccuStandard follows U.S. conventions in reporting numerical values on both certificates and labels:

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

1. All weights are traceable through NIST, Test No.822-275872-11
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3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

See reverse side for additional information
Refer to the MSDS for additional safety information

Certified by: R. Cooper
Russ Cooper, QC Manager

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

Analytical Run Number _____

Calibration Information

Tune Data (If applicable)

Initial Calibration (If different than Initial Calibration in Run 1)
- Calibration Factor Summary
- Chromatogram
- Quant Report (If applicable)

Continuing Calibration
- Calibration Response Check
- Chromatogram
- Quant Report (If applicable)

Instrument Logs/Analysis Notebook Pages

Blank / Field Sample / QC Data

Form 1 (If required)
Chromatogram
Quant Report (If applicable)
Confirmation Analysis Quant Report / Chromatogram (If applicable)
Tentatively Identified Compounds (If required)

Rev. 1.0

Calibration Information

Tune Data (If applicable)

Initial Calibration (If different than Initial Calibration in Run 1)
- Calibration Factor Summary
- Chromatogram
- Quant Report (If applicable)

Continuing Calibration
- Calibration Response Check
- Chromatogram
- Quant Report (If applicable)

Rev. 1.0

Method C:\HPCHEM\1\METHODS\EXPHH2.M

Calibration Table

Calib. Data Modified : Monday, October 28, 2013 10:25:13 AM

Calculate : External Standard
Based on : Peak Area

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.500 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.500 min
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Linear
Origin : Included
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Lvl	Amount [PPB]	Area	Amt/Area	Ref	Grp	Name
8.078	2	1	50.00000	7.59689	6.58164			RDX
		2	100.00000	15.85412	6.30751			
		3	200.00000	32.88393	6.08200			
		4	400.00000	65.29810	6.12575			
		5	800.00000	130.46573	6.13188			
13.125	2	1	50.00000	22.22412	2.24981			1,4-DNB(Surr)
		2	100.00000	44.25861	2.25945			
		3	200.00000	90.42964	2.21166			
		4	400.00000	180.48079	2.21630			
		5	800.00000	361.87109	2.21073			
18.179	1	1	50.00000	12.96533	3.85644			Nitroglycerine
		2	100.00000	25.27819	3.95598			
		3	200.00000	53.49364	3.73876			
		4	400.00000	102.50692	3.90218			
		5	800.00000	207.15292	3.86188			
24.995	2	1	50.00000	24.45439	2.04462			2,4-DNT
		2	100.00000	48.33740	2.06879			
		3	200.00000	97.77531	2.04551			
		4	400.00000	194.47369	2.05683			
		5	800.00000	390.39532	2.04920			

ICAL
4 Compds only:
RDX
1,4-DNB (Surr)
NG
2,4-DNT
Pass JD 10/28/13

Peak Sum Table

No Entries in table

==========

Calibration Curves

==========

RDX at exp. RT: 8.078
VWD1 A, Wavelength=254 nm
Correlation: 0.99998
Residual Std. Dev.: 0.33271
Formula: y = mx + b
m: 1.63484e-1
b: -2.16881e-1
x: Amount[PPB]
y: Area

1,4-DNB(Surr) at exp. RT: 13.125
VWD1 A, Wavelength=254 nm
Correlation: 1.00000
Residual Std. Dev.: 0.40912
Formula: y = mx + b
m: 4.52724e-1
b: -4.09628e-1
x: Amount[PPB]
y: Area

Nitroglycerine at exp. RT: 18.179
DAD1 A, Sig=205,10 Ref=300,100
Correlation: 0.99993
Residual Std. Dev.: 1.04607
Formula: y = mx + b
m: 2.58593e-1
b: 9.62472e-2
x: Amount[PPB]
y: Area

2,4-DNT at exp. RT: 24.995
VWD1 A, Wavelength=254 nm
Correlation: 1.00000
Residual Std. Dev.: 0.39179
Formula: y = mx + b
m: 4.87881e-1
b: -1.29941e-1
x: Amount[PPB]
y: Area

==========

Injection Date : 10/24/13 7:18:27 PM
Sample Name : 50 PPB 1008042
Acq. Operator : JGD

Seq. Line : 13
Location : Vial 6
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 10/28/13 10:15:40 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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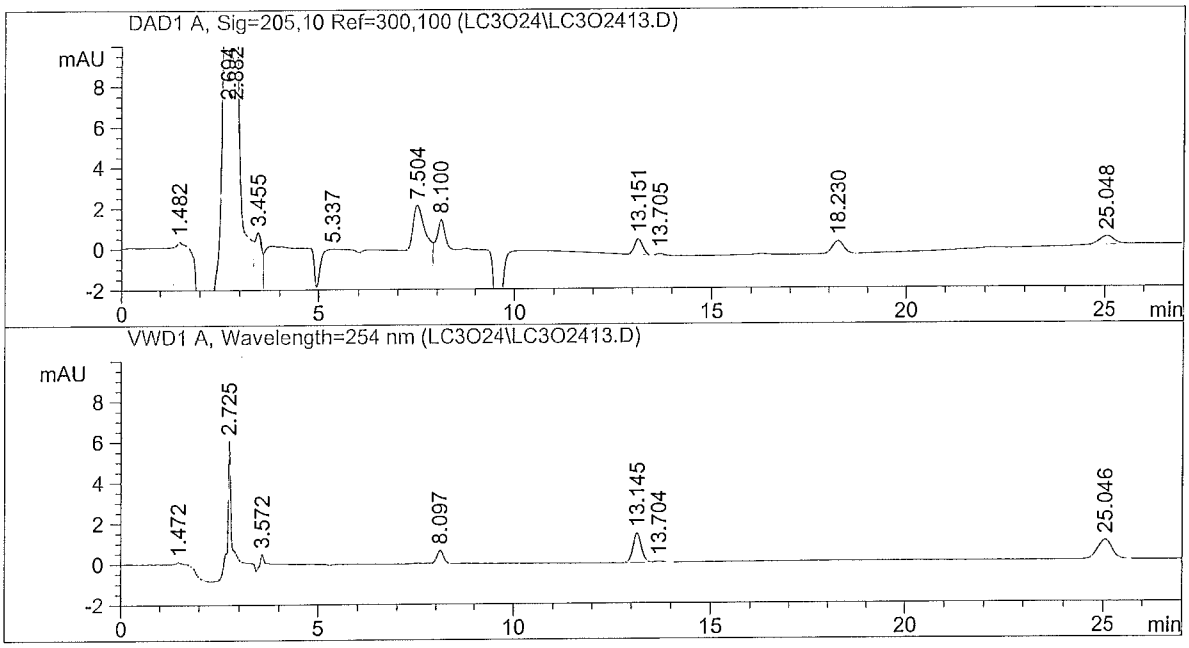

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : Monday, October 28, 2013 10:14:52 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.097	2	BP	7.59689	6.58164	50.00000		RDX
13.145	2	BV	22.22412	2.24981	50.00000		1,4-DNB(Surr)
18.230	1	BP	12.96533	3.85644	50.00000		Nitroglycerine
25.046	2	BB	24.45439	2.04462	50.00000		2,4-DNT

Totals : 200.00000

Results obtained with enhanced integrator!

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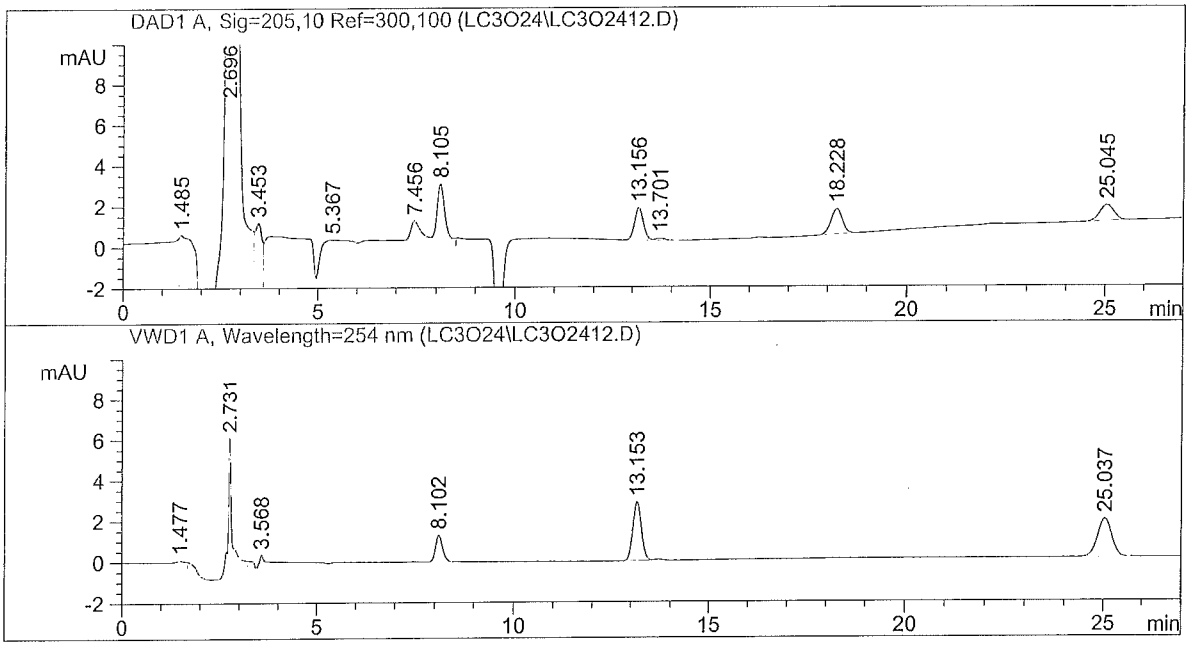
*** End of Report ***

Data File C:\HPCHEM\1\DATA\LC3O24\LC3O2412.D Sample Name: 100 PPB 1008042

Injection Date	: 10/24/13 6:49:15 PM	Seq. Line	: 12
Sample Name	: 100 PPB 1008042	Location	: Vial 5
Acq. Operator	: JGD	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 10/28/13 10:19:36 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 10/28/13 10:19:36 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.102	2	BB	15.85412	6.35129	100.69418		RDX
13.153	2	BB	44.25861	2.25783	99.92859		1,4-DNB(Surr)
18.228	1	BP	25.27819	3.93896	99.56981		Nitroglycerine
25.037	2	BB	48.33740	2.06472	99.80299		2,4-DNT
Totals :					399.99557		

Results obtained with enhanced integrator!

*** End of Report ***

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Injection Date : 10/24/13 6:20:08 PM
Sample Name : 200 PPB 1008042
Acq. Operator : JGD

Seq. Line : 11
Location : Vial 4
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 10/28/13 10:21:16 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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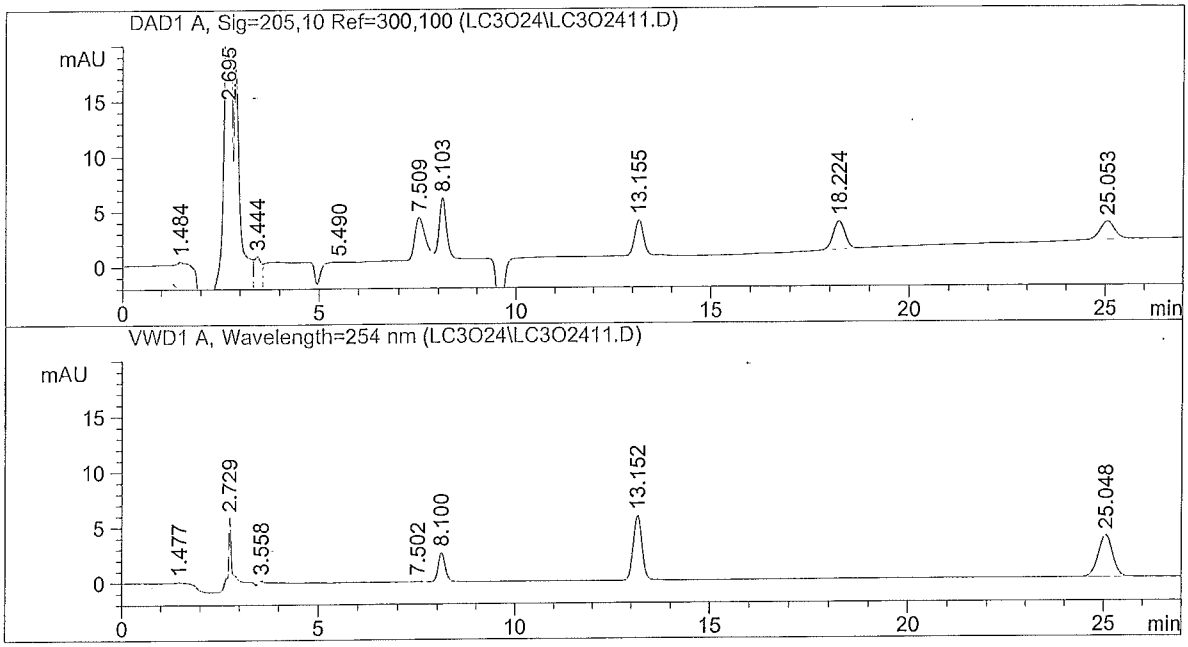

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 10/28/13 10:19:36 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.100	2	BB	32.88393	6.32862	208.10987		RDX
13.152	2	BB	90.42964	2.25866	204.24962		1,4-DNB(Surr)
18.224	1	BB	53.49364	3.94794	211.18950		Nitroglycerine
25.048	2	BB	97.77531	2.06678	202.07972		2,4-DNT
Totals :					825.62871		

Results obtained with enhanced integrator!

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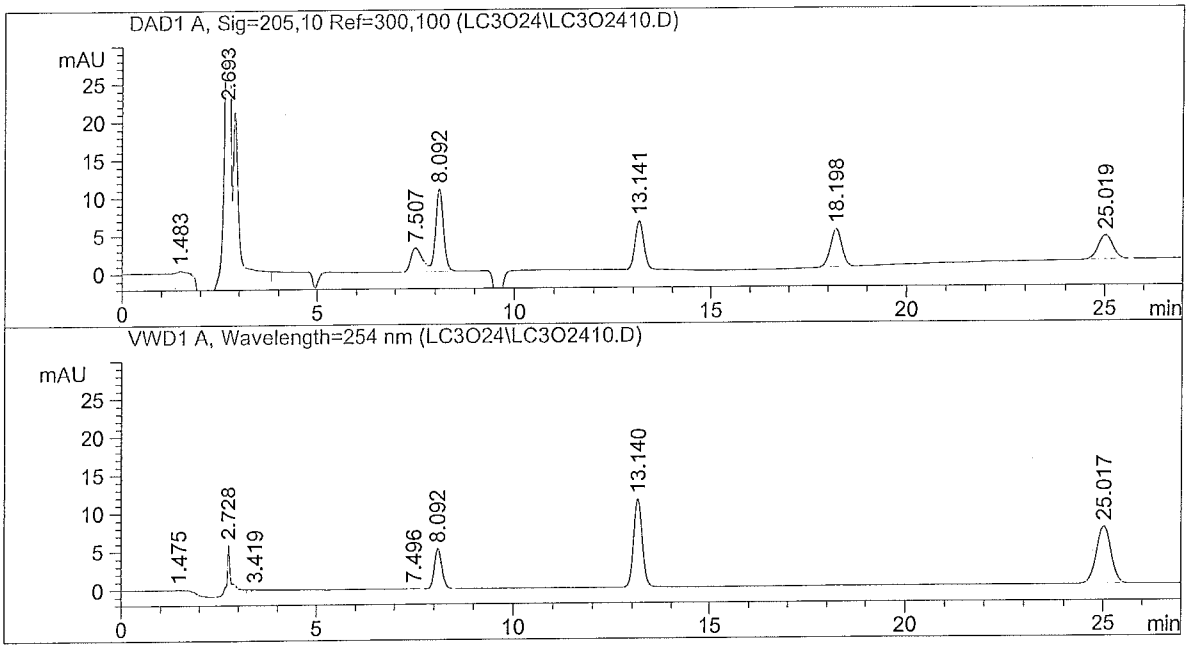
*** End of Report ***

Injection Date	: 10/24/13 5:50:56 PM	Seq. Line :	10
Sample Name	: 400 PPB 1008042	Location :	Vial 3
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl
Acq. Method	: C:\HPCHEM\1\METHODS\EXPHH1.M		
Last changed	: 10/24/13 4:43:40 PM by JGD		
Analysis Method	: C:\HPCHEM\1\METHODS\EXPHH2.M		
Last changed	: 10/28/13 10:22:36 AM by JGD (modified after loading)		

EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By	:	Retention Time
Calib. Data Modified	:	Monday, October 28, 2013 10:22:14 AM
Multiplier	:	1.0000
Dilution	:	1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.092	2	BB	65.29810	6.08902	397.60141		RDX
13.140	2	BB	180.48079	2.21534	399.82709		1,4-DNB(Surr)
18.198	1	BP	102.50692	3.75739	385.15857		Nitroglycerine
25.017	2	BB	194.47369	2.04801	398.28454		2,4-DNT
Totals :					1580.87161		

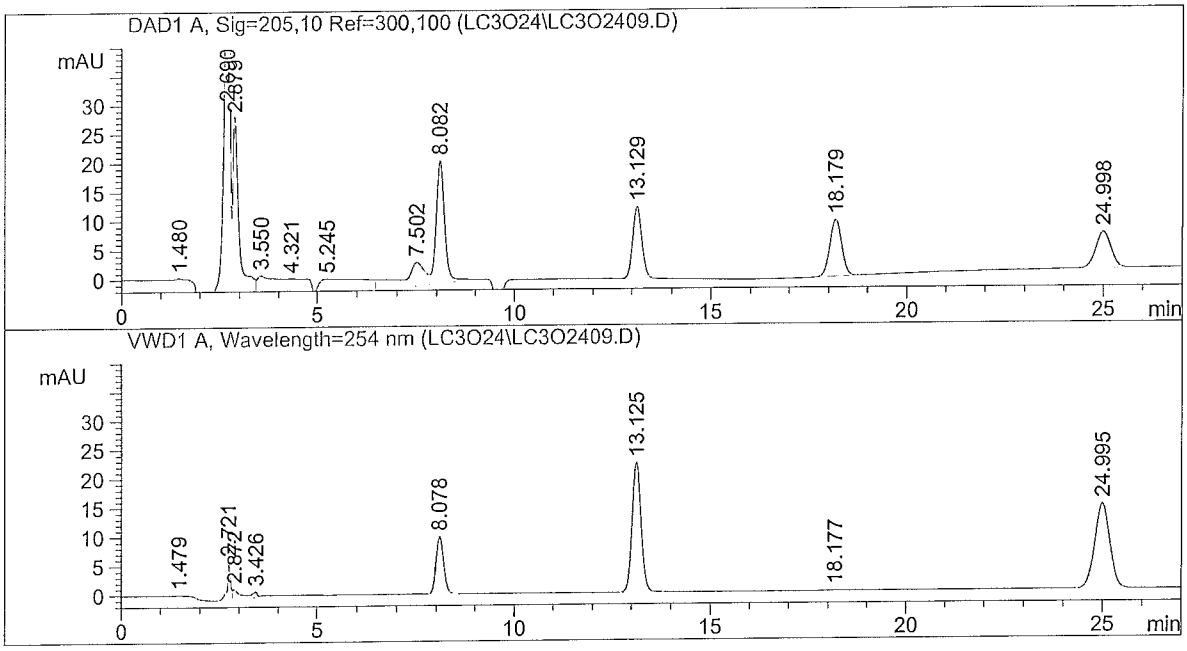
Results obtained with enhanced integrator!

*** End of Report ***

Data File C:\HPCHEM\1\DATA\LC3O24\LC3O2409.D Sample Name: 800 PPB 1008042

Injection Date	: 10/24/13 5:21:49 PM	Seq. Line :	9
Sample Name	: 800 PPB 1008042	Location :	Vial 2
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 10/28/13 10:24:09 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By	:	Retention Time
Calib. Data Modified	:	Monday, October 28, 2013 10:23:42 AM
Multiplier	:	1.0000
Dilution	:	1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

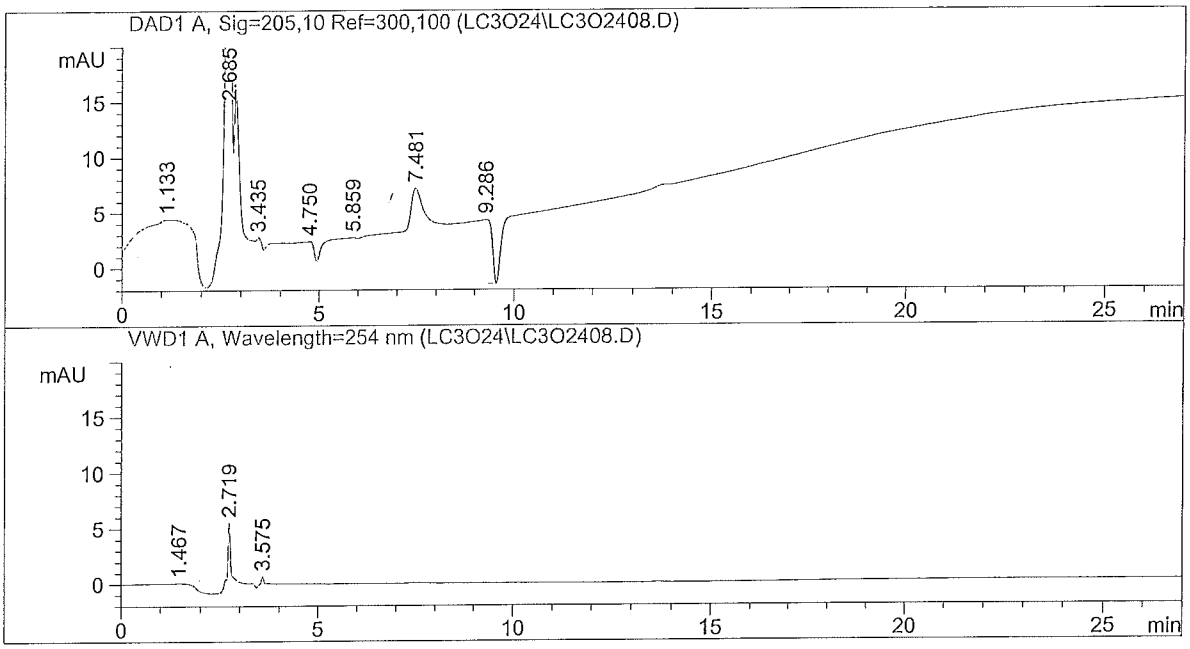
RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.078	2	BB	130.46573	6.10540	796.54608		RDX
13.125	2	BB	361.87109	2.21410	801.21946		1,4-DNB(Surr)
18.179	1	PB	207.15292	3.88041	803.83749		Nitroglycerine
24.995	2	BB	390.39532	2.05550	802.45750		2,4-DNT
Totals :					3204.06052		

Results obtained with enhanced integrator!

*** End of Report ***

Injection Date	: 10/24/13 4:52:37 PM	Seq. Line :	8
Sample Name	: CAL BLK 1008042	Location :	Vial 1
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 10/28/13 10:26:04 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : Monday, October 28, 2013 10:25:13 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.078	2		-	-	-		RDX
13.125	2		-	-	-		1,4-DNB(Surr)
18.179	1		-	-	-		Nitroglycerine
24.995	2		-	-	-		2,4-DNT

Totals : 0.00000

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

```
==================================================================
Injection Date  : 10/24/13 4:52:37 PM          Seq. Line :   8
Sample Name     : CAL BLK 1008042               Location : Vial 1
Acq. Operator   : JGD                                Inj :   1
                                              Inj Volume : 100 µl

Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed    : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 10/28/13 10:26:04 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================

==================================================================
                         Area Percent Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      Monday, October 28, 2013 10:25:13 AM
Multiplier             :      1.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

Peak RetTime Sig  Type     Area       Area    Name
  #   [min]                            %
----|-------|---|------|----------|--------|------------------------
   1   8.078  2            0.00000   0.0000 RDX
   2  13.125  2            0.00000   0.0000 1,4-DNB(Surr)
   3  18.179  1            0.00000   0.0000 Nitroglycerine
   4  24.995  2            0.00000   0.0000 2,4-DNT

Totals :                   0.00000

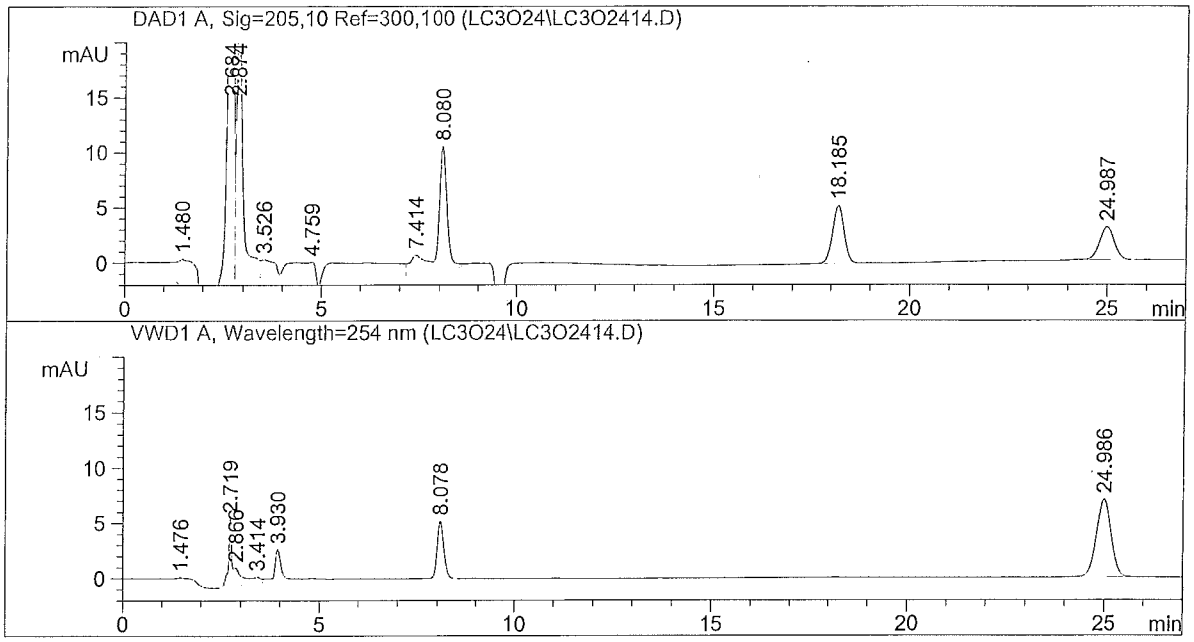
 Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==================================================================
                        *** End of Report ***
```

Injection Date	: 10/24/13 7:47:35 PM	Seq. Line	: 14
Sample Name	: 400 PPB 1008043 ICV	Location	: Vial 7
Acq. Operator	: JGD	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH1.M
Last changed : 10/24/13 4:43:40 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 10/28/13 10:26:04 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : Monday, October 28, 2013 10:25:13 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

± 15% = 340 – 460

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
8.078	2	BP	64.65681	6.13733	396.82007		RDX
13.125	2		-	-	-		1,4-DNB(Surr)
18.185	1	BB	109.86657	3.86369	424.49030		Nitroglycerine
24.986	2	BB	183.31058	2.05113	375.99429		2,4-DNT
Totals :					1197.30465		

Pass
JD 10/28/13

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Data File C:\HPCHEM\1\DATA\LC3N01\LC3N0101.D Sample Name: 400 PPB 1008047

==========

Injection Date : 11/1/13 3:34:11 PM
Sample Name : 400 PPB 1008047
Acq. Operator : JGD

Seq. Line : 1
Location : Vial 1
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 3:32:03 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 11:51:46 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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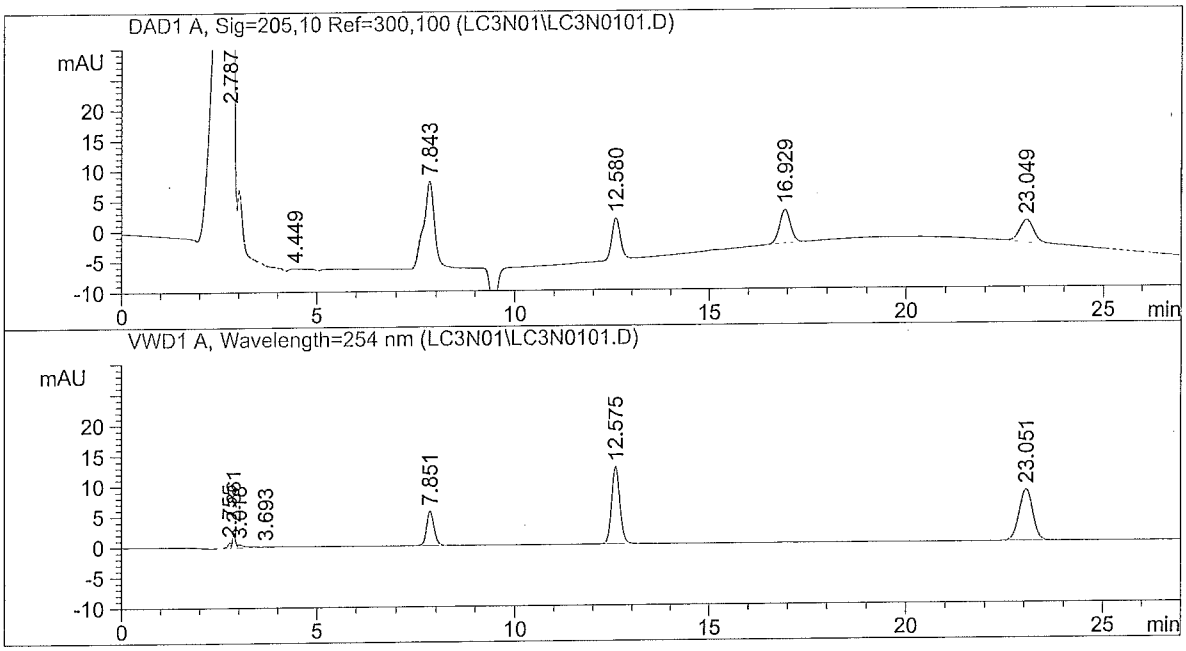

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.851	2	BB	70.47855	6.13563	432.43054		RDX
12.575	2	BB	191.40306	2.21358	423.68582		1,4-DNB(Surr)
16.929	1	BBA	107.93763	3.86363	417.03094		Nitroglycerine
23.051	2	BB	204.29889	2.05098	419.01360		2,4-DNT

Pass +/- 15%
JGD 11/4/13

Totals : 1692.16090

Results obtained with enhanced integrator!

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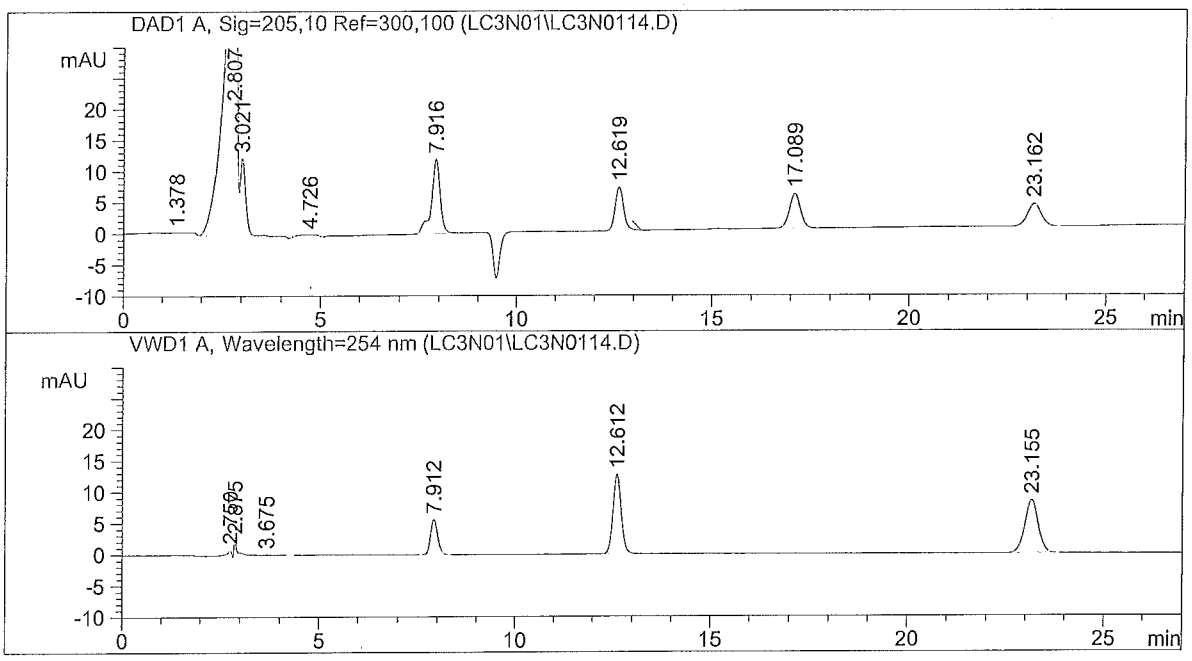
*** End of Report ***

Injection Date	: 11/1/13 9:53:41 PM	Seq. Line :	14
Sample Name	: 400 PPB 1008047	Location :	Vial 1
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\LC3N01.S		
Method	: C:\HPCHEM\1\METHODS\EXPHH2.M		
Last changed	: 11/1/13 9:51:40 PM by JGD (modified after loading)		

EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By	:	Retention Time
Calib. Data Modified	:	11/1/13 4:39:37 PM
Multiplier	:	1.0000
Dilution	:	1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.912	2	BB	69.03755	6.13603	423.61620		RDX
12.612	2	BB	192.23207	2.21356	425.51698		1,4-DNB(Surr)
17.089	1	BB	109.74442	3.86369	424.01795		Nitroglycerine
23.155	2	BB	205.54109	2.05098	421.55972		2,4-DNT
Totals :					1694.71085		

340 – 460
Pass
JP 11/1/13

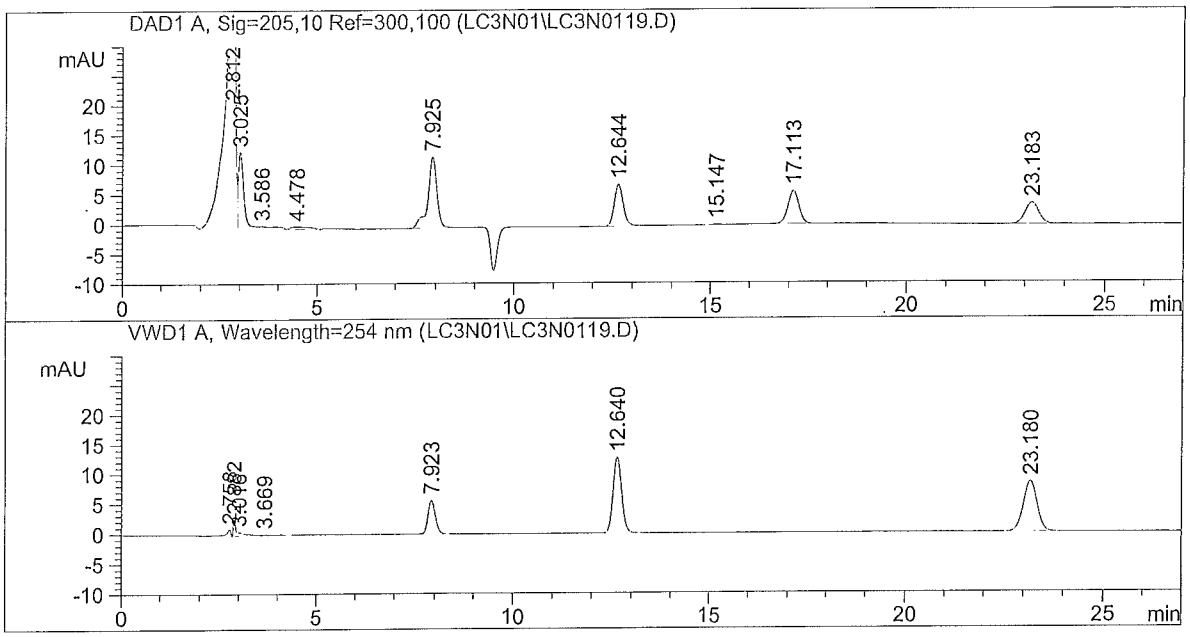
Results obtained with enhanced integrator!

*** End of Report ***

Data File C:\HPCHEM\1\DATA\LC3N01\LC3N0119.D Sample Name: 400 PPB 1008047

Injection Date	: 11/2/13 12:19:32 AM	Seq. Line :	19
Sample Name	: 400 PPB 1008047	Location :	Vial 1
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/2/13 12:17:32 AM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 11:54:48 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.923	2	BB	68.46732	6.13619	420.12822		RDX
12.640	2	BB	192.47765	2.21355	426.05942		1,4-DNB(Surr)
17.113	1	BBA	109.39173	3.86367	422.65407		Nitroglycerine
23.180	2	BB	205.05721	2.05098	420.56791		2,4-DNT

Totals : 1689.40961

Results obtained with enhanced integrator!

*** End of Report ***

Pass (340-460)
JGD 11/4/13

Instrument Logs/
Analysis Notebook Pages

Rev. 1.0

1° Column. 1 CAL for HI Tissue *
Mobile Phase 3135-70
0.900 mL / min ; 100 µL Inj. Vol., 30° C
Column Ser No. 542447-2

* 3 Analytes only: RDX, NG + 2,4-DNT (+ 1,4 DNB Surr.)

Sequence: C:\HPCHEM\1\SEQUENCE\LC3024.S

Sequence Table:

Method and Injection Info Part:

	Line	Location	SampleName	Method	Inj	
LC3024	1	Vial 1	CAL BLK 1008042	EXPHH1	1	DAD λ @ 214 nm
	2	Vial 2	800 PPB 1008042	EXPHH1	1	
	3	Vial 3	400 PPB 1008042	EXPHH1	1	
	4	Vial 4	200 PPB 1008042	EXPHH1	1	
	5	Vial 5	100 PPB 1008042	EXPHH1	1	
	6	Vial 6	50 PPB 1008042	EXPHH1	1	
	7	Vial 7	400 PPB 1008043	EXPHH1	1	
	8	Vial 1	CAL BLK 1008042	EXPHH1	1	DAD λ @ 205 nm ** EXPHH2.m
	9	Vial 2	800 PPB 1008042	EXPHH1	1	
	10	Vial 3	400 PPB 1008042	EXPHH1	1	
	11	Vial 4	200 PPB 1008042	EXPHH1	1	
	12	Vial 5	100 PPB 1008042	EXPHH1	1	
	13	Vial 6	50 PPB 1008042	EXPHH1	1	
LC3024	14	Vial 7	400 PPB 1008043	EXPHH1	1	

10/28/13

** NG area is better (higher) at this λ
5-point ICAL passes / Name EXPHH2.m

Continued on Page

Read and Understood By

Signed 10/28/13 Date Signed 11/4/13 Date

HW. Tissues - 1° Column

Sequence: C:\HPCHEM\1\SEQUENCE\LC3N01.S

Sequence Table:

Method and Injection Info Part:

	Line	Location	SampleName	Method	Inj
	====	========	==========	========	===
LC3 N0101.		Vial 1	400 PPB 1008047 Pass	EXPHH2	1
	2	Vial 2	6556-01B1/B10116	EXPHH2	1
	3	Vial 3	6556-01K1/B10116	EXPHH2	1
	4	Vial 4	6555-14	EXPHH2	1
	5	Vial 5	6555-15	EXPHH2	1
	6	Vial 6	6555-16	EXPHH2	1
	7	Vial 7	6555-17	EXPHH2	1
	8	Vial 8	6555-18	EXPHH2	1
	9	Vial 9	6555-19	EXPHH2	1
	10	Vial 10	6555-20	EXPHH2	1
	11	Vial 11	6556-01	EXPHH2	1
	12	Vial 12	6556-01MS	EXPHH2	1
	13	Vial 13	6556-01MD	EXPHH2	1
	14	Vial 1	400 PPB 1008047 Pass	EXPHH2	1
	15	Vial 14	6556-02	EXPHH2	1
	16	Vial 15	6556-03	EXPHH2	1
	17	Vial 16	6556-04	EXPHH2	1
	18	Vial 17	6556-05	EXPHH2	1
LC3 N0119		Vial 1	400 PPB 1008047 Pass	EXPHH2	1

GP 11/4/13

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
GP	11/4/13	BT	11/14/13

Blank / Field Sample / QC Data

Rev. 1.0

METHOD BLANK REPORT
ARDL, Inc. 400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	NA	ARDL Lab No.:	006556-01B1
Desc/Location:	NA	Lab Filename:	
Sample Date:	NA	Received Date:	NA
Sample Time:	NA	Prep. Date:	10/31/2013
Matrix:	QC Material	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	NA	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units
2,4-Dinitrotoluene	100	500	ND		UG/KG
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG
Nitroglycerine	300	500	ND		UG/KG

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	106%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Blank for Run B6637, 8330, EXPLOSIVES

Page 1 of 1

Data File C:\HPCHEM\1\DATA\LC3N01\LC3N0102.D Sample Name: 6556-01B1/B10116
MBLK B10116

==========

Injection Date	: 11/1/13 4:03:21 PM	Seq. Line :	2
Sample Name	: 6556-01B1/B10116	Location :	Vial 2
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 3:32:03 PM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 11:58:32 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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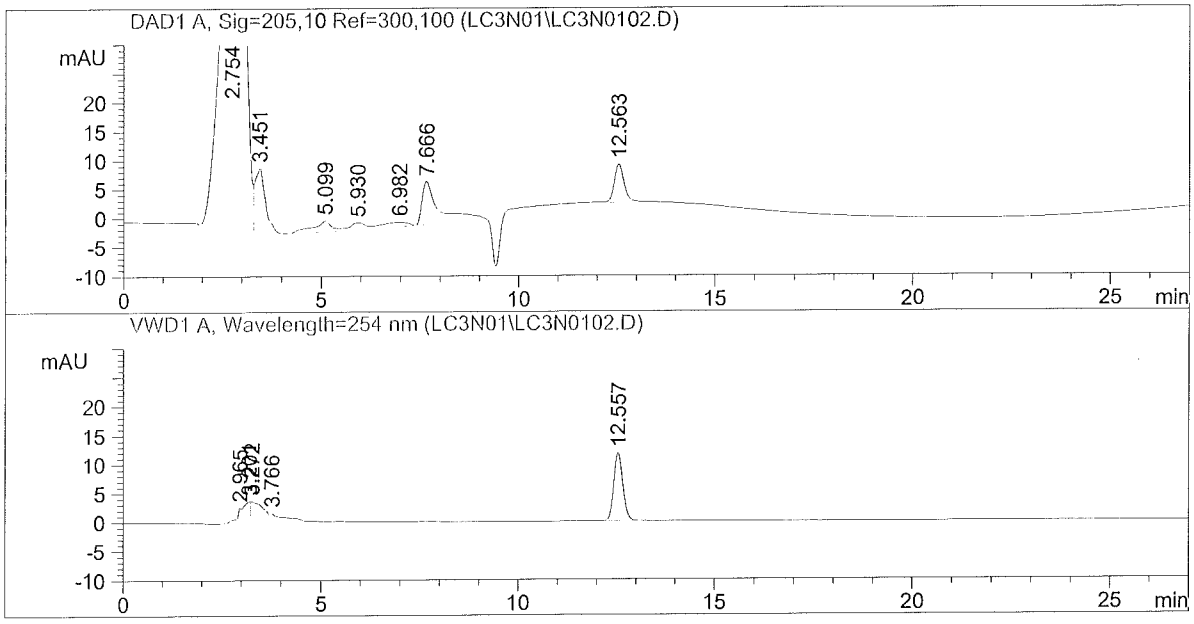

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.557	2	BB	190.82930	2.21359	4224.18467		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 4224.18467

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Instrument 1 11/4/13 11:58:35 AM JGD Page 1 of 1

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	NA	ARDL Lab No.:	006556-01K1
Desc/Location:	NA	Lab Filename:	
Sample Date:	NA	Received Date:	NA
Sample Time:	NA	Prep. Date:	10/31/2013
Matrix:	QC Material	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	NA	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units
2,4-Dinitrotoluene	100	500	4000		UG/KG
Hexahydro-trinitro-triazine (RDX)	200	500	4460		UG/KG
Nitroglycerine	300	500	4380		UG/KG

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	109%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Spike Blank for Run B6637, 8330, EXPLOSIVES

Page 1 of 1

Data File C:\HPCHEM\1\DATA\LC3N01\LC3N0103.D Sample Name: 6556-01K1/B10116
LCS B10116

==========

Injection Date	: 11/1/13 4:32:28 PM	Seq. Line :	3
Sample Name	: 6556-01K1/B10116	Location :	Vial 3
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 4:42:42 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 11:58:32 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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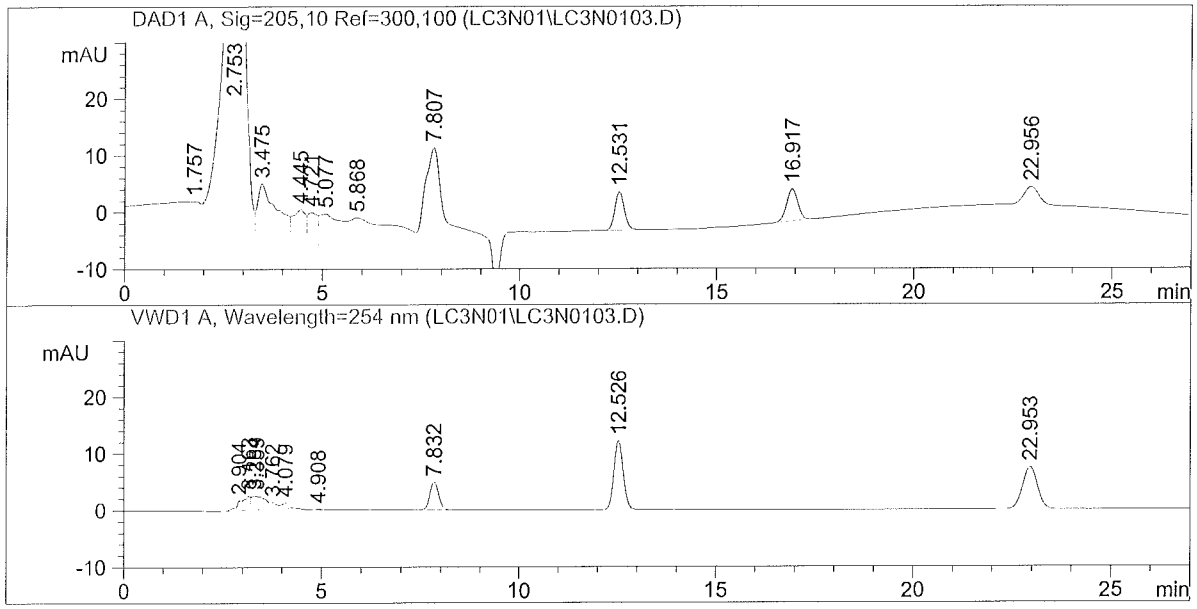

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.832	2	BB	72.75381	6.13504	4463.47877		RDX
12.526	2	BB	196.81728	2.21345	4356.45019		1,4-DNB(Surr)
16.917	1	BV	113.31472	3.86379	4378.24566		Nitroglycerine
22.953	2	BB	195.23112	2.05104	4004.27589		2,4-DNT

Totals : 1.72025e4

Results obtained with enhanced integrator!

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*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK014O	ARDL Lab No.:	006555-14
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0820	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

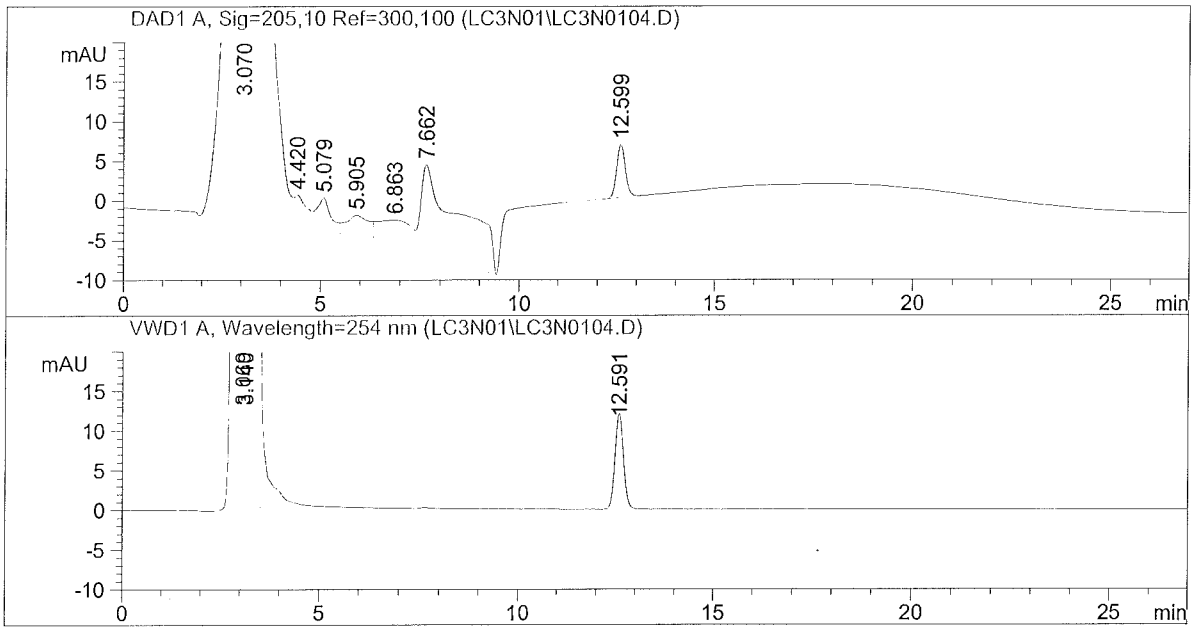
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Injection Date	: 11/1/13 5:01:40 PM	Seq. Line :	4
Sample Name	: 6555-14	Location :	Vial 4
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 4:59:40 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 12:11:06 PM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.591	2	BB	176.94182	2.21397	3917.43076		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3917.43076

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK015O	ARDL Lab No.:	006555-15
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	0830	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

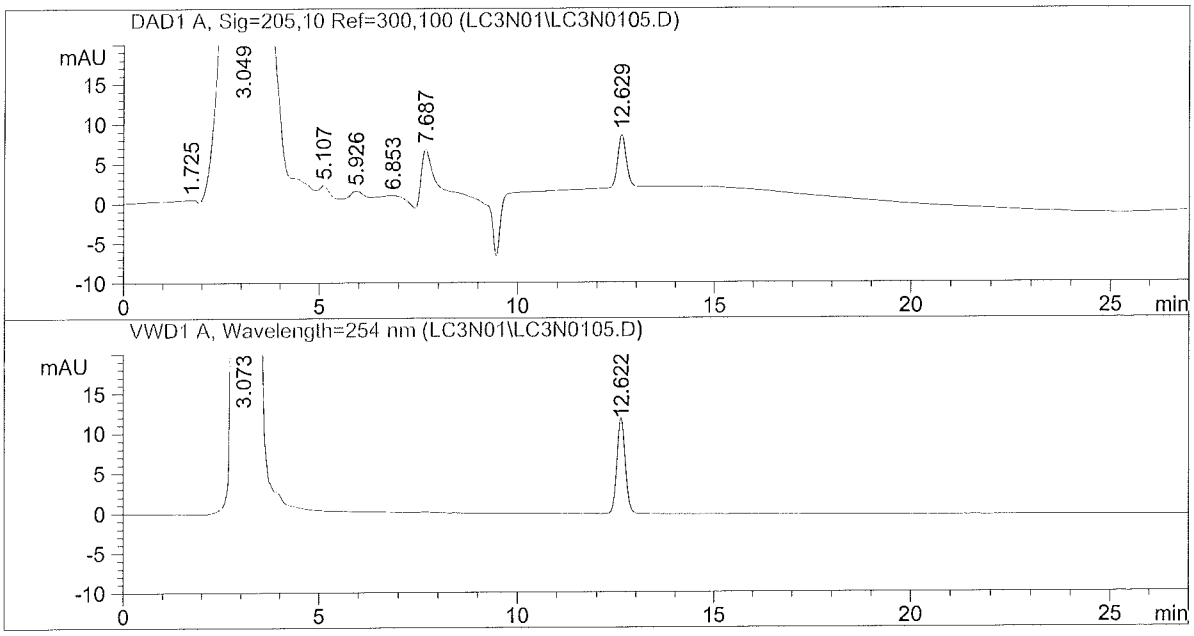
Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-15, 8330, EXPLOSIVES

Page 1 of 1

Injection Date	: 11/1/13 5:30:51 PM	Seq. Line :	5
Sample Name	: 6555-15	Location :	Vial 5
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 5:28:51 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 12:11:06 PM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.622	2	BB	174.39774	2.21404	3861.23575		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3861.23575

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK016O	ARDL Lab No.:	006555-16
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1115	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-16, 8330, EXPLOSIVES

Page 1 of 1

==========

Injection Date : 11/1/13 6:00:01 PM
Sample Name : 6555-16
Acq. Operator : JGD

Seq. Line : 6
Location : Vial 6
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 5:58:02 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/4/13 12:11:06 PM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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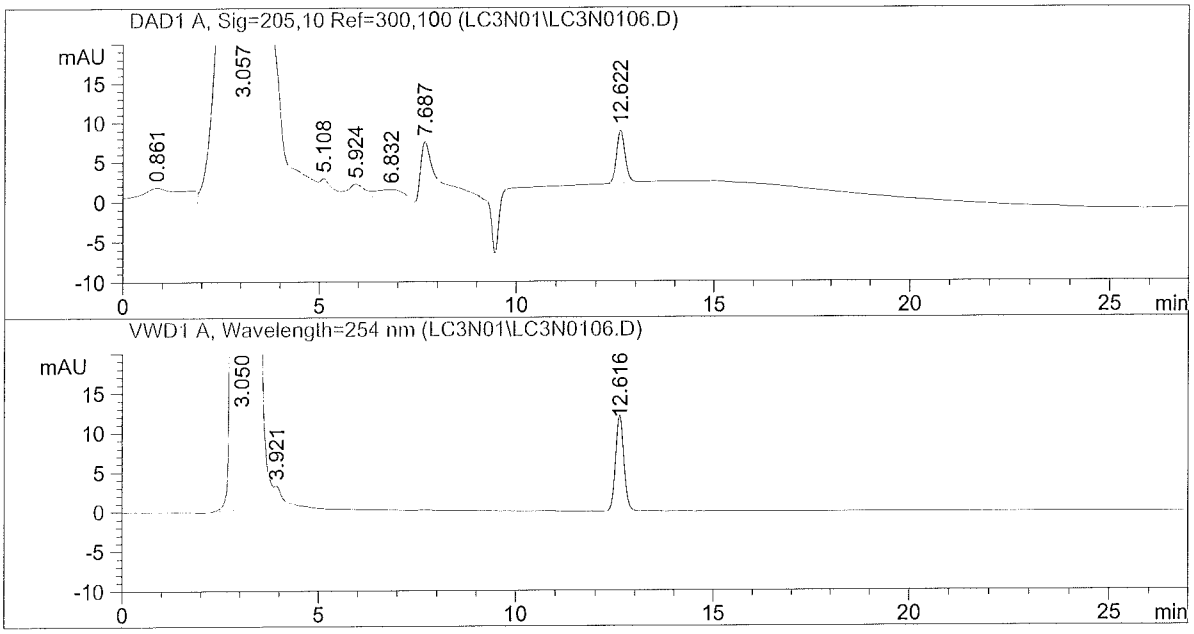

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.616	2	BB	177.71690	2.21394	3934.55125		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3934.55125

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK017O	ARDL Lab No.:	006555-17
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1140	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

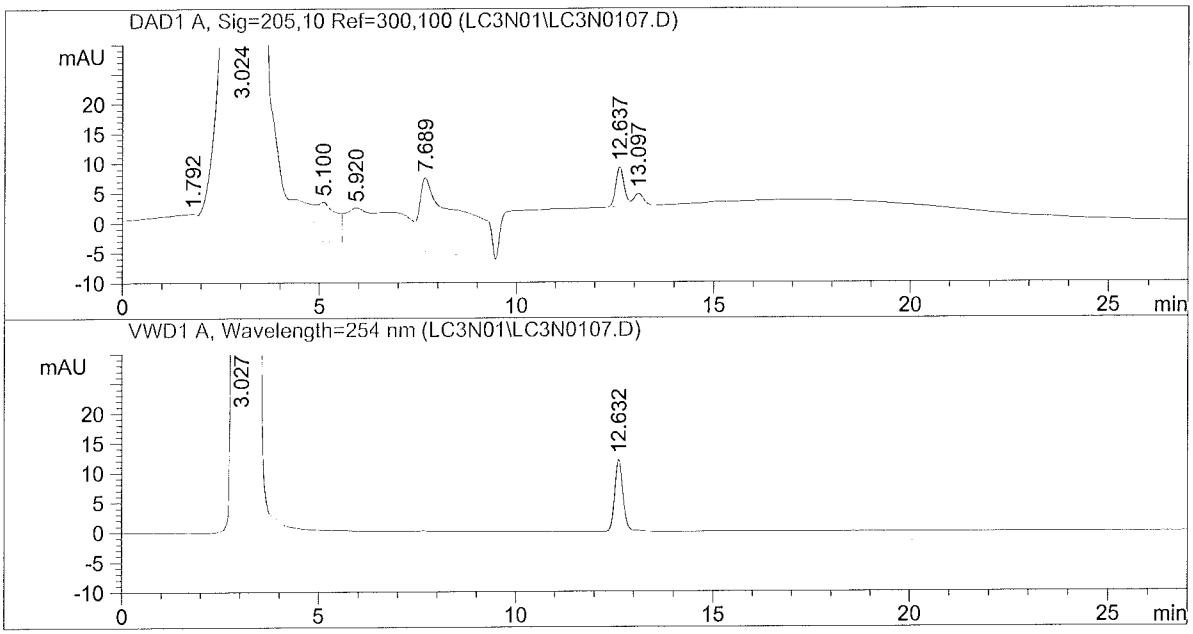
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	99%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Injection Date : 11/1/13 6:29:08 PM
Sample Name : 6555-17
Acq. Operator : JGD

Seq. Line : 7
Location : Vial 7
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 6:27:12 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:02:20 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.632	2	BB	178.35646	2.21392	3948.67812		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3948.67812

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK018O	ARDL Lab No.:	006555-18
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1206	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

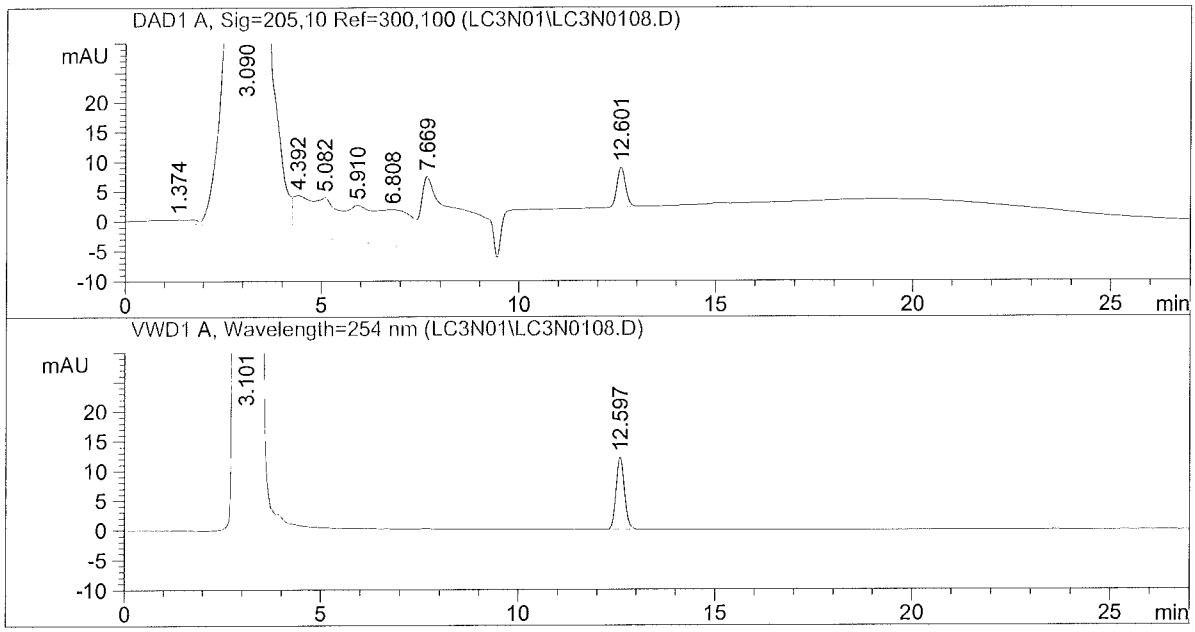
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-18, 8330, EXPLOSIVES

Page 1 of 1

```
==================================================================
Injection Date  : 11/1/13 6:58:22 PM          Seq. Line :   8
Sample Name     : 6555-18                      Location : Vial 8
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/1/13 6:56:20 PM by JGD
                  (modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 10:02:20 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/1/13 4:39:37 PM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.597	2	BB	175.93738	2.21399	3895.24417		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3895.24417

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK019O	ARDL Lab No.:	006555-19
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0833	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-19, 8330, EXPLOSIVES

Page 1 of 1

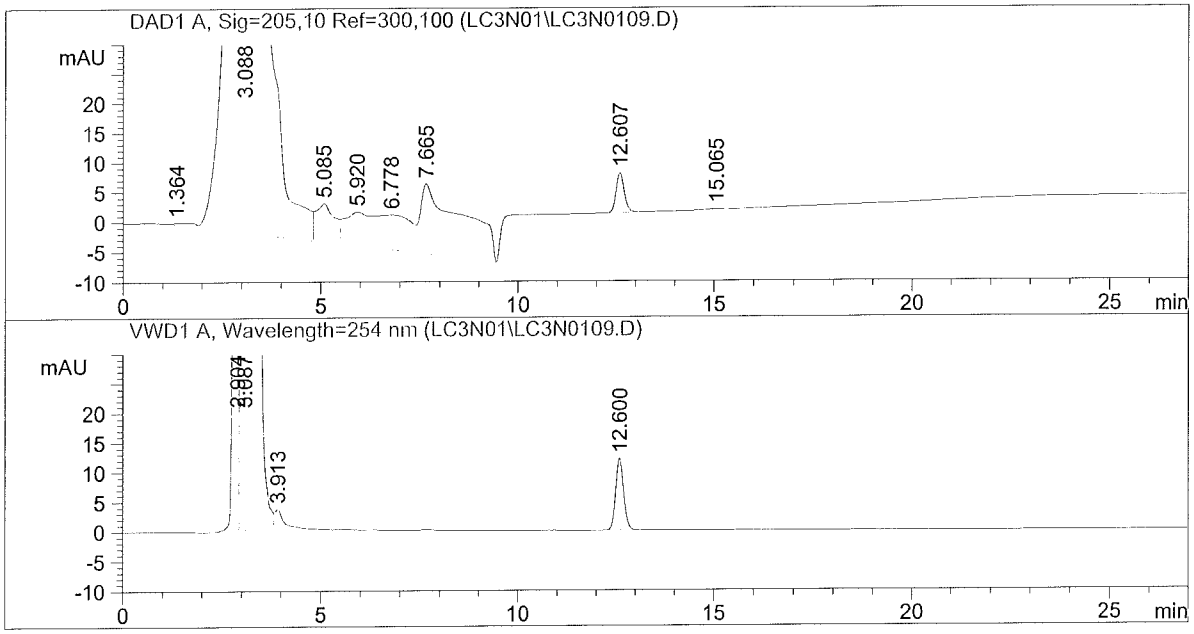
==========

Injection Date : 11/1/13 7:27:36 PM
Sample Name : 6555-19
Acq. Operator : JGD

Seq. Line : 9
Location : Vial 9
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 7:25:32 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:02:20 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

==========



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.600	2	BB	175.41527	2.21401	3883.71153		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3883.71153

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

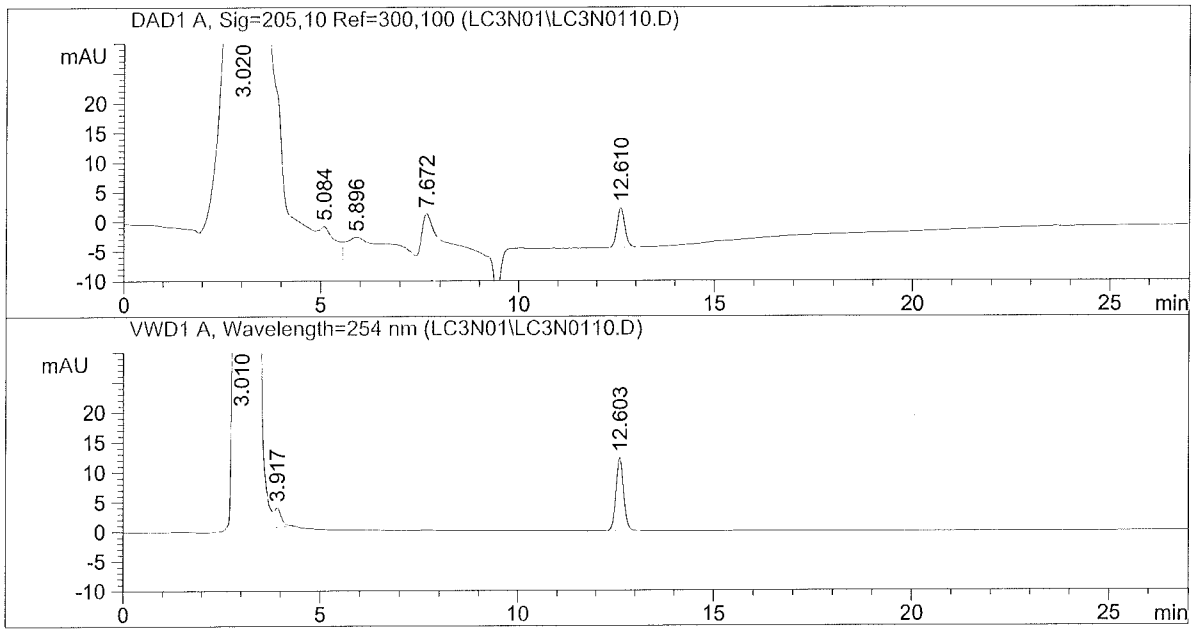
Field ID:	MAK020O	ARDL Lab No.:	006555-20
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0855	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

```
==================================================================
Injection Date  : 11/1/13 7:56:50 PM          Seq. Line :  10
Sample Name     : 6555-20                      Location : Vial 10
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/1/13 7:54:47 PM by JGD
                  (modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 10:02:20 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/1/13 4:39:37 PM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.603	2	BB	176.62152	2.21397	3910.35587		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT
Totals :					3910.35587		

```
 Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==================================================================
                        *** End of Report ***
```

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK007O	ARDL Lab No.:	006556-01
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1125	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	96%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

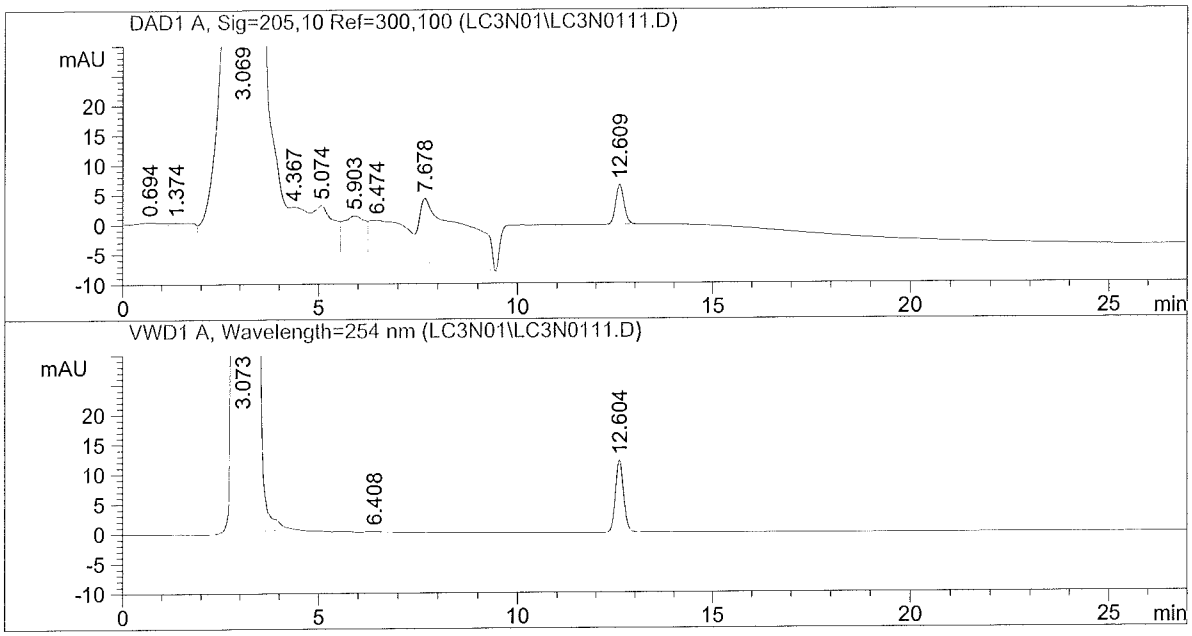
==========

Injection Date : 11/1/13 8:26:07 PM
Sample Name : 6556-01
Acq. Operator : JGD

Seq. Line : 11
Location : Vial 11
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 8:24:02 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:02:20 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

==========



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External Standard Report

==========

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.604	2	BB	174.17113	2.21405	3856.23031		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3856.23031

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK007O	ARDL Lab No.:	006556-01MS
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1125	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

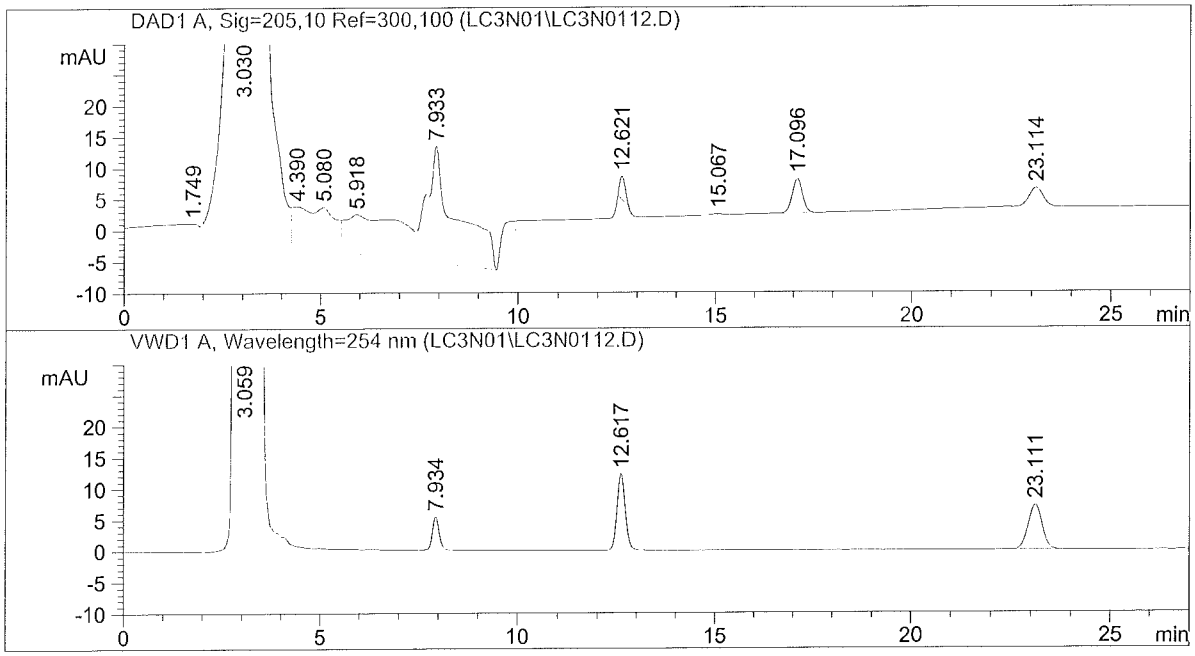
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	3550		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	3860		UG/KG	1
Nitroglycerine	300	500	3930		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Matrix Spike for 006556-01, 8330, EXPLOSIVES

```
==================================================================
Injection Date  : 11/1/13 8:55:18 PM          Seq. Line :  12
Sample Name     : 6556-01MS                    Location : Vial 12
Acq. Operator   : JGD                               Inj :  1
                                             Inj Volume : 100 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\LC3N01.S
Method          : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/1/13 8:53:17 PM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/1/13 4:39:37 PM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.934	2	BB	62.93425	6.13789	3862.83466		RDX
12.617	2	BB	177.02522	2.21396	3919.27305		1,4-DNB(Surr)
17.096	1	BP	101.64365	3.86342	3926.91652		Nitroglycerine
23.111	2	BB	173.06198	2.05122	3549.87948		2,4-DNT

Totals : 1.52589e4

Results obtained with enhanced integrator!

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK007O	ARDL Lab No.:	006556-01MD
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1125	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	3540		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	3860		UG/KG	1
Nitroglycerine	300	500	3920		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Matrix Spike Duplicate for 006556-01, 8330, EXPLOSIVES

Page 1 of 1

==========

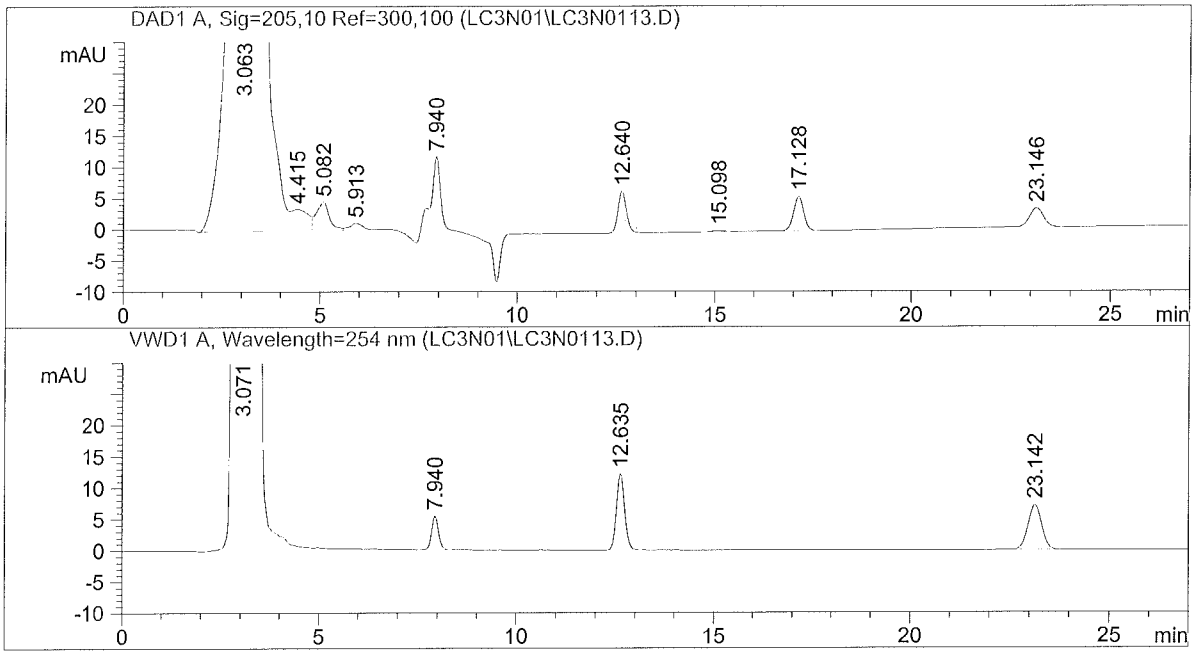
Injection Date : 11/1/13 9:24:29 PM
Sample Name : 6556-01MD
Acq. Operator : JGD

Seq. Line : 13
Location : Vial 13
Inj : 1
Inj Volume : 100 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\LC3N01.S
Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 9:22:29 PM by JGD
(modified after loading)

EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

==========



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.940	2	BB	62.87951	6.13791	3859.48603		RDX
12.635	2	BB	175.67567	2.21400	3889.46352		1,4-DNB(Surr)
17.128	1	BP	101.57039	3.86341	3924.08331		Nitroglycerine
23.142	2	BB	172.70438	2.05122	3542.54972		2,4-DNT

Totals : 1.52156e4

Results obtained with enhanced integrator!

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK022O	ARDL Lab No.:	006556-02
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	1020	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

==========

Injection Date : 11/1/13 10:22:51 PM
Sample Name : 6556-02
Acq. Operator : JGD

Seq. Line : 15
Location : Vial 14
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 10:20:51 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:02:20 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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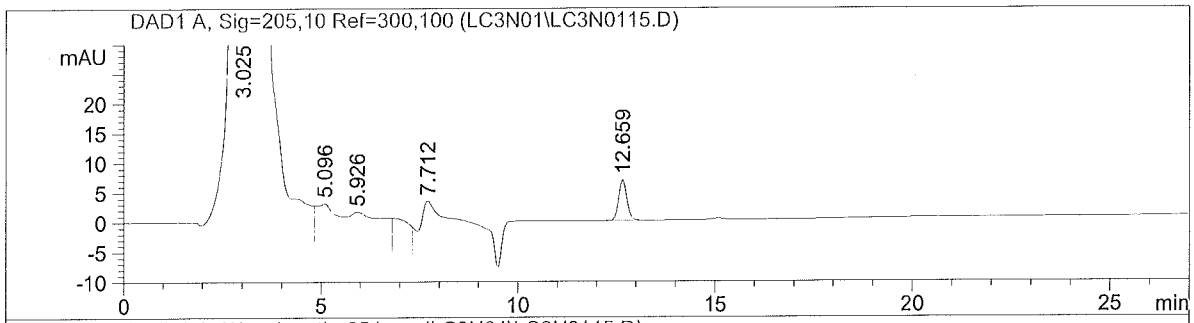

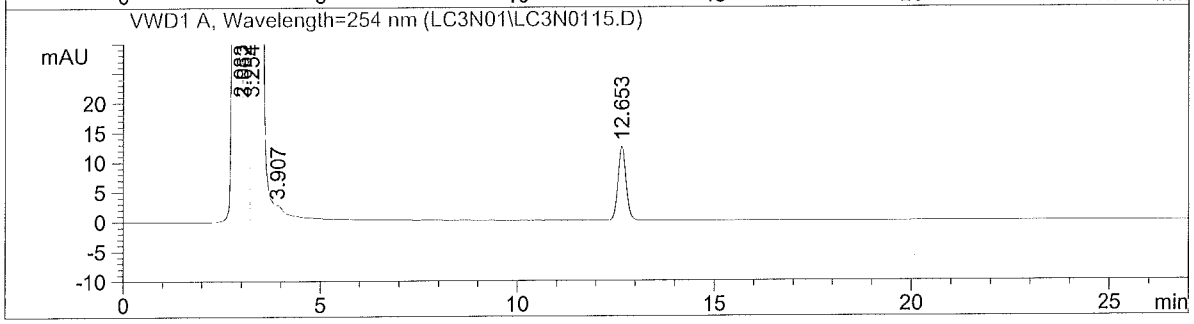

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.653	2	BB	180.65155	2.21386	3999.37325		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3999.37325

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

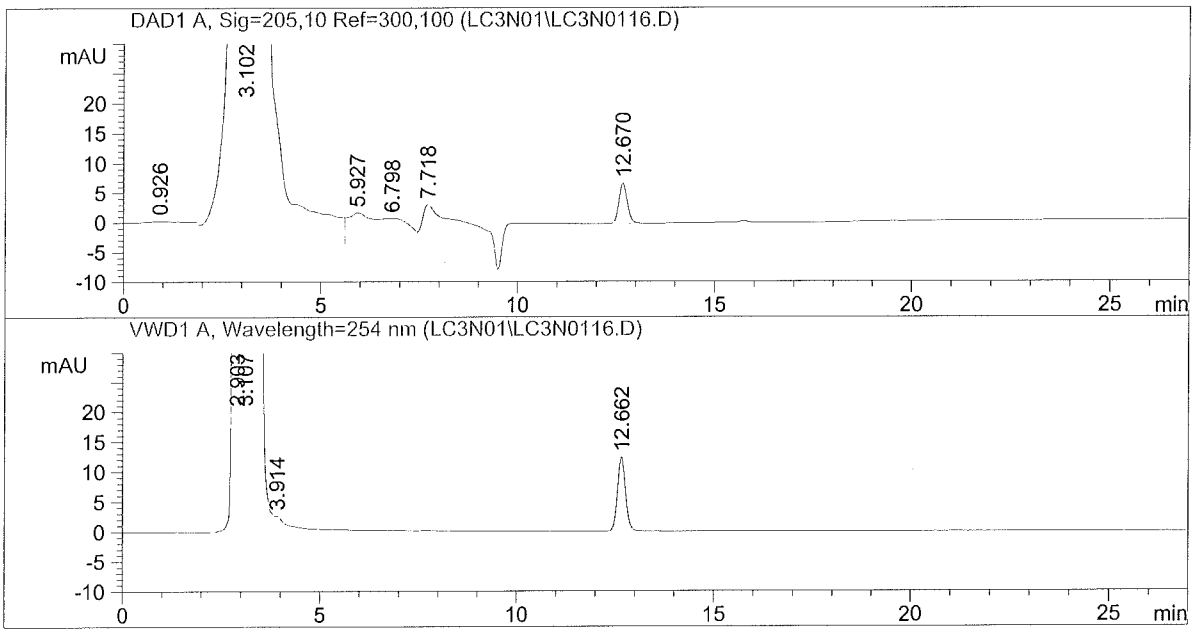
Field ID:	MAK023O	ARDL Lab No.:	006556-03
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	1136	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	99%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

```
==================================================================
Injection Date  : 11/1/13 10:51:58 PM          Seq. Line :  16
Sample Name     : 6556-03                       Location : Vial 15
Acq. Operator   : JGD                                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/1/13 10:50:02 PM by JGD
                  (modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 10:02:20 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/1/13 4:39:37 PM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.662	2	BB	178.77887	2.21391	3958.00851		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3958.00851

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006556 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK024O	ARDL Lab No.:	006556-04
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/27/2013	Received Date:	10/23/2013
Sample Time:	0828	Prep. Date:	10/31/2013
Matrix:	TISSUE	Analysis Date:	11/01/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6637
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

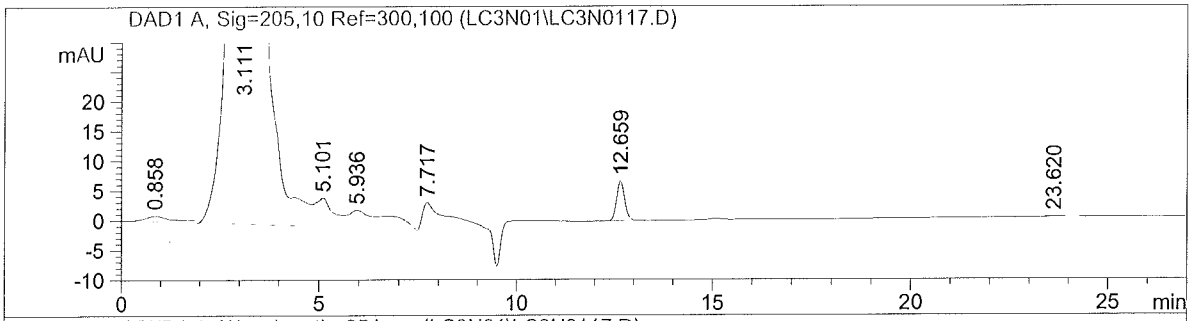
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

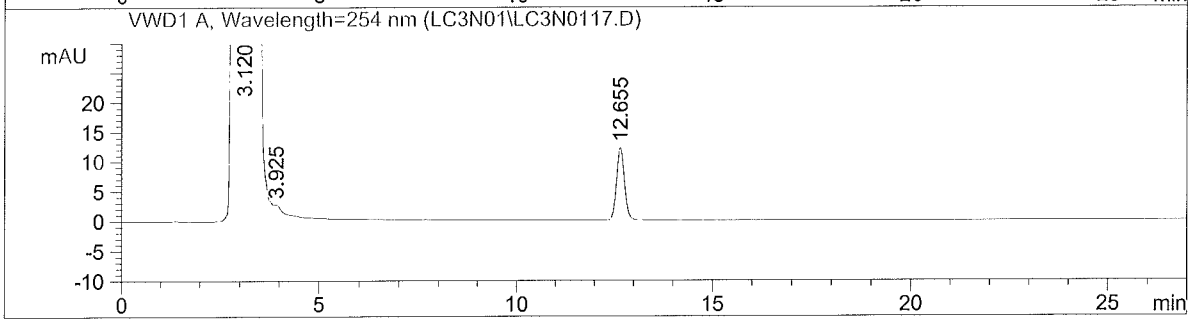
Surrogate recoveries marked with '*' indicates they are outside standard limits.

Injection Date : 11/1/13 11:21:12 PM
Sample Name : 6556-04
Acq. Operator : JGD

Seq. Line : 17
Location : Vial 16
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/1/13 11:19:11 PM by JGD
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:02:20 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm





External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.840	2		-	-	-		RDX
12.655	2	BB	175.52972	2.21401	3886.23970		1,4-DNB(Surr)
16.940	1		-	-	-		Nitroglycerine
23.000	2		-	-	-		2,4-DNT

Totals : 3886.23970

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

Analytical Run Number 2

Calibration Information

Tune Data (If applicable)

Initial Calibration (If different than Initial Calibration in Run 1)
- Calibration Factor Summary
- Chromatogram
- Quant Report (If applicable)

Continuing Calibration
- Calibration Response Check
- Chromatogram
- Quant Report (If applicable)

Instrument Logs/Analysis Notebook Pages

Blank / Field Sample / QC Data

Form 1 (If required)
Chromatogram
Quant Report (If applicable)
Confirmation Analysis Quant Report / Chromatogram (If applicable)
Tentatively Identified Compounds (If required)

Rev. 1.0

Calibration Information

Tune Data (If applicable)

Initial Calibration (If different than Initial Calibration in Run 1)
- Calibration Factor Summary
- Chromatogram
- Quant Report (If applicable)

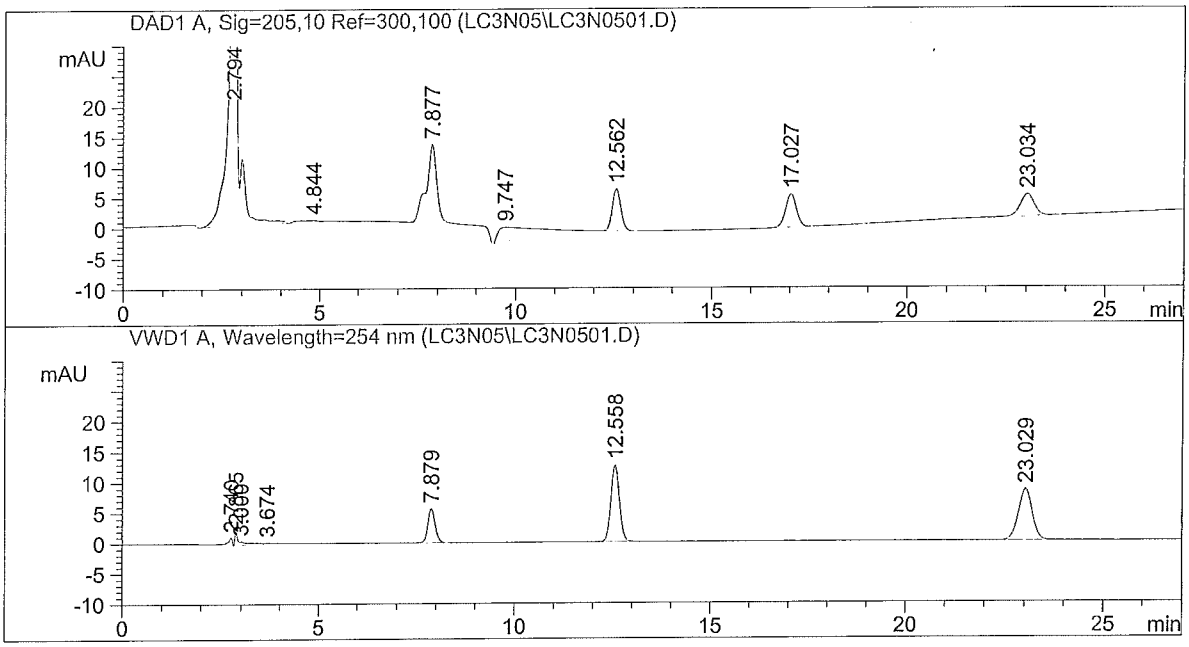
Continuing Calibration
- Calibration Response Check
- Chromatogram
- Quant Report (If applicable)

Rev. 1.0

Data File C:\HPCHEM\1\DATA\LC3N05\LC3N0501.D Sample Name: 400 PPB 1008049

Injection Date	: 11/5/13 11:43:35 AM	Seq. Line :	1
Sample Name	: 400 PPB 1008049	Location :	Vial 1
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:02:20 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/1/13 4:39:37 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.879	2	BB	69.41074	6.13592	425.89895		RDX
12.558	2	BB	189.51961	2.21363	419.52555		1,4-DNB(Surr)
17.027	1	BB	107.57829	3.86362	415.64136		Nitroglycerine
23.029	2	BB	203.19714	2.05099	416.75537		2,4-DNT

Pass 340 – 460
JD 11/6/13

Totals : 1677.82123

Results obtained with enhanced integrator!

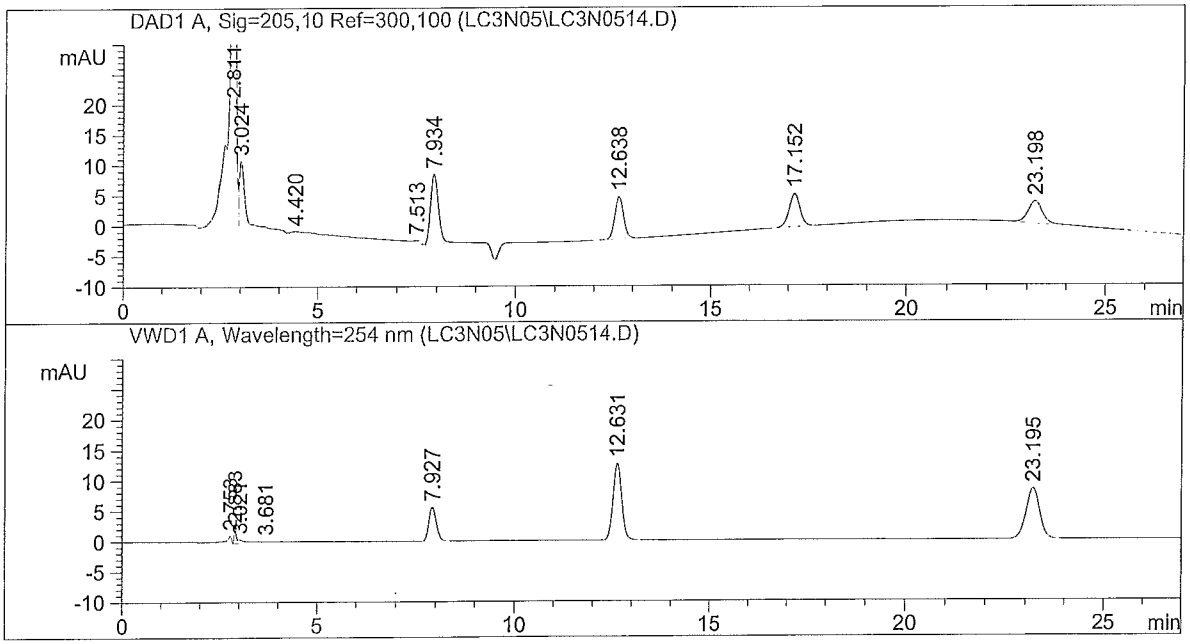
*** End of Report ***

ARDL Inc Report Numbers 6555 & 6556 - Octopus - Explosives 8330A Page 125 of 167

Data File C:\HPCHEM\1\DATA\LC3N05\LC3N0514.D Sample Name: 400 PPB 1008049

Injection Date	: 11/5/13 6:02:45 PM	Seq. Line :	14
Sample Name	: 400 PPB 1008049	Location :	Vial 1
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:16:29 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.927	2	BB	68.01509	6.13631	417.36200		RDX
12.631	2	BB	191.85225	2.21357	424.67801		1,4-DNB(Surr)
17.152	1	BBA	108.29103	3.86364	418.39757		Nitroglycerine
23.195	2	BB	203.99992	2.05099	418.40082		2,4-DNT

Totals : 1678.83840

Pass 340 - 460
go 11/6/13

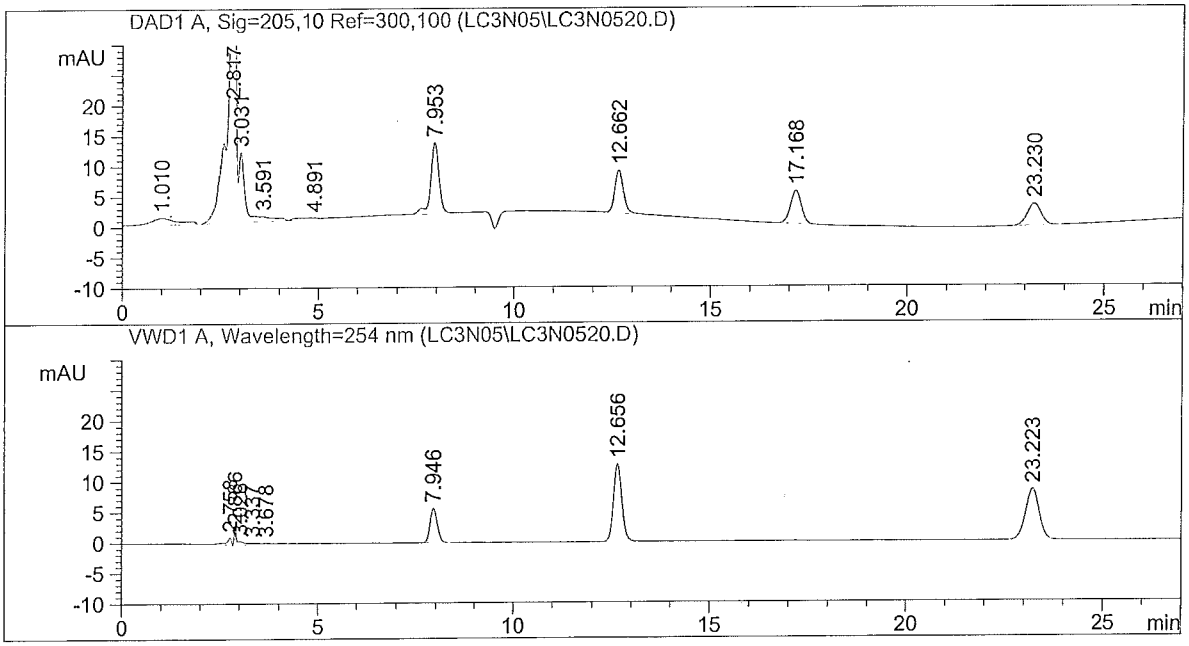
Results obtained with enhanced integrator!

*** End of Report ***

Data File C:\HPCHEM\1\DATA\LC3N05\LC3N0520.D Sample Name: 400 PPB 1008049

Injection Date	: 11/5/13 8:57:19 PM	Seq. Line :	20
Sample Name	: 400 PPB 1008049	Location :	Vial 1
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 10:16:29 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.946	2	BB	68.25456	6.13625	418.82681		RDX
12.656	2	BB	190.99487	2.21359	422.78419		1,4-DNB(Surr)
17.168	1	BBA	107.61813	3.86362	415.79543		Nitroglycerine
23.223	2	BB	204.49001	2.05098	419.40533		2,4-DNT
Totals :					1676.81175		

Pass 340 - 460
JGD 11/6/13

Results obtained with enhanced integrator!

*** End of Report ***

Instrument Logs/
Analysis Notebook Pages

Rev. 1.0

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PROJECT 11/5/13 8330A EXPLOS HIW TISSUES

Notebook No. 3135

Continued From Page

1° Column.

Sequence: C:\HPCHEM\1\SEQUENCE\LC3N05.S

Sequence Table:

Method and Injection Info, Part:

Line	Location	SampleName	Method	Inj
LC3N0501.	Vial 1	400 PPB 1008049 Pass	EXPHH2	1
2	Vial 2	6555-06B1/B10119	EXPHH2	1
3	Vial 3	6555-06K1/B10119	EXPHH2	1
4	Vial 4	6555-01	EXPHH2	1
5	Vial 5	6555-02	EXPHH2	1
6	Vial 6	6555-03	EXPHH2	1
7	Vial 7	6555-04	EXPHH2	1
8	Vial 8	6555-05	EXPHH2	1
9	Vial 9	6555-06	EXPHH2	1
10	Vial 10	6555-06MS	EXPHH2	1
11	Vial 11	6555-06MD	EXPHH2	1
12	Vial 12	6555-07	EXPHH2	1
13	Vial 13	6555-08 Pass	EXPHH2	1
14	Vial 1	400 PPB 1008049	EXPHH2	1
15	Vial 14	6555-09	EXPHH2	1
16	Vial 15	6555-10	EXPHH2	1
17	Vial 16	6555-11	EXPHH2	1
18	Vial 17	6555-12	EXPHH2	1
19	Vial 18	6555-13	EXPHH2	1
LC3N0520.	Vial 1	400 PPB 1008049 Pass	EXPHH2	1

11/6/13

Continued on Page

Read and Understood By

Signed 11/6/13 Date Signed 11/14/13 Date

Blank / Field Sample / QC Data

Rev. 1.0

METHOD BLANK REPORT
ARDL, Inc. 400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	NA	ARDL Lab No.:	006555-06B1
Desc/Location:	NA	Lab Filename:	
Sample Date:	NA	Received Date:	NA
Sample Time:	NA	Prep. Date:	11/04/2013
Matrix:	QC Material	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	NA	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units
2,4-Dinitrotoluene	100	500	ND		UG/KG
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG
Nitroglycerine	300	500	ND		UG/KG

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	109%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Blank for Run B6638, 8330, EXPLOSIVES

Page 1 of 1

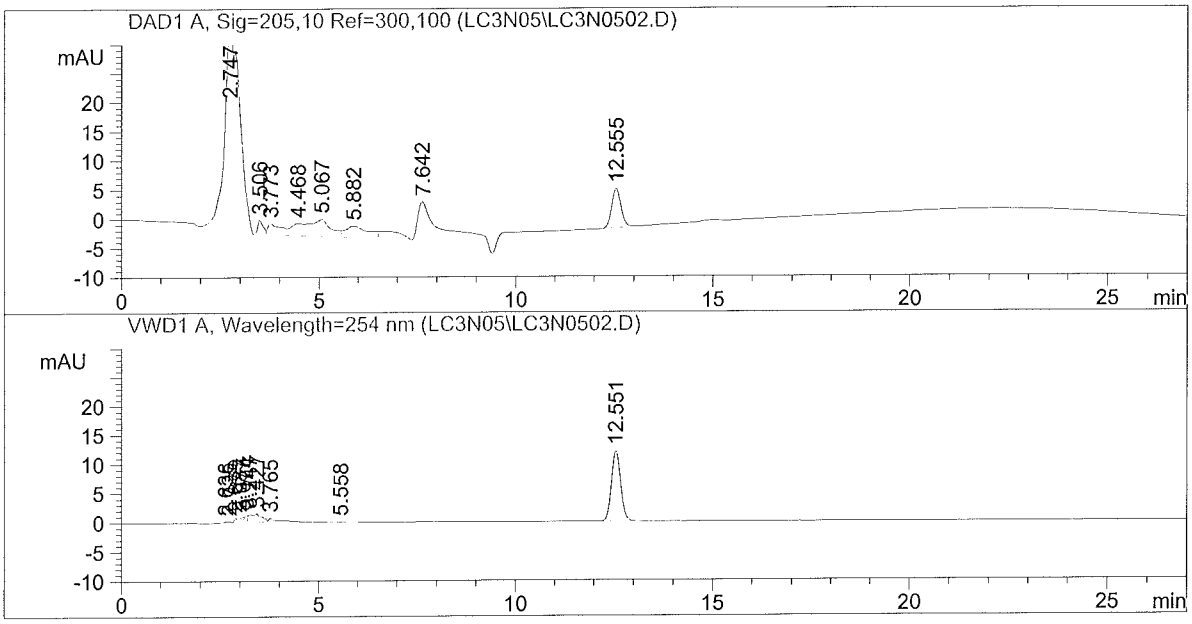
Data File C:\HPCHEM\1\DATA\LC3N05\LC3N0502.D Sample Name: 6555-06B1/B10119
MBLK B10119

==========

Injection Date : 11/5/13 12:12:47 PM Seq. Line : 2
Sample Name : 6555-06B1/B10119 Location : Vial 2
Acq. Operator : JGD Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:34:35 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

==========



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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.551	2	BB	197.17369	2.21344	4364.32286		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 4364.32286

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Instrument 1 11/6/13 11:34:54 AM JGD

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK001O	ARDL Lab No.:	006555-01
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/09/2013	Received Date:	10/23/2013
Sample Time:	1104	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

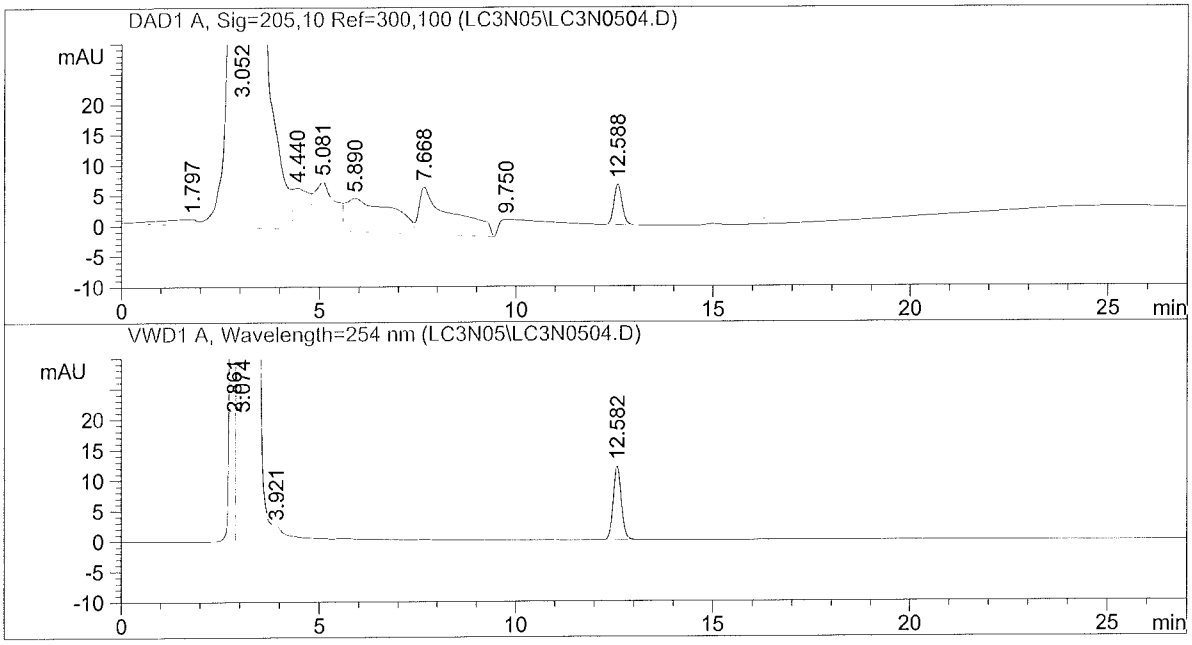
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	97%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-01, 8330, EXPLOSIVES

```
==================================================================
Injection Date  : 11/5/13 1:11:09 PM          Seq. Line :   4
Sample Name     : 6555-01                      Location : Vial 4
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl

Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.582	2	BB	175.11223	2.21402	3877.01783		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3877.01783

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK002O	ARDL Lab No.:	006555-02
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/09/2013	Received Date:	10/23/2013
Sample Time:	1215	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

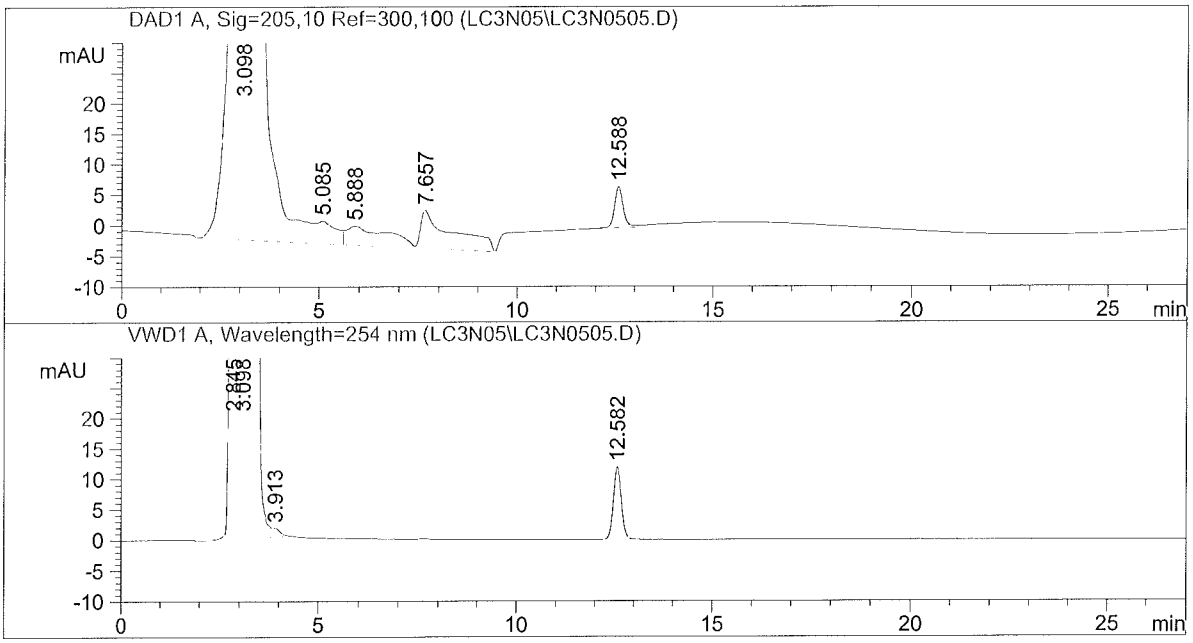
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	95%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-02, 8330, EXPLOSIVES

Page 1 of 1

```
==================================================================
Injection Date  : 11/5/13 1:40:24 PM          Seq. Line :   5
Sample Name     : 6555-02                      Location : Vial 5
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.582	2	BB	172.02847	2.21411	3808.90224		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3808.90224

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK003O	ARDL Lab No.:	006555-03
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/09/2013	Received Date:	10/23/2013
Sample Time:	1505	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

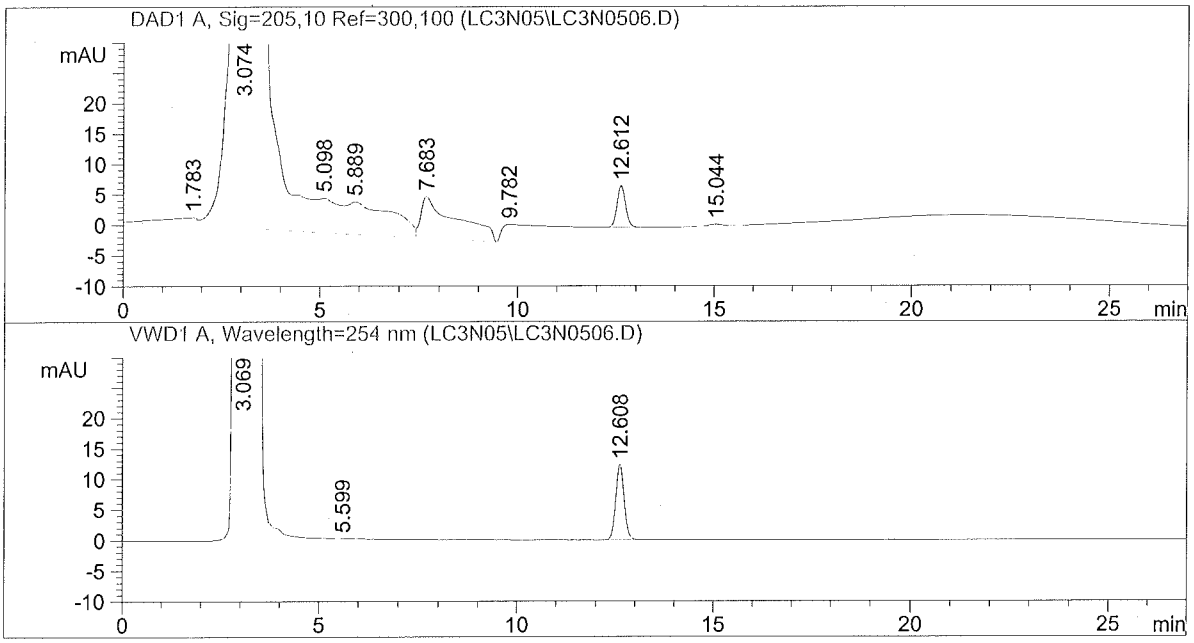
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	99%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-03, 8330, EXPLOSIVES

```
==================================================================
Injection Date  : 11/5/13 2:09:33 PM          Seq. Line :   6
Sample Name     : 6555-03                      Location : Vial 6
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.608	2	BB	179.12431	2.21390	3965.63885		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3965.63885

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK004O	ARDL Lab No.:	006555-04
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1011	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

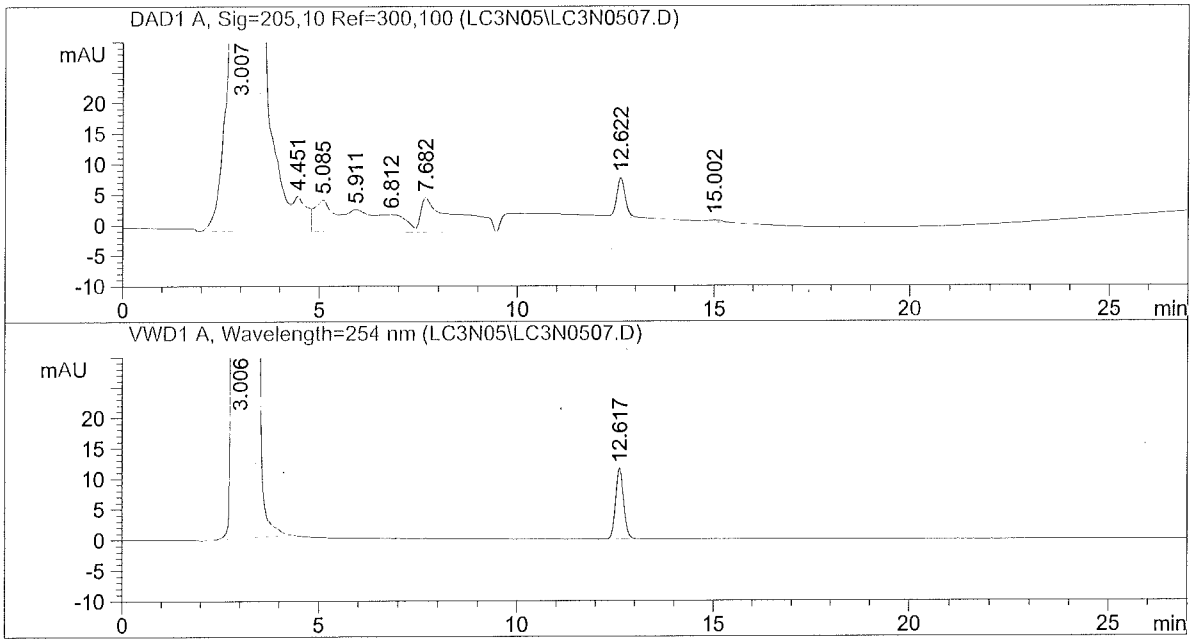
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	93%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-04, 8330, EXPLOSIVES

```
==================================================================
Injection Date  : 11/5/13 2:38:41 PM          Seq. Line :   7
Sample Name     : 6555-04                      Location : Vial 7
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.617	2	BB	168.73874	2.21421	3736.23689		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3736.23689

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK005O	ARDL Lab No.:	006555-05
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1035	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	98%

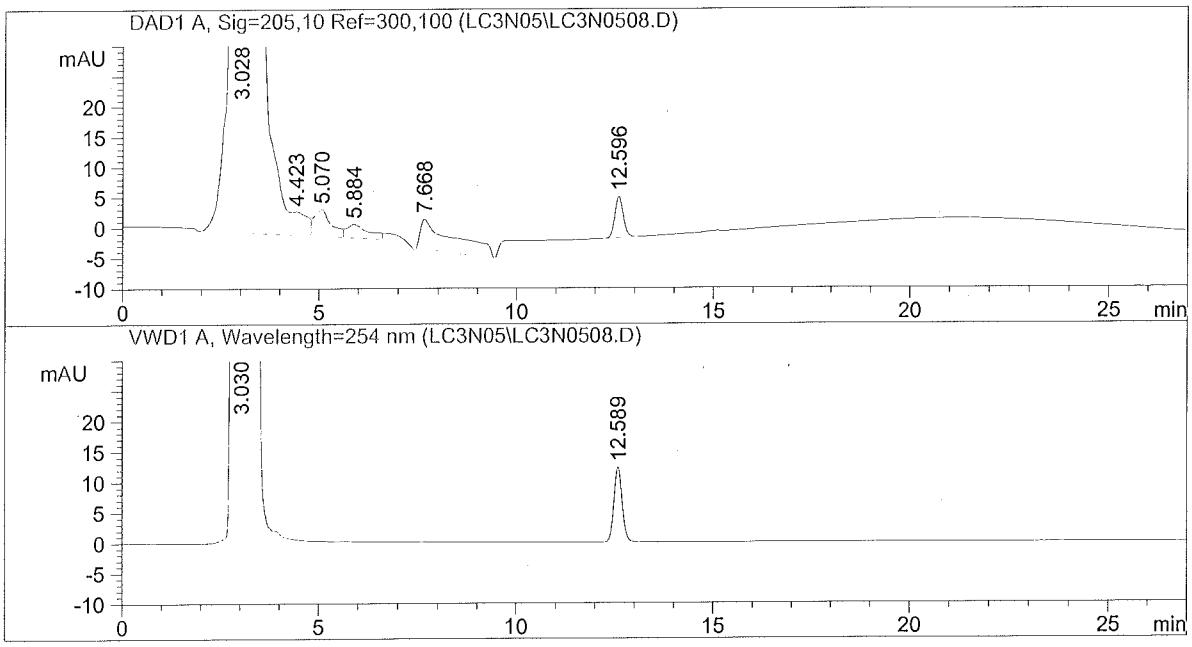
Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-05, 8330, EXPLOSIVES

Page 1 of 1

Injection Date	: 11/5/13 3:07:54 PM	Seq. Line :	8
Sample Name	: 6555-05	Location :	Vial 8
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:42:54 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.589	2	BB	177.34592	2.21395	3926.35670		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3926.35670

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

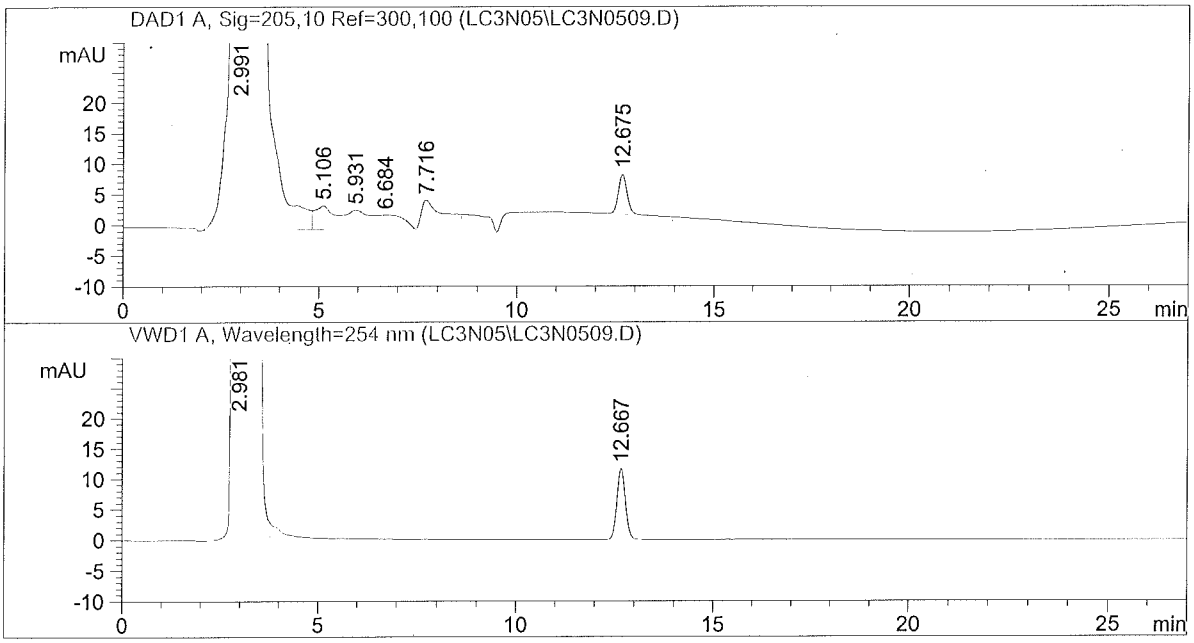
Field ID:	MAK006O	ARDL Lab No.:	006555-06
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1055	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	95%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

```
==================================================================
Injection Date  : 11/5/13 3:37:09 PM          Seq. Line :   9
Sample Name     : 6555-06                      Location : Vial 9
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```

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==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.667	2	BB	170.72652	2.21415	3780.14396		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3780.14396

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK021O	ARDL Lab No.:	006555-07
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/23/2013	Received Date:	10/23/2013
Sample Time:	0927	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

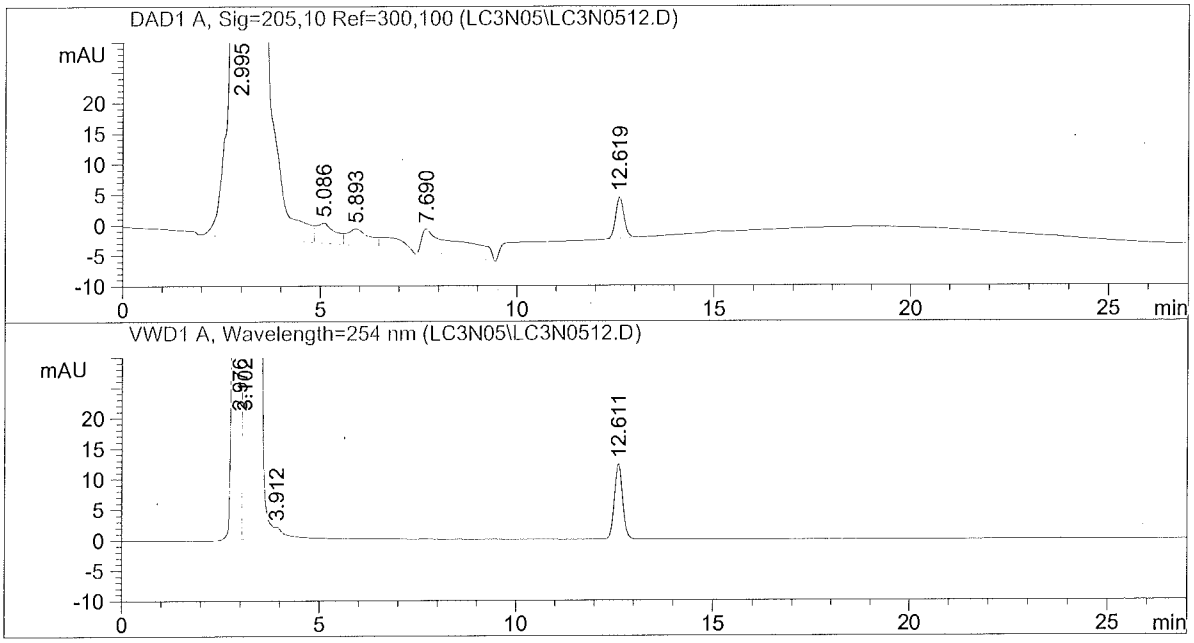
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-07, 8330, EXPLOSIVES

Injection Date	: 11/5/13 5:04:37 PM	Seq. Line :	12
Sample Name	: 6555-07	Location :	Vial 12
Acq. Operator	: JGD	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 2:13:32 PM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.611	2	BB	180.50255	2.21386	3996.08202		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3996.08202

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	NA	ARDL Lab No.:	006555-06K1
Desc/Location:	NA	Lab Filename:	
Sample Date:	NA	Received Date:	NA
Sample Time:	NA	Prep. Date:	11/04/2013
Matrix:	QC Material	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	NA	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units
2,4-Dinitrotoluene	100	500	3900		UG/KG
Hexahydro-trinitro-triazine (RDX)	200	500	4280		UG/KG
Nitroglycerine	300	500	4360		UG/KG

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	104%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Spike Blank for Run B6638, 8330, EXPLOSIVES

Page 1 of 1

Data File C:\HPCHEM\1\DATA\LC3N05\LC3N0503.D Sample Name: 6555-06K1/B10119
LCS B10119

==========

Injection Date : 11/5/13 12:41:57 PM Seq. Line : 3
Sample Name : 6555-06K1/B10119 Location : Vial 3
Acq. Operator : JGD Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:34:35 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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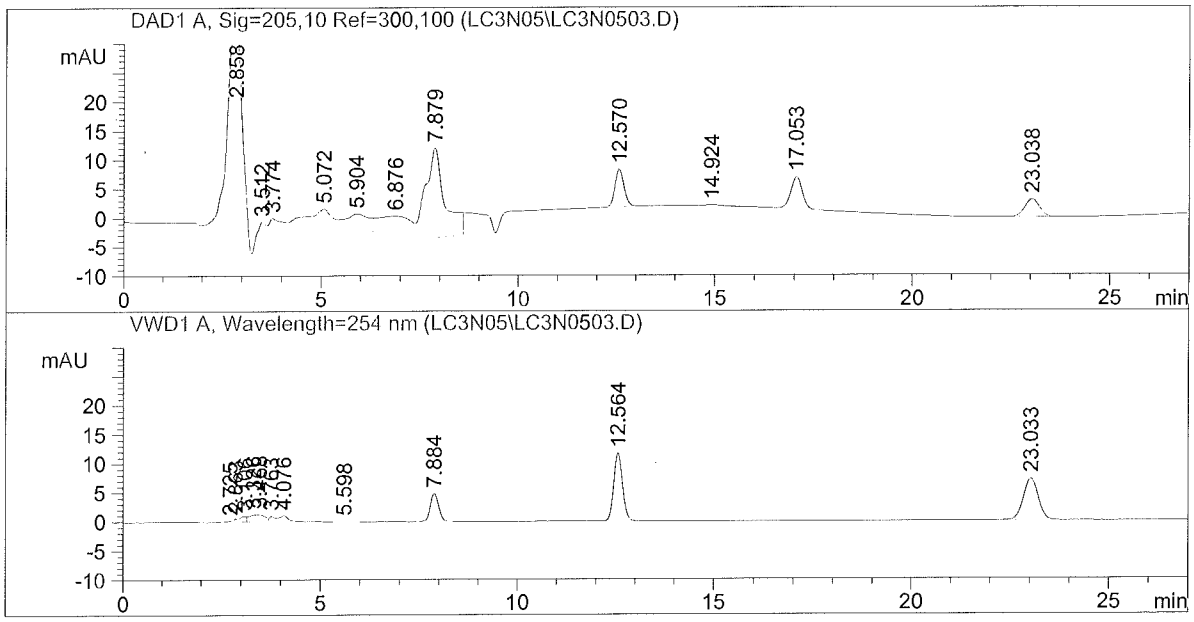

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.884	2	BB	69.73265	6.13583	4278.67992		RDX
12.564	2	BB	188.76176	2.21365	4178.51587		1,4-DNB(Surr)
17.053	1	BBA	112.75073	3.86378	4356.43582		Nitroglycerine
23.033	2	BB	189.92120	2.05108	3895.43952		2,4-DNT

Totals : 1.67091e4

Results obtained with enhanced integrator!

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK006O	ARDL Lab No.:	006555-06MS
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1055	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	3540		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	3850		UG/KG	1
Nitroglycerine	300	500	4010		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	104%

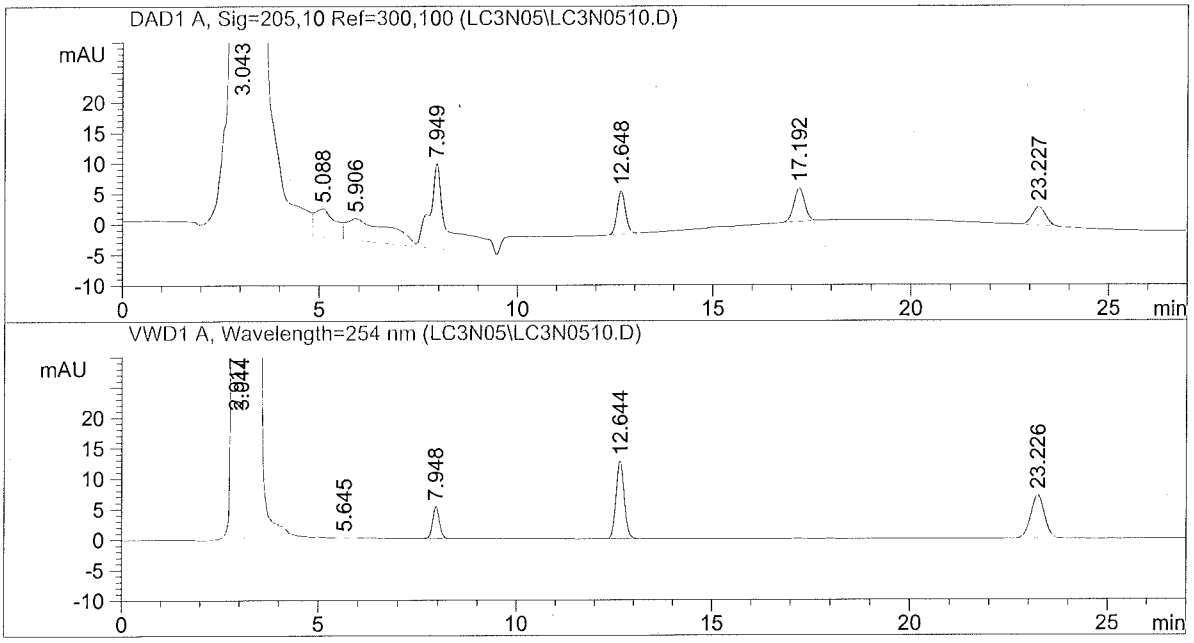
Surrogate recoveries marked with '*' indicates they are outside standard limits.

Matrix Spike for 006555-06, 8330, EXPLOSIVES

Page 1 of 1

Injection Date	: 11/5/13 4:06:18 PM	Seq. Line	: 10
Sample Name	: 6555-06MS	Location	: Vial 10
Acq. Operator	: JGD	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:42:54 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.948	2	BB	62.74511	6.13795	3851.26530		RDX
12.644	2	BB	187.27751	2.21368	4145.73092		1,4-DNB(Surr)
17.192	1	BBA	103.69906	3.86349	4006.40061		Nitroglycerine
23.226	2	BB	172.52151	2.05122	3538.80165		2,4-DNT

Totals : 1.55422e4

Results obtained with enhanced integrator!

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK006O	ARDL Lab No.:	006555-06MD
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1055	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

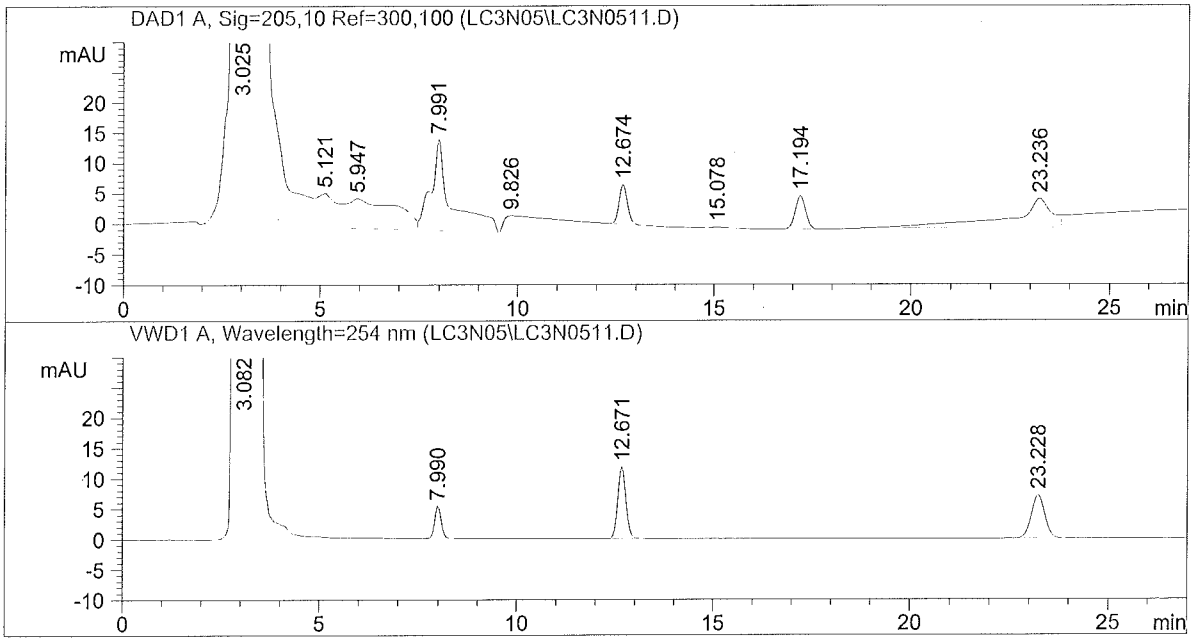
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	3520		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	3820		UG/KG	1
Nitroglycerine	300	500	3910		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	94%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Matrix Spike Duplicate for 006555-06, 8330, EXPLOSIVES

```
==================================================================
Injection Date  : 11/5/13 4:35:29 PM          Seq. Line :  11
Sample Name     : 6555-06MD                    Location : Vial 11
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.990	2	BB	62.28206	6.13811	3822.94160		RDX
12.671	2	BB	170.60564	2.21416	3777.47390		1,4-DNB(Surr)
17.194	1	BBA	101.31521	3.86340	3914.21529		Nitroglycerine
23.228	2	BB	171.62260	2.05123	3520.37686		2,4-DNT

Totals : 1.50350e4

Results obtained with enhanced integrator!

==========

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK008O	ARDL Lab No.:	006555-08
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/11/2013	Received Date:	10/23/2013
Sample Time:	1210	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

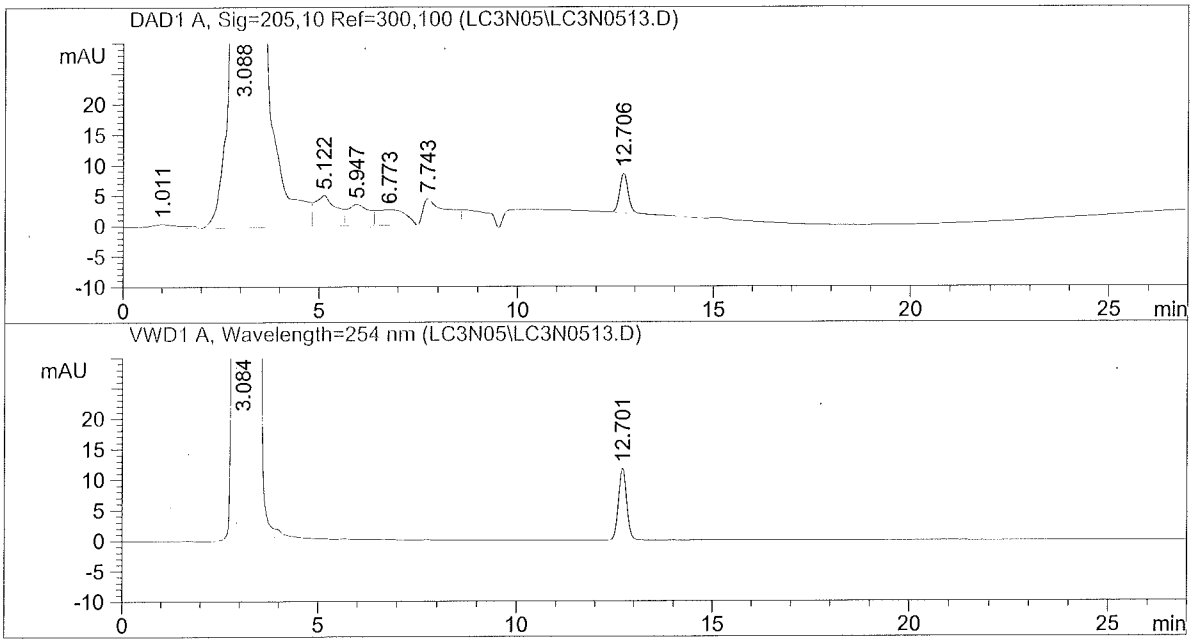
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	94%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-08, 8330, EXPLOSIVES

```
==================================================================
Injection Date  : 11/5/13 5:33:41 PM          Seq. Line :  13
Sample Name     : 6555-08                      Location : Vial 13
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.701	2	BB	170.38658	2.21416	3772.63529		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3772.63529

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK009O	ARDL Lab No.:	006555-09
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/13/2013	Received Date:	10/23/2013
Sample Time:	1248	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

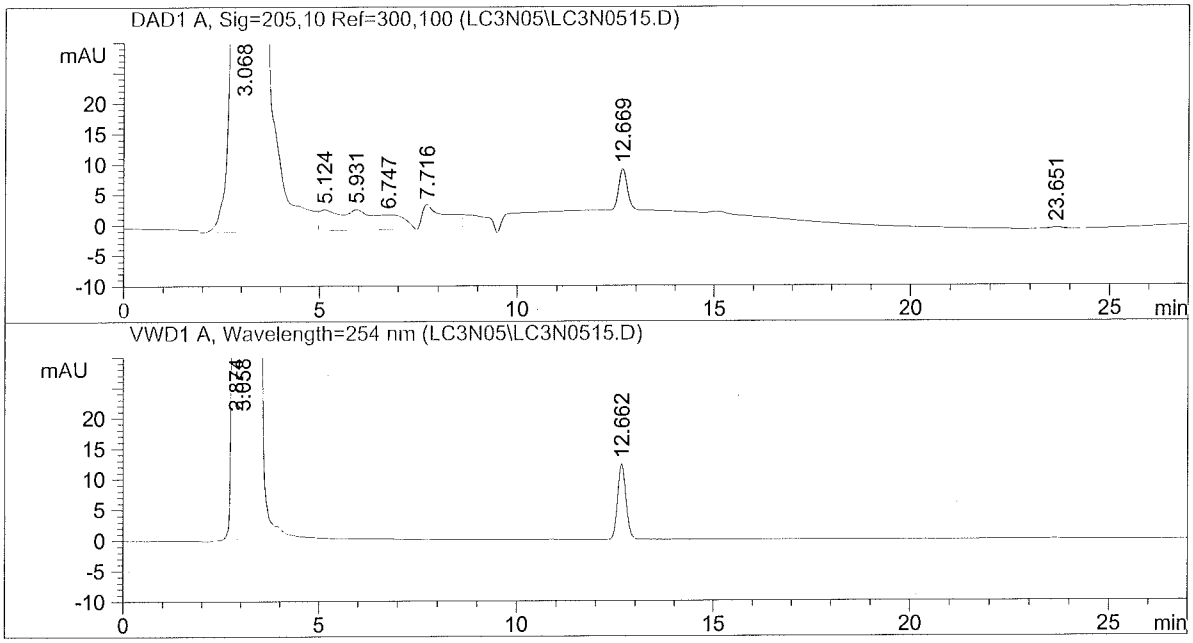
SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-09, 8330, EXPLOSIVES

Page 1 of 1

```
==================================================================
Injection Date  : 11/5/13 6:31:51 PM          Seq. Line :  15
Sample Name     : 6555-09                      Location : Vial 14
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.662	2	BB	180.11060	2.21388	3987.42437		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3987.42437

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

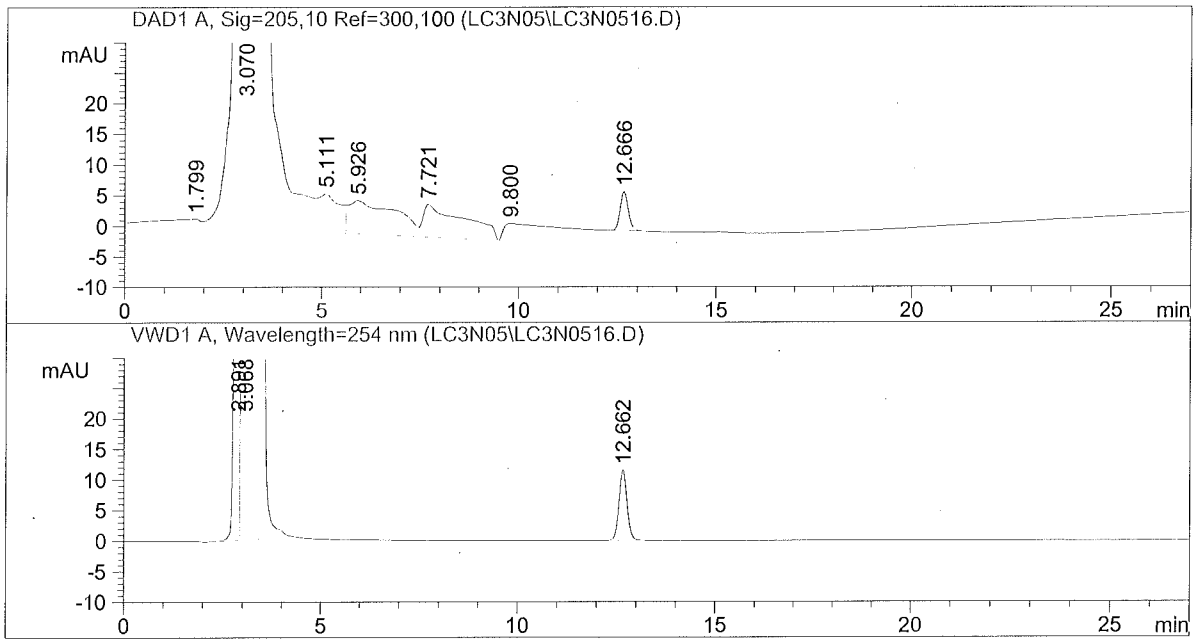
Field ID:	MAK010O	ARDL Lab No.:	006555-10
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/16/2013	Received Date:	10/23/2013
Sample Time:	1025	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	92%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

```
==================================================================
Injection Date  : 11/5/13 7:00:55 PM          Seq. Line :  16
Sample Name     : 6555-10                      Location : Vial 15
Acq. Operator   : JGD                               Inj :   1
                                             Inj Volume : 100 µl
Acq. Method     : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed    : 11/6/13 11:42:54 AM by JGD
                  (modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm
==================================================================
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Retention Time
Calib. Data Modified   :      11/6/13 10:16:29 AM
Multiplier             :     10.0000
Dilution               :      1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm
```

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.662	2	BB	166.72452	2.21428	3691.74573		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3691.74573

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK011O	ARDL Lab No.:	006555-11
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/16/2013	Received Date:	10/23/2013
Sample Time:	1110	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

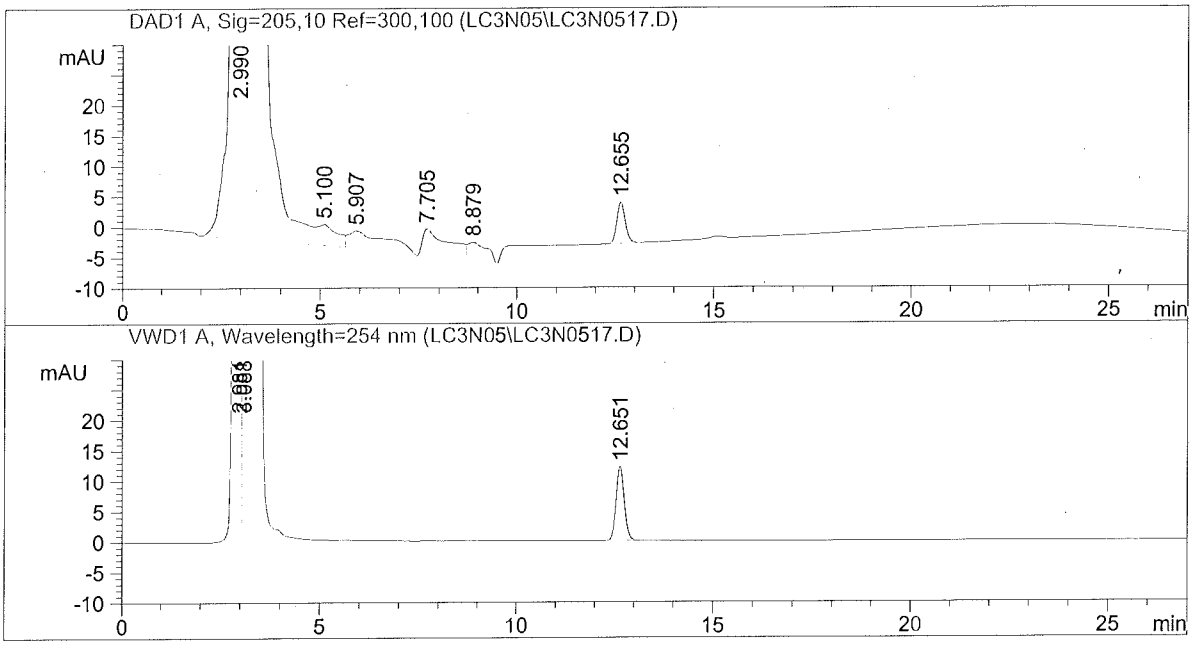
Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	100%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Injection Date	: 11/5/13 7:30:04 PM	Seq. Line	: 17
Sample Name	: 6555-11	Location	: Vial 16
Acq. Operator	: JGD	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:42:54 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm



External Standard Report

Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.651	2	BB	179.95584	2.21388	3984.00606		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3984.00606

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK012O	ARDL Lab No.:	006555-12
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1315	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	93%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

==========

Injection Date : 11/5/13 7:59:08 PM
Sample Name : 6555-12
Acq. Operator : JGD

Seq. Line : 18
Location : Vial 17
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:42:54 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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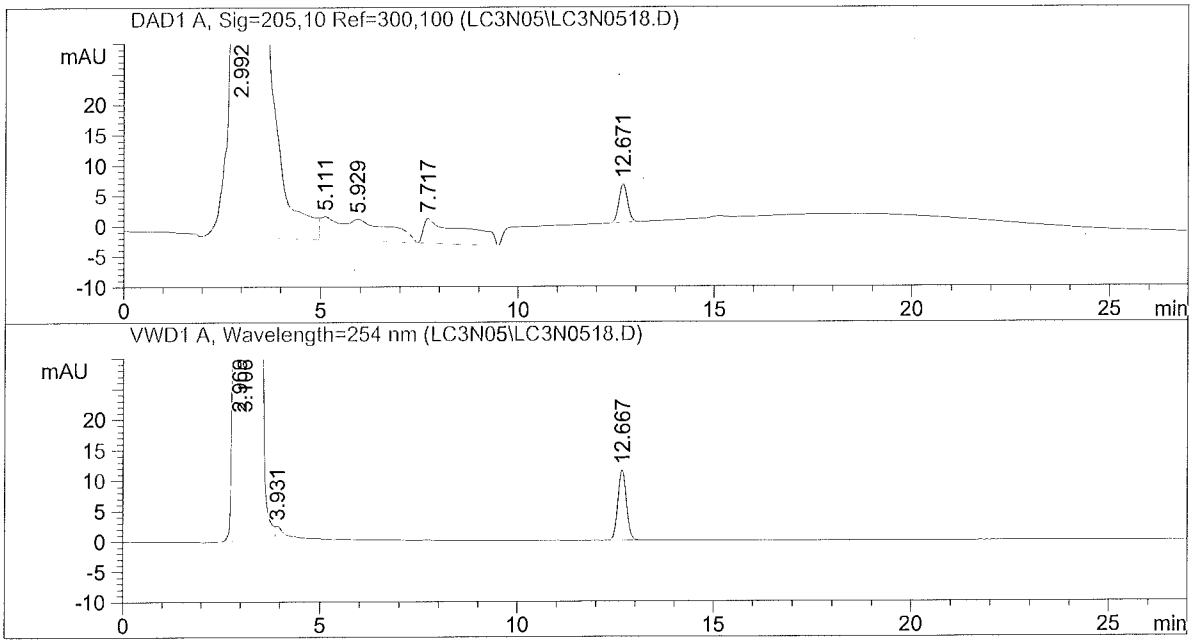

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.667	2	BB	168.17642	2.21423	3723.81615		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3723.81615

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

ARDL, INC.
400 Aviation Drive; P.O. Box 1566
Mt. Vernon, Illinois 62864

Lab Report No: 006555 Report Date: 11/08/2013

Project Name: MAKAU MILITARY RES O Analysis: 8330, EXPLOSIVES
Project No.: Analytical Method: 8330
NELAC Certified - IL100308 Prep Method: METHOD

Field ID:	MAK013O	ARDL Lab No.:	006555-13
Desc/Location:	MAKAU MILITARY RESERV OAHU	Lab Filename:	
Sample Date:	09/22/2013	Received Date:	10/23/2013
Sample Time:	1400	Prep. Date:	11/04/2013
Matrix:	TISSUE	Analysis Date:	11/05/2013
Amount Used:	2 g	Instrument ID:	
Final Volume:	10 mL	QC Batch:	B6638
% Moisture:	No Moisture Present	Level:	LOW

Parameter	Method Limit	Reporting Limit	Result	Data Flag	Units	Dilution Factor
2,4-Dinitrotoluene	100	500	ND		UG/KG	1
Hexahydro-trinitro-triazine (RDX)	200	500	ND		UG/KG	1
Nitroglycerine	300	500	ND		UG/KG	1

SURROGATE RECOVERIES:	Limits	Results
1,4-Dinitrobenzene	50-150	94%

Surrogate recoveries marked with '*' indicates they are outside standard limits.

Sample 006555-13, 8330, EXPLOSIVES

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Injection Date : 11/5/13 8:28:13 PM
Sample Name : 6555-13
Acq. Operator : JGD

Seq. Line : 19
Location : Vial 18
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/5/13 11:41:56 AM by JGD
Analysis Method : C:\HPCHEM\1\METHODS\EXPHH2.M
Last changed : 11/6/13 11:42:54 AM by JGD
(modified after loading)
EXPLOSIVES PRIMARY/HYDRO C18 250 X 4.6mm

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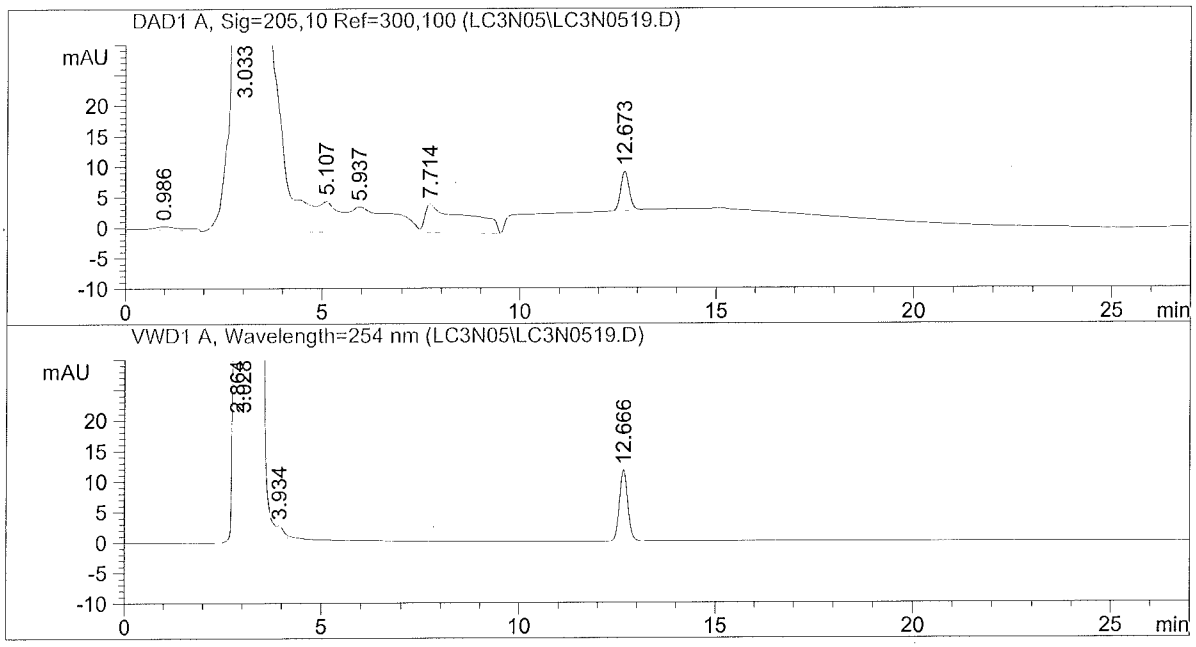

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External Standard Report

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Sorted By : Retention Time
Calib. Data Modified : 11/6/13 10:16:29 AM
Multiplier : 10.0000
Dilution : 1.0000

Signal 1: DAD1 A, Sig=205,10 Ref=300,100
Signal 2: VWD1 A, Wavelength=254 nm

RetTime [min]	Sig	Type	Area	Amt/Area	Amount [PPB]	Grp	Name
7.880	2		-	-	-		RDX
12.666	2	BB	170.19524	2.21417	3768.40876		1,4-DNB(Surr)
17.030	1		-	-	-		Nitroglycerine
23.030	2		-	-	-		2,4-DNT

Totals : 3768.40876

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

Example Calculation

EXAMPLE CALCULATIONS
(Explosives)

Sample 6555-06 MS

As appropriate for each analyte, use the values either for the average calibration factor (CF) or the linear regression equation from the full initial calibration. Calculate the apparent concentration in the sample using the relationship given below:

$$\text{ug analyte/mL} = \frac{\text{Peak Area}}{\text{Average CF}}$$

$$\text{ug analyte/L} = \frac{\text{Peak Area - b}}{\text{m}} = \frac{62.745 - (-0.21688)}{0.16348} = 385$$

✓ RDX

where: m is the slope of the initial calibration curve, and b is the zero intercept of that curve

Sample Calculations

$$\text{Concentration of analyte} = \frac{(A)\ (Vt)\ (Df)}{(Vi)}$$

Water:

Where:
- A = Concentration of the analyte in the sample extract (ug/L)
- Vi = Initial sample volume (L)
- Vt = Volume of final extract (L)
- Df = Dilution Factor

Soil:

Where:
- A = Concentration of the analyte in the sample extract (ug/L)
- Vi = Initial sample weight (kg)
- Vt = Volume of final extract (L)
- Df = Dilution Factor (2x DL per method)

Example Sample Calculation

$$\text{Water Result} = \frac{(____)(____)(____)}{(____)} = (____)\ \text{ug/L}$$

$$\text{Soil Result} = \frac{(385\ \mu g/L)(0.010\ L)(2X)}{(0.002\ kg)} = (3850)\ \text{ug/kg}$$

Example Calculations
Performed By: _____ Date: 11/20/13

Miscellaneous Additional Data

(If applicable)

NONE.

DSD
11/20/13

Rev. 1.0