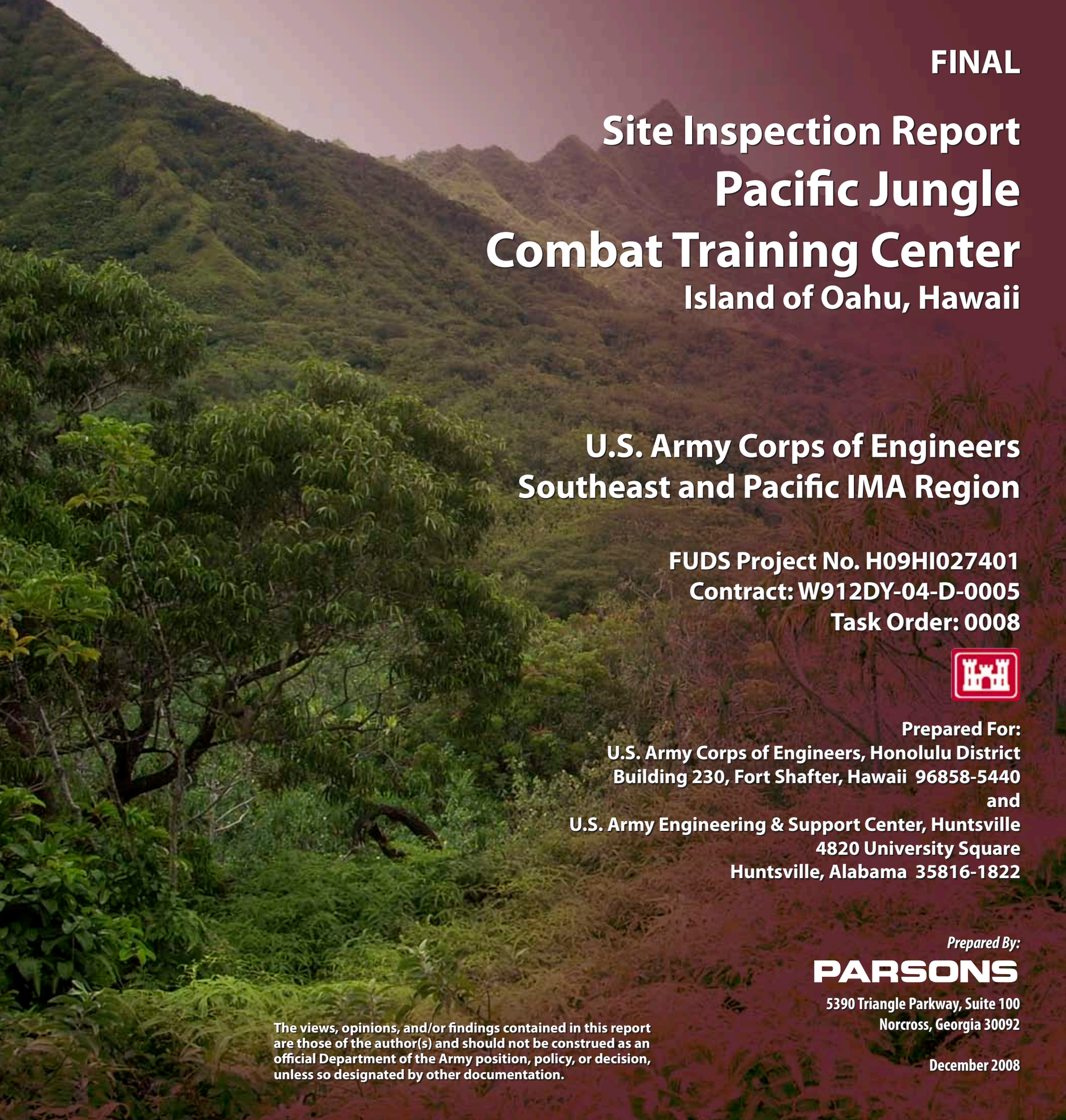


FINAL

Site Inspection Report
Pacific Jungle Combat Training Center
Island of Oahu, Hawaii

U.S. Army Corps of Engineers
Southeast and Pacific IMA Region

FUDS Project No. H09HI027401
Contract: W912DY-04-D-0005
Task Order: 0008

Prepared For:
U.S. Army Corps of Engineers, Honolulu District
Building 230, Fort Shafter, Hawaii 96858-5440
and
U.S. Army Engineering & Support Center, Huntsville
4820 University Square
Huntsville, Alabama 35816-1822

Prepared By:

PARSONS

5390 Triangle Parkway, Suite 100
Norcross, Georgia 30092

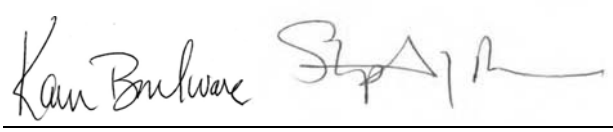
December 2008

The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other documentation.

CONTRACTOR STATEMENT OF INDEPENDENT TECHNICAL REVIEW

Parsons has completed the Final Site Inspection report for the Pacific Jungle Combat Training Center, Island of Oahu, Hawaii. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing Corps policy.





December 18, 2008

Study/Design Team Leader and Team Members





December 18, 2008

Independent Technical Review Team Leader

Significant concerns and the explanation of the resolution are as follows:

None

As noted above, all concerns resulting from independent technical review of the project have been considered.





December 18, 2008

Parsons Program Manager(s)

PARSONS
Parsons Infrastructure & Technology Group, Inc.
5390 Triangle Parkway • Suite 100 • Norcross, Georgia 30092 • (770) 446-4900 • Fax: (770) 446-4910 • www.parsons.com

December 18, 2008

U.S. Army Engineering & Support Center
ATTN: CEHNC-OE-DC (Ms. Becky Terry)
4820 University Square
Huntsville, Alabama 35816-1822
(256) 895-1788

Subject: Contract W912DY-04-D-0005, Delivery Order 0008
MMRP SI for SE and Pacific IMA Region - Final SI Report
Pacific Jungle Combat Training Center, Island of Oahu, Hawaii

Dear Ms. Terry:

Parsons has prepared this Final Site Inspection (SI) Report in accordance with the Performance Work Statement (PWS) to include the completed Munitions Response Site Prioritization Protocol (MRSPP). In addition, copies of previous reports are included as appendices. Two copies have been provided for your review and comment.

We have simultaneously forwarded seven copies of the document to Ms. Helene Takemoto of the Honolulu District for review and comment. We have simultaneously submitted single copies of this Final document to USACE HQ, EM CX (Huntsville and Omaha). Electronic copies have also been provided.

If you have any questions or comments, please contact me at (678) 969-2384 or (404) 606-0346 (cell) or the Project Manager (Ms. Laura Kelley) at (678) 969-2437.

Sincerely,

PARSONS



Don Silkebakken, P.E.
MMRP SI Program Manager

cc: Helene Takemoto – 7 copies/7 CDs
Brad McCowan/Deborah Walker (EM CX/Huntsville) – 1 copy/1 CD
Heidi Novotny (EM CX/Omaha) - 1 CD
Lloyd Grearson – 1 copy/ 1 CD
Laura Kelley/Project File (744647.51000)

U.S. Army Corps of Engineers
Southeast and Pacific IMA Region

FINAL
Site Inspection Report
Pacific Jungle Combat Training Center
Oahu, Hawaii

FUDS Project No. H09HI027401
December 2008

In Support of
FUDS MMRP Site Inspections Project

Prepared by:
PARSONS
5390 Triangle Parkway, Suite 100
Norcross, Georgia 30092

Prepared For:

U.S. Army Corps of Engineers, Honolulu District
Building 230
Fort Shafter, Hawaii 96858-5440

and

U.S. Army Engineering & Support Center, Huntsville
4820 University Square
Huntsville, Alabama 35816-1822

Contract: W912DY-04-D-0005
Task Order: 0008

The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other documentation

TABLE OF CONTENTS

Page

LIST OF TABLES vi

LIST OF FIGURES viii

ACRONYMS AND ABBREVIATIONS iv

GLOSSARY OF TERMS xii

EXECUTIVE SUMMARY ES-1

CHAPTER 1 INTRODUCTION 1-1

1.1 Background 1-1
1.2 Project Objectives 1-1
1.3 Project Scope 1-2

CHAPTER 2 PROPERTY DESCRIPTION AND HISTORY 2-1

2.1 Site Location 2-1
2.2 Site Description and Setting 2-1
2.2.1 Topography and Vegetation 2-1
2.2.2 Geology and Soils 2-1
2.2.3 Hydrology… 2-2
2.2.4 Climate… 2-2
2.2.5 Cultural and Archaeological Resources 2-2
2.2.6 Significant Structures 2-3
2.2.7 Demographics 2-3
2.2.8 Current and Future Land Use 2-4
2.3 Site Ownership and History 2-4
2.4 Site Operations and Waste Characteristics 2-4
2.4.1 MRS-Specific Description/Operations 2-4
2.4.2 Regulatory Compliance 2-4
2.5 Previous Investigations 2-5
2.5.1 1993 Inventory Project Report 2-5
2.5.2 2004 INPR Supplement 2-5

CHAPTER 3 SITE INSPECTION TASKS 3-1

3.1 Historical Records Review 3-1
3.2 Technical Project Planning 3-1
3.3 Non-Measurement Data Collection 3-1
3.4 Site-Specific Work Plan 3-2
3.5 Departures from Planning Documents 3-2

TABLE OF CONTENTS (CONTINUED)

Page

CHAPTER 4 MUNITIONS AND EXPLOSIVES OF CONCERN FINDINGS 4-1

4.1 General Information 4-1
4.1.1 Qualitative Reconnaissance 4-1
4.1.2 Munitions Constituents Sampling 4-1
4.2 Data Quality Objectives 4-2
4.2.1 Introduction 4-2
4.2.2 Munitions and Explosives of Concern DQO 4-2
4.2.3 Munitions Constituents DQO 4-2
4.2.4 Munitions Response Site Prioritization Protocol DQO 4-2
4.2.5 Hazard Ranking System DQO 4-3
4.3 Maneuver Area Munitions Response Site 4-3
4.3.1 Historical Munitions and Explosives of Concern Information 4-3
4.3.2 Inspection Activities 4-3

CHAPTER 5 MIGRATION/EXPOSURE PATHWAYS AND RECEPTORS 5-1

5.1 Introduction 5-1
5.2 General Information 5-1
5.2.1 Regional Geologic Setting 5-1
5.2.2 Regional Hydrogeologic Setting 5-1
5.2.3 Regional Groundwater Use 5-2
5.2.4 Regional Hydrologic Setting 5-3
5.2.5 Regional Sensitive Ecological Resources 5-3
5.2.6 Sample Locations and Methods 5-11
5.2.7 Soil Ambient Concentrations 5-30
5.2.8 Munitions Constituents Source Evaluation 5-30
5.3 Maneuver Area Munitions Response Site 5-31
5.3.1 Historical Munitions Constituents Information 5-31
5.3.2 Groundwater Exposure Pathway 5-31
5.3.2.1 Geologic and Hydrogeologic Setting 5-31
5.3.2.2 Releases and Potential Releases to Groundwater 5-31
5.3.2.3 Groundwater Exposure Pathways and Receptors 5-32
5.3.2.4 Groundwater Sample Locations and Methods 5-32
5.3.2.5 Groundwater Exposure Pathway Analytical Results 5-32
5.3.2.6 Groundwater Exposure Pathway Conclusions 5-32
5.3.3 Surface Water and Sediment Exposure Pathway 5-32
5.3.3.1 Hydrologic Setting 5-32
5.3.3.2 Releases and Potential Releases to Surface Water and Sediment 5-32
5.3.3.3 Surface Water and Sediment Exposure Pathways and Receptors 5-33

TABLE OF CONTENTS (CONTINUED)

Page

5.3.3.4 Surface Water and Sediment Sample Locations and Methods...5-33
5.3.3.5 Surface Water and Sediment Exposure Pathway Analytical Results 5-33
5.3.3.6 Surface Water and Sediment Exposure Pathway Conclusions...5-33
5.3.4 Soil Exposure Pathway 5-34
5.3.4.1 Physical Source Access Conditions....5-34
5.3.4.2 Actual or Potential Contamination Areas....5-34
5.3.4.3 Soil Exposure Pathways and Receptors 5-35
5.3.4.4 Soil Sample Locations and Methods 5-35
5.3.4.5 Soil Exposure Analytical Results 5-35
5.3.4.6 Soil Exposure Pathway Conclusions 5-36
5.3.5 Air Migration Pathway 5-36
5.3.5.1 Climate 5-36
5.3.5.2 Releases and Potential Releases to Air....5-36
5.3.5.3 Air Migration Pathways and Receptors....5-36
5.3.5.4 Air Sample Monitoring Locations and Methods....5-36
5.3.5.5 Air Analytical Results 5-36
5.3.5.6 Air Migration Pathway Conclusions 5-36

CHAPTER 6 SCREENING-LEVEL RISK ASSESSMENT 6-1

6.1 Munitions and Explosives of Concern Screening-Level Risk Assessment....6-1
6.1.1 Conceptual Site Model 6-1
6.1.2 Introduction 6-1
6.1.3 Qualitative Risk Evaluation....6-1
6.1.4 Munitions and Explosives of Concern Risk Assessment 6-4
6.1.5 Risk Summary 6-4
6.2 Munitions Constituent Human Health Screening-Level Risk Assessment 6-5
6.2.1 Conceptual Site Exposure Model 6-5
6.2.2 Affected Media....6-6
6.2.3 Screening Values....6-6
6.2.4 Risk Characterization for Soil and Sediment 6-6
6.2.5 Discussion....6-7
6.3 Munitions Constituent Ecological Screening-Level Risk Assessment 6-8
6.3.1 Conceptual Site Model 6-8
6.3.2 Affected Media....6-8
6.3.3 Screening Values....6-8
6.3.4 Ecological Risk Characterization for Soil and Sediment 6-8
6.3.4.1 Maneuver Area Munitions Response Site 6-9
6.3.4.2 Discussion....6-9

TABLE OF CONTENTS (CONTINUED)

Page

CHAPTER 7 SUMMARY AND CONCLUSIONS 7-1

7.1 Summary 7-1
7.2 Conclusions Regarding Potential Munitions and Explosives of Concern 7-2
7.3 Conclusions Regarding Potential Munitions Constituents Exposure Pathways 7-2

CHAPTER 8 RECOMMENDATIONS 8-1

CHAPTER 9 REFERENCES 9-1

TABLE OF CONTENTS (CONTINUED)

APPENDICES

A - PERFORMANCE WORK STATEMENT

B - TECHNICAL PLANNING PROCESS (TPP) SESSION DOCUMENTATION / MEETING MINUTES

C - INTERVIEW DOCUMENTATION

D - FIELD NOTES AND FIELD FORMS

E – PHOTO-DOCUMENTATION LOG

F - ANALYTICAL DATA

G - ANALYTICAL DATA QA/QC REPORT AND USACE-PREPARED CHEMICAL DATA QUALITY ASSURANCE REPORT

H - GEOGRAPHIC INFORMATION SYSTEMS DATA

I - GEOPHYSICAL DATA

J - CONCEPTUAL SITE MODEL

K - MUNITIONS RESPONSE SITE PRIORITIZATION PROTOCOL EVALUATIONS

L - REFERENCE COPIES

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES

		Page
ES.1	Summary of Site Inspection Qualitative Reconnaissance	ES-2
ES.2	Soil Human Health Screening-Level Risk Assessment	ES-3
ES.3	Recommendations	ES-4
1.1	Pacific Jungle Combat Training Center Coordinates	1-1
2.1	Population Information in the Vicinity of Pacific Jungle Combat Training Center	2-3
4.1	Chemical Composition of Munitions and Potential Munitions Constituents	4-5
4.2	MEC Data Quality Objective Worksheet	4-6
4.3	MC Data Quality Objective Worksheet	4-7
4.4	MRSPP Data Quality Objective Worksheet	4-8
4.5	HRS Data Quality Objective Worksheet	4-10
5.1	Active Groundwater Wells Within a 4-Mile Radius of Pacific Jungle Combat Training Center	5-2
5.2	State and Federally Listed Threatened and Endangered Species	5-5
5.3	Sampling Summary for Pacific Jungle Combat Training Center	5-13
5.4	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Surface Soil Samples Collected July 2008 - Decision Unit DU2	5-14
5.5	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Laboratory Triplicate Samples Collected July 2008 - Decision Unit DU2	5-16
5.6	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Surface Soil Samples Collected July 2008 - Decision Unit DU3	5-18
5.7	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Surface Soil Samples Collected July 2008 - Decision Unit DU4	5-20
5.8	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Ambient Soil Samples Collected July 2008 - Ambient Unit AU1	5-22
5.9	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Ambient Soil Samples Collected July 2008 - Ambient Unit AU2	5-24
5.10	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Surface Water Samples Collected July 2008	5-26
5.11	Summary of Validated Analytical Results for Pacific Jungle Combat Training Center Sediment Samples Collected July 2008	5-28
5.12	Soil Ambient Concentrations	5-30
5.13	Sediment Source Evaluation	5-33
5.14	Soil Source Evaluation	5-35

6.1 Categories of MEC Presence 6-2
6.2 Categories of MEC Type 6-3
6.3 Categories of Site Accessibility 6-3
6.4 MEC Risk Evaluation 6-4
6.5 Soil Human Health Screening-Level Risk Assessment 6-7
6.6 Sediment Human Health Screening-Level Risk Assessment 6-7
6.7 Soil Screening-Level Ecological Risk Assessment 6-9
6.8 Sediment Screening-Level Ecological Risk Assessment 6-9

8.1 Recommendations 8-1

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

		Page
ES.1	General Site Overview	ES-5
1.1	Site Location	1-4
2.1	Site Setting	2-6
2.2	2000 Census Data	2-7
4.1	Qualitative Reconnaissance and Field Observations Locations	4-11
5.1	Qualitative Reconnaissance and Decision Unit Locations	5-38
5.2	Wetlands	5-39

ACRONYMS AND ABBREVIATIONS

AP	Armor Piercing
bgs	Below Ground Surface
CEMVR	U.S. Army Corps of Engineers, Rock Island District
CEPOH	U.S. Army Corps of Engineers, Honolulu District
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHE	Chemical Hazard Evaluation
CSEM	Conceptual Site Exposure Model
CSM	Conceptual Site Model
CZMP	Costal Zone Management Program
DERP	Defense Environmental Response Program
DLNR	(Hawaii) Department of Land and Natural Resources
DoD	Department of Defense
DOFAW	Division of Forestry and Wildlife
DQO	Data Quality Objective
EAL	Environmental Action Level
EHE	Explosive Hazard Evaluation
EOD	Explosive Ordnance Disposal
ER	Engineering Regulation
ESV	Ecological Screening Values
° F	Degrees Fahrenheit
FDE	Findings and Determination of Eligibility
FMA	Fisheries Management Area
FUDS	Formerly Used Defense Site
GIS	Geographic Information System
GPS	Global Positioning System
HBS	Hawaii Biological Survey
HDOH	Hawaii State Department of Health
HE	High Explosive
HHE	Health Hazard Evaluation
HHRA	Human Health Risk Assessment
HQ	Hazard Quotient
HRS	Hazard Ranking System
INPR	Inventory Project Report
MC	Munitions Constituents

ACRONYMS AND ABBREVIATIONS (CONTINUED)

MD	Munitions Debris
MDL	Minimum Detection Limit
MEC	Munitions and Explosives of Concern
MI	Multi-Incremental (sample)
MMRP	Military Munitions Response Program
MPA	Marine Protected Areas
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NAD	North American Datum
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NDAI	No DoD Action Indicated
NERRS	National Estuarine Research Reserve System
NFS	National Forest Service
NHA	National Heritage Areas
NHL	National Historic Landmarks
NHP	National Heritage Program
NMFS	National Marine Fisheries Service
NMSP	National Marine Sanctuary Program
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRHP	National Register of Historic Places
NRIS	National Register Information System
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System
Parsons	Parsons Corporation
PQL	Practical Quantitation Limit
PRP	Potentially Responsible Party
PWP	Programmatic Work Plan
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QR	Qualitative Reconnaissance
RAC	Risk Assessment Code

ACRONYMS AND ABBREVIATIONS (CONTINUED)

RI/FS	Remedial Investigation / Feasibility Study
SHPD	State Historic Preservation Division
SI	Site Inspection
SLERA	Screening Level Ecological Risk Assessment
SLRA	Screening Level Risk Assessment
SS-WP	Site-Specific Work Plan
SVT	Site Visit Team
TCRA	Time Critical Removal Action
T & E	Threatened and Endangered
TESS	Threatened and Endangered Species System
TPP	Technical Project Planning
UIC	Underground Injection Control
US	United States
USACE	United States Army Corps of Engineers
USAESCH	United States Army Engineering and Support Center, Huntsville
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
UXO	Unexploded Ordnance

GLOSSARY OF TERMS

Anomaly	Any item that deviates from the expected subsurface ferrous and non-ferrous material at a site (*i.e.*, pipes, power lines, *etc.*).
Inhabited Structure	Permanent or temporary structure, other than military munitions-related structures, routinely occupied by one or more persons for any portion of a day.
Magnetometer	An instrument for measuring the strength of a magnetic field; used to detect buried iron.
Military Munitions	All ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants; explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents; chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges; and devices and components thereof.
Munitions and Explosives of Concern (MEC)	Military munitions that may pose unique explosives safety risks, including unexploded ordnance, discarded military munitions, or munitions constituents present in high enough concentrations to pose an explosive or other health hazard.
Munitions Constituents (MC)	Any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and nonexplosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.
Munitions Debris	Remnants of munitions (*e.g.*, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

GLOSSARY OF TERMS (CONTINUED)

Munitions Response	Response actions, including investigation, removal actions, and remedial actions, to address the explosive safety, human health, or environmental risks presented by unexploded ordnance, discarded military munitions, or munitions constituents, or to support a determination that no removal or remedial action is required.
Munitions Response Site (MRS)	A discrete location that is known to require a munitions response.
Projectile	Object projected by an applied force and continuing in motion by its own inertia. This includes bullets, bombs, shells, grenades, guided missiles, and rockets.
Unexploded Ordnance (UXO)	Military munitions that have been primed, fuzed, armed, or otherwise prepared for action; that have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material; and that remain unexploded whether by malfunction, design, or any other cause.

EXECUTIVE SUMMARY

ES.1 The Pacific Jungle Combat Training Center formerly used defense site consists of one munitions response site comprised of several parcels of land totaling approximately 2,545 acres in two adjacent valleys (Punaluu and Kahana Valleys) located on the northeast coast of the Island of Oahu, Hawaii (Figure ES.1). The parcels of land were acquired by the Army between 1943 and 1947 and established as a unit level jungle combat training center that included basic and advanced jungle warfare training, as well as instructor training. Munitions known to have been used or recovered at the site include 75mm armor piercing rounds, 105mm high explosive rounds, 81mm high explosive and practice mortar rounds, and small arms. Parcels in Kahana Valley were returned to the landowner in 1946, while leases and licenses for parcels in Punaluu Valley were officially terminated from April 1945 to November 1950. De-dudding efforts were conducted in Punaluu Valley by a clearance team in 1949.

ES.2 A site inspection for the munitions response site, documented in this report, was conducted to determine whether the site warrants further munitions and explosives of concern or munitions constituents response action, or a determination of No Department of Defense Action Indicated. The site inspection was performed to evaluate evidence for the presence of munitions and explosives of concern, munitions debris, and munitions constituents at the site. To accomplish this objective, qualitative reconnaissance and munitions constituent sampling were performed in July 2008.

ES.3 The technical project planning process identified that, in addition to qualitative reconnaissance, the collection of a multi-incremental surface soil sample from each of the four decision units designated to represent the munitions response site would be sufficient to meet the project objectives. The four decision units were identified as DU1, DU2, DU3, and DU4. At the time of the site inspection, the parcels in decision unit DU1 were being used for agricultural and aquacultural purposes, and could not be sampled. The MI soil samples collected from decision units DU2 and DU3 were comprised of 100 soil increments collected in triplicate. The MI soil sample collected from decision unit DU4 was comprised of 50 soil increments collected in triplicate. In addition, two ambient surface soil samples were collected at locations not expected to be affected by munitions activities to evaluate ambient metal concentrations, and surface water and sediment samples were collected from two streams at the site. No groundwater sample was collected because there is no drinking water source within the munitions response site.

ES.4 The site inspection included 11.91 miles of qualitative reconnaissance and collecting the multi-incremental surface soil samples. The surface soil sample increments

were collected on an unbiased, systematic random basis at approximately equally spaced intervals along the qualitative reconnaissance track (Figure ES.1).

ES.5 The surface soil, surface water, and sediment samples were sent to TestAmerica Inc. in Arvada, Colorado for analysis of explosives and selected metals. The soil and sediment samples results were screened and evaluated using the Hawaii Department of Health Environmental Action Levels for Soil (groundwater is a potential drinking water source; <150m to surface water). The surface water sample results were evaluated using the Hawaii Department of Health Environmental Action Levels for Surface Water.

ES.6 During the qualitative reconnaissance, munitions and explosives of concern were found in the form of an unexpended smoke grenade near a combat tank used for target practice in Punaluu Valley (Figure ES.1, Location 17) and munitions debris consisting of .30 caliber casings were found in Kahana Valley (Figure ES.1, Location 6). Five concrete gun emplacements were also observed at the site. The qualitative reconnaissance results are summarized in Table ES.1.

Table ES.1
Summary of Site Inspection Qualitative Reconnaissance
Pacific Jungle Combat Training Center

Munitions Response Site	Munitions and Explosives of Concern Found	Munitions Debris Found	Munitions Related Structures Found
Maneuver Area	Unexpended smoke grenade	.30 caliber casings	Five concrete gun emplacements

ES.7 No explosive compounds were detected in the three multi-incremental surface soil samples collected from the decision units; however, the explosive compound 2,4-dinitrotoluene was detected in one surface soil sample replicate collected from one of the ambient units (AU1). The munitions constituent metals antimony, copper, lead, and zinc were detected in the surface soil samples at concentrations above the ambient concentrations derived from the ambient surface soil sample collected from ambient unit AU2. As a result, a human health screening level risk assessment was conducted for these munitions constituents. The maximum concentrations of 2,4-dinitrotoluene, antimony, copper, lead, and zinc did not exceed their respective screening levels. The risk assessment concluded that no unacceptable risks to human receptors are expected from exposure to the munitions constituents detected in surface soil at the site. These results are summarized in Table ES.2.

Table ES.2
Soil Human Health Screening-Level Risk Assessment
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Concentration	Hawaii Department of Health Environmental Action Levels for Soil[1]	Exceeds Screening-Level?
Metals				
Antimony	mg/kg	0.071	6.3	No
Copper	mg/kg	61	230	No
Lead	mg/kg	36	200	No
Zinc	mg/kg	170	600	No
Explosives				
2,4-Dinitrotoluene	µg/kg	75	2,700	No

[1]Hawaii Department of Health Environmental Action Levels for Soil (groundwater is a potential drinking water source; <150m to surface water); revised August 2008.

ES.8 Surface water and sediment samples were collected from Punaluu Stream and Kahana Stream within the site boundary. No explosives or metals were detected in the surface water samples. In the sediment samples, no explosives were detected; however, copper, lead, and zinc were detected. These detections resulted in conducting a human health screening level risk assessment for the sediment. The maximum concentrations of copper, lead, and zinc in sediment did not exceed their respective screening levels; therefore, no unacceptable risks to human receptors are expected from exposure to surface water or sediment at the site.

ES.9 The Pacific Jungle Combat Training Center site is considered to be an important ecological place. The explosive compound 2,4-dinitrotoluene and munitions constituent metals detected above ambient concentrations in surface soil (antimony, copper, lead, and zinc) were retained for evaluation in the screening level ecological risk assessment. The metals detected in the sediment samples (copper, lead, and zinc) also were retained for evaluation in the screening level ecological risk assessment. To complete the ecological risk assessment, the detected 2,4-dinitrotoluene concentration and the maximum metal concentrations detected in surface soil and sediment were evaluated against their respective screening levels (Hawaii Department of Health Environmental Action Levels for Soil). None of the constituents exceeded their respective screening levels and the risk assessment concluded that no unacceptable risks to ecological receptors are expected from exposure to surface soil, surface water, or sediment at the munitions response site.

ES.10 It is recommended that the Pacific Jungle Combat Training Center - Training Maneuver Area munitions response site precede to a remedial investigation/feasibility study based on the findings of munitions and explosive concern at the site. The recommendation and justification for the site are summarized in Table ES.3.

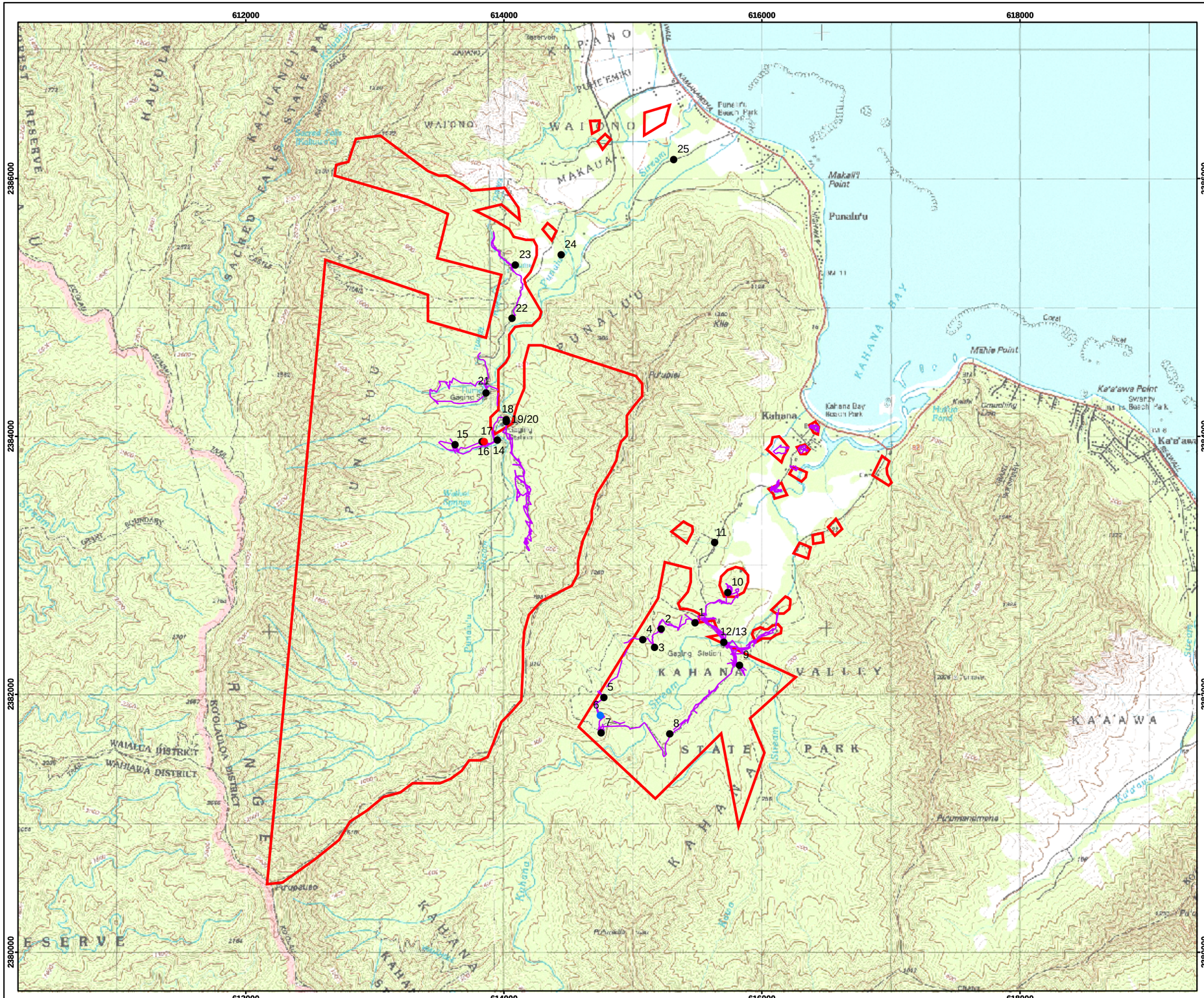
Table ES.3
Recommendations
Pacific Jungle Combat Training Center

Munitions Response Site	Recommendation	Justification
Maneuver Area	**Remedial Investigation/Feasibility Study**	**Munitions and Explosives of Concern:** During the July 2008 qualitative reconnaissance of the site, an unexpended smoke grenade was found near a combat tank used for target practice in Punaluu Valley. Historically, unexpended .30 caliber bullets and a live 81mm mortar were found in Punaluu Valley. **Munitions Debris:** During the July 2008 qualitative reconnaissance of the site, .30 caliber casings were found in Kahana Valley. Historically, an expended 105mm armor piercing round, expended M1 and M2 cartridges, and a 75mm high explosive or armor piercing round were found in Punaluu Valley.

Figure ES.1

General Site Overview
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii


612000
614000
616000
618000
2386000
2384000
2382000
2380000
25
24
23
22
21
18
19/20
17
15
16
14
11
10
1
2
4
3
12/13
9
5
6
7
8
Kahana
Kahana Bay Beach Park
Mahie Point
Ka'a'awa Point
Makahi Point
Punalu'u
KAHANA BAY
KAHANA VALLEY STATE PARK
KA'A'AWA
WAIAHOLE
WAIKANE
KAPA'ANO
MAKAUAE
PUHI'EMIKI
KAUAINOA
NA'UDLA
SACRED FALLS STATE PARK
KOOLAULOA RANGE RESERVE
WAILUA DISTRICT
WAHIAWA DISTRICT
Waiahole Stream
Waikane Stream
Kahana Stream
Punalu'u Stream
Makua Stream
Kaluanui Stream
Kahana Valley Stream
Kaluanui Gulch
Kahana Valley Gulch
Kahana Valley Trail
Kaluanui Trail
Kaluanui Ridge Trail
Kahana Ridge Trail
Kahana Valley Ridge Trail
Kaluanui Ridge Trail
Kahana Valley Ridge Trail
Kaluanui Ridge Trail
Kahana Valley Ridge Trail
Kaluanui

CHAPTER 1
INTRODUCTION

1.1 BACKGROUND

1.1.1 Parsons Corporation (Parsons) received Contract No. W912DY-04-D-0005, Task Order No. 0008, from the United States (US) Army Corps of Engineers (USACE), US Army Engineering and Support Center, Huntsville (USAESCH) to perform a Site Inspection (SI) at the Pacific Jungle Combat Training Center located on the northeast coast of the Island of Oahu, Hawaii. The Pacific Jungle Combat Training Center consists of approximately 2,545 acres designated as a formerly used defense site (FUDS). The location of the site is shown in Figure 1.1. The site has been assigned FUDS Project Number **H09HI027401**.

1.1.2 Based on historical research and site visits confirming the area that was used by the military, the 1993 Inventory Project Report (INPR) prepared by USACE Honolulu District (CEPOH) identified 2,266.77 acres used by the US Army for jungle combat training during WWII. The FUDS eligible property was identified as the Pacific Jungle Combat Training Center and assigned FUDS Property Number H09HI027400 (CEPOH, 1993). The 2004 INPR Supplement prepared by the USACE, Rock Island District (CEMVR) identified the Pacific Jungle Combat Training Center - Maneuver Area as a Munitions Response Site (MRS), assigned it FUDS Project Number H09HI027401, and increased the MRS area to 2,545 acres (CEMVR, 2004). The coordinates for the MRS are listed in Table 1.1. The coordinates are in meters in Universal Transverse Mercator (UTM) Projection, Zone 4, referenced to the North American Datum (NAD) 83.

Table 1.1
Pacific Jungle Combat Training Center Coordinates[1]

MRS	X-Coordinate (meters)	Y-Coordinate (meters)
Maneuver Area	613439.00	2383349.00

[1] INPR Supplement and FUDS Management Information System

1.2 PROJECT OBJECTIVES

1.2.1 The Department of Defense (DoD) has established the Military Munitions Response Program (MMRP) to address DoD sites suspected of containing munitions and explosives of concern (MEC) or munitions constituents (MC). Under the MMRP, the USACE is conducting environmental response activities at FUDS for the US Army, the DoD Executive Agent for the FUDS program.

1.2.2 Pursuant to USACE Engineer Regulation (ER) 200-3-1 (USACE, 10 May 2004) and the Management Guidance for the Defense Environmental Response Program (DERP) (Office of the Deputy Under Secretary of Defense (Installations and Environment), September 2001), USACE is conducting FUDS response activities in accordance with the DERP statute (10 United States Code (USC) 2701 et seq.), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC §9620), Executive Orders 12580 and 13016, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300). As such, USACE is conducting remedial SIs, as set forth in the NCP, to evaluate hazardous substance releases or threatened releases from eligible FUDS.

1.2.3 While not all MEC/MC constitute CERCLA hazardous substances, pollutants or contaminants, the DERP statute provides DoD with the authority to respond to releases of MEC/MC, and DoD policy states that such responses shall be conducted in accordance with CERCLA and the NCP.

1.2.4 The primary objective of the MMRP SI is to determine whether or not a FUDS project warrants further response action under CERCLA. Alternatives are a recommendation for immediate action in a Time Critical Removal Action (TCRA), subsequent characterization action in a Remedial Investigation/Feasibility Study (RI/FS), a Potentially Responsible Party (PRP) action, or No DoD Action Indicated (NDAI). The SI collects the minimum amount of information necessary to make this determination. Additionally, the SI (i) collects or develops additional data, as appropriate, for Hazard Ranking System (HRS) scoring by the United States Environmental Protection Agency (USEPA); (ii) collects data, as appropriate, to characterize the release for effective and rapid initiation of the RI/FS; and (iii) collects the additional data necessary to complete the Munitions Response Site Prioritization Protocol (MRSPP).

1.2.5 The SI was performed as a result of the suspected presence of MEC and munitions debris (MD) as discussed in the INPR. All work adhered to the DERP for FUDS and relevant US Army regulations and guidance for ordnance and explosives programs. As specified in the task order, this report is prepared to summarize the SI sampling events and presents an assessment of the MEC/MC contamination identified on-site.

1.3 PROJECT SCOPE

1.3.1 The primary project planning documents used to perform the SI include the Final Technical Project Planning Memorandum and Associated Documentation for the Pacific Jungle Combat Training Center (Parsons, 2007a) and the Final Programmatic Work Plan (PWP) for Southeast and Pacific Installation Management Agency Region (Parsons, 2005). The performance work statement for this project is in Appendix A.

1.3.2 The CEPOH facilitated a Technical Project Planning (TPP) meeting on February 9, 2007 that included representatives of USAESCH, CEPOH, Hawaii Department of Health (HDOH), and Parsons. The TPP Team developed and unanimously concurred with the technical approach presented in the Final TPP Memorandum (Parsons, 2007a).

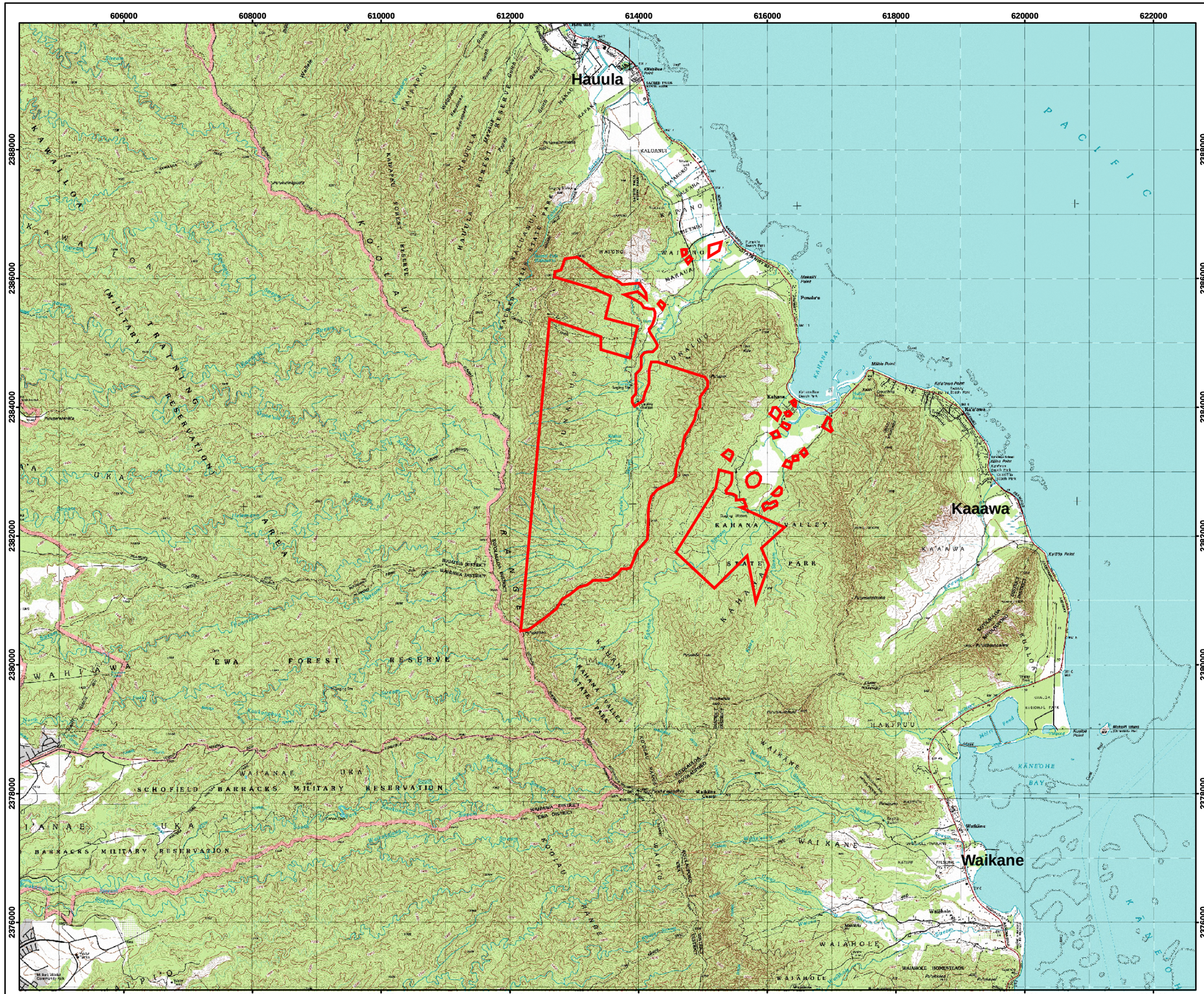
1.3.3 Based on the existing body of data for the site, particularly the confirmed presence of MEC and MD in the form of live artillery rounds and artillery shrapnel discovered during the INPR site visits, the TPP Team agreed that the SI approach for the site would proceed in a manner to support a focused follow-on RI/FS. Therefore, the objective of the SI for the Pacific Jungle Combat Training Center is to evaluate MEC/MC presence in the known Maneuver Area MRS and evaluate MEC presence in peripheral portions of the MRS to provide supporting evidence of the absence or presence MEC in these areas. In this manner, the SI report recommendation can potentially focus on the single MRS for the RI/FS determination.

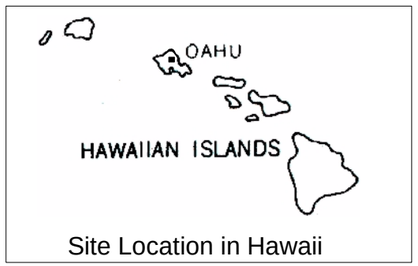
1.3.4 To accomplish the site objective, the TPP Team unanimously agreed that SI data collection efforts would include qualitative reconnaissance (QR) and MC sampling of surface soil, surface water, and sediment. Surface water and sediment would be sampled in the major stream in Punaluu Valley and the major stream in Kahana Valley. MC sampling of surface soil would use the multi-incremental (MI) sampling method to obtain soil samples representative of the MRS. The TPP Team agreed the MRS would be represented by four MI soil sampling decision units. MI sampling provides the project with a more accurate measure of the mean concentration of contaminants present and produces repeatable, scientifically defensible data. Because there are no known background concentrations for metals in the vicinity of the MRS, an ambient MI surface soil sample would be collected in each valley at locations expected to be free of contamination.

Figure 1.1

Site Location
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii





Site Location in Hawaii

Image: USGS Topo Map, 1983
Projection: UTM Zone 4 NAD83, Map Units in Meters

5,000 2,500 0 5,000 Feet

N

Legend

Approximate FUDS Property and Maneuver Area Boundary

PARSONS	U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER
DESIGNED BY: BT	Site Location
DRAWN BY: BT	
CHECKED BY: LK	SCALE: As Shown — PROJECT NUMBER: 744647.51000
SUBMITTED BY: DS	DATE: September 2008 — PAGE NUMBER: 1-4
	FILE: X:\GIS\Site_inspections_se\Maps\kahuku_HI\Fig1_1.mxd

CHAPTER 2
PROPERTY DESCRIPTION AND HISTORY

2.1 SITE LOCATION

The Pacific Jungle Combat Training Center - Maneuver Area MRS is located on the northeast coast of the Island of Oahu, Hawaii. The MRS consists of several noncontiguous parcels within the adjacent Kahana and Punaluu Valleys that total approximately 2,545 acres based on the 2004 INPR Supplement (CEMVR, 2004). Portions of the MRS are located within the boundaries of the Hauula Forest Reserve and Kahana Valley State Park. The MRS parcel locations are shown in Figure 2.1.

2.2 SITE DESCRIPTION AND SETTING

2.2.1 Topography and Vegetation

The MRS is located along the eastern slope of the northern Koolau Range and the coastal plain of northeast Oahu. The main topographic features at the MRS are the Kahana and Punaluu Valleys. The topography is relatively flat to gently sloping in the lower portions of the valleys near the coast and becomes steep and rugged as the valleys ascend into the Koolau Range. Elevations range from near sea level near the coast to approximately 2,000 feet above sea level in the mountainous interior regions. Vegetation is dense in the interior portions of both valleys. The natural vegetation includes ferns, guava, Christmas berry, java plum, rice grass, hilograss, and paragrass. The lower Kahana Valley includes areas of ancient wet taro cultivation systems.

2.2.2 Geology and Soils

2.2.2.1 The Island of Oahu represents the eroded remains of two coalesced shield volcanoes, the Waianae Volcano and the Koolau Volcano. Shield-building lavas emanated mainly from rift zones of the volcanoes. Subaerial eruptions of the Waianae Volcano occurred between 3.9 and 2.5 million years ago. Eruptions of the Koolau Volcano occurred between 2.6 and 1.8 million years ago. The volcanoes have subsided more than 6,000 feet and erosion has destroyed all but the western rim of the Koolau Volcano and the eastern part of the Waianae Volcano, represented by the Koolau and Waianae Ranges, respectively (Hunt 1996).

2.2.2.2 The geology in the interior parts of the MRS along the slope of the Koolau Range is mapped as the Koolau Basalt which consists of tholeiitic basalt lava flows and feeder dikes (Hunt, 1996). The lower elevation areas that lie in the Kahana and Punaluu Valleys are underlain by alluvium at shallow depths. Marine sediment may underlie the alluvium in the lower parts of the valleys near the coast. Both valleys were cut back into

the ancient cliffs of the Koolau Range by erosion during a higher stand in sea level and are considered to be "drowned valleys" as the floor of each valley extends offshore.

2.2.2.3 Chemical weathering readily decomposes basaltic rocks to produce thick zones of clay rich saprolite that is easily eroded. The soil covering most of the MRS is the Waikane Series dark brown silty clay on steep terraces and alluvial fans. The Hanalei series dark gray silty clay is found in the less well drained floodplains of the lower valleys.

2.2.3 Hydrology

The surface water hydrology at the MRS is characterized by numerous streams that flow from the higher elevation mountain areas into the valleys where they coalesce and eventually discharge into the ocean. Two primary streams referred to as "pristine" are located at the MRS, the Punaluu Stream which drains Punaluu Valley and the Kahana Stream which drains Kahana Valley (Figure 2.1). There are no lakes or other large bodies of water in the MRS, although there are wetlands in the lower parts of both valleys (described in Subchapter 5.2.5) and a fish pond in the lower Punaluu Valley. Springs are present along the slope of the Koolau Range in the western part of the MRS that result from the release of confined basal and/or dike impounded groundwater (Figure 2.1). Groundwater hydrology for the MRS is discussed in Subchapter 5.2.2.

2.2.4 Climate

The prevailing northeast trade winds are the dominant factor governing Oahu's pleasant climate and that of all the Hawaiian Islands. The persistent trade winds result in steady breezes. Average wind speed recorded at Honolulu International Airport is 12 knots from the east-northeast direction. Recent seawater temperatures have measured between 76 to 78 degrees Fahrenheit (°F). The trade winds help to make even the warmest months comfortable. The average air temperature ranges from 88° F to 74° F with moderate humidity of 53% during the day. The Koolau Range along the northeastern coast of Oahu has a profound effect on the distribution of rainfall. Annual rainfall near the crest of the Koolau Range may be 275 inches while leeward areas to the west have less than 25 inches (Climate of Oahu, Hawaii, 2008). The Kahana and Punaluu Valleys average 60 to 80 inches of rain per year.

2.2.5 Cultural and Archaeological Resources

According to the National Register Information System (NRIS), National Register of Historic Places (NRHP), and National Historic Landmarks (NHL) databases, there are many recorded archaeological/cultural resources on Oahu. According to the State Historic Preservation Division (SHPD) database there are nine archaeological/cultural resources recorded on the Kahana (06) quadrangle map where the site is located. Specific locations of these nine areas are not available due to address restrictions on sensitive areas. According to the INPR, an ancient wet taro system is believed to have dominated Kahana Valley at one time. Remnants of the system include as many as 120 small wet terraces and 12 irrigation canals. A temple or heiau is located in Kahana

Valley, in addition to three fishing shrines. Huilua Fishpond at the mouth of Kahana Valley is listed on both the National and Hawaii registers of historic places.

2.2.6 Significant Structures

Five concrete gun emplacements were identified at the MRS during the QR. One gun emplacement was found in Punaluu Valley and four gun emplacements were found on a ridge in the upper part of Kahana Valley.

2.2.7 Demographics

2.2.7.1 The regional demographics information for the Pacific Jungle Combat Training Center-Maneuver Area MRS was obtained from the American Fact Finder Fast Access to Information link (http://factfinder.census.gov/home/saff/main.html?_lang=en) on the US Census Bureau website, and from the 2000 US Census Bureau website (http://quickfacts.census.gov/qfd/).

2.2.7.2 The US Census Bureau 2000 population for the Island of Oahu, Honolulu County is 876,156, with a population density of 1460.3 persons per square mile. The median age of the population is 35.7. The population consists of 21.3% White, 2.4% Black or African American, 0.2% American Indian or Alaskan, 46.0% Asian, 8.9% Native Hawaiian and Other Pacific Islander, 6.7% Hispanic or Latino, 1.3% of some other race, and 19.9% of two or more races. Figure 2.2 shows the population distribution in the vicinity of the MRS based on the 2000 Census data organized by census block. This information is summarized below in Table 2.1. Because the Census data is organized by Census block, Figure 2.2 and Table 2.1 show a population of 403 residents on site. However, some of 403 residents actually reside outside the MRS boundaries within 0.5 miles. As of 2007, more than 26 inhabited structures exist within two miles of the MRS.

Table 2.1
Population Information in the Vicinity of
Pacific Jungle Combat Training Center

MRS	On Site	0 to 0.25 mile	0.25 to 0.5 mile	0.5 to 1 mile	1 to 2 miles	2 to 3 miles	3 to 4 miles	Total
Maneuver Area	403	0	0	239	2588	4949	497	8376

Source: U.S. Census 2000 data. As of 2007, more than 26 inhabited structures exist within two miles of the FUDS boundary. The population within the MRS or within any buffer area is determined using a conservative approach to calculate the population of an area by including the total number of people for any census block that falls within or overlaps the site boundary, MRS boundary, or buffer line. The population data accounts for the population of residences, and does not take into account the transient population.

2.2.8 Current and Future Land Use

The site currently includes residential and recreational areas in the valleys near the coast. Further inland the site is mountainous and undeveloped. Much of the area in Kahana Valley and Punaluu Valley is within the Hauula Forest Reserve. In 1960, Kahana Valley was designated a state park and is currently under the purview of the Hawaii Department of Land and Natural Resources (DLNR). Punaluu Valley is currently owned by several private owners and used for residential and agricultural purposes. There are no known plans for future development in the MRS area.

2.3 SITE OWNERSHIP AND HISTORY

The Pacific Jungle Combat Training Center originally consisted of 2,267 acres (increased to 2,545 acres in the INPR Supplement) in Kahana and Punaluu Valleys. The US Army acquired 485.25 acres in Kahana Valley by license in November 1944 retroactive to May 1943. Leases, licenses, and informal agreements were executed by the US Army between October 1943 and March 1947 to acquire approximately 1,781.52 acres in Punaluu Valley. The valleys were used as a unit jungle combat training center beginning in September 1943. Due to a change in training policy, the center became known as Unit Combat Training Centers in March 1945 and Pacific Combat Training Center the following month. Parcels in Kahana Valley were returned to its landowner in 1946, while leases and licenses for parcels in Punaluu Valley were officially terminated from April 1945 to November 1950. De-dudding efforts were conducted by an engineer search and range clearance team in Punaluu Valley in 1949.

2.4 SITE OPERATIONS AND WASTE CHARACTERISTICS

2.4.1 MRS-Specific Descriptions/Operations

The Pacific Jungle Combat Training Center was established and used as a unit level jungle combat center to supplement Department Ranger and Combat School Training. The Center was divided into three courses; Red, Blue, and Green. Basic jungle warfare was conducted at the Red and Blue courses. Advanced jungle warfare training as well as the Instructor Jungle Training School were conducted at the Green course. Training included jungle first aid and evacuation, hand to hand combat training, construction and passage of wire entanglements, booby traps, patrolling and ambushing, assault of Japanese fortified areas, combat reaction proficiency, and jungle living. In all, over 241,000 Army, Marine, and Navy troops received basic jungle training and over 300,000 troops received basic, advanced or instructor jungle training at the Pacific Jungle Combat Training Center. Munitions known to have been used or recovered at the MRS include 75mm armor piercing (AP) rounds, 105mm high explosive (HE) rounds, 81mm HE and practice mortar rounds, and small arms.

2.4.2 Regulatory Compliance

The USACE is conducting the SI at the Pacific Jungle Combat Training Center-Maneuver Area MRS as part of FUDS response activities pursuant to and in accordance with the guidance, regulations, and legislation listed in Subchapter 1.2.

2.5 PREVIOUS INVESTIGATIONS

2.5.1 1993 Inventory Project Report

The INPR was completed by CEPOH on December 3, 1993 (CEPOH, 1993). The INPR established the Pacific Jungle Combat Training Center site as a FUDS, established the preliminary site boundary, assigned the FUDS Project Number H09HI027401, and recommended an investigation to evaluate the presence of MEC. The Findings and Determination of Eligibility (FDE) for the site concluded that Pacific Jungle Combat Training Center was utilized as a training/maneuver area. Three site surveys were conducted in support of the INPR. The Trip Report for the Site Surveys reported the presence of MEC/MD in the form of an expended 105mm AP round, unexpended .30 caliber bullets, expended M1 and M2 cartridges, a 75mm HE or AP round, and a live 81mm mortar round.

2.5.2 2004 INPR Supplement

The INPR Supplement (CEMVR, 2004) was completed by the USACE, Rock Island District as an addition to the 1993 INPR. This document notes that the INPR Site Survey team observed several MEC and MD during their visit. The INPR Supplement identified one MRS, Maneuver Area, consisting of several noncontiguous parcels with a total area of 2,545 acres. The Pacific Jungle Combat Training Center-Maneuver Area MRS was assigned a Risk Assessment Code (RAC) of 2 based on hazard severity of “critical” and hazard probability of “probable”. No site visit was conducted in support of the INPR Supplement.

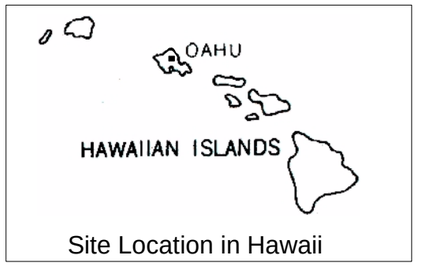
Figure 2.1

Site Setting
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii

Legend

Approximate FUDS Property and Maneuver Area Boundary



Site Location in Hawaii

Image: USGS Topo Map, 1983
Projection: UTM Zone 4 NAD83, Map Units in Meters

2,500 1,250 0 2,500 Feet

N

PARSONS	U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER

DESIGNED BY: BT	Site Setting		
DRAWN BY: BT		SCALE: As Shown	PROJECT NUMBER: 744647.51000
CHECKED BY: LK		DATE: September 2008	PAGE NUMBER: 2-6
SUBMITTED BY: DS		FILE: X:\GIS\Site_inspections_se\Maps\kahuku_HI\Fig2_1.mxd	

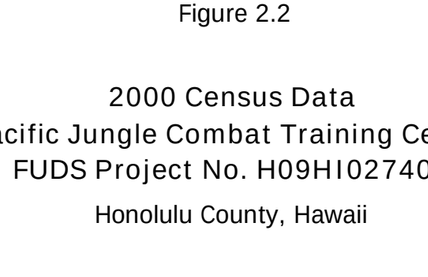
Figure 2.2

2000 Census Data
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii

Legend

- 4 — 2000 Census Block Boundary with Total Population
- Approximate FUDS Property and Maneuver Area Boundary
- Buffer (Miles)



Site Location in Hawaii

Image: USGS Topo Map, 1983
Projection: UTM Zone 4 NAD83, Map Units in Meters

1 0.5 0 1 Miles

N

PARSONS	U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER

DESIGNED BY: BT	2000 Census Data		
DRAWN BY: BT		SCALE: As Shown	PROJECT NUMBER: 744647.51000
CHECKED BY: LK		DATE: September 2008	PAGE NUMBER: 2-7
SUBMITTED BY: DS		FILE: X:\GIS\Site_inspections_se\Maps\kahuku_HI\Fig2_2.mxd	

CHAPTER 3
SITE INSPECTION TASKS

3.1 HISTORICAL RECORDS REVIEW

Parsons performed a document review for the Pacific Jungle Combat Training Center. Documents reviewed included the 1993 INPR (CEPOH, 1993) and the 2004 INPR Supplement (CEMVR, 2004).

3.2 TECHNICAL PROJECT PLANNING

The Pacific Jungle Combat Training Center - Maneuver Area MRS falls under the purview of CEPOH, which facilitated a TPP meeting on February 9, 2007. Participants included representatives of USAESCH, CEPOH, HDOH, and Parsons. The purpose of the TPP meeting was to develop the technical approach presented in the Final TPP Memorandum (Parsons, 2007a) which is in Appendix B of this SI Report. Key TPP findings and decisions are summarized below:

- The TPP Team concurs with the technical approach (anticipated RI/FS), as revised at the TPP meeting on February 9, 2007.
- The TPP Team agreed that Pacific Jungle Combat Training Center - Maneuver Area MRS should be a straight forward and simple SI. No SI concerns were identified by the HDOH.
- The TPP Team agreed that sampling for iron would not be useful for the site due to the high natural iron content of soil in Hawaii.
- The TPP Team agreed that two streams located on the site considered “pristine” will be sampled at or near two existing gauge stations.
- The TPP Team agreed to use the multi-incremental soil sampling method.
- The TPP Team agreed that CEPOH will serve as the primary coordinator with the Hawaii State Historic Preservation Office.
- The TPP Team did not identify any site specific issues requiring an expedited project schedule or document reviews for the site.

3.3 NON-MEASUREMENT DATA COLLECTION

Site information presented in this SI Report was prepared by reviewing existing site documents, doing research via the internet, and requesting information from agency contacts. The following sources were consulted for identifying biological and cultural resources at the Pacific Jungle Combat Training Center-Maneuver Area MRS:

- Topographic Map – US Geological Survey (USGS)

- Wetlands Online Mapper – National Wetlands Inventory (NWI), US Fish and Wildlife Service (USFWS)
- Threatened and Endangered Species System (TESS) – Endangered Species Program, USFWS
- National Wildlife Refuge System (NWRS) – USFWS
- US Department of Agriculture (USDA) – National Forest Service (NFS)
- DLNR, Division of Forestry and Wildlife (DOFAW)
- Hawaii Biological Survey (HBS)
- National Park Service (NPS)
- Hawaii State Parks
- NRIS – NRHP (Honolulu County), NPS
- List of National Historic Landmarks – National Historic Landmarks Program (Hawaii), NPS
- Hawaii Historic Districts, Honolulu County
- List of National Heritage Areas (NHAs) – National Heritage Areas Program, NPS
- Hawaii State Historic Preservation Division
- Natural Heritage Program (NHP)
- National Oceanic and Atmospheric Administration (NOAA):
    - Coastal Zone Management Program (CZMP)
    - National Marine Sanctuary Program (NMSP)
    - National Estuarine Research Reserve System (NERRS)
    - National Marine Fisheries Service (NMFS)
    - Marine Protected Areas (MPA)
    - Fishery Management Areas (FMA)

3.4 SITE-SPECIFIC WORK PLAN

The Final Site-Specific Work Plan (SS-WP) Addendum for the Pacific Jungle Combat Training Center - Maneuver Area MRS was issued to the USACE on November 19, 2007 with slip pages issued on November 26, 2007 (Parsons, 2007b).

3.5 DEPARTURES FROM PLANNING DOCUMENTS

3.5.1 The SS-WP Addendum Table 4.2 specified that one of the replicates for each sample including the ambient samples should be designated for the Quality Control (QC) matrix spike/matrix spike duplicate (MS/MSD) samples and another of the replicates should be designated for the QC laboratory triplicate. The USACE Project Chemist approved a change to stipulate that only one set of MS/MSD samples and one set of laboratory triplicates were needed for each site provided that the laboratory analyzes all samples in one analytical batch. Parsons Project Chemist instructed TestAmerica to analyze all samples from this site in one analytical batch.

3.5.2 The SS-WP Addendum specified that the Pacific Jungle Combat Training Center - Maneuver Area MRS would be represented by four soil sample decision units identified as DU1, DU2, DU3, and DU4. One MI surface soil sample was collected from each of the decision units, except DU1 which could not be sampled because the FUDS parcels in DU1 were being used for agricultural and aquacultural purposes.

CHAPTER 4
MUNITIONS AND EXPLOSIVES OF CONCERN FINDINGS

4.1 GENERAL INFORMATION

The primary task of this SI was to assess the presence of MEC, MD indicative of MEC, and MC in the Pacific Jungle Combat Training Center - Maneuver Area MRS. The field visit to the MRS was conducted from July 11 to July 17, 2008. The following subchapters provide details on the data quality objectives (DQO), historical MEC information, and inspection activities.

4.1.1 Qualitative Reconnaissance

Site QR consisted of a visual reconnaissance of the MRS to locate surface MEC or MD and to identify indicators of the past use of the MRS such as craters, target remnants, land scars, surface staining, and buildings or earthen structures. An Unexploded Ordnance (UXO) Technician III used a metal detector to avoid metallic debris originating from potential MEC or MD that may be concealed by vegetation. Photographs were taken of pertinent land and munitions-related features. The photographs were referenced to global positioning system (GPS) coordinates as shown in the Photo-Documentation Log in Appendix E. The field observation locations in Figure 4.1 correspond to the Point ID numbers in the Photo-Documentation Log. The site QR data collection was conducted through the MRS where physical conditions permitted. A total of 11.91 miles of QR track was completed as shown in Figure 4.1.

4.1.2 Munitions Constituents Sampling

MC sampling included the collection of surface soil, surface water, and sediment samples. MC sampling of surface soil was conducted using the MI sampling method. The MRS is represented by four soil sampling decision units identified as DU1, DU2, DU3, and DU4. One MI surface soil sample was collected from three of the four decision units. The FUDS parcels in decision unit DU1 were being used for agricultural and aquacultural purposes; therefore, could not be sampled. The MI soil samples collected from DU2 and DU3 were comprised of 100 soil increments. The MI soil sample collected from DU4 was comprised of 50 soil increments. All three MI soil samples were collected in triplicate. The site visit team (SVT) conducted sampling along the QR track and obtained sample increments at equally spaced intervals within each DU. Ambient MI surface soil samples and surface water/sediment samples were also collected within the MRS. Groundwater was not sampled because there is no drinking water source within the MRS. Table 4.1 shows the potential MC expected from munitions known or suspected to be present based on the INPR and INPR Supplement. The sampling results are presented in Chapter 5.

4.2 DATA QUALITY OBJECTIVES

4.2.1 Introduction

4.2.1.1 DQOs are qualitative and quantitative statements that clarify study objectives and specify the type and quality of the data necessary to support decisions. The development of DQOs for a specific site takes into account factors that determine whether the quality and quantity of data are adequate for project needs, such as data collection, uses, types, and needs. While developing these DQOs in accordance with the process presented in Chapter 3, paragraph 3.1.2 of the PWP, Parsons followed the Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4, EPA/240/B-06/001 (USEPA, 2006). Tables 4.2 through 4.5 present the DQO Worksheets including evaluations for each criterion.

4.2.1.2 The goal of the TPP process is to achieve stakeholder, USACE, and applicable state and federal regulatory concurrence with the DQOs for a given site. The TPP Team approved the DQOs at the TPP meeting on February 9, 2007. As indicated in Tables 4.2 through 4.5, all the DQOs for the Pacific Jungle Combat Training Center-Maneuver Area MRS have been met.

4.2.1.3 As stated in Subchapter 1.2, Paragraph 1.2.4 of this SI Report, data must be sufficient to do the following: 1) determine the potential need for a removal action; 2) enable HRS scoring by USEPA; 3) characterize the release for effective and rapid initiation of RI/FS; and 4) complete the MRSPP.

4.2.1.4 DQOs cover four (4) project objectives that SI data must satisfy: 1) evaluate potential presence of MEC; 2) evaluate potential presence of MC; 3) collect data needed to complete MRSPP scoring sheets; and 4) collect information for HRS scoring.

4.2.2 Munitions and Explosives of Concern DQO

The MEC DQO was achieved by evaluating the potential presence of MEC/MD at the MRS. In Punaluu Valley, the SVT found MEC in the form of an unexpended smoke grenade near a combat tank used for target practice. In Kahana Valley, the SVT found MD consisting of several .30 caliber casings.

4.2.3 Munitions Constituents DQO

The MC DQO was achieved by evaluating the potential presence of MC known to occur in the munitions documented or suspected to have been used at the Pacific Jungle Combat Training Center-Maneuver Area MRS. The Parsons SI Project Chemist evaluated the composition of munitions and fillers known or suspected to have been used at the site and developed the list of analytes for sample analysis. Potential MC are summarized in Table 4.1. Chapter 5 presents the MC sampling and analysis results. Chapter 6 reports the risk assessments based on the MC concentrations detected.

4.2.4 Munitions Response Site Prioritization Protocol DQO

The MRSPP DQO was achieved by obtaining sufficient information to complete the MRSPP scoring sheets. Specific input data were collected and the three modules for the

MRSPP were populated as part of the SI. The scoring sheets for the MRSPP are included in Appendix K.

4.2.5 Hazard Ranking System DQO

The HRS DQO was achieved by including information in the SI report necessary for the USEPA to populate the HRS scoring sheets. Source documents for the HRS information include the 1993 INPR and 2004 INPR Supplement documents, information from local and state agencies regarding population, groundwater well users, drinking water well use, and the MC sampling results reported in Chapter 5.

4.3 MANEUVER AREA MUNITIONS RESPONSE SITE

4.3.1 Historical Munitions and Explosives of Concern Information

4.3.1.1 The Pacific Jungle Combat Training Center was established and used as a unit level jungle combat center to supplement Department Ranger and Combat School Training. Training included jungle first aid and evacuation, hand to hand combat training, construction and passage of wire entanglements, booby traps, patrolling and ambushing, assault of Japanese fortified areas, combat reaction proficiency, and jungle living. Munitions known to have been used or recovered at the MRS include 75mm AP rounds, 105mm HE rounds, 81mm HE and practice mortar rounds, and small arms. De-dudding efforts were conducted by an engineer search and range clearance team in Punaluu Valley in 1949.

4.3.1.2 There have not been any documented munitions-related incidents at the MRS. Table 4.1 lists the various munitions known or suspected to have been used on the site based on data in the INPR Supplement. The associated fillers and potential constituents are also included in Table 4.1 to provide a more complete picture of the potential contamination on site.

4.3.2 Inspection Activities

4.3.2.1 The SI effort for the Pacific Jungle Combat Training Center - Maneuver Area MRS was conducted from July 11 to July 17, 2008. The FUDS parcels in the lower part of Punaluu Valley near the coast were being used for agricultural and aquacultural purposes; therefore, the QR in this area was limited to taking pictures and observing the parcels from a distance. Photographs taken at Point IDs 24 and 25, presented in the Photo-Documentation Log in Appendix E, show the parcels currently occupied by a fish farm and farm land. The field observation locations in Figure 4.1 correspond to the Point IDs in the Photo-Documentation Log. No MEC or MD were observed in the lower Punaluu Valley.

4.3.2.2 The QR in upper Punaluu Valley part of the MRS was conducted along 5.83 miles of track as shown in Figure 4.1. The QR track deviated from the planned QR track due to the steep terrain and dense vegetation. Photographs taken at Point ID 15 show the steep terrain and dense vegetation (Appendix E; Figure 4.1). In upper Punaluu Valley, the SVT found MEC in the form of an unexpended smoke grenade near a combat tank used for target practice. The tank had numerous small arms holes and appeared to have been hit by artillery rounds, as pieces were missing and scattered nearby. The

landowner representative was notified of the MEC (smoke grenade). Photographs at Point IDs 16 and 17 show the metal tank and smoke grenade, respectively (Appendix E; Figure 4.1). In addition, a concrete gun emplacement was observed in the area. Photographs at Point ID 18 show the gun emplacement (Appendix E; Figure 4.1). Some subsurface anomalies were detected by the metal detector used by the UXO Technician III at Point ID 14.

4.3.2.3 The QR in upper Kahana Valley was conducted along 2.96 miles of track as shown in Figure 4.1. The QR track deviated from the planned QR track due to the steep terrain and dense vegetation. Photographs taken at Point IDs 2, 3, 4, and 5 show the steep terrain and dense vegetation (Appendix E; Figure 4.1). In upper Kahana Valley, the SVT found MD in the form of spent .30 caliber casings scattered on the ground. Photographs at Point ID 6 show the .30 caliber casings (Appendix E; Figure 4.1). In addition, four concrete gun emplacements were observed in the area. Photographs at Point ID 7 show the gun emplacement (Appendix E; Figure 4.1). No MEC were observed by the SVT during the QR. No subsurface anomalies were detected by the metal detector used by the UXO Technician III.

4.3.2.4 The QR in the lower part of Kahana Valley was conducted along 3.13 miles of track as shown in Figure 4.1. Several small parcels comprise the MRS in the lower part of Kahana Valley, some of which were inaccessible due to their locations adjacent to private residences. Due to the inaccessibility of some parcels, the QR track deviated from the planned QR track. Photographs at Point ID 11 show the private properties (Appendix E; Figure 4.1). No MEC or MD were observed by the SVT during the QR. No subsurface anomalies were detected by the metal detector used by the UXO Technician III.

4.3.2.5 MI surface soil samples were collected concurrently with the investigations along the QR tracks. The MI surface soil sample collection methods and analytical results are described in Chapter 5. Ambient MI surface soil samples and surface water/sediment samples were also collected during the SI as described in Chapter 5.

Table 4.1
Chemical Composition of Munitions and Potential Munitions Constituents
Pacific Jungle Combat Training Center

General Munitions Type*	Type/Model	Case Composition	Filler	Potential Constituent
Small Arms Ammunition .30 cal with gliding metal jacket	M2 Ball M1 Tracer M2 Armor Piercing (AP) Primer, Percussion	Brass, steel, aluminum	Lead antimony, Tracer Composition, Tungsten Chrome Steel, Single- or double-base powder, Primer Composition	Lead, antimony, copper, zinc, molybdenum, iron, aluminum, calcium, strontium, magnesium
Small Arms Ammunition .50 cal with gliding metal jacket	M2 Ball, M1 Tracer, M10 Tracer, M17 Tracer, M21 Tracer, M2 AP, Propellant, Primer, Percussion	Brass, steel, aluminum	Soft steel, Tracer Composition Tungsten Chrome Steel, Single- or double-base powder, Primer Composition	Lead, antimony, copper, zinc, molybdenum, iron, aluminum, calcium, strontium, magnesium nitroglycerin
Shell, 75mm, AP	M72	Brass, Hardened Steel	FNH powder	Aluminum, iron, copper, zinc, Trinitrotoluene (TNT), nitroglycerin
Cartridge, 105mm, High Explosive (HE)	M1	Brass, Steel	TNT, Composition B, 50/50 Amatol	Iron, TNT/RDX, Nitroglycerin, Ammonium Nitrate
Mortar, 81mm, HE and Practice	M43A1	Steel	TNT, Based Powder	Iron, TNT
Grenade, Hand, Smoke	M18 (Red, Violet, Green, Yellow)	Sheet Steel	Smoke Mixtures, Starter Mixture	Iron, Magnesium Carbonate, Nitrocellulose, Potassium Chlorate, Potassium Nitrate
Fuze, Grenade, Pyrotechnic Delay	M201A1	Zinc Alloy	Delay Compound, Ignition Compound, Primer Mixture	Aluminum, Barium Chromate, Barium Nitrate, Lead Chromate, Lead Thiocyanate, Iron, Iron Oxide, Magnesium, Potassium Chlorate, Potassium Perchlorate, Titanium, TNT, Zinc, Zirconium

TABLE 4.2
MEC DATA QUALITY OBJECTIVE WORKSHEET

SITE: **Pacific Jungle Combat Training Center**

PROJECT: **MMRP Site Inspection / FUDS No. H09HI027401**

DQO STATEMENT NUMBER: **1 of 4**

DQO Element Number[a]	DQO Element Description[1]	Site-Specific DQO Statement	Objective Met? Yes (Y)/ No (N)
Intended Data Use(s):			
1	Project Objective(s) Satisfied	Evaluate presence/lack thereof of MEC	Y
Intended Need Requirements:			
2	Data User Perspective(s)	Risk, Remedy	Y
3	Contaminant or Characteristic of Interest	MEC, MD	Y
4	Media of Interest	Not Applicable	-
5	Required Sampling Locations or Areas and Depths	Focus on impact areas and indications of target/training areas.	Y
6	Number of Samples Required	Not Applicable	-
7	Reference Concentration of Interest or Other Performance Criteria	Any indication of residual MEC/MD will be evaluated. Based on indications of type, degree and quantity of MEC/MD, a recommendation will be made regarding subsequent actions at the site.	Y
Appropriate Sampling and Analysis Methods:			
8	Sampling Method	Qualitative Reconnaissance with Minelab or equivalent instrument	Y
9	Analytical Method	Not Applicable	-

[1] Refer to EM 200-1-2, Paragraph 4.2.1

TABLE 4.3
MC DATA QUALITY OBJECTIVE WORKSHEET

SITE: **Pacific Jungle Combat Training Center**

PROJECT: **MMRP Site Inspection / FUDS No. H09HI027401**

DQO STATEMENT NUMBER: **2 of 4**

DQO Element Number[a]	DQO Element Description[1]	Site-Specific DQO Statement	Objective Met? Yes (Y)/ No (N)
Intended Data Use(s):			
1	Project Objective(s) Satisfied	Evaluate presence/lack thereof of MC	Y
Intended Need Requirements:			
2	Data User Perspective(s)	Risk, Remedy	Y
3	Contaminant or Characteristic of Interest	Antimony, copper, lead, zinc, and explosives	Y
4	Media of Interest	Surface soil, surface water, and sediment	Y
5	Required Sampling Locations or Areas and Depths	As determined by the TPP Team	Y
6	Number of Samples Required	Surface soil samples – 4 decision units (DUs), 50 increments in triplicate for DU1 and DU4, 100 increments in triplicate for DU2 and DU3; 2 ambient surface soil samples, 30 increments in triplicate; 2 surface water and sediment samples.	Y
7	Reference Concentration of Interest or Other Performance Criteria	Established Hawaii Department of Health Environmental Action Levels	Y
Appropriate Sampling and Analysis Methods:			
8	Sampling Method	Multi-incremental sampling method	Y
9	Analytical Method	Explosives - SW8321A; Metals (antimony, copper, lead, and zinc) - SW6020	Y

[1] Refer to EM 200-1-2, Paragraph 4.2.1

Table 4.4
MRSPP Data Quality Objective Worksheet

Site: Pacific Jungle Combat Training Center
Project: MMRP Site Inspection / FUDS No. H09HI027401
DQO Statement Number: 3 of 4

Module	Table #	Table Description	Known Data	Current Data Gap	Data Source
Explosive Hazard Evaluation (EHE)	1	Munitions Type	X		Historical Records/Findings
	2	Source of Hazard	X		Historical Maps
	3	Location of Munitions	X		Historical or Field Findings
	4	Ease of Access	X		Field Findings
	5	Status of Property	X		Tax Records
	6	Population Density	X		U.S. Census Bureau
	7	Population Near Hazard	X		Field Findings
	8	Types of Activities/Structures	X		Regional Zoning
	9	Ecological and/or Cultural Resources	X		State Historic Preservation Office
	10	Determining the EHE	X		Scores from Tables 1 through 9
Chemical Warfare Materiel (CWM) Hazard Evaluation (CHE)	11	CWM Configuration	X		Historical Records/Findings
	12	Sources of CWM	X		Historical Records/Findings
	13	Location of CWM	X		Historical or Field Findings
	14	Ease of Access	X		Field Findings
	15	Status of Property	X		Historical Records
	16	Population Density	X		U.S. Census Bureau
	17	Population Near Hazard	X		Field Findings
	18	Types of Activities/Structures	X		Regional Zoning
	19	Ecological and/or Cultural Resources	X		State Historic Preservation Office
	20	Determining the CHE	X		Scores from Tables 11 through 19

Table 4.4 (Continued)
MRSPP Data Quality Objective Worksheet

Module	Table #	Table Description	Known Data	Current Data Gap	Data Source
Health Hazard Evaluation (HHE)	21	Groundwater Data	X		Not Applicable
	22	Surface Water - Human Endpoint	X		Surface Water Sample Results
	23	Sediment - Human Endpoint	X		Sediment Sample Results
	24	Surface Water - Ecological Endpoint	X		Surface Water Sample Results
	25	Sediment - Ecological Endpoint	X		Sediment Sample Results
	26	Surface Soil	X		Surface Soil Sample Results
	27	Supplemental Contaminant Hazard Factor	X		All MC Sample Results
	28	Determining the HHE	X		Scores from Tables 21 through 27
	29	MRS Priority	X		Scores from Tables 10, 20, and 28
	A	MRS Background Information	X		DoD Databases

Table 4.5
HRS Data Quality Objective Worksheet

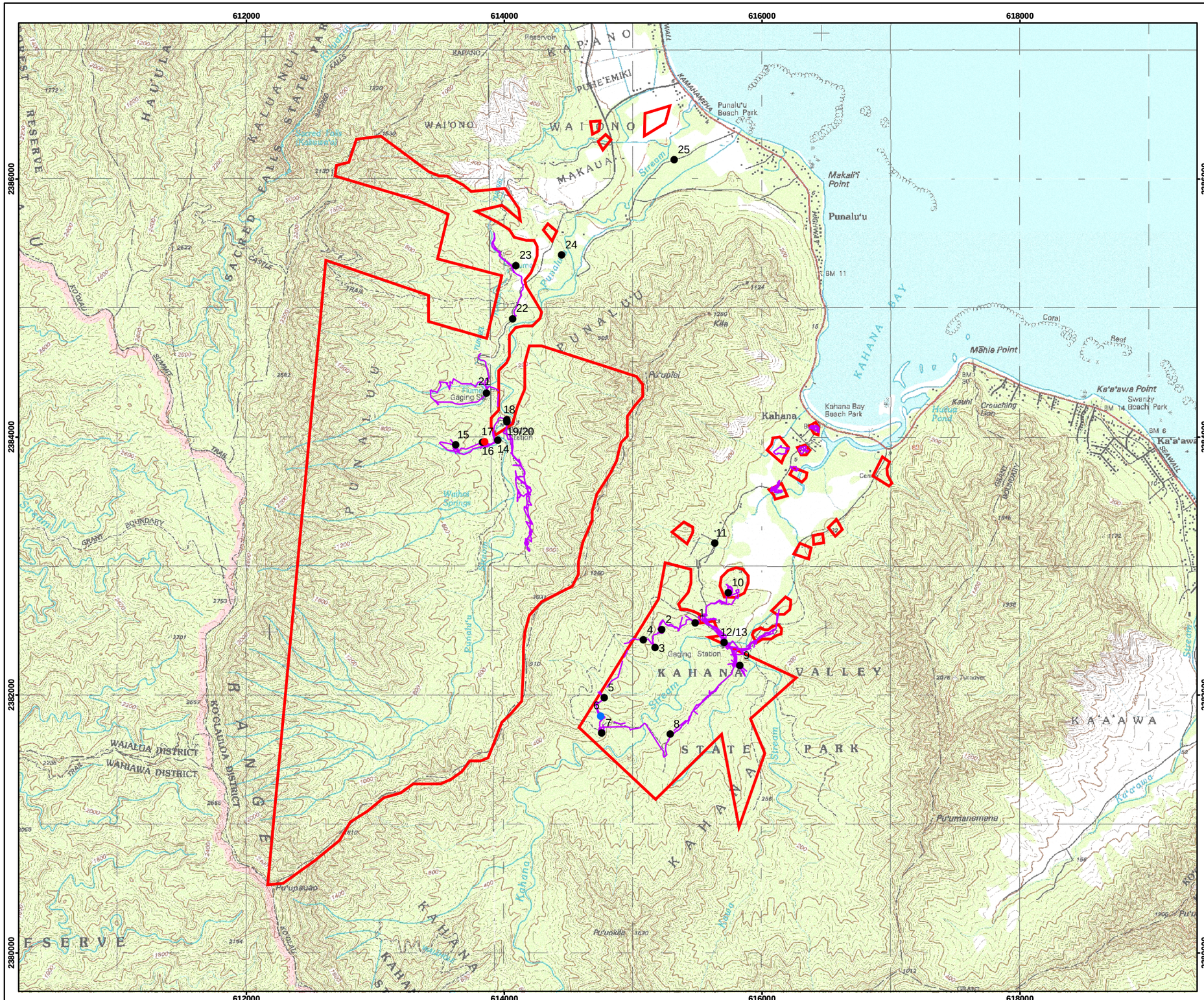
Site: Pacific Jungle Combat Training Center
Project: MMRP Site Inspection / FUDS No. H09HI027401
DQO Statement Number: 4 of 4

Data Description	Known Data	Current Data Gap	Data Source
Source Type	X		Historical Records/Findings
Estimated Volume or Area	X		Field Findings
Hazardous Substance	X		Constituents of Suspected Munitions
Groundwater Sample Concentration	X		Not Applicable
Groundwater Use	X		Well Records/Municipal Data
Surface Water Sample Concentration	X		Sample Results
Surface Water Pathways	X		Field Findings
Soil Sample Concentration	X		Sample Results
Soil Pathways	X		Municipal Data
Sensitive Environments	X		State Historic Preservation Office, US Fish and Wildlife Service, various government agencies
Attractiveness/Accessibility	X		Field Findings/Land Use Records

Figure 4.1

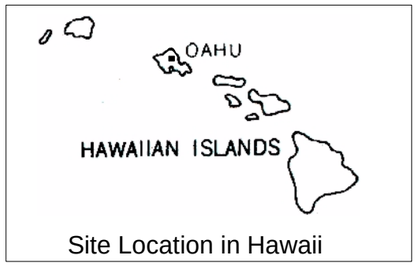
Qualitative Reconnaissance and Field Observation Location Map
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii



Legend

- 17 ● Munitions and Explosives of Concern Location
- 6 ● Munitions Debris Location
- 1 ● Field Observation Location
- Approximate FUDS Property and Maneuver Area Boundary
- Qualitative Reconnaissance Track



Site Location in Hawaii

Image: USGS Topo Map, 1983
Projection: UTM Zone 4 NAD83, Map Units in Meters

2,500 1,250 0 2,500 Feet

N

PARSONS

U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER

DESIGNED BY: BT	Qualitative Reconnaissance and Field Observation Location Map
DRAWN BY: BT	
CHECKED BY: LK	SCALE: As Shown — PROJECT NUMBER: 744647.51000
SUBMITTED BY: DS	DATE: September 2008 — PAGE NUMBER: 4-11
	FILE: X:\GIS\Site_inspections_se\Maps\kahuku_HI\Fig4_1.mxd

CHAPTER 5
MIGRATION/EXPOSURE PATHWAYS AND RECEPTORS

5.1 INTRODUCTION

5.1.1 This chapter of the SI report evaluates the potential for release of MC to the environment based on site-specific conditions. Exposure pathways for groundwater, surface water and sediment, soil, and air are evaluated. It is necessary to evaluate site-specific conditions and land use to evaluate risks posed to potential receptors under current and future land use scenarios. The Conceptual Site Exposure Model (CSEM) for the Pacific Jungle Combat Training Center - Maneuver Area MRS (Appendix J) summarizes which potential receptor exposure pathways are (or may be) complete and which are (and are likely to remain) incomplete for each MRS. An exposure pathway is not considered to be complete unless all four of the following elements are present (USEPA, 1989). An example of a hypothetical groundwater pathway is included:

- *A source and mechanism for contaminant release.* For example, a site has known MEC from which MC have leached and contaminated surface soil.
- *An environmental transport and/or exposure medium.* In the example, the MC in soil is mobile and can contaminate groundwater.
- *A point of exposure at which the contaminant can interact with a receptor*. A drinking water well drawing from the contaminated aquifer is located at the site.
- *A receptor and a likely route of exposure at the exposure point.* A resident lives onsite and drinks water from the well.

5.1.2 In the hypothetical resident example described above, all four factors are present. Therefore, the groundwater exposure pathway is complete. If any single factor was absent (*e.g.*, MC contamination was not present in soil, or the resident obtained drinking water from another source), the pathway would be incomplete.

5.2 GENERAL INFORMATION

5.2.1 Regional Geologic Setting

The general geology of Oahu including the Pacific Jungle Combat Training Center - Maneuver Area MRS is discussed in Subchapter 2.2.2.

5.2.2 Regional Hydrogeologic Setting

5.2.2.1 Volcanic-rock aquifers are the most extensive and productive groundwater sources in the Hawaiian Islands. On Oahu, the primary aquifers occur in the thick accumulations of thin-bedded permeable lavas of the Koolau Basalt and the Waianae Volcanics (Hunt, 1996). The aquifers of Oahu contain two flow regimes; shallow

freshwater and deep saltwater. The basal freshwater, derived primarily from the infiltration of rainfall through the permeable lavas in the mountainous regions, floats as a lens on the underlying saltwater in a condition of buoyant displacement. Another important source of freshwater is dike-impounded groundwater. The intrusion of near vertical, relatively impermeable basaltic dikes particularly along the rift zones has isolated smaller compartments of fresh groundwater at levels higher than the regional basal freshwater lens (Takasaki and Valenciano, 1969). The upper parts of Kahana and Punaluu Valleys are within the Koolau rift zone which contains dike impounded groundwater (Hunt, 1996).

5.2.2.2 The Pacific Jungle Combat Training Center - Maneuver Area MRS is located in the eastern Oahu groundwater flow system. In this flow system, which lies east of the Koolau Range topographic divide, fresh groundwater flows east-northeast from the high elevation mountainous areas of the Koolau Range towards the low elevation coastal plain (Hunt, 1996). A narrow band of caprock (sedimentary deposits) along the northeast Oahu coast confines the fresh groundwater in the area (Hunt, 1996). Springs present along the slope of the Koolau Range in the western part of the MRS result from the release of confined basal and/or dike impounded groundwater. The depths to groundwater in the MRS are uncertain, but likely vary considerably depending on the ground surface elevation. The topography and ground surface elevations are shown in Figure 5.1. In the lower parts of the valleys near the coast, groundwater probably occurs at relatively shallow depths that approximate sea level elevation. In the inland portions of the MRS where surface elevations are considerably higher, the depth to groundwater is probably much deeper relative to surface grade. Most of the MRS is located above the HDOH Underground Injection Control (UIC) Line which means the underlying aquifer is considered a drinking water source.

5.2.3 Regional Groundwater Use

According to the Banks Environmental Data Water Well Report, there are 76 registered wells within a 4 mile radius of Pacific Jungle Combat Training Center - Maneuver Area MRS, of which 41 are listed as active wells. The active wells are listed in Table 5.1 and the Water Well Report that describes the well types and depths drilled is included in Appendix L. Depths of the water production zone in the wells were not reported. No active wells are present in any of the MRS parcels. There are 11 public water supply (municipal) wells located less than 0.5 miles of the MRS parcel boundaries. These municipal wells are owned by the Honolulu Board of Water Supply (Banks, 2008).

Table 5.1
Active Groundwater Wells Within a
4-Mile Radius of Pacific Jungle Combat Training Center

Public Water Supply	Domestic	Irrigation	Observation	Other	Total
16	4	13	2	6	41

5.2.4 Regional Hydrologic Setting

The surface water hydrology at the MRS is characterized by the occurrence of numerous streams that flow from the high elevation mountain areas of the Koolau Range into the valleys where they coalesce and eventually discharge into the ocean (Figure 5.1). Two primary streams referred to as "pristine" are located at the MRS, the Punaluu Stream which drains Punaluu Valley and the Kahana Stream which drains Kahana Valley. There are no lakes or other large bodies of water in the MRS, although there are wetlands in the lower parts of both valleys (described in Subchapter 5.2.5) and a fish pond in the lower Punaluu Valley. Springs are present along the slope of the Koolau Range in the western part of the MRS within Punaluu Valley.

5.2.5 Regional Sensitive Ecological Resources

5.2.5.1 According to the USFWS, the Hawaiian Islands support 344 federally listed threatened and endangered (T&E) species consisting of 71 animals and 273 plants. According to the NRCS, of the 344 federally listed species approximately 64 animal species and 118 plant species are known or potentially occupy the island of Oahu; however, it is indeterminate as to how many of these federally listed species actually occupy the Pacific Jungle Combat Training Center - Maneuver Area MRS (USFWS, 2007a). According to the 2005 Hawaii's Comprehensive Wildlife Conservation Strategy report created by DOFAW, the animal species of most concern for the island of Oahu that are federally listed are: the Hawaiian hoary bat *(Lasiurus cinereus semotus)*, Oahu 'elepaio *(Chasiempis sandwichensis ibidis)*, Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot (*Fulica americana alai*), Hawaiian duck (*Anas wyvilliana*), Hawaiian common moorhen (*Gallinula chloropus sandvicensis*), Oahu creeper (*Paroreomyza maculate)*, Hawaiian petrel *(Pterodroma sandwichensis)*, Newell's shearwater *(Puffinus auricularis newelli)*, Oahu tree snail *(Achatinella spp.)*, and the green sea turtle *(Chelonia mydas agassizi)*. The federal and state listed species of most concern that are known to exist on Oahu and may potentially exist within the site boundaries are presented in Table 5.2.

5.2.5.2 According to the USFWS, NPS, NFS, and Hawaii state government the Pacific Jungle Combat Training Center is not located within a national wildlife refuge, national park, or national forest. However, parts of the site are located within the Hauula Forest Reserve and the Kahana Valley State Park.

5.2.5.3 According to NOAA CZMP, parts of the MRS lie within a coastal zone management area, as do all of the coastal areas of the Hawaiian Islands. The northeastern coast of Oahu is considered a marine managed/protected area and is part of the Hawaiian Islands Humpback Whale National Marine Sanctuary.

5.2.5.4 The USFWS Wetlands Online Mapper, through the NWI, was used to identify any wetlands within the Pacific Jungle Combat Training Center. According to the NWI, there are four main wetland types in the lower valleys of the MRS (Figure 5.2). These four wetland types are:

- PSS3C – Palustrine, scrub-shrub, broad-leaved evergreen seasonally flooded.
- PEM1C – Palustrine, emergent, persistent, seasonally flooded.

- PFO3C – Palustrine, forested, broad-leaved evergreen, seasonally flooded.
- PSSI/EM1F – Palustrine, scrub shrub, broad-leaved deciduous/emergent, persistent, semi-permanently flooded.

5.2.5.5 Based on this information, the MRS is an important ecological place and ecological receptors are considered to be present at the site.

Table 5.2
State and Federally Listed Species
Pacific Jungle Combat Training Center

Common Name	Scientific Name	Federal Status	State Status	Preferred Habitat	Habitat Potentially Present?
Oahu Creeper 	*Paroreomyza maculata*	Endangered	Endangered	This extremely rare and possibly extinct bird has been seen in ‘ohi‘a-koa forests between 1,000 to 2,000 feet in elevation. The Oahu Creeper moves up and down tree trunks and large branches as it searches for insects. The last confirmed sighting of this bird was in 1991 in Halawa Valley; an unconfirmed sighting in the northern Koolau Range was made in 1997.	Yes
Oahu Tree Snail 	*Achatinella spp.*	Endangered	Endangered	Oahu tree snails are currently found in mountainous dry to wet forests and shrublands above 1,300 feet. They are found on trees, are nocturnal, and feed by grazing fungus from the surface of native plant leaves. They are occasionally found on introduced plants. Adult snails are hermaphroditic (having both male and female reproductive organs) and can live for many years. The young are born alive.	Yes

Table 5.2 (Continued)
State and Federally Listed Species
Pacific Jungle Combat Training Center

Common Name	Scientific Name	Federal Status	State Status	Preferred Habitat	Habitat Potentially Present?
Newell's Shearwater 	*Puffinus auricularis newelli*	Endangered	Threatened	The Newell's Shearwater was once abundant on all main Hawaiian islands. Today, they only nest in the mountainous terrain between 500 to 2,300 feet on Kauai. This seabird was reported to be in danger of extinction by the 1930s.	No
Hawaiian Common Moorhen 	*Gallinula chloropus sandvicensis*	Endangered	Endangered	The Hawaiian Moorhen is known as the most secretive native water bird. These secretive birds can be found in freshwater marshes, taro patches, irrigation ditches, reservoirs, and wet pastures. They favor dense emergent vegetation near open water, floating or barely emergent mats of vegetation, and water depths of less than 3 feet.	Yes

Table 5.2 (Continued)
State and Federally Listed Threatened and Endangered Species
Pacific Jungle Combat Training Center

Common Name	Scientific Name	Federal Status	State Status	Preferred Habitat	Habitat Potentially Present?
Hawaiian Petrel 	*Pterodroma sandwichensis*	Endangered	Threatened	They nest in burrows along large rock outcrops, under cinder cones, or under old lichen-covered lava at elevations above 7,200 feet. The burrows are generally three to six feet long (from entrance to nest chamber), although some may be as long as 15 feet. One white egg is laid deep within the burrows.	No
Hawaiian Stilt 	*Himantopus mexicanus knudseni*	Endangered	Endangered	Stilts use a variety of aquatic habitats. Nest sites are frequently separated from feeding sites and stilts move between these areas daily. Nesting sites are adjacent to or on low islands within bodies of fresh, brackish, or salt water. Feeding habitats are shallow bodies of water providing them with a wide variety of invertebrates and other aquatic organisms (worms, crabs, and fish).	Yes

Table 5.2 (Continued)
State and Federally Listed Threatened and Endangered Species
Pacific Jungle Combat Training Center

Common Name	Scientific Name	Federal Status	State Status	Preferred Habitat	Habitat Potentially Present?
Hawaiian Coot 	*Fulica americana alai*	Endangered	Endangered	Coots are found in fresh and brackish-water marshes and ponds. They rarely fly, but are capable of sustained flight close to the water. The Hawaiian Coot builds floating nests in aquatic vegetation, in which four to ten eggs are laid.	Yes
Hawaiian Duck 	*Anas wyvilliana*	Endangered	Endangered	Hawaiian ducks (Koloa) can be found in lowland wetlands, river valleys, and mountain streams. They are cautious ducks that travel in pairs. Koloa eat mollusks, insects, and freshwater vegetation. The main breeding season is between January and May. Two to ten eggs are laid in a well concealed nest lined with down and feathers. The largest number of Hawaiian ducks can be found at the Hanalei National Wildlife Refuge and at Alakoko Pond in Huleia Valley, both on the island of Kauai. They can also be seen in the Kahuku, Pearl Harbor, and Waialua areas of Oahu.	Yes

Table 5.2 (Continued)
State and Federally Listed Threatened and Endangered Species
Pacific Jungle Combat Training Center

Common Name	Scientific Name	Federal Status	State Status	Preferred Habitat	Habitat Potentially Present?
Hawaiian Hoary Bat 	*Lasiurus cinereus semotus*	Endangered	Endangered	Most of the available documentation suggests that this elusive bat roosts among trees in areas near forests. It is a solitary bat that typically leaves its roost shortly before sunset and returns before sunrise. Breeding has only been documented on Hawaii and Kauai.	No
Oahu ‘elepaio 	*Chasiempis sandwichensis ibidis*	Endangered	Threatened	Currently, it is most often found in streamside vegetation and in mesic forest with a tall canopy and well-developed understory. The species is thought to occupy less than four percent (about 13,600 acres) of its original range. Six core subpopulations and several smaller subpopulations totaling approximately 1,982 birds are thought to remain in the world.	Yes

Table 5.2 (Continued)
State and Federally Listed Threatened and Endangered Species
Pacific Jungle Combat Training Center

Common Name	Scientific Name	Federal Status	State Status	Preferred Habitat	Habitat Potentially Present?
Ohai 	*Sesbania tomentosa*	Endangered	Endangered	The ‘ohai shrub is found on all major Hawaiian islands. It usually grows in coastal areas.	Yes
Green Sea Turtle 	*Chelonia mydas agassizi*	Endangered	Endangered	The Green Sea Turtle is found world wide in warm seas. The Green Sea Turtle occupies three habitat types: open beaches, open sea, and feeding grounds in shallow, protected waters. Nesting occurs throughout the Hawaiian archipelago, but over 90 percent occurs at the French Frigate Shoals in the northwestern Hawaiian Islands.	No

5.2.6 Sample Locations and Methods

5.2.6.1 Surface soil samples were collected concurrently with the QR from July 11 to July 17, 2008 using the MI soil sampling method. The MI soil sample is obtained by collecting many aliquots of material (increments) at equally spaced intervals within a single decision unit beginning from a randomly selected starting point. This is done to obtain a sample that is representative of the environmental population within a decision unit. To be representative of a decision unit, compositional and distributional heterogeneity must be minimized. Compositional heterogeneity is inversely related to the mass of the sample and distributional heterogeneity is inversely related to the number of increments. Therefore, a large number of increments and large sample mass minimize errors from both sources of heterogeneity. The target mass of the MI sample is 1-2 kg. The systematic random sampling design is used to ensure that MI sample increments are collected over the entire decision unit without bias. A sample is considered random if each portion of the population has an equal probability of being selected as a sample. The required number of increments is obtained by collecting the initial increment at a random location within the decision unit and then collecting all other increments at equally spaced intervals over the entire decision unit. Incremental sampling provides a more accurate measure of the mean concentration of contaminants for a decision unit and produces reproducible, scientifically defensible results. Since the MI sampling method is designed to provide a composite sample that is representative of the decision unit and the results are reproducible, it is not necessary to record the location of each individual sample increment.

5.2.6.2 The SS-WP Addendum specified that the Pacific Jungle Combat Training Center - Maneuver Area MRS would be represented by four soil sample decision units identified as DU1, DU2, DU3, and DU4 (Figure 5.1). One MI surface soil sample was collected from each of the decision units, except DU1 which could not be sampled because the FUDS parcels in DU1 were being used for agricultural and aquacultural purposes. The MI soil samples collected from DU2 and DU3 were comprised of 100 soil increments. The MI soil sample collected from DU4 was comprised of 50 soil increments. All three MI soil samples were collected in triplicate. Sample increments were collected from 0-2 inches below ground surface (bgs) along the QR track using a sample tool designed for MI sampling. Photographs taken at Point IDs 1, 10, 14, and 21, presented in the Photo-Documentation Log in Appendix E, show collection of the MI surface soil samples from the decision units. The field observation locations in Figure 4.1 correspond to the Point IDs in the Photo-Documentation Log. The center point coordinates of each decision unit sampled are in Table 5.3.

5.2.6.3 Two ambient MI surface soil samples were collected on July 14 and 17, 2008 within the FUDS property at accessible locations where no contamination was suspected. One ambient sample was collected from ambient unit AU1 between decision units DU1 and DU2 in Punaluu Valley and the other was collected from ambient unit AU2 within decision unit DU3 in Kahana Valley (Figure 5.1). No MEC, MD or other metal objects were observed on the ground surface in the ambient units. Each ambient unit encompassed a square area approximately 30 feet by 30 feet in which 30 soil increments were collected in triplicate at equally spaced intervals. The ambient samples were collected to provide an indication of the range of naturally occurring metals

concentrations in the surface soil at the FUDS property. Photographs taken at Point ID 9, presented in the Photo-Documentation Log in Appendix E, show collection of the ambient MI surface soil sample from ambient unit AU2. The field observation location in Figure 4.1 corresponds to the Point ID in the Photo-Documentation Log. The center point coordinates of ambient units AU1 and AU2 are listed in Table 5.3.

5.2.6.4 Surface soil sample increment locations were checked for potential anomalies by the UXO Technician III using a White's All-Metal detector prior to sample collection. Soil samples were collected using the MI soil sampling method as described in Subchapters 3.3.3 and 4.2 of the SS-WP Addendum. With the approval of the USACE Project Chemist, only one sample per MRS was designated for MS/MSD splits and only one sample per site was designated for a laboratory triplicate. This approval for a change from the SS-WP Addendum was given under the condition that the laboratory would analyze all site samples in one batch.

5.2.6.5 Surface water and sediment samples were collected at two separate locations on July 15 and 16, 2008 within the FUDS property. Surface water/sediment sample SW-01/SD-01 was collected from Punaluu Stream and SW-02/SD-02 was collected from Kahana Stream (Figure 5.1). Field duplicates of the surface water and sediment samples were collected from Kahana Stream. Photographs taken at Point IDs 12, 13 and 20, presented in the Photo-Documentation Log in Appendix E, show collection of the surface water and sediment samples. The field observation locations in Figure 4.1 correspond to the Point IDs in the Photo-Documentation Log. Coordinates of the surface water and sediment sample location are in Table 5.3.

5.2.6.6 The surface soil, surface water, and sediment samples were collected in accordance with the PWP (Parsons, 2005), the Sampling and Analysis Plan (USACE, 2005), and the Final PSAP Addendum (Parsons, 2006) with modifications to conform to the MI sampling method as defined in Subchapter 4.2 of the SS-WP Addendum. Samples were analyzed for explosives and selected metals by TestAmerica, Inc., Arvada, CO. The selected metals included antimony, copper, lead, and zinc. Method SW846 8321A was used to analyze samples for explosives and Method SW846 6020 was used to analyze samples for the selected metals. The list of target analytes and a summary of the validated analytical results for the samples collected at the Pacific Jungle Combat Training Center - Maneuver Area MRS are presented in Tables 5.4 through 5.11.

Table 5.3
Sampling Summary for
Pacific Jungle Combat Training Center

Sample ID	Decision Unit ID	Center Coordinates UTM Zone 4 NAD 83		Number of Increments	Media	Analysis	Munitions
		X (meters)	Y (meters)				
PJC-MRS01-DU2-SS-02-01 PJC-MRS01-DU2-SS-02-02 PJC-MRS01-DU2-SS-02-03	DU2	613603.30	2384034.88	100	Soil	Antimony, Copper, Lead, Zinc, Explosives	Small Arms; Shell, 75mm, AP; Cartridge, 105mm HE; Mortar, 81mm HE and Practice; Grenade, Hand, Smoke
PJC-MRS01-DU3-SS-02-01 PJC-MRS01-DU3-SS-02-02 PJC-MRS01-DU3-SS-02-03	DU3	615254.55	2382095.32	100	Soil	Antimony, Copper, Lead, Zinc, Explosives	Small Arms; Shell, 75mm, AP; Cartridge, 105mm HE; Mortar, 81mm HE and Practice
PJC-MRS01-DU4-SS-02-01 PJC-MRS01-DU4-SS-02-02 PJC-MRS01-DU4-SS-02-03	DU4	615922.91	2383405.83	50	Soil	Antimony, Copper, Lead, Zinc, Explosives	Small Arms; Shell, 75mm, AP; Cartridge, 105mm HE; Mortar, 81mm HE and Practice
PJC-MRS01-AU1-SS-02-01 PJC-MRS01-AU1-SS-02-02 PJC-MRS01-AU1-SS-02-03	AU1	614064.87	2384916.88	30	Soil	Antimony, Copper, Lead, Zinc, Explosives	NA
PJC-MRS01-AU2-SS-02-01 PJC-MRS01-AU2-SS-02-02 PJC-MRS01-AU2-SS-02-03	AU2	615827.27	2382228.32	30	Soil	Antimony, Copper, Lead, Zinc, Explosives	NA
PJC-MRS01-SW-01	NA	614018.74	2384117.62	NA	Surface Water	Antimony, Copper, Lead, Zinc, Explosives	NA
PJC-MRS01-SD-01	NA	614018.74	2384117.62	NA	Sediment	Antimony, Copper, Lead, Zinc, Explosives	NA
PJC-MRS01-SW-02 PJC-MRS01-SW-03[1]	NA	615705.12	2382406.45	NA	Surface Water	Antimony, Copper, Lead, Zinc, Explosives	NA
PJC-MRS01-SD-02 PJC-MRS01-SD-03[1]	NA	615705.12	2382406.45	NA	Sediment	Antimony, Copper, Lead, Zinc, Explosives	NA

[1] Field duplicate sample

Table 5.4
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Soil Samples Collected July 2008 – Decision Unit DU2

SAMPLE ID		PJC-MRS01-DU2-SS-02-01[1]		PJC-MRS01-DU2-SS-02-02[1]		PJC-MRS01-DU2-SS-02-03-A[2]	
DATE SAMPLED		07/17/08		07/17/08		07/17/08	
LAB SAMPLE ID	Units	D8G210174002		D8G210174003		D8G210174004	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.4 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Soil Samples Collected July 2008 – Decision Unit DU2

SAMPLE ID		PJC-MRS01-DU2-SS-02-01[1]		PJC-MRS01-DU2-SS-02-02[1]		PJC-MRS01-DU2-SS-02-03-A[2]	
DATE SAMPLED		07/17/08		07/17/08		07/17/08	
LAB SAMPLE ID	Units	D8G210174002		D8G210174003		D8G210174004	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	**0.016**	J	**0.016**	J	**0.015**	J
Copper	mg/kg	**52**		**56**	J	**59**	
Lead	mg/kg	**14**		**12**		**10**	
Zinc	mg/kg	**54**		**54**	J	**63**	

[1] Field triplicate sample

[2] Field triplicate and parent sample of laboratory triplicate samples

(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
J - Analyte detected, estimated concentration.
Detections are bolded.

Table 5.5
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Laboratory Triplicate from Soil Samples Collected July 2008 – Decision Unit DU2

SAMPLE ID		PJC-MRS01-DU2-SS-02-03-A[1]		PJC-MRS01-DU2-SS-02-03-B[2]		PJC-MRS01-DU2-SS-02-03-C[2]	
DATE SAMPLED		07/17/08		07/17/08		07/17/08	
LAB SAMPLE ID	Units	D8G210174004		D8G210174005		D8G210174006	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.5 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Laboratory Triplicate from Soil Samples Collected July 2008 – Decision Unit DU2

SAMPLE ID		PJC-MRS01-DU2-SS-02-03-A[1]		PJC-MRS01-DU2-SS-02-03-B[2]		PJC-MRS01-DU2-SS-02-03-C[2]	
DATE SAMPLED		07/17/08		07/17/08		07/17/08	
LAB SAMPLE ID	Units	D8G210174004		D8G210174005		D8G210174006	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	**0.015**	J	0.25	U	0.25	U
Copper	mg/kg	**59**		**58**		**57**	
Lead	mg/kg	**10**		**11**		**9.8**	
Zinc	mg/kg	**63**		**61**		**63**	

[1] Field triplicate and parent sample of laboratory triplicate samples
[2] Laboratory triplicate sample
(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
J - Analyte detected, estimated concentration.
Detections are bolded.

Table 5.6
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Soil Samples Collected July 2008 – Decision Unit DU3

SAMPLE ID		PJC-MRS01-DU3-SS-02-01[1]		PJC-MRS01-DU3-SS-02-02[1]		PJC-MRS01-DU3-SS-02-03[1]	
DATE SAMPLED		07/11/08		07/11/08		07/11/08	
LAB SAMPLE ID	Units	D8G210174013		D8G210174014		D8G210174015	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.6 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Soil Samples Collected July 2008 – Decision Unit DU3

SAMPLE ID		PJC-MRS01-DU3-SS-02-01[1]		PJC-MRS01-DU3-SS-02-02[1]		PJC-MRS01-DU3-SS-02-03[1]	
DATE SAMPLED		07/11/08		07/11/08		07/11/08	
LAB SAMPLE ID	Units	D8G210174013		D8G210174014		D8G210174015	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	0.25	U	0.25	U	0.25	U
Copper	mg/kg	**45**		**61**		**50**	
Lead	mg/kg	**7.0**		**6.8**		**6.4**	
Zinc	mg/kg	**36**		**43**		**35**	

[1] Field triplicate sample
(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
Detections are bolded.

Table 5.7
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Soil Samples Collected July 2008 – Decision Unit DU4

SAMPLE ID		PJC-MRS01-DU4-SS-02-01[1]		PJC-MRS01-DU4-SS-02-02[1]		PJC-MRS01-DU4-SS-02-03[1]	
DATE SAMPLED		07/15/08		07/15/08		07/15/08	
LAB SAMPLE ID	Units	D8G220301002		D8G220301003		D8G220301004	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.7 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Soil Samples Collected July 2008 – Decision Unit DU4

SAMPLE ID		PJC-MRS01-DU4-SS-02-01[1]		PJC-MRS01-DU4-SS-02-02[1]		PJC-MRS01-DU4-SS-02-03[1]	
DATE SAMPLED		07/15/08		07/15/08		07/15/08	
LAB SAMPLE ID	Units	D8G220301002		D8G220301003		D8G220301004	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	**0.059**	J	**0.065**	J	**0.071**	J
Copper	mg/kg	**52**	J	**56**	J	**47**	J
Lead	mg/kg	**31**		**36**		**25**	
Zinc	mg/kg	**88**	J	**170**	J	**120**	J

[1] Field triplicate sample
(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
J - Analyte detected, estimated concentration.
Detections are bolded.

Table 5.8
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Ambient Soil Samples Collected July 2008 – Ambient Unit AU1

SAMPLE ID		PJC-MRS01-AU1-SS-02-01[1]		PJC-MRS01-AU1-SS-02-02[1]		PJC-MRS01-AU1-SS-02-03[1]	
DATE SAMPLED		07/11/08		07/11/08		07/11/08	
LAB SAMPLE ID	Units	D8G210174018		D8G210174019		D8G210174020	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	**75**	J	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.8 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Ambient Soil Samples Collected July 2008 – Ambient Unit AU1

SAMPLE ID		PJC-MRS01-AU1-SS-02-01[1]		PJC-MRS01-AU1-SS-02-02[1]		PJC-MRS01-AU1-SS-02-03[1]	
DATE SAMPLED		07/11/08		07/11/08		07/11/08	
LAB SAMPLE ID	Units	D8G210174018		D8G210174019		D8G210174020	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	**0.061**	J	**0.062**	J	**0.062**	J
Copper	mg/kg	**55**	J	**56**	J	**60**	J
Lead	mg/kg	**14**		**15**		**16**	
Zinc	mg/kg	**54**	J	**63**	J	**90**	J

[1] Field triplicate sample
(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
J - Analyte detected, estimated concentration.
Detections are bolded.

Table 5.9
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Ambient Soil Samples Collected July 2008 – Ambient Unit AU2

SAMPLE ID		PJC-MRS01-AU2-SS-02-01[1]		PJC-MRS01-AU2-SS-02-02[1]		PJC-MRS01-AU2-SS-02-03[1]	
DATE SAMPLED		07/14/08		07/14/08		07/14/08	
LAB SAMPLE ID	Units	D8G210174008		D8G210174009		D8G210174010	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.9 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Ambient Soil Samples Collected July 2008 – Ambient Unit AU2

SAMPLE ID		PJC-MRS01-AU2-SS-02-01[1]		PJC-MRS01-AU2-SS-02-02[1]		PJC-MRS01-AU2-SS-02-03[1]	
DATE SAMPLED		07/14/08		07/14/08		07/14/08	
LAB SAMPLE ID	Units	D8G210174008		D8G210174009		D8G210174010	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	0.25	U	0.25	U	0.25	U
Copper	mg/kg	**33**		**33**		**26**	
Lead	mg/kg	**8.7**		**8.8**		**6.7**	
Zinc	mg/kg	**17**		**17**		**14**	

[1] Field triplicate sample
(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
J - Analyte detected, estimated concentration.
Detections are bolded.

Table 5.10
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Water Samples Collected July 2008

SAMPLE ID		PJC-MRS01-SW-01		PJC-MRS01-SW-02		PJC-MRS01-SW-03[1]	
DATE SAMPLED		07/16/08		07/15/08		07/15/08	
LAB SAMPLE ID	Units	D8G210174017		D8G210174001		D8G210174011	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/L	0.12	U	0.12	U	0.12	U
1,3-Dinitrobenzene	µg/L	0.12	U	0.12	U	0.12	U
2,4,6-Trintrotoluene (TNT)	µg/L	0.12	U	0.12	U	0.12	U
2,4-Dinitrotoluene	µg/L	0.12	U	0.12	U	0.12	U
2,6-Dinitrotoluene	µg/L	0.12	U	0.12	U	0.12	U
2-Amino-4,6-dinitrotoluene	µg/L	0.12	U	0.12	U	0.12	U
2-Nitrotoluene	µg/L	0.20	U	0.20	U	0.20	U
3-Nitrotoluene	µg/L	0.20	U	0.20	U	0.20	U
4-Amino-2,6-dinitrotoluene	µg/L	0.12	U	0.12	U	0.12	U
4-Nitrotoluene	µg/L	0.20	U	0.20	U	0.20	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/L	0.12	U	0.12	U	0.12	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/L	0.12	U	0.12	U	0.12	U

Table 5.10 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Surface Water Samples Collected July 2008

SAMPLE ID		PJC-MRS01-SW-01		PJC-MRS01-SW-02		PJC-MRS01-SW-03[1]	
DATE SAMPLED		07/16/08		07/15/08		07/15/08	
LAB SAMPLE ID	Units	D8G210174017		D8G210174001		D8G210174011	
Nitrobenzene	µg/L	0.12	U	0.12	U	0.12	U
Nitroglycerin	µg/L	0.15	U	0.15	U	0.15	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/L	0.12	U	0.12	U	0.12	U
Pentaerythritol Tetranitrate (PETN)	µg/L	0.12	U	0.12	U	0.12	U
Metals – SW6020							
Antimony	µg/L	6.0	U	6.0	U	6.0	U
Copper	µg/L	2.0	U	2.0	U	2.0	U
Lead	µg/L	3.0	U	3.0	U	3.0	U
Zinc	µg/L	20	U	20	U	20	U

[1] Field duplicate of sample ID PJC-MRS01-SW-02
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).

Table 5.11
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Sediment Samples Collected July 2008

SAMPLE ID		PJC-MRS01-SD-01		PJC-MRS01-SD-02		PJC-MRS01-SD-03[1]	
DATE SAMPLED		07/16/08		07/15/08		07/15/08	
LAB SAMPLE ID	Units	D8G210174016		D8G220301001		D8G210174012	
Explosives SW8321A							
1,3,5-Trinitrobenzene	µg/kg	100	U	100	U	100	U
1,3-Dinitrobenzene	µg/kg	100	U	100	U	100	U
2,4,6-Trintrotoluene (TNT)	µg/kg	100	U	100	U	100	U
2,4-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2,6-Dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Amino-4,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
2-Nitrotoluene	µg/kg	100	U	100	U	100	U
3-Nitrotoluene	µg/kg	100	U	100	U	100	U
4-Amino-2,6-dinitrotoluene	µg/kg	100	U	100	U	100	U
4-Nitrotoluene	µg/kg	100	U	100	U	100	U
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	µg/kg	100	U	100	U	100	U
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	µg/kg	100	U	100	U	100	U

Table 5.11 (Continued)
Summary of Validated Analytical Results for Pacific Jungle Combat Training Center
Sediment Samples Collected July 2008

SAMPLE ID		PJC-MRS01-SD-01		PJC-MRS01-SD-02		PJC-MRS01-SD-03[1]	
DATE SAMPLED		07/16/08		07/15/08		07/15/08	
LAB SAMPLE ID	Units	D8G210174016		D8G220301001		D8G210174012	
Nitrobenzene	µg/kg	100	U	100	U	100	U
Nitroglycerin	µg/kg	100	U	100	U	100	U
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	µg/kg	100	U	100	U	100	U
Pentaerythritol Tetranitrate (PETN)	µg/kg	100	U	100	U	100	U
Metals – SW6020							
Antimony	mg/kg	0.037	U	0.056	UJ	0.059	UJ
Copper	mg/kg	**98**		**90**	J	**93**	J
Lead	mg/kg	**2.7**		**4.0**		**4.0**	
Zinc	mg/kg	**95**		**81**		**87**	J

[1] Field duplicate of Sample ID PJC-MRS01-SD-02
(NO CODE) - Confirmed identification.
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit (PQL).
J - Analyte detected, estimated concentration.
UJ - Analyte not detected, reported PQL may be inaccurate or imprecise.
Detections are bolded.

5.2.7 Soil Ambient Concentrations

5.2.7.1 No site-specific statistical evaluation of background metals concentrations in soil is available. Due to the limited scope of the SI, conducting a site-specific statistical background evaluation of metals concentrations in soil (which typically requires collection of at least 10 background samples) was not considered practical or warranted at this stage of investigation. Analytical results for the ambient soil sample collected during the 2008 SI field activities were used to estimate background metals concentrations at the site. Two ambient MI surface soil samples were collected inside the FUDS property boundary at locations not expected to be affected by munitions activities, as described in Subchapter 5.2.6.3. However, 2,4-dinitrotoluene was detected in one of the ambient samples collected from ambient unit AU1. Therefore, the results from AU1 were considered biased and the results were evaluated with the MRS results.

5.2.7.2 The metal concentrations detected in the ambient soil sample replicates collected from AU2 are summarized in Table 5.12. The maximum detected ambient concentrations were selected and used to estimate the background concentrations for the site. Exceedance of background (as represented by the ambient soil sample) is one of the criteria used to evaluate whether or not a source of contamination is present.

Table 5.12
Soil Ambient Concentrations
Pacific Jungle Combat Training Center

Analyte	Units	PJC-MRS01-AU2-SS-02-01	PJC-MRS01-AU2-SS-02-02	PJC-MRS01-AU2-SS-02-03	Maximum Ambient Concentration[1]
Metals					
Antimony	mg/kg	0.25 U	0.25 U	0.25 U	0.25
Copper	mg/kg	33	33	26	33
Lead	mg/kg	8.7	8.8	6.7	8.8
Zinc	mg/kg	17	17	14	17

[1] Concentration is the maximum concentration of the replicate surface soil samples collected from ambient unit AU2 (Table 5.9).
U - Analyte was analyzed for but not detected above the sample specific practical quantitation limit.

5.2.8 Munitions Constituents Source Evaluation

5.2.8.1 As explained in Subchapter 5.1.1, an exposure pathway is not considered to be complete unless MC contamination is present. To make this determination for metals, the concentration of each MC metal is compared to several criteria. For an analyte to be considered contamination related to a release from munitions activities, it is necessary for the following conditions to be true:

- The analyte is detected in the sample medium; AND
- The analyte is present above the background concentration; AND

- The analyte is a potential constituent of the munitions formerly used at the site.

5.2.8.2 Each MC metal analyzed at the site was evaluated against these criteria to determine whether a source of MC metal contamination was present. Only detections of metals that met the conditions above were retained for consideration in the Screening Level Risk Assessment (SLRA) in Chapter 6. Detections of explosives at the site would be considered to be potential MC contamination and would be retained for evaluation in Chapter 6.

5.3 MANEUVER AREA MUNITIONS RESPONSE SITE

This subchapter of the SI report describes the evaluation of exposure pathways for the Pacific Jungle Combat Training Center - Maneuver Area MRS, in relation to the overall site setting described in Subchapter 5.2. The analysis of each pathway is based on the analytical results for media of concern and the current and future land use information presented in Subchapter 2.2.8. The CSEM for the MRS is provided in Appendix J**.**

5.3.1 Historical Munitions Constituents Information

To date, no historical data exist to indicate that MC related to DoD use have affected environmental media in the MRS.

5.3.2 Groundwater Exposure Pathway

Groundwater can serve as a contaminant transport mechanism that may affect surface water bodies, sediment, drinking water supplies, vegetation, and sensitive environmental areas such as wetlands. The likelihood of exposure is influenced by such factors as the volume and concentration of contaminated soil at the ground surface that can be transported to the groundwater, site-specific geology, climate, and the current and future land use.

5.3.2.1 Geologic and Hydrogeologic Setting

There are no known differences between the geologic and hydrogeologic setting at the Maneuver Area MRS and the setting of the overall Pacific Jungle Combat Training Center FUDS described in Subchapter 5.2. There are 11 public water supply (municipal) wells located less than 0.5 miles of the MRS parcels, although none appear to be within the parcels. Depths of the water production zone in the wells were not reported. The depths to groundwater in the MRS are uncertain, but likely vary considerably depending on the ground surface elevation. In the lower parts of the valleys near the coast, groundwater probably occurs at relatively shallow depths that approximate sea level elevation. In the inland portions of the MRS where surface elevations are considerably higher, the depth to groundwater is probably much deeper relative to surface grade.

5.3.2.2 Releases and Potential Releases to Groundwater

There are no known releases of MC to groundwater at the MRS.

5.3.2.3 Groundwater Exposure Pathways and Receptors

There are no active groundwater wells in the MRS parcels. Based on the available groundwater information and the current and future land use, the potential human receptors for a complete groundwater migration pathway at the MRS would include current and future residents, commercial or industrial workers (e.g., park personnel), and site visitors or recreational users. Ecological receptors are present at the site, but they are not generally exposed to groundwater, so the groundwater exposure pathway is not complete for ecological receptors.

5.3.2.4 Groundwater Sample Locations and Methods

Groundwater sampling was not performed during the SI at the MRS because there is no drinking water source within the MRS.

5.3.2.5 Groundwater Exposure Pathway Analytical Results

Not applicable; groundwater sampling was not conducted during the SI.

5.3.2.6 Groundwater Exposure Pathway Conclusions

There are no groundwater wells within the Maneuver Area MRS and it is unlikely that any wells will be constructed in the future given the anticipated continued use of the site. An explosive, 2,4-dinitrotoluene, was detected at an estimated concentration below the practical quantitation limit (PQL) in one surface soil sample and MC metals were detected above ambient concentrations in the surface soil. Due to the relatively shallow groundwater in some locations, it is possible that MC contamination could leach to groundwater. Since groundwater samples were not collected, the groundwater exposure pathway is potentially complete, but not quantitatively assessed for all human receptors. Ecological receptors are present at the site, but are not generally exposed to groundwater. Therefore, the groundwater exposure pathway is incomplete for ecological receptors.

5.3.3 Surface Water and Sediment Exposure Pathway

Surface water can serve as a contaminant transport mechanism that may affect surface water bodies, sediment, drinking water supplies, vegetation, and sensitive environments such as wetlands.

5.3.3.1 Hydrologic Setting

The surface water hydrology at the MRS is described in Subchapter 5.2.4.

5.3.3.2 Releases and Potential Releases to Surface Water and Sediment

There are no known releases or potential releases of MC to surface water or sediment at the MRS. If there were releases of MC to soil as a result of DoD activities at the MRS, it is possible that the MC could migrate to surface water or sediment via runoff or erosion. Therefore, surface water and sediment samples were collected from Punaluu Stream and Kahana Stream.

5.3.3.3 Surface Water and Sediment Exposure Pathways and Receptors

Based on the current and future land use, potential receptors for a complete surface water migration pathway would include current and future residents, commercial or industrial workers (e.g., park personnel), site visitors or recreational users, and ecological receptors. Exposures to human and ecological receptors might occur by incidental ingestion and dermal contact. Ecological receptors might also be exposed via ingestion of surface water as drinking water.

5.3.3.4 Surface Water and Sediment Sample Locations and Methods

Surface water and sediment sampling was conducted as described in Subchapter 5.2.6.

5.3.3.5 Surface Water and Sediment Exposure Pathway Analytical Results

Table 5.10 indicates that none of the analytes were detected in surface water. Therefore, no analytes were retained for consideration in the SLRA in Chapter 6. Table 5.11 indicates that copper, lead, and zinc were detected in sediment samples collected from the MRS. A source evaluation for sediment is presented in Table 5.13. Since ambient concentrations of the metals are not available for sediment, the analytes were retained for consideration in the SLRA in Chapter 6.

Table 5.13
Sediment Source Evaluation
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Site Concentration	Potential MC[1]?	SLRA Required?	Primary Reason for Exclusion from SLRA
Metals					
Antimony	mg/kg	0.059 UJ	**Yes**	No	Not detected at MRS
Copper	mg/kg	98	**Yes**	**Yes**	--
Lead	mg/kg	4.0	**Yes**	**Yes**	--
Zinc	mg/kg	95	**Yes**	**Yes**	--

[1] Potential munitions constituent as listed in Table 4.1
UJ - Analyte not detected, reported PQL may be inaccurate or imprecise.

5.3.3.6 Surface Water and Sediment Exposure Pathway Conclusions

No MC analytes were detected in surface water; therefore, no analytes were retained for consideration in the SLRA. The exposure pathway for surface water is incomplete, and no unacceptable risk is expected from exposure of human and ecological receptors to surface water. Copper, lead, and zinc were detected in sediment. In the absence of ambient data for sediment, it is assumed that these analytes are present above background

concentrations. Therefore, exposure pathways for sediment are complete and copper, lead, and zinc in sediment were retained for further evaluation in Chapter 6.

5.3.4 Soil Exposure Pathway

Potential soil exposure pathways include incidental ingestion, dermal contact, and inhalation of resuspended particulates by human receptors. Soil contamination can leach to groundwater and migrate to surface water and sediment via runoff and erosion. Subchapters 5.3.2 and 5.3.3 describe the groundwater, surface water, and sediment exposure pathways.

5.3.4.1 Physical Source Access Conditions

5.3.4.1.1 The Kahana Valley portion of the Pacific Jungle Combat Training Center is currently owned and maintained by the State of Hawaii DLNR, Division of State Parks for use by the general public. Portions of land are leased and used as a native Hawaiian Living Park. Kahana Valley was set aside and established as a state park during the 1960s. Approximately 31 families live in Kahana Valley in support of the living park concept whereby residents are regarded as park personnel portraying traditional Hawaiian cultural practices for visitors. Family residences are clustered primarily near the valley and park entrance off Kamehameha Highway and just inland of Kahana Bay. The valley is open to the public for cultural enrichment as well as for hiking and hunting. A former military jeep trail toward the rear of the valley is utilized as a foot trail. Vegetation is dense and valley walls are steep. Public access is unimpeded and the site is easily accessible by State Highway 83.

5.3.4.1.2 Residential dwellings in the Punaluu Valley portion of the Pacific Jungle Combat Training Center are generally located at the valley mouth near Kamehameha Highway, along Green Valley Road, and just inland of the Hauula Forest Reserve boundary along Punaluu Stream. An irrigation system service road extends approximately halfway into the valley terminating at an irrigation ditch intake. This service road also serves as an Oahu Civil Defense Agency evacuation route for coastal residents to move to higher ground in the event of a tsunami. Foot trails ascend further into the valley. Although hunters are allowed in Punaluu Valley, access is generally restricted only to valley residents and guests, and landowner and lessee personnel.

5.3.4.2 Actual or Potential Contamination Areas

The Pacific Jungle Combat Training Center was established and used as a unit level jungle combat center to supplement Department Ranger and Combat School Training. Training included jungle first aid and evacuation, hand to hand combat training, construction and passage of wire entanglements, booby traps, patrolling and ambushing, assault of Japanese fortified areas, combat reaction proficiency, and jungle living. Munitions known to have been used or recovered at the MRS include 75mm AP rounds, 105mm HE rounds, 81mm HE and practice mortar rounds, and small arms. During the SI, the SVT found MEC in the form of an unexpended smoke grenade in decision unit DU2 and MD in the form of spent .30 caliber casings scattered on the ground in decision unit DU3. No MC sampling has been performed at the MRS in the past.

5.3.4.3 Soil Exposure Pathways and Receptors

The soil exposure pathway accounts for the potential risks to human and ecological receptors at or near the MRS that may come into contact with contaminated soil. Based on the known current and future land use at the site, the potential receptors for soil at the Maneuver Area MRS include current and future residents, commercial or industrial workers (e.g., park personnel), site visitors or recreational users, and ecological receptors. Exposure to contaminated soil could occur via incidental ingestion, inhalation of re-suspended particulate matter, and by dermal contact. Ecological receptors may come into contact with MC in the soil by ingestion of biota that have been exposed to MC in soil

5.3.4.4 Soil Sample Locations and Methods

Surface soil sampling was conducted using the MI sampling method. Sampling details for the MRS are discussed in Subchapter 5.2.6.

5.3.4.5 Soil Exposure Analytical Results

The analytical results for the surface soil samples collected from the Maneuver Area MRS are presented in Tables 5.4 through 5.8. These soil samples represent decision units DU2, DU3, DU4, and ambient unit AU1. The analytical results for AU1 were included because 2,4-dinitrotoluene was detected in one of the sample replicates collected from AU1. The reported maximum concentrations for the samples, including the field and laboratory triplicates, were evaluated using the criteria described in Subchapter 5.2.8. Table 5.14 shows that antimony, copper, lead, and zinc were detected in surface soil at concentrations exceeding background concentrations. Also, 2,4-dinitrotoluene was detected in surface soil (Table 5.8).

Table 5.14
Soil Source Evaluation
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Site Concentration	Maximum Ambient Concentration[1]	Exceeds Background Concentration[2]?	Potential MC[3]?	SLRA Required?	Primary Reason for Exclusion from SLRA
Metals							
Antimony	mg/kg	0.071 J	0.25 U	**Yes**	**Yes**	**Yes**	--
Copper	mg/kg	61	33	**Yes**	**Yes**	**Yes**	--
Lead	mg/kg	36	8.8	**Yes**	**Yes**	**Yes**	--
Zinc	mg/kg	170 J	17	**Yes**	**Yes**	**Yes**	--

[1] Maximum ambient concentrations as established in Table 5.12.
[2] Maximum ambient concentration is used as an estimate of background concentration
[3] Potential munitions constituent as listed in Table 4.1.
U - Analyte was analyzed for but not detected above the sample specific PQL.
J - Analyte detected, estimated concentration.

5.3.4.6 Soil Exposure Pathway Conclusions

Antimony, copper, lead, and zinc were detected above ambient concentrations within the MRS. Additionally, 2,4-dinitrotoluene was detected in one sample. Therefore, the soil exposure pathways are complete for all receptors present in the MRS, and antimony, copper, lead, zinc, and 2,4-dinitrotoluene were retained for consideration in the SLRA in Chapter 6.

5.3.5 Air Migration Pathway

The air exposure pathway accounts for hazardous substance migration in gaseous or particulate form through the air. Airborne transport of contaminants can result in exposure of human receptors to MC.

5.3.5.1 Climate

The climate in the area of the MRS is described in Subchapter 2.2.4.

5.3.5.2 Releases and Potential Releases to Air

Antimony, copper, lead, and zinc were detected above ambient concentrations within the MRS. Additionally, 2,4-dinitrotoluene was detected in one sample. Therefore, the soil exposure pathways are complete for all receptors present in the MRS, and antimony, copper, lead, zinc, and 2,4-dinitrotoluene were retained for consideration in the SLRA in Chapter 6.

5.3.5.3 Air Migration Pathways and Receptors

As indicated in Table 2.1, there are 403 residential receptors at and within 0.5 miles of the MRS, and a total of 8,676 residents within 4 miles of the MRS. Receptor populations potentially affected by the air pathway consist of people who reside, work, or go to school within the target distance limit of 4 miles around the MRS. Receptors could be exposed to MC in air through inhalation of fugitive dust. Based on the known current and future uses of the land, the potential air migration pathway receptors at the Maneuver Area MRS would include current and future residents, commercial or industrial workers (*e.g.*, park personnel), site visitors or recreational users, and ecological receptors. Exposures would occur via inhalation of re-suspended particulate matter.

5.3.5.4 Air Sample Monitoring Locations and Methods

No air sampling is known to have been previously performed at the MRS. Air sampling was not conducted as part of this SI.

5.3.5.5 Air Analytical Results

Not applicable; no air sampling was conducted during this SI.

5.3.5.6 Air Migration Pathway Conclusions

As discussed in Subchapter 5.3.4, 2,4-dinitrotoluene was detected in the soil samples collected from the Maneuver Area MRS, and the MC metals antimony, copper, lead, and zinc were detected above ambient concentrations; therefore, potential MC contamination

is present. Consequently, there is potential for a receptor's windblown exposure to contaminated particulates. Based on this information, the air migration pathway for inhalation of fugitive dust is complete for all receptors that are present at the MRS. The screening levels used to evaluate soil contamination also include the inhalation pathway. Therefore, any human health risk associated with air migration will be addressed as a soil exposure pathway. This pathway is potentially complete, but was not quantitatively assessed for ecological receptors because the published risk screening values do not currently account for the inhalation pathway.

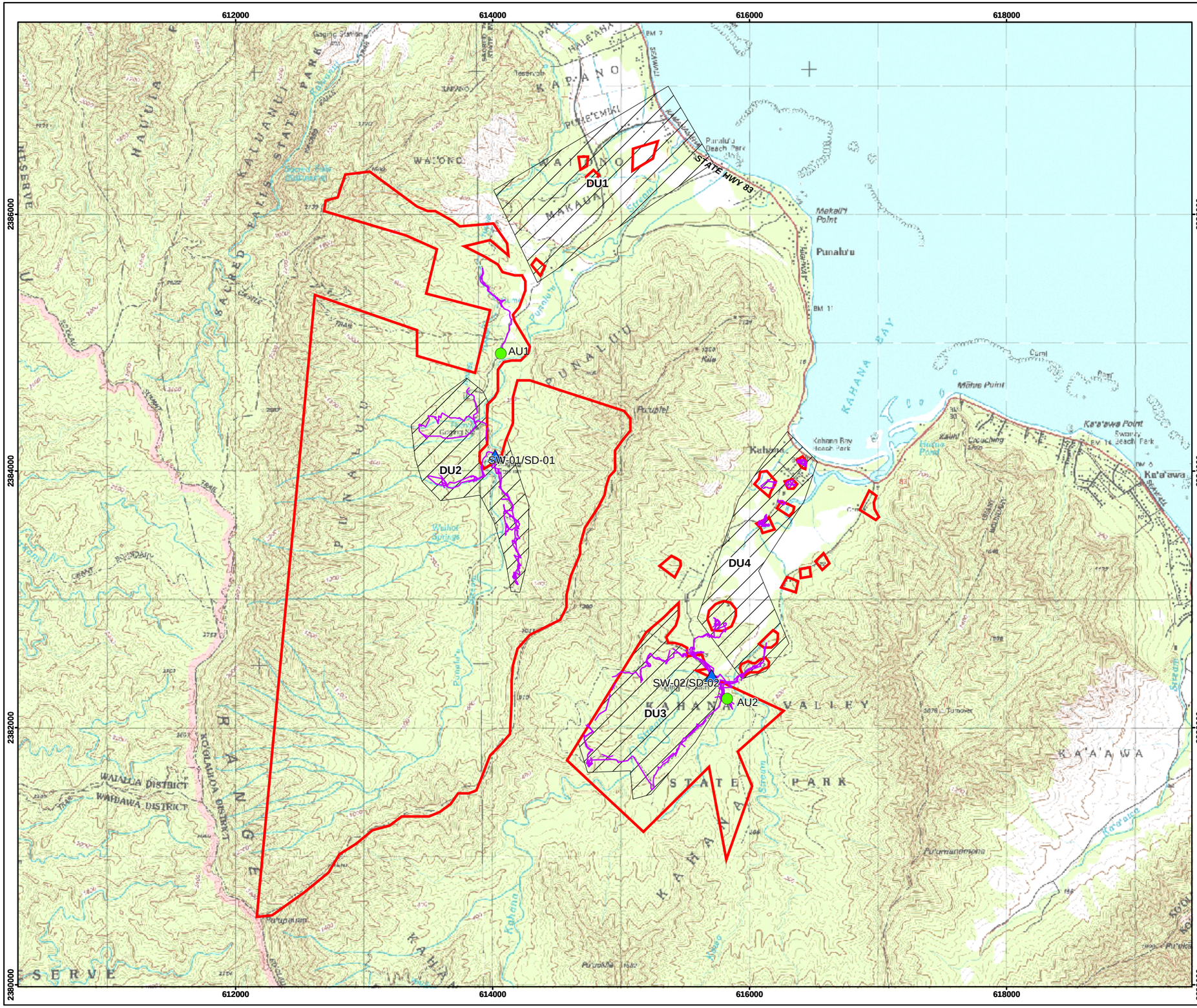


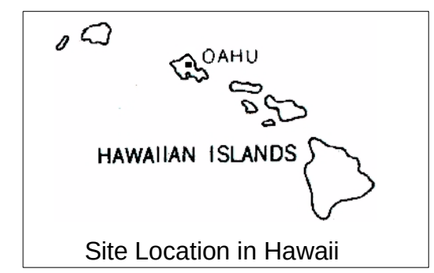
Figure 5.1

Qualitative Reconnaissance and Decision Unit Location Map
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii

Legend

- Ambient Multi-Incremental Sample
- Surface Water/Sediment Sample Location
- Qualitative Reconnaissance Track
- Decision Unit
- Approximate FUDS Property and Maneuver Area Boundary



Site Location in Hawaii

Image: USGS Topo Map, 1983
Projection: UTM Zone 4 NAD83, Map Units in Meters

2,500 1,250 0 2,500 Feet

N

PARSONS

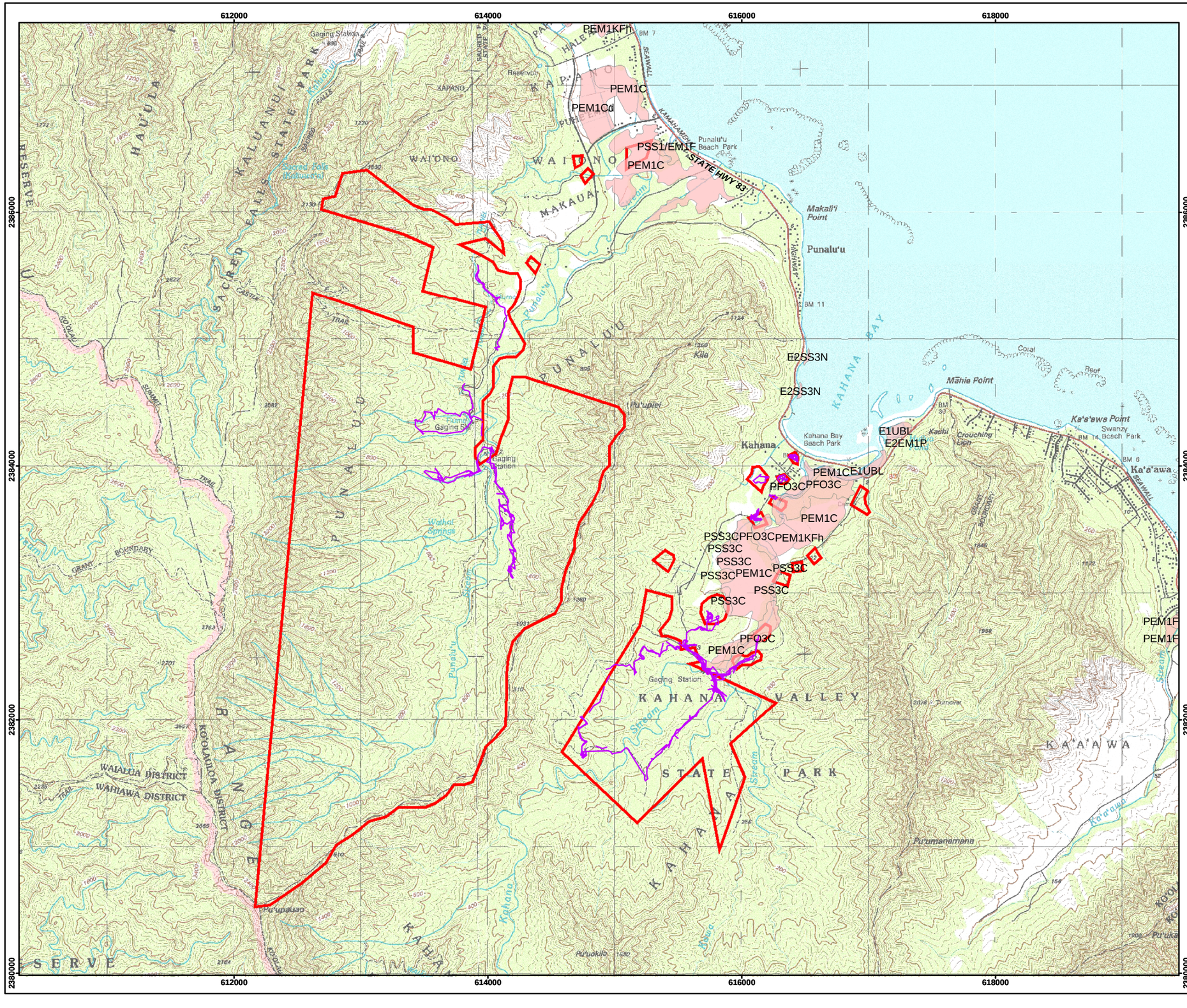
U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER

DESIGNED BY: BT	Qualitative Reconnaissance and Decision Unit Location Map
DRAWN BY: BT	
CHECKED BY: LK	SCALE: As Shown
SUBMITTED BY: DS	DATE: September 2008
	FILE: X:\GIS\Site_inspections_se\Maps\kahuku_HI\Fig5_1.mxd
PROJECT NUMBER: 744647.51000	PAGE NUMBER: 5-38

Figure 5.2

Wetlands
Pacific Jungle Combat Training Center
FUDS Project No. H09HI027401

Honolulu County, Hawaii


612000
614000
616000
618000
2386000
2384000
2382000
2380000
PEM1KFh
PEM1C
PEM1Cd
PSS1/EM1F
PEM1C
STATE HWY 83
Punalu'u Beach Park
Makali'i Point
Punalu'u
E2SS3N
E2SS3N
Māhie Point
Ka'a'awa Point
E1UBL
E2EM1P
Kahana Bay Beach Park
Kahana
PEM1C
E1UBL
PFO3C
PFO3C
PEM1C
PSS3C
PFO3C
PEM1KFh
PSS3C
PSS3C
PSS3C
PEM1C
PSS3C
PSS3C
PSS3C
PEM1F
PEM1F
PFO3C
PEM1C
Gaging Station
KAHANA VALLEY STATE PARK
KA'A'AWA
HAUULA FOREST RESERVE
KALUANUI PARK
WAI'ONO
MAKAUA
PUNALU'U
KAHANA BAY
KAHANA
KAHANA
WAIALUA DISTRICT
WAHIAWA DISTRICT
KOOLAULOA DISTRICT
BOUNDARY
GRANT
TRAIL
SEAWALL
Coral Reef
Crouching Lion
Kaala
Kila
Pu'uoniei
Pu'umanamana
Pu'uokila
Waihee Ridge
Kahana Stream
Punalu'u Stream
Waihee Springs
Gaging Station
Gaging Station
Gaging Station
Gaging Station
Swanzy Beach Park
Ka'a'awa
Ka'a'awa Stream
Kahana Stream
Waihee Stream
Punalu'u Stream
Kahana Stream
Kahana Stream
Kahana

CHAPTER 6
SCREENING-LEVEL RISK ASSESSMENT

6.1 MUNITIONS AND EXPLOSIVES OF CONCERN SCREENING-LEVEL RISK ASSESSMENT

6.1.1 Conceptual Site Model

The Conceptual Site Model (CSM) for the Pacific Jungle Combat Training Center - Maneuver Area MRS, included in Appendix J, summarizes conditions at the site that could result in human exposure to MEC. The CSM describes the types of MEC potentially present in the MRS, past MEC and MD findings, and current and projected future land use and receptors.

6.1.2 Introduction

6.1.2.1 A qualitative risk evaluation was conducted to assess the potential explosive safety risk to the public at the MRS. The purpose of this risk evaluation is to qualitatively communicate whether a potential explosive risk is present at the site and the primary causes of that potential risk. The risk evaluation presented here is based on historical information presented in prior studies (e.g., INPR and INPR Supplement) and observations made during the SI site visit in July 2008.

6.1.2.2 An explosive safety risk exists if a person can come near or into contact with a MEC item and interact with it in a manner that results in a detonation. The potential for an explosive safety risk depends on the presence of three critical elements:

- a source (*i.e.*, presence of MEC); AND
- a human receptor (*i.e.*, a person); AND
- the potential for interaction between the source and receptor (i.e., the possibility the item might be picked up or disturbed by the receptor).

6.1.2.3 All three of these elements must be present for there to be an explosive safety risk. There is no risk if any one element is missing. Each of these three elements provides a basis for implementing effective risk-management response actions.

6.1.3 Qualitative Risk Evaluation

6.1.3.1 The potential risk posed by MEC was characterized qualitatively by evaluating three primary risk factors for the MRS. These factors are related to the three critical elements listed above and are:

1) MEC Presence: whether there is the potential for MEC to be present at the MRS;

2) MEC Type: the type(s) of MEC that might be present at the MRS and the related potential explosive hazards; and

3) Site Accessibility: the potential receptors at the MRS and how they might interact with the MEC.

6.1.3.2 The known or suspected presence of an explosive hazard and any potential human receptors at an MRS will typically be considered sufficient justification for a RI/FS. The following paragraphs describe each of the primary risk factors.

6.1.3.3 **MEC Presence**: this factor describes whether MEC either has been confirmed or is suspected to be present at the MRS, either at the surface or in the subsurface, and is based on historical information presented in prior studies (e.g., INPR and INPR Supplement) and observations made during the SI site visit in July 2008. Note that if there is historical evidence of potential MEC presence at a site, lack of confirmation of MEC presence during the SI QR will not be considered as evidence of MEC absence for this qualitative risk evaluation. Table 6.1 lists the three possible categories used to describe MEC Presence for this evaluation.

Table 6.1
Categories of MEC Presence

MEC Presence	Description
Confirmed or suspected	There is physical or confirmed historical evidence of MEC presence at the MRS, or there is physical or historical evidence indicating that MEC may be present at the MRS.
Small arms only[1]	The presence of small arms ammunition is confirmed or suspected, and there is evidence that no other types of munitions were used or are present at the MRS.
Evidence of no munitions	Following investigation of the MRS, there is physical or historical evidence that there are no UXO or DMM present.

[1] Small arms ammunition is defined as "ammunition, without projectiles that contain explosives (other than tracers), that is .50 caliber or smaller or for shotguns" (BTAG Department of the Army 2005).

6.1.3.4 **MEC Type**: this factor describes whether the MEC potentially present at the MRS might be detonated, resulting in injury to one or more human receptors. If multiple MEC items are potentially present at an MRS, the item that poses the greatest risk to public health is selected for purposes of this qualitative risk evaluation. This determination is based on historical information presented in prior studies (e.g., INPR and INPR Supplement) and observations made during the SI site visit in July 2008. Table 6.2 lists the three possible categories used to describe MEC Type for this evaluation.

Table 6.2
Categories of MEC Type

MEC Type	Description
Potentially Hazardous	Fuzed or unfuzed MEC that may result in physical injury to an individual if detonated by an individual's activities.
Small arms only[1]	Small arms ammunition is confirmed or suspected, and there is evidence that no other types of munitions were used or are present at the MRS.
Inert	Munitions debris or other items that will cause no injury (e.g., training ordnance containing no explosives, fuzes, spotting charges, etc.).

[1] Small arms ammunition is defined as "ammunition, without projectiles that contain explosives (other than tracers), that is .50 caliber or smaller or for shotguns" (BTAG Department of the Army, 2005).

6.1.3.5 **Site Accessibility**: this factor describes whether human receptors have any access to the MRS and, therefore, may interact with any MEC present at the surface or in the subsurface. For purposes of this qualitative risk evaluation, if MEC is confirmed or suspected to be present at the MRS, it is assumed that human receptors might come into contact with that MEC unless there is "Complete Restriction to Access." A description of the potential receptors will also be given with this assessment. Table 6.3 lists the two possible categories used to describe Site Accessibility for this evaluation.

Table 6.3
Categories of Site Accessibility

Site Accessibility	Description
Accessible	Access control is not complete: residents, site workers, visitors, or trespassers can gain access to all or part of the MRS.
Complete restriction to access	Human receptors are completely prevented from gaining access to the MRS.

6.1.3.6 With regard to this qualitative risk evaluation, further evaluation (i.e., RI/FS) for the MRS will typically be justified if the following conditions are true:

- MEC is confirmed or suspected to be present, AND
- The MEC confirmed or suspected to be present is potentially hazardous, AND
- The MRS is accessible.

6.1.3.7 The primary risk factors identified above were evaluated for the MRS using the historical data available from prior studies and observations made during the

July 2008 SI. The following sections discuss the qualitative risk evaluation by each primary risk factor to determine whether or not further evaluation is justified at the MRS.

6.1.4 Munitions and Explosives of Concern Risk Assessment

6.1.4.1 During the QR conducted in July 2008 as part of this SI, the SVT found MEC in the form of an unexpended smoke grenade in Punaluu Valley and MD in the form of spent .30 caliber casings in Kahana Valley. Based on the INPR and INPR Supplement, munitions known to have been used or recovered at the MRS include 75mm AP rounds, 105mm HE rounds, 81mm HE and practice mortar rounds, and small arms ammunition. There have not been any documented munitions related incidents at the MRS. Based on this information, the MEC presence at the MRS is assessed to be "Confirmed or Suspected."

6.1.4.2 Based on information from the INPR, INPR Supplement, and observations during the SI site visit, the munitions known or suspected to have been used at the MRS include: 75mm AP rounds, 105mm HE rounds, 81mm HE and practice mortar rounds, .30 and .50 caliber small arms ammunition, and smoke bombs. The 75mm AP rounds potentially contain TNT and nitroglycerin. The 105mm HE rounds potentially contain TNT, RDX, and nitroglycerin. Based on this information, the MRS is assessed to be "Potentially Hazardous"

6.1.4.3 The Kahana Valley portion of the MRS is currently owned and maintained by the State of Hawaii DLNR, Division of State Parks for use by the general public. Family residences are clustered primarily near the valley and park entrance off Kamehameha Highway and just inland of Kahana Bay. The valley is open to the public for cultural enrichment as well as for hiking and hunting. Public access is unimpeded and the site is easily accessible by State Highway 83. Residential dwellings in the Punaluu Valley portion of the MRS are at the valley mouth near Kamehameha Highway along Green Valley Road. Although hunters are allowed in Punaluu Valley, access is generally restricted only to valley residents and guests, and landowner and lessee personnel. Based on this information, the Site Accessibility at the MRS is assessed to be "Accessible."

6.1.5 Risk Summary

6.1.5.1 The qualitative MEC risk evaluation for the MRS is summarized in Table 6.4.

Table 6.4
MEC Risk Evaluation
Pacific Jungle Combat Training Center

MRS	MEC Presence	MEC Type[1]		Site Accessibility	Further Evaluation?
Maneuver Area	Confirmed or Suspected	High Explosive Round (Cartridge), 105mm, M1	Potentially Hazardous	Accessible	Yes

[1]Where multiple MEC items were used at an MRS, the item which poses the greatest risk to public health is listed for purposes of this risk assessment.

6.1.5.2 Based on this qualitative MEC risk evaluation, there is the possibility that human receptors may come into contact with explosively hazardous MEC at the MRS. Therefore, a potential explosive safety risk is considered to be present at the Pacific Jungle Combat Training Center - Maneuver Area MRS.

6.2 MUNITIONS CONSTITUENT HUMAN HEALTH SCREENING-LEVEL RISK ASSESSMENT

6.2.1 Conceptual Site Exposure Model

6.2.1.1 The Kahana Valley portion of the Pacific Jungle Combat Training Center is currently owned and maintained by the State of Hawaii DLNR, Division of State Parks for use by the general public. Portions of land are leased and used as a native Hawaiian Living Park. Kahana Valley was set aside and established as a state park during the 1960's. Approximately 31 families live in Kahana Valley in support of the living park concept whereby residents are regarded as park personnel portraying traditional Hawaiian cultural practices for visitors. Family residences are clustered primarily near the valley and park entrance off Kamehameha Highway and just inland of Kahana Bay. The valley is open to the public for cultural enrichment as well as for hiking and hunting. A former military jeep trail toward the rear of the valley is utilized as a foot trail. Vegetation is dense and valley walls are steep. Public access is unimpeded and the site is easily accessible by State Highway 83.

6.2.1.2 Residential dwellings in the Punaluu Valley portion of the Pacific Jungle Combat Training Center are generally located at the valley mouth near Kamehameha Highway, along Green Valley Road, and just inland of the Hauula Forest Reserve boundary along Punaluu Stream. An irrigation system service road extends approximately halfway into the valley terminating at an irrigation ditch intake. This service road also serves as an Oahu Civil Defense Agency evacuation route for coastal residents to move to higher ground in the event of a tsunami. Foot trails ascend further into the valley. Although hunters are allowed in Punaluu Valley, access is generally restricted only to valley residents and guests, and landowner and lessee personnel.

6.2.1.3 Numerous streams flow from the high elevation mountain areas of the Koolau Range into the valleys where they coalesce and eventually discharge into the ocean (Figure 5.1). Two primary streams referred to as "pristine" are located at the MRS, the Punaluu Stream which drains Punaluu Valley and the Kahana Stream which drains Kahana Valley. There are no lakes or other large bodies of water in the MRS, although there are wetlands in the in lower parts of both valleys (described in Subchapter 5.2.5) and a fish pond in the lower Punaluu Valley. Springs are present along the slope of the Koolau Range in the western part of the MRS.

6.2.1.4 Based on the current and future land use, potential human receptors for the Maneuver Area MRS include current and future residents, commercial or industrial workers (e.g., park personnel), and current or future site visitors or recreational users. The MC CSEM (Appendix J) identifies affected media, transport mechanisms, exposure routes, and potential receptors.

6.2.2 Affected Media

Direct release of MC from munitions activities at the site would have been to surface soil. MC released to surface soil could leach to groundwater and migrate to surface water and sediment through runoff and erosion. No MC analytes were detected in the surface water samples collected from streams at the MRS. There are no groundwater wells within the MRS and no groundwater samples were collected during the SI. Given this site information and the detection of MC metals in surface soil and sediment, the soil and sediment exposure pathways are considered to be complete, the groundwater exposure pathway is considered potentially complete (but not quantitatively assessed), and the surface water exposure pathway is considered to be incomplete. This is illustrated in the CSEM in Appendix J.

6.2.3 Screening Values

The soil and sediment screening values selected by the TPP Team for this SI are the chemical-specific HDOH EALs for Soil (groundwater is a potential drinking water source). The final EALs used for screening are the lowest of gross contamination, ecotoxicity, direct-exposure, vapor intrusion, and soil leaching action levels, and are protective of human health and the environment.

6.2.4 Risk Characterization for Soil and Sediment

6.2.4.1 As discussed in Subchapter 5.2.8, the source evaluation is used to determine which analytes are retained for consideration in a SLRA. Only those analytes retained for consideration in the SLRA are evaluated in this chapter.

6.2.4.2 To complete the human health risk characterization for soil and sediment at the site, the maximum detected concentration of each analyte retained for consideration in the SLRA was compared with the screening levels selected during the TPP process. For an analyte to be considered as a possible human health concern related to a release from munitions activities, the following conditions must be true:

- The analyte is present above background concentrations, AND
- The analyte is a potential constituent of the formerly used munitions, AND
- The analyte is present above human health screening levels.

6.2.4.3 As noted in Chapter 5, because no background concentration could be established for sediment at the site, if an MC metal met the other two criteria, it was evaluated further in the SLRA. Therefore, any detected explosives or metals at the site were considered to be MC contamination and were retained for consideration in this SLRA. The following subchapters describe the screening-level human health risk evaluation of the retained MC at the Maneuver Area MRS.

6.2.4.4 Four surface soil MI samples were collected in triplicate (DU2, DU3, DU4, and AU1) from the Maneuver Area MRS. As discussed in Subchapter 5.3.4.5, antimony, copper, lead, zinc, and 2,4-dinitrotoluene were retained for evaluation in this

SLRA. Table 6.5 shows that the maximum concentrations of those MC in surface soil did not exceed their respective screening values.

6.2.4.5 Two sediment samples (and one duplicate) were collected from the Maneuver Area MRS. As discussed in Subchapter 5.3.3.6, copper, lead, and zinc were retained for evaluation in this SLRA. Table 6.6 shows that the maximum detected concentrations of those MC in sediment did not exceed their respective screening values.

Table 6.5
Soil Human Health Screening-Level Risk Assessment
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Concentration	HDOH EALs for Soil[1]	Exceeds Screening-Level?
Metals				
Antimony	mg/kg	0.071	6.3	No
Copper	mg/kg	61	230	No
Lead	mg/kg	36	200	No
Zinc	mg/kg	170	600	No
Metals				
2,4-Dinitrotoluene	µg/kg	75	2,700	No

[1]HDOH EALs for Soil (groundwater is a potential drinking water source, < 150m to surface water); revised August 2008.

Table 6.6
Sediment Human Health Screening-Level Risk Assessment
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Concentration	HDOH EALs for Soil[1]	Exceeds Screening-Level?
Metals				
Copper	mg/kg	98	230	No
Lead	mg/kg	4.0	200	No
Zinc	mg/kg	95	600	No

[1]HDOH EALs for Soil (groundwater is a potential drinking water source, < 150m to surface water); revised August 2008.

6.2.5 Discussion

Based on the results of this SLRA, unacceptable human health risks are not expected to result from exposure to MC in surface soil or sediment at the Maneuver Area MRS.

6.3 MUNITIONS CONSTITUENT ECOLOGICAL SCREENING-LEVEL RISK ASSESSMENT

6.3.1 Conceptual Site Model

Ecological receptors within the MRS may be exposed to MC in surface soil by incidental ingestion, dermal contact, inhalation of fugitive dust, and by consuming other MC contaminated biota as part of their diet. Flora could be exposed via uptake from contaminated soil or from deposition of windblown particulates on exposed plant structures. Ecological receptors can also be exposed to MC in sediment by incidental ingestion and dermal contact. Ecological receptors are not generally exposed to groundwater. Appendix J presents the CSEM developed for the site.

6.3.2 Affected Media

The discussion of affected media in Subchapter 6.2.2 also applies to this screening-level ecological risk assessment (SLERA). Affected media relevant to ecological receptors at this MRS include surface soil and sediment.

6.3.3 Screening Values

6.3.3.1 The screening values selected by the TPP Team for soil and sediment are the chemical specific HDOH EALs for Soil (groundwater is a potential drinking water source). The final EALs used for screening are the lowest of gross contamination, ecotoxicity, direct-exposure, vapor intrusion, and soil leaching action levels, and are protective of human health and the environment.

6.3.3.2 Ecological screening values (ESV) are based on a number of conservative assumptions, including assumptions about the types of receptors present (e.g., insectivores, terrestrial mammals, etc.) and assumptions about exposure parameters such as soil ingestion rate and receptor range. Site-specific information was not used to develop these screening values. The use of site-specific information typically results in less conservative, higher screening values.

6.3.4 Ecological Risk Characterization for Soil and Sediment

Subchapter 5.3 describes how the soil data for the Maneuver Area MRS were evaluated to determine whether MC contamination is present. Any detected explosives and MC metals present above background were retained for further evaluation in this chapter. To complete the ecological risk characterization for this site, the MC that met these criteria were retained for risk characterization, and the maximum detected concentration of each MC in surface soil and sediment was evaluated against the respective ESVs (Subchapter 6.3.3). This comparison resulted in the calculation of a hazard quotient (HQ). The HQ was calculated by determining the ratio of the maximum detected site concentration to the screening value. If the HQ is equal to or less than 1, the potential for ecological risk is considered to be negligible. If the HQ is greater than 1, there may be reason to believe that unacceptable ecological risks are possible.

6.3.4.1 Maneuver Area Munitions Response Site

Table 6.7 shows that the calculated HQs for antimony, copper, lead, zinc, and 2,4-dinitrotolune detected in surface soil at this MRS were less than 1. Additionally, Table 6.8 indicates that the calculated HQs for copper, lead, and zinc detected in sediment at this MRS were less than 1.

Table 6.7
Soil Screening-Level Ecological Risk Assessment
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Concentration	Ecological Receptors	
			HDOH EALs for Soil[1]	HQ
Metals				
Antimony	mg/kg	0.071	6.3	≤1
Copper	mg/kg	61	230	≤1
Lead	mg/kg	36	200	≤1
Zinc	mg/kg	170	600	≤1
Explosives				
2,4-Dinitrotoluene	µg/kg	75	2,700	≤1

[1]HDOH EALs for Soil (groundwater is a potential drinking water source, < 150m to surface water); revised August 2008.

Table 6.8
Sediment Screening-Level Ecological Risk Assessment
Pacific Jungle Combat Training Center

Analyte	Units	Maximum Detected Concentration	Ecological Receptors	
			HDOH EALs for Soil[1]	HQ
Metals				
Copper	mg/kg	98	230	≤1
Lead	mg/kg	4.0	200	≤1
Zinc	mg/kg	95	600	≤1

[1]HDOH EALs for Soil (groundwater is a potential drinking water source, < 150m to surface water); revised August 2008.

6.3.4.2 Discussion

Based on the results of this SLERA, unacceptable risks for ecological receptors exposed to MC in surface soil and sediment are not expected to occur at the Maneuver Area MRS.

CHAPTER 7
SUMMARY AND CONCLUSIONS

7.1 SUMMARY

7.1.1 One MRS covering the Pacific Jungle Combat Training Center FUDS was identified and evaluated to determine its potential to cause significant contamination to the environment or to adversely affect human and ecological receptors. The evaluation included implementation of a QR and the collection of MI surface soil samples from decision units DU2, DU3, and DU4 at the MRS. In addition, two ambient MI surface soil samples were collected within the MRS at locations not expected to be affected by munitions activities to evaluate ambient MC metal concentrations. Surface water and sediment samples also were collected from two streams in the MRS.

7.1.2 During the 11.91-mile QR of the MRS in July 2008, the SVT found MEC in the form of an unexpended smoke grenade in Punaluu Valley and MD consisting of several .30 caliber casings in Kahana Valley. A combat tank used for target practice and five concrete gun emplacements were also found in the MRS.

7.1.3 Direct release of MC from munitions activities at the site would have been to surface soil. MC released to surface soil could leach to groundwater and migrate to surface water and sediment through runoff and erosion. No MC analytes were detected in the surface water samples collected from streams at the MRS. There are no groundwater wells within the MRS and no groundwater samples were collected during the SI. Given this site information and the detection of MC metals in surface soil and sediment, the soil and sediment exposure pathways are considered to be complete, the groundwater exposure pathway is considered potentially complete (but not quantitatively assessed), and the surface water exposure pathway is considered to be incomplete.

7.1.4 Analysis of the MI surface soil samples indicated that the explosive 2,4-dinitrotoluene was detected in one sample replicate intended to provide ambient data; however, the concentration was below the screening level (HDOH EALs for Soil). The maximum concentrations of metals detected in the MI surface soil samples were below screening levels (HDOH EALs for Soil). Analysis of the surface water samples indicated that no explosives or metals were detected. Analytical results for the sediment samples indicated that no explosives were detected and that metals detected were below screening levels (HDOH EALs for Soil).

7.2 CONCLUSIONS REGARDING POTENTIAL MUNITIONS AND EXPLOSIVES OF CONCERN

During the SI, MEC and MD were identified at the Pacific Jungle Combat Training Center - Maneuver Area MRS. Based on historical data indicating use of the MRS as a training/maneuver area which was confirmed by the SI, it is possible that additional MEC may be present at the MRS. The MEC SLRA concluded a potential explosive safety risk is considered to be present at this MRS.

7.3 CONCLUSIONS REGARDING POTENTIAL MUNITIONS CONSTITUENTS EXPOSURE PATHWAYS

7.3.1 Soil is the primary exposure pathway at the MRS. The exposure pathway for soil is complete at the MRS because potential MC contamination was found.

7.3.2 The explosive 2,4-dinitrotoluene was detected in one surface soil sample replicate intended to provide ambient data; however, the concentration was below the screening level (HDOH EALs for soil). The MC metals antimony, copper, lead, and zinc were detected in the surface soil samples above the ambient concentrations derived from the ambient surface soil samples. The maximum concentrations of antimony, copper, lead, and zinc did not exceed their respective screening levels (HDOH EALs for soil).

7.3.3 No explosives were detected in the surface water or sediment samples. No MC metals were detected in the surface water samples. Copper, lead, and zinc were detected in the sediment samples. The maximum concentrations of copper, lead, and zinc in sediment did not exceed their respective screening levels (HDOH EALs for soil).

7.3.4 Based on the analytical results presented in this SI report, no unacceptable risks to human health are expected as a result of exposure to surface soil, surface water, or sediment at the Pacific Jungle Combat Training Center - Maneuver Area MRS.

7.3.5 The Pacific Jungle Combat Training Center site is considered to be an important ecological place. Based on the analytical results presented in this SI report, no unacceptable risks to ecological receptors are expected as a result of exposure to surface soil, surface water, or sediment at the Pacific Jungle Combat Training Center - Maneuver Area MRS.

CHAPTER 8
RECOMMENDATIONS

Based on findings of MEC and MD at the Pacific Jungle Combat Training Center - Maneuver Area MRS, it is recommended that the MRS proceed to RI/FS. This recommendation is summarized in Table 8.1. A removal action is not warranted for the MRS at this time. The supporting evidence for this recommendation is as follows:

- MEC were found in the form of an unexpended smoke grenade near a combat tank used for target practice in Pualuu Valley and MD consisting of .30 caliber casings were found in Kahana Valley during the July 2008 QR of the MRS. Five concrete gun emplacements also were found in the MRS during the QR.
- Historically, MEC in the form of unexpended .30 caliber bullets and a live 81mm mortar were found in Punaluu Valley, and MD consisting of an expended 105mm AP round, expended M1 and M2 cartridges, and a 75mm HE or AP round were found in Punaluu Valley.
- Analysis of the MI surface soil samples indicated that the explosive 2,4-dinitrotoluene was detected in one sample replicate intended to provide ambient data; however, the concentration was below the screening level (HDOH EALs for soil). The maximum concentrations of metals detected in the MI surface soil samples were below screening levels (HDOH EALs for soil). Analysis of the surface water samples indicated that no explosives or metals were detected. Analytical results for the sediment samples indicated that no explosives were detected and that metals detected were below screening levels (HDOH EALs for soil).

Table 8.1
Recommendations
Pacific Jungle Combat Training Center

MRS	Recommendation	Justification
Training Area	**RI/FS**	**MEC:** During the July 2008 QR of the MRS, an unexpended smoke grenade was found near a combat tank used for target practice in Punaluu Valley. Historically, MEC in the form of unexpended .30 caliber bullets and a live 81mm mortar were found in Punaluu Valley. **MD:** During the July 2008 QR of the MRS, .30 caliber casings were found in Kahana Valley. Historically, MD consisting of an expended 105mm AP round, expended M1 and M2 cartridges, and a 75mm HE or AP round were found in Punaluu Valley.

CHAPTER 9
REFERENCES

Banks Environmental Data, 2008. *Water Well Report, Pacific Jungle Combat Training Center, Island of Oahu, Hawaii*. August 27, 2008.

Climate of Oahu, Hawaii. http://www.alternative-hawaii.com/oahu1.htm. Accessed August 14, 2007.

Hawaii Biological Survey (HBS), 2007. http://hbs.bishopmuseum.org/. Accessed August 14, 2007.

Hawaii Department of Land and Natural Resources (DLNR), 2007. *Division of Forestry and Wildlife (DOFAW), Hawaii's Comprehensive Wildlife Conservation Strategy Hawaii Island, October 1, 2005.* http://www.dofaw.net/. Accessed August 14, 2007.

Hawaii Natural Heritage Program (NHP), 2007. http://hinhp.org/. Accessed August 14, 2007.

Hawaii Statewide GIS Program, Department of Business, Economic Development and Tourism, Office of Planning, 2007. *Geographic Information Systems Data Maps*, http://www.hawaii.gov/dbedt/gis/. Accessed August 14, 2007.

Hawaii State Historic Preservation Division (SHPD), 2007. http://www.hawaii.gov/dlnr/hpd/hpgreeting.htm. Accessed August 14, 2007.

Hawaii State Parks (HSP), 2008. http://www.stateparks.com/hi.html. Accessed August 14, 2007.

Hunt, Charles D. Jr., 1996. *Geohydrology of the Island of Oahu, Hawaii,* US Geological Survey Professional Paper 1412-B.

National Oceanic and Atmospheric Administration (NOAA) 2007a. *Coastal Zone Management Program, Office of Ocean and Coastal Resource Management, National Ocean Service.* http://www.ocrm.nos.noaa.gov/czm/national.html. Accessed August 14, 2007.

NOAA, 2007b. *National Marine Fisheries Service,* http://sero.nmfs.noaa.gov. Accessed August 14, 2007.

NOAA, 2007c. *National Marine Sanctuaries,* http://sanctuaries.noaa.gov/visit/welcom.html. Accessed August 14, 2007.

NOAA, 2007d. *National Estuarine Research Reserve System,* http://nerrs.noaa.gov/Background_Overview.html. Accessed August 14, 2007.

National Park Service (NPS), 2007a. *List of National Parks by State*. http://www.nps.gov/applications/parksearch/geosearch.cfm. Accessed August 14, 2007.

NPS, 2007b. *National Register Information System, National Register of Historic Places.* http://www.nr.nps.gov/nr.research.nris.htm. Accessed August 14, 2007.

NPS, 2007c. *National Register Information System, National Register of Historic Districts*.http://www.nationalregisterofhistoricplaces.com/hi/Hawaii/districts.html. Accessed August 14, 2007.

NPS, 2007d. *List of National Historic Landmarks, National Historic Landmarks Program.* http://www.cr.nps.gov/nhl/designations/listsofNHLs.htm. Updated 2006. Accessed August 14, 2007.

NPS, 2007e. *List of National Heritage Areas, National Heritage Areas Program.* http://www.cr.nps.gov/heritageareas/VST/INDEX.HT. Accessed August 14, 2007.

Parsons, 2005. *Final Programmatic Work Plan for Southeast and Pacific IMA Region Military Munitions Response Program for Site Inspections at Multiple Sites*. October 2005.

Parsons, 2006. *Final Addendum to the Final Programmatic Sampling and Analysis Plan.* March 2006.

Parsons, 2007a. *Final Technical Project Planning Memorandum and Associated Documentation for Pacific Jungle Combat Training Center – Island of Oahu, (FUDSH09HI027400)*. February.

Parsons, 2007b. *Final Site Specific Work Plan Addendum to the Programmatic Work Plan, Pacific Jungle Combat Training Center, Island of Oahu, Hawaii*. November 2007.

State of Hawaii Department of Health (HDOH), 2006. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*. State of Hawaii Department of Health, Hazard Evaluation and Emergency Response Office. Revised August 2006.

Takasaki, K.J., and Valenciano, Santos, 1969. *Water in the Kahuku Area, Oahu, Hawaii*, US Geological Survey Water Supply Paper 1874.

United States Army Biological Technical Group (BTAG), 2005. *Technical Document for Ecological Risk Assessment: Process for Developing Management Goals*.

United States Army Corps of Engineers (USACE), 2005. *Final Programmatic Sampling and Analysis Plan.* September 2005.

USACE, 2006. *Screening-Level Ecological Risk Assessments for FUDS MMRP Site Inspections*. Prepared by USACE HTRW CX. August 11, 2006

USACE, Huntsville District (USAESCH), 2005. *Sampling and Analysis Plan Military Munitions Response Program Site Inspections*. September 2005.

USACE, Rock Island District (CEMVR), 2004. *INPR Supplement for Pacific Jungle Combat Training Center*, 26 November 2004.

USACE, Honolulu District (CEPOH), 1993. *DERP-FUDS Inventory Project Report for Pacific Jungle Combat Training Center, Kahana and Punaluu Valleys, Island of Oahu, Hawaii, Site No. H09HI027400*, December 3.

United States Department of Agriculture (USDA), Natural Resources Conservation Service, 2007a. *Hawaii Soils.* http://www.ctahr.hawaii.edu/soilsurvey/soils.htm Accessed August 14, 2007.

USDA, Natural Resource Conservation Service, 2007b. *Pacific Islands Wildlife Habitat Incentive Program (WHIP) Fiscal Year 2007.* http://www.hi.nrcs.usda.gov/programs/whip.html. Accessed August 14, 2007.

USDA, National Forest Service, 2007. *List of National Forests by State.* http://www.fs.fed.us/recreation/map/finder.shtml. Accessed August 14, 2007.

United States Environmental Protection Agency (USEPA), 1989. *Risk Assessment Guidance for Superfund: Volume I: Human Health Evaluation Manual (Part A), Interim Final.* U.S. Environmental Protection Agency, EPA/540/1-89/002. December 1989.

USEPA, 2006. Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4, EPA/240/B-06/001. February 2006.

United States Fish and Wildlife Service (USFWS), 2007a. *Wetlands Online Mapper*, National Wetlands Inventory. http://wetlandsfws.er.usgs.gov/wtlnds/launch.html. Last modified September 27, 2005. Accessed August 14, 2007.

USFWS, 2007b. *Threatened and Endangered Species System (TESS) Hawaii.* Listings by State and Territory as of 08/14/2007. http://ecos.fws.gov/tess_public/StateListing.do?state=all. Updated August 14, 2007. Accessed August 14, 2007.

USFWS, 2007c. *National Wildlife Refuge System.* http://www.fws.gov/refusges/profiles/Bystate.cfm?state=HI. Accessed August 14, 2007.

APPENDIX A

Performance Work Statement
Electronic Only

SECTION C - DESCRIPTIONS AND SPECIFICATIONS

PERFORMANCE WORK STATEMENT
FOR
Formerly Used Defense Sites (FUDS)
Military Munitions Response Program (MMRP)
Site Inspections (SI)
at Multiple Sites
(CONUS and OCONUS)
24 May 2005

Revison #1: 8 July 2005
Revision #2: 27 July, 2006
Revision #3: 28 September, 2006
This is a firm fixed price Task Order

Revision #2 (27 July, 2006): This revision adds Perchlorate Sampling and Analysis and MRSPP Coordination to the requirements of this Task Order.

Revision #3 (28 September, 2006): This revision clarifies requirements for the MRSPP Coordination and specifies the Period of Performance.

1.0 OBJECTIVE:

The objective of the MMRP SI is to determine whether the individual project sites within the FUDS program warrants further response action or no Department of Defense action indicated (NDAI).

2.0 BACKGROUND AND GENERAL STATEMENT OF WORK:

2.1 Regulatory Guidelines. The work required under this Scope of Work (SOW) falls under the Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS). Munitions and Explosives of Concern (MEC) exist on property formerly owned or leased by the Department of Army. USACE is conducting environmental response activities at FUDS in accordance with Engineer Regulation (ER) 200-3-1 and the DoD Management Guidance for the Defense Environmental Response Program (DERP). USACE is conducting these activities in accordance with CERCLA.

2.1.1 MEC is a safety hazard and may constitute an imminent and substantial endangerment to the local populace and site personnel. The work associated with this Site Investigation(s) shall

be performed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 104, and the National Contingency Plan (NCP), Sections 300.120(d) and 300.400(e), Executive Orders 12580 and 13016.

2.1.2 All activities involving work in areas potentially containing unexploded ordnance hazards shall be conducted in full compliance with Department of Defense (DoD), Department of Army, US Army Corps of Engineers (USACE), state, local and federal requirements regarding safety, personnel, equipment, and procedures. 29 CFR 1910.120 shall apply to all actions taken at this site.

2.1.3 The project sites are not suspected to contain Recovered Chemical Warfare Materiel (RCWM); however, if the contractor identifies or suspects CWM, the contractor shall immediately withdraw upwind from the work area and notify the USAESCH Chemical Warfare Design Center and the USAESCH Ordnance and Explosives (OE) Safety Office for assistance and guidance. The contractor shall secure the area and locate two Unexploded Ordnance (UXO) Technicians at level II or above upwind of the suspect CWM to secure the site until relieved by the Technical Escort Unit (TEU) or Explosive Ordnance Disposal (EOD) personnel.

3.0 Performance Work Statement:

The following performance work statement will apply to all tasks/projects in this PWS.

The contractor shall perform the activities necessary to meet the objective in paragraph 1.0 of this PWS for munitions and explosives of concern (MEC) and munitions constituents (MC). MEC intrusive activities shall **not** be performed during this SI. Work shall be in accordance with (IAW) with ER 200-3-1, the DoD Management Guidance for the Defense Environmental Response Program (DERP), and Engineering Pamphlet (EP) 75-1-2.

The contractor shall collect the minimum amount of information necessary to (i) eliminate from further consideration those releases that pose no significant threat to public health or the environment; (ii) determine the potential need for a time critical removal action; (iii) collect or develop additional data, as appropriate, for Hazard Ranking System (HRS) scoring by

Environmental Protection Agency (EPA); and (iv) collect data, as appropriate, to characterize the release for effective and rapid initiation of the Remedial Investigation and Feasibility Study (RI/FS). The contractor shall also collect the appropriate data to complete the Munitions Response Site Prioritization Protocol (MRSPP).

Methods to be used to achieve the specified objectives shall be determined by the Contractor.

Quality Control. The Contractor shall implement an accepted Quality Control (QC) Program. The Quality Control Program shall include QC procedures for all aspects and types of work. The Contractor shall ensure that QC documentation is maintained, and provided in the Final Reports. If any Government QA review identifies a process failure or a work product failure, the contractor will be issued a Corrective Action Request (CAR). The Contractor shall provide full documentation detailing the cause of the failure, why it was not detected in the Contractor's QC Program, and how the problem was corrected. Failure can be defined as workmanship or work products not complying with the WP or not meeting project needs defined during TPP or other accepted industry practices or defined as not complying with basic safety concepts and other industry safety practices.

Kick Off Meeting: The Contractor(s) shall plan to attend a kick off meeting, after award, in Huntsville, Alabama for 1 day.

Work Plan: The contractor shall prepare and submit a programmatic SI Work Plan (WP) which will also address any contractor-specific programmatic information supplemental to the Programmatic Sampling and Analysis Plan provided by the government. The WP shall be prepared following the general format described in data item description (DID) MR-001. Deviations from this format will be accepted if they are for the purpose of consolidating topics into a single chapter or sub-chapter or for removing duplications. For each site, a site-specific Work Plan and SAP annex shall be prepared.

Geographic Information System (GIS). The Contractor shall create a GIS in accordance with DID MR-005-07. The coordinate system for these tasks/projects shall be UTM Coordinates. All

geo-referenced data shall be submitted in UTM Coordinates.

Munitions Constituents Sampling and Analysis: MC sampling and analysis shall be performed IAW Final Programmatic SAP and applicable Site-Specific SAP. Any exceptions to the Programmatic SAP must be clearly indicated in the Site-Specific SAP. Contractor shall determine in consultation with their subcontractor laboratory appropriate analytical methodology to meet or exceed the data quality objectives provided in Table 1 of the Programmatic SAP. If these DQOs cannot be met with standard analytical methodology, provide recommendation for best value approach. Technical proposal shall provide laboratory's proposed reporting limits along with their method detection limits. It shall also describe laboratory's procedures for subsampling and sample preparation for explosives and any method variations to address analytes not addressed by routine methods, such as PETN and nitroglycerine. For aqueous samples, solid phase extraction rather than salting out extraction shall be used.

The contractor shall address MC sampling and analysis requirements and deliverables IAW with DID MR-005-10, with the following exceptions:

- The USACE validation process has been replaced. The contractor shall use a laboratory that meets the requirements of the HTRW Chemical Data Quality Management (CDQM) Policy for Environmental Laboratory Testing (USACE, 2004), to include NELAP accreditation and self declaration of compliance with the DoD Quality Systems Manual (DoD QSM) (latest version). All laboratory requirements of DID MR 005-10 not related to the validation process continue to apply.
- Section 1.4 of DID MR-005-10 shall be modified as follows:

  Electronic Data Deliverable; G.

  All laboratory data for samples analyzed by commercial laboratories shall be submitted in the Staged Electronic Data Deliverable (SEDD) format. Details on the SEDD format are provided in SEDD Version 5.0 (or most recent version) specification located at http://www.epa.gov/superfund/programs/clp/sedd.htm. EDDs shall be provided to applicable Design Center and MM CX on a site-by-site basis IAW schedule provided in Contractor's proposal. SEDD Stage 2a is a mandatory submittal. SEDD Stage 2b should be provided if the laboratory is capable.

- Section 2.8 of DID MR-005-10 shall be modified as follows:

  2.8 ELECTRONIC DATA DELIVERABLE

  Chemical data shall also be provided electronically by the Contractor in the SEDD format and as part of the Geographic Information System. The SEDD formatted deliverable will require data parsing for use in the Automated Data Review (ADR) software (most current version). Use of the ADR software will also require that the contractor develop a comprehensive library file for all of the methods to be analyzed under this PWS. The library file will accurately reflect all of the analytical quality requirements as documented in the Final Programmatic SAP (or site-specific SAP, if deviations from the Programmatic SAP are approved) and will be provided to the appropriate Design Center, MM CX, and the sub-contract lab for use in screening EDD submittals. All electronic data submitted by the contract laboratory is required to be error-free, and in complete agreement with the hardcopy data. Data files are to be delivered both by e-mail and on high density CD accompanying the hardcopy data reports. The disk must be submitted with a transmittal letter from the laboratory that certifies that the file is in agreement with hardcopy data reports and has been found to be free of errors using the latest version of the ADR evaluation software provided to the laboratory. The contract laboratory, at their cost, will correct any errors identified by USACE. The Contractor is responsible for the successful electronic transmission of field and laboratory data under this PWS. The Contractor's laboratory is responsible for archiving the electronic raw data and sufficient associated hardcopy data (e.g., sample login sheets and sample preparation log sheets) to completely reconstruct the analyses that were performed for a period of ten years after completion of this contract.

- The following software is available upon request to support this task as government furnished software: ADR, Environmental Data Management System (EDMS), and Forms II Lite. Use of the ADR software is mandatory, use of EDMS and Forms II Lite are optional.
- Information required for completion of main SI Report need not be duplicated in SI Report Appendix containing **CHEMICAL DATA FINAL REPORT**

Perchlorate Sampling and Analysis. **Sampling and analysis for perchlorate shall be conducted IAW OSD Policy on DoD Required Actions Related to Perchlorate, DoD Perchlorate Handbook, and Interim Army Guidance on Perchlorate for Restoration/Cleanup Activities (or most recent version). Where potential for a DoD-related perchlorate source exists, the contractor shall include consideration of the need for perchlorate sampling and analysis in the project TPP. Analysis must be performed by Liquid Chromatography/Mass Spectrometry or Ion Chromatography/Mass Spectrometry. Either tandem or single mass spectrometry is acceptable. If the laboratory identified in the Contractor's initial proposal is unable to perform perchlorate analysis by one of these methods, Contractor may propose a supplemental laboratory for perchlorate analysis. If a supplemental laboratory is proposed, it must meet all PWS requirements and all documentation for new laboratory that was required for initial proposal must be provided.**

SI Reports: The Contractor shall prepare a final report using DID MR-030 as a guideline for general document format. The report content outline is attached as Appendix A. Each report shall identify the specific members and title of the Contractor's staff and subcontractors that had significant and specific input into the reports' preparation or review. The contractor shall also include a cover letter signed by an authorized person (preferably the person who signed the Task Order) of the company certifying, on behalf of the company, that the requirements of this Task Order have been met.

MRSPP Coordination: The Contractor shall coordinate stakeholder participation for the MRSPP IAW 32 CFR Part 179, specifically:

- **Notify stakeholders of the opportunity to participate in the Protocol application** ***at a meeting to be held immediately after (on the same day or the next day) the second TPP meeting. This is to be a meeting for the regulators and stakeholders only and will not include the public unless the specifically requested by the District.***
- **Publish announcements to request involvement in the application of the Protocol and information pertinent to prioritization or sequencing.** ***An ad in a local newspaper must run for 2 days, once during the week and once on Sunday.***
- **Include a copy of all notices and announcements in the project file**

- **Incorporate stakeholders' input in prioritization**
- **Include information influencing the priority in the project file**

Schedule: The Contractor shall submit a proposed programmatic project schedule in the proposal. Seven (7) days after Award the contractor shall submit and electronic copy (preferably by email) of the schedule. The schedule shall be adjusted and refined during the Technical Project Planning (TPP) process. The contractor shall update the schedule in accordance with DID MR-085, Project Status Report. A task/project specific schedule shall be submitted a minimum of 14 days after the completion of the TPP process. All schedules shall be in a format compatible with Primavera software.

Teleconferences: The Contractor shall participate in monthly MMRP teleconferences with HQ, MM CX, Technical PM, District PM, and other contractors to discuss project status and any issues that have arisen during the SI phase of work. The Contractor will be prepared to present issue resolution alternatives as part of these discussions.

In Progress Review Meetings: The Contractor shall attend Quarterly In-Progress Review (IPR) meetings on the MMRP SI with USACE representatives and other contractors at various CONUS locations. In addition, the Contractor will be expected to plan, coordinate, and host one IPR meeting each year.

Reports/Minutes, Record of Meetings. The Contractor shall prepare and submit a report/minutes of all meetings attended in accordance with DID MR-045.

Telephone Conversations/Correspondence Records. The Contractor shall keep a record of each phone conversation and written correspondence concerning this Task Order in accordance with DID MR-055. A copy of this record shall be attached to the Project Status Report.

Project Status Reports. The Contractor shall prepare and submit project status reports in accordance with DID MR-085 and include any other items required in the PWS.

Specific Tasks/Projects:

The specific Tasks/Projects below are shown in the table below. Along with the project, the responsible Geographic FUDS USACE District is shown as well as the USACE design center that will provide technical management and execute the project. The 4 (four) design centers are the Huntsville Center MM Design Center (HNC), Omaha District MM Design Center (NWO), South Pacific Division Range Support Center (SPD), Baltimore District MM Design Center (NAB).

An additional list of project sites is attached as Appendix B. This list will be used for optional future SI Projects based on funding and priority from DoD.

Task #	District	FUDS ID	FUDS Name	MM DC	Perchlorate Sampling
1.1	SAW	I04NC107101	Corolla Naval Target	HNC	YES
1.2	SAS	I04GA004503	Camp Toccoa Mil Res	HNC	YES
1.3	SAJ	I04 FL 0405	Pinecastle Jeep Range	HNC	YES
1.4	POH	H09HI024901	Kane Puu	HNC	YES
1.5	LRL	G04KY0028	Camp Breckinridge	HNC	YES
1.6	SAM	I04AL06700	Fort McClellan	HNC	YES
1.7	POA	F10AK0291	Burma Road	HNC	YES
1.8	SAC	I04SC0040	Lake Murray Bombing & Gunnery Range	HNC	NO
1.9	SAW	I04NC080303	Charlotte Naval Ammo Depot	HNC	NO
1.10	SAS	I04GA106401	Arabia Mountain State Park	HNC	NO
1.11	SAJ	I04 FL 0856	Chaffee Road Bomb Target	HNC	NO
1.12	SAC	I04SC0023	Sand Hills Bombing & Gunnery Range	HNC	YES
1.13	POH	H09HI047601	Big Island Target – Mahukona Range	HNC	NO
1.14	LRL	G04KY016506	Kentucky Ordnance Works	HNC	NO
1.15	SAW	I04NC1085	Southern Shores	HNC	YES
1.16	SAC	I04SC0042	Lk Isaqueena Bom Rng	HNC	NO
1.17	SAJ			HNC	YES
2.1	NAB	C03MD0930	Assateague Island	NAB	NO
2.2	NAE	D01ME003200	Seal Island Gunnery Range	NAB	NO
2.3	NAN	C02NJ0004	Fort Hancock	NAB	YES
2.4	NAO	C03VA000901	NAAS Creeds	NAB	YES
2.5	NAB	CO3DE0526	Fort Delaware	NAB	NO
2.6	NAE	D01MA023204	Hingham NAD	NAB	YES
2.7	NAN	C02NJ0792	Millville Bomb & Gunnery Range	NAB	YES

Task #	District	FUDS ID	FUDS Name	MM DC	Perchlorate Sampling
2.8	NAO	C03VA020201	Plum Tree Island	NAB	YES
2.9	NAB	C03PA0048	Susquehanna Ordnance Sub-Depot	NAB	NO
2.10	NAO	C03VA0162	Virginia Ordnance Works	NAB	NO
2.11	NAB	C03DE0528	Governor Bacon Health Center	NAB	NO
2.12	NAO	C03VA0103	Ft. Monroe/Ft. Wool	NAB	NO
2.13	NAO	C03VA1012	Camp Wallace	NAB	YES
2.14	NAO	C03VA0194	Chopawamic Troop Trng	NAB	YES
2.15	NAO	C03VA0027	Ft. Lee	NAB	NO
3.1	LRL	G05OH0007	Lockbourne, AFB	NWO	YES
3.2	NWK	B07MO014601	Jefferson Barracks Target Range	NWO	YES
3.3	NWO	B08WY042601	Casper Ground Gunnery Range	NWO	NO
3.4	NWS	F10OR004102	Camp Abbott	NWO	YES
3.5	LRL	E05MI003402	Camp Claybanks AAA Firing Range	NWO	YES
3.6	NWK	B07KS002904	Olathe Naval Air Station	NWO	NO
3.7	NWO	B08WY042901	Casper Precision Bombing Range No. 3	NWO	NO
3.8	NWS	F10OR002903	Camp Adair	NWO	YES
3.9	LRL	G05IN0010	Camp Atterbury	NWO	NO
3.10	LRL	G05OH002706	Erie Army Depot	NWO	YES
3.11	LRL	G05IN001904	Kingsbury Ordnance Plant	NWO	NO
3.12	LRL	E05MI001303	Ft Custer Rec Area	NWO	YES
3.13	LRL	E05MI000501	Camp Lucas/Camp Brady Target Range	NWO	NO
3.14	LRL	E05IL009903	Green River Ordnance Plant	NWO	YES
3.15	LRL	E05IL010203	Sangamon Ordnance Plant	NWO	NO
4.1	SPA	K06NM042401	Fort Sumner	SPD	YES
4.2	SWF	K06TX1008	Matagorda Peninsula Bombing Range	SPD	YES
4.3	SPL	J09CA1110	Camp Matthews	SPD	YES
4.4	SWT	K06OK011001	Great Salt Plains Bombing Range	SPD	YES
4.5	SPL	J09AZ057601	Sahuarita AFR	SPD	YES
4.6	SWF	A06LA0008	Camp Livingston	SPD	YES
4.7	SPL	J09CA707802	Camp Lockett - Target Pit	SPD	YES
4.8	SWT	K06OK001301	Camp Gruber	SPD	YES
4.9	SPA	K06NM005206	Walker AFB	SPD	YES
4.10	SWF	K06TX0058	Matagorda Island AF Range	SPD	YES
4.11	SPL	J09CA711501	Naval Air Base - Ordnance Areas	SPD	YES
4.12	SPL	J09CA724201	Camp Vista Army - Green Oak Ranch Small	SPD	NO

Task #	District	FUDS ID	FUDS Name	MM DC	Perchlorate Sampling
			Arms Range		
4.13	SWF	K06TX0144	Pyote AAF Bomb Range #1	SPD	NO
4.14	SWF	K06TX0293	Childress AAF Bombing Range #1	SPD	NO
4.15	SWF			SPD	NO
4.16					
4.17					
4.18					

Design Center-Specific Requirements:

Huntsville Design Center Projects: Southeast and Pacific IMA Regions (Tasks 1.X)

The contractor that is awarded the tasks/projects assigned to the Huntsville MM Design Center shall plan for an onboard review of draft programmatic work plan and the internal draft SI report at USAESCH in Huntsville, AL. This onboard review shall take place after the contractor has received comments on the draft WP and after receiving comments on the internal draft SI Report. The contract shall be expected to provide a CD of the draft version at the conclusion of the onboard review.

Baltimore MM Design Center Projects: Northeast IMA Region (Tasks 2.X)

The contractor that is awarded the tasks/projects assigned to the Baltimore MM Design Center shall plan for an onboard review of the draft SI report at the District office in Baltimore, MD. This onboard review shall take place after the contractor has received comments on the internal draft version.

Omaha District Design Center Projects: Northwest IMA Region (Tasks 3.X)

The contractor that is awarded the tasks/projects assigned to the Omaha District MM Design Center shall plan for an onboard review of the draft SI report at the District office in Omaha, NE. This onboard review shall take place after the contractor has received comments on the internal draft version.

South Pacific Division Range Support Center Projects: Southwest IMA Region (Tasks 4.X)

The contractor that is awarded the tasks/projects assigned to the South Pacific Division Range Support Center shall plan for an onboard review of draft programmatic work plan and the internal draft SI report at the South Pacific Division USACE Headquarters, San Francisco, Ca. This onboard review shall take place after the contractor has received comments on the draft WP and after receiving comments on the internal draft SI Report. The contract shall be expected to provide a CD of the draft version at the conclusion of the onboard review.

4.0 SUBMITTALS AND CORRESPONDENCE:

Computer Files. All final text files generated by the Contractor under this task order shall be furnished to the Contract Officer in Microsoft Word 6.0 or higher software. Spreadsheets shall be provided in Microsoft EXCEL format. All final CADD drawings shall be in Microstation 95 or higher. All GIS data shall be in ESRI (Arcview/Arcinfo) format. All chemical sampling data submittals shall be IAW DID MR 005-10 except as noted above. These documents shall be submitted on CD or DVD.

PDF Deliverables. In addition to the paper and digital copies of submittals, the final version of any and all reports and/or plans shall be submitted, uncompressed, on CD or DVD in PDF format along with a linked table of contents, linked tables, linked photographs, linked graphs and linked figures, all of which shall be suitable for viewing on the Internet. PDF files shall be produced from source documents wherever possible.

Review Comments. Various reviewers will have the opportunity to review submittals made by the Contractor under this contract. The Contractor shall review all comments received through the Technical or Project Manager/Contracting Officer and evaluate their appropriateness based upon their merit and the requirements of the PWS. The Contractor shall issue to the Project Manager a formal, annotated response to each. The Contractor shall not non-concur with a comment without discussing with the PM and/or comment maker.

Public Affairs. The Contractor shall not publicly disclose any data generated or reviewed under this contract. The Contractor shall refer all requests for information concerning site conditions to the subject FUDS Geographic USACE Corps of Engineers District with a copy furnished to the

Technical Manager. Reports and data generated under this contract are the property of DoD and distribution to any other source by the Contractor, unless authorized by the Contracting Officer, is prohibited.

Submittals: The contractor shall furnish copies of the plans, maps, and reports as identified in table below, or as specified in this PWS, to each addressee listed below in the quantities indicated.

Document Distribution: For the purposes of determining when documents get submitted to specific organizations, the attached document distribution table is provided.

Document Description	HTRW CX		MM Design Center		District PM		MM CX		HQ USACE
	Hard Copy	CD Copy	Hard Copy	CD Copy	Hard Copy	CD Copy	Hard Copy	CD Copy	CD
CSM:									
Draft	2		3		6		2		
Working Final	2		3		6		2		1
TPP Memorandum:									
Draft	1	2	1	3	1	6	1	2	1
Final Memorandum	1	2	1	3	1	6	1	2	1
SI Work Plan:									
Draft	1	2	1	3	1	6	1	2	1
Final	1	2	1	3	1	6	1	2	1
SI Report:									
Draft	1	2	1	3	1	6	1	2	
Draft Final	1	2	1	3	1	6	1	2	1
Final	1	2	1	3	1	6	1	2	1

Notes:

1. The number of final copies distributed may vary from that shown above

Period of Performance: *All projects are to be completed within 18 months of the award date.*

Milestones:

TPP Memorandum (accepted)

Work Plan (accepted)

Field Work Completed

Final SI Report (accepted)

Milestones will be considered met or completed when the appropriate QC documentation has been submitted and QA completed and the submittal and/or product is accepted.

Points of Contact:

Program Manager:

Betina Johnson

CEHNC-OE-CX

US Army Engineering and Support Center

P. O. Box 1600

4820 University Square

Huntsville, AL 35807

256-895-1238

Betina.V.Johnson@hnd01.usace.army.mil

Huntsville Center MMRP SI Regional Program Manager

Chris Cochrane

CEHNC-OE-DC

US Army Engineering and Support Center

P. O. Box 1600

4820 University Square

Huntsville, AL 35807

256-895-1696

Chris.Cochrane@hnd01.usace.army.mil

Omaha District MMRP SI Regional Program Manager

Robert Zaruba

CENWO-PM-HB (ZARUBA)

106 South 15th Street

Omaha, NE 68102-1618

(402) 221-7659

Robert.K.Zaruba@nwo02.usace.army.mil

SPD Range Support Center MMRP SI Regional Program Manager

Monique Ostermann

CESPA-EC-EG (Ostermann)

4101 Jeff Plaza NE

Albuquerque, NM 87109

(505) 342-3475 Monique.M.Ostermann@spa02.usace.army.mil

Baltimore District MMRP SI Regional Program Manager

Leland Reeser

CENAB-EN-HN (Reeser)

10 South Howard Street

Room 10040D

Baltimore, MD 21201

(410) 962-2186

Leland.H.Reeser@nab02.usace.army.mil

5.0 REFERENCES

5.1 Basic Contract

5.2 USACE, 2004 - HTRW Chemical Data Quality Management (CDQM) Policy for Environmental Laboratory Testing, September 30, 2004

5.3 DoD Quality Systems Manual (DoD QSM) (latest version).

5.4 USEPA, 1992 - Guidance for Performing Site Inspections under CERCLA; Interim Final, September 1992, PB92-963375, EPA 9345.1-05

5.5 EM 200-1-3, Requirements for the Preparation of Sampling and Analysis Plans

5.6 ER 1110-1-263, Chemical Data Quality Management for Hazardous, Toxic, Radioactive Waste Remedial Activities

5.7 DOD Memorandum on Definitions Related to Munitions Response Actions, 18 December 2003, http://www.epa.gov/fedfac/pdf/MRP_Definitions_12-18-03.pdf.

5.8 Military Munitions Center of Expertise Technical Update Munitions Constituent (MC) Sampling March 2005.

5.9 OASA(I&E) Memorandum on Munitions Response Terminology, April 21, 2005

5.10 DUSD (I&E) Policy on DoD Required Actions Related to Perchlorate, January 26, 2006

5.11 EPA OSWER Assessment Guidance for Perchlorate, January 26, 2006

5.12 DoD Perchlorate Handbook, March 2006

5.13 ACSIM Memorandum: Interim Army Guidance on Perchlorate for Restoration/Cleanup Activities, May 25, 2006

SAMPLE PUBLIC COMMENT NEWSPAPER AD

PUBLIC NOTICE

Name of site

Taking into consideration various factors relating to safety and environmental hazard potential, the U.S. Army Corps of Engineers designated ***name of site*** as a Munitions Response Site for applying the Department of Defense's Munitions Response Site Prioritization Protocol.

DoD conducted live-fire training and testing of weapon systems at active and former military installations throughout the United States to ensure force readiness and defend our nation. While DoD has made great progress in addressing the potential hazards associated with former munitions-related activities, much remains to be done. Through direction provided by Congress, DoD developed a model that assigns priorities to defense sites containing unexploded ordnance, discarded military munitions or munitions constituents.

One sentence that describes what took place at this site (i.e. chemical warfare training, live-fire, testing, etc.). The U.S. Army Corps of Engineers has recently completed a site inspection at ***name of site*** and evaluated it using the prioritization model. The evaluation criteria, including types of munitions that may be present, ease of access to the site and number of people living near the site, are available for public review at ***district Web site*** and ***name of information repository.***

If you have additional information about ***name of site*** please send it to: U.S. Army Corps of Engineers, ***name of district***, Public Affairs Office, ***address*** or email to ***email address for PAO***.

For more information, please contact the U.S. Army Corps of Engineers, ***name of district***, Public Affairs Office at ***phone number***.

SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by $1,212,109.00 from $7,051,591.53 to $8,263,700.53.

CLIN 0008:

CS: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 9L4D96 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CS has been added.

CT: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 L4JD47 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CT has been added.

CU: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 92D9K0 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CU has been added.

CV: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 607BG5 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CV has been added.

CW: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 1FB51L was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CW has been added.

CX: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 9F300K was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CX has been added.

CY: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 72K0L4 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CY has been added.

CZ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 3D7KBB was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN CZ has been added.

DA: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 LDF20K was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DA has been added.

DB: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 4LHFFJ was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DB has been added.

DC: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 H8H6D7 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DC has been added.

DD: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 9GG8K9 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DD has been added.

DE: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 GLHL60 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DE has been added.

DF: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 0DB05F was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DF has been added.

DG: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 41DBDG was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DG has been added.

DH: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 7H12CD was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DH has been added.

DJ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 D93881 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DJ has been added.

DK: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 C2B331 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DK has been added.

DL: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 B1J839 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DL has been added.

DM: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 D5DD53 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DM has been added.

DN: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 H1203K was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DN has been added.

DP: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 KF76K9 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DP has been added.

DQ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 06BG23 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DQ has been added.

DR: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 C87G9L was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DR has been added.

DS: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 2139H4 was increased by $6,721.00 from $0.00 to $6,721.00

The contract ACRN DS has been added.

DT: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 J683GK was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DT has been added.

DU: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 6F055C was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DU has been added.

DV: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 8J2D8L was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DV has been added.

DW: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 46H2FL was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DW has been added.

DX: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 K1L26J was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DX has been added.

DY: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 12F88B was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DY has been added.

DZ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 32GJ3K was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN DZ has been added.

EA: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 J58C47 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EA has been added.

EB: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 31GLD6 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EB has been added.

EC: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 C64120 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EC has been added.

ED: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 8H80KH was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN ED has been added.

EE: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 7H33HK was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EE has been added.

EF: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 K73G68 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EF has been added.

EG: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 KB03L2 was increased by $6,721.00

from $0.00 to $6,721.00
The contract ACRN EG has been added.

EH: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 F7H91G was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EH has been added.

EJ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 G831CJ was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EJ has been added.

EK: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 9K5G1L was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EK has been added.

EL: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 3L2J39 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EL has been added.

EM: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 3B9K34 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EM has been added.

EN: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 GK27D1 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EN has been added.

EP: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 D51KF1 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EP has been added.

EQ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 03CF6G was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EQ has been added.

ER: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 9B1LK9 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN ER has been added.

ES: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 452B6D was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN ES has been added.

ET: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 75H962 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN ET has been added.

EU: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 JD0KD0 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EU has been added.

EV: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 18114K was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EV has been added.

EW: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 D9K38L was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EW has been added.

EX: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 081K5K was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EX has been added.

EY: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 J88B1F was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EY has been added.

EZ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 D4GJL5 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN EZ has been added.

FA: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 L7K3K4 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN FA has been added.

FB: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 9D6B16 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN FB has been added.

FC: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 6B1L69 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN FC has been added.

FD: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 325GD3 was increased by $6,721.00 from $0.00 to $6,721.00
The contract ACRN FD has been added.

FE: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 1K8FLG was increased by $163,350.00 from $0.00 to $163,350.00
The contract ACRN FE has been added.

FF: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 14B53C was increased by $150,346.50 from $0.00 to $150,346.50
The contract ACRN FF has been added.

FG: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 75C2KJ was increased by $150,346.50 from $0.00 to $150,346.50
The contract ACRN FG has been added.

FH: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 F015FC was increased by $154,035.00 from $0.00 to $154,035.00
The contract ACRN FH has been added.

FJ: 21 NA 2006 2020.0000 A0 2006 08 8130 49300821000 01110 3230 D52172 was increased by $190,771.00 from $0.00 to $190,771.00
The contract ACRN FJ has been added.

(End of Summary of Changes)

Appendix A
Site Inspection Report Outline
21 November 2006

TABLE OF ACRONYMS

GLOSSARY OF TERMS

Table of Contents (Government will provide example table of contents but allows for flexibility in the TOC)

EXECUTIVE SUMMARY

- Brief 1-2 page summary
- Include a table summarizing findings by MRA/MRS.
- Include small paragraph summarizing recommendations.

1.0 INTRODUCTION

- State that an SI was performed, the name of the agency performing it, and the authority under which it was conducted (authority language provided below):

  The Department of Defense (DoD) has established the Military Munitions Response Program (MMRP) to address DoD sites suspected of containing munitions and explosives of concern (MEC) or munitions constituents (MC). Under the MMRP, the U.S. Army Corps of Engineers (USACE) is conducting environmental response activities at formerly used defense sites (FUDS) for the Army, DoD's Executive Agent for the FUDS program.

  Pursuant to USACE's Engineer Regulation (ER) 200-3-1 (USACE, 10 May 2004) and the Management Guidance for the Defense Environmental Response Program (DERP) (Office of the Deputy Under Secretary of Defense (Installations and Environment), September 2001), USACE is conducting FUDS response activities in accordance with the DERP statute (10 USC 2701 et seq.), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC §9601 et seq.), Executive Orders 12580 and 13016, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300). As such, USACE is conducting remedial site inspections (SI), as set forth in the NCP, to evaluate hazardous substance releases or threatened releases from eligible FUDS.

  While not all MEC/MC constitute CERCLA hazardous substances, pollutants or contaminants, the DERP statute provides DOD the authority to respond to releases of MEC/MC, and DOD policy states that such responses shall be conducted in accordance with CERCLA and the NCP.

- State the FUDS property name, FUDS property and project numbers, and location (street address, city, county, State, latitude/longitude coordinates). If necessary, provide brief directions to the property.
- State the purpose, scope, and objectives of the SI (standard language provided below):

  The primary objective of the MMRP SI is to determine whether a FUDS project warrants further response action under CERCLA or not. The SI collects the minimum amount of information necessary to make this determination, as well as it (i) determines the potential need for a removal action (ii) collects or develops additional data, as appropriate, for Hazard Ranking System (HRS) scoring by Environmental Protection Agency (EPA); and (iii) collects data, as appropriate, to characterize the release for effective and rapid initiation of the Remedial Investigation and Feasibility Study (RI/FS). An additional objective of the MMRP SI is to collect the additional data necessary to ~~(i)~~ complete the Munitions Response Site Prioritization Protocol (MRSPP).

Appendix A
Site Inspection Report Outline
21 November 2006

2.0 PROPERTY DESCRIPTION AND HISTORY

- Identify and describe historic military operations (e.g., munitions manufacturing plant, Air Force or Navy base, Army WWII training camp, etc.) at the FUDS property, as well as the individual MRAs (e.g., mortar range, artillery range, open burning/open detonation area, burial pit, etc.)/MRSs identified.
    - Identify former owners and operators, years of operation, types of MEC and MC used and thought to be present, any MEC or MC treatment or disposal practices, containment features, if present, and quantities of MEC or MC used and thought to be present, if known or possible to estimate. Identify current owners and operators and current land use.
    - Describe the area's physical setting (e.g., topography, climate, vegetation, and significant structures). Describe accessibility to MEC and MC and current institutional controls (e.g., fencing, signage, etc.). Briefly describe surrounding land uses and identify nearby populations.
- Include the appropriate portion of a USGS 7.5-minute topographic map locating the project and surrounding area. On the map, identify nearby surface water bodies and the nearest groundwater and drinking water wells, drinking water intake, residence, wetlands, and other sensitive environments, as applicable.
- If applicable, provide the dates, scopes, and general results of previous investigations for MEC and MC, including previous records reviews (Archives Search Reports (ASR) and results of subsequent range inventory (ASR supplement)) and any investigations conducted under USACE's hazardous, toxic, and radioactive waste (HTRW) program related to MC.
- If applicable, describe other land use that may have contributed to contamination, as well as regulatory history, if applicable, including RCRA status, permits, permit violations, and inspections by local, State, or Federal authorities.
- Discuss any occurrences of MEC found by citizens and any accidents, injuries, chemical exposures, or complaints.

3.0 SI TASKS

- Include a summary of agreements made in the first Technical Project Planning (TPP) session and contacts made with the State Historical Preservation Office, U.S. Fish and Wildlife Service, or other agencies coordinated with on cultural and natural resources considerations.
- Describe the results of any additional desk-top research or interviews conducted as part of the SI, by MRA, as applicable.

4.0 MEC Findings

- Summarize, by MRA, the investigative activities conducted for MEC and the results. Present data quality objectives (DQOs) of the SI and discuss whether they were satisfied.
    - Identify specific MEC items found, wherever possible, and list them in a table, describing the results of the qualitative reconnaissance, as well as any geophysical studies, spatial analysis, aerial surveys, and footprint analysis (i.e., identification of MRA boundaries), if conducted. Include a map of the results of the reconnaissance inspections.
    - Summarize previous MEC findings in a table. Include a map of MEC finds, and add locations to the CSM, or refer to a map in a previous report.

5.0 MIGRATION/EXPOSURE PATHWAYS AND TARGETS

Appendix A
Site Inspection Report Outline
21 November 2006

GROUND WATER MIGRATION PATHWAY

- Describe the local geologic and hydrogeologic setting and features, (including the stratigraphy, geologic formations, aquifers, karst features, confining layers, and depth to each aquifer. Provide a description of the underlying unit with the lowest hydraulic conductivity, including its thickness. (Do not consider units within the first 10 feet below ground surface.)
- Discuss ground water use within a 4-mile radius of the MRAs. Identify the nearest private and municipal drinking water wells, including standby wells used at least once a year. Provide the number of wells, their locations, pumping rates, and the aquifer from which water is drawn. Identify wells in karst aquifers. Quantify drinking water populations served by wells within 4 miles, breaking out populations into the following distance categories: 0-1/4; >1/4-1/2; >1/2-1; >1-2; >2-3; and >3-4 miles, including residents, students, and workers. Identify any municipal wells that are part of a blended system (ground water mixed with surface water), and provide the relative amount the wells contribute to the system. [Note: Where more than one MRSs have been identified, measure the distance to ground water targets from them, as opposed to the MRA.]
- Indicate whether ground water within a 4-mile radius of the MRAs is used for any of the following purposes: irrigation (5-acre minimum) of commercial food or forage crops; watering of commercial livestock; ingredient in commercial food preparation; supply for commercial aquaculture; or supply for a major or designated water recreation area. If there are no drinking water wells, indicate whether aquifers are usable for drinking water purposes.
- Identify designated Wellhead Protection Areas (pursuant to Section 1428 of the Safe Drinking Water Act) and specify location.
- Note: Some of the information listed above may already have been collected during the preliminary assessment (PA), and if so, may be summarized from the PA. If not, the contractor may choose to utilize companies that specialize in providing or compiling environmental data to parties involved in real estate transactions.
- Discuss any previous ground water sampling results (analyzed for MC); provide dates of sampling events, well locations, and the depths and names of sampled aquifers. Summarize analytical results in a table and include sampling locations in the CSM in Appendix J or refer to a map in a previous report.
- List in a table each well or spring sampled during the SI, provide the depth from which it draws drinking water and the screened interval, quantify the population served by the well, if applicable, and identify its distance from the MRAs. Discuss SI ground water sampling results in terms of attribution of hazardous substances to DoD activities and comparison to background concentrations, as applicable. List in a table each sample and summarize analytical results. Include a map of sampling locations ~~or~~ Identify drinking water wells exposed to hazardous substances, if present, and quantify the populations served by those wells, as applicable. If no groundwater samples were taken, explain. For example, sampling may not be supported by the CSM (no complete exposure route exists or no receptors are present), or it was decided in the TPP session that soil/sediment/surface water, etc. would be the focus of the SI because the project was already identified as requiring an RI/FS, and groundwater contamination could more effectively be addressed at that phase.

SURFACE WATER MIGRATION PATHWAY

- Describe the local hydrologic setting, including MRA location with respect to the nearest surface water bodies and potentially affected floodplains. Include a figure depicting surface water features and targets (fisheries, wetlands, etc.) Describe the overland and in-water segments of the surface water migration path, starting at the perimeter of the MRA and ending 15 miles downstream of the probable point of entry (PPE) of MEC/MC into surface water. Identify all water bodies within the

in-water segment, and state the length of reach and flow or depth characteristics of each. Describe any tidal influence along the surface water migration path. Note: surface water includes perennially flowing man-made ditches as well as intermittently flowing ditches in areas with <20 inches of mean annual precipitation. For lakes, oceans, coastal tidal waters, and the Great Lakes, apply the 15-mile target distance limit as an arc. [Note: Where more than one MRSs have been identified, measure the distance to all surface water targets from them, not the MRAs.]

- Add the surface water migration path to the CSM in Appendix J. Describe upgradient drainage areas (including predominant soil type), onsite drainage (including storm drains, ditches, culverts, etc.), discharges into surface water, and pertinent historical events, including floods, fish kills, and fishery closures.
- Indicate whether surface water within the 15-mile target distance limit supplies drinking water. Identify the location and state the distance from the PPE to each drinking water intake. Quantify the population served by the intake; identify blended systems (where surface water is mixed with ground water) and provide the relative amount that surface water contributes.
- Indicate whether surface water within the target distance limit contains recreational, subsistence, or commercial fisheries. Identify and state the distance from the PPE to each fishery; briefly characterize each.
- Identify sensitive environments present within or adjacent to the in-water segment. Include all sensitive environments listed in Attachment 2 of the USACE guidance entitled "Screening Level Ecological Risk Assessments for MMRP SIs" (Army checklist for important ecological places). State the distance from the PPE to each sensitive environment. In addition, quantify the length of wetlands frontage along the surface water migration path within the following mileage categories downstream of the PPE: <0.1, 0.1-1, >1-2, >2-3, >3-4, >4-8, >8-12, >12-16, >16-20, >20 miles.
- Note: Some of the information listed above may already have been collected during the PA, and if so, may be summarized from the PA. If not, the contractor may choose to utilize companies that specialize in providing or compiling environmental data to parties involved in real estate transactions.
- Discuss any previous surface water and/or sediment sampling results (analyzed for MC), including dates, locations, and types of samples. Summarize analytical results in a table and include sampling locations in the CSM in Appendix J or refer to a map in a previous report.
- Discuss SI surface water and sediment sampling results. List in a table each sample and summarize analytical results. Identify surface water intakes, fisheries, and sensitive environments exposed to hazardous substances, if present at concentrations significantly above background; quantify the affected drinking water populations and fisheries (in pounds per year) and describe the exposed sensitive environments, including wetlands frontage, as applicable. If no surface water or sediment samples were collected, explain. For example, sampling may not be supported by the CSM (no complete exposure route exists or no receptors are present). Alternatively, surface water may not have been present to allow collection of a sample..

SOIL EXPOSURE PATHWAY

- Discuss any previous observations and sampling results of surface MEC or MC, including dates and locations. Summarize analytical results in a table and include sampling locations in the CSM in Appendix J or refer to a map in a previous report.
- Discuss SI surface soil samples. List each sample in a table and summarize analytical results. If soil samples were not collected, explain. For example, sampling may not be supported by the CSM (e.g., no surface soil sampling was planned for the FUDS because range activities were limited to the use of practice bombs with spotting charges. If field reconnaissance identified MEC debris associated with MEC other than practice bombs, the need for MC sampling was reassessed in the field).

Appendix A
Site Inspection Report Outline
21 November 2006

- State the number of workers, residents, and students present on and within 200 feet of areas of observed surface contamination (hazardous substances within top 2 feet of surface soil) and identify the locations of the pertinent workplaces, schools, day care facilities, and homes. If there are no workers, residents, or students on or within 200 feet of observed contamination, state the shortest travel distance within 1 mile to any residence or school (accounting for natural barriers to travel on foot).
- State the number of people who live or attend school within 1 mile travel distance of areas of observed contamination, within the following distance categories: >0-1/4, >1/4-1/2, >1/2-1 mile. (Do not include those counted on or within 200 feet of area of observed contamination, as above.)
- Indicate whether any of the following terrestrial sensitive environments exist in the area of observed contamination:
  - Terrestrial critical habitat for Federal designated endangered or threatened species; National Park; designated Federal Wilderness Area; National Monument
  - Terrestrial habitat known to be used by Federal designated or proposed endangered or threatened species; National Preserve (terrestrial); National or State Terrestrial Wildlife Refuge; Federal land designated for protection of natural ecosystems; administratively proposed Federal Wilderness Area; terrestrial areas utilized for breeding by large or dense aggregations of animals
  - Terrestrial habitat known to be used by State designated endangered or threatened species; terrestrial habitat known to be used by species under review as to its Federal status
  - State land designated for wildlife or game mgmt; State designated Natural Areas; particular areas, relatively small in size important to maintenance of unique biotic communities
- Describe how attractive/accessible the area of observed contamination is for public use, indicating whether the area is: designated for recreational use; area is regularly used for public recreation; accessible and uniquely used for recreation (e.g., vacant lots in urban areas); moderately accessible (e.g., some access improvements, such as gravel road) with some public recreation use; slightly accessible (e.g., rural area with no road improvement) with some public recreation use; accessible, with no public recreation use; physically inaccessible to the public, with no evidence of public recreation use.

AIR MIGRATION PATHWAY

- Identify for each MRA the potential for release of contaminated particulate to the air and conditions that may prevent release (area is covered by liquids, uncontaminated soil cover, or thick vegetation, or area is surrounded by windbreak, or source is totally enclosed in intact building or containers.) Describe the results of any air samples, if collected. If air samples were not collected, explain. For example, no air samples were collected because there are no known sources of air contamination associated with the historic DoD operations; Surface soil may present a source of particulate contamination; therefore surface soil samples were collected during the SI, as applicable). Discuss any previous observations of air releases or air sampling results, including dates, locations, sampling procedures, and meteorological conditions.
- Identify the location of and distance to the nearest resident, worker, or student within 1 mile of the source of particulate contamination.
- State the population within 4 miles of the sources of particulate contamination, including residents, students, and workers, broken out into the following distance categories: on a source; >0-1/4, >1/4-1/2, >1/2-1, >1-2, >2-3, >3-4 miles.
- Indicate all types of sensitive environments, using those listed in Attachment 2 of the USACE guidance entitled "Screening Level Ecological Risk Assessments for MMRP SIs" (Army checklist for important ecological places), within 4 miles of the source of particulate contamination, broken out into the same distance categories listed above for human populations.

Appendix A
Site Inspection Report Outline
21 November 2006

- Indicate the total acres of wetlands within 4 miles of the source of particulate contamination, broken out into the same distance categories listed above for human populations

- For results of the MC investigation, summarize the number and type of samples collected in each MRA, including background samples, and identify specific hazardous substances, if detected. Describe observations made at each sampling location (presence of MEC, MEC scrap, MC bulk material, targets, craters, proximity of known or suspected MEC items, stressed vegetation, and nature of sample material if unusual characteristics are noted (e.g., high turbidity, discoloration, high organic matter content). List in a table each environmental sample collected and summarize analytical results. Include a map of sampling locations.

6.0 SCREENING-LEVEL RISK ASSESSMENT

- Provide discussion of risk from MEC. (i.e. likelihood of removing MEC from its original location, accessibility, detonation on contact, etc.). State whether or not it is believed that MEC may be present and why. Summarize the attributes of the potential MEC (type, how it functions, and potential hazard) Describe the potential receptors and how they may interact with the MEC. {Describe the potential hazards from potential MEC. Presence of MEC and any potential human receptors is normally sufficient to justify an RI/FS. More detailed explanation of hazards will be required to justify NDAI (if there is a potential MEC presence), TCRA, or NTCRA.}
- Provide sub-sections entitled "Screening Level Human Health Risk Assessment (HHRA)" and "Screening-Level Ecological Risk Assessment (ERA)." Discuss the conservative evaluation of the potential for adverse effects to human health and the environment due to MC contamination. This information is used to make recommendations for areas that do not pose a significant threat from MC, those that require further investigation, and those that may require a removal action. The HHRA will compare exposure point concentrations (highest detection or 95% upper confidence limit (UCL) if sufficient data exists) to health-based screening levels and will be consistent with USACE's Risk Assessment Handbook Vol. I: Human Health Evaluation (EM 200-1-4). The ERA shall be consistent with Steps 1 and 2 of the U.S. EPA guidance, Ecological Risk Assessment Guidance for Superfund (ERAGS): Process for Designing and Conducting Ecological Risk Assessments.
- All complete pathways shown in the CSM (Appendix J) shall be addressed in this section.
    - Human
    - Ecological
    - MEC

7.0 SUMMARY AND CONCLUSIONS

- Briefly summarize the major aspects of the FUDS property, the MRAs (and the MRSs), and their histories that relate to the release or threatened release of MEC or MC and the exposure of human and ecological target populations. Briefly summarize principal migration pathways and targets of concern. [Note: Where MRSs have been identified, provide a summary for each.]
- Summarize sampling results, including MEC and MC found and detected in the MRAs as well as within the migration pathways.

8.0 RECOMMENDATIONS

- Summarize recommendations for further remedial response (RI/FS), removal response, or No Department of Defense (DoD) Action Indicated. Provide recommendations and the basis for these recommendations (from MEC and MC results) in tabular format

Appendix A
Site Inspection Report Outline
21 November 2006

9.0 REFERENCES

- List, in bibliographic citation format, all references cited in the SI report.

APPENDICES

A. Performance Work Statement – Electronic Only
B. Technical Project Planning (TPP) Session Documentation/Meeting Minutes – Electronic Only
C. Interview Documentation (pertinent teleconferences regarding site history or conditions; coordination on cultural and natural resources considerations)
D. Field Notes and Field Forms
E. Photodocumentation Log (As an attachment, provide photographs taken during the SI depicting pertinent observations such as MEC and MC source areas, containment conditions, stained soil, stressed vegetation, drainage routes, sample locations, and any MEC or munitions debris findings. Describe each photograph in captions or accompanying text. Key each photo to its location on the site sketch or CSM)
F. Analytical Data – Electronic Only, should include SEDD files and laboratory reports in pdf. – for all versions (Draft, Draft-Final, and Final) of the report
G. Analytical Data QA/QC Report, to include all requirements from DID MR005-10 for Chemical Data Final Report that are not addressed elsewhere and the USACE-prepared Chemical Quality Assurance Report (CQAR)
H. Geographic Information Systems Data – Electronic Only
I. Geophysical Data, if applicable. (All raw and processed geophysical data and geophysical maps in their native format (Surfer, Geosoft Oasis montaj, Intergraph, or ESRI ArcView format) and/or as raster bit-map images such as BMP, JPEG, TIF, or GIF.) – Electronic Only; Maps hardcopy also.
J. Conceptual Site Model
K. Munitions Response Site Prioritization Protocol Evaluations (for each MRS)
    - The protocol is being applied at the MRS level, because individual MRSs are to be delineated. For purposes of applying the Protocol herein, usually the MRS equals one MRA. [Note: Where MRSs have been identified and there is more than one MRS in the MRA apply the Protocol to individual MRSs, ensuring the total acreage adds up to the MRA acreage.]
    - Directions section of the MRSPP sheets shall contain specific references and critical information used to develop the score for that particular table in the MRSPP.
    - Do not use bolding to show selection. Use boxes or circles to show selection.
    - Recommend printing the Table 20 rather than all the CWM tables for the printed copy. The other CWM tables provide no information if there's no known or suspected hazard.
    - Include site name, FUDS Project ID, MRS identifier, and Appendix Pg # to each page. If the site is in the Range Inventory (i.e., has a number in the ASR Supplement), the Range Inventory designation/name should be included. Similarly, if there is an ARC number (see http://deparc.egovservices.net/deparc/do/home), it should be included.
    - Need to provide guidance on what to do if no media sampled (no hazard or just leave blank)
    - Table 9 (cultural and eco) shouldn't just refer to the ASR, but also the SI report, which presumably acquired more current and complete information than the ASR.
    - Per the current draft (and all preceding drafts) of the Primer, "All contaminants of concern attributable to an MRS should be included. Naturally occurring compounds that are detected within established background concentration ranges are not included." Given that the contractor collected background (or "ambient") samples, it is unreasonable to include every detected metal in these worksheets.
L. Reference Copies: Attach copies of communication records and other references gathered for additional HRS and MRSPP data (e.g., records of teleconferences with local water or county health departments on groundwater use; references for locating sensitive environments and population densities). Any site specific documents/reports used to formulate your recommendation (include other pertinent reference materials generated during the SI that are not otherwise cited or included in the

Appendix A
Site Inspection Report Outline
21 November 2006

Appendices. (e.g. Copies of previously issued reports, ASRs, other investigation reports (i.e. ATSDR, CDC, DHHS), etc) in electronic copy only. Include hard copies only of things produced as part of the SI effort (contact records, etc.) and critical excerpts from reference documents.

APPENDIX B

TPP Session Documentation/Meeting Minutes
Electronic Only

US Army Corps of Engineers
Honolulu District

HAWAII STATE DEPARTMENT OF HEALTH
HEALTHY PEOPLE • HEALTHY COMMUNITIES • HEALTHY ISLANDS

US Army Corps of Engineers
Huntsville, US Army Engineering and Support Center

Technical Project Planning Memo:

Subject: FUDS Military Munitions Response Program (MMRP) Documentation of Technical Project Planning Project Team Concurrence for Site Inspection Phase

Site: **Pacific Jungle Combat Training Center, H09H1027401, Island of Oahu, HI**

Contract: Contract Number W912DY-04-D-0005, Delivery Order 0008

This document is intended to record the conduct of Technical Project Planning (TPP) for the ***Pacific Jungle Combat Training Center***. The Project Team members listed below indicated concurrence with the Site Inspection (SI) Technical Approach as developed during the TPP meeting held in the U.S. Army Corps of Engineers (USACE) Honolulu District (CEPOH) offices, Honolulu, HI on February 9, 2007. An initial Technical Approach (as presented) was developed using the collaborative experience of Parsons and USACE technical experts in conjunction with available site information to include the 1993 Inventory Project Report (INPR) and associated documentation, 2004 INPR Supplement, and other pertinent documents and interviews. The Project Team discussed and refined the initial Technical Approach during the course of the TPP meeting yielding a Final Technical Approach for implementation at the ***Pacific Jungle Combat Training Center***. The Project Team's agreed upon Final Technical Approach is documented herein and will be further detailed in the forthcoming Draft Site-Specific Work Plan (SS-WP). The Draft SS-WP will be submitted to the Project Team members for review to ensure the key aspects of the TPP Meeting resolutions are fully captured. The details of the TPP meeting are included in this TPP Memorandum document with revised site maps, revised TPP Worksheets, and a revised Conceptual Site Model (CSM).

The ***Pacific Jungle Combat Training Center***, comprised of approximately 2,267 acres (increased in the 2004 INPR Supplement to 2,545 acres), was acquired by license sometime in 1943 by the United States Army as a unit jungle combat training center. Training camps were divided into three courses: Blue, Red and Green. Basic training was conducted at the Red and Blue courses. Advanced training and the Instructor Jungle Training School were located at the Green course. In 1945 the training centers were combined and became known as the Pacific Combat Training Center. Portions of the site in Kahana Valley were returned to its owner in 1946. The remaining parcels were officially terminated from 1945 to 1950. De-dudding efforts were reportedly conducted in 1949 by an engineer search and range clearance team in Punalu'u Valley. In all,

PARSONS

approximately 300,000 troops were trained or took instructor courses during the Center's lifetime.

The site is located on the northeast coast on the Island of Oahu, between the towns of Punalu`u to the north and Ka`a`awa to the south. ***Pacific Jungle Combat Training Center*** is currently owned by the State of Hawaii and portions are currently leased and used as a native Hawaiian Living Park. Public access is unimpeded and the site is easily accessible by state highway 83.

The 1992 Site Survey conducted in support of the INPR reported the presence of munitions debris (MD) in the form of an expended 105 mm artillery round. It also references that a resident was in possession of unexpended .30 caliber ammunition, expended M1 and M2 ammunition and a live 75mm Armor Piercing (AP) or High Explosive (HE) artillery round. The resident also guided the Site Visit Team to a location where a live 81mm mortar round was wedged in tree roots. The items were subsequently removed by an Explosives Ordnance Disposal team. The 2004 INPR Supplement identified the Maneuver Area as the single munitions response site (MRS) for this project.

Based on the existing body of data for this site and due to the confirmed presence of munitions and explosives of concern (MEC) and MD in the form of live artillery rounds and artillery shrapnel discovered during the 1992 site visit, it was agreed by the Project Team that the SI approach for the ***Pacific Jungle Combat Training Center*** will proceed in a manner to support a focused follow-on Remedial Investigation/Feasibility Study (RI/FS). Exposure pathways are complete for the residents, visitors, and trespassers on the site. The recent findings will be further discussed in the Site Specific Work Plan (SS-WP) following consultation with CEPOH and the landowner.

The TPP Project Team has agreed to use a multi-incremental soil sampling approach at this site. Multi-incremental sampling is a methodology whereby the sampler collects many small incremental samples within a designated decision unit to build a single sample that is representative of the entire decision unit. Systematic random sampling is employed to ensure that incremental samples are collected without judgment from the sampler. Details of the sample collection process will be discussed in the SS-WP. Incremental sampling benefits the project by providing a more accurate measure of the mean concentration of contaminants present and produces reproducible, scientifically defensible data.

To accomplish the objective of supporting a follow-on RI/FS for this site, the Project Team has agreed that the SI data collection efforts will focus on four decision units comprising the MRS. The Site Visit Team (SVT), with concurrence from the TPP Project Team, will collect the number of increments agreed upon for each decision unit to build a single soil sample for each decision unit. Samples will be collected in triplicate for decision units #1 and #4 (comprised of 50 increments) and decision units #2 and #3 (comprised of 100 increments). Two surface water samples will also be collected from

two "pristine" streams on the site. The sampling details are summarized in the MC Sampling Approach table in the Site Specific Technical Approach.

The Qualitative Reconnaissance (QR) will be conducted to further evaluate the presence or absence of munitions and explosives of concern (MEC) and MD. The QR will utilize a Minelab metal detector (or equivalent) for anomaly avoidance, global positioning systems (GPS), personal digital assistants (PDAs), and digital photography in an integrated format. The QR field efforts will be conducted so as to minimize any inconvenience to the native Hawaiian Living Park. Endangered species are likely on this site and cultural/archaeological sites are also present on or near the site. Detailed information regarding endangered/threatened species and cultural/archaeological sites will be included in the SS-WP. Procedural details of the field work will also be provided in the SS-WP (an addendum to the Programmatic Work Plan) for stakeholder review and comment. CEPOH is actively seeking right of entry (ROE) from the landowner.

In addition to the Project Team determinations stated above, the following issues and resolutions are noted:

- The Project Team concurs with the Technical Approach (anticipated RI/FS) as revised at the TPP meeting on February 9, 2007.
- The Project Team is in agreement that this particular site, ***Pacific Jungle Combat Training Center***, should be a straightforward and simple SI. No SI concerns were identified by the Hawaii State Department of Health (HDOH).
- The Project Team agreed that sampling for Iron would not be useful for this site due to the high natural Iron content of soil in Hawaii.
- Two streams located on the site that are considered "pristine" will be sampled at or near two existing gauging stations.
- The Project Team agreed to use the multi-incremental sampling method. The sampling information, sample numbers, and center locations of each decision unit in this TPP Memo are shown in the Sampling Rationale Table. Figures 3.1 and 3.2 shows the four decision units comprising the MRS.
- CEPOH will serve as the primary coordinator with Hawaii State Historic Preservation Office. Parsons will prepare the associated portion of the SS-WP with input from CEPOH.
- The Project Team did not identify any site specific issues requiring an expedited project schedule or document reviews for this site.

All QR results will be fully documented in a SI Report for the Project Team and other stakeholder review. The SI Technical Approach described above will not be modified without consultation and agreement by the Project Team whose names appear below.

Ms. Helene Takemoto
USACE, Honolulu District
FUDS Project Manager

Ms. Becky Terry
USACE MMRP SI Project Chemist
Southeast and Pacific Geographic Region

Mr. Chuck Streck
USACE, Honolulu District
Ordnance Program Manager

Mr. Steve Mow
HDOH
Project Manager

Mr. Tom Maruyama
USACE, Honolulu District
Technical Manager

Mr. Don Silkebakken
Parsons
Program Manager

Ms. Chris Cochrane
USACE MMRP SI Program Manager
Southeast and Pacific Geographic Region

Ms. Laura Kelley
Parsons
Project Manager

TPP Team	EM 200-1-2, Paragraph 1.1.1
Decision Makers	
Customer	USACE Honolulu District (CEPOH)
Project Manager	Helene Takemoto, CEPOH
Regulators	Hawaii Department of Health (HDOH)
Primary Stakeholders	Hawaii Department of Land and Natural Resources (DLNR)

Data Types	Data Users	Data Gatherer
Demographics/Land Use	Risk, Responsibility, and Compliance Perspectives	Parsons (SI Team)
Site Conditions	Remedy Perspective	Parsons (SI Field Team)
Munitions and explosives of concern (MEC)	Risk and Remedy Perspectives	
Munitions constituents (MC)	Risk and Remedy Perspectives	Parsons (SI Field Team)
Archaeology	Compliance and Remedy Perspectives	CEPOH, Parsons (avoidance)
Endangered Species	Risk and Compliance Perspectives	CEPOH, Parsons (avoidance)

CUSTOMER'S GOALS		EM 200-1-2, Paragraph 1.1.2	
Munitions Response Site (MRS)	**Contaminant Issues**	**Future Land Use**	**Site-specific Closeout Goal (if applicable)**
Maneuver Area	MC/MEC	Residential, State Park, Forest Reserve	TBD

Site Closeout Statement
To manage the munitions and explosives of concern (MEC) and munitions constituents (MC) risk through a combination of removal, administrative controls, and public education; thereby rendering the site as safe as reasonably possible to humans and the environment and conducive to the anticipated future land use.

Customer's Schedule Requirements
Site Inspection and Reporting Complete by April 24, 2008

Customer's Site Budget
Site Inspection and Reporting: Fully funded through the SI Phase

IDENTIFY SITE APPROACH		
EXISTING SITE INFORMATION & DATA EM 200-1-2, Paragraph 1.1.3 and 1.2.1		
Attachment(s) to Phase I TPP Memorandum	**Located at Repository**	**Preliminary Conceptual Site Model**
Preliminary Assessment (Inventory Project Report)	N/A for SI Phase; Implemented in post-SI Phase as warranted	No
Site-Specific SI Work Plan	N/A for SI Phase; Implemented in post-SI Phase as warranted	Yes
POTENTIAL POINTS OF COMPLIANCE EM 200-1-2, Paragraph 1.2.1.3		
Determination of absence or presence of MEC/MC		
If MC is detected, comparison against appropriate HDOH Environmental Action Levels to determine if further MC evaluation during RI/FS.		
Avoidance of sensitive conditions: wetlands, endangered species, archaeological sites (if applicable)		
MEDIA OF POTENTIAL CONCERN EM 200-1-2, Paragraph 1.2.1.4		
Qualitative review of MEC presence.		
Quantitative screening of MC in soil and water.		
SITE OBJECTIVES EM 200-1-2, Paragraph 1.2.2		
Collection of sufficient MEC and MC data to determine if concentrations are high enough to warrant further study or action.		
Eliminate from further consideration those releases that pose no significant threat to public health or the environment.		
Collection of sufficient data to perform MRSPP scoring and for EPA to complete MC-related HRS scoring.		
See Programmatic and Site-Specific Work Plan		
See Attached Worksheets Developed by the Project Team		
REGULATOR AND STAKEHOLDER PERSPECTIVES EM 200-1-2, Paragraph 1.2.3		
Regulators	**Community Interests**	**Others**
TBD	TBD	TBD
PROBABLE REMEDIES EM 200-1-2, Paragraph 1.2.4		
RI/FS		
EXECUTABLE STAGES TO SITE CLOSEOUT EM 200-1-2, Paragraph 1.2.5		
Remedial Investigation/Feasibility Study		
Proposed Plan		
Decision Document		
Remedial Design		
Remedial Action (as necessary)		
5-Year Review		

IDENTIFY CURRENT PROJECT	
SITE CONSTRAINTS AND DEPENDENCIES	**EM 200-1-2, Paragraph 1.3.1**
Administrative Constraints and Dependencies	
Rights of Entry (ROE)	
Cultural Resources	
Funding beyond the SI	
Concurrent planning programs	
Scheduling	
Technical Constraints and Dependencies	
Property owner/leaseholder site activities (Site access)	
MEC avoidance screening of MC sample locations for safety	
Cultural Resources	
Topography/vegetation	
Environmentally sensitive areas	
Legal and Regulatory Milestones and Requirements	
Consistent with CERCLA and NCP	
Public, stakeholder and regulatory involvement and review of key documents (see schedule)	
Funding beyond the SI	
Soil screening and water levels as agreed upon by the Project Team to include the appropriate HDOH Environmental Action Levels as determined by the Project Team.	
CURRENT EXECUTABLE STAGE	**EM 200-1-2, Paragraph 1.3.3**
Site Inspection (SI)	

Basic (For Current Projects)	**Optimum** (For Future Projects)	**Excessive** (Objectives that do not lead to site closeout)
Site Reconnaissance		

Acronyms

CEPOH - U.S. Corps of Engineers, Honolulu District
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DLNR - Department of Land and Natural Resources
EPA - U.S. Environmental Protection Agency
FUDS - Formerly Used Defense Sites
HDOH - Hawaii Department of Health
HRS - Hazard Ranking System
MC - munitions constituents
MEC - munitions and explosives of concern
MRS - munitions response site
MRSPP - Munitions Response Site Prioritization Protocol
NCP - National Contingency Plan
NDAI - No Department of Defense Action Indicated
RI/FS - Remedial Investigation and Feasibility Study
ROE - Rights of Entry
SI - Site Inspection
TBD - To be determined
TPP - Technical Project Planning

PROJECT OBJECTIVES WORKSHEET

SITE: **Maneuver Area**

PROJECT: **Pacific Jungle Combat Training Center, Oahu, Hawaii**

Site Objective [a]					Data Needs	Data Collection Methods	Data User(s)	Project Objective Classification [d]
Number	Executable Stage [b]		Description	Source [c]				
	Current	Future						
1	Yes		Determine presence/lack thereof of MEC	INPR, Recon	Are there any MEC? If so what type, where and hazard posed.	Qualitative Reconnaissance	Risk and Remedy Perspectives	Basic
2	Yes		Determine if the concentration of MC is high enough to pose a risk to human health or the environment	Soil, Sediment & Surface Water Sampling	Is there any MC present in the multi-incremental soil sample # 1 through #4, and/or the 2 surface water samples and/or the 2 sediment samples? If present, what is it? To what degree is it present? Is it above the designated comparison criteria (see Table 1)? And if so, is action required? Future LU.	Sample collection IAW SAP	Risk and Remedy Perspectives	Basic
3	Yes		Determine if the concentration of MC is high enough to pose a risk to human health or the environment	Soil Sampling	Will provide information relating to ambient conditions at the site to augment or in the absence of regional background data.	Multi-Incremental Sampling Method	Risk and Remedy Perspectives	Basic
4								

a Refer to EM 200-1-2, Paragraph 1.2.2

b Refer to EM 200-1-2, Paragraph 1.2.5

c For example, Meeting with Customer/stakeholder/Regulator, State Regulation____,

d Classification of project objectives can only occur after the current project has been identified. Refer to EM 200-1-2, Paragraph 1.3.3.

INPR - Inventory Project Report
IAW - In accordance with
MC - Munitions Constituents
MEC - Munitions and Explosives of Concern
SAP - Sampling and Analysis Plan
TPP - Technical Project Planning

DATA QUALITY OBJECTIVE WORKSHEET

SITE: **Pacific Jungle Combat Training Center**

PROJECT: **MMRP Site Inspection / FUDS No. H09HI027401**

DQO STATEMENT NUMBER: **1 of 4**

DQO Element Number[a]	DQO Element Description[a]	Site-Specific DQO Statement
Intended Data Use(s):		
1	Project Objective(s) Satisfied	Evaluate presence/lack thereof of MEC
Intended Need Requirements:		
2	Data User Perspective(s)	Risk, Remedy
3	Contaminant or Characteristic of Interest	MEC, Munitions Debris
4	Media of Interest	N/A
5	Required Sampling Locations or Areas and Depths	Focus on impact areas and indications of target/training areas.
6	Number of Samples Required	N/A
7	Reference Concentration of Interest or Other Performance Criteria	Any indication of residual MEC/MD will be evaluated. Based on the indications of type, degree and quantity of MEC/MD a recommendation will be made regarding subsequent actions at the site. If the presence of MEC is confirmed or physical evidence of a potential explosive hazard is identified, a RI/FS or RA may be recommended.
Appropriate Sampling and Analysis Methods:		
8	Sampling Method	Qualitative Reconnaissance with Minelab Instrument for anomaly avoidance
9	Analytical Method	N/A

[a] Refer to EM 200-1-2, Paragraph 4.2.1

DATA QUALITY OBJECTIVE WORKSHEET

SITE: **Pacific Jungle Combat Training Center**

PROJECT: **MMRP Site Inspection / FUDS No. H09HI027401**

DQO STATEMENT NUMBER: **2 of 4**

DQO Element Number[a]	DQO Element Description[a]	Site-Specific DQO Statement
Intended Data Use(s):		
1	Project Objective(s) Satisfied	Evaluate presence/lack thereof of MC
Intended Need Requirements:		
2	Data User Perspective(s)	Risk, Remedy
3	Contaminant or Characteristic of Interest	Antimony, Copper, Lead, Zinc, and Explosives
4	Media of Interest	Surface Soil, Surface Water, and Sediment
5	Required Sampling Locations or Areas and Depths	As determined by the Project Team, see Figures 3.1 and 3.2.
6	Number of Samples Required	Soil Sample - 4 Decision Units, 50 increments in triplicate for Decision Units #1 and #4, 100 increments for Decision Units #2 and #3, 2 surface water samples, and 2 sediment samples; 2 ambient multi-incremental samples, 30 increments, approx. 30'x30' in size, collected in triplicate with each triplicate sample consisting of 30 increments each (collected to reflect ambient site conditions).
7	Reference Concentration of Interest or Other Performance Criteria	Established Hawaii DOH Environmental Action Levels, see Table 1
Appropriate Sampling and Analysis Methods:		
8	Sampling Method	Multi-Incremental Sampling Method
9	Analytical Method	Explosives - SW8321A; Antimony, Copper, and Lead – SW6020

[a] Refer to EM 200-1-2, Paragraph 4.2.1

MRSPP Data Quality Objective Worksheet

Site: Pacific Jungle Combat Training Center
Project: MMRP Site Inspection / FUDS No. H09HI027401
DQO Statement Number: 3 of 4

Module	Table #	Table Description	Known Data	Current Data Gap	Data Source
Explosive Hazard Evaluation (EHE)	1	Munitions Type	X		Historical Records/Findings
	2	Source of Hazard	X		Historical Maps
	3	Location of Munitions		X	Historical or Field Findings
	4	Ease of Access		X	Field Findings
	5	Status of Property		X	Tax Records
	6	Population Density		X	U.S. Census Bureau
	7	Population Near Hazard		X	Field Findings
	8	Types of Activities/Structures		X	Regional Zoning
	9	Ecological and/or Cultural Resources		X	State Historic Preservation Office
	10	Determining the EHE		X	Scores from Tables 1 through 9
Chemical Warfare Materiel (CWM) Hazard Evaluation (CHE)	11	CWM Configuration	X		Historical Records/Findings
	12	Sources of CWM	X		Historical Records/Findings
	13	Location of CWM		X	Historical or Field Findings
	14	Ease of Access		X	Field Findings
	15	Status of Property		X	Historical Records
	16	Population Density		X	U.S. Census Bureau
	17	Population Near Hazard		X	Field Findings
	18	Types of Activities/Structures		X	Regional Zoning
	19	Ecological and/or Cultural Resources		X	State Historic Preservation Office
	20	Determining the CHE		X	Scores from Tables 11 through 19
Health Hazard Evaluation (HHE)	21	Groundwater Data		X	Groundwater Sampling Results
	22	Surface Water - Human Endpoint		X	Surface Water Sampling Results
	23	Sediment - Human Endpoint		X	Sediment Sampling Results
	24	Surface Water - Ecological Endpoint		X	Surface Water Sampling Results
	25	Sediment - Ecological Endpoint		X	Sediment Sampling Results
	26	Surface Soil		X	Surface Soil Sampling Results
	27	Supplemental Contaminant Hazard Factor		X	All MC Sampling Results
	28	Determining the HHE		X	Scores from Tables 21 through 27
	29	MRS Priority		X	Scores from Tables 10, 20, and 28
	A	MRS Background Information	X		DoD Databases

HRS Data Quality Objective Worksheet

Site: Pacific Jungle Combat Training Center
Project: MMRP Site Inspection / FUDS No. H09HI027401
DQO Statement Number: 4 of 4

Data Description	Known Data	Current Data Gap	Data Source
Source Type	X		Historical Records/Findings
Estimated Volume or Area		X	Field Findings
Hazardous Substance	X		Constituents of Suspected Munitions
Groundwater Sample Concentration		X	Sample Results
Groundwater Use		X	Well Records/Municipal Data
Surface Water Sample Concentration		X	Sample Results
Surface Water Pathways		X	Field Findings
Soil Sample Concentration		X	Sample Results
Soil Pathways		X	Municipal Data
Sensitive Environments		X	State Historic Preservation Office, US Fish and Wildlife Service, various government agencies
Attractiveness/Accessibility		X	Field Findings/Land Use Records

US Army Corps of Engineers
Honolulu District

HAWAII STATE DEPARTMENT OF HEALTH
HEALTHY PEOPLE • HEALTHY COMMUNITIES • HEALTHY ISLANDS

US Army Corps of Engineers
Huntsville, US Army Engineering and Support Center

Technical Project Planning Memo:

Subject: FUDS Military Munitions Response Program (MMRP) Documentation of Technical Project Planning Team Second TPP Meeting

Site: ***Pacific Jungle Combat Training Center,*** **H09HI027401, Island of Oahu, HI**

Contract: Contract Number W912DY-04-D-0005, Delivery Order 0008

This document is intended to record the events that occurred during the second and final Technical Project Planning (TPP) Meeting for the ***Pacific Jungle Combat Training Center, Island of Oahu, HI***. The TPP team members listed below met for a presentation and project status discussions of the Draft Final Site Inspection (SI) Report at the Hawaii Department of Health (HDOH) Honolulu office on November 21, 2008. The Draft Final SI document was provided for review in advance of the meeting and comments from the HDOH were addressed prior to finalization of the document.

Since there had been some turnover in the TPP Team personnel introductions were made around the room. Key personnel changes since the initial TPP Meeting held in February 2007 included:

- Project Manager addition for United States Army Corps of Engineers (USACE), Ms. Becky Terry
- Technical Manager change for USACE from Mr. Jason Burcham to Ms. Kim Meacham.
- Project Manager change for HDOH from Mr. Steve Mow to Mr. David Wong

Parsons' Mr. Daron Gibson presented introductory information regarding MRSPP and background as to how we have gotten to where we are today. The Technical Presentation commenced and the following items were noted:

- The TPP Team concurred with the recommendation for the Pacific Jungle Combat Training Center Maneuver Area Munitions Response Site (MRS) to move to a Remedial Investigation/Feasibility Study (RI/FS) based on the presence of munitions and explosives of concern (MEC) found at the site.

PARSONS

- Parsons will include this Second TPP Meeting Memorandum and the Presentation and MRSPP Scoring Review slides in the Final SI Report to document the meeting.

The following item is pertinent to the MRSPP Scoring:

> No issues were discussed at the meeting. As presented, the MRSPP priority for the Pacific Jungle Combat Training Center Maneuver Area MRS is 2.

The individuals noted below were in attendance at the meeting:

Ms. Helene Takemoto
USACE, Honolulu District
FUDS Project Manager

Ms. Becky Terry
USACE MMRP SI Project Manager
Southeast and Pacific Geographic Region

Ms. Kim Meacham
USACE Huntsville
Technical Manager

Mr. Tom Maruyama
USACE, Honolulu District
CEPOH Technical Manager

Mr. Frank Ono
USACE, Honolulu District
CEPOH-PP-E

Mr. David Wong
HDOH - HEER
Project Manager

Ms. Laura Kelley
Parsons
Deputy Program Manager

Mr. Lloyd Grearson
Parsons
Hawaii Region Lead

Mr. Daron Gibson
Parsons
Engineer

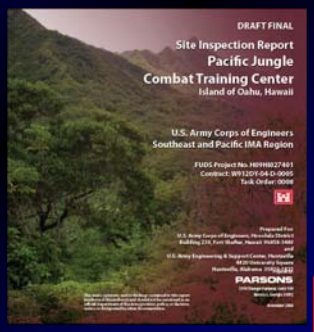
Mr. Steven Mow
HDOH
Project Manager

Mr. Barry Temple
Parsons
Geologist

Pacific Jungle Combat Training Center
Formerly Used Defense Site

Technical Project Planning
Site Inspection Closure Meeting

November 21, 2008



PARSONS

How Did We Get Here?

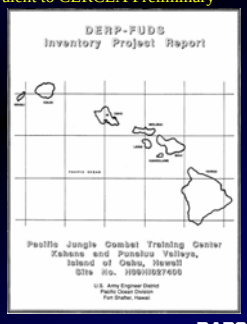
- TPP Meeting #1 – February 9, 2007
  - No windshield tour conducted
  - Established TPP Team consensus on appropriate SI Technical Approach.
- TPP Memorandum Submitted/Approved – June 8, 2007
- SSWP Addendum Submitted/Approved – November 20, 2007
- Field Work (QR and MC Sampling) – July 11-18, 2008 Field Team Leader = Daron Gibson (Parsons); Parsons (Justin Bukunt, Blair Oakes); CEPOH (Mike Mullen)
- **TPP Meeting #2 (This Meeting) – November 21, 2008**
- Final SI Report – NLT December 11, 2008

PARSONS

1993 Inventory Project Report

Basis for initial site information. Equivalent to CERCLA Preliminary Assessment.

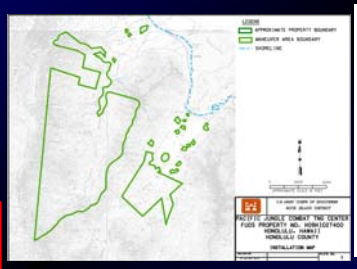


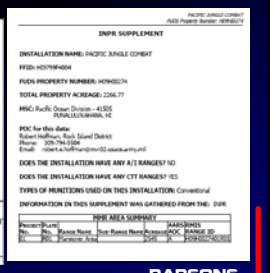


PARSONS

2004 INPR Supplement

The Pacific Jungle Combat Training Center, was used as an unit jungle combat training center. An MRS (Maneuver Area) was established as part of the 2004 INPR Supplement consisting of 2545 acres.





PARSONS

Refresher - SI Scope

- Recommend next action ***by MRS***
  - ***RI/FS for the Maneuver Area***
    - No ***Immediate*** Removal Action (TCRA) recommended.

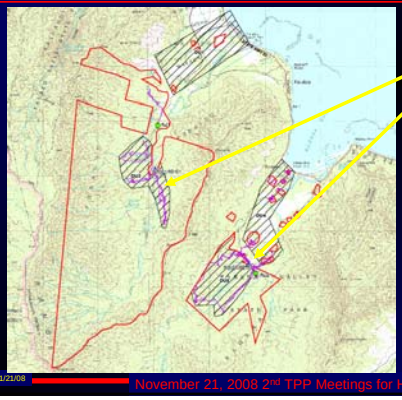
Site Description and History – Revisited

- Pacific Jungle Combat Training Center
- 1943 to 1950 – The Pacific Jungle Combat Training Center was acquired by the US Government by leases, licenses, and informal agreements between the Government and the landowners. It consists of several separate parcels totaling approximately 2,545 acres.
  - The Army used the area for basic and advanced jungle warfare training.
  - An estimated 241,000 troops received training at the Center.
  - Training was divided among Blue, Red, and Green courses.
  - Basic training was conducted in the Blue and Red courses, while advanced training took place inside the Green course.
  - In 1945, all the training centers became known as Pacific Combat Training Centers in a move to de-emphasize jungle warfare.
  - Parcels in Kahana Valley were returned to its landowners in 1946.
  - Leases and licenses in Punaluu Valley were officially terminated from 1945 through 1950.
  - In 1949, de-dudding efforts were conducted by an engineer search and range clearance team in Punaluu Valley.
- FUDS Eligibility
  - Designated as Pacific Jungle Combat Training Center FUDS Project H09HI027401.
- Suspect Past DoD Activities
  - Jungle Training Area

Refresher - What Did We Agree To?

- Kickoff Meeting – February 9, 2007
  - RI/FS due to historical findings of MEC (.30 caliber ammunition, 81mm mortar, 75mm HE projectile).

QR Path Pacific Jungle Combat Training Area



So What Did We Find??

- QR Results for Pacific Jungle Combat Training Center
  - QR conducted within the MRS to identify any MEC or MD indicative of MEC. Total of approximately 11.91 miles of pedestrian QR with associated observations.
  - MD in the form of .30 caliber casings were found.
  - MEC in the form of an unexpended smoke grenade was found.
  - SVT also discovered several gun emplacements as well as an unidentified small tank that had been used as target practice.

PARSONS

So What Did We Find??



PARSONS

So What Did We Find??



PARSONS

So What Did We Find??

- MC Sampling Results for Pacific Jungle Combat Training Center
  - Surface Soil, Surface Water, Sediment
    - MC sampling was conducted using the multi-incremental sampling method.
    - No explosives were detected in the surface water or sediment samples.
    - ***2,4-Dinitrotoluene was detected in the soil. The maximum detected concentration was below the HDOH EALs for soil.***
    - Metals detected in soil samples.
      - » Antimony, Copper, Lead, and Zinc did not exceed the HDOH EAL values.
    - Metals detected in sediment samples.
      - » Copper, Lead, and Zinc did not exceed the HDOH EAL values.
    - No metals detected in surface water samples.
    - Human Health Evaluation = ***The mean concentrations of copper, lead and zinc were below the HDOH Soil Action Levels. As a result, no unacceptable risk to human health is expected from exposure to copper, lead and zinc in the surface soil at this MRS***
    - Eco Risk Evaluation = ***A Screening Level Ecological Risk assessment was conducted. Exposure of ecological receptors to MC could occur through direct exposure to potentially contaminated soil and the ingestion of biota. The screening level ecological risk assessment was conducted using a ratio of the maximum detected analyte concentration to the screening value which provides a hazard quotient for each analyte. The hazard quotient for lead and zinc were less than 1 which indicates the potential for ecological risk is considered negligible. Therefore, no unacceptable risk to ecological receptors is expected.***

PARSONS

Recommendations

- Recommended ***RI/FS*** for the Maneuver Area based on:
  - Historical MEC findings as well as MD/MEC found during the SI.
  - Explosives were detected in the soil sample.

Pacific Jungle Combat Training Center
Island of Oahu, Hawaii

Munitions Response Site
Prioritization Protocol (MRSPP)
Scoring Review
November 21, 2008

Background

- Pacific Jungle Combat Training Center primary unit jungle training camp. One MRS is identified;
  - ❖ Maneuver Area (2545 acres)

MRS Background Information

Historical MEC/MD Findings – Items discovered during a 1992 INPR Site Visit include; .30 caliber ammunition, 81mm mortar, and a 75mm HE projectile.

Pacific Jungle Combat Training Center Scoring

- CWM is not known or suspected at the Pacific Jungle Combat Training Center; therefore, the CHE Module was rated as: ***No Known or Suspected CWM Hazard***

Pacific Jungle Combat Training Center Scoring

- EHE Module Rating: A [range is from A (high) to G]
- EHE Priority: 2 [range of priority values is from 2 (high) to 8 (low)]

EHE Score Drivers:

- Confirmed MEC findings
- Nearby agricultural land use
- MRS has no barrier to access
- The majority of Kahana and Punaluu Valleys are within the Hauula Forest Reserve.
- Kahana Valley has been designated as a state park.
- Moderate population density.
- Inhabited structures, residential nearby.
- Recreational area use (both land and water).

Pacific Jungle Combat Training Center Scoring

- HHE Module Rating: C (range from A to G)
- HHE Priority: 4 (range from 2 to 8)
- The primary pathway of concern at the Maneuver Area is surface soil.
- Surface soil scored low on contaminant hazard factor, medium on migratory pathway factor, and medium on receptor factor.

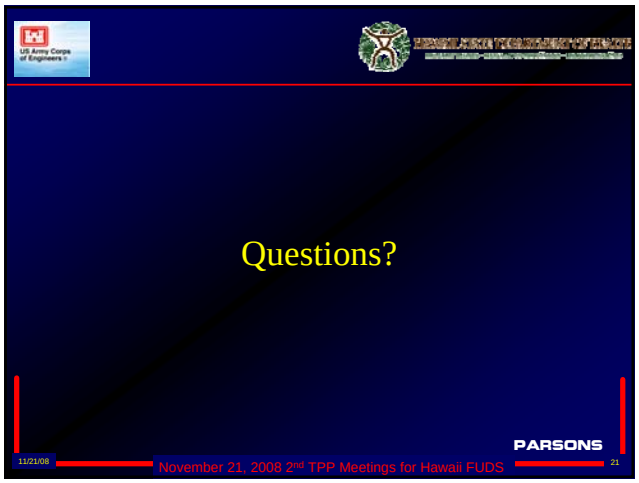
HHE Score Drivers:

- Explosives: Low
  Metals: Lead/Zinc. All well below comparison values.
- Potential receptors to surface soil

Pacific Jungle Combat Training Center Scoring

Overall MRS-Priority:

2


US Army Corps of Engineers
Questions?
PARSONS
11/21/08
November 21, 2008 2nd TPP Meetings for Hawaii FUDS
21

TECHNICAL PROJECT PLANNING MEETING 2
ATTENDANCE SIGN-IN SHEET

Projects: ***Kahuku Training Camp, Waimea Falls Park, Waimea Training Site, Pakini Bombing Range, Pacific Jungle Combat Training Center, Makanalua Bombing Range, Oahu Target Island, Ka`u Bombing Range, Ahukini, Hickam Air Force Base***

Date/Time: ***11-21-2008 at 8:00 a.m.***

Place: **Hawaii Department of Health Offices (HDOH), Honolulu, Hawaii**

PRINTED NAME	ORGANIZATION/ADDRESS	PHONE NUMBER	EMAIL ADDRESS
Ms. Helene Takemoto	U.S. Army Corps of Engineers Honolulu District CEPOH-PP-E Building 230 Fort Shafter, HI 96858-5440	(808) 438-6931	helene.y.takemoto@usace.army.mil
Mr. Tom Maruyama	U.S. Army Corps of Engineers Honolulu District CEPOH-PP-E Building 230 Fort Shafter, HI 96858-5440	(808) 438-3792	thomas.h.maruyama@usace.army.mil
Mr. David Wong	Hawaii Department of Health Hazard Evaluation Emergency Response Office 919 Ala Moana Blvd., Room 206 Honolulu, Hawaii 96814-4920	(808) 586-4256	david.wong@doh.hawaii.gov
Mr. Bruce Tsutsui	Hawaii Department of Health Hazard Evaluation Emergency Response Office 919 Ala Moana Blvd., Room 206 Honolulu, Hawaii 96814-4920	(808) 586-4249	bruce.tsutsui@doh.hawaii.gov
Ms. Becky Terry	U.S. Army Engineer Center Huntsville CEHNC-OE-DC 4820 University Square Huntsville, AL 35816-1822	(256) 895-1788	rebecca.k.terry@usace.army.mil
Ms. Kim Meacham	U.S. Army Engineer Center Huntsville CEHNC-ED-CS-P 4820 University Square Huntsville, AL 35816-1822	(256) 895-1667 (256) 895-1602 (FAX)	kim.k.meacham@usace.army.mil
Ms. Laura Kelley	Parsons 5390 Triangle Pkwy, Suite 100 Norcross, GA 30092	(678) 969-2437 (770) 446-4910 (FAX) (404) 934-1266 (CELL)	laura.kelley@parsons.com
Mr. Lloyd Grearson	Parsons 1132 Bishop Street, Suite 2102 Honolulu, HI 96813	(808) 748-7593	lloyd.grearson@parsons.com
Mr. Daron Gibson	Parsons 5390 Triangle Pkwy, Suite 100 Norcross, GA 30092	(678) 969-2446 (770)446-4910 (FAX) (770) 634-1318 (CELL)	daron.gibson@parsons.com
Barry Temple	Parsons Honolulu		

TECHNICAL PROJECT PLANNING MEETING 2
ATTENDANCE SIGN-IN SHEET

Projects: ***Kahuku Training Camp, Waimea Falls Park, Waimea Training Site, Pakini Bombing Range, Pacific Jungle Combat Training Center, Makanalua Bombing Range, Oahu Target Island, Ka`u Bombing Range, Ahukini, Hickam Air Force Base***

Date/Time: ***11-21-2008 at 8:00 a.m.***

Place: **Hawaii Department of Health Offices (HDOH), Honolulu, Hawaii**

PRINTED NAME	ORGANIZATION/ADDRESS	PHONE NUMBER	EMAIL ADDRESS
FRANK ONO	CEPOH-EP-E	438-0470	frank.g.ono@usace.army.mil

IN THE MATTER OF
PUBLIC NOTICE
PACIFIC JUNGLE COMBAT TRAINING CENTER

STATE OF HAWAII }
} SS.
City and County of Honolulu }

Doc. Date: NOV 17 2008 # Pages: 1
Notary Name: Patricia K. Reese First Judicial Circuit
Doc. Description: Affidavit of Publication

Notary Signature NOV 17 2008 Date

PATRICIA K. REESE NOTARY PUBLIC Comm. No 86-467 STATE OF HAWAII

Rose Mae Rosales being duly sworn, deposes and says that she is a clerk, duly authorized to execute this affidavit of MidWeek Printing, Inc. publisher of MidWeek and the Honolulu Star-Bulletin, that said newspapers are newspapers of general circulation in the State of Hawaii, and that the attached notice is true notice as was published in the aforementioned newspapers as follows:

Honolulu Star-Bulletin 2 times on:
11/13, 11/16/2008

Midweek Wed. 0 times on:

Midweek Fri. 0 times on:

___ times on:

And that affiant is not a party to or in any way interested in the above entitled matter.

Rose Mae Rosales

Subscribed to and sworn before me this 17th day
of November A.D. 20 08

Patricia K. Reese, Notary Public of the First Judicial Circuit, State of Hawaii

My commission expires: October 07, 2010

PATRICIA K. REESE NOTARY PUBLIC Comm. No 86-467 STATE OF HAWAII

Ad # 0000083139

AFFIDAVIT OF PUBLICATION

PUBLIC NOTICE

Request for information about the former Pacific Jungle Combat Training Center (located on the northeast coast of the Island of Oahu, Hawaii)

Recently, the U.S. Army Corps of Engineers completed a Site Inspection at the former ***Pacific Jungle Combat Training Center. This site was used as a unit level jungle combat training center.***

The former ***Pacific Jungle Combat Training Center*** is one of many former military installations throughout the United States that will be reviewed under the Department of Defense's Munitions Response Site Prioritization Protocol. This protocol is used to assess sites that may have unexploded ordnance, discarded military munitions or munitions constituents, and to assign priorities for any additional investigation or munitions removal that may be required.

The evaluation criteria, including types of munitions that may be present, ease of access to the site and number of people living near the site, are available for public review in the Site Inspection Report located at:

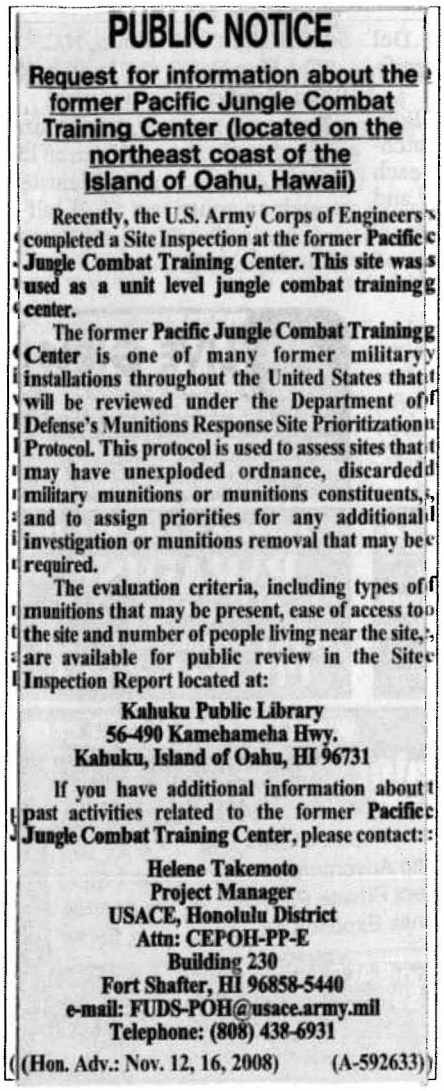
Kahuku Public Library
56-490 Kamehameha Hwy.
Kahuku, Island of Oahu, HI 96731

If you have additional information about past activities related to the former ***Pacific Jungle Combat Training Center,*** please contact:

Helene Takemoto
Project Manager
USACE, Honolulu District
Attn: CEPOH-PP-E
Building 230
Fort Shafter, HI 96858-5440
e-mail: FUDS-POH@usace.army.mil
Telephone:(808) 438-6931

IN THE MATTER OF

PUBLIC NOTICE



PUBLIC NOTICE

Request for information about the former Pacific Jungle Combat Training Center (located on the northeast coast of the Island of Oahu, Hawaii)

Recently, the U.S. Army Corps of Engineers completed a Site Inspection at the former Pacific Jungle Combat Training Center. This site was used as a unit level jungle combat training center.

The former Pacific Jungle Combat Training Center is one of many former military installations throughout the United States that will be reviewed under the Department of Defense's Munitions Response Site Prioritization Protocol. This protocol is used to assess sites that may have unexploded ordnance, discarded military munitions or munitions constituents, and to assign priorities for any additional investigation or munitions removal that may be required.

The evaluation criteria, including types of munitions that may be present, ease of access to the site and number of people living near the site, are available for public review in the Site Inspection Report located at:

Kahuku Public Library
56-490 Kamehameha Hwy.
Kahuku, Island of Oahu, HI 96731

If you have additional information about past activities related to the former Pacific Jungle Combat Training Center, please contact:

Helene Takemoto
Project Manager
USACE, Honolulu District
Attn: CEPOH-PP-E
Building 230
Fort Shafter, HI 96858-5440
e-mail: FUDS-POH@usace.army.mil
Telephone: (808) 438-6931

((Hon. Adv.: Nov. 12, 16, 2008) (A-592633))

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII
City and County of Honolulu ss.

Jane Kawasaki being duly sworn deposes and says that she is a clerk, duly authorized to execute this affidavit of THE HONOLULU ADVERTISER, a division of GANNETT PACIFIC CORPORATION, that said newspaper is a newspaper of general circulation in the State of Hawaii, and that the attached notice is a true notice as was published in the aforereferenced newspaper as follows

11/12/2008 The Honolulu Advertiser
11/16/2008 The Honolulu Advertiser

and that affiant is not a party to or in any way interested in the above entitled matter.

Jane Kawasaki

Subscribed and sworn to before me this 16th day of November A.D. 2008

ELSIE A. MARUYAMA NOTARY 88-127 PUBLIC STATE OF HAWAII

Elsie A. Maruyama
Notary Public of the First Judicial Circuit
State of Hawaii

My commission expires: 3/7/2012

NOTARY PUBLIC CERTIFICATION

Elsie A. Maruyama First Judicial Circuit

Document Description: Affidavit of Publication

No. of Pages: 1 Date of Doc. 11/16/2008

Elsie A. Maruyama 11/20/08
Notary Signature Date

ELSIE A. MARUYAMA NOTARY 88-127 PUBLIC STATE OF HAWAII

592633

APPENDIX C

Interview Documentation

Not Applicable

APPENDIX D

Field Notes and Field Forms

DAILY FIELD REPORT
MMRP SITE INSPECTION

CONTRACT NO.	**W912DY-04-D-0005**	**DELIVERY ORDER NO.**	**0008**
JOB NO:	744647-51000	**DATE/DAY:**	11-Jul-08
SITE NAME:	Pacific Jungle Combat Training Center	**REPORT NO:**	1
USACE DISTRICT:	CEPOH	**SHEET:**	1
WEATHER:	Sunny, high 81, low 72		

WORK IN PROGRESS OR COMPLETED:

1. Mobilization/Demobilization

		CUMULATIVE
45	***Miles Driven***	45
2/9500	***Number of Flights/Miles Flown***	2/9500
3	***Personnel:***	3

2. Reconnaissance Details

15,604	**Linear Feet:**	15,604

Discussion -

3. MC Sampling Details

3	***Soil Samples***	3
0	***Water Samples***	0

Sampling Notes: See Attached DQCR

4. QC Activities

0	***Soil Samples***	0
0	***Water Samples***	0

Sampling Notes: See Attached DQCR

5. QA Activities

0	***Soil Samples***	0
0	***Water Samples***	0

Sampling Notes: no QA split sample for MIS required in the SSWP

6. Safety Activities

Held safety brief. Topics included slips, trips & falls, UXO safety and heat stress/stroke.

PARSONS WORKFORCE		On-site Yes/No	Tailgate Brief Yes/No
Parsons FTL - Daron Gibson	Cell Phone: 931-260-5854	Yes	Yes
Parsons FTS - Justin Bukunt	Cell Phone: 808-291-2453	Yes	Yes
Parsons UXO Technician/SSHO -Blair Oakes	Cell Phone: 931-638-2445	Yes	Yes
None			

EQUIPMENT LIST:

Trimble Geo XH, Garmin Rino handheld GPS units, Minelab Explorer II metal detector, Canon Digital Camera

ADDITIONAL INFORMATION:

All other site details recorded in PDA/Logbook

ACTIVITIES SCHEDULED FOR NEXT WORK DAY:

Team will complete sampling for DU4 and collect the Ambient Sample for DU3. Team will also meet with representative from the Bishop Estate regarding access to the Punaluu valley portion of the Pacific Jungle CTC.

REQUEST FOR PROJECT ACTION: None

ACCIDENTS REPORTED TODAY: 0

ACCIDENTS TO DATE: 0

Prepared By Field Team Leader: Daron Gibson

DAILY CONTRACTOR QUALITY CONTROL REPORT

Contract Number: W912DY-04-D-0005
Delivery Order: 0008
Project Name: MMRP FUDS SI
Project Number: 744647-51000
Site Location: Pacific Jungle Combat Training Center
Date: 11-Jul-08

Activities Conducted:

SVT mobilized at hotel at 0700 and left for the site. Arrived at site at 0845, prepared equipment and held safety brief. Team then began QR and MIS for DU3 at 0930. We found several spent .30 caliber casings as well as four gun emplacements on a ridge near the backside of the valley. No MEC was found today. Team completed QR and MIS for DU3 today at 1530. We returned to the hotel and placed the samples on ice for storage per Parsons PSAP until we ship them. Completed activities at 1700.

Work Planned:

Team will complete sampling for DU4 and collect the Ambient Sample for DU3. Team will also meet with representative from the Bishop Estate regarding access to the Punaluu valley portion of the Pacific Jungle CTC.

Field Instrument Measurements (list or provide attachment):

Water Sampling Location:	Temp (ºC):	Cond (mS/cm)	Turb (NTU):	pH (s.u.):
NA				

Equipment Calibrations (list or provide attachment): NA

List all field and quality control samples collected (list or provide

Sample ID	Media	Time	Analysis	Shipment Date	Lab	Comments
PJC-MRS01-DU3-SS-02-01	Soil	1517	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Field Triplicate
PJC-MRS01-DU3-SS-02-02	Soil	1517	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Field Triplicate
PJC-MRS01-DU3-SS-02-03	Soil	1517	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Field Triplicate

Departures from approved SAP:

The USACE Project Chemist, Teresa Carpenter, approved a change to stipulate that only one set of MS/MSD samples and one set of laboratory triplicates were needed for each MIS site provided that the laboratory analyzes all samples in one analytical batch. Parsons Project Chemist instructed TestAmerica to analyze all samples from this site in one analytical batch. One of the field triplicate samples to be collected from DU2 will be marked for MS/MSD and Lab Triplicate analyses on the COC.

Instructions given by government personnel:

None

Check all attachments:

_____ Field sampling forms (in separate submittal)
_____ Field-generated analytical results
_____ Chain-of-custody forms (in separate submittal)

Signed by: Daron Gibson

Name	Daron Gibson, FTL	
Date:	11-Jul-08	
Phone	Mobile: 931-260-5854	Office#: 678-969-2446
Copies sent to:		
	Deborah Walker (EM CX)	Helene Takemoto (CEPOH)
	Heidi Novotny (EM CX)	Maureen Lawrence (USAESCH)
	Rebecca Terry (USAESCH)	Michael D'Auben (USAESCH)
	Kim Meacham (USAESCH)	Laura Kelley (Parsons DPM)
	Don Silkebakken (Parsons PM)	Tammy Chang (Parsons)
	Lloyd Grearson (Parsons)	

DAILY FIELD REPORT
MMRP SITE INSPECTION

CONTRACT NO.	**W912DY-04-D-0005**	**DELIVERY ORDER NO.**	**0008**
JOB NO:	744647-51000	**DATE/DAY:**	14-Jul-08
SITE NAME:	Pacific Jungle Combat Training Center	**REPORT NO:**	2
USACE DISTRICT:	CEPOH	**SHEET:**	1
WEATHER:	Rain, high 84, low 73		

WORK IN PROGRESS OR COMPLETED:

1. Mobilization/Demobilization

		CUMULATIVE
45	***Miles Driven***	**90**
0	***Number of Flights/Miles Flown***	**2/9500**
3	***Personnel:***	**3**

2. Reconnaissance Details

13,630	**Linear Feet:**	**29,234**

Discussion -

3. MC Sampling Details

3	***Soil Samples***	**6**
0	***Water Samples***	**0**

Sampling Notes: See Attached DQCR

4. QC Activities

0	***Soil Samples***	**0**
0	***Water Samples***	**0**

Sampling Notes: See Attached DQCR

5. QA Activities

0	***Soil Samples***	**0**
0	***Water Samples***	**0**

Sampling Notes: no QA split sample for MIS required in the SSWP

6. Safety Activities

Held safety brief. Topics included slips, trips & falls, UXO safety and heat stress/stroke.

PARSONS WORKFORCE		On-site Yes/No	Tailgate Brief Yes/No
Parsons FTL - Daron Gibson	Cell Phone: 931-260-5854	Yes	Yes
Parsons FTS - Justin Bukunt	Cell Phone: 808-291-2453	Yes	Yes
Parsons UXO Technician/SSHO -Blair Oakes	Cell Phone: 931-638-2445	Yes	Yes
None			

EQUIPMENT LIST:

Trimble Geo XH, Garmin Rino handheld GPS units, Minelab Explorer II metal detector, Canon Digital Camera

ADDITIONAL INFORMATION:

All other site details recorded in PDA/Logbook

ACTIVITIES SCHEDULED FOR NEXT WORK DAY:

Team will complete MIS for DU4 and collect the SD/SW samples for the site.

REQUEST FOR PROJECT ACTION: None

ACCIDENTS REPORTED TODAY: 0

ACCIDENTS TO DATE: 0

Prepared By Field Team Leader: Daron Gibson

DAILY CONTRACTOR QUALITY CONTROL REPORT

Contract Number: W912DY-04-D-0005
Delivery Order: 0008
Project Name: MMRP FUDS SI
Project Number: 744647-51000
Site Location: Pacific Jungle Combat Training Center
Date: 14-Jul-08

Activities Conducted:

SVT mobilized at hotel at 0700 and left for the site. Arrived at site at 0830, prepared equipment and held safety brief. Team then went in to collect the MIS at AU2. The original location is located in a stream bed. The area lies in a large flood plain with mostly rocks and debris (branches and trees). We moved the AU2 to a more suitable location that was deemed to not have been disturbed. Team completed AU2 at 1107. After collecting AU2, we began QR and MIS for DU4. This is the area with the small noncontiguous parcels. Some of the parcels were inaccessible due to being located near private residences. We did however access the majority of them. Collected 30 out of 50 increments. No MD/MEC was found today. We returned to the hotel and placed the samples on ice until we ship them. Completed activities at 1700.

Work Planned:

Team will complete MIS for DU4 and collect the SD/SW samples for the site.

Field Instrument Measurements (list or provide attachment):

Water Sampling Location:	Temp (ºC):	Cond (mS/cm)	Turb (NTU):	pH (s.u.):
NA				

Equipment Calibrations (list or provide attachment): NA

List all field and quality control samples collected (list or provide

Sample ID	Media	Time	Analysis	Shipment Date	Lab	Comments
PJC-MRS01-AU2-SS-02-01	Soil	1107	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Ambient Sample/Field Triplicate
PJC-MRS01-AU2-SS-02-02	Soil	1107	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Ambient Sample/Field Triplicate
PJC-MRS01-AU2-SS-02-03	Soil	1107	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Ambient Sample/Field Triplicate

Departures from approved SAP:

The USACE Project Chemist, Teresa Carpenter, approved a change to stipulate that only one set of MS/MSD samples and one set of laboratory triplicates were needed for each MIS site provided that the laboratory analyzes all samples in one analytical batch. Parsons Project Chemist instructed TestAmerica to analyze all samples from this site in one analytical batch. One of the field triplicate samples to be collected from DU2 will be marked for MS/MSD and Lab Triplicate analyses on the COC.

Instructions given by government personnel:

None

Check all attachments:

_____ Field sampling forms (in separate submittal)

_____ Field-generated analytical results

_____ Chain-of-custody forms (in separate submittal)

Signed by: Daron Gibson

Name	Daron Gibson, FTL	
Date:	14-Jul-08	
Phone	Mobile: 931-260-5854	Office#: 678-969-2446
Copies sent to:		
	Deborah Walker (EM CX)	Helene Takemoto (CEPOH)
	Heidi Novotny (EM CX)	Maureen Lawrence (USAESCH)
	Rebecca Terry (USAESCH)	Michael D'Auben (USAESCH)
	Kim Meacham (USAESCH)	Laura Kelley (Parsons DPM)
	Don Silkebakken (Parsons PM)	Tammy Chang (Parsons)
	Lloyd Grearson (Parsons)	

DAILY FIELD REPORT
MMRP SITE INSPECTION

CONTRACT NO.	**W912DY-04-D-0005**	**DELIVERY ORDER NO.**	**0008**
JOB NO:	744647-51000	**DATE/DAY:**	15-Jul-08
SITE NAME:	Pacific Jungle Combat Training Center	**REPORT NO:**	3
USACE DISTRICT:	CEPOH	**SHEET:**	1
WEATHER:	Sunny, high 87, low 73		

WORK IN PROGRESS OR COMPLETED:

1. Mobilization/Demobilization

		CUMULATIVE
45	***Miles Driven***	**135**
0	***Number of Flights/Miles Flown***	**2/9500**
4	***Personnel:***	**4**

2. Reconnaissance Details

2,911	**Linear Feet:**	**32,145**

Discussion -

3. MC Sampling Details

3	***Soil Samples***	**9**
2	***Water Samples***	**2**
2	***Sediment Samples***	**2**

Sampling Notes: See Attached DQCR

4. QC Activities

0	***Soil Samples***	**0**
3	***Water Samples***	**3**
3	***Sediment Samples***	**3**

Sampling Notes: See Attached DQCR

5. QA Activities

0	***Soil Samples***	**0**
1	***Water Samples***	**1**
1	***Sediment Samples***	**1**

Sampling Notes: no QA split sample for MIS required in the SSWP

6. Safety Activities

Held safety brief. Topics included slips, trips & falls, UXO safety and heat stress/stroke.

PARSONS WORKFORCE		On-site Yes/No	Tailgate Brief Yes/No
Parsons FTL - Daron Gibson	Cell Phone: 931-260-5854	Yes	Yes
Parsons FTS - Justin Bukunt	Cell Phone: 808-291-2453	Yes	Yes
Parsons UXO Technician/SSHO -Blair Oakes	Cell Phone: 931-638-2445	Yes	Yes
CEPOH - Mike Mullen	Cell Phone: 808-291-8571	Yes	Yes

EQUIPMENT LIST:

Trimble Geo XH, Garmin Rino handheld GPS units, Minelab Explorer II metal detector, Canon Digital Camera, LaMotte Turbidimeter, and Horiba U22.

ADDITIONAL INFORMATION:

All other site details recorded in PDA/Logbook

ACTIVITIES SCHEDULED FOR NEXT WORK DAY:

Team will collect EB sample and begin QR and MIS for DU2.

REQUEST FOR PROJECT ACTION: None

ACCIDENTS REPORTED TODAY: 0

ACCIDENTS TO DATE: 0

Prepared By Field Team Leader: Daron Gibson

DAILY CONTRACTOR QUALITY CONTROL REPORT

Contract Number: W912DY-04-D-0005
Delivery Order: 0008
Project Name: MMRP FUDS SI
Project Number: 744647-51000
Site Location: Pacific Jungle Combat Training Center
Date: 15-Jul-08

Activities Conducted:

SVT mobilized from hotel at 0700 and went to Parsons Honolulu office to collect water sampling equipment that arrived from Georgia. Arrived at site at 0900, prepared equipment and held safety brief. Team then completed the MIS at DU4. At 1100 the team met with representatives from the Bishop Estate (majority landowners for Punaluu valley). They led the team into the valley and directed the team where we could access the interior portions of the valley tomorrow. Meeting with Bishop representatives (Mr. Darrell Tachibana {808 221-0292} and Ms. Esther Kiaaina {808 534-8189}) ended at 1330. Team then returned to Kahana valley and collected the SW2 and SD2 samples. We completed sampling at 1515. No MD/MEC was found today. We returned to the hotel and placed the samples on ice. Completed activities at 1700.

Work Planned:

Team will collect EB sample and begin QR and MIS for DU2.

Field Instrument Measurements (list or provide attachment):

Water Sampling Location:	Temp (ºC):	Cond (mS/cm)	Turb (NTU):	pH (s.u.):
PJC-MRS01-SW-02	22.98	0.116	1.52	6.3

Equipment Calibrations (list or provide attachment): Horiba U22 and LaMotte Turbidimeter were calibrated per manufacturers specification.

List all field and quality control samples collected (list or provide

Sample ID	Media	Time	Analysis	Shipment Date	Lab	Comments
PJC-MRS01-DU4-SS-02-01	Soil	1054	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	
PJC-MRS01-DU4-SS-02-02	Soil	1054	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	
PJC-MRS01-DU4-SS-02-03	Soil	1054	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	
PJC-MRS01-SW-02	Surface Water	1342	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	MS/MSD
PJC-MRS01-SW-02 QA	Surface Water	1342	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	GPL	QA split of PJC-MRS01-SW-02

PJC-MRS01-SW-03	Surface Water	1409	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	FD of PJC-MRS01-SW-02
PJC-MRS01-SD-02	Sediment	1425	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	MS/MSD
PJC-MRS01-SD-02 QA	Sediment	1425	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	GPL	QA split of PJC-MRS01-SD-02
PJC-MRS01-SD-03	Sediment	1437	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	FD of PJC-MRS01-SD-02

Departures from approved SAP:

The USACE Project Chemist, Teresa Carpenter, approved a change to stipulate that only one set of MS/MSD samples and one set of laboratory triplicates were needed for each site provided that the laboratory analyzes all samples in one analytical batch. Parsons Project Chemist instructed TestAmerica to analyze all samples from this site in one analytical batch. One of the field triplicate samples to be collected from DU2 will be marked for MS/MSD and Lab Triplicate analyses on the COC.

Instructions given by government personnel:

None

Check all attachments:

_____ Field sampling forms (in separate submittal)

_____ Field-generated analytical results

_____ Chain-of-custody forms (in separate submittal)

Signed by: Daron Gibson

Name	Daron Gibson, FTL	
Date:	15-Jul-08	
Phone	Mobile: 931-260-5854	Office#: 678-969-2446
Copies sent to:		
	Deborah Walker (EM CX)	Helene Takemoto (CEPOH)
	Heidi Novotny (EM CX)	Maureen Lawrence (USAESCH)
	Rebecca Terry (USAESCH)	Michael D'Auben (USAESCH)
	Kim Meacham (USAESCH)	Laura Kelley (Parsons DPM)
	Don Silkebakken (Parsons PM)	Tammy Chang (Parsons)
	Lloyd Grearson (Parsons)	

DAILY FIELD REPORT
MMRP SITE INSPECTION

CONTRACT NO.	**W912DY-04-D-0005**	**DELIVERY ORDER NO.**	**0008**
JOB NO:	744647-51000	**DATE/DAY:**	16-Jul-08
SITE NAME:	Pacific Jungle Combat Training Center	**REPORT NO:**	4
USACE DISTRICT:	CEPOH	**SHEET:**	1
WEATHER:	Sunny, high 87, low 75		

WORK IN PROGRESS OR COMPLETED:

1. Mobilization/Demobilization

		CUMULATIVE
45	***Miles Driven***	**180**
0	***Number of Flights/Miles Flown***	**2/9500**
4	***Personnel:***	**4**

2. Reconnaissance Details

21,083	**Linear Feet:**	**53,228**

Discussion -

3. MC Sampling Details

0	***Soil Samples***	**9**
1	***Water Samples***	**3**
1	***Sediment Samples***	**3**

Sampling Notes: See Attached DQCR

4. QC Activities

0	***Soil Samples***	**0**
1	***Water Samples (Equipment Blank)***	**4**
0	***Sediment Samples***	**3**

Sampling Notes: See Attached DQCR

5. QA Activities

0	***Soil Samples***	**0**
0	***Water Samples***	**1**
0	***Sediment Samples***	**1**

Sampling Notes: no QA split sample for MIS required in the SSWP

6. Safety Activities

Held safety brief. Topics included slips, trips & falls, UXO safety and heat stress/stroke.

PARSONS WORKFORCE		On-site Yes/No	Tailgate Brief Yes/No
Parsons FTL - Daron Gibson	Cell Phone: 931-260-5854	Yes	Yes
Parsons FTS - Justin Bukunt	Cell Phone: 808-291-2453	Yes	Yes
Parsons UXO Technician/SSHO -Blair Oakes	Cell Phone: 931-638-2445	Yes	Yes
CEPOH - Mike Mullen	Cell Phone: 808-291-8571	Yes	Yes

EQUIPMENT LIST:

Trimble Geo XH, Garmin Rino handheld GPS units, Minelab Explorer II metal detector, Canon Digital Camera, Lamotte Turbidimeter, and Horiba U22.

ADDITIONAL INFORMATION:

All other site details recorded in PDA/Logbook

ACTIVITIES SCHEDULED FOR NEXT WORK DAY:

Team will complete sampling for DU2 and collect AU1.

REQUEST FOR PROJECT ACTION: None

ACCIDENTS REPORTED TODAY: 0

ACCIDENTS TO DATE: 0

Prepared By Field Team Leader: Daron Gibson

DAILY CONTRACTOR QUALITY CONTROL REPORT

Contract Number: W912DY-04-D-0005
Delivery Order: 0008
Project Name: MMRP FUDS SI
Project Number: 744647-51000
Site Location: Pacific Jungle Combat Training Center
Date: 16-Jul-08

Activities Conducted:

SVT mobilized from hotel at 0700. Arrived at site at 0830, prepared equipment and held safety brief. Team then collected the EB sample. We then began QR at DU2 and collected 65 of the scheduled 100 increments from DU2. The team found a tank that had been used for target practice. There were numerous small arms holes in it and it looked like it had also been hit with artillery as most of the armor was missing and scattered around it. We also found an unexpended smoke grenade near the tank. Team attempted to notify the landowner representatives but was unable to reach them. We will contact them in the morning when we meet with Mr. Darrell Tachibana. The item is located in the middle of a dense bamboo forest and is not near any residence. We finished QR and MIS at 1500. No further MEC or MD was found today. The team collected the SW and SD samples for Punaluu Valley at 1515-1630. We returned to the hotel and placed the samples on ice for storage per Parsons PSAP until we ship them. Completed activities at 1830.

Work Planned:

Team will complete sampling for DU2 and collect AU1.

Field Instrument Measurements (list or provide attachment):

Water Sampling Location:	Temp (ºC):	Cond (mS/cm)	Turb (NTU):	pH (s.u.):
Stream in Punaluu Valley	23.09	0.098	1	7.67

Equipment Calibrations (list or provide attachment): Horiba U22 and Lamotte Turbidimeter were calibrated per manufacturers specification.

List all field and quality control samples collected (list or provide

Sample ID	Media	Time	Analysis	Shipment Date	Lab	Comments
PJC-MRS01-EB-01	Water	0850	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	Equipment Blank
PJC-MRS01-SW-01	Surface Water	1530	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	
PJC-MRS01-SD-01	Sediment	1547	Antimony, Copper, Lead, Zinc, and Explosives	7/17/2008	TA	

Departures from approved SAP:

The USACE Project Chemist, Teresa Carpenter, approved a change to stipulate that only one set of MS/MSD samples and one set of laboratory triplicates were needed for each site provided that the laboratory analyzes all samples in one analytical batch. Parsons Project Chemist instructed TestAmerica to analyze all samples from this site in one analytical batch. One of the field triplicate samples to be collected from DU2 will be marked for MS/MSD and Lab Triplicate analyses on the COC.

Instructions given by government personnel:

None

Check all attachments:

	Field sampling forms (in separate submittal)
	Field-generated analytical results
	Chain-of-custody forms (in separate submittal)

Signed by:	Daron Gibson	
Name	Daron Gibson, FTL	
Date:	16-Jul-08	
Phone	Mobile: 931-260-5854	Office#: 678-969-2446
Copies sent to:		
	Deborah Walker (EM CX)	Helene Takemoto (CEPOH)
	Heidi Novotny (EM CX)	Maureen Lawrence (USAESCH)
	Rebecca Terry (USAESCH)	Michael D'Auben (USAESCH)
	Kim Meacham (USAESCH)	Laura Kelley (Parsons DPM)
	Don Silkebakken (Parsons PM)	Tammy Chang (Parsons)
	Lloyd Grearson (Parsons)	

DAILY FIELD REPORT
MMRP SITE INSPECTION

CONTRACT NO.	**W912DY-04-D-0005**	**DELIVERY ORDER NO.**	**0008**
JOB NO:	744647-51000	**DATE/DAY:**	17-Jul-08
SITE NAME:	Pacific Jungle Combat Training Center	**REPORT NO:**	5
USACE DISTRICT:	CEPOH	**SHEET:**	1
WEATHER:	Rain, high 85, low 76		

WORK IN PROGRESS OR COMPLETED:

1. Mobilization/Demobilization

		CUMULATIVE
45	***Miles Driven***	**225**
0	***Number of Flights/Miles Flown***	**2/9500**
3	***Personnel:***	**3**

2. Reconnaissance Details

9,697	**Linear Feet:**	**62,925**

Discussion - Total of 11.91 miles.

3. MC Sampling Details

6	***Soil Samples***	**15**
0	***Water Samples***	**3**
0	***Sediment Samples***	**3**

Sampling Notes: See Attached DQCR

4. QC Activities

2	***Soil Samples***	**2**
0	***Water Samples***	**4**
0	***Sediment Samples***	**3**

Sampling Notes: See Attached DQCR

5. QA Activities

0	***Soil Samples***	**0**
0	***Water Samples***	**1**
0	***Sediment Samples***	**1**

Sampling Notes: no QA split sample for MIS required in the SSWP

6. Safety Activities

Held safety brief. Topics included slips, trips & falls, UXO safety and heat stress/stroke.

PARSONS WORKFORCE		On-site Yes/No	Tailgate Brief Yes/No
Parsons FTL - Daron Gibson	Cell Phone: 931-260-5854	Yes	Yes
Parsons FTS - Justin Bukunt	Cell Phone: 808-291-2453	Yes	Yes
Parsons UXO Technician/SSHO -Blair Oakes	Cell Phone: 931-638-2445	Yes	Yes
VISITORS			
None			

EQUIPMENT LIST:

Trimble Geo XH, Garmin Rino handheld GPS units, Minelab Explorer II metal detector, Canon Digital Camera

ADDITIONAL INFORMATION:

All other site details recorded in PDA/Logbook

ACTIVITIES SCHEDULED FOR NEXT WORK DAY:

Team will pack and ship samples. We will also ship equipment to Maui in preparation for the Makanalua Bombing Range site on Molokai.

REQUEST FOR PROJECT ACTION: None

ACCIDENTS REPORTED TODAY: 0

ACCIDENTS TO DATE: 0

Prepared By Field Team Leader: Daron Gibson

DAILY CONTRACTOR QUALITY CONTROL REPORT

Contract Number: W912DY-04-D-0005
Delivery Order: 0008
Project Name: MMRP FUDS SI
Project Number: 744647-51000
Site Location: Pacific Jungle Combat Training Center
Date: 17-Jul-08

Activities Conducted:

SVT mobilized from the hotel at 0630. Arrived at site at 0800, prepared equipment and held safety brief. We met with Mr. Darrell Tachibana (landowner representative) and directed him (per his request) to the area where the MEC item was found. The team informed him that he should contact the Honolulu Police Department to begin the removal process. He stated that he will check with his superiors and they will decide the plan of action. Team then resumed QR and MIS for DU2. We completed MIS for DU2 at 12(Team then moved the AU1 sample due to the original location being located on private property. The area was swept by the UXO Tech III and was determined to be undisturbed. Finished AU sample at 1300. Team then conducted additional QR in the MRS. Finished at 1500. No further MEC or MD was found today. All on site activities are complete. We returned to the hotel and prepared the samples for shipment tomorrow. Completed activities at 1730.

Work Planned:

Team will pack and ship samples. We will also ship equipment to Maui in preparation for the Makanalua Bombing Range site on Molokai.

Field Instrument Measurements (list or provide attachment):

Water Sampling Location:	Temp (ºC):	Cond (mS/cm)	Turb (NTU):	pH (s.u.):
NA				

Equipment Calibrations (list or provide attachment): None

List all field and quality control samples collected (list or provide

Sample ID	Media	Time	Analysis	Shipment Date	Lab	Comments
PJC-MRS01-DU2-SS-02-01	Soil	1140	Antimony, Copper, Lead, Zinc, and Explosives	7/18/2008	TA	Field Triplicate
PJC-MRS01-DU2-SS-02-02	Soil	1140	Antimony, Copper, Lead, Zinc, and Explosives	7/18/2008	TA	Field Triplicate/MS/MSD
PJC-MRS01-DU2-SS-02-03	Soil	1140	Antimony, Copper, Lead, Zinc, and Explosives	7/18/2008	TA	Lab/Field Triplicate
PJC-MRS01-AU1-SS-02-01	Soil	1257	Antimony, Copper, Lead, Zinc, and Explosives	7/18/2008	TA	Ambient Sample
PJC-MRS01-AU1-SS-02-02	Soil	1257	Antimony, Copper, Lead, Zinc, and Explosives	7/18/2008	TA	Ambient Sample

PJC-MRS01-AU1-SS-02-03	Soil	1257	Antimony, Copper, Lead, Zinc, and Explosives	7/18/2008	TA	Ambient Sample

Departures from approved SAP:

The USACE Project Chemist, Teresa Carpenter, approved a change to stipulate that only one set of MS/MSD samples and one set of laboratory triplicates were needed for each site provided that the laboratory analyzes all samples in one analytical batch. Parsons Project Chemist instructed TestAmerica to analyze all samples from this site in one analytical batch. ***No MIS could be collected from DU1 due to the FUDS parcels being used for agricultural and aqua cultural purposes. Team took observations and collected pictures of the areas.**

Instructions given by government personnel:

None

Check all attachments:

	Field sampling forms (in separate submittal)
	Field-generated analytical results
	Chain-of-custody forms (in separate submittal)

Signed by: Daron Gibson

Name	Daron Gibson, FTL	
Date:	17-Jul-08	
Phone	Mobile: 931-260-5854	Office#: 678-969-2446
Copies sent to:		
	Deborah Walker (EM CX)	Helene Takemoto (CEPOH)
	Heidi Novotny (EM CX)	Maureen Lawrence (USAESCH)
	Rebecca Terry (USAESCH)	Michael D'Auben (USAESCH)
	Kim Meacham (USAESCH)	Laura Kelley (Parsons DPM)
	Don Silkebakken (Parsons PM)	Tammy Chang (Parsons)
	Lloyd Grearson (Parsons)	

APPENDIX E

Photo-documentation Log

Field Team Leader's Site Observations
Pacific Jungle Combat Training Center, Island of Oahu, Hawaii

Friday, July 11, 2008

Property: Pacific Jungle HI ***Area:*** Maneuver Area ***Time*** 9:57:26 AM ***Point_ID:*** 1

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-DU3-SS0203

MRSPP Menu: None
MRSPP Note:

Latitude: 21.542104554
Longitude: -157.884815798

Begin mis for DU3

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Red

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32525 W157.53090



1.JPG
Collection of first increment for DU3



2.JPG
Collection of first increment for DU3



3.JPG
Kahana Valley

Property: Pacific Jungle HI ***Area:*** Maneuver Area ***Time*** 10:20:55 AM ***Point_ID:*** 2

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.54165
Longitude: -157.887333

Dense jungle, No signs of MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32499 W157.53243



4.JPG
Dense jungle



5.JPG
Dense jungle



6.JPG
Dense jungle

Friday, July 11, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 10:37:43 AM **Point_ID:** 3

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.5404
Longitude: -157.887833

Terrain observation at top of ridge, no signs of MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32424 W157.53272



7.JPG
Top of ridge



8.JPG
Top of ridge



9.JPG
Top of ridge

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:03:43 AM **Point_ID:** 4

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.5202
Longitude: -157.891667

QR deviation due to steep terrain and dense jungle, no signs of MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Steep Slope
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32427 W157.53438



10.JPG
Dense jungle, steep terrain



11.JPG
Dense jungle, steep terrain



12.JPG
Dense jungle, steep terrain

Friday, July 11, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:25:09 AM **Point_ID:** 5

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.536904778
Longitude: -157.891672783

QR deviation due to dense ferns, no signs of MD/MEC

Barrier:
Vegetation: Heavy Brush
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.31212 W157.53501



13.JPG
Dense ferns



14.JPG
Dense ferns



15.JPG
Dense ferns

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:42:57 AM **Point_ID:** 6

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.535645689
Longitude: -157.891959823

Found numerous spent .30 caliber casings, no MEC found

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: High Density
Subsurface Met: Medium Density
MECMD: Small Arms, .30 Cal

N21.32142 W157.53523



16.JPG
.30 caliber casings



17.JPG
.30 caliber casings



18.JPG
.30 caliber casings

Friday, July 11, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 12:00:48 PM **Point_ID:** 7

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.534437422
Longitude: -157.891879062

Found 4 gun emplacements, no MD/MEC found

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32096 W157.53518



19.JPG
Gun emplacement



20.JPG
Gun emplacement



21.JPG
Gun emplacement

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 1:02:01 PM **Point_ID:** 8

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.534321799
Longitude: -157.886764723

Overlooking Kahana Valley, no signs of MD/MEC

Barrier:
Vegetation: Heavy Brush
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Steep Slope
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32062 W157.53207



22.JPG
Kahana Valley



23.JPG
Kahana Valley



24.JPG
Kahana Valley

Monday, July 14, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 9:55:29 AM **Point_ID:** 9

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-AU2-SS0201

MRSPP Menu: None
MRSPP Note:

Latitude: 21.5391
Longitude: -157.8815

Moved AU2 due to planned location being in a streambed, swept new area and collected AU2 MIS.

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Gentle Slope
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.32346 W157.52898



25.JPG
Collecting increments from AU2



26.JPG
Collecting increments from AU2



27.JPG
Collecting increments from AU2

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:50:03 AM **Point_ID:** 10

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-DU4-SS0201

MRSPP Menu: None
MRSPP Note:

Latitude: 21.544183
Longitude: -157.882333

Begin MIS for DU4, no MD/MEC, found old barbwire fence

Barrier: Barbed wire fence
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: Low Density
Subsurface Met: No Detect
MECMD: None

N21.32651 W157.52941



28.JPG
Collecting 1st increment for DU4



29.JPG
Collecting 1st increment for DU4



30.JPG
Collecting 1st increment for DU4

Monday, July 14, 2008

Property:	Pacific Jungle HI	***Area:***	Maneuver Area	***Time***	1:30:17 PM

Point_ID: 11

Team Leader	Daron Gibson	***MRSPP Menu:***	None	Latitude:	21.547692639
Sampler:	Justin Bukunt	***MRSPP Note:***		Longitude:	-157.883301909
Sample ID:	PJC-MRS01-DU4-SS0201				

Unable to access SW parcel of DU4 due to being located behind a home.

Barrier:		***Topography:***	Broken Terrain
Vegetation:	Mixed Trees + Brush	***Surface Feature:***	Asphalt road
Drainage:	None	***Surface Debris:***	None
SoilType:	Mixed	***Subsurface Met:***	N/A
SoilColor:	Brown	***MECMD:***	None

N21.32862 W157.53000



31.JPG
Private properties



32.JPG
Private properties



33.JPG
Private properties

Tuesday, July 15, 2008

Property: Pacific Jungle HI **Area:** **Time** 1:41:30 PM **Point_ID:** 12

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-SW-02

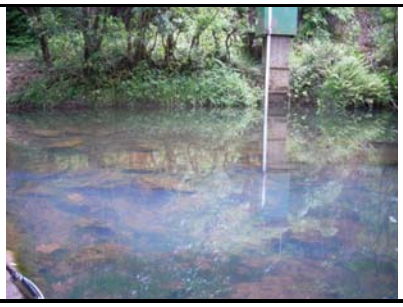
MRSPP Menu:
MRSPP Note:

Latitude: 21.540717
Longitude: -157.882667

N21.32443 W157.52964

Barrier:
Vegetation:
Drainage:
SoilType: Surface Water
SoilColor: None

Topography:
Surface Feature:
Surface Debris:
Subsurface Met:
MECMD:



34.JPG
Stream



35.JPG
Stream



36.JPG
Stream

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 1:46:08 PM **Point_ID:** 13

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-SD-02

MRSPP Menu: None
MRSPP Note:

Latitude: 21.540717
Longitude: -157.882667

Collection of SD2

N21.32443 W157.52964

Barrier:
Vegetation:
Drainage: Creek
SoilType: Mixed
SoilColor: Dark Brown

Topography: Flat
Surface Feature:
Surface Debris: None
Subsurface Met: N/A
MECMD: None



37.JPG
Stream bank



38.JPG
Stream bank



39.JPG
Stream bank

Wednesday, July 16, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 9:21:13 AM **Point_ID:** 14

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-DU2-SS0201

MRSPP Menu: None
MRSPP Note:

Latitude: 21.555
Longitude: -157.8995

Begin MIS for DU2, some subsurface detections, no surface MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: Low Density
MECMD: None

N21.33300 W157.53979



40.JPG
Begin MIS for DU2



41.JPG
Begin MIS for DU2



42.JPG
Begin MIS for DU2

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 10:50:56 AM **Point_ID:** 15

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.5547
Longitude: -157.902667

QR deviation due to steep terrain and dense vegetation, no signs of MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Steep Slope
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.33282 W157.54162



43.JPG
Terrain, steep and dense



44.JPG
Terrain, steep and dense



45.JPG
Terrain, steep and dense

Wednesday, July 16, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:26:47 AM **Point_ID:** 16

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.554867
Longitude: -157.900667

Tank used for target, no MD/MEC at tank

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Black

Topography: Broken Terrain
Surface Feature: Target
Surface Debris: Low Density
Subsurface Met: Low Density
MECMD: None

N21.33292 W157.54040



46.JPG
Tank



47.JPG
Tank



48.JPG
Bullet holes on side of tank

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:35:10 AM **Point_ID:** 17

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.554883
Longitude: -157.9005

MEC, unexpended smoke grenade, near tank

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature: Target
Surface Debris: Low Density
Subsurface Met: Low Density
MECMD: Other

N21.33293 W157.54034



49.JPG
Smoke grenade



50.JPG
Smoke grenade



51.JPG
Smoke grenade

Wednesday, July 16, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 12:17:48 PM **Point_ID:** 18

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.556417
Longitude: -157.898833

Gun emplacement on edge of stream, no MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: Creek
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature: 4WD road
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.33385 W157.53936



52.JPG
Gun emplacement



53.JPG
Gun emplacement



54.JPG
Gun emplacement

Property: Pacific Jungle HI **Area:** **Time** 3:27:45 PM **Point_ID:** 19

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-SW-01

MRSPP Menu:
MRSPP Note:

Latitude: 21.556283
Longitude: -157.898833

N21.33377 W157.53937

Barrier:
Vegetation:
Drainage:
SoilType: Surface Water
SoilColor: none

Topography:
Surface Feature:
Surface Debris:
Subsurface Met:
MECMD:



55.JPG
Stream in Punaluu Valley



56.JPG
Stream in Punaluu Valley



57.JPG
Stream in Punaluu Valley

Wednesday, July 16, 2008

Property:	Pacific Jungle HI	***Area:***	Maneuver Area	***Time***	3:32:55 PM

Point_ID: 20

Team Leader	Daron Gibson	***MRSPP Menu:***	None	Latitude:	21.556283
Sampler:	Justin Bukunt	***MRSPP Note:***		Longitude:	-157.898833
Sample ID:	PJC-MRS01-SD-01				

Collection of SD1

Barrier:		***Topography:***	Broken Terrain
Vegetation:		***Surface Feature:***	
Drainage:	Creek	***Surface Debris:***	None
SoilType:	Mixed	***Subsurface Met:***	N/A
SoilColor:	Brown	***MECMD:***	None

N21.33377 W157.53937



58.JPG
Streambank



59.JPG
Streambank



60.JPG
Streambank

Thursday, July 17, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 11:38:02 AM **Point_ID:** 21

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-DU2-SS0201

MRSPP Menu: None
MRSPP Note:

Latitude: 21.558283
Longitude: -157.900333

Finish of DU2, no signs of MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: Creek
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.33497 W157.54023



61.JPG
Collection of last increment for DU2



62.JPG
Collection of last increment for DU2



63.JPG
Collection of last increment for DU2

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 12:48:17 PM **Point_ID:** 22

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: PJC-MRS01-AU1-SS0201

MRSPP Menu: None
MRSPP Note:

Latitude: 21.5635
Longitude: -157.898333

Collection of AU1, no signs of disturbance

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.33810 W157.53903



64.JPG
Sweeping AU1



65.JPG
AU1



66.JPG
AU1

Thursday, July 17, 2008

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 1:05:49 PM **Point_ID:** 23

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.567233375
Longitude: -157.89805899

Terrain observation, overlooking Punaluu Valley, no signs of MD/MEC

Barrier:
Vegetation: Dense Trees
Drainage: None
SoilType: Mixed
SoilColor: Brown

Topography: Broken Terrain
Surface Feature:
Surface Debris: None
Subsurface Met: No Detect
MECMD: None

N21.34035 W157.53886



67.JPG
Punaluu Valley



68.JPG
Punaluu Valley



69.JPG
Punaluu Valley

Property: Pacific Jungle HI **Area:** Maneuver Area **Time** 1:35:16 PM **Point_ID:** 24

Team Leader Daron Gibson
Sampler: Justin Bukunt
Sample ID: None

MRSPP Menu: None
MRSPP Note:

Latitude: 21.567942042
Longitude: -157.894633348

Unable to access southern most parcel of DU1 due to currently being used for fish farming

Barrier:
Vegetation: Grasses
Drainage: Pond
SoilType:
SoilColor:

Topography: Flat
Surface Feature:
Surface Debris: None
Subsurface Met: N/A
MECMD: None

N21.34079 W157.53676



70.JPG
Fish farm



71.JPG
Fish farm



72.JPG
Fish farm

Thursday, July 17, 2008

Property:	Pacific Jungle HI	***Area:***	Maneuver Area	***Time***	1:49:59 PM

Point_ID: 25

Team Leader	Daron Gibson
Sampler:	Justin Bukunt
Sample ID:	PJC-MRS01-DU1-SS0201

MRSPP Menu:	None
MRSPP Note:	

Latitude:	21.574553591
Longitude:	-157.886152722

The parcels for DU1 are used for farming. Area has been developed agriculturally.

N21.34476 W157.53167

Barrier:		***Topography:***	Flat
Vegetation:	Grasses	***Surface Feature:***	
Drainage:	Manmade Ditch	***Surface Debris:***	None
SoilType:	Mixed	***Subsurface Met:***	N/A
SoilColor:	Brown	***MECMD:***	None



73.JPG
Farm land



74.JPG
Farm land



75.JPG
Farm land

APPENDIX F

Analytical Data
Electronic Only

Lot # D8G210174 (Revision 2)

Report Cover Page 1
Case Narrative 2
Methods Summary 7
Method / Analyst Summary 8
Sample Summary 9
QC Data Association Summary 10
LC/MS Forms 12
Metals Forms 63
Metals Forms (cont.) 139
Wet Chemistry Forms 161
Chain of Custody 165
Sample Receipt Documents 169

Supporting Documentation 171
LC/MS Raw Data 171
LC/MS Raw Data (cont.) 305
LC/MS Raw Data (cont.) 459
LC/MS Raw Data (cont.) 625
ICPMS Metals Raw Data 759
ICPMS Metals Raw Data (cont.) 837
ICPMS Metals Raw Data (cont.) 923
ICPMS Metals Raw Data (cont.) 1004
Wet Chemistry Raw Data 1084
Percent Moisture 1084

Total Number of Pages in this Package 1087

Close Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Huntsville MMRP FUDS SI Project

Subcontract No. 744647

D8G210174

Tammy Chang

Parsons Corporation
8000 Centre Park Drive
Suite 200
Austin, TX 78754

TestAmerica Denver

M. Elaine Walker
Project Manager

August 11, 2008
Revision 2: September 8, 2008

Case Narrative – Rev. 2: September 8, 2008
Lot D8G210174

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The results relate only to the samples in this report and meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

Manual integrations are summarized by analytical batch and the summary reports are included with the report forms, organized by method and batch.

Sample Receiving

The samples presented in this report were received at TestAmerica Denver under chain of custody on July 21, 2008. The samples were received in good condition at temperatures of 15.1°C, 19.3°C, 15.6°C and 16.8°C.

An MS/MSD was performed on samples D8G210174-001 (PJC-MRS01-SW-02) and -003 (PJC-MRS01-DU2-SS-02-02). The laboratory triplicate was logged as samples D8G210174-004 (PJC-MRS01-DU2-SS-02-03-A), -005 (PJC-MRS01-DU2-SS-02-03-B), and -006 (PJC-MRS01-DU2-SS-02-03-C).

Per the Parsons Huntsville Hawaii QAS; the soil samples are reported "as is" without % moisture correction. The entire soil sample must be dried, sieved, and aliquotted per SOP DV-OP-0014.

LC/MS Explosives, SW846 8321A

The solid samples associated with this SDG were air dried, ground, and sieved per the applicable procedure.

The MS/MSD pair associated with aqueous batch 8203541 was performed on sample D8G210174-001 (PJC-MRS01-SW-02), and was within the control limits.

The MS/MSD pair associated with solid batch 8206281 was performed on sample D8G210174-003 (PJC-MRS01-DU2-SS-02-02), and was within the control limits.

The CCV for PETN associated with samples D8G210174-002 through -006 and -018 through -020 in solid batch 8206281 exceeded the upper control limit. Associated sample results should be considered valid because none of the target compounds were detected in these samples.

Total Metals, SW846 6020

The MS/MSD associated with aqueous batch 8204435 was performed on sample D8G210174-001 (PJC-MRS01-SW-02), and was within the control limits.

The serial dilution and post digestion spike associated with aqueous batch 8204435 were performed on sample D8G210174-001 (PJC-MRS01-SW-02), and were within control limits. All the samples in the batch were less than 100x the respective MDLs for the elements of concern, so the PDS applies.

Case Narrative – Rev. 2: September 8, 2008
Lot D8G210174

The MS/MSD associated with solid batch 8204479 was performed on sample D8G210174-003 (PJC-MRS01-DU2-SS-02-02), and was outside the established control limits for antimony, copper, and zinc.

A second MS/MSD associated with solid batch 8204480 was performed on sample D8G210174-012 (PJC-MRS01-SD-03), and was outside the established control limits for antimony, copper, and zinc.

The serial dilution (SD) and post digestion spike (PDS) associated with solid batch 8204479 were performed on sample D8G210174-003 (PJC-MRS01-DU2-SS-02-02). The SD was outside the established control limits for copper, but the PDS was within limits. All of the samples in the batch were less than 100x the respective MDLs for antimony, so the PDS applies to this element. There were samples in the batch that were over 100x the respective MDLs for copper, lead, and zinc, so the PDS does not apply to those elements.

The SD and PDS associated with solid batch 8204480 were performed on sample D8G210174-012 (PJC-MRS01-SD-03), and were within control limits. All of the samples in the batch were less than 100x the respective MDLs for antimony and lead, so the PDS applies to those elements. There were samples in the batch that were over 100x the respective MDLs for copper and zinc, so the PDS does not apply to those elements.

Zinc was detected in the method blank associated with solid batch 8204480. However, because the result was less than ½ the reporting limit, no further corrective action was necessary.

General Chemistry, MCAWW 160.3 MOD
The method 160.3 duplicate analysis associated with samples D8G210174-012 ((PJC-MRS01-SD-03) and D8G210174-016 (PJC-MRS01-SD-01) was performed on a sample from a different lot, and was within control limits.

Revision 1 - Explanation of Changes
For Total Metals, SW846 6020:

> On page two of the case narrative – The last sentence of the first and second paragraphs have been deleted.
>
> The last paragraph in the Total Metals, SW846 6020 section of the case narrative has been revised to read: "Zinc was detected in the method blank associated with solid batch 8204480. However, because the result was less than ½ the reporting limit, no further corrective action was necessary."

Pages 4 & 5 of the report were replaced – the incorrect Quality Control Definitions and Terms were in the report.

Pages 6 through 8 (Executive Summary Report) were removed from the report per client request.

Revision 2 – Explanation of Changes
Per client request, samples D8G210174-018 (PJC-MRS01-AU1-SS-02-01), D8G210174-019 (PJC-MRS01-AU1-SS-02-02), and D8G210174-020 (PJC-MRS01-AU1-SS-02-03) were reanalyzed for SW846 6020 total antimony, copper, lead, and zinc to verify the triplicate results

from the original analysis. The reanalyses have been provided as an addendum data package to the original report.

A MS/MSD analyses pair associated with the batch (8246402) were not run with the reanalysis due to limited sample volume. A LCS and blank were analyzed to provide evidence of lab precision.

The SD and PDS associated with batch 8246402 were performed on sample D8G210174-018 (PJC-MRS01-AU1-SS-02-01), and were outside the established control limits for copper and zinc. These elements were flagged accordingly. All of the samples were less than 100x the MDL for antimony, so the PDS applies to this element. There were samples that were greater than 100x the MDL for lead, so the PDS does not apply to these elements.

Parsons / Huntsville SI / SE and SW Regions
Quality Control Definitions of Terms

Term	Definition
Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (e.g., Ottawa sand, glass beads, or Teflon chips) for soil and sediment samples that is spiked with known amounts of representative target analytes and required surrogates. An LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. An LCSD is a second Laboratory Control Sample.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MS/MSD(s) are carried throughout the entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD results is only representative of the sample that was spiked.
Method Blank (MB)	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate	Organic constituents not expected to be detected in environmental media and added to every field and QC sample at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical processes.
Sample Duplicate	A second aliquot of an environmental sample, taken from the same sample container when possible, that is processed independently from the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative of the precision for other samples in the batch.
Method Detection Limit (MDL)	The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from replicate analyses of low-level standards, long-term blanks and verification of the calculated MDL in a typical representative matrix.
Reporting Limit (RL)	The reporting limit is normally the lowest level at which measurements become quantitatively meaningful, i.e., the practical quantitation limit (PQL), which is at least three times greater than the MDL. Some projects require RLs that are less than the quantitation limit to achieve particular maximum contaminant levels (MCLs) or relevant and appropriate requirements (ARARs), but RLs cannot be less than the statistically determined MDL.

Parsons / Huntsville SI / SE and SW Regions
Quality Control Definitions of Terms

Qualifier	Definition
U	Undetected at the MDL. The associated data value is equal to the MDL, adjusted by any dilution factor introduced during the extraction and/or analysis, percent solid correction, or sample weight/volume adjustment.
J	Estimated. The analyte was positively identified and the quantitation is estimated. (For example, matrix interference or concentrations outside the calibration range).
B	Blank contamination. The analyte was detected in the associated method blank at a concentration greater than one-half the reporting limit.
B	Metals Forms 3, 5B and 9 (ICB, CCB, Post-Digestion Spike and Serial Dilutions): Analyte was detected above the method detection limit but below the reporting limit.
Q	One or more quality control criteria (for example, LCS recovery, surrogate recovery) failed. Data usability should be carefully assessed by the project team.
a	Spiked analyte recovery is outside control limit.
"0.0"	The recovery and RPD were not calculated or were estimated because the sample amount was greater than four times the spike amount.
"0.0"	The recovery and RPD were not calculated or were estimated because a dilution was performed.
N	Inorganics: Spiked analyte recovery is outside stated control limits.
a	Organics: Spiked analyte recovery is outside stated control limits.
*	Surrogate or LCS is outside control limits.

METHODS SUMMARY

D8G210174

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
ICP-MS (6020)	SW846 6020	SW846 3020A
ICP-MS (6020)	SW846 6020	SW846 3050B
LCMS by 8321A	SW846 8321A	
LCMS by 8321A	SW846 8321A	SW846 8330B
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D8G210174

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 160.3 MOD	ReAnna Davis	002266
SW846 6020	Thomas Lill	006929
SW846 6020	Thomas Lill	6929
SW846 8321A	Andrew Meyer	003649

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D8G210174

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KRW1L	001	PJC-MRS01-SW-02	07/15/08	13:42
KRW1Q	002	PJC-MRS01-DU2-SS-02-01	07/17/08	11:40
KRW1W	003	PJC-MRS01-DU2-SS-02-02	07/17/08	11:40
KRW1X	004	PJC-MRS01-DU2-SS-02-03-A	07/17/08	11:40
KRW2R	005	PJC-MRS01-DU2-SS-02-03-B	07/17/08	11:40
KRW2T	006	PJC-MRS01-DU2-SS-02-03-C	07/17/08	11:40
KRW2V	007	PJC-MRS01-EB-01	07/16/08	08:50
KRW2W	008	PJC-MRS01-AU2-SS-02-01	07/14/08	11:07
KRW2X	009	PJC-MRS01-AU2-SS-02-02	07/14/08	11:07
KRW20	010	PJC-MRS01-AU2-SS-02-03	07/14/08	11:07
KRW22	011	PJC-MRS01-SW-03	07/15/08	14:09
KRW24	012	PJC-MRS01-SD-03	07/15/08	14:37
KRW25	013	PJC-MRS01-DU3-SS-02-01	07/11/08	15:17
KRW26	014	PJC-MRS01-DU3-SS-02-02	07/11/08	15:17
KRW27	015	PJC-MRS01-DU3-SS-02-03	07/11/08	15:17
KRW28	016	PJC-MRS01-SD-01	07/16/08	15:47
KRW29	017	PJC-MRS01-SW-01	07/16/08	15:30
KRW3C	018	PJC-MRS01-AU1-SS-02-01	07/17/08	12:57
KRW3D	019	PJC-MRS01-AU1-SS-02-02	07/17/08	12:57
KRW3E	020	PJC-MRS01-AU1-SS-02-03	07/17/08	12:57

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D8G210174

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 8321A		8203541	8203365
	WATER	SW846 6020		8204435	8204258
002	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
003	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
004	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
005	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
006	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
007	WATER	SW846 8321A		8203541	8203365
	WATER	SW846 6020		8204435	8204258
008	SOLID	SW846 8321A		8205508	
	SOLID	SW846 6020		8204479	8204289
009	SOLID	SW846 8321A		8205508	
	SOLID	SW846 6020		8204479	8204289
010	SOLID	SW846 8321A		8205508	
	SOLID	SW846 6020		8204479	8204289
011	WATER	SW846 8321A		8203541	8203365
	WATER	SW846 6020		8204435	8204258
012	SOLID	SW846 8321A		8206526	8206331
	SOLID	SW846 6020		8204480	8204290
	SOLID	MCAWW 160.3 MOD		8218179	8219161
013	SOLID	SW846 8321A		8205508	
	SOLID	SW846 6020		8204479	8204289
014	SOLID	SW846 8321A		8205508	
	SOLID	SW846 6020		8204479	8204289

(Continued on next page)

QC DATA ASSOCIATION SUMMARY

D8G210174

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
015	SOLID	SW846 8321A		8205508	
	SOLID	SW846 6020		8204479	8204289
016	SOLID	SW846 8321A		8206526	8206331
	SOLID	SW846 6020		8204480	8204290
	SOLID	MCAWW 160.3 MOD		8218179	8219161
017	WATER	SW846 8321A		8203541	8203365
	WATER	SW846 6020		8204435	8204258
018	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
019	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289
020	SOLID	SW846 8321A		8206281	8206177
	SOLID	SW846 6020		8204479	8204289

TestAmerica

LC/MS

CLP-Like Forms

Lot ID: D8G210174

Client: Parsons

Method: 8321A Explosives

Associated Sample(s): -001 through -020

Batch: 8203541, 8205508, 8206281, & 8206526

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-001
Matrix:	WATER	**Lab WorkOrder:**	KRW1L1AF
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 13:42
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 19:58
Sample Aliquot:	990 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	3535

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.010	0.010	0.12	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.011	0.011	0.12	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.021	0.021	0.12	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.022	0.022	0.20	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.025	0.025	0.20	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.026	0.026	0.20	U
2691-41-0	HMX	Andrew Meyer	AM	0.019	0.019	0.12	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.033	0.033	0.12	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.045	0.045	0.15	U
78-11-5	PETN	Andrew Meyer	AM	0.015	0.015	0.12	U
121-82-4	RDX	Andrew Meyer	AM	0.021	0.021	0.12	U
479-45-8	Tetryl	Andrew Meyer	AM	0.021	0.021	0.12	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	72	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-002
Matrix:	SOLID	**Lab WorkOrder:**	KRW1Q1AA
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 11:59
Sample Aliquot:	10.27 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	141	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-003
Matrix:	SOLID	**Lab WorkOrder:**	KRW1W1AA
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 12:16
Sample Aliquot:	10.21 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	114	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-03-A
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-004
Matrix:	SOLID	**Lab WorkOrder:**	KRW1X1AA
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 13:05
Sample Aliquot:	9.81 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	111	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-03-B
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-005
Matrix:	SOLID	**Lab WorkOrder:**	KRW2R1AA
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 13:22
Sample Aliquot:	10.03 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	107	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-03-C
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-006
Matrix:	SOLID	**Lab WorkOrder:**	KRW2T1AA
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 13:38
Sample Aliquot:	10.25 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	91	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-EB-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-007
Matrix:	WATER	**Lab WorkOrder:**	KRW2V1AF
% Moisture:	N/A	**Date/Time Collected:**	07/16/08 08:50
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 20:47
Sample Aliquot:	1058 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	3535

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.010	0.010	0.12	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.011	0.011	0.12	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.021	0.021	0.12	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.022	0.022	0.20	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.025	0.025	0.20	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.026	0.026	0.20	U
2691-41-0	HMX	Andrew Meyer	AM	0.019	0.019	0.12	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.033	0.033	0.12	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.045	0.045	0.15	U
78-11-5	PETN	Andrew Meyer	AM	0.015	0.015	0.12	U
121-82-4	RDX	Andrew Meyer	AM	0.021	0.021	0.12	U
479-45-8	Tetryl	Andrew Meyer	AM	0.021	0.021	0.12	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	68	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU2-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-008
Matrix:	SOLID	**Lab WorkOrder:**	KRW2W1AA
% Moisture:		**Date/Time Collected:**	07/14/08 11:07
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 20:45
Sample Aliquot:	9.96 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	101	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU2-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-009
Matrix:	SOLID	**Lab WorkOrder:**	KRW2X1AA
% Moisture:		**Date/Time Collected:**	07/14/08 11:07
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 21:01
Sample Aliquot:	10.01 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	99	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU2-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-010
Matrix:	SOLID	**Lab WorkOrder:**	KRW201AA
% Moisture:		**Date/Time Collected:**	07/14/08 11:07
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 21:17
Sample Aliquot:	10.02 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	92	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-011
Matrix:	WATER	**Lab WorkOrder:**	KRW221AF
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 14:09
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 21:04
Sample Aliquot:	1055 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	3535

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.010	0.010	0.12	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.011	0.011	0.12	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.021	0.021	0.12	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.022	0.022	0.20	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.025	0.025	0.20	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.026	0.026	0.20	U
2691-41-0	HMX	Andrew Meyer	AM	0.019	0.019	0.12	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.033	0.033	0.12	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.045	0.045	0.15	U
78-11-5	PETN	Andrew Meyer	AM	0.015	0.015	0.12	U
121-82-4	RDX	Andrew Meyer	AM	0.021	0.021	0.12	U
479-45-8	Tetryl	Andrew Meyer	AM	0.021	0.021	0.12	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	70	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SD-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-012
Matrix:	SOLID	**Lab WorkOrder:**	KRW241AC
% Moisture:	58	**Date/Time Collected:**	07/15/08 14:37
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 21:00
QC Batch ID:	8206526	**Date/Time Analyzed:**	07/29/08 23:13
Sample Aliquot:	9.92 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	111	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU3-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-013
Matrix:	SOLID	**Lab WorkOrder:**	KRW251AA
% Moisture:		**Date/Time Collected:**	07/11/08 15:17
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 21:34
Sample Aliquot:	10.02 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	103	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU3-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-014
Matrix:	SOLID	**Lab WorkOrder:**	KRW261AA
% Moisture:		**Date/Time Collected:**	07/11/08 15:17
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 21:50
Sample Aliquot:	10.07 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	102	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU3-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-015
Matrix:	SOLID	**Lab WorkOrder:**	KRW271AA
% Moisture:		**Date/Time Collected:**	07/11/08 15:17
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 22:07
Sample Aliquot:	10.08 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	82	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SD-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-016
Matrix:	SOLID	**Lab WorkOrder:**	KRW281AC
% Moisture:	33	**Date/Time Collected:**	07/16/08 15:47
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 21:00
QC Batch ID:	8206526	**Date/Time Analyzed:**	07/30/08 03:22
Sample Aliquot:	9.99 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	119	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-017
Matrix:	WATER	**Lab WorkOrder:**	KRW291AF
% Moisture:	N/A	**Date/Time Collected:**	07/16/08 15:30
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 21:20
Sample Aliquot:	1048 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	3535

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.010	0.010	0.12	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.011	0.011	0.12	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.021	0.021	0.12	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.022	0.022	0.20	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.025	0.025	0.20	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.026	0.026	0.20	U
2691-41-0	HMX	Andrew Meyer	AM	0.019	0.019	0.12	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.033	0.033	0.12	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.045	0.045	0.15	U
78-11-5	PETN	Andrew Meyer	AM	0.015	0.015	0.12	U
121-82-4	RDX	Andrew Meyer	AM	0.021	0.021	0.12	U
479-45-8	Tetryl	Andrew Meyer	AM	0.021	0.021	0.12	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	59	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-018
Matrix:	SOLID	**Lab WorkOrder:**	KRW3C1AA
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 14:11
Sample Aliquot:	10.14 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	100	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-019
Matrix:	SOLID	**Lab WorkOrder:**	KRW3D1AA
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 14:28
Sample Aliquot:	10.26 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	**0.075**	0.0082	0.10	J
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	100	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-020
Matrix:	SOLID	**Lab WorkOrder:**	KRW3E1AA
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 14:45
Sample Aliquot:	9.94 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U Q
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	103	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G210000-541B
Matrix:	WATER	**Lab WorkOrder:**	KRW7L1AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 19:08
Sample Aliquot:	1000 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	3535

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.010	0.010	0.12	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.011	0.011	0.12	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.022	0.022	0.12	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.021	0.021	0.12	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.022	0.022	0.20	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.025	0.025	0.20	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.019	0.019	0.12	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.026	0.026	0.20	U
2691-41-0	HMX	Andrew Meyer	AM	0.019	0.019	0.12	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.033	0.033	0.12	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.045	0.045	0.15	U
78-11-5	PETN	Andrew Meyer	AM	0.015	0.015	0.12	U
121-82-4	RDX	Andrew Meyer	AM	0.021	0.021	0.12	U
479-45-8	Tetryl	Andrew Meyer	AM	0.021	0.021	0.12	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	72	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G230000-508B
Matrix:	SOLID	**Lab WorkOrder:**	KR3EL1AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 19:55
Sample Aliquot:	10.04 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	104	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G230000-508B
Matrix:	SOLID	**Lab WorkOrder:**	KR3EL1AD
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 20:28
Sample Aliquot:	9.98 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	121	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-281B
Matrix:	SOLID	**Lab WorkOrder:**	KR4C61AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 11:09
Sample Aliquot:	10.14 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	116	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-281B
Matrix:	SOLID	**Lab WorkOrder:**	KR4C61AD
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 11:43
Sample Aliquot:	9.92 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	126	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-526B
Matrix:	SOLID	**Lab WorkOrder:**	KR5MD1AA
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 21:00
QC Batch ID:	8206526	**Date/Time Analyzed:**	07/29/08 22:40
Sample Aliquot:	10.28 g	**Instrument ID:**	LCMS4
Dilution Factor:	1	**Extraction Method:**	8330B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
99-35-4	1,3,5-Trinitrobenzene	Andrew Meyer	AM	0.013	0.013	0.10	U
99-65-0	1,3-Dinitrobenzene	Andrew Meyer	AM	0.0071	0.0071	0.10	U
118-96-7	2,4,6-Trinitrotoluene	Andrew Meyer	AM	0.0050	0.0050	0.10	U
121-14-2	2,4-Dinitrotoluene	Andrew Meyer	AM	0.0082	0.0082	0.10	U
606-20-2	2,6-Dinitrotoluene	Andrew Meyer	AM	0.020	0.020	0.10	U
35572-78-2	2-Amino-4,6-dinitrotoluene	Andrew Meyer	AM	0.012	0.012	0.10	U
88-72-2	2-Nitrotoluene	Andrew Meyer	AM	0.0057	0.0057	0.10	U
99-08-1	3-Nitrotoluene	Andrew Meyer	AM	0.013	0.013	0.10	U
19406-51-0	4-Amino-2,6-dinitrotoluene	Andrew Meyer	AM	0.0051	0.0051	0.10	U
99-99-0	4-Nitrotoluene	Andrew Meyer	AM	0.011	0.011	0.10	U
2691-41-0	HMX	Andrew Meyer	AM	0.0058	0.0058	0.10	U
98-95-3	Nitrobenzene	Andrew Meyer	AM	0.011	0.011	0.10	U
55-63-0	Nitroglycerin	Andrew Meyer	AM	0.010	0.010	0.10	U
78-11-5	PETN	Andrew Meyer	AM	0.0052	0.0052	0.10	U
121-82-4	RDX	Andrew Meyer	AM	0.0043	0.0043	0.10	U
479-45-8	Tetryl	Andrew Meyer	AM	0.0076	0.0076	0.10	U

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	96	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Surrogate Recovery Summary

Lab Name: TESTAMERICA DENVER **Extraction** IB7BXMR
Lot/SDG Number: D8G210174 **QC Batch ID:** 8203541

Client ID	Work Order	SRG1	SRG2	SRG3	SRG4	SRG5	SRG6	SRG7	SRG8	TOT OUT
PJC-MRS01-SW-02	KRW1L1AF	72								0
PJC-MRS01-SW-02 MS	KRW1L1AQ	53								0
PJC-MRS01-SW-02 MSD	KRW1L1AR	53								0
PJC-MRS01-SW-03	KRW221AF	70								0
PJC-MRS01-SW-01	KRW291AF	59								0
PJC-MRS01-EB-01	KRW2V1AF	68								0
INTRA-LAB BLANK	KRW7L1AA	72								0
CHECK SAMPLE	KRW7L1AC	55								0
DUPLICATE CHECK	KRW7L1AD	59								0

Surrogate Number	Surrogate Name	Lower Control Limit	Upper Control Limit
SRG 1	Nitrobenzene-d5	50	150

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Surrogate Recovery Summary

Lab Name: TESTAMERICA DENVER **Extraction** A12BXHI
Lot/SDG Number: D8G210174 **QC Batch ID:** 8205508

Client ID	Work Order	SRG1	SRG2	SRG3	SRG4	SRG5	SRG6	SRG7	SRG8	TOT OUT
INTRA-LAB BLANK	KR3EL1AA	104								0
CHECK SAMPLE	KR3EL1AC	97								0
INTRA-LAB BLANK	KR3EL1AD	121								0
PJC-MRS01-AU2-SS-02-03	KRW201AA	92								0
PJC-MRS01-DU3-SS-02-01	KRW251AA	103								0
PJC-MRS01-DU3-SS-02-02	KRW261AA	102								0
PJC-MRS01-DU3-SS-02-03	KRW271AA	82								0
PJC-MRS01-AU2-SS-02-01	KRW2W1AA	101								0
PJC-MRS01-AU2-SS-02-02	KRW2X1AA	99								0

Surrogate Number	Surrogate Name	Lower Control Limit	Upper Control Limit
SRG 1	Nitrobenzene-d5	50	150

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Surrogate Recovery Summary

Lab Name: TESTAMERICA DENVER **Extraction** A12BXHI
Lot/SDG Number: D8G210174 **QC Batch ID:** 8206281

Client ID	Work Order	SRG1	SRG2	SRG3	SRG4	SRG5	SRG6	SRG7	SRG8	TOT OUT
INTRA-LAB BLANK	KR4C61AA	116								0
CHECK SAMPLE	KR4C61AC	109								0
INTRA-LAB BLANK	KR4C61AD	126								0
PJC-MRS01-DU2-SS-02-01	KRW1Q1AA	141								0
PJC-MRS01-DU2-SS-02-02	KRW1W1AA	114								0
PJC-MRS01-DU2-SS-02-02 MS	KRW1W1AG	108								0
PJC-MRS01-DU2-SS-02-02 MSD	KRW1W1AH	90								0
PJC-MRS01-DU2-SS-02-03-A	KRW1X1AA	111								0
PJC-MRS01-DU2-SS-02-03-B	KRW2R1AA	107								0
PJC-MRS01-DU2-SS-02-03-C	KRW2T1AA	91								0
PJC-MRS01-AU1-SS-02-01	KRW3C1AA	100								0
PJC-MRS01-AU1-SS-02-02	KRW3D1AA	100								0
PJC-MRS01-AU1-SS-02-03	KRW3E1AA	103								0

Surrogate Number	Surrogate Name	Lower Control Limit	Upper Control Limit
SRG 1	Nitrobenzene-d5	50	150

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Surrogate Recovery Summary

Lab Name: TESTAMERICA DENVER **Extraction** A12BXMR
Lot/SDG Number: D8G210174 **QC Batch ID:** 8206526

Client ID	Work Order	SRG1	SRG2	SRG3	SRG4	SRG5	SRG6	SRG7	SRG8	TOT OUT
LAB MS/MSD MS	KR5C21C4	115								0
LAB MS/MSD MSD	KR5C21C5	102								0
INTRA-LAB BLANK	KR5MD1AA	96								0
CHECK SAMPLE	KR5MD1AC	101								0
PJC-MRS01-SD-03	KRW241AC	111								0
PJC-MRS01-SD-01	KRW281AC	119								0

Surrogate Number	Surrogate Name	Lower Control Limit	Upper Control Limit
SRG 1	Nitrobenzene-d5	50	150

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G210000-541C
Matrix:	WATER	**Lab WorkOrder:**	KRW7L1AC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 19:25
Sample Aliquot:	1000 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
1,3-Dinitrobenzene	0.500	0.441	88		65 - 133
2,4-Dinitrotoluene	0.500	0.433	87		66 - 129
2,6-Dinitrotoluene	0.500	0.405	81		63 - 131
Nitrobenzene	0.500	0.261	52		39 - 143
Nitroglycerin	0.500	0.404	81		39 - 144
1,3,5-Trinitrobenzene	0.500	0.446	89		47 - 139
2,4,6-Trinitrotoluene	0.500	0.406	81		33 - 142
HMX	0.500	0.473	95		57 - 138
RDX	0.500	0.513	103		74 - 129
Tetryl	0.500	0.528	106		10 - 136
2-Nitrotoluene	0.500	0.222	44		32 - 129
3-Nitrotoluene	0.500	0.285	57		30 - 134
4-Nitrotoluene	0.500	0.345	69		35 - 138
4-Amino-2,6-dinitrotoluene	0.500	0.437	87		65 - 129
2-Amino-4,6-dinitrotoluene	0.500	0.425	85		64 - 136
PETN	0.500	0.400	80		23 - 175

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	55	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G230000-508C
Matrix:	SOLID	**Lab WorkOrder:**	KR3EL1AC
% Moisture:	0.0	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/23/08 22:00
QC Batch ID:	8205508	**Date/Time Analyzed:**	07/29/08 20:12
Sample Aliquot:	10.03 g	**Instrument ID:**	LCMS4
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
1,3-Dinitrobenzene	0.399	0.385	97		69 - 128
2,4-Dinitrotoluene	0.399	0.387	97		61 - 128
2,6-Dinitrotoluene	0.399	0.403	101		59 - 134
Nitrobenzene	0.399	0.387	97		59 - 150
Nitroglycerin	0.399	0.360	90		32 - 135
1,3,5-Trinitrobenzene	0.399	0.386	97		47 - 131
2,4,6-Trinitrotoluene	0.399	0.381	96		58 - 130
HMX	0.399	0.432	108		53 - 115
RDX	0.399	0.439	110		70 - 121
Tetryl	0.399	0.428	107		10 - 160
2-Nitrotoluene	0.399	0.394	99		55 - 147
3-Nitrotoluene	0.399	0.421	106		51 - 153
4-Nitrotoluene	0.399	0.367	92		65 - 146
4-Amino-2,6-dinitrotoluene	0.399	0.396	99		60 - 133
2-Amino-4,6-dinitrotoluene	0.399	0.418	105		53 - 141
PETN	0.399	0.378	95		28 - 178

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	97	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-281C
Matrix:	SOLID	**Lab WorkOrder:**	KR4C61AC
% Moisture:	0.0	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 11:26
Sample Aliquot:	9.83 g	**Instrument ID:**	LCMS4
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
1,3-Dinitrobenzene	0.407	0.498	122		69 - 128
2,4-Dinitrotoluene	0.407	0.441	108		61 - 128
2,6-Dinitrotoluene	0.407	0.465	114		59 - 134
Nitrobenzene	0.407	0.464	114		59 - 150
Nitroglycerin	0.407	0.520	128		32 - 135
1,3,5-Trinitrobenzene	0.407	0.460	113		47 - 131
2,4,6-Trinitrotoluene	0.407	0.471	116		58 - 130
HMX	0.407	0.458	112		53 - 115
RDX	0.407	0.465	114		70 - 121
Tetryl	0.407	0.525	129		10 - 160
2-Nitrotoluene	0.407	0.419	103		55 - 147
3-Nitrotoluene	0.407	0.429	105		51 - 153
4-Nitrotoluene	0.407	0.384	94		65 - 146
4-Amino-2,6-dinitrotoluene	0.407	0.495	122		60 - 133
2-Amino-4,6-dinitrotoluene	0.407	0.574	141		53 - 141
PETN	0.407	0.497	122		28 - 178

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	109	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-526C
Matrix:	SOLID	**Lab WorkOrder:**	KR5MD1AC
% Moisture:	0.0	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 21:00
QC Batch ID:	8206526	**Date/Time Analyzed:**	07/29/08 22:57
Sample Aliquot:	10.08 g	**Instrument ID:**	LCMS4
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
1,3-Dinitrobenzene	0.397	0.451	114		69 - 128
2,4-Dinitrotoluene	0.397	0.305	77		61 - 128
2,6-Dinitrotoluene	0.397	0.401	101		59 - 134
Nitrobenzene	0.397	0.395	99		59 - 150
Nitroglycerin	0.397	0.412	104		32 - 135
1,3,5-Trinitrobenzene	0.397	0.459	116		47 - 131
2,4,6-Trinitrotoluene	0.397	0.373	94		58 - 130
HMX	0.397	0.390	98		53 - 115
RDX	0.397	0.439	111		70 - 121
Tetryl	0.397	0.527	133		10 - 160
2-Nitrotoluene	0.397	0.388	98		55 - 147
3-Nitrotoluene	0.397	0.389	98		51 - 153
4-Nitrotoluene	0.397	0.346	87		65 - 146
4-Amino-2,6-dinitrotoluene	0.397	0.398	100		60 - 133
2-Amino-4,6-dinitrotoluene	0.397	0.438	110		53 - 141
PETN	0.397	0.415	105		28 - 178

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	101	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G210000-541L
Matrix:	WATER	**Lab WorkOrder:**	KRW7L1AD
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 19:41
Sample Aliquot:	1000 mL	**Instrument ID:**	LCMS4
Dilution Factor:	1		

Analyte	True	Found	C	% Rec	Q	RPD	Q	QC Limits	
								% Rec	RPD
1,3-Dinitrobenzene	0.500	0.473		95		6.9		65 - 133	30
2,4-Dinitrotoluene	0.500	0.448		90		3.4		66 - 129	30
2,6-Dinitrotoluene	0.500	0.439		88		8.1		63 - 131	30
Nitrobenzene	0.500	0.272		54		4.0		39 - 143	30
Nitroglycerin	0.500	0.442		88		9.0		39 - 144	30
1,3,5-Trinitrobenzene	0.500	0.472		94		5.7		47 - 139	30
2,4,6-Trinitrotoluene	0.500	0.448		90		10		33 - 142	30
HMX	0.500	0.491		98		3.6		57 - 138	30
RDX	0.500	0.461		92		11		74 - 129	30
Tetryl	0.500	0.552		110		4.5		10 - 136	30
2-Nitrotoluene	0.500	0.225		45		1.6		32 - 129	30
3-Nitrotoluene	0.500	0.302		60		5.8		30 - 134	30
4-Nitrotoluene	0.500	0.362		72		4.9		35 - 138	30
4-Amino-2,6-dinitrotoluene	0.500	0.474		95		8.2		65 - 129	30
2-Amino-4,6-dinitrotoluene	0.500	0.449		90		5.6		64 - 136	30
PETN	0.500	0.430		86		7.2		23 - 175	30

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	59	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-02
Lot/SDG Number:	D8G210174	**MS Lab Sample ID:**	D8G210174-001S
Matrix:	WATER	**MS Lab WorkOrder:**	KRW1L1AQ
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 13:42
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 20:14
MS Sample Aliquot:	1000 mL	**Instrument ID:**	LCMS4
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
1,3,5-Trinitrobenzene	0.500	0.010	U	0.445		89		47 - 139
1,3-Dinitrobenzene	0.500	0.011	U	0.425		85		65 - 133
2,4,6-Trinitrotoluene	0.500	0.022	U	0.382		76		33 - 142
2,4-Dinitrotoluene	0.500	0.019	U	0.405		81		66 - 129
2,6-Dinitrotoluene	0.500	0.022	U	0.392		78		63 - 131
2-Amino-4,6-dinitrotoluene	0.500	0.021	U	0.376		75		64 - 136
2-Nitrotoluene	0.500	0.022	U	0.281		56		32 - 129
3-Nitrotoluene	0.500	0.025	U	0.391		78		30 - 134
4-Amino-2,6-dinitrotoluene	0.500	0.019	U	0.446		89		65 - 129
4-Nitrotoluene	0.500	0.026	U	0.384		77		35 - 138
HMX	0.500	0.019	U	0.441		88		57 - 138
Nitrobenzene	0.500	0.033	U	0.251		50		39 - 143
Nitroglycerin	0.500	0.045	U	0.382		76		39 - 144
PETN	0.500	0.015	U	0.382		76		23 - 175
RDX	0.500	0.021	U	0.501		100		74 - 129
Tetryl	0.500	0.021	U	0.349		70		10 - 136

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	53	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-02
Lot/SDG Number:	D8G210174	**MS Lab Sample ID:**	D8G210174-003S
Matrix:	SOLID	**MS Lab WorkOrder:**	KRW1W1AG
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 12:32
MS Sample Aliquot:	9.92 g	**Instrument ID:**	LCMS4
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
1,3,5-Trinitrobenzene	0.403	0.013	U	0.344		85		47 - 131
1,3-Dinitrobenzene	0.403	0.0071	U	0.425		105		69 - 128
2,4,6-Trinitrotoluene	0.403	0.0050	U	0.386		96		58 - 130
2,4-Dinitrotoluene	0.403	0.0082	U	0.385		96		61 - 128
2,6-Dinitrotoluene	0.403	0.020	U	0.420		104		59 - 134
2-Amino-4,6-dinitrotoluene	0.403	0.012	U	0.408		101		53 - 141
2-Nitrotoluene	0.403	0.0057	U	0.406		101		55 - 147
3-Nitrotoluene	0.403	0.013	U	0.376		93		51 - 153
4-Amino-2,6-dinitrotoluene	0.403	0.0051	U	0.330		82		60 - 133
4-Nitrotoluene	0.403	0.011	U	0.372		92		65 - 146
HMX	0.403	0.0058	U	0.389		96		53 - 115
Nitrobenzene	0.403	0.011	U	0.426		106		59 - 150
Nitroglycerin	0.403	0.010	U	0.433		107		32 - 135
PETN	0.403	0.0052	U Q	0.456		113		28 - 178
RDX	0.403	0.0043	U	0.373		93		70 - 121
Tetryl	0.403	0.0076	U	0.357		89		10 - 160

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	108	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D8G210174	**MS Lab Sample ID:**	D8G240298-008S
Matrix:	SOLID	**MS Lab WorkOrder:**	KR5C21C4
% Moisture:	1.0	**Date/Time Collected:**	07/23/08 09:56
Basis:	Wet	**Date/Time Received:**	07/24/08 09:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 21:00
QC Batch ID:	8206526	**Date/Time Analyzed:**	07/30/08 01:59
MS Sample Aliquot:	9.98 g	**Instrument ID:**	LCMS4
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
1,3,5-Trinitrobenzene	0.401	0.013	U	0.442		110		47 - 131
1,3-Dinitrobenzene	0.401	0.0071	U	0.427		106		69 - 128
2,4,6-Trinitrotoluene	0.401	0.0050	U	0.430		107		58 - 130
2,4-Dinitrotoluene	0.401	0.0082	U	0.452		113		61 - 128
2,6-Dinitrotoluene	0.401	0.020	U	0.410		102		59 - 134
2-Amino-4,6-dinitrotoluene	0.401	0.012	U	0.464		116		53 - 141
2-Nitrotoluene	0.401	0.0057	U	0.428		107		55 - 147
3-Nitrotoluene	0.401	0.013	U	0.418		104		51 - 153
4-Amino-2,6-dinitrotoluene	0.401	0.0051	U	0.460		115		60 - 133
4-Nitrotoluene	0.401	0.011	U	0.393		98		65 - 146
HMX	0.401	0.0058	U	0.458		114		53 - 115
Nitrobenzene	0.401	0.011	U	0.433		108		59 - 150
Nitroglycerin	0.401	0.010	U	0.444		111		32 - 135
PETN	0.401	0.0052	U	0.434		108		28 - 178
RDX	0.401	0.0043	U	0.432		108		70 - 121
Tetryl	0.401	0.0076	U	0.488		122		10 - 160

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	115	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-02
Lot/SDG Number:	D8G210174	**MSD Lab Sample ID:**	D8G210174-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	KRW1L1AR
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 13:42
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/21/08 18:00
QC Batch ID:	8203541	**Date/Time Analyzed:**	07/31/08 20:31
MSD Sample Aliquot:	1000 mL	**Instrument ID:**	LCMS4
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
1,3,5-Trinitrobenzene	0.500	0.010	U	0.417		83		6.6		47 - 139	30
1,3-Dinitrobenzene	0.500	0.011	U	0.439		88		3.4		65 - 133	30
2,4,6-Trinitrotoluene	0.500	0.022	U	0.364		73		4.8		33 - 142	30
2,4-Dinitrotoluene	0.500	0.019	U	0.434		87		7.1		66 - 129	30
2,6-Dinitrotoluene	0.500	0.022	U	0.429		86		9.1		63 - 131	30
2-Amino-4,6-dinitrotoluene	0.500	0.021	U	0.359		72		4.6		64 - 136	30
2-Nitrotoluene	0.500	0.022	U	0.222		44		24		32 - 129	30
3-Nitrotoluene	0.500	0.025	U	0.302		60		26		30 - 134	30
4-Amino-2,6-dinitrotoluene	0.500	0.019	U	0.416		83		6.8		65 - 129	30
4-Nitrotoluene	0.500	0.026	U	0.337		67		13		35 - 138	30
HMX	0.500	0.019	U	0.407		81		8.0		57 - 138	30
Nitrobenzene	0.500	0.033	U	0.242		48		3.5		39 - 143	30
Nitroglycerin	0.500	0.045	U	0.426		85		11		39 - 144	30
PETN	0.500	0.015	U	0.422		84		10		23 - 175	30
RDX	0.500	0.021	U	0.450		90		11		74 - 129	30
Tetryl	0.500	0.021	U	0.372		74		6.3		10 - 136	30

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	53	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-02
Lot/SDG Number:	D8G210174	**MSD Lab Sample ID:**	D8G210174-003D
Matrix:	SOLID	**MSD Lab WorkOrder:**	KRW1W1AH
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 12:00
QC Batch ID:	8206281	**Date/Time Analyzed:**	07/30/08 12:49
MSD Sample Aliquot:	9.89 g	**Instrument ID:**	LCMS4
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
1,3,5-Trinitrobenzene	0.404	0.013	U	0.361		89		4.8		47 - 131	30
1,3-Dinitrobenzene	0.404	0.0071	U	0.352		87		19		69 - 128	30
2,4,6-Trinitrotoluene	0.404	0.0050	U	0.342		85		12		58 - 130	30
2,4-Dinitrotoluene	0.404	0.0082	U	0.383		95		0.67		61 - 128	30
2,6-Dinitrotoluene	0.404	0.020	U	0.406		100		3.4		59 - 134	30
2-Amino-4,6-dinitrotoluene	0.404	0.012	U	0.408		101		0.11		53 - 141	30
2-Nitrotoluene	0.404	0.0057	U	0.446		110		9.4		55 - 147	30
3-Nitrotoluene	0.404	0.013	U	0.384		95		1.9		51 - 153	30
4-Amino-2,6-dinitrotoluene	0.404	0.0051	U	0.270		67		20		60 - 133	30
4-Nitrotoluene	0.404	0.011	U	0.422		104		13		65 - 146	30
HMX	0.404	0.0058	U	0.403		100		3.6		53 - 115	30
Nitrobenzene	0.404	0.011	U	0.351		87		19		59 - 150	30
Nitroglycerin	0.404	0.010	U	0.412		102		4.8		32 - 135	30
PETN	0.404	0.0052	U Q	0.508		126		11		28 - 178	30
RDX	0.404	0.0043	U	0.364		90		2.5		70 - 121	30
Tetryl	0.404	0.0076	U	0.344		85		3.6		10 - 160	30

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	90	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D8G210174	**MSD Lab Sample ID:**	D8G240298-008D
Matrix:	SOLID	**MSD Lab WorkOrder:**	KR5C21C5
% Moisture:	1.0	**Date/Time Collected:**	07/23/08 09:56
Basis:	Wet	**Date/Time Received:**	07/24/08 09:00
Analysis Method:	8321A	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/24/08 21:00
QC Batch ID:	8206526	**Date/Time Analyzed:**	07/30/08 02:15
MSD Sample Aliquot:	9.93 g	**Instrument ID:**	LCMS4
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
1,3,5-Trinitrobenzene	0.403	0.013	U	0.395		98		11		47 - 131	30
1,3-Dinitrobenzene	0.403	0.0071	U	0.399		99		6.8		69 - 128	30
2,4,6-Trinitrotoluene	0.403	0.0050	U	0.385		96		11		58 - 130	30
2,4-Dinitrotoluene	0.403	0.0082	U	0.383		95		16		61 - 128	30
2,6-Dinitrotoluene	0.403	0.020	U	0.406		101		1.1		59 - 134	30
2-Amino-4,6-dinitrotoluene	0.403	0.012	U	0.435		108		6.6		53 - 141	30
2-Nitrotoluene	0.403	0.0057	U	0.401		100		6.5		55 - 147	30
3-Nitrotoluene	0.403	0.013	U	0.394		98		5.9		51 - 153	30
4-Amino-2,6-dinitrotoluene	0.403	0.0051	U	0.403		100		13		60 - 133	30
4-Nitrotoluene	0.403	0.011	U	0.376		93		4.5		65 - 146	30
HMX	0.403	0.0058	U	0.408		101		12		53 - 115	30
Nitrobenzene	0.403	0.011	U	0.409		102		5.5		59 - 150	30
Nitroglycerin	0.403	0.010	U	0.396		98		11		32 - 135	30
PETN	0.403	0.0052	U	0.427		106		1.4		28 - 178	30
RDX	0.403	0.0043	U	0.405		100		6.4		70 - 121	30
Tetryl	0.403	0.0076	U	0.452		112		7.7		10 - 160	30

CAS No.	Surrogate	% Rec	Lower Limit	Upper Limit	Q
4165-60-0	Nitrobenzene-d5	102	50	150	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	EX48G3127
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G210000-541B
Matrix:	WATER	**Lab Work Order:**	KRW7L1AA
Analysis Method:	8321A	**Date/Time Extracted:**	07/21/08 18:00
Extraction Method:	IB7BXMR	**Date/Time Analyzed:**	07/31/08 19:08
QC Batch ID:	8203541	**Instrument ID:**	LCMS4

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
PJC-MRS01-SW-02	KRW1L1AF	EX48G3127	07/31/08	19:58
PJC-MRS01-SW-02 MS	KRW1L1AQ S	EX48G3128	07/31/08	20:14
PJC-MRS01-SW-02 MSD	KRW1L1AR D	EX48G3129	07/31/08	20:31
PJC-MRS01-SW-03	KRW221AF	EX48G3131	07/31/08	21:04
PJC-MRS01-SW-01	KRW291AF	EX48G3132	07/31/08	21:20
PJC-MRS01-EB-01	KRW2V1AF	EX48G3130	07/31/08	20:47
CHECK SAMPLE	KRW7L1AC C	EX48G3125	07/31/08	19:25
DUPLICATE CHECK	KRW7L1AD L	EX48G3126	07/31/08	19:41

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	EX48G2935
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G230000-508B
Matrix:	SOLID	**Lab Work Order:**	KR3EL1AA
Analysis Method:	8321A	**Date/Time Extracted:**	07/23/08 22:00
Extraction Method:	A12BXHI	**Date/Time Analyzed:**	07/29/08 19:55
QC Batch ID:	8205508	**Instrument ID:**	LCMS4

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
CHECK SAMPLE	KR3EL1AC C	EX48G2935	07/29/08	20:12
CHECK SAMPLE	KR3EL1AC C	EX48G2935	07/29/08	20:12
PJC-MRS01-AU2-SS-02-03	KRW201AA	EX48G2939	07/29/08	21:17
PJC-MRS01-AU2-SS-02-03	KRW201AA	EX48G2939	07/29/08	21:17
PJC-MRS01-DU3-SS-02-01	KRW251AA	EX48G2940	07/29/08	21:34
PJC-MRS01-DU3-SS-02-01	KRW251AA	EX48G2940	07/29/08	21:34
PJC-MRS01-DU3-SS-02-02	KRW261AA	EX48G2941	07/29/08	21:50
PJC-MRS01-DU3-SS-02-02	KRW261AA	EX48G2941	07/29/08	21:50
PJC-MRS01-DU3-SS-02-03	KRW271AA	EX48G2942	07/29/08	22:07
PJC-MRS01-DU3-SS-02-03	KRW271AA	EX48G2942	07/29/08	22:07
PJC-MRS01-AU2-SS-02-01	KRW2W1AA	EX48G2937	07/29/08	20:45
PJC-MRS01-AU2-SS-02-01	KRW2W1AA	EX48G2937	07/29/08	20:45
PJC-MRS01-AU2-SS-02-02	KRW2X1AA	EX48G2938	07/29/08	21:01
PJC-MRS01-AU2-SS-02-02	KRW2X1AA	EX48G2938	07/29/08	21:01

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	EX48G2966
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-281B
Matrix:	SOLID	**Lab Work Order:**	KR4C61AA
Analysis Method:	8321A	**Date/Time Extracted:**	07/24/08 12:00
Extraction Method:	A12BXHI	**Date/Time Analyzed:**	07/30/08 11:09
QC Batch ID:	8206281	**Instrument ID:**	LCMS4

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
CHECK SAMPLE	KR4C61AC C	EX48G2966	07/30/08	11:26
CHECK SAMPLE	KR4C61AC C	EX48G2966	07/30/08	11:26
PJC-MRS01-DU2-SS-02-01	KRW1Q1AA	EX48G2968	07/30/08	11:59
PJC-MRS01-DU2-SS-02-01	KRW1Q1AA	EX48G2968	07/30/08	11:59
PJC-MRS01-DU2-SS-02-02	KRW1W1AA	EX48G2969	07/30/08	12:16
PJC-MRS01-DU2-SS-02-02	KRW1W1AA	EX48G2969	07/30/08	12:16
PJC-MRS01-DU2-SS-02-02 MS	KRW1W1AG S	EX48G2970	07/30/08	12:32
PJC-MRS01-DU2-SS-02-02 MS	KRW1W1AG S	EX48G2970	07/30/08	12:32
PJC-MRS01-DU2-SS-02-02 MSD	KRW1W1AH D	EX48G2971	07/30/08	12:49
PJC-MRS01-DU2-SS-02-02 MSD	KRW1W1AH D	EX48G2971	07/30/08	12:49
PJC-MRS01-DU2-SS-02-03-A	KRW1X1AA	EX48G2972	07/30/08	13:05
PJC-MRS01-DU2-SS-02-03-A	KRW1X1AA	EX48G2972	07/30/08	13:05
PJC-MRS01-DU2-SS-02-03-B	KRW2R1AA	EX48G2973	07/30/08	13:22
PJC-MRS01-DU2-SS-02-03-B	KRW2R1AA	EX48G2973	07/30/08	13:22
PJC-MRS01-DU2-SS-02-03-C	KRW2T1AA	EX48G2974	07/30/08	13:38
PJC-MRS01-DU2-SS-02-03-C	KRW2T1AA	EX48G2974	07/30/08	13:38
PJC-MRS01-AU1-SS-02-01	KRW3C1AA	EX48G2976	07/30/08	14:11
PJC-MRS01-AU1-SS-02-01	KRW3C1AA	EX48G2976	07/30/08	14:11
PJC-MRS01-AU1-SS-02-02	KRW3D1AA	EX48G2977	07/30/08	14:28
PJC-MRS01-AU1-SS-02-02	KRW3D1AA	EX48G2977	07/30/08	14:28
PJC-MRS01-AU1-SS-02-03	KRW3E1AA	EX48G2978	07/30/08	14:45
PJC-MRS01-AU1-SS-02-03	KRW3E1AA	EX48G2978	07/30/08	14:45

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Method Blank Summary

Lab Name:	TESTAMERICA DENVER	**Lab File ID:**	EX48G2956
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	R8G240000-526B
Matrix:	SOLID	**Lab Work Order:**	KR5MD1AA
Analysis Method:	8321A	**Date/Time Extracted:**	07/24/08 21:00
Extraction Method:	A12BXMR	**Date/Time Analyzed:**	07/29/08 22:40
QC Batch ID:	8206526	**Instrument ID:**	LCMS4

Client ID	Sample Work Order #	Lab File ID	Date Analyzed	Time Analyzed
LAB MS/MSD MS	KR5C21C4 S	EX48G2956	07/30/08	01:59
LAB MS/MSD MSD	KR5C21C5 D	EX48G2957	07/30/08	02:15
CHECK SAMPLE	KR5MD1AC C	EX48G2945	07/29/08	22:57
PJC-MRS01-SD-03	KRW241AC	EX48G2946	07/29/08	23:13
PJC-MRS01-SD-01	KRW281AC	EX48G2961	07/30/08	03:22

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Replicate Measurement Evaluation - Multi-increment Sampling
Lot#: D8G210174
Date: 8/1/2008

NC= Not calculable
ND= Not detected

Client Sample ID	PJC-MRS01-DU2-SS-02-03-A	PJC-MRS01-DU2-SS-02-03-B	PJC-MRS01-DU2-SS-02-03-C		average	Standard Deviation	%RSD
Lab Sample ID	D8G210174-004 (µg/Kg)	D8G210174-005 (µg/Kg)	D8G210174-006 (µg/Kg)				
4-Amino-2,6-dinitrotoluene	ND	ND	ND		NC	NC	NC
2-Amino-4,6-dinitrotoluene	ND	ND	ND		NC	NC	NC
1,3-Dinitrobenzene	ND	ND	ND		NC	NC	NC
2,4-Dinitrotoluene	ND	ND	ND		NC	NC	NC
2,6-Dinitrotoluene	ND	ND	ND		NC	NC	NC
HMX	ND	ND	ND		NC	NC	NC
Nitrobenzene	ND	ND	ND		NC	NC	NC
Nitroglycerin	ND	ND	ND		NC	NC	NC
2-Nitrotoluene	ND	ND	ND		NC	NC	NC
3-Nitrotoluene	ND	ND	ND		NC	NC	NC
4-Nitrotoluene	ND	ND	ND		NC	NC	NC
PETN	ND	ND	ND		NC	NC	NC
RDX	ND	ND	ND		NC	NC	NC
Tetryl	ND	ND	ND		NC	NC	NC
1,3,5-Trinitrobenzene	ND	ND	ND		NC	NC	NC
2,4,6-Trinitrotoluene	ND	ND	ND		NC	NC	NC

Manual Integration Summary for Parsons

8321A Explosives

	Lot: D8G210174					8203541						
Compound	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--
HMX 13C-4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX 13C-284 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Tetryl	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene-d4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene-d5 (Surrogate)	--	--	--	--	--	--	--	--	--	--	--	--
Nitroglycerin	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Amino-2,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Amino-4,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene-d3 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
PETN	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--

Legend (Why MI needed)		Reviewed By:
1 = Baseline event	4 = Computer did NOT ID analyte	8/4/08
2 = Split Peak	5 = Peak mis-ID by computer	
3 = Peak tailing	6 = other (specify)	

Table of Contents

Manual Integration Summary for Parsons

8321A Explosives

	Lot: D8G210174						8206281					
Compound	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--
HMX 13C-4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX 13C-284 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Tetryl	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene-d4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene-d5 (Surrogate)	--	--	--	--	--	--	--	--	--	--	--	--
Nitroglycerin	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Amino-2,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Amino-4,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene-d3 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
PETN	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--

Legend (Why MI needed)		Reviewed By:
1 = Baseline event	4 = Computer did NOT ID analyte	7/31/08
2 = Split Peak	5 = Peak mis-ID by computer	
3 = Peak tailing	6 = other (specify)	

TestAmerica

Table of Contents

Manual Integration Summary for Parsons

8321A Explosives

	Lot:	D8G210174			8206526							
Compound	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--
HMX 13C-4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX 13C-284 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Tetryl	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene-d4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene-d5 (Surrogate)	--	--	--	--	--	--	--	--	--	--	--	--
Nitroglycerin	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Amino-2,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Amino-4,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene-d3 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
PETN	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--

Legend (Why MI needed)		Reviewed By:
1 = Baseline event	4 = Computer did NOT ID analyte	7/30/08
2 = Split Peak	5 = Peak mis-ID by computer	
3 = Peak tailing	6 = other (specify)	

Table of Contents

Manual Integration Summary for Parsons

8321A Explosives

	Lot: D8G210174			8205508								
Compound	--	--	--	--	--	--	--	--	--	--	--	--
HMX	--	--	--	--	--	--	--	--	--	--	--	--
HMX 13C-4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX 13C-284 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
RDX	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Tetryl	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene-d4 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene-d5 (Surrogate)	--	--	--	--	--	--	--	--	--	--	--	--
Nitroglycerin	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Amino-2,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Amino-4,6-dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene-d3 (IS)	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
PETN	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--

Legend (Why MI needed)		Reviewed By:
1 = Baseline event	4 = Computer did NOT ID analyte	7/30/08
2 = Split Peak	5 = Peak mis-ID by computer	
3 = Peak tailing	6 = other (specify)	

TestAmerica

Table of Contents

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D8G210174

Client: Parsons

Method: 6020

Associated Sample(s): -001 through -020

Batch: 8204435, 8204479 & 8204480

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Parsons Corporation SDG No.: D8G210174

Lab Code: Case No.: SAS No.:

SOW No.:

Sample ID.	Lab Sample No.
PJC-MRS01-EB-01	D8G210174-007
PJC-MRS01-SW-01	D8G210174-017
PJC-MRS01-SW-02	D8G210174-001
PJC-MRS01-SW-02 MS	D8G210174-001S
PJC-MRS01-SW-02 MSD	D8G210174-001SD
PJC-MRS01-SW-03	D8G210174-011

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments: 6020

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 8/8/08 Title: Metals Analyst

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Parsons Corporation SDG No.: D8G210174

Lab Code: Case No.: SAS No.:

SOW No.:

Sample ID.	Lab Sample No.
PJC-MRS01-AU1-SS-02-01	D8G210174-018
PJC-MRS01-AU1-SS-02-02	D8G210174-019
PJC-MRS01-AU1-SS-02-03	D8G210174-020
PJC-MRS01-AU2-SS-02-01	D8G210174-008
PJC-MRS01-AU2-SS-02-02	D8G210174-009
PJC-MRS01-AU2-SS-02-03	D8G210174-010
PJC-MRS01-DU2-SS-02-01	D8G210174-002
PJC-MRS01-DU2-SS-02-02	D8G210174-003
PJC-MRS01-DU2-SS-02-02 MS	D8G210174-003S
PJC-MRS01-DU2-SS-02-02 MSD	D8G210174-003SD
PJC-MRS01-DU2-SS-02-03-A	D8G210174-004
PJC-MRS01-DU2-SS-02-03-B	D8G210174-005
PJC-MRS01-DU2-SS-02-03-C	D8G210174-006
PJC-MRS01-DU3-SS-02-01	D8G210174-013
PJC-MRS01-DU3-SS-02-02	D8G210174-014
PJC-MRS01-DU3-SS-02-03	D8G210174-015

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: 6020

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 8/8/08 Title: Metals Analyst

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Parsons Corporation SDG No.: D8G210174

Lab Code: Case No.: SAS No.:

SOW No.:

Sample ID.	Lab Sample No.
PJC-MRS01-SD-01	D8G210174-016
PJC-MRS01-SD-03	D8G210174-012
PJC-MRS01-SD-03 MS	D8G210174-012S
PJC-MRS01-SD-03 MSD	D8G210174-012SD

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: 6020

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 8/8/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-001
Matrix:	WATER	**Lab WorkOrder:**	KRW1L
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 13:42
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 18:31
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3020A

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.070	0.070	6.0	U
7440-50-8	Copper	Thomas Lill	TL	0.56	0.56	2.0	U
7439-92-1	Lead	Thomas Lill	TL	0.18	0.18	3.0	U
7440-66-6	Zinc	Thomas Lill	TL	2.0	2.0	20	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-002
Matrix:	SOLID	**Lab WorkOrder:**	KRW1Q
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:18
Sample Aliquot:	9.98 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.016**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**52**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**14**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**54**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-003
Matrix:	SOLID	**Lab WorkOrder:**	KRW1W
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:22
Sample Aliquot:	9.73 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.016**	0.014	0.25	J J
7440-50-8	Copper	Thomas Lill	TL	**56**	0.071	0.32	J
7439-92-1	Lead	Thomas Lill	TL	**12**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**54**	0.32	2.5	J

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-03-A
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-004
Matrix:	SOLID	**Lab WorkOrder:**	KRW1X
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:56
Sample Aliquot:	9.97 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.015**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**59**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**10**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**63**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-03-B
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-005
Matrix:	SOLID	**Lab WorkOrder:**	KRW2R
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:01
Sample Aliquot:	10 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**58**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**11**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**61**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-03-C
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-006
Matrix:	SOLID	**Lab WorkOrder:**	KRW2T
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:06
Sample Aliquot:	10.1 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**57**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**9.8**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**63**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-EB-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-007
Matrix:	WATER	**Lab WorkOrder:**	KRW2V
% Moisture:	N/A	**Date/Time Collected:**	07/16/08 08:50
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 18:55
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3020A

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.070	0.070	6.0	U
7440-50-8	Copper	Thomas Lill	TL	**2.1**	0.56	2.0	
7439-92-1	Lead	Thomas Lill	TL	**0.33**	0.18	3.0	J
7440-66-6	Zinc	Thomas Lill	TL	2.0	2.0	20	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU2-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-008
Matrix:	SOLID	**Lab WorkOrder:**	KRW2W
% Moisture:		**Date/Time Collected:**	07/14/08 11:07
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:10
Sample Aliquot:	10 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**33**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**8.7**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**17**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU2-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-009
Matrix:	SOLID	**Lab WorkOrder:**	KRW2X
% Moisture:		**Date/Time Collected:**	07/14/08 11:07
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:15
Sample Aliquot:	9.99 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**33**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**8.8**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**17**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU2-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-010
Matrix:	SOLID	**Lab WorkOrder:**	KRW20
% Moisture:		**Date/Time Collected:**	07/14/08 11:07
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:20
Sample Aliquot:	10.2 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**26**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**6.7**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**14**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-011
Matrix:	WATER	**Lab WorkOrder:**	KRW22
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 14:09
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 19:00
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3020A

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.070	0.070	6.0	U
7440-50-8	Copper	Thomas Lill	TL	0.56	0.56	2.0	U
7439-92-1	Lead	Thomas Lill	TL	0.18	0.18	3.0	U
7440-66-6	Zinc	Thomas Lill	TL	2.0	2.0	20	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SD-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-012
Matrix:	SOLID	**Lab WorkOrder:**	KRW24
% Moisture:	58	**Date/Time Collected:**	07/15/08 14:37
Basis:	Dry	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	08/05/08 09:00
QC Batch ID:	8204480	**Date/Time Analyzed:**	08/05/08 18:07
Sample Aliquot:	0.99 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.033	0.033	0.59	U J
7440-50-8	Copper	Thomas Lill	TL	**93**	0.17	0.75	J
7439-92-1	Lead	Thomas Lill	TL	**4.0**	0.043	0.94	
7440-66-6	Zinc	Thomas Lill	TL	**87**	0.74	5.9	B J

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU3-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-013
Matrix:	SOLID	**Lab WorkOrder:**	KRW25
% Moisture:		**Date/Time Collected:**	07/11/08 15:17
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:34
Sample Aliquot:	10.03 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**45**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**7.0**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**36**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU3-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-014
Matrix:	SOLID	**Lab WorkOrder:**	KRW26
% Moisture:		**Date/Time Collected:**	07/11/08 15:17
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:39
Sample Aliquot:	10.02 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**61**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**6.8**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**43**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU3-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-015
Matrix:	SOLID	**Lab WorkOrder:**	KRW27
% Moisture:		**Date/Time Collected:**	07/11/08 15:17
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:44
Sample Aliquot:	9.89 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**50**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**6.4**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**35**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SD-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-016
Matrix:	SOLID	**Lab WorkOrder:**	KRW28
% Moisture:	33	**Date/Time Collected:**	07/16/08 15:47
Basis:	Dry	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	08/05/08 09:00
QC Batch ID:	8204480	**Date/Time Analyzed:**	08/05/08 18:31
Sample Aliquot:	1.01 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.021	0.021	0.37	U
7440-50-8	Copper	Thomas Lill	TL	**98**	0.11	0.48	
7439-92-1	Lead	Thomas Lill	TL	**2.7**	0.027	0.60	
7440-66-6	Zinc	Thomas Lill	TL	**95**	0.47	3.7	B

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-017
Matrix:	WATER	**Lab WorkOrder:**	KRW29
% Moisture:	N/A	**Date/Time Collected:**	07/16/08 15:30
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 19:04
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3020A

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.070	0.070	6.0	U
7440-50-8	Copper	Thomas Lill	TL	0.56	0.56	2.0	U
7439-92-1	Lead	Thomas Lill	TL	0.18	0.18	3.0	U
7440-66-6	Zinc	Thomas Lill	TL	2.0	2.0	20	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-018
Matrix:	SOLID	**Lab WorkOrder:**	KRW3C
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:49
Sample Aliquot:	10.08 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.039**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**50**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**13**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**47**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-019
Matrix:	SOLID	**Lab WorkOrder:**	KRW3D
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:54
Sample Aliquot:	10.02 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.045**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**56**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**13**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**53**	0.32	2.5	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-020
Matrix:	SOLID	**Lab WorkOrder:**	KRW3E
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 20:58
Sample Aliquot:	10.18 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.048**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**140**	0.071	0.32	
7439-92-1	Lead	Thomas Lill	TL	**16**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**82**	0.32	2.5	

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	40.0	39.6	99.0	50.0	49.8	99.6	49.7	99.4	M
Copper	40.0	41.7	104.2	50.0	50.1	100.2	50.8	101.6	M
Lead	40.0	41.4	103.5	50.0	49.8	99.6	51.0	102.0	M
Zinc	40.0	39.1	97.8	50.0	50.6	101.2	50.1	100.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	50.5	101.0	50.1	100.2	M
Copper				50.0	50.1	100.2	50.8	101.6	M
Lead				50.0	50.3	100.6	49.5	99.0	M
Zinc				50.0	50.0	100.0	49.1	98.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	50.3	100.6			M
Copper				50.0	50.6	101.2			M
Lead				50.0	50.0	100.0			M
Zinc				50.0	49.6	99.2			M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	40.0	38.8	97.0	50.0	49.9	99.8	49.6	99.2	M
Copper	40.0	40.8	102.0	50.0	49.8	99.6	51.6	103.2	M
Lead	40.0	41.6	104.0	50.0	50.5	101.0	49.2	98.4	M
Zinc	40.0	38.7	96.8	50.0	49.0	98.0	49.3	98.6	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	49.5	99.0	49.0	98.0	M
Copper				50.0	52.4	104.8	52.3	104.6	M
Lead				50.0	50.1	100.2	49.1	98.2	M
Zinc				50.0	48.4	96.8	48.8	97.6	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	49.9	99.8	50.2	100.4	M
Copper				50.0	52.9	105.8	51.5	103.0	M
Lead				50.0	50.1	100.2	50.5	101.0	M
Zinc				50.0	48.8	97.6	49.6	99.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	40.0	38.9	97.2	50.0	49.3	98.6	49.4	98.8	M
Copper	40.0	40.9	102.2	50.0	50.6	101.2	52.2	104.4	M
Lead	40.0	40.4	101.0	50.0	50.9	101.8	49.8	99.6	M
Zinc	40.0	38.8	97.0	50.0	49.1	98.2	48.7	97.4	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	49.4	98.8	49.0	98.0	M
Copper				50.0	52.3	104.6	52.8	105.6	M
Lead				50.0	49.9	99.8	50.0	100.0	M
Zinc				50.0	47.7	95.4	48.8	97.6	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	49.1	98.2	49.5	99.0	M
Copper				50.0	52.7	105.4	50.9	101.8	M
Lead				50.0	49.2	98.4	50.0	100.0	M
Zinc				50.0	47.8	95.6	48.6	97.2	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

TestAmerica

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				1.00	0.976	97.6		
Copper				1.00	1.141	114.1		
Lead				1.00	1.080	108.0		
Zinc				10.00	10.220	102.2		

Comments:

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				1.00	1.016	101.6		
Copper				2.00			2.203	110.2
Lead				1.00	1.007	100.7		
Zinc				10.00	10.710	107.1		

Comments:

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				1.00	0.972	97.2		
Copper				1.00	1.056	105.6		
Lead				1.00	1.018	101.8		
Zinc				10.00	9.954	99.5		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G220000-435B
Matrix:	WATER	**Lab WorkOrder:**	KR03W
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 18:21
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3020A

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.070	0.070	6.0	U
7440-50-8	Copper	Thomas Lill	TL	0.56	0.56	2.0	U
7439-92-1	Lead	Thomas Lill	TL	0.18	0.18	3.0	U
7440-66-6	Zinc	Thomas Lill	TL	2.0	2.0	20	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G220000-479B
Matrix:	SOLID	**Lab WorkOrder:**	KR07W
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:08
Sample Aliquot:	10 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	**0.085**	0.071	0.32	J
7439-92-1	Lead	Thomas Lill	TL	0.018	0.018	0.40	U
7440-66-6	Zinc	Thomas Lill	TL	0.32	0.32	2.5	U

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G220000-480B
Matrix:	SOLID	**Lab WorkOrder:**	KR070
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	08/05/08 09:00
QC Batch ID:	8204480	**Date/Time Analyzed:**	08/05/08 19:39
Sample Aliquot:	1 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	0.071	0.071	0.32	U
7439-92-1	Lead	Thomas Lill	TL	0.018	0.018	0.40	U
7440-66-6	Zinc	Thomas Lill	TL	**1.4**	0.32	2.5	J

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony	0.070	U	0.070	U	0.070	U	0.070	U	0.07	U	M
Copper	0.560	U	0.560	U	0.560	U	0.560	U	0.56	U	M
Lead	0.180	U	0.180	U	0.180	U	0.180	U	0.18	U	M
Zinc	2.000	U	2.000	U	2.000	U	2.000	U	2.0	U	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony			0.070	U	0.070	U					M
Copper			0.560	U	0.560	U					M
Lead			0.180	U	0.180	U					M
Zinc			2.000	U	2.000	U					M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony	0.140	U	0.140	U	0.140	U	0.140	U	0.014	U	M
Copper	0.710	U	0.710	U	0.710	U	0.710	U	0.0850	B	M
Lead	0.180	U	0.180	U	0.180	U	0.180	U	0.018	U	M
Zinc	3.200	U	3.200	U	3.200	U	3.200	U	0.32	U	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony			0.140	U	0.140	U	0.140	U			M
Copper			0.710	U	0.710	U	0.710	U			M
Lead			0.180	U	0.180	U	0.180	U			M
Zinc			3.200	U	3.200	U	3.200	U			M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony	0.140	U	0.140	U	0.140	U	0.140	U	0.014	U	M
Copper	0.710	U	0.710	U	0.710	U	0.710	U	0.0710	U	M
Lead	0.180	U	0.180	U	0.180	U	0.180	U	0.018	U	M
Zinc	3.200	U	3.200	U	3.200	U	3.200	U	1.40	B	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony			0.140	U	0.140	U	0.140	U			M
Copper			0.710	U	0.710	U	0.710	U			M
Lead			0.180	U	0.180	U	0.180	U			M
Zinc			3.200	U	3.200	U	3.200	U			M

Comments:

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	100.0	0.22	103.90	103.9	0.22	103.70	103.7
Copper	0.0	100.0	0.32	83.66	83.7	0.36	87.18	87.2
Lead	0.0	100.0	0.09	95.13	95.1	0.09	93.41	93.4
Zinc	0.0	100.0	2.76	92.89	92.9	3.01	90.76	90.8

Total Metals Analvsis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	100.0	0.21	105.30	105.3	0.22	103.70	103.7
Copper	0.0	100.0	0.32	85.01	85.0	0.33	89.90	89.9
Lead	0.0	100.0	0.09	98.26	98.3	0.09	96.22	96.2
Zinc	0.0	100.0	3.20	94.19	94.2	3.23	93.18	93.2

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	100.0	0.23	100.10	100.1	0.21	98.56	98.6
Copper	0.0	100.0	0.31	84.28	84.3	0.36	87.42	87.4
Lead	0.0	100.0	0.09	93.73	93.7	0.09	91.03	91.0
Zinc	0.0	100.0	3.11	93.06	93.1	3.27	90.90	90.9

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-02
Lot/SDG Number:	D8G210174	**MS Lab Sample ID:**	D8G210174-001S
Matrix:	WATER	**MS Lab WorkOrder:**	KRW1L
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 13:42
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 18:45
MS Sample Aliquot:	50 mL	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Antimony	40.0	0.070	U	40.5		101		80 - 120
Copper	40.0	0.56	U	40.6		101		80 - 120
Lead	40.0	0.18	U	40.5		101		80 - 120
Zinc	40.0	2.0	U	38.2		96		80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SW-02
Lot/SDG Number:	D8G210174	**MSD Lab Sample ID:**	D8G210174-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	KRW1L
% Moisture:	N/A	**Date/Time Collected:**	07/15/08 13:42
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 18:50
MSD Sample Aliquot:	50 mL	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Antimony	40.0	0.070	U	40.5		101		0.12		80 - 120	20
Copper	40.0	0.56	U	40.6		101		0.040		80 - 120	20
Lead	40.0	0.18	U	40.4		101		0.22		80 - 120	20
Zinc	40.0	2.0	U	38.3		96		0.26		80 - 120	20

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-02
Lot/SDG Number:	D8G210174	**MS Lab Sample ID:**	D8G210174-003S
Matrix:	SOLID	**MS Lab WorkOrder:**	KRW1W
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:37
MS Sample Aliquot:	9.73 g	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Antimony	10.3	0.016	J J	0.410		3.8	N	80 - 120
Copper	10.3	56	J	68.8		124	N	80 - 120
Lead	10.3	12		21.8		99		80 - 120
Zinc	10.3	54	J	64.5		102		80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-DU2-SS-02-02
Lot/SDG Number:	D8G210174	**MSD Lab Sample ID:**	D8G210174-003D
Matrix:	SOLID	**MSD Lab WorkOrder:**	KRW1W
% Moisture:		**Date/Time Collected:**	07/17/08 11:40
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:51
MSD Sample Aliquot:	9.73 g	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Antimony	10.3	0.016	J J	0.350		3.3	N	16		80 - 120	20
Copper	10.3	56	J	63.6		73	N	7.9		80 - 120	20
Lead	10.3	12		20.8		89		4.8		80 - 120	20
Zinc	10.3	54	J	60.6		64	N	6.2		80 - 120	20

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SD-03
Lot/SDG Number:	D8G210174	**MS Lab Sample ID:**	D8G210174-012S
Matrix:	SOLID	**MS Lab WorkOrder:**	KRW24
% Moisture:	58	**Date/Time Collected:**	07/15/08 14:37
Basis:	Dry	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	08/05/08 09:00
QC Batch ID:	8204480	**Date/Time Analyzed:**	08/05/08 18:22
MS Sample Aliquot:	0.99 g	**Instrument ID:**	024
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Antimony	47.5	0.033	U J	3.90		8.1	N	80 - 120
Copper	47.5	93	J	151		122	N	80 - 120
Lead	47.5	4.0		52.4		102		80 - 120
Zinc	47.5	87	B J	139		109		80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-SD-03
Lot/SDG Number:	D8G210174	**MSD Lab Sample ID:**	D8G210174-012D
Matrix:	SOLID	**MSD Lab WorkOrder:**	KRW24
% Moisture:	58	**Date/Time Collected:**	07/15/08 14:37
Basis:	Dry	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	08/05/08 09:00
QC Batch ID:	8204480	**Date/Time Analyzed:**	08/05/08 18:26
MSD Sample Aliquot:	0.99 g	**Instrument ID:**	024
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Antimony	47.5	0.033	U J	4.07		8.5	N	4.2		80 - 120	20
Copper	47.5	93	J	161		144	N	6.7		80 - 120	20
Lead	47.5	4.0		56.8		111		8.0		80 - 120	20
Zinc	47.5	87	B J	148		130	N	6.9		80 - 120	20

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: PJC-MRS01-SW-02 PDS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony	75 - 125	194.100		0.070	U	200.00	97.0		M
Copper	75 - 125	195.200		0.560	U	200.00	97.6		M
Lead	75 - 125	190.800		0.180	U	200.00	95.4		M
Zinc	75 - 125	186.800		2.000	U	200.00	93.4		M

Comments: _____

Total Metals Analvsis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

PJC-MRS01-DU2-SS-02-02 P

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony	75 - 125	191.500		0.062	B	200.00	95.8		M
Copper	75 - 125	377.900		218.451		200.00	79.7		M
Lead	75 - 125	238.800		45.348		200.00	96.7		M
Zinc	75 - 125	362.800		210.354		200.00	76.2		M

Comments: _____

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: PJC-MRS01-SD-03 PDS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony	75 - 125	191.400		0.140	U	200.00	95.7		M
Copper	75 - 125	260.200		78.222		200.00	91.0		M
Lead	75 - 125	192.000		3.360	B	200.00	94.3		M
Zinc	75 - 125	248.600		73.055		200.00	87.8		M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G220000-435C
Matrix:	WATER	**Lab WorkOrder:**	KR03W
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	07/31/08 15:00
QC Batch ID:	8204435	**Date/Time Analyzed:**	08/01/08 18:26
Sample Aliquot:	50 mL	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Antimony	40.0	40.9	102		80 - 120
Lead	40.0	41.3	103		80 - 120
Zinc	40.0	39.0	98		80 - 120
Copper	40.0	41.8	105		80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G220000-479C
Matrix:	SOLID	**Lab WorkOrder:**	KR07W
% Moisture:	0.0	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	07/28/08 08:45
QC Batch ID:	8204479	**Date/Time Analyzed:**	07/31/08 19:13
Sample Aliquot:	10 g	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Antimony	10.0	9.72	97		80 - 120
Lead	10.0	10.2	102		80 - 120
Zinc	10.0	9.90	99		80 - 120
Copper	10.0	10.2	102		80 - 120

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G220000-480C
Matrix:	SOLID	**Lab WorkOrder:**	KR070
% Moisture:	0.0	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	08/05/08 09:00
QC Batch ID:	8204480	**Date/Time Analyzed:**	08/05/08 18:02
Sample Aliquot:	1 g	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Antimony	20.0	18.1	90		80 - 120
Lead	20.0	18.5	93		80 - 120
Zinc	20.0	20.4	102		80 - 120
Copper	20.0	19.0	95		80 - 120

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

PJC-MRS01-SW-02 SER

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.070	U	0.350	U			M
Copper	0.560	U	2.800	U			M
Lead	0.180	U	0.900	U			M
Zinc	2.000	U	10.000	U			M

Comments: _____

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

PJC-MRS01-DU2-SS-02-02 SER

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.062	B	0.700	U	100.0		M
Copper	218.451		245.621		12.4	E	M
Lead	45.348		43.578		3.9		M
Zinc	210.354		226.742		7.8		M

Comments: _____

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

PJC-MRS01-SD-03 SER

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.140	U	0.700	U			M
Copper	78.222		86.231		10.2		M
Lead	3.360	B	3.698	B	10.1		M
Zinc	73.055		80.262	B	9.9		M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 Date: 5/2/2008

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Antimony	121		6.000	0.0700	M
Copper	63		2.000	0.5600	M
Lead	208		3.000	0.1800	M
Zinc	66		20.000	2.0000	M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 Date: 4/30/2008

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Antimony	121		2.500	0.1400	M
Copper	63		3.200	0.7100	M
Lead	208		4.000	0.1800	M
Zinc	66		25.000	3.2000	M

Comments: _____

TestAmerica

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 Date: 7/17/2008

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Antimony	0.001	3600	M
Copper	0.001	3600	M
Lead	0.001	3600	M
Zinc	0.001	3600	M

Comments: _____

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 Date: 7/17/2008

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Antimony	0.001	3600	M
Copper	0.001	3600	M
Lead	0.001	3600	M
Zinc	0.001	3600	M

Comments: _____

TestAmerica

Total Metals Analvsis

-13-

PREPARATION LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
PJC-MRS01-SW-02	7/31/2008	50.0	50.0
PJC-MRS01-SW-02 MS	7/31/2008	50.0	50.0
PJC-MRS01-SW-02 MSD	7/31/2008	50.0	50.0
PJC-MRS01-EB-01	7/31/2008	50.0	50.0
PJC-MRS01-SW-03	7/31/2008	50.0	50.0
PJC-MRS01-SW-01	7/31/2008	50.0	50.0
MB8204435	7/31/2008	50.0	50.0
Check Sample	7/31/2008	50.0	50.0

Comments:

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-AU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-AU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-AU2-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU3-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU3-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-DU3-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-AU1-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-AU1-SS-02-	7/28/2008	10.00	500.0
PJC-MRS01-AU1-SS-02-	7/28/2008	10.00	500.0
MB8204479	7/28/2008	10.00	500.0
Check Sample	7/28/2008	10.00	500.0

Comments:

TestAmerica

Total Metals Analysis

-13-

PREPARATION LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
PJC-MRS01-SD-03	8/5/2008	1.00	100.0
PJC-MRS01-SD-03 MS	8/5/2008	1.00	100.0
PJC-MRS01-SD-03 MSD	8/5/2008	1.00	100.0
PJC-MRS01-SD-01	8/5/2008	1.00	100.0
MB8204480	8/5/2008	1.00	100.0
Check Sample	8/5/2008	1.00	100.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 8/1/2008 End Date: 8/1/2008

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	17:14			X								X		X										X	
100 PPB	1.00	17:19			X								X		X										X	
ICV	1.00	17:23			X								X		X										X	
ICB	1.00	17:28			X								X		X										X	
RL STD	1.00	17:33			X								X		X										X	
ICSA	1.00	17:47			X								X		X										X	
ICSAB	1.00	17:52			X								X		X										X	
WASH	1.00	17:57			X								X		X										X	
LR	1.00	18:02			X								X		X										X	
WASH	1.00	18:07			X								X		X										X	
CCV	1.00	18:11			X								X		X										X	
CCB	1.00	18:16			X								X		X										X	
MB8204435	1.00	18:21			X								X		X										X	
Check Sample	1.00	18:26			X								X		X										X	
PJC-MRS01-SW-02	1.00	18:31			X								X		X										X	
PJC-MRS01-SW-02 SE	5.00	18:36			X								X		X										X	
PJC-MRS01-SW-02 PD	1.00	18:40			X								X		X										X	
PJC-MRS01-SW-02 MS	1.00	18:45			X								X		X										X	
PJC-MRS01-SW-02 MS	1.00	18:50			X								X		X										X	
PJC-MRS01-EB-01	1.00	18:55			X								X		X										X	
PJC-MRS01-SW-03	1.00	19:00			X								X		X										X	
PJC-MRS01-SW-01	1.00	19:04			X								X		X										X	
CCV	1.00	19:09			X								X		X										X	
CCB	1.00	19:14			X								X		X										X	
CAL BLANK	1.00	21:00			X								X		X										X	
100 PPB	1.00	21:05			X								X		X										X	
CCV	1.00	21:10			X								X		X										X	
CCB	1.00	21:15			X								X		X										X	
CCV	1.00	22:08			X								X		X										X	
CCB	1.00	22:12			X								X		X										X	
ICSA	1.00	22:17			X								X		X										X	
ICSAB	1.00	22:22			X								X		X										X	
WASH	1.00	22:27			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 8/1/2008 End Date: 8/1/2008

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	22:32			X								X		X										X	
CCB	1.00	22:36			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analvsis

-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/31/2008 End Date: 7/31/2008

Sample ID.	D/F	Time	% R	Analytes																											
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	17:55			X								X		X										X	
100 PPB	1.00	18:00			X								X		X										X	
ICV	1.00	18:05			X								X		X										X	
ICB	1.00	18:10			X								X		X										X	
RL STD	1.00	18:15			X										X										X	
ALTCU	1.00	18:30											X													
ICSA	1.00	18:34			X								X		X										X	
ICSAB	1.00	18:39			X								X		X										X	
WASH	1.00	18:44			X								X		X										X	
LR	1.00	18:49			X								X		X										X	
WASH	1.00	18:53			X								X		X										X	
CCV	1.00	18:58			X								X		X										X	
CCB	1.00	19:03			X								X		X										X	
MB8204479	1.00	19:08			X								X		X										X	
Check Sample	1.00	19:13			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	19:18			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	19:22			X								X		X										X	
PJC-MRS01-DU2-SS-0	5.00	19:27			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	19:32			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	19:37			X								X		X										X	
CCV	1.00	19:42			X								X		X										X	
CCB	1.00	19:46			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	19:51			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	19:56			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	20:01			X								X		X										X	
PJC-MRS01-DU2-SS-0	1.00	20:06			X								X		X										X	
PJC-MRS01-AU2-SS-0	1.00	20:10			X								X		X										X	
PJC-MRS01-AU2-SS-0	1.00	20:15			X								X		X										X	
PJC-MRS01-AU2-SS-0	1.00	20:20			X								X		X										X	
CCV	1.00	20:25			X								X		X										X	
CCB	1.00	20:30			X								X		X										X	
PJC-MRS01-DU3-SS-0	1.00	20:34			X								X		X										X	
PJC-MRS01-DU3-SS-0	1.00	20:39			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 7/31/2008 End Date: 7/31/2008

Sample ID.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
PJC-MRS01-DU3-SS-0	1.00	20:44			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	20:49			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	20:54			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	20:58			X								X		X										X	
CCV	1.00	21:03			X								X		X										X	
CCB	1.00	21:08			X								X		X										X	
CCV	1.00	22:54			X								X		X										X	
CCB	1.00	22:59			X								X		X										X	
ICSA	1.00	23:04			X								X		X										X	
ICSAB	1.00	23:08			X								X		X										X	
WASH	1.00	23:13			X								X		X										X	
CCV	1.00	23:18			X								X		X										X	
CCB	1.00	23:23			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 8/5/2008 End Date: 8/5/2008

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	16:50			X								X		X										X	
100 PPB	1.00	16:55			X								X		X										X	
ICV	1.00	17:00			X								X		X										X	
ICB	1.00	17:05			X								X		X										X	
RL STD	1.00	17:10			X								X		X										X	
ICSA	1.00	17:24			X								X		X										X	
ICSAB	1.00	17:29			X								X		X										X	
WASH	1.00	17:34			X								X		X										X	
LR	1.00	17:38			X								X		X										X	
WASH	1.00	17:43			X								X		X										X	
CCV	1.00	17:48			X								X		X										X	
CCB	1.00	17:53			X								X		X										X	
Check Sample	1.00	18:02			X								X		X										X	
PJC-MRS01-SD-03	1.00	18:07			X								X		X										X	
PJC-MRS01-SD-03 SE	5.00	18:12			X								X		X										X	
PJC-MRS01-SD-03 PD	1.00	18:17			X								X		X										X	
PJC-MRS01-SD-03 MS	1.00	18:22			X								X		X										X	
PJC-MRS01-SD-03 MS	1.00	18:26			X								X		X										X	
PJC-MRS01-SD-01	1.00	18:31			X								X		X										X	
CCV	1.00	18:36			X								X		X										X	
CCB	1.00	18:41			X								X		X										X	
CCV	1.00	19:29			X								X		X										X	
CCB	1.00	19:34			X								X		X										X	
MB8204480	1.00	19:39			X								X		X										X	
CCV	1.00	19:43			X								X		X										X	
CCB	1.00	19:48			X								X		X										X	
CCV	1.00	20:31			X								X		X										X	
CCB	1.00	20:36			X								X		X										X	
ICSA	1.00	20:41			X								X		X										X	
ICSAB	1.00	20:46			X								X		X										X	
WASH	1.00	20:51			X								X		X										X	
CCV	1.00	20:56			X								X		X										X	
CCB	1.00	21:00			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Replicate Measurement Evaluation - Multi-increment Sampling
Lot#:D8G210174
Date:08/08/08

Lab Sample Number	Client Sample Number	Run #	Antimony mg/Kg	Copper mg/Kg	Lead mg/Kg	Zinc mg/Kg
D8G210174-04	PJC-MRS01-DU2-SS-02-03-A	1	0.015	59	10	63.0
D8G210174-05	PJC-MRS01-DU2-SS-02-03-B	2	0	58	11	61.0
D8G210174-06	PJC-MRS01-DU2-SS-02-03-C	3	0	57	9.8	63.0
	average	n=3	0.0	58.0	10.3	62.3
	Standard Deviation		0.01	1.00	0.64	1.15
	%RSD		173.21	1.72	6.26	1.85

Table of Contents

TestAmerica

Total Metals

CLP-Like Forms

Lot ID: D8G210174

Client: Parsons

Method: 6020 Addendum

Associated Sample(s): -018 through -020

Batch: 8246402

TestAmerica

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: Parsons Corporation SDG No.: D8G210174

Lab Code: Case No.: SAS No.:

SOW No.:

Sample ID.	Lab Sample No.
PJC-MRS01-AU1-SS-02-01	D8G210174-018
PJC-MRS01-AU1-SS-02-02	D8G210174-019
PJC-MRS01-AU1-SS-02-03	D8G210174-020

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments: 6020

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 9/5/08 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-01
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-018
Matrix:	SOLID	**Lab WorkOrder:**	KRW3C
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	09/03/08 09:00
QC Batch ID:	8246402	**Date/Time Analyzed:**	09/04/08 00:39
Sample Aliquot:	10.16 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.061**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**55**	0.071	0.32	J
7439-92-1	Lead	Thomas Lill	TL	**14**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**54**	0.32	2.5	J

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-02
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-019
Matrix:	SOLID	**Lab WorkOrder:**	KRW3D
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	09/03/08 09:00
QC Batch ID:	8246402	**Date/Time Analyzed:**	09/04/08 00:54
Sample Aliquot:	10.03 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.062**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**56**	0.071	0.32	J
7439-92-1	Lead	Thomas Lill	TL	**15**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**63**	0.32	2.5	J

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

FUDS_SI_SE

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	PJC-MRS01-AU1-SS-02-03
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8G210174-020
Matrix:	SOLID	**Lab WorkOrder:**	KRW3E
% Moisture:		**Date/Time Collected:**	07/17/08 12:57
Basis:	Wet	**Date/Time Received:**	07/21/08 08:00
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	09/03/08 09:00
QC Batch ID:	8246402	**Date/Time Analyzed:**	09/04/08 00:59
Sample Aliquot:	9.79 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	**0.062**	0.014	0.25	J
7440-50-8	Copper	Thomas Lill	TL	**60**	0.071	0.32	J
7439-92-1	Lead	Thomas Lill	TL	**16**	0.018	0.40	
7440-66-6	Zinc	Thomas Lill	TL	**90**	0.32	2.5	J

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony	40.0	39.4	98.5	50.0	50.0	100.0	50.4	100.8	M
Copper	40.0	41.6	104.0	50.0	51.5	103.0	50.8	101.6	M
Lead	40.0	40.6	101.5	50.0	50.6	101.2	51.3	102.6	M
Zinc	40.0	41.1	102.8	50.0	50.5	101.0	50.8	101.6	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	51.4	102.8	50.2	100.4	M
Copper				50.0	51.0	102.0	51.0	102.0	M
Lead				50.0	51.0	102.0	51.4	102.8	M
Zinc				50.0	50.4	100.8	50.3	100.6	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Initial Calibration Source: High Purity

Continuing Calibration Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				50.0	50.9	101.8	51.8	103.6	M
Copper				50.0	51.8	103.6	52.0	104.0	M
Lead				50.0	51.0	102.0	51.2	102.4	M
Zinc				50.0	50.8	101.6	50.8	101.6	M

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

TestAmerica

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

AA CRDL Standard Source: _____

ICP CRDL Standard Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				1.00	1.066	106.6		
Copper				1.00	1.042	104.2		
Lead				1.00	1.016	101.6		
Zinc				10.00	11.250	112.5		

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation
FUDS_SI_SE
Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8I020000-402B
Matrix:	SOLID	**Lab WorkOrder:**	KV5TJ
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	09/03/08 09:00
QC Batch ID:	8246402	**Date/Time Analyzed:**	09/04/08 00:30
Sample Aliquot:	10 g	**Instrument ID:**	024
Dilution Factor:	1	**Extraction Method:**	3050B

CAS No.	Analyte	Analyst Name	Initials	Conc.	MDL	RL	Q
7440-36-0	Antimony	Thomas Lill	TL	0.014	0.014	0.25	U
7440-50-8	Copper	Thomas Lill	TL	0.071	0.071	0.32	U
7439-92-1	Lead	Thomas Lill	TL	0.018	0.018	0.40	U
7440-66-6	Zinc	Thomas Lill	TL	0.32	0.32	2.5	U

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony	0.140	U	0.140	U	0.140	U	0.140	U	0.014	U	M
Copper	0.710	U	0.710	U	0.710	U	0.710	U	0.0710	U	M
Lead	0.180	U	0.180	U	0.180	U	0.180	U	0.018	U	M
Zinc	3.200	U	3.200	U	3.200	U	3.200	U	0.32	U	M

Comments:

TestAmerica

Total Metals Analysis

-3-

BLANKS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony			0.140	U	0.140	U	0.140	U			M
Copper			0.710	U	0.710	U	0.710	U			M
Lead			0.180	U	0.180	U	0.180	U			M
Zinc			3.200	U	3.200	U	3.200	U			M

Comments:

TestAmerica

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	100.0	0.26	103.20	103.2	0.23	99.74	99.7
Copper	0.0	100.0	0.37	87.39	87.4	0.55	87.60	87.6
Lead	0.0	100.0	0.13	96.74	96.7	0.08	92.42	92.4
Zinc	0.0	100.0	4.28	96.83	96.8	4.84	96.75	96.8

Total Metals Analysis

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0	100.0				0.24	101.70	101.7
Copper	0.0	100.0				0.44	88.32	88.3
Lead	0.0	100.0				0.09	90.39	90.4
Zinc	0.0	100.0				3.79	96.87	96.9

TestAmerica

Total Metals Analysis
-5B-

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.: PJC-MRS01-AU1-SS-02-01 P

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony	75 - 125	192.600		0.248	B	200.00	96.2		M
Copper	75 - 125	358.500		224.502		200.00	67.0	N	M
Lead	75 - 125	254.500		58.431		200.00	98.0		M
Zinc	75 - 125	364.000		220.642		200.00	71.7	N	M

Comments: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Parsons Corporation

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D8G210174	**Lab Sample ID:**	D8I020000-402C
Matrix:	SOLID	**Lab WorkOrder:**	KV5TJ
% Moisture:	0.0	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	6020	**Date Leached:**	
Unit:	mg/kg	**Date/Time Extracted:**	09/03/08 09:00
QC Batch ID:	8246402	**Date/Time Analyzed:**	09/04/08 00:35
Sample Aliquot:	10 g	**Instrument ID:**	024
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Antimony	10.0	9.79	98		80 - 120
Lead	10.0	9.74	97		80 - 120
Zinc	10.0	9.75	98		80 - 120
Copper	10.0	9.89	99		80 - 120

Total Metals Analysis

-9-

ICP SERIAL DILUTIONS

SAMPLE NO.

PJC-MRS01-AU1-SS-02-01 SER

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.248	B	0.700	U	100.0		M
Copper	224.502		259.041		15.4	E	M
Lead	58.432		55.466		5.1		M
Zinc	220.642		253.556		14.9	E	M

Comments: _____

TestAmerica

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 Date: 4/30/2008

Flame AA ID Number: _____

Furnace AA ID Number:

Analyte	Isotope	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Antimony	121		2.500	0.1400	M
Copper	63		3.200	0.7100	M
Lead	208		4.000	0.1800	M
Zinc	66		25.000	3.2000	M

Comments: _____

Total Metals Analysis
-12-
ICP LINEAR RANGES (QUARTERLY)

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

ICP ID Number: Agilent 7500 Date: 7/17/2008

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Antimony	0.001	3600	M
Copper	0.001	3600	M
Lead	0.001	3600	M
Zinc	0.001	3600	M

Comments: _____

Total Metals Analvsis

-13-

PREPARATION LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D8G210174

Method: MS Prep Method: _____

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
PJC-MRS01-AU1-SS-02-	9/3/2008	1.00	100.0
PJC-MRS01-AU1-SS-02-	9/3/2008	1.00	100.0
PJC-MRS01-AU1-SS-02-	9/3/2008	1.00	100.0
MB8246402	9/3/2008	1.00	100.0
Check Sample	9/3/2008	1.00	100.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 9/3/2008 End Date: 9/4/2008

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CAL BLANK	1.00	16:10			X								X		X										X	
100 PPB	1.00	16:14			X								X		X										X	
ICV	1.00	16:19			X								X		X										X	
ICB	1.00	16:24			X								X		X										X	
RL STD	1.00	16:29			X								X		X										X	
ICSA	1.00	16:43			X								X		X										X	
ICSAB	1.00	16:48			X								X		X										X	
WASH	1.00	16:53			X								X		X										X	
LR	1.00	16:58			X								X		X										X	
WASH	1.00	17:02			X								X		X										X	
CCV	1.00	17:07			X								X		X										X	
CCB	1.00	17:12			X								X		X										X	
CAL BLANK	1.00	23:47			X								X		X										X	
100 PPB	1.00	23:51			X								X		X										X	
CCV	1.00	23:56			X								X		X										X	
CCB	1.00	00:01			X								X		X										X	
ICSA	1.00	00:06			X								X		X										X	
ICSAB	1.00	00:11			X								X		X										X	
WASH	1.00	00:15			X								X		X										X	
CCV	1.00	00:20			X								X		X										X	
CCB	1.00	00:25			X								X		X										X	
MB8246402	1.00	00:30			X								X		X										X	
Check Sample	1.00	00:35			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	00:39			X								X		X										X	
PJC-MRS01-AU1-SS-0	5.00	00:44			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	00:49			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	00:54			X								X		X										X	
PJC-MRS01-AU1-SS-0	1.00	00:59			X								X		X										X	
CCV	1.00	01:03			X								X		X										X	
CCB	1.00	01:08			X								X		X										X	
CAL BLANK	1.00	03:33			X								X		X										X	
100 PPB	1.00	03:37			X								X		X										X	
CCV	1.00	03:42			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: Parsons Corporation

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D8G210174

Instrument ID Number: Agilent 7500 Method: M

Start Date: 9/3/2008 End Date: 9/4/2008

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	03:47			X								X		X										X	
ICSA	1.00	03:52			X								X		X										X	
ICSAB	1.00	03:57			X								X		X										X	
WASH	1.00	04:01			X								X		X										X	
CCV	1.00	04:06			X								X		X										X	
CCB	1.00	04:11			X								X		X										X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

General Chemistry

Standard LIMS Report

Lot ID: D8G210174

Client: Parsons

Method: 160.3 MOD

Associated Samples: -012 & -016

Parsons Corporation

Client Sample ID: PJC-MRS01-SD-03

General Chemistry

Lot-Sample #...: D8G210174-012 **Work Order #...:** KRW24 **Matrix.....:** SOLID
Date Sampled...: 07/15/08 14:37 **Date Received..:** 07/21/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**58**	**0.10**	**%**	**MCAWW 160.3 MOD**	**08/05/08**	**8218179**

Dilution Factor: 1 Analysis Time..: 14:00 MDL.....: 0.0

Parsons Corporation

Client Sample ID: PJC-MRS01-SD-01

General Chemistry

Lot-Sample #...: D8G210174-016 **Work Order #...:** KRW28 **Matrix.....:** SOLID
Date Sampled...: 07/16/08 15:47 **Date Received..:** 07/21/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	**33**	**0.10**	**%**	**MCAWW 160.3 MOD**	**08/05/08**	**8218179**

Dilution Factor: 1 Analysis Time..: 14:00 MDL.....: 0.0

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: D8G210174 **Work Order #...:** KRW3M-SMP KRW3M-DUP **Matrix.....:** SOLID

Date Sampled...: 08/10/06 10:15 **Date Received..:** 08/12/06

% Moisture.....: 16

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: D8G210177-007		
	16	15	%	3.2	(0-20)	MCAWW 160.3 MOD	08/05/08	8218179

Dilution Factor: 1 Analysis Time..: 14:00

Chain of Custody Record

Sampler ID: Ira Miller

Temperature on Receipt: 15.1°C AB 7/21/08 IR1

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

165

TAL-4124-280 (1007)

Client: PARSONS	Project Manager: LLOYD GREARSON	Date: 7-18-08	Chain of Custody Number: 105285
Address: 5346 TRIANGLE PKWY, STE 100	Telephone Number (Area Code)/Fax Number: 804-748-7593	Lab Number:	Page 1 of 1
City: NORCROSS; State: GA; Zip Code: 30092	Site Contact: D. GIBSON	Lab Contact: E. WALKER	
Project Name and Location (State): PJCTC, HI	Carrier/Waybill Number: 9612 5256 9459*		
Contract/Purchase Order/Quote No.: 744647-51000			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: EXPLOSIVES	Analysis: METALS**	Special Instructions/ Conditions of Receipt
PJC-MRS01-SW-02	7-15-08	1342		X					X				2	1	
PJC-MRS01-SW-02MS	7-15-08	1342		X					X				2	1	MS
PJC-MRS01-SW-02MSD	7-15-08	1342		X					X				1	1	MSD
PJC-MRS01-DU2-SS-02-01	7-17-08	1140				X							X	X	
PJC-MRS01-DU2-SS-02-02	7-17-08	1140				X							X	X	MS/MSD
PJC-MRS01-DU2-SS-02-03	7-17-08	1140				X							X	X	LAB TRIPLICATE

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify):

1. Relinquished By: DARON C GIBSON	Date: 7-18-08	Time: 1100	1. Received By:	Date: 7/21/08	Time: 0800
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments: SHIPPED FEDEX PRIORITY OVERNIGHT ** ANTIMONY, COPPER, LEAD, ZINC

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica

Table of Contents

Chain of Custody Record

Temperature on Receipt 19.3°C Ice melted
~~XB~~ 7/21/08 IR1

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

166

4124 (0907)

Client	Project Manager	Date	Chain of Custody Number
PARSONS	LLOYD GREARSON	7-14-08	406389
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
5390 TRIANGLE PKWY, STE 100	808-748-7593		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
NORCROSS / GA / 30092	D. GIBSON	E. WALKER	
Project Name and Location (State)	**Carrier/Waybill Number**		
PJCTC, HI	8612 5256 9443*		
Contract/Purchase Order/Quote No.			
746647-51000			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: EXPLOSIVES	METALS**	Special Instructions/ Conditions of Receipt
PJC-MRS01-EB-01	7-16-08	0950		X					X				2	1	
PJC-MRS01-AU2-SS-02-01	7-14-08	1107				X							X	X	
PJC-MRS01-AU2-SS-02-02	7-14-08	1107				X							X	X	
PJC-MRS01-AU2-SS-02-03	7-14-08	1107				X							X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

1. Relinquished By: DARON C GIBSON	Date: 7-14-08	Time: 1100	1. Received By:	Date: 7/21/08	Time: 0800
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments * SHIPPED FEDEX PRIOR. OVERNIGHT ** ANTIMONY, COPPER, LEAD, ZINC

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

TestAmerica

Chain of Custody Record

Ice method

Temperature on Receipt 15.6°C
06 7/21/08 IR1

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

167

4124 (0907)

Client	Project Manager	Date	Chain of Custody Number
PARSONS	LLOYD GREARSON	7-14-08	406294
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
5340 TRIANGLE PKWY, STE 100	304-743-7593		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
NORCROSS / GA / 30092	D. GIBSON	E. WALKER	
Project Name and Location (State)	**Carrier/Waybill Number**		
PJCTC, HI	3665 6324 2738*		
Contract/Purchase Order/Quote No.			
744617-5100C			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: EXPLOSIVES	Analysis: METALS**
PJC-MRS01-SW-03	7-15-08	1409		X					X				2	1
PJC-MRS01-SD-03	7-15-08	1437			X								1	1
PJC-MRS01-DU3-SS-02-01	7-11-08	1517				X							X	X
PJC-MRS01-DU3-SS-02-02	7-11-08	1517				X							X	X
PJC-MRS01-DU3-SS-02-03	7-11-08	1517				X							X	X

Special Instructions/ Conditions of Receipt

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.	DAREN C GIBSON	7-15-08	1130		7/21/08	0800
2.						
3.						

Comments * SHIPPED FEDEX PRIORITY OVERNIGHT ** ANTIMONY, COPPER, LEAD, ZINC

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

TestAmerica

Chain of Custody Record

Temperature on Receipt 11.8°C Ice melted
DB 7/21/08 IR1
Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

168

4124 (0907)

Client: PARSONS	Project Manager: LLOYD GREARSON	Date: 7-18-08	Chain of Custody Number: 406293
Address: 5310 TRIANGLE PKWY, STE 100	Telephone Number (Area Code)/Fax Number: 408-748-7593	Lab Number:	Page 1 of 1
City: NORCROSS; State: GA; Zip Code: 30092	Site Contact: D. GIBSON	Lab Contact: E. WALKER	
Project Name and Location (State): PJCTC, HI	Carrier/Waybill Number: 8665 6324 2716*		
Contract/Purchase Order/Quote No.: 744647-51000			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: EXPLOSIVES	METALS**	Special Instructions/ Conditions of Receipt
PJC-MRS01-SD-01	7-16-08	1547			X								1	1	
PJC-MRS01-SW-01	7-16-08	1530		X					X				2	1	
PJC-MRS01-AUI-SS-02-01	7-17-08	1257				X							X	X	
PJC-MRS01-AUI-SS-02-02	7-17-08	1257				X							X	X	
PJC-MRS01-AUI-SS-02-03	7-17-08	1257				X							X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

1. Relinquished By: DARON COBSON	Date: 7-18-08	Time: 1130	1. Received By: Aaron Birdell	Date: 7/21/08	Time: 0800
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: SHIPPED FEDEX PRIORITY OVERNIGHT ** ANTIMONY, COPPER, LEAD, ZINC

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Table of Contents

TestAmerica

TestAmerica Denver

Sample Receiving Checklist

Lot #: D8G210174 Date/Time Received: 7/21/08 0800

Company Name & Sampling Site: Parsons FUDS

PM to Complete This Section: *Yes* *No* *Yes* *No*

Residual chlorine check required: o X Quarantined: o X

Quote #: ~~103970~~ 77850 am 7/21

Special Instructions: 8321A Exp. 6020 Sb, Cu, Pb, Zn

* log lab triplicate as 3 samples

* log MS/MSD

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): ____ ____ ____ ____ ____ ____ ____ ____

Temperatures (°C): *15.1° *19.3° *15.6° *16.8° ____ ____ ____ ____

*-CUR elevated temp!

N/A	Yes	No		Initials
o	✓	o	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
	✓	o	2. Chain of custody present? If no, document on CUR.	
	o	✓	3. Bottles broken and/or are leaking? If yes, document on CUR.	
	o	✓	4. Multiphasic samples obvious? If yes, document on CUR.	
	✓	o	5. Proper container & preservatives used? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR.	
o	✓	o	6. pH of all samples checked and meet requirements? If no, document on CUR.	
	✓	o	7. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.	
	✓	o	8. Did chain of custody agree with labels ID and samples received? If no, document on CUR.	
✓	o	o	9. Were VOA samples without headspace? If no, document on CUR.	
✓	o	o	10. Were VOA vials preserved? Preservative oHCl o4±2°C oSodium Thiosulfate o Ascorbic Acid	
	o	✓	11. Did samples require preservation with sodium thiosulfate?	
✓	o	o	12. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.	
✓	o	o	13. Sediment present in dissolved/filtered bottles? If yes, document on CUR.	
o	✓	o	14. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	✓	X	15. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	o	✓	16. Are analyses with short holding times requested?	
	o	✓	17. Was a quick Turn Around (TAT) requested?	

TestAmerica Denver

Sample Receiving Checklist

Lot # D8G210174

Login Checks:

N/A	Yes	No		Initials
	✓	o	18. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.	
✓	o	o	19. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.	
	✓	o	20. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?	
o	✓	o	21. Were special log in instructions read and followed?	
✓	o	o	22. Were AFCEE metals logged for refrigerated storage?	
	✓	o	23. Were tests logged checked against the COC? Which samples were confirmed? 1	
✓	o	o	24. Was a Rush form completed for quick TAT?	
✓	o	o	25. Was a Short Hold form completed for any short holds?	
(✓)	✗		26. Were special archiving instructions indicated in the General Comments? If so, what were they?	

60 days

Labeling and Storage Checks:

				Initials
✓	o	o	28. Was the subcontract COC signed and sent with samples to bottle prep?	
	✓	o	29. Were sample labels double-checked by a second person?	
✓	o	o	30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?	
	✓	o	31. Did the sample ID, Date, and Time from label match what was logged?	
o	✓	o	32. Were stickers for special archiving instructions affixed to each box and to the ICOC? See #27	
o	o	o	33. Were AFCEE metals stored refrigerated?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

LC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Method: 8321A Explosives

Associated Samples: 8-10, 13-15

Batch #(s): 8205508

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: Smc 7-31-08

LC/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/24/08
Time: 23:48:52

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct & all match
			Y	Y	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGrou
_ Bench Sheet Copied per COC

Extractionist: 004599 Craig Cullen

Concentrationist: 007795 Koley Hall

Reviewer/Date: HALLKJ / 7/24/08

****
* *
* **QC BATCH: 8205508** *
* *
****

PREP DATE: 7/23/08 22:00
COMP DATE: 7/24/08 23:00

8321A, Explosives by LCMS
SONICATION - Medium Level

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
7/26/08	8/08/08	D8G210174-008 **KRW2W-1-AA**		12	BX	SOLID	**9.96g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/26/08	8/08/08	D8G210174-009 **KRW2X-1-AA**		12	BX	SOLID	**10.01g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/26/08	8/08/08	D8G210174-010 **KRW20-1-AA**		12	BX	SOLID	**10.02g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/23/08	8/08/08	D8G210174-013 **KRW25-1-AA**		12	BX	SOLID	**10.02g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/23/08	8/08/08	D8G210174-014 **KRW26-1-AA**		12	BX	SOLID	**10.07g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/23/08	8/08/08	D8G210174-015 **KRW27-1-AA**		12	BX	SOLID	**10.08g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/26/08	0/00/00	R8G230000-508 **KR3EL-1-AA**B		12	BX	SOLID	**10.04g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															

Table of Contents

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/24/08
Time: 23:48:52

QC BATCH: 8205508

PREP DATE: 7/23/08 22:00
COMP DATE: 7/24/08 23:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
7/26/08	0/00/00	R8G230000-508 **KR3EL-1-ACC**		12	BX	SOLID	**10.03g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML HPLC177 7/3/08 1ML LCMS031 6/16/08
COMMENTS:															
7/26/08	0/00/00	R8G230000-508 **KR3EL-1-ADB**		12	BX	SOLID	**9.98g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:		GRINDING BLK													

DV-LC-0010 BAL:F90716 SAND:WR0025 A.ACN:1-3-14 S/S:CRC-E,EXP-1 W:KH
SONICATOR ON 7/23/08@2330 OFF 07/24/08@1740 FILTER:R710/R783
TEMP MIN:5C MAX:9C

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 9

Table of Contents

LC/MS SEMIVOLATILE STANDARD DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 1 name: HMX Method File: ex48g29
Coefficient of Determination: 0.997772
Calibration curve: 0.0109807 * x + 0.0180378
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

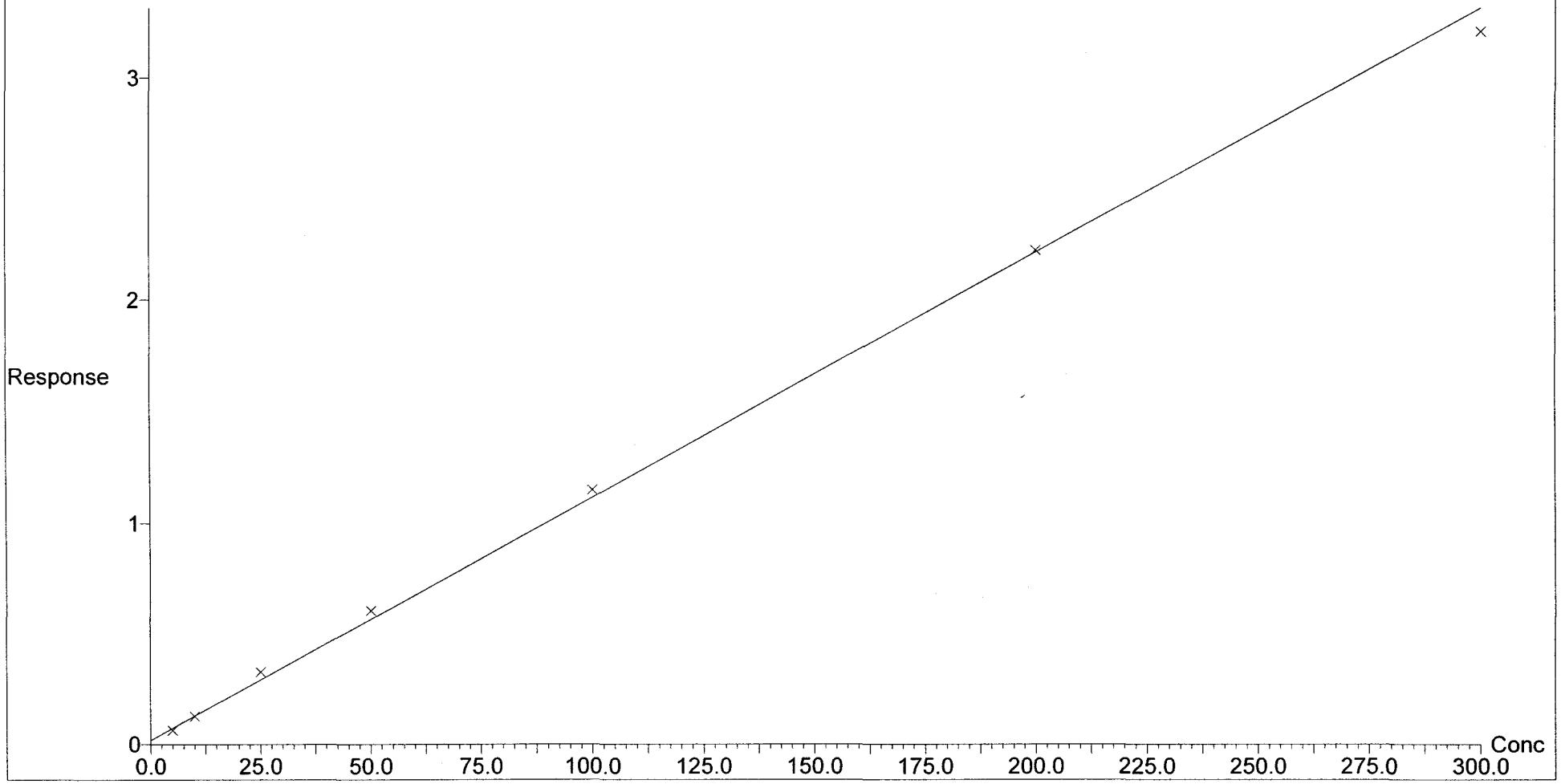
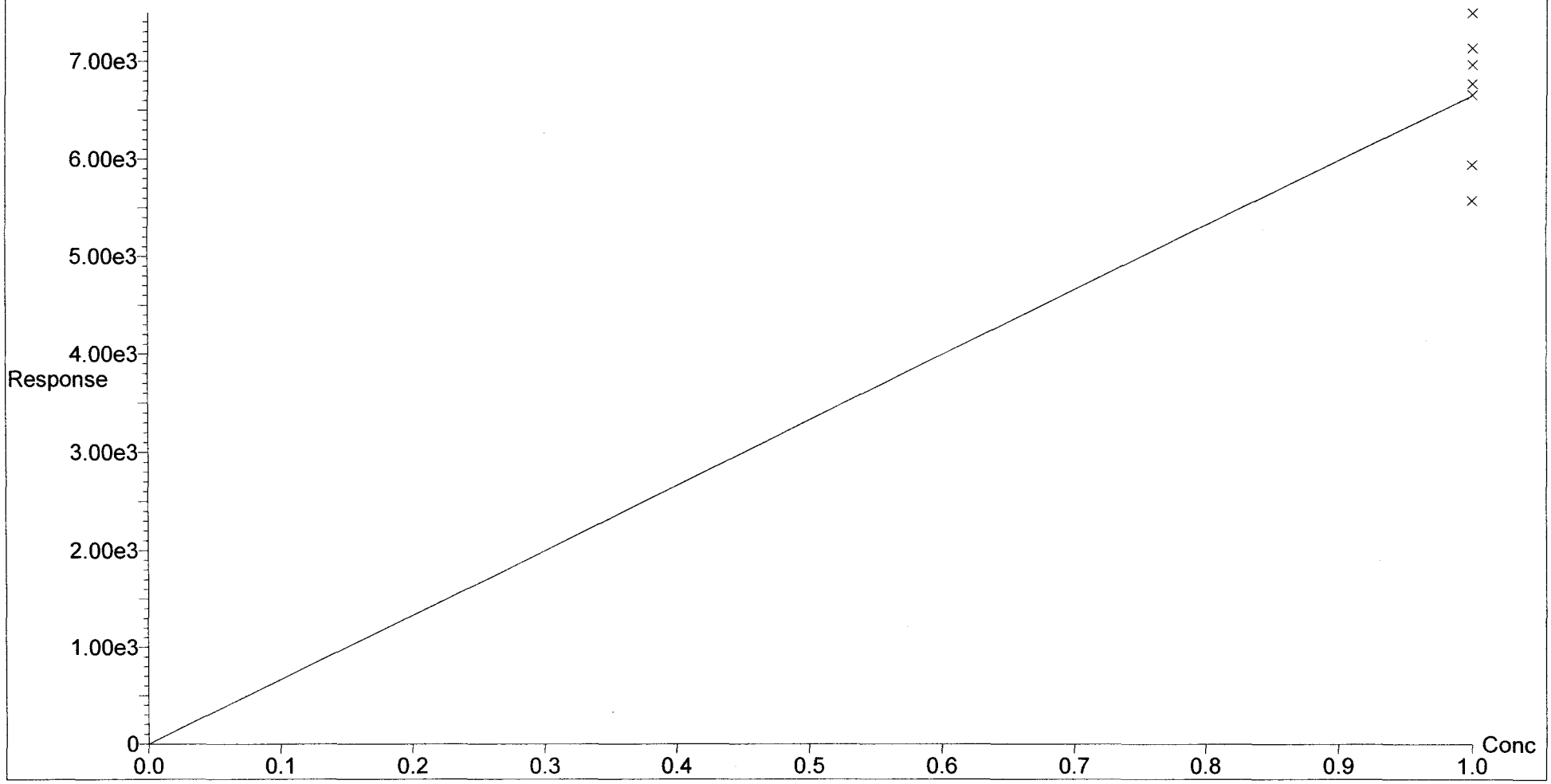


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

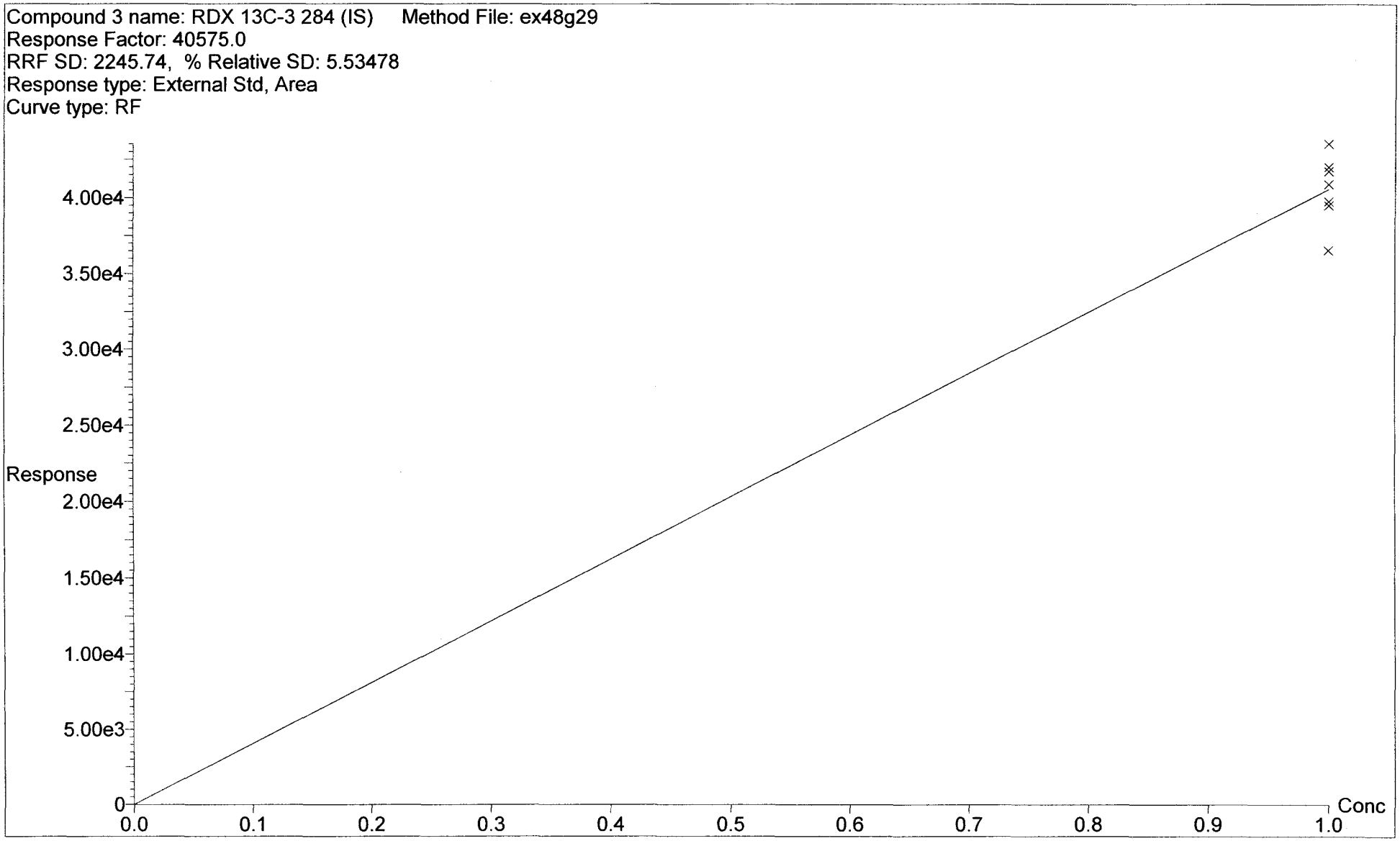
Compound 2 name: HMX 13C-4 (IS) Method File: ex48g29
Response Factor: 6651.37
RRF SD: 673.653, % Relative SD: 10.1280
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 3 name: RDX 13C-3 284 (IS) Method File: ex48g29
Response Factor: 40575.0
RRF SD: 2245.74, % Relative SD: 5.53478
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 4 name: RDX Method File: ex48g29
Coefficient of Determination: 0.991254
Calibration curve: 0.00334413 * x + 0.0121126
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

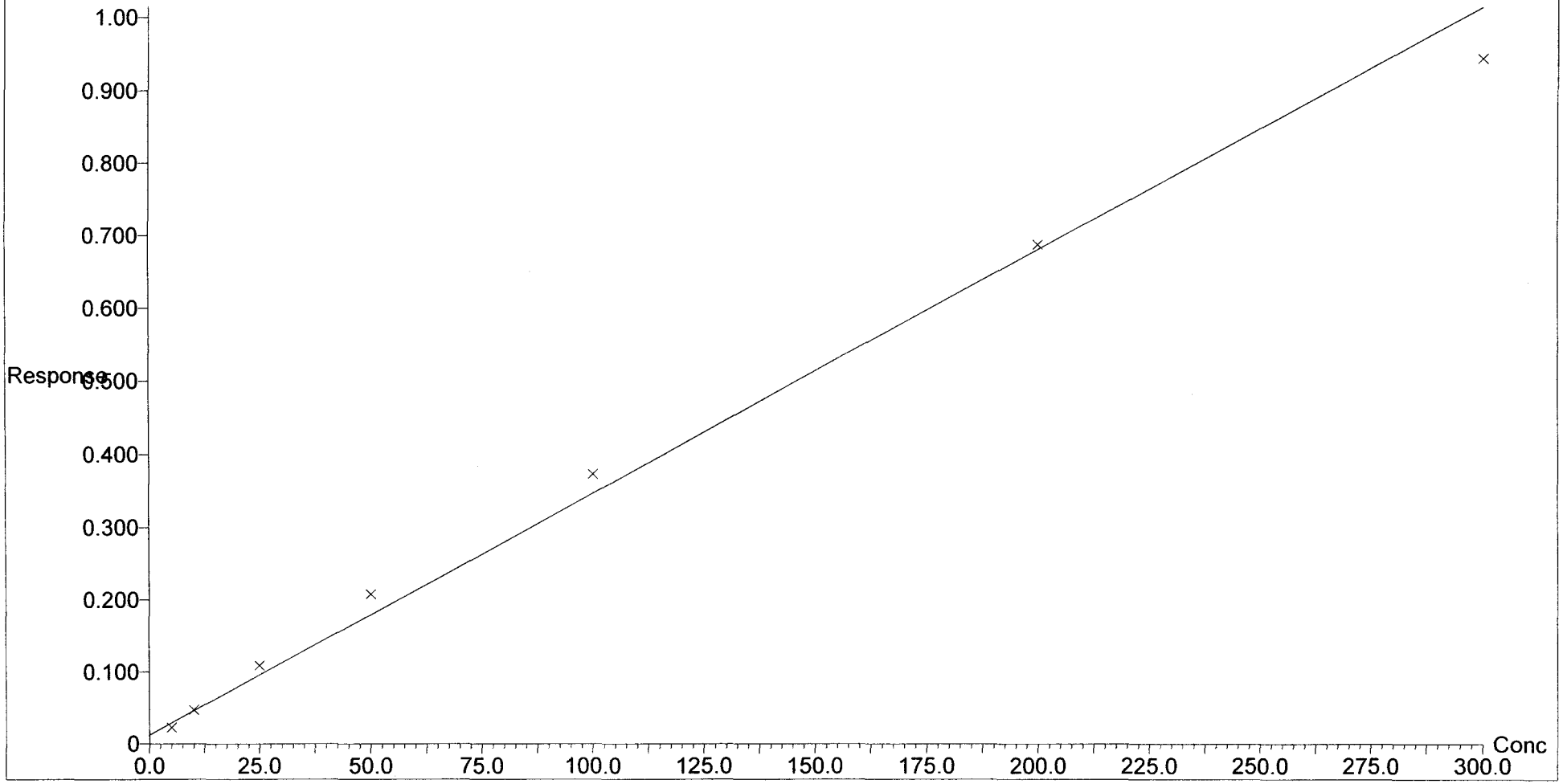


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 5 name: 1,3,5-Trinitrobenzene Method File: ex48g29
Coefficient of Determination: 0.994563
Calibration curve: 0.00384794 * x + 0.00471089
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

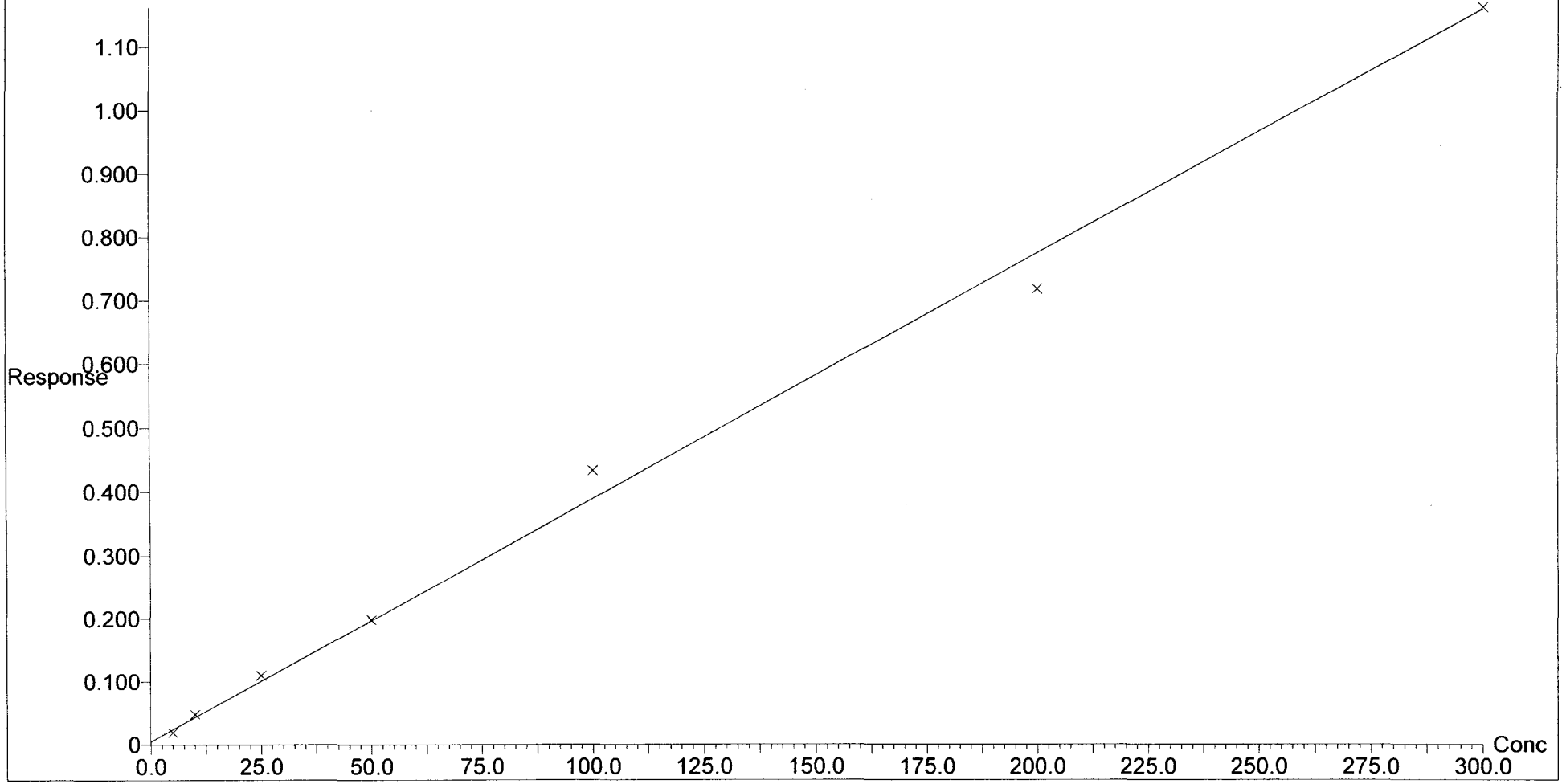
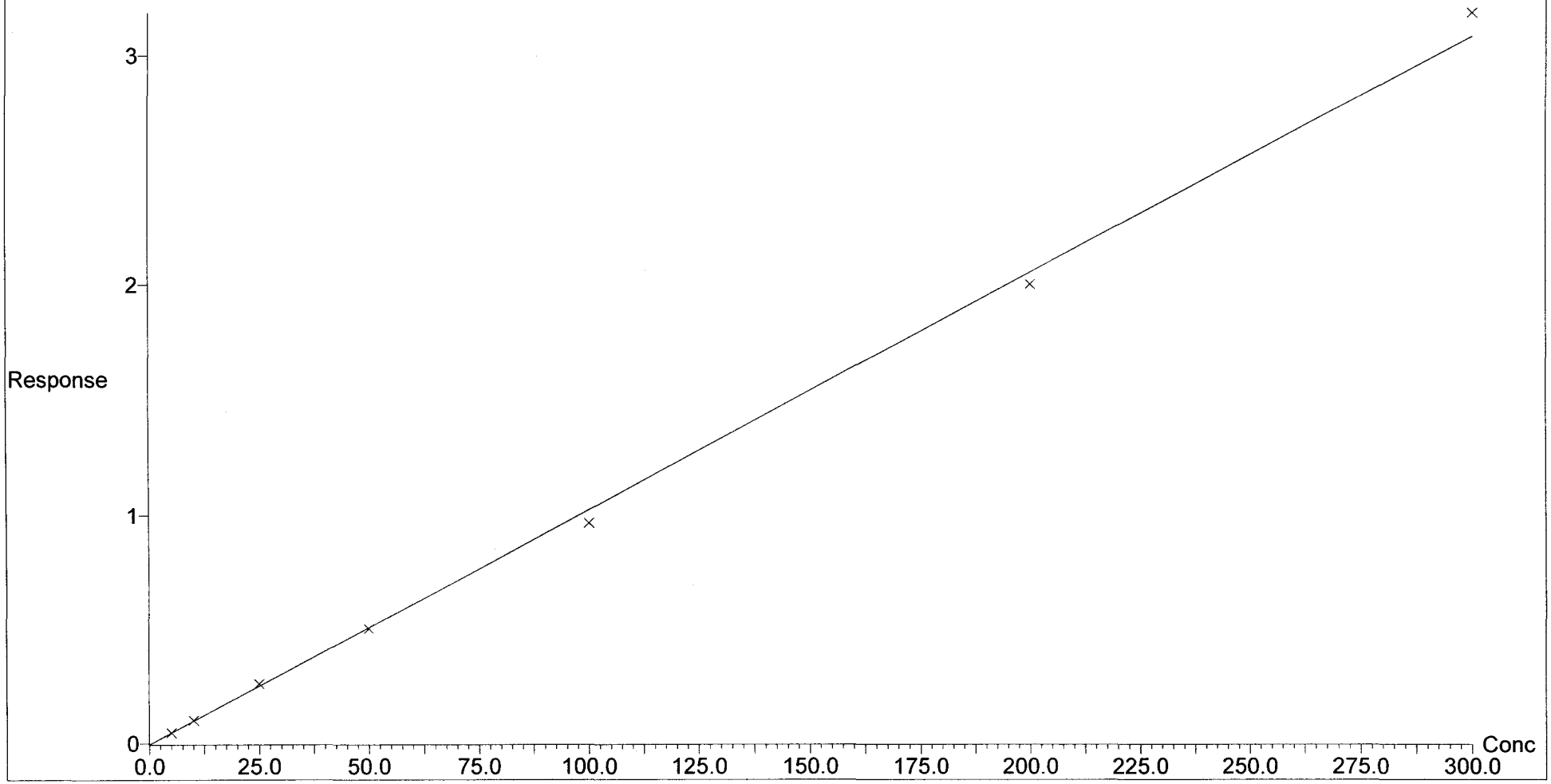


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

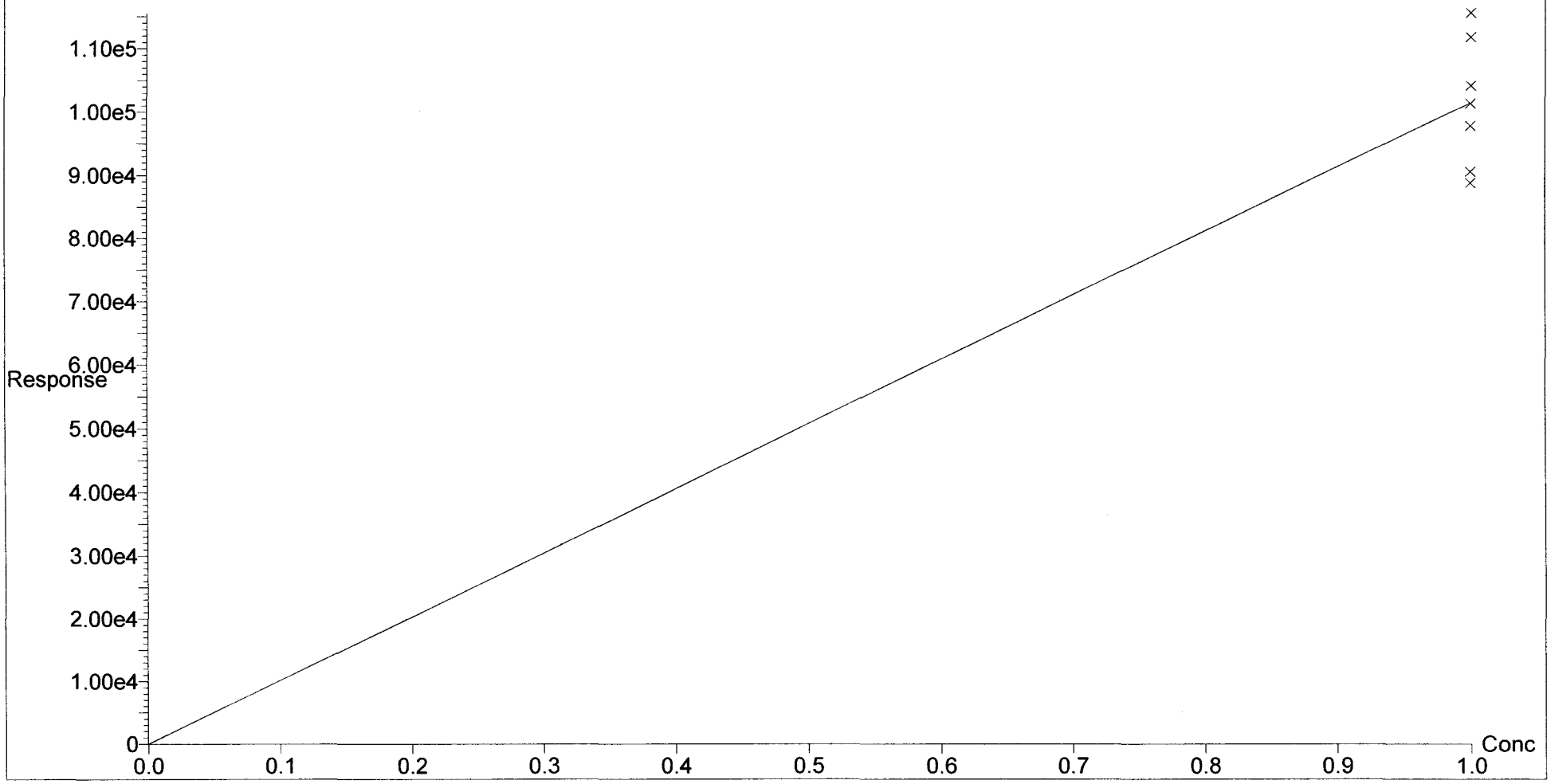
Compound 6 name: Tetryl Method File: ex48g29
Coefficient of Determination: 0.998525
Calibration curve: 0.0102885 * x + -0.00453104
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

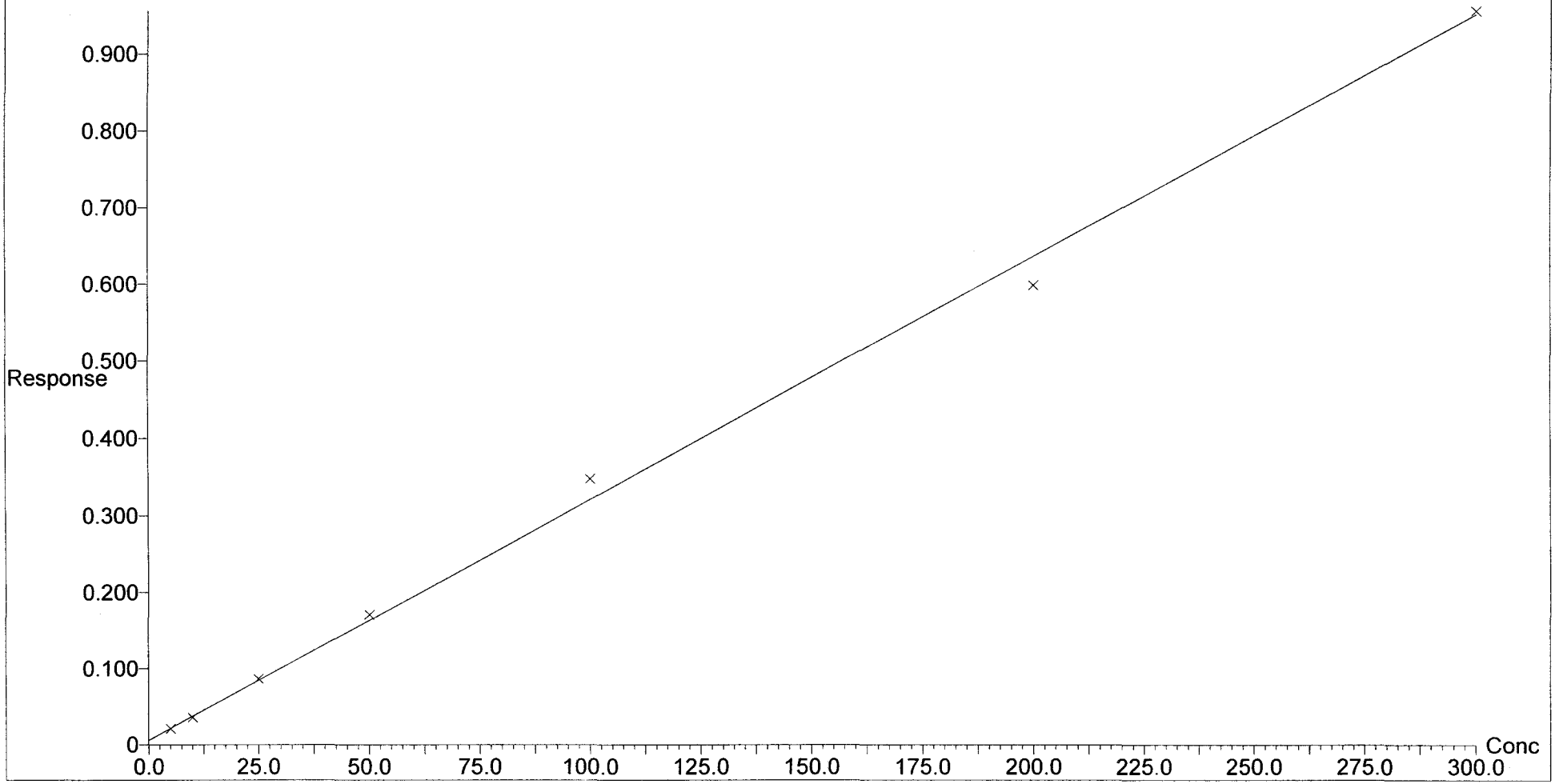
Compound 7 name: 1,3 Dinitrobenzene-d4 (IS) Method File: ex48g29
Response Factor: 101434
RRF SD: 10063.6, % Relative SD: 9.92135
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

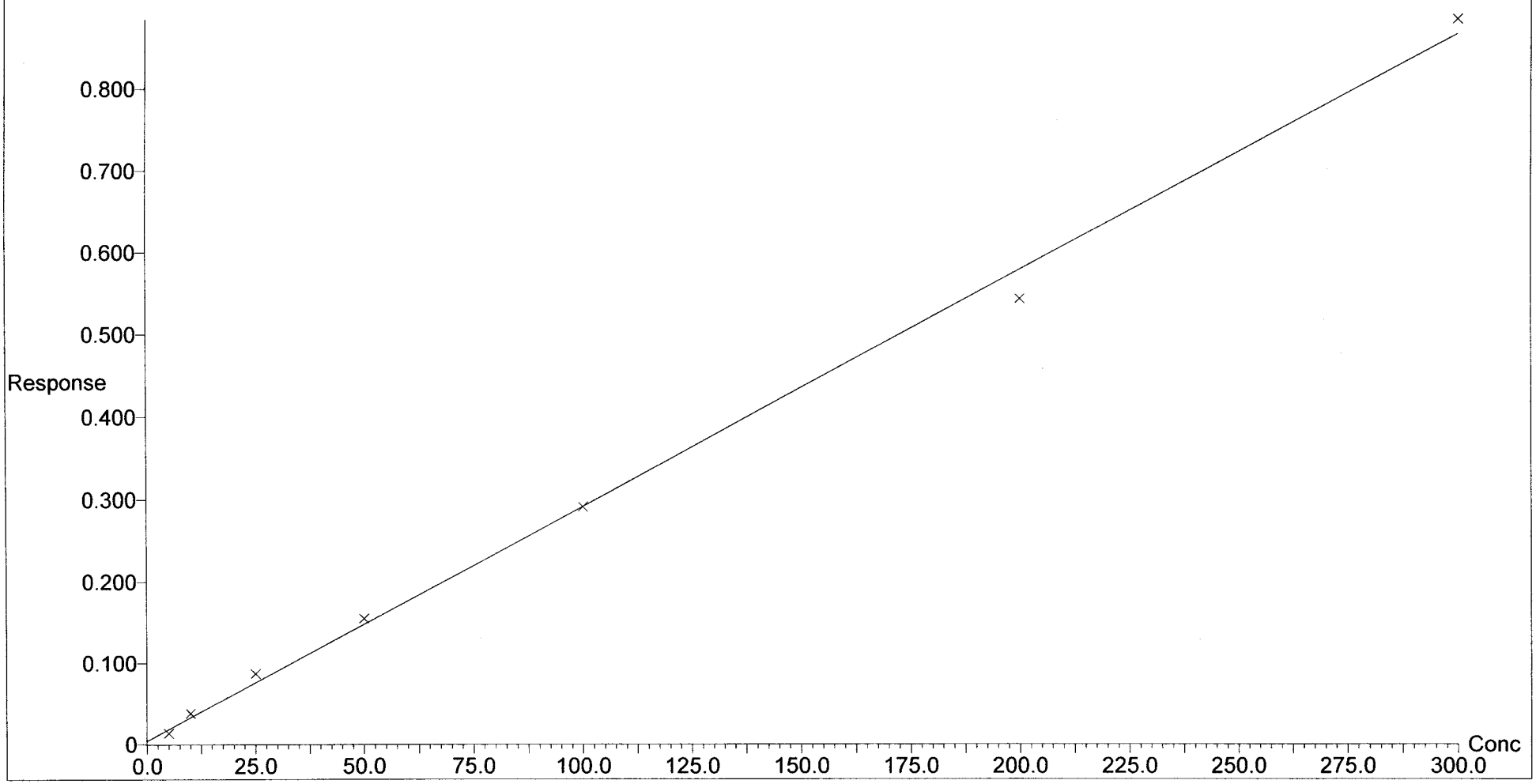
Compound 8 name: 1,3-Dinitrobenzene Method File: ex48g29
Coefficient of Determination: 0.997196
Calibration curve: 0.00315292 * x + 0.00564178
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

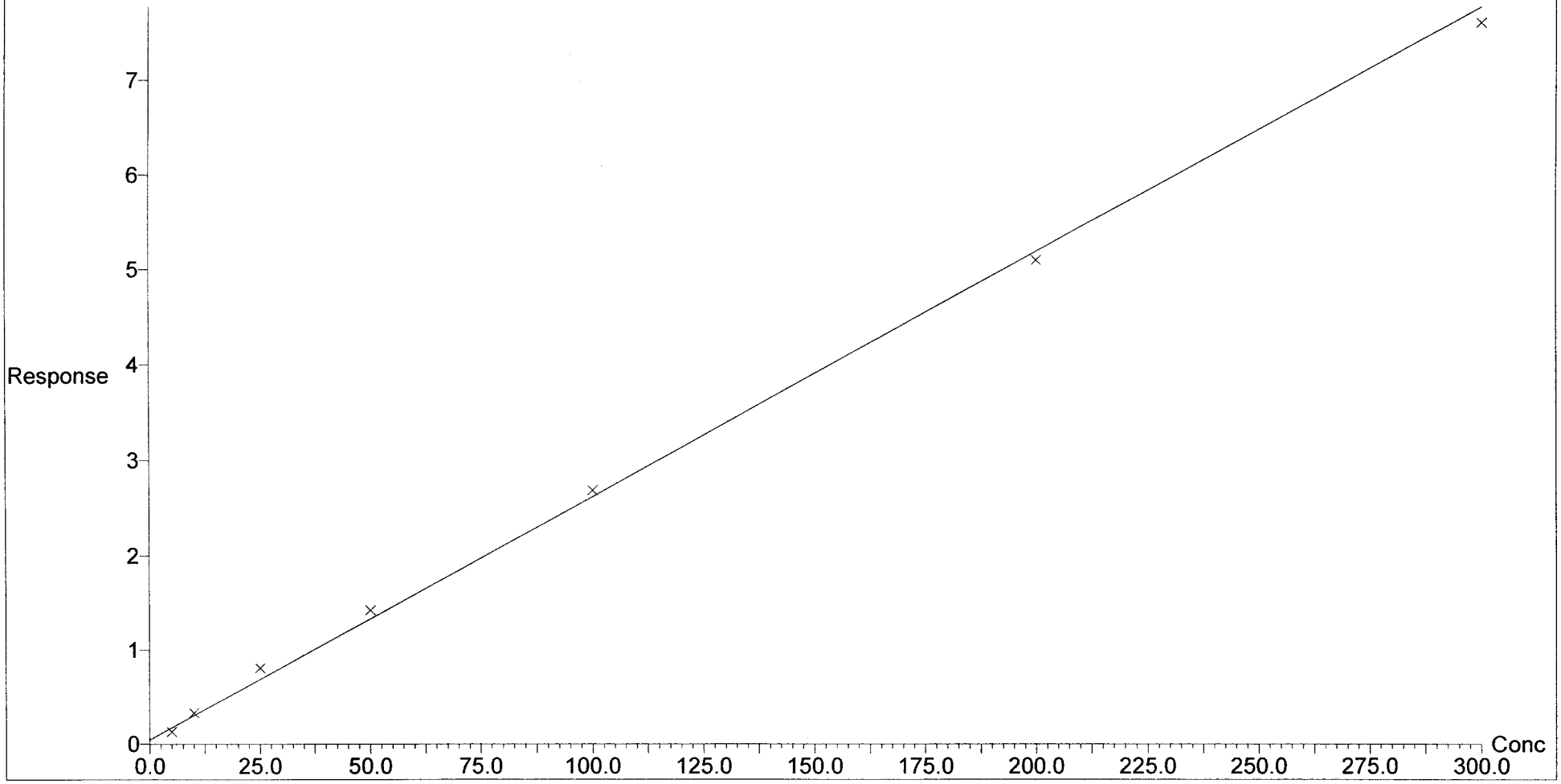
Compound 9 name: Nitrobenzene-d5 Method File: ex48g29
Coefficient of Determination: 0.995648
Calibration curve: 0.00287504 * x + 0.00410105
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

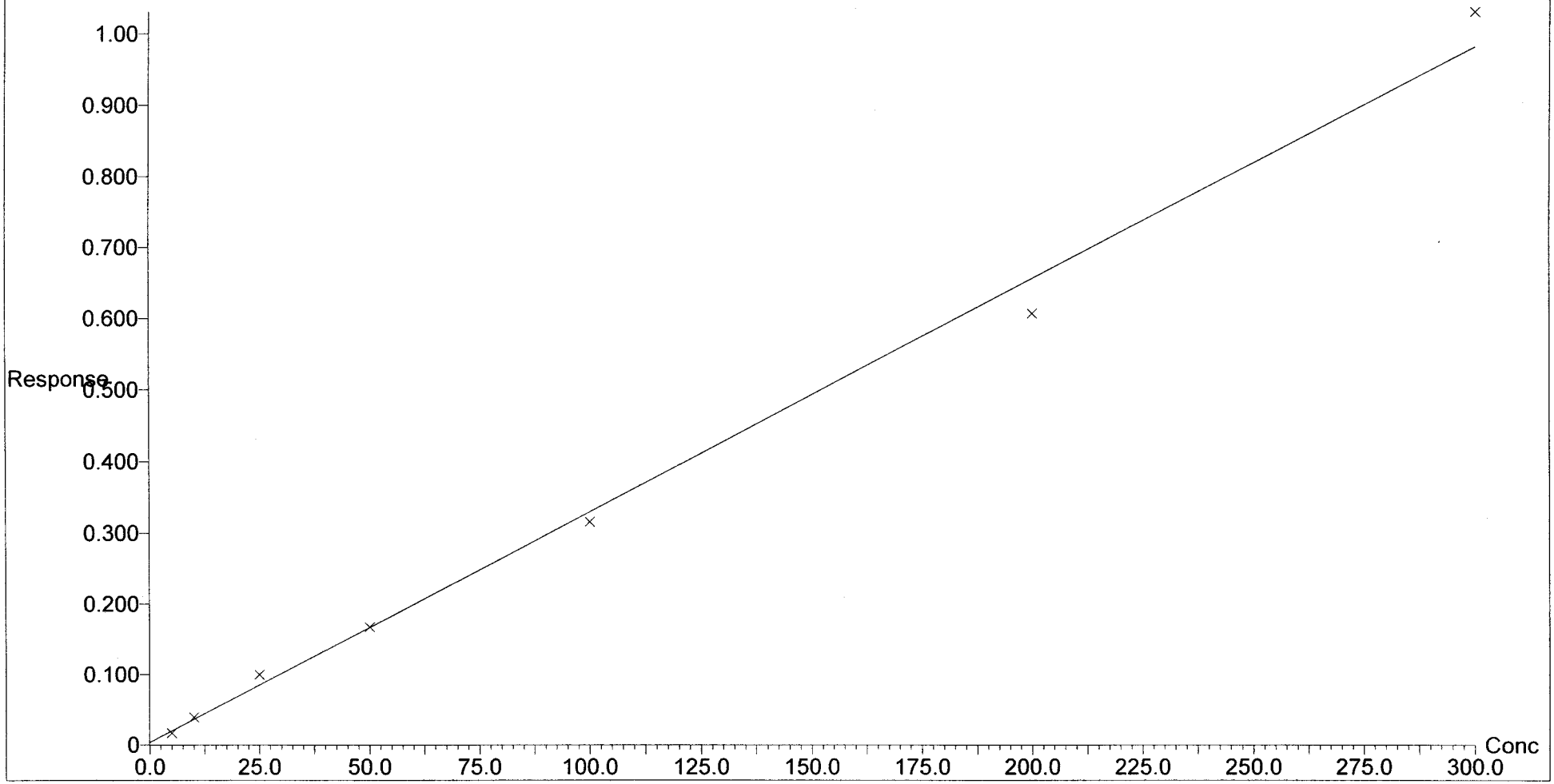
Compound 10 name: Nitroglycerin Method File: ex48g29
Coefficient of Determination: 0.996295
Calibration curve: 0.0257449 * x + 0.0436900
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 11 name: Nitrobenzene Method File: ex48g29
Coefficient of Determination: 0.994425
Calibration curve: 0.00326327 * x + 0.00344180
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 12 name: 2,4,6-Trinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.995606
Calibration curve: 0.0282574 * x + -0.00933175
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

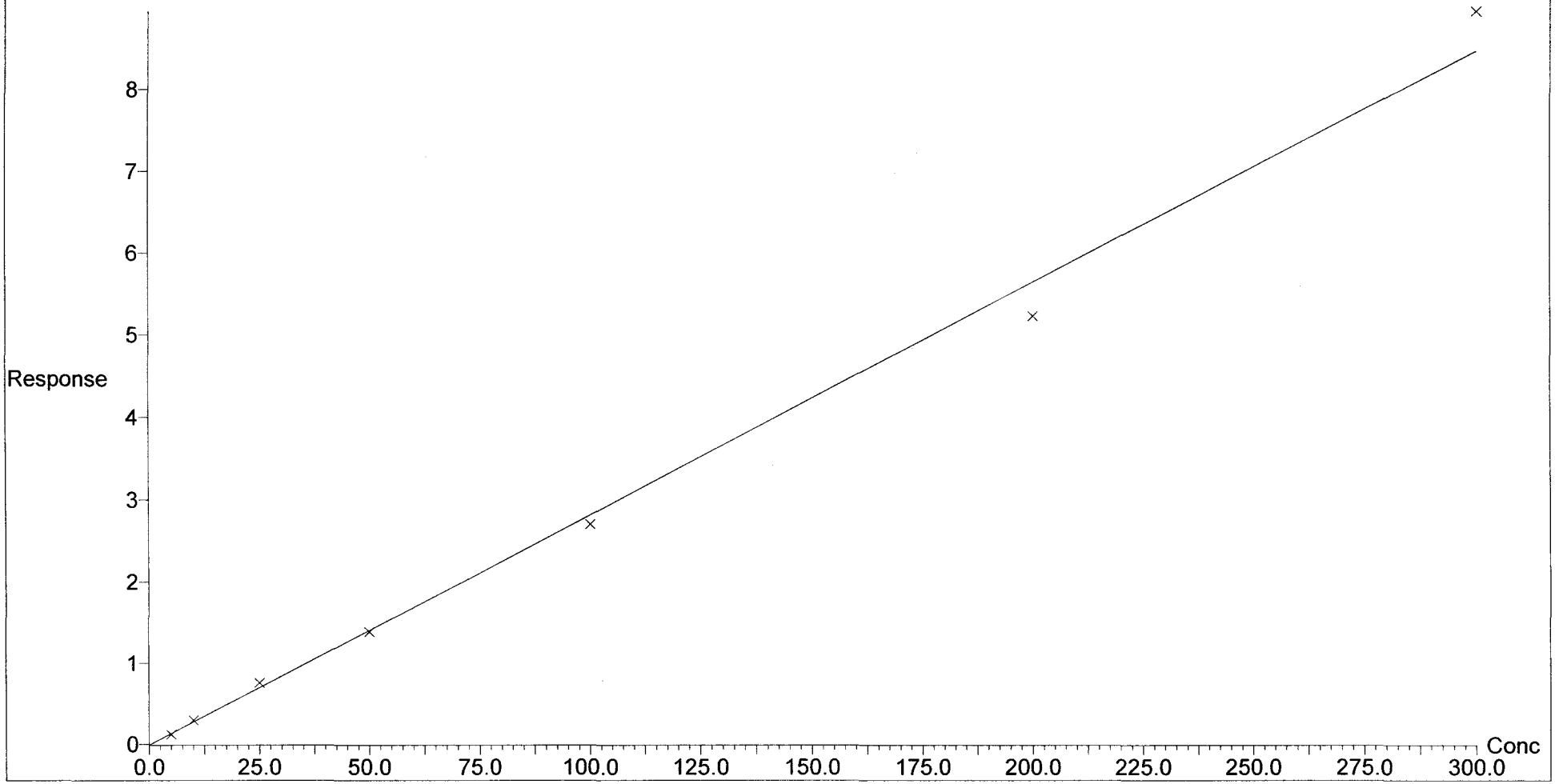


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 13 name: 4-Amino-2,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.998445
Calibration curve: 0.0132837 * x + 0.00560063
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

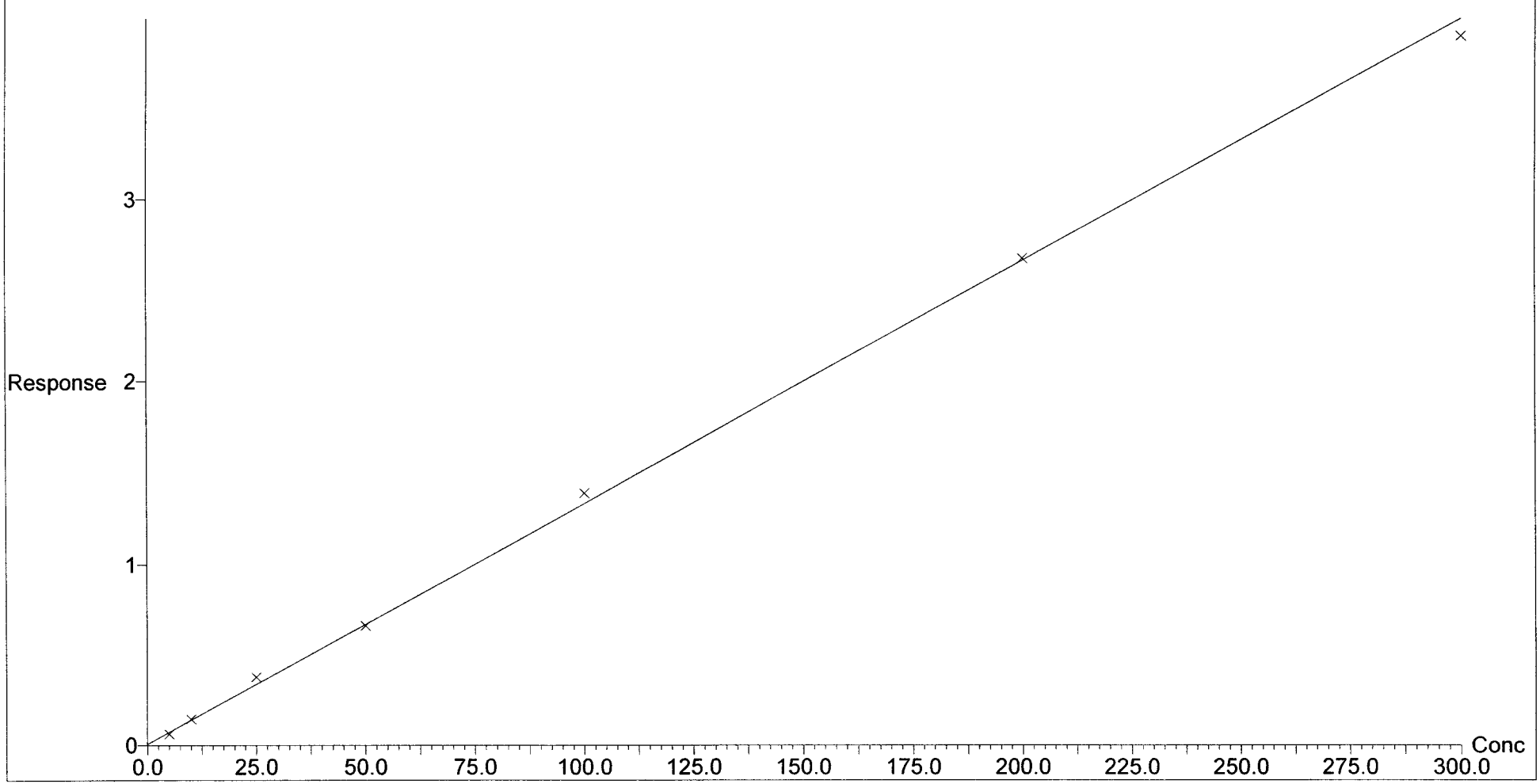
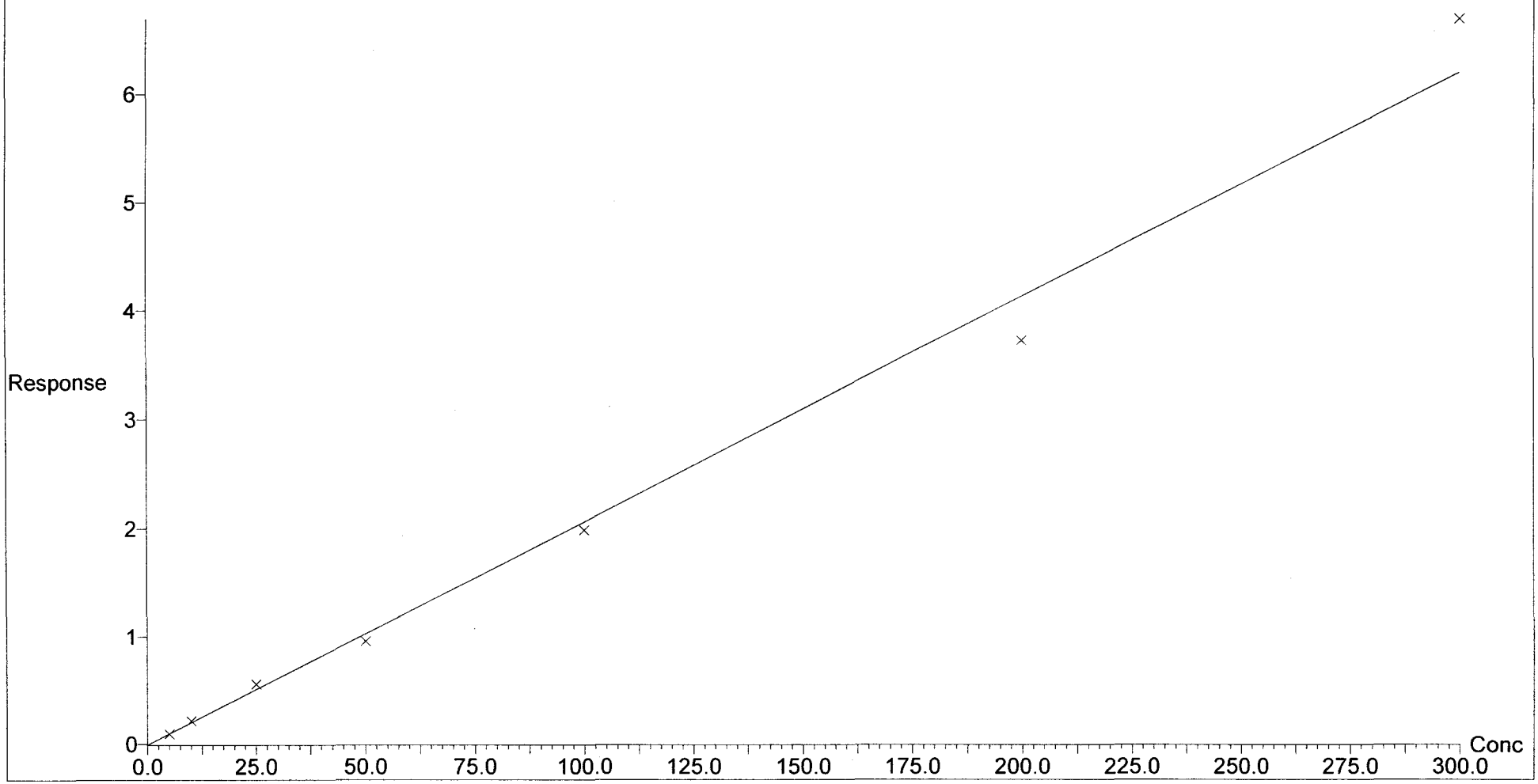


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

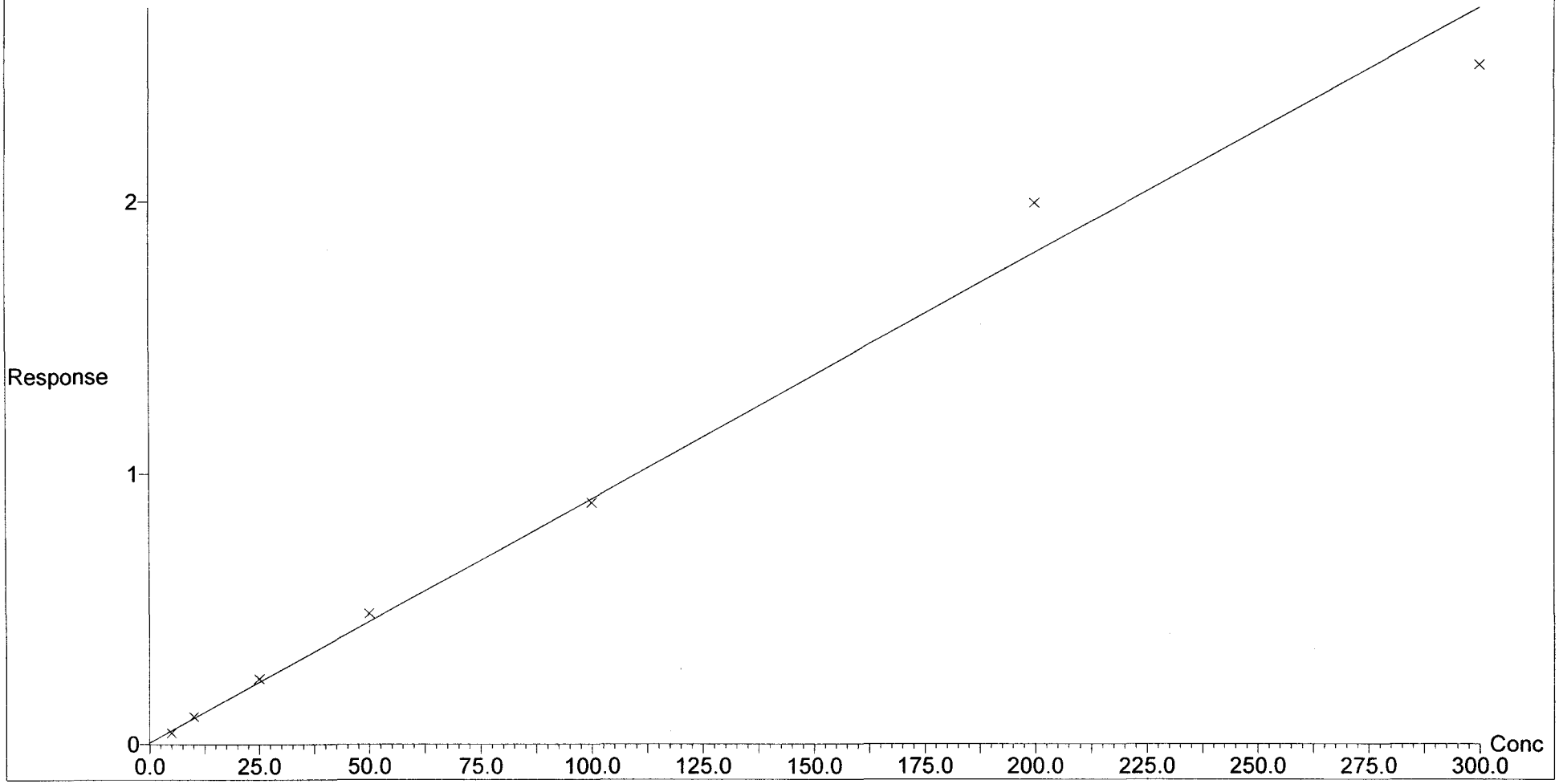
Compound 14 name: 2-Amino-4,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.992131
Calibration curve: 0.0206873 * x + -0.00713639
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

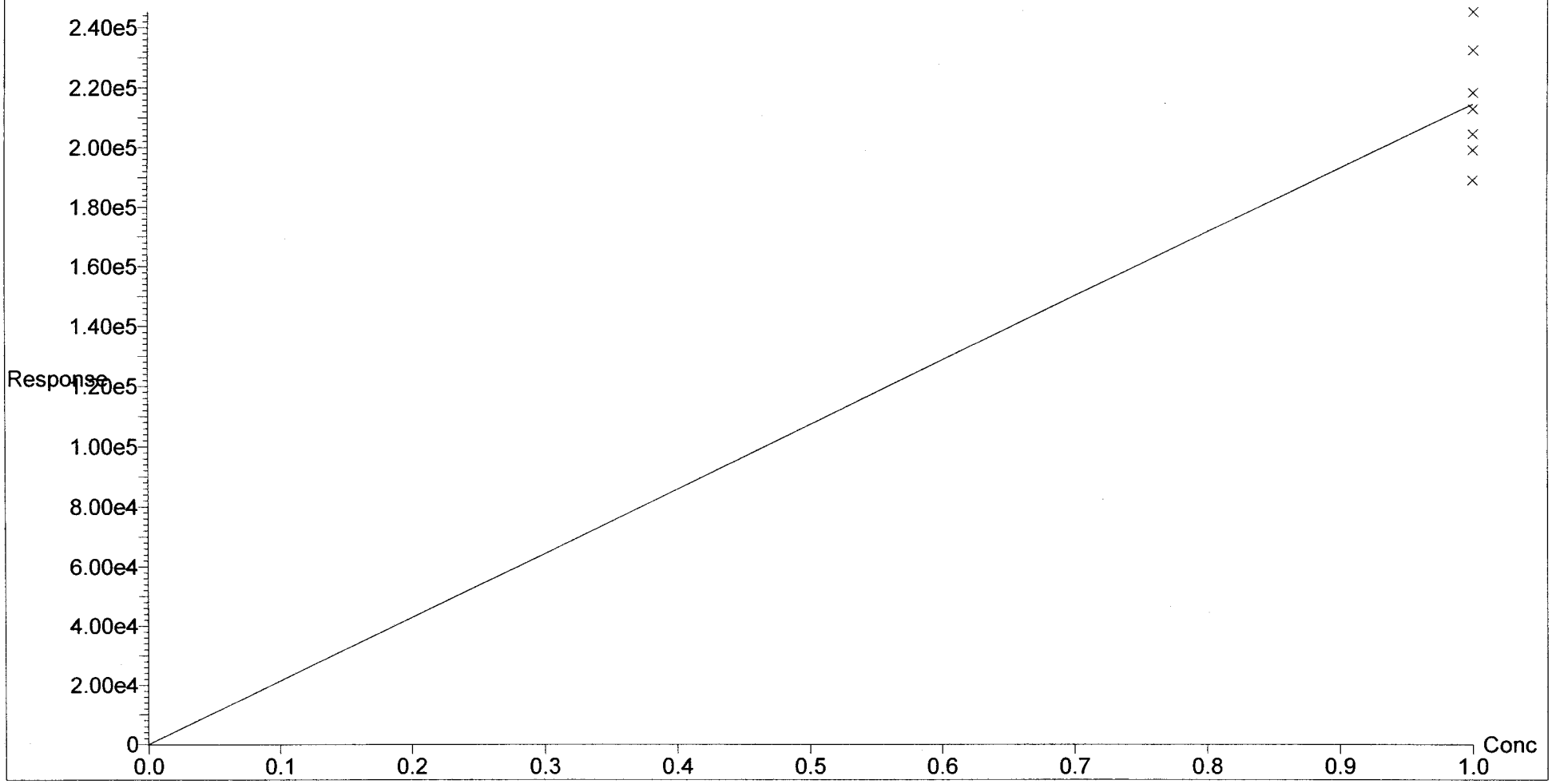
Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 15 name: 2,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.992191
Calibration curve: 0.00902750 * x + 0.00548383
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

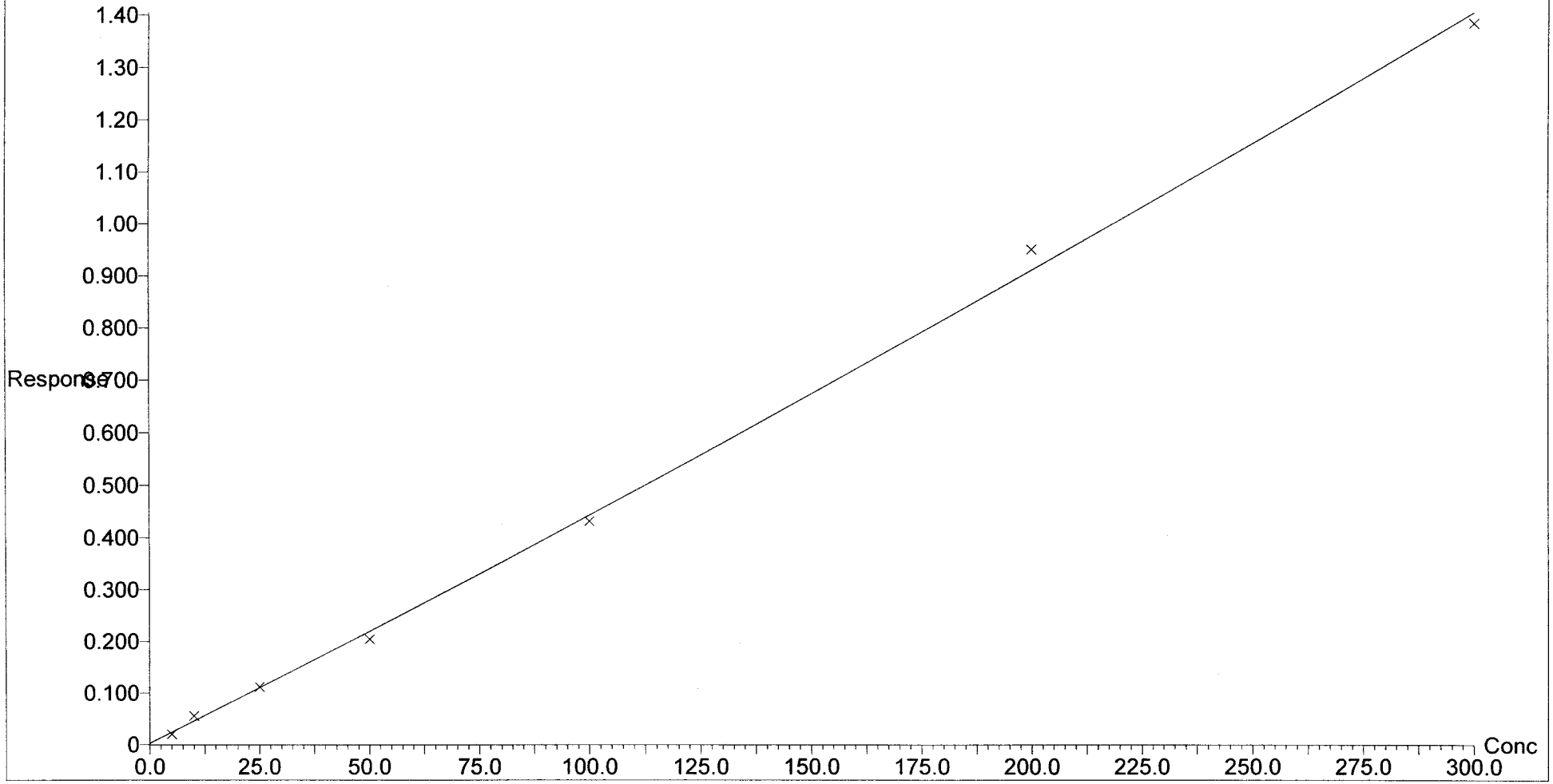
Compound 16 name: 2,4-Dinitrotoluene-d3 (IS) Method File: ex48g29
Response Factor: 214519
RRF SD: 19439.3, % Relative SD: 9.06180
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 17 name: 2,4-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.997621
Calibration curve: 1.34213e-6 * x^2 + 0.00427312 * x + 0.00270958
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

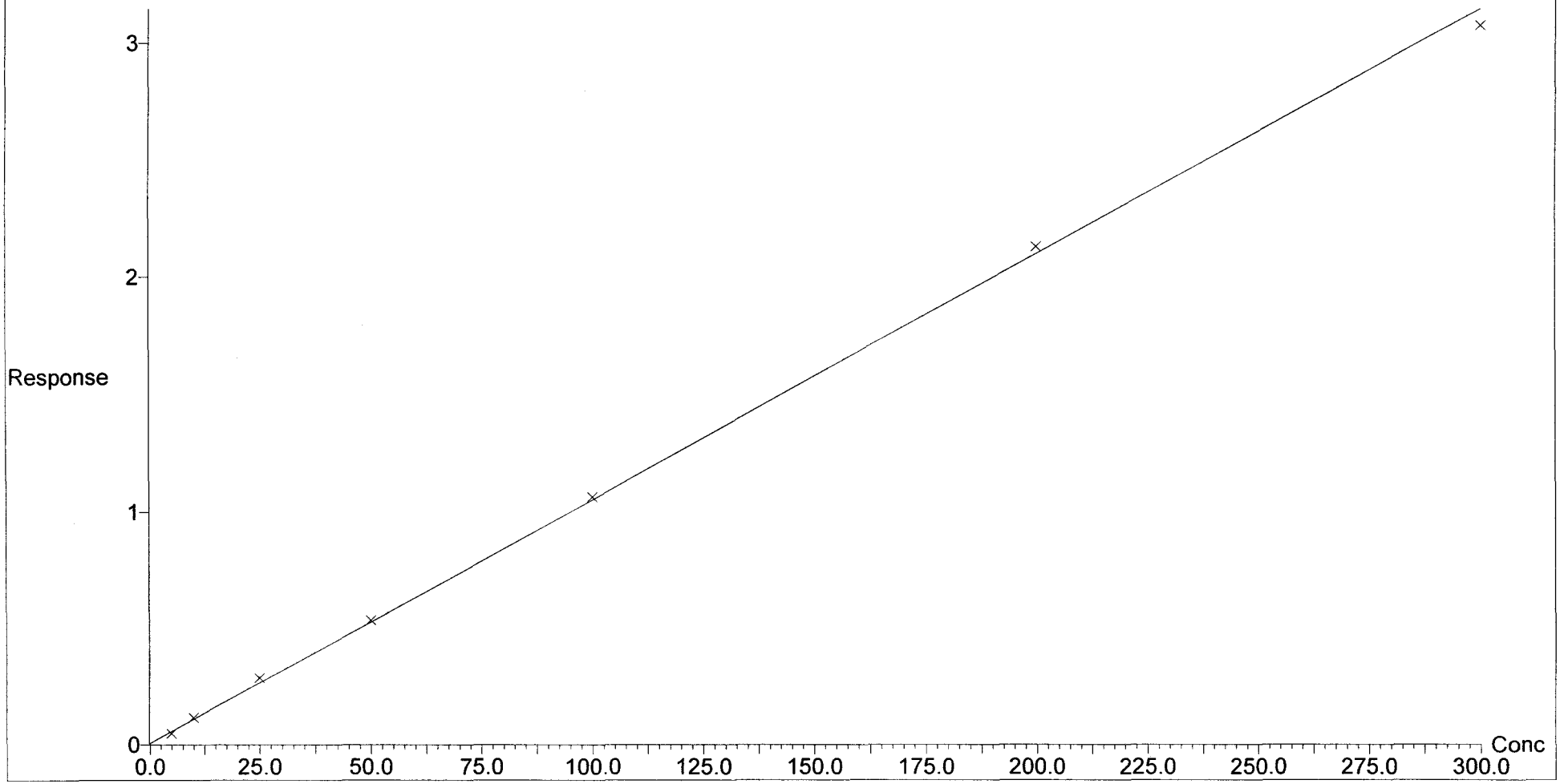
Compound 18 name: 2-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.999594
Calibration curve: 0.00197244 * x + 0.00132781
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

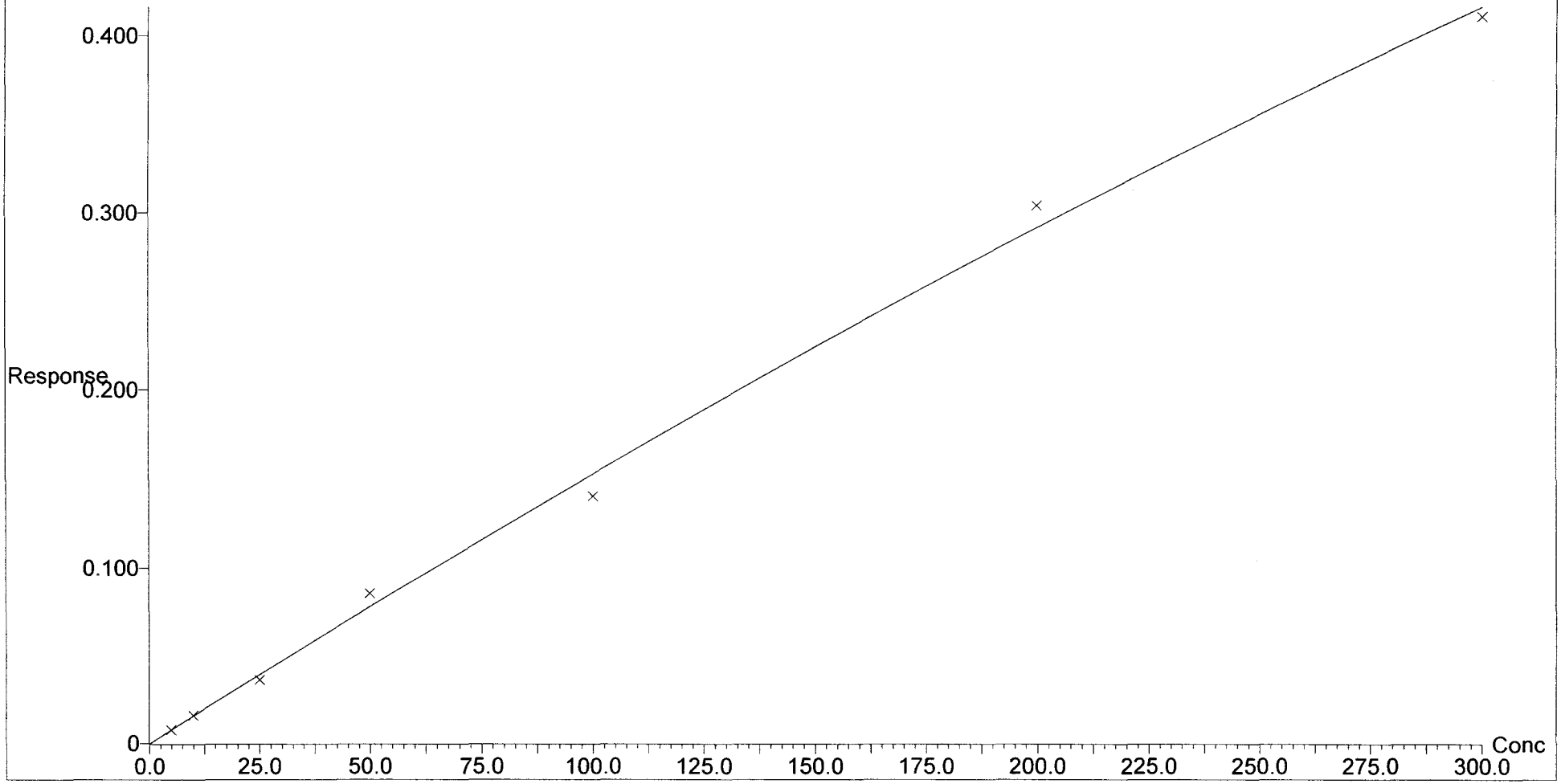
Compound 19 name: PETN Method File: ex48g29
Coefficient of Determination: 0.999013
Calibration curve: 0.0104654 * x + 0.00498117
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

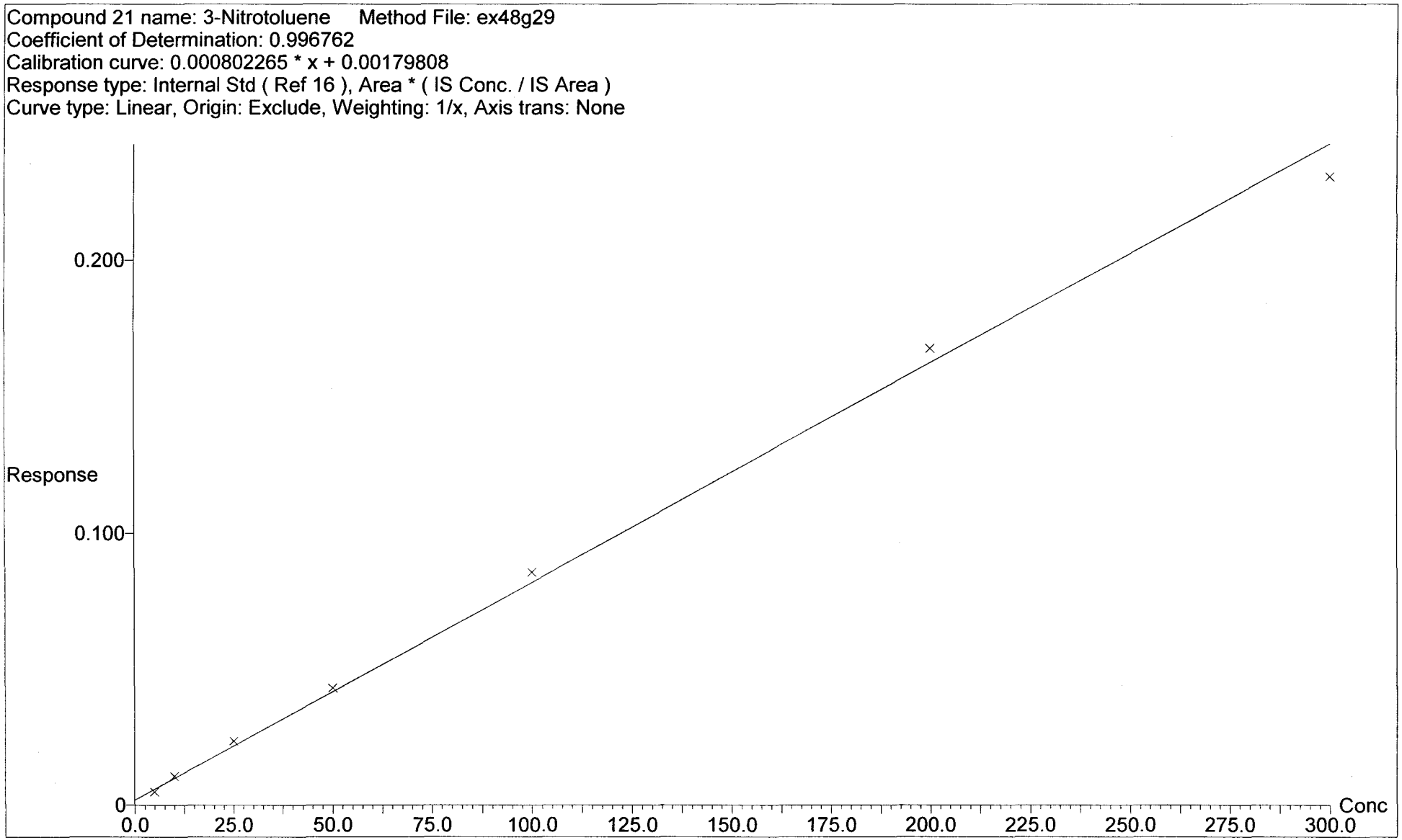
Compound 20 name: 4-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.996636
Calibration curve: -7.10754e-7 * x^2 + 0.00160195 * x + -0.000369042
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 07:56:30 2008

Compound 21 name: 3-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.996762
Calibration curve: 0.000802265 * x + 0.00179808
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



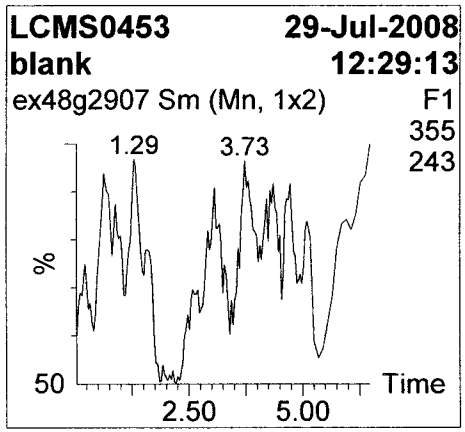
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

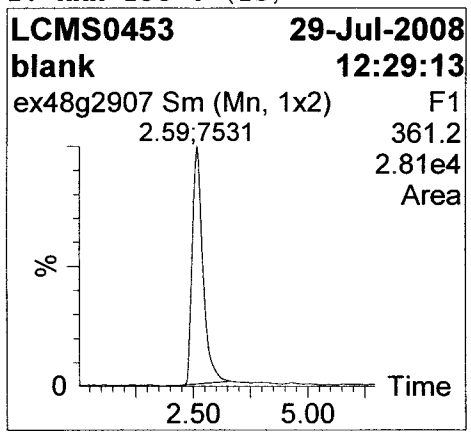
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2907
Text: blank

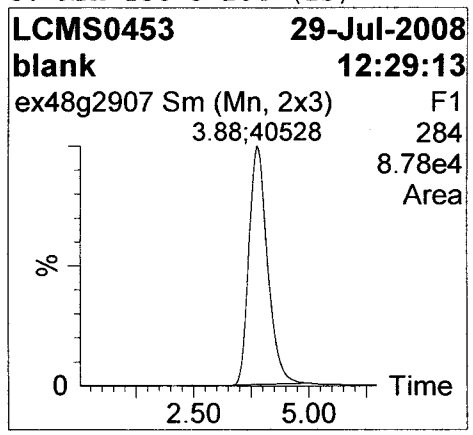
1: HMX



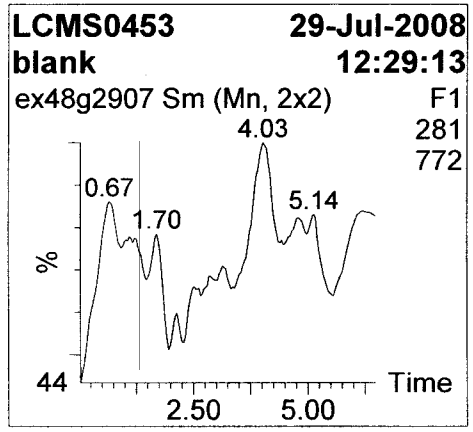
2: HMX 13C-4 (IS)



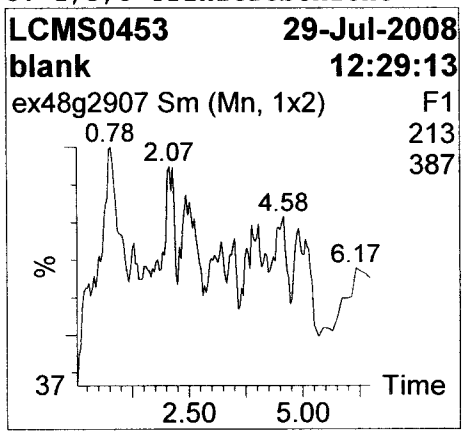
3: RDX 13C-3 284 (IS)



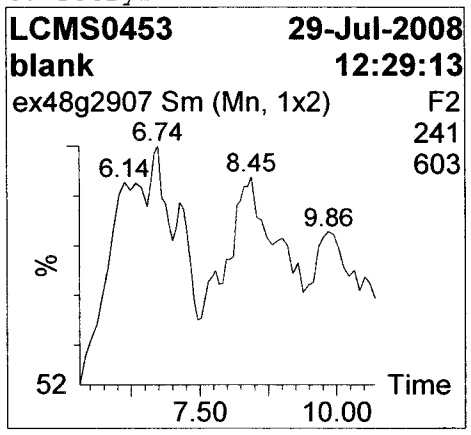
4: RDX



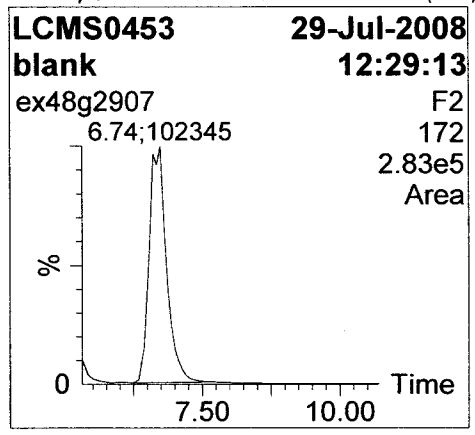
5: 1,3,5-Trinitrobenzene



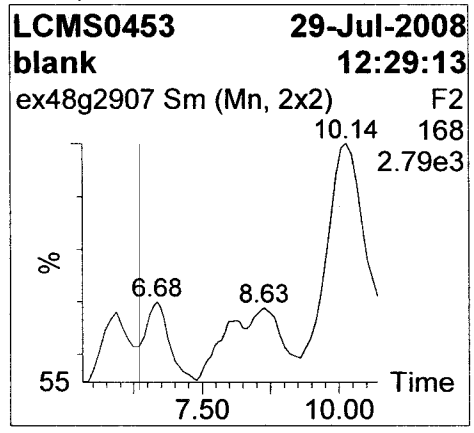
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



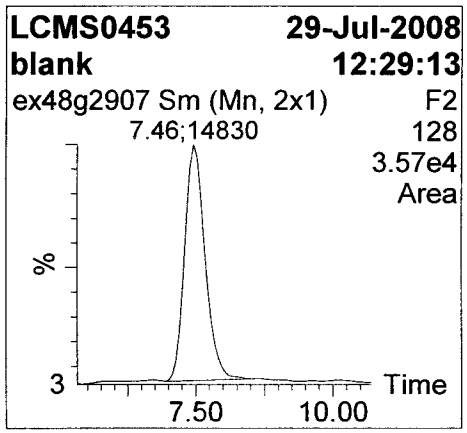
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

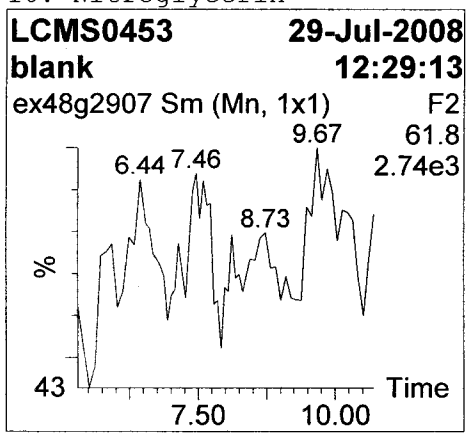
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2907
Text: blank

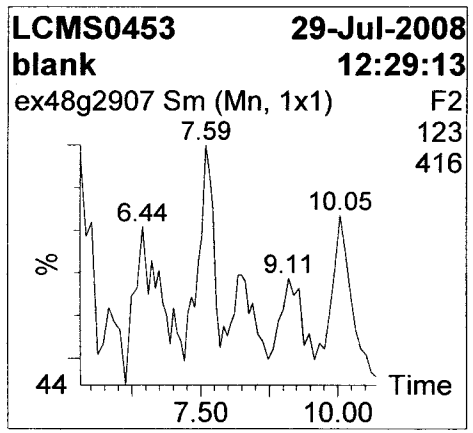
9: Nitrobenzene-d5



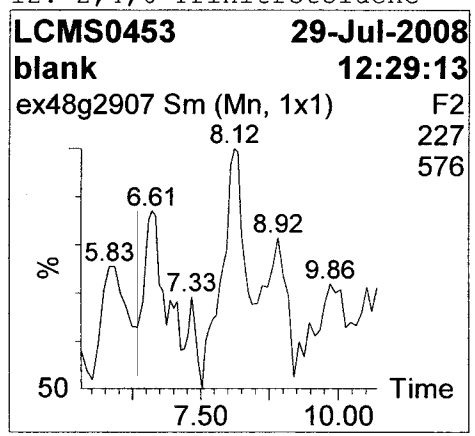
10: Nitroglycerin



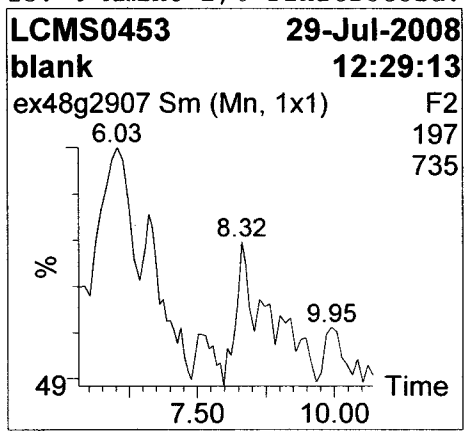
11: Nitrobenzene



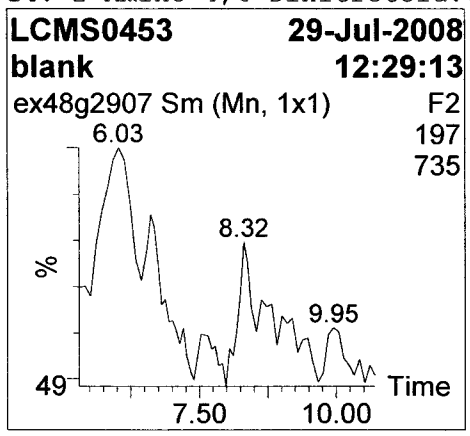
12: 2,4,6-Trinitrotoluene



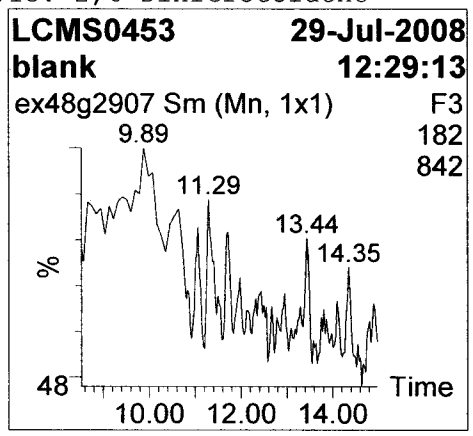
13: 4-Amino-2,6-Dinitrotolu..



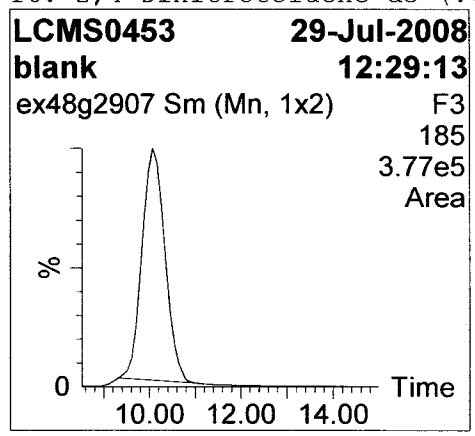
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



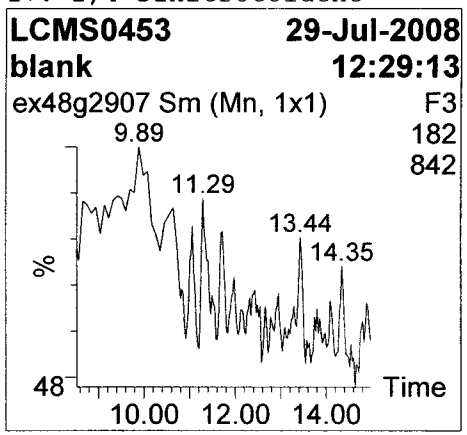
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

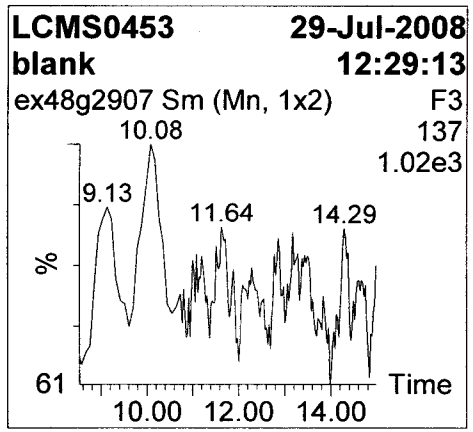
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2907
Text: blank

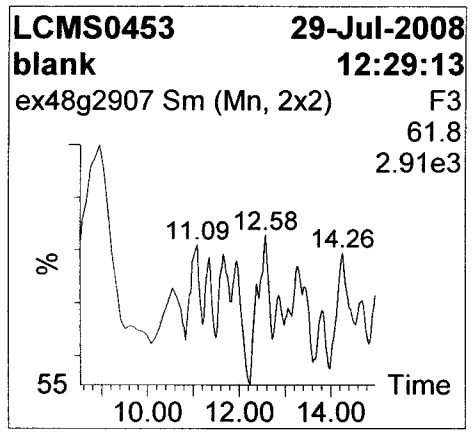
17: 2,4-Dinitrotoluene



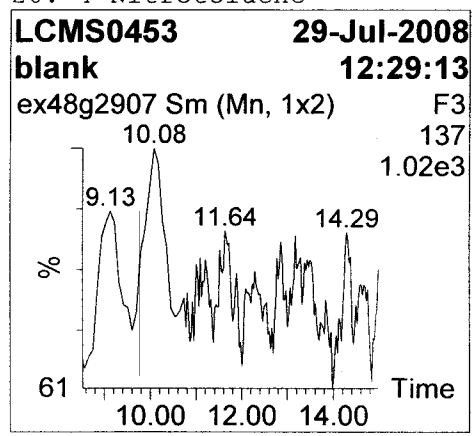
18: 2-Nitrotoluene



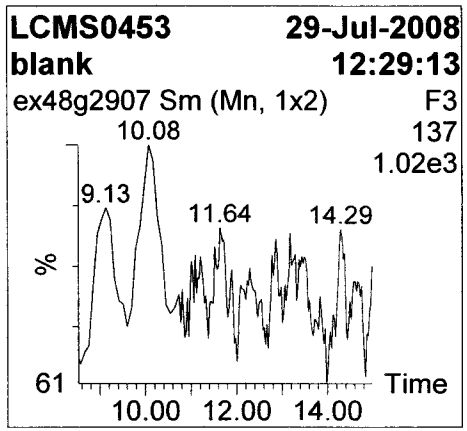
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2907
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7531	bb	1.132	113	29/Jul/08	ex48g29	
RDX 13C-..	3.882	40528	bb	0.999	100	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.743	102345	bb	1.009	101	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.464	14830	bb	48.972	98	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.076	213845	bb	0.997	100	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

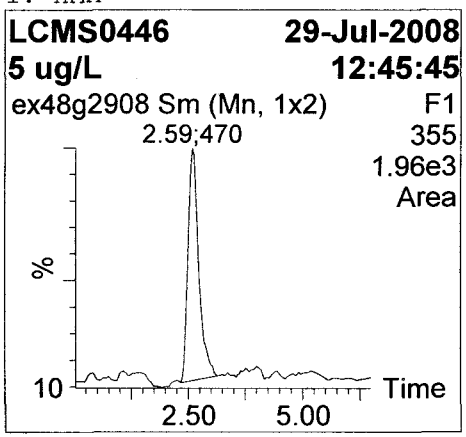
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

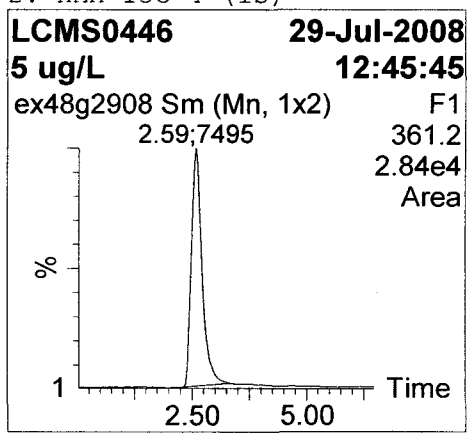
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2908
Text: 5 ug/L

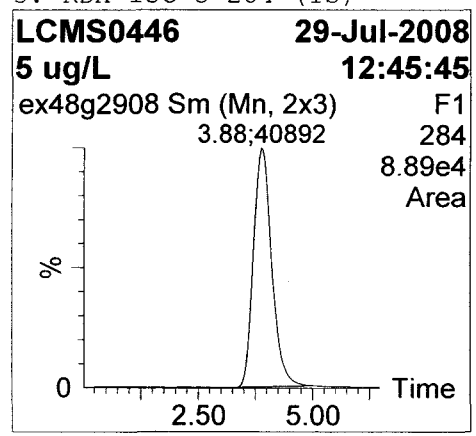
1: HMX



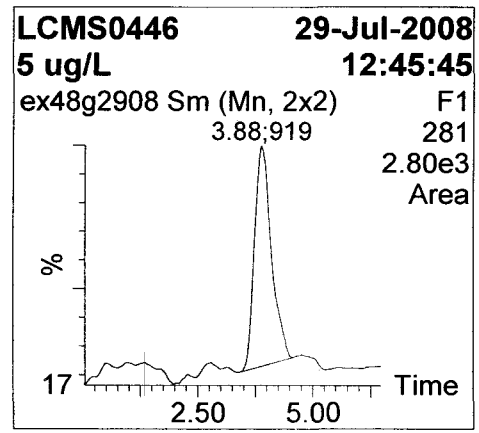
2: HMX 13C-4 (IS)



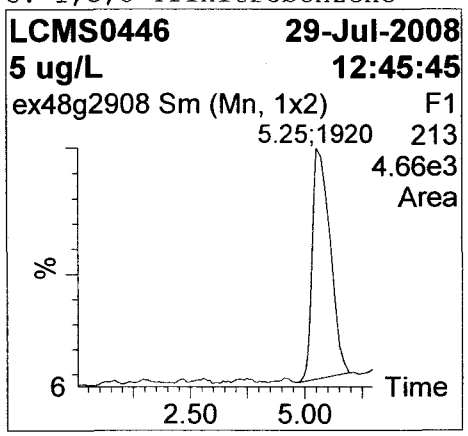
3: RDX 13C-3 284 (IS)



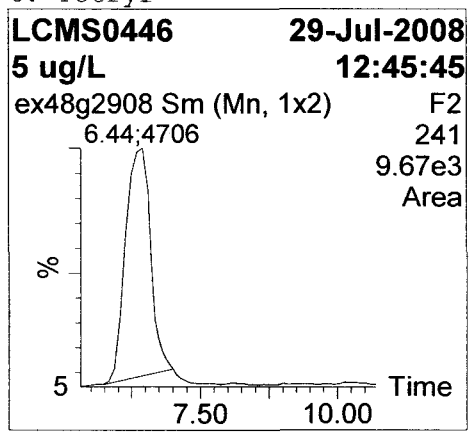
4: RDX



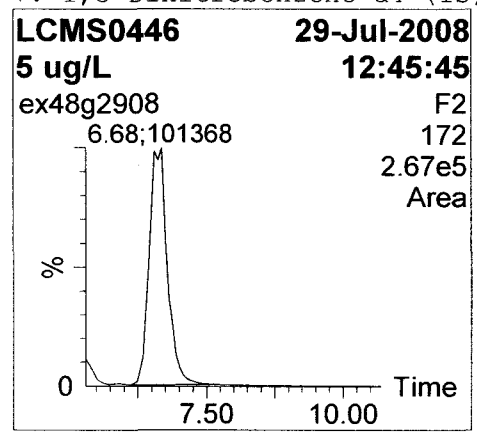
5: 1,3,5-Trinitrobenzene



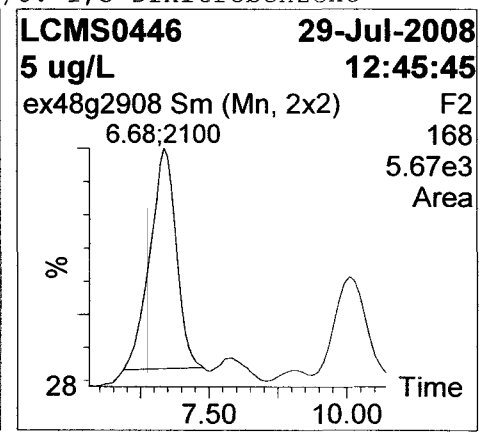
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



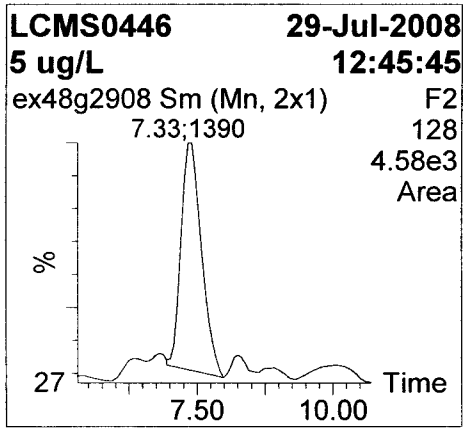
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

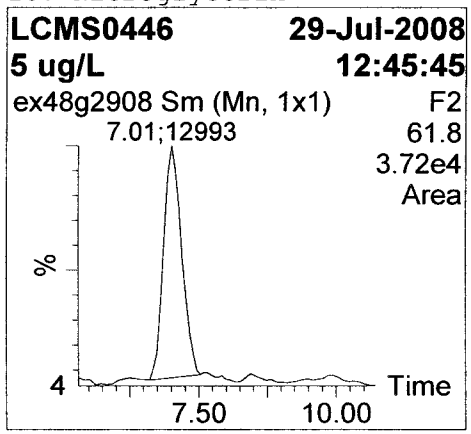
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2908
Text: 5 ug/L

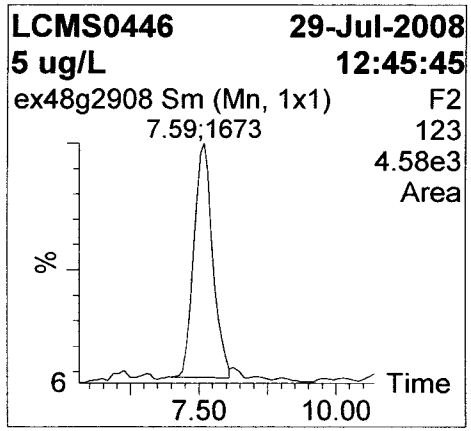
9: Nitrobenzene-d5



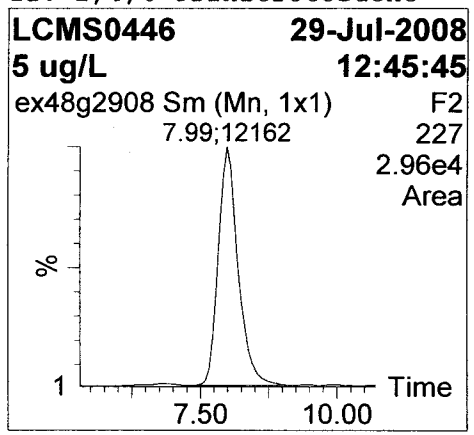
10: Nitroglycerin



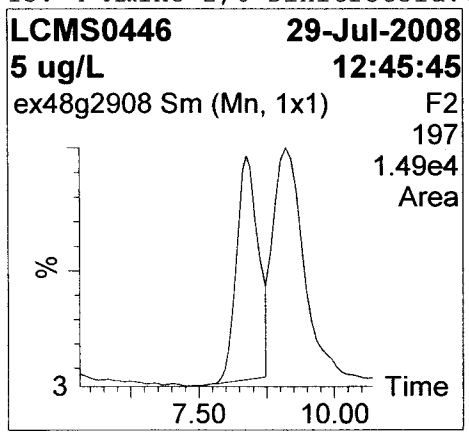
11: Nitrobenzene



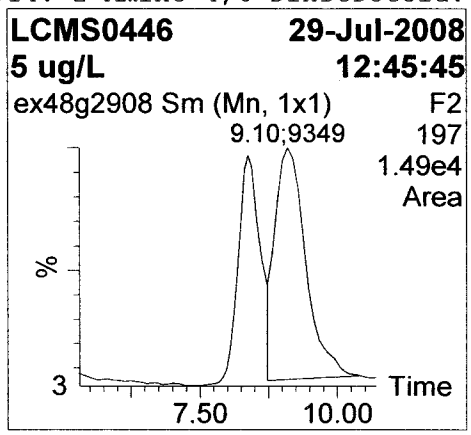
12: 2,4,6-Trinitrotoluene



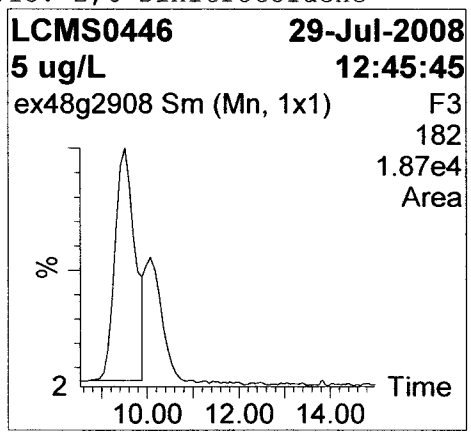
13: 4-Amino-2,6-Dinitrotolu..



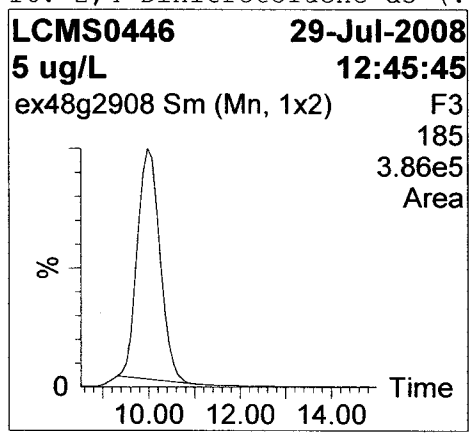
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



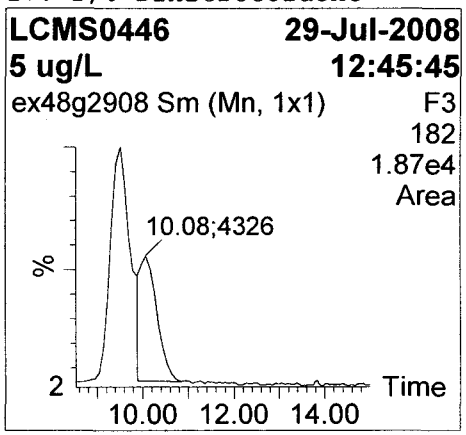
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

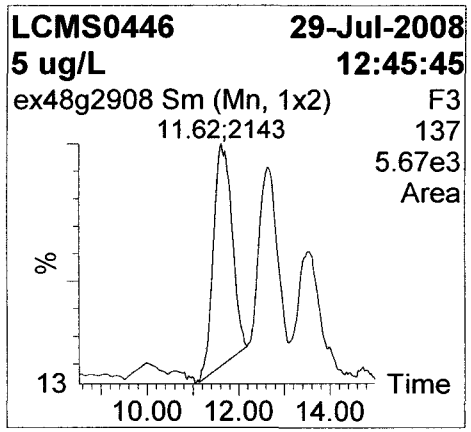
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2908
Text: 5 ug/L

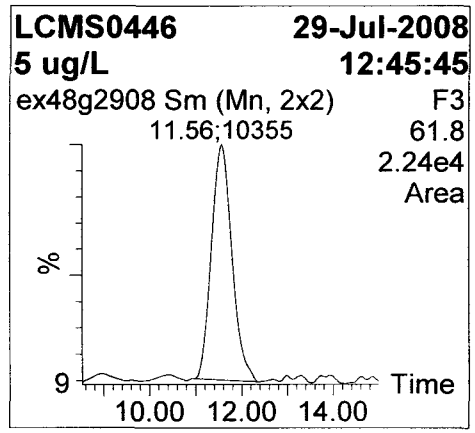
17: 2,4-Dinitrotoluene



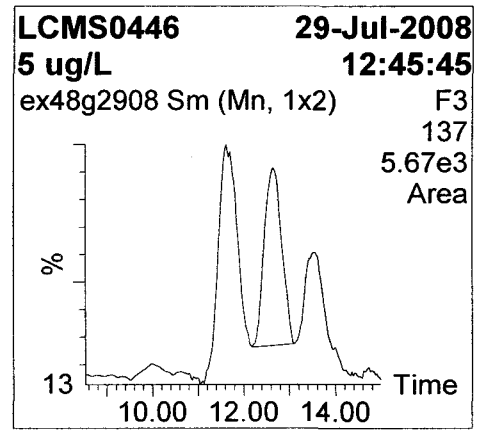
18: 2-Nitrotoluene



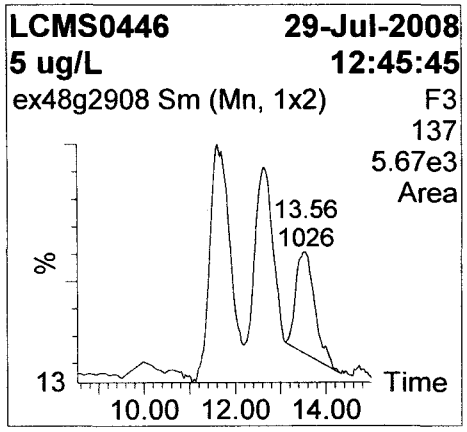
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2908
Text: 5 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	470	bb	4.073	81	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7495	bb	1.127	113	29/Jul/08	ex48g29	
RDX 13C-..	3.882	40892	bb	1.008	101	29/Jul/08	ex48g29	
RDX	3.882	919	bb	3.095	62	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	1920	bb	3.698	74	29/Jul/08	ex48g29	
Tetryl	6.444	4706	bb	4.953	99	29/Jul/08	ex48g29	
1,3 Dini..	6.678	101368	bb	0.999	100	29/Jul/08	ex48g29	
1,3-Dini..	6.678	2100	bb	4.781	96	29/Jul/08	ex48g29	
Nitroben..	7.333	1390	db	3.344	67	29/Jul/08	ex48g29	
Nitrogly..	7.005	12993	bb	3.282	66	29/Jul/08	ex48g29	
Nitroben..	7.595	1673	bd	4.003	80	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	12162	bb	4.576	92	29/Jul/08	ex48g29	
4-Amino-..	8.381	6168	dd	4.159	83	29/Jul/08	ex48g29	
2-Amino-..	9.105	9349	db	4.803	96	29/Jul/08	ex48g29	
2,6-Dini..	9.510	8876	bd	4.011	80	29/Jul/08	ex48g29	
2,4-Dini..	9.981	212900	bb	0.992	99	29/Jul/08	ex48g29	
2,4-Dini..	10.075	4326	db	4.116	82	29/Jul/08	ex48g29	
2-Nitrot..	11.615	2143	bb	4.430	89	29/Jul/08	ex48g29	
PETN	11.558	10355	bb	4.171	83	29/Jul/08	ex48g29	
4-Nitrot..	12.644	1628	bb	5.014	100	29/Jul/08	ex48g29	
3-Nitrot..	13.558	1026	bb	3.768	75	29/Jul/08	ex48g29	

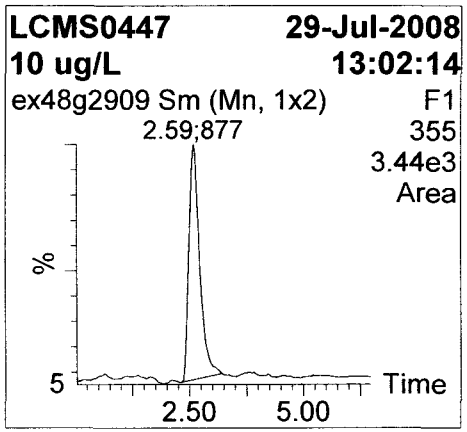
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

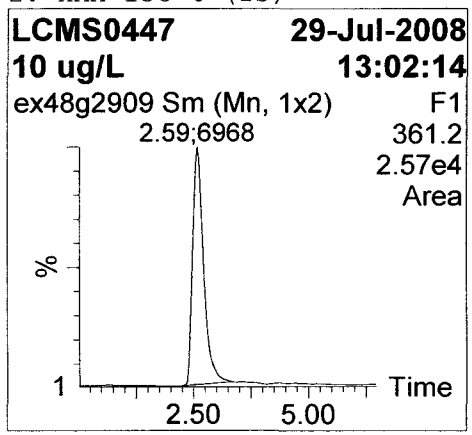
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2909
Text: 10 ug/L

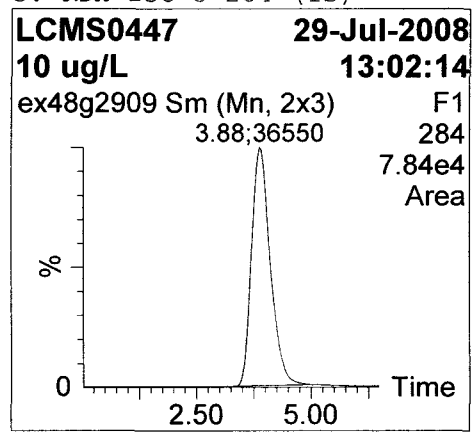
1: HMX



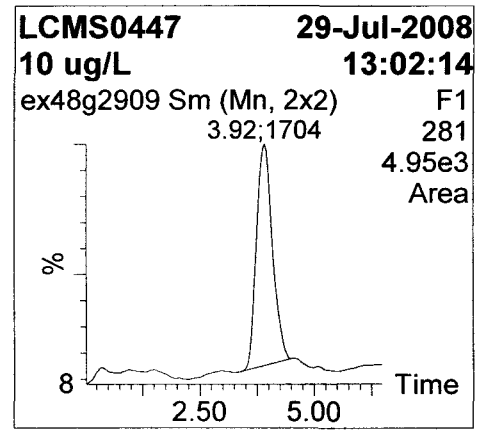
2: HMX 13C-4 (IS)



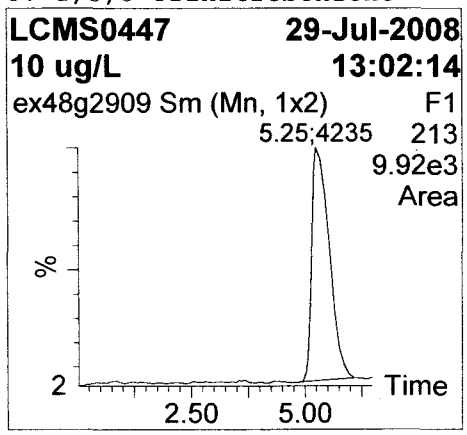
3: RDX 13C-3 284 (IS)



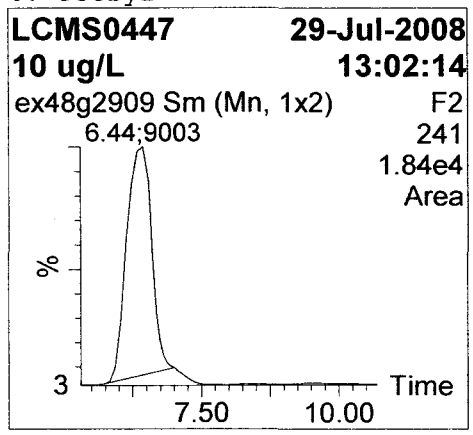
4: RDX



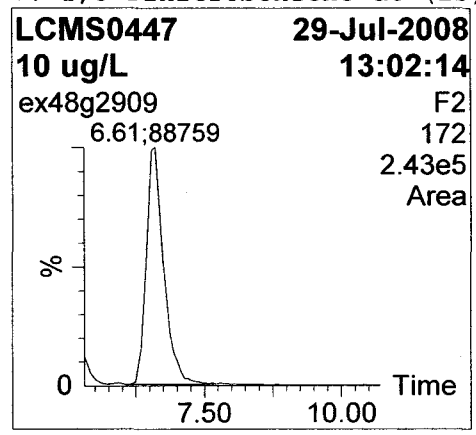
5: 1,3,5-Trinitrobenzene



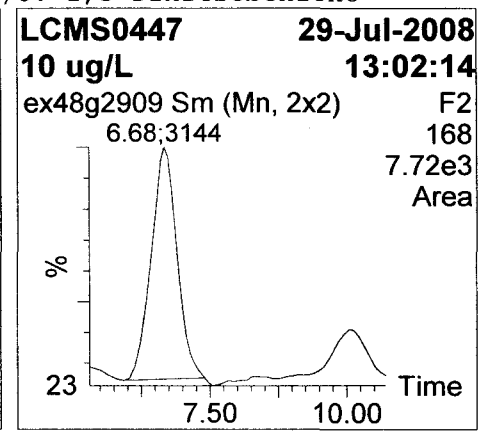
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



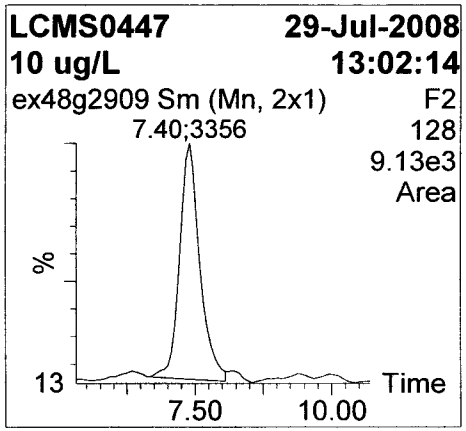
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

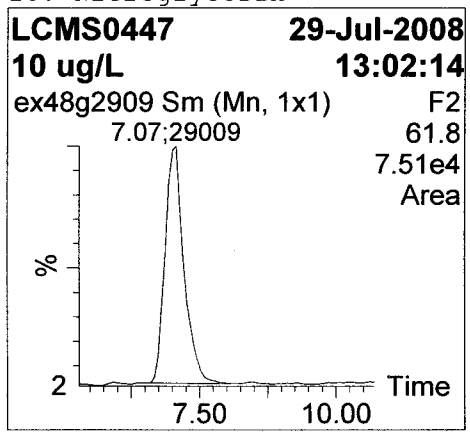
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2909
Text: 10 ug/L

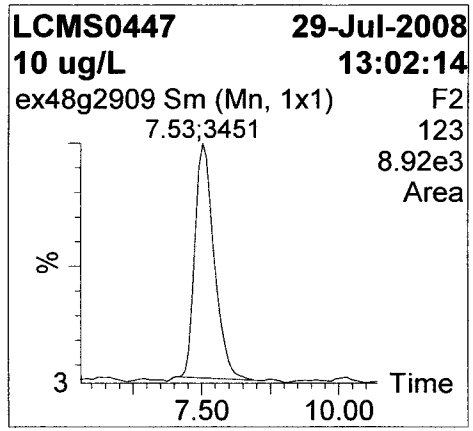
9: Nitrobenzene-d5



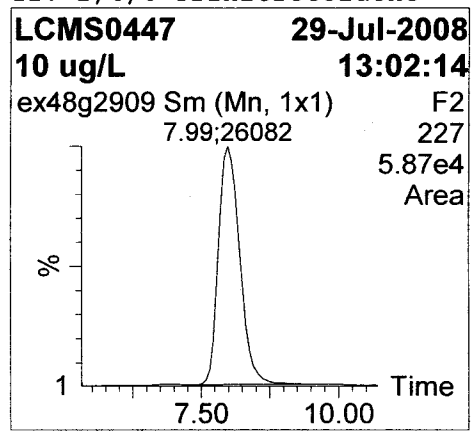
10: Nitroglycerin



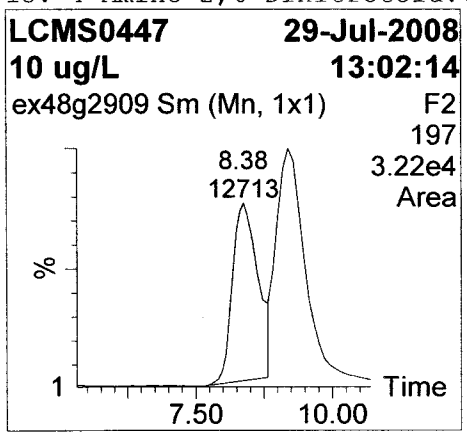
11: Nitrobenzene



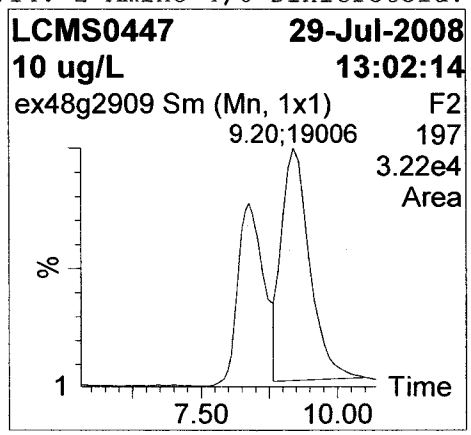
12: 2,4,6-Trinitrotoluene



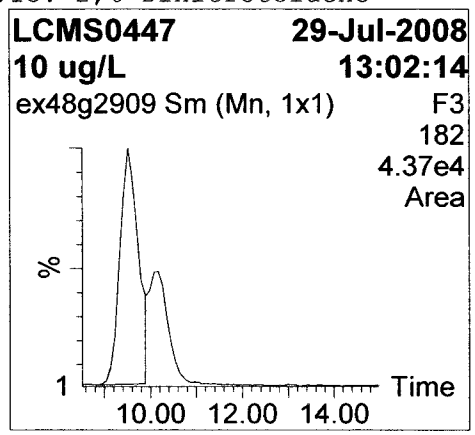
13: 4-Amino-2,6-Dinitrotolu..



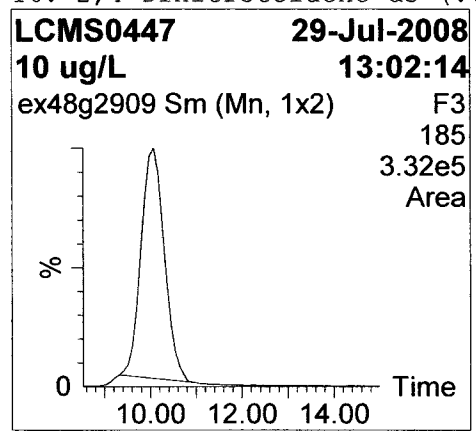
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



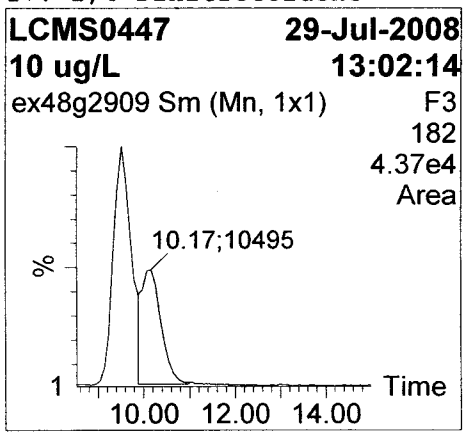
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

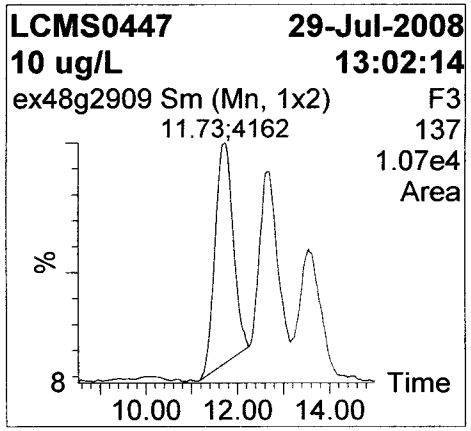
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2909
Text: 10 ug/L

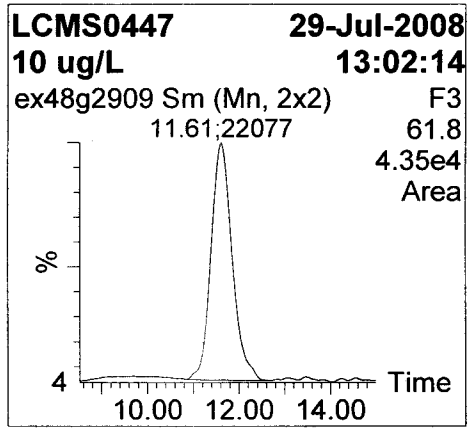
17: 2,4-Dinitrotoluene



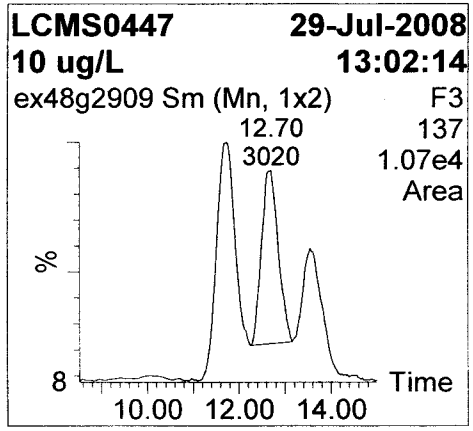
18: 2-Nitrotoluene



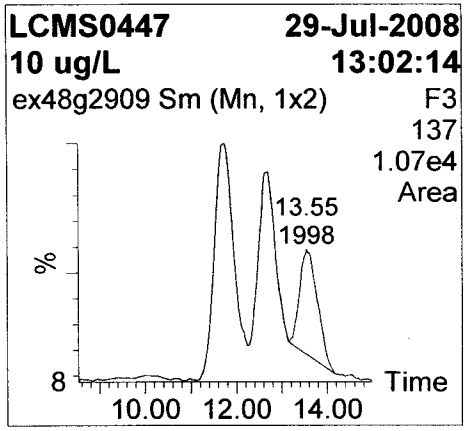
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2909
Text: 10 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	877	bb	9.817	98	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6968	bb	1.048	105	29/Jul/08	ex48g29	
RDX 13C-..	3.882	36550	bb	0.901	90	29/Jul/08	ex48g29	
RDX	3.919	1704	bb	10.317	103	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	4235	bb	11.174	112	29/Jul/08	ex48g29	
Tetryl	6.444	9003	bb	10.299	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	88759	bb	0.875	88	29/Jul/08	ex48g29	
1,3-Dini..	6.678	3144	bb	9.446	94	29/Jul/08	ex48g29	
Nitroben..	7.398	3356	bd	11.725	117	29/Jul/08	ex48g29	
Nitrogly..	7.071	29009	bb	10.998	110	29/Jul/08	ex48g29	
Nitroben..	7.529	3451	bb	10.858	109	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	26082	bb	10.729	107	29/Jul/08	ex48g29	
4-Amino-..	8.380	12713	bd	10.361	104	29/Jul/08	ex48g29	
2-Amino-..	9.198	19006	db	10.696	107	29/Jul/08	ex48g29	
2,6-Dini..	9.510	19306	bd	10.705	107	29/Jul/08	ex48g29	
2,4-Dini..	10.075	189050	bb	0.881	88	29/Jul/08	ex48g29	
2,4-Dini..	10.169	10495	dd	12.310	123	29/Jul/08	ex48g29	
2-Nitrot..	11.728	4162	bb	10.488	105	29/Jul/08	ex48g29	
PETN	11.614	22077	bb	10.683	107	29/Jul/08	ex48g29	
4-Nitrot..	12.698	3020	bb	10.248	102	29/Jul/08	ex48g29	
3-Nitrot..	13.554	1998	bb	10.929	109	29/Jul/08	ex48g29	

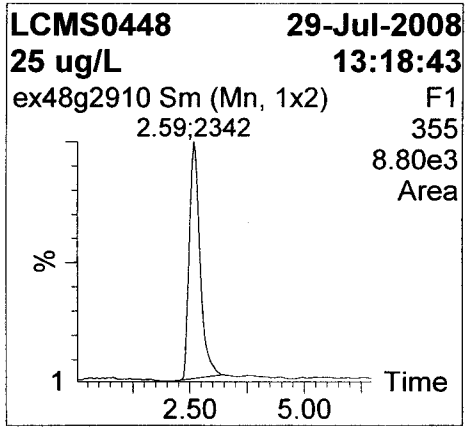
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

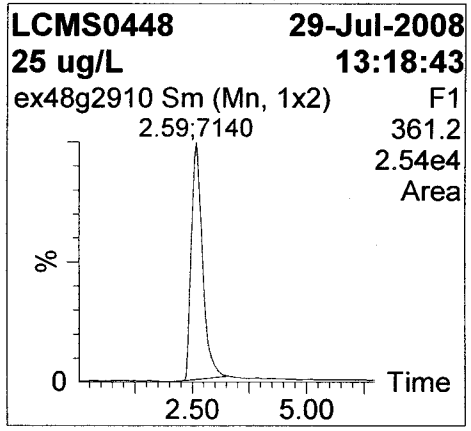
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2910
Text: 25 ug/L

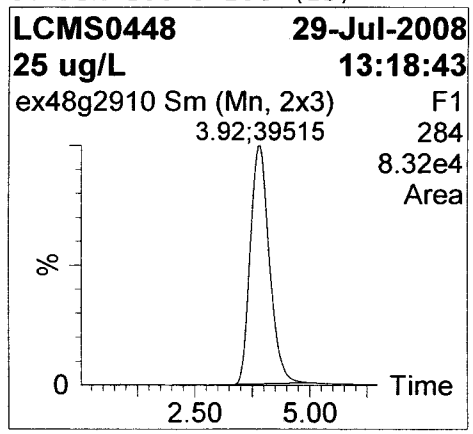
1: HMX



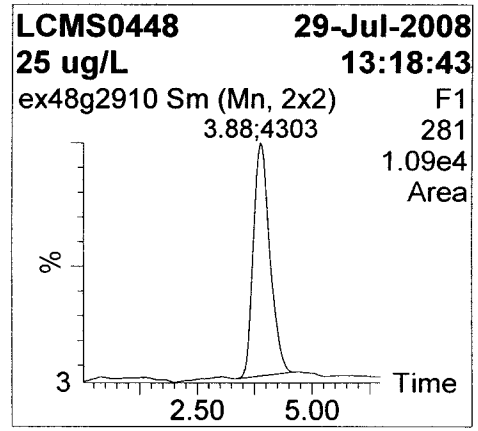
2: HMX 13C-4 (IS)



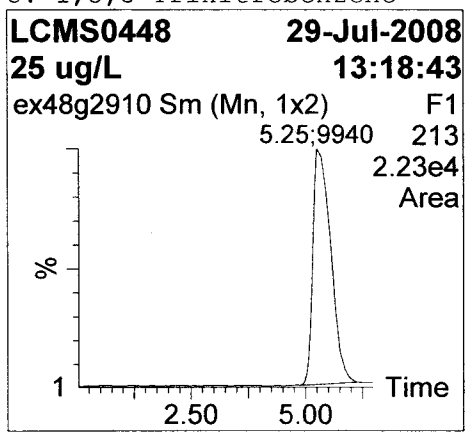
3: RDX 13C-3 284 (IS)



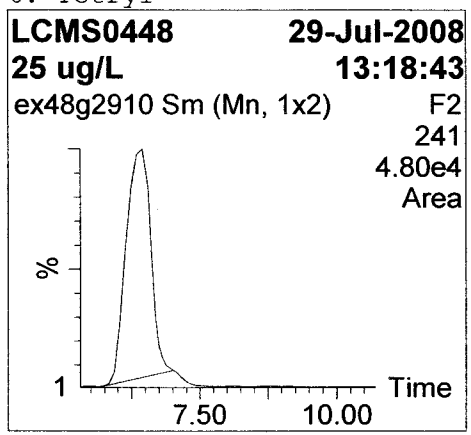
4: RDX



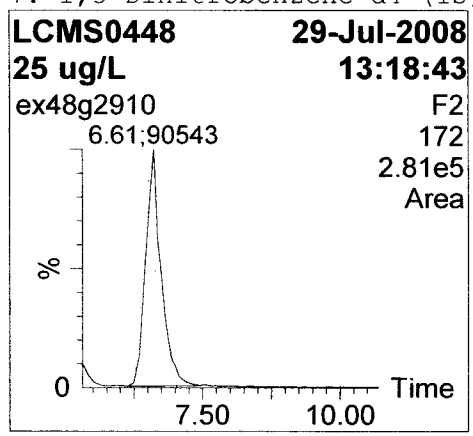
5: 1,3,5-Trinitrobenzene



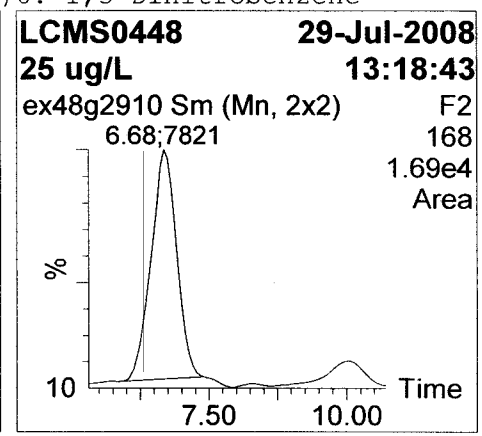
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



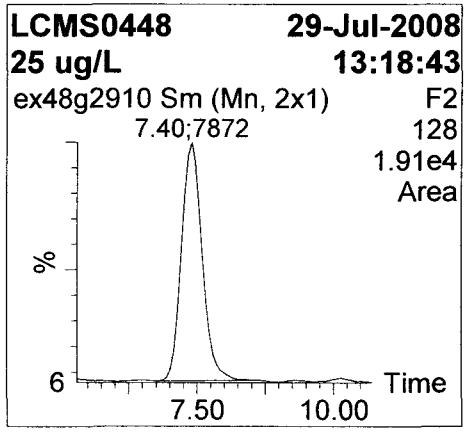
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

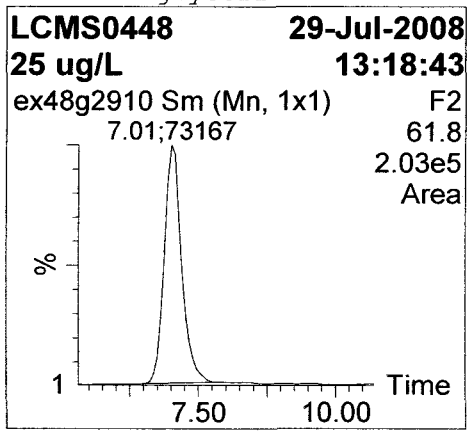
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2910
Text: 25 ug/L

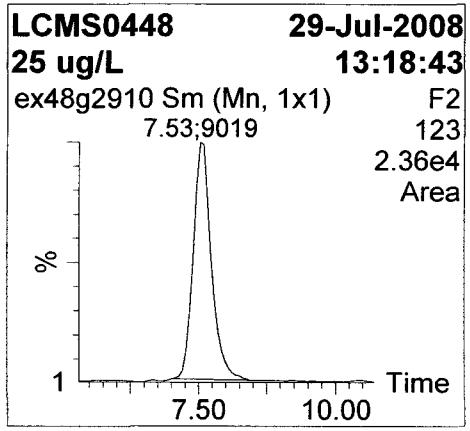
9: Nitrobenzene-d5



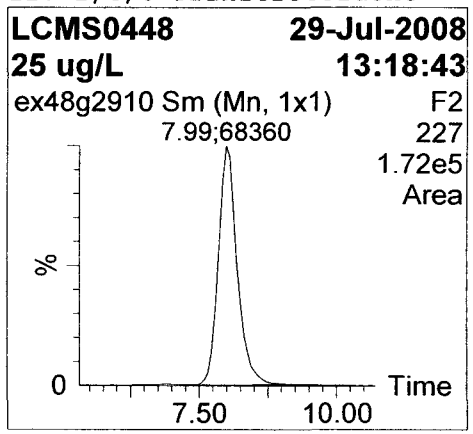
10: Nitroglycerin



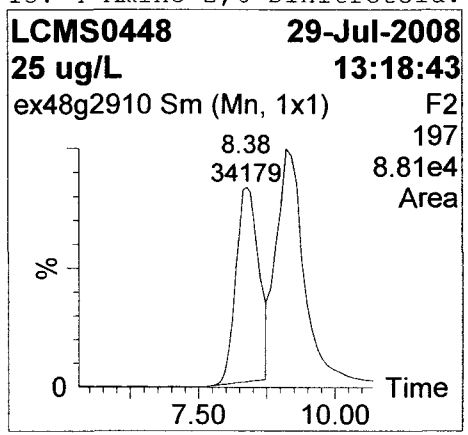
11: Nitrobenzene



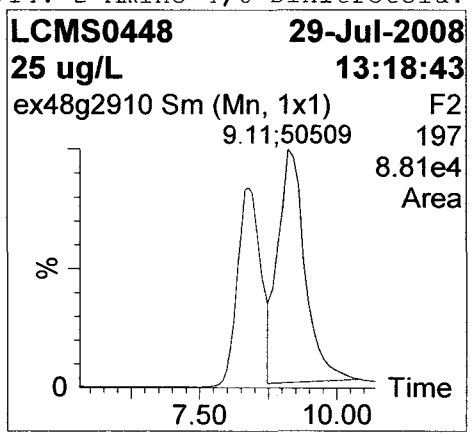
12: 2,4,6-Trinitrotoluene



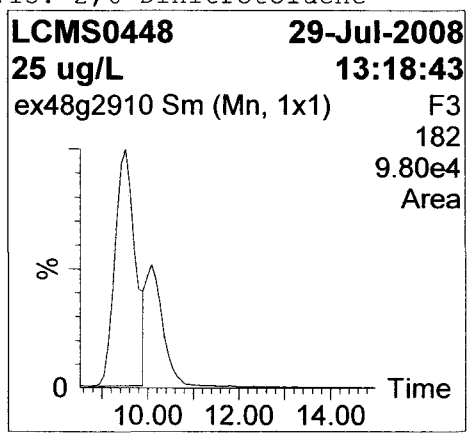
13: 4-Amino-2,6-Dinitrotolu..



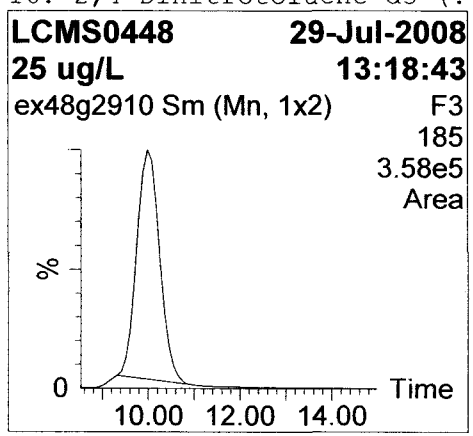
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



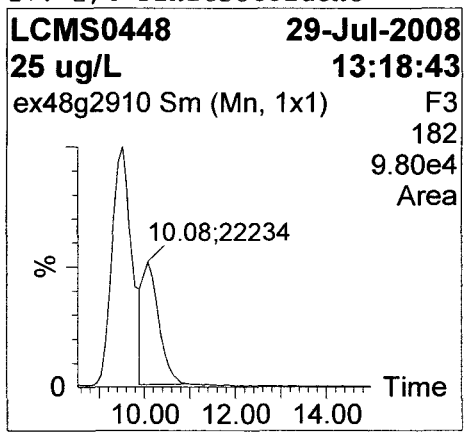
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

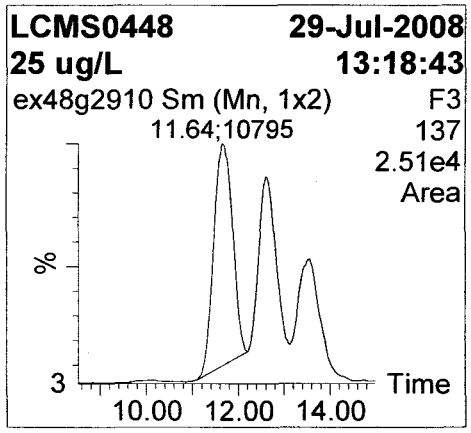
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2910
Text: 25 ug/L

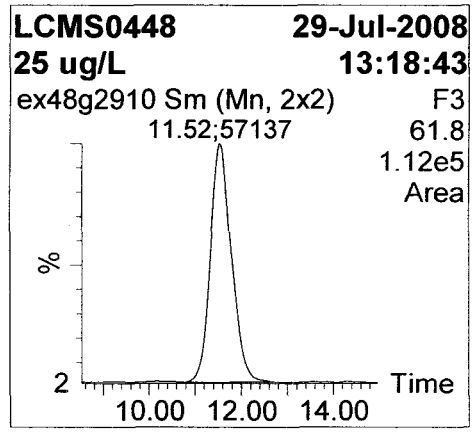
17: 2,4-Dinitrotoluene



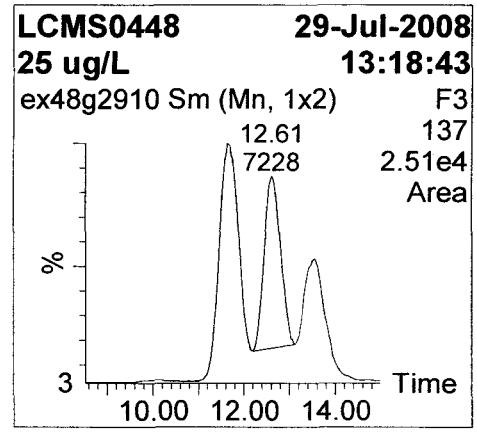
18: 2-Nitrotoluene



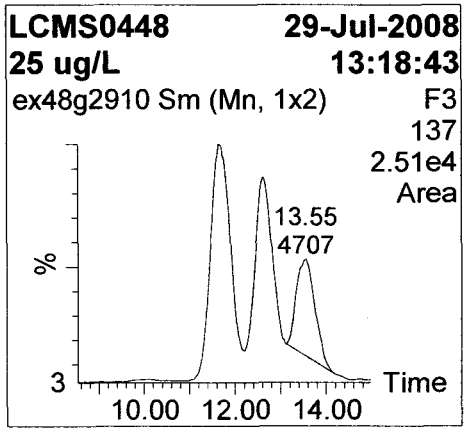
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2910
Text: 25 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	2342	bb	28.235	113	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7140	bb	1.073	107	29/Jul/08	ex48g29	
RDX 13C-..	3.919	39515	bb	0.974	97	29/Jul/08	ex48g29	
RDX	3.882	4303	bb	28.940	116	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	9940	bb	27.306	109	29/Jul/08	ex48g29	
Tetryl	6.445	23750	bb	25.936	104	29/Jul/08	ex48g29	
1,3 Dini..	6.613	90543	bd	0.893	89	29/Jul/08	ex48g29	
1,3-Dini..	6.678	7821	bb	25.606	102	29/Jul/08	ex48g29	
Nitroben..	7.399	7872	bb	28.813	115	29/Jul/08	ex48g29	
Nitrogly..	7.006	73167	bb	29.691	119	29/Jul/08	ex48g29	
Nitroben..	7.530	9019	bb	29.469	118	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	68360	bb	27.049	108	29/Jul/08	ex48g29	
4-Amino-..	8.381	34179	bd	27.996	112	29/Jul/08	ex48g29	
2-Amino-..	9.106	50509	db	27.310	109	29/Jul/08	ex48g29	
2,6-Dini..	9.511	48406	bd	26.322	105	29/Jul/08	ex48g29	
2,4-Dini..	9.982	199111	bb	0.928	93	29/Jul/08	ex48g29	
2,4-Dini..	10.076	22234	dd	25.297	101	29/Jul/08	ex48g29	
2-Nitrot..	11.636	10795	bb	26.814	107	29/Jul/08	ex48g29	
PETN	11.522	57137	bb	26.944	108	29/Jul/08	ex48g29	
4-Nitrot..	12.607	7228	bb	23.127	93	29/Jul/08	ex48g29	
3-Nitrot..	13.550	4707	bb	27.224	109	29/Jul/08	ex48g29	

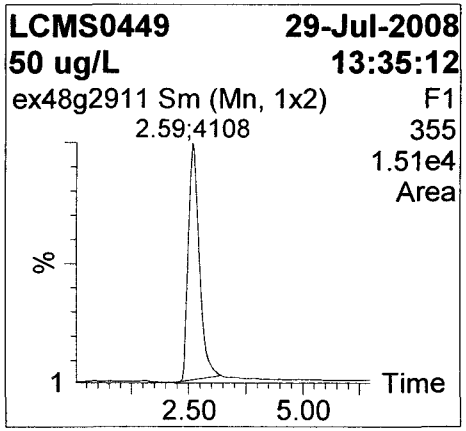
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

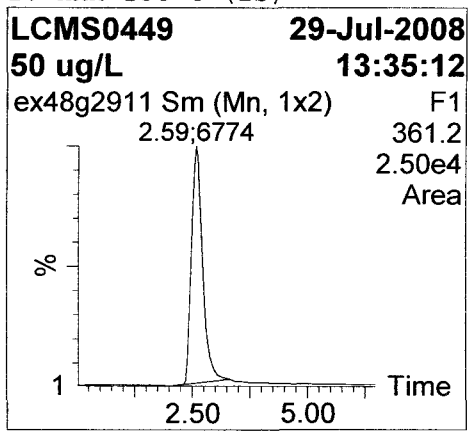
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2911
Text: 50 ug/L

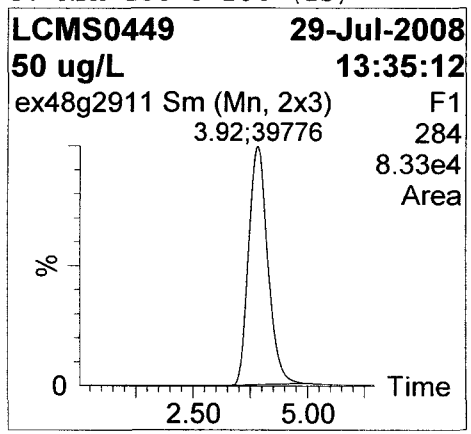
1: HMX



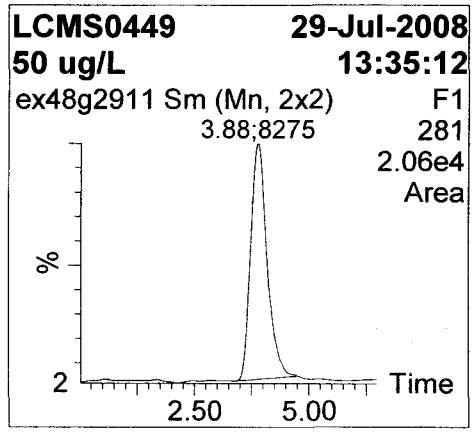
2: HMX 13C-4 (IS)



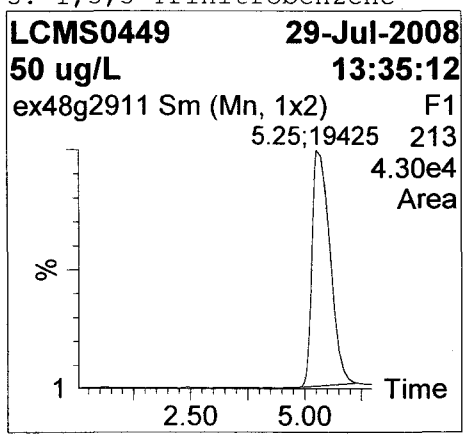
3: RDX 13C-3 284 (IS)



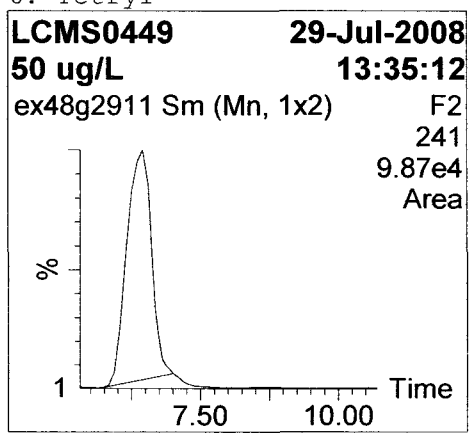
4: RDX



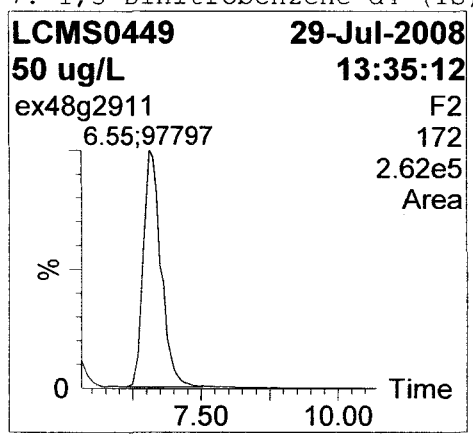
5: 1,3,5-Trinitrobenzene



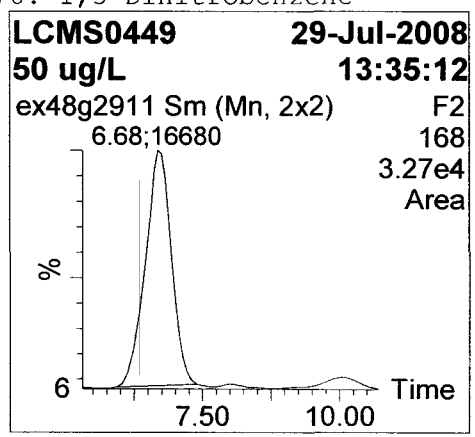
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



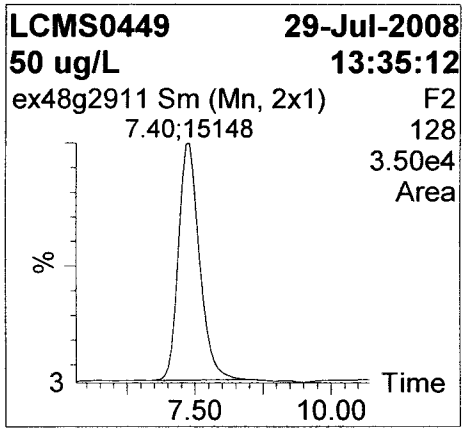
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

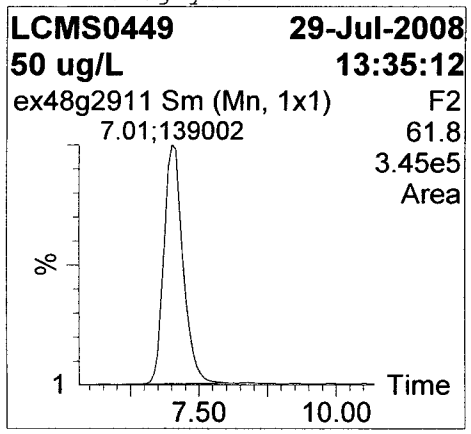
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2911
Text: 50 ug/L

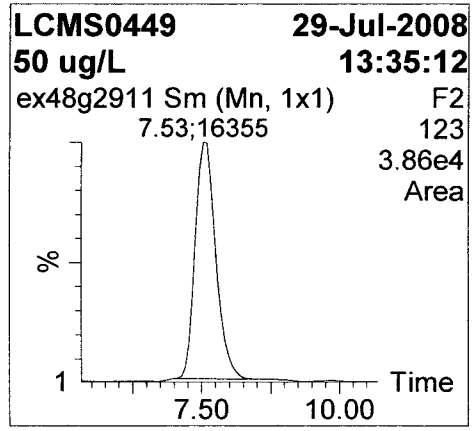
9: Nitrobenzene-d5



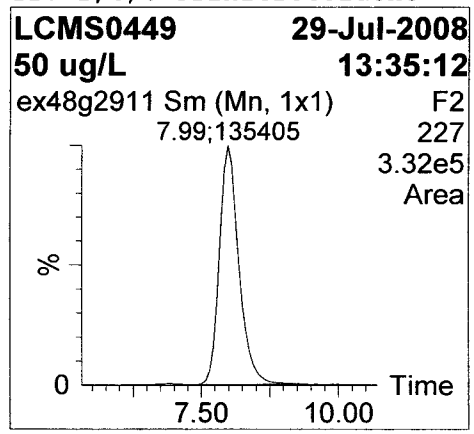
10: Nitroglycerin



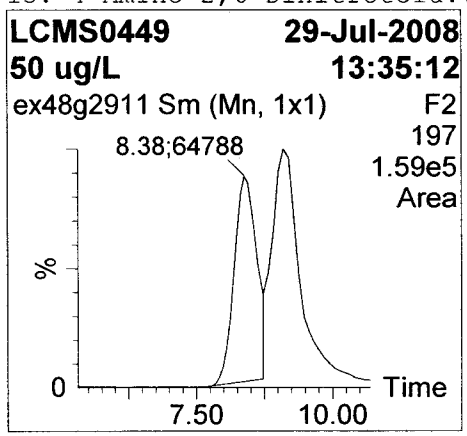
11: Nitrobenzene



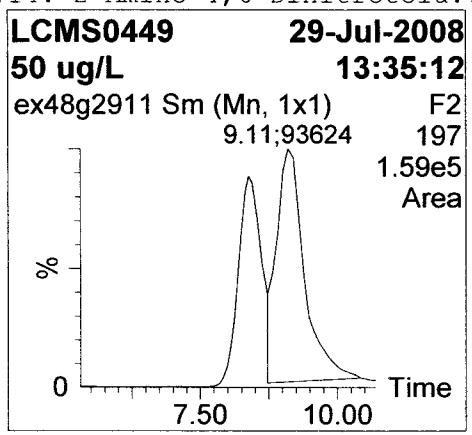
12: 2,4,6-Trinitrotoluene



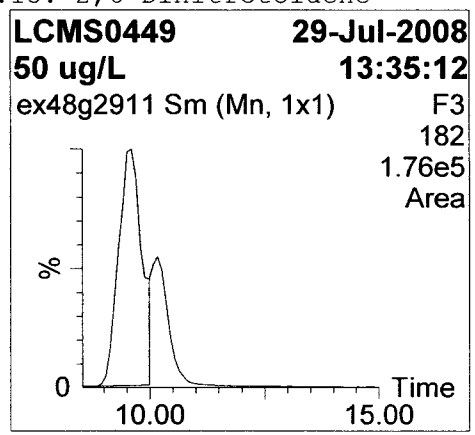
13: 4-Amino-2,6-Dinitrotolu..



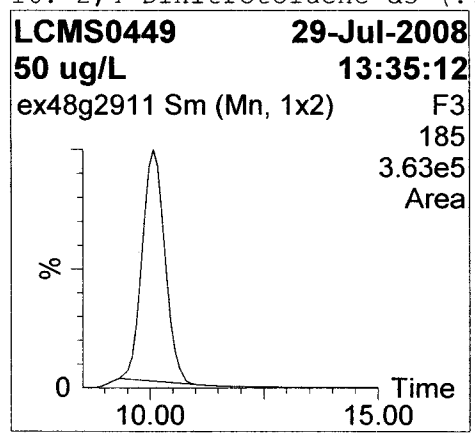
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



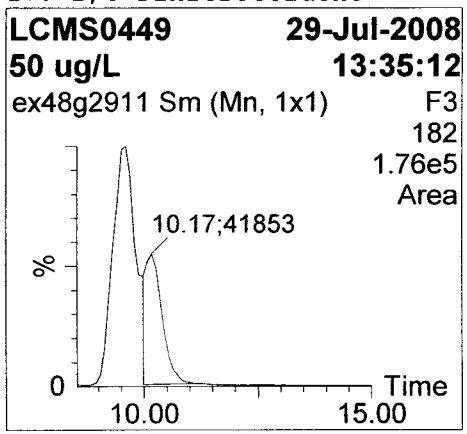
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

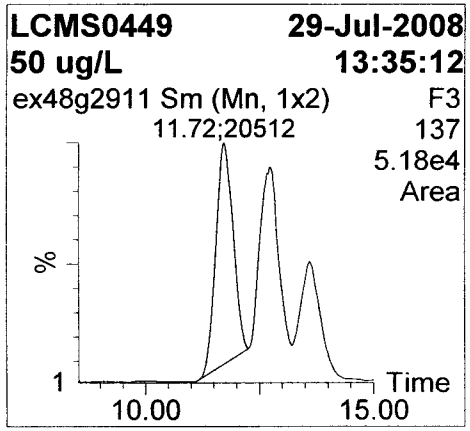
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2911
Text: 50 ug/L

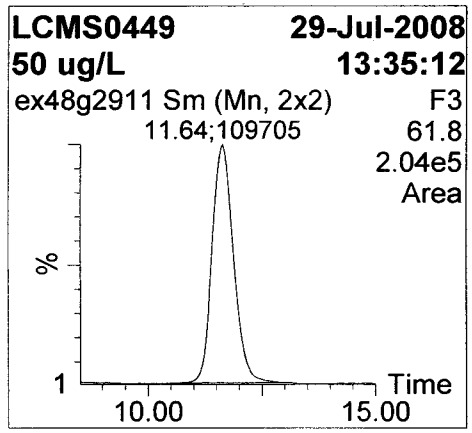
17: 2,4-Dinitrotoluene



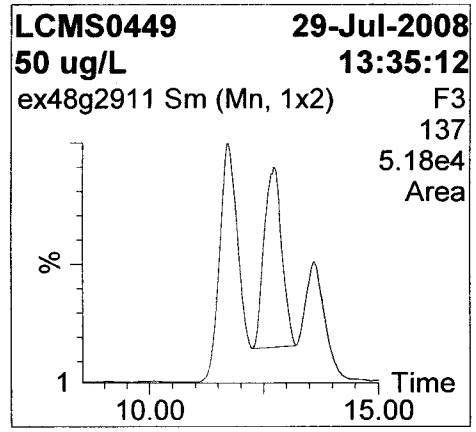
18: 2-Nitrotoluene



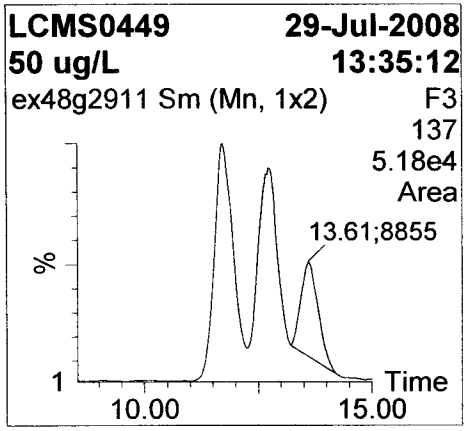
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2911
Text: 50 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	4108	bb	53.583	107	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6774	bb	1.018	102	29/Jul/08	ex48g29	
RDX 13C-..	3.919	39776	bb	0.980	98	29/Jul/08	ex48g29	
RDX	3.882	8275	bb	58.592	117	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	19425	bb	50.394	101	29/Jul/08	ex48g29	
Tetryl	6.445	49397	bb	49.534	99	29/Jul/08	ex48g29	
1,3 Dini..	6.547	97797	bs	0.964	96	29/Jul/08	ex48g29	
1,3-Dini..	6.678	16680	bb	52.307	105	29/Jul/08	ex48g29	
Nitroben..	7.399	15148	bb	52.447	105	29/Jul/08	ex48g29	
Nitrogly..	7.006	139002	bb	53.511	107	29/Jul/08	ex48g29	
Nitroben..	7.530	16355	bb	50.193	100	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	135405	bb	49.329	99	29/Jul/08	ex48g29	
4-Amino-..	8.381	64788	bd	49.450	99	29/Jul/08	ex48g29	
2-Amino-..	9.106	93624	db	46.622	93	29/Jul/08	ex48g29	
2,6-Dini..	9.606	99450	bd	53.256	107	29/Jul/08	ex48g29	
2,4-Dini..	10.076	204522	bb	0.953	95	29/Jul/08	ex48g29	
2,4-Dini..	10.171	41853	db	46.574	93	29/Jul/08	ex48g29	
2-Nitrot..	11.722	20512	bb	50.174	100	29/Jul/08	ex48g29	
PETN	11.636	109705	bb	50.778	102	29/Jul/08	ex48g29	
4-Nitrot..	12.721	17492	bb	54.961	110	29/Jul/08	ex48g29	
3-Nitrot..	13.607	8855	bb	51.728	103	29/Jul/08	ex48g29	

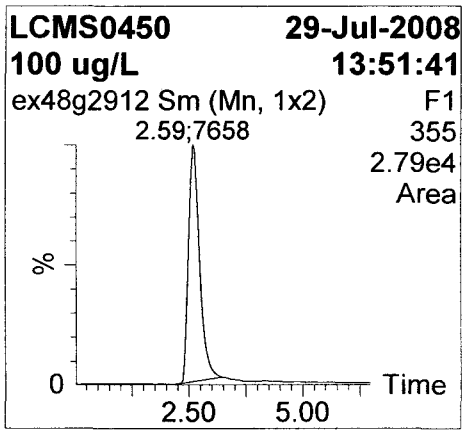
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

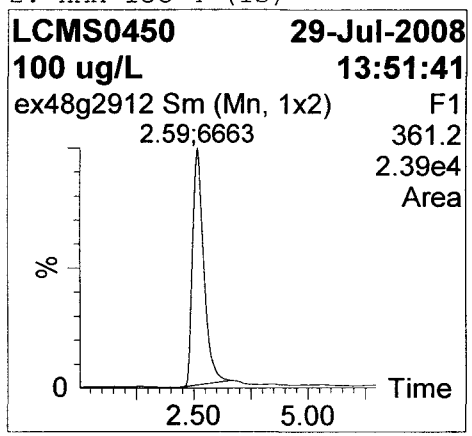
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2912
Text: 100 ug/L

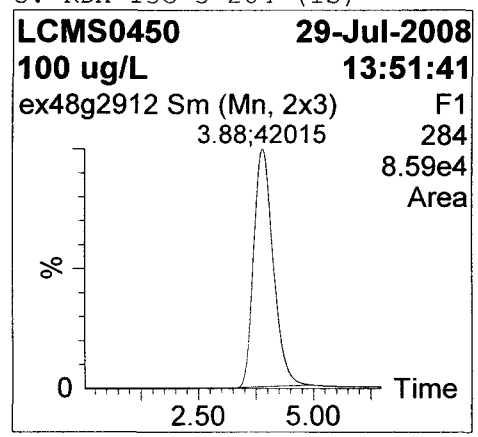
1: HMX



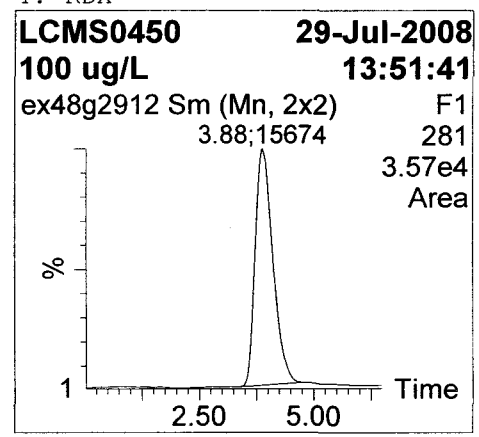
2: HMX 13C-4 (IS)



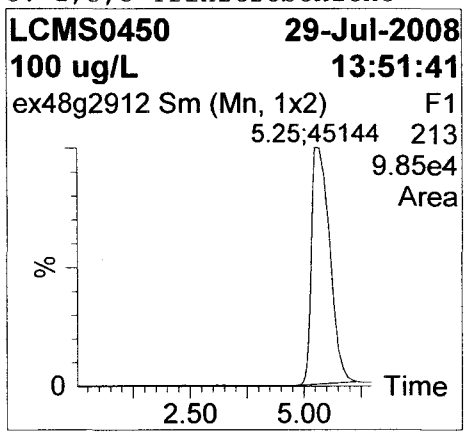
3: RDX 13C-3 284 (IS)



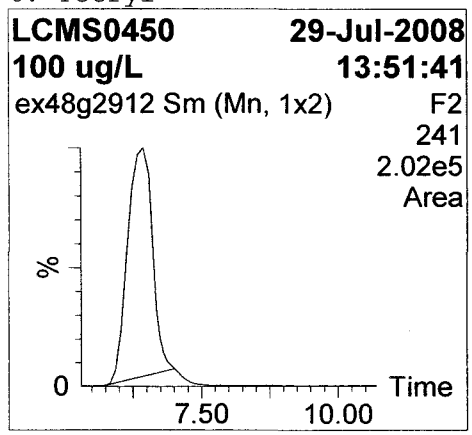
4: RDX



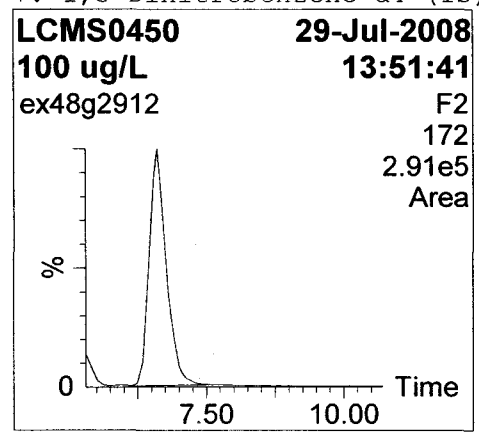
5: 1,3,5-Trinitrobenzene



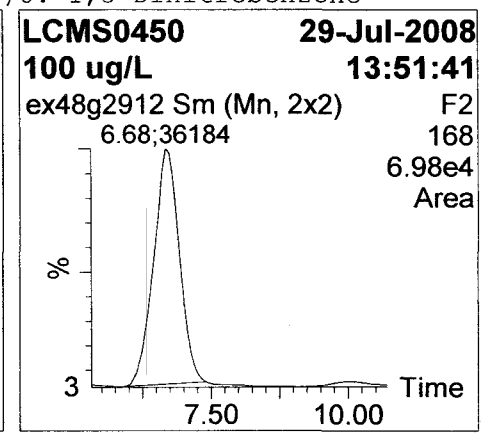
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



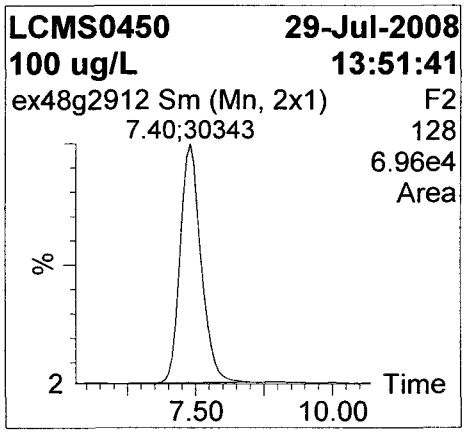
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

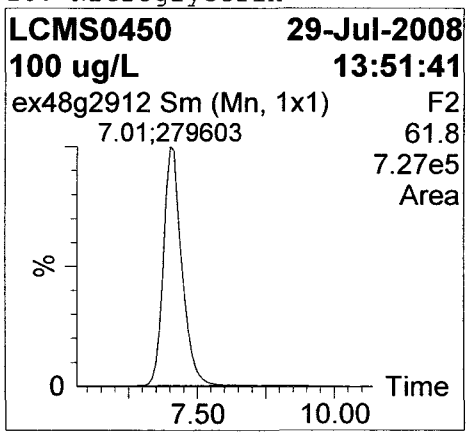
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2912
Text: 100 ug/L

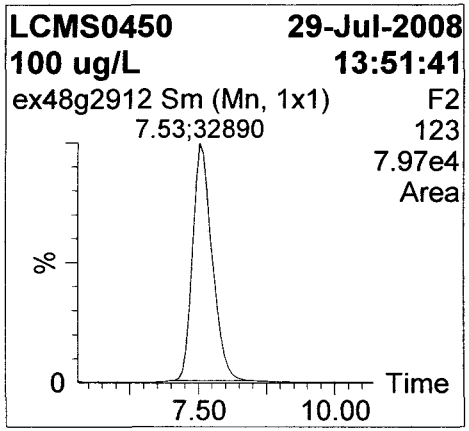
9: Nitrobenzene-d5



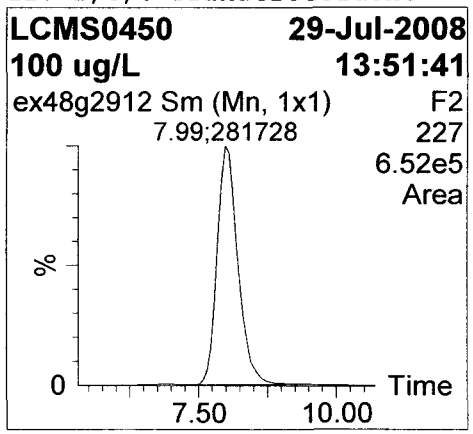
10: Nitroglycerin



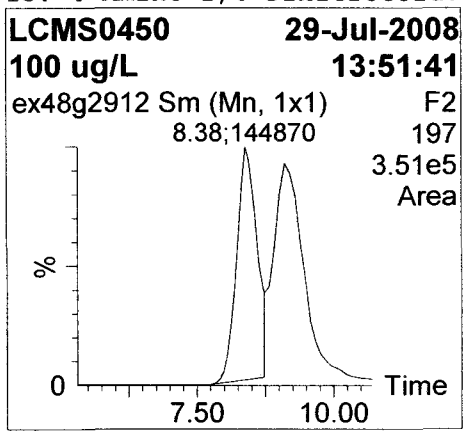
11: Nitrobenzene



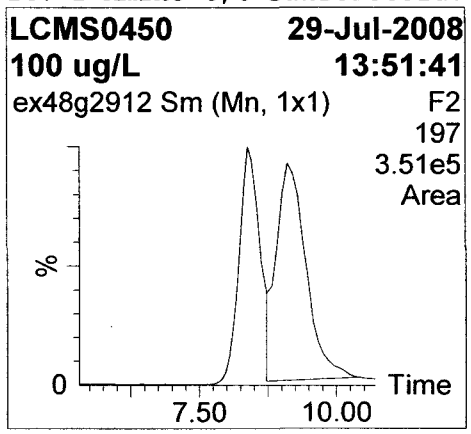
12: 2,4,6-Trinitrotoluene



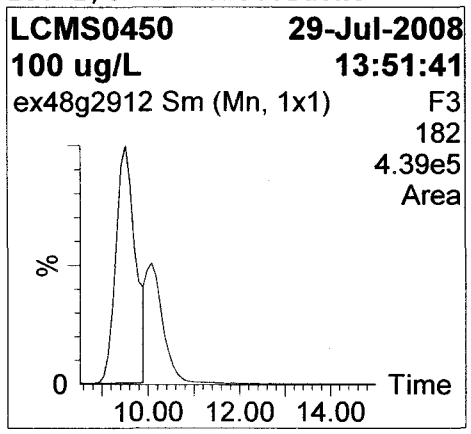
13: 4-Amino-2,6-Dinitrotolu..



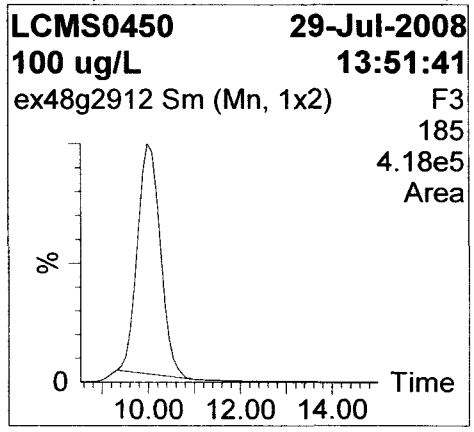
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



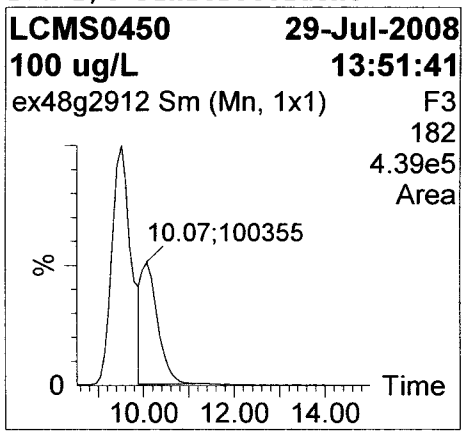
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

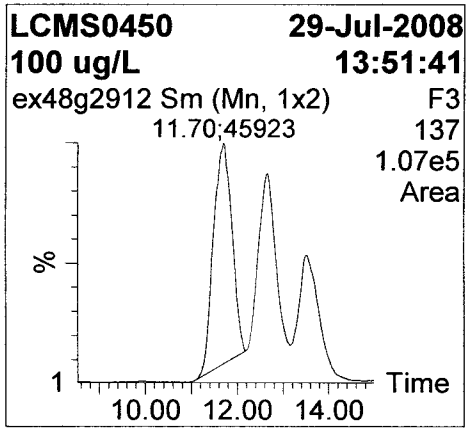
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2912
Text: 100 ug/L

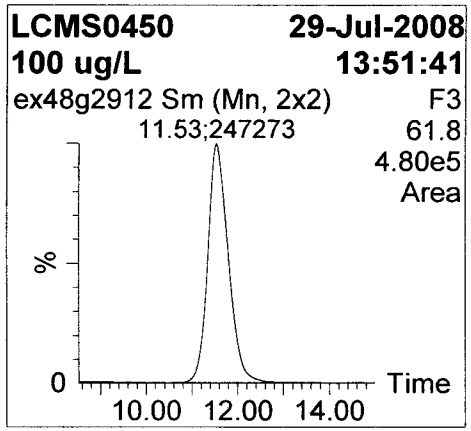
17: 2,4-Dinitrotoluene



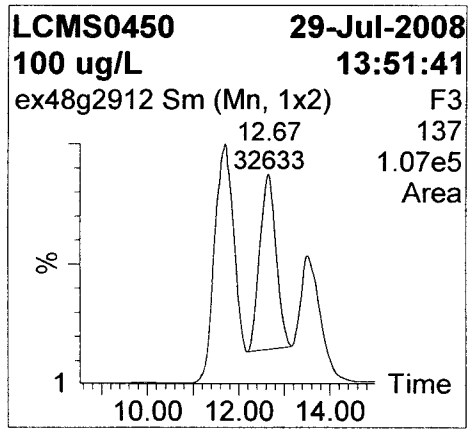
18: 2-Nitrotoluene



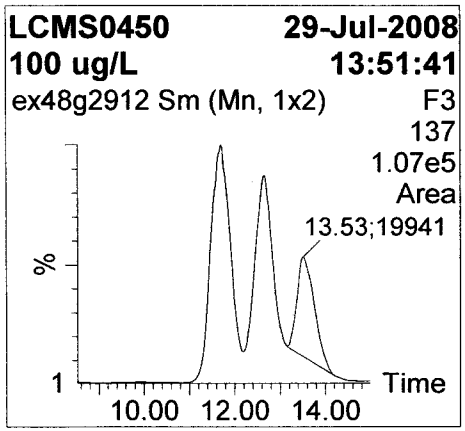
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2912
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	7658	bb	103.035	103	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6663	bb	1.002	100	29/Jul/08	ex48g29	
RDX 13C-..	3.882	42015	bb	1.035	104	29/Jul/08	ex48g29	
RDX	3.882	15674	bb	107.935	108	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	45144	bb	111.376	111	29/Jul/08	ex48g29	
Tetryl	6.444	100652	bb	94.335	94	29/Jul/08	ex48g29	
1,3 Dini..	6.612	104190	bb	1.027	103	29/Jul/08	ex48g29	
1,3-Dini..	6.678	36184	bb	108.360	108	29/Jul/08	ex48g29	
Nitroben..	7.398	30343	bb	99.867	100	29/Jul/08	ex48g29	
Nitrogly..	7.005	279603	bb	102.540	103	29/Jul/08	ex48g29	
Nitroben..	7.529	32890	bb	95.680	96	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	281728	bb	96.021	96	29/Jul/08	ex48g29	
4-Amino-..	8.380	144870	bd	104.251	104	29/Jul/08	ex48g29	
2-Amino-..	9.104	206964	db	96.365	96	29/Jul/08	ex48g29	
2,6-Dini..	9.510	207873	bd	98.456	98	29/Jul/08	ex48g29	
2,4-Dini..	9.980	232442	bb	1.084	108	29/Jul/08	ex48g29	
2,4-Dini..	10.074	100355	dd	97.421	97	29/Jul/08	ex48g29	
2-Nitrot..	11.699	45923	bb	99.492	99	29/Jul/08	ex48g29	
PETN	11.528	247273	bb	101.174	101	29/Jul/08	ex48g29	
4-Nitrot..	12.670	32633	bb	91.592	92	29/Jul/08	ex48g29	
3-Nitrot..	13.527	19941	bb	104.691	105	29/Jul/08	ex48g29	

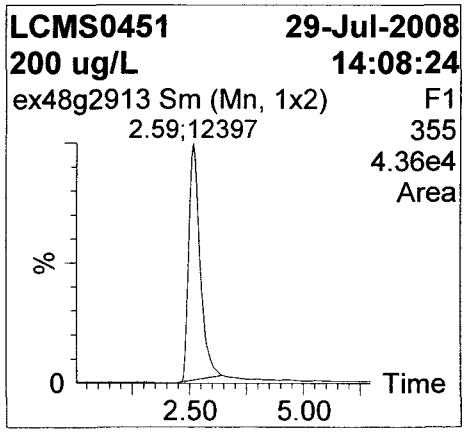
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

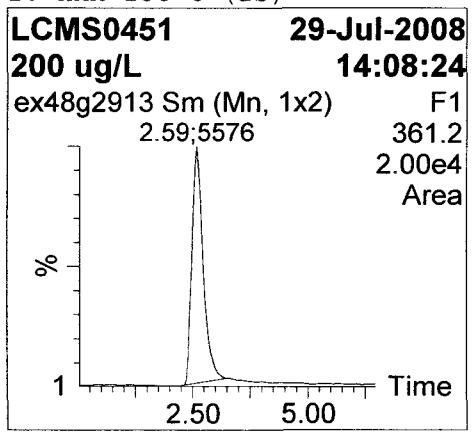
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2913
Text: 200 ug/L

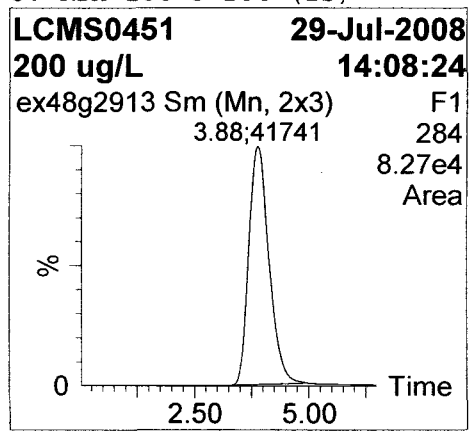
1: HMX



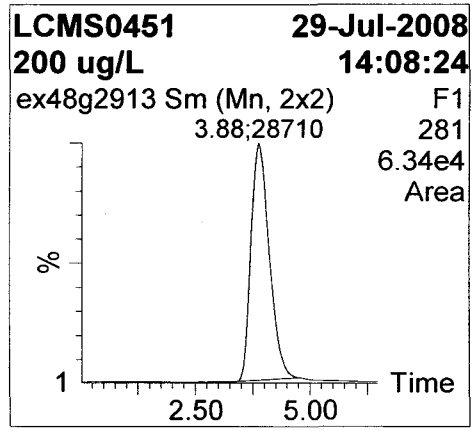
2: HMX 13C-4 (IS)



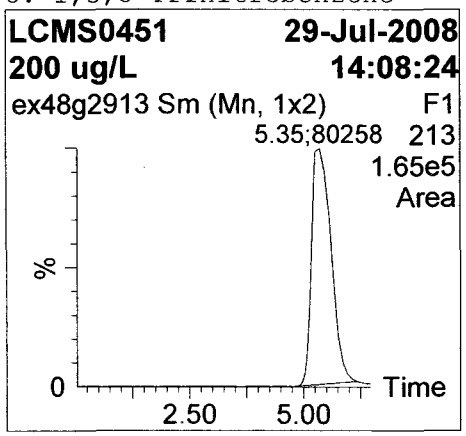
3: RDX 13C-3 284 (IS)



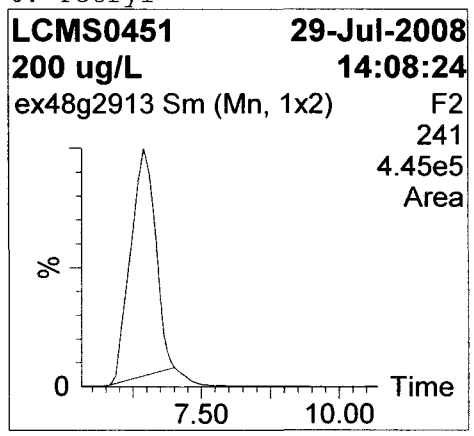
4: RDX



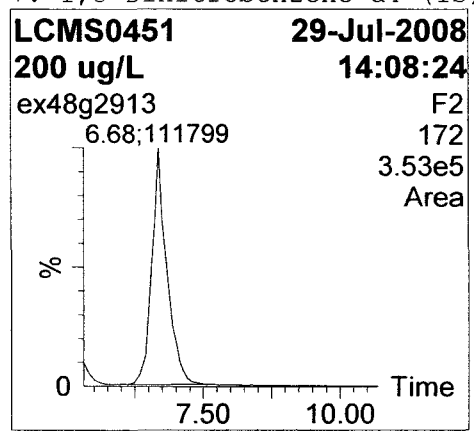
5: 1,3,5-Trinitrobenzene



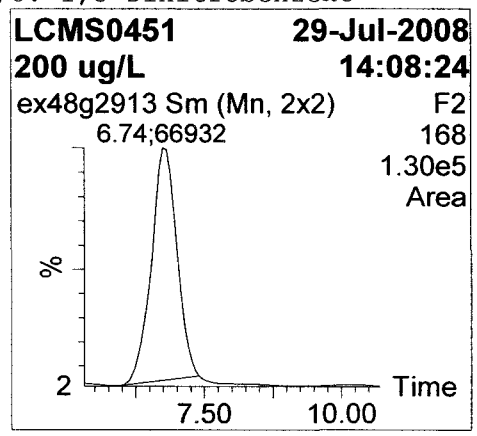
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



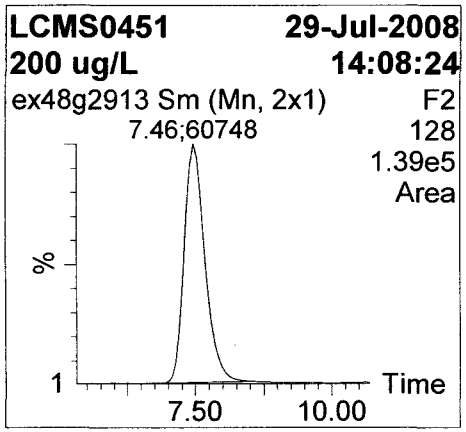
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

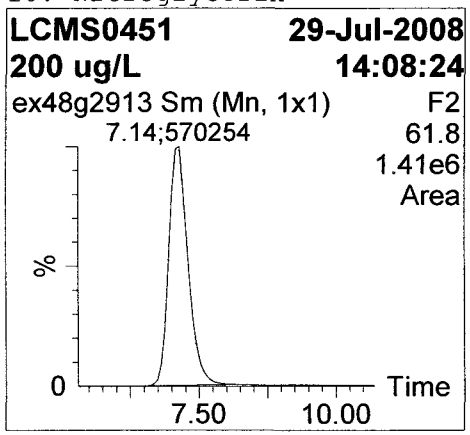
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2913
Text: 200 ug/L

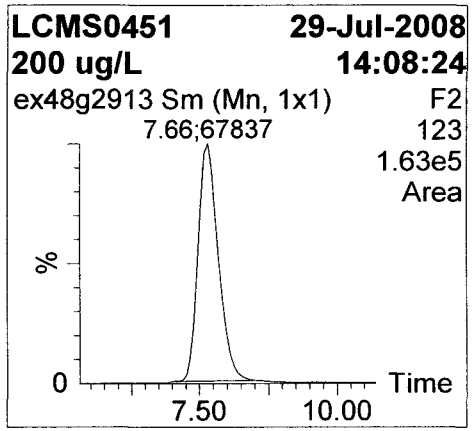
9: Nitrobenzene-d5



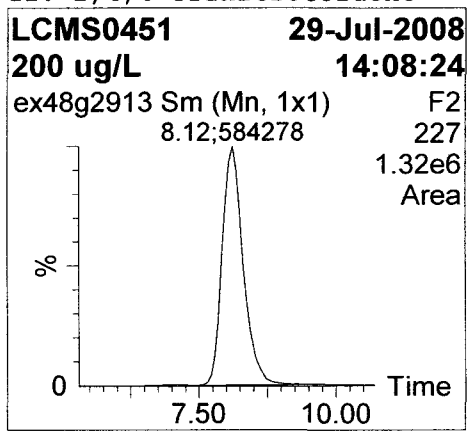
10: Nitroglycerin



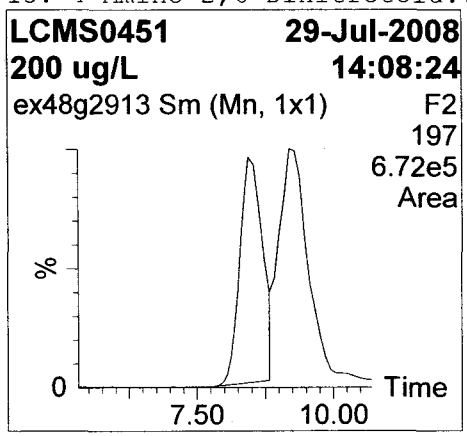
11: Nitrobenzene



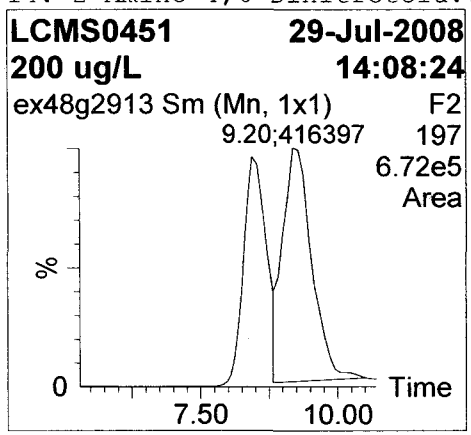
12: 2,4,6-Trinitrotoluene



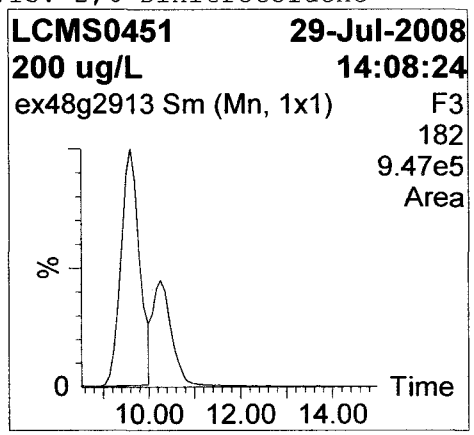
13: 4-Amino-2,6-Dinitrotolu..



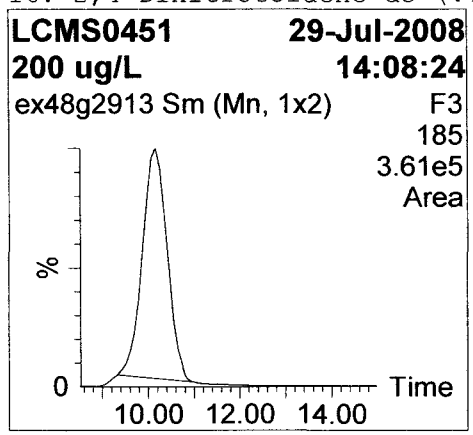
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



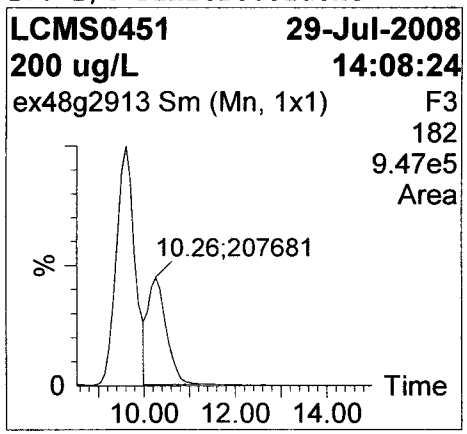
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

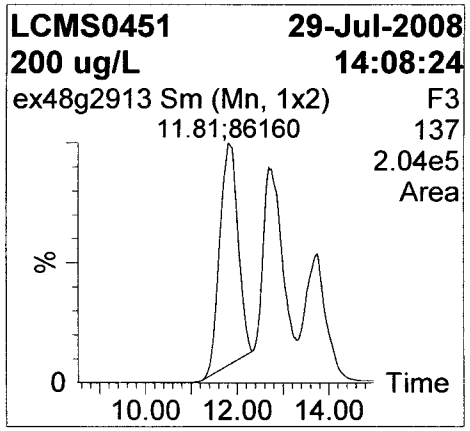
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2913
Text: 200 ug/L

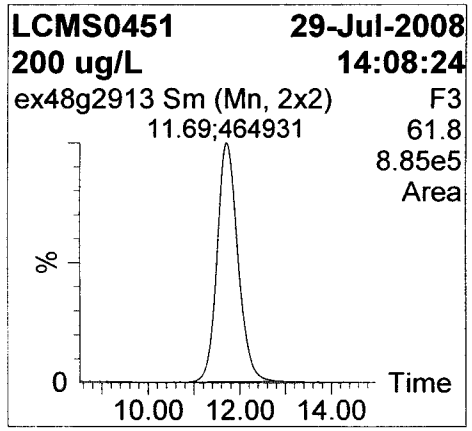
17: 2,4-Dinitrotoluene



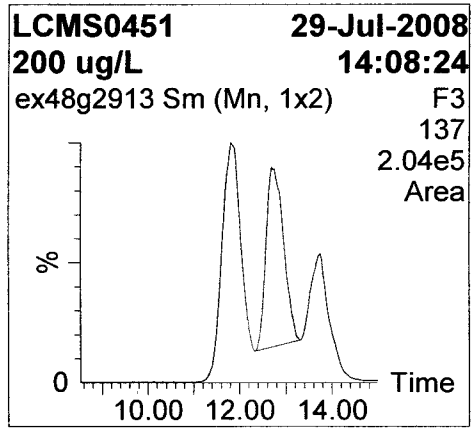
18: 2-Nitrotoluene



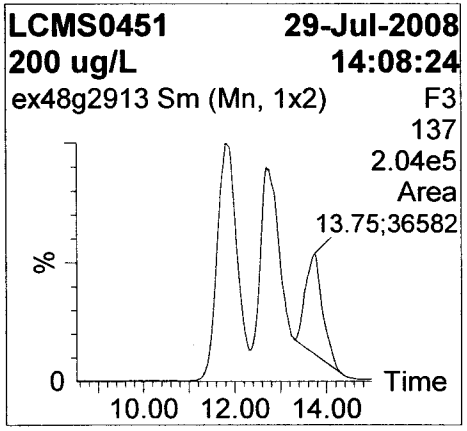
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2913
Text: 200 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	12397	bb	200.831	100	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5576	bb	0.838	84	29/Jul/08	ex48g29	
RDX 13C-..	3.882	41741	bb	1.029	103	29/Jul/08	ex48g29	
RDX	3.882	28710	bb	202.057	101	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	80258	bb	185.336	93	29/Jul/08	ex48g29	
Tetryl	6.444	223758	bb	194.970	97	29/Jul/08	ex48g29	
1,3 Dini..	6.678	111799	bb	1.102	110	29/Jul/08	ex48g29	
1,3-Dini..	6.743	66932	bb	188.092	94	29/Jul/08	ex48g29	
Nitroben..	7.464	60748	bb	187.567	94	29/Jul/08	ex48g29	
Nitrogly..	7.136	570254	bb	196.427	98	29/Jul/08	ex48g29	
Nitroben..	7.660	67837	bb	184.886	92	29/Jul/08	ex48g29	
2,4,6-Tr..	8.119	584278	bb	185.278	93	29/Jul/08	ex48g29	
4-Amino-..	8.447	298980	bd	200.897	100	29/Jul/08	ex48g29	
2-Amino-..	9.200	416397	db	180.383	90	29/Jul/08	ex48g29	
2,6-Dini..	9.605	435688	bd	220.380	110	29/Jul/08	ex48g29	
2,4-Dini..	10.170	218394	bb	1.018	102	29/Jul/08	ex48g29	
2,4-Dini..	10.264	207681	dd	208.282	104	29/Jul/08	ex48g29	
2-Nitrot..	11.807	86160	bb	199.342	100	29/Jul/08	ex48g29	
PETN	11.693	464931	bb	202.944	101	29/Jul/08	ex48g29	
4-Nitrot..	12.693	66427	bb	209.590	105	29/Jul/08	ex48g29	
3-Nitrot..	13.750	36582	bb	206.546	103	29/Jul/08	ex48g29	

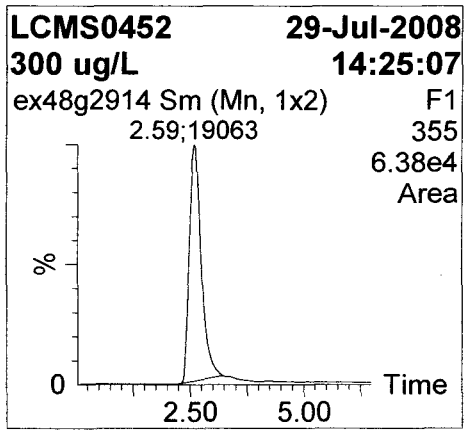
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

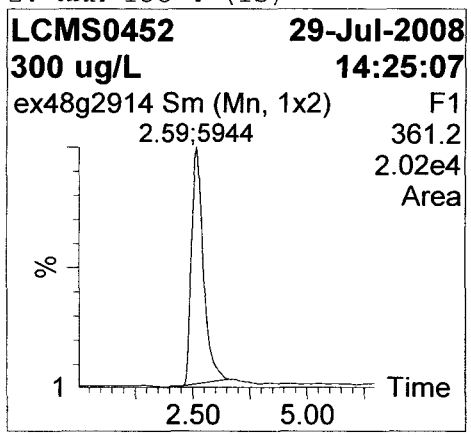
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2914
Text: 300 ug/L

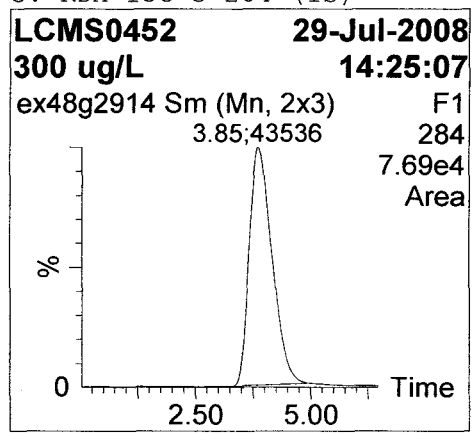
1: HMX



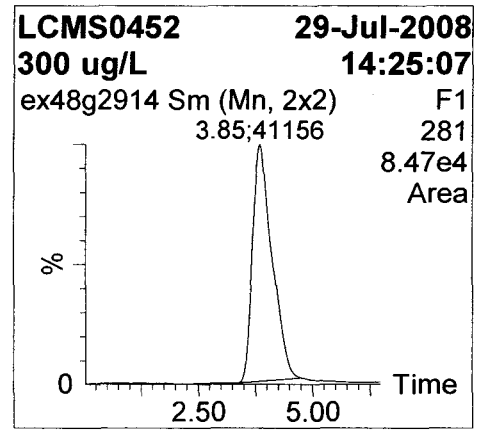
2: HMX 13C-4 (IS)



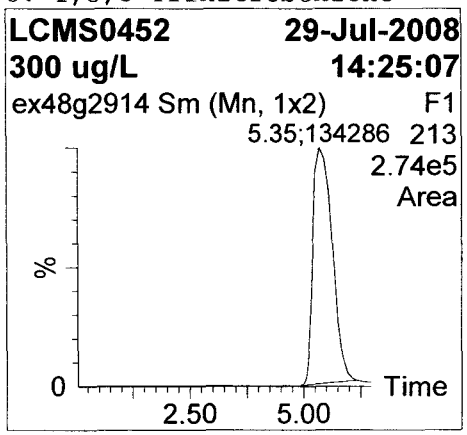
3: RDX 13C-3 284 (IS)



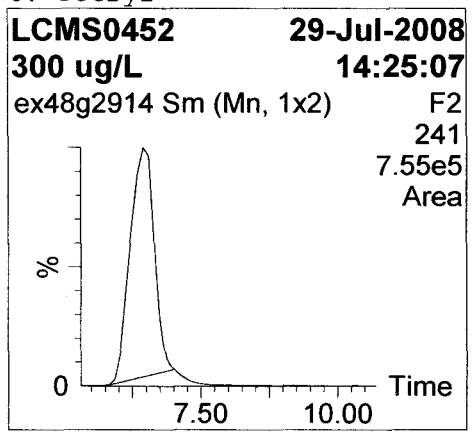
4: RDX



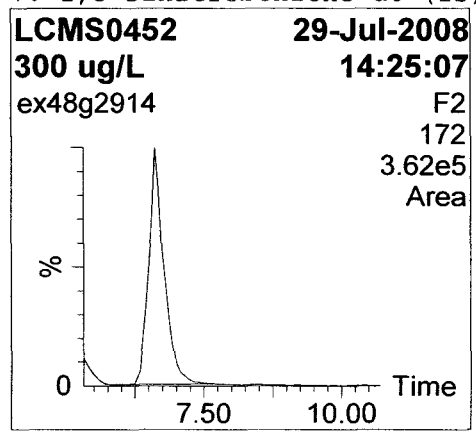
5: 1,3,5-Trinitrobenzene



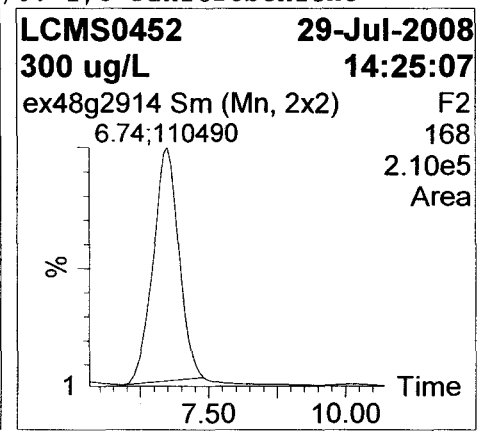
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



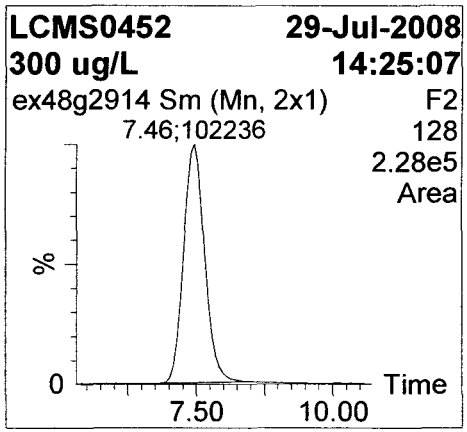
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

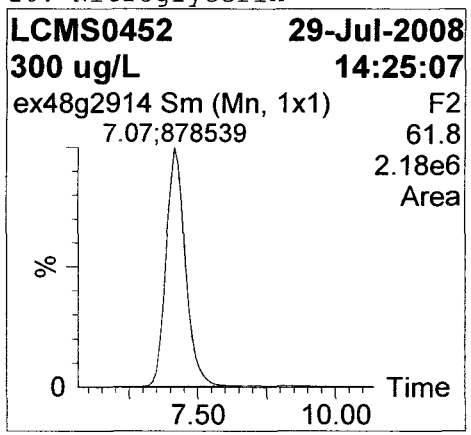
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2914
Text: 300 ug/L

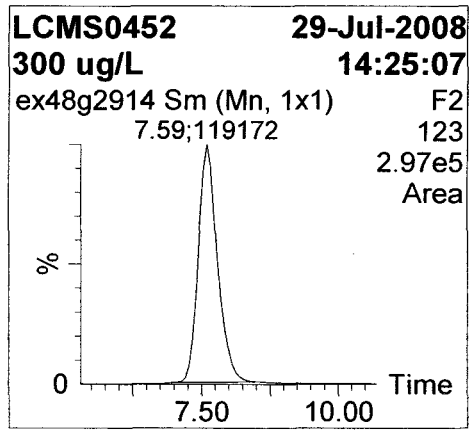
9: Nitrobenzene-d5



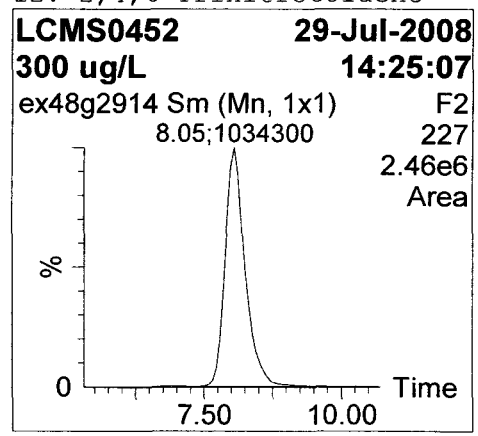
10: Nitroglycerin



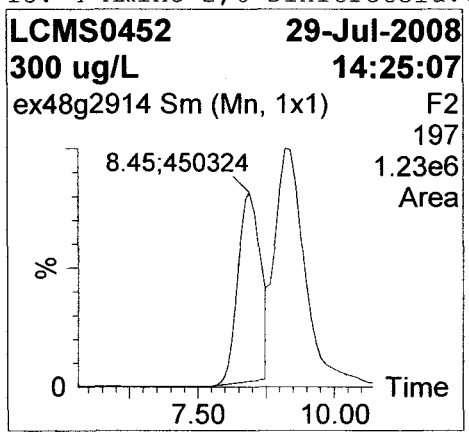
11: Nitrobenzene



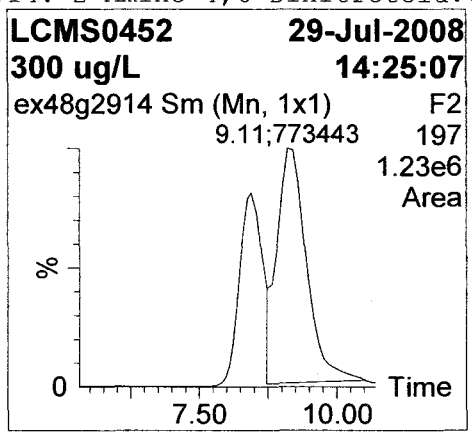
12: 2,4,6-Trinitrotoluene



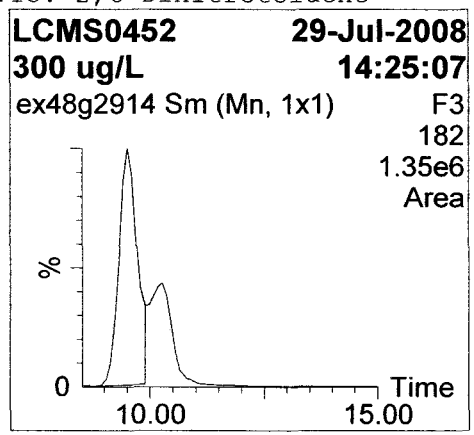
13: 4-Amino-2,6-Dinitrotolu..



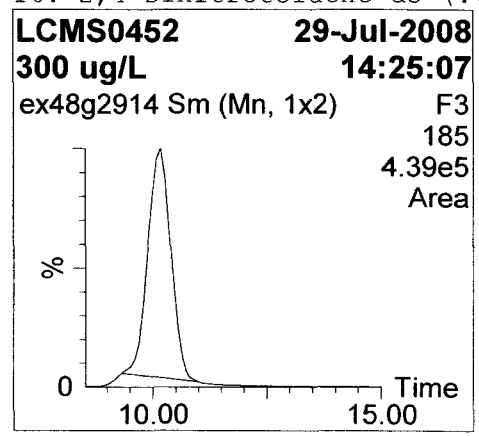
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



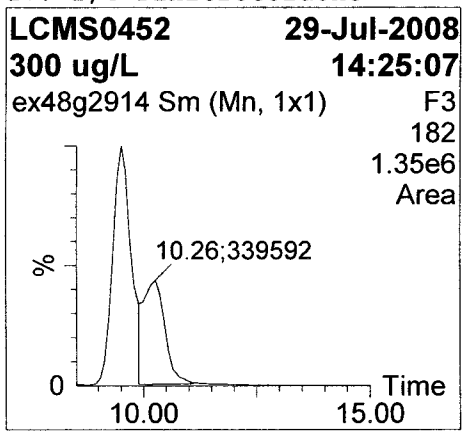
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

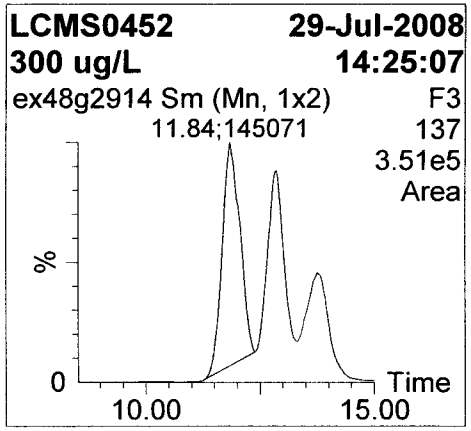
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2914
Text: 300 ug/L

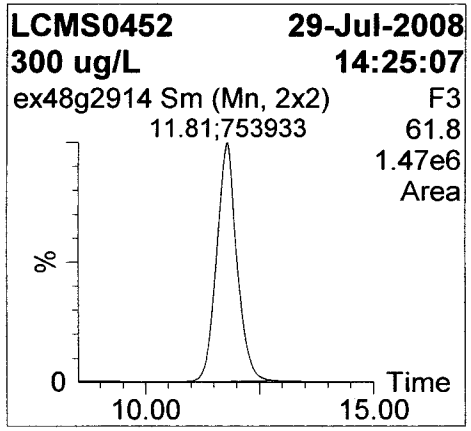
17: 2,4-Dinitrotoluene



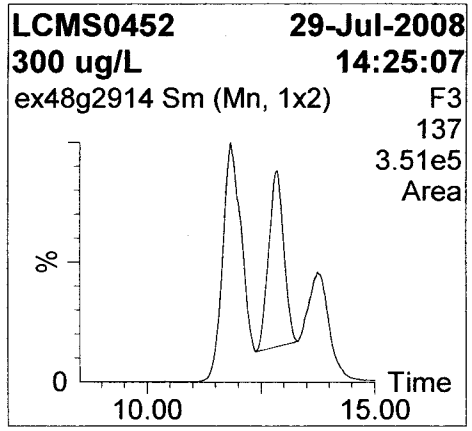
18: 2-Nitrotoluene



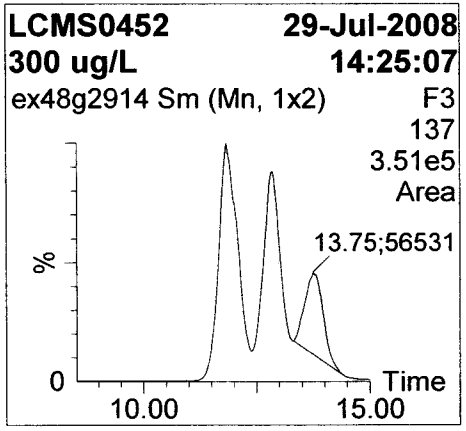
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2914
Text: 300 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	19063	bb	290.426	97	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5944	bb	0.894	89	29/Jul/08	ex48g29	
RDX 13C-..	3.845	43536	bb	1.073	107	29/Jul/08	ex48g29	
RDX	3.845	41156	bb	279.064	93	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	134286	bb	300.715	100	29/Jul/08	ex48g29	
Tetryl	6.444	368080	bb	309.973	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	115580	bb	1.139	114	29/Jul/08	ex48g29	
1,3-Dini..	6.743	110490	bb	301.408	100	29/Jul/08	ex48g29	
Nitroben..	7.464	102236	bb	306.237	102	29/Jul/08	ex48g29	
Nitrogly..	7.071	878539	bb	293.551	98	29/Jul/08	ex48g29	
Nitroben..	7.595	119172	bb	314.911	105	29/Jul/08	ex48g29	
2,4,6-Tr..	8.054	1034300	bb	317.018	106	29/Jul/08	ex48g29	
4-Amino-..	8.447	450324	bd	292.887	98	29/Jul/08	ex48g29	
2-Amino-..	9.106	773443	db	323.821	108	29/Jul/08	ex48g29	
2,6-Dini..	9.511	614252	bd	276.869	92	29/Jul/08	ex48g29	
2,4-Dini..	10.170	245218	bb	1.143	114	29/Jul/08	ex48g29	
2,4-Dini..	10.264	339592	dd	295.943	99	29/Jul/08	ex48g29	
2-Nitrot..	11.836	145071	bb	299.260	100	29/Jul/08	ex48g29	
PETN	11.807	753933	bb	293.306	98	29/Jul/08	ex48g29	
4-Nitrot..	12.864	100771	bb	295.500	99	29/Jul/08	ex48g29	
3-Nitrot..	13.750	56531	bb	285.114	95	29/Jul/08	ex48g29	

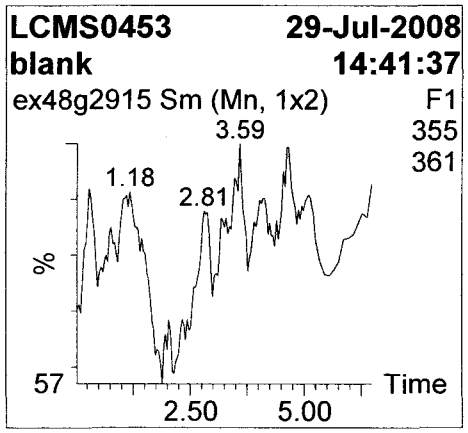
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

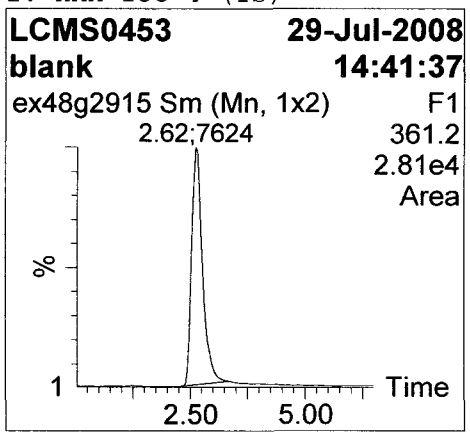
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2915
Text: blank

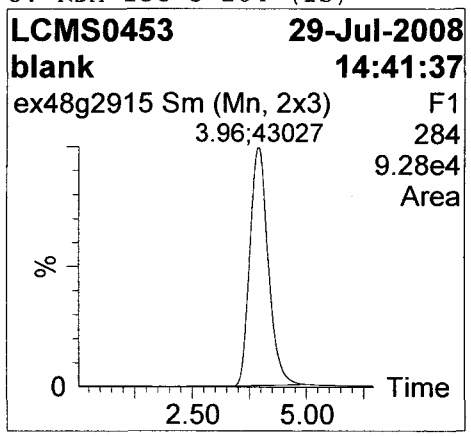
1: HMX



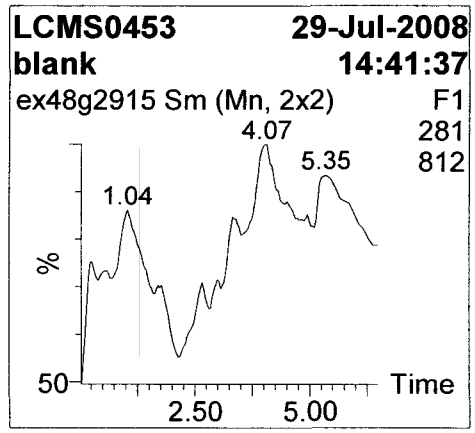
2: HMX 13C-4 (IS)



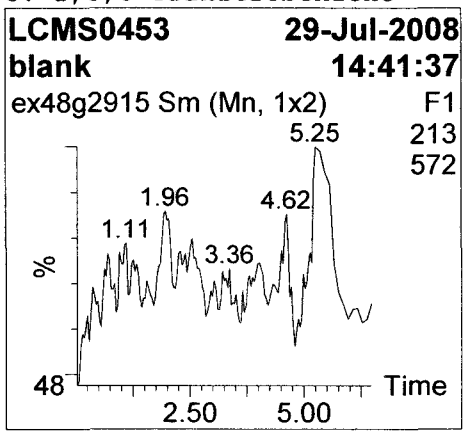
3: RDX 13C-3 284 (IS)



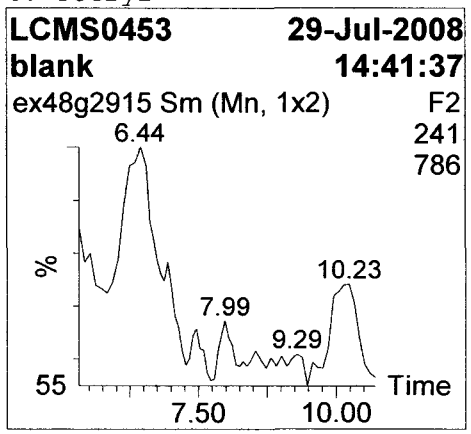
4: RDX



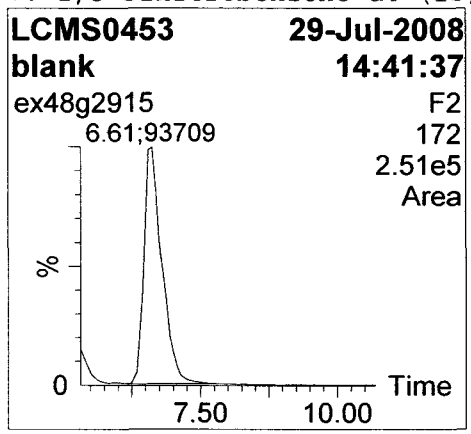
5: 1,3,5-Trinitrobenzene



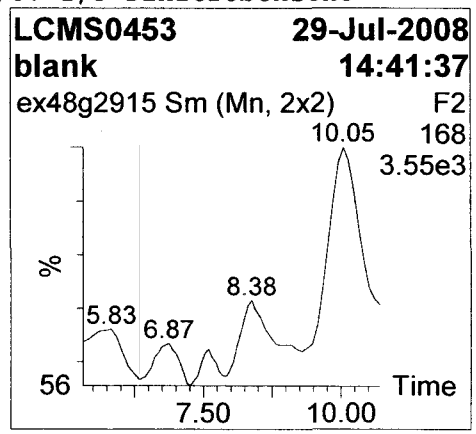
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



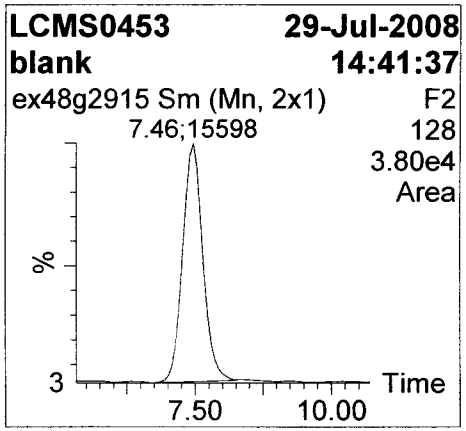
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

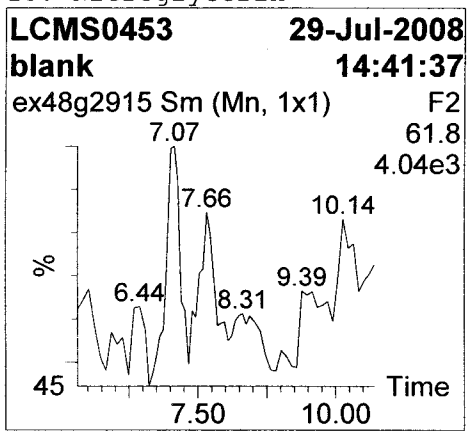
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2915
Text: blank

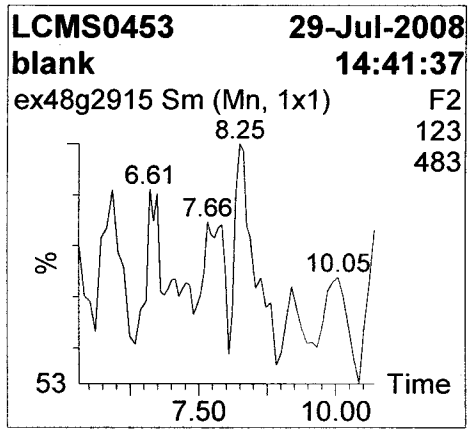
9: Nitrobenzene-d5



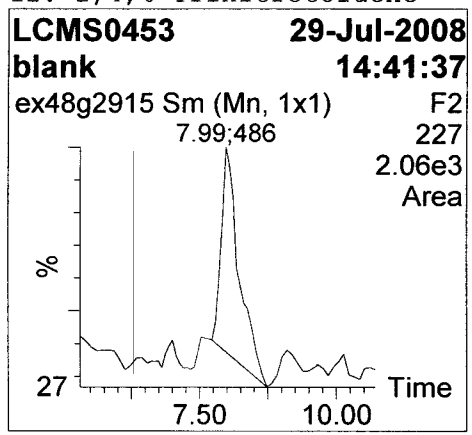
10: Nitroglycerin



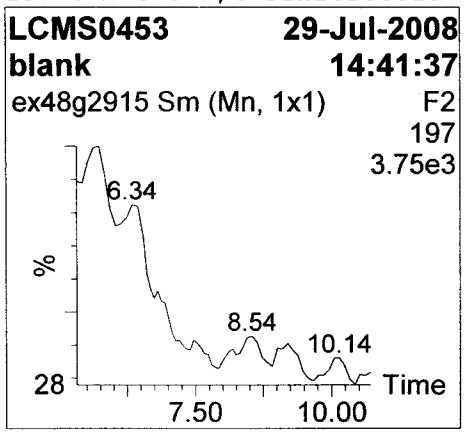
11: Nitrobenzene



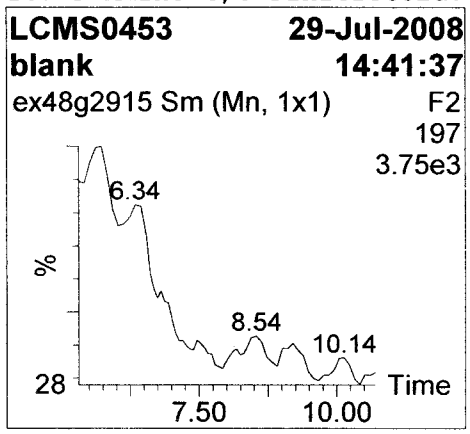
12: 2,4,6-Trinitrotoluene



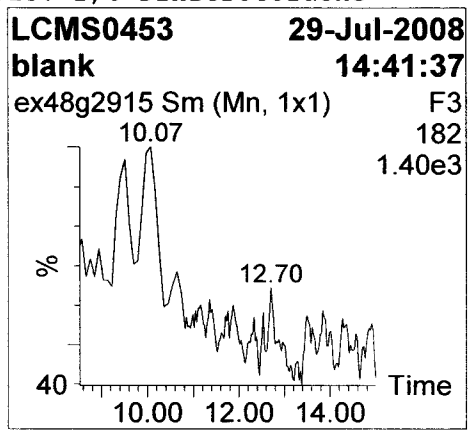
13: 4-Amino-2,6-Dinitrotolu..



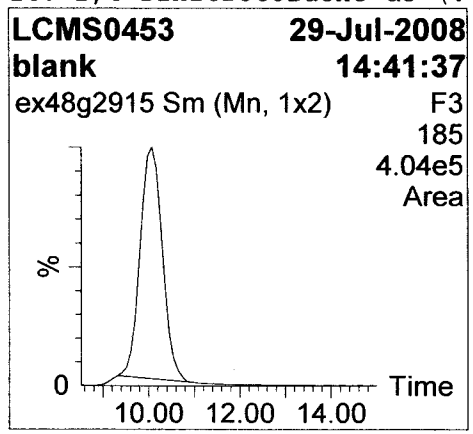
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



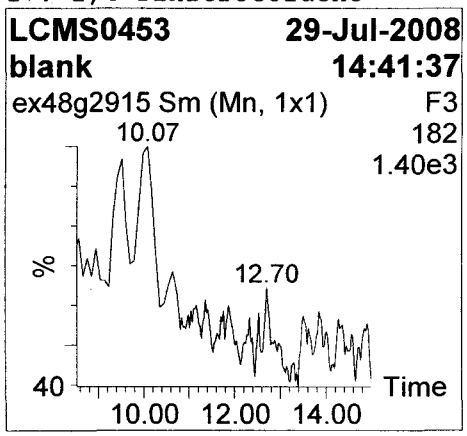
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

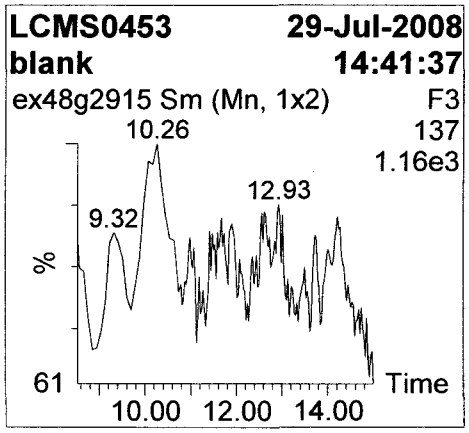
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2915
Text: blank

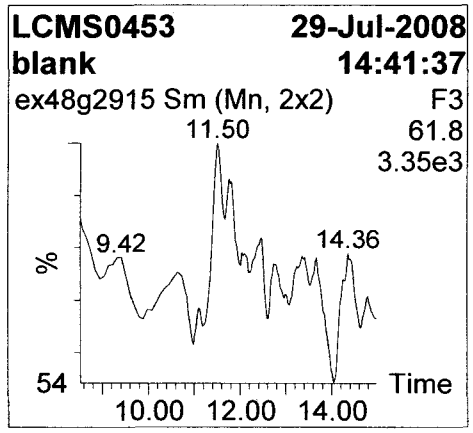
17: 2,4-Dinitrotoluene



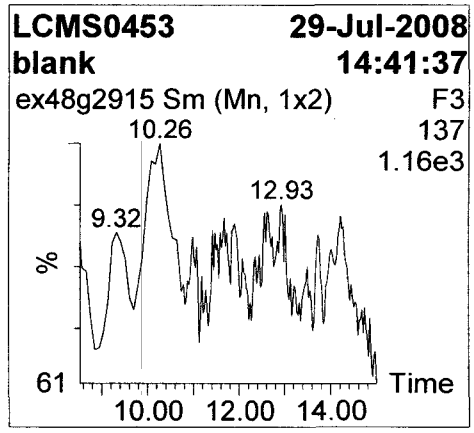
18: 2-Nitrotoluene



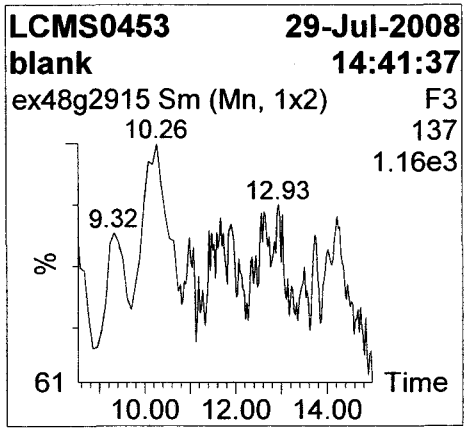
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2915
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.625	7624	bb	1.146	115	29/Jul/08	ex48g29	
RDX 13C-..	3.956	43027	bb	1.060	106	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	93709	bb	0.924	92	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.463	15598	bd	56.469	113	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	486	bb	0.514		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	222357	bb	1.037	104	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

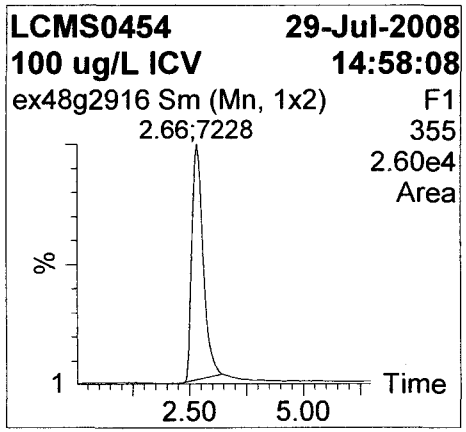
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

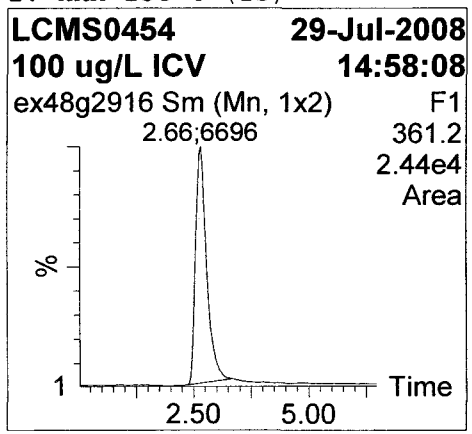
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2916
Text: 100 ug/L ICV

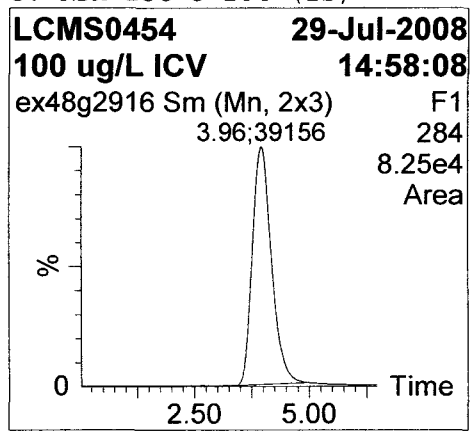
1: HMX



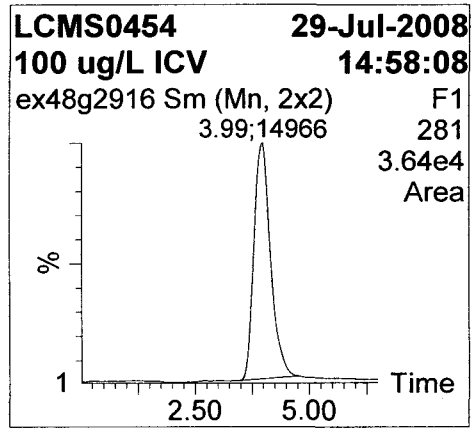
2: HMX 13C-4 (IS)



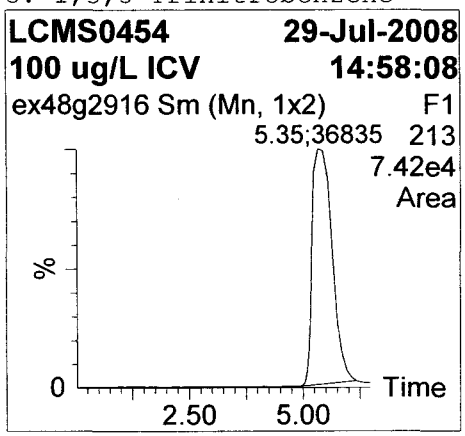
3: RDX 13C-3 284 (IS)



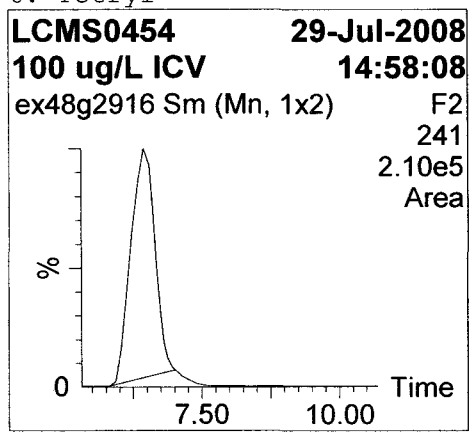
4: RDX



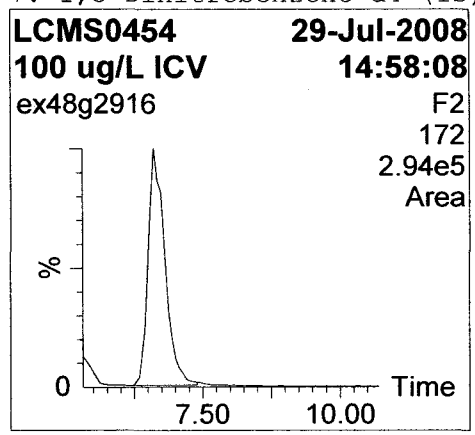
5: 1,3,5-Trinitrobenzene



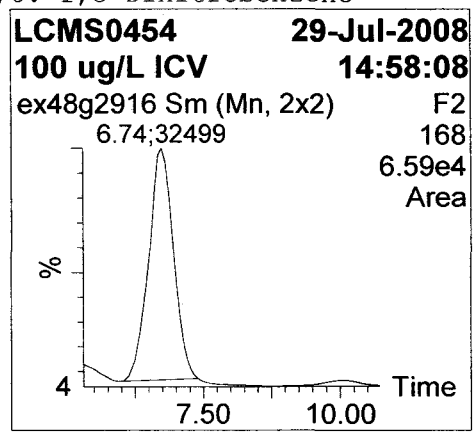
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



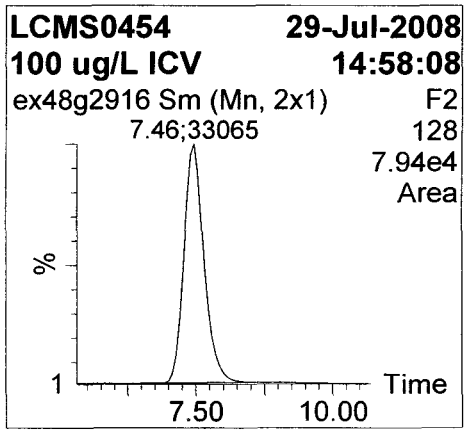
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

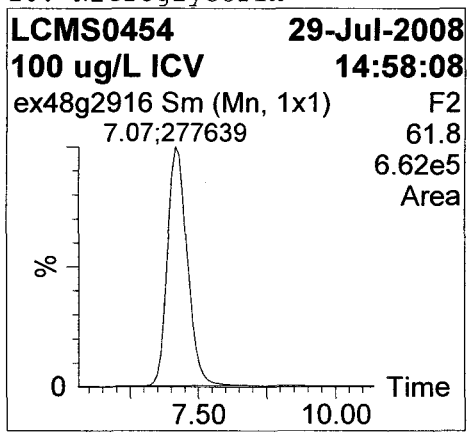
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2916
Text: 100 ug/L ICV

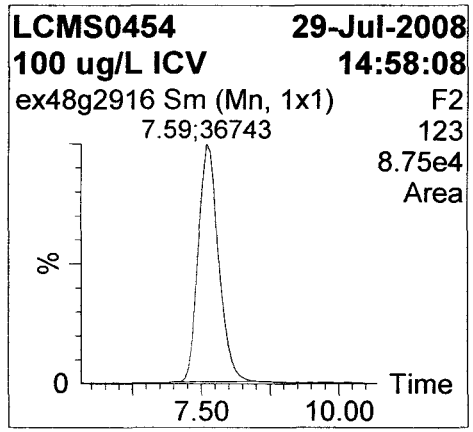
9: Nitrobenzene-d5



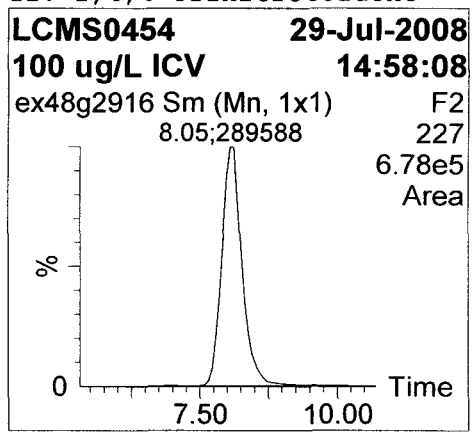
10: Nitroglycerin



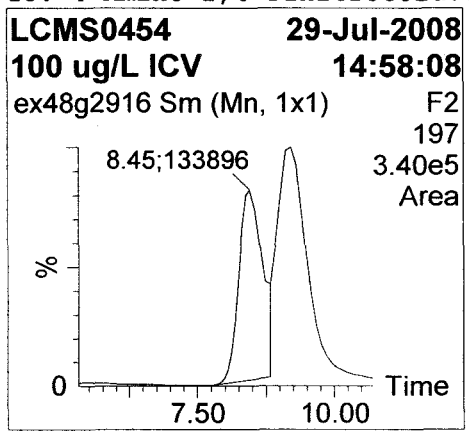
11: Nitrobenzene



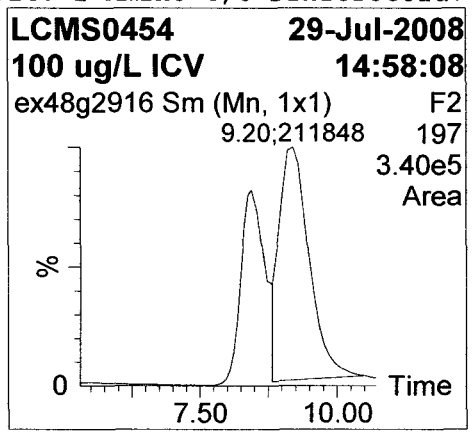
12: 2,4,6-Trinitrotoluene



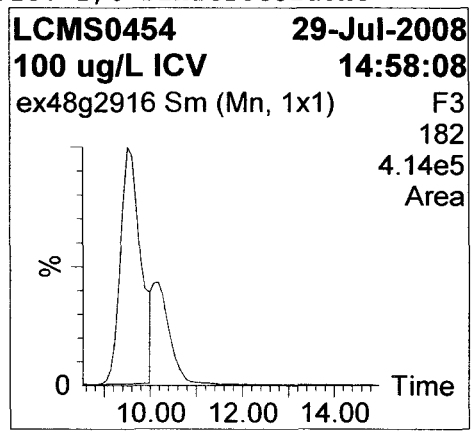
13: 4-Amino-2,6-Dinitrotolu..



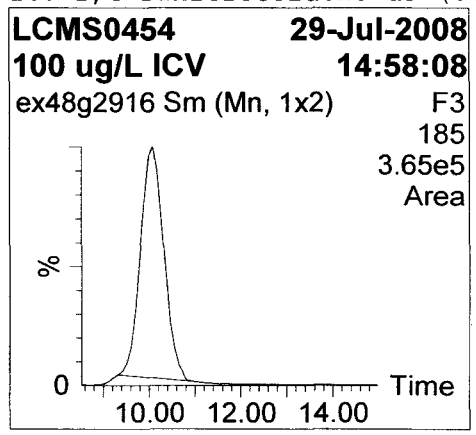
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



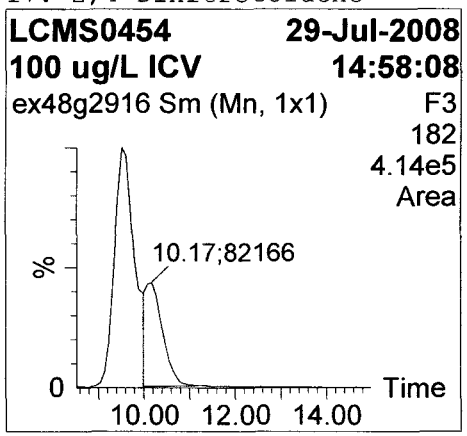
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

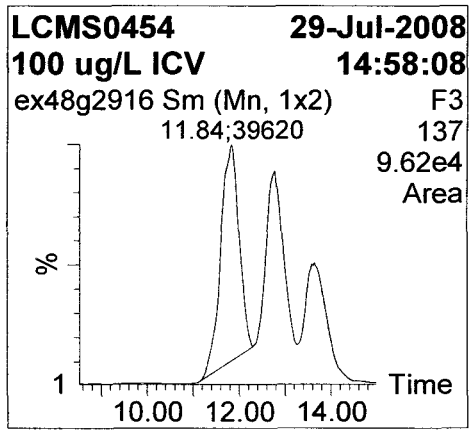
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2916
Text: 100 ug/L ICV

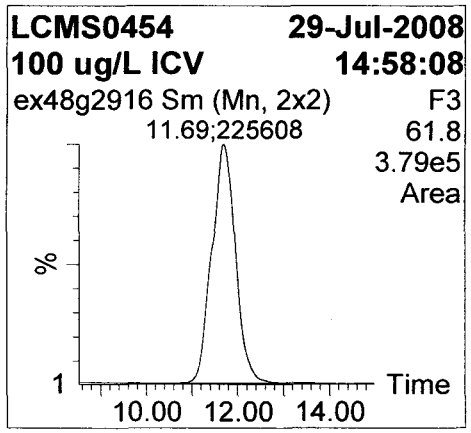
17: 2,4-Dinitrotoluene



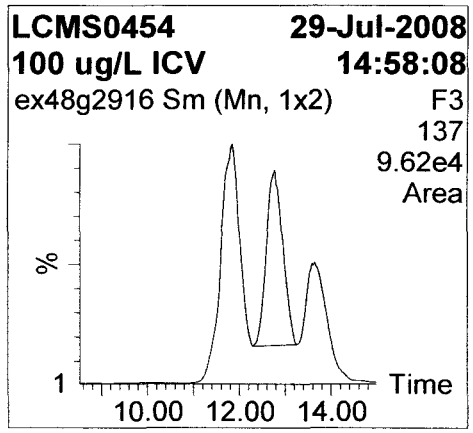
18: 2-Nitrotoluene



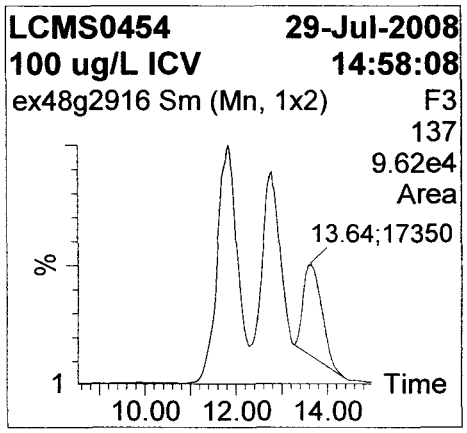
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2916
Text: 100 ug/L ICV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.662	7228	bb	96.669	97	29/Jul/08	ex48g29	
HMX 13C-..	2.662	6696	bb	1.007	101	29/Jul/08	ex48g29	
RDX 13C-..	3.956	39156	bb	0.965	97	29/Jul/08	ex48g29	
RDX	3.993	14966	bb	110.670	111	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	36835	bb	91.213	91	29/Jul/08	ex48g29	
Tetryl	6.444	102152	bb	96.317	96	29/Jul/08	ex48g29	
1,3 Dini..	6.612	103558	bs	1.021	102	29/Jul/08	ex48g29	
1,3-Dini..	6.743	32499	bb	97.744	98	29/Jul/08	ex48g29	
Nitroben..	7.464	33065	bb	109.628	110	29/Jul/08	ex48g29	
Nitrogly..	7.071	277639	bb	102.440	102	29/Jul/08	ex48g29	
Nitroben..	7.595	36743	bb	107.673	108	29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	289588	bb	99.292	99	29/Jul/08	ex48g29	
4-Amino-..	8.446	133896	bd	96.913	97	29/Jul/08	ex48g29	
2-Amino-..	9.200	211848	db	99.232	99	29/Jul/08	ex48g29	
2,6-Dini..	9.511	206170	bd	108.371	108	29/Jul/08	ex48g29	
2,4-Dini..	10.076	209566	bb	0.977	98	29/Jul/08	ex48g29	
2,4-Dini..	10.170	82166	dd	88.652	89	29/Jul/08	ex48g29	
2-Nitrot..	11.836	39620	bb	95.175	95	29/Jul/08	ex48g29	
PETN	11.693	225608	bb	102.392	102	29/Jul/08	ex48g29	
4-Nitrot..	12.779	29178	bb	90.803	91	29/Jul/08	ex48g29	
3-Nitrot..	13.637	17350	bb	100.953	101	29/Jul/08	ex48g29	

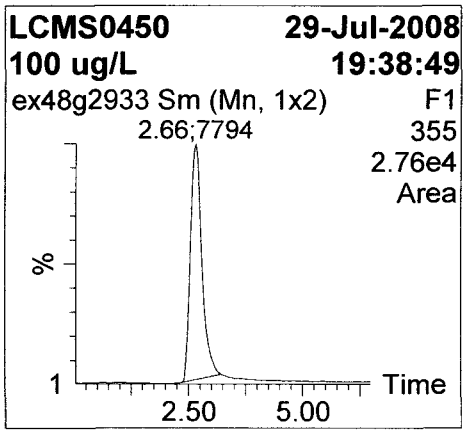
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

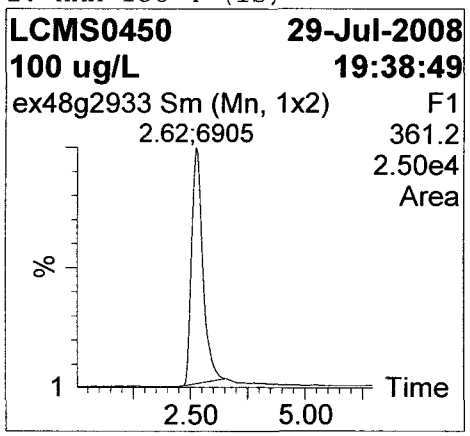
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2933
Text: 100 ug/L

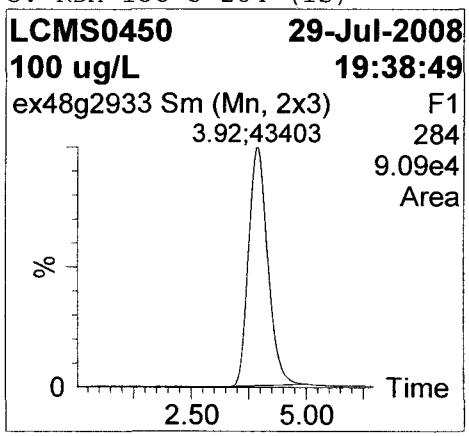
1: HMX



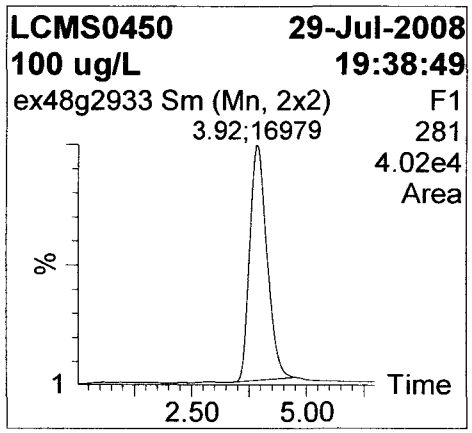
2: HMX 13C-4 (IS)



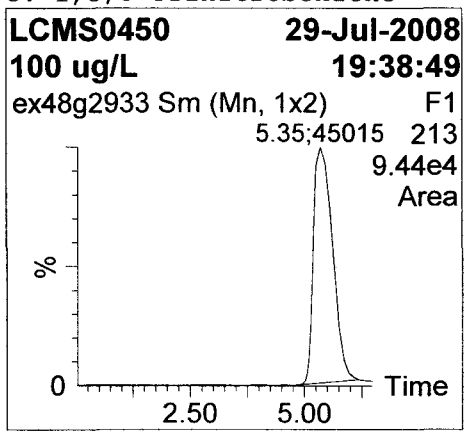
3: RDX 13C-3 284 (IS)



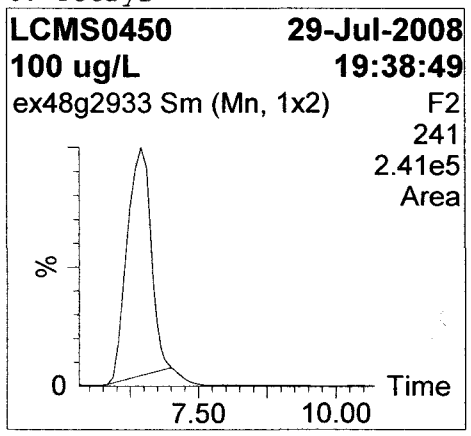
4: RDX



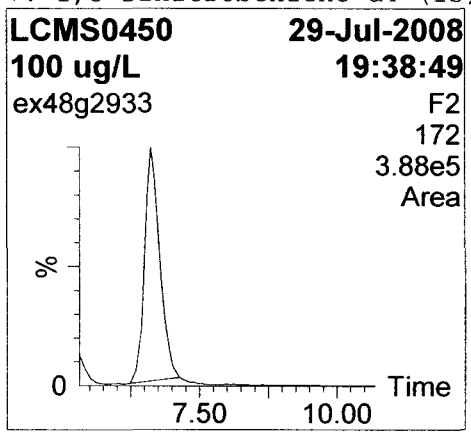
5: 1,3,5-Trinitrobenzene



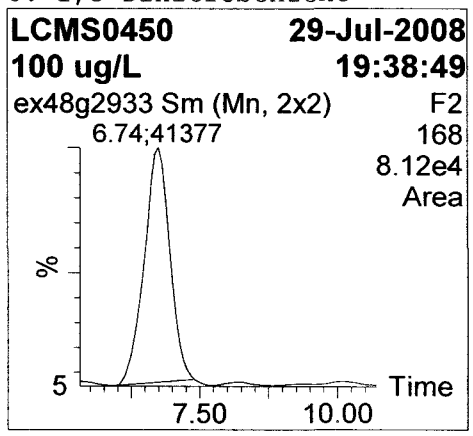
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



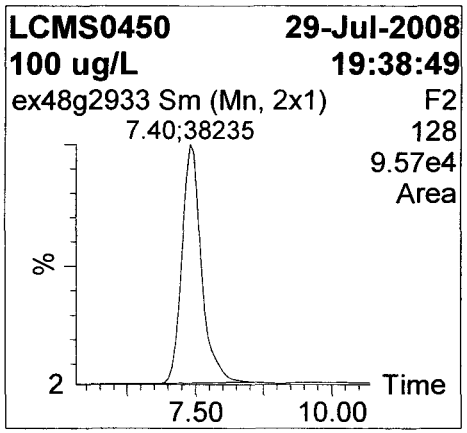
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

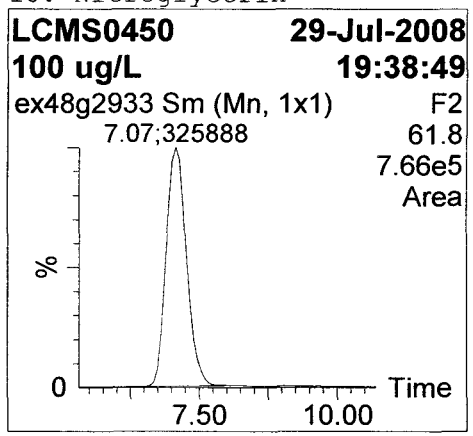
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2933
Text: 100 ug/L

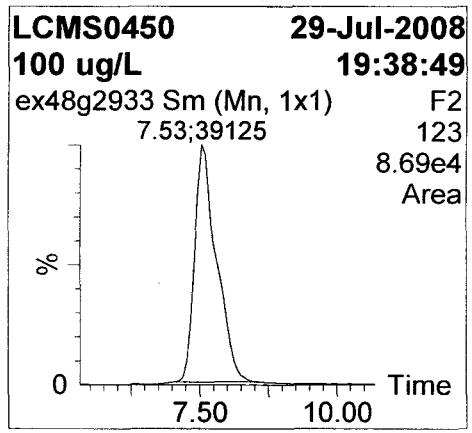
9: Nitrobenzene-d5



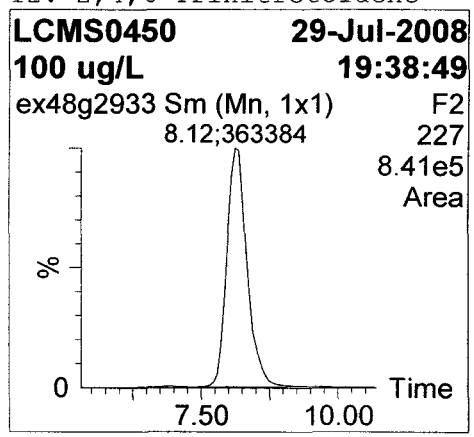
10: Nitroglycerin



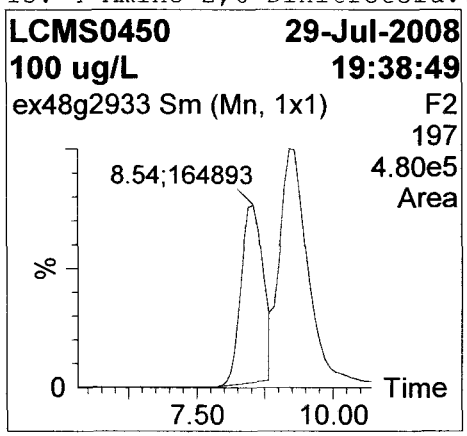
11: Nitrobenzene



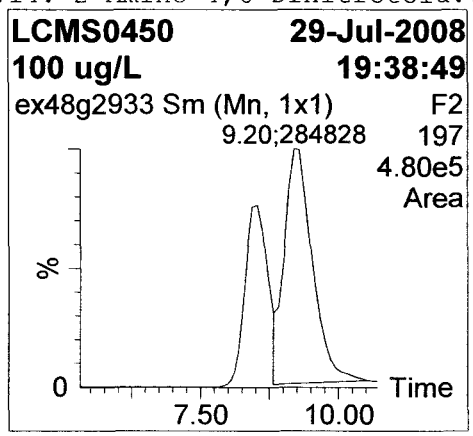
12: 2,4,6-Trinitrotoluene



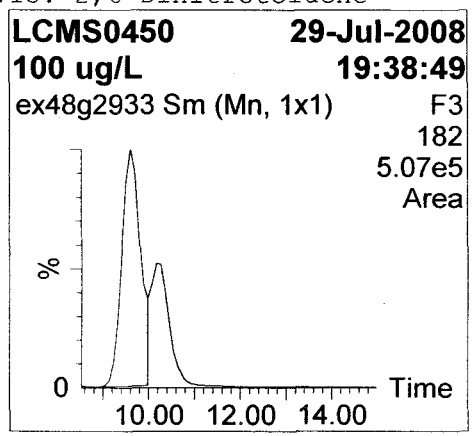
13: 4-Amino-2,6-Dinitrotolu..



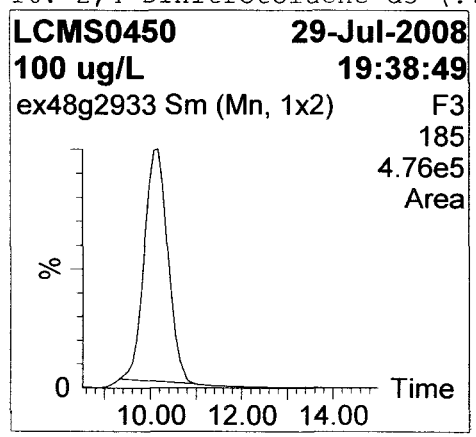
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..

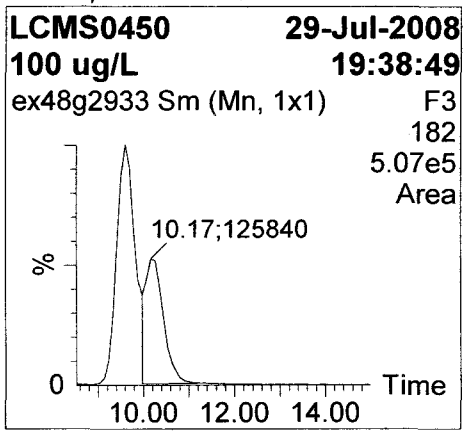


Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

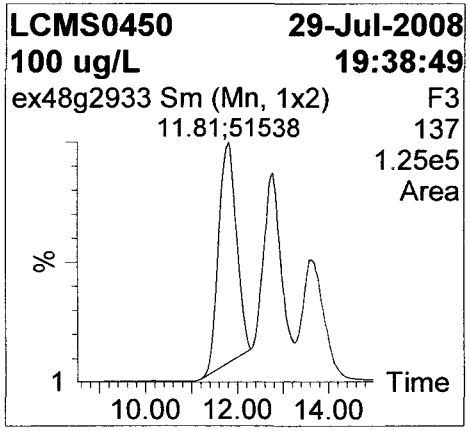
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2933
Text: 100 ug/L

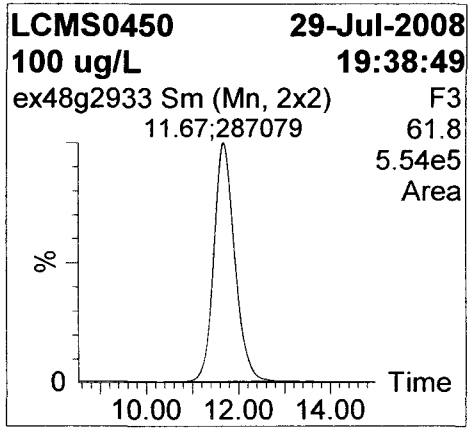
17: 2,4-Dinitrotoluene



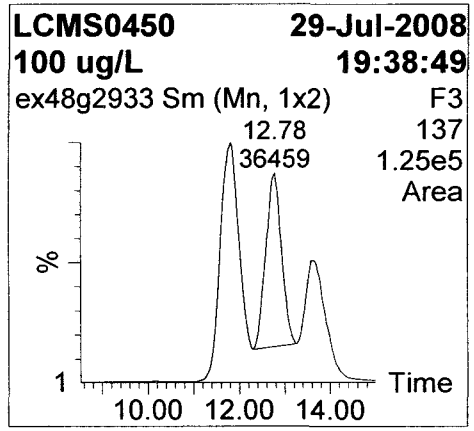
18: 2-Nitrotoluene



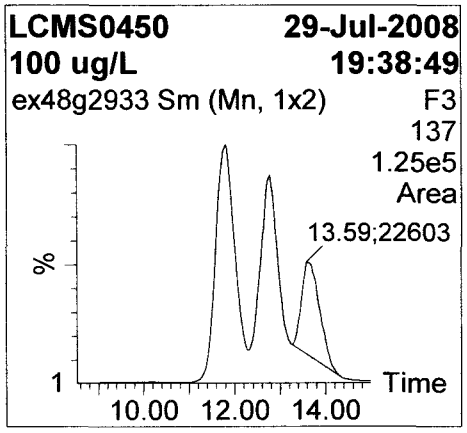
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2933
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.662	7794	bb	101.154	101	29/Jul/08	ex48g29	
HMX 13C-..	2.625	6905	bb	1.038	104	29/Jul/08	ex48g29	
RDX 13C-..	3.919	43403	bb	1.070	107	29/Jul/08	ex48g29	
RDX	3.919	16979	bb	113.357	113	29/Jul/08	ex48g29	
1,3,5-Tr..	5.352	45015	bb	94.771	95	29/Jul/08	ex48g29	
Tetryl	6.444	117303	bb	93.997	94	29/Jul/08	ex48g29	
1,3 Dini..	6.612	121866	bb	1.201	120	29/Jul/08	ex48g29	
1,3-Dini..	6.743	41377	bb	105.897	106	29/Jul/08	ex48g29	
Nitroben..	7.398	38235	bb	107.700	108	29/Jul/08	ex48g29	
Nitrogly..	7.070	325888	bb	102.174	102	29/Jul/08	ex48g29	
Nitroben..	7.529	39125	bb	97.329	97	29/Jul/08	ex48g29	
2,4,6-Tr..	8.118	363384	bb	105.855	106	29/Jul/08	ex48g29	
4-Amino-..	8.540	164893	bd	101.438	101	29/Jul/08	ex48g29	
2-Amino-..	9.198	284828	db	113.324	113	29/Jul/08	ex48g29	
2,6-Dini..	9.604	237006	bd	94.157	94	29/Jul/08	ex48g29	
2,4-Dini..	10.169	277043	bb	1.291	129	29/Jul/08	ex48g29	
2,4-Dini..	10.169	125840	dd	102.372	102	29/Jul/08	ex48g29	
2-Nitrot..	11.814	51538	bb	93.641	94	29/Jul/08	ex48g29	
PETN	11.671	287079	bb	98.539	99	29/Jul/08	ex48g29	
4-Nitrot..	12.785	36459	bb	85.634	86	29/Jul/08	ex48g29	
3-Nitrot..	13.585	22603	bb	99.456	99	29/Jul/08	ex48g29	

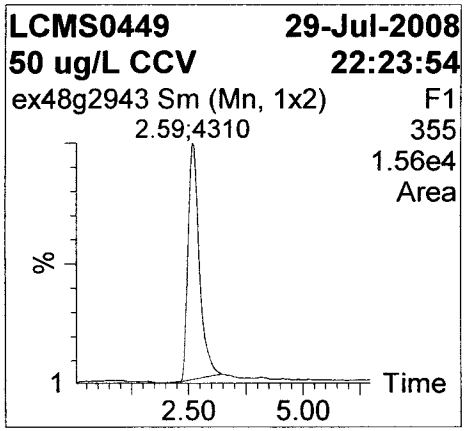
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

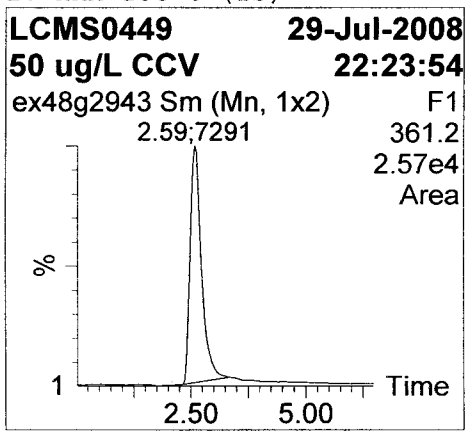
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2943
Text: 50 ug/L CCV

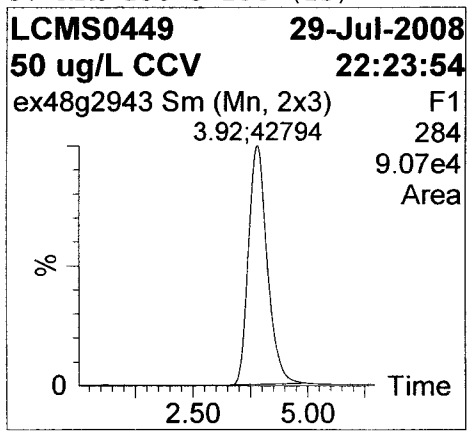
1: HMX



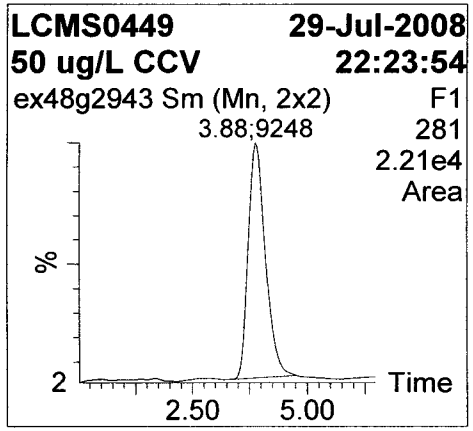
2: HMX 13C-4 (IS)



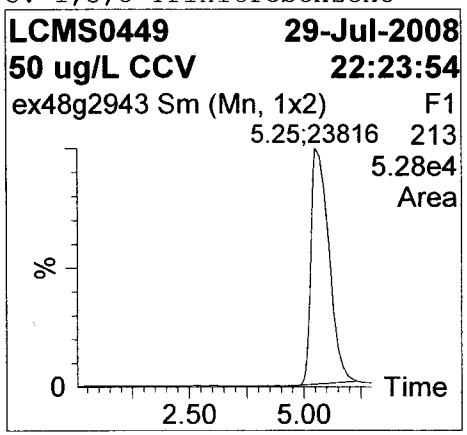
3: RDX 13C-3 284 (IS)



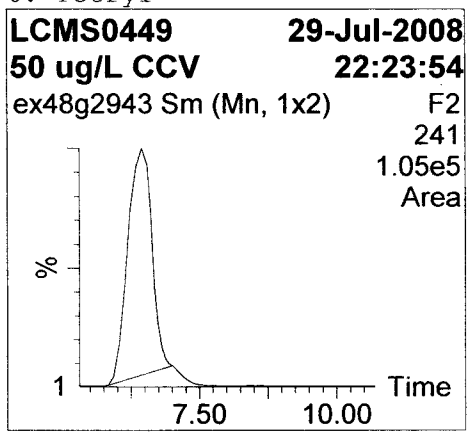
4: RDX



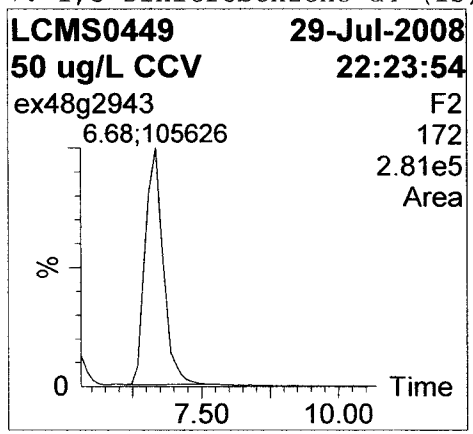
5: 1,3,5-Trinitrobenzene



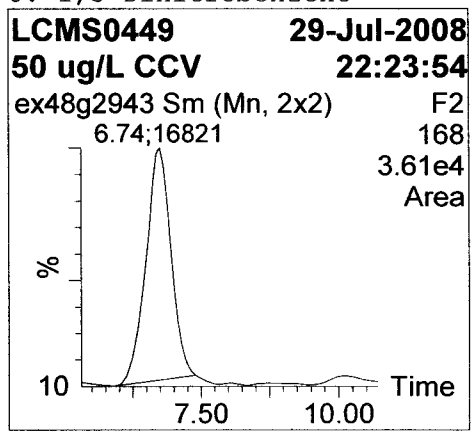
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



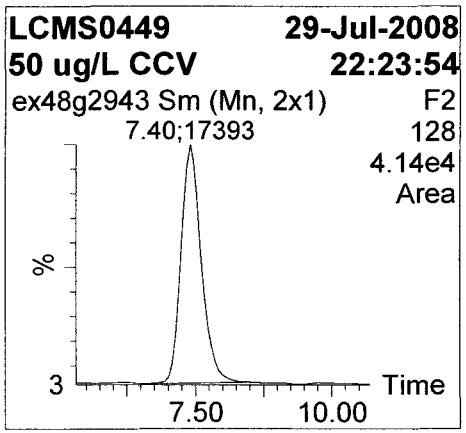
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

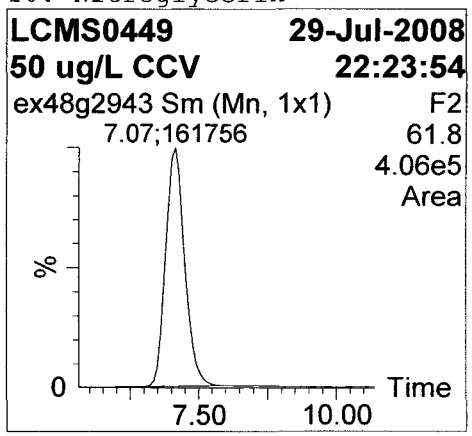
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2943
Text: 50 ug/L CCV

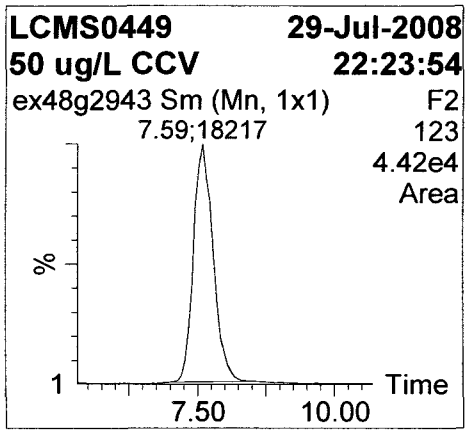
9: Nitrobenzene-d5



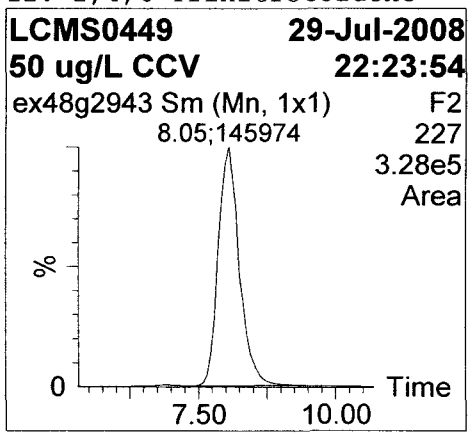
10: Nitroglycerin



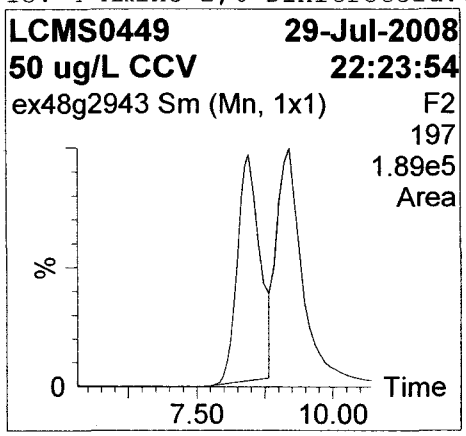
11: Nitrobenzene



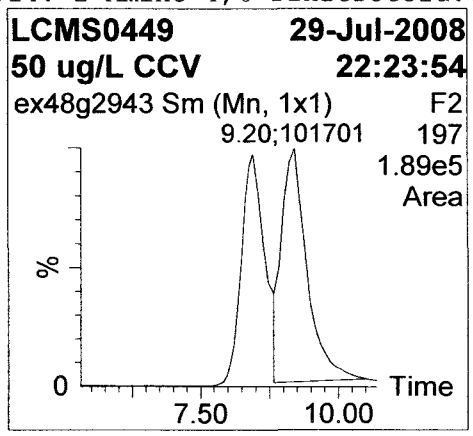
12: 2,4,6-Trinitrotoluene



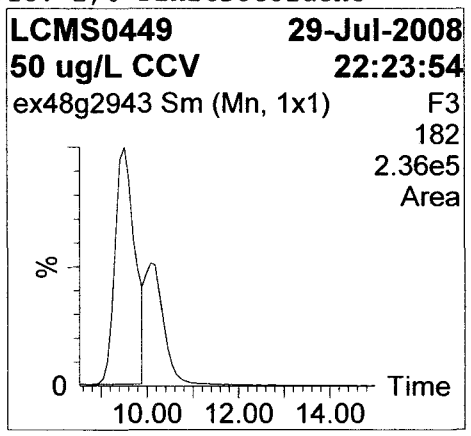
13: 4-Amino-2,6-Dinitrotolu..



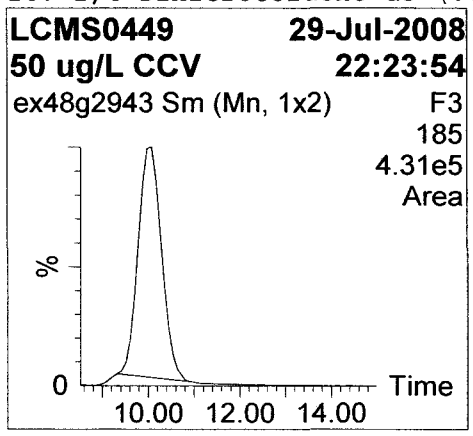
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



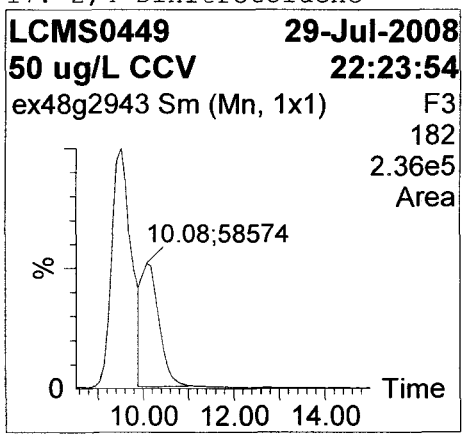
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

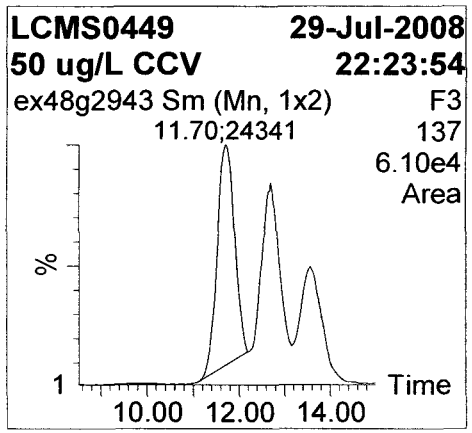
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2943
Text: 50 ug/L CCV

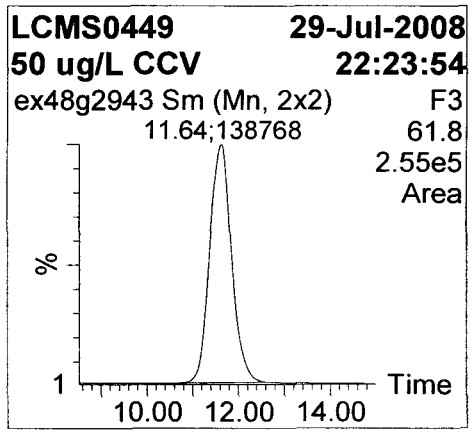
17: 2,4-Dinitrotoluene



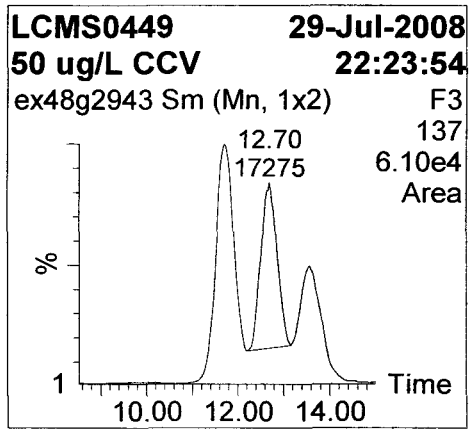
18: 2-Nitrotoluene



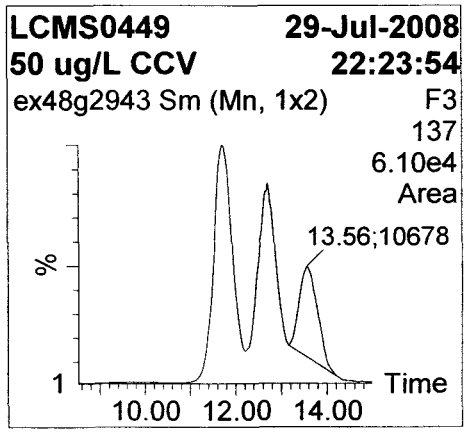
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2943
Text: 50 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	4310	bb	52.191	104	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7291	bb	1.096	110	29/Jul/08	ex48g29	
RDX 13C-..	3.919	42794	bb	1.055	105	29/Jul/08	ex48g29	
RDX	3.882	9248	bb	60.998	122	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	23816	bb	57.372	115	29/Jul/08	ex48g29	
Tetryl	6.444	50873	bb	47.253	95	29/Jul/08	ex48g29	
1,3 Dini..	6.677	105626	bb	1.041	104	29/Jul/08	ex48g29	
1,3-Dini..	6.743	16821	bb	48.719	97	29/Jul/08	ex48g29	
Nitroben..	7.398	17393	bb	55.848	112	29/Jul/08	ex48g29	
Nitrogly..	7.071	161756	bb	57.787	116	29/Jul/08	ex48g29	
Nitroben..	7.595	18217	bb	51.796	104	29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	145974	bb	49.238	98	29/Jul/08	ex48g29	
4-Amino-..	8.446	83615	bd	59.172	118	29/Jul/08	ex48g29	
2-Amino-..	9.199	101701	db	46.888	94	29/Jul/08	ex48g29	
2,6-Dini..	9.510	113711	bd	50.507	101	29/Jul/08	ex48g29	
2,4-Dini..	10.075	246428	bb	1.149	115	29/Jul/08	ex48g29	
2,4-Dini..	10.075	58574	dd	54.073	108	29/Jul/08	ex48g29	
2-Nitrot..	11.701	24341	bb	49.404	99	29/Jul/08	ex48g29	
PETN	11.643	138768	bb	53.332	107	29/Jul/08	ex48g29	
4-Nitrot..	12.700	17275	bb	44.885	90	29/Jul/08	ex48g29	
3-Nitrot..	13.558	10678	bb	51.770	104	29/Jul/08	ex48g29	

LC/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03).SPL
Last Modified: 30 July 2008 07:47:46 Mountain Daylight Time
Printed: 30 July 2008 07:47:53 Mountain Daylight Time Page Position (1, 1)

	File Name	Sample ID	File Text	Sample Type	Analyte ug/L	QC ug/L	Bottle	Extract (mL)
1	ex48g2907	LCMS0453	blank	Blank	0	50	1	1.000000
2	ex48g2908	LCMS0446	5 ug/L	Standard	5	5	2	1.000000
3	ex48g2909	LCMS0447	10 ug/L	Standard	10	10	3	1.000000
4	ex48g2910	LCMS0448	25 ug/L	Standard	25	25	4	1.000000
5	ex48g2911	LCMS0449	50 ug/L	Standard	50	50	5	1.000000
6	ex48g2912	LCMS0450	100 ug/L	Standard	100	100	6	1.000000
7	ex48g2913	LCMS0451	200 ug/L	Standard	200	200	7	1.000000
8	ex48g2914	LCMS0452	300 ug/L	Standard	300	300	8	1.000000
9	ex48g2915	LCMS0453	blank	Blank	0	50	1	1.000000
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100	100	9	1.000000
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100	100	6	1.000000
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank	0	398.406	25	40.000000
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.804	398.804	26	40.000000
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank	0	400.802	27	40.000000
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte	0	401.606	28	40.000000
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte	0	399.600	29	40.000000
17	ex48g2939	KRW201AA	D8G210174-010	Analyte	0	399.202	30	40.000000
18	ex48g2940	KRW251AA	D8G210174-013	Analyte	0	399.202	31	40.000000
19	ex48g2941	KRW261AA	D8G210174-014	Analyte	0	397.219	32	40.000000
20	ex48g2942	KRW271AA	D8G210174-015	Analyte	0	396.825	33	40.000000
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50	50	5	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03).SPL
Last Modified: 30 July 2008 07:47:46 Mountain Daylight Time
Printed: 30 July 2008 07:47:53 Mountain Daylight Time

Page Position (2, 1)

sample (mL or g)	dilution	Inject Volume (uL)	Inlet File	MS File	MS Tune File
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.040000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.030000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.980000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.960000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.010000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.020000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.020000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.070000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.080000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 1: HMX Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.997772
Calibration curve: 0.0109807 * x + 0.0180378
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				7531					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	2.588	470	7495	bb	0.063	4.073	81.5	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	2.588	877	6968	bb	0.126	9.817	98.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	2.588	2342	7140	bb	0.328	28.235	112.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	2.588	4108	6774	bb	0.606	53.583	107.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	2.588	7658	6663	bb	1.149	103.035	103.0	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	2.588	12397	5576	bb	2.223	200.831	100.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	2.588	19063	5944	bb	3.207	290.426	96.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				7624					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	2.662	7228	6696	bb	1.080	96.669	96.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	2.662	7794	6905	bb	1.129	101.154	101.2	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				8068					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	2.588	8283	6866	bb	1.206	431.573	108.2	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				7324					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				7724					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				7621					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				7781					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				7377					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				7677					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				7910					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	2.588	4310	7291	bb	0.591	52.191	104.4	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 2: HMX 13C-4 (IS) Sample List: ex48g29(03) Method File: ex48g29
Response Factor: 6651.37
RRF SD: 673.653, % Relative SD: 10.1280
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		2.588	7531		bb	7530.946	1.132	113.2	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	2.588	7495		bb	7494.528	1.127	112.7	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	2.588	6968		bb	6968.432	1.048	104.8	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	2.588	7140		bb	7139.938	1.073	107.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	2.588	6774		bb	6774.367	1.018	101.8	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	2.588	6663		bb	6662.704	1.002	100.2	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	2.588	5576		bb	5575.795	0.838	83.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	2.588	5944		bb	5943.849	0.894	89.4	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		2.625	7624		bb	7624.451	1.146	114.6	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	2.662	6696		bb	6695.607	1.007	100.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	1.00	2.625	6905		bb	6904.674	1.038	103.8	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		2.588	8068		bb	8068.011	1.213	121.3	40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	1.00	2.588	6866		bb	6865.949	1.032	103.2	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		2.588	7324		bb	7324.371	1.101	110.1	40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte		2.588	7724		bb	7724.204	1.161	116.1	40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte		2.588	7621		bb	7620.703	1.146	114.6	40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte		2.588	7781		bb	7781.407	1.170	117.0	40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte		2.588	7377		bb	7377.022	1.109	110.9	40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte		2.588	7677		bb	7676.757	1.154	115.4	40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte		2.588	7910		bb	7910.483	1.189	118.9	40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	2.588	7291		bb	7291.026	1.096	109.6	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 3: RDX 13C-3 284 (IS) Sample List: ex48g29(03) Method File: ex48g29
Response Factor: 40575.0
RRF SD: 2245.74, % Relative SD: 5.53478
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		3.882	40528		bb	40527.902	0.999	99.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	3.882	40892		bb	40892.055	1.008	100.8	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	3.882	36550		bb	36550.301	0.901	90.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	3.919	39515		bb	39515.344	0.974	97.4	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	3.919	39776		bb	39775.504	0.980	98.0	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	3.882	42015		bb	42015.160	1.035	103.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	3.882	41741		bb	41740.750	1.029	102.9	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	3.845	43536		bb	43535.777	1.073	107.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		3.956	43027		bb	43027.234	1.060	106.0	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	3.956	39156		bb	39155.984	0.965	96.5	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	1.00	3.919	43403		bb	43403.008	1.070	107.0	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		3.956	46005		bb	46004.801	1.134	113.4	40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	1.00	3.919	43479		bb	43478.789	1.072	107.2	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		3.919	41930		bb	41930.449	1.033	103.3	40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte		3.882	42148		bb	42147.836	1.039	103.9	40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte		3.919	42336		bb	42335.961	1.043	104.3	40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte		3.919	42849		bb	42848.922	1.056	105.6	40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte		3.919	42626		bb	42626.086	1.051	105.1	40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte		3.919	43087		bb	43087.398	1.062	106.2	40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte		3.919	42873		bb	42872.984	1.057	105.7	40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	3.919	42794		bb	42793.707	1.055	105.5	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 4: RDX Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.991254
Calibration curve: 0.00334413 * x + 0.0121126
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				40528					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	3.882	919	40892	bb	0.022	3.095	61.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	3.919	1704	36550	bb	0.047	10.317	103.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	3.882	4303	39515	bb	0.109	28.940	115.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	3.882	8275	39776	bb	0.208	58.592	117.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	3.882	15674	42015	bb	0.373	107.935	107.9	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	3.882	28710	41741	bb	0.688	202.057	101.0	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	3.845	41156	43536	bb	0.945	279.064	93.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				43027					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	3.993	14966	39156	bb	0.382	110.670	110.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	3.919	16979	43403	bb	0.391	113.357	113.4	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				46005					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	3.882	16519	43479	bb	0.380	438.633	110.0	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				41930					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				42148					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				42336					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				42849					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				42626					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				43087					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				42873					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	3.882	9248	42794	bb	0.216	60.998	122.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 5: 1,3,5-Trinitrobenzene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.994563
Calibration curve: 0.00384794 * x + 0.00471089
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	5.250	1920	101368	bb	0.019	3.698	74.0	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	5.250	4235	88759	bb	0.048	11.174	111.7	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	5.250	9940	90543	bb	0.110	27.306	109.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	5.250	19425	97797	bb	0.199	50.394	100.8	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	5.250	45144	104190	bb	0.433	111.376	111.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	5.353	80258	111799	bb	0.718	185.336	92.7	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	5.353	134286	115580	bb	1.162	300.715	100.2	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	5.353	36835	103558	bb	0.356	91.213	91.2	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	5.352	45015	121866	bb	0.369	94.771	94.8	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				117514					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	5.250	48567	128765	bb	0.377	386.025	96.8	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	5.250	23816	105626	bb	0.225	57.372	114.7	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 6: Tetryl Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.998525
Calibration curve: 0.0102885 * x + -0.00453104
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	6.444	4706	101368	bb	0.046	4.953	99.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	6.444	9003	88759	bb	0.101	10.299	103.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	6.445	23750	90543	bb	0.262	25.936	103.7	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	6.445	49397	97797	bb	0.505	49.534	99.1	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	6.444	100652	104190	bb	0.966	94.335	94.3	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	6.444	223758	111799	bb	2.001	194.970	97.5	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	6.444	368080	115580	bb	3.185	309.973	103.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	6.444	102152	103558	bb	0.986	96.317	96.3	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	6.444	117303	121866	bb	0.963	93.997	94.0	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				117514					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	6.444	141443	128765	bb	1.098	427.539	107.2	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	6.444	50873	105626	bb	0.482	47.253	94.5	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 7: 1,3 Dinitrobenzene-d4 (IS) Sample List: ex48g29(03) Method File: ex48g29
Response Factor: 101434
RRF SD: 10063.6, % Relative SD: 9.92135
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		6.743	102345		bb	102344.820	1.009	100.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	6.678	101368		bb	101367.680	0.999	99.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	6.612	88759		bb	88758.570	0.875	87.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	6.613	90543		bd	90543.391	0.893	89.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	6.547	97797		bs	97796.617	0.964	96.4	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	6.612	104190		bb	104190.422	1.027	102.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	6.678	111799		bb	111799.352	1.102	110.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	6.612	115580		bb	115580.016	1.139	113.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		6.612	93709		bb	93708.750	0.924	92.4	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	6.612	103558		bs	103557.820	1.021	102.1	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	1.00	6.612	121866		bb	121865.703	1.201	120.1	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		6.612	117514		bb	117514.383	1.159	115.9	40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	1.00	6.612	128765		bs	128765.383	1.269	126.9	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		6.612	105964		bb	105963.789	1.045	104.5	40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte		6.612	123659		bb	123658.805	1.219	121.9	40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte		6.612	117063		bb	117062.648	1.154	115.4	40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte		6.612	115388		bb	115387.602	1.138	113.8	40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte		6.612	116644		bb	116644.336	1.150	115.0	40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte		6.612	112735		bb	112735.250	1.111	111.1	40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte		6.612	121048		bb	121047.711	1.193	119.3	40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	6.677	105626		bb	105625.523	1.041	104.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 8: 1,3-Dinitrobenzene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.997196
Calibration curve: 0.00315292 * x + 0.00564178
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	6.678	2100	101368	bb	0.021	4.781	95.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	6.678	3144	88759	bb	0.035	9.446	94.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	6.678	7821	90543	bb	0.086	25.606	102.4	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	6.678	16680	97797	bb	0.171	52.307	104.6	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	6.678	36184	104190	bb	0.347	108.360	108.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	6.743	66932	111799	bb	0.599	188.092	94.0	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	6.743	110490	115580	bb	0.956	301.408	100.5	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	6.743	32499	103558	bb	0.314	97.744	97.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	6.743	41377	121866	bb	0.340	105.897	105.9	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		6.940	376	117514	bb	0.003	0.000		40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	6.678	39950	128765	bb	0.310	385.292	96.6	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	6.743	16821	105626	bb	0.159	48.719	97.4	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 9: Nitrobenzene-d5 Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.995648
Calibration curve: 0.00287504 * x + 0.00410105
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		7.464	14830	102345	bb	0.145	48.972	97.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.333	1390	101368	db	0.014	3.344	66.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.398	3356	88759	bd	0.038	11.725	117.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.399	7872	90543	bb	0.087	28.813	115.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.399	15148	97797	bb	0.155	52.447	104.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.398	30343	104190	bb	0.291	99.867	99.9	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.464	60748	111799	bb	0.543	187.567	93.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.464	102236	115580	bb	0.885	306.237	102.1	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		7.463	15598	93709	bd	0.166	56.469	112.9	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.464	33065	103558	bb	0.319	109.628	109.6	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	7.398	38235	121866	bb	0.314	107.700	107.7	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		7.398	35492	117514	bb	0.302	412.843	103.6	40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	7.399	36338	128765	bb	0.282	385.761	96.7	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		7.398	37326	105964	db	0.352	485.350	121.1	40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte		7.398	36454	123659	bb	0.295	406.059	101.1	40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte		7.398	33760	117063	bb	0.288	395.132	98.9	40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte		7.398	31079	115388	bb	0.269	368.296	92.3	40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte		7.398	34928	116644	bb	0.299	410.079	102.7	40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte		7.398	33539	112735	bb	0.297	405.362	102.1	40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte		7.398	29101	121048	bb	0.240	326.166	82.2	40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	7.398	17393	105626	bb	0.165	55.848	111.7	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 10: Nitroglycerin Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.996295
Calibration curve: 0.0257449 * x + 0.0436900
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.005	12993	101368	bb	0.128	3.282	65.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.071	29009	88759	bb	0.327	10.998	110.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.006	73167	90543	bb	0.808	29.691	118.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.006	139002	97797	bb	1.421	53.511	107.0	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.005	279603	104190	bb	2.684	102.540	102.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.136	570254	111799	bb	5.101	196.427	98.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.071	878539	115580	bb	7.601	293.551	97.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.071	277639	103558	bb	2.681	102.440	102.4	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	7.070	325888	121866	bb	2.674	102.174	102.2	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				117514					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	7.005	304511	128765	bb	2.365	359.562	90.2	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	7.071	161756	105626	bb	1.531	57.787	115.6	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 11: Nitrobenzene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.994425
Calibration curve: 0.00326327 * x + 0.00344180
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.595	1673	101368	bd	0.017	4.003	80.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.529	3451	88759	bb	0.039	10.858	108.6	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.530	9019	90543	bb	0.100	29.469	117.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.530	16355	97797	bb	0.167	50.193	100.4	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.529	32890	104190	bb	0.316	95.680	95.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.660	67837	111799	bb	0.607	184.886	92.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.595	119172	115580	bb	1.031	314.911	105.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.595	36743	103558	bb	0.355	107.673	107.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	7.529	39125	121866	bb	0.321	97.329	97.3	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				117514					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	7.529	41240	128765	bb	0.320	387.197	97.1	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	7.595	18217	105626	bb	0.172	51.796	103.6	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 12: 2,4,6-Trinitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.995606
Calibration curve: 0.0282574 * x + -0.00933175
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.988	12162	101368	bb	0.120	4.576	91.5	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.987	26082	88759	bb	0.294	10.729	107.3	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.988	68360	90543	bb	0.755	27.049	108.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.988	135405	97797	bb	1.385	49.329	98.7	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.987	281728	104190	bb	2.704	96.021	96.0	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	8.119	584278	111799	bb	5.226	185.278	92.6	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	8.054	1034300	115580	bb	8.949	317.018	105.7	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		7.987	486	93709	bb	0.005	0.514		1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	8.053	289588	103558	bb	2.796	99.292	99.3	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	8.118	363384	121866	bb	2.982	105.855	105.9	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		7.988	259	117514	bb	0.002	1.626		40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	7.988	346507	128765	bb	2.691	381.104	95.6	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		7.987	63	105964	bb	0.001	1.408		40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte		7.988	305	116644	bb	0.003	1.688		40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte		7.988	214	112735	bb	0.002	1.579		40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte		7.987	270	121048	bb	0.002	1.623		40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	8.053	145974	105626	bb	1.382	49.238	98.5	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 13: 4-Amino-2,6-Dinitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.998445
Calibration curve: 0.0132837 * x + 0.00560063
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	8.381	6168	101368	dd	0.061	4.159	83.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	8.380	12713	88759	bd	0.143	10.361	103.6	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	8.381	34179	90543	bd	0.377	27.996	112.0	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	8.381	64788	97797	bd	0.662	49.450	98.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	8.380	144870	104190	bd	1.390	104.251	104.3	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	8.447	298980	111799	bd	2.674	200.897	100.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	8.447	450324	115580	bd	3.896	292.887	97.6	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	8.446	133896	103558	bd	1.293	96.913	96.9	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	8.540	164893	121866	bd	1.353	101.438	101.4	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				117514					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	8.381	170599	128765	bd	1.325	396.076	99.3	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	8.446	83615	105626	bd	0.792	59.172	118.3	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 14: 2-Amino-4,6-Dinitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.992131
Calibration curve: 0.0206873 * x + -0.00713639
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	9.105	9349	101368	db	0.092	4.803	96.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	9.198	19006	88759	db	0.214	10.696	107.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	9.106	50509	90543	db	0.558	27.310	109.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	9.106	93624	97797	db	0.957	46.622	93.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	9.104	206964	104190	db	1.986	96.365	96.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	9.200	416397	111799	db	3.725	180.383	90.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	9.106	773443	115580	db	6.692	323.821	107.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	9.200	211848	103558	db	2.046	99.232	99.2	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	9.198	284828	121866	db	2.337	113.324	113.3	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				117514					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	9.106	278191	128765	db	2.160	417.861	104.8	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				105964					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				123659					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				117063					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				115388					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				116644					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				112735					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				121048					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	9.199	101701	105626	db	0.963	46.888	93.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 15: 2,6-Dinitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.992191
Calibration curve: 0.00902750 * x + 0.00548383
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	9.510	8876	212900	bd	0.042	4.011	80.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	9.510	19306	189050	bd	0.102	10.705	107.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	9.511	48406	199111	bd	0.243	26.322	105.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	9.606	99450	204522	bd	0.486	53.256	106.5	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	9.510	207873	232442	bd	0.894	98.456	98.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	9.605	435688	218394	bd	1.995	220.380	110.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	9.511	614252	245218	bd	2.505	276.869	92.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	9.511	206170	209566	bd	0.984	108.371	108.4	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	9.604	237006	277043	bd	0.855	94.157	94.2	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				274759					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	9.511	242482	264218	bd	0.918	403.001	101.1	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				233638					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				271469					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				259971					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				252087					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				249384					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				259792					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				251105					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	9.510	113711	246428	bd	0.461	50.507	101.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 16: 2,4-Dinitrotoluene-d3 (IS) Sample List: ex48g29(03) Method File: ex48g29
Response Factor: 214519
RRF SD: 19439.3, % Relative SD: 9.06180
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		10.076	213845	bb	213845.047	0.997	99.7	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	9.981	212900	bb	212899.953	0.992	99.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	10.075	189050	bb	189049.688	0.881	88.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	9.982	199111	bb	199110.891	0.928	92.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	10.076	204522	bb	204522.063	0.953	95.3	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	9.980	232442	bb	232442.063	1.084	108.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	10.170	218394	bb	218393.813	1.018	101.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	10.170	245218	bb	245217.828	1.143	114.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		10.075	222357	bb	222356.594	1.037	103.7	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	10.076	209566	bb	209565.547	0.977	97.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	1.00	10.169	277043	bb	277042.969	1.291	129.1	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank		10.075	274759	bb	274758.688	1.281	128.1	40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	1.00	9.982	264218	bb	264218.000	1.232	123.2	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		10.073	233638	bb	233638.438	1.089	108.9	40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte		9.981	271469	bb	271468.938	1.265	126.5	40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte		9.981	259971	bb	259971.203	1.212	121.2	40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte		9.980	252087	bb	252086.531	1.175	117.5	40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte		9.982	249384	bb	249384.328	1.163	116.3	40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte		9.981	259792	bd	259791.531	1.211	121.1	40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte		9.980	251105	bb	251105.453	1.171	117.1	40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	10.075	246428	bb	246427.625	1.149	114.9	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 17: 2,4-Dinitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.997621
Calibration curve: 1.34213e-6 * x^2 + 0.00427312 * x + 0.00270958
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	10.075	4326	212900	db	0.020	4.116	82.3	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	10.169	10495	189050	dd	0.056	12.310	123.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	10.076	22234	199111	dd	0.112	25.297	101.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	10.171	41853	204522	db	0.205	46.574	93.1	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	10.074	100355	232442	dd	0.432	97.421	97.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	10.264	207681	218394	dd	0.951	208.282	104.1	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	10.264	339592	245218	dd	1.385	295.943	98.6	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	10.170	82166	209566	dd	0.392	88.652	88.7	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	10.169	125840	277043	dd	0.454	102.372	102.4	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				274759					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	10.076	113651	264218	dd	0.430	387.113	97.1	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank		9.979	113	233638	bb	0.000	0.000		40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				271469					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				259971					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				252087					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				249384					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				259792					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				251105					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	10.075	58574	246428	dd	0.238	54.073	108.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 18: 2-Nitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.999594
Calibration curve: 0.00197244 * x + 0.00132781
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	11.615	2143	212900	bb	0.010	4.430	88.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	11.728	4162	189050	bb	0.022	10.488	104.9	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	11.636	10795	199111	bb	0.054	26.814	107.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	11.722	20512	204522	bb	0.100	50.174	100.3	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	11.699	45923	232442	bb	0.198	99.492	99.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	11.807	86160	218394	bb	0.395	199.342	99.7	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	11.836	145071	245218	bb	0.592	299.260	99.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	11.836	39620	209566	bb	0.189	95.175	95.2	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	11.814	51538	277043	bb	0.186	93.641	93.6	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				274759					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	11.758	51779	264218	bb	0.196	393.547	98.7	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				233638					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				271469					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				259971					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				252087					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				249384					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				259792					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				251105					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	11.701	24341	246428	bb	0.099	49.404	98.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 19: PETN Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.999013
Calibration curve: 0.0104654 * x + 0.00498117
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	11.558	10355	212900	bb	0.049	4.171	83.4	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	11.614	22077	189050	bb	0.117	10.683	106.8	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	11.522	57137	199111	bb	0.287	26.944	107.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	11.636	109705	204522	bb	0.536	50.778	101.6	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	11.528	247273	232442	bb	1.064	101.174	101.2	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	11.693	464931	218394	bb	2.129	202.944	101.5	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	11.807	753933	245218	bb	3.075	293.306	97.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	11.693	225608	209566	bb	1.077	102.392	102.4	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	11.671	287079	277043	bb	1.036	98.539	98.5	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				274759					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	11.673	263078	264218	bb	0.996	377.527	94.7	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				233638					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				271469					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				259971					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				252087					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				249384					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				259792					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				251105					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	11.643	138768	246428	bb	0.563	53.332	106.7	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 20: 4-Nitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.996636
Calibration curve: -7.10754e-7 * x^2 + 0.00160195 * x + -0.000369042
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	12.644	1628	212900	bb	0.008	5.014	100.3	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	12.698	3020	189050	bb	0.016	10.248	102.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	12.607	7228	199111	bb	0.036	23.127	92.5	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	12.721	17492	204522	bb	0.086	54.961	109.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	12.670	32633	232442	bb	0.140	91.592	91.6	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	12.693	66427	218394	bb	0.304	209.590	104.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	12.864	100771	245218	bb	0.411	295.500	98.5	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	12.779	29178	209566	bb	0.139	90.803	90.8	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	12.785	36459	277043	bb	0.132	85.634	85.6	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				274759					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	12.672	37306	264218	bb	0.141	367.441	92.1	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				233638					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				271469					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				259971					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				252087					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				249384					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				259792					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				251105					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	12.700	17275	246428	bb	0.070	44.885	89.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:54:22 2008

Compound 21: 3-Nitrotoluene Sample List: ex48g29(03) Method File: ex48g29
Coefficient of Determination: 0.996762
Calibration curve: 0.000802265 * x + 0.00179808
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	13.558	1026	212900	bb	0.005	3.768	75.4	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	13.554	1998	189050	bb	0.011	10.929	109.3	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	13.550	4707	199111	bb	0.024	27.224	108.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	13.607	8855	204522	bb	0.043	51.728	103.5	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	13.527	19941	232442	bb	0.086	104.691	104.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	13.750	36582	218394	bb	0.168	206.546	103.3	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	13.750	56531	245218	bb	0.231	285.114	95.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	13.637	17350	209566	bb	0.083	100.953	101.0	1.000	1.000	1	40	ex48g29
11	ex48g2933	LCMS0450	100 ug/L CCV	QC	100.00	13.585	22603	277043	bb	0.082	99.456	99.5	1.000	1.000	1	40	ex48g29
12	ex48g2934	KR3EL1AA	R8G230000-508 MB	Blank				274759					40.000	10.040	1	40	ex48g29
13	ex48g2935	KR3EL1AC	R8G230000-508 LCS	QC	398.80	13.614	22865	264218	bb	0.087	421.237	105.6	40.000	10.030	1	40	ex48g29
14	ex48g2936	KR3EL1AD	R8G230000-508 GB	Blank				233638					40.000	9.980	1	40	ex48g29
15	ex48g2937	KRW2W1AA	D8G210174-008	Analyte				271469					40.000	9.960	1	40	ex48g29
16	ex48g2938	KRW2X1AA	D8G210174-009	Analyte				259971					40.000	10.010	1	40	ex48g29
17	ex48g2939	KRW201AA	D8G210174-010	Analyte				252087					40.000	10.020	1	40	ex48g29
18	ex48g2940	KRW251AA	D8G210174-013	Analyte				249384					40.000	10.020	1	40	ex48g29
19	ex48g2941	KRW261AA	D8G210174-014	Analyte				259792					40.000	10.070	1	40	ex48g29
20	ex48g2942	KRW271AA	D8G210174-015	Analyte				251105					40.000	10.080	1	40	ex48g29
21	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	13.558	10678	246428	bb	0.043	51.770	103.5	1.000	1.000	1	40	ex48g29

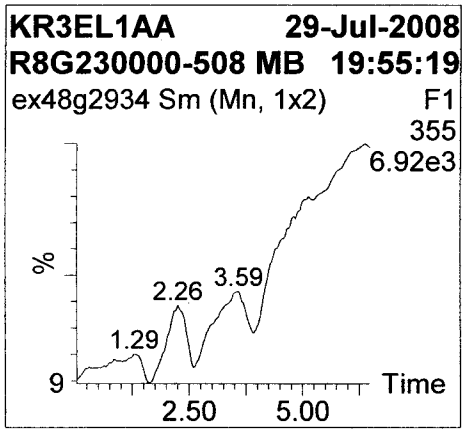
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

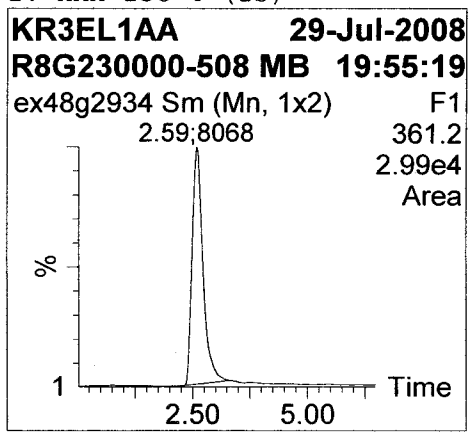
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2934
Text: R8G230000-508 MB

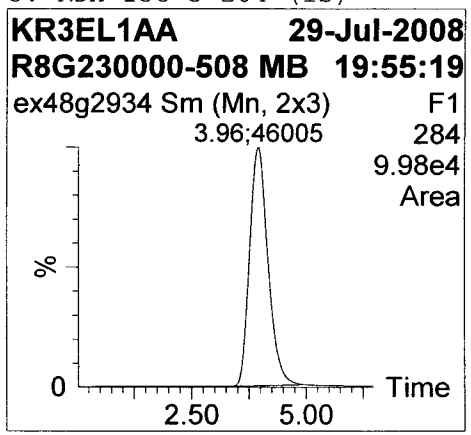
1: HMX



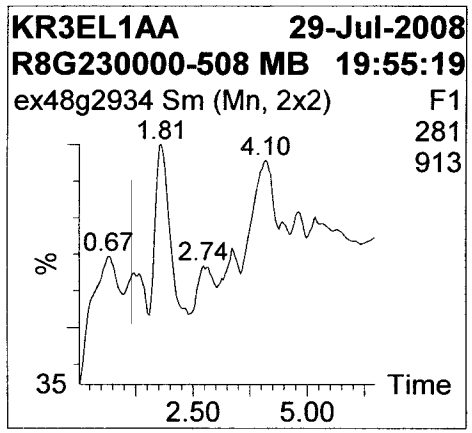
2: HMX 13C-4 (IS)



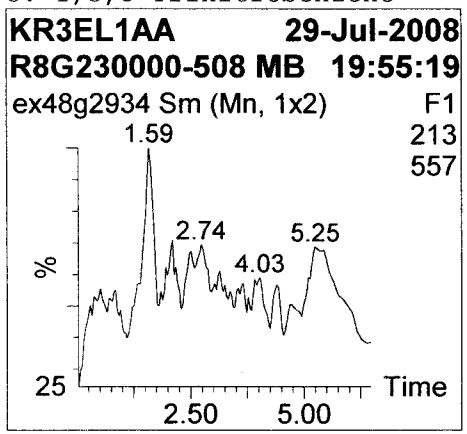
3: RDX 13C-3 284 (IS)



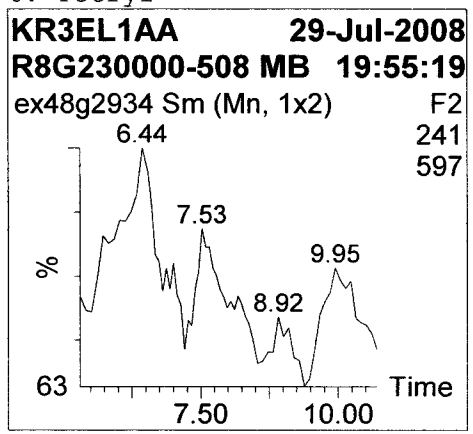
4: RDX



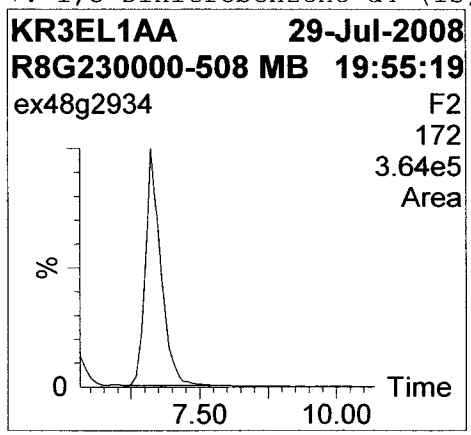
5: 1,3,5-Trinitrobenzene



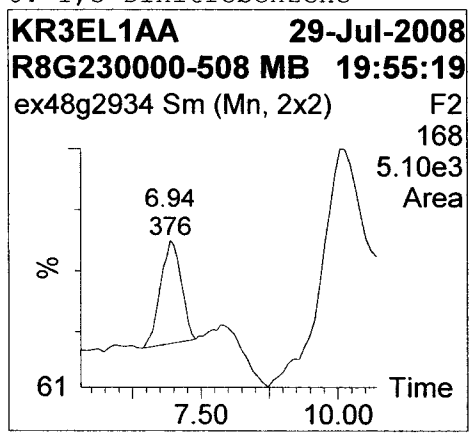
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



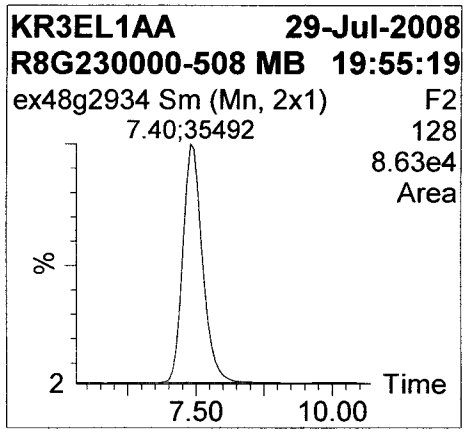
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

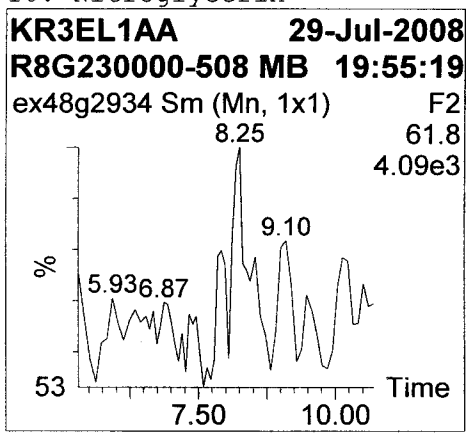
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2934
Text: R8G230000-508 MB

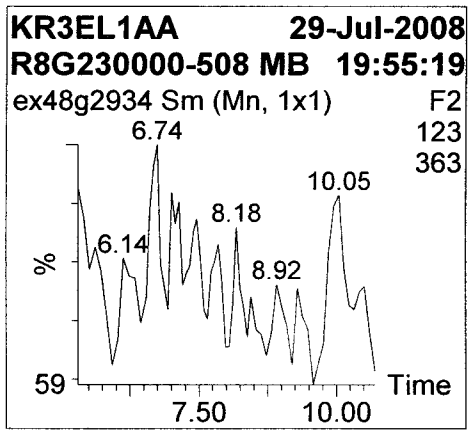
9: Nitrobenzene-d5



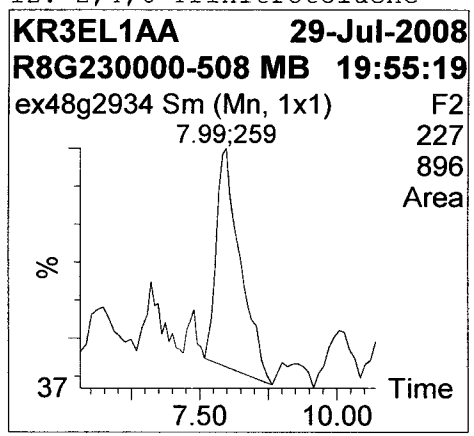
10: Nitroglycerin



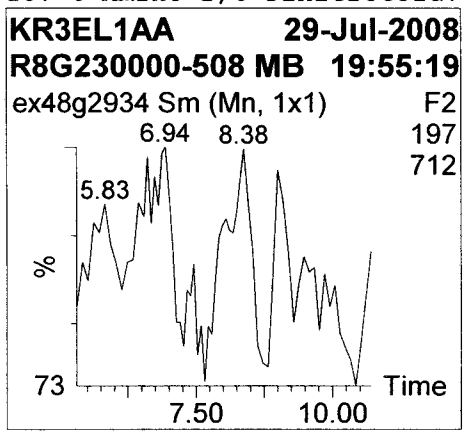
11: Nitrobenzene



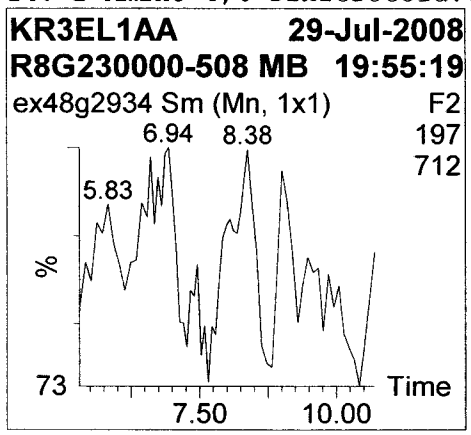
12: 2,4,6-Trinitrotoluene



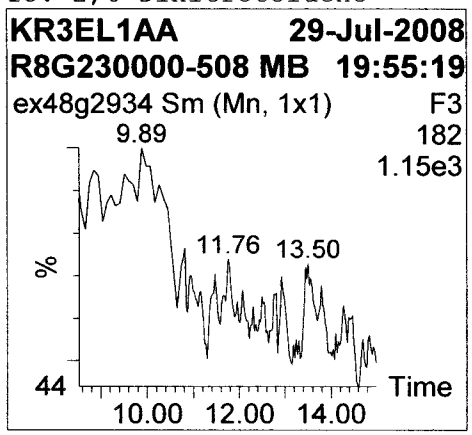
13: 4-Amino-2,6-Dinitrotolu..



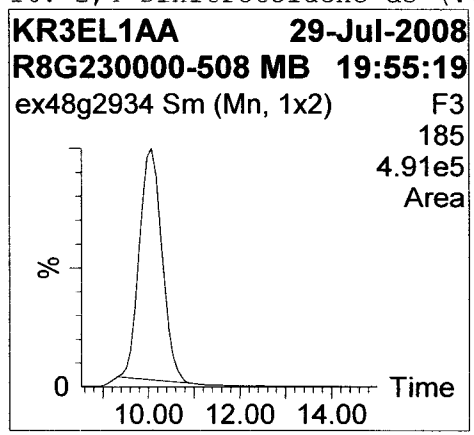
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



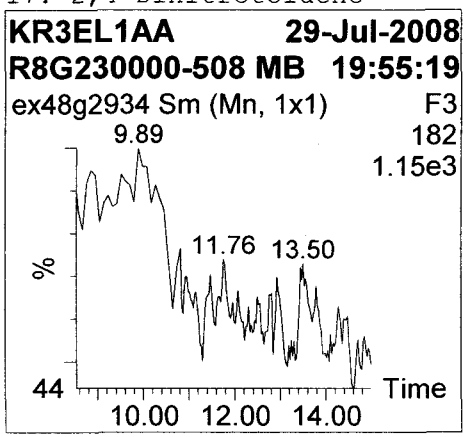
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

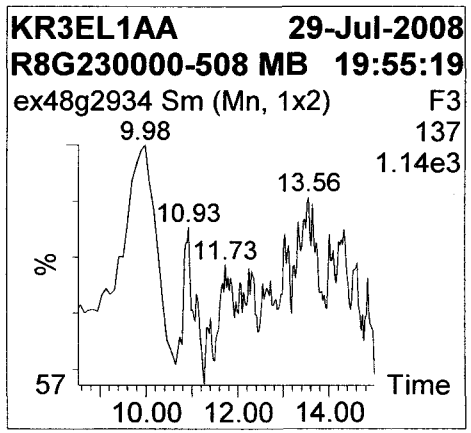
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2934
Text: R8G230000-508 MB

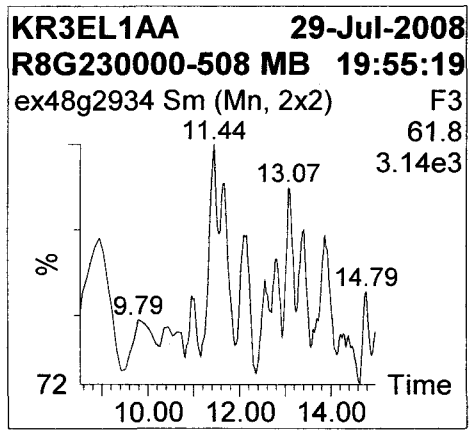
17: 2,4-Dinitrotoluene



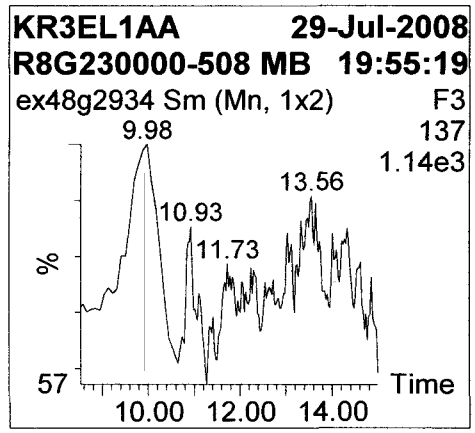
18: 2-Nitrotoluene



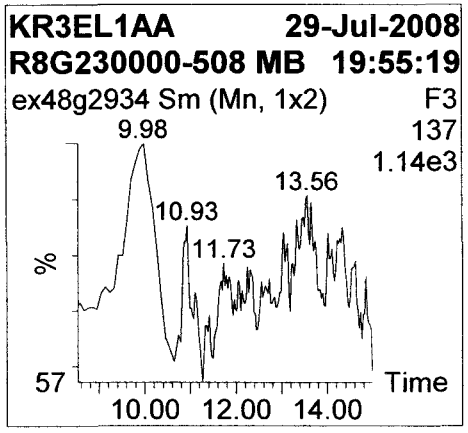
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2934
Text: R8G230000-508 MB

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	8068	bb	1.213	121	29/Jul/08	ex48g29	
RDX 13C-..	3.956	46005	bb	1.134	113	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	117514	bb	1.159	116	29/Jul/08	ex48g29	
1,3-Dini..	6.940	376	bb	0.000		29/Jul/08	ex48g29	
Nitroben..	7.398	35492	bb	412.843	104	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	259	bb	1.626		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	274759	bb	1.281	128	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

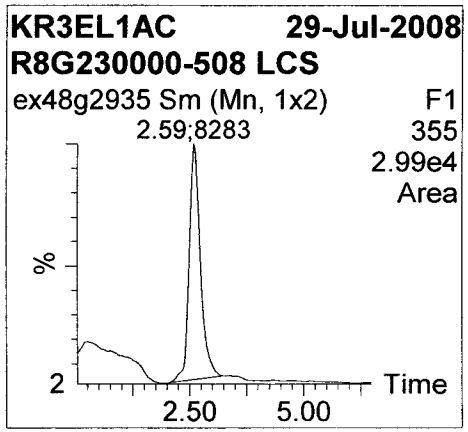
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

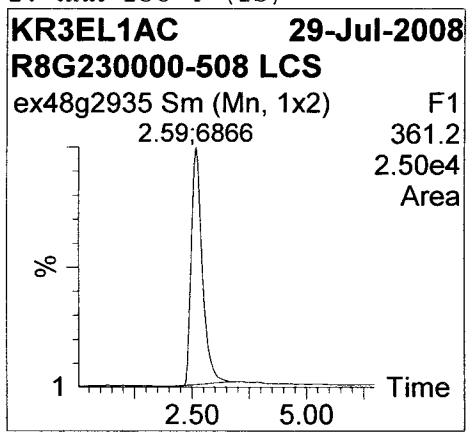
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2935
Text: R8G230000-508 LCS

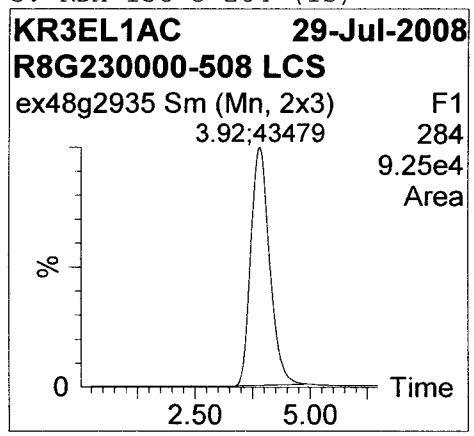
1: HMX



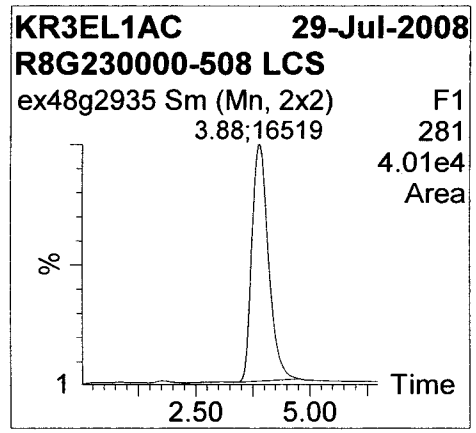
2: HMX 13C-4 (IS)



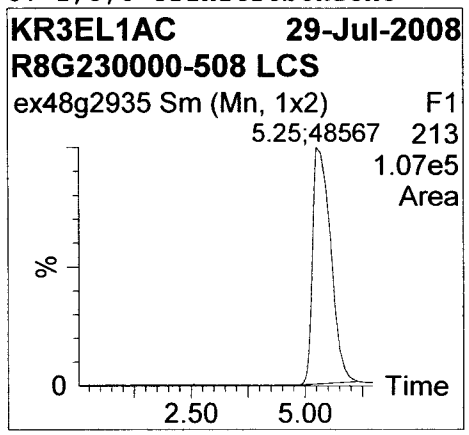
3: RDX 13C-3 284 (IS)



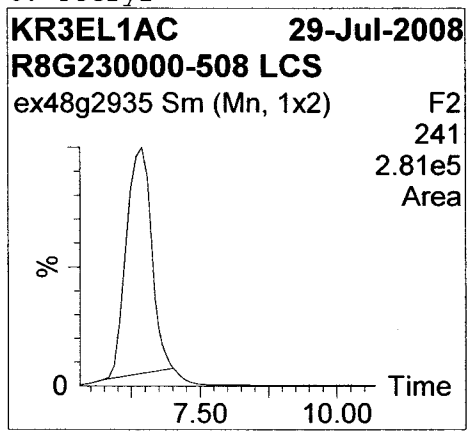
4: RDX



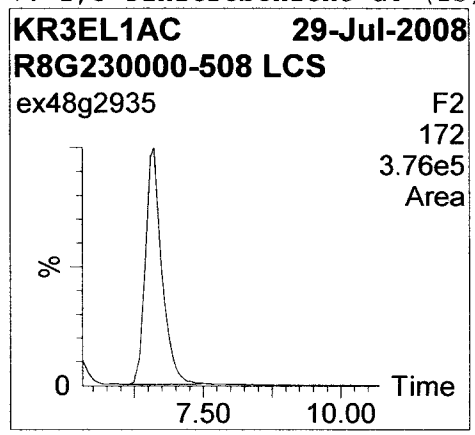
5: 1,3,5-Trinitrobenzene



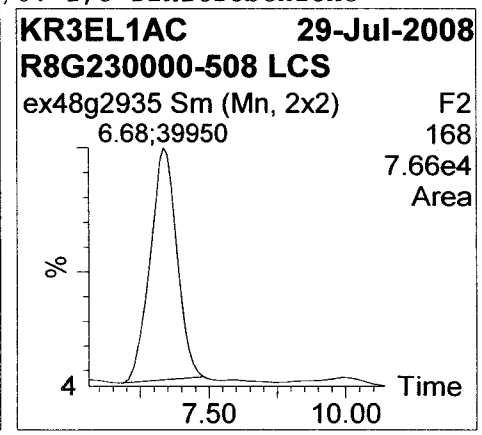
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



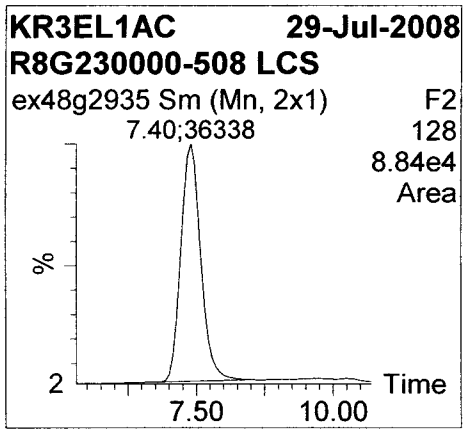
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

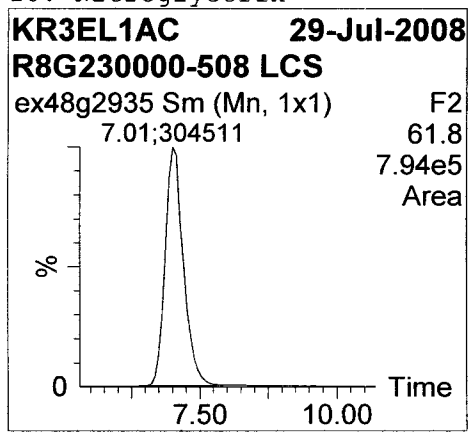
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2935
Text: R8G230000-508 LCS

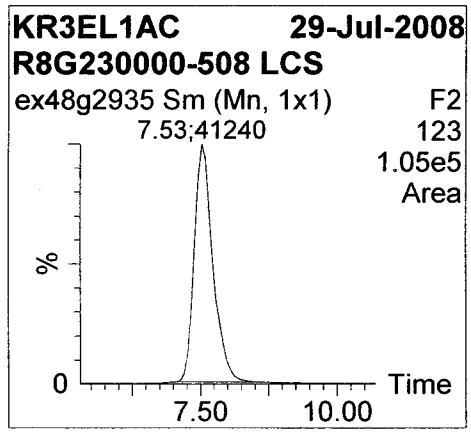
9: Nitrobenzene-d5



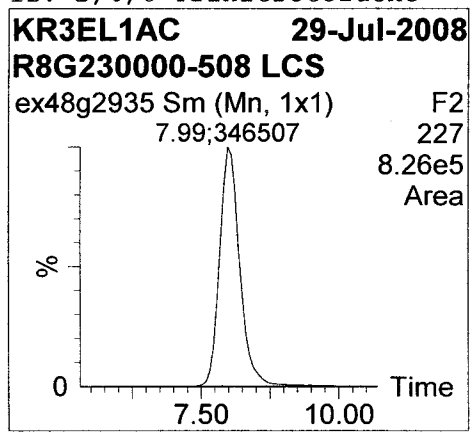
10: Nitroglycerin



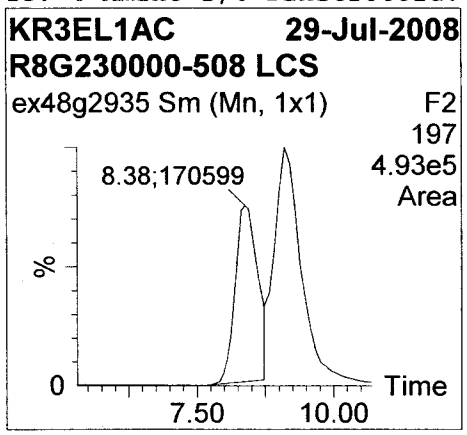
11: Nitrobenzene



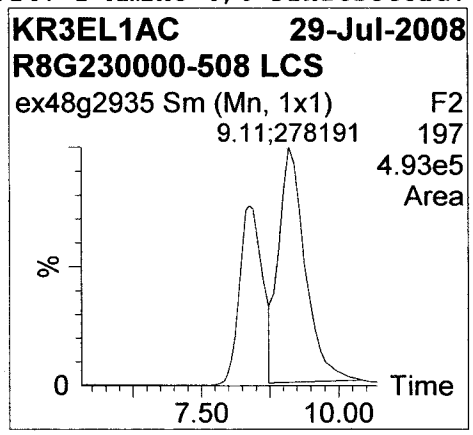
12: 2,4,6-Trinitrotoluene



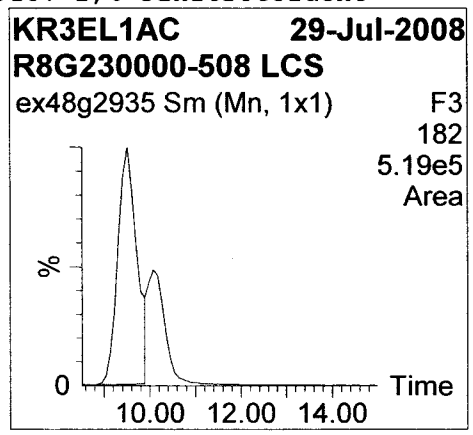
13: 4-Amino-2,6-Dinitrotolu..



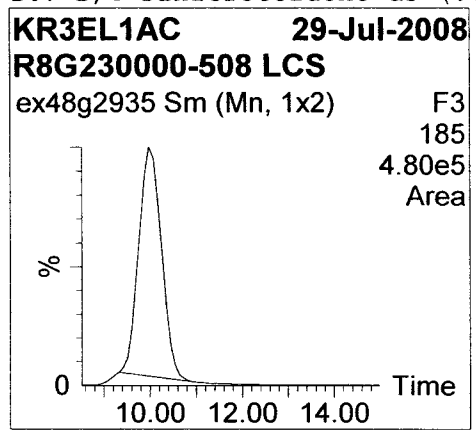
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



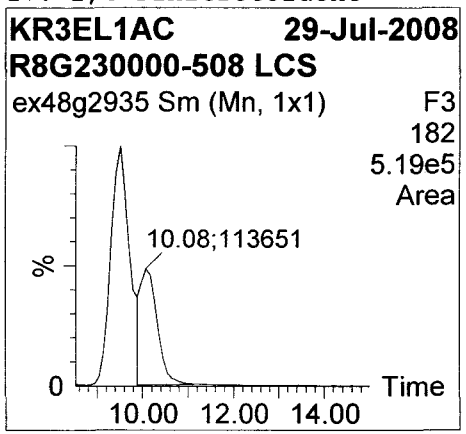
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

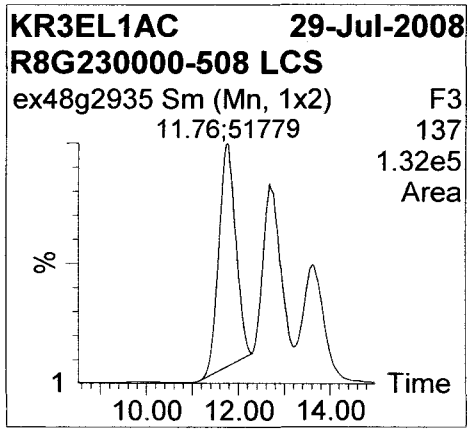
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2935
Text: R8G230000-508 LCS

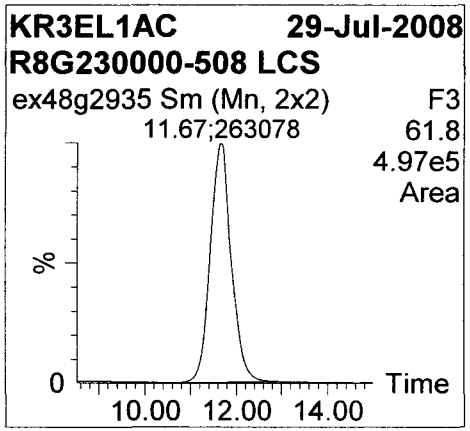
17: 2,4-Dinitrotoluene



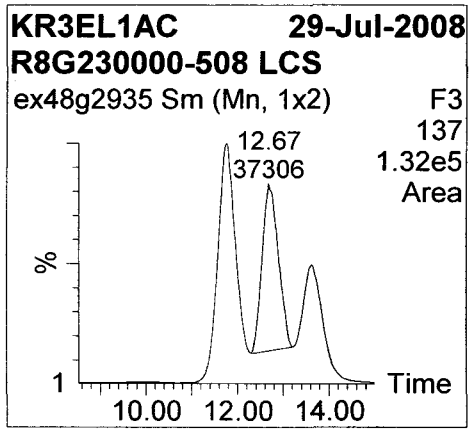
18: 2-Nitrotoluene



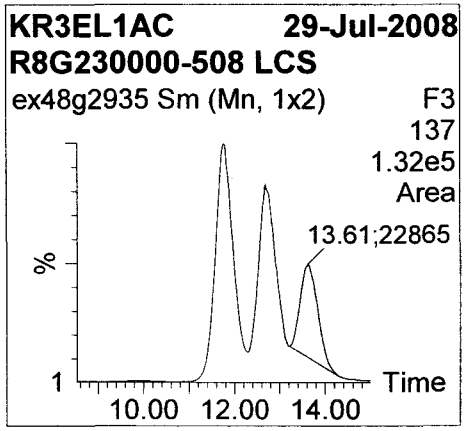
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2935
Text: R8G230000-508 LCS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	8283	bb	431.573	108	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6866	bb	1.032	103	29/Jul/08	ex48g29	
RDX 13C-..	3.919	43479	bb	1.072	107	29/Jul/08	ex48g29	
RDX	3.882	16519	bb	438.633	110	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	48567	bb	386.025	97	29/Jul/08	ex48g29	
Tetryl	6.444	141443	bb	427.539	107	29/Jul/08	ex48g29	
1,3 Dini..	6.612	128765	bs	1.269	127	29/Jul/08	ex48g29	
1,3-Dini..	6.678	39950	bb	385.292	97	29/Jul/08	ex48g29	
Nitroben..	7.399	36338	bb	385.761	97	29/Jul/08	ex48g29	
Nitrogly..	7.005	304511	bb	359.562	90	29/Jul/08	ex48g29	
Nitroben..	7.529	41240	bb	387.197	97	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	346507	bb	381.104	96	29/Jul/08	ex48g29	
4-Amino-..	8.381	170599	bd	396.076	99	29/Jul/08	ex48g29	
2-Amino-..	9.106	278191	db	417.861	105	29/Jul/08	ex48g29	
2,6-Dini..	9.511	242482	bd	403.001	101	29/Jul/08	ex48g29	
2,4-Dini..	9.982	264218	bb	1.232	123	29/Jul/08	ex48g29	
2,4-Dini..	10.076	113651	dd	387.113	97	29/Jul/08	ex48g29	
2-Nitrot..	11.758	51779	bb	393.547	99	29/Jul/08	ex48g29	
PETN	11.673	263078	bb	377.527	95	29/Jul/08	ex48g29	
4-Nitrot..	12.672	37306	bb	367.441	92	29/Jul/08	ex48g29	
3-Nitrot..	13.614	22865	bb	421.237	106	29/Jul/08	ex48g29	

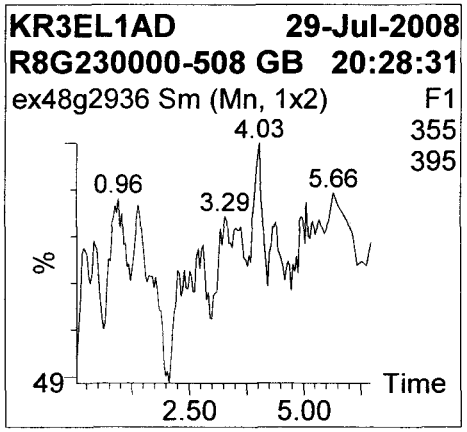
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

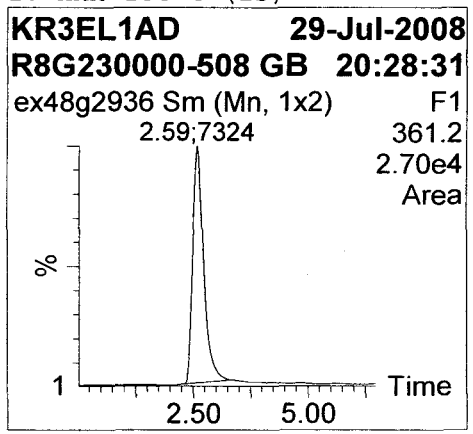
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2936
Text: R8G230000-508 GB

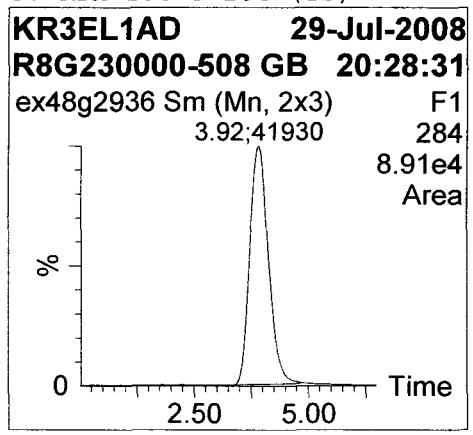
1: HMX



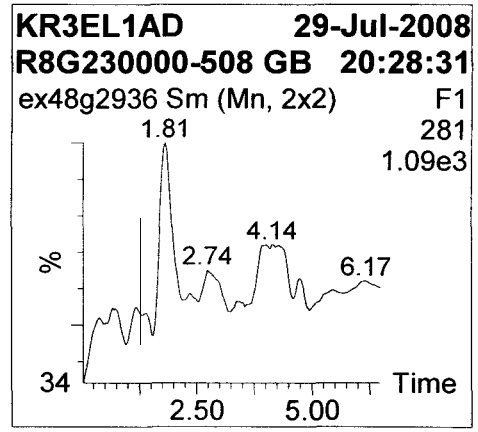
2: HMX 13C-4 (IS)



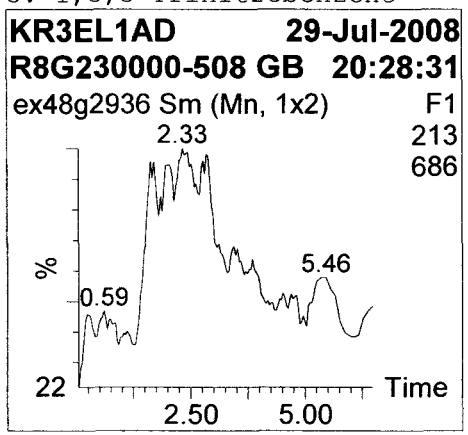
3: RDX 13C-3 284 (IS)



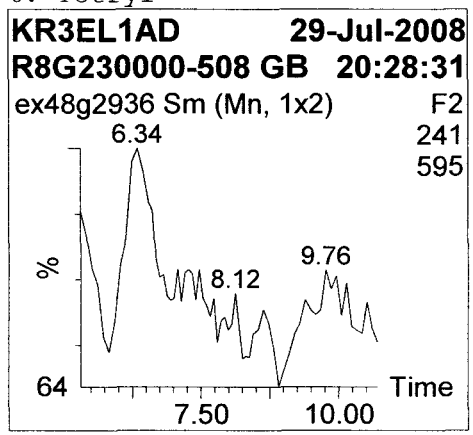
4: RDX



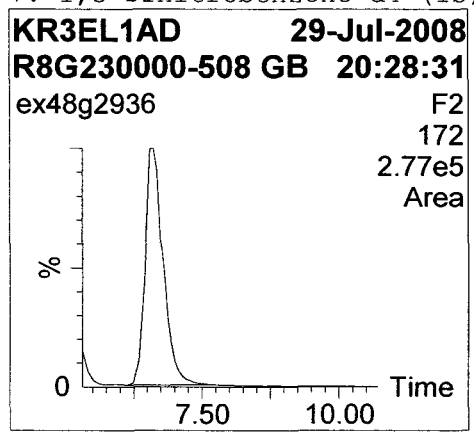
5: 1,3,5-Trinitrobenzene



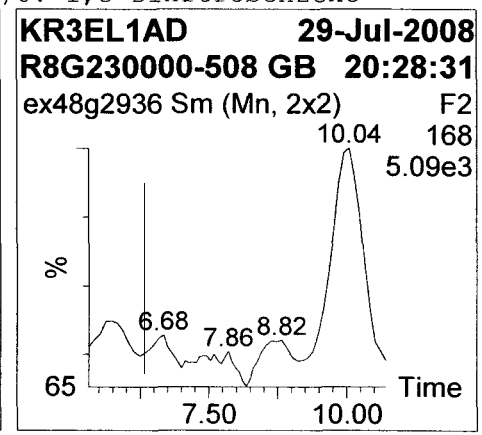
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



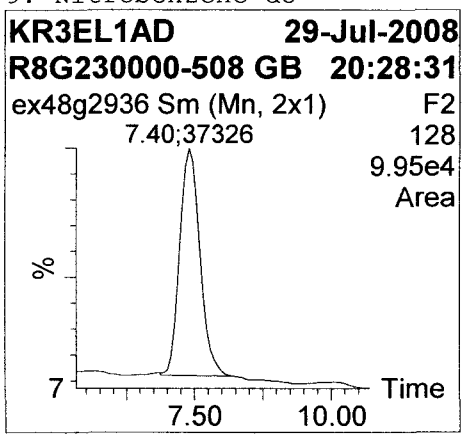
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

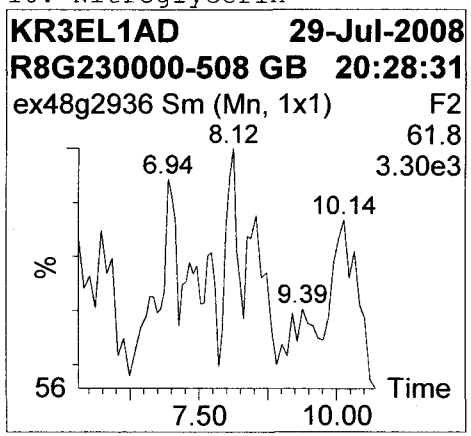
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2936
Text: R8G230000-508 GB

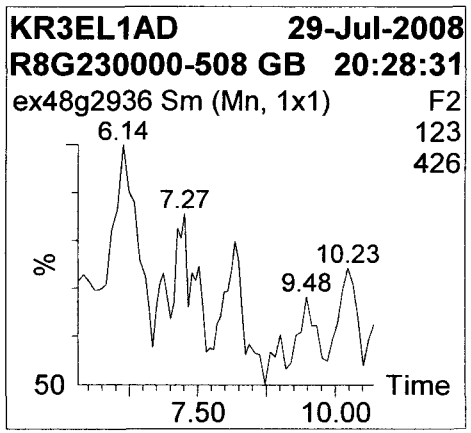
9: Nitrobenzene-d5



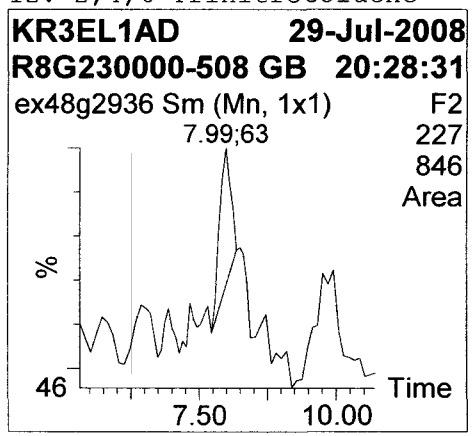
10: Nitroglycerin



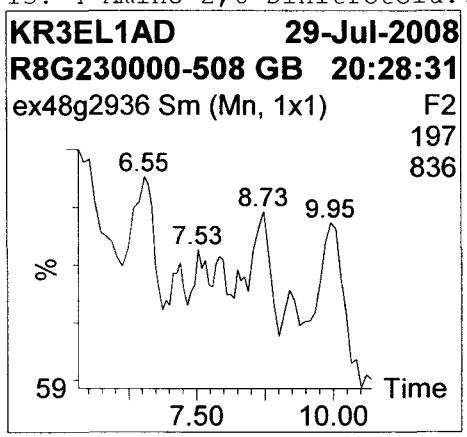
11: Nitrobenzene



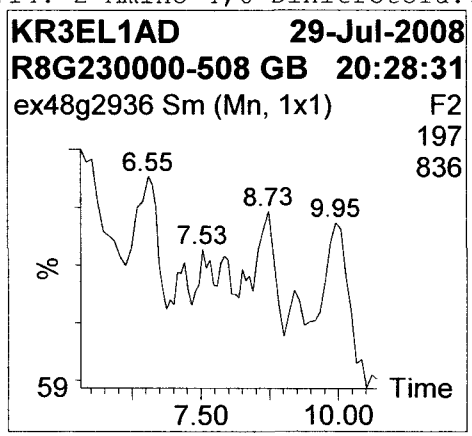
12: 2,4,6-Trinitrotoluene



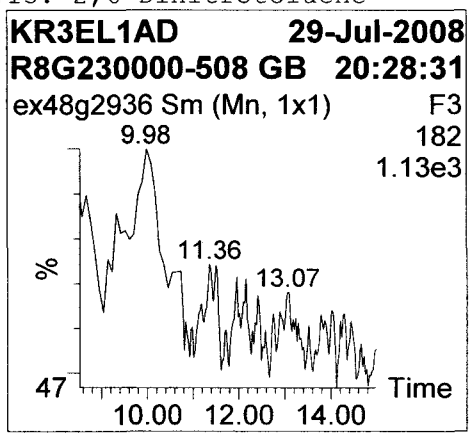
13: 4-Amino-2,6-Dinitrotolu..



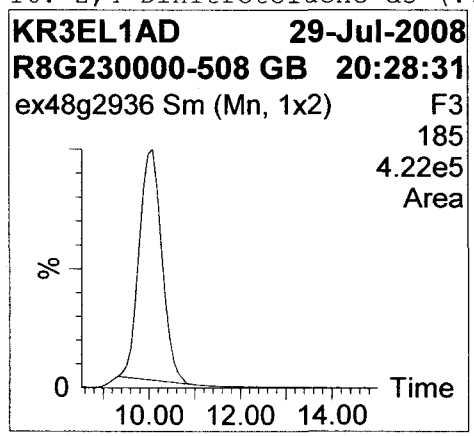
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



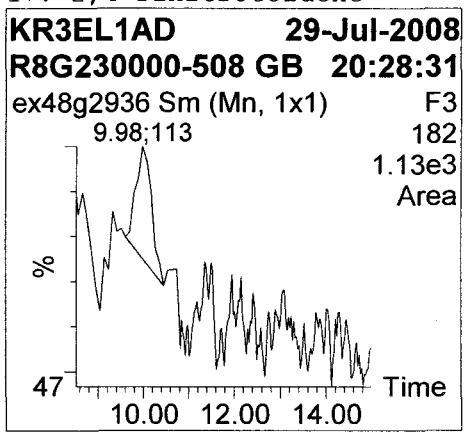
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

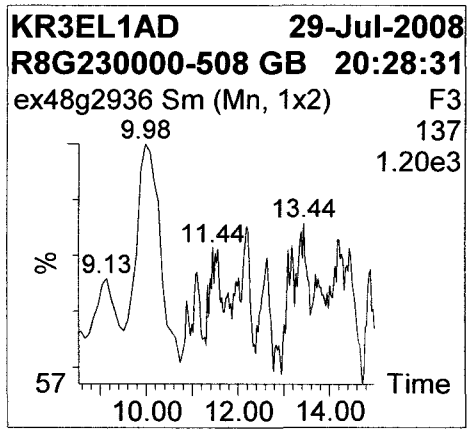
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2936
Text: R8G230000-508 GB

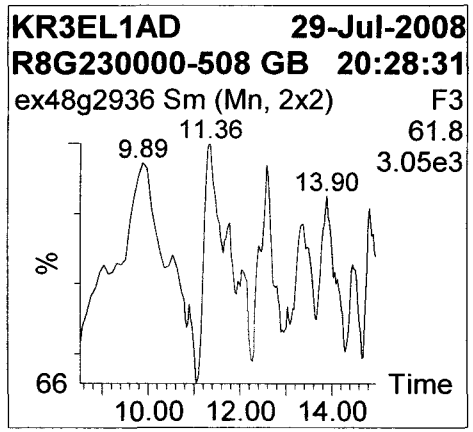
17: 2,4-Dinitrotoluene



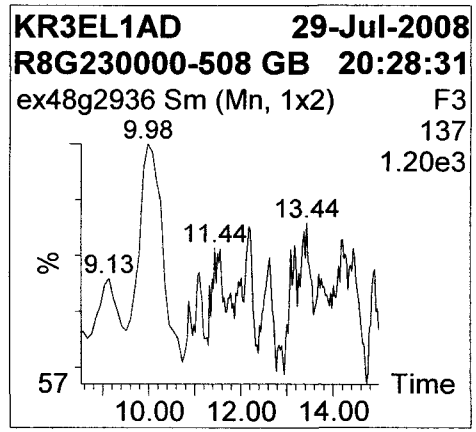
18: 2-Nitrotoluene



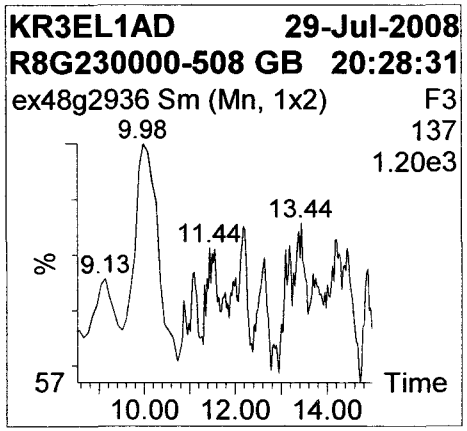
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2936
Text: R8G230000-508 GB

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7324	bb	1.101	110	29/Jul/08	ex48g29	
RDX 13C-..	3.919	41930	bb	1.033	103	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	105964	bb	1.045	104	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	37326	db	485.350	121	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	63	bb	1.408		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.073	233638	bb	1.089	109	29/Jul/08	ex48g29	
2,4-Dini..	9.979	113	bb	0.000		29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

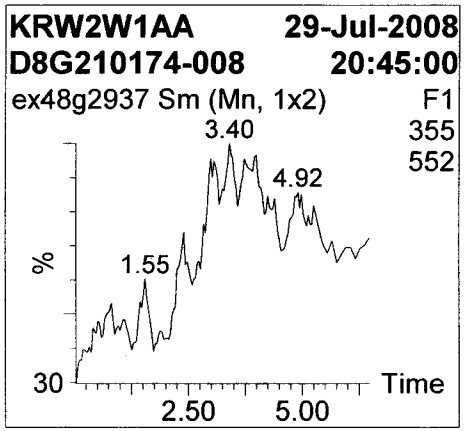
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

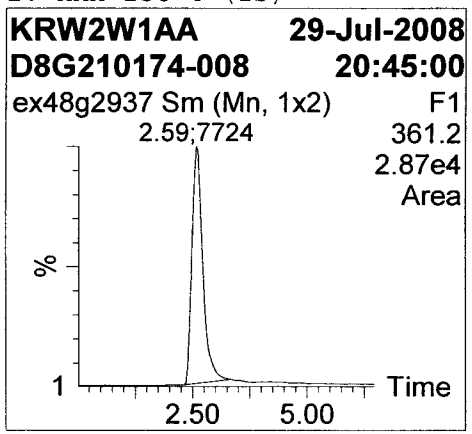
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2937
Text: D8G210174-008

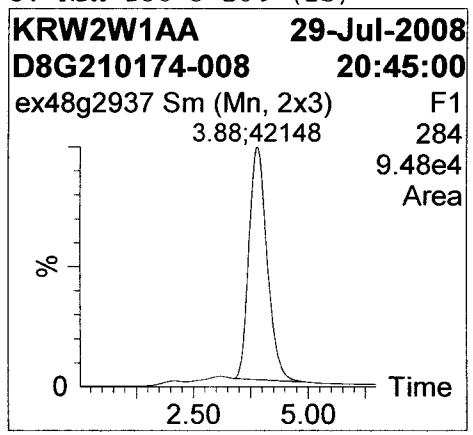
1: HMX



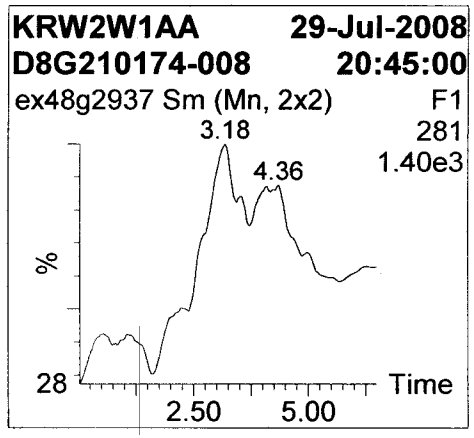
2: HMX 13C-4 (IS)



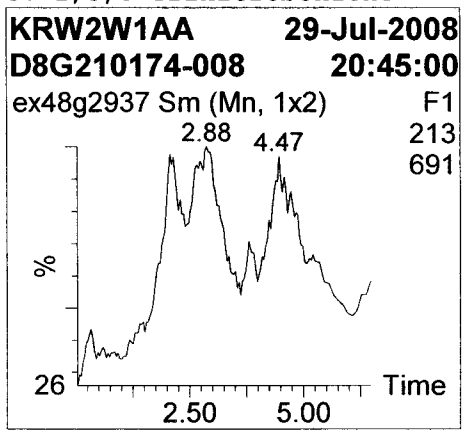
3: RDX 13C-3 284 (IS)



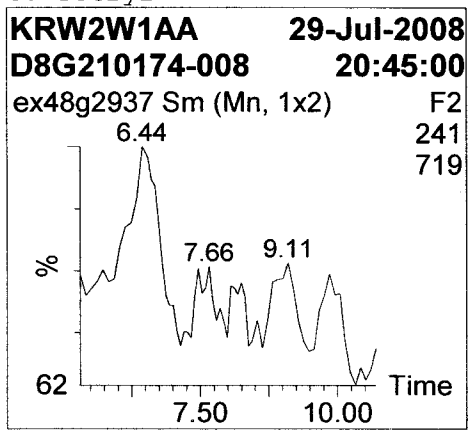
4: RDX



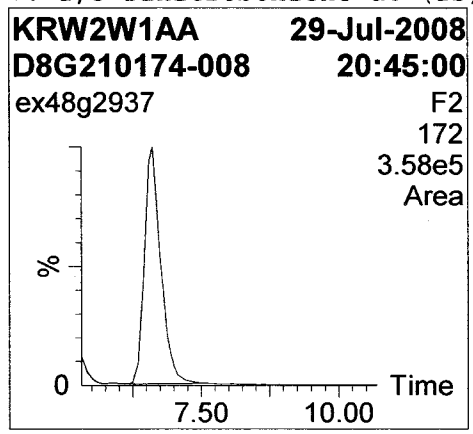
5: 1,3,5-Trinitrobenzene



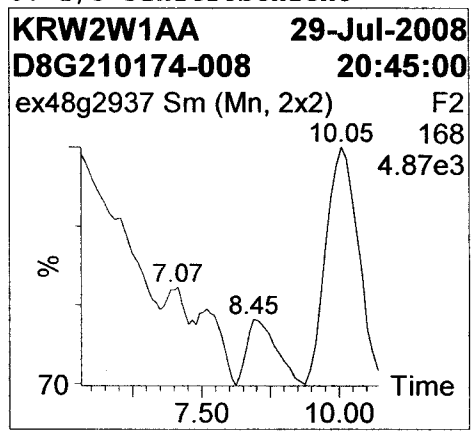
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



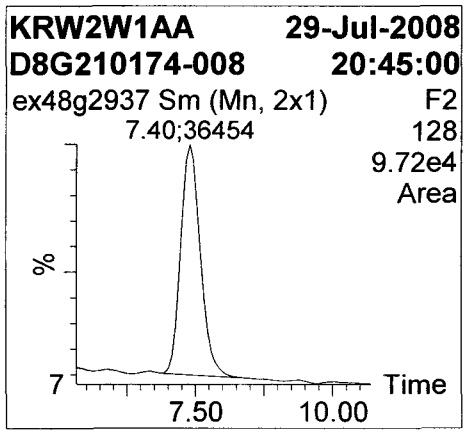
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

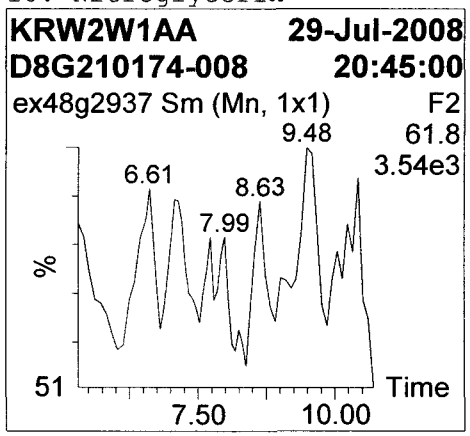
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2937
Text: D8G210174-008

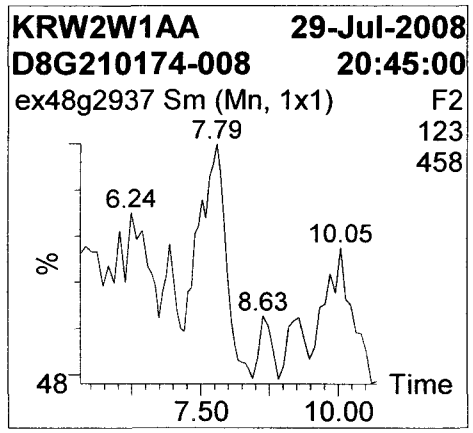
9: Nitrobenzene-d5



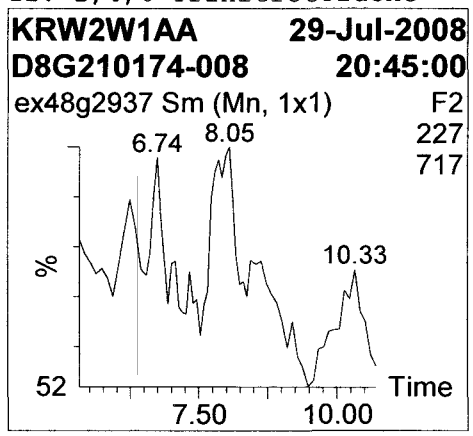
10: Nitroglycerin



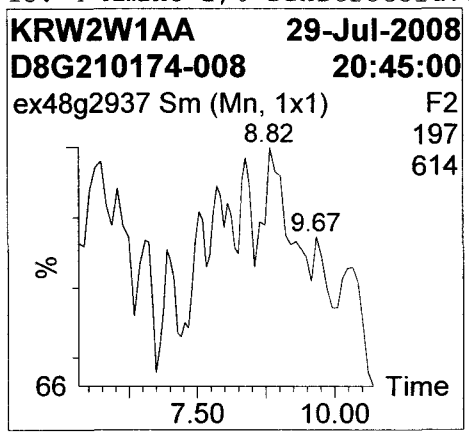
11: Nitrobenzene



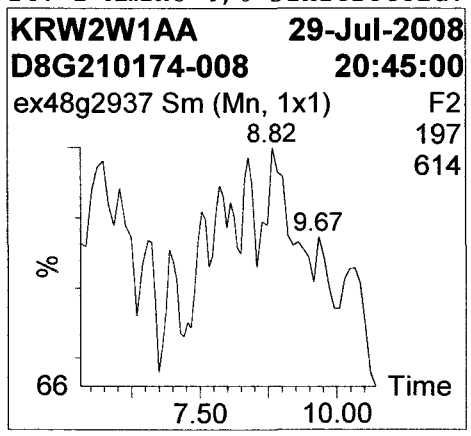
12: 2,4,6-Trinitrotoluene



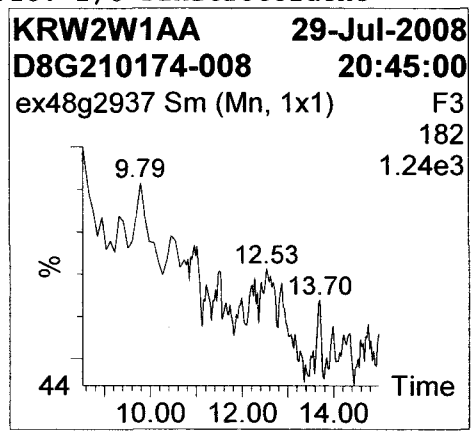
13: 4-Amino-2,6-Dinitrotolu..



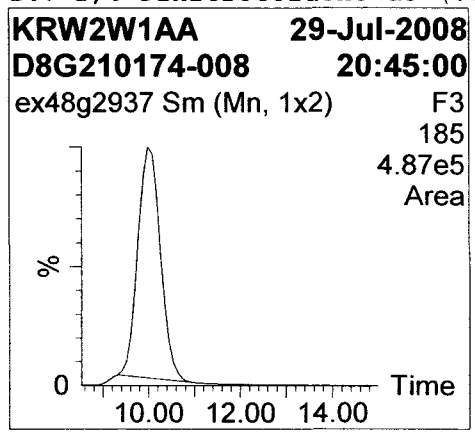
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



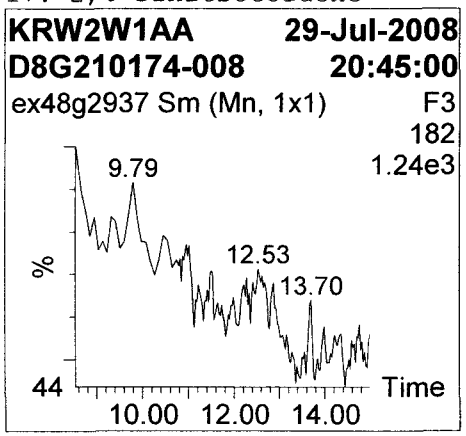
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

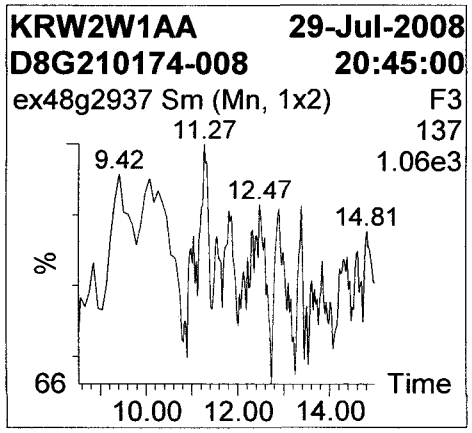
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2937
Text: D8G210174-008

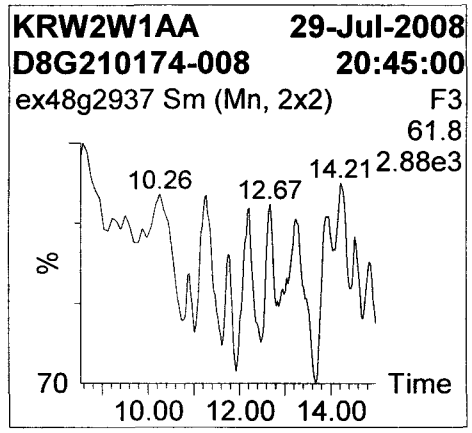
17: 2,4-Dinitrotoluene



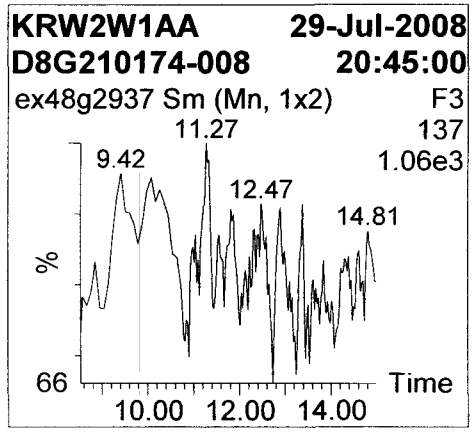
18: 2-Nitrotoluene



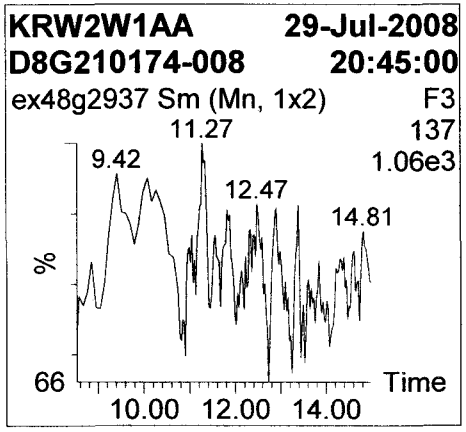
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2937
Text: D8G210174-008

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7724	bb	1.161	116	29/Jul/08	ex48g29	
RDX 13C-..	3.882	42148	bb	1.039	104	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	123659	bb	1.219	122	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	36454	bb	406.059	101	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	271469	bb	1.265	127	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

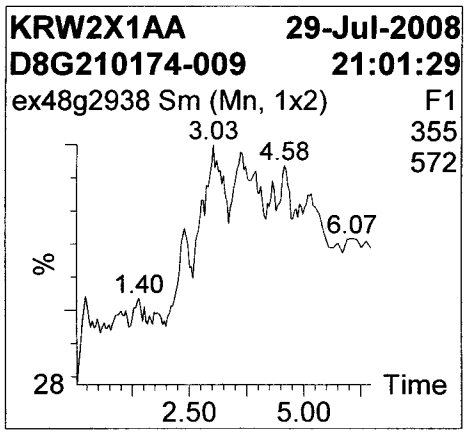
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

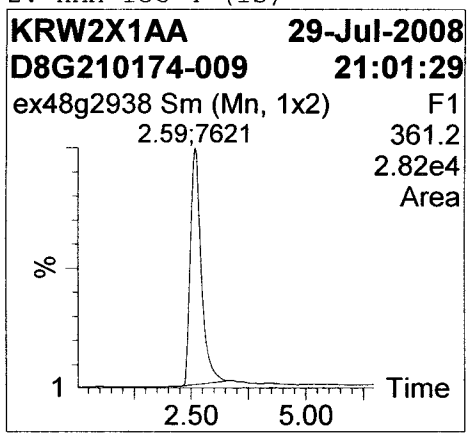
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2938
Text: D8G210174-009

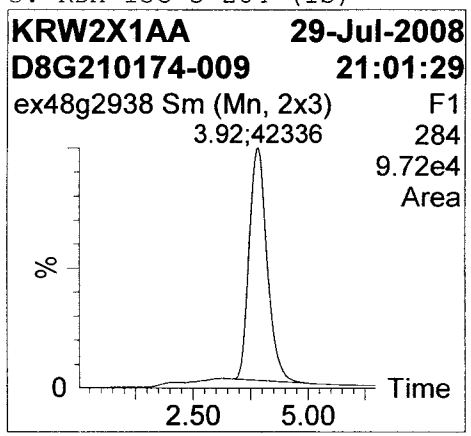
1: HMX



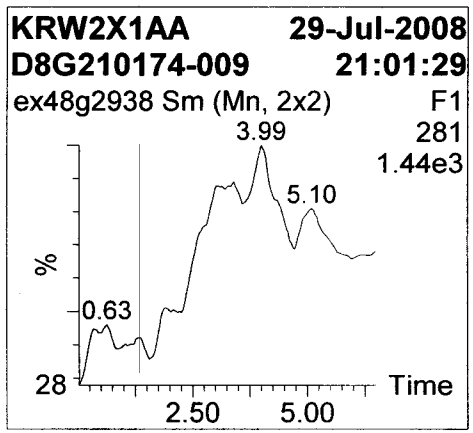
2: HMX 13C-4 (IS)



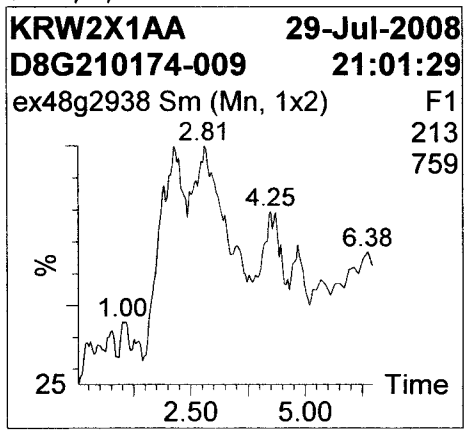
3: RDX 13C-3 284 (IS)



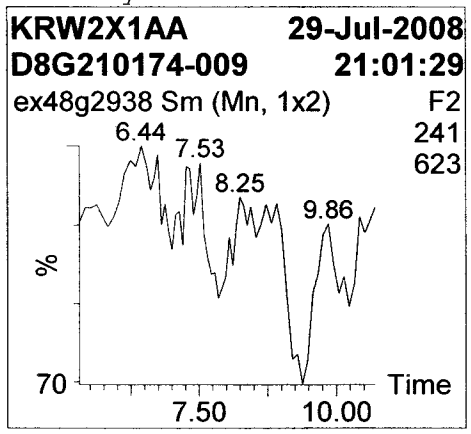
4: RDX



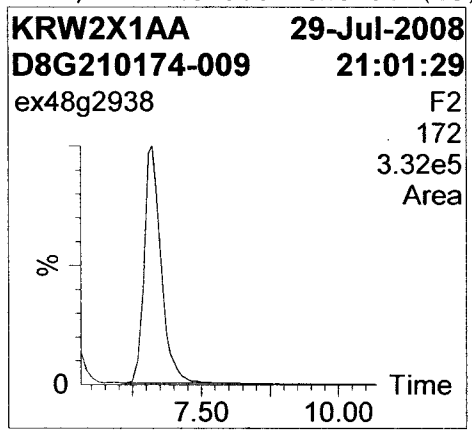
5: 1,3,5-Trinitrobenzene



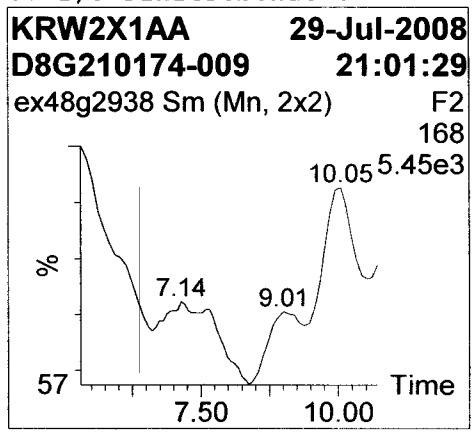
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



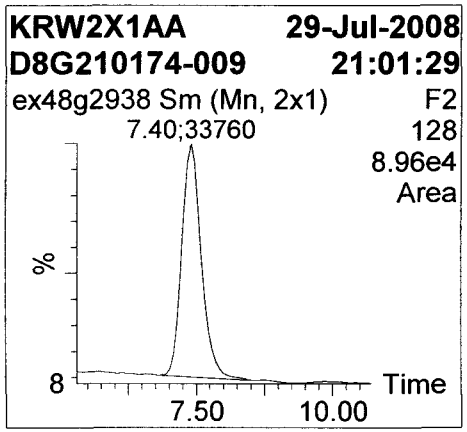
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

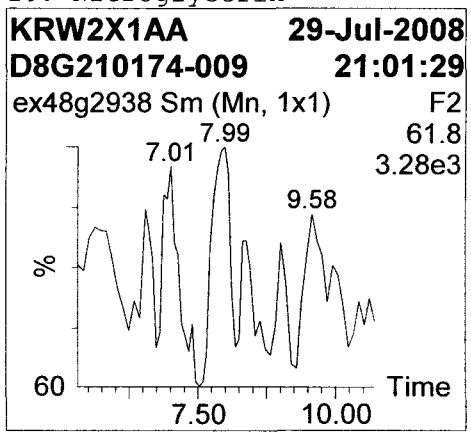
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2938
Text: D8G210174-009

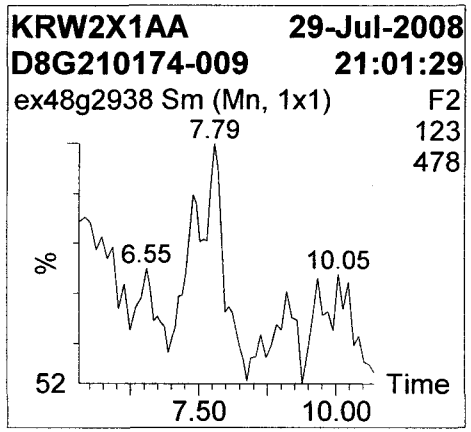
9: Nitrobenzene-d5



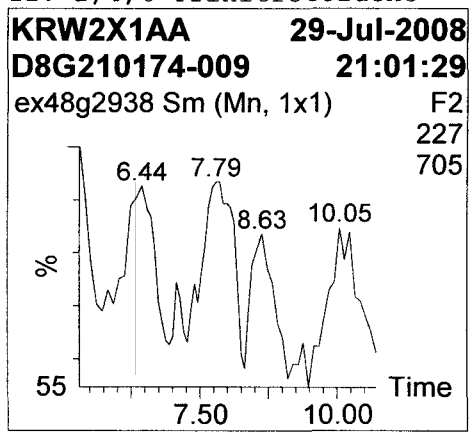
10: Nitroglycerin



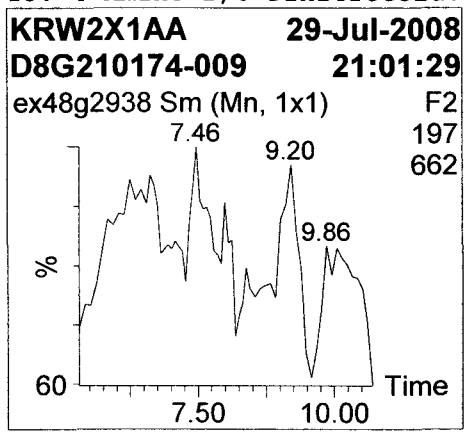
11: Nitrobenzene



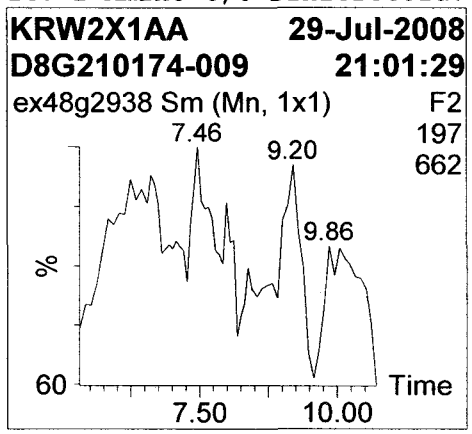
12: 2,4,6-Trinitrotoluene



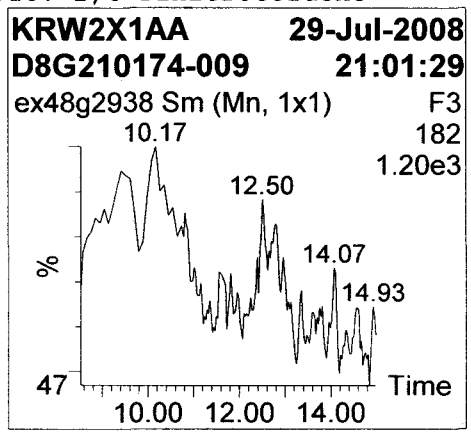
13: 4-Amino-2,6-Dinitrotolu..



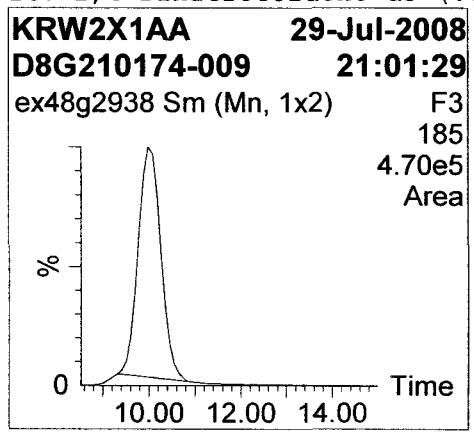
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

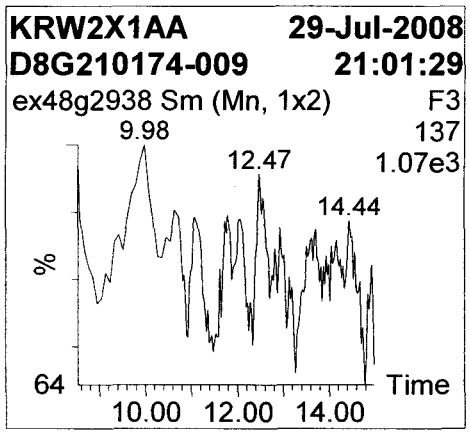
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2938
Text: D8G210174-009

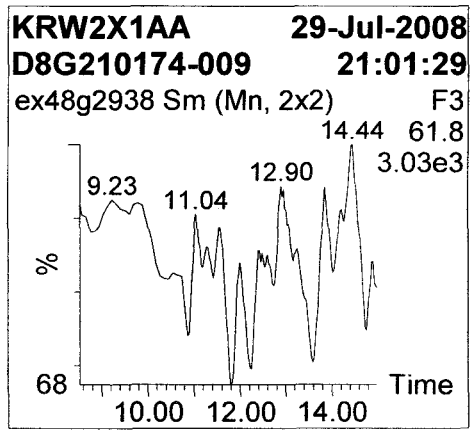
17: 2,4-Dinitrotoluene



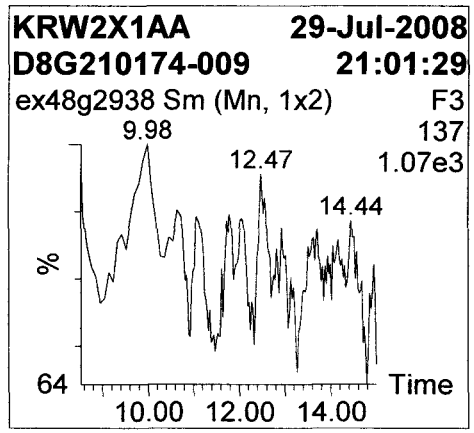
18: 2-Nitrotoluene



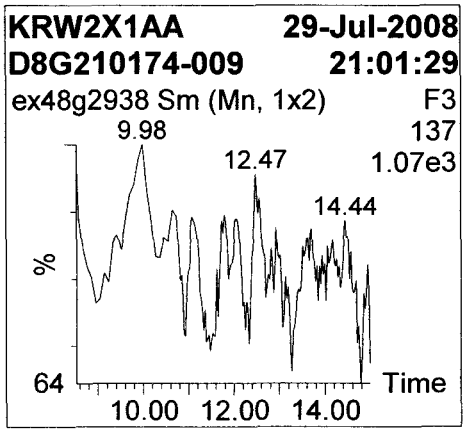
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 64

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2938
Text: D8G210174-009

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7621	bb	1.146	115	29/Jul/08	ex48g29	
RDX 13C-..	3.919	42336	bb	1.043	104	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	117063	bb	1.154	115	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	33760	bb	395.132	99	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	259971	bb	1.212	121	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

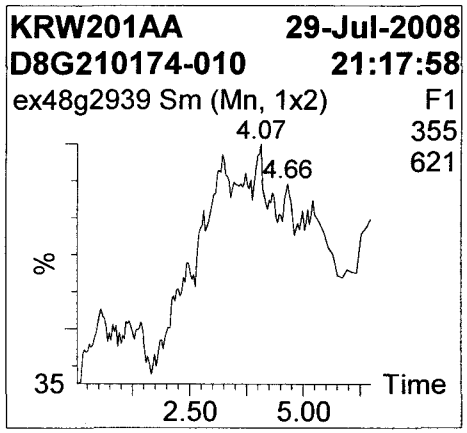
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

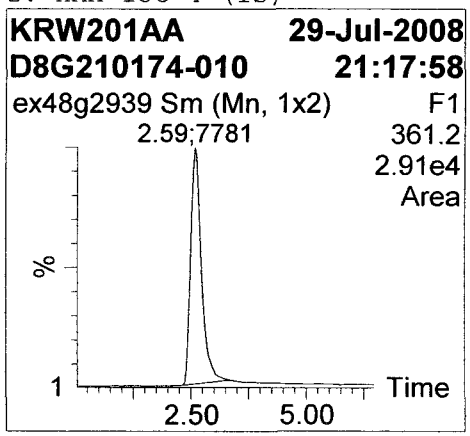
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2939
Text: D8G210174-010

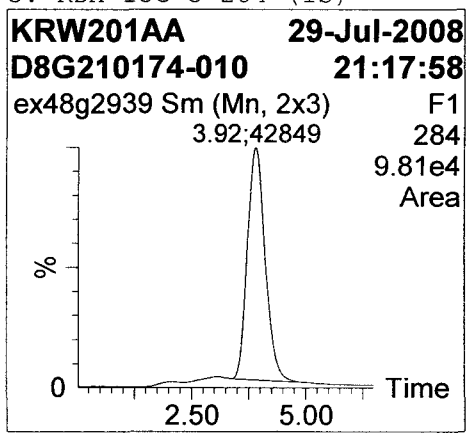
1: HMX



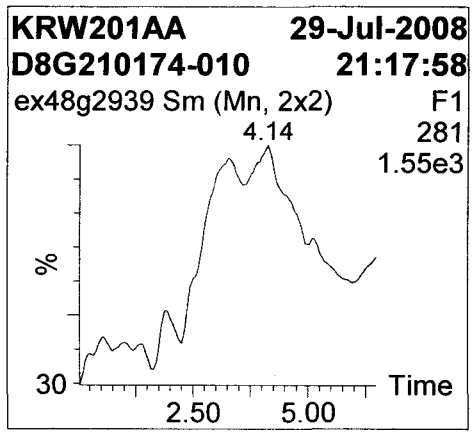
2: HMX 13C-4 (IS)



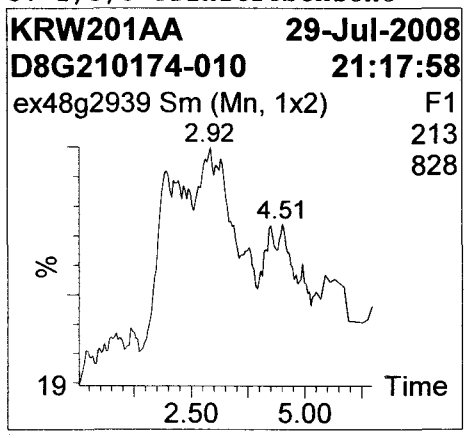
3: RDX 13C-3 284 (IS)



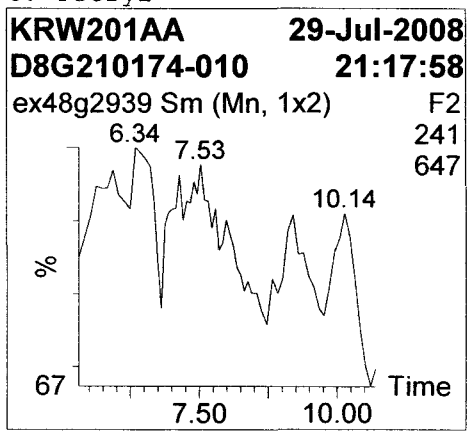
4: RDX



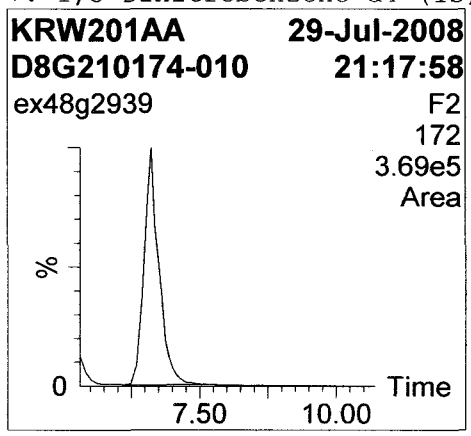
5: 1,3,5-Trinitrobenzene



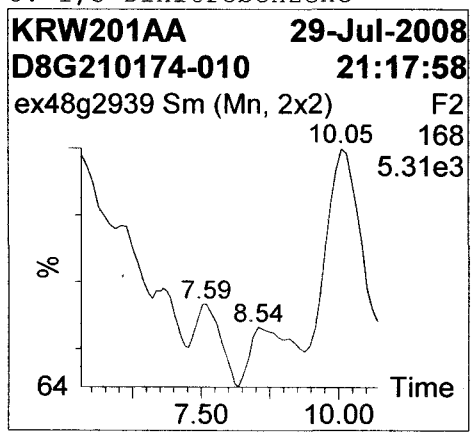
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



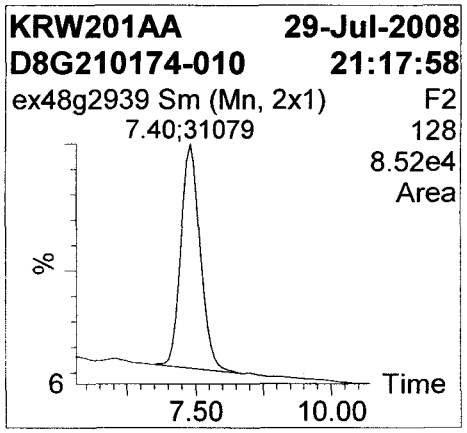
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

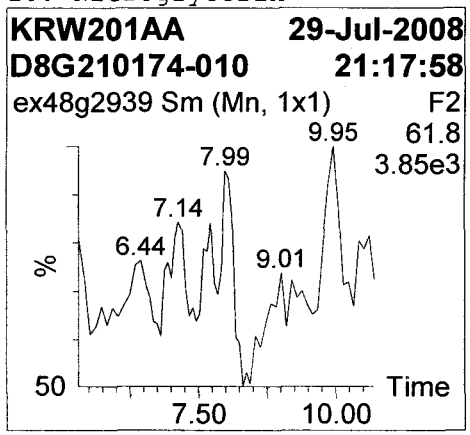
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2939
Text: D8G210174-010

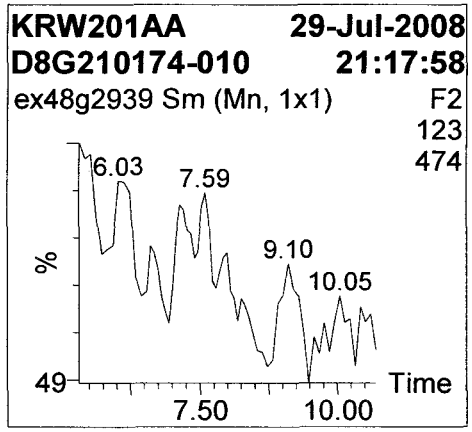
9: Nitrobenzene-d5



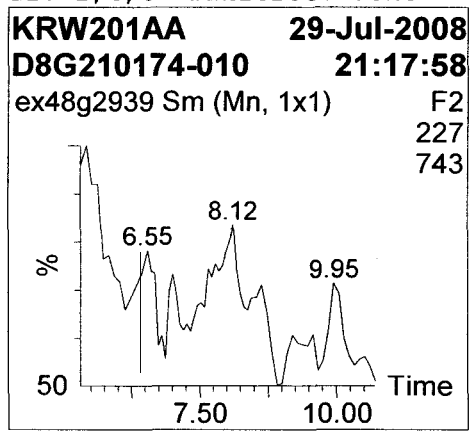
10: Nitroglycerin



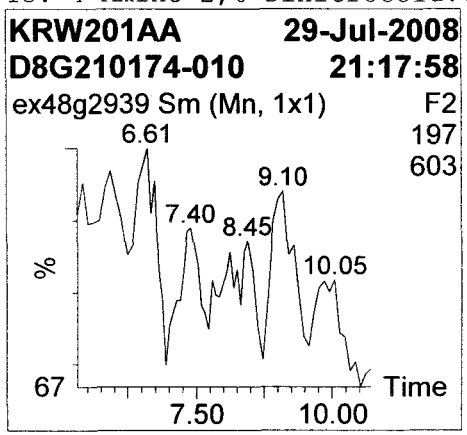
11: Nitrobenzene



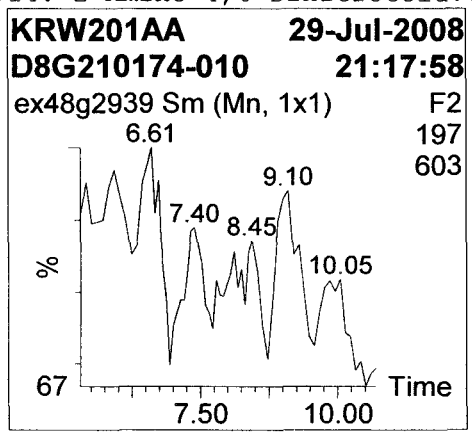
12: 2,4,6-Trinitrotoluene



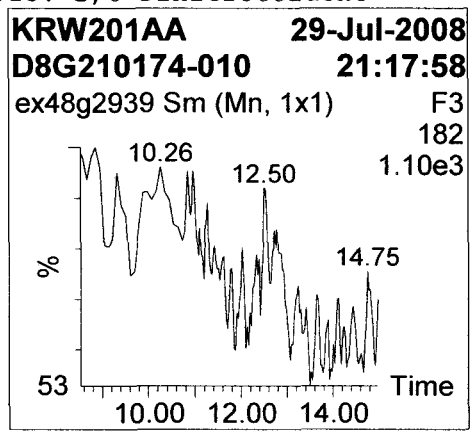
13: 4-Amino-2,6-Dinitrotolu..



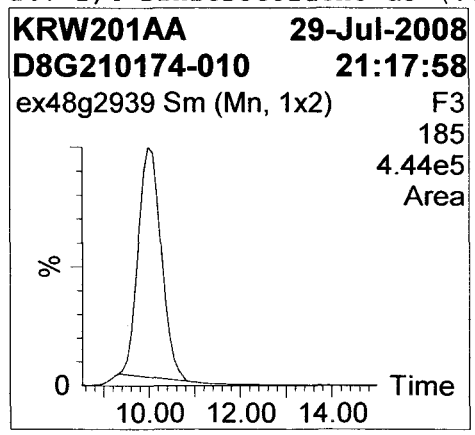
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



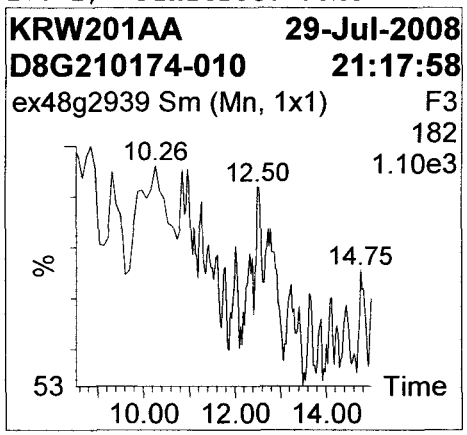
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

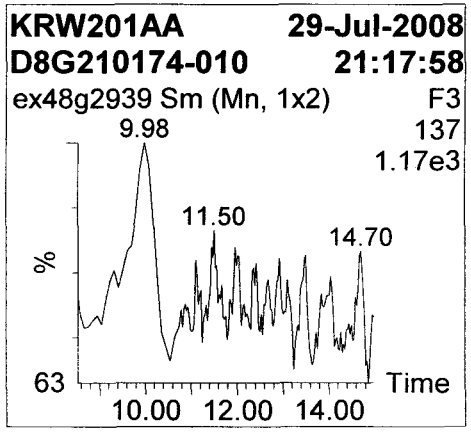
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2939
Text: D8G210174-010

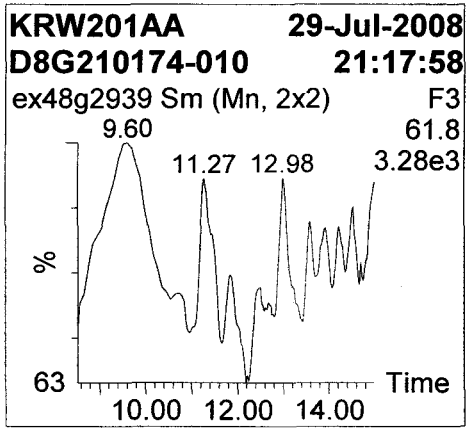
17: 2,4-Dinitrotoluene



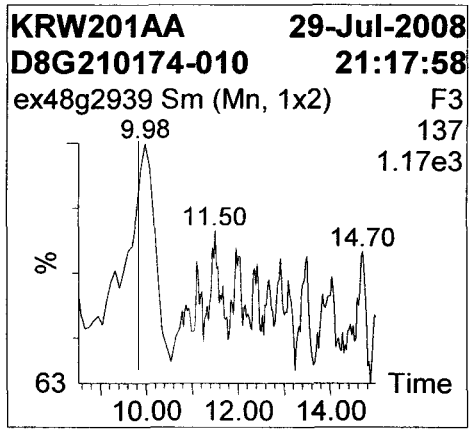
18: 2-Nitrotoluene



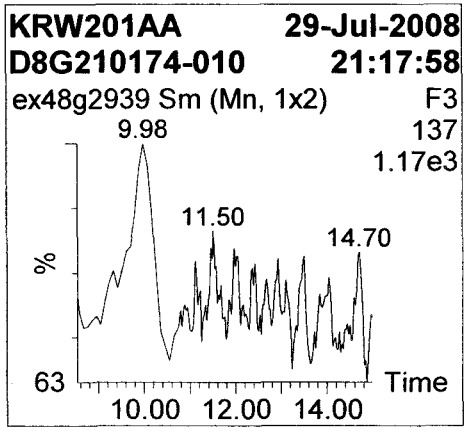
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 68

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2939
Text: D8G210174-010

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7781	bb	1.170	117	29/Jul/08	ex48g29	
RDX 13C-..	3.919	42849	bb	1.056	106	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	115388	bb	1.138	114	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	31079	bb	368.296	92	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.980	252087	bb	1.175	118	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

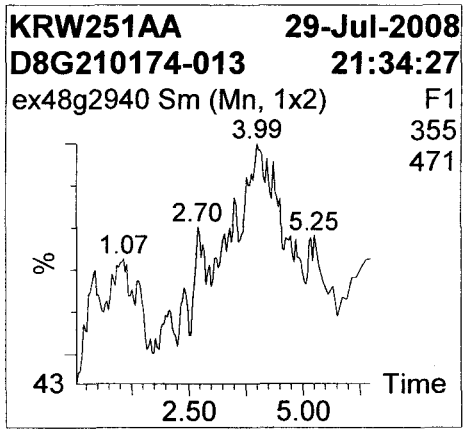
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

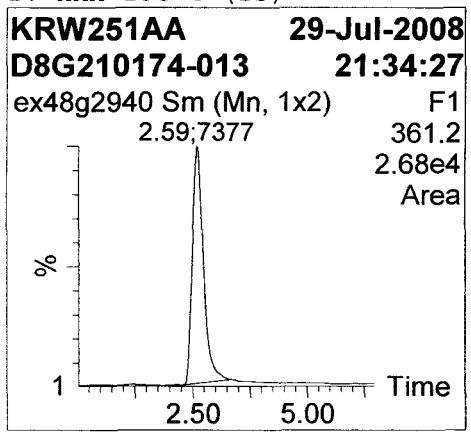
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2940
Text: D8G210174-013

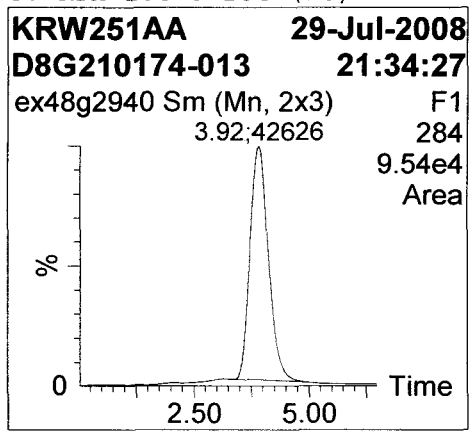
1: HMX



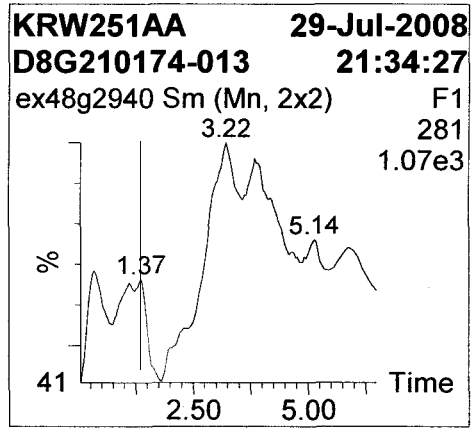
2: HMX 13C-4 (IS)



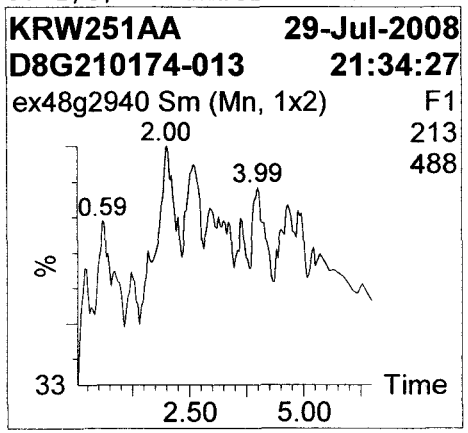
3: RDX 13C-3 284 (IS)



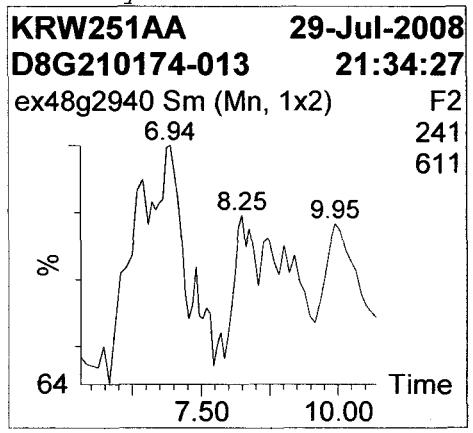
4: RDX



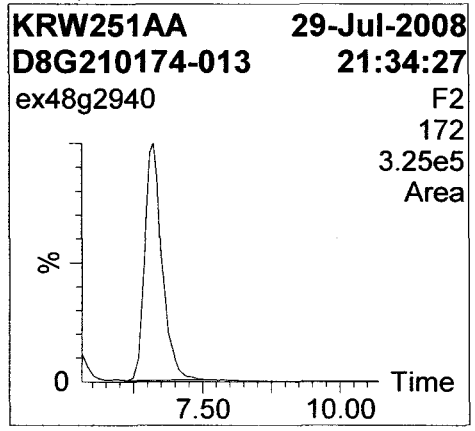
5: 1,3,5-Trinitrobenzene



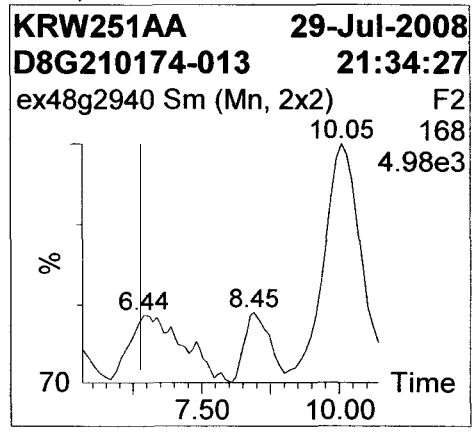
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



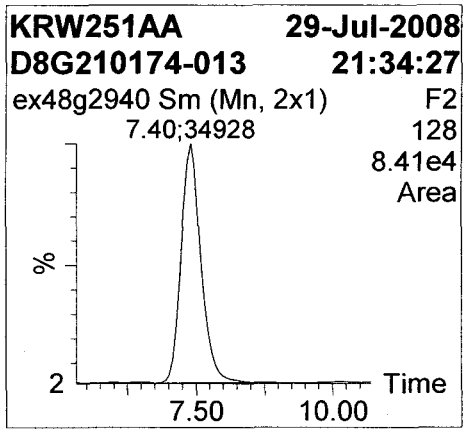
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

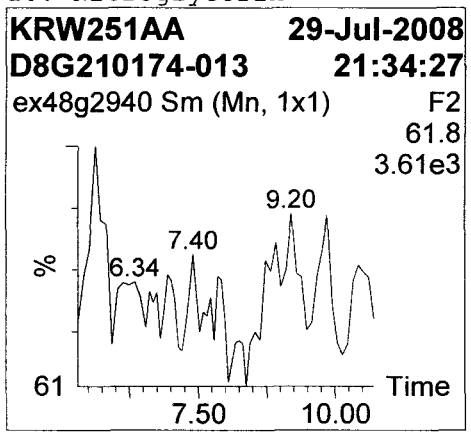
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2940
Text: D8G210174-013

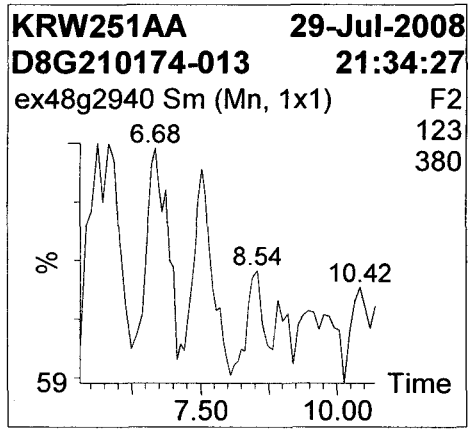
9: Nitrobenzene-d5



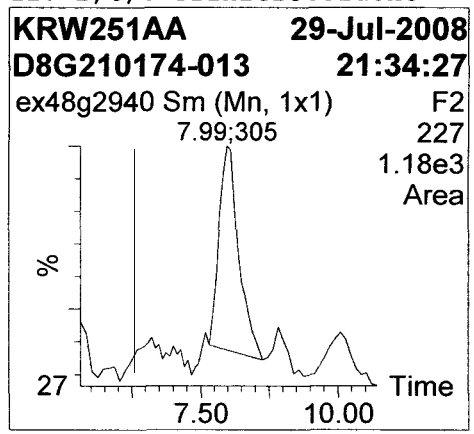
10: Nitroglycerin



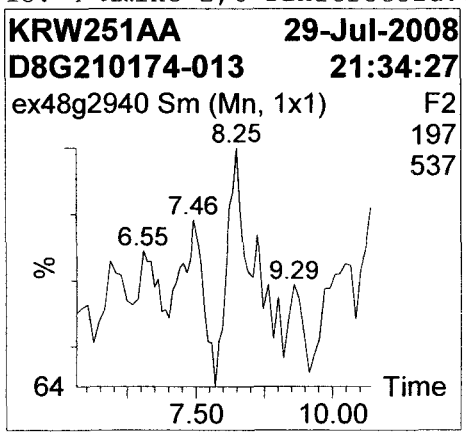
11: Nitrobenzene



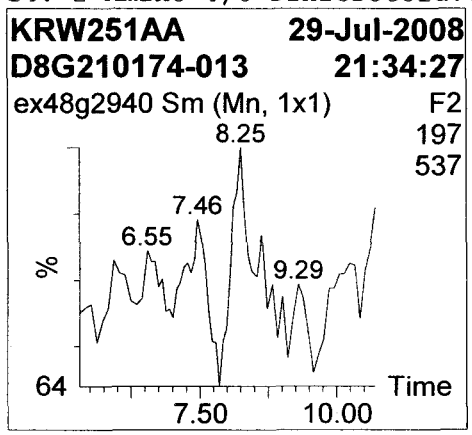
12: 2,4,6-Trinitrotoluene



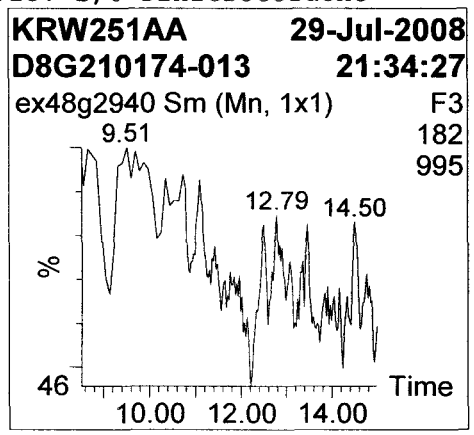
13: 4-Amino-2,6-Dinitrotolu..



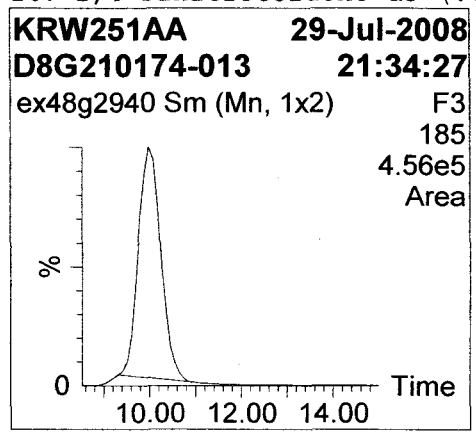
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



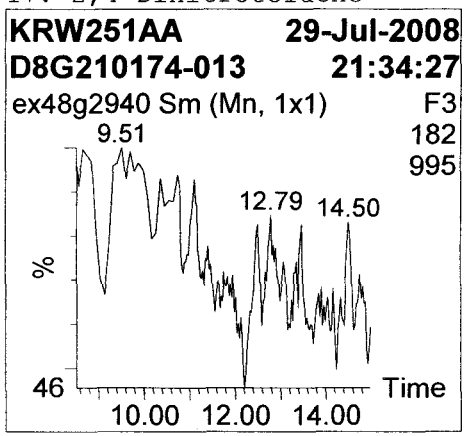
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

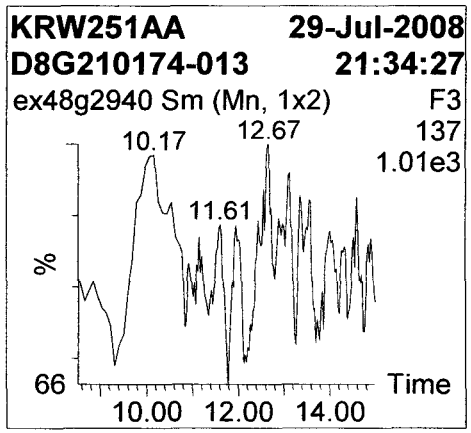
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2940
Text: D8G210174-013

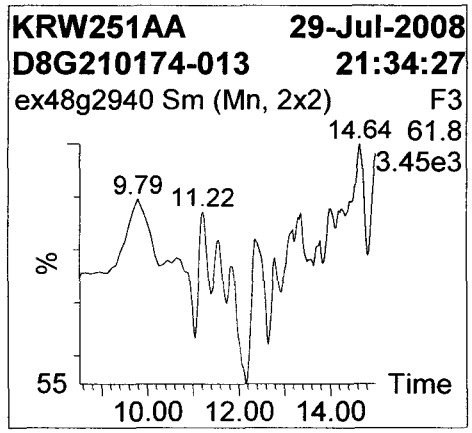
17: 2,4-Dinitrotoluene



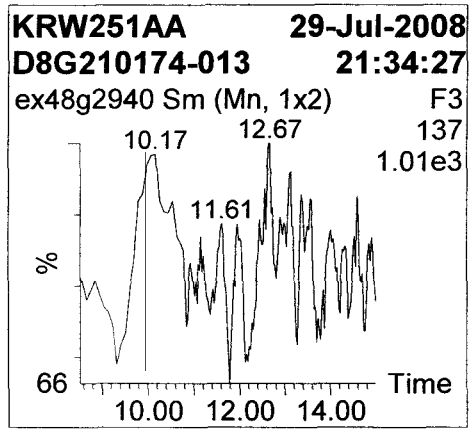
18: 2-Nitrotoluene



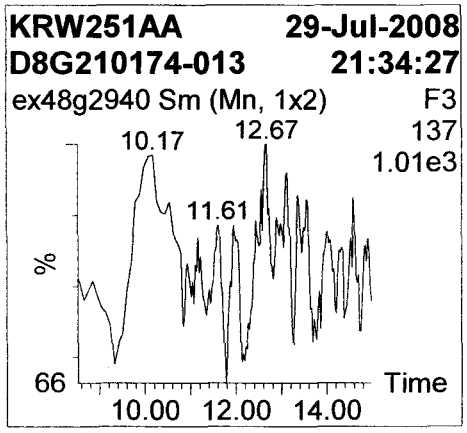
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2940
Text: D8G210174-013

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7377	bb	1.109	111	29/Jul/08	ex48g29	
RDX 13C-..	3.919	42626	bb	1.051	105	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	116644	bb	1.150	115	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	34928	bb	410.079	103	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	305	bb	1.688		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.982	249384	bb	1.163	116	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

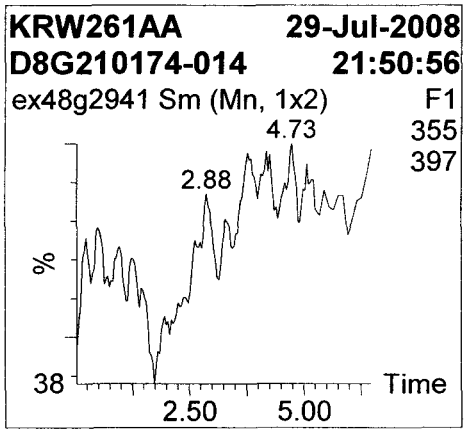
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

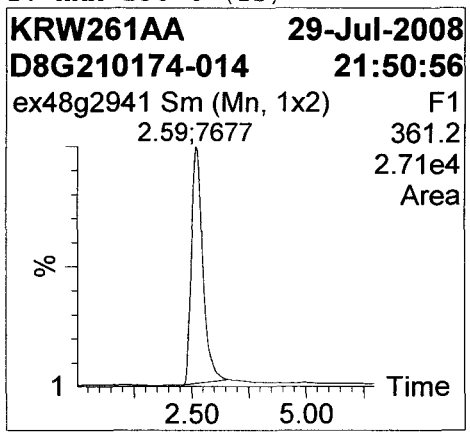
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2941
Text: D8G210174-014

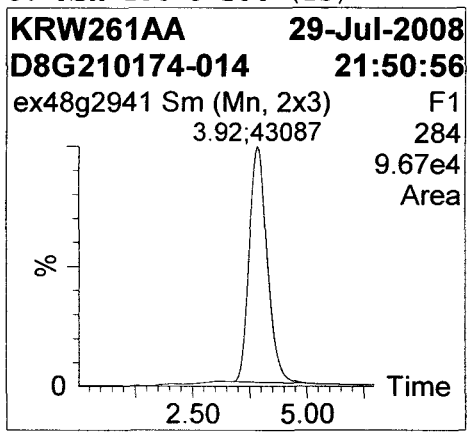
1: HMX



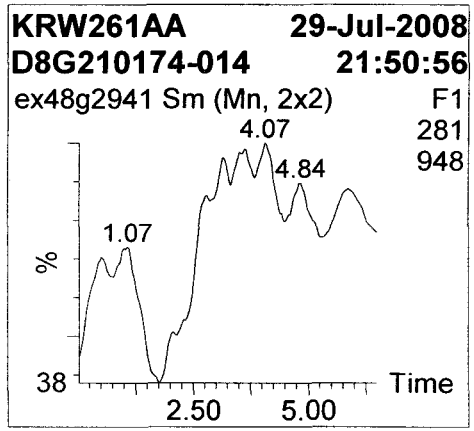
2: HMX 13C-4 (IS)



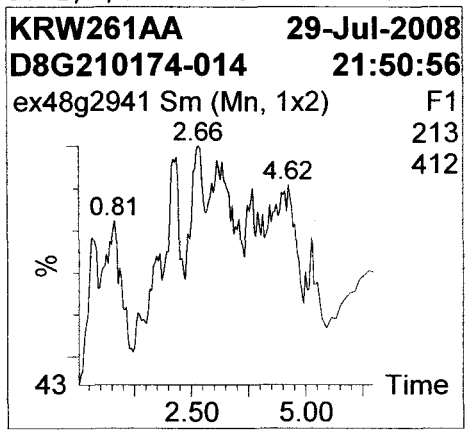
3: RDX 13C-3 284 (IS)



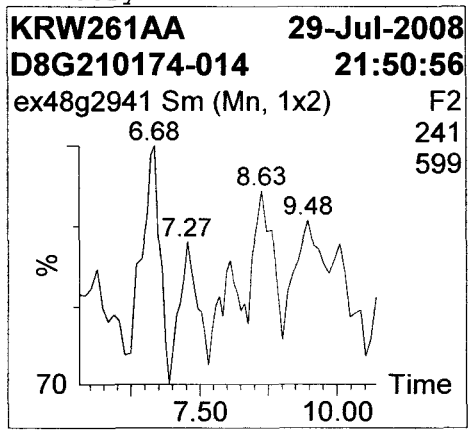
4: RDX



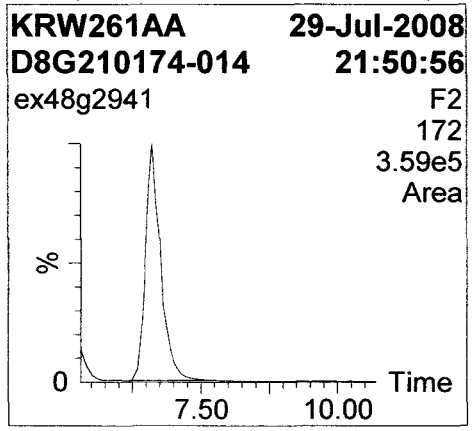
5: 1,3,5-Trinitrobenzene



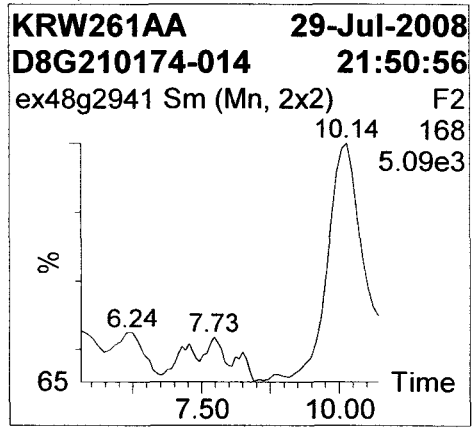
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



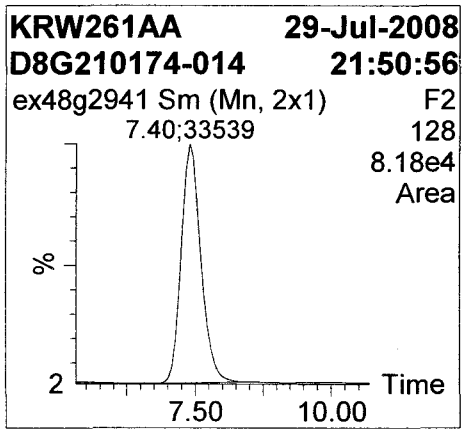
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

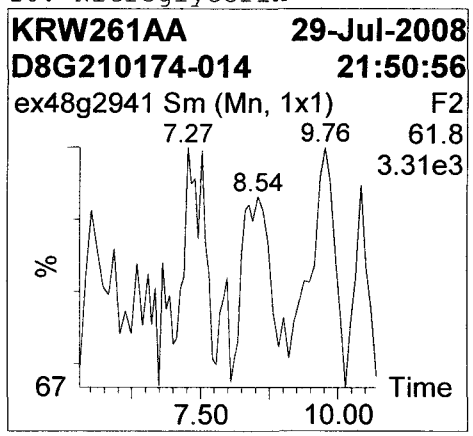
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2941
Text: D8G210174-014

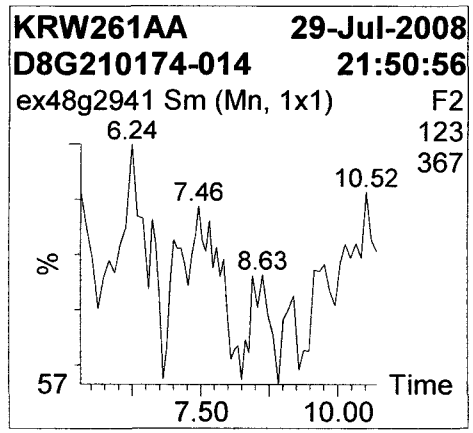
9: Nitrobenzene-d5



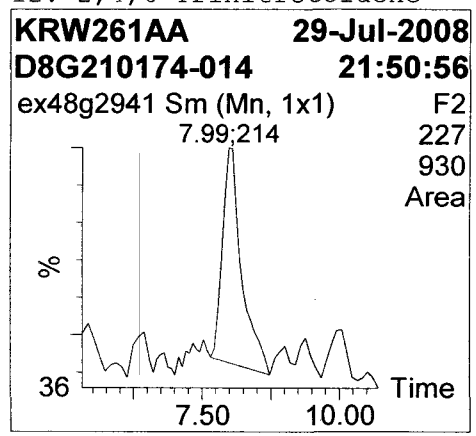
10: Nitroglycerin



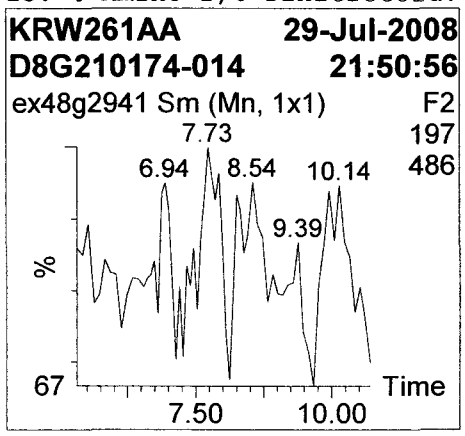
11: Nitrobenzene



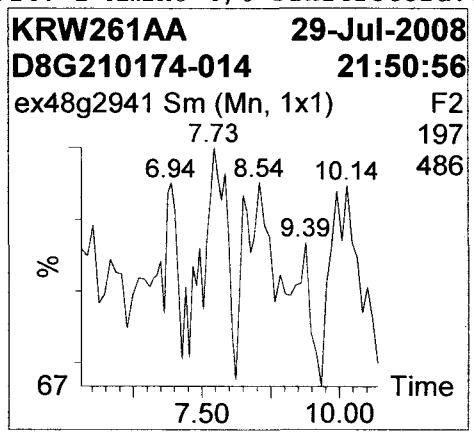
12: 2,4,6-Trinitrotoluene



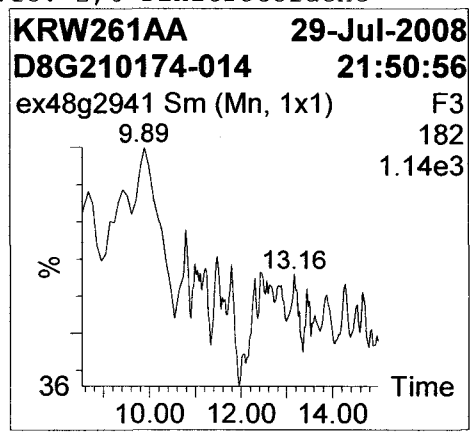
13: 4-Amino-2,6-Dinitrotolu..



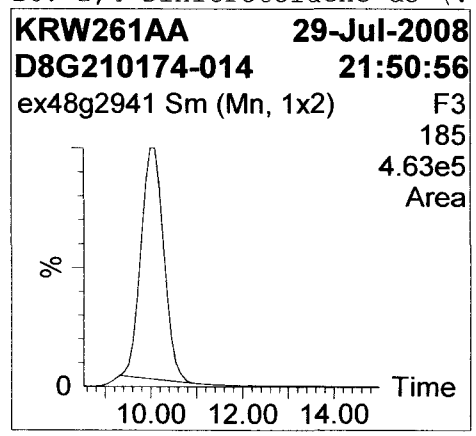
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



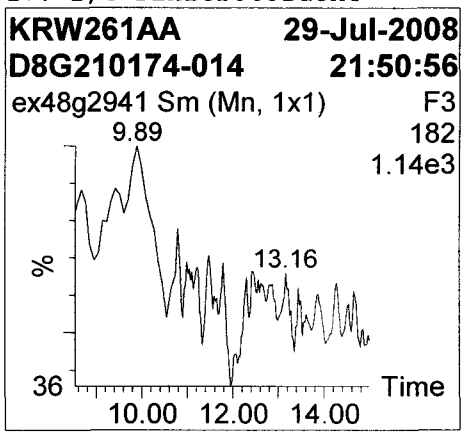
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

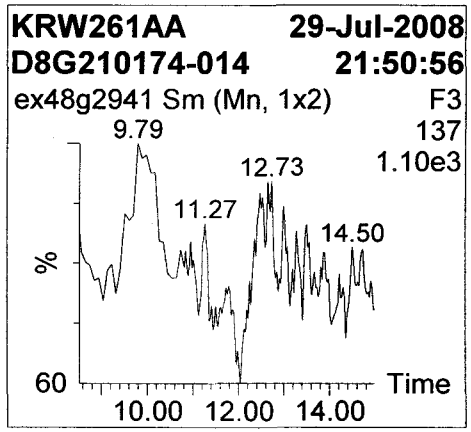
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2941
Text: D8G210174-014

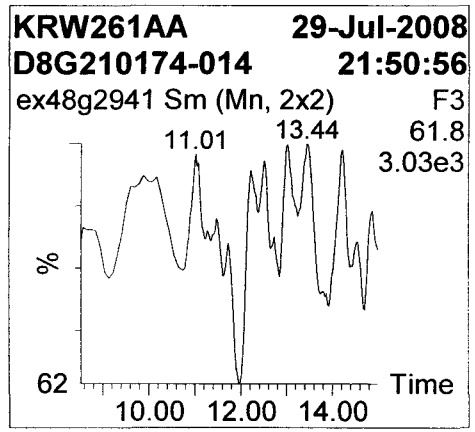
17: 2,4-Dinitrotoluene



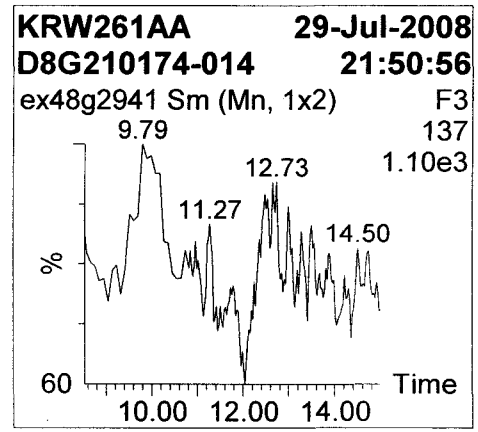
18: 2-Nitrotoluene



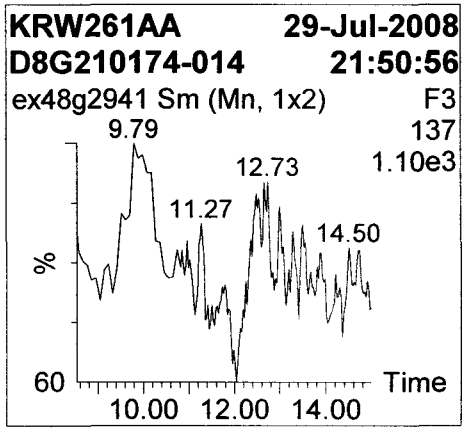
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2941
Text: D8G210174-014

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7677	bb	1.154	115	29/Jul/08	ex48g29	
RDX 13C-..	3.919	43087	bb	1.062	106	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	112735	bb	1.111	111	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	33539	bb	405.362	102	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	214	bb	1.579		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	259792	bd	1.211	121	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

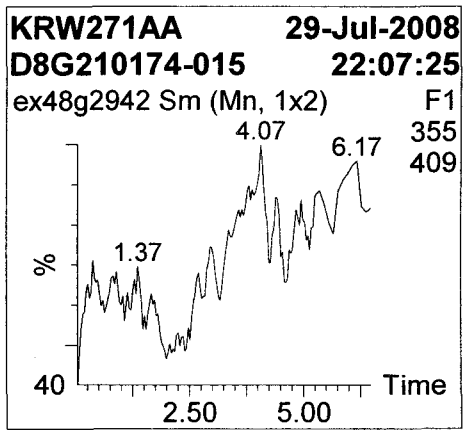
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

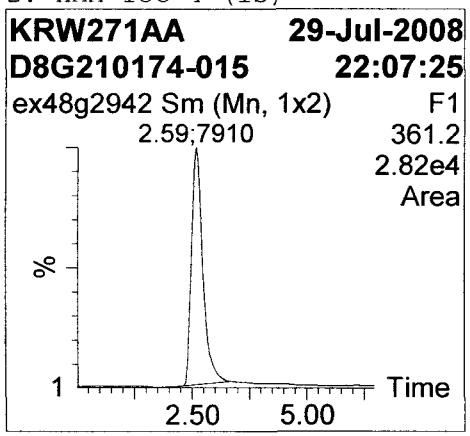
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2942
Text: D8G210174-015

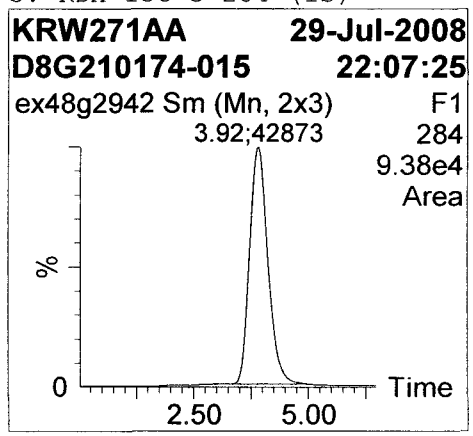
1: HMX



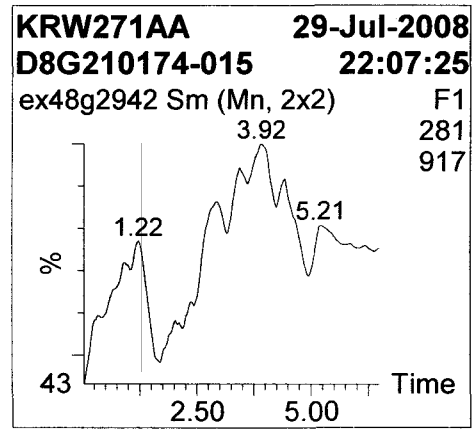
2: HMX 13C-4 (IS)



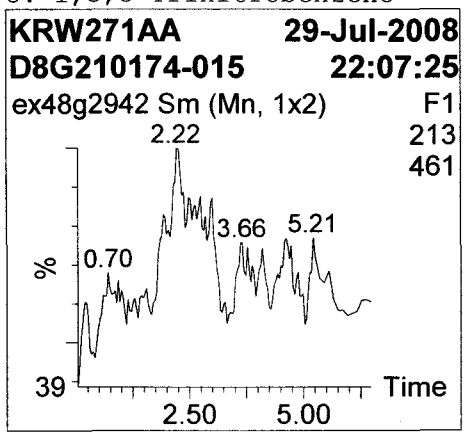
3: RDX 13C-3 284 (IS)



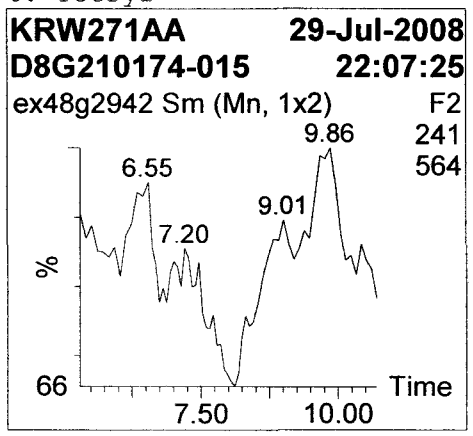
4: RDX



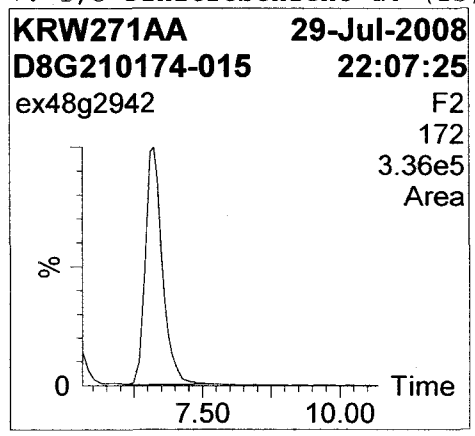
5: 1,3,5-Trinitrobenzene



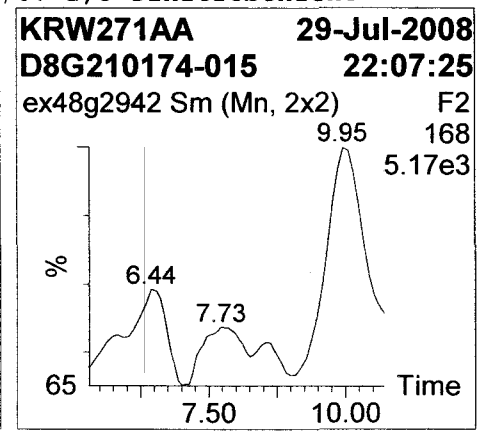
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



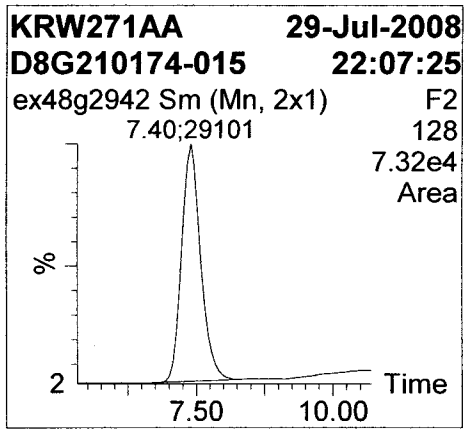
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

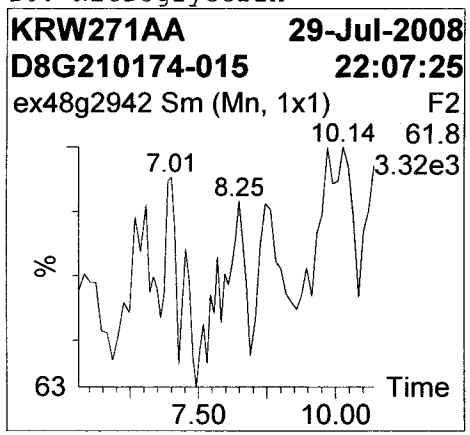
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2942
Text: D8G210174-015

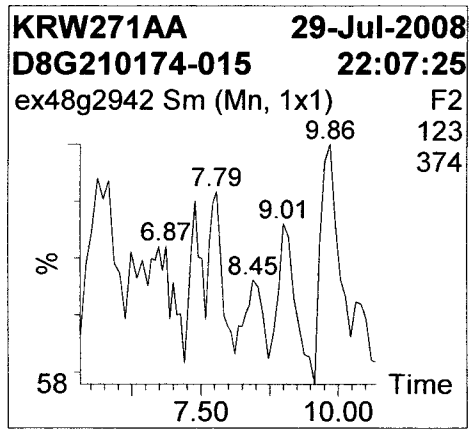
9: Nitrobenzene-d5



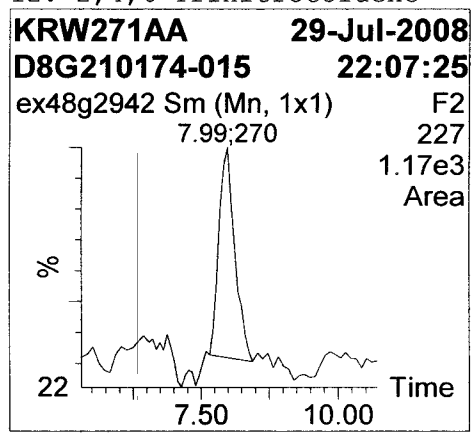
10: Nitroglycerin



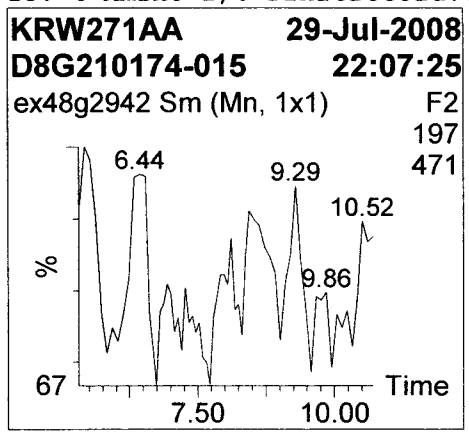
11: Nitrobenzene



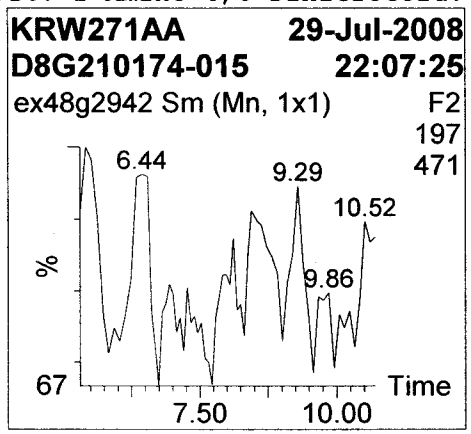
12: 2,4,6-Trinitrotoluene



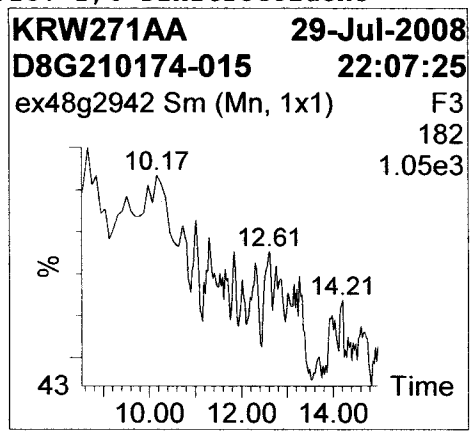
13: 4-Amino-2,6-Dinitrotolu..



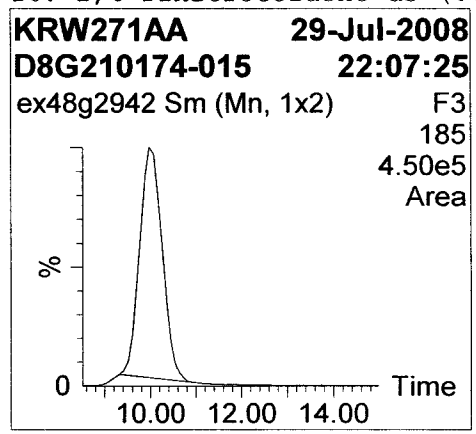
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



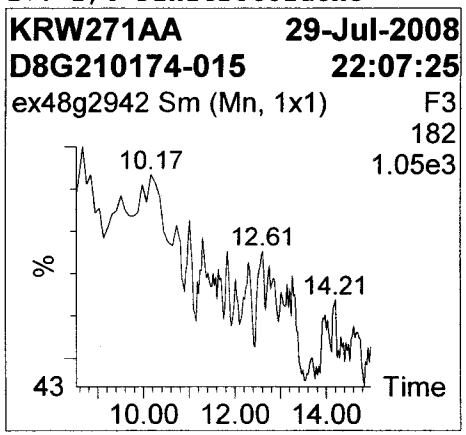
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

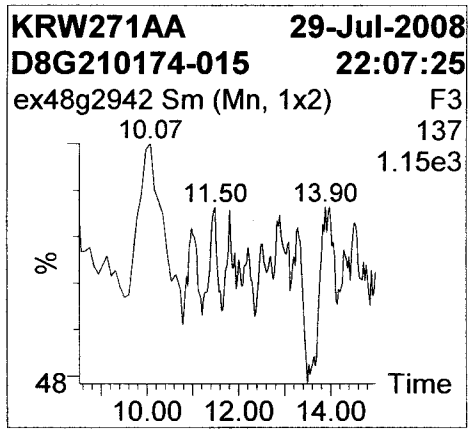
Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2942
Text: D8G210174-015

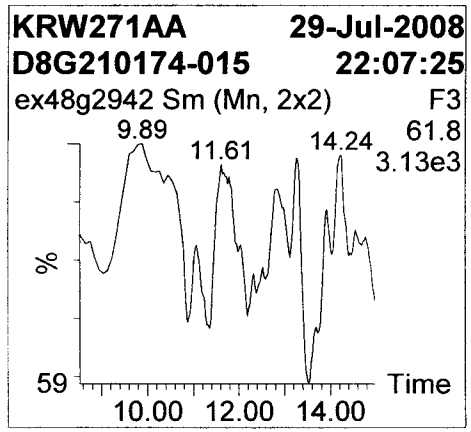
17: 2,4-Dinitrotoluene



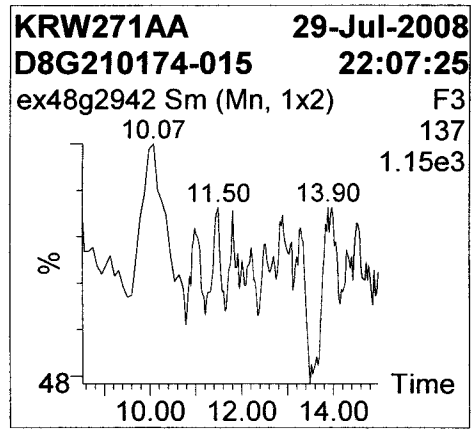
18: 2-Nitrotoluene



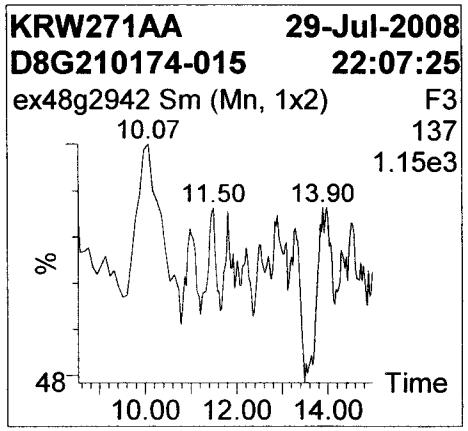
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(03)
Last modified: Wed Jul 30 07:47:46 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 07:56:32 2008

Name: ex48g2942
Text: D8G210174-015

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7910	bb	1.189	119	29/Jul/08	ex48g29	
RDX 13C-..	3.919	42873	bb	1.057	106	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	121048	bb	1.193	119	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	29101	bb	326.166	82	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	270	bb	1.623		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.980	251105	bb	1.171	117	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

LC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Method: 8321A Explosives

Associated Samples: 2-6, 18-20

Batch #(s): 8206281

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: SME 8-1-08

LC/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/25/08
Time: 22:13:54

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGro
_ Bench Sheet Copied per COC

Extractionist: 004035 Katherine Abbott
004788 Tegan Moore

Concentrationist: 011821 Chad M. Lane

****
* *
* **QC BATCH: 8206281** *
* *
****

PREP DATE: 7/24/08 12:00
COMP DATE: 7/25/08 22:00

Reviewer/Date: LANEC / 7/25/08

8321A, Explosives by LCMS
SONICATION - Medium Level

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH'S INIT	PH'S ADJ1	PH'S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
7/29/08	8/08/08	D8G210174-002 **KRW1Q-1-AA**		12	BX	SOLID	**10.27g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-003 **KRW1W-1-AA**		12	BX	SOLID	**10.21g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-003 **KRW1W-1-AG**S M		12	BX	SOLID	**9.92g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML HPLC177 7/3/08 1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-003 **KRW1W-1-AH**D M		12	BX	SOLID	**9.89g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML HPLC177 7/3/08 1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-004 **KRW1X-1-AA**		12	BX	SOLID	**9.81g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-005 **KRW2R-1-AA**		12	BX	SOLID	**10.03g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-006 **KRW2T-1-AA**		12	BX	SOLID	**10.25g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															

Table of Contents

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/25/08
Time: 22:13:54

QC BATCH: 8206281

PREP DATE: 7/24/08 12:00
COMP DATE: 7/25/08 22:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
7/29/08	8/08/08	D8G210174-018 **KRW3C-1-AA**		12	BX	SOLID	**10.14g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-019 **KRW3D-1-AA**		12	BX	SOLID	**10.26g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	8/08/08	D8G210174-020 **KRW3E-1-AA**		12	BX	SOLID	**9.94g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	0/00/00	R8G240000-281 **KR4C6-1-AA**B		12	BX	SOLID	**10.14g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	0/00/00	R8G240000-281 **KR4C6-1-AC**C		12	BX	SOLID	**9.83g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML HPLC177 7/3/08 1.0ML LCMS031 6/16/08
COMMENTS:															
7/29/08	0/00/00	R8G240000-281 **KR4C6-1-AD**B		12	BX	SOLID	**9.92g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1.0ML LCMS031 6/16/08
COMMENTS:	GRINDING BLK														

DV-LC-0010 BAL:F90716 SAND:WT0049 A.ACN:1-3-14 S/S:KH-E,EXP-1 W:KA MESH:10
SONICATOR ON 07/24/08@1840 OFF 07/25/08@20:15 FILTER:R396
TEMP MIN:6C MAX:9C

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 13

Table of Contents

LC/MS SEMIVOLATILE STANDARD DATA

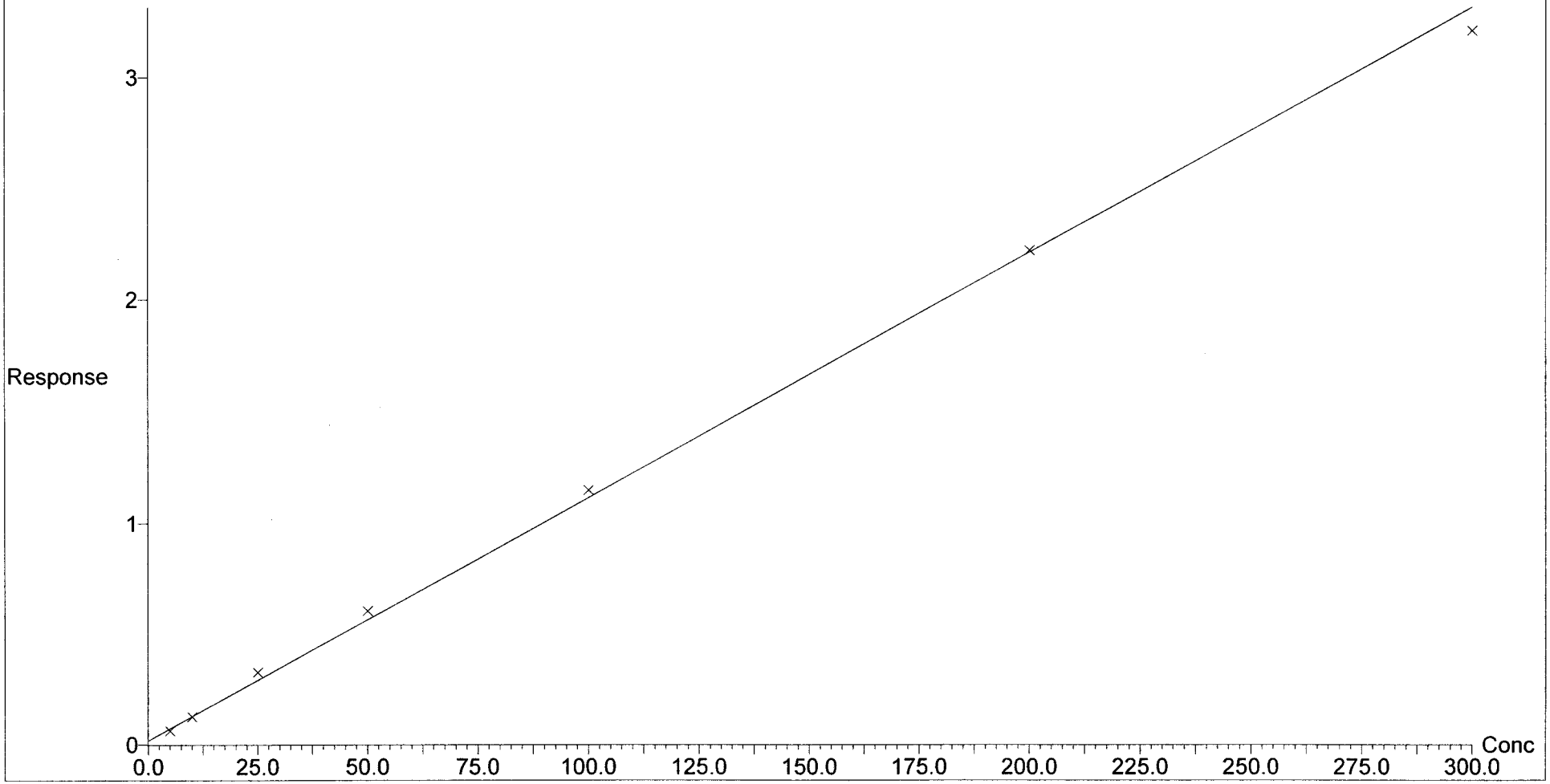
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 1 name: HMX Method File: ex48g29
Coefficient of Determination: 0.997772
Calibration curve: 0.0109807 * x + 0.0180378
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 2 name: HMX 13C-4 (IS) Method File: ex48g29
Response Factor: 6651.37
RRF SD: 673.653, % Relative SD: 10.1280
Response type: External Std, Area
Curve type: RF

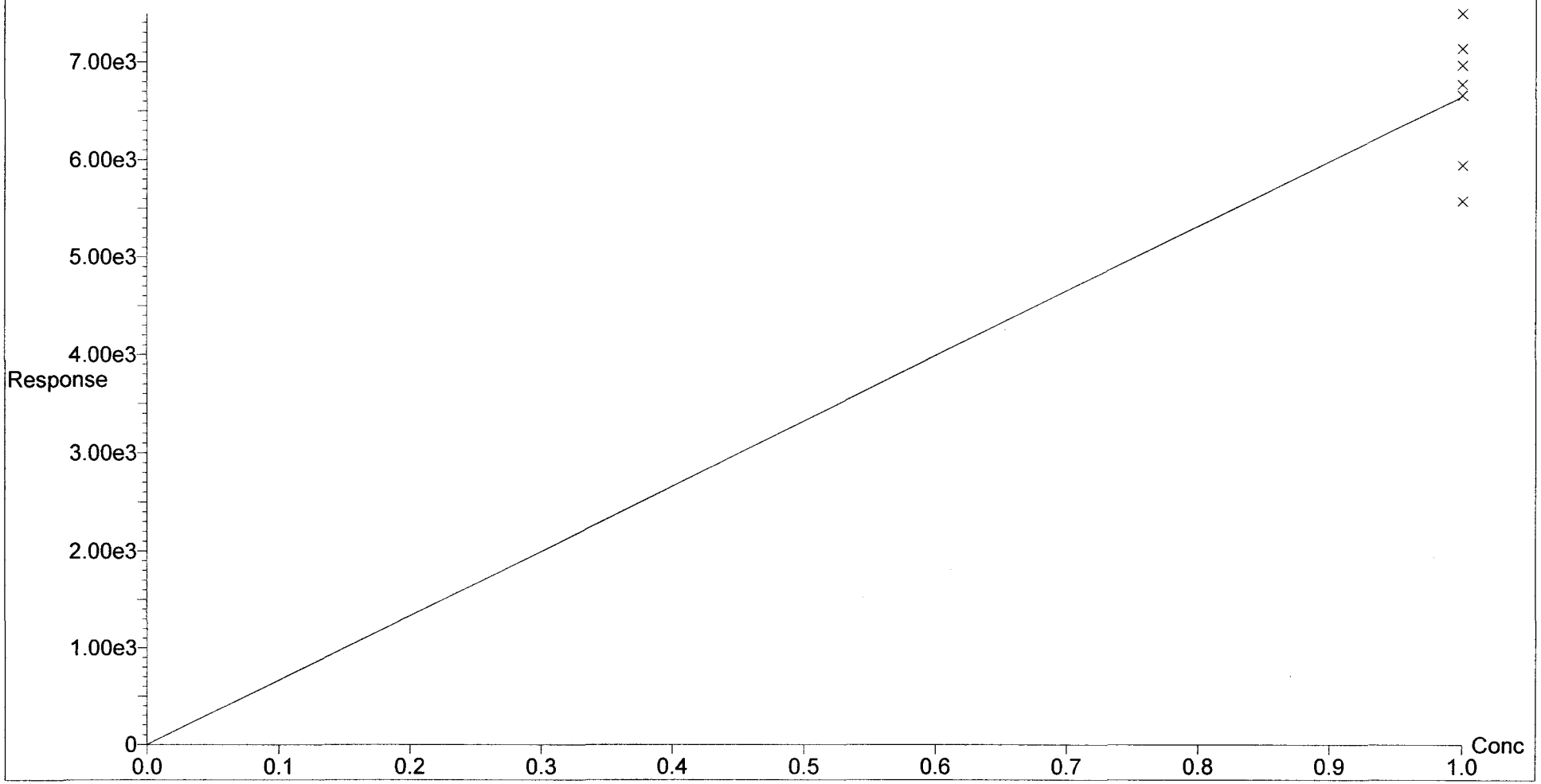
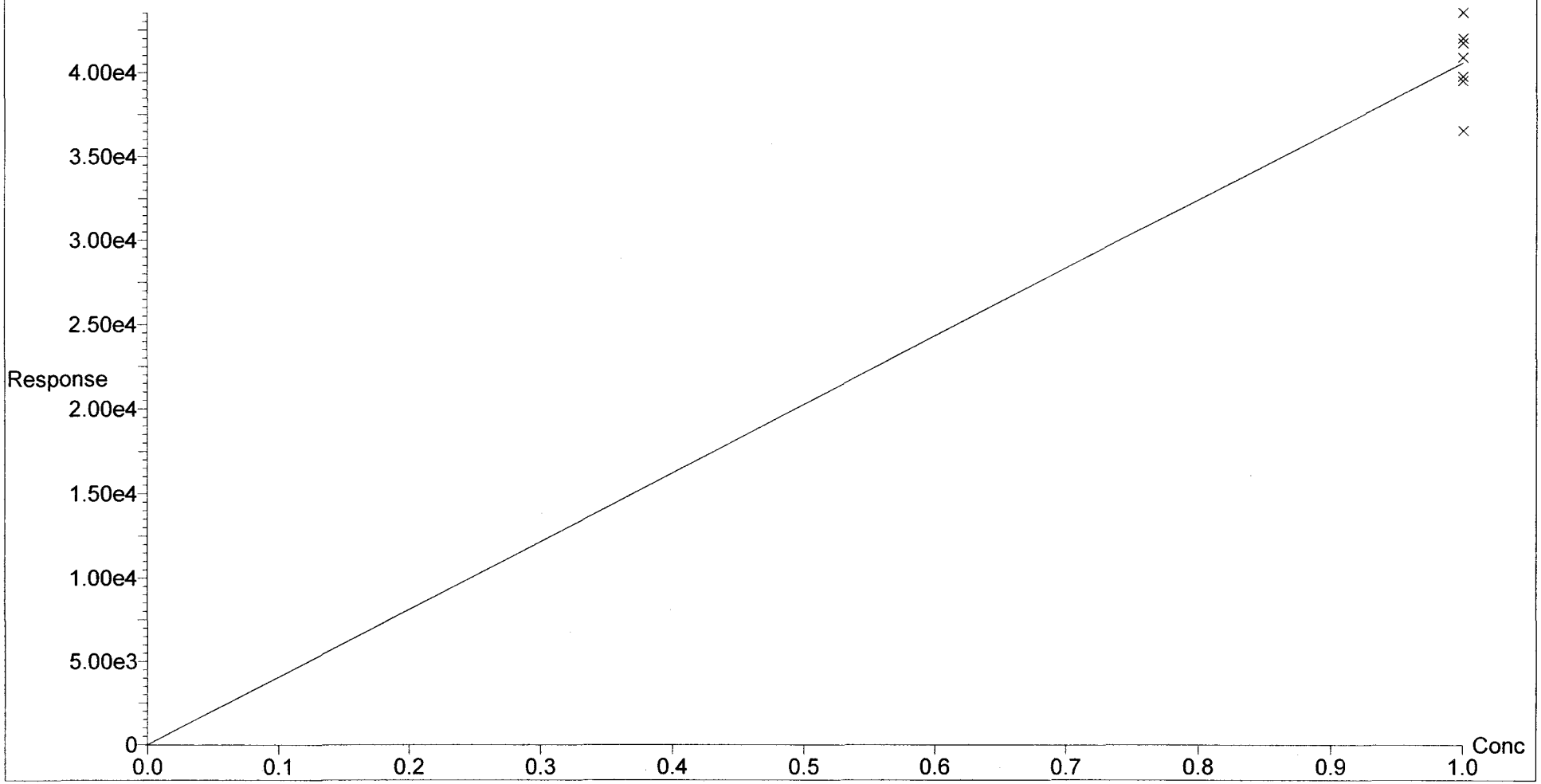


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

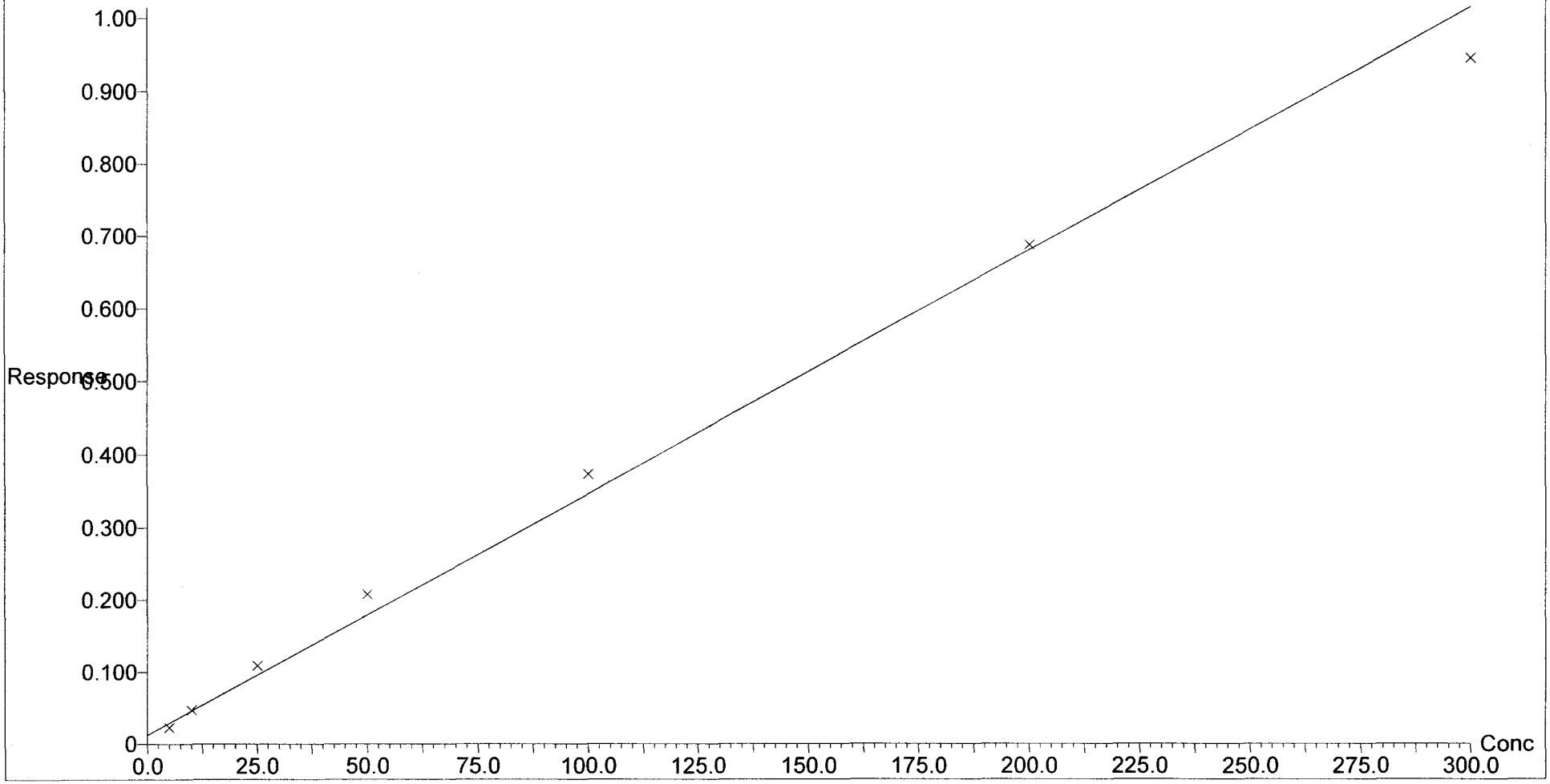
Compound 3 name: RDX 13C-3 284 (IS) Method File: ex48g29
Response Factor: 40575.0
RRF SD: 2245.74, % Relative SD: 5.53478
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

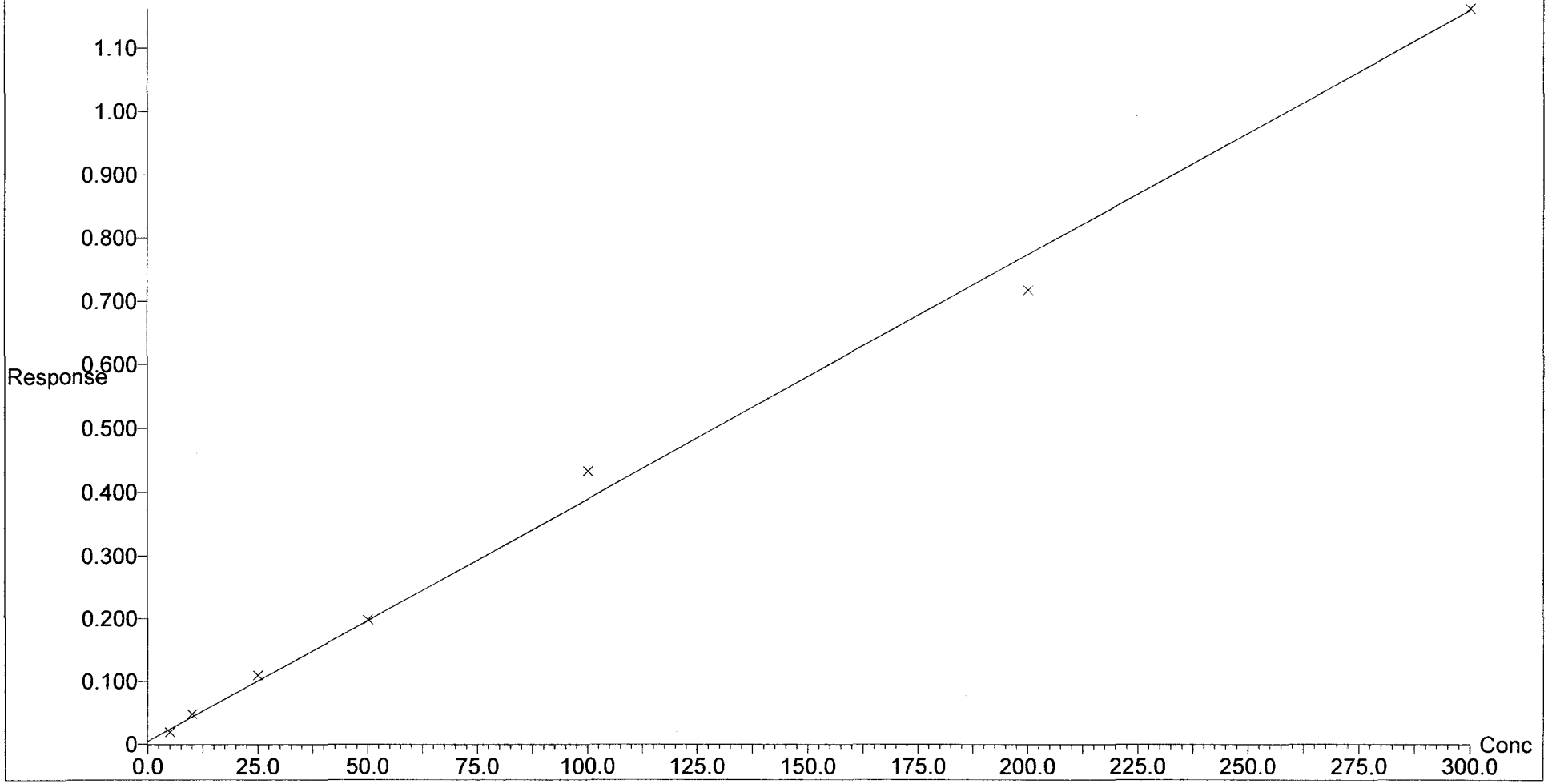
Compound 4 name: RDX Method File: ex48g29
Coefficient of Determination: 0.991254
Calibration curve: 0.00334413 * x + 0.0121126
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

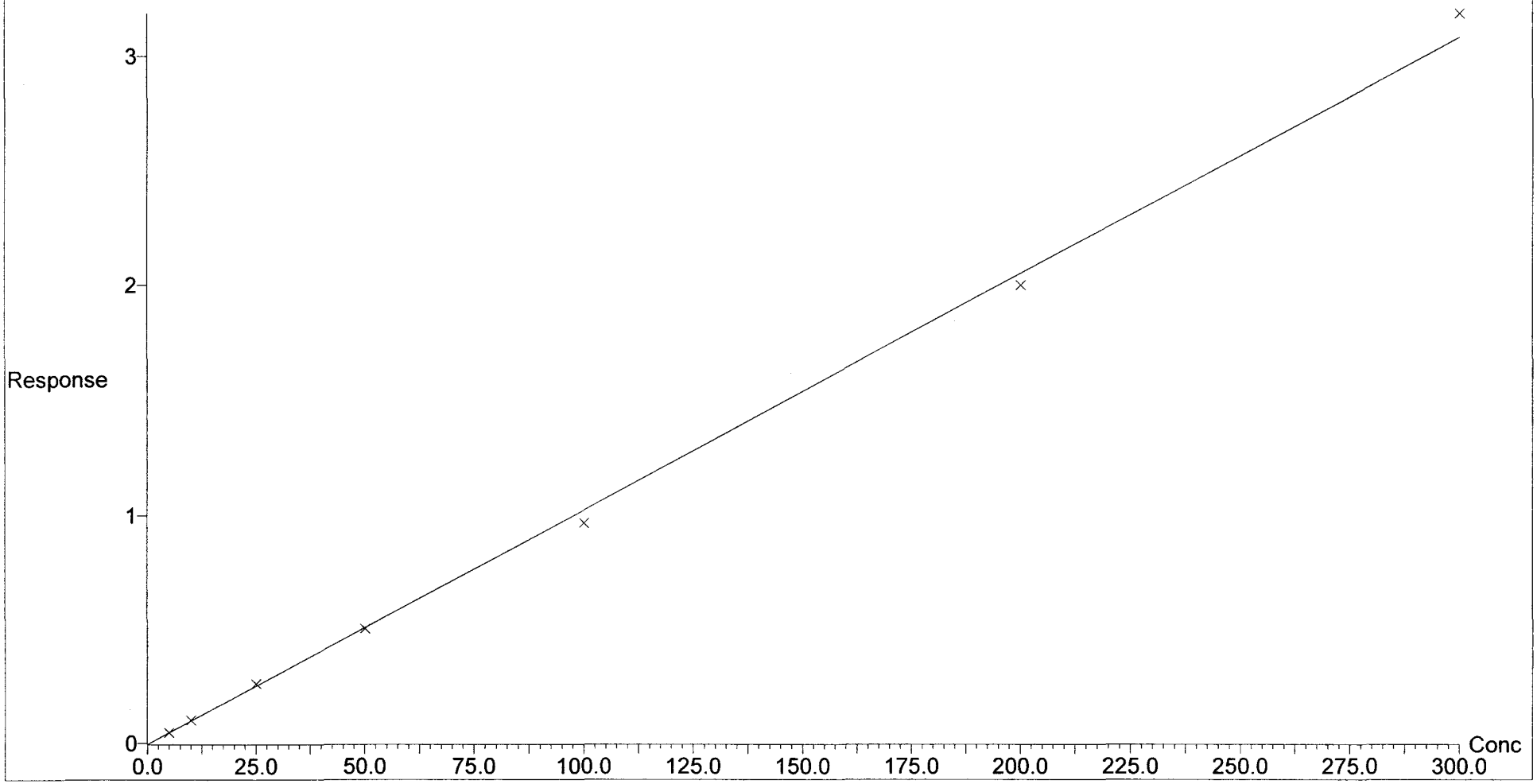
Compound 5 name: 1,3,5-Trinitrobenzene Method File: ex48g29
Coefficient of Determination: 0.994563
Calibration curve: 0.00384794 * x + 0.00471089
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 6 name: Tetryl Method File: ex48g29
Coefficient of Determination: 0.998525
Calibration curve: 0.0102885 * x + -0.00453104
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 7 name: 1,3 Dinitrobenzene-d4 (IS) Method File: ex48g29
Response Factor: 101434
RRF SD: 10063.6, % Relative SD: 9.92135
Response type: External Std, Area
Curve type: RF

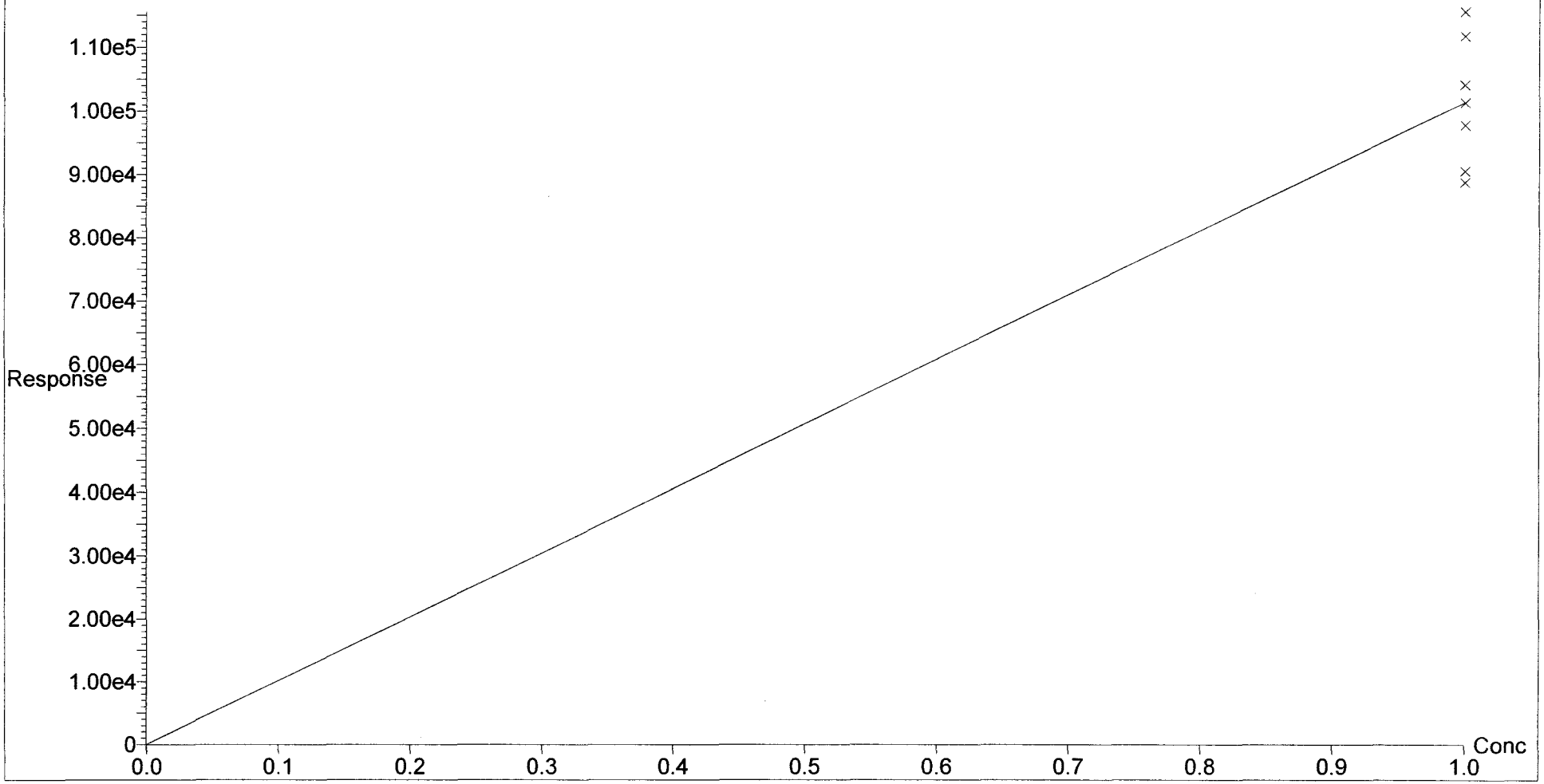
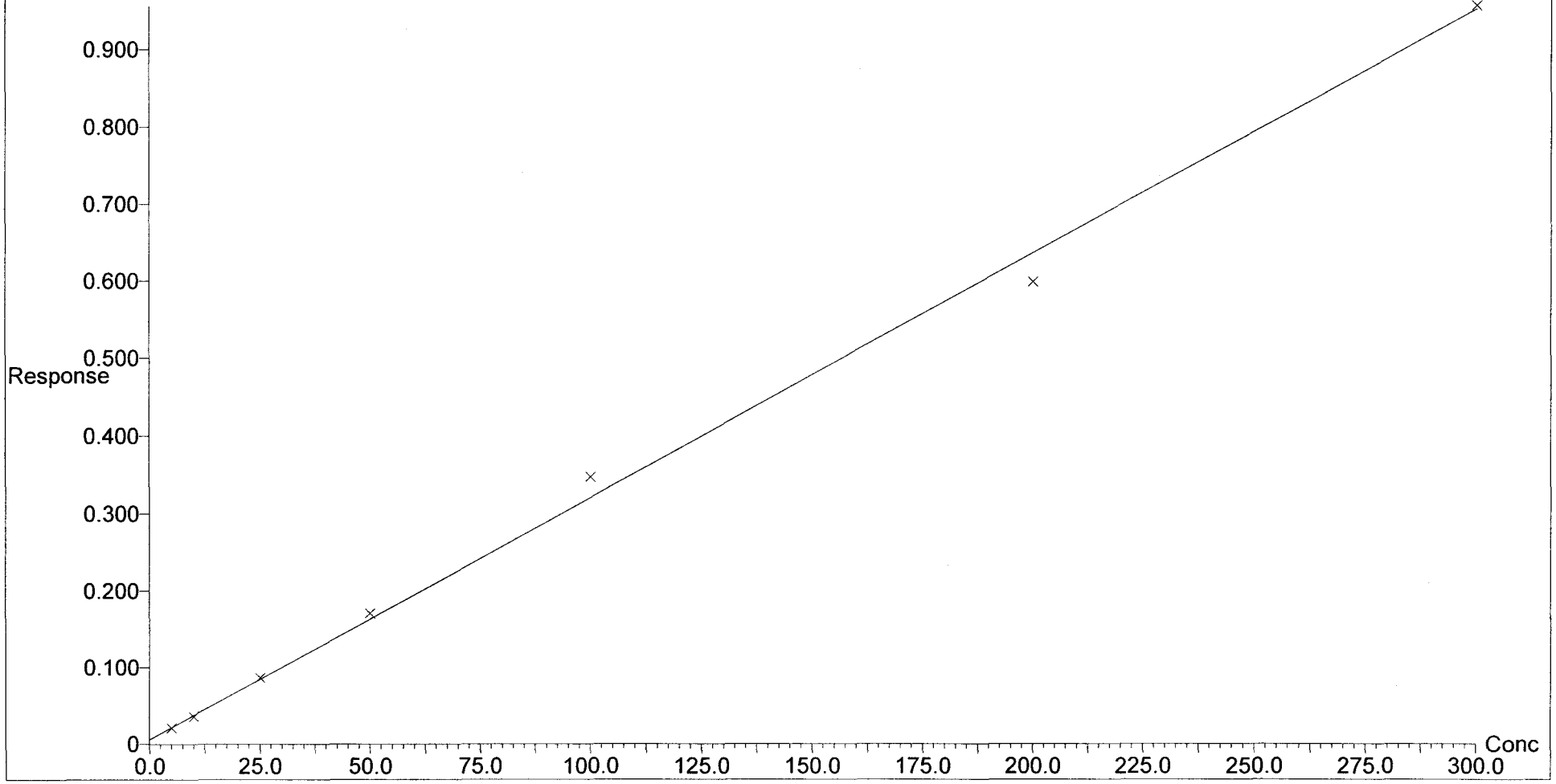


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

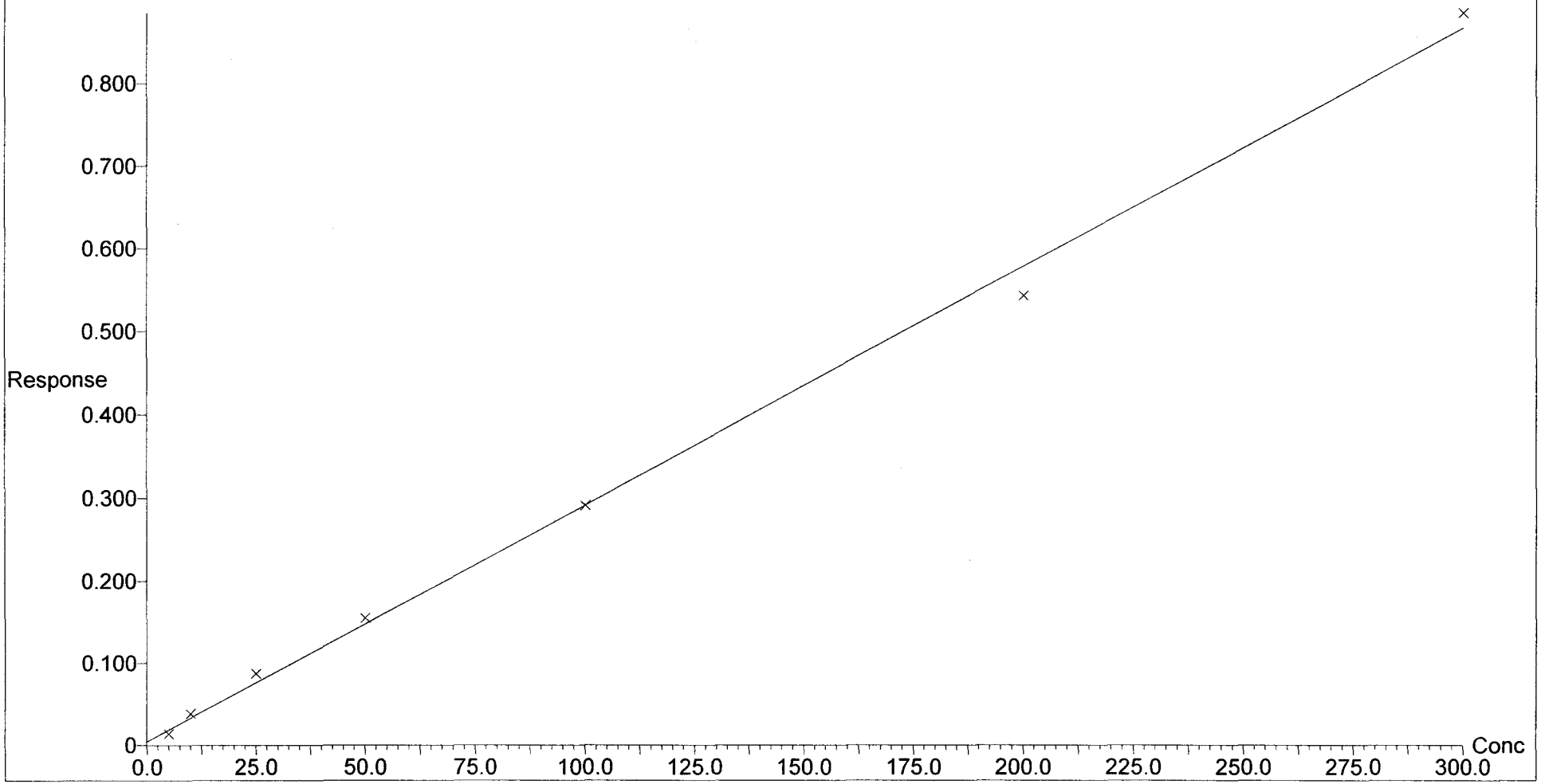
Compound 8 name: 1,3-Dinitrobenzene Method File: ex48g29
Coefficient of Determination: 0.997196
Calibration curve: 0.00315292 * x + 0.00564178
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

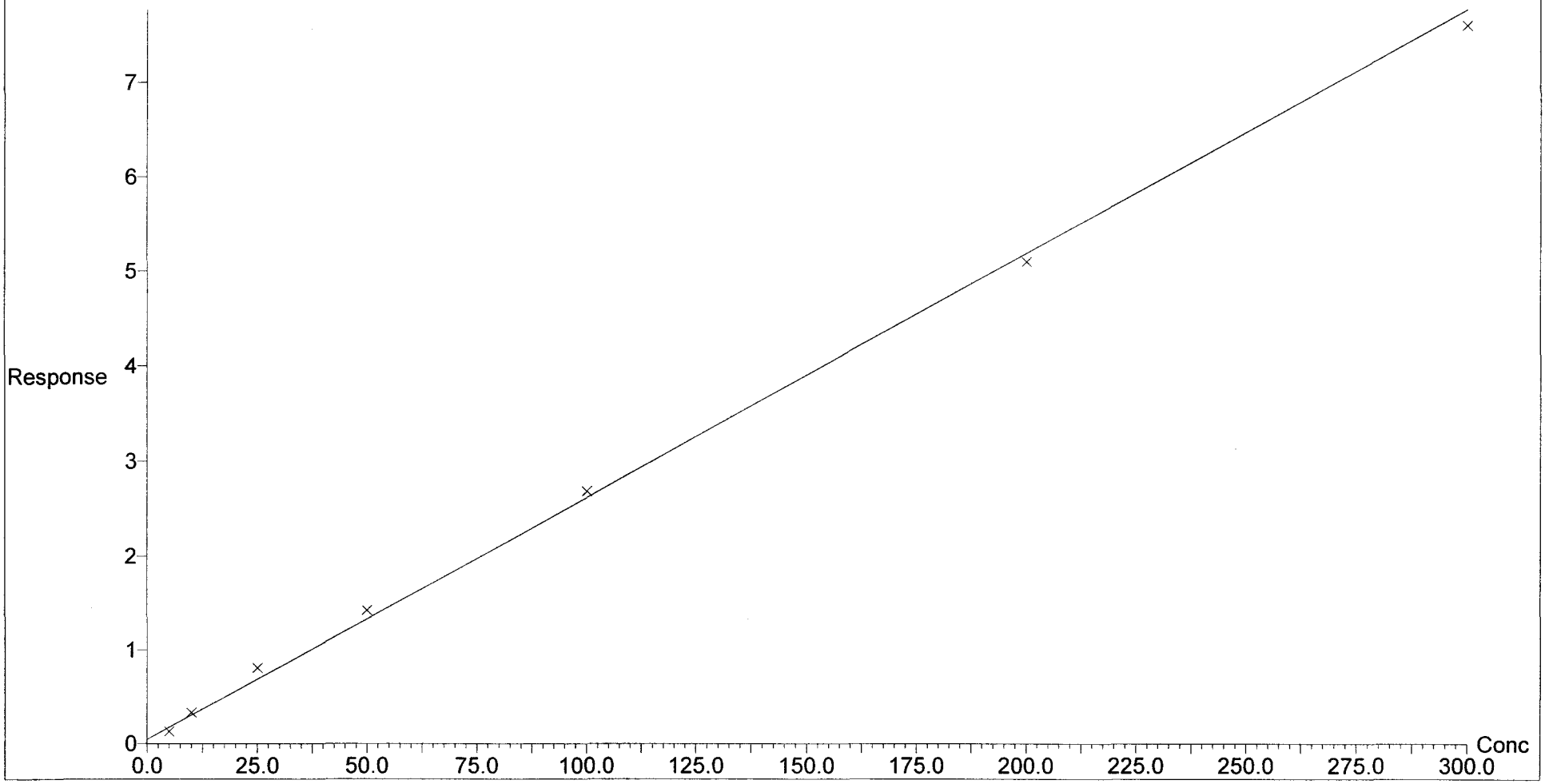
Compound 9 name: Nitrobenzene-d5 Method File: ex48g29
Coefficient of Determination: 0.995648
Calibration curve: 0.00287504 * x + 0.00410105
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

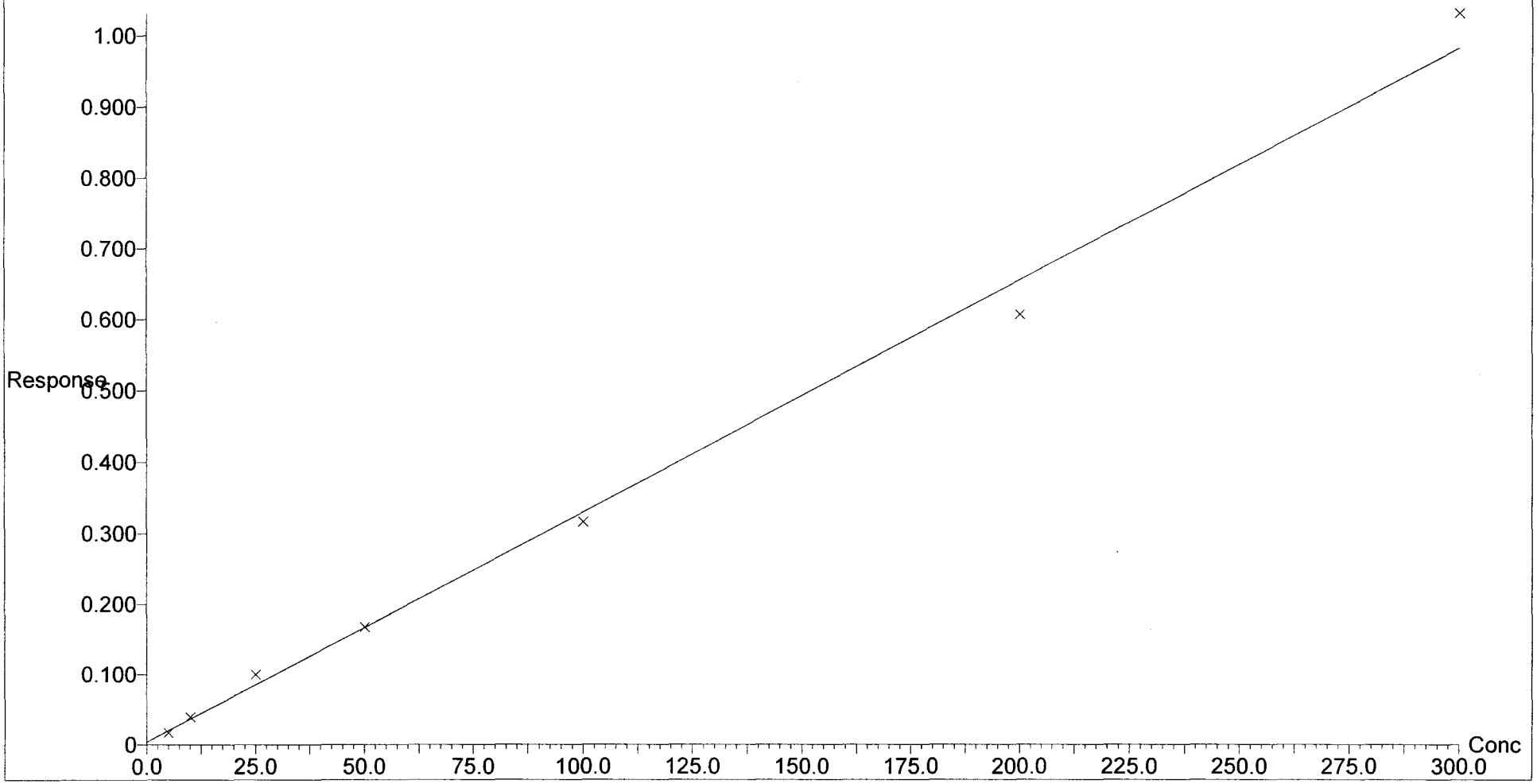
Compound 10 name: Nitroglycerin Method File: ex48g29
Coefficient of Determination: 0.996295
Calibration curve: 0.0257449 * x + 0.0436900
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

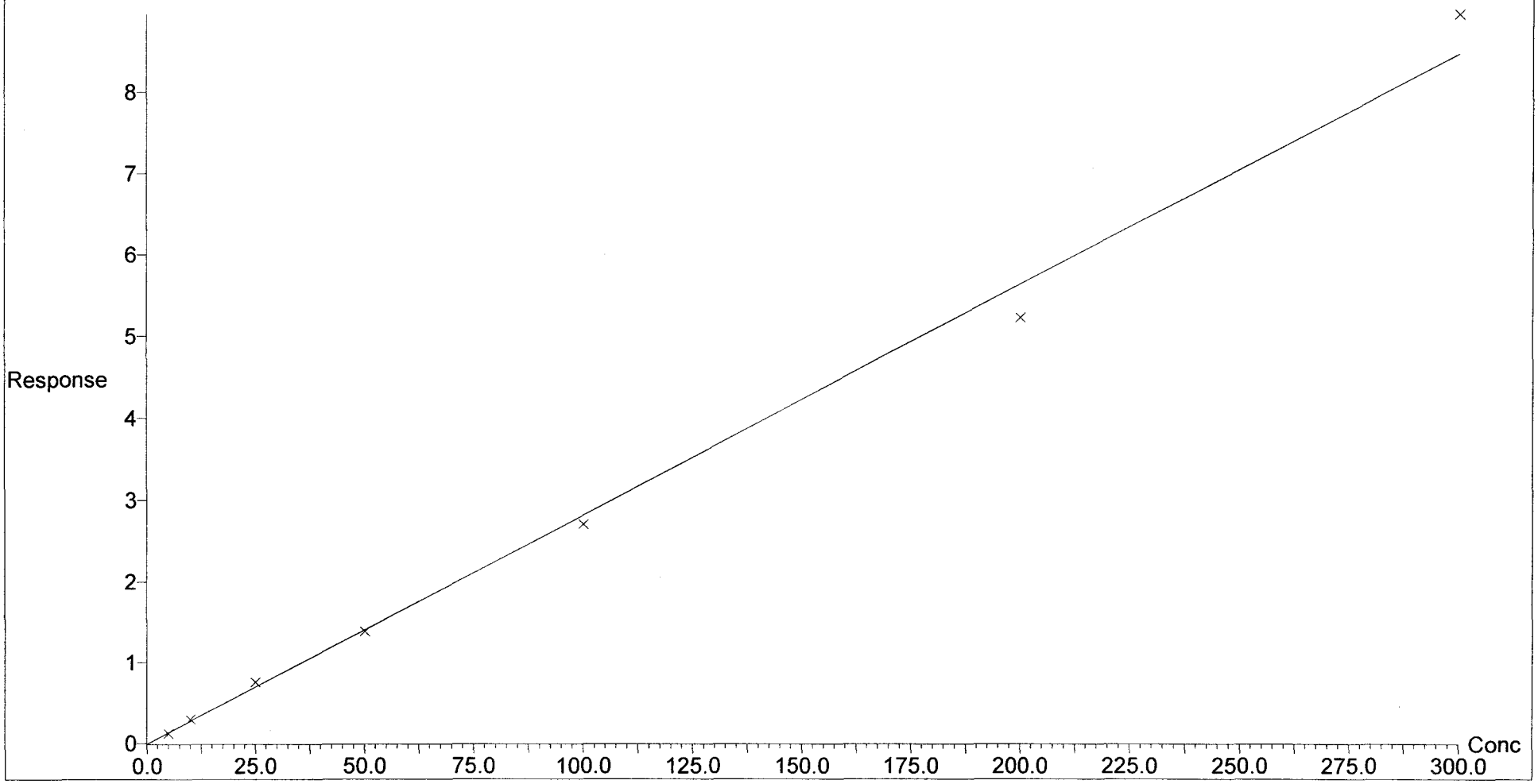
Compound 11 name: Nitrobenzene Method File: ex48g29
Coefficient of Determination: 0.994425
Calibration curve: 0.00326327 * x + 0.00344180
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

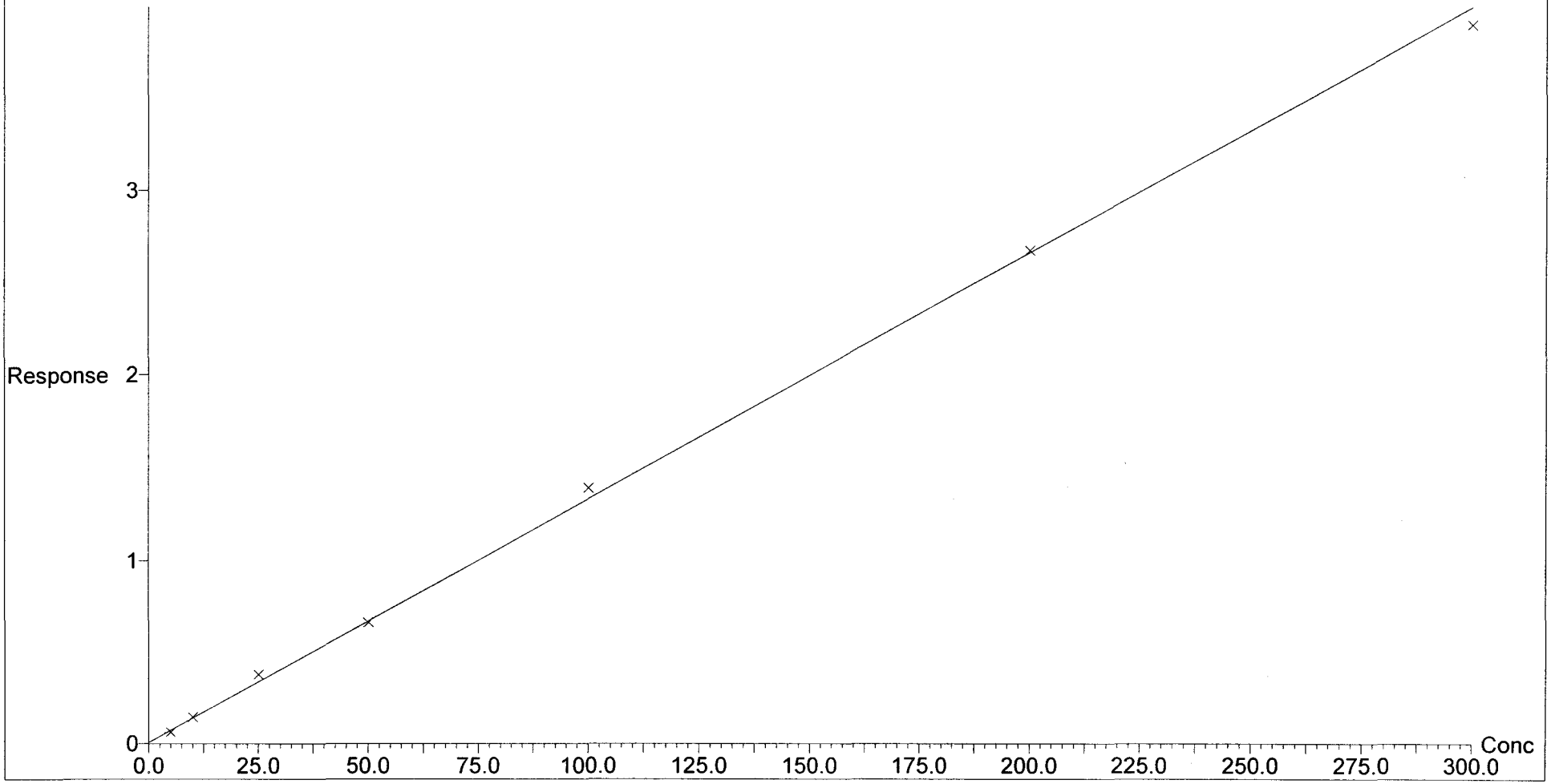
Compound 12 name: 2,4,6-Trinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.995606
Calibration curve: 0.0282574 * x + -0.00933175
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

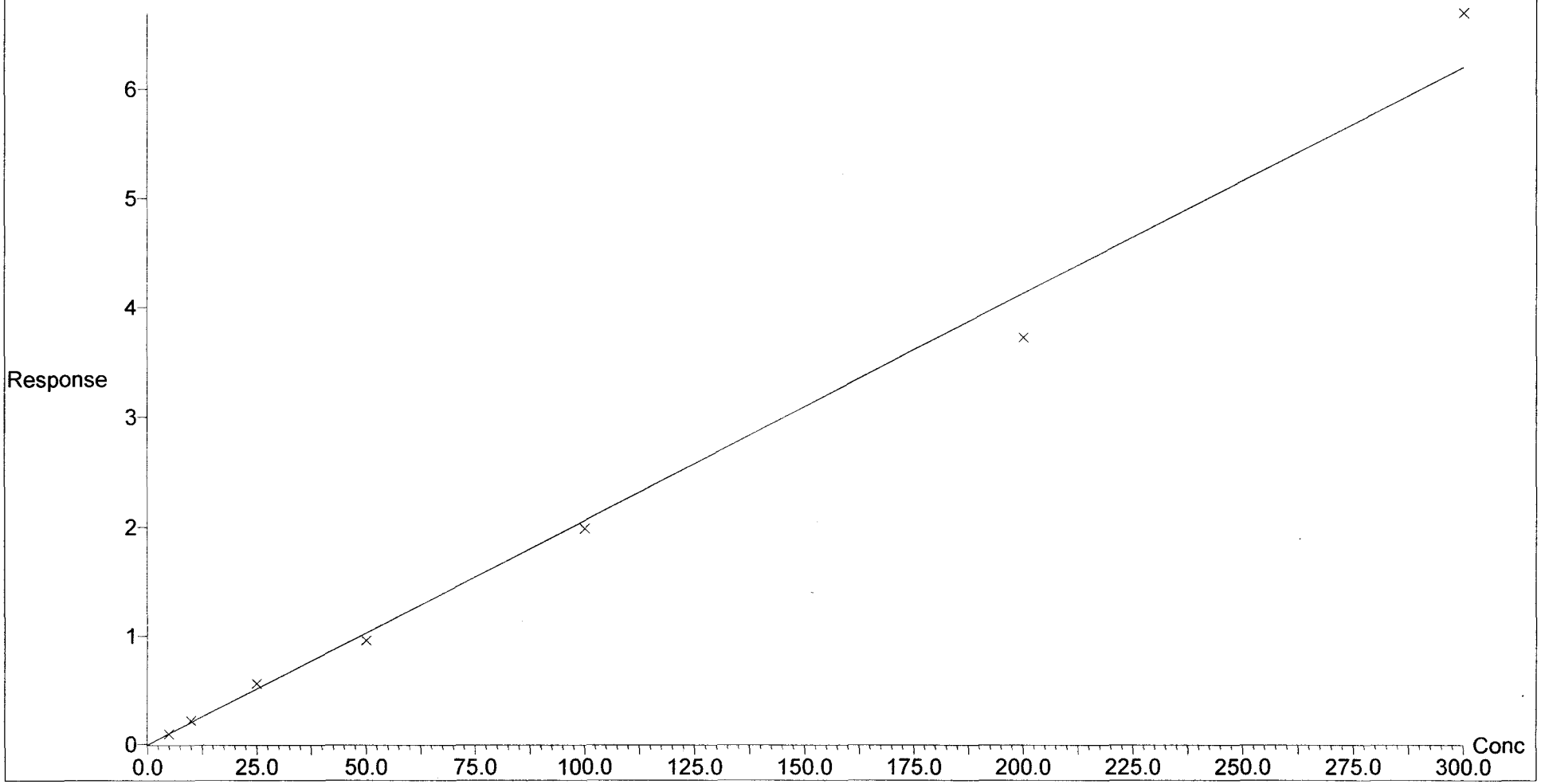
Compound 13 name: 4-Amino-2,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.998445
Calibration curve: 0.0132837 * x + 0.00560063
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 14 name: 2-Amino-4,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.992131
Calibration curve: 0.0206873 * x + -0.00713639
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 15 name: 2,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.992191
Calibration curve: 0.00902750 * x + 0.00548383
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

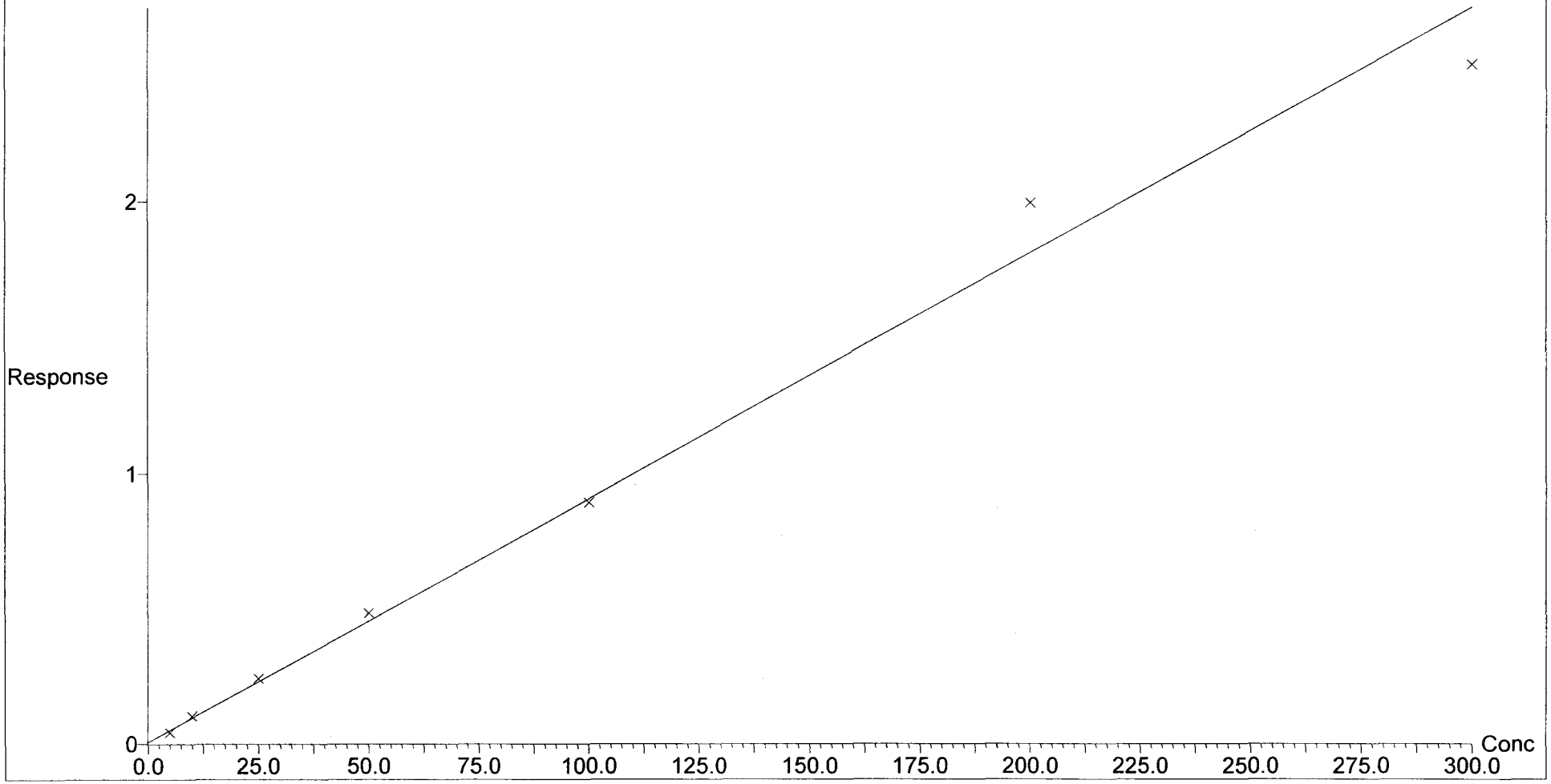
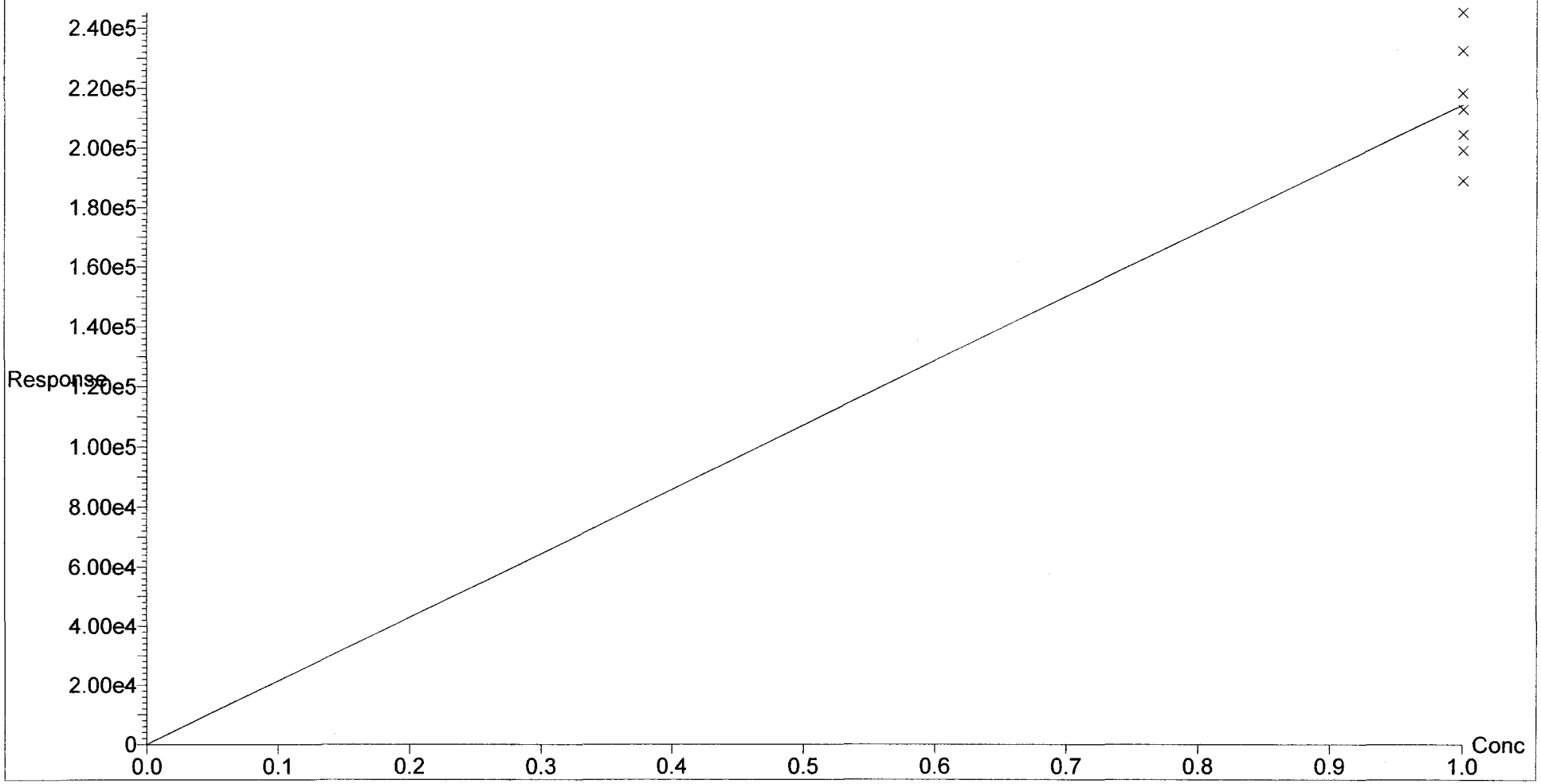


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

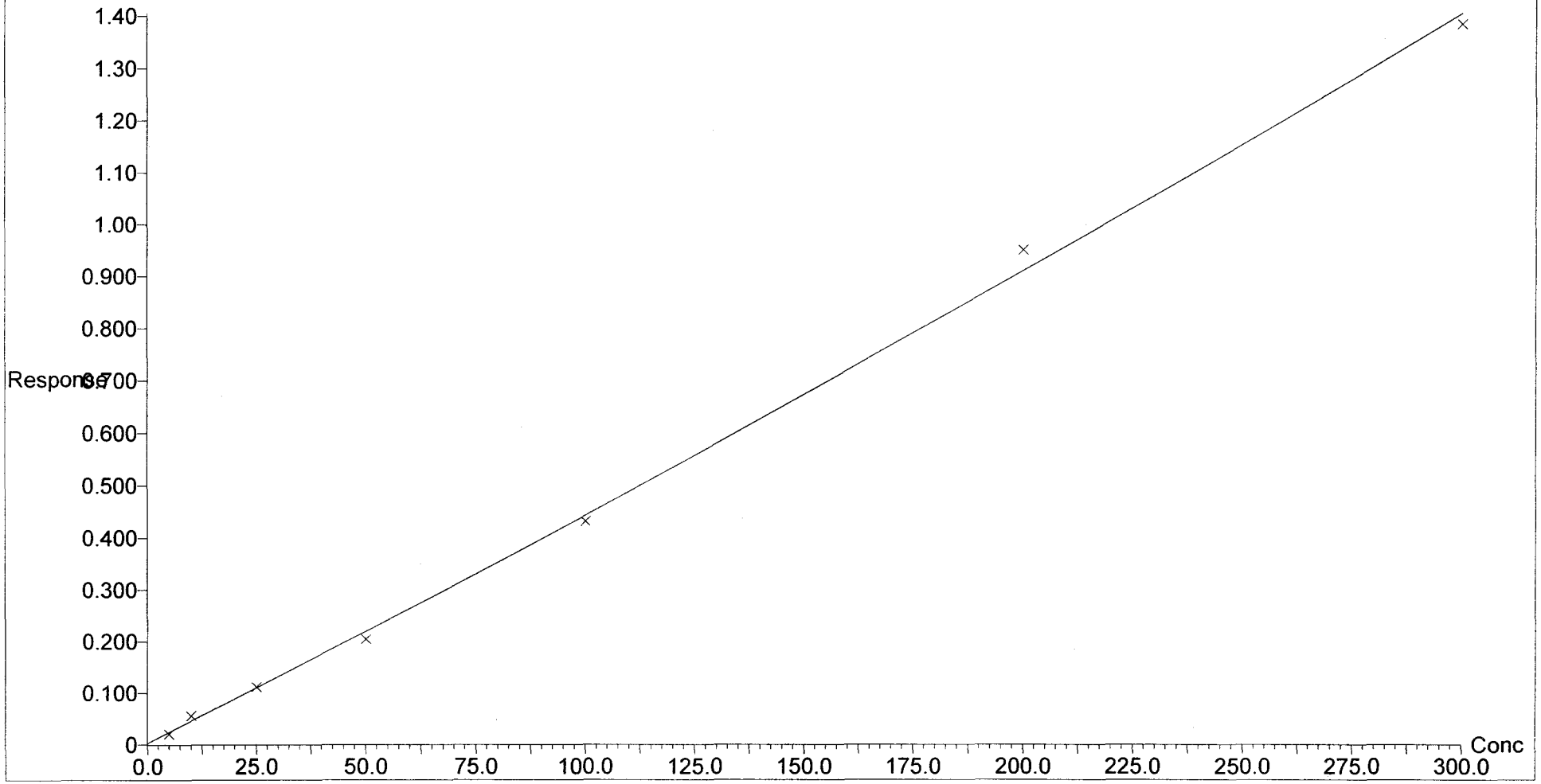
Compound 16 name: 2,4-Dinitrotoluene-d3 (IS) Method File: ex48g29
Response Factor: 214519
RRF SD: 19439.3, % Relative SD: 9.06180
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

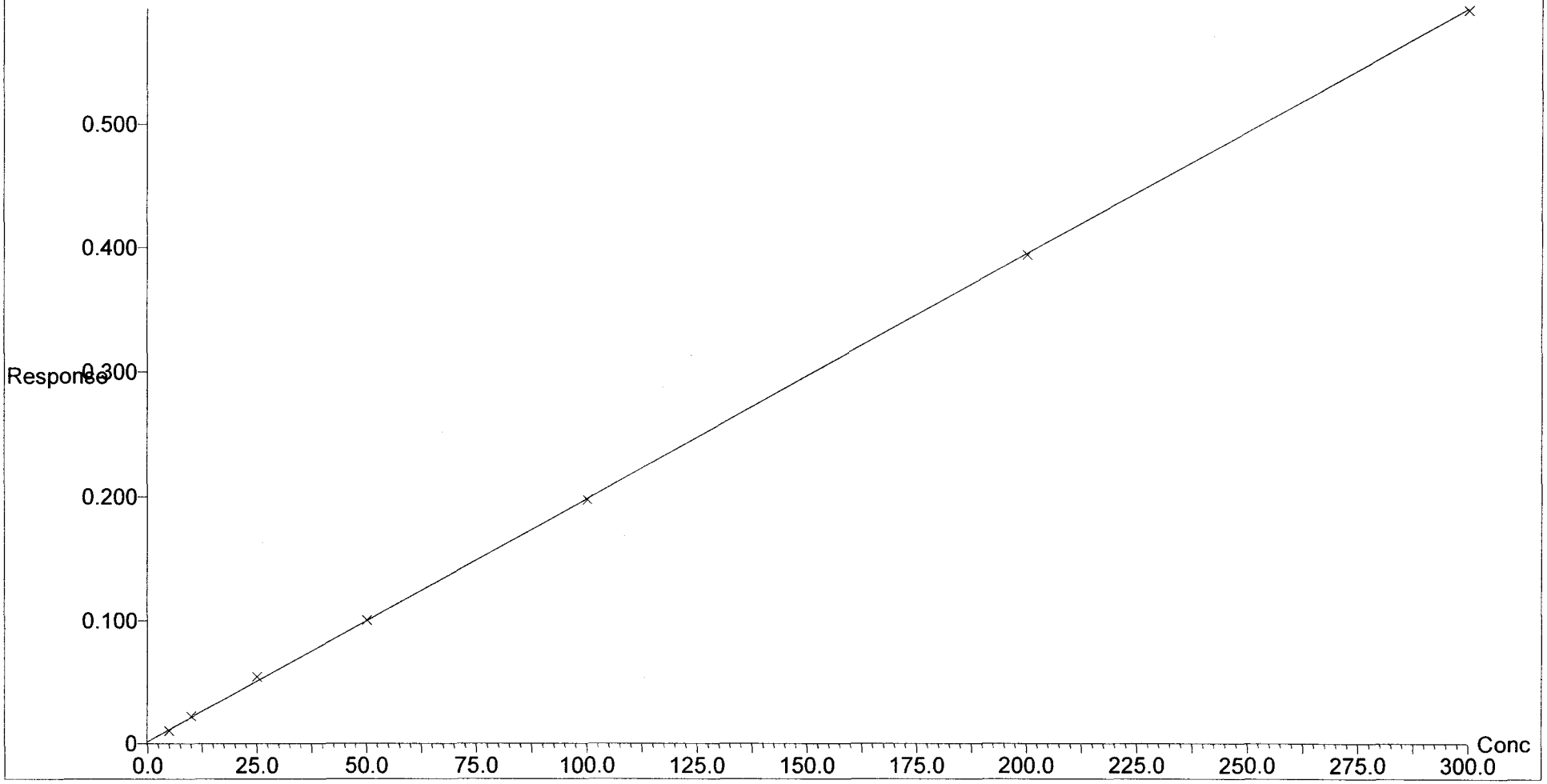
Compound 17 name: 2,4-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.997621
Calibration curve: 1.34213e-6 * x^2 + 0.00427312 * x + 0.00270958
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

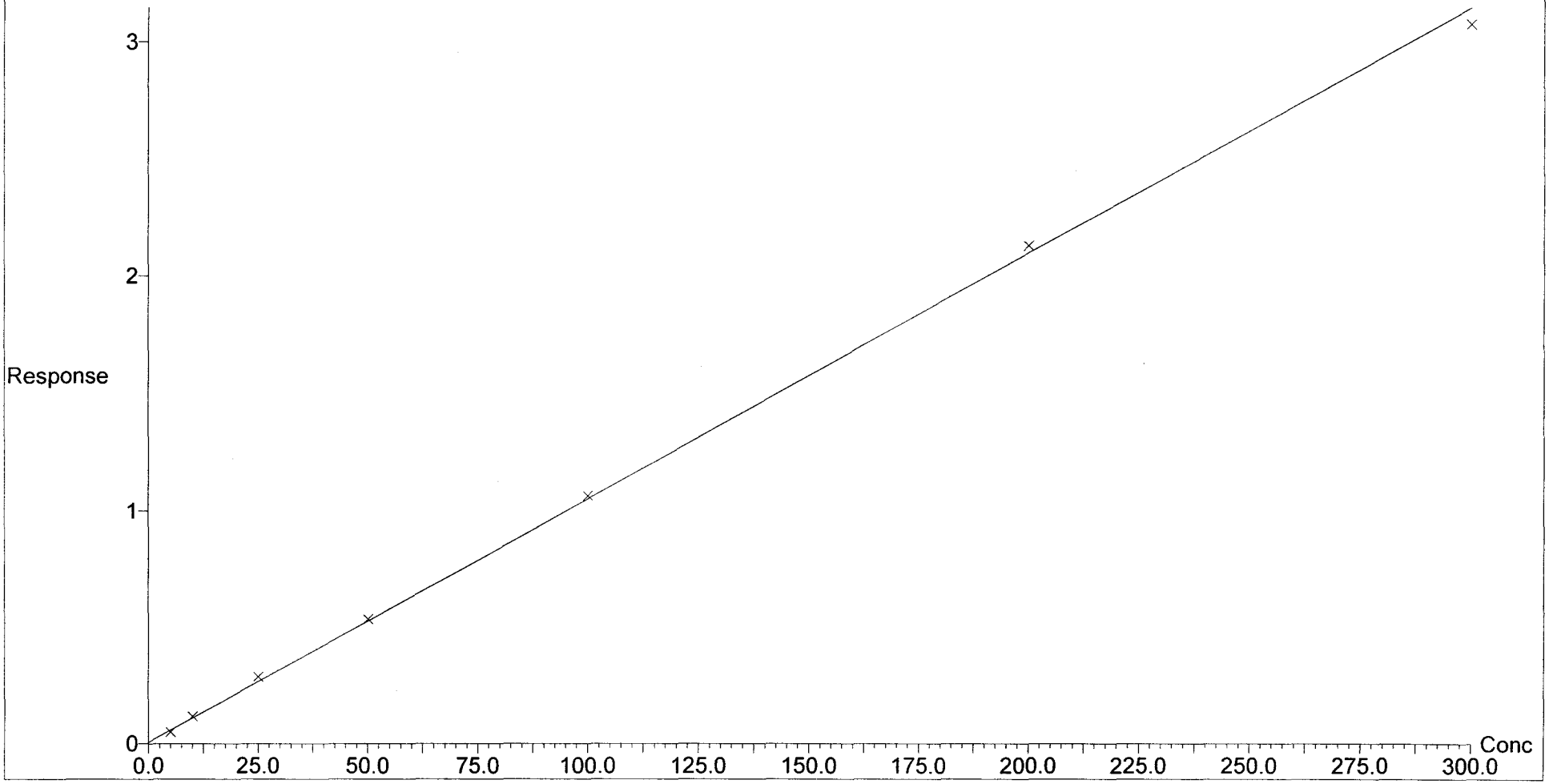
Compound 18 name: 2-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.999594
Calibration curve: 0.00197244 * x + 0.00132781
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

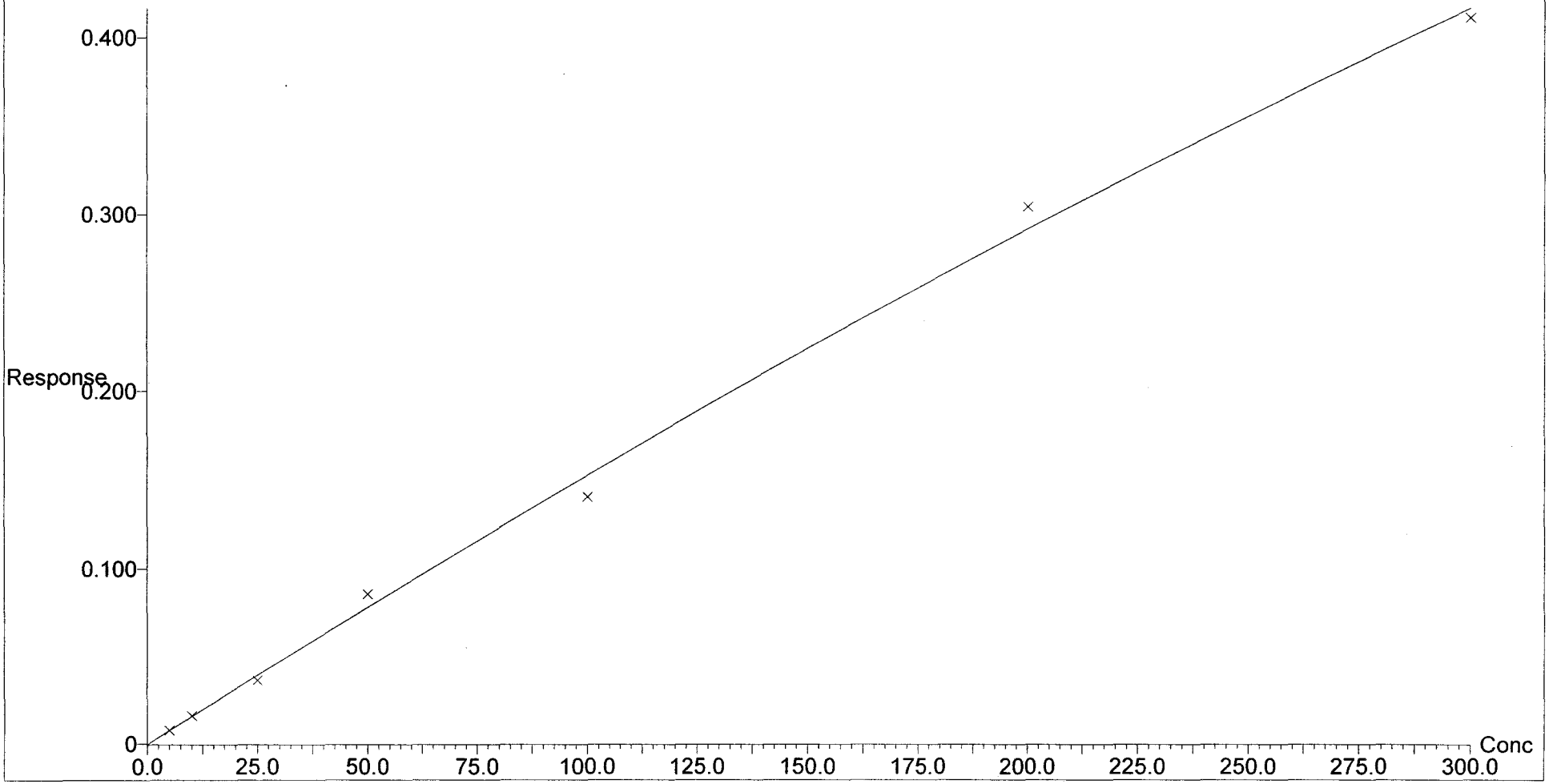
Compound 19 name: PETN Method File: ex48g29
Coefficient of Determination: 0.999013
Calibration curve: 0.0104654 * x + 0.00498117
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

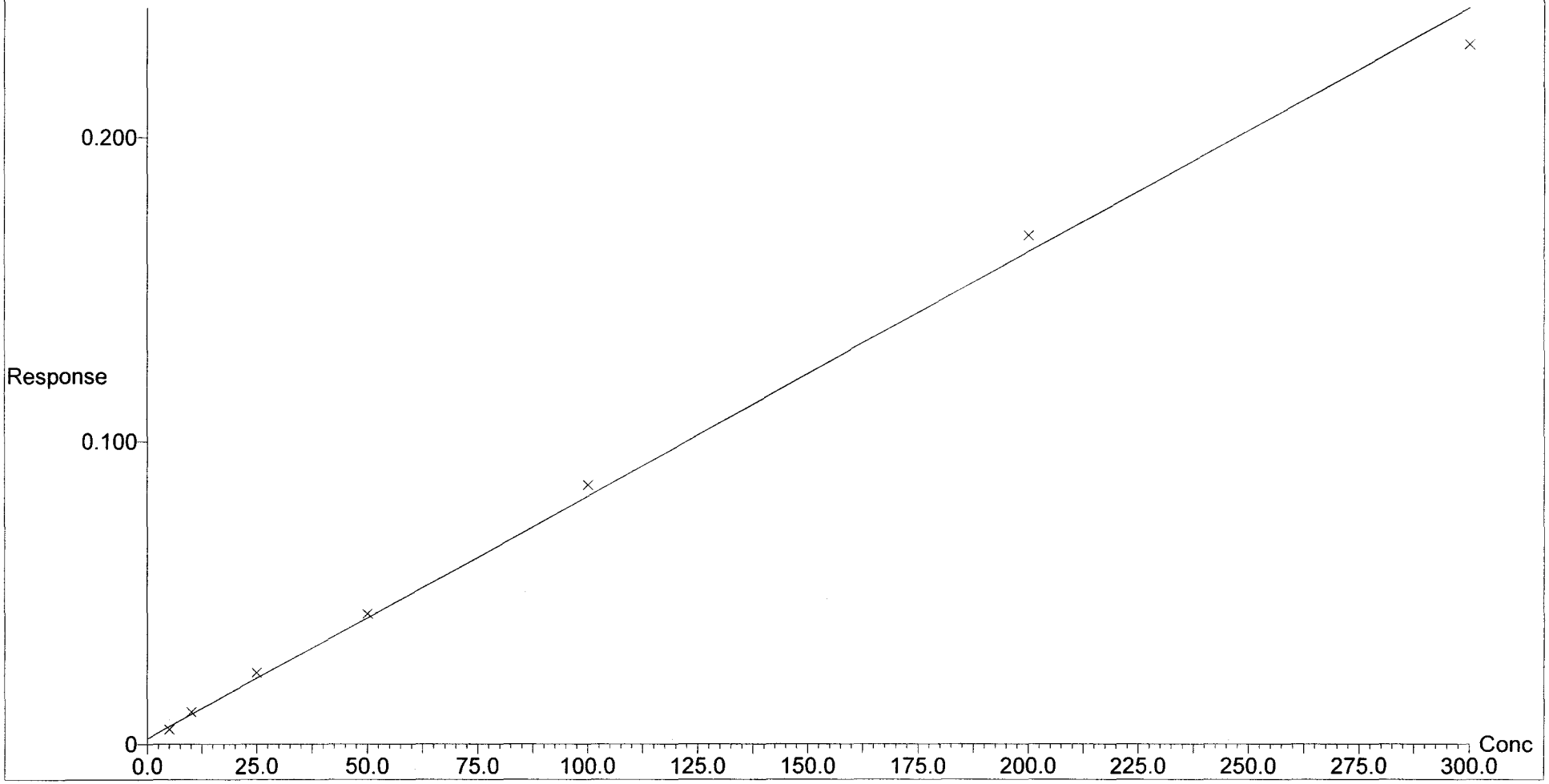
Compound 20 name: 4-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.996636
Calibration curve: -7.10754e-7 * x^2 + 0.00160195 * x + -0.000369042
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 15:23:06 2008

Compound 21 name: 3-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.996762
Calibration curve: 0.000802265 * x + 0.00179808
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



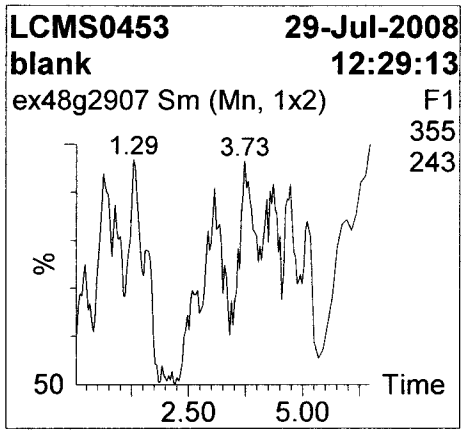
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

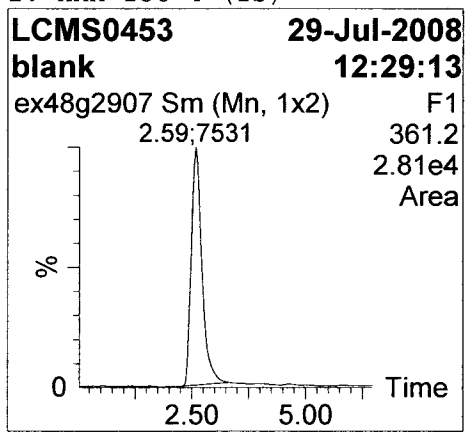
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2907
Text: blank

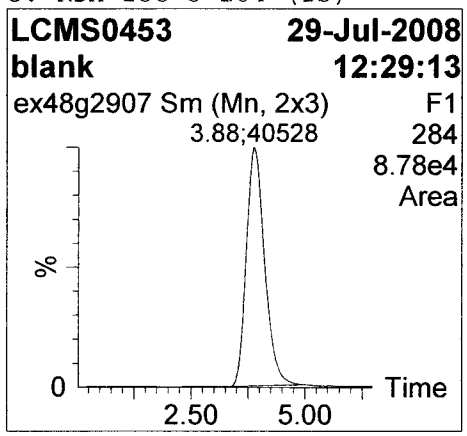
1: HMX



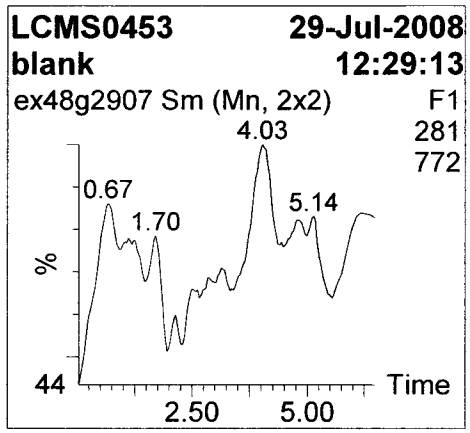
2: HMX 13C-4 (IS)



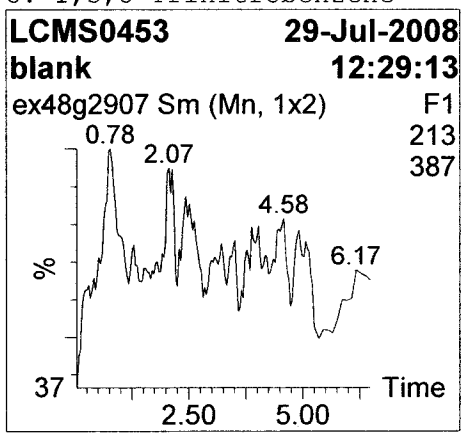
3: RDX 13C-3 284 (IS)



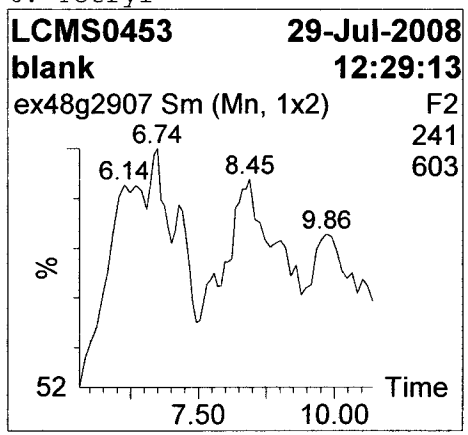
4: RDX



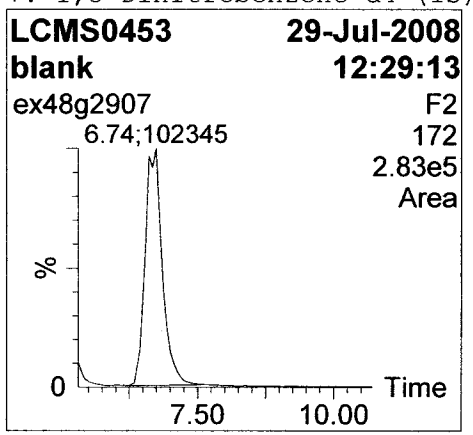
5: 1,3,5-Trinitrobenzene



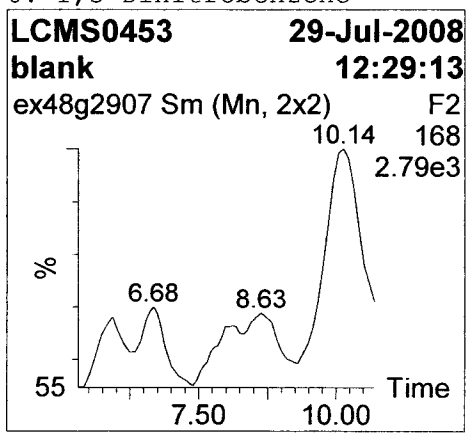
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



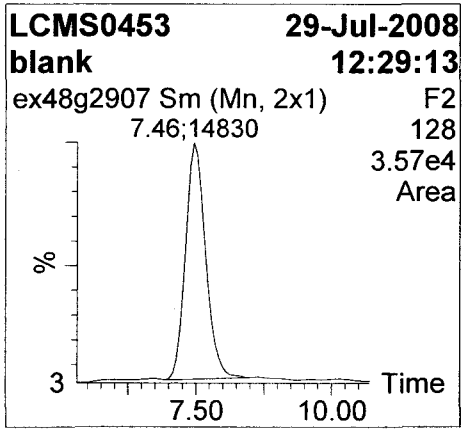
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

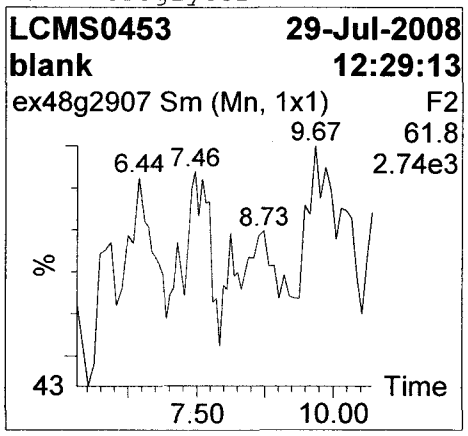
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2907
Text: blank

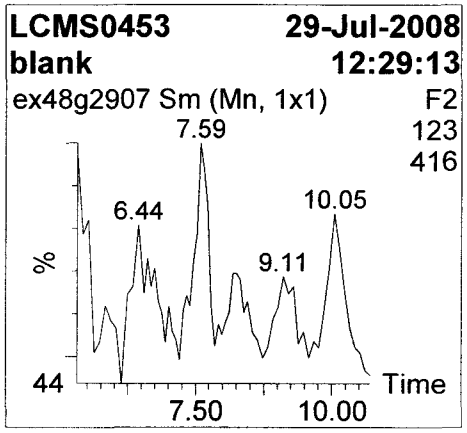
9: Nitrobenzene-d5



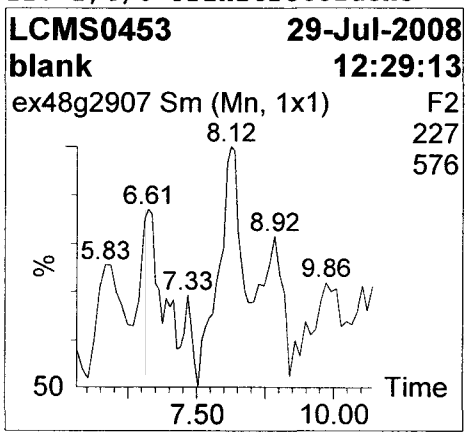
10: Nitroglycerin



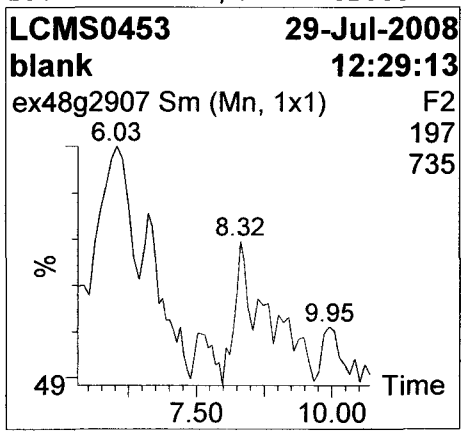
11: Nitrobenzene



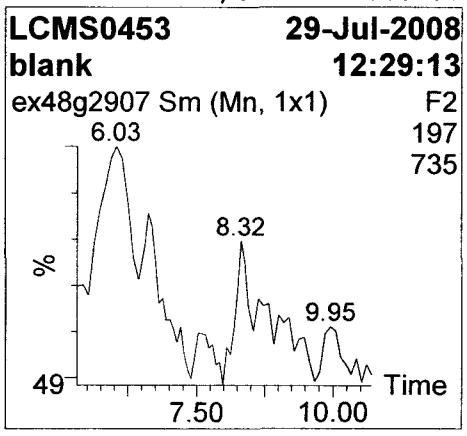
12: 2,4,6-Trinitrotoluene



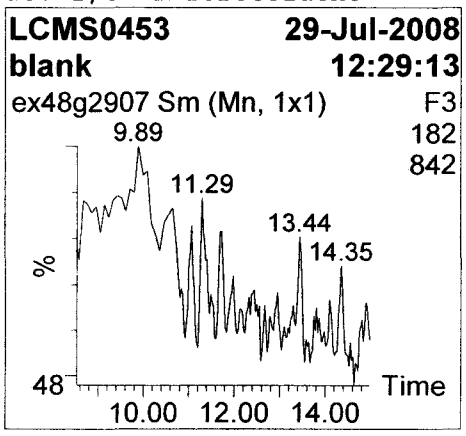
13: 4-Amino-2,6-Dinitrotolu..



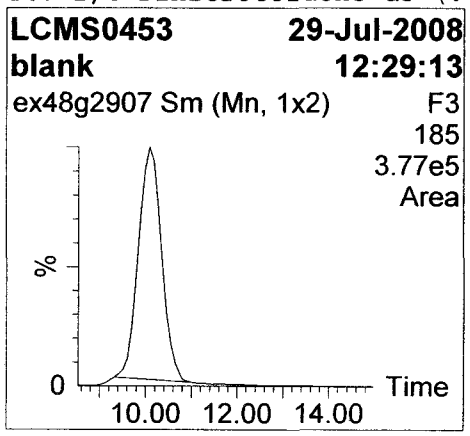
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



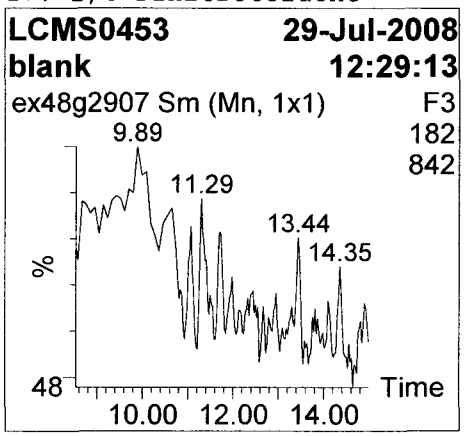
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

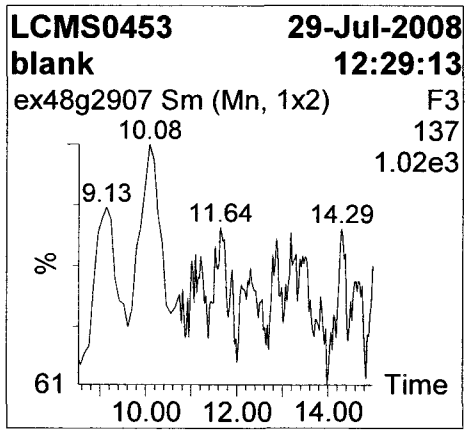
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2907
Text: blank

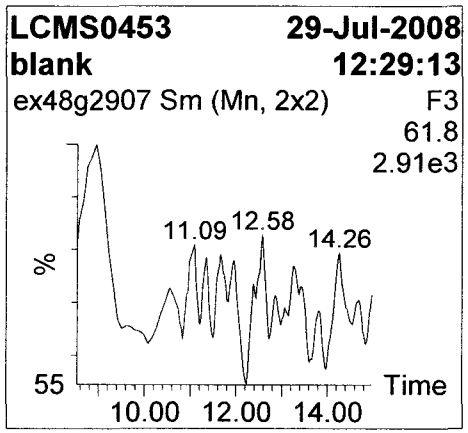
17: 2,4-Dinitrotoluene



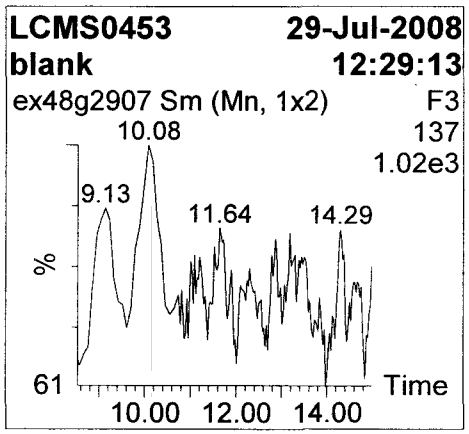
18: 2-Nitrotoluene



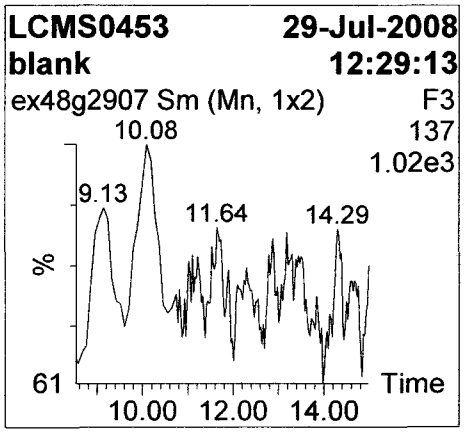
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2907
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7531	bb	1.132	113	29/Jul/08	ex48g29	
RDX 13C-..	3.882	40528	bb	0.999	100	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.743	102345	bb	1.009	101	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.464	14830	bb	48.972	98	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.076	213845	bb	0.997	100	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

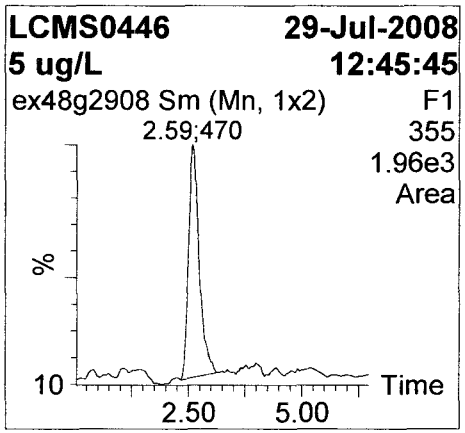
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

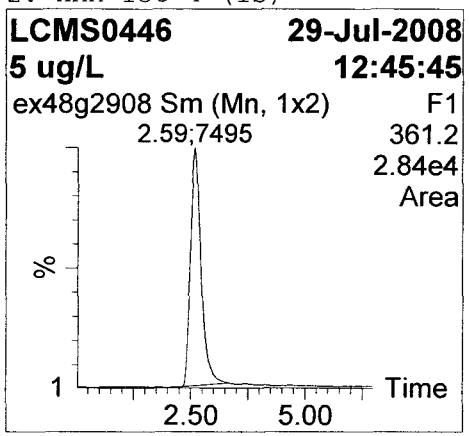
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2908
Text: 5 ug/L

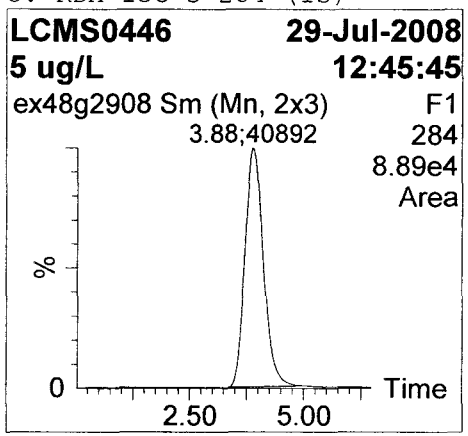
1: HMX



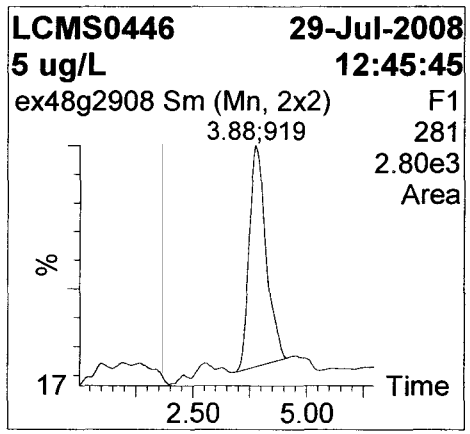
2: HMX 13C-4 (IS)



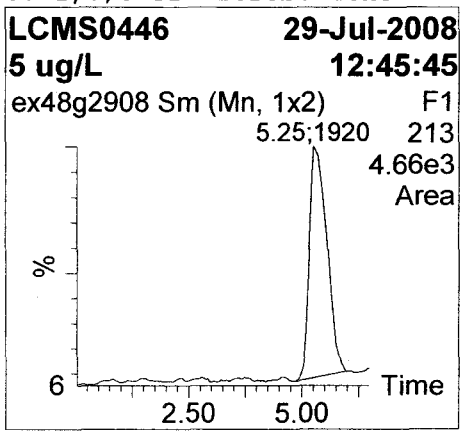
3: RDX 13C-3 284 (IS)



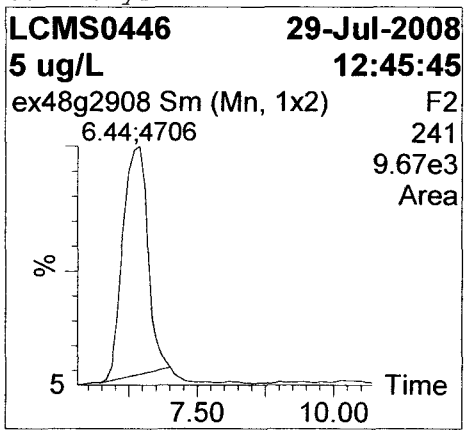
4: RDX



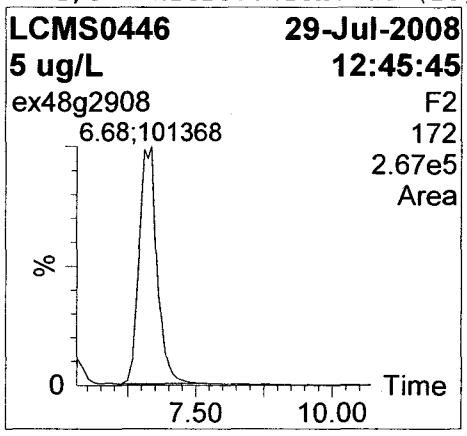
5: 1,3,5-Trinitrobenzene



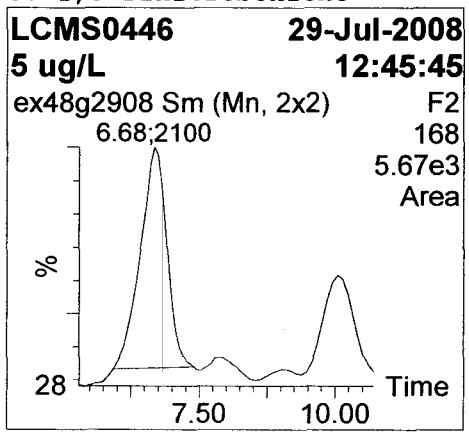
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



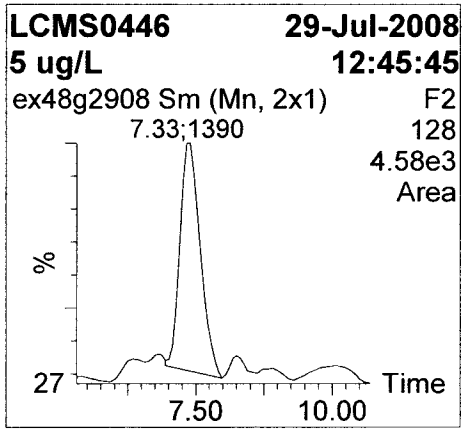
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

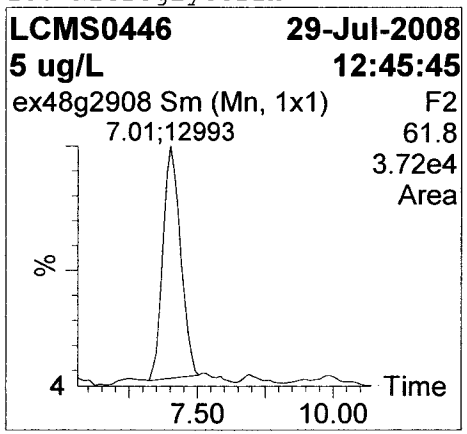
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2908
Text: 5 ug/L

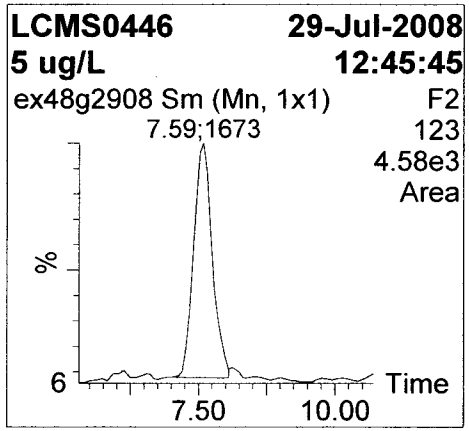
9: Nitrobenzene-d5



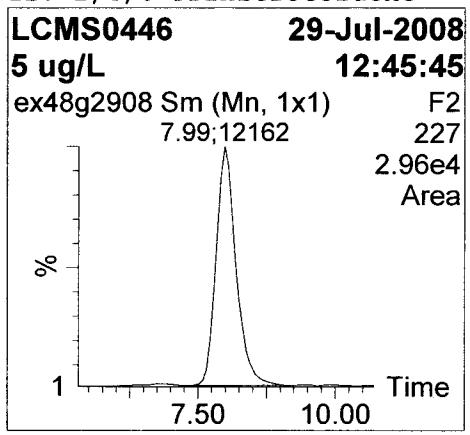
10: Nitroglycerin



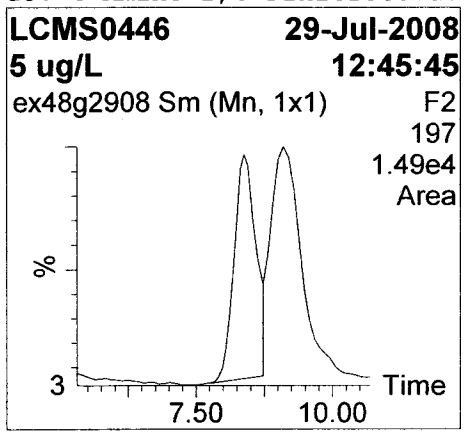
11: Nitrobenzene



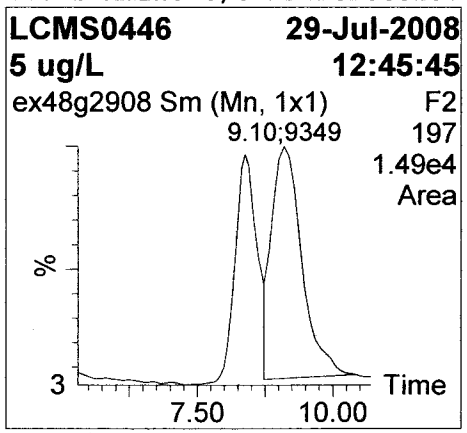
12: 2,4,6-Trinitrotoluene



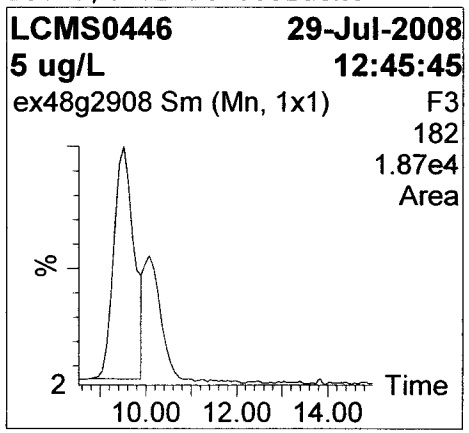
13: 4-Amino-2,6-Dinitrotolu..



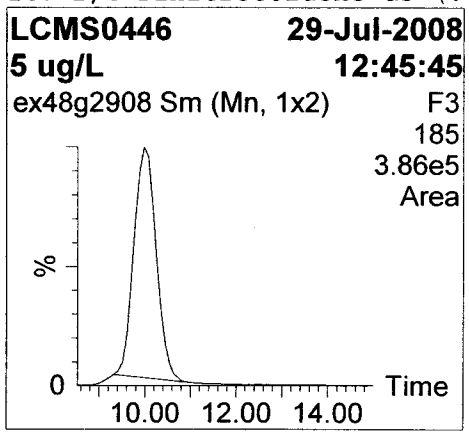
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



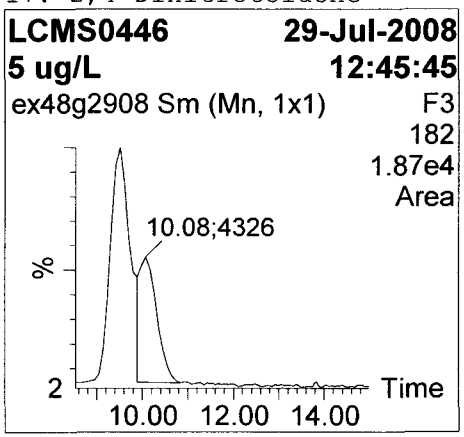
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

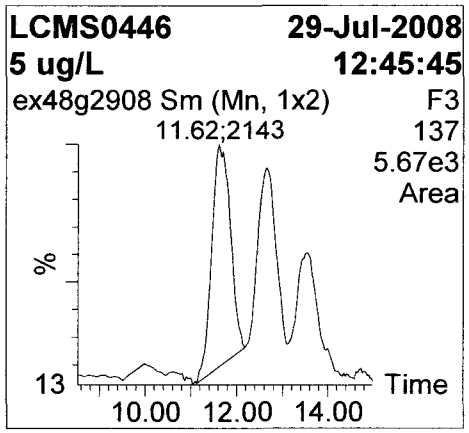
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2908
Text: 5 ug/L

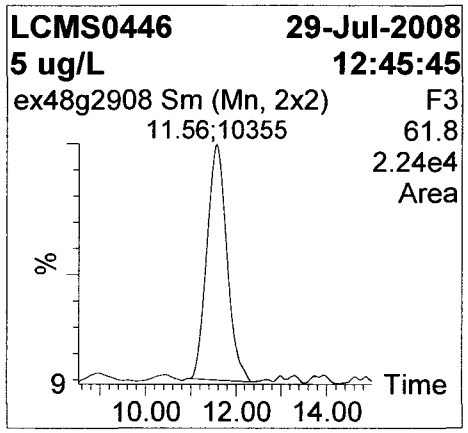
17: 2,4-Dinitrotoluene



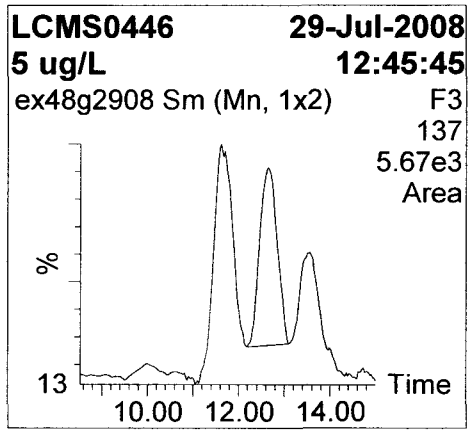
18: 2-Nitrotoluene



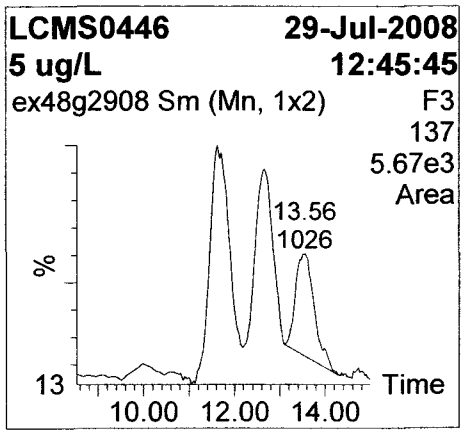
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2908
Text: 5 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	470	bb	4.073	81	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7495	bb	1.127	113	29/Jul/08	ex48g29	
RDX 13C-..	3.882	40892	bb	1.008	101	29/Jul/08	ex48g29	
RDX	3.882	919	bb	3.095	62	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	1920	bb	3.698	74	29/Jul/08	ex48g29	
Tetryl	6.444	4706	bb	4.953	99	29/Jul/08	ex48g29	
1,3 Dini..	6.678	101368	bb	0.999	100	29/Jul/08	ex48g29	
1,3-Dini..	6.678	2100	bb	4.781	96	29/Jul/08	ex48g29	
Nitroben..	7.333	1390	db	3.344	67	29/Jul/08	ex48g29	
Nitrogly..	7.005	12993	bb	3.282	66	29/Jul/08	ex48g29	
Nitroben..	7.595	1673	bd	4.003	80	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	12162	bb	4.576	92	29/Jul/08	ex48g29	
4-Amino-..	8.381	6168	dd	4.159	83	29/Jul/08	ex48g29	
2-Amino-..	9.105	9349	db	4.803	96	29/Jul/08	ex48g29	
2,6-Dini..	9.510	8876	bd	4.011	80	29/Jul/08	ex48g29	
2,4-Dini..	9.981	212900	bb	0.992	99	29/Jul/08	ex48g29	
2,4-Dini..	10.075	4326	db	4.116	82	29/Jul/08	ex48g29	
2-Nitrot..	11.615	2143	bb	4.430	89	29/Jul/08	ex48g29	
PETN	11.558	10355	bb	4.171	83	29/Jul/08	ex48g29	
4-Nitrot..	12.644	1628	bb	5.014	100	29/Jul/08	ex48g29	
3-Nitrot..	13.558	1026	bb	3.768	75	29/Jul/08	ex48g29	

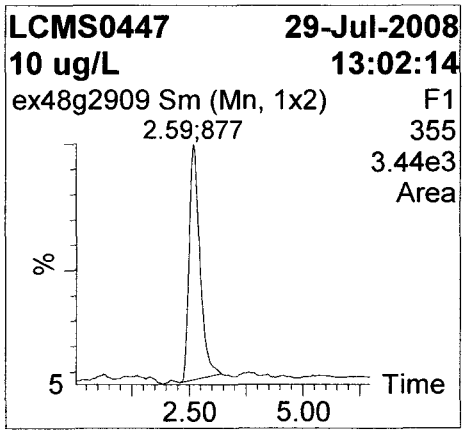
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

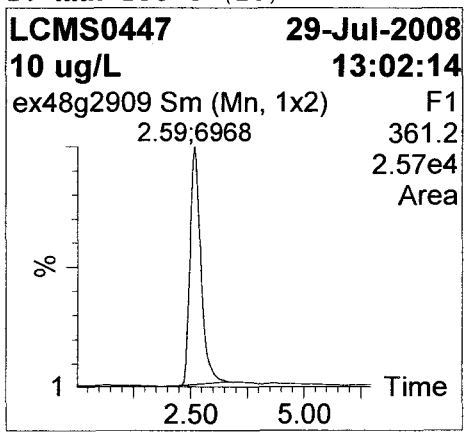
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2909
Text: 10 ug/L

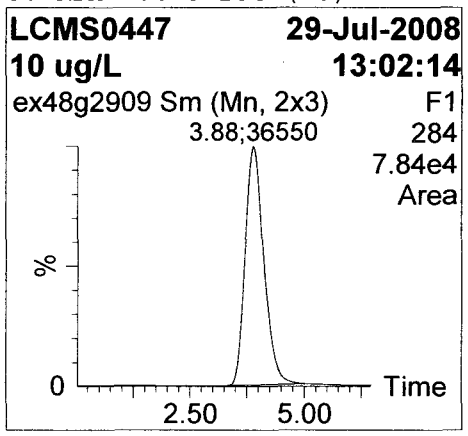
1: HMX



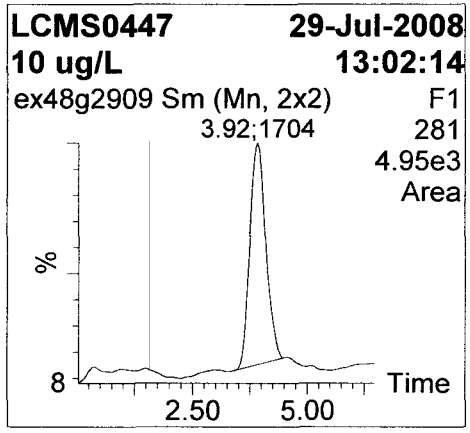
2: HMX 13C-4 (IS)



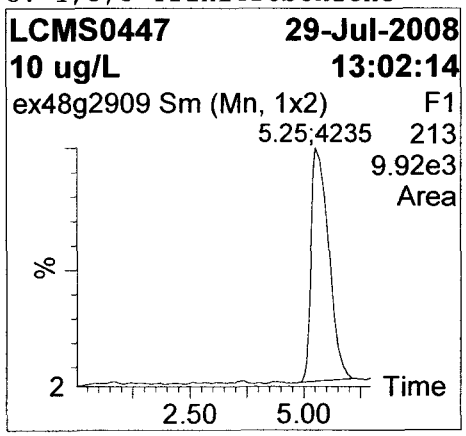
3: RDX 13C-3 284 (IS)



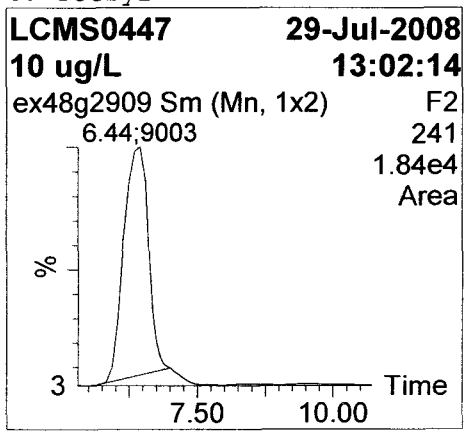
4: RDX



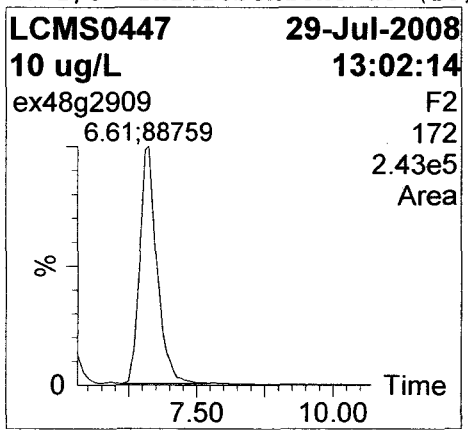
5: 1,3,5-Trinitrobenzene



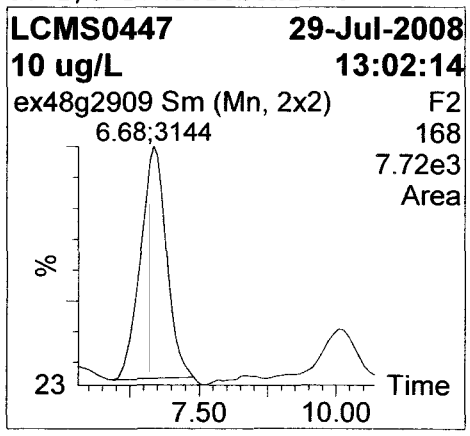
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



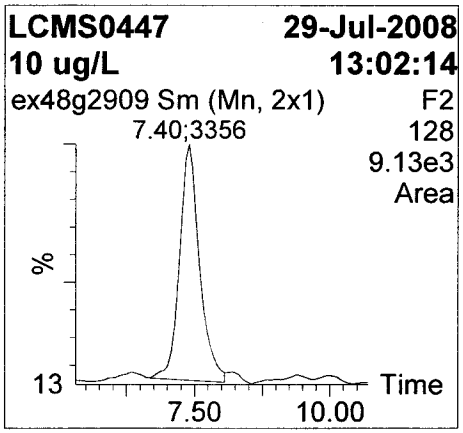
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

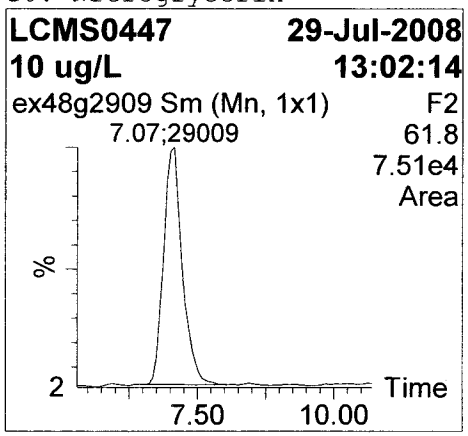
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2909
Text: 10 ug/L

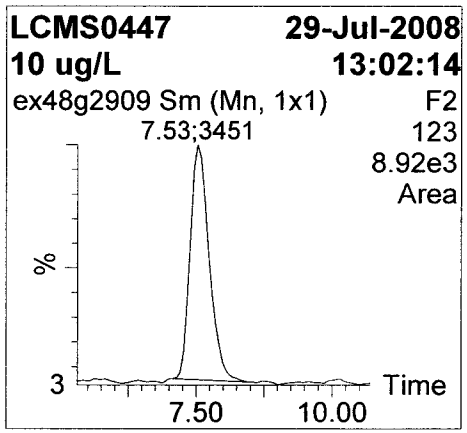
9: Nitrobenzene-d5



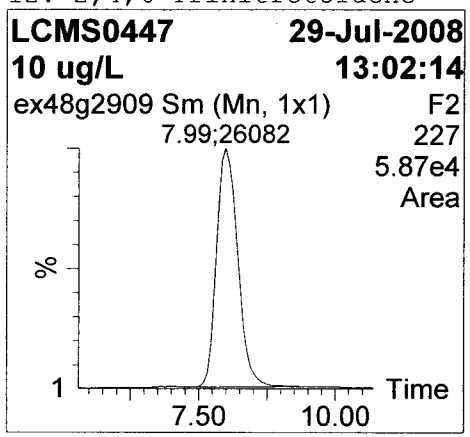
10: Nitroglycerin



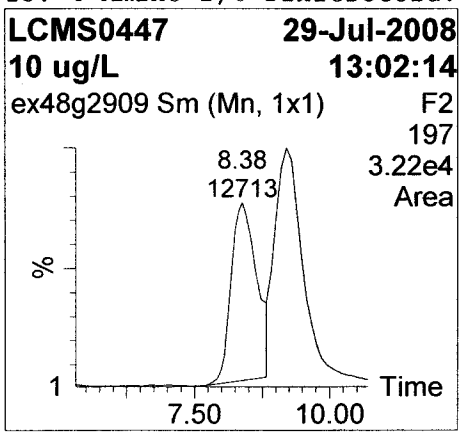
11: Nitrobenzene



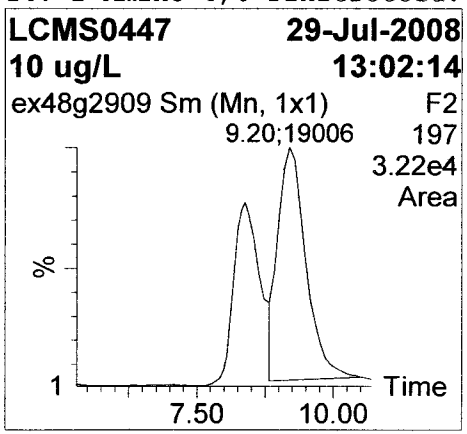
12: 2,4,6-Trinitrotoluene



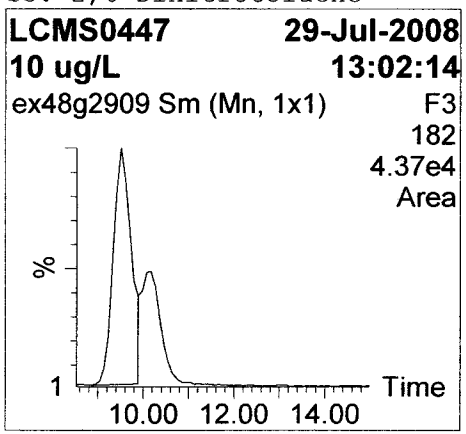
13: 4-Amino-2,6-Dinitrotolu..



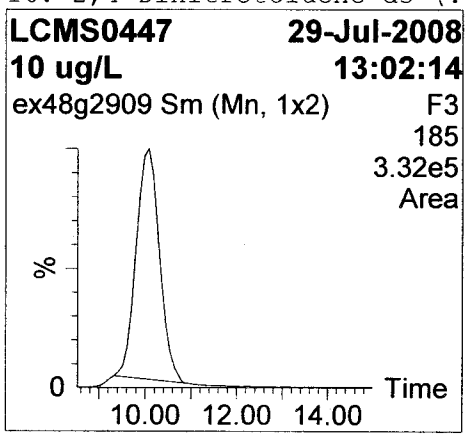
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



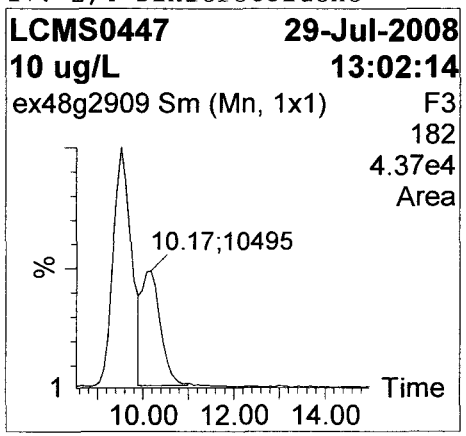
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

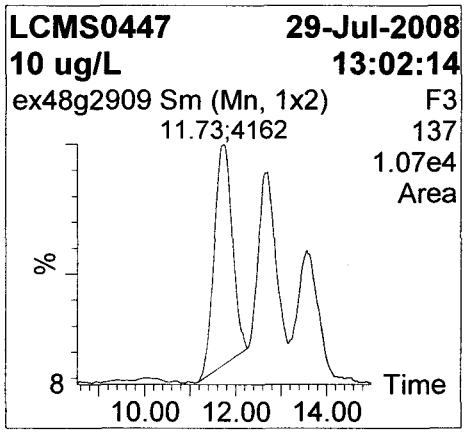
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2909
Text: 10 ug/L

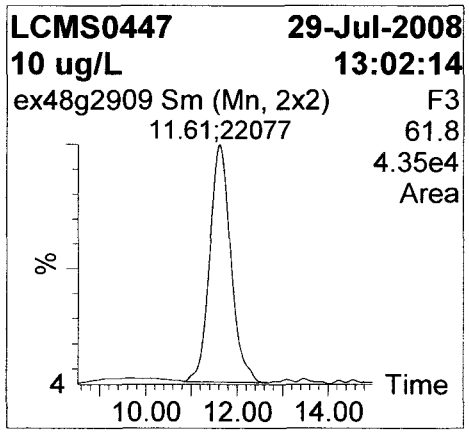
17: 2,4-Dinitrotoluene



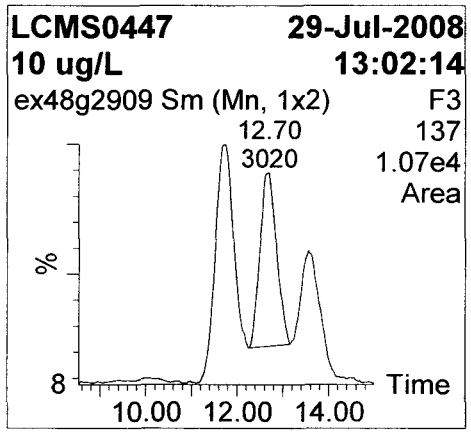
18: 2-Nitrotoluene



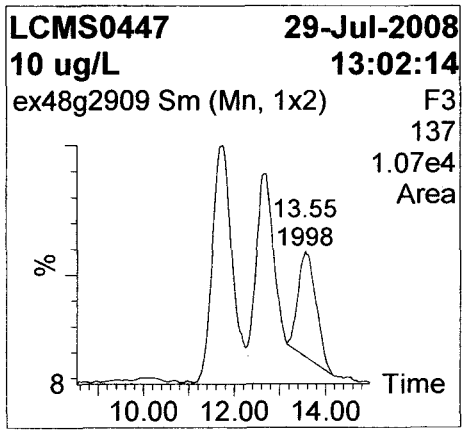
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 12

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2909
Text: 10 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	877	bb	9.817	98	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6968	bb	1.048	105	29/Jul/08	ex48g29	
RDX 13C-..	3.882	36550	bb	0.901	90	29/Jul/08	ex48g29	
RDX	3.919	1704	bb	10.317	103	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	4235	bb	11.174	112	29/Jul/08	ex48g29	
Tetryl	6.444	9003	bb	10.299	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	88759	bb	0.875	88	29/Jul/08	ex48g29	
1,3-Dini..	6.678	3144	bb	9.446	94	29/Jul/08	ex48g29	
Nitroben..	7.398	3356	bd	11.725	117	29/Jul/08	ex48g29	
Nitrogly..	7.071	29009	bb	10.998	110	29/Jul/08	ex48g29	
Nitroben..	7.529	3451	bb	10.858	109	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	26082	bb	10.729	107	29/Jul/08	ex48g29	
4-Amino-..	8.380	12713	bd	10.361	104	29/Jul/08	ex48g29	
2-Amino-..	9.198	19006	db	10.696	107	29/Jul/08	ex48g29	
2,6-Dini..	9.510	19306	bd	10.705	107	29/Jul/08	ex48g29	
2,4-Dini..	10.075	189050	bb	0.881	88	29/Jul/08	ex48g29	
2,4-Dini..	10.169	10495	dd	12.310	123	29/Jul/08	ex48g29	
2-Nitrot..	11.728	4162	bb	10.488	105	29/Jul/08	ex48g29	
PETN	11.614	22077	bb	10.683	107	29/Jul/08	ex48g29	
4-Nitrot..	12.698	3020	bb	10.248	102	29/Jul/08	ex48g29	
3-Nitrot..	13.554	1998	bb	10.929	109	29/Jul/08	ex48g29	

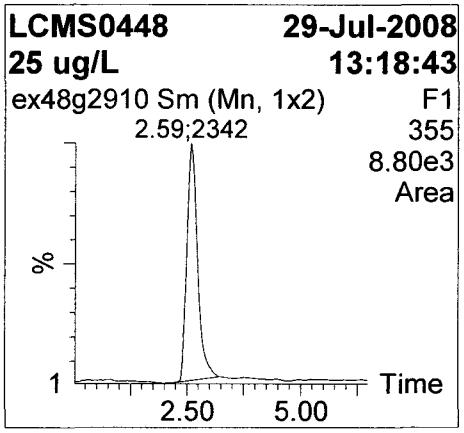
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

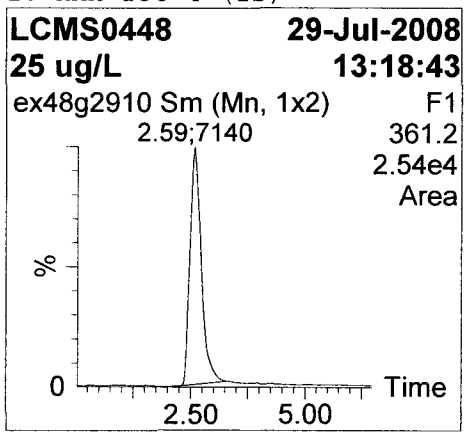
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2910
Text: 25 ug/L

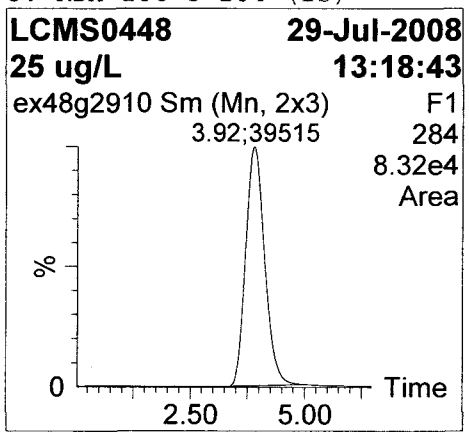
1: HMX



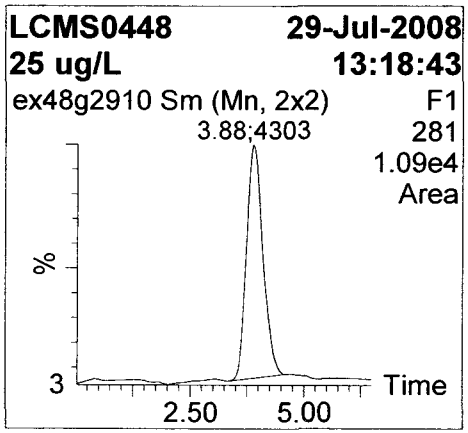
2: HMX 13C-4 (IS)



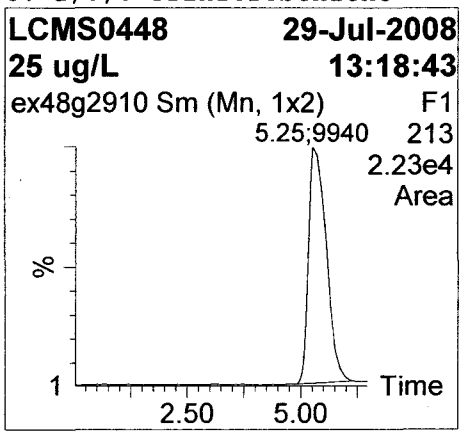
3: RDX 13C-3 284 (IS)



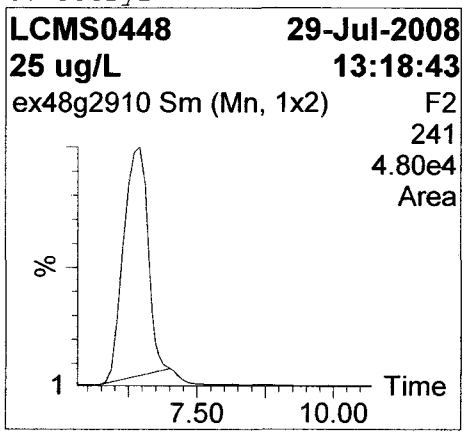
4: RDX



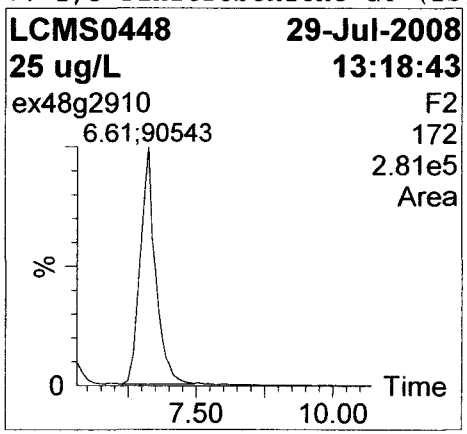
5: 1,3,5-Trinitrobenzene



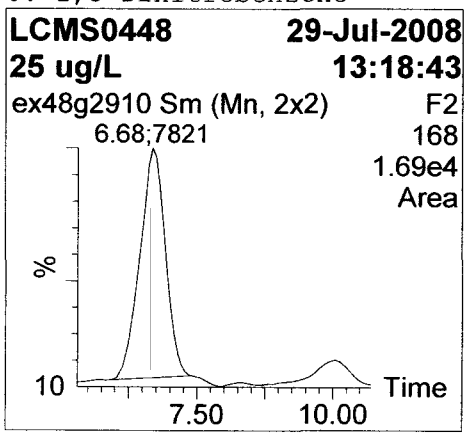
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



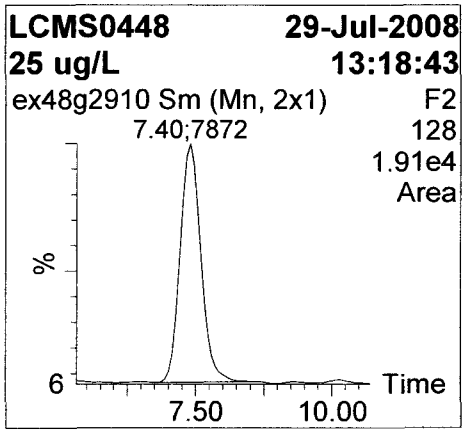
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

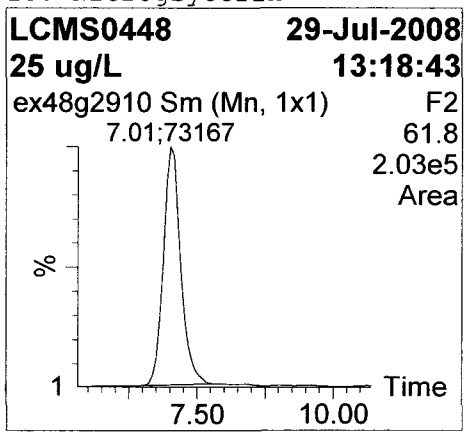
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2910
Text: 25 ug/L

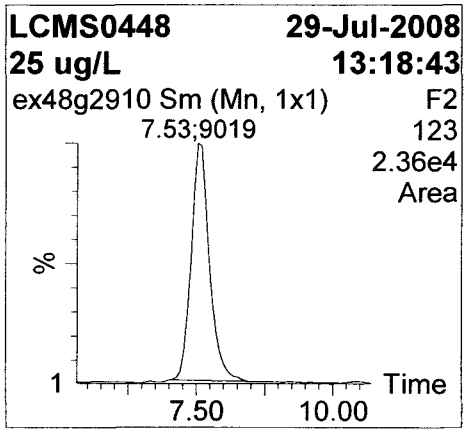
9: Nitrobenzene-d5



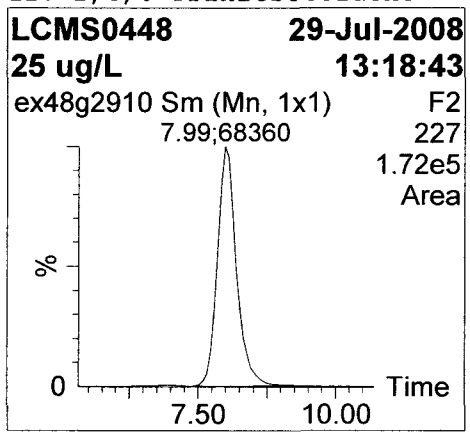
10: Nitroglycerin



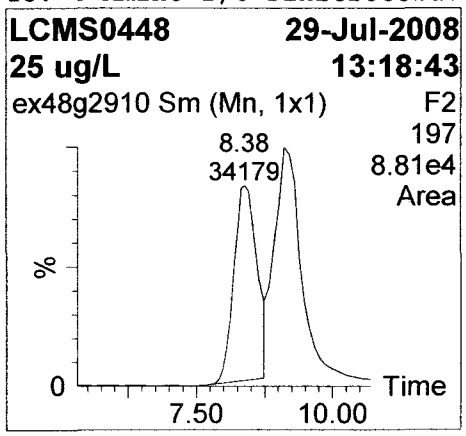
11: Nitrobenzene



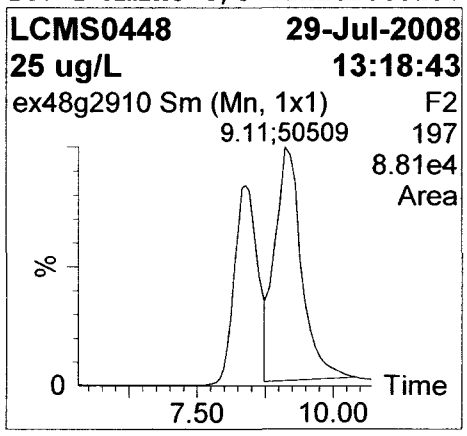
12: 2,4,6-Trinitrotoluene



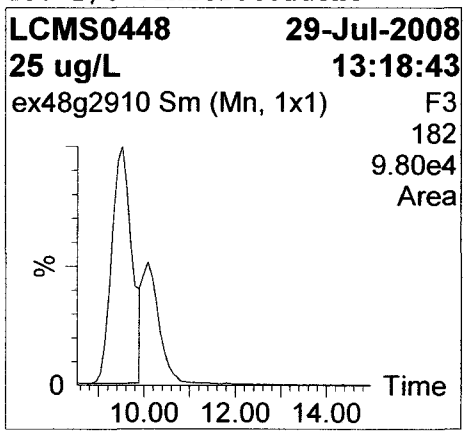
13: 4-Amino-2,6-Dinitrotolu..



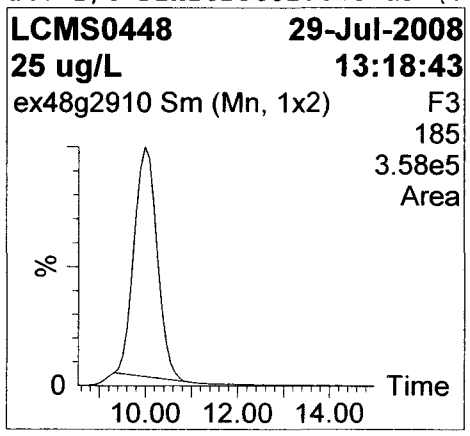
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



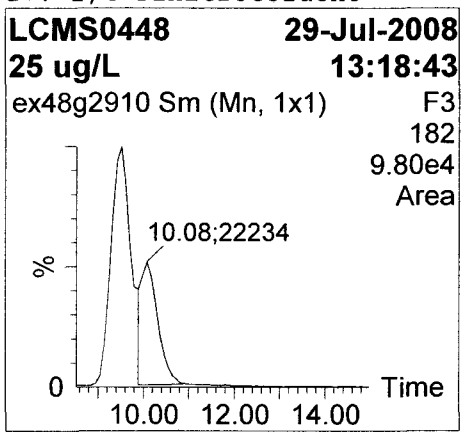
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

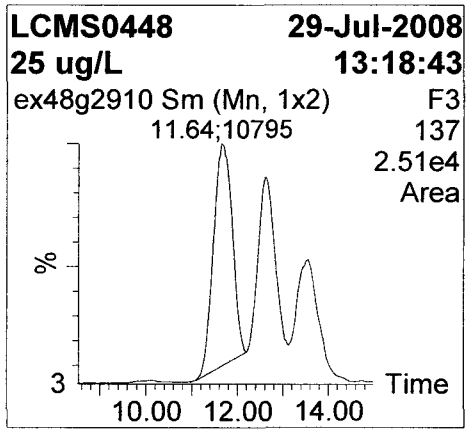
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2910
Text: 25 ug/L

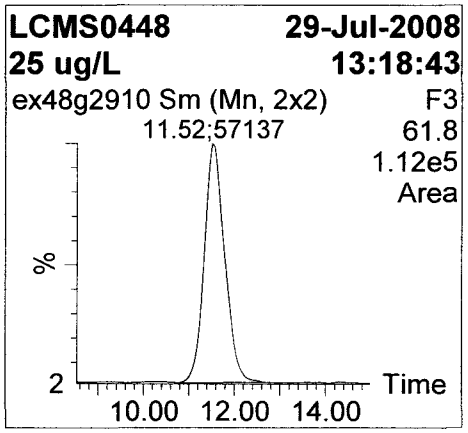
17: 2,4-Dinitrotoluene



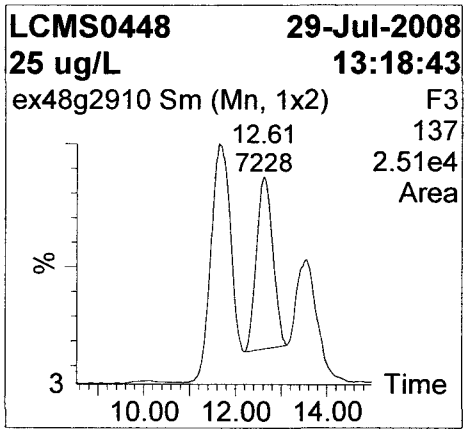
18: 2-Nitrotoluene



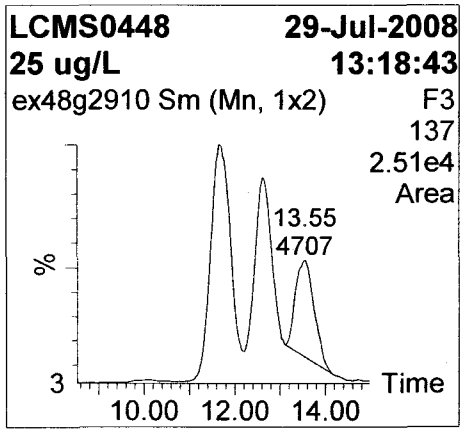
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 16

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2910
Text: 25 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	2342	bb	28.235	113	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7140	bb	1.073	107	29/Jul/08	ex48g29	
RDX 13C-..	3.919	39515	bb	0.974	97	29/Jul/08	ex48g29	
RDX	3.882	4303	bb	28.940	116	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	9940	bb	27.306	109	29/Jul/08	ex48g29	
Tetryl	6.445	23750	bb	25.936	104	29/Jul/08	ex48g29	
1,3 Dini..	6.613	90543	bd	0.893	89	29/Jul/08	ex48g29	
1,3-Dini..	6.678	7821	bb	25.606	102	29/Jul/08	ex48g29	
Nitroben..	7.399	7872	bb	28.813	115	29/Jul/08	ex48g29	
Nitrogly..	7.006	73167	bb	29.691	119	29/Jul/08	ex48g29	
Nitroben..	7.530	9019	bb	29.469	118	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	68360	bb	27.049	108	29/Jul/08	ex48g29	
4-Amino-..	8.381	34179	bd	27.996	112	29/Jul/08	ex48g29	
2-Amino-..	9.106	50509	db	27.310	109	29/Jul/08	ex48g29	
2,6-Dini..	9.511	48406	bd	26.322	105	29/Jul/08	ex48g29	
2,4-Dini..	9.982	199111	bb	0.928	93	29/Jul/08	ex48g29	
2,4-Dini..	10.076	22234	dd	25.297	101	29/Jul/08	ex48g29	
2-Nitrot..	11.636	10795	bb	26.814	107	29/Jul/08	ex48g29	
PETN	11.522	57137	bb	26.944	108	29/Jul/08	ex48g29	
4-Nitrot..	12.607	7228	bb	23.127	93	29/Jul/08	ex48g29	
3-Nitrot..	13.550	4707	bb	27.224	109	29/Jul/08	ex48g29	

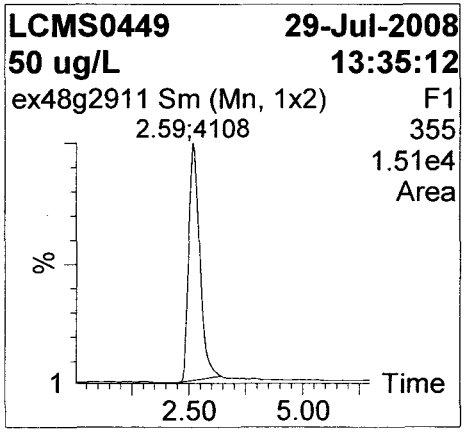
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

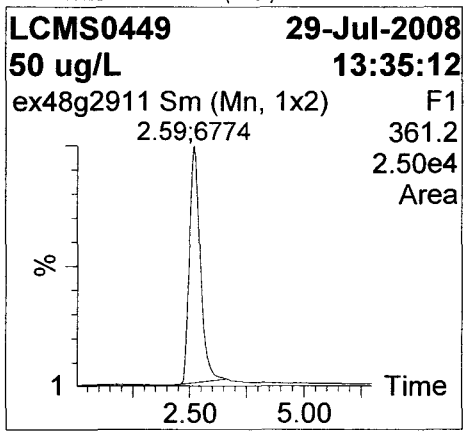
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2911
Text: 50 ug/L

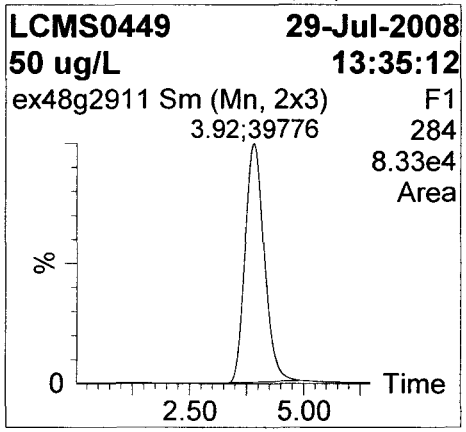
1: HMX



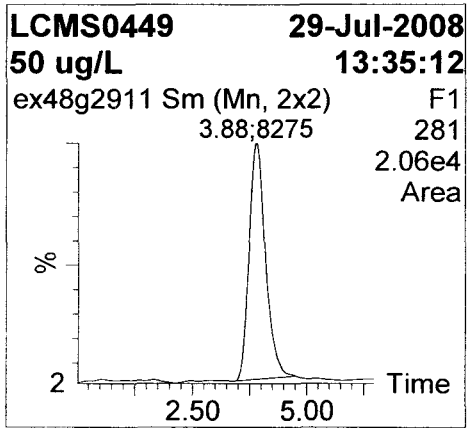
2: HMX 13C-4 (IS)



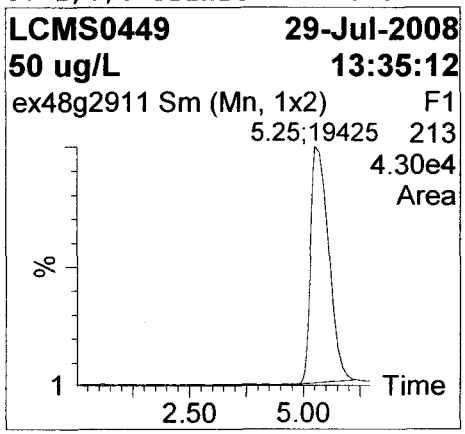
3: RDX 13C-3 284 (IS)



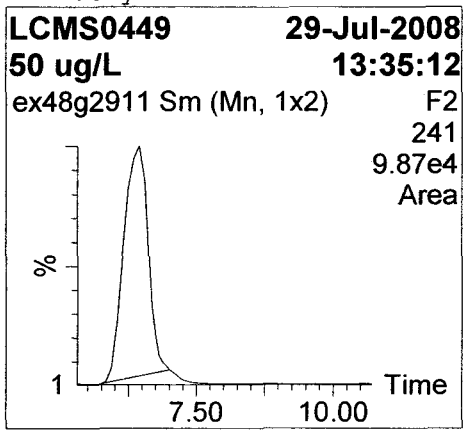
4: RDX



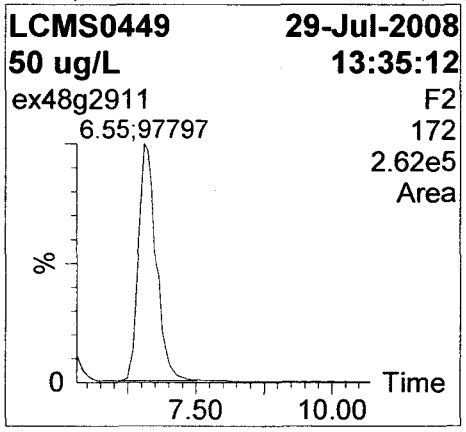
5: 1,3,5-Trinitrobenzene



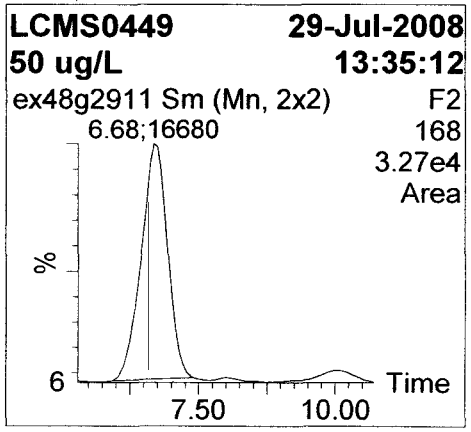
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



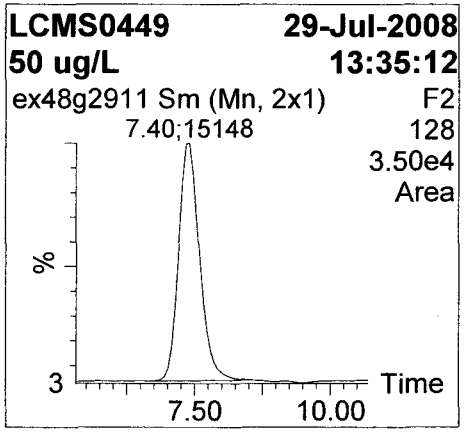
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

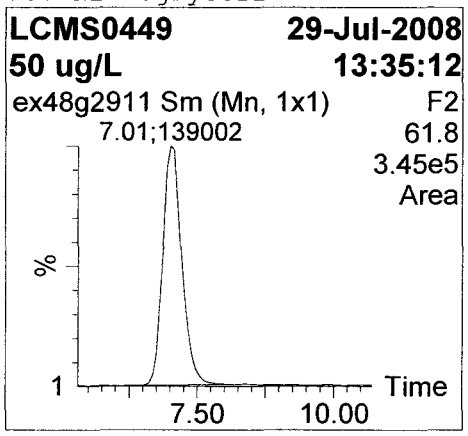
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2911
Text: 50 ug/L

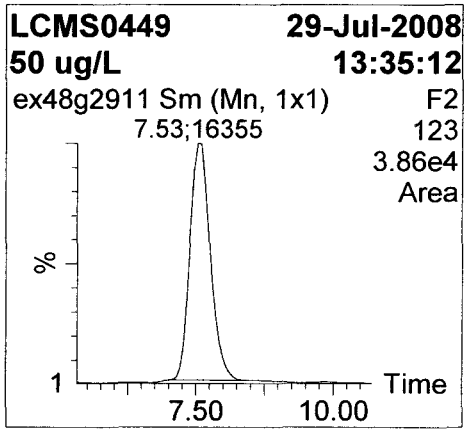
9: Nitrobenzene-d5



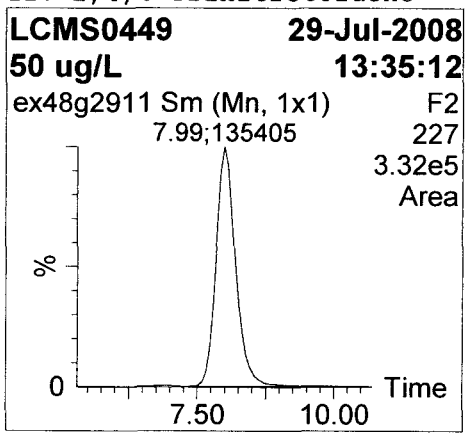
10: Nitroglycerin



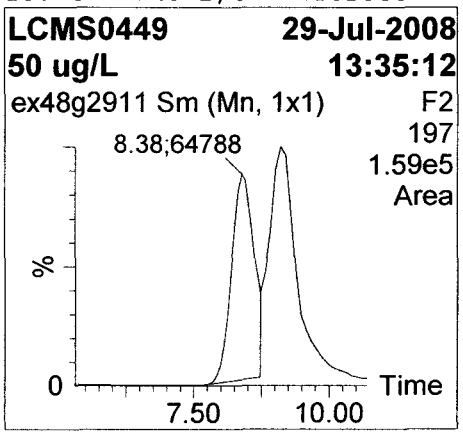
11: Nitrobenzene



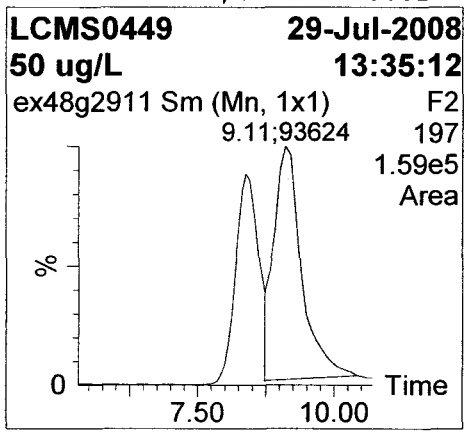
12: 2,4,6-Trinitrotoluene



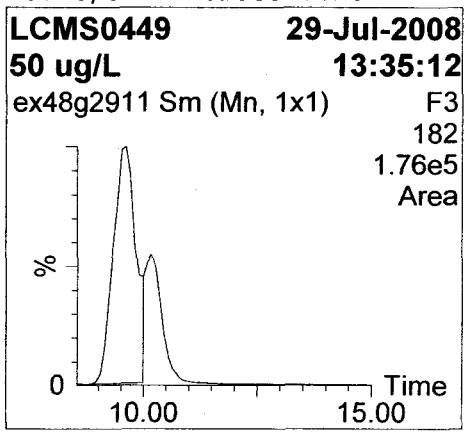
13: 4-Amino-2,6-Dinitrotolu..



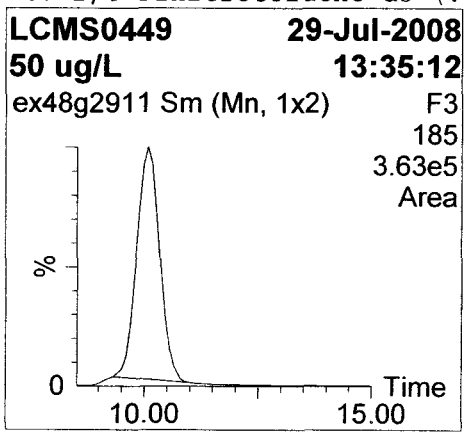
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



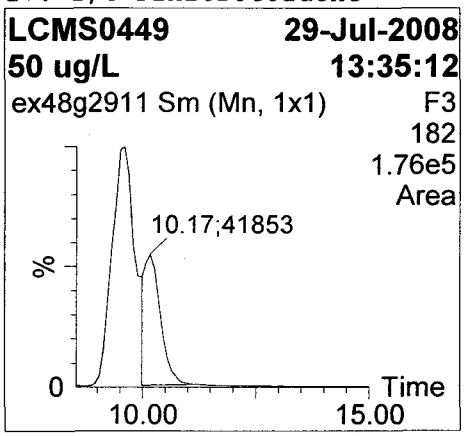
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

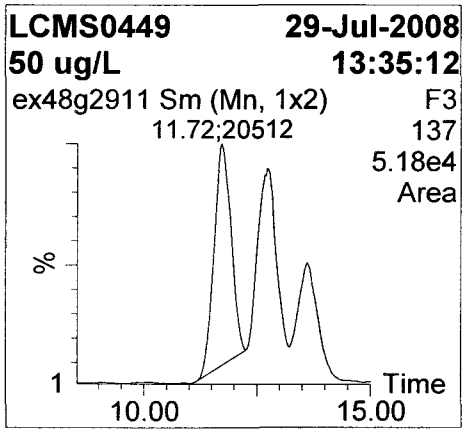
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2911
Text: 50 ug/L

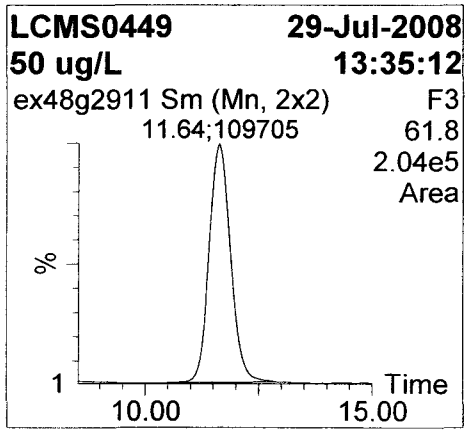
17: 2,4-Dinitrotoluene



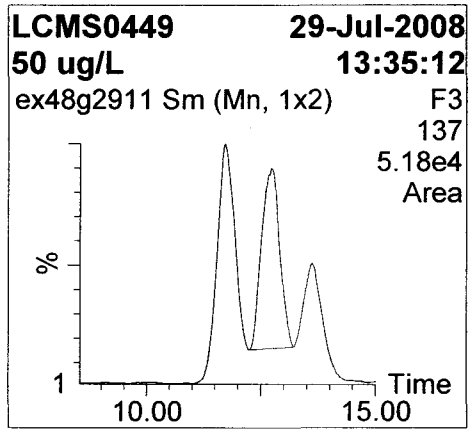
18: 2-Nitrotoluene



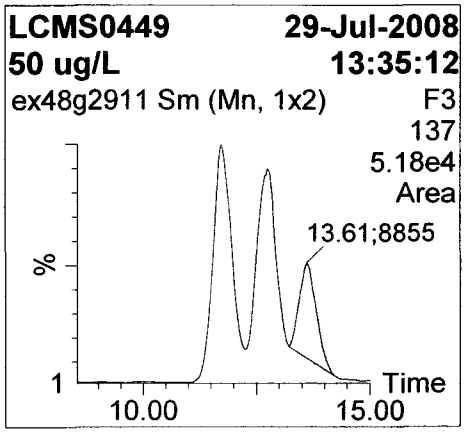
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2911
Text: 50 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	4108	bb	53.583	107	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6774	bb	1.018	102	29/Jul/08	ex48g29	
RDX 13C-..	3.919	39776	bb	0.980	98	29/Jul/08	ex48g29	
RDX	3.882	8275	bb	58.592	117	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	19425	bb	50.394	101	29/Jul/08	ex48g29	
Tetryl	6.445	49397	bb	49.534	99	29/Jul/08	ex48g29	
1,3 Dini..	6.547	97797	bs	0.964	96	29/Jul/08	ex48g29	
1,3-Dini..	6.678	16680	bb	52.307	105	29/Jul/08	ex48g29	
Nitroben..	7.399	15148	bb	52.447	105	29/Jul/08	ex48g29	
Nitrogly..	7.006	139002	bb	53.511	107	29/Jul/08	ex48g29	
Nitroben..	7.530	16355	bb	50.193	100	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	135405	bb	49.329	99	29/Jul/08	ex48g29	
4-Amino-..	8.381	64788	bd	49.450	99	29/Jul/08	ex48g29	
2-Amino-..	9.106	93624	db	46.622	93	29/Jul/08	ex48g29	
2,6-Dini..	9.606	99450	bd	53.256	107	29/Jul/08	ex48g29	
2,4-Dini..	10.076	204522	bb	0.953	95	29/Jul/08	ex48g29	
2,4-Dini..	10.171	41853	db	46.574	93	29/Jul/08	ex48g29	
2-Nitrot..	11.722	20512	bb	50.174	100	29/Jul/08	ex48g29	
PETN	11.636	109705	bb	50.778	102	29/Jul/08	ex48g29	
4-Nitrot..	12.721	17492	bb	54.961	110	29/Jul/08	ex48g29	
3-Nitrot..	13.607	8855	bb	51.728	103	29/Jul/08	ex48g29	

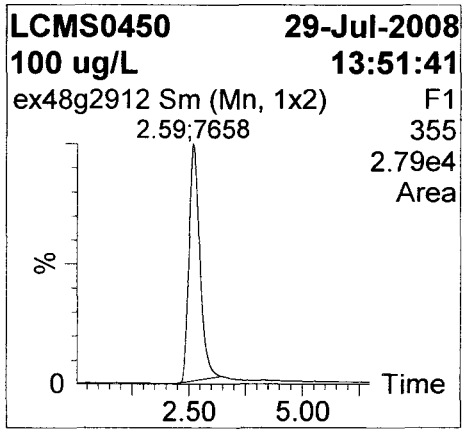
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

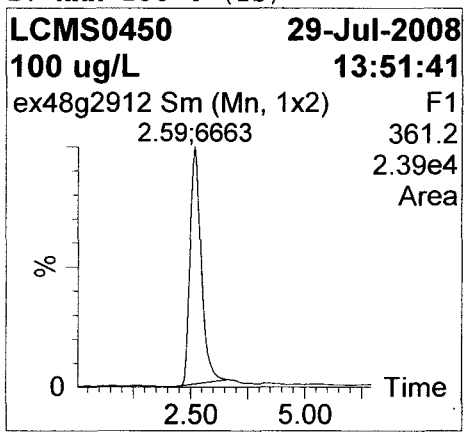
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2912
Text: 100 ug/L

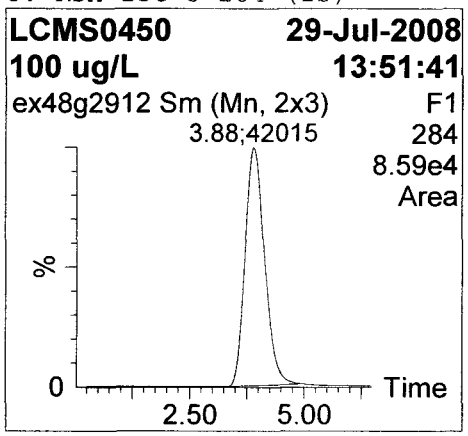
1: HMX



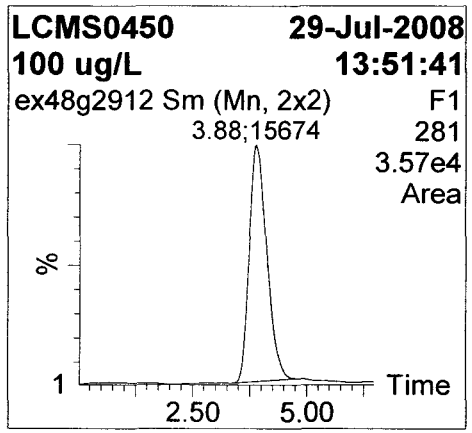
2: HMX 13C-4 (IS)



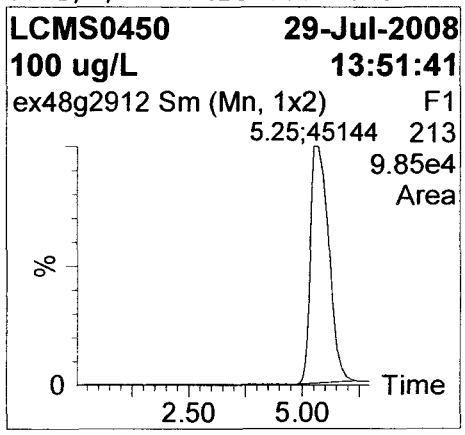
3: RDX 13C-3 284 (IS)



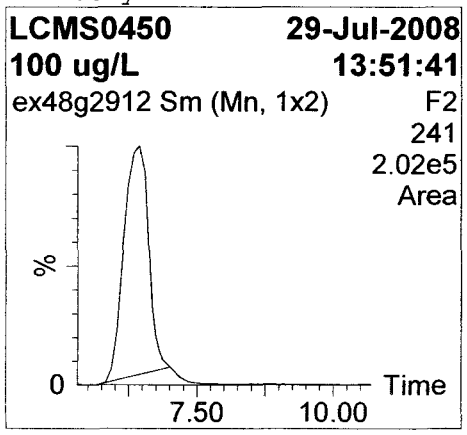
4: RDX



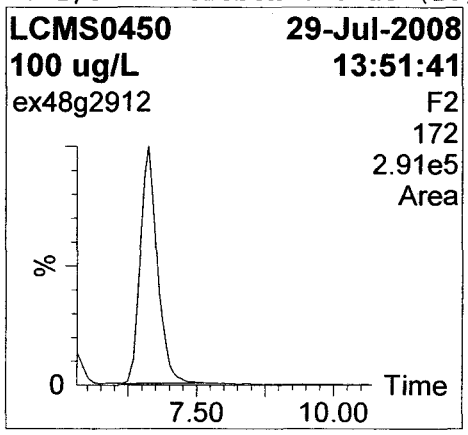
5: 1,3,5-Trinitrobenzene



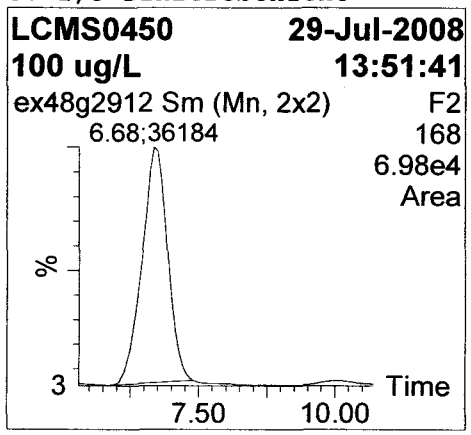
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



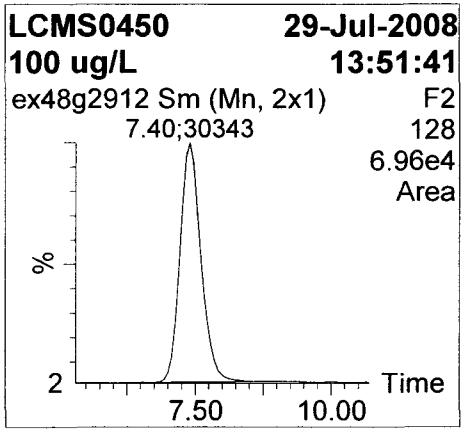
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

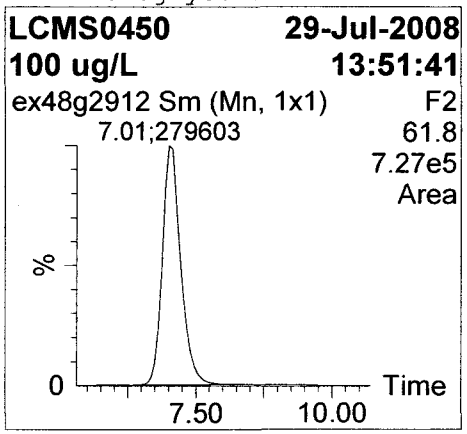
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2912
Text: 100 ug/L

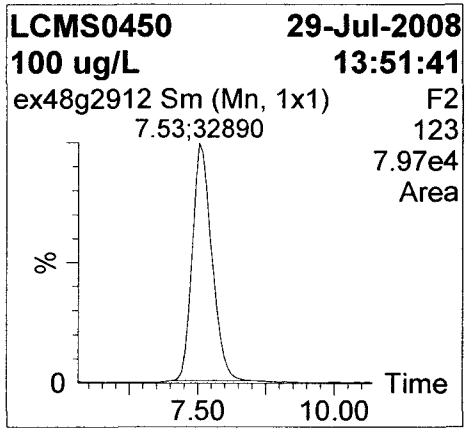
9: Nitrobenzene-d5



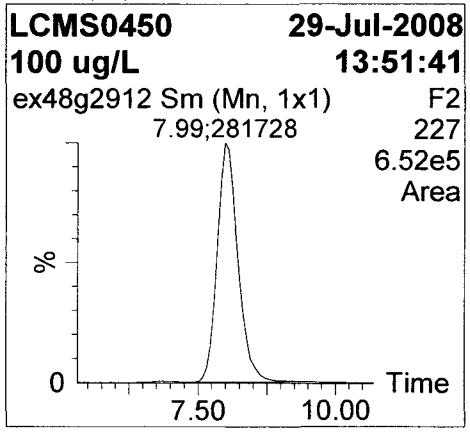
10: Nitroglycerin



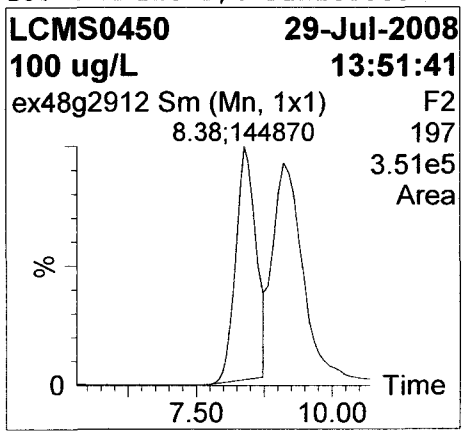
11: Nitrobenzene



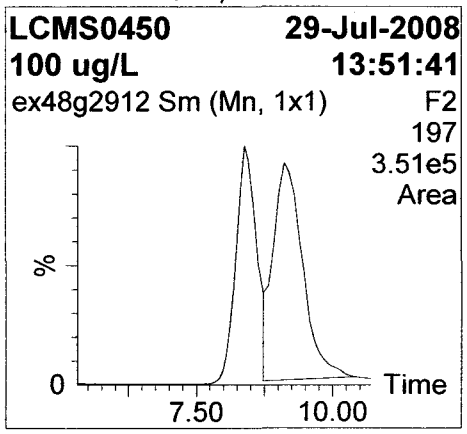
12: 2,4,6-Trinitrotoluene



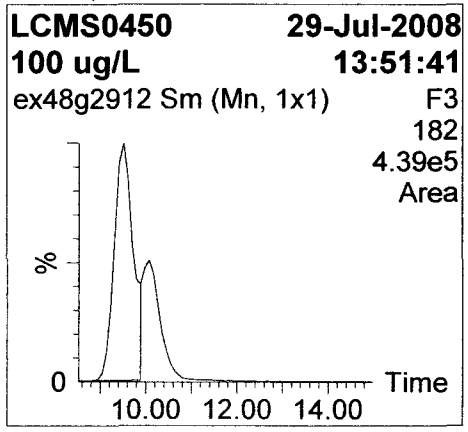
13: 4-Amino-2,6-Dinitrotolu..



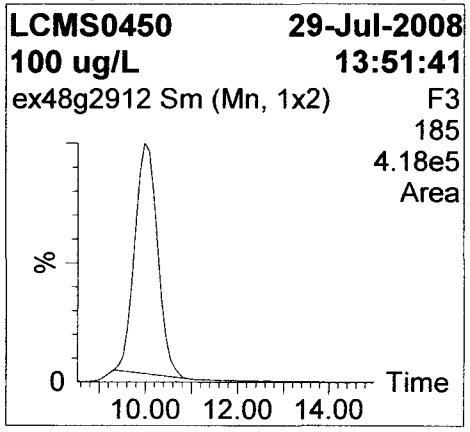
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



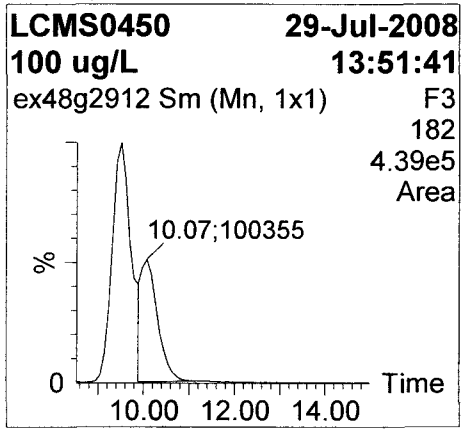
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

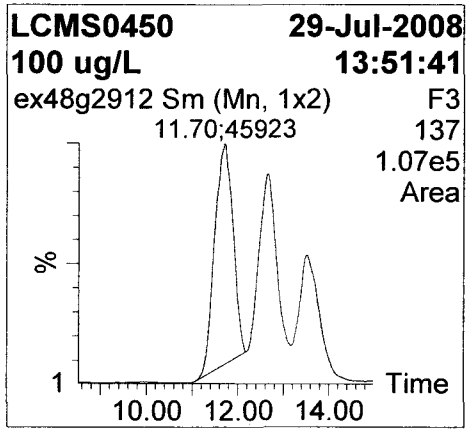
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2912
Text: 100 ug/L

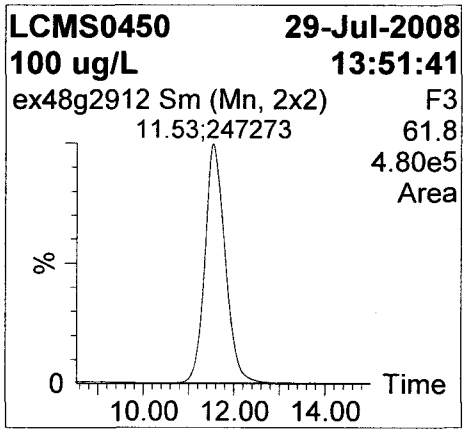
17: 2,4-Dinitrotoluene



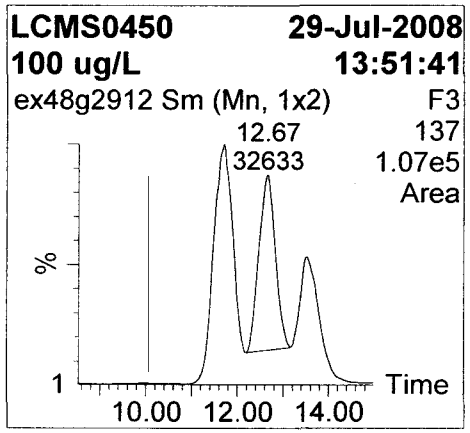
18: 2-Nitrotoluene



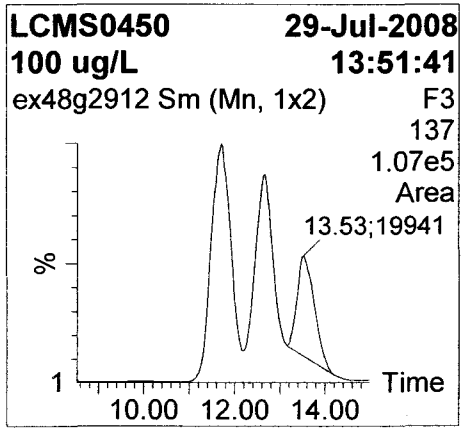
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 24

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2912
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	7658	bb	103.035	103	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6663	bb	1.002	100	29/Jul/08	ex48g29	
RDX 13C-..	3.882	42015	bb	1.035	104	29/Jul/08	ex48g29	
RDX	3.882	15674	bb	107.935	108	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	45144	bb	111.376	111	29/Jul/08	ex48g29	
Tetryl	6.444	100652	bb	94.335	94	29/Jul/08	ex48g29	
1,3 Dini..	6.612	104190	bb	1.027	103	29/Jul/08	ex48g29	
1,3-Dini..	6.678	36184	bb	108.360	108	29/Jul/08	ex48g29	
Nitroben..	7.398	30343	bb	99.867	100	29/Jul/08	ex48g29	
Nitrogly..	7.005	279603	bb	102.540	103	29/Jul/08	ex48g29	
Nitroben..	7.529	32890	bb	95.680	96	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	281728	bb	96.021	96	29/Jul/08	ex48g29	
4-Amino-..	8.380	144870	bd	104.251	104	29/Jul/08	ex48g29	
2-Amino-..	9.104	206964	db	96.365	96	29/Jul/08	ex48g29	
2,6-Dini..	9.510	207873	bd	98.456	98	29/Jul/08	ex48g29	
2,4-Dini..	9.980	232442	bb	1.084	108	29/Jul/08	ex48g29	
2,4-Dini..	10.074	100355	dd	97.421	97	29/Jul/08	ex48g29	
2-Nitrot..	11.699	45923	bb	99.492	99	29/Jul/08	ex48g29	
PETN	11.528	247273	bb	101.174	101	29/Jul/08	ex48g29	
4-Nitrot..	12.670	32633	bb	91.592	92	29/Jul/08	ex48g29	
3-Nitrot..	13.527	19941	bb	104.691	105	29/Jul/08	ex48g29	

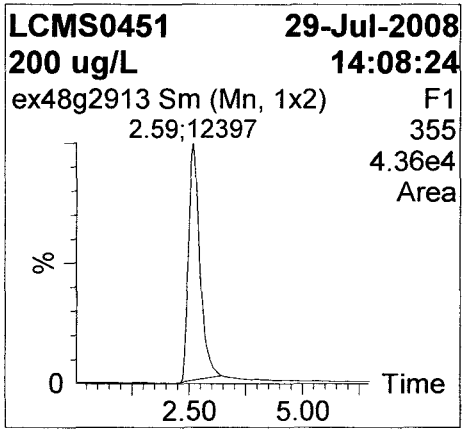
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

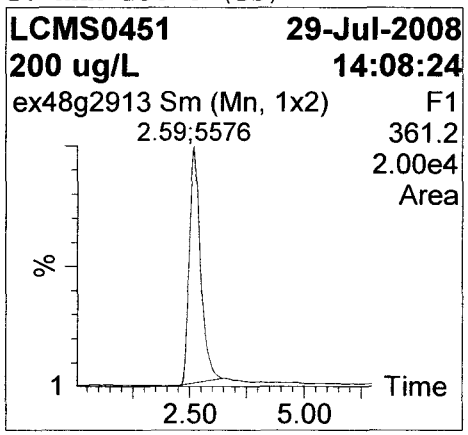
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2913
Text: 200 ug/L

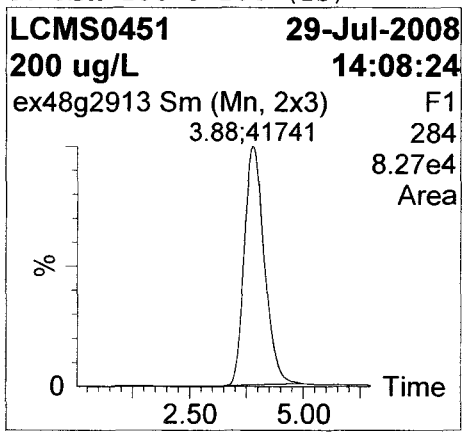
1: HMX



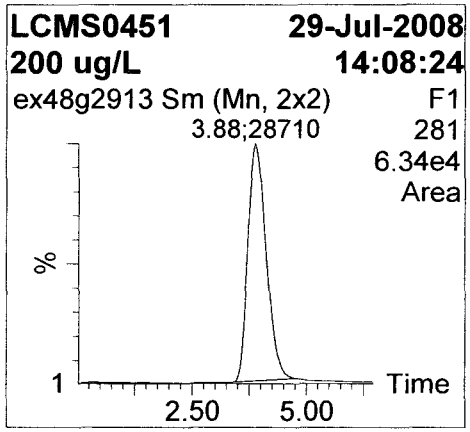
2: HMX 13C-4 (IS)



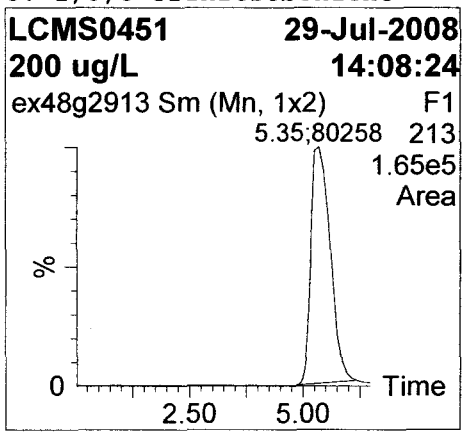
3: RDX 13C-3 284 (IS)



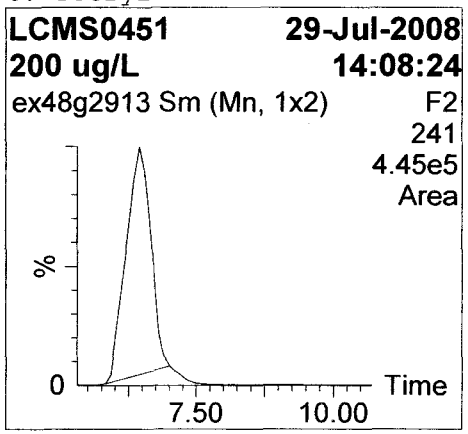
4: RDX



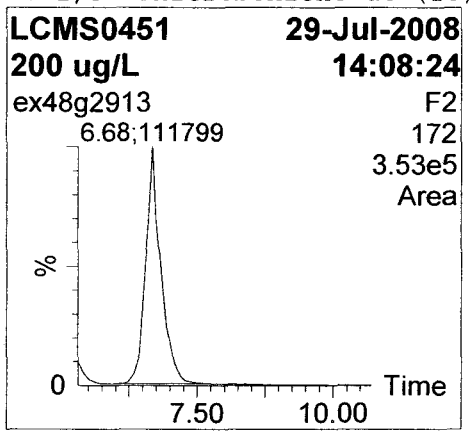
5: 1,3,5-Trinitrobenzene



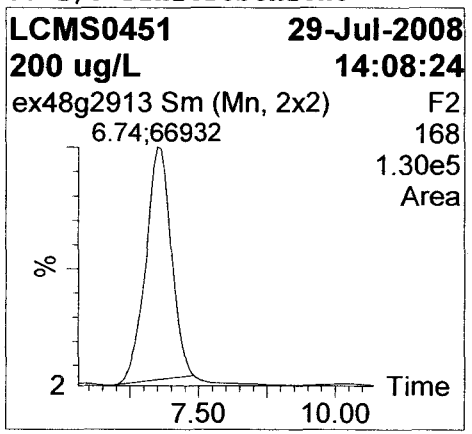
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



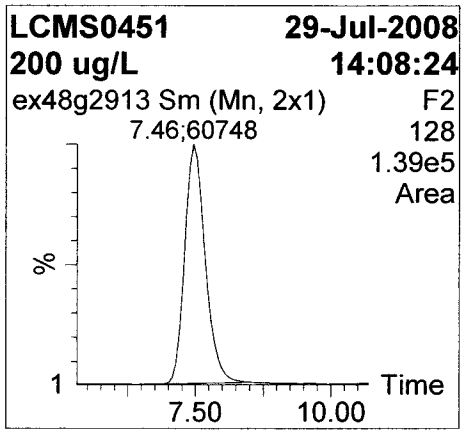
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

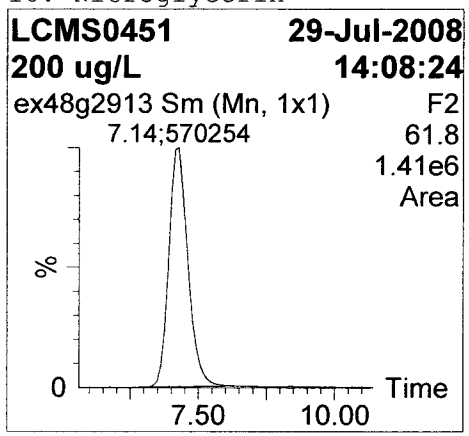
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2913
Text: 200 ug/L

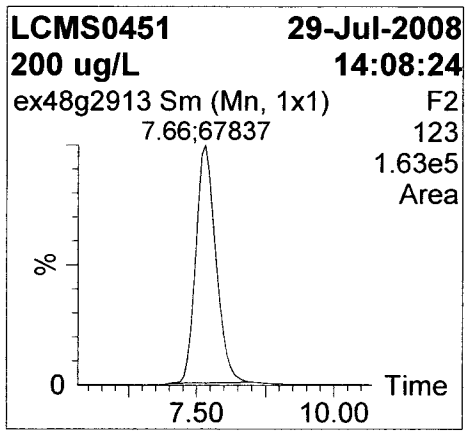
9: Nitrobenzene-d5



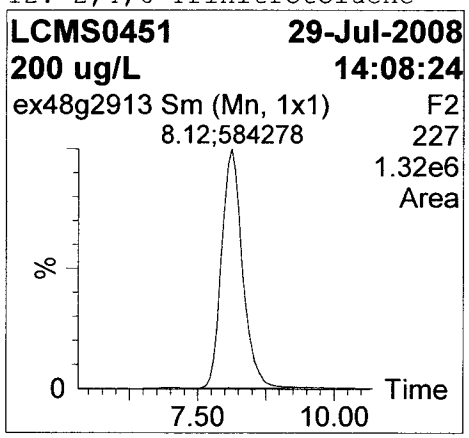
10: Nitroglycerin



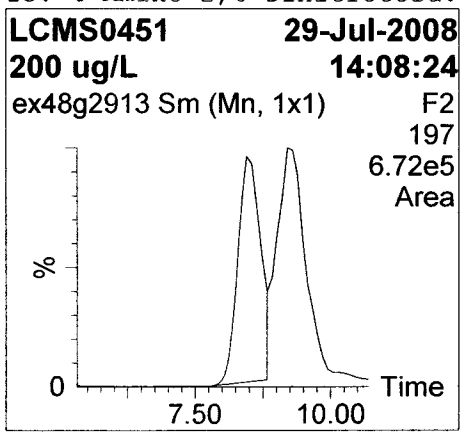
11: Nitrobenzene



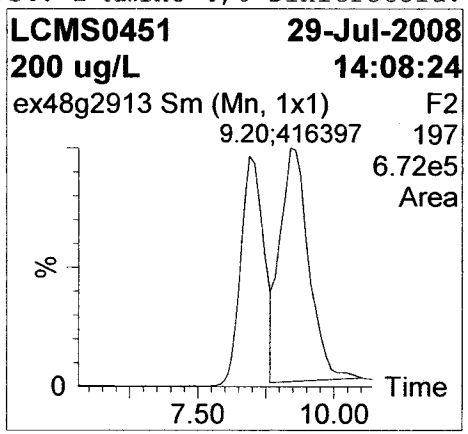
12: 2,4,6-Trinitrotoluene



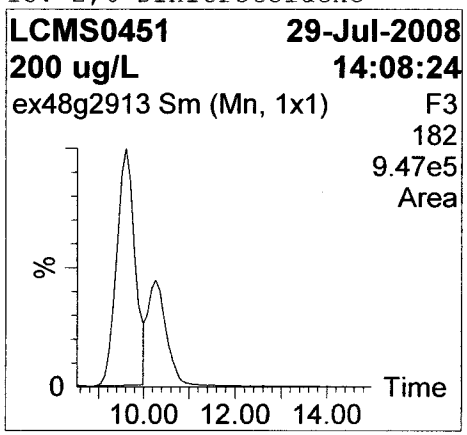
13: 4-Amino-2,6-Dinitrotolu..



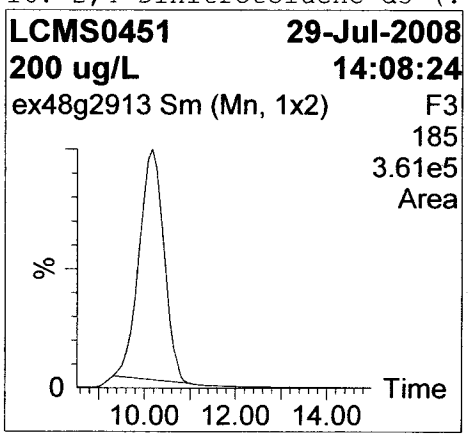
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



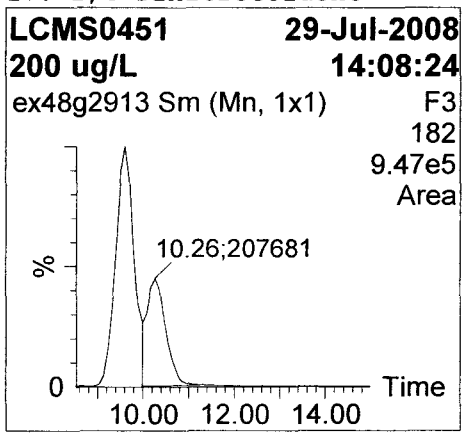
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

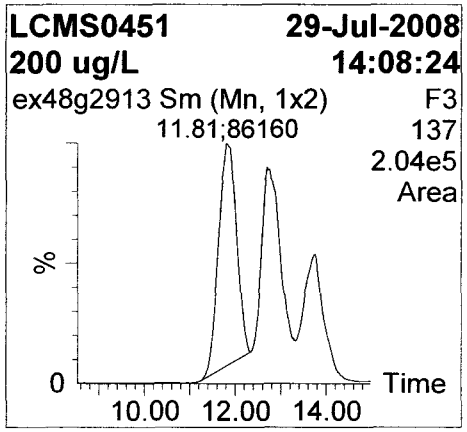
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2913
Text: 200 ug/L

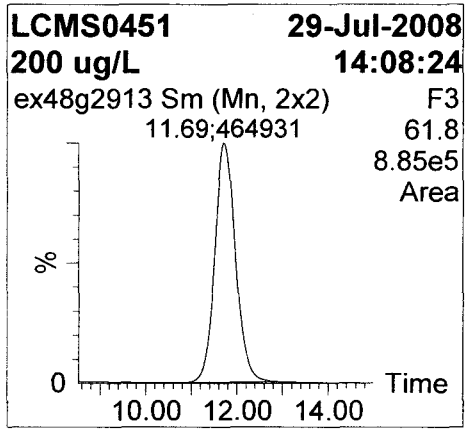
17: 2,4-Dinitrotoluene



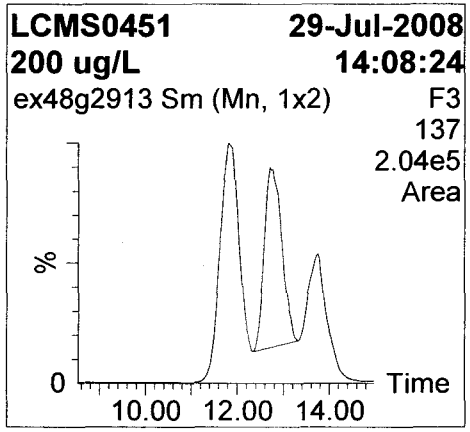
18: 2-Nitrotoluene



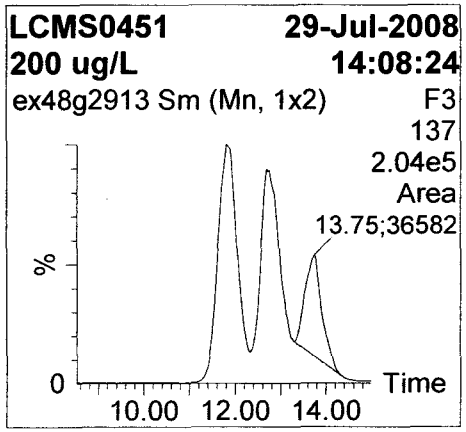
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2913
Text: 200 ug/L

Name	RT	Area	Flags	Conc. ()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	12397	bb	200.831	100	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5576	bb	0.838	84	29/Jul/08	ex48g29	
RDX 13C-..	3.882	41741	bb	1.029	103	29/Jul/08	ex48g29	
RDX	3.882	28710	bb	202.057	101	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	80258	bb	185.336	93	29/Jul/08	ex48g29	
Tetryl	6.444	223758	bb	194.970	97	29/Jul/08	ex48g29	
1,3 Dini..	6.678	111799	bb	1.102	110	29/Jul/08	ex48g29	
1,3-Dini..	6.743	66932	bb	188.092	94	29/Jul/08	ex48g29	
Nitroben..	7.464	60748	bb	187.567	94	29/Jul/08	ex48g29	
Nitrogly..	7.136	570254	bb	196.427	98	29/Jul/08	ex48g29	
Nitroben..	7.660	67837	bb	184.886	92	29/Jul/08	ex48g29	
2,4,6-Tr..	8.119	584278	bb	185.278	93	29/Jul/08	ex48g29	
4-Amino-..	8.447	298980	bd	200.897	100	29/Jul/08	ex48g29	
2-Amino-..	9.200	416397	db	180.383	90	29/Jul/08	ex48g29	
2,6-Dini..	9.605	435688	bd	220.380	110	29/Jul/08	ex48g29	
2,4-Dini..	10.170	218394	bb	1.018	102	29/Jul/08	ex48g29	
2,4-Dini..	10.264	207681	dd	208.282	104	29/Jul/08	ex48g29	
2-Nitrot..	11.807	86160	bb	199.342	100	29/Jul/08	ex48g29	
PETN	11.693	464931	bb	202.944	101	29/Jul/08	ex48g29	
4-Nitrot..	12.693	66427	bb	209.590	105	29/Jul/08	ex48g29	
3-Nitrot..	13.750	36582	bb	206.546	103	29/Jul/08	ex48g29	

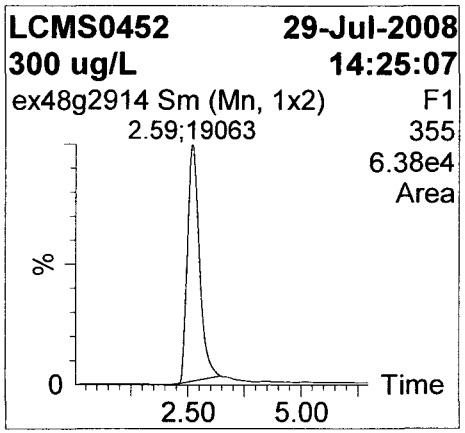
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

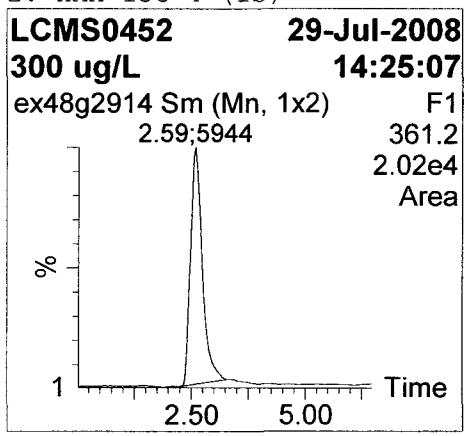
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2914
Text: 300 ug/L

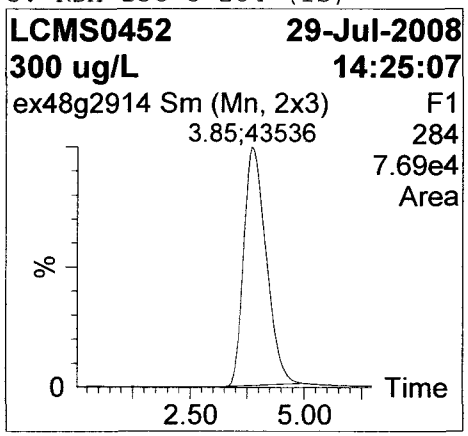
1: HMX



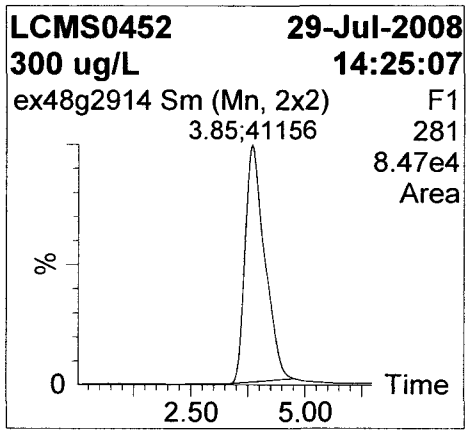
2: HMX 13C-4 (IS)



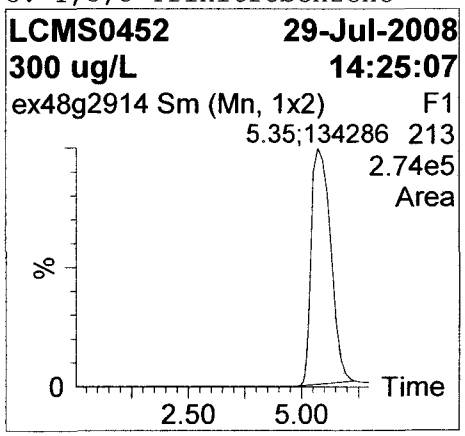
3: RDX 13C-3 284 (IS)



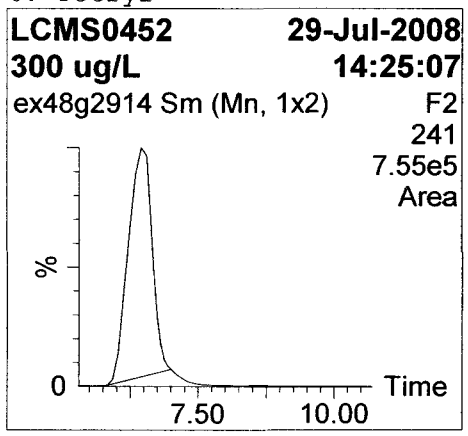
4: RDX



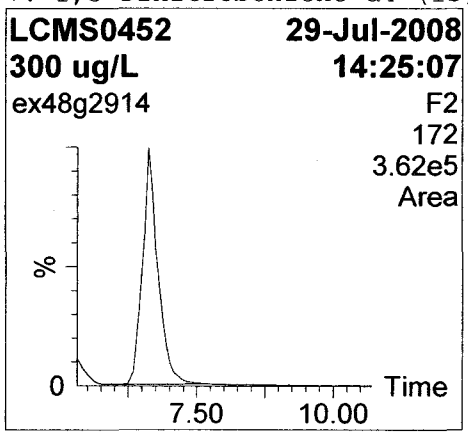
5: 1,3,5-Trinitrobenzene



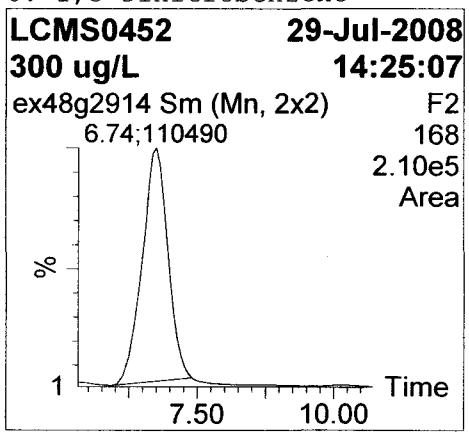
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



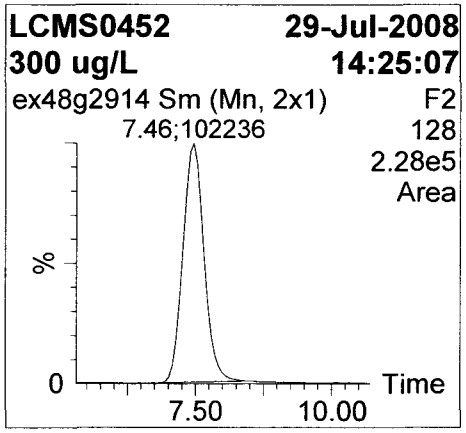
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

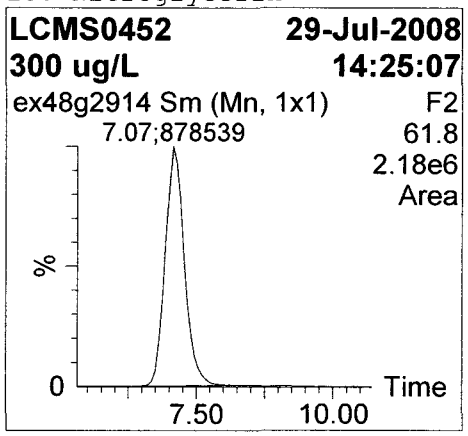
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2914
Text: 300 ug/L

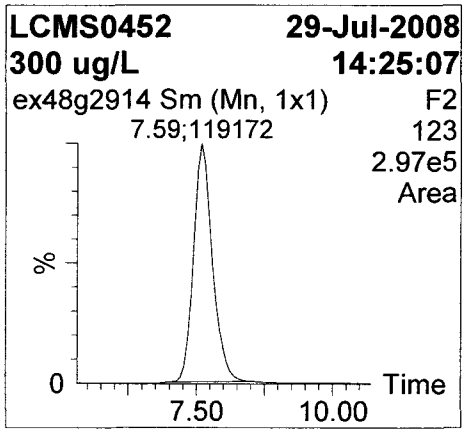
9: Nitrobenzene-d5



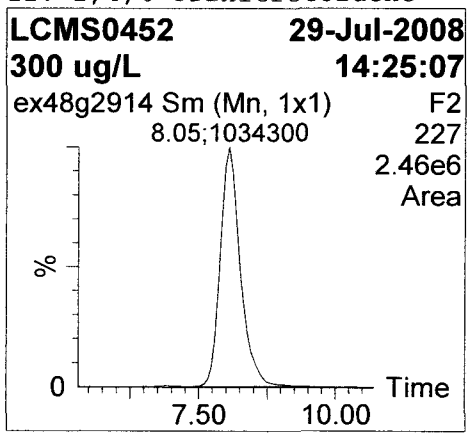
10: Nitroglycerin



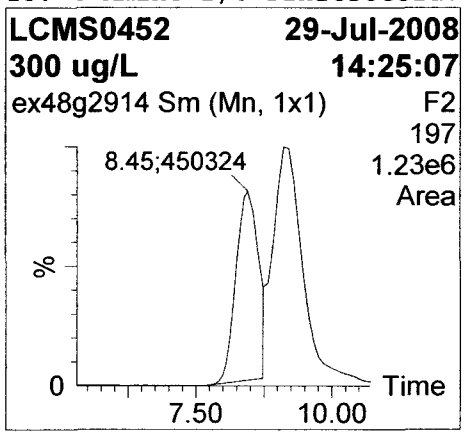
11: Nitrobenzene



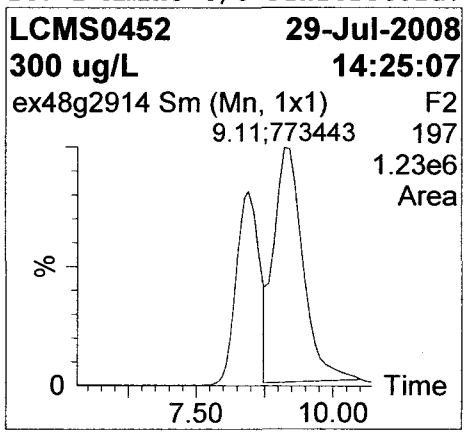
12: 2,4,6-Trinitrotoluene



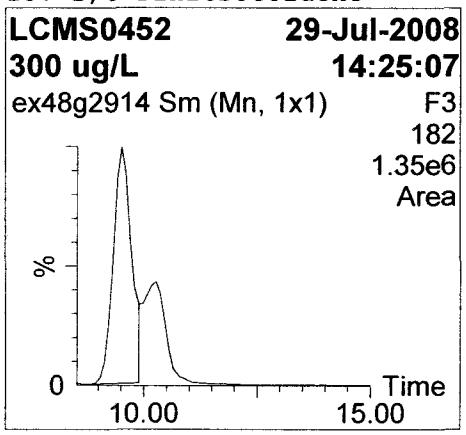
13: 4-Amino-2,6-Dinitrotolu..



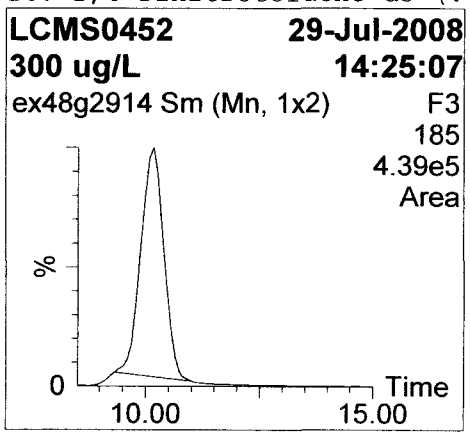
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



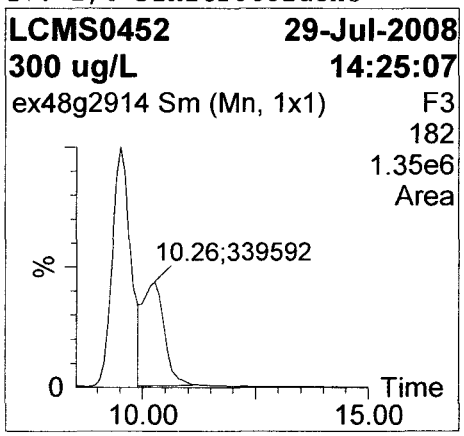
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

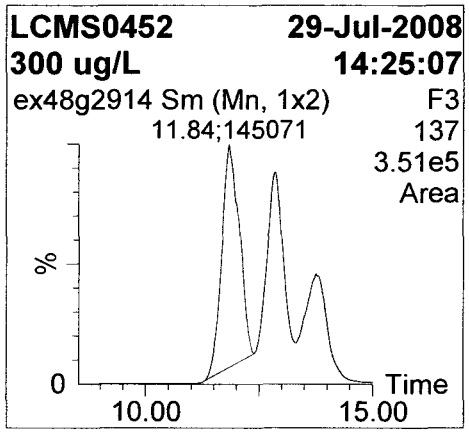
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2914
Text: 300 ug/L

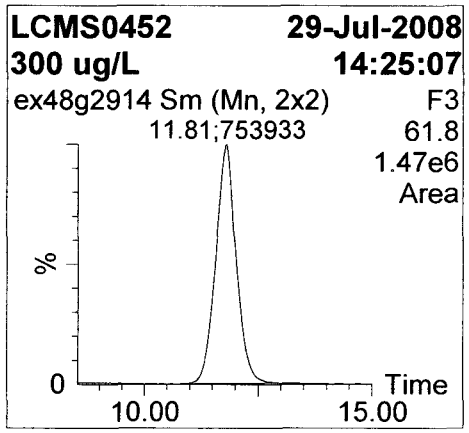
17: 2,4-Dinitrotoluene



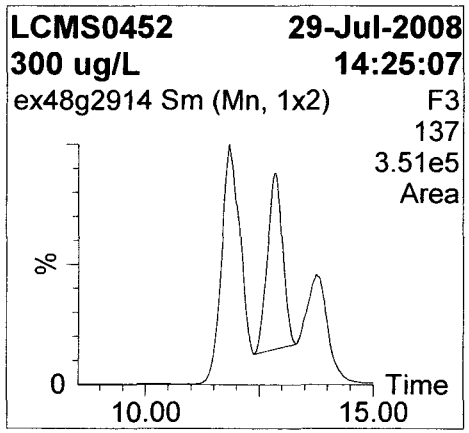
18: 2-Nitrotoluene



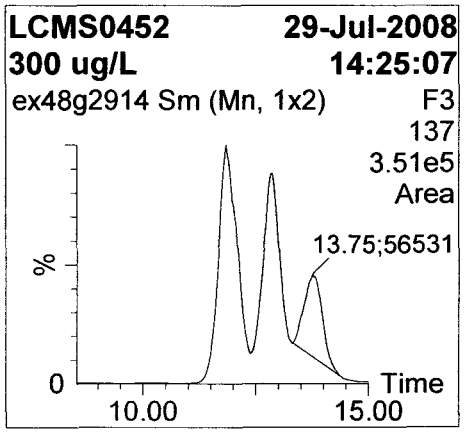
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 32

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2914
Text: 300 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	19063	bb	290.426	97	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5944	bb	0.894	89	29/Jul/08	ex48g29	
RDX 13C-..	3.845	43536	bb	1.073	107	29/Jul/08	ex48g29	
RDX	3.845	41156	bb	279.064	93	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	134286	bb	300.715	100	29/Jul/08	ex48g29	
Tetryl	6.444	368080	bb	309.973	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	115580	bb	1.139	114	29/Jul/08	ex48g29	
1,3-Dini..	6.743	110490	bb	301.408	100	29/Jul/08	ex48g29	
Nitroben..	7.464	102236	bb	306.237	102	29/Jul/08	ex48g29	
Nitrogly..	7.071	878539	bb	293.551	98	29/Jul/08	ex48g29	
Nitroben..	7.595	119172	bb	314.911	105	29/Jul/08	ex48g29	
2,4,6-Tr..	8.054	1034300	bb	317.018	106	29/Jul/08	ex48g29	
4-Amino-..	8.447	450324	bd	292.887	98	29/Jul/08	ex48g29	
2-Amino-..	9.106	773443	db	323.821	108	29/Jul/08	ex48g29	
2,6-Dini..	9.511	614252	bd	276.869	92	29/Jul/08	ex48g29	
2,4-Dini..	10.170	245218	bb	1.143	114	29/Jul/08	ex48g29	
2,4-Dini..	10.264	339592	dd	295.943	99	29/Jul/08	ex48g29	
2-Nitrot..	11.836	145071	bb	299.260	100	29/Jul/08	ex48g29	
PETN	11.807	753933	bb	293.306	98	29/Jul/08	ex48g29	
4-Nitrot..	12.864	100771	bb	295.500	99	29/Jul/08	ex48g29	
3-Nitrot..	13.750	56531	bb	285.114	95	29/Jul/08	ex48g29	

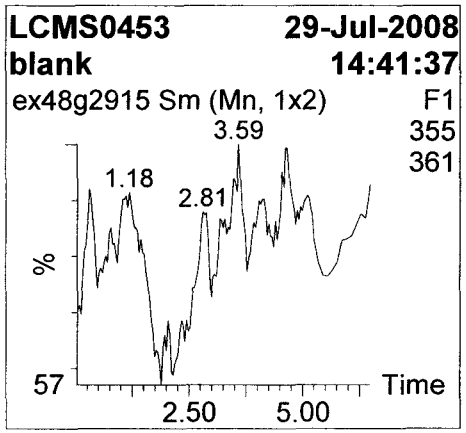
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

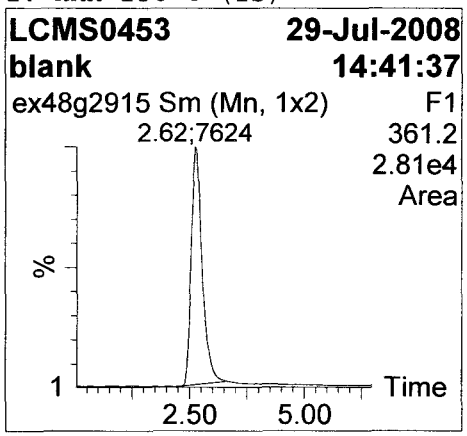
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2915
Text: blank

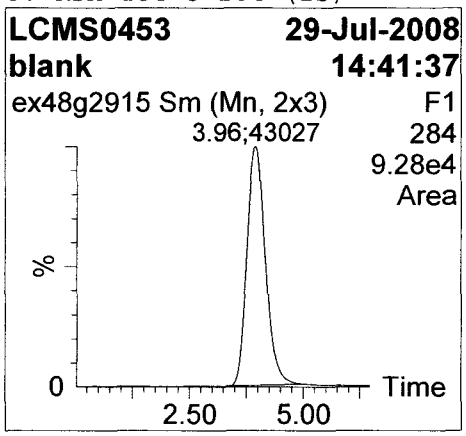
1: HMX



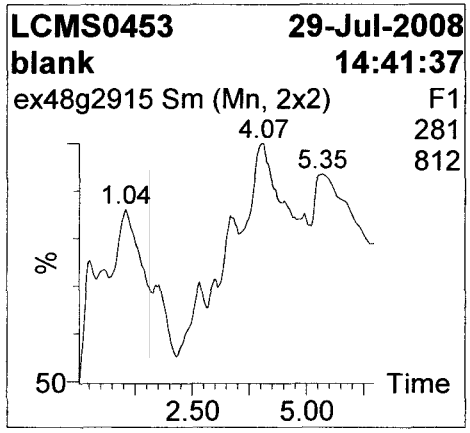
2: HMX 13C-4 (IS)



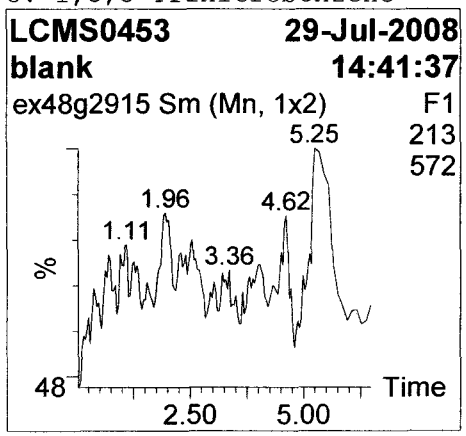
3: RDX 13C-3 284 (IS)



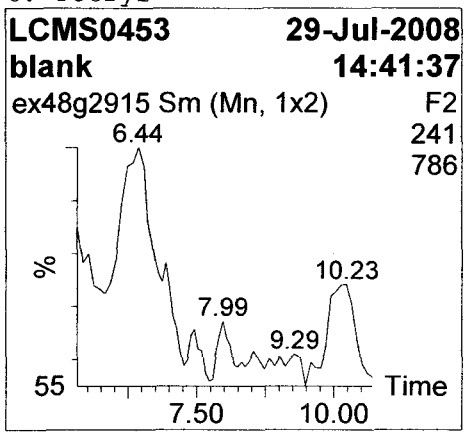
4: RDX



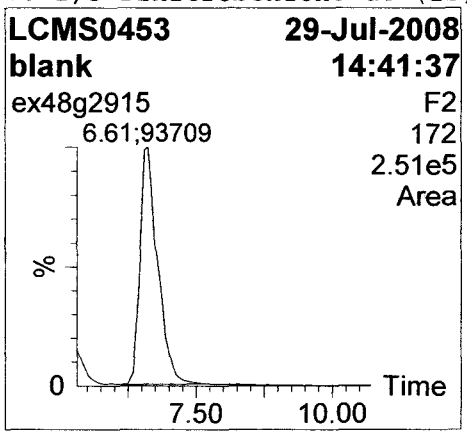
5: 1,3,5-Trinitrobenzene



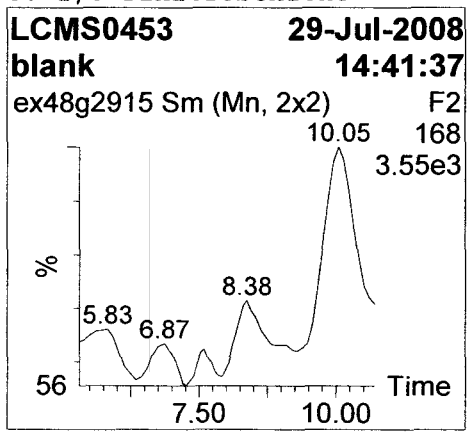
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



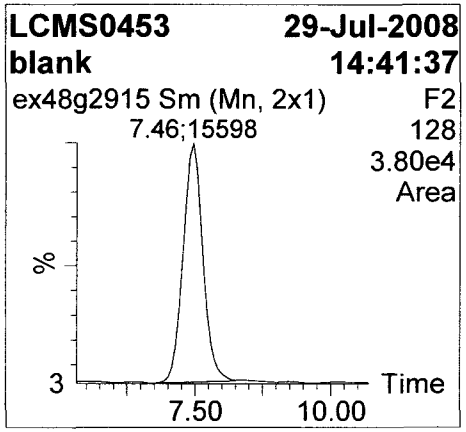
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

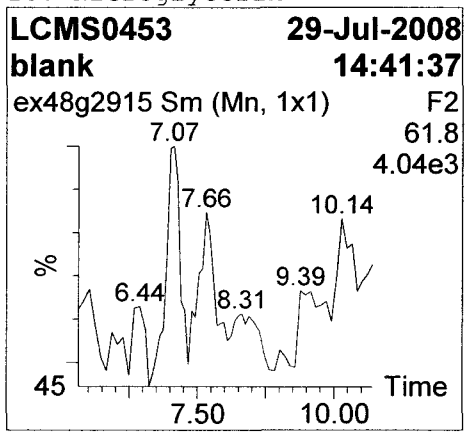
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2915
Text: blank

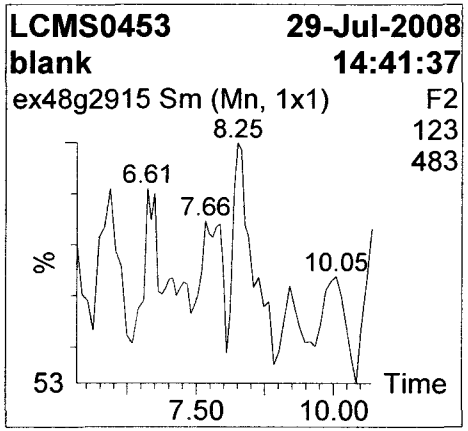
9: Nitrobenzene-d5



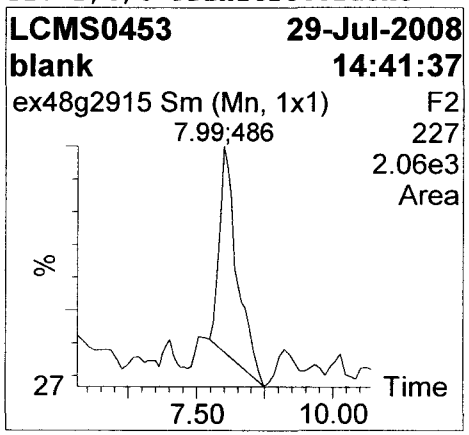
10: Nitroglycerin



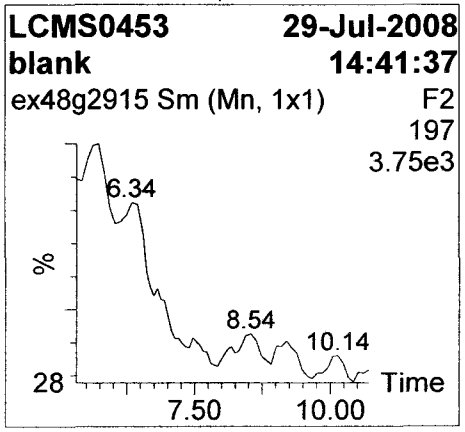
11: Nitrobenzene



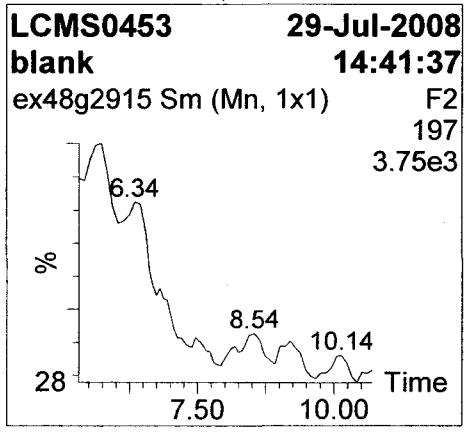
12: 2,4,6-Trinitrotoluene



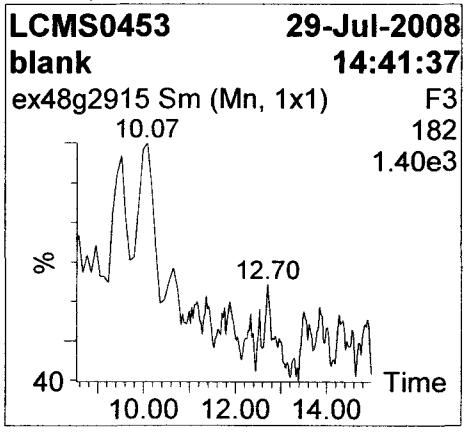
13: 4-Amino-2,6-Dinitrotolu..



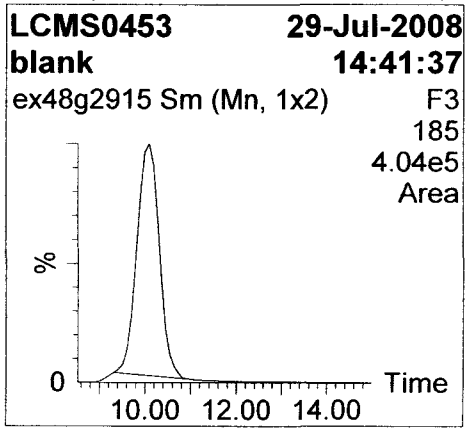
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



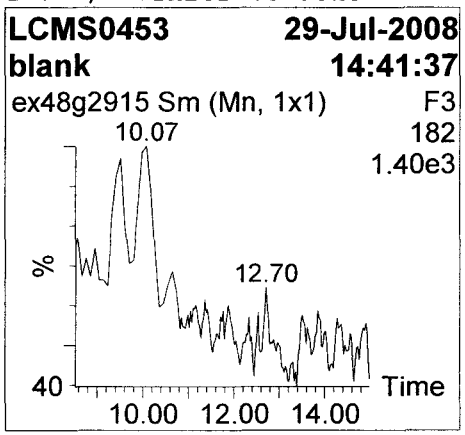
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

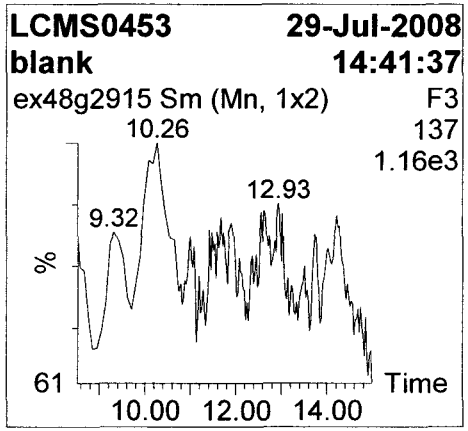
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2915
Text: blank

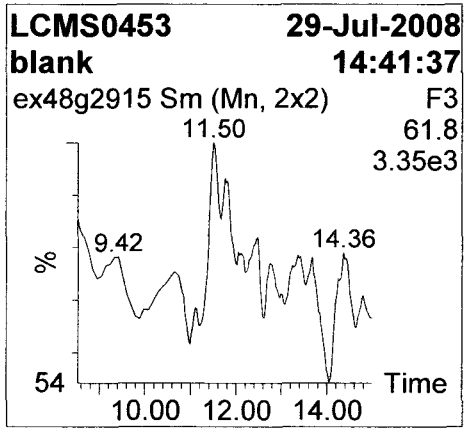
17: 2,4-Dinitrotoluene



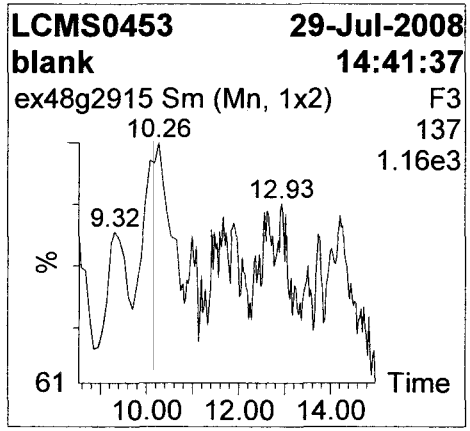
18: 2-Nitrotoluene



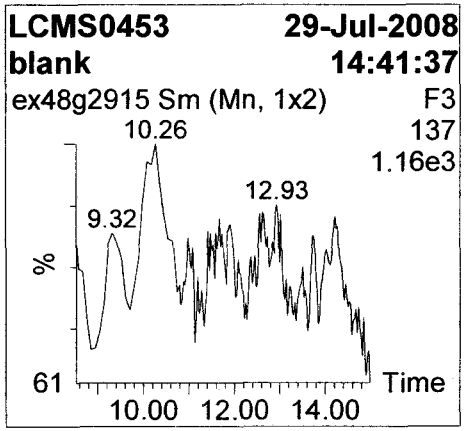
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2915
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.625	7624	bb	1.146	115	29/Jul/08	ex48g29	
RDX 13C-..	3.956	43027	bb	1.060	106	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	93709	bb	0.924	92	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.463	15598	bd	56.469	113	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	486	bb	0.514		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	222357	bb	1.037	104	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

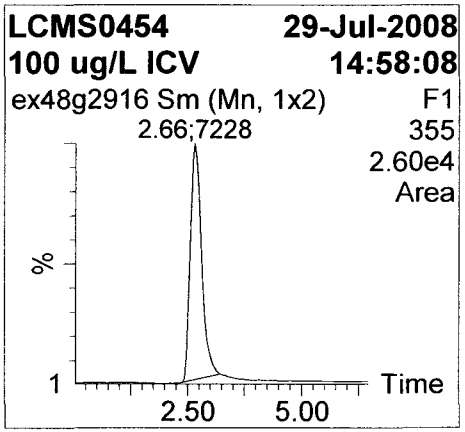
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

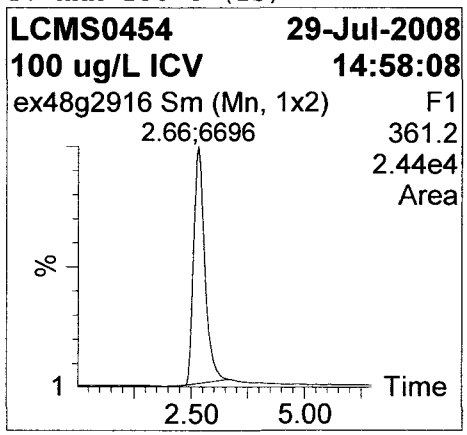
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2916
Text: 100 ug/L ICV

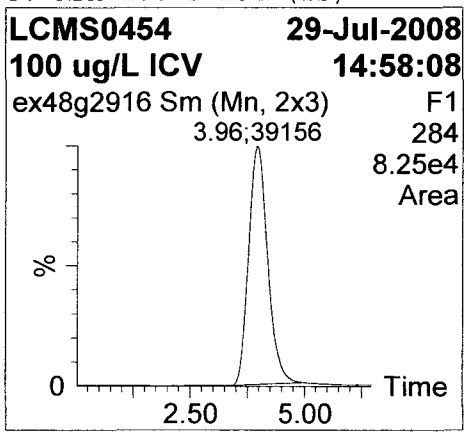
1: HMX



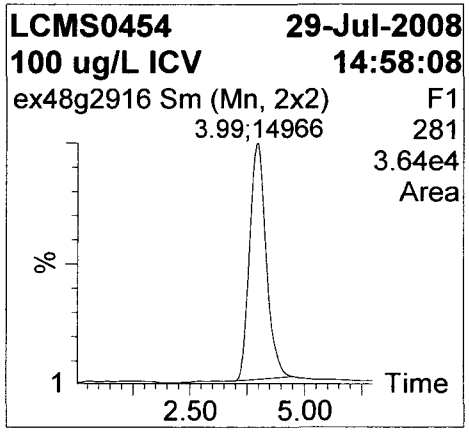
2: HMX 13C-4 (IS)



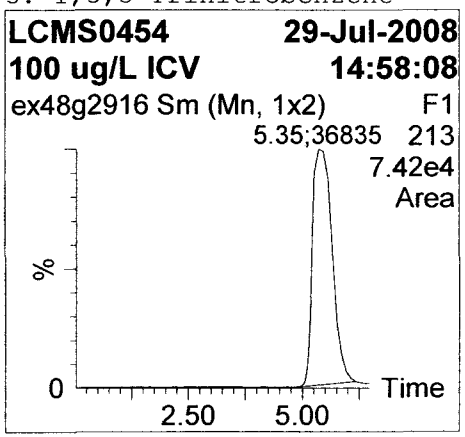
3: RDX 13C-3 284 (IS)



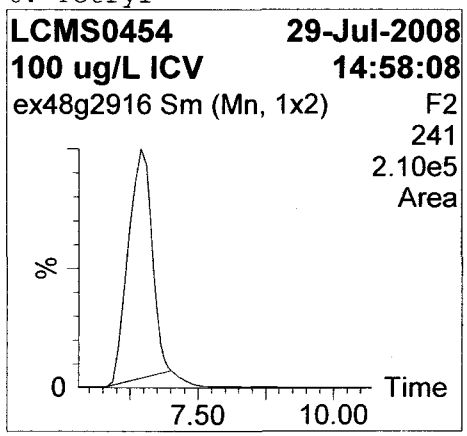
4: RDX



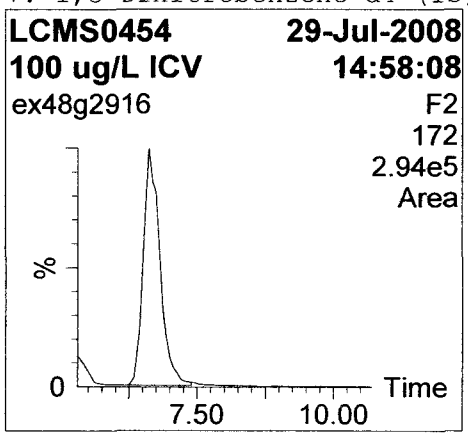
5: 1,3,5-Trinitrobenzene



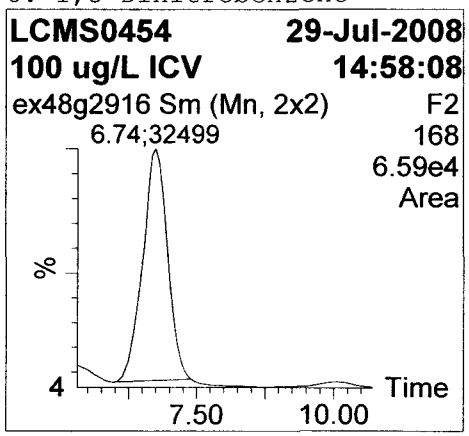
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



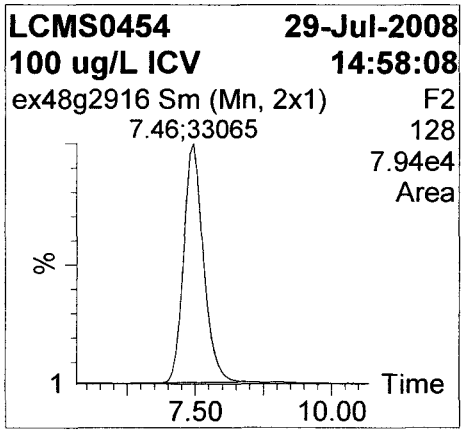
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

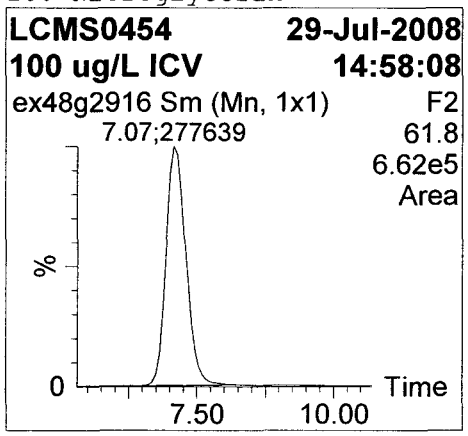
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2916
Text: 100 ug/L ICV

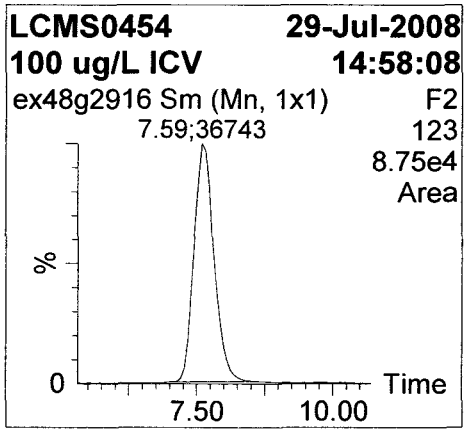
9: Nitrobenzene-d5



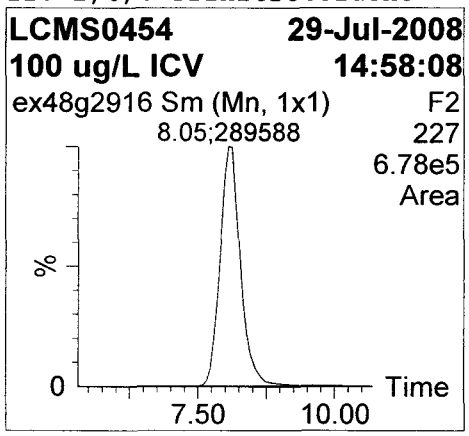
10: Nitroglycerin



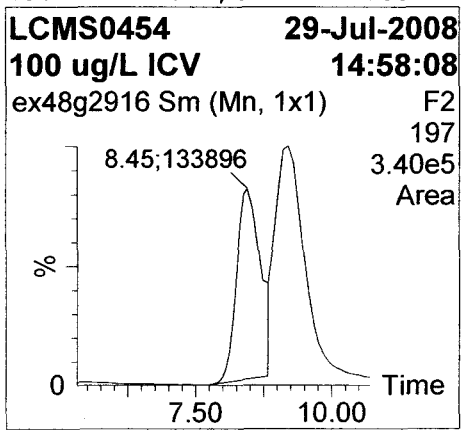
11: Nitrobenzene



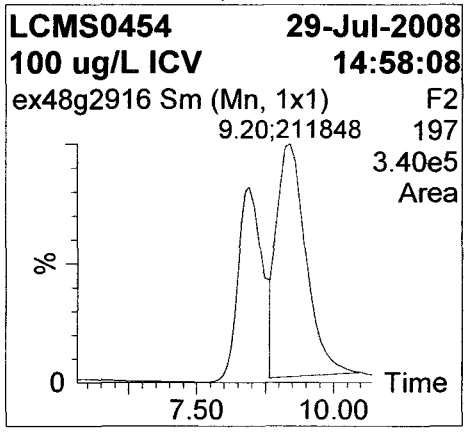
12: 2,4,6-Trinitrotoluene



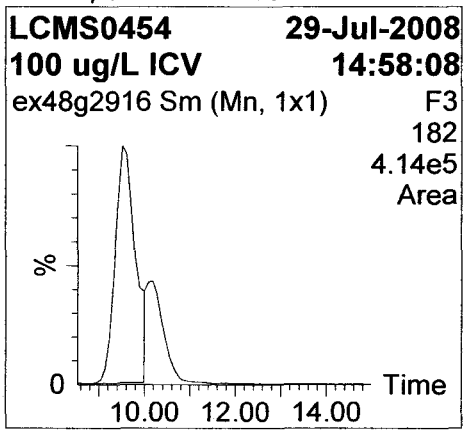
13: 4-Amino-2,6-Dinitrotolu..



14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..

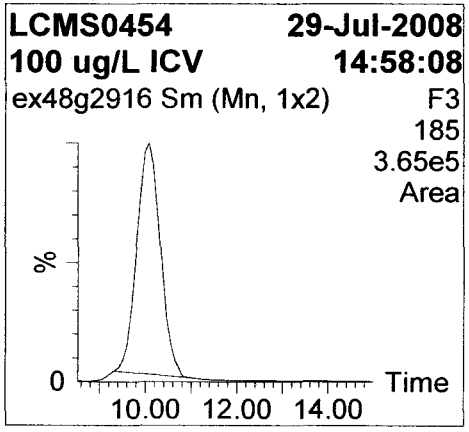


Table of Contents

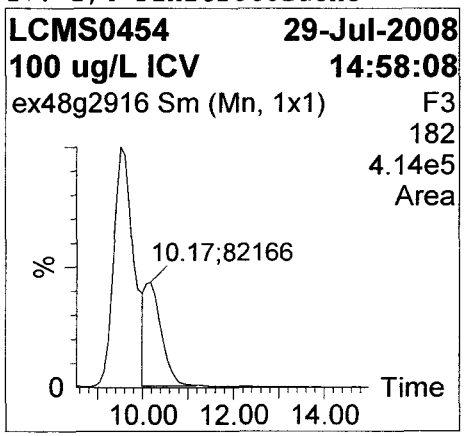
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

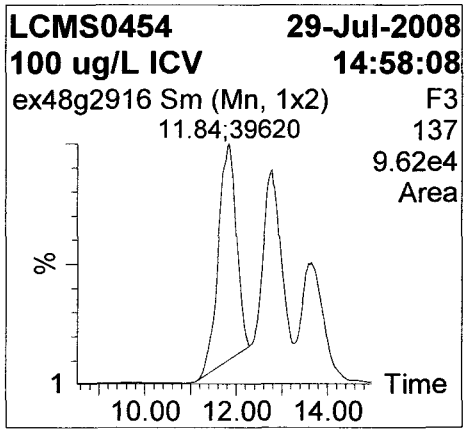
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2916
Text: 100 ug/L ICV

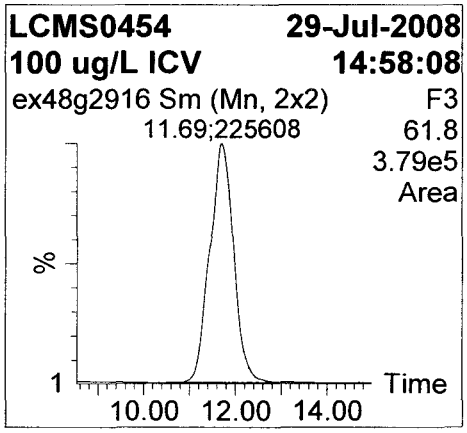
17: 2,4-Dinitrotoluene



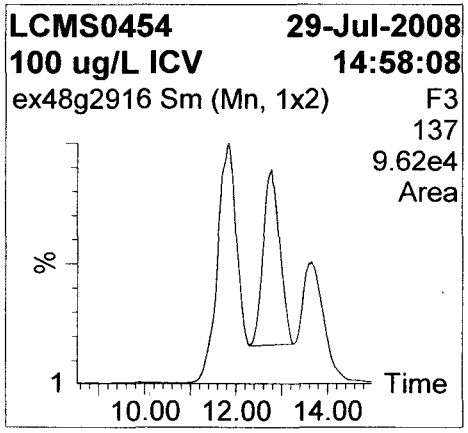
18: 2-Nitrotoluene



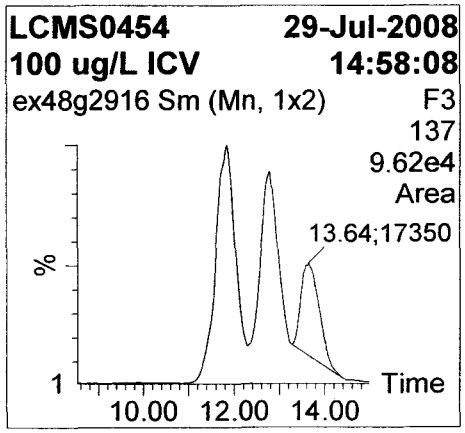
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2916
Text: 100 ug/L ICV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.662	7228	bb	96.669	97	29/Jul/08	ex48g29	
HMX 13C-..	2.662	6696	bb	1.007	101	29/Jul/08	ex48g29	
RDX 13C-..	3.956	39156	bb	0.965	97	29/Jul/08	ex48g29	
RDX	3.993	14966	bb	110.670	111	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	36835	bb	91.213	91	29/Jul/08	ex48g29	
Tetryl	6.444	102152	bb	96.317	96	29/Jul/08	ex48g29	
1,3 Dini..	6.612	103558	bs	1.021	102	29/Jul/08	ex48g29	
1,3-Dini..	6.743	32499	bb	97.744	98	29/Jul/08	ex48g29	
Nitroben..	7.464	33065	bb	109.628	110	29/Jul/08	ex48g29	
Nitrogly..	7.071	277639	bb	102.440	102	29/Jul/08	ex48g29	
Nitroben..	7.595	36743	bb	107.673	108	29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	289588	bb	99.292	99	29/Jul/08	ex48g29	
4-Amino-..	8.446	133896	bd	96.913	97	29/Jul/08	ex48g29	
2-Amino-..	9.200	211848	db	99.232	99	29/Jul/08	ex48g29	
2,6-Dini..	9.511	206170	bd	108.371	108	29/Jul/08	ex48g29	
2,4-Dini..	10.076	209566	bb	0.977	98	29/Jul/08	ex48g29	
2,4-Dini..	10.170	82166	dd	88.652	89	29/Jul/08	ex48g29	
2-Nitrot..	11.836	39620	bb	95.175	95	29/Jul/08	ex48g29	
PETN	11.693	225608	bb	102.392	102	29/Jul/08	ex48g29	
4-Nitrot..	12.779	29178	bb	90.803	91	29/Jul/08	ex48g29	
3-Nitrot..	13.637	17350	bb	100.953	101	29/Jul/08	ex48g29	

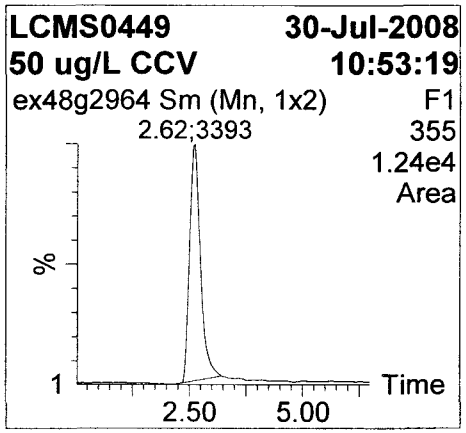
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

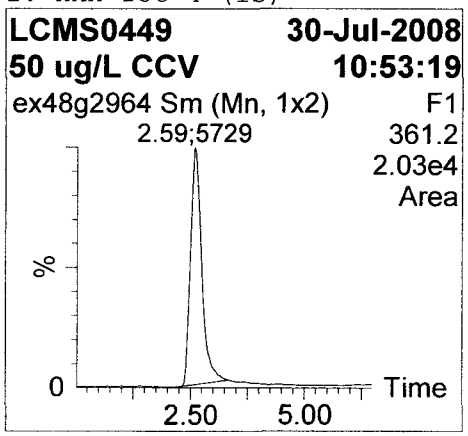
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2964
Text: 50 ug/L CCV

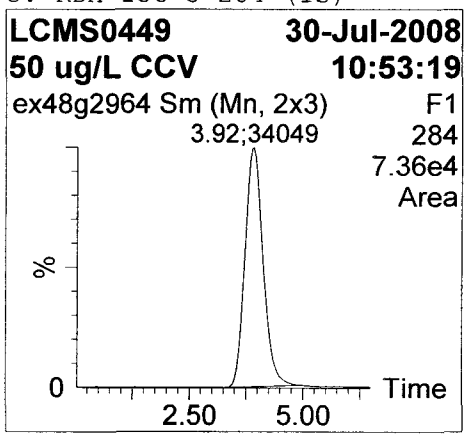
1: HMX



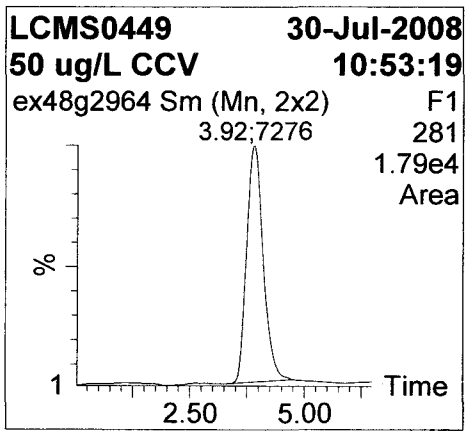
2: HMX 13C-4 (IS)



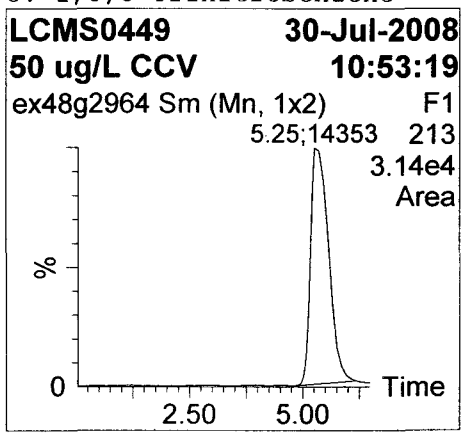
3: RDX 13C-3 284 (IS)



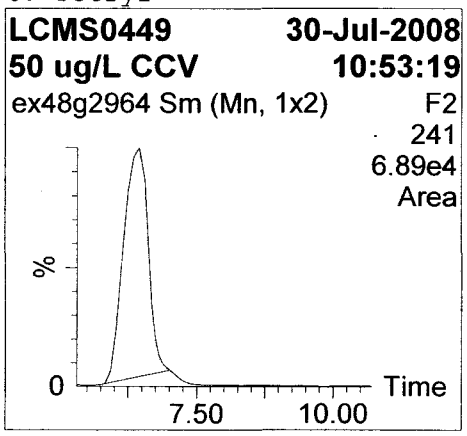
4: RDX



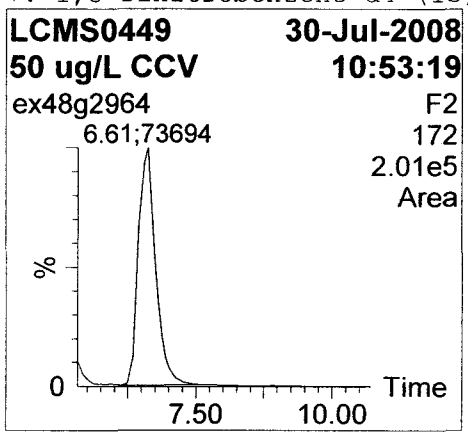
5: 1,3,5-Trinitrobenzene



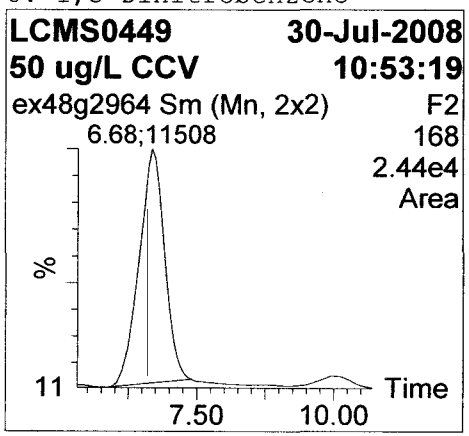
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



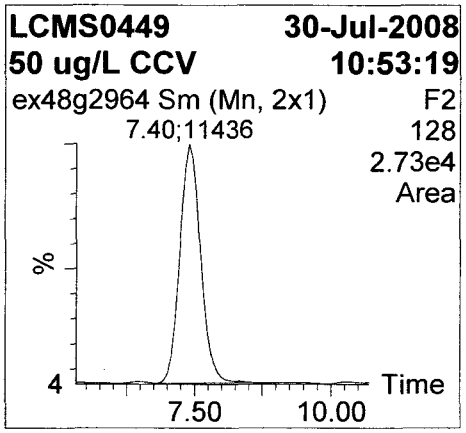
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

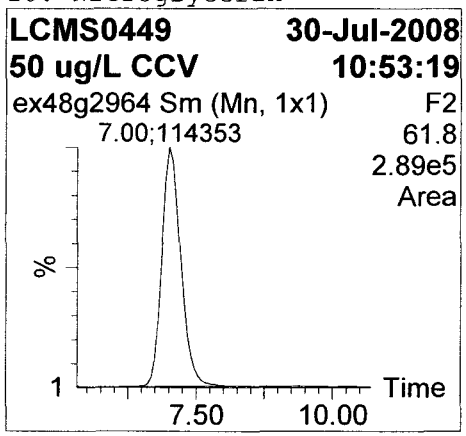
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2964
Text: 50 ug/L CCV

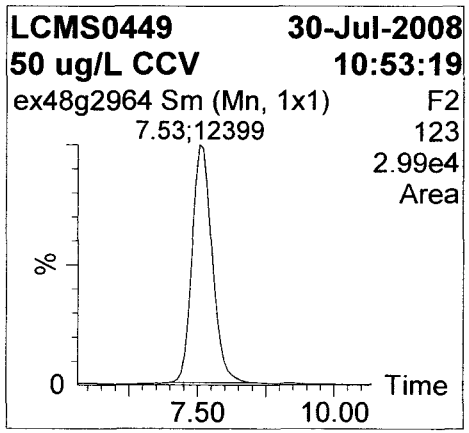
9: Nitrobenzene-d5



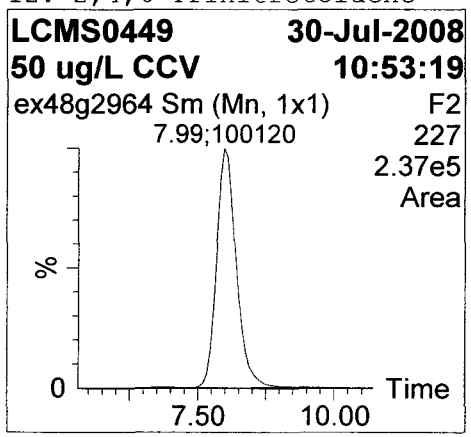
10: Nitroglycerin



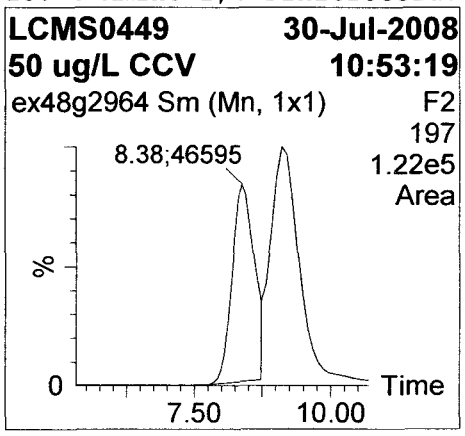
11: Nitrobenzene



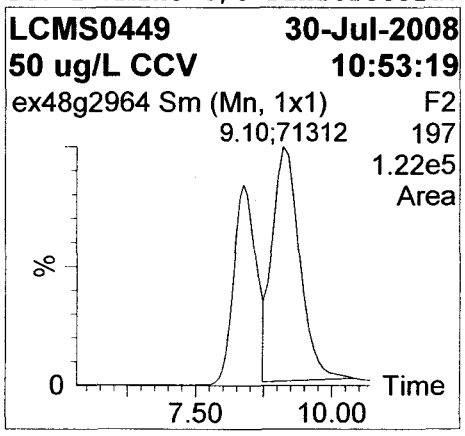
12: 2,4,6-Trinitrotoluene



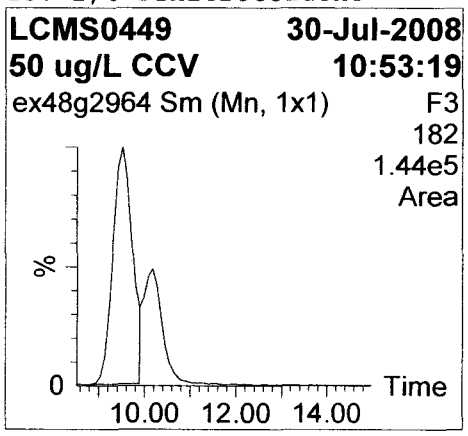
13: 4-Amino-2,6-Dinitrotolu..



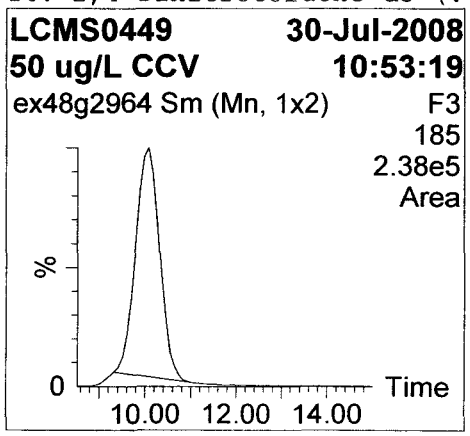
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



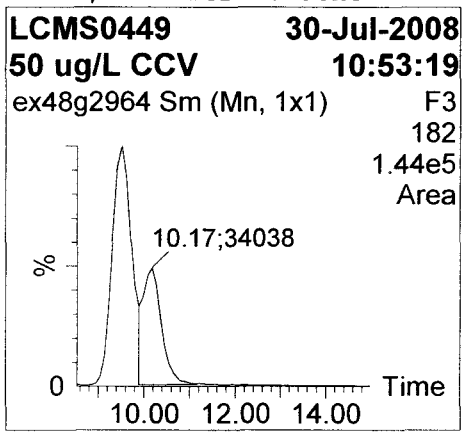
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

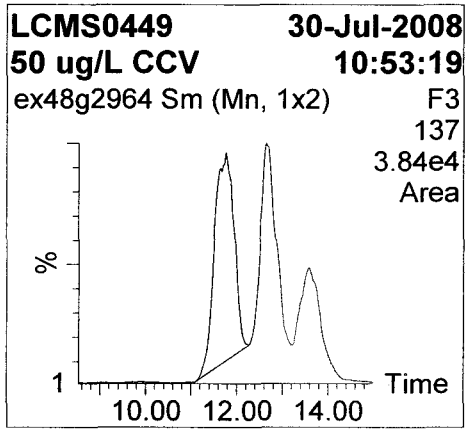
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2964
Text: 50 ug/L CCV

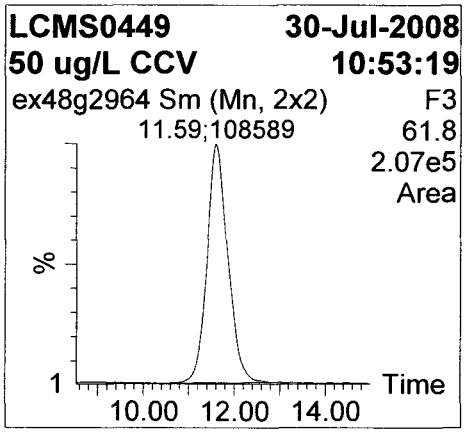
17: 2,4-Dinitrotoluene



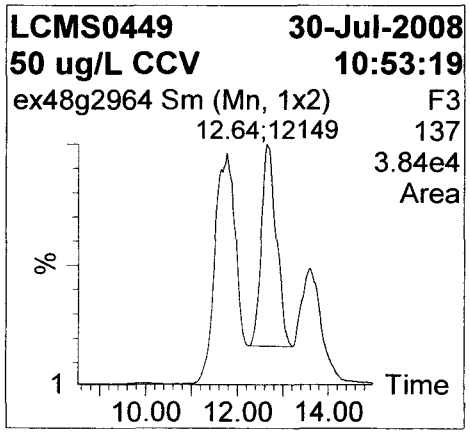
18: 2-Nitrotoluene



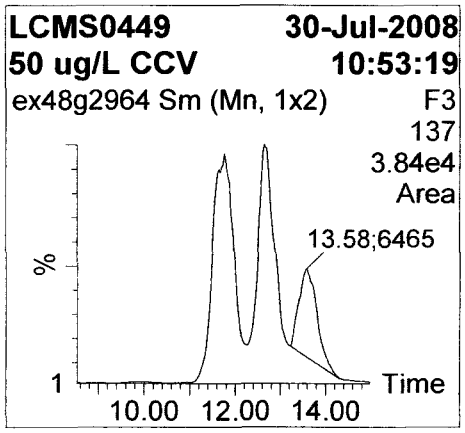
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2964
Text: 50 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	3393	bb	52.285	105	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5729	bb	0.861	86	29/Jul/08	ex48g29	
RDX 13C-..	3.919	34049	bb	0.839	84	29/Jul/08	ex48g29	
RDX	3.919	7276	bb	60.280	121	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	14353	bb	49.390	99	29/Jul/08	ex48g29	
Tetryl	6.444	34129	bb	45.453	91	29/Jul/08	ex48g29	
1,3 Dini..	6.612	73694	bb	0.727	73	29/Jul/08	ex48g29	
1,3-Dini..	6.677	11508	bb	47.740	95	29/Jul/08	ex48g29	
Nitroben..	7.398	11436	bb	52.548	105	29/Jul/08	ex48g29	
Nitrogly..	7.005	114353	bb	58.576	117	29/Jul/08	ex48g29	
Nitroben..	7.528	12399	bb	50.503	101	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	100120	bb	48.409	97	29/Jul/08	ex48g29	
4-Amino-..	8.380	46595	bd	47.177	94	29/Jul/08	ex48g29	
2-Amino-..	9.104	71312	db	47.121	94	29/Jul/08	ex48g29	
2,6-Dini..	9.510	69011	bd	54.501	109	29/Jul/08	ex48g29	
2,4-Dini..	10.075	138718	bb	0.647	65	29/Jul/08	ex48g29	
2,4-Dini..	10.169	34038	dd	55.810	112	29/Jul/08	ex48g29	
2-Nitrot..	11.757	16308	bb	58.928	118	29/Jul/08	ex48g29	
PETN	11.585	108589	bb	74.324	149	29/Jul/08	ex48g29	
4-Nitrot..	12.642	12149	bb	56.308	113	29/Jul/08	ex48g29	
3-Nitrot..	13.585	6465	bb	55.850	112	29/Jul/08	ex48g29	

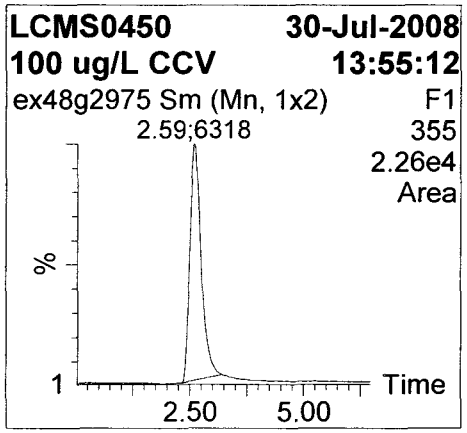
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

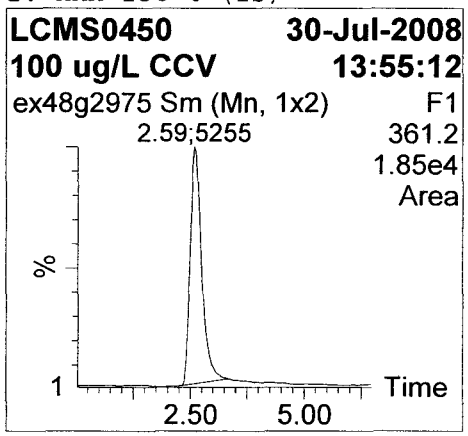
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2975
Text: 100 ug/L CCV

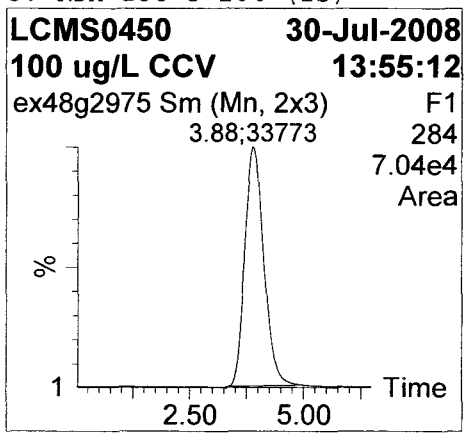
1: HMX



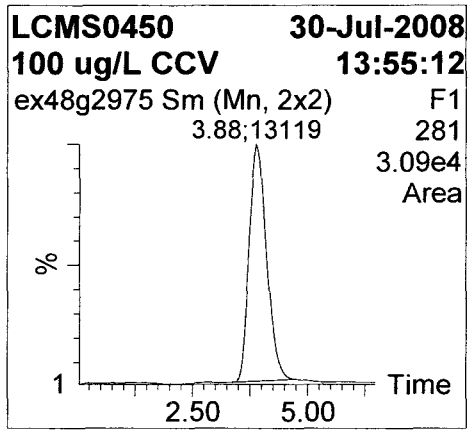
2: HMX 13C-4 (IS)



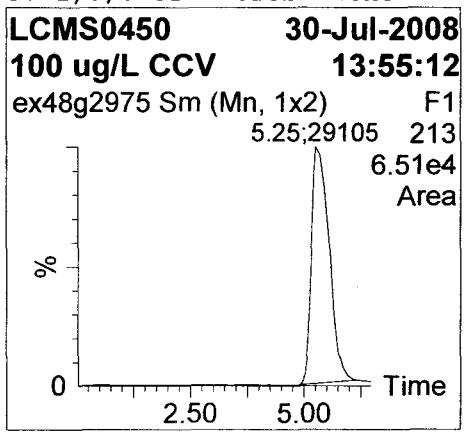
3: RDX 13C-3 284 (IS)



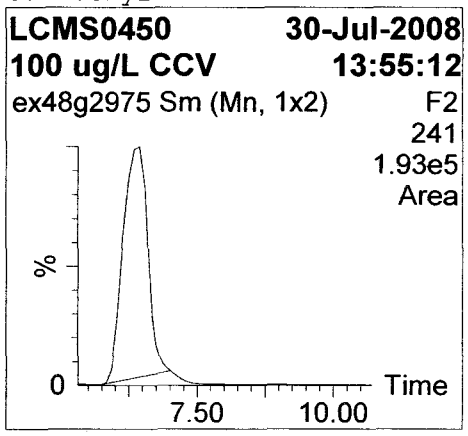
4: RDX



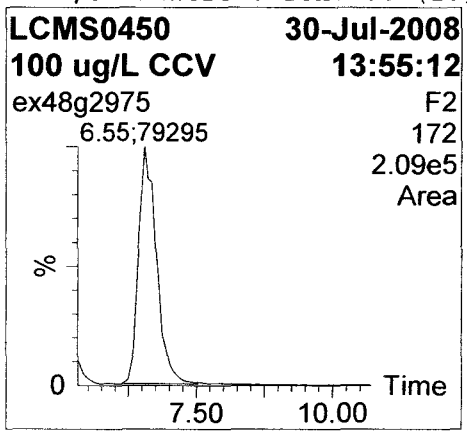
5: 1,3,5-Trinitrobenzene



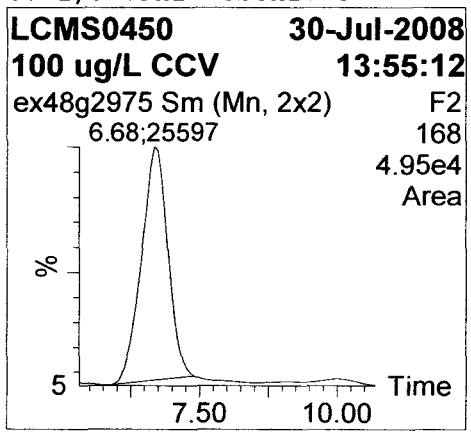
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



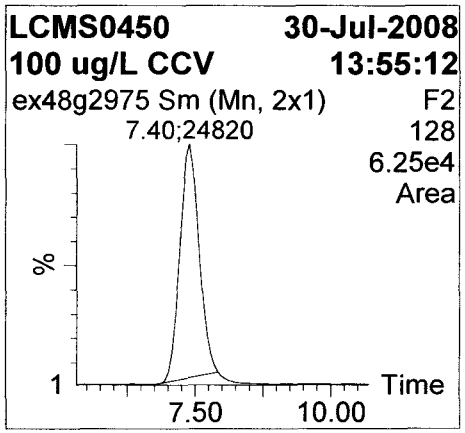
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

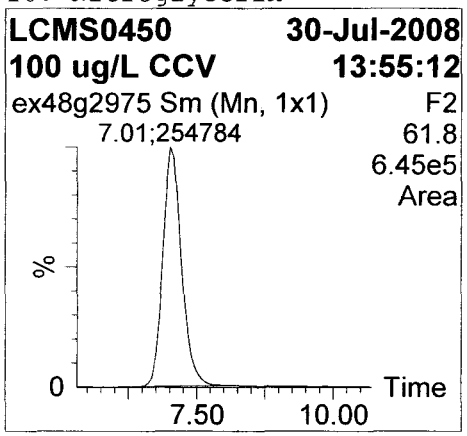
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2975
Text: 100 ug/L CCV

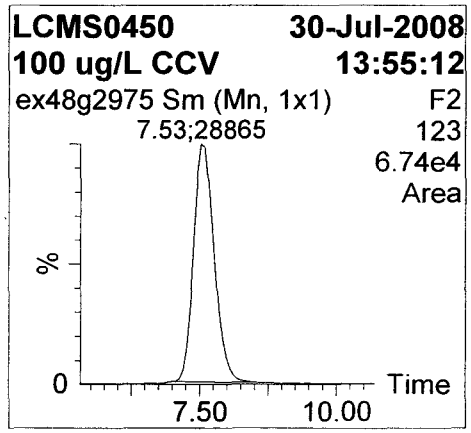
9: Nitrobenzene-d5



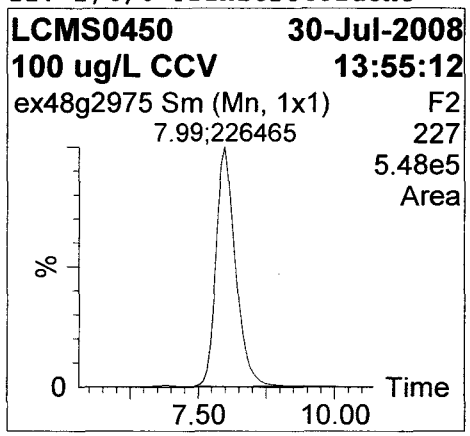
10: Nitroglycerin



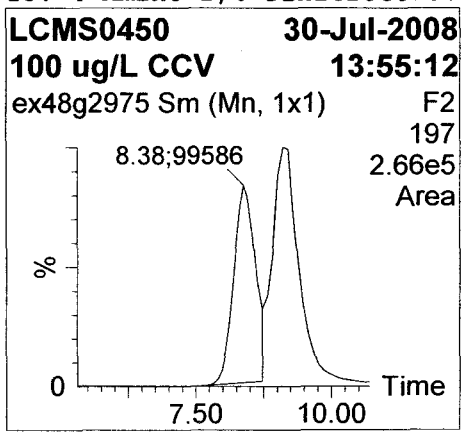
11: Nitrobenzene



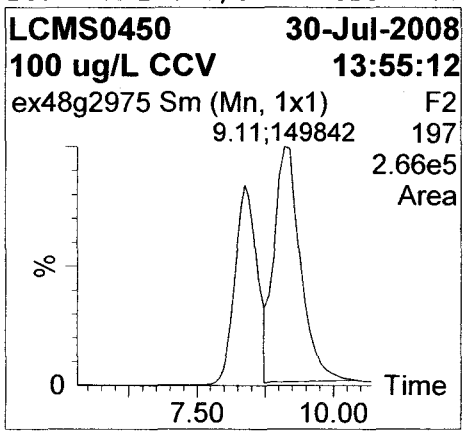
12: 2,4,6-Trinitrotoluene



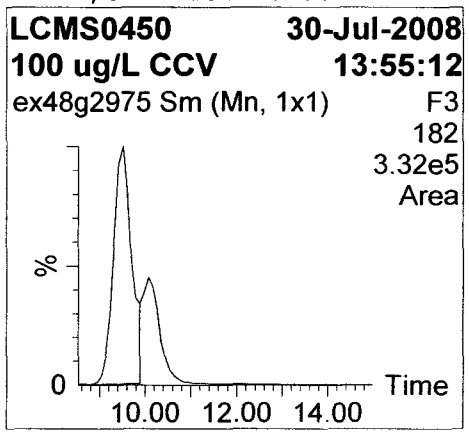
13: 4-Amino-2,6-Dinitrotolu..



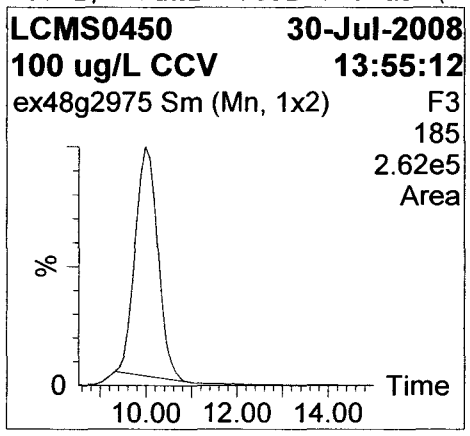
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



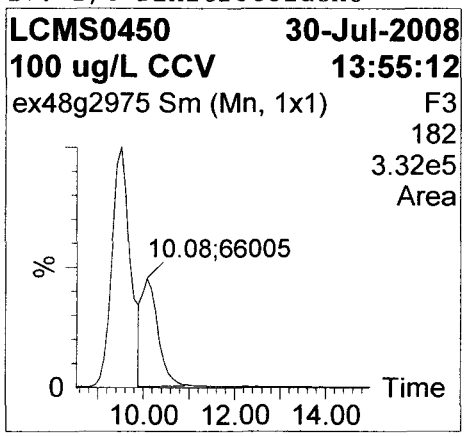
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

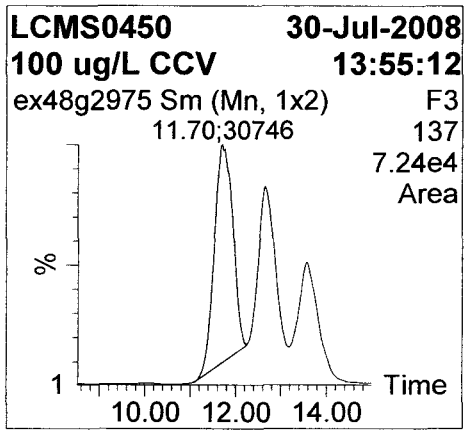
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2975
Text: 100 ug/L CCV

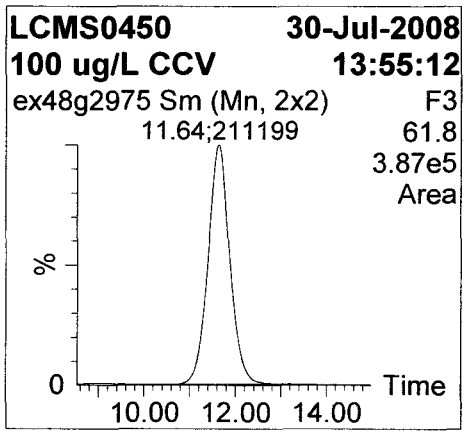
17: 2,4-Dinitrotoluene



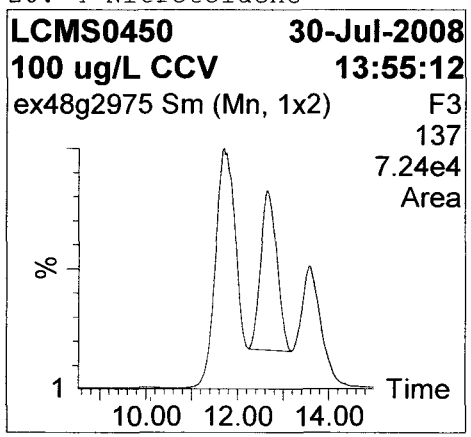
18: 2-Nitrotoluene



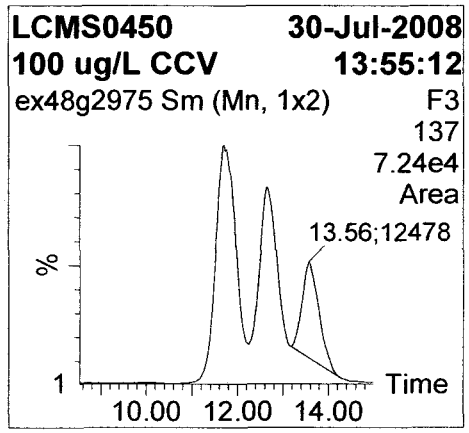
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2975
Text: 100 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	6318	bb	107.855	108	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5255	bb	0.790	79	29/Jul/08	ex48g29	
RDX 13C-..	3.882	33773	bb	0.832	83	29/Jul/08	ex48g29	
RDX	3.882	13119	bb	112.539	113	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	29105	bb	94.163	94	29/Jul/08	ex48g29	
Tetryl	6.444	97385	bb	119.810	120	29/Jul/08	ex48g29	
1,3 Dini..	6.547	79295	bs	0.782	78	29/Jul/08	ex48g29	
1,3-Dini..	6.678	25597	bb	100.593	101	29/Jul/08	ex48g29	
Nitroben..	7.398	24820	bb	107.445	107	29/Jul/08	ex48g29	
Nitrogly..	7.005	254784	bb	123.108	123	29/Jul/08	ex48g29	
Nitroben..	7.529	28865	bb	110.495	110	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	226465	bb	101.400	101	29/Jul/08	ex48g29	
4-Amino-..	8.380	99586	bd	94.122	94	29/Jul/08	ex48g29	
2-Amino-..	9.105	149842	db	91.689	92	29/Jul/08	ex48g29	
2,6-Dini..	9.510	150782	bd	114.643	115	29/Jul/08	ex48g29	
2,4-Dini..	9.981	144924	bb	0.676	68	29/Jul/08	ex48g29	
2,4-Dini..	10.075	66005	dd	102.641	103	29/Jul/08	ex48g29	
2-Nitrot..	11.701	30746	bb	106.887	107	29/Jul/08	ex48g29	
PETN	11.644	211199	bb	138.775	139	29/Jul/08	ex48g29	
4-Nitrot..	12.643	19499	bb	87.626	88	29/Jul/08	ex48g29	
3-Nitrot..	13.557	12478	bb	105.079	105	29/Jul/08	ex48g29	

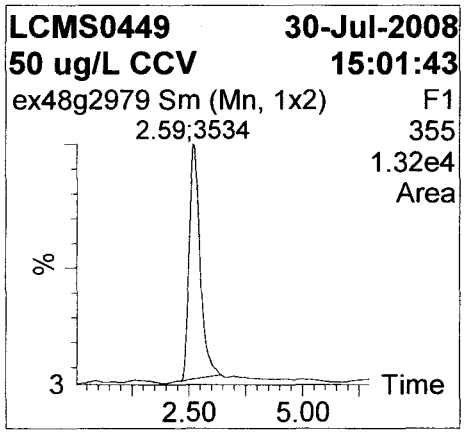
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

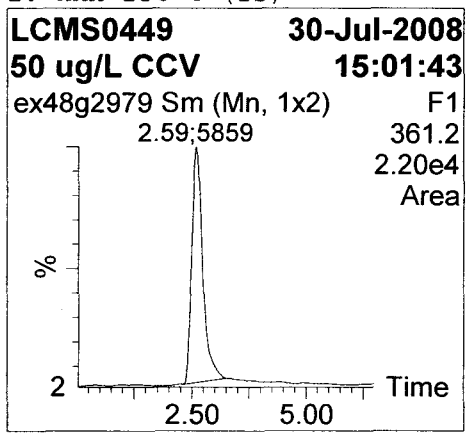
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2979
Text: 50 ug/L CCV

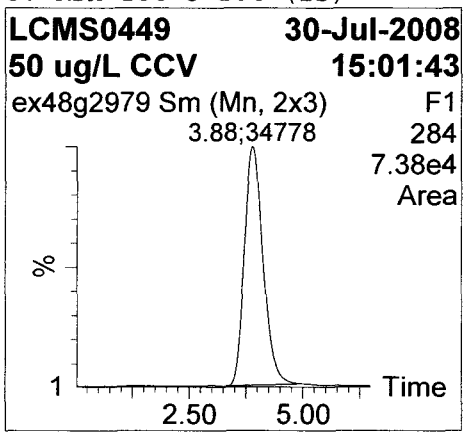
1: HMX



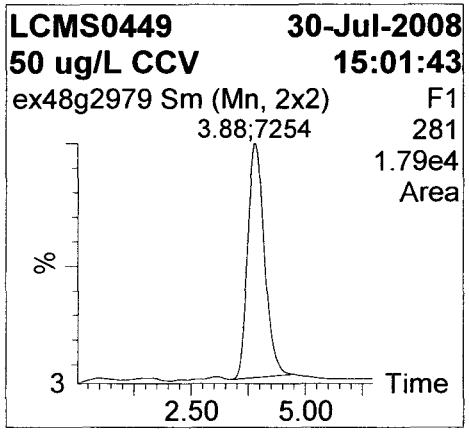
2: HMX 13C-4 (IS)



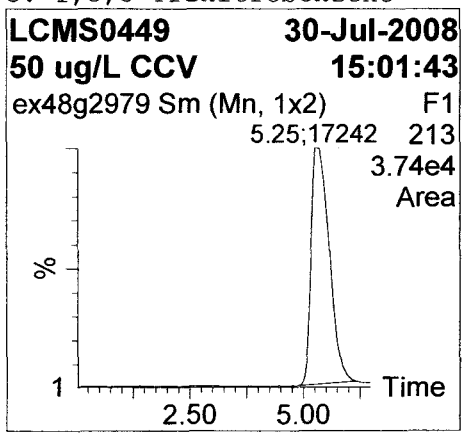
3: RDX 13C-3 284 (IS)



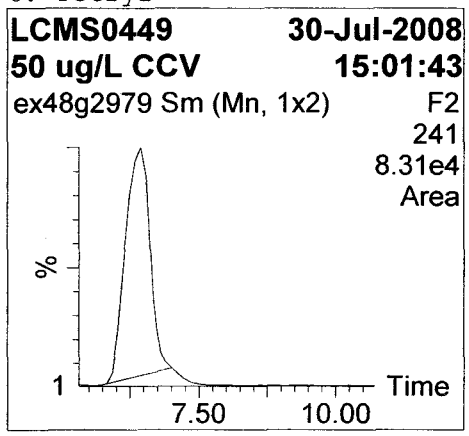
4: RDX



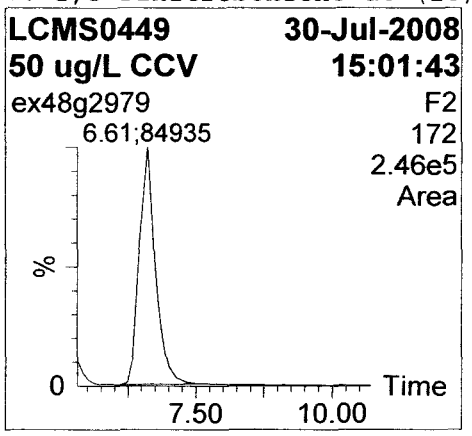
5: 1,3,5-Trinitrobenzene



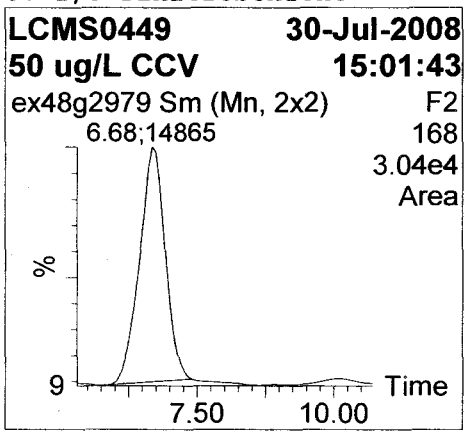
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



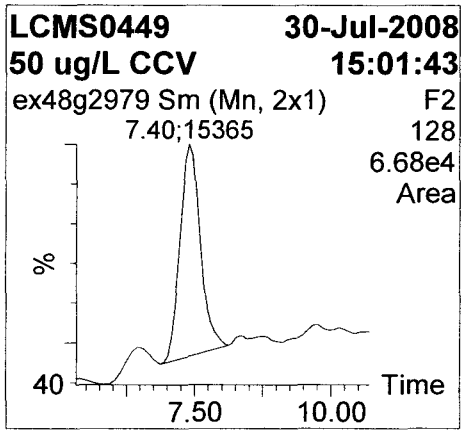
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

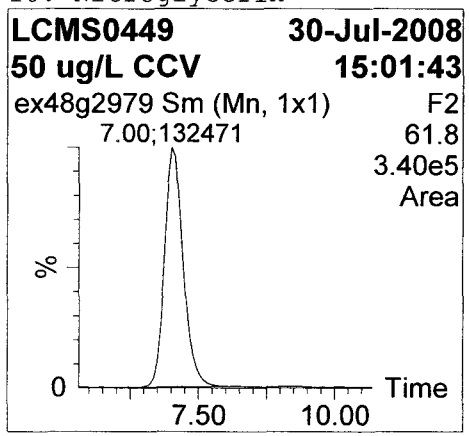
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2979
Text: 50 ug/L CCV

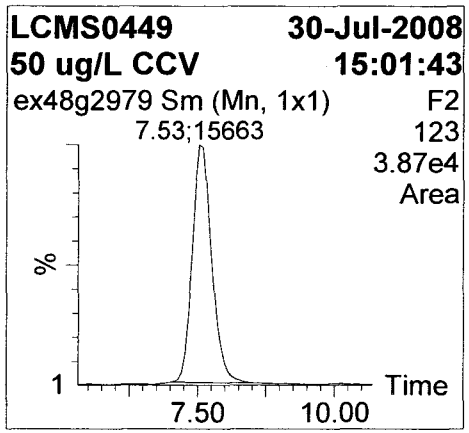
9: Nitrobenzene-d5



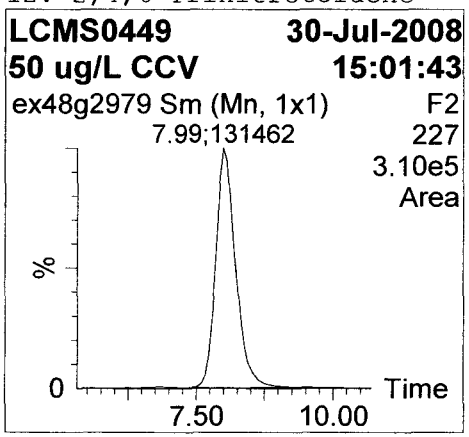
10: Nitroglycerin



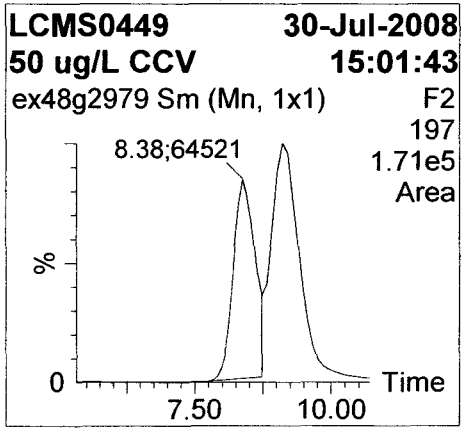
11: Nitrobenzene



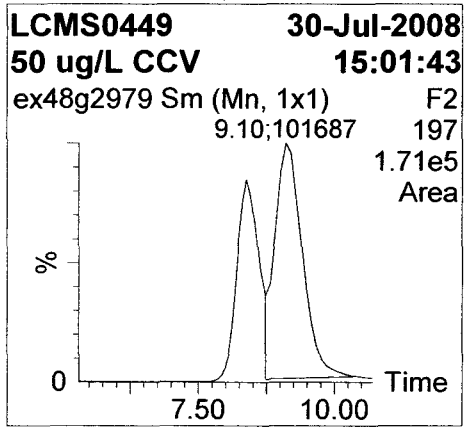
12: 2,4,6-Trinitrotoluene



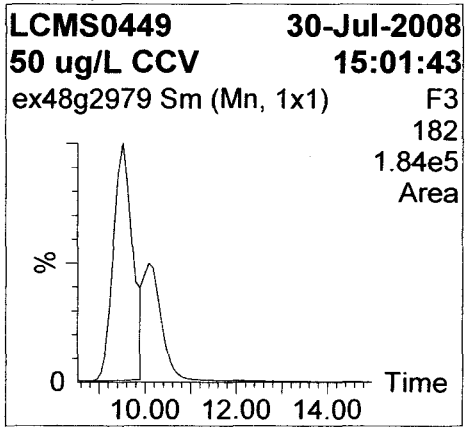
13: 4-Amino-2,6-Dinitrotolu..



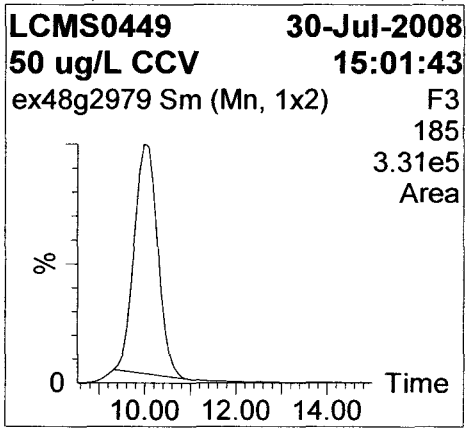
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



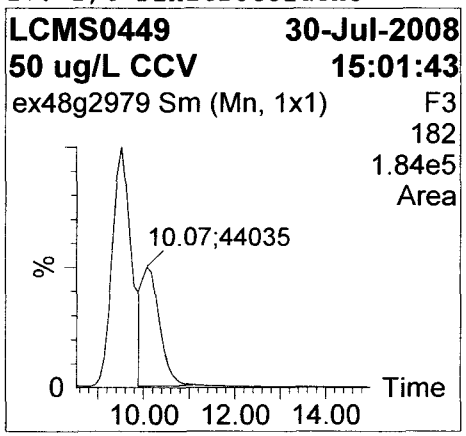
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

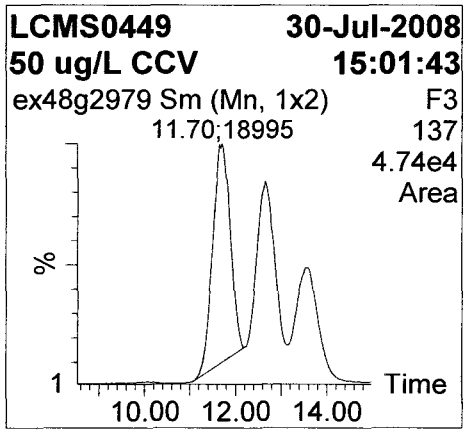
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2979
Text: 50 ug/L CCV

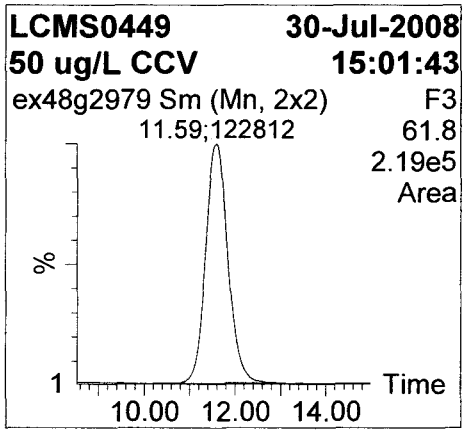
17: 2,4-Dinitrotoluene



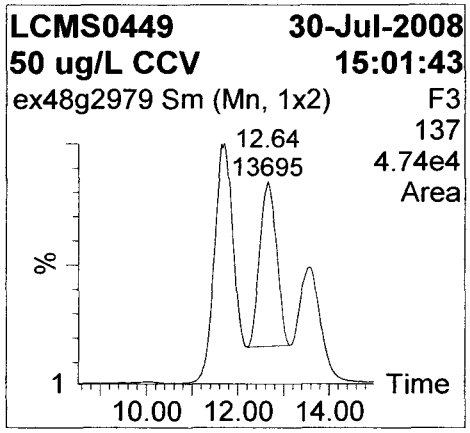
18: 2-Nitrotoluene



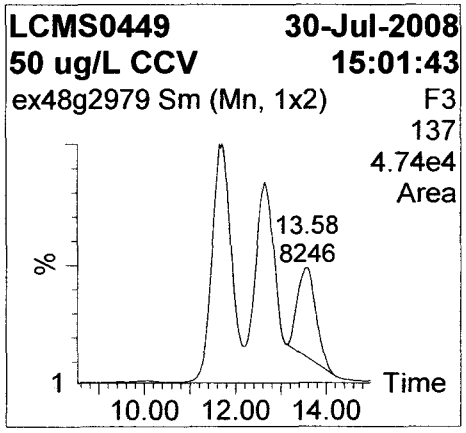
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 104

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2979
Text: 50 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	3534	bb	53.291	107	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5859	bb	0.881	88	29/Jul/08	ex48g29	
RDX 13C-..	3.882	34778	bb	0.857	86	29/Jul/08	ex48g29	
RDX	3.882	7254	bb	58.751	118	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	17242	bb	51.533	103	29/Jul/08	ex48g29	
Tetryl	6.444	40634	bb	46.940	94	29/Jul/08	ex48g29	
1,3 Dini..	6.612	84935	bb	0.837	84	29/Jul/08	ex48g29	
1,3-Dini..	6.677	14865	bb	53.721	107	29/Jul/08	ex48g29	
Nitroben..	7.397	15365	bb	61.495	123	29/Jul/08	ex48g29	
Nitrogly..	7.004	132471	bb	58.885	118	29/Jul/08	ex48g29	
Nitroben..	7.528	15663	bb	55.456	111	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	131462	bb	55.105	110	29/Jul/08	ex48g29	
4-Amino-..	8.380	64521	bd	56.765	114	29/Jul/08	ex48g29	
2-Amino-..	9.104	101687	db	58.218	116	29/Jul/08	ex48g29	
2,6-Dini..	9.510	86140	bd	49.604	99	29/Jul/08	ex48g29	
2,4-Dini..	9.980	190034	bb	0.886	89	29/Jul/08	ex48g29	
2,4-Dini..	10.074	44035	dd	52.720	105	29/Jul/08	ex48g29	
2-Nitrot..	11.700	18995	bb	50.003	100	29/Jul/08	ex48g29	
PETN	11.585	122812	bb	61.276	123	29/Jul/08	ex48g29	
4-Nitrot..	12.642	13695	bb	46.164	92	29/Jul/08	ex48g29	
3-Nitrot..	13.585	8246	bb	51.849	104	29/Jul/08	ex48g29	

LC/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05).SPL Page 1 of 2
Last Modified: 30 July 2008 15:20:03 Mountain Daylight Time
Printed: 30 July 2008 15:20:06 Mountain Daylight Time Page Position (1, 1)

	File Name	Sample ID	File Text	Sample Type	Analyte ug/L	QC ug/L	Bottle	Extract (mL)
1	ex48g2907	LCMS0453	blank	Blank	0	50	1	1.000000
2	ex48g2908	LCMS0446	5 ug/L	Standard	5	5	2	1.000000
3	ex48g2909	LCMS0447	10 ug/L	Standard	10	10	3	1.000000
4	ex48g2910	LCMS0448	25 ug/L	Standard	25	25	4	1.000000
5	ex48g2911	LCMS0449	50 ug/L	Standard	50	50	5	1.000000
6	ex48g2912	LCMS0450	100 ug/L	Standard	100	100	6	1.000000
7	ex48g2913	LCMS0451	200 ug/L	Standard	200	200	7	1.000000
8	ex48g2914	LCMS0452	300 ug/L	Standard	300	300	8	1.000000
9	ex48g2915	LCMS0453	blank	Blank	0	50	1	1.000000
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100	100	9	1.000000
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50	50	5	1.000000
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank	0	394.477	50	40.000000
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.918	406.918	51	40.000000
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte	0	403.226	52	40.000000
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte	0	389.484	53	40.000000
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte	0	391.773	54	40.000000
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.226	403.226	55	40.000000
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.449	404.449	56	40.000000
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte	0	407.747	57	40.000000
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte	0	398.804	58	40.000000
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte	0	390.244	59	40.000000
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100	100	6	1.000000
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte	0	394.477	60	40.000000
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte	0	389.864	61	40.000000
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte	0	402.414	62	40.000000
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50	50	5	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05).SPL
Last Modified: 30 July 2008 15:20:03 Mountain Daylight Time
Printed: 30 July 2008 15:20:06 Mountain Daylight Time Page Position (2, 1)

sample (mL or g)	dilution	Inject Volume (uL)	Inlet File	MS File	MS Tune File
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.140000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.830000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.920000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.270000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.210000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.920000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.890000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.810000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.030000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.250000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.140000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.260000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.940000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 1: HMX Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.997772
Calibration curve: 0.0109807 * x + 0.0180378
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				7531					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	2.588	470	7495	bb	0.063	4.073	81.5	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	2.588	877	6968	bb	0.126	9.817	98.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	2.588	2342	7140	bb	0.328	28.235	112.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	2.588	4108	6774	bb	0.606	53.583	107.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	2.588	7658	6663	bb	1.149	103.035	103.0	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	2.588	12397	5576	bb	2.223	200.831	100.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	2.588	19063	5944	bb	3.207	290.426	96.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				7624					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	2.662	7228	6696	bb	1.080	96.669	96.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	2.625	3393	5729	bb	0.592	52.285	104.6	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				6547					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	2.588	6300	5029	bb	1.253	457.542	112.4	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				5829					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				5150					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				5300					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	2.625	4938	4587	bb	1.076	388.679	96.4	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	2.625	5400	4857	bb	1.112	402.866	99.6	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				5729					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				5337					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				5821					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	2.588	6318	5255	bb	1.202	107.855	107.9	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				5612					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				5642					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				6357					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	2.588	3534	5859	bb	0.603	53.291	106.6	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 2: HMX 13C-4 (IS) Sample List: ex48g29(05) Method File: ex48g29
Response Factor: 6651.37
RRF SD: 673.653, % Relative SD: 10.1280
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		2.588	7531		bb	7530.946	1.132	113.2	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	2.588	7495		bb	7494.528	1.127	112.7	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	2.588	6968		bb	6968.432	1.048	104.8	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	2.588	7140		bb	7139.938	1.073	107.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	2.588	6774		bb	6774.367	1.018	101.8	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	2.588	6663		bb	6662.704	1.002	100.2	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	2.588	5576		bb	5575.795	0.838	83.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	2.588	5944		bb	5943.849	0.894	89.4	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		2.625	7624		bb	7624.451	1.146	114.6	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	2.662	6696		bb	6695.607	1.007	100.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	1.00	2.588	5729		bb	5729.236	0.861	86.1	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank		2.588	6547		bb	6546.909	0.984	98.4	40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	1.00	2.588	5029		bb	5028.811	0.756	75.6	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte		2.588	5829		bb	5828.738	0.876	87.6	40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte		2.588	5150		bb	5150.481	0.774	77.4	40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte		2.588	5300		bb	5299.629	0.797	79.7	40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	1.00	2.588	4587		bb	4587.324	0.690	69.0	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	1.00	2.588	4857		bb	4856.641	0.730	73.0	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte		2.662	5729		bb	5728.733	0.861	86.1	40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte		2.588	5337		bb	5337.185	0.802	80.2	40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte		2.588	5821		bb	5820.601	0.875	87.5	40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	1.00	2.588	5255		bb	5254.684	0.790	79.0	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte		2.699	5612		bb	5612.101	0.844	84.4	40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		2.588	5642		bb	5642.303	0.848	84.8	40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte		2.588	6357		bb	6357.061	0.956	95.6	40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	1.00	2.588	5859		bb	5858.535	0.881	88.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 3: RDX 13C-3 284 (IS) Sample List: ex48g29(05) Method File: ex48g29
Response Factor: 40575.0
RRF SD: 2245.74, % Relative SD: 5.53478
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		3.882	40528		bb	40527.902	0.999	99.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	3.882	40892		bb	40892.055	1.008	100.8	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	3.882	36550		bb	36550.301	0.901	90.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	3.919	39515		bb	39515.344	0.974	97.4	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	3.919	39776		bb	39775.504	0.980	98.0	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	3.882	42015		bb	42015.160	1.035	103.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	3.882	41741		bb	41740.750	1.029	102.9	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	3.845	43536		bb	43535.777	1.073	107.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		3.956	43027		bb	43027.234	1.060	106.0	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	3.956	39156		bb	39155.984	0.965	96.5	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	1.00	3.919	34049		bb	34048.703	0.839	83.9	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank		3.882	35799		bb	35798.855	0.882	88.2	40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	1.00	3.882	32445		bb	32445.369	0.800	80.0	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte		3.919	32057		bb	32057.307	0.790	79.0	40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte		3.882	29538		bb	29537.566	0.728	72.8	40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte		3.919	33782		bb	33781.500	0.833	83.3	40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	1.00	3.919	32432		bb	32431.777	0.799	79.9	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	1.00	3.919	32798		bb	32797.563	0.808	80.8	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte		3.993	34994		bb	34994.070	0.862	86.2	40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte		3.882	31735		bb	31734.805	0.782	78.2	40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte		3.919	32448		bb	32447.666	0.800	80.0	40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	1.00	3.882	33773		bb	33773.285	0.832	83.2	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte		3.993	30944		db	30944.186	0.763	76.3	40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		3.956	31077		bb	31076.756	0.766	76.6	40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte		3.882	34664		bb	34664.238	0.854	85.4	40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	1.00	3.882	34778		bb	34777.840	0.857	85.7	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 4: RDX Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.991254
Calibration curve: 0.00334413 * x + 0.0121126
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				40528					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	3.882	919	40892	bb	0.022	3.095	61.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	3.919	1704	36550	bb	0.047	10.317	103.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	3.882	4303	39515	bb	0.109	28.940	115.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	3.882	8275	39776	bb	0.208	58.592	117.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	3.882	15674	42015	bb	0.373	107.935	107.9	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	3.882	28710	41741	bb	0.688	202.057	101.0	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	3.845	41156	43536	bb	0.945	279.064	93.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				43027					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	3.993	14966	39156	bb	0.382	110.670	110.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	3.919	7276	34049	bb	0.214	60.280	120.6	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank		3.956	39	35799	bb	0.001	0.000		40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	3.882	12797	32445	bb	0.394	465.182	114.3	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				32057					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				29538					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				33782					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	3.882	10434	32432	bb	0.322	373.335	92.6	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	3.919	10274	32798	bb	0.313	364.206	90.0	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				34994					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				31735					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				32448					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	3.882	13119	33773	bb	0.388	112.539	112.5	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				30944					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				31077					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				34664					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	3.882	7254	34778	bb	0.209	58.751	117.5	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 5: 1,3,5-Trinitrobenzene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.994563
Calibration curve: 0.00384794 * x + 0.00471089
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	5.250	1920	101368	bb	0.019	3.698	74.0	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	5.250	4235	88759	bb	0.048	11.174	111.7	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	5.250	9940	90543	bb	0.110	27.306	109.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	5.250	19425	97797	bb	0.199	50.394	100.8	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	5.250	45144	104190	bb	0.433	111.376	111.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	5.353	80258	111799	bb	0.718	185.336	92.7	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	5.353	134286	115580	bb	1.162	300.715	100.2	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	5.353	36835	103558	bb	0.356	91.213	91.2	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	5.250	14353	73694	bb	0.195	49.390	98.8	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	5.250	28626	65074	bb	0.440	460.217	113.1	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	5.250	28386	85255	bb	0.333	343.962	85.3	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	5.250	30568	87827	bb	0.348	360.870	89.2	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	5.250	29105	79295	bb	0.367	94.163	94.2	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				81717					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	5.250	17242	84935	bb	0.203	51.533	103.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 6: Tetryl Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.998525
Calibration curve: 0.0102885 * x + -0.00453104
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	6.444	4706	101368	bb	0.046	4.953	99.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	6.444	9003	88759	bb	0.101	10.299	103.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	6.445	23750	90543	bb	0.262	25.936	103.7	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	6.445	49397	97797	bb	0.505	49.534	99.1	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	6.444	100652	104190	bb	0.966	94.335	94.3	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	6.444	223758	111799	bb	2.001	194.970	97.5	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	6.444	368080	115580	bb	3.185	309.973	103.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	6.444	102152	103558	bb	0.986	96.317	96.3	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	6.444	34129	73694	bb	0.463	45.453	90.9	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	6.444	86048	65074	bb	1.322	524.775	129.0	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	6.444	77277	85255	bb	0.906	357.019	88.5	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	6.444	76560	87827	bb	0.872	344.457	85.2	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	6.444	97385	79295	bb	1.228	119.810	119.8	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				81717					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	6.444	40634	84935	bb	0.478	46.940	93.9	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 7: 1,3 Dinitrobenzene-d4 (IS) Sample List: ex48g29(05) Method File: ex48g29
Response Factor: 101434
RRF SD: 10063.6, % Relative SD: 9.92135
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		6.743	102345	bb	102344.820	1.009	100.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	6.678	101368	bb	101367.680	0.999	99.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	6.612	88759	bb	88758.570	0.875	87.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	6.613	90543	bd	90543.391	0.893	89.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	6.547	97797	bs	97796.617	0.964	96.4	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	6.612	104190	bb	104190.422	1.027	102.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	6.678	111799	bb	111799.352	1.102	110.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	6.612	115580	bb	115580.016	1.139	113.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		6.612	93709	bb	93708.750	0.924	92.4	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	6.612	103558	bs	103557.820	1.021	102.1	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	1.00	6.612	73694	bb	73694.164	0.727	72.7	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank		6.612	65616	bd	65615.500	0.647	64.7	40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	1.00	6.547	65074	bb	65073.926	0.642	64.2	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte		6.546	61364	bb	61363.859	0.605	60.5	40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte		6.612	59258	bb	59257.891	0.584	58.4	40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte		6.612	80080	bb	80080.094	0.789	78.9	40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	1.00	6.612	85255	bb	85255.383	0.841	84.1	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	1.00	6.547	87827	bb	87827.242	0.866	86.6	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte		6.678	72512	bb	72512.219	0.715	71.5	40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte		6.612	84246	bb	84245.734	0.831	83.1	40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte		6.612	79896	bb	79895.742	0.788	78.8	40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	1.00	6.547	79295	bs	79295.414	0.782	78.2	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte		6.677	67800	bb	67800.188	0.668	66.8	40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		6.612	81717	ds	81717.258	0.806	80.6	40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte		6.612	82349	bb	82348.664	0.812	81.2	40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	1.00	6.612	84935	bb	84934.930	0.837	83.7	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 8: 1,3-Dinitrobenzene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.997196
Calibration curve: 0.00315292 * x + 0.00564178
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	6.678	2100	101368	bb	0.021	4.781	95.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	6.678	3144	88759	bb	0.035	9.446	94.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	6.678	7821	90543	bb	0.086	25.606	102.4	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	6.678	16680	97797	bb	0.171	52.307	104.6	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	6.678	36184	104190	bb	0.347	108.360	108.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	6.743	66932	111799	bb	0.599	188.092	94.0	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	6.743	110490	115580	bb	0.956	301.408	100.5	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	6.743	32499	103558	bb	0.314	97.744	97.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	6.677	11508	73694	bb	0.156	47.740	95.5	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	6.678	25453	65074	bb	0.391	497.530	122.3	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	6.677	28803	85255	bb	0.338	424.851	105.4	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	6.678	24585	87827	bb	0.280	351.836	87.0	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte		6.678	139	79896	bb	0.002	0.000		40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	6.678	25597	79295	bb	0.323	100.593	100.6	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				81717					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	6.677	14865	84935	bb	0.175	53.721	107.4	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 9: Nitrobenzene-d5 Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.995648
Calibration curve: 0.00287504 * x + 0.00410105
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		7.464	14830	102345	bb	0.145	48.972	97.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.333	1390	101368	db	0.014	3.344	66.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.398	3356	88759	bd	0.038	11.725	117.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.399	7872	90543	bb	0.087	28.813	115.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.399	15148	97797	bb	0.155	52.447	104.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.398	30343	104190	bb	0.291	99.867	99.9	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.464	60748	111799	bb	0.543	187.567	93.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.464	102236	115580	bb	0.885	306.237	102.1	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		7.463	15598	93709	bd	0.166	56.469	112.9	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.464	33065	103558	bb	0.319	109.628	109.6	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	7.398	11436	73694	bb	0.155	52.548	105.1	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank		7.398	22179	65616	bb	0.338	458.150	116.1	40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	7.333	20626	65074	bb	0.317	442.802	108.8	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte		7.397	22406	61364	bb	0.365	506.355	125.6	40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte		7.398	24239	59258	bb	0.409	548.582	140.8	40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte		7.398	26559	80080	bb	0.332	446.347	113.9	40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	7.397	26806	85255	bb	0.314	435.217	107.9	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	7.399	22969	87827	bb	0.262	362.128	89.5	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte		7.464	23483	72512	bb	0.324	453.466	111.2	40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte		7.397	26316	84246	bb	0.312	427.604	107.2	40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte		7.398	21284	79896	bb	0.266	356.036	91.2	40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	7.398	24820	79295	bb	0.313	107.445	107.4	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte		7.463	19754	67800	bb	0.291	394.134	99.9	40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		7.530	23862	81717	bb	0.292	390.404	100.1	40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte		7.398	24731	82349	bd	0.300	414.612	103.0	40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	7.397	15365	84935	bb	0.181	61.495	123.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 10: Nitroglycerin Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.996295
Calibration curve: 0.0257449 * x + 0.0436900
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.005	12993	101368	bb	0.128	3.282	65.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.071	29009	88759	bb	0.327	10.998	110.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.006	73167	90543	bb	0.808	29.691	118.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.006	139002	97797	bb	1.421	53.511	107.0	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.005	279603	104190	bb	2.684	102.540	102.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.136	570254	111799	bb	5.101	196.427	98.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.071	878539	115580	bb	7.601	293.551	97.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.071	277639	103558	bb	2.681	102.440	102.4	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	7.005	114353	73694	bb	1.552	58.576	117.2	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	7.071	217024	65074	bb	3.335	520.223	127.8	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	7.004	239435	85255	bb	2.808	433.026	107.4	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	7.005	234448	87827	bb	2.669	412.499	102.0	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	7.005	254784	79295	bb	3.213	123.108	123.1	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				81717					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	7.004	132471	84935	bb	1.560	58.885	117.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 11: Nitrobenzene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.994425
Calibration curve: 0.00326327 * x + 0.00344180
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.595	1673	101368	bd	0.017	4.003	80.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.529	3451	88759	bb	0.039	10.858	108.6	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.530	9019	90543	bb	0.100	29.469	117.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.530	16355	97797	bb	0.167	50.193	100.4	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.529	32890	104190	bb	0.316	95.680	95.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.660	67837	111799	bb	0.607	184.886	92.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.595	119172	115580	bb	1.031	314.911	105.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.595	36743	103558	bb	0.355	107.673	107.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	7.528	12399	73694	bb	0.168	50.503	101.0	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	7.726	24433	65074	bb	0.375	463.901	114.0	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	7.594	29680	85255	bb	0.348	425.916	105.6	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	7.595	25165	87827	bb	0.287	350.864	86.8	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	7.529	28865	79295	bb	0.364	110.495	110.5	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		7.595	30	81717	bb	0.000	0.000		40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	7.528	15663	84935	bb	0.184	55.456	110.9	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 12: 2,4,6-Trinitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.995606
Calibration curve: 0.0282574 * x + -0.00933175
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.988	12162	101368	bb	0.120	4.576	91.5	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.987	26082	88759	bb	0.294	10.729	107.3	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.988	68360	90543	bb	0.755	27.049	108.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.988	135405	97797	bb	1.385	49.329	98.7	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.987	281728	104190	bb	2.704	96.021	96.0	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	8.119	584278	111799	bb	5.226	185.278	92.6	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	8.054	1034300	115580	bb	8.949	317.018	105.7	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		7.987	486	93709	bb	0.005	0.514		1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	8.053	289588	103558	bb	2.796	99.292	99.3	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	7.987	100120	73694	bb	1.359	48.409	96.8	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	8.053	212309	65074	bb	3.263	471.168	115.8	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	8.052	229717	85255	bb	2.694	385.824	95.7	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	7.988	209089	87827	bb	2.381	342.084	84.6	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte		8.053	205	72512	bb	0.003	1.754		40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte		7.986	177	84246	bb	0.002	1.613		40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	7.987	226465	79295	bb	2.856	101.400	101.4	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		8.054	175	81717	bb	0.002	1.583		40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	7.987	131462	84935	bb	1.548	55.105	110.2	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 13: 4-Amino-2,6-Dinitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.998445
Calibration curve: 0.0132837 * x + 0.00560063
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	8.381	6168	101368	dd	0.061	4.159	83.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	8.380	12713	88759	bd	0.143	10.361	103.6	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	8.381	34179	90543	bd	0.377	27.996	112.0	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	8.381	64788	97797	bd	0.662	49.450	98.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	8.380	144870	104190	bd	1.390	104.251	104.3	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	8.447	298980	111799	bd	2.674	200.897	100.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	8.447	450324	115580	bd	3.896	292.887	97.6	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	8.446	133896	103558	bd	1.293	96.913	96.9	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	8.380	46595	73694	bd	0.632	47.177	94.4	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	8.447	105590	65074	bd	1.623	495.339	121.7	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	8.379	93061	85255	bd	1.092	329.642	81.8	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	8.446	78509	87827	bd	0.894	270.463	66.9	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	8.380	99586	79295	bd	1.256	94.122	94.1	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				81717					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	8.380	64521	84935	bd	0.760	56.765	113.5	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 14: 2-Amino-4,6-Dinitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.992131
Calibration curve: 0.0206873 * x + -0.00713639
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	9.105	9349	101368	db	0.092	4.803	96.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	9.198	19006	88759	db	0.214	10.696	107.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	9.106	50509	90543	db	0.558	27.310	109.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	9.106	93624	97797	db	0.957	46.622	93.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	9.104	206964	104190	db	1.986	96.365	96.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	9.200	416397	111799	db	3.725	180.383	90.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	9.106	773443	115580	db	6.692	323.821	107.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	9.200	211848	103558	db	2.046	99.232	99.2	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	9.104	71312	73694	db	0.968	47.121	94.2	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				65616					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	9.199	189562	65074	db	2.913	574.394	141.2	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				61364					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				59258					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				80080					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	9.104	178008	85255	db	2.088	408.361	101.3	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	9.200	182610	87827	db	2.079	407.891	100.9	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				72512					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				84246					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				79896					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	9.105	149842	79295	db	1.890	91.689	91.7	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				67800					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				81717					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				82349					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	9.104	101687	84935	db	1.197	58.218	116.4	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 15: 2,6-Dinitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.992191
Calibration curve: 0.00902750 * x + 0.00548383
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	9.510	8876	212900	bd	0.042	4.011	80.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	9.510	19306	189050	bd	0.102	10.705	107.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	9.511	48406	199111	bd	0.243	26.322	105.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	9.606	99450	204522	bd	0.486	53.256	106.5	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	9.510	207873	232442	bd	0.894	98.456	98.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	9.605	435688	218394	bd	1.995	220.380	110.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	9.511	614252	245218	bd	2.505	276.869	92.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	9.511	206170	209566	bd	0.984	108.371	108.4	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	9.510	69011	138718	bd	0.497	54.501	109.0	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				178180					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	9.605	158494	152671	bd	1.038	465.472	114.4	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				150713					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				129135					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				144171					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	9.509	176500	186532	bd	0.946	420.193	104.2	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	9.605	155839	170856	bd	0.912	406.184	100.4	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				150415					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				142778					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				185637					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	9.510	150782	144924	bd	1.040	114.643	114.6	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				166552					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		9.511	1693	144762	bd	0.012	2.684		40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				156502					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	9.510	86140	190034	bd	0.453	49.604	99.2	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 16: 2,4-Dinitrotoluene-d3 (IS) Sample List: ex48g29(05) Method File: ex48g29
Response Factor: 214519
RRF SD: 19439.3, % Relative SD: 9.06180
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		10.076	213845	bb	213845.047	0.997	99.7	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	9.981	212900	bb	212899.953	0.992	99.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	10.075	189050	bb	189049.688	0.881	88.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	9.982	199111	bb	199110.891	0.928	92.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	10.076	204522	bb	204522.063	0.953	95.3	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	9.980	232442	bb	232442.063	1.084	108.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	10.170	218394	bb	218393.813	1.018	101.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	10.170	245218	bb	245217.828	1.143	114.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		10.075	222357	bb	222356.594	1.037	103.7	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	10.076	209566	bb	209565.547	0.977	97.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	1.00	10.075	138718	bb	138717.750	0.647	64.7	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank		9.981	178180	bb	178180.219	0.831	83.1	40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	1.00	10.076	152671	bb	152671.219	0.712	71.2	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte		10.074	150713	bb	150712.906	0.703	70.3	40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte		9.982	129135	bb	129135.172	0.602	60.2	40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte		10.075	144171	bb	144170.641	0.672	67.2	40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	1.00	9.980	186532	bb	186531.984	0.870	87.0	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	1.00	10.076	170856	bb	170856.281	0.796	79.6	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte		10.170	150415	bb	150414.938	0.701	70.1	40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte		10.075	142778	bb	142778.016	0.666	66.6	40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte		9.981	185637	bb	185636.672	0.865	86.5	40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	1.00	9.981	144924	bb	144923.875	0.676	67.6	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte		10.169	166552	bb	166552.125	0.776	77.6	40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		10.170	144762	bb	144761.578	0.675	67.5	40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte		10.076	156502	bb	156502.328	0.730	73.0	40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	1.00	9.980	190034	bb	190034.266	0.886	88.6	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 17: 2,4-Dinitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.997621
Calibration curve: 1.34213e-6 * x^2 + 0.00427312 * x + 0.00270958
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	10.075	4326	212900	db	0.020	4.116	82.3	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	10.169	10495	189050	dd	0.056	12.310	123.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	10.076	22234	199111	dd	0.112	25.297	101.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	10.171	41853	204522	db	0.205	46.574	93.1	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	10.074	100355	232442	dd	0.432	97.421	97.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	10.264	207681	218394	dd	0.951	208.282	104.1	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	10.264	339592	245218	dd	1.385	295.943	98.6	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	10.170	82166	209566	dd	0.392	88.652	88.7	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	10.169	34038	138718	dd	0.245	55.810	111.6	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				178180					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	10.170	73470	152671	dd	0.481	440.694	108.3	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				150713					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				129135					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				144171					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	10.074	78935	186532	dd	0.423	385.203	95.5	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	10.171	71579	170856	dd	0.419	382.597	94.6	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				150415					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				142778					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				185637					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	10.075	66005	144924	dd	0.455	102.641	102.6	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				166552					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte		10.264	12394	144762	dd	0.086	75.184		40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				156502					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	10.074	44035	190034	dd	0.232	52.720	105.4	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 18: 2-Nitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.999594
Calibration curve: 0.00197244 * x + 0.00132781
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	11.615	2143	212900	bb	0.010	4.430	88.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	11.728	4162	189050	bb	0.022	10.488	104.9	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	11.636	10795	199111	bb	0.054	26.814	107.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	11.722	20512	204522	bb	0.100	50.174	100.3	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	11.699	45923	232442	bb	0.198	99.492	99.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	11.807	86160	218394	bb	0.395	199.342	99.7	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	11.836	145071	245218	bb	0.592	299.260	99.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	11.836	39620	209566	bb	0.189	95.175	95.2	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	11.757	16308	138718	bb	0.118	58.928	117.9	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				178180					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	11.758	31211	152671	bb	0.204	419.007	103.0	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				150713					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				129135					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				144171					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	11.699	37308	186532	bb	0.200	406.158	100.7	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	11.751	37396	170856	bb	0.219	446.072	110.3	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				150415					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				142778					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				185637					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	11.701	30746	144924	bb	0.212	106.887	106.9	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				166552					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				144762					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				156502					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	11.700	18995	190034	bb	0.100	50.003	100.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 19: PETN Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.999013
Calibration curve: 0.0104654 * x + 0.00498117
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	11.558	10355	212900	bb	0.049	4.171	83.4	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	11.614	22077	189050	bb	0.117	10.683	106.8	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	11.522	57137	199111	bb	0.287	26.944	107.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	11.636	109705	204522	bb	0.536	50.778	101.6	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	11.528	247273	232442	bb	1.064	101.174	101.2	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	11.693	464931	218394	bb	2.129	202.944	101.5	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	11.807	753933	245218	bb	3.075	293.306	97.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	11.693	225608	209566	bb	1.077	102.392	102.4	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	11.585	108589	138718	bb	0.783	74.324	148.6	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				178180					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	11.672	195926	152671	bb	1.283	497.046	122.1	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				150713					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				129135					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				144171					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	11.557	221666	186532	bb	1.188	455.947	113.1	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	11.636	225435	170856	bb	1.319	507.991	125.6	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				150415					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				142778					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				185637					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	11.644	211199	144924	bb	1.457	138.775	138.8	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				166552					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				144762					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				156502					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	11.585	122812	190034	bb	0.646	61.276	122.6	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 20: 4-Nitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.996636
Calibration curve: -7.10754e-7 * x^2 + 0.00160195 * x + -0.000369042
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	12.644	1628	212900	bb	0.008	5.014	100.3	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	12.698	3020	189050	bb	0.016	10.248	102.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	12.607	7228	199111	bb	0.036	23.127	92.5	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	12.721	17492	204522	bb	0.086	54.961	109.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	12.670	32633	232442	bb	0.140	91.592	91.6	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	12.693	66427	218394	bb	0.304	209.590	104.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	12.864	100771	245218	bb	0.411	295.500	98.5	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	12.779	29178	209566	bb	0.139	90.803	90.8	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	12.642	12149	138718	bb	0.088	56.308	112.6	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				178180					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	12.700	22038	152671	bb	0.144	383.652	94.3	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				150713					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				129135					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				144171					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	12.670	26362	186532	bb	0.141	371.879	92.2	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	12.722	27147	170856	bb	0.159	421.575	104.2	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				150415					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				142778					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				185637					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	12.643	19499	144924	bb	0.135	87.626	87.6	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				166552					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				144762					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				156502					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	12.642	13695	190034	bb	0.072	46.164	92.3	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:21:23 2008

Compound 21: 3-Nitrotoluene Sample List: ex48g29(05) Method File: ex48g29
Coefficient of Determination: 0.996762
Calibration curve: 0.000802265 * x + 0.00179808
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	13.558	1026	212900	bb	0.005	3.768	75.4	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	13.554	1998	189050	bb	0.011	10.929	109.3	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	13.550	4707	199111	bb	0.024	27.224	108.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	13.607	8855	204522	bb	0.043	51.728	103.5	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	13.527	19941	232442	bb	0.086	104.691	104.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	13.750	36582	218394	bb	0.168	206.546	103.3	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	13.750	56531	245218	bb	0.231	285.114	95.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	13.637	17350	209566	bb	0.083	100.953	101.0	1.000	1.000	1	40	ex48g29
11	ex48g2964	LCMS0449	50 ug/L CCV	QC	50.00	13.585	6465	138718	bb	0.047	55.850	111.7	1.000	1.000	1	40	ex48g29
12	ex48g2965	KR4C61AA	R8G240000-281 MB	Blank				178180					40.000	10.140	1	40	ex48g29
13	ex48g2966	KR4C61AC	R8G240000-281 LCS	QC	406.92	13.614	13176	152671	bb	0.086	428.607	105.3	40.000	9.830	1	40	ex48g29
14	ex48g2967	KR4C61AD	R8G240000-281 GB	Analyte				150713					40.000	9.920	1	40	ex48g29
15	ex48g2968	KRW1Q1AA	D8G210174-002	Analyte				129135					40.000	10.270	1	40	ex48g29
16	ex48g2969	KRW1W1AA	D8G210174-003	Analyte				144171					40.000	10.210	1	40	ex48g29
17	ex48g2970	KRW1W1AG	D8G210174-003 MS	QC	403.23	13.584	14308	186532	bb	0.077	376.491	93.4	40.000	9.920	1	40	ex48g29
18	ex48g2971	KRW1W1AH	D8G210174-003 MSD	QC	404.45	13.635	13312	170856	bb	0.078	383.713	94.9	40.000	9.890	1	40	ex48g29
19	ex48g2972	KRW1X1AA	D8G210174-004	Analyte				150415					40.000	9.810	1	40	ex48g29
20	ex48g2973	KRW2R1AA	D8G210174-005	Analyte				142778					40.000	10.030	1	40	ex48g29
21	ex48g2974	KRW2T1AA	D8G210174-006	Analyte				185637					40.000	10.250	1	40	ex48g29
22	ex48g2975	LCMS0450	100 ug/L CCV	QC	100.00	13.557	12478	144924	bb	0.086	105.079	105.1	1.000	1.000	1	40	ex48g29
23	ex48g2976	KRW3C1AA	D8G210174-018	Analyte				166552					40.000	10.140	1	40	ex48g29
24	ex48g2977	KRW3D1AA	D8G210174-019	Analyte				144762					40.000	10.260	1	40	ex48g29
25	ex48g2978	KRW3E1AA	D8G210174-020	Analyte				156502					40.000	9.940	1	40	ex48g29
26	ex48g2979	LCMS0449	50 ug/L CCV	QC	50.00	13.585	8246	190034	bb	0.043	51.849	103.7	1.000	1.000	1	40	ex48g29

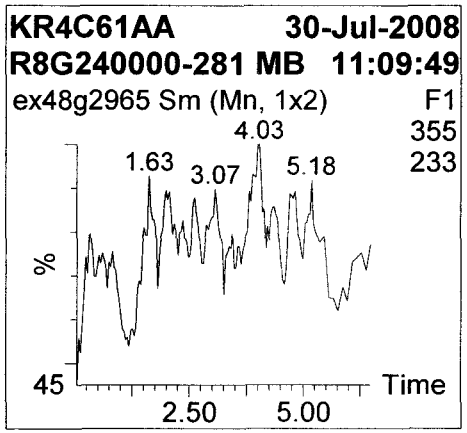
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

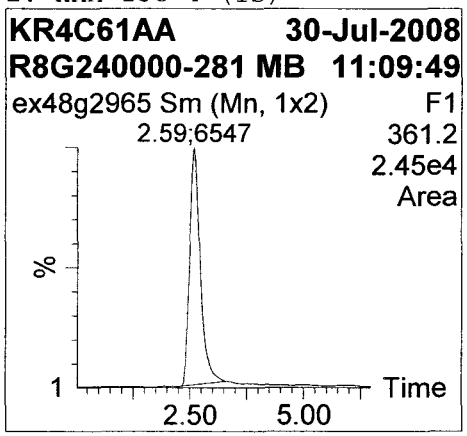
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2965
Text: R8G240000-281 MB

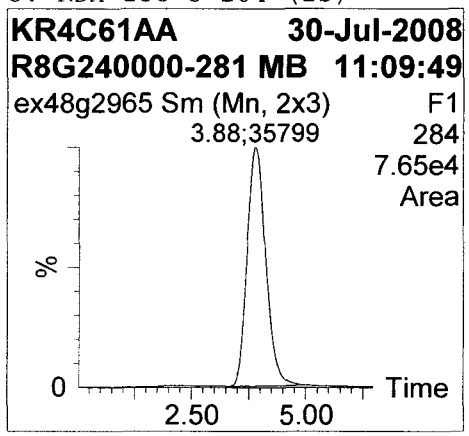
1: HMX



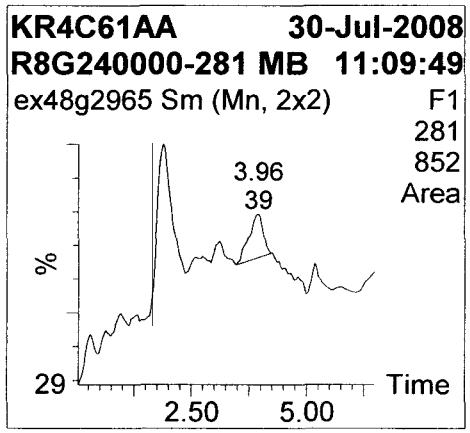
2: HMX 13C-4 (IS)



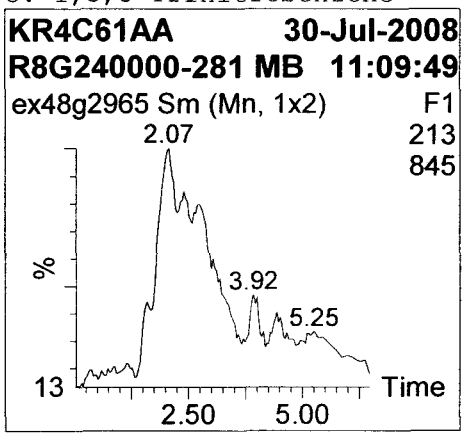
3: RDX 13C-3 284 (IS)



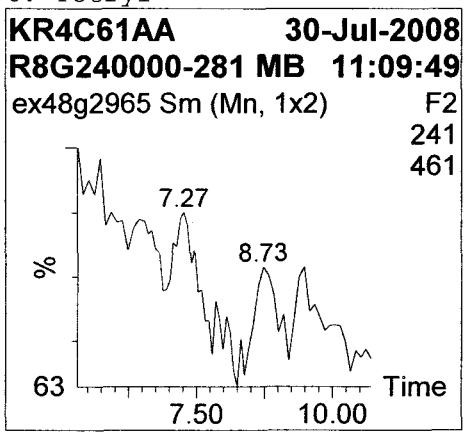
4: RDX



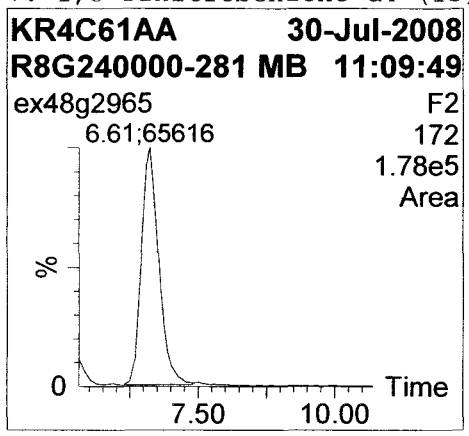
5: 1,3,5-Trinitrobenzene



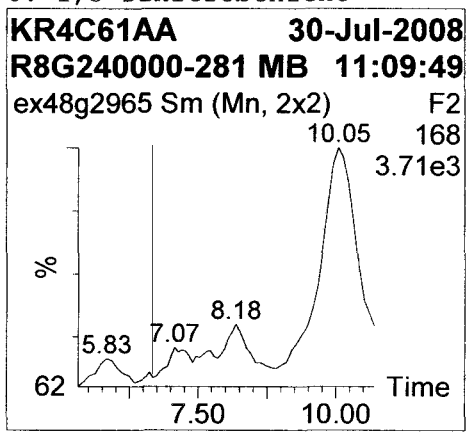
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



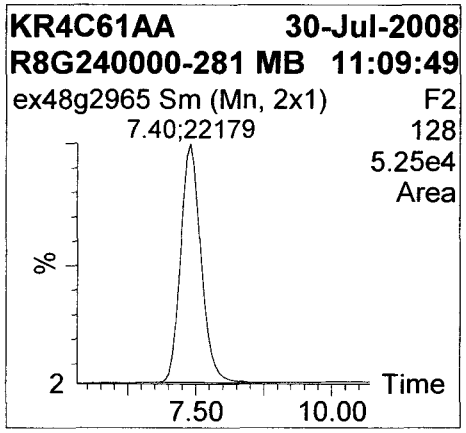
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

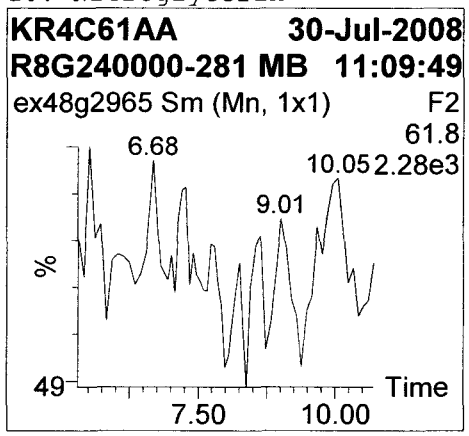
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2965
Text: R8G240000-281 MB

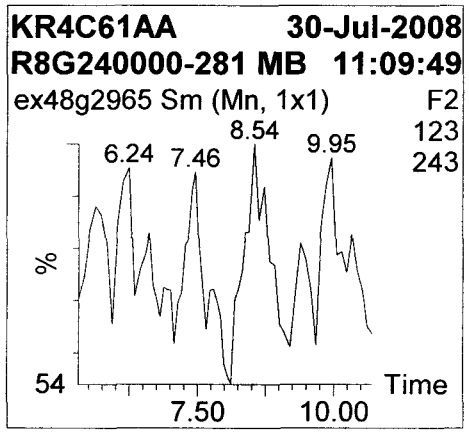
9: Nitrobenzene-d5



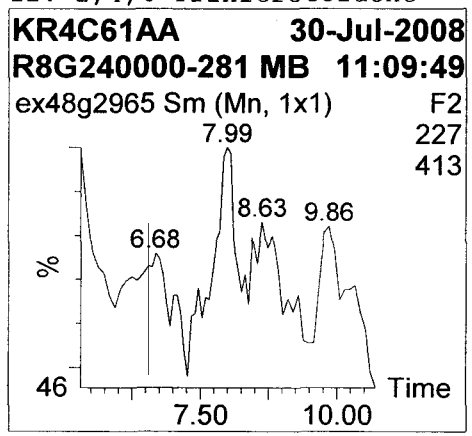
10: Nitroglycerin



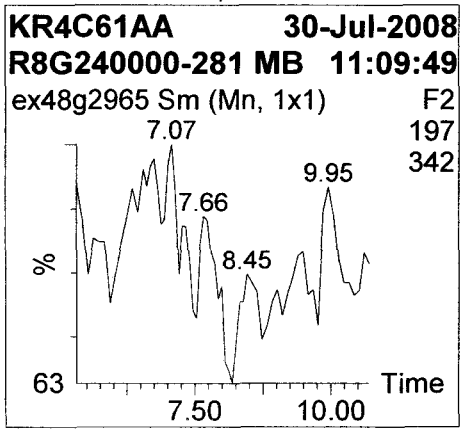
11: Nitrobenzene



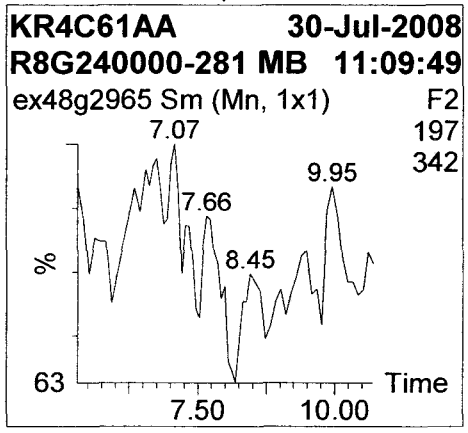
12: 2,4,6-Trinitrotoluene



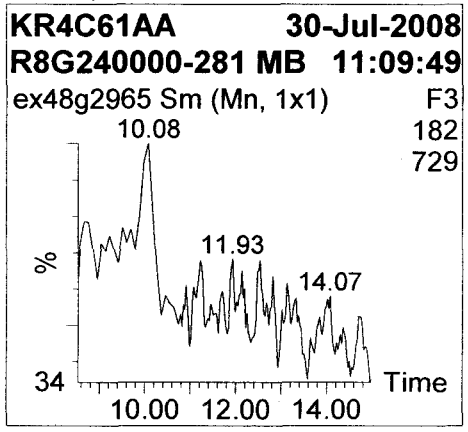
13: 4-Amino-2,6-Dinitrotolu..



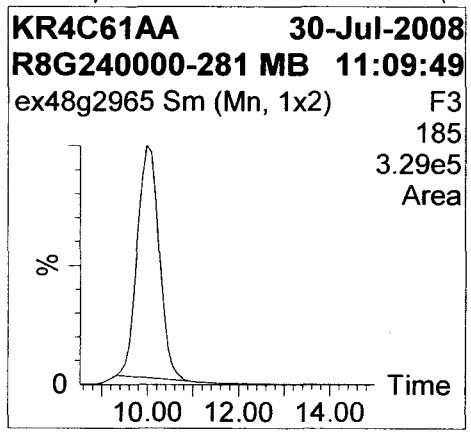
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



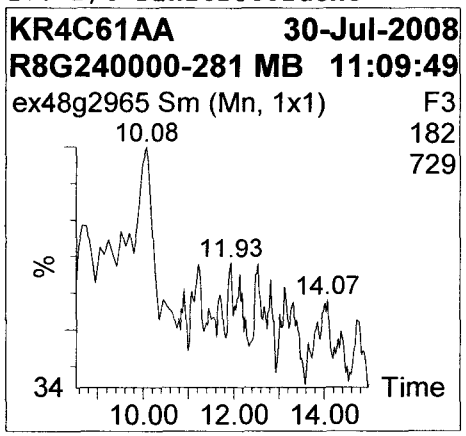
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

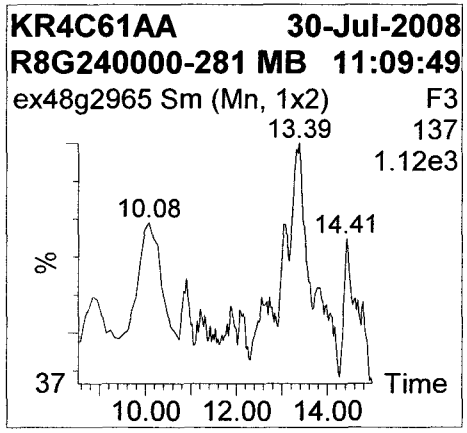
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2965
Text: R8G240000-281 MB

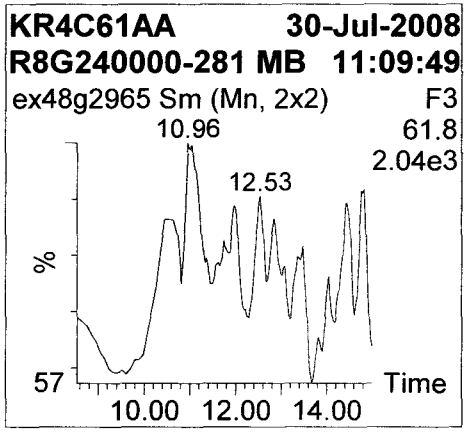
17: 2,4-Dinitrotoluene



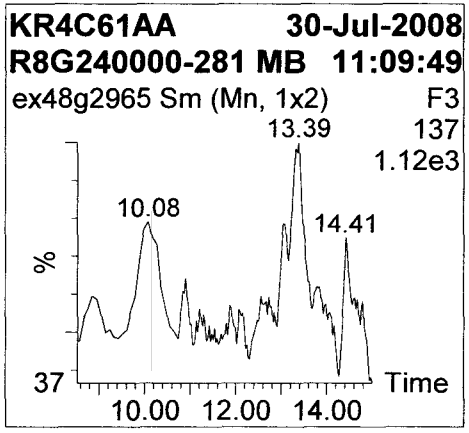
18: 2-Nitrotoluene



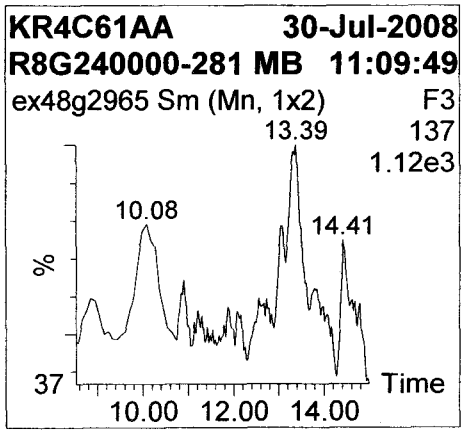
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2965
Text: R8G240000-281 MB

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	6547	bb	0.984	98	29/Jul/08	ex48g29	
RDX 13C-..	3.882	35799	bb	0.882	88	29/Jul/08	ex48g29	
RDX	3.956	39	bb	0.000		29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	65616	bd	0.647	65	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	22179	bb	458.150	116	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	178180	bb	0.831	83	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

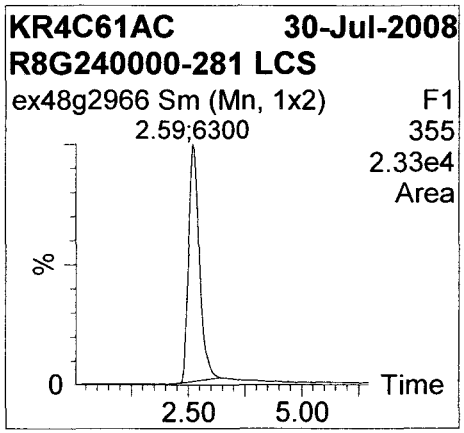
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

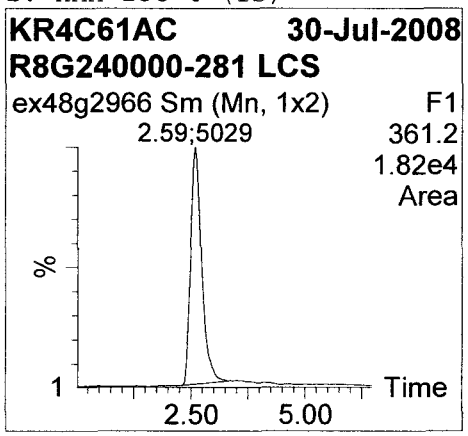
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2966
Text: R8G240000-281 LCS

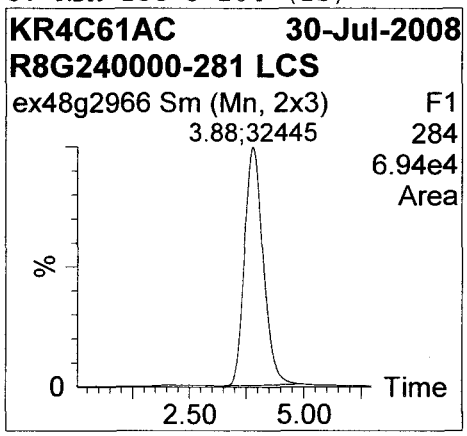
1: HMX



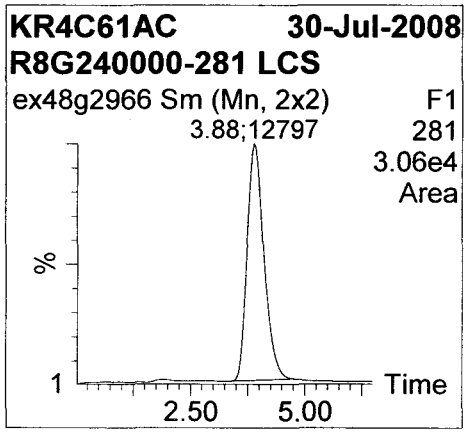
2: HMX 13C-4 (IS)



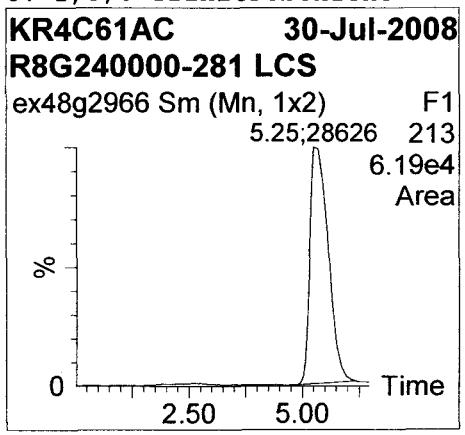
3: RDX 13C-3 284 (IS)



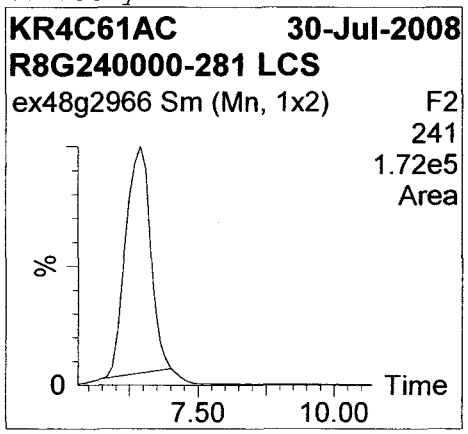
4: RDX



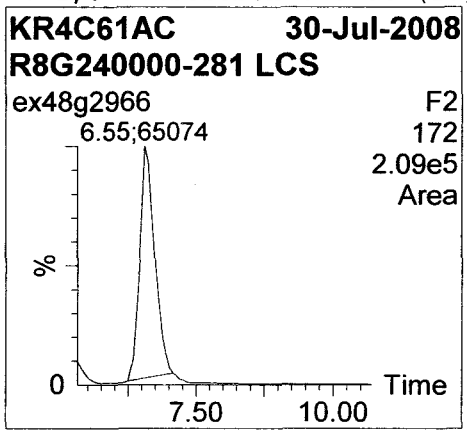
5: 1,3,5-Trinitrobenzene



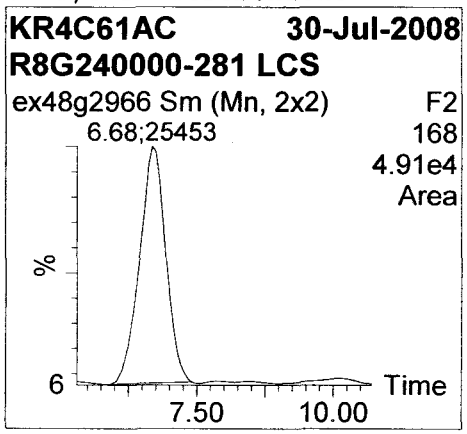
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



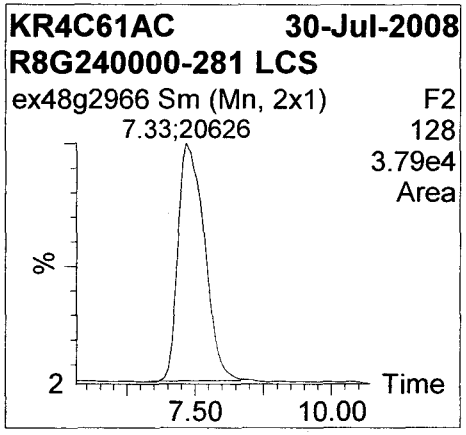
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

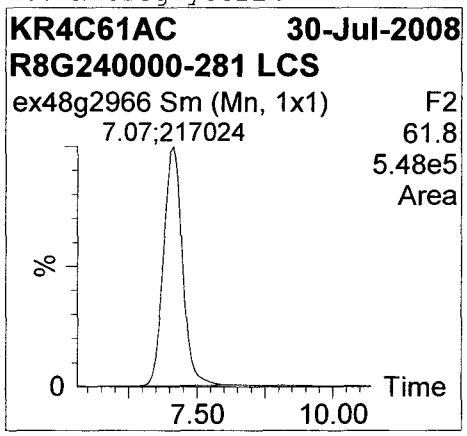
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2966
Text: R8G240000-281 LCS

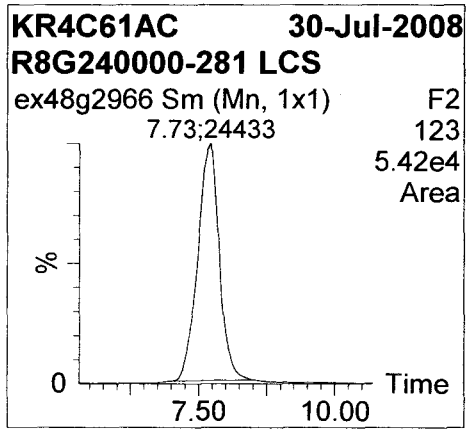
9: Nitrobenzene-d5



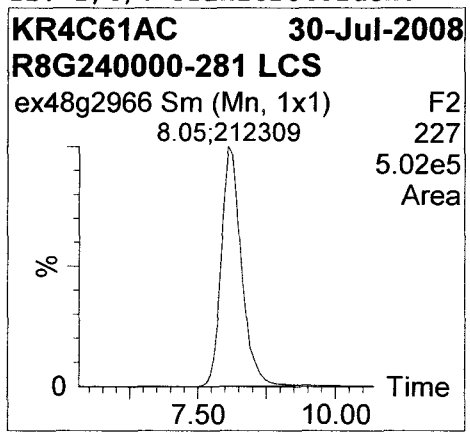
10: Nitroglycerin



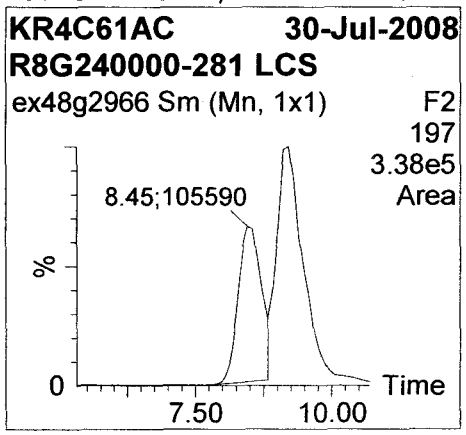
11: Nitrobenzene



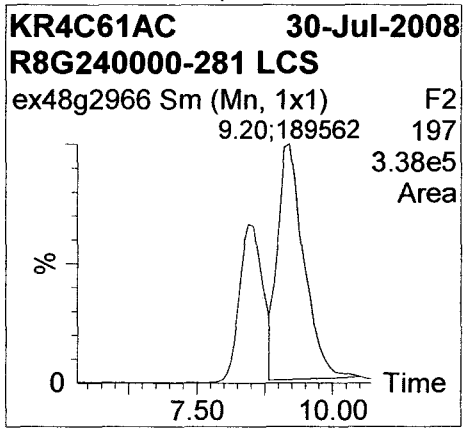
12: 2,4,6-Trinitrotoluene



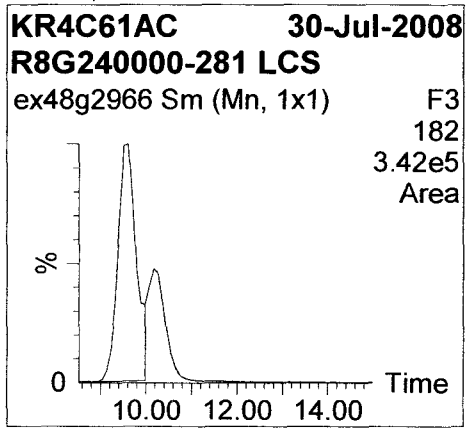
13: 4-Amino-2,6-Dinitrotolu..



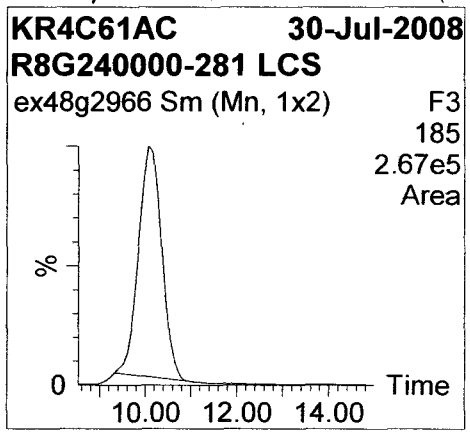
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



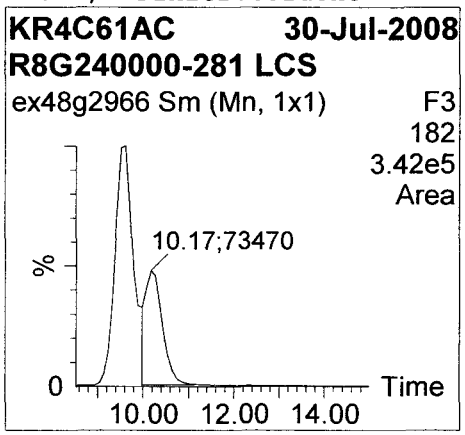
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

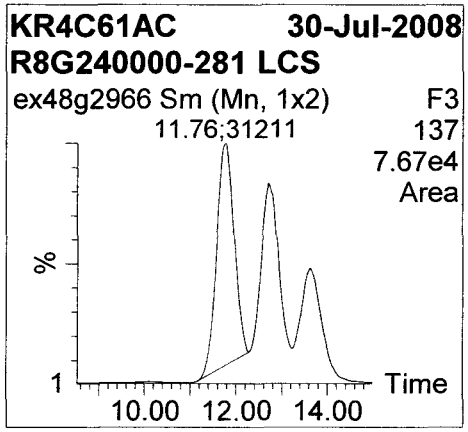
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2966
Text: R8G240000-281 LCS

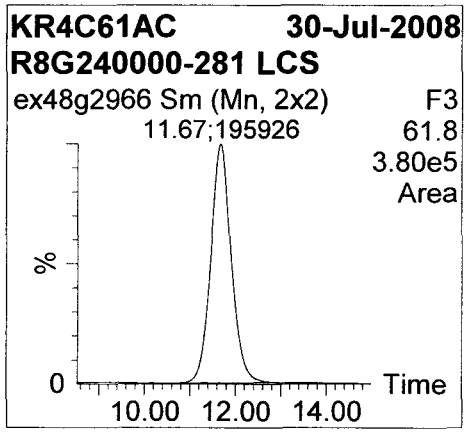
17: 2,4-Dinitrotoluene



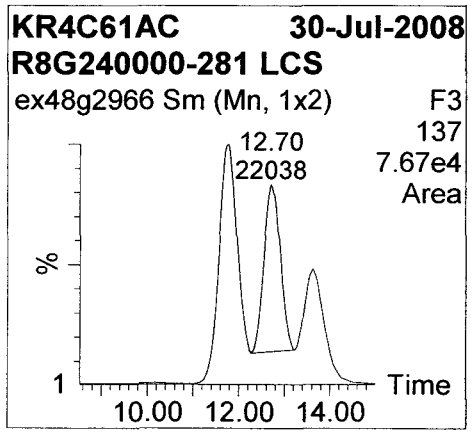
18: 2-Nitrotoluene



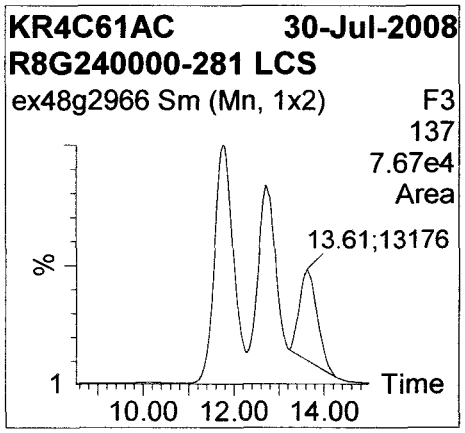
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2966
Text: R8G240000-281 LCS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	6300	bb	457.542	112	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5029	bb	0.756	76	29/Jul/08	ex48g29	
RDX 13C-..	3.882	32445	bb	0.800	80	29/Jul/08	ex48g29	
RDX	3.882	12797	bb	465.182	114	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	28626	bb	460.217	113	29/Jul/08	ex48g29	
Tetryl	6.444	86048	bb	524.775	129	29/Jul/08	ex48g29	
1,3 Dini..	6.547	65074	bb	0.642	64	29/Jul/08	ex48g29	
1,3-Dini..	6.678	25453	bb	497.530	122	29/Jul/08	ex48g29	
Nitroben..	7.333	20626	bb	442.802	109	29/Jul/08	ex48g29	
Nitrogly..	7.071	217024	bb	520.223	128	29/Jul/08	ex48g29	
Nitroben..	7.726	24433	bb	463.901	114	29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	212309	bb	471.168	116	29/Jul/08	ex48g29	
4-Amino-..	8.447	105590	bd	495.339	122	29/Jul/08	ex48g29	
2-Amino-..	9.199	189562	db	574.394	141	29/Jul/08	ex48g29	
2,6-Dini..	9.605	158494	bd	465.472	114	29/Jul/08	ex48g29	
2,4-Dini..	10.076	152671	bb	0.712	71	29/Jul/08	ex48g29	
2,4-Dini..	10.170	73470	dd	440.694	108	29/Jul/08	ex48g29	
2-Nitrot..	11.758	31211	bb	419.007	103	29/Jul/08	ex48g29	
PETN	11.672	195926	bb	497.046	122	29/Jul/08	ex48g29	
4-Nitrot..	12.700	22038	bb	383.652	94	29/Jul/08	ex48g29	
3-Nitrot..	13.614	13176	bb	428.607	105	29/Jul/08	ex48g29	

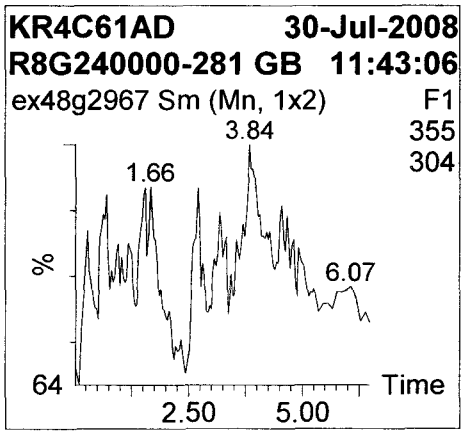
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

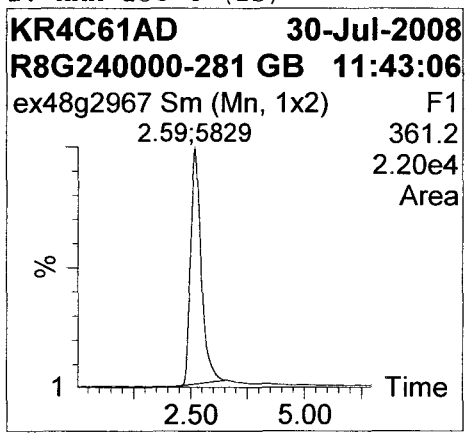
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2967
Text: R8G240000-281 GB

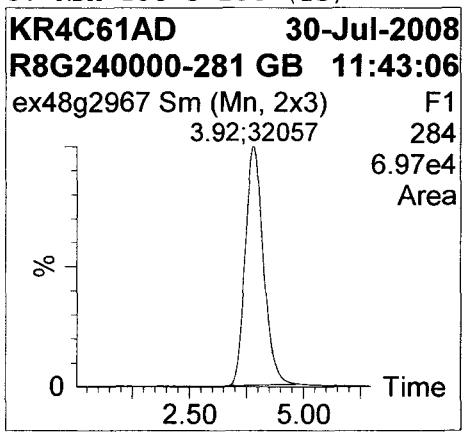
1: HMX



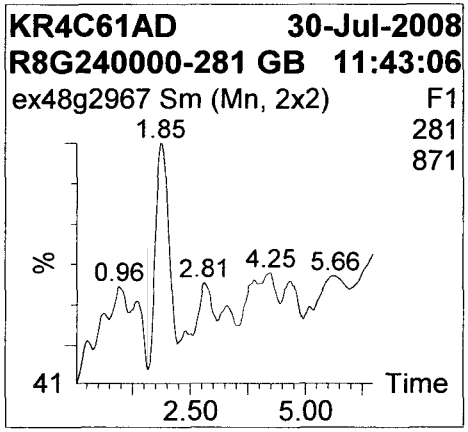
2: HMX 13C-4 (IS)



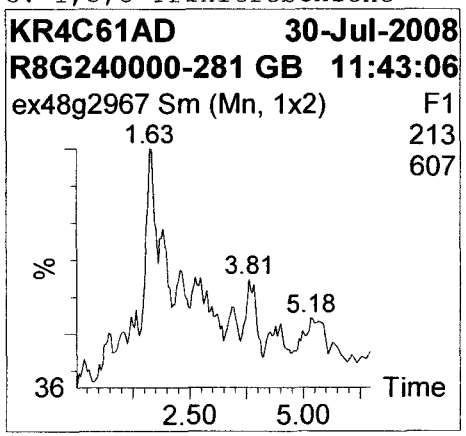
3: RDX 13C-3 284 (IS)



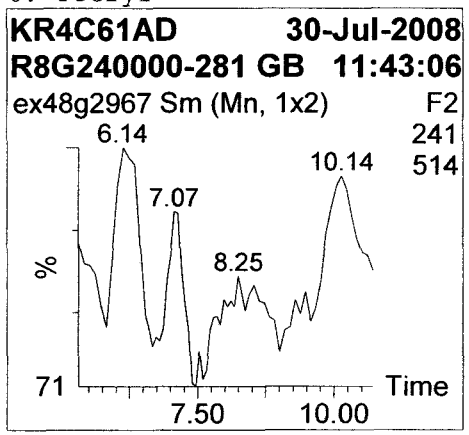
4: RDX



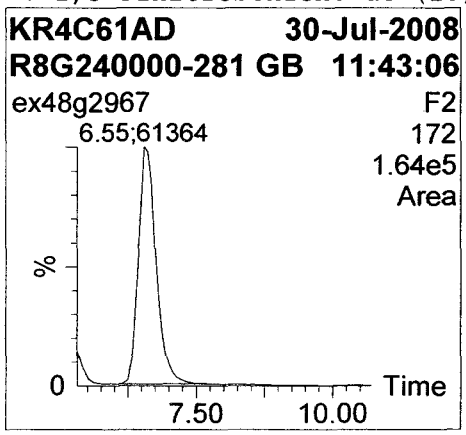
5: 1,3,5-Trinitrobenzene



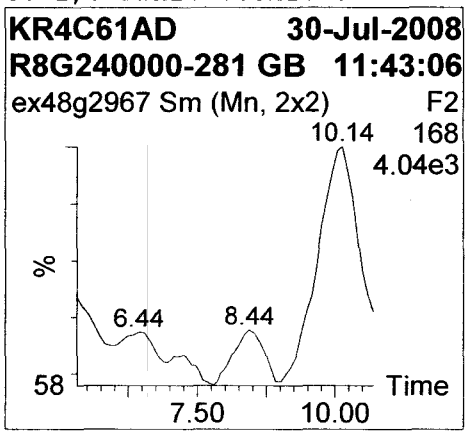
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



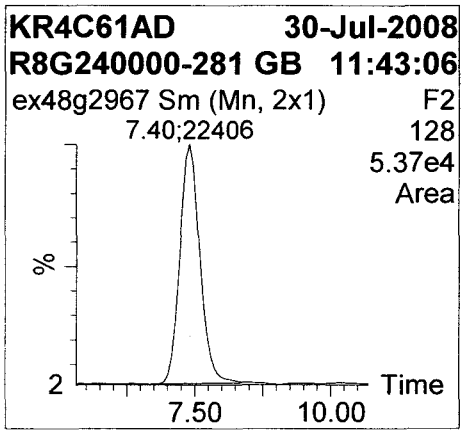
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

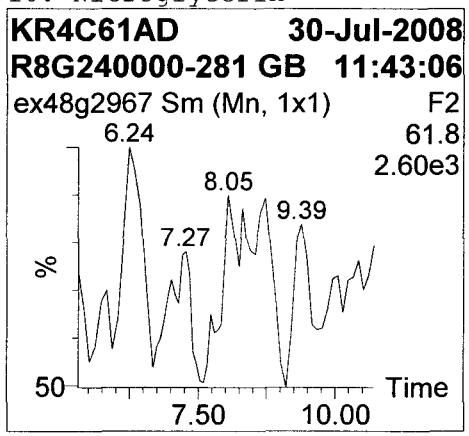
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2967
Text: R8G240000-281 GB

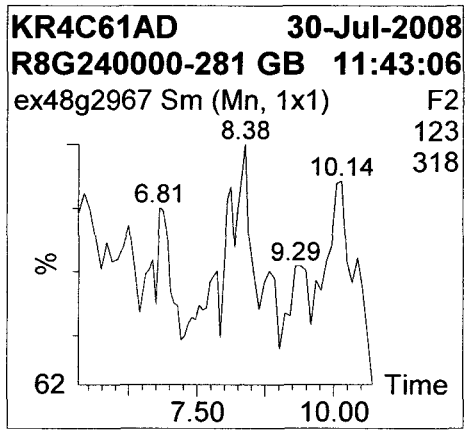
9: Nitrobenzene-d5



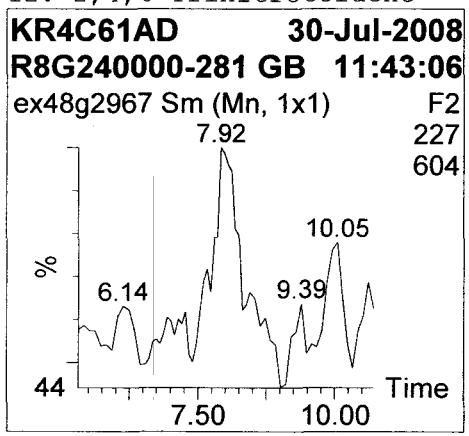
10: Nitroglycerin



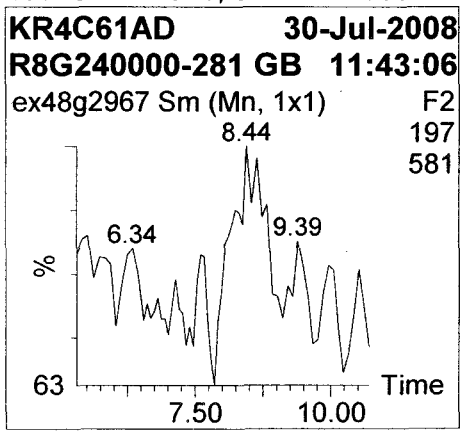
11: Nitrobenzene



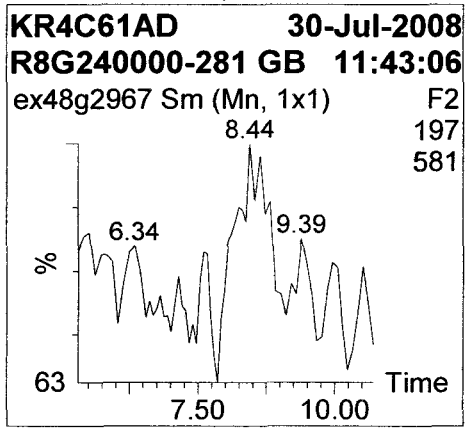
12: 2,4,6-Trinitrotoluene



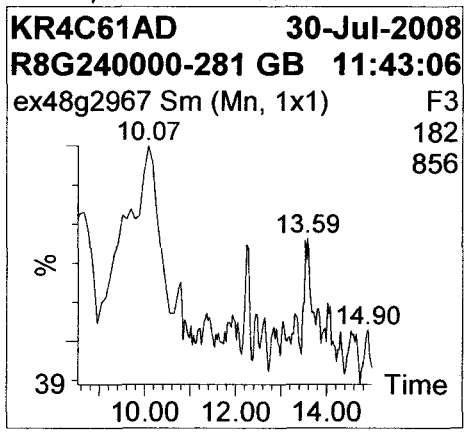
13: 4-Amino-2,6-Dinitrotolu..



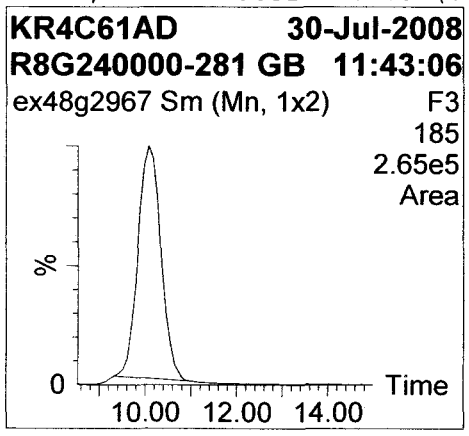
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



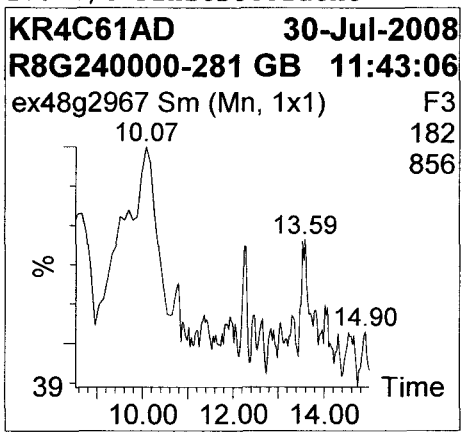
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

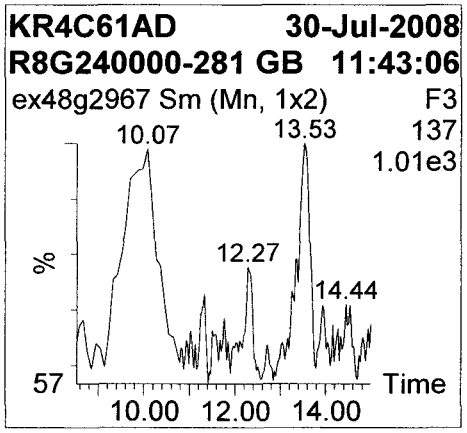
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2967
Text: R8G240000-281 GB

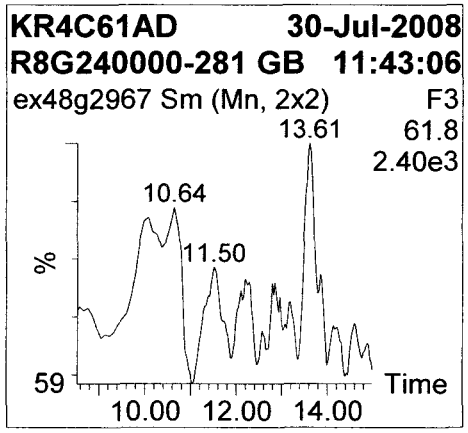
17: 2,4-Dinitrotoluene



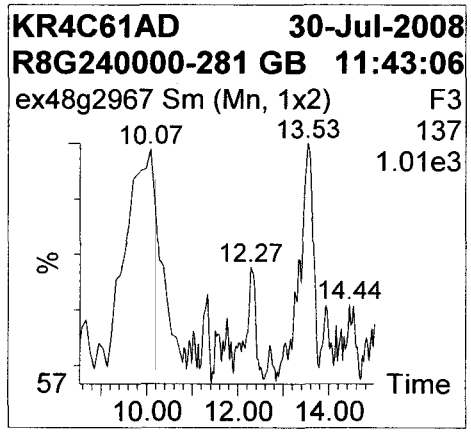
18: 2-Nitrotoluene



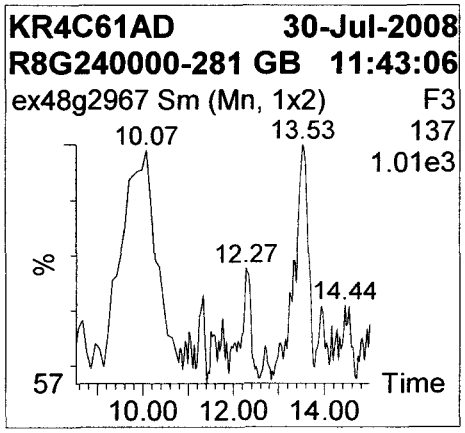
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2967
Text: R8G240000-281 GB

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	5829	bb	0.876	88	29/Jul/08	ex48g29	
RDX 13C-..	3.919	32057	bb	0.790	79	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.546	61364	bb	0.605	60	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.397	22406	bb	506.355	126	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.074	150713	bb	0.703	70	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

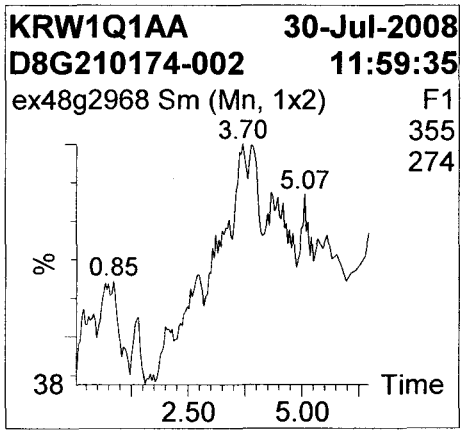
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

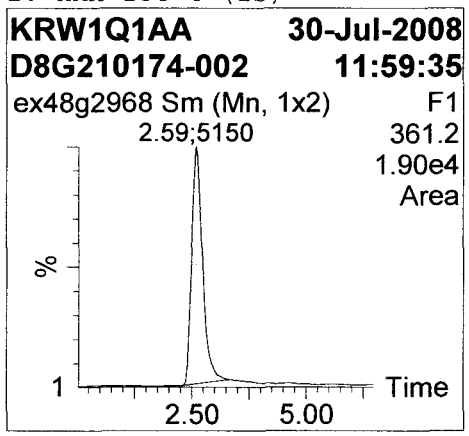
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2968
Text: D8G210174-002

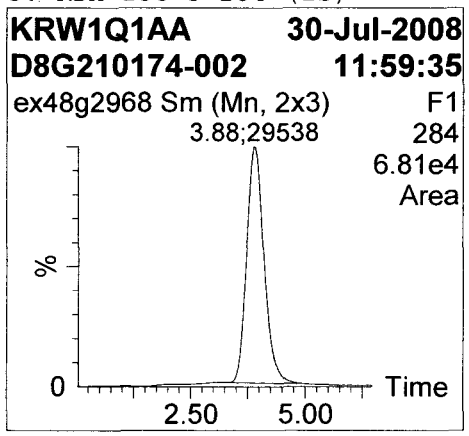
1: HMX



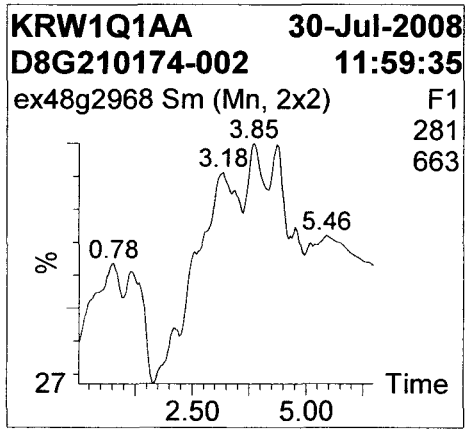
2: HMX 13C-4 (IS)



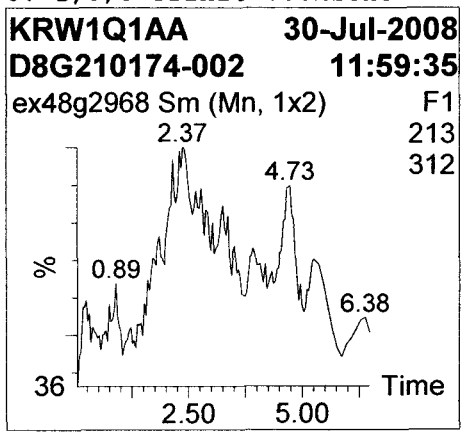
3: RDX 13C-3 284 (IS)



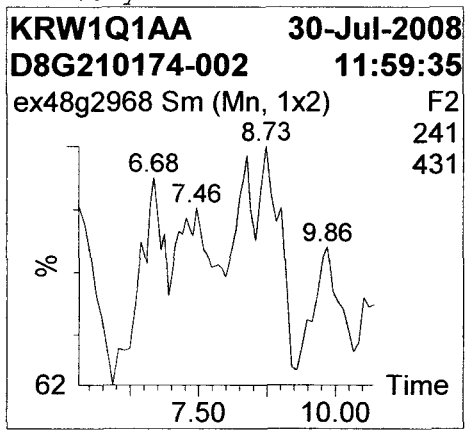
4: RDX



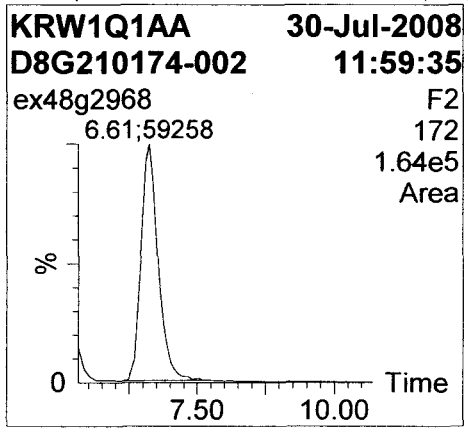
5: 1,3,5-Trinitrobenzene



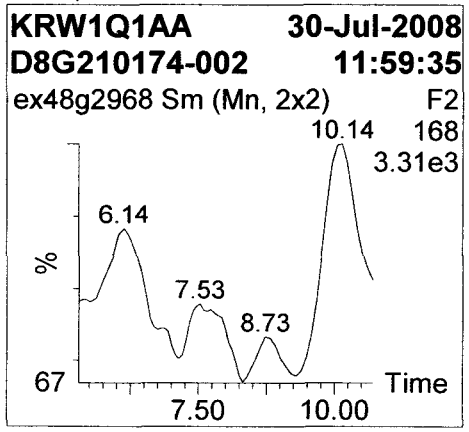
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



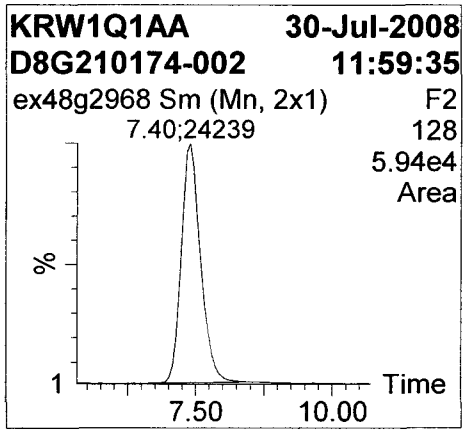
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

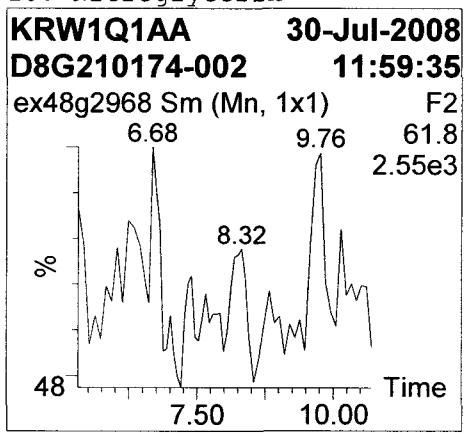
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2968
Text: D8G210174-002

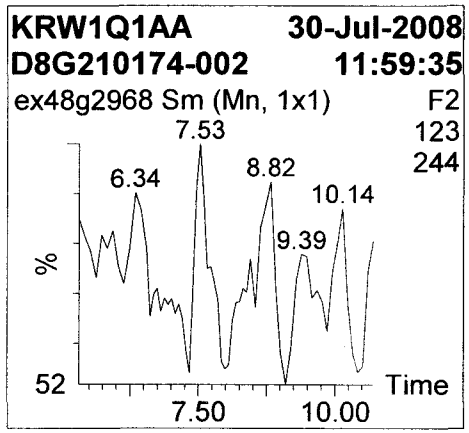
9: Nitrobenzene-d5



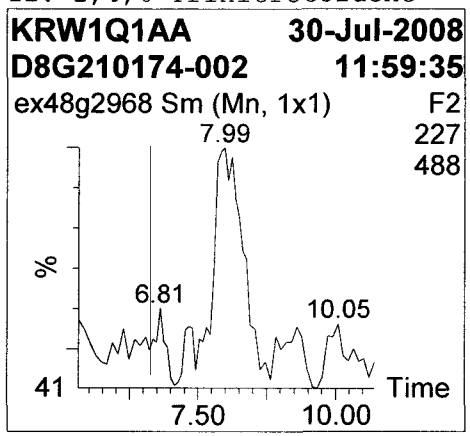
10: Nitroglycerin



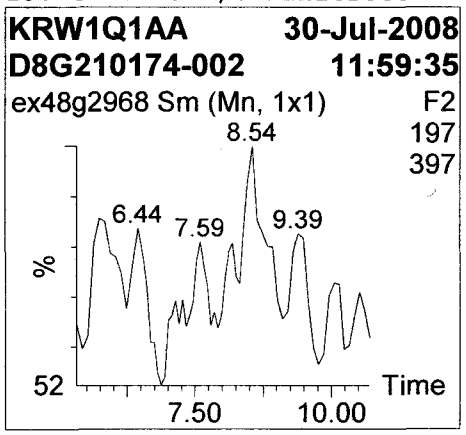
11: Nitrobenzene



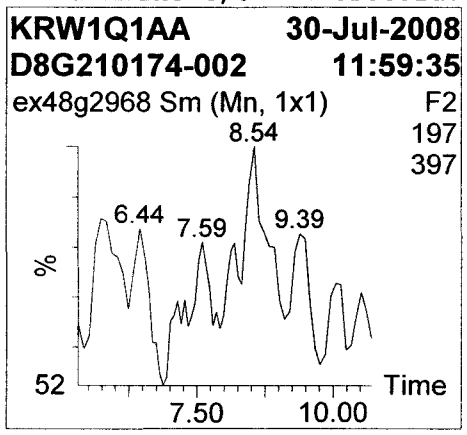
12: 2,4,6-Trinitrotoluene



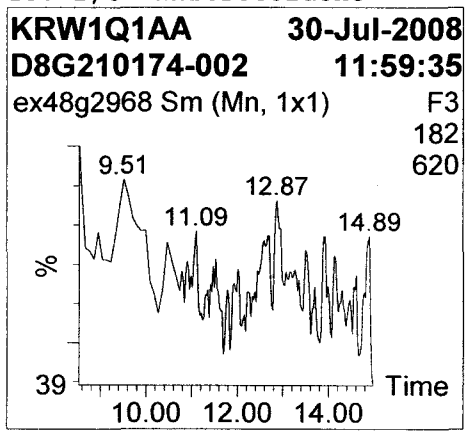
13: 4-Amino-2,6-Dinitrotolu..



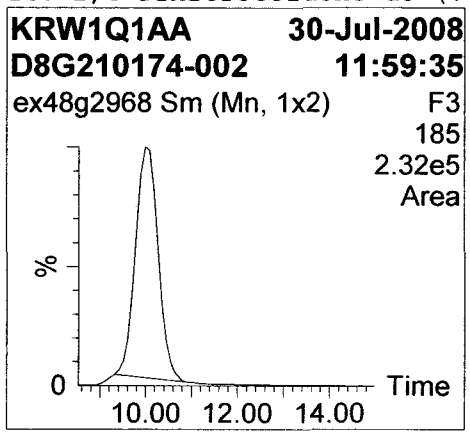
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



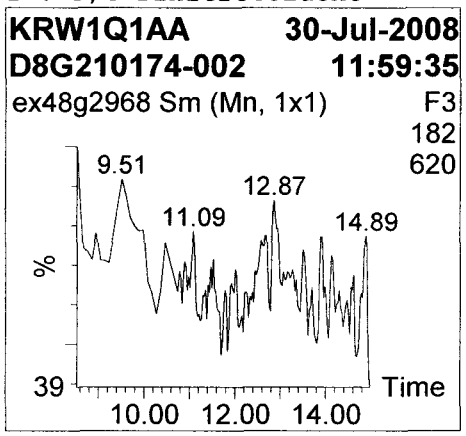
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

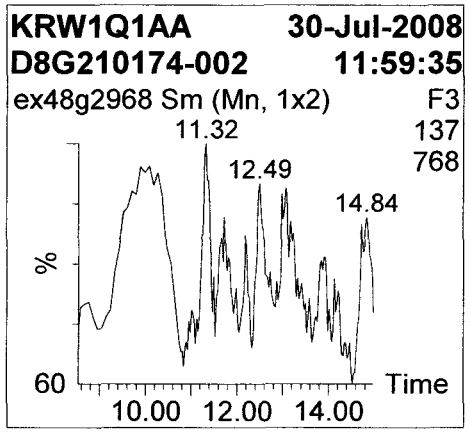
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2968
Text: D8G210174-002

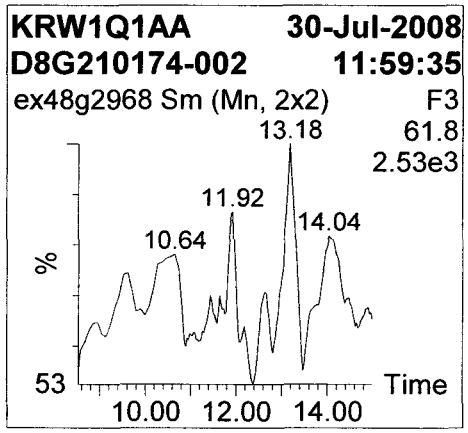
17: 2,4-Dinitrotoluene



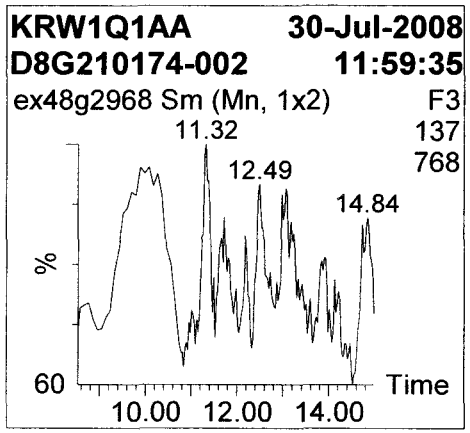
18: 2-Nitrotoluene



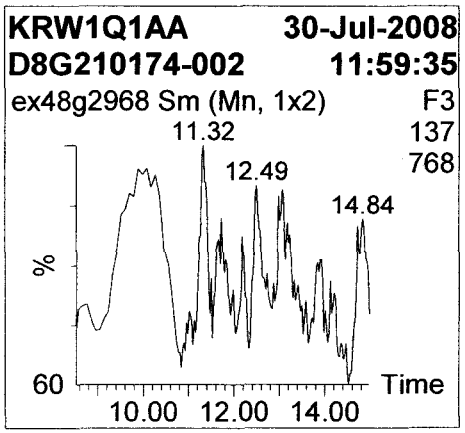
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2968
Text: D8G210174-002

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	5150	bb	0.774	77	29/Jul/08	ex48g29	
RDX 13C-..	3.882	29538	bb	0.728	73	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	59258	bb	0.584	58	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	24239	bb	548.582	141	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.982	129135	bb	0.602	60	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

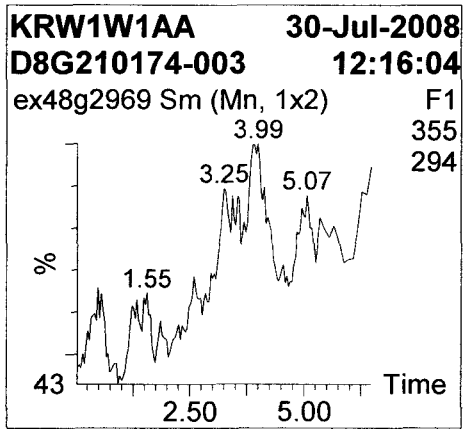
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

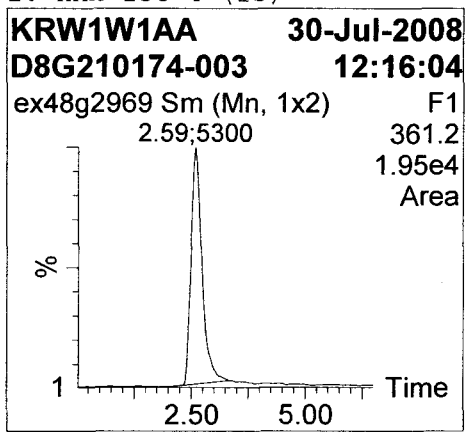
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2969
Text: D8G210174-003

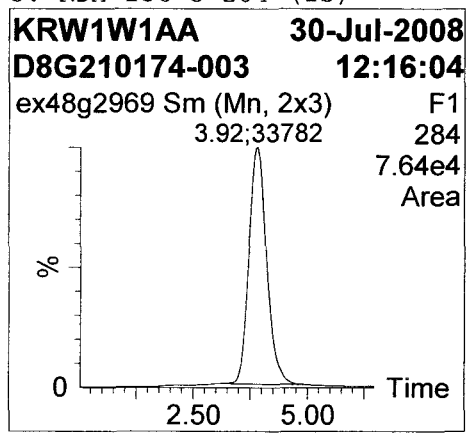
1: HMX



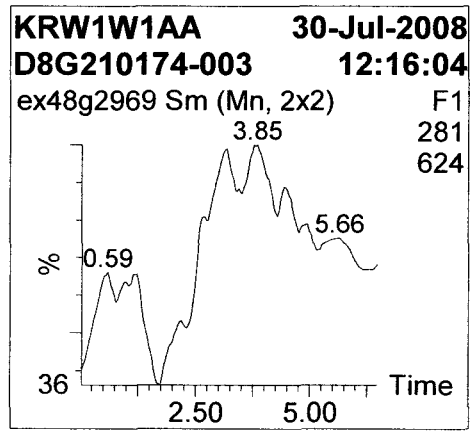
2: HMX 13C-4 (IS)



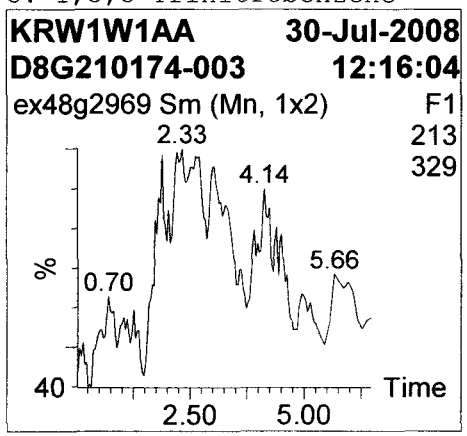
3: RDX 13C-3 284 (IS)



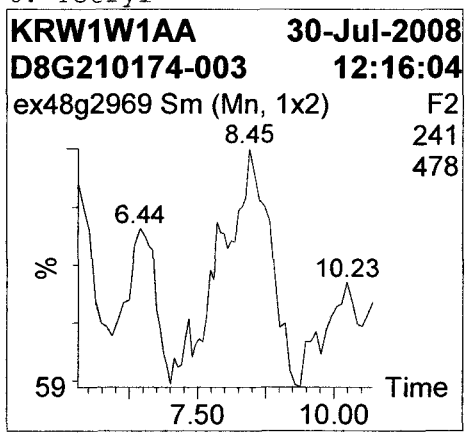
4: RDX



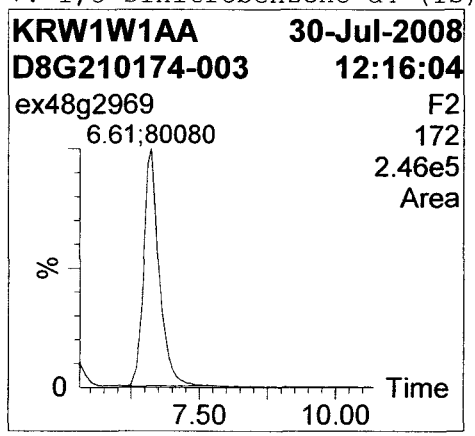
5: 1,3,5-Trinitrobenzene



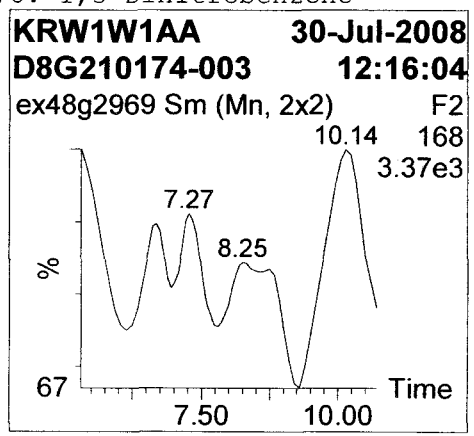
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



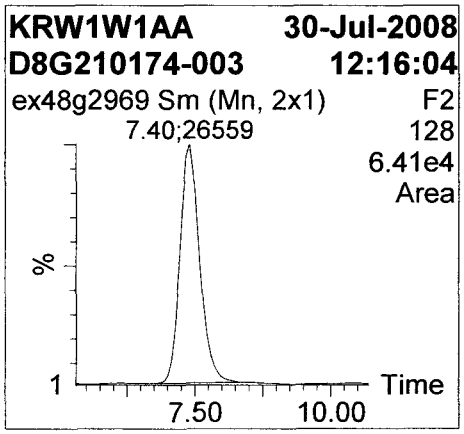
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

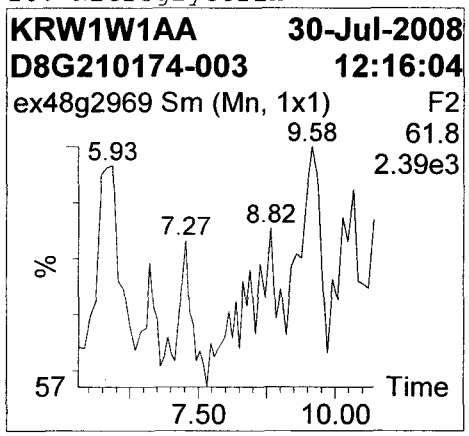
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2969
Text: D8G210174-003

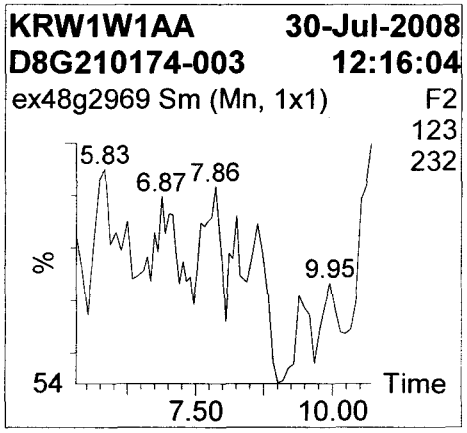
9: Nitrobenzene-d5



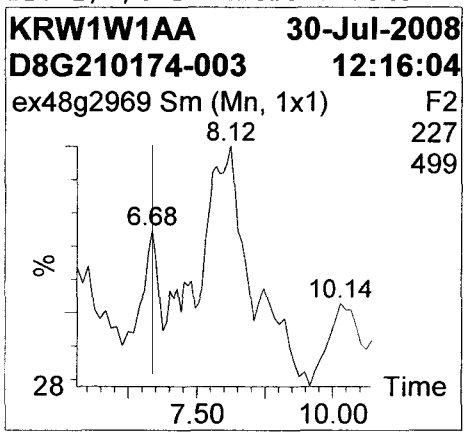
10: Nitroglycerin



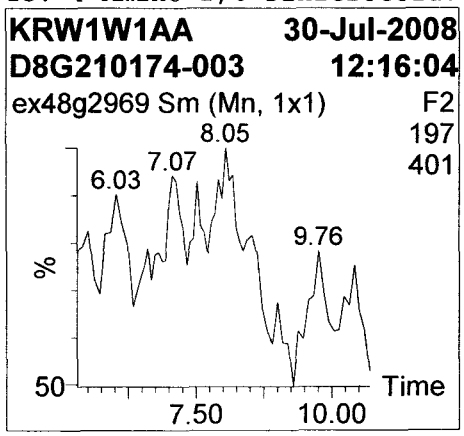
11: Nitrobenzene



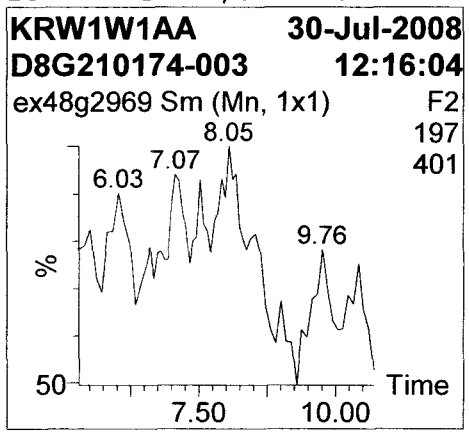
12: 2,4,6-Trinitrotoluene



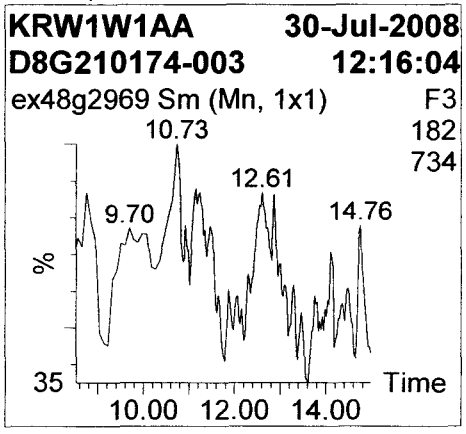
13: 4-Amino-2,6-Dinitrotolu..



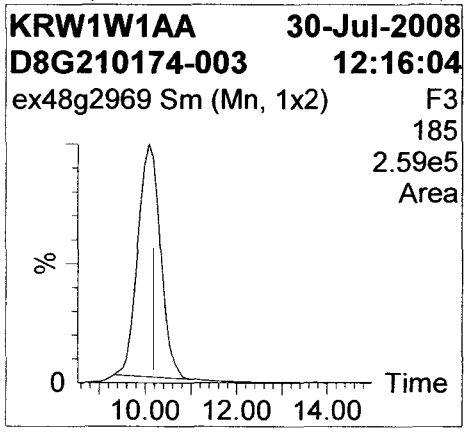
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



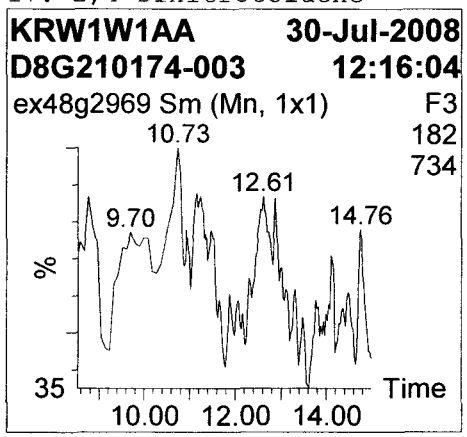
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

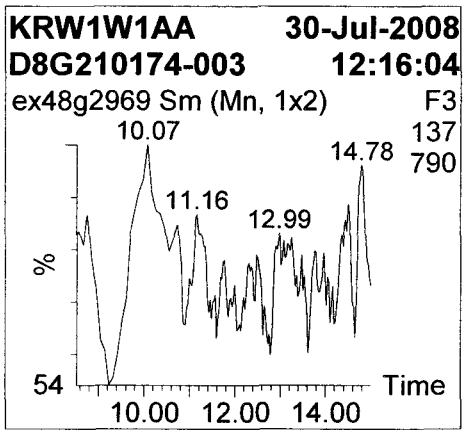
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2969
Text: D8G210174-003

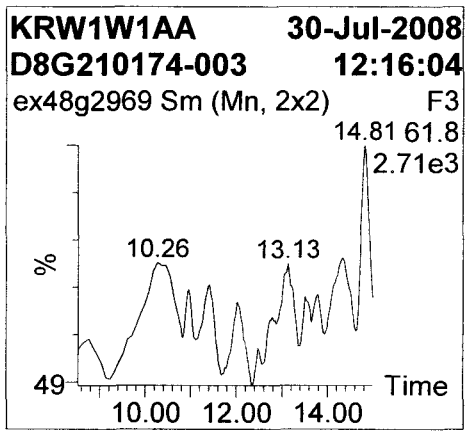
17: 2,4-Dinitrotoluene



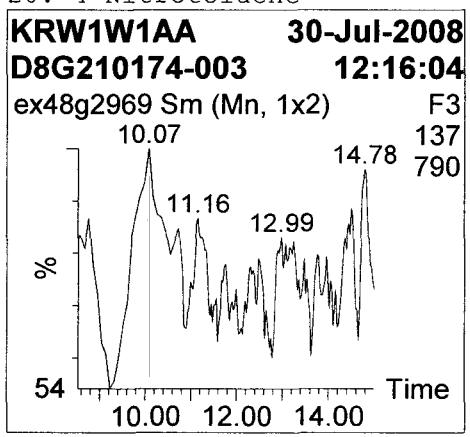
18: 2-Nitrotoluene



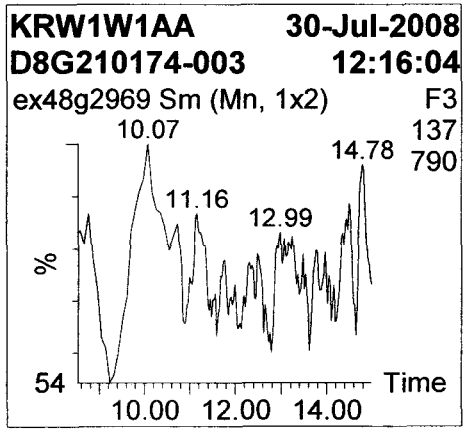
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2969
Text: D8G210174-003

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	5300	bb	0.797	80	29/Jul/08	ex48g29	
RDX 13C-..	3.919	33782	bb	0.833	83	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	80080	bb	0.789	79	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	26559	bb	446.347	114	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	144171	bb	0.672	67	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

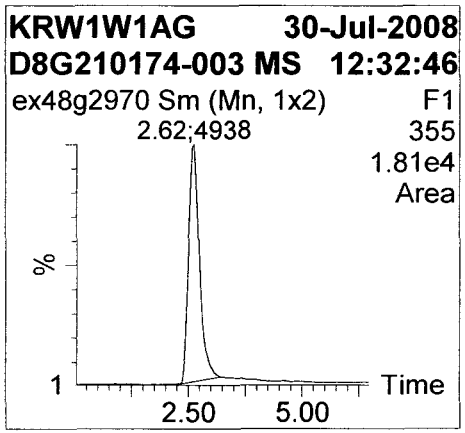
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

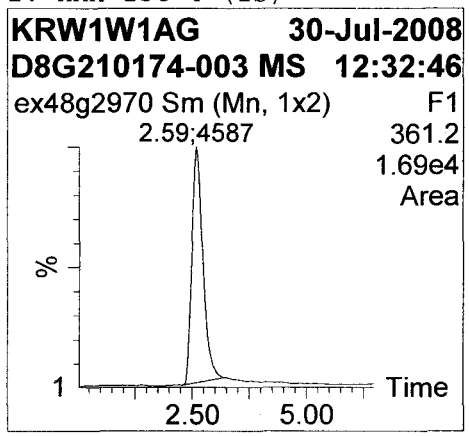
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2970
Text: D8G210174-003 MS

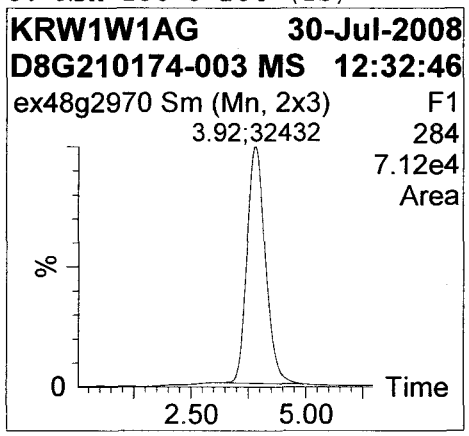
1: HMX



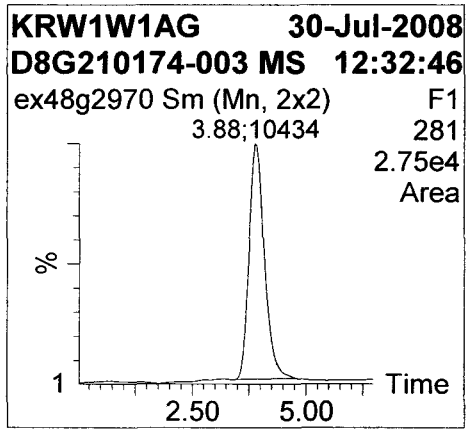
2: HMX 13C-4 (IS)



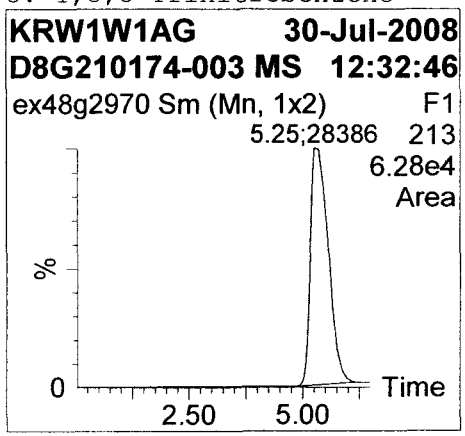
3: RDX 13C-3 284 (IS)



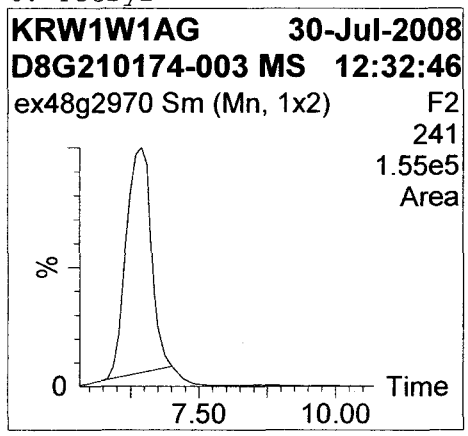
4: RDX



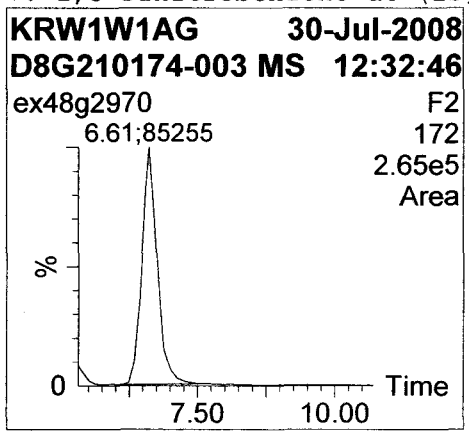
5: 1,3,5-Trinitrobenzene



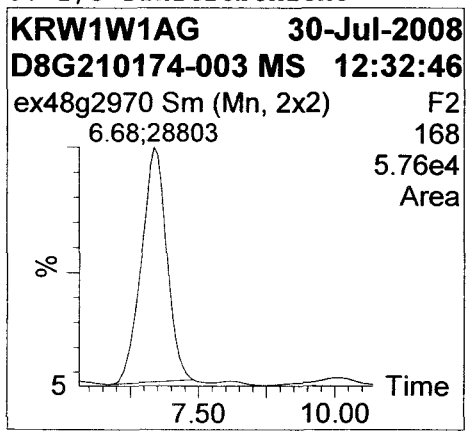
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



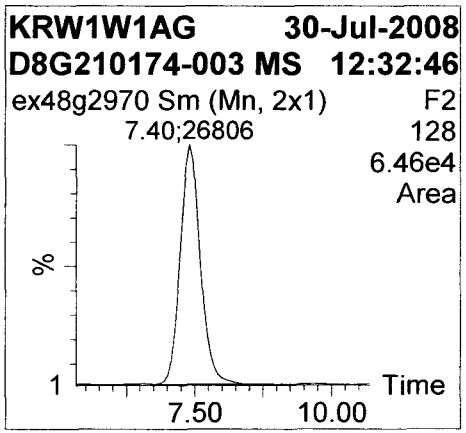
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

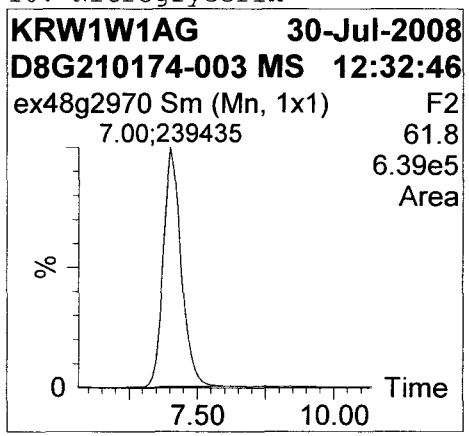
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2970
Text: D8G210174-003 MS

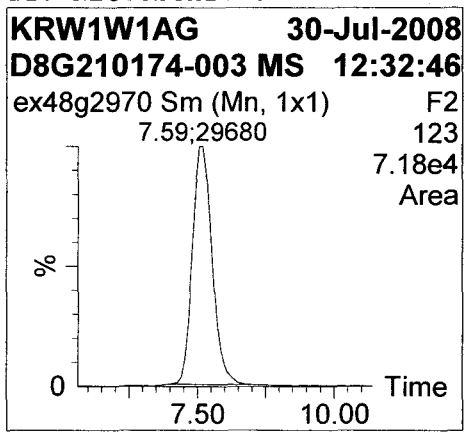
9: Nitrobenzene-d5



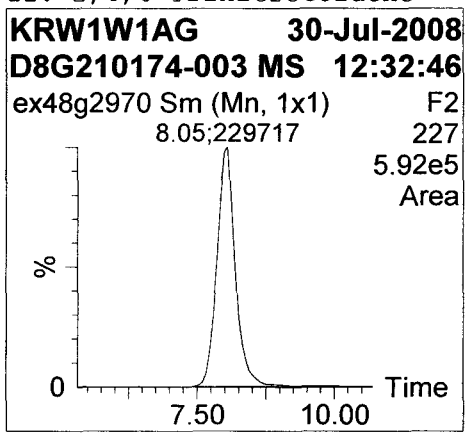
10: Nitroglycerin



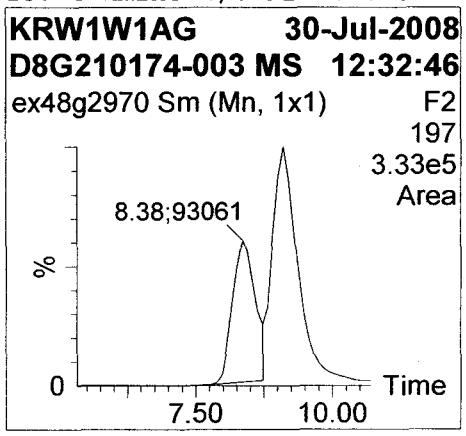
11: Nitrobenzene



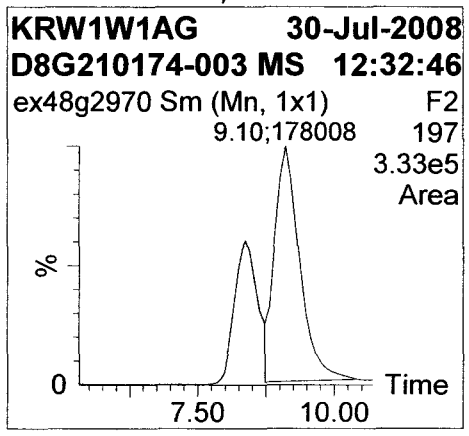
12: 2,4,6-Trinitrotoluene



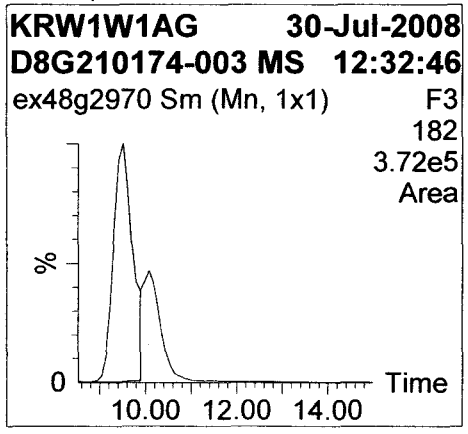
13: 4-Amino-2,6-Dinitrotolu..



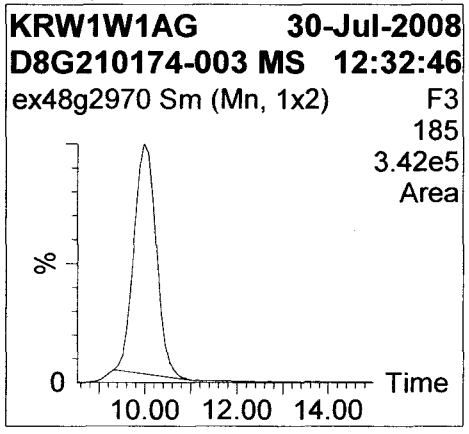
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



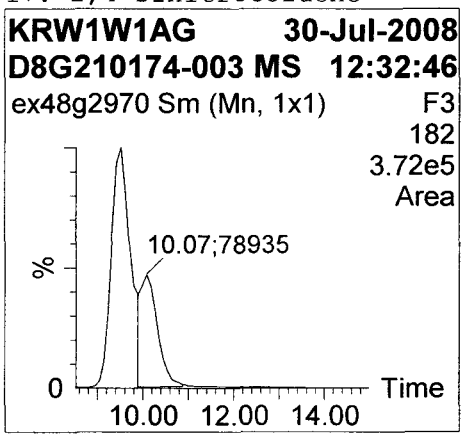
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

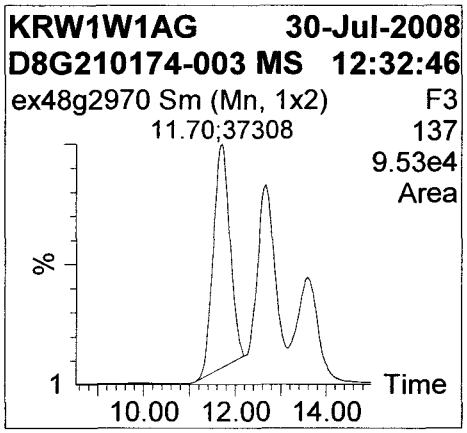
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2970
Text: D8G210174-003 MS

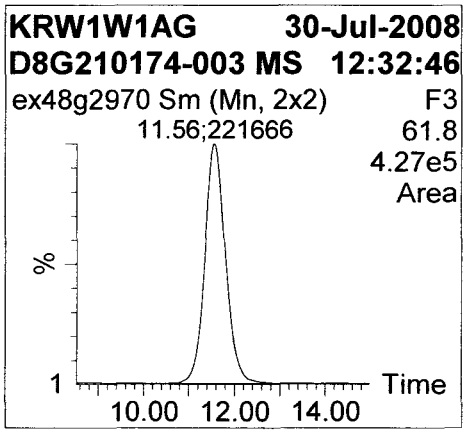
17: 2,4-Dinitrotoluene



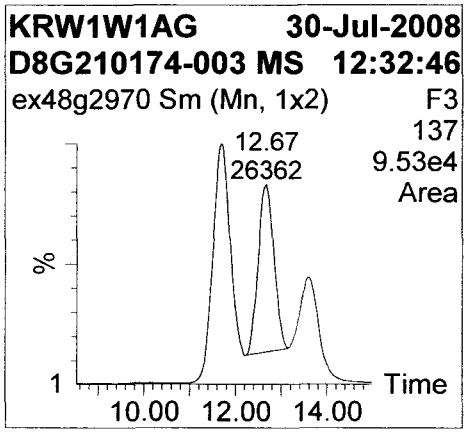
18: 2-Nitrotoluene



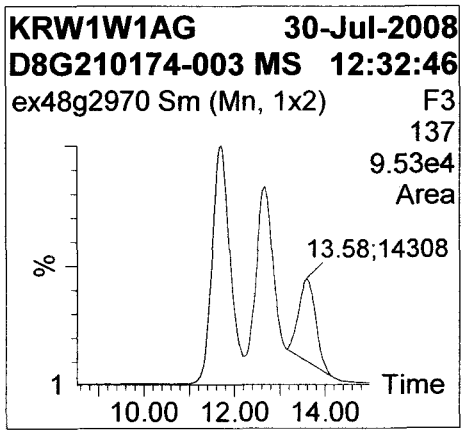
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2970
Text: D8G210174-003 MS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	4938	bb	388.679	96	29/Jul/08	ex48g29	
HMX 13C-..	2.588	4587	bb	0.690	69	29/Jul/08	ex48g29	
RDX 13C-..	3.919	32432	bb	0.799	80	29/Jul/08	ex48g29	
RDX	3.882	10434	bb	373.335	93	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	28386	bb	343.962	85	29/Jul/08	ex48g29	
Tetryl	6.444	77277	bb	357.019	89	29/Jul/08	ex48g29	
1,3 Dini..	6.612	85255	bb	0.841	84	29/Jul/08	ex48g29	
1,3-Dini..	6.677	28803	bb	424.851	105	29/Jul/08	ex48g29	
Nitroben..	7.397	26806	bb	435.217	108	29/Jul/08	ex48g29	
Nitrogly..	7.004	239435	bb	433.026	107	29/Jul/08	ex48g29	
Nitroben..	7.594	29680	bb	425.916	106	29/Jul/08	ex48g29	
2,4,6-Tr..	8.052	229717	bb	385.824	96	29/Jul/08	ex48g29	
4-Amino-..	8.379	93061	bd	329.642	82	29/Jul/08	ex48g29	
2-Amino-..	9.104	178008	db	408.361	101	29/Jul/08	ex48g29	
2,6-Dini..	9.509	176500	bd	420.193	104	29/Jul/08	ex48g29	
2,4-Dini..	9.980	186532	bb	0.870	87	29/Jul/08	ex48g29	
2,4-Dini..	10.074	78935	dd	385.203	96	29/Jul/08	ex48g29	
2-Nitrot..	11.699	37308	bb	406.158	101	29/Jul/08	ex48g29	
PETN	11.557	221666	bb	455.947	113	29/Jul/08	ex48g29	
4-Nitrot..	12.670	26362	bb	371.879	92	29/Jul/08	ex48g29	
3-Nitrot..	13.584	14308	bb	376.491	93	29/Jul/08	ex48g29	

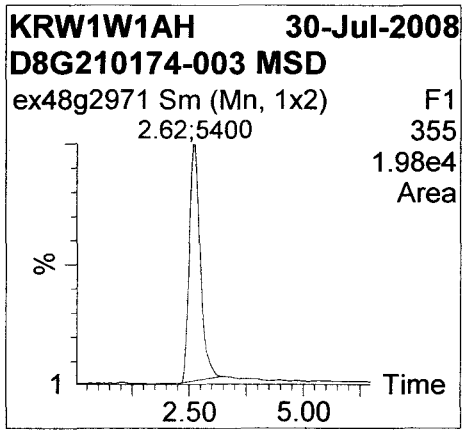
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

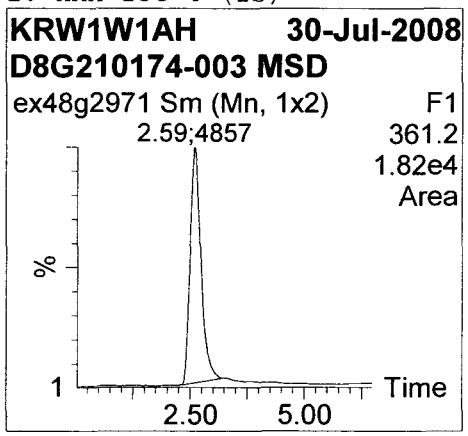
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2971
Text: D8G210174-003 MSD

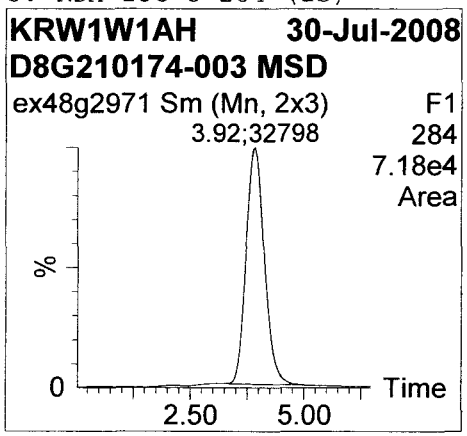
1: HMX



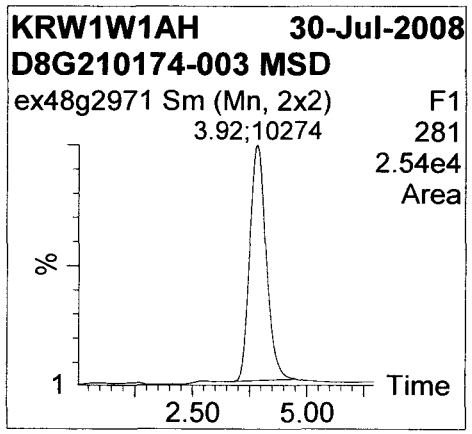
2: HMX 13C-4 (IS)



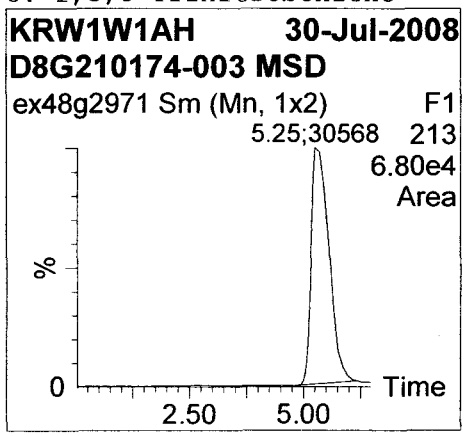
3: RDX 13C-3 284 (IS)



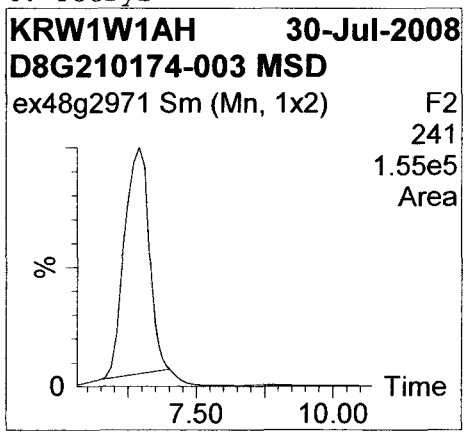
4: RDX



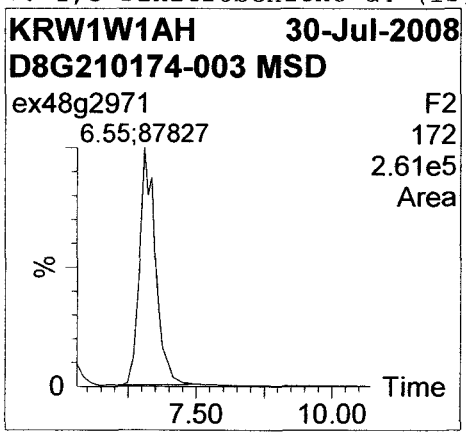
5: 1,3,5-Trinitrobenzene



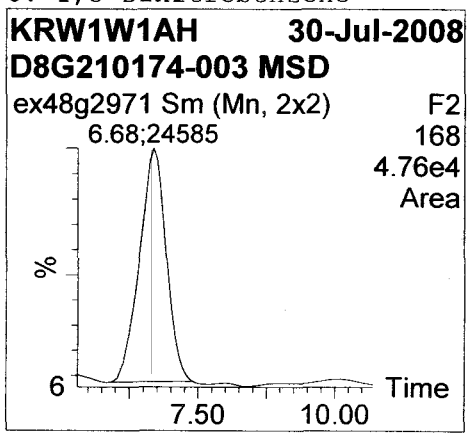
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



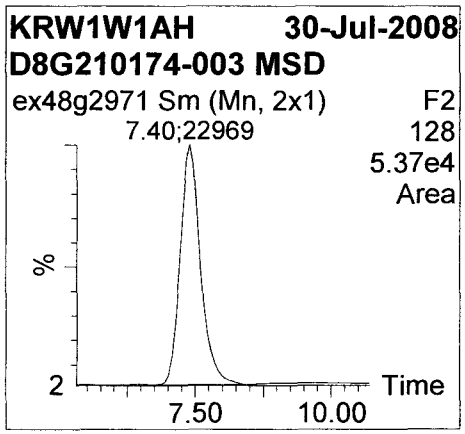
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

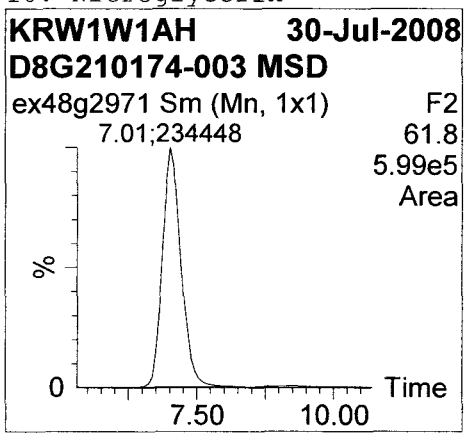
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2971
Text: D8G210174-003 MSD

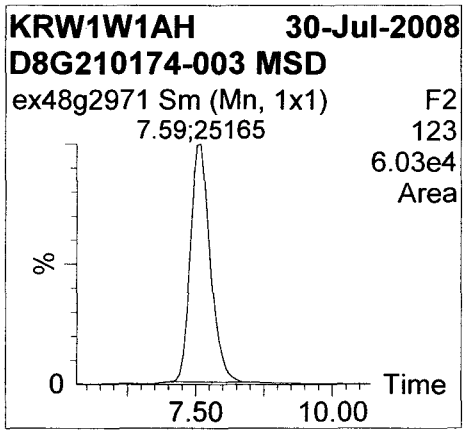
9: Nitrobenzene-d5



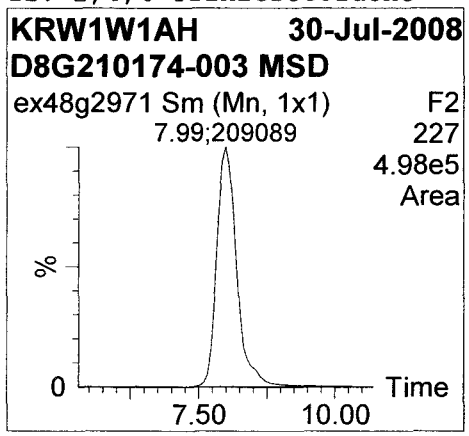
10: Nitroglycerin



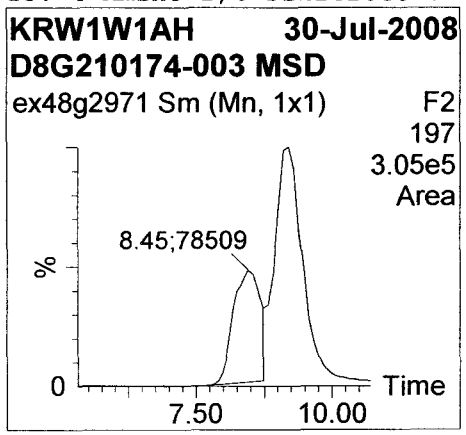
11: Nitrobenzene



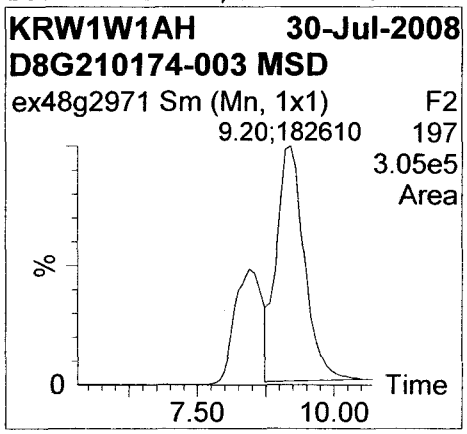
12: 2,4,6-Trinitrotoluene



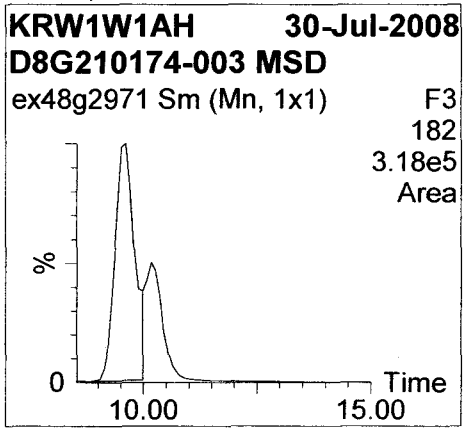
13: 4-Amino-2,6-Dinitrotolu..



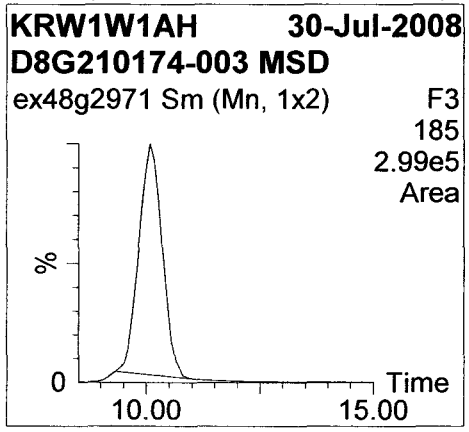
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



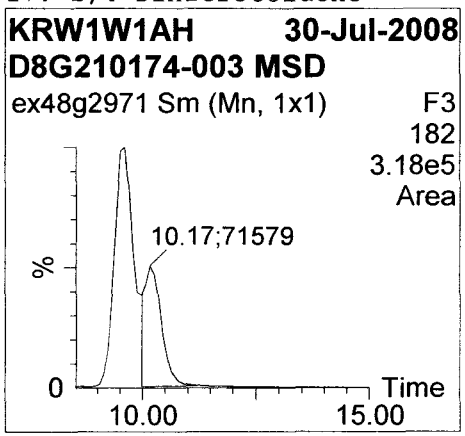
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

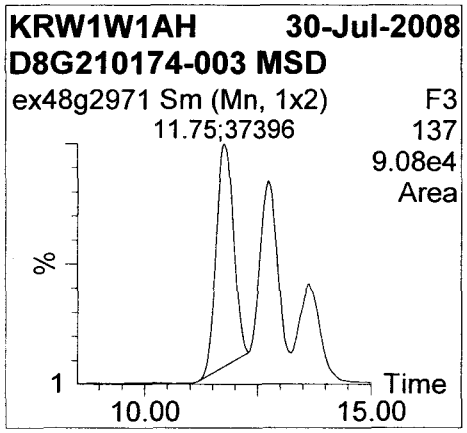
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2971
Text: D8G210174-003 MSD

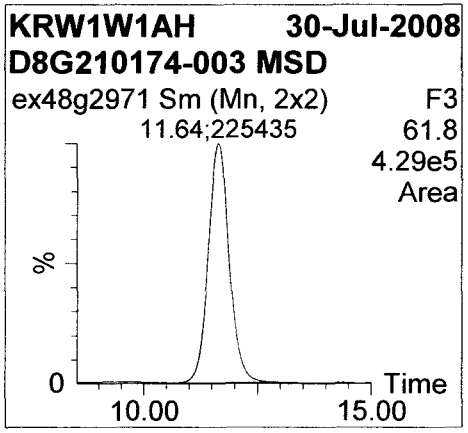
17: 2,4-Dinitrotoluene



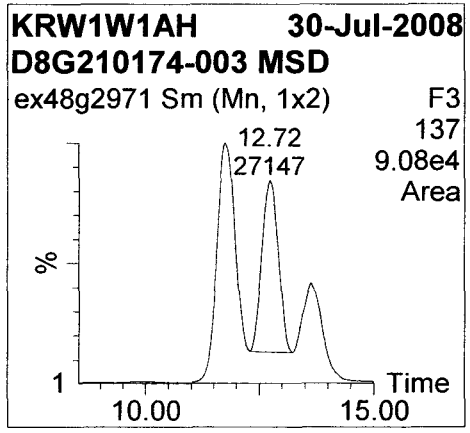
18: 2-Nitrotoluene



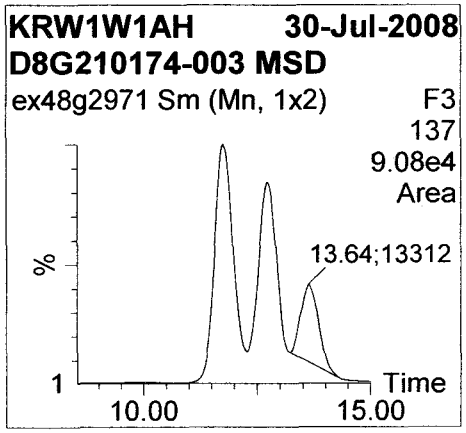
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2971
Text: D8G210174-003 MSD

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	5400	bb	402.866	100	29/Jul/08	ex48g29	
HMX 13C-..	2.588	4857	bb	0.730	73	29/Jul/08	ex48g29	
RDX 13C-..	3.919	32798	bb	0.808	81	29/Jul/08	ex48g29	
RDX	3.919	10274	bb	364.206	90	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	30568	bb	360.870	89	29/Jul/08	ex48g29	
Tetryl	6.444	76560	bb	344.457	85	29/Jul/08	ex48g29	
1,3 Dini..	6.547	87827	bb	0.866	87	29/Jul/08	ex48g29	
1,3-Dini..	6.678	24585	bb	351.836	87	29/Jul/08	ex48g29	
Nitroben..	7.399	22969	bb	362.128	90	29/Jul/08	ex48g29	
Nitrogly..	7.005	234448	bb	412.499	102	29/Jul/08	ex48g29	
Nitroben..	7.595	25165	bb	350.864	87	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	209089	bb	342.084	85	29/Jul/08	ex48g29	
4-Amino-..	8.446	78509	bd	270.463	67	29/Jul/08	ex48g29	
2-Amino-..	9.200	182610	db	407.891	101	29/Jul/08	ex48g29	
2,6-Dini..	9.605	155839	bd	406.184	100	29/Jul/08	ex48g29	
2,4-Dini..	10.076	170856	bb	0.796	80	29/Jul/08	ex48g29	
2,4-Dini..	10.171	71579	dd	382.597	95	29/Jul/08	ex48g29	
2-Nitrot..	11.751	37396	bb	446.072	110	29/Jul/08	ex48g29	
PETN	11.636	225435	bb	507.991	126	29/Jul/08	ex48g29	
4-Nitrot..	12.722	27147	bb	421.575	104	29/Jul/08	ex48g29	
3-Nitrot..	13.635	13312	bb	383.713	95	29/Jul/08	ex48g29	

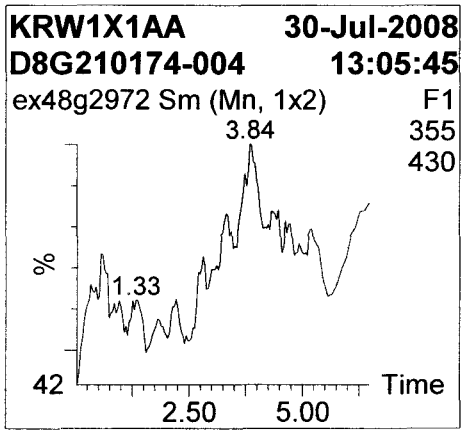
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

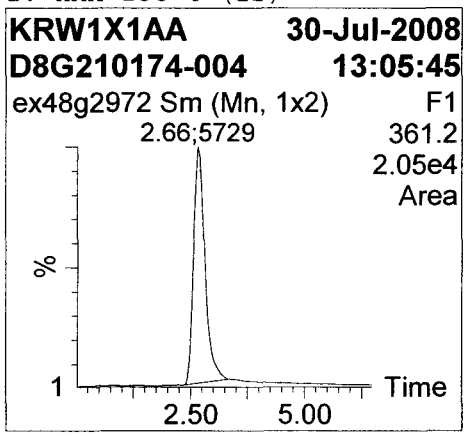
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2972
Text: D8G210174-004

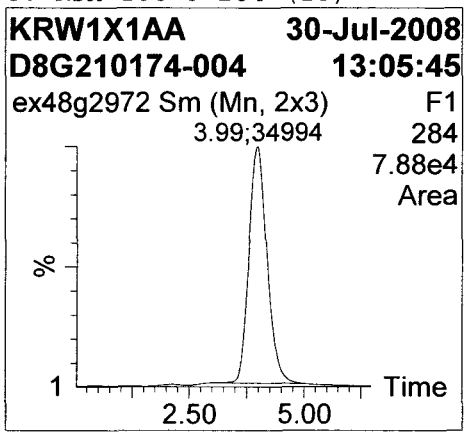
1: HMX



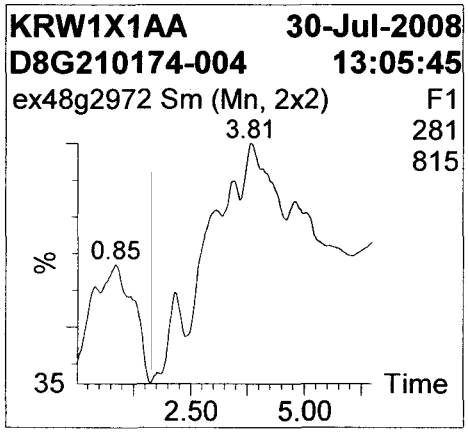
2: HMX 13C-4 (IS)



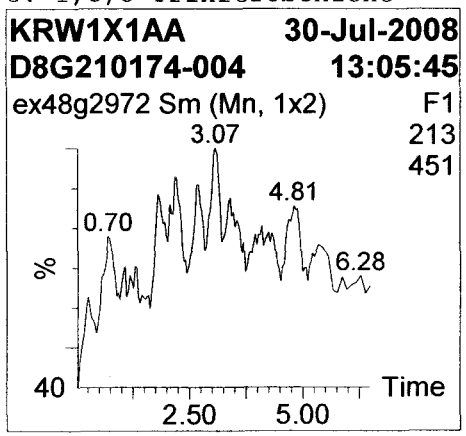
3: RDX 13C-3 284 (IS)



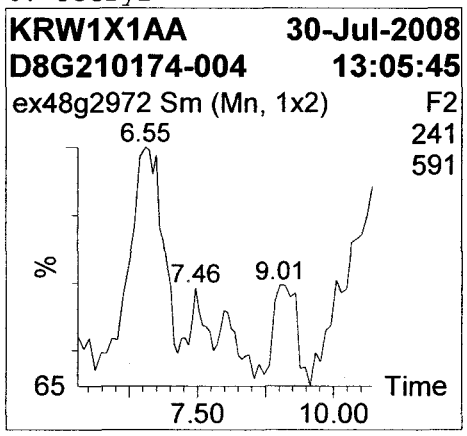
4: RDX



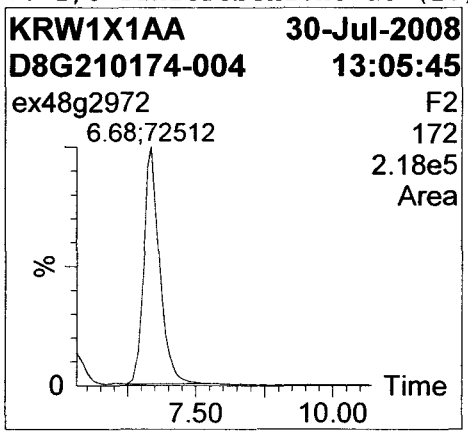
5: 1,3,5-Trinitrobenzene



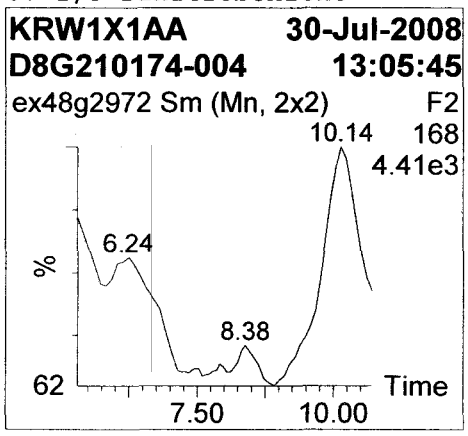
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



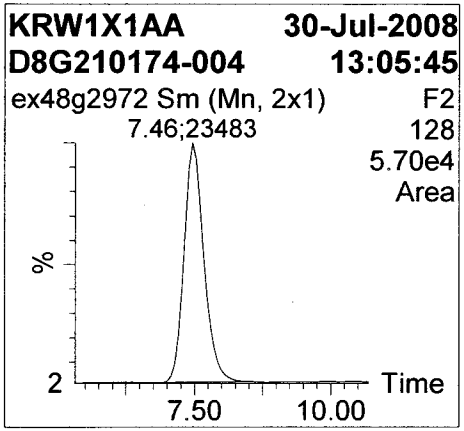
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

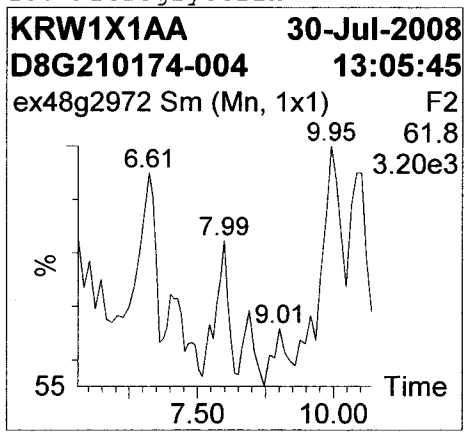
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2972
Text: D8G210174-004

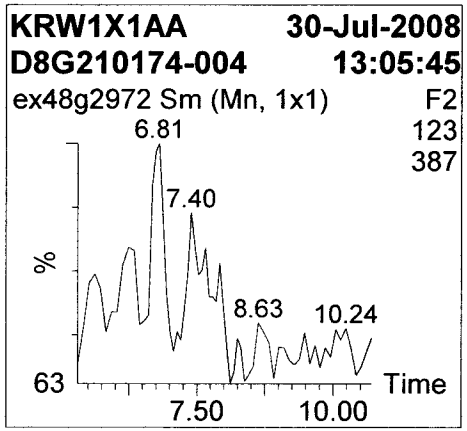
9: Nitrobenzene-d5



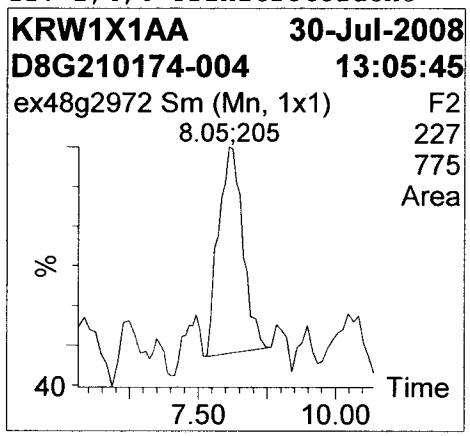
10: Nitroglycerin



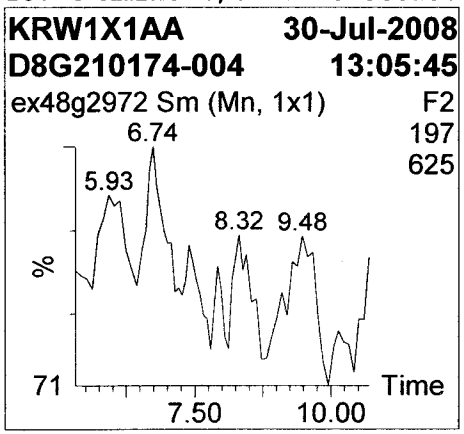
11: Nitrobenzene



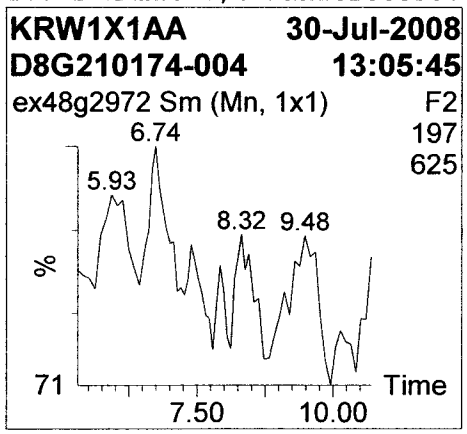
12: 2,4,6-Trinitrotoluene



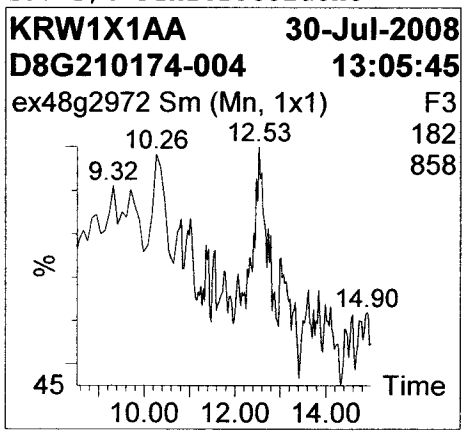
13: 4-Amino-2,6-Dinitrotolu..



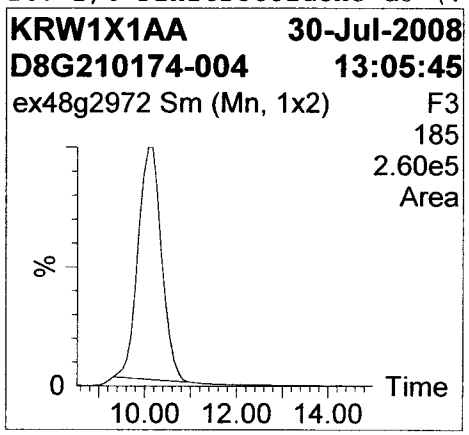
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



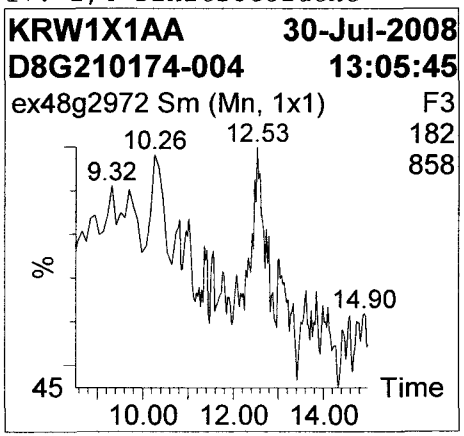
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

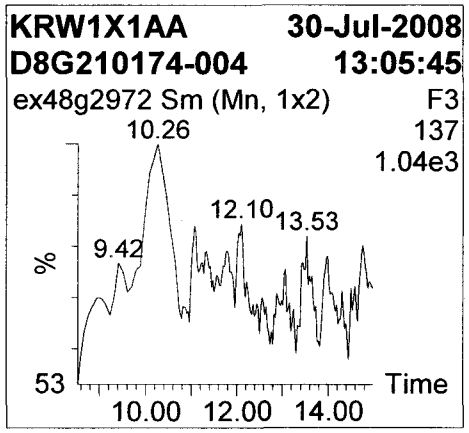
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2972
Text: D8G210174-004

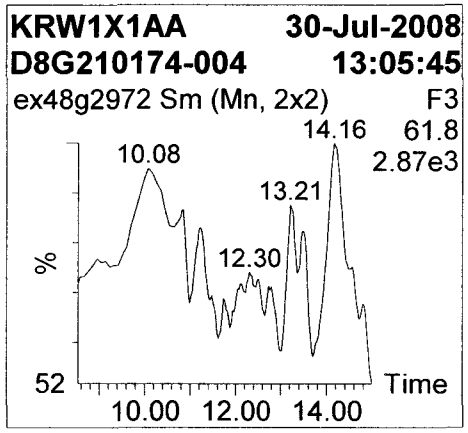
17: 2,4-Dinitrotoluene



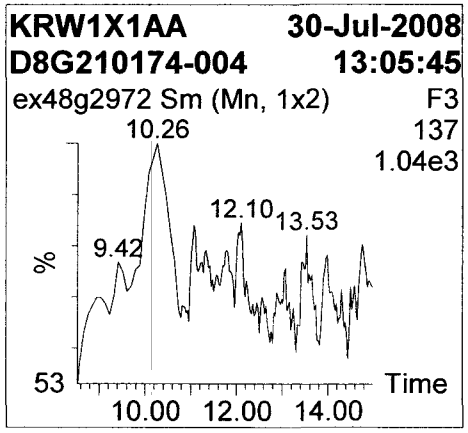
18: 2-Nitrotoluene



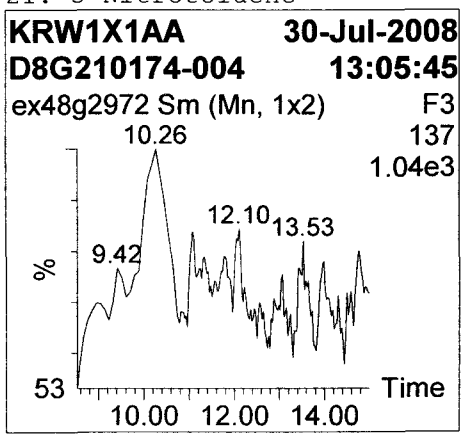
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2972
Text: D8G210174-004

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.662	5729	bb	0.861	86	29/Jul/08	ex48g29	
RDX 13C-..	3.993	34994	bb	0.862	86	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.678	72512	bb	0.715	71	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.464	23483	bb	453.466	111	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	205	bb	1.754		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.170	150415	bb	0.701	70	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

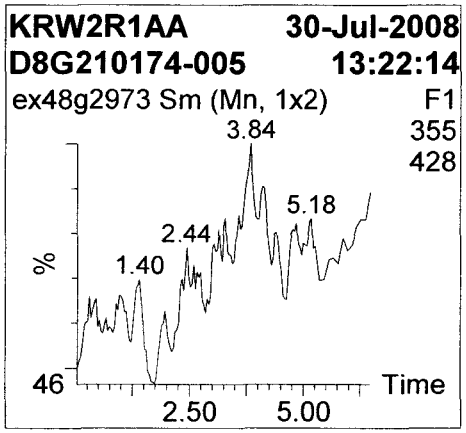
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

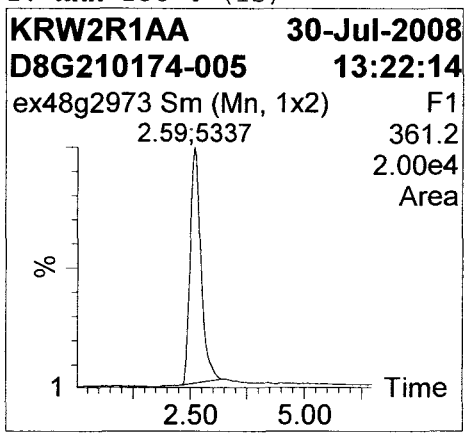
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2973
Text: D8G210174-005

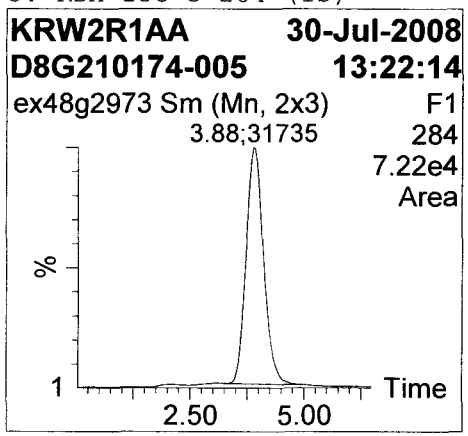
1: HMX



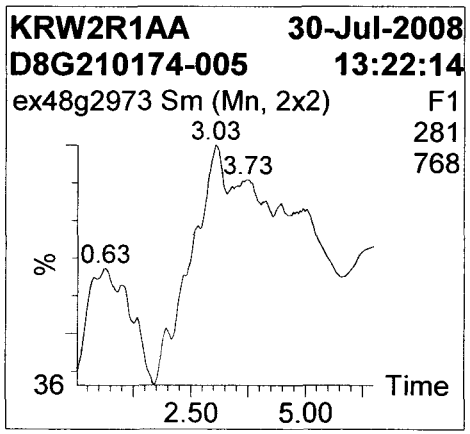
2: HMX 13C-4 (IS)



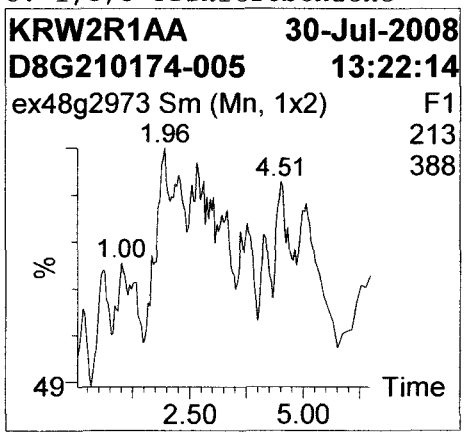
3: RDX 13C-3 284 (IS)



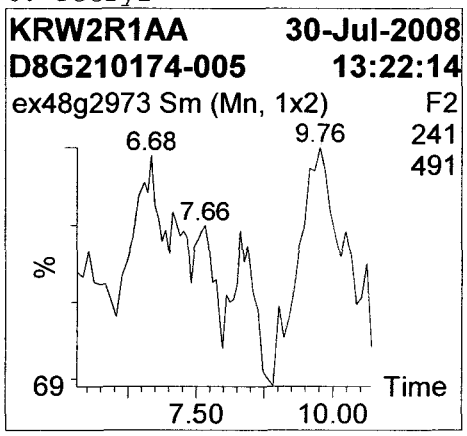
4: RDX



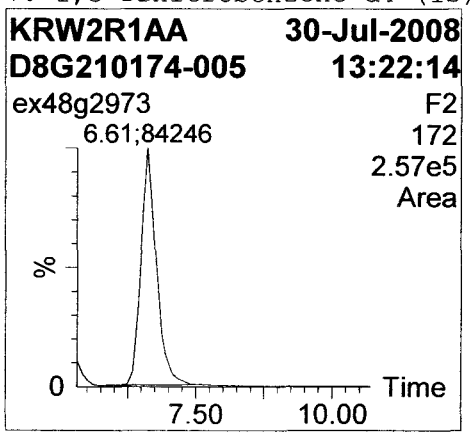
5: 1,3,5-Trinitrobenzene



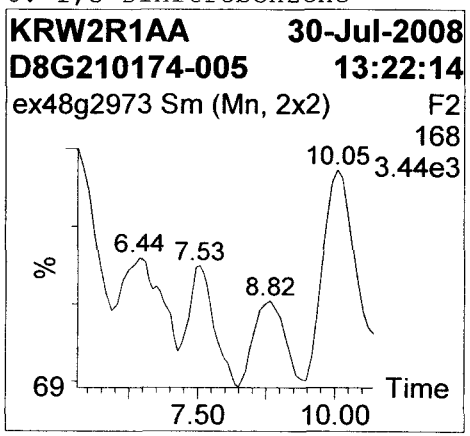
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



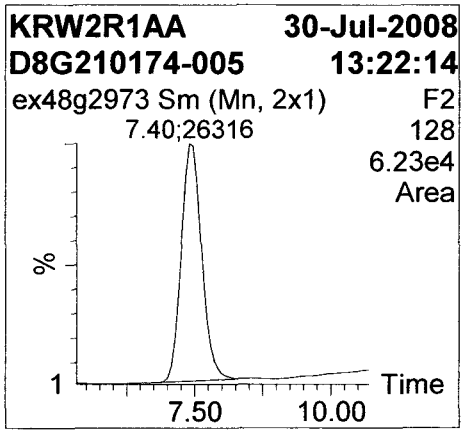
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

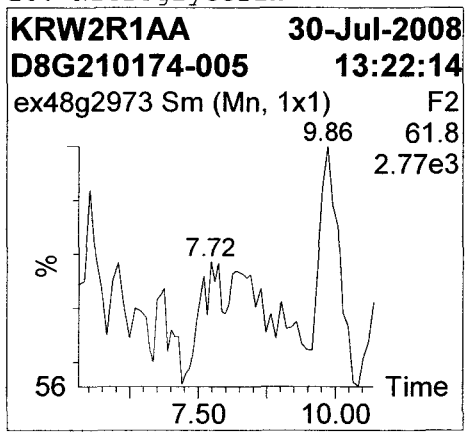
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2973
Text: D8G210174-005

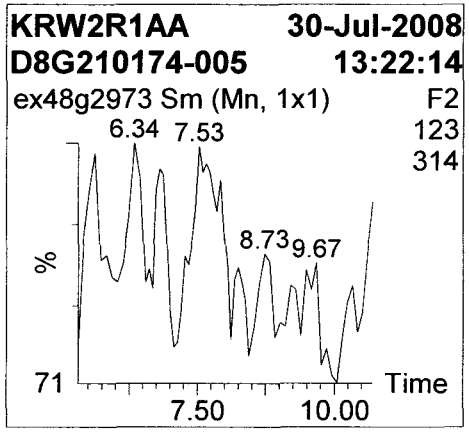
9: Nitrobenzene-d5



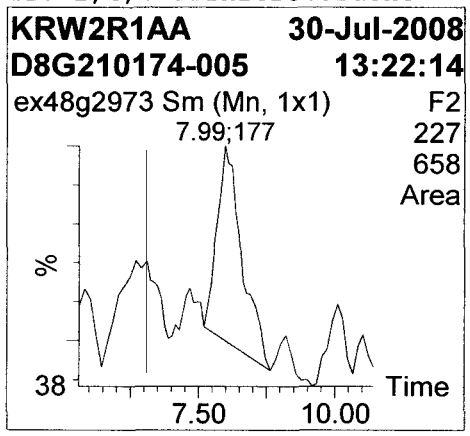
10: Nitroglycerin



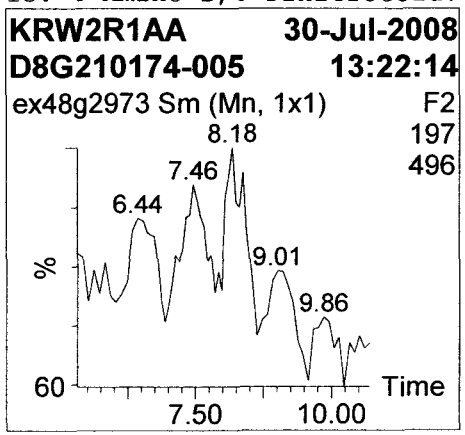
11: Nitrobenzene



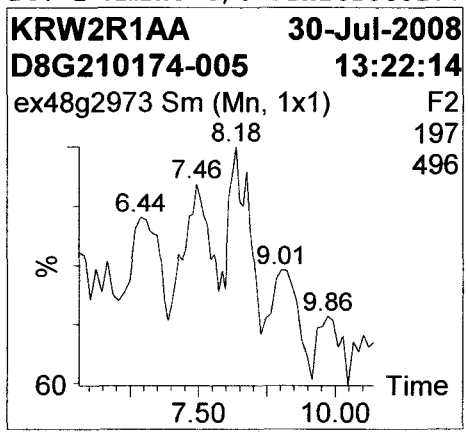
12: 2,4,6-Trinitrotoluene



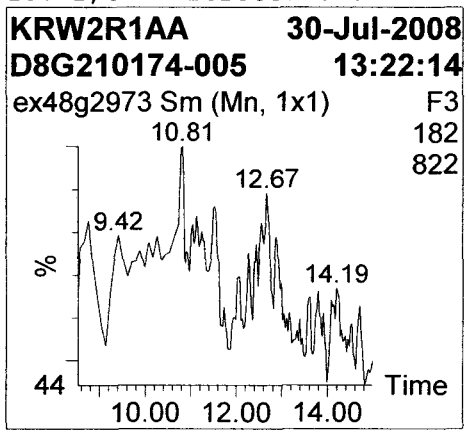
13: 4-Amino-2,6-Dinitrotolu..



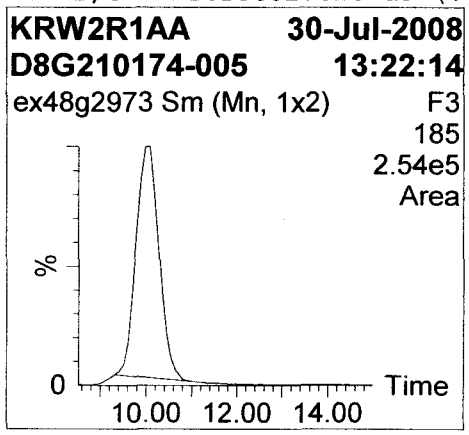
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



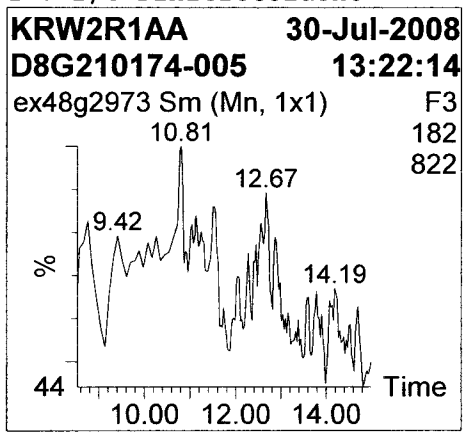
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

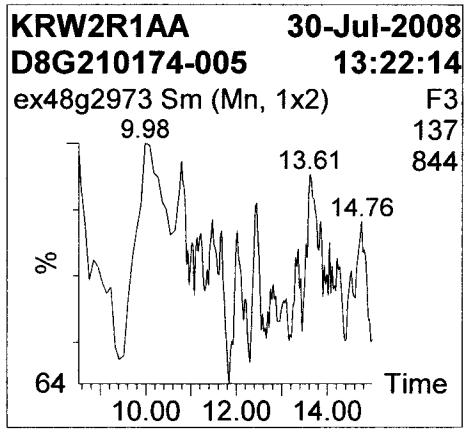
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2973
Text: D8G210174-005

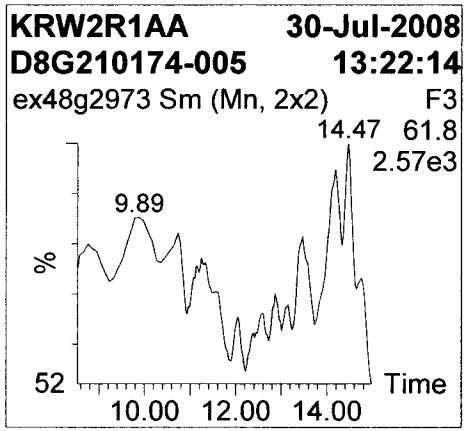
17: 2,4-Dinitrotoluene



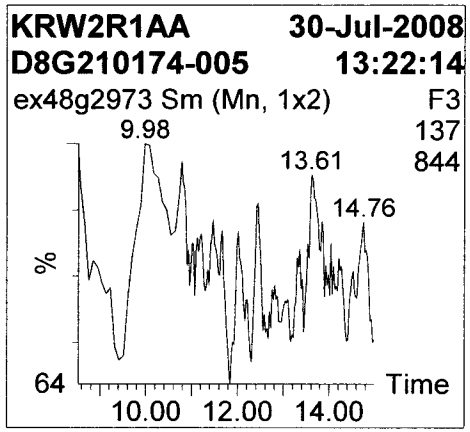
18: 2-Nitrotoluene



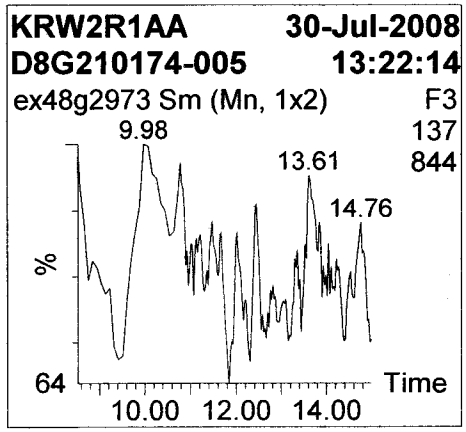
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 80

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2973
Text: D8G210174-005

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	5337	bb	0.802	80	29/Jul/08	ex48g29	
RDX 13C-..	3.882	31735	bb	0.782	78	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	84246	bb	0.831	83	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.397	26316	bb	427.604	107	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.986	177	bb	1.613		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	142778	bb	0.666	67	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

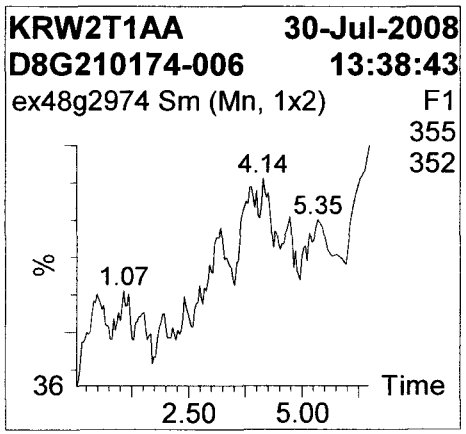
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

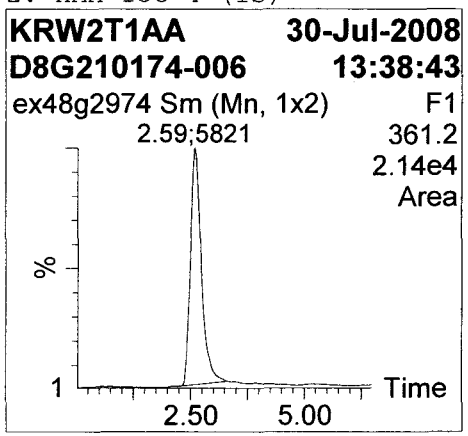
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2974
Text: D8G210174-006

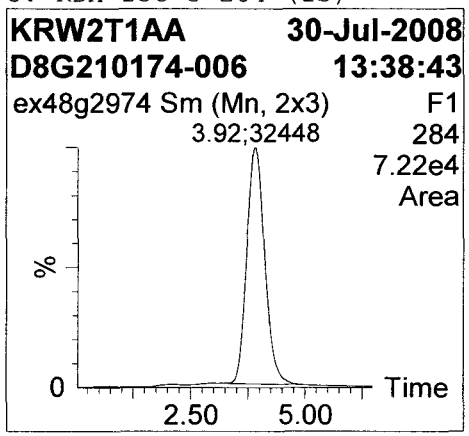
1: HMX



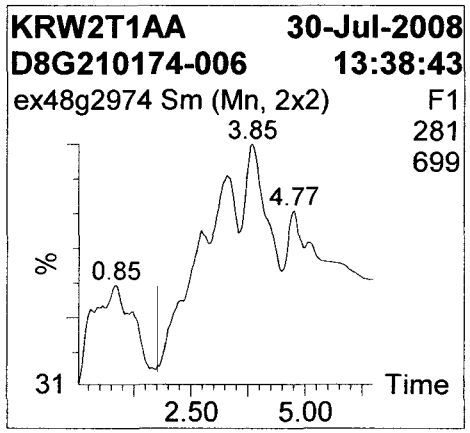
2: HMX 13C-4 (IS)



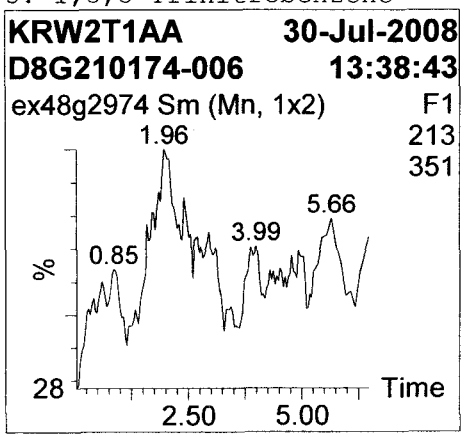
3: RDX 13C-3 284 (IS)



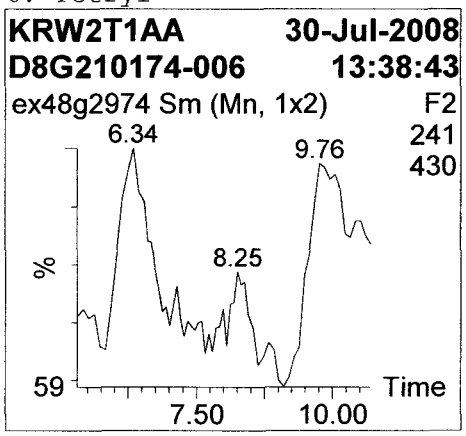
4: RDX



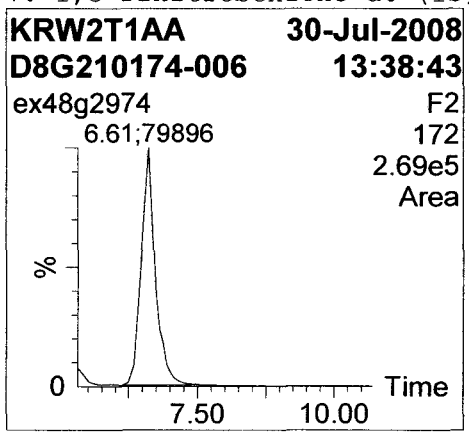
5: 1,3,5-Trinitrobenzene



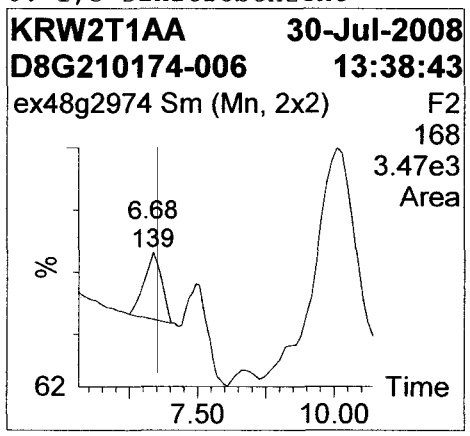
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



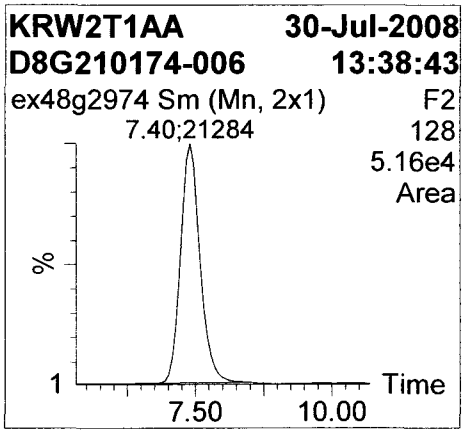
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

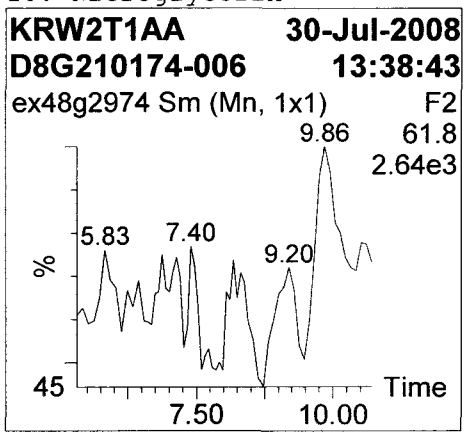
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2974
Text: D8G210174-006

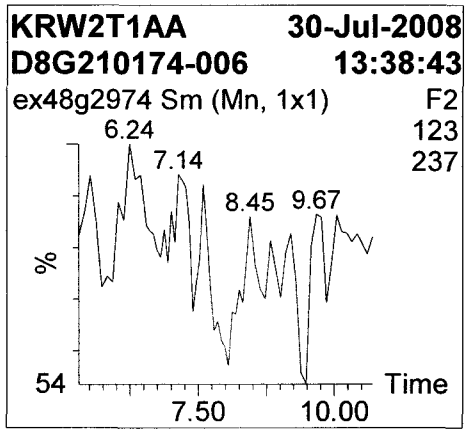
9: Nitrobenzene-d5



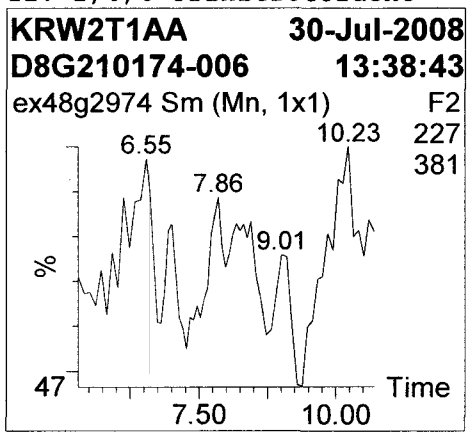
10: Nitroglycerin



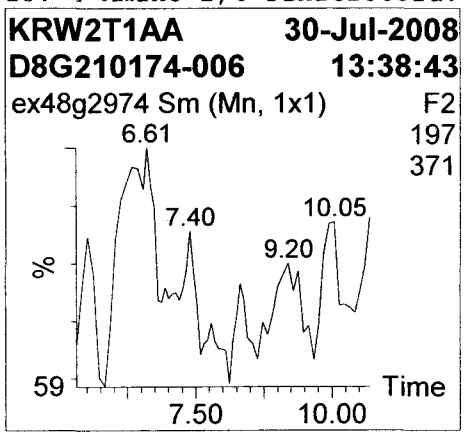
11: Nitrobenzene



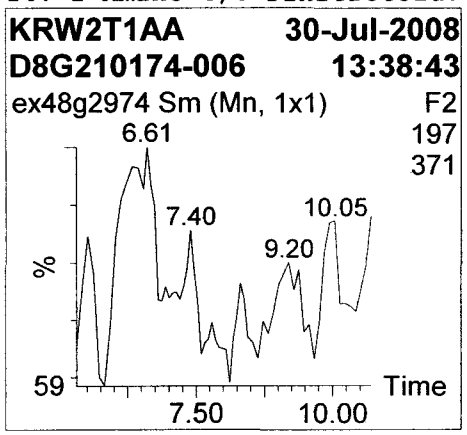
12: 2,4,6-Trinitrotoluene



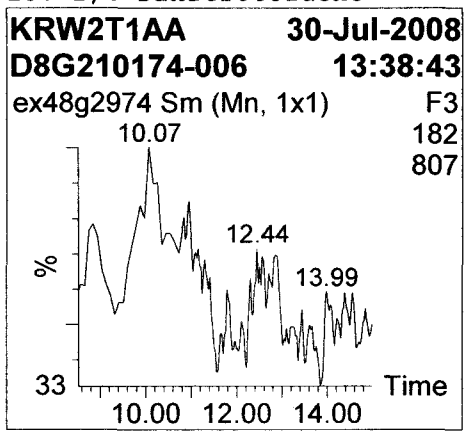
13: 4-Amino-2,6-Dinitrotolu..



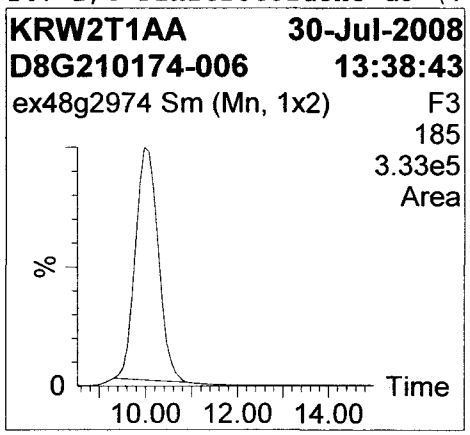
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



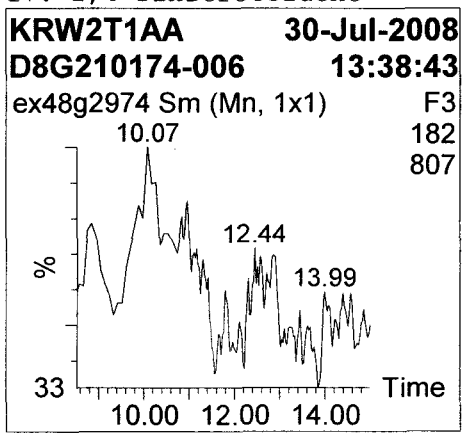
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

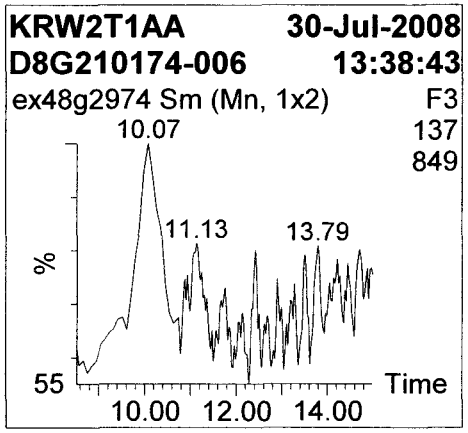
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2974
Text: D8G210174-006

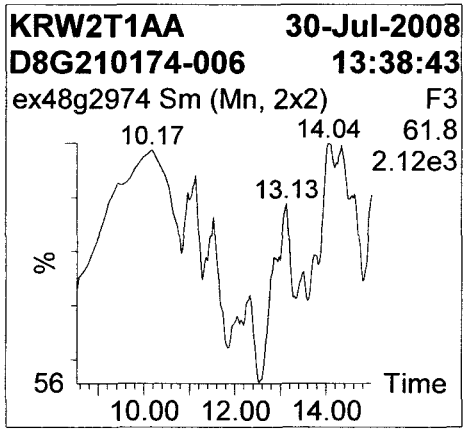
17: 2,4-Dinitrotoluene



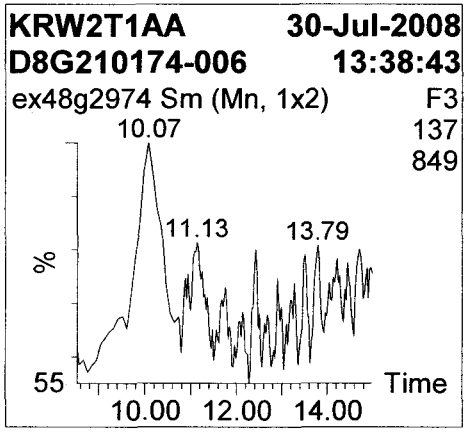
18: 2-Nitrotoluene



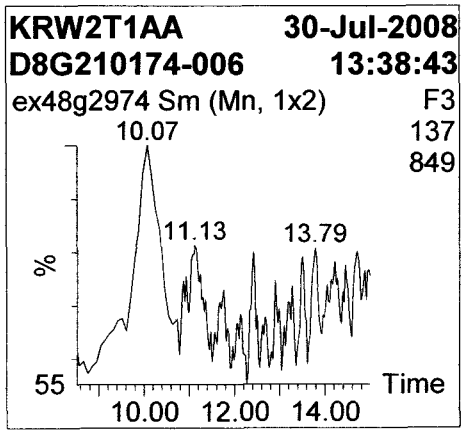
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 84

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2974
Text: D8G210174-006

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	5821	bb	0.875	88	29/Jul/08	ex48g29	
RDX 13C-..	3.919	32448	bb	0.800	80	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	79896	bb	0.788	79	29/Jul/08	ex48g29	
1,3-Dini..	6.678	139	bb	0.000		29/Jul/08	ex48g29	
Nitroben..	7.398	21284	bb	356.036	91	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	185637	bb	0.865	87	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

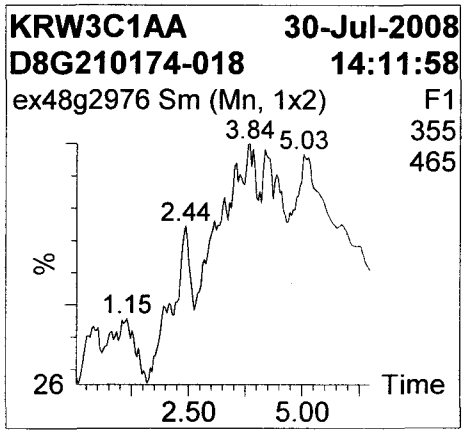
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

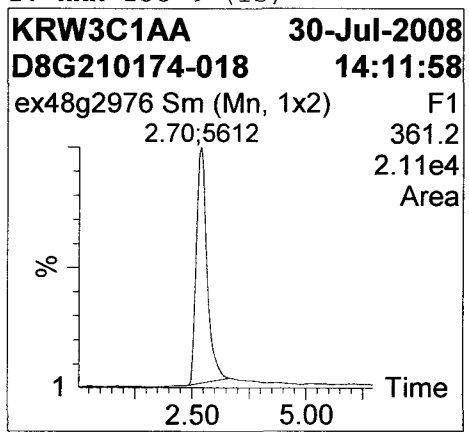
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2976
Text: D8G210174-018

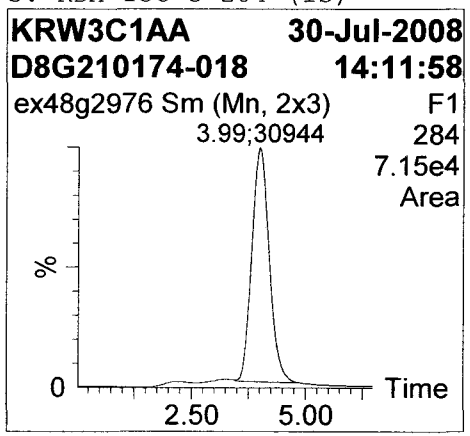
1: HMX



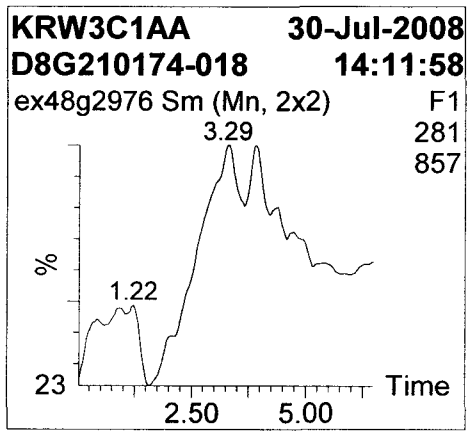
2: HMX 13C-4 (IS)



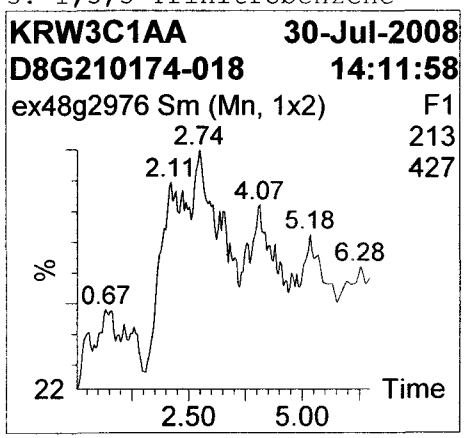
3: RDX 13C-3 284 (IS)



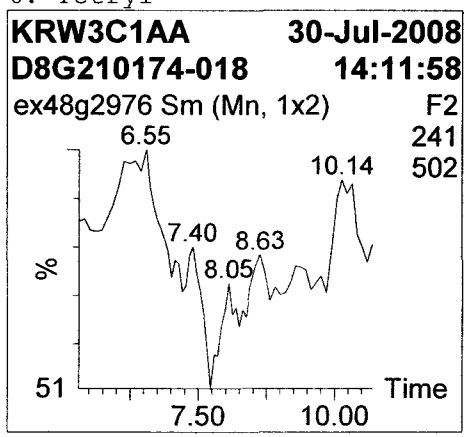
4: RDX



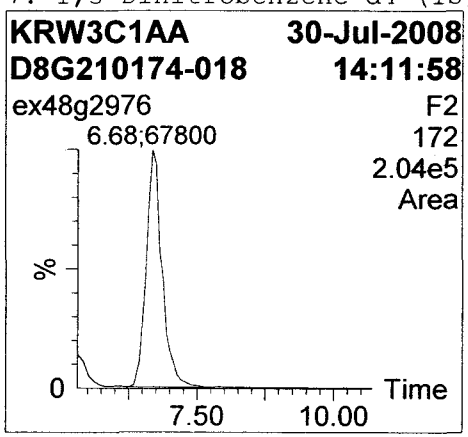
5: 1,3,5-Trinitrobenzene



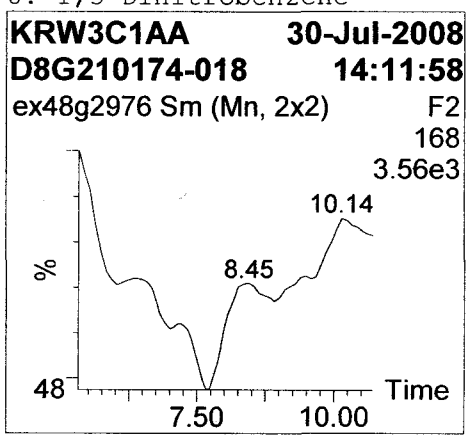
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



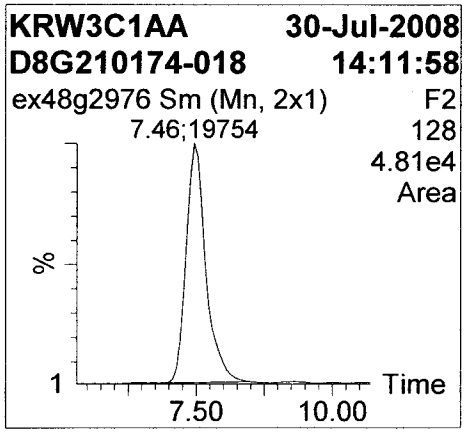
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

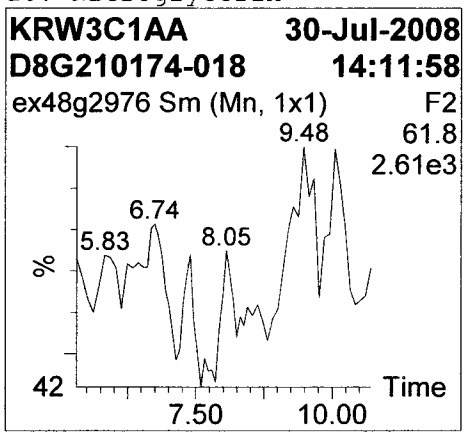
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2976
Text: D8G210174-018

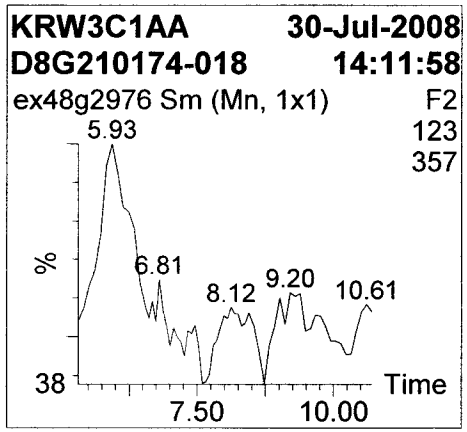
9: Nitrobenzene-d5



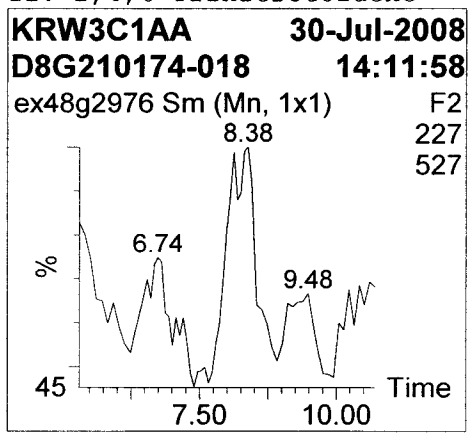
10: Nitroglycerin



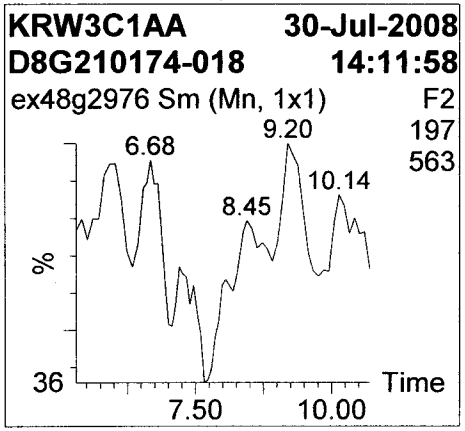
11: Nitrobenzene



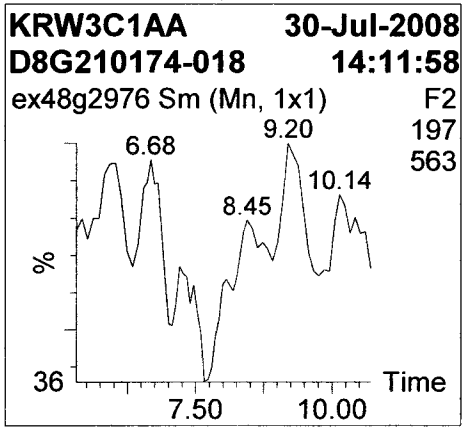
12: 2,4,6-Trinitrotoluene



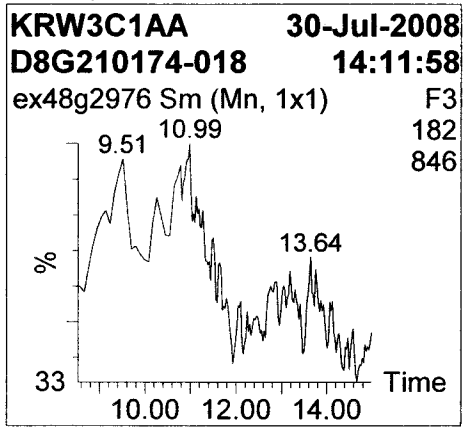
13: 4-Amino-2,6-Dinitrotolu..



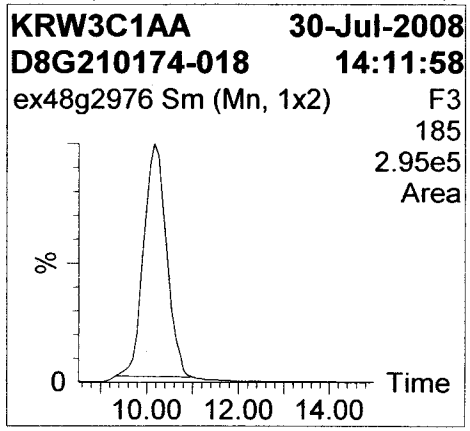
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



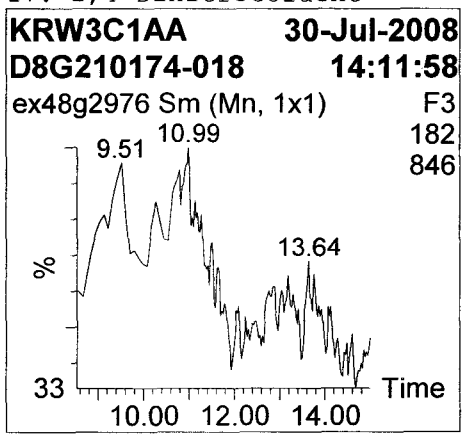
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

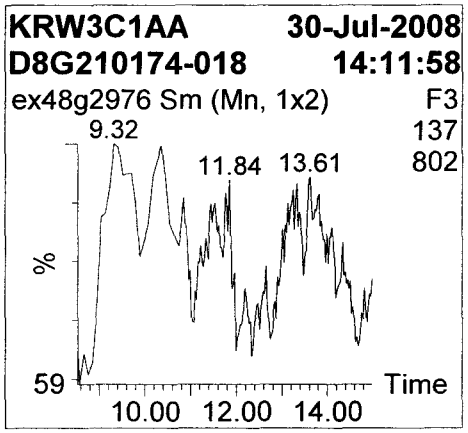
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2976
Text: D8G210174-018

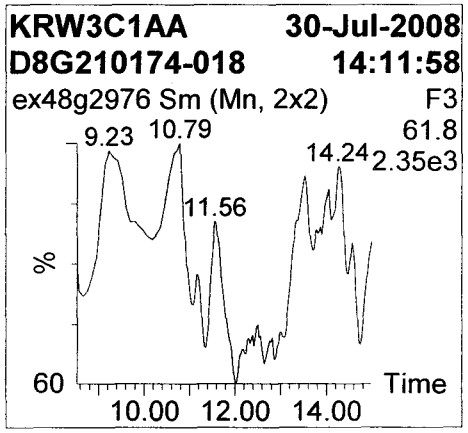
17: 2,4-Dinitrotoluene



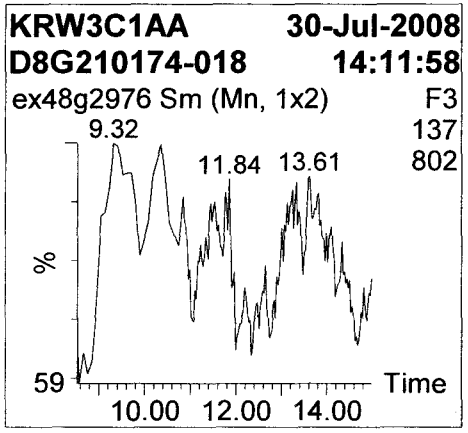
18: 2-Nitrotoluene



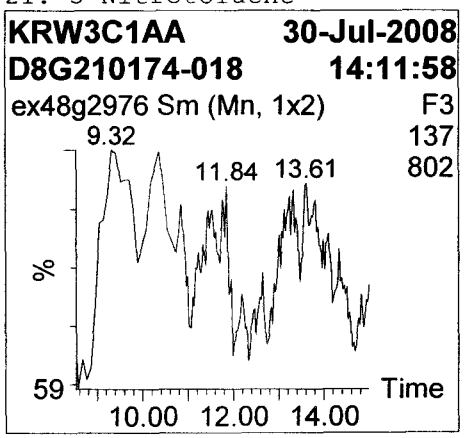
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2976
Text: D8G210174-018

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.699	5612	bb	0.844	84	29/Jul/08	ex48g29	
RDX 13C-..	3.993	30944	db	0.763	76	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.677	67800	bb	0.668	67	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.463	19754	bb	394.134	100	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.169	166552	bb	0.776	78	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

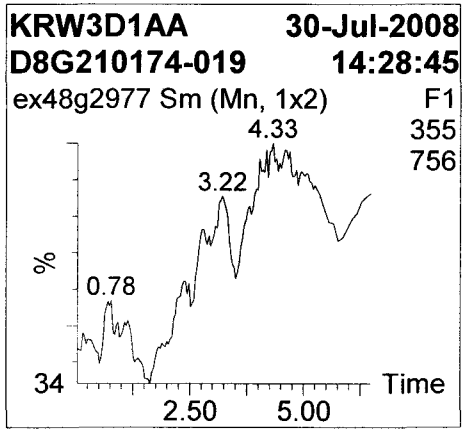
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

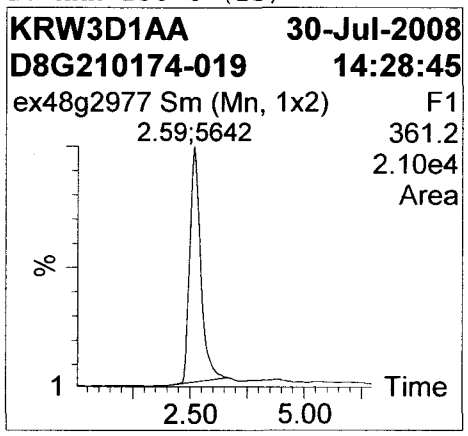
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2977
Text: D8G210174-019

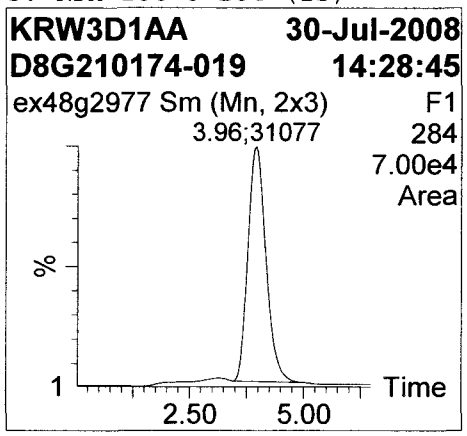
1: HMX



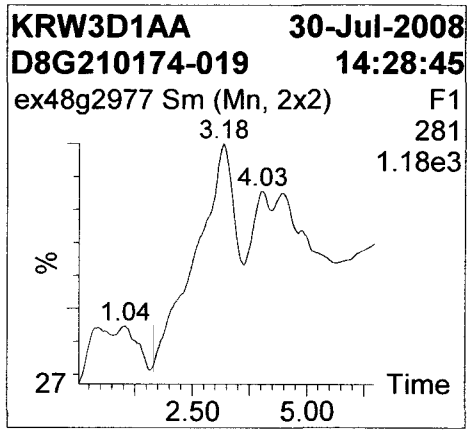
2: HMX 13C-4 (IS)



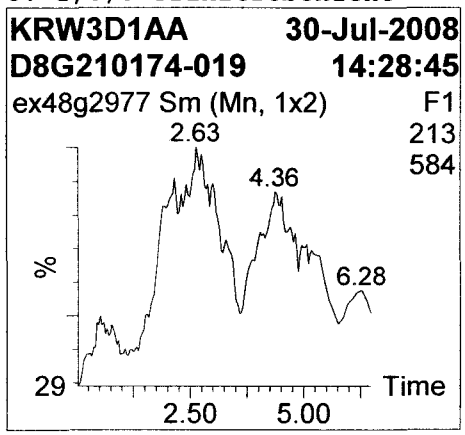
3: RDX 13C-3 284 (IS)



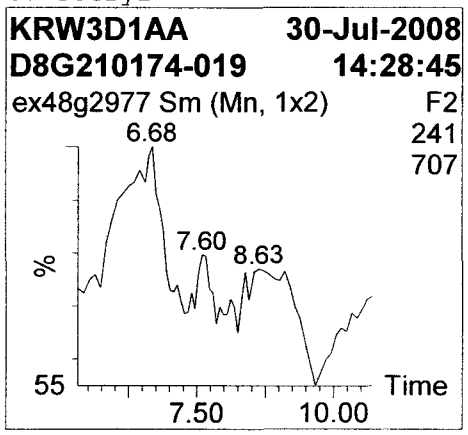
4: RDX



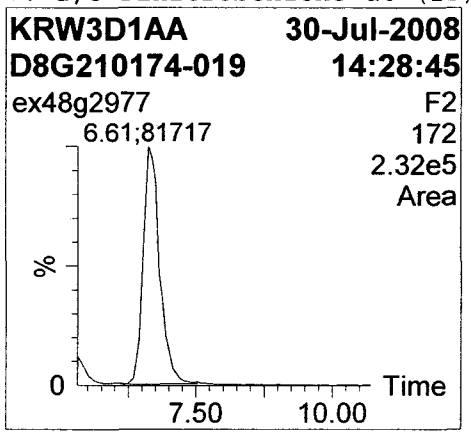
5: 1,3,5-Trinitrobenzene



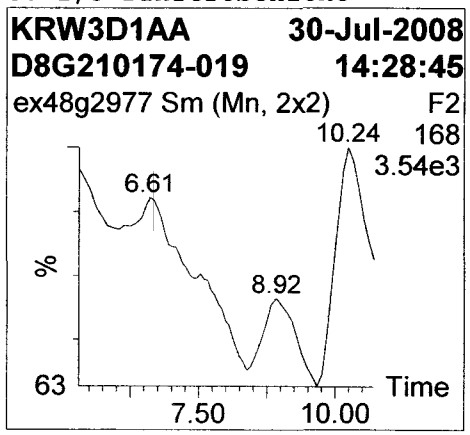
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



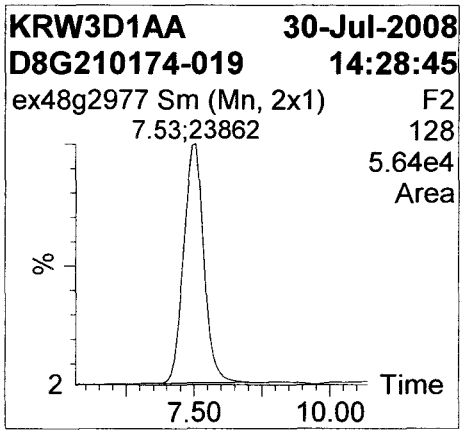
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

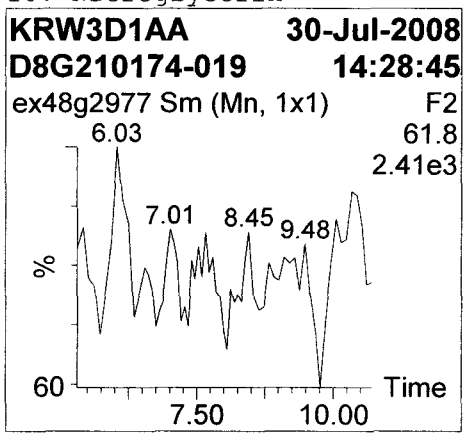
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2977
Text: D8G210174-019

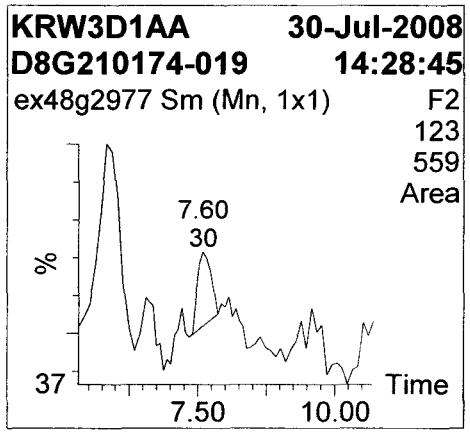
9: Nitrobenzene-d5



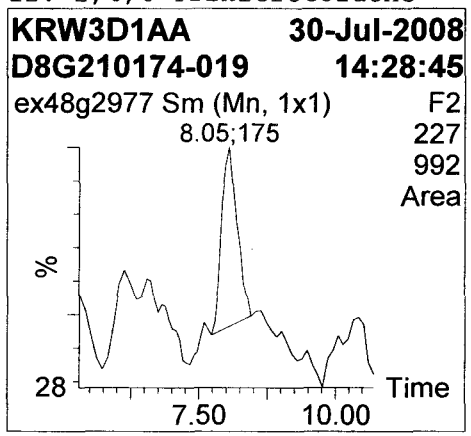
10: Nitroglycerin



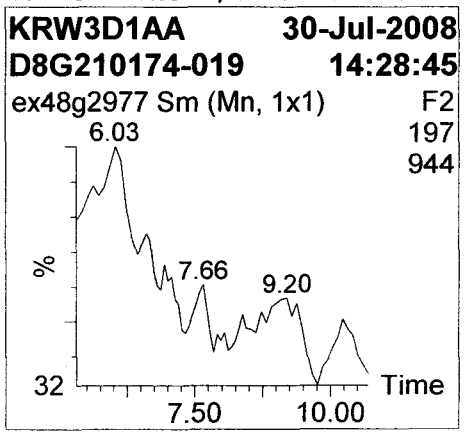
11: Nitrobenzene



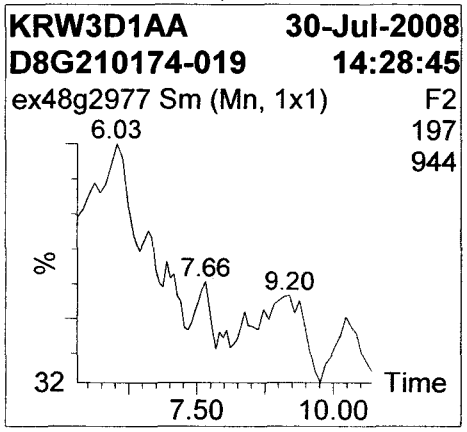
12: 2,4,6-Trinitrotoluene



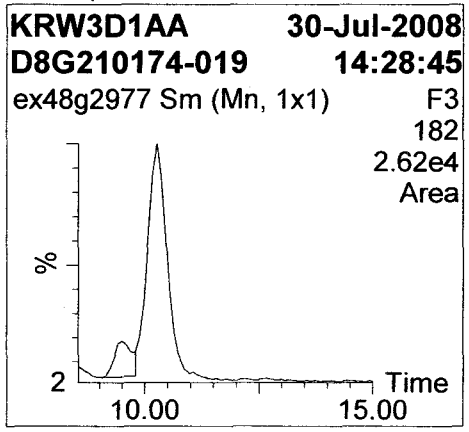
13: 4-Amino-2,6-Dinitrotolu..



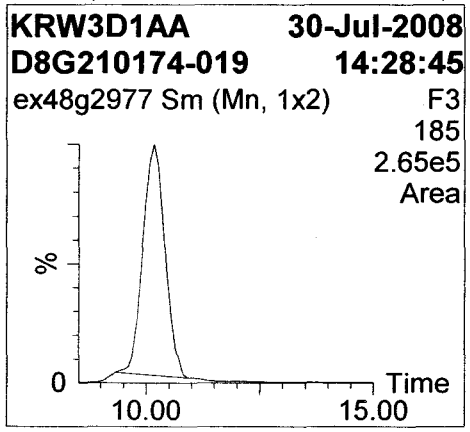
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



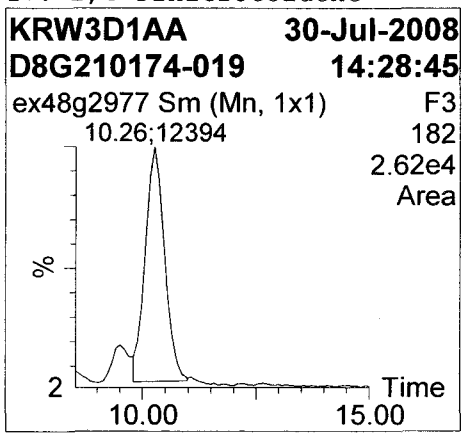
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

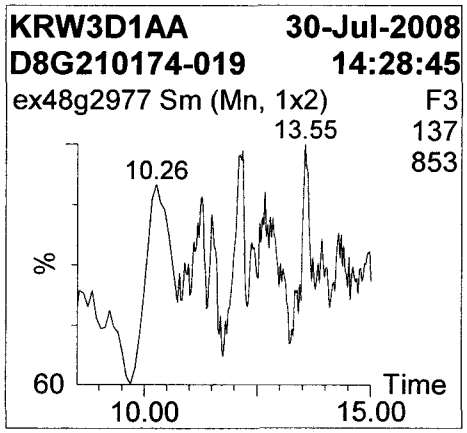
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2977
Text: D8G210174-019

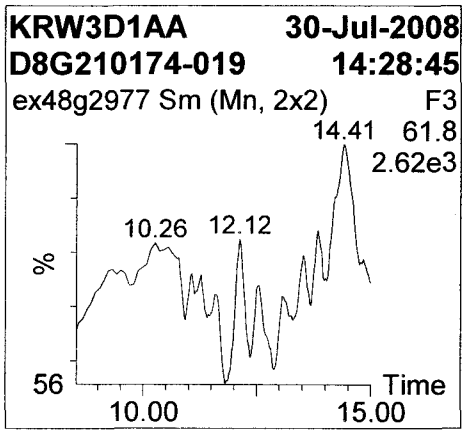
17: 2,4-Dinitrotoluene



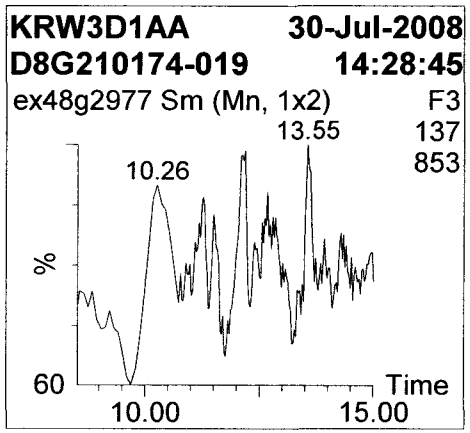
18: 2-Nitrotoluene



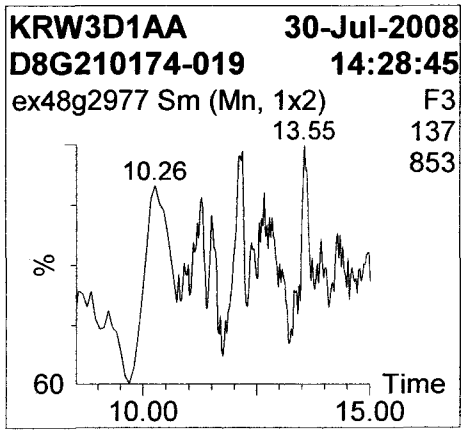
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 96

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2977
Text: D8G210174-019

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	5642	bb	0.848	85	29/Jul/08	ex48g29	
RDX 13C-..	3.956	31077	bb	0.766	77	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	81717	ds	0.806	81	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.530	23862	bb	390.404	100	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..	7.595	30	bb	0.000		29/Jul/08	ex48g29	
2,4,6-Tr..	8.054	175	bb	1.583		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..	9.511	1693	bd	2.684		29/Jul/08	ex48g29	
2,4-Dini..	10.170	144762	bb	0.675	67	29/Jul/08	ex48g29	
2,4-Dini..	10.264	12394	dd	75.184		29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

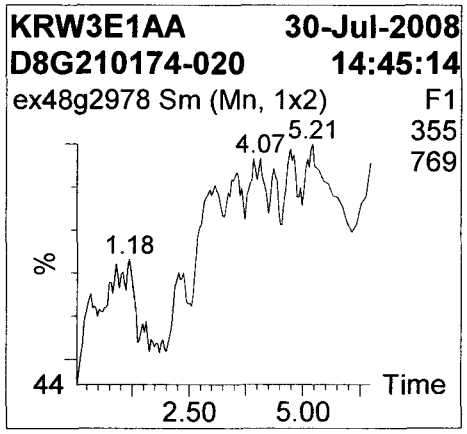
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

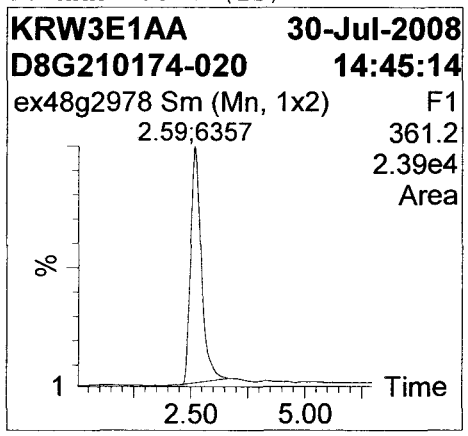
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2978
Text: D8G210174-020

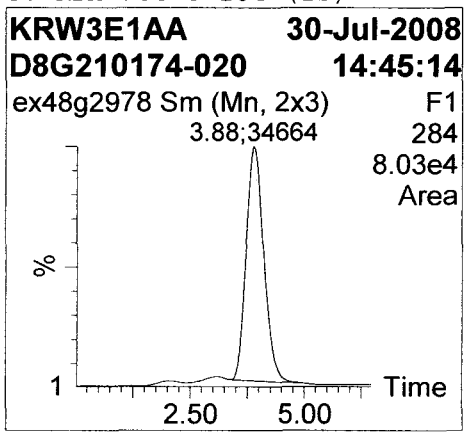
1: HMX



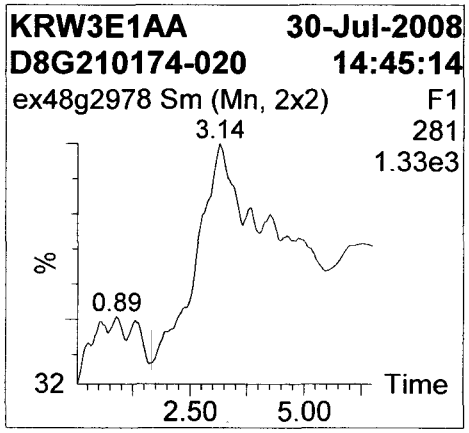
2: HMX 13C-4 (IS)



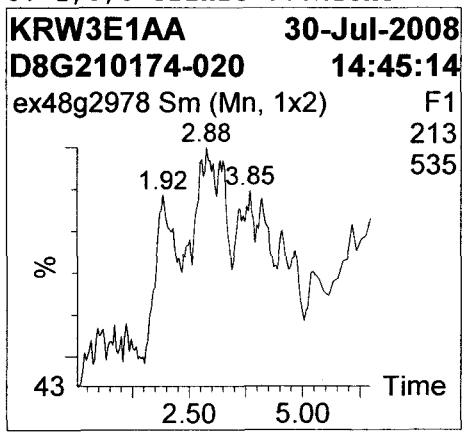
3: RDX 13C-3 284 (IS)



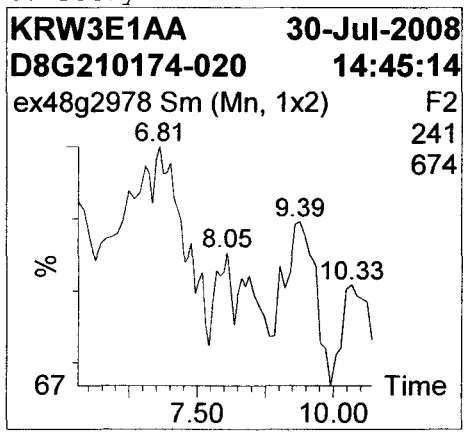
4: RDX



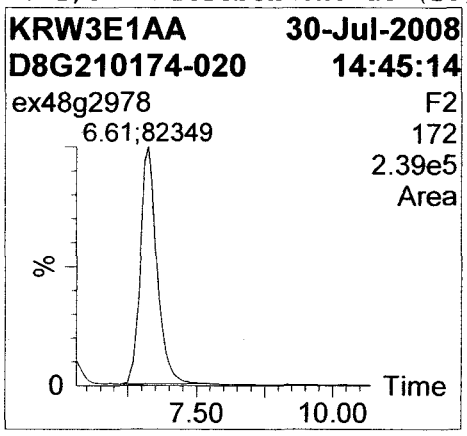
5: 1,3,5-Trinitrobenzene



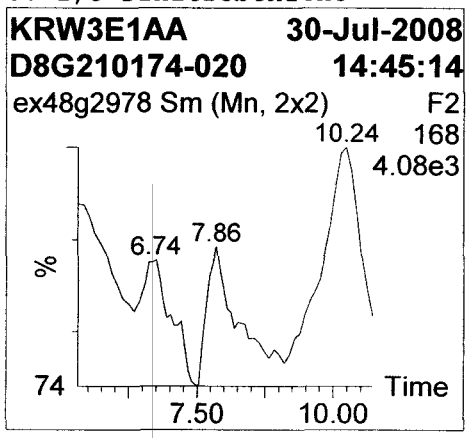
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



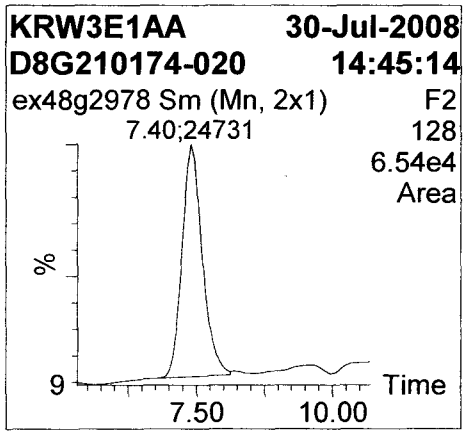
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

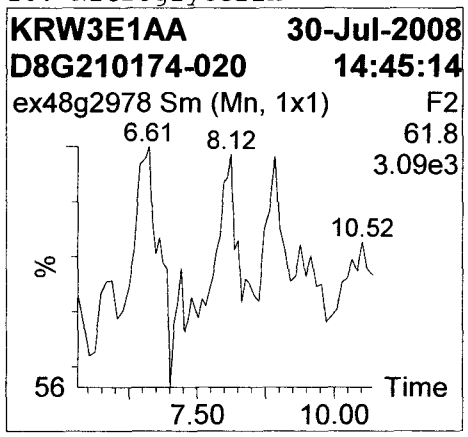
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2978
Text: D8G210174-020

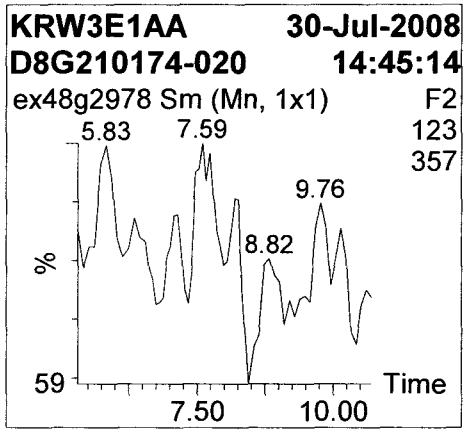
9: Nitrobenzene-d5



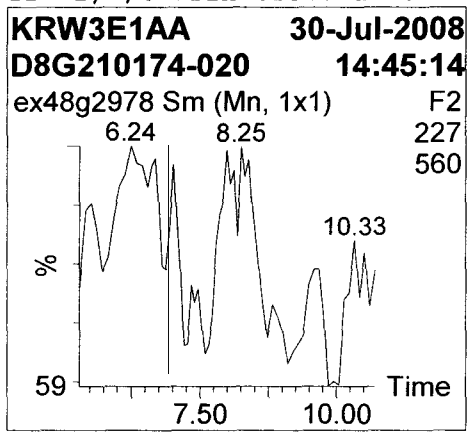
10: Nitroglycerin



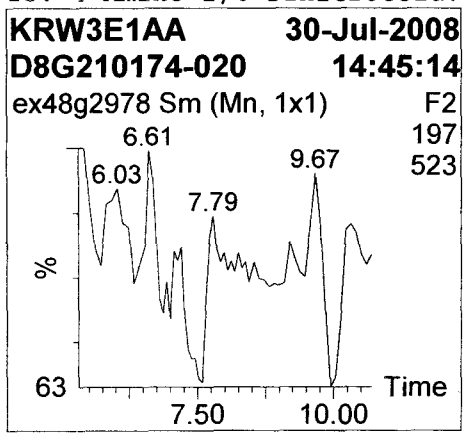
11: Nitrobenzene



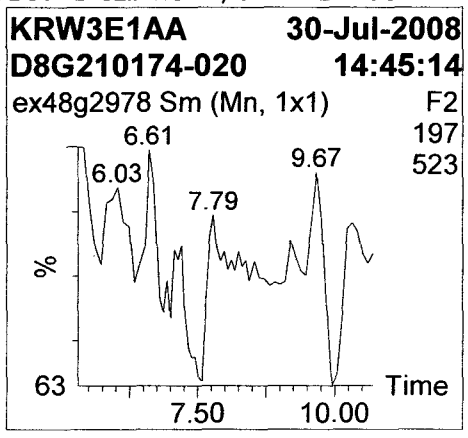
12: 2,4,6-Trinitrotoluene



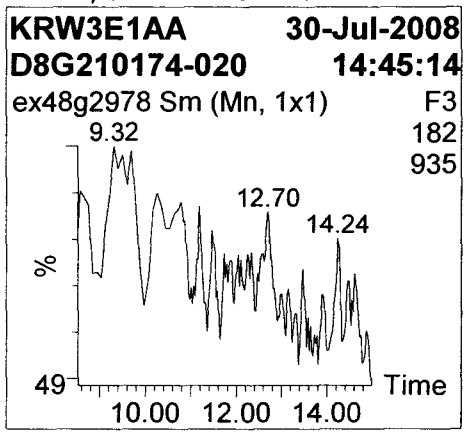
13: 4-Amino-2,6-Dinitrotolu..



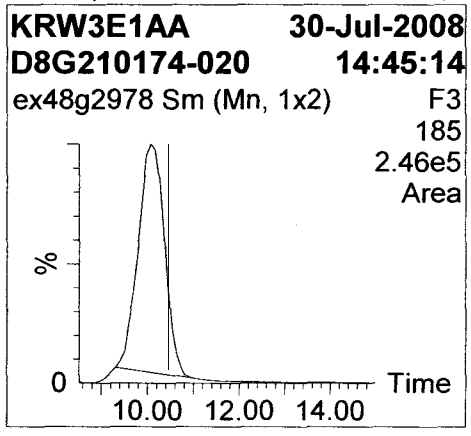
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



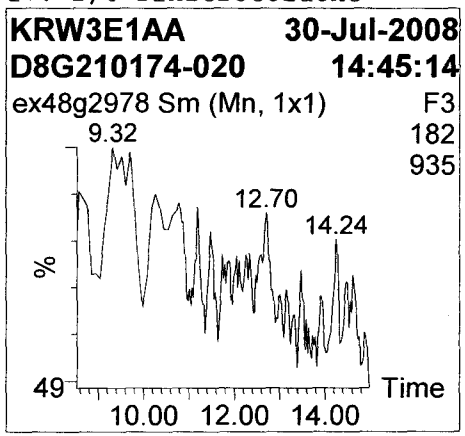
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

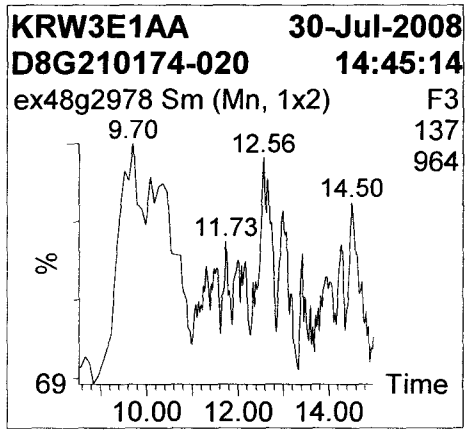
Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2978
Text: D8G210174-020

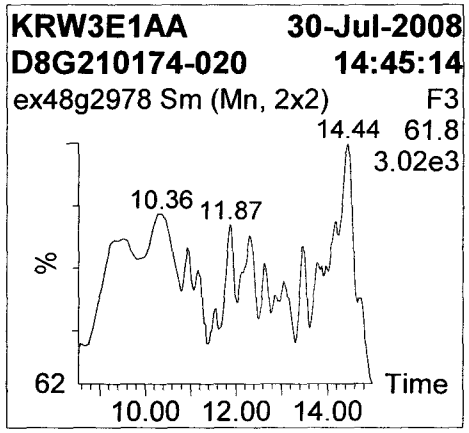
17: 2,4-Dinitrotoluene



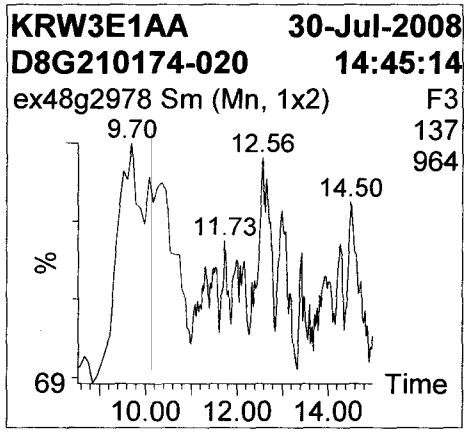
18: 2-Nitrotoluene



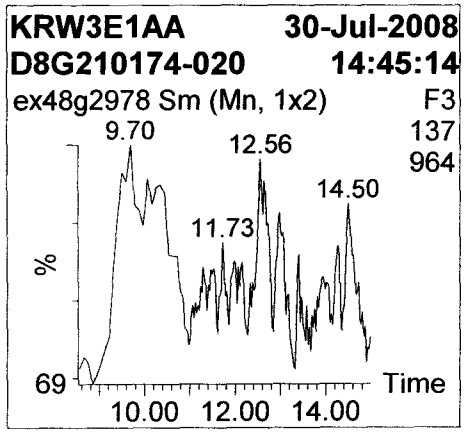
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(05)
Last modified: Wed Jul 30 15:20:03 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Wed Jul 30 13:37:57 2008
Job Code:

Printed: Wed Jul 30 15:23:08 2008

Name: ex48g2978
Text: D8G210174-020

Name	RT	Area	Flags	Conc. ()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	6357	bb	0.956	96	29/Jul/08	ex48g29	
RDX 13C-..	3.882	34664	bb	0.854	85	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	82349	bb	0.812	81	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	24731	bd	414.612	103	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.076	156502	bb	0.730	73	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

LC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Method: 8321A Explosives

Associated Samples: 12,16

Batch #(s): 8206526

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: SMC 8-1-08

LC/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/25/08
Time: 22:12:59

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			Y	Y	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGrou
_ Bench Sheet Copied per COC

Extractionist: 011821 Chad M. Lane

Concentrationist: 011821 Chad M. Lane

****
* *
* **QC BATCH: 8206526** *
* *
****

PREP DATE: 7/24/08 21:00
COMP DATE: 7/25/08 22:00

Reviewer/Date: LANEC / 7/25/08

8321A, Explosives by LCMS
SONICATION - Medium Level

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
7/27/08	8/08/08	D8G210174-012 **KRW24-1-AC**		12	BX	SOLID	**9.92g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
7/28/08	8/08/08	D8G210174-016 **KRW28-1-AC**		12	BX	SOLID	**9.99g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/03/08	8/12/08	D8G240298-001 **KR5CC-1-AC**		12	BX	SOLID	**10.19g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/03/08	8/12/08	D8G240298-002 **KR5CR-1-AL**		12	BX	SOLID	**10.27g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/03/08	8/12/08	D8G240298-003 **KR5CT-1-AL**		12	BX	SOLID	**9.89g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/03/08	8/12/08	D8G240298-004 **KR5CV-1-AL**		12	BX	SOLID	**10.16g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/04/08	8/12/08	D8G240298-006 **KR5C0-1-AL**		12	BX	SOLID	**10.00g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															

Table of Contents

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/25/08
Time: 22:12:59

QC BATCH: 8206526

PREP DATE: 7/24/08 21:00
COMP DATE: 7/25/08 22:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
8/04/08	8/12/08	D8G240298-007 **KR5C1-1-AL**		12	BX	SOLID	**10.04g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/04/08	8/12/08	D8G240298-008 **KR5C2-1-AL**		12	BX	SOLID	**9.95g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/04/08	8/12/08	D8G240298-008 **KR5C2-1-C4**S M		12	BX	SOLID	**9.98g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML HPLC177 7/3/08
COMMENTS:															1ML LCMS031 6/16/08
8/04/08	8/12/08	D8G240298-008 **KR5C2-1-C5**D M		12	BX	SOLID	**9.93g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML HPLC177 7/3/08
COMMENTS:															1ML LCMS031 6/16/08
8/04/08	8/12/08	D8G240298-009 **KR5C3-1-AL**		12	BX	SOLID	**10.27g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/04/08	8/12/08	D8G240298-010 **KR5C4-1-AL**		12	BX	SOLID	**10.23g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/03/08	0/00/00	R8G240000-526 **KR5MD-1-AA**B		12	BX	SOLID	**10.28g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML LCMS031 6/16/08
COMMENTS:															
8/03/08	0/00/00	R8G240000-526 **KR5MD-1-AC**C		12	BX	SOLID	**10.08g** 20.00mL	NA	NA	NA	A.ACN	20.0		.0	1ML HPLC177 7/3/08
COMMENTS:															1ML LCMS031 6/16/08

DV-LC-0010 BAL.F90716 SAND:WR0025 A.ACN:1-3-14 S/S:CL-E,EXP-1 W:KH
ON 7/24/08@23:55 OFF:7/25/08@20:15 FILTER:R396 MESH:10
TEMP: MIN:6C MAX:9C

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 15

Table of Contents

LC/MS SEMIVOLATILE STANDARD DATA

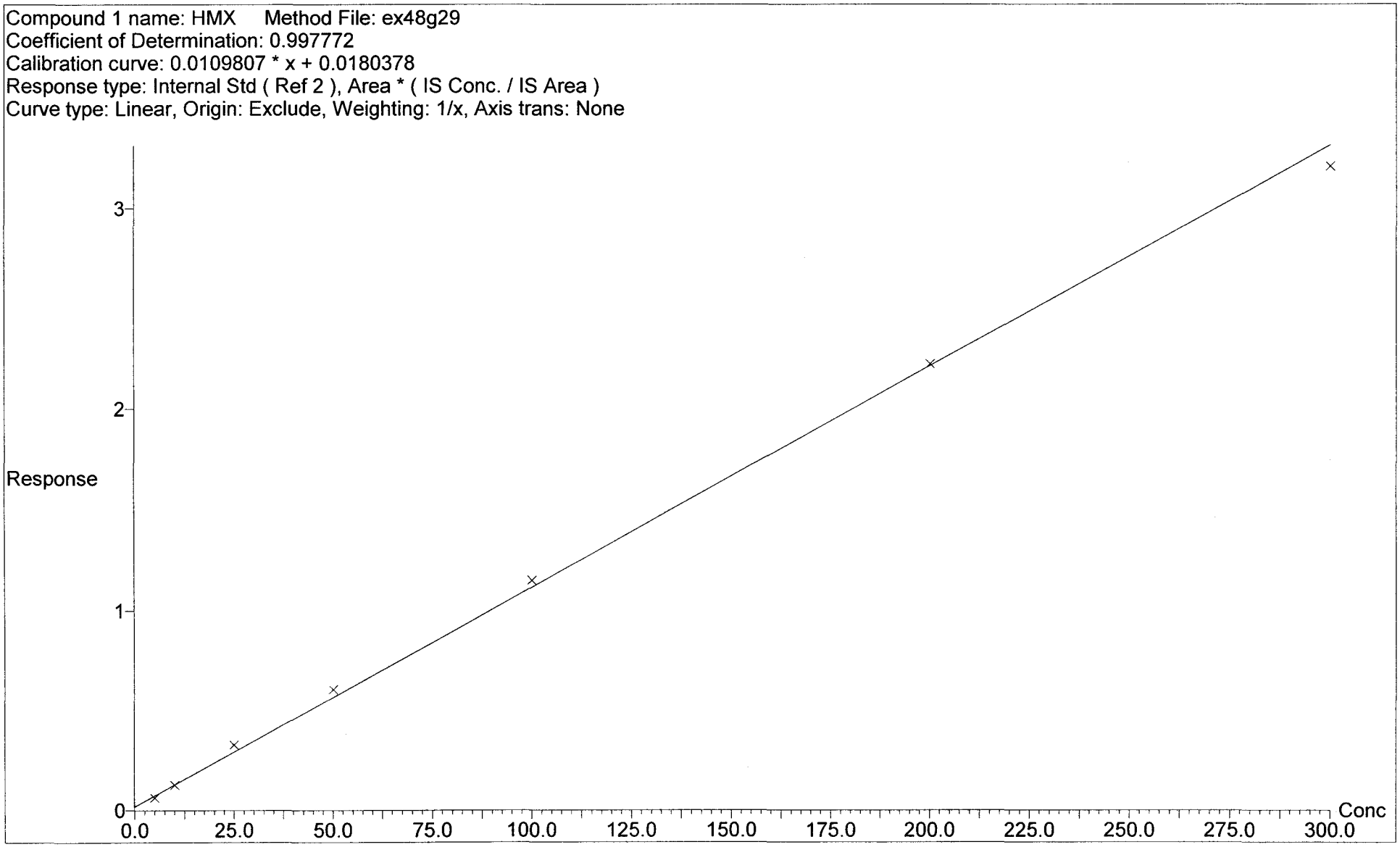
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

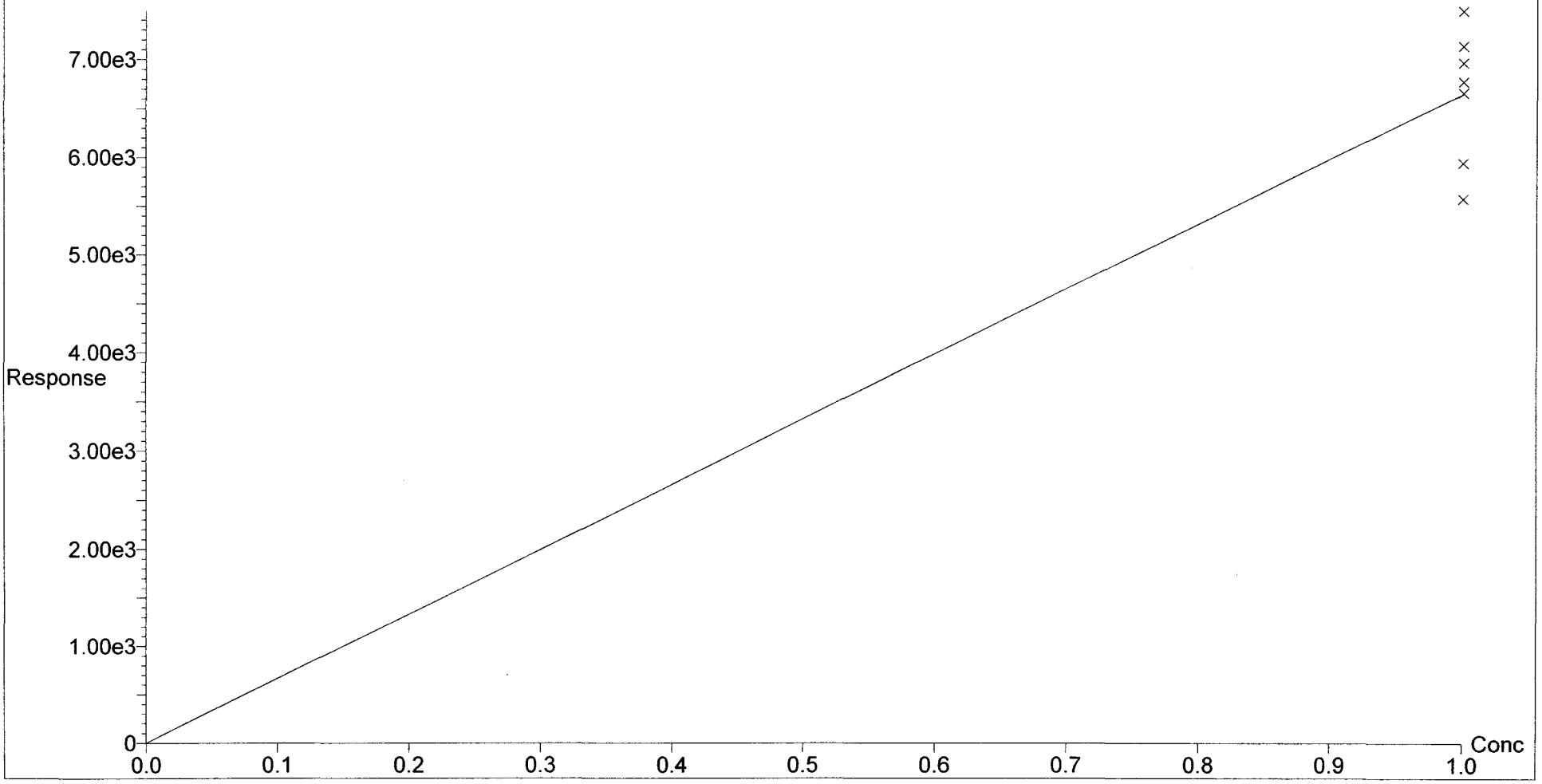
Compound 1 name: HMX Method File: ex48g29
Coefficient of Determination: 0.997772
Calibration curve: 0.0109807 * x + 0.0180378
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

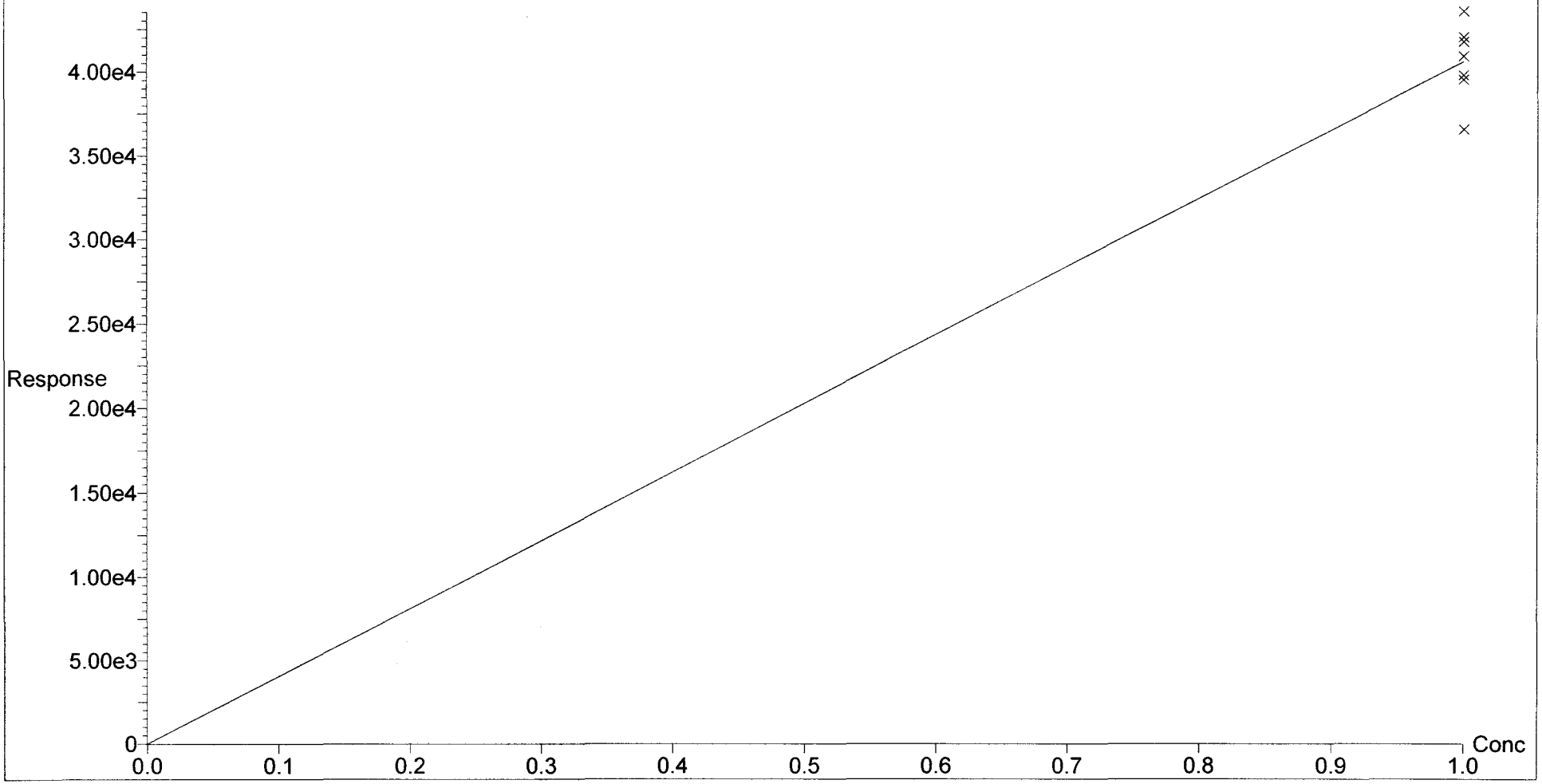
Compound 2 name: HMX 13C-4 (IS) Method File: ex48g29
Response Factor: 6651.37
RRF SD: 673.653, % Relative SD: 10.1280
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

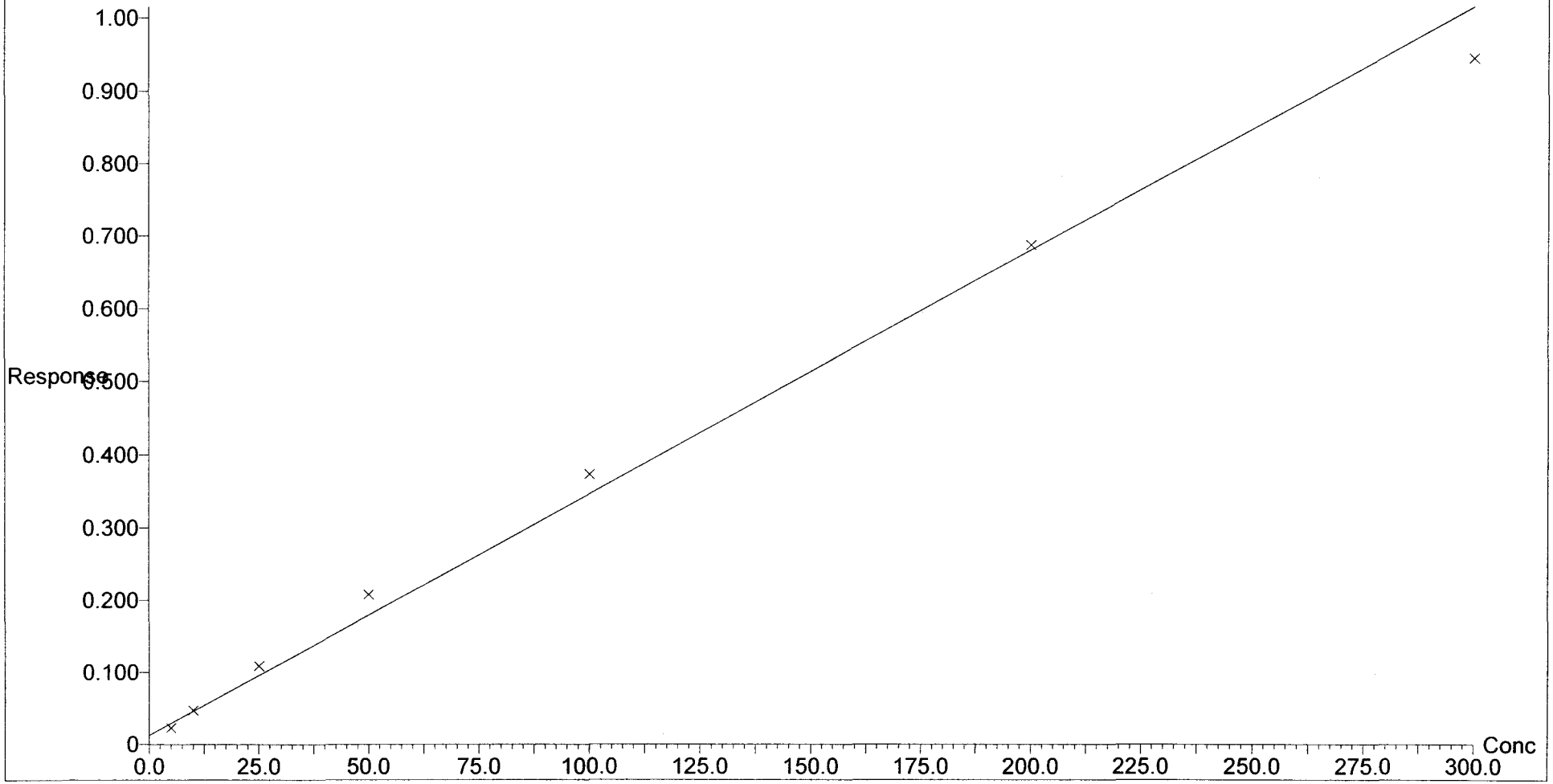
Compound 3 name: RDX 13C-3 284 (IS) Method File: ex48g29
Response Factor: 40575.0
RRF SD: 2245.74, % Relative SD: 5.53478
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

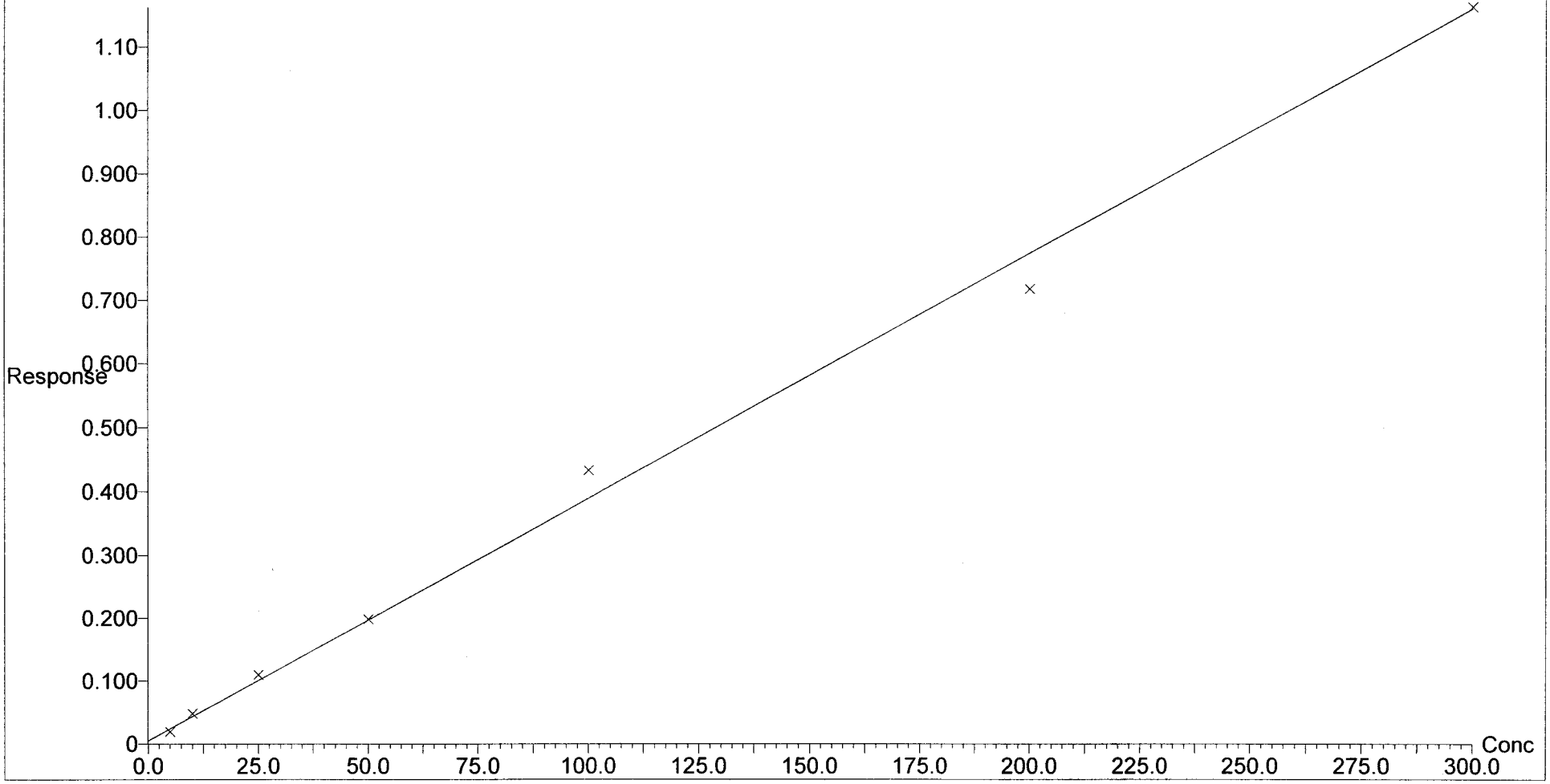
Compound 4 name: RDX Method File: ex48g29
Coefficient of Determination: 0.991254
Calibration curve: 0.00334413 * x + 0.0121126
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

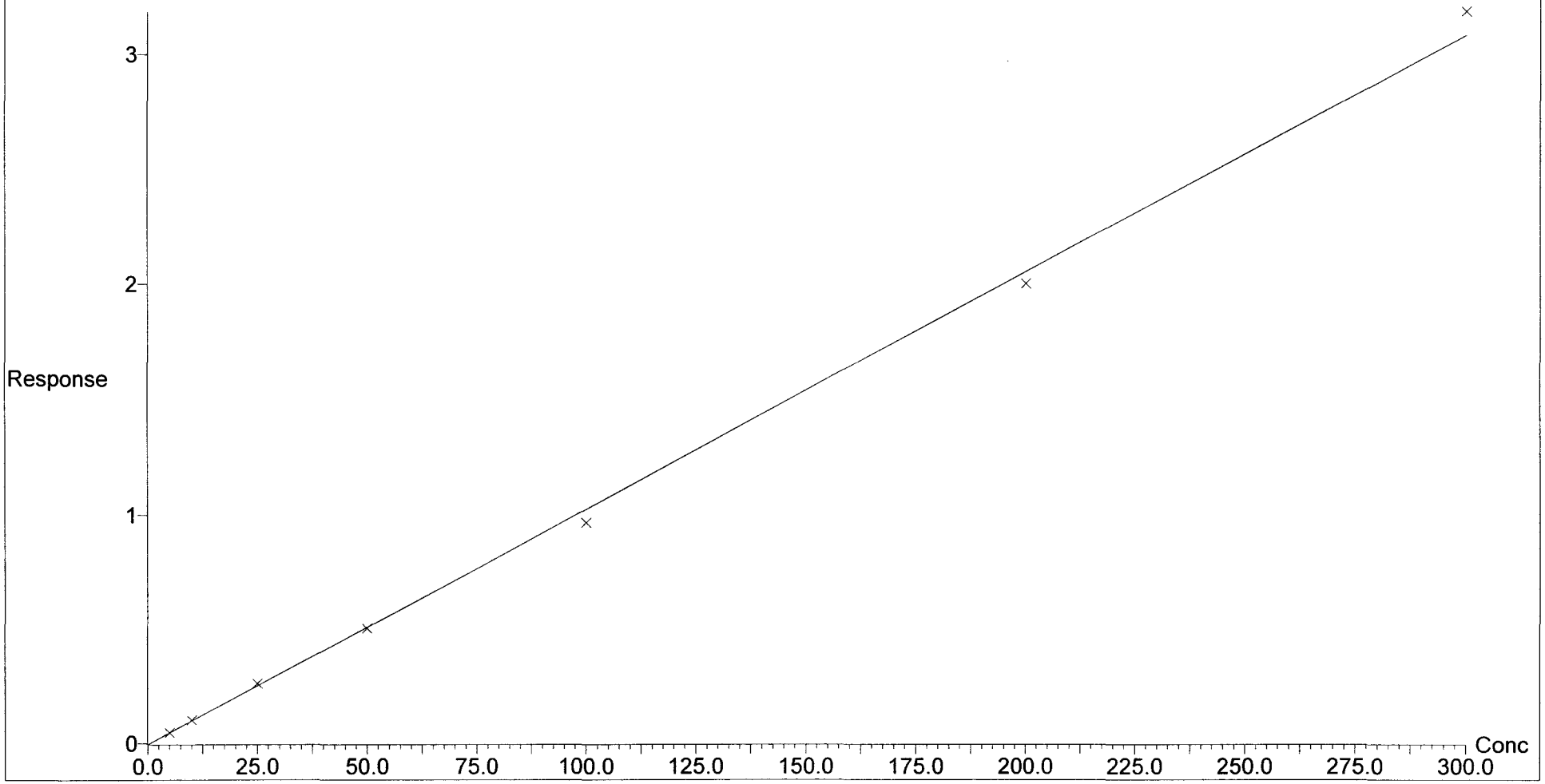
Compound 5 name: 1,3,5-Trinitrobenzene Method File: ex48g29
Coefficient of Determination: 0.994563
Calibration curve: 0.00384794 * x + 0.00471089
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

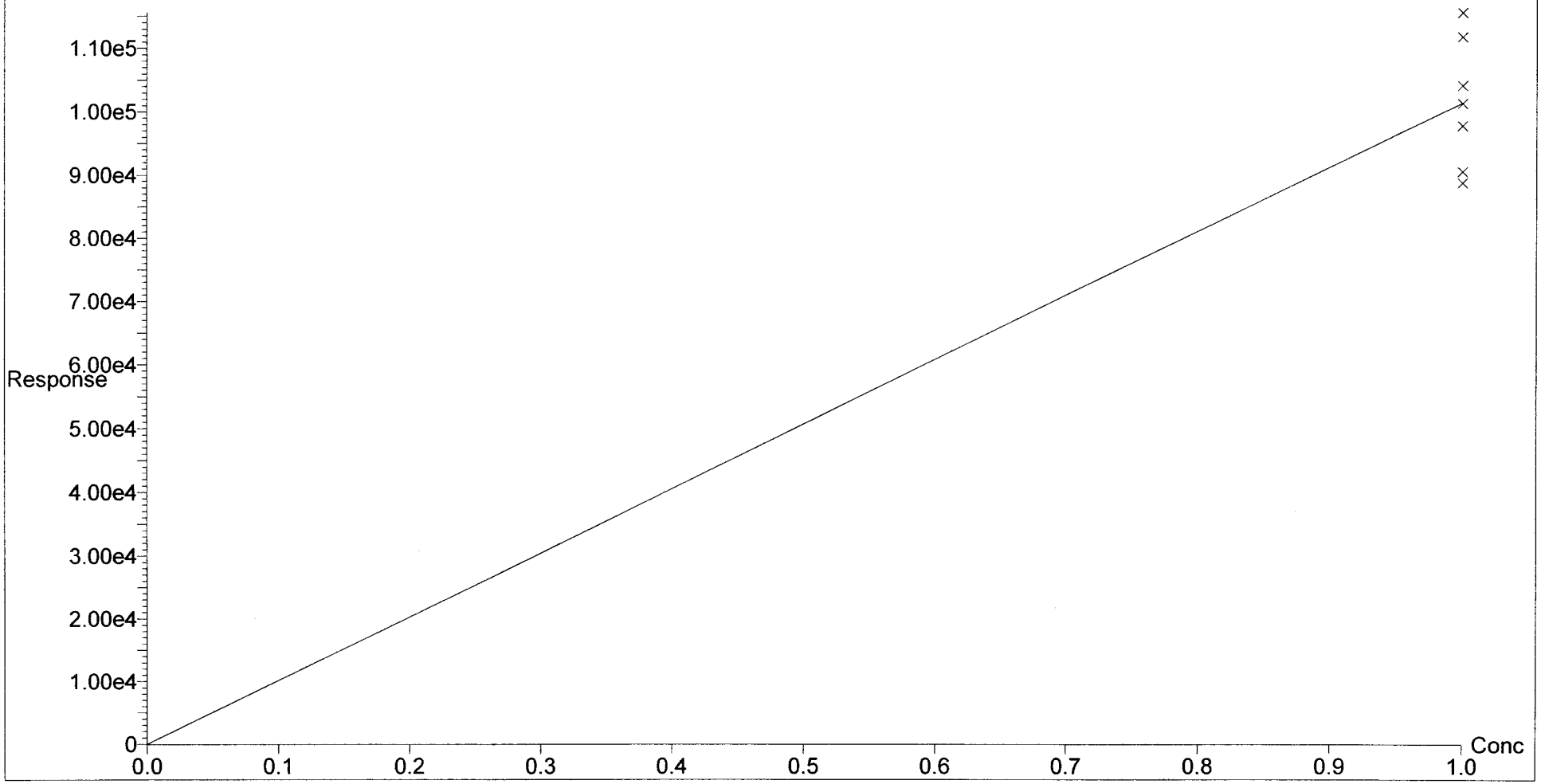
Compound 6 name: Tetryl Method File: ex48g29
Coefficient of Determination: 0.998525
Calibration curve: 0.0102885 * x + -0.00453104
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

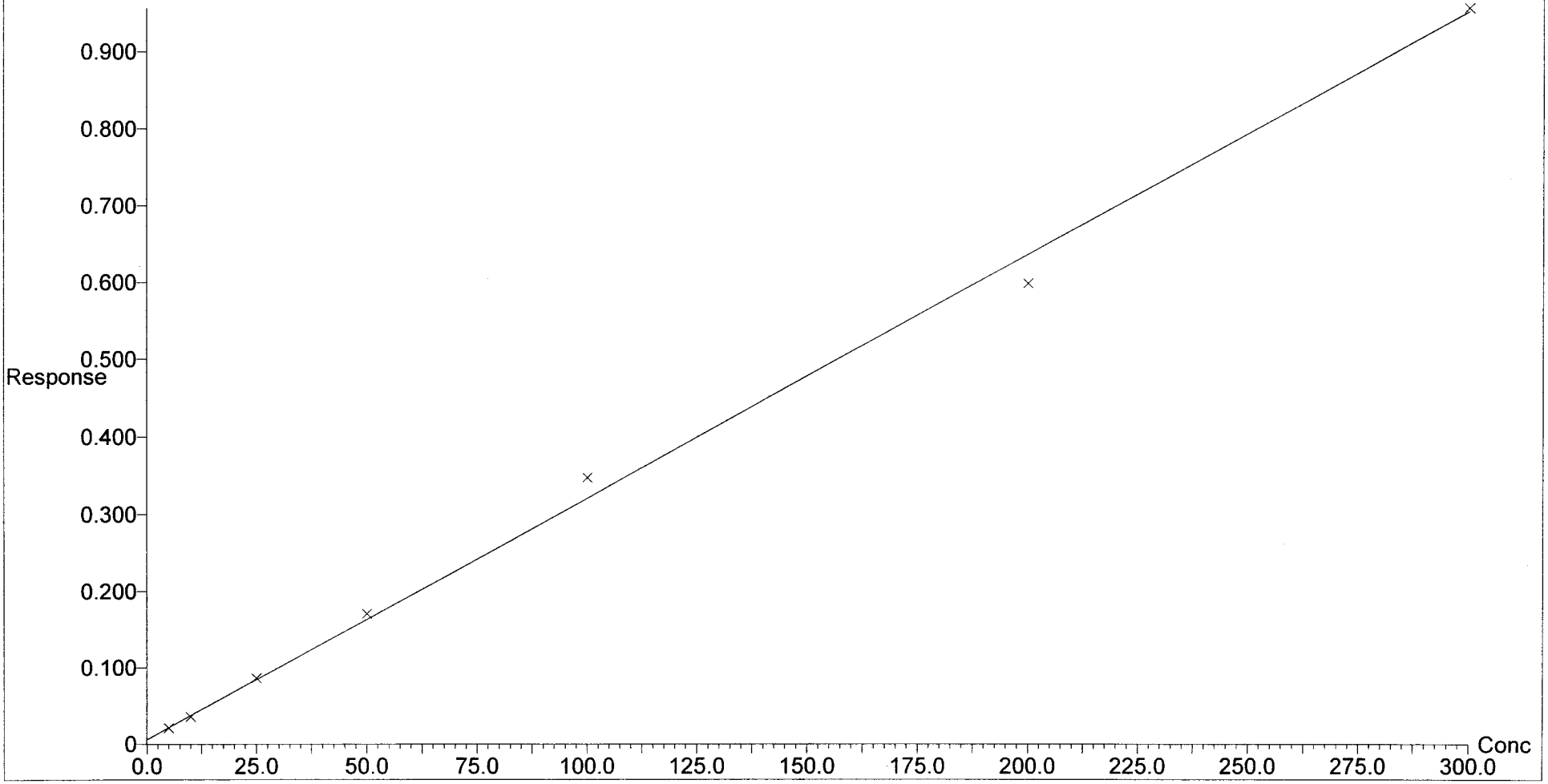
Compound 7 name: 1,3 Dinitrobenzene-d4 (IS) Method File: ex48g29
Response Factor: 101434
RRF SD: 10063.6, % Relative SD: 9.92135
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

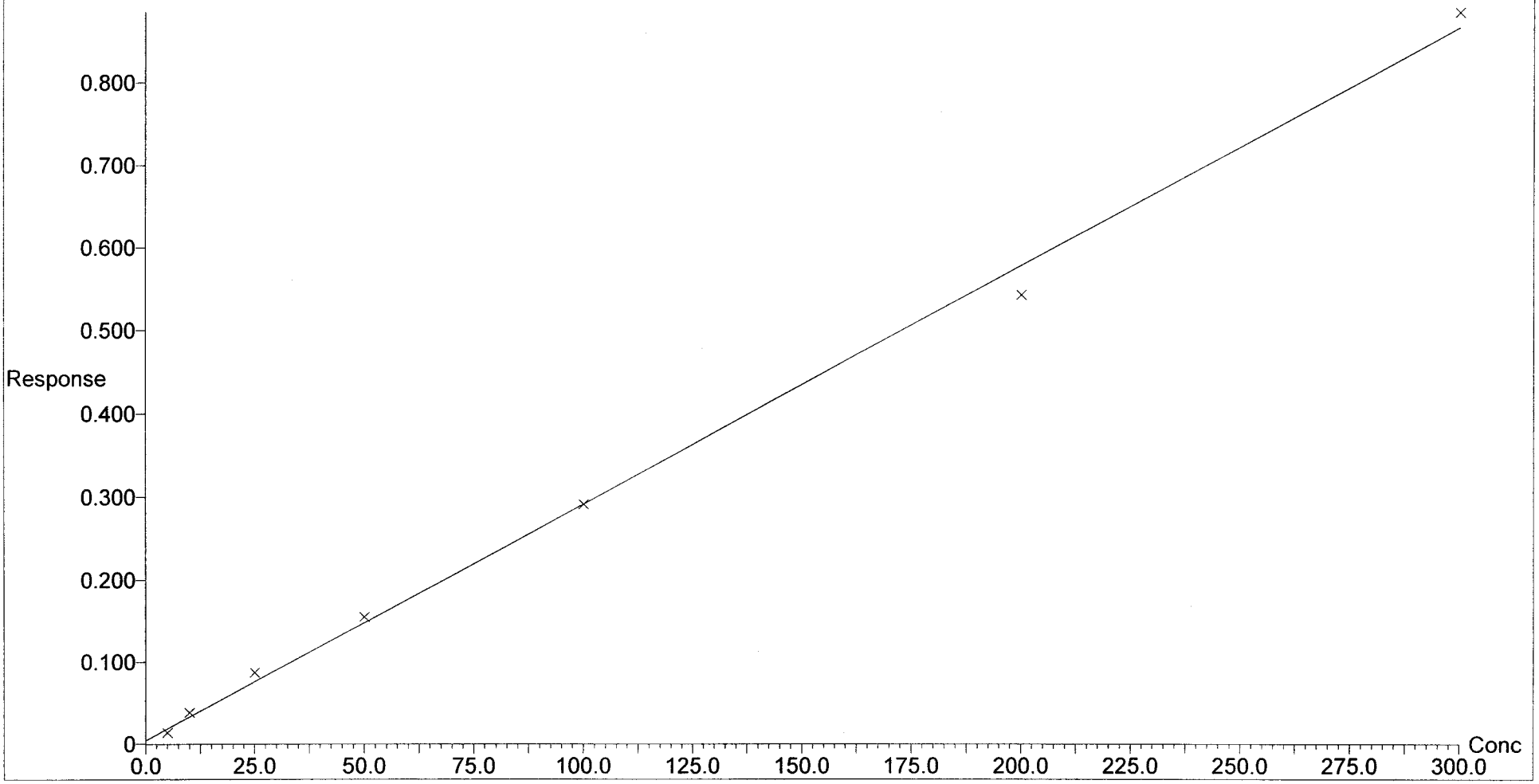
Compound 8 name: 1,3-Dinitrobenzene Method File: ex48g29
Coefficient of Determination: 0.997196
Calibration curve: 0.00315292 * x + 0.00564178
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

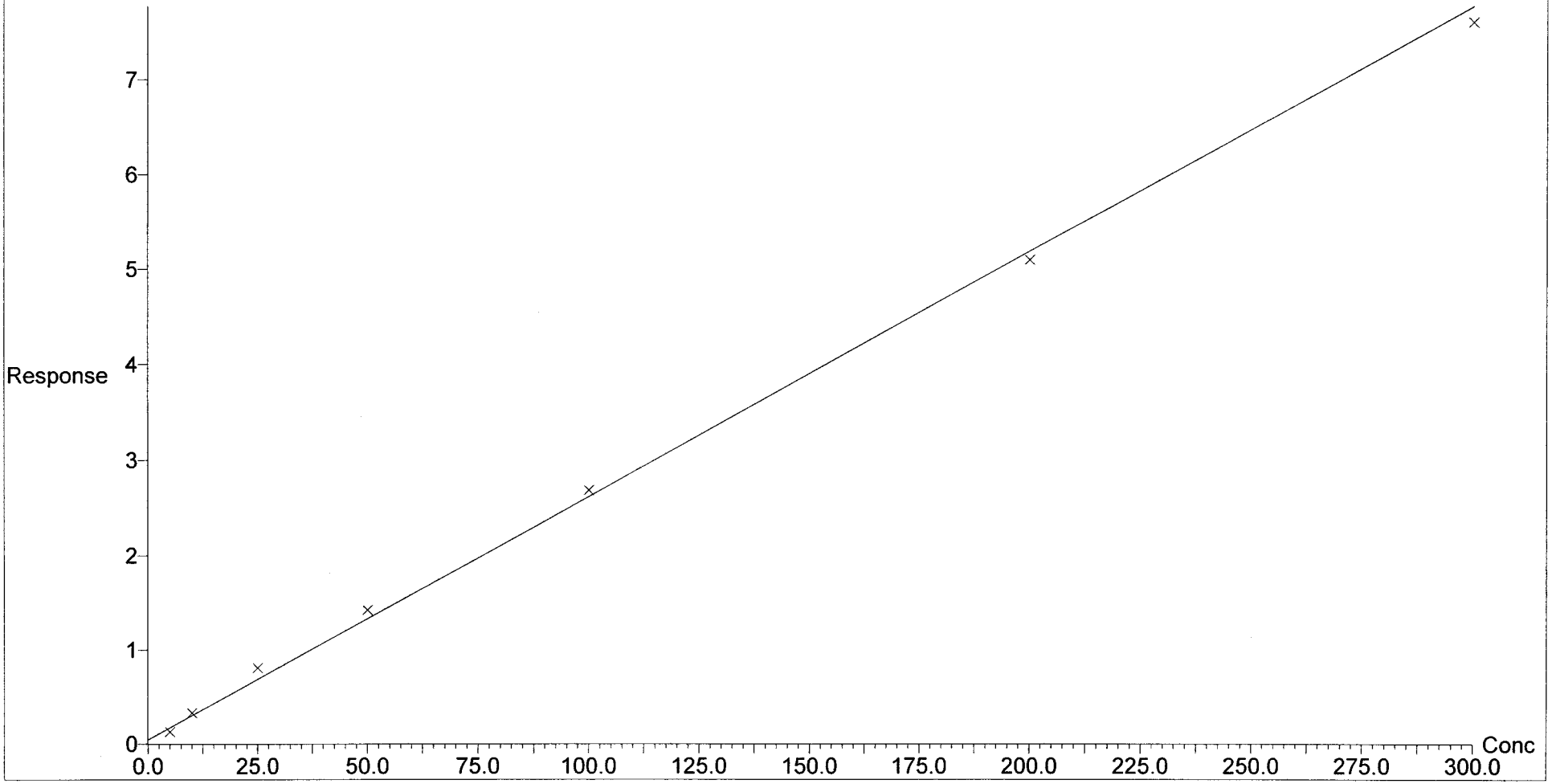
Compound 9 name: Nitrobenzene-d5 Method File: ex48g29
Coefficient of Determination: 0.995648
Calibration curve: 0.00287504 * x + 0.00410105
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

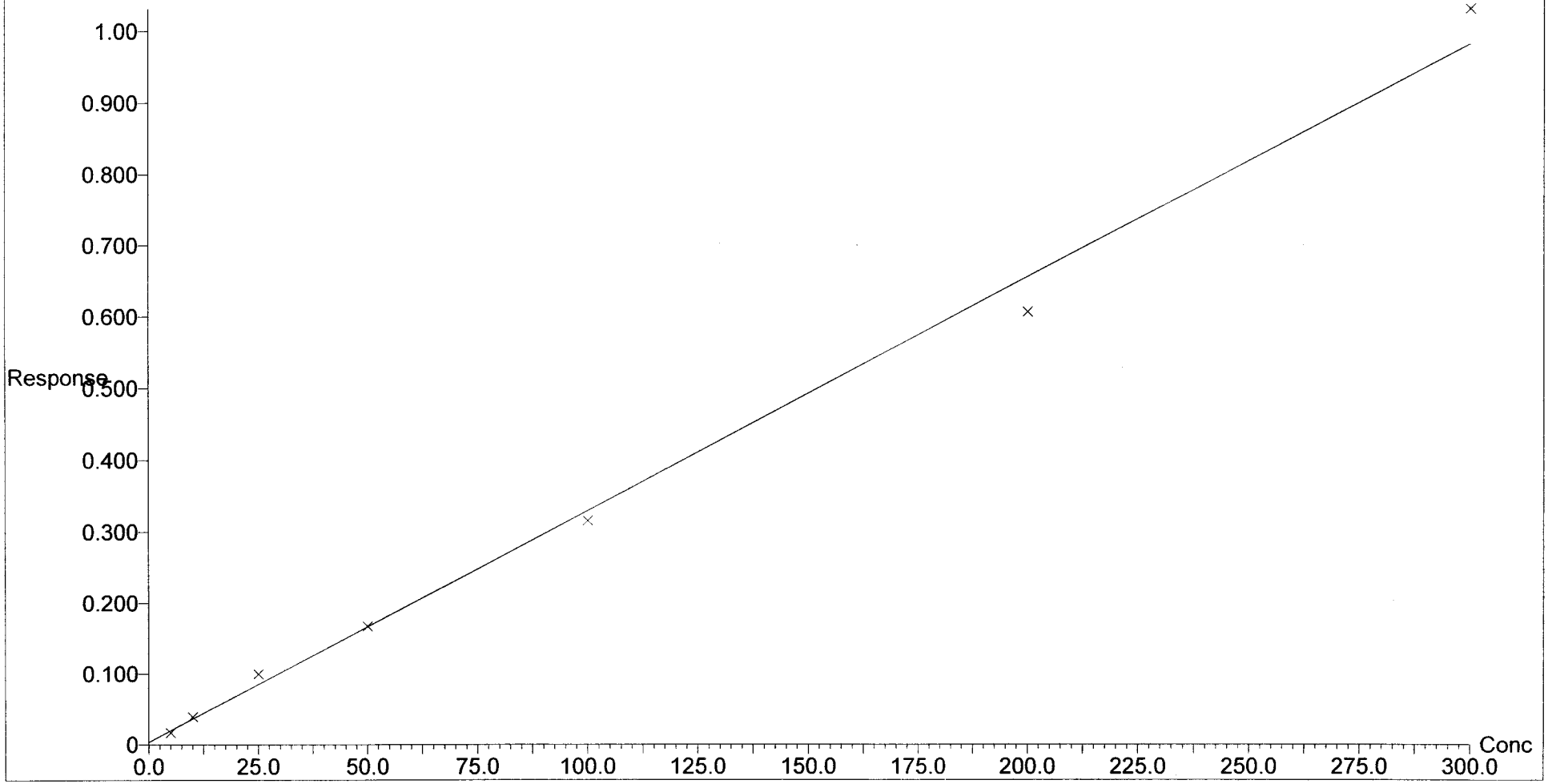
Compound 10 name: Nitroglycerin Method File: ex48g29
Coefficient of Determination: 0.996295
Calibration curve: 0.0257449 * x + 0.0436900
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

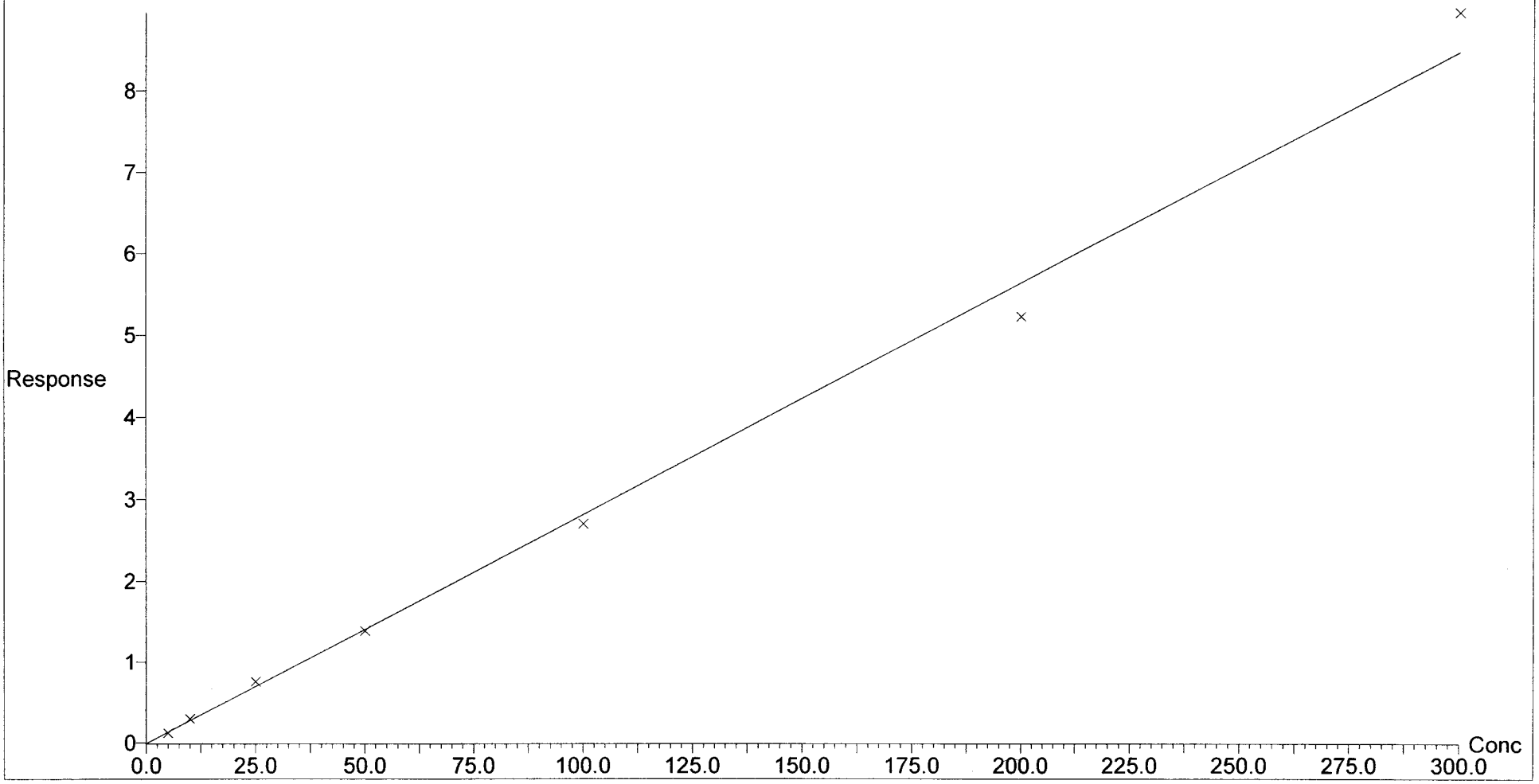
Compound 11 name: Nitrobenzene Method File: ex48g29
Coefficient of Determination: 0.994425
Calibration curve: 0.00326327 * x + 0.00344180
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

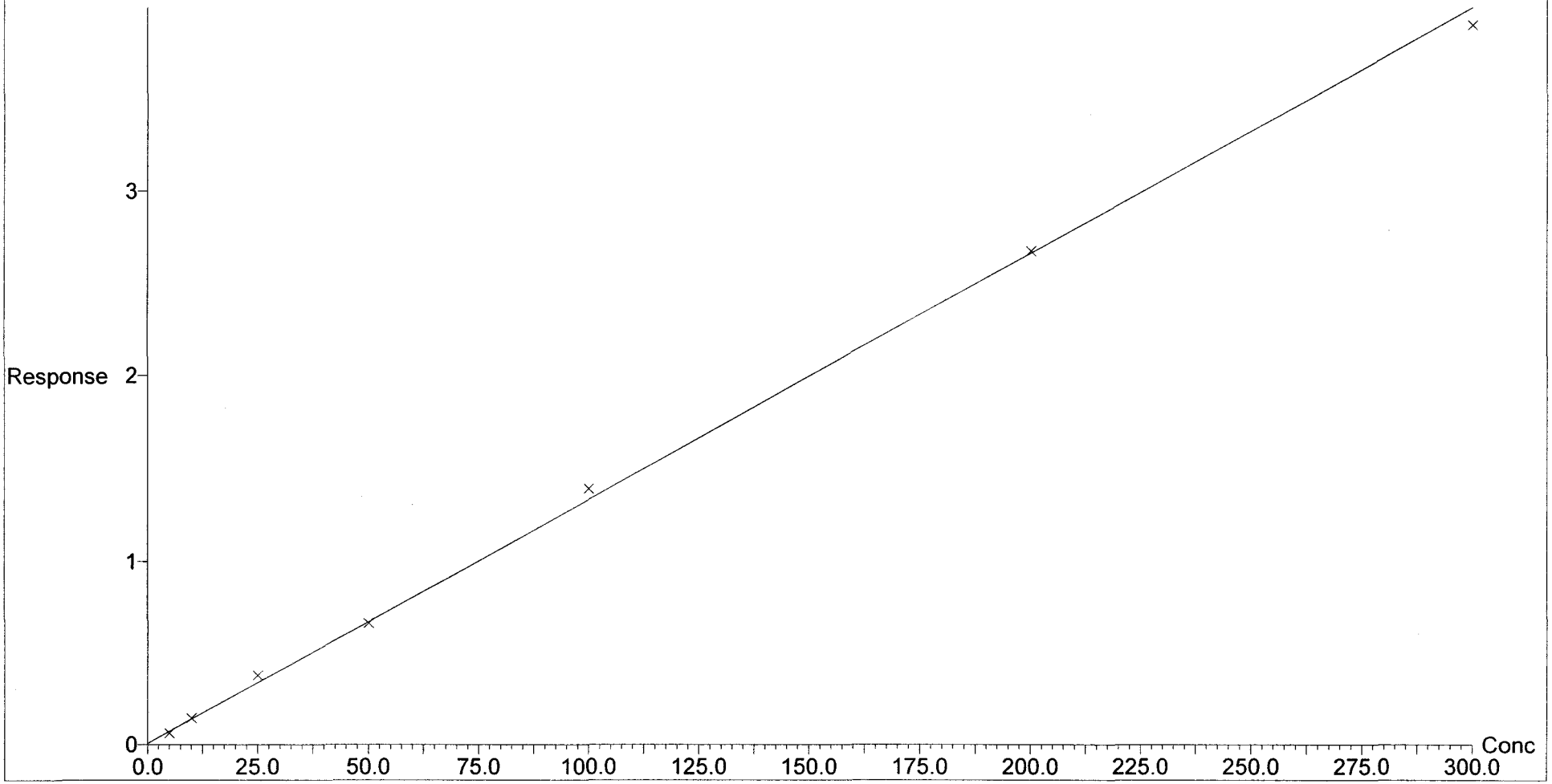
Compound 12 name: 2,4,6-Trinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.995606
Calibration curve: 0.0282574 * x + -0.00933175
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

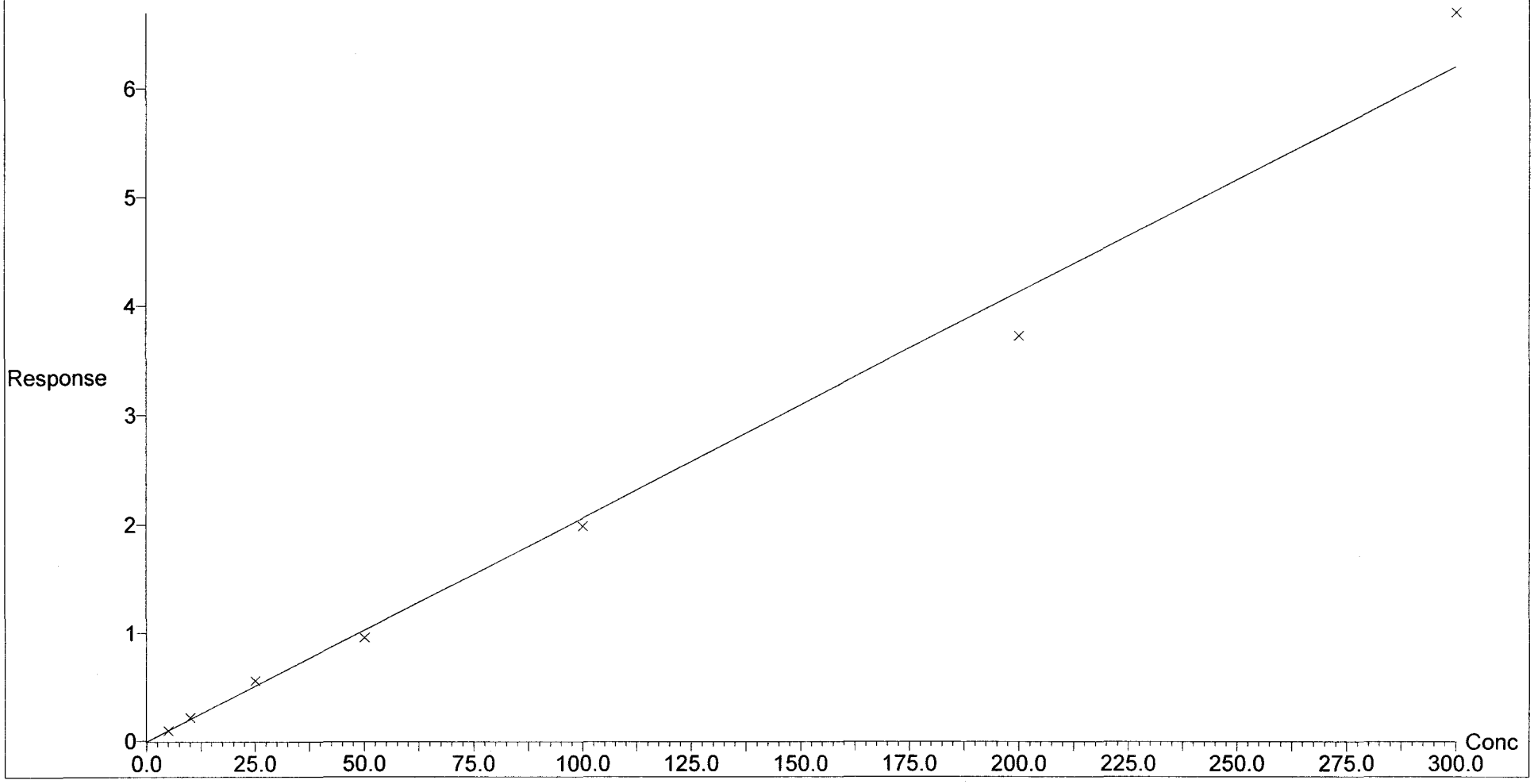
Compound 13 name: 4-Amino-2,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.998445
Calibration curve: 0.0132837 * x + 0.00560063
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

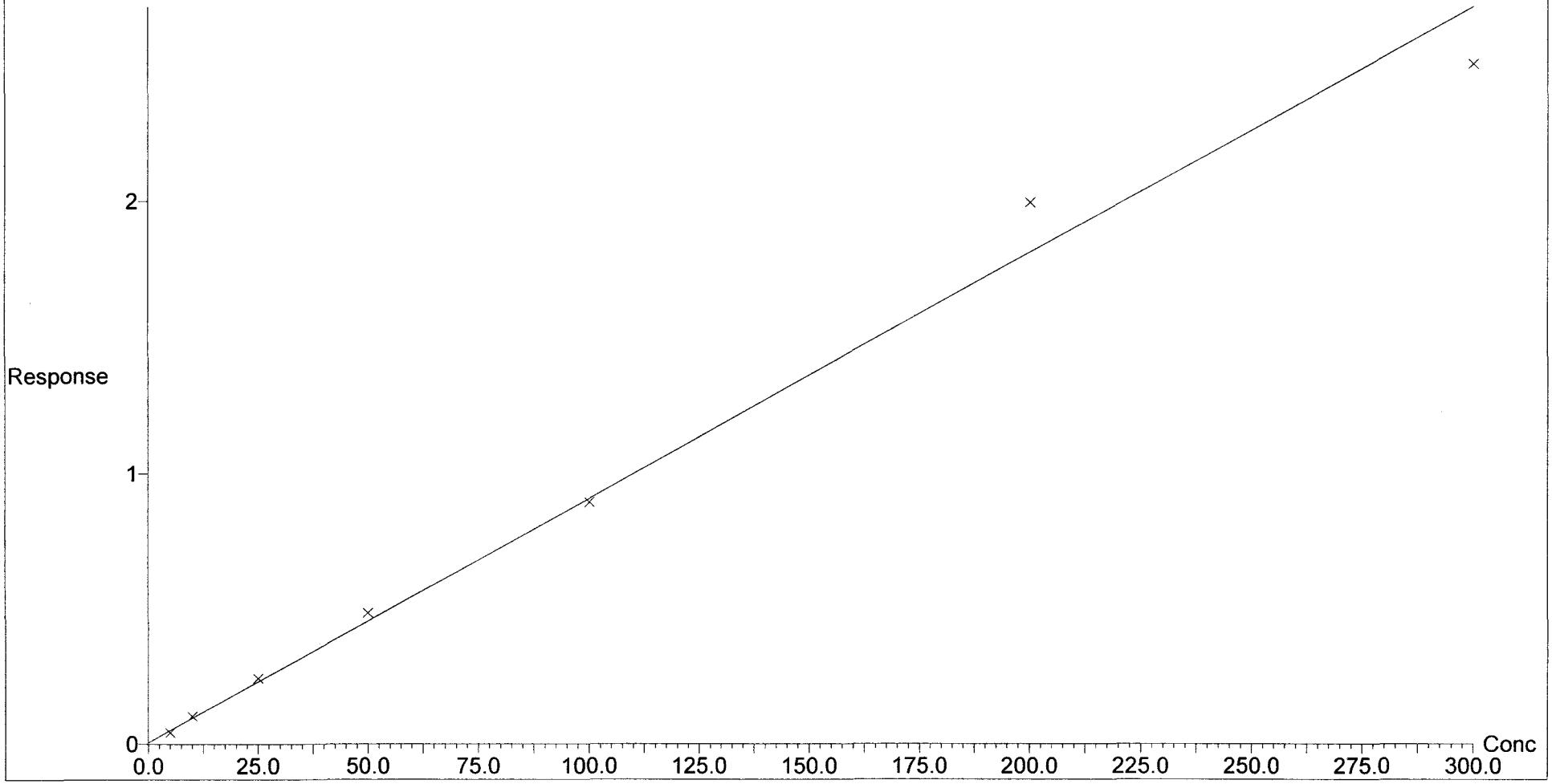
Compound 14 name: 2-Amino-4,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.992131
Calibration curve: 0.0206873 * x + -0.00713639
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

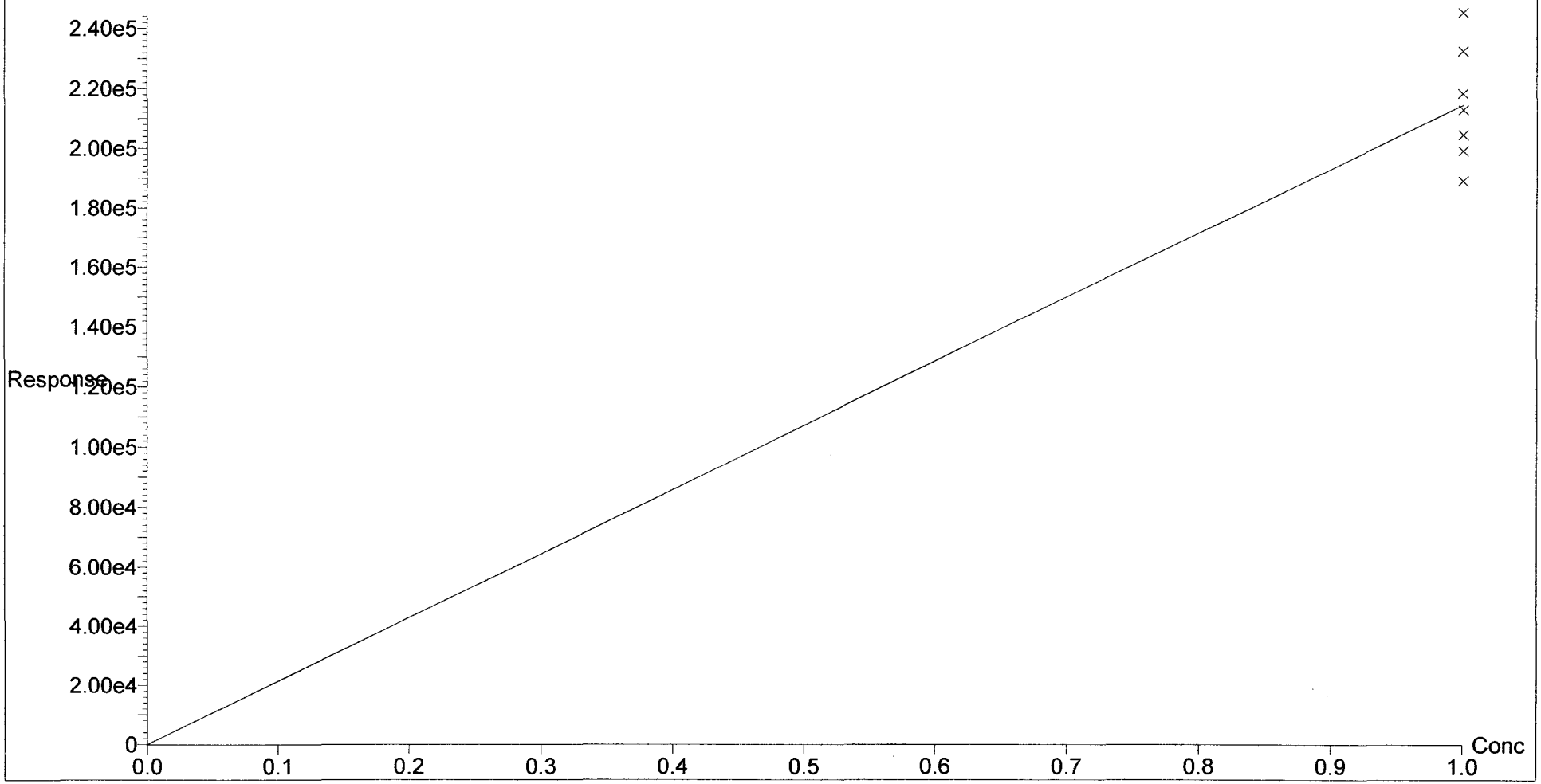
Compound 15 name: 2,6-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.992191
Calibration curve: 0.00902750 * x + 0.00548383
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

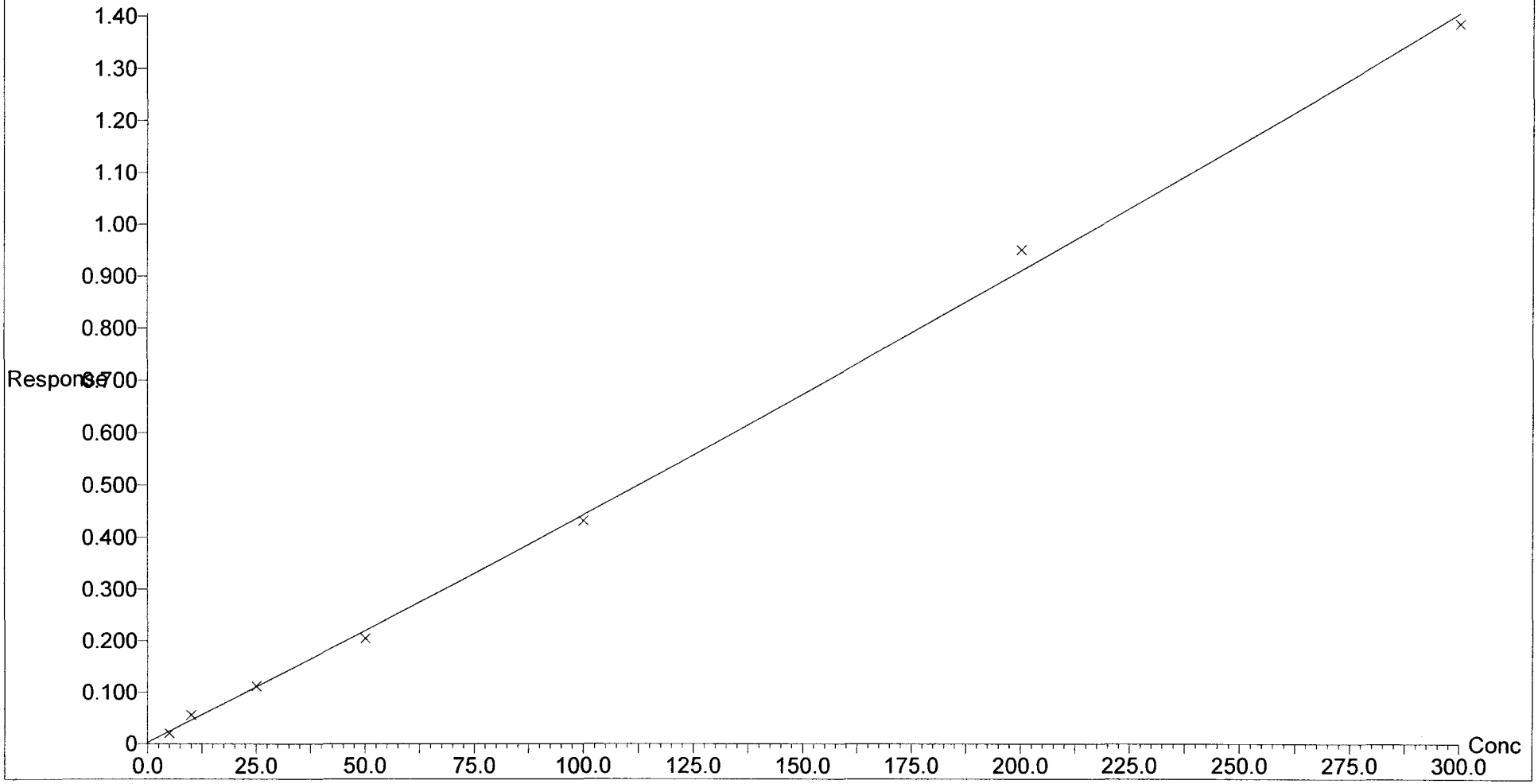
Compound 16 name: 2,4-Dinitrotoluene-d3 (IS) Method File: ex48g29
Response Factor: 214519
RRF SD: 19439.3, % Relative SD: 9.06180
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

Compound 17 name: 2,4-Dinitrotoluene Method File: ex48g29
Coefficient of Determination: 0.997621
Calibration curve: 1.34213e-6 * x^2 + 0.00427312 * x + 0.00270958
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

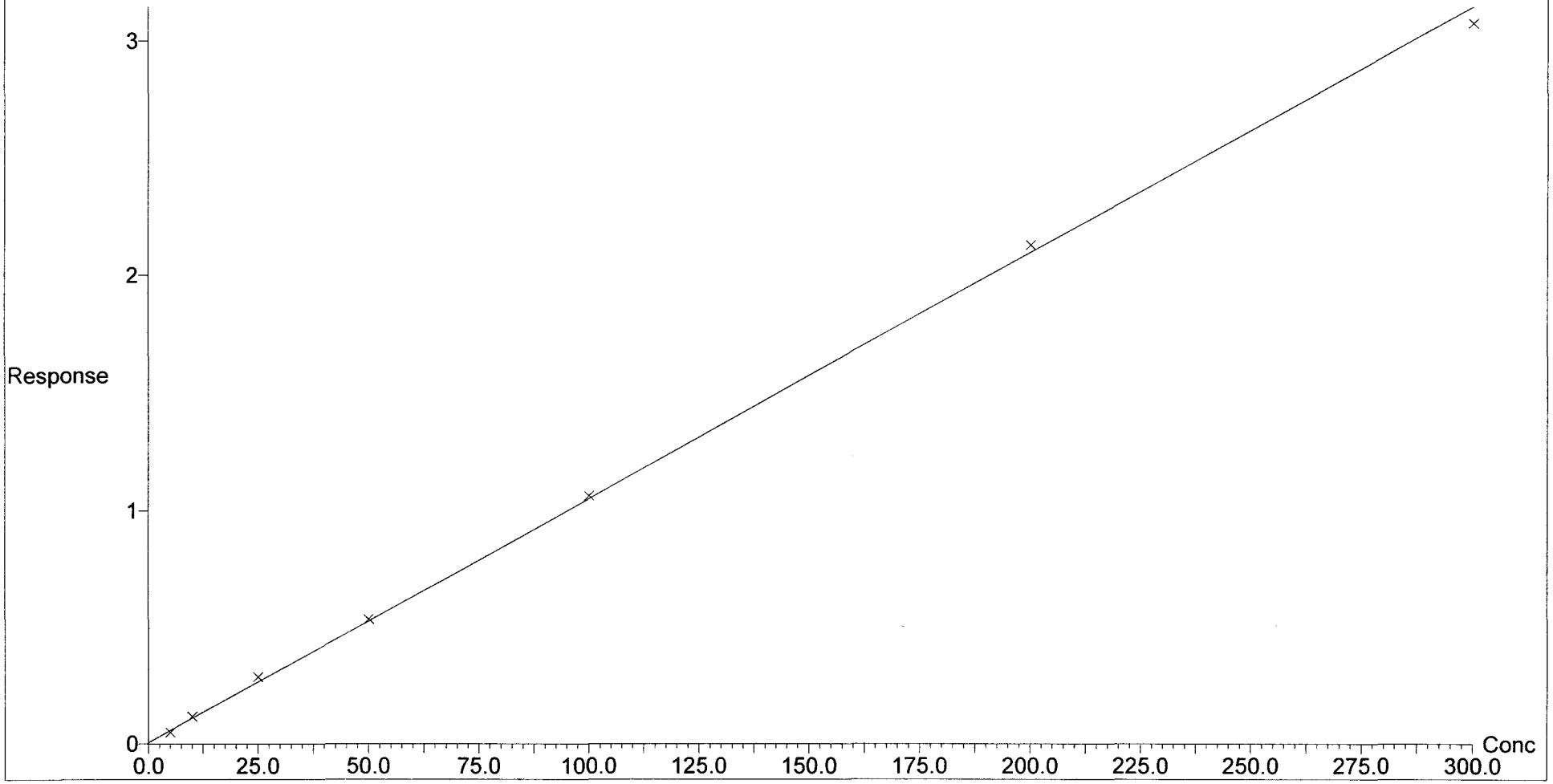
Compound 18 name: 2-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.999594
Calibration curve: 0.00197244 * x + 0.00132781
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

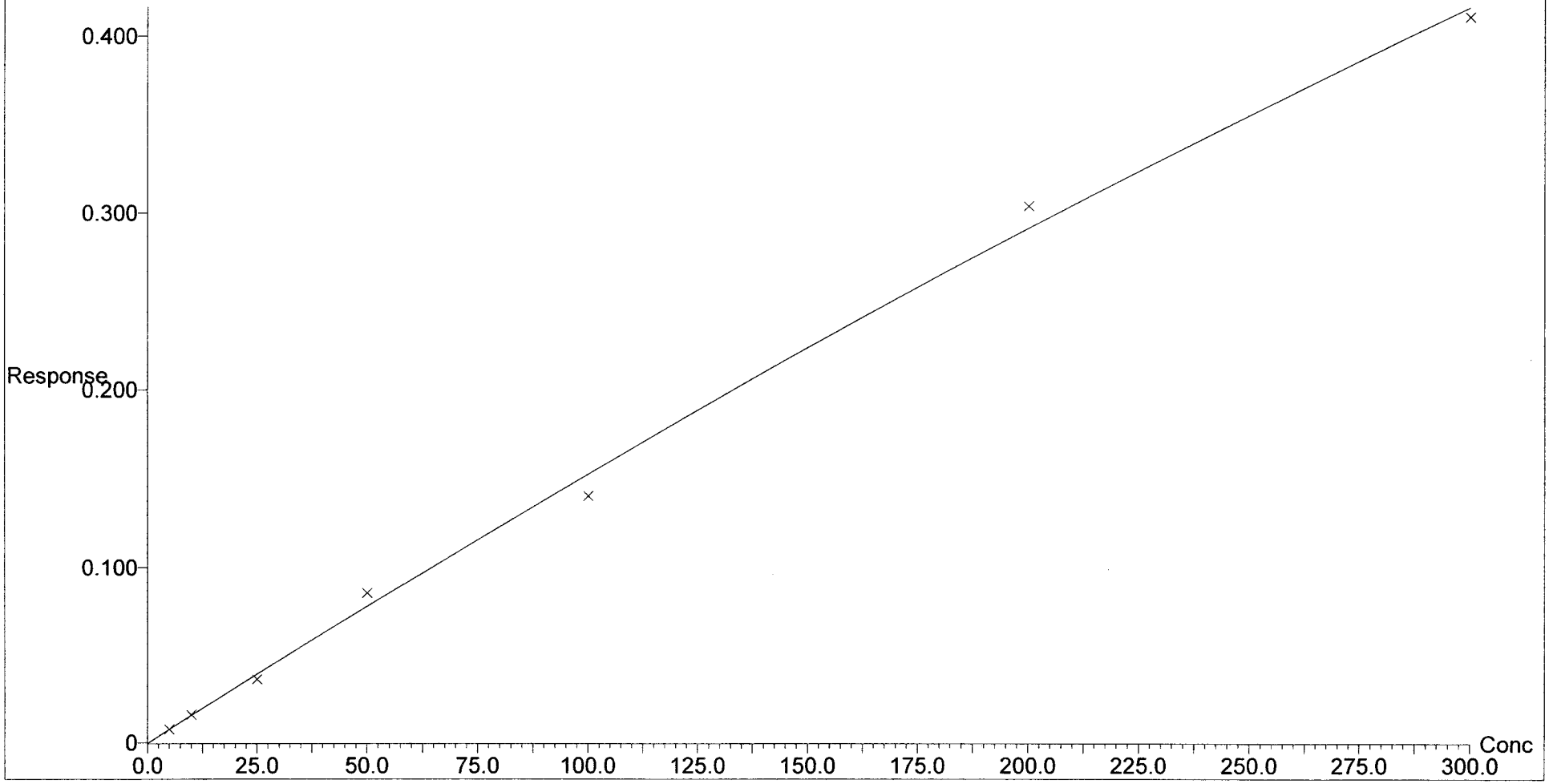
Compound 19 name: PETN Method File: ex48g29
Coefficient of Determination: 0.999013
Calibration curve: 0.0104654 * x + 0.00498117
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

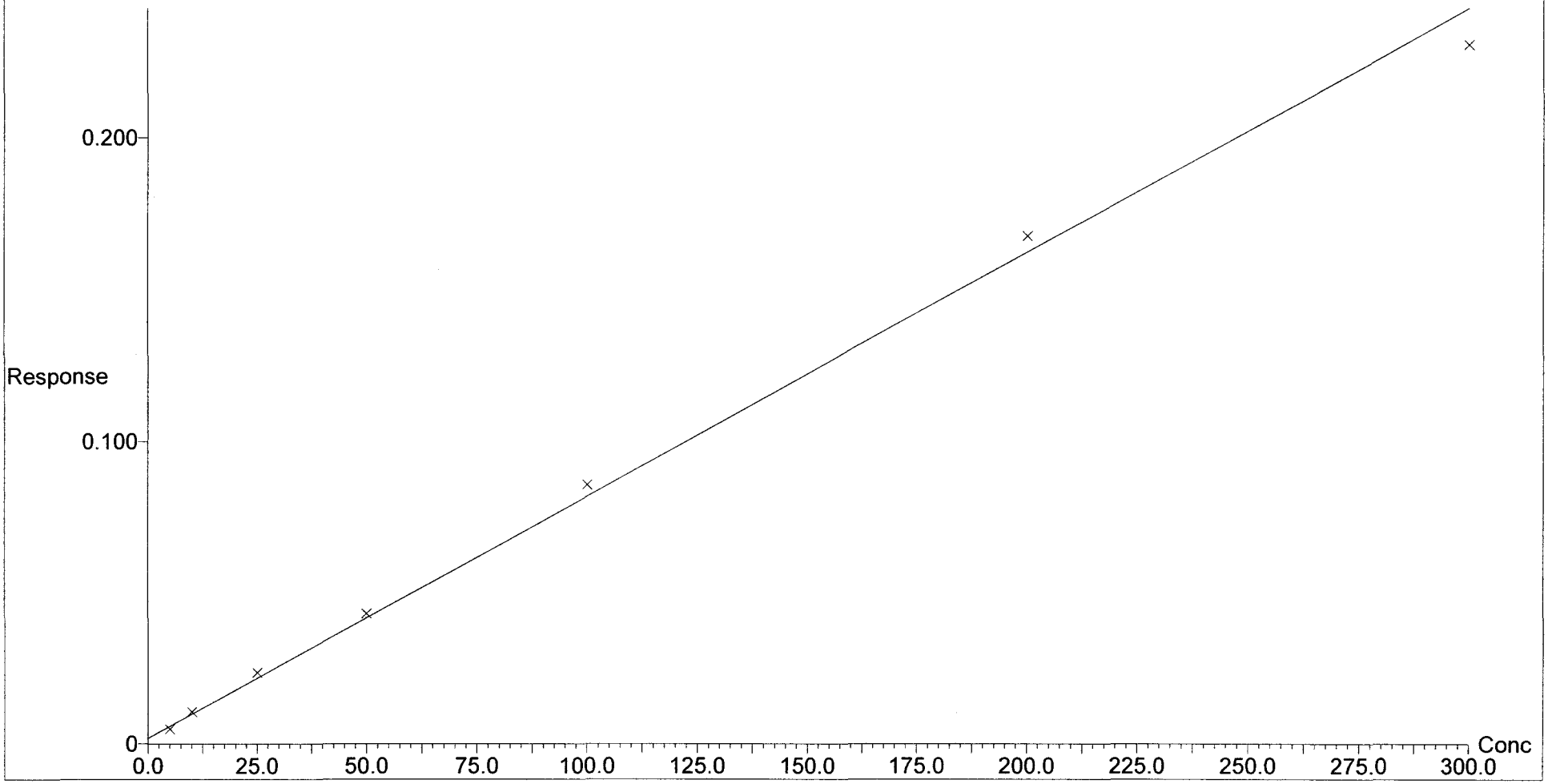
Compound 20 name: 4-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.996636
Calibration curve: -7.10754e-7 * x^2 + 0.00160195 * x + -0.000369042
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g29
Last modified: Tue Jul 29 15:18:41 2008
Printed: Wed Jul 30 08:12:38 2008

Compound 21 name: 3-Nitrotoluene Method File: ex48g29
Coefficient of Determination: 0.996762
Calibration curve: 0.000802265 * x + 0.00179808
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



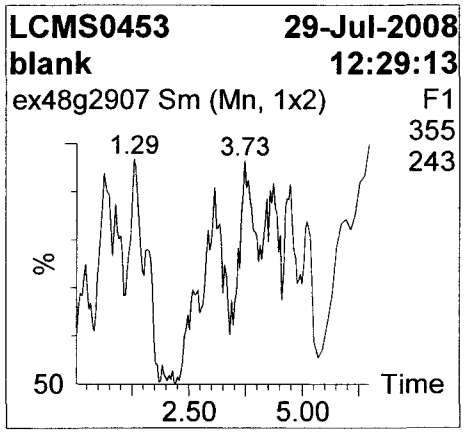
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

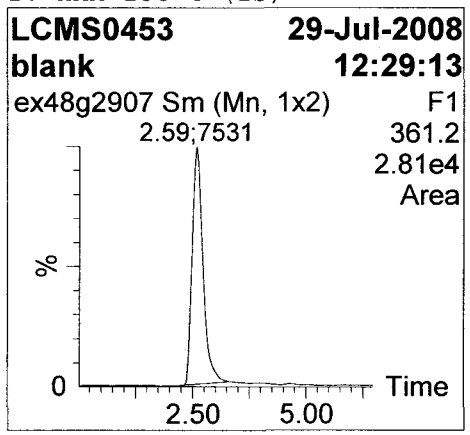
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2907
Text: blank

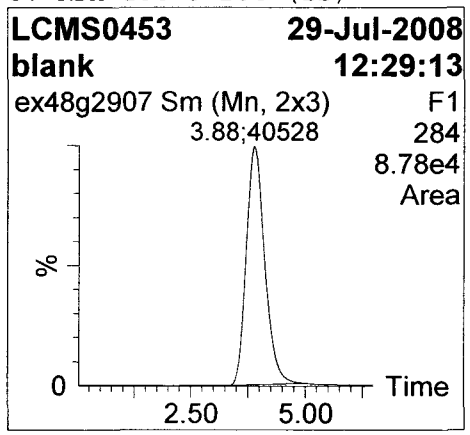
1: HMX



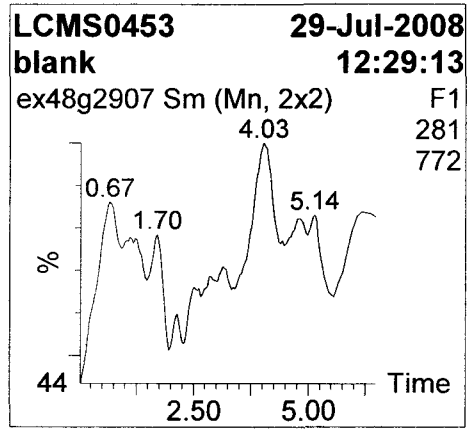
2: HMX 13C-4 (IS)



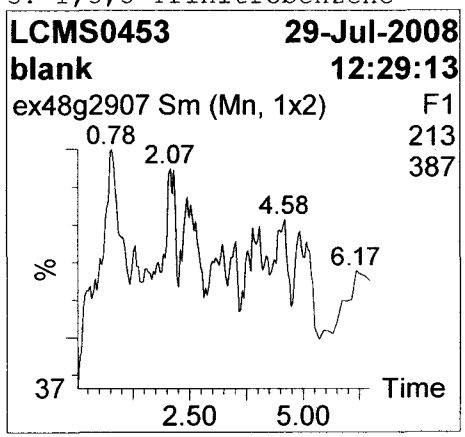
3: RDX 13C-3 284 (IS)



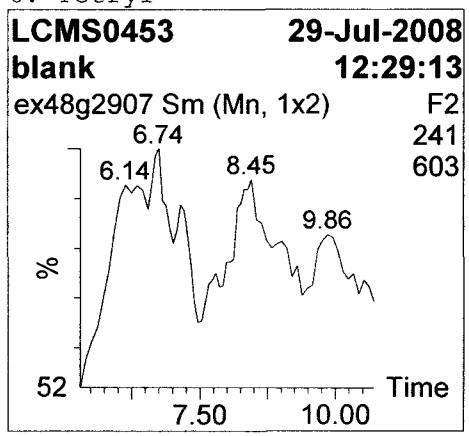
4: RDX



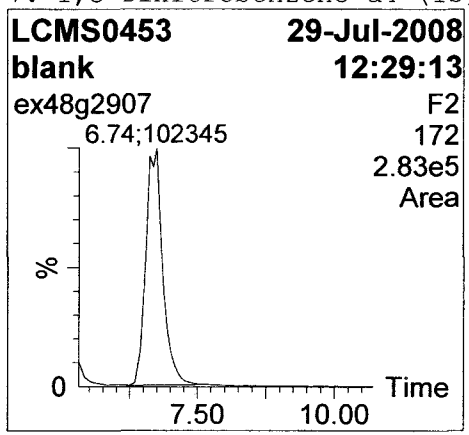
5: 1,3,5-Trinitrobenzene



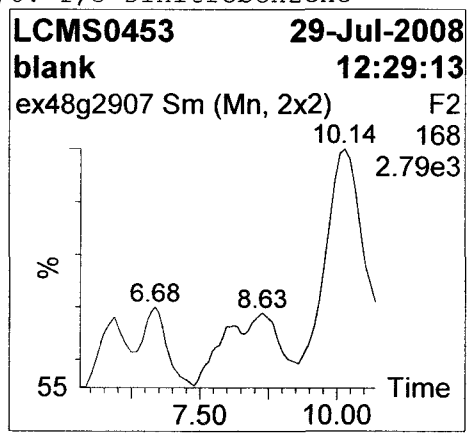
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



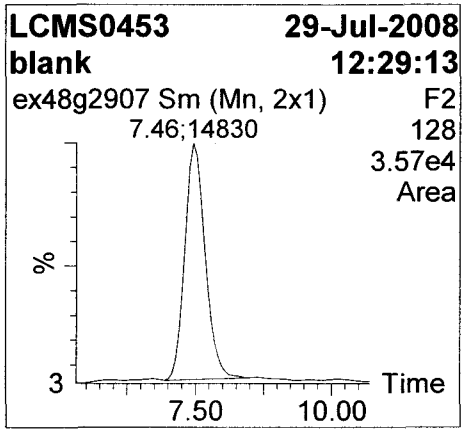
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

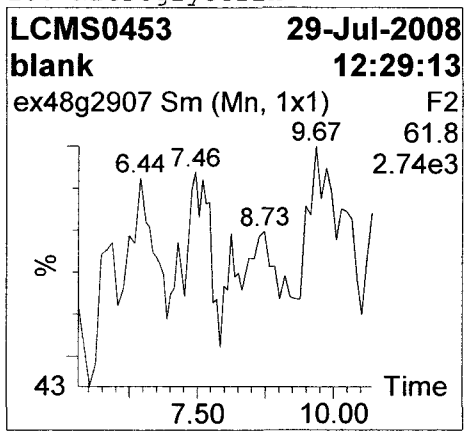
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2907
Text: blank

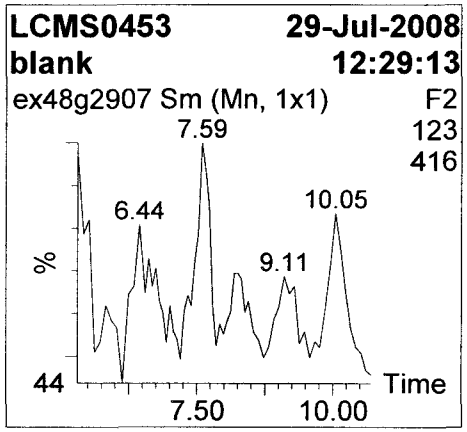
9: Nitrobenzene-d5



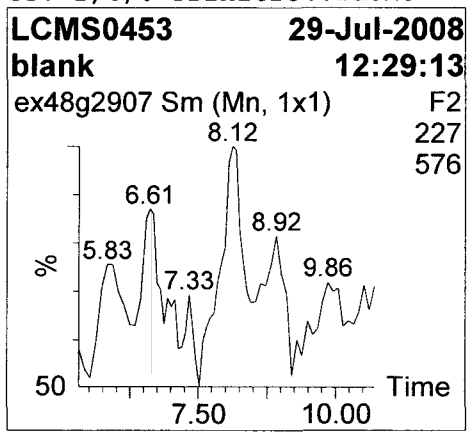
10: Nitroglycerin



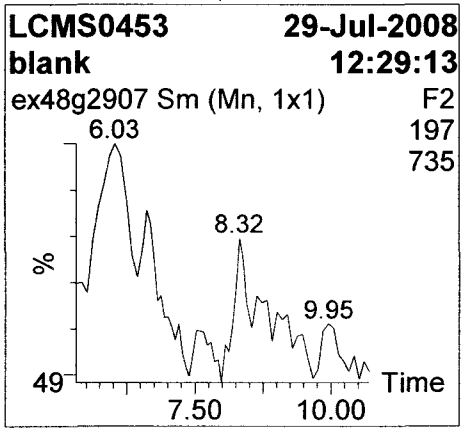
11: Nitrobenzene



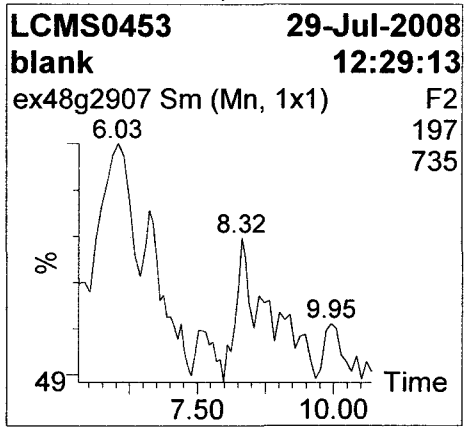
12: 2,4,6-Trinitrotoluene



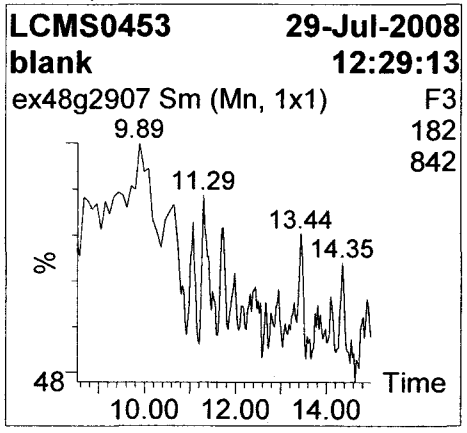
13: 4-Amino-2,6-Dinitrotolu..



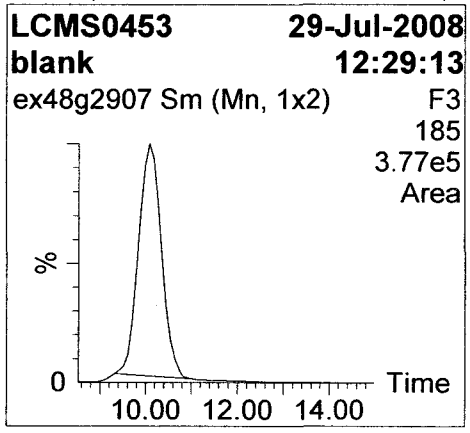
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



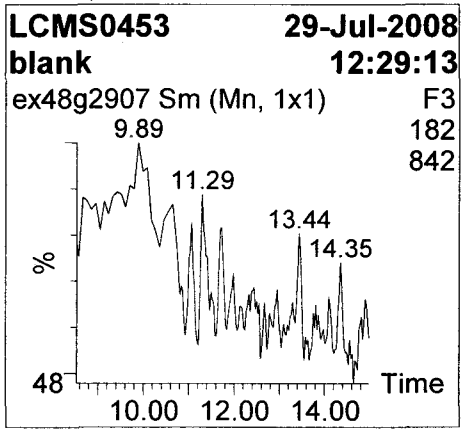
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

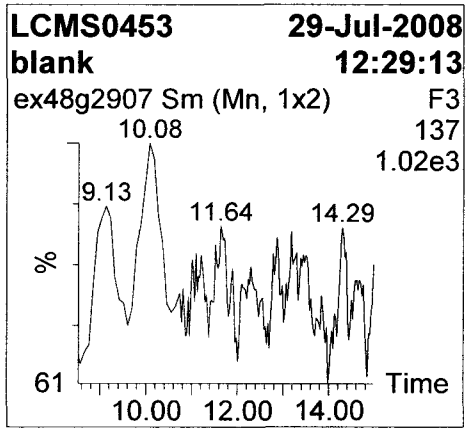
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2907
Text: blank

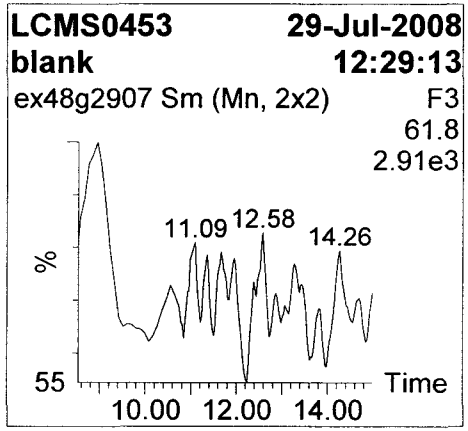
17: 2,4-Dinitrotoluene



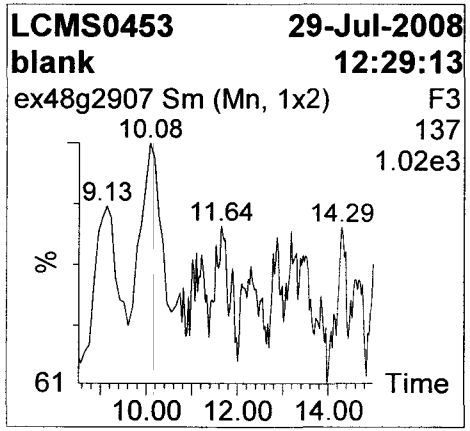
18: 2-Nitrotoluene



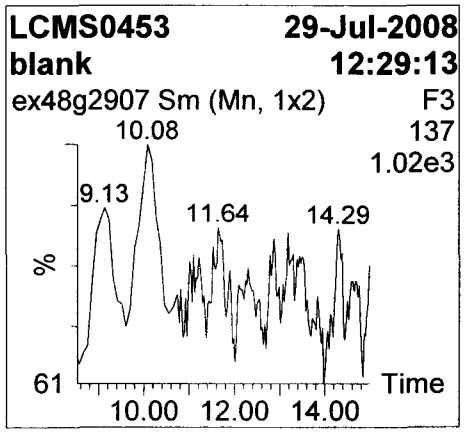
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2907
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7531	bb	1.132	113	29/Jul/08	ex48g29	
RDX 13C-..	3.882	40528	bb	0.999	100	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.743	102345	bb	1.009	101	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.464	14830	bb	48.972	98	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.076	213845	bb	0.997	100	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

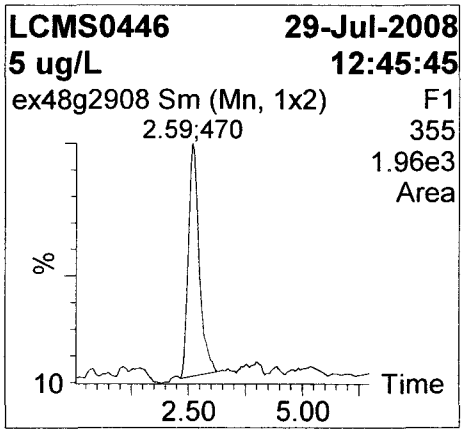
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

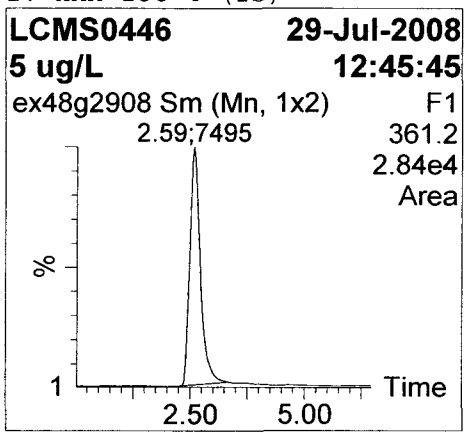
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2908
Text: 5 ug/L

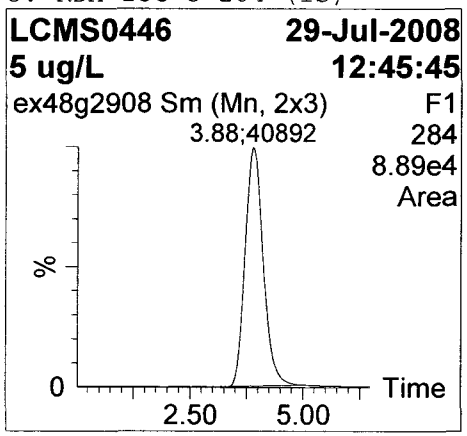
1: HMX



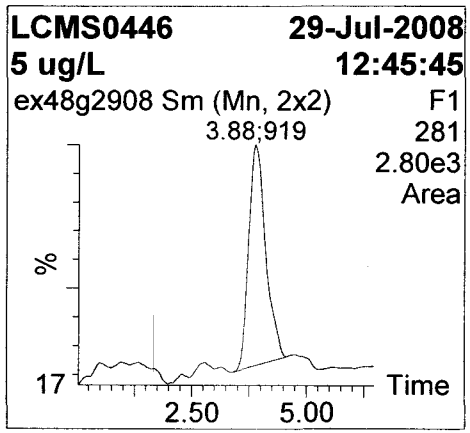
2: HMX 13C-4 (IS)



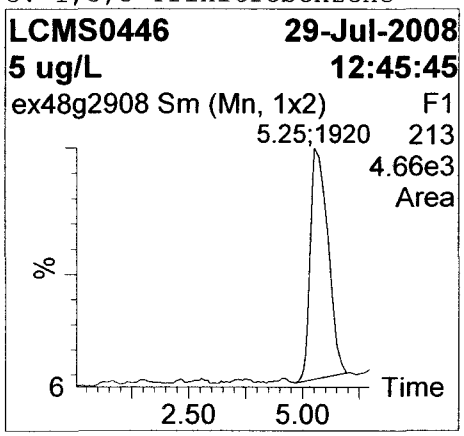
3: RDX 13C-3 284 (IS)



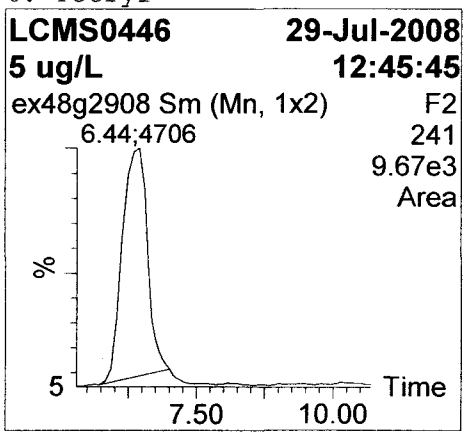
4: RDX



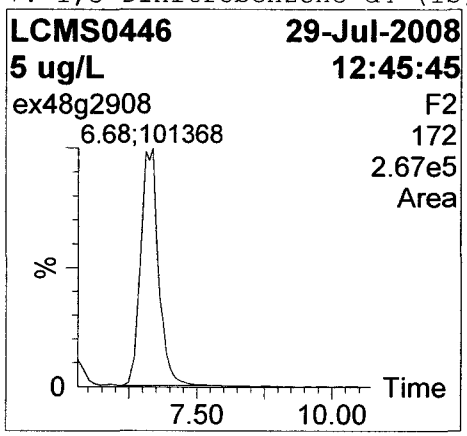
5: 1,3,5-Trinitrobenzene



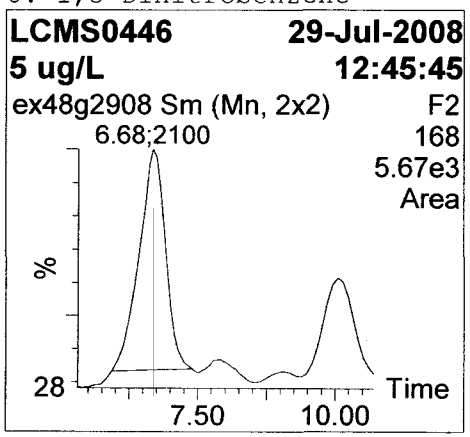
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



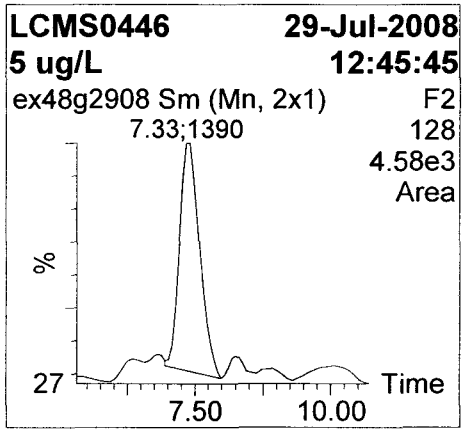
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

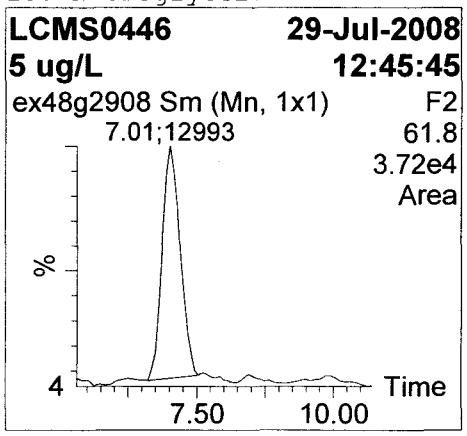
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2908
Text: 5 ug/L

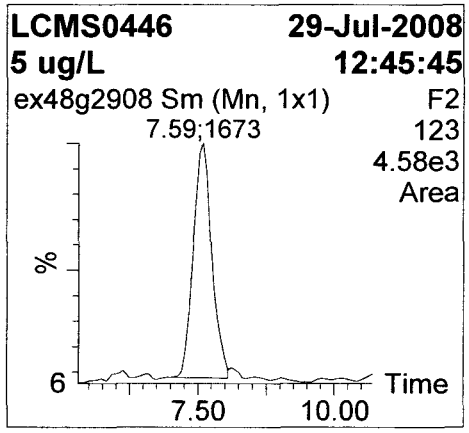
9: Nitrobenzene-d5



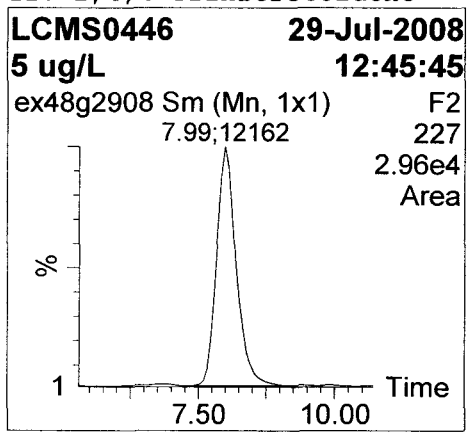
10: Nitroglycerin



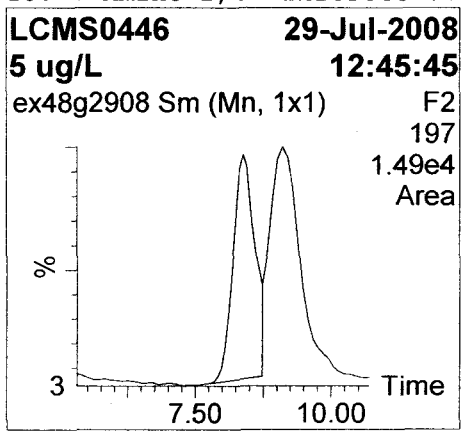
11: Nitrobenzene



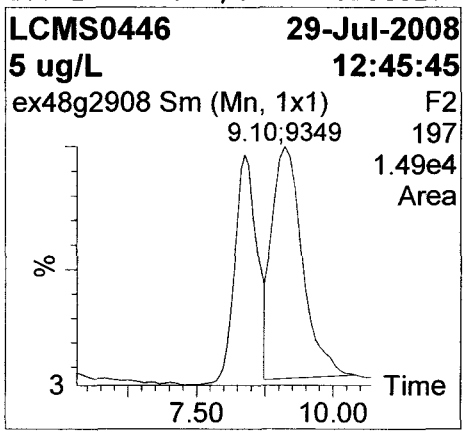
12: 2,4,6-Trinitrotoluene



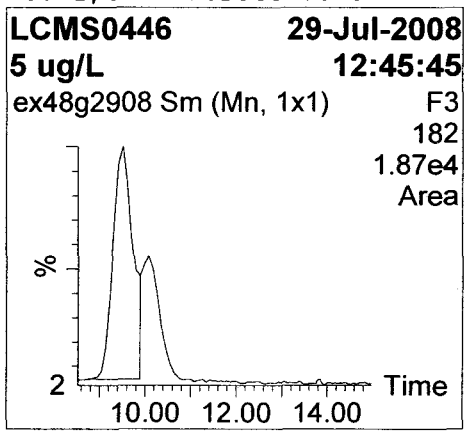
13: 4-Amino-2,6-Dinitrotolu..



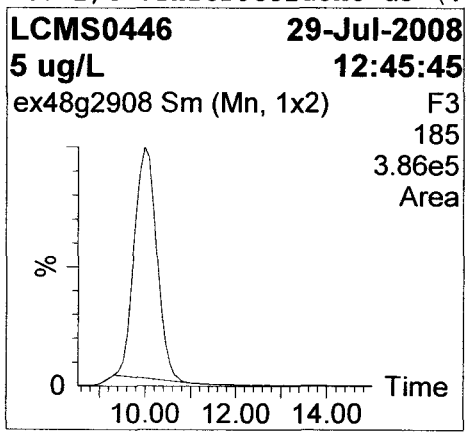
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



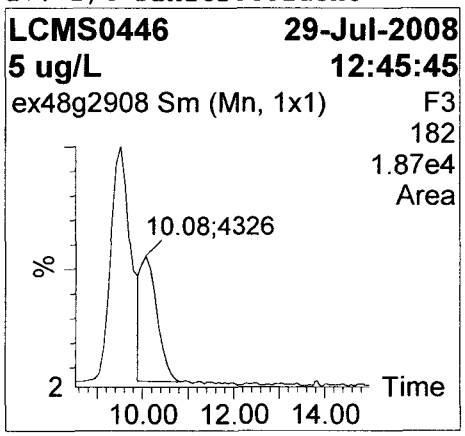
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

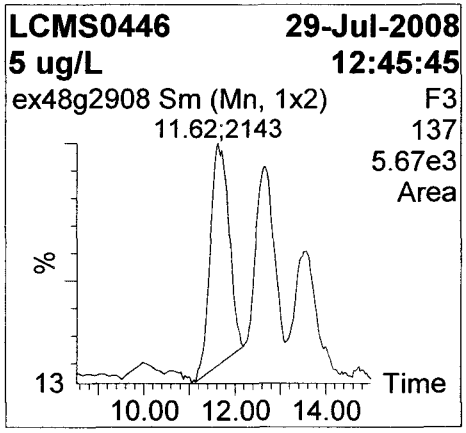
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2908
Text: 5 ug/L

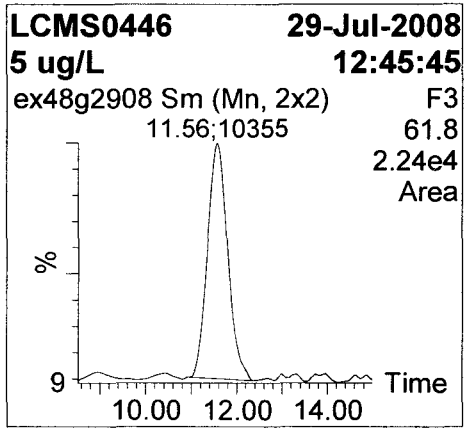
17: 2,4-Dinitrotoluene



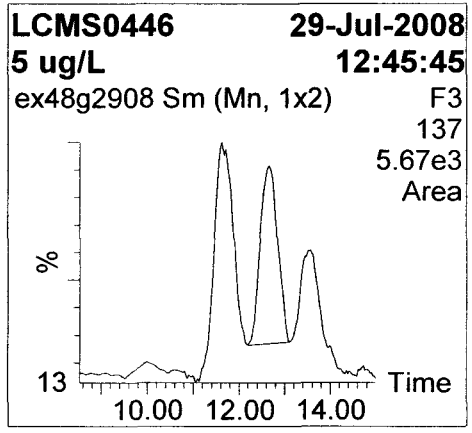
18: 2-Nitrotoluene



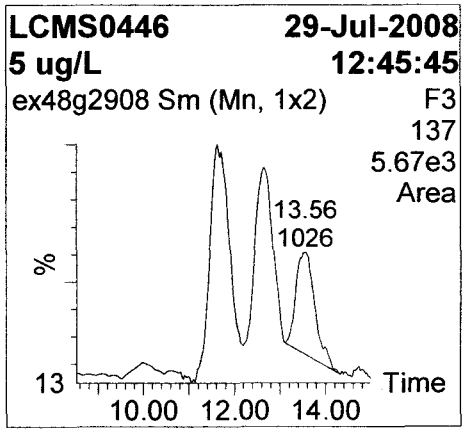
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2908
Text: 5 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	470	bb	4.073	81	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7495	bb	1.127	113	29/Jul/08	ex48g29	
RDX 13C-..	3.882	40892	bb	1.008	101	29/Jul/08	ex48g29	
RDX	3.882	919	bb	3.095	62	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	1920	bb	3.698	74	29/Jul/08	ex48g29	
Tetryl	6.444	4706	bb	4.953	99	29/Jul/08	ex48g29	
1,3 Dini..	6.678	101368	bb	0.999	100	29/Jul/08	ex48g29	
1,3-Dini..	6.678	2100	bb	4.781	96	29/Jul/08	ex48g29	
Nitroben..	7.333	1390	db	3.344	67	29/Jul/08	ex48g29	
Nitrogly..	7.005	12993	bb	3.282	66	29/Jul/08	ex48g29	
Nitroben..	7.595	1673	bd	4.003	80	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	12162	bb	4.576	92	29/Jul/08	ex48g29	
4-Amino-..	8.381	6168	dd	4.159	83	29/Jul/08	ex48g29	
2-Amino-..	9.105	9349	db	4.803	96	29/Jul/08	ex48g29	
2,6-Dini..	9.510	8876	bd	4.011	80	29/Jul/08	ex48g29	
2,4-Dini..	9.981	212900	bb	0.992	99	29/Jul/08	ex48g29	
2,4-Dini..	10.075	4326	db	4.116	82	29/Jul/08	ex48g29	
2-Nitrot..	11.615	2143	bb	4.430	89	29/Jul/08	ex48g29	
PETN	11.558	10355	bb	4.171	83	29/Jul/08	ex48g29	
4-Nitrot..	12.644	1628	bb	5.014	100	29/Jul/08	ex48g29	
3-Nitrot..	13.558	1026	bb	3.768	75	29/Jul/08	ex48g29	

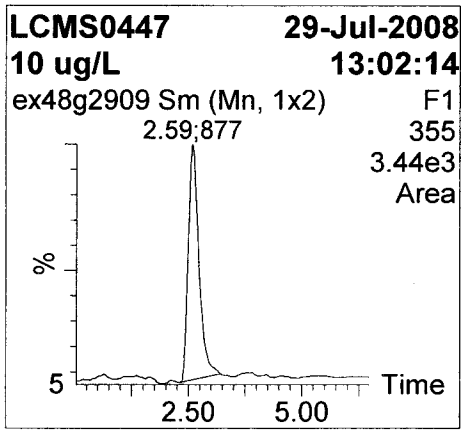
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

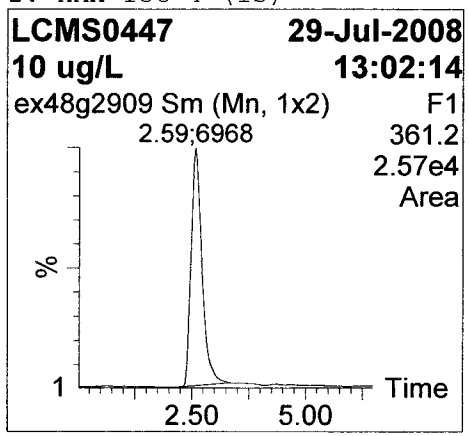
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2909
Text: 10 ug/L

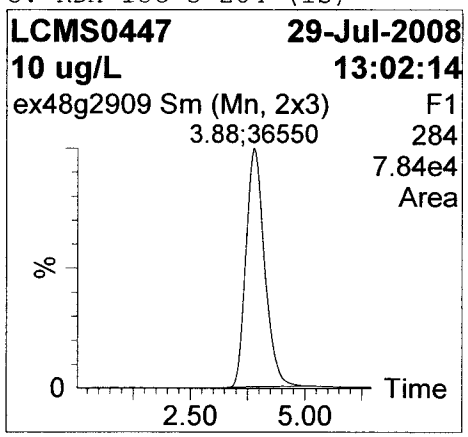
1: HMX



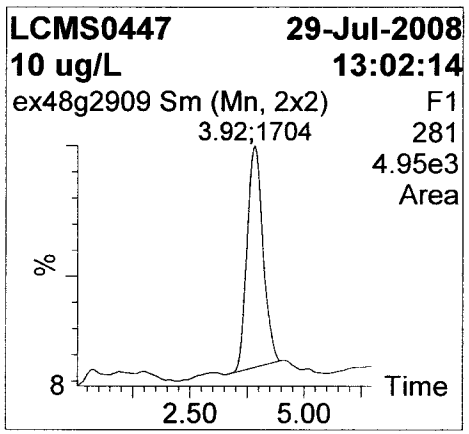
2: HMX 13C-4 (IS)



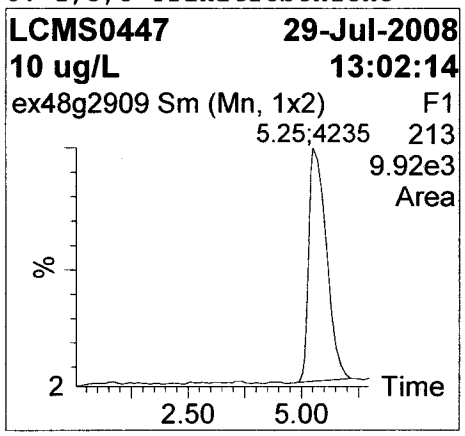
3: RDX 13C-3 284 (IS)



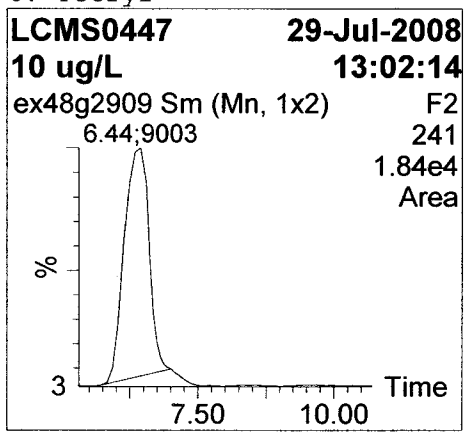
4: RDX



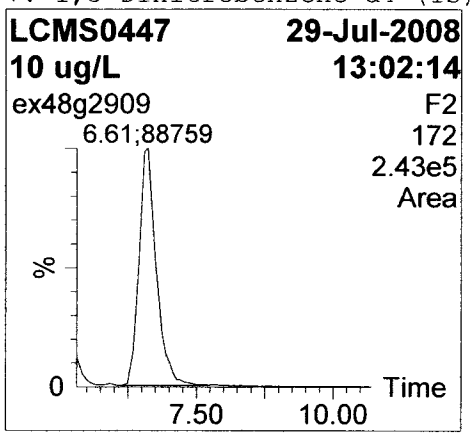
5: 1,3,5-Trinitrobenzene



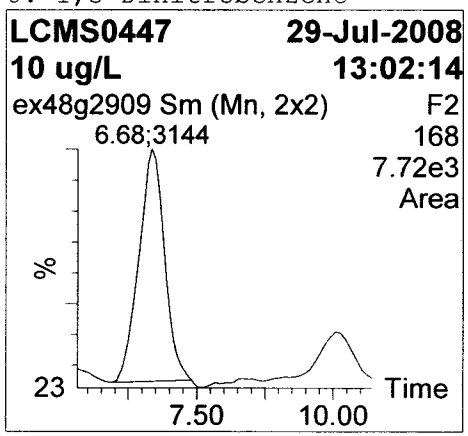
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



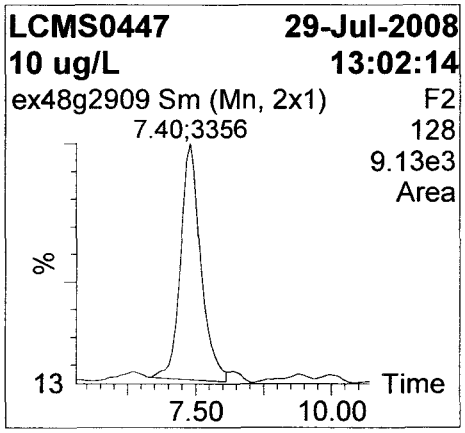
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

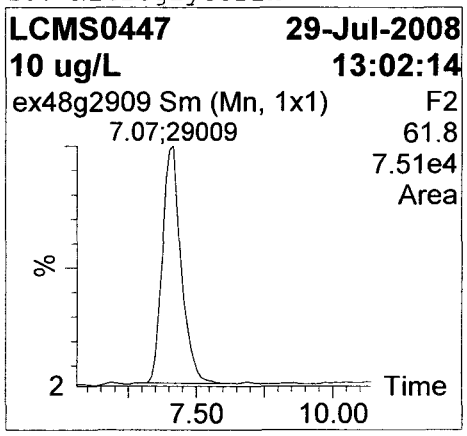
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2909
Text: 10 ug/L

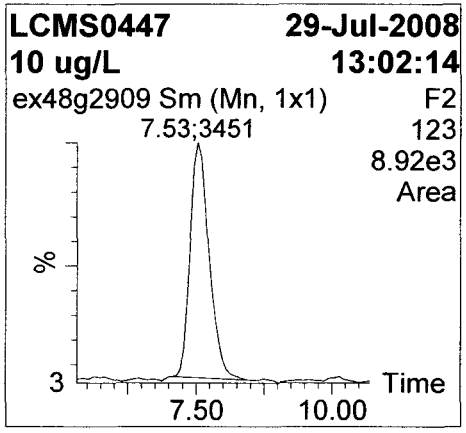
9: Nitrobenzene-d5



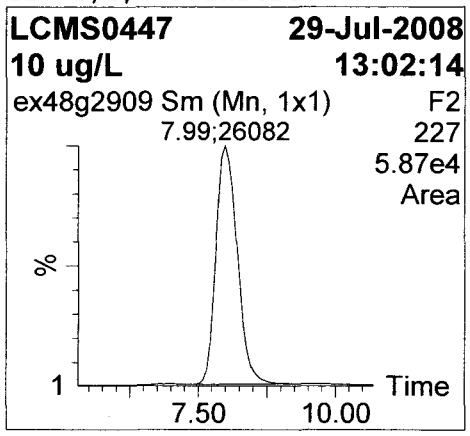
10: Nitroglycerin



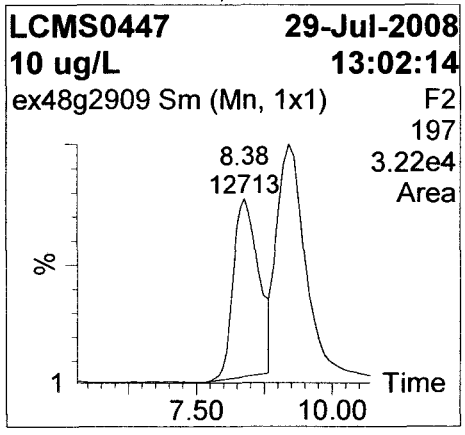
11: Nitrobenzene



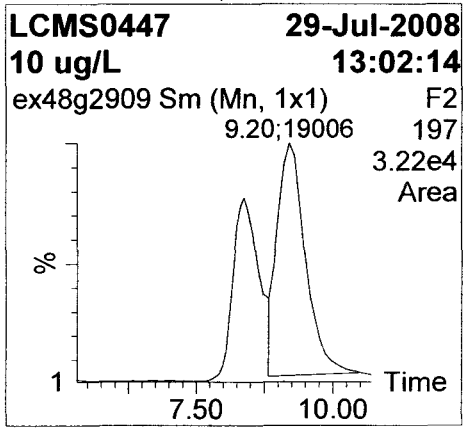
12: 2,4,6-Trinitrotoluene



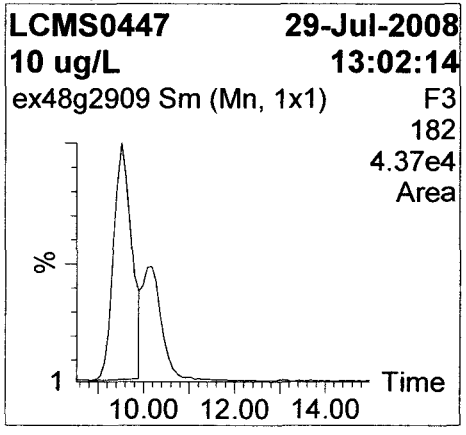
13: 4-Amino-2,6-Dinitrotolu..



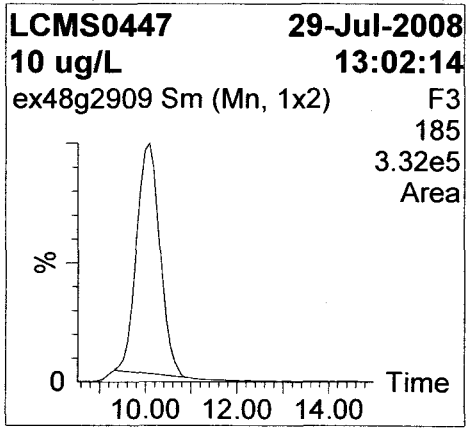
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



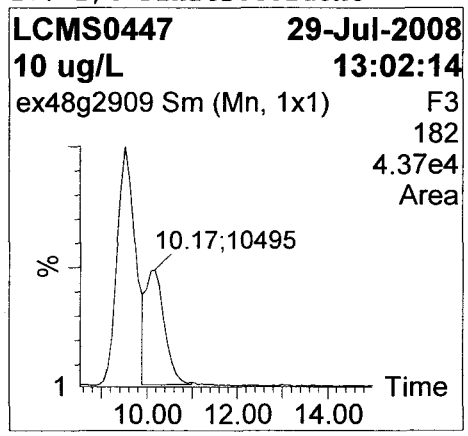
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

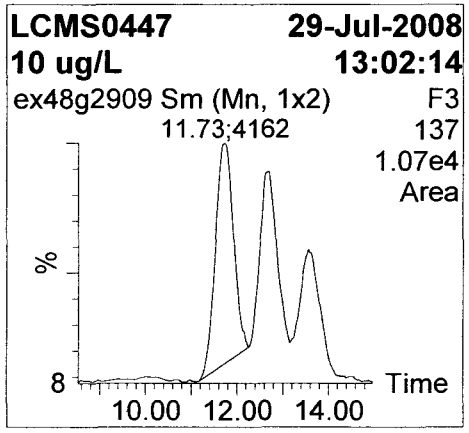
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2909
Text: 10 ug/L

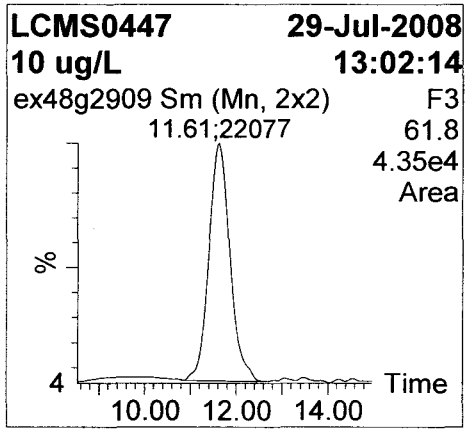
17: 2,4-Dinitrotoluene



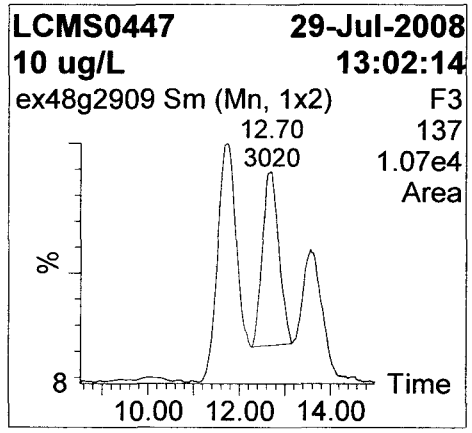
18: 2-Nitrotoluene



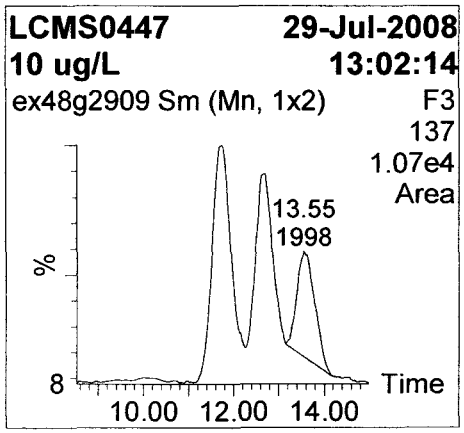
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 12

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2909
Text: 10 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	877	bb	9.817	98	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6968	bb	1.048	105	29/Jul/08	ex48g29	
RDX 13C-..	3.882	36550	bb	0.901	90	29/Jul/08	ex48g29	
RDX	3.919	1704	bb	10.317	103	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	4235	bb	11.174	112	29/Jul/08	ex48g29	
Tetryl	6.444	9003	bb	10.299	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	88759	bb	0.875	88	29/Jul/08	ex48g29	
1,3-Dini..	6.678	3144	bb	9.446	94	29/Jul/08	ex48g29	
Nitroben..	7.398	3356	bd	11.725	117	29/Jul/08	ex48g29	
Nitrogly..	7.071	29009	bb	10.998	110	29/Jul/08	ex48g29	
Nitroben..	7.529	3451	bb	10.858	109	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	26082	bb	10.729	107	29/Jul/08	ex48g29	
4-Amino-..	8.380	12713	bd	10.361	104	29/Jul/08	ex48g29	
2-Amino-..	9.198	19006	db	10.696	107	29/Jul/08	ex48g29	
2,6-Dini..	9.510	19306	bd	10.705	107	29/Jul/08	ex48g29	
2,4-Dini..	10.075	189050	bb	0.881	88	29/Jul/08	ex48g29	
2,4-Dini..	10.169	10495	dd	12.310	123	29/Jul/08	ex48g29	
2-Nitrot..	11.728	4162	bb	10.488	105	29/Jul/08	ex48g29	
PETN	11.614	22077	bb	10.683	107	29/Jul/08	ex48g29	
4-Nitrot..	12.698	3020	bb	10.248	102	29/Jul/08	ex48g29	
3-Nitrot..	13.554	1998	bb	10.929	109	29/Jul/08	ex48g29	

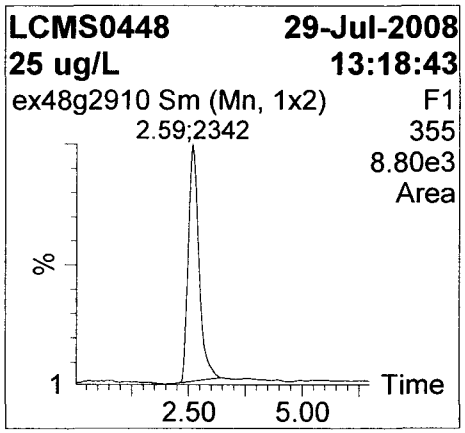
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

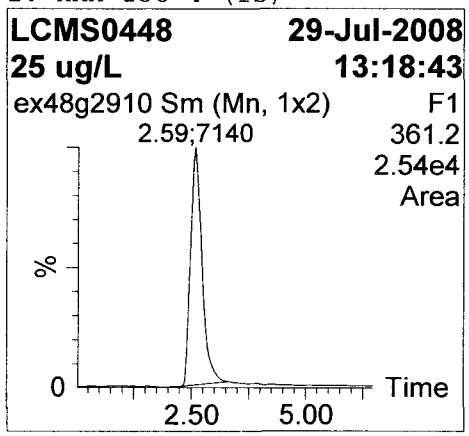
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2910
Text: 25 ug/L

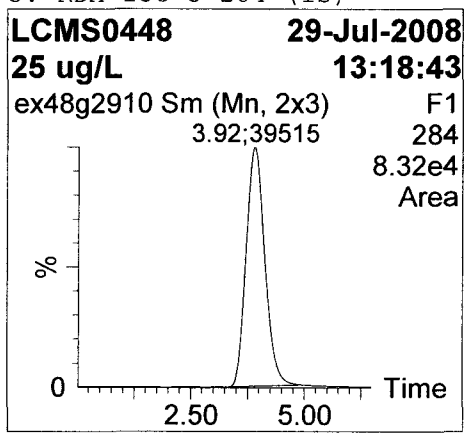
1: HMX



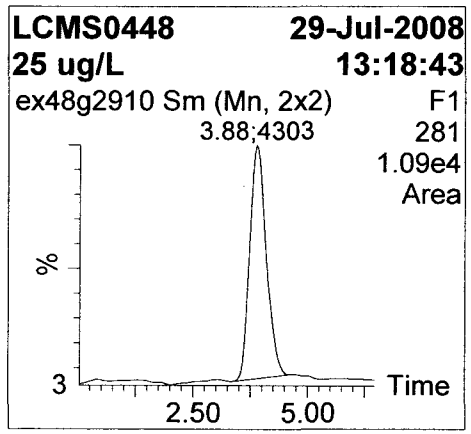
2: HMX 13C-4 (IS)



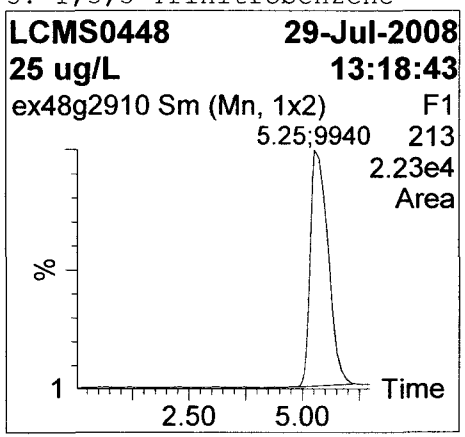
3: RDX 13C-3 284 (IS)



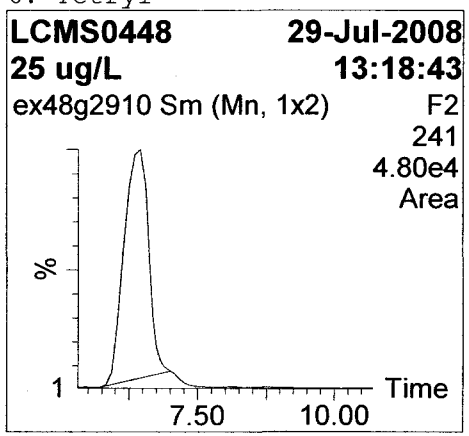
4: RDX



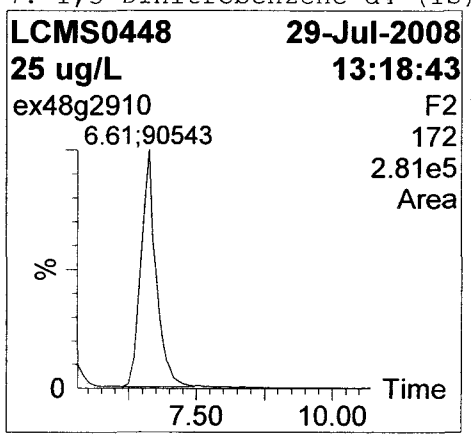
5: 1,3,5-Trinitrobenzene



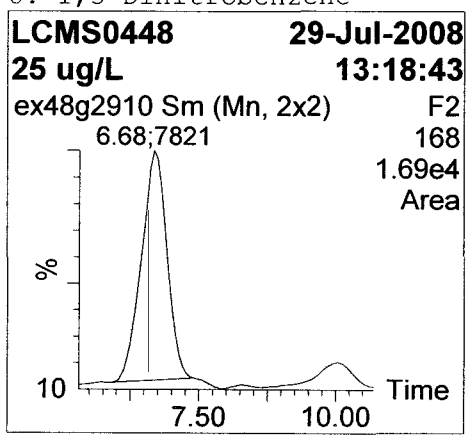
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



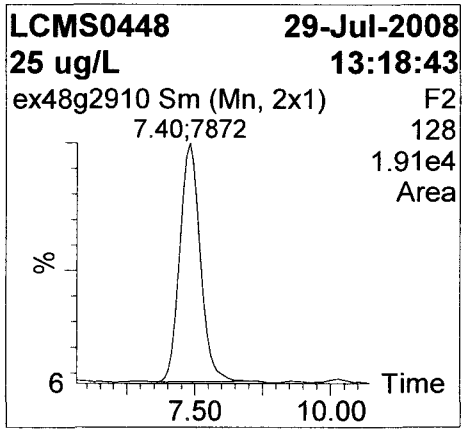
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

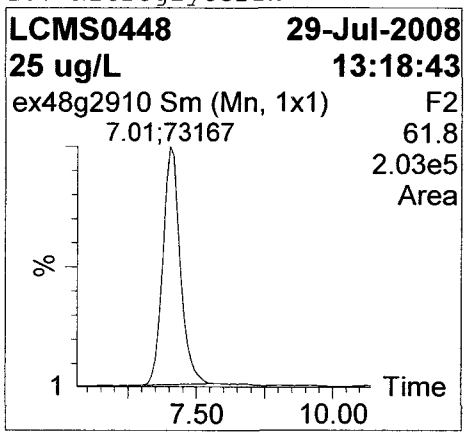
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2910
Text: 25 ug/L

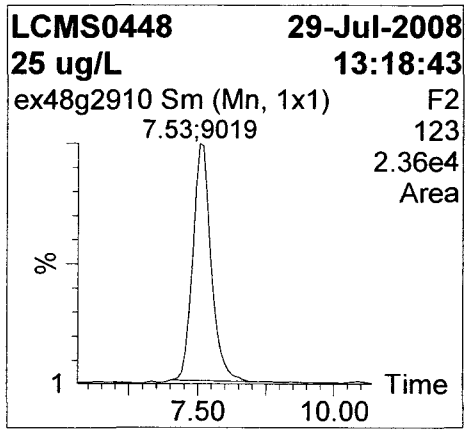
9: Nitrobenzene-d5



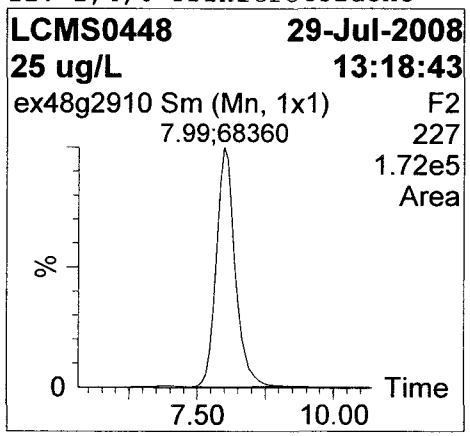
10: Nitroglycerin



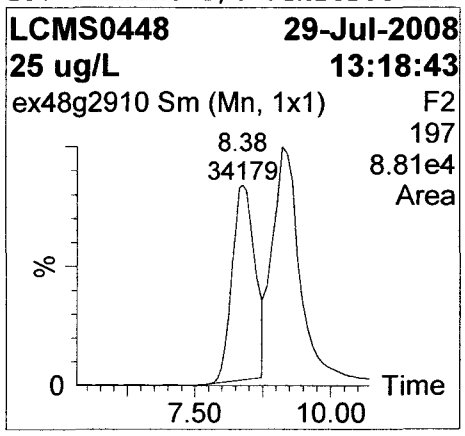
11: Nitrobenzene



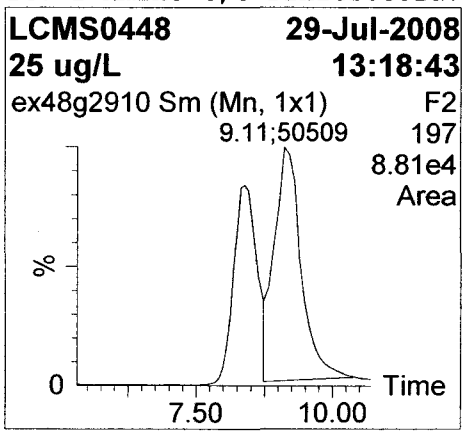
12: 2,4,6-Trinitrotoluene



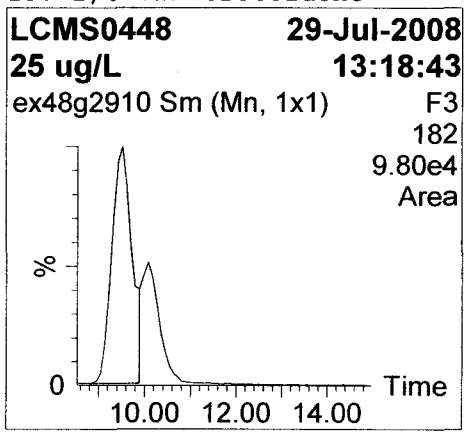
13: 4-Amino-2,6-Dinitrotolu..



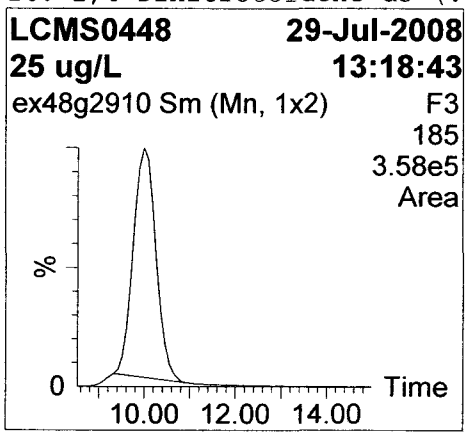
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



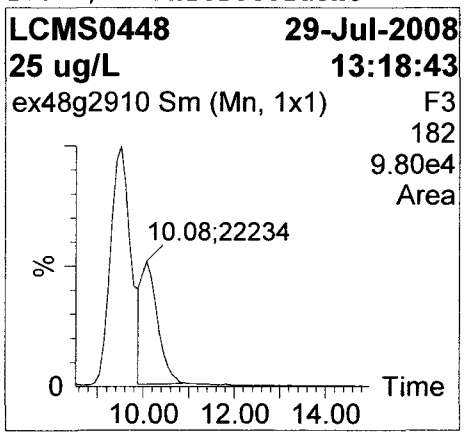
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

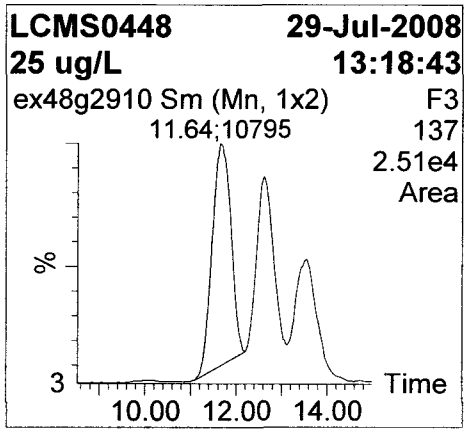
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2910
Text: 25 ug/L

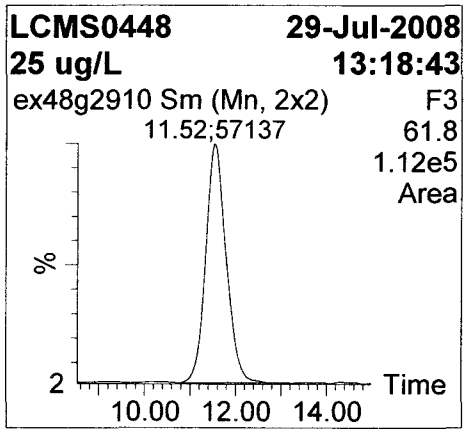
17: 2,4-Dinitrotoluene



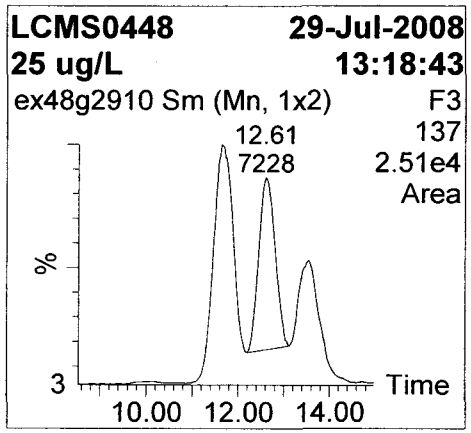
18: 2-Nitrotoluene



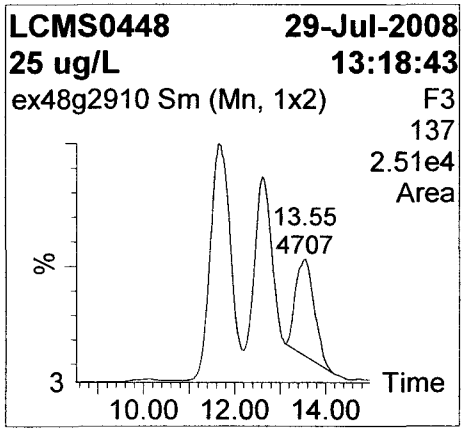
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2910
Text: 25 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	2342	bb	28.235	113	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7140	bb	1.073	107	29/Jul/08	ex48g29	
RDX 13C-..	3.919	39515	bb	0.974	97	29/Jul/08	ex48g29	
RDX	3.882	4303	bb	28.940	116	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	9940	bb	27.306	109	29/Jul/08	ex48g29	
Tetryl	6.445	23750	bb	25.936	104	29/Jul/08	ex48g29	
1,3 Dini..	6.613	90543	bd	0.893	89	29/Jul/08	ex48g29	
1,3-Dini..	6.678	7821	bb	25.606	102	29/Jul/08	ex48g29	
Nitroben..	7.399	7872	bb	28.813	115	29/Jul/08	ex48g29	
Nitrogly..	7.006	73167	bb	29.691	119	29/Jul/08	ex48g29	
Nitroben..	7.530	9019	bb	29.469	118	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	68360	bb	27.049	108	29/Jul/08	ex48g29	
4-Amino-..	8.381	34179	bd	27.996	112	29/Jul/08	ex48g29	
2-Amino-..	9.106	50509	db	27.310	109	29/Jul/08	ex48g29	
2,6-Dini..	9.511	48406	bd	26.322	105	29/Jul/08	ex48g29	
2,4-Dini..	9.982	199111	bb	0.928	93	29/Jul/08	ex48g29	
2,4-Dini..	10.076	22234	dd	25.297	101	29/Jul/08	ex48g29	
2-Nitrot..	11.636	10795	bb	26.814	107	29/Jul/08	ex48g29	
PETN	11.522	57137	bb	26.944	108	29/Jul/08	ex48g29	
4-Nitrot..	12.607	7228	bb	23.127	93	29/Jul/08	ex48g29	
3-Nitrot..	13.550	4707	bb	27.224	109	29/Jul/08	ex48g29	

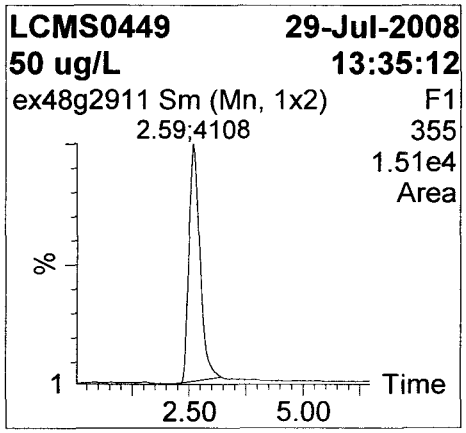
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

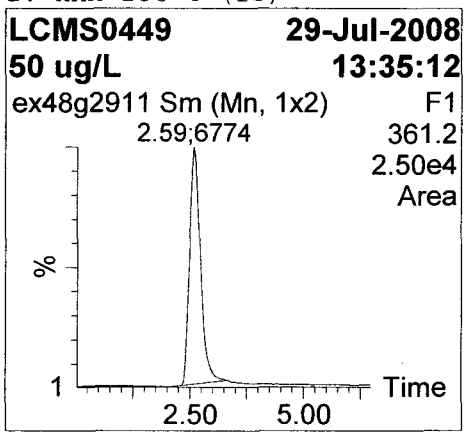
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2911
Text: 50 ug/L

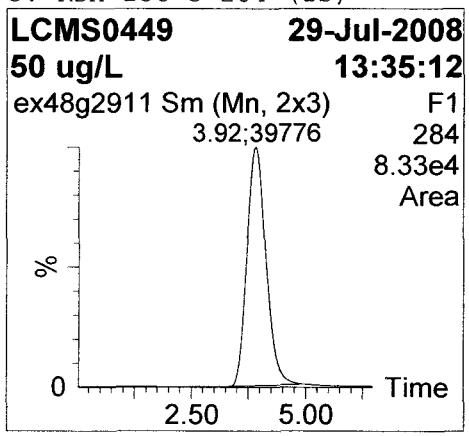
1: HMX



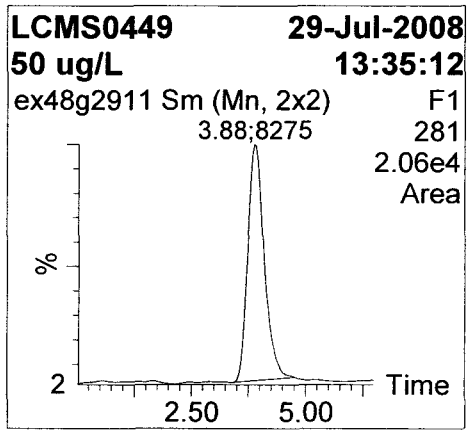
2: HMX 13C-4 (IS)



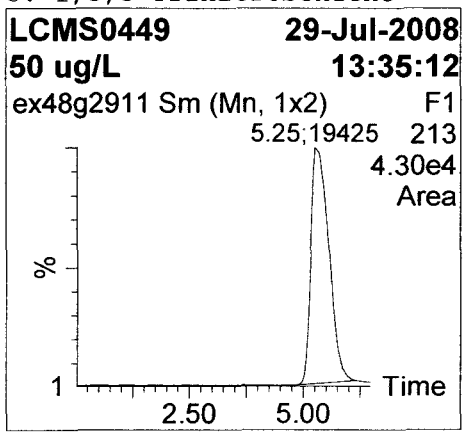
3: RDX 13C-3 284 (IS)



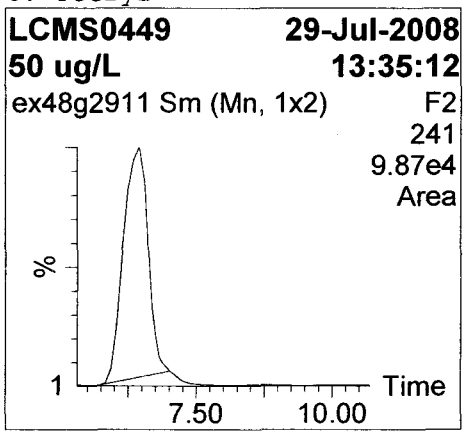
4: RDX



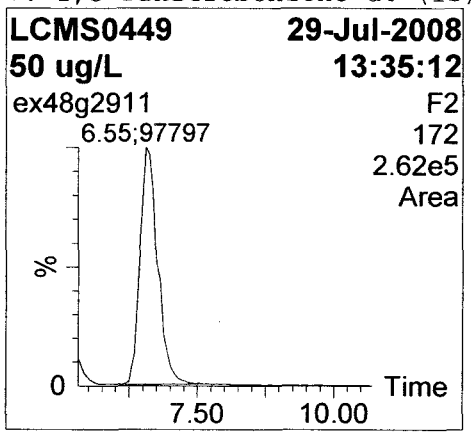
5: 1,3,5-Trinitrobenzene



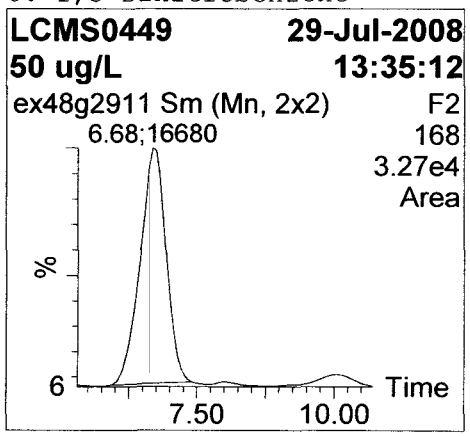
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



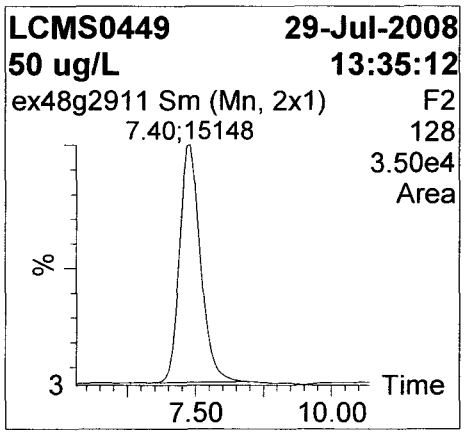
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

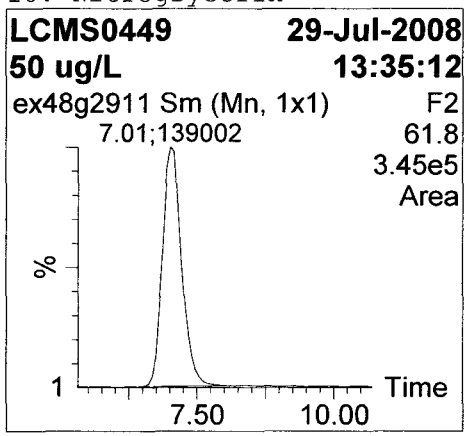
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2911
Text: 50 ug/L

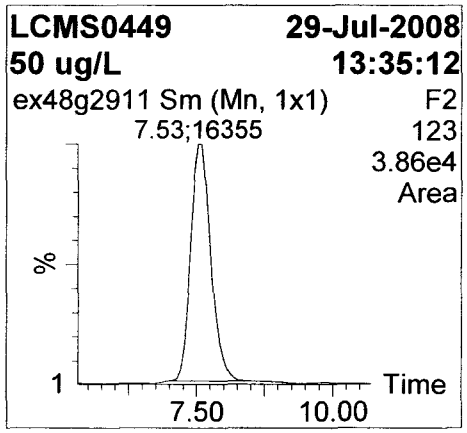
9: Nitrobenzene-d5



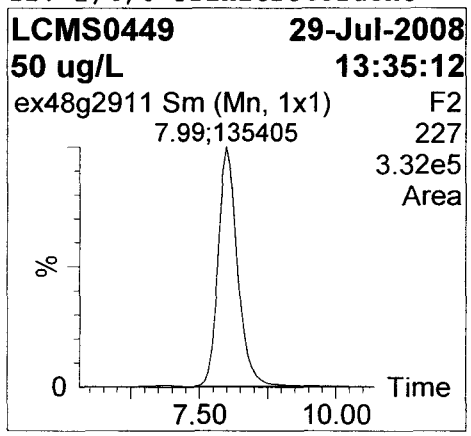
10: Nitroglycerin



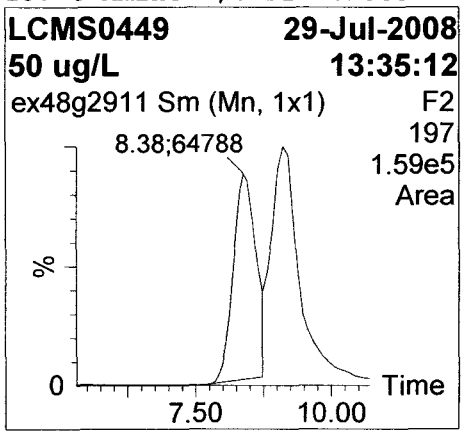
11: Nitrobenzene



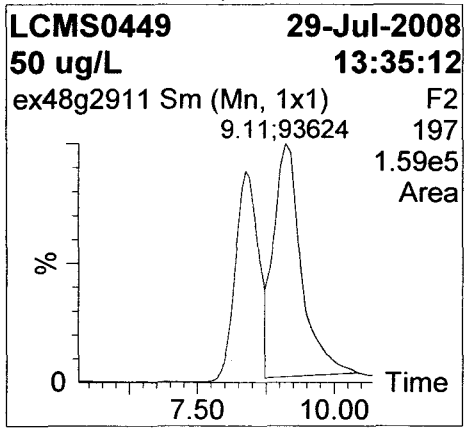
12: 2,4,6-Trinitrotoluene



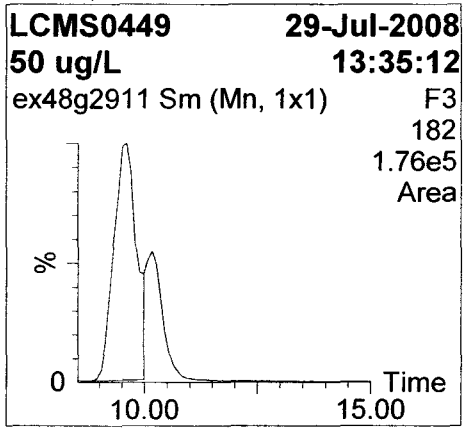
13: 4-Amino-2,6-Dinitrotolu..



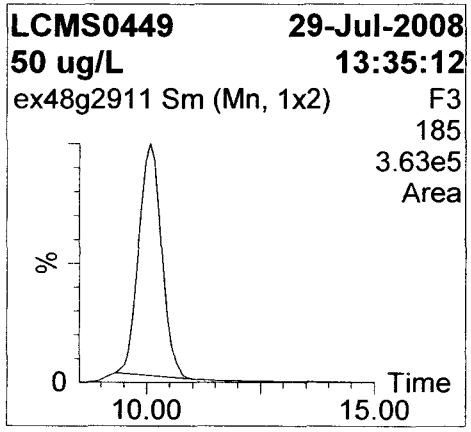
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



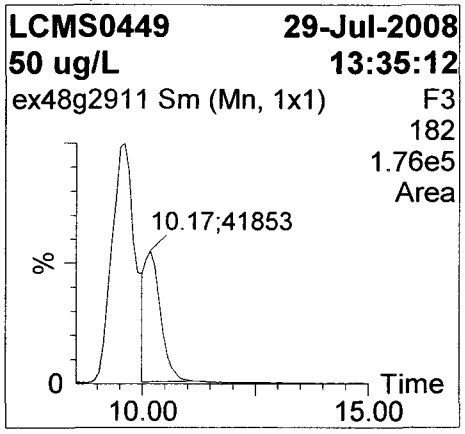
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

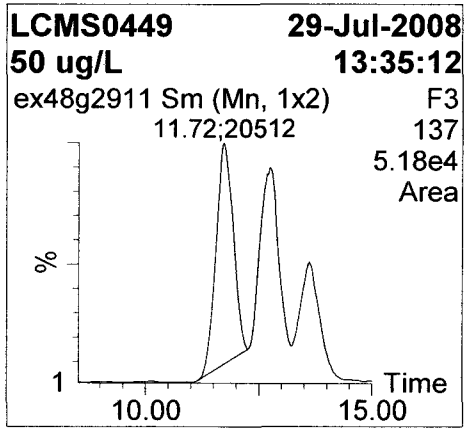
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2911
Text: 50 ug/L

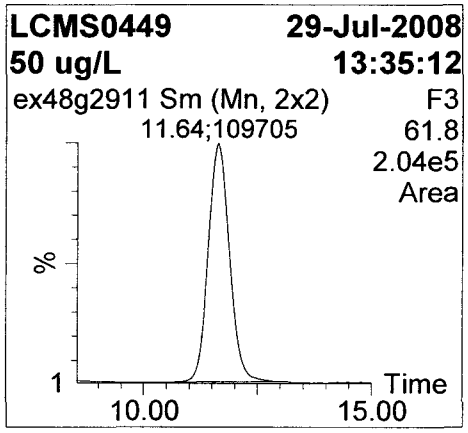
17: 2,4-Dinitrotoluene



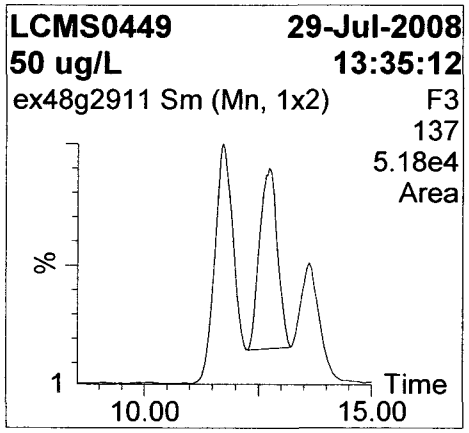
18: 2-Nitrotoluene



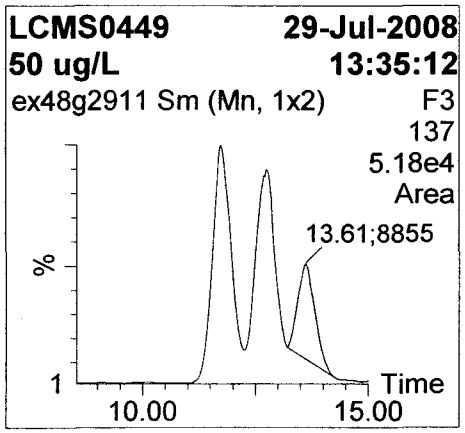
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2911
Text: 50 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	4108	bb	53.583	107	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6774	bb	1.018	102	29/Jul/08	ex48g29	
RDX 13C-..	3.919	39776	bb	0.980	98	29/Jul/08	ex48g29	
RDX	3.882	8275	bb	58.592	117	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	19425	bb	50.394	101	29/Jul/08	ex48g29	
Tetryl	6.445	49397	bb	49.534	99	29/Jul/08	ex48g29	
1,3 Dini..	6.547	97797	bs	0.964	96	29/Jul/08	ex48g29	
1,3-Dini..	6.678	16680	bb	52.307	105	29/Jul/08	ex48g29	
Nitroben..	7.399	15148	bb	52.447	105	29/Jul/08	ex48g29	
Nitrogly..	7.006	139002	bb	53.511	107	29/Jul/08	ex48g29	
Nitroben..	7.530	16355	bb	50.193	100	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	135405	bb	49.329	99	29/Jul/08	ex48g29	
4-Amino-..	8.381	64788	bd	49.450	99	29/Jul/08	ex48g29	
2-Amino-..	9.106	93624	db	46.622	93	29/Jul/08	ex48g29	
2,6-Dini..	9.606	99450	bd	53.256	107	29/Jul/08	ex48g29	
2,4-Dini..	10.076	204522	bb	0.953	95	29/Jul/08	ex48g29	
2,4-Dini..	10.171	41853	db	46.574	93	29/Jul/08	ex48g29	
2-Nitrot..	11.722	20512	bb	50.174	100	29/Jul/08	ex48g29	
PETN	11.636	109705	bb	50.778	102	29/Jul/08	ex48g29	
4-Nitrot..	12.721	17492	bb	54.961	110	29/Jul/08	ex48g29	
3-Nitrot..	13.607	8855	bb	51.728	103	29/Jul/08	ex48g29	

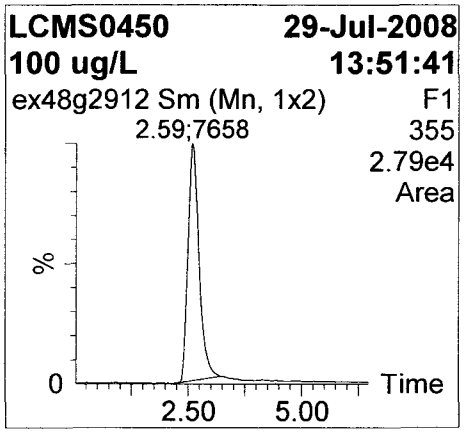
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

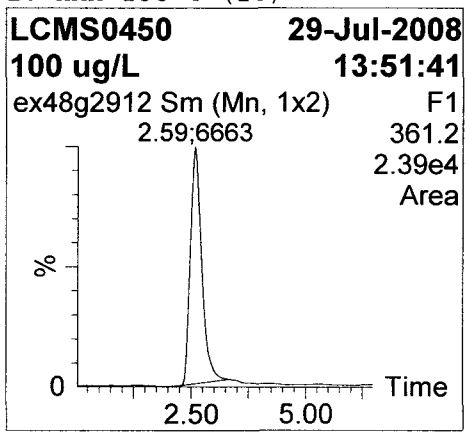
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2912
Text: 100 ug/L

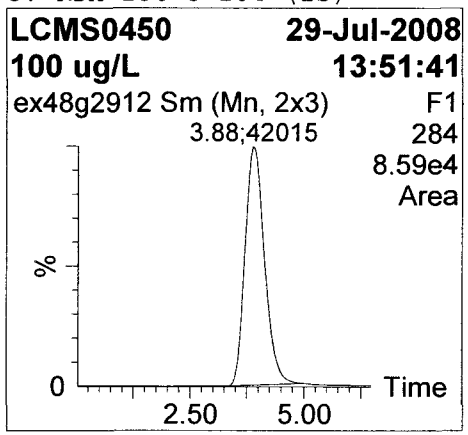
1: HMX



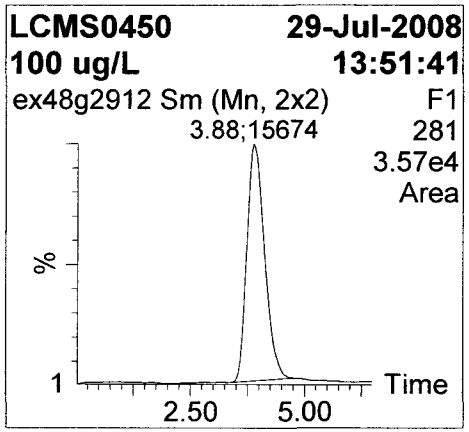
2: HMX 13C-4 (IS)



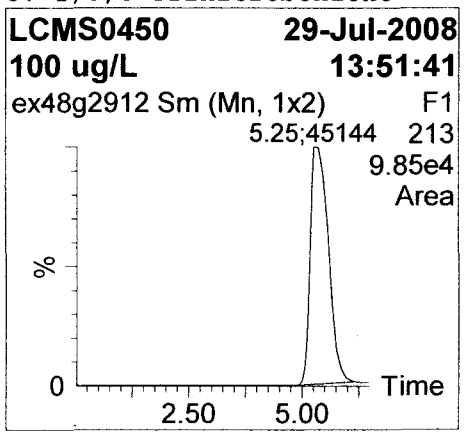
3: RDX 13C-3 284 (IS)



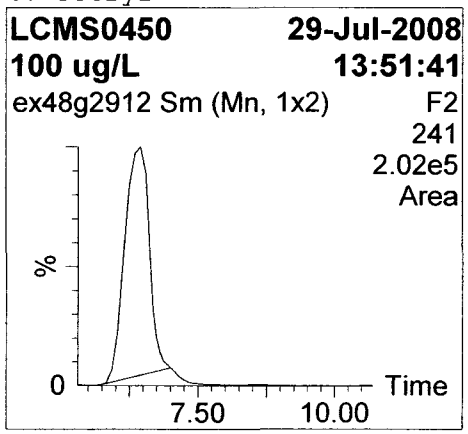
4: RDX



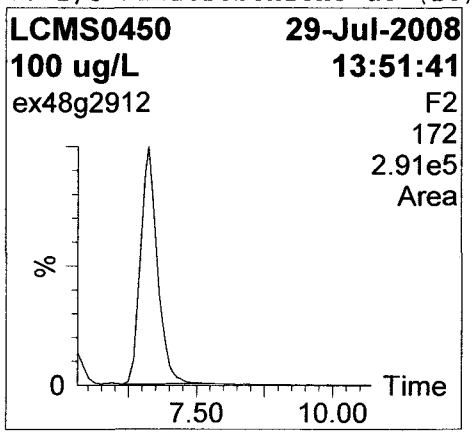
5: 1,3,5-Trinitrobenzene



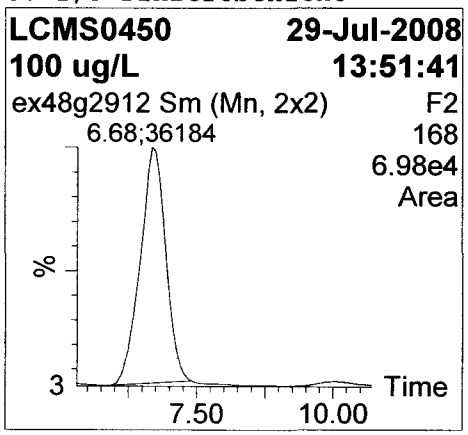
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



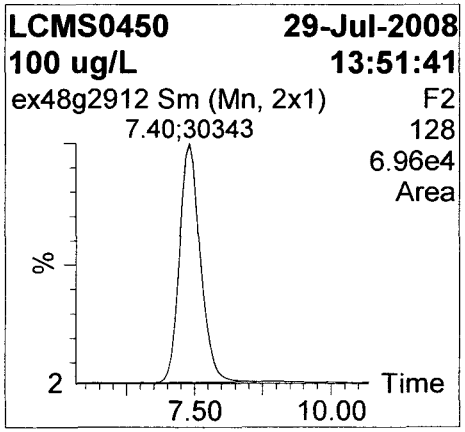
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

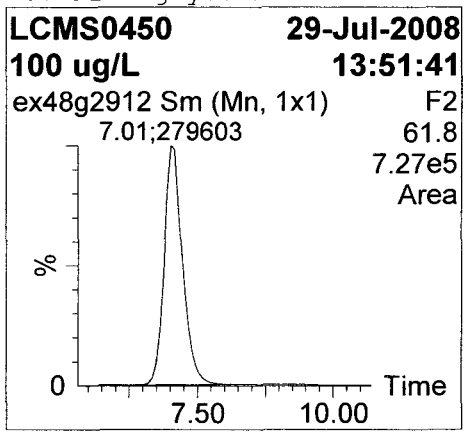
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2912
Text: 100 ug/L

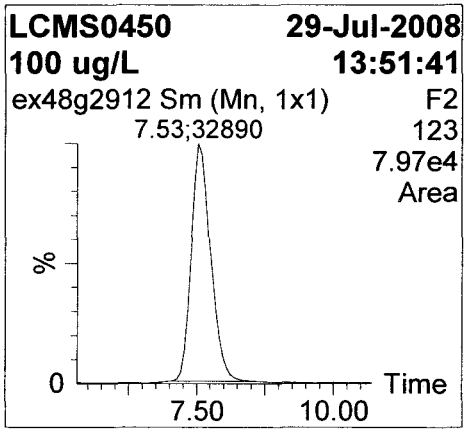
9: Nitrobenzene-d5



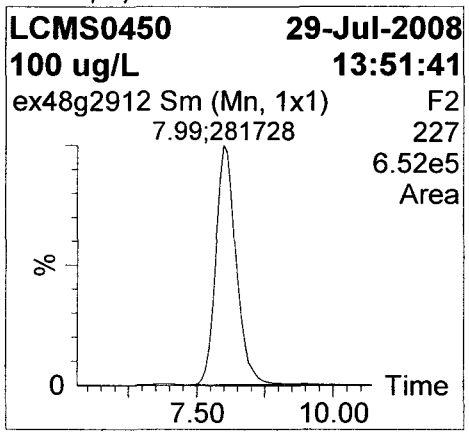
10: Nitroglycerin



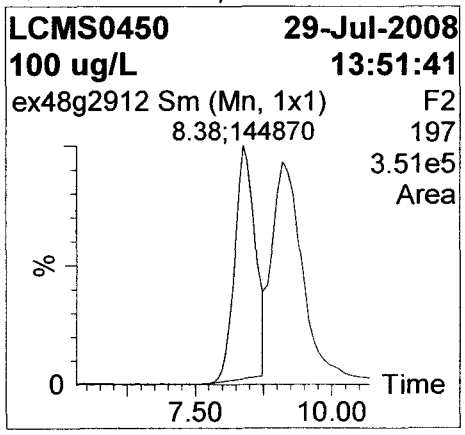
11: Nitrobenzene



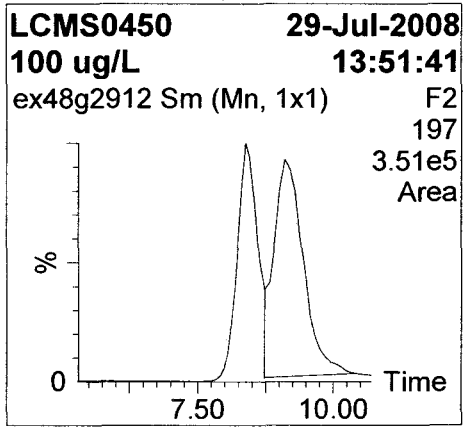
12: 2,4,6-Trinitrotoluene



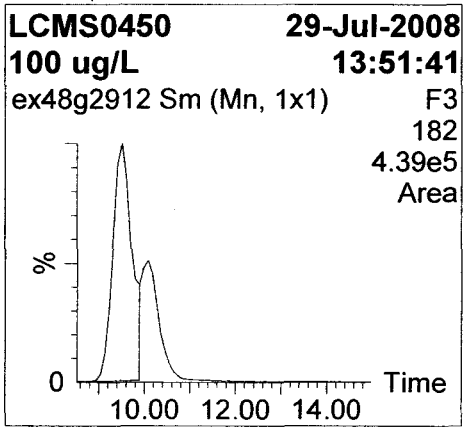
13: 4-Amino-2,6-Dinitrotolu..



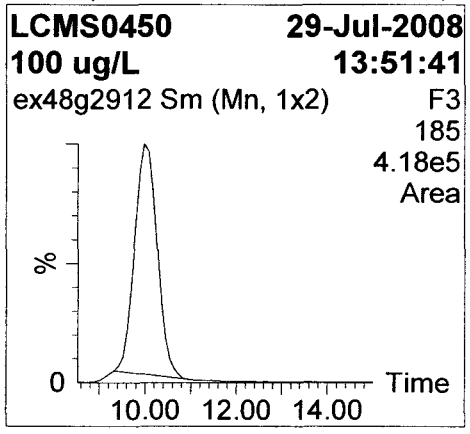
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



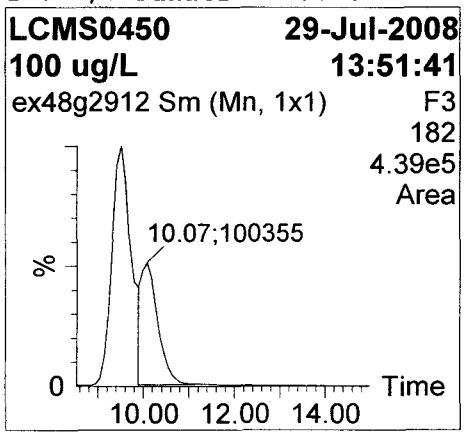
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

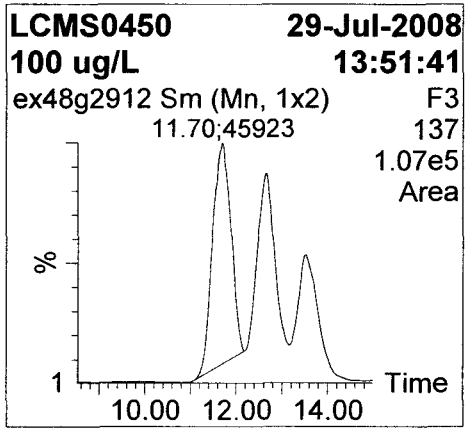
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2912
Text: 100 ug/L

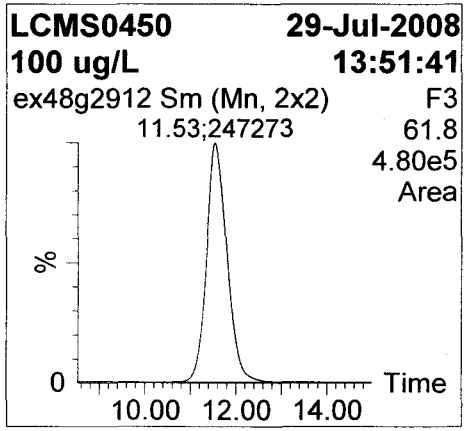
17: 2,4-Dinitrotoluene



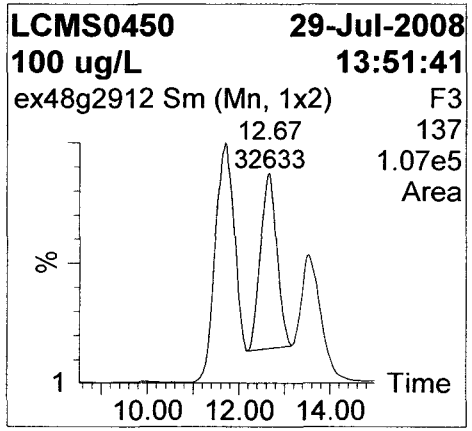
18: 2-Nitrotoluene



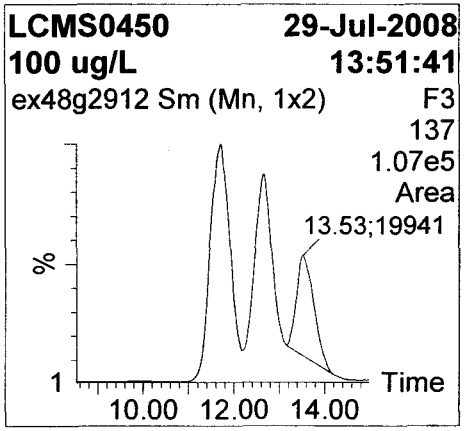
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 24

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2912
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	7658	bb	103.035	103	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6663	bb	1.002	100	29/Jul/08	ex48g29	
RDX 13C-..	3.882	42015	bb	1.035	104	29/Jul/08	ex48g29	
RDX	3.882	15674	bb	107.935	108	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	45144	bb	111.376	111	29/Jul/08	ex48g29	
Tetryl	6.444	100652	bb	94.335	94	29/Jul/08	ex48g29	
1,3 Dini..	6.612	104190	bb	1.027	103	29/Jul/08	ex48g29	
1,3-Dini..	6.678	36184	bb	108.360	108	29/Jul/08	ex48g29	
Nitroben..	7.398	30343	bb	99.867	100	29/Jul/08	ex48g29	
Nitrogly..	7.005	279603	bb	102.540	103	29/Jul/08	ex48g29	
Nitroben..	7.529	32890	bb	95.680	96	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	281728	bb	96.021	96	29/Jul/08	ex48g29	
4-Amino-..	8.380	144870	bd	104.251	104	29/Jul/08	ex48g29	
2-Amino-..	9.104	206964	db	96.365	96	29/Jul/08	ex48g29	
2,6-Dini..	9.510	207873	bd	98.456	98	29/Jul/08	ex48g29	
2,4-Dini..	9.980	232442	bb	1.084	108	29/Jul/08	ex48g29	
2,4-Dini..	10.074	100355	dd	97.421	97	29/Jul/08	ex48g29	
2-Nitrot..	11.699	45923	bb	99.492	99	29/Jul/08	ex48g29	
PETN	11.528	247273	bb	101.174	101	29/Jul/08	ex48g29	
4-Nitrot..	12.670	32633	bb	91.592	92	29/Jul/08	ex48g29	
3-Nitrot..	13.527	19941	bb	104.691	105	29/Jul/08	ex48g29	

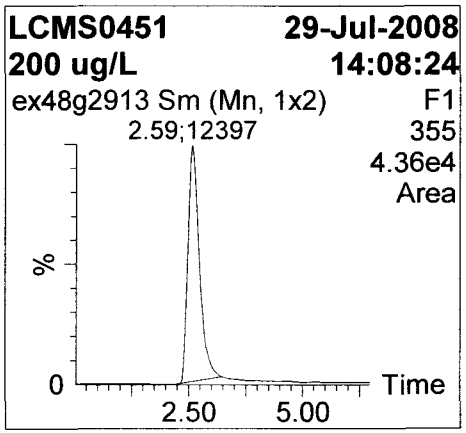
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

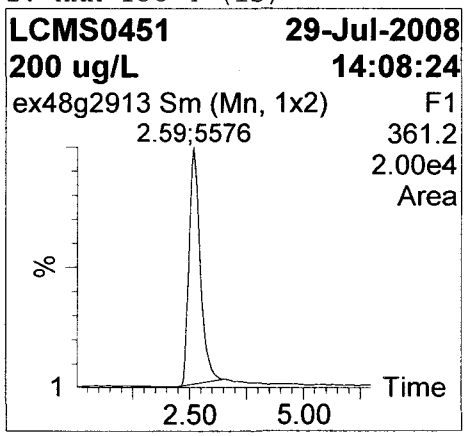
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2913
Text: 200 ug/L

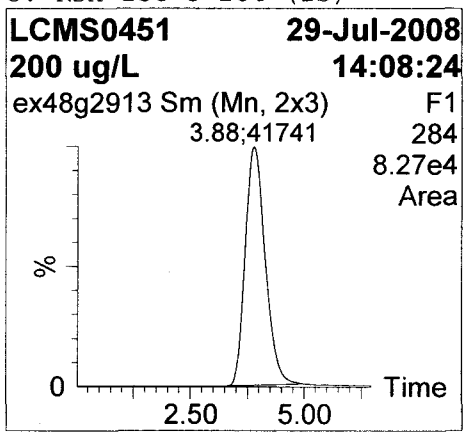
1: HMX



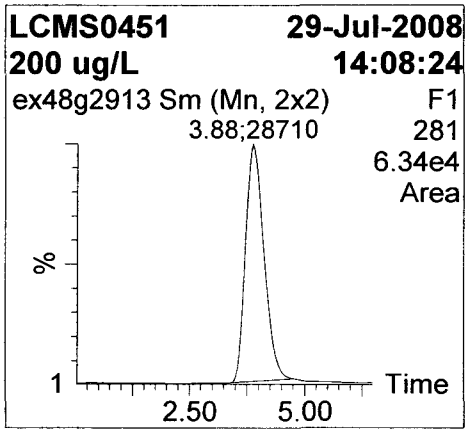
2: HMX 13C-4 (IS)



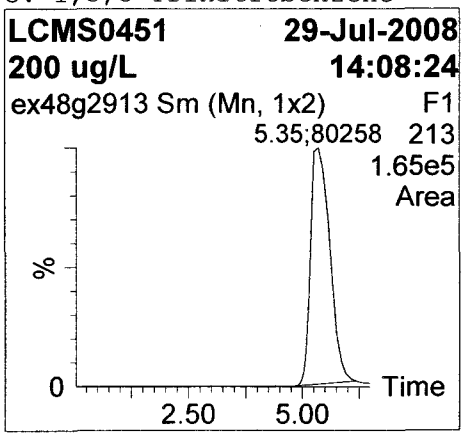
3: RDX 13C-3 284 (IS)



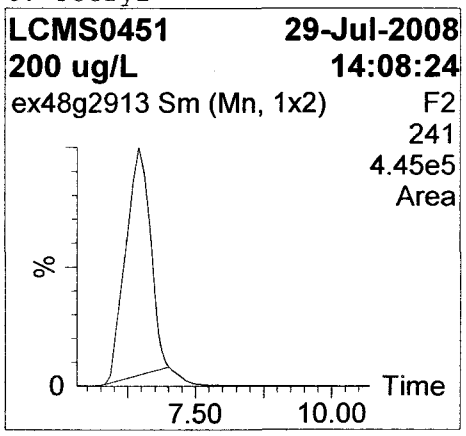
4: RDX



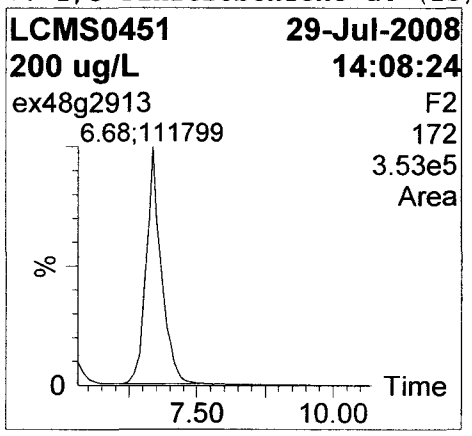
5: 1,3,5-Trinitrobenzene



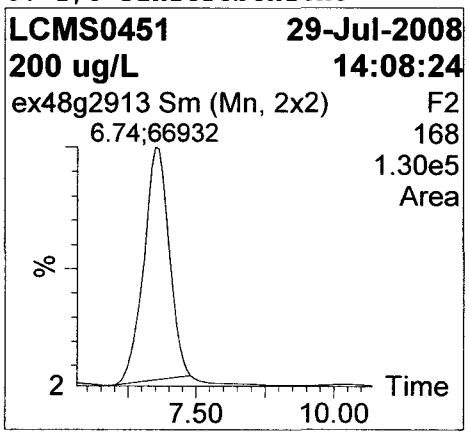
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



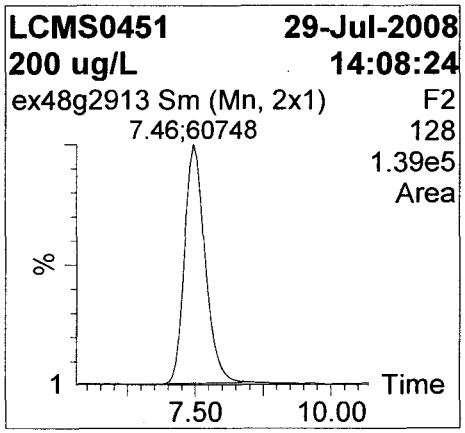
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

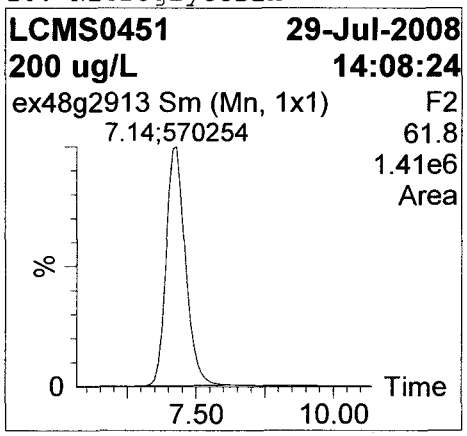
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2913
Text: 200 ug/L

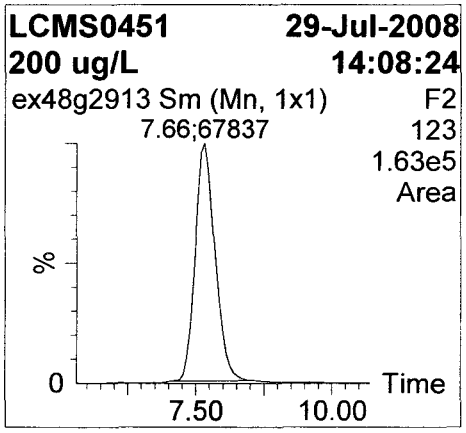
9: Nitrobenzene-d5



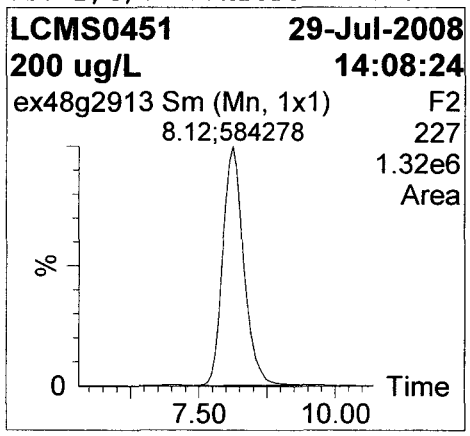
10: Nitroglycerin



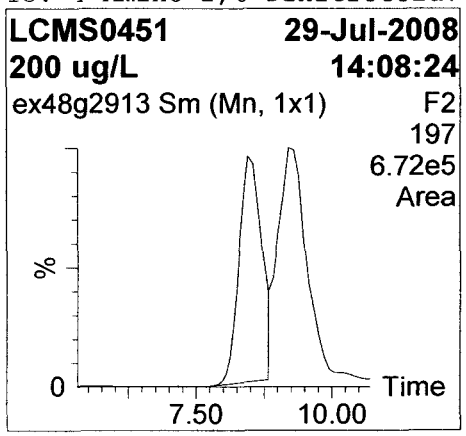
11: Nitrobenzene



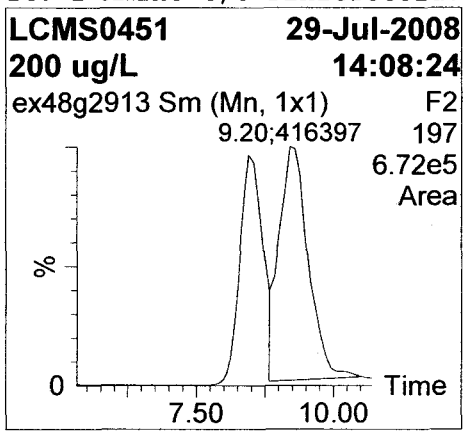
12: 2,4,6-Trinitrotoluene



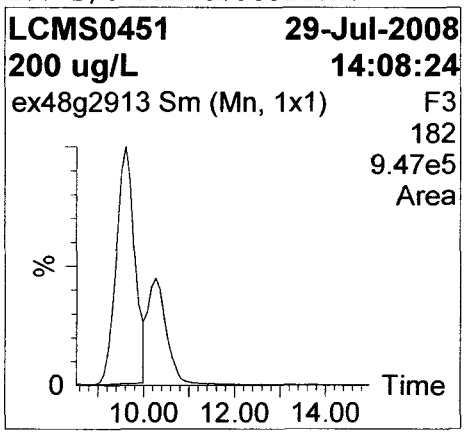
13: 4-Amino-2,6-Dinitrotolu..



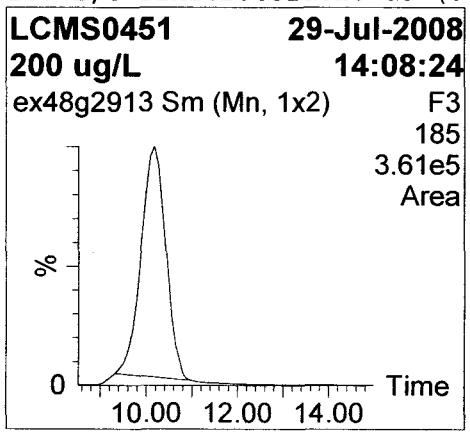
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



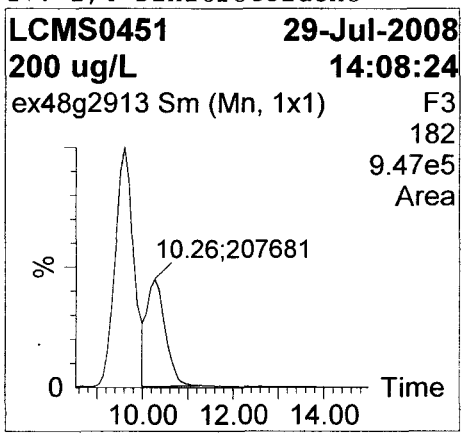
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

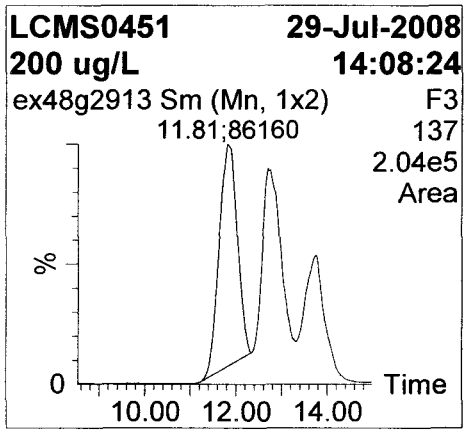
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2913
Text: 200 ug/L

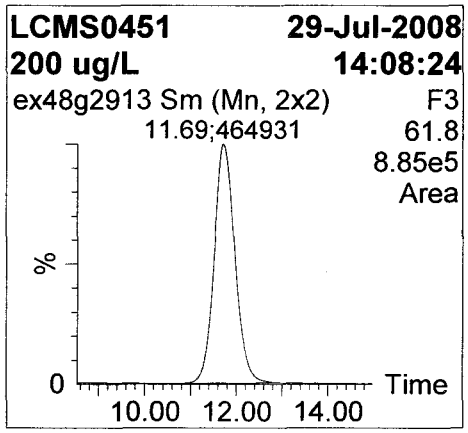
17: 2,4-Dinitrotoluene



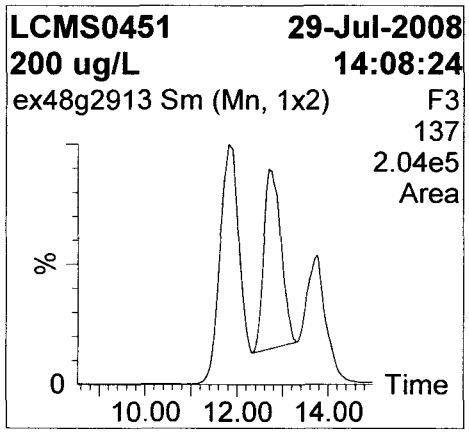
18: 2-Nitrotoluene



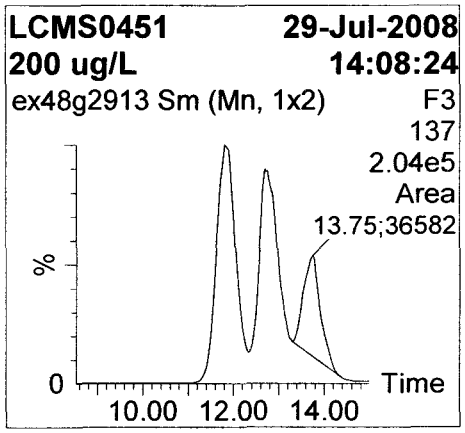
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 28

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2913
Text: 200 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	12397	bb	200.831	100	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5576	bb	0.838	84	29/Jul/08	ex48g29	
RDX 13C-..	3.882	41741	bb	1.029	103	29/Jul/08	ex48g29	
RDX	3.882	28710	bb	202.057	101	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	80258	bb	185.336	93	29/Jul/08	ex48g29	
Tetryl	6.444	223758	bb	194.970	97	29/Jul/08	ex48g29	
1,3 Dini..	6.678	111799	bb	1.102	110	29/Jul/08	ex48g29	
1,3-Dini..	6.743	66932	bb	188.092	94	29/Jul/08	ex48g29	
Nitroben..	7.464	60748	bb	187.567	94	29/Jul/08	ex48g29	
Nitrogly..	7.136	570254	bb	196.427	98	29/Jul/08	ex48g29	
Nitroben..	7.660	67837	bb	184.886	92	29/Jul/08	ex48g29	
2,4,6-Tr..	8.119	584278	bb	185.278	93	29/Jul/08	ex48g29	
4-Amino-..	8.447	298980	bd	200.897	100	29/Jul/08	ex48g29	
2-Amino-..	9.200	416397	db	180.383	90	29/Jul/08	ex48g29	
2,6-Dini..	9.605	435688	bd	220.380	110	29/Jul/08	ex48g29	
2,4-Dini..	10.170	218394	bb	1.018	102	29/Jul/08	ex48g29	
2,4-Dini..	10.264	207681	dd	208.282	104	29/Jul/08	ex48g29	
2-Nitrot..	11.807	86160	bb	199.342	100	29/Jul/08	ex48g29	
PETN	11.693	464931	bb	202.944	101	29/Jul/08	ex48g29	
4-Nitrot..	12.693	66427	bb	209.590	105	29/Jul/08	ex48g29	
3-Nitrot..	13.750	36582	bb	206.546	103	29/Jul/08	ex48g29	

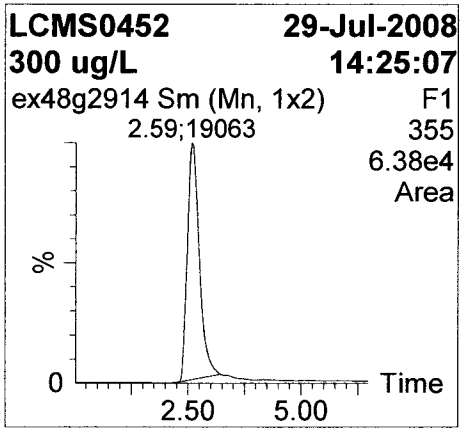
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

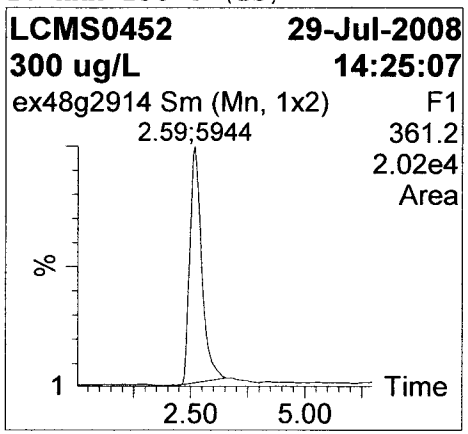
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2914
Text: 300 ug/L

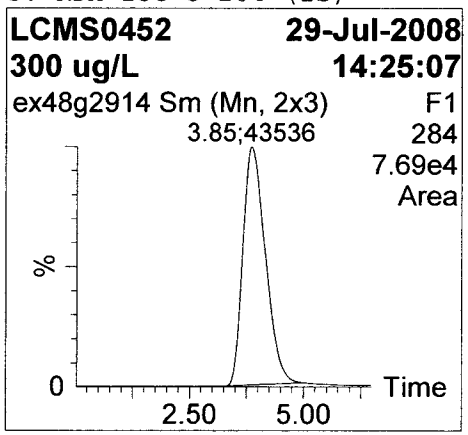
1: HMX



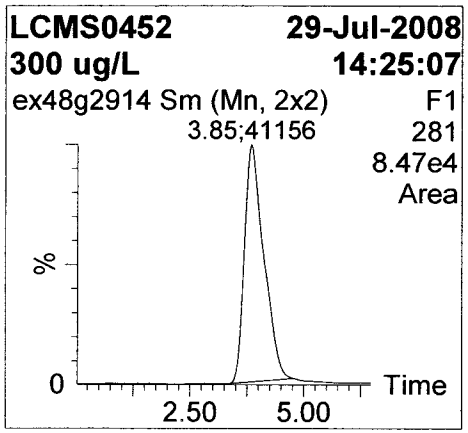
2: HMX 13C-4 (IS)



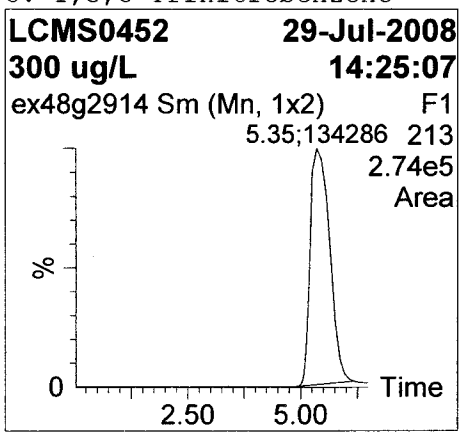
3: RDX 13C-3 284 (IS)



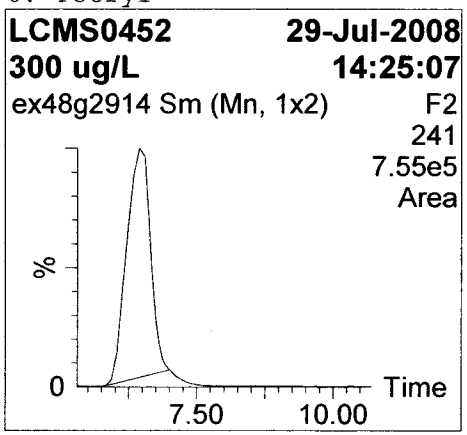
4: RDX



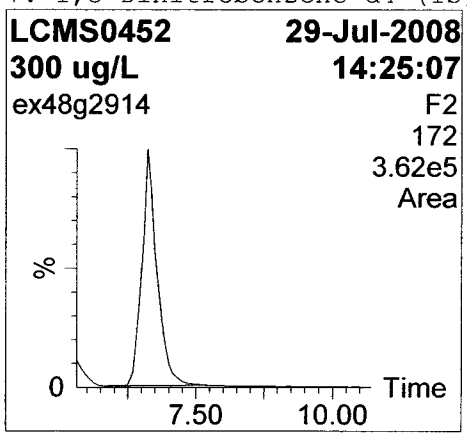
5: 1,3,5-Trinitrobenzene



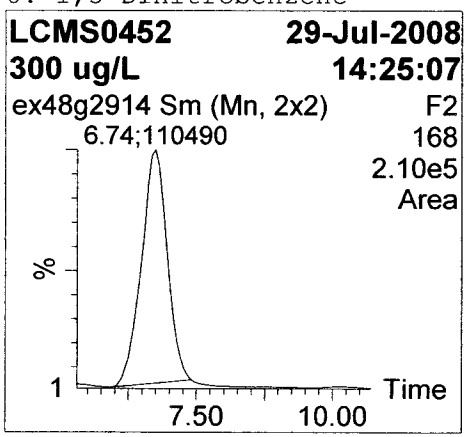
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



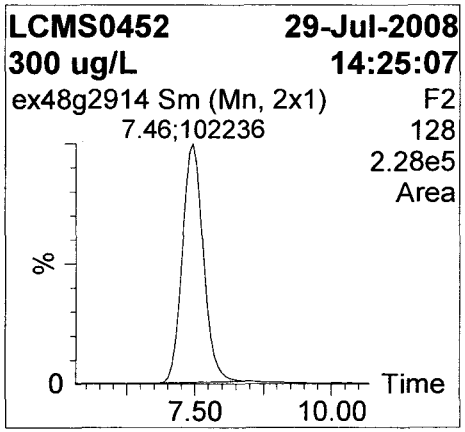
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

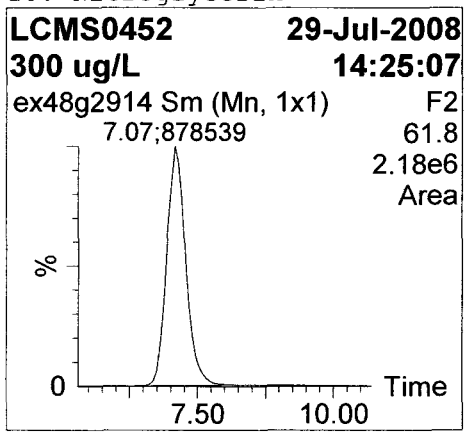
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2914
Text: 300 ug/L

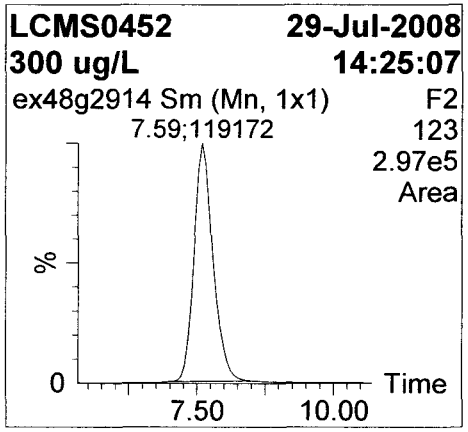
9: Nitrobenzene-d5



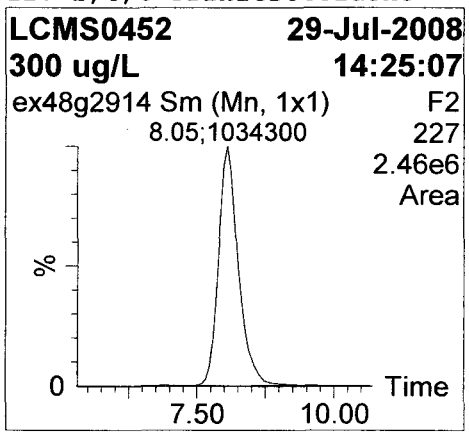
10: Nitroglycerin



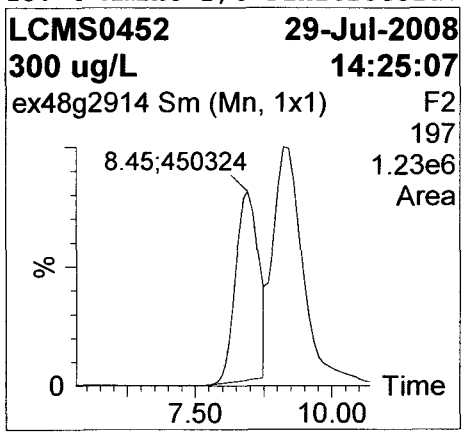
11: Nitrobenzene



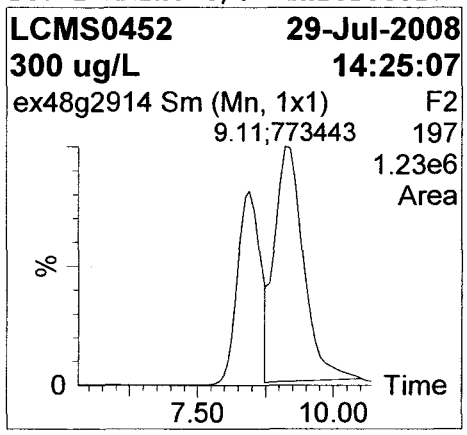
12: 2,4,6-Trinitrotoluene



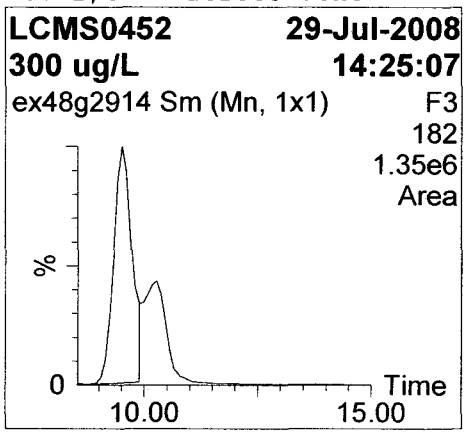
13: 4-Amino-2,6-Dinitrotolu..



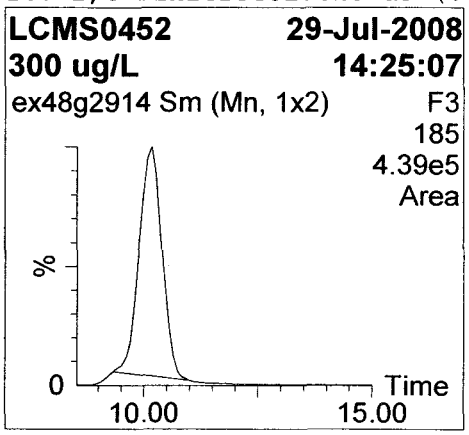
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..

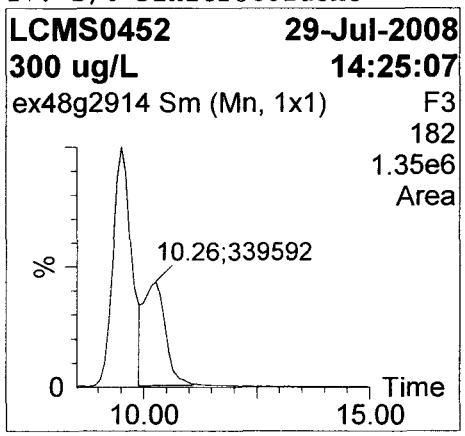


Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

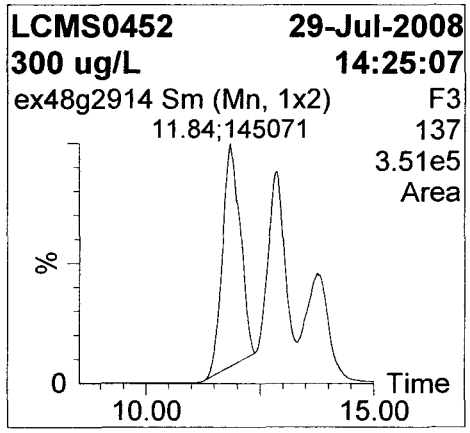
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2914
Text: 300 ug/L

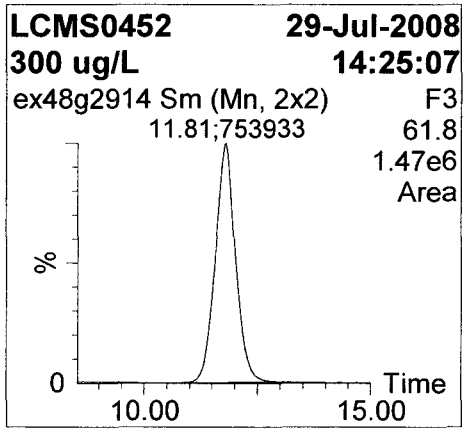
17: 2,4-Dinitrotoluene



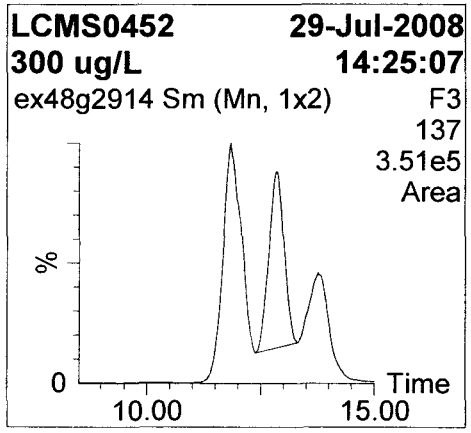
18: 2-Nitrotoluene



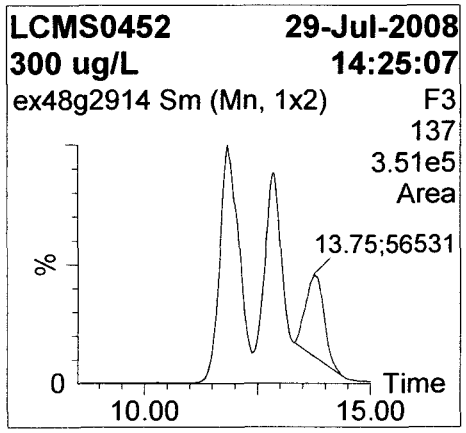
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2914
Text: 300 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	19063	bb	290.426	97	29/Jul/08	ex48g29	
HMX 13C-..	2.588	5944	bb	0.894	89	29/Jul/08	ex48g29	
RDX 13C-..	3.845	43536	bb	1.073	107	29/Jul/08	ex48g29	
RDX	3.845	41156	bb	279.064	93	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	134286	bb	300.715	100	29/Jul/08	ex48g29	
Tetryl	6.444	368080	bb	309.973	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	115580	bb	1.139	114	29/Jul/08	ex48g29	
1,3-Dini..	6.743	110490	bb	301.408	100	29/Jul/08	ex48g29	
Nitroben..	7.464	102236	bb	306.237	102	29/Jul/08	ex48g29	
Nitrogly..	7.071	878539	bb	293.551	98	29/Jul/08	ex48g29	
Nitroben..	7.595	119172	bb	314.911	105	29/Jul/08	ex48g29	
2,4,6-Tr..	8.054	1034300	bb	317.018	106	29/Jul/08	ex48g29	
4-Amino-..	8.447	450324	bd	292.887	98	29/Jul/08	ex48g29	
2-Amino-..	9.106	773443	db	323.821	108	29/Jul/08	ex48g29	
2,6-Dini..	9.511	614252	bd	276.869	92	29/Jul/08	ex48g29	
2,4-Dini..	10.170	245218	bb	1.143	114	29/Jul/08	ex48g29	
2,4-Dini..	10.264	339592	dd	295.943	99	29/Jul/08	ex48g29	
2-Nitrot..	11.836	145071	bb	299.260	100	29/Jul/08	ex48g29	
PETN	11.807	753933	bb	293.306	98	29/Jul/08	ex48g29	
4-Nitrot..	12.864	100771	bb	295.500	99	29/Jul/08	ex48g29	
3-Nitrot..	13.750	56531	bb	285.114	95	29/Jul/08	ex48g29	

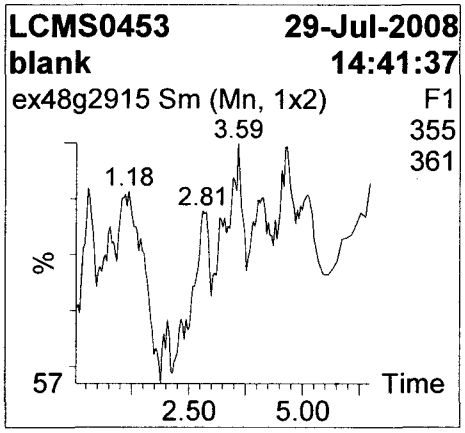
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

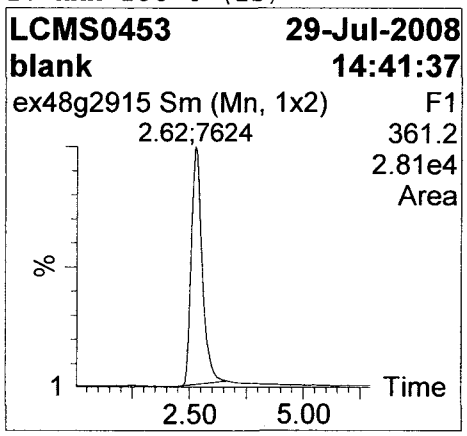
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2915
Text: blank

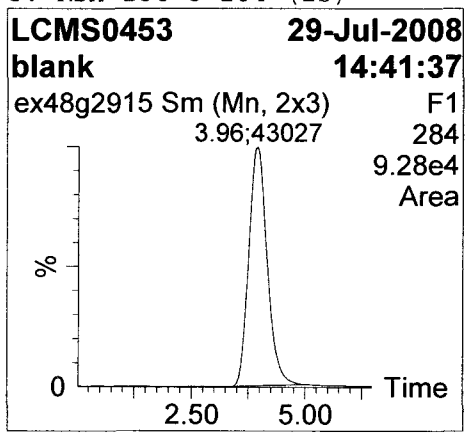
1: HMX



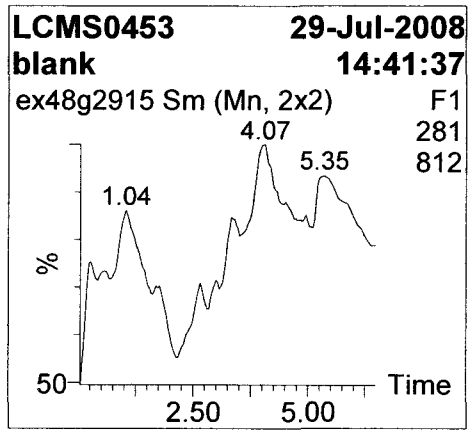
2: HMX 13C-4 (IS)



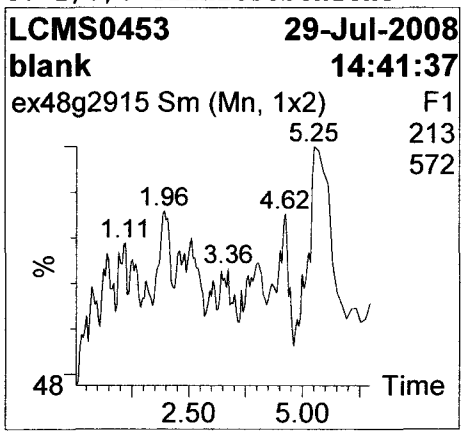
3: RDX 13C-3 284 (IS)



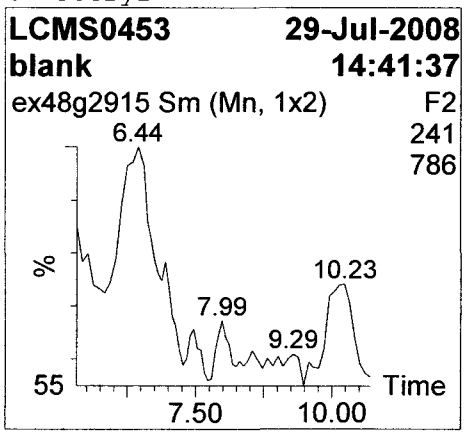
4: RDX



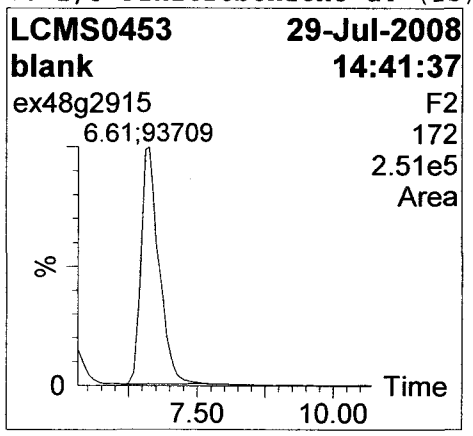
5: 1,3,5-Trinitrobenzene



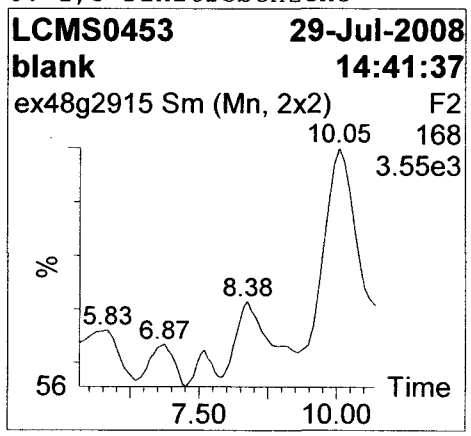
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



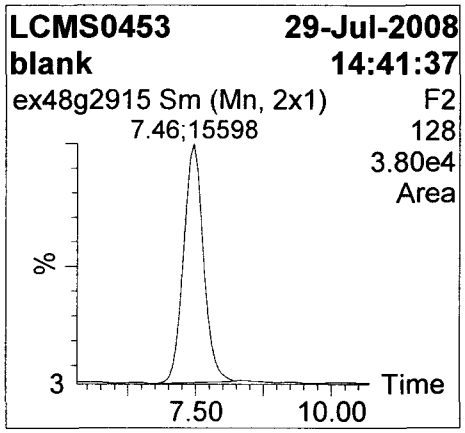
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

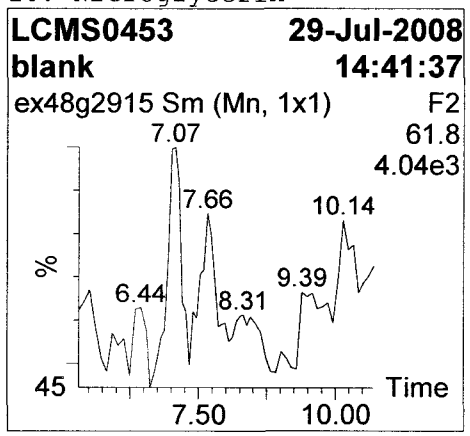
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2915
Text: blank

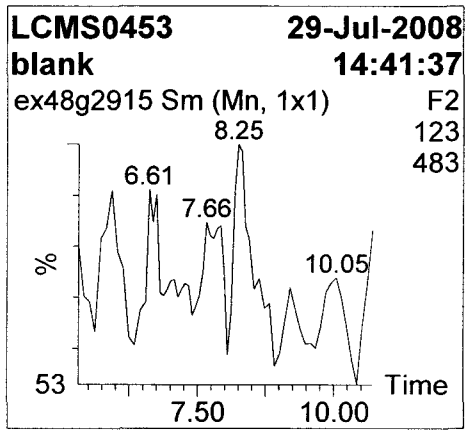
9: Nitrobenzene-d5



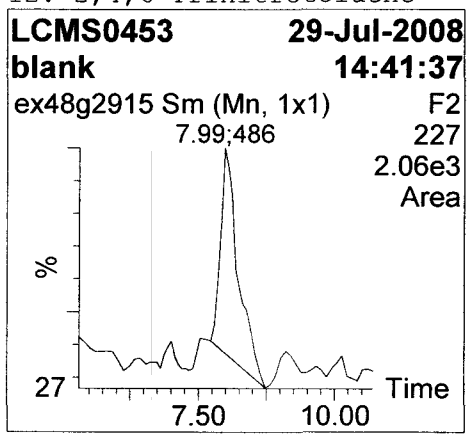
10: Nitroglycerin



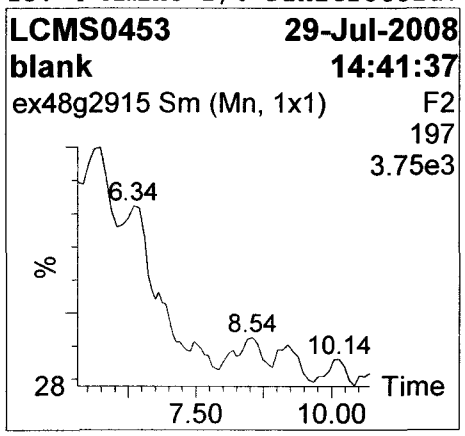
11: Nitrobenzene



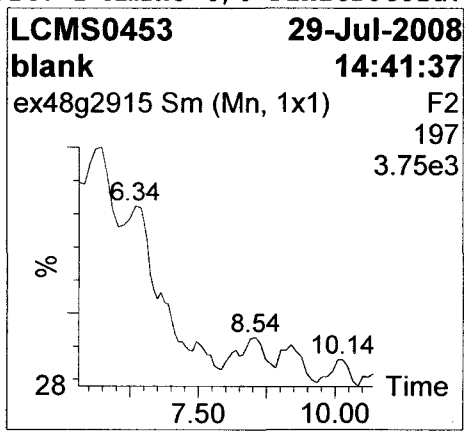
12: 2,4,6-Trinitrotoluene



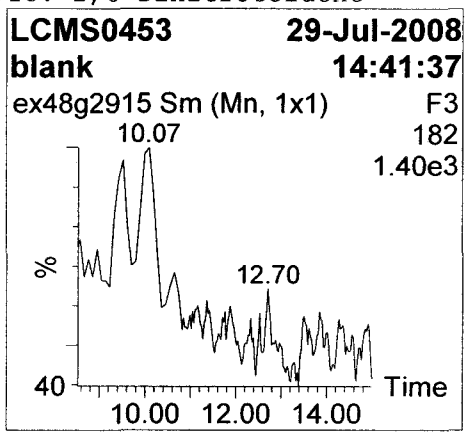
13: 4-Amino-2,6-Dinitrotolu..



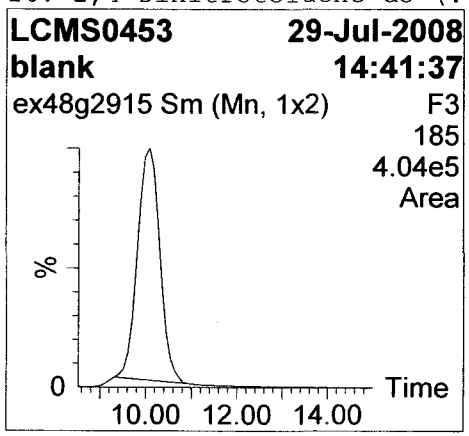
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



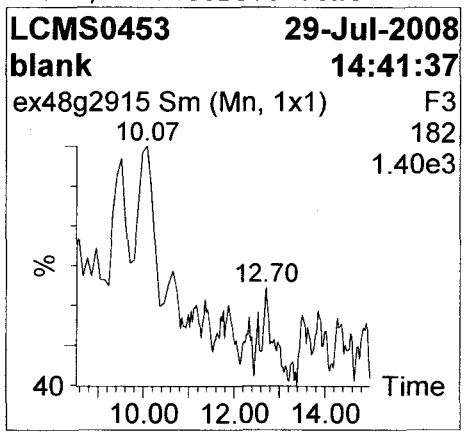
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

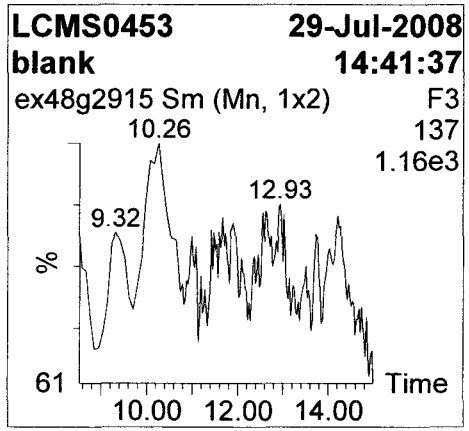
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2915
Text: blank

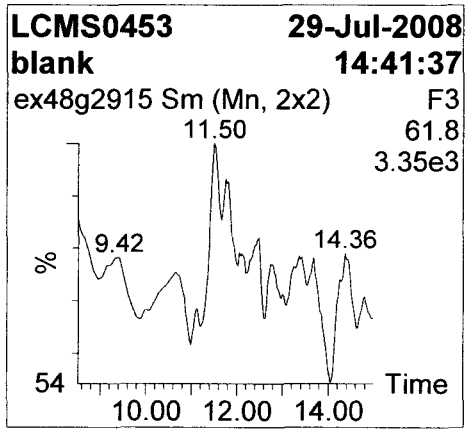
17: 2,4-Dinitrotoluene



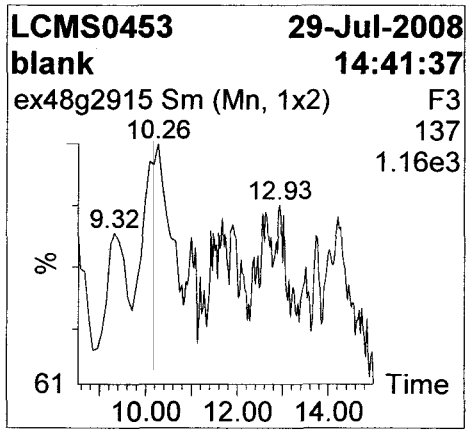
18: 2-Nitrotoluene



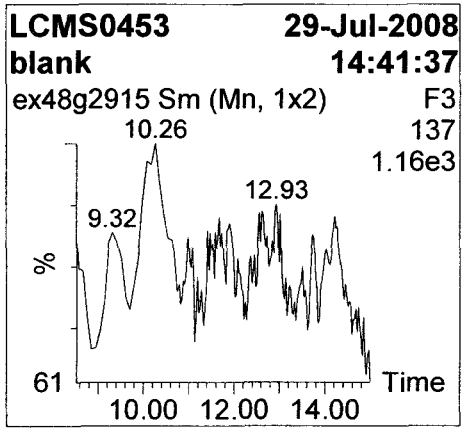
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2915
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.625	7624	bb	1.146	115	29/Jul/08	ex48g29	
RDX 13C-..	3.956	43027	bb	1.060	106	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	93709	bb	0.924	92	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.463	15598	bd	56.469	113	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	486	bb	0.514		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	222357	bb	1.037	104	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

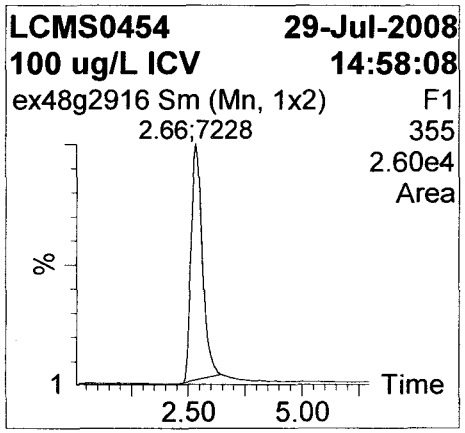
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

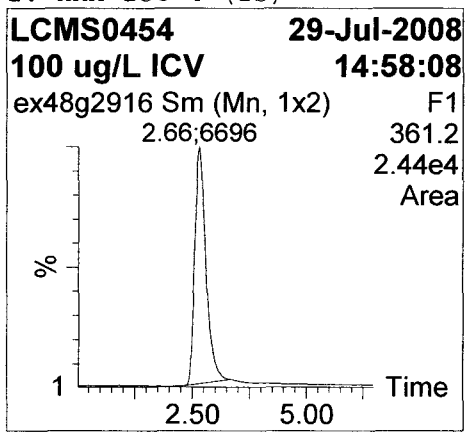
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2916
Text: 100 ug/L ICV

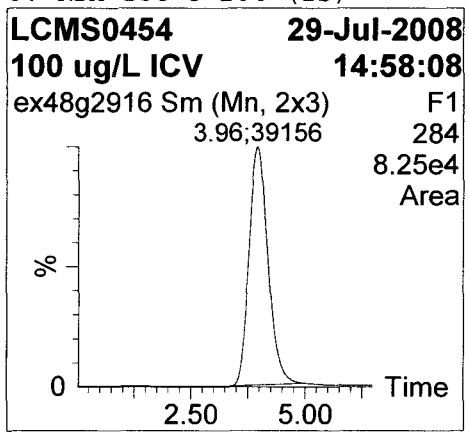
1: HMX



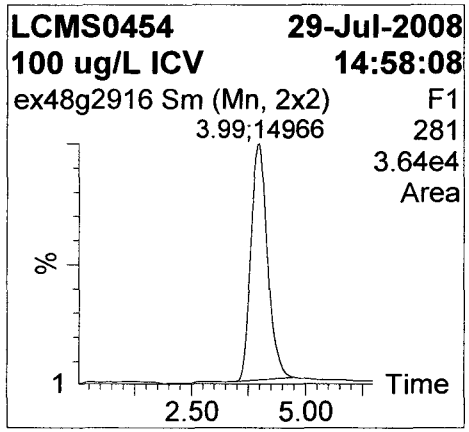
2: HMX 13C-4 (IS)



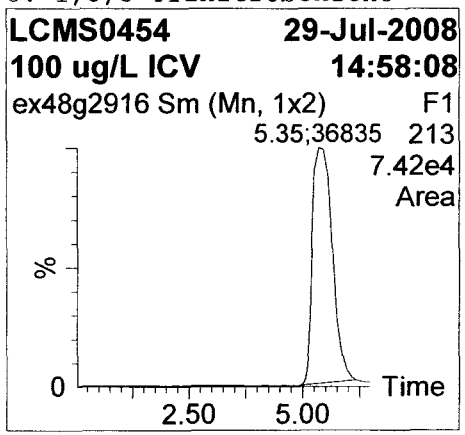
3: RDX 13C-3 284 (IS)



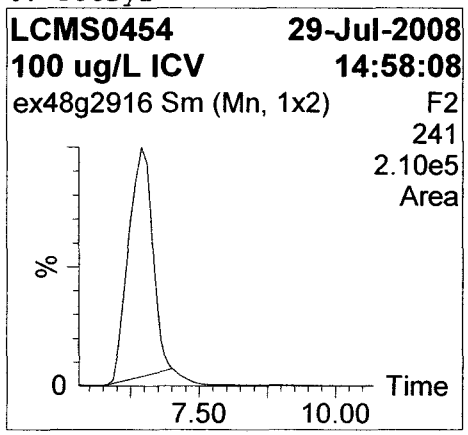
4: RDX



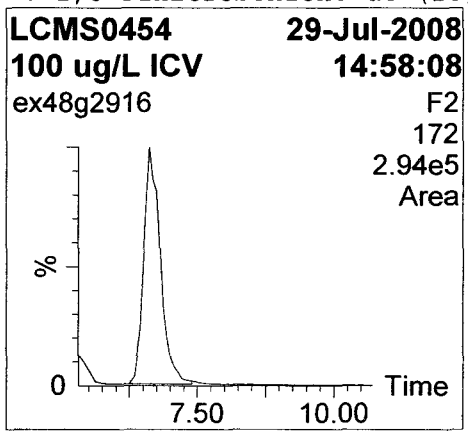
5: 1,3,5-Trinitrobenzene



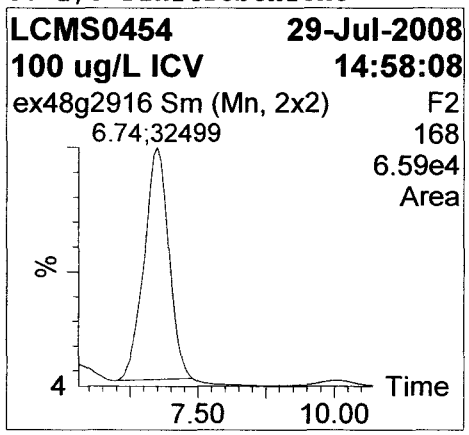
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



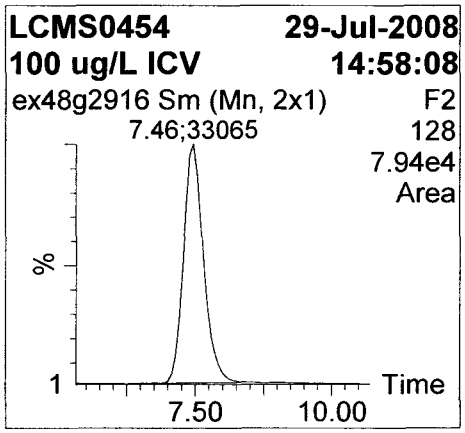
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

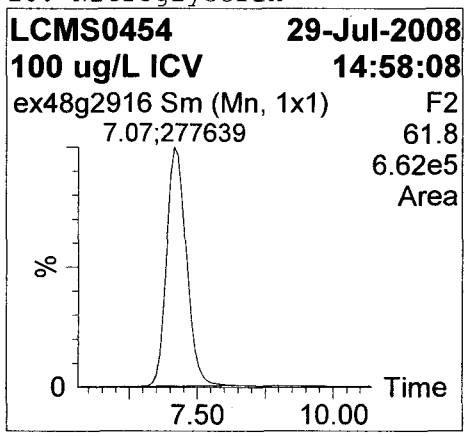
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2916
Text: 100 ug/L ICV

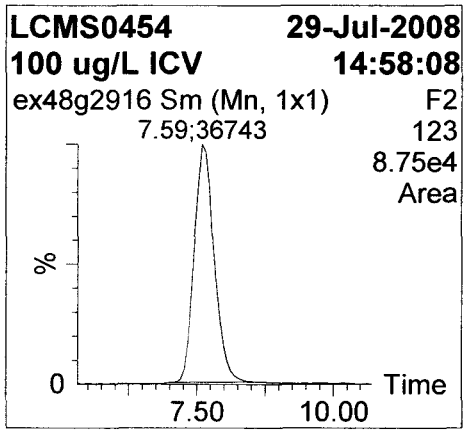
9: Nitrobenzene-d5



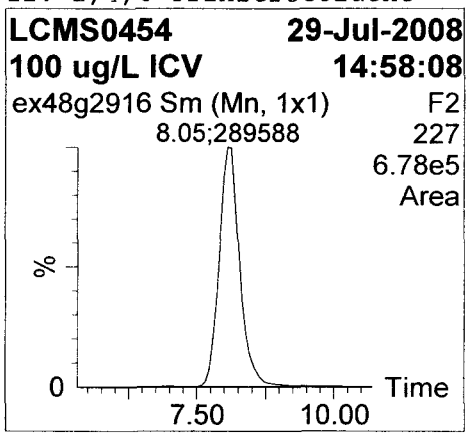
10: Nitroglycerin



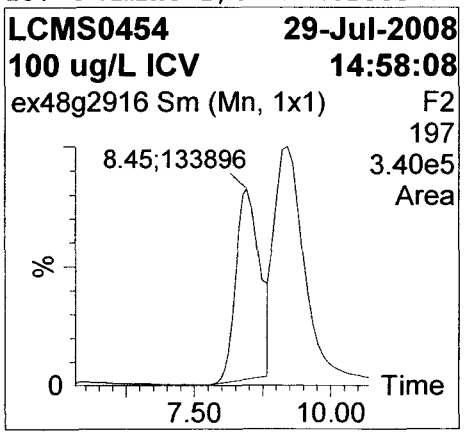
11: Nitrobenzene



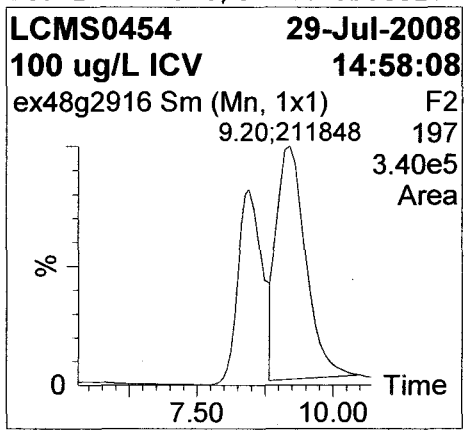
12: 2,4,6-Trinitrotoluene



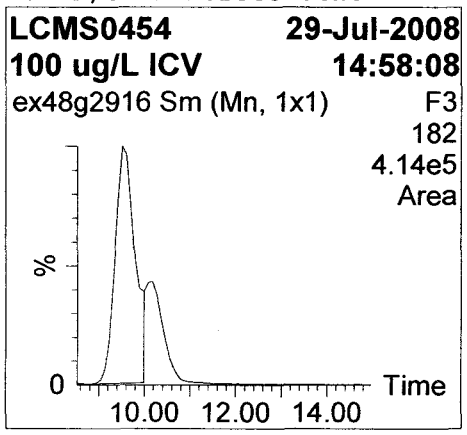
13: 4-Amino-2,6-Dinitrotolu..



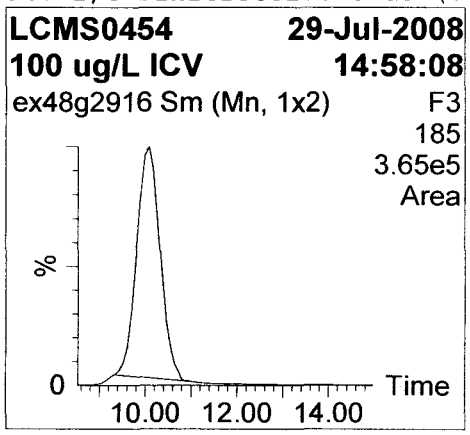
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



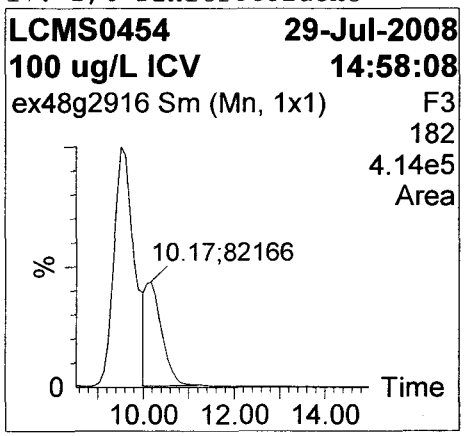
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

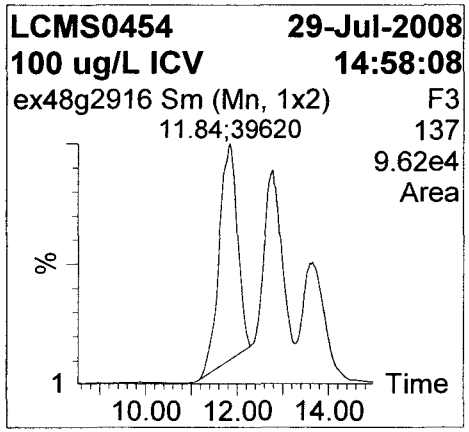
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2916
Text: 100 ug/L ICV

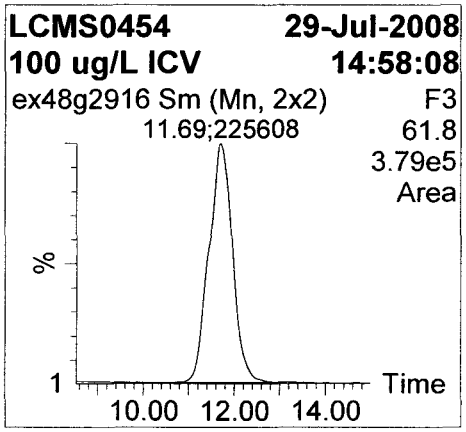
17: 2,4-Dinitrotoluene



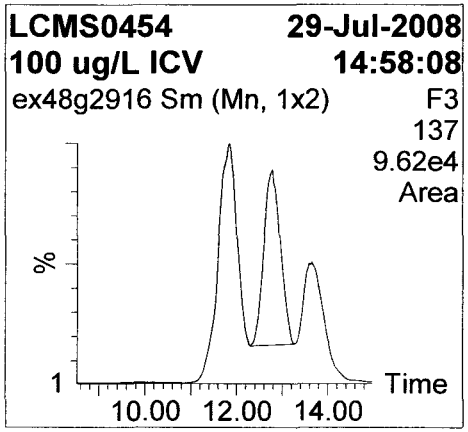
18: 2-Nitrotoluene



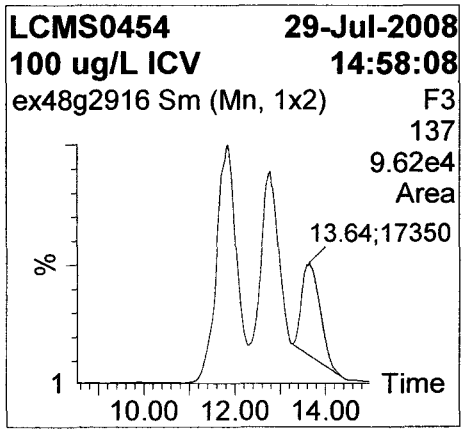
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2916
Text: 100 ug/L ICV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.662	7228	bb	96.669	97	29/Jul/08	ex48g29	
HMX 13C-..	2.662	6696	bb	1.007	101	29/Jul/08	ex48g29	
RDX 13C-..	3.956	39156	bb	0.965	97	29/Jul/08	ex48g29	
RDX	3.993	14966	bb	110.670	111	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	36835	bb	91.213	91	29/Jul/08	ex48g29	
Tetryl	6.444	102152	bb	96.317	96	29/Jul/08	ex48g29	
1,3 Dini..	6.612	103558	bs	1.021	102	29/Jul/08	ex48g29	
1,3-Dini..	6.743	32499	bb	97.744	98	29/Jul/08	ex48g29	
Nitroben..	7.464	33065	bb	109.628	110	29/Jul/08	ex48g29	
Nitrogly..	7.071	277639	bb	102.440	102	29/Jul/08	ex48g29	
Nitroben..	7.595	36743	bb	107.673	108	29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	289588	bb	99.292	99	29/Jul/08	ex48g29	
4-Amino-..	8.446	133896	bd	96.913	97	29/Jul/08	ex48g29	
2-Amino-..	9.200	211848	db	99.232	99	29/Jul/08	ex48g29	
2,6-Dini..	9.511	206170	bd	108.371	108	29/Jul/08	ex48g29	
2,4-Dini..	10.076	209566	bb	0.977	98	29/Jul/08	ex48g29	
2,4-Dini..	10.170	82166	dd	88.652	89	29/Jul/08	ex48g29	
2-Nitrot..	11.836	39620	bb	95.175	95	29/Jul/08	ex48g29	
PETN	11.693	225608	bb	102.392	102	29/Jul/08	ex48g29	
4-Nitrot..	12.779	29178	bb	90.803	91	29/Jul/08	ex48g29	
3-Nitrot..	13.637	17350	bb	100.953	101	29/Jul/08	ex48g29	

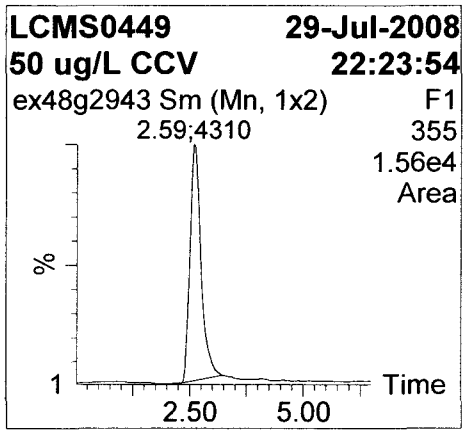
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

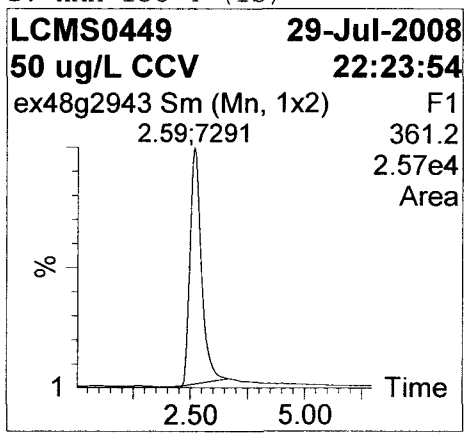
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2943
Text: 50 ug/L CCV

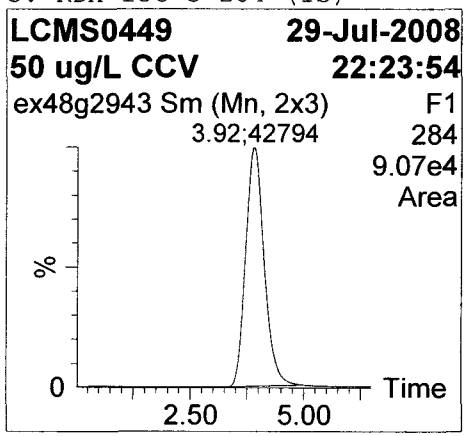
1: HMX



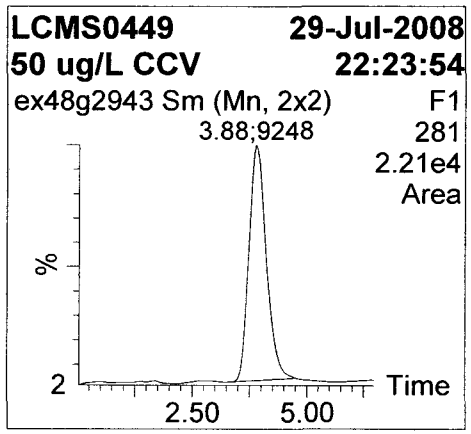
2: HMX 13C-4 (IS)



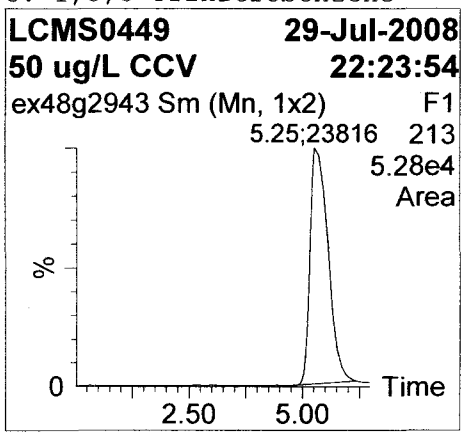
3: RDX 13C-3 284 (IS)



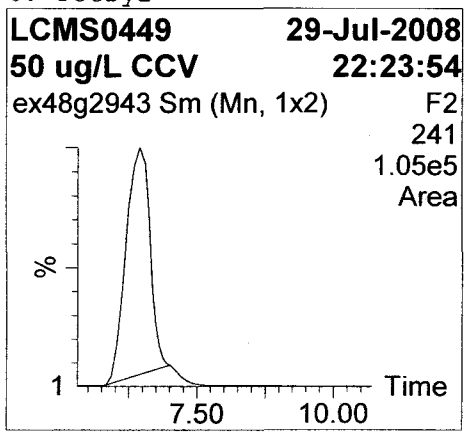
4: RDX



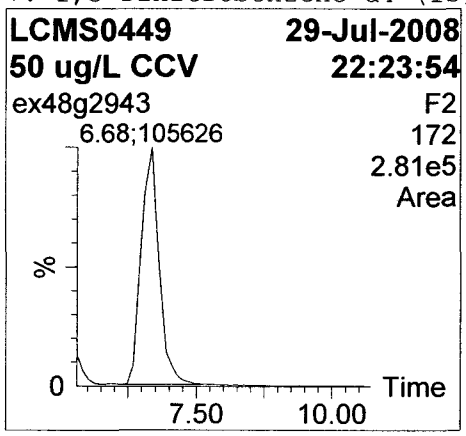
5: 1,3,5-Trinitrobenzene



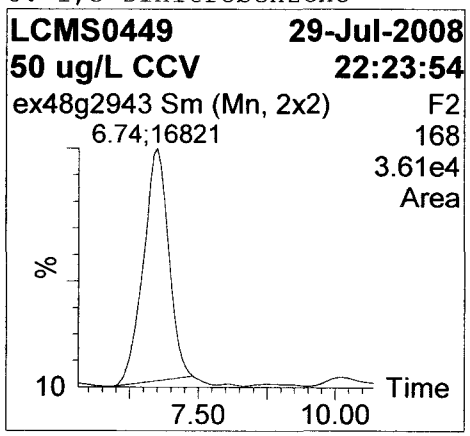
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



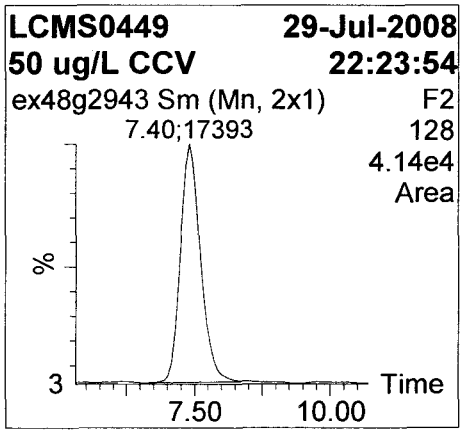
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

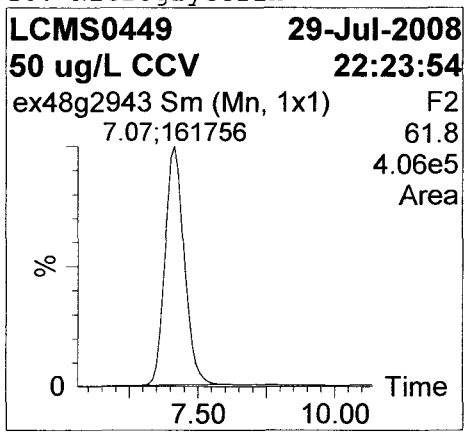
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2943
Text: 50 ug/L CCV

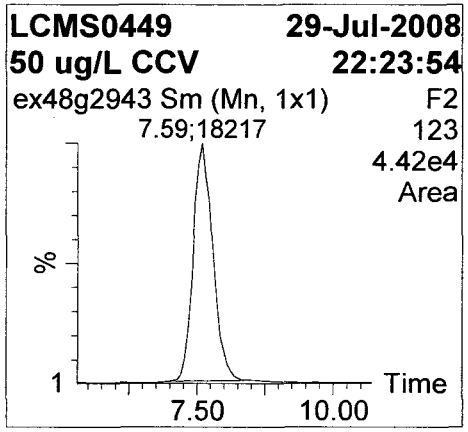
9: Nitrobenzene-d5



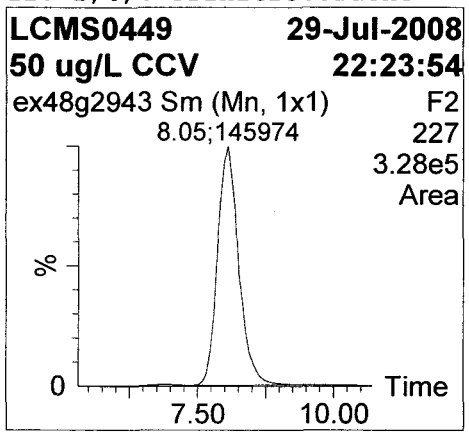
10: Nitroglycerin



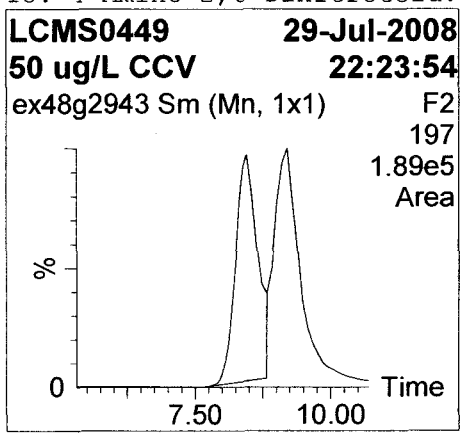
11: Nitrobenzene



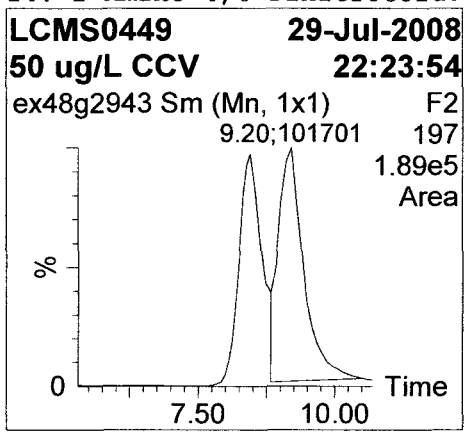
12: 2,4,6-Trinitrotoluene



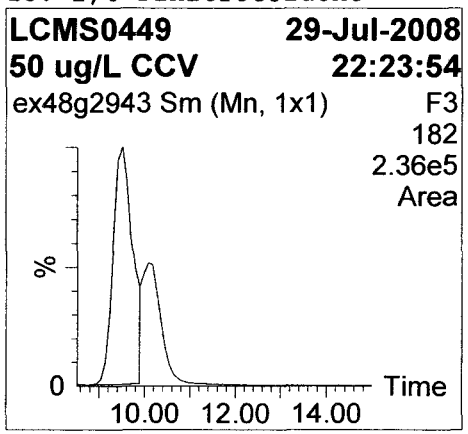
13: 4-Amino-2,6-Dinitrotolu..



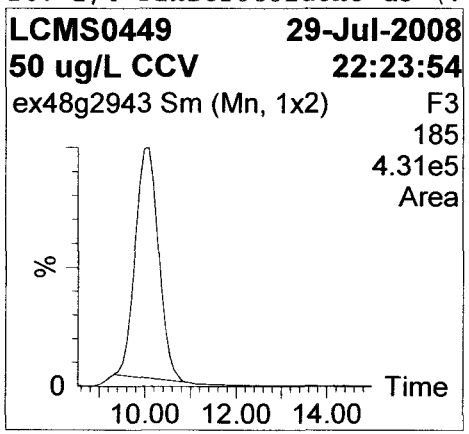
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



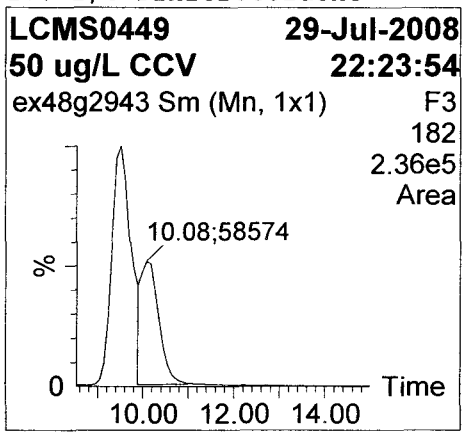
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

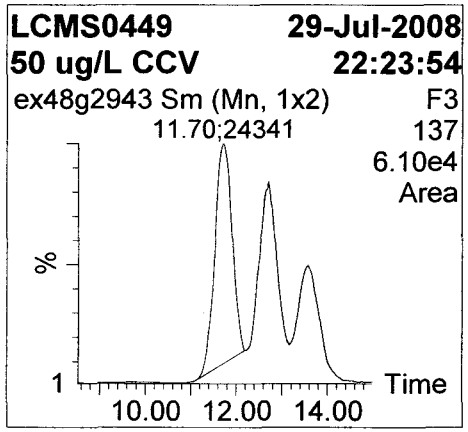
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2943
Text: 50 ug/L CCV

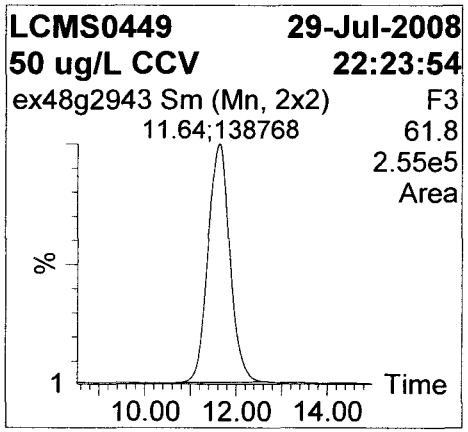
17: 2,4-Dinitrotoluene



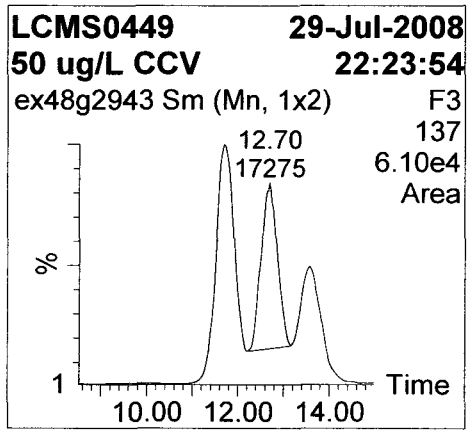
18: 2-Nitrotoluene



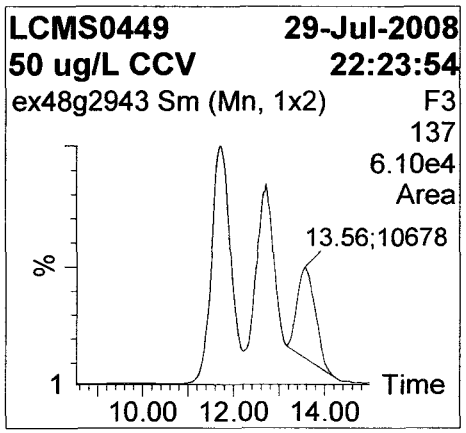
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2943
Text: 50 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	4310	bb	52.191	104	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7291	bb	1.096	110	29/Jul/08	ex48g29	
RDX 13C-..	3.919	42794	bb	1.055	105	29/Jul/08	ex48g29	
RDX	3.882	9248	bb	60.998	122	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	23816	bb	57.372	115	29/Jul/08	ex48g29	
Tetryl	6.444	50873	bb	47.253	95	29/Jul/08	ex48g29	
1,3 Dini..	6.677	105626	bb	1.041	104	29/Jul/08	ex48g29	
1,3-Dini..	6.743	16821	bb	48.719	97	29/Jul/08	ex48g29	
Nitroben..	7.398	17393	bb	55.848	112	29/Jul/08	ex48g29	
Nitrogly..	7.071	161756	bb	57.787	116	29/Jul/08	ex48g29	
Nitroben..	7.595	18217	bb	51.796	104	29/Jul/08	ex48g29	
2,4,6-Tr..	8.053	145974	bb	49.238	98	29/Jul/08	ex48g29	
4-Amino-..	8.446	83615	bd	59.172	118	29/Jul/08	ex48g29	
2-Amino-..	9.199	101701	db	46.888	94	29/Jul/08	ex48g29	
2,6-Dini..	9.510	113711	bd	50.507	101	29/Jul/08	ex48g29	
2,4-Dini..	10.075	246428	bb	1.149	115	29/Jul/08	ex48g29	
2,4-Dini..	10.075	58574	dd	54.073	108	29/Jul/08	ex48g29	
2-Nitrot..	11.701	24341	bb	49.404	99	29/Jul/08	ex48g29	
PETN	11.643	138768	bb	53.332	107	29/Jul/08	ex48g29	
4-Nitrot..	12.700	17275	bb	44.885	90	29/Jul/08	ex48g29	
3-Nitrot..	13.558	10678	bb	51.770	104	29/Jul/08	ex48g29	

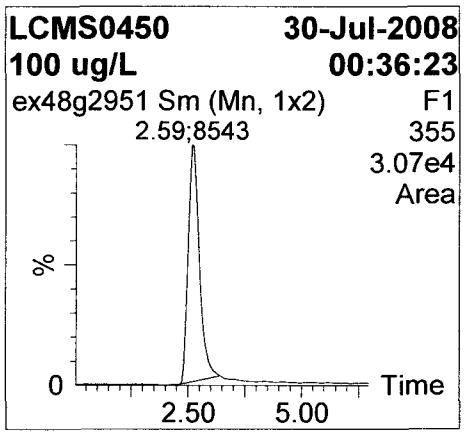
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

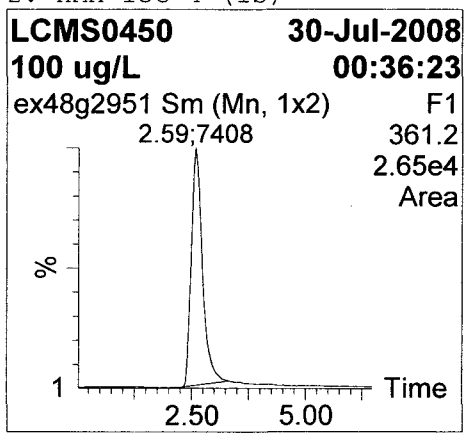
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2951
Text: 100 ug/L

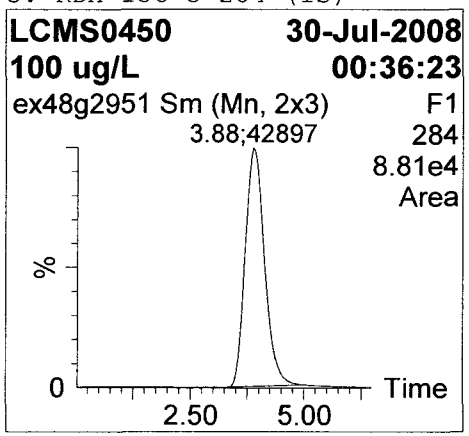
1: HMX



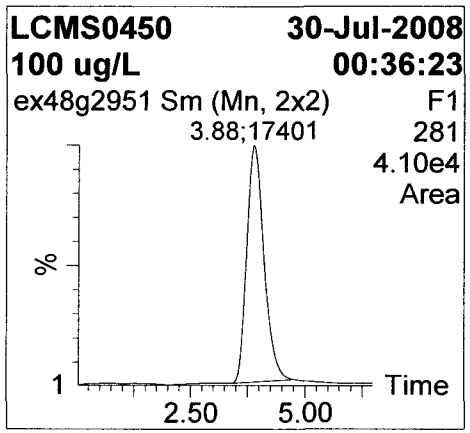
2: HMX 13C-4 (IS)



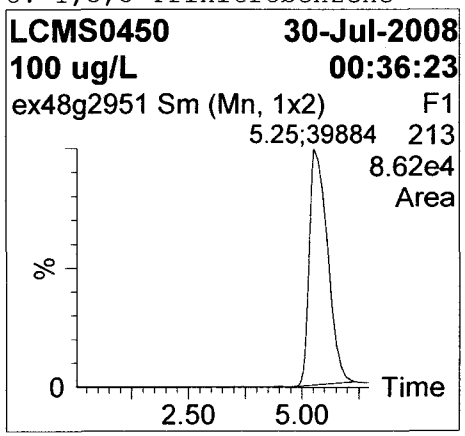
3: RDX 13C-3 284 (IS)



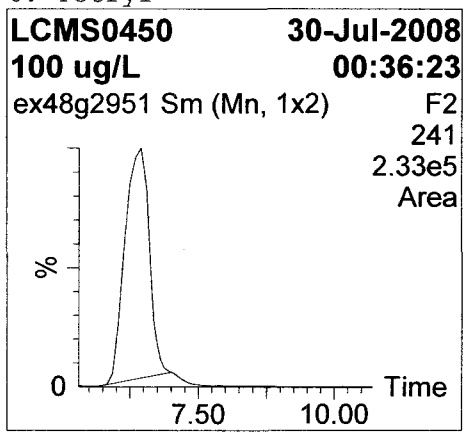
4: RDX



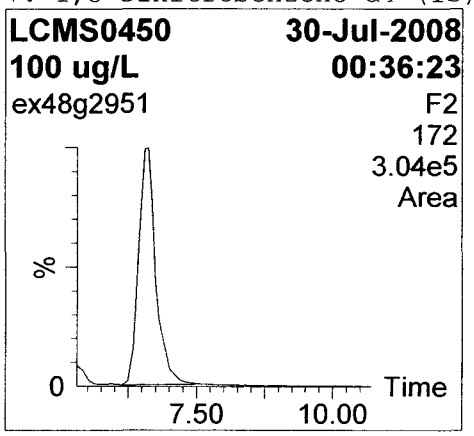
5: 1,3,5-Trinitrobenzene



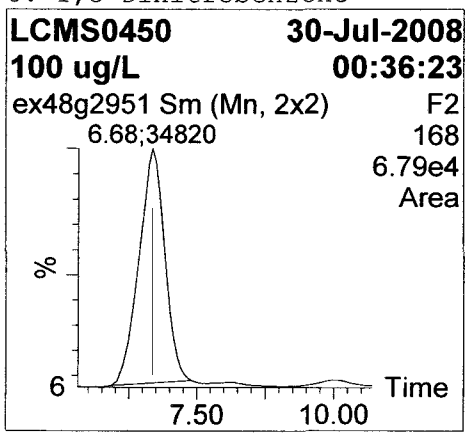
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



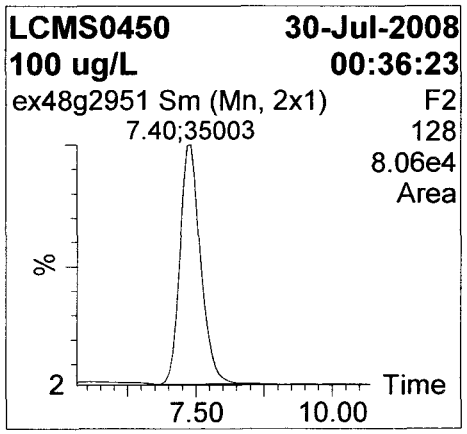
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

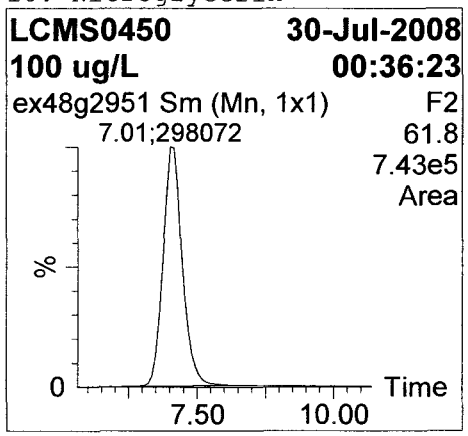
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2951
Text: 100 ug/L

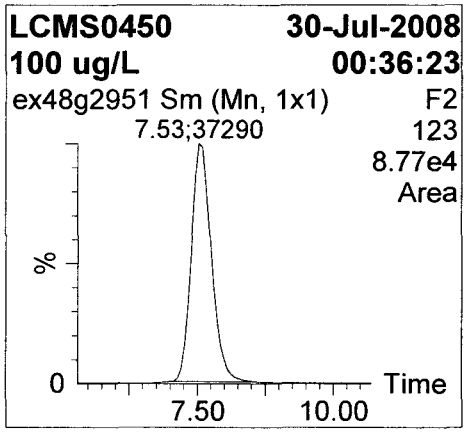
9: Nitrobenzene-d5



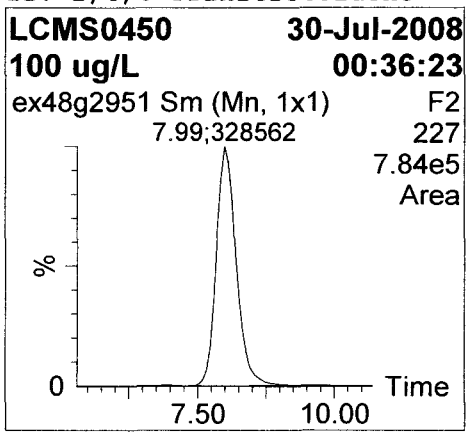
10: Nitroglycerin



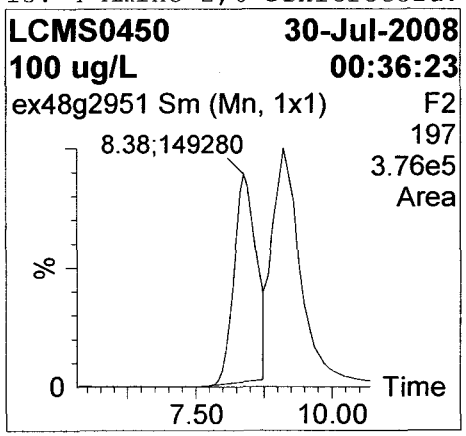
11: Nitrobenzene



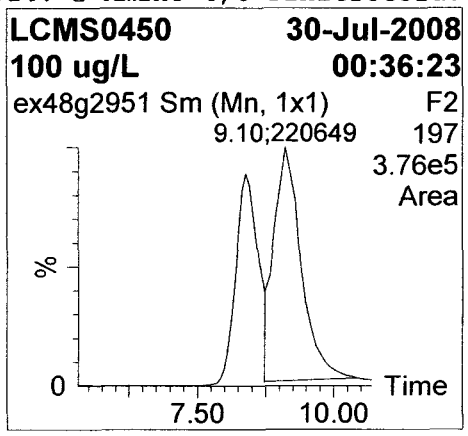
12: 2,4,6-Trinitrotoluene



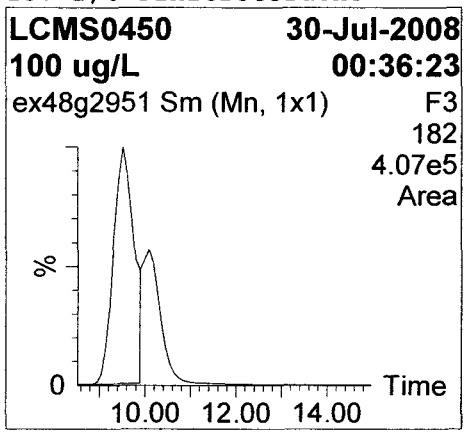
13: 4-Amino-2,6-Dinitrotolu..



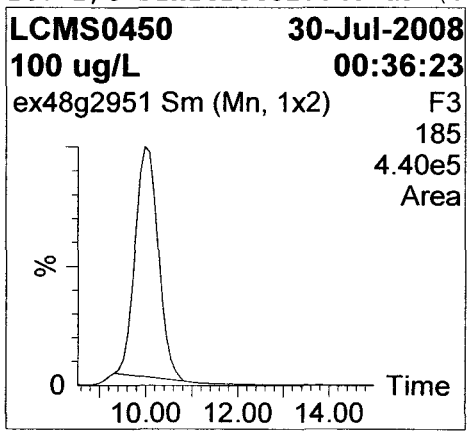
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



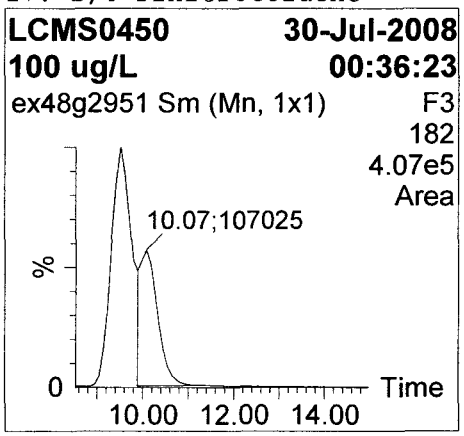
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

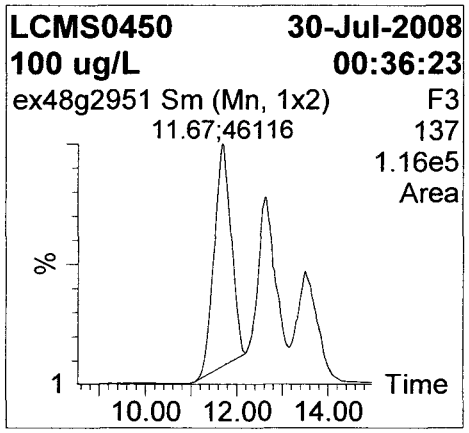
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2951
Text: 100 ug/L

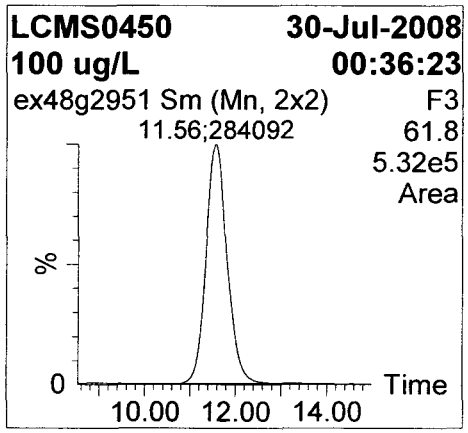
17: 2,4-Dinitrotoluene



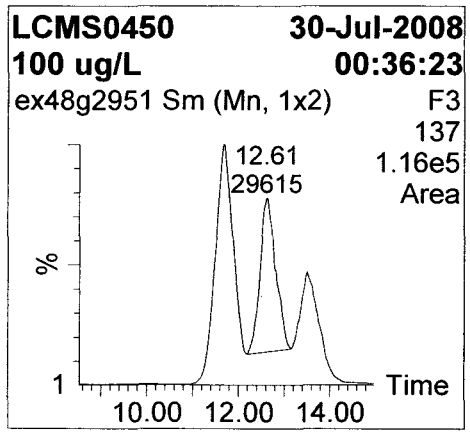
18: 2-Nitrotoluene



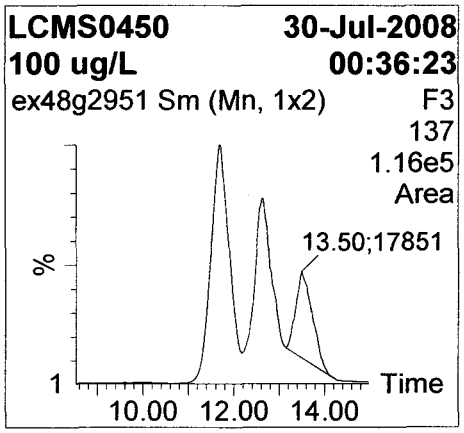
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 72

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2951
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	8543	bb	103.378	103	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7408	bb	1.114	111	29/Jul/08	ex48g29	
RDX 13C-..	3.882	42897	bb	1.057	106	29/Jul/08	ex48g29	
RDX	3.882	17401	bb	117.680	118	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	39884	bb	93.107	93	29/Jul/08	ex48g29	
Tetryl	6.444	115626	bb	102.720	103	29/Jul/08	ex48g29	
1,3 Dini..	6.612	109879	bb	1.083	108	29/Jul/08	ex48g29	
1,3-Dini..	6.678	34820	bb	98.719	99	29/Jul/08	ex48g29	
Nitroben..	7.398	35003	bb	109.374	109	29/Jul/08	ex48g29	
Nitrogly..	7.005	298072	bb	103.672	104	29/Jul/08	ex48g29	
Nitroben..	7.529	37290	bb	102.943	103	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	328562	bb	106.151	106	29/Jul/08	ex48g29	
4-Amino-..	8.380	149280	bd	101.853	102	29/Jul/08	ex48g29	
2-Amino-..	9.104	220649	db	97.415	97	29/Jul/08	ex48g29	
2,6-Dini..	9.509	204376	bd	91.003	91	29/Jul/08	ex48g29	
2,4-Dini..	9.980	247124	bb	1.152	115	29/Jul/08	ex48g29	
2,4-Dini..	10.074	107025	dd	97.717	98	29/Jul/08	ex48g29	
2-Nitrot..	11.670	46116	bb	93.935	94	29/Jul/08	ex48g29	
PETN	11.556	284092	bb	109.371	109	29/Jul/08	ex48g29	
4-Nitrot..	12.612	29615	bb	77.718	78	29/Jul/08	ex48g29	
3-Nitrot..	13.498	17851	bb	87.799	88	29/Jul/08	ex48g29	

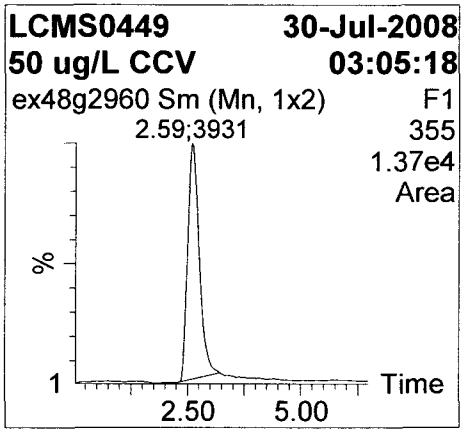
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

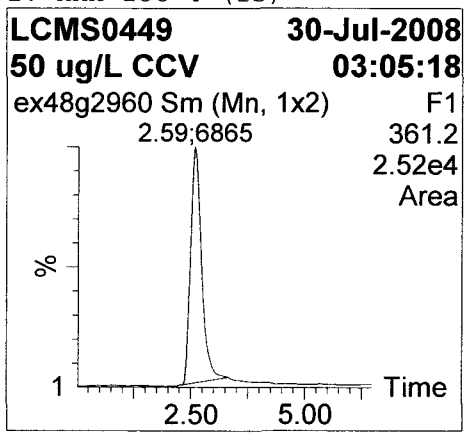
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2960
Text: 50 ug/L CCV

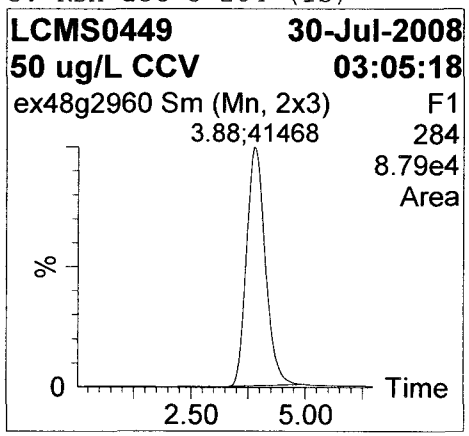
1: HMX



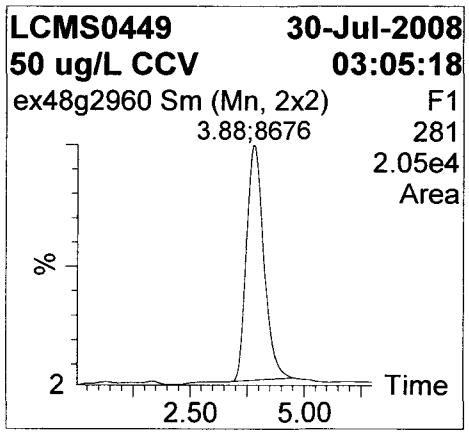
2: HMX 13C-4 (IS)



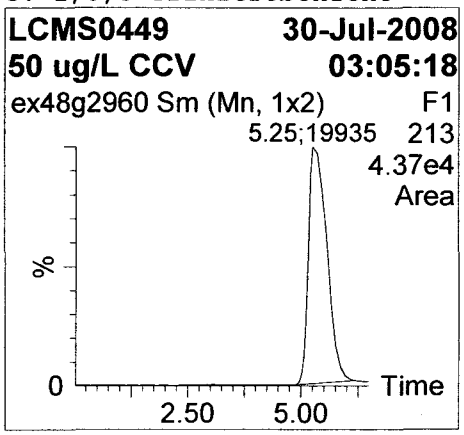
3: RDX 13C-3 284 (IS)



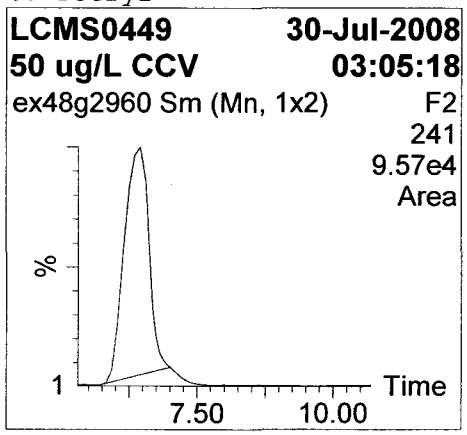
4: RDX



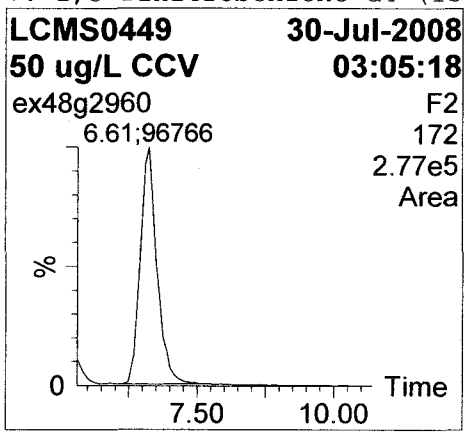
5: 1,3,5-Trinitrobenzene



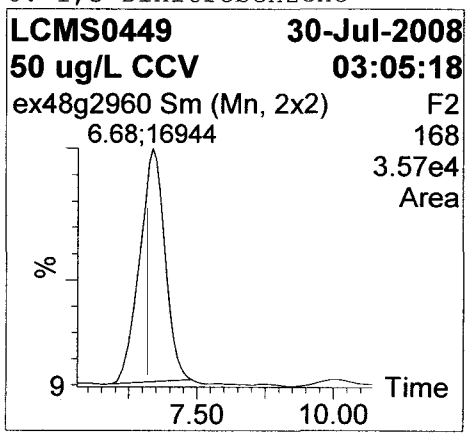
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



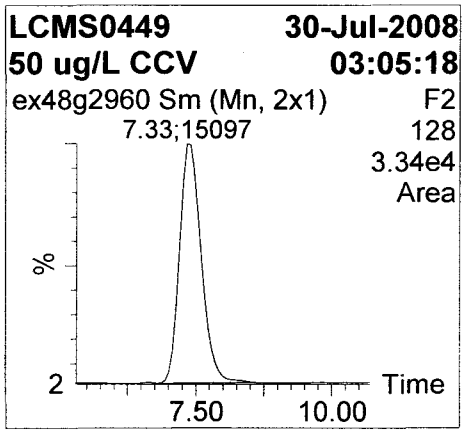
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

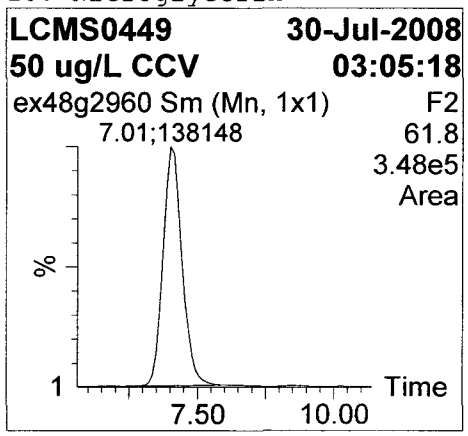
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2960
Text: 50 ug/L CCV

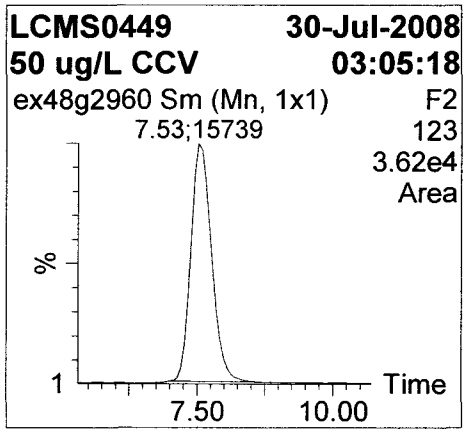
9: Nitrobenzene-d5



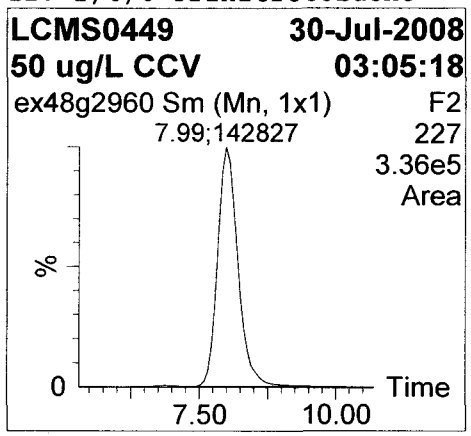
10: Nitroglycerin



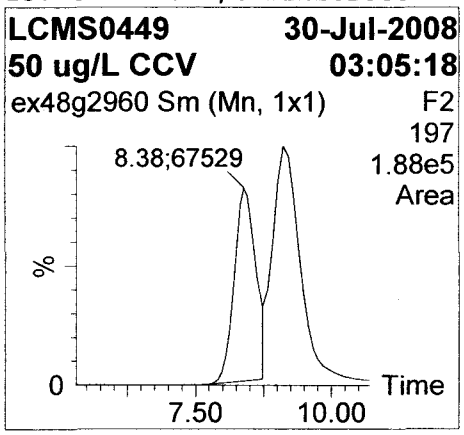
11: Nitrobenzene



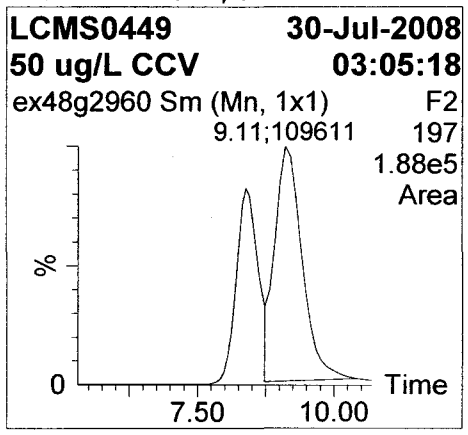
12: 2,4,6-Trinitrotoluene



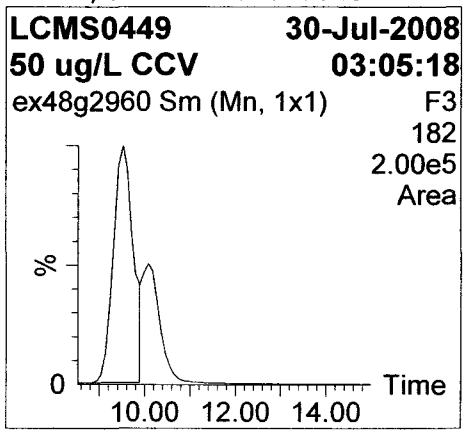
13: 4-Amino-2,6-Dinitrotolu..



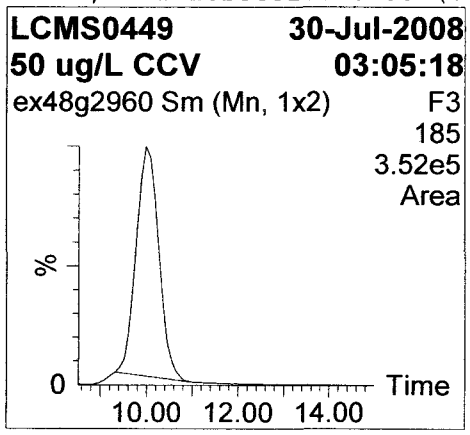
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



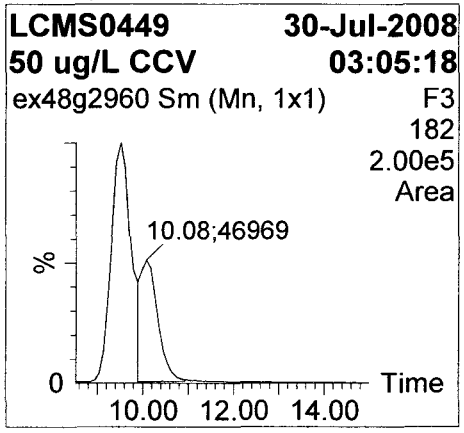
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

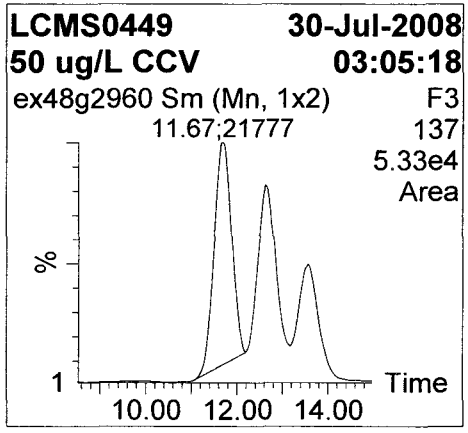
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2960
Text: 50 ug/L CCV

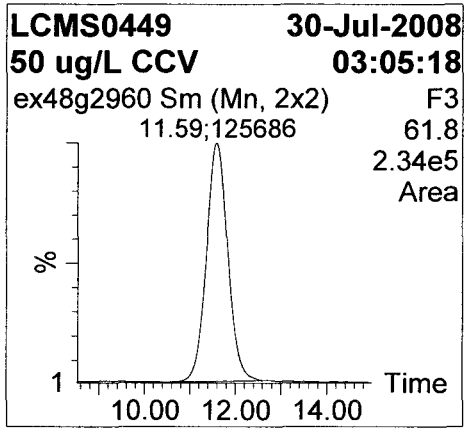
17: 2,4-Dinitrotoluene



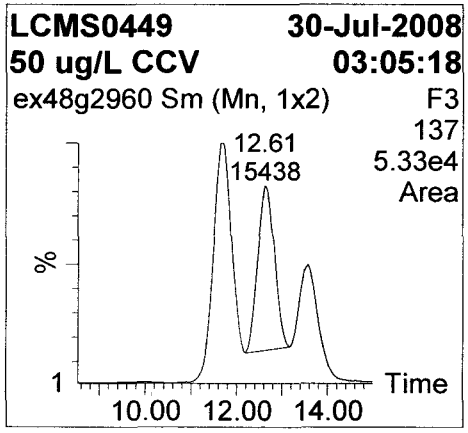
18: 2-Nitrotoluene



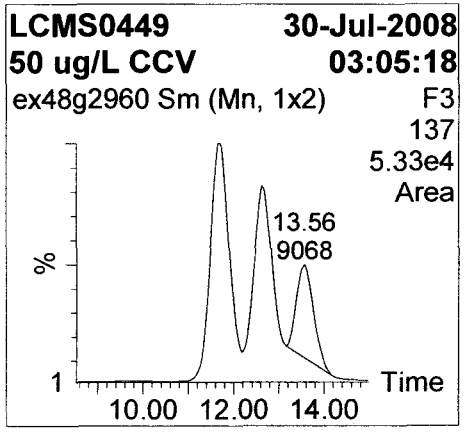
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2960
Text: 50 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	3931	bb	50.504	101	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6865	bb	1.032	103	29/Jul/08	ex48g29	
RDX 13C-..	3.882	41468	bb	1.022	102	29/Jul/08	ex48g29	
RDX	3.882	8676	bb	58.941	118	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	19935	bb	52.315	105	29/Jul/08	ex48g29	
Tetryl	6.444	47425	bb	48.076	96	29/Jul/08	ex48g29	
1,3 Dini..	6.612	96766	bb	0.954	95	29/Jul/08	ex48g29	
1,3-Dini..	6.678	16944	bb	53.748	107	29/Jul/08	ex48g29	
Nitroben..	7.333	15097	bb	52.841	106	29/Jul/08	ex48g29	
Nitrogly..	7.005	138148	bb	53.757	108	29/Jul/08	ex48g29	
Nitroben..	7.529	15739	bb	48.789	98	29/Jul/08	ex48g29	
2,4,6-Tr..	7.988	142827	bb	52.565	105	29/Jul/08	ex48g29	
4-Amino-..	8.381	67529	bd	52.114	104	29/Jul/08	ex48g29	
2-Amino-..	9.105	109611	db	55.100	110	29/Jul/08	ex48g29	
2,6-Dini..	9.511	98247	bd	55.377	111	29/Jul/08	ex48g29	
2,4-Dini..	9.981	194396	bb	0.906	91	29/Jul/08	ex48g29	
2,4-Dini..	10.075	46969	dd	54.961	110	29/Jul/08	ex48g29	
2-Nitrot..	11.672	21777	bb	56.123	112	29/Jul/08	ex48g29	
PETN	11.587	125686	bb	61.304	123	29/Jul/08	ex48g29	
4-Nitrot..	12.615	15438	bb	50.955	102	29/Jul/08	ex48g29	
3-Nitrot..	13.557	9068	bb	55.902	112	29/Jul/08	ex48g29	

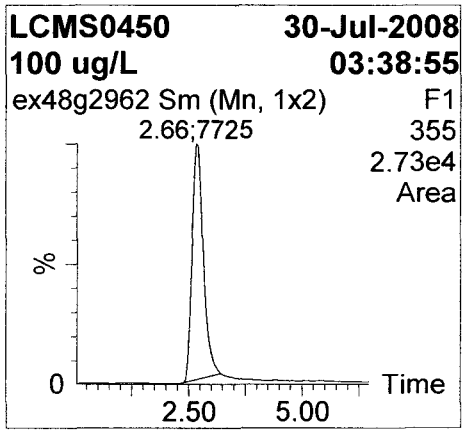
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

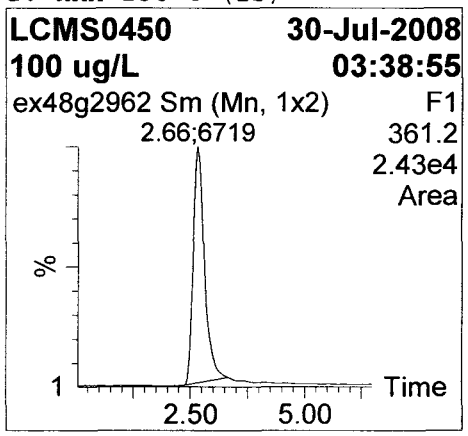
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2962
Text: 100 ug/L

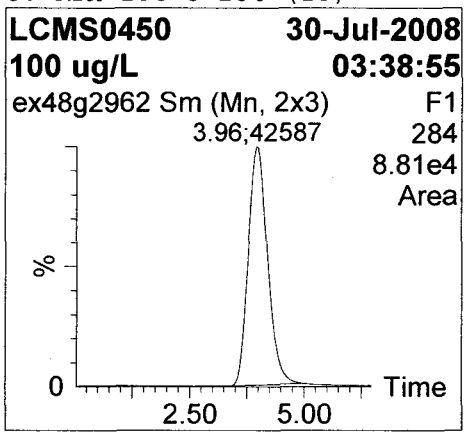
1: HMX



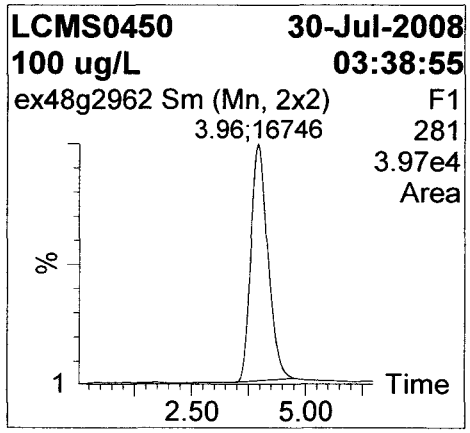
2: HMX 13C-4 (IS)



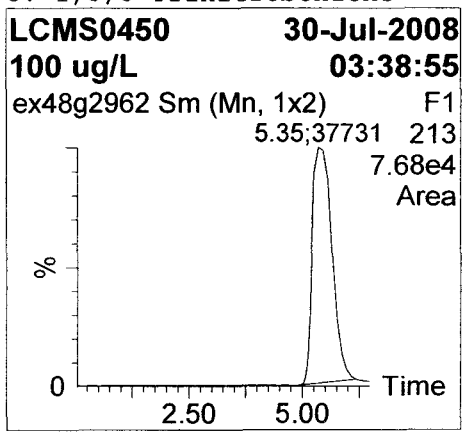
3: RDX 13C-3 284 (IS)



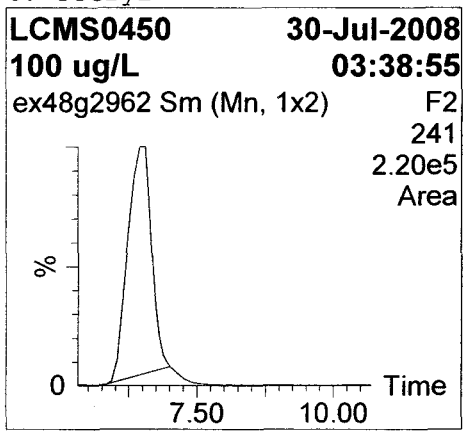
4: RDX



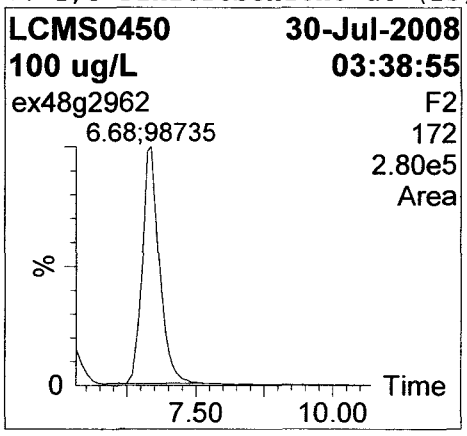
5: 1,3,5-Trinitrobenzene



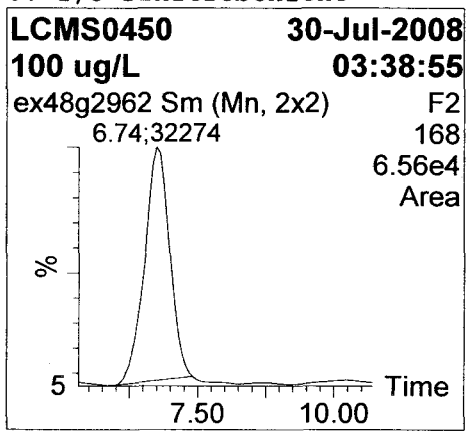
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



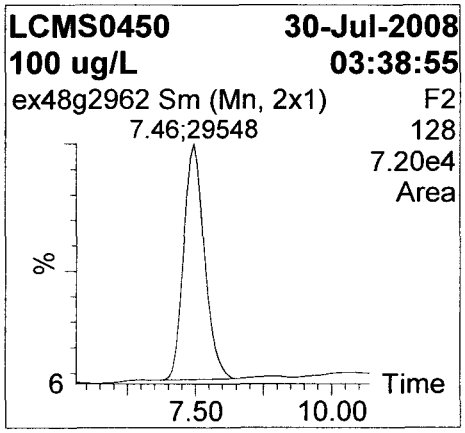
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

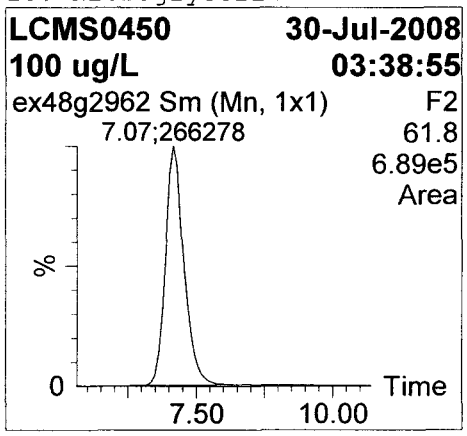
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2962
Text: 100 ug/L

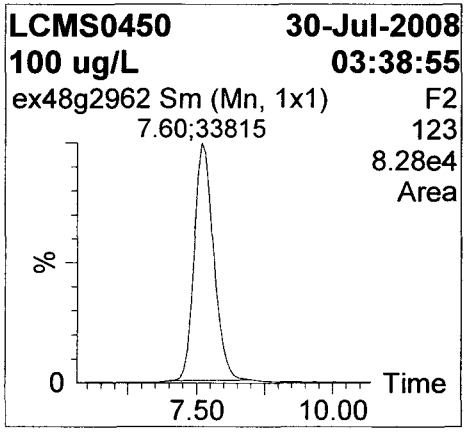
9: Nitrobenzene-d5



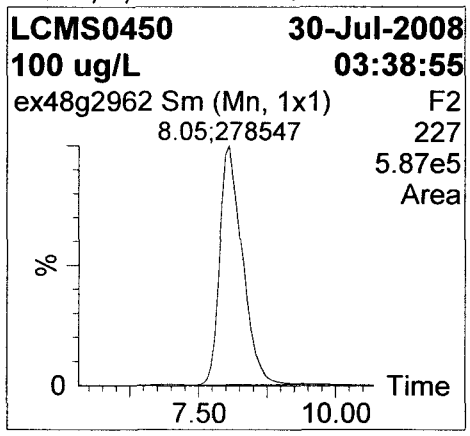
10: Nitroglycerin



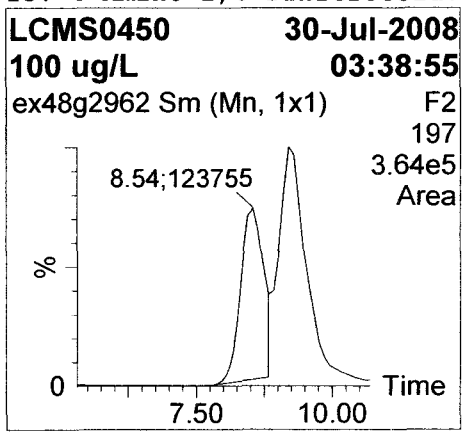
11: Nitrobenzene



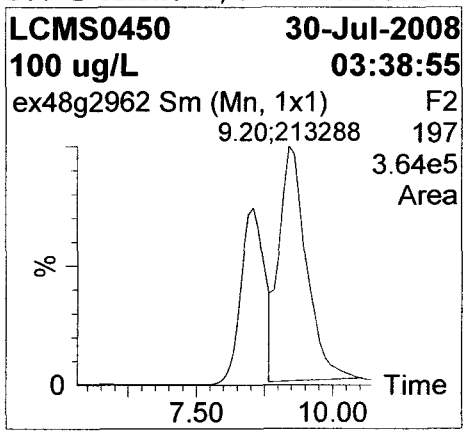
12: 2,4,6-Trinitrotoluene



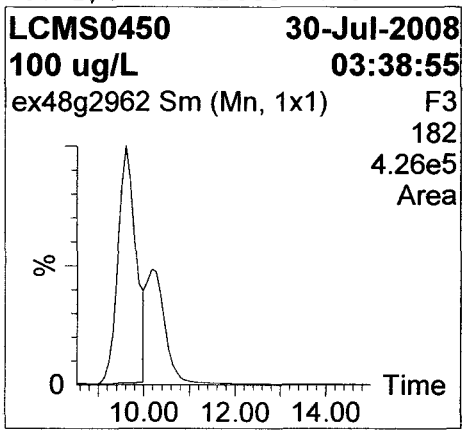
13: 4-Amino-2,6-Dinitrotolu..



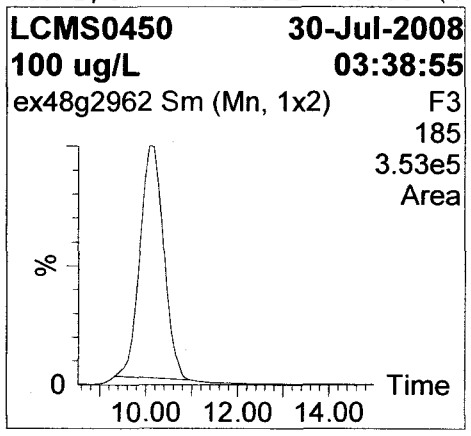
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



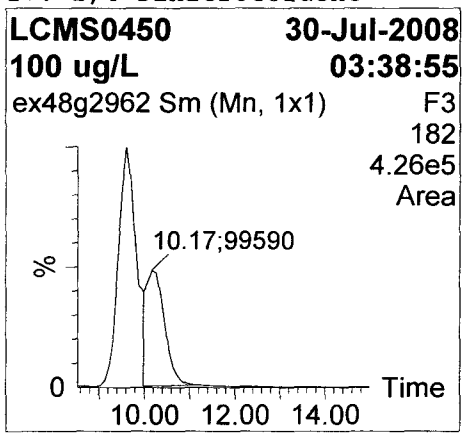
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

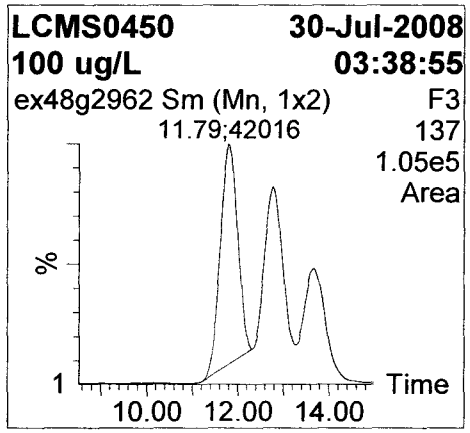
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2962
Text: 100 ug/L

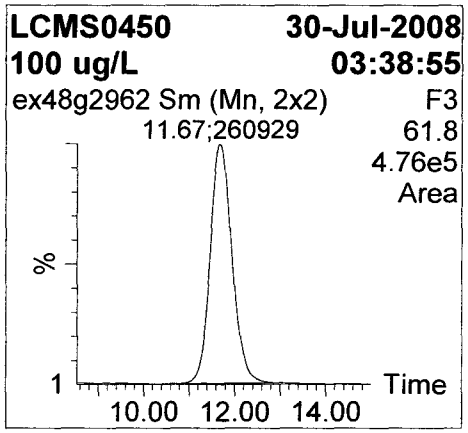
17: 2,4-Dinitrotoluene



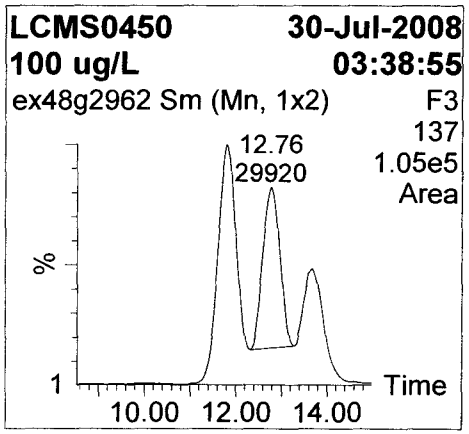
18: 2-Nitrotoluene



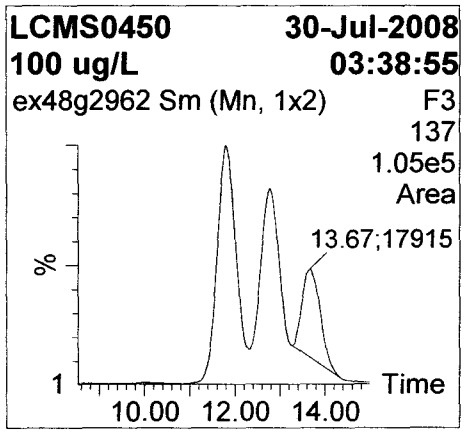
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2962
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.662	7725	bb	103.059	103	29/Jul/08	ex48g29	
HMX 13C-..	2.662	6719	bb	1.010	101	29/Jul/08	ex48g29	
RDX 13C-..	3.956	42587	bb	1.050	105	29/Jul/08	ex48g29	
RDX	3.956	16746	bb	113.966	114	29/Jul/08	ex48g29	
1,3,5-Tr..	5.353	37731	bb	98.087	98	29/Jul/08	ex48g29	
Tetryl	6.444	106300	bb	105.083	105	29/Jul/08	ex48g29	
1,3 Dini..	6.678	98735	bb	0.973	97	29/Jul/08	ex48g29	
1,3-Dini..	6.743	32274	bb	101.883	102	29/Jul/08	ex48g29	
Nitroben..	7.464	29548	bb	102.664	103	29/Jul/08	ex48g29	
Nitrogly..	7.071	266278	bb	103.058	103	29/Jul/08	ex48g29	
Nitroben..	7.595	33815	bb	103.895	104	29/Jul/08	ex48g29	
2,4,6-Tr..	8.054	278547	bb	100.168	100	29/Jul/08	ex48g29	
4-Amino-..	8.541	123755	bd	93.936	94	29/Jul/08	ex48g29	
2-Amino-..	9.200	213288	db	104.767	105	29/Jul/08	ex48g29	
2,6-Dini..	9.605	189964	bd	101.777	102	29/Jul/08	ex48g29	
2,4-Dini..	10.075	205528	bb	0.958	96	29/Jul/08	ex48g29	
2,4-Dini..	10.170	99590	db	109.028	109	29/Jul/08	ex48g29	
2-Nitrot..	11.787	42016	bb	102.969	103	29/Jul/08	ex48g29	
PETN	11.673	260929	bb	120.834	121	29/Jul/08	ex48g29	
4-Nitrot..	12.758	29920	bb	95.120	95	29/Jul/08	ex48g29	
3-Nitrot..	13.672	17915	bb	106.408	106	29/Jul/08	ex48g29	

LC/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04).SPL
Last Modified: 30 July 2008 08:10:13 Mountain Daylight Time
Printed: 30 July 2008 08:10:17 Mountain Daylight Time Page Position (1, 1)

	File Name	Sample ID	File Text	Sample Type	Analyte ug/L	QC ug/L	Bottle	Extract (mL)
1	ex48g2907	LCMS0453	blank	Blank	0	50	1	1.000000
2	ex48g2908	LCMS0446	5 ug/L	Standard	5	5	2	1.000000
3	ex48g2909	LCMS0447	10 ug/L	Standard	10	10	3	1.000000
4	ex48g2910	LCMS0448	25 ug/L	Standard	25	25	4	1.000000
5	ex48g2911	LCMS0449	50 ug/L	Standard	50	50	5	1.000000
6	ex48g2912	LCMS0450	100 ug/L	Standard	100	100	6	1.000000
7	ex48g2913	LCMS0451	200 ug/L	Standard	200	200	7	1.000000
8	ex48g2914	LCMS0452	300 ug/L	Standard	300	300	8	1.000000
9	ex48g2915	LCMS0453	blank	Blank	0	50	1	1.000000
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100	100	9	1.000000
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50	50	5	1.000000
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank	0	389.105	34	40.000000
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.825	396.825	35	40.000000
14	ex48g2946	KRW241AC	D8G210174-012	Analyte	0	403.226	36	40.000000
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte	0	392.542	38	40.000000
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte	0	389.484	39	40.000000
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte	0	404.449	40	40.000000
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100	100	6	1.000000
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte	0	393.701	41	40.000000
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte	0	400.000	42	40.000000
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte	0	398.406	43	40.000000
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte	0	402.010	44	40.000000
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.802	400.802	45	40.000000
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.820	402.820	46	40.000000
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte	0	389.484	47	40.000000
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte	0	391.007	48	40.000000
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50	50	5	1.000000
28	ex48g2961	KRW281AC	D8G210174-016	Analyte	0	400.400	49	40.000000
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100	100	6	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04).SPL
Last Modified: 30 July 2008 08:10:13 Mountain Daylight Time
Printed: 30 July 2008 08:10:17 Mountain Daylight Time

Page Position (2, 1)

sample (mL or g)	dilution	Inject Volume (uL)	Inlet File	MS File	MS Tune File
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.280000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.080000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.920000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.190000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.270000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.890000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.160000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.040000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.950000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.980000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.930000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.270000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
10.230000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
9.990000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 1: HMX Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.997772
Calibration curve: 0.0109807 * x + 0.0180378
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				7531					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	2.588	470	7495	bb	0.063	4.073	81.5	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	2.588	877	6968	bb	0.126	9.817	98.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	2.588	2342	7140	bb	0.328	28.235	112.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	2.588	4108	6774	bb	0.606	53.583	107.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	2.588	7658	6663	bb	1.149	103.035	103.0	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	2.588	12397	5576	bb	2.223	200.831	100.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	2.588	19063	5944	bb	3.207	290.426	96.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				7624					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	2.662	7228	6696	bb	1.080	96.669	96.7	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	2.588	4310	7291	bb	0.591	52.191	104.4	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				7925					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	2.588	8109	7399	bb	1.096	389.505	98.2	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				7948					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				7726					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				7478					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				7955					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	2.588	8543	7408	bb	1.153	103.378	103.4	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				8054					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				7998					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				7788					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				8106					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	2.588	8357	6566	bb	1.273	457.962	114.3	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	2.588	7874	6965	bb	1.131	408.124	101.3	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				7432					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				8037					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	2.588	3931	6865	bb	0.573	50.504	101.0	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				6573					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	2.662	7725	6719	bb	1.150	103.059	103.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 2: HMX 13C-4 (IS) Sample List: ex48g29(04) Method File: ex48g29
Response Factor: 6651.37
RRF SD: 673.653, % Relative SD: 10.1280
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		2.588	7531		bb	7530.946	1.132	113.2	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	2.588	7495		bb	7494.528	1.127	112.7	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	2.588	6968		bb	6968.432	1.048	104.8	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	2.588	7140		bb	7139.938	1.073	107.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	2.588	6774		bb	6774.367	1.018	101.8	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	2.588	6663		bb	6662.704	1.002	100.2	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	2.588	5576		bb	5575.795	0.838	83.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	2.588	5944		bb	5943.849	0.894	89.4	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		2.625	7624		bb	7624.451	1.146	114.6	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	2.662	6696		bb	6695.607	1.007	100.7	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	2.588	7291		bb	7291.026	1.096	109.6	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank		2.588	7925		bb	7924.501	1.191	119.1	40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	1.00	2.588	7399		bb	7399.471	1.112	111.2	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte		2.588	7948		bb	7947.821	1.195	119.5	40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte		2.588	7726		bb	7726.063	1.162	116.2	40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte		2.588	7478		bb	7478.381	1.124	112.4	40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte		2.625	7955		bb	7954.971	1.196	119.6	40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	1.00	2.588	7408		bb	7407.857	1.114	111.4	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte		2.588	8054		bb	8054.372	1.211	121.1	40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte		2.588	7998		bb	7998.414	1.203	120.3	40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte		2.625	7788		bb	7788.007	1.171	117.1	40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte		2.588	8106		bb	8106.204	1.219	121.9	40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	1.00	2.588	6566		bb	6566.329	0.987	98.7	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	1.00	2.588	6965		bb	6964.837	1.047	104.7	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte		2.588	7432		bb	7431.661	1.117	111.7	40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte		2.625	8037		bb	8036.722	1.208	120.8	40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	1.00	2.588	6865		bb	6865.381	1.032	103.2	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte		2.588	6573		bb	6573.104	0.988	98.8	40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	1.00	2.662	6719		bb	6718.899	1.010	101.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 3: RDX 13C-3 284 (IS) Sample List: ex48g29(04) Method File: ex48g29
Response Factor: 40575.0
RRF SD: 2245.74, % Relative SD: 5.53478
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		3.882	40528	bb	40527.902	0.999	99.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	3.882	40892	bb	40892.055	1.008	100.8	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	3.882	36550	bb	36550.301	0.901	90.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	3.919	39515	bb	39515.344	0.974	97.4	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	3.919	39776	bb	39775.504	0.980	98.0	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	3.882	42015	bb	42015.160	1.035	103.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	3.882	41741	bb	41740.750	1.029	102.9	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	3.845	43536	bb	43535.777	1.073	107.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		3.956	43027	bb	43027.234	1.060	106.0	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	3.956	39156	bb	39155.984	0.965	96.5	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	3.919	42794	bb	42793.707	1.055	105.5	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank		3.882	44878	bb	44878.461	1.106	110.6	40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	1.00	3.882	45127	bb	45127.223	1.112	111.2	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte		3.882	51602	bb	51602.457	1.272	127.2	40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte		3.882	42208	bb	42208.164	1.040	104.0	40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte		3.882	43951	bb	43950.652	1.083	108.3	40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte		3.956	43935	bb	43934.992	1.083	108.3	40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	1.00	3.882	42897	bb	42897.105	1.057	105.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte		3.882	46239	bb	46239.063	1.140	114.0	40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte		3.882	45463	bb	45462.621	1.120	112.0	40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte		3.919	44215	bb	44215.395	1.090	109.0	40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte		3.919	44544	bb	44544.488	1.098	109.8	40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	1.00	3.956	41988	bb	41987.680	1.035	103.5	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	1.00	3.882	44451	bb	44451.461	1.096	109.6	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte		3.882	43571	bb	43570.570	1.074	107.4	40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte		3.919	45103	bb	45102.922	1.112	111.2	40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	1.00	3.882	41468	bb	41468.215	1.022	102.2	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte		3.882	48582	bb	48581.910	1.197	119.7	40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	1.00	3.956	42587	bb	42586.969	1.050	105.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 4: RDX Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.991254
Calibration curve: 0.00334413 * x + 0.0121126
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				40528					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	3.882	919	40892	bb	0.022	3.095	61.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	3.919	1704	36550	bb	0.047	10.317	103.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	3.882	4303	39515	bb	0.109	28.940	115.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	3.882	8275	39776	bb	0.208	58.592	117.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	3.882	15674	42015	bb	0.373	107.935	107.9	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	3.882	28710	41741	bb	0.688	202.057	101.0	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	3.845	41156	43536	bb	0.945	279.064	93.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				43027					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	3.993	14966	39156	bb	0.382	110.670	110.7	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	3.882	9248	42794	bb	0.216	60.998	122.0	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				44878					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	3.882	17233	45127	bb	0.382	438.780	110.6	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				51602					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				42208					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				43951					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				43935					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	3.882	17401	42897	bb	0.406	117.680	117.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				46239					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				45463					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				44215					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				44544					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	3.956	15629	41988	bb	0.372	431.610	107.7	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	3.882	15471	44451	bb	0.348	404.635	100.5	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				43571					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				45103					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	3.882	8676	41468	bb	0.209	58.941	117.9	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				48582					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	3.956	16746	42587	bb	0.393	113.966	114.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 5: 1,3,5-Trinitrobenzene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.994563
Calibration curve: 0.00384794 * x + 0.00471089
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	5.250	1920	101368	bb	0.019	3.698	74.0	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	5.250	4235	88759	bb	0.048	11.174	111.7	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	5.250	9940	90543	bb	0.110	27.306	109.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	5.250	19425	97797	bb	0.199	50.394	100.8	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	5.250	45144	104190	bb	0.433	111.376	111.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	5.353	80258	111799	bb	0.718	185.336	92.7	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	5.353	134286	115580	bb	1.162	300.715	100.2	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	5.353	36835	103558	bb	0.356	91.213	91.2	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	5.250	23816	105626	bb	0.225	57.372	114.7	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	5.250	46121	102584	bb	0.450	458.797	115.6	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	5.250	39884	109879	bb	0.363	93.107	93.1	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	5.455	42094	98197	bb	0.429	441.594	110.2	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	5.250	42222	110634	bb	0.382	394.587	98.0	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	5.250	19935	96766	bb	0.206	52.315	104.6	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	5.353	37731	98735	bb	0.382	98.087	98.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 6: Tetryl Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.998525
Calibration curve: 0.0102885 * x + -0.00453104
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	6.444	4706	101368	bb	0.046	4.953	99.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	6.444	9003	88759	bb	0.101	10.299	103.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	6.445	23750	90543	bb	0.262	25.936	103.7	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	6.445	49397	97797	bb	0.505	49.534	99.1	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	6.444	100652	104190	bb	0.966	94.335	94.3	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	6.444	223758	111799	bb	2.001	194.970	97.5	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	6.444	368080	115580	bb	3.185	309.973	103.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	6.444	102152	103558	bb	0.986	96.317	96.3	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	6.444	50873	105626	bb	0.482	47.253	94.5	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	6.444	139786	102584	bb	1.363	527.319	132.9	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	6.444	115626	109879	bb	1.052	102.720	102.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	6.547	122618	98197	bb	1.249	488.207	121.8	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	6.444	127256	110634	bb	1.150	452.119	112.2	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	6.444	47425	96766	bb	0.490	48.076	96.2	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	6.444	106300	98735	bb	1.077	105.083	105.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 7: 1,3 Dinitrobenzene-d4 (IS) Sample List: ex48g29(04) Method File: ex48g29
Response Factor: 101434
RRF SD: 10063.6, % Relative SD: 9.92135
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		6.743	102345	bb	102344.820 1.009	100.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	6.678	101368	bb	101367.680 0.999	99.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	6.612	88759	bb	88758.570 0.875	87.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	6.613	90543	bd	90543.391 0.893	89.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	6.547	97797	bs	97796.617 0.964	96.4	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	6.612	104190	bb	104190.422 1.027	102.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	6.678	111799	bb	111799.352 1.102	110.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	6.612	115580	bb	115580.016 1.139	113.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		6.612	93709	bb	93708.750 0.924	92.4	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	6.612	103558	bs	103557.820 1.021	102.1	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	6.677	105626	bb	105625.523 1.041	104.1	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank		6.613	105351	dd	105351.461 1.039	103.9	40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	1.00	6.547	102584	bb	102583.609 1.011	101.1	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte		6.547	93679	bd	93678.922 0.924	92.4	40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte		6.547	81328	bb	81327.617 0.802	80.2	40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte		6.612	82382	bb	82382.359 0.812	81.2	40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte		6.612	98746	bb	98746.484 0.974	97.4	40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	1.00	6.612	109879	bb	109879.133 1.083	108.3	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte		6.546	72041	bb	72041.195 0.710	71.0	40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte		6.612	87826	bs	87826.484 0.866	86.6	40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte		6.612	81570	bb	81569.516 0.804	80.4	40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte		6.612	99890	bb	99889.930 0.985	98.5	40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	1.00	6.612	98197	bb	98197.203 0.968	96.8	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	1.00	6.612	110634	bs	110634.063 1.091	109.1	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte		6.612	98645	bb	98645.125 0.973	97.3	40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte		6.612	104523	bb	104522.516 1.030	103.0	40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	1.00	6.612	96766	bb	96765.891 0.954	95.4	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte		6.612	84673	bb	84672.641 0.835	83.5	40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	1.00	6.678	98735	bb	98734.805 0.973	97.3	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 8: 1,3-Dinitrobenzene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.997196
Calibration curve: 0.00315292 * x + 0.00564178
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	6.678	2100	101368	bb	0.021	4.781	95.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	6.678	3144	88759	bb	0.035	9.446	94.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	6.678	7821	90543	bb	0.086	25.606	102.4	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	6.678	16680	97797	bb	0.171	52.307	104.6	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	6.678	36184	104190	bb	0.347	108.360	108.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	6.743	66932	111799	bb	0.599	188.092	94.0	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	6.743	110490	115580	bb	0.956	301.408	100.5	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	6.743	32499	103558	bb	0.314	97.744	97.7	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	6.743	16821	105626	bb	0.159	48.719	97.4	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	6.678	37363	102584	bb	0.364	451.303	113.7	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	6.678	34820	109879	bb	0.317	98.719	98.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	6.743	33518	98197	bb	0.341	426.739	106.5	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	6.677	35157	110634	bb	0.318	398.783	99.0	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	6.678	16944	96766	bb	0.175	53.748	107.5	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	6.743	32274	98735	bb	0.327	101.883	101.9	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 9: Nitrobenzene-d5 Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.995648
Calibration curve: 0.00287504 * x + 0.00410105
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		7.464	14830	102345	bb	0.145	48.972	97.9	1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.333	1390	101368	db	0.014	3.344	66.9	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.398	3356	88759	bd	0.038	11.725	117.2	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.399	7872	90543	bb	0.087	28.813	115.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.399	15148	97797	bb	0.155	52.447	104.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.398	30343	104190	bb	0.291	99.867	99.9	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.464	60748	111799	bb	0.543	187.567	93.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.464	102236	115580	bb	0.885	306.237	102.1	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		7.463	15598	93709	bd	0.166	56.469	112.9	1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.464	33065	103558	bb	0.319	109.628	109.6	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	7.398	17393	105626	bb	0.165	55.848	111.7	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank		7.399	29569	105351	bb	0.281	374.306	96.2	40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	7.333	30225	102584	bb	0.295	401.007	101.1	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte		7.398	30262	93679	bb	0.323	447.308	110.9	40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte		7.333	30334	81328	bb	0.373	503.645	128.3	40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte		7.398	32039	82382	bb	0.389	521.292	133.8	40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte		7.398	32357	98746	bb	0.328	455.188	112.5	40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	7.398	35003	109879	bb	0.319	109.374	109.4	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte		7.398	24903	72041	bb	0.346	467.744	118.8	40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte		7.398	29917	87826	bb	0.341	468.225	117.1	40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte		7.398	24925	81570	bb	0.306	417.753	104.9	40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte		7.398	33686	99890	bb	0.337	465.808	115.9	40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	7.464	32961	98197	bb	0.336	462.212	115.3	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	7.398	33049	110634	bb	0.299	412.798	102.5	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte		7.397	31679	98645	bb	0.321	429.498	110.3	40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte		7.398	30538	104523	bb	0.292	391.767	100.2	40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	7.333	15097	96766	bb	0.156	52.841	105.7	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte		7.397	29199	84673	bb	0.345	474.552	118.5	40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	7.464	29548	98735	bb	0.299	102.664	102.7	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 10: Nitroglycerin Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.996295
Calibration curve: 0.0257449 * x + 0.0436900
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.005	12993	101368	bb	0.128	3.282	65.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.071	29009	88759	bb	0.327	10.998	110.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.006	73167	90543	bb	0.808	29.691	118.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.006	139002	97797	bb	1.421	53.511	107.0	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.005	279603	104190	bb	2.684	102.540	102.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.136	570254	111799	bb	5.101	196.427	98.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.071	878539	115580	bb	7.601	293.551	97.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.071	277639	103558	bb	2.681	102.440	102.4	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	7.071	161756	105626	bb	1.531	57.787	115.6	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	7.071	278711	102584	bb	2.717	412.043	103.8	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	7.005	298072	109879	bb	2.713	103.672	103.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	7.071	284582	98197	bb	2.898	444.374	110.9	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	7.005	285173	110634	bb	2.578	396.474	98.4	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	7.005	138148	96766	bb	1.428	53.757	107.5	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	7.071	266278	98735	bb	2.697	103.058	103.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 11: Nitrobenzene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.994425
Calibration curve: 0.00326327 * x + 0.00344180
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.595	1673	101368	bd	0.017	4.003	80.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.529	3451	88759	bb	0.039	10.858	108.6	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.530	9019	90543	bb	0.100	29.469	117.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.530	16355	97797	bb	0.167	50.193	100.4	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.529	32890	104190	bb	0.316	95.680	95.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	7.660	67837	111799	bb	0.607	184.886	92.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	7.595	119172	115580	bb	1.031	314.911	105.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	7.595	36743	103558	bb	0.355	107.673	107.7	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	7.595	18217	105626	bb	0.172	51.796	103.6	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	7.594	33658	102584	bb	0.328	394.802	99.5	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	7.529	37290	109879	bb	0.339	102.943	102.9	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	7.595	34922	98197	bb	0.356	432.561	107.9	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	7.529	37059	110634	bb	0.335	409.237	101.6	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	7.529	15739	96766	bb	0.163	48.789	97.6	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	7.595	33815	98735	bb	0.342	103.895	103.9	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 12: 2,4,6-Trinitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.995606
Calibration curve: 0.0282574 * x + -0.00933175
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	7.988	12162	101368	bb	0.120	4.576	91.5	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	7.987	26082	88759	bb	0.294	10.729	107.3	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	7.988	68360	90543	bb	0.755	27.049	108.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	7.988	135405	97797	bb	1.385	49.329	98.7	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	7.987	281728	104190	bb	2.704	96.021	96.0	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	8.119	584278	111799	bb	5.226	185.278	92.6	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	8.054	1034300	115580	bb	8.949	317.018	105.7	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank		7.987	486	93709	bb	0.005	0.514		1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	8.053	289588	103558	bb	2.796	99.292	99.3	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	8.053	145974	105626	bb	1.382	49.238	98.5	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	7.987	271307	102584	bb	2.645	372.718	93.9	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte		7.857	182	93679	bb	0.002	1.608		40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	7.987	328562	109879	bb	2.990	106.151	106.2	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	8.119	296817	98197	bb	3.023	430.058	107.3	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	7.987	297896	110634	bb	2.693	385.174	95.6	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte		7.986	218	98645	bb	0.002	1.590		40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	7.988	142827	96766	bb	1.476	52.565	105.1	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	8.054	278547	98735	bb	2.821	100.168	100.2	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 13: 4-Amino-2,6-Dinitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.998445
Calibration curve: 0.0132837 * x + 0.00560063
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	8.381	6168	101368	dd	0.061	4.159	83.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	8.380	12713	88759	bd	0.143	10.361	103.6	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	8.381	34179	90543	bd	0.377	27.996	112.0	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	8.381	64788	97797	bd	0.662	49.450	98.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	8.380	144870	104190	bd	1.390	104.251	104.3	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	8.447	298980	111799	bd	2.674	200.897	100.4	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	8.447	450324	115580	bd	3.896	292.887	97.6	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	8.446	133896	103558	bd	1.293	96.913	96.9	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	8.446	83615	105626	bd	0.792	59.172	118.3	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	8.315	137279	102584	bd	1.338	398.096	100.3	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	8.380	149280	109879	bd	1.359	101.853	101.9	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	8.446	150107	98197	bd	1.529	459.535	114.7	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	8.380	147649	110634	bd	1.335	403.002	100.0	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	8.381	67529	96766	bd	0.698	52.114	104.2	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	8.541	123755	98735	bd	1.253	93.936	93.9	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 14: 2-Amino-4,6-Dinitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.992131
Calibration curve: 0.0206873 * x + -0.00713639
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				102345					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	9.105	9349	101368	db	0.092	4.803	96.1	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	9.198	19006	88759	db	0.214	10.696	107.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	9.106	50509	90543	db	0.558	27.310	109.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	9.106	93624	97797	db	0.957	46.622	93.2	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	9.104	206964	104190	db	1.986	96.365	96.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	9.200	416397	111799	db	3.725	180.383	90.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	9.106	773443	115580	db	6.692	323.821	107.9	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				93709					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	9.200	211848	103558	db	2.046	99.232	99.2	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	9.199	101701	105626	db	0.963	46.888	93.8	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				105351					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	9.105	233767	102584	db	2.279	438.489	110.5	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				93679					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				81328					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				82382					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				98746					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	9.104	220649	109879	db	2.008	97.415	97.4	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				72041					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				87826					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				81570					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				99890					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	9.199	234498	98197	db	2.388	464.046	115.8	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	9.199	246134	110634	db	2.225	434.591	107.9	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				98645					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				104523					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	9.105	109611	96766	db	1.133	55.100	110.2	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				84673					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	9.200	213288	98735	db	2.160	104.767	104.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 15: 2,6-Dinitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.992191
Calibration curve: 0.00902750 * x + 0.00548383
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	9.510	8876	212900	bd	0.042	4.011	80.2	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	9.510	19306	189050	bd	0.102	10.705	107.0	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	9.511	48406	199111	bd	0.243	26.322	105.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	9.606	99450	204522	bd	0.486	53.256	106.5	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	9.510	207873	232442	bd	0.894	98.456	98.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	9.605	435688	218394	bd	1.995	220.380	110.2	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	9.511	614252	245218	bd	2.505	276.869	92.3	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	9.511	206170	209566	bd	0.984	108.371	108.4	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	9.510	113711	246428	bd	0.461	50.507	101.0	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				217728					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	9.510	214721	233984	bd	0.918	400.974	101.0	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				192974					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				185984					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				208948					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				233589					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	9.509	204376	247124	bd	0.827	91.003	91.0	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				179125					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				183556					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				180026					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				220706					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	9.605	201739	216938	bd	0.930	410.437	102.4	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	9.510	216005	236064	bd	0.915	405.852	100.8	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				213914					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				230992					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	9.511	98247	194396	bd	0.505	55.377	110.8	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				169037					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	9.605	189964	205528	bd	0.924	101.777	101.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 16: 2,4-Dinitrotoluene-d3 (IS) Sample List: ex48g29(04) Method File: ex48g29
Response Factor: 214519
RRF SD: 19439.3, % Relative SD: 9.06180
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank		10.076	213845	bb	213845.047	0.997	99.7	1.000	1.000	1	40 ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	1.00	9.981	212900	bb	212899.953	0.992	99.2	1.000	1.000	1	40 ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	1.00	10.075	189050	bb	189049.688	0.881	88.1	1.000	1.000	1	40 ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	1.00	9.982	199111	bb	199110.891	0.928	92.8	1.000	1.000	1	40 ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	1.00	10.076	204522	bb	204522.063	0.953	95.3	1.000	1.000	1	40 ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	1.00	9.980	232442	bb	232442.063	1.084	108.4	1.000	1.000	1	40 ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	1.00	10.170	218394	bb	218393.813	1.018	101.8	1.000	1.000	1	40 ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	1.00	10.170	245218	bb	245217.828	1.143	114.3	1.000	1.000	1	40 ex48g29
9	ex48g2915	LCMS0453	blank	Blank		10.075	222357	bb	222356.594	1.037	103.7	1.000	1.000	1	40 ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	1.00	10.076	209566	bb	209565.547	0.977	97.7	1.000	1.000	1	40 ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	1.00	10.075	246428	bb	246427.625	1.149	114.9	1.000	1.000	1	40 ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank		10.076	217728	bb	217728.141	1.015	101.5	40.000	10.280	1	40 ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	1.00	9.981	233984	bb	233984.453	1.091	109.1	40.000	10.080	1	40 ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte		9.981	192974	bb	192973.906	0.900	90.0	40.000	9.920	1	40 ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte		10.075	185984	bb	185983.750	0.867	86.7	40.000	10.190	1	40 ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte		9.981	208948	bb	208948.031	0.974	97.4	40.000	10.270	1	40 ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte		10.076	233589	bb	233589.078	1.089	108.9	40.000	9.890	1	40 ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	1.00	9.980	247124	bb	247124.328	1.152	115.2	1.000	1.000	1	40 ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte		9.981	179125	bb	179125.141	0.835	83.5	40.000	10.160	1	40 ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte		9.981	183556	bb	183555.750	0.856	85.6	40.000	10.000	1	40 ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte		10.075	180026	bb	180025.672	0.839	83.9	40.000	10.040	1	40 ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte		9.980	220706	bb	220705.594	1.029	102.9	40.000	9.950	1	40 ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	1.00	10.075	216938	bb	216938.469	1.011	101.1	40.000	9.980	1	40 ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	1.00	9.981	236064	bb	236063.844	1.100	110.0	40.000	9.930	1	40 ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte		9.979	213914	bb	213913.547	0.997	99.7	40.000	10.270	1	40 ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte		10.075	230992	bb	230992.188	1.077	107.7	40.000	10.230	1	40 ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	1.00	9.981	194396	bb	194396.188	0.906	90.6	1.000	1.000	1	40 ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte		10.074	169037	bb	169036.938	0.788	78.8	40.000	9.990	1	40 ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	1.00	10.075	205528	bb	205528.109	0.958	95.8	1.000	1.000	1	40 ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 17: 2,4-Dinitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.997621
Calibration curve: 1.34213e-6 * x^2 + 0.00427312 * x + 0.00270958
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	10.075	4326	212900	db	0.020	4.116	82.3	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	10.169	10495	189050	dd	0.056	12.310	123.1	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	10.076	22234	199111	dd	0.112	25.297	101.2	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	10.171	41853	204522	db	0.205	46.574	93.1	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	10.074	100355	232442	dd	0.432	97.421	97.4	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	10.264	207681	218394	dd	0.951	208.282	104.1	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	10.264	339592	245218	dd	1.385	295.943	98.6	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	10.170	82166	209566	dd	0.392	88.652	88.7	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	10.075	58574	246428	dd	0.238	54.073	108.1	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				217728					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	10.075	79298	233984	dd	0.339	304.850	76.8	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				192974					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				185984					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				208948					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				233589					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	10.074	107025	247124	dd	0.433	97.717	97.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				179125					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				183556					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				180026					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				220706					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	10.075	108807	216938	db	0.502	451.894	112.7	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	10.075	99523	236064	dd	0.422	383.413	95.2	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				213914					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				230992					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	10.075	46969	194396	dd	0.242	54.961	109.9	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				169037					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	10.170	99590	205528	db	0.485	109.028	109.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 18: 2-Nitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.999594
Calibration curve: 0.00197244 * x + 0.00132781
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	11.615	2143	212900	bb	0.010	4.430	88.6	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	11.728	4162	189050	bb	0.022	10.488	104.9	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	11.636	10795	199111	bb	0.054	26.814	107.3	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	11.722	20512	204522	bb	0.100	50.174	100.3	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	11.699	45923	232442	bb	0.198	99.492	99.5	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	11.807	86160	218394	bb	0.395	199.342	99.7	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	11.836	145071	245218	bb	0.592	299.260	99.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	11.836	39620	209566	bb	0.189	95.175	95.2	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	11.701	24341	246428	bb	0.099	49.404	98.8	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				217728					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	11.614	45425	233984	bb	0.194	387.899	97.8	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				192974					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				185984					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				208948					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				233589					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	11.670	46116	247124	bb	0.187	93.935	93.9	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				179125					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				183556					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				180026					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				220706					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	11.757	45988	216938	bb	0.212	428.064	106.8	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	11.701	46661	236064	bb	0.198	400.966	99.5	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				213914					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				230992					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	11.672	21777	194396	bb	0.112	56.123	112.2	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				169037					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	11.787	42016	205528	bb	0.204	102.969	103.0	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 19: PETN Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.999013
Calibration curve: 0.0104654 * x + 0.00498117
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	11.558	10355	212900	bb	0.049	4.171	83.4	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	11.614	22077	189050	bb	0.117	10.683	106.8	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	11.522	57137	199111	bb	0.287	26.944	107.8	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	11.636	109705	204522	bb	0.536	50.778	101.6	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	11.528	247273	232442	bb	1.064	101.174	101.2	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	11.693	464931	218394	bb	2.129	202.944	101.5	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	11.807	753933	245218	bb	3.075	293.306	97.8	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	11.693	225608	209566	bb	1.077	102.392	102.4	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	11.643	138768	246428	bb	0.563	53.332	106.7	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				217728					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	11.557	257272	233984	bb	1.100	415.028	104.6	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				192974					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				185984					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				208948					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				233589					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	11.556	284092	247124	bb	1.150	109.371	109.4	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				179125					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				183556					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				180026					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				220706					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	11.671	246639	216938	bb	1.137	433.503	108.2	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	11.558	263223	236064	bb	1.115	427.273	106.1	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				213914					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				230992					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	11.587	125686	194396	bb	0.647	61.304	122.6	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				169037					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	11.673	260929	205528	bb	1.270	120.834	120.8	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 20: 4-Nitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.996636
Calibration curve: -7.10754e-7 * x^2 + 0.00160195 * x + -0.000369042
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	12.644	1628	212900	bb	0.008	5.014	100.3	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	12.698	3020	189050	bb	0.016	10.248	102.5	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	12.607	7228	199111	bb	0.036	23.127	92.5	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	12.721	17492	204522	bb	0.086	54.961	109.9	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	12.670	32633	232442	bb	0.140	91.592	91.6	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	12.693	66427	218394	bb	0.304	209.590	104.8	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	12.864	100771	245218	bb	0.411	295.500	98.5	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	12.779	29178	209566	bb	0.139	90.803	90.8	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	12.700	17275	246428	bb	0.070	44.885	89.8	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				217728					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	12.727	31290	233984	bb	0.134	345.520	87.1	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				192974					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				185984					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				208948					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				233589					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	12.612	29615	247124	bb	0.120	77.718	77.7	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				179125					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				183556					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				180026					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				220706					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	12.757	32519	216938	bb	0.150	393.063	98.1	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	12.643	33737	236064	bb	0.143	375.855	93.3	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				213914					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				230992					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	12.615	15438	194396	bb	0.079	50.955	101.9	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				169037					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	12.758	29920	205528	bb	0.146	95.120	95.1	1.000	1.000	1	40	ex48g29

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:10:59 2008

Compound 21: 3-Nitrotoluene Sample List: ex48g29(04) Method File: ex48g29
Coefficient of Determination: 0.996762
Calibration curve: 0.000802265 * x + 0.00179808
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g2907	LCMS0453	blank	Blank				213845					1.000	1.000	1	40	ex48g29
2	ex48g2908	LCMS0446	5 ug/L	Standard	5.00	13.558	1026	212900	bb	0.005	3.768	75.4	1.000	1.000	1	40	ex48g29
3	ex48g2909	LCMS0447	10 ug/L	Standard	10.00	13.554	1998	189050	bb	0.011	10.929	109.3	1.000	1.000	1	40	ex48g29
4	ex48g2910	LCMS0448	25 ug/L	Standard	25.00	13.550	4707	199111	bb	0.024	27.224	108.9	1.000	1.000	1	40	ex48g29
5	ex48g2911	LCMS0449	50 ug/L	Standard	50.00	13.607	8855	204522	bb	0.043	51.728	103.5	1.000	1.000	1	40	ex48g29
6	ex48g2912	LCMS0450	100 ug/L	Standard	100.00	13.527	19941	232442	bb	0.086	104.691	104.7	1.000	1.000	1	40	ex48g29
7	ex48g2913	LCMS0451	200 ug/L	Standard	200.00	13.750	36582	218394	bb	0.168	206.546	103.3	1.000	1.000	1	40	ex48g29
8	ex48g2914	LCMS0452	300 ug/L	Standard	300.00	13.750	56531	245218	bb	0.231	285.114	95.0	1.000	1.000	1	40	ex48g29
9	ex48g2915	LCMS0453	blank	Blank				222357					1.000	1.000	1	40	ex48g29
10	ex48g2916	LCMS0454	100 ug/L ICV	QC	100.00	13.637	17350	209566	bb	0.083	100.953	101.0	1.000	1.000	1	40	ex48g29
11	ex48g2943	LCMS0449	50 ug/L CCV	QC	50.00	13.558	10678	246428	bb	0.043	51.770	103.5	1.000	1.000	1	40	ex48g29
12	ex48g2944	KR5MD1AA	R8G240000-526 MB	Blank				217728					40.000	10.280	1	40	ex48g29
13	ex48g2945	KR5MD1AC	R8G240000-526 LCS	QC	396.82	13.612	18840	233984	bb	0.081	389.373	98.1	40.000	10.080	1	40	ex48g29
14	ex48g2946	KRW241AC	D8G210174-012	Analyte				192974					40.000	9.920	1	40	ex48g29
15	ex48g2948	KR5CC1AC	D8G240298-001	Analyte				185984					40.000	10.190	1	40	ex48g29
16	ex48g2949	KR5CR1AL	D8G240298-002	Analyte				208948					40.000	10.270	1	40	ex48g29
17	ex48g2950	KR5CT1AL	D8G240298-003	Analyte				233589					40.000	9.890	1	40	ex48g29
18	ex48g2951	LCMS0450	100 ug/L CCV	QC	100.00	13.498	17851	247124	bb	0.072	87.799	87.8	1.000	1.000	1	40	ex48g29
19	ex48g2952	KR5CV1AL	D8G240298-004	Analyte				179125					40.000	10.160	1	40	ex48g29
20	ex48g2953	KR5C01AL	D8G240298-006	Analyte				183556					40.000	10.000	1	40	ex48g29
21	ex48g2954	KR5C11AL	D8G240298-007	Analyte				180026					40.000	10.040	1	40	ex48g29
22	ex48g2955	KR5C21AL	D8G240298-008	Analyte				220706					40.000	9.950	1	40	ex48g29
23	ex48g2956	KR5C21C4	D8G240298-008 MS	QC	400.80	13.613	18549	216938	bb	0.086	418.177	104.3	40.000	9.980	1	40	ex48g29
24	ex48g2957	KR5C21C5	D8G240298-008 MSD	QC	402.82	13.528	18953	236064	bb	0.080	394.107	97.8	40.000	9.930	1	40	ex48g29
25	ex48g2958	KR5C31AL	D8G240298-009	Analyte				213914					40.000	10.270	1	40	ex48g29
26	ex48g2959	KR5C41AL	D8G240298-010	Analyte				230992					40.000	10.230	1	40	ex48g29
27	ex48g2960	LCMS0449	50 ug/L CCV	QC	50.00	13.557	9068	194396	bb	0.047	55.902	111.8	1.000	1.000	1	40	ex48g29
28	ex48g2961	KRW281AC	D8G210174-016	Analyte				169037					40.000	9.990	1	40	ex48g29
29	ex48g2962	LCMS0450	100 ug/L CCV	QC	100.00	13.672	17915	205528	bb	0.087	106.408	106.4	1.000	1.000	1	40	ex48g29

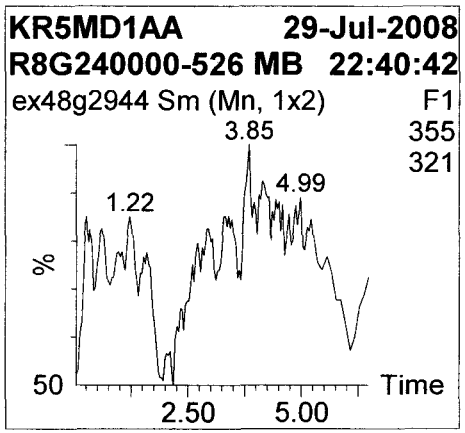
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

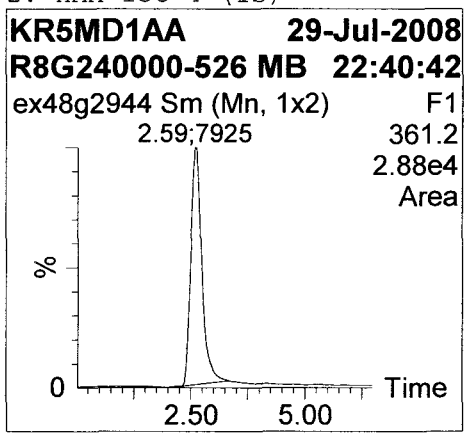
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2944
Text: R8G240000-526 MB

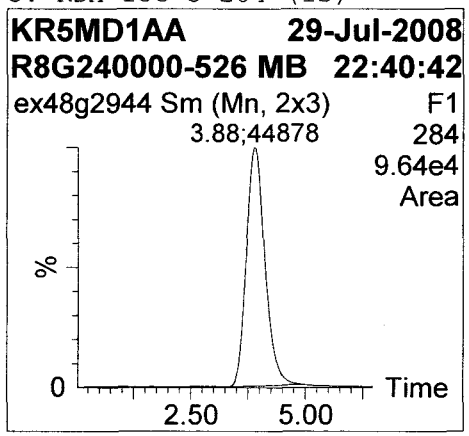
1: HMX



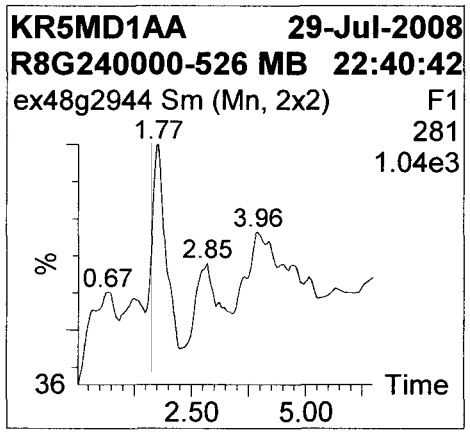
2: HMX 13C-4 (IS)



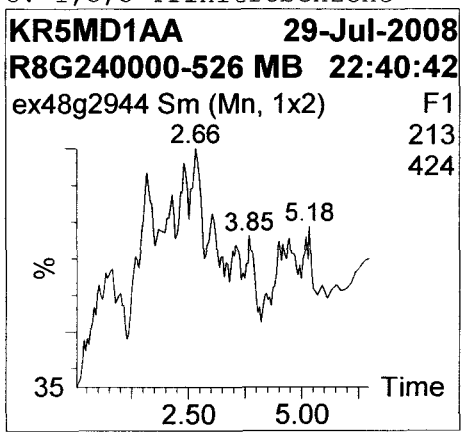
3: RDX 13C-3 284 (IS)



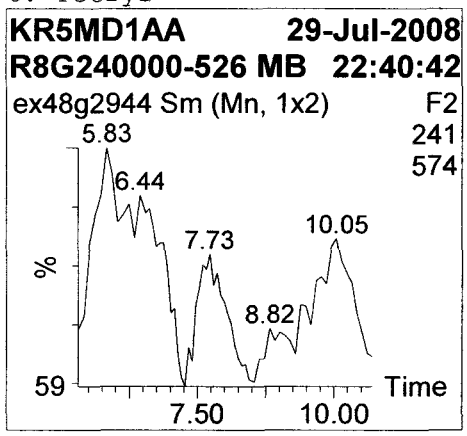
4: RDX



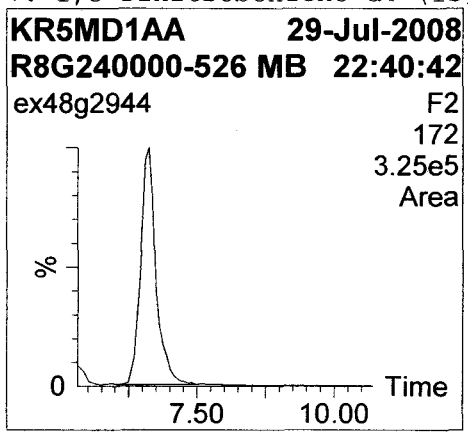
5: 1,3,5-Trinitrobenzene



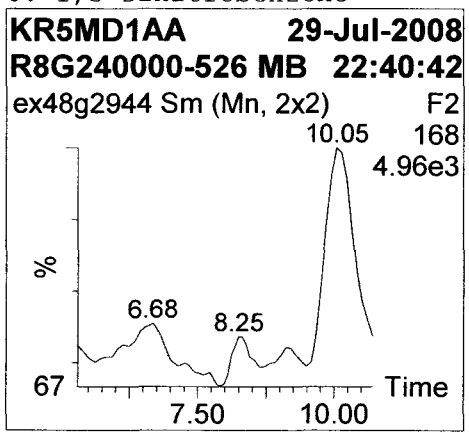
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



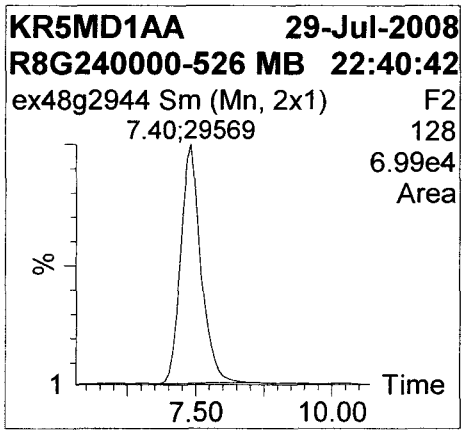
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

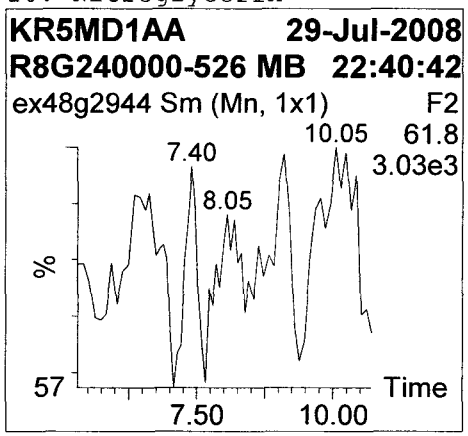
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2944
Text: R8G240000-526 MB

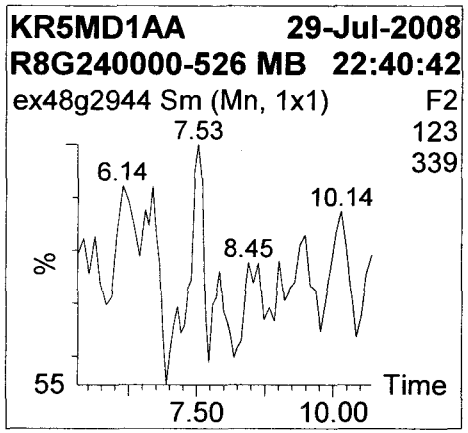
9: Nitrobenzene-d5



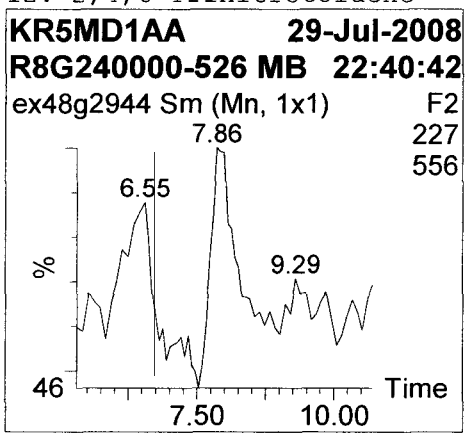
10: Nitroglycerin



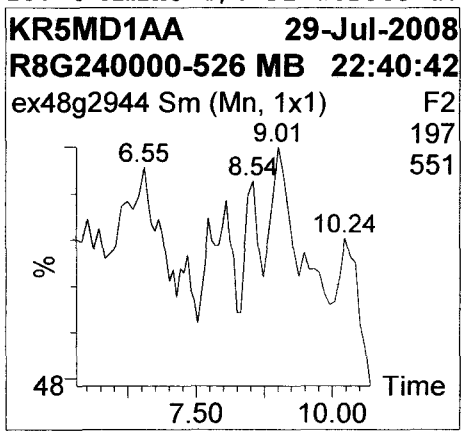
11: Nitrobenzene



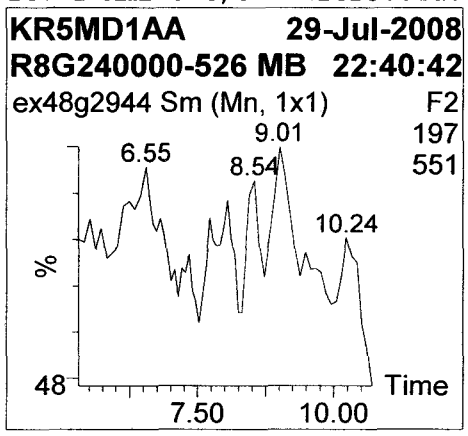
12: 2,4,6-Trinitrotoluene



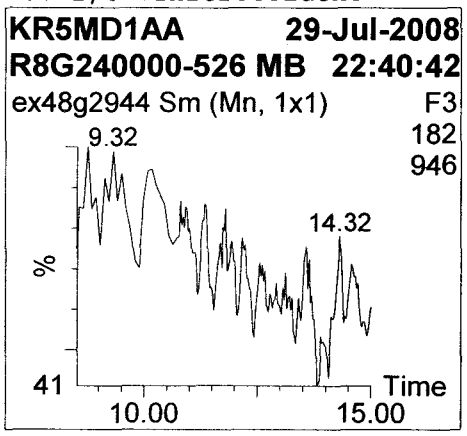
13: 4-Amino-2,6-Dinitrotolu..



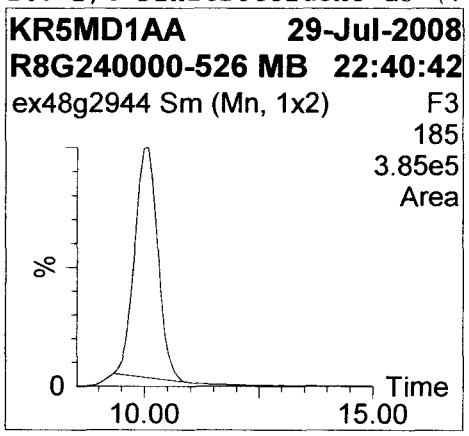
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



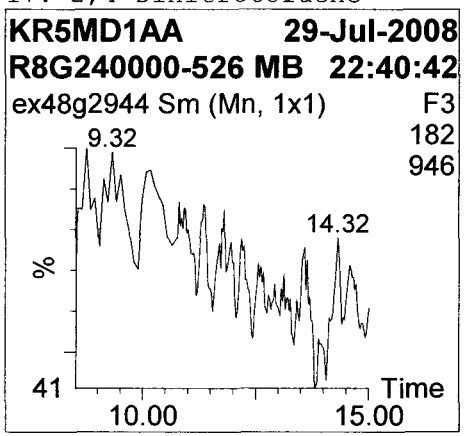
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

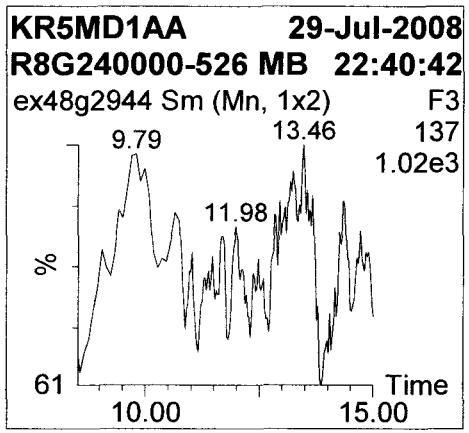
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2944
Text: R8G240000-526 MB

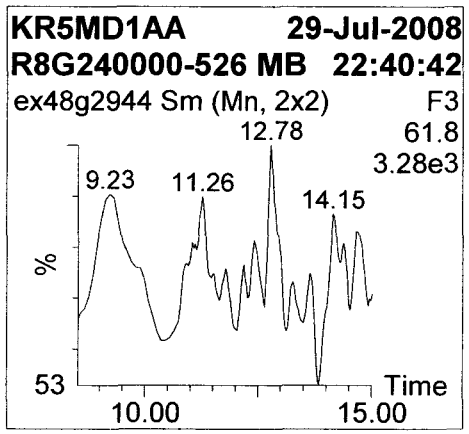
17: 2,4-Dinitrotoluene



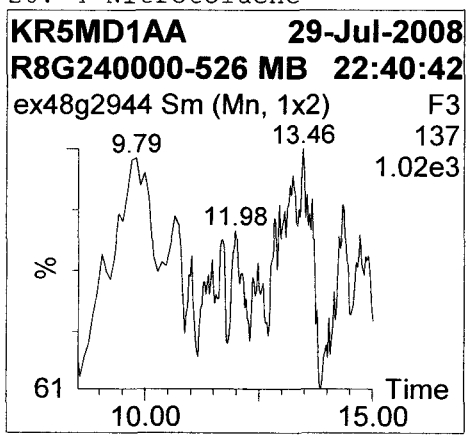
18: 2-Nitrotoluene



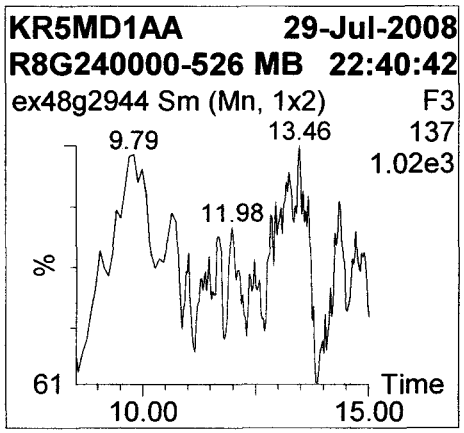
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2944
Text: R8G240000-526 MB

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7925	bb	1.191	119	29/Jul/08	ex48g29	
RDX 13C-..	3.882	44878	bb	1.106	111	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.613	105351	dd	1.039	104	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.399	29569	bb	374.306	96	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.076	217728	bb	1.015	101	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

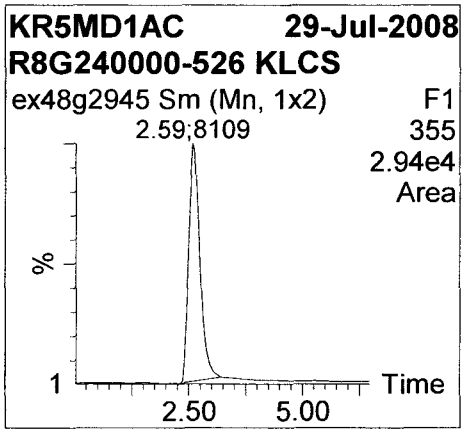
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

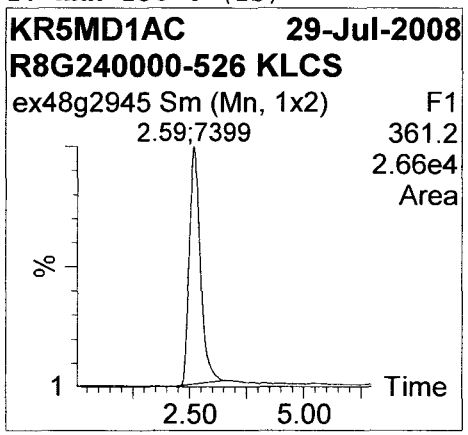
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2945
Text: R8G240000-526 KLCS

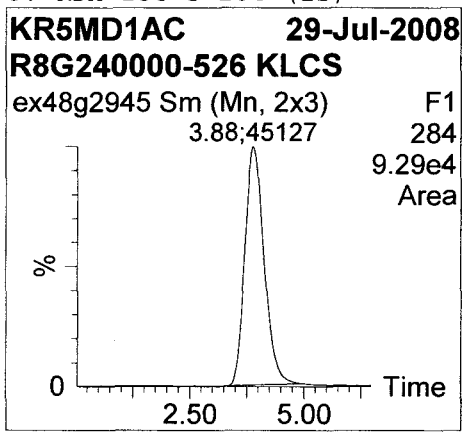
1: HMX



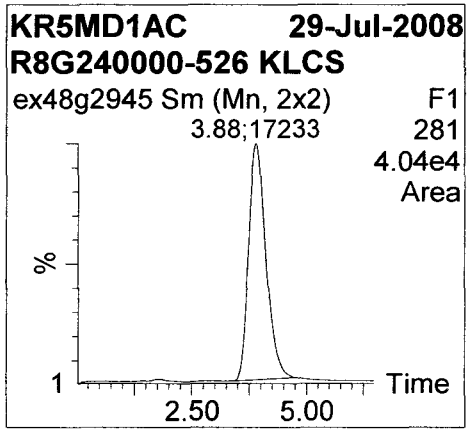
2: HMX 13C-4 (IS)



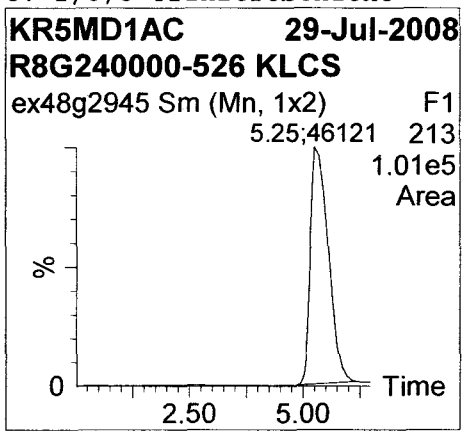
3: RDX 13C-3 284 (IS)



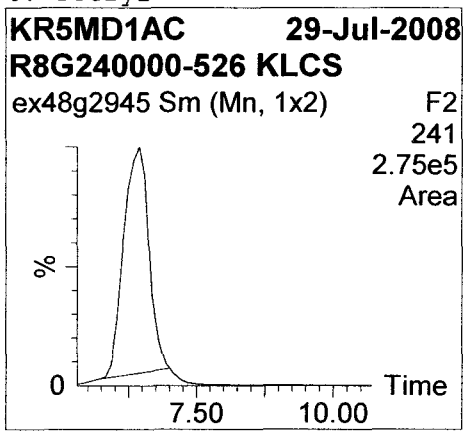
4: RDX



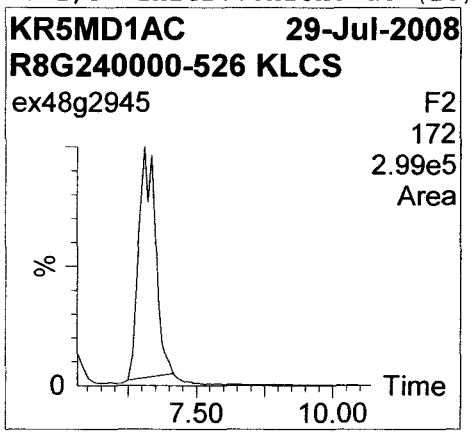
5: 1,3,5-Trinitrobenzene



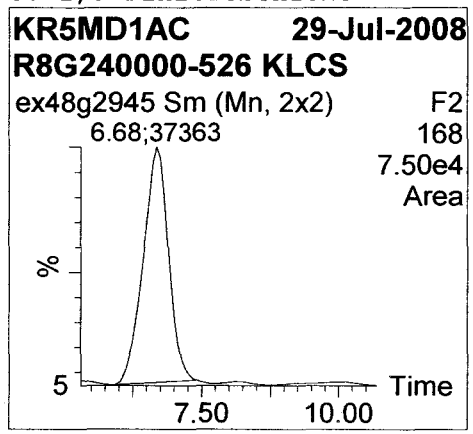
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



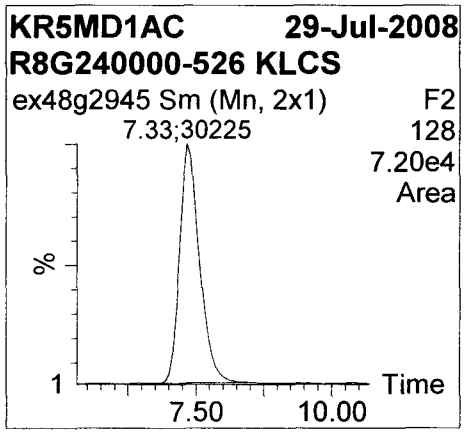
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

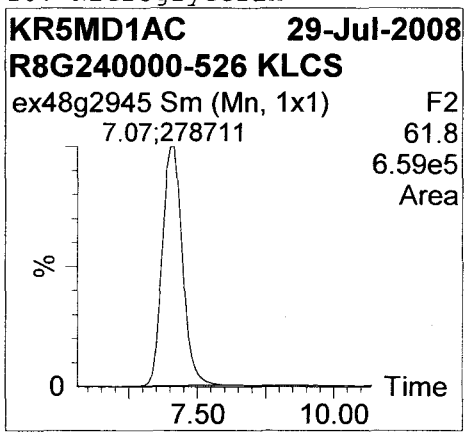
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2945
Text: R8G240000-526 KLCS

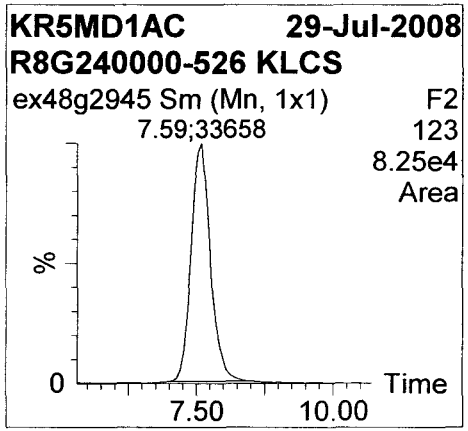
9: Nitrobenzene-d5



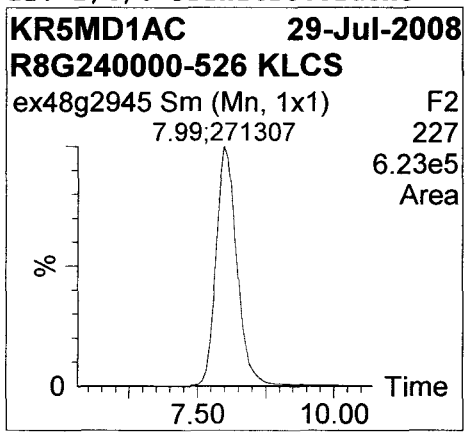
10: Nitroglycerin



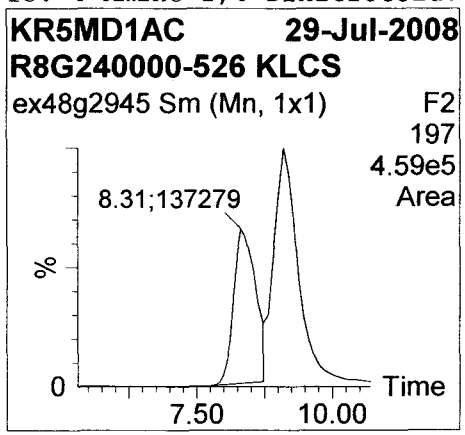
11: Nitrobenzene



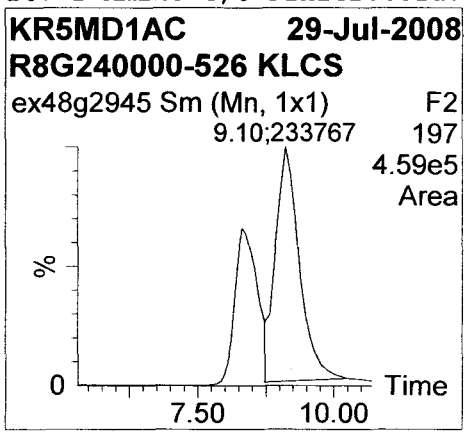
12: 2,4,6-Trinitrotoluene



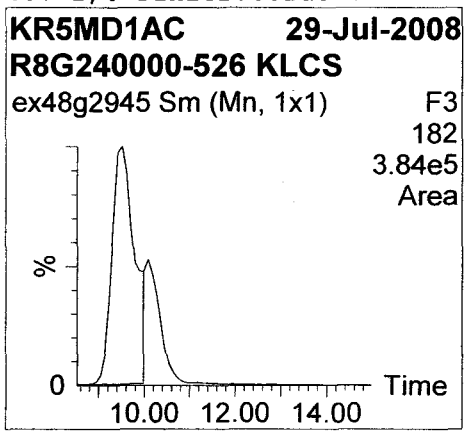
13: 4-Amino-2,6-Dinitrotolu..



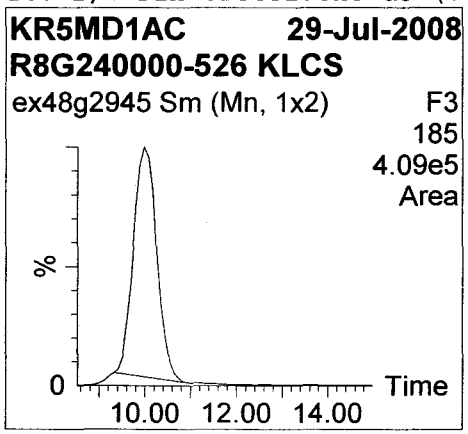
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



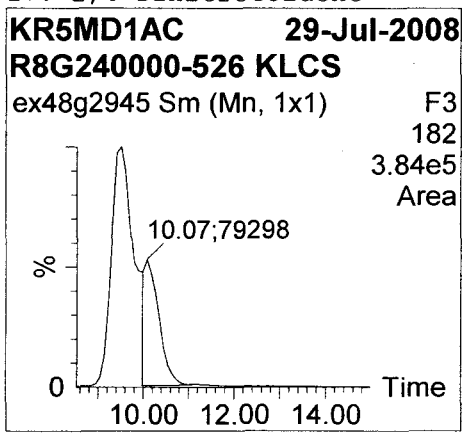
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

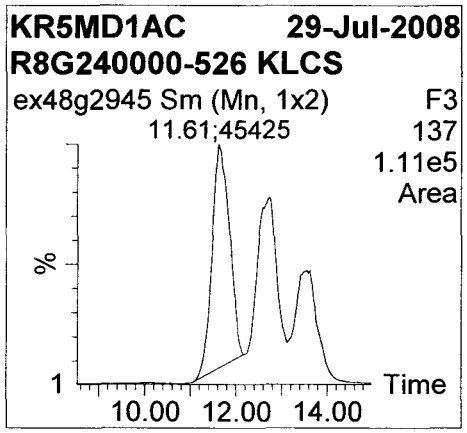
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2945
Text: R8G240000-526 KLCS

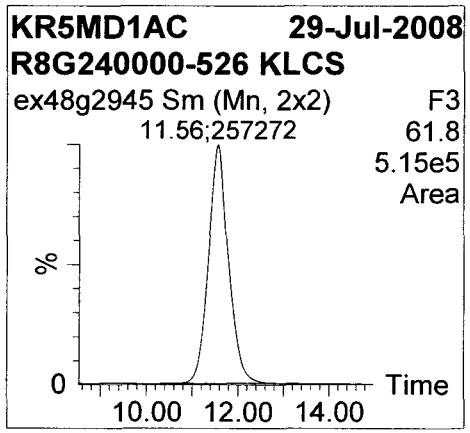
17: 2,4-Dinitrotoluene



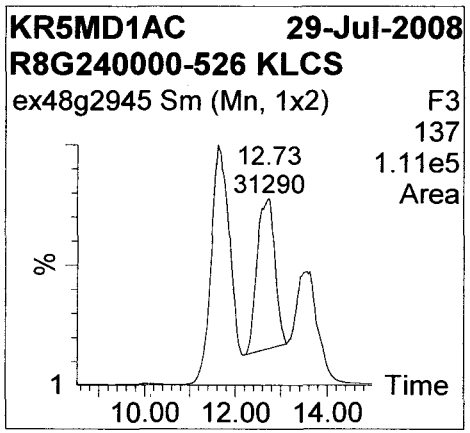
18: 2-Nitrotoluene



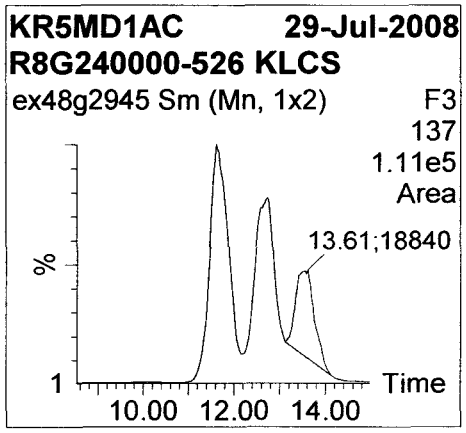
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2945
Text: R8G240000-526 KLCS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	8109	bb	389.505	98	29/Jul/08	ex48g29	
HMX 13C-..	2.588	7399	bb	1.112	111	29/Jul/08	ex48g29	
RDX 13C-..	3.882	45127	bb	1.112	111	29/Jul/08	ex48g29	
RDX	3.882	17233	bb	438.780	111	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	46121	bb	458.797	116	29/Jul/08	ex48g29	
Tetryl	6.444	139786	bb	527.319	133	29/Jul/08	ex48g29	
1,3 Dini..	6.547	102584	bb	1.011	101	29/Jul/08	ex48g29	
1,3-Dini..	6.678	37363	bb	451.303	114	29/Jul/08	ex48g29	
Nitroben..	7.333	30225	bb	401.007	101	29/Jul/08	ex48g29	
Nitrogly..	7.071	278711	bb	412.043	104	29/Jul/08	ex48g29	
Nitroben..	7.594	33658	bb	394.802	99	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	271307	bb	372.718	94	29/Jul/08	ex48g29	
4-Amino-..	8.315	137279	bd	398.096	100	29/Jul/08	ex48g29	
2-Amino-..	9.105	233767	db	438.489	110	29/Jul/08	ex48g29	
2,6-Dini..	9.510	214721	bd	400.974	101	29/Jul/08	ex48g29	
2,4-Dini..	9.981	233984	bb	1.091	109	29/Jul/08	ex48g29	
2,4-Dini..	10.075	79298	dd	304.850	77	29/Jul/08	ex48g29	
2-Nitrot..	11.614	45425	bb	387.899	98	29/Jul/08	ex48g29	
PETN	11.557	257272	bb	415.028	105	29/Jul/08	ex48g29	
4-Nitrot..	12.727	31290	bb	345.520	87	29/Jul/08	ex48g29	
3-Nitrot..	13.612	18840	bb	389.373	98	29/Jul/08	ex48g29	

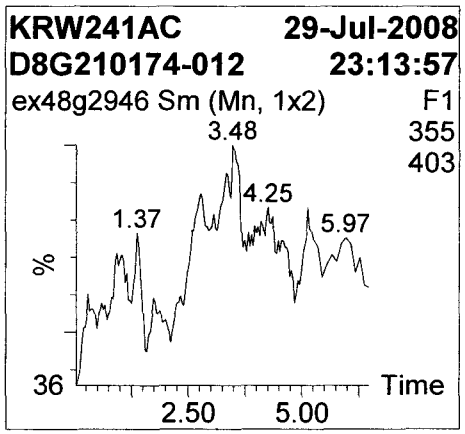
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

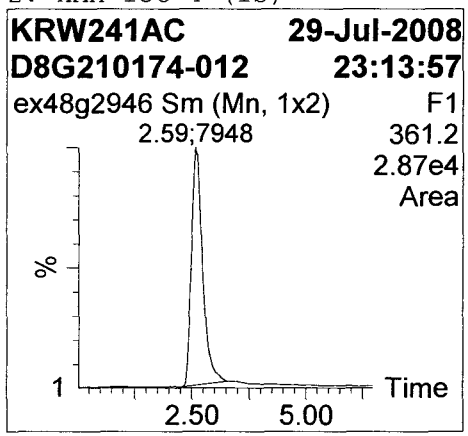
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2946
Text: D8G210174-012

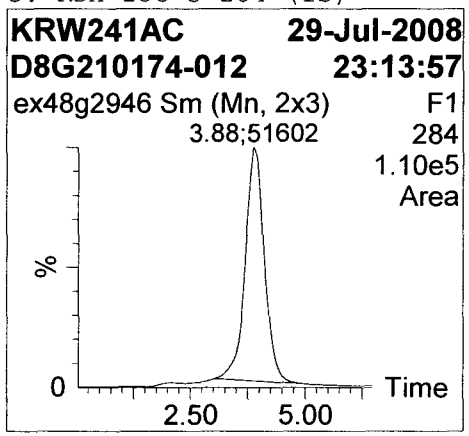
1: HMX



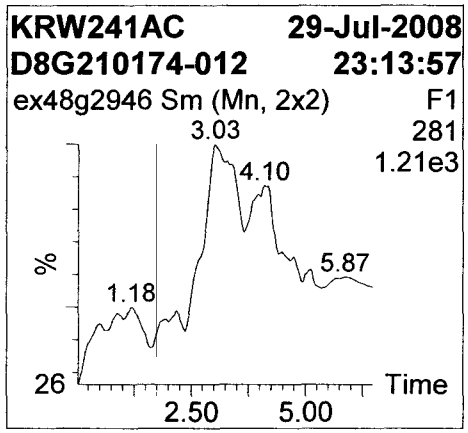
2: HMX 13C-4 (IS)



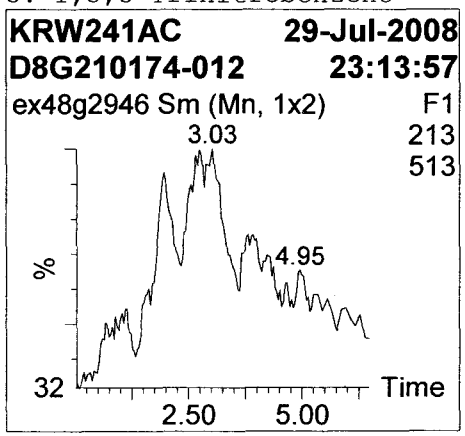
3: RDX 13C-3 284 (IS)



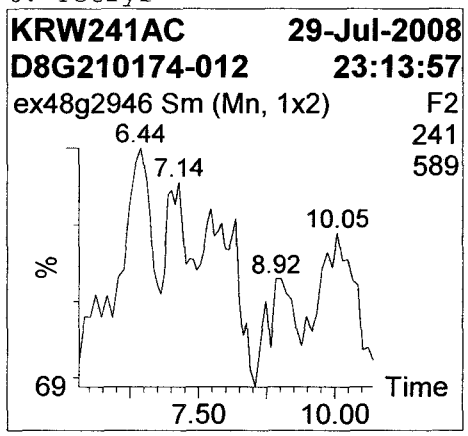
4: RDX



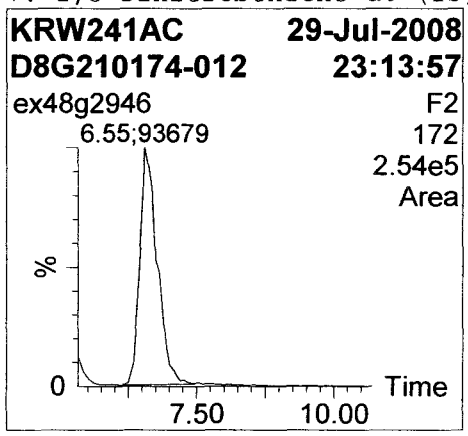
5: 1,3,5-Trinitrobenzene



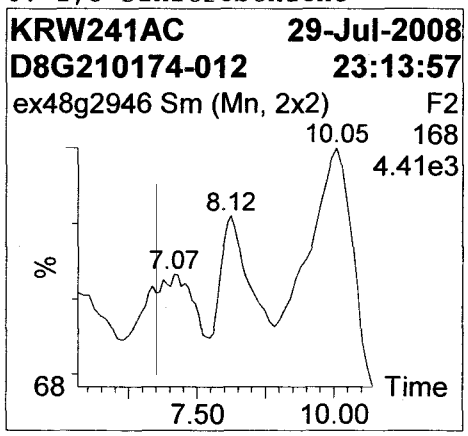
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



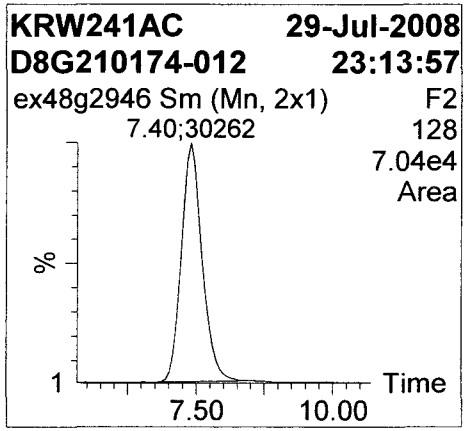
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

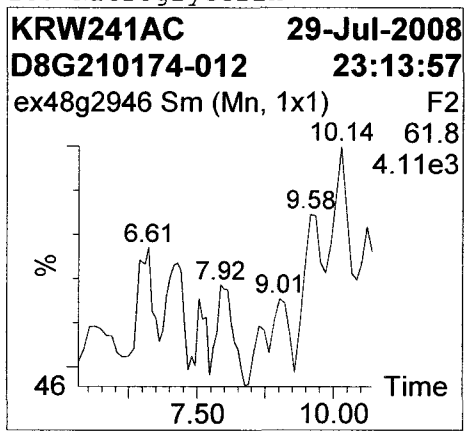
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2946
Text: D8G210174-012

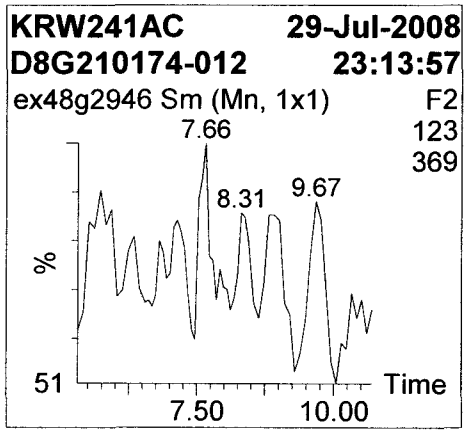
9: Nitrobenzene-d5



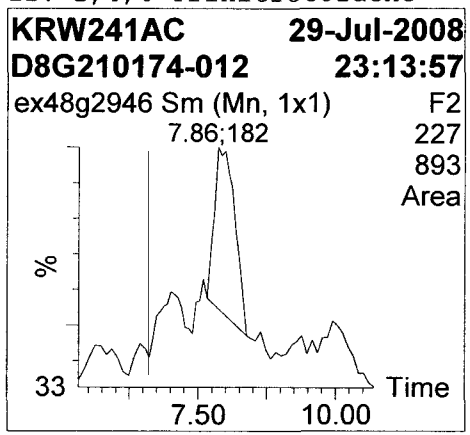
10: Nitroglycerin



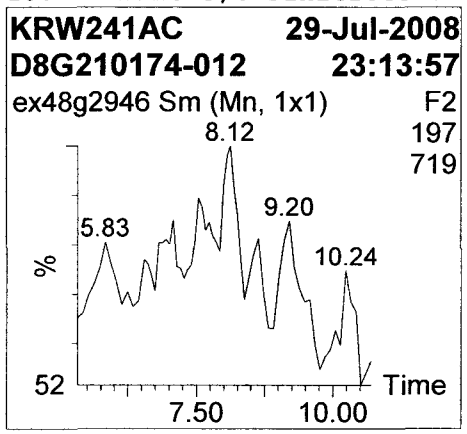
11: Nitrobenzene



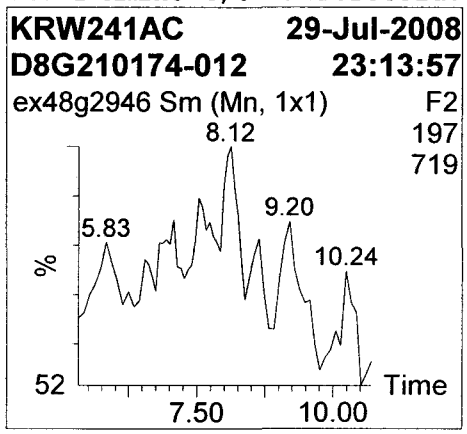
12: 2,4,6-Trinitrotoluene



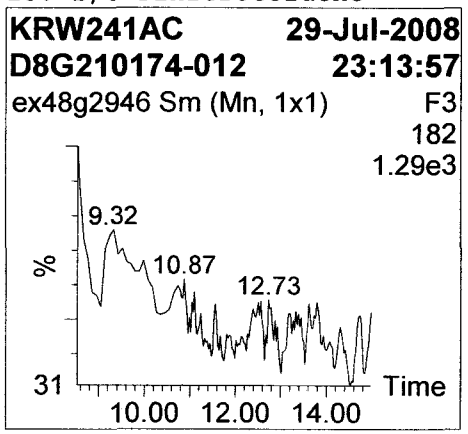
13: 4-Amino-2,6-Dinitrotolu..



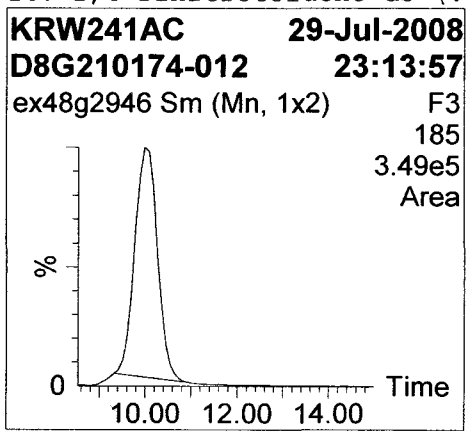
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



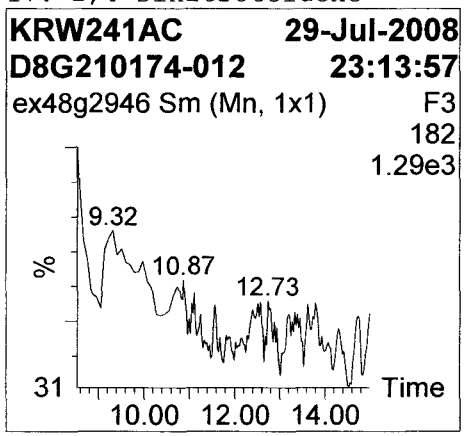
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

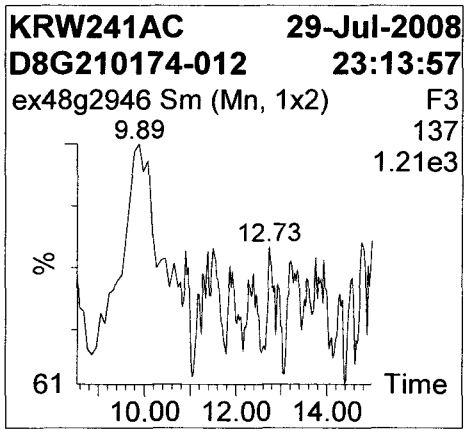
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2946
Text: D8G210174-012

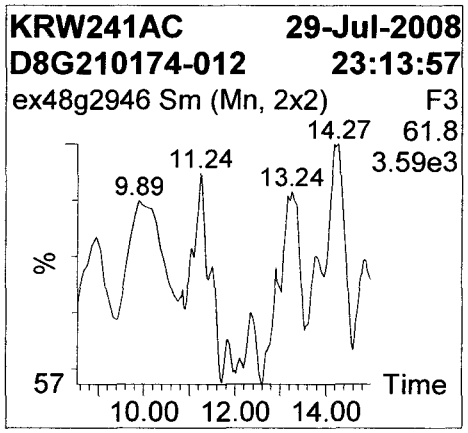
17: 2,4-Dinitrotoluene



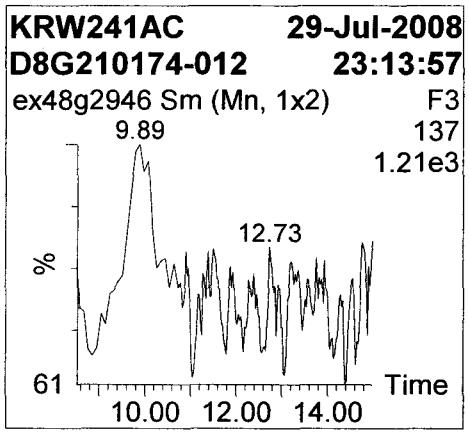
18: 2-Nitrotoluene



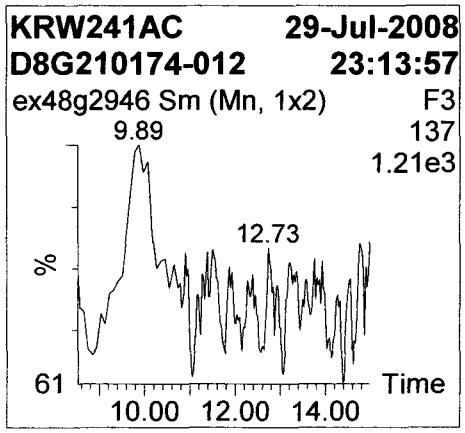
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2946
Text: D8G210174-012

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7948	bb	1.195	119	29/Jul/08	ex48g29	
RDX 13C-..	3.882	51602	bb	1.272	127	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.547	93679	bd	0.924	92	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	30262	bb	447.308	111	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.857	182	bb	1.608		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	192974	bb	0.900	90	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

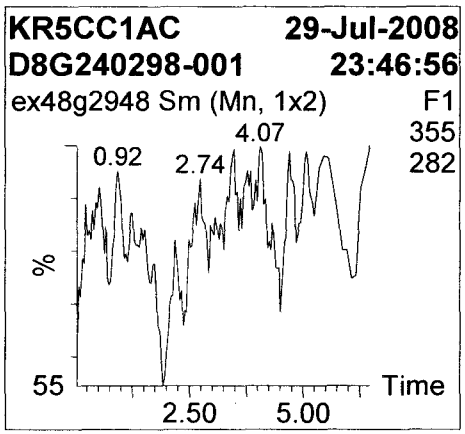
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

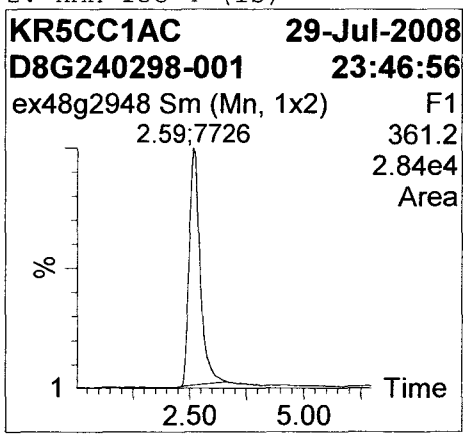
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2948
Text: D8G240298-001

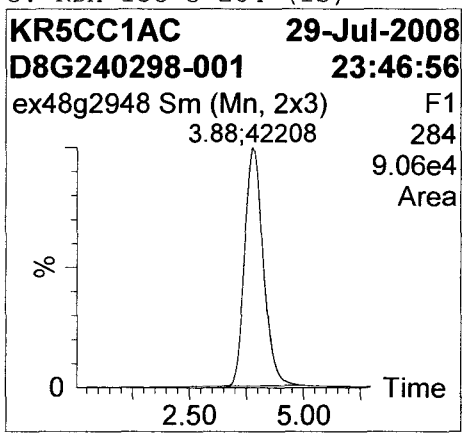
1: HMX



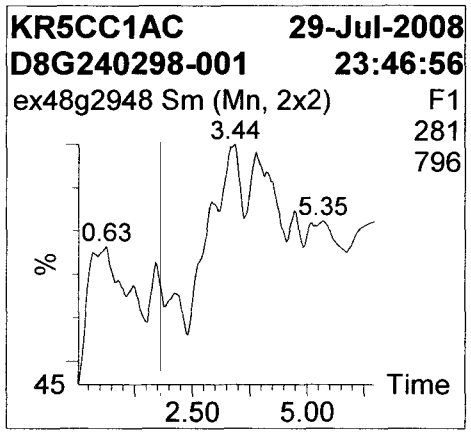
2: HMX 13C-4 (IS)



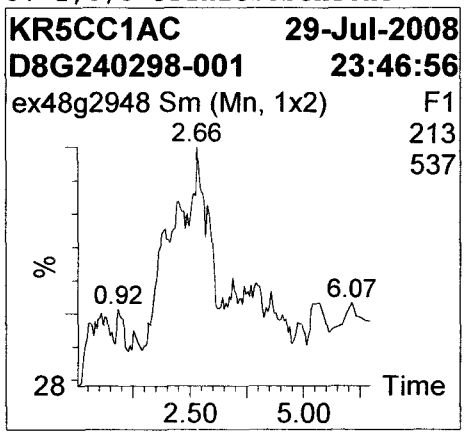
3: RDX 13C-3 284 (IS)



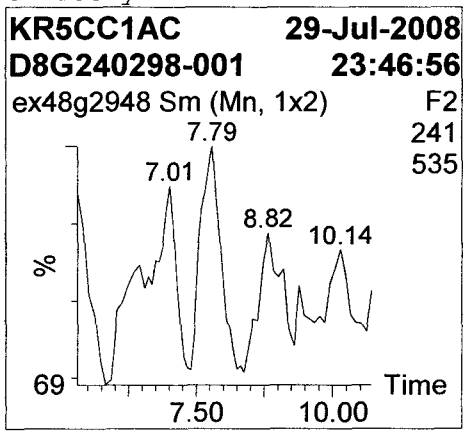
4: RDX



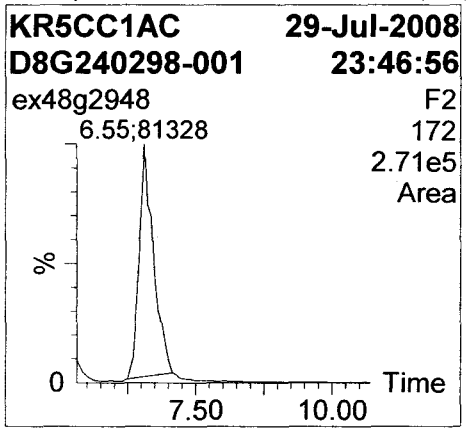
5: 1,3,5-Trinitrobenzene



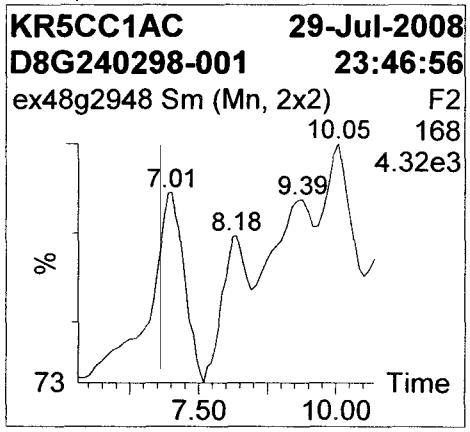
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



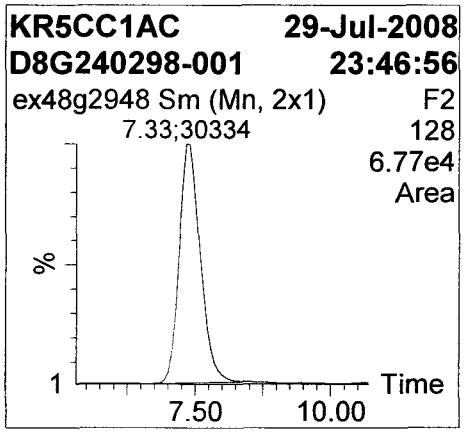
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

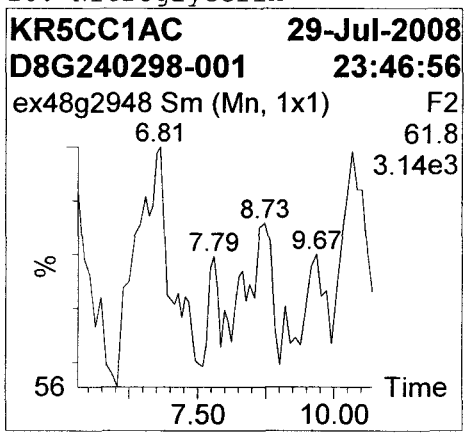
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2948
Text: D8G240298-001

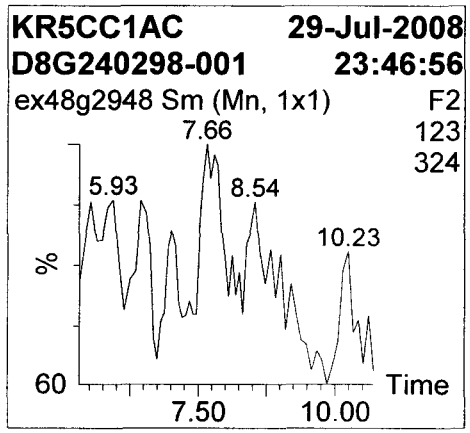
9: Nitrobenzene-d5



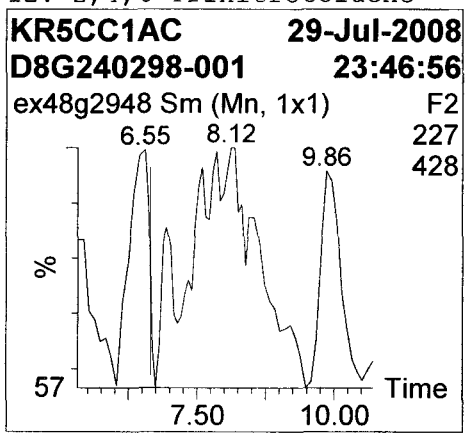
10: Nitroglycerin



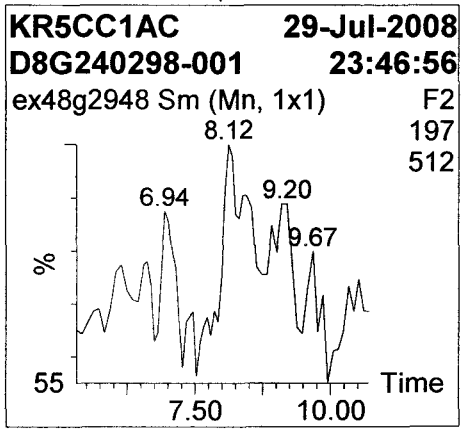
11: Nitrobenzene



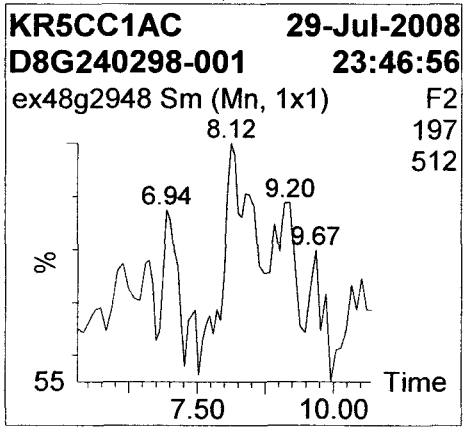
12: 2,4,6-Trinitrotoluene



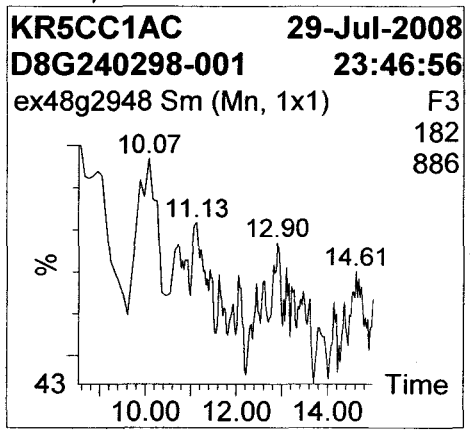
13: 4-Amino-2,6-Dinitrotolu..



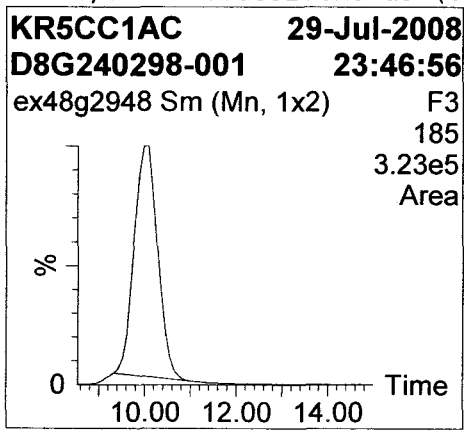
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



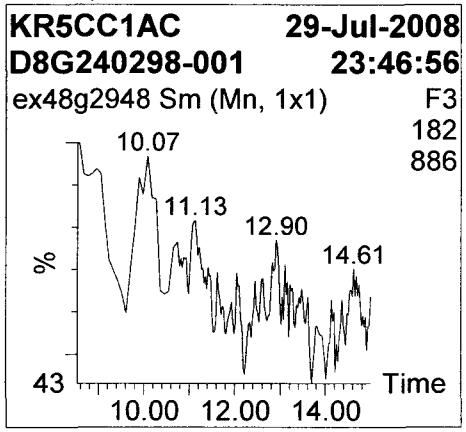
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

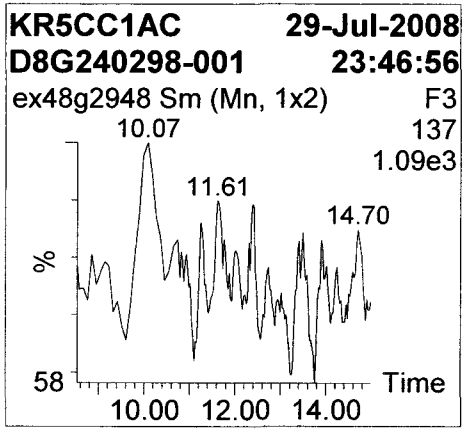
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2948
Text: D8G240298-001

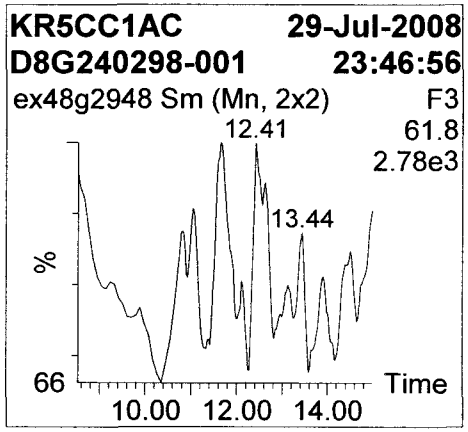
17: 2,4-Dinitrotoluene



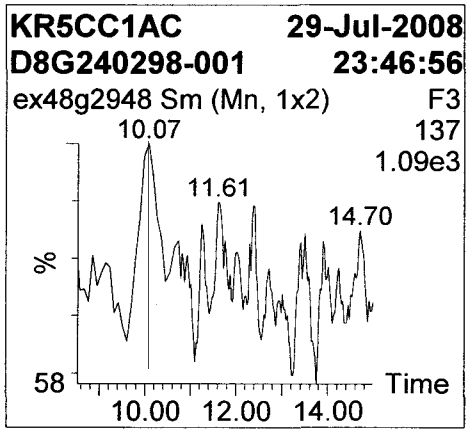
18: 2-Nitrotoluene



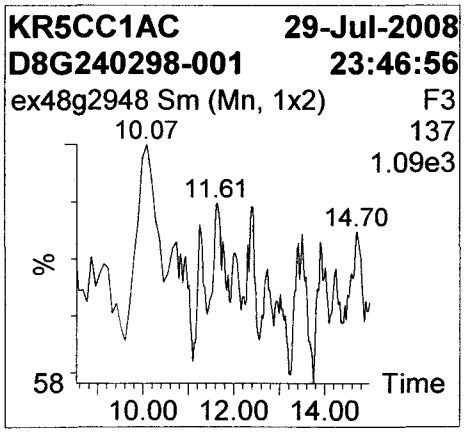
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2948
Text: D8G240298-001

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7726	bb	1.162	116	29/Jul/08	ex48g29	
RDX 13C-..	3.882	42208	bb	1.040	104	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.547	81328	bb	0.802	80	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.333	30334	bb	503.645	128	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	185984	bb	0.867	87	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

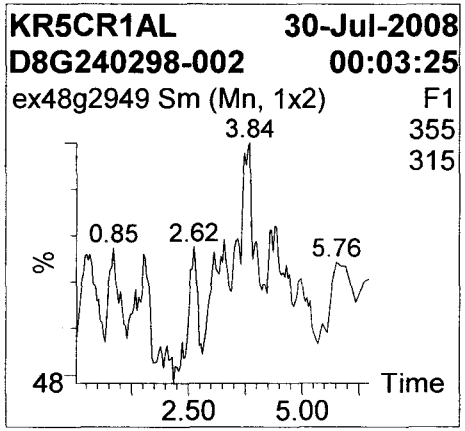
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

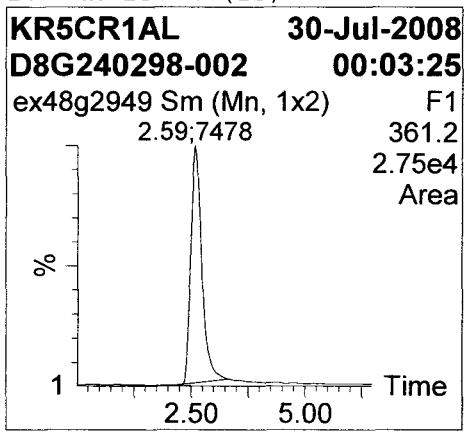
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2949
Text: D8G240298-002

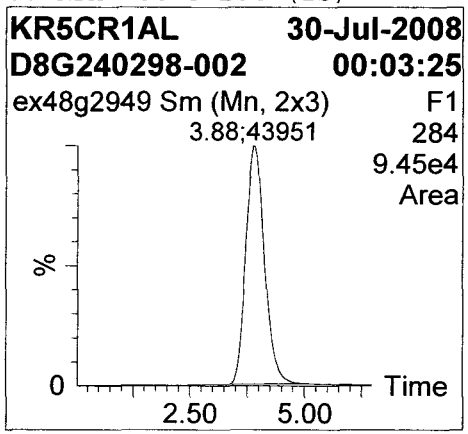
1: HMX



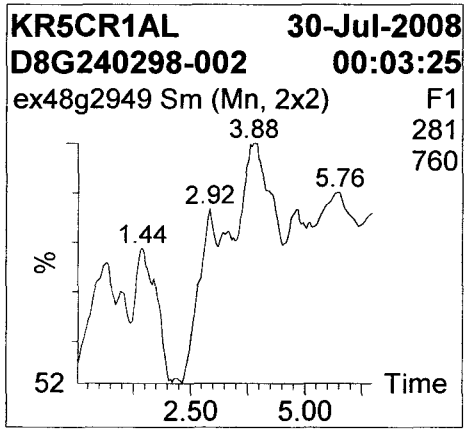
2: HMX 13C-4 (IS)



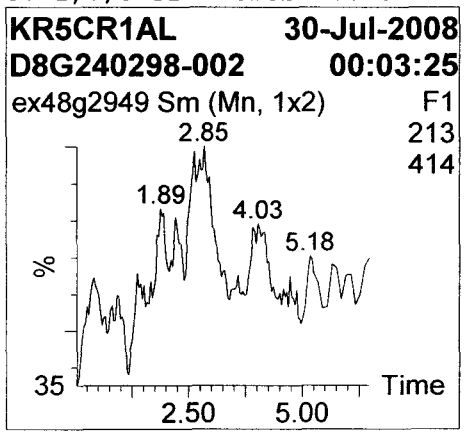
3: RDX 13C-3 284 (IS)



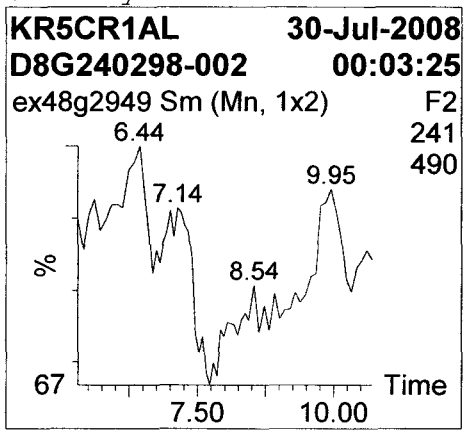
4: RDX



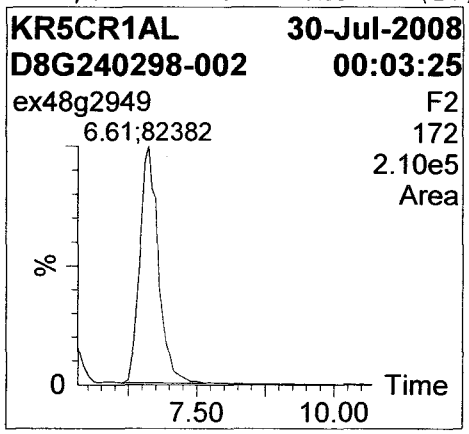
5: 1,3,5-Trinitrobenzene



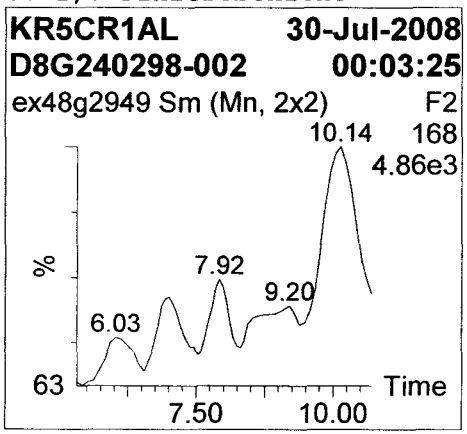
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



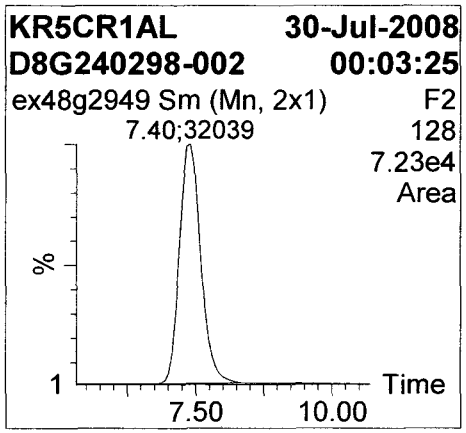
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

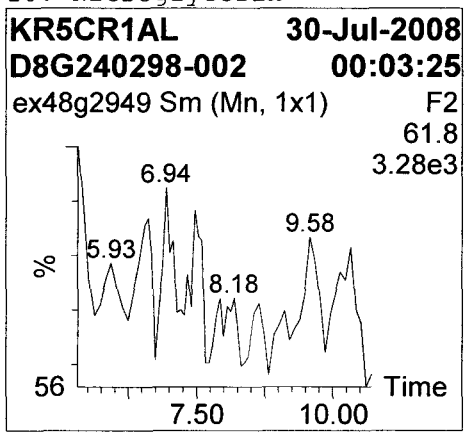
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2949
Text: D8G240298-002

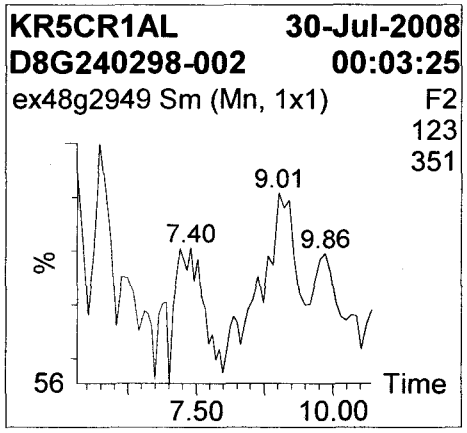
9: Nitrobenzene-d5



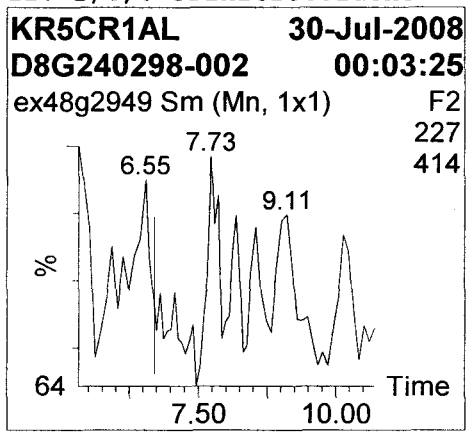
10: Nitroglycerin



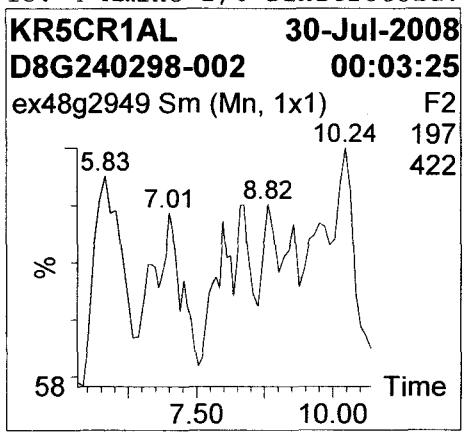
11: Nitrobenzene



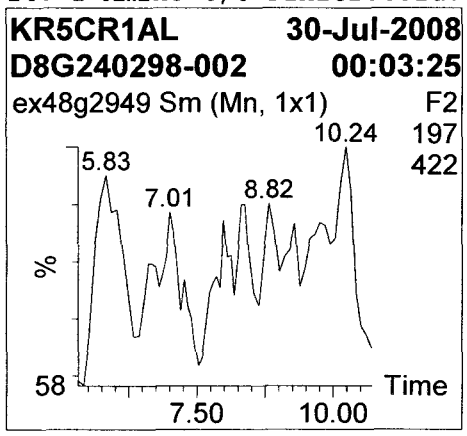
12: 2,4,6-Trinitrotoluene



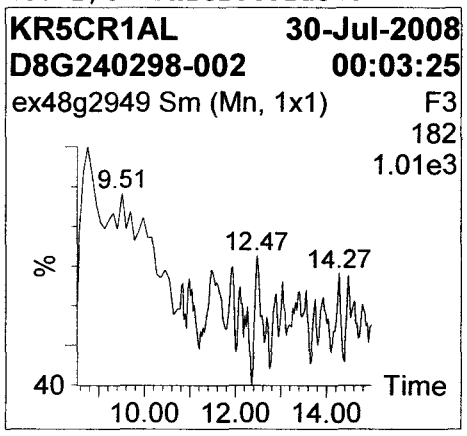
13: 4-Amino-2,6-Dinitrotolu..



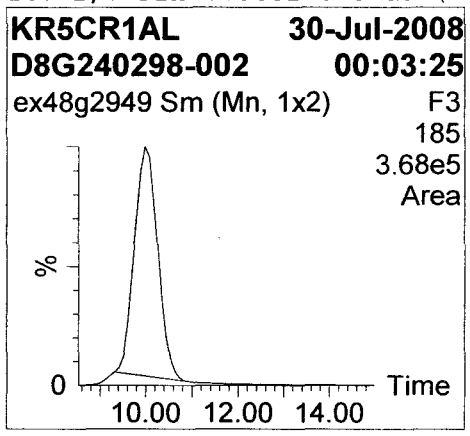
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



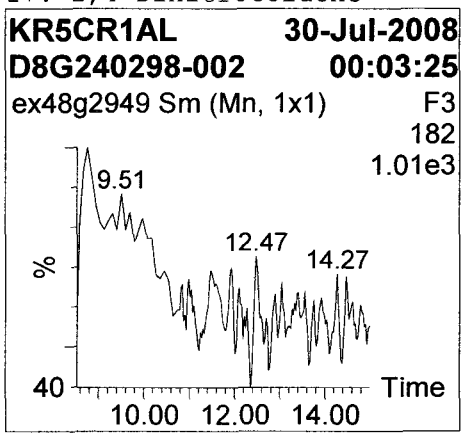
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

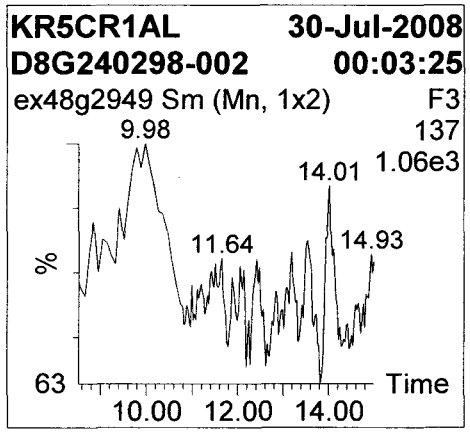
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2949
Text: D8G240298-002

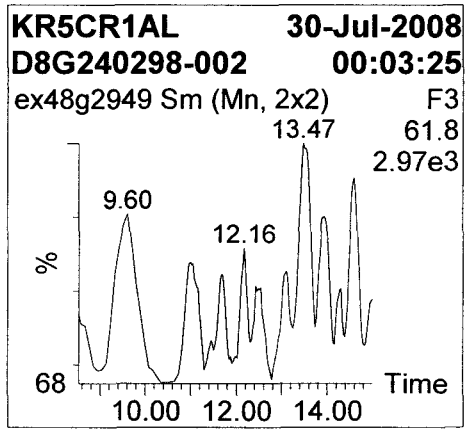
17: 2,4-Dinitrotoluene



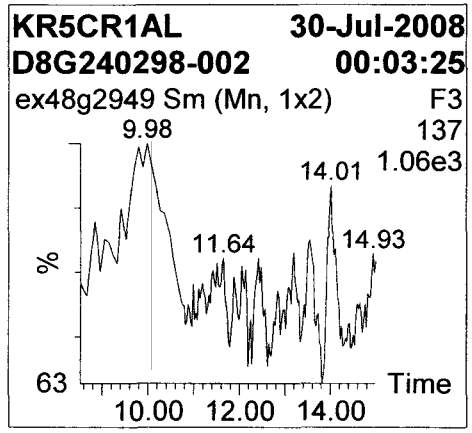
18: 2-Nitrotoluene



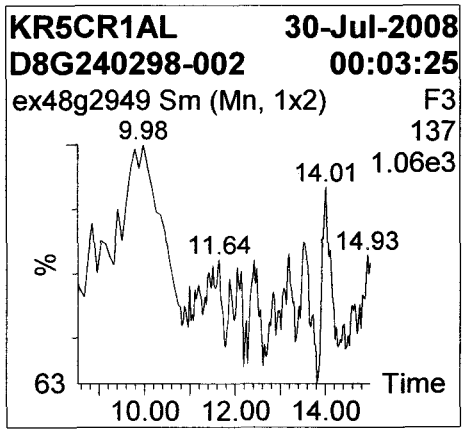
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report Page 64

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2949
Text: D8G240298-002

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7478	bb	1.124	112	29/Jul/08	ex48g29	
RDX 13C-..	3.882	43951	bb	1.083	108	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	82382	bb	0.812	81	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	32039	bb	521.292	134	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	208948	bb	0.974	97	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

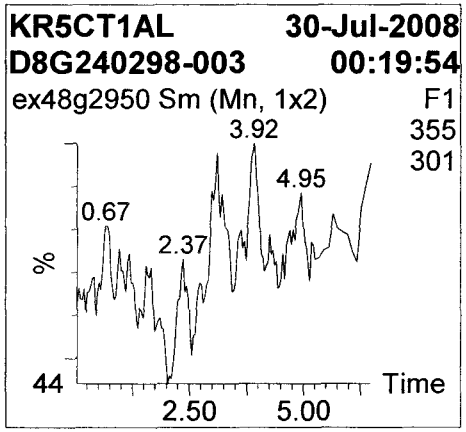
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

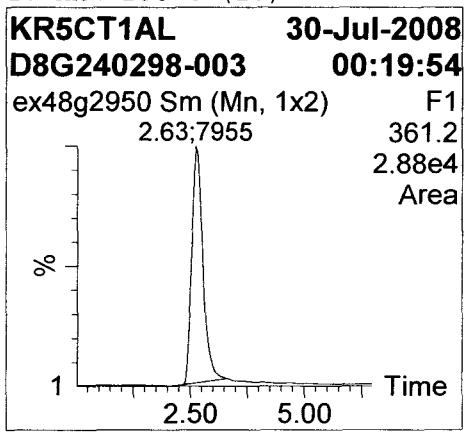
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2950
Text: D8G240298-003

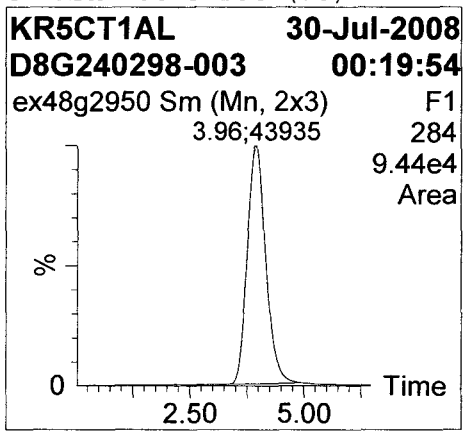
1: HMX



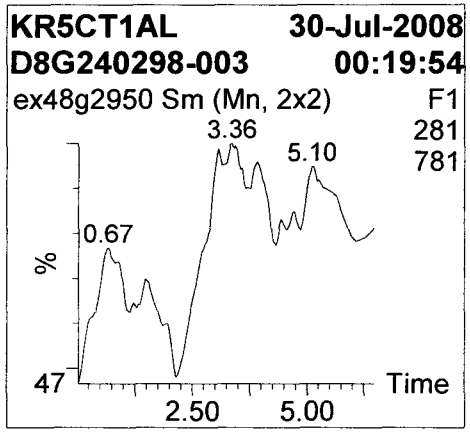
2: HMX 13C-4 (IS)



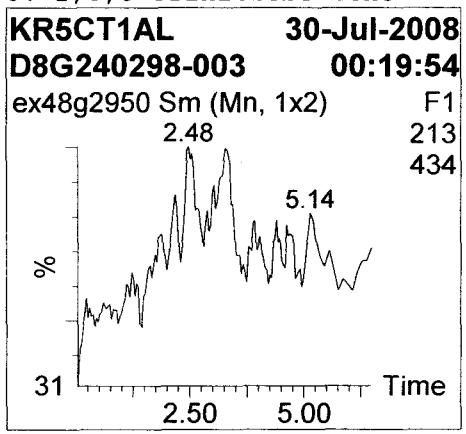
3: RDX 13C-3 284 (IS)



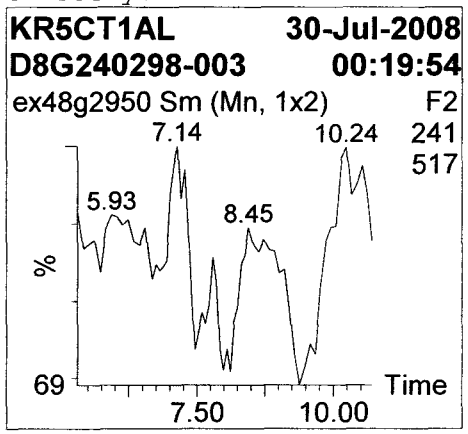
4: RDX



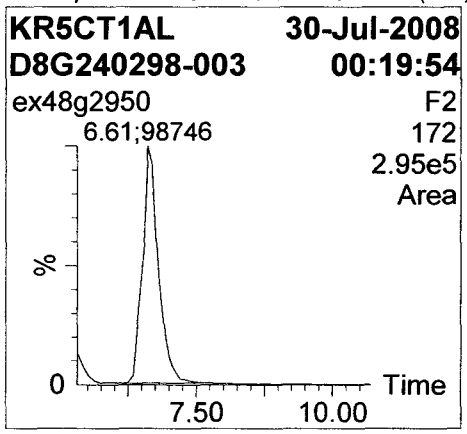
5: 1,3,5-Trinitrobenzene



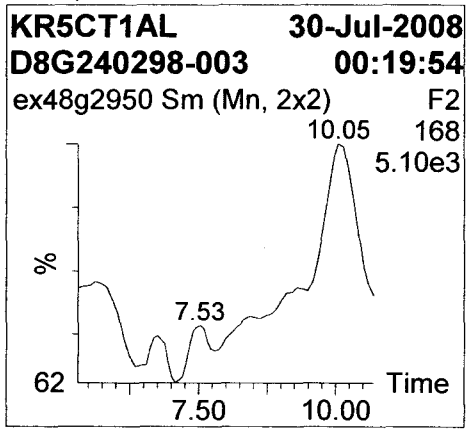
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



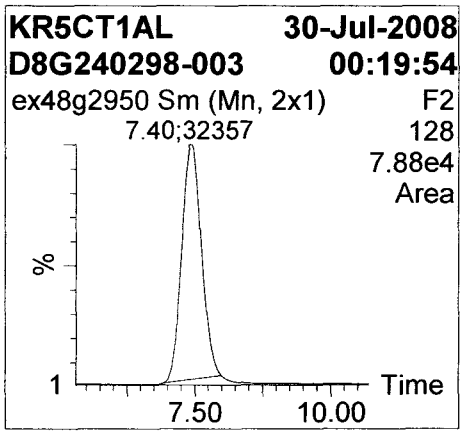
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

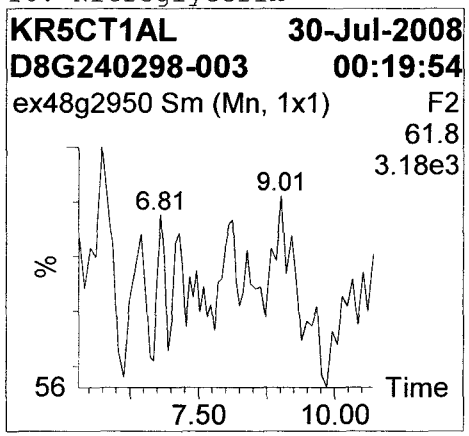
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2950
Text: D8G240298-003

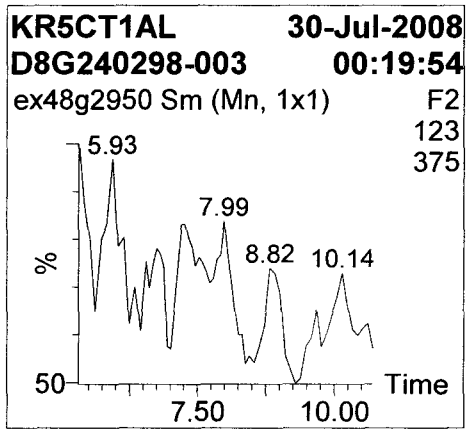
9: Nitrobenzene-d5



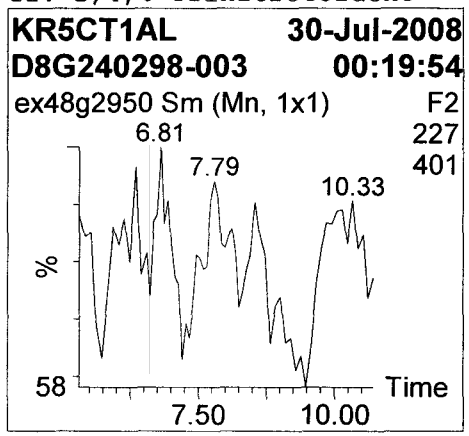
10: Nitroglycerin



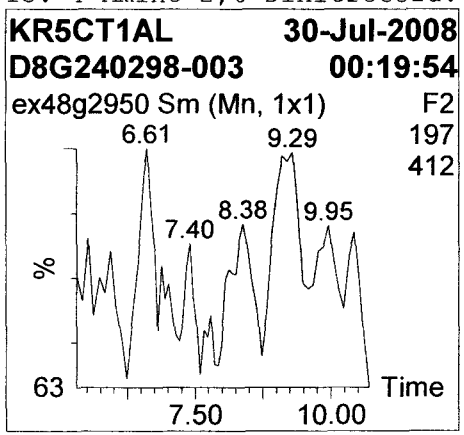
11: Nitrobenzene



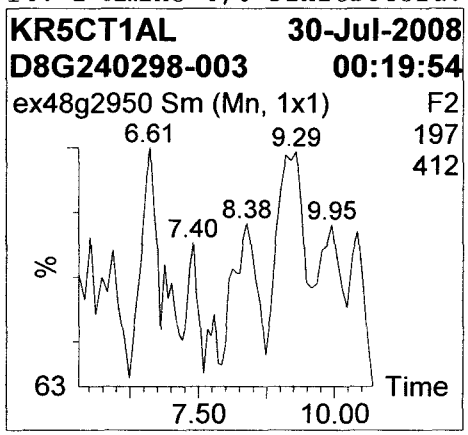
12: 2,4,6-Trinitrotoluene



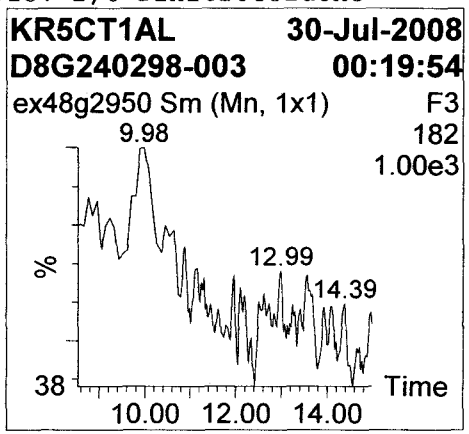
13: 4-Amino-2,6-Dinitrotolu..



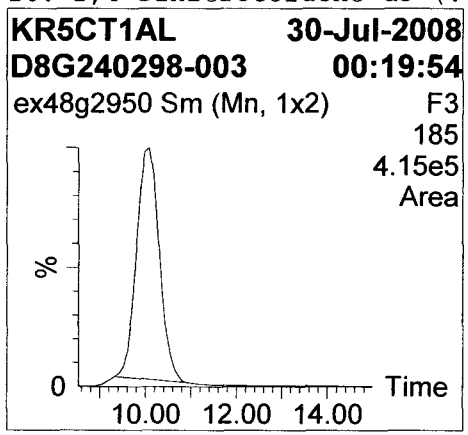
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



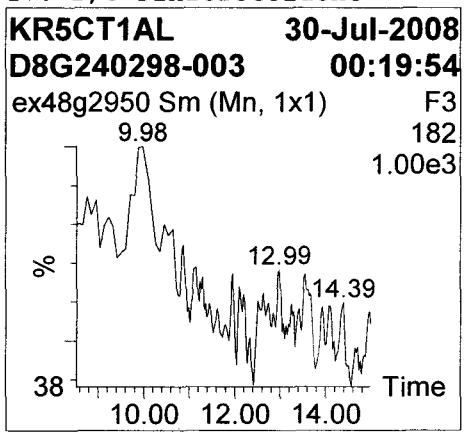
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

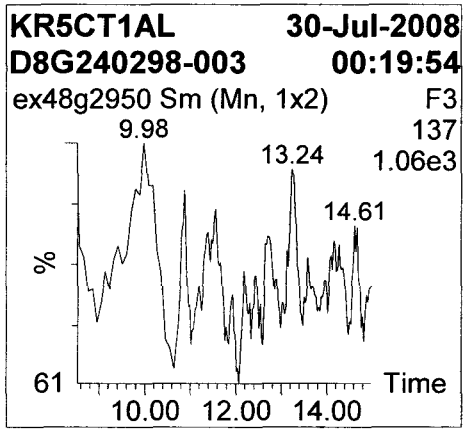
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2950
Text: D8G240298-003

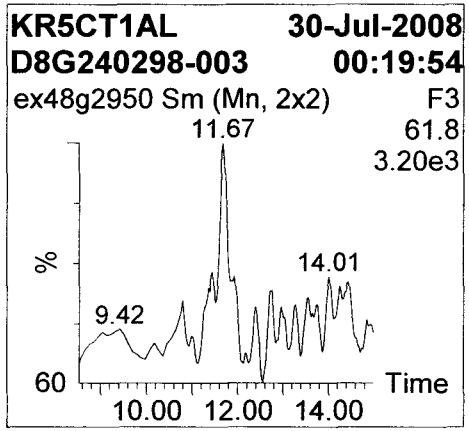
17: 2,4-Dinitrotoluene



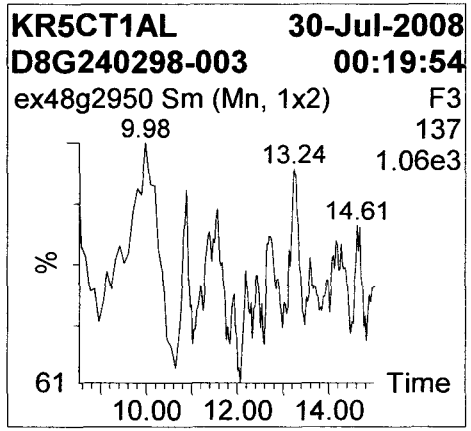
18: 2-Nitrotoluene



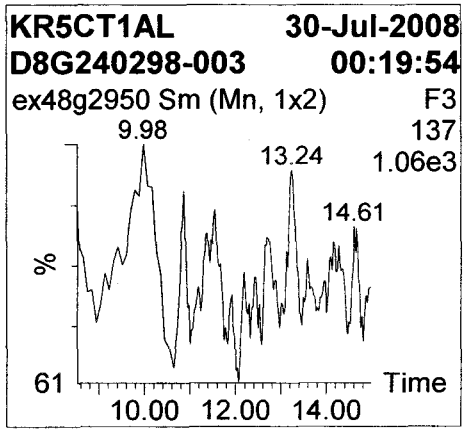
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2950
Text: D8G240298-003

Name	RT	Area	Flags	Conc. ()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.625	7955	bb	1.196	120	29/Jul/08	ex48g29	
RDX 13C-..	3.956	43935	bb	1.083	108	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	98746	bb	0.974	97	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	32357	bb	455.188	113	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.076	233589	bb	1.089	109	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

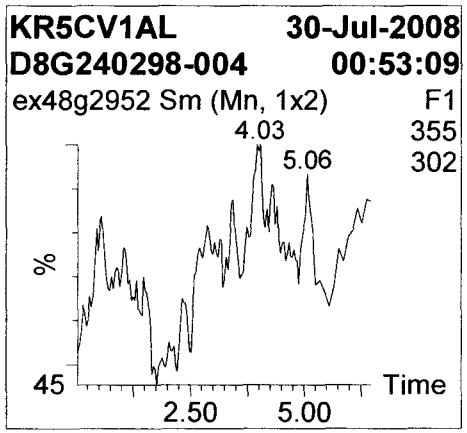
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

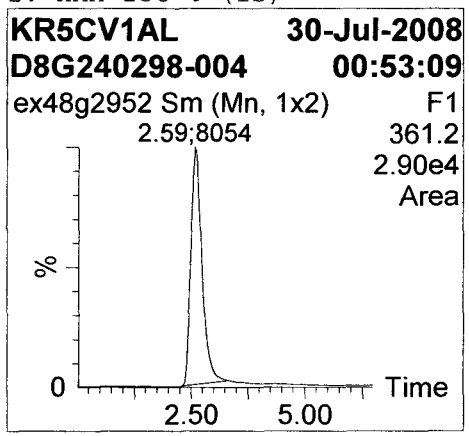
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2952
Text: D8G240298-004

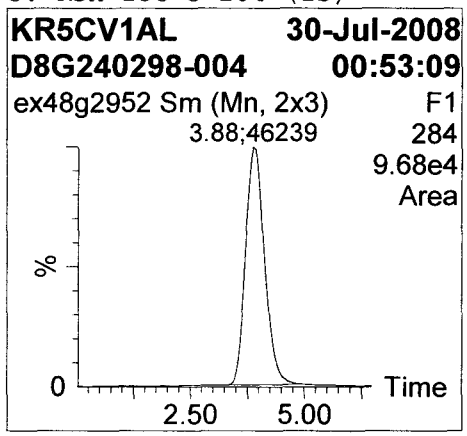
1: HMX



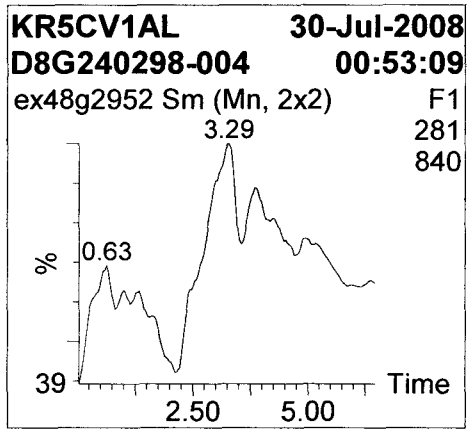
2: HMX 13C-4 (IS)



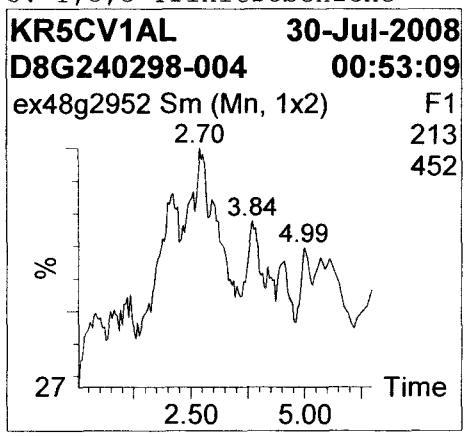
3: RDX 13C-3 284 (IS)



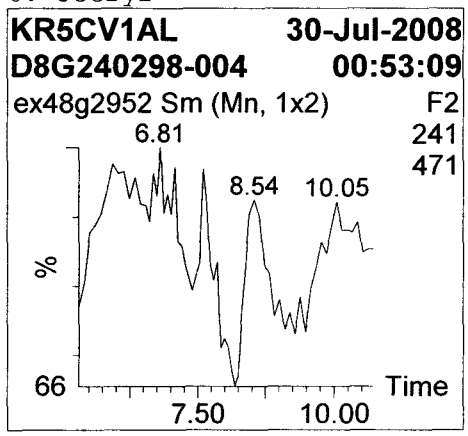
4: RDX



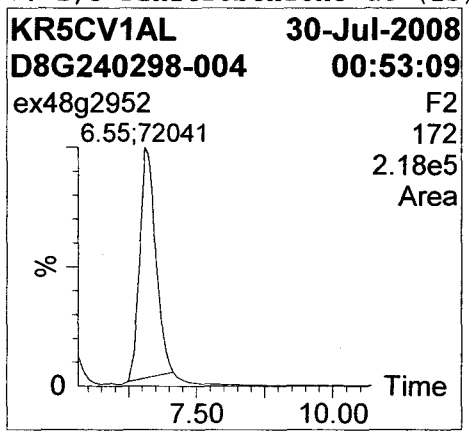
5: 1,3,5-Trinitrobenzene



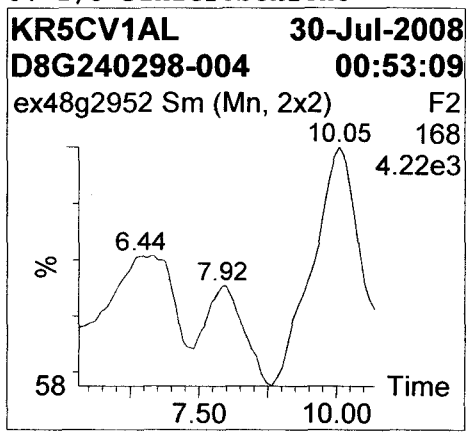
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



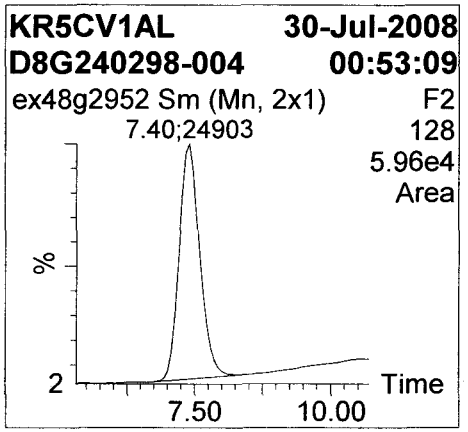
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

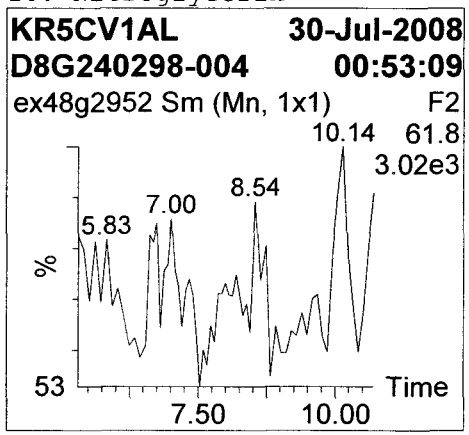
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2952
Text: D8G240298-004

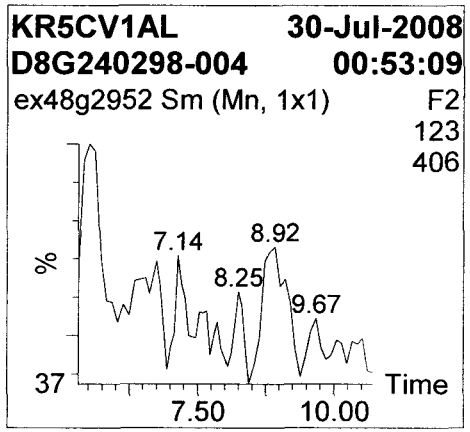
9: Nitrobenzene-d5



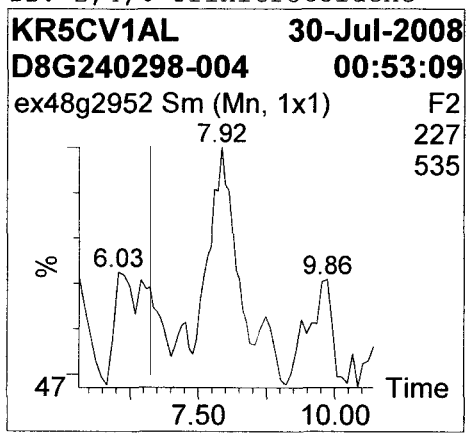
10: Nitroglycerin



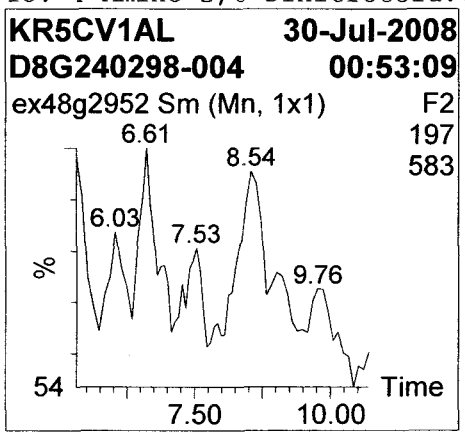
11: Nitrobenzene



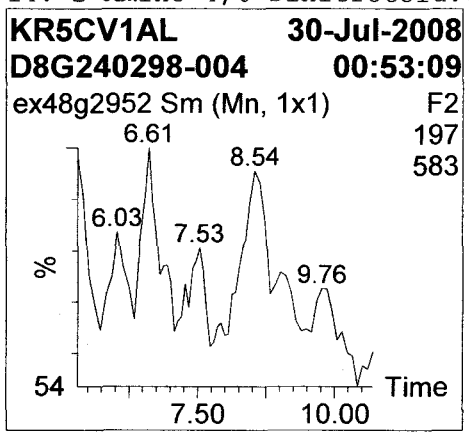
12: 2,4,6-Trinitrotoluene



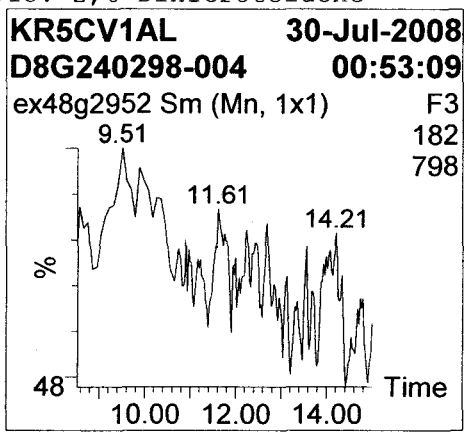
13: 4-Amino-2,6-Dinitrotolu..



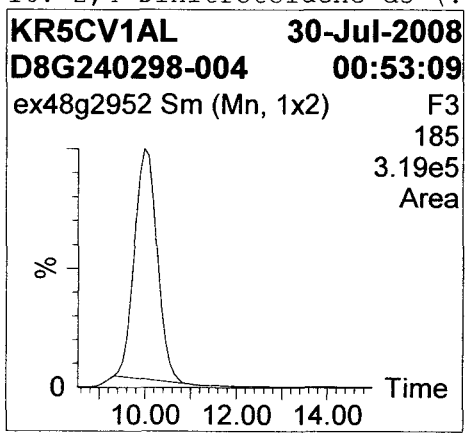
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



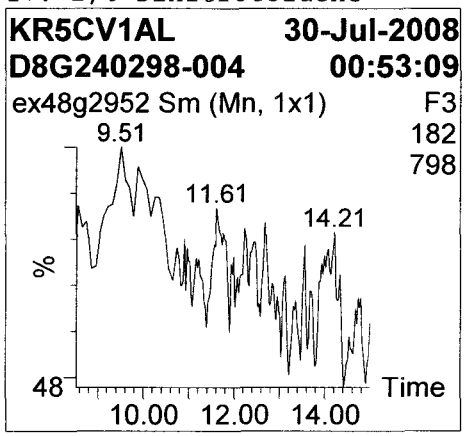
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

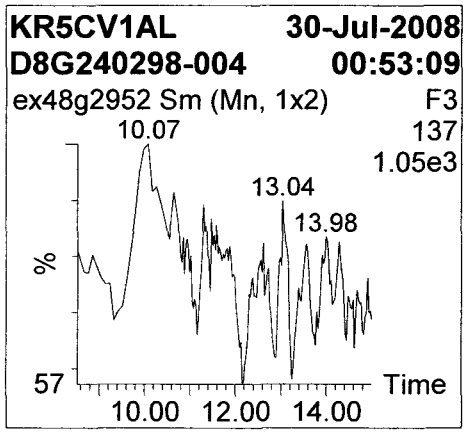
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2952
Text: D8G240298-004

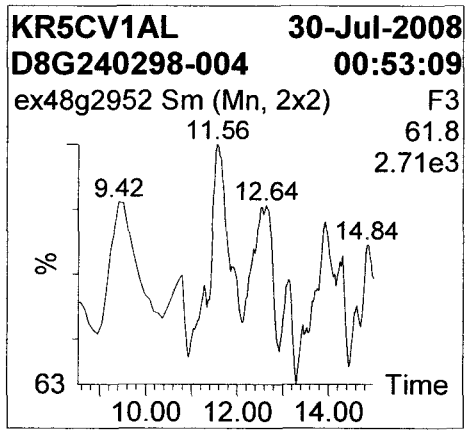
17: 2,4-Dinitrotoluene



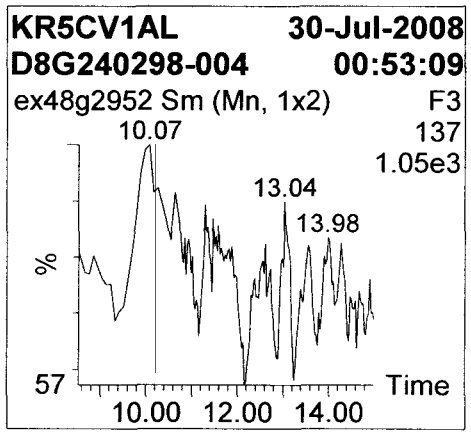
18: 2-Nitrotoluene



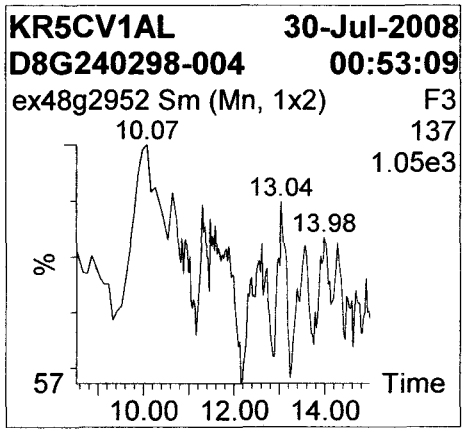
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2952
Text: D8G240298-004

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	8054	bb	1.211	121	29/Jul/08	ex48g29	
RDX 13C-..	3.882	46239	bb	1.140	114	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.546	72041	bb	0.710	71	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	24903	bb	467.744	119	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	179125	bb	0.835	84	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

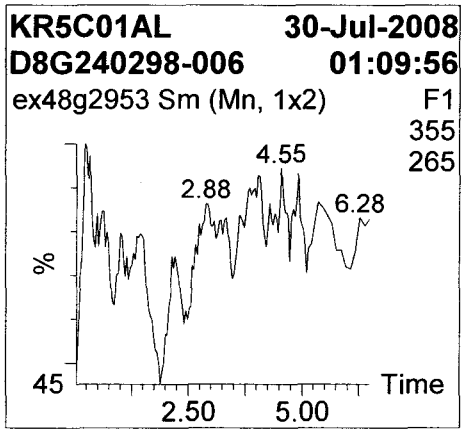
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

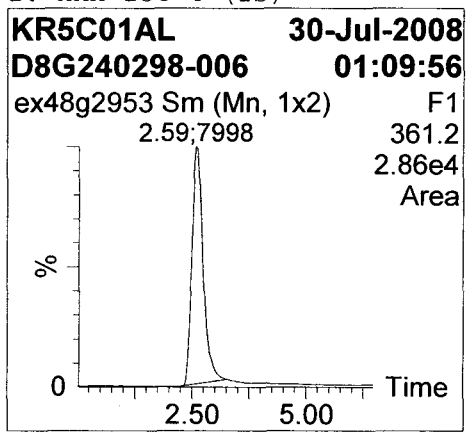
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2953
Text: D8G240298-006

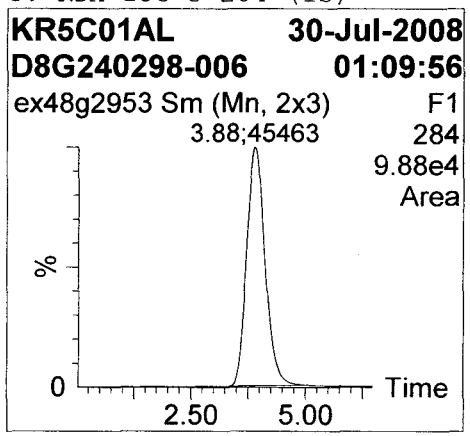
1: HMX



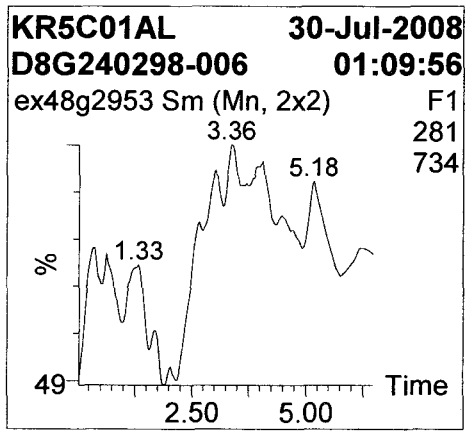
2: HMX 13C-4 (IS)



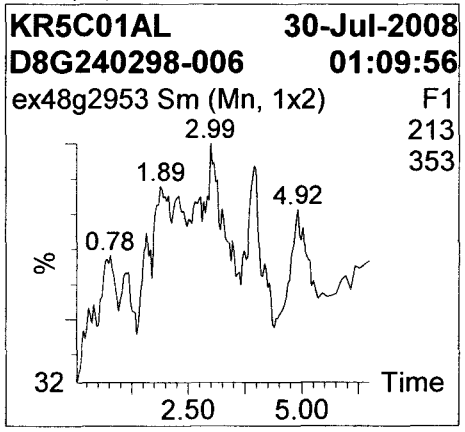
3: RDX 13C-3 284 (IS)



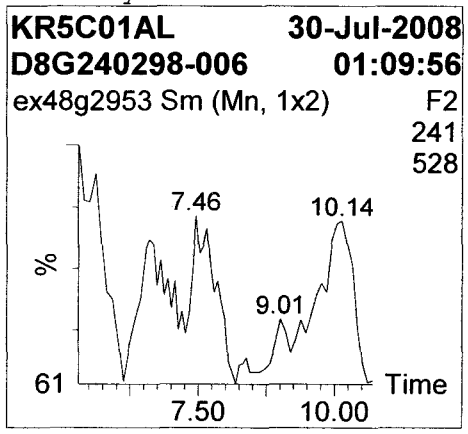
4: RDX



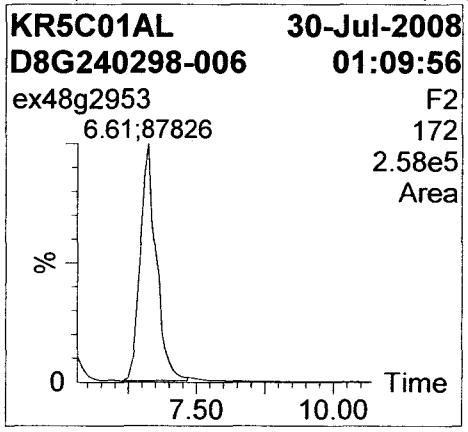
5: 1,3,5-Trinitrobenzene



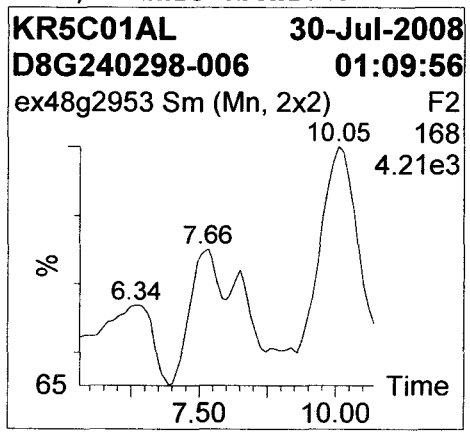
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



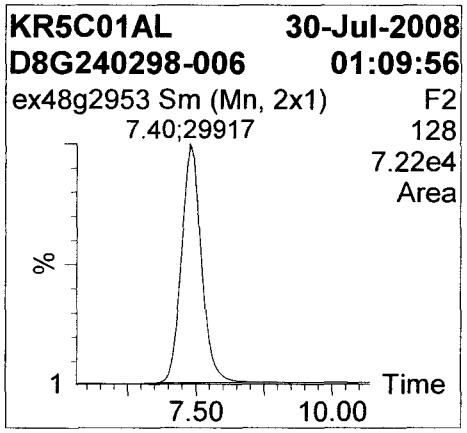
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

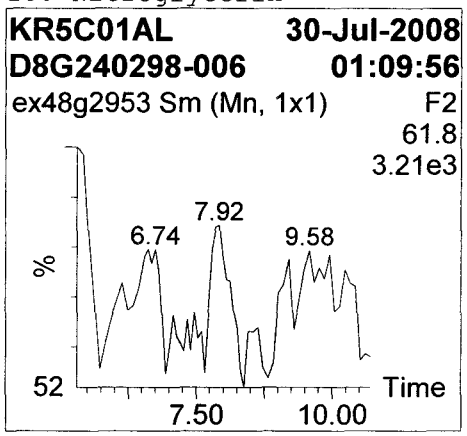
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2953
Text: D8G240298-006

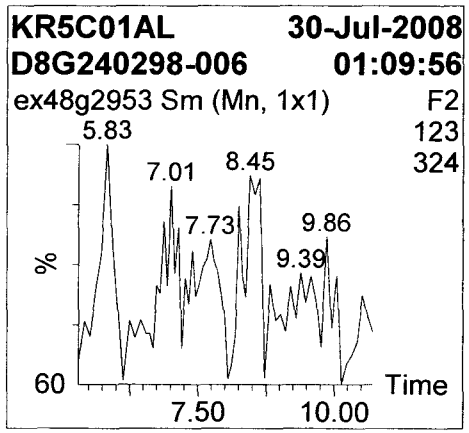
9: Nitrobenzene-d5



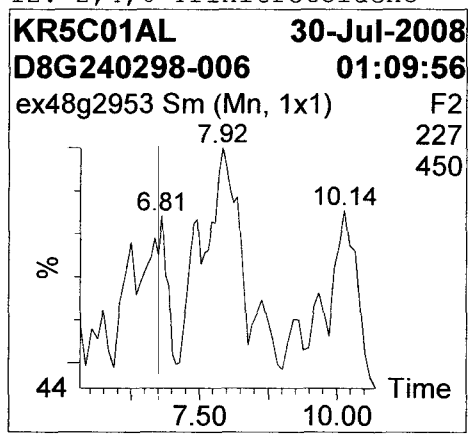
10: Nitroglycerin



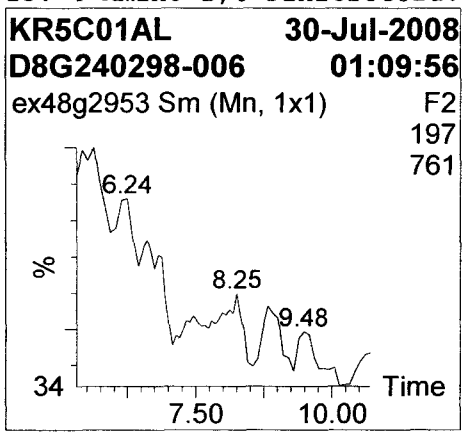
11: Nitrobenzene



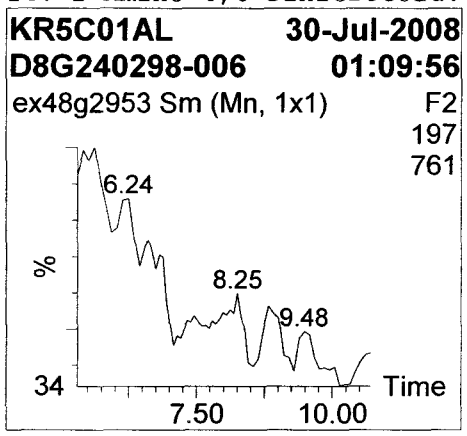
12: 2,4,6-Trinitrotoluene



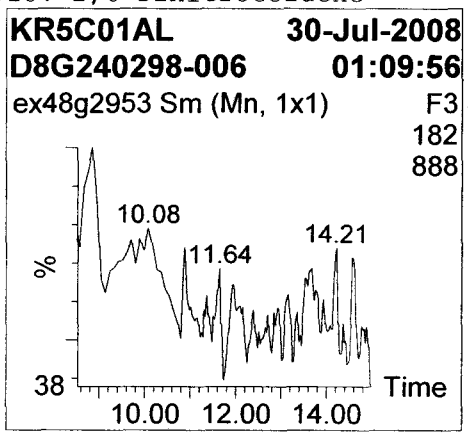
13: 4-Amino-2,6-Dinitrotolu..



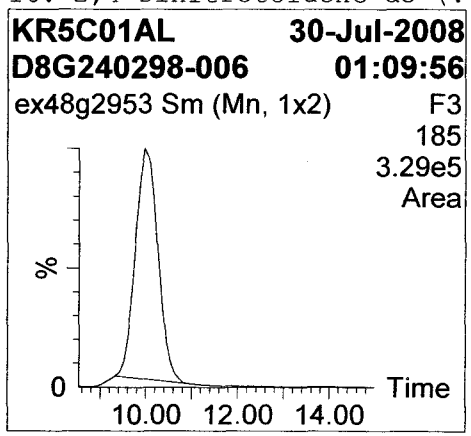
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



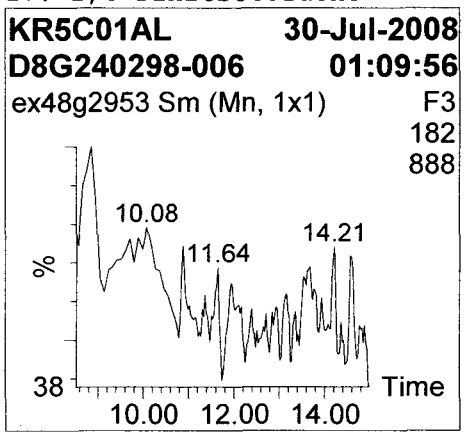
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

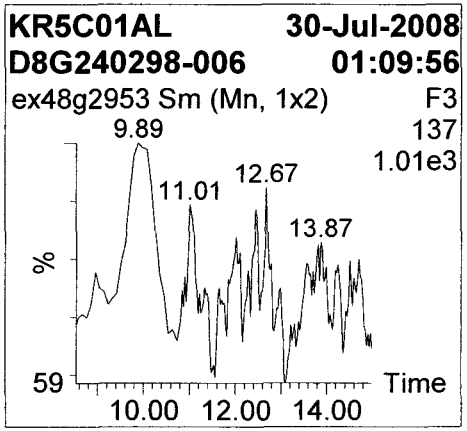
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2953
Text: D8G240298-006

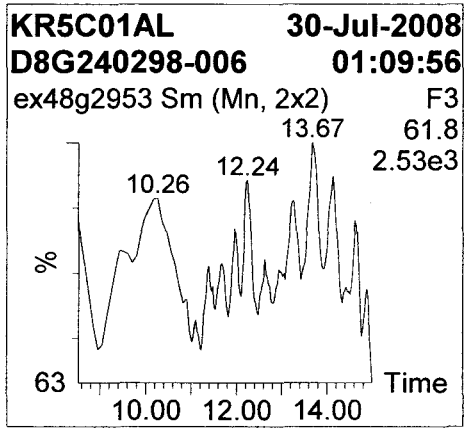
17: 2,4-Dinitrotoluene



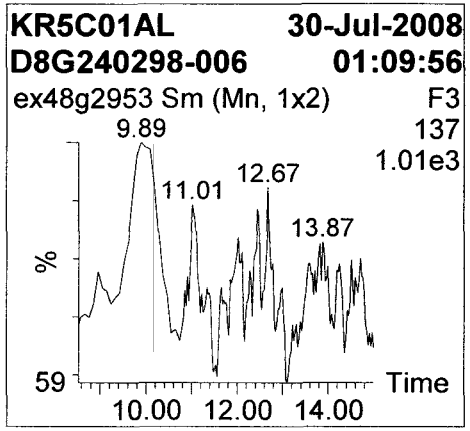
18: 2-Nitrotoluene



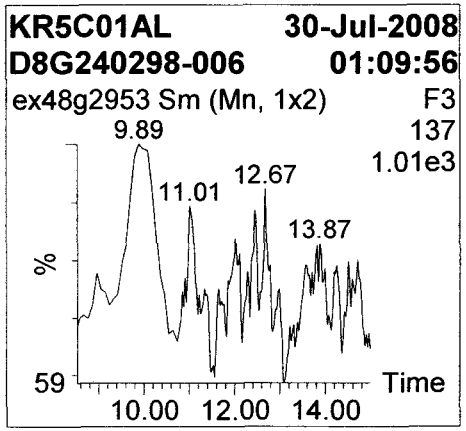
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2953
Text: D8G240298-006

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7998	bb	1.203	120	29/Jul/08	ex48g29	
RDX 13C-..	3.882	45463	bb	1.120	112	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	87826	bs	0.866	87	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	29917	bb	468.225	117	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.981	183556	bb	0.856	86	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

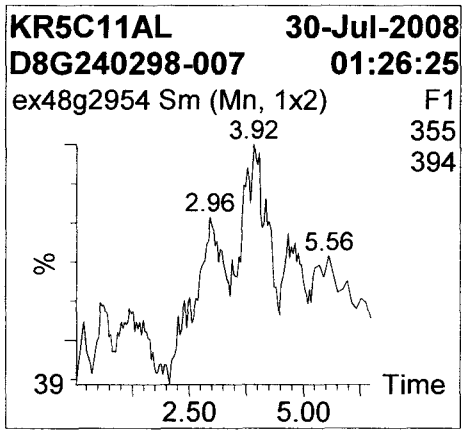
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

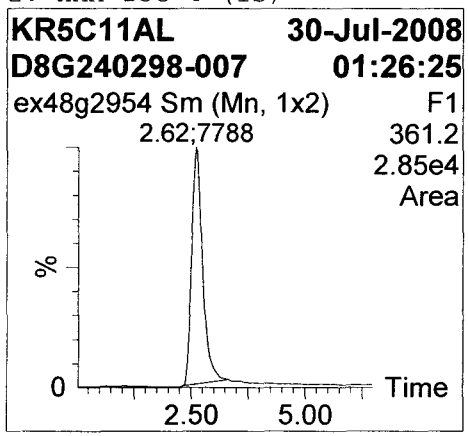
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2954
Text: D8G240298-007

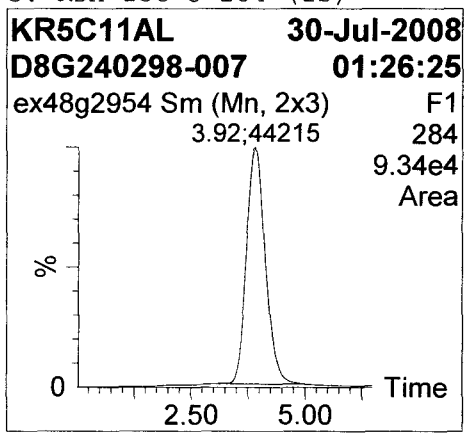
1: HMX



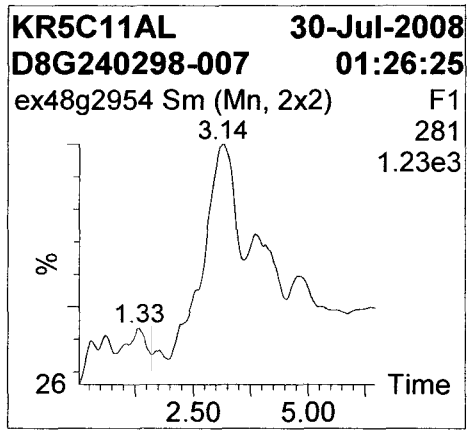
2: HMX 13C-4 (IS)



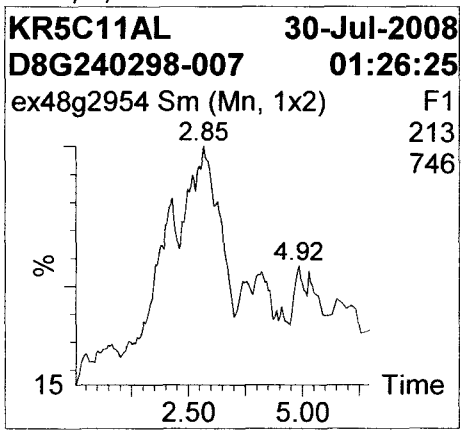
3: RDX 13C-3 284 (IS)



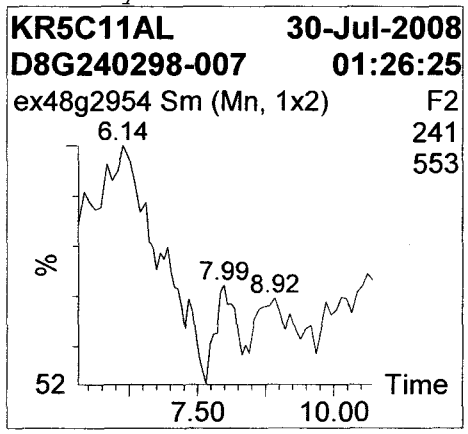
4: RDX



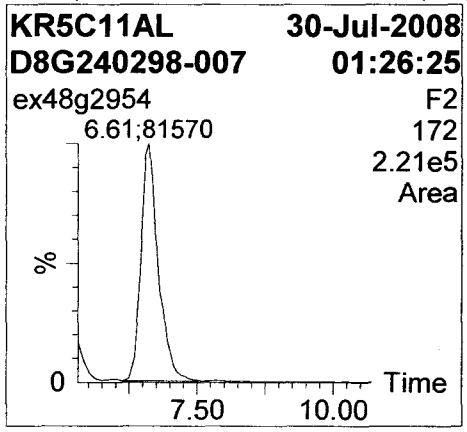
5: 1,3,5-Trinitrobenzene



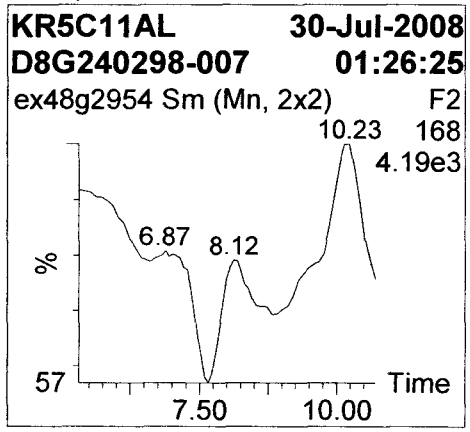
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



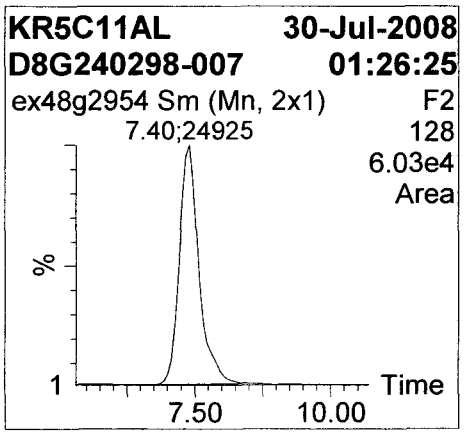
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

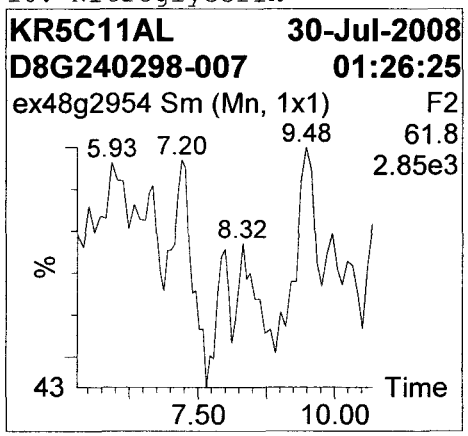
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2954
Text: D8G240298-007

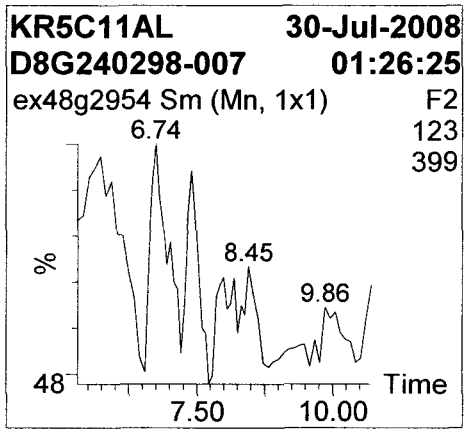
9: Nitrobenzene-d5



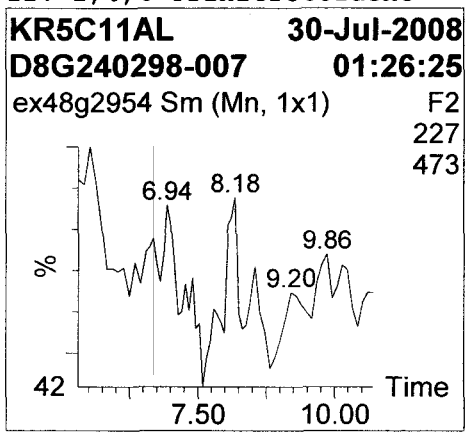
10: Nitroglycerin



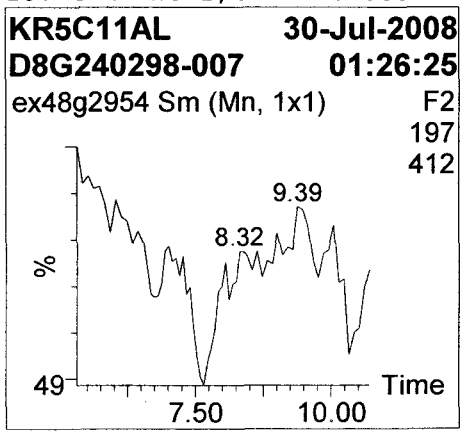
11: Nitrobenzene



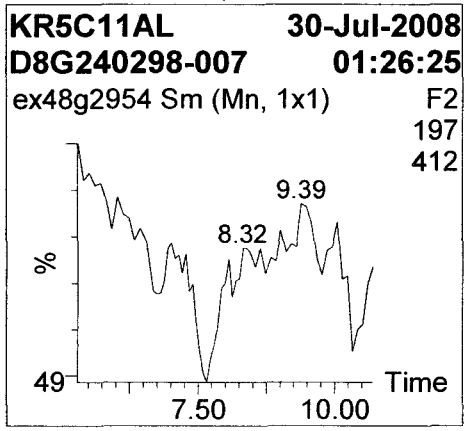
12: 2,4,6-Trinitrotoluene



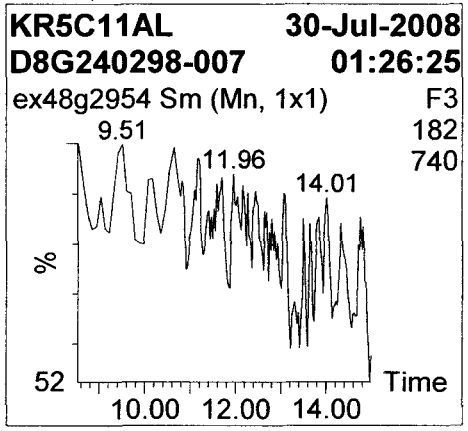
13: 4-Amino-2,6-Dinitrotolu..



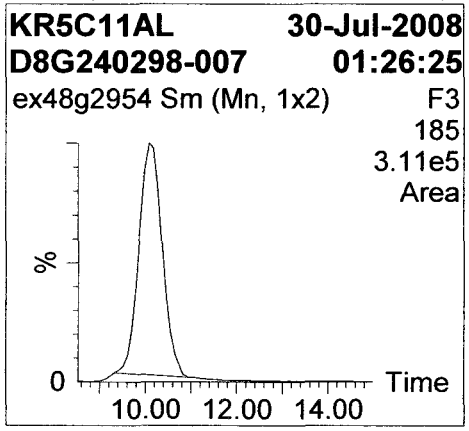
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



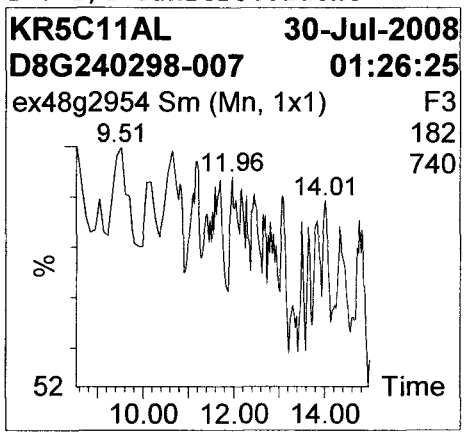
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

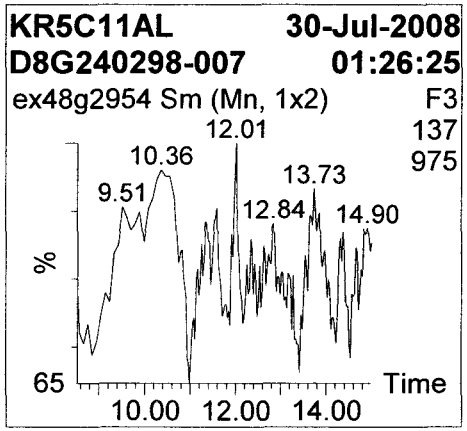
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2954
Text: D8G240298-007

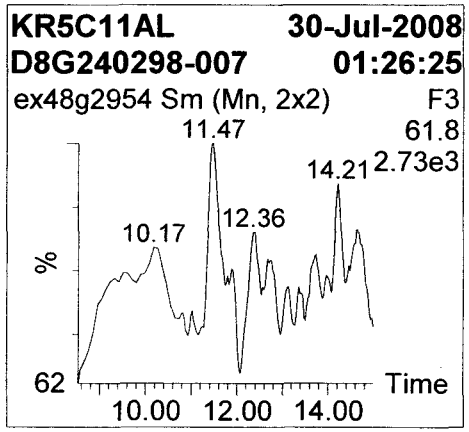
17: 2,4-Dinitrotoluene



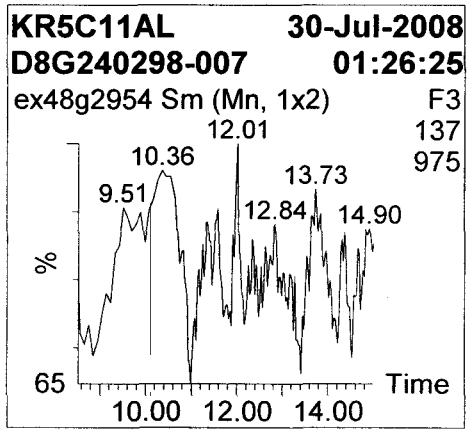
18: 2-Nitrotoluene



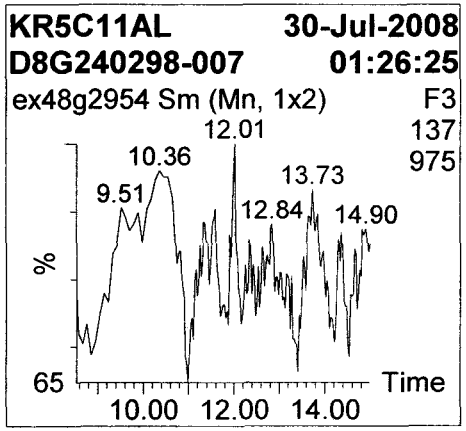
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2954
Text: D8G240298-007

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.625	7788	bb	1.171	117	29/Jul/08	ex48g29	
RDX 13C-..	3.919	44215	bb	1.090	109	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	81570	bb	0.804	80	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	24925	bb	417.753	105	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	180026	bb	0.839	84	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

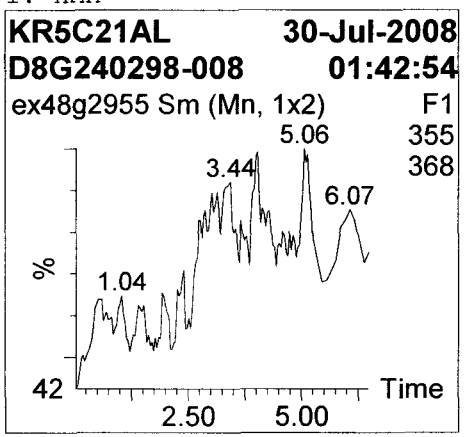
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

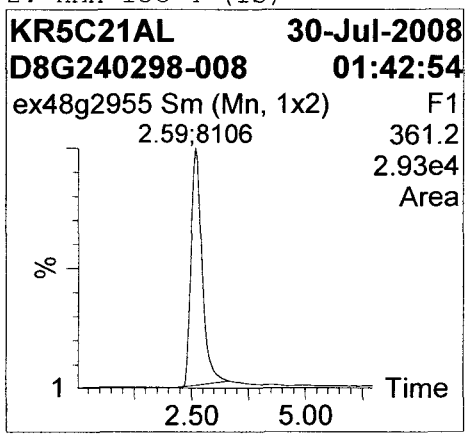
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2955
Text: D8G240298-008

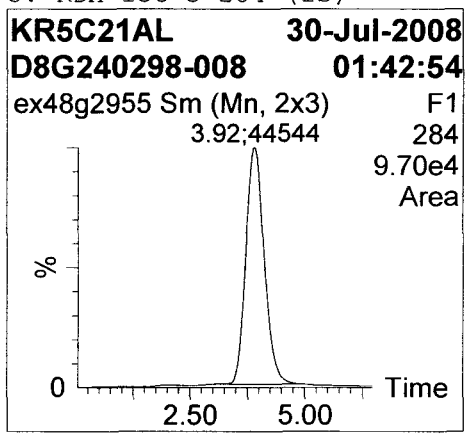
1: HMX



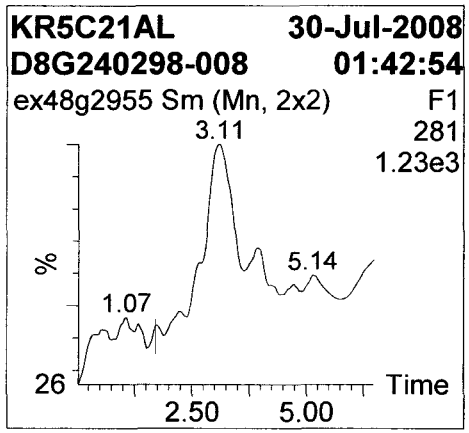
2: HMX 13C-4 (IS)



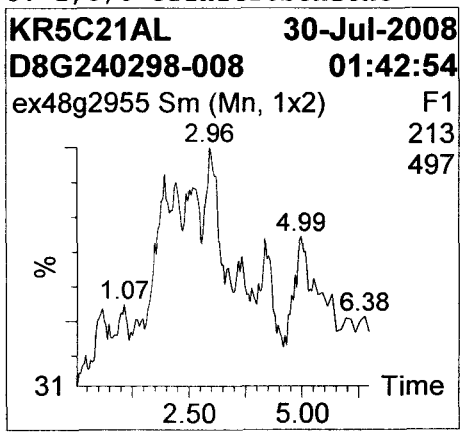
3: RDX 13C-3 284 (IS)



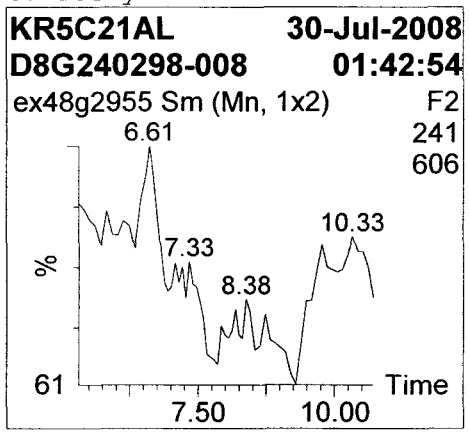
4: RDX



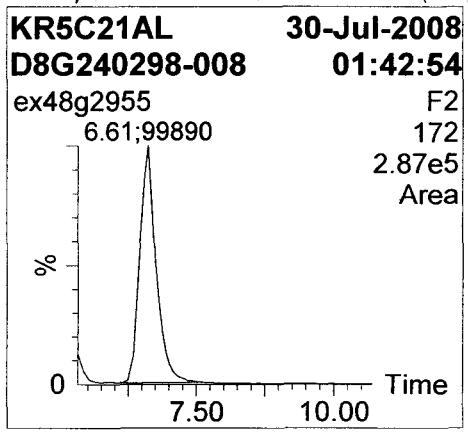
5: 1,3,5-Trinitrobenzene



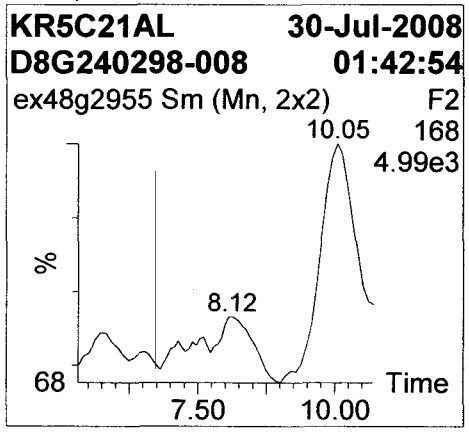
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



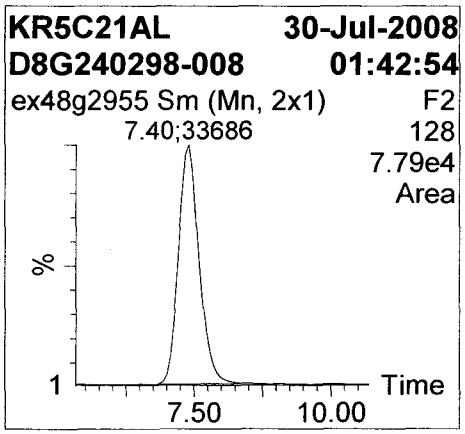
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

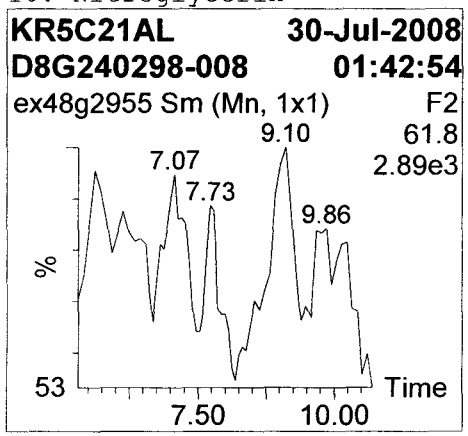
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2955
Text: D8G240298-008

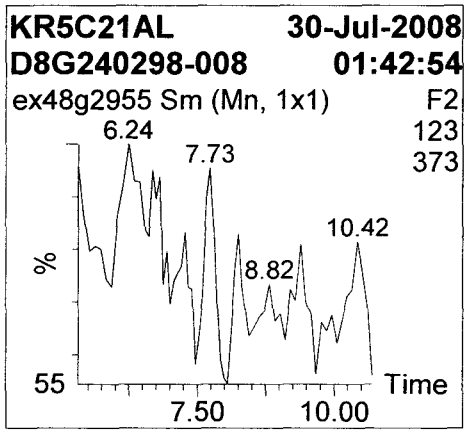
9: Nitrobenzene-d5



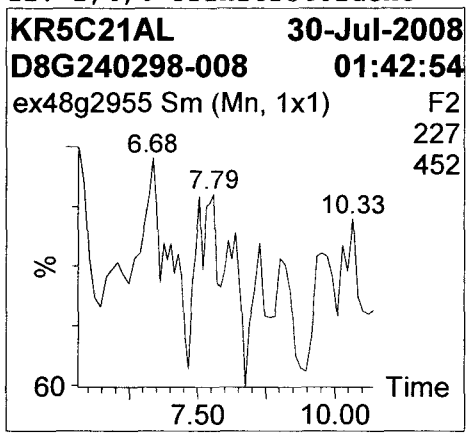
10: Nitroglycerin



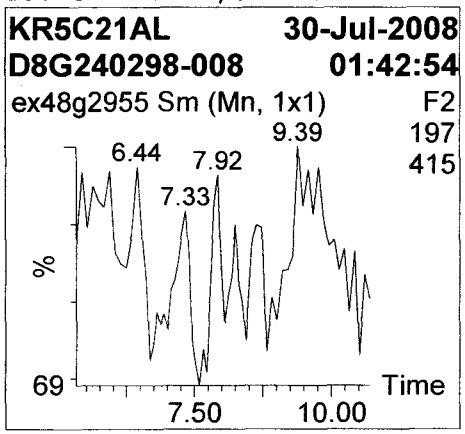
11: Nitrobenzene



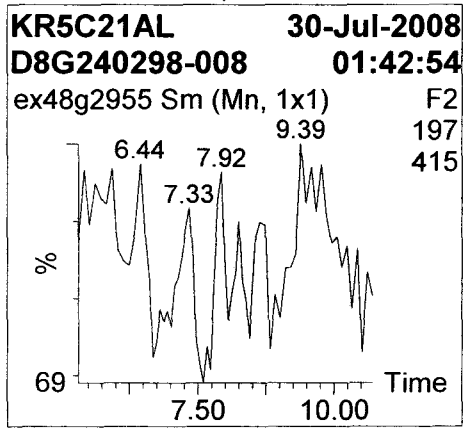
12: 2,4,6-Trinitrotoluene



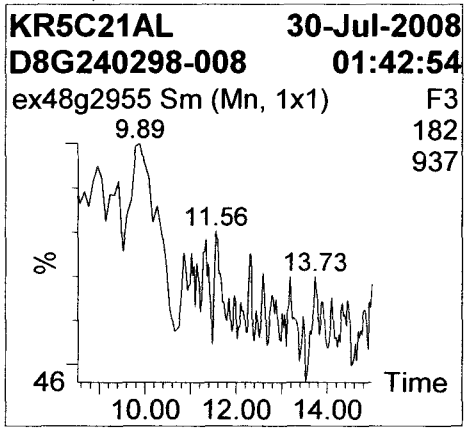
13: 4-Amino-2,6-Dinitrotolu..



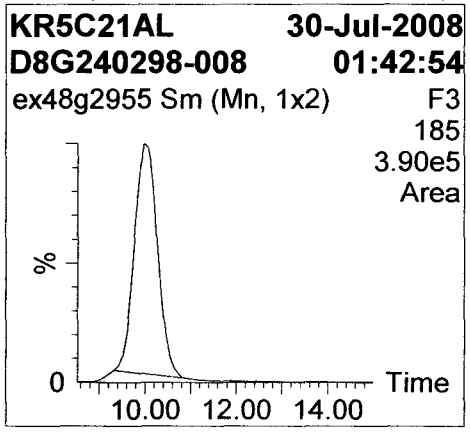
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



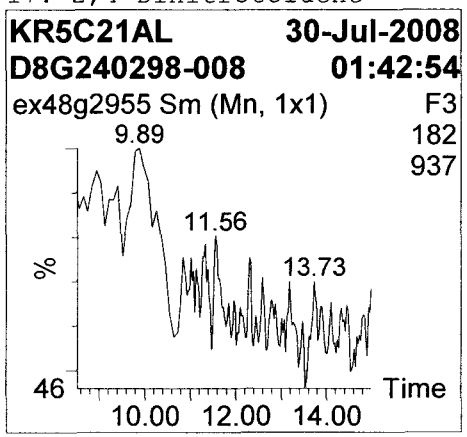
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

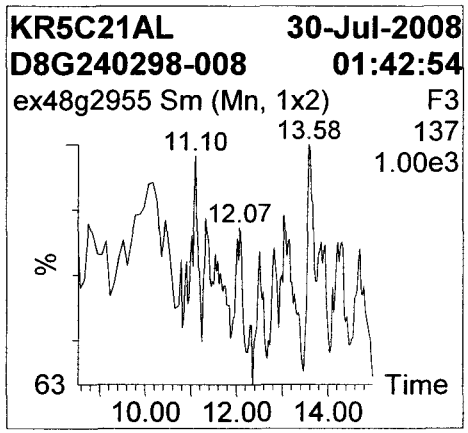
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2955
Text: D8G240298-008

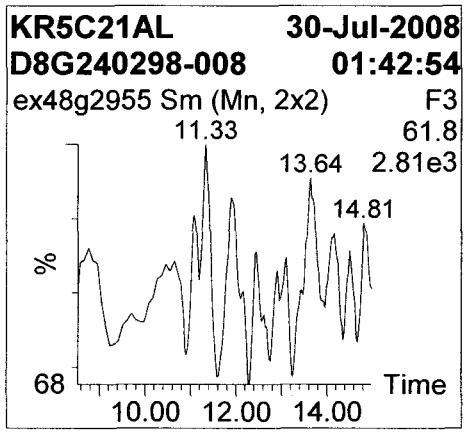
17: 2,4-Dinitrotoluene



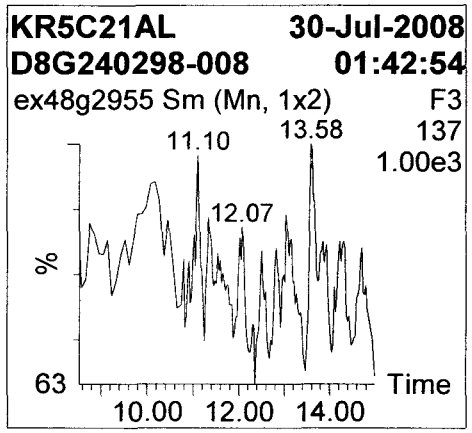
18: 2-Nitrotoluene



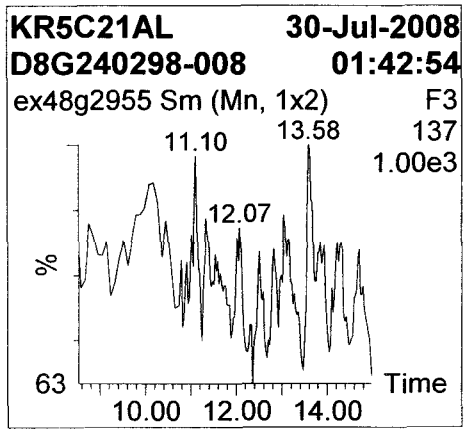
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2955
Text: D8G240298-008

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	8106	bb	1.219	122	29/Jul/08	ex48g29	
RDX 13C-..	3.919	44544	bb	1.098	110	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	99890	bb	0.985	98	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	33686	bb	465.808	116	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.980	220706	bb	1.029	103	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

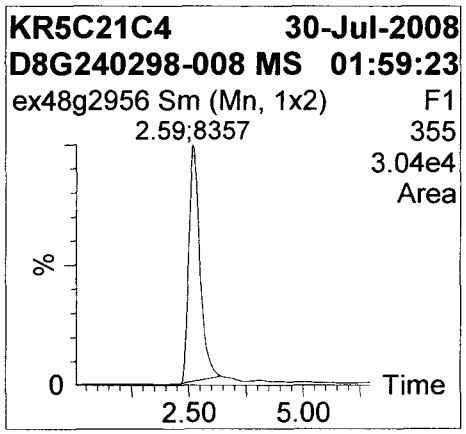
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

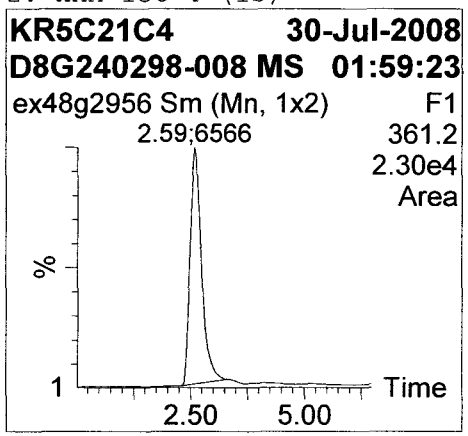
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2956
Text: D8G240298-008 MS

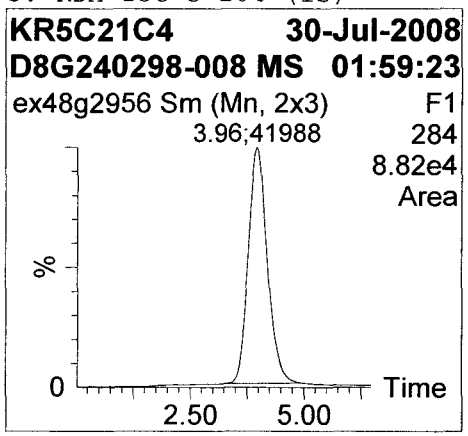
1: HMX



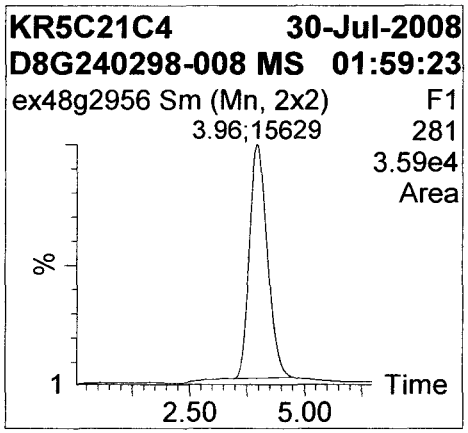
2: HMX 13C-4 (IS)



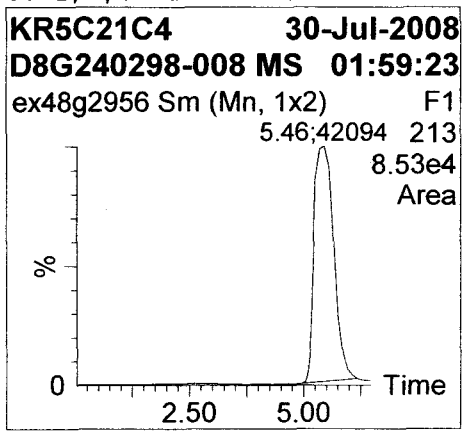
3: RDX 13C-3 284 (IS)



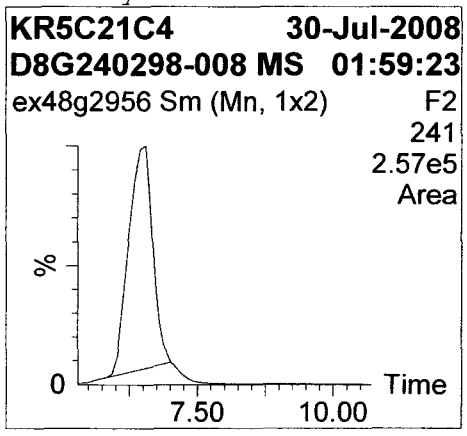
4: RDX



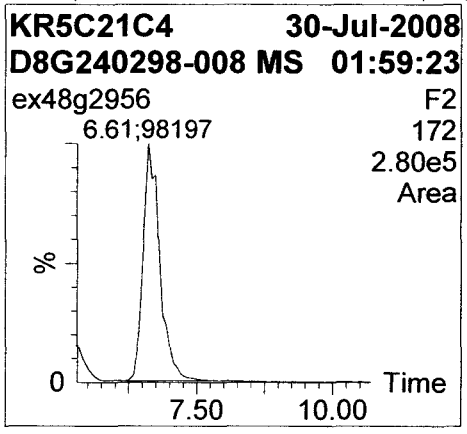
5: 1,3,5-Trinitrobenzene



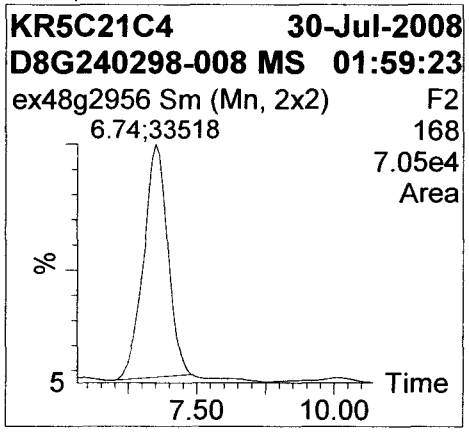
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



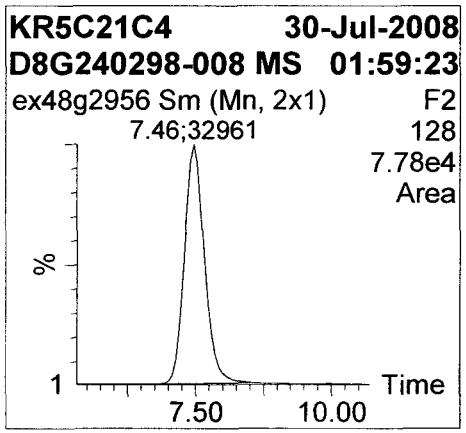
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

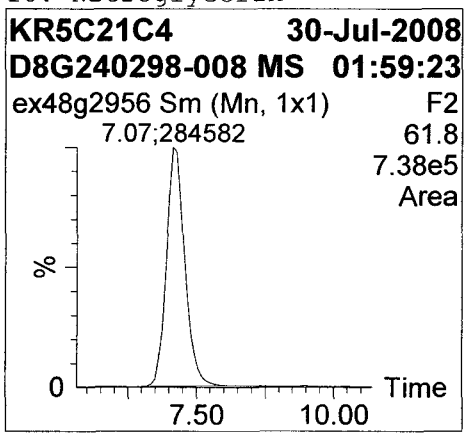
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2956
Text: D8G240298-008 MS

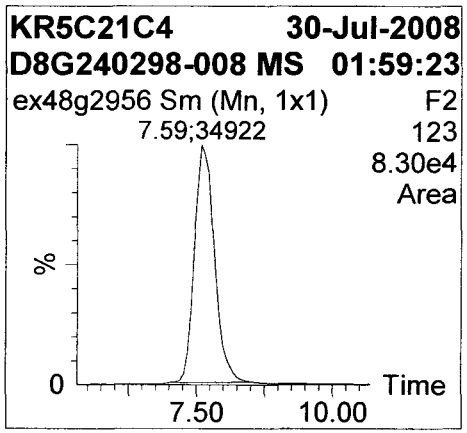
9: Nitrobenzene-d5



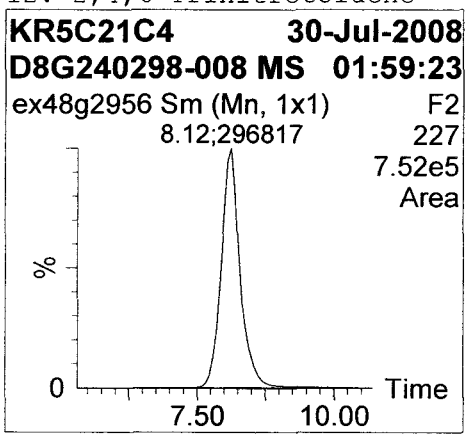
10: Nitroglycerin



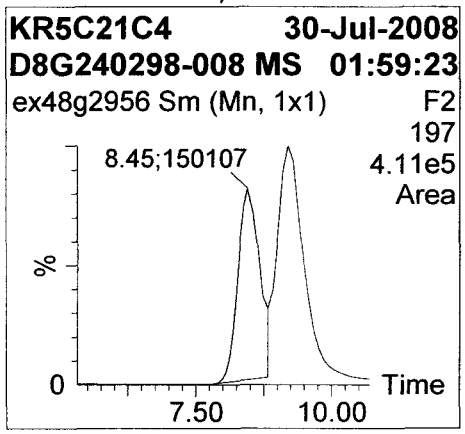
11: Nitrobenzene



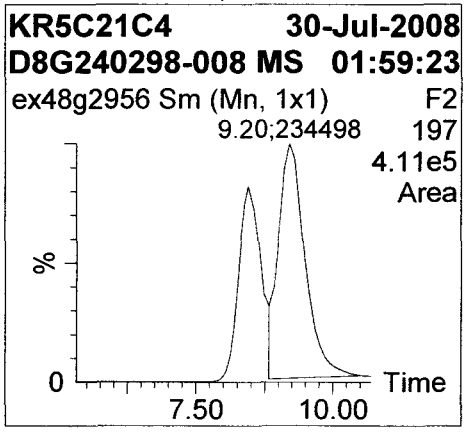
12: 2,4,6-Trinitrotoluene



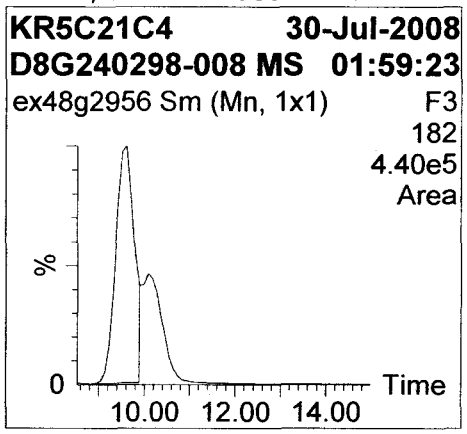
13: 4-Amino-2,6-Dinitrotolu..



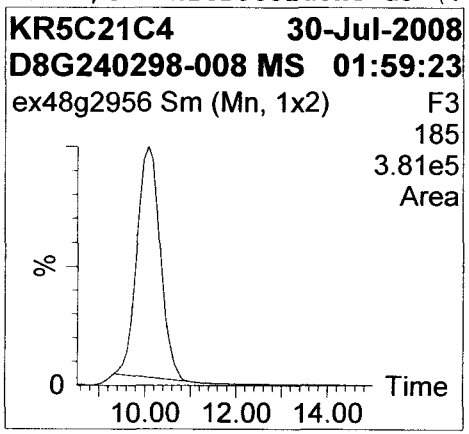
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



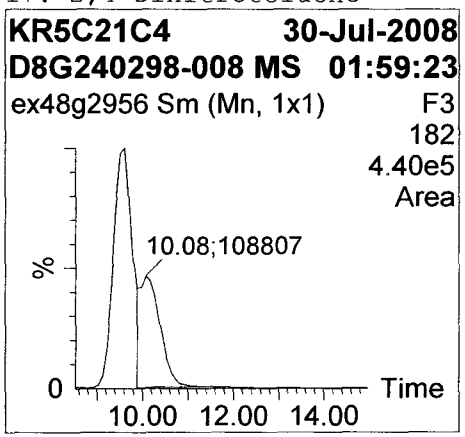
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

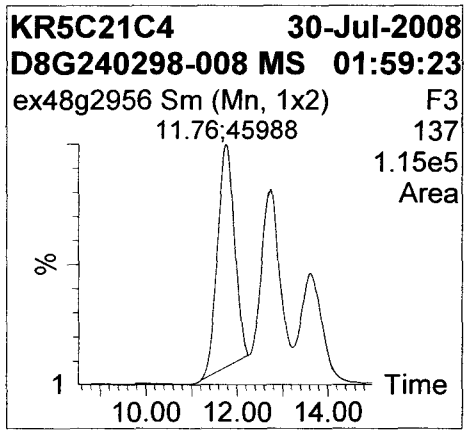
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2956
Text: D8G240298-008 MS

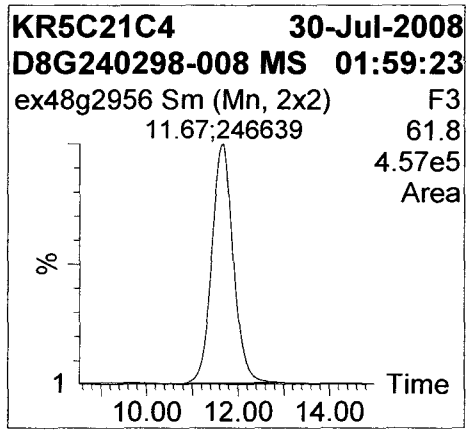
17: 2,4-Dinitrotoluene



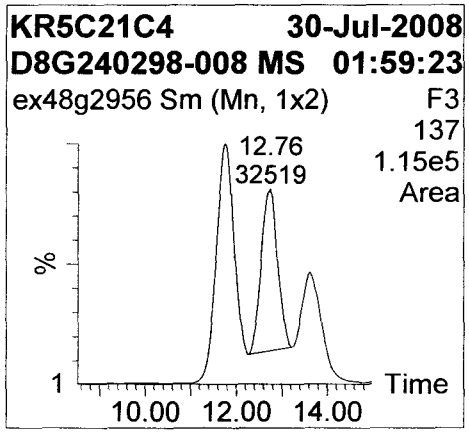
18: 2-Nitrotoluene



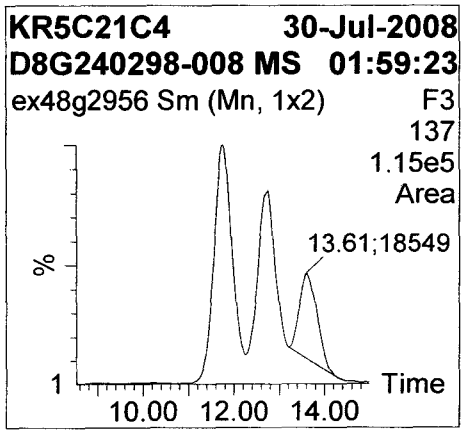
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2956
Text: D8G240298-008 MS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	8357	bb	457.962	114	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6566	bb	0.987	99	29/Jul/08	ex48g29	
RDX 13C-..	3.956	41988	bb	1.035	103	29/Jul/08	ex48g29	
RDX	3.956	15629	bb	431.610	108	29/Jul/08	ex48g29	
1,3,5-Tr..	5.455	42094	bb	441.594	110	29/Jul/08	ex48g29	
Tetryl	6.547	122618	bb	488.207	122	29/Jul/08	ex48g29	
1,3 Dini..	6.612	98197	bb	0.968	97	29/Jul/08	ex48g29	
1,3-Dini..	6.743	33518	bb	426.739	106	29/Jul/08	ex48g29	
Nitroben..	7.464	32961	bb	462.212	115	29/Jul/08	ex48g29	
Nitrogly..	7.071	284582	bb	444.374	111	29/Jul/08	ex48g29	
Nitroben..	7.595	34922	bb	432.561	108	29/Jul/08	ex48g29	
2,4,6-Tr..	8.119	296817	bb	430.058	107	29/Jul/08	ex48g29	
4-Amino-..	8.446	150107	bd	459.535	115	29/Jul/08	ex48g29	
2-Amino-..	9.199	234498	db	464.046	116	29/Jul/08	ex48g29	
2,6-Dini..	9.605	201739	bd	410.437	102	29/Jul/08	ex48g29	
2,4-Dini..	10.075	216938	bb	1.011	101	29/Jul/08	ex48g29	
2,4-Dini..	10.075	108807	db	451.894	113	29/Jul/08	ex48g29	
2-Nitrot..	11.757	45988	bb	428.064	107	29/Jul/08	ex48g29	
PETN	11.671	246639	bb	433.503	108	29/Jul/08	ex48g29	
4-Nitrot..	12.757	32519	bb	393.063	98	29/Jul/08	ex48g29	
3-Nitrot..	13.613	18549	bb	418.177	104	29/Jul/08	ex48g29	

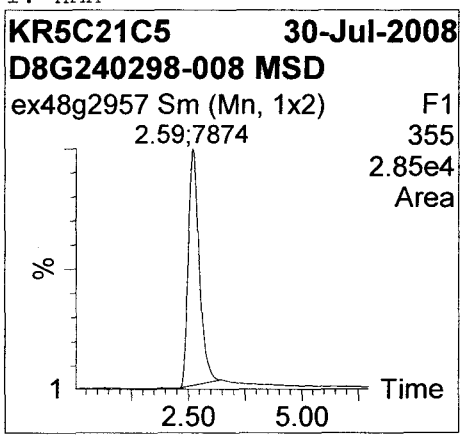
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

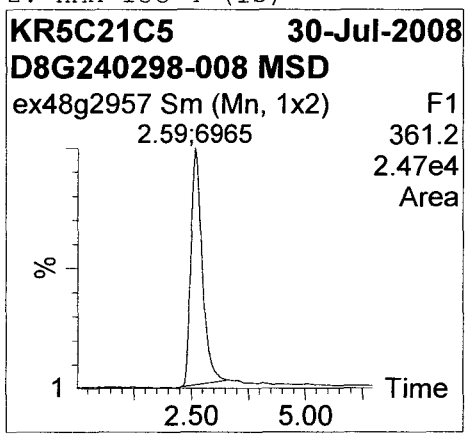
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2957
Text: D8G240298-008 MSD

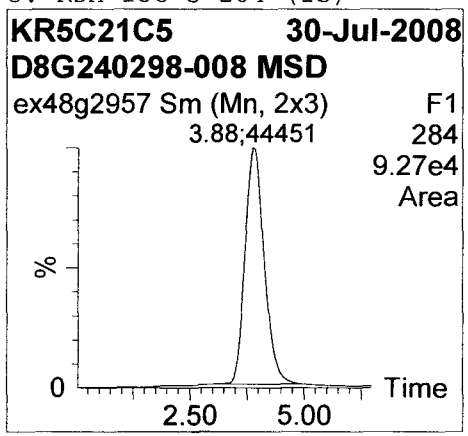
1: HMX



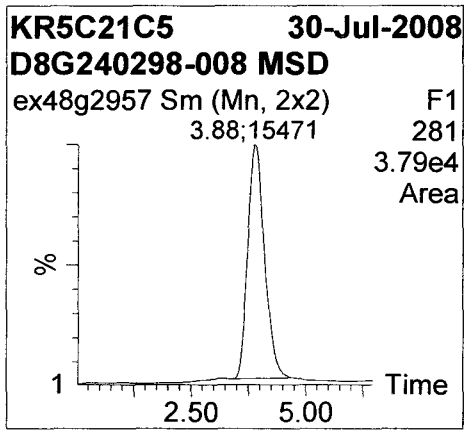
2: HMX 13C-4 (IS)



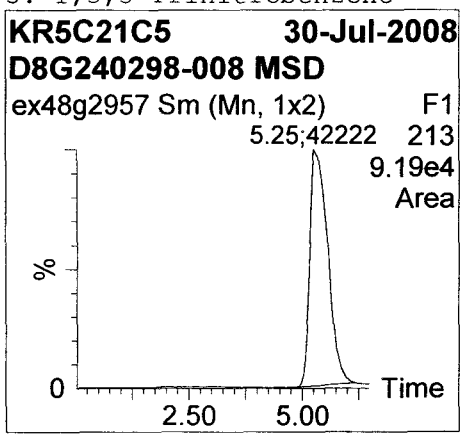
3: RDX 13C-3 284 (IS)



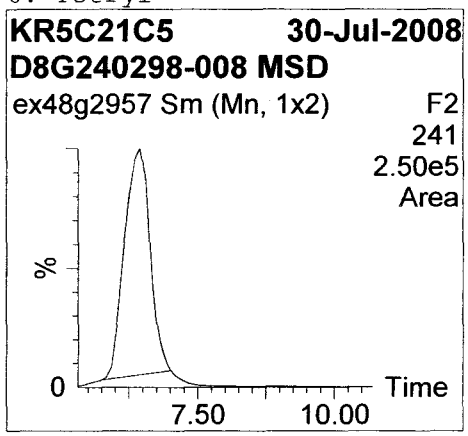
4: RDX



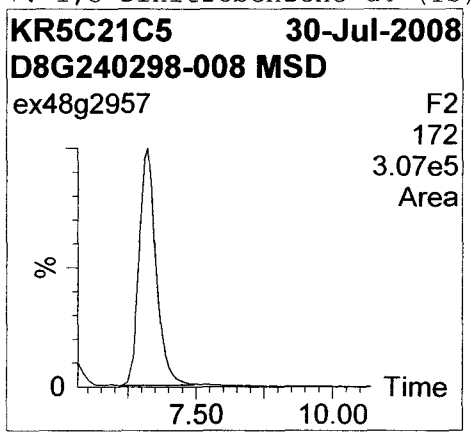
5: 1,3,5-Trinitrobenzene



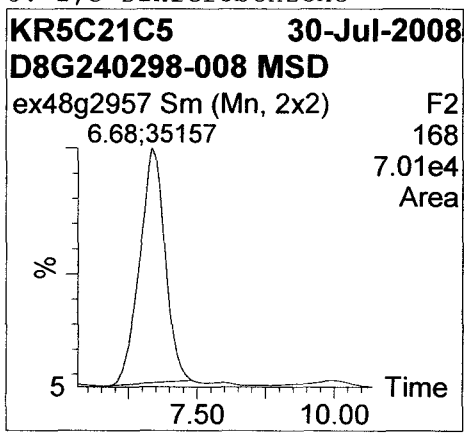
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



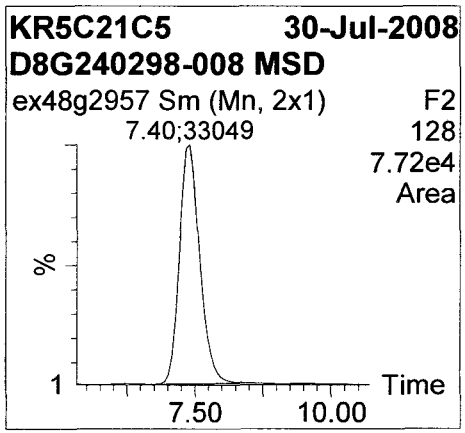
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

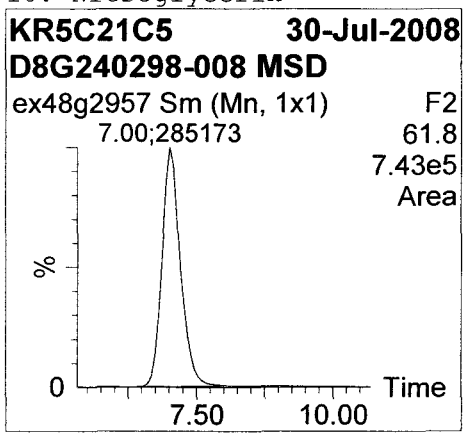
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2957
Text: D8G240298-008 MSD

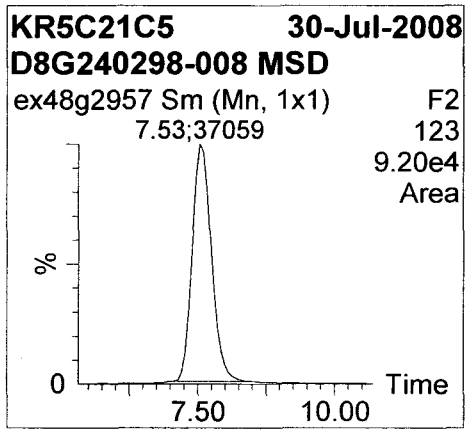
9: Nitrobenzene-d5



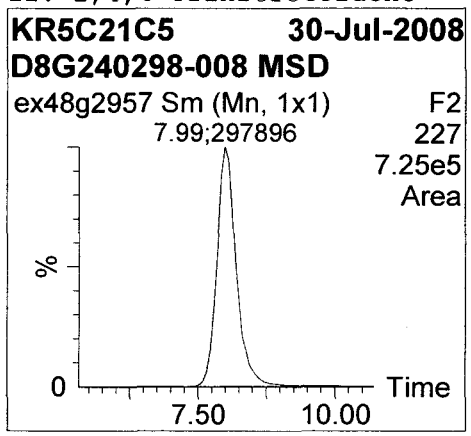
10: Nitroglycerin



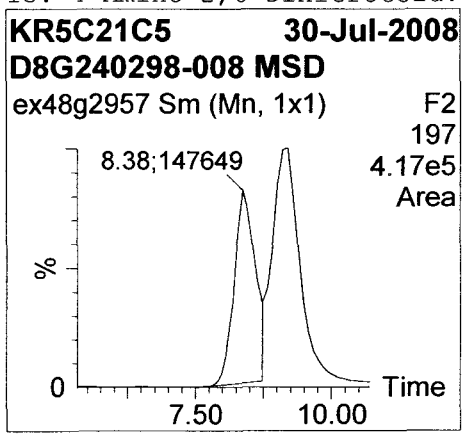
11: Nitrobenzene



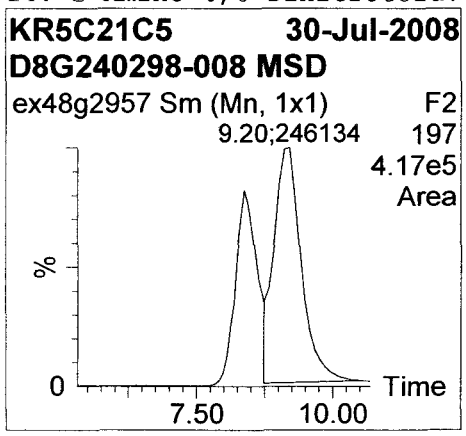
12: 2,4,6-Trinitrotoluene



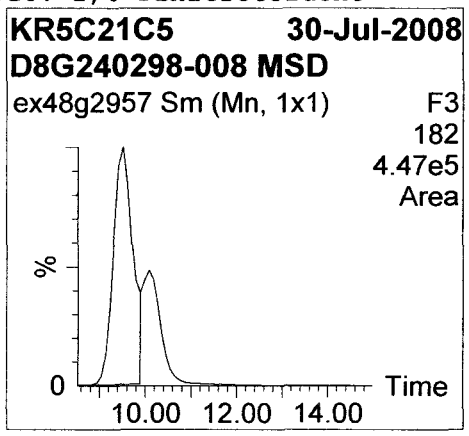
13: 4-Amino-2,6-Dinitrotolu..



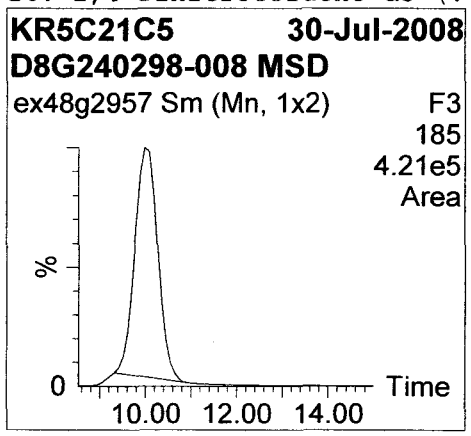
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



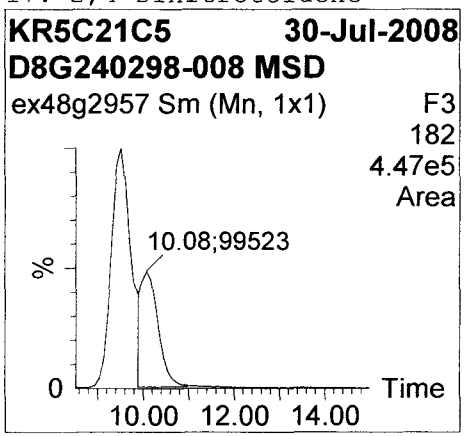
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

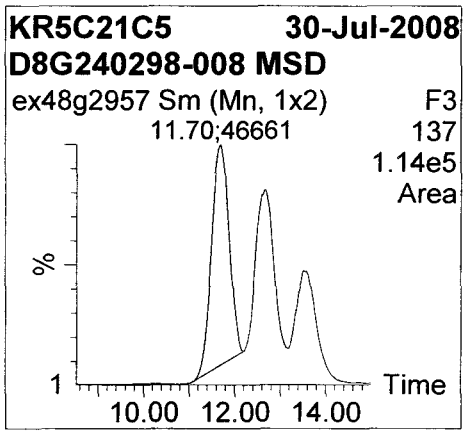
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2957
Text: D8G240298-008 MSD

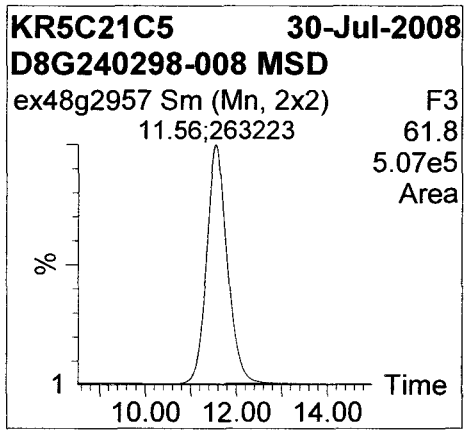
17: 2,4-Dinitrotoluene



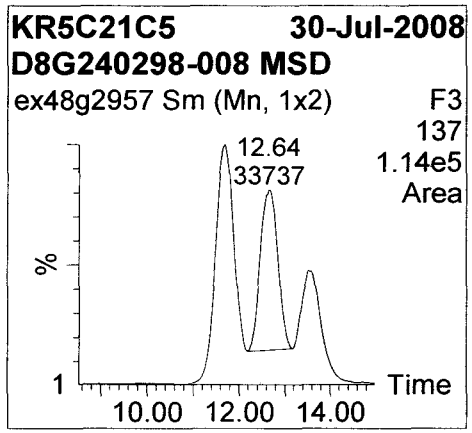
18: 2-Nitrotoluene



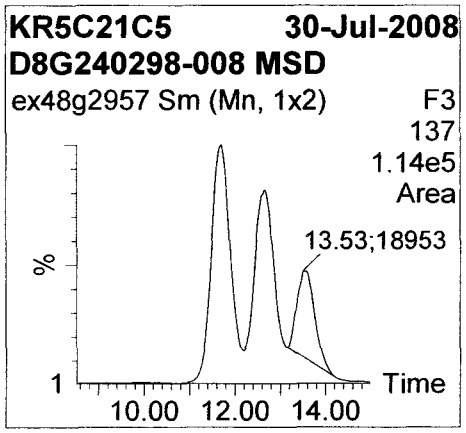
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2957
Text: D8G240298-008 MSD

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	7874	bb	408.124	101	29/Jul/08	ex48g29	
HMX 13C-..	2.588	6965	bb	1.047	105	29/Jul/08	ex48g29	
RDX 13C-..	3.882	44451	bb	1.096	110	29/Jul/08	ex48g29	
RDX	3.882	15471	bb	404.635	100	29/Jul/08	ex48g29	
1,3,5-Tr..	5.250	42222	bb	394.587	98	29/Jul/08	ex48g29	
Tetryl	6.444	127256	bb	452.119	112	29/Jul/08	ex48g29	
1,3 Dini..	6.612	110634	bs	1.091	109	29/Jul/08	ex48g29	
1,3-Dini..	6.677	35157	bb	398.783	99	29/Jul/08	ex48g29	
Nitroben..	7.398	33049	bb	412.798	102	29/Jul/08	ex48g29	
Nitrogly..	7.005	285173	bb	396.474	98	29/Jul/08	ex48g29	
Nitroben..	7.529	37059	bb	409.237	102	29/Jul/08	ex48g29	
2,4,6-Tr..	7.987	297896	bb	385.174	96	29/Jul/08	ex48g29	
4-Amino-..	8.380	147649	bd	403.002	100	29/Jul/08	ex48g29	
2-Amino-..	9.199	246134	db	434.591	108	29/Jul/08	ex48g29	
2,6-Dini..	9.510	216005	bd	405.852	101	29/Jul/08	ex48g29	
2,4-Dini..	9.981	236064	bb	1.100	110	29/Jul/08	ex48g29	
2,4-Dini..	10.075	99523	dd	383.413	95	29/Jul/08	ex48g29	
2-Nitrot..	11.701	46661	bb	400.966	100	29/Jul/08	ex48g29	
PETN	11.558	263223	bb	427.273	106	29/Jul/08	ex48g29	
4-Nitrot..	12.643	33737	bb	375.855	93	29/Jul/08	ex48g29	
3-Nitrot..	13.528	18953	bb	394.107	98	29/Jul/08	ex48g29	

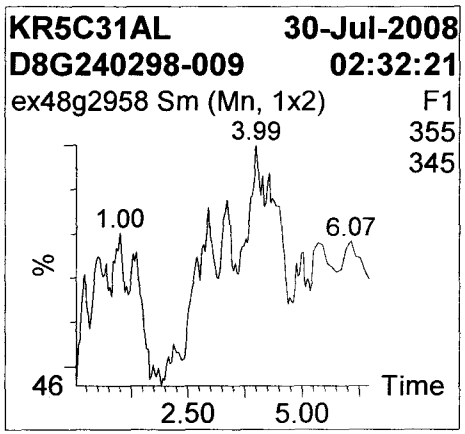
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

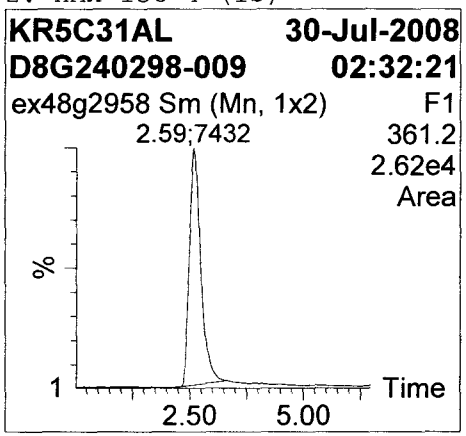
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2958
Text: D8G240298-009

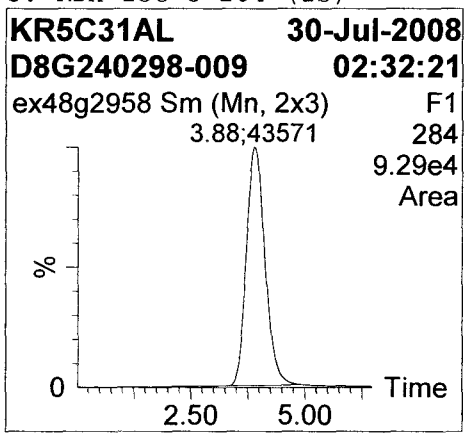
1: HMX



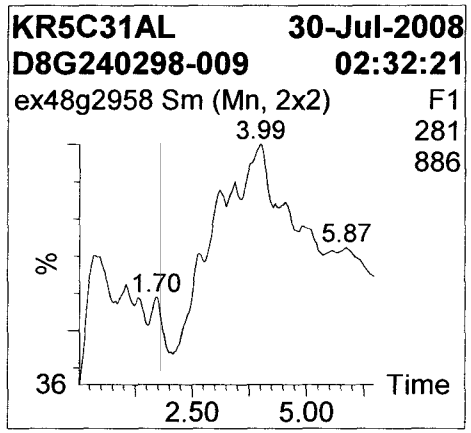
2: HMX 13C-4 (IS)



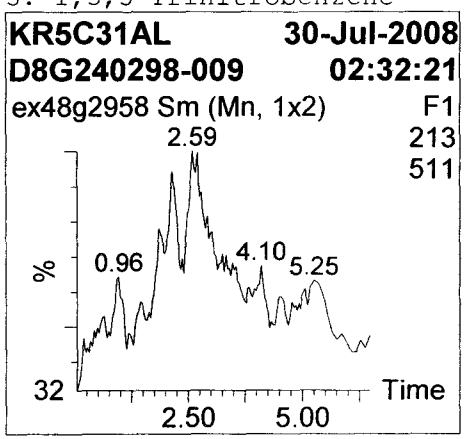
3: RDX 13C-3 284 (IS)



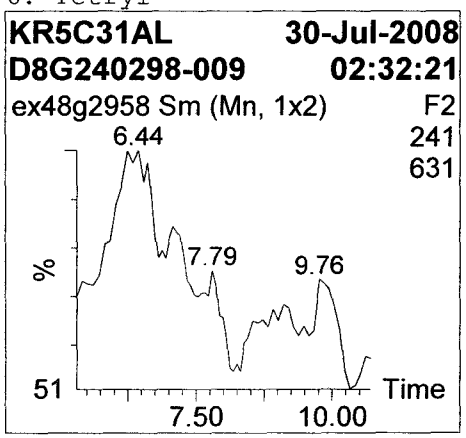
4: RDX



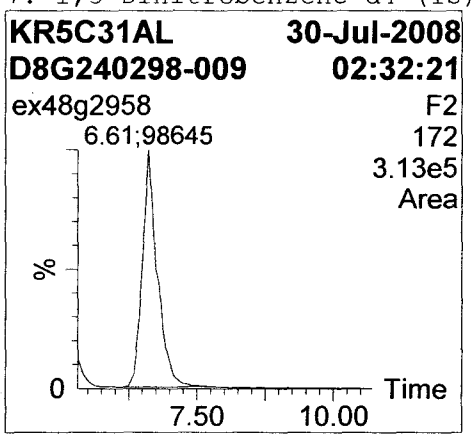
5: 1,3,5-Trinitrobenzene



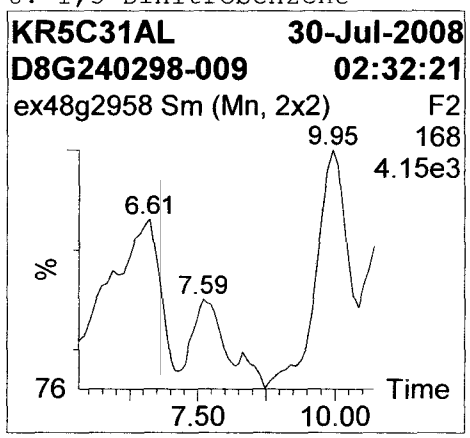
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



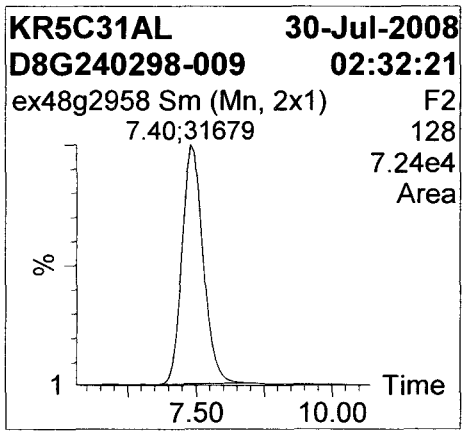
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

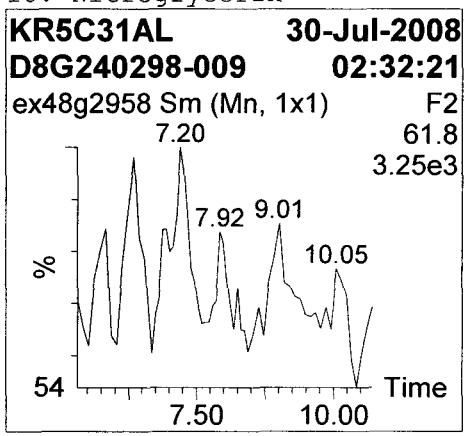
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2958
Text: D8G240298-009

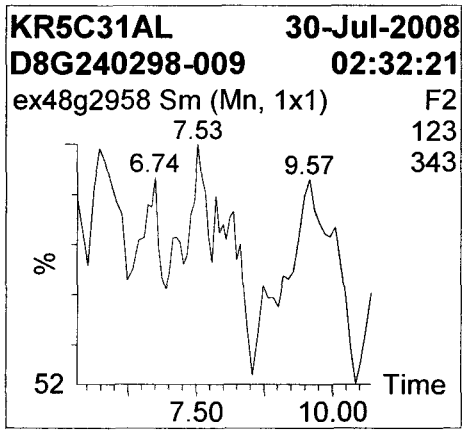
9: Nitrobenzene-d5



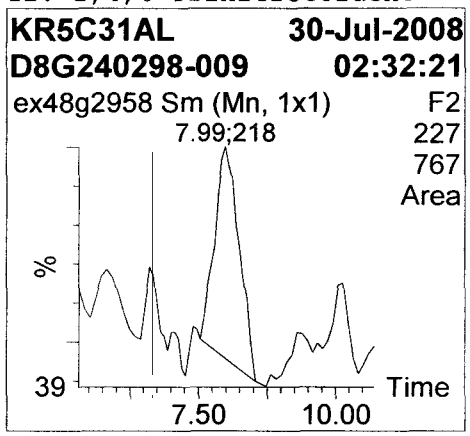
10: Nitroglycerin



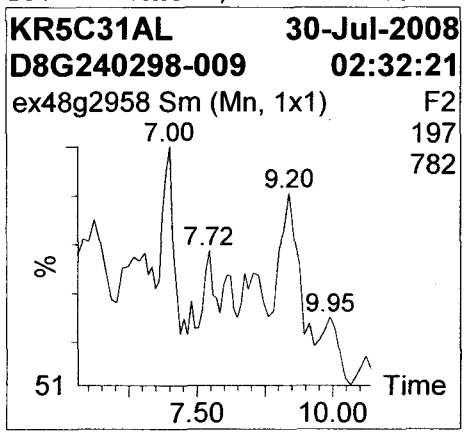
11: Nitrobenzene



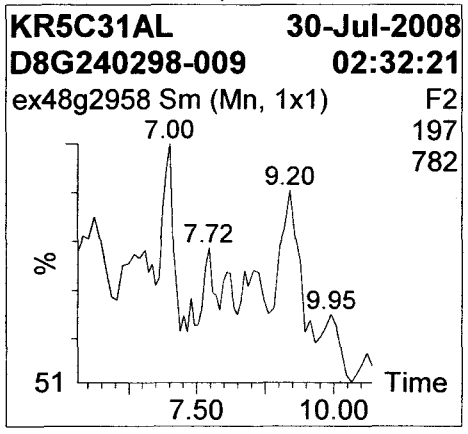
12: 2,4,6-Trinitrotoluene



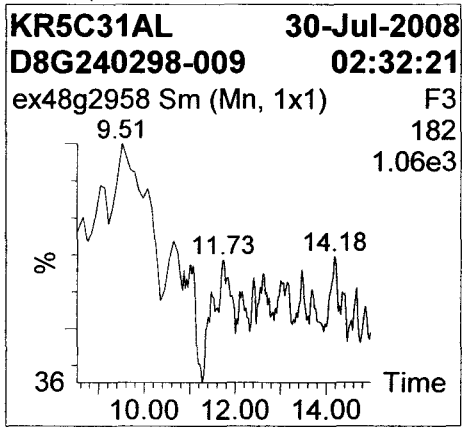
13: 4-Amino-2,6-Dinitrotolu..



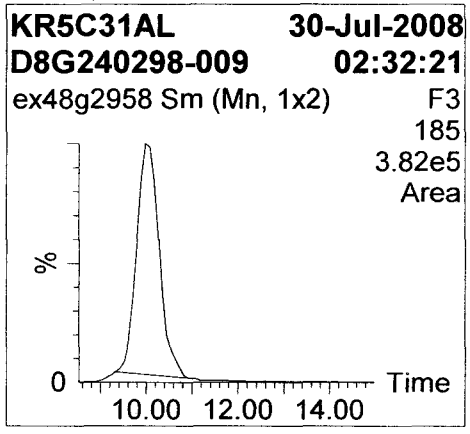
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



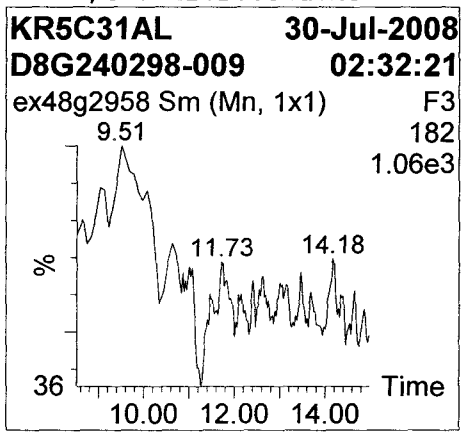
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

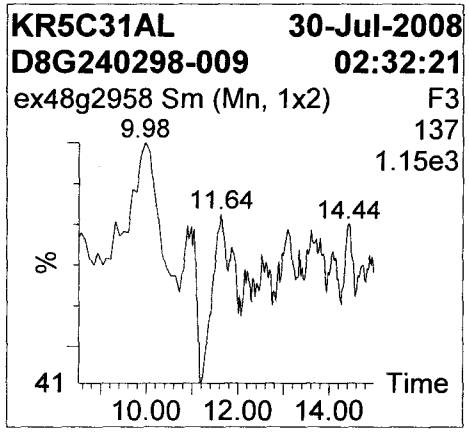
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2958
Text: D8G240298-009

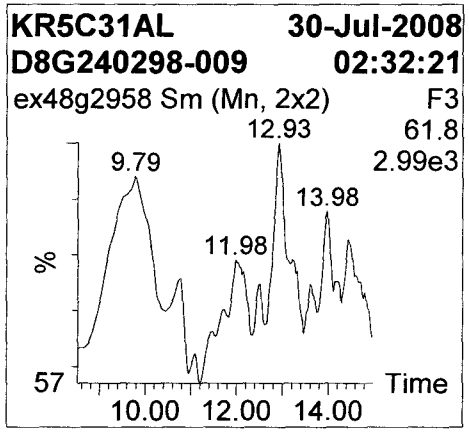
17: 2,4-Dinitrotoluene



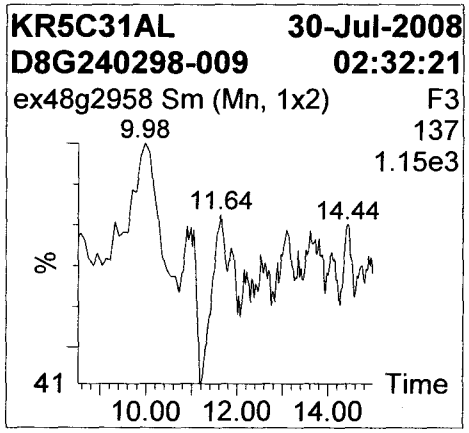
18: 2-Nitrotoluene



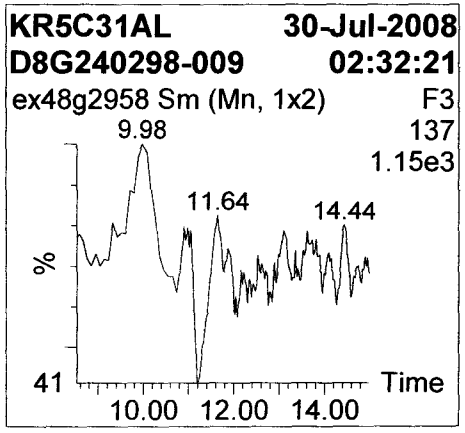
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2958
Text: D8G240298-009

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	7432	bb	1.117	112	29/Jul/08	ex48g29	
RDX 13C-..	3.882	43571	bb	1.074	107	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	98645	bb	0.973	97	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.397	31679	bb	429.498	110	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..	7.986	218	bb	1.590		29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	9.979	213914	bb	0.997	100	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

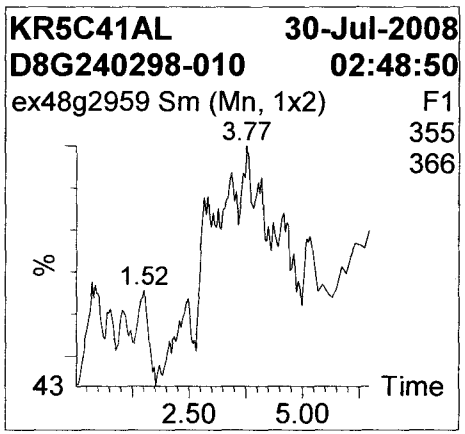
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

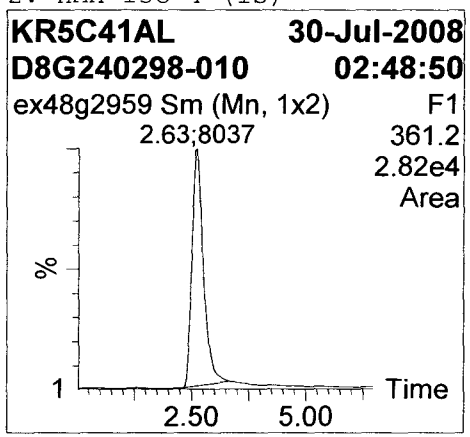
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2959
Text: D8G240298-010

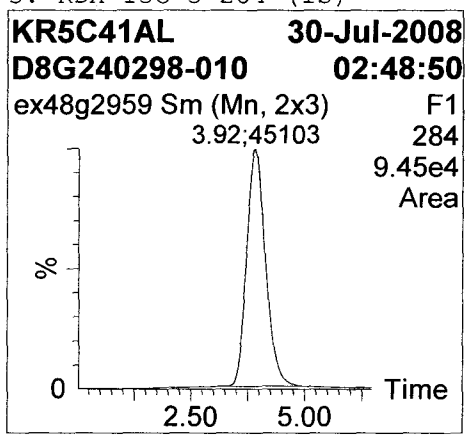
1: HMX



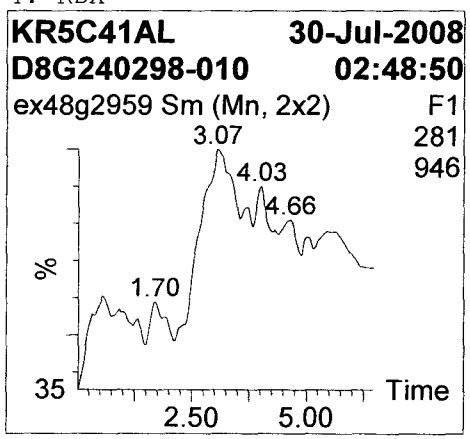
2: HMX 13C-4 (IS)



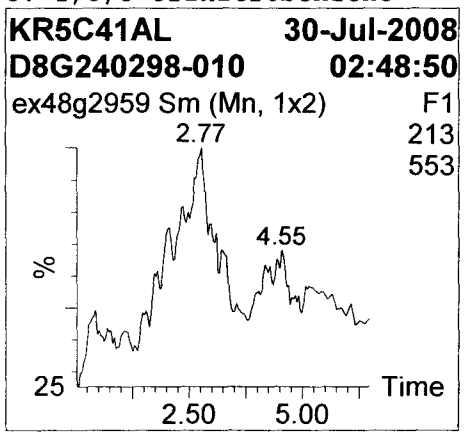
3: RDX 13C-3 284 (IS)



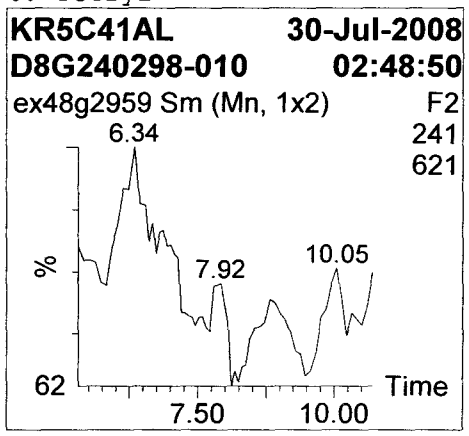
4: RDX



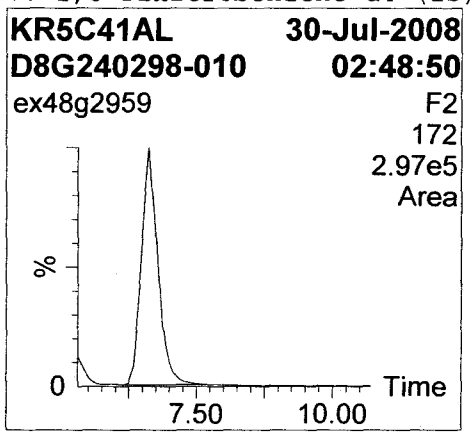
5: 1,3,5-Trinitrobenzene



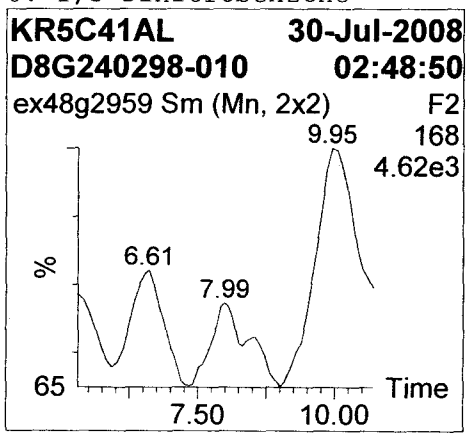
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



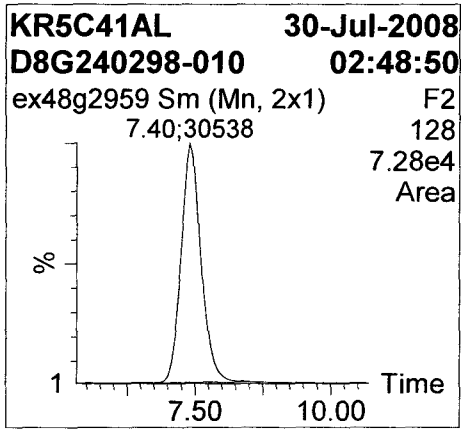
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

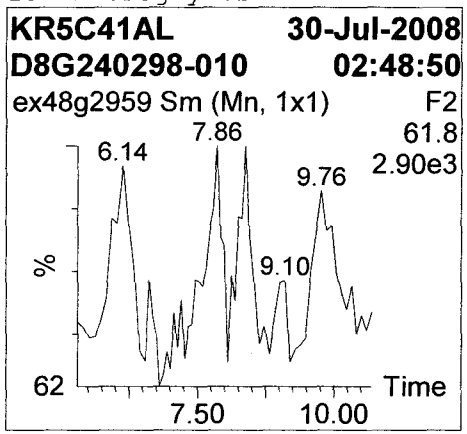
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2959
Text: D8G240298-010

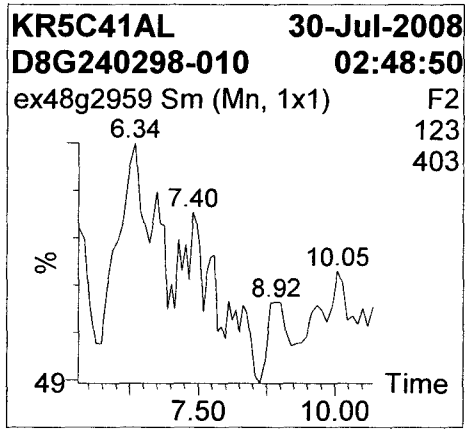
9: Nitrobenzene-d5



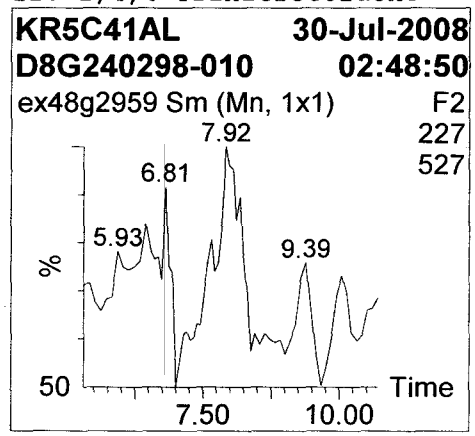
10: Nitroglycerin



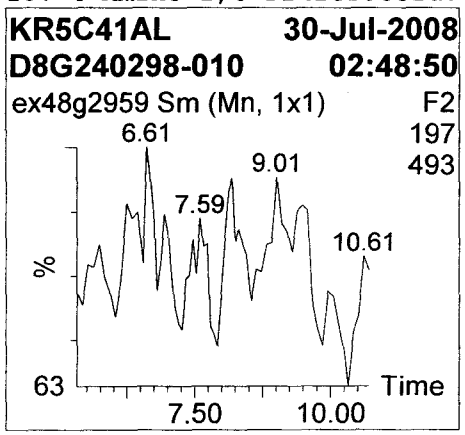
11: Nitrobenzene



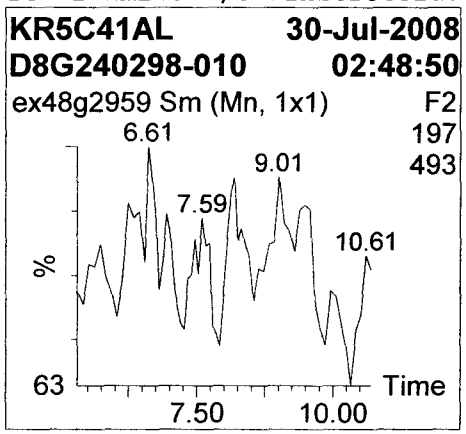
12: 2,4,6-Trinitrotoluene



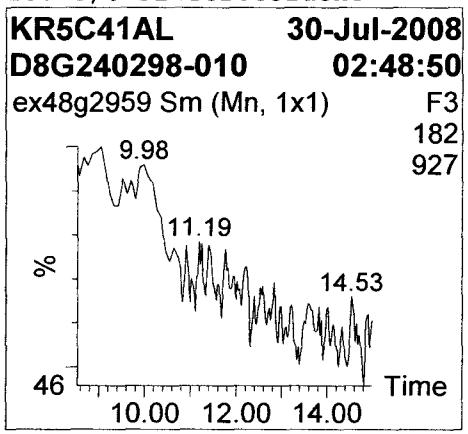
13: 4-Amino-2,6-Dinitrotolu..



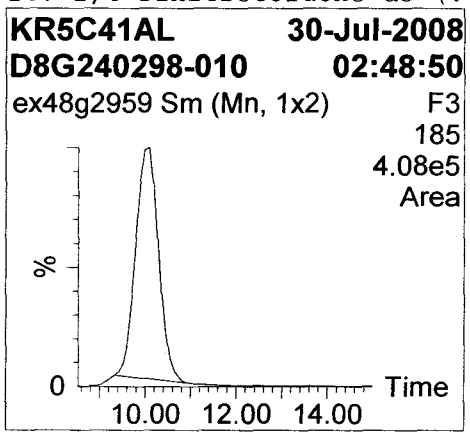
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



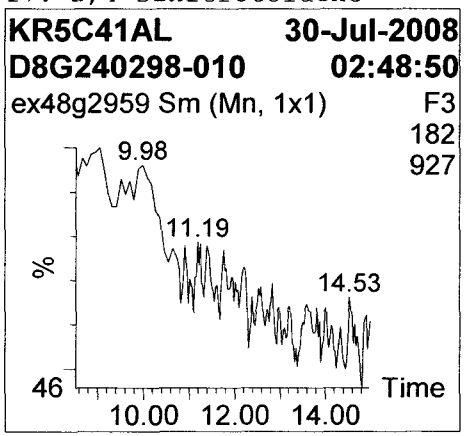
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

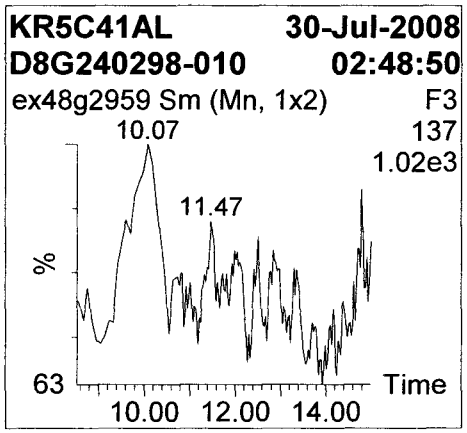
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2959
Text: D8G240298-010

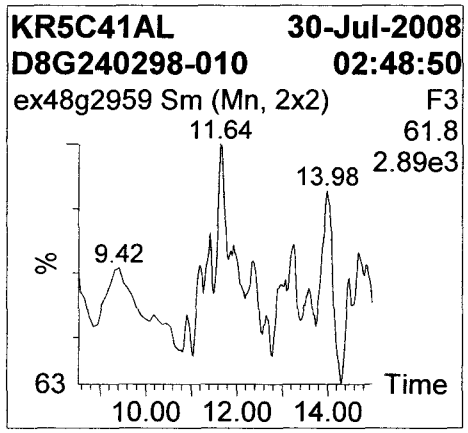
17: 2,4-Dinitrotoluene



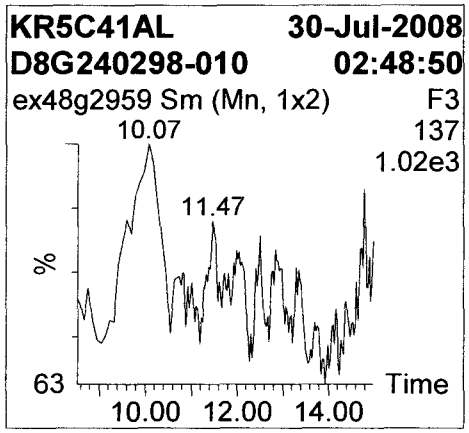
18: 2-Nitrotoluene



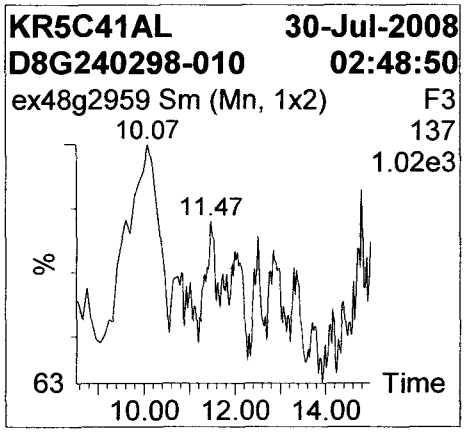
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2959
Text: D8G240298-010

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.625	8037	bb	1.208	121	29/Jul/08	ex48g29	
RDX 13C-..	3.919	45103	bb	1.112	111	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	104523	bb	1.030	103	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.398	30538	bb	391.767	100	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.075	230992	bb	1.077	108	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

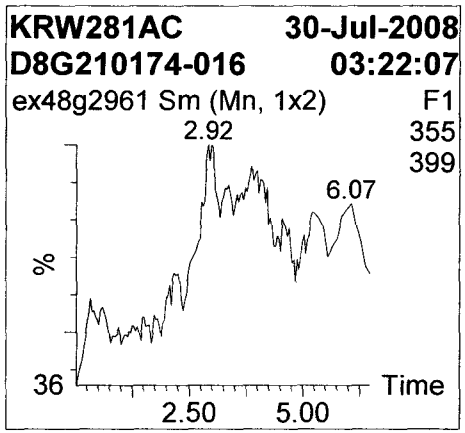
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

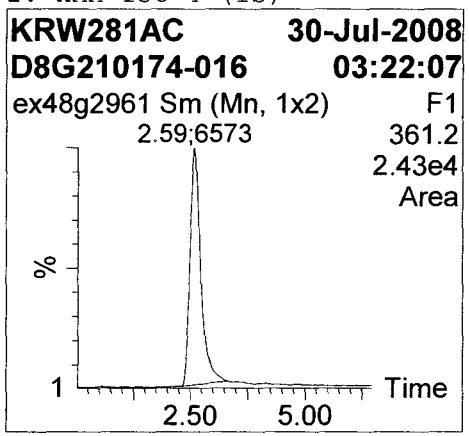
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2961
Text: D8G210174-016

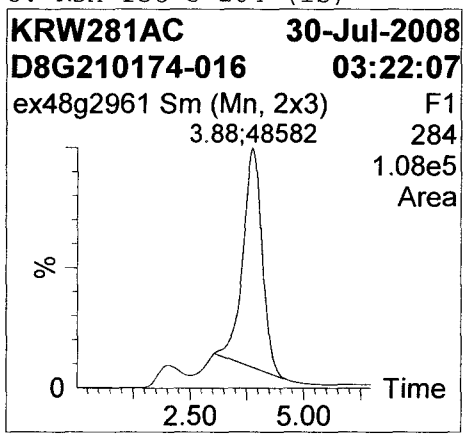
1: HMX



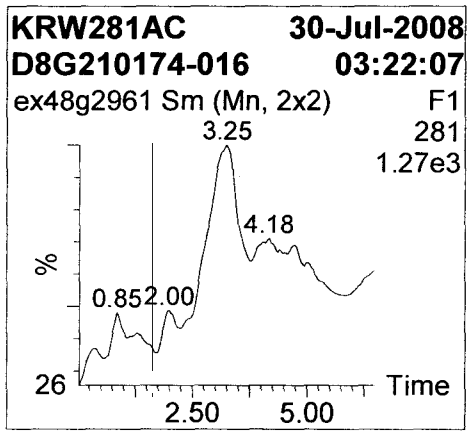
2: HMX 13C-4 (IS)



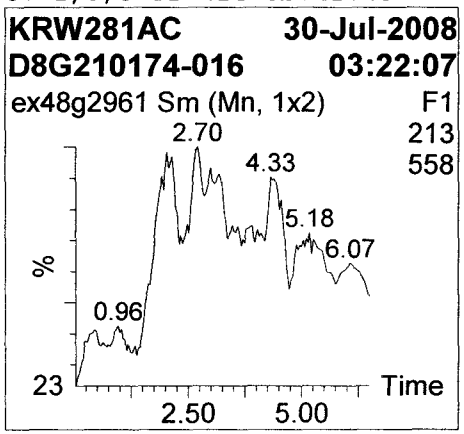
3: RDX 13C-3 284 (IS)



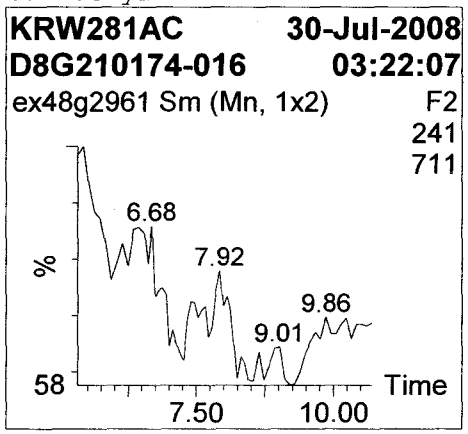
4: RDX



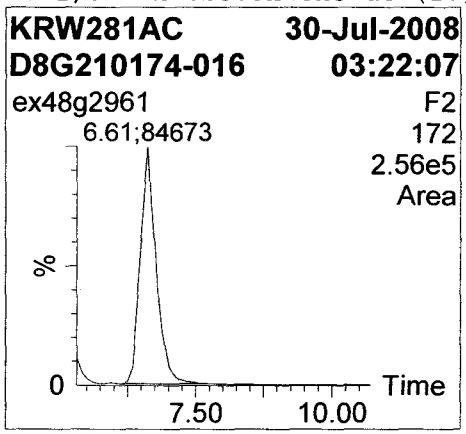
5: 1,3,5-Trinitrobenzene



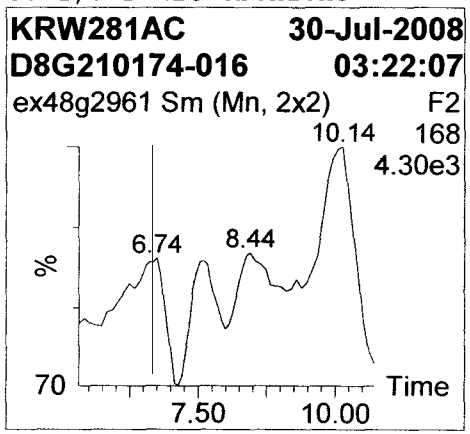
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



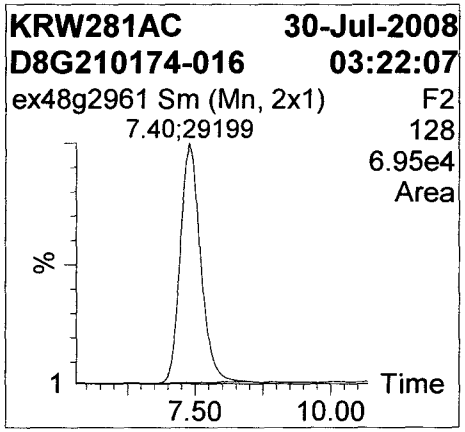
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

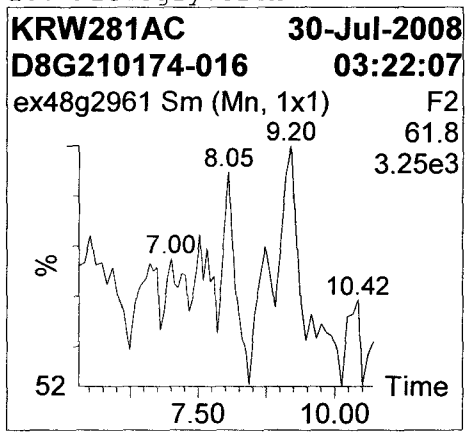
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2961
Text: D8G210174-016

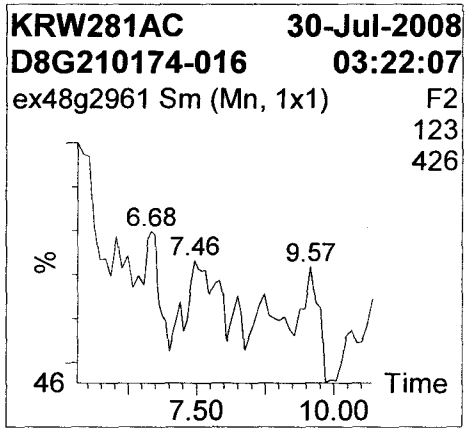
9: Nitrobenzene-d5



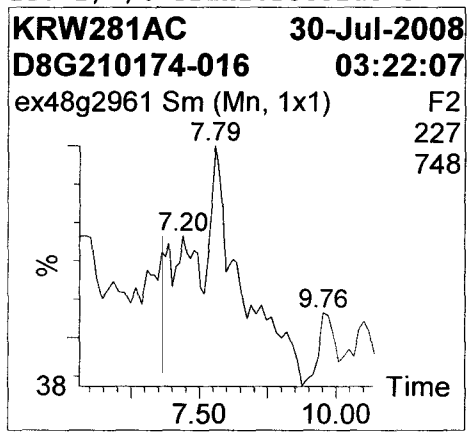
10: Nitroglycerin



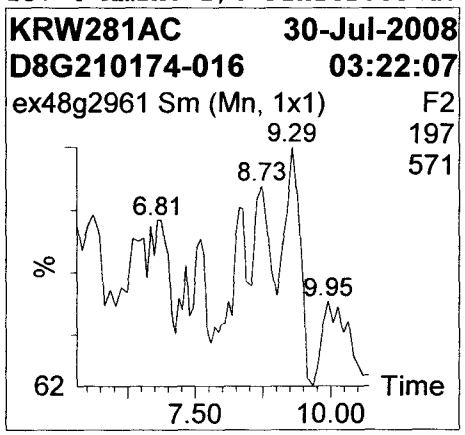
11: Nitrobenzene



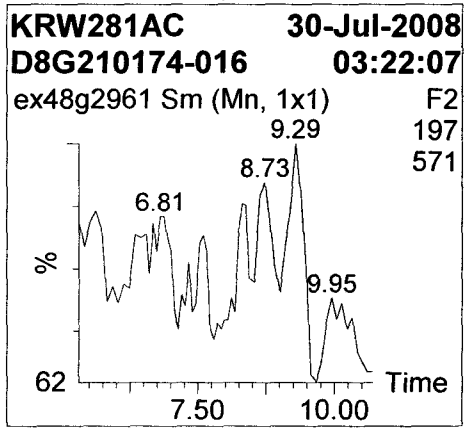
12: 2,4,6-Trinitrotoluene



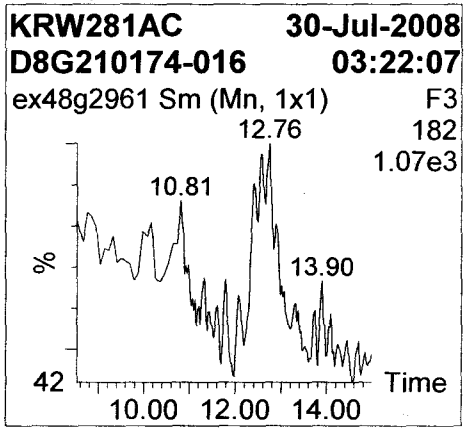
13: 4-Amino-2,6-Dinitrotolu..



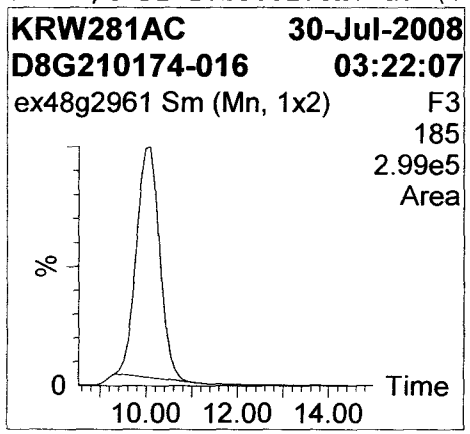
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



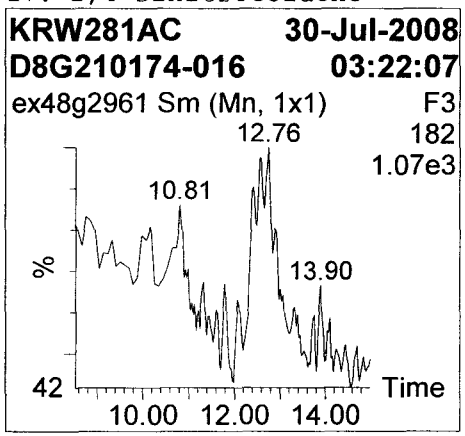
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

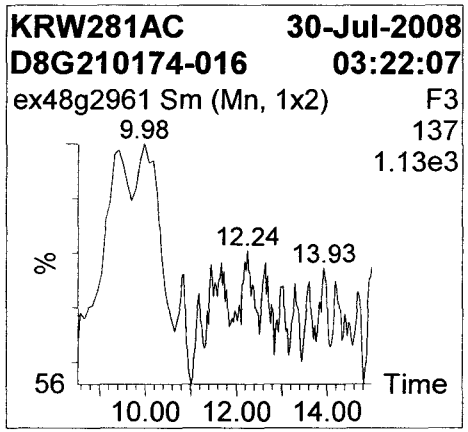
Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2961
Text: D8G210174-016

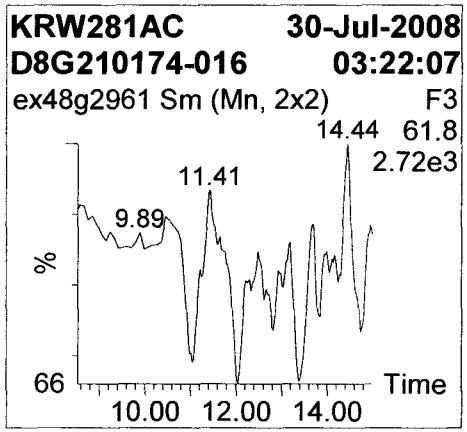
17: 2,4-Dinitrotoluene



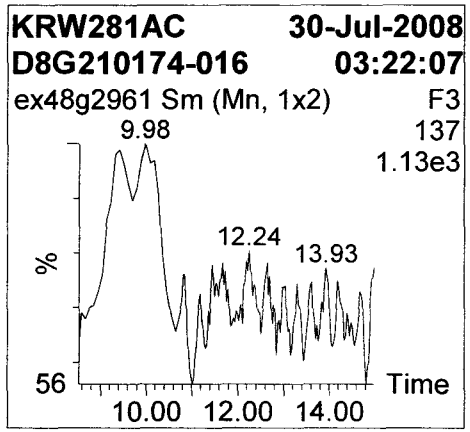
18: 2-Nitrotoluene



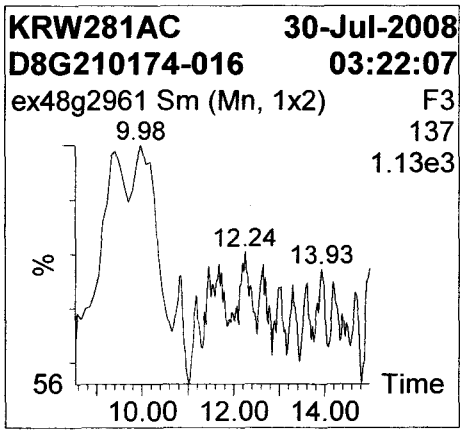
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g29(04)
Last modified: Wed Jul 30 08:10:13 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g29
Last modified: Tue Jul 29 15:18:33 2008
Job Code:

Printed: Wed Jul 30 08:12:40 2008

Name: ex48g2961
Text: D8G210174-016

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						29/Jul/08	ex48g29	
HMX 13C-..	2.588	6573	bb	0.988	99	29/Jul/08	ex48g29	
RDX 13C-..	3.882	48582	bb	1.197	120	29/Jul/08	ex48g29	
RDX						29/Jul/08	ex48g29	
1,3,5-Tr..						29/Jul/08	ex48g29	
Tetryl						29/Jul/08	ex48g29	
1,3 Dini..	6.612	84673	bb	0.835	83	29/Jul/08	ex48g29	
1,3-Dini..						29/Jul/08	ex48g29	
Nitroben..	7.397	29199	bb	474.552	119	29/Jul/08	ex48g29	
Nitrogly..						29/Jul/08	ex48g29	
Nitroben..						29/Jul/08	ex48g29	
2,4,6-Tr..						29/Jul/08	ex48g29	
4-Amino-..						29/Jul/08	ex48g29	
2-Amino-..						29/Jul/08	ex48g29	
2,6-Dini..						29/Jul/08	ex48g29	
2,4-Dini..	10.074	169037	bb	0.788	79	29/Jul/08	ex48g29	
2,4-Dini..						29/Jul/08	ex48g29	
2-Nitrot..						29/Jul/08	ex48g29	
PETN						29/Jul/08	ex48g29	
4-Nitrot..						29/Jul/08	ex48g29	
3-Nitrot..						29/Jul/08	ex48g29	

LC/MS

Supporting Documentation

Sample Sequence, Chromatograms/Mass Spectra

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Method: 8321A Explosives

Associated Samples: 1, 7, 11, 17

Batch #(s): 8203541

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: SMC 8-6-08

LC/MS SEMIVOLATILE ORGANIC EXTRACTION LOG SHEETS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RQC058 Te

Extracts Must Be Held 60 days Past Invoice

Run Date: 7/22/08
Time: 14:43:20

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGrou
_ Bench Sheet Copied per COC

Extractionist: 011821 Chad M. Lane

Concentrationist: 011821 Chad M. Lane

Reviewer/Date: LANEC / 7/21/08

****
* *
* **QC BATCH: 8203541** *
* *
****

PREP DATE: 7/21/08 18:00
COMP DATE: 7/22/08 2:00

8321A, Explosives by LCMS
SOLID PHASE EXTRACTION (NOMINAL)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
7/21/08	8/08/08	D8G210174-001 **KRW1L-1-AF**		B7	BX	WATER	**990mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	0.5ML LCMS0372 6-16-08
COMMENTS:															
7/21/08	8/08/08	D8G210174-001 **KRW1L-1-AQ**S M		B7	BX	WATER	**1000mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	1ML HPLC170 7-3-08 0.5ML LCMS0372 6-16-08
COMMENTS:															
7/21/08	8/08/08	D8G210174-001 **KRW1L-1-AR**D M		B7	BX	WATER	**1000mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	1ML HPLC170 7-3-08 0.5ML LCMS0372 6-16-08
COMMENTS:															
7/22/08	8/08/08	D8G210174-007 **KRW2V-1-AF**		B7	BX	WATER	**1058mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	0.5ML LCMS0372 6-16-08
COMMENTS:															
7/21/08	8/08/08	D8G210174-011 **KRW22-1-AF**		B7	BX	WATER	**1055mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	0.5ML LCMS0372 6-16-08
COMMENTS:															
7/22/08	8/08/08	D8G210174-017 **KRW29-1-AF**		B7	BX	WATER	**1048mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	0.5ML LCMS0372 6-16-08
COMMENTS:															
7/21/08	0/00/00	R8G210000-541 **KRW7L-1-AA**B		B7	BX	WATER	**1000mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	0.5ML LCMS0372 6-16-08
COMMENTS:															

Table of Contents

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 7/22/08
Time: 14:43:20

QC BATCH: 8203541

PREP DATE: 7/21/08 18:00
COMP DATE: 7/22/08 2:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
7/21/08	0/00/00	R8G210000-541 **KRW7L-1-ACC**		B7	BX	WATER	**1000mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	1ML HPLC170 7-3-08 0.5ML LCMS0372 6-16-08
COMMENTS:															
7/21/08	0/00/00	R8G210000-541 **KRW7L-1-ADL**	R	B7	BX	WATER	**1000mL** 5.00mL	NA	NA	NA	ACN	2.5		.0	1ML HPLC170 7-3-08 0.5ML LCMS0372 6-16-08
COMMENTS:															

DV-LC-0010 H2O:G24001 CART:S214-31;40300-1-5 ACN:G12819 0.1%ACETIC ACID:1-2-1
S/S:CL-C,AASG3 W:KH SHARE QC W/8203540

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 9

LC/MS SEMIVOLATILE STANDARD DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 1 name: HMX Method File: ex48g31
Coefficient of Determination: 0.999314
Calibration curve: 0.0112767 * x + -0.000635370
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

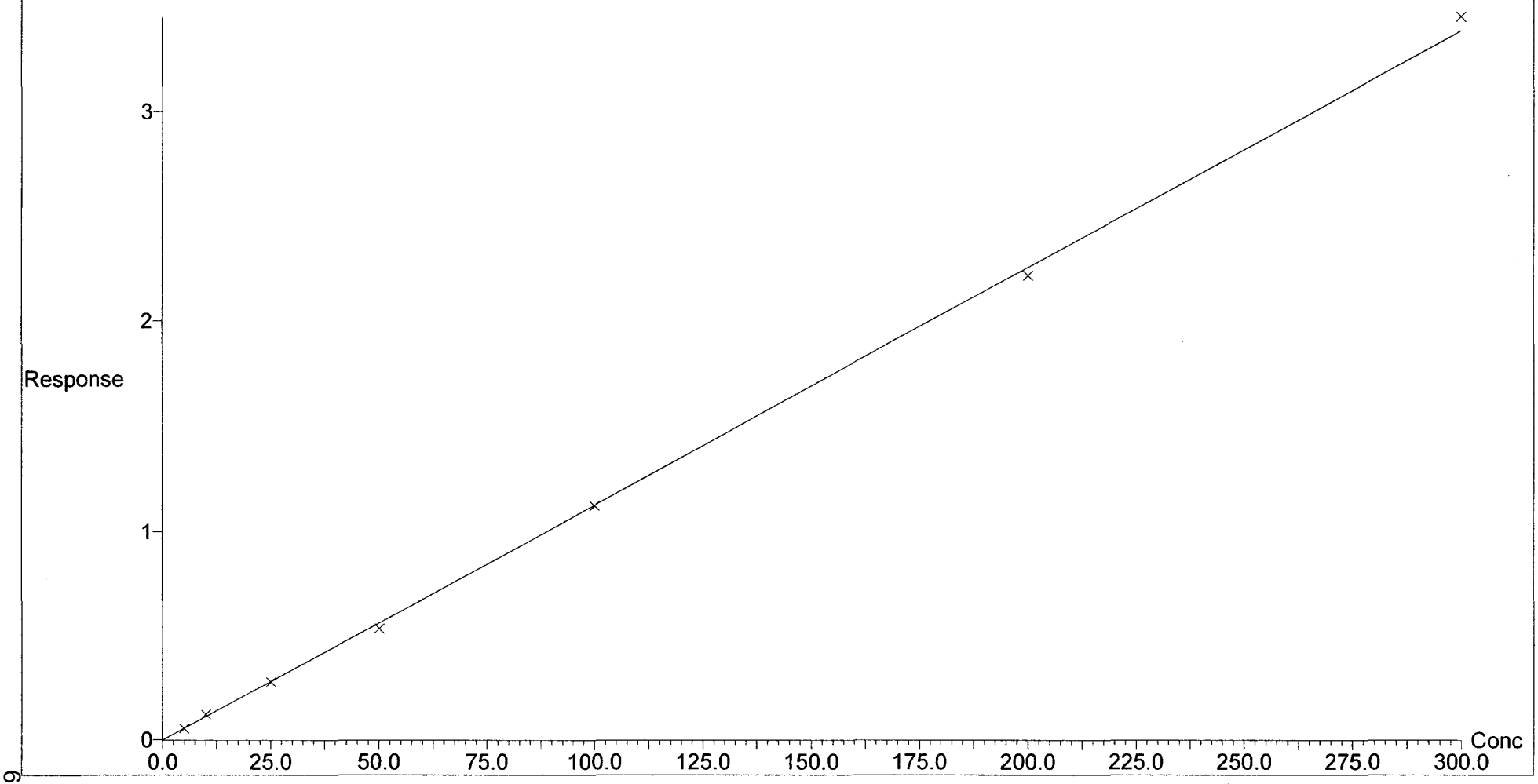


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 2 name: HMX 13C-4 (IS) Method File: ex48g31
Response Factor: 5261.05
RRF SD: 558.092, % Relative SD: 10.6080
Response type: External Std, Area
Curve type: RF

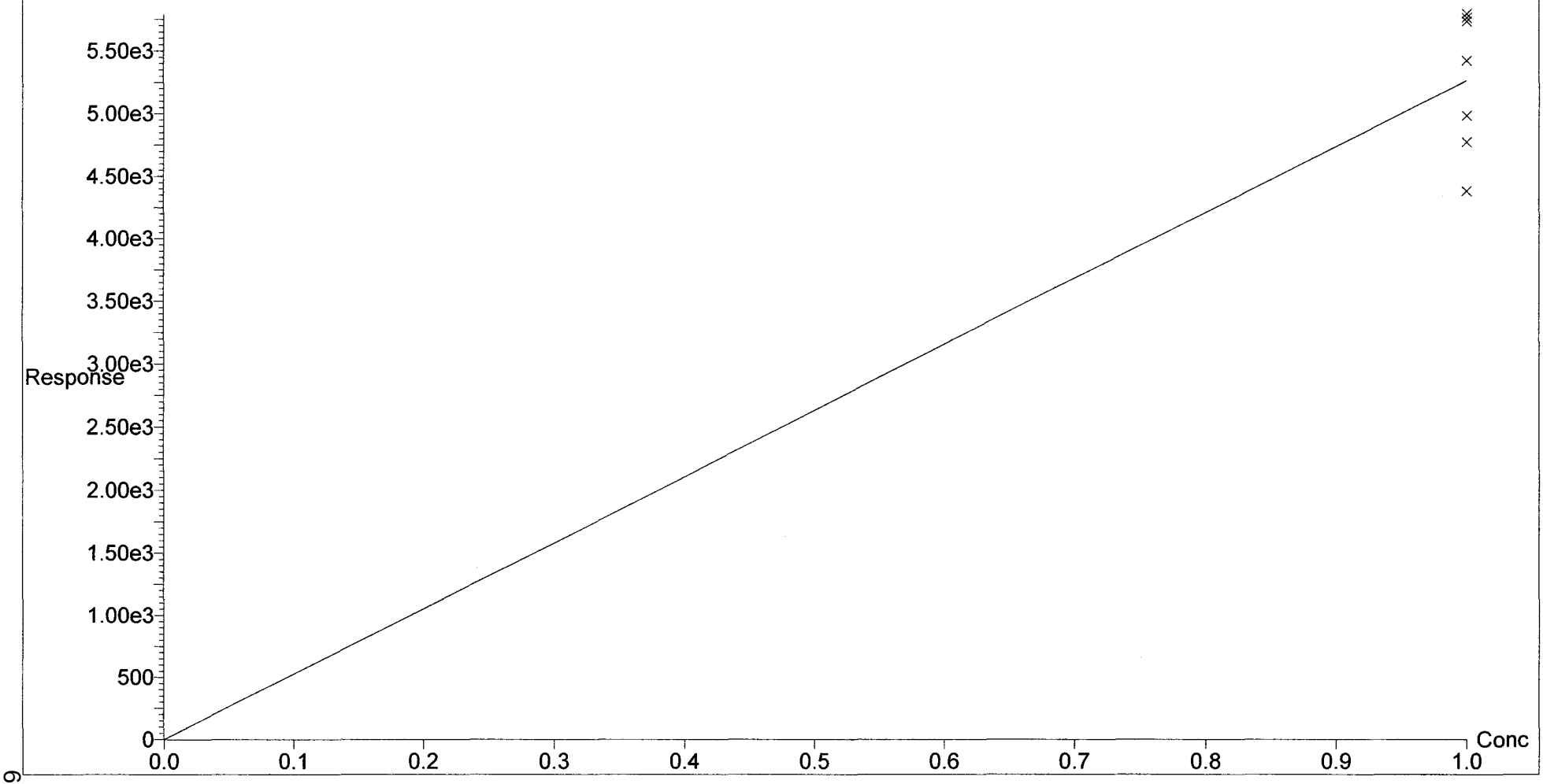


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 3 name: RDX 13C-3 284 (IS) Method File: ex48g31
Response Factor: 31483.8
RRF SD: 1043.96, % Relative SD: 3.31586
Response type: External Std, Area
Curve type: RF

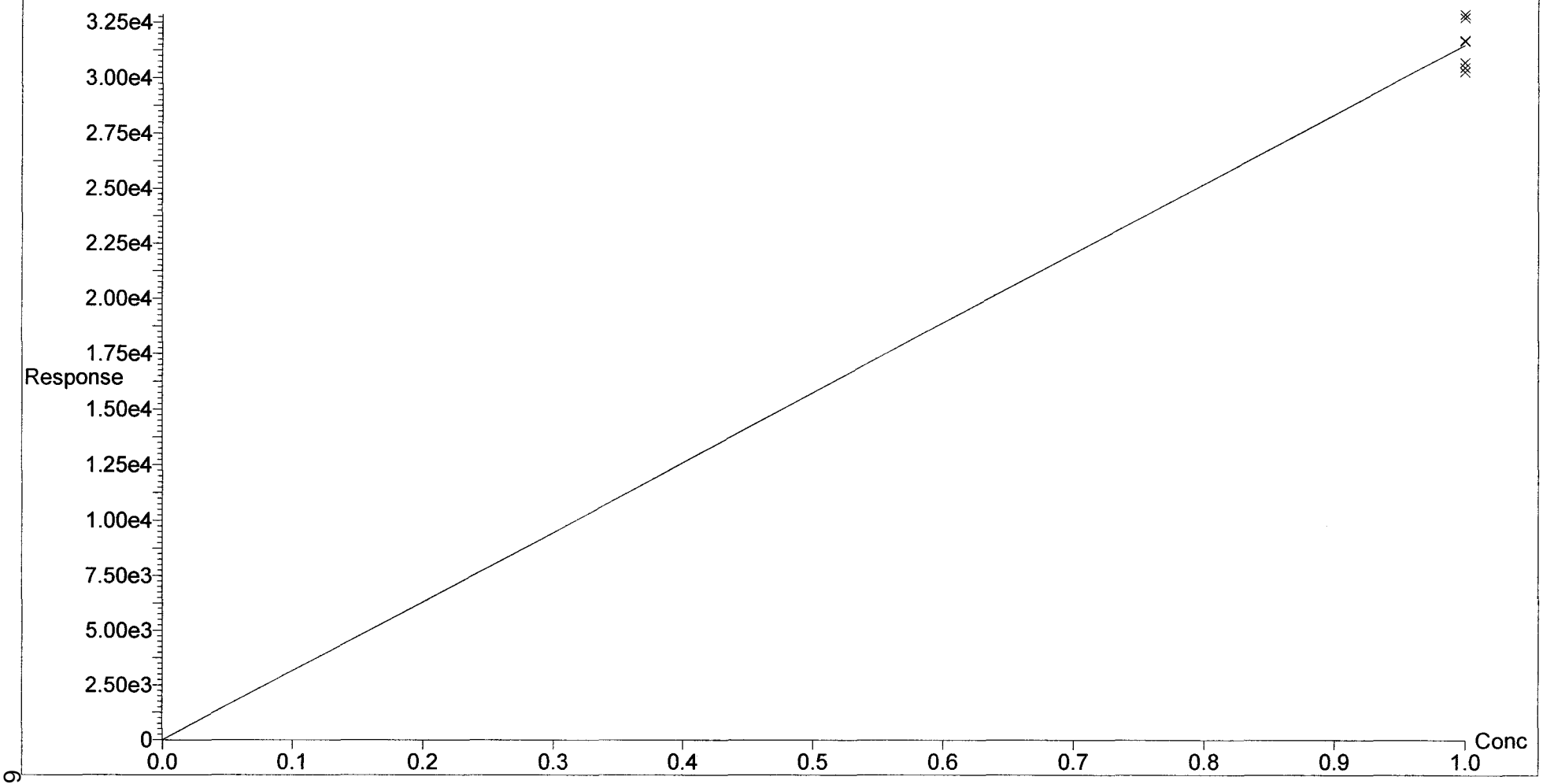


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 4 name: RDX Method File: ex48g31
Coefficient of Determination: 0.996973
Calibration curve: 0.00344222 * x + 0.00979037
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

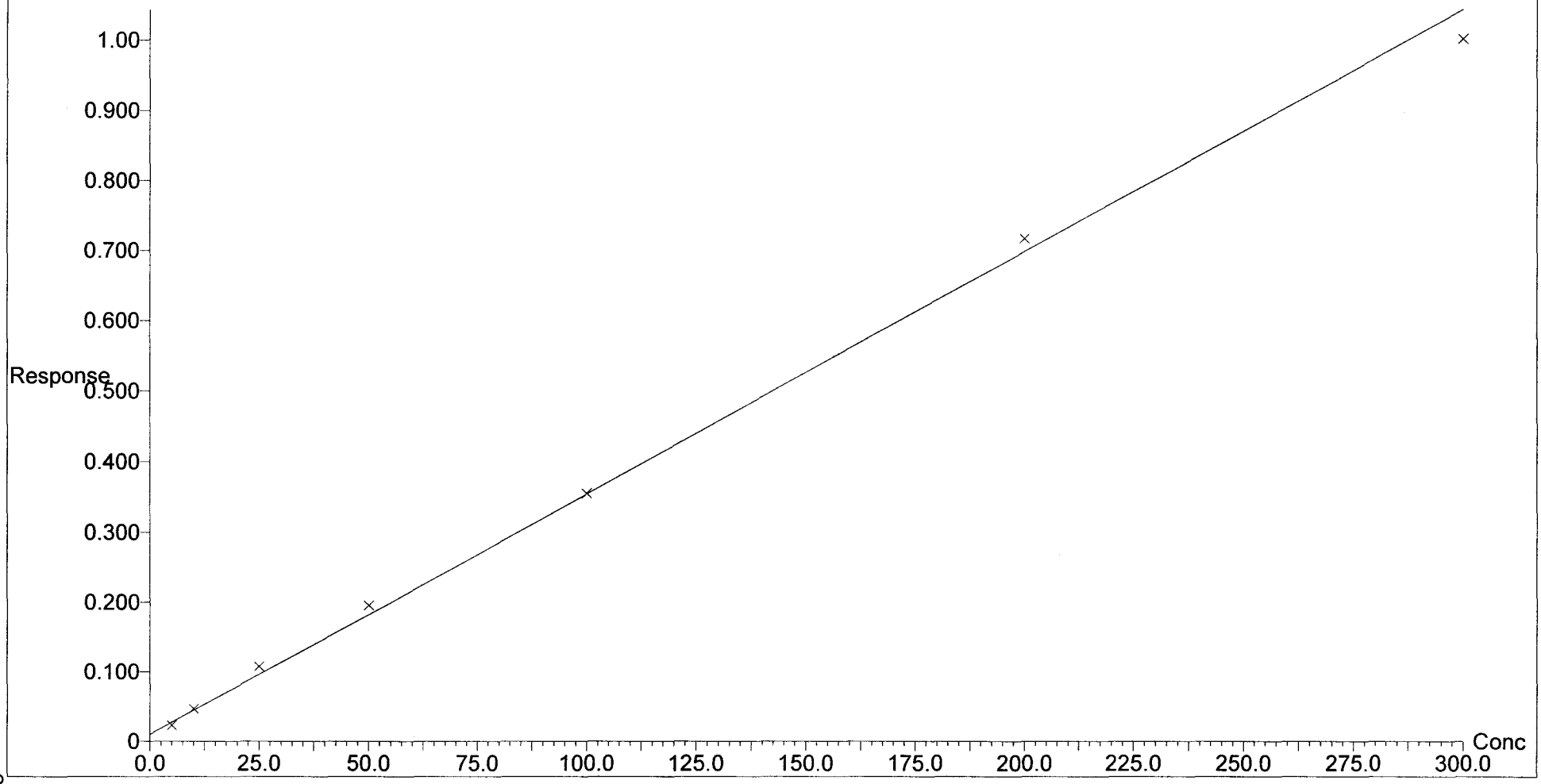


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 5 name: 1,3,5-Trinitrobenzene Method File: ex48g31
Coefficient of Determination: 0.998709
Calibration curve: 4.43606e-6 * x^2 + 0.00315575 * x + 0.00674631
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

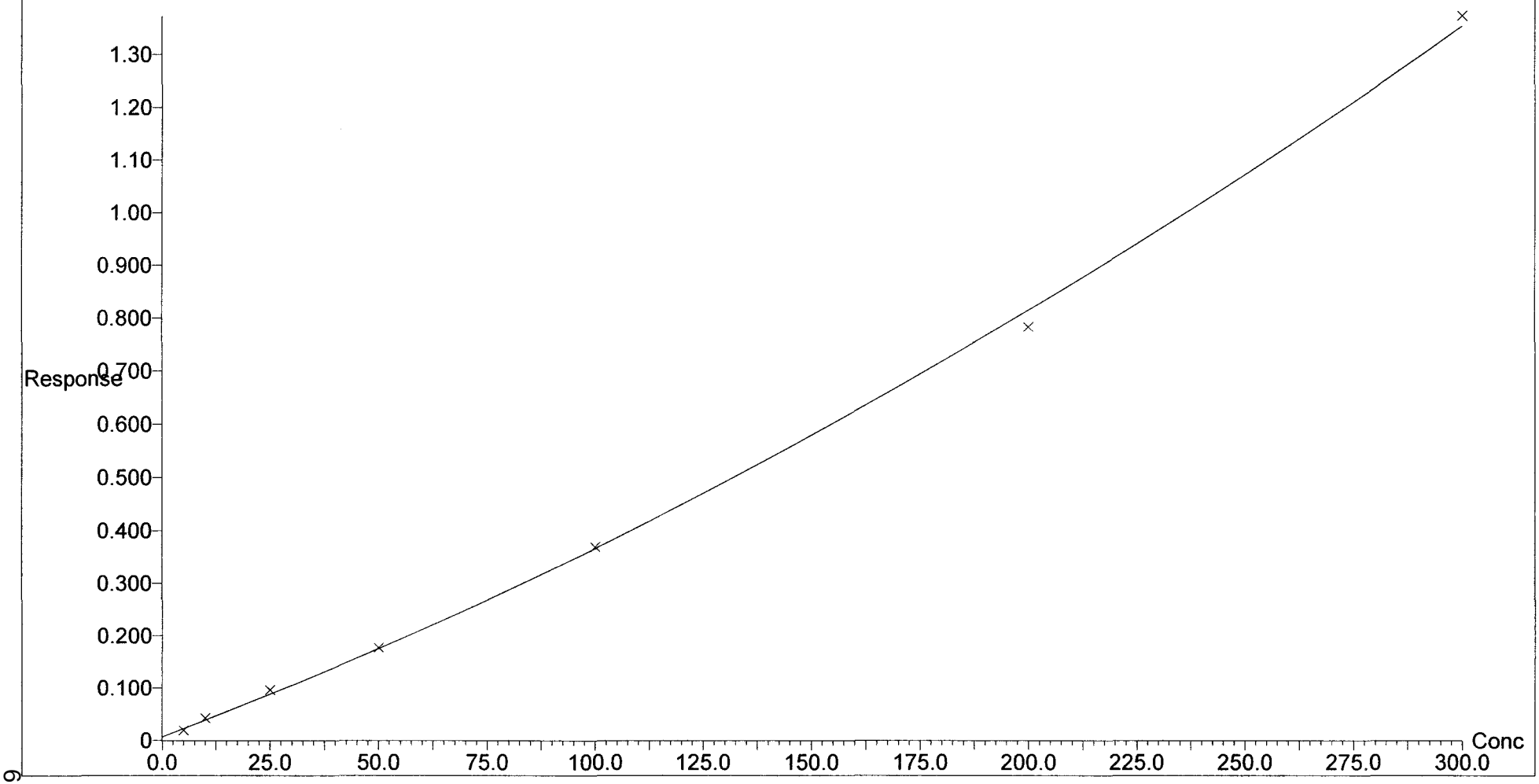


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 6 name: Tetryl Method File: ex48g31
Coefficient of Determination: 0.999233
Calibration curve: 1.98864e-5 * x^2 + 0.00760925 * x + 0.0164819
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

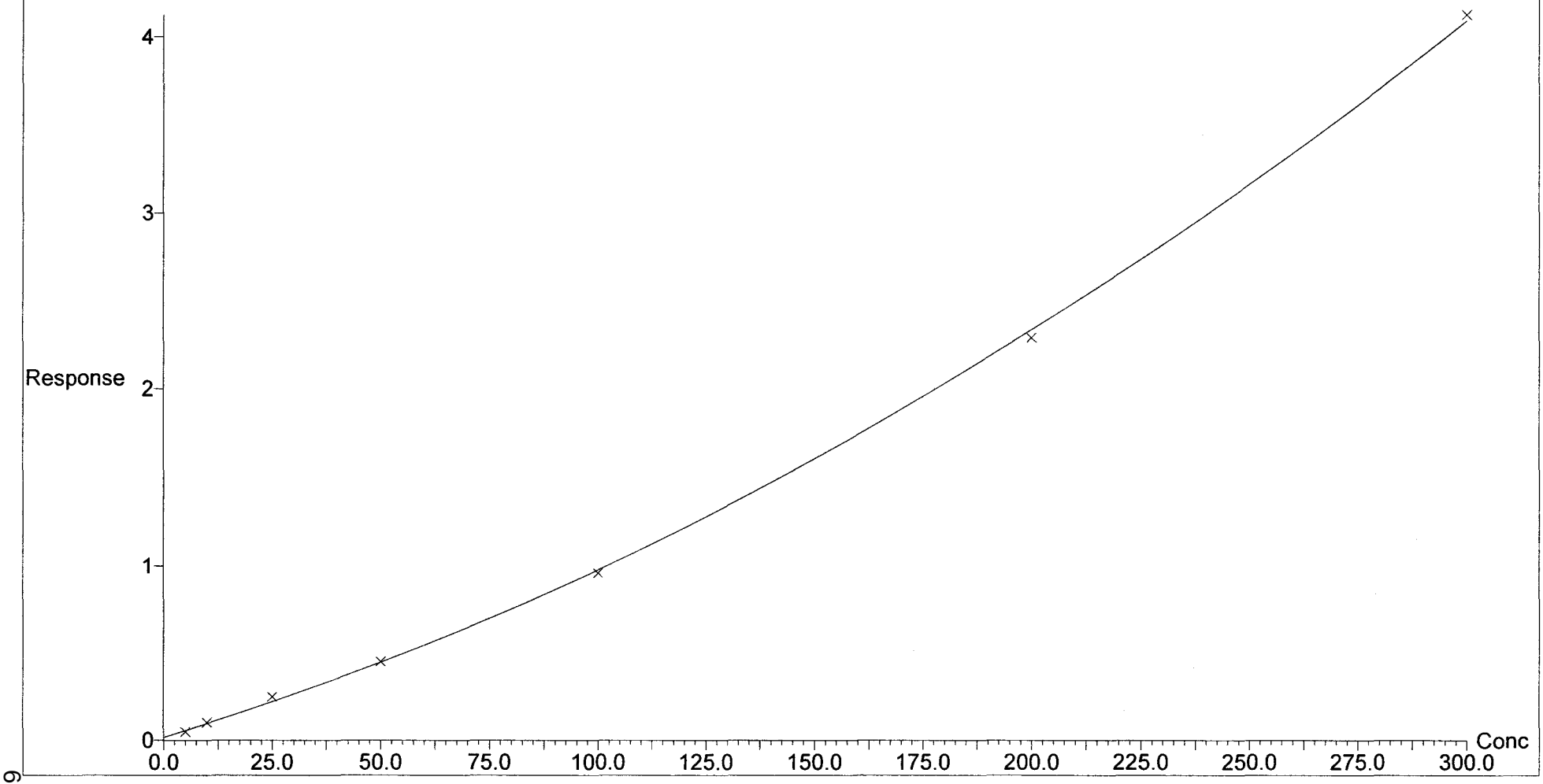


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 7 name: 1,3 Dinitrobenzene-d4 (IS) Method File: ex48g31
Response Factor: 69616.2
RRF SD: 5011.12, % Relative SD: 7.19821
Response type: External Std, Area
Curve type: RF

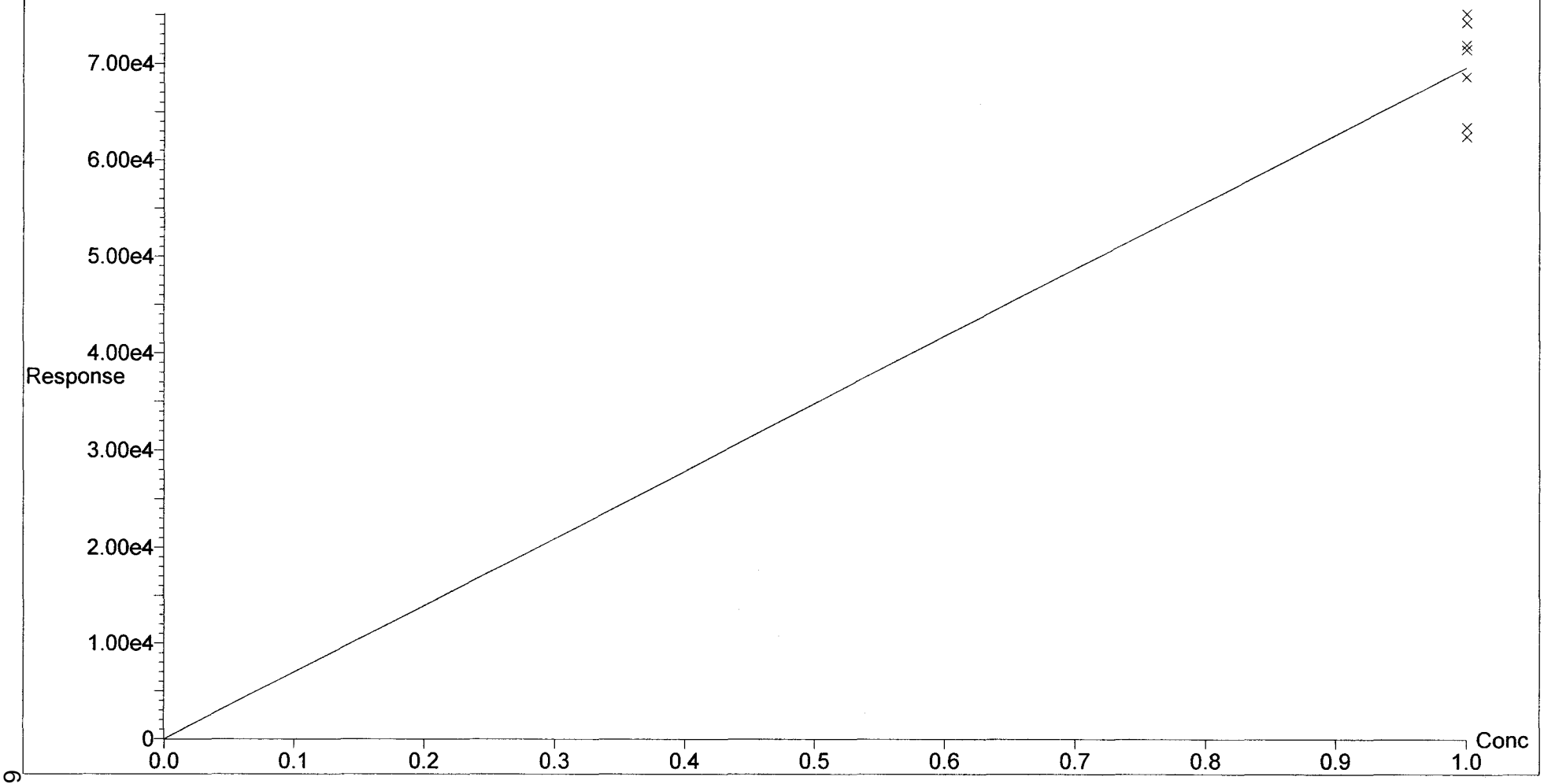


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 8 name: 1,3-Dinitrobenzene Method File: ex48g31
Coefficient of Determination: 0.997816
Calibration curve: 0.00315135 * x + 0.00290853
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

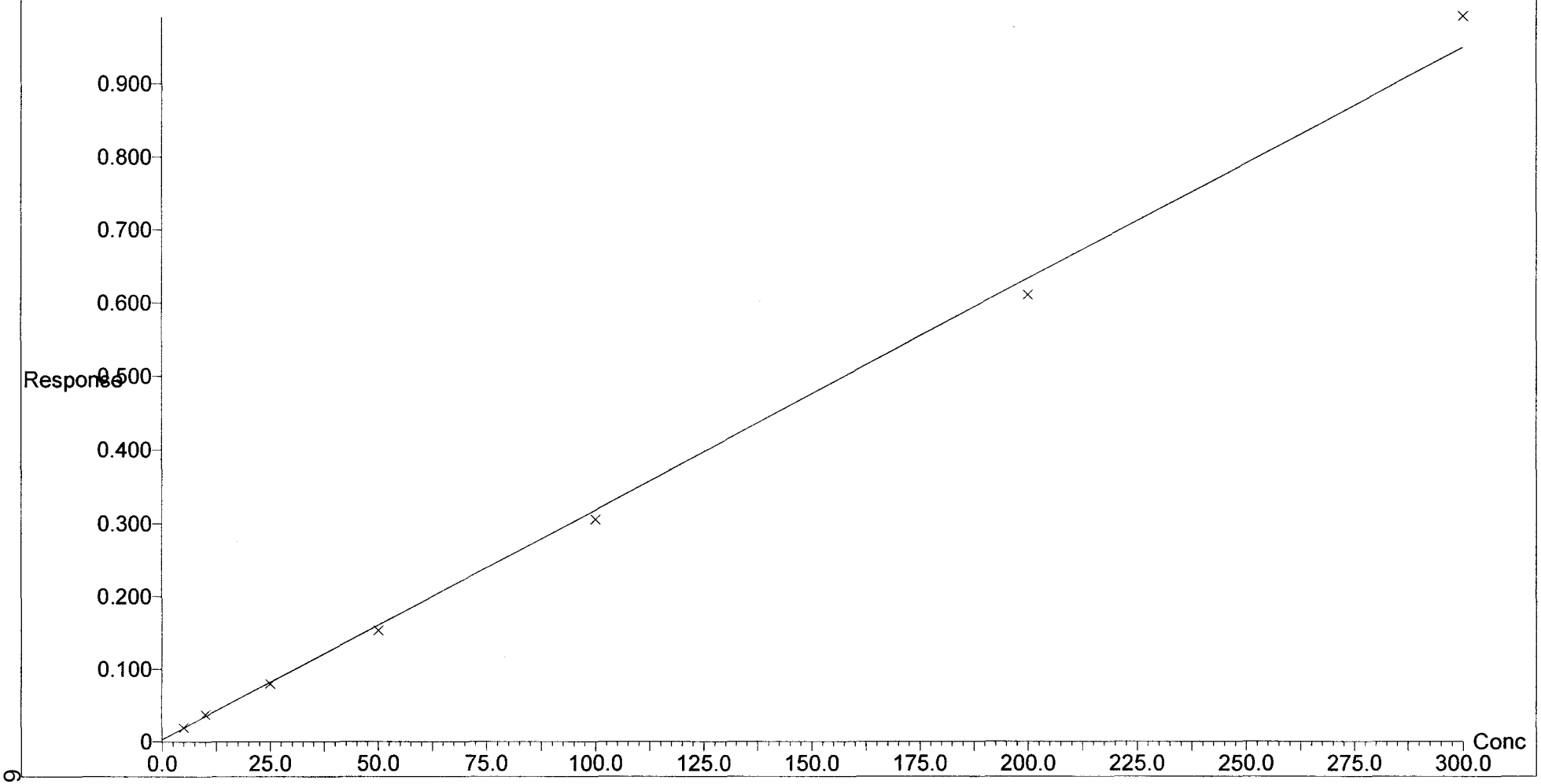
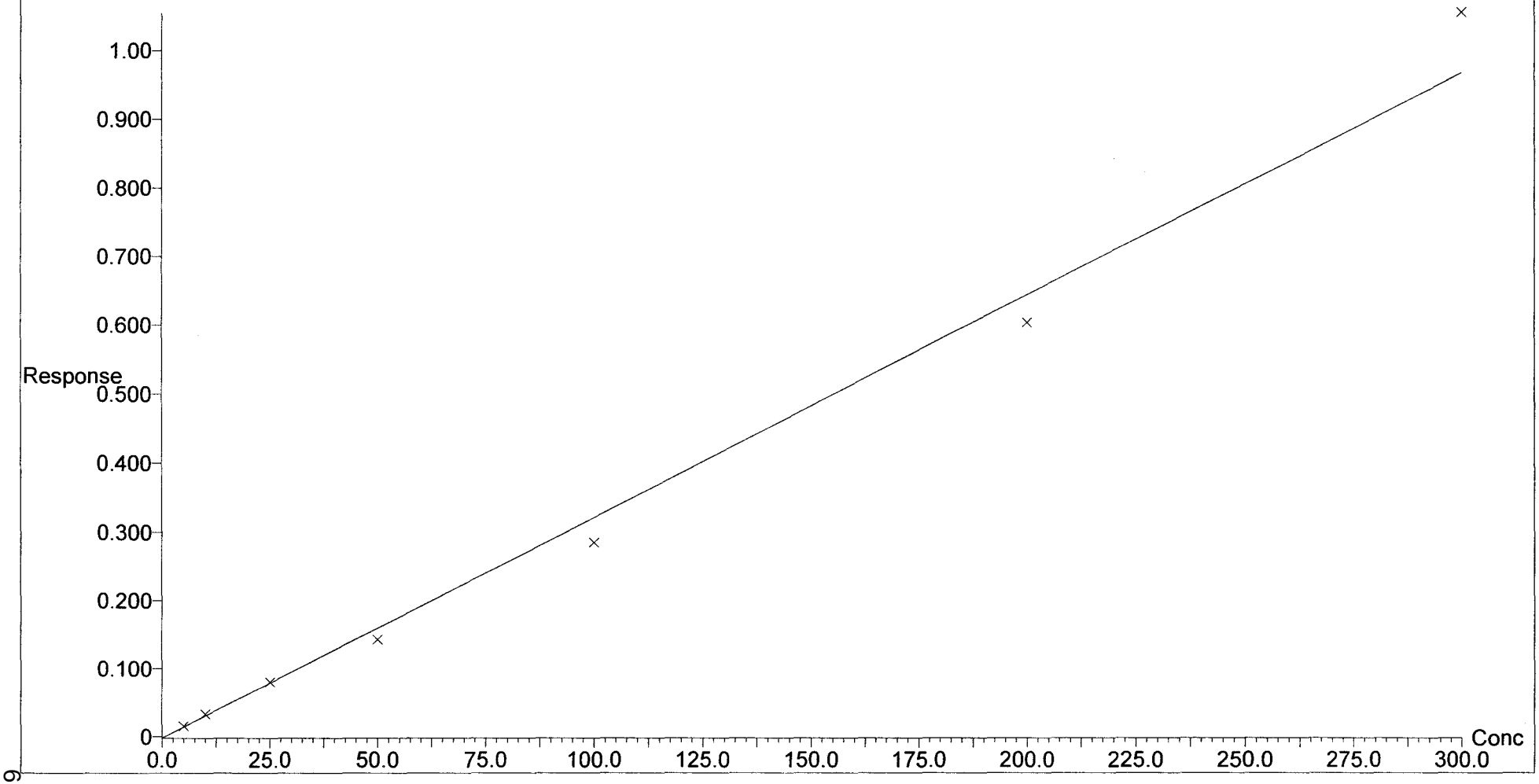


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 9 name: Nitrobenzene-d5 Method File: ex48g31
Coefficient of Determination: 0.990973
Calibration curve: 0.00322824 * x + -0.00170186
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 10 name: Nitroglycerin Method File: ex48g31
Coefficient of Determination: 0.998816
Calibration curve: 0.0296695 * x + 0.0190758
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

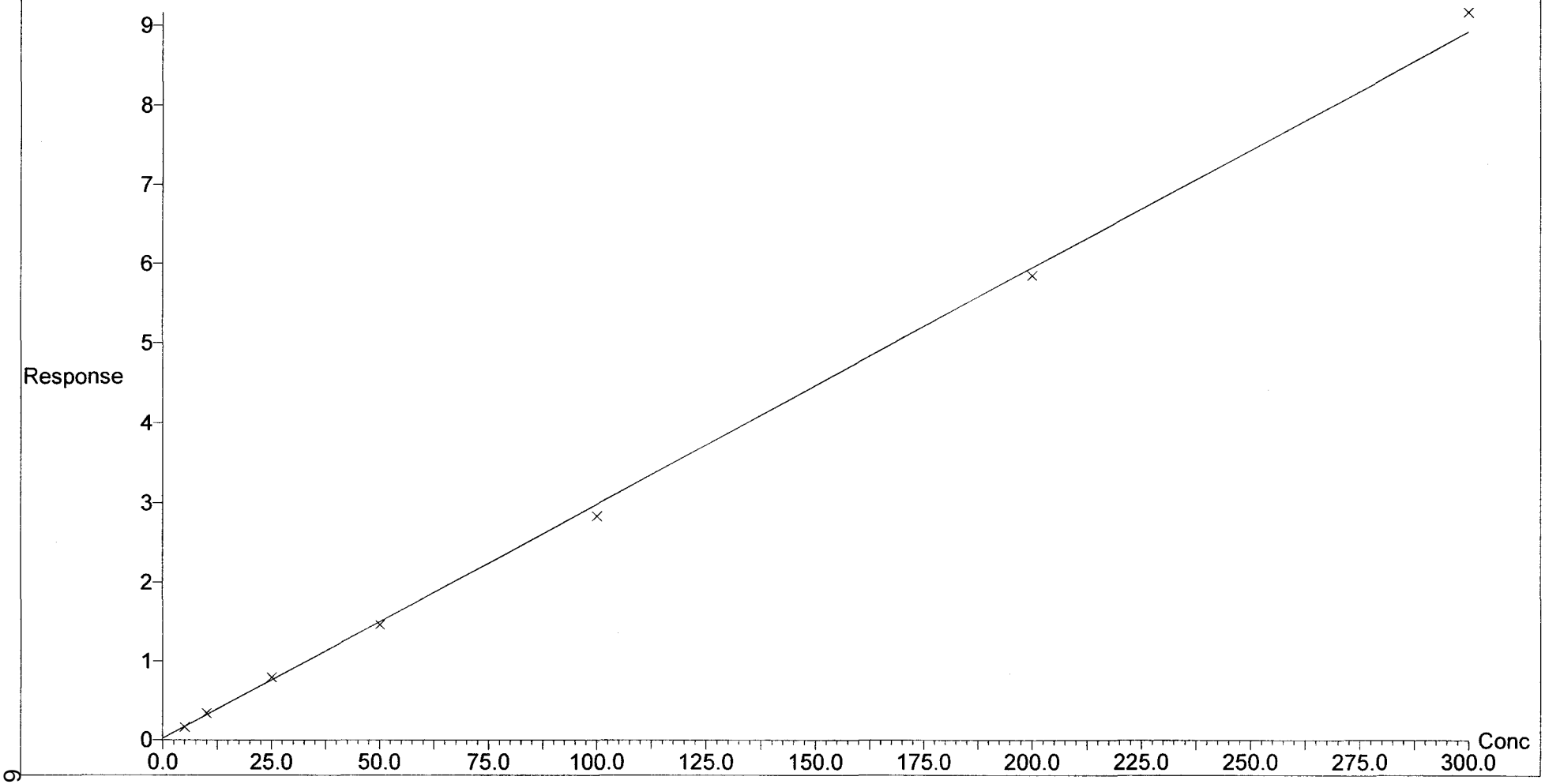


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 11 name: Nitrobenzene Method File: ex48g31
Coefficient of Determination: 0.994036
Calibration curve: 0.00358556 * x + -0.000695270
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

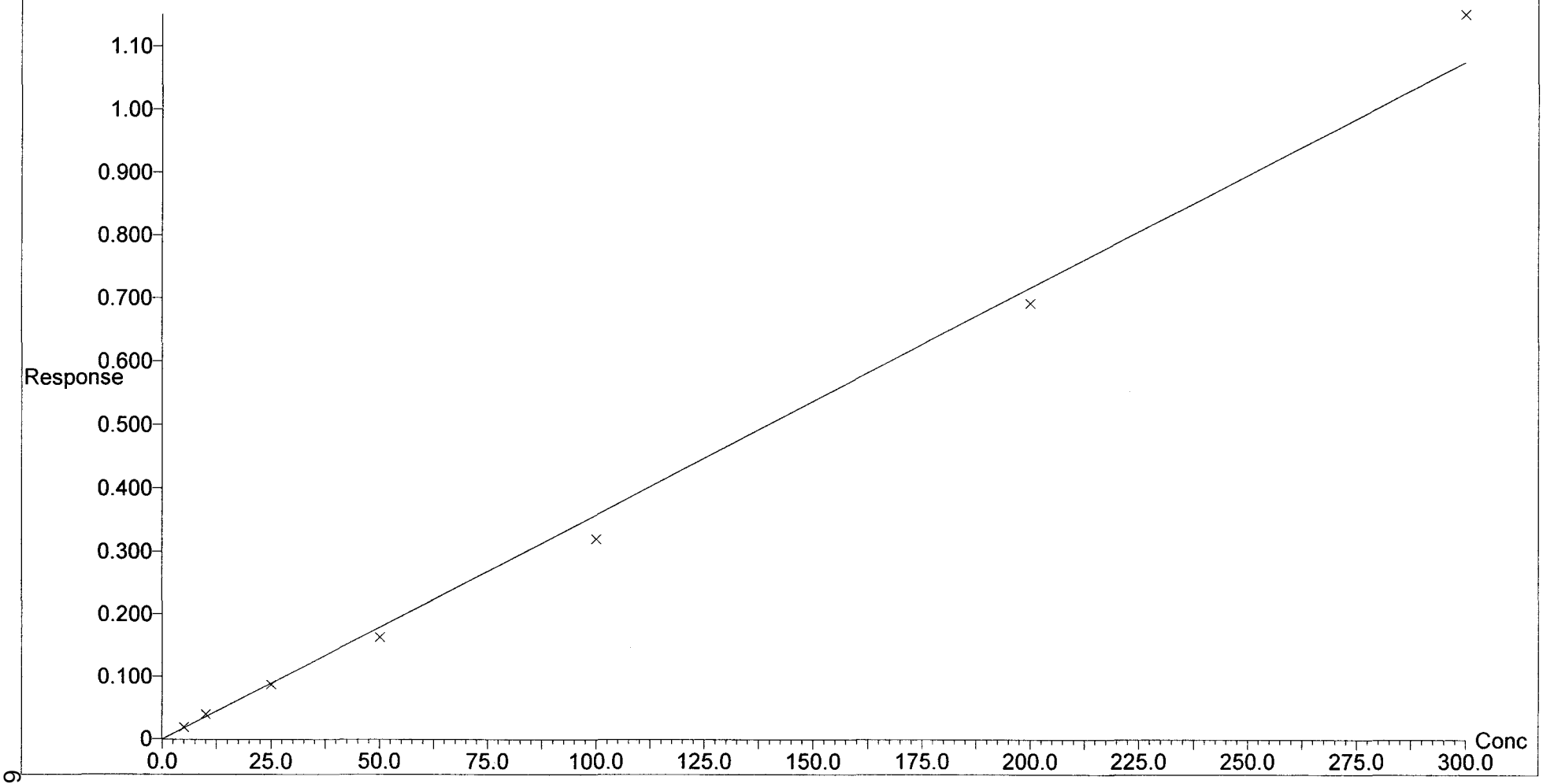
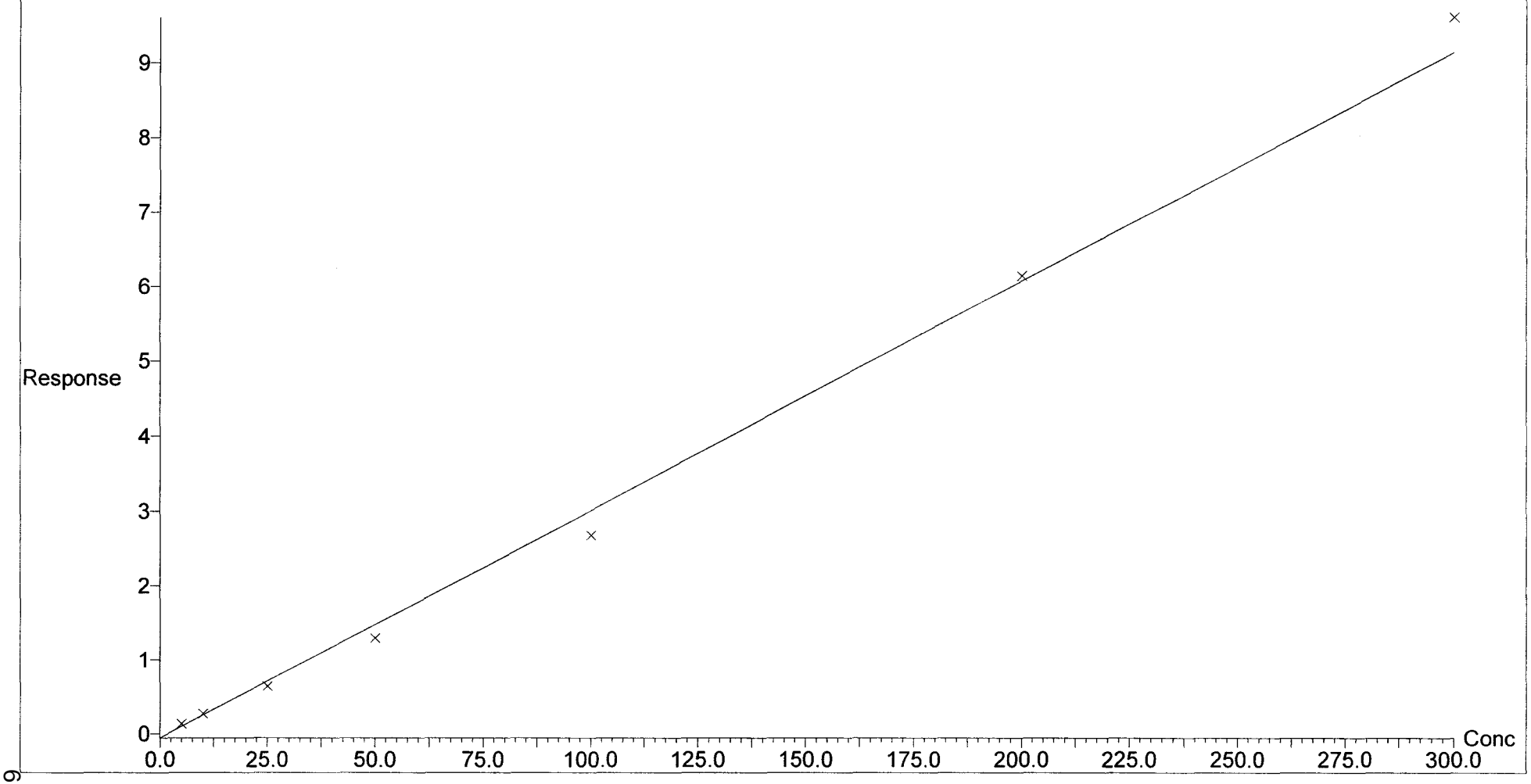


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 12 name: 2,4,6-Trinitrotoluene Method File: ex48g31
Coefficient of Determination: 0.994440
Calibration curve: 0.0306238 * x + -0.0535118
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 13 name: 4-Amino-2,6-Dinitrotoluene Method File: ex48g31
Coefficient of Determination: 0.997674
Calibration curve: 0.0148959 * x + -0.00251501
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

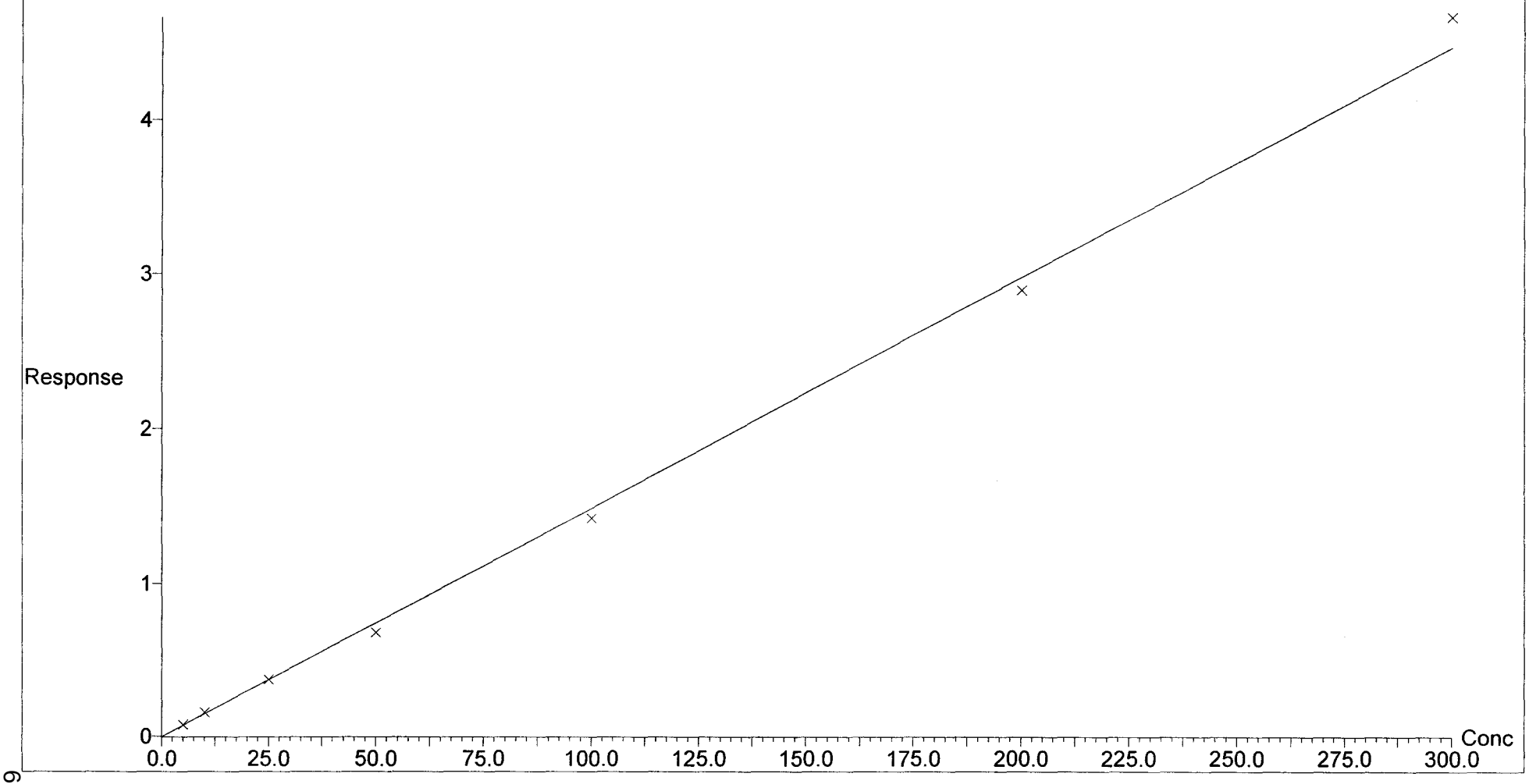


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 14 name: 2-Amino-4,6-Dinitrotoluene Method File: ex48g31
Coefficient of Determination: 0.991074
Calibration curve: 0.0245880 * x + -0.0419305
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

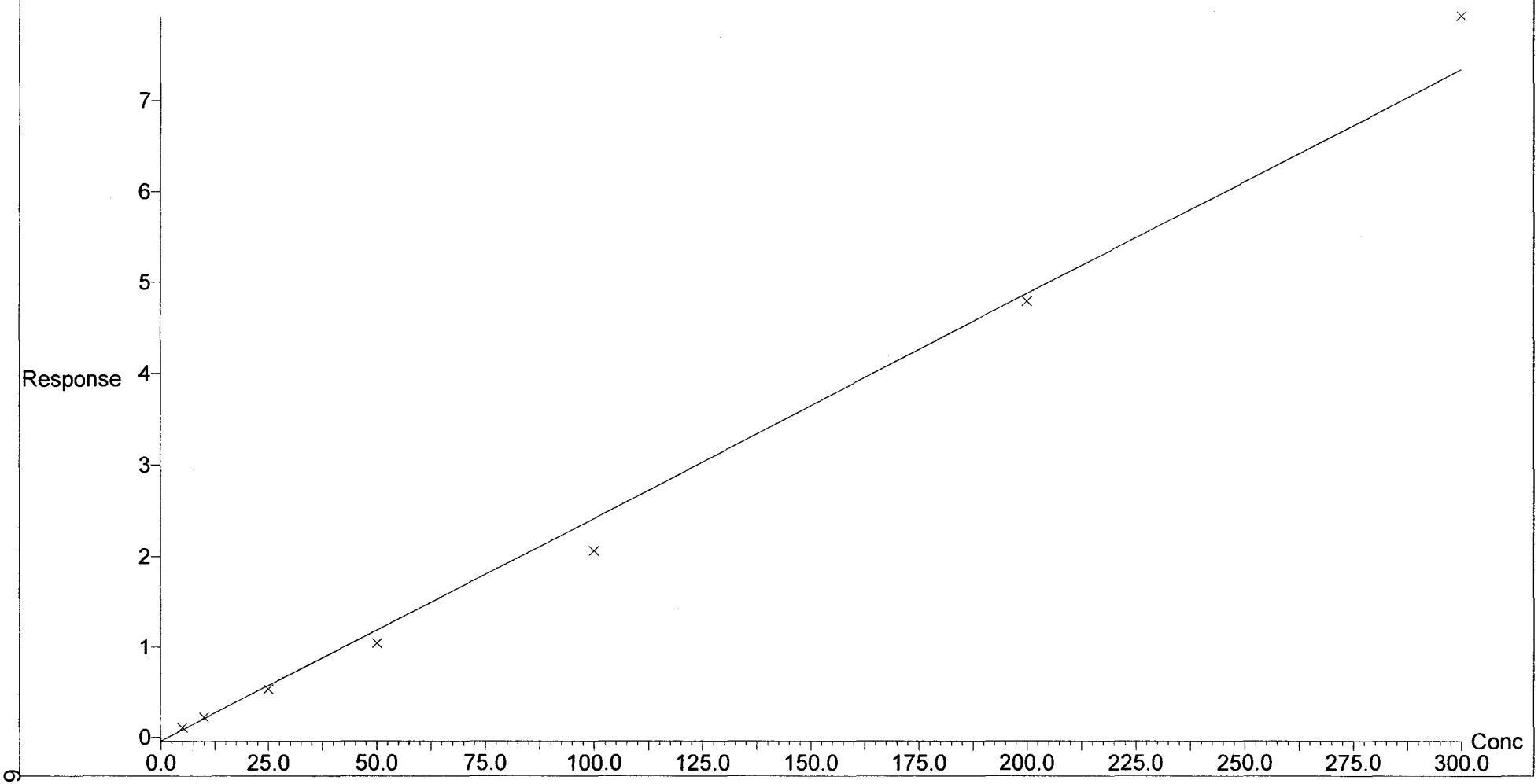


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 15 name: 2,6-Dinitrotoluene Method File: ex48g31
Coefficient of Determination: 0.998765
Calibration curve: 0.00924159 * x + -0.0123174
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

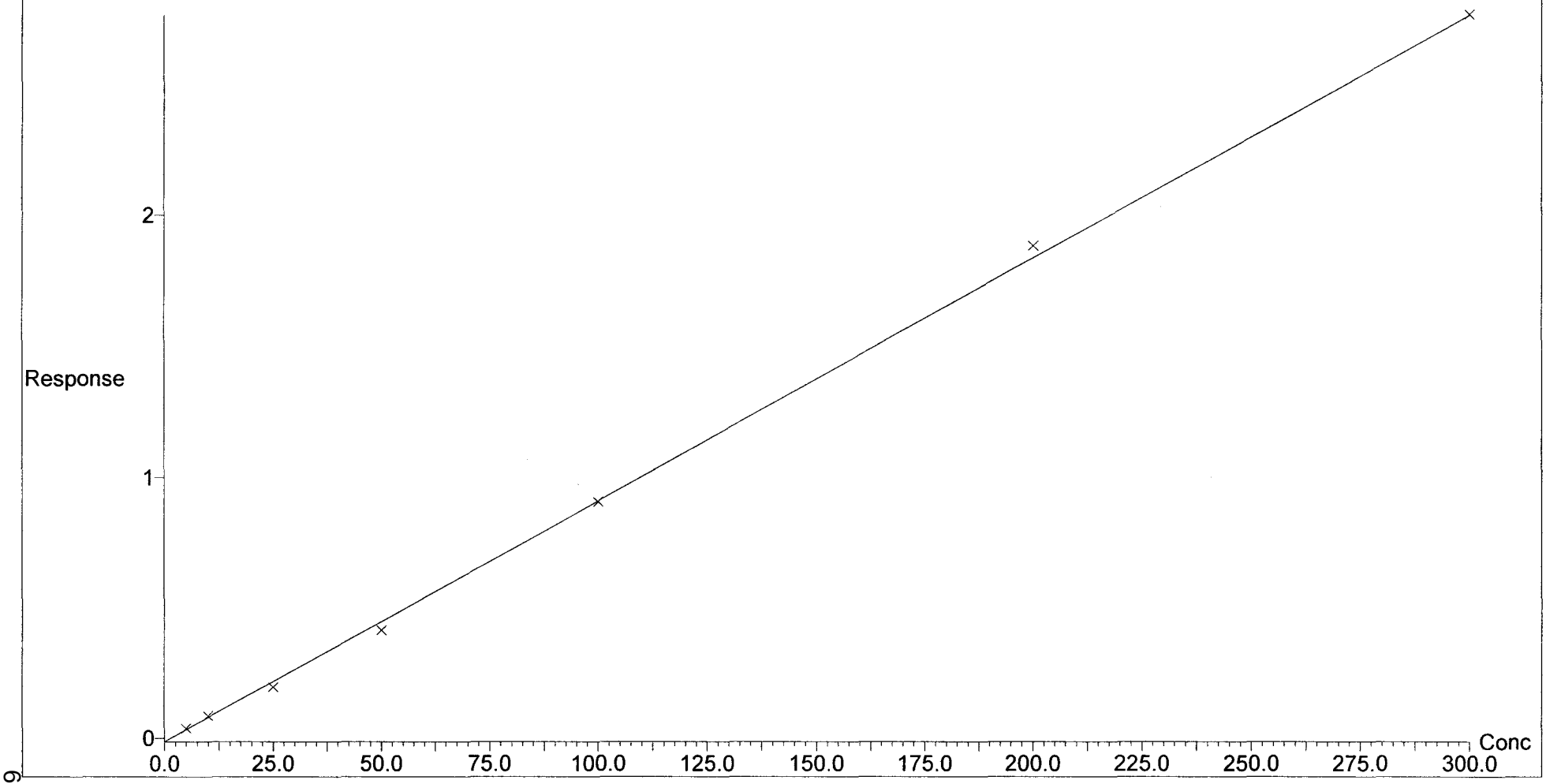
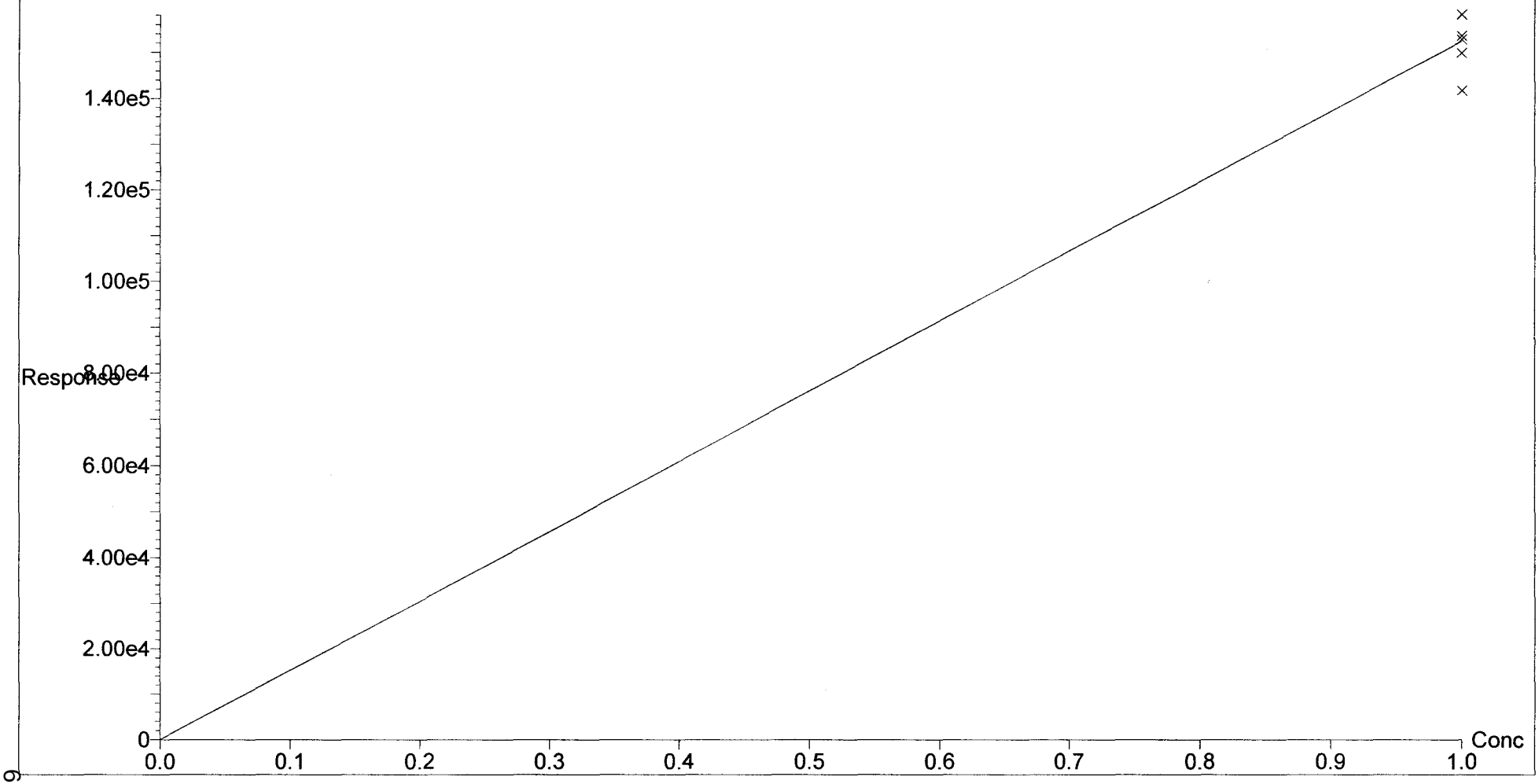


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

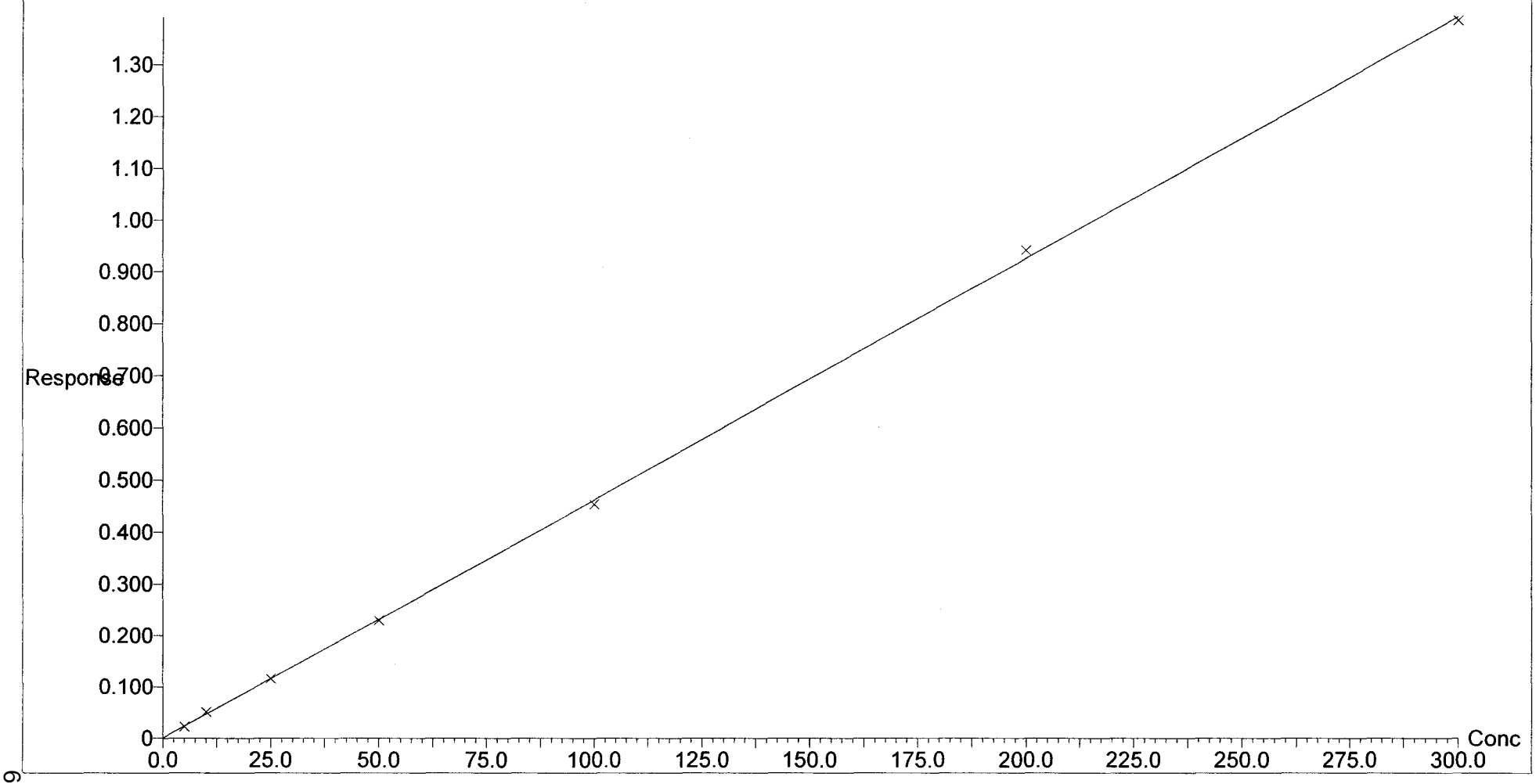
Compound 16 name: 2,4-Dinitrotoluene-d3 (IS) Method File: ex48g31
Response Factor: 152305
RRF SD: 5602.62, % Relative SD: 3.67855
Response type: External Std, Area
Curve type: RF



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 17 name: 2,4-Dinitrotoluene Method File: ex48g31
Coefficient of Determination: 0.999659
Calibration curve: 8.41747e-8 * x^2 + 0.00460960 * x + 0.000301571
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 18 name: 2-Nitrotoluene Method File: ex48g31
Coefficient of Determination: 0.998974
Calibration curve: 0.00195359 * x + -0.000501926
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

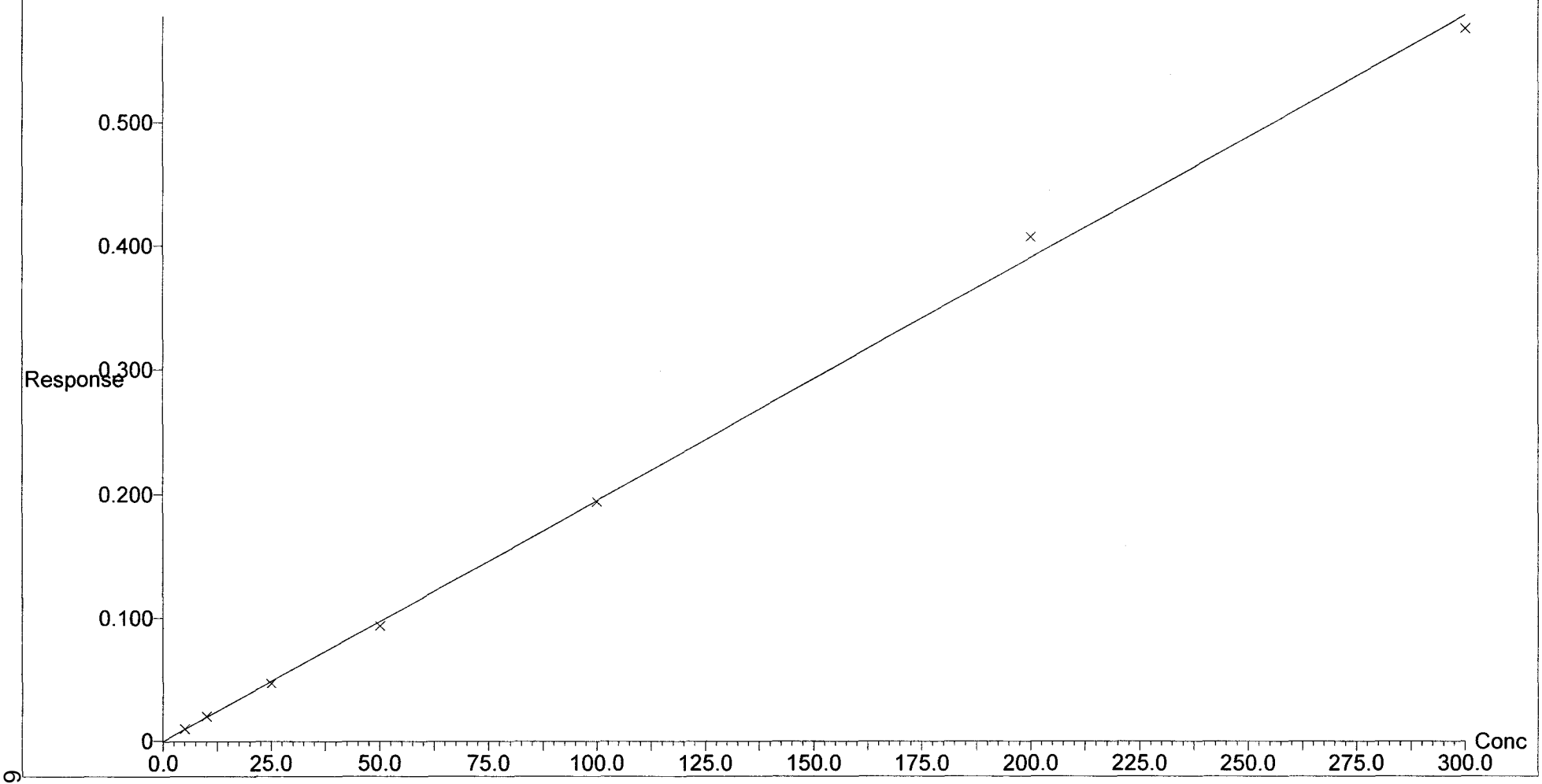


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 19 name: PETN Method File: ex48g31
Coefficient of Determination: 0.999577
Calibration curve: 0.0128004 * x + -0.000489882
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

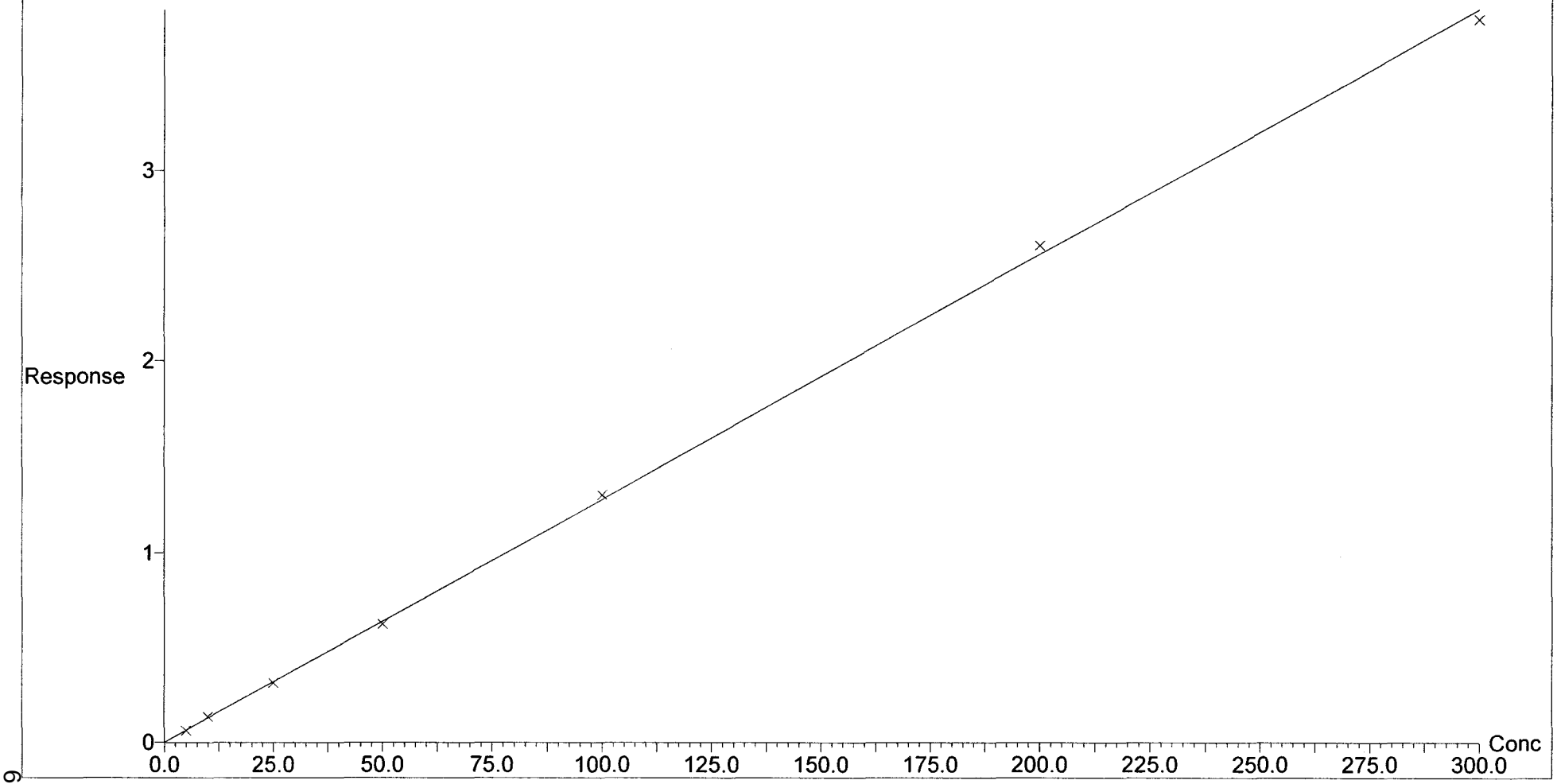


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 20 name: 4-Nitrotoluene Method File: ex48g31
Coefficient of Determination: 0.999033
Calibration curve: -6.38702e-9 * x^2 + 0.00126172 * x + 0.000822346
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

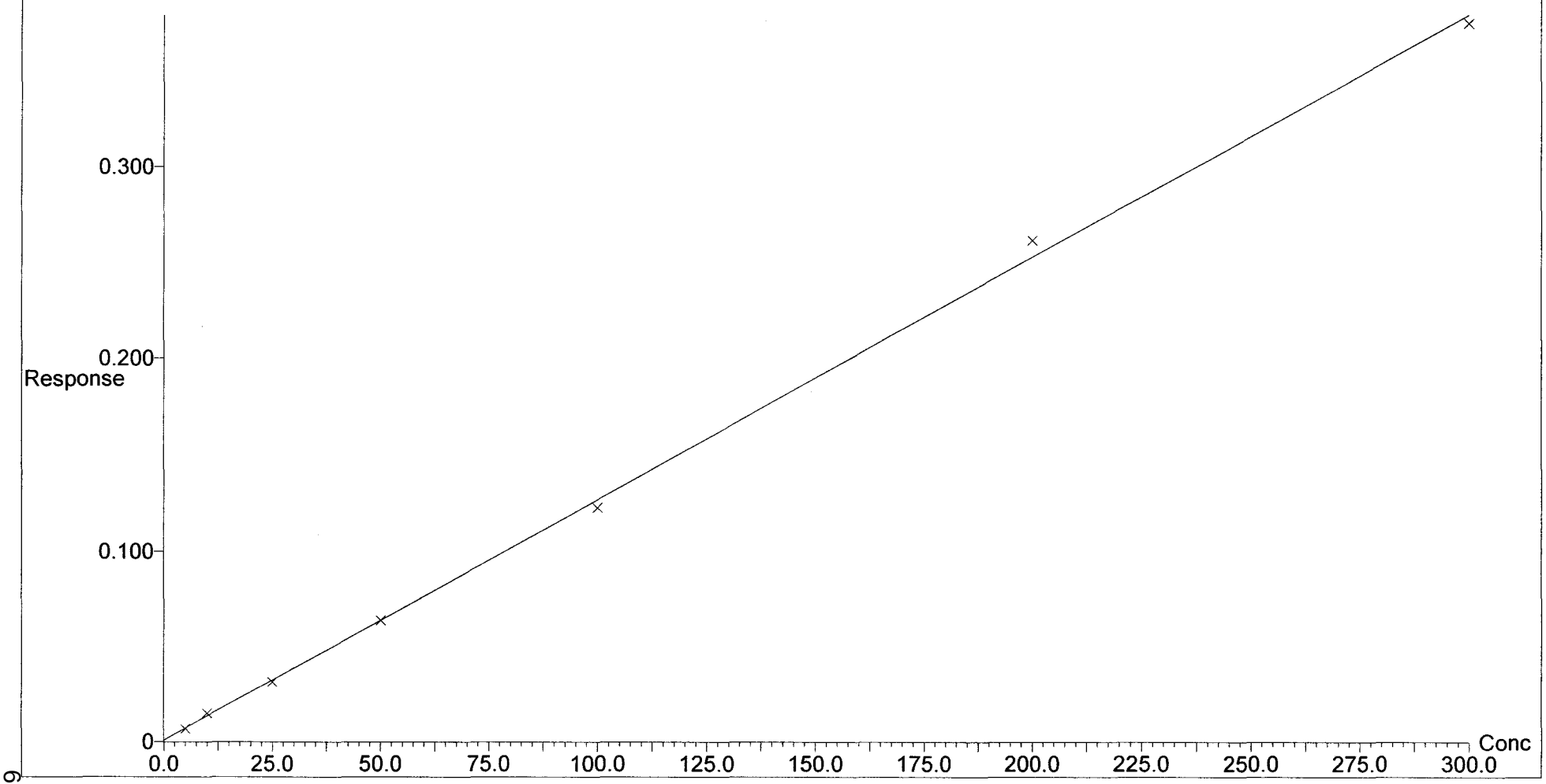


Table of Contents

Quantify Calibration Report

Calibration: C:\MassLynx\Explosives.PRO\CurveDB\ex48g31
Last modified: Fri Aug 01 07:32:53 2008
Printed: Fri Aug 01 07:58:04 2008

Compound 21 name: 3-Nitrotoluene Method File: ex48g31
Coefficient of Determination: 0.998471
Calibration curve: 0.000717061 * x + 0.000592401
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

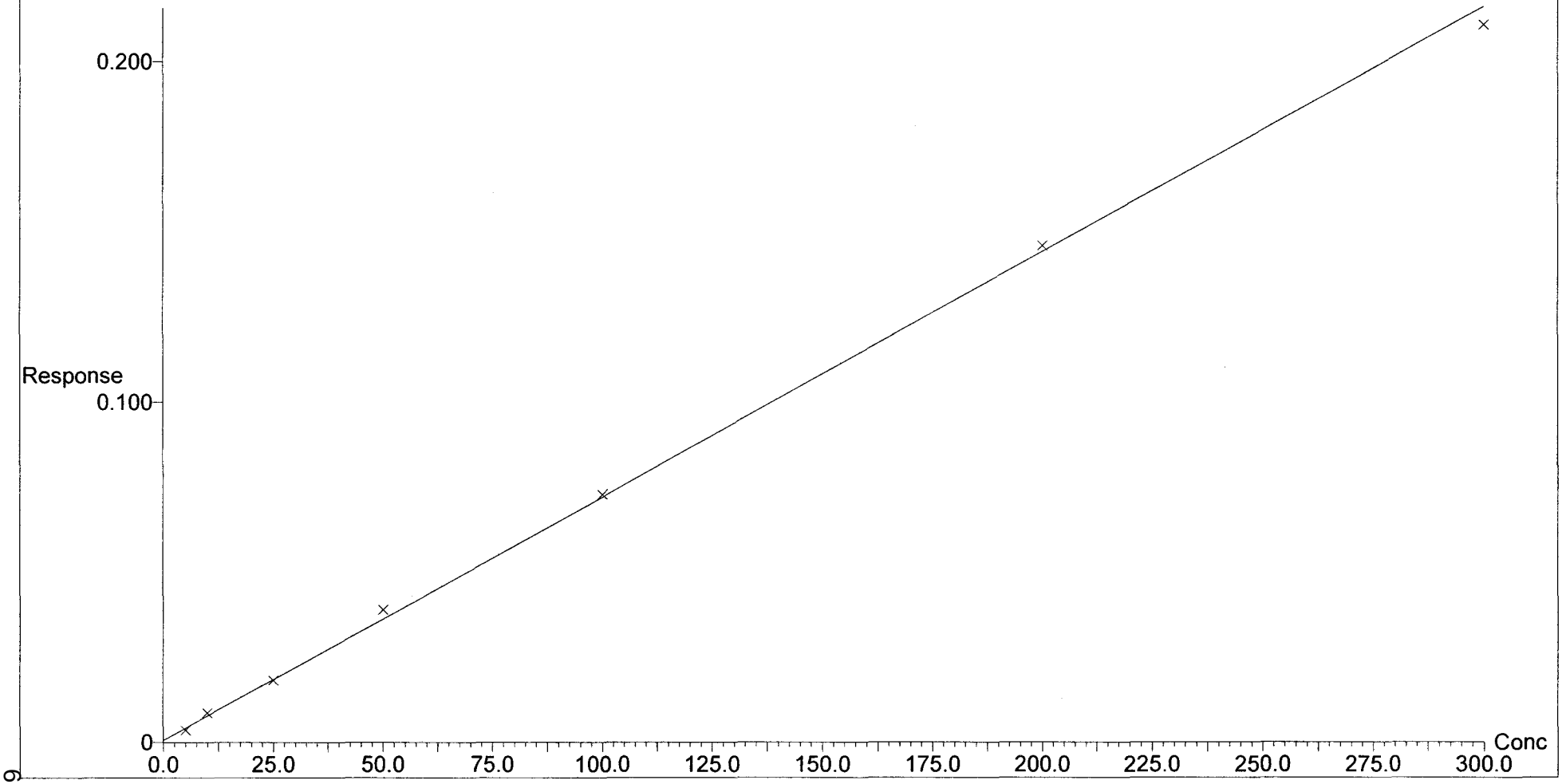


Table of Contents

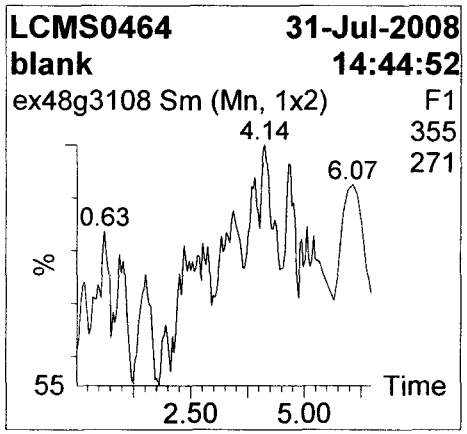
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

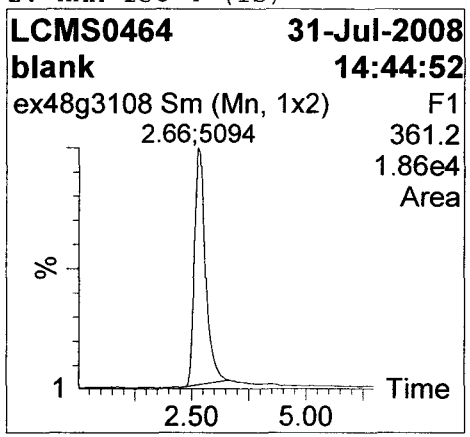
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3108
Text: blank

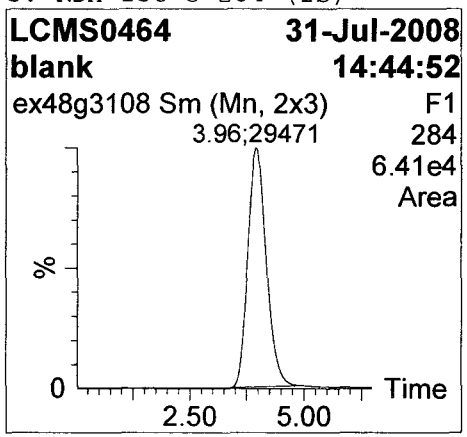
1: HMX



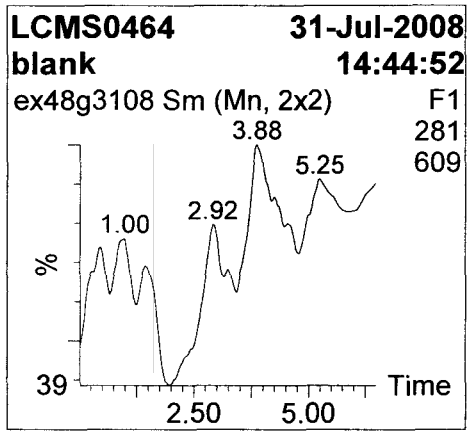
2: HMX 13C-4 (IS)



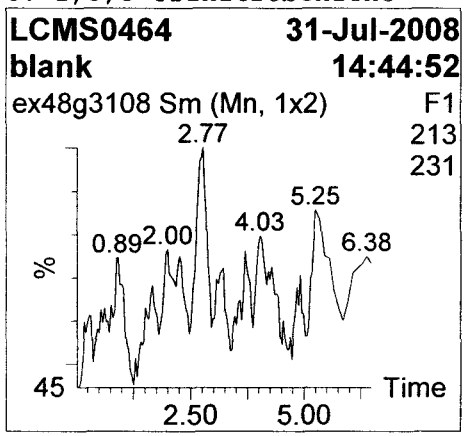
3: RDX 13C-3 284 (IS)



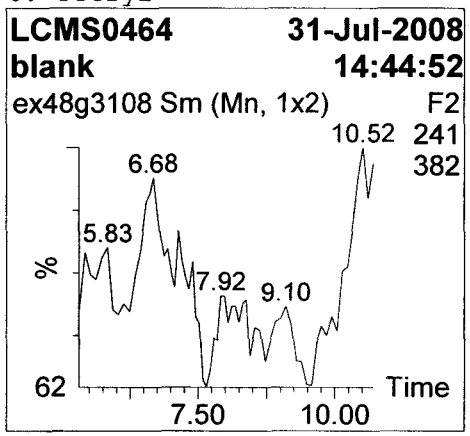
4: RDX



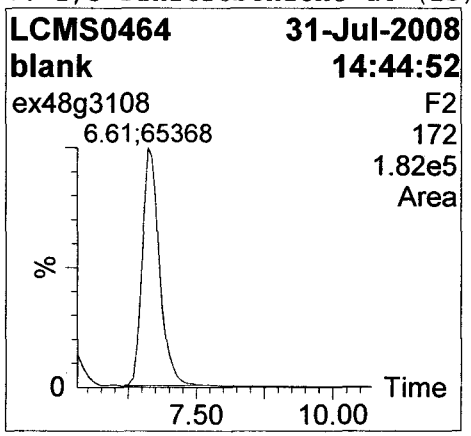
5: 1,3,5-Trinitrobenzene



6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene

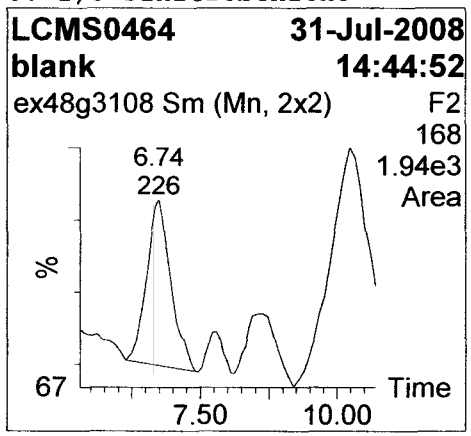


Table of Contents

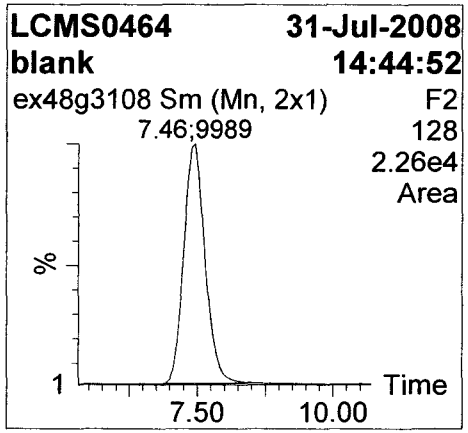
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

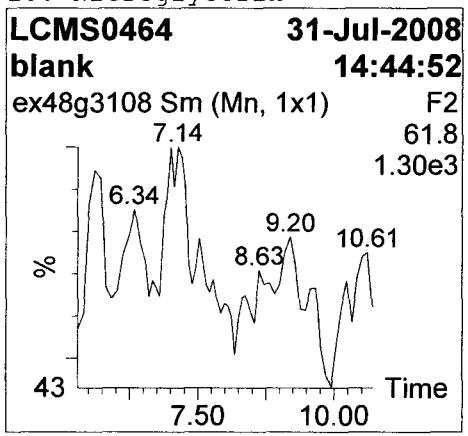
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3108
Text: blank

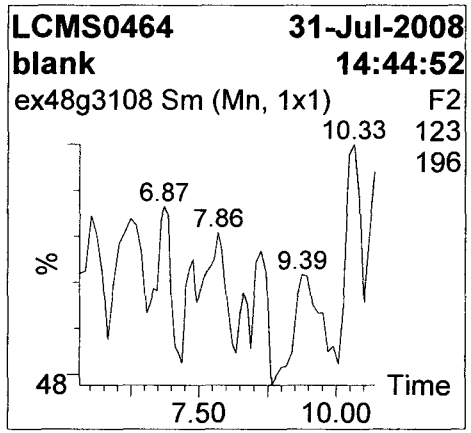
9: Nitrobenzene-d5



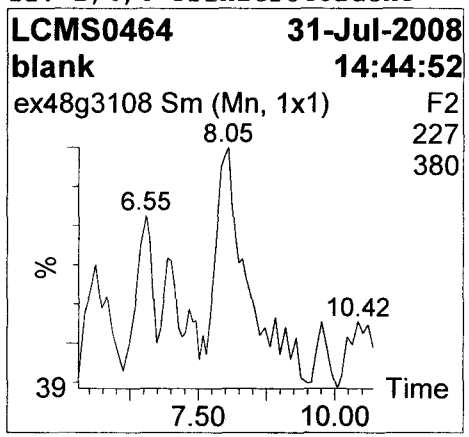
10: Nitroglycerin



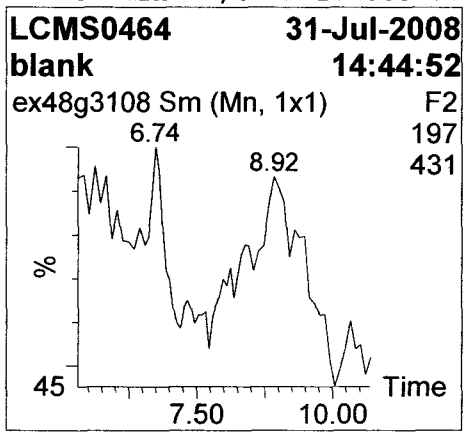
11: Nitrobenzene



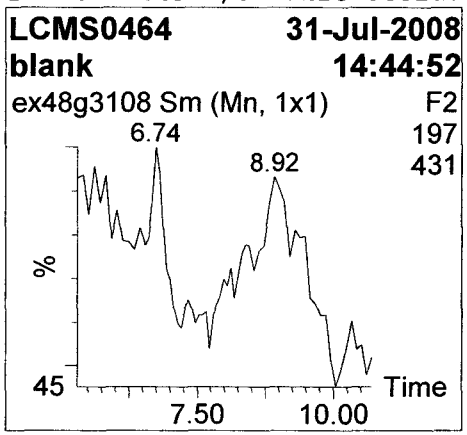
12: 2,4,6-Trinitrotoluene



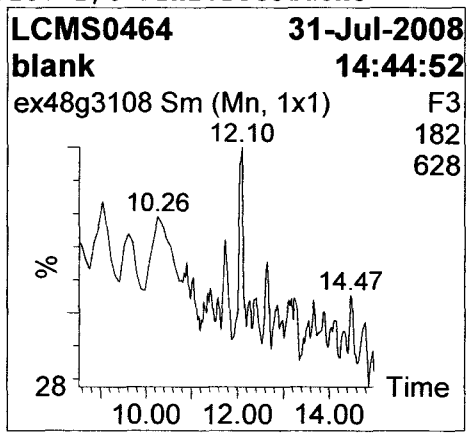
13: 4-Amino-2,6-Dinitrotolu..



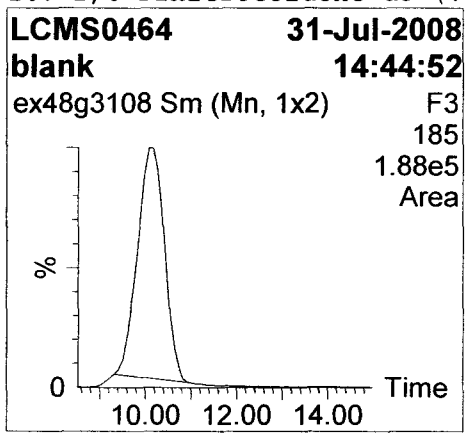
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



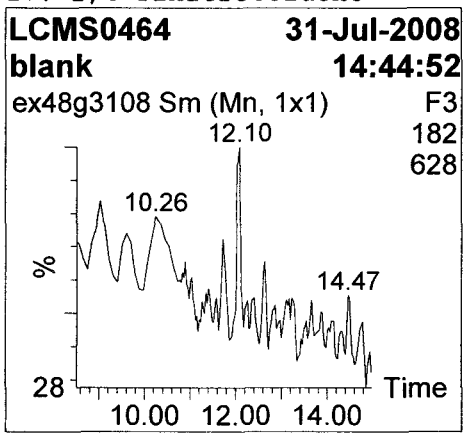
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

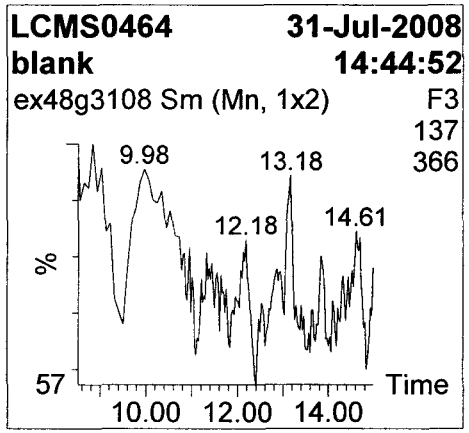
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3108
Text: blank

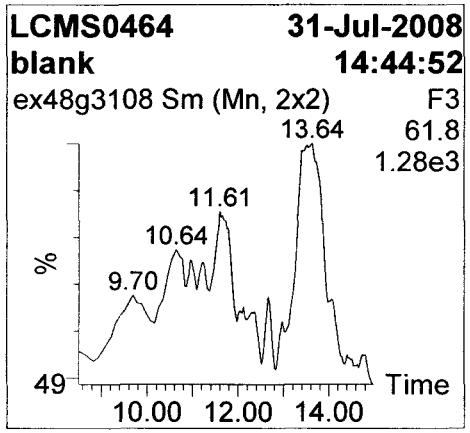
17: 2,4-Dinitrotoluene



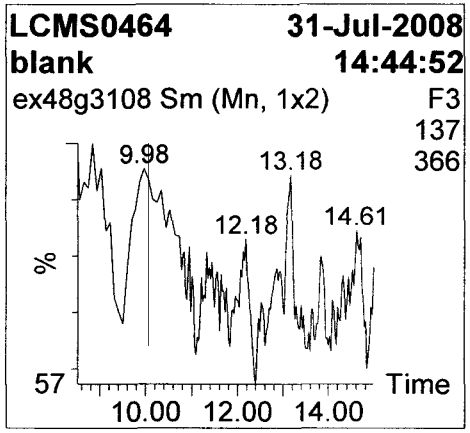
18: 2-Nitrotoluene



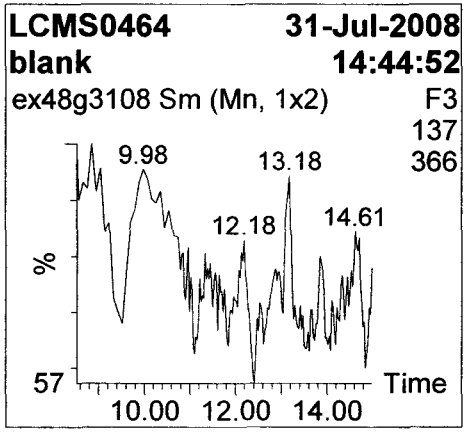
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3108
Text: blank

Name	RT	Area	Flags	Conc. ()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.662	5094	bb	0.968	97	01/Aug/08	ex48g31	
RDX 13C-..	3.956	29471	bb	0.936	94	01/Aug/08	ex48g31	
RDX						01/Aug/08	ex48g31	
1,3,5-Tr..						01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.612	65368	bb	0.939	94	01/Aug/08	ex48g31	
1,3-Dini..	6.743	226	bb	0.176		01/Aug/08	ex48g31	
Nitroben..	7.463	9989	bb	47.861	96	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..						01/Aug/08	ex48g31	
2,4,6-Tr..						01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	10.075	123787	bb	0.813	81	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

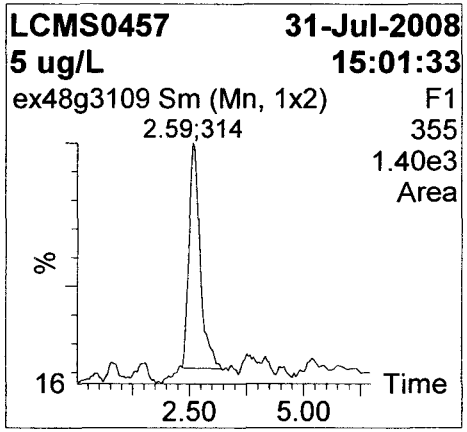
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

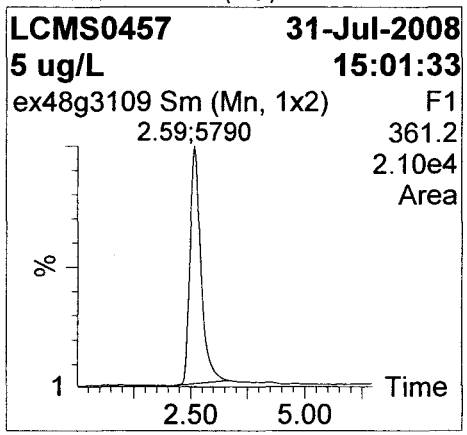
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3109
Text: 5 ug/L

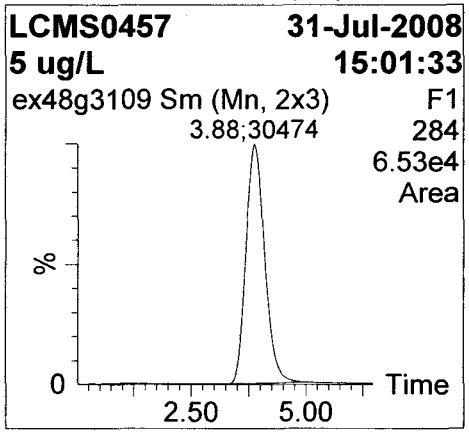
1: HMX



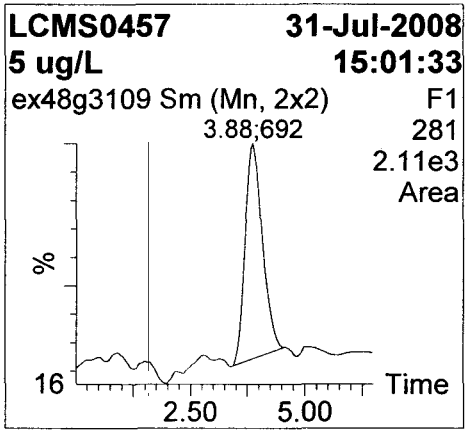
2: HMX 13C-4 (IS)



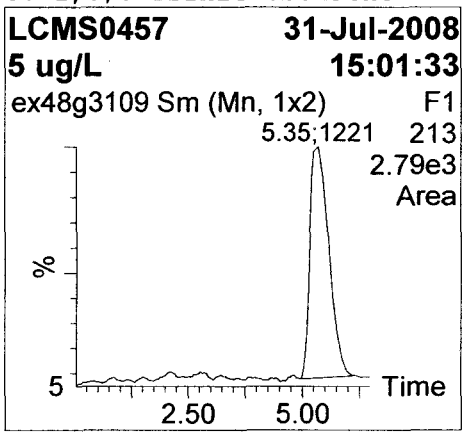
3: RDX 13C-3 284 (IS)



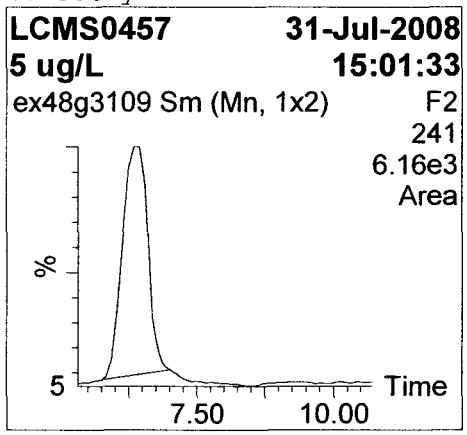
4: RDX



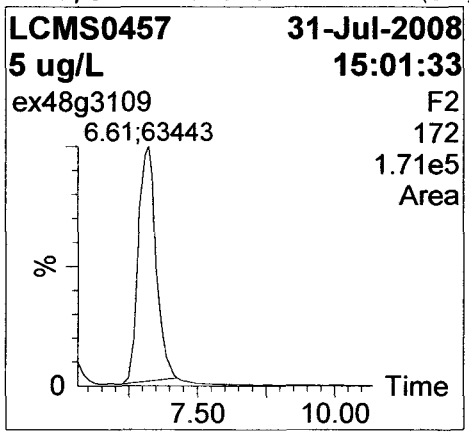
5: 1,3,5-Trinitrobenzene



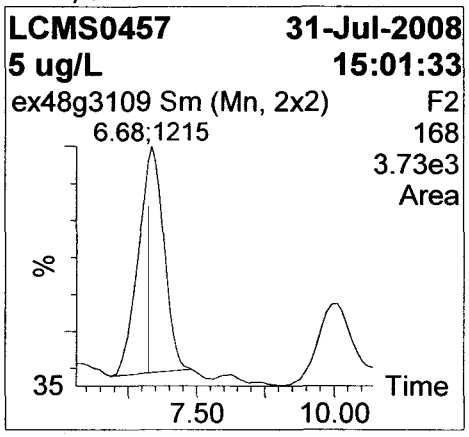
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



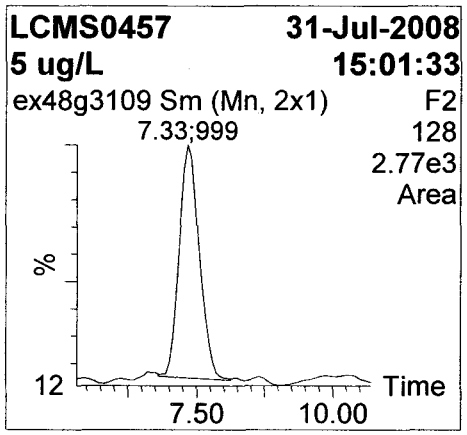
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

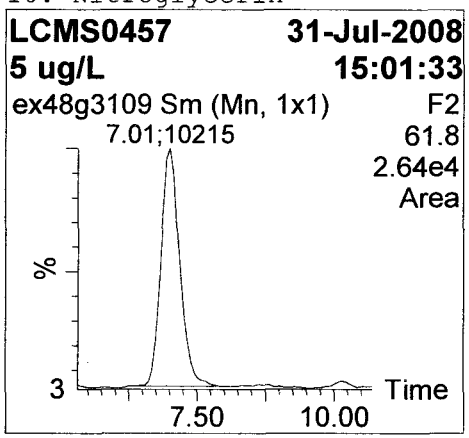
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3109
Text: 5 ug/L

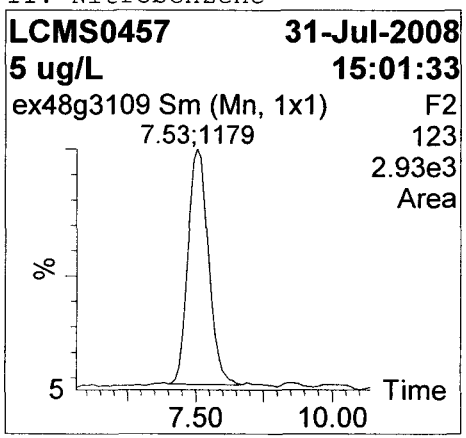
9: Nitrobenzene-d5



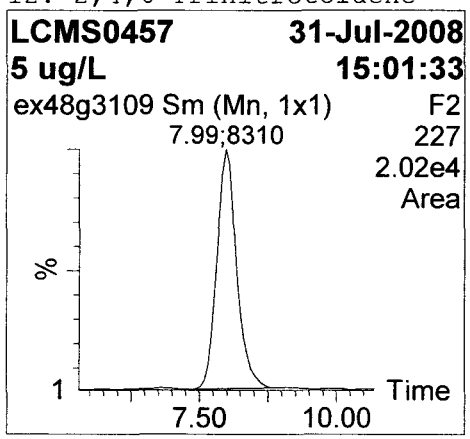
10: Nitroglycerin



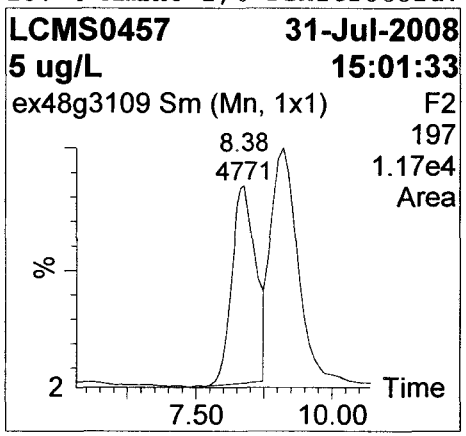
11: Nitrobenzene



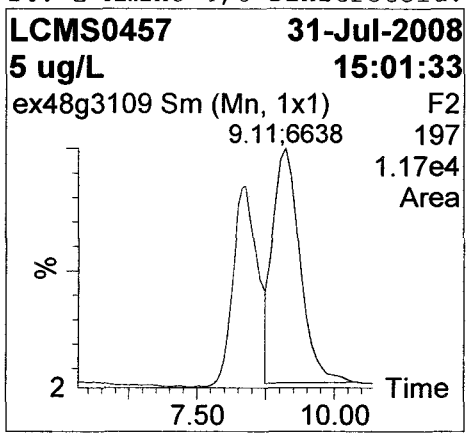
12: 2,4,6-Trinitrotoluene



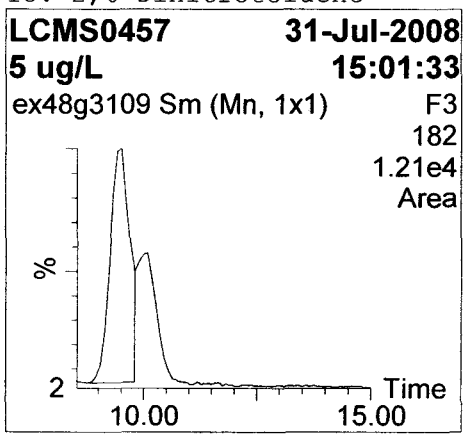
13: 4-Amino-2,6-Dinitrotolu..



14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..

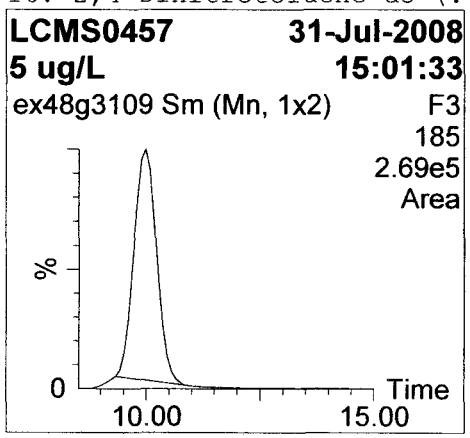


Table of Contents

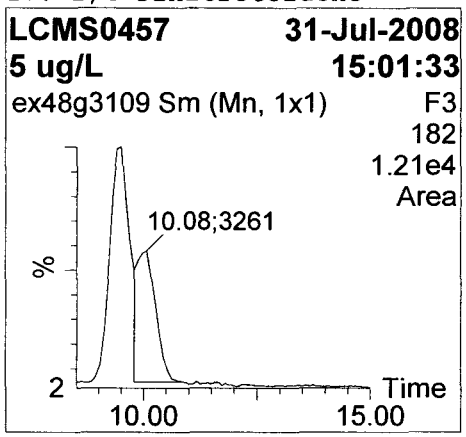
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

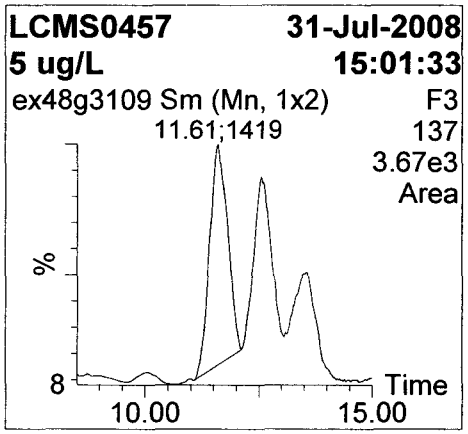
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3109
Text: 5 ug/L

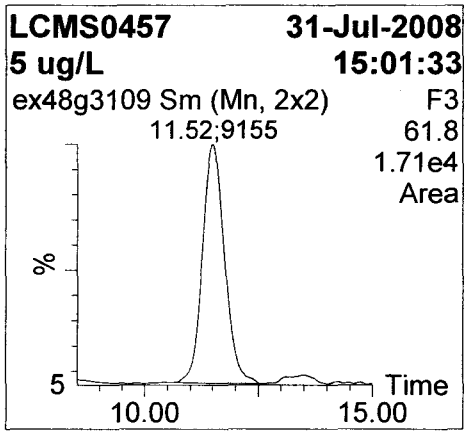
17: 2,4-Dinitrotoluene



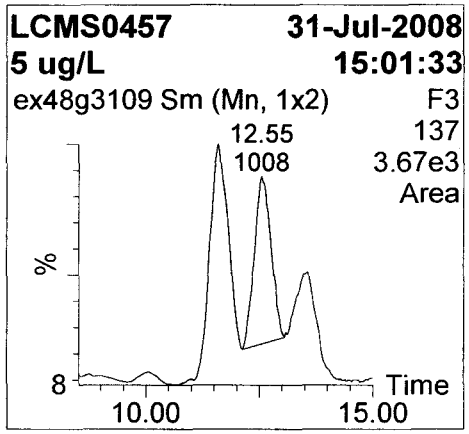
18: 2-Nitrotoluene



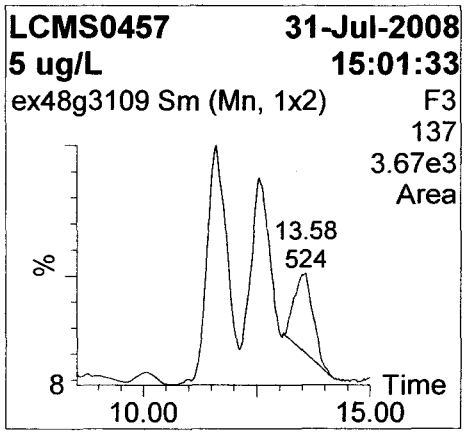
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3109
Text: 5 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	314	bb	4.862	97	01/Aug/08	ex48g31	
HMX 13C-..	2.588	5790	bb	1.101	110	01/Aug/08	ex48g31	
RDX 13C-..	3.882	30474	bb	0.968	97	01/Aug/08	ex48g31	
RDX	3.882	692	bb	3.751	75	01/Aug/08	ex48g31	
1,3,5-Tr..	5.352	1221	bb	3.939	79	01/Aug/08	ex48g31	
Tetryl	6.341	3017	bb	4.040	81	01/Aug/08	ex48g31	
1,3 Dini..	6.612	63443	bb	0.911	91	01/Aug/08	ex48g31	
1,3-Dini..	6.678	1215	bb	5.154	103	01/Aug/08	ex48g31	
Nitroben..	7.333	999	dd	5.403	108	01/Aug/08	ex48g31	
Nitrogly..	7.005	10215	bb	4.784	96	01/Aug/08	ex48g31	
Nitroben..	7.529	1179	bb	5.377	108	01/Aug/08	ex48g31	
2,4,6-Tr..	7.988	8310	bb	6.024	120	01/Aug/08	ex48g31	
4-Amino-..	8.381	4771	bd	5.218	104	01/Aug/08	ex48g31	
2-Amino-..	9.106	6638	db	5.961	119	01/Aug/08	ex48g31	
2,6-Dini..	9.511	5689	bd	5.444	109	01/Aug/08	ex48g31	
2,4-Dini..	9.982	149724	bb	0.983	98	01/Aug/08	ex48g31	
2,4-Dini..	10.076	3261	db	4.659	93	01/Aug/08	ex48g31	
2-Nitrot..	11.607	1419	bb	5.108	102	01/Aug/08	ex48g31	
PETN	11.521	9155	bb	4.815	96	01/Aug/08	ex48g31	
4-Nitrot..	12.550	1008	bb	4.684	94	01/Aug/08	ex48g31	
3-Nitrot..	13.578	524	bb	4.055	81	01/Aug/08	ex48g31	

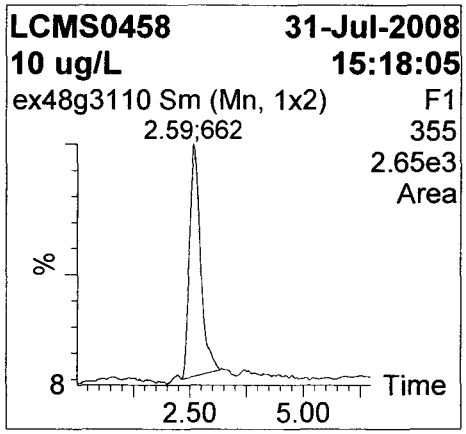
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

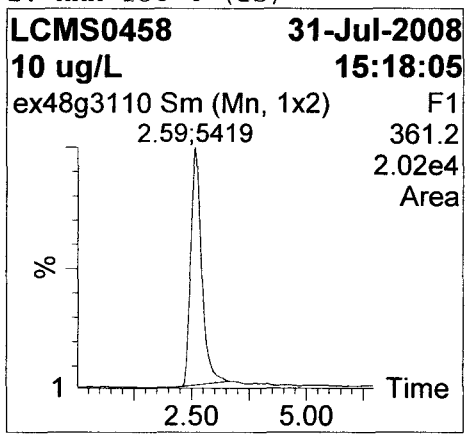
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3110
Text: 10 ug/L

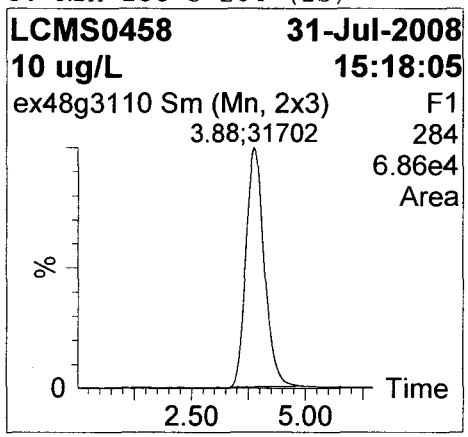
1: HMX



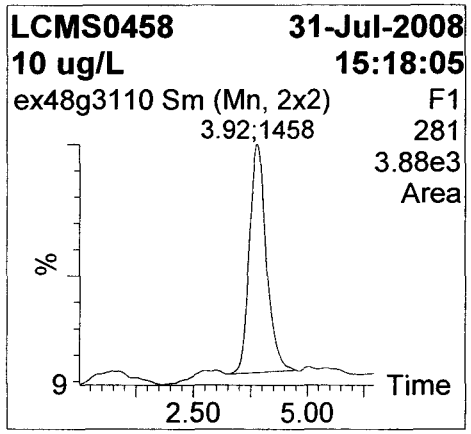
2: HMX 13C-4 (IS)



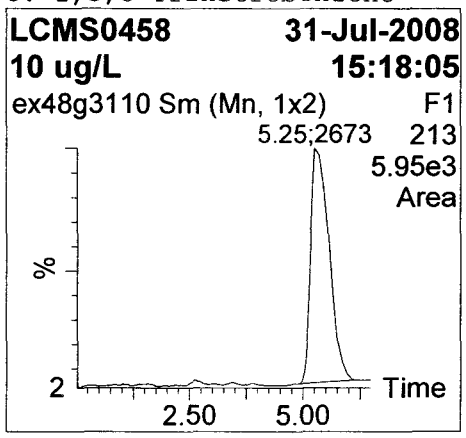
3: RDX 13C-3 284 (IS)



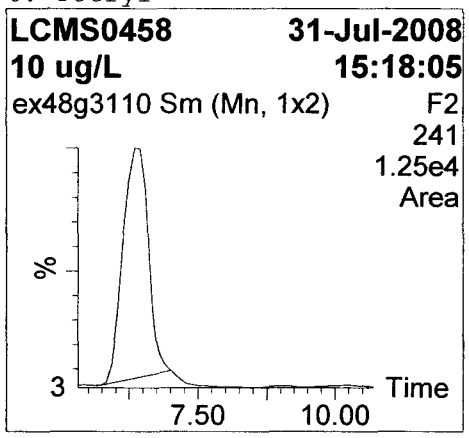
4: RDX



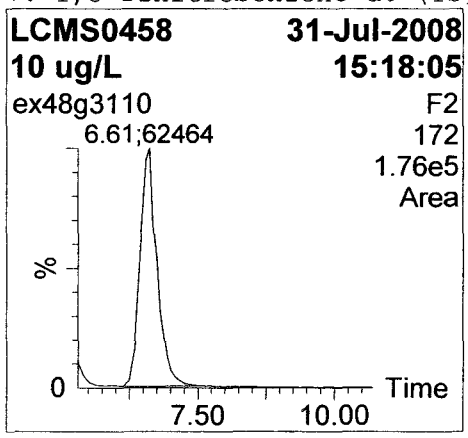
5: 1,3,5-Trinitrobenzene



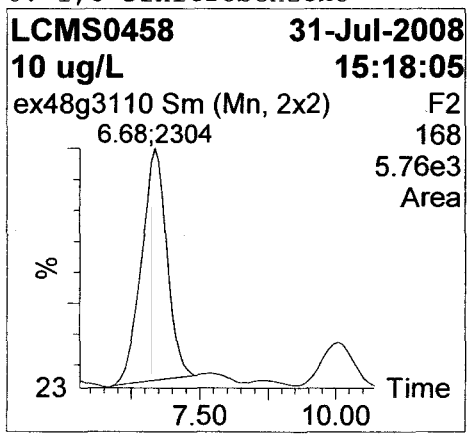
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



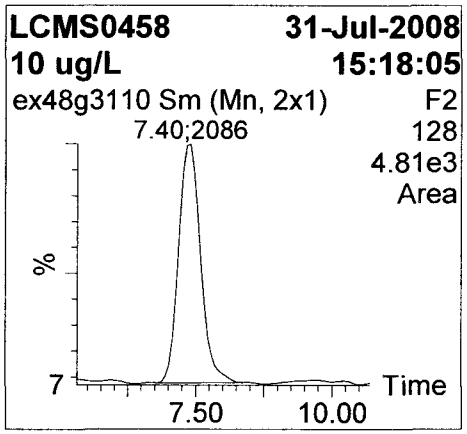
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

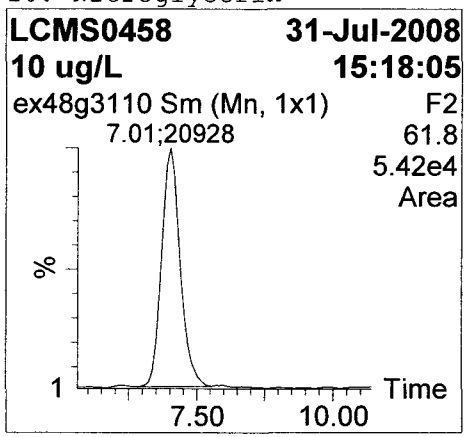
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3110
Text: 10 ug/L

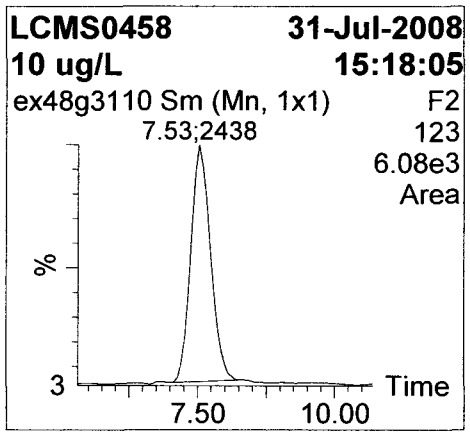
9: Nitrobenzene-d5



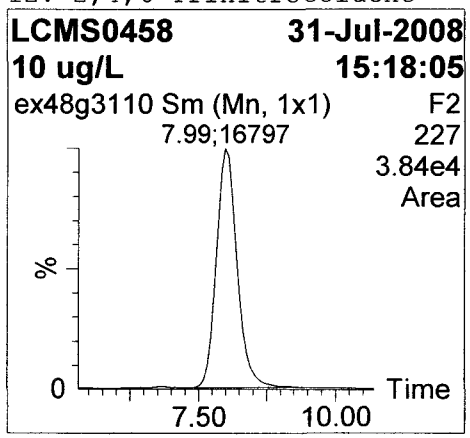
10: Nitroglycerin



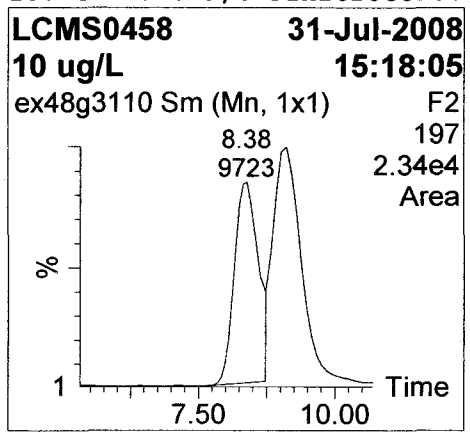
11: Nitrobenzene



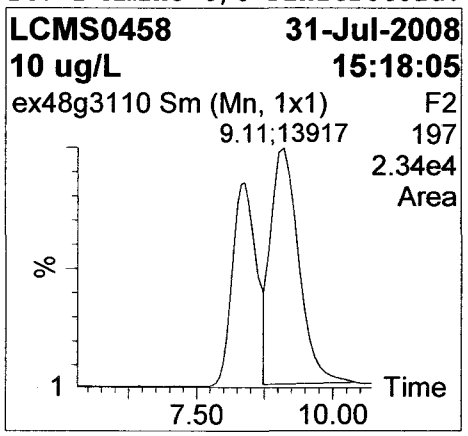
12: 2,4,6-Trinitrotoluene



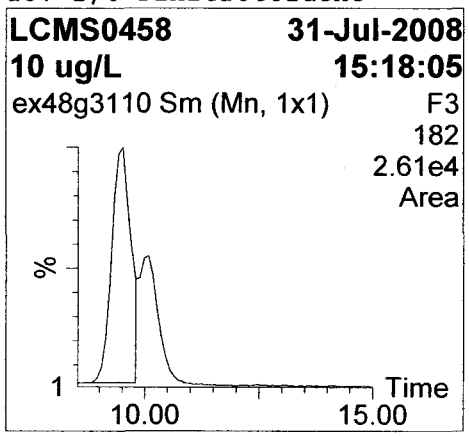
13: 4-Amino-2,6-Dinitrotolu..



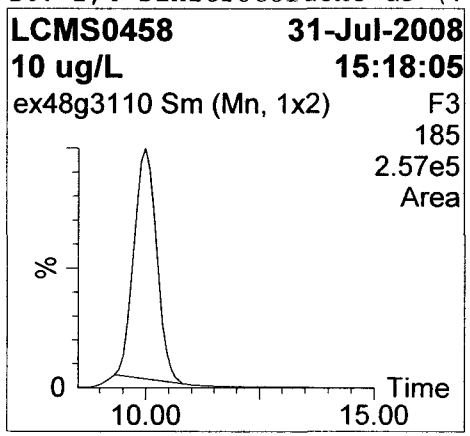
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



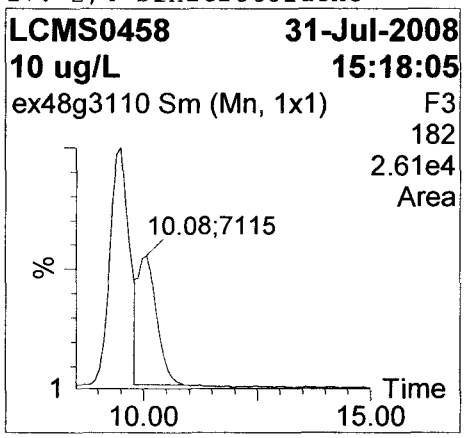
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

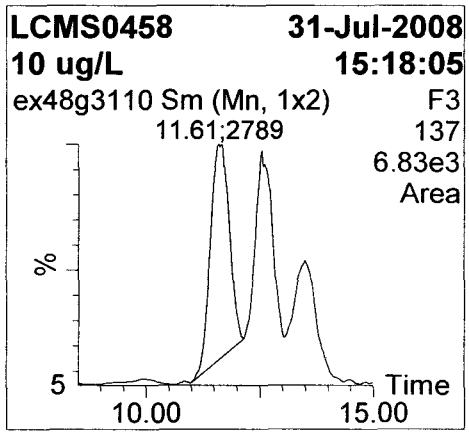
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3110
Text: 10 ug/L

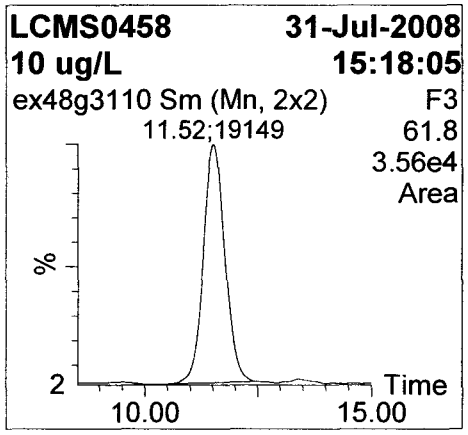
17: 2,4-Dinitrotoluene



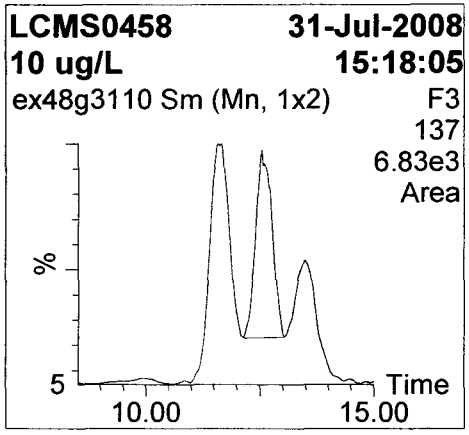
18: 2-Nitrotoluene



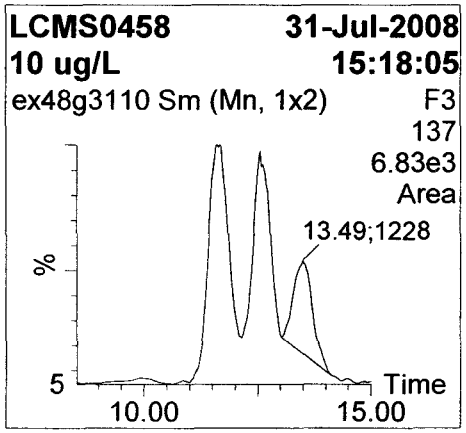
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3110
Text: 10 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	662	bb	10.894	109	01/Aug/08	ex48g31	
HMX 13C-..	2.588	5419	bb	1.030	103	01/Aug/08	ex48g31	
RDX 13C-..	3.882	31702	bb	1.007	101	01/Aug/08	ex48g31	
RDX	3.919	1458	bb	10.519	105	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	2673	bb	11.246	112	01/Aug/08	ex48g31	
Tetryl	6.342	6263	bb	10.711	107	01/Aug/08	ex48g31	
1,3 Dini..	6.612	62464	bb	0.897	90	01/Aug/08	ex48g31	
1,3-Dini..	6.678	2304	bb	10.779	108	01/Aug/08	ex48g31	
Nitroben..	7.399	2086	bd	10.869	109	01/Aug/08	ex48g31	
Nitrogly..	7.005	20928	bb	10.649	106	01/Aug/08	ex48g31	
Nitroben..	7.530	2438	bb	11.077	111	01/Aug/08	ex48g31	
2,4,6-Tr..	7.988	16797	bb	10.528	105	01/Aug/08	ex48g31	
4-Amino-..	8.381	9723	bd	10.618	106	01/Aug/08	ex48g31	
2-Amino-..	9.106	13917	db	10.767	108	01/Aug/08	ex48g31	
2,6-Dini..	9.511	12088	bd	10.570	106	01/Aug/08	ex48g31	
2,4-Dini..	9.982	141602	bb	0.930	93	01/Aug/08	ex48g31	
2,4-Dini..	10.076	7115	db	10.834	108	01/Aug/08	ex48g31	
2-Nitrot..	11.607	2789	bb	10.338	103	01/Aug/08	ex48g31	
PETN	11.521	19149	bb	10.603	106	01/Aug/08	ex48g31	
4-Nitrot..	12.550	2095	bb	11.074	111	01/Aug/08	ex48g31	
3-Nitrot..	13.492	1228	bb	11.264	113	01/Aug/08	ex48g31	

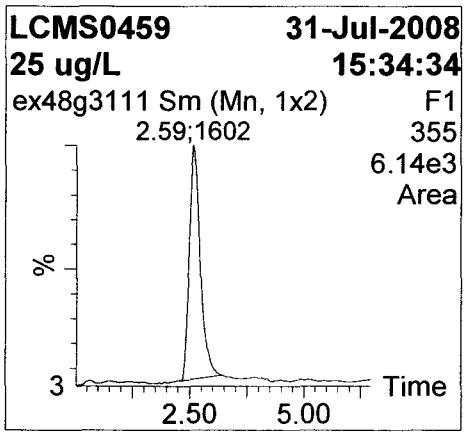
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

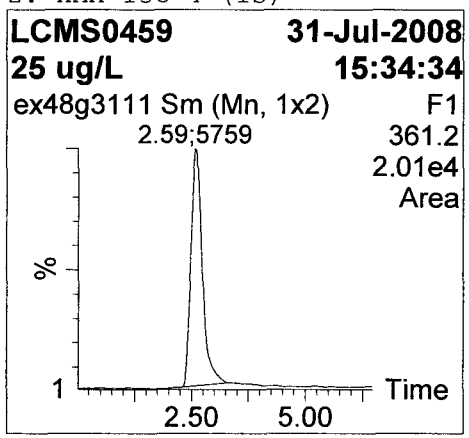
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3111
Text: 25 ug/L

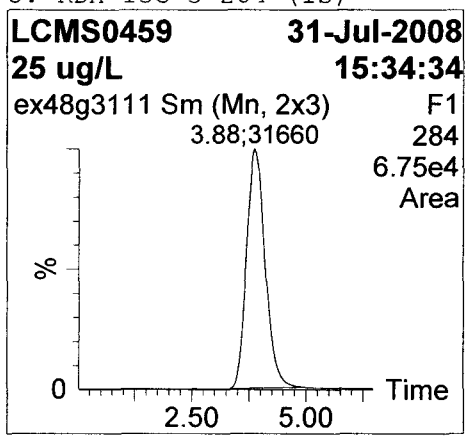
1: HMX



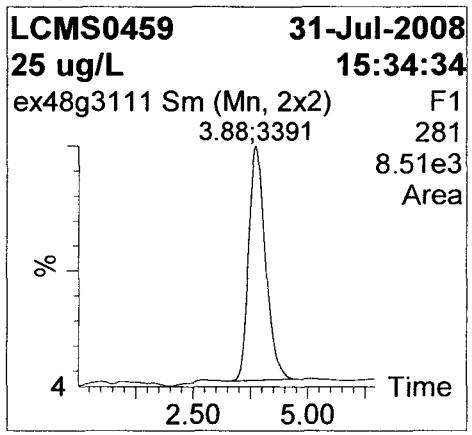
2: HMX 13C-4 (IS)



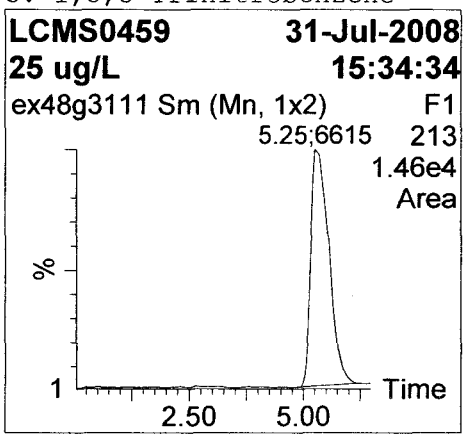
3: RDX 13C-3 284 (IS)



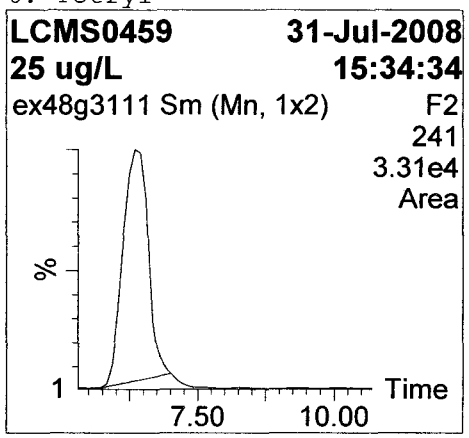
4: RDX



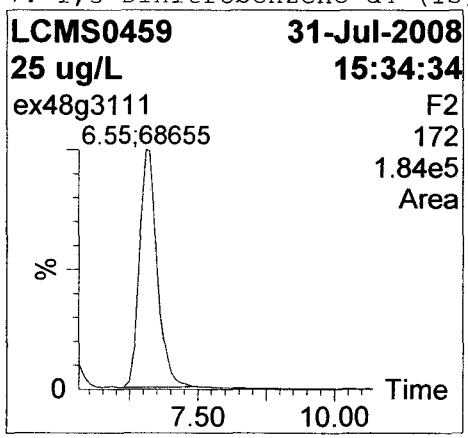
5: 1,3,5-Trinitrobenzene



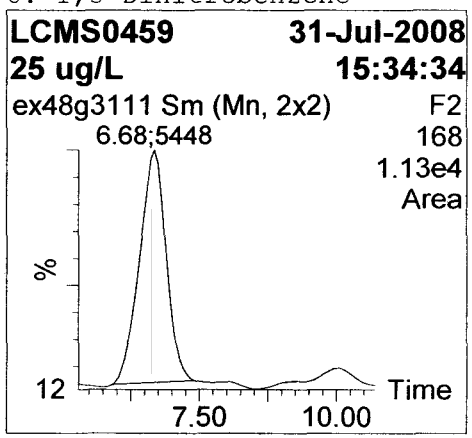
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



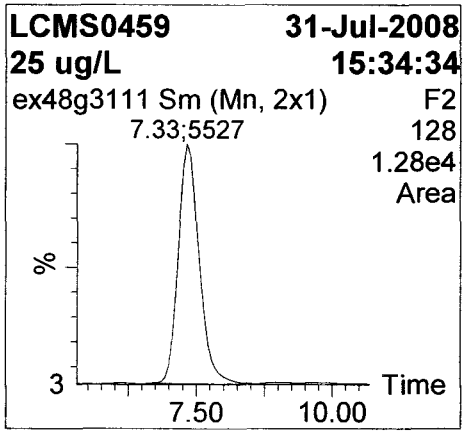
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

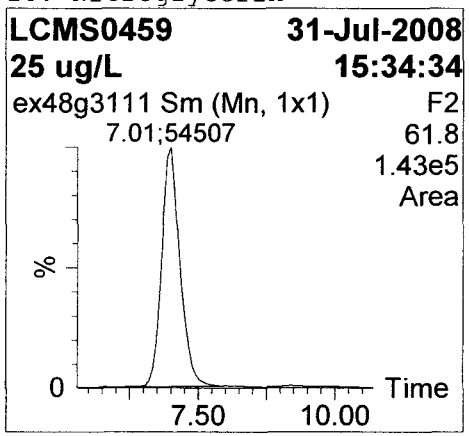
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3111
Text: 25 ug/L

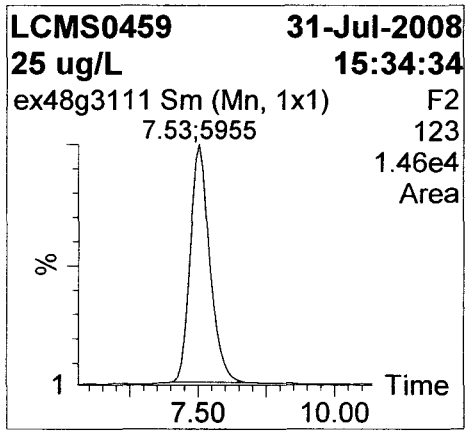
9: Nitrobenzene-d5



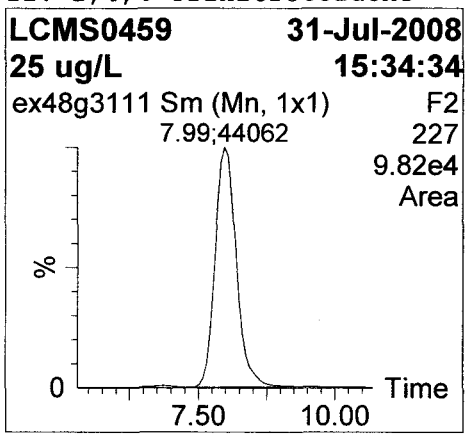
10: Nitroglycerin



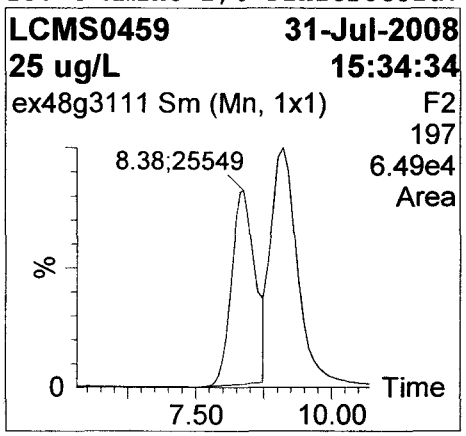
11: Nitrobenzene



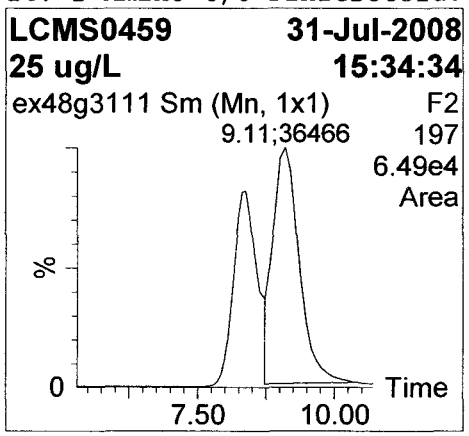
12: 2,4,6-Trinitrotoluene



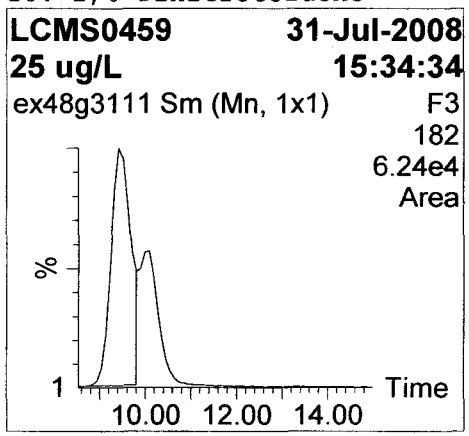
13: 4-Amino-2,6-Dinitrotolu..



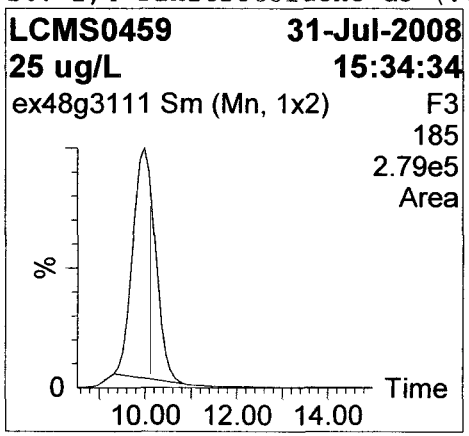
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



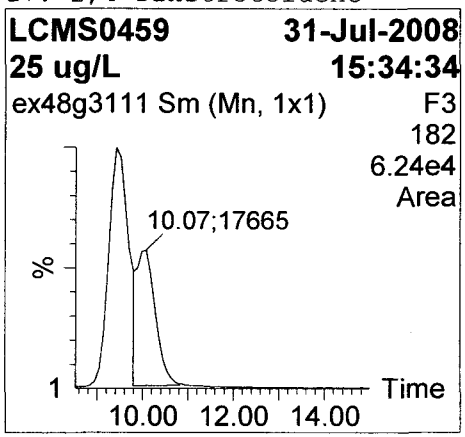
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

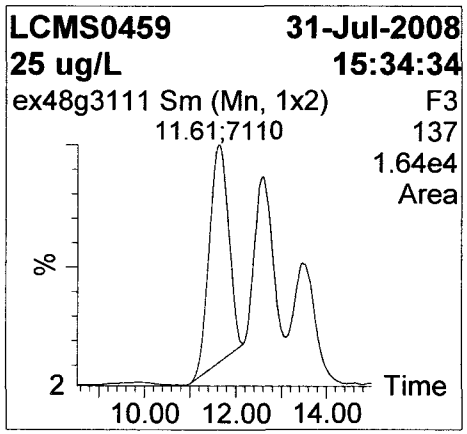
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3111
Text: 25 ug/L

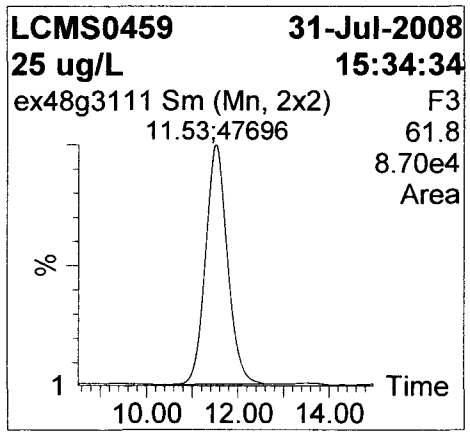
17: 2,4-Dinitrotoluene



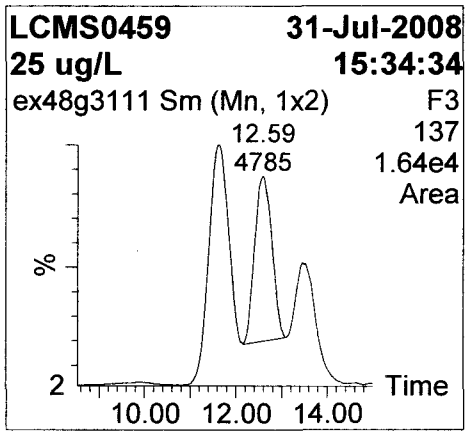
18: 2-Nitrotoluene



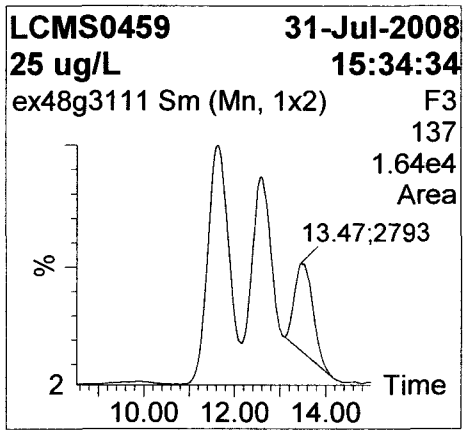
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3111
Text: 25 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	1602	bb	24.721	99	01/Aug/08	ex48g31	
HMX 13C-..	2.588	5759	bb	1.095	109	01/Aug/08	ex48g31	
RDX 13C-..	3.882	31660	bb	1.006	101	01/Aug/08	ex48g31	
RDX	3.882	3391	bb	28.270	113	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	6615	bb	27.343	109	01/Aug/08	ex48g31	
Tetryl	6.342	17019	bb	28.317	113	01/Aug/08	ex48g31	
1,3 Dini..	6.547	68655	bb	0.986	99	01/Aug/08	ex48g31	
1,3-Dini..	6.678	5448	bb	24.257	97	01/Aug/08	ex48g31	
Nitroben..	7.333	5527	bb	25.465	102	01/Aug/08	ex48g31	
Nitrogly..	7.005	54507	bb	26.116	104	01/Aug/08	ex48g31	
Nitroben..	7.529	5955	bb	24.385	98	01/Aug/08	ex48g31	
2,4,6-Tr..	7.988	44062	bb	22.705	91	01/Aug/08	ex48g31	
4-Amino-..	8.381	25549	bd	25.151	101	01/Aug/08	ex48g31	
2-Amino-..	9.105	36466	db	23.307	93	01/Aug/08	ex48g31	
2,6-Dini..	9.416	30015	bd	22.604	90	01/Aug/08	ex48g31	
2,4-Dini..	9.981	152686	bb	1.003	100	01/Aug/08	ex48g31	
2,4-Dini..	10.075	17665	dd	25.022	100	01/Aug/08	ex48g31	
2-Nitrot..	11.615	7110	bb	24.092	96	01/Aug/08	ex48g31	
PETN	11.529	47696	bb	24.442	98	01/Aug/08	ex48g31	
4-Nitrot..	12.586	4785	bb	24.189	97	01/Aug/08	ex48g31	
3-Nitrot..	13.471	2793	bb	24.688	99	01/Aug/08	ex48g31	

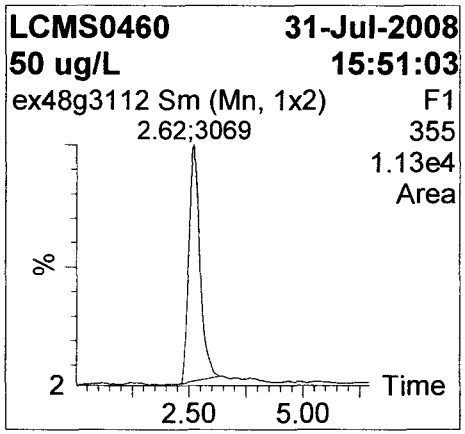
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

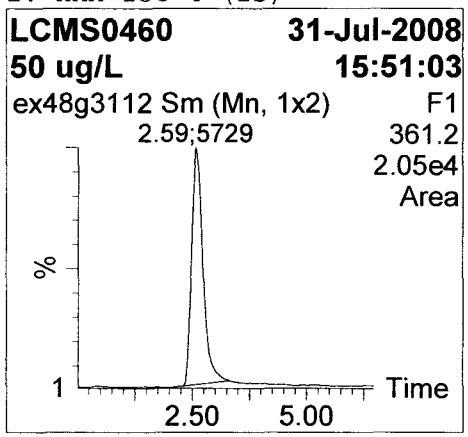
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3112
Text: 50 ug/L

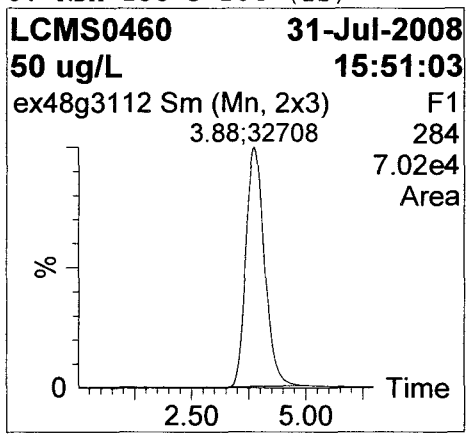
1: HMX



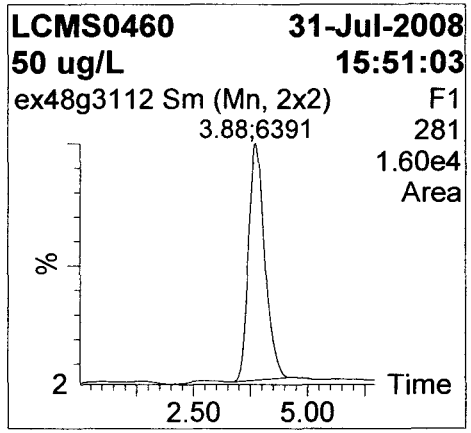
2: HMX 13C-4 (IS)



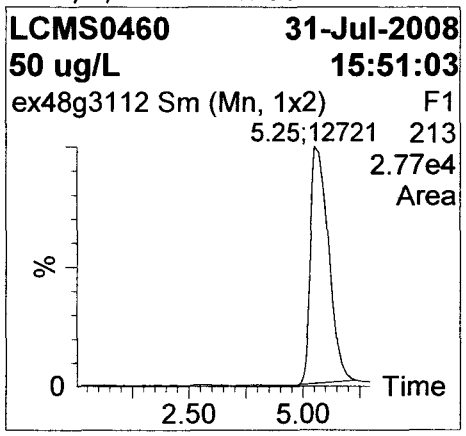
3: RDX 13C-3 284 (IS)



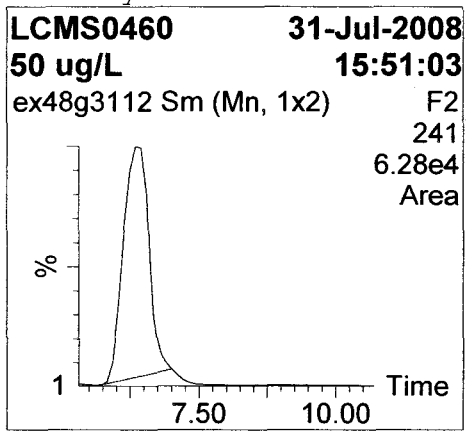
4: RDX



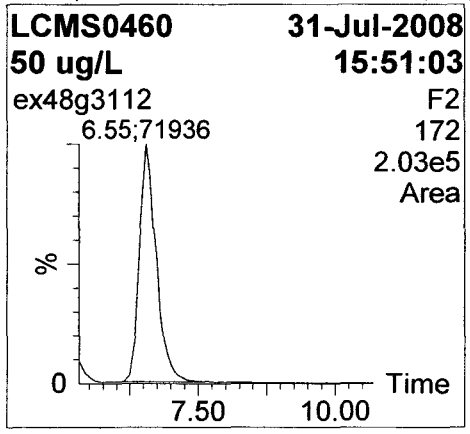
5: 1,3,5-Trinitrobenzene



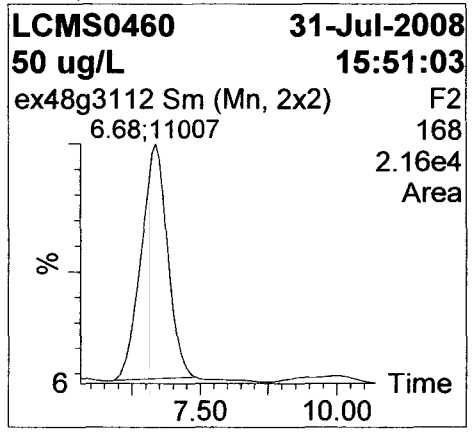
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



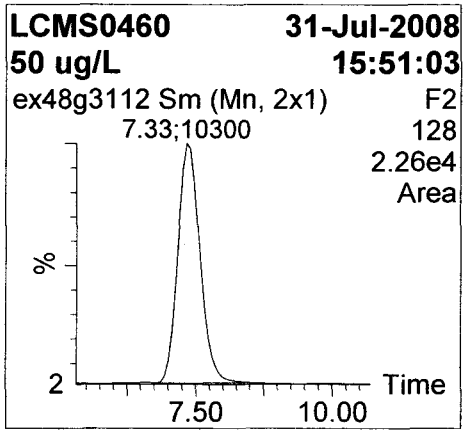
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

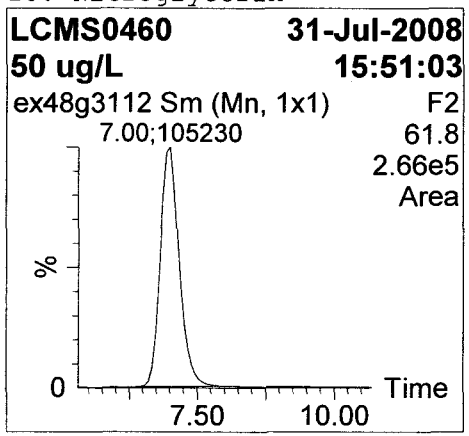
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3112
Text: 50 ug/L

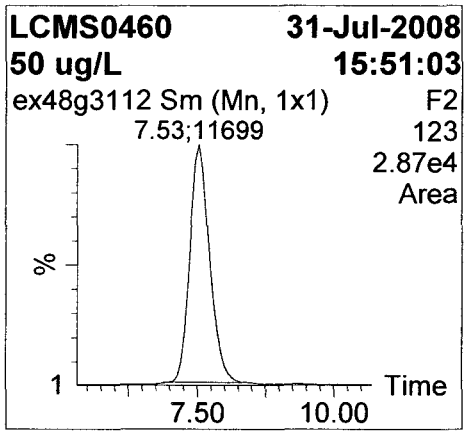
9: Nitrobenzene-d5



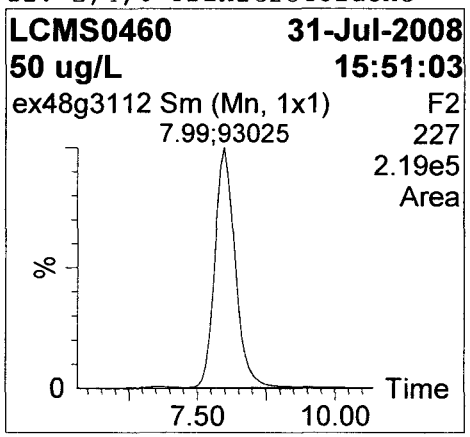
10: Nitroglycerin



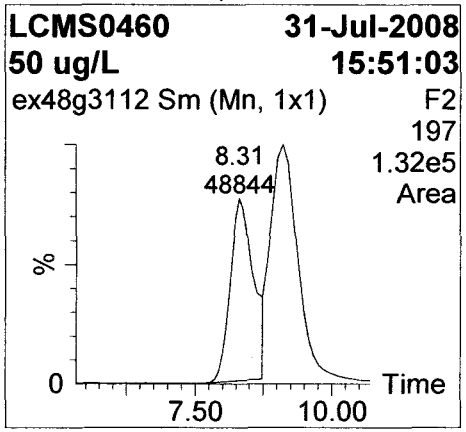
11: Nitrobenzene



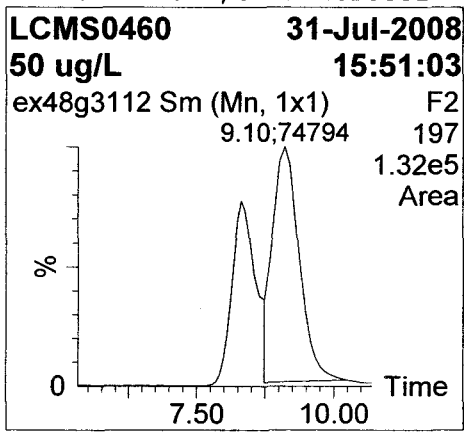
12: 2,4,6-Trinitrotoluene



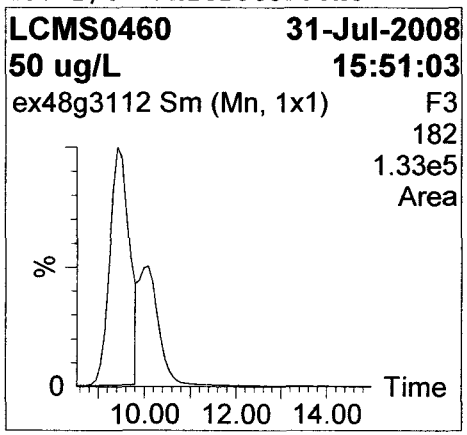
13: 4-Amino-2,6-Dinitrotolu..



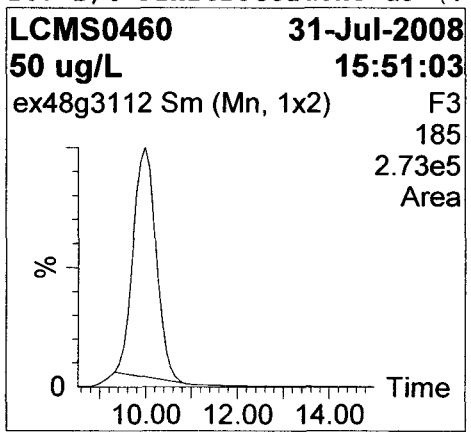
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



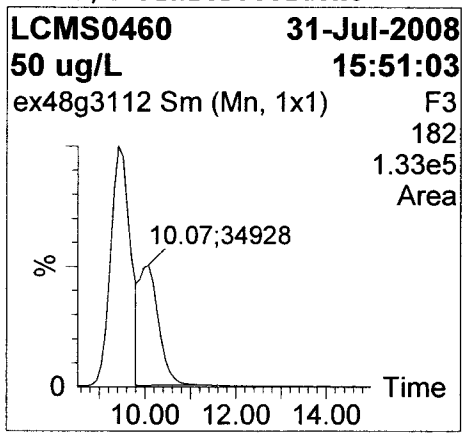
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

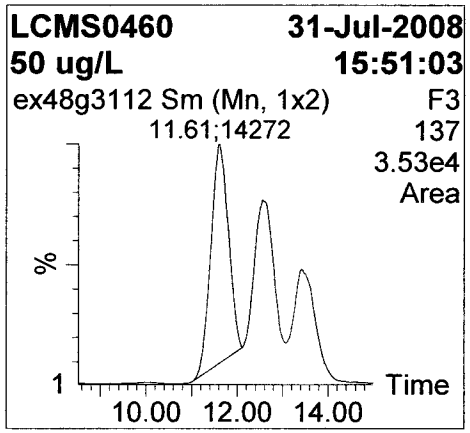
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3112
Text: 50 ug/L

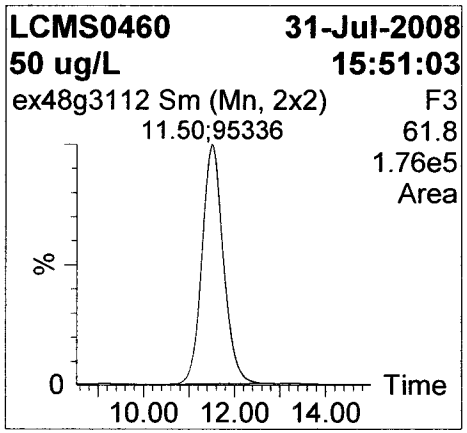
17: 2,4-Dinitrotoluene



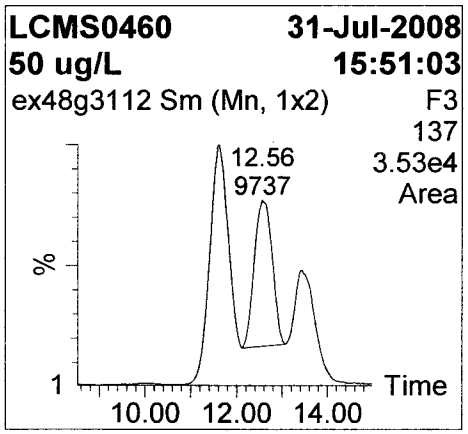
18: 2-Nitrotoluene



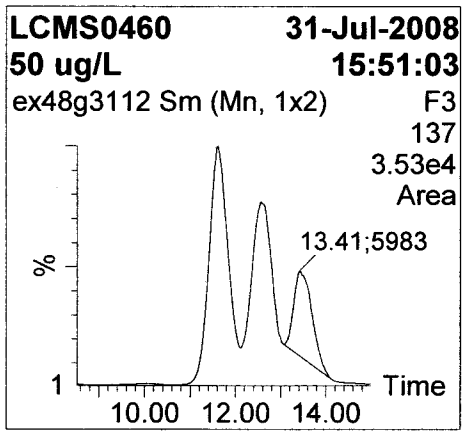
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3112
Text: 50 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	3069	bb	47.561	95	01/Aug/08	ex48g31	
HMX 13C-..	2.588	5729	bb	1.089	109	01/Aug/08	ex48g31	
RDX 13C-..	3.882	32708	bb	1.039	104	01/Aug/08	ex48g31	
RDX	3.882	6391	bb	53.925	108	01/Aug/08	ex48g31	
1,3,5-Tr..	5.249	12721	bb	50.337	101	01/Aug/08	ex48g31	
Tetryl	6.341	32409	bb	50.403	101	01/Aug/08	ex48g31	
1,3 Dini..	6.546	71936	bb	1.033	103	01/Aug/08	ex48g31	
1,3-Dini..	6.677	11007	bb	47.630	95	01/Aug/08	ex48g31	
Nitroben..	7.332	10300	bb	44.882	90	01/Aug/08	ex48g31	
Nitrogly..	7.005	105230	bb	48.661	97	01/Aug/08	ex48g31	
Nitroben..	7.529	11699	bb	45.550	91	01/Aug/08	ex48g31	
2,4,6-Tr..	7.987	93025	bb	43.975	88	01/Aug/08	ex48g31	
4-Amino-..	8.315	48844	bd	45.751	92	01/Aug/08	ex48g31	
2-Amino-..	9.105	74794	db	43.991	88	01/Aug/08	ex48g31	
2,6-Dini..	9.416	63539	bd	46.374	93	01/Aug/08	ex48g31	
2,4-Dini..	9.981	152646	bb	1.002	100	01/Aug/08	ex48g31	
2,4-Dini..	10.075	34928	db	49.529	99	01/Aug/08	ex48g31	
2-Nitrot..	11.615	14272	bb	48.116	96	01/Aug/08	ex48g31	
PETN	11.500	95336	bb	48.830	98	01/Aug/08	ex48g31	
4-Nitrot..	12.558	9737	bb	49.916	100	01/Aug/08	ex48g31	
3-Nitrot..	13.415	5983	bb	53.831	108	01/Aug/08	ex48g31	

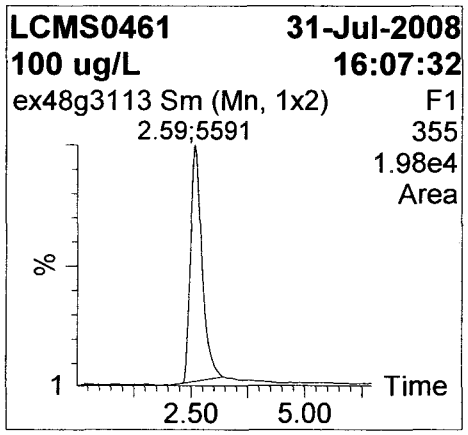
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

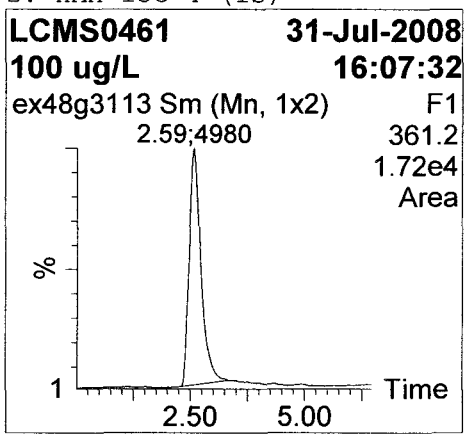
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3113
Text: 100 ug/L

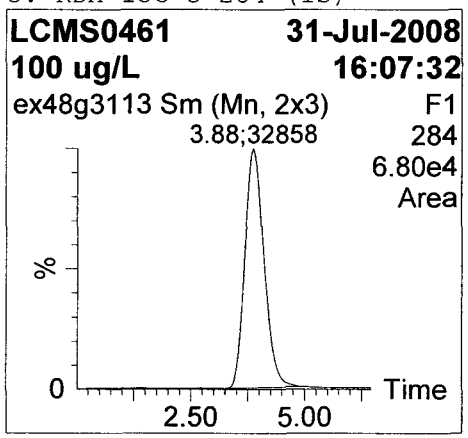
1: HMX



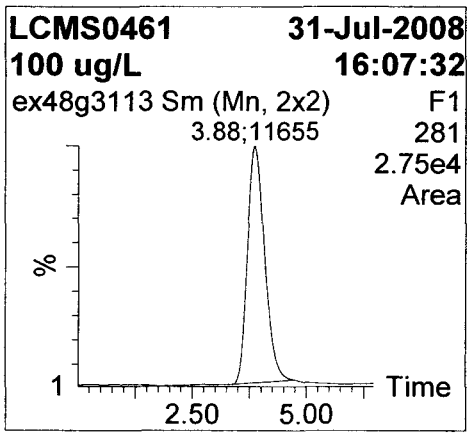
2: HMX 13C-4 (IS)



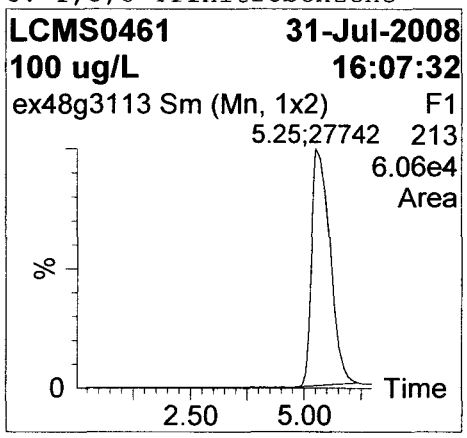
3: RDX 13C-3 284 (IS)



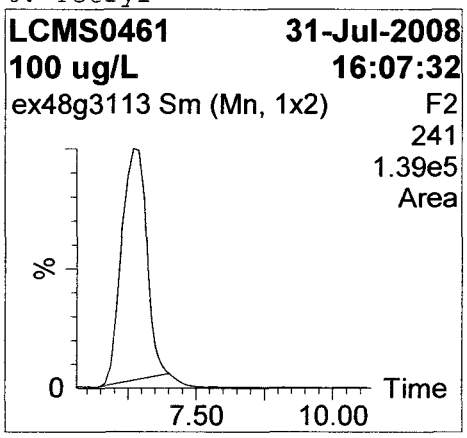
4: RDX



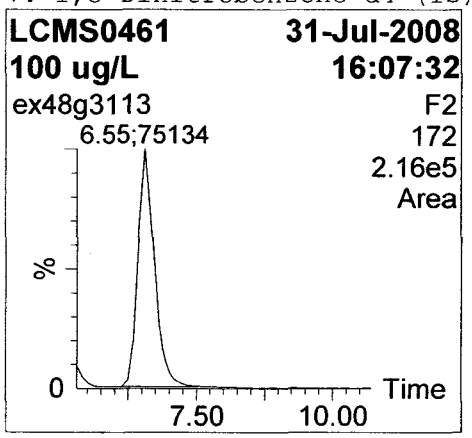
5: 1,3,5-Trinitrobenzene



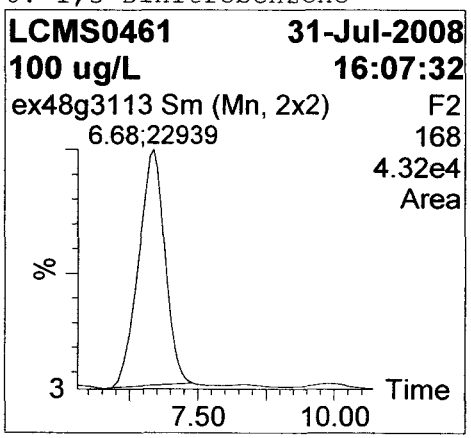
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



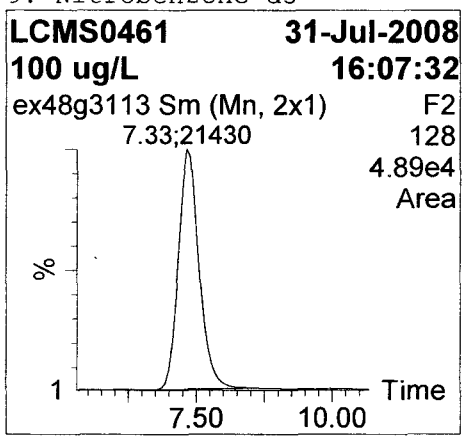
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

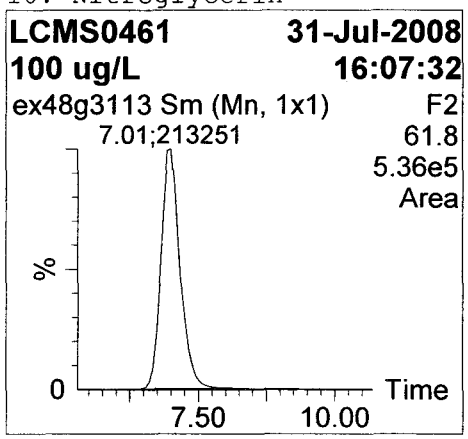
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3113
Text: 100 ug/L

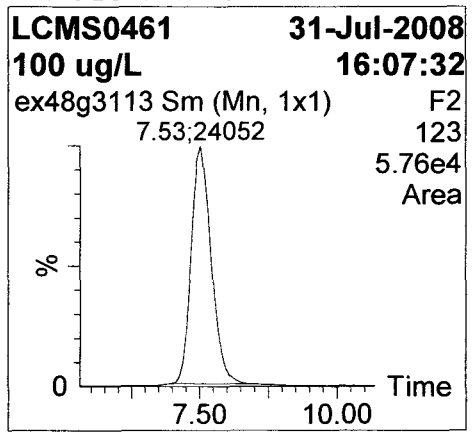
9: Nitrobenzene-d5



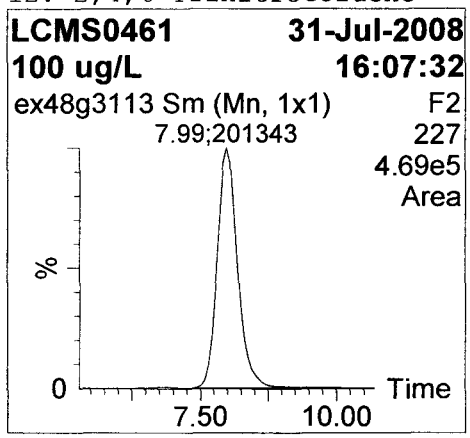
10: Nitroglycerin



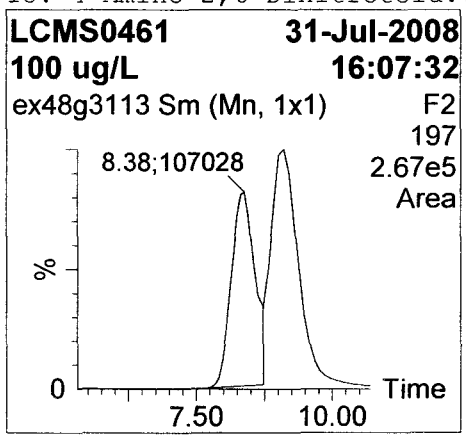
11: Nitrobenzene



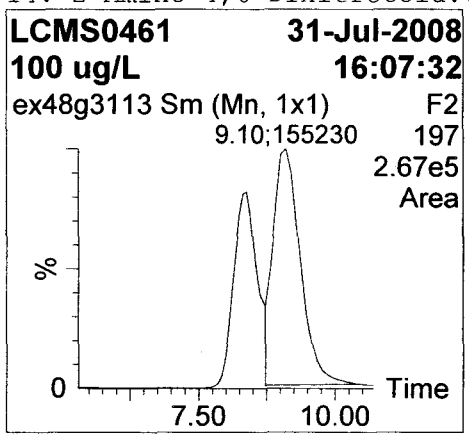
12: 2,4,6-Trinitrotoluene



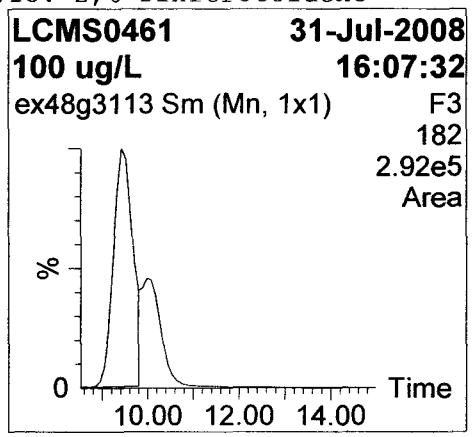
13: 4-Amino-2,6-Dinitrotolu..



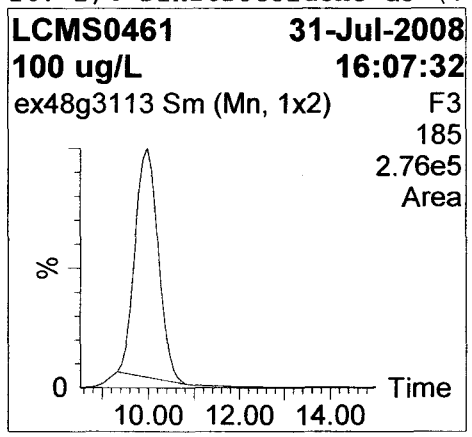
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



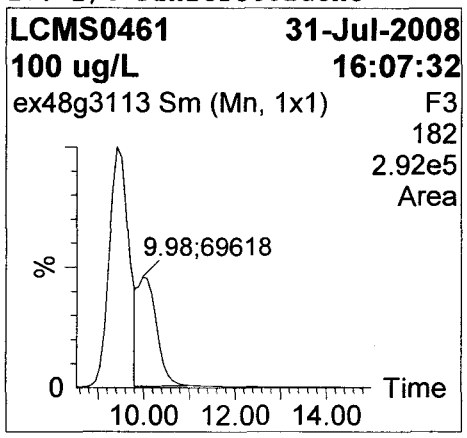
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

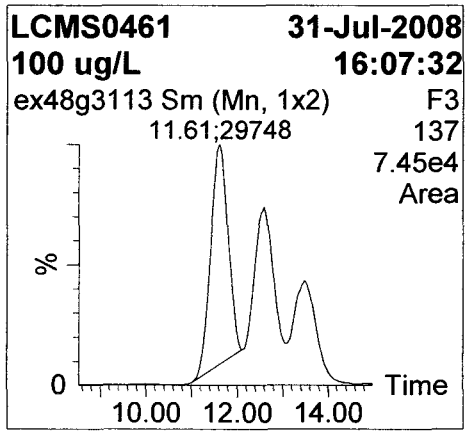
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3113
Text: 100 ug/L

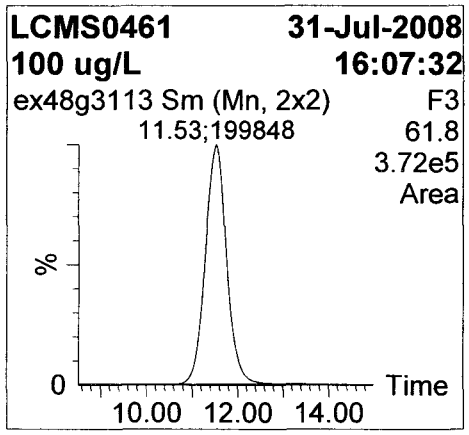
17: 2,4-Dinitrotoluene



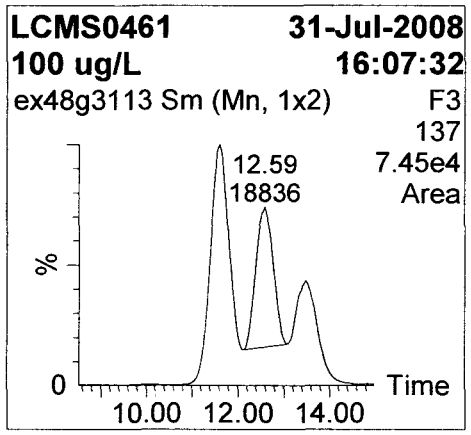
18: 2-Nitrotoluene



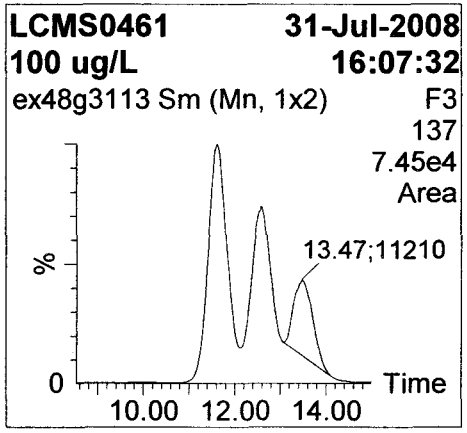
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3113
Text: 100 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	5591	bb	99.623	100	01/Aug/08	ex48g31	
HMX 13C-..	2.588	4980	bb	0.947	95	01/Aug/08	ex48g31	
RDX 13C-..	3.882	32858	bb	1.044	104	01/Aug/08	ex48g31	
RDX	3.882	11655	bb	100.203	100	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	27742	bb	100.630	101	01/Aug/08	ex48g31	
Tetryl	6.342	71970	bb	98.409	98	01/Aug/08	ex48g31	
1,3 Dini..	6.547	75134	bs	1.079	108	01/Aug/08	ex48g31	
1,3-Dini..	6.678	22939	bb	95.958	96	01/Aug/08	ex48g31	
Nitroben..	7.333	21430	bb	88.878	89	01/Aug/08	ex48g31	
Nitrogly..	7.005	213251	bb	95.020	95	01/Aug/08	ex48g31	
Nitroben..	7.529	24052	bb	89.473	89	01/Aug/08	ex48g31	
2,4,6-Tr..	7.988	201343	bb	89.254	89	01/Aug/08	ex48g31	
4-Amino-..	8.380	107028	bd	95.798	96	01/Aug/08	ex48g31	
2-Amino-..	9.105	155230	db	85.732	86	01/Aug/08	ex48g31	
2,6-Dini..	9.416	139354	bd	99.624	100	01/Aug/08	ex48g31	
2,4-Dini..	9.981	153411	bb	1.007	101	01/Aug/08	ex48g31	
2,4-Dini..	9.981	69618	dd	98.205	98	01/Aug/08	ex48g31	
2-Nitrot..	11.615	29748	bb	99.514	100	01/Aug/08	ex48g31	
PETN	11.529	199848	bb	101.808	102	01/Aug/08	ex48g31	
4-Nitrot..	12.586	18836	bb	96.711	97	01/Aug/08	ex48g31	
3-Nitrot..	13.472	11210	bb	101.075	101	01/Aug/08	ex48g31	

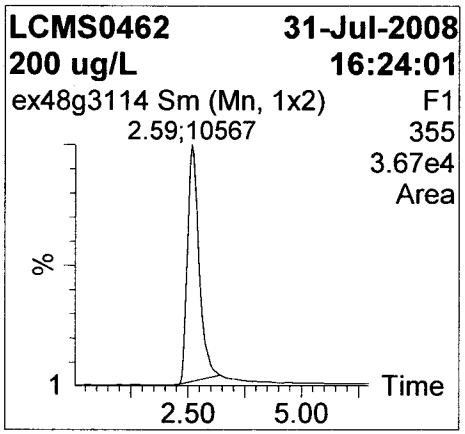
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

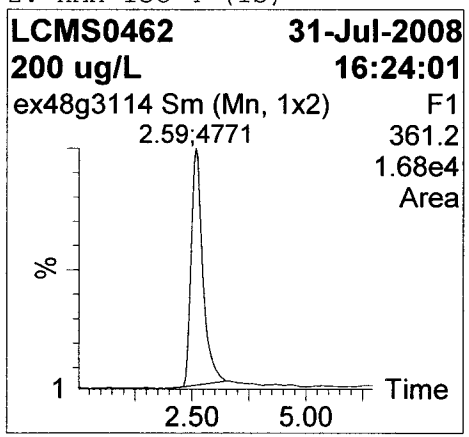
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3114
Text: 200 ug/L

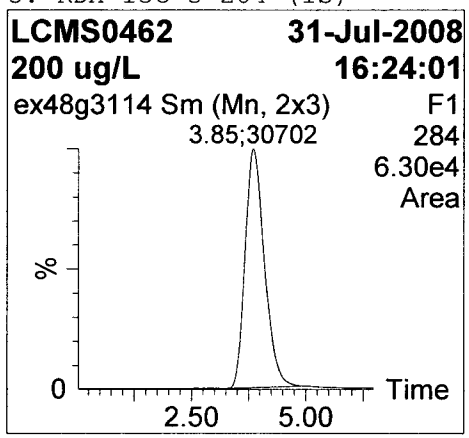
1: HMX



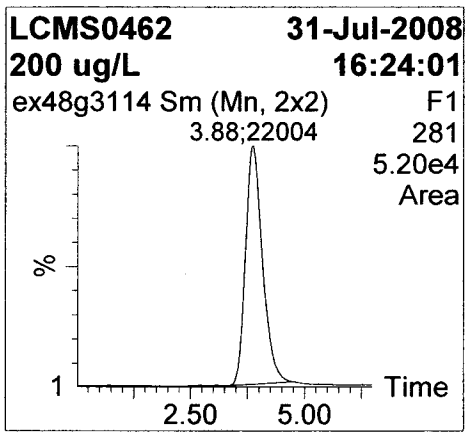
2: HMX 13C-4 (IS)



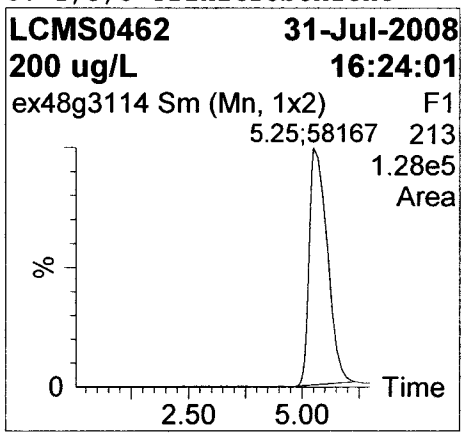
3: RDX 13C-3 284 (IS)



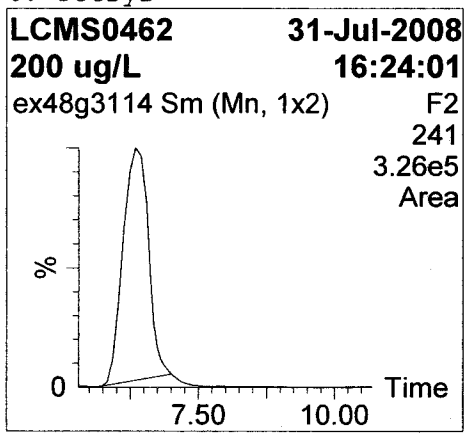
4: RDX



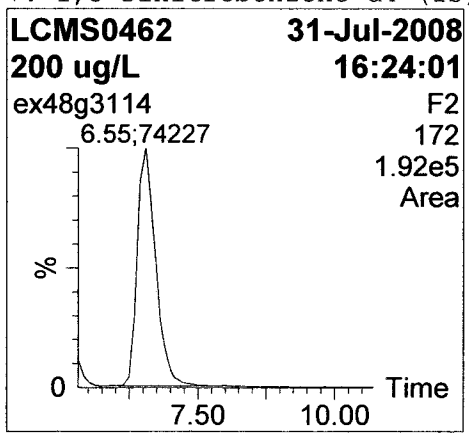
5: 1,3,5-Trinitrobenzene



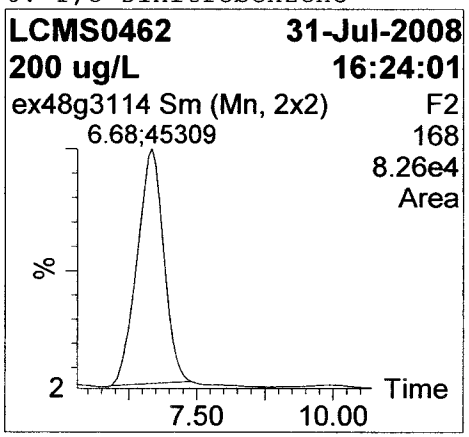
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



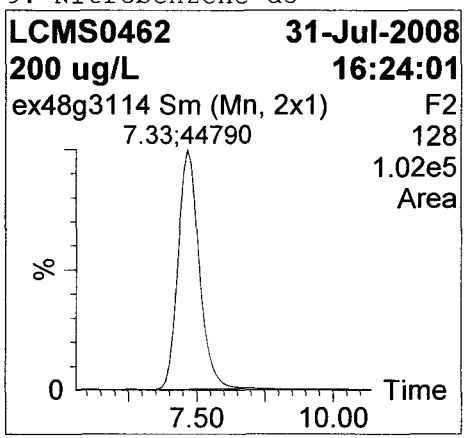
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

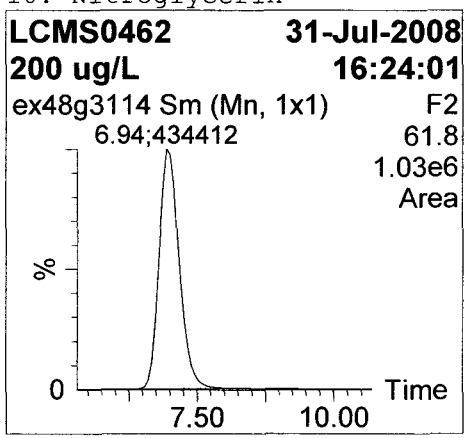
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3114
Text: 200 ug/L

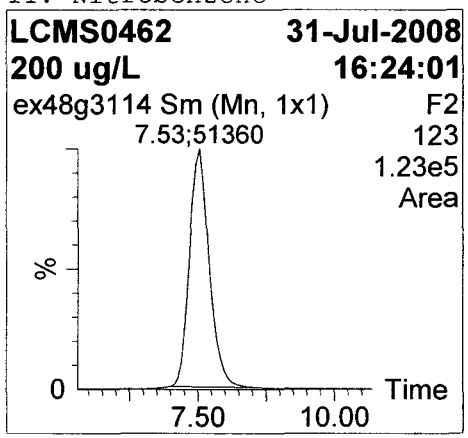
9: Nitrobenzene-d5



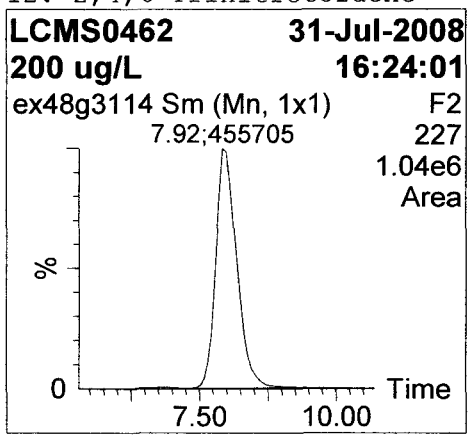
10: Nitroglycerin



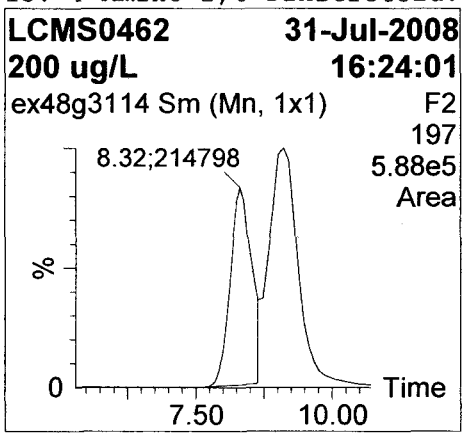
11: Nitrobenzene



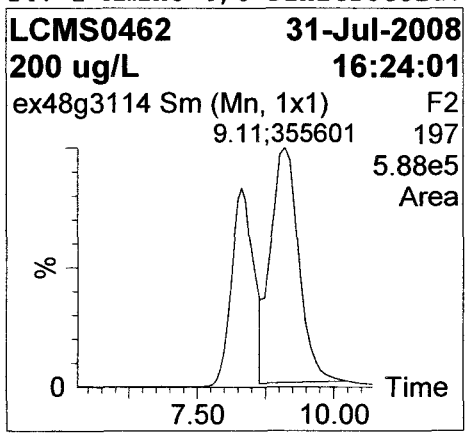
12: 2,4,6-Trinitrotoluene



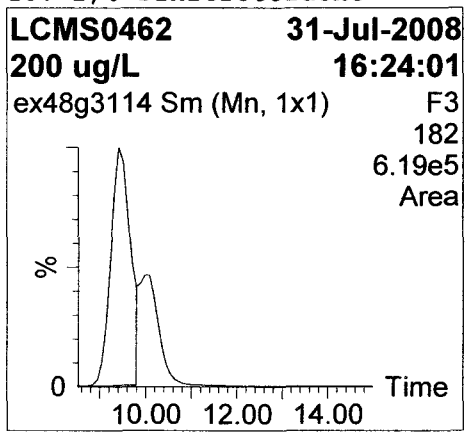
13: 4-Amino-2,6-Dinitrotolu..



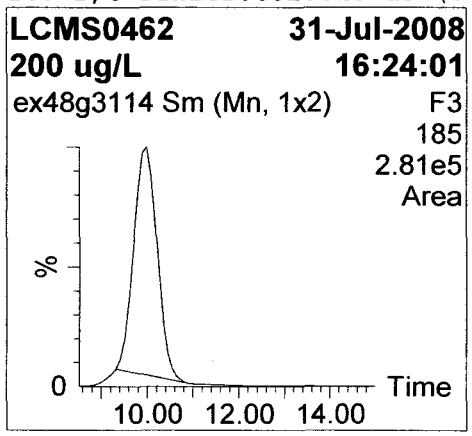
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



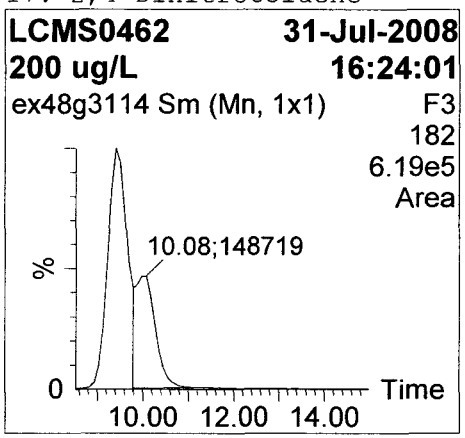
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

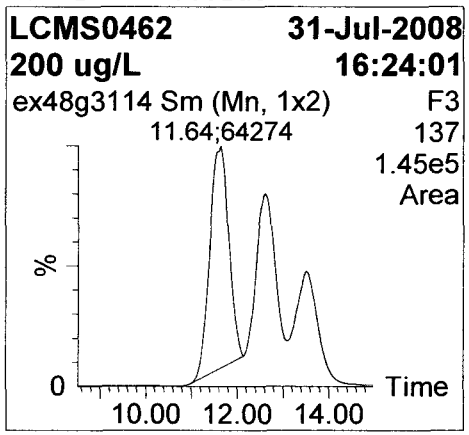
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3114
Text: 200 ug/L

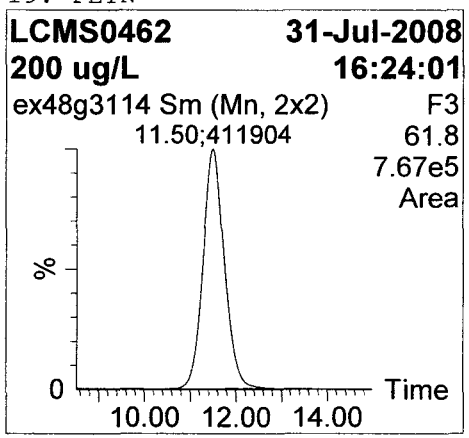
17: 2,4-Dinitrotoluene



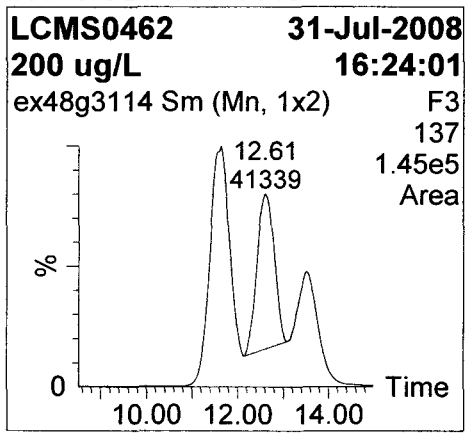
18: 2-Nitrotoluene



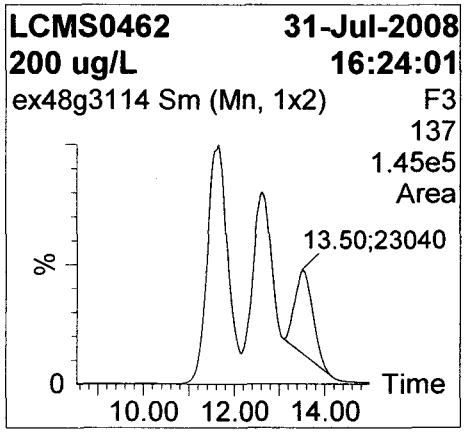
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3114
Text: 200 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	10567	bb	196.468	98	01/Aug/08	ex48g31	
HMX 13C-..	2.588	4771	bb	0.907	91	01/Aug/08	ex48g31	
RDX 13C-..	3.845	30702	bb	0.975	98	01/Aug/08	ex48g31	
RDX	3.882	22004	bb	205.365	103	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	58167	bb	193.532	97	01/Aug/08	ex48g31	
Tetryl	6.342	169782	bb	197.003	99	01/Aug/08	ex48g31	
1,3 Dini..	6.547	74227	bb	1.066	107	01/Aug/08	ex48g31	
1,3-Dini..	6.678	45309	bb	192.775	96	01/Aug/08	ex48g31	
Nitroben..	7.333	44790	bb	187.446	94	01/Aug/08	ex48g31	
Nitrogly..	6.940	434412	bb	196.613	98	01/Aug/08	ex48g31	
Nitroben..	7.530	51360	bb	193.169	97	01/Aug/08	ex48g31	
2,4,6-Tr..	7.923	455705	bb	202.223	101	01/Aug/08	ex48g31	
4-Amino-..	8.315	214798	bd	194.436	97	01/Aug/08	ex48g31	
2-Amino-..	9.105	355601	db	196.544	98	01/Aug/08	ex48g31	
2,6-Dini..	9.416	297564	bd	205.030	103	01/Aug/08	ex48g31	
2,4-Dini..	9.981	158069	bb	1.038	104	01/Aug/08	ex48g31	
2,4-Dini..	10.075	148719	dd	203.286	102	01/Aug/08	ex48g31	
2-Nitrot..	11.643	64274	bb	208.395	104	01/Aug/08	ex48g31	
PETN	11.500	411904	bb	203.613	102	01/Aug/08	ex48g31	
4-Nitrot..	12.614	41339	bb	206.843	103	01/Aug/08	ex48g31	
3-Nitrot..	13.499	23040	bb	202.449	101	01/Aug/08	ex48g31	

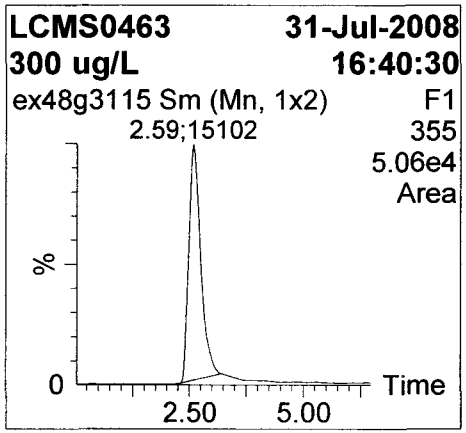
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

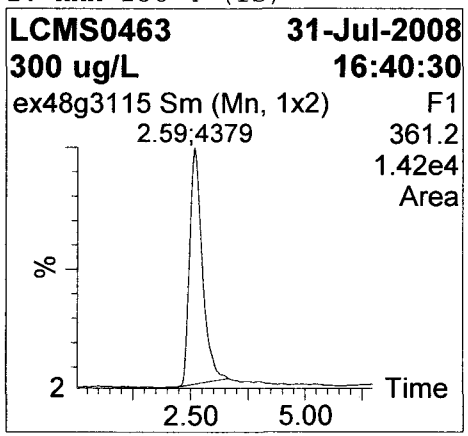
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3115
Text: 300 ug/L

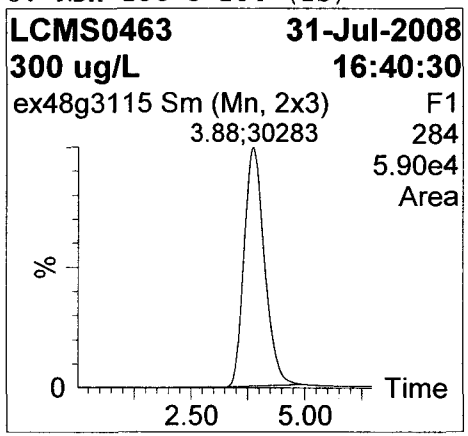
1: HMX



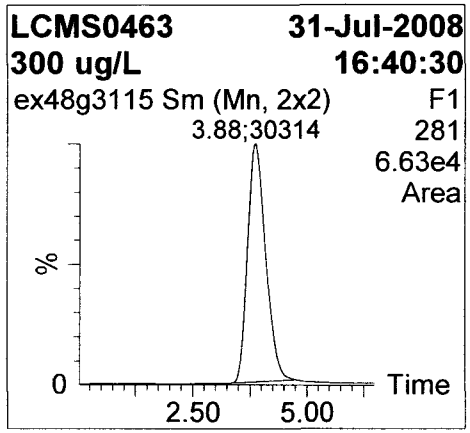
2: HMX 13C-4 (IS)



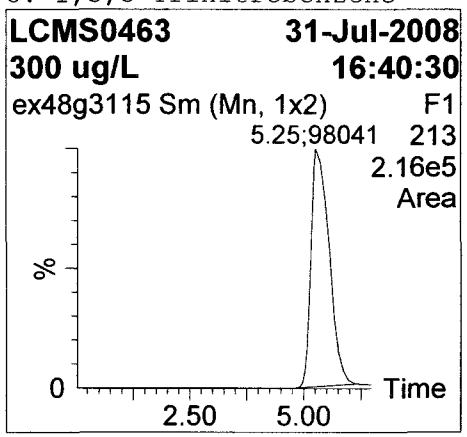
3: RDX 13C-3 284 (IS)



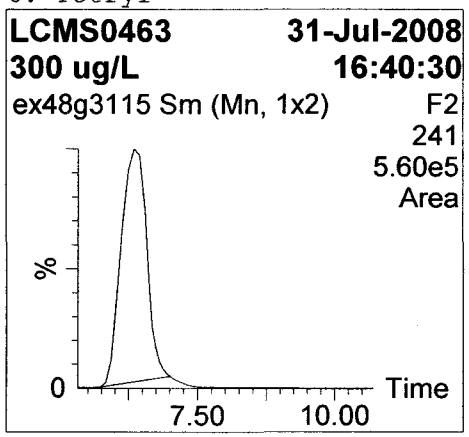
4: RDX



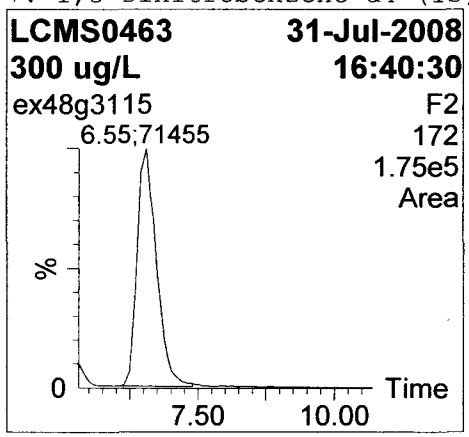
5: 1,3,5-Trinitrobenzene



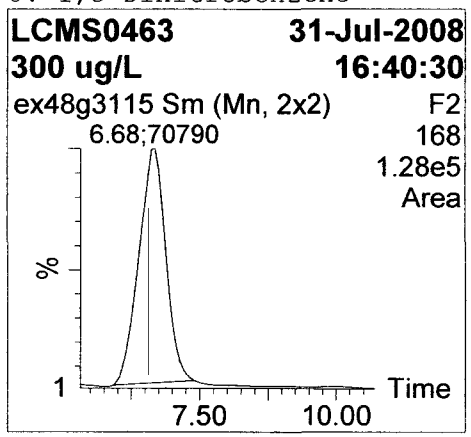
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



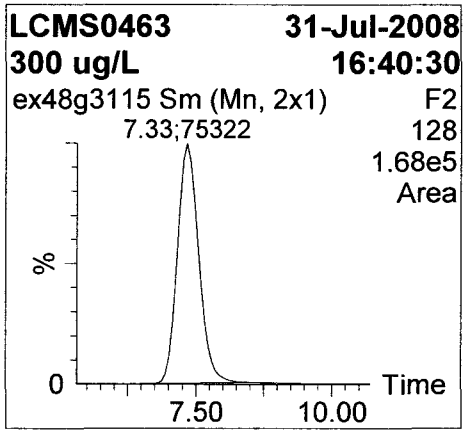
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

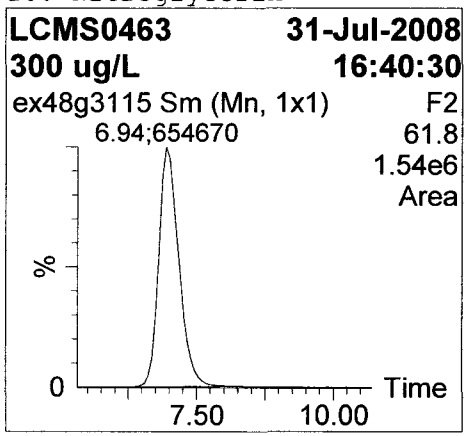
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3115
Text: 300 ug/L

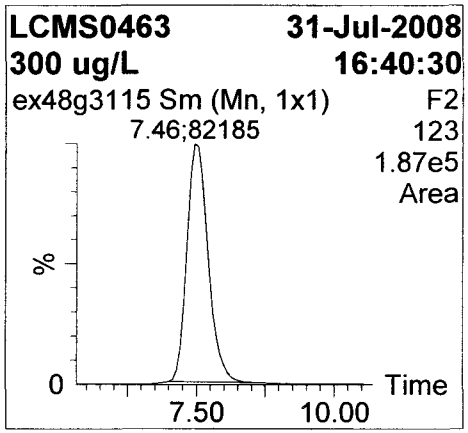
9: Nitrobenzene-d5



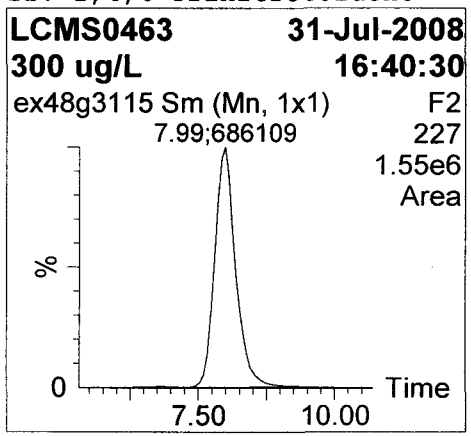
10: Nitroglycerin



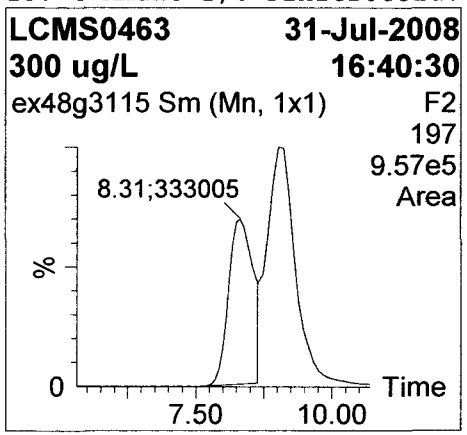
11: Nitrobenzene



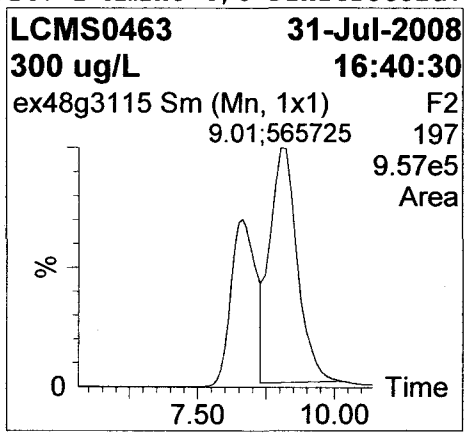
12: 2,4,6-Trinitrotoluene



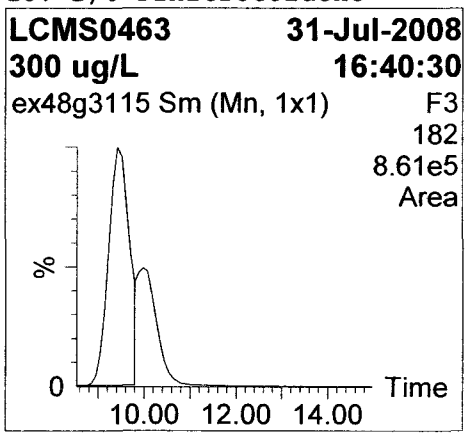
13: 4-Amino-2,6-Dinitrotolu..



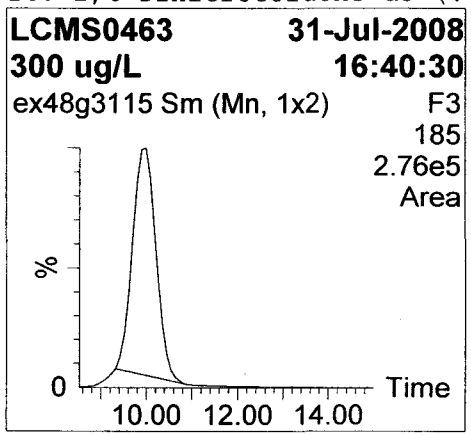
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..

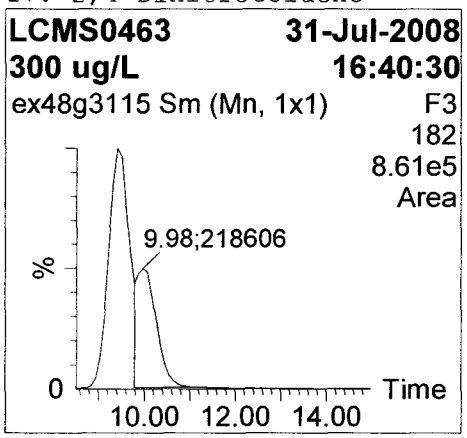


Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

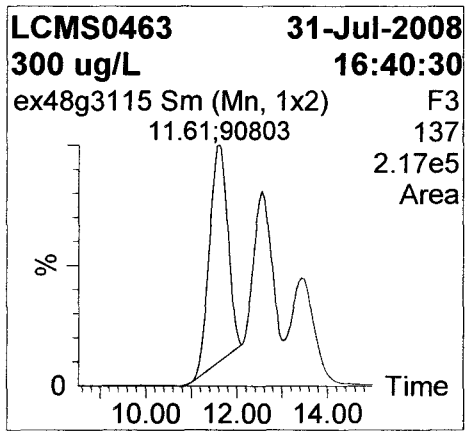
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3115
Text: 300 ug/L

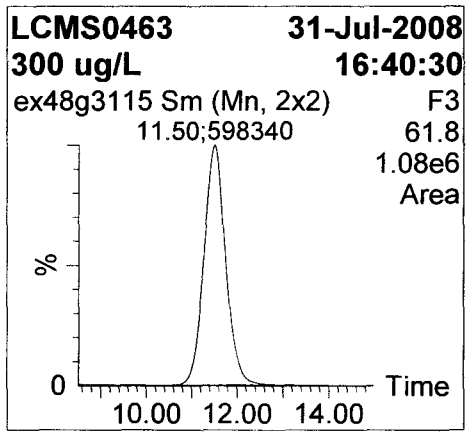
17: 2,4-Dinitrotoluene



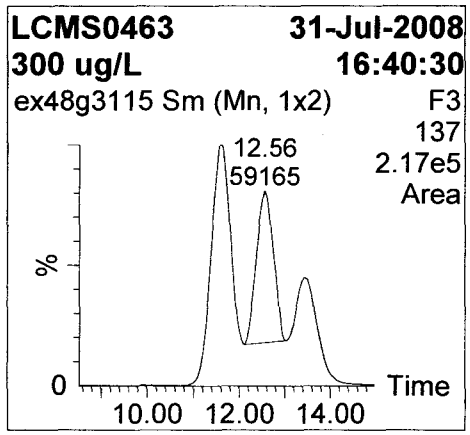
18: 2-Nitrotoluene



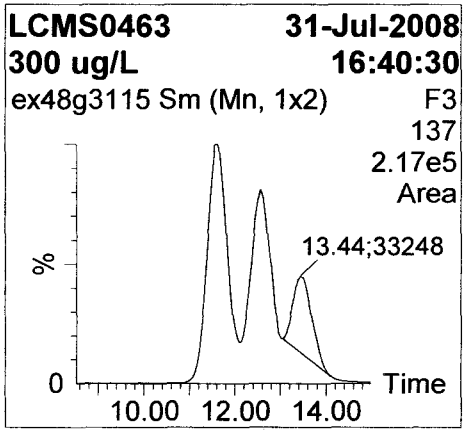
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3115
Text: 300 ug/L

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	15102	bb	305.870	102	01/Aug/08	ex48g31	
HMX 13C-..	2.588	4379	bb	0.832	83	01/Aug/08	ex48g31	
RDX 13C-..	3.882	30283	bb	0.962	96	01/Aug/08	ex48g31	
RDX	3.882	30314	bb	287.968	96	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	98041	bb	303.317	101	01/Aug/08	ex48g31	
Tetryl	6.341	294613	bb	301.737	101	01/Aug/08	ex48g31	
1,3 Dini..	6.546	71455	bs	1.026	103	01/Aug/08	ex48g31	
1,3-Dini..	6.677	70790	bb	313.446	104	01/Aug/08	ex48g31	
Nitroben..	7.332	75322	bb	327.056	109	01/Aug/08	ex48g31	
Nitrogly..	6.939	654670	bb	308.157	103	01/Aug/08	ex48g31	
Nitroben..	7.463	82185	bb	320.968	107	01/Aug/08	ex48g31	
2,4,6-Tr..	7.987	686109	bb	315.291	105	01/Aug/08	ex48g31	
4-Amino-..	8.314	333005	bd	313.027	104	01/Aug/08	ex48g31	
2-Amino-..	9.010	565725	db	323.698	108	01/Aug/08	ex48g31	
2,6-Dini..	9.415	436615	bd	300.354	100	01/Aug/08	ex48g31	
2,4-Dini..	9.980	157998	bb	1.037	104	01/Aug/08	ex48g31	
2,4-Dini..	9.980	218606	db	298.465	99	01/Aug/08	ex48g31	
2-Nitrot..	11.615	90803	bb	294.438	98	01/Aug/08	ex48g31	
PETN	11.501	598340	bb	295.889	99	01/Aug/08	ex48g31	
4-Nitrot..	12.558	59165	bb	296.583	99	01/Aug/08	ex48g31	
3-Nitrot..	13.443	33248	bb	292.638	98	01/Aug/08	ex48g31	

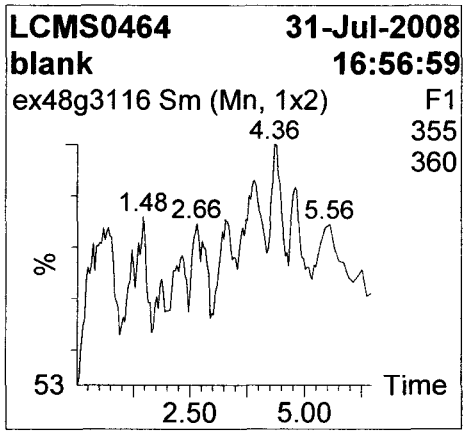
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

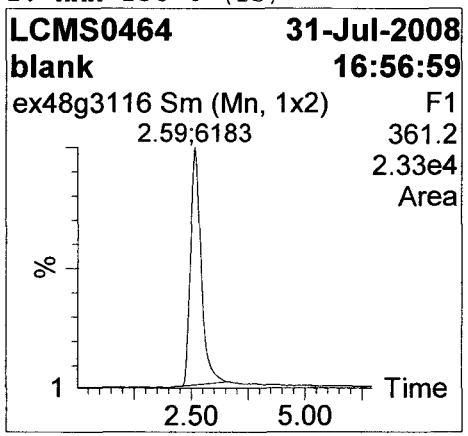
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3116
Text: blank

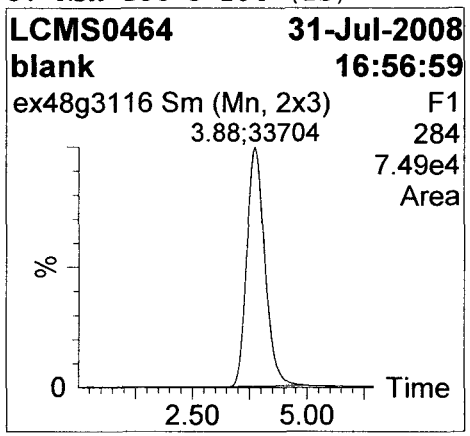
1: HMX



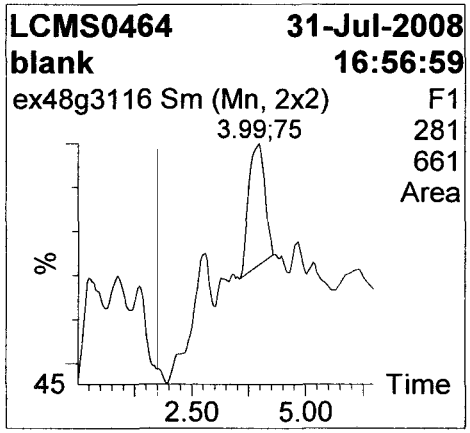
2: HMX 13C-4 (IS)



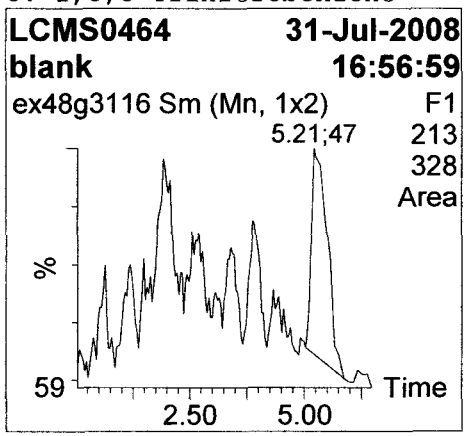
3: RDX 13C-3 284 (IS)



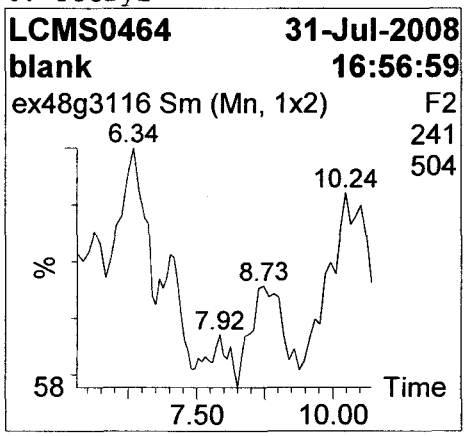
4: RDX



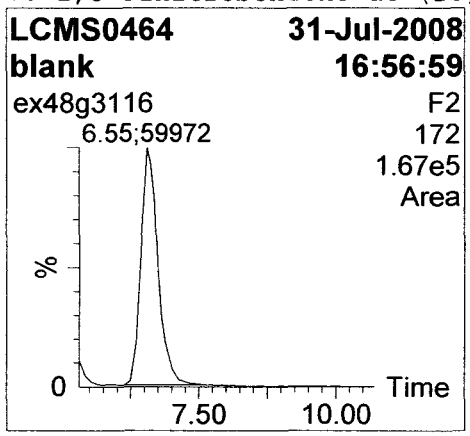
5: 1,3,5-Trinitrobenzene



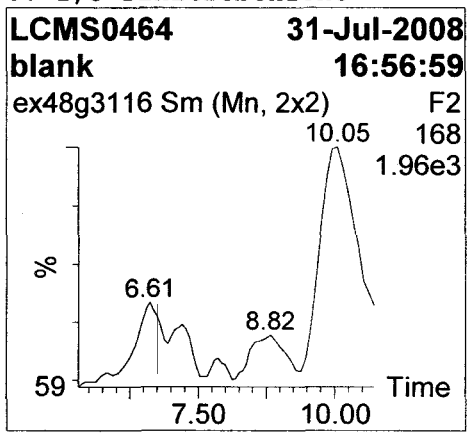
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



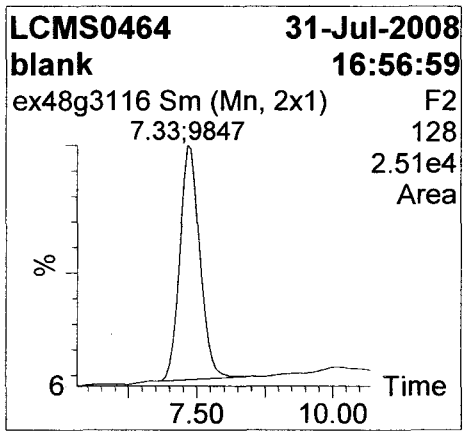
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

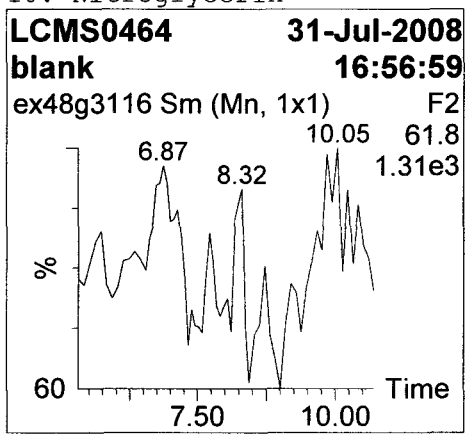
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3116
Text: blank

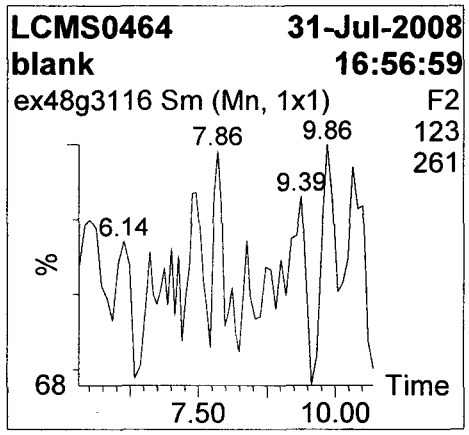
9: Nitrobenzene-d5



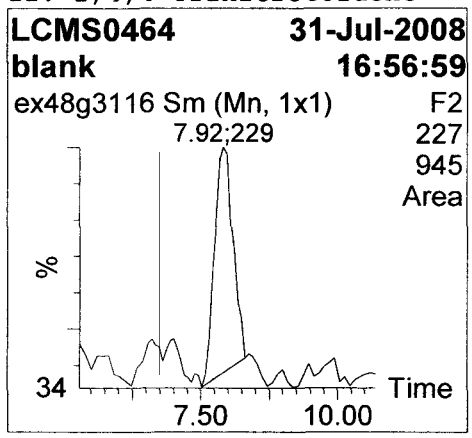
10: Nitroglycerin



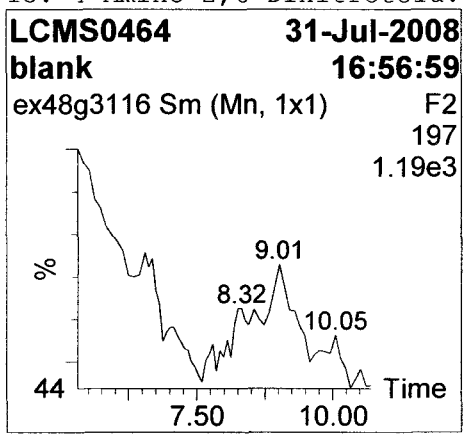
11: Nitrobenzene



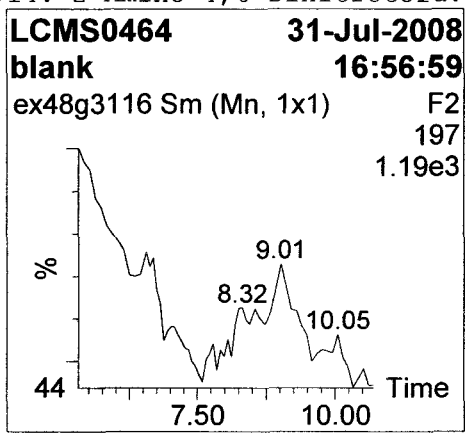
12: 2,4,6-Trinitrotoluene



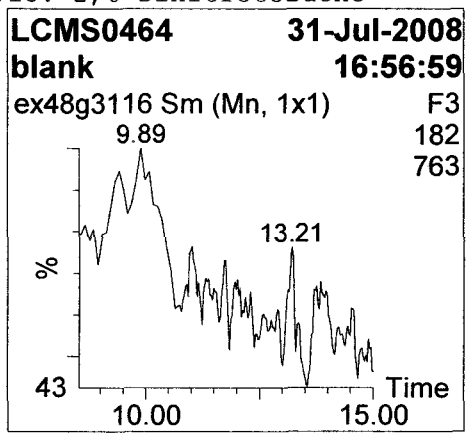
13: 4-Amino-2,6-Dinitrotolu..



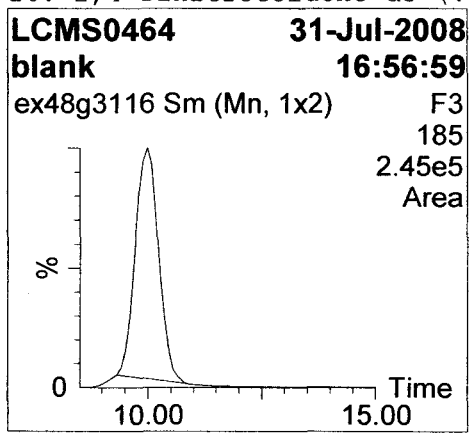
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



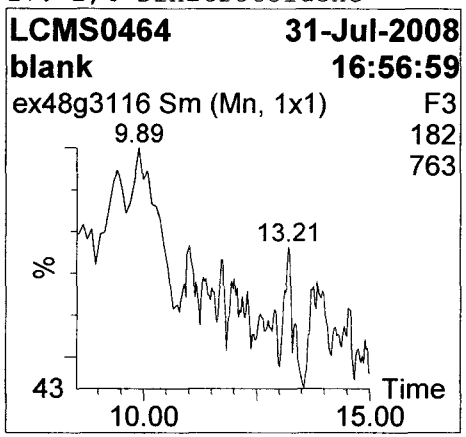
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

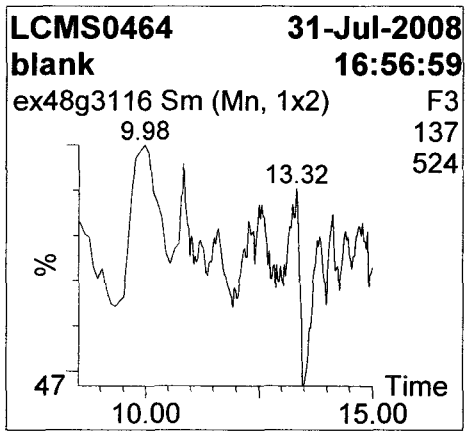
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3116
Text: blank

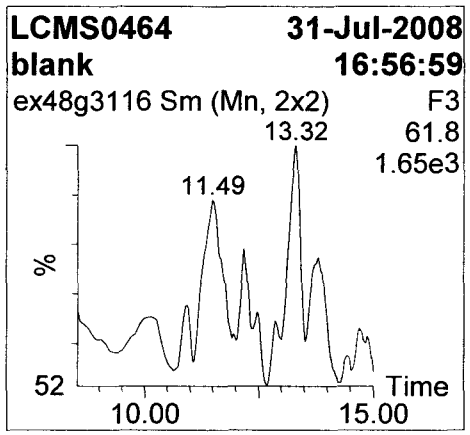
17: 2,4-Dinitrotoluene



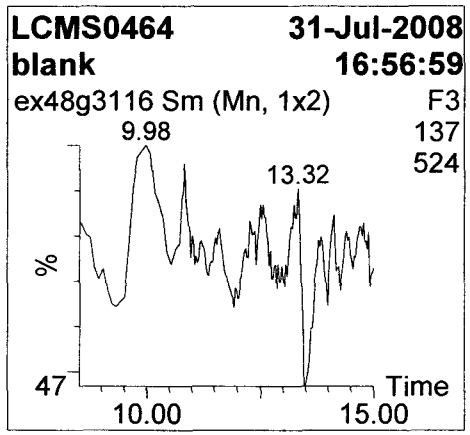
18: 2-Nitrotoluene



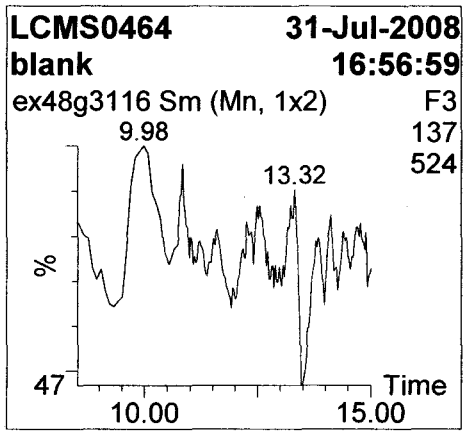
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3116
Text: blank

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.588	6183	bb	1.175	118	01/Aug/08	ex48g31	
RDX 13C-..	3.882	33704	bb	1.071	107	01/Aug/08	ex48g31	
RDX	3.993	75	bb	0.000		01/Aug/08	ex48g31	
1,3,5-Tr..	5.213	47	bb	0.000		01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.547	59972	bb	0.861	86	01/Aug/08	ex48g31	
1,3-Dini..						01/Aug/08	ex48g31	
Nitroben..	7.333	9847	bb	51.388	103	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..						01/Aug/08	ex48g31	
2,4,6-Tr..	7.922	229	bb	1.872		01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	9.982	138208	bb	0.907	91	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

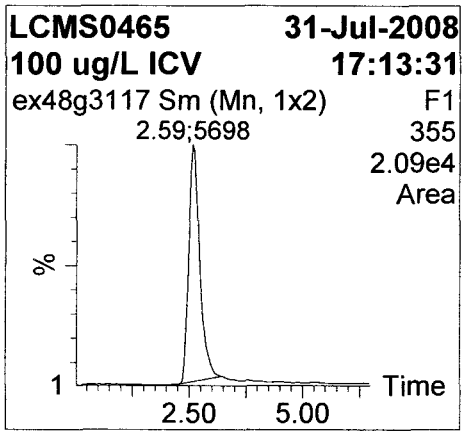
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

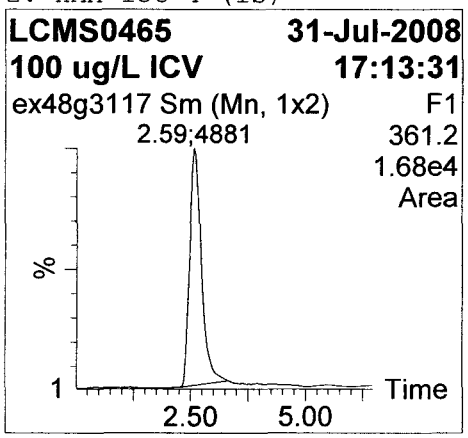
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3117
Text: 100 ug/L ICV

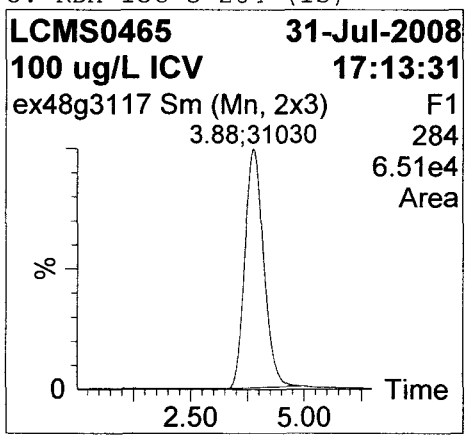
1: HMX



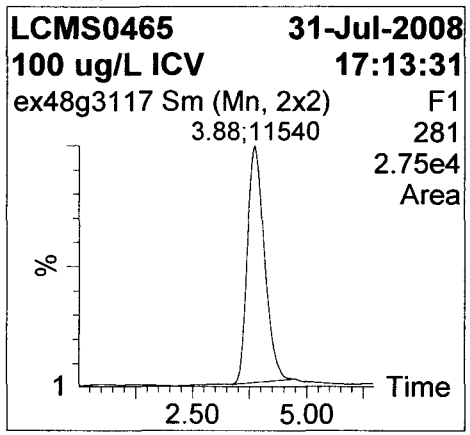
2: HMX 13C-4 (IS)



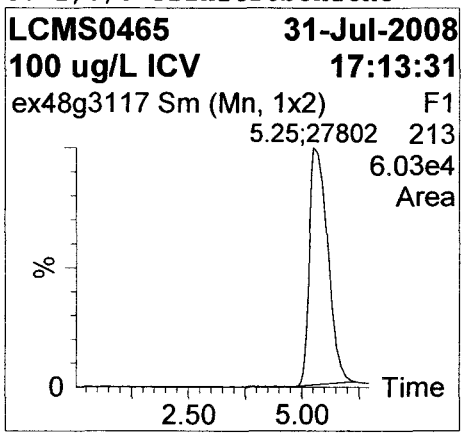
3: RDX 13C-3 284 (IS)



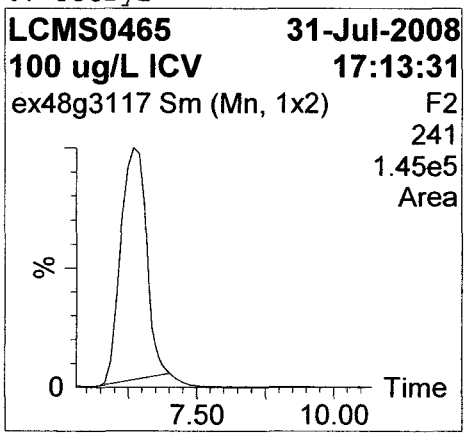
4: RDX



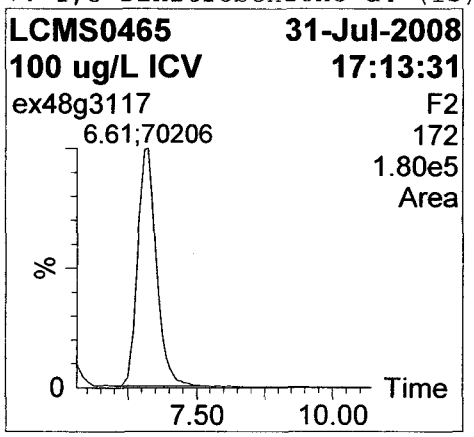
5: 1,3,5-Trinitrobenzene



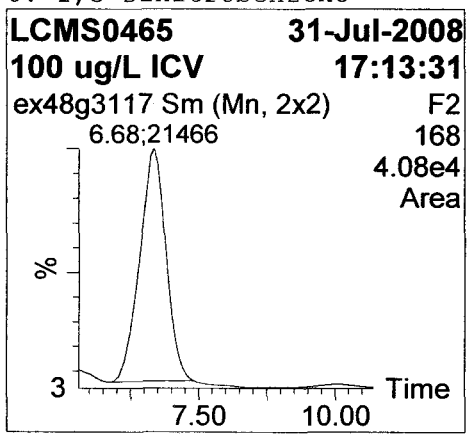
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



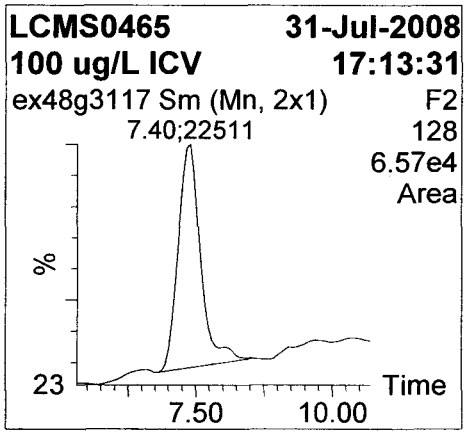
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

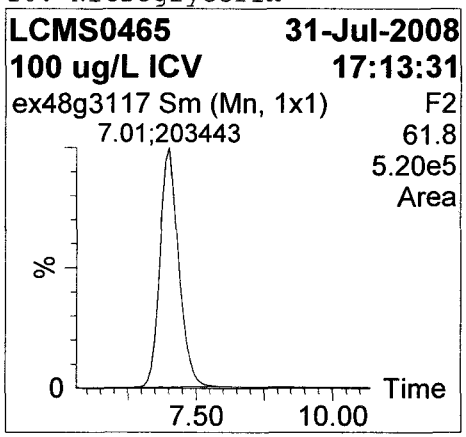
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3117
Text: 100 ug/L ICV

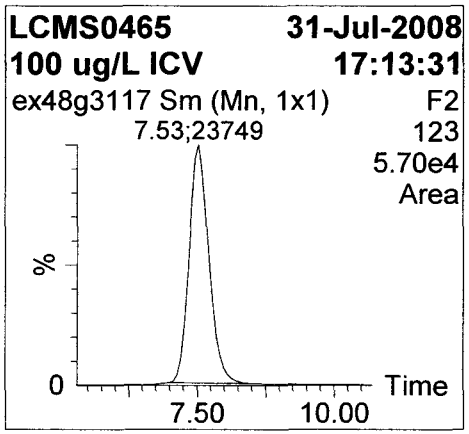
9: Nitrobenzene-d5



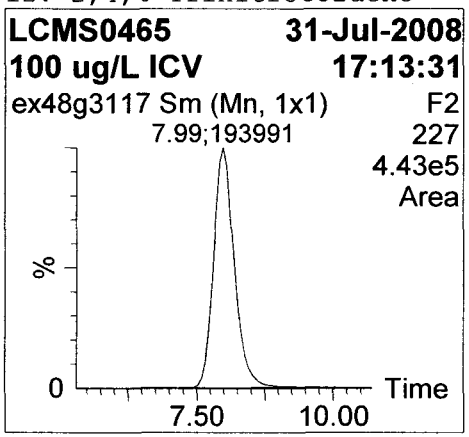
10: Nitroglycerin



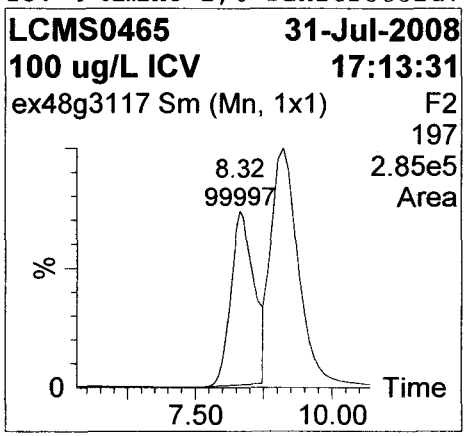
11: Nitrobenzene



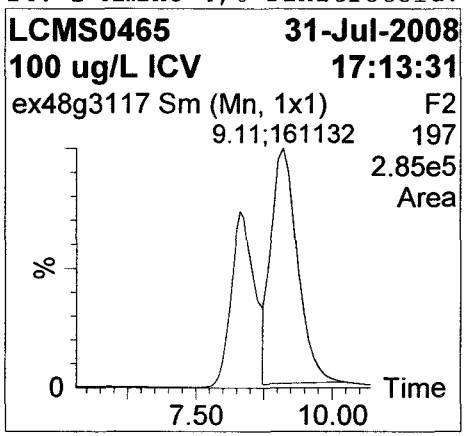
12: 2,4,6-Trinitrotoluene



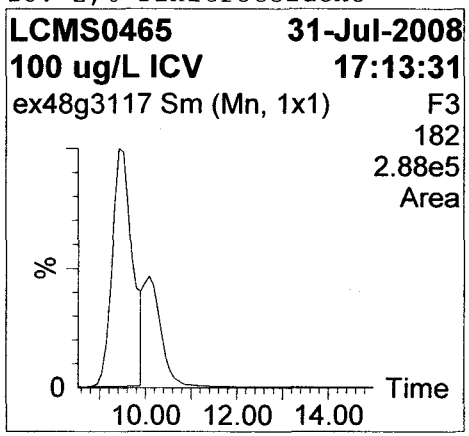
13: 4-Amino-2,6-Dinitrotolu..



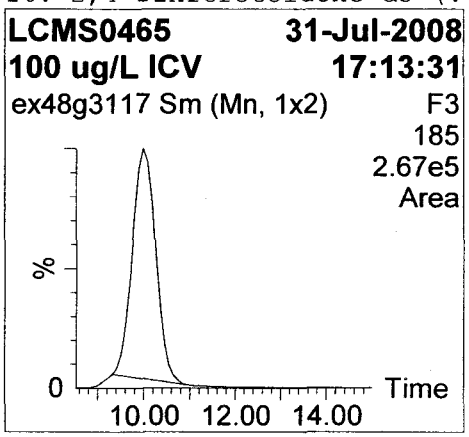
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



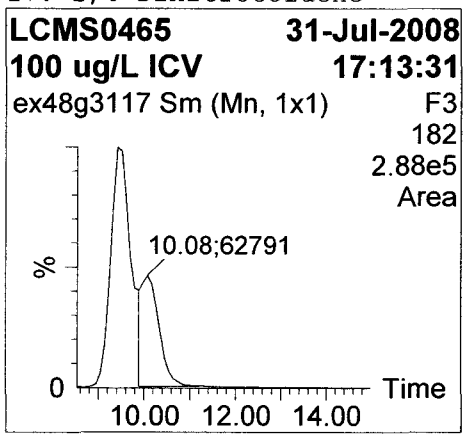
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

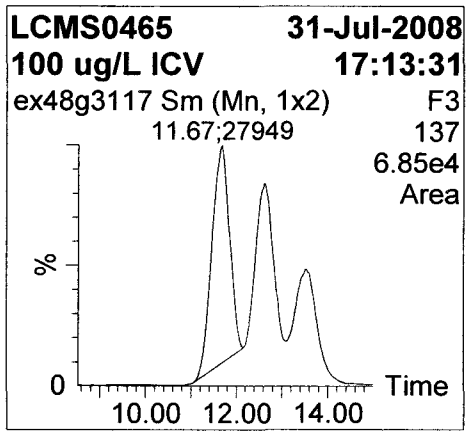
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3117
Text: 100 ug/L ICV

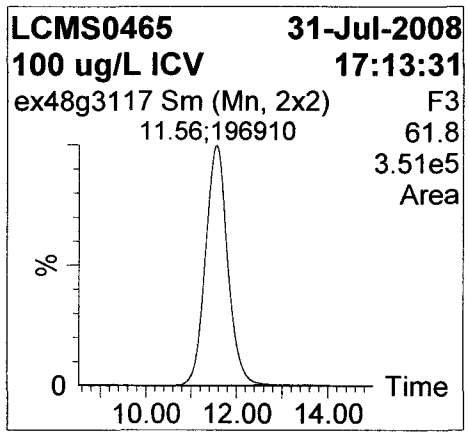
17: 2,4-Dinitrotoluene



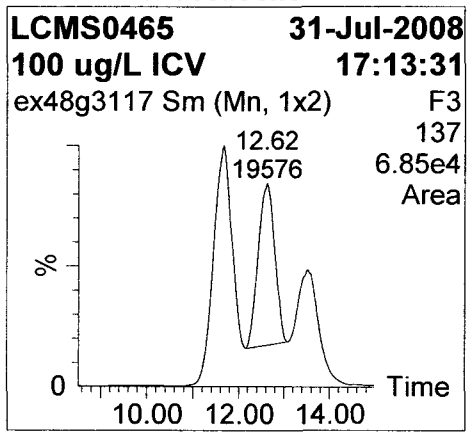
18: 2-Nitrotoluene



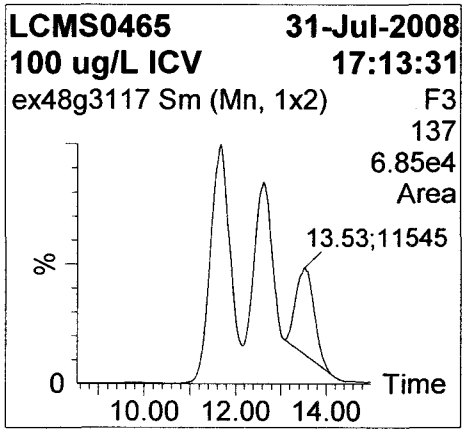
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3117
Text: 100 ug/L ICV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	5698	bb	103.582	104	01/Aug/08	ex48g31	
HMX 13C-..	2.588	4881	bb	0.928	93	01/Aug/08	ex48g31	
RDX 13C-..	3.882	31030	bb	0.986	99	01/Aug/08	ex48g31	
RDX	3.882	11540	bb	105.200	105	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	27802	bb	107.195	107	01/Aug/08	ex48g31	
Tetryl	6.341	75917	bb	108.932	109	01/Aug/08	ex48g31	
1,3 Dini..	6.612	70206	bb	1.008	101	01/Aug/08	ex48g31	
1,3-Dini..	6.677	21466	bb	96.100	96	01/Aug/08	ex48g31	
Nitroben..	7.398	22511	bb	99.853	100	01/Aug/08	ex48g31	
Nitrogly..	7.005	203443	bb	97.026	97	01/Aug/08	ex48g31	
Nitroben..	7.529	23749	bb	94.539	95	01/Aug/08	ex48g31	
2,4,6-Tr..	7.988	193991	bb	91.977	92	01/Aug/08	ex48g31	
4-Amino-..	8.315	99997	bd	95.787	96	01/Aug/08	ex48g31	
2-Amino-..	9.105	161132	db	95.049	95	01/Aug/08	ex48g31	
2,6-Dini..	9.416	143861	bd	103.939	104	01/Aug/08	ex48g31	
2,4-Dini..	9.981	151714	bb	0.996	100	01/Aug/08	ex48g31	
2,4-Dini..	10.076	62791	dd	89.575	90	01/Aug/08	ex48g31	
2-Nitrot..	11.672	27949	bb	94.557	95	01/Aug/08	ex48g31	
PETN	11.558	196910	bb	101.434	101	01/Aug/08	ex48g31	
4-Nitrot..	12.615	19576	bb	101.667	102	01/Aug/08	ex48g31	
3-Nitrot..	13.530	11545	bb	105.298	105	01/Aug/08	ex48g31	

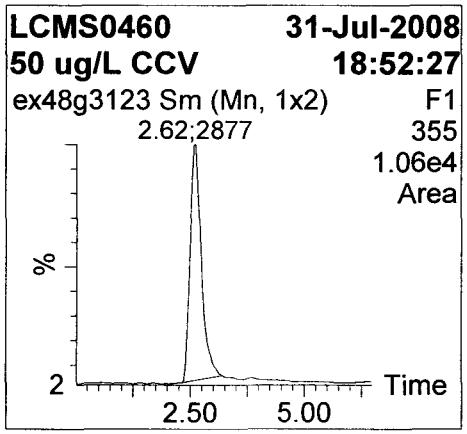
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

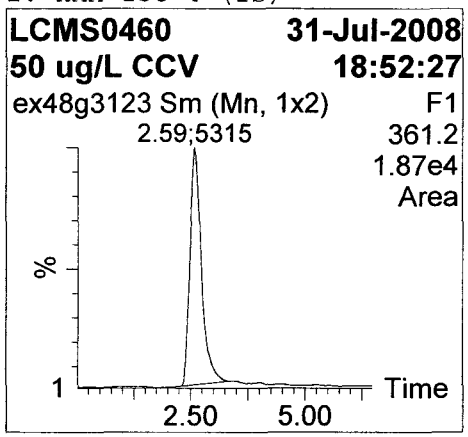
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3123
Text: 50 ug/L CCV

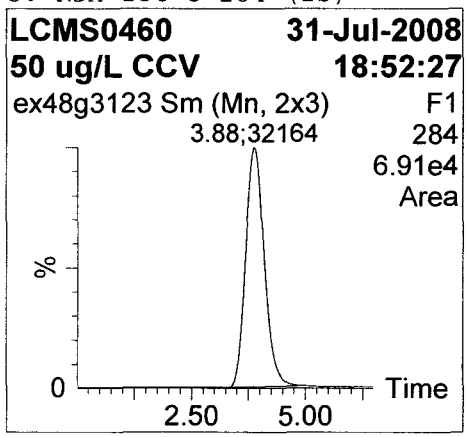
1: HMX



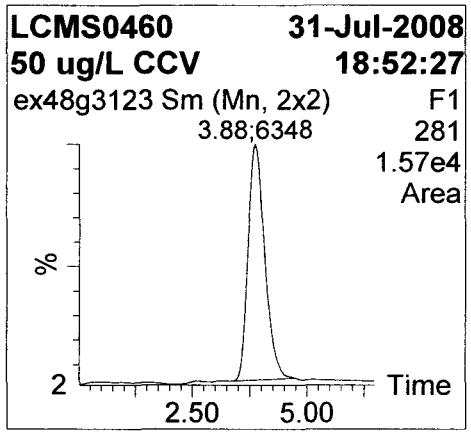
2: HMX 13C-4 (IS)



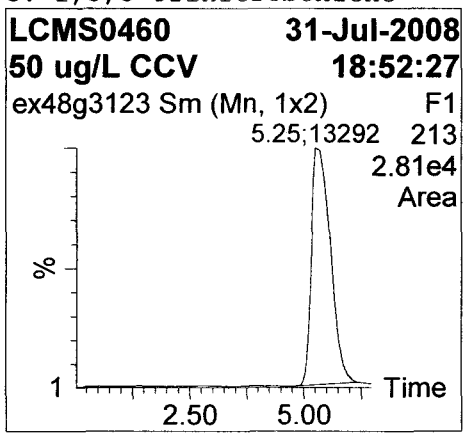
3: RDX 13C-3 284 (IS)



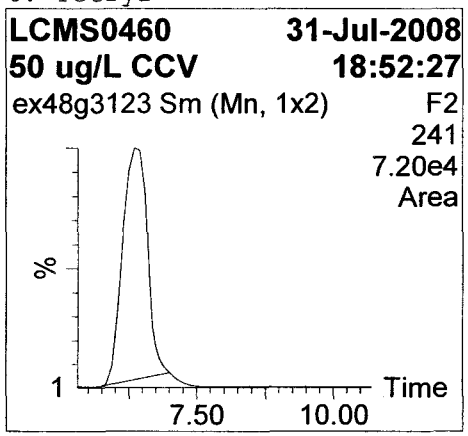
4: RDX



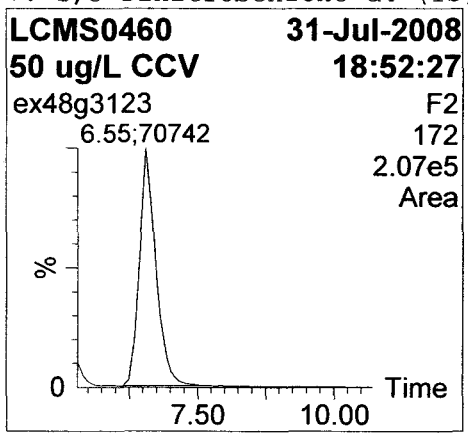
5: 1,3,5-Trinitrobenzene



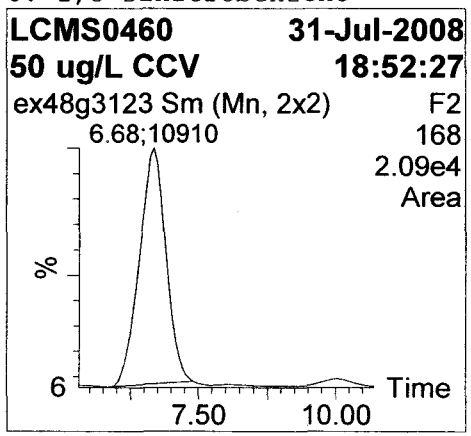
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



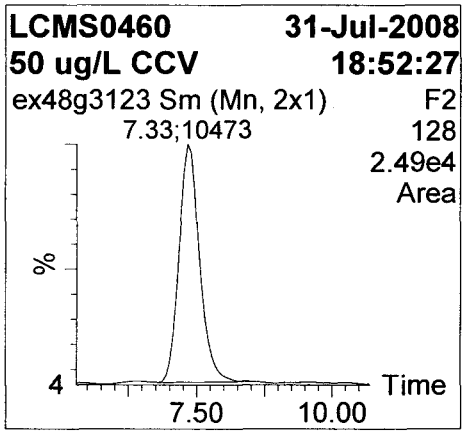
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

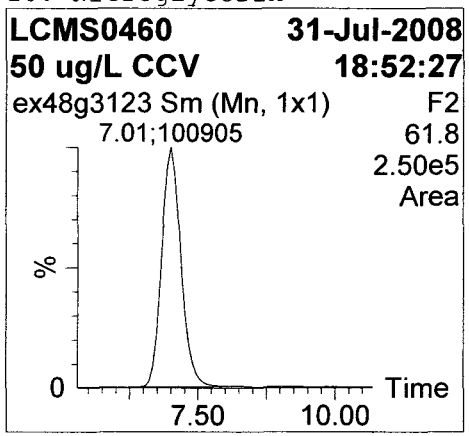
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3123
Text: 50 ug/L CCV

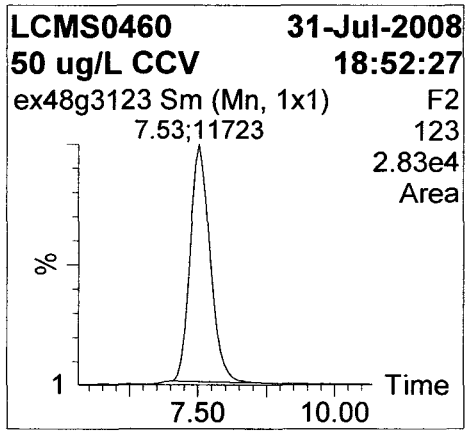
9: Nitrobenzene-d5



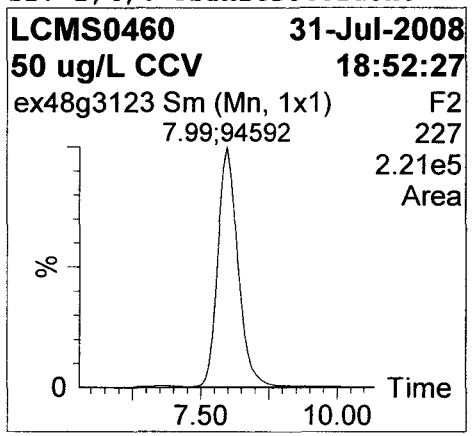
10: Nitroglycerin



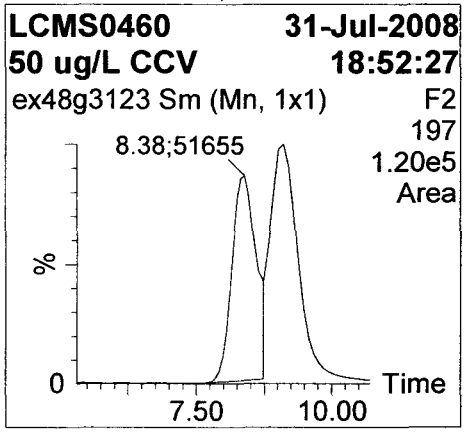
11: Nitrobenzene



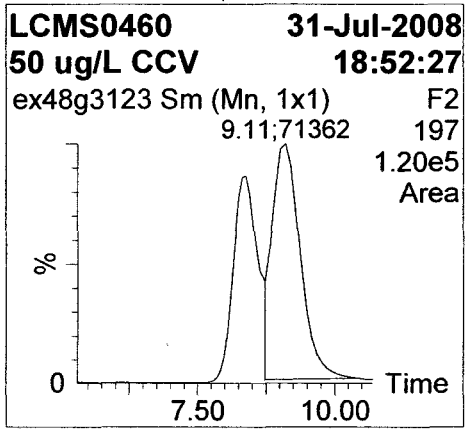
12: 2,4,6-Trinitrotoluene



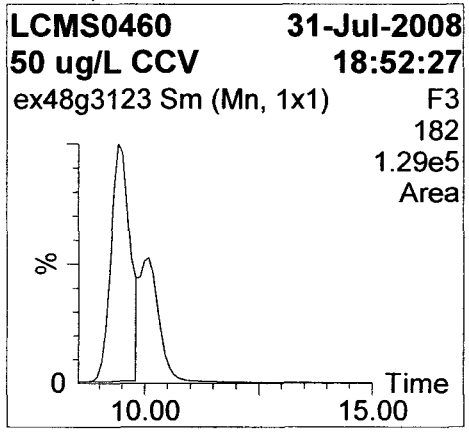
13: 4-Amino-2,6-Dinitrotolu..



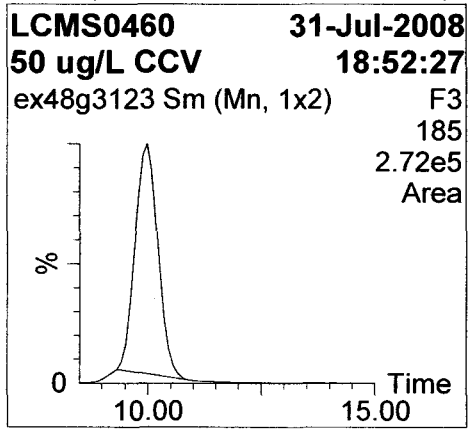
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



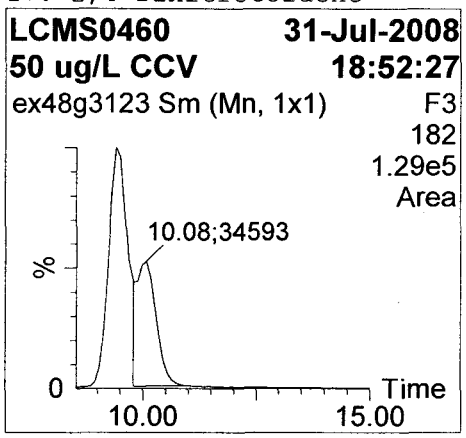
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

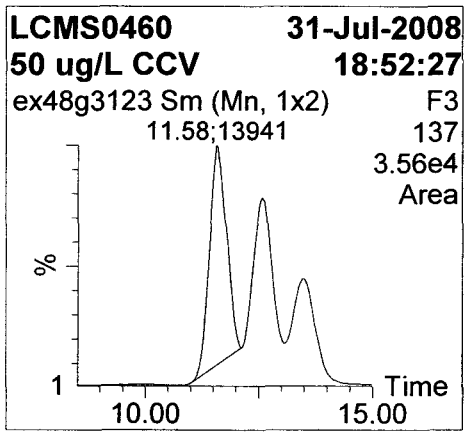
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3123
Text: 50 ug/L CCV

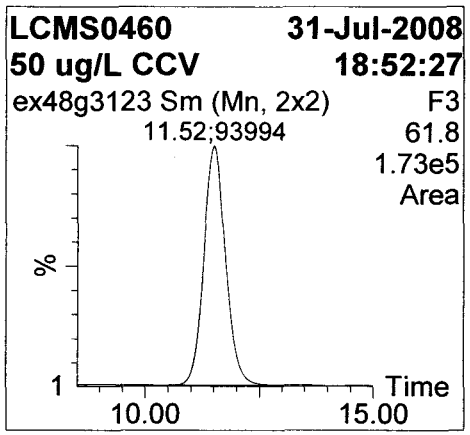
17: 2,4-Dinitrotoluene



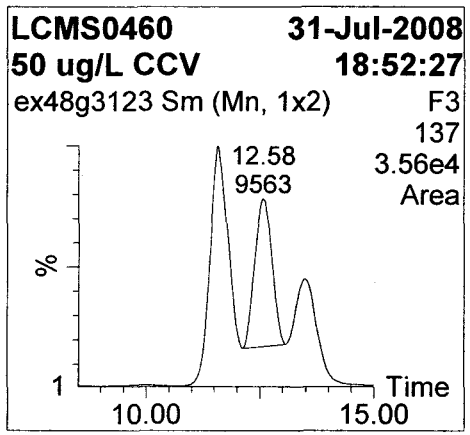
18: 2-Nitrotoluene



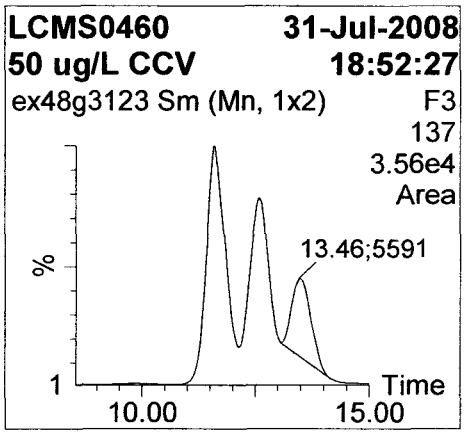
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3123
Text: 50 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	2877	bb	48.053	96	01/Aug/08	ex48g31	
HMX 13C-..	2.588	5315	bb	1.010	101	01/Aug/08	ex48g31	
RDX 13C-..	3.882	32164	bb	1.022	102	01/Aug/08	ex48g31	
RDX	3.882	6348	bb	54.491	109	01/Aug/08	ex48g31	
1,3,5-Tr..	5.250	13292	bb	53.395	107	01/Aug/08	ex48g31	
Tetryl	6.342	36738	bb	57.455	115	01/Aug/08	ex48g31	
1,3 Dini..	6.547	70742	bb	1.016	102	01/Aug/08	ex48g31	
1,3-Dini..	6.678	10910	bb	48.017	96	01/Aug/08	ex48g31	
Nitroben..	7.333	10473	bb	46.388	93	01/Aug/08	ex48g31	
Nitrogly..	7.005	100905	bb	47.432	95	01/Aug/08	ex48g31	
Nitroben..	7.530	11723	bb	46.409	93	01/Aug/08	ex48g31	
2,4,6-Tr..	7.988	94592	bb	45.411	91	01/Aug/08	ex48g31	
4-Amino-..	8.382	51655	bd	49.188	98	01/Aug/08	ex48g31	
2-Amino-..	9.106	71362	db	42.732	85	01/Aug/08	ex48g31	
2,6-Dini..	9.417	60891	bd	44.835	90	01/Aug/08	ex48g31	
2,4-Dini..	9.982	151461	bb	0.994	99	01/Aug/08	ex48g31	
2,4-Dini..	10.076	34593	db	49.438	99	01/Aug/08	ex48g31	
2-Nitrot..	11.578	13941	bb	47.372	95	01/Aug/08	ex48g31	
PETN	11.521	93994	bb	48.520	97	01/Aug/08	ex48g31	
4-Nitrot..	12.578	9563	bb	49.401	99	01/Aug/08	ex48g31	
3-Nitrot..	13.463	5591	bb	50.656	101	01/Aug/08	ex48g31	

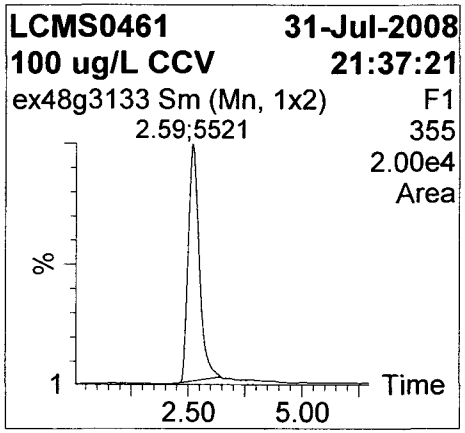
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

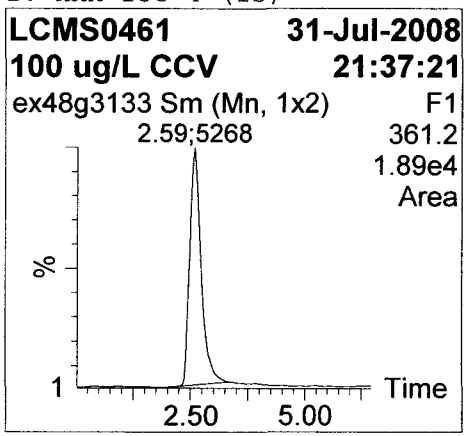
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3133
Text: 100 ug/L CCV

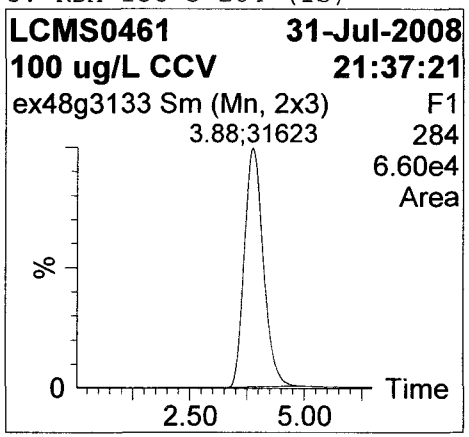
1: HMX



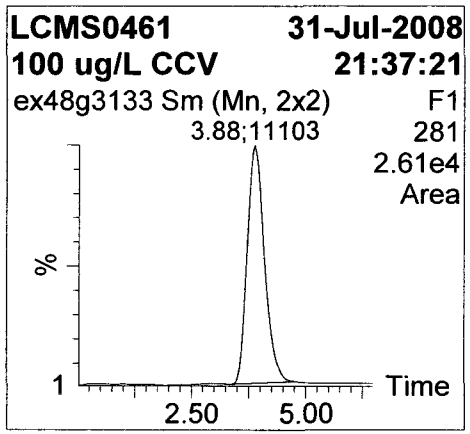
2: HMX 13C-4 (IS)



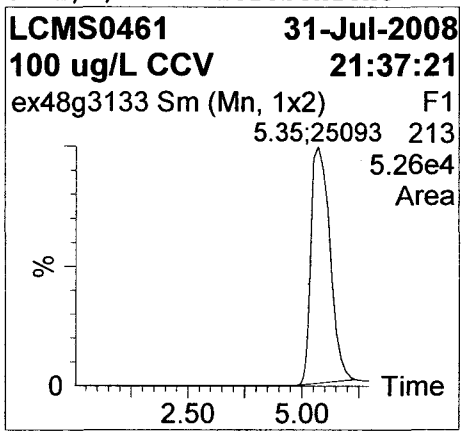
3: RDX 13C-3 284 (IS)



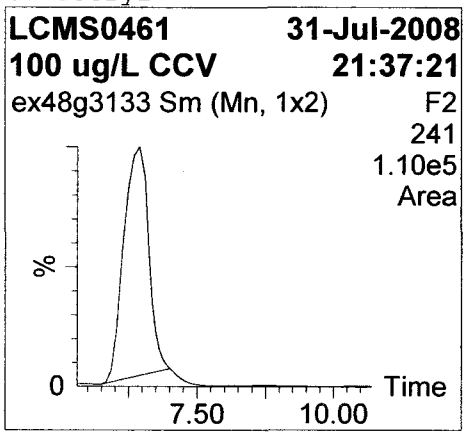
4: RDX



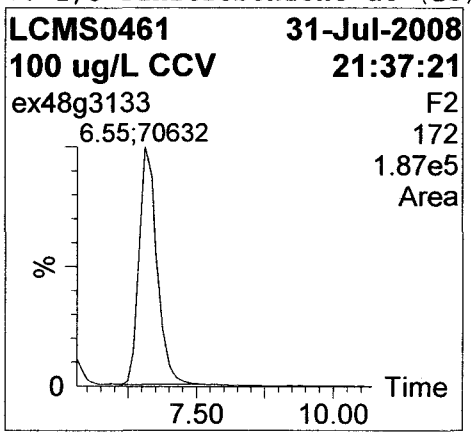
5: 1,3,5-Trinitrobenzene



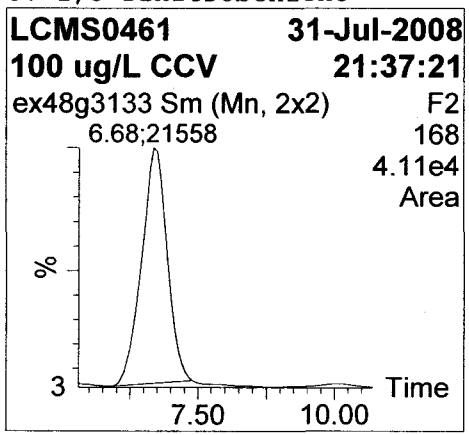
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



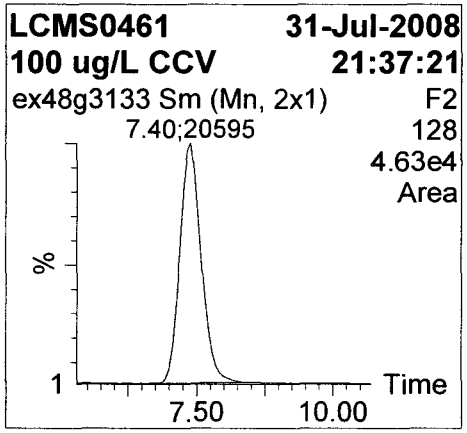
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

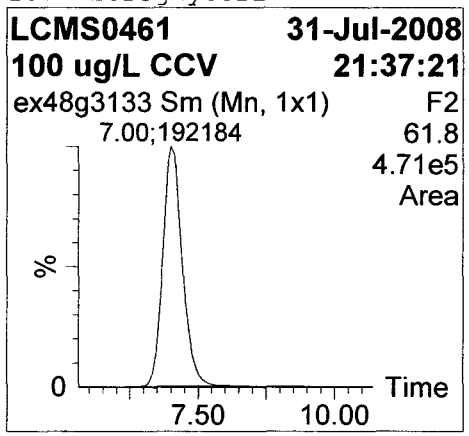
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3133
Text: 100 ug/L CCV

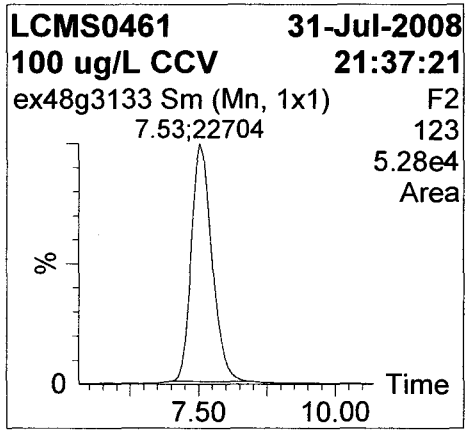
9: Nitrobenzene-d5



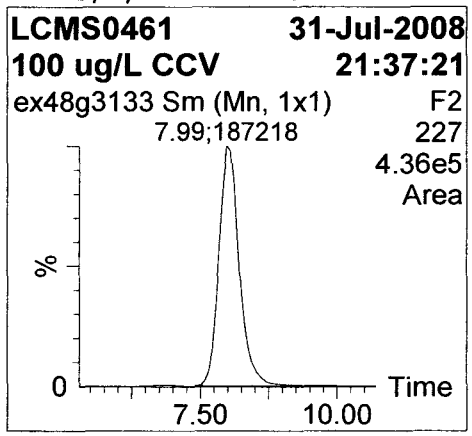
10: Nitroglycerin



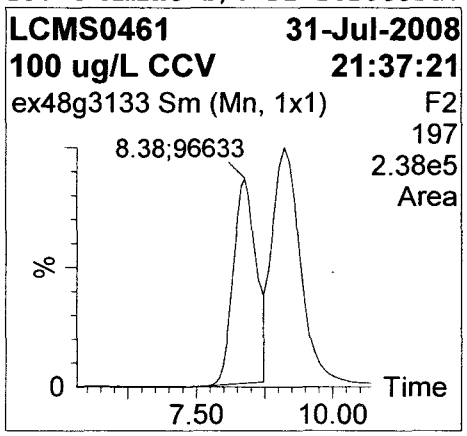
11: Nitrobenzene



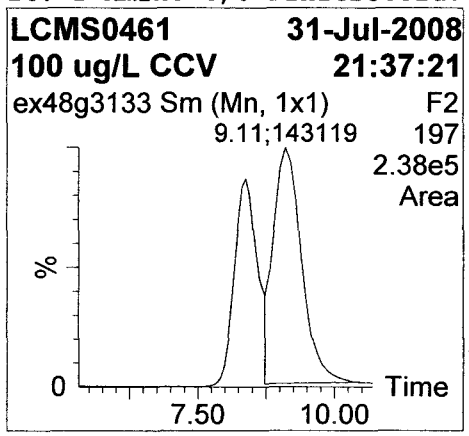
12: 2,4,6-Trinitrotoluene



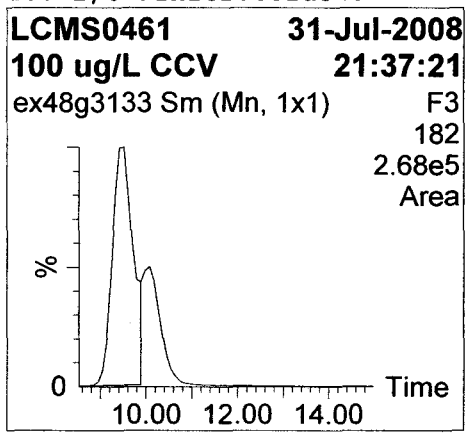
13: 4-Amino-2,6-Dinitrotolu..



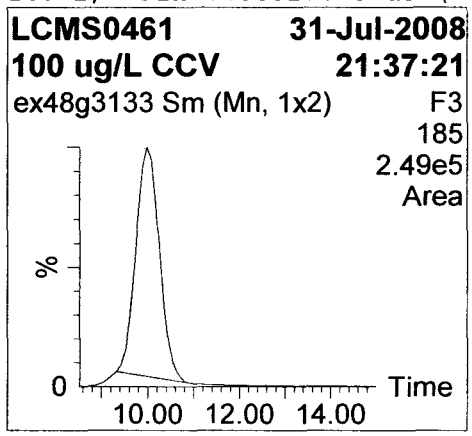
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



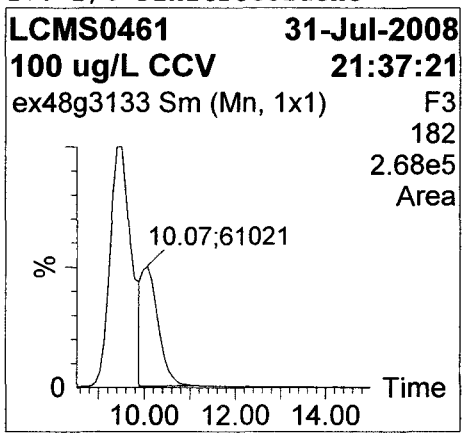
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

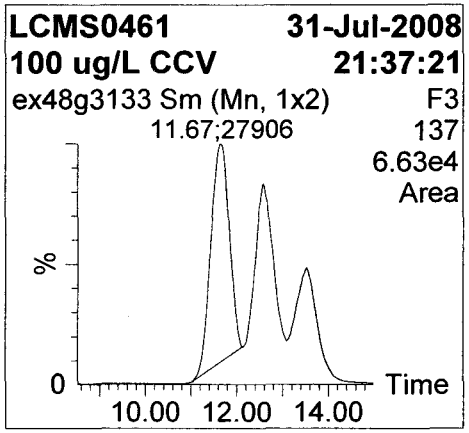
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3133
Text: 100 ug/L CCV

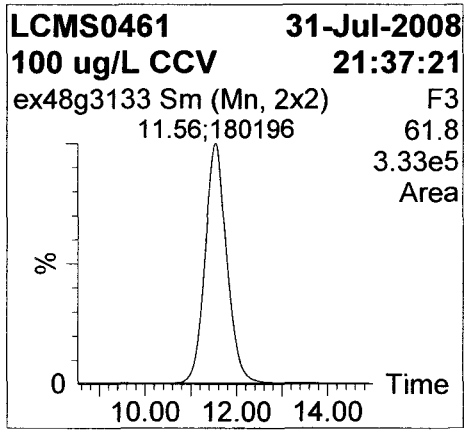
17: 2,4-Dinitrotoluene



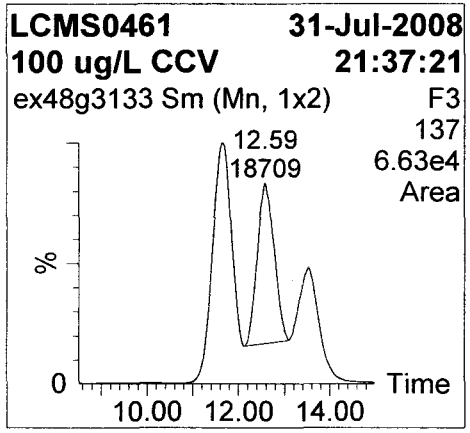
18: 2-Nitrotoluene



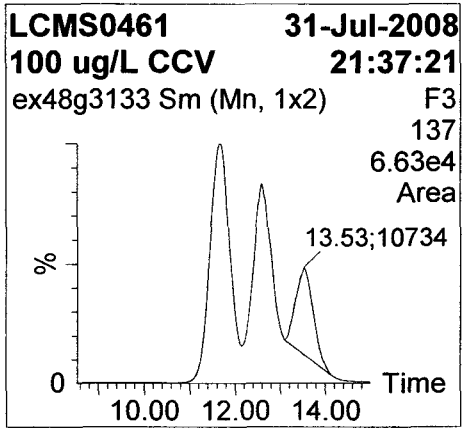
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3133
Text: 100 ug/L CCV

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.588	5521	bb	93.007	93	01/Aug/08	ex48g31	
HMX 13C-..	2.588	5268	bb	1.001	100	01/Aug/08	ex48g31	
RDX 13C-..	3.882	31623	bb	1.004	100	01/Aug/08	ex48g31	
RDX	3.882	11103	bb	99.155	99	01/Aug/08	ex48g31	
1,3,5-Tr..	5.353	25093	bb	97.169	97	01/Aug/08	ex48g31	
Tetryl	6.444	55103	bb	82.550	83	01/Aug/08	ex48g31	
1,3 Dini..	6.547	70632	bb	1.015	101	01/Aug/08	ex48g31	
1,3-Dini..	6.677	21558	bb	95.930	96	01/Aug/08	ex48g31	
Nitroben..	7.398	20595	bb	90.851	91	01/Aug/08	ex48g31	
Nitrogly..	7.005	192184	bb	91.065	91	01/Aug/08	ex48g31	
Nitroben..	7.529	22704	bb	89.841	90	01/Aug/08	ex48g31	
2,4,6-Tr..	7.987	187218	bb	88.302	88	01/Aug/08	ex48g31	
4-Amino-..	8.381	96633	bd	92.014	92	01/Aug/08	ex48g31	
2-Amino-..	9.105	143119	db	84.114	84	01/Aug/08	ex48g31	
2,6-Dini..	9.510	139805	bd	108.779	109	01/Aug/08	ex48g31	
2,4-Dini..	9.981	140794	bb	0.924	92	01/Aug/08	ex48g31	
2,4-Dini..	10.075	61021	dd	93.797	94	01/Aug/08	ex48g31	
2-Nitrot..	11.671	27906	bb	101.714	102	01/Aug/08	ex48g31	
PETN	11.557	180196	bb	100.023	100	01/Aug/08	ex48g31	
4-Nitrot..	12.585	18709	bb	104.720	105	01/Aug/08	ex48g31	
3-Nitrot..	13.527	10734	bb	105.497	105	01/Aug/08	ex48g31	

LC/MS SEMIVOLATILE SAMPLE DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02).SPL
Last Modified: 01 August 2008 07:48:28 Mountain Daylight Time
Printed: 01 August 2008 07:54:44 Mountain Daylight Time Page Position (1, 1)

	File Name	Sample ID	File Text	Sample Type	Analyte ug/L	QC ug/L	Bottle	Extract (mL)
1	ex48g3108	LCMS0464	blank	Blank	0	50	1	1.000000
2	ex48g3109	LCMS0457	5 ug/L	Standard	5	5	2	1.000000
3	ex48g3110	LCMS0458	10 ug/L	Standard	10	10	3	1.000000
4	ex48g3111	LCMS0459	25 ug/L	Standard	25	25	4	1.000000
5	ex48g3112	LCMS0460	50 ug/L	Standard	50	50	5	1.000000
6	ex48g3113	LCMS0461	100 ug/L	Standard	100	100	6	1.000000
7	ex48g3114	LCMS0462	200 ug/L	Standard	200	200	7	1.000000
8	ex48g3115	LCMS0463	300 ug/L	Standard	300	300	8	1.000000
9	ex48g3116	LCMS0464	blank	Blank	0	50	1	1.000000
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100	100	9	1.000000
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50	50	5	1.000000
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank	0	0.5	15	5.000000
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.5	0.5	16	5.000000
14	ex48g3126	KRW7L1AD	R8G210000-541 LCSD	QC	0.5	0.5	17	5.000000
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte	0	0.50505	18	5.000000
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.5000	0.5000	19	5.000000
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.5000	0.5000	20	5.000000
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte	0	0.47259	21	5.000000
19	ex48g3131	KRW221AF	D8G210174-011	Analyte	0	0.47393	22	5.000000
20	ex48g3132	KRW291AF	D8G210174-017	Analyte	0	0.47710	23	5.000000
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100	100	6	1.000000

Sample List Report **MassLynx 4.0 SP4**

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02).SPL
Last Modified: 01 August 2008 07:48:28 Mountain Daylight Time
Printed: 01 August 2008 07:54:44 Mountain Daylight Time

Page Position (2, 1)

sample (mL or g)	dilution	Inject Volume (uL)	Inlet File	MS File	MS Tune File
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1000.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1000.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1000.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
990.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1000.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1000.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1058.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1055.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1048.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives
1.000000	1.000000	40.000000	ShortExplosives	Shortexplosive2	Explosives

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 1: HMX Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.999314
Calibration curve: 0.0112767 * x + -0.000635370
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				5094					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	2.588	314	5790	bb	0.054	4.862	97.2	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	2.588	662	5419	bb	0.122	10.894	108.9	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	2.588	1602	5759	bb	0.278	24.721	98.9	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	2.625	3069	5729	bb	0.536	47.561	95.1	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	2.588	5591	4980	bb	1.123	99.623	99.6	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	2.588	10567	4771	bb	2.215	196.468	98.2	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	2.588	15102	4379	bb	3.449	305.870	102.0	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				6183					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	2.588	5698	4881	bb	1.167	103.582	103.6	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	2.625	2877	5315	bb	0.541	48.053	96.1	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				5064					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	2.625	3989	3739	bb	1.067	0.473	94.7	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	2.625	4650	4204	bb	1.106	0.491	98.1	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				4033					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	2.625	3181	3199	bb	0.994	0.441	88.2	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	2.625	3204	3493	bb	0.917	0.407	81.4	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				4584					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				3810					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				3923					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	2.588	5521	5268	bb	1.048	93.007	93.0	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 2: HMX 13C-4 (IS) Sample List: ex48g31(02) Method File: ex48g31
Response Factor: 5261.05
RRF SD: 558.092, % Relative SD: 10.6080
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank		2.662	5094	bb		5094.354	0.968	96.8	1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	1.00	2.588	5790	bb		5790.452	1.101	110.1	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	1.00	2.588	5419	bb		5418.740	1.030	103.0	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	1.00	2.588	5759	bb		5758.713	1.095	109.5	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	1.00	2.588	5729	bb		5729.246	1.089	108.9	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	1.00	2.588	4980	bb		4979.894	0.947	94.7	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	1.00	2.588	4771	bb		4771.100	0.907	90.7	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	1.00	2.588	4379	bb		4379.180	0.832	83.2	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		2.588	6183	bb		6183.133	1.175	117.5	1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	1.00	2.588	4881	bb		4880.745	0.928	92.8	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	1.00	2.588	5315	bb		5314.691	1.010	101.0	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		2.625	5064	bb		5064.180	0.963	96.3	5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	1.00	2.625	3739	bb		3739.131	0.711	71.1	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	1.00	2.625	4204	bb		4204.249	0.799	79.9	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte		2.662	4033	bb		4033.377	0.767	76.7	5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	1.00	2.625	3199	bb		3199.347	0.608	60.8	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	1.00	2.625	3493	bb		3492.722	0.664	66.4	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte		2.625	4584	bb		4584.401	0.871	87.1	5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte		2.625	3810	bb		3810.412	0.724	72.4	5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte		2.625	3923	bb		3922.710	0.746	74.6	5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	1.00	2.588	5268	bb		5267.643	1.001	100.1	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 3: RDX 13C-3 284 (IS) Sample List: ex48g31(02) Method File: ex48g31
Response Factor: 31483.8
RRF SD: 1043.96, % Relative SD: 3.31586
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank		3.956	29471	bb		29470.643	0.936	93.6	1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	1.00	3.882	30474	bb		30474.020	0.968	96.8	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	1.00	3.882	31702	bb		31701.607	1.007	100.7	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	1.00	3.882	31660	bb		31660.121	1.006	100.6	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	1.00	3.882	32708	bb		32708.043	1.039	103.9	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	1.00	3.882	32858	bb		32858.020	1.044	104.4	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	1.00	3.845	30702	bb		30702.029	0.975	97.5	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	1.00	3.882	30283	bb		30282.766	0.962	96.2	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		3.882	33704	bb		33703.656	1.071	107.1	1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	1.00	3.882	31030	bb		31029.764	0.986	98.6	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	1.00	3.882	32164	bb		32163.826	1.022	102.2	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		3.956	26007	bb		26007.240	0.826	82.6	5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	1.00	3.993	23315	bb		23314.752	0.741	74.1	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	1.00	3.993	27657	bb		27656.500	0.878	87.8	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte		4.030	23879	bb		23878.533	0.758	75.8	5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	1.00	3.993	21041	bb		21041.328	0.668	66.8	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	1.00	3.956	24930	bb		24929.844	0.792	79.2	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte		4.067	25598	bb		25598.211	0.813	81.3	5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte		3.993	24782	bb		24782.416	0.787	78.7	5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte		3.993	23096	bb		23096.490	0.734	73.4	5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	1.00	3.882	31623	bb		31622.586	1.004	100.4	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 4: RDX Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.996973
Calibration curve: 0.00344222 * x + 0.00979037
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				29471					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	3.882	692	30474	bb	0.023	3.751	75.0	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	3.919	1458	31702	bb	0.046	10.519	105.2	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	3.882	3391	31660	bb	0.107	28.270	113.1	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	3.882	6391	32708	bb	0.195	53.925	107.8	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	3.882	11655	32858	bb	0.355	100.203	100.2	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	3.882	22004	30702	bb	0.717	205.365	102.7	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	3.882	30314	30283	bb	1.001	287.968	96.0	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		3.993	75	33704	bb	0.002	0.000		1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	3.882	11540	31030	bb	0.372	105.200	105.2	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	3.882	6348	32164	bb	0.197	54.491	109.0	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				26007					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	3.993	8463	23315	bb	0.363	0.513	102.6	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	3.993	9048	27657	bb	0.327	0.461	92.2	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				23879					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	3.993	7458	21041	bb	0.354	0.501	100.1	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	3.993	7964	24930	bb	0.319	0.450	90.0	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				25598					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				24782					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				23096					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	3.882	11103	31623	bb	0.351	99.155	99.2	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 5: 1,3,5-Trinitrobenzene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.998709
Calibration curve: 4.43606e-6 * x^2 + 0.00315575 * x + 0.00674631
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	5.352	1221	63443	bb	0.019	3.939	78.8	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	5.250	2673	62464	bb	0.043	11.246	112.5	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	5.250	6615	68655	bb	0.096	27.343	109.4	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	5.249	12721	71936	bb	0.177	50.337	100.7	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	5.250	27742	75134	bb	0.369	100.630	100.6	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	5.250	58167	74227	bb	0.784	193.532	96.8	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	5.250	98041	71455	bb	1.372	303.317	101.1	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		5.213	47	59972	bb	0.001	0.000		1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	5.250	27802	70206	bb	0.396	107.195	107.2	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	5.250	13292	70742	bb	0.188	53.395	106.8	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				60083					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	5.455	22867	70658	bb	0.324	0.446	89.2	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	5.455	22567	65492	bb	0.345	0.472	94.5	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	5.558	23101	71505	bb	0.323	0.445	89.1	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	5.455	22295	74138	bb	0.301	0.417	83.4	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	5.353	25093	70632	bb	0.355	97.169	97.2	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 6: Tetryl Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.999233
Calibration curve: 1.98864e-5 * x^2 + 0.00760925 * x + 0.0164819
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	6.341	3017	63443	bb	0.048	4.040	80.8	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	6.342	6263	62464	bb	0.100	10.711	107.1	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	6.342	17019	68655	bb	0.248	28.317	113.3	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	6.341	32409	71936	bb	0.451	50.403	100.8	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	6.342	71970	75134	bb	0.958	98.409	98.4	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	6.342	169782	74227	bb	2.287	197.003	98.5	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	6.341	294613	71455	bb	4.123	301.737	100.6	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				59972					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	6.341	75917	70206	bb	1.081	108.932	108.9	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	6.342	36738	70742	bb	0.519	57.455	114.9	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				60083					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	6.547	73530	70658	bb	1.041	0.528	105.5	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	6.547	71919	65492	bb	1.098	0.552	110.3	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	6.547	46101	71505	bb	0.645	0.349	69.8	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	6.547	51324	74138	bb	0.692	0.372	74.4	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	6.444	55103	70632	bb	0.780	82.550	82.6	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 7: 1,3 Dinitrobenzene-d4 (IS) Sample List: ex48g31(02) Method File: ex48g31
Response Factor: 69616.2
RRF SD: 5011.12, % Relative SD: 7.19821
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L) ..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank		6.612	65368		bb	65367.926	0.939	93.9	1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	1.00	6.612	63443		bb	63442.527	0.911	91.1	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	1.00	6.612	62464		bb	62463.641	0.897	89.7	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	1.00	6.547	68655		bb	68655.000	0.986	98.6	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	1.00	6.546	71936		bb	71935.883	1.033	103.3	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	1.00	6.547	75134		bs	75133.969	1.079	107.9	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	1.00	6.547	74227		bb	74227.203	1.066	106.6	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	1.00	6.546	71455		bs	71455.453	1.026	102.6	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		6.547	59972		bb	59971.781	0.861	86.1	1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	1.00	6.612	70206		bb	70206.102	1.008	100.8	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	1.00	6.547	70742		bb	70742.383	1.016	101.6	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		6.743	60083		bb	60082.512	0.863	86.3	5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	1.00	6.678	70658		bb	70658.406	1.015	101.5	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	1.00	6.678	65492		bb	65492.270	0.941	94.1	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte		6.678	62737		bb	62736.578	0.901	90.1	5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	1.00	6.743	71505		bb	71505.289	1.027	102.7	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	1.00	6.678	74138		bb	74138.023	1.065	106.5	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte		6.743	59568		bb	59568.348	0.856	85.6	5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte		6.678	64453		bs	64453.387	0.926	92.6	5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte		6.678	63184		bs	63184.184	0.908	90.8	5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	1.00	6.547	70632		bb	70631.789	1.015	101.5	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 8: 1,3-Dinitrobenzene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.997816
Calibration curve: 0.00315135 * x + 0.00290853
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank		6.743	226	65368	bb	0.003	0.176		1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	6.678	1215	63443	bb	0.019	5.154	103.1	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	6.678	2304	62464	bb	0.037	10.779	107.8	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	6.678	5448	68655	bb	0.079	24.257	97.0	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	6.677	11007	71936	bb	0.153	47.630	95.3	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	6.678	22939	75134	bb	0.305	95.958	96.0	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	6.678	45309	74227	bb	0.610	192.775	96.4	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	6.677	70790	71455	bb	0.991	313.446	104.5	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				59972					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	6.677	21466	70206	bb	0.306	96.100	96.1	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	6.678	10910	70742	bb	0.154	48.017	96.0	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				60083					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	6.743	19867	70658	bb	0.281	0.441	88.3	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	6.743	19719	65492	bb	0.301	0.473	94.6	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	6.809	19354	71505	bb	0.271	0.425	85.0	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	6.743	20744	74138	bb	0.280	0.439	87.9	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	6.677	21558	70632	bb	0.305	95.930	95.9	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 9: Nitrobenzene-d5 Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.990973
Calibration curve: 0.00322824 * x + -0.00170186
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank		7.463	9989	65368	bb	0.153	47.861	95.7	1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	7.333	999	63443	dd	0.016	5.403	108.1	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	7.399	2086	62464	bd	0.033	10.869	108.7	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	7.333	5527	68655	bb	0.081	25.465	101.9	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	7.332	10300	71936	bb	0.143	44.882	89.8	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	7.333	21430	75134	bb	0.285	88.878	88.9	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	7.333	44790	74227	bb	0.603	187.446	93.7	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	7.332	75322	71455	bb	1.054	327.056	109.0	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		7.333	9847	59972	bb	0.164	51.388	102.8	1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	7.398	22511	70206	bb	0.321	99.853	99.9	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	7.333	10473	70742	bb	0.148	46.388	92.8	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		7.529	13931	60083	bb	0.232	0.362	72.4	5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	7.463	12463	70658	bb	0.176	0.276	55.2	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	7.464	12296	65492	bb	0.188	0.293	58.7	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte		7.595	14379	62737	bb	0.229	0.361	71.5	5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	7.530	12087	71505	bb	0.169	0.264	52.9	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	7.464	12607	74138	bb	0.170	0.266	53.2	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte		7.529	13055	59568	bb	0.219	0.323	68.4	5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte		7.464	14436	64453	bb	0.224	0.331	69.9	5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte		7.529	11932	63184	bb	0.189	0.282	59.0	5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	7.398	20595	70632	bb	0.292	90.851	90.9	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 10: Nitroglycerin Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.998816
Calibration curve: 0.0296695 * x + 0.0190758
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	7.005	10215	63443	bb	0.161	4.784	95.7	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	7.005	20928	62464	bb	0.335	10.649	106.5	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	7.005	54507	68655	bb	0.794	26.116	104.5	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	7.005	105230	71936	bb	1.463	48.661	97.3	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	7.005	213251	75134	bb	2.838	95.020	95.0	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	6.940	434412	74227	bb	5.852	196.613	98.3	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	6.939	654670	71455	bb	9.162	308.157	102.7	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				59972					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	7.005	203443	70206	bb	2.898	97.026	97.0	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	7.005	100905	70742	bb	1.426	47.432	94.9	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				60083					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	7.071	170774	70658	bb	2.417	0.404	80.8	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	7.071	173104	65492	bb	2.643	0.442	88.4	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	7.137	163473	71505	bb	2.286	0.382	76.4	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	7.071	188711	74138	bb	2.545	0.426	85.1	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	7.005	192184	70632	bb	2.721	91.065	91.1	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 11: Nitrobenzene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.994036
Calibration curve: 0.00358556 * x + -0.000695270
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	7.529	1179	63443	bb	0.019	5.377	107.5	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	7.530	2438	62464	bb	0.039	11.077	110.8	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	7.529	5955	68655	bb	0.087	24.385	97.5	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	7.529	11699	71936	bb	0.163	45.550	91.1	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	7.529	24052	75134	bb	0.320	89.473	89.5	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	7.530	51360	74227	bb	0.692	193.169	96.6	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	7.463	82185	71455	bb	1.150	320.968	107.0	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				59972					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	7.529	23749	70206	bb	0.338	94.539	94.5	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	7.530	11723	70742	bb	0.166	46.409	92.8	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		7.726	55	60083	bb	0.001	0.002		5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	7.660	13169	70658	bb	0.186	0.261	52.2	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	7.660	12706	65492	bb	0.194	0.272	54.3	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	7.726	12810	71505	bb	0.179	0.251	50.2	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	7.595	12817	74138	bb	0.173	0.242	48.4	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	7.529	22704	70632	bb	0.321	89.841	89.8	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 12: 2,4,6-Trinitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.994440
Calibration curve: 0.0306238 * x + -0.0535118
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	7.988	8310	63443	bb	0.131	6.024	120.5	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	7.988	16797	62464	bb	0.269	10.528	105.3	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	7.988	44062	68655	bb	0.642	22.705	90.8	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	7.987	93025	71936	bb	1.293	43.975	87.9	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	7.988	201343	75134	bb	2.680	89.254	89.3	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	7.923	455705	74227	bb	6.139	202.223	101.1	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	7.987	686109	71455	bb	9.602	315.291	105.1	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		7.922	229	59972	bb	0.004	1.872		1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	7.988	193991	70206	bb	2.763	91.977	92.0	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	7.988	94592	70742	bb	1.337	45.411	90.8	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		8.118	157	60083	bb	0.003	0.009		5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	8.118	171772	70658	bb	2.431	0.406	81.1	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	8.119	176332	65492	bb	2.692	0.448	89.7	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte		8.184	134	62737	bb	0.002	0.009		5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	8.119	163583	71505	bb	2.288	0.382	76.5	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	8.053	161391	74138	bb	2.177	0.364	72.8	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte		8.249	123	59568	bb	0.002	0.009		5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte		8.119	148	63184	bb	0.002	0.009		5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	7.987	187218	70632	bb	2.651	88.302	88.3	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 13: 4-Amino-2,6-Dinitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.997674
Calibration curve: 0.0148959 * x + -0.00251501
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	8.381	4771	63443	bd	0.075	5.218	104.4	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	8.381	9723	62464	bd	0.156	10.618	106.2	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	8.381	25549	68655	bd	0.372	25.151	100.6	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	8.315	48844	71936	bd	0.679	45.751	91.5	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	8.380	107028	75134	bd	1.424	95.798	95.8	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	8.315	214798	74227	bd	2.894	194.436	97.2	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	8.314	333005	71455	bd	4.660	313.027	104.3	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				59972					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	8.315	99997	70206	bd	1.424	95.787	95.8	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	8.382	51655	70742	bd	0.730	49.188	98.4	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				60083					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	8.446	91732	70658	bd	1.298	0.437	87.3	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	8.446	92290	65492	bd	1.409	0.474	94.8	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	8.541	94820	71505	bd	1.326	0.446	89.2	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	8.446	91798	74138	bd	1.238	0.416	83.3	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	8.381	96633	70632	bd	1.368	92.014	92.0	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 14: 2-Amino-4,6-Dinitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.991074
Calibration curve: 0.0245880 * x + -0.0419305
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				65368					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	9.106	6638	63443	db	0.105	5.961	119.2	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	9.106	13917	62464	db	0.223	10.767	107.7	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	9.105	36466	68655	db	0.531	23.307	93.2	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	9.105	74794	71936	db	1.040	43.991	88.0	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	9.105	155230	75134	db	2.066	85.732	85.7	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	9.105	355601	74227	db	4.791	196.544	98.3	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	9.010	565725	71455	db	7.917	323.698	107.9	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				59972					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	9.105	161132	70206	db	2.295	95.049	95.0	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	9.106	71362	70742	db	1.009	42.732	85.5	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				60083					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	9.199	144583	70658	db	2.046	0.425	84.9	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	9.199	141819	65492	db	2.165	0.449	89.8	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				62737					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	9.294	129146	71505	db	1.806	0.376	75.2	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	9.199	127718	74138	db	1.723	0.359	71.8	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				59568					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				64453					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				63184					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	9.105	143119	70632	db	2.026	84.114	84.1	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 15: 2,6-Dinitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.998765
Calibration curve: 0.00924159 * x + -0.0123174
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				123787					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	9.511	5689	149724	bd	0.038	5.444	108.9	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	9.511	12088	141602	bd	0.085	10.570	105.7	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	9.416	30015	152686	bd	0.197	22.604	90.4	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	9.416	63539	152646	bd	0.416	46.374	92.7	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	9.416	139354	153411	bd	0.908	99.624	99.6	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	9.416	297564	158069	bd	1.882	205.030	102.5	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	9.415	436615	157998	bd	2.763	300.354	100.1	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				138208					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	9.416	143861	151714	bd	0.948	103.939	103.9	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	9.417	60891	151461	bd	0.402	44.835	89.7	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				140406					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	9.604	111678	151681	bd	0.736	0.405	81.0	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	9.510	114307	142914	bd	0.800	0.439	87.9	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				142313					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	9.605	109291	153445	bd	0.712	0.392	78.4	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	9.510	111452	142698	bd	0.781	0.429	85.8	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				134299					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				147462					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				140167					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	9.510	139805	140794	bd	0.993	108.779	108.8	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 16: 2,4-Dinitrotoluene-d3 (IS) Sample List: ex48g31(02) Method File: ex48g31
Response Factor: 152305
RRF SD: 5602.62, % Relative SD: 3.67855
Response type: External Std, Area
Curve type: RF

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank		10.075	123787	bb	123786.914	0.813	81.3	1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	1.00	9.982	149724	bb	149723.906	0.983	98.3	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	1.00	9.982	141602	bb	141601.938	0.930	93.0	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	1.00	9.981	152686	bb	152686.438	1.003	100.3	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	1.00	9.981	152646	bb	152646.406	1.002	100.2	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	1.00	9.981	153411	bb	153410.891	1.007	100.7	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	1.00	9.981	158069	bb	158069.250	1.038	103.8	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	1.00	9.980	157998	bb	157997.719	1.037	103.7	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank		9.982	138208	bb	138208.109	0.907	90.7	1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	1.00	9.981	151714	bb	151713.578	0.996	99.6	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	1.00	9.982	151461	bb	151460.703	0.994	99.4	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank		10.169	140406	bb	140406.234	0.922	92.2	5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	1.00	10.075	151681	bb	151681.063	0.996	99.6	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	1.00	10.075	142914	bb	142914.016	0.938	93.8	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte		10.263	142313	bb	142313.422	0.934	93.4	5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	1.00	10.170	153445	bb	153444.609	1.007	100.7	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	1.00	10.075	142698	bb	142697.969	0.937	93.7	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte		10.168	134299	bb	134298.500	0.882	88.2	5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte		10.076	147462	bb	147461.922	0.968	96.8	5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte		10.170	140167	bb	140166.500	0.920	92.0	5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	1.00	9.981	140794	bb	140794.406	0.924	92.4	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 17: 2,4-Dinitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.999659
Calibration curve: 8.41747e-8 * x^2 + 0.00460960 * x + 0.000301571
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				123787					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	10.076	3261	149724	db	0.022	4.659	93.2	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	10.076	7115	141602	db	0.050	10.834	108.3	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	10.075	17665	152686	dd	0.116	25.022	100.1	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	10.075	34928	152646	db	0.229	49.529	99.1	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	9.981	69618	153411	dd	0.454	98.205	98.2	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	10.075	148719	158069	dd	0.941	203.286	101.6	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	9.980	218606	157998	db	1.384	298.465	99.5	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				138208					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	10.076	62791	151714	dd	0.414	89.575	89.6	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	10.076	34593	151461	db	0.228	49.438	98.9	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				140406					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	10.169	60706	151681	dd	0.400	0.433	86.6	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	10.169	59177	142914	dd	0.414	0.448	89.6	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				142313					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	10.264	57364	153445	dd	0.374	0.405	80.9	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	10.169	57261	142698	dd	0.401	0.434	86.8	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				134299					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				147462					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				140167					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	10.075	61021	140794	dd	0.433	93.797	93.8	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 18: 2-Nitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.998974
Calibration curve: 0.00195359 * x + -0.000501926
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				123787					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	11.607	1419	149724	bb	0.009	5.108	102.2	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	11.607	2789	141602	bb	0.020	10.338	103.4	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	11.615	7110	152686	bb	0.047	24.092	96.4	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	11.615	14272	152646	bb	0.093	48.116	96.2	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	11.615	29748	153411	bb	0.194	99.514	99.5	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	11.643	64274	158069	bb	0.407	208.395	104.2	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	11.615	90803	157998	bb	0.575	294.438	98.1	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				138208					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	11.672	27949	151714	bb	0.184	94.557	94.6	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	11.578	13941	151461	bb	0.092	47.372	94.7	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				140406					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	11.757	13073	151681	bb	0.086	0.222	44.4	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	11.729	12519	142914	bb	0.088	0.225	45.1	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				142313					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	11.787	16788	153445	bb	0.109	0.281	56.3	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	11.730	12285	142698	bb	0.086	0.222	44.3	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				134299					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				147462					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				140167					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	11.671	27906	140794	bb	0.198	101.714	101.7	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 19: PETN Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.999577
Calibration curve: 0.0128004 * x + -0.000489882
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				123787					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	11.521	9155	149724	bb	0.061	4.815	96.3	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	11.521	19149	141602	bb	0.135	10.603	106.0	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	11.529	47696	152686	bb	0.312	24.442	97.8	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	11.500	95336	152646	bb	0.625	48.830	97.7	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	11.529	199848	153411	bb	1.303	101.808	101.8	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	11.500	411904	158069	bb	2.606	203.613	101.8	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	11.501	598340	157998	bb	3.787	295.889	98.6	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				138208					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	11.558	196910	151714	bb	1.298	101.434	101.4	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	11.521	93994	151461	bb	0.621	48.520	97.0	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				140406					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	11.643	155392	151681	bb	1.024	0.400	80.1	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	11.615	157293	142914	bb	1.101	0.430	86.0	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				142313					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	11.672	149938	153445	bb	0.977	0.382	76.4	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	11.615	154230	142698	bb	1.081	0.422	84.5	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				134299					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				147462					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				140167					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	11.557	180196	140794	bb	1.280	100.023	100.0	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 20: 4-Nitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.999033
Calibration curve: -6.38702e-9 * x^2 + 0.00126172 * x + 0.000822346
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				123787					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	12.550	1008	149724	bb	0.007	4.684	93.7	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	12.550	2095	141602	bb	0.015	11.074	110.7	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	12.586	4785	152686	bb	0.031	24.189	96.8	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	12.558	9737	152646	bb	0.064	49.916	99.8	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	12.586	18836	153411	bb	0.123	96.711	96.7	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	12.614	41339	158069	bb	0.262	206.843	103.4	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	12.558	59165	157998	bb	0.374	296.583	98.9	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				138208					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	12.615	19576	151714	bb	0.129	101.667	101.7	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	12.578	9563	151461	bb	0.063	49.401	98.8	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				140406					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	12.729	13315	151681	bb	0.088	0.345	68.9	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	12.700	13167	142914	bb	0.092	0.362	72.4	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				142313					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	12.758	15005	153445	bb	0.098	0.384	76.9	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	12.672	12243	142698	bb	0.086	0.337	67.4	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				134299					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				147462					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				140167					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	12.585	18709	140794	bb	0.133	104.720	104.7	1.000	1.000	1	40	ex48g31

Quantify Compound Summary Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:52:53 2008

Compound 21: 3-Nitrotoluene Sample List: ex48g31(02) Method File: ex48g31
Coefficient of Determination: 0.998471
Calibration curve: 0.000717061 * x + 0.000592401
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	ID	Sample Text	Type	Std C..	RT	Area	IS Area	Flags	Response	Conc (ug/L)..	%Rec	Vf (mL)	Vs (mL or g)	DF	Inj	Cal.File
1	ex48g3108	LCMS0464	blank	Blank				123787					1.000	1.000	1	40	ex48g31
2	ex48g3109	LCMS0457	5 ug/L	Standard	5.00	13.578	524	149724	bb	0.004	4.055	81.1	1.000	1.000	1	40	ex48g31
3	ex48g3110	LCMS0458	10 ug/L	Standard	10.00	13.492	1228	141602	bb	0.009	11.264	112.6	1.000	1.000	1	40	ex48g31
4	ex48g3111	LCMS0459	25 ug/L	Standard	25.00	13.471	2793	152686	bb	0.018	24.688	98.8	1.000	1.000	1	40	ex48g31
5	ex48g3112	LCMS0460	50 ug/L	Standard	50.00	13.415	5983	152646	bb	0.039	53.831	107.7	1.000	1.000	1	40	ex48g31
6	ex48g3113	LCMS0461	100 ug/L	Standard	100.00	13.472	11210	153411	bb	0.073	101.075	101.1	1.000	1.000	1	40	ex48g31
7	ex48g3114	LCMS0462	200 ug/L	Standard	200.00	13.499	23040	158069	bb	0.146	202.449	101.2	1.000	1.000	1	40	ex48g31
8	ex48g3115	LCMS0463	300 ug/L	Standard	300.00	13.443	33248	157998	bb	0.210	292.638	97.5	1.000	1.000	1	40	ex48g31
9	ex48g3116	LCMS0464	blank	Blank				138208					1.000	1.000	1	40	ex48g31
10	ex48g3117	LCMS0465	100 ug/L ICV	QC	100.00	13.530	11545	151714	bb	0.076	105.298	105.3	1.000	1.000	1	40	ex48g31
11	ex48g3123	LCMS0460	50 ug/L CCV	QC	50.00	13.463	5591	151461	bb	0.037	50.656	101.3	1.000	1.000	1	40	ex48g31
12	ex48g3124	KRW7L1AA	R8G210000-541 MB	Blank				140406					5.000	1000.000	1	40	ex48g31
13	ex48g3125	KRW7L1AC	R8G210000-541 LCS	QC	0.50	13.614	6290	151681	bb	0.041	0.285	57.0	5.000	1000.000	1	40	ex48g31
14	ex48g3126	KRW7L1AD	R8G210000-541 L..	QC	0.50	13.586	6275	142914	bb	0.044	0.302	60.4	5.000	1000.000	1	40	ex48g31
15	ex48g3127	KRW1L1AF	D8G210174-001	Analyte				142313					5.000	990.000	1	40	ex48g31
16	ex48g3128	KRW1L1AQ	D8G210174-001 MS	QC	0.50	13.672	8690	153445	bb	0.057	0.391	78.2	5.000	1000.000	1	40	ex48g31
17	ex48g3129	KRW1L1AR	D8G210174-001 MSD	QC	0.50	13.586	6258	142698	bb	0.044	0.302	60.3	5.000	1000.000	1	40	ex48g31
18	ex48g3130	KRW2V1AF	D8G210174-007	Analyte				134299					5.000	1058.000	1	40	ex48g31
19	ex48g3131	KRW221AF	D8G210174-011	Analyte				147462					5.000	1055.000	1	40	ex48g31
20	ex48g3132	KRW291AF	D8G210174-017	Analyte				140167					5.000	1048.000	1	40	ex48g31
21	ex48g3133	LCMS0461	100 ug/L CCV	QC	100.00	13.527	10734	140794	bb	0.076	105.497	105.5	1.000	1.000	1	40	ex48g31

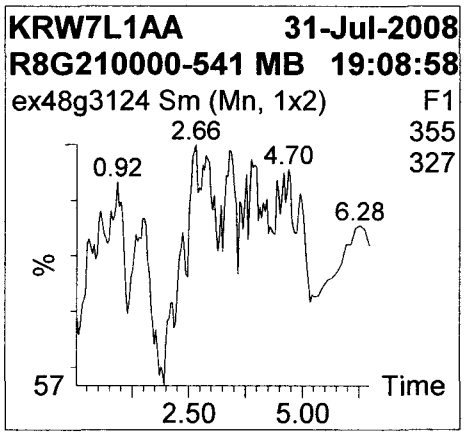
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

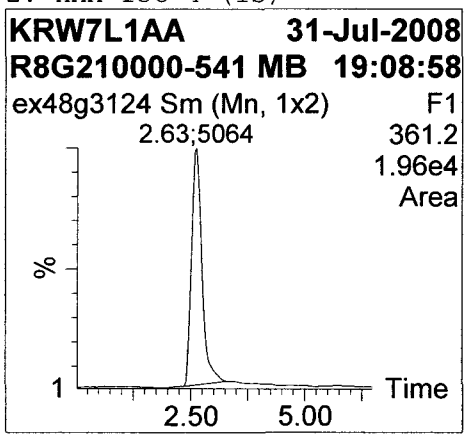
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3124
Text: R8G210000-541 MB

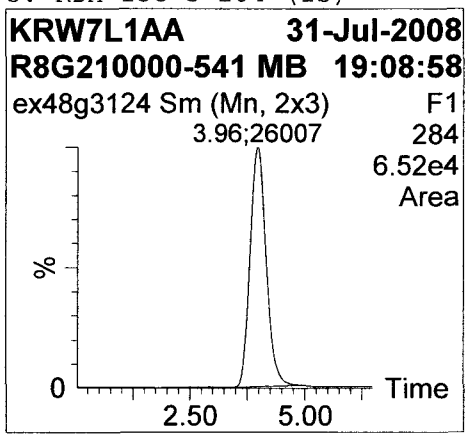
1: HMX



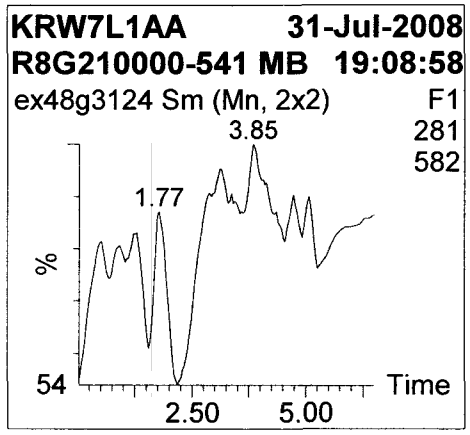
2: HMX 13C-4 (IS)



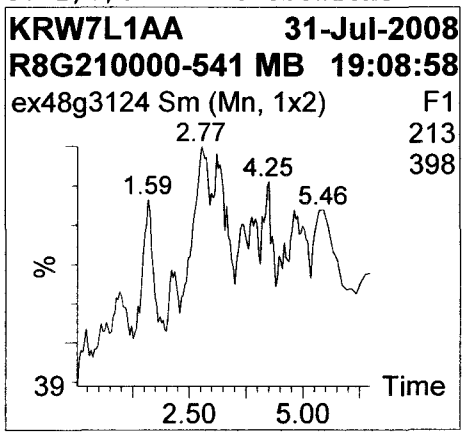
3: RDX 13C-3 284 (IS)



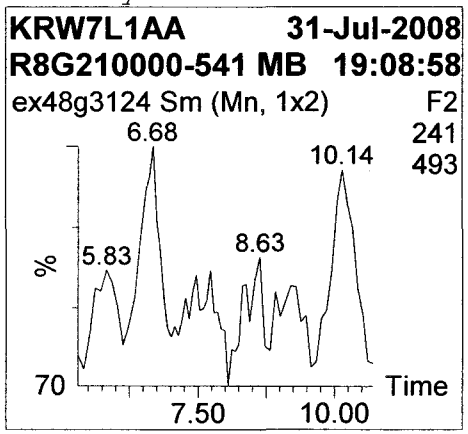
4: RDX



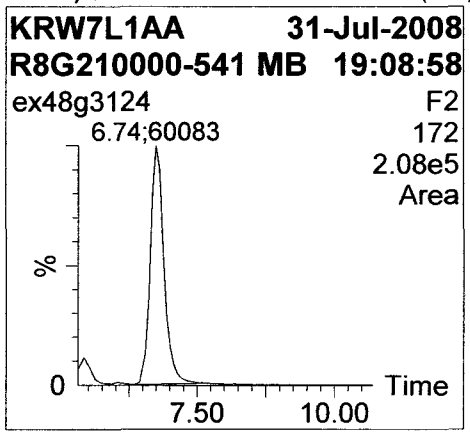
5: 1,3,5-Trinitrobenzene



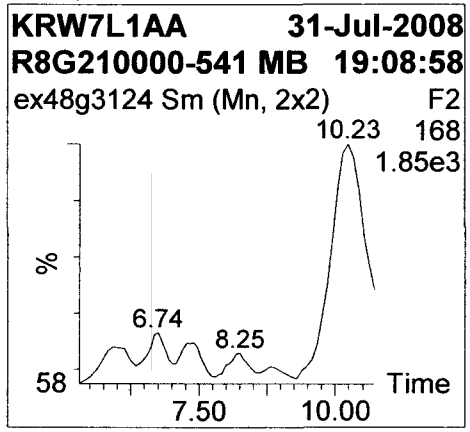
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



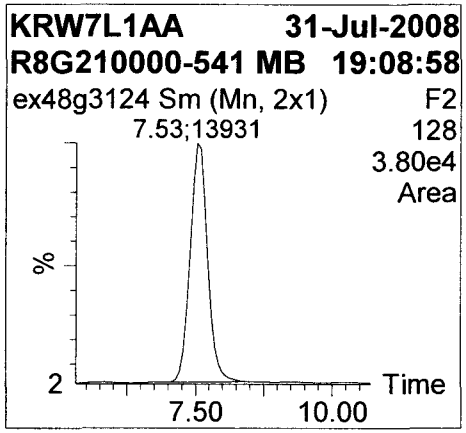
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

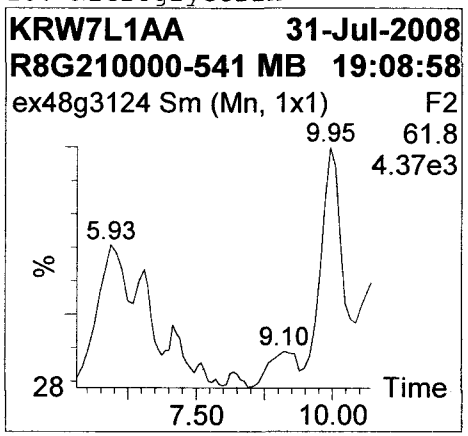
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3124
Text: R8G210000-541 MB

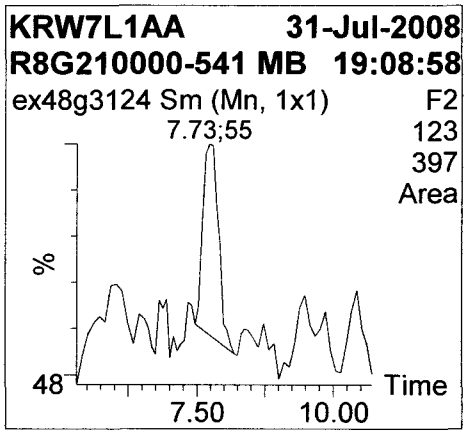
9: Nitrobenzene-d5



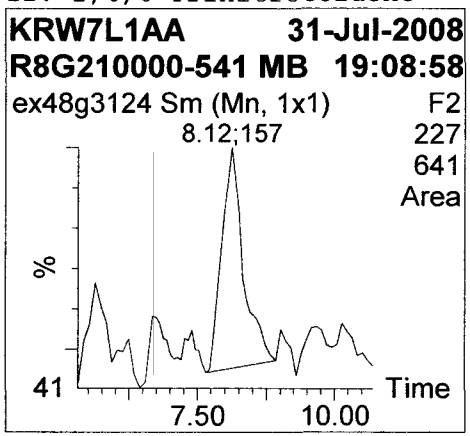
10: Nitroglycerin



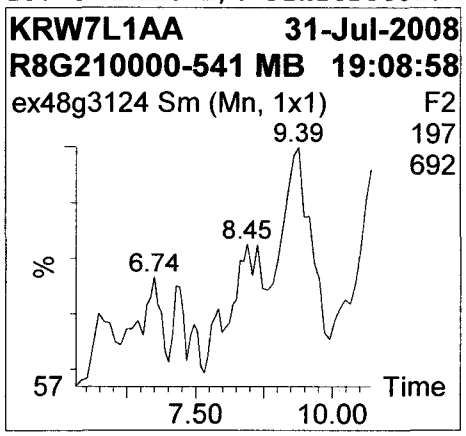
11: Nitrobenzene



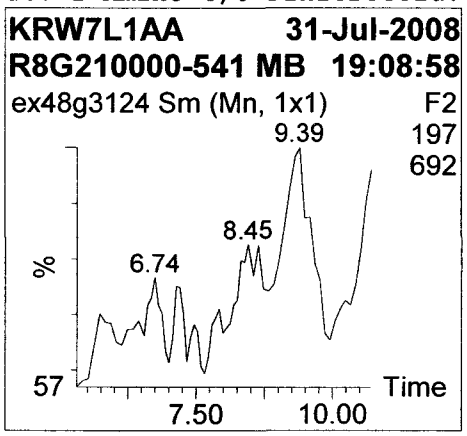
12: 2,4,6-Trinitrotoluene



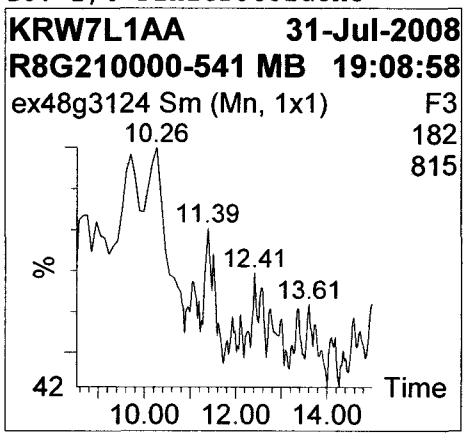
13: 4-Amino-2,6-Dinitrotolu..



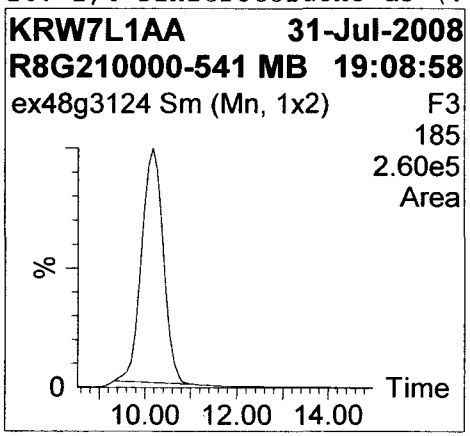
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



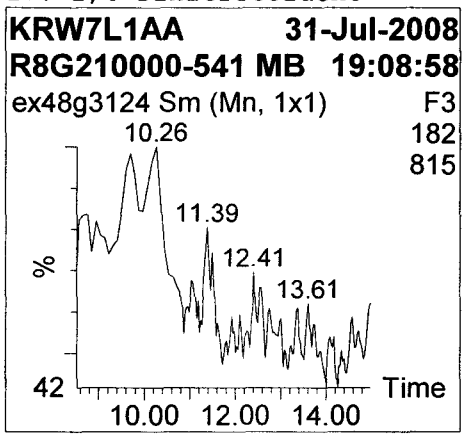
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

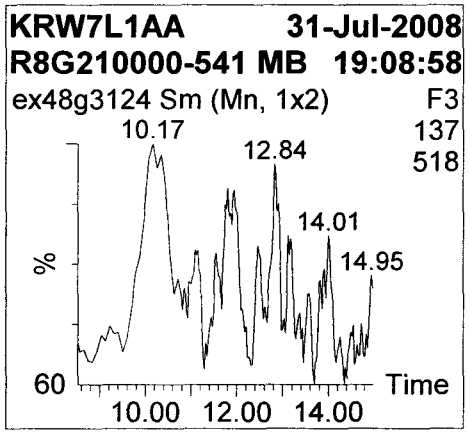
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3124
Text: R8G210000-541 MB

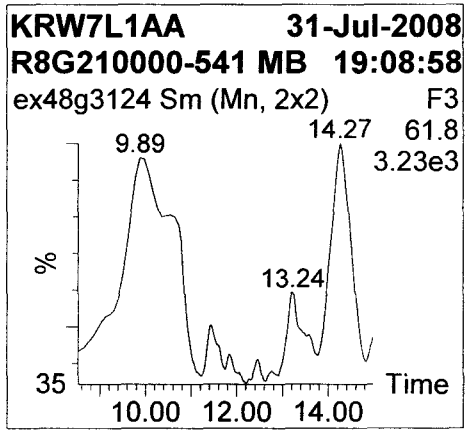
17: 2,4-Dinitrotoluene



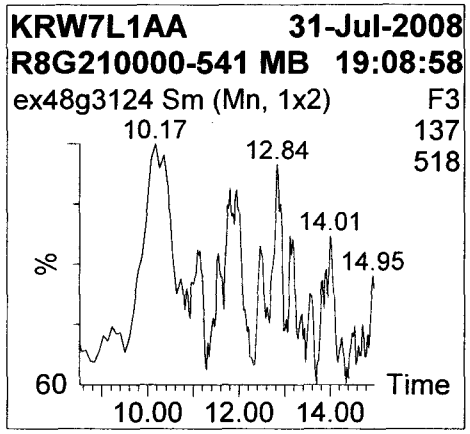
18: 2-Nitrotoluene



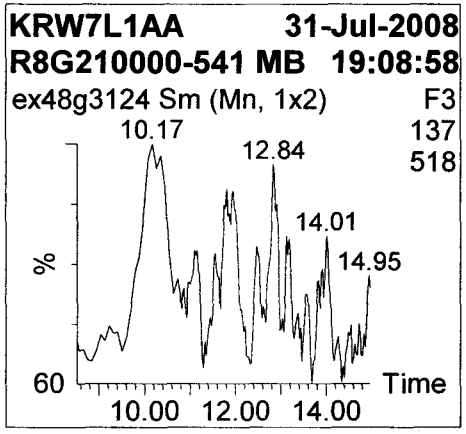
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3124
Text: R8G210000-541 MB

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.625	5064	bb	0.963	96	01/Aug/08	ex48g31	
RDX 13C-..	3.956	26007	bb	0.826	83	01/Aug/08	ex48g31	
RDX						01/Aug/08	ex48g31	
1,3,5-Tr..						01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.743	60083	bb	0.863	86	01/Aug/08	ex48g31	
1,3-Dini..						01/Aug/08	ex48g31	
Nitroben..	7.529	13931	bb	0.362	72	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..	7.726	55	bb	0.002		01/Aug/08	ex48g31	
2,4,6-Tr..	8.118	157	bb	0.009		01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	10.169	140406	bb	0.922	92	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

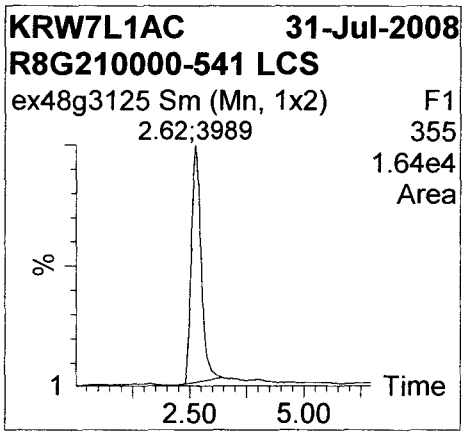
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

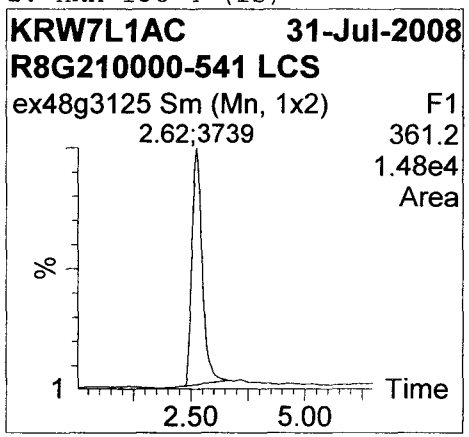
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3125
Text: R8G210000-541 LCS

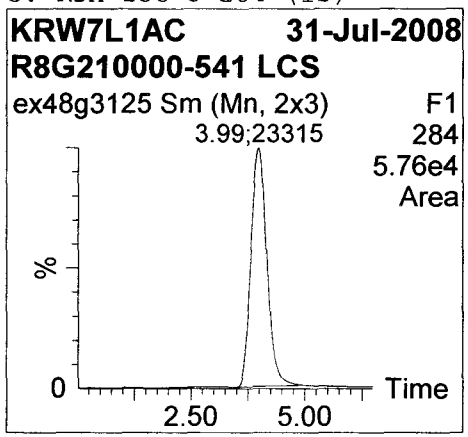
1: HMX



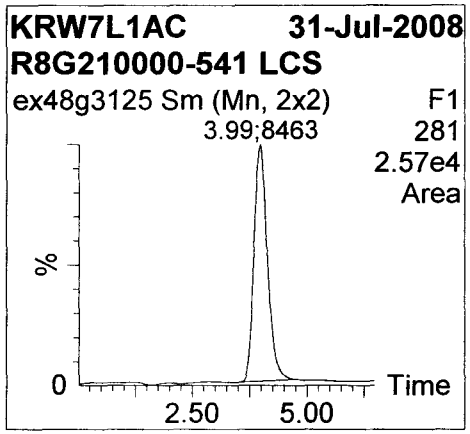
2: HMX 13C-4 (IS)



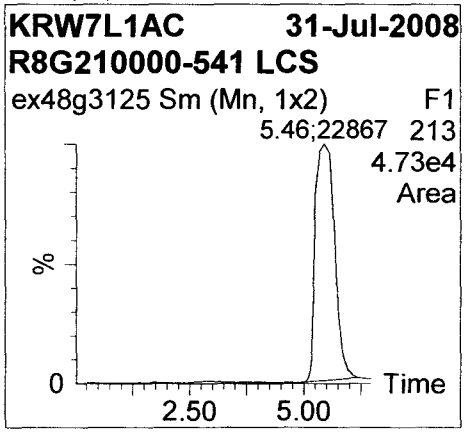
3: RDX 13C-3 284 (IS)



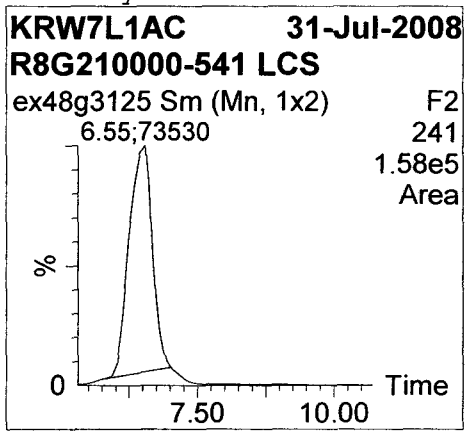
4: RDX



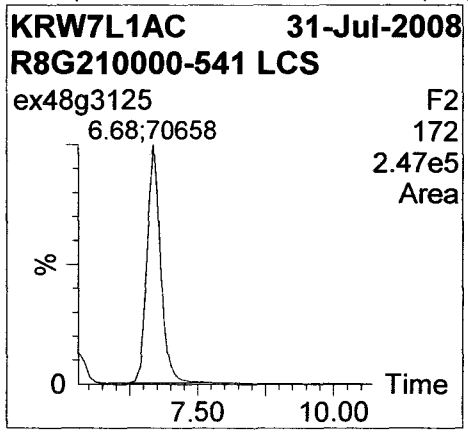
5: 1,3,5-Trinitrobenzene



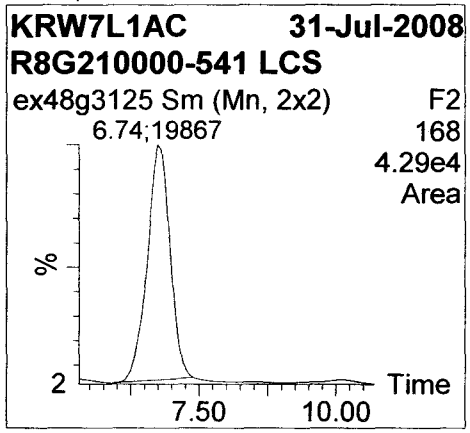
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



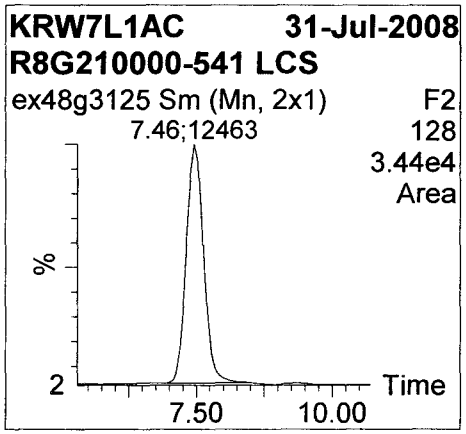
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

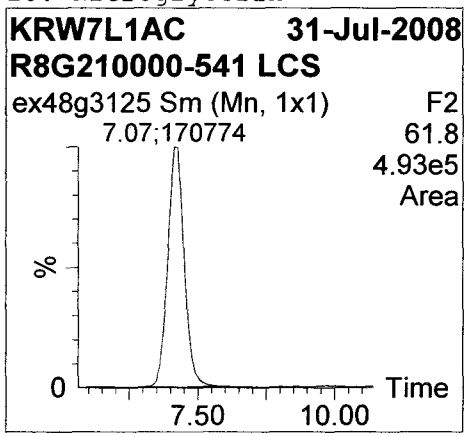
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3125
Text: R8G210000-541 LCS

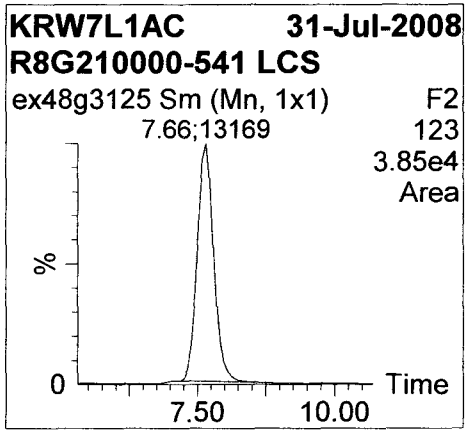
9: Nitrobenzene-d5



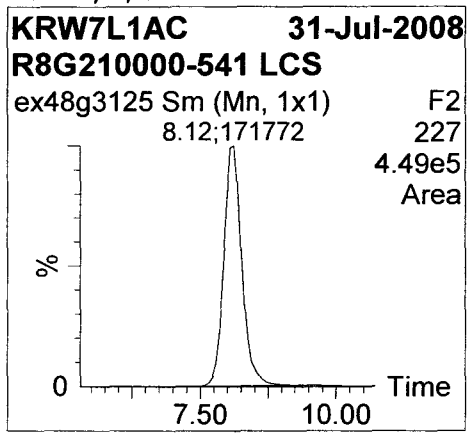
10: Nitroglycerin



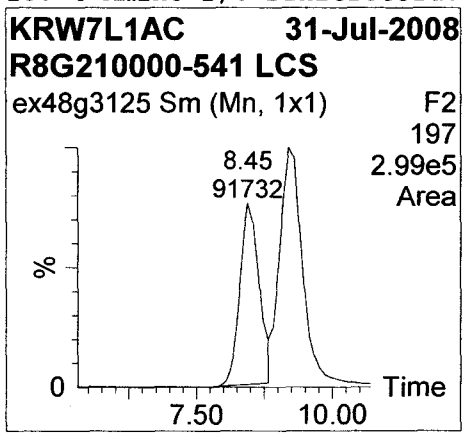
11: Nitrobenzene



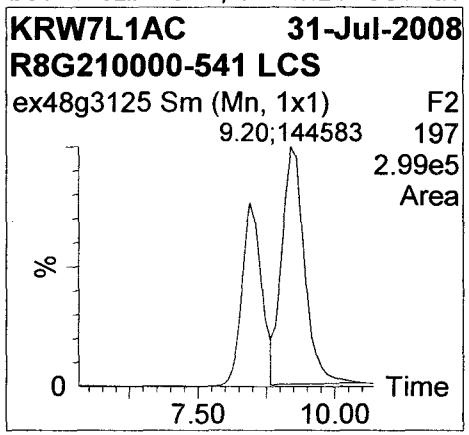
12: 2,4,6-Trinitrotoluene



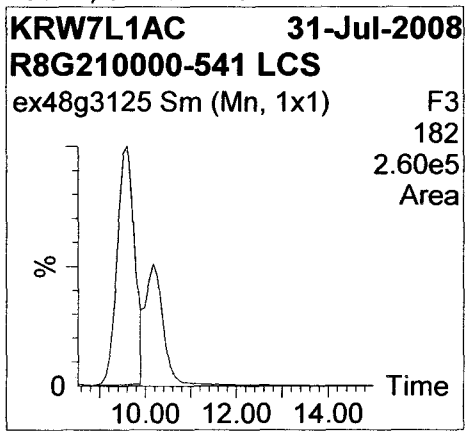
13: 4-Amino-2,6-Dinitrotolu..



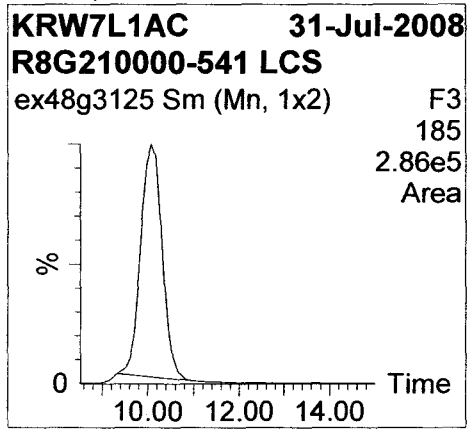
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



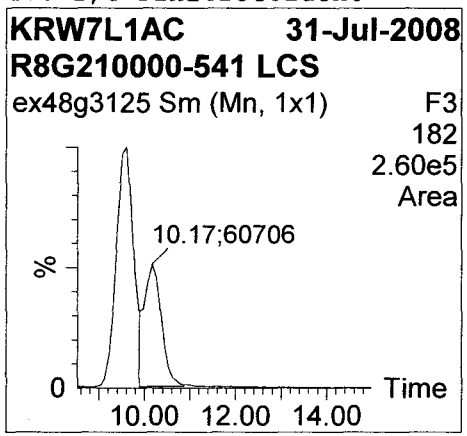
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

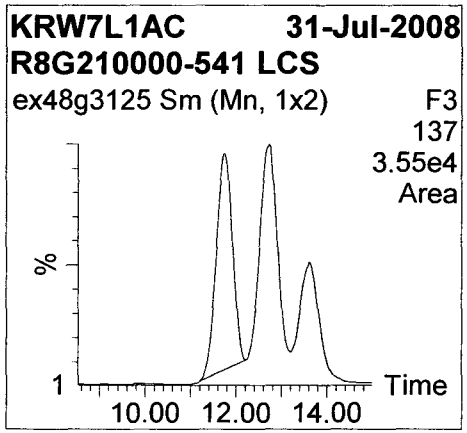
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3125
Text: R8G210000-541 LCS

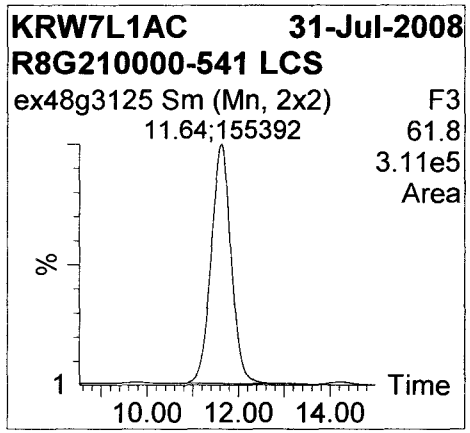
17: 2,4-Dinitrotoluene



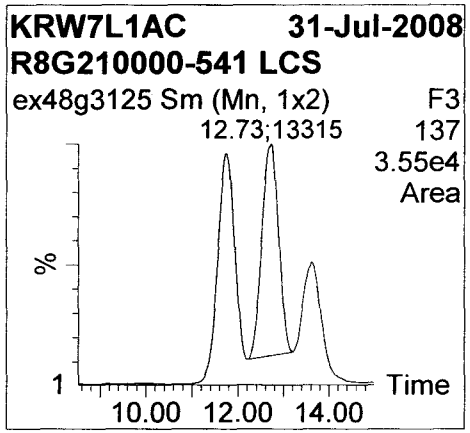
18: 2-Nitrotoluene



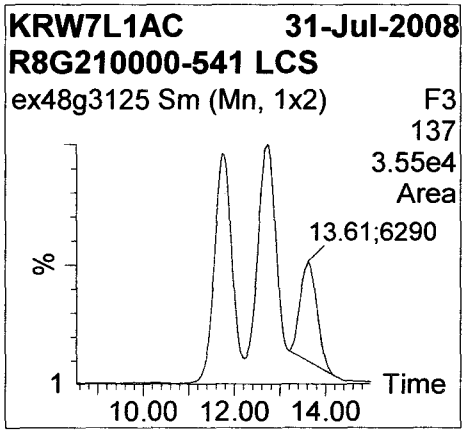
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3125
Text: R8G210000-541 LCS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	3989	bb	0.473	95	01/Aug/08	ex48g31	
HMX 13C-..	2.625	3739	bb	0.711	71	01/Aug/08	ex48g31	
RDX 13C-..	3.993	23315	bb	0.741	74	01/Aug/08	ex48g31	
RDX	3.993	8463	bb	0.513	103	01/Aug/08	ex48g31	
1,3,5-Tr..	5.455	22867	bb	0.446	89	01/Aug/08	ex48g31	
Tetryl	6.547	73530	bb	0.528	106	01/Aug/08	ex48g31	
1,3 Dini..	6.678	70658	bb	1.015	101	01/Aug/08	ex48g31	
1,3-Dini..	6.743	19867	bb	0.441	88	01/Aug/08	ex48g31	
Nitroben..	7.463	12463	bb	0.276	55	01/Aug/08	ex48g31	
Nitrogly..	7.071	170774	bb	0.404	81	01/Aug/08	ex48g31	
Nitroben..	7.660	13169	bb	0.261	52	01/Aug/08	ex48g31	
2,4,6-Tr..	8.118	171772	bb	0.406	81	01/Aug/08	ex48g31	
4-Amino-..	8.446	91732	bd	0.437	87	01/Aug/08	ex48g31	
2-Amino-..	9.199	144583	db	0.425	85	01/Aug/08	ex48g31	
2,6-Dini..	9.604	111678	bd	0.405	81	01/Aug/08	ex48g31	
2,4-Dini..	10.075	151681	bb	0.996	100	01/Aug/08	ex48g31	
2,4-Dini..	10.169	60706	dd	0.433	87	01/Aug/08	ex48g31	
2-Nitrot..	11.757	13073	bb	0.222	44	01/Aug/08	ex48g31	
PETN	11.643	155392	bb	0.400	80	01/Aug/08	ex48g31	
4-Nitrot..	12.729	13315	bb	0.345	69	01/Aug/08	ex48g31	
3-Nitrot..	13.614	6290	bb	0.285	57	01/Aug/08	ex48g31	

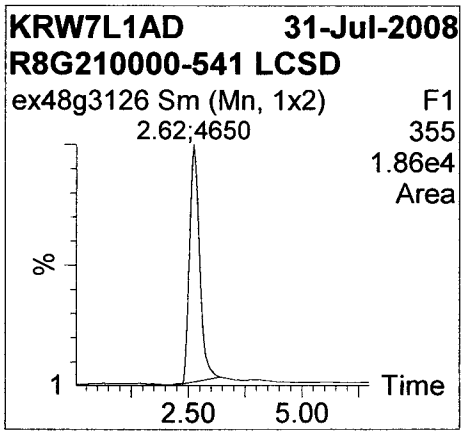
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

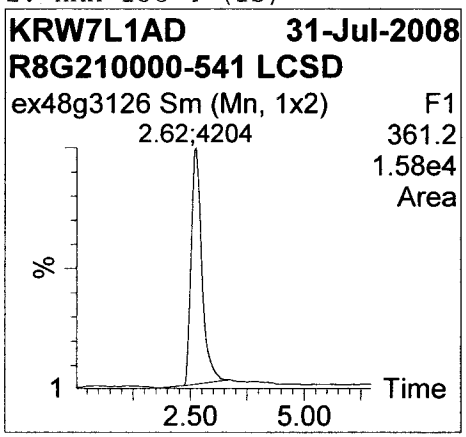
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3126
Text: R8G210000-541 LCSD

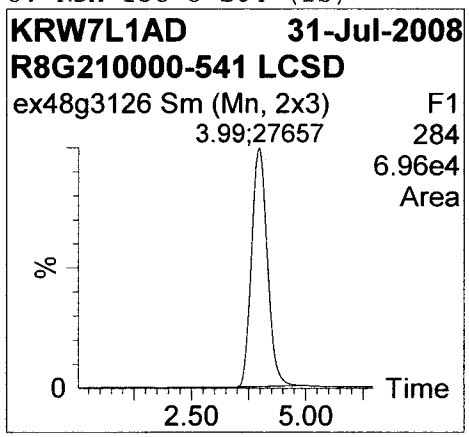
1: HMX



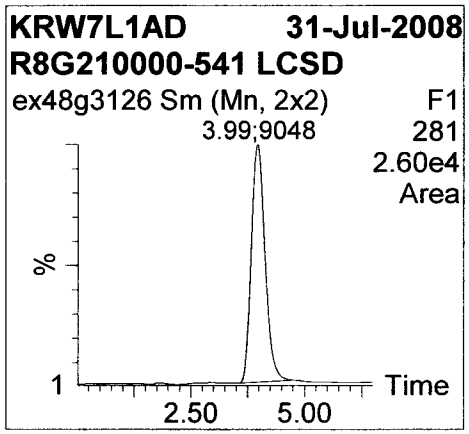
2: HMX 13C-4 (IS)



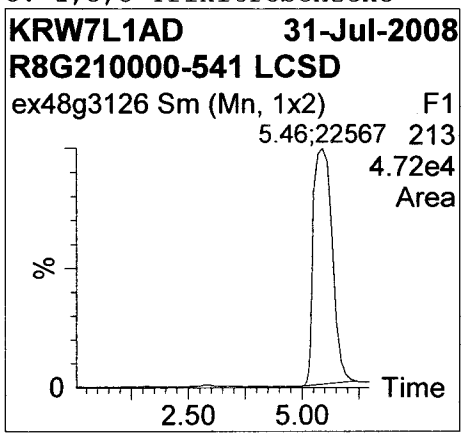
3: RDX 13C-3 284 (IS)



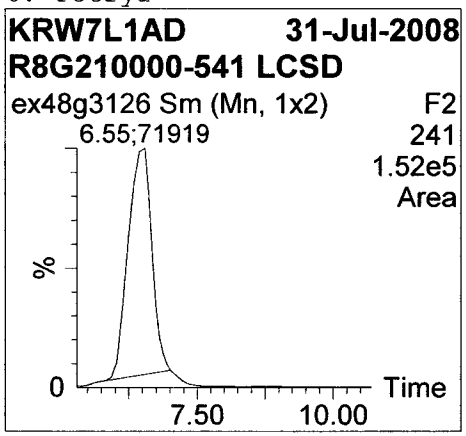
4: RDX



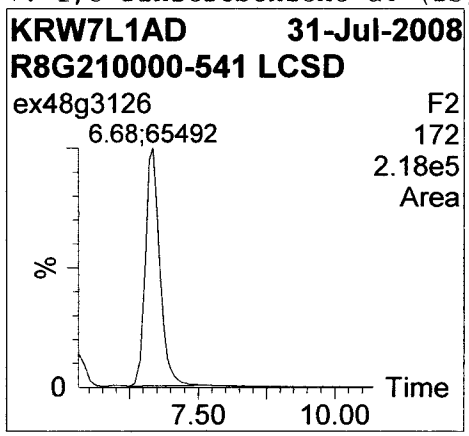
5: 1,3,5-Trinitrobenzene



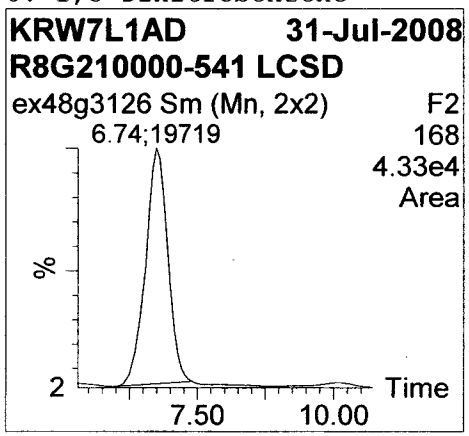
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



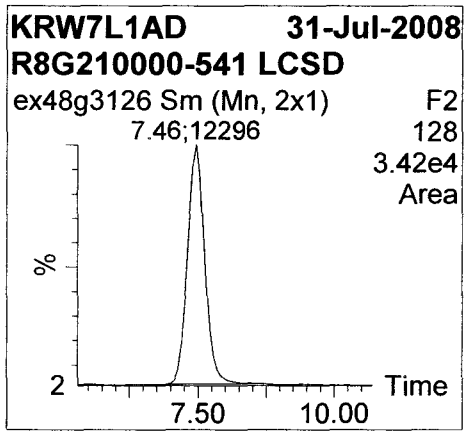
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

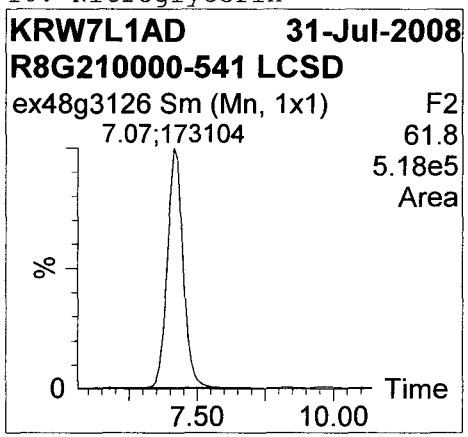
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3126
Text: R8G210000-541 LCSD

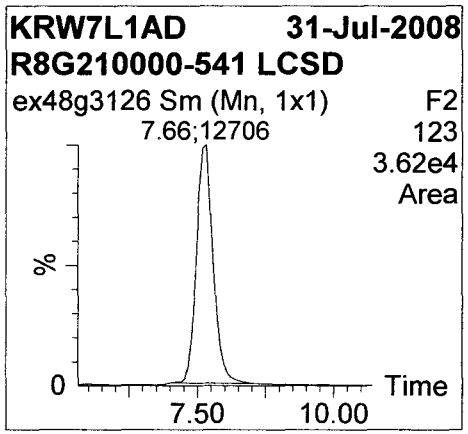
9: Nitrobenzene-d5



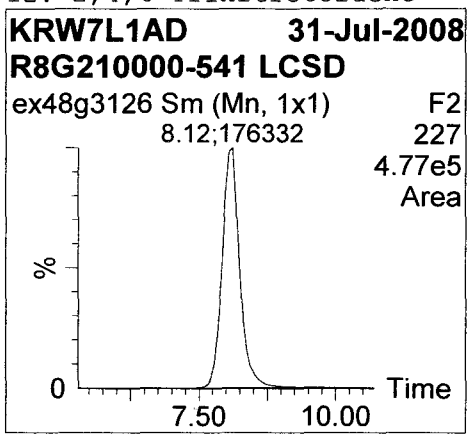
10: Nitroglycerin



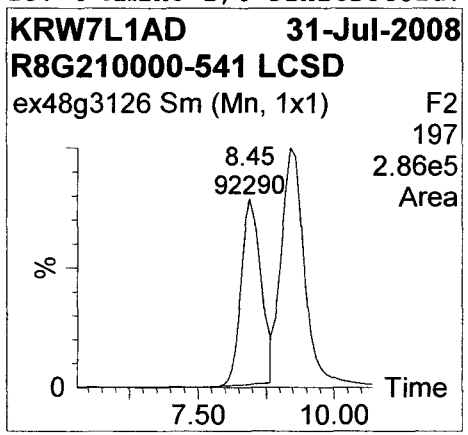
11: Nitrobenzene



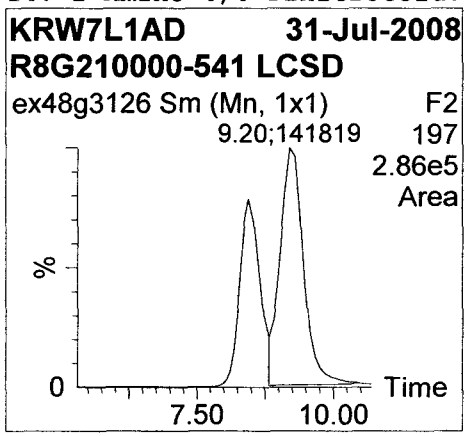
12: 2,4,6-Trinitrotoluene



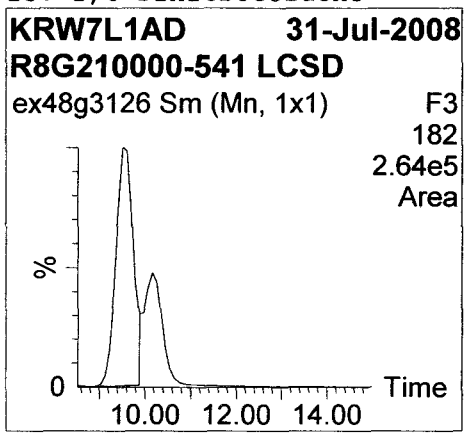
13: 4-Amino-2,6-Dinitrotolu..



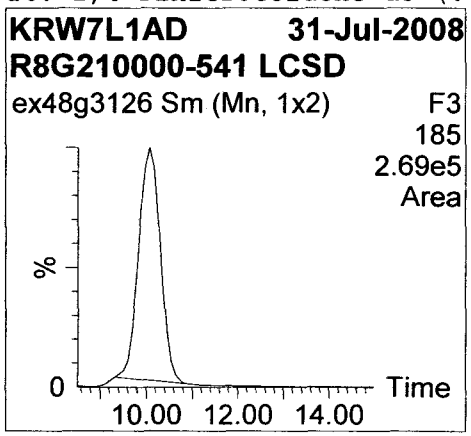
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



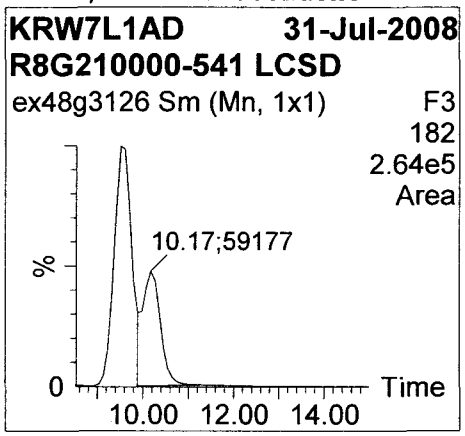
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

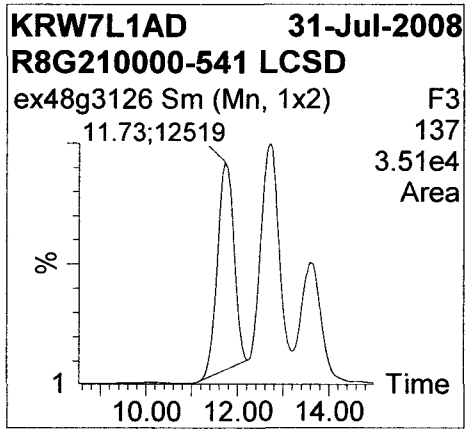
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3126
Text: R8G210000-541 LCSD

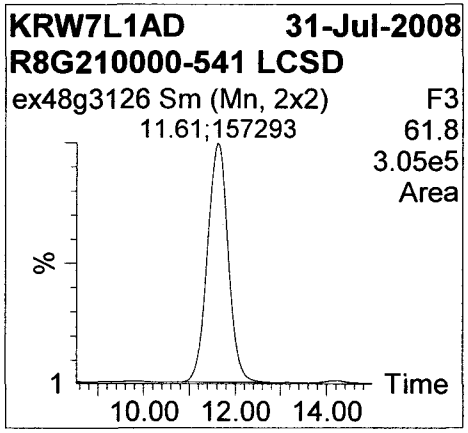
17: 2,4-Dinitrotoluene



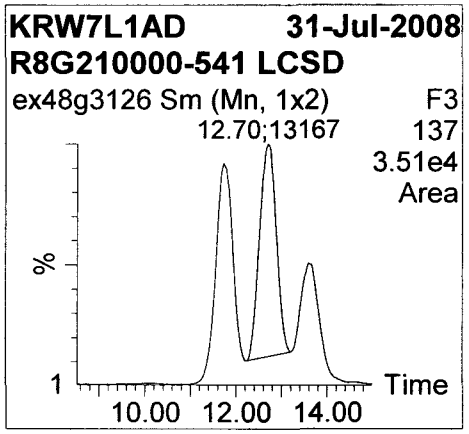
18: 2-Nitrotoluene



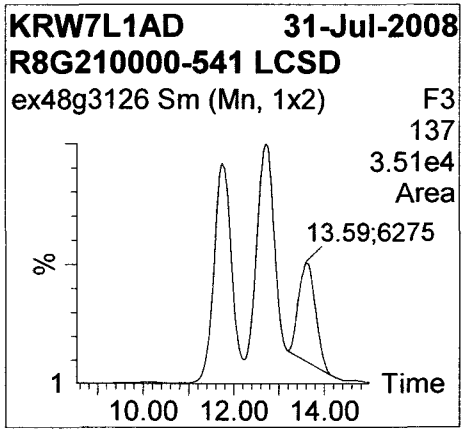
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3126
Text: R8G210000-541 LCSD

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	4650	bb	0.491	98	01/Aug/08	ex48g31	
HMX 13C-..	2.625	4204	bb	0.799	80	01/Aug/08	ex48g31	
RDX 13C-..	3.993	27657	bb	0.878	88	01/Aug/08	ex48g31	
RDX	3.993	9048	bb	0.461	92	01/Aug/08	ex48g31	
1,3,5-Tr..	5.455	22567	bb	0.472	94	01/Aug/08	ex48g31	
Tetryl	6.547	71919	bb	0.552	110	01/Aug/08	ex48g31	
1,3 Dini..	6.678	65492	bb	0.941	94	01/Aug/08	ex48g31	
1,3-Dini..	6.743	19719	bb	0.473	95	01/Aug/08	ex48g31	
Nitroben..	7.464	12296	bb	0.293	59	01/Aug/08	ex48g31	
Nitrogly..	7.071	173104	bb	0.442	88	01/Aug/08	ex48g31	
Nitroben..	7.660	12706	bb	0.272	54	01/Aug/08	ex48g31	
2,4,6-Tr..	8.119	176332	bb	0.448	90	01/Aug/08	ex48g31	
4-Amino-..	8.446	92290	bd	0.474	95	01/Aug/08	ex48g31	
2-Amino-..	9.199	141819	db	0.449	90	01/Aug/08	ex48g31	
2,6-Dini..	9.510	114307	bd	0.439	88	01/Aug/08	ex48g31	
2,4-Dini..	10.075	142914	bb	0.938	94	01/Aug/08	ex48g31	
2,4-Dini..	10.169	59177	dd	0.448	90	01/Aug/08	ex48g31	
2-Nitrot..	11.729	12519	bb	0.225	45	01/Aug/08	ex48g31	
PETN	11.615	157293	bb	0.430	86	01/Aug/08	ex48g31	
4-Nitrot..	12.700	13167	bb	0.362	72	01/Aug/08	ex48g31	
3-Nitrot..	13.586	6275	bb	0.302	60	01/Aug/08	ex48g31	

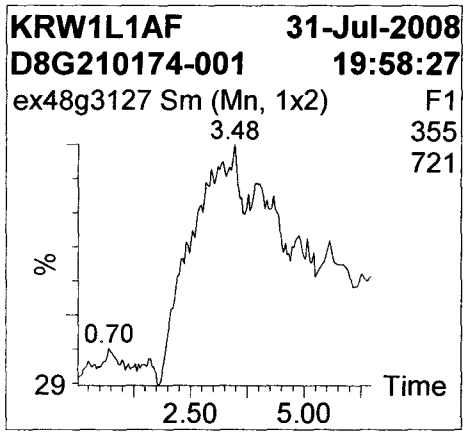
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

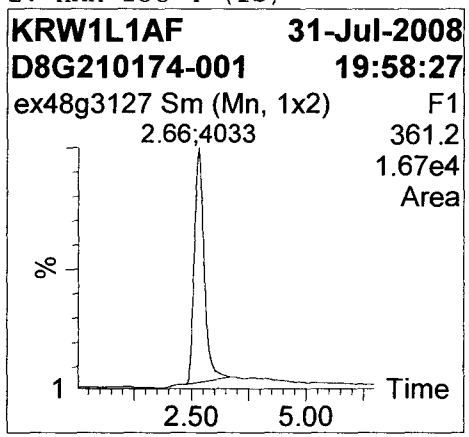
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3127
Text: D8G210174-001

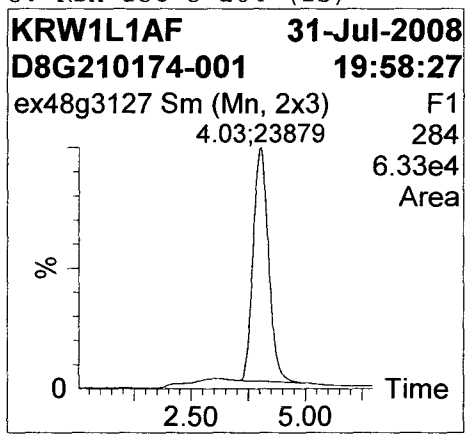
1: HMX



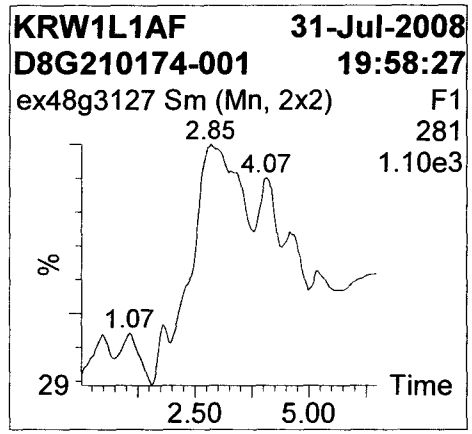
2: HMX 13C-4 (IS)



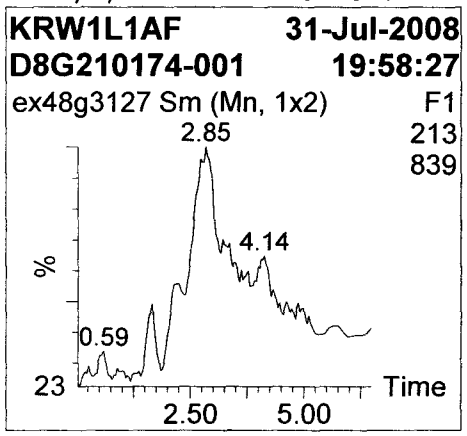
3: RDX 13C-3 284 (IS)



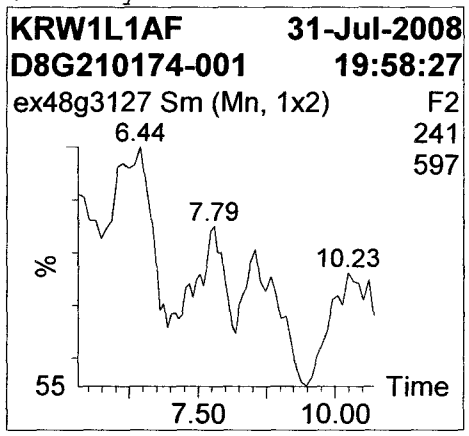
4: RDX



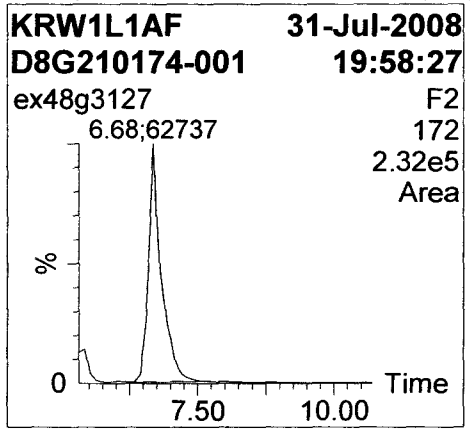
5: 1,3,5-Trinitrobenzene



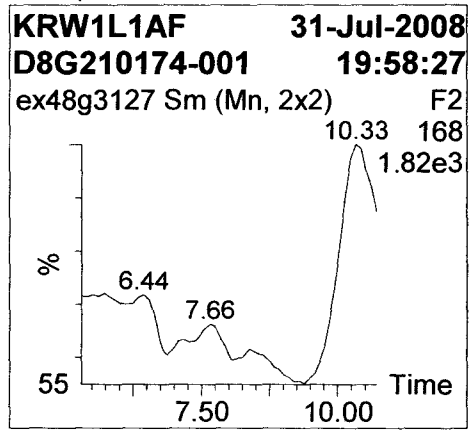
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



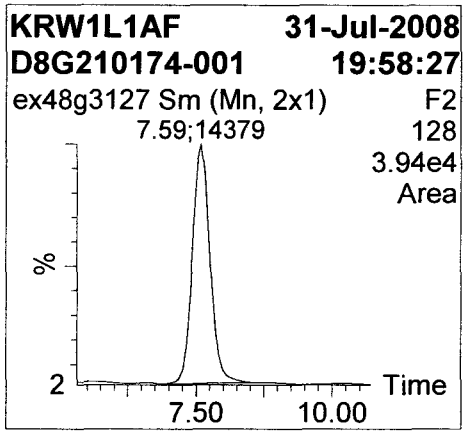
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

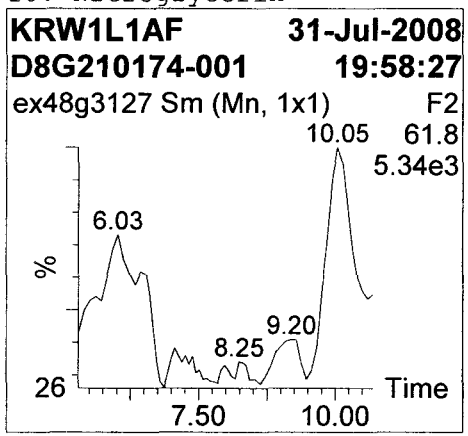
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3127
Text: D8G210174-001

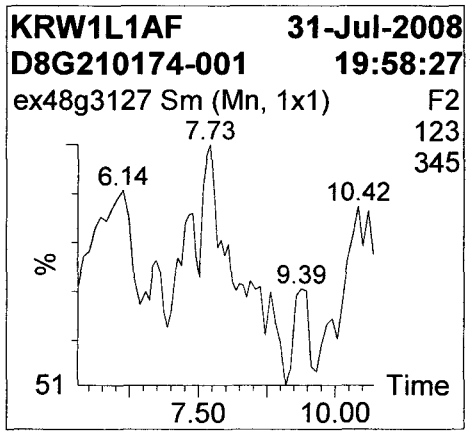
9: Nitrobenzene-d5



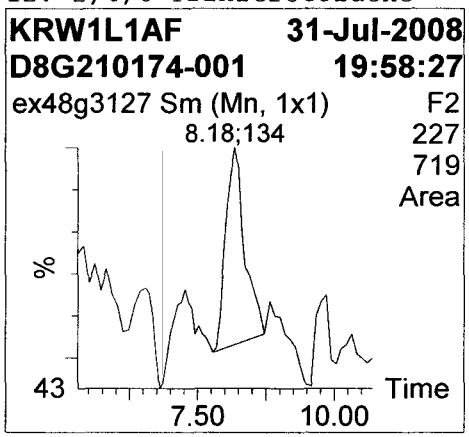
10: Nitroglycerin



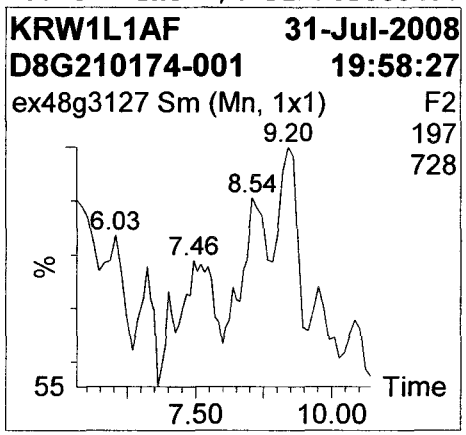
11: Nitrobenzene



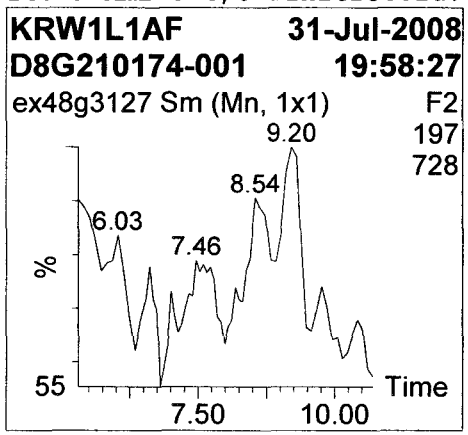
12: 2,4,6-Trinitrotoluene



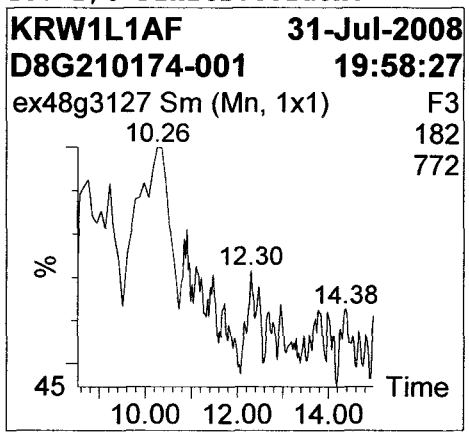
13: 4-Amino-2,6-Dinitrotolu..



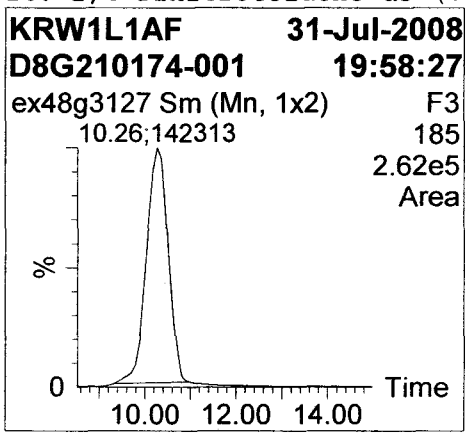
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



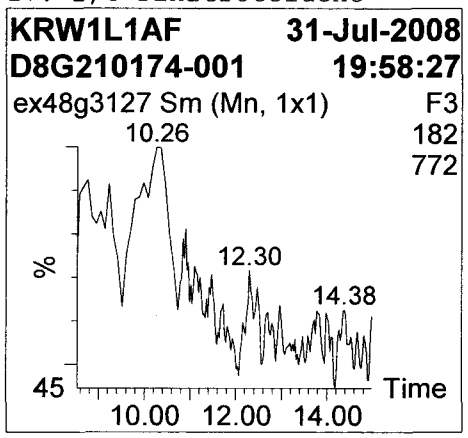
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

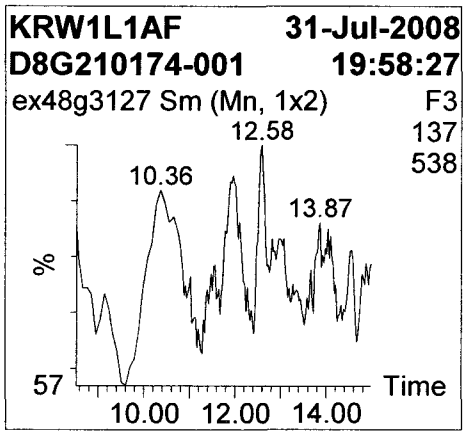
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3127
Text: D8G210174-001

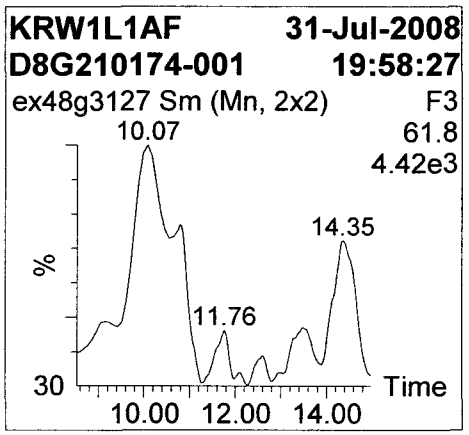
17: 2,4-Dinitrotoluene



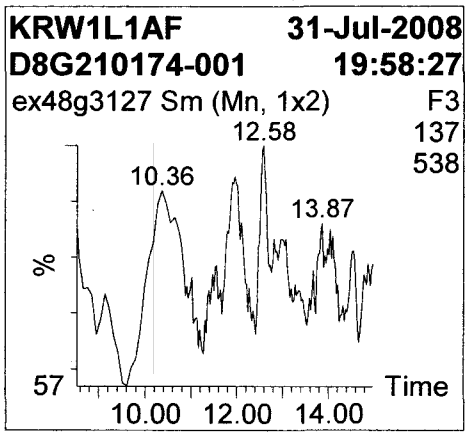
18: 2-Nitrotoluene



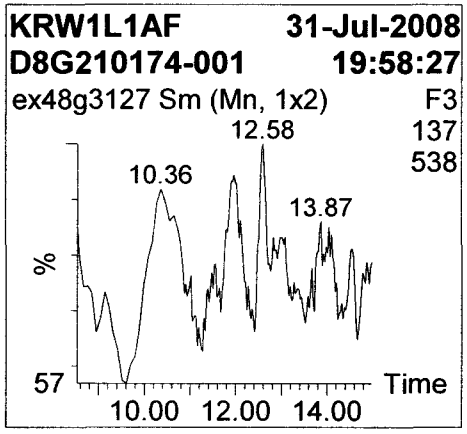
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3127
Text: D8G210174-001

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.662	4033	bb	0.767	77	01/Aug/08	ex48g31	
RDX 13C-..	4.030	23879	bb	0.758	76	01/Aug/08	ex48g31	
RDX						01/Aug/08	ex48g31	
1,3,5-Tr..						01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.678	62737	bb	0.901	90	01/Aug/08	ex48g31	
1,3-Dini..						01/Aug/08	ex48g31	
Nitroben..	7.595	14379	bb	0.361	72	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..						01/Aug/08	ex48g31	
2,4,6-Tr..	8.184	134	bb	0.009		01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	10.263	142313	bb	0.934	93	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

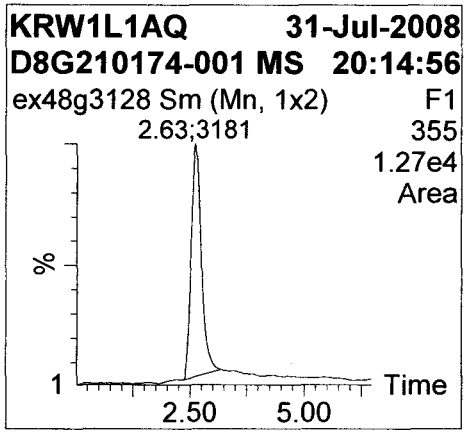
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

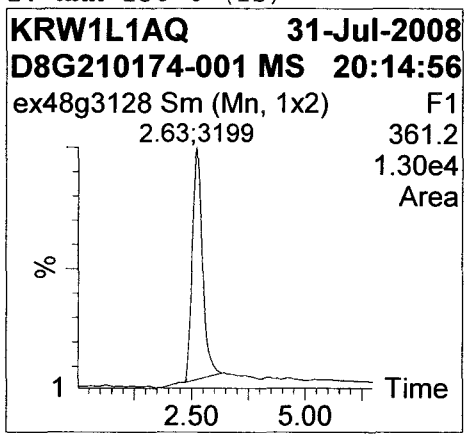
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3128
Text: D8G210174-001 MS

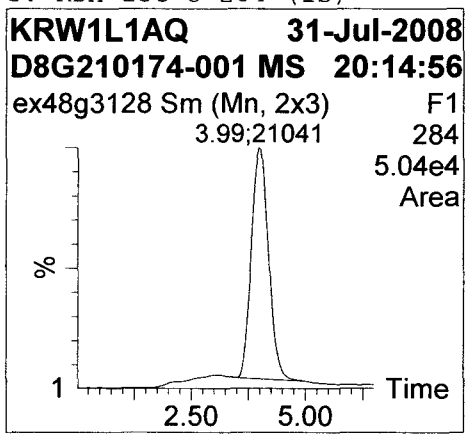
1: HMX



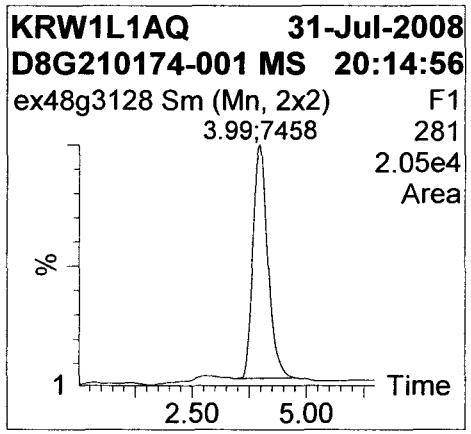
2: HMX 13C-4 (IS)



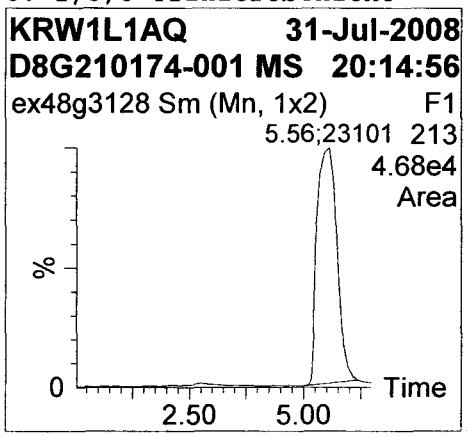
3: RDX 13C-3 284 (IS)



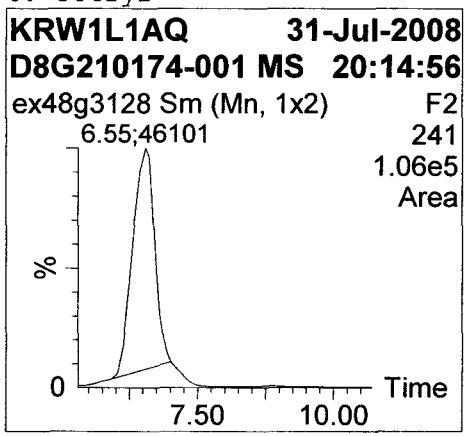
4: RDX



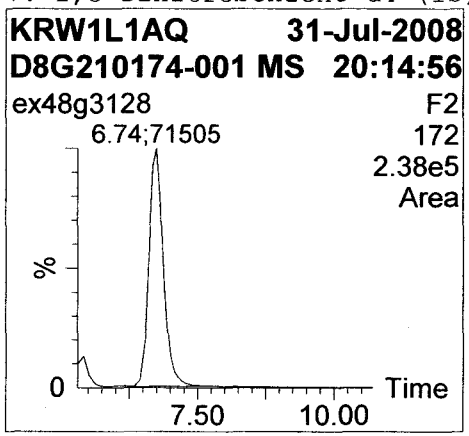
5: 1,3,5-Trinitrobenzene



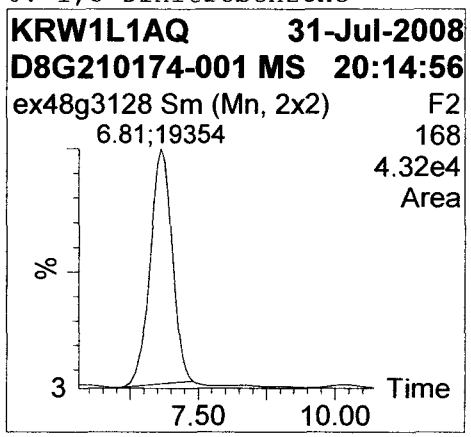
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



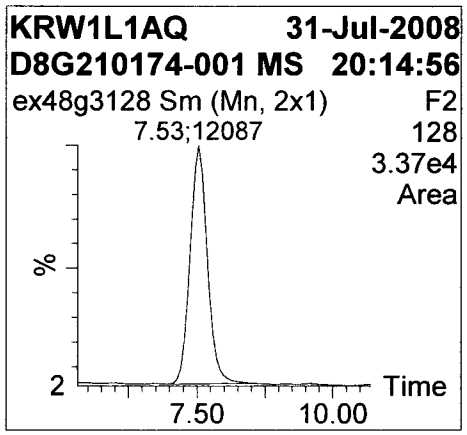
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

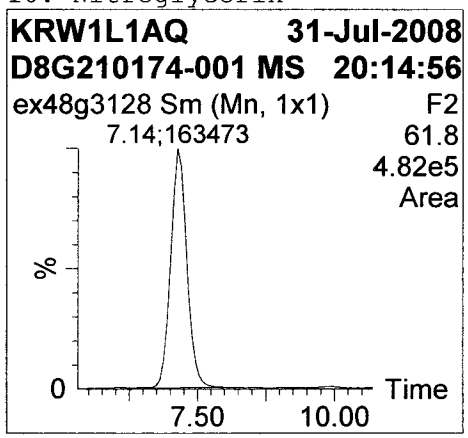
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3128
Text: D8G210174-001 MS

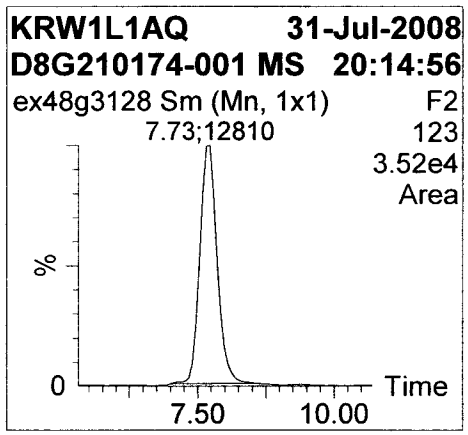
9: Nitrobenzene-d5



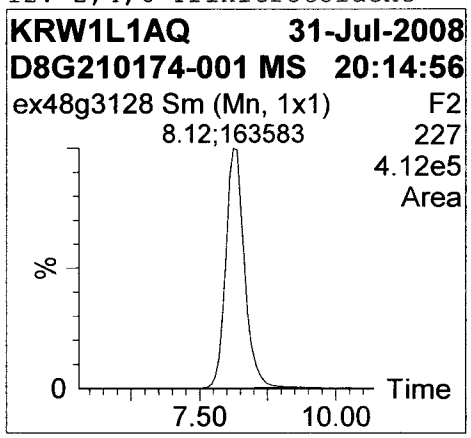
10: Nitroglycerin



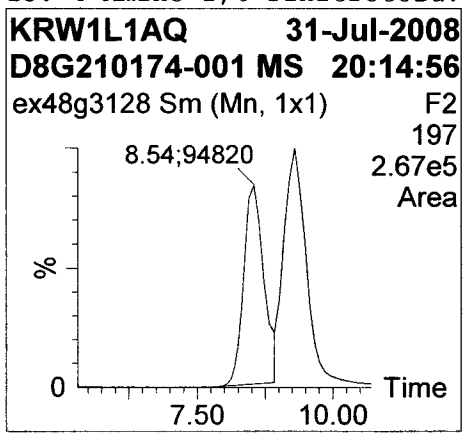
11: Nitrobenzene



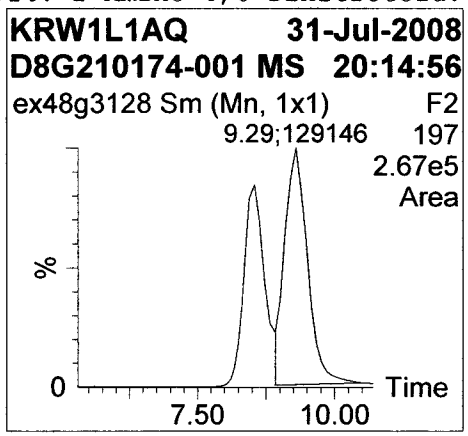
12: 2,4,6-Trinitrotoluene



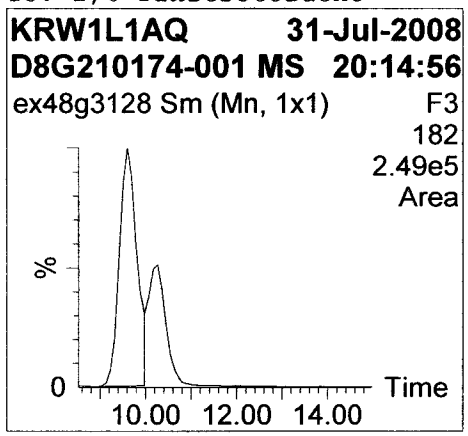
13: 4-Amino-2,6-Dinitrotolu..



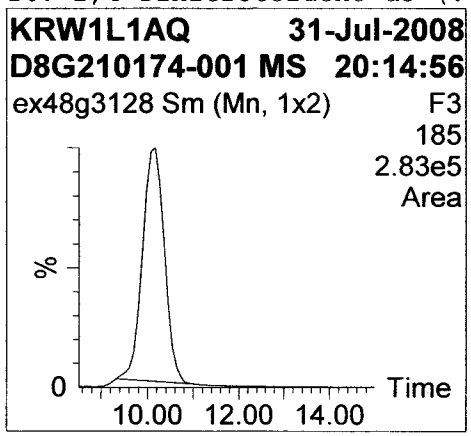
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



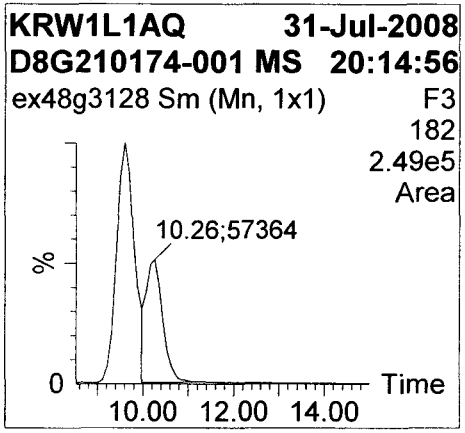
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

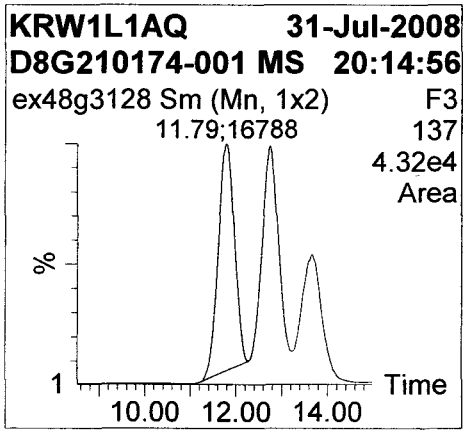
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3128
Text: D8G210174-001 MS

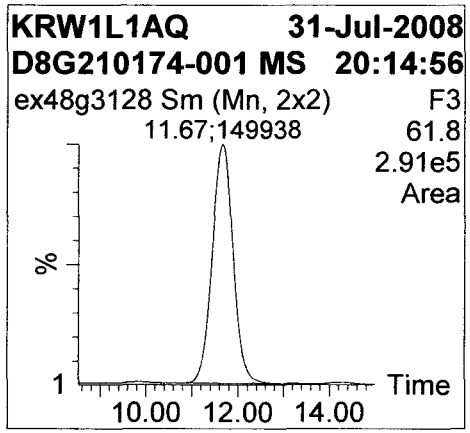
17: 2,4-Dinitrotoluene



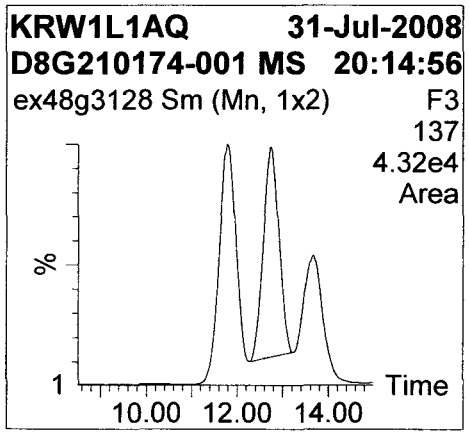
18: 2-Nitrotoluene



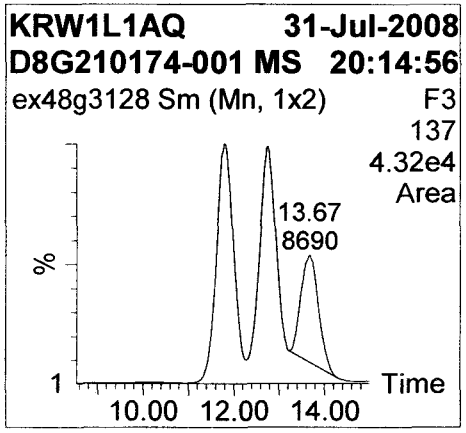
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3128
Text: D8G210174-001 MS

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	3181	bb	0.441	88	01/Aug/08	ex48g31	
HMX 13C-..	2.625	3199	bb	0.608	61	01/Aug/08	ex48g31	
RDX 13C-..	3.993	21041	bb	0.668	67	01/Aug/08	ex48g31	
RDX	3.993	7458	bb	0.501	100	01/Aug/08	ex48g31	
1,3,5-Tr..	5.558	23101	bb	0.445	89	01/Aug/08	ex48g31	
Tetryl	6.547	46101	bb	0.349	70	01/Aug/08	ex48g31	
1,3 Dini..	6.743	71505	bb	1.027	103	01/Aug/08	ex48g31	
1,3-Dini..	6.809	19354	bb	0.425	85	01/Aug/08	ex48g31	
Nitroben..	7.530	12087	bb	0.264	53	01/Aug/08	ex48g31	
Nitrogly..	7.137	163473	bb	0.382	76	01/Aug/08	ex48g31	
Nitroben..	7.726	12810	bb	0.251	50	01/Aug/08	ex48g31	
2,4,6-Tr..	8.119	163583	bb	0.382	76	01/Aug/08	ex48g31	
4-Amino-..	8.541	94820	bd	0.446	89	01/Aug/08	ex48g31	
2-Amino-..	9.294	129146	db	0.376	75	01/Aug/08	ex48g31	
2,6-Dini..	9.605	109291	bd	0.392	78	01/Aug/08	ex48g31	
2,4-Dini..	10.170	153445	bb	1.007	101	01/Aug/08	ex48g31	
2,4-Dini..	10.264	57364	dd	0.405	81	01/Aug/08	ex48g31	
2-Nitrot..	11.787	16788	bb	0.281	56	01/Aug/08	ex48g31	
PETN	11.672	149938	bb	0.382	76	01/Aug/08	ex48g31	
4-Nitrot..	12.758	15005	bb	0.384	77	01/Aug/08	ex48g31	
3-Nitrot..	13.672	8690	bb	0.391	78	01/Aug/08	ex48g31	

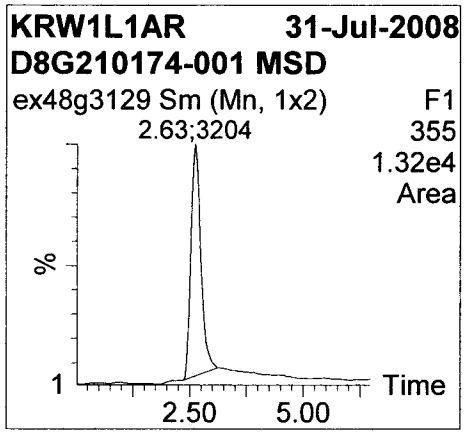
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

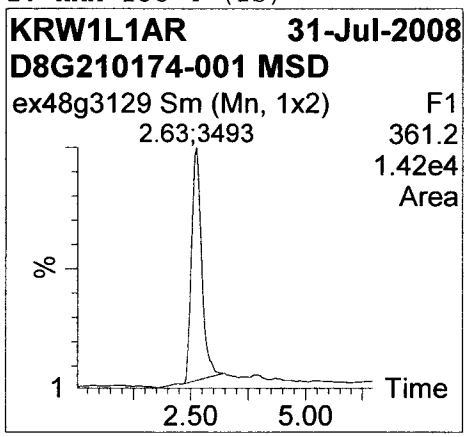
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3129
Text: D8G210174-001 MSD

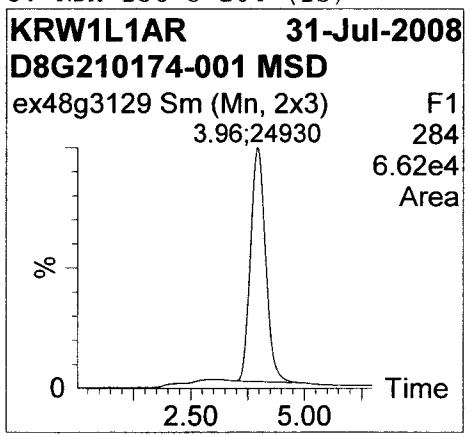
1: HMX



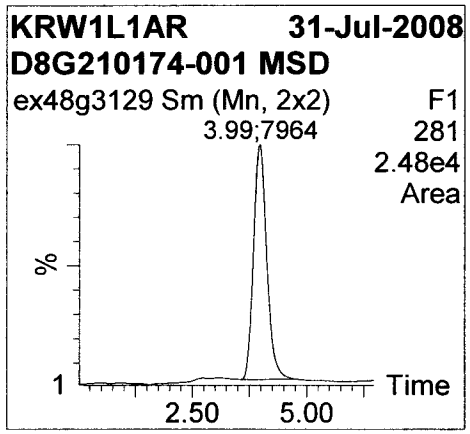
2: HMX 13C-4 (IS)



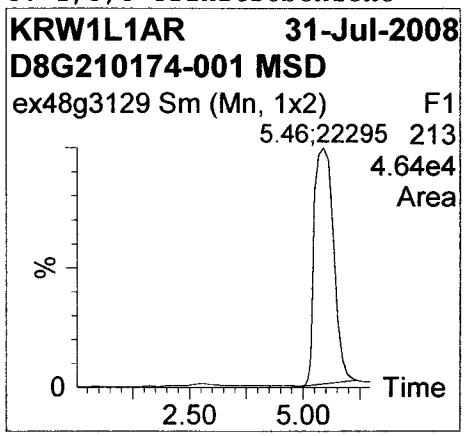
3: RDX 13C-3 284 (IS)



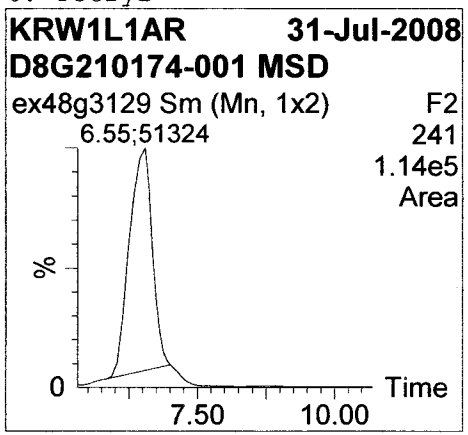
4: RDX



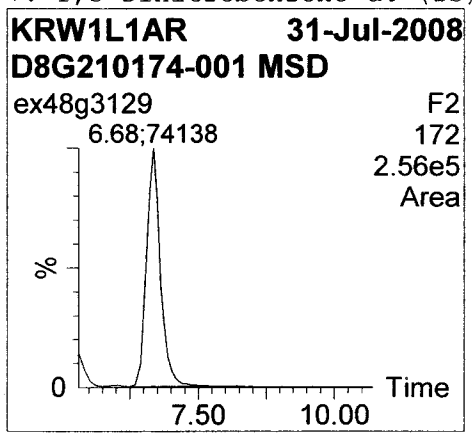
5: 1,3,5-Trinitrobenzene



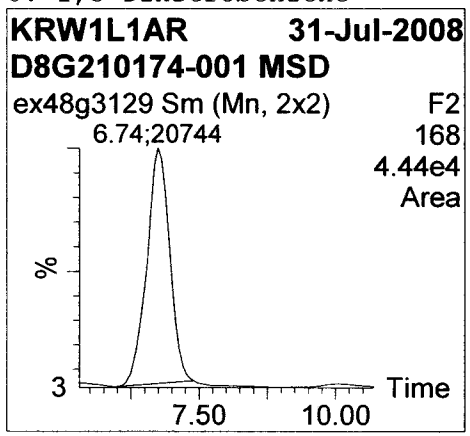
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



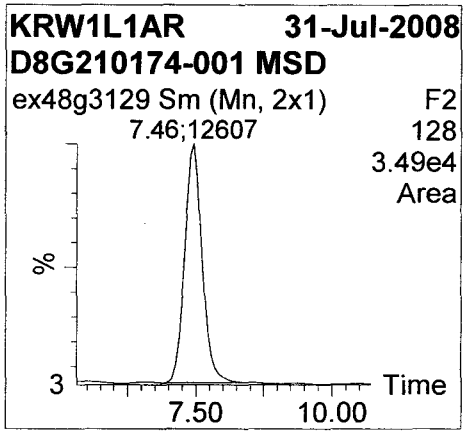
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

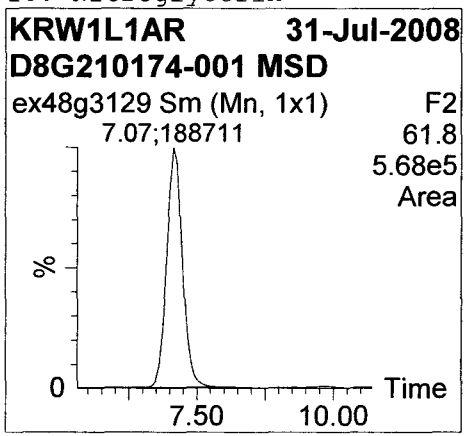
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3129
Text: D8G210174-001 MSD

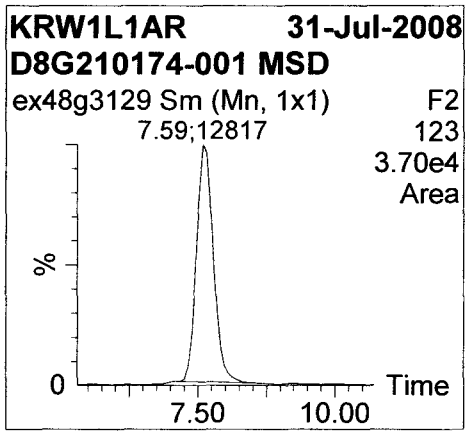
9: Nitrobenzene-d5



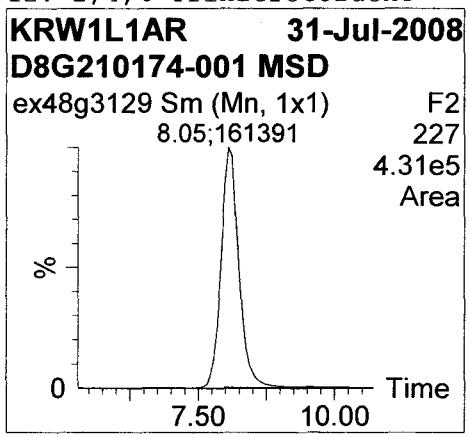
10: Nitroglycerin



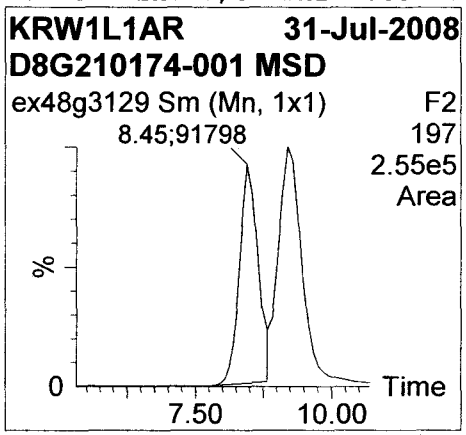
11: Nitrobenzene



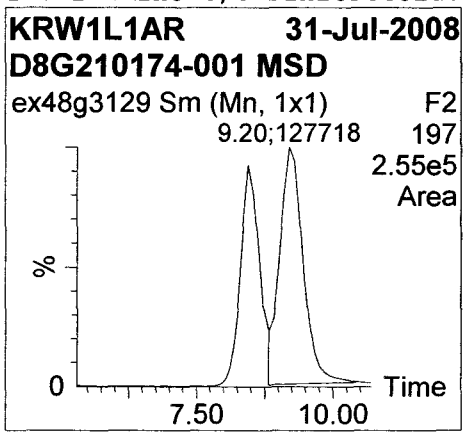
12: 2,4,6-Trinitrotoluene



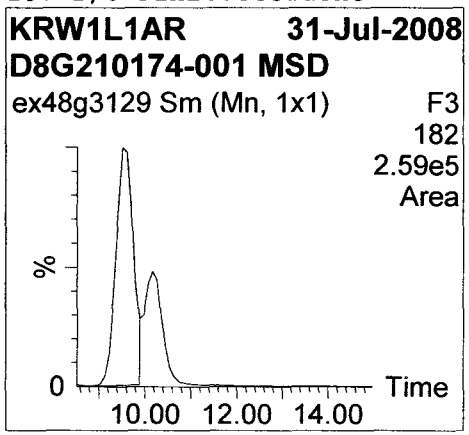
13: 4-Amino-2,6-Dinitrotolu..



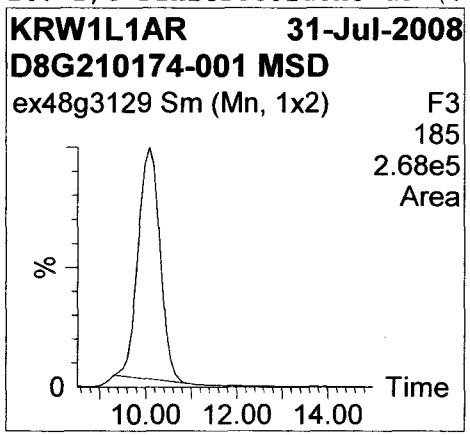
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



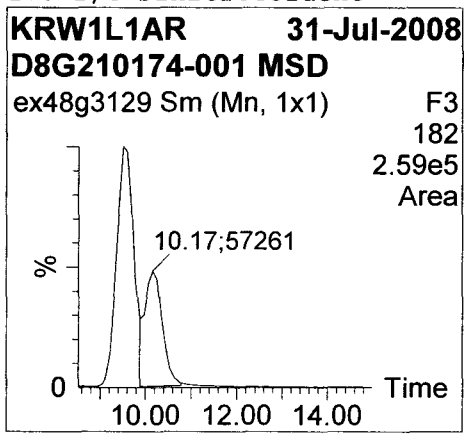
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

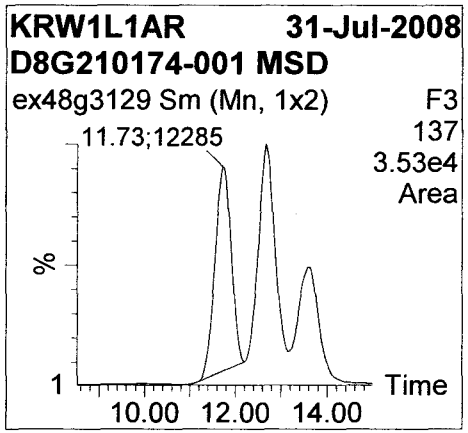
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3129
Text: D8G210174-001 MSD

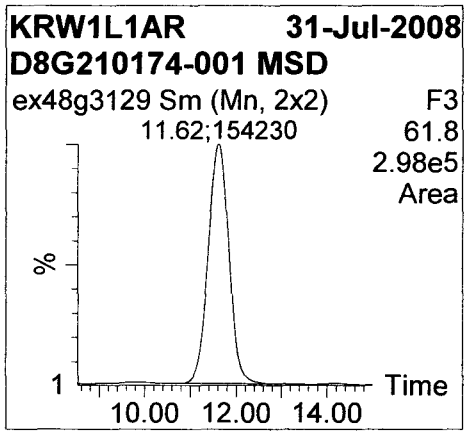
17: 2,4-Dinitrotoluene



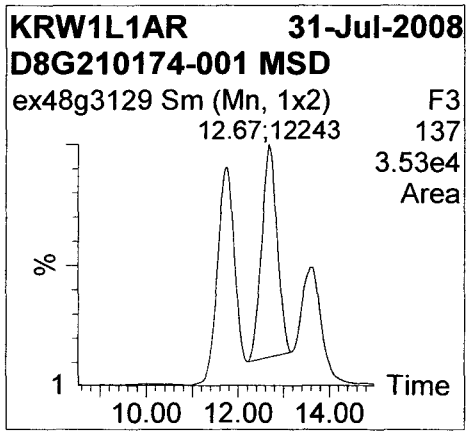
18: 2-Nitrotoluene



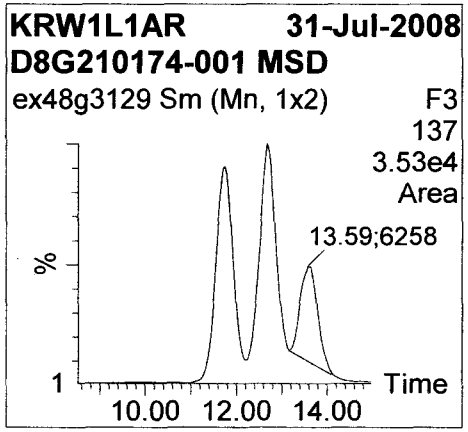
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3129
Text: D8G210174-001 MSD

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX	2.625	3204	bb	0.407	81	01/Aug/08	ex48g31	
HMX 13C-..	2.625	3493	bb	0.664	66	01/Aug/08	ex48g31	
RDX 13C-..	3.956	24930	bb	0.792	79	01/Aug/08	ex48g31	
RDX	3.993	7964	bb	0.450	90	01/Aug/08	ex48g31	
1,3,5-Tr..	5.455	22295	bb	0.417	83	01/Aug/08	ex48g31	
Tetryl	6.547	51324	bb	0.372	74	01/Aug/08	ex48g31	
1,3 Dini..	6.678	74138	bb	1.065	106	01/Aug/08	ex48g31	
1,3-Dini..	6.743	20744	bb	0.439	88	01/Aug/08	ex48g31	
Nitroben..	7.464	12607	bb	0.266	53	01/Aug/08	ex48g31	
Nitrogly..	7.071	188711	bb	0.426	85	01/Aug/08	ex48g31	
Nitroben..	7.595	12817	bb	0.242	48	01/Aug/08	ex48g31	
2,4,6-Tr..	8.053	161391	bb	0.364	73	01/Aug/08	ex48g31	
4-Amino-..	8.446	91798	bd	0.416	83	01/Aug/08	ex48g31	
2-Amino-..	9.199	127718	db	0.359	72	01/Aug/08	ex48g31	
2,6-Dini..	9.510	111452	bd	0.429	86	01/Aug/08	ex48g31	
2,4-Dini..	10.075	142698	bb	0.937	94	01/Aug/08	ex48g31	
2,4-Dini..	10.169	57261	dd	0.434	87	01/Aug/08	ex48g31	
2-Nitrot..	11.730	12285	bb	0.222	44	01/Aug/08	ex48g31	
PETN	11.615	154230	bb	0.422	84	01/Aug/08	ex48g31	
4-Nitrot..	12.672	12243	bb	0.337	67	01/Aug/08	ex48g31	
3-Nitrot..	13.586	6258	bb	0.302	60	01/Aug/08	ex48g31	

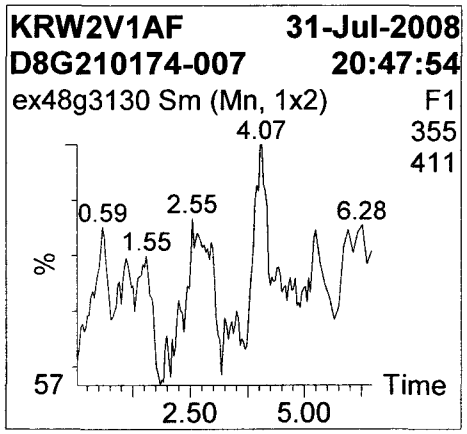
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

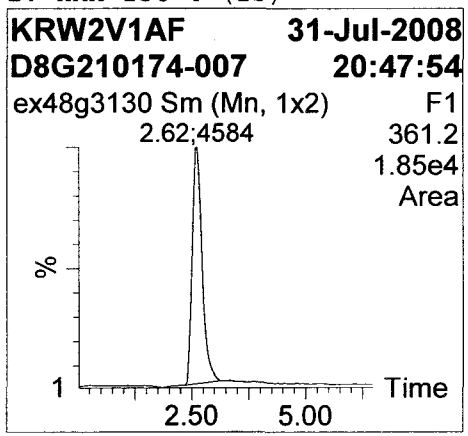
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3130
Text: D8G210174-007

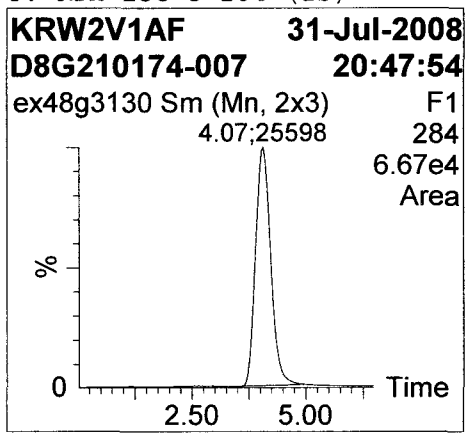
1: HMX



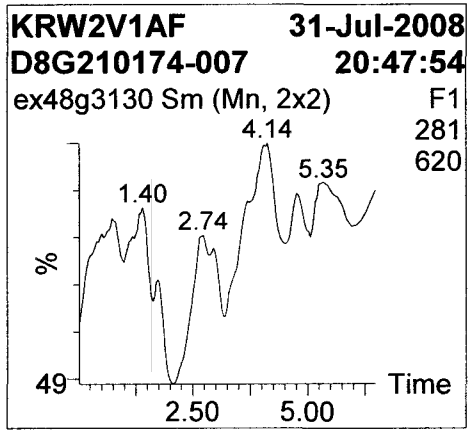
2: HMX 13C-4 (IS)



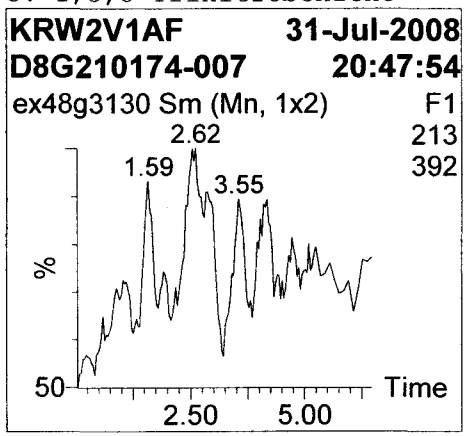
3: RDX 13C-3 284 (IS)



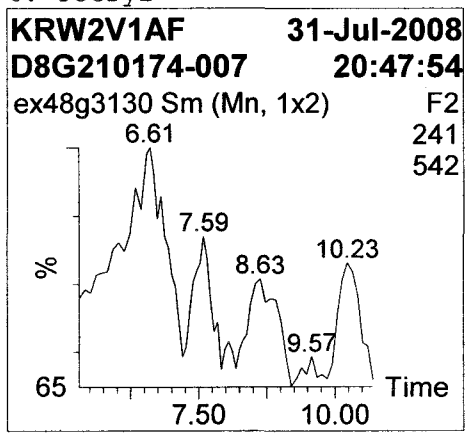
4: RDX



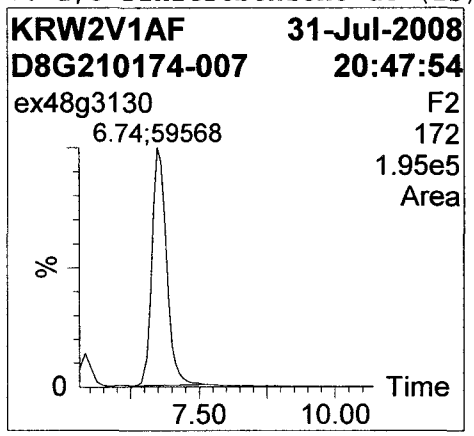
5: 1,3,5-Trinitrobenzene



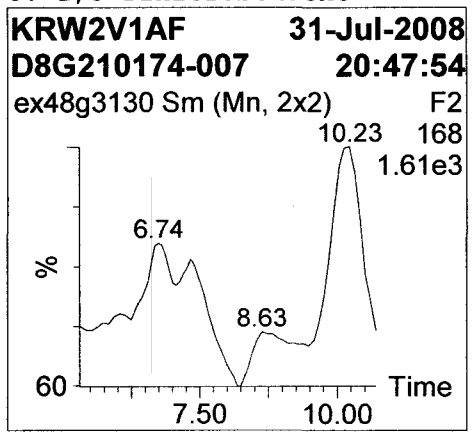
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



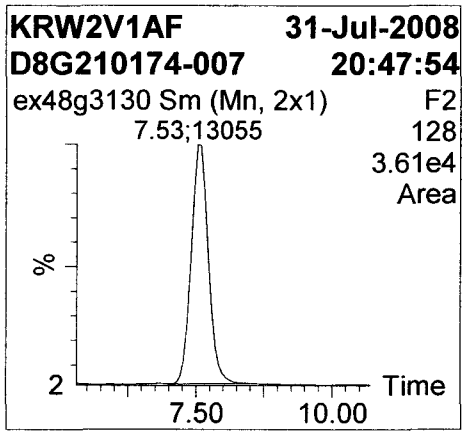
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

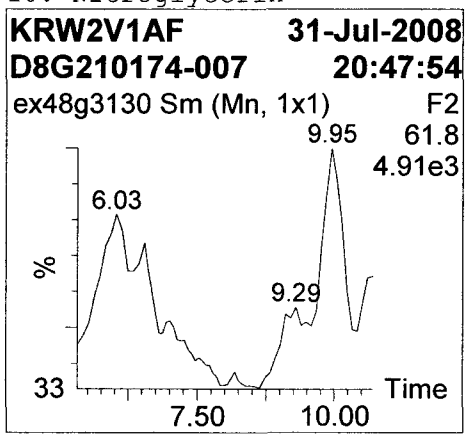
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3130
Text: D8G210174-007

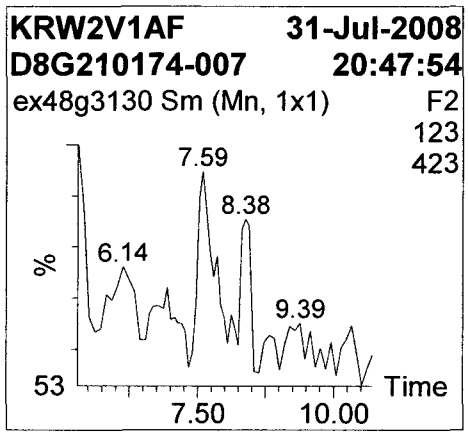
9: Nitrobenzene-d5



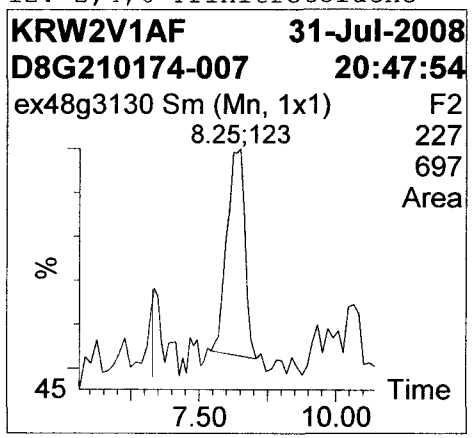
10: Nitroglycerin



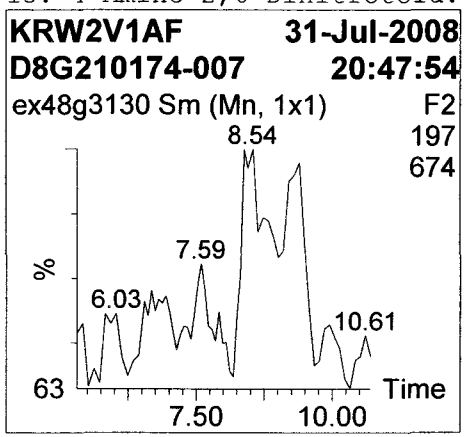
11: Nitrobenzene



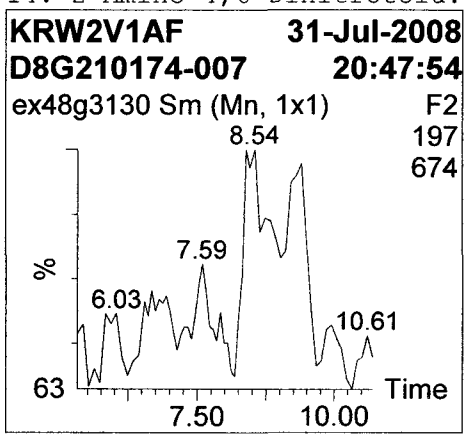
12: 2,4,6-Trinitrotoluene



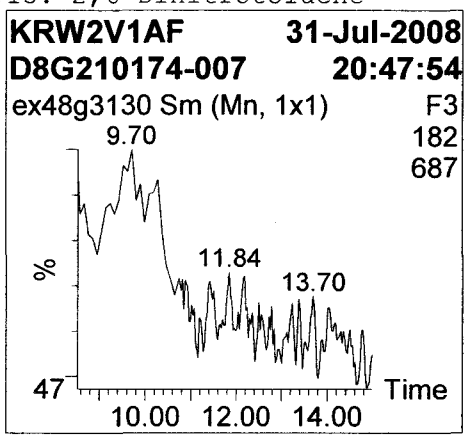
13: 4-Amino-2,6-Dinitrotolu..



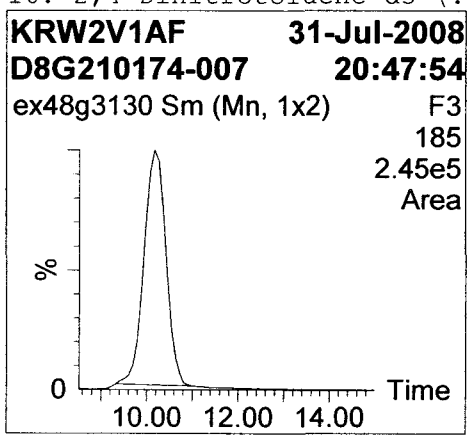
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



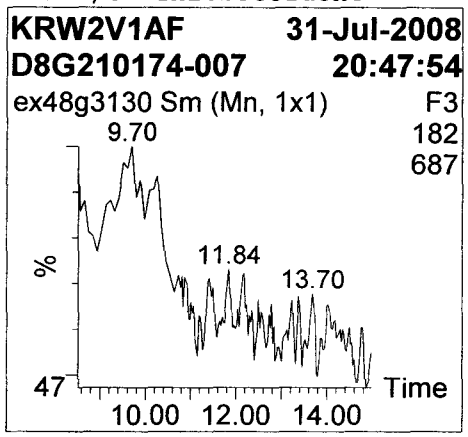
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

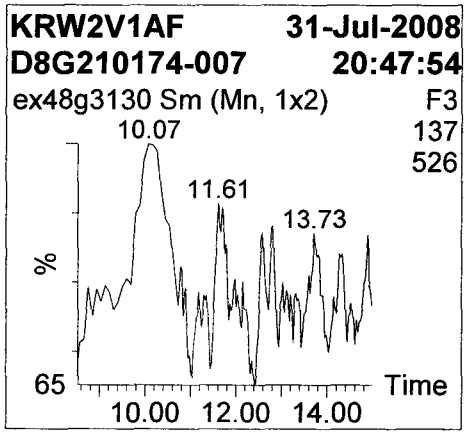
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3130
Text: D8G210174-007

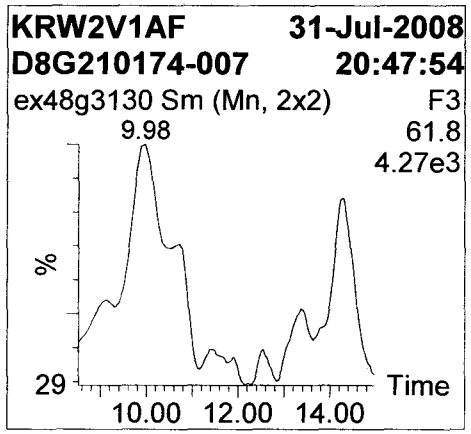
17: 2,4-Dinitrotoluene



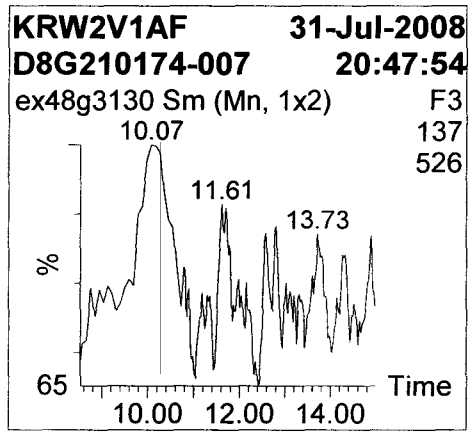
18: 2-Nitrotoluene



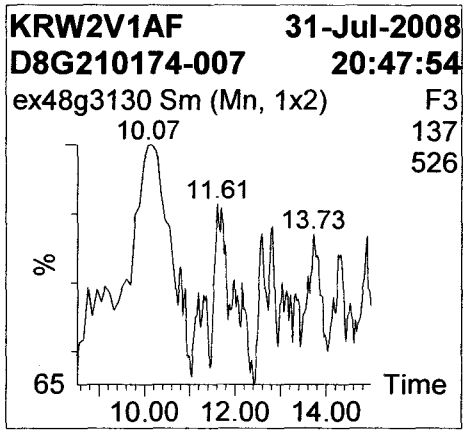
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3130
Text: D8G210174-007

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.625	4584	bb	0.871	87	01/Aug/08	ex48g31	
RDX 13C-..	4.067	25598	bb	0.813	81	01/Aug/08	ex48g31	
RDX						01/Aug/08	ex48g31	
1,3,5-Tr..						01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.743	59568	bb	0.856	86	01/Aug/08	ex48g31	
1,3-Dini..						01/Aug/08	ex48g31	
Nitroben..	7.529	13055	bb	0.323	68	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..						01/Aug/08	ex48g31	
2,4,6-Tr..	8.249	123	bb	0.009		01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	10.168	134299	bb	0.882	88	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

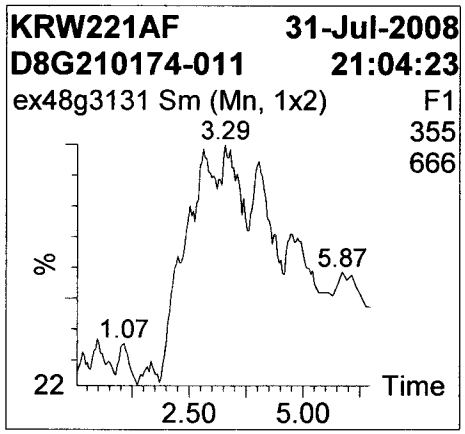
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

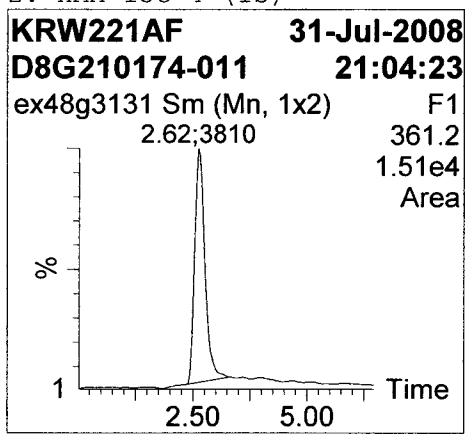
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3131
Text: D8G210174-011

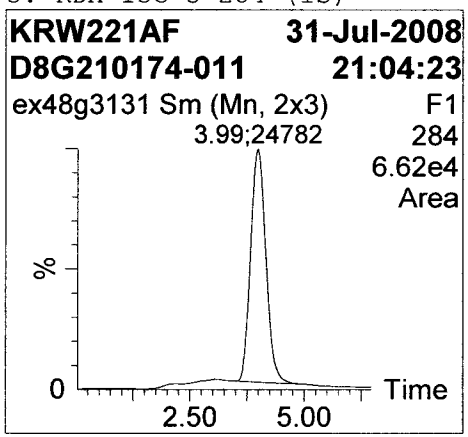
1: HMX



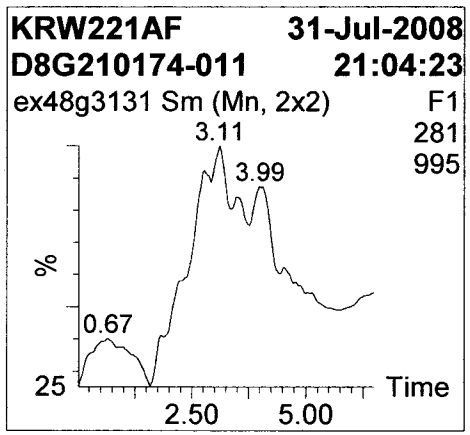
2: HMX 13C-4 (IS)



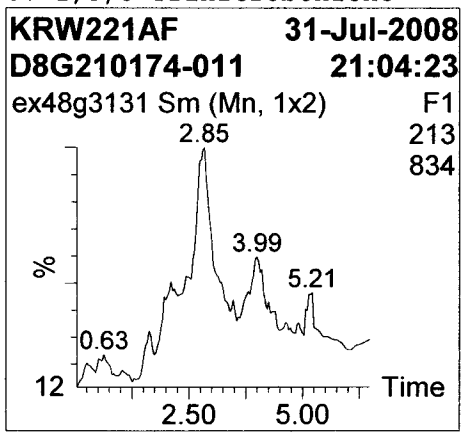
3: RDX 13C-3 284 (IS)



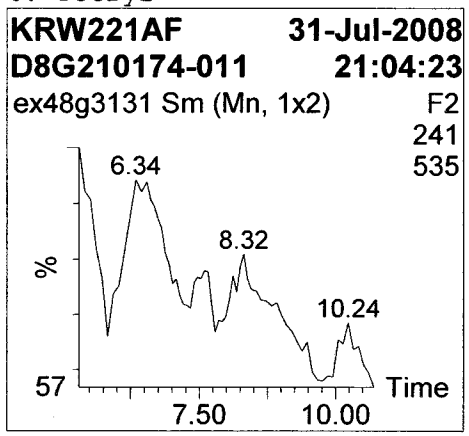
4: RDX



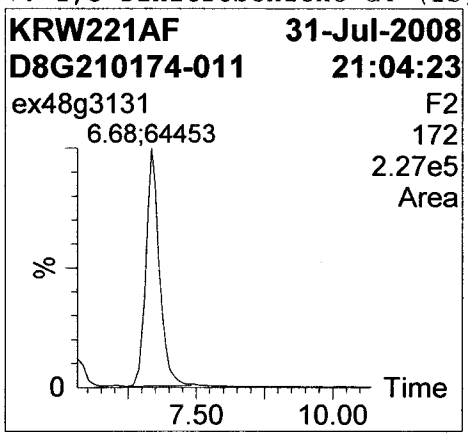
5: 1,3,5-Trinitrobenzene



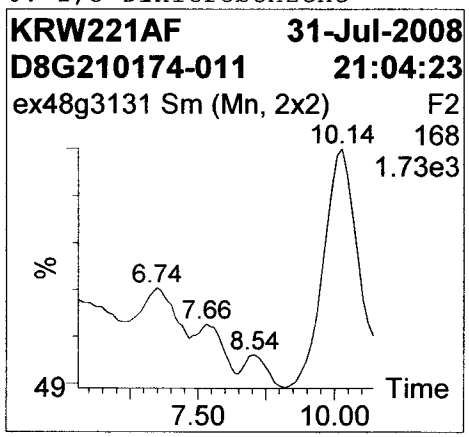
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



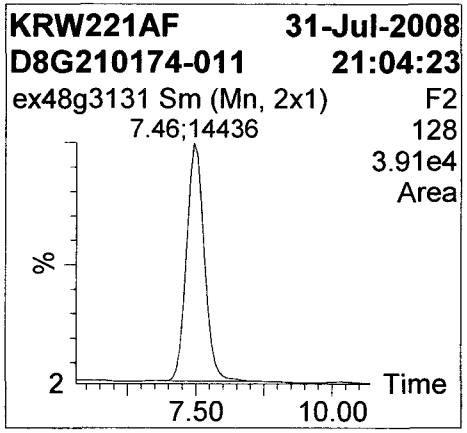
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

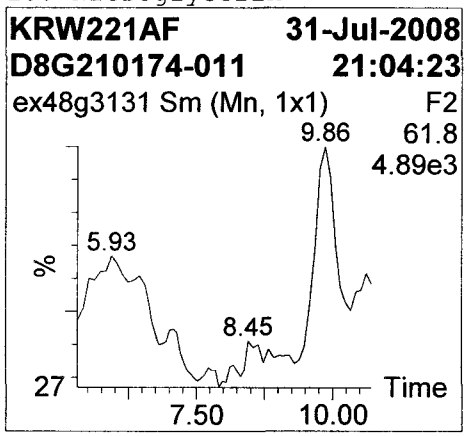
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3131
Text: D8G210174-011

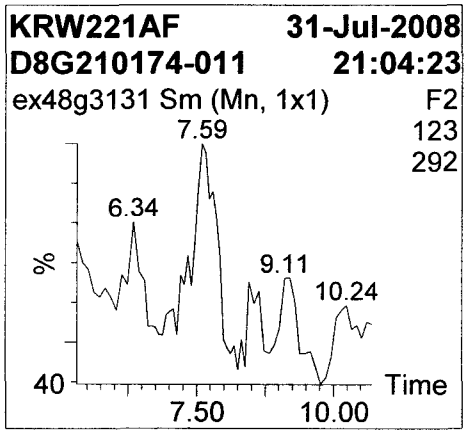
9: Nitrobenzene-d5



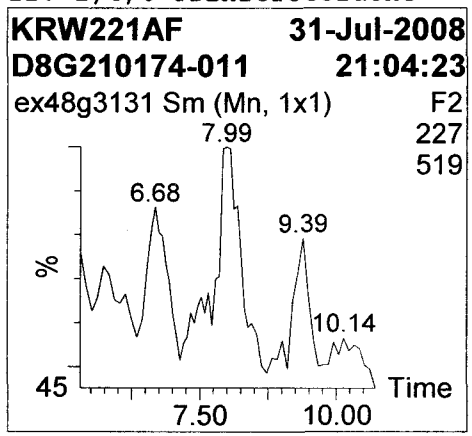
10: Nitroglycerin



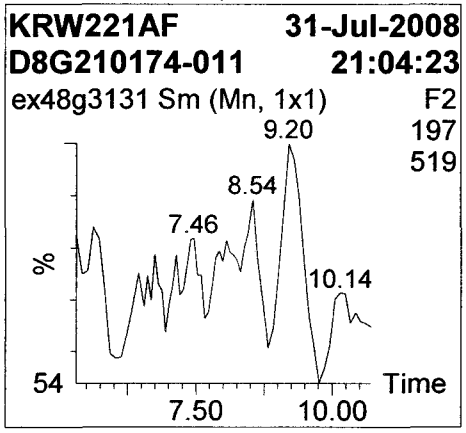
11: Nitrobenzene



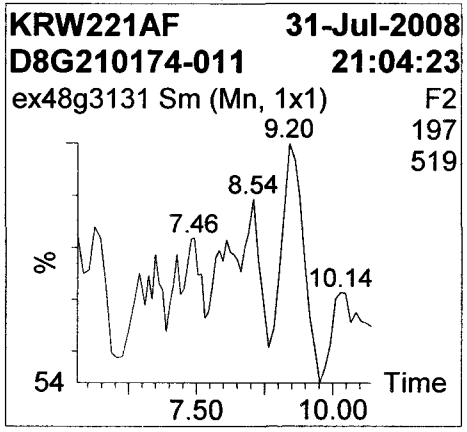
12: 2,4,6-Trinitrotoluene



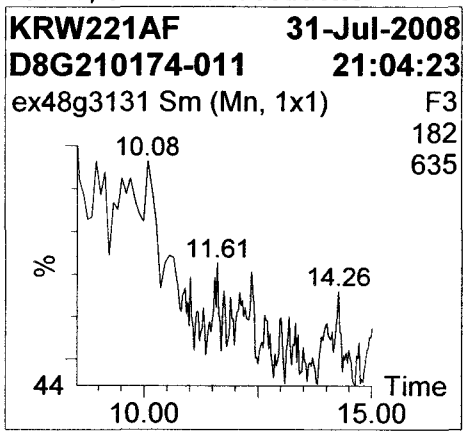
13: 4-Amino-2,6-Dinitrotolu..



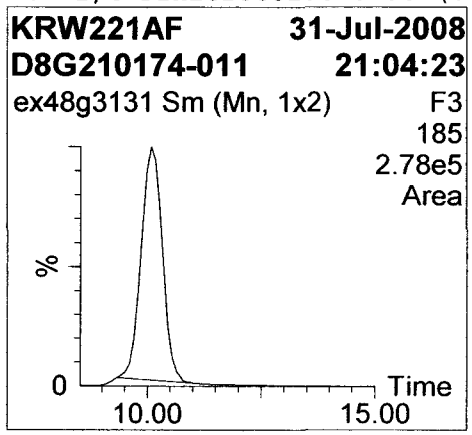
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



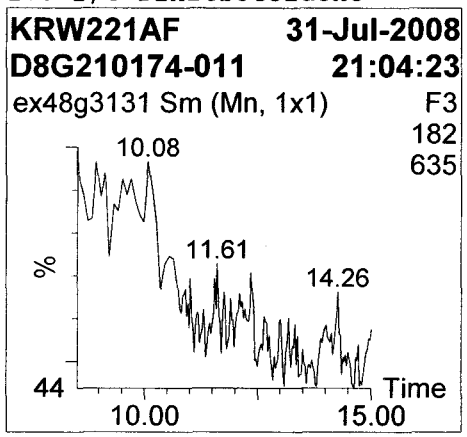
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

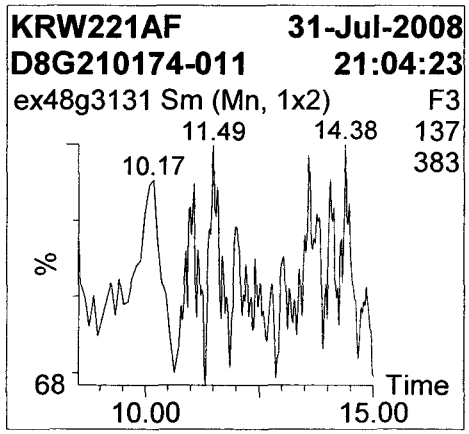
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3131
Text: D8G210174-011

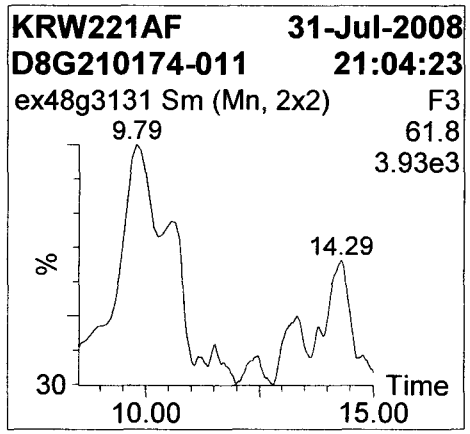
17: 2,4-Dinitrotoluene



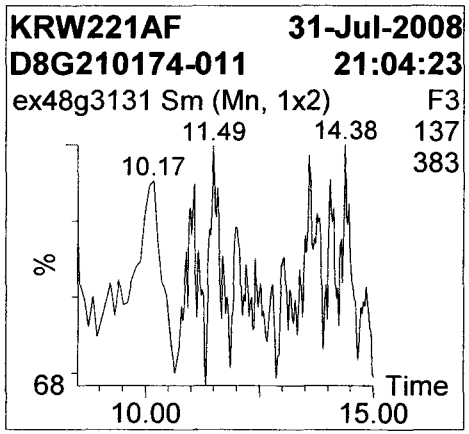
18: 2-Nitrotoluene



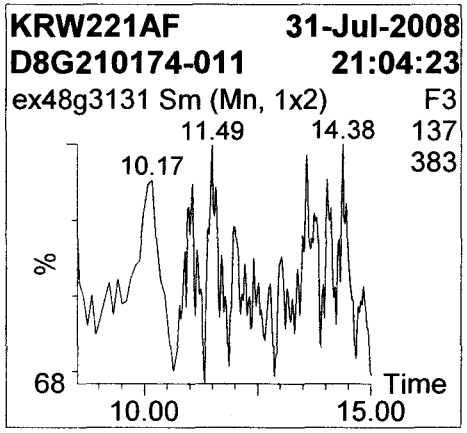
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3131
Text: D8G210174-011

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.625	3810	bb	0.724	72	01/Aug/08	ex48g31	
RDX 13C-..	3.993	24782	bb	0.787	79	01/Aug/08	ex48g31	
RDX						01/Aug/08	ex48g31	
1,3,5-Tr..						01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.678	64453	bs	0.926	93	01/Aug/08	ex48g31	
1,3-Dini..						01/Aug/08	ex48g31	
Nitroben..	7.464	14436	bb	0.331	70	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..						01/Aug/08	ex48g31	
2,4,6-Tr..						01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	10.076	147462	bb	0.968	97	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

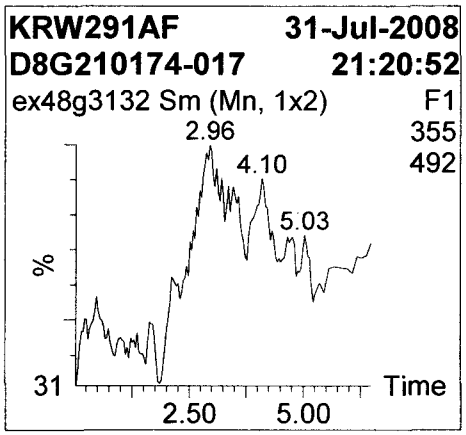
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

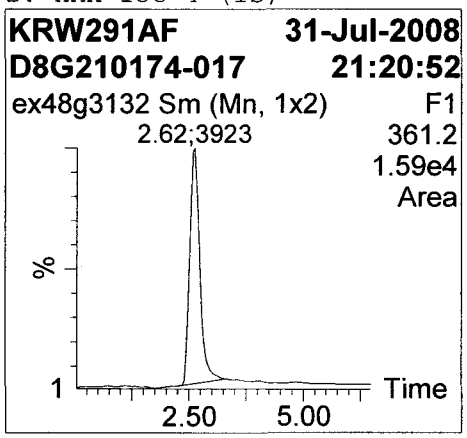
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3132
Text: D8G210174-017

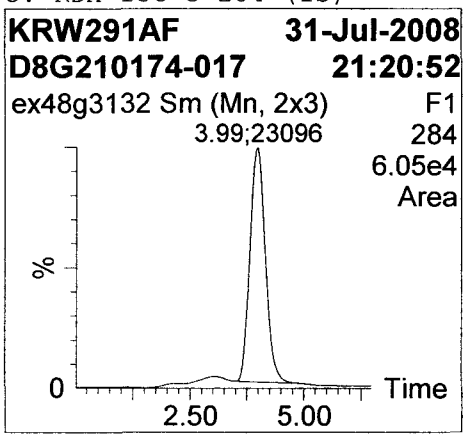
1: HMX



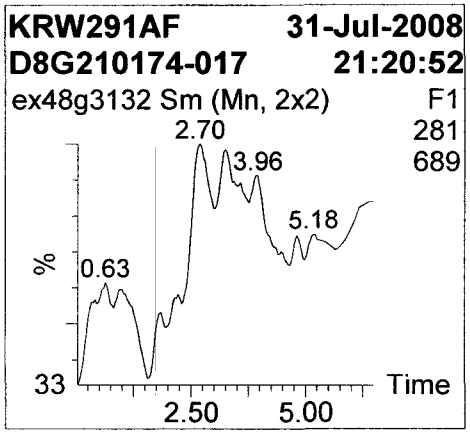
2: HMX 13C-4 (IS)



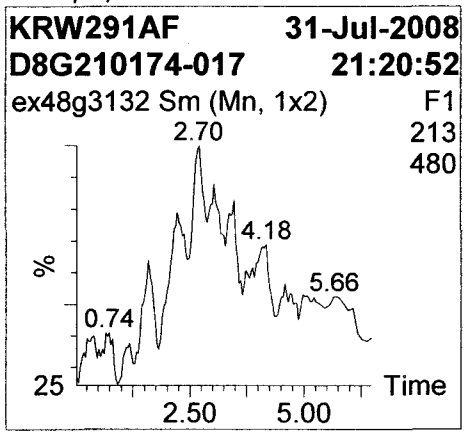
3: RDX 13C-3 284 (IS)



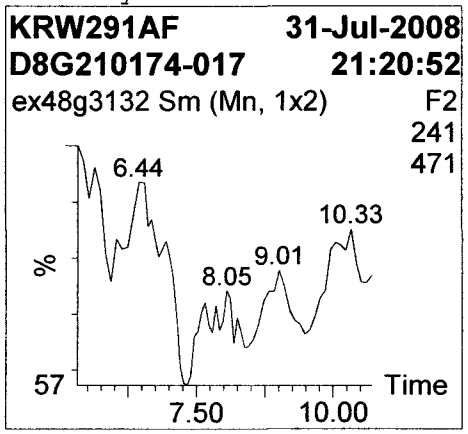
4: RDX



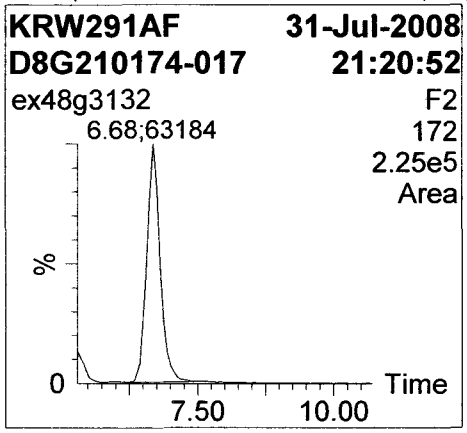
5: 1,3,5-Trinitrobenzene



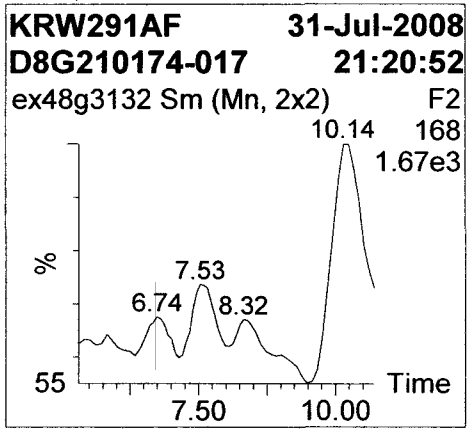
6: Tetryl



7: 1,3 Dinitrobenzene-d4 (IS)



8: 1,3-Dinitrobenzene



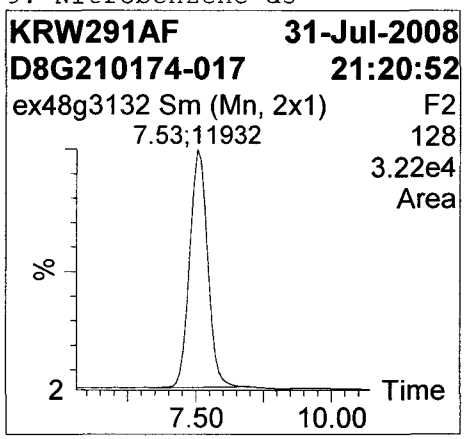
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

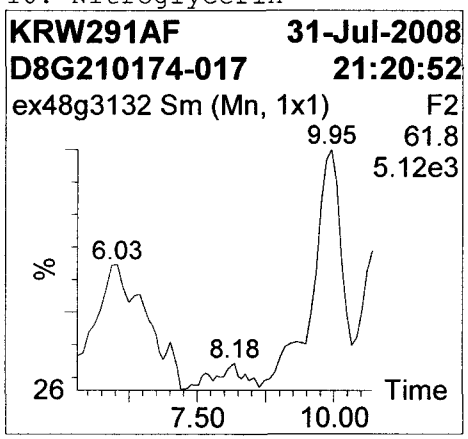
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3132
Text: D8G210174-017

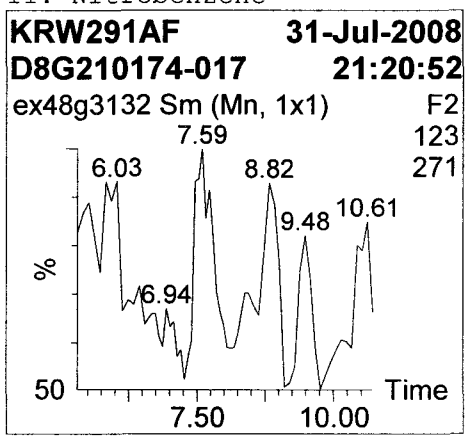
9: Nitrobenzene-d5



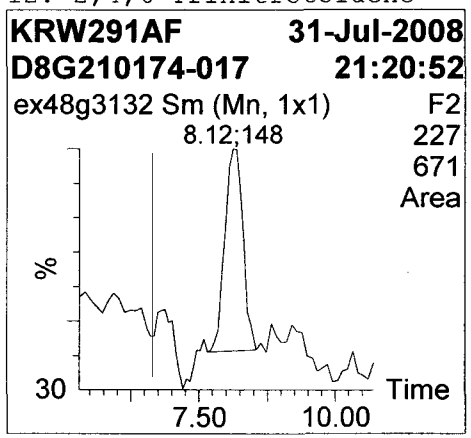
10: Nitroglycerin



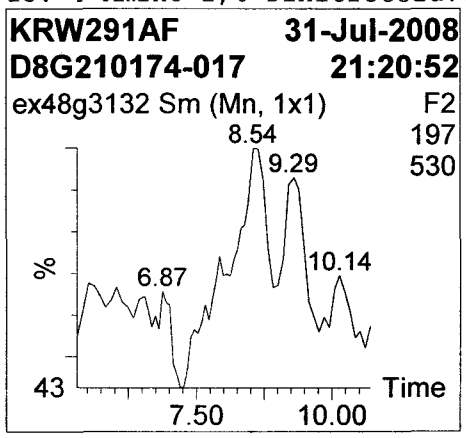
11: Nitrobenzene



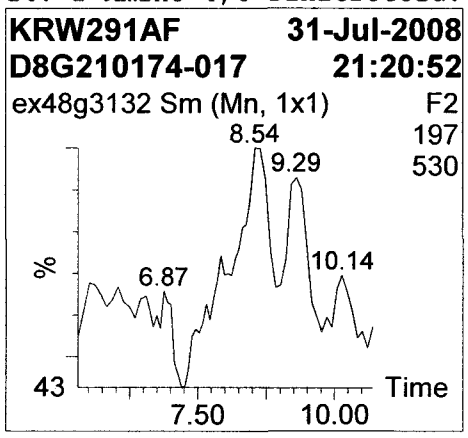
12: 2,4,6-Trinitrotoluene



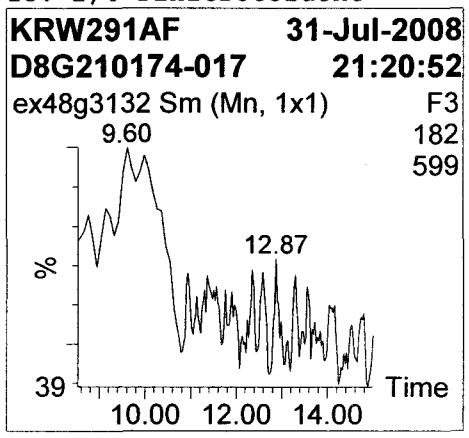
13: 4-Amino-2,6-Dinitrotolu..



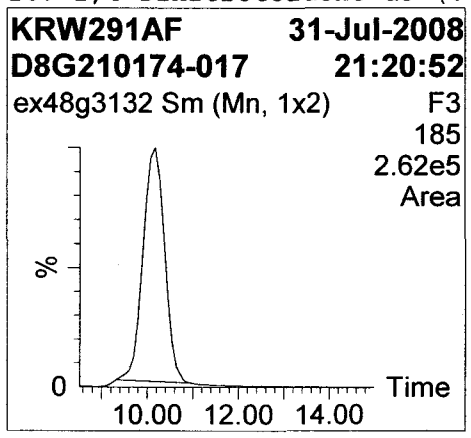
14: 2-Amino-4,6-Dinitrotolu..



15: 2,6-Dinitrotoluene



16: 2,4-Dinitrotoluene-d3 (..



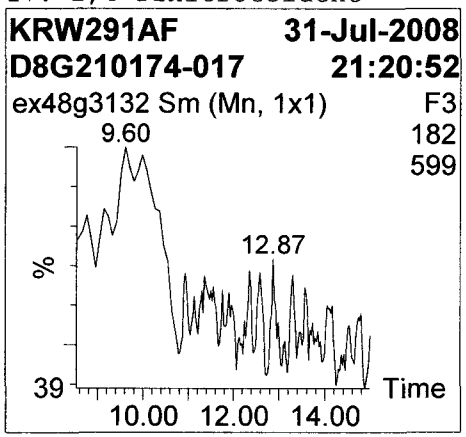
Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

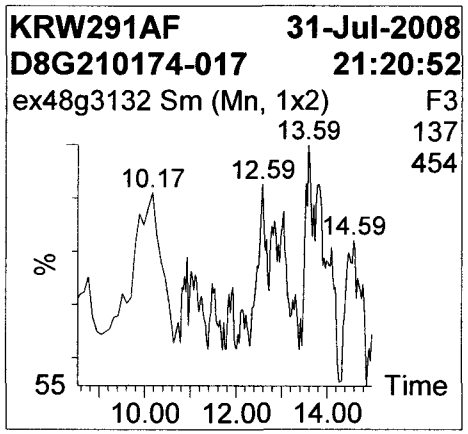
Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3132
Text: D8G210174-017

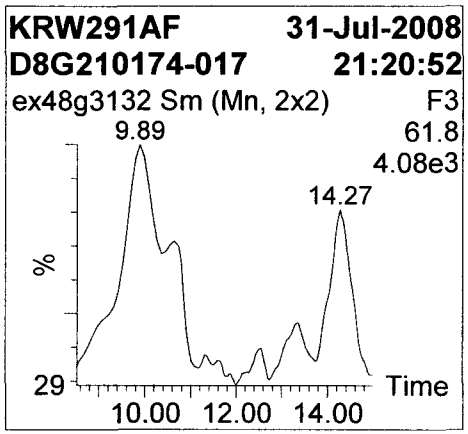
17: 2,4-Dinitrotoluene



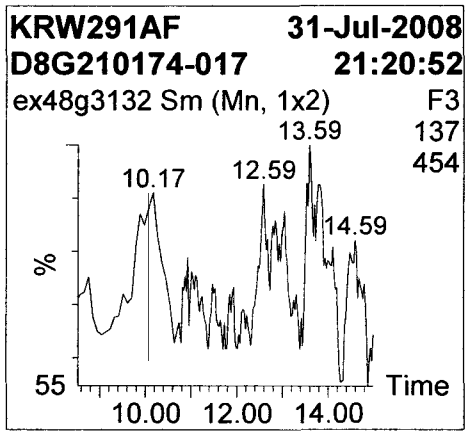
18: 2-Nitrotoluene



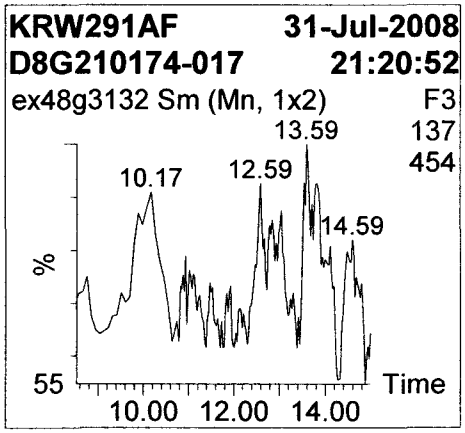
19: PETN



20: 4-Nitrotoluene



21: 3-Nitrotoluene



Quantify Sample Report

Sample List: C:\MassLynx\Explosives.PRO\SampleDB\ex48g31(02)
Last modified: Fri Aug 01 07:48:28 2008
Method: C:\MassLynx\Explosives.PRO\MethDB\ex48g31
Last modified: Fri Aug 01 07:32:46 2008
Job Code:

Printed: Fri Aug 01 07:58:06 2008

Name: ex48g3132
Text: D8G210174-017

Name	RT	Area	Flags	Conc.()	%Rec	Cal.Date	Cal.File	Mod.Comment
HMX						01/Aug/08	ex48g31	
HMX 13C-..	2.625	3923	bb	0.746	75	01/Aug/08	ex48g31	
RDX 13C-..	3.993	23096	bb	0.734	73	01/Aug/08	ex48g31	
RDX						01/Aug/08	ex48g31	
1,3,5-Tr..						01/Aug/08	ex48g31	
Tetryl						01/Aug/08	ex48g31	
1,3 Dini..	6.678	63184	bs	0.908	91	01/Aug/08	ex48g31	
1,3-Dini..						01/Aug/08	ex48g31	
Nitroben..	7.529	11932	bb	0.282	59	01/Aug/08	ex48g31	
Nitrogly..						01/Aug/08	ex48g31	
Nitroben..						01/Aug/08	ex48g31	
2,4,6-Tr..	8.119	148	bb	0.009		01/Aug/08	ex48g31	
4-Amino-..						01/Aug/08	ex48g31	
2-Amino-..						01/Aug/08	ex48g31	
2,6-Dini..						01/Aug/08	ex48g31	
2,4-Dini..	10.170	140167	bb	0.920	92	01/Aug/08	ex48g31	
2,4-Dini..						01/Aug/08	ex48g31	
2-Nitrot..						01/Aug/08	ex48g31	
PETN						01/Aug/08	ex48g31	
4-Nitrot..						01/Aug/08	ex48g31	
3-Nitrot..						01/Aug/08	ex48g31	

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Batch(es) #: 8204435

Associated Samples: 1, 7, 11, 17,

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 8/4/08

Metals Raw Data RoadMap

LotID		Metal	WorkOrder	Anal Date	TestDesc	Batch	File Id	Instr
D8G210174	1 D	ZN	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1	CU	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1	PB	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1	ZN	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 S	SB	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 D	SB	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 S	CU	KRW1L1AJ	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 D	CU	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 S	PB	KRW1L1AL	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 D	PB	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1	SB	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	1 S	ZN	KRW1L1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	7	CU	KRW2V1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	7	PB	KRW2V1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	7	ZN	KRW2V1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	7	SB	KRW2V1A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	11	SB	KRW221A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	11	CU	KRW221A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	11	PB	KRW221A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	11	ZN	KRW221A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	17	ZN	KRW291A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	17	SB	KRW291A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	17	CU	KRW291A	20080801	6020TOTA	8204435	AG080108	024
D8G210174	17	PB	KRW291A	20080801	6020TOTA	8204435	AG080108	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **8204435**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: ~~JAY WILLMS~~ JKH 7/31/08

Prep Date: ~~07/24/08~~ 7/31/08 JKH

Due Date: 08/08/08

Lot	Work Order			Initial Weight/Volume
D8G220000 Water	**KR03W**	B	Due Date: SDG:	50 mL
D8G220000 Water	**KR03W**	C	Due Date: SDG:	50 mL
D8G210174 Water	**KRW1L** Total		Due Date: 08/08/08 SDG:	50 mL
D8G210174 Water	**KRW1L** Total	S	Due Date: 08/08/08 SDG:	50 mL
D8G210174 Water	**KRW1L** Total	D	Due Date: 08/08/08 SDG:	50 mL
D8G210174 Water	**KRW2V** Total		Due Date: 08/08/08 SDG:	50 mL
D8G210174 Water	**KRW22** Total		Due Date: 08/08/08 SDG:	50 mL
D8G210174 Water	**KRW29** Total		Due Date: 08/08/08 SDG:	50 mL

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

CU PB SB ZN

checked 8/1/08

checked 8/4/08

METALS PREP SHEET
SOP: DEN-IP-0014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

TOTAL WATER DIGESTION FOR ICPMS (Prep code MS)

BATCH # 8204435 **ALLIQUOTTED BY:** JRW
PREP DATE: 7/31/2008 **DIGESTED BY:** JKH

CONSUMABLES USED

Digestion Cups: **Manufacturer:** Environmental Express **Lot #:** A801LP001

One or more samples were filtered prior to analysis at the instrument. ☐ Yes ☐ No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3983-08	7/21/09	100uL	21
2008Cal-2	STD-3621-08	7/1/09	100uL	21

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	G17027	3

TEMPERATURE CYCLES

JKH 7/31/08

Thermometer ID: 4110 Block & Cup # : 3 4, 11

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
HNO3	15:00	96	19:20	96
HNO3	19:30	94	20:00	96
HNO3				

Samples and QC revolumed to: 50 mL Analyst's Initials JKH

COMMENTS:

I certify that all information above is correct and complete.

Signature: ***Date:*** 7/31/08

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Calibration Standard	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50		--	40	40	200
Antimony	100	40	50	100,000 Aluminum	100	40	40	200
Arsenic	100	40	50	100,000 Calcium	100	40	40	200
Barium	100	40	50	100,000 Iron	100	40	40	200
Beryllium	100	40	50	100,000 Magnesium	100	40	40	200
Cadmium	100	40	50	100,000 Sodium	100	40	40	200
Chromium	100	40	50	100,000 Phosphorus	100	40	40	200
Cobalt	100	40	50	100,000 Potassium	100	40	40	200
Copper	100	40	50	100,000 Sulfur	100	40	40	200
Iron	5000	1000	2500	200,000 Carbon	--	1000	1000	5000
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	200
Thallium	100	40	50		100	40	40	200
Thorium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

QC Std.1 = Initial Calibration Verification (ICV)
QC Std.2 = Initial Calibration Blank (ICB)
QC Std.3 = Continuing Calibration Verification (CCV)
QC Std.4 = Continuing Calibration Blank (CCB)

TestAmerica Denver

Standards Preparation Logbook Record

Aug-04-2008

Logbook: \\Densvr06\StdsLog\metals.std

STD4871-07, 1000 Se

Analyst: TRUDELLL

Vendor: Inorganic Ventures Lot No.: Z-SE01120 Vendor's Expiration Date: 10-01-2008
Solvent: 2% HNO3
Date Prep./Opened: 10-02-2007 Date Received: 10-02-2007
Date Expires(1): 10-01-2008 (None)
Date Expires(2): 10-01-2008 (None)
Inventory ID: 667

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD0410-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: A2-ZN02040 Vendor's Expiration Date: 02-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 01-28-2008 Date Received: 01-28-2008
Date Expires(1): 02-01-2009 (None)
Date Expires(2): 02-01-2009 (None)
Inventory ID: 704

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD2251-08, 1000 mg/L Sn

Analyst: LILLT

Vendor: Inorganic Ventures Lot No.: B2-SN02014 Vendor's Expiration Date: 06-01-2009
Solvent: H2O tr. HNO3 tr.HF
Date Prep./Opened: 04-30-2008 Date Received: 04-23-2007
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Inventory ID: 610

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD2862-08, 1 mg/l Se

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G07057 Volume (ml): 100.00
Date Prep./Opened: 05-23-2008
Date Expires(1): 10-01-2008 (1 Year)
pipette: Met 21

Parent Std No.: STD4871-07, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 10-01-2008 Parent Date Expires(2): 10-01-2008

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD4030-08, ICP-MS 1 ppm Sn Std

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 01-23-2009 (6 Months)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

STD4031-08, ICP-MS 1 ppm Zn Std

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 02-01-2009 (1 Year)
Date Expires(2): 02-01-2009 (None)
pipettes: Met 21 and Met 8

Parent Std No.: STD0410-08, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD4164-08, ICP-MS (024) INT STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 250.00
Date Prep./Opened: 07-30-2008
Date Expires(1): 11-16-2008 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1733-08, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2009 Parent Date Expires(2): 05-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD2349-08, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD5820-07, Germanium Stock — Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD5822-07, Holmium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD4203-08, ICP-MS ICSA — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 05-05-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
pipettes: Met 8

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard — Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD4213-08, ICP-MS BLANK — Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4212-08, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4214-08, ICP-MS 10 ppm Sn

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	10.000

STD4215-08, ICP-MS CCV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3982-08, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000

Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000
V	20.000	50.000
Zn	20.000	50.000

Parent Std No.: STD4214-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4216-08, ICP-MS 100 ppb cal

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Expires(2): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4214-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)

Sn	10.000	100.00

STD4217-08, ICPMS RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD4030-08, ICP-MS 1 ppm Sn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 01-23-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	1.0000	9.0000

Parent Std No.: STD4031-08, ICP-MS 1 ppm Zn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
1000 Zn	1.0000	9.0000

Parent Std No.: STD4216-08, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 08-02-2008 Parent Date Expires(2): 08-02-2008

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Mo	100.00	1.0000
Sb	100.00	1.0000
Ag	100.00	1.0000
Al	100.00	1.0000
As	100.00	1.0000
Ba	100.00	1.0000
Be	100.00	1.0000
Cd	100.00	1.0000
Co	100.00	1.0000
Cr	100.00	1.0000
Cu	100.00	1.0000
Mn	100.00	1.0000
Ni	100.00	1.0000
Pb	100.00	1.0000
Se	100.00	1.0000
Th	100.00	1.0000
Tl	100.00	1.0000
U	100.00	1.0000
V	100.00	1.0000
Zn	100.00	1.0000
Sn	100.00	1.0000

STD4218-08, ICP-MS AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 19

Parent Std No.: STD4217-08, ICPMS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Sn	9.0000	1.8000
1000 Zn	9.0000	1.8000
Mo	1.0000	0.2000
Sb	1.0000	0.2000
Ag	1.0000	0.2000
Al	1.0000	0.2000
As	1.0000	0.2000
Ba	1.0000	0.2000
Be	1.0000	0.2000
Cd	1.0000	0.2000
Co	1.0000	0.2000
Cr	1.0000	0.2000
Cu	1.0000	0.2000
Mn	1.0000	0.2000
Ni	1.0000	0.2000
Pb	1.0000	0.2000
Se	1.0000	0.2000
Th	1.0000	0.2000
Tl	1.0000	0.2000
U	1.0000	0.2000
V	1.0000	0.2000
Zn	1.0000	0.2000
Sn	1.0000	0.2000

STD4219-08, ICP-MS ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 8, Met 20, and Met 21

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000

CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4214-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4220-08, ICPMS LR STD 1000 ppb

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0
V	20.000	1,000.0
Zn	20.000	1,000.0

Parent Std No.: STD4214-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4221-08, ICPMS ICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 08-02-2008 (1 Day)
Date Expires(2): 02-18-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD0845-08, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000

Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD0846-08, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4222-08, ALTSe Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-01-2008
Date Expires(1): 10-01-2008 (1 Year)
pipettes: Met 21 and Met 8

Parent Std No.: STD2862-08, 1 mg/l Se Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0050

Reviewed By: T. Hill 8/4/08

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/04/08 08:55:54

File ID: AG080108 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	08/01/08 17:09		☐
3	Cal Blank				1.0	08/01/08 17:14		☐
4	100 ppb				1.0	08/01/08 17:19		☐
5	ICV				1.0	08/01/08 17:23		☐
6	ICB				1.0	08/01/08 17:28		☐
7	RL STD				1.0	08/01/08 17:33		☐
8	ALTSe				1.0	08/01/08 17:38		☐
9	AFCEE RL				1.0	08/01/08 17:43		☐
10	ICSA				1.0	08/01/08 17:47		☐
11	ICSAB				1.0	08/01/08 17:52		☐
12	WASH				1.0	08/01/08 17:57		☐
13	LR				1.0	08/01/08 18:02		☐
14	WASH				1.0	08/01/08 18:07		☐
15	CCV				1.0	08/01/08 18:11		☐
16	CCB				1.0	08/01/08 18:16		☐
17	KR03WB	D8G220000	8204435	MS	1.0	08/01/08 18:21		☐
18	KR03WC	D8G220000	8204435	MS	1.0	08/01/08 18:26		☐
19	KRW1L	D8G210174-1	8204435	MS	1.0	08/01/08 18:31		☐
20	KRW1LP5	D8G210174	8204435		5.0	08/01/08 18:36		☐
21	KRW1LZ	D8G210174-1	8204435		1.0	08/01/08 18:40		☐
22	KRW1LS	D8G210174-1	8204435	MS	1.0	08/01/08 18:45		☐
23	KRW1LD	D8G210174-1	8204435	MS	1.0	08/01/08 18:50		☐
24	KRW2V	D8G210174-7	8204435	MS	1.0	08/01/08 18:55		☐
25	KRW22	D8G210174-11	8204435	MS	1.0	08/01/08 19:00		☐
26	KRW29	D8G210174-17	8204435	MS	1.0	08/01/08 19:04		☐
27	CCV				1.0	08/01/08 19:09		☐
28	CCB				1.0	08/01/08 19:14		☐
29	~~KTEK8B~~	~~D8G300000~~	~~8212450~~	~~MS~~	~~1.0~~	~~08/01/08 19:19~~		☐
30	KTEK8C	D8G300000	8212450	MS	1.0	08/01/08 19:24		☐
31	KR2HG	D8G230206-1	8212450	MS	1.0	08/01/08 19:28		☐
32	KR2JK	D8G230206-2	8212450	MS	1.0	08/01/08 19:33		☐
33	KR2JKP5	D8G230206	8212450		5.0	08/01/08 19:38		☐
34	KR2JKZ	D8G230206-2	8212450		1.0	08/01/08 19:43		☐
35	KR2JKS	D8G230206-2	8212450	MS	1.0	08/01/08 19:48		☐
36	KR2JKD	D8G230206-2	8212450	MS	1.0	08/01/08 19:52		☐
37	KR2JW	D8G230206-3	8212450	MS	1.0	08/01/08 19:57		☐
38	KR2KC	D8G230206-4	8212450	MS	1.0	08/01/08 20:02		☐
39	CCV				1.0	08/01/08 20:07		☐
40	CCB				1.0	08/01/08 20:12		☐
41	KR2KK	D8G230206-5	8212450	MS	1.0	08/01/08 20:17		☐
42	KR750	D8G260159-1	8212450	MS	1.0	08/01/08 20:21		☐
43	KR78D	D8G260168-2	8212450	MS	1.0	08/01/08 20:26		☐
44	RINSE				1.0	08/01/08 20:31		☐
45	RINSE				1.0	08/01/08 20:36		☐
46	RINSE				1.0	08/01/08 20:41		☐
47	~~RINSE~~				~~1.0~~	~~08/01/08 20:45~~	K.T. 8/4/08 Did not use,	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/04/08 08:55:54

File ID: AG080108 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	~~RINSE~~				~~1.0~~	~~08/01/08 20:51~~		☐
49	~~Cal Blank~~				~~1.0~~	~~08/01/08 20:55~~	KT 8/4/08 Did not use.	☐
50	Cal Blank				1.0	08/01/08 21:00		☐
51	100 ppb				1.0	08/01/08 21:05		☐
52	CCV				1.0	08/01/08 21:10		☐
53	CCB				1.0	08/01/08 21:15		☐
54	KTEK8B	D8G300000	8212450	MS	1.0	08/01/08 21:19		☐
55	KTEK8C	D8G300000	8212450	MS	1.0	08/01/08 21:24		☐
56	KR2HG	D8G230206-1	8212450	MS	1.0	08/01/08 21:29		☐
57	KR2JK	D8G230206-2	8212450	MS	1.0	08/01/08 21:34		☐
58	KR2JKP5	D8G230206	8212450		5.0	08/01/08 21:39		☐
59	KR2JKZ	D8G230206-2	8212450		1.0	08/01/08 21:44		☐
60	KR2JKS	D8G230206-2	8212450	MS	1.0	08/01/08 21:48		☐
61	KR2JKD	D8G230206-2	8212450	MS	1.0	08/01/08 21:53		☐
62	KR2JW	D8G230206-3	8212450	MS	1.0	08/01/08 21:58		☐
63	KR2KC	D8G230206-4	8212450	MS	1.0	08/01/08 22:03		☐
64	CCV				1.0	08/01/08 22:08		☐
65	CCB				1.0	08/01/08 22:12		☐
66	ICSA				1.0	08/01/08 22:17		☐
67	ICSAB				1.0	08/01/08 22:22		☐
68	WASH				1.0	08/01/08 22:27		☐
69	CCV				1.0	08/01/08 22:32		☐
70	CCB				1.0	08/01/08 22:36		☐
71	KR2KK	D8G230206-5	8212450	MS	1.0	08/01/08 22:41		☐
72	KR750	D8G260159-1	8212450	MS	1.0	08/01/08 22:46		☐
73	KR78D	D8G260168-2	8212450	MS	1.0	08/01/08 22:51		☐
74	KR78F	D8G260168-3	8212450	MS	1.0	08/01/08 22:56		☐
75	KR78G	D8G260168-4	8212450	MS	1.0	08/01/08 23:00		☐
76	KR78H	D8G260168-5	8212450	MS	1.0	08/01/08 23:05		☐
77	KR78J	D8G260168-6	8212450	MS	1.0	08/01/08 23:10		☐
78	KR78L	D8G260168-7	8212450	MS	1.0	08/01/08 23:15		☐
79	KR78N	D8G260168-8	8212450	MS	1.0	08/01/08 23:20		☐
80	KR78Q	D8G260168-9	8212450	MS	1.0	08/01/08 23:25		☐
81	CCV				1.0	08/01/08 23:29		☐
82	CCB				1.0	08/01/08 23:34		☐
83	KR9M1B	D8G280000	8210414	MS	1.0	08/01/08 23:39		☐
84	KR9M1C	D8G280000	8210414	MS	1.0	08/01/08 23:44		☐
85	KR9M1L	D8G280000	8210414	MS	1.0	08/01/08 23:49		☐
86	KR6HK	D8G250173-26	8210414	MS	1.0	08/01/08 23:54		☐
87	KR6HKP5	D8G250173	8210414		5.0	08/01/08 23:58		☐
88	KR6HKZ	D8G250173-26	8210414		1.0	08/02/08 00:03		☐
89	KR6HL	D8G250173-27	8210414	MS	1.0	08/02/08 00:08		☐
90	CCV				1.0	08/02/08 00:13		☐
91	CCB				1.0	08/02/08 00:18		☐
92	~~KR938B~~	~~D8G290000~~	~~8211084~~	~~46~~	~~1.0~~	~~08/02/08 00:22~~		☐
93	~~KR938C~~	~~D8G290000~~	~~8211084~~	~~46~~	~~1.0~~	~~08/02/08 00:27~~	KT 8/4/08 Did not use.	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/04/08 08:55:54

File ID: AG080108 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	~~KR73D~~	~~D8G260146-1~~	~~8211084~~	~~46~~	~~1.0~~	~~08/02/08 00:32~~		☐
95	KR73DP5	D8G260146	8211084		5.0	08/02/08 00:37		☐
96	KR73DZ	D8G260146-1	8211084		1.0	08/02/08 00:42		☐
97	KR73DS	D8G260146-1	8211084	46	1.0	08/02/08 00:46		☐
98	KR73DD	D8G260146-1	8211084	46	1.0	08/02/08 00:51		☐
99	KR739	D8G260146-2	8211084	46	1.0	08/02/08 00:56		☐
100	KR74C	D8G260146-3	8211084	46	1.0	08/02/08 01:01		☐
101	CCV				1.0	08/02/08 01:06		☐
102	CCB				1.0	08/02/08 01:11		☐
103	KR74E	D8G260146-4	8211084	46	1.0	08/02/08 01:15		☐
104	KR74N	D8G260146-5	8211084	46	1.0	08/02/08 01:20		☐
105	KR74P	D8G260146-6	8211084	46	1.0	08/02/08 01:25		☐
106	KR74Q	D8G260146-7	8211084	46	1.0	08/02/08 01:30		☐
107	KR74T	D8G260146-8	8211084	46	1.0	08/02/08 01:35		☐
108	KR74V	D8G260146-9	8211084	46	1.0	08/02/08 01:40		☐
109	KR74W	D8G260146-10	8211084	46	1.0	08/02/08 01:44		☐
110	KR744	D8G260146-12	8211084	46	1.0	08/02/08 01:49		☐
111	CCV				1.0	08/02/08 01:54		☐
112	CCB				1.0	08/02/08 01:59		☐
113	KR73D	D8G260146-1	8211084	46	1.0	08/02/08 02:04		☐
114	KR73DS	D8G260146-1	8211084	46	1.0	08/02/08 02:08		☐
115	KR73DD	D8G260146-1	8211084	46	1.0	08/02/08 02:13		☐
116	CCV				1.0	08/02/08 02:18		☐
117	CCB				1.0	08/02/08 02:23		☐
118	RINSE				1.0	08/02/08 02:28		☐
119	RINSE				1.0	08/02/08 02:32		☐
120	RINSE				1.0	08/02/08 02:37		☐
121	RINSE				1.0	08/02/08 02:42		☐
122	RINSE				1.0	08/02/08 02:47		☐
123	RINSE				1.0	08/02/08 02:52		☐
124	RINSE				1.0	08/02/08 02:56		☐
125	~~Cal Blank~~				~~1.0~~	~~08/02/08 03:01~~	KT 8/4/08 Did not use.	☐
126	Cal Blank				1.0	08/02/08 03:06		☐
127	100 ppb				1.0	08/02/08 03:11		☐
128	CCV				1.0	08/02/08 03:16		☐
129	CCB				1.0	08/02/08 03:20		☐
130	ICSA				1.0	08/02/08 03:25		☐
131	ICSAB				1.0	08/02/08 03:30		☐
132	WASH				1.0	08/02/08 03:35		☐
133	CCV				1.0	08/02/08 03:40		☐
134	CCB				1.0	08/02/08 03:45		☐
135	KRW1HB	D8G210000	8203472	46	1.0	08/02/08 03:49		☐
136	KRW1HC	D8G210000	8203472	46	1.0	08/02/08 03:54		☐
137	KRPQ2	D8G170316-2	8203472	46	1.0	08/02/08 03:59		☐
138	KRPQ2P5	D8G170316	8203472		5.0	08/02/08 04:04		☐
139	KRPQ2Z	D8G170316-2	8203472		1.0	08/02/08 04:09		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/04/08 08:55:54

File ID: AG080108 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	KRPQ2S	D8G170316-2	8203472	46	1.0	08/02/08 04:13		☐
141	KRPQ2D	D8G170316-2	8203472	46	1.0	08/02/08 04:18		☐
142	KRPQ5	D8G170316-3	8203472	46	1.0	08/02/08 04:23		☐
143	KRPQ7	D8G170316-4	8203472	46	1.0	08/02/08 04:28		☐
144	CCV				1.0	08/02/08 04:33		☐
145	CCB				1.0	08/02/08 04:38		☐
146	KRPQ8	D8G170316-5	8203472	46	1.0	08/02/08 04:42		☐
147	KRPRG	D8G170316-7	8203472	46	1.0	08/02/08 04:47		☐
148	KRPRJ	D8G170316-8	8203472	46	1.0	08/02/08 04:52		☐
149	KRPRK	D8G170316-9	8203472	46	1.0	08/02/08 04:57		☐
150	KRPRN	D8G170316-10	8203472	46	1.0	08/02/08 05:02		☐
151	KRPRX	D8G170316-12	8203472	46	1.0	08/02/08 05:06		☐
152	KRPR1	D8G170316-13	8203472	46	1.0	08/02/08 05:11		☐
153	KRPR2	D8G170316-14	8203472	46	1.0	08/02/08 05:16		☐
154	KRPR8	D8G170316-15	8203472	46	1.0	08/02/08 05:21		☐
155	CCV				1.0	08/02/08 05:26		☐
156	CCB				1.0	08/02/08 05:31		☐
157	KRPTF	D8G170316-17	8203472	46	1.0	08/02/08 05:35		☐
158	KRPTJ	D8G170316-18	8203472	46	1.0	08/02/08 05:40		☐
159	KRPTL	D8G170316-19	8203472	46	1.0	08/02/08 05:45		☐
160	KRPTM	D8G170316-20	8203472	46	1.0	08/02/08 05:50		☐
161	KRPTT	D8G170316-22	8203472	46	1.0	08/02/08 05:55		☐
162	KRPTX	D8G170316-23	8203472	46	1.0	08/02/08 06:00		☐
163	KRPT1	D8G170316-24	8203472	46	1.0	08/02/08 06:04		☐
164	KRPT2	D8G170316-25	8203472	46	1.0	08/02/08 06:09		☐
165	CCV				1.0	08/02/08 06:14		☐
166	CCB				1.0	08/02/08 06:19		☐
167	KR06WB	D8G220000	8204469	46	1.0	08/02/08 06:24		☐
168	KR06WC	D8G220000	8204469	46	1.0	08/02/08 06:29		☐
169	KRT7N	D8G190138-3	8204469	46	1.0	08/02/08 06:34		☐
170	KRT7NP5	D8G190138	8204469		5.0	08/02/08 06:38		☐
171	KRT7NZ	D8G190138-3	8204469		1.0	08/02/08 06:43		☐
172	KRT7NS	D8G190138-3	8204469	46	1.0	08/02/08 06:48		☐
173	KRT7ND	D8G190138-3	8204469	46	1.0	08/02/08 06:53		☐
174	KRT7T	D8G190138-4	8204469	46	1.0	08/02/08 06:58		☐
175	KRT7X	D8G190138-5	8204469	46	1.0	08/02/08 07:03		☐
176	CCV				1.0	08/02/08 07:07		☐
177	CCB				1.0	08/02/08 07:12		☐
178	KRT71	D8G190138-6	8204469	46	1.0	08/02/08 07:17		☐
179	KRT79	D8G190138-8	8204469	46	1.0	08/02/08 07:22		☐
180	KRT8A	D8G190138-9	8204469	46	1.0	08/02/08 07:27		☐
181	KRT8C	D8G190138-10	8204469	46	1.0	08/02/08 07:32		☐
182	KRT8E	D8G190138-11	8204469	46	1.0	08/02/08 07:36		☐
183	KRT8G	D8G190138-13	8204469	46	1.0	08/02/08 07:41		☐
184	KRT8H	D8G190138-14	8204469	46	1.0	08/02/08 07:46		☐
185	KRT8J	D8G190138-15	8204469	46	1.0	08/02/08 07:51		☐

Denver RUN SUMMARY

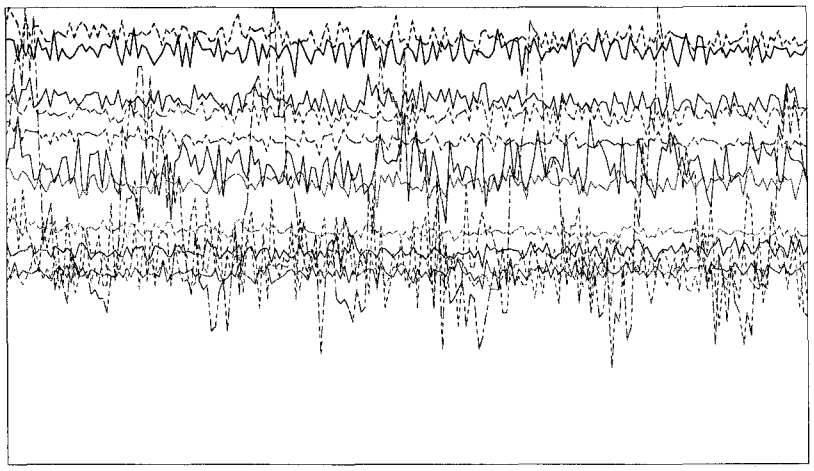
Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/04/08 08:55:54

File ID: **AG080108** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	KRT8K	D8G190138-16	8204469	46	1.0	08/02/08 07:56		☐
187	CCV				1.0	08/02/08 08:01		☐
188	CCB				1.0	08/02/08 08:05		☐
189	KRT8M	D8G190138-18	8204469	46	1.0	08/02/08 08:10		☐
190	KRT8N	D8G190138-19	8204469	46	1.0	08/02/08 08:15		☐
191	KRT8P	D8G190138-20	8204469	46	1.0	08/02/08 08:20		☐
192	KRT8Q	D8G190138-21	8204469	46	1.0	08/02/08 08:25		☐
193	KRT8V	D8G190138-23	8204469	46	1.0	08/02/08 08:30		☐
194	KRT8W	D8G190138-24	8204469	46	1.0	08/02/08 08:35		☐
195	KRT8X	D8G190138-25	8204469	46	1.0	08/02/08 08:39		☐
196	KRT80	D8G190138-26	8204469	46	1.0	08/02/08 08:44		☐
197	CCV				1.0	08/02/08 08:49		☐
198	CCB				1.0	08/02/08 08:54		☐
199	KTFT0BF	D8G310000	8213293	MD	1.0	08/02/08 08:59		☐
200	KTFT0CF	D8G310000	8213293	MD	1.0	08/02/08 09:04		☐
201	KR830F	D8G280125-1	8213293	MD	1.0	08/02/08 09:08		☐
202	KR832F	D8G280125-2	8213293	MD	1.0	08/02/08 09:13		☐
203	KR6WAF	D8G250217-1	8213293	MD	1.0	08/02/08 09:18		☐
204	KR6WHF	D8G250217-2	8213293	MD	1.0	08/02/08 09:23		☐
205	KR6WHP5F	D8G250217	8213293		5.0	08/02/08 09:28		☐
206	KR6WHZF	D8G250217-2	8213293		1.0	08/02/08 09:33		☐
207	KR6WHSF	D8G250217-2	8213293	MD	1.0	08/02/08 09:37		☐
208	CCV				1.0	08/02/08 09:42		☐
209	CCB				1.0	08/02/08 09:47		☐
210	KR6WHDF	D8G250217-2	8213293	MD	1.0	08/02/08 09:52		☐
211	KR6WJF	D8G250217-3	8213293	MD	1.0	08/02/08 09:57		☐
212	KR6WLF	D8G250217-4	8213293	MD	1.0	08/02/08 10:02		☐
213	KR6WMF	D8G250217-5	8213293	MD	1.0	08/02/08 10:07		☐
214	KR6WNF	D8G250217-6	8213293	MD	1.0	08/02/08 10:11		☐
215	KR6WRF	D8G250217-7	8213293	MD	1.0	08/02/08 10:16		☐
216	KR6WXF	D8G250217-8	8213293	MD	1.0	08/02/08 10:21		☐
217	KR7MDF	D8G250300-1	8213293	MD	1.0	08/02/08 10:26		☐
218	CCV				1.0	08/02/08 10:31		☐
219	CCB				1.0	08/02/08 10:36		☐
220	KTFWPB	D8G310000	8213300	04	1.0	08/02/08 10:40		☐
221	KTFWPC	D8G310000	8213300	04	1.0	08/02/08 10:45		☐
222	KR830	D8G280125-1	8213300	04	1.0	08/02/08 10:50		☐
223	KR832	D8G280125-2	8213300	04	1.0	08/02/08 10:55		☐
224	KR832P5	D8G280125	8213300		5.0	08/02/08 11:00		☐
225	KR832Z	D8G280125-2	8213300		1.0	08/02/08 11:05		☐
226	KR832S	D8G280125-2	8213300	04	1.0	08/02/08 11:09		☐
227	KR832D	D8G280125-2	8213300	04	1.0	08/02/08 11:14		☐
228	KR7FM	D8G250273-1	8213300	04	1.0	08/02/08 11:19		☐
229	CCV				1.0	08/02/08 11:24		☐
230	CCB				1.0	08/02/08 11:29		☐

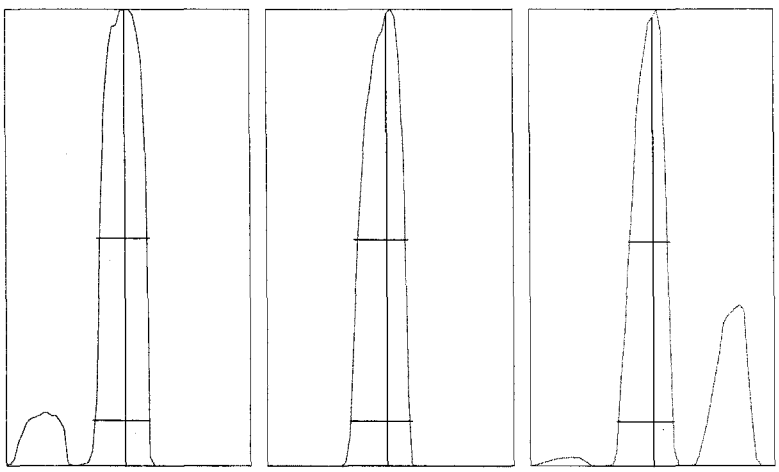
Tune Report

Tune File : norm.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.413%
Doubly Charged:	70/140	1.059%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2362.0	2321.9	2.62	1.40
7	50,000	21970.0	20908.4	2.85	1.80
59	50,000	32013.0	30724.6	2.67	1.20
78	500	304.0	324.9	6.53	1.20
89	50,000	45484.0	45274.1	2.26	1.10
115	50,000	38746.0	39792.9	2.39	1.70
140	50,000	38807.0	38317.9	2.20	1.90
63	500	176.0	213.3	7.50	0.90
205	50,000	24922.0	25391.3	2.14	3.10
95	100	32.0	45.9	14.76	1.40
208	20,000	18478.0	18689.2	2.12	2.70
238	50,000	34550.0	35420.3	1.81	3.20
82	100	62.0	55.0	36.48	1.80
156/140	2	1.459%	1.453%	6.44	
70/140	2	1.049%	1.112%	6.70	



m/z:	7	89	205
Height:	21,221	45,462	26,096
Axis:	7.00	89.00	205.05
W-50%:	0.65	0.65	0.50
W-10%:	0.700	0.7500	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Aug 01, 2008 16:39:00
Printed : Aug 01, 2008 16:39:03

Tune Report

Tune File : norm.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	: 1550	W	Extract 1	: 0	V	AMU Gain	: 133	
RF Matching	: 1.8	V	Extract 2	: -180	V	AMU Offset	: 123	
Smpl Depth	: 8	mm	Omega Bias-ce	: -26	V	Axis Gain	: 1.0008	
Torch-H	: -0.5	mm	Omega Lens-ce	: 1.4	V	Axis Offset	: -0.02	
Torch-V	: 0.2	mm	Cell Entrance	: -30	V	QP Bias	: -5	V
Carrier Gas	: 0.83	L/min	QP Focus	: 5	V			
Makeup Gas	: 0.23	L/min	Cell Exit	: -30	V	===Detector Parameters===		
Optional Gas	: ---	%				Discriminator	: 8	mV
Nebulizer Pump	: 0.1	rps	===Octopole Parameters===			Analog HV	: 1650	V
Sample Pump	: ---	rps	OctP RF	: 180	V	Pulse HV	: 1290	V
S/C Temp	: 2	degC	OctP Bias	: -18	V			

===Reaction Cell===								
Reaction Mode	: OFF							
H2 Gas	: 0	mL/min	He Gas	: 3.5	mL/min	Optional Gas	: ---	%

Generated : Aug 01, 2008 16:39:00
Printed : Aug 01, 2008 16:39:06

P/A Factor Tuning Report

Acquired:Aug 1 2008 04:44 pm

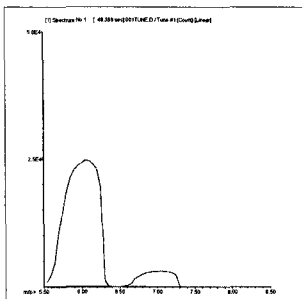
Mass[amu]	Element	P/A Factor
6	Li	0.060172
7	(Li)	Sensitivity too low
9	Be	0.068310
51	V	0.084488
52	Cr	0.087081
53	Cr	Sensitivity too low
55	Mn	0.088853
59	Co	0.091966
60	Ni	0.093121
63	Cu	0.095482
66	Zn	0.095000
72	Ge	0.093759
75	As	0.092951
78	Se	Sensitivity too low
95	Mo	0.093465
106	(Cd)	0.099625
107	Ag	Sensitivity too low
108	(Cd)	0.100352
111	Cd	0.100718
115	In	0.100801
118	Sn	0.100120
121	Sb	0.099955
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
205	Tl	0.109544
206	(Pb)	0.108640
207	(Pb)	0.108584
208	Pb	0.108873
238	U	0.107990

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1650 V
Pulse HV: 1290 V

200.8 QC Tune Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\001TUNE.D
Date Acquired: Aug 1 2008 05:01 pm
Acq. Method: HeTN2008.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: D:\ICPCHEM\1\METHODS\HeTN2008.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	16221	16205	16212	16087	16008	16591	2.71	5.00	
9 Be	3109	3075	3054	3132	3187	3099	0.81	5.00	
24 Mg	18288	17898	18217	18443	18527	18355	2.19	5.00	
59 Co	104848	103696	104949	104583	105546	105466	0.73	5.00	
115 In	1018229	1016035	1023700	1014935	1005016	1031457	1.24	5.00	
208 Pb	80347	81020	79786	79904	80725	80301	0.83	5.00	
238 U	140932	141870	141348	139854	140973	140615	0.54	5.00	

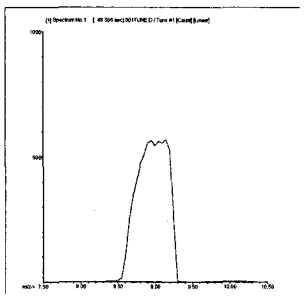


7 Li
Mass Calib.

Actual:	7.05		
Required:	6.90	-	7.10
Flag:			

Peak Width

Actual:	0.60		
Required	0.90		
Flag:			

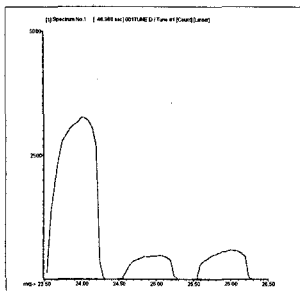


9 Be
Mass Calib.

Actual:	9.05		
Required:	8.90	-	9.10
Flag:			

Peak Width

Actual:	0.65		
Required:	0.90		
Flag:			

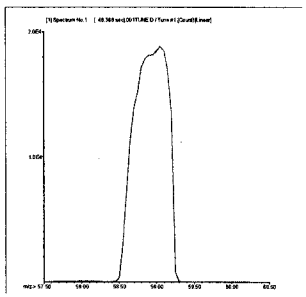


24 Mg
Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



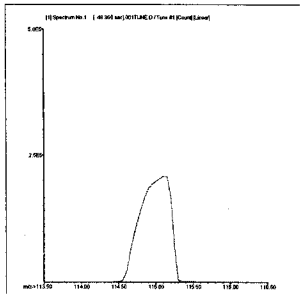
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



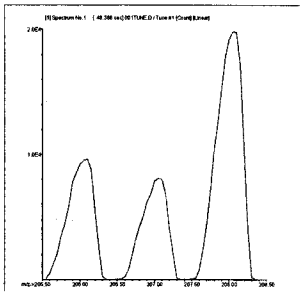
115 In

Mass Calib.

Actual:	115.05		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



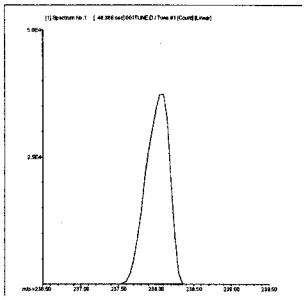
208 Pb

Mass Calib.

Actual:	208.05		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	238.05		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: **Pass**

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\002CALB.D\002CALB.D#
Date Acquired: Aug 1 2008 05:09 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:12 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	226	57.18
52	Cr	72	1	2117	10.82
55	Mn	72	1	467	9.66
59	Co	72	1	860	14.10
60	Ni	72	1	183	6.30
63	Cu	72	1	747	0.77
66	Zn	72	1	1270	7.00
75	As	72	1	44	8.66
78	Se	72	1	369	10.18
95	Mo	115	1	63	50.76
107	Ag	115	1	3	173.21
111	Cd	115	1	-13	83.74
118	Sn	115	1	77	41.93
121	Sb	115	1	27	57.28
137	Ba	115	1	10	173.21
205	Tl	165	1	537	16.07
208	Pb	165	1	1390	16.26
238	U	165	1	110	32.78

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	833878	0.73
72	Ge	1	1973549	2.94
115	In	1	5336565	2.46
165	Ho	1	9960409	1.53

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File:	D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#
Date Acquired:	Aug 1 2008 05:14 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Aug 01 2008 05:12 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-272	50.49
52	Cr	72	1	2897	5.68
55	Mn	72	1	563	7.17
59	Co	72	1	57	10.19
60	Ni	72	1	110	36.36
63	Cu	72	1	560	6.44
66	Zn	72	1	2417	3.11
75	As	72	1	40	16.67
78	Se	72	1	356	2.42
95	Mo	115	1	53	54.13
107	Ag	115	1	23	65.47
111	Cd	115	1	-6	132.17
118	Sn	115	1	300	11.55
121	Sb	115	1	37	15.75
137	Ba	115	1	30	33.33
205	Tl	165	1	173	12.01
208	Pb	165	1	140	21.43
238	U	165	1	40	0.00

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	255548	0.60
72	Ge	1	672650	0.44
115	In	1	1871847	1.51
165	Ho	1	3221199	1.43

Tune File#	1	d:\icpchem\1\7500\he.u
Tune File#	2	D:\ICPCHEM\1\7500\
Tune File#	3	D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\004ICAL.D\004ICAL.D#
Date Acquired: Aug 1 2008 05:19 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:17 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	53131	1.06
51	V	72	1	1283257	0.76
52	Cr	72	1	1425275	0.77
55	Mn	72	1	1536008	2.08
59	Co	72	1	1816730	0.63
60	Ni	72	1	419905	1.65
63	Cu	72	1	1011646	1.87
66	Zn	72	1	225922	0.98
75	As	72	1	156016	0.75
78	Se	72	1	27608	0.60
95	Mo	115	1	500099	0.82
107	Ag	115	1	1510579	0.78
111	Cd	115	1	284993	1.35
118	Sn	115	1	732326	1.35
121	Sb	115	1	843490	0.78
137	Ba	115	1	330080	0.40
205	Tl	165	1	2599950	0.31
208	Pb	165	1	3598837	0.74
238	U	165	1	3475802	1.08

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	254956	0.78	255548	99.8	30 - 120	
72	Ge	1	660113	0.69	672650	98.1	30 - 120	
115	In	1	1853161	0.59	1871847	99.0	30 - 120	
165	Ho	1	3234405	1.52	3221199	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\005 ICV.D\005 ICV.D#
Date Acquired: Aug 1 2008 05:23 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.560 ug/l	0.94	40	101.4	90 - 110	
51 V	72	1	42.020 ug/l	1.26	40	105.1	90 - 110	
52 Cr	72	1	40.700 ug/l	1.06	40	101.8	90 - 110	
55 Mn	72	1	40.180 ug/l	0.41	40	100.5	90 - 110	
59 Co	72	1	41.070 ug/l	0.49	40	102.7	90 - 110	
60 Ni	72	1	41.010 ug/l	0.56	40	102.5	90 - 110	
63 Cu	72	1	41.690 ug/l	0.69	40	104.2	90 - 110	
66 Zn	72	1	39.090 ug/l	1.50	40	97.7	90 - 110	
75 As	72	1	41.200 ug/l	1.49	40	103.0	90 - 110	
78 Se	72	1	40.800 ug/l	2.06	40	102.0	90 - 110	
95 Mo	115	1	40.340 ug/l	0.40	40	100.9	90 - 110	
107 Ag	115	1	40.890 ug/l	1.63	40	102.2	90 - 110	
111 Cd	115	1	40.280 ug/l	1.37	40	100.7	90 - 110	
118 Sn	115	1	41.210 ug/l	1.05	40	103.0	90 - 110	
121 Sb	115	1	39.630 ug/l	0.98	40	99.1	90 - 110	
137 Ba	115	1	39.860 ug/l	0.90	40	99.7	90 - 110	
205 Tl	165	1	41.670 ug/l	1.18	40	104.2	90 - 110	
208 Pb	165	1	41.370 ug/l	0.10	40	103.4	90 - 110	
238 U	165	1	41.230 ug/l	1.44	40	103.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	250435	0.44	255548	98.0	30 - 120	
72 Ge	1	659087	0.77	672650	98.0	30 - 120	
115 In	1	1873914	0.98	1871847	100.1	30 - 120	
165 Ho	1	3244658	0.81	3221199	100.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\006 ICB.D\006 ICB.D#
Date Acquired: Aug 1 2008 05:28 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit
9 Be	6	1	0.002	ug/l	173.26	1.00
51 V	72	1	0.034	ug/l	9.46	1.00
52 Cr	72	1	0.003	ug/l	578.51	1.00
55 Mn	72	1	0.015	ug/l	43.00	1.00
59 Co	72	1	0.001	ug/l	198.62	1.00
60 Ni	72	1	0.015	ug/l	19.22	1.00
63 Cu	72	1	0.001	ug/l	1165.20	1.00
66 Zn	72	1	0.037	ug/l	296.64	10.00
75 As	72	1	0.001	ug/l	189.47	5.00
78 Se	72	1	0.127	ug/l	37.21	5.00
95 Mo	115	1	0.017	ug/l	10.61	1.00
107 Ag	115	1	0.001	ug/l	120.51	1.00
111 Cd	115	1	0.008	ug/l	17.43	1.00
118 Sn	115	1	0.015	ug/l	96.99	10.00
121 Sb	115	1	0.057	ug/l	10.10	1.00
137 Ba	115	1	-0.001	ug/l	528.92	1.00
205 Tl	165	1	0.010	ug/l	32.63	1.00
208 Pb	165	1	0.003	ug/l	23.33	1.00
238 U	165	1	0.003	ug/l	40.16	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	258465	0.26	255548	101.1	30 - 120	
72 Ge	1	677150	0.70	672650	100.7	30 - 120	
115 In	1	1906229	1.53	1871847	101.8	30 - 120	
165 Ho	1	3274132	0.26	3221199	101.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\007RLST.D\007RLST.D#
Date Acquired: Aug 1 2008 05:33 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	0.924 ug/l	8.57	1	92.4
51 V	72	1	1.016 ug/l	1.95	1	101.6
52 Cr	72	1	0.990 ug/l	4.23	1	99.0
55 Mn	72	1	1.025 ug/l	3.42	1	102.5
59 Co	72	1	0.996 ug/l	2.31	1	99.6
60 Ni	72	1	1.086 ug/l	1.12	1	108.6
63 Cu	72	1	1.141 ug/l	3.01	1	114.1
66 Zn	72	1	10.220 ug/l	1.80	10	102.2
75 As	72	1	1.020 ug/l	3.09	1	102.0
78 Se	72	1	1.147 ug/l	6.67	1	114.7
95 Mo	115	1	1.027 ug/l	0.67	1	102.7
107 Ag	115	1	0.993 ug/l	3.51	1	99.3
111 Cd	115	1	0.918 ug/l	2.33	1	91.8
118 Sn	115	1	9.630 ug/l	2.90	10	96.3
121 Sb	115	1	0.976 ug/l	3.07	1	97.6
137 Ba	115	1	1.000 ug/l	2.82	1	100.0
205 Tl	165	1	1.042 ug/l	2.40	1	104.2
208 Pb	165	1	1.080 ug/l	1.98	1	108.0
238 U	165	1	1.056 ug/l	1.59	1	105.6

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	259484	0.71	255548	101.5	30 - 120	
72 Ge	1	673848	1.22	672650	100.2	30 - 120	
115 In	1	1903379	2.16	1871847	101.7	30 - 120	
165 Ho	1	3274608	0.91	3221199	101.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\008SMPL.D\008SMPL.D#
Date Acquired: Aug 1 2008 05:38 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ALTSe
Misc Info:
Vial Number: 2106
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.000	0.000	ug/l	0.00	3600	
51 V	72	1	0.048	0.048	ug/l	16.98	3600	
52 Cr	72	1	0.006	0.006	ug/l	139.37	3600	
55 Mn	72	1	0.086	0.086	ug/l	20.71	18000	
59 Co	72	1	-0.002	-0.002	ug/l	50.25	3600	
60 Ni	72	1	0.007	0.007	ug/l	60.53	3600	
63 Cu	72	1	0.080	0.080	ug/l	16.25	3600	
66 Zn	72	1	0.096	0.096	ug/l	76.42	3600	
75 As	72	1	0.000	0.000	ug/l	14901.00	3600	
78 Se	72	1	5.158	5.158	ug/l	3.53	3600	
95 Mo	115	1	0.005	0.005	ug/l	132.01	3600	
107 Ag	115	1	0.001	0.001	ug/l	161.82	3600	
111 Cd	115	1	0.002	0.002	ug/l	138.08	3600	
118 Sn	115	1	0.003	0.003	ug/l	163.30	3600	
121 Sb	115	1	0.010	0.010	ug/l	12.99	3600	
137 Ba	115	1	0.016	0.016	ug/l	76.05	3600	
205 Tl	165	1	0.000	0.000	ug/l	606.70	3600	
208 Pb	165	1	0.011	0.011	ug/l	24.76	3600	
238 U	165	1	0.000	0.000	ug/l	467.25	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	259912	0.55	255548	101.7	30 - 120	
72 Ge	1	675481	0.34	672650	100.4	30 - 120	
115 In	1	1899120	0.92	1871847	101.5	30 - 120	
165 Ho	1	3256986	1.03	3221199	101.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\009AFCE.D\009AFCE.D#
Date Acquired: Aug 1 2008 05:43 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.206 ug/l	15.58	0	111.2	50 - 150	
51 V	72	1	0.224 ug/l	14.96	0	110.0	50 - 150	
52 Cr	72	1	0.217 ug/l	11.03	0	109.6	50 - 150	
55 Mn	72	1	0.198 ug/l	7.79	0	96.6	50 - 150	
59 Co	72	1	0.190 ug/l	7.22	0	95.3	50 - 150	
60 Ni	72	1	0.210 ug/l	15.03	0	96.5	50 - 150	
63 Cu	72	1	0.280 ug/l	5.49	0	122.7	50 - 150	
66 Zn	72	1	3.314 ug/l	4.90	2	162.1	50 - 150	
75 As	72	1	0.202 ug/l	9.89	0	99.2	50 - 150	
78 Se	72	1	0.234 ug/l	40.72	0	101.9	50 - 150	
95 Mo	115	1	0.204 ug/l	17.22	0	99.4	50 - 150	
107 Ag	115	1	0.193 ug/l	1.97	0	97.0	50 - 150	
111 Cd	115	1	0.194 ug/l	7.47	0	105.7	50 - 150	
118 Sn	115	1	1.928 ug/l	5.82	2	100.1	50 - 150	
121 Sb	115	1	0.203 ug/l	8.50	0	104.1	50 - 150	
137 Ba	115	1	0.273 ug/l	3.52	0	136.3	50 - 150	
205 Tl	165	1	0.197 ug/l	8.31	0	94.4	50 - 150	
208 Pb	165	1	0.226 ug/l	1.36	0	104.8	50 - 150	
238 U	165	1	0.213 ug/l	3.82	0	100.8	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	256676	0.90	255548	100.4	30 - 120	
72 Ge	1	673194	1.78	672650	100.1	30 - 120	
115 In	1	1881176	0.46	1871847	100.5	30 - 120	
165 Ho	1	3253745	1.24	3221199	101.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\010ICSA.D\010ICSA.D#
Date Acquired: Aug 1 2008 05:47 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.003 ug/l	173.18	10.00	
51 V	72	1	-0.131 ug/l	63.31	10.00	
52 Cr	72	1	0.886 ug/l	7.43	10.00	
55 Mn	72	1	1.737 ug/l	3.46	10.00	
59 Co	72	1	0.034 ug/l	14.04	10.00	
60 Ni	72	1	4.080 ug/l	1.60	10.00	
63 Cu	72	1	0.320 ug/l	4.03	10.00	
66 Zn	72	1	2.755 ug/l	2.88	100.00	
75 As	72	1	0.131 ug/l	10.68	50.00	
78 Se	72	1	0.128 ug/l	94.45	50.00	
95 Mo	115	1	1930.000 ug/l	2.72	10.00	
107 Ag	115	1	0.011 ug/l	48.81	10.00	
111 Cd	115	1	0.289 ug/l	32.85	10.00	
118 Sn	115	1	0.073 ug/l	7.03	100.00	
121 Sb	115	1	0.222 ug/l	6.23	10.00	
137 Ba	115	1	1.681 ug/l	3.20	10.00	
205 Tl	165	1	0.018 ug/l	34.02	10.00	
208 Pb	165	1	0.091 ug/l	7.67	10.00	
238 U	165	1	0.004 ug/l	56.34	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	167207	2.07	255548	65.4	30 - 120	
72 Ge	1	497234	1.03	672650	73.9	30 - 120	
115 In	1	1451076	1.00	1871847	77.5	30 - 120	
165 Ho	1	2739928	0.60	3221199	85.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\011ICSB.D\011ICSB.D#
Date Acquired: Aug 1 2008 05:52 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	110.900	2.30	100	110.9	80 - 120	
51 V	72	1	92.300	1.61	100	92.3	80 - 120	
52 Cr	72	1	89.370	0.83	100	89.4	80 - 120	
55 Mn	72	1	90.700	0.70	100	90.7	80 - 120	
59 Co	72	1	87.570	1.28	100	87.6	80 - 120	
60 Ni	72	1	87.870	0.39	100	87.9	80 - 120	
63 Cu	72	1	83.660	0.88	100	83.7	80 - 120	
66 Zn	72	1	92.890	1.75	100	92.9	80 - 120	
75 As	72	1	99.200	1.31	100	99.2	80 - 120	
78 Se	72	1	104.700	0.98	100	104.7	80 - 120	
95 Mo	115	1	1941.000	0.69	2100	92.4	80 - 120	
107 Ag	115	1	85.020	0.67	100	85.0	80 - 120	
111 Cd	115	1	95.710	1.25	100	95.7	80 - 120	
118 Sn	115	1	101.600	1.26	100	101.6	80 - 120	
121 Sb	115	1	103.900	0.85	100	103.9	80 - 120	
137 Ba	115	1	104.400	0.53	100	104.4	80 - 120	
205 Tl	165	1	96.410	0.40	100	96.4	80 - 120	
208 Pb	165	1	95.130	0.35	100	95.1	80 - 120	
238 U	165	1	105.700	0.51	100	105.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	137844	2.21	255548	53.9	30 - 120	
72 Ge	1	461837	1.54	672650	68.7	30 - 120	
115 In	1	1395988	1.96	1871847	74.6	30 - 120	
165 Ho	1	2774809	0.69	3221199	86.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\012WASH.D\012WASH.D#
Date Acquired: Aug 1 2008 05:57 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Fail

Empty cal WD 8/1/2008

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.001 ug/l	86.64	10.00	
51 V	72	1	0.025 ug/l	41.80	10.00	
52 Cr	72	1	-0.160 ug/l	1.63	10.00	
55 Mn	72	1	-0.025 ug/l	6.66	10.00	
59 Co	72	1	0.007 ug/l	19.81	10.00	
60 Ni	72	1	-0.010 ug/l	33.65	10.00	
63 Cu	72	1	-0.029 ug/l	10.34	10.00	
66 Zn	72	1	-0.890 ug/l	2.02	100.00	
75 As	72	1	-0.017 ug/l	11.11	50.00	
78 Se	72	1	-0.824 ug/l	2.12	50.00	
95 Mo	115	1	0.110 ug/l	11.55	10.00	
107 Ag	115	1	0.001 ug/l	20.97	10.00	
111 Cd	115	1	0.004 ug/l	32.95	10.00	
118 Sn	115	1	-0.034 ug/l	4.88	100.00	
121 Sb	115	1	0.003 ug/l	31.21	10.00	
137 Ba	115	1	-0.006 ug/l	9.05	10.00	
205 Tl	165	1	0.005 ug/l	23.11	10.00	
208 Pb	165	1	0.005 ug/l	20.22	10.00	
238 U	165	1	0.001 ug/l	44.10	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	733074	2.27	255548	286.9	30 - 120	IS Fail
72 Ge	1	1804533	2.71	672650	268.3	30 - 120	IS Fail
115 In	1	5144189	2.06	1871847	274.8	30 - 120	IS Fail
165 Ho	1	9997889	2.48	3221199	310.4	30 - 120	IS Fail

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
4 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\013 LR.D\013 LR.D#
Date Acquired: Aug 1 2008 06:02 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	1028.000 ug/l	1.04	1000	102.8
51 V	72	1	913.000 ug/l	0.79	1000	91.3
52 Cr	72	1	933.200 ug/l	0.13	1000	93.3
55 Mn	72	1	917.100 ug/l	0.07	1000	91.7
59 Co	72	1	928.100 ug/l	0.91	1000	92.8
60 Ni	72	1	937.400 ug/l	1.13	1000	93.7
63 Cu	72	1	923.100 ug/l	0.93	1000	92.3
66 Zn	72	1	964.600 ug/l	0.27	1000	96.5
75 As	72	1	995.500 ug/l	1.76	1000	99.6
78 Se	72	1	1006.000 ug/l	0.89	1000	100.6
95 Mo	115	1	937.300 ug/l	1.59	1000	93.7
107 Ag	115	1	921.600 ug/l	1.39	1000	92.2
111 Cd	115	1	954.600 ug/l	1.05	1000	95.5
118 Sn	115	1	943.200 ug/l	0.95	1000	94.3
121 Sb	115	1	947.700 ug/l	1.56	1000	94.8
137 Ba	115	1	977.100 ug/l	1.48	1000	97.7
205 Tl	165	1	973.000 ug/l	1.65	1000	97.3
208 Pb	165	1	967.200 ug/l	1.35	1000	96.7
238 U	165	1	988.100 ug/l	1.36	1000	98.8

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	224143	0.48	255548	87.7	30 - 120	
72 Ge	1	625280	1.04	672650	93.0	30 - 120	
115 In	1	1863956	1.08	1871847	99.6	30 - 120	
165 Ho	1	3251125	1.31	3221199	100.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\014WASH.D\014WASH.D#
Date Acquired: Aug 1 2008 06:07 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.011 ug/l	125.16	10.00	
51 V	72	1	0.049 ug/l	65.21	10.00	
52 Cr	72	1	0.006 ug/l	324.32	10.00	
55 Mn	72	1	0.016 ug/l	20.91	10.00	
59 Co	72	1	0.018 ug/l	12.05	10.00	
60 Ni	72	1	0.034 ug/l	50.24	10.00	
63 Cu	72	1	0.027 ug/l	25.26	10.00	
66 Zn	72	1	0.125 ug/l	67.72	100.00	
75 As	72	1	0.032 ug/l	42.25	50.00	
78 Se	72	1	0.195 ug/l	49.97	50.00	
95 Mo	115	1	0.136 ug/l	13.20	10.00	
107 Ag	115	1	0.029 ug/l	14.32	10.00	
111 Cd	115	1	0.021 ug/l	34.64	10.00	
118 Sn	115	1	0.189 ug/l	16.74	100.00	
121 Sb	115	1	0.118 ug/l	4.58	10.00	
137 Ba	115	1	0.017 ug/l	64.29	10.00	
205 Tl	165	1	0.027 ug/l	16.50	10.00	
208 Pb	165	1	0.021 ug/l	23.76	10.00	
238 U	165	1	0.033 ug/l	1.86	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	237865	0.45	255548	93.1	30 - 120	
72 Ge	1	656686	0.91	672650	97.6	30 - 120	
115 In	1	1884098	2.15	1871847	100.7	30 - 120	
165 Ho	1	3286155	0.90	3221199	102.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\015 CCV.D\015 CCV.D#
Date Acquired: Aug 1 2008 06:11 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.980 ug/l	2.52	50	100.0	90 - 110	
51 V	72	1	50.680 ug/l	1.55	50	101.4	90 - 110	
52 Cr	72	1	49.610 ug/l	2.13	50	99.2	90 - 110	
55 Mn	72	1	49.080 ug/l	0.60	50	98.2	90 - 110	
59 Co	72	1	49.560 ug/l	2.15	50	99.1	90 - 110	
60 Ni	72	1	49.420 ug/l	0.14	50	98.8	90 - 110	
63 Cu	72	1	50.100 ug/l	0.57	50	100.2	90 - 110	
66 Zn	72	1	50.590 ug/l	1.63	50	101.2	90 - 110	
75 As	72	1	50.200 ug/l	1.51	50	100.4	90 - 110	
78 Se	72	1	49.910 ug/l	1.37	50	99.8	90 - 110	
95 Mo	115	1	48.960 ug/l	0.95	50	97.9	90 - 110	
107 Ag	115	1	48.950 ug/l	0.90	50	97.9	90 - 110	
111 Cd	115	1	49.140 ug/l	0.76	50	98.3	90 - 110	
118 Sn	115	1	49.440 ug/l	1.82	50	98.9	90 - 110	
121 Sb	115	1	49.800 ug/l	1.61	50	99.6	90 - 110	
137 Ba	115	1	49.940 ug/l	1.70	50	99.9	90 - 110	
205 Tl	165	1	50.770 ug/l	0.39	50	101.5	90 - 110	
208 Pb	165	1	49.770 ug/l	1.54	50	99.5	90 - 110	
238 U	165	1	51.050 ug/l	2.02	50	102.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	244634	1.48	255548	95.7	30 - 120	
72 Ge	1	645887	0.68	672650	96.0	30 - 120	
115 In	1	1877513	0.42	1871847	100.3	30 - 120	
165 Ho	1	3317705	1.07	3221199	103.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\016 CCB.D\016 CCB.D#
Date Acquired: Aug 1 2008 06:16 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.004	ug/l	173.22	1.00	
51 V	72	1	0.043	ug/l	22.76	1.00	
52 Cr	72	1	-0.010	ug/l	83.80	1.00	
55 Mn	72	1	0.003	ug/l	101.83	1.00	
59 Co	72	1	0.002	ug/l	92.49	1.00	
60 Ni	72	1	0.006	ug/l	113.81	1.00	
63 Cu	72	1	-0.002	ug/l	118.38	1.00	
66 Zn	72	1	0.094	ug/l	28.51	10.00	
75 As	72	1	0.011	ug/l	58.76	5.00	
78 Se	72	1	0.117	ug/l	10.56	5.00	
95 Mo	115	1	0.033	ug/l	38.47	1.00	
107 Ag	115	1	0.006	ug/l	60.22	1.00	
111 Cd	115	1	0.001	ug/l	409.06	1.00	
118 Sn	115	1	0.034	ug/l	5.64	10.00	
121 Sb	115	1	0.029	ug/l	17.49	1.00	
137 Ba	115	1	0.000	ug/l	13562.00	1.00	
205 Tl	165	1	0.005	ug/l	32.06	1.00	
208 Pb	165	1	0.002	ug/l	29.03	1.00	
238 U	165	1	0.005	ug/l	49.51	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	245150	0.45	255548	95.9	30 - 120	
72 Ge	1	652346	0.64	672650	97.0	30 - 120	
115 In	1	1876648	1.79	1871847	100.3	30 - 120	
165 Ho	1	3226238	0.20	3221199	100.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\017 BLK.D\017 BLK.D#
Date Acquired: Aug 1 2008 06:21 pm
Operator: TEL
Sample Name: KR03WB
Misc Info: BLANK 8204435 6020
Vial Number: 2201
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: BLK
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit
9 Be	6	1	0.002 ug/l	173.20	1.00
51 V	72	1	0.024 ug/l	69.39	1.00
52 Cr	72	1	0.022 ug/l	58.54	1.00
55 Mn	72	1	0.057 ug/l	2.30	1.00
59 Co	72	1	0.000 ug/l	289.96	1.00
60 Ni	72	1	0.038 ug/l	16.72	1.00
63 Cu	72	1	0.059 ug/l	17.80	1.00
66 Zn	72	1	0.525 ug/l	25.11	10.00
75 As	72	1	0.007 ug/l	90.12	5.00
78 Se	72	1	0.081 ug/l	29.95	5.00
95 Mo	115	1	0.019 ug/l	17.19	1.00
107 Ag	115	1	0.008 ug/l	71.87	1.00
111 Cd	115	1	0.002 ug/l	28.64	1.00
118 Sn	115	1	0.098 ug/l	5.95	10.00
121 Sb	115	1	0.018 ug/l	14.68	1.00
137 Ba	115	1	0.110 ug/l	4.09	1.00
205 Tl	165	1	0.005 ug/l	28.41	1.00
208 Pb	165	1	0.021 ug/l	13.31	1.00
238 U	165	1	0.002 ug/l	34.97	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	253234	0.51	255548	99.1	30 - 120	
72 Ge	1	666604	0.82	672650	99.1	30 - 120	
115 In	1	1897850	1.31	1871847	101.4	30 - 120	
165 Ho	1	3291402	0.39	3221199	102.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\018 LCS.D\018 LCS.D#
Date Acquired: Aug 1 2008 06:26 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KR03WC
Misc Info: LCS
Vial Number: 2202
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: LCS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)
9 Be	6	1	40.51	1.15	40	101.3
51 V	72	1	41.95	1.63	40	104.9
52 Cr	72	1	40.85	1.86	40	102.1
55 Mn	72	1	40.60	0.44	40	101.5
59 Co	72	1	41.49	0.43	40	103.7
60 Ni	72	1	40.98	0.35	40	102.5
63 Cu	72	1	41.82	1.25	40	104.6
66 Zn	72	1	39.02	0.94	40	97.6
75 As	72	1	40.34	0.29	40	100.9
78 Se	72	1	39.96	1.74	40	99.9
95 Mo	115	1	41.43	1.63	40	103.6
107 Ag	115	1	40.29	2.31	40	100.7
111 Cd	115	1	40.02	1.12	40	100.1
118 Sn	115	1	0.04	26.89	40	0.1
121 Sb	115	1	40.87	1.23	40	102.2
137 Ba	115	1	41.30	1.54	40	103.3
205 Tl	165	1	42.33	1.55	40	105.8
208 Pb	165	1	41.34	2.19	40	103.4
238 U	165	1	42.46	1.08	40	106.2

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	253080	0.41	255548	99.0	30 - 120	
72 Ge	1	658240	0.53	672650	97.9	30 - 120	
115 In	1	1874920	0.67	1871847	100.2	30 - 120	
165 Ho	1	3278681	0.92	3221199	101.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

All Reference Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\019AREF.D\019AREF.D#
Date Acquired: Aug 1 2008 06:31 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1L
Misc Info: D8G210174
Vial Number: 2203
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: AllRef
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Data Results:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.008	0.008	ug/l	114.37	3600.00	
51 V	72	1	1.667	1.667	ug/l	1.26	3600.00	
52 Cr	72	1	0.438	0.438	ug/l	0.33	3600.00	
55 Mn	72	1	58.680	58.680	ug/l	2.17	18000.00	
59 Co	72	1	0.197	0.197	ug/l	1.27	3600.00	
60 Ni	72	1	0.303	0.303	ug/l	8.96	3600.00	
63 Cu	72	1	0.309	0.309	ug/l	5.20	3600.00	
66 Zn	72	1	-0.109	-0.109	ug/l	37.79	3600.00	
75 As	72	1	0.031	0.031	ug/l	26.45	3600.00	
78 Se	72	1	0.132	0.132	ug/l	7.73	3600.00	
95 Mo	115	1	0.058	0.058	ug/l	3.04	3600.00	
107 Ag	115	1	0.006	0.006	ug/l	17.52	3600.00	
111 Cd	115	1	0.008	0.008	ug/l	75.99	3600.00	
118 Sn	115	1	0.092	0.092	ug/l	17.69	3600.00	
121 Sb	115	1	0.021	0.021	ug/l	19.22	3600.00	
137 Ba	115	1	0.996	0.996	ug/l	3.74	3600.00	
205 Tl	165	1	0.019	0.019	ug/l	23.05	3600.00	
208 Pb	165	1	0.020	0.020	ug/l	6.09	3600.00	
238 U	165	1	0.003	0.003	ug/l	54.91	3600.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	254625	0.86	255548	99.6	30 - 120	
72 Ge	1	675493	0.20	672650	100.4	30 - 120	
115 In	1	1869157	1.00	1871847	99.9	30 - 120	
165 Ho	1	3293113	1.20	3221199	102.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\020SDIL.D\020SDIL.D#
Date Acquired: Aug 1 2008 06:36 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1LP5
Misc Info: SERIAL DILUTION
Vial Number: 2204
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: SDIL
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: D:\ICPCHEM\1\DATA\AG080108.B\019AREF.D\019AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.
9 Be	6	1	0.004	ug/l	86.62	0.00
51 V	72	1	0.369	ug/l	4.34	0.33
52 Cr	72	1	0.093	ug/l	9.92	0.09
55 Mn	72	1	12.690	ug/l	2.58	11.74
59 Co	72	1	0.044	ug/l	9.12	0.04
60 Ni	72	1	0.130	ug/l	10.11	0.06
63 Cu	72	1	0.062	ug/l	21.19	0.06
66 Zn	72	1	0.092	ug/l	50.21	-0.02
75 As	72	1	0.017	ug/l	17.53	0.01
78 Se	72	1	0.094	ug/l	37.06	0.03
95 Mo	115	1	0.014	ug/l	64.77	0.01
107 Ag	115	1	0.002	ug/l	75.94	0.00
111 Cd	115	1	0.003	ug/l	44.20	0.00
118 Sn	115	1	0.006	ug/l	103.31	0.02
121 Sb	115	1	0.008	ug/l	59.09	0.00
137 Ba	115	1	0.209	ug/l	11.68	0.20
205 Tl	165	1	0.002	ug/l	41.78	0.00
208 Pb	165	1	0.004	ug/l	34.85	0.00
238 U	165	1	0.000	ug/l	68.01	0.00

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	254419	0.49	255548	99.6	30 - 120	
72 Ge	1	685536	1.78	672650	101.9	30 - 120	
115 In	1	1933678	1.46	1871847	103.3	30 - 120	
165 Ho	1	3361331	1.13	3221199	104.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 08/04/08 08:56:13

Department: 090 (Metals) | Source: Spreadsheet

Sample: **KRW1LP5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG080108 # 20
Acquired: 08/01/2008 18:36:00
Calibrated: 08/01/2008 17:14:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	2	0.02093	0.00840	149		*	
7440-62-2	Vanadium	51	4640	1.8435	1.6670	10.6		*	
7440-47-3	Chromium	52	4331	0.46605	0.43770	6.48		*	
7439-96-5	Manganese	55	202831	63.450	58.680	8.13		*	
7440-48-4	Cobalt	59	883	0.21855	0.19710	10.9		*	
7440-02-0	Nickel	60	677	0.64750	0.30330	113		*	
7440-66-6	Zinc	66	2677	0.46230	-0.10920		2.0	NC	☑
7440-38-2	Arsenic	75	68	0.08345	0.03120	167		*	
7782-49-2	Selenium	78	390	0.47045	0.13210	256		*	
7439-98-7	Molybdenum	95	127	0.06925	0.05822	18.9		*	
7440-22-4	Silver	107	57	0.01027	0.00613	67.3		*	
7440-43-9	Cadmium	111	3	0.01677	0.00773	117		*	
7440-31-5	Tin	118	353	0.02840	0.09210	69.2		*	
7440-36-0	Antimony	121	110	0.04072	0.02076	96.2	0.070	NC	☑
7440-39-3	Barium	137	750	1.0440	0.99570	4.85		*	
7440-28-0	Thallium	205	240	0.01090	0.01877	42.0		*	
7439-92-1	Lead	208	290	0.01916	0.01965	2.52	0.18	NC	☑
7440-61-1	Uranium	238	33	-0.00116	0.00300	139		*	
7440-56-4	Germanium	72			0			*	
7440-50-8	Copper	63	1227	0.31220	0.30940	0.905	0.56	NC	☑
7440-47-3	Chromium	53	667	0.15190	0.46590	67.4		*	
7440-74-6	Indium	115			0			*	
7440-60-0	Holmium	165			0			*	
7439-93-2	Lithium	6			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Z Date: 8/4/08

Post Digestion Spiked Sample (PDS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\021PDS.D\021PDS.D#
Date Acquired: Aug 1 2008 06:40 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1LZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 2205
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG080108.B\019AREF.D\019AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt
9 Be	6	1	197.400	0.008	ug/l	1.69	200
51 V	72	1	195.500	1.667	ug/l	1.65	200
52 Cr	72	1	193.200	0.438	ug/l	1.61	200
55 Mn	72	1	250.200	58.680	ug/l	0.40	200
59 Co	72	1	191.700	0.197	ug/l	0.51	200
60 Ni	72	1	192.500	0.303	ug/l	0.23	200
63 Cu	72	1	195.200	0.309	ug/l	0.57	200
66 Zn	72	1	186.800	-0.109	ug/l	0.96	200
75 As	72	1	195.200	0.031	ug/l	0.94	200
78 Se	72	1	191.200	0.132	ug/l	0.79	200
95 Mo	115	1	193.300	0.058	ug/l	1.08	200
107 Ag	115	1	151.400	0.006	ug/l	16.59	200
111 Cd	115	1	191.100	0.008	ug/l	1.23	200
118 Sn	115	1	195.300	0.092	ug/l	1.29	200
121 Sb	115	1	194.100	0.021	ug/l	1.51	200
137 Ba	115	1	199.000	0.996	ug/l	1.05	200
205 Tl	165	1	186.600	0.019	ug/l	1.06	200
208 Pb	165	1	190.800	0.020	ug/l	1.31	200
238 U	165	1	194.000	0.003	ug/l	1.20	200

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	249158	1.06	255548	97.5	30 - 120	
72 Ge	1	653008	0.44	672650	97.1	30 - 120	
115 In	1	1878139	0.22	1871847	100.3	30 - 120	
165 Ho	1	3304527	0.22	3221199	102.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) ICPMS_024 Reported: 08/04/08 08:56:36

Department: 090 (Metals) Source: Spreadsheet

Sample: **KRW1LZ** Spike Dilution: **1.00** Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG080108 # 21
Acquired: 08/01/2008 18:40:00
Calibrated: 08/01/2008 17:14:00

Channel 272
Method 6020_
ICPMS_024

Matrix: AQUEOUS
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	102510	197.40	0.00840	98.7	200		☐
7440-62-2	Vanadium	51	2481660	195.50	1.6670	96.9	200		☐
7440-47-3	Chromium	52	2721540	193.20	0.43770	96.4	200	>	☐
7439-96-5	Manganese	55	3801930	250.20	58.680	95.8	200		☐
7440-48-4	Cobalt	59	3445080	191.70	0.19710	95.8	200		☐
7440-02-0	Nickel	60	799595	192.50	0.30330	96.1	200		☐
7440-66-6	Zinc	66	415559	186.80	-0.10920	93.4	200		☑
7440-38-2	Arsenic	75	301199	195.20	0.03120	97.6	200	>	☐
7782-49-2	Selenium	78	51900	191.20	0.13210	95.5	200		☐
7439-98-7	Molybdenum	95	979467	193.30	0.05822	96.6	200		☐
7440-22-4	Silver	107	2317610	151.40	0.00613	75.7	200		☐
7440-43-9	Cadmium	111	551836	191.10	0.00773	95.5	200		☐
7440-31-5	Tin	118	1449090	195.30	0.09210	97.6	200		☐
7440-36-0	Antimony	121	1658950	194.10	0.02076	97.0	200		☑
7440-39-3	Barium	137	665741	199.00	0.99570	99.0	200	>	☐
7440-28-0	Thallium	205	4957180	186.60	0.01877	93.3	200		☐
7439-92-1	Lead	208	7017660	190.80	0.01965	95.4	200	>	☑
7440-61-1	Uranium	238	6891870	194.00	0.00300	97.0	200		☐
7440-56-4	Germanium	72			0				
7440-50-8	Copper	63	1953130	195.20	0.30940	97.4	200		☑
7440-47-3	Chromium	53	330952	198.80	0.46590				
7440-74-6	Indium	115			0				
7440-60-0	Holmium	165			0				
7439-93-2	Lithium	6			0				

* : Unspiked sample result greater than 4 X spike amount

> : Analyte was found at concentration > 100 X MDL

Reviewed by: Date: 8/4/08

Spiked Sample (MS) QC Report

Data File:	D:\ICPCHEM\1\DATA\AG080108.B\022_MS.D\022_MS.D#
Date Acquired:	Aug 1 2008 06:45 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	KRW1LS
Misc Info:	MATRIX SPIKE
Vial Number:	2206
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Aug 01 2008 05:21 pm
Sample Type:	MS
Prep Dil. Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG080108.B\019AREF.D\019AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)
9 Be	6	1	41.06	0.01	ug/l	0.27	40	102.6
51 V	72	1	43.55	1.67	ug/l	1.00	40	104.5
52 Cr	72	1	40.39	0.44	ug/l	1.12	40	99.9
55 Mn	72	1	99.94	58.68	ug/l	2.37	40	101.3
59 Co	72	1	40.85	0.20	ug/l	1.68	40	101.6
60 Ni	72	1	39.84	0.30	ug/l	3.25	40	98.9
63 Cu	72	1	40.58	0.31	ug/l	1.20	40	100.7
66 Zn	72	1	38.24	-0.11	ug/l	1.96	40	95.9
75 As	72	1	40.09	0.03	ug/l	0.88	40	100.1
78 Se	72	1	39.55	0.13	ug/l	0.97	40	98.5
95 Mo	115	1	41.02	0.06	ug/l	1.16	40	102.4
107 Ag	115	1	38.78	0.01	ug/l	0.33	40	96.9
111 Cd	115	1	39.58	0.01	ug/l	0.20	40	98.9
118 Sn	115	1	0.10	0.09	ug/l	26.51	40	0.2
121 Sb	115	1	40.52	0.02	ug/l	1.29	40	101.2
137 Ba	115	1	41.47	1.00	ug/l	1.61	40	101.2
205 Tl	165	1	41.33	0.02	ug/l	2.15	40	103.3
208 Pb	165	1	40.54	0.02	ug/l	0.40	40	101.3
238 U	165	1	42.34	0.00	ug/l	1.41	40	105.8

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	249322	0.82	255548	97.6	30 - 120	
72 Ge	1	658560	1.30	672650	97.9	30 - 120	
115 In	1	1888422	1.05	1871847	100.9	30 - 120	
165 Ho	1	3276050	0.65	3221199	101.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\023 MSD.D\023 MSD.D#
Date Acquired: Aug 1 2008 06:50 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1LD
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2207
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: MSD
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Duplicate Ref File: D:\ICPCHEM\1\DATA\AG080108.B\022 MS.D\022 MS.D#

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Ref Conc	Differ(%)
9 Be	6	1	41.46 ug/l	1.88	41.06	0.97
51 V	72	1	43.41 ug/l	0.63	43.55	0.32
52 Cr	72	1	40.33 ug/l	0.95	40.39	0.15
55 Mn	72	1	98.49 ug/l	2.18	99.94	1.46
59 Co	72	1	40.36 ug/l	0.89	40.85	1.21
60 Ni	72	1	40.03 ug/l	1.19	39.84	0.48
63 Cu	72	1	40.60 ug/l	0.26	40.58	0.05
66 Zn	72	1	38.34 ug/l	0.65	38.24	0.26
75 As	72	1	40.05 ug/l	0.75	40.09	0.10
78 Se	72	1	39.17 ug/l	1.62	39.55	0.97
95 Mo	115	1	40.99 ug/l	2.58	41.02	0.07
107 Ag	115	1	38.26 ug/l	1.37	38.78	1.35
111 Cd	115	1	39.34 ug/l	1.49	39.58	0.61
118 Sn	115	1	0.04 ug/l	10.91	0.10	82.03
121 Sb	115	1	40.47 ug/l	2.01	40.52	0.12
137 Ba	115	1	41.65 ug/l	2.43	41.47	0.43
205 Tl	165	1	41.20 ug/l	1.23	41.33	0.32
208 Pb	165	1	40.45 ug/l	0.33	40.54	0.22
238 U	165	1	42.62 ug/l	1.29	42.34	0.66

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	252065	0.84	255548	98.6	30 - 120	
72 Ge	1	661691	1.02	672650	98.4	30 - 120	
115 In	1	1909670	1.08	1871847	102.0	30 - 120	
165 Ho	1	3289525	0.41	3221199	102.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref. File D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\024SMPL.D\024SMPL.D#
Date Acquired: Aug 1 2008 06:55 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW2V
Misc Info: D8G210174
Vial Number: 2208
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.012	0.012	ug/l	49.90	3600	
51 V	72	1	2.030	2.030	ug/l	8.71	3600	
52 Cr	72	1	2.269	2.269	ug/l	1.93	3600	
55 Mn	72	1	16.710	16.710	ug/l	1.71	18000	
59 Co	72	1	0.513	0.513	ug/l	2.62	3600	
60 Ni	72	1	4.537	4.537	ug/l	2.73	3600	
63 Cu	72	1	2.110	2.110	ug/l	4.85	3600	
66 Zn	72	1	1.649	1.649	ug/l	5.70	3600	
75 As	72	1	0.133	0.133	ug/l	7.51	3600	
78 Se	72	1	0.074	0.074	ug/l	77.26	3600	
95 Mo	115	1	0.053	0.053	ug/l	18.19	3600	
107 Ag	115	1	0.005	0.005	ug/l	26.79	3600	
111 Cd	115	1	0.014	0.014	ug/l	70.70	3600	
118 Sn	115	1	0.044	0.044	ug/l	9.12	3600	
121 Sb	115	1	0.028	0.028	ug/l	4.84	3600	
137 Ba	115	1	1.229	1.229	ug/l	2.67	3600	
205 Tl	165	1	0.004	0.004	ug/l	48.39	3600	
208 Pb	165	1	0.327	0.327	ug/l	1.78	3600	
238 U	165	1	0.024	0.024	ug/l	6.48	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	259188	0.27	255548	101.4	30 - 120	
72 Ge	1	674052	0.71	672650	100.2	30 - 120	
115 In	1	1920337	0.67	1871847	102.6	30 - 120	
165 Ho	1	3361743	0.28	3221199	104.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\025SMPL.D\025SMPL.D#
Date Acquired: Aug 1 2008 07:00 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW22
Misc Info: D8G210174
Vial Number: 2209
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.000	0.000	ug/l	0.00	3600	
51 V	72	1	1.496	1.496	ug/l	3.23	3600	
52 Cr	72	1	0.421	0.421	ug/l	1.72	3600	
55 Mn	72	1	61.450	61.450	ug/l	1.67	18000	
59 Co	72	1	0.208	0.208	ug/l	3.58	3600	
60 Ni	72	1	0.252	0.252	ug/l	9.98	3600	
63 Cu	72	1	0.307	0.307	ug/l	3.90	3600	
66 Zn	72	1	0.211	0.211	ug/l	15.57	3600	
75 As	72	1	0.023	0.023	ug/l	68.29	3600	
78 Se	72	1	0.113	0.113	ug/l	45.60	3600	
95 Mo	115	1	0.046	0.046	ug/l	14.28	3600	
107 Ag	115	1	0.005	0.005	ug/l	22.90	3600	
111 Cd	115	1	0.005	0.005	ug/l	49.59	3600	
118 Sn	115	1	0.030	0.030	ug/l	47.99	3600	
121 Sb	115	1	0.011	0.011	ug/l	16.25	3600	
137 Ba	115	1	1.179	1.179	ug/l	9.60	3600	
205 Tl	165	1	0.005	0.005	ug/l	83.09	3600	
208 Pb	165	1	0.016	0.016	ug/l	16.91	3600	
238 U	165	1	0.001	0.001	ug/l	116.37	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	256014	1.53	255548	100.2	30 - 120	
72 Ge	1	672947	1.42	672650	100.0	30 - 120	
115 In	1	1911398	0.40	1871847	102.1	30 - 120	
165 Ho	1	3305930	0.70	3221199	102.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\026SMPL.D\026SMPL.D#
Date Acquired: Aug 1 2008 07:04 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW29
Misc Info: D8G210174
Vial Number: 2210
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 05:21 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.002	0.002	ug/l	173.20	3600	
51 V	72	1	5.743	5.743	ug/l	1.42	3600	
52 Cr	72	1	1.325	1.325	ug/l	2.15	3600	
55 Mn	72	1	7.124	7.124	ug/l	2.02	18000	
59 Co	72	1	0.079	0.079	ug/l	2.93	3600	
60 Ni	72	1	0.250	0.250	ug/l	13.95	3600	
63 Cu	72	1	0.317	0.317	ug/l	5.93	3600	
66 Zn	72	1	0.845	0.845	ug/l	7.33	3600	
75 As	72	1	0.020	0.020	ug/l	53.55	3600	
78 Se	72	1	0.227	0.227	ug/l	31.41	3600	
95 Mo	115	1	0.057	0.057	ug/l	11.94	3600	
107 Ag	115	1	0.003	0.003	ug/l	56.27	3600	
111 Cd	115	1	0.012	0.012	ug/l	26.36	3600	
118 Sn	115	1	0.044	0.044	ug/l	32.90	3600	
121 Sb	115	1	0.011	0.011	ug/l	41.32	3600	
137 Ba	115	1	1.277	1.277	ug/l	3.25	3600	
205 Tl	165	1	0.005	0.005	ug/l	25.21	3600	
208 Pb	165	1	0.023	0.023	ug/l	7.38	3600	
238 U	165	1	0.005	0.005	ug/l	29.37	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	253418	1.16	255548	99.2	30 - 120	
72 Ge	1	660722	0.85	672650	98.2	30 - 120	
115 In	1	1890266	0.68	1871847	101.0	30 - 120	
165 Ho	1	3325116	0.43	3221199	103.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\027 CCV.D\027 CCV.D#
Date Acquired: Aug 1 2008 07:09 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.280 ug/l	2.73	50	98.6	90 - 110	
51 V	72	1	50.370 ug/l	0.79	50	100.7	90 - 110	
52 Cr	72	1	49.310 ug/l	1.01	50	98.6	90 - 110	
55 Mn	72	1	49.460 ug/l	1.29	50	98.9	90 - 110	
59 Co	72	1	50.780 ug/l	1.11	50	101.6	90 - 110	
60 Ni	72	1	49.760 ug/l	0.98	50	99.5	90 - 110	
63 Cu	72	1	50.750 ug/l	0.34	50	101.5	90 - 110	
66 Zn	72	1	50.120 ug/l	1.10	50	100.2	90 - 110	
75 As	72	1	50.910 ug/l	1.52	50	101.8	90 - 110	
78 Se	72	1	50.650 ug/l	1.34	50	101.3	90 - 110	
95 Mo	115	1	48.610 ug/l	1.43	50	97.2	90 - 110	
107 Ag	115	1	49.470 ug/l	0.80	50	98.9	90 - 110	
111 Cd	115	1	48.960 ug/l	1.24	50	97.9	90 - 110	
118 Sn	115	1	49.110 ug/l	1.74	50	98.2	90 - 110	
121 Sb	115	1	49.670 ug/l	1.69	50	99.3	90 - 110	
137 Ba	115	1	50.320 ug/l	0.55	50	100.6	90 - 110	
205 Tl	165	1	51.470 ug/l	2.50	50	102.9	90 - 110	
208 Pb	165	1	50.970 ug/l	1.20	50	101.9	90 - 110	
238 U	165	1	52.060 ug/l	0.88	50	104.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	253878	0.64	255548	99.3	30 - 120	
72 Ge	1	653639	0.99	672650	97.2	30 - 120	
115 In	1	1914327	0.58	1871847	102.3	30 - 120	
165 Ho	1	3297654	1.00	3221199	102.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\028 CCB.D\028 CCB.D#
Date Acquired: Aug 1 2008 07:14 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 05:21 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.002	ug/l	173.19	1.00	
51 V	72	1	0.014	ug/l	145.02	1.00	
52 Cr	72	1	-0.014	ug/l	18.69	1.00	
55 Mn	72	1	0.001	ug/l	366.55	1.00	
59 Co	72	1	0.002	ug/l	108.39	1.00	
60 Ni	72	1	0.004	ug/l	209.57	1.00	
63 Cu	72	1	-0.006	ug/l	171.50	1.00	
66 Zn	72	1	0.091	ug/l	173.99	10.00	
75 As	72	1	0.000	ug/l	2138.20	5.00	
78 Se	72	1	0.037	ug/l	147.02	5.00	
95 Mo	115	1	0.017	ug/l	21.98	1.00	
107 Ag	115	1	0.005	ug/l	44.30	1.00	
111 Cd	115	1	0.003	ug/l	152.92	1.00	
118 Sn	115	1	-0.001	ug/l	799.22	10.00	
121 Sb	115	1	0.011	ug/l	18.29	1.00	
137 Ba	115	1	-0.005	ug/l	67.99	1.00	
205 Tl	165	1	0.001	ug/l	120.23	1.00	
208 Pb	165	1	0.001	ug/l	79.93	1.00	
238 U	165	1	0.003	ug/l	7.10	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	257097	0.75	255548	100.6	30 - 120	
72 Ge	1	657427	1.25	672650	97.7	30 - 120	
115 In	1	1888883	0.78	1871847	100.9	30 - 120	
165 Ho	1	3298641	0.71	3221199	102.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: LRD

Date: 8/1/2008

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#
Date Acquired: Aug 1 2008 09:00 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 08:58 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	3	99.51
51	V	72	1	223	38.15
52	Cr	72	1	2920	3.77
55	Mn	72	1	653	11.62
59	Co	72	1	67	34.29
60	Ni	72	1	130	34.24
63	Cu	72	1	540	18.60
66	Zn	72	1	2667	2.71
75	As	72	1	40	58.89
78	Se	72	1	475	4.84
95	Mo	115	1	337	18.25
107	Ag	115	1	43	52.58
111	Cd	115	1	4	186.45
118	Sn	115	1	283	10.07
121	Sb	115	1	43	73.57
137	Ba	115	1	47	32.54
205	Tl	165	1	207	5.03
208	Pb	165	1	180	15.08
238	U	165	1	17	124.37

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	286102	0.94
72	Ge	1	717277	0.99
115	In	1	2048763	1.85
165	Ho	1	3319080	0.81

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\051ICAL.D\051ICAL.D#
Date Acquired: Aug 1 2008 09:05 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 09:03 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	55061	1.28
51	V	72	1	1423249	1.40
52	Cr	72	1	1539444	1.06
55	Mn	72	1	1612753	1.13
59	Co	72	1	1975117	0.28
60	Ni	72	1	453908	0.79
63	Cu	72	1	1122661	0.87
66	Zn	72	1	242881	1.18
75	As	72	1	175077	0.43
78	Se	72	1	30450	1.57
95	Mo	115	1	539676	1.67
107	Ag	115	1	1627466	2.33
111	Cd	115	1	301023	1.01
118	Sn	115	1	778864	0.79
121	Sb	115	1	896652	0.97
137	Ba	115	1	364739	1.63
205	Tl	165	1	2648226	1.65
208	Pb	165	1	3675610	0.34
238	U	165	1	3566590	0.86

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	281966	0.49	286102	98.6	30 - 120	
72	Ge	1	714613	0.45	717277	99.6	30 - 120	
115	In	1	2023546	1.21	2048763	98.8	30 - 120	
165	Ho	1	3324284	1.04	3319080	100.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\052 CCV.D\052 CCV.D#
Date Acquired: Aug 1 2008 09:10 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.770 ug/l	0.59	50	101.5	90 - 110	
51 V	72	1	51.660 ug/l	0.62	50	103.3	90 - 110	
52 Cr	72	1	50.480 ug/l	0.74	50	101.0	90 - 110	
55 Mn	72	1	50.030 ug/l	0.69	50	100.1	90 - 110	
59 Co	72	1	51.600 ug/l	1.14	50	103.2	90 - 110	
60 Ni	72	1	51.190 ug/l	0.25	50	102.4	90 - 110	
63 Cu	72	1	50.090 ug/l	0.92	50	100.2	90 - 110	
66 Zn	72	1	49.970 ug/l	1.03	50	99.9	90 - 110	
75 As	72	1	50.620 ug/l	1.61	50	101.2	90 - 110	
78 Se	72	1	51.410 ug/l	0.76	50	102.8	90 - 110	
95 Mo	115	1	49.600 ug/l	0.90	50	99.2	90 - 110	
107 Ag	115	1	50.200 ug/l	0.60	50	100.4	90 - 110	
111 Cd	115	1	50.360 ug/l	0.73	50	100.7	90 - 110	
118 Sn	115	1	50.380 ug/l	0.73	50	100.8	90 - 110	
121 Sb	115	1	50.490 ug/l	0.64	50	101.0	90 - 110	
137 Ba	115	1	49.980 ug/l	1.45	50	100.0	90 - 110	
205 Tl	165	1	51.870 ug/l	0.86	50	103.7	90 - 110	
208 Pb	165	1	50.320 ug/l	1.91	50	100.6	90 - 110	
238 U	165	1	51.310 ug/l	1.25	50	102.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	279439	0.45	286102	97.7	30 - 120	
72 Ge	1	715779	0.82	717277	99.8	30 - 120	
115 In	1	2023739	0.19	2048763	98.8	30 - 120	
165 Ho	1	3313482	0.55	3319080	99.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\053 CCB.D\053 CCB.D#
Date Acquired: Aug 1 2008 09:15 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.004	ug/l	89.27	1.00	
51 V	72	1	0.004	ug/l	460.37	1.00	
52 Cr	72	1	-0.009	ug/l	91.18	1.00	
55 Mn	72	1	-0.002	ug/l	218.53	1.00	
59 Co	72	1	0.002	ug/l	24.85	1.00	
60 Ni	72	1	0.006	ug/l	136.85	1.00	
63 Cu	72	1	-0.003	ug/l	212.99	1.00	
66 Zn	72	1	0.045	ug/l	62.50	10.00	
75 As	72	1	-0.001	ug/l	818.87	5.00	
78 Se	72	1	0.065	ug/l	6.47	5.00	
95 Mo	115	1	-0.031	ug/l	38.07	1.00	
107 Ag	115	1	0.004	ug/l	20.66	1.00	
111 Cd	115	1	0.003	ug/l	71.34	1.00	
118 Sn	115	1	0.011	ug/l	34.32	10.00	
121 Sb	115	1	0.014	ug/l	55.06	1.00	
137 Ba	115	1	-0.004	ug/l	61.61	1.00	
205 Tl	165	1	0.003	ug/l	49.81	1.00	
208 Pb	165	1	0.001	ug/l	153.90	1.00	
238 U	165	1	0.004	ug/l	10.03	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	280893	0.78	286102	98.2	30 - 120	
72 Ge	1	725062	0.82	717277	101.1	30 - 120	
115 In	1	2040862	0.67	2048763	99.6	30 - 120	
165 Ho	1	3308127	0.94	3319080	99.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\064 CCV.D\064 CCV.D#
Date Acquired: Aug 1 2008 10:08 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.460 ug/l	1.25	50	100.9	90 - 110	
51 V	72	1	51.590 ug/l	1.12	50	103.2	90 - 110	
52 Cr	72	1	50.720 ug/l	1.21	50	101.4	90 - 110	
55 Mn	72	1	50.710 ug/l	0.73	50	101.4	90 - 110	
59 Co	72	1	51.710 ug/l	0.97	50	103.4	90 - 110	
60 Ni	72	1	51.620 ug/l	0.45	50	103.2	90 - 110	
63 Cu	72	1	50.810 ug/l	0.87	50	101.6	90 - 110	
66 Zn	72	1	49.070 ug/l	0.25	50	98.1	90 - 110	
75 As	72	1	50.550 ug/l	2.24	50	101.1	90 - 110	
78 Se	72	1	50.400 ug/l	2.68	50	100.8	90 - 110	
95 Mo	115	1	50.200 ug/l	1.15	50	100.4	90 - 110	
107 Ag	115	1	49.930 ug/l	1.18	50	99.9	90 - 110	
111 Cd	115	1	49.810 ug/l	1.26	50	99.6	90 - 110	
118 Sn	115	1	50.190 ug/l	0.91	50	100.4	90 - 110	
121 Sb	115	1	50.060 ug/l	1.62	50	100.1	90 - 110	
137 Ba	115	1	49.630 ug/l	0.98	50	99.3	90 - 110	
205 Tl	165	1	51.060 ug/l	1.96	50	102.1	90 - 110	
208 Pb	165	1	49.500 ug/l	0.97	50	99.0	90 - 110	
238 U	165	1	50.180 ug/l	1.35	50	100.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	290338	0.98	286102	101.5	30 - 120	
72 Ge	1	708703	0.61	717277	98.8	30 - 120	
115 In	1	1991648	1.63	2048763	97.2	30 - 120	
165 Ho	1	3249719	0.18	3319080	97.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\065 CCB.D\065 CCB.D#
Date Acquired: Aug 1 2008 10:12 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.002	ug/l	163.00	1.00	
51 V	72	1	0.002	ug/l	586.77	1.00	
52 Cr	72	1	-0.011	ug/l	214.07	1.00	
55 Mn	72	1	-0.002	ug/l	62.89	1.00	
59 Co	72	1	0.002	ug/l	79.86	1.00	
60 Ni	72	1	0.015	ug/l	37.44	1.00	
63 Cu	72	1	0.006	ug/l	51.25	1.00	
66 Zn	72	1	0.003	ug/l	3228.60	10.00	
75 As	72	1	-0.003	ug/l	88.20	5.00	
78 Se	72	1	0.080	ug/l	64.96	5.00	
95 Mo	115	1	-0.035	ug/l	14.58	1.00	
107 Ag	115	1	0.012	ug/l	19.55	1.00	
111 Cd	115	1	0.004	ug/l	93.84	1.00	
118 Sn	115	1	0.003	ug/l	165.28	10.00	
121 Sb	115	1	0.012	ug/l	19.65	1.00	
137 Ba	115	1	-0.004	ug/l	223.23	1.00	
205 Tl	165	1	0.002	ug/l	161.96	1.00	
208 Pb	165	1	0.001	ug/l	135.08	1.00	
238 U	165	1	0.006	ug/l	22.13	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	291243	0.32	286102	101.8	30 - 120	
72 Ge	1	719160	0.14	717277	100.3	30 - 120	
115 In	1	1997630	0.96	2048763	97.5	30 - 120	
165 Ho	1	3198950	0.96	3319080	96.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\066ICSA.D\066ICSA.D#
Date Acquired: Aug 1 2008 10:17 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 09:08 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	-0.003 ug/l	127.20	10.00	
51	V	72	1	-0.284 ug/l	20.16	10.00	
52	Cr	72	1	0.996 ug/l	2.28	10.00	
55	Mn	72	1	1.833 ug/l	2.13	10.00	
59	Co	72	1	0.055 ug/l	12.68	10.00	
60	Ni	72	1	4.511 ug/l	0.81	10.00	
63	Cu	72	1	0.355 ug/l	8.67	10.00	
66	Zn	72	1	3.007 ug/l	3.57	100.00	
75	As	72	1	0.260 ug/l	14.55	50.00	
78	Se	72	1	0.136 ug/l	36.21	50.00	
95	Mo	115	1	2018.000 ug/l	1.88	10.00	
107	Ag	115	1	0.017 ug/l	34.07	10.00	
111	Cd	115	1	0.345 ug/l	28.01	10.00	
118	Sn	115	1	0.080 ug/l	8.56	100.00	
121	Sb	115	1	0.219 ug/l	11.93	10.00	
137	Ba	115	1	1.664 ug/l	3.84	10.00	
205	Tl	165	1	0.019 ug/l	31.41	10.00	
208	Pb	165	1	0.086 ug/l	13.95	10.00	
238	U	165	1	0.005 ug/l	6.47	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	223797	1.06	286102	78.2	30 - 120	
72	Ge	1	582635	0.08	717277	81.2	30 - 120	
115	In	1	1600297	1.06	2048763	78.1	30 - 120	
165	Ho	1	2839685	0.37	3319080	85.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\067ICSB.D\067ICSB.D#
Date Acquired: Aug 1 2008 10:22 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 09:08 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	103.500	0.77	100	103.5	80 - 120	
51 V	72	1	96.480	0.87	100	96.5	80 - 120	
52 Cr	72	1	95.340	0.95	100	95.3	80 - 120	
55 Mn	72	1	95.190	0.71	100	95.2	80 - 120	
59 Co	72	1	92.850	1.49	100	92.9	80 - 120	
60 Ni	72	1	94.340	0.07	100	94.3	80 - 120	
63 Cu	72	1	87.180	0.12	100	87.2	80 - 120	
66 Zn	72	1	90.760	0.40	100	90.8	80 - 120	
75 As	72	1	99.760	0.68	100	99.8	80 - 120	
78 Se	72	1	103.900	1.00	100	103.9	80 - 120	
95 Mo	115	1	2028.000	1.21	2100	96.6	80 - 120	
107 Ag	115	1	87.630	1.26	100	87.6	80 - 120	
111 Cd	115	1	97.080	0.60	100	97.1	80 - 120	
118 Sn	115	1	101.200	0.65	100	101.2	80 - 120	
121 Sb	115	1	103.700	1.06	100	103.7	80 - 120	
137 Ba	115	1	104.900	0.70	100	104.9	80 - 120	
205 Tl	165	1	95.010	0.91	100	95.0	80 - 120	
208 Pb	165	1	93.410	0.80	100	93.4	80 - 120	
238 U	165	1	102.000	0.93	100	102.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	211341	0.61	286102	73.9	30 - 120	
72 Ge	1	575183	0.79	717277	80.2	30 - 120	
115 In	1	1615495	0.18	2048763	78.9	30 - 120	
165 Ho	1	2934869	0.99	3319080	88.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\068WASH.D\068WASH.D#
Date Acquired: Aug 1 2008 10:27 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	-0.006 ug/l	0.00	10.00	
51 V	72	1	-0.004 ug/l	562.59	10.00	
52 Cr	72	1	-0.015 ug/l	54.26	10.00	
55 Mn	72	1	0.005 ug/l	161.40	10.00	
59 Co	72	1	0.006 ug/l	27.72	10.00	
60 Ni	72	1	-0.002 ug/l	125.47	10.00	
63 Cu	72	1	0.007 ug/l	71.76	10.00	
66 Zn	72	1	0.034 ug/l	51.73	100.00	
75 As	72	1	0.012 ug/l	34.11	50.00	
78 Se	72	1	0.149 ug/l	45.03	50.00	
95 Mo	115	1	0.228 ug/l	2.70	10.00	
107 Ag	115	1	0.008 ug/l	26.39	10.00	
111 Cd	115	1	-0.002 ug/l	101.34	10.00	
118 Sn	115	1	0.003 ug/l	292.15	100.00	
121 Sb	115	1	0.012 ug/l	44.08	10.00	
137 Ba	115	1	0.013 ug/l	60.21	10.00	
205 Tl	165	1	0.022 ug/l	18.87	10.00	
208 Pb	165	1	0.007 ug/l	21.90	10.00	
238 U	165	1	0.007 ug/l	19.75	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	269882	1.57	286102	94.3	30 - 120	
72 Ge	1	697735	0.35	717277	97.3	30 - 120	
115 In	1	1984277	0.33	2048763	96.9	30 - 120	
165 Ho	1	3337626	1.72	3319080	100.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\069 CCV.D\069 CCV.D#
Date Acquired: Aug 1 2008 10:32 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.690 ug/l	1.97	50	101.4	90 - 110	
51 V	72	1	50.880 ug/l	1.31	50	101.8	90 - 110	
52 Cr	72	1	50.240 ug/l	1.11	50	100.5	90 - 110	
55 Mn	72	1	50.260 ug/l	1.10	50	100.5	90 - 110	
59 Co	72	1	50.960 ug/l	1.04	50	101.9	90 - 110	
60 Ni	72	1	51.310 ug/l	0.53	50	102.6	90 - 110	
63 Cu	72	1	50.590 ug/l	0.52	50	101.2	90 - 110	
66 Zn	72	1	49.590 ug/l	1.20	50	99.2	90 - 110	
75 As	72	1	50.730 ug/l	1.68	50	101.5	90 - 110	
78 Se	72	1	51.290 ug/l	1.67	50	102.6	90 - 110	
95 Mo	115	1	49.930 ug/l	0.46	50	99.9	90 - 110	
107 Ag	115	1	50.220 ug/l	0.64	50	100.4	90 - 110	
111 Cd	115	1	49.790 ug/l	0.16	50	99.6	90 - 110	
118 Sn	115	1	50.630 ug/l	1.06	50	101.3	90 - 110	
121 Sb	115	1	50.310 ug/l	0.95	50	100.6	90 - 110	
137 Ba	115	1	50.480 ug/l	0.50	50	101.0	90 - 110	
205 Tl	165	1	51.200 ug/l	0.52	50	102.4	90 - 110	
208 Pb	165	1	49.970 ug/l	0.98	50	99.9	90 - 110	
238 U	165	1	51.040 ug/l	0.89	50	102.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	275408	0.97	286102	96.3	30 - 120	
72 Ge	1	712072	0.84	717277	99.3	30 - 120	
115 In	1	2042001	0.03	2048763	99.7	30 - 120	
165 Ho	1	3370264	0.45	3319080	101.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\070 CCB.D\070 CCB.D#
Date Acquired: Aug 1 2008 10:36 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 09:08 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.004	ug/l	89.22	1.00	
51 V	72	1	-0.012	ug/l	216.17	1.00	
52 Cr	72	1	-0.012	ug/l	31.06	1.00	
55 Mn	72	1	-0.001	ug/l	328.85	1.00	
59 Co	72	1	0.002	ug/l	74.45	1.00	
60 Ni	72	1	0.011	ug/l	25.49	1.00	
63 Cu	72	1	0.001	ug/l	2187.30	1.00	
66 Zn	72	1	0.011	ug/l	132.04	10.00	
75 As	72	1	0.007	ug/l	130.14	5.00	
78 Se	72	1	0.136	ug/l	67.11	5.00	
95 Mo	115	1	-0.007	ug/l	69.94	1.00	
107 Ag	115	1	0.005	ug/l	9.30	1.00	
111 Cd	115	1	0.002	ug/l	136.17	1.00	
118 Sn	115	1	-0.001	ug/l	254.72	10.00	
121 Sb	115	1	0.016	ug/l	42.49	1.00	
137 Ba	115	1	0.000	ug/l	4292.80	1.00	
205 Tl	165	1	0.006	ug/l	9.96	1.00	
208 Pb	165	1	0.003	ug/l	62.27	1.00	
238 U	165	1	0.003	ug/l	41.36	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	279984	0.05	286102	97.9	30 - 120	
72 Ge	1	727247	1.50	717277	101.4	30 - 120	
115 In	1	2026177	1.37	2048763	98.9	30 - 120	
165 Ho	1	3322289	1.19	3319080	100.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\050CALB.D\050CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: _____

Date: 8/4/08

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#
Date Acquired: Aug 2 2008 03:06 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 02 2008 03:04 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	27	199.39
52	Cr	72	1	2490	4.31
55	Mn	72	1	590	15.87
59	Co	72	1	50	79.78
60	Ni	72	1	130	23.15
63	Cu	72	1	510	20.69
66	Zn	72	1	2614	6.08
75	As	72	1	77	37.56
78	Se	72	1	580	4.60
95	Mo	115	1	180	25.36
107	Ag	115	1	57	20.60
111	Cd	115	1	7	188.22
118	Sn	115	1	253	12.25
121	Sb	115	1	60	43.95
137	Ba	115	1	50	40.02
205	Tl	165	1	143	10.95
208	Pb	165	1	147	31.23
238	U	165	1	3	173.20

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	275641	0.16
72	Ge	1	722052	0.31
115	In	1	2019881	0.21
165	Ho	1	3253518	0.87

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\127ICAL.D\127ICAL.D#
Date Acquired: Aug 2 2008 03:11 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 02 2008 03:09 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	52939	0.45
51	V	72	1	1399017	0.68
52	Cr	72	1	1512481	1.18
55	Mn	72	1	1592918	0.56
59	Co	72	1	1949680	0.87
60	Ni	72	1	456967	0.24
63	Cu	72	1	1110767	0.27
66	Zn	72	1	235338	0.95
75	As	72	1	174735	0.42
78	Se	72	1	30212	0.72
95	Mo	115	1	536286	1.45
107	Ag	115	1	1568706	0.82
111	Cd	115	1	295707	1.51
118	Sn	115	1	765967	0.87
121	Sb	115	1	887960	1.07
137	Ba	115	1	363051	1.30
205	Tl	165	1	2561862	0.55
208	Pb	165	1	3512098	1.06
238	U	165	1	3377959	0.91

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	268312	0.73	275641	97.3	30 - 120	
72	Ge	1	710133	0.28	722052	98.3	30 - 120	
115	In	1	1998345	1.08	2019881	98.9	30 - 120	
165	Ho	1	3203829	0.15	3253518	98.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\128 CCV.D\128 CCV.D#
Date Acquired: Aug 2 2008 03:16 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 02 2008 03:14 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.150 ug/l	1.62	50	102.3	90 - 110	
51 V	72	1	52.760 ug/l	1.45	50	105.5	90 - 110	
52 Cr	72	1	51.550 ug/l	0.29	50	103.1	90 - 110	
55 Mn	72	1	51.320 ug/l	1.66	50	102.6	90 - 110	
59 Co	72	1	52.700 ug/l	2.11	50	105.4	90 - 110	
60 Ni	72	1	51.650 ug/l	1.62	50	103.3	90 - 110	
63 Cu	72	1	51.800 ug/l	1.36	50	103.6	90 - 110	
66 Zn	72	1	50.910 ug/l	1.48	50	101.8	90 - 110	
75 As	72	1	51.290 ug/l	1.26	50	102.6	90 - 110	
78 Se	72	1	50.750 ug/l	0.75	50	101.5	90 - 110	
95 Mo	115	1	50.520 ug/l	1.22	50	101.0	90 - 110	
107 Ag	115	1	51.970 ug/l	0.98	50	103.9	90 - 110	
111 Cd	115	1	50.910 ug/l	0.94	50	101.8	90 - 110	
118 Sn	115	1	51.200 ug/l	1.65	50	102.4	90 - 110	
121 Sb	115	1	50.720 ug/l	1.08	50	101.4	90 - 110	
137 Ba	115	1	50.810 ug/l	1.43	50	101.6	90 - 110	
205 Tl	165	1	51.420 ug/l	0.47	50	102.8	90 - 110	
208 Pb	165	1	50.410 ug/l	1.32	50	100.8	90 - 110	
238 U	165	1	51.690 ug/l	1.86	50	103.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	266891	0.26	275641	96.8	30 - 120	
72 Ge	1	698808	1.19	722052	96.8	30 - 120	
115 In	1	1994444	0.29	2019881	98.7	30 - 120	
165 Ho	1	3213035	1.07	3253518	98.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\129 CCB.D\129 CCB.D#
Date Acquired: Aug 2 2008 03:20 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 02 2008 03:14 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.006	ug/l	100.41	1.00	
51 V	72	1	-0.010	ug/l	143.83	1.00	
52 Cr	72	1	0.007	ug/l	145.12	1.00	
55 Mn	72	1	0.005	ug/l	59.31	1.00	
59 Co	72	1	0.005	ug/l	28.53	1.00	
60 Ni	72	1	0.003	ug/l	342.46	1.00	
63 Cu	72	1	0.002	ug/l	363.65	1.00	
66 Zn	72	1	0.030	ug/l	421.11	10.00	
75 As	72	1	-0.009	ug/l	102.44	5.00	
78 Se	72	1	0.076	ug/l	203.02	5.00	
95 Mo	115	1	0.004	ug/l	107.43	1.00	
107 Ag	115	1	0.004	ug/l	74.52	1.00	
111 Cd	115	1	0.005	ug/l	57.33	1.00	
118 Sn	115	1	0.019	ug/l	41.37	10.00	
121 Sb	115	1	0.025	ug/l	6.15	1.00	
137 Ba	115	1	0.007	ug/l	188.93	1.00	
205 Tl	165	1	0.008	ug/l	25.68	1.00	
208 Pb	165	1	0.004	ug/l	14.66	1.00	
238 U	165	1	0.006	ug/l	22.31	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	268506	0.65	275641	97.4	30 - 120	
72 Ge	1	706743	1.00	722052	97.9	30 - 120	
115 In	1	1992323	1.32	2019881	98.6	30 - 120	
165 Ho	1	3193499	1.32	3253518	98.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\130ICSA.D\130ICSA.D#
Date Acquired: Aug 2 2008 03:25 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 02 2008 03:14 am
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	0.005 ug/l	173.19	10.00	
51	V	72	1	-0.233 ug/l	45.14	10.00	
52	Cr	72	1	1.092 ug/l	4.13	10.00	
55	Mn	72	1	1.905 ug/l	0.63	10.00	
59	Co	72	1	0.055 ug/l	4.26	10.00	
60	Ni	72	1	4.593 ug/l	2.24	10.00	
63	Cu	72	1	0.398 ug/l	5.07	10.00	
66	Zn	72	1	3.165 ug/l	4.59	100.00	
75	As	72	1	0.215 ug/l	3.19	50.00	
78	Se	72	1	0.042 ug/l	38.76	50.00	
95	Mo	115	1	1970.000 ug/l	0.75	10.00	
107	Ag	115	1	0.013 ug/l	11.02	10.00	
111	Cd	115	1	0.413 ug/l	9.06	10.00	
118	Sn	115	1	0.085 ug/l	6.24	100.00	
121	Sb	115	1	0.232 ug/l	5.62	10.00	
137	Ba	115	1	1.639 ug/l	4.08	10.00	
205	Tl	165	1	0.024 ug/l	14.70	10.00	
208	Pb	165	1	0.094 ug/l	3.16	10.00	
238	U	165	1	0.005 ug/l	14.23	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	208566	0.96	275641	75.7	30 - 120	
72	Ge	1	578351	1.00	722052	80.1	30 - 120	
115	In	1	1618347	0.99	2019881	80.1	30 - 120	
165	Ho	1	2841025	0.65	3253518	87.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\131ICSB.D\131ICSB.D#
Date Acquired: Aug 2 2008 03:30 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 02 2008 03:14 am
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	102.200	0.20	100	102.2	80 - 120	
51 V	72	1	98.230	0.54	100	98.2	80 - 120	
52 Cr	72	1	96.380	1.19	100	96.4	80 - 120	
55 Mn	72	1	96.340	1.52	100	96.3	80 - 120	
59 Co	72	1	93.450	1.77	100	93.5	80 - 120	
60 Ni	72	1	93.070	0.99	100	93.1	80 - 120	
63 Cu	72	1	87.110	0.18	100	87.1	80 - 120	
66 Zn	72	1	93.720	0.38	100	93.7	80 - 120	
75 As	72	1	106.000	0.33	100	106.0	80 - 120	
78 Se	72	1	114.700	0.21	100	114.7	80 - 120	
95 Mo	115	1	2007.000	0.62	2100	95.6	80 - 120	
107 Ag	115	1	85.990	4.23	100	86.0	80 - 120	
111 Cd	115	1	96.800	1.90	100	96.8	80 - 120	
118 Sn	115	1	101.300	1.18	100	101.3	80 - 120	
121 Sb	115	1	103.100	1.30	100	103.1	80 - 120	
137 Ba	115	1	104.200	1.78	100	104.2	80 - 120	
205 Tl	165	1	95.080	1.03	100	95.1	80 - 120	
208 Pb	165	1	94.640	1.24	100	94.6	80 - 120	
238 U	165	1	103.000	2.16	100	103.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	197473	0.79	275641	71.6	30 - 120	
72 Ge	1	557209	1.26	722052	77.2	30 - 120	
115 In	1	1586328	1.16	2019881	78.5	30 - 120	
165 Ho	1	2848300	1.20	3253518	87.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\132WASH.D\132WASH.D#
Date Acquired: Aug 2 2008 03:35 am
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 02 2008 03:14 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.009 ug/l	42.70	10.00	
51 V	72	1	0.017 ug/l	8.67	10.00	
52 Cr	72	1	0.056 ug/l	33.46	10.00	
55 Mn	72	1	0.008 ug/l	11.24	10.00	
59 Co	72	1	0.006 ug/l	10.13	10.00	
60 Ni	72	1	0.015 ug/l	57.54	10.00	
63 Cu	72	1	0.018 ug/l	31.90	10.00	
66 Zn	72	1	0.189 ug/l	73.55	100.00	
75 As	72	1	-0.002 ug/l	741.36	50.00	
78 Se	72	1	-0.043 ug/l	110.06	50.00	
95 Mo	115	1	0.287 ug/l	7.83	10.00	
107 Ag	115	1	0.007 ug/l	43.56	10.00	
111 Cd	115	1	0.007 ug/l	76.21	10.00	
118 Sn	115	1	0.010 ug/l	44.96	100.00	
121 Sb	115	1	0.008 ug/l	8.92	10.00	
137 Ba	115	1	-0.004 ug/l	169.11	10.00	
205 Tl	165	1	0.035 ug/l	7.33	10.00	
208 Pb	165	1	0.010 ug/l	13.29	10.00	
238 U	165	1	0.011 ug/l	26.74	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	248513	0.54	275641	90.2	30 - 120	
72 Ge	1	676548	0.37	722052	93.7	30 - 120	
115 In	1	1939609	0.50	2019881	96.0	30 - 120	
165 Ho	1	3209966	0.05	3253518	98.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\133 CCV.D\133 CCV.D#
Date Acquired: Aug 2 2008 03:40 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 02 2008 03:14 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.460 ug/l	1.96	50	102.9	90 - 110	
51 V	72	1	51.990 ug/l	0.43	50	104.0	90 - 110	
52 Cr	72	1	51.100 ug/l	0.31	50	102.2	90 - 110	
55 Mn	72	1	50.750 ug/l	0.41	50	101.5	90 - 110	
59 Co	72	1	51.870 ug/l	0.88	50	103.7	90 - 110	
60 Ni	72	1	50.720 ug/l	1.15	50	101.4	90 - 110	
63 Cu	72	1	51.080 ug/l	0.38	50	102.2	90 - 110	
66 Zn	72	1	50.860 ug/l	1.29	50	101.7	90 - 110	
75 As	72	1	51.790 ug/l	0.23	50	103.6	90 - 110	
78 Se	72	1	53.230 ug/l	0.53	50	106.5	90 - 110	
95 Mo	115	1	50.510 ug/l	1.23	50	101.0	90 - 110	
107 Ag	115	1	52.080 ug/l	2.08	50	104.2	90 - 110	
111 Cd	115	1	51.110 ug/l	1.80	50	102.2	90 - 110	
118 Sn	115	1	51.420 ug/l	1.69	50	102.8	90 - 110	
121 Sb	115	1	51.170 ug/l	1.40	50	102.3	90 - 110	
137 Ba	115	1	51.000 ug/l	1.10	50	102.0	90 - 110	
205 Tl	165	1	52.110 ug/l	0.81	50	104.2	90 - 110	
208 Pb	165	1	51.160 ug/l	1.51	50	102.3	90 - 110	
238 U	165	1	52.590 ug/l	2.72	50	105.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	253602	0.30	275641	92.0	30 - 120	
72 Ge	1	684717	0.48	722052	94.8	30 - 120	
115 In	1	1963175	1.65	2019881	97.2	30 - 120	
165 Ho	1	3229264	1.43	3253518	99.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080108.B\134 CCB.D\134 CCB.D#
Date Acquired: Aug 2 2008 03:45 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 02 2008 03:14 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.006	ug/l	99.80	1.00	
51 V	72	1	0.021	ug/l	58.64	1.00	
52 Cr	72	1	0.039	ug/l	44.91	1.00	
55 Mn	72	1	0.002	ug/l	597.54	1.00	
59 Co	72	1	0.005	ug/l	29.62	1.00	
60 Ni	72	1	0.002	ug/l	183.30	1.00	
63 Cu	72	1	0.003	ug/l	225.31	1.00	
66 Zn	72	1	0.080	ug/l	49.34	10.00	
75 As	72	1	-0.006	ug/l	242.52	5.00	
78 Se	72	1	-0.038	ug/l	194.54	5.00	
95 Mo	115	1	0.037	ug/l	31.00	1.00	
107 Ag	115	1	0.005	ug/l	32.16	1.00	
111 Cd	115	1	-0.004	ug/l	70.71	1.00	
118 Sn	115	1	0.017	ug/l	35.18	10.00	
121 Sb	115	1	0.020	ug/l	10.96	1.00	
137 Ba	115	1	-0.001	ug/l	635.45	1.00	
205 Tl	165	1	0.013	ug/l	25.57	1.00	
208 Pb	165	1	0.003	ug/l	38.43	1.00	
238 U	165	1	0.007	ug/l	3.02	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	261043	0.73	275641	94.7	30 - 120	
72 Ge	1	697520	0.43	722052	96.6	30 - 120	
115 In	1	1988318	1.31	2019881	98.4	30 - 120	
165 Ho	1	3218878	1.42	3253518	98.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080108.B\126CALB.D\126CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Batch(es) #: 8204479

Associated Samples: 2-6, 8-10, 13-15, 18-20

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 8/1/08

Metals Raw Data RoadMap

LotID		Metal	WorkOrder	Anal Date	TestDesc	Batch	File Id	Instr
D8G210174	2	CU	KRW1Q1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	2	PB	KRW1Q1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	2	ZN	KRW1Q1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	2	SB	KRW1Q1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 S	SB	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 S	ZN	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 D	PB	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 S	PB	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 D	CU	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 D	SB	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 D	ZN	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3	ZN	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3	PB	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3	CU	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3	SB	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	3 S	CU	KRW1W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	4	PB	KRW1X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	4	ZN	KRW1X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	4	SB	KRW1X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	4	CU	KRW1X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	5	SB	KRW2R1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	5	CU	KRW2R1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	5	PB	KRW2R1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	5	ZN	KRW2R1A	20080731	6020_S	8204479	AG073108A	024

LotID		Metal	WorkOrder	Anal Date	TestDesc	Batch	File Id	Instr
D8G210174	6	SB	KRW2T1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	6	CU	KRW2T1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	6	PB	KRW2T1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	6	ZN	KRW2T1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	8	PB	KRW2W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	8	SB	KRW2W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	8	CU	KRW2W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	8	ZN	KRW2W1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	9	CU	KRW2X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	9	PB	KRW2X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	9	ZN	KRW2X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	9	SB	KRW2X1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	10	SB	KRW201A	20080731	6020_S	8204479	AG073108A	024
D8G210174	10	CU	KRW201A	20080731	6020_S	8204479	AG073108A	024
D8G210174	10	PB	KRW201A	20080731	6020_S	8204479	AG073108A	024
D8G210174	10	ZN	KRW201AF	20080731	6020_S	8204479	AG073108A	024
D8G210174	13	SB	KRW251A	20080731	6020_S	8204479	AG073108A	024
D8G210174	13	ZN	KRW251AF	20080731	6020_S	8204479	AG073108A	024
D8G210174	13	CU	KRW251A	20080731	6020_S	8204479	AG073108A	024
D8G210174	13	PB	KRW251A	20080731	6020_S	8204479	AG073108A	024
D8G210174	14	ZN	KRW261AF	20080731	6020_S	8204479	AG073108A	024
D8G210174	14	SB	KRW261A	20080731	6020_S	8204479	AG073108A	024
D8G210174	14	CU	KRW261A	20080731	6020_S	8204479	AG073108A	024
D8G210174	14	PB	KRW261A	20080731	6020_S	8204479	AG073108A	024
D8G210174	15	ZN	KRW271AF	20080731	6020_S	8204479	AG073108A	024
D8G210174	15	PB	KRW271A	20080731	6020_S	8204479	AG073108A	024

LotID		Metal	WorkOrder	Anal Date	TestDesc	Batch	File Id	Instr
D8G210174	15	SB	KRW271A	20080731	6020_S	8204479	AG073108A	024
D8G210174	15	CU	KRW271A	20080731	6020_S	8204479	AG073108A	024
D8G210174	18	SB	KRW3C1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	18	CU	KRW3C1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	18	PB	KRW3C1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	18	ZN	KRW3C1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	19	SB	KRW3D1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	19	CU	KRW3D1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	19	PB	KRW3D1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	19	ZN	KRW3D1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	20	ZN	KRW3E1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	20	SB	KRW3E1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	20	CU	KRW3E1A	20080731	6020_S	8204479	AG073108A	024
D8G210174	20	PB	KRW3E1A	20080731	6020_S	8204479	AG073108A	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **8204479**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JAY WILLMS

Prep Date: 07/28/08
Due Date: 08/08/08

Lot	Work Order			Initial Weight/Volume
D8G220000 Solid	**KR07W**	B	Due Date: SDG:	10 g
D8G220000 Solid	**KR07W**	C	Due Date: SDG:	10 g
D8G210174 Solid	**KRW1Q** Total		Due Date: 08/08/08 SDG:	9.98 g
D8G210174 Solid	**KRW1W** Total		Due Date: 08/08/08 SDG:	9.73 g
D8G210174 Solid	**KRW1W** Total	S	Due Date: 08/08/08 SDG:	9.78 g
D8G210174 Solid	**KRW1W** Total	D	Due Date: 08/08/08 SDG:	10.05 g
D8G210174 Solid	**KRW1X** Total		Due Date: 08/08/08 SDG:	9.97 g
D8G210174 Solid	**KRW2R** Total		Due Date: 08/08/08 SDG:	10 g
D8G210174 Solid	**KRW2T** Total		Due Date: 08/08/08 SDG:	10.1 g
D8G210174 Solid	**KRW2W** Total		Due Date: 08/08/08 SDG:	10 g
D8G210174 Solid	**KRW2X** Total		Due Date: 08/08/08 SDG:	9.99 g
D8G210174 Solid	**KRW20** Total		Due Date: 08/08/08 SDG:	10.2 g
D8G210174 Solid	**KRW25** Total		Due Date: 08/08/08 SDG:	10.03 g
D8G210174 Solid	**KRW26** Total		Due Date: 08/08/08 SDG:	10.02 g
D8G210174 Solid	**KRW27** Total		Due Date: 08/08/08 SDG:	9.89 g
D8G210174 Solid	**KRW3C** Total		Due Date: 08/08/08 SDG:	10.08 g
D8G210174 Solid	**KRW3D** Total		Due Date: 08/08/08 SDG:	10.02 g
D8G210174 Solid	**KRW3E** Total		Due Date: 08/08/08 SDG:	10.18 g

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:
CU PB SB ZN

checked 7/31/08

METALS PREP SHEET
SOP: DEN-IP-0015

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

10 GRAM SOIL DIGESTION FOR ICP-MS (Prep code 46)

BATCH # 8204479
PREP DATE: 7/28/2008
BALANCE ID: M28318

ALLIQUOTTED BY: JKH
DIGESTED BY: JRW

CONSUMABLES USED

Digestion Cups: 50mL **Manufacturer:** Environmental Express **Lot #:** A801LP001
100l **Manufacturer:** Environmental Express **Lot #:** A801LP001

Filter Paper: All samples and QC filtered? ☒ Yes ☐ No
Manufacturer: Ahlstrom **Size:** Grade 55
Lot #: 649277 **Analyst(s) Initials:** JRW

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3620-08	7/1/09	1000uL	13
2008Cal-2	STD-3621-08	7/1/09	1000uL	13

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	G17027	10 x 5
H_2O_2	JT Baker	E47H10	4 x 5

TEMPERATURE CYCLES

		Aliquot						Aliquot				
		1	2	3	4	5		1	2	3	4	5
Cycle	Start Time	Temperature (°C)					End Time	Temperature (°C)				
1:1 HNO3	845 ✓	95	95	93	93	92	855	93	95	93	93	92
HNO3	900	95	95	93	93	92	1030	95	95	95	95	93
H2O2	1120	95	95	95	95	92	1320 ✓	95	95	95	95	91
Thermometer ID:		96-211	96-211	25844	25844	4110	Block & Cup # :	1/36	1/34	2/12	2/12	3/9

Samples and QC revolumed to: 500 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: [signature] ***Date:*** 7/28/08

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Calibration Standard	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50		--	40	40	200
Antimony	100	40	50	100,000 Aluminum	100	40	40	200
Arsenic	100	40	50	100,000 Calcium	100	40	40	200
Barium	100	40	50	100,000 Iron	100	40	40	200
Beryllium	100	40	50	100,000 Magnesium	100	40	40	200
Cadmium	100	40	50	100,000 Sodium	100	40	40	200
Chromium	100	40	50	100,000 Phosphorus	100	40	40	200
Cobalt	100	40	50	100,000 Potassium	100	40	40	200
Copper	100	40	50	100,000 Sulfur	100	40	40	200
Iron	5000	1000	2500	200,000 Carbon	--	1000	1000	5000
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	200
Thallium	100	40	50		100	40	40	200
Thorium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

QC Std.1 = Initial Calibration Verification (ICV)
QC Std.2 = Initial Calibration Blank (ICB)
QC Std.3 = Continuing Calibration Verification (CCV)
QC Std.4 = Continuing Calibration Blank (CCB)

TestAmerica Denver

Standards Preparation Logbook Record

Aug-01-2008

Logbook: \\Densvr06\StdsLog\metals.std

STD4871-07, 1000 Se

Analyst: TRUDELLL

Vendor: Inorganic Ventures Lot No.: Z-SE01120 Vendor's Expiration Date: 10-01-2008
Solvent: 2% HNO3
Date Prep./Opened: 10-02-2007 Date Received: 10-02-2007
Date Expires(1): 10-01-2008 (None)
Date Expires(2): 10-01-2008 (None)
Inventory ID: 667

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD0410-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: A2-ZN02040 Vendor's Expiration Date: 02-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 01-28-2008 Date Received: 01-28-2008
Date Expires(1): 02-01-2009 (None)
Date Expires(2): 02-01-2009 (None)
Inventory ID: 704

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD1067-08, 1000 Cu

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: B2-CU02099 Vendor's Expiration Date: 04-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 03-05-2008 Date Received: 03-05-2008
Date Expires(1): 04-01-2009 (None)
Date Expires(2): 04-01-2009 (None)
Inventory ID: 719

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Cu	1,000.0	1,000.0

STD2251-08, 1000 mg/L Sn

Analyst: LILLT

Vendor: Inorganic Ventures Lot No.: B2-SN02014 Vendor's Expiration Date: 06-01-2009
Solvent: H2O tr. HNO3 tr.HF
Date Prep./Opened: 04-30-2008 Date Received: 04-23-2007
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Inventory ID: 610

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD2862-08, 1 mg/l Se

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G07057 Volume (ml): 100.00
Date Prep./Opened: 05-23-2008
Date Expires(1): 10-01-2008 (1 Year)
pipette: Met 21

Parent Std No.: STD4871-07, 1000 Se Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 10-01-2008 Parent Date Expires(2): 10-01-2008

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD3485-08, Cu 1 mg/l

Analyst: LILLT

Solvent: 3% HNO3 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 06-24-2008
Date Expires(1): 04-01-2009 (1 Year)
Date Expires(2): 04-01-2009 (None)

Parent Std No.: STD1067-08, 1000 Cu Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-01-2009 Parent Date Expires(2): 04-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Cu	1,000.0	1.0000

STD4030-08, ICP-MS 1 ppm Sn Std

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 01-23-2009 (6 Months)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

STD4031-08, ICP-MS 1 ppm Zn Std

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 02-01-2009 (1 Year)
Date Expires(2): 02-01-2009 (None)
pipettes: Met 21 and Met 8

Parent Std No.: STD0410-08, 1000 Zn (Inorganic Ventures) Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD4164-08, ICP-MS (024) INT STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 250.00
Date Prep./Opened: 07-30-2008
Date Expires(1): 11-16-2008 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1733-08, Lithium 6 Stock Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2009 Parent Date Expires(2): 05-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD2349-08, Indium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD5820-07, Germanium Stock Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD5822-07, Holmium Stock Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD4193-08, ICP-MS BLANK

Analyst: LILLT

Solvent: Water
Volume (ml): 1,000.0
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4192-08, NITRIC ACID
Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4194-08, ICP-MS 10 ppm Sn

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027
Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn
Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	10.000

STD4195-08, ICP-MS CCV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027
Volume (ml): 100.00
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3982-08, Iron Stock
Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures
Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures
Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	50.000

Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000
V	20.000	50.000
Zn	20.000	50.000

Parent Std No.: STD4194-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4196-08, ICP-MS 100 ppb cal

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Expires(2): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00

Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4194-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4197-08, ICPMS RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD4030-08, ICP-MS 1 ppm Sn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 01-23-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	1.0000	9.0000

Parent Std No.: STD4031-08, ICP-MS 1 ppm Zn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
1000 Zn	1.0000	9.0000

Parent Std No.: STD4196-08, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 08-01-2008 Parent Date Expires(2): 08-01-2008

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Mo	100.00	1.0000
Sb	100.00	1.0000
Ag	100.00	1.0000
Al	100.00	1.0000
As	100.00	1.0000
Ba	100.00	1.0000
Be	100.00	1.0000
Cd	100.00	1.0000
Co	100.00	1.0000
Cr	100.00	1.0000
Cu	100.00	1.0000
Mn	100.00	1.0000
Ni	100.00	1.0000
Pb	100.00	1.0000
Se	100.00	1.0000
Th	100.00	1.0000

Tl	100.00	1.0000
U	100.00	1.0000
V	100.00	1.0000
Zn	100.00	1.0000
Sn	100.00	1.0000

STD4198-08, ICP-MS AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 19

Parent Std No.: STD4197-08, ICPMS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Sn	9.0000	1.8000
1000 Zn	9.0000	1.8000
Mo	1.0000	0.2000
Sb	1.0000	0.2000
Ag	1.0000	0.2000
Al	1.0000	0.2000
As	1.0000	0.2000
Ba	1.0000	0.2000
Be	1.0000	0.2000
Cd	1.0000	0.2000
Co	1.0000	0.2000
Cr	1.0000	0.2000
Cu	1.0000	0.2000
Mn	1.0000	0.2000
Ni	1.0000	0.2000
Pb	1.0000	0.2000
Se	1.0000	0.2000
Th	1.0000	0.2000
Tl	1.0000	0.2000
U	1.0000	0.2000
V	1.0000	0.2000
Zn	1.0000	0.2000
Sn	1.0000	0.2000

STD4199-08, ICP-MS ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 8, Met 20, and Met 21

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4194-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4200-08, ICPMS LR STD 1000 ppb

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0
V	20.000	1,000.0
Zn	20.000	1,000.0

Parent Std No.: STD4194-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4201-08, ICPMS ICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 08-01-2008 (1 Day)
Date Expires(2): 02-18-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD0845-08, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD0846-08, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4202-08, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 10-01-2008 (1 Year)
pipettes: Met 21 and Met 8

Parent Std No.: STD2862-08, 1 mg/l Se Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0050

STD4203-08, ICP-MS ICSA

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 05-05-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
pipettes: Met 8

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD4205-08, ALTCu

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 07-31-2008
Date Expires(1): 04-01-2009 (1 Year)
pipettes: Met 21 and Met 8

Parent Std No.: STD3485-08, Cu 1 mg/l Aliquot Amount (ml): 0.2000
Parent Date Expires(1): 04-01-2009 Parent Date Expires(2): 04-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
1000 Cu	1.0000	2.0000

Reviewed By: 8/1/08

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/01/08 13:02:51

File ID: **AG073108A** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	07/31/08 17:51		☐
3	Cal Blank				1.0	07/31/08 17:55		☐
4	100 ppb				1.0	07/31/08 18:00		☐
5	ICV				1.0	07/31/08 18:05		☐
6	ICB				1.0	07/31/08 18:10		☐
7	RL STD				1.0	07/31/08 18:15		☐
8	ALTSe				1.0	07/31/08 18:19		☐
9	AFCEE RL				1.0	07/31/08 18:24		☐
10	ALTCu				1.0	07/31/08 18:30		☐
11	ICSA				1.0	07/31/08 18:34		☐
12	ICSAB				1.0	07/31/08 18:39		☐
13	WASH				1.0	07/31/08 18:44		☐
14	LR				1.0	07/31/08 18:49		☐
15	WASH				1.0	07/31/08 18:53		☐
16	CCV				1.0	07/31/08 18:58		☐
17	CCB				1.0	07/31/08 19:03		☐
18	KR07WB	D8G220000	8204479	46	1.0	07/31/08 19:08		☐
19	KR07WC	D8G220000	8204479	46	1.0	07/31/08 19:13		☐
20	KRW1Q	D8G210174-2	8204479	46	1.0	07/31/08 19:18		☐
21	KRW1W	D8G210174-3	8204479	46	1.0	07/31/08 19:22		☐
22	KRW1WP5	D8G210174	8204479		5.0	07/31/08 19:27		☐
23	KRW1WZ	D8G210174-3	8204479		1.0	07/31/08 19:32		☐
24	KRW1WS	D8G210174-3	8204479	46	1.0	07/31/08 19:37		☐
25	CCV				1.0	07/31/08 19:42		☐
26	CCB				1.0	07/31/08 19:46		☐
27	KRW1WD	D8G210174-3	8204479	46	1.0	07/31/08 19:51		☐
28	KRW1X	D8G210174-4	8204479	46	1.0	07/31/08 19:56		☐
29	KRW2R	D8G210174-5	8204479	46	1.0	07/31/08 20:01		☐
30	KRW2T	D8G210174-6	8204479	46	1.0	07/31/08 20:06		☐
31	KRW2W	D8G210174-8	8204479	46	1.0	07/31/08 20:10		☐
32	KRW2X	D8G210174-9	8204479	46	1.0	07/31/08 20:15		☐
33	KRW20	D8G210174-10	8204479	46	1.0	07/31/08 20:20		☐
34	CCV				1.0	07/31/08 20:25		☐
35	CCB				1.0	07/31/08 20:30		☐
36	KRW25	D8G210174-13	8204479	46	1.0	07/31/08 20:34		☐
37	KRW26	D8G210174-14	8204479	46	1.0	07/31/08 20:39		☐
38	KRW27	D8G210174-15	8204479	46	1.0	07/31/08 20:44		☐
39	KRW3C	D8G210174-18	8204479	46	1.0	07/31/08 20:49		☐
40	KRW3D	D8G210174-19	8204479	46	1.0	07/31/08 20:54		☐
41	KRW3E	D8G210174-20	8204479	46	1.0	07/31/08 20:58		☐
42	CCV				1.0	07/31/08 21:03		☐
43	CCB				1.0	07/31/08 21:08		☐
44	KR82NB	D8G280000	8210213	46	1.0	07/31/08 21:13		☐
45	KR82NC	D8G280000	8210213	46	1.0	07/31/08 21:18		☐
46	KR4X2	D8G240253-1	8210213	46	1.0	07/31/08 21:22		☐
47	KR4X2P5	D8G240253	8210213		5.0	07/31/08 21:27		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/01/08 13:02:51

File ID: **AG073108A** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	KR4X2Z	D8G240253-1	8210213		1.0	07/31/08 21:32		☐
49	KR4X2S	D8G240253-1	8210213	46	1.0	07/31/08 21:37		☐
50	KR4X2D	D8G240253-1	8210213	46	1.0	07/31/08 21:42		☐
51	KR40D	D8G240253-3	8210213	46	1.0	07/31/08 21:47		☐
52	KR40G	D8G240253-4	8210213	46	1.0	07/31/08 21:51		☐
53	KR40W	D8G240253-8	8210213	46	1.0	07/31/08 21:56		☐
54	CCV				1.0	07/31/08 22:01		☐
55	CCB				1.0	07/31/08 22:06		☐
56	KR402	D8G240253-9	8210213	46	1.0	07/31/08 22:11		☐
57	KR407	D8G240253-10	8210213	46	1.0	07/31/08 22:15		☐
58	KR41D	D8G240253-12	8210213	46	1.0	07/31/08 22:20		☐
59	KR41H	D8G240253-13	8210213	46	1.0	07/31/08 22:25		☐
60	KR41M	D8G240253-14	8210213	46	1.0	07/31/08 22:30		☐
61	KR42E	D8G240253-15	8210213	46	1.0	07/31/08 22:35		☐
62	KR42G	D8G240253-16	8210213	46	1.0	07/31/08 22:40		☐
63	KR42H	D8G240253-17	8210213	46	1.0	07/31/08 22:44		☐
64	KR42J	D8G240253-18	8210213	46	1.0	07/31/08 22:49		☐
65	CCV				1.0	07/31/08 22:54		☐
66	CCB				1.0	07/31/08 22:59		☐
67	ICSA				1.0	07/31/08 23:04		☐
68	ICSAB				1.0	07/31/08 23:08		☐
69	WASH				1.0	07/31/08 23:13		☐
70	CCV				1.0	07/31/08 23:18		☐
71	CCB				1.0	07/31/08 23:23		☐
72	KR4X2	D8G240253-1	8210213	46	1.0	07/31/08 23:28	-For confirmation only. RT 8/1/08	☐
73	KR4X2S	D8G240253-1	8210213	46	1.0	07/31/08 23:32		☐
74	KR4X2D	D8G240253-1	8210213	46	1.0	07/31/08 23:37		☐
75	CCV				1.0	07/31/08 23:42		☐
76	CCB				1.0	07/31/08 23:47		☐
77	KR05TB	D8G220000	8204447	46	1.0	07/31/08 23:52		☐
78	KR05TC	D8G220000	8204447	46	1.0	07/31/08 23:57		☐
79	KRTJK	D8G180352-1	8204447	46	1.0	08/01/08 00:01		☐
80	KRTKC	D8G180352-2	8204447	46	1.0	08/01/08 00:06		☐
81	KRTKH	D8G180352-3	8204447	46	1.0	08/01/08 00:11		☐
82	KRTK3	D8G180352-4	8204447	46	1.0	08/01/08 00:16		☐
83	KRTK7	D8G180352-5	8204447	46	1.0	08/01/08 00:21		☐
84	KRTK9	D8G180352-6	8204447	46	1.0	08/01/08 00:25		☐
85	KRTLA	D8G180352-7	8204447	46	1.0	08/01/08 00:30		☐
86	KRTLG	D8G180352-8	8204447	46	1.0	08/01/08 00:35		☐
87	CCV				1.0	08/01/08 00:40		☐
88	CCB				1.0	08/01/08 00:45		☐
89	KRTLJ	D8G180352-9	8204447	46	1.0	08/01/08 00:49		☐
90	KRTLM	D8G180352-10	8204447	46	1.0	08/01/08 00:54		☐
91	KRTLMP5	D8G180352	8204447		5.0	08/01/08 00:59		☐
92	KRTLMZ	D8G180352-10	8204447		1.0	08/01/08 01:04		☐
93	KRTLMS	D8G180352-10	8204447	46	1.0	08/01/08 01:09		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/01/08 13:02:51

File ID: **AG073108A** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	KRTLMD	D8G180352-10	8204447	46	1.0	08/01/08 01:14		☐
95	KRTLQ	D8G180352-11	8204447	46	1.0	08/01/08 01:18		☐
96	KRTLT	D8G180352-12	8204447	46	1.0	08/01/08 01:23		☐
97	KRTLV	D8G180352-13	8204447	46	1.0	08/01/08 01:28		☐
98	CCV				1.0	08/01/08 01:33		☐
99	CCB				1.0	08/01/08 01:38		☐
100	KR9MLB	D8G280000	8210411	46	1.0	08/01/08 01:42		☐
101	KR9MLC	D8G280000	8210411	46	1.0	08/01/08 01:47		☐
102	KR6D8	D8G250173-1	8210411	46	1.0	08/01/08 01:52		☐
103	KR6D8P5	D8G250173	8210411		5.0	08/01/08 01:57		☐
104	KR6D8Z	D8G250173-1	8210411		1.0	08/01/08 02:02		☐
105	KR6D8S	D8G250173-1	8210411	46	1.0	08/01/08 02:07		☐
106	KR6D8D	D8G250173-1	8210411	46	1.0	08/01/08 02:11		☐
107	KR6EF	D8G250173-2	8210411	46	1.0	08/01/08 02:16		☐
108	KR6EN	D8G250173-3	8210411	46	1.0	08/01/08 02:21		☐
109	KR6E3	D8G250173-7	8210411	46	1.0	08/01/08 02:26		☐
110	CCV				1.0	08/01/08 02:31		☐
111	CCB				1.0	08/01/08 02:36		☐
112	KR6FL	D8G250173-9	8210411	46	1.0	08/01/08 02:40		☐
113	KR6FW	D8G250173-12	8210411	46	1.0	08/01/08 02:45		☐
114	KR6F8	D8G250173-13	8210411	46	1.0	08/01/08 02:50		☐
115	KR6GE	D8G250173-14	8210411	46	1.0	08/01/08 02:55		☐
116	KR6GG	D8G250173-15	8210411	46	1.0	08/01/08 03:00		☐
117	KR6GJ	D8G250173-16	8210411	46	1.0	08/01/08 03:04		☐
118	KR6GN	D8G250173-17	8210411	46	1.0	08/01/08 03:09		☐
119	KR6GX	D8G250173-22	8210411	46	1.0	08/01/08 03:14		☐
120	KR6HH	D8G250173-24	8210411	46	1.0	08/01/08 03:19		☐
121	KR6HJ	D8G250173-25	8210411	46	1.0	08/01/08 03:24		☐
122	CCV				1.0	08/01/08 03:29		☐
123	CCB				1.0	08/01/08 03:33		☐
124	KR6D8	D8G250173-1	8210411	46	1.0	08/01/08 03:38	For confirmation only. 8/1/08	☐
125	KR6D8S	D8G250173-1	8210411	46	1.0	08/01/08 03:43		☐
126	KR6D8D	D8G250173-1	8210411	46	1.0	08/01/08 03:48		☐
127	CCV				1.0	08/01/08 03:53		☐
128	CCB				1.0	08/01/08 03:58		☐
129	KR93PB	D8G290000	8211076	46	1.0	08/01/08 04:02		☐
130	KR93PC	D8G290000	8211076	46	1.0	08/01/08 04:07		☐
131	KR78T	D8G260169-1	8211076	46	1.0	08/01/08 04:12		☐
132	KR78TP5	D8G260169	8211076		5.0	08/01/08 04:17		☐
133	KR78TZ	D8G260169-1	8211076		1.0	08/01/08 04:22		☐
134	KR78TS	D8G260169-1	8211076	46	1.0	08/01/08 04:27		☐
135	KR78TD	D8G260169-1	8211076	46	1.0	08/01/08 04:31		☐
136	CCV				1.0	08/01/08 04:36		☐
137	CCB				1.0	08/01/08 04:41		☐
138	KR78V	D8G260169-2	8211076	46	1.0	08/01/08 04:46		☐
139	KR78W	D8G260169-3	8211076	46	1.0	08/01/08 04:51		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/01/08 13:02:51

File ID: AG073108A **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	KR780	D8G260169-4	8211076	46	1.0	08/01/08 04:56		☐
141	KR782	D8G260169-5	8211076	46	1.0	08/01/08 05:00		☐
142	KR784	D8G260169-6	8211076	46	1.0	08/01/08 05:05		☐
143	KR786	D8G260169-7	8211076	46	1.0	08/01/08 05:10		☐
144	KR787	D8G260169-8	8211076	46	1.0	08/01/08 05:15		☐
145	CCV				1.0	08/01/08 05:20		☐
146	CCB				1.0	08/01/08 05:25		☐
147	KR788	D8G260169-9	8211076	46	1.0	08/01/08 05:29		☐
148	KR789	D8G260169-10	8211076	46	1.0	08/01/08 05:34		☐
149	KR79A	D8G260169-11	8211076	46	1.0	08/01/08 05:39		☐
150	KR79D	D8G260169-13	8211076	46	1.0	08/01/08 05:44		☐
151	KR79F	D8G260169-14	8211076	46	1.0	08/01/08 05:49		☐
152	KR79L	D8G260169-16	8211076	46	1.0	08/01/08 05:54		☐
153	KR79T	D8G260169-19	8211076	46	1.0	08/01/08 05:59		☐
154	CCV				1.0	08/01/08 06:03		☐
155	CCB				1.0	08/01/08 06:08		☐
156	KR78T	D8G260169-1	8211076	46	1.0	08/01/08 06:13	For confirmation only. FF 8/11/08	☐
157	KR78TS	D8G260169-1	8211076	46	1.0	08/01/08 06:18		☐
158	KR78TD	D8G260169-1	8211076	46	1.0	08/01/08 06:23		☐
159	CCV				1.0	08/01/08 06:28		☐
160	CCB				1.0	08/01/08 06:32		☐
161	KR9VMB	D8G280000	8210473	MS	1.0	08/01/08 06:37		☐
162	KR9VMC	D8G280000	8210473	MS	1.0	08/01/08 06:42		☐
163	KR43K	D8G240261-14	8210473	MS	1.0	08/01/08 06:47		☐
164	KR43L	D8G240261-15	8210473	MS	1.0	08/01/08 06:52		☐
165	KR43LP5	D8G240261	8210473		5.0	08/01/08 06:57		☐
166	KR43LZ	D8G240261-15	8210473		1.0	08/01/08 07:01		☐
167	KR43LS	D8G240261-15	8210473	MS	1.0	08/01/08 07:06		☐
168	KR43LD	D8G240261-15	8210473	MS	1.0	08/01/08 07:11		☐
169	KR43M	D8G240261-16	8210473	MS	1.0	08/01/08 07:16		☐
170	CCV				1.0	08/01/08 07:21		☐
171	CCB				1.0	08/01/08 07:26		☐
172	KR43N	D8G240261-17	8210473	MS	1.0	08/01/08 07:30		☐
173	KR43P	D8G240261-18	8210473	MS	1.0	08/01/08 07:35		☐
174	KR43R	D8G240261-19	8210473	MS	1.0	08/01/08 07:40		☐
175	KR43T	D8G240261-20	8210473	MS	1.0	08/01/08 07:45		☐
176	KR43V	D8G240261-21	8210473	MS	1.0	08/01/08 07:50		☐
177	KR43W	D8G240261-22	8210473	MS	1.0	08/01/08 07:55		☐
178	KR43X	D8G240261-23	8210473	MS	1.0	08/01/08 08:00		☐
179	KR430	D8G240261-24	8210473	MS	1.0	08/01/08 08:04		☐
180	KR432	D8G240261-26	8210473	MS	1.0	08/01/08 08:09		☐
181	CCV				1.0	08/01/08 08:14		☐
182	CCB				1.0	08/01/08 08:19		☐
183	KR9T2B	D8G280000	8210472	MS	1.0	08/01/08 08:24		☐
184	KR9T2C	D8G280000	8210472	MS	1.0	08/01/08 08:29		☐
185	KR422	D8G240261-1	8210472	MS	1.0	08/01/08 08:33		☐

Denver

RUN SUMMARY

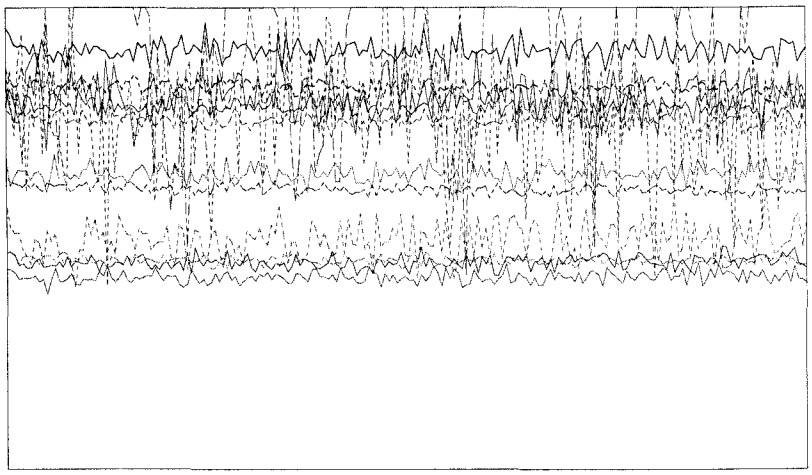
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/01/08 13:02:51

File ID: AG073108A **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	KR423	D8G240261-2	8210472	MS	1.0	08/01/08 08:38		☐
187	KR423P5	D8G240261	8210472		5.0	08/01/08 08:43		☐
188	KR423Z	D8G240261-2	8210472		1.0	08/01/08 08:48		☐
189	KR423S	D8G240261-2	8210472	MS	1.0	08/01/08 08:53		☐
190	KR423D	D8G240261-2	8210472	MS	1.0	08/01/08 08:58		☐
191	KR424	D8G240261-3	8210472	MS	1.0	08/01/08 09:03		☐
192	KR425	D8G240261-4	8210472	MS	1.0	08/01/08 09:07		☐
193	CCV				1.0	08/01/08 09:12		☐
194	CCB				1.0	08/01/08 09:17		☐
195	~~RINSE~~				~~1.0~~	~~08/01/08 09:22~~		☐
196	RINSE				1.0	08/01/08 09:27		☐
197	RINSE				1.0	08/01/08 09:31		☐
198	RINSE				1.0	08/01/08 09:36		☐
199	RINSE				1.0	08/01/08 09:41		☐
200	RINSE				1.0	08/01/08 09:46		☐
201	~~Cal Blank~~				~~1.0~~	~~08/01/08 09:51~~	EF. 8/1/08 Did not use.	☐
202	Cal Blank				1.0	08/01/08 09:55		☐
203	100 ppb				1.0	08/01/08 10:00		☐
204	CCV				1.0	08/01/08 10:05		☐
205	CCB				1.0	08/01/08 10:10		☐
206	ICSA				1.0	08/01/08 10:15		☐
207	ICSAB				1.0	08/01/08 10:19		☐
208	WASH				1.0	08/01/08 10:24		☐
209	CCV				1.0	08/01/08 10:29		☐
210	CCB				1.0	08/01/08 10:34		☐
211	KR426	D8G240261-5	8210472	MS	1.0	08/01/08 10:39		☐
212	KR428	D8G240261-6	8210472	MS	1.0	08/01/08 10:43		☐
213	KR429	D8G240261-7	8210472	MS	1.0	08/01/08 10:48		☐
214	KR43A	D8G240261-8	8210472	MS	1.0	08/01/08 10:53		☐
215	KR43D	D8G240261-9	8210472	MS	1.0	08/01/08 10:58		☐
216	KR43E	D8G240261-10	8210472	MS	1.0	08/01/08 11:03		☐
217	KR43G	D8G240261-11	8210472	MS	1.0	08/01/08 11:08		☐
218	KR43H	D8G240261-12	8210472	MS	1.0	08/01/08 11:13		☐
219	KR43J	D8G240261-13	8210472	MS	1.0	08/01/08 11:17		☐
220	CCV				1.0	08/01/08 11:22		☐
221	CCB				1.0	08/01/08 11:27		☐

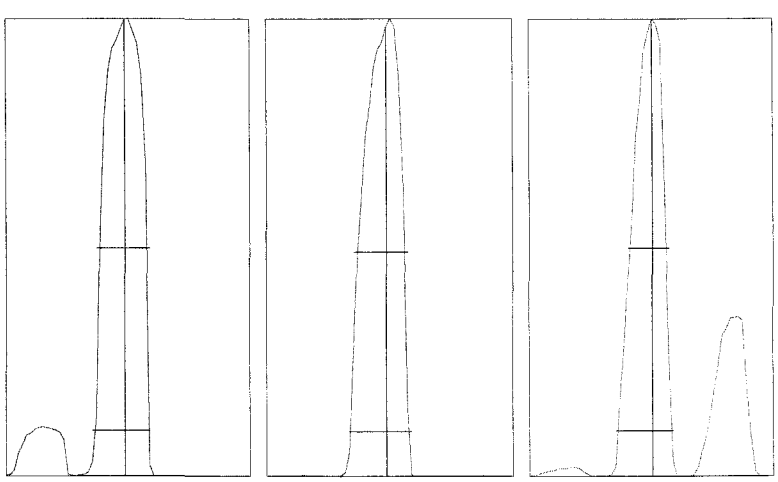
Tune Report

Tune File : norm.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.600%
Doubly Charged:	70/140	1.197%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2175.0	2240.9	2.84	1.00
7	50,000	20172.0	20793.7	2.85	1.40
59	50,000	29938.0	31846.5	2.61	1.00
78	500	400.0	403.7	5.36	1.40
89	50,000	45524.0	45301.1	2.20	1.00
115	50,000	38851.0	39196.7	2.23	2.10
140	50,000	36967.0	37647.2	1.95	2.40
63	500	265.0	247.5	7.26	1.40
205	50,000	22173.0	22591.7	1.69	2.90
95	50	40.0	38.5	16.66	1.70
208	20,000	16047.0	16561.5	1.58	2.40
238	50,000	29897.0	30182.8	1.53	3.80
82	50	53.0	56.5	37.65	1.60
156/140	2	1.564%	1.601%	6.28	
70/140	2	1.312%	1.267%	6.60	



m/z:	7	89	205
Height:	21,575	45,630	23,521
Axis:	7.00	89.00	205.05
W-50%:	0.65	0.65	0.50
W-10%:	0.700	0.7500	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Tune Report

Tune File : norm.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1550 W	Extract 1	:	0 V	AMU Gain	:	133
RF Matching	:	1.8 V	Extract 2	:	-180 V	AMU Offset	:	123
Smpl Depth	:	8 mm	Omega Bias-ce	:	-26 V	Axis Gain	:	1.0008
Torch-H	:	-0.5 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.02
Torch-V	:	0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-5 V
Carrier Gas	:	0.83 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1650 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1290 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	3.5 mL/min	Optional Gas	:	--- %

P/A Factor Tuning Report

Acquired:Jul 31 2008 04:59 pm

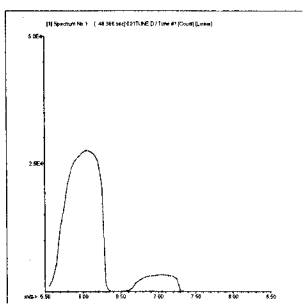
Mass[amu]	Element	P/A Factor
6	Li	0.060351
7	(Li)	Sensitivity too low
9	Be	0.068439
51	V	0.084642
52	Cr	0.087509
53	Cr	Sensitivity too low
55	Mn	0.089322
59	Co	0.092410
60	Ni	0.093763
63	Cu	0.096087
66	Zn	0.095587
72	Ge	0.094333
75	As	0.093488
78	Se	Sensitivity too low
95	Mo	0.093888
106	(Cd)	0.100437
107	Ag	Sensitivity too low
108	(Cd)	0.100961
111	Cd	0.101432
115	In	0.101266
118	Sn	0.100695
121	Sb	0.100448
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
205	Tl	0.110219
206	(Pb)	0.109611
207	(Pb)	0.109538
208	Pb	0.109642
238	U	0.108777

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1650 V
Pulse HV: 1290 V

200.8 QC Tune Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\001TUNE.D
Date Acquired: Jul 31 2008 05:42 pm
Acq. Method: HeTN2008.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: D:\ICPCHEM\1\METHODS\HeTN2008.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	17617	17647	17670	17491	17844	17433	**1.73**	5.00	
9 Be	3168	3174	3212	3134	3174	3142	**3.68**	5.00	
24 Mg	18913	19000	19037	18920	18730	18875	**2.33**	5.00	
59 Co	109113	110505	108429	109005	108613	109010	**1.30**	5.00	
115 In	1119091	1132789	1111419	1124898	1111630	1114717	**1.23**	5.00	
208 Pb	77701	79254	77902	76954	76887	77509	**0.98**	5.00	
238 U	134649	137889	134625	134347	133320	133062	**1.66**	5.00	

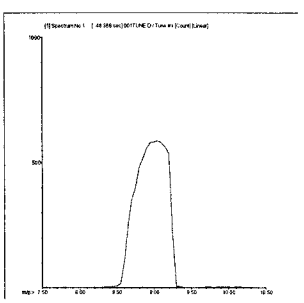


7 Li
Mass Calib.

Actual:	7.05		
Required:	6.90	-	7.10
Flag:			

Peak Width

Actual:	0.60		
Required	0.90		
Flag:			

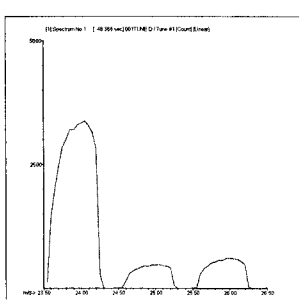


9 Be
Mass Calib.

Actual:	9.05		
Required:	8.90	-	9.10
Flag:			

Peak Width

Actual:	0.65		
Required:	0.90		
Flag:			

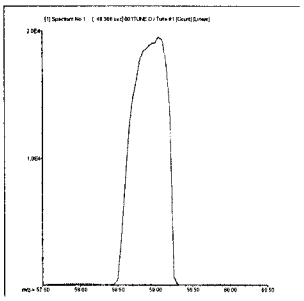


24 Mg
Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



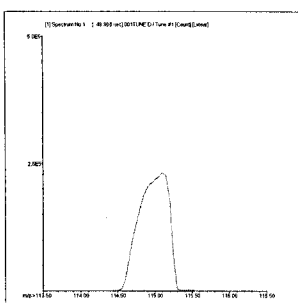
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60
Required:	0.90
Flag:	



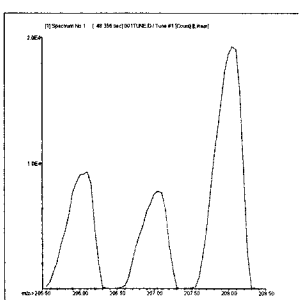
115 In

Mass Calib.

Actual:	115.05		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60
Required:	0.90
Flag:	



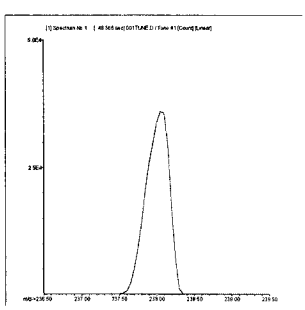
208 Pb

Mass Calib.

Actual:	208.05		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.60
Required:	0.90
Flag:	



238 U

Mass Calib.

Actual:	238.05		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55
Required:	0.90
Flag:	

Tune Result: **Pass**

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\002CALB.D\002CALB.D#
Date Acquired: Jul 31 2008 05:51 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 05:53 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	185	131.42
52	Cr	72	1	2700	0.74
55	Mn	72	1	460	18.83
59	Co	72	1	93	43.30
60	Ni	72	1	197	15.54
63	Cu	72	1	760	26.28
66	Zn	72	1	1083	8.27
75	As	72	1	31	24.74
78	Se	72	1	396	10.81
95	Mo	115	1	63	9.12
107	Ag	115	1	27	114.56
111	Cd	115	1	2	358.39
118	Sn	115	1	190	42.11
121	Sb	115	1	50	52.92
137	Ba	115	1	30	33.33
205	Tl	165	1	180	43.39
208	Pb	165	1	253	15.95
238	U	165	1	100	17.32

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	267192	0.24
72	Ge	1	728912	0.73
115	In	1	1974060	1.60
165	Ho	1	3376981	1.04

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File:	D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#
Date Acquired:	Jul 31 2008 05:55 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Jul 31 2008 05:53 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	274	104.84
52	Cr	72	1	3414	7.80
55	Mn	72	1	493	7.12
59	Co	72	1	103	27.94
60	Ni	72	1	183	16.66
63	Cu	72	1	900	5.77
66	Zn	72	1	880	10.84
75	As	72	1	50	13.33
78	Se	72	1	405	3.26
95	Mo	115	1	73	28.39
107	Ag	115	1	23	65.47
111	Cd	115	1	-3	191.96
118	Sn	115	1	253	29.10
121	Sb	115	1	50	40.00
137	Ba	115	1	40	43.30
205	Tl	165	1	130	15.39
208	Pb	165	1	197	12.80
238	U	165	1	40	25.00

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	269919	1.64
72	Ge	1	743339	0.49
115	In	1	2052432	0.79
165	Ho	1	3454779	1.04

Tune File#	1	d:\icpchem\1\7500\he.u
Tune File#	2	D:\ICPCHEM\1\7500\
Tune File#	3	D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\004ICAL.D\004ICAL.D#
Date Acquired: Jul 31 2008 06:00 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 05:58 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	51071	0.93
51	V	72	1	1264447	1.16
52	Cr	72	1	1384830	0.86
55	Mn	72	1	1467906	0.95
59	Co	72	1	1785675	1.96
60	Ni	72	1	407291	1.45
63	Cu	72	1	1025381	1.05
66	Zn	72	1	221531	0.97
75	As	72	1	164027	2.55
78	Se	72	1	29380	3.05
95	Mo	115	1	492334	1.05
107	Ag	115	1	1497609	0.88
111	Cd	115	1	283806	0.94
118	Sn	115	1	729050	2.13
121	Sb	115	1	842872	1.90
137	Ba	115	1	328607	1.28
205	Tl	165	1	2506608	0.68
208	Pb	165	1	3473357	1.80
238	U	165	1	3304911	1.55

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	259728	0.95	269919	96.2	30 - 120	
72	Ge	1	718129	1.91	743339	96.6	30 - 120	
115	In	1	2003576	1.30	2052432	97.6	30 - 120	
165	Ho	1	3420646	1.62	3454779	99.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\005 ICV.D\005 ICV.D#
Date Acquired: Jul 31 2008 06:05 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	39.350 ug/l	1.88	40	98.4	90 - 110	
51 V	72	1	42.690 ug/l	0.95	40	106.7	90 - 110	
52 Cr	72	1	42.100 ug/l	1.16	40	105.3	90 - 110	
55 Mn	72	1	42.050 ug/l	1.48	40	105.1	90 - 110	
59 Co	72	1	41.520 ug/l	1.17	40	103.8	90 - 110	
60 Ni	72	1	42.230 ug/l	0.97	40	105.6	90 - 110	
63 Cu	72	1	40.750 ug/l	0.30	40	101.9	90 - 110	
66 Zn	72	1	38.680 ug/l	0.06	40	96.7	90 - 110	
75 As	72	1	38.400 ug/l	2.01	40	96.0	90 - 110	
78 Se	72	1	37.910 ug/l	3.36	40	94.8	90 - 110	
95 Mo	115	1	41.050 ug/l	1.59	40	102.6	90 - 110	
107 Ag	115	1	40.170 ug/l	2.05	40	100.4	90 - 110	
111 Cd	115	1	39.580 ug/l	0.29	40	99.0	90 - 110	
118 Sn	115	1	41.380 ug/l	0.85	40	103.5	90 - 110	
121 Sb	115	1	38.800 ug/l	2.04	40	97.0	90 - 110	
137 Ba	115	1	39.770 ug/l	2.69	40	99.4	90 - 110	
205 Tl	165	1	41.780 ug/l	0.86	40	104.5	90 - 110	
208 Pb	165	1	41.620 ug/l	1.45	40	104.1	90 - 110	
238 U	165	1	42.610 ug/l	1.54	40	106.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	268056	1.06	269919	99.3	30 - 120	
72 Ge	1	716087	0.55	743339	96.3	30 - 120	
115 In	1	2034596	1.23	2052432	99.1	30 - 120	
165 Ho	1	3433001	1.23	3454779	99.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\006 ICB.D\006 ICB.D#
Date Acquired: Jul 31 2008 06:10 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit
9 Be	6	1	0.002	ug/l	173.21	1.00
51 V	72	1	0.012	ug/l	134.03	1.00
52 Cr	72	1	-0.016	ug/l	52.68	1.00
55 Mn	72	1	0.007	ug/l	33.77	1.00
59 Co	72	1	0.000	ug/l	3499.70	1.00
60 Ni	72	1	-0.011	ug/l	83.52	1.00
63 Cu	72	1	0.003	ug/l	76.38	1.00
66 Zn	72	1	0.000	ug/l	9856.40	10.00
75 As	72	1	0.002	ug/l	234.59	5.00
78 Se	72	1	0.095	ug/l	113.41	5.00
95 Mo	115	1	0.017	ug/l	43.74	1.00
107 Ag	115	1	0.002	ug/l	97.14	1.00
111 Cd	115	1	0.004	ug/l	36.79	1.00
118 Sn	115	1	0.047	ug/l	27.59	10.00
121 Sb	115	1	0.053	ug/l	6.12	1.00
137 Ba	115	1	0.001	ug/l	647.57	1.00
205 Tl	165	1	0.014	ug/l	35.53	1.00
208 Pb	165	1	0.002	ug/l	130.42	1.00
238 U	165	1	0.002	ug/l	49.35	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	273465	1.12	269919	101.3	30 - 120	
72 Ge	1	730346	1.39	743339	98.3	30 - 120	
115 In	1	2024188	0.77	2052432	98.6	30 - 120	
165 Ho	1	3467556	0.65	3454779	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\007RLST.D\007RLST.D#
Date Acquired: Jul 31 2008 06:15 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	0.965 ug/l	2.49	1	96.5
51 V	72	1	1.088 ug/l	4.82	1	108.8
52 Cr	72	1	1.045 ug/l	5.27	1	104.5
55 Mn	72	1	1.202 ug/l	3.53	1	120.2
59 Co	72	1	1.006 ug/l	3.08	1	100.6
60 Ni	72	1	1.029 ug/l	4.36	1	102.9
63 Cu	72	1	1.367 ug/l	2.39	1	136.7
66 Zn	72	1	10.710 ug/l	2.06	10	107.1
75 As	72	1	0.906 ug/l	2.82	1	90.6
78 Se	72	1	1.047 ug/l	11.38	1	104.7
95 Mo	115	1	0.979 ug/l	1.27	1	97.9
107 Ag	115	1	0.959 ug/l	2.45	1	95.9
111 Cd	115	1	0.946 ug/l	4.27	1	94.6
118 Sn	115	1	9.747 ug/l	1.29	10	97.5
121 Sb	115	1	1.016 ug/l	2.49	1	101.6
137 Ba	115	1	1.021 ug/l	2.95	1	102.1
205 Tl	165	1	1.015 ug/l	3.02	1	101.5
208 Pb	165	1	1.007 ug/l	4.80	1	100.7
238 U	165	1	1.064 ug/l	1.06	1	106.4

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	275774	1.17	269919	102.2	30 - 120	
72 Ge	1	734701	1.20	743339	98.8	30 - 120	
115 In	1	2072922	1.92	2052432	101.0	30 - 120	
165 Ho	1	3464164	1.35	3454779	100.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\008SMPL.D\008SMPL.D#
Date Acquired: Jul 31 2008 06:19 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ALTSe
Misc Info:
Vial Number: 2106
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.000	0.000	ug/l	0.00	3600	
51 V	72	1	-0.005	-0.005	ug/l	432.80	3600	
52 Cr	72	1	-0.028	-0.028	ug/l	96.23	3600	
55 Mn	72	1	0.035	0.035	ug/l	12.03	18000	
59 Co	72	1	0.002	0.002	ug/l	62.87	3600	
60 Ni	72	1	-0.007	-0.007	ug/l	17.51	3600	
63 Cu	72	1	0.084	0.084	ug/l	15.50	3600	
66 Zn	72	1	1.980	1.980	ug/l	9.37	3600	
75 As	72	1	0.004	0.004	ug/l	290.40	3600	
78 Se	72	1	5.007	5.007	ug/l	3.48	3600	
95 Mo	115	1	0.022	0.022	ug/l	18.49	3600	
107 Ag	115	1	0.000	0.000	ug/l	152.35	3600	
111 Cd	115	1	0.002	0.002	ug/l	176.56	3600	
118 Sn	115	1	0.023	0.023	ug/l	26.43	3600	
121 Sb	115	1	0.010	0.010	ug/l	45.72	3600	
137 Ba	115	1	0.035	0.035	ug/l	39.49	3600	
205 Tl	165	1	0.000	0.000	ug/l	463.32	3600	
208 Pb	165	1	0.024	0.024	ug/l	15.32	3600	
238 U	165	1	0.000	0.000	ug/l	363.25	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	269887	0.24	269919	100.0	30 - 120	
72 Ge	1	745173	0.50	743339	100.2	30 - 120	
115 In	1	2022168	0.60	2052432	98.5	30 - 120	
165 Ho	1	3454470	1.71	3454779	100.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\009AFCE.D\009AFCE.D#
Date Acquired: Jul 31 2008 06:24 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.212 ug/l	18.67	0	109.9	50 - 150	
51 V	72	1	0.192 ug/l	14.51	0	88.1	50 - 150	
52 Cr	72	1	0.170 ug/l	18.75	0	81.3	50 - 150	
55 Mn	72	1	0.225 ug/l	3.15	0	93.8	50 - 150	
59 Co	72	1	0.205 ug/l	1.88	0	102.0	50 - 150	
60 Ni	72	1	0.194 ug/l	13.43	0	94.2	50 - 150	
63 Cu	72	1	0.271 ug/l	1.99	0	98.9	50 - 150	
66 Zn	72	1	2.595 ug/l	1.29	2	121.1	50 - 150	
75 As	72	1	0.207 ug/l	6.56	0	114.1	50 - 150	
78 Se	72	1	0.296 ug/l	19.74	0	141.4	50 - 150	
95 Mo	115	1	0.172 ug/l	10.41	0	88.0	50 - 150	
107 Ag	115	1	0.192 ug/l	8.06	0	100.3	50 - 150	
111 Cd	115	1	0.197 ug/l	13.28	0	103.9	50 - 150	
118 Sn	115	1	1.858 ug/l	2.29	2	95.3	50 - 150	
121 Sb	115	1	0.211 ug/l	11.79	0	103.6	50 - 150	
137 Ba	115	1	0.216 ug/l	11.81	0	105.6	50 - 150	
205 Tl	165	1	0.203 ug/l	0.81	0	100.1	50 - 150	
208 Pb	165	1	0.195 ug/l	4.11	0	96.8	50 - 150	
238 U	165	1	0.209 ug/l	2.66	0	98.2	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	274460	0.42	269919	101.7	30 - 120	
72 Ge	1	745554	0.52	743339	100.3	30 - 120	
115 In	1	2055795	1.01	2052432	100.2	30 - 120	
165 Ho	1	3475129	0.44	3454779	100.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\010SMPL.D\010SMPL.D#
Date Acquired: Jul 31 2008 06:30 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ALTCu
Misc Info: 2 ppb
Vial Number: 2111
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.006	0.006	ug/l	0.75	3600	
51 V	72	1	-0.018	-0.018	ug/l	49.47	3600	
52 Cr	72	1	-0.021	-0.021	ug/l	24.65	3600	
55 Mn	72	1	0.010	0.010	ug/l	50.54	18000	
59 Co	72	1	0.000	0.000	ug/l	743.55	3600	
60 Ni	72	1	-0.014	-0.014	ug/l	46.28	3600	
63 Cu	72	1	2.203	2.203	ug/l	2.65	3600	
66 Zn	72	1	1.294	1.294	ug/l	6.33	3600	
75 As	72	1	-0.003	-0.003	ug/l	89.40	3600	
78 Se	72	1	0.102	0.102	ug/l	27.53	3600	
95 Mo	115	1	-0.007	-0.007	ug/l	15.28	3600	
107 Ag	115	1	0.000	0.000	ug/l	549.40	3600	
111 Cd	115	1	0.002	0.002	ug/l	208.00	3600	
118 Sn	115	1	-0.001	-0.001	ug/l	57.93	3600	
121 Sb	115	1	0.000	0.000	ug/l	7391.80	3600	
137 Ba	115	1	0.006	0.006	ug/l	88.22	3600	
205 Tl	165	1	0.000	0.000	ug/l	80.67	3600	
208 Pb	165	1	-0.001	-0.001	ug/l	35.32	3600	
238 U	165	1	-0.001	-0.001	ug/l	17.28	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	276764	0.75	269919	102.5	30 - 120	
72 Ge	1	747834	0.80	743339	100.6	30 - 120	
115 In	1	2079406	0.58	2052432	101.3	30 - 120	
165 Ho	1	3489429	1.65	3454779	101.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\011ICSA.D\011ICSA.D#
Date Acquired: Jul 31 2008 06:34 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	0.006 ug/l	173.17	10.00	
51	V	72	1	-0.237 ug/l	34.52	10.00	
52	Cr	72	1	0.912 ug/l	2.24	10.00	
55	Mn	72	1	1.707 ug/l	3.27	10.00	
59	Co	72	1	0.043 ug/l	18.84	10.00	
60	Ni	72	1	4.412 ug/l	2.21	10.00	
63	Cu	72	1	0.318 ug/l	8.95	10.00	
66	Zn	72	1	3.203 ug/l	4.46	100.00	
75	As	72	1	0.183 ug/l	13.57	50.00	
78	Se	72	1	0.058 ug/l	105.83	50.00	
95	Mo	115	1	1936.000 ug/l	0.83	10.00	
107	Ag	115	1	0.010 ug/l	26.52	10.00	
111	Cd	115	1	0.311 ug/l	14.28	10.00	
118	Sn	115	1	0.081 ug/l	9.54	100.00	
121	Sb	115	1	0.209 ug/l	14.28	10.00	
137	Ba	115	1	1.651 ug/l	4.09	10.00	
205	Tl	165	1	0.029 ug/l	16.35	10.00	
208	Pb	165	1	0.090 ug/l	4.20	10.00	
238	U	165	1	0.002 ug/l	108.99	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	185742	1.39	269919	68.8	30 - 120	
72	Ge	1	555836	0.99	743339	74.8	30 - 120	
115	In	1	1604368	0.91	2052432	78.2	30 - 120	
165	Ho	1	2965336	0.52	3454779	85.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\012ICSB.D\012ICSB.D#
Date Acquired: Jul 31 2008 06:39 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	106.900	2.90	100	106.9	80 - 120	
51 V	72	1	95.100	2.96	100	95.1	80 - 120	
52 Cr	72	1	95.380	1.78	100	95.4	80 - 120	
55 Mn	72	1	97.930	1.81	100	97.9	80 - 120	
59 Co	72	1	92.290	0.29	100	92.3	80 - 120	
60 Ni	72	1	93.480	1.65	100	93.5	80 - 120	
63 Cu	72	1	85.010	1.36	100	85.0	80 - 120	
66 Zn	72	1	94.190	1.75	100	94.2	80 - 120	
75 As	72	1	98.300	2.11	100	98.3	80 - 120	
78 Se	72	1	104.200	2.51	100	104.2	80 - 120	
95 Mo	115	1	2029.000	1.31	2100	96.6	80 - 120	
107 Ag	115	1	88.420	2.22	100	88.4	80 - 120	
111 Cd	115	1	97.830	1.34	100	97.8	80 - 120	
118 Sn	115	1	103.000	0.11	100	103.0	80 - 120	
121 Sb	115	1	105.300	0.45	100	105.3	80 - 120	
137 Ba	115	1	106.600	0.27	100	106.6	80 - 120	
205 Tl	165	1	99.500	0.28	100	99.5	80 - 120	
208 Pb	165	1	98.260	0.64	100	98.3	80 - 120	
238 U	165	1	110.300	1.10	100	110.3	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	158432	1.99	269919	58.7	30 - 120	
72 Ge	1	524492	1.84	743339	70.6	30 - 120	
115 In	1	1542210	1.01	2052432	75.1	30 - 120	
165 Ho	1	2965215	0.26	3454779	85.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\013WASH.D\013WASH.D#
Date Acquired: Jul 31 2008 06:44 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.014 ug/l	99.58	10.00	
51 V	72	1	0.006 ug/l	513.51	10.00	
52 Cr	72	1	-0.027 ug/l	84.42	10.00	
55 Mn	72	1	0.009 ug/l	80.80	10.00	
59 Co	72	1	0.003 ug/l	107.63	10.00	
60 Ni	72	1	0.004 ug/l	90.86	10.00	
63 Cu	72	1	0.004 ug/l	201.31	10.00	
66 Zn	72	1	0.077 ug/l	94.58	100.00	
75 As	72	1	-0.001 ug/l	1776.00	50.00	
78 Se	72	1	-0.044 ug/l	199.66	50.00	
95 Mo	115	1	0.327 ug/l	8.99	10.00	
107 Ag	115	1	0.004 ug/l	75.14	10.00	
111 Cd	115	1	0.005 ug/l	52.30	10.00	
118 Sn	115	1	0.000 ug/l	14671.00	100.00	
121 Sb	115	1	0.011 ug/l	34.36	10.00	
137 Ba	115	1	0.007 ug/l	223.01	10.00	
205 Tl	165	1	0.025 ug/l	27.58	10.00	
208 Pb	165	1	0.007 ug/l	31.01	10.00	
238 U	165	1	0.006 ug/l	10.60	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	235389	0.80	269919	87.2	30 - 120	
72 Ge	1	676282	0.19	743339	91.0	30 - 120	
115 In	1	1979413	1.77	2052432	96.4	30 - 120	
165 Ho	1	3471283	0.62	3454779	100.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\014 LR.D\014 LR.D#
Date Acquired: Jul 31 2008 06:49 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	1013.000 ug/l	1.48	1000	101.3
51 V	72	1	939.800 ug/l	1.90	1000	94.0
52 Cr	72	1	970.500 ug/l	1.26	1000	97.1
55 Mn	72	1	985.400 ug/l	0.86	1000	98.5
59 Co	72	1	961.800 ug/l	2.96	1000	96.2
60 Ni	72	1	985.500 ug/l	2.18	1000	98.6
63 Cu	72	1	930.600 ug/l	2.29	1000	93.1
66 Zn	72	1	976.400 ug/l	1.80	1000	97.6
75 As	72	1	976.700 ug/l	1.38	1000	97.7
78 Se	72	1	967.300 ug/l	0.93	1000	96.7
95 Mo	115	1	954.600 ug/l	3.28	1000	95.5
107 Ag	115	1	942.000 ug/l	2.43	1000	94.2
111 Cd	115	1	975.900 ug/l	1.02	1000	97.6
118 Sn	115	1	968.600 ug/l	1.70	1000	96.9
121 Sb	115	1	965.800 ug/l	1.76	1000	96.6
137 Ba	115	1	1016.000 ug/l	2.03	1000	101.6
205 Tl	165	1	990.000 ug/l	1.09	1000	99.0
208 Pb	165	1	977.300 ug/l	0.97	1000	97.7
238 U	165	1	1009.000 ug/l	0.88	1000	100.9

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	233850	1.37	269919	86.6	30 - 120	
72 Ge	1	673457	1.80	743339	90.6	30 - 120	
115 In	1	1982128	2.31	2052432	96.6	30 - 120	
165 Ho	1	3514438	1.25	3454779	101.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\015WASH.D\015WASH.D#
Date Acquired: Jul 31 2008 06:53 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.031 ug/l	61.76	10.00	
51 V	72	1	0.011 ug/l	31.30	10.00	
52 Cr	72	1	-0.013 ug/l	36.64	10.00	
55 Mn	72	1	0.013 ug/l	97.57	10.00	
59 Co	72	1	0.024 ug/l	12.88	10.00	
60 Ni	72	1	0.021 ug/l	77.36	10.00	
63 Cu	72	1	0.006 ug/l	161.96	10.00	
66 Zn	72	1	0.162 ug/l	44.19	100.00	
75 As	72	1	0.030 ug/l	17.66	50.00	
78 Se	72	1	0.106 ug/l	86.08	50.00	
95 Mo	115	1	0.147 ug/l	13.55	10.00	
107 Ag	115	1	0.026 ug/l	14.77	10.00	
111 Cd	115	1	0.024 ug/l	21.66	10.00	
118 Sn	115	1	0.225 ug/l	18.47	100.00	
121 Sb	115	1	0.128 ug/l	10.23	10.00	
137 Ba	115	1	0.014 ug/l	45.88	10.00	
205 Tl	165	1	0.037 ug/l	1.45	10.00	
208 Pb	165	1	0.024 ug/l	8.00	10.00	
238 U	165	1	0.036 ug/l	5.76	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	252075	1.76	269919	93.4	30 - 120	
72 Ge	1	719402	0.78	743339	96.8	30 - 120	
115 In	1	2042309	0.77	2052432	99.5	30 - 120	
165 Ho	1	3554526	0.71	3454779	102.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\016 CCV.D\016 CCV.D#
Date Acquired: Jul 31 2008 06:58 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.640 ug/l	1.39	50	99.3	90 - 110	
51 V	72	1	50.100 ug/l	0.44	50	100.2	90 - 110	
52 Cr	72	1	49.760 ug/l	0.93	50	99.5	90 - 110	
55 Mn	72	1	50.080 ug/l	0.80	50	100.2	90 - 110	
59 Co	72	1	50.130 ug/l	0.56	50	100.3	90 - 110	
60 Ni	72	1	50.560 ug/l	1.57	50	101.1	90 - 110	
63 Cu	72	1	49.780 ug/l	0.17	50	99.6	90 - 110	
66 Zn	72	1	49.040 ug/l	0.16	50	98.1	90 - 110	
75 As	72	1	48.800 ug/l	1.21	50	97.6	90 - 110	
78 Se	72	1	48.660 ug/l	1.80	50	97.3	90 - 110	
95 Mo	115	1	49.790 ug/l	1.32	50	99.6	90 - 110	
107 Ag	115	1	48.930 ug/l	1.08	50	97.9	90 - 110	
111 Cd	115	1	49.030 ug/l	1.34	50	98.1	90 - 110	
118 Sn	115	1	50.220 ug/l	1.57	50	100.4	90 - 110	
121 Sb	115	1	49.890 ug/l	1.92	50	99.8	90 - 110	
137 Ba	115	1	49.890 ug/l	1.71	50	99.8	90 - 110	
205 Tl	165	1	51.560 ug/l	1.41	50	103.1	90 - 110	
208 Pb	165	1	50.530 ug/l	0.89	50	101.1	90 - 110	
238 U	165	1	52.540 ug/l	0.71	50	105.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	256105	0.53	269919	94.9	30 - 120	
72 Ge	1	710322	0.82	743339	95.6	30 - 120	
115 In	1	2025362	0.34	2052432	98.7	30 - 120	
165 Ho	1	3489887	0.89	3454779	101.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\017 CCB.D\017 CCB.D#
Date Acquired: Jul 31 2008 07:03 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.006	ug/l	173.19	1.00	
51 V	72	1	-0.004	ug/l	391.57	1.00	
52 Cr	72	1	-0.019	ug/l	140.41	1.00	
55 Mn	72	1	0.008	ug/l	35.69	1.00	
59 Co	72	1	0.005	ug/l	101.55	1.00	
60 Ni	72	1	-0.020	ug/l	15.48	1.00	
63 Cu	72	1	-0.007	ug/l	182.47	1.00	
66 Zn	72	1	0.085	ug/l	31.16	10.00	
75 As	72	1	0.020	ug/l	71.51	5.00	
78 Se	72	1	0.144	ug/l	45.44	5.00	
95 Mo	115	1	0.052	ug/l	11.13	1.00	
107 Ag	115	1	0.006	ug/l	25.11	1.00	
111 Cd	115	1	0.004	ug/l	32.27	1.00	
118 Sn	115	1	0.048	ug/l	19.61	10.00	
121 Sb	115	1	0.030	ug/l	17.28	1.00	
137 Ba	115	1	0.013	ug/l	72.99	1.00	
205 Tl	165	1	0.010	ug/l	21.65	1.00	
208 Pb	165	1	0.001	ug/l	80.10	1.00	
238 U	165	1	0.004	ug/l	45.04	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	264822	0.63	269919	98.1	30 - 120	
72 Ge	1	712166	0.72	743339	95.8	30 - 120	
115 In	1	2036009	0.42	2052432	99.2	30 - 120	
165 Ho	1	3489419	0.78	3454779	101.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\018 BLK.D\018 BLK.D#
Date Acquired: Jul 31 2008 07:08 pm
Operator: TEL
Sample Name: KR07WB
Misc Info: BLANK 8204479 6020
Vial Number: 2201
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: BLK
Total Dil Factor: 250.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit
9 Be	6	1	0.004 ug/l	86.61	1.00
51 V	72	1	0.084 ug/l	8.96	1.00
52 Cr	72	1	0.304 ug/l	4.83	1.00
55 Mn	72	1	0.876 ug/l	2.06	1.00
59 Co	72	1	0.029 ug/l	27.43	1.00
60 Ni	72	1	0.147 ug/l	7.83	1.00
63 Cu	72	1	0.338 ug/l	7.39	1.00
66 Zn	72	1	0.964 ug/l	4.60	10.00
75 As	72	1	0.015 ug/l	78.47	5.00
78 Se	72	1	0.107 ug/l	65.68	5.00
95 Mo	115	1	0.032 ug/l	42.00	1.00
107 Ag	115	1	0.006 ug/l	31.81	1.00
111 Cd	115	1	0.008 ug/l	62.99	1.00
118 Sn	115	1	0.071 ug/l	10.14	10.00
121 Sb	115	1	0.024 ug/l	36.73	1.00
137 Ba	115	1	0.107 ug/l	14.50	1.00
205 Tl	165	1	0.018 ug/l	17.12	1.00
208 Pb	165	1	0.057 ug/l	6.48	1.00
238 U	165	1	0.008 ug/l	22.19	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	283118	0.84	269919	104.9	30 - 120	
72 Ge	1	734830	0.43	743339	98.9	30 - 120	
115 In	1	2078818	1.07	2052432	101.3	30 - 120	
165 Ho	1	3570934	0.54	3454779	103.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\019 LCS.D\019 LCS.D#
Date Acquired: Jul 31 2008 07:13 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KR07WC
Misc Info: LCS
Vial Number: 2202
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: LCS
Prep Dil. Factor: 250.00
Autodil Factor: Undiluted
Final Dil Factor: 250.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)
9 Be	6	1	39.05	1.27	40	97.6
51 V	72	1	41.83	0.68	40	104.6
52 Cr	72	1	41.14	0.59	40	102.9
55 Mn	72	1	41.83	0.21	40	104.6
59 Co	72	1	41.20	0.26	40	103.0
60 Ni	72	1	41.23	0.92	40	103.1
63 Cu	72	1	40.73	0.39	40	101.8
66 Zn	72	1	39.59	0.34	40	99.0
75 As	72	1	37.94	0.78	40	94.9
78 Se	72	1	37.26	2.67	40	93.2
95 Mo	115	1	39.24	0.65	40	98.1
107 Ag	115	1	38.12	0.09	40	95.3
111 Cd	115	1	38.69	1.72	40	96.7
118 Sn	115	1	0.03	24.20	40	0.1
121 Sb	115	1	38.89	0.80	40	97.2
137 Ba	115	1	40.36	0.84	40	100.9
205 Tl	165	1	41.09	0.77	40	102.7
208 Pb	165	1	40.90	1.55	40	102.3
238 U	165	1	42.56	1.12	40	106.4

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	270009	0.69	269919	100.0	30 - 120	
72 Ge	1	723958	0.49	743339	97.4	30 - 120	
115 In	1	2080473	0.24	2052432	101.4	30 - 120	
165 Ho	1	3528233	1.09	3454779	102.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\020SMPL.D\020SMPL.D#
Date Acquired: Jul 31 2008 07:18 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1Q
Misc Info: D8G210174
Vial Number: 2203
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 250.50
Autodil Factor: Undiluted
Final Dil Factor: 250.50

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	445.389	1.778	ug/l	9.15	3600	
51 V	72	1	121,743.000	486.000	ug/l	0.68	3600	
52 Cr	72	1	159,343.050	636.100	ug/l	1.42	3600	
55 Mn	72	1	878,253.000	3506.000	ug/l	0.63	18000	
59 Co	72	1	24,827.055	99.110	ug/l	0.44	3600	
60 Ni	72	1	127,905.300	510.600	ug/l	0.99	3600	
63 Cu	72	1	52,154.100	208.200	ug/l	1.31	3600	
66 Zn	72	1	53,907.600	215.200	ug/l	0.49	3600	
75 As	72	1	3,679.845	14.690	ug/l	2.11	3600	
78 Se	72	1	980.457	3.914	ug/l	5.49	3600	
95 Mo	115	1	234.518	0.936	ug/l	4.92	3600	
107 Ag	115	1	121.568	0.485	ug/l	3.89	3600	
111 Cd	115	1	784.817	3.133	ug/l	2.27	3600	
118 Sn	115	1	171.768	0.686	ug/l	4.14	3600	
121 Sb	115	1	15.872	0.063	ug/l	25.19	3600	
137 Ba	115	1	46,392.600	185.200	ug/l	1.20	3600	
205 Tl	165	1	27.530	0.110	ug/l	2.97	3600	
208 Pb	165	1	14,038.020	56.040	ug/l	0.31	3600	
238 U	165	1	424.848	1.696	ug/l	1.25	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	232606	0.80	269919	86.2	30 - 120	
72 Ge	1	658350	1.00	743339	88.6	30 - 120	
115 In	1	1729999	0.53	2052432	84.3	30 - 120	
165 Ho	1	2893266	1.30	3454779	83.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

All Reference Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\021AREF.D\021AREF.D#
Date Acquired: Jul 31 2008 07:22 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1W
Misc Info: D8G210174
Vial Number: 2204
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: AllRef
Dilution Factor: 256.90
Autodil Factor: Undiluted
Final Dil Factor: 256.90

Data Results:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	454.970	1.771	ug/l	0.97	3600.00	
51 V	72	1	##########	497.900	ug/l	0.36	3600.00	
52 Cr	72	1	##########	665.800	ug/l	0.92	3600.00	
55 Mn	72	1	##########	3401.000	ug/l	1.22	18000.00	
59 Co	72	1	24,328.430	94.700	ug/l	0.26	3600.00	
60 Ni	72	1	##########	550.900	ug/l	1.16	3600.00	
63 Cu	72	1	56,106.960	218.400	ug/l	0.55	3600.00	
66 Zn	72	1	54,051.760	210.400	ug/l	0.45	3600.00	
75 As	72	1	5,302.416	20.640	ug/l	2.47	3600.00	
78 Se	72	1	993.946	3.869	ug/l	4.60	3600.00	
95 Mo	115	1	261.781	1.019	ug/l	1.88	3600.00	
107 Ag	115	1	129.478	0.504	ug/l	5.47	3600.00	
111 Cd	115	1	907.371	3.532	ug/l	6.28	3600.00	
118 Sn	115	1	188.179	0.733	ug/l	6.12	3600.00	
121 Sb	115	1	15.961	0.062	ug/l	16.48	3600.00	
137 Ba	115	1	54,976.600	214.000	ug/l	0.48	3600.00	
205 Tl	165	1	25.081	0.098	ug/l	10.17	3600.00	
208 Pb	165	1	11,647.846	45.340	ug/l	0.69	3600.00	
238 U	165	1	418.747	1.630	ug/l	1.45	3600.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	232310	1.01	269919	86.1	30 - 120	
72 Ge	1	661354	0.79	743339	89.0	30 - 120	
115 In	1	1740158	0.97	2052432	84.8	30 - 120	
165 Ho	1	2874436	1.00	3454779	83.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\022SDIL.D\022SDIL.D#
Date Acquired: Jul 31 2008 07:27 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1WP5
Misc Info: SERIAL DILUTION
Vial Number: 2205
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SDIL
Dilution Factor: 256.90

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: D:\ICPCHEM\1\DATA\AG073108A.B\021AREF.D\021AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb	RSD(%)	Ref Conc.
9 Be	6	1	0.352 ug/l	2.97	0.35
51 V	72	1	111.600 ug/l	0.62	99.58
52 Cr	72	1	145.700 ug/l	0.70	133.16
55 Mn	72	1	721.000 ug/l	0.81	680.20
59 Co	72	1	20.360 ug/l	0.32	18.94
60 Ni	72	1	121.600 ug/l	0.33	110.18
63 Cu	72	1	49.140 ug/l	1.36	43.68
66 Zn	72	1	45.360 ug/l	0.96	42.08
75 As	72	1	4.182 ug/l	1.99	4.13
78 Se	72	1	1.062 ug/l	2.67	0.77
95 Mo	115	1	0.214 ug/l	7.45	0.20
107 Ag	115	1	0.097 ug/l	10.03	0.10
111 Cd	115	1	0.691 ug/l	9.57	0.71
118 Sn	115	1	0.184 ug/l	8.03	0.15
121 Sb	115	1	0.013 ug/l	33.20	0.01
137 Ba	115	1	41.720 ug/l	2.26	42.80
205 Tl	165	1	0.021 ug/l	3.17	0.02
208 Pb	165	1	8.716 ug/l	0.33	9.07
238 U	165	1	0.302 ug/l	2.46	0.33

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	271186	1.76	269919	100.5	30 - 120	
72 Ge	1	713727	0.63	743339	96.0	30 - 120	
115 In	1	1989524	2.23	2052432	96.9	30 - 120	
165 Ho	1	3311604	0.96	3454779	95.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 08/01/08 12:39:50

Department: 090 (Metals) | Source: Spreadsheet

Sample: **KRW1WP5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500** | Channel 272
File: AG073108A # 22 | Method 6020_
Acquired: 07/31/2008 19:27:00 | ICPMS_024
Calibrated: 07/31/2008 17:55:00 | Matrix: SOLID
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	188	1.7610	1.7707	0.550		*	
7440-62-2	Vanadium	51	1403140	558.19	497.86	12.1		*	
7440-47-3	Chromium	52	2004150	728.50	665.63	9.44		*	
7439-96-5	Manganese	55	10519000	3604.5	3400.9	5.99		*	
7440-48-4	Cobalt	59	361407	101.79	94.706	7.48		*	
7440-02-0	Nickel	60	492308	608.02	550.80	10.4		*	
7440-66-6	Zinc	66	100350	226.74	210.35	7.79	3.2	~~NC~~	☑
7440-38-2	Arsenic	75	6864	20.903	20.634	1.30		*	
7782-49-2	Selenium	78	694	5.3075	3.8692	37.2		*	
7439-98-7	Molybdenum	95	1117	1.0685	1.0187	4.89		*	
7440-22-4	Silver	107	1457	0.48268	0.50409	4.25		*	
7440-43-9	Cadmium	111	1945	3.4566	3.5317	2.13		*	
7440-31-5	Tin	118	1580	0.92176	0.73258	25.8		*	
7440-36-0	Antimony	121	160	0.06643	0.06213	6.92	0.14	NC	☑
7440-39-3	Barium	137	136122	208.64	213.94	2.47		*	
7440-28-0	Thallium	205	630	0.10413	0.09763	6.66		*	
7439-92-1	Lead	208	293274	43.577	45.348	3.91	0.18	3.9	☑
7440-61-1	Uranium	238	9711	1.5115	1.6298	7.26		*	
7440-56-4	Germanium	72			0			*	
7440-50-8	Copper	63	501276	245.62	218.45	12.4	0.71	E	☐
7440-47-3	Chromium	53	239423	739.00	707.28	4.49		*	
7440-74-6	Indium	115			0			*	
7440-60-0	Holmium	165			0			*	
7439-93-2	Lithium	6			0			*	

7.79 Z 8/1/08

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Z Date: 8/1/08

Post Digestion Spiked Sample (PDS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\023PDS.D\023PDS.D#
Date Acquired: Jul 31 2008 07:32 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1WZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 2206
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG073108A.B\021AREF.D\021AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt
9 Be	6	1	190.200	1.771	ug/l	1.71	200
51 V	72	1	659.900	497.900	ug/l	1.12	200
52 Cr	72	1	823.100	665.800	ug/l	1.63	200
55 Mn	72	1	3423.000	3401.000	ug/l	0.77	200
59 Co	72	1	269.900	94.700	ug/l	0.71	200
60 Ni	72	1	719.200	550.900	ug/l	0.30	200
63 Cu	72	1	377.900	218.400	ug/l	1.18	200
66 Zn	72	1	362.800	210.400	ug/l	0.34	200
75 As	72	1	193.600	20.640	ug/l	1.22	200
78 Se	72	1	166.000	3.869	ug/l	1.19	200
95 Mo	115	1	211.800	1.019	ug/l	0.63	200
107 Ag	115	1	178.800	0.504	ug/l	0.62	200
111 Cd	115	1	189.100	3.532	ug/l	1.14	200
118 Sn	115	1	200.900	0.733	ug/l	1.41	200
121 Sb	115	1	191.500	0.062	ug/l	1.01	200
137 Ba	115	1	408.300	214.000	ug/l	0.71	200
205 Tl	165	1	197.400	0.098	ug/l	0.64	200
208 Pb	165	1	238.800	45.340	ug/l	0.47	200
238 U	165	1	211.600	1.630	ug/l	0.43	200

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	232420	1.01	269919	86.1	30 - 120	
72 Ge	1	657767	0.60	743339	88.5	30 - 120	
115 In	1	1731758	0.43	2052432	84.4	30 - 120	
165 Ho	1	2884915	0.35	3454779	83.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 08/01/08 12:40:00

Department: 090 (Metals) | Source: Spreadsheet

Sample: **KRW1WZ** | Spike Dilution: **1.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG073108A # 23
Acquired: 07/31/2008 19:32:00
Calibrated: 07/31/2008 17:55:00

Channel 272
Method 6020_
ICPMS_024

Matrix: SOLID
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	86920	190.20	1.7707	94.2	200		☐
7440-62-2	Vanadium	51	7642670	659.90	497.86	81.0	200		☐
7440-47-3	Chromium	52	10419800	823.10	665.63	78.7	200	>	☐
7439-96-5	Manganese	55	46028700	3423.0	3400.9	11.0	200	*	☐
7440-48-4	Cobalt	59	4413980	269.90	94.706	87.6	200		☐
7440-02-0	Nickel	60	2682230	719.20	550.80	84.2	200		☐
7440-66-6	Zinc	66	734128	362.80	210.35	76.2 ✓	200		☐
7440-38-2	Arsenic	75	290854	193.60	20.634	86.5	200	>	☐
7782-49-2	Selenium	78	44439	166.00	3.8692	81.1	200		☐
7439-98-7	Molybdenum	95	901408	211.80	1.0187	105	200		☐
7440-22-4	Silver	107	2314390	178.80	0.50409	89.1	200		☐
7440-43-9	Cadmium	111	463773	189.10	3.5317	92.8	200		☐
7440-31-5	Tin	118	1265770	200.90	0.73258	100 ✓	200		☐
7440-36-0	Antimony	121	1394900	191.50	0.06213	95.7 ✓	200		☑
7440-39-3	Barium	137	1159560	408.30	213.94	97.2	200	>	☐
7440-28-0	Thallium	205	4174050	197.40	0.09763	98.7	200		☐
7439-92-1	Lead	208	6995590	238.80	45.348	96.7 ✓	200	>	☑
7440-61-1	Uranium	238	5897560	211.60	1.6298	105	200		☐
7440-56-4	Germanium	72			0				
7440-50-8	Copper	63	3547350	377.90	218.45	79.7 ✓	200		☐
7440-47-3	Chromium	53	1326340	889.70	707.28				
7440-74-6	Indium	115			0				
7440-60-0	Holmium	165			0				
7439-93-2	Lithium	6			0				

* : Unspiked sample result greater than 4 X spike amount

> : Analyte was found at concentration > 100 X MDL

Reviewed by: _____ Date: 8/1/08

Spiked Sample (MS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\024_MS.D\024_MS.D#
Date Acquired: Jul 31 2008 07:37 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1WS
Misc Info: MATRIX SPIKE
Vial Number: 2207
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: MS
Prep Dil. Factor: 256.90
Autodil Factor: Undiluted
Final Dil Factor: 256.90

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG073108A.B\021AREF.D\021AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)
9 Be	6	1	38.77	1.77	ug/l	2.48	40	92.8
51 V	72	1	559.80	497.90	ug/l	0.67	40	104.1
52 Cr	72	1	725.00	665.80	ug/l	1.48	40	102.7
55 Mn	72	1	3588.00	3401.00	ug/l	1.38	40	104.3
59 Co	72	1	135.00	94.70	ug/l	1.21	40	100.2
60 Ni	72	1	637.40	550.90	ug/l	0.43	40	107.9
63 Cu	72	1	268.00	218.40	ug/l	0.77	40	103.7
66 Zn	72	1	251.10	210.40	ug/l	1.01	40	100.3
75 As	72	1	49.45	20.64	ug/l	1.52	40	81.5
78 Se	72	1	25.04	3.87	ug/l	2.55	40	57.1
95 Mo	115	1	26.64	1.02	ug/l	1.24	40	64.9
107 Ag	115	1	33.40	0.50	ug/l	1.67	40	82.5
111 Cd	115	1	39.29	3.53	ug/l	1.33	40	90.3
118 Sn	115	1	0.83	0.73	ug/l	1.47	40	2.0
121 Sb	115	1	1.60	0.06	ug/l	3.85	40	4.0
137 Ba	115	1	270.60	214.00	ug/l	0.83	40	106.5
205 Tl	165	1	39.57	0.10	ug/l	0.62	40	98.7
208 Pb	165	1	85.04	45.34	ug/l	0.86	40	99.6
238 U	165	1	44.47	1.63	ug/l	0.44	40	106.8

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	229431	0.90	269919	85.0	30 - 120	
72 Ge	1	656903	0.47	743339	88.4	30 - 120	
115 In	1	1720778	0.22	2052432	83.8	30 - 120	
165 Ho	1	2834916	0.35	3454779	82.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\025 CCV.D\025 CCV.D#
Date Acquired: Jul 31 2008 07:42 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	48.540 ug/l	0.71	50	97.1	90 - 110	
51 V	72	1	51.950 ug/l	0.56	50	103.9	90 - 110	
52 Cr	72	1	50.980 ug/l	0.30	50	102.0	90 - 110	
55 Mn	72	1	50.430 ug/l	0.79	50	100.9	90 - 110	
59 Co	72	1	51.750 ug/l	1.01	50	103.5	90 - 110	
60 Ni	72	1	52.230 ug/l	1.52	50	104.5	90 - 110	
63 Cu	72	1	51.600 ug/l	0.58	50	103.2	90 - 110	
66 Zn	72	1	49.300 ug/l	0.65	50	98.6	90 - 110	
75 As	72	1	50.080 ug/l	2.30	50	100.2	90 - 110	
78 Se	72	1	49.770 ug/l	3.89	50	99.5	90 - 110	
95 Mo	115	1	50.700 ug/l	1.15	50	101.4	90 - 110	
107 Ag	115	1	49.990 ug/l	0.77	50	100.0	90 - 110	
111 Cd	115	1	49.410 ug/l	1.10	50	98.8	90 - 110	
118 Sn	115	1	49.780 ug/l	2.36	50	99.6	90 - 110	
121 Sb	115	1	49.580 ug/l	1.71	50	99.2	90 - 110	
137 Ba	115	1	50.350 ug/l	1.03	50	100.7	90 - 110	
205 Tl	165	1	50.350 ug/l	0.51	50	100.7	90 - 110	
208 Pb	165	1	49.180 ug/l	1.26	50	98.4	90 - 110	
238 U	165	1	51.230 ug/l	0.95	50	102.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272347	1.01	269919	100.9	30 - 120	
72 Ge	1	753257	0.42	743339	101.3	30 - 120	
115 In	1	2088330	0.61	2052432	101.7	30 - 120	
165 Ho	1	3480048	0.32	3454779	100.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\026 CCB.D\026 CCB.D#
Date Acquired: Jul 31 2008 07:46 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ug/l	0.00	1.00	
51 V	72	1	-0.013	ug/l	232.41	1.00	
52 Cr	72	1	-0.027	ug/l	28.05	1.00	
55 Mn	72	1	0.025	ug/l	26.53	1.00	
59 Co	72	1	0.001	ug/l	110.22	1.00	
60 Ni	72	1	-0.003	ug/l	453.31	1.00	
63 Cu	72	1	-0.018	ug/l	42.89	1.00	
66 Zn	72	1	0.033	ug/l	36.38	10.00	
75 As	72	1	0.010	ug/l	149.13	5.00	
78 Se	72	1	0.323	ug/l	44.21	5.00	
95 Mo	115	1	0.013	ug/l	31.63	1.00	
107 Ag	115	1	0.004	ug/l	9.37	1.00	
111 Cd	115	1	0.003	ug/l	63.09	1.00	
118 Sn	115	1	0.013	ug/l	57.24	10.00	
121 Sb	115	1	0.015	ug/l	38.79	1.00	
137 Ba	115	1	0.002	ug/l	448.20	1.00	
205 Tl	165	1	0.007	ug/l	20.91	1.00	
208 Pb	165	1	0.001	ug/l	78.36	1.00	
238 U	165	1	0.003	ug/l	5.09	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	277533	1.56	269919	102.8	30 - 120	
72 Ge	1	759616	0.46	743339	102.2	30 - 120	
115 In	1	2099202	1.38	2052432	102.3	30 - 120	
165 Ho	1	3466567	0.46	3454779	100.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\027 MSD.D\027 MSD.D#
Date Acquired: Jul 31 2008 07:51 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1WD
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2208
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: MSD
Dilution Factor: 256.90

Duplicate Ref File: D:\ICPCHEM\1\DATA\AG073108A.B\024 MS.D\024 MS.D#

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Ref Conc	Differ(%)
9 Be	6	1	35.02 ug/l	1.59	38.77	10.16
51 V	72	1	532.70 ug/l	2.39	559.80	4.96
52 Cr	72	1	689.40 ug/l	2.24	725.00	5.03
55 Mn	72	1	3430.00 ug/l	0.91	3588.00	4.50
59 Co	72	1	129.80 ug/l	1.11	135.00	3.93
60 Ni	72	1	604.60 ug/l	1.32	637.40	5.28
63 Cu	72	1	247.70 ug/l	1.46	268.00	7.87
66 Zn	72	1	236.00 ug/l	0.82	251.10	6.20
75 As	72	1	46.86 ug/l	2.05	49.45	5.38
78 Se	72	1	23.97 ug/l	3.43	25.04	4.37
95 Mo	115	1	24.78 ug/l	2.12	26.64	7.23
107 Ag	115	1	30.93 ug/l	1.49	33.40	7.68
111 Cd	115	1	35.98 ug/l	1.19	39.29	8.80
118 Sn	115	1	0.73 ug/l	4.58	0.83	13.81
121 Sb	115	1	1.36 ug/l	2.18	1.60	15.81
137 Ba	115	1	249.40 ug/l	1.65	270.60	8.15
205 Tl	165	1	36.99 ug/l	1.91	39.57	6.74
208 Pb	165	1	81.07 ug/l	1.05	85.04	4.78
238 U	165	1	41.26 ug/l	0.91	44.47	7.49

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	233845	0.95	269919	86.6	30 - 120	
72 Ge	1	660572	1.67	743339	88.9	30 - 120	
115 In	1	1750396	0.83	2052432	85.3	30 - 120	
165 Ho	1	2821104	0.18	3454779	81.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref. File D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\028SMPL.D\028SMPL.D#
Date Acquired: Jul 31 2008 07:56 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW1X
Misc Info: D8G210174
Vial Number: 2209
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 250.80
Autodil Factor: Undiluted
Final Dil Factor: 250.80

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	510.127	2.034	ug/l	1.34	3600	
51 V	72	1	131,720.160	525.200	ug/l	2.17	3600	
52 Cr	72	1	175,484.760	699.700	ug/l	1.09	3600	
55 Mn	72	1	906,391.200	3614.000	ug/l	0.85	18000	
59 Co	72	1	27,111.480	108.100	ug/l	1.90	3600	
60 Ni	72	1	141,476.280	564.100	ug/l	0.89	3600	
63 Cu	72	1	59,464.680	237.100	ug/l	0.62	3600	
66 Zn	72	1	63,176.520	251.900	ug/l	0.51	3600	
75 As	72	1	3,935.052	15.690	ug/l	2.10	3600	
78 Se	72	1	976.615	3.894	ug/l	5.43	3600	
95 Mo	115	1	248.668	0.992	ug/l	6.03	3600	
107 Ag	115	1	127.557	0.509	ug/l	3.83	3600	
111 Cd	115	1	936.236	3.733	ug/l	6.47	3600	
118 Sn	115	1	178.344	0.711	ug/l	4.50	3600	
121 Sb	115	1	14.697	0.059	ug/l	13.22	3600	
137 Ba	115	1	53,621.040	213.800	ug/l	0.98	3600	
205 Tl	165	1	25.832	0.103	ug/l	3.54	3600	
208 Pb	165	1	9,989.364	39.830	ug/l	0.19	3600	
238 U	165	1	392.000	1.563	ug/l	1.80	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	232772	0.49	269919	86.2	30 - 120	
72 Ge	1	659079	0.66	743339	88.7	30 - 120	
115 In	1	1735867	0.18	2052432	84.6	30 - 120	
165 Ho	1	2847509	1.26	3454779	82.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\029SMPL.D\029SMPL.D#
Date Acquired: Jul 31 2008 08:01 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW2R
Misc Info: D8G210174
Vial Number: 2210
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 250.00
Autodil Factor: Undiluted
Final Dil Factor: 250.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	492.750	1.971	ug/l	0.89	3600	
51 V	72	1	127,600.000	510.400	ug/l	1.13	3600	
52 Cr	72	1	171,225.000	684.900	ug/l	1.13	3600	
55 Mn	72	1	877,500.000	3510.000	ug/l	1.59	18000	
59 Co	72	1	27,225.000	108.900	ug/l	1.17	3600	
60 Ni	72	1	139,025.000	556.100	ug/l	1.54	3600	
63 Cu	72	1	57,950.000	231.800	ug/l	0.45	3600	
66 Zn	72	1	60,625.000	242.500	ug/l	0.96	3600	
75 As	72	1	3,902.500	15.610	ug/l	0.95	3600	
78 Se	72	1	922.750	3.691	ug/l	1.37	3600	
95 Mo	115	1	252.000	1.008	ug/l	7.92	3600	
107 Ag	115	1	127.900	0.512	ug/l	2.65	3600	
111 Cd	115	1	918.000	3.672	ug/l	3.01	3600	
118 Sn	115	1	177.350	0.709	ug/l	3.25	3600	
121 Sb	115	1	12.063	0.048	ug/l	28.02	3600	
137 Ba	115	1	53,075.000	212.300	ug/l	0.30	3600	
205 Tl	165	1	23.265	0.093	ug/l	14.13	3600	
208 Pb	165	1	10,577.500	42.310	ug/l	1.48	3600	
238 U	165	1	378.000	1.512	ug/l	2.83	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	232797	0.72	269919	86.2	30 - 120	
72 Ge	1	659151	1.69	743339	88.7	30 - 120	
115 In	1	1717525	0.76	2052432	83.7	30 - 120	
165 Ho	1	2864048	1.09	3454779	82.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\030SMPL.D\030SMPL.D#
Date Acquired: Jul 31 2008 08:06 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW2T
Misc Info: D8G210174
Vial Number: 2211
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 247.50
Autodil Factor: Undiluted
Final Dil Factor: 247.50

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	488.318	1.973	ug/l	5.00	3600	
51 V	72	1	128,551.500	519.400	ug/l	1.43	3600	
52 Cr	72	1	171,468.000	692.800	ug/l	0.91	3600	
55 Mn	72	1	898,177.500	3629.000	ug/l	0.64	18000	
59 Co	72	1	26,878.500	108.600	ug/l	1.11	3600	
60 Ni	72	1	137,684.250	556.300	ug/l	1.36	3600	
63 Cu	72	1	57,271.500	231.400	ug/l	1.11	3600	
66 Zn	72	1	63,087.750	254.900	ug/l	0.50	3600	
75 As	72	1	3,848.625	15.550	ug/l	0.96	3600	
78 Se	72	1	906.593	3.663	ug/l	1.86	3600	
95 Mo	115	1	230.101	0.930	ug/l	8.41	3600	
107 Ag	115	1	126.473	0.511	ug/l	1.07	3600	
111 Cd	115	1	921.690	3.724	ug/l	3.89	3600	
118 Sn	115	1	179.066	0.724	ug/l	6.31	3600	
121 Sb	115	1	12.835	0.052	ug/l	31.84	3600	
137 Ba	115	1	53,707.500	217.000	ug/l	1.49	3600	
205 Tl	165	1	25.344	0.102	ug/l	6.49	3600	
208 Pb	165	1	9,766.350	39.460	ug/l	0.59	3600	
238 U	165	1	384.615	1.554	ug/l	2.36	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	230558	0.84	269919	85.4	30 - 120	
72 Ge	1	656921	0.95	743339	88.4	30 - 120	
115 In	1	1718971	0.80	2052432	83.8	30 - 120	
165 Ho	1	2827494	1.28	3454779	81.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\031SMPL.D\031SMPL.D#
Date Acquired: Jul 31 2008 08:10 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW2W
Misc Info: D8G210174
Vial Number: 2212
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 250.00
Autodil Factor: Undiluted
Final Dil Factor: 250.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	114.275	0.457	ug/l	7.66	3600	
51 V	72	1	263,750.000	1055.000	ug/l	0.72	3600	
52 Cr	72	1	308,000.000	1232.000	ug/l	0.99	3600	
55 Mn	72	1	59,675.000	238.700	ug/l	1.44	18000	
59 Co	72	1	2,216.000	8.864	ug/l	1.07	3600	
60 Ni	72	1	46,700.000	186.800	ug/l	0.24	3600	
63 Cu	72	1	33,175.000	132.700	ug/l	0.20	3600	
66 Zn	72	1	17,177.500	68.710	ug/l	0.74	3600	
75 As	72	1	2,900.000	11.600	ug/l	3.23	3600	
78 Se	72	1	1,423.500	5.694	ug/l	2.69	3600	
95 Mo	115	1	774.250	3.097	ug/l	3.82	3600	
107 Ag	115	1	123.775	0.495	ug/l	2.71	3600	
111 Cd	115	1	802.750	3.211	ug/l	2.27	3600	
118 Sn	115	1	309.250	1.237	ug/l	1.52	3600	
121 Sb	115	1	9.123	0.036	ug/l	18.39	3600	
137 Ba	115	1	10,197.500	40.790	ug/l	2.35	3600	
205 Tl	165	1	21.533	0.086	ug/l	3.21	3600	
208 Pb	165	1	8,727.500	34.910	ug/l	0.61	3600	
238 U	165	1	913.000	3.652	ug/l	1.89	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	226123	0.91	269919	83.8	30 - 120	
72 Ge	1	690922	1.57	743339	92.9	30 - 120	
115 In	1	1723726	0.68	2052432	84.0	30 - 120	
165 Ho	1	2821252	1.08	3454779	81.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\032SMPL.D\032SMPL.D#
Date Acquired: Jul 31 2008 08:15 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW2X
Misc Info: D8G210174
Vial Number: 2301
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 250.30
Autodil Factor: Undiluted
Final Dil Factor: 250.30

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	109.431	0.437	ug/l	20.35	3600	
51 V	72	1	264,567.100	1057.000	ug/l	0.97	3600	
52 Cr	72	1	309,871.400	1238.000	ug/l	0.59	3600	
55 Mn	72	1	58,870.560	235.200	ug/l	1.07	18000	
59 Co	72	1	2,204.392	8.807	ug/l	0.52	3600	
60 Ni	72	1	46,030.170	183.900	ug/l	0.61	3600	
63 Cu	72	1	33,039.600	132.000	ug/l	1.56	3600	
66 Zn	72	1	17,060.448	68.160	ug/l	0.27	3600	
75 As	72	1	2,908.486	11.620	ug/l	1.95	3600	
78 Se	72	1	1,302.561	5.204	ug/l	2.36	3600	
95 Mo	115	1	788.445	3.150	ug/l	1.07	3600	
107 Ag	115	1	122.972	0.491	ug/l	3.49	3600	
111 Cd	115	1	832.498	3.326	ug/l	1.94	3600	
118 Sn	115	1	306.868	1.226	ug/l	0.50	3600	
121 Sb	115	1	13.128	0.052	ug/l	2.77	3600	
137 Ba	115	1	9,951.928	39.760	ug/l	1.07	3600	
205 Tl	165	1	21.986	0.088	ug/l	12.10	3600	
208 Pb	165	1	8,790.536	35.120	ug/l	0.55	3600	
238 U	165	1	920.854	3.679	ug/l	2.04	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	218292	1.42	269919	80.9	30 - 120	
72 Ge	1	672911	1.04	743339	90.5	30 - 120	
115 In	1	1687645	1.11	2052432	82.2	30 - 120	
165 Ho	1	2762557	0.86	3454779	80.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File:	D:\ICPCHEM\1\DATA\AG073108A.B\033SMPL.D\033SMPL.D#
Date Acquired:	Jul 31 2008 08:20 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	KRW20
Misc Info:	D8G210174
Vial Number:	2302
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Jul 31 2008 06:03 pm
Sample Type:	SA
Dilution Factor:	245.10
Autodil Factor:	Undiluted
Final Dil Factor:	245.10

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	75.466	0.308	ug/l	12.54	3600	
51 V	72	1	207,942.840	848.400	ug/l	1.27	3600	
52 Cr	72	1	243,041.160	991.600	ug/l	1.62	3600	
55 Mn	72	1	46,519.980	189.800	ug/l	0.54	18000	
59 Co	72	1	1,711.043	6.981	ug/l	1.44	3600	
60 Ni	72	1	35,907.150	146.500	ug/l	0.95	3600	
63 Cu	72	1	26,470.800	108.000	ug/l	1.12	3600	
66 Zn	72	1	13,524.618	55.180	ug/l	1.88	3600	
75 As	72	1	2,264.724	9.240	ug/l	2.33	3600	
78 Se	72	1	1,059.812	4.324	ug/l	4.91	3600	
95 Mo	115	1	648.535	2.646	ug/l	1.98	3600	
107 Ag	115	1	101.520	0.414	ug/l	6.15	3600	
111 Cd	115	1	651.476	2.658	ug/l	5.48	3600	
118 Sn	115	1	235.271	0.960	ug/l	4.26	3600	
121 Sb	115	1	8.581	0.035	ug/l	16.18	3600	
137 Ba	115	1	7,502.511	30.610	ug/l	1.16	3600	
205 Tl	165	1	15.954	0.065	ug/l	13.17	3600	
208 Pb	165	1	6,652.014	27.140	ug/l	0.60	3600	
238 U	165	1	686.280	2.800	ug/l	1.11	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	220129	0.79	269919	81.6	30 - 120	
72 Ge	1	662986	1.24	743339	89.2	30 - 120	
115 In	1	1709068	0.29	2052432	83.3	30 - 120	
165 Ho	1	2844005	0.73	3454779	82.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\034 CCV.D\034 CCV.D#
Date Acquired: Jul 31 2008 08:25 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.270 ug/l	1.47	50	98.5	90 - 110	
51 V	72	1	52.090 ug/l	1.24	50	104.2	90 - 110	
52 Cr	72	1	50.930 ug/l	0.35	50	101.9	90 - 110	
55 Mn	72	1	49.490 ug/l	0.87	50	99.0	90 - 110	
59 Co	72	1	51.080 ug/l	2.54	50	102.2	90 - 110	
60 Ni	72	1	52.470 ug/l	0.99	50	104.9	90 - 110	
63 Cu	72	1	52.380 ug/l	1.04	50	104.8	90 - 110	
66 Zn	72	1	48.440 ug/l	2.17	50	96.9	90 - 110	
75 As	72	1	51.510 ug/l	1.98	50	103.0	90 - 110	
78 Se	72	1	50.190 ug/l	3.77	50	100.4	90 - 110	
95 Mo	115	1	50.340 ug/l	0.91	50	100.7	90 - 110	
107 Ag	115	1	49.970 ug/l	0.17	50	99.9	90 - 110	
111 Cd	115	1	48.730 ug/l	0.88	50	97.5	90 - 110	
118 Sn	115	1	49.560 ug/l	0.24	50	99.1	90 - 110	
121 Sb	115	1	49.510 ug/l	0.18	50	99.0	90 - 110	
137 Ba	115	1	49.790 ug/l	0.86	50	99.6	90 - 110	
205 Tl	165	1	51.000 ug/l	2.35	50	102.0	90 - 110	
208 Pb	165	1	50.080 ug/l	1.57	50	100.2	90 - 110	
238 U	165	1	50.990 ug/l	2.20	50	102.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	248221	1.02	269919	92.0	30 - 120	
72 Ge	1	712238	0.31	743339	95.8	30 - 120	
115 In	1	2014026	0.42	2052432	98.1	30 - 120	
165 Ho	1	3276270	2.04	3454779	94.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\035 CCB.D\035 CCB.D#
Date Acquired: Jul 31 2008 08:30 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ug/l	99.70	1.00	
51 V	72	1	0.006	ug/l	130.09	1.00	
52 Cr	72	1	-0.041	ug/l	6.88	1.00	
55 Mn	72	1	0.009	ug/l	18.01	1.00	
59 Co	72	1	-0.001	ug/l	87.74	1.00	
60 Ni	72	1	0.001	ug/l	602.07	1.00	
63 Cu	72	1	-0.017	ug/l	48.57	1.00	
66 Zn	72	1	0.046	ug/l	50.81	10.00	
75 As	72	1	0.002	ug/l	711.21	5.00	
78 Se	72	1	0.459	ug/l	27.98	5.00	
95 Mo	115	1	0.014	ug/l	82.85	1.00	
107 Ag	115	1	0.002	ug/l	34.24	1.00	
111 Cd	115	1	0.001	ug/l	404.45	1.00	
118 Sn	115	1	0.006	ug/l	142.62	10.00	
121 Sb	115	1	0.009	ug/l	44.72	1.00	
137 Ba	115	1	0.003	ug/l	168.15	1.00	
205 Tl	165	1	0.005	ug/l	24.99	1.00	
208 Pb	165	1	0.002	ug/l	40.24	1.00	
238 U	165	1	0.003	ug/l	22.00	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	255508	0.47	269919	94.7	30 - 120	
72 Ge	1	721125	0.86	743339	97.0	30 - 120	
115 In	1	2036070	0.08	2052432	99.2	30 - 120	
165 Ho	1	3304994	0.57	3454779	95.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File:	D:\ICPCHEM\1\DATA\AG073108A.B\036SMPL.D\036SMPL.D#
Date Acquired:	Jul 31 2008 08:34 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	KRW25
Misc Info:	D8G210174
Vial Number:	2303
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Jul 31 2008 06:03 pm
Sample Type:	SA
Dilution Factor:	249.30
Autodil Factor:	Undiluted
Final Dil Factor:	249.30

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	223.099	0.895	ug/l	7.63	3600	
51 V	72	1	173,014.200	694.000	ug/l	2.24	3600	
52 Cr	72	1	210,359.340	843.800	ug/l	2.00	3600	
55 Mn	72	1	369,213.300	1481.000	ug/l	1.02	18000	
59 Co	72	1	8,782.839	35.230	ug/l	0.68	3600	
60 Ni	72	1	76,086.360	305.200	ug/l	1.21	3600	
63 Cu	72	1	45,098.370	180.900	ug/l	0.45	3600	
66 Zn	72	1	36,497.520	146.400	ug/l	0.50	3600	
75 As	72	1	4,412.610	17.700	ug/l	1.11	3600	
78 Se	72	1	1,636.904	6.566	ug/l	1.44	3600	
95 Mo	115	1	481.398	1.931	ug/l	5.86	3600	
107 Ag	115	1	118.418	0.475	ug/l	4.69	3600	
111 Cd	115	1	910.942	3.654	ug/l	3.06	3600	
118 Sn	115	1	226.165	0.907	ug/l	6.19	3600	
121 Sb	115	1	12.163	0.049	ug/l	9.52	3600	
137 Ba	115	1	17,261.532	69.240	ug/l	1.65	3600	
205 Tl	165	1	27.897	0.112	ug/l	4.14	3600	
208 Pb	165	1	6,985.386	28.020	ug/l	1.39	3600	
238 U	165	1	687.569	2.758	ug/l	2.92	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	219921	1.92	269919	81.5	30 - 120	
72 Ge	1	650008	1.63	743339	87.4	30 - 120	
115 In	1	1669270	0.74	2052432	81.3	30 - 120	
165 Ho	1	2743140	1.11	3454779	79.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\037SMPL.D\037SMPL.D#
Date Acquired: Jul 31 2008 08:39 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW26
Misc Info: D8G210174
Vial Number: 2304
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 249.50
Autodil Factor: Undiluted
Final Dil Factor: 249.50

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	179.066	0.718	ug/l	8.89	3600	
51 V	72	1	163,173.000	654.000	ug/l	1.18	3600	
52 Cr	72	1	192,988.250	773.500	ug/l	1.46	3600	
55 Mn	72	1	352,044.500	1411.000	ug/l	1.38	18000	
59 Co	72	1	9,473.515	37.970	ug/l	0.82	3600	
60 Ni	72	1	78,118.450	313.100	ug/l	1.45	3600	
63 Cu	72	1	61,476.800	246.400	ug/l	1.29	3600	
66 Zn	72	1	42,739.350	171.300	ug/l	1.27	3600	
75 As	72	1	4,772.935	19.130	ug/l	0.48	3600	
78 Se	72	1	1,727.039	6.922	ug/l	2.78	3600	
95 Mo	115	1	455.587	1.826	ug/l	3.94	3600	
107 Ag	115	1	106.362	0.426	ug/l	5.54	3600	
111 Cd	115	1	810.875	3.250	ug/l	0.86	3600	
118 Sn	115	1	195.558	0.784	ug/l	2.63	3600	
121 Sb	115	1	13.161	0.053	ug/l	20.42	3600	
137 Ba	115	1	20,506.405	82.190	ug/l	0.53	3600	
205 Tl	165	1	21.899	0.088	ug/l	2.94	3600	
208 Pb	165	1	6,791.390	27.220	ug/l	1.11	3600	
238 U	165	1	691.365	2.771	ug/l	1.60	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	221360	0.96	269919	82.0	30 - 120	
72 Ge	1	642649	1.33	743339	86.5	30 - 120	
115 In	1	1679052	0.69	2052432	81.8	30 - 120	
165 Ho	1	2712723	0.33	3454779	78.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\038SMPL.D\038SMPL.D#
Date Acquired: Jul 31 2008 08:44 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW27
Misc Info: D8G210174
Vial Number: 2305
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 252.80
Autodil Factor: Undiluted
Final Dil Factor: 252.80

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	235.357	0.931	ug/l	3.89	3600	
51 V	72	1	199,484.480	789.100	ug/l	2.09	3600	
52 Cr	72	1	235,609.600	932.000	ug/l	1.91	3600	
55 Mn	72	1	336,982.400	1333.000	ug/l	0.92	18000	
59 Co	72	1	9,775.776	38.670	ug/l	0.65	3600	
60 Ni	72	1	85,395.840	337.800	ug/l	1.01	3600	
63 Cu	72	1	50,104.960	198.200	ug/l	0.13	3600	
66 Zn	72	1	35,265.600	139.500	ug/l	0.61	3600	
75 As	72	1	5,109.088	20.210	ug/l	1.85	3600	
78 Se	72	1	1,621.712	6.415	ug/l	2.19	3600	
95 Mo	115	1	522.285	2.066	ug/l	5.49	3600	
107 Ag	115	1	130.116	0.515	ug/l	4.61	3600	
111 Cd	115	1	971.510	3.843	ug/l	4.11	3600	
118 Sn	115	1	224.436	0.888	ug/l	0.43	3600	
121 Sb	115	1	12.905	0.051	ug/l	32.38	3600	
137 Ba	115	1	16,151.392	63.890	ug/l	0.21	3600	
205 Tl	165	1	22.074	0.087	ug/l	8.31	3600	
208 Pb	165	1	6,395.840	25.300	ug/l	0.36	3600	
238 U	165	1	798.595	3.159	ug/l	1.57	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	214860	0.06	269919	79.6	30 - 120	
72 Ge	1	642087	1.54	743339	86.4	30 - 120	
115 In	1	1643791	0.86	2052432	80.1	30 - 120	
165 Ho	1	2675863	0.84	3454779	77.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\039SMPL.D\039SMPL.D#
Date Acquired: Jul 31 2008 08:49 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3C
Misc Info: D8G210174
Vial Number: 2306
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 248.00
Autodil Factor: Undiluted
Final Dil Factor: 248.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	220.894	0.891	ug/l	11.17	3600	
51 V	72	1	146,369.600	590.200	ug/l	0.87	3600	
52 Cr	72	1	190,116.800	766.600	ug/l	0.25	3600	
55 Mn	72	1	566,928.000	2286.000	ug/l	1.11	18000	
59 Co	72	1	9,327.280	37.610	ug/l	1.21	3600	
60 Ni	72	1	128,761.600	519.200	ug/l	1.56	3600	
63 Cu	72	1	50,145.600	202.200	ug/l	0.93	3600	
66 Zn	72	1	46,996.000	189.500	ug/l	0.85	3600	
75 As	72	1	8,945.360	36.070	ug/l	0.67	3600	
78 Se	72	1	1,267.032	5.109	ug/l	2.92	3600	
95 Mo	115	1	366.544	1.478	ug/l	0.96	3600	
107 Ag	115	1	171.219	0.690	ug/l	3.18	3600	
111 Cd	115	1	1,030.440	4.155	ug/l	4.69	3600	
118 Sn	115	1	329.592	1.329	ug/l	2.02	3600	
121 Sb	115	1	39.432	0.159	ug/l	15.38	3600	
137 Ba	115	1	20,291.360	81.820	ug/l	0.61	3600	
205 Tl	165	1	16.646	0.067	ug/l	1.66	3600	
208 Pb	165	1	13,235.760	53.370	ug/l	0.85	3600	
238 U	165	1	497.240	2.005	ug/l	1.38	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	219797	1.80	269919	81.4	30 - 120	
72 Ge	1	661675	1.34	743339	89.0	30 - 120	
115 In	1	1718648	1.67	2052432	83.7	30 - 120	
165 Ho	1	2801433	0.71	3454779	81.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\040SMPL.D\040SMPL.D#
Date Acquired: Jul 31 2008 08:54 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3D
Misc Info: D8G210174
Vial Number: 2307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 249.50
Autodil Factor: Undiluted
Final Dil Factor: 249.50

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	267.963	1.074	ug/l	13.63	3600	
51 V	72	1	158,058.250	633.500	ug/l	1.34	3600	
52 Cr	72	1	207,658.850	832.300	ug/l	1.64	3600	
55 Mn	72	1	642,213.000	2574.000	ug/l	0.95	18000	
59 Co	72	1	10,132.195	40.610	ug/l	0.45	3600	
60 Ni	72	1	140,742.950	564.100	ug/l	1.04	3600	
63 Cu	72	1	56,112.550	224.900	ug/l	1.70	3600	
66 Zn	72	1	53,068.650	212.700	ug/l	0.28	3600	
75 As	72	1	12,103.245	48.510	ug/l	0.46	3600	
78 Se	72	1	1,466.561	5.878	ug/l	2.67	3600	
95 Mo	115	1	429.639	1.722	ug/l	3.11	3600	
107 Ag	115	1	187.998	0.754	ug/l	3.23	3600	
111 Cd	115	1	1,164.666	4.668	ug/l	5.08	3600	
118 Sn	115	1	678.391	2.719	ug/l	1.88	3600	
121 Sb	115	1	44.586	0.179	ug/l	0.08	3600	
137 Ba	115	1	22,035.840	88.320	ug/l	1.22	3600	
205 Tl	165	1	18.114	0.073	ug/l	12.99	3600	
208 Pb	165	1	13,338.270	53.460	ug/l	0.18	3600	
238 U	165	1	537.922	2.156	ug/l	0.90	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	209530	1.25	269919	77.6	30 - 120	
72 Ge	1	639776	1.14	743339	86.1	30 - 120	
115 In	1	1640806	1.90	2052432	79.9	30 - 120	
165 Ho	1	2732534	0.73	3454779	79.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\041SMPL.D\041SMPL.D#
Date Acquired: Jul 31 2008 08:58 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3E
Misc Info: D8G210174
Vial Number: 2308
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Jul 31 2008 06:03 pm
Sample Type: SA
Dilution Factor: 245.60
Autodil Factor: Undiluted
Final Dil Factor: 245.60

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	265.002	1.079	ug/l	13.03	3600	
51 V	72	1	175,726.800	715.500	ug/l	1.02	3600	
52 Cr	72	1	223,692.480	910.800	ug/l	0.80	3600	
55 Mn	72	1	673,189.600	2741.000	ug/l	0.95	18000	
59 Co	72	1	10,634.480	43.300	ug/l	1.03	3600	
60 Ni	72	1	160,475.040	653.400	ug/l	1.46	3600	
63 Cu	72	1	139,181.520	566.700	ug/l	0.94	3600	
66 Zn	72	1	81,735.680	332.800	ug/l	0.78	3600	
75 As	72	1	17,275.504	70.340	ug/l	1.32	3600	
78 Se	72	1	1,636.187	6.662	ug/l	3.05	3600	
95 Mo	115	1	471.798	1.921	ug/l	3.46	3600	
107 Ag	115	1	210.651	0.858	ug/l	1.51	3600	
111 Cd	115	1	1,177.161	4.793	ug/l	3.74	3600	
118 Sn	115	1	434.221	1.768	ug/l	2.85	3600	
121 Sb	115	1	48.187	0.196	ug/l	2.55	3600	
137 Ba	115	1	25,935.360	105.600	ug/l	0.69	3600	
205 Tl	165	1	19.940	0.081	ug/l	5.62	3600	
208 Pb	165	1	16,489.584	67.140	ug/l	1.30	3600	
238 U	165	1	616.947	2.512	ug/l	3.39	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	201125	0.14	269919	74.5	30 - 120	
72 Ge	1	640965	1.70	743339	86.2	30 - 120	
115 In	1	1647913	0.76	2052432	80.3	30 - 120	
165 Ho	1	2729627	0.42	3454779	79.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\042 CCV.D\042 CCV.D#
Date Acquired: Jul 31 2008 09:03 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	48.200 ug/l	1.80	50	96.4	90 - 110	
51 V	72	1	51.560 ug/l	1.23	50	103.1	90 - 110	
52 Cr	72	1	50.500 ug/l	0.56	50	101.0	90 - 110	
55 Mn	72	1	49.430 ug/l	0.56	50	98.9	90 - 110	
59 Co	72	1	51.400 ug/l	0.96	50	102.8	90 - 110	
60 Ni	72	1	52.680 ug/l	1.22	50	105.4	90 - 110	
63 Cu	72	1	52.290 ug/l	0.42	50	104.6	90 - 110	
66 Zn	72	1	48.800 ug/l	0.61	50	97.6	90 - 110	
75 As	72	1	50.750 ug/l	0.11	50	101.5	90 - 110	
78 Se	72	1	49.200 ug/l	2.19	50	98.4	90 - 110	
95 Mo	115	1	50.310 ug/l	1.40	50	100.6	90 - 110	
107 Ag	115	1	50.080 ug/l	0.32	50	100.2	90 - 110	
111 Cd	115	1	48.650 ug/l	0.11	50	97.3	90 - 110	
118 Sn	115	1	49.700 ug/l	0.68	50	99.4	90 - 110	
121 Sb	115	1	49.010 ug/l	0.91	50	98.0	90 - 110	
137 Ba	115	1	50.890 ug/l	1.08	50	101.8	90 - 110	
205 Tl	165	1	50.440 ug/l	1.50	50	100.9	90 - 110	
208 Pb	165	1	49.090 ug/l	1.36	50	98.2	90 - 110	
238 U	165	1	50.380 ug/l	0.60	50	100.8	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	237106	0.20	269919	87.8	30 - 120	
72 Ge	1	688165	1.08	743339	92.6	30 - 120	
115 In	1	1954830	0.98	2052432	95.2	30 - 120	
165 Ho	1	3231344	0.64	3454779	93.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\043 CCB.D\043 CCB.D#
Date Acquired: Jul 31 2008 09:08 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ug/l	0.00	1.00	
51 V	72	1	0.004	ug/l	287.40	1.00	
52 Cr	72	1	-0.024	ug/l	87.71	1.00	
55 Mn	72	1	0.023	ug/l	24.91	1.00	
59 Co	72	1	0.001	ug/l	121.41	1.00	
60 Ni	72	1	0.002	ug/l	315.74	1.00	
63 Cu	72	1	-0.017	ug/l	13.20	1.00	
66 Zn	72	1	0.053	ug/l	96.21	10.00	
75 As	72	1	-0.004	ug/l	160.84	5.00	
78 Se	72	1	0.589	ug/l	24.44	5.00	
95 Mo	115	1	0.003	ug/l	186.25	1.00	
107 Ag	115	1	0.005	ug/l	20.75	1.00	
111 Cd	115	1	0.004	ug/l	51.06	1.00	
118 Sn	115	1	0.007	ug/l	65.63	10.00	
121 Sb	115	1	0.011	ug/l	31.83	1.00	
137 Ba	115	1	-0.001	ug/l	1444.90	1.00	
205 Tl	165	1	0.004	ug/l	47.13	1.00	
208 Pb	165	1	0.002	ug/l	131.73	1.00	
238 U	165	1	0.003	ug/l	52.36	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	242972	0.25	269919	90.0	30 - 120	
72 Ge	1	705460	0.68	743339	94.9	30 - 120	
115 In	1	1977755	1.44	2052432	96.4	30 - 120	
165 Ho	1	3255291	0.64	3454779	94.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\193 CCV.D\193 CCV.D#
Date Acquired: Aug 1 2008 09:12 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	47.730	ug/l	0.07	50	95.5	90 - 110	
51 V	72	1	53.620	ug/l	1.07	50	107.2	90 - 110	
52 Cr	72	1	51.590	ug/l	0.99	50	103.2	90 - 110	
55 Mn	72	1	50.300	ug/l	1.06	50	100.6	90 - 110	
59 Co	72	1	52.450	ug/l	0.70	50	104.9	90 - 110	
60 Ni	72	1	53.650	ug/l	1.65	50	107.3	90 - 110	
63 Cu	72	1	53.240	ug/l	0.44	50	106.5	90 - 110	
66 Zn	72	1	48.020	ug/l	1.91	50	96.0	90 - 110	
75 As	72	1	52.540	ug/l	1.13	50	105.1	90 - 110	
78 Se	72	1	51.020	ug/l	0.54	50	102.0	90 - 110	
95 Mo	115	1	50.420	ug/l	1.56	50	100.8	90 - 110	
107 Ag	115	1	49.820	ug/l	1.00	50	99.6	90 - 110	
111 Cd	115	1	48.820	ug/l	0.61	50	97.6	90 - 110	
118 Sn	115	1	49.780	ug/l	0.94	50	99.6	90 - 110	
121 Sb	115	1	49.700	ug/l	0.74	50	99.4	90 - 110	
137 Ba	115	1	52.240	ug/l	1.28	50	104.5	90 - 110	
205 Tl	165	1	51.500	ug/l	0.23	50	103.0	90 - 110	
208 Pb	165	1	49.710	ug/l	0.80	50	99.4	90 - 110	
238 U	165	1	50.680	ug/l	1.66	50	101.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	243955	0.70	269919	90.4	30 - 120	
72 Ge	1	667327	1.19	743339	89.8	30 - 120	
115 In	1	1923401	1.22	2052432	93.7	30 - 120	
165 Ho	1	3061679	0.19	3454779	88.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\194 CCB.D\194 CCB.D#
Date Acquired: Aug 1 2008 09:17 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Jul 31 2008 06:03 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.002	ug/l	173.25	1.00	
51 V	72	1	0.001	ug/l	749.07	1.00	
52 Cr	72	1	-0.048	ug/l	10.28	1.00	
55 Mn	72	1	0.016	ug/l	68.45	1.00	
59 Co	72	1	0.005	ug/l	47.06	1.00	
60 Ni	72	1	0.019	ug/l	55.94	1.00	
63 Cu	72	1	-0.049	ug/l	6.80	1.00	
66 Zn	72	1	0.081	ug/l	53.45	10.00	
75 As	72	1	0.021	ug/l	37.14	5.00	
78 Se	72	1	0.828	ug/l	8.52	5.00	
95 Mo	115	1	0.017	ug/l	94.89	1.00	
107 Ag	115	1	0.029	ug/l	10.41	1.00	
111 Cd	115	1	0.006	ug/l	10.14	1.00	
118 Sn	115	1	0.016	ug/l	13.04	10.00	
121 Sb	115	1	0.025	ug/l	16.94	1.00	
137 Ba	115	1	0.045	ug/l	45.21	1.00	
205 Tl	165	1	0.009	ug/l	32.46	1.00	
208 Pb	165	1	0.003	ug/l	38.24	1.00	
238 U	165	1	0.007	ug/l	32.42	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	239141	1.16	269919	88.6	30 - 120	
72 Ge	1	662810	0.55	743339	89.2	30 - 120	
115 In	1	1884910	1.18	2052432	91.8	30 - 120	
165 Ho	1	3005039	0.50	3454779	87.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: _____

Date: 8/1/08

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#
Date Acquired: Aug 1 2008 09:55 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 09:53 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	1	173.21
51	V	72	1	220	88.92
52	Cr	72	1	2940	8.26
55	Mn	72	1	610	19.87
59	Co	72	1	1513	12.21
60	Ni	72	1	117	25.03
63	Cu	72	1	533	24.80
66	Zn	72	1	760	3.63
75	As	72	1	52	19.33
78	Se	72	1	573	1.94
95	Mo	115	1	123	22.02
107	Ag	115	1	57	28.08
111	Cd	115	1	1	443.58
118	Sn	115	1	290	21.47
121	Sb	115	1	17	92.56
137	Ba	115	1	33	61.52
205	Tl	165	1	130	22.58
208	Pb	165	1	143	31.52
238	U	165	1	20	49.52

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	227164	0.82
72	Ge	1	661405	1.48
115	In	1	1920094	1.89
165	Ho	1	3091864	0.53

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\203ICAL.D\203ICAL.D#
Date Acquired: Aug 1 2008 10:00 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 09:58 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	42582	1.41
51	V	72	1	1198736	1.04
52	Cr	72	1	1295801	1.07
55	Mn	72	1	1337952	0.62
59	Co	72	1	1680969	1.16
60	Ni	72	1	392052	0.27
63	Cu	72	1	957296	1.76
66	Zn	72	1	196941	1.11
75	As	72	1	166823	0.96
78	Se	72	1	30259	1.51
95	Mo	115	1	466825	1.67
107	Ag	115	1	1419425	1.55
111	Cd	115	1	264693	2.23
118	Sn	115	1	683968	1.68
121	Sb	115	1	811378	1.44
137	Ba	115	1	327871	2.34
205	Tl	165	1	2285600	0.63
208	Pb	165	1	3128942	0.19
238	U	165	1	2985497	0.81

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	225042	0.47	227164	99.1	30 - 120	
72	Ge	1	668706	1.10	661405	101.1	30 - 120	
115	In	1	1933101	1.40	1920094	100.7	30 - 120	
165	Ho	1	3105193	0.10	3091864	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\204 CCV.D\204 CCV.D#
Date Acquired: Aug 1 2008 10:05 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 10:03 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.730	ug/l	0.67	50	99.5	90 - 110	
51 V	72	1	51.940	ug/l	0.92	50	103.9	90 - 110	
52 Cr	72	1	50.540	ug/l	0.25	50	101.1	90 - 110	
55 Mn	72	1	51.490	ug/l	1.38	50	103.0	90 - 110	
59 Co	72	1	51.530	ug/l	1.34	50	103.1	90 - 110	
60 Ni	72	1	51.510	ug/l	1.64	50	103.0	90 - 110	
63 Cu	72	1	52.920	ug/l	0.36	50	105.8	90 - 110	
66 Zn	72	1	51.180	ug/l	1.11	50	102.4	90 - 110	
75 As	72	1	48.640	ug/l	0.98	50	97.3	90 - 110	
78 Se	72	1	46.660	ug/l	1.46	50	93.3	90 - 110	
95 Mo	115	1	51.330	ug/l	0.25	50	102.7	90 - 110	
107 Ag	115	1	50.770	ug/l	1.85	50	101.5	90 - 110	
111 Cd	115	1	50.770	ug/l	1.10	50	101.5	90 - 110	
118 Sn	115	1	51.030	ug/l	1.13	50	102.1	90 - 110	
121 Sb	115	1	50.380	ug/l	1.15	50	100.8	90 - 110	
137 Ba	115	1	51.160	ug/l	1.14	50	102.3	90 - 110	
205 Tl	165	1	52.060	ug/l	0.90	50	104.1	90 - 110	
208 Pb	165	1	51.080	ug/l	1.42	50	102.2	90 - 110	
238 U	165	1	52.450	ug/l	0.53	50	104.9	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	224653	1.21	227164	98.9	30 - 120	
72 Ge	1	657567	1.04	661405	99.4	30 - 120	
115 In	1	1918561	0.65	1920094	99.9	30 - 120	
165 Ho	1	3067059	0.40	3091864	99.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\205 CCB.D\205 CCB.D#
Date Acquired: Aug 1 2008 10:10 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 10:03 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.008	ug/l	152.09	1.00	
51 V	72	1	-0.012	ug/l	103.88	1.00	
52 Cr	72	1	-0.040	ug/l	25.18	1.00	
55 Mn	72	1	0.003	ug/l	226.29	1.00	
59 Co	72	1	-0.081	ug/l	3.90	1.00	
60 Ni	72	1	0.053	ug/l	25.28	1.00	
63 Cu	72	1	-0.011	ug/l	63.96	1.00	
66 Zn	72	1	0.124	ug/l	58.16	10.00	
75 As	72	1	0.004	ug/l	321.45	5.00	
78 Se	72	1	0.101	ug/l	79.90	5.00	
95 Mo	115	1	0.022	ug/l	47.55	1.00	
107 Ag	115	1	0.004	ug/l	63.17	1.00	
111 Cd	115	1	0.002	ug/l	95.68	1.00	
118 Sn	115	1	0.027	ug/l	30.89	10.00	
121 Sb	115	1	0.028	ug/l	15.61	1.00	
137 Ba	115	1	0.043	ug/l	21.43	1.00	
205 Tl	165	1	0.012	ug/l	21.64	1.00	
208 Pb	165	1	0.005	ug/l	19.63	1.00	
238 U	165	1	0.008	ug/l	19.04	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	223086	0.25	227164	98.2	30 - 120	
72 Ge	1	647408	0.03	661405	97.9	30 - 120	
115 In	1	1907562	0.81	1920094	99.3	30 - 120	
165 Ho	1	3060440	1.04	3091864	99.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\206ICSA.D\206ICSA.D#
Date Acquired: Aug 1 2008 10:15 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 10:03 am
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	0.004 ug/l	141.23	10.00	
51	V	72	1	-0.157 ug/l	89.47	10.00	
52	Cr	72	1	0.988 ug/l	5.75	10.00	
55	Mn	72	1	1.910 ug/l	2.52	10.00	
59	Co	72	1	-0.032 ug/l	11.68	10.00	
60	Ni	72	1	4.626 ug/l	2.07	10.00	
63	Cu	72	1	0.389 ug/l	4.49	10.00	
66	Zn	72	1	3.743 ug/l	4.61	100.00	
75	As	72	1	0.250 ug/l	1.95	50.00	
78	Se	72	1	0.248 ug/l	46.73	50.00	
95	Mo	115	1	2008.000 ug/l	0.57	10.00	
107	Ag	115	1	0.009 ug/l	28.15	10.00	
111	Cd	115	1	0.323 ug/l	27.92	10.00	
118	Sn	115	1	0.056 ug/l	15.57	100.00	
121	Sb	115	1	0.230 ug/l	4.11	10.00	
137	Ba	115	1	1.655 ug/l	6.10	10.00	
205	Tl	165	1	0.034 ug/l	18.94	10.00	
208	Pb	165	1	0.110 ug/l	2.26	10.00	
238	U	165	1	0.004 ug/l	29.04	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	174682	0.99	227164	76.9	30 - 120	
72	Ge	1	528637	1.13	661405	79.9	30 - 120	
115	In	1	1512431	0.51	1920094	78.8	30 - 120	
165	Ho	1	2626458	0.48	3091864	84.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\207ICSB.D\207ICSB.D#
Date Acquired: Aug 1 2008 10:19 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 01 2008 10:03 am
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	96.670	1.07	100	96.7	80 - 120	
51 V	72	1	98.760	2.43	100	98.8	80 - 120	
52 Cr	72	1	97.130	1.12	100	97.1	80 - 120	
55 Mn	72	1	98.320	2.03	100	98.3	80 - 120	
59 Co	72	1	93.330	2.06	100	93.3	80 - 120	
60 Ni	72	1	93.890	1.51	100	93.9	80 - 120	
63 Cu	72	1	88.350	1.46	100	88.4	80 - 120	
66 Zn	72	1	95.020	1.92	100	95.0	80 - 120	
75 As	72	1	93.410	3.96	100	93.4	80 - 120	
78 Se	72	1	94.010	4.63	100	94.0	80 - 120	
95 Mo	115	1	2032.000	2.29	2100	96.8	80 - 120	
107 Ag	115	1	87.100	1.21	100	87.1	80 - 120	
111 Cd	115	1	94.610	0.36	100	94.6	80 - 120	
118 Sn	115	1	101.300	0.65	100	101.3	80 - 120	
121 Sb	115	1	102.100	0.95	100	102.1	80 - 120	
137 Ba	115	1	103.500	0.30	100	103.5	80 - 120	
205 Tl	165	1	94.580	0.66	100	94.6	80 - 120	
208 Pb	165	1	93.710	1.67	100	93.7	80 - 120	
238 U	165	1	103.300	2.35	100	103.3	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	173088	0.59	227164	76.2	30 - 120	
72 Ge	1	519852	1.41	661405	78.6	30 - 120	
115 In	1	1518992	0.82	1920094	79.1	30 - 120	
165 Ho	1	2660461	1.14	3091864	86.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\208WASH.D\208WASH.D#
Date Acquired: Aug 1 2008 10:24 am
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 10:03 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.014 ug/l	118.47	10.00	
51 V	72	1	0.006 ug/l	473.76	10.00	
52 Cr	72	1	-0.025 ug/l	72.72	10.00	
55 Mn	72	1	-0.001 ug/l	1228.30	10.00	
59 Co	72	1	-0.078 ug/l	3.84	10.00	
60 Ni	72	1	0.023 ug/l	48.35	10.00	
63 Cu	72	1	0.031 ug/l	16.02	10.00	
66 Zn	72	1	0.141 ug/l	33.79	100.00	
75 As	72	1	0.020 ug/l	19.41	50.00	
78 Se	72	1	0.171 ug/l	56.00	50.00	
95 Mo	115	1	0.611 ug/l	9.97	10.00	
107 Ag	115	1	0.008 ug/l	52.32	10.00	
111 Cd	115	1	0.003 ug/l	113.95	10.00	
118 Sn	115	1	-0.006 ug/l	10.48	100.00	
121 Sb	115	1	0.016 ug/l	8.80	10.00	
137 Ba	115	1	0.013 ug/l	26.93	10.00	
205 Tl	165	1	0.031 ug/l	9.19	10.00	
208 Pb	165	1	0.015 ug/l	11.85	10.00	
238 U	165	1	0.011 ug/l	11.14	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	209508	0.28	227164	92.2	30 - 120	
72 Ge	1	620433	0.50	661405	93.8	30 - 120	
115 In	1	1808624	1.01	1920094	94.2	30 - 120	
165 Ho	1	2961148	0.86	3091864	95.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\209 CCV.D\209 CCV.D#
Date Acquired: Aug 1 2008 10:29 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 10:03 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.950 ug/l	1.69	50	99.9	90 - 110	
51 V	72	1	50.790 ug/l	0.53	50	101.6	90 - 110	
52 Cr	72	1	50.230 ug/l	0.49	50	100.5	90 - 110	
55 Mn	72	1	50.510 ug/l	1.15	50	101.0	90 - 110	
59 Co	72	1	50.630 ug/l	0.38	50	101.3	90 - 110	
60 Ni	72	1	51.050 ug/l	0.43	50	102.1	90 - 110	
63 Cu	72	1	52.480 ug/l	0.38	50	105.0	90 - 110	
66 Zn	72	1	50.800 ug/l	1.60	50	101.6	90 - 110	
75 As	72	1	48.270 ug/l	1.18	50	96.5	90 - 110	
78 Se	72	1	46.420 ug/l	2.40	50	92.8	90 - 110	
95 Mo	115	1	50.900 ug/l	1.38	50	101.8	90 - 110	
107 Ag	115	1	50.340 ug/l	1.53	50	100.7	90 - 110	
111 Cd	115	1	50.440 ug/l	1.32	50	100.9	90 - 110	
118 Sn	115	1	51.680 ug/l	1.13	50	103.4	90 - 110	
121 Sb	115	1	50.320 ug/l	1.39	50	100.6	90 - 110	
137 Ba	115	1	50.920 ug/l	0.46	50	101.8	90 - 110	
205 Tl	165	1	52.050 ug/l	2.42	50	104.1	90 - 110	
208 Pb	165	1	50.840 ug/l	0.37	50	101.7	90 - 110	
238 U	165	1	52.550 ug/l	0.22	50	105.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	211925	1.22	227164	93.3	30 - 120	
72 Ge	1	634408	0.72	661405	95.9	30 - 120	
115 In	1	1863248	1.21	1920094	97.0	30 - 120	
165 Ho	1	3025568	0.85	3091864	97.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG073108A.B\210 CCB.D\210 CCB.D#
Date Acquired: Aug 1 2008 10:34 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 01 2008 10:03 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.008	ug/l	150.62	1.00	
51 V	72	1	-0.003	ug/l	440.44	1.00	
52 Cr	72	1	-0.025	ug/l	21.21	1.00	
55 Mn	72	1	0.008	ug/l	64.91	1.00	
59 Co	72	1	-0.080	ug/l	1.65	1.00	
60 Ni	72	1	0.041	ug/l	10.79	1.00	
63 Cu	72	1	0.009	ug/l	62.62	1.00	
66 Zn	72	1	0.143	ug/l	17.55	10.00	
75 As	72	1	0.014	ug/l	100.35	5.00	
78 Se	72	1	0.058	ug/l	341.72	5.00	
95 Mo	115	1	0.080	ug/l	11.53	1.00	
107 Ag	115	1	0.006	ug/l	40.47	1.00	
111 Cd	115	1	0.010	ug/l	27.21	1.00	
118 Sn	115	1	0.028	ug/l	58.28	10.00	
121 Sb	115	1	0.029	ug/l	1.79	1.00	
137 Ba	115	1	0.059	ug/l	21.17	1.00	
205 Tl	165	1	0.014	ug/l	4.57	1.00	
208 Pb	165	1	0.012	ug/l	27.25	1.00	
238 U	165	1	0.010	ug/l	27.02	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	216614	0.39	227164	95.4	30 - 120	
72 Ge	1	639331	0.73	661405	96.7	30 - 120	
115 In	1	1863966	0.67	1920094	97.1	30 - 120	
165 Ho	1	3032817	1.02	3091864	98.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG073108A.B\202CALB.D\202CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Batch(es) #: 8204480

Associated Samples: 12, 16

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 8/6/08

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D8G210174	12 S	ZN	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12	PB	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12	ZN	KRW241AF	20080805	6020_S	8204480	AG080508	024
D8G210174	12	SB	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12 S	CU	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12 D	CU	KRW241AJ	20080805	6020_S	8204480	AG080508	024
D8G210174	12	CU	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12 D	PB	KRW241AL	20080805	6020_S	8204480	AG080508	024
D8G210174	12 D	ZN	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12 S	SB	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12 D	SB	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	12 S	PB	KRW241A	20080805	6020_S	8204480	AG080508	024
D8G210174	16	SB	KRW281A	20080805	6020_S	8204480	AG080508	024
D8G210174	16	CU	KRW281A	20080805	6020_S	8204480	AG080508	024
D8G210174	16	PB	KRW281A	20080805	6020_S	8204480	AG080508	024
D8G210174	16	ZN	KRW281AF	20080805	6020_S	8204480	AG080508	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **8204480**

TestAmerica Laboratories, Inc.
Metals Prep Log/Batch Summary

Prepared By: JAY WILLMS

Prep Date: 08/05/08
Due Date: 08/08/08

Lot	Work Order			Initial Weight/Volume
D8G220000 Solid	**KR070**	B	Due Date: SDG:	1 g
D8G220000 Solid	**KR070**	C	Due Date: SDG:	1 g
D8G210174 Solid	**KRW24** Total		Due Date: 08/08/08 SDG:	0.99 g
D8G210174 Solid	**KRW24** Total	S	Due Date: 08/08/08 SDG:	0.99 g
D8G210174 Solid	**KRW24** Total	D	Due Date: 08/08/08 SDG:	0.99 g
D8G210174 Solid	**KRW28** Total		Due Date: 08/08/08 SDG:	1.01 g

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:

CU PB SB ZN

checked 8/5/08

METALS PREP SHEET
SOP: DEN-IP-0015

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

SOIL DIGESTION FOR ICP-MS (Prep code 46)

BATCH #	8204480	**ALLIQUOTTED BY:**	JKH
PREP DATE:	8/5/2008	**DIGESTED BY:**	JRW
BALANCE ID:	M28318		

CONSUMABLES USED

Digestion Cups: **50mL** **Manufacturer:** Environmental Express **Lot #:** A801LP001

100mL **Manufacturer:** Environmental Express **Lot #:** A801LP001

Filter Paper:

All samples and QC filtered? ☒ Yes ☐ No

Manufacturer: Ahlstrom **Size:** Grade 55

Lot #: 736184 Analyst(s) Initials: JRW

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
2008Cal-1	STD-3983-08	7/21/09	1000uL	11
2008Cal-2	STD-3984-08	7/21/09	1000uL	11

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	G17027	10
H_2O_2	JT Baker	E47H10	4

TEMPERATURE CYCLES

Thermometer ID: 3967 Block & Cup # : 9/34

Cycle	Start Time	Temperature (°C)	End Time	Temperature (°C)
1:1 HNO_3	900	92	910	92
HNO_3	915	92	1045	93
H_2O_2	1130	93	1330	93

Samples and QC revolumed to: 100 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: Jm Wilk ***Date:*** 8/5/08

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Calibration Standard	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50		--	40	40	200
Antimony	100	40	50	100,000 Aluminum	100	40	40	200
Arsenic	100	40	50	100,000 Calcium	100	40	40	200
Barium	100	40	50	100,000 Iron	100	40	40	200
Beryllium	100	40	50	100,000 Magnesium	100	40	40	200
Cadmium	100	40	50	100,000 Sodium	100	40	40	200
Chromium	100	40	50	100,000 Phosphorus	100	40	40	200
Cobalt	100	40	50	100,000 Potassium	100	40	40	200
Copper	100	40	50	100,000 Sulfur	100	40	40	200
Iron	5000	1000	2500	200,000 Carbon	--	1000	1000	5000
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	200
Thallium	100	40	50		100	40	40	200
Thorium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

QC Std.1 = Initial Calibration Verification (ICV)
QC Std.2 = Initial Calibration Blank (ICB)
QC Std.3 = Continuing Calibration Verification (CCV)
QC Std.4 = Continuing Calibration Blank (CCB)

TestAmerica Denver

Standards Preparation Logbook Record

Aug-06-2008

Logbook: \\Densvr06\StdsLog\metals.std

STD4871-07, 1000 Se

Analyst: TRUDELLL

Vendor: Inorganic Ventures Lot No.: Z-SE01120 Vendor's Expiration Date: 10-01-2008
Solvent: 2% HNO3
Date Prep./Opened: 10-02-2007 Date Received: 10-02-2007
Date Expires(1): 10-01-2008 (None)
Date Expires(2): 10-01-2008 (None)
Inventory ID: 667

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD0410-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: A2-ZN02040 Vendor's Expiration Date: 02-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 01-28-2008 Date Received: 01-28-2008
Date Expires(1): 02-01-2009 (None)
Date Expires(2): 02-01-2009 (None)
Inventory ID: 704

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD2251-08, 1000 mg/L Sn

Analyst: LILLT

Vendor: Inorganic Ventures Lot No.: B2-SN02014 Vendor's Expiration Date: 06-01-2009
Solvent: H2O tr. HNO3 tr.HF
Date Prep./Opened: 04-30-2008 Date Received: 04-23-2007
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Inventory ID: 610

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD2862-08, 1 mg/l Se

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G07057 Volume (ml): 100.00
Date Prep./Opened: 05-23-2008
Date Expires(1): 10-01-2008 (1 Year)
pipette: Met 21

Parent Std No.: STD4871-07, 1000 Se — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 10-01-2008 Parent Date Expires(2): 10-01-2008

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD4030-08, ICP-MS 1 ppm Sn Std — Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 01-23-2009 (6 Months)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn — Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

STD4031-08, ICP-MS 1 ppm Zn Std — Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 02-01-2009 (1 Year)
Date Expires(2): 02-01-2009 (None)
pipettes: Met 21 and Met 8

Parent Std No.: STD0410-08, 1000 Zn (Inorganic Ventures) — Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD4164-08, ICP-MS (024) INT STD — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 250.00
Date Prep./Opened: 07-30-2008
Date Expires(1): 11-16-2008 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1733-08, Lithium 6 Stock — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2009 Parent Date Expires(2): 05-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD2349-08, Indium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD5820-07, Germanium Stock — Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD5822-07, Holmium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD4203-08, ICP-MS ICSA — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 07-31-2008
Date Expires(1): 05-05-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
pipettes: Met 8

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard — Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

STD4277-08, ICP-MS BLANK — Analyst: LILLT

Solvent: Water Volume (ml): 1,000.0
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4276-08, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4278-08, ICP-MS 10 ppm Sn

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 04-30-2009 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	10.000

STD4279-08, ICP-MS CCV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3982-08, Iron Stock Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000

Tl	20.000	50.000
U	20.000	50.000
V	20.000	50.000
Zn	20.000	50.000

Parent Std No.: STD4278-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4280-08, ICP-MS 100 ppb cal

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Expires(2): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4278-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4281-08, ICPMS RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD4030-08, ICP-MS 1 ppm Sn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 01-23-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	1.0000	9.0000

Parent Std No.: STD4031-08, ICP-MS 1 ppm Zn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
1000 Zn	1.0000	9.0000

Parent Std No.: STD4280-08, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 08-06-2008 Parent Date Expires(2): 08-06-2008

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Mo	100.00	1.0000
Sb	100.00	1.0000
Ag	100.00	1.0000
Al	100.00	1.0000
As	100.00	1.0000
Ba	100.00	1.0000
Be	100.00	1.0000
Cd	100.00	1.0000
Co	100.00	1.0000
Cr	100.00	1.0000
Cu	100.00	1.0000
Mn	100.00	1.0000
Ni	100.00	1.0000
Pb	100.00	1.0000
Se	100.00	1.0000
Th	100.00	1.0000
Tl	100.00	1.0000
U	100.00	1.0000
V	100.00	1.0000
Zn	100.00	1.0000
Sn	100.00	1.0000

STD4282-08, ICP-MS AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 19

Parent Std No.: STD4281-08, ICPMS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Sn	9.0000	1.8000
1000 Zn	9.0000	1.8000
Mo	1.0000	0.2000
Sb	1.0000	0.2000
Ag	1.0000	0.2000
Al	1.0000	0.2000
As	1.0000	0.2000
Ba	1.0000	0.2000
Be	1.0000	0.2000
Cd	1.0000	0.2000
Co	1.0000	0.2000
Cr	1.0000	0.2000
Cu	1.0000	0.2000
Mn	1.0000	0.2000
Ni	1.0000	0.2000
Pb	1.0000	0.2000
Se	1.0000	0.2000
Th	1.0000	0.2000
Tl	1.0000	0.2000
U	1.0000	0.2000
V	1.0000	0.2000
Zn	1.0000	0.2000
Sn	1.0000	0.2000

STD4283-08, ICP-MS ICSAB

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 8, Met 20, and Met 21

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000

CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4278-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4284-08, ICPMS LR STD 1000 ppb

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD3983-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD3984-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 07-21-2009 Parent Date Expires(2): 08-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0
V	20.000	1,000.0
Zn	20.000	1,000.0

Parent Std No.: STD4278-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4285-08, ICPMS ICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 08-06-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD0845-08, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000

Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD0846-08, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4286-08, ALTSe Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 08-05-2008
Date Expires(1): 10-01-2008 (1 Year) ✓
pipettes: Met 21 and Met 8

Parent Std No.: STD2862-08, 1 mg/l Se Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0050

Reviewed By: 8/6/08

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/06/08 13:28:40

File ID: AG080508 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	08/05/08 16:46		☐
3	Cal Blank				1.0	08/05/08 16:50		☐
4	100 ppb				1.0	08/05/08 16:55		☐
5	ICV				1.0	08/05/08 17:00		☐
6	ICB				1.0	08/05/08 17:05		☐
7	RL STD				1.0	08/05/08 17:10		☐
8	ALTSe				1.0	08/05/08 17:14		☐
9	AFCEE RL				1.0	08/05/08 17:19		☐
10	ICSA				1.0	08/05/08 17:24		☐
11	ICSAB				1.0	08/05/08 17:29		☐
12	WASH				1.0	08/05/08 17:34		☐
13	LR				1.0	08/05/08 17:38		☐
14	WASH				1.0	08/05/08 17:43		☐
15	CCV				1.0	08/05/08 17:48		☐
16	CCB				1.0	08/05/08 17:53		☐
17	~~KR070B~~	~~D8G220000~~	~~8204480~~	~~46~~	~~1.0~~	~~08/05/08 17:58~~	V.T. 8/6/08 Did not use. See rerun.	☐
18	KR070C	D8G220000	8204480	46	1.0	08/05/08 18:02		☐
19	KRW24	D8G210174-12	8204480	46	1.0	08/05/08 18:07		☐
20	KRW24P5	D8G210174	8204480		5.0	08/05/08 18:12		☐
21	KRW24Z	D8G210174-12	8204480		1.0	08/05/08 18:17		☐
22	KRW24S	D8G210174-12	8204480	46	1.0	08/05/08 18:22		☐
23	KRW24D	D8G210174-12	8204480	46	1.0	08/05/08 18:26		☐
24	KRW28	D8G210174-16	8204480	46	1.0	08/05/08 18:31		☐
25	CCV				1.0	08/05/08 18:36		☐
26	CCB				1.0	08/05/08 18:41		☐
27	KTDR3B	D8G300000	8212281	46	1.0	08/05/08 18:46		☐
28	KTDR3C	D8G300000	8212281	46	1.0	08/05/08 18:50		☐
29	KR1JA	D8G230111-1	8212281	46	1.0	08/05/08 18:55		☐
30	KR1JF	D8G230111-2	8212281	46	1.0	08/05/08 19:00		☐
31	KR1JH	D8G230111-3	8212281	46	1.0	08/05/08 19:05		☐
32	KR1JJ	D8G230111-4	8212281	46	1.0	08/05/08 19:10		☐
33	KR1JK	D8G230111-5	8212281	46	1.0	08/05/08 19:14		☐
34	KR1JL	D8G230111-6	8212281	46	1.0	08/05/08 19:19		☐
35	KR1JM	D8G230111-7	8212281	46	1.0	08/05/08 19:24		☐
36	CCV				1.0	08/05/08 19:29		☐
37	CCB				1.0	08/05/08 19:34		☐
38	KR070B	D8G220000	8204480	46	1.0	08/05/08 19:39		☐
39	CCV				1.0	08/05/08 19:43		☐
40	CCB				1.0	08/05/08 19:48		☐
41	KR1JN	D8G230111-8	8212281	46	1.0	08/05/08 19:53		☐
42	KR1JP	D8G230111-9	8212281	46	1.0	08/05/08 19:58		☐
43	KR1JQ	D8G230111-10	8212281	46	1.0	08/05/08 20:03		☐
44	KR1JQP5	D8G230111	8212281		5.0	08/05/08 20:07		☐
45	KR1JQZ	D8G230111-10	8212281		1.0	08/05/08 20:12		☐
46	KR1JQS	D8G230111-10	8212281	46	1.0	08/05/08 20:17		☐
47	KR1JQD	D8G230111-10	8212281	46	1.0	08/05/08 20:22		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/06/08 13:28:40

File ID: **AG080508** **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	KR1JR	D8G230111-11	8212281	46	1.0	08/05/08 20:27		☐
49	CCV				1.0	08/05/08 20:31		☐
50	CCB				1.0	08/05/08 20:36		☐
51	ICSA				1.0	08/05/08 20:41		☐
52	ICSAB				1.0	08/05/08 20:46		☐
53	WASH				1.0	08/05/08 20:51		☐
54	CCV				1.0	08/05/08 20:56		☐
55	CCB				1.0	08/05/08 21:00		☐
56	KTCV5B	D8G290000	8211536	46	1.0	08/05/08 21:05		☐
57	KTCV5C	D8G290000	8211536	46	1.0	08/05/08 21:10		☐
58	KR5CC	D8G240298-1	8211536	46	1.0	08/05/08 21:15		☐
59	KR5CR	D8G240298-2	8211536	46	1.0	08/05/08 21:20		☐
60	KR5CT	D8G240298-3	8211536	46	1.0	08/05/08 21:24		☐
61	KR5CV	D8G240298-4	8211536	46	1.0	08/05/08 21:29		☐
62	KR5CX	D8G240298-5	8211536	46	1.0	08/05/08 21:34		☐
63	KR5C0	D8G240298-6	8211536	46	1.0	08/05/08 21:39		☐
64	CCV				1.0	08/05/08 21:44		☐
65	CCB				1.0	08/05/08 21:49		☐
66	KR5C1	D8G240298-7	8211536	46	1.0	08/05/08 21:53		☐
67	KR5C2	D8G240298-8	8211536	46	1.0	08/05/08 21:58		☐
68	KR5C2P5	D8G240298	8211536		5.0	08/05/08 22:03		☐
69	KR5C2Z	D8G240298-8	8211536		1.0	08/05/08 22:08		☐
70	KR5C2S	D8G240298-8	8211536	46	1.0	08/05/08 22:13		☐
71	KR5C2D	D8G240298-8	8211536	46	1.0	08/05/08 22:17		☐
72	KR5C3	D8G240298-9	8211536	46	1.0	08/05/08 22:22		☐
73	KR5C4	D8G240298-10	8211536	46	1.0	08/05/08 22:27		☐
74	CCV				1.0	08/05/08 22:32		☐
75	CCB				1.0	08/05/08 22:37		☐
76	ICSA				1.0	08/05/08 22:42		☐
77	ICSAB				1.0	08/05/08 22:46		☐
78	WASH				1.0	08/05/08 22:51		☐
79	CCV				1.0	08/05/08 22:56		☐
80	CCB				1.0	08/05/08 23:01		☐
81	KTCVHB	D8G290000	8211534	46	1.0	08/05/08 23:06		☐
82	KTCVHC	D8G290000	8211534	46	1.0	08/05/08 23:10		☐
83	KR085	D8G220306-1	8211534	46	1.0	08/05/08 23:15		☐
84	KR087	D8G220306-2	8211534	46	1.0	08/05/08 23:20		☐
85	KR088	D8G220306-3	8211534	46	1.0	08/05/08 23:25		☐
86	KR089	D8G220306-4	8211534	46	1.0	08/05/08 23:30		☐
87	KR09C	D8G220306-5	8211534	46	1.0	08/05/08 23:34		☐
88	KR09D	D8G220306-6	8211534	46	1.0	08/05/08 23:39		☐
89	KR09E	D8G220306-7	8211534	46	1.0	08/05/08 23:44		☐
90	KR09EP5	D8G220306	8211534		5.0	08/05/08 23:49		☐
91	CCV				1.0	08/05/08 23:54		☐
92	CCB				1.0	08/05/08 23:59		☐
93	KR09EZ	D8G220306-7	8211534		1.0	08/06/08 00:03		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/06/08 13:28:40

File ID: AG080508 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	KR09ES	D8G220306-7	8211534	46	1.0	08/06/08 00:08		☐
95	KR09ED	D8G220306-7	8211534	46	1.0	08/06/08 00:13		☐
96	KR09F	D8G220306-8	8211534	46	1.0	08/06/08 00:18		☐
97	KR09G	D8G220306-9	8211534	46	1.0	08/06/08 00:23		☐
98	KR09H	D8G220306-10	8211534	46	1.0	08/06/08 00:27		☐
99	KR09J	D8G220306-11	8211534	46	1.0	08/06/08 00:32		☐
100	KR067	D8G220301-1	8211534	46	1.0	08/06/08 00:37		☐
101	KR067S	D8G220301-1	8211534	46	1.0	08/06/08 00:42		☐
102	KR067D	D8G220301-1	8211534	46	1.0	08/06/08 00:47		☐
103	CCV				1.0	08/06/08 00:52		☐
104	CCB				1.0	08/06/08 00:56		☐
105	KTCT2B	D8G290000	8211525	46	1.0	08/06/08 01:01		☐
106	KTCT2C	D8G290000	8211525	46	1.0	08/06/08 01:06		☐
107	KR95J	D8G290108-2	8211525	46	1.0	08/06/08 01:11		☐
108	KR95R	D8G290108-3	8211525	46	1.0	08/06/08 01:16		☐
109	KR95X	D8G290108-4	8211525	46	1.0	08/06/08 01:21		☐
110	KR95XP5	D8G290108	8211525		5.0	08/06/08 01:25		☐
111	KR95XZ	D8G290108-4	8211525		1.0	08/06/08 01:30		☐
112	KR95XS	D8G290108-4	8211525	46	1.0	08/06/08 01:35		☐
113	CCV				1.0	08/06/08 01:40		☐
114	CCB				1.0	08/06/08 01:45		☐
115	KR95XD	D8G290108-4	8211525	46	1.0	08/06/08 01:50		☐
116	KR956	D8G290108-5	8211525	46	1.0	08/06/08 01:55		☐
117	KR96C	D8G290108-6	8211525	46	1.0	08/06/08 01:59		☐
118	KR96E	D8G290108-7	8211525	46	1.0	08/06/08 02:04		☐
119	KR96P	D8G290108-8	8211525	46	1.0	08/06/08 02:09		☐
120	KR96R	D8G290108-10	8211525	46	1.0	08/06/08 02:14		☐
121	KR96T	D8G290108-11	8211525	46	1.0	08/06/08 02:19		☐
122	KR961	D8G290108-12	8211525	46	1.0	08/06/08 02:24		☐
123	CCV				1.0	08/06/08 02:28		☐
124	CCB				1.0	08/06/08 02:33		☐
125	KR968	D8G290108-14	8211525	46	1.0	08/06/08 02:38		☐
126	KR97F	D8G290108-15	8211525	46	1.0	08/06/08 02:43		☐
127	KR97K	D8G290108-16	8211525	46	1.0	08/06/08 02:48		☐
128	KR97L	D8G290108-17	8211525	46	1.0	08/06/08 02:53		☐
129	KTATA	D8G290108-19	8211525	46	1.0	08/06/08 02:57		☐
130	KTATR	D8G290108-20	8211525	46	1.0	08/06/08 03:02		☐
131	KTATW	D8G290108-21	8211525	46	1.0	08/06/08 03:07		☐
132	KTAT0	D8G290108-22	8211525	46	1.0	08/06/08 03:12		☐
133	CCV				1.0	08/06/08 03:17		☐
134	CCB				1.0	08/06/08 03:22		☐
135	KR95X	D8G290108-4	8211525	46	1.0	08/06/08 03:26	For confirmation only. RA 8/6/08	☐
136	KR95XS	D8G290108-4	8211525	46	1.0	08/06/08 03:31		☐
137	KR95XD	D8G290108-4	8211525	46	1.0	08/06/08 03:36		☐
138	CCV				1.0	08/06/08 03:41		☐
139	CCB				1.0	08/06/08 03:46		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/06/08 13:28:40

File ID: AG080508 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	KTJ0CB	D8H020000	8215055	46	1.0	08/06/08 03:51		☐
141	KTJ0CC	D8H020000	8215055	46	1.0	08/06/08 03:56		☐
142	KTCWM	D8G290285-3	8215055	46	1.0	08/06/08 04:00		☐
143	KTCWN	D8G290285-4	8215055	46	1.0	08/06/08 04:05		☐
144	KTCWNP5	D8G290285	8215055		5.0	08/06/08 04:10		☐
145	KTCWNZ	D8G290285-4	8215055		1.0	08/06/08 04:15		☐
146	KTCWNS	D8G290285-4	8215055	46	1.0	08/06/08 04:20		☐
147	KTCWND	D8G290285-4	8215055	46	1.0	08/06/08 04:25		☐
148	KTCWQ	D8G290285-6	8215055	46	1.0	08/06/08 04:29		☐
149	CCV				1.0	08/06/08 04:34		☐
150	CCB				1.0	08/06/08 04:39		☐
151	KTCWT	D8G290285-8	8215055	46	1.0	08/06/08 04:44		☐
152	KTCWV	D8G290285-9	8215055	46	1.0	08/06/08 04:49		☐
153	KTCWX	D8G290285-11	8215055	46	1.0	08/06/08 04:54		☐
154	KTCW0	D8G290285-12	8215055	46	1.0	08/06/08 04:58		☐
155	KTCW1	D8G290285-13	8215055	46	1.0	08/06/08 05:03		☐
156	KTCW2	D8G290285-14	8215055	46	1.0	08/06/08 05:08		☐
157	KTCW3	D8G290285-15	8215055	46	1.0	08/06/08 05:13		☐
158	KTCW4	D8G290285-16	8215055	46	1.0	08/06/08 05:18		☐
159	CCV				1.0	08/06/08 05:23		☐
160	CCB				1.0	08/06/08 05:27		☐
161	KTCWN	D8G290285-4	8215055	46	1.0	08/06/08 05:32	For confirmation only. 8/6/08	☐
162	KTCWNS	D8G290285-4	8215055	46	1.0	08/06/08 05:37		☐
163	KTCWND	D8G290285-4	8215055	46	1.0	08/06/08 05:42		☐
164	CCV				1.0	08/06/08 05:47		☐
165	CCB				1.0	08/06/08 05:52		☐
166	KTH2WB	D8H010000	8214373	46	1.0	08/06/08 05:56		☐
167	KTH2WC	D8H010000	8214373	46	1.0	08/06/08 06:01		☐
168	KTER0	D8G300277-2	8214373	46	1.0	08/06/08 06:06		☐
169	KTER2	D8G300277-3	8214373	46	1.0	08/06/08 06:11		☐
170	KTER4	D8G300277-4	8214373	46	1.0	08/06/08 06:16		☐
171	KTER5	D8G300277-5	8214373	46	1.0	08/06/08 06:21		☐
172	KTER7	D8G300277-6	8214373	46	1.0	08/06/08 06:26		☐
173	KTER8	D8G300277-7	8214373	46	1.0	08/06/08 06:31		☐
174	KTER9	D8G300277-8	8214373	46	1.0	08/06/08 06:35		☐
175	KTETA	D8G300277-9	8214373	46	1.0	08/06/08 06:40		☐
176	CCV				1.0	08/06/08 06:45		☐
177	CCB				1.0	08/06/08 06:50		☐
178	KTETC	D8G300277-10	8214373	46	1.0	08/06/08 06:55		☐
179	KTETD	D8G300277-11	8214373	46	1.0	08/06/08 07:00		☐
180	KTETH	D8G300277-14	8214373	46	1.0	08/06/08 07:04		☐
181	KTETJ	D8G300277-15	8214373	46	1.0	08/06/08 07:09		☐
182	KTETL	D8G300277-17	8214373	46	1.0	08/06/08 07:14		☐
183	KTETLP5	D8G300277	8214373		5.0	08/06/08 07:19		☐
184	KTETLZ	D8G300277-17	8214373		1.0	08/06/08 07:24		☐
185	KTETLS	D8G300277-17	8214373	46	1.0	08/06/08 07:29		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 08/06/08 13:28:40

File ID: AG080508 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	KTETLD	D8G300277-17	8214373	46	1.0	08/06/08 07:34		☐
187	KTETM	D8G300277-18	8214373	46	1.0	08/06/08 07:38		☐
188	CCV				1.0	08/06/08 07:43		☐
189	CCB				1.0	08/06/08 07:48		☐
190	KTETL	D8G300277-17	8214373	46	1.0	08/06/08 07:53	For confirmation only. KT 8/6/08	☐
191	KTETLS	D8G300277-17	8214373	46	1.0	08/06/08 07:58		☐
192	KTETLD	D8G300277-17	8214373	46	1.0	08/06/08 08:03		☐
193	CCV				1.0	08/06/08 08:07		☐
194	CCB				1.0	08/06/08 08:12		☐
195	KTHN2B	D8H010000	8214307	MS	1.0	08/06/08 08:17		☐
196	~~KTHN2C~~	~~D8H010000~~	~~8214307~~	~~MS~~	~~1.0~~	~~08/06/08 08:22~~	KT 8/6/08 Did not use. See rerun.	☐
197	KR6C8 2X	D8G250169-1	8214307	MS	2.0	08/06/08 08:27		☐
198	KR6D3 5X	D8G250172-1	8214307	MS	5.0	08/06/08 08:31		☐
199	KR6EA 5X	D8G250174-1	8214307	MS	5.0	08/06/08 08:36		☐
200	KR6M6 2X	D8G250195-1	8214307	MS	2.0	08/06/08 08:41		☐
201	KR6M6P10	D8G250195	8214307		10.0	08/06/08 08:46		☐
202	CCV				1.0	08/06/08 08:51		☐
203	CCB				1.0	08/06/08 08:55		☐
204	KR6M6Z	D8G250195-1	8214307		1.0	08/06/08 09:00		☐
205	KR6M6S 2X	D8G250195-1	8214307	MS	2.0	08/06/08 09:05		☐
206	KR6M6D 2X	D8G250195-1	8214307	MS	2.0	08/06/08 09:10		☐
207	KR6ND 5X	D8G250195-2	8214307	MS	5.0	08/06/08 09:15		☐
208	KR9DH 20X	D8G280152-1	8214307	MS	20.0	08/06/08 09:20		☐
209	KR9DM 20X	D8G280152-2	8214307	MS	20.0	08/06/08 09:24		☐
210	CCV				1.0	08/06/08 09:29		☐
211	CCB				1.0	08/06/08 09:34		☐
212	~~RINSE~~				~~1.0~~	~~08/06/08 09:39~~		☐
213	RINSE				1.0	08/06/08 09:44		☐
214	RINSE				1.0	08/06/08 09:48		☐
215	RINSE				1.0	08/06/08 09:53		☐
216	~~Cal Blank~~				~~1.0~~	~~08/06/08 09:58~~	KT 8/6/08 Did not use.	☐
217	Cal Blank				1.0	08/06/08 10:03		☐
218	100 ppb				1.0	08/06/08 10:08		☐
219	CCV				1.0	08/06/08 10:12		☐
220	CCB				1.0	08/06/08 10:17		☐
221	ICSA				1.0	08/06/08 10:22		☐
222	ICSAB				1.0	08/06/08 10:27		☐
223	WASH				1.0	08/06/08 10:32		☐
224	CCV				1.0	08/06/08 10:36		☐
225	CCB				1.0	08/06/08 10:41		☐
226	KTH59B	D8H010000	8214392	46	1.0	08/06/08 10:46		☐
227	KTH59C	D8H010000	8214392	46	1.0	08/06/08 10:51		☐
228	KTGRJ	D8H010112-1	8214392	46	1.0	08/06/08 10:56		☐
229	KTGRJP5	D8H010112	8214392		5.0	08/06/08 11:01		☐
230	KTGRJZ	D8H010112-1	8214392		1.0	08/06/08 11:05		☐
231	KTGRJS	D8H010112-1	8214392	46	1.0	08/06/08 11:10		☐

Denver

RUN SUMMARY

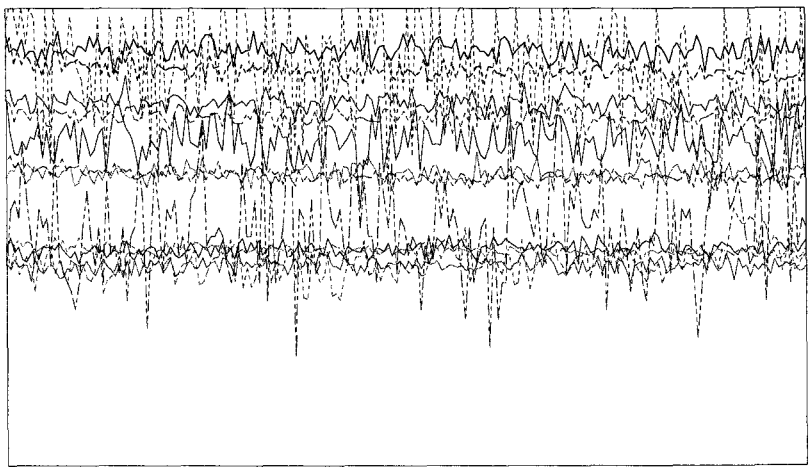
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 08/06/08 13:28:40

File ID: AG080508 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
232	CCV				1.0	08/06/08 11:15		☐
233	CCB				1.0	08/06/08 11:20		☐
234	KTGRJD	D8H010112-1	8214392	46	1.0	08/06/08 11:25		☐
235	KTGRL	D8H010112-2	8214392	46	1.0	08/06/08 11:30		☐
236	KTGRP	D8H010112-3	8214392	46	1.0	08/06/08 11:34		☐
237	KTGRQ	D8H010112-4	8214392	46	1.0	08/06/08 11:39		☐
238	KTGRV	D8H010112-5	8214392	46	1.0	08/06/08 11:44		☐
239	CCV				1.0	08/06/08 11:49		☐
240	CCB				1.0	08/06/08 11:54		☐
241	KTGRJ	D8H010112-1	8214392	46	1.0	08/06/08 11:59	For confirmation only. 8/6/08	☐
242	KTGRJS	D8H010112-1	8214392	46	1.0	08/06/08 12:03		☐
243	KTGRJD	D8H010112-1	8214392	46	1.0	08/06/08 12:08		☐
244	CCV				1.0	08/06/08 12:13		☐
245	CCB				1.0	08/06/08 12:18		☐
246	KTHN2C	D8H010000	8214307	MS	1.0	08/06/08 12:23		☐
247	CCV				1.0	08/06/08 12:28		☐
248	CCB				1.0	08/06/08 12:32		☐

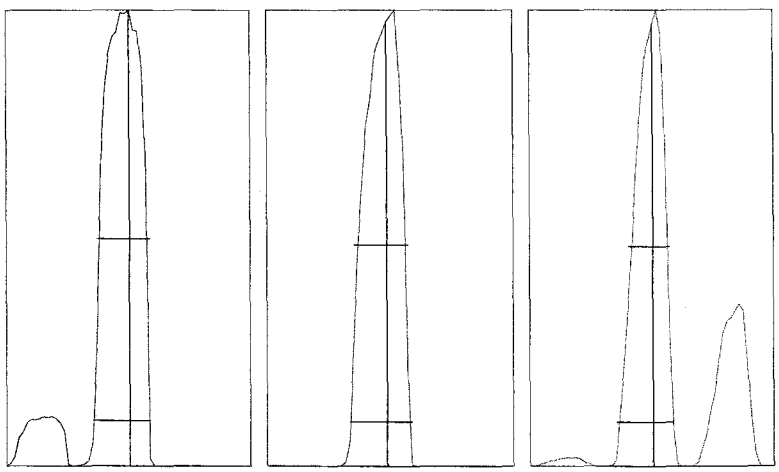
Tune Report

Tune File : norm.U
Comment :



Integration Time:	0.1000 sec	
Sampling Period:	1.5300 sec	
n:	200	
Oxide:	156/140	1.472%
Doubly Charged:	70/140	1.193%

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2464.0	2366.1	2.91	1.90
7	50,000	21854.0	21828.4	3.01	1.40
59	50,000	32931.0	31902.9	2.45	1.20
78	500	310.0	355.8	5.75	1.40
89	50,000	45796.0	45360.4	2.17	1.10
115	50,000	40294.0	39597.6	2.14	1.40
140	50,000	38966.0	38065.2	2.05	2.30
63	500	231.0	222.7	8.06	1.00
205	50,000	23958.0	23522.8	1.94	2.70
95	50	40.0	44.0	16.51	1.50
208	20,000	17772.0	17274.3	2.19	2.80
238	50,000	31801.0	31671.5	2.11	3.20
82	50	26.0	26.1	20.22	1.40
156/140	2	1.571%	1.462%	6.18	
70/140	2	1.242%	1.229%	6.33	



m/z:	7	89	205
Height:	22,285	45,448	24,290
Axis:	7.05	89.00	205.05
W-50%:	0.65	0.65	0.50
W-10%:	0.700	0.7500	0.700

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Aug 05, 2008 16:00:48
Printed : Aug 05, 2008 16:00:51

Tune Report

Tune File : norm.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1550 W	Extract 1	:	0 V	AMU Gain	:	133
RF Matching	:	1.8 V	Extract 2	:	-180 V	AMU Offset	:	123
Smpl Depth	:	8 mm	Omega Bias-ce	:	-26 V	Axis Gain	:	1.0008
Torch-H	:	-0.5 mm	Omega Lens-ce	:	1.4 V	Axis Offset	:	-0.02
Torch-V	:	0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-5 V
Carrier Gas	:	0.83 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.23 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1650 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1290 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	3.5 mL/min	Optional Gas	:	--- %

Generated : Aug 05, 2008 16:00:48
Printed : Aug 05, 2008 16:00:54

P/A Factor Tuning Report

Acquired:Aug 5 2008 04:15 pm

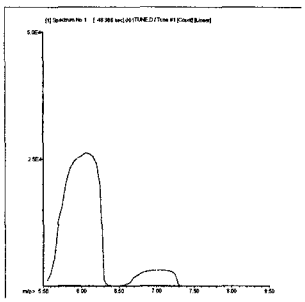
Mass[amu]	Element	P/A Factor
6	Li	0.060363
7	(Li)	Sensitivity too low
9	Be	0.068457
51	V	0.084773
52	Cr	0.087488
53	Cr	Sensitivity too low
55	Mn	0.089173
59	Co	0.092486
60	Ni	0.093834
63	Cu	0.096079
66	Zn	0.095735
72	Ge	0.094423
75	As	0.093521
78	Se	Sensitivity too low
95	Mo	0.094065
106	(Cd)	0.100213
107	Ag	Sensitivity too low
108	(Cd)	0.100897
111	Cd	0.101211
115	In	0.101118
118	Sn	0.100681
121	Sb	0.100483
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
205	Tl	0.110104
206	(Pb)	0.109405
207	(Pb)	0.109413
208	Pb	0.109657
238	U	0.108631

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1650 V
Pulse HV: 1290 V

200.8 QC Tune Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\001TUNE.D
Date Acquired: Aug 5 2008 04:37 pm
Acq. Method: HeTN2008.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: D:\ICPCHEM\1\METHODS\HeTN2008.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	16915	16877	16702	16747	17088	17157	1.62	5.00	
9 Be	3169	3146	3192	3129	3201	3177	2.03	5.00	
24 Mg	18954	19035	18816	19122	18909	18889	1.60	5.00	
59 Co	108354	107531	108823	108206	108254	108954	1.02	5.00	
115 In	1039722	1026804	1036735	1039993	1047921	1047158	0.98	5.00	
208 Pb	74765	74881	74394	74921	74496	75131	0.41	5.00	
238 U	127722	128440	127508	127682	127390	127588	1.07	5.00	

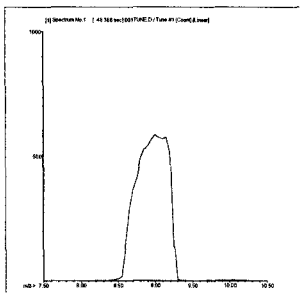


7 Li
Mass Calib.

Actual:	7.05		
Required:	6.90	-	7.10
Flag:			

Peak Width

Actual:	0.60		
Required	0.90		
Flag:			

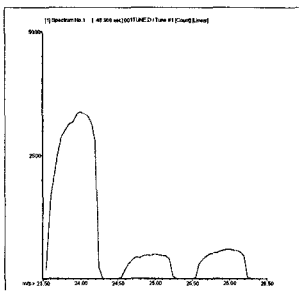


9 Be
Mass Calib.

Actual:	9.05		
Required:	8.90	-	9.10
Flag:			

Peak Width

Actual:	0.65		
Required:	0.90		
Flag:			

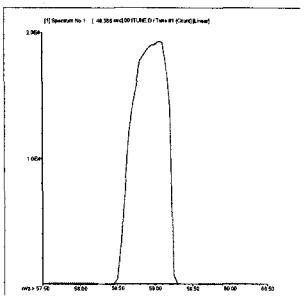


24 Mg
Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



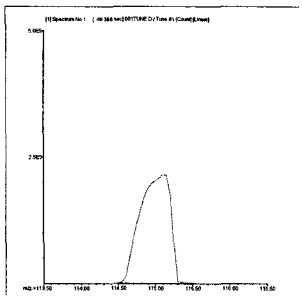
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



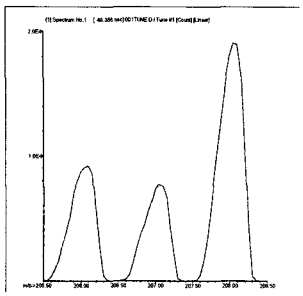
115 In

Mass Calib.

Actual:	115.05		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



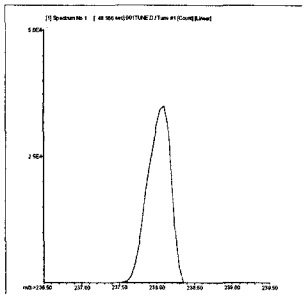
208 Pb

Mass Calib.

Actual:	208.05		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	238.05		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.50		
Required:	0.90		
Flag:			

Tune Result: **Pass**

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\002CALB.D\002CALB.D#
Date Acquired: Aug 5 2008 04:46 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:48 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	65	226.44
52	Cr	72	1	2907	2.86
55	Mn	72	1	553	2.76
59	Co	72	1	63	32.87
60	Ni	72	1	293	19.68
63	Cu	72	1	443	19.71
66	Zn	72	1	1647	3.06
75	As	72	1	38	36.74
78	Se	72	1	358	6.57
95	Mo	115	1	20	100.00
107	Ag	115	1	30	57.74
111	Cd	115	1	4	114.28
118	Sn	115	1	153	38.21
121	Sb	115	1	3	173.21
137	Ba	115	1	60	50.00
205	Tl	165	1	230	15.68
208	Pb	165	1	317	14.24
238	U	165	1	127	43.48

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	266146	0.81
72	Ge	1	717507	0.90
115	In	1	1896715	0.19
165	Ho	1	3212505	2.06

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#
Date Acquired: Aug 5 2008 04:50 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:48 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	2	86.60
51	V	72	1	145	91.80
52	Cr	72	1	2770	2.53
55	Mn	72	1	467	13.09
59	Co	72	1	73	41.66
60	Ni	72	1	160	10.83
63	Cu	72	1	360	16.90
66	Zn	72	1	1553	1.86
75	As	72	1	36	30.14
78	Se	72	1	353	5.10
95	Mo	115	1	47	24.74
107	Ag	115	1	13	114.56
111	Cd	115	1	0	2592.30
118	Sn	115	1	213	28.64
121	Sb	115	1	17	69.28
137	Ba	115	1	30	33.33
205	Tl	165	1	137	23.52
208	Pb	165	1	180	22.22
238	U	165	1	37	31.49

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	270788	1.38
72	Ge	1	724038	0.96
115	In	1	1928749	1.95
165	Ho	1	3216476	0.32

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\004ICAL.D\004ICAL.D#
Date Acquired: Aug 5 2008 04:55 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:53 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	54868	1.31
51	V	72	1	1331941	0.45
52	Cr	72	1	1479743	1.25
55	Mn	72	1	1514913	1.04
59	Co	72	1	1900119	1.20
60	Ni	72	1	441640	2.14
63	Cu	72	1	1075586	1.01
66	Zn	72	1	236074	1.11
75	As	72	1	164352	1.16
78	Se	72	1	27761	1.24
95	Mo	115	1	512084	0.74
107	Ag	115	1	1527491	0.79
111	Cd	115	1	287564	1.41
118	Sn	115	1	726005	1.31
121	Sb	115	1	852510	1.36
137	Ba	115	1	327827	1.28
205	Tl	165	1	2460501	0.36
208	Pb	165	1	3411807	1.12
238	U	165	1	3145773	1.18

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	270609	1.89	270788	99.9	30 - 120	
72	Ge	1	713777	1.47	724038	98.6	30 - 120	
115	In	1	1908624	0.47	1928749	99.0	30 - 120	
165	Ho	1	3218200	0.34	3216476	100.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Initial Calibration Verification (ICV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\005 ICV.D\005 ICV.D#
Date Acquired: Aug 5 2008 05:00 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	41.520 ug/l	1.24	40	103.8	90 - 110	
51 V	72	1	41.760 ug/l	0.81	40	104.4	90 - 110	
52 Cr	72	1	40.520 ug/l	1.10	40	101.3	90 - 110	
55 Mn	72	1	41.180 ug/l	2.14	40	103.0	90 - 110	
59 Co	72	1	40.400 ug/l	1.16	40	101.0	90 - 110	
60 Ni	72	1	40.990 ug/l	1.73	40	102.5	90 - 110	
63 Cu	72	1	40.860 ug/l	1.44	40	102.2	90 - 110	
66 Zn	72	1	38.790 ug/l	1.02	40	97.0	90 - 110	
75 As	72	1	40.440 ug/l	1.20	40	101.1	90 - 110	
78 Se	72	1	40.660 ug/l	1.66	40	101.7	90 - 110	
95 Mo	115	1	39.740 ug/l	2.52	40	99.4	90 - 110	
107 Ag	115	1	40.160 ug/l	1.44	40	100.4	90 - 110	
111 Cd	115	1	40.540 ug/l	1.14	40	101.4	90 - 110	
118 Sn	115	1	40.780 ug/l	1.48	40	102.0	90 - 110	
121 Sb	115	1	38.880 ug/l	1.24	40	97.2	90 - 110	
137 Ba	115	1	39.610 ug/l	1.95	40	99.0	90 - 110	
205 Tl	165	1	40.530 ug/l	0.59	40	101.3	90 - 110	
208 Pb	165	1	40.350 ug/l	0.75	40	100.9	90 - 110	
238 U	165	1	40.890 ug/l	1.87	40	102.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	267870	2.02	270788	98.9	30 - 120	
72 Ge	1	708119	1.24	724038	97.8	30 - 120	
115 In	1	1905653	1.57	1928749	98.8	30 - 120	
165 Ho	1	3247926	1.41	3216476	101.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\006 ICB.D\006 ICB.D#
Date Acquired: Aug 5 2008 05:05 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit
9 Be	6	1	-0.004	ug/l	0.00	1.00
51 V	72	1	0.015	ug/l	55.54	1.00
52 Cr	72	1	0.010	ug/l	78.28	1.00
55 Mn	72	1	0.012	ug/l	58.22	1.00
59 Co	72	1	0.001	ug/l	254.68	1.00
60 Ni	72	1	-0.002	ug/l	455.20	1.00
63 Cu	72	1	0.007	ug/l	52.78	1.00
66 Zn	72	1	0.191	ug/l	20.54	10.00
75 As	72	1	0.005	ug/l	115.35	5.00
78 Se	72	1	0.072	ug/l	29.90	5.00
95 Mo	115	1	0.011	ug/l	11.77	1.00
107 Ag	115	1	0.002	ug/l	35.08	1.00
111 Cd	115	1	0.001	ug/l	184.11	1.00
118 Sn	115	1	0.018	ug/l	7.01	10.00
121 Sb	115	1	0.065	ug/l	6.97	1.00
137 Ba	115	1	-0.001	ug/l	467.26	1.00
205 Tl	165	1	0.012	ug/l	10.67	1.00
208 Pb	165	1	0.003	ug/l	57.11	1.00
238 U	165	1	0.002	ug/l	22.52	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	270080	0.28	270788	99.7	30 - 120	
72 Ge	1	709687	0.38	724038	98.0	30 - 120	
115 In	1	1918423	1.83	1928749	99.5	30 - 120	
165 Ho	1	3183996	1.04	3216476	99.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\007RLST.D\007RLST.D#
Date Acquired: Aug 5 2008 05:10 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	1.059 ug/l	1.58	1	105.9
51 V	72	1	0.984 ug/l	3.32	1	98.4
52 Cr	72	1	1.020 ug/l	2.57	1	102.0
55 Mn	72	1	1.049 ug/l	0.49	1	104.9
59 Co	72	1	0.990 ug/l	0.28	1	99.0
60 Ni	72	1	1.043 ug/l	1.93	1	104.3
63 Cu	72	1	1.056 ug/l	0.75	1	105.6
66 Zn	72	1	9.954 ug/l	1.21	10	99.5
75 As	72	1	0.973 ug/l	4.25	1	97.3
78 Se	72	1	0.998 ug/l	13.38	1	99.8
95 Mo	115	1	0.958 ug/l	2.00	1	95.8
107 Ag	115	1	0.945 ug/l	0.95	1	94.5
111 Cd	115	1	0.957 ug/l	4.90	1	95.7
118 Sn	115	1	9.613 ug/l	2.02	10	96.1
121 Sb	115	1	0.972 ug/l	1.47	1	97.2
137 Ba	115	1	0.896 ug/l	3.37	1	89.6
205 Tl	165	1	1.034 ug/l	2.35	1	103.4
208 Pb	165	1	1.018 ug/l	2.50	1	101.8
238 U	165	1	1.060 ug/l	1.64	1	106.0

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	274155	0.18	270788	101.2	30 - 120	
72 Ge	1	711206	0.59	724038	98.2	30 - 120	
115 In	1	1941821	1.23	1928749	100.7	30 - 120	
165 Ho	1	3206877	1.04	3216476	99.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\008SMPL.D\008SMPL.D#
Date Acquired: Aug 5 2008 05:14 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ALTSe
Misc Info:
Vial Number: 2106
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	-0.004	-0.004	ug/l	0.00	3600	
51 V	72	1	0.005	0.005	ug/l	70.14	3600	
52 Cr	72	1	0.031	0.031	ug/l	4.77	3600	
55 Mn	72	1	0.071	0.071	ug/l	8.56	18000	
59 Co	72	1	0.000	0.000	ug/l	570.39	3600	
60 Ni	72	1	0.012	0.012	ug/l	102.05	3600	
63 Cu	72	1	0.147	0.147	ug/l	3.54	3600	
66 Zn	72	1	1.120	1.120	ug/l	3.26	3600	
75 As	72	1	0.003	0.003	ug/l	142.20	3600	
78 Se	72	1	5.006	5.006	ug/l	2.01	3600	
95 Mo	115	1	0.005	0.005	ug/l	76.26	3600	
107 Ag	115	1	0.002	0.002	ug/l	64.24	3600	
111 Cd	115	1	0.001	0.001	ug/l	483.86	3600	
118 Sn	115	1	0.020	0.020	ug/l	27.35	3600	
121 Sb	115	1	0.019	0.019	ug/l	35.93	3600	
137 Ba	115	1	0.042	0.042	ug/l	13.75	3600	
205 Tl	165	1	0.003	0.003	ug/l	12.44	3600	
208 Pb	165	1	0.042	0.042	ug/l	5.28	3600	
238 U	165	1	0.000	0.000	ug/l	388.30	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	277405	1.64	270788	102.4	30 - 120	
72 Ge	1	714036	1.33	724038	98.6	30 - 120	
115 In	1	1929303	1.09	1928749	100.0	30 - 120	
165 Ho	1	3242175	0.60	3216476	100.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\009AFCE.D\009AFCE.D#
Date Acquired: Aug 5 2008 05:19 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.200 ug/l	18.90	0	94.2	50 - 150	
51 V	72	1	0.200 ug/l	1.33	0	101.4	50 - 150	
52 Cr	72	1	0.208 ug/l	12.87	0	102.0	50 - 150	
55 Mn	72	1	0.224 ug/l	4.53	0	106.8	50 - 150	
59 Co	72	1	0.197 ug/l	2.73	0	99.4	50 - 150	
60 Ni	72	1	0.184 ug/l	2.97	0	88.2	50 - 150	
63 Cu	72	1	0.282 ug/l	5.86	0	133.3	50 - 150	
66 Zn	72	1	2.923 ug/l	4.13	2	146.8	50 - 150	
75 As	72	1	0.229 ug/l	6.43	0	117.5	50 - 150	
78 Se	72	1	0.278 ug/l	22.19	0	139.3	50 - 150	
95 Mo	115	1	0.183 ug/l	14.46	0	95.5	50 - 150	
107 Ag	115	1	0.201 ug/l	5.44	0	106.3	50 - 150	
111 Cd	115	1	0.205 ug/l	9.43	0	106.9	50 - 150	
118 Sn	115	1	1.894 ug/l	1.34	2	98.5	50 - 150	
121 Sb	115	1	0.204 ug/l	13.70	0	104.7	50 - 150	
137 Ba	115	1	0.203 ug/l	22.08	0	113.5	50 - 150	
205 Tl	165	1	0.199 ug/l	3.84	0	96.1	50 - 150	
208 Pb	165	1	0.212 ug/l	6.04	0	104.1	50 - 150	
238 U	165	1	0.223 ug/l	4.30	0	105.0	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	277072	0.23	270788	102.3	30 - 120	
72 Ge	1	714115	1.07	724038	98.6	30 - 120	
115 In	1	1921736	0.83	1928749	99.6	30 - 120	
165 Ho	1	3205808	1.00	3216476	99.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\010ICSA.D\010ICSA.D#
Date Acquired: Aug 5 2008 05:24 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	-0.004 ug/l	0.00	10.00	
51 V	72	1	-0.056 ug/l	57.55	10.00	
52 Cr	72	1	0.909 ug/l	4.45	10.00	
55 Mn	72	1	1.746 ug/l	0.24	10.00	
59 Co	72	1	0.033 ug/l	19.30	10.00	
60 Ni	72	1	4.157 ug/l	4.00	10.00	
63 Cu	72	1	0.311 ug/l	5.53	10.00	
66 Zn	72	1	3.108 ug/l	3.47	100.00	
75 As	72	1	0.153 ug/l	4.27	50.00	
78 Se	72	1	0.048 ug/l	103.21	50.00	
95 Mo	115	1	1877.000 ug/l	2.25	10.00	
107 Ag	115	1	0.009 ug/l	32.11	10.00	
111 Cd	115	1	0.231 ug/l	53.90	10.00	
118 Sn	115	1	0.456 ug/l	4.35	100.00	
121 Sb	115	1	0.232 ug/l	4.46	10.00	
137 Ba	115	1	1.676 ug/l	2.08	10.00	
205 Tl	165	1	0.025 ug/l	35.80	10.00	
208 Pb	165	1	0.086 ug/l	9.64	10.00	
238 U	165	1	0.003 ug/l	30.01	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	183454	3.04	270788	67.7	30 - 120	
72 Ge	1	555956	1.46	724038	76.8	30 - 120	
115 In	1	1541733	1.71	1928749	79.9	30 - 120	
165 Ho	1	2901171	0.96	3216476	90.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\011ICSB.D\011ICSB.D#
Date Acquired: Aug 5 2008 05:29 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	106.500	1.06	100	106.5	80 - 120	
51 V	72	1	93.640	1.94	100	93.6	80 - 120	
52 Cr	72	1	90.650	0.47	100	90.7	80 - 120	
55 Mn	72	1	94.050	0.93	100	94.1	80 - 120	
59 Co	72	1	87.590	2.08	100	87.6	80 - 120	
60 Ni	72	1	88.550	0.63	100	88.6	80 - 120	
63 Cu	72	1	84.280	0.94	100	84.3	80 - 120	
66 Zn	72	1	93.060	1.20	100	93.1	80 - 120	
75 As	72	1	97.180	0.87	100	97.2	80 - 120	
78 Se	72	1	102.300	1.10	100	102.3	80 - 120	
95 Mo	115	1	1918.000	0.69	2100	91.3	80 - 120	
107 Ag	115	1	83.230	1.80	100	83.2	80 - 120	
111 Cd	115	1	93.740	0.17	100	93.7	80 - 120	
118 Sn	115	1	99.400	0.75	100	99.4	80 - 120	
121 Sb	115	1	100.100	0.93	100	100.1	80 - 120	
137 Ba	115	1	101.500	0.39	100	101.5	80 - 120	
205 Tl	165	1	95.240	0.78	100	95.2	80 - 120	
208 Pb	165	1	93.730	0.10	100	93.7	80 - 120	
238 U	165	1	106.000	1.70	100	106.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	166066	1.78	270788	61.3	30 - 120	
72 Ge	1	527646	1.69	724038	72.9	30 - 120	
115 In	1	1525483	1.35	1928749	79.1	30 - 120	
165 Ho	1	2885124	0.41	3216476	89.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\012WASH.D\012WASH.D#
Date Acquired: Aug 5 2008 05:34 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	-0.004 ug/l	0.00	10.00	
51 V	72	1	-0.005 ug/l	413.66	10.00	
52 Cr	72	1	-0.002 ug/l	703.72	10.00	
55 Mn	72	1	0.007 ug/l	44.02	10.00	
59 Co	72	1	0.001 ug/l	187.84	10.00	
60 Ni	72	1	0.021 ug/l	32.38	10.00	
63 Cu	72	1	0.008 ug/l	59.91	10.00	
66 Zn	72	1	0.044 ug/l	129.23	100.00	
75 As	72	1	0.006 ug/l	61.90	50.00	
78 Se	72	1	0.041 ug/l	77.76	50.00	
95 Mo	115	1	0.243 ug/l	2.55	10.00	
107 Ag	115	1	0.006 ug/l	22.93	10.00	
111 Cd	115	1	0.001 ug/l	108.75	10.00	
118 Sn	115	1	-0.004 ug/l	235.55	100.00	
121 Sb	115	1	0.012 ug/l	19.26	10.00	
137 Ba	115	1	0.007 ug/l	105.75	10.00	
205 Tl	165	1	0.019 ug/l	7.00	10.00	
208 Pb	165	1	0.004 ug/l	14.42	10.00	
238 U	165	1	0.004 ug/l	29.45	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	248771	0.89	270788	91.9	30 - 120	
72 Ge	1	687965	0.57	724038	95.0	30 - 120	
115 In	1	1918506	0.56	1928749	99.5	30 - 120	
165 Ho	1	3353170	0.98	3216476	104.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\013 LR.D\013 LR.D#
Date Acquired: Aug 5 2008 05:38 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	1018.000 ug/l	0.30	1000	101.8
51 V	72	1	907.100 ug/l	0.84	1000	90.7
52 Cr	72	1	923.000 ug/l	0.97	1000	92.3
55 Mn	72	1	943.100 ug/l	1.66	1000	94.3
59 Co	72	1	909.900 ug/l	0.88	1000	91.0
60 Ni	72	1	923.200 ug/l	1.53	1000	92.3
63 Cu	72	1	907.100 ug/l	0.31	1000	90.7
66 Zn	72	1	938.000 ug/l	0.48	1000	93.8
75 As	72	1	970.800 ug/l	0.49	1000	97.1
78 Se	72	1	963.000 ug/l	0.09	1000	96.3
95 Mo	115	1	916.600 ug/l	0.23	1000	91.7
107 Ag	115	1	907.200 ug/l	0.90	1000	90.7
111 Cd	115	1	935.800 ug/l	0.99	1000	93.6
118 Sn	115	1	947.300 ug/l	0.34	1000	94.7
121 Sb	115	1	936.600 ug/l	0.94	1000	93.7
137 Ba	115	1	969.500 ug/l	0.62	1000	97.0
205 Tl	165	1	932.300 ug/l	0.93	1000	93.2
208 Pb	165	1	928.300 ug/l	0.74	1000	92.8
238 U	165	1	962.000 ug/l	1.68	1000	96.2

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	241133	0.51	270788	89.0	30 - 120	
72 Ge	1	680102	0.86	724038	93.9	30 - 120	
115 In	1	1896415	0.43	1928749	98.3	30 - 120	
165 Ho	1	3331151	0.56	3216476	103.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\014WASH.D\014WASH.D#
Date Acquired: Aug 5 2008 05:43 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.030 ug/l	34.36	10.00	
51 V	72	1	0.003 ug/l	640.41	10.00	
52 Cr	72	1	0.015 ug/l	133.51	10.00	
55 Mn	72	1	0.028 ug/l	23.49	10.00	
59 Co	72	1	0.026 ug/l	16.20	10.00	
60 Ni	72	1	0.030 ug/l	24.32	10.00	
63 Cu	72	1	0.032 ug/l	50.02	10.00	
66 Zn	72	1	0.077 ug/l	120.23	100.00	
75 As	72	1	0.043 ug/l	13.16	50.00	
78 Se	72	1	0.124 ug/l	35.22	50.00	
95 Mo	115	1	0.131 ug/l	15.02	10.00	
107 Ag	115	1	0.033 ug/l	8.52	10.00	
111 Cd	115	1	0.015 ug/l	19.44	10.00	
118 Sn	115	1	0.199 ug/l	10.41	100.00	
121 Sb	115	1	0.124 ug/l	2.82	10.00	
137 Ba	115	1	0.029 ug/l	22.04	10.00	
205 Tl	165	1	0.039 ug/l	7.73	10.00	
208 Pb	165	1	0.028 ug/l	7.13	10.00	
238 U	165	1	0.036 ug/l	10.36	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	259631	1.92	270788	95.9	30 - 120	
72 Ge	1	703030	0.81	724038	97.1	30 - 120	
115 In	1	1917623	0.58	1928749	99.4	30 - 120	
165 Ho	1	3305619	0.43	3216476	102.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\015 CCV.D\015 CCV.D#
Date Acquired: Aug 5 2008 05:48 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.890 ug/l	1.99	50	101.8	90 - 110	
51 V	72	1	51.930 ug/l	1.24	50	103.9	90 - 110	
52 Cr	72	1	50.720 ug/l	0.82	50	101.4	90 - 110	
55 Mn	72	1	51.680 ug/l	0.33	50	103.4	90 - 110	
59 Co	72	1	50.560 ug/l	2.19	50	101.1	90 - 110	
60 Ni	72	1	50.730 ug/l	0.90	50	101.5	90 - 110	
63 Cu	72	1	50.560 ug/l	0.70	50	101.1	90 - 110	
66 Zn	72	1	49.080 ug/l	0.50	50	98.2	90 - 110	
75 As	72	1	49.960 ug/l	0.51	50	99.9	90 - 110	
78 Se	72	1	50.170 ug/l	0.65	50	100.3	90 - 110	
95 Mo	115	1	48.860 ug/l	0.65	50	97.7	90 - 110	
107 Ag	115	1	49.490 ug/l	1.38	50	99.0	90 - 110	
111 Cd	115	1	48.780 ug/l	1.72	50	97.6	90 - 110	
118 Sn	115	1	49.700 ug/l	1.87	50	99.4	90 - 110	
121 Sb	115	1	49.250 ug/l	1.19	50	98.5	90 - 110	
137 Ba	115	1	49.780 ug/l	1.65	50	99.6	90 - 110	
205 Tl	165	1	51.980 ug/l	0.60	50	104.0	90 - 110	
208 Pb	165	1	50.920 ug/l	0.44	50	101.8	90 - 110	
238 U	165	1	53.330 ug/l	2.08	50	106.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	262755	0.34	270788	97.0	30 - 120	
72 Ge	1	701624	0.23	724038	96.9	30 - 120	
115 In	1	1944570	0.43	1928749	100.8	30 - 120	
165 Ho	1	3227996	0.54	3216476	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\016 CCB.D\016 CCB.D#
Date Acquired: Aug 5 2008 05:53 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.002	ug/l	178.33	1.00	
51 V	72	1	-0.019	ug/l	84.60	1.00	
52 Cr	72	1	-0.008	ug/l	111.82	1.00	
55 Mn	72	1	0.012	ug/l	57.13	1.00	
59 Co	72	1	0.004	ug/l	54.48	1.00	
60 Ni	72	1	-0.003	ug/l	381.13	1.00	
63 Cu	72	1	0.007	ug/l	208.40	1.00	
66 Zn	72	1	0.342	ug/l	7.01	10.00	
75 As	72	1	0.014	ug/l	44.26	5.00	
78 Se	72	1	0.094	ug/l	69.60	5.00	
95 Mo	115	1	0.027	ug/l	32.72	1.00	
107 Ag	115	1	0.005	ug/l	46.94	1.00	
111 Cd	115	1	0.001	ug/l	156.42	1.00	
118 Sn	115	1	0.039	ug/l	22.33	10.00	
121 Sb	115	1	0.026	ug/l	22.02	1.00	
137 Ba	115	1	-0.003	ug/l	174.84	1.00	
205 Tl	165	1	0.007	ug/l	19.83	1.00	
208 Pb	165	1	0.002	ug/l	90.55	1.00	
238 U	165	1	0.003	ug/l	5.58	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	267995	1.27	270788	99.0	30 - 120	
72 Ge	1	716617	0.71	724038	99.0	30 - 120	
115 In	1	1927451	0.59	1928749	99.9	30 - 120	
165 Ho	1	3245172	0.57	3216476	100.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\017 BLK.D\017 BLK.D#
Date Acquired: Aug 5 2008 05:58 pm
Operator: TEL
Sample Name: KR070B
Misc Info: BLANK 8204480 6020
Vial Number: 2302
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: BLK
Total Dil Factor: 500.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit
9 Be	6	1	-0.004 ug/l	0.00	1.00
51 V	72	1	-0.008 ug/l	141.21	1.00
52 Cr	72	1	0.056 ug/l	51.13	1.00
55 Mn	72	1	0.049 ug/l	36.43	1.00
59 Co	72	1	0.003 ug/l	34.72	1.00
60 Ni	72	1	0.020 ug/l	38.59	1.00
63 Cu	72	1	0.088 ug/l	1.03	1.00
66 Zn	72	1	4.024 ug/l	3.55	10.00
75 As	72	1	0.002 ug/l	58.48	5.00
78 Se	72	1	0.101 ug/l	29.67	5.00
95 Mo	115	1	0.017 ug/l	26.93	1.00
107 Ag	115	1	0.026 ug/l	22.21	1.00
111 Cd	115	1	0.009 ug/l	39.70	1.00
118 Sn	115	1	0.306 ug/l	3.97	10.00
121 Sb	115	1	0.018 ug/l	24.95	1.00
137 Ba	115	1	0.052 ug/l	9.59	1.00
205 Tl	165	1	0.012 ug/l	20.55	1.00
208 Pb	165	1	0.013 ug/l	5.15	1.00
238 U	165	1	0.003 ug/l	37.13	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	279943	0.67	270788	103.4	30 - 120	
72 Ge	1	725326	1.47	724038	100.2	30 - 120	
115 In	1	1931151	1.39	1928749	100.1	30 - 120	
165 Ho	1	3297479	1.33	3216476	102.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

8/6/08
Did not use.

Laboratory Control Spike (LCS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\018 LCS.D\018 LCS.D#
Date Acquired: Aug 5 2008 06:02 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KR070C
Misc Info: LCS
Vial Number: 2303
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: LCS
Prep Dil. Factor: 500.00
Autodil Factor: Undiluted
Final Dil Factor: 500.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)
9 Be	6	1	36.49	1.70	40	91.2
51 V	72	1	39.06	1.07	40	97.7
52 Cr	72	1	38.24	1.10	40	95.6
55 Mn	72	1	38.46	1.71	40	96.2
59 Co	72	1	37.90	0.90	40	94.8
60 Ni	72	1	38.13	0.54	40	95.3
63 Cu	72	1	37.94	1.82	40	94.9
66 Zn	72	1	40.89	0.18	40	102.2
75 As	72	1	35.37	0.42	40	88.4
78 Se	72	1	35.23	1.09	40	88.1
95 Mo	115	1	36.96	1.55	40	92.4
107 Ag	115	1	41.52	2.84	40	103.8
111 Cd	115	1	36.14	1.93	40	90.4
118 Sn	115	1	0.34	15.30	40	0.8
121 Sb	115	1	36.21	0.75	40	90.5
137 Ba	115	1	36.96	3.12	40	92.4
205 Tl	165	1	37.76	1.11	40	94.4
208 Pb	165	1	37.02	1.40	40	92.6
238 U	165	1	38.01	1.49	40	95.0

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	278420	1.19	270788	102.8	30 - 120	
72 Ge	1	720039	1.06	724038	99.4	30 - 120	
115 In	1	1942722	0.97	1928749	100.7	30 - 120	
165 Ho	1	3279266	0.46	3216476	102.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

All Reference Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\019AREF.D\019AREF.D#
Date Acquired: Aug 5 2008 06:07 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW24
Misc Info: D8G210174
Vial Number: 2304
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: AllRef
Dilution Factor: 505.10
Autodil Factor: Undiluted
Final Dil Factor: 505.10

Data Results:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	379.886	0.752	ug/l	12.61	3600.00	
51 V	72	1	82,684.870	163.700	ug/l	2.08	3600.00	
52 Cr	72	1	78,997.640	156.400	ug/l	1.85	3600.00	
55 Mn	72	1	###########	723.100	ug/l	1.13	18000.00	
59 Co	72	1	15,627.794	30.940	ug/l	0.51	3600.00	
60 Ni	72	1	61,319.140	121.400	ug/l	0.39	3600.00	
63 Cu	72	1	39,503.871	78.210	ug/l	0.33	3600.00	
66 Zn	72	1	36,902.606	73.060	ug/l	0.79	3600.00	
75 As	72	1	397.413	0.787	ug/l	2.28	3600.00	
78 Se	72	1	776.844	1.538	ug/l	10.29	3600.00	
95 Mo	115	1	141.276	0.280	ug/l	9.62	3600.00	
107 Ag	115	1	68.593	0.136	ug/l	2.08	3600.00	
111 Cd	115	1	455.146	0.901	ug/l	4.04	3600.00	
118 Sn	115	1	274.017	0.543	ug/l	4.08	3600.00	
121 Sb	115	1	12.966	0.026	ug/l	39.46	3600.00	
137 Ba	115	1	40,776.723	80.730	ug/l	1.89	3600.00	
205 Tl	165	1	18.689	0.037	ug/l	18.72	3600.00	
208 Pb	165	1	1,697.136	3.360	ug/l	1.46	3600.00	
238 U	165	1	136.630	0.271	ug/l	1.80	3600.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	257313	0.68	270788	95.0	30 - 120	
72 Ge	1	699242	1.36	724038	96.6	30 - 120	
115 In	1	1838003	1.48	1928749	95.3	30 - 120	
165 Ho	1	3140894	1.41	3216476	97.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\020SDIL.D\020SDIL.D#
Date Acquired: Aug 5 2008 06:12 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW24P5
Misc Info: SERIAL DILUTION
Vial Number: 2305
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: SDIL
Dilution Factor: 505.10

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: D:\ICPCHEM\1\DATA\AG080508.B\019AREF.D\019AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb		RSD(%)	Ref Conc.
9 Be	6	1	0.149	ug/l	14.51	0.15
51 V	72	1	36.140	ug/l	0.89	32.74
52 Cr	72	1	34.400	ug/l	0.50	31.28
55 Mn	72	1	158.800	ug/l	1.40	144.62
59 Co	72	1	6.730	ug/l	1.22	6.19
60 Ni	72	1	26.550	ug/l	1.27	24.28
63 Cu	72	1	17.250	ug/l	0.89	15.64
66 Zn	72	1	16.050	ug/l	1.17	14.61
75 As	72	1	0.169	ug/l	9.12	0.16
78 Se	72	1	0.381	ug/l	10.11	0.31
95 Mo	115	1	0.052	ug/l	3.46	0.06
107 Ag	115	1	0.028	ug/l	19.56	0.03
111 Cd	115	1	0.183	ug/l	6.32	0.18
118 Sn	115	1	0.174	ug/l	9.41	0.11
121 Sb	115	1	0.006	ug/l	64.15	0.01
137 Ba	115	1	17.150	ug/l	0.32	16.15
205 Tl	165	1	0.004	ug/l	51.45	0.01
208 Pb	165	1	0.739	ug/l	1.08	0.67
238 U	165	1	0.061	ug/l	12.90	0.05

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	264514	1.17	270788	97.7	30 - 120	
72 Ge	1	732195	1.05	724038	101.1	30 - 120	
115 In	1	1943356	0.29	1928749	100.8	30 - 120	
165 Ho	1	3243465	1.02	3216476	100.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 08/06/08 13:28:51

Department: 090 (Metals) | Source: Spreadsheet

Sample: **KRW24P5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500** | Channel 272
File: AG080508 # 20 | Method 6020_
Acquired: 08/05/2008 18:12:00 | ICPMS_024 | Matrix: SOLID
Calibrated: 08/05/2008 16:50:00 | Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	82	0.74530	0.75213	0.908		*	
7440-62-2	Vanadium	51	493866	180.66	163.73	10.3		*	
7440-47-3	Chromium	52	524049	172.04	156.42	9.99		*	
7439-96-5	Manganese	55	2467670	794.00	723.02	9.82		*	
7440-48-4	Cobalt	59	131250	33.647	30.944	8.73		*	
7440-02-0	Nickel	60	120381	132.75	121.40	9.34		*	
7440-66-6	Zinc	66	40195	80.261	73.055	9.86	3.2	~~NC~~	☑
7440-38-2	Arsenic	75	320	0.84280	0.78678	7.12		*	
7782-49-2	Selenium	78	464	1.9046	1.5381	23.8		*	
7439-98-7	Molybdenum	95	320	0.26173	0.27975	6.44		*	
7440-22-4	Silver	107	447	0.13918	0.13575	2.52		*	
7440-43-9	Cadmium	111	535	0.91447	0.90121	1.47		*	
7440-31-5	Tin	118	1500	0.86913	0.54247	60.2		*	
7440-36-0	Antimony	121	67	0.02879	0.02568	12.1	0.14	NC	☑
7440-39-3	Barium	137	57283	85.765	80.737	6.23		*	
7440-28-0	Thallium	205	230	0.01865	0.03700	49.6		*	
7439-92-1	Lead	208	25604	3.6973	3.3597	10.0	0.18	NC	☑
7440-61-1	Uranium	238	1967	0.30430	0.27044	12.5		*	
7440-56-4	Germanium	72			0			*	
7440-50-8	Copper	63	190609	86.230	78.222	10.2	0.71	~~E~~	☐
7440-47-3	Chromium	53	63486	177.59	159.55	11.3		*	
7440-74-6	Indium	115			0			*	
7440-60-0	Holmium	165			0			*	
7439-93-2	Lithium	6			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: Z Date: 8/7/08

Post Digestion Spiked Sample (PDS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\021PDS.D\021PDS.D#
Date Acquired: Aug 5 2008 06:17 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW24Z
Misc Info: POST DIGESTION SPIKE
Vial Number: 2306
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG080508.B\019AREF.D\019AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt
9 Be	6	1	198.600	0.752	ug/l	1.31	200
51 V	72	1	343.600	163.700	ug/l	1.66	200
52 Cr	72	1	336.000	156.400	ug/l	0.93	200
55 Mn	72	1	883.400	723.100	ug/l	0.42	200
59 Co	72	1	216.300	30.940	ug/l	0.58	200
60 Ni	72	1	309.900	121.400	ug/l	1.62	200
63 Cu	72	1	260.200	78.210	ug/l	1.04	200
66 Zn	72	1	248.600	73.060	ug/l	0.56	200
75 As	72	1	190.100	0.787	ug/l	0.79	200
78 Se	72	1	185.300	1.538	ug/l	1.22	200
95 Mo	115	1	198.000	0.280	ug/l	0.20	200
107 Ag	115	1	186.400	0.136	ug/l	1.24	200
111 Cd	115	1	190.200	0.901	ug/l	1.53	200
118 Sn	115	1	197.700	0.543	ug/l	1.27	200
121 Sb	115	1	191.400	0.026	ug/l	0.78	200
137 Ba	115	1	274.600	80.730	ug/l	0.78	200
205 Tl	165	1	188.500	0.037	ug/l	0.78	200
208 Pb	165	1	192.000	3.360	ug/l	1.18	200
238 U	165	1	195.500	0.271	ug/l	0.79	200

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	254481	0.96	270788	94.0	30 - 120	
72 Ge	1	695870	0.91	724038	96.1	30 - 120	
115 In	1	1834763	0.64	1928749	95.1	30 - 120	
165 Ho	1	3126796	1.06	3216476	97.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 08/06/08 13:29:01

Department: 090 (Metals) | Source: Spreadsheet

Sample: **KRW24Z** | Spike Dilution: **1.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG080508 # 21
Acquired: 08/05/2008 18:17:00
Calibrated: 08/05/2008 16:50:00

Channel 272
Method 6020_
ICPMS_024

Matrix: SOLID
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	102498	198.60	0.75213	98.9	200		☐
7440-62-2	Vanadium	51	4461840	343.60	163.73	89.9	200		☐
7440-47-3	Chromium	52	4841060	336.00	156.42	89.8	200	>	☐
7439-96-5	Manganese	55	13044500	883.40	723.02	80.2	200		☐
7440-48-4	Cobalt	59	4006290	216.30	30.944	92.7	200		☐
7440-02-0	Nickel	60	1333690	309.90	121.40	94.2	200		☐
7440-66-6	Zinc	66	570070	248.60	73.055	87.8	200		☑
7440-38-2	Arsenic	75	304587	190.10	0.78678	94.7	200	>	☐
7782-49-2	Selenium	78	49869	185.30	1.5381	91.9	200		☐
7439-98-7	Molybdenum	95	974702	198.00	0.27975	98.9	200		☐
7440-22-4	Silver	107	2737020	186.40	0.13575	93.1	200		☐
7440-43-9	Cadmium	111	525747	190.20	0.90121	94.6	200		☐
7440-31-5	Tin	118	1379300	197.70	0.54247	98.6	200		☐
7440-36-0	Antimony	121	1568750	191.40	0.02568	95.7	200		☑
7440-39-3	Barium	137	865285	274.60	80.737	96.9	200	>	☐
7440-28-0	Thallium	205	4506930	188.50	0.03700	94.2	200		☐
7439-92-1	Lead	208	6363710	192.00	3.3597	94.3	200	>	☑
7440-61-1	Uranium	238	5974150	195.50	0.27044	97.6	200		☐
7440-56-4	Germanium	72			0				
7440-50-8	Copper	63	2728060	260.20	78.222	91.0	200		☑
7440-47-3	Chromium	53	592161	350.60	159.55				
7440-74-6	Indium	115			0				
7440-60-0	Holmium	165			0				
7439-93-2	Lithium	6			0				

* : Unspiked sample result greater than 4 X spike amount

> : Analyte was found at concentration > 100 X MDL

Reviewed by: [signature] Date: 8/7/08

Spiked Sample (MS) QC Report

Data File:	D:\ICPCHEM\1\DATA\AG080508.B\022_MS.D\022_MS.D#
Date Acquired:	Aug 5 2008 06:22 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	KRW24S
Misc Info:	MATRIX SPIKE
Vial Number:	2307
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Aug 05 2008 04:58 pm
Sample Type:	MS
Prep Dil. Factor:	505.10
Autodil Factor:	Undiluted
Final Dil Factor:	505.10

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG080508.B\019AREF.D\019AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt	Rec(%)
9 Be	6	1	44.00	0.75	ug/l	1.55	40	108.0
51 V	72	1	222.30	163.70	ug/l	2.44	40	109.1
52 Cr	72	1	211.60	156.40	ug/l	1.45	40	107.7
55 Mn	72	1	983.70	723.10	ug/l	0.62	40	128.9
59 Co	72	1	77.76	30.94	ug/l	0.39	40	109.6
60 Ni	72	1	174.20	121.40	ug/l	1.17	40	107.9
63 Cu	72	1	127.00	78.21	ug/l	1.27	40	107.4
66 Zn	72	1	116.60	73.06	ug/l	0.12	40	103.1
75 As	72	1	35.48	0.79	ug/l	0.84	40	87.0
78 Se	72	1	33.35	1.54	ug/l	1.38	40	80.3
95 Mo	115	1	31.29	0.28	ug/l	1.48	40	77.7
107 Ag	115	1	39.54	0.14	ug/l	1.87	40	98.5
111 Cd	115	1	40.33	0.90	ug/l	0.72	40	98.6
118 Sn	115	1	0.60	0.54	ug/l	9.63	40	1.5
121 Sb	115	1	3.28	0.03	ug/l	2.96	40	8.2
137 Ba	115	1	137.20	80.73	ug/l	0.74	40	113.6
205 Tl	165	1	41.54	0.04	ug/l	0.17	40	103.8
208 Pb	165	1	44.13	3.36	ug/l	0.43	40	101.8
238 U	165	1	43.57	0.27	ug/l	1.50	40	108.2

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	249024	1.00	270788	92.0	30 - 120	
72 Ge	1	699717	0.60	724038	96.6	30 - 120	
115 In	1	1856764	1.89	1928749	96.3	30 - 120	
165 Ho	1	3104218	0.68	3216476	96.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Duplicate Spike (MSD) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\023 MSD.D\023 MSD.D#
Date Acquired: Aug 5 2008 06:26 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW24D
Misc Info: MATRIX SPIKE DUPLICATE
Vial Number: 2308
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: MSD
Dilution Factor: 505.10

Duplicate Ref File: D:\ICPCHEM\1\DATA\AG080508.B\022 MS.D\022 MS.D#

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Ref Conc	Differ(%)
9 Be	6	1	47.58 ug/l	1.38	44.00	7.82
51 V	72	1	236.50 ug/l	1.09	222.30	6.19
52 Cr	72	1	229.40 ug/l	0.49	211.60	8.07
55 Mn	72	1	836.70 ug/l	1.37	983.70	16.15
59 Co	72	1	79.94 ug/l	1.97	77.76	2.76
60 Ni	72	1	186.40 ug/l	0.82	174.20	6.77
63 Cu	72	1	135.80 ug/l	1.15	127.00	6.70
66 Zn	72	1	124.90 ug/l	1.09	116.60	6.87
75 As	72	1	38.64 ug/l	0.55	35.48	8.53
78 Se	72	1	37.01 ug/l	1.39	33.35	10.40
95 Mo	115	1	34.89 ug/l	1.28	31.29	10.88
107 Ag	115	1	45.93 ug/l	1.47	39.54	14.95
111 Cd	115	1	44.38 ug/l	1.98	40.33	9.56
118 Sn	115	1	0.69 ug/l	6.42	0.60	13.80
121 Sb	115	1	3.43 ug/l	2.41	3.28	4.23
137 Ba	115	1	139.50 ug/l	1.74	137.20	1.66
205 Tl	165	1	44.67 ug/l	0.39	41.54	7.26
208 Pb	165	1	47.79 ug/l	1.18	44.13	7.96
238 U	165	1	47.26 ug/l	0.41	43.57	8.13

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	252085	1.36	270788	93.1	30 - 120	
72 Ge	1	693631	0.67	724038	95.8	30 - 120	
115 In	1	1842677	0.36	1928749	95.5	30 - 120	
165 Ho	1	3076412	0.56	3216476	95.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref. File D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\024SMPL.D\024SMPL.D#
Date Acquired: Aug 5 2008 06:31 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW28
Misc Info: D8G210174
Vial Number: 2309
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: SA
Dilution Factor: 495.00
Autodil Factor: Undiluted
Final Dil Factor: 495.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	746.460	1.508	ug/l	16.12	3600	
51 V	72	1	113,949.000	230.200	ug/l	0.27	3600	
52 Cr	72	1	152,608.500	308.300	ug/l	0.81	3600	
55 Mn	72	1	645,975.000	1305.000	ug/l	0.55	18000	
59 Co	72	1	36,902.250	74.550	ug/l	1.78	3600	
60 Ni	72	1	193,594.500	391.100	ug/l	0.59	3600	
63 Cu	72	1	65,340.000	132.000	ug/l	0.75	3600	
66 Zn	72	1	63,558.000	128.400	ug/l	0.42	3600	
75 As	72	1	432.531	0.874	ug/l	8.91	3600	
78 Se	72	1	677.655	1.369	ug/l	6.95	3600	
95 Mo	115	1	124.938	0.252	ug/l	8.52	3600	
107 Ag	115	1	137.907	0.279	ug/l	3.03	3600	
111 Cd	115	1	899.910	1.818	ug/l	4.04	3600	
118 Sn	115	1	262.350	0.530	ug/l	3.30	3600	
121 Sb	115	1	6.727	0.014	ug/l	28.85	3600	
137 Ba	115	1	93,307.500	188.500	ug/l	2.46	3600	
205 Tl	165	1	23.760	0.048	ug/l	8.90	3600	
208 Pb	165	1	1,783.980	3.604	ug/l	0.67	3600	
238 U	165	1	166.419	0.336	ug/l	2.63	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	246491	0.54	270788	91.0	30 - 120	
72 Ge	1	687547	0.27	724038	95.0	30 - 120	
115 In	1	1778711	1.46	1928749	92.2	30 - 120	
165 Ho	1	2962539	0.87	3216476	92.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\025 CCV.D\025 CCV.D#
Date Acquired: Aug 5 2008 06:36 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.680 ug/l	1.74	50	103.4	90 - 110	
51 V	72	1	52.760 ug/l	1.45	50	105.5	90 - 110	
52 Cr	72	1	50.940 ug/l	2.19	50	101.9	90 - 110	
55 Mn	72	1	51.090 ug/l	1.91	50	102.2	90 - 110	
59 Co	72	1	52.780 ug/l	2.44	50	105.6	90 - 110	
60 Ni	72	1	51.430 ug/l	1.03	50	102.9	90 - 110	
63 Cu	72	1	52.190 ug/l	2.13	50	104.4	90 - 110	
66 Zn	72	1	48.690 ug/l	1.44	50	97.4	90 - 110	
75 As	72	1	50.790 ug/l	1.22	50	101.6	90 - 110	
78 Se	72	1	49.420 ug/l	2.86	50	98.8	90 - 110	
95 Mo	115	1	50.390 ug/l	0.56	50	100.8	90 - 110	
107 Ag	115	1	50.720 ug/l	0.18	50	101.4	90 - 110	
111 Cd	115	1	49.190 ug/l	0.37	50	98.4	90 - 110	
118 Sn	115	1	49.540 ug/l	0.79	50	99.1	90 - 110	
121 Sb	115	1	49.360 ug/l	0.34	50	98.7	90 - 110	
137 Ba	115	1	50.250 ug/l	0.35	50	100.5	90 - 110	
205 Tl	165	1	50.580 ug/l	0.63	50	101.2	90 - 110	
208 Pb	165	1	49.770 ug/l	0.54	50	99.5	90 - 110	
238 U	165	1	52.240 ug/l	0.92	50	104.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	265313	0.85	270788	98.0	30 - 120	
72 Ge	1	732337	1.89	724038	101.1	30 - 120	
115 In	1	1964170	0.70	1928749	101.8	30 - 120	
165 Ho	1	3250258	0.53	3216476	101.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\026 CCB.D\026 CCB.D#
Date Acquired: Aug 5 2008 06:41 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ug/l	23250.00	1.00	
51 V	72	1	0.004	ug/l	548.32	1.00	
52 Cr	72	1	-0.004	ug/l	104.62	1.00	
55 Mn	72	1	0.015	ug/l	12.04	1.00	
59 Co	72	1	0.005	ug/l	43.46	1.00	
60 Ni	72	1	0.006	ug/l	139.98	1.00	
63 Cu	72	1	0.010	ug/l	108.97	1.00	
66 Zn	72	1	0.393	ug/l	27.13	10.00	
75 As	72	1	-0.001	ug/l	1043.00	5.00	
78 Se	72	1	0.200	ug/l	6.99	5.00	
95 Mo	115	1	0.014	ug/l	89.57	1.00	
107 Ag	115	1	0.003	ug/l	71.04	1.00	
111 Cd	115	1	0.005	ug/l	80.32	1.00	
118 Sn	115	1	0.008	ug/l	62.91	10.00	
121 Sb	115	1	0.023	ug/l	11.55	1.00	
137 Ba	115	1	0.007	ug/l	127.43	1.00	
205 Tl	165	1	0.005	ug/l	52.10	1.00	
208 Pb	165	1	0.002	ug/l	76.32	1.00	
238 U	165	1	0.003	ug/l	33.53	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	268512	1.00	270788	99.2	30 - 120	
72 Ge	1	743762	0.60	724038	102.7	30 - 120	
115 In	1	1974666	1.01	1928749	102.4	30 - 120	
165 Ho	1	3273916	0.82	3216476	101.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\049 CCV.D\049 CCV.D#
Date Acquired: Aug 5 2008 08:31 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.850 ug/l	0.87	50	101.7	90 - 110	
51 V	72	1	53.050 ug/l	0.72	50	106.1	90 - 110	
52 Cr	72	1	51.460 ug/l	1.25	50	102.9	90 - 110	
55 Mn	72	1	51.250 ug/l	0.86	50	102.5	90 - 110	
59 Co	72	1	52.870 ug/l	1.30	50	105.7	90 - 110	
60 Ni	72	1	52.130 ug/l	0.44	50	104.3	90 - 110	
63 Cu	72	1	52.650 ug/l	0.80	50	105.3	90 - 110	
66 Zn	72	1	47.760 ug/l	1.31	50	95.5	90 - 110	
75 As	72	1	51.130 ug/l	1.08	50	102.3	90 - 110	
78 Se	72	1	50.200 ug/l	1.28	50	100.4	90 - 110	
95 Mo	115	1	50.020 ug/l	1.37	50	100.0	90 - 110	
107 Ag	115	1	50.120 ug/l	0.83	50	100.2	90 - 110	
111 Cd	115	1	48.490 ug/l	0.40	50	97.0	90 - 110	
118 Sn	115	1	49.250 ug/l	0.61	50	98.5	90 - 110	
121 Sb	115	1	49.110 ug/l	0.92	50	98.2	90 - 110	
137 Ba	115	1	49.850 ug/l	1.78	50	99.7	90 - 110	
205 Tl	165	1	50.180 ug/l	2.86	50	100.4	90 - 110	
208 Pb	165	1	49.210 ug/l	1.92	50	98.4	90 - 110	
238 U	165	1	50.670 ug/l	1.56	50	101.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	271992	0.48	270788	100.4	30 - 120	
72 Ge	1	737742	0.03	724038	101.9	30 - 120	
115 In	1	1990696	0.89	1928749	103.2	30 - 120	
165 Ho	1	3256120	1.74	3216476	101.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\050 CCB.D\050 CCB.D#
Date Acquired: Aug 5 2008 08:36 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.006	ug/l	118.03	1.00	
51 V	72	1	0.002	ug/l	458.61	1.00	
52 Cr	72	1	-0.017	ug/l	53.68	1.00	
55 Mn	72	1	0.009	ug/l	30.46	1.00	
59 Co	72	1	0.001	ug/l	69.60	1.00	
60 Ni	72	1	0.003	ug/l	632.23	1.00	
63 Cu	72	1	0.015	ug/l	21.54	1.00	
66 Zn	72	1	0.400	ug/l	15.73	10.00	
75 As	72	1	0.004	ug/l	90.16	5.00	
78 Se	72	1	0.336	ug/l	22.63	5.00	
95 Mo	115	1	0.016	ug/l	17.14	1.00	
107 Ag	115	1	0.005	ug/l	25.25	1.00	
111 Cd	115	1	0.001	ug/l	100.24	1.00	
118 Sn	115	1	0.013	ug/l	33.81	10.00	
121 Sb	115	1	0.021	ug/l	30.16	1.00	
137 Ba	115	1	0.003	ug/l	3.78	1.00	
205 Tl	165	1	0.004	ug/l	136.52	1.00	
208 Pb	165	1	0.004	ug/l	39.77	1.00	
238 U	165	1	0.003	ug/l	13.28	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	275300	0.90	270788	101.7	30 - 120	
72 Ge	1	750442	0.78	724038	103.6	30 - 120	
115 In	1	1993598	0.86	1928749	103.4	30 - 120	
165 Ho	1	3220627	0.58	3216476	100.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\051ICSA.D\051ICSA.D#
Date Acquired: Aug 5 2008 08:41 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	-0.001 ug/l	372.27	10.00	
51	V	72	1	-0.222 ug/l	18.47	10.00	
52	Cr	72	1	0.896 ug/l	3.57	10.00	
55	Mn	72	1	1.852 ug/l	2.98	10.00	
59	Co	72	1	0.046 ug/l	4.88	10.00	
60	Ni	72	1	4.251 ug/l	2.26	10.00	
63	Cu	72	1	0.358 ug/l	3.26	10.00	
66	Zn	72	1	3.270 ug/l	1.45	100.00	
75	As	72	1	0.192 ug/l	16.09	50.00	
78	Se	72	1	0.347 ug/l	37.14	50.00	
95	Mo	115	1	1914.000 ug/l	1.14	10.00	
107	Ag	115	1	0.012 ug/l	24.00	10.00	
111	Cd	115	1	0.235 ug/l	10.98	10.00	
118	Sn	115	1	0.460 ug/l	3.02	100.00	
121	Sb	115	1	0.205 ug/l	15.92	10.00	
137	Ba	115	1	1.610 ug/l	5.96	10.00	
205	Tl	165	1	0.032 ug/l	19.16	10.00	
208	Pb	165	1	0.090 ug/l	10.57	10.00	
238	U	165	1	0.004 ug/l	17.58	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	200772	1.59	270788	74.1	30 - 120	
72	Ge	1	597705	0.60	724038	82.6	30 - 120	
115	In	1	1613488	0.59	1928749	83.7	30 - 120	
165	Ho	1	2874874	1.49	3216476	89.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\052ICSB.D\052ICSB.D#
Date Acquired: Aug 5 2008 08:46 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	101.700	1.68	100	101.7	80 - 120	
51 V	72	1	99.150	1.34	100	99.2	80 - 120	
52 Cr	72	1	94.330	2.25	100	94.3	80 - 120	
55 Mn	72	1	95.390	0.83	100	95.4	80 - 120	
59 Co	72	1	91.390	1.16	100	91.4	80 - 120	
60 Ni	72	1	91.920	0.89	100	91.9	80 - 120	
63 Cu	72	1	87.420	0.23	100	87.4	80 - 120	
66 Zn	72	1	90.900	0.25	100	90.9	80 - 120	
75 As	72	1	102.200	0.71	100	102.2	80 - 120	
78 Se	72	1	106.600	0.64	100	106.6	80 - 120	
95 Mo	115	1	1972.000	0.49	2100	93.9	80 - 120	
107 Ag	115	1	82.450	9.03	100	82.5	80 - 120	
111 Cd	115	1	91.890	0.79	100	91.9	80 - 120	
118 Sn	115	1	97.150	0.82	100	97.2	80 - 120	
121 Sb	115	1	98.560	0.80	100	98.6	80 - 120	
137 Ba	115	1	102.200	0.26	100	102.2	80 - 120	
205 Tl	165	1	91.820	0.14	100	91.8	80 - 120	
208 Pb	165	1	91.030	0.94	100	91.0	80 - 120	
238 U	165	1	101.800	0.22	100	101.8	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	197885	1.79	270788	73.1	30 - 120	
72 Ge	1	591871	0.87	724038	81.7	30 - 120	
115 In	1	1640029	1.07	1928749	85.0	30 - 120	
165 Ho	1	2983693	0.21	3216476	92.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\053WASH.D\053WASH.D#
Date Acquired: Aug 5 2008 08:51 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.011 ug/l	120.42	10.00	
51 V	72	1	-0.009 ug/l	280.75	10.00	
52 Cr	72	1	-0.010 ug/l	126.72	10.00	
55 Mn	72	1	0.016 ug/l	18.17	10.00	
59 Co	72	1	0.007 ug/l	30.37	10.00	
60 Ni	72	1	0.031 ug/l	34.15	10.00	
63 Cu	72	1	0.018 ug/l	18.71	10.00	
66 Zn	72	1	0.198 ug/l	32.92	100.00	
75 As	72	1	0.019 ug/l	41.38	50.00	
78 Se	72	1	0.212 ug/l	15.18	50.00	
95 Mo	115	1	0.280 ug/l	9.51	10.00	
107 Ag	115	1	0.009 ug/l	19.98	10.00	
111 Cd	115	1	0.007 ug/l	24.19	10.00	
118 Sn	115	1	0.014 ug/l	48.82	100.00	
121 Sb	115	1	0.018 ug/l	11.37	10.00	
137 Ba	115	1	0.014 ug/l	14.62	10.00	
205 Tl	165	1	0.040 ug/l	5.82	10.00	
208 Pb	165	1	0.013 ug/l	11.37	10.00	
238 U	165	1	0.009 ug/l	14.03	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	248463	1.60	270788	91.8	30 - 120	
72 Ge	1	721231	0.83	724038	99.6	30 - 120	
115 In	1	1983142	1.75	1928749	102.8	30 - 120	
165 Ho	1	3367124	0.95	3216476	104.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\054 CCV.D\054 CCV.D#
Date Acquired: Aug 5 2008 08:56 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	52.160 ug/l	1.06	50	104.3	90 - 110	
51 V	72	1	51.450 ug/l	2.21	50	102.9	90 - 110	
52 Cr	72	1	49.980 ug/l	1.79	50	100.0	90 - 110	
55 Mn	72	1	50.290 ug/l	2.29	50	100.6	90 - 110	
59 Co	72	1	50.570 ug/l	1.42	50	101.1	90 - 110	
60 Ni	72	1	50.500 ug/l	1.48	50	101.0	90 - 110	
63 Cu	72	1	50.900 ug/l	2.11	50	101.8	90 - 110	
66 Zn	72	1	48.630 ug/l	1.81	50	97.3	90 - 110	
75 As	72	1	50.310 ug/l	1.56	50	100.6	90 - 110	
78 Se	72	1	49.880 ug/l	1.61	50	99.8	90 - 110	
95 Mo	115	1	49.520 ug/l	0.87	50	99.0	90 - 110	
107 Ag	115	1	50.270 ug/l	1.20	50	100.5	90 - 110	
111 Cd	115	1	49.060 ug/l	1.59	50	98.1	90 - 110	
118 Sn	115	1	49.710 ug/l	1.09	50	99.4	90 - 110	
121 Sb	115	1	49.540 ug/l	1.09	50	99.1	90 - 110	
137 Ba	115	1	50.120 ug/l	1.82	50	100.2	90 - 110	
205 Tl	165	1	50.880 ug/l	0.79	50	101.8	90 - 110	
208 Pb	165	1	49.950 ug/l	0.60	50	99.9	90 - 110	
238 U	165	1	51.770 ug/l	1.99	50	103.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	251419	1.25	270788	92.8	30 - 120	
72 Ge	1	728950	1.49	724038	100.7	30 - 120	
115 In	1	2013016	0.95	1928749	104.4	30 - 120	
165 Ho	1	3390799	0.86	3216476	105.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\055 CCB.D\055 CCB.D#
Date Acquired: Aug 5 2008 09:00 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	-0.002	ug/l	178.19	1.00	
51 V	72	1	-0.005	ug/l	374.06	1.00	
52 Cr	72	1	-0.008	ug/l	35.10	1.00	
55 Mn	72	1	0.009	ug/l	33.78	1.00	
59 Co	72	1	0.002	ug/l	83.57	1.00	
60 Ni	72	1	0.002	ug/l	409.69	1.00	
63 Cu	72	1	0.013	ug/l	38.37	1.00	
66 Zn	72	1	0.391	ug/l	10.02	10.00	
75 As	72	1	0.007	ug/l	65.17	5.00	
78 Se	72	1	0.276	ug/l	29.29	5.00	
95 Mo	115	1	0.052	ug/l	17.36	1.00	
107 Ag	115	1	0.004	ug/l	66.02	1.00	
111 Cd	115	1	0.003	ug/l	4.83	1.00	
118 Sn	115	1	0.013	ug/l	13.37	10.00	
121 Sb	115	1	0.017	ug/l	27.18	1.00	
137 Ba	115	1	0.009	ug/l	101.08	1.00	
205 Tl	165	1	0.012	ug/l	7.15	1.00	
208 Pb	165	1	0.004	ug/l	65.49	1.00	
238 U	165	1	0.003	ug/l	41.56	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	264300	0.73	270788	97.6	30 - 120	
72 Ge	1	754122	0.85	724038	104.2	30 - 120	
115 In	1	2059867	1.02	1928749	106.8	30 - 120	
165 Ho	1	3360828	0.87	3216476	104.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\074 CCV.D\074 CCV.D#
Date Acquired: Aug 5 2008 10:32 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.010 ug/l	0.32	50	102.0	90 - 110	
51 V	72	1	53.440 ug/l	1.14	50	106.9	90 - 110	
52 Cr	72	1	51.380 ug/l	1.57	50	102.8	90 - 110	
55 Mn	72	1	51.560 ug/l	1.31	50	103.1	90 - 110	
59 Co	72	1	52.480 ug/l	1.09	50	105.0	90 - 110	
60 Ni	72	1	52.340 ug/l	1.62	50	104.7	90 - 110	
63 Cu	72	1	52.080 ug/l	1.25	50	104.2	90 - 110	
66 Zn	72	1	48.250 ug/l	2.51	50	96.5	90 - 110	
75 As	72	1	51.450 ug/l	2.05	50	102.9	90 - 110	
78 Se	72	1	50.440 ug/l	2.14	50	100.9	90 - 110	
95 Mo	115	1	50.140 ug/l	1.22	50	100.3	90 - 110	
107 Ag	115	1	50.110 ug/l	1.57	50	100.2	90 - 110	
111 Cd	115	1	48.430 ug/l	1.31	50	96.9	90 - 110	
118 Sn	115	1	49.050 ug/l	1.74	50	98.1	90 - 110	
121 Sb	115	1	48.900 ug/l	1.39	50	97.8	90 - 110	
137 Ba	115	1	50.300 ug/l	1.21	50	100.6	90 - 110	
205 Tl	165	1	49.970 ug/l	0.73	50	99.9	90 - 110	
208 Pb	165	1	49.480 ug/l	2.09	50	99.0	90 - 110	
238 U	165	1	50.780 ug/l	1.22	50	101.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	270676	0.26	270788	100.0	30 - 120	
72 Ge	1	750452	1.28	724038	103.6	30 - 120	
115 In	1	2014518	0.97	1928749	104.4	30 - 120	
165 Ho	1	3243814	1.26	3216476	100.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\075 CCB.D\075 CCB.D#
Date Acquired: Aug 5 2008 10:37 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.002	ug/l	0.96	1.00	
51 V	72	1	0.003	ug/l	788.41	1.00	
52 Cr	72	1	-0.010	ug/l	87.42	1.00	
55 Mn	72	1	0.018	ug/l	17.66	1.00	
59 Co	72	1	0.003	ug/l	15.30	1.00	
60 Ni	72	1	-0.005	ug/l	216.22	1.00	
63 Cu	72	1	0.014	ug/l	57.85	1.00	
66 Zn	72	1	0.454	ug/l	13.96	10.00	
75 As	72	1	0.002	ug/l	336.82	5.00	
78 Se	72	1	0.391	ug/l	27.55	5.00	
95 Mo	115	1	0.020	ug/l	50.72	1.00	
107 Ag	115	1	0.005	ug/l	30.56	1.00	
111 Cd	115	1	0.003	ug/l	64.92	1.00	
118 Sn	115	1	0.014	ug/l	40.47	10.00	
121 Sb	115	1	0.020	ug/l	8.55	1.00	
137 Ba	115	1	0.002	ug/l	265.81	1.00	
205 Tl	165	1	0.005	ug/l	41.45	1.00	
208 Pb	165	1	0.004	ug/l	71.76	1.00	
238 U	165	1	0.003	ug/l	66.50	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	272828	0.31	270788	100.8	30 - 120	
72 Ge	1	760500	0.68	724038	105.0	30 - 120	
115 In	1	1994295	0.22	1928749	103.4	30 - 120	
165 Ho	1	3214053	1.29	3216476	99.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\076ICSA.D\076ICSA.D#
Date Acquired: Aug 5 2008 10:42 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	-0.004 ug/l	0.00	10.00	
51 V	72	1	-0.119 ug/l	86.96	10.00	
52 Cr	72	1	0.901 ug/l	4.96	10.00	
55 Mn	72	1	1.769 ug/l	0.77	10.00	
59 Co	72	1	0.050 ug/l	10.81	10.00	
60 Ni	72	1	4.159 ug/l	2.41	10.00	
63 Cu	72	1	0.351 ug/l	3.02	10.00	
66 Zn	72	1	3.110 ug/l	2.85	100.00	
75 As	72	1	0.227 ug/l	17.52	50.00	
78 Se	72	1	0.445 ug/l	23.60	50.00	
95 Mo	115	1	1878.000 ug/l	1.47	10.00	
107 Ag	115	1	0.015 ug/l	10.68	10.00	
111 Cd	115	1	0.266 ug/l	63.05	10.00	
118 Sn	115	1	0.448 ug/l	0.26	100.00	
121 Sb	115	1	0.206 ug/l	13.99	10.00	
137 Ba	115	1	1.610 ug/l	1.55	10.00	
205 Tl	165	1	0.031 ug/l	39.17	10.00	
208 Pb	165	1	0.089 ug/l	7.12	10.00	
238 U	165	1	0.004 ug/l	8.60	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	204805	1.83	270788	75.6	30 - 120	
72 Ge	1	598804	0.93	724038	82.7	30 - 120	
115 In	1	1618397	1.34	1928749	83.9	30 - 120	
165 Ho	1	2818248	0.35	3216476	87.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\077ICSB.D\077ICSB.D#
Date Acquired: Aug 5 2008 10:46 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 05 2008 04:58 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	98.610	1.93	100	98.6	80 - 120	
51 V	72	1	98.910	1.32	100	98.9	80 - 120	
52 Cr	72	1	95.960	1.99	100	96.0	80 - 120	
55 Mn	72	1	96.040	1.82	100	96.0	80 - 120	
59 Co	72	1	92.590	2.60	100	92.6	80 - 120	
60 Ni	72	1	92.260	1.52	100	92.3	80 - 120	
63 Cu	72	1	86.690	0.50	100	86.7	80 - 120	
66 Zn	72	1	90.040	1.24	100	90.0	80 - 120	
75 As	72	1	100.400	1.06	100	100.4	80 - 120	
78 Se	72	1	103.100	1.61	100	103.1	80 - 120	
95 Mo	115	1	1971.000	0.54	2100	93.9	80 - 120	
107 Ag	115	1	81.360	5.45	100	81.4	80 - 120	
111 Cd	115	1	91.920	2.07	100	91.9	80 - 120	
118 Sn	115	1	97.080	0.73	100	97.1	80 - 120	
121 Sb	115	1	98.250	0.84	100	98.3	80 - 120	
137 Ba	115	1	103.000	1.78	100	103.0	80 - 120	
205 Tl	165	1	92.330	0.61	100	92.3	80 - 120	
208 Pb	165	1	91.450	0.33	100	91.5	80 - 120	
238 U	165	1	100.200	1.20	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	198622	2.13	270788	73.3	30 - 120	
72 Ge	1	584743	1.57	724038	80.8	30 - 120	
115 In	1	1600469	0.52	1928749	83.0	30 - 120	
165 Ho	1	2846433	0.59	3216476	88.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\078WASH.D\078WASH.D#
Date Acquired: Aug 5 2008 10:51 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.007 ug/l	56.19	10.00	
51 V	72	1	-0.030 ug/l	61.03	10.00	
52 Cr	72	1	-0.014 ug/l	133.49	10.00	
55 Mn	72	1	0.020 ug/l	33.09	10.00	
59 Co	72	1	0.009 ug/l	41.40	10.00	
60 Ni	72	1	0.030 ug/l	20.01	10.00	
63 Cu	72	1	0.027 ug/l	23.91	10.00	
66 Zn	72	1	0.301 ug/l	0.89	100.00	
75 As	72	1	0.010 ug/l	40.05	50.00	
78 Se	72	1	0.318 ug/l	27.57	50.00	
95 Mo	115	1	0.289 ug/l	13.75	10.00	
107 Ag	115	1	0.008 ug/l	35.06	10.00	
111 Cd	115	1	0.009 ug/l	55.13	10.00	
118 Sn	115	1	0.008 ug/l	73.97	100.00	
121 Sb	115	1	0.015 ug/l	4.73	10.00	
137 Ba	115	1	0.017 ug/l	26.47	10.00	
205 Tl	165	1	0.041 ug/l	4.84	10.00	
208 Pb	165	1	0.009 ug/l	40.72	10.00	
238 U	165	1	0.007 ug/l	23.58	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	250904	0.96	270788	92.7	30 - 120	
72 Ge	1	722400	0.54	724038	99.8	30 - 120	
115 In	1	1975077	0.72	1928749	102.4	30 - 120	
165 Ho	1	3254003	0.57	3216476	101.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\079 CCV.D\079 CCV.D#
Date Acquired: Aug 5 2008 10:56 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.820 ug/l	1.38	50	101.6	90 - 110	
51 V	72	1	52.130 ug/l	0.64	50	104.3	90 - 110	
52 Cr	72	1	50.410 ug/l	0.79	50	100.8	90 - 110	
55 Mn	72	1	51.240 ug/l	0.94	50	102.5	90 - 110	
59 Co	72	1	51.670 ug/l	1.24	50	103.3	90 - 110	
60 Ni	72	1	50.480 ug/l	0.26	50	101.0	90 - 110	
63 Cu	72	1	50.890 ug/l	0.44	50	101.8	90 - 110	
66 Zn	72	1	47.280 ug/l	0.13	50	94.6	90 - 110	
75 As	72	1	50.850 ug/l	1.39	50	101.7	90 - 110	
78 Se	72	1	50.750 ug/l	0.56	50	101.5	90 - 110	
95 Mo	115	1	49.810 ug/l	2.14	50	99.6	90 - 110	
107 Ag	115	1	50.350 ug/l	1.46	50	100.7	90 - 110	
111 Cd	115	1	48.870 ug/l	1.11	50	97.7	90 - 110	
118 Sn	115	1	49.250 ug/l	1.39	50	98.5	90 - 110	
121 Sb	115	1	49.360 ug/l	0.73	50	98.7	90 - 110	
137 Ba	115	1	50.570 ug/l	1.37	50	101.1	90 - 110	
205 Tl	165	1	50.430 ug/l	0.99	50	100.9	90 - 110	
208 Pb	165	1	49.720 ug/l	0.63	50	99.4	90 - 110	
238 U	165	1	51.590 ug/l	0.93	50	103.2	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	255574	0.49	270788	94.4	30 - 120	
72 Ge	1	722872	0.57	724038	99.8	30 - 120	
115 In	1	1991116	1.66	1928749	103.2	30 - 120	
165 Ho	1	3313592	0.93	3216476	103.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\080 CCB.D\080 CCB.D#
Date Acquired: Aug 5 2008 11:01 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.002	ug/l	287.01	1.00	
51 V	72	1	0.005	ug/l	189.44	1.00	
52 Cr	72	1	-0.012	ug/l	25.55	1.00	
55 Mn	72	1	0.009	ug/l	26.17	1.00	
59 Co	72	1	0.004	ug/l	71.32	1.00	
60 Ni	72	1	0.010	ug/l	61.78	1.00	
63 Cu	72	1	0.017	ug/l	19.40	1.00	
66 Zn	72	1	0.376	ug/l	9.20	10.00	
75 As	72	1	0.004	ug/l	294.25	5.00	
78 Se	72	1	0.341	ug/l	9.27	5.00	
95 Mo	115	1	0.047	ug/l	20.46	1.00	
107 Ag	115	1	0.007	ug/l	8.15	1.00	
111 Cd	115	1	0.002	ug/l	133.64	1.00	
118 Sn	115	1	0.007	ug/l	228.14	10.00	
121 Sb	115	1	0.018	ug/l	14.29	1.00	
137 Ba	115	1	-0.004	ug/l	37.76	1.00	
205 Tl	165	1	0.008	ug/l	8.75	1.00	
208 Pb	165	1	0.004	ug/l	13.37	1.00	
238 U	165	1	0.003	ug/l	55.04	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	263254	0.55	270788	97.2	30 - 120	
72 Ge	1	753100	0.31	724038	104.0	30 - 120	
115 In	1	2032791	1.19	1928749	105.4	30 - 120	
165 Ho	1	3303631	0.94	3216476	102.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\210 CCV.D\210 CCV.D#
Date Acquired: Aug 6 2008 09:29 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	47.990 ug/l	1.41	50	96.0	90 - 110	
51 V	72	1	52.500 ug/l	1.30	50	105.0	90 - 110	
52 Cr	72	1	50.570 ug/l	1.92	50	101.1	90 - 110	
55 Mn	72	1	50.740 ug/l	1.09	50	101.5	90 - 110	
59 Co	72	1	51.450 ug/l	2.50	50	102.9	90 - 110	
60 Ni	72	1	51.870 ug/l	1.18	50	103.7	90 - 110	
63 Cu	72	1	52.180 ug/l	1.02	50	104.4	90 - 110	
66 Zn	72	1	46.500 ug/l	0.86	50	93.0	90 - 110	
75 As	72	1	51.970 ug/l	1.12	50	103.9	90 - 110	
78 Se	72	1	52.950 ug/l	1.28	50	105.9	90 - 110	
95 Mo	115	1	49.790 ug/l	0.27	50	99.6	90 - 110	
107 Ag	115	1	49.620 ug/l	0.27	50	99.2	90 - 110	
111 Cd	115	1	47.940 ug/l	0.83	50	95.9	90 - 110	
118 Sn	115	1	48.560 ug/l	0.85	50	97.1	90 - 110	
121 Sb	115	1	48.240 ug/l	1.08	50	96.5	90 - 110	
137 Ba	115	1	51.210 ug/l	1.13	50	102.4	90 - 110	
205 Tl	165	1	50.220 ug/l	1.08	50	100.4	90 - 110	
208 Pb	165	1	48.640 ug/l	0.45	50	97.3	90 - 110	
238 U	165	1	49.330 ug/l	1.79	50	98.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	255782	0.52	270788	94.5	30 - 120	
72 Ge	1	695232	1.04	724038	96.0	30 - 120	
115 In	1	1924344	0.37	1928749	99.8	30 - 120	
165 Ho	1	3061931	0.28	3216476	95.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\211 CCB.D\211 CCB.D#
Date Acquired: Aug 6 2008 09:34 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 05 2008 04:58 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.002	ug/l	492.96	1.00	
51 V	72	1	-0.009	ug/l	331.38	1.00	
52 Cr	72	1	-0.018	ug/l	61.94	1.00	
55 Mn	72	1	0.032	ug/l	22.97	1.00	
59 Co	72	1	0.005	ug/l	24.20	1.00	
60 Ni	72	1	0.008	ug/l	236.59	1.00	
63 Cu	72	1	0.029	ug/l	42.11	1.00	
66 Zn	72	1	0.317	ug/l	7.36	10.00	
75 As	72	1	0.015	ug/l	82.76	5.00	
78 Se	72	1	1.025	ug/l	13.69	5.00	
95 Mo	115	1	0.029	ug/l	24.10	1.00	
107 Ag	115	1	0.009	ug/l	31.65	1.00	
111 Cd	115	1	0.008	ug/l	2.98	1.00	
118 Sn	115	1	0.007	ug/l	102.24	10.00	
121 Sb	115	1	0.020	ug/l	30.94	1.00	
137 Ba	115	1	0.018	ug/l	29.48	1.00	
205 Tl	165	1	0.014	ug/l	2.68	1.00	
208 Pb	165	1	0.010	ug/l	21.08	1.00	
238 U	165	1	0.007	ug/l	2.51	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	260582	0.59	270788	96.2	30 - 120	
72 Ge	1	720078	0.50	724038	99.5	30 - 120	
115 In	1	1966823	0.39	1928749	102.0	30 - 120	
165 Ho	1	3090109	0.33	3216476	96.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: _____

Date: 8/6/08

Calibration Blank QC Report

Data File:	D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#
Date Acquired:	Aug 6 2008 10:03 am
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	2101
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Aug 06 2008 10:01 am
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-5	2386.50
52	Cr	72	1	2437	1.18
55	Mn	72	1	670	15.54
59	Co	72	1	63	24.51
60	Ni	72	1	110	17.87
63	Cu	72	1	350	17.52
66	Zn	72	1	1677	2.13
75	As	72	1	48	20.99
78	Se	72	1	576	5.12
95	Mo	115	1	233	29.16
107	Ag	115	1	23	64.43
111	Cd	115	1	7	139.20
118	Sn	115	1	200	9.08
121	Sb	115	1	30	58.21
137	Ba	115	1	67	46.29
205	Tl	165	1	233	15.04
208	Pb	165	1	213	37.75
238	U	165	1	13	86.58

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	259601	1.87
72	Ge	1	719776	0.39
115	In	1	1953223	1.07
165	Ho	1	3044907	0.19

Tune File#	1	d:\icpchem\1\7500\he.u
Tune File#	2	D:\ICPCHEM\1\7500\
Tune File#	3	D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\218ICAL.D\218ICAL.D#
Date Acquired: Aug 6 2008 10:08 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 06 2008 10:06 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	50461	0.87
51	V	72	1	1370715	0.13
52	Cr	72	1	1486150	1.41
55	Mn	72	1	1535146	1.14
59	Co	72	1	1943230	1.10
60	Ni	72	1	453509	0.35
63	Cu	72	1	1127895	2.09
66	Zn	72	1	224482	0.56
75	As	72	1	180646	2.29
78	Se	72	1	31778	3.94
95	Mo	115	1	516797	1.14
107	Ag	115	1	1547123	1.48
111	Cd	115	1	280967	1.43
118	Sn	115	1	718331	1.26
121	Sb	115	1	847676	1.35
137	Ba	115	1	342605	0.80
205	Tl	165	1	2262498	0.68
208	Pb	165	1	3136488	0.42
238	U	165	1	2933421	1.52

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	256332	1.13	259601	98.7	30 - 120	
72	Ge	1	713806	0.56	719776	99.2	30 - 120	
115	In	1	1952128	1.32	1953223	99.9	30 - 120	
165	Ho	1	3050264	0.43	3044907	100.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\219 CCV.D\219 CCV.D#
Date Acquired: Aug 6 2008 10:12 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 06 2008 10:10 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.390 ug/l	0.55	50	98.8	90 - 110	
51 V	72	1	51.030 ug/l	0.34	50	102.1	90 - 110	
52 Cr	72	1	49.980 ug/l	1.35	50	100.0	90 - 110	
55 Mn	72	1	49.730 ug/l	0.50	50	99.5	90 - 110	
59 Co	72	1	50.740 ug/l	0.84	50	101.5	90 - 110	
60 Ni	72	1	49.750 ug/l	0.73	50	99.5	90 - 110	
63 Cu	72	1	49.050 ug/l	0.90	50	98.1	90 - 110	
66 Zn	72	1	48.160 ug/l	2.55	50	96.3	90 - 110	
75 As	72	1	48.800 ug/l	2.46	50	97.6	90 - 110	
78 Se	72	1	48.050 ug/l	2.67	50	96.1	90 - 110	
95 Mo	115	1	49.510 ug/l	1.11	50	99.0	90 - 110	
107 Ag	115	1	49.100 ug/l	1.77	50	98.2	90 - 110	
111 Cd	115	1	48.930 ug/l	0.86	50	97.9	90 - 110	
118 Sn	115	1	49.820 ug/l	0.66	50	99.6	90 - 110	
121 Sb	115	1	49.040 ug/l	0.93	50	98.1	90 - 110	
137 Ba	115	1	49.000 ug/l	1.46	50	98.0	90 - 110	
205 Tl	165	1	51.170 ug/l	0.95	50	102.3	90 - 110	
208 Pb	165	1	49.690 ug/l	1.08	50	99.4	90 - 110	
238 U	165	1	50.330 ug/l	1.36	50	100.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	256677	0.65	259601	98.9	30 - 120	
72 Ge	1	713410	0.07	719776	99.1	30 - 120	
115 In	1	1972618	1.34	1953223	101.0	30 - 120	
165 Ho	1	3067580	0.43	3044907	100.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\220 CCB.D\220 CCB.D#
Date Acquired: Aug 6 2008 10:17 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 06 2008 10:10 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.022	ug/l	34.45	1.00	
51 V	72	1	0.026	ug/l	63.98	1.00	
52 Cr	72	1	0.019	ug/l	74.10	1.00	
55 Mn	72	1	0.009	ug/l	39.02	1.00	
59 Co	72	1	0.006	ug/l	45.51	1.00	
60 Ni	72	1	0.027	ug/l	45.23	1.00	
63 Cu	72	1	0.036	ug/l	7.88	1.00	
66 Zn	72	1	0.263	ug/l	28.03	10.00	
75 As	72	1	0.002	ug/l	403.59	5.00	
78 Se	72	1	0.101	ug/l	31.06	5.00	
95 Mo	115	1	0.005	ug/l	215.38	1.00	
107 Ag	115	1	0.006	ug/l	11.30	1.00	
111 Cd	115	1	0.005	ug/l	64.09	1.00	
118 Sn	115	1	0.021	ug/l	64.87	10.00	
121 Sb	115	1	0.021	ug/l	16.96	1.00	
137 Ba	115	1	-0.004	ug/l	149.53	1.00	
205 Tl	165	1	0.004	ug/l	39.76	1.00	
208 Pb	165	1	0.005	ug/l	30.79	1.00	
238 U	165	1	0.006	ug/l	17.59	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	261247	0.58	259601	100.6	30 - 120	
72 Ge	1	723271	0.64	719776	100.5	30 - 120	
115 In	1	1973532	0.86	1953223	101.0	30 - 120	
165 Ho	1	3057605	1.01	3044907	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\221ICSA.D\221ICSA.D#
Date Acquired: Aug 6 2008 10:22 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 06 2008 10:10 am
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	0.003 ug/l	173.21	10.00	
51	V	72	1	-0.232 ug/l	10.63	10.00	
52	Cr	72	1	0.938 ug/l	2.89	10.00	
55	Mn	72	1	1.801 ug/l	4.28	10.00	
59	Co	72	1	0.062 ug/l	12.47	10.00	
60	Ni	72	1	4.300 ug/l	2.62	10.00	
63	Cu	72	1	0.402 ug/l	6.11	10.00	
66	Zn	72	1	3.425 ug/l	3.75	100.00	
75	As	72	1	0.219 ug/l	19.68	50.00	
78	Se	72	1	0.232 ug/l	3.59	50.00	
95	Mo	115	1	1941.000 ug/l	1.30	10.00	
107	Ag	115	1	0.013 ug/l	37.61	10.00	
111	Cd	115	1	0.312 ug/l	32.03	10.00	
118	Sn	115	1	0.449 ug/l	7.78	100.00	
121	Sb	115	1	0.225 ug/l	7.70	10.00	
137	Ba	115	1	1.605 ug/l	4.44	10.00	
205	Tl	165	1	0.017 ug/l	35.70	10.00	
208	Pb	165	1	0.081 ug/l	12.08	10.00	
238	U	165	1	0.004 ug/l	27.54	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	210997	1.28	259601	81.3	30 - 120	
72	Ge	1	576466	0.91	719776	80.1	30 - 120	
115	In	1	1540421	1.44	1953223	78.9	30 - 120	
165	Ho	1	2680305	0.96	3044907	88.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\222ICSB.D\222ICSB.D#
Date Acquired: Aug 6 2008 10:27 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Aug 06 2008 10:10 am
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	93.300	0.96	100	93.3	80 - 120	
51 V	72	1	96.590	2.21	100	96.6	80 - 120	
52 Cr	72	1	95.750	2.37	100	95.8	80 - 120	
55 Mn	72	1	95.400	0.30	100	95.4	80 - 120	
59 Co	72	1	91.500	1.84	100	91.5	80 - 120	
60 Ni	72	1	91.260	0.97	100	91.3	80 - 120	
63 Cu	72	1	83.980	0.52	100	84.0	80 - 120	
66 Zn	72	1	91.460	0.45	100	91.5	80 - 120	
75 As	72	1	94.540	1.23	100	94.5	80 - 120	
78 Se	72	1	95.980	0.44	100	96.0	80 - 120	
95 Mo	115	1	1956.000	1.27	2100	93.1	80 - 120	
107 Ag	115	1	86.050	2.39	100	86.1	80 - 120	
111 Cd	115	1	93.540	2.48	100	93.5	80 - 120	
118 Sn	115	1	98.850	2.06	100	98.9	80 - 120	
121 Sb	115	1	98.950	2.52	100	99.0	80 - 120	
137 Ba	115	1	101.200	2.03	100	101.2	80 - 120	
205 Tl	165	1	93.960	0.42	100	94.0	80 - 120	
208 Pb	165	1	93.260	0.48	100	93.3	80 - 120	
238 U	165	1	100.000	1.20	100	100.0	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	204728	1.65	259601	78.9	30 - 120	
72 Ge	1	561358	1.28	719776	78.0	30 - 120	
115 In	1	1553944	1.43	1953223	79.6	30 - 120	
165 Ho	1	2654494	0.95	3044907	87.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\223WASH.D\223WASH.D#
Date Acquired: Aug 6 2008 10:32 am
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 06 2008 10:10 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.009 ug/l	86.61	10.00	
51 V	72	1	0.062 ug/l	77.54	10.00	
52 Cr	72	1	0.055 ug/l	40.51	10.00	
55 Mn	72	1	0.009 ug/l	70.92	10.00	
59 Co	72	1	0.006 ug/l	9.70	10.00	
60 Ni	72	1	0.037 ug/l	40.72	10.00	
63 Cu	72	1	0.019 ug/l	9.93	10.00	
66 Zn	72	1	0.221 ug/l	33.38	100.00	
75 As	72	1	0.013 ug/l	110.33	50.00	
78 Se	72	1	0.044 ug/l	415.08	50.00	
95 Mo	115	1	0.347 ug/l	4.60	10.00	
107 Ag	115	1	0.008 ug/l	22.38	10.00	
111 Cd	115	1	0.003 ug/l	324.05	10.00	
118 Sn	115	1	0.009 ug/l	98.02	100.00	
121 Sb	115	1	0.023 ug/l	32.62	10.00	
137 Ba	115	1	0.029 ug/l	15.77	10.00	
205 Tl	165	1	0.017 ug/l	0.54	10.00	
208 Pb	165	1	0.009 ug/l	38.39	10.00	
238 U	165	1	0.011 ug/l	27.99	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	248113	0.66	259601	95.6	30 - 120	
72 Ge	1	693647	0.43	719776	96.4	30 - 120	
115 In	1	1928000	0.23	1953223	98.7	30 - 120	
165 Ho	1	3038136	0.67	3044907	99.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\224 CCV.D\224 CCV.D#
Date Acquired: Aug 6 2008 10:36 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 06 2008 10:10 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.980 ug/l	0.70	50	100.0	90 - 110	
51 V	72	1	51.020 ug/l	0.45	50	102.0	90 - 110	
52 Cr	72	1	49.910 ug/l	1.04	50	99.8	90 - 110	
55 Mn	72	1	49.650 ug/l	0.49	50	99.3	90 - 110	
59 Co	72	1	50.010 ug/l	0.56	50	100.0	90 - 110	
60 Ni	72	1	50.190 ug/l	0.80	50	100.4	90 - 110	
63 Cu	72	1	49.270 ug/l	0.72	50	98.5	90 - 110	
66 Zn	72	1	48.500 ug/l	1.27	50	97.0	90 - 110	
75 As	72	1	48.520 ug/l	1.92	50	97.0	90 - 110	
78 Se	72	1	48.180 ug/l	3.24	50	96.4	90 - 110	
95 Mo	115	1	49.460 ug/l	2.87	50	98.9	90 - 110	
107 Ag	115	1	49.120 ug/l	1.84	50	98.2	90 - 110	
111 Cd	115	1	49.060 ug/l	2.11	50	98.1	90 - 110	
118 Sn	115	1	49.490 ug/l	2.94	50	99.0	90 - 110	
121 Sb	115	1	48.820 ug/l	1.65	50	97.6	90 - 110	
137 Ba	115	1	49.310 ug/l	2.14	50	98.6	90 - 110	
205 Tl	165	1	51.080 ug/l	0.76	50	102.2	90 - 110	
208 Pb	165	1	50.430 ug/l	0.47	50	100.9	90 - 110	
238 U	165	1	50.870 ug/l	2.01	50	101.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	250508	0.73	259601	96.5	30 - 120	
72 Ge	1	694678	0.25	719776	96.5	30 - 120	
115 In	1	1950212	1.74	1953223	99.8	30 - 120	
165 Ho	1	3027000	1.22	3044907	99.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG080508.B\225 CCB.D\225 CCB.D#
Date Acquired: Aug 6 2008 10:41 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Aug 06 2008 10:10 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.013	ug/l	100.68	1.00	
51 V	72	1	0.044	ug/l	75.71	1.00	
52 Cr	72	1	0.059	ug/l	58.06	1.00	
55 Mn	72	1	0.012	ug/l	76.77	1.00	
59 Co	72	1	0.007	ug/l	19.52	1.00	
60 Ni	72	1	0.027	ug/l	56.75	1.00	
63 Cu	72	1	0.025	ug/l	23.62	1.00	
66 Zn	72	1	0.211	ug/l	37.61	10.00	
75 As	72	1	0.006	ug/l	42.23	5.00	
78 Se	72	1	0.023	ug/l	500.43	5.00	
95 Mo	115	1	0.047	ug/l	10.34	1.00	
107 Ag	115	1	0.007	ug/l	55.96	1.00	
111 Cd	115	1	0.002	ug/l	353.59	1.00	
118 Sn	115	1	0.019	ug/l	39.96	10.00	
121 Sb	115	1	0.027	ug/l	10.83	1.00	
137 Ba	115	1	-0.005	ug/l	158.31	1.00	
205 Tl	165	1	0.007	ug/l	107.50	1.00	
208 Pb	165	1	0.005	ug/l	35.52	1.00	
238 U	165	1	0.006	ug/l	25.04	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	255250	1.14	259601	98.3	30 - 120	
72 Ge	1	714239	0.58	719776	99.2	30 - 120	
115 In	1	1950828	0.27	1953223	99.9	30 - 120	
165 Ho	1	3052582	0.49	3044907	100.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG080508.B\217CALB.D\217CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D8G210174

Client: Parsons

Batch(es) #: 8246402

Associated Samples: 18, 19, 20

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 9/4/08

Metals Raw Data RoadMap

LotID		Metal	WorkOrder	Anal Date	TestDesc	Batch	File Id	Instr
D8G210174	18	ZN	KRW3C1A	20080904	6020_S	8246402	AG090308	024
D8G210174	18	PB	KRW3C1A	20080904	6020_S	8246402	AG090308	024
D8G210174	18	SB	KRW3C1A	20080904	6020_S	8246402	AG090308	024
D8G210174	18	CU	KRW3C1A	20080904	6020_S	8246402	AG090308	024
D8G210174	19	ZN	KRW3D1A	20080904	6020_S	8246402	AG090308	024
D8G210174	19	PB	KRW3D1A	20080904	6020_S	8246402	AG090308	024
D8G210174	19	SB	KRW3D1A	20080904	6020_S	8246402	AG090308	024
D8G210174	19	CU	KRW3D1A	20080904	6020_S	8246402	AG090308	024
D8G210174	20	CU	KRW3E1AJ	20080904	6020_S	8246402	AG090308	024
D8G210174	20	ZN	KRW3E1A	20080904	6020_S	8246402	AG090308	024
D8G210174	20	PB	KRW3E1A	20080904	6020_S	8246402	AG090308	024
D8G210174	20	SB	KRW3E1A	20080904	6020_S	8246402	AG090308	024

METALS
PREPARATION LOGS
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Batch Number: **8246402**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: JAY WILLMS

Prep Date: 09/03/08
Due Date: 08/08/08

Lot	Work Order			Initial Weight/Volume
D8I020000 Solid	**KV5TJ**	B	Due Date: SDG:	10 g
D8I020000 Solid	**KV5TJ**	C	Due Date: SDG:	10 g
D8G210174 Solid	**KRW3C** Total		Due Date: 08/08/08 SDG:	10.16 g
D8G210174 Solid	**KRW3D** Total		Due Date: 08/08/08 SDG:	10.03 g
D8G210174 Solid	**KRW3E** Total		Due Date: 08/08/08 SDG:	9.79 g

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

ICPMS ELEMENTS WITHIN THE BATCH:
CU PB SB ZN

V checked 9/3/08

METALS PREP SHEET
SOP: DEN-IP-0015

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

10 GRAM SOIL DIGESTION FOR ICP-MS (Prep code 46)

BATCH # 8246402
PREP DATE: 9/3/2008
BALANCE ID: M28318

ALLIQUOTTED BY: JKH
DIGESTED BY: JRW

CONSUMABLES USED

Digestion Cups: **50mL** **Manufacturer:** Environmental Express **Lot #:** A803LS180
100l **Manufacturer:** Environmental Express **Lot #:** A801LP001

Filter Paper: All samples and QC filtered? ☒ Yes ☐ No
Manufacturer: Ahlstrom **Size:** Grade 55
Lot #: 736181 **Analyst(s) Initials:** JRW

STANDARDS USED

Standard ID	Verification #	Exp. Date	Spike Amount	Pipette ID
~~2008Cal-1~~	~~STD-4716-08~~	8/27/09	1000uL	13
2008Cal-2	STD-4726-08	8/27/09	1000uL	13

REAGENTS USED

Reagent	Manufacturer	Lot #	Volume Used (mL)
HNO_3	JT Baker	G17027	10 x 5
H_2O_2	JT Baker	E47H10	

TEMPERATURE CYCLES

		Aliquot						Aliquot				
		1	2	3	4	5		1	2	3	4	5
Cycle	Start Time	Temperature (°C)					End Time	Temperature (°C)				
1:1 HNO3	900	95	95	95	95	95	910	95	95	95	95	95
HNO3	915	95	95	95	95	95	1041	95	95	95	95	95
H2O2	1120	95	95	95	95	95	1300	95	95	95	95	95
Thermometer ID:		4110	4110	4110	4110	4110	**Block & Cup # :**	3/21	3/21	3/21	3/21	3/21

Samples and QC revolumed to: 500 mL Analyst's Initials JRW

COMMENTS:

I certify that all information above is correct and complete.

Signature: [signature] ***Date:*** 9/3/08

METALS
SAMPLE DATA
ICP-MS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ICP-MS Standard and Spike True Values

Element	Calibration Standard	Initial Calibration Standard	Continuing Calibration Standard	Interference Check Sample A	Interference Check Sample AB	Laboratory Control Sample and Duplicate	Matrix Spike Sample and Duplicate	Post Digestion Spike
Aluminum	100	40	50		--	40	40	200
Antimony	100	40	50	100,000 Aluminum	100	40	40	200
Arsenic	100	40	50	100,000 Calcium	100	40	40	200
Barium	100	40	50	100,000 Iron	100	40	40	200
Beryllium	100	40	50	100,000 Magnesium	100	40	40	200
Cadmium	100	40	50	100,000 Sodium	100	40	40	200
Chromium	100	40	50	100,000 Phosphorus	100	40	40	200
Cobalt	100	40	50	100,000 Potassium	100	40	40	200
Copper	100	40	50	100,000 Sulfur	100	40	40	200
Iron	5000	1000	2500	200,000 Carbon	--	1000	1000	5000
Lead	100	40	50	1,000,000 Chloride	100	40	40	200
Manganese	100	40	50	2000 Molybdenum	--	40	40	200
Molybdenum	100	40	50	2000 Titanium	100	40	40	200
Nickel	100	40	50		100	40	40	200
Selenium	100	40	50		100	40	40	200
Silver	100	40	50		100	40	40	200
Thallium	100	40	50		100	40	40	200
Thorium	100	40	50		100	40	40	200
Tin	100	40	50		100	40	40	200
Uranium	100	40	50		100	40	40	200
Vanadium	100	40	50		100	40	40	200
Zinc	100	40	50		100	40	40	200

All units are ug/L.

Due to the presence of trace contaminants in the ICSA solution, the % recovery for the ICSAB solution is calculated by subtracting the levels in the ICSA from the ICSAB.

Quality Control Standards

QC Std.1 = Initial Calibration Verification (ICV)

QC Std.2 = Initial Calibration Blank (ICB)

QC Std.3 = Continuing Calibration Verification (CCV)

QC Std.4 = Continuing Calibration Blank (CCB)

TestAmerica Denver

Standards Preparation Logbook Record

Sep-04-2008

Logbook: \\Densvr06\StdsLog\metals.std

STD4871-07, 1000 Se

Analyst: TRUDELLL

Vendor: Inorganic Ventures Lot No.: Z-SE01120 Vendor's Expiration Date: 10-01-2008
Solvent: 2% HNO3
Date Prep./Opened: 10-02-2007 Date Received: 10-02-2007
Date Expires(1): 10-01-2008 (None)
Date Expires(2): 10-01-2008 (None)
Inventory ID: 667

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1,000.0

STD0410-08, 1000 Zn (Inorganic Ventures)

Analyst: trudelll

Vendor: Inorganic Ventures Lot No.: A2-ZN02040 Vendor's Expiration Date: 02-01-2009
Solvent: 2% HNO3
Date Prep./Opened: 01-28-2008 Date Received: 01-28-2008
Date Expires(1): 02-01-2009 (None)
Date Expires(2): 02-01-2009 (None)
Inventory ID: 704

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1,000.0

STD2251-08, 1000 mg/L Sn

Analyst: LILLT

Vendor: Inorganic Ventures Lot No.: B2-SN02014 Vendor's Expiration Date: 06-01-2009
Solvent: H2O tr. HNO3 tr.HF
Date Prep./Opened: 04-30-2008 Date Received: 04-23-2007
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Inventory ID: 610

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1,000.0

STD2862-08, 1 mg/l Se

Analyst: LILLT

Solvent: 3% HN03 Lot No.: G07057 Volume (ml): 100.00
Date Prep./Opened: 05-23-2008
Date Expires(1): 10-01-2008 (1 Year)
pipette: Met 21

Parent Std No.: STD4871-07, 1000 Se — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 10-01-2008 Parent Date Expires(2): 10-01-2008

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1,000.0	1.0000

STD4030-08, ICP-MS 1 ppm Sn Std — Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 01-23-2009 (6 Months)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn — Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	1.0000

STD4031-08, ICP-MS 1 ppm Zn Std — Analyst: LILLT

Solvent: 3% HN03 Lot No.: G17027 Volume (ml): 20.000
Date Prep./Opened: 07-23-2008
Date Expires(1): 02-01-2009 (1 Year)
Date Expires(2): 02-01-2009 (None)
pipettes: Met 21 and Met 8

Parent Std No.: STD0410-08, 1000 Zn (Inorganic Ventures) — Aliquot Amount (ml): 0.0200
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
1000 Zn	1,000.0	1.0000

STD4815-08, ICP-MS (024) INT STD — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 250.00
Date Prep./Opened: 09-02-2008
Date Expires(1): 11-16-2008 (1 Year)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD1733-08, Lithium 6 Stock — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-07-2009 Parent Date Expires(2): 05-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Lithium6	1,000.0	4,000.0

Parent Std No.: STD2349-08, Indium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
In	1,000.0	1,000.0

Parent Std No.: STD5820-07, Germanium Stock — Aliquot Amount (ml): 0.7500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ge	1,000.0	3,000.0

Parent Std No.: STD5822-07, Holmium Stock — Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 11-16-2008 Parent Date Expires(2): 12-01-2008

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ho	1,000.0	1,000.0

STD4818-08, ICP-MS BLANK — Analyst: LILLT

Solvent: Water — Volume (ml): 1,000.0
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD4817-08, NITRIC ACID — Aliquot Amount (ml): 50.000

Component	Initial Conc (%)	Final Conc (%)
HNO3	100.00	5.0000

STD4819-08, ICP-MS 10 ppm Sn — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 — Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 04-30-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD2251-08, 1000 mg/L Sn — Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Sn	1,000.0	10.000

STD4820-08, ICP-MS CCV — Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 — Volume (ml): 100.00
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD3982-08, Iron Stock — Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Fe	1,000.0	2,500.0

Parent Std No.: STD4716-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	50.000
Sb	20.000	50.000

Parent Std No.: STD4726-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 08-27-2009 Parent Date Expires(2): 09-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	50.000
Al	20.000	50.000
As	20.000	50.000
Ba	20.000	50.000
Be	20.000	50.000
Cd	20.000	50.000
Co	20.000	50.000
Cr	20.000	50.000
Cu	20.000	50.000
Mn	20.000	50.000
Ni	20.000	50.000
Pb	20.000	50.000
Se	20.000	50.000
Th	20.000	50.000
Tl	20.000	50.000
U	20.000	50.000
V	20.000	50.000
Zn	20.000	50.000

Parent Std No.: STD4819-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	50.000

STD4821-08, ICP-MS 100 ppb cal

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 50.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Expires(2): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20

Parent Std No.: STD4716-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.2500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD4726-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.2500
Parent Date Expires(1): 08-27-2009 Parent Date Expires(2): 09-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00
Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4819-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4822-08, ICPMS RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD4030-08, ICP-MS 1 ppm Sn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 01-23-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	1.0000	9.0000

Parent Std No.: STD4031-08, ICP-MS 1 ppm Zn Std Aliquot Amount (ml): 0.0900
Parent Date Expires(1): 02-01-2009 Parent Date Expires(2): 02-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
1000 Zn	1.0000	9.0000

Parent Std No.: STD4821-08, ICP-MS 100 ppb cal Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 09-04-2008 Parent Date Expires(2): 09-04-2008

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Mo	100.00	1.0000
Sb	100.00	1.0000

Ag	100.00	1.0000
Al	100.00	1.0000
As	100.00	1.0000
Ba	100.00	1.0000
Be	100.00	1.0000
Cd	100.00	1.0000
Co	100.00	1.0000
Cr	100.00	1.0000
Cu	100.00	1.0000
Mn	100.00	1.0000
Ni	100.00	1.0000
Pb	100.00	1.0000
Se	100.00	1.0000
Th	100.00	1.0000
Tl	100.00	1.0000
U	100.00	1.0000
V	100.00	1.0000
Zn	100.00	1.0000
Sn	100.00	1.0000

STD4823-08, ICP-MS AFCEE RL STD

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 19

Parent Std No.: STD4822-08, ICPMS RL STD Aliquot Amount (ml): 2.0000

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Sn	9.0000	1.8000
1000 Zn	9.0000	1.8000
Mo	1.0000	0.2000
Sb	1.0000	0.2000
Ag	1.0000	0.2000
Al	1.0000	0.2000
As	1.0000	0.2000
Ba	1.0000	0.2000
Be	1.0000	0.2000
Cd	1.0000	0.2000
Co	1.0000	0.2000
Cr	1.0000	0.2000
Cu	1.0000	0.2000
Mn	1.0000	0.2000
Ni	1.0000	0.2000
Pb	1.0000	0.2000
Se	1.0000	0.2000
Th	1.0000	0.2000
Tl	1.0000	0.2000

U	1.0000	0.2000
V	1.0000	0.2000
Zn	1.0000	0.2000
Sn	1.0000	0.2000

STD4824-08, ICP-MS ICSAB Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 8, Met 20, and Met 21

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

Parent Std No.: STD4716-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	100.00
Sb	20.000	100.00

Parent Std No.: STD4726-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.0500
Parent Date Expires(1): 08-27-2009 Parent Date Expires(2): 09-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	100.00
Al	20.000	100.00
As	20.000	100.00
Ba	20.000	100.00
Be	20.000	100.00
Cd	20.000	100.00
Co	20.000	100.00
Cr	20.000	100.00
Cu	20.000	100.00
Mn	20.000	100.00
Ni	20.000	100.00
Pb	20.000	100.00
Se	20.000	100.00

Th	20.000	100.00
Tl	20.000	100.00
U	20.000	100.00
V	20.000	100.00
Zn	20.000	100.00

Parent Std No.: STD4819-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 0.1000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	100.00

STD4825-08, ICPMS LR STD 1000 ppb

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 20 and Met 8

Parent Std No.: STD4716-08, ICPMS 2008CAL-1 Inorganic Ventures Aliquot Amount (ml): 0.5000

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Mo	20.000	1,000.0
Sb	20.000	1,000.0

Parent Std No.: STD4726-08, ICPMS 2008CAL-2 Inorganic Ventures Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 08-27-2009 Parent Date Expires(2): 09-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Ag	20.000	1,000.0
Al	20.000	1,000.0
As	20.000	1,000.0
Ba	20.000	1,000.0
Be	20.000	1,000.0
Cd	20.000	1,000.0
Co	20.000	1,000.0
Cr	20.000	1,000.0
Cu	20.000	1,000.0
Mn	20.000	1,000.0
Ni	20.000	1,000.0
Pb	20.000	1,000.0
Se	20.000	1,000.0
Th	20.000	1,000.0
Tl	20.000	1,000.0
U	20.000	1,000.0
V	20.000	1,000.0
Zn	20.000	1,000.0

Parent Std No.: STD4819-08, ICP-MS 10 ppm Sn Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-30-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Sn	10.000	1,000.0

STD4826-08, ICPMS ICV

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 09-04-2008 (1 Day)
Date Expires(2): 02-18-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)
pipettes: Met 21 and Met 8

Parent Std No.: STD0845-08, ICPMS ICV SOLUTION A (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Al	10.000	40.000
As	10.000	40.000
Ba	10.000	40.000
Be	10.000	40.000
Cd	10.000	40.000
Co	10.000	40.000
Cr	10.000	40.000
Cu	10.000	40.000
Fe	250.00	1,000.0
Li	10.000	40.000
Mn	10.000	40.000
Ni	10.000	40.000
Pb	10.000	40.000
Se	10.000	40.000
Th	10.000	40.000
Tl	10.000	40.000
U	10.000	40.000
V	10.000	40.000
Zn	10.000	40.000

Parent Std No.: STD0846-08, ICPMS ICV SOLUTION B (High Purity) Aliquot Amount (ml): 0.0400
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 02-18-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Ag	10.000	40.000
Mo	10.000	40.000
Sb	10.000	40.000
Sn	10.000	40.000
Zr	10.000	40.000

STD4827-08, ALTSe

Analyst: LILLT

Solvent: 5% HNO3 Lot No.: G17027 Volume (ml): 10.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 10-01-2008 (1 Year)
pipettes: Met 21 and Met 8

Parent Std No.: STD2862-08, 1 mg/l Se — Aliquot Amount (ml): 0.0500

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Se	1.0000	0.0050

STD4829-08, ICP-MS ICSA — Analyst: LILLT

Solvent: 5% HNO3 — Lot No.: G17027 — Volume (ml): 50.000
Date Prep./Opened: 09-03-2008
Date Expires(1): 05-05-2009 (1 Year)
pipettes: Met 8

Parent Std No.: STD2350-08, ICPMS Interferent Check Standard — Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 05-05-2009 Parent Date Expires(2): 06-01-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/L)
Al	1,000.0	100,000
C	2,000.0	200,000
Ca	1,000.0	100,000
CL	10,000	1,000,000
Fe	1,000.0	100,000
K	1,000.0	100,000
Mg	1,000.0	100,000
Mo	20.000	2,000.0
Na	1,000.0	100,000
P	1,000.0	100,000
S	1,000.0	100,000
Ti	20.000	2,000.0

Reviewed By: 9/4/08

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) ICPMS_024 (024) Reported: 09/04/08 09:47:00

File ID: AG090308 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
2	Cal Blank				1.0	09/03/08 16:05		☐
3	Cal Blank				1.0	09/03/08 16:10		☐
4	100 ppb				1.0	09/03/08 16:14		☐
5	ICV				1.0	09/03/08 16:19		☐
6	ICB				1.0	09/03/08 16:24		☐
7	RL STD				1.0	09/03/08 16:29		☐
8	ALTSe				1.0	09/03/08 16:34		☐
9	AFCEE RL				1.0	09/03/08 16:38		☐
10	ICSA				1.0	09/03/08 16:43		☐
11	ICSAB				1.0	09/03/08 16:48		☐
12	WASH				1.0	09/03/08 16:53		☐
13	LR				1.0	09/03/08 16:58		☐
14	WASH				1.0	09/03/08 17:02		☐
15	CCV				1.0	09/03/08 17:07		☐
16	CCB				1.0	09/03/08 17:12		☐
17	KVR5QBF	D8H260000	8239360	MD	1.0	09/03/08 17:17		☐
18	KVR5QCF	D8H260000	8239360	MD	1.0	09/03/08 17:22		☐
19	KT97TF 5X	D8H160211-5	8239360	MD	5.0	09/03/08 17:26		☐
20	KVN9FF	D8H230188-1	8239360	MD	1.0	09/03/08 17:31		☐
21	KVN9FP5F	D8H230188	8239360		5.0	09/03/08 17:36		☐
22	KVN9FZF	D8H230188-1	8239360		1.0	09/03/08 17:41		☐
23	KVN9FSF	D8H230188-1	8239360	MD	1.0	09/03/08 17:46		☐
24	KVN9FDF	D8H230188-1	8239360	MD	1.0	09/03/08 17:50		☐
25	KVN9MF	D8H230188-2	8239360	MD	1.0	09/03/08 17:55		☐
26	KVN92F	D8H230191-2	8239360	MD	1.0	09/03/08 18:00		☐
27	CCV				1.0	09/03/08 18:05		☐
28	CCB				1.0	09/03/08 18:10		☐
29	KVJNDZF	D8H210235-1	8239366		1.0	09/03/08 18:15		☐
30	CCV				1.0	09/03/08 18:19		☐
31	CCB				1.0	09/03/08 18:24		☐
32	KNJ39 2X				2.5	09/03/08 18:29		☐
33	CCV				1.0	09/03/08 18:34		☐
34	CCB				1.0	09/03/08 18:39		☐
35	KVWF3B	D8H270000	8240391	05	1.0	09/03/08 18:43		☐
36	KVWF3C	D8H270000	8240391	05	1.0	09/03/08 18:48		☐
37	KVWF3L	D8H270000	8240391	05	1.0	09/03/08 18:53		☐
38	KVLVW	D8H220178-1	8240391	05	1.0	09/03/08 18:58		☐
39	KVLVWP5	D8H220178	8240391		5.0	09/03/08 19:03		☐
40	KVLVWZ	D8H220178-1	8240391		1.0	09/03/08 19:08		☐
41	KVLVWX	D8H220178-1	8240391	05	1.0	09/03/08 19:12		☐
42	CCV				1.0	09/03/08 19:17		☐
43	CCB				1.0	09/03/08 19:22		☐
44	KVXKTB	D8H280000	8241105	46	1.0	09/03/08 19:27		☐
45	KVXKTC	D8H280000	8241105	46	1.0	09/03/08 19:32		☐
46	KVV5N	D8H270196-1	8241105	46	1.0	09/03/08 19:36		☐
47	KVV6Q	D8H270196-2	8241105	46	1.0	09/03/08 19:41		☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 09/04/08 09:47:00

File ID: AG090308 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
48	KVV6QP5	D8H270196	8241105		5.0	09/03/08 19:46		☐
49	KVV6QZ	D8H270196-2	8241105		1.0	09/03/08 19:51		☐
50	CCV				1.0	09/03/08 19:56		☐
51	CCB				1.0	09/03/08 20:01		☐
52	KVV6QS	D8H270196-2	8241105	46	1.0	09/03/08 20:05		☐
53	KVV6QD	D8H270196-2	8241105	46	1.0	09/03/08 20:10		☐
54	KVV7F	D8H270196-3	8241105	46	1.0	09/03/08 20:15		☐
55	KVV7R	D8H270196-4	8241105	46	1.0	09/03/08 20:20		☐
56	KVV7T	D8H270196-5	8241105	46	1.0	09/03/08 20:25		☐
57	CCV				1.0	09/03/08 20:29		☐
58	CCB				1.0	09/03/08 20:34		☐
59	KVV6Q	D8H270196-2	8241105	46	1.0	09/03/08 20:39		☐
60	KVV6QS	D8H270196-2	8241105	46	1.0	09/03/08 20:44		☐
61	KVV6QD	D8H270196-2	8241105	46	1.0	09/03/08 20:49		☐
62	CCV				1.0	09/03/08 20:53		☐
63	CCB				1.0	09/03/08 20:58		☐
64	ICSA				1.0	09/03/08 21:03		☐
65	ICSAB				1.0	09/03/08 21:08		☐
66	WASH				1.0	09/03/08 21:13		☐
67	CCV				1.0	09/03/08 21:17		☐
68	CCB				1.0	09/03/08 21:22		☐
69	KVV9WBF	D8H270000	8240363	MD	1.0	09/03/08 21:27		☐
70	KVV9WCF	D8H270000	8240363	MD	1.0	09/03/08 21:32		☐
71	KVTN5F	D8H260255-1	8240363	MD	1.0	09/03/08 21:37		☐
72	KVTPVF	D8H260255-2	8240363	MD	1.0	09/03/08 21:42		☐
73	KVTP0F	D8H260255-3	8240363	MD	1.0	09/03/08 21:46	YMH 9/4/08	☐
74	KVTP2F	D8H260255-4	8240363	MD	1.0	09/03/08 21:51	Takeall but Ni. Ef.	☐
75	KVTP4F	D8H260255-5	8240363	MD	1.0	09/03/08 21:56	9/4/08	☐
76	KVTP4P5F	D8H260255	8240363		5.0	09/03/08 22:01		☐
77	CCV				1.0	09/03/08 22:06		☐
78	CCB				1.0	09/03/08 22:10		☐
79	~~KVTP4ZF~~	~~D8H260255-5~~	~~8240363~~		~~1.0~~	~~09/03/08 22:15~~	DNM 9/4/08	☐
80	KVTP4SF	D8H260255-5	8240363	MD	1.0	09/03/08 22:20		☐
81	KVTP4DF	D8H260255-5	8240363	MD	1.0	09/03/08 22:25		☐
82	KVTP4ZF	D8H260255-5	8240363		1.0	09/03/08 22:30		☐
83	KVTP9F	D8H260255-6	8240363	MD	1.0	09/03/08 22:35		☐
84	KVTQCF	D8H260255-7	8240363	MD	1.0	09/03/08 22:39		☐
85	KVTQDF	D8H260255-8	8240363	MD	1.0	09/03/08 22:44		☐
86	KVTQFF	D8H260255-9	8240363	MD	1.0	09/03/08 22:49		☐
87	KVTQLF	D8H260255-11	8240363	MD	1.0	09/03/08 22:54		☐
88	CCV				1.0	09/03/08 22:59		☐
89	CCB				1.0	09/03/08 23:03		☐
90	~~RINSE~~				~~1.0~~	~~09/03/08 23:08~~		☐
91	RINSE				1.0	09/03/08 23:13		☐
92	RINSE				1.0	09/03/08 23:18		☐
93	~~RINSE~~				~~1.0~~	~~09/03/08 23:23~~	9/4/08	☐

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 09/04/08 09:47:00

File ID: AG090308 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
94	~~RINSE~~				1.0	~~09/03/08 23:27~~		
95	RINSE				1.0	09/03/08 23:32		
96	RINSE				1.0	09/03/08 23:37		
97	~~Cal Blank~~				1.0	~~09/03/08 23:42~~	KF 9/4/08	
98	Cal Blank				1.0	09/03/08 23:47		
99	100 ppb				1.0	09/03/08 23:51		
100	CCV				1.0	09/03/08 23:56		
101	CCB				1.0	09/04/08 00:01		
102	ICSA				1.0	09/04/08 00:06		
103	ICSAB				1.0	09/04/08 00:11		
104	WASH				1.0	09/04/08 00:15		
105	CCV				1.0	09/04/08 00:20		
106	CCB				1.0	09/04/08 00:25		
107	KV5TJB	D8I020000	8246402	46	1.0	09/04/08 00:30		
108	KV5TJC	D8I020000	8246402	46	1.0	09/04/08 00:35		
109	KRW3C	D8G210174-18	8204479	46	1.0	09/04/08 00:39		
110	KRW3CP5	D8G210174	8204479		5.0	09/04/08 00:44		
111	KRW3CZ	D8G210174-18	8204479		1.0	09/04/08 00:49		
112	KRW3D	D8G210174-19	8204479	46	1.0	09/04/08 00:54		
113	KRW3E	D8G210174-20	8204479	46	1.0	09/04/08 00:59		
114	CCV		8246402		1.0	09/04/08 01:03		
115	CCB		KF 9/4/08		1.0	09/04/08 01:08		
116	KVRVHB	D8H260000	8239299	46	1.0	09/04/08 01:13		
117	KVRVHC	D8H260000	8239299	46	1.0	09/04/08 01:18		
118	KVK04	D8H210365-1	8239299	46	1.0	09/04/08 01:23		
119	KVK05	D8H210365-2	8239299	46	1.0	09/04/08 01:28		
120	KVK06	D8H210365-3	8239299	46	1.0	09/04/08 01:32		
121	KVK07	D8H210365-4	8239299	46	1.0	09/04/08 01:37		
122	KVK08	D8H210365-5	8239299	46	1.0	09/04/08 01:42		
123	KVK09	D8H210365-6	8239299	46	1.0	09/04/08 01:47		
124	KVK1A	D8H210365-7	8239299	46	1.0	09/04/08 01:52		
125	CCV				1.0	09/04/08 01:56		
126	CCB				1.0	09/04/08 02:01		
127	KVK1C	D8H210365-8	8239299	46	1.0	09/04/08 02:06		
128	KVK1D	D8H210365-9	8239299	46	1.0	09/04/08 02:11		
129	KVK1DP5	D8H210365	8239299		5.0	09/04/08 02:16		
130	KVK1DZ	D8H210365-9	8239299		1.0	09/04/08 02:21		
131	KVK1DS	D8H210365-9	8239299	46	1.0	09/04/08 02:25		
132	KVK1DD	D8H210365-9	8239299	46	1.0	09/04/08 02:30		
133	KVK1E	D8H210365-10	8239299	46	1.0	09/04/08 02:35		
134	KVK1F	D8H210365-11	8239299	46	1.0	09/04/08 02:40		
135	CCV				1.0	09/04/08 02:45		
136	CCB				1.0	09/04/08 02:50		
137	~~RINSE~~				1.0	~~09/04/08 02:54~~		
138	RINSE				1.0	09/04/08 02:59		
139	~~RINSE~~				1.0	~~09/04/08 03:04~~	KF 9/4/08	

Denver

RUN SUMMARY

Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 09/04/08 09:47:00

File ID: AG090308 **Analyst: TEL**

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
140	~~RINSE~~				1.0	09/04/08 03:09		☐
141	RINSE				1.0	09/04/08 03:13		☐
142	RINSE				1.0	09/04/08 03:18		☐
143	RINSE				1.0	09/04/08 03:23		☐
144	~~Cal Blank~~				1.0	09/04/08 03:28	KF 9/4/08	☐
145	Cal Blank				1.0	09/04/08 03:33		☐
146	100 ppb				1.0	09/04/08 03:37		☐
147	CCV				1.0	09/04/08 03:42		☐
148	CCB				1.0	09/04/08 03:47		☐
149	ICSA				1.0	09/04/08 03:52		☐
150	ICSAB				1.0	09/04/08 03:57		☐
151	WASH				1.0	09/04/08 04:01		☐
152	CCV				1.0	09/04/08 04:06		☐
153	CCB				1.0	09/04/08 04:11		☐
154	~~KV47PB~~	~~D8I020000~~	~~8246196~~	~~46~~	1.0	09/04/08 04:16		☐
155	KV47PC	D8I020000	8246196	46	1.0	09/04/08 04:21		☐
156	KV23Q	D8H290273-1	8246196	46	1.0	09/04/08 04:25		☐
157	KV23QP5	D8H290273	8246196		5.0	09/04/08 04:30		☐
158	KV23QZ	D8H290273-1	8246196		1.0	09/04/08 04:35		☐
159	KV23QS	D8H290273-1	8246196	46	1.0	09/04/08 04:40		☐
160	KV23QD	D8H290273-1	8246196	46	1.0	09/04/08 04:45		☐
161	KV24M	D8H290273-2	8246196	46	1.0	09/04/08 04:50		☐
162	KV24N	D8H290273-3	8246196	46	1.0	09/04/08 04:54		☐
163	KV24T	D8H290273-4	8246196	46	1.0	09/04/08 04:59		☐
164	CCV				1.0	09/04/08 05:04		☐
165	CCB				1.0	09/04/08 05:09		☐
166	KV241	D8H290273-5	8246196	46	1.0	09/04/08 05:14		☐
167	KV243	D8H290273-6	8246196	46	1.0	09/04/08 05:19		☐
168	KV246	D8H290273-7	8246196	46	1.0	09/04/08 05:23		☐
169	KV248	D8H290273-8	8246196	46	1.0	09/04/08 05:28		☐
170	KV25A	D8H290273-9	8246196	46	1.0	09/04/08 05:33		☐
171	KV25C	D8H290273-10	8246196	46	1.0	09/04/08 05:38		☐
172	KV25E	D8H290273-11	8246196	46	1.0	09/04/08 05:43		☐
173	KV25F	D8H290273-12	8246196	46	1.0	09/04/08 05:48		☐
174	KV2RW	D8H290122-8	8246196	46	1.0	09/04/08 05:52		☐
175	KV2TL	D8H290122-9	8246196	46	1.0	09/04/08 05:57		☐
176	CCV				1.0	09/04/08 06:02		☐
177	CCB				1.0	09/04/08 06:07		☐
178	KV23Q	D8H290273-1	8246196	46	1.0	09/04/08 06:12		☐
179	KV23QS	D8H290273-1	8246196	46	1.0	09/04/08 06:17		☐
180	KV23QD	D8H290273-1	8246196	46	1.0	09/04/08 06:21		☐
181	CCV				1.0	09/04/08 06:26		☐
182	CCB				1.0	09/04/08 06:31		☐
183	KVXKFB	D8H280000	8241098	46	1.0	09/04/08 06:36		☐
184	KVXKFC	D8H280000	8241098	46	1.0	09/04/08 06:41		☐
185	~~KVV3L~~	~~D8H270187-1~~	~~8241098~~	~~46~~	1.0	09/04/08 06:46	KF 9/4/08 Did not use.	☐

Denver

RUN SUMMARY

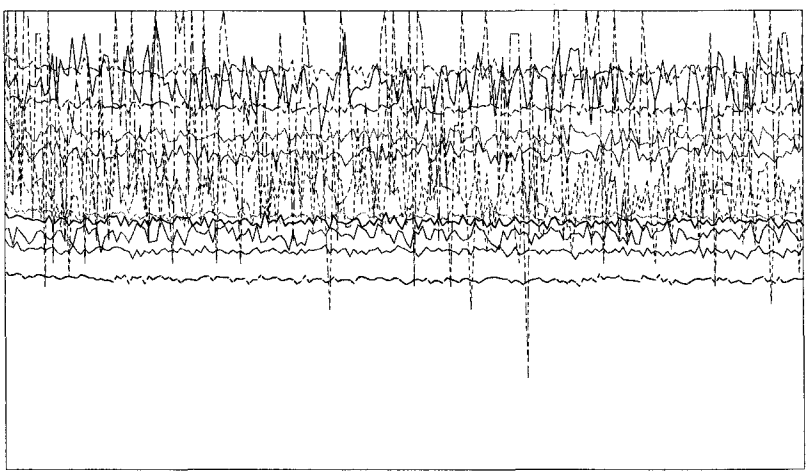
Method: 6020 (ICP/MS) | ICPMS_024 (024) | Reported: 09/04/08 09:47:00

File ID: AG090308 **Analyst:** TEL

#	Sample ID	Lot No.	Batch		DF	Analyzed Date	Comment	Q
186	~~KVV4M~~	~~D8H270187-2~~	~~8241098~~	~~46~~	~~1.0~~	~~09/04/08 06:50~~		☐
187	KVV4MP5	D8H270187	8241098		5.0	09/04/08 06:55		☐
188	KVV4MZ	D8H270187-2	8241098		1.0	09/04/08 07:00		☐
189	KVV4MS	D8H270187-2	8241098	46	1.0	09/04/08 07:05		☐
190	KVV4MD	D8H270187-2	8241098	46	1.0	09/04/08 07:10		☐
191	KVV55	D8H270187-3	8241098	46	1.0	09/04/08 07:15		☐
192	KVV6N	D8H270187-4	8241098	46	1.0	09/04/08 07:20		☐
193	CCV				1.0	09/04/08 07:24		☐
194	CCB				1.0	09/04/08 07:29		☐
195	KVV75	D8H270187-5	8241098	46	1.0	09/04/08 07:34		☐
196	KVV8G	D8H270187-6	8241098	46	1.0	09/04/08 07:39		☐
197	KVV85	D8H270187-7	8241098	46	1.0	09/04/08 07:44		☐
198	KVV9H	D8H270187-8	8241098	46	1.0	09/04/08 07:48		☐
199	KVV9P	D8H270187-9	8241098	46	1.0	09/04/08 07:53		☐
200	KVV90	D8H270187-10	8241098	46	1.0	09/04/08 07:58		☐
201	KVV96	D8H270187-11	8241098	46	1.0	09/04/08 08:03		☐
202	KVV99	D8H270187-12	8241098	46	1.0	09/04/08 08:08		☐
203	KVWKL	D8H270187-14	8241098	46	1.0	09/04/08 08:13		☐
204	KVWK2	D8H270187-15	8241098	46	1.0	09/04/08 08:18		☐
205	CCV				1.0	09/04/08 08:22		☐
206	CCB				1.0	09/04/08 08:27		☐
207	KVV4M	D8H270187-2	8241098	46	1.0	09/04/08 08:32		☐
208	KVV4MS	D8H270187-2	8241098	46	1.0	09/04/08 08:37		☐
209	KVV4MD	D8H270187-2	8241098	46	1.0	09/04/08 08:42		☐
210	CCV				1.0	09/04/08 08:47		☐
211	CCB				1.0	09/04/08 08:51		☐
212	CCV				1.0	09/04/08 08:56		☐
213	~~CCB~~				~~1.0~~	~~09/04/08 09:01~~	~~9/4/08 Did not use.~~	☐

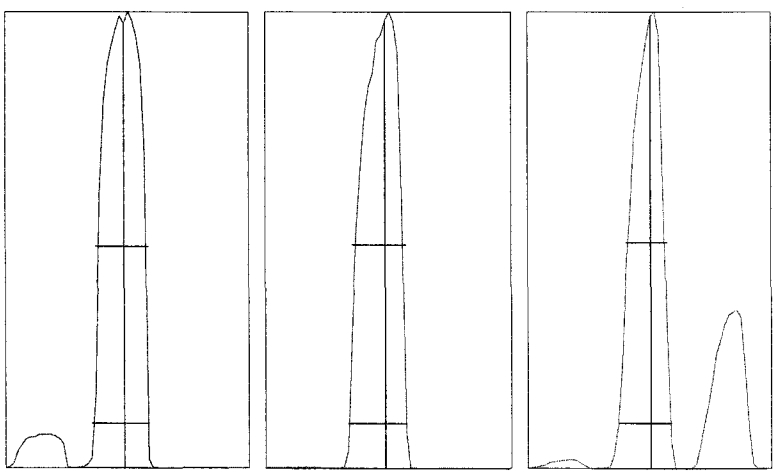
Tune Report

Tune File : norm.U
Comment :



Integration Time:	0.1000 sec		
Sampling Period:	1.5300 sec		
n:	200		
Oxide:	156/140	1.801%	
Doubly Charged:	70/140	1.869%	

m/z	Range	Count	Mean	RSD%	Background
6	5,000	2508.0	2566.7	2.73	0.70
7	50,000	35326.0	34468.1	1.89	0.60
59	50,000	36150.0	36346.6	1.71	0.60
78	500	420.0	421.5	5.21	0.70
89	100,000	53172.0	54159.2	1.47	0.60
115	100,000	48472.0	47697.6	1.41	1.10
140	50,000	44038.0	43393.9	1.42	1.20
63	500	270.0	300.2	5.93	0.70
205	50,000	27762.0	27707.3	1.41	2.00
95	100	63.0	62.6	13.59	0.60
208	50,000	20728.0	20753.3	1.38	2.30
238	50,000	39364.0	39458.0	1.27	2.20
82	20	19.0	15.4	25.35	1.10
156/140	5	1.913%	1.835%	6.66	
70/140	5	1.888%	1.889%	5.23	



m/z:	7	89	205
Height:	34,445	54,899	29,633
Axis:	7.00	89.00	205.05
W-50%:	0.65	0.65	0.50
W-10%:	0.700	0.700	0.6500

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Sep 03, 2008 15:28:19
Printed : Sep 03, 2008 15:28:22

Tune Report

Tune File : norm.U
Comment :

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1550 W	Extract 1	:	0 V	AMU Gain	:	133
RF Matching	:	1.8 V	Extract 2	:	-170 V	AMU Offset	:	123
Smpl Depth	:	8 mm	Omega Bias-ce	:	-30 V	Axis Gain	:	1.0007
Torch-H	:	-0.5 mm	Omega Lens-ce	:	1.6 V	Axis Offset	:	-0.02
Torch-V	:	0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-4 V
Carrier Gas	:	0.83 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.22 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1620 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1310 V
S/C Temp	:	2 degC	OctP Bias	:	-18 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	3.5 mL/min	Optional Gas	:	--- %

P/A Factor Tuning Report

Acquired:Sep 3 2008 03:36 pm

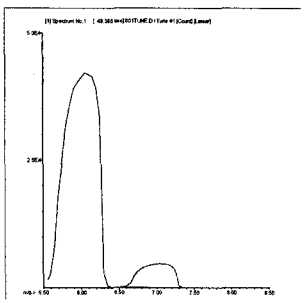
Mass[amu]	Element	P/A Factor
6	Li	0.070080
7	(Li)	Sensitivity too low
9	Be	0.079093
51	V	0.097285
52	Cr	0.100077
53	Cr	Sensitivity too low
55	Mn	0.102065
59	Co	0.105118
60	Ni	0.106601
63	Cu	0.109054
66	Zn	0.108428
72	Ge	0.107312
75	As	0.106256
78	Se	Sensitivity too low
95	Mo	0.107253
106	(Cd)	0.113604
107	Ag	Sensitivity too low
108	(Cd)	0.113946
111	Cd	0.114567
115	In	0.114277
118	Sn	0.113705
121	Sb	0.113667
137	Ba	Sensitivity too low
165	Ho	Sensitivity too low
205	Tl	0.123525
206	(Pb)	0.122513
207	(Pb)	0.122698
208	Pb	0.122689
238	U	0.121921

===Detector Parameters===
Discriminator: 8.0 mV
Analog HV: 1620 V
Pulse HV: 1310 V

200.8 QC Tune Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\001TUNE.D
Date Acquired: Sep 3 2008 03:56 pm
Acq. Method: HeTN2008.M
Operator: TEL
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 4
Current Method: D:\ICPCHEM\1\METHODS\HeTN2008.M

Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
7 Li	25207	25318	24816	25310	25435	25155	**1.82**	5.00	
9 Be	4074	4064	4036	4069	4064	4136	**1.47**	5.00	
24 Mg	21158	21200	21333	20957	21132	21169	**1.36**	5.00	
59 Co	114758	115040	114997	114575	114611	114565	**0.37**	5.00	
115 In	1252775	1255988	1251006	1252273	1246606	1258002	**0.83**	5.00	
208 Pb	85787	86297	85884	86030	85485	85239	**1.01**	5.00	
238 U	148957	150440	148784	149307	148020	148234	**0.59**	5.00	

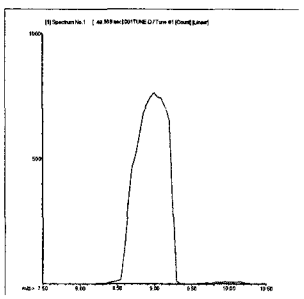


7 Li
Mass Calib.

Actual:	7.05		
Required:	6.90	-	7.10
Flag:			

Peak Width

Actual:	0.60		
Required	0.90		
Flag:			

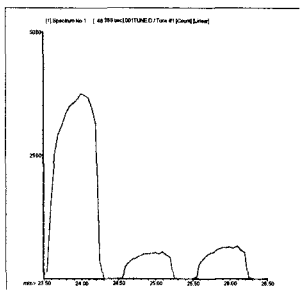


9 Be
Mass Calib.

Actual:	9.00		
Required:	8.90	-	9.10
Flag:			

Peak Width

Actual:	0.65		
Required:	0.90		
Flag:			

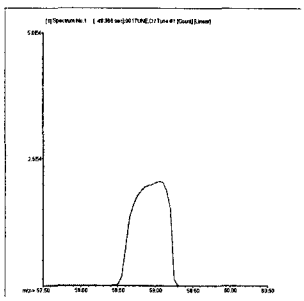


24 Mg
Mass Calib.

Actual:	24.00		
Required:	23.90	-	24.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



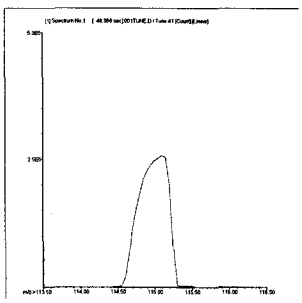
59 Co

Mass Calib.

Actual:	59.00		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



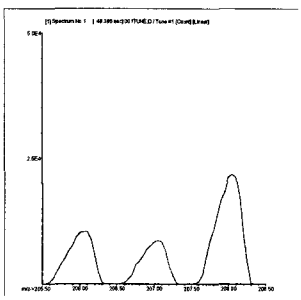
115 In

Mass Calib.

Actual:	115.05		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



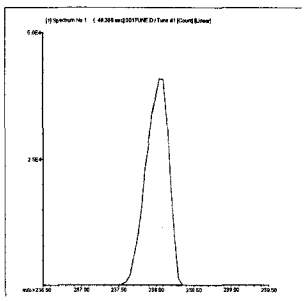
208 Pb

Mass Calib.

Actual:	208.05		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



238 U

Mass Calib.

Actual:	238.05		
Required:	237.90	-	238.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			

Tune Result: **Pass**

Calibration Blank QC Report

Data File:	D:\ICPCHEM\1\DATA\AG090308.B\002CALB.D\002CALB.D#
Date Acquired:	Sep 3 2008 04:05 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	Cal Blank
Misc Info:	
Vial Number:	1101
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Sep 03 2008 04:08 pm
Sample Type:	CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	1	173.21
51	V	72	1	-142	169.97
52	Cr	72	1	1817	6.14
55	Mn	72	1	670	9.79
59	Co	72	1	73	20.83
60	Ni	72	1	140	32.73
63	Cu	72	1	450	11.55
66	Zn	72	1	907	7.00
75	As	72	1	42	19.87
78	Se	72	1	366	3.42
95	Mo	115	1	43	26.65
107	Ag	115	1	37	31.49
111	Cd	115	1	0	23218.00
118	Sn	115	1	303	26.44
121	Sb	115	1	17	124.90
137	Ba	115	1	33	34.64
205	Tl	165	1	320	17.40
208	Pb	165	1	460	29.25
238	U	165	1	197	21.17

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	420621	0.26
72	Ge	1	720163	0.44
115	In	1	2272371	1.05
165	Ho	1	3860704	0.85

Tune File#	1	d:\icpchem\1\7500\he.u
Tune File#	2	D:\ICPCHEM\1\7500\
Tune File#	3	D:\ICPCHEM\1\7500\

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#
Date Acquired: Sep 3 2008 04:10 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:08 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	-15	1077.00
52	Cr	72	1	2054	1.01
55	Mn	72	1	617	11.73
59	Co	72	1	73	34.32
60	Ni	72	1	140	18.90
63	Cu	72	1	600	8.33
66	Zn	72	1	827	5.97
75	As	72	1	53	38.02
78	Se	72	1	380	6.32
95	Mo	115	1	53	60.27
107	Ag	115	1	27	21.65
111	Cd	115	1	-3	52.70
118	Sn	115	1	450	27.31
121	Sb	115	1	43	13.32
137	Ba	115	1	37	41.66
205	Tl	165	1	260	7.69
208	Pb	165	1	387	3.95
238	U	165	1	83	54.11

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	425826	0.48
72	Ge	1	729962	0.99
115	In	1	2295861	0.37
165	Ho	1	3857249	0.36

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File:	D:\ICPCHEM\1\DATA\AG090308.B\004ICAL.D\004ICAL.D#
Date Acquired:	Sep 3 2008 04:14 pm
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	100 ppb
Misc Info:	
Vial Number:	2102
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Sep 03 2008 04:12 pm
Sample Type:	ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	60919	1.22
51	V	72	1	1306347	0.15
52	Cr	72	1	1436278	1.20
55	Mn	72	1	1580847	1.22
59	Co	72	1	1866938	2.25
60	Ni	72	1	424850	0.41
63	Cu	72	1	999474	0.87
66	Zn	72	1	195227	1.67
75	As	72	1	141646	0.87
78	Se	72	1	27197	1.10
95	Mo	115	1	495791	0.64
107	Ag	115	1	1552178	0.95
111	Cd	115	1	280541	0.85
118	Sn	115	1	779494	1.74
121	Sb	115	1	760032	0.80
137	Ba	115	1	350847	0.97
205	Tl	165	1	2617482	0.93
208	Pb	165	1	3732040	0.49
238	U	165	1	3524558	0.68

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	413505	1.10	425826	97.1	30 - 120	
72	Ge	1	707553	0.99	729962	96.9	30 - 120	
115	In	1	2262175	1.36	2295861	98.5	30 - 120	
165	Ho	1	3793342	0.39	3857249	98.3	30 - 120	

Tune File#	1	d:\icpchem\1\7500\he.u
Tune File#	2	D:\ICPCHEM\1\7500\
Tune File#	3	D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures	0
0 :ISTD Failures	0

Initial Calibration Verification (ICV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\005 ICV.D\005 ICV.D#
Date Acquired: Sep 3 2008 04:19 pm
Operator: TEL
Sample Name: ICV
Misc Info:
Vial Number: 2103
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: ICV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	40.810 ug/l	1.17	40	102.0	90 - 110	
51 V	72	1	41.430 ug/l	0.49	40	103.6	90 - 110	
52 Cr	72	1	40.150 ug/l	0.61	40	100.4	90 - 110	
55 Mn	72	1	40.440 ug/l	0.66	40	101.1	90 - 110	
59 Co	72	1	41.440 ug/l	0.56	40	103.6	90 - 110	
60 Ni	72	1	41.380 ug/l	0.49	40	103.5	90 - 110	
63 Cu	72	1	41.640 ug/l	1.06	40	104.1	90 - 110	
66 Zn	72	1	41.050 ug/l	1.91	40	102.6	90 - 110	
75 As	72	1	40.580 ug/l	1.14	40	101.5	90 - 110	
78 Se	72	1	40.860 ug/l	0.68	40	102.2	90 - 110	
95 Mo	115	1	40.700 ug/l	0.80	40	101.8	90 - 110	
107 Ag	115	1	40.160 ug/l	1.12	40	100.4	90 - 110	
111 Cd	115	1	40.870 ug/l	1.39	40	102.2	90 - 110	
118 Sn	115	1	40.770 ug/l	0.63	40	101.9	90 - 110	
121 Sb	115	1	39.370 ug/l	0.80	40	98.4	90 - 110	
137 Ba	115	1	39.620 ug/l	1.93	40	99.1	90 - 110	
205 Tl	165	1	41.400 ug/l	0.84	40	103.5	90 - 110	
208 Pb	165	1	40.620 ug/l	0.64	40	101.6	90 - 110	
238 U	165	1	41.030 ug/l	1.45	40	102.6	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	405063	1.16	425826	95.1	30 - 120	
72 Ge	1	695753	1.05	729962	95.3	30 - 120	
115 In	1	2243311	0.62	2295861	97.7	30 - 120	
165 Ho	1	3786364	0.89	3857249	98.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Initial Calibration Blank (ICB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\006 ICB.D\006 ICB.D#
Date Acquired: Sep 3 2008 04:24 pm
Operator: TEL
Sample Name: ICB
Misc Info:
Vial Number: 2104
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: ICB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit
9 Be	6	1	0.000	ug/l	0.00	1.00
51 V	72	1	0.001	ug/l	1620.30	1.00
52 Cr	72	1	0.007	ug/l	180.60	1.00
55 Mn	72	1	0.004	ug/l	69.05	1.00
59 Co	72	1	0.001	ug/l	49.23	1.00
60 Ni	72	1	-0.004	ug/l	127.41	1.00
63 Cu	72	1	-0.013	ug/l	49.56	1.00
66 Zn	72	1	0.013	ug/l	290.40	10.00
75 As	72	1	0.004	ug/l	66.39	5.00
78 Se	72	1	0.039	ug/l	70.95	5.00
95 Mo	115	1	0.009	ug/l	88.16	1.00
107 Ag	115	1	0.006	ug/l	25.49	1.00
111 Cd	115	1	0.000	ug/l	394.44	1.00
118 Sn	115	1	0.035	ug/l	70.72	10.00
121 Sb	115	1	0.080	ug/l	4.43	1.00
137 Ba	115	1	0.000	ug/l	3500.00	1.00
205 Tl	165	1	0.014	ug/l	8.16	1.00
208 Pb	165	1	0.000	ug/l	10461.00	1.00
238 U	165	1	0.003	ug/l	35.09	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	413342	0.43	425826	97.1	30 - 120	
72 Ge	1	707055	0.66	729962	96.9	30 - 120	
115 In	1	2270339	0.95	2295861	98.9	30 - 120	
165 Ho	1	3795394	1.31	3857249	98.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

RL STD QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\007RLST.D\007RLST.D#
Date Acquired: Sep 3 2008 04:29 pm
Operator: TEL
Sample Name: RL STD
Misc Info:
Vial Number: 2105
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: RLSTD
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	1.006 ug/l	8.79	1	100.6
51 V	72	1	0.973 ug/l	7.21	1	97.3
52 Cr	72	1	0.972 ug/l	5.58	1	97.2
55 Mn	72	1	1.070 ug/l	2.00	1	107.0
59 Co	72	1	1.034 ug/l	1.14	1	103.4
60 Ni	72	1	1.015 ug/l	1.62	1	101.5
63 Cu	72	1	1.042 ug/l	2.06	1	104.2
66 Zn	72	1	11.250 ug/l	4.84	10	112.5
75 As	72	1	0.939 ug/l	5.70	1	93.9
78 Se	72	1	1.201 ug/l	3.03	1	120.1
95 Mo	115	1	1.003 ug/l	1.07	1	100.3
107 Ag	115	1	1.008 ug/l	2.89	1	100.8
111 Cd	115	1	0.999 ug/l	1.69	1	99.9
118 Sn	115	1	10.010 ug/l	0.82	10	100.1
121 Sb	115	1	1.066 ug/l	3.97	1	106.6
137 Ba	115	1	1.034 ug/l	1.95	1	103.4
205 Tl	165	1	1.033 ug/l	0.39	1	103.3
208 Pb	165	1	1.016 ug/l	0.63	1	101.6
238 U	165	1	1.055 ug/l	1.44	1	105.5

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	419731	0.39	425826	98.6	30 - 120	
72 Ge	1	715374	0.85	729962	98.0	30 - 120	
115 In	1	2273234	0.16	2295861	99.0	30 - 120	
165 Ho	1	3793302	0.96	3857249	98.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\008SMPL.D\008SMPL.D#
Date Acquired: Sep 3 2008 04:34 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ALTSe
Misc Info:
Vial Number: 2106
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:17 pm
Sample Type: SA
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	0.004	0.004	ug/l	86.59	3600	
51 V	72	1	-0.007	-0.007	ug/l	417.02	3600	
52 Cr	72	1	0.005	0.005	ug/l	274.13	3600	
55 Mn	72	1	0.025	0.025	ug/l	13.43	18000	
59 Co	72	1	0.001	0.001	ug/l	207.81	3600	
60 Ni	72	1	0.008	0.008	ug/l	57.32	3600	
63 Cu	72	1	0.023	0.023	ug/l	24.54	3600	
66 Zn	72	1	0.855	0.855	ug/l	10.45	3600	
75 As	72	1	0.005	0.005	ug/l	298.04	3600	
78 Se	72	1	5.009	5.009	ug/l	2.85	3600	
95 Mo	115	1	0.000	0.000	ug/l	16046.00	3600	
107 Ag	115	1	0.001	0.001	ug/l	113.17	3600	
111 Cd	115	1	0.004	0.004	ug/l	14.74	3600	
118 Sn	115	1	-0.006	-0.006	ug/l	36.62	3600	
121 Sb	115	1	0.012	0.012	ug/l	26.45	3600	
137 Ba	115	1	0.003	0.003	ug/l	113.88	3600	
205 Tl	165	1	0.000	0.000	ug/l	892.46	3600	
208 Pb	165	1	0.003	0.003	ug/l	56.75	3600	
238 U	165	1	0.005	0.005	ug/l	37.89	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	422363	0.87	425826	99.2	30 - 120	
72 Ge	1	721588	0.74	729962	98.9	30 - 120	
115 In	1	2290822	0.40	2295861	99.8	30 - 120	
165 Ho	1	3803463	1.09	3857249	98.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

AFCEE RL QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\009AFCE.D\009AFCE.D#
Date Acquired: Sep 3 2008 04:38 pm
Operator: TEL
Sample Name: AFCEE RL
Misc Info:
Vial Number: 2107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: AFCEERL
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	0.200 ug/l	11.78	0	99.6	50 - 150	
51 V	72	1	0.218 ug/l	9.05	0	111.8	50 - 150	
52 Cr	72	1	0.215 ug/l	9.45	0	110.6	50 - 150	
55 Mn	72	1	0.268 ug/l	8.83	0	125.1	50 - 150	
59 Co	72	1	0.198 ug/l	0.67	0	95.5	50 - 150	
60 Ni	72	1	0.205 ug/l	13.11	0	101.0	50 - 150	
63 Cu	72	1	0.205 ug/l	7.20	0	98.3	50 - 150	
66 Zn	72	1	2.479 ug/l	3.65	2	110.2	50 - 150	
75 As	72	1	0.172 ug/l	13.04	0	91.8	50 - 150	
78 Se	72	1	0.233 ug/l	10.13	0	96.8	50 - 150	
95 Mo	115	1	0.215 ug/l	5.36	0	107.3	50 - 150	
107 Ag	115	1	0.208 ug/l	1.86	0	103.1	50 - 150	
111 Cd	115	1	0.217 ug/l	3.88	0	108.8	50 - 150	
118 Sn	115	1	2.023 ug/l	2.09	2	101.0	50 - 150	
121 Sb	115	1	0.225 ug/l	13.73	0	105.6	50 - 150	
137 Ba	115	1	0.211 ug/l	7.17	0	101.8	50 - 150	
205 Tl	165	1	0.201 ug/l	3.75	0	97.4	50 - 150	
208 Pb	165	1	0.206 ug/l	2.76	0	101.3	50 - 150	
238 U	165	1	0.216 ug/l	1.52	0	102.4	50 - 150	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	425182	0.44	425826	99.8	30 - 120	
72 Ge	1	723535	0.88	729962	99.1	30 - 120	
115 In	1	2289215	1.25	2295861	99.7	30 - 120	
165 Ho	1	3800465	0.96	3857249	98.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\010ICSA.D\010ICSA.D#
Date Acquired: Sep 3 2008 04:43 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:17 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	0.007 ug/l	98.30	10.00	
51	V	72	1	-0.078 ug/l	190.03	10.00	
52	Cr	72	1	0.974 ug/l	3.63	10.00	
55	Mn	72	1	1.906 ug/l	3.32	10.00	
59	Co	72	1	0.039 ug/l	17.72	10.00	
60	Ni	72	1	4.246 ug/l	2.50	10.00	
63	Cu	72	1	0.375 ug/l	8.22	10.00	
66	Zn	72	1	4.280 ug/l	6.62	100.00	
75	As	72	1	0.212 ug/l	11.55	50.00	
78	Se	72	1	-0.092 ug/l	106.23	50.00	
95	Mo	115	1	2035.000 ug/l	1.13	10.00	
107	Ag	115	1	0.024 ug/l	18.26	10.00	
111	Cd	115	1	0.300 ug/l	38.06	10.00	
118	Sn	115	1	0.124 ug/l	21.15	100.00	
121	Sb	115	1	0.262 ug/l	3.23	10.00	
137	Ba	115	1	1.859 ug/l	5.32	10.00	
205	Tl	165	1	0.028 ug/l	22.19	10.00	
208	Pb	165	1	0.133 ug/l	7.80	10.00	
238	U	165	1	0.003 ug/l	38.82	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	303931	2.76	425826	71.4	30 - 120	
72	Ge	1	516965	2.64	729962	70.8	30 - 120	
115	In	1	1718216	0.83	2295861	74.8	30 - 120	
165	Ho	1	3185333	0.51	3857249	82.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\011ICSB.D\011ICSB.D#
Date Acquired: Sep 3 2008 04:48 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:17 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	99.620	0.33	100	99.6	80 - 120	
51 V	72	1	101.400	0.52	100	101.4	80 - 120	
52 Cr	72	1	95.500	1.05	100	95.5	80 - 120	
55 Mn	72	1	98.860	1.39	100	98.9	80 - 120	
59 Co	72	1	95.570	1.41	100	95.6	80 - 120	
60 Ni	72	1	93.440	1.57	100	93.4	80 - 120	
63 Cu	72	1	87.390	0.38	100	87.4	80 - 120	
66 Zn	72	1	96.830	0.97	100	96.8	80 - 120	
75 As	72	1	99.110	0.55	100	99.1	80 - 120	
78 Se	72	1	106.300	1.63	100	106.3	80 - 120	
95 Mo	115	1	2037.000	0.42	2100	97.0	80 - 120	
107 Ag	115	1	83.320	1.02	100	83.3	80 - 120	
111 Cd	115	1	93.960	1.42	100	94.0	80 - 120	
118 Sn	115	1	99.960	1.10	100	100.0	80 - 120	
121 Sb	115	1	103.200	1.45	100	103.2	80 - 120	
137 Ba	115	1	104.300	2.00	100	104.3	80 - 120	
205 Tl	165	1	99.520	1.34	100	99.5	80 - 120	
208 Pb	165	1	96.740	1.10	100	96.7	80 - 120	
238 U	165	1	109.600	0.63	100	109.6	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	277719	1.39	425826	65.2	30 - 120	
72 Ge	1	482747	2.23	729962	66.1	30 - 120	
115 In	1	1700463	0.64	2295861	74.1	30 - 120	
165 Ho	1	3134465	0.34	3857249	81.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\012WASH.D\012WASH.D#
Date Acquired: Sep 3 2008 04:53 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.008 ug/l	86.60	10.00	
51 V	72	1	0.014 ug/l	77.68	10.00	
52 Cr	72	1	0.003 ug/l	429.99	10.00	
55 Mn	72	1	0.003 ug/l	148.46	10.00	
59 Co	72	1	0.003 ug/l	31.93	10.00	
60 Ni	72	1	0.011 ug/l	76.31	10.00	
63 Cu	72	1	0.031 ug/l	30.57	10.00	
66 Zn	72	1	0.144 ug/l	22.62	100.00	
75 As	72	1	-0.012 ug/l	32.37	50.00	
78 Se	72	1	-0.003 ug/l	1375.70	50.00	
95 Mo	115	1	0.392 ug/l	10.09	10.00	
107 Ag	115	1	0.005 ug/l	14.27	10.00	
111 Cd	115	1	0.005 ug/l	110.29	10.00	
118 Sn	115	1	-0.005 ug/l	85.18	100.00	
121 Sb	115	1	0.017 ug/l	36.90	10.00	
137 Ba	115	1	-0.002 ug/l	360.09	10.00	
205 Tl	165	1	0.003 ug/l	14.10	10.00	
208 Pb	165	1	0.001 ug/l	63.76	10.00	
238 U	165	1	0.010 ug/l	15.66	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	386052	0.78	425826	90.7	30 - 120	
72 Ge	1	689830	0.13	729962	94.5	30 - 120	
115 In	1	2243446	1.81	2295861	97.7	30 - 120	
165 Ho	1	3833229	0.47	3857249	99.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Linear Dynamic Range Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\013 LR.D\013 LR.D#
Date Acquired: Sep 3 2008 04:58 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: LR
Misc Info:
Vial Number: 2110
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:17 pm
Sample Type: LR
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)
9 Be	6	1	1004.000 ug/l	0.63	1000	100.4
51 V	72	1	926.200 ug/l	0.94	1000	92.6
52 Cr	72	1	942.000 ug/l	0.53	1000	94.2
55 Mn	72	1	970.500 ug/l	0.26	1000	97.1
59 Co	72	1	963.100 ug/l	0.37	1000	96.3
60 Ni	72	1	985.400 ug/l	0.56	1000	98.5
63 Cu	72	1	967.700 ug/l	0.71	1000	96.8
66 Zn	72	1	1005.000 ug/l	0.55	1000	100.5
75 As	72	1	1008.000 ug/l	0.89	1000	100.8
78 Se	72	1	1021.000 ug/l	0.90	1000	102.1
95 Mo	115	1	944.600 ug/l	0.38	1000	94.5
107 Ag	115	1	940.800 ug/l	1.35	1000	94.1
111 Cd	115	1	973.400 ug/l	1.32	1000	97.3
118 Sn	115	1	961.700 ug/l	0.87	1000	96.2
121 Sb	115	1	959.800 ug/l	1.10	1000	96.0
137 Ba	115	1	987.700 ug/l	1.66	1000	98.8
205 Tl	165	1	974.400 ug/l	0.72	1000	97.4
208 Pb	165	1	950.000 ug/l	0.93	1000	95.0
238 U	165	1	995.700 ug/l	1.08	1000	99.6

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	372243	0.81	425826	87.4	30 - 120	
72 Ge	1	646548	0.51	729962	88.6	30 - 120	
115 In	1	2175145	1.21	2295861	94.7	30 - 120	
165 Ho	1	3769846	0.46	3857249	97.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\014WASH.D\014WASH.D#
Date Acquired: Sep 3 2008 05:02 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.068 ug/l	8.84	10.00	
51 V	72	1	0.050 ug/l	47.66	10.00	
52 Cr	72	1	0.047 ug/l	31.90	10.00	
55 Mn	72	1	0.059 ug/l	16.24	10.00	
59 Co	72	1	0.056 ug/l	6.54	10.00	
60 Ni	72	1	0.052 ug/l	30.01	10.00	
63 Cu	72	1	0.071 ug/l	27.96	10.00	
66 Zn	72	1	0.137 ug/l	32.71	100.00	
75 As	72	1	0.079 ug/l	17.66	50.00	
78 Se	72	1	0.253 ug/l	43.75	50.00	
95 Mo	115	1	0.217 ug/l	13.12	10.00	
107 Ag	115	1	0.048 ug/l	10.69	10.00	
111 Cd	115	1	0.048 ug/l	12.71	10.00	
118 Sn	115	1	0.278 ug/l	15.95	100.00	
121 Sb	115	1	0.170 ug/l	19.17	10.00	
137 Ba	115	1	0.043 ug/l	22.58	10.00	
205 Tl	165	1	0.058 ug/l	6.14	10.00	
208 Pb	165	1	0.050 ug/l	4.20	10.00	
238 U	165	1	0.083 ug/l	12.69	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	401561	0.58	425826	94.3	30 - 120	
72 Ge	1	694064	1.28	729962	95.1	30 - 120	
115 In	1	2231870	1.06	2295861	97.2	30 - 120	
165 Ho	1	3833606	1.41	3857249	99.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\015 CCV.D\015 CCV.D#
Date Acquired: Sep 3 2008 05:07 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.070 ug/l	1.90	50	100.1	90 - 110	
51 V	72	1	50.440 ug/l	1.09	50	100.9	90 - 110	
52 Cr	72	1	49.220 ug/l	0.86	50	98.4	90 - 110	
55 Mn	72	1	50.290 ug/l	1.80	50	100.6	90 - 110	
59 Co	72	1	50.830 ug/l	1.81	50	101.7	90 - 110	
60 Ni	72	1	50.900 ug/l	0.88	50	101.8	90 - 110	
63 Cu	72	1	51.470 ug/l	1.54	50	102.9	90 - 110	
66 Zn	72	1	50.470 ug/l	2.26	50	100.9	90 - 110	
75 As	72	1	50.350 ug/l	1.23	50	100.7	90 - 110	
78 Se	72	1	51.130 ug/l	1.06	50	102.3	90 - 110	
95 Mo	115	1	50.110 ug/l	1.84	50	100.2	90 - 110	
107 Ag	115	1	50.550 ug/l	2.76	50	101.1	90 - 110	
111 Cd	115	1	49.890 ug/l	2.60	50	99.8	90 - 110	
118 Sn	115	1	49.560 ug/l	2.15	50	99.1	90 - 110	
121 Sb	115	1	49.990 ug/l	2.52	50	100.0	90 - 110	
137 Ba	115	1	49.850 ug/l	1.96	50	99.7	90 - 110	
205 Tl	165	1	52.200 ug/l	0.67	50	104.4	90 - 110	
208 Pb	165	1	50.580 ug/l	1.21	50	101.2	90 - 110	
238 U	165	1	52.550 ug/l	0.54	50	105.1	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	402660	1.10	425826	94.6	30 - 120	
72 Ge	1	687607	2.03	729962	94.2	30 - 120	
115 In	1	2240794	1.41	2295861	97.6	30 - 120	
165 Ho	1	3789147	0.50	3857249	98.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\016 CCB.D\016 CCB.D#
Date Acquired: Sep 3 2008 05:12 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.011	ug/l	86.63	1.00	
51 V	72	1	0.004	ug/l	392.39	1.00	
52 Cr	72	1	0.005	ug/l	185.09	1.00	
55 Mn	72	1	-0.001	ug/l	616.75	1.00	
59 Co	72	1	0.004	ug/l	22.91	1.00	
60 Ni	72	1	0.584	ug/l	4.02	1.00	
63 Cu	72	1	-0.010	ug/l	70.72	1.00	
66 Zn	72	1	0.449	ug/l	5.69	10.00	
75 As	72	1	0.020	ug/l	38.44	5.00	
78 Se	72	1	0.099	ug/l	70.77	5.00	
95 Mo	115	1	0.046	ug/l	22.52	1.00	
107 Ag	115	1	0.006	ug/l	52.09	1.00	
111 Cd	115	1	0.009	ug/l	14.21	1.00	
118 Sn	115	1	0.042	ug/l	48.58	10.00	
121 Sb	115	1	0.035	ug/l	12.76	1.00	
137 Ba	115	1	0.004	ug/l	184.96	1.00	
205 Tl	165	1	0.007	ug/l	33.24	1.00	
208 Pb	165	1	0.002	ug/l	81.01	1.00	
238 U	165	1	0.006	ug/l	34.46	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	403086	0.04	425826	94.7	30 - 120	
72 Ge	1	691600	1.04	729962	94.7	30 - 120	
115 In	1	2230547	0.45	2295861	97.2	30 - 120	
165 Ho	1	3747284	0.73	3857249	97.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\062 CCV.D\062 CCV.D#
Date Acquired: Sep 3 2008 08:53 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.620 ug/l	1.95	50	101.2	90 - 110	
51 V	72	1	50.770 ug/l	0.90	50	101.5	90 - 110	
52 Cr	72	1	49.080 ug/l	0.54	50	98.2	90 - 110	
55 Mn	72	1	49.860 ug/l	0.52	50	99.7	90 - 110	
59 Co	72	1	51.350 ug/l	0.75	50	102.7	90 - 110	
60 Ni	72	1	51.880 ug/l	0.42	50	103.8	90 - 110	
63 Cu	72	1	52.140 ug/l	0.47	50	104.3	90 - 110	
66 Zn	72	1	50.560 ug/l	1.81	50	101.1	90 - 110	
75 As	72	1	52.140 ug/l	0.84	50	104.3	90 - 110	
78 Se	72	1	53.280 ug/l	0.32	50	106.6	90 - 110	
95 Mo	115	1	50.100 ug/l	0.90	50	100.2	90 - 110	
107 Ag	115	1	50.620 ug/l	1.18	50	101.2	90 - 110	
111 Cd	115	1	49.480 ug/l	0.86	50	99.0	90 - 110	
118 Sn	115	1	49.680 ug/l	1.28	50	99.4	90 - 110	
121 Sb	115	1	50.070 ug/l	2.21	50	100.1	90 - 110	
137 Ba	115	1	52.080 ug/l	0.71	50	104.2	90 - 110	
205 Tl	165	1	53.090 ug/l	0.73	50	106.2	90 - 110	
208 Pb	165	1	51.450 ug/l	0.15	50	102.9	90 - 110	
238 U	165	1	54.500 ug/l	0.78	50	109.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	328753	0.71	425826	77.2	30 - 120	
72 Ge	1	615210	1.07	729962	84.3	30 - 120	
115 In	1	2043967	0.12	2295861	89.0	30 - 120	
165 Ho	1	3446008	0.84	3857249	89.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\063 CCB.D\063 CCB.D#
Date Acquired: Sep 3 2008 08:58 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.002	ug/l	173.18	1.00	
51 V	72	1	0.014	ug/l	66.27	1.00	
52 Cr	72	1	0.010	ug/l	103.18	1.00	
55 Mn	72	1	0.005	ug/l	67.31	1.00	
59 Co	72	1	0.004	ug/l	14.40	1.00	
60 Ni	72	1	0.685	ug/l	3.02	1.00	
63 Cu	72	1	0.002	ug/l	247.09	1.00	
66 Zn	72	1	0.485	ug/l	5.65	10.00	
75 As	72	1	0.022	ug/l	66.26	5.00	
78 Se	72	1	0.369	ug/l	10.36	5.00	
95 Mo	115	1	0.025	ug/l	18.35	1.00	
107 Ag	115	1	0.012	ug/l	22.68	1.00	
111 Cd	115	1	0.006	ug/l	13.77	1.00	
118 Sn	115	1	0.031	ug/l	26.50	10.00	
121 Sb	115	1	0.020	ug/l	4.41	1.00	
137 Ba	115	1	0.011	ug/l	161.74	1.00	
205 Tl	165	1	0.009	ug/l	16.05	1.00	
208 Pb	165	1	0.020	ug/l	16.48	1.00	
238 U	165	1	0.007	ug/l	19.55	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	331263	0.39	425826	77.8	30 - 120	
72 Ge	1	625186	0.86	729962	85.6	30 - 120	
115 In	1	2051778	0.85	2295861	89.4	30 - 120	
165 Ho	1	3439548	0.60	3857249	89.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\064ICSA.D\064ICSA.D#
Date Acquired: Sep 3 2008 09:03 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:17 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.005 ug/l	86.61	10.00	
51 V	72	1	-0.142 ug/l	56.03	10.00	
52 Cr	72	1	0.988 ug/l	4.16	10.00	
55 Mn	72	1	1.981 ug/l	2.43	10.00	
59 Co	72	1	0.065 ug/l	7.94	10.00	
60 Ni	72	1	4.841 ug/l	1.54	10.00	
63 Cu	72	1	0.594 ug/l	4.52	10.00	
66 Zn	72	1	4.827 ug/l	2.62	100.00	
75 As	72	1	0.337 ug/l	7.39	50.00	
78 Se	72	1	0.520 ug/l	4.36	50.00	
95 Mo	115	1	2047.000 ug/l	0.95	10.00	
107 Ag	115	1	0.052 ug/l	18.27	10.00	
111 Cd	115	1	0.329 ug/l	57.98	10.00	
118 Sn	115	1	0.124 ug/l	19.48	100.00	
121 Sb	115	1	0.228 ug/l	7.28	10.00	
137 Ba	115	1	1.828 ug/l	8.28	10.00	
205 Tl	165	1	0.031 ug/l	30.74	10.00	
208 Pb	165	1	0.194 ug/l	7.62	10.00	
238 U	165	1	0.004 ug/l	20.95	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	301438	0.70	425826	70.8	30 - 120	
72 Ge	1	528100	0.47	729962	72.3	30 - 120	
115 In	1	1708609	0.37	2295861	74.4	30 - 120	
165 Ho	1	2949953	1.07	3857249	76.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\065ICSB.D\065ICSB.D#
Date Acquired: Sep 3 2008 09:08 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 04:17 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	94.740	0.61	100	94.7	80 - 120	
51 V	72	1	104.200	0.98	100	104.2	80 - 120	
52 Cr	72	1	98.640	1.52	100	98.6	80 - 120	
55 Mn	72	1	99.050	0.80	100	99.1	80 - 120	
59 Co	72	1	99.110	0.76	100	99.1	80 - 120	
60 Ni	72	1	97.790	0.92	100	97.8	80 - 120	
63 Cu	72	1	90.690	0.42	100	90.7	80 - 120	
66 Zn	72	1	95.000	1.24	100	95.0	80 - 120	
75 As	72	1	102.900	2.04	100	102.9	80 - 120	
78 Se	72	1	109.200	1.98	100	109.2	80 - 120	
95 Mo	115	1	2102.000	0.77	2100	100.1	80 - 120	
107 Ag	115	1	83.100	2.55	100	83.1	80 - 120	
111 Cd	115	1	94.440	0.41	100	94.4	80 - 120	
118 Sn	115	1	99.500	1.60	100	99.5	80 - 120	
121 Sb	115	1	100.800	1.70	100	100.8	80 - 120	
137 Ba	115	1	107.000	0.98	100	107.0	80 - 120	
205 Tl	165	1	100.000	1.37	100	100.0	80 - 120	
208 Pb	165	1	96.410	0.55	100	96.4	80 - 120	
238 U	165	1	108.700	1.23	100	108.7	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	296751	0.68	425826	69.7	30 - 120	
72 Ge	1	513405	0.97	729962	70.3	30 - 120	
115 In	1	1723458	0.44	2295861	75.1	30 - 120	
165 Ho	1	2991528	0.94	3857249	77.6	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\066WASH.D\066WASH.D#
Date Acquired: Sep 3 2008 09:13 pm
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.007 ug/l	99.79	10.00	
51 V	72	1	0.022 ug/l	96.05	10.00	
52 Cr	72	1	0.010 ug/l	82.92	10.00	
55 Mn	72	1	0.011 ug/l	53.69	10.00	
59 Co	72	1	0.007 ug/l	27.66	10.00	
60 Ni	72	1	0.010 ug/l	169.66	10.00	
63 Cu	72	1	0.043 ug/l	13.33	10.00	
66 Zn	72	1	0.174 ug/l	24.22	100.00	
75 As	72	1	0.003 ug/l	313.17	50.00	
78 Se	72	1	0.397 ug/l	10.44	50.00	
95 Mo	115	1	0.457 ug/l	12.62	10.00	
107 Ag	115	1	0.013 ug/l	43.93	10.00	
111 Cd	115	1	0.008 ug/l	5.80	10.00	
118 Sn	115	1	-0.005 ug/l	306.14	100.00	
121 Sb	115	1	0.016 ug/l	15.92	10.00	
137 Ba	115	1	0.002 ug/l	239.36	10.00	
205 Tl	165	1	0.025 ug/l	22.09	10.00	
208 Pb	165	1	0.017 ug/l	15.54	10.00	
238 U	165	1	0.010 ug/l	15.80	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	320345	0.36	425826	75.2	30 - 120	
72 Ge	1	608786	0.75	729962	83.4	30 - 120	
115 In	1	2050704	1.42	2295861	89.3	30 - 120	
165 Ho	1	3432354	0.70	3857249	89.0	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\067 CCV.D\067 CCV.D#
Date Acquired: Sep 3 2008 09:17 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.000 ug/l	1.12	50	102.0	90 - 110	
51 V	72	1	50.980 ug/l	0.23	50	102.0	90 - 110	
52 Cr	72	1	49.100 ug/l	0.46	50	98.2	90 - 110	
55 Mn	72	1	49.960 ug/l	0.75	50	99.9	90 - 110	
59 Co	72	1	51.530 ug/l	1.04	50	103.1	90 - 110	
60 Ni	72	1	52.040 ug/l	0.29	50	104.1	90 - 110	
63 Cu	72	1	52.460 ug/l	1.53	50	104.9	90 - 110	
66 Zn	72	1	50.040 ug/l	1.72	50	100.1	90 - 110	
75 As	72	1	52.390 ug/l	1.11	50	104.8	90 - 110	
78 Se	72	1	53.810 ug/l	1.53	50	107.6	90 - 110	
95 Mo	115	1	49.600 ug/l	1.43	50	99.2	90 - 110	
107 Ag	115	1	50.660 ug/l	0.93	50	101.3	90 - 110	
111 Cd	115	1	49.600 ug/l	1.17	50	99.2	90 - 110	
118 Sn	115	1	49.820 ug/l	0.51	50	99.6	90 - 110	
121 Sb	115	1	50.380 ug/l	2.09	50	100.8	90 - 110	
137 Ba	115	1	51.960 ug/l	1.92	50	103.9	90 - 110	
205 Tl	165	1	53.110 ug/l	0.84	50	106.2	90 - 110	
208 Pb	165	1	51.750 ug/l	0.72	50	103.5	90 - 110	
238 U	165	1	54.700 ug/l	1.26	50	109.4	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	311678	0.26	425826	73.2	30 - 120	
72 Ge	1	594648	0.85	729962	81.5	30 - 120	
115 In	1	2019371	0.45	2295861	88.0	30 - 120	
165 Ho	1	3409622	0.47	3857249	88.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\068 CCB.D\068 CCB.D#
Date Acquired: Sep 3 2008 09:22 pm
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 04:17 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.005	ug/l	86.62	1.00	
51 V	72	1	0.015	ug/l	33.10	1.00	
52 Cr	72	1	0.028	ug/l	55.70	1.00	
55 Mn	72	1	0.000	ug/l	7983.10	1.00	
59 Co	72	1	0.007	ug/l	9.54	1.00	
60 Ni	72	1	0.622	ug/l	5.29	1.00	
63 Cu	72	1	-0.004	ug/l	73.58	1.00	
66 Zn	72	1	0.515	ug/l	3.62	10.00	
75 As	72	1	0.009	ug/l	153.44	5.00	
78 Se	72	1	0.515	ug/l	13.33	5.00	
95 Mo	115	1	0.069	ug/l	13.68	1.00	
107 Ag	115	1	0.008	ug/l	51.41	1.00	
111 Cd	115	1	0.007	ug/l	54.37	1.00	
118 Sn	115	1	0.012	ug/l	53.51	10.00	
121 Sb	115	1	0.026	ug/l	31.91	1.00	
137 Ba	115	1	0.007	ug/l	71.67	1.00	
205 Tl	165	1	0.005	ug/l	72.86	1.00	
208 Pb	165	1	0.010	ug/l	38.23	1.00	
238 U	165	1	0.006	ug/l	28.73	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	314358	0.15	425826	73.8	30 - 120	
72 Ge	1	612528	0.79	729962	83.9	30 - 120	
115 In	1	2018007	0.93	2295861	87.9	30 - 120	
165 Ho	1	3441418	0.20	3857249	89.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\003CALB.D\003CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: T. Hill

Date: 9/4/08

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#
Date Acquired: Sep 3 2008 11:47 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:45 pm
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	60	135.80
52	Cr	72	1	1510	19.04
55	Mn	72	1	407	22.09
59	Co	72	1	43	80.98
60	Ni	72	1	120	36.27
63	Cu	72	1	2670	4.41
66	Zn	72	1	613	7.37
75	As	72	1	38	57.45
78	Se	72	1	584	3.44
95	Mo	115	1	160	21.46
107	Ag	115	1	137	117.02
111	Cd	115	1	9	36.90
118	Sn	115	1	297	9.18
121	Sb	115	1	107	32.38
137	Ba	115	1	37	15.55
205	Tl	165	1	260	32.13
208	Pb	165	1	337	25.86
238	U	165	1	17	91.53

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	266913	0.11
72	Ge	1	519361	0.10
115	In	1	1758193	0.74
165	Ho	1	3007903	1.06

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\099ICAL.D\099ICAL.D#
Date Acquired: Sep 3 2008 11:51 pm
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:49 pm
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	39023	1.53
51	V	72	1	922054	2.63
52	Cr	72	1	981899	2.10
55	Mn	72	1	1130752	2.07
59	Co	72	1	1361929	1.98
60	Ni	72	1	303178	1.91
63	Cu	72	1	723428	1.60
66	Zn	72	1	139386	1.18
75	As	72	1	106319	0.82
78	Se	72	1	21242	1.21
95	Mo	115	1	375488	1.60
107	Ag	115	1	1194552	1.04
111	Cd	115	1	213929	1.59
118	Sn	115	1	597784	0.92
121	Sb	115	1	594750	1.17
137	Ba	115	1	285116	0.87
205	Tl	165	1	2142858	0.77
208	Pb	165	1	3052409	0.59
238	U	165	1	2997648	2.19

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	265619	0.16	266913	99.5	30 - 120	
72	Ge	1	511827	0.52	519361	98.5	30 - 120	
115	In	1	1759167	0.54	1758193	100.1	30 - 120	
165	Ho	1	3021620	0.86	3007903	100.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\100 CCV.D\100 CCV.D#
Date Acquired: Sep 3 2008 11:56 pm
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.460 ug/l	0.45	50	100.9	90 - 110	
51 V	72	1	50.660 ug/l	0.51	50	101.3	90 - 110	
52 Cr	72	1	50.720 ug/l	1.20	50	101.4	90 - 110	
55 Mn	72	1	50.050 ug/l	1.01	50	100.1	90 - 110	
59 Co	72	1	49.870 ug/l	1.13	50	99.7	90 - 110	
60 Ni	72	1	51.170 ug/l	0.22	50	102.3	90 - 110	
63 Cu	72	1	50.800 ug/l	1.18	50	101.6	90 - 110	
66 Zn	72	1	50.810 ug/l	1.54	50	101.6	90 - 110	
75 As	72	1	50.100 ug/l	1.32	50	100.2	90 - 110	
78 Se	72	1	49.330 ug/l	0.51	50	98.7	90 - 110	
95 Mo	115	1	51.070 ug/l	3.14	50	102.1	90 - 110	
107 Ag	115	1	50.900 ug/l	2.41	50	101.8	90 - 110	
111 Cd	115	1	50.990 ug/l	1.04	50	102.0	90 - 110	
118 Sn	115	1	51.200 ug/l	2.01	50	102.4	90 - 110	
121 Sb	115	1	50.380 ug/l	2.50	50	100.8	90 - 110	
137 Ba	115	1	50.510 ug/l	2.89	50	101.0	90 - 110	
205 Tl	165	1	52.760 ug/l	0.58	50	105.5	90 - 110	
208 Pb	165	1	51.270 ug/l	0.19	50	102.5	90 - 110	
238 U	165	1	51.870 ug/l	0.67	50	103.7	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	264895	0.12	266913	99.2	30 - 120	
72 Ge	1	516360	0.92	519361	99.4	30 - 120	
115 In	1	1760315	2.00	1758193	100.1	30 - 120	
165 Ho	1	3028080	0.68	3007903	100.7	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\101 CCB.D\101 CCB.D#
Date Acquired: Sep 4 2008 12:01 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.009	ug/l	99.87	1.00	
51 V	72	1	0.013	ug/l	200.31	1.00	
52 Cr	72	1	0.006	ug/l	271.69	1.00	
55 Mn	72	1	-0.006	ug/l	124.46	1.00	
59 Co	72	1	0.007	ug/l	14.96	1.00	
60 Ni	72	1	0.607	ug/l	4.50	1.00	
63 Cu	72	1	-0.065	ug/l	30.89	1.00	
66 Zn	72	1	0.496	ug/l	15.35	10.00	
75 As	72	1	0.015	ug/l	98.93	5.00	
78 Se	72	1	-0.285	ug/l	23.52	5.00	
95 Mo	115	1	0.013	ug/l	69.26	1.00	
107 Ag	115	1	0.004	ug/l	75.97	1.00	
111 Cd	115	1	-0.001	ug/l	467.77	1.00	
118 Sn	115	1	0.031	ug/l	56.23	10.00	
121 Sb	115	1	0.016	ug/l	38.41	1.00	
137 Ba	115	1	0.016	ug/l	80.35	1.00	
205 Tl	165	1	0.006	ug/l	43.17	1.00	
208 Pb	165	1	0.004	ug/l	40.66	1.00	
238 U	165	1	0.008	ug/l	19.77	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	265382	0.27	266913	99.4	30 - 120	
72 Ge	1	515017	1.07	519361	99.2	30 - 120	
115 In	1	1754267	0.67	1758193	99.8	30 - 120	
165 Ho	1	3020443	0.81	3007903	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\102ICSA.D\102ICSA.D#
Date Acquired: Sep 4 2008 12:06 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element		IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9	Be	6	1	0.003 ug/l	173.21	10.00	
51	V	72	1	-0.178 ug/l	39.25	10.00	
52	Cr	72	1	1.077 ug/l	2.97	10.00	
55	Mn	72	1	1.907 ug/l	2.48	10.00	
59	Co	72	1	0.068 ug/l	13.26	10.00	
60	Ni	72	1	4.838 ug/l	2.95	10.00	
63	Cu	72	1	0.546 ug/l	7.37	10.00	
66	Zn	72	1	4.843 ug/l	6.07	100.00	
75	As	72	1	0.289 ug/l	6.73	50.00	
78	Se	72	1	0.353 ug/l	44.96	50.00	
95	Mo	115	1	2105.000 ug/l	0.23	10.00	
107	Ag	115	1	0.014 ug/l	44.16	10.00	
111	Cd	115	1	0.343 ug/l	21.57	10.00	
118	Sn	115	1	0.124 ug/l	7.21	100.00	
121	Sb	115	1	0.231 ug/l	8.24	10.00	
137	Ba	115	1	1.701 ug/l	2.11	10.00	
205	Tl	165	1	0.019 ug/l	28.40	10.00	
208	Pb	165	1	0.079 ug/l	6.29	10.00	
238	U	165	1	0.006 ug/l	11.38	10.00	

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	264711	0.13	266913	99.2	30 - 120	
72	Ge	1	482387	0.97	519361	92.9	30 - 120	
115	In	1	1592691	0.57	1758193	90.6	30 - 120	
165	Ho	1	2804960	0.32	3007903	93.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\103ICSB.D\103ICSB.D#
Date Acquired: Sep 4 2008 12:11 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6	1	95.120	0.64	100	95.1	80 - 120	
51 V	72	1	104.500	1.07	100	104.5	80 - 120	
52 Cr	72	1	102.100	0.93	100	102.1	80 - 120	
55 Mn	72	1	99.660	0.87	100	99.7	80 - 120	
59 Co	72	1	94.930	1.30	100	94.9	80 - 120	
60 Ni	72	1	96.350	0.51	100	96.4	80 - 120	
63 Cu	72	1	87.600	0.19	100	87.6	80 - 120	
66 Zn	72	1	96.750	0.37	100	96.8	80 - 120	
75 As	72	1	99.780	0.72	100	99.8	80 - 120	
78 Se	72	1	103.300	0.83	100	103.3	80 - 120	
95 Mo	115	1	2121.000	0.58	2100	101.0	80 - 120	
107 Ag	115	1	82.150	1.32	100	82.2	80 - 120	
111 Cd	115	1	95.670	0.56	100	95.7	80 - 120	
118 Sn	115	1	100.700	0.95	100	100.7	80 - 120	
121 Sb	115	1	99.740	0.83	100	99.7	80 - 120	
137 Ba	115	1	102.900	1.02	100	102.9	80 - 120	
205 Tl	165	1	95.060	0.33	100	95.1	80 - 120	
208 Pb	165	1	92.420	1.36	100	92.4	80 - 120	
238 U	165	1	100.200	0.95	100	100.2	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	261308	0.89	266913	97.9	30 - 120	
72 Ge	1	473979	1.31	519361	91.3	30 - 120	
115 In	1	1603946	0.24	1758193	91.2	30 - 120	
165 Ho	1	2783000	0.87	3007903	92.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\104WASH.D\104WASH.D#
Date Acquired: Sep 4 2008 12:15 am
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.003 ug/l	173.20	10.00	
51 V	72	1	0.005 ug/l	483.80	10.00	
52 Cr	72	1	0.015 ug/l	69.69	10.00	
55 Mn	72	1	0.004 ug/l	119.44	10.00	
59 Co	72	1	0.004 ug/l	54.74	10.00	
60 Ni	72	1	0.002 ug/l	627.33	10.00	
63 Cu	72	1	-0.065 ug/l	33.09	10.00	
66 Zn	72	1	0.214 ug/l	23.59	100.00	
75 As	72	1	0.017 ug/l	60.99	50.00	
78 Se	72	1	-0.091 ug/l	31.07	50.00	
95 Mo	115	1	0.362 ug/l	3.54	10.00	
107 Ag	115	1	-0.002 ug/l	290.97	10.00	
111 Cd	115	1	-0.001 ug/l	534.10	10.00	
118 Sn	115	1	-0.003 ug/l	261.41	100.00	
121 Sb	115	1	-0.003 ug/l	51.44	10.00	
137 Ba	115	1	0.006 ug/l	94.73	10.00	
205 Tl	165	1	0.008 ug/l	20.79	10.00	
208 Pb	165	1	0.003 ug/l	23.75	10.00	
238 U	165	1	0.008 ug/l	4.10	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	267427	1.09	266913	100.2	30 - 120	
72 Ge	1	520081	1.02	519361	100.1	30 - 120	
115 In	1	1764407	1.76	1758193	100.4	30 - 120	
165 Ho	1	3054187	0.56	3007903	101.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\105 CCV.D\105 CCV.D#
Date Acquired: Sep 4 2008 12:20 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.660 ug/l	2.80	50	101.3	90 - 110	
51 V	72	1	50.920 ug/l	1.40	50	101.8	90 - 110	
52 Cr	72	1	50.590 ug/l	1.09	50	101.2	90 - 110	
55 Mn	72	1	50.060 ug/l	1.05	50	100.1	90 - 110	
59 Co	72	1	49.510 ug/l	0.76	50	99.0	90 - 110	
60 Ni	72	1	51.360 ug/l	0.39	50	102.7	90 - 110	
63 Cu	72	1	50.960 ug/l	0.51	50	101.9	90 - 110	
66 Zn	72	1	50.380 ug/l	0.73	50	100.8	90 - 110	
75 As	72	1	50.780 ug/l	0.43	50	101.6	90 - 110	
78 Se	72	1	50.360 ug/l	1.24	50	100.7	90 - 110	
95 Mo	115	1	50.530 ug/l	0.83	50	101.1	90 - 110	
107 Ag	115	1	50.320 ug/l	1.39	50	100.6	90 - 110	
111 Cd	115	1	51.360 ug/l	1.56	50	102.7	90 - 110	
118 Sn	115	1	51.190 ug/l	1.46	50	102.4	90 - 110	
121 Sb	115	1	51.390 ug/l	1.46	50	102.8	90 - 110	
137 Ba	115	1	50.500 ug/l	1.28	50	101.0	90 - 110	
205 Tl	165	1	52.500 ug/l	0.51	50	105.0	90 - 110	
208 Pb	165	1	51.010 ug/l	1.00	50	102.0	90 - 110	
238 U	165	1	50.900 ug/l	1.61	50	101.8	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	262869	0.13	266913	98.5	30 - 120	
72 Ge	1	513744	1.32	519361	98.9	30 - 120	
115 In	1	1754978	0.80	1758193	99.8	30 - 120	
165 Ho	1	3012882	0.53	3007903	100.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\106 CCB.D\106 CCB.D#
Date Acquired: Sep 4 2008 12:25 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.015	ug/l	34.84	1.00	
51 V	72	1	0.022	ug/l	77.86	1.00	
52 Cr	72	1	0.019	ug/l	42.36	1.00	
55 Mn	72	1	-0.002	ug/l	52.03	1.00	
59 Co	72	1	0.004	ug/l	53.79	1.00	
60 Ni	72	1	0.581	ug/l	5.40	1.00	
63 Cu	72	1	-0.092	ug/l	16.73	1.00	
66 Zn	72	1	0.419	ug/l	12.18	10.00	
75 As	72	1	0.016	ug/l	80.26	5.00	
78 Se	72	1	-0.170	ug/l	36.52	5.00	
95 Mo	115	1	0.047	ug/l	29.42	1.00	
107 Ag	115	1	-0.002	ug/l	158.53	1.00	
111 Cd	115	1	0.002	ug/l	374.00	1.00	
118 Sn	115	1	0.032	ug/l	8.84	10.00	
121 Sb	115	1	0.009	ug/l	81.46	1.00	
137 Ba	115	1	0.013	ug/l	86.88	1.00	
205 Tl	165	1	0.003	ug/l	99.03	1.00	
208 Pb	165	1	0.004	ug/l	75.16	1.00	
238 U	165	1	0.008	ug/l	6.75	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	259120	0.53	266913	97.1	30 - 120	
72 Ge	1	515002	0.45	519361	99.2	30 - 120	
115 In	1	1751222	0.27	1758193	99.6	30 - 120	
165 Ho	1	3023125	1.04	3007903	100.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\107 BLK.D\107 BLK.D#
Date Acquired: Sep 4 2008 12:30 am
Operator: TEL
Sample Name: KV5TJB
Misc Info: BLANK 8246402 6020
Vial Number: 2511
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: BLK
Total Dil Factor: 250.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit
9 Be	6	1	0.000 ug/l	0.00	1.00
51 V	72	1	0.096 ug/l	24.71	1.00
52 Cr	72	1	0.159 ug/l	8.38	1.00
55 Mn	72	1	0.363 ug/l	4.55	1.00
59 Co	72	1	0.007 ug/l	11.39	1.00
60 Ni	72	1	0.097 ug/l	9.63	1.00
63 Cu	72	1	-0.030 ug/l	33.59	1.00
66 Zn	72	1	1.037 ug/l	10.00	10.00
75 As	72	1	0.000 ug/l	3499.30	5.00
78 Se	72	1	-0.265 ug/l	42.04	5.00
95 Mo	115	1	0.023 ug/l	73.49	1.00
107 Ag	115	1	-0.010 ug/l	10.28	1.00
111 Cd	115	1	-0.003 ug/l	31.06	1.00
118 Sn	115	1	-0.001 ug/l	1113.50	10.00
121 Sb	115	1	-0.005 ug/l	94.84	1.00
137 Ba	115	1	0.062 ug/l	31.30	1.00
205 Tl	165	1	-0.005 ug/l	20.47	1.00
208 Pb	165	1	0.018 ug/l	17.05	1.00
238 U	165	1	0.003 ug/l	27.08	1.00

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	255636	0.58	266913	95.8	30 - 120	
72 Ge	1	506019	0.49	519361	97.4	30 - 120	
115 In	1	1724005	0.91	1758193	98.1	30 - 120	
165 Ho	1	2963920	0.38	3007903	98.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Laboratory Control Spike (LCS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\108 LCS.D\108 LCS.D#
Date Acquired: Sep 4 2008 12:35 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KV5TJC
Misc Info: LCS
Vial Number: 2512
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: LCS
Prep Dil. Factor: 250.00
Autodil Factor: Undiluted
Final Dil Factor: 250.00

QC Summary:
Analytes: Pass
ISTD: Pass

Analyte Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	Rec(%)
9 Be	6	1	38.22	3.47	40	95.6
51 V	72	1	39.57	1.47	40	98.9
52 Cr	72	1	39.62	1.96	40	99.1
55 Mn	72	1	38.93	2.23	40	97.3
59 Co	72	1	38.78	1.07	40	97.0
60 Ni	72	1	39.61	0.58	40	99.0
63 Cu	72	1	39.57	0.29	40	98.9
66 Zn	72	1	39.02	0.81	40	97.6
75 As	72	1	38.93	0.63	40	97.3
78 Se	72	1	38.99	1.42	40	97.5
95 Mo	115	1	39.86	1.37	40	99.7
107 Ag	115	1	37.43	2.05	40	93.6
111 Cd	115	1	38.23	1.33	40	95.6
118 Sn	115	1	-0.01	79.51	40	0.0
121 Sb	115	1	39.17	1.32	40	97.9
137 Ba	115	1	39.34	1.58	40	98.4
205 Tl	165	1	39.85	1.64	40	99.6
208 Pb	165	1	38.95	1.47	40	97.4
238 U	165	1	40.41	1.08	40	101.0

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	253232	0.54	266913	94.9	30 - 120	
72 Ge	1	490566	1.37	519361	94.5	30 - 120	
115 In	1	1699525	0.77	1758193	96.7	30 - 120	
165 Ho	1	2961867	0.26	3007903	98.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

All Reference Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\109AREF.D\109AREF.D#
Date Acquired: Sep 4 2008 12:39 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3C
Misc Info: D8H210174
Vial Number: 3101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: AllRef
Dilution Factor: 246.10
Autodil Factor: Undiluted
Final Dil Factor: 246.10

Data Results:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	300.734	1.222	ug/l	8.32	3600.00	
51 V	72	1	##########	667.800	ug/l	0.50	3600.00	
52 Cr	72	1	##########	882.200	ug/l	1.63	3600.00	
55 Mn	72	1	##########	2638.000	ug/l	1.41	18000.00	
59 Co	72	1	10,506.009	42.690	ug/l	1.26	3600.00	
60 Ni	72	1	##########	576.600	ug/l	0.53	3600.00	
63 Cu	72	1	55,249.450	224.500	ug/l	0.85	3600.00	
66 Zn	72	1	54,314.270	220.700	ug/l	1.56	3600.00	
75 As	72	1	10,626.598	43.180	ug/l	0.35	3600.00	
78 Se	72	1	1,151.994	4.681	ug/l	7.29	3600.00	
95 Mo	115	1	442.734	1.799	ug/l	5.64	3600.00	
107 Ag	115	1	223.139	0.907	ug/l	4.94	3600.00	
111 Cd	115	1	1,477.584	6.004	ug/l	3.71	3600.00	
118 Sn	115	1	373.334	1.517	ug/l	1.51	3600.00	
121 Sb	115	1	61.033	0.248	ug/l	4.71	3600.00	
137 Ba	115	1	22,909.449	93.090	ug/l	2.06	3600.00	
205 Tl	165	1	23.365	0.095	ug/l	12.29	3600.00	
208 Pb	165	1	14,379.623	58.430	ug/l	1.23	3600.00	
238 U	165	1	607.129	2.467	ug/l	3.00	3600.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	228290	1.69	266913	85.5	30 - 120	
72 Ge	1	485071	0.20	519361	93.4	30 - 120	
115 In	1	1460903	0.68	1758193	83.1	30 - 120	
165 Ho	1	2386977	0.82	3007903	79.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Dilution Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\110SDIL.D\110SDIL.D#
Date Acquired: Sep 4 2008 12:44 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3CP5
Misc Info: SERIAL DILUTION
Vial Number: 3102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: SDIL
Dilution Factor: 246.10

QC Summary:
Analytes: Pass
ISTD: Pass

Dilution Ref File: D:\ICPCHEM\1\DATA\AG090308.B\109AREF.D\109AREF.D#

QC elements

Element	IS Ref	Tune	Conc.ppb	RSD(%)	Ref Conc.
9 Be	6	1	0.230 ug/l	23.28	0.24
51 V	72	1	152.600 ug/l	1.35	133.56
52 Cr	72	1	196.000 ug/l	1.27	176.44
55 Mn	72	1	574.700 ug/l	1.56	527.60
59 Co	72	1	9.340 ug/l	0.42	8.54
60 Ni	72	1	128.400 ug/l	0.76	115.32
63 Cu	72	1	51.800 ug/l	0.43	44.90
66 Zn	72	1	50.720 ug/l	0.91	44.14
75 As	72	1	9.730 ug/l	0.84	8.64
78 Se	72	1	0.644 ug/l	15.11	0.94
95 Mo	115	1	0.307 ug/l	6.13	0.36
107 Ag	115	1	0.164 ug/l	5.05	0.18
111 Cd	115	1	1.252 ug/l	5.91	1.20
118 Sn	115	1	0.310 ug/l	9.12	0.30
121 Sb	115	1	0.035 ug/l	27.81	0.05
137 Ba	115	1	18.230 ug/l	1.03	18.62
205 Tl	165	1	0.009 ug/l	43.27	0.02
208 Pb	165	1	11.090 ug/l	2.55	11.69
238 U	165	1	0.459 ug/l	3.27	0.49

ISTD elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	232968	0.72	266913	87.3	30 - 120	
72 Ge	1	466982	0.82	519361	89.9	30 - 120	
115 In	1	1558579	0.55	1758193	88.6	30 - 120	
165 Ho	1	2661380	1.83	3007903	88.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Denver

SERIAL DILUTION

Method: 6020 (ICP/MS) | ICPMS_024 | Reported: 09/04/08 09:48:34

Department: 090 (Metals) | Source: Spreadsheet

Sample: **KRW3CP5** | Serial Dilution: **5.00** | Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG090308 # 110
Acquired: 09/04/2008 00:44:00
Calibrated: 09/03/2008 23:47:00

Channel 272
Method 6020_
ICPMS_024

Matrix: SOLID
Units: ug/L

CASN	Analyte Name	M/S	Area	Dilution	Sample	%Diff.	MDL	Flag	Q
7440-41-7	Beryllium	9	79	1.1512	1.2223	5.82		*	
7440-62-2	Vanadium	51	1284150	763.31	667.62	14.3		*	
7440-47-3	Chromium	52	1754660	980.09	882.16	11.1		*	
7439-96-5	Manganese	55	5927140	2872.8	2637.9	8.90		*	
7440-48-4	Cobalt	59	116099	46.709	42.706	9.37		*	
7440-02-0	Nickel	60	355259	642.22	576.60	11.4		*	
7440-66-6	Zinc	66	64777	253.56	220.64	14.9	3.2	NC	☑
7440-38-2	Arsenic	75	9470	48.659	43.194	12.7		*	
7782-49-2	Selenium	78	647	3.2223	4.6810	31.2		*	
7439-98-7	Molybdenum	95	1163	1.5360	1.7993	14.6		*	
7440-22-4	Silver	107	1857	0.81999	0.90654	9.55		*	
7440-43-9	Cadmium	111	2381	6.2576	6.0057	4.19		*	
7440-31-5	Tin	118	1907	1.5522	1.5173	2.30		*	
7440-36-0	Antimony	121	277	0.17312	0.24803	30.2	0.14	NC	☑
7440-39-3	Barium	137	46073	91.142	93.092	2.09		*	
7440-28-0	Thallium	205	410	0.04748	0.09492	50.0		*	
7439-92-1	Lead	208	298446	55.465	58.432	5.08	0.18	5.1	☑
7440-61-1	Uranium	238	12136	2.2958	2.4673	6.95		*	
7440-56-4	Germanium	72			0			*	
7440-50-8	Copper	63	343051	259.04	224.50	15.4	0.71	E	☐
7440-47-3	Chromium	53	206627	960.99	924.83	3.91		*	
7440-74-6	Indium	115			0			*	
7440-60-0	Holmium	165			0			*	
7439-93-2	Lithium	6			0			*	

* Analyte not requested for this batch, no MDL

NC : Serial dilution concentration < 100 X MDL

E : Difference greater than Limit (10%)

Reviewed by: _____ Date: 9/4/08

Post Digestion Spiked Sample (PDS) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\111PDS.D\111PDS.D#
Date Acquired: Sep 4 2008 12:49 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3CZ
Misc Info: POST DIGESTION SPIKE
Vial Number: 3103
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: PDS
Prep Dil. Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

Spike Ref. File: D:\ICPCHEM\1\DATA\AG090308.B\109AREF.D\109AREF.D#

QC Elements

Element	IS Ref	Tune	Conc.	Ref Conc		RSD(%)	Spk Amt
9 Be	6	1	189.900	1.222	ug/l	1.83	200
51 V	72	1	812.600	667.800	ug/l	2.91	200
52 Cr	72	1	1008.000	882.200	ug/l	2.77	200
55 Mn	72	1	2674.000	2638.000	ug/l	2.50	200
59 Co	72	1	205.600	42.690	ug/l	2.99	200
60 Ni	72	1	717.400	576.600	ug/l	1.89	200
63 Cu	72	1	358.500	224.500	ug/l	1.76	200
66 Zn	72	1	364.000	220.700	ug/l	1.00	200
75 As	72	1	213.400	43.180	ug/l	1.23	200
78 Se	72	1	173.300	4.681	ug/l	1.32	200
95 Mo	115	1	203.100	1.799	ug/l	0.94	200
107 Ag	115	1	172.700	0.907	ug/l	1.58	200
111 Cd	115	1	190.200	6.004	ug/l	0.73	200
118 Sn	115	1	194.400	1.517	ug/l	1.67	200
121 Sb	115	1	192.600	0.248	ug/l	1.25	200
137 Ba	115	1	283.800	93.090	ug/l	1.35	200
205 Tl	165	1	203.300	0.095	ug/l	0.85	200
208 Pb	165	1	254.500	58.430	ug/l	1.21	200
238 U	165	1	211.800	2.467	ug/l	0.48	200

ISTD Elements

Element	Tune	Counts	RSD(%)	Ref. Counts	Rec(%)	QC Range(%)	QC Flag
6 Li	1	213578	1.96	266913	80.0	30 - 120	
72 Ge	1	455919	2.54	519361	87.8	30 - 120	
115 In	1	1411568	0.80	1758193	80.3	30 - 120	
165 Ho	1	2281146	1.63	3007903	75.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Denver

SAMPLE SPIKE

Method: 6020 (ICP/MS) ICPMS_024 Reported: 09/04/08 09:48:40

Department: 090 (Metals) Source: Spreadsheet

Sample: **KRW3CZ** Spike Dilution: **1.00** Sample Dilution: **1.00**

Instrument: **Agilent7500**
File: AG090308 # 111
Acquired: 09/04/2008 00:49:00
Calibrated: 09/03/2008 23:47:00

Channel 272
Method 6020_
ICPMS_024

Matrix: SOLID
Units: ug/L

CASN	Analyte Name	M/S	Area	Amount	Sample	%Rec.	Spike	Flag	Q
7440-41-7	Beryllium	9	59573	189.90	1.2223	94.3	200		☑
7440-62-2	Vanadium	51	6670750	812.60	667.62	72.5	200		☐
7440-47-3	Chromium	52	8801880	1008.0	882.16	62.9	200	*>	☐
7439-96-5	Manganese	55	26915700	2674.0	2637.9	18.0	200	*	☐
7440-48-4	Cobalt	59	2492790	205.60	42.706	81.4	200		☐
7440-02-0	Nickel	60	1936320	717.40	576.60	70.4	200		☑
7440-66-6	Zinc	66	450535	364.00	220.64	71.7 NCM	200		☐
7440-38-2	Arsenic	75	202057	213.40	43.194	85.1	200	>	☑
7782-49-2	Selenium	78	32413	173.30	4.6810	84.3	200		☑
7439-98-7	Molybdenum	95	611909	203.10	1.7993	101	200		☑
7440-22-4	Silver	107	1654840	172.70	0.90654	85.9	200		☑
7440-43-9	Cadmium	111	326474	190.20	6.0057	92.1	200		☑
7440-31-5	Tin	118	932355	194.40	1.5173	96.4	200		☐
7440-36-0	Antimony	121	919097	192.60	0.24803	96.2	200		☑
7440-39-3	Barium	137	649305	283.80	93.092	95.4	200	>	☑
7440-28-0	Thallium	205	3288610	203.30	0.09492	102	200		☑
7439-92-1	Lead	208	5863870	254.50	58.432	98.0	200	>	☑
7440-61-1	Uranium	238	4793060	211.80	2.4673	105	200		☑
7440-56-4	Germanium	72			0				
7440-50-8	Copper	63	2303640	358.50	224.50	67.0 NCM	200		☐
7440-47-3	Chromium	53	1102770	1052.0	924.83				
7440-74-6	Indium	115			0				
7440-60-0	Holmium	165			0				
7439-93-2	Lithium	6			0				

* : Unspiked sample result greater than 4 X spike amount

> : Analyte was found at concentration > 100 X MDL

Reviewed by: Date: 9/4/08

Sample QC Report

Data File:	D:\ICPCHEM\1\DATA\AG090308.B\112SMPL.D\112SMPL.D#
Date Acquired:	Sep 4 2008 12:54 am
Acq. Method:	6020NEW.M
Operator:	TEL
Sample Name:	KRW3D
Misc Info:	D8H210174
Vial Number:	3104
Current Method:	D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File:	D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update:	Sep 03 2008 11:54 pm
Sample Type:	SA
Dilution Factor:	249.30
Autodil Factor:	Undiluted
Final Dil Factor:	249.30

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	289.687	1.162	ug/l	11.85	3600	
51 V	72	1	165,809.430	665.100	ug/l	0.79	3600	
52 Cr	72	1	212,603.040	852.800	ug/l	1.27	3600	
55 Mn	72	1	669,869.100	2687.000	ug/l	0.45	18000	
59 Co	72	1	9,822.420	39.400	ug/l	0.26	3600	
60 Ni	72	1	142,599.600	572.000	ug/l	0.80	3600	
63 Cu	72	1	56,017.710	224.700	ug/l	0.47	3600	
66 Zn	72	1	62,873.460	252.200	ug/l	0.53	3600	
75 As	72	1	13,205.421	52.970	ug/l	0.45	3600	
78 Se	72	1	1,257.968	5.046	ug/l	1.99	3600	
95 Mo	115	1	496.606	1.992	ug/l	2.85	3600	
107 Ag	115	1	228.010	0.915	ug/l	3.05	3600	
111 Cd	115	1	1,471.867	5.904	ug/l	6.14	3600	
118 Sn	115	1	631.228	2.532	ug/l	2.28	3600	
121 Sb	115	1	62.400	0.250	ug/l	6.30	3600	
137 Ba	115	1	23,681.007	94.990	ug/l	1.66	3600	
205 Tl	165	1	23.880	0.096	ug/l	5.73	3600	
208 Pb	165	1	15,479.037	62.090	ug/l	0.54	3600	
238 U	165	1	612.530	2.457	ug/l	1.26	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	205182	1.66	266913	76.9	30 - 120	
72 Ge	1	443646	1.51	519361	85.4	30 - 120	
115 In	1	1363538	1.23	1758193	77.6	30 - 120	
165 Ho	1	2228995	1.37	3007903	74.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Sample QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\113SMPL.D\113SMPL.D#
Date Acquired: Sep 4 2008 12:59 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: KRW3E
Misc Info: D8H210174
Vial Number: 3105
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 03 2008 11:54 pm
Sample Type: SA
Dilution Factor: 255.40
Autodil Factor: Undiluted
Final Dil Factor: 255.40

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Corr Conc	Raw Conc	Units	RSD(%)	High Limit	Flag
9 Be	6	1	276.343	1.082	ug/l	6.01	3600	
51 V	72	1	166,852.820	653.300	ug/l	0.97	3600	
52 Cr	72	1	212,594.960	832.400	ug/l	0.24	3600	
55 Mn	72	1	638,755.400	2501.000	ug/l	1.07	18000	
59 Co	72	1	10,057.652	39.380	ug/l	0.19	3600	
60 Ni	72	1	142,257.800	557.000	ug/l	1.15	3600	
63 Cu	72	1	59,738.060	233.900	ug/l	0.67	3600	
66 Zn	72	1	90,360.520	353.800	ug/l	0.33	3600	
75 As	72	1	15,742.856	61.640	ug/l	1.24	3600	
78 Se	72	1	1,147.768	4.494	ug/l	3.66	3600	
95 Mo	115	1	595.593	2.332	ug/l	1.09	3600	
107 Ag	115	1	215.072	0.842	ug/l	6.85	3600	
111 Cd	115	1	1,565.857	6.131	ug/l	1.92	3600	
118 Sn	115	1	482.706	1.890	ug/l	2.08	3600	
121 Sb	115	1	61.883	0.242	ug/l	4.07	3600	
137 Ba	115	1	24,569.480	96.200	ug/l	0.57	3600	
205 Tl	165	1	18.843	0.074	ug/l	11.01	3600	
208 Pb	165	1	16,036.566	62.790	ug/l	2.76	3600	
238 U	165	1	602.999	2.361	ug/l	5.92	3600	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	197055	1.23	266913	73.8	30 - 120	
72 Ge	1	429261	2.19	519361	82.7	30 - 120	
115 In	1	1311655	1.11	1758193	74.6	30 - 120	
165 Ho	1	2145014	1.64	3007903	71.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\114 CCV.D\114 CCV.D#
Date Acquired: Sep 4 2008 01:03 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	51.860 ug/l	2.57	50	103.7	90 - 110	
51 V	72	1	51.220 ug/l	0.52	50	102.4	90 - 110	
52 Cr	72	1	50.770 ug/l	1.04	50	101.5	90 - 110	
55 Mn	72	1	49.890 ug/l	0.56	50	99.8	90 - 110	
59 Co	72	1	50.060 ug/l	1.62	50	100.1	90 - 110	
60 Ni	72	1	52.280 ug/l	2.27	50	104.6	90 - 110	
63 Cu	72	1	51.040 ug/l	1.18	50	102.1	90 - 110	
66 Zn	72	1	50.280 ug/l	2.54	50	100.6	90 - 110	
75 As	72	1	51.780 ug/l	0.69	50	103.6	90 - 110	
78 Se	72	1	49.950 ug/l	3.42	50	99.9	90 - 110	
95 Mo	115	1	50.510 ug/l	1.02	50	101.0	90 - 110	
107 Ag	115	1	50.300 ug/l	1.53	50	100.6	90 - 110	
111 Cd	115	1	50.250 ug/l	1.14	50	100.5	90 - 110	
118 Sn	115	1	50.670 ug/l	1.25	50	101.3	90 - 110	
121 Sb	115	1	50.220 ug/l	2.40	50	100.4	90 - 110	
137 Ba	115	1	50.510 ug/l	1.04	50	101.0	90 - 110	
205 Tl	165	1	52.600 ug/l	0.49	50	105.2	90 - 110	
208 Pb	165	1	51.430 ug/l	0.64	50	102.9	90 - 110	
238 U	165	1	51.980 ug/l	1.12	50	104.0	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	212021	0.31	266913	79.4	30 - 120	
72 Ge	1	438786	0.53	519361	84.5	30 - 120	
115 In	1	1528812	0.62	1758193	87.0	30 - 120	
165 Ho	1	2624064	0.46	3007903	87.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\115 CCB.D\115 CCB.D#
Date Acquired: Sep 4 2008 01:08 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 03 2008 11:54 pm
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ug/l	173.16	1.00	
51 V	72	1	0.023	ug/l	27.96	1.00	
52 Cr	72	1	0.023	ug/l	61.57	1.00	
55 Mn	72	1	0.011	ug/l	57.91	1.00	
59 Co	72	1	0.003	ug/l	39.96	1.00	
60 Ni	72	1	0.663	ug/l	4.26	1.00	
63 Cu	72	1	-0.296	ug/l	2.63	1.00	
66 Zn	72	1	0.395	ug/l	6.66	10.00	
75 As	72	1	0.013	ug/l	114.26	5.00	
78 Se	72	1	-0.687	ug/l	16.31	5.00	
95 Mo	115	1	-0.006	ug/l	75.77	1.00	
107 Ag	115	1	0.000	ug/l	1664.60	1.00	
111 Cd	115	1	-0.001	ug/l	180.95	1.00	
118 Sn	115	1	0.022	ug/l	48.75	10.00	
121 Sb	115	1	0.018	ug/l	71.02	1.00	
137 Ba	115	1	0.002	ug/l	357.53	1.00	
205 Tl	165	1	0.001	ug/l	114.74	1.00	
208 Pb	165	1	0.004	ug/l	67.48	1.00	
238 U	165	1	0.008	ug/l	22.34	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	217362	0.36	266913	81.4	30 - 120	
72 Ge	1	448482	0.66	519361	86.4	30 - 120	
115 In	1	1553403	1.23	1758193	88.4	30 - 120	
165 Ho	1	2680552	1.04	3007903	89.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\098CALB.D\098CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Reslope Before Continuing Analytical Run

Corrective action was taken as stated in method 6020 section 7.8

…"During the course of an analytical run, the instrument may be "resloped" or recalibrated to correct for instrument drift. A recalibration must then be followed immediately by a new analysis of a CCV and CCB before any further samples are analyzed."

Analyst: _____

Date: 9/4/08

Calibration Blank QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#
Date Acquired: Sep 4 2008 03:33 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: Cal Blank
Misc Info:
Vial Number: 2101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 04 2008 03:31 am
Sample Type: CalBlk

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	0	0.00
51	V	72	1	188	98.00
52	Cr	72	1	1593	8.56
55	Mn	72	1	380	28.44
59	Co	72	1	30	33.57
60	Ni	72	1	90	55.41
63	Cu	72	1	390	4.86
66	Zn	72	1	1750	3.52
75	As	72	1	47	21.70
78	Se	72	1	394	5.49
95	Mo	115	1	163	53.49
107	Ag	115	1	40	66.24
111	Cd	115	1	4	135.68
118	Sn	115	1	330	13.33
121	Sb	115	1	83	28.22
137	Ba	115	1	33	45.81
205	Tl	165	1	243	1.89
208	Pb	165	1	283	10.73
238	U	165	1	23	24.15

Internal Standard Elements

Element		Tune	CPS Mean	RSD(%)
6	Li	1	213096	0.73
72	Ge	1	463653	0.29
115	In	1	1573128	0.54
165	Ho	1	2686399	0.72

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

Calibration Standard QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\146ICAL.D\146ICAL.D#
Date Acquired: Sep 4 2008 03:37 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: 100 ppb
Misc Info:
Vial Number: 2102
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 04 2008 03:35 am
Sample Type: ICAL

QC Elements

Element		IS Ref	Tune	CPS Mean	RSD(%)
9	Be	6	1	31512	1.43
51	V	72	1	798730	0.55
52	Cr	72	1	847144	0.61
55	Mn	72	1	952159	1.12
59	Co	72	1	1182068	1.74
60	Ni	72	1	264529	1.97
63	Cu	72	1	630302	0.59
66	Zn	72	1	120609	1.21
75	As	72	1	94293	1.00
78	Se	72	1	18343	1.71
95	Mo	115	1	331913	1.42
107	Ag	115	1	1052846	1.58
111	Cd	115	1	187626	1.11
118	Sn	115	1	527429	0.53
121	Sb	115	1	527722	1.50
137	Ba	115	1	254181	2.05
205	Tl	165	1	1974786	0.71
208	Pb	165	1	2758901	1.91
238	U	165	1	2743503	0.91

ISTD Elements

Element		Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6	Li	1	208881	1.28	213096	98.0	30 - 120	
72	Ge	1	447779	1.38	463653	96.6	30 - 120	
115	In	1	1584555	2.26	1573128	100.7	30 - 120	
165	Ho	1	2684865	0.93	2686399	99.9	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures 0
0 :ISTD Failures 0

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\147 CCV.D\147 CCV.D#
Date Acquired: Sep 4 2008 03:42 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 04 2008 03:40 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	50.370 ug/l	3.50	50	100.7	90 - 110	
51 V	72	1	51.450 ug/l	1.01	50	102.9	90 - 110	
52 Cr	72	1	51.410 ug/l	0.44	50	102.8	90 - 110	
55 Mn	72	1	51.550 ug/l	0.78	50	103.1	90 - 110	
59 Co	72	1	50.170 ug/l	0.70	50	100.3	90 - 110	
60 Ni	72	1	51.580 ug/l	1.01	50	103.2	90 - 110	
63 Cu	72	1	51.840 ug/l	0.11	50	103.7	90 - 110	
66 Zn	72	1	50.790 ug/l	1.07	50	101.6	90 - 110	
75 As	72	1	50.760 ug/l	1.29	50	101.5	90 - 110	
78 Se	72	1	51.460 ug/l	0.98	50	102.9	90 - 110	
95 Mo	115	1	50.710 ug/l	0.75	50	101.4	90 - 110	
107 Ag	115	1	51.180 ug/l	0.81	50	102.4	90 - 110	
111 Cd	115	1	51.710 ug/l	1.19	50	103.4	90 - 110	
118 Sn	115	1	51.680 ug/l	1.66	50	103.4	90 - 110	
121 Sb	115	1	50.860 ug/l	1.77	50	101.7	90 - 110	
137 Ba	115	1	51.520 ug/l	1.18	50	103.0	90 - 110	
205 Tl	165	1	51.850 ug/l	0.18	50	103.7	90 - 110	
208 Pb	165	1	51.040 ug/l	0.65	50	102.1	90 - 110	
238 U	165	1	52.160 ug/l	1.59	50	104.3	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	209033	0.40	213096	98.1	30 - 120	
72 Ge	1	445334	1.02	463653	96.0	30 - 120	
115 In	1	1582639	0.32	1573128	100.6	30 - 120	
165 Ho	1	2698547	1.36	2686399	100.5	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\148 CCB.D\148 CCB.D#
Date Acquired: Sep 4 2008 03:47 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 04 2008 03:40 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.007	ug/l	86.62	1.00	
51 V	72	1	0.002	ug/l	530.91	1.00	
52 Cr	72	1	-0.029	ug/l	13.39	1.00	
55 Mn	72	1	-0.007	ug/l	38.20	1.00	
59 Co	72	1	0.006	ug/l	37.06	1.00	
60 Ni	72	1	0.599	ug/l	0.73	1.00	
63 Cu	72	1	-0.006	ug/l	70.74	1.00	
66 Zn	72	1	-0.548	ug/l	23.79	10.00	
75 As	72	1	0.005	ug/l	449.65	5.00	
78 Se	72	1	0.089	ug/l	108.73	5.00	
95 Mo	115	1	0.008	ug/l	88.62	1.00	
107 Ag	115	1	0.008	ug/l	24.83	1.00	
111 Cd	115	1	0.000	ug/l	158.28	1.00	
118 Sn	115	1	0.013	ug/l	112.88	10.00	
121 Sb	115	1	0.024	ug/l	25.43	1.00	
137 Ba	115	1	0.004	ug/l	225.47	1.00	
205 Tl	165	1	0.010	ug/l	34.47	1.00	
208 Pb	165	1	0.002	ug/l	109.51	1.00	
238 U	165	1	0.009	ug/l	40.27	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	207379	1.14	213096	97.3	30 - 120	
72 Ge	1	448249	0.24	463653	96.7	30 - 120	
115 In	1	1559235	0.95	1573128	99.1	30 - 120	
165 Ho	1	2720804	1.61	2686399	101.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Interference Check Solution A (ICS-A) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\149ICSA.D\149ICSA.D#
Date Acquired: Sep 4 2008 03:52 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSA
Misc Info:
Vial Number: 2108
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 04 2008 03:40 am
Sample Type: ICSA
Dilution Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit ppb	Flag
9 Be	6	1	0.004 ug/l	173.20	10.00	
51 V	72	1	-0.263 ug/l	65.08	10.00	
52 Cr	72	1	1.017 ug/l	8.16	10.00	
55 Mn	72	1	1.947 ug/l	1.65	10.00	
59 Co	72	1	0.062 ug/l	9.18	10.00	
60 Ni	72	1	5.029 ug/l	1.25	10.00	
63 Cu	72	1	0.445 ug/l	8.58	10.00	
66 Zn	72	1	3.785 ug/l	8.40	100.00	
75 As	72	1	0.351 ug/l	1.75	50.00	
78 Se	72	1	0.390 ug/l	15.31	50.00	
95 Mo	115	1	2096.000 ug/l	1.18	10.00	
107 Ag	115	1	0.022 ug/l	20.94	10.00	
111 Cd	115	1	0.327 ug/l	25.58	10.00	
118 Sn	115	1	0.130 ug/l	12.93	100.00	
121 Sb	115	1	0.240 ug/l	10.90	10.00	
137 Ba	115	1	1.764 ug/l	6.77	10.00	
205 Tl	165	1	0.020 ug/l	35.45	10.00	
208 Pb	165	1	0.090 ug/l	13.97	10.00	
238 U	165	1	0.005 ug/l	23.87	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	199259	0.59	213096	93.5	30 - 120	
72 Ge	1	405526	0.76	463653	87.5	30 - 120	
115 In	1	1392268	1.88	1573128	88.5	30 - 120	
165 Ho	1	2439761	0.55	2686399	90.8	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Interference Check Solution AB (ICS-AB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\150ICSB.D\150ICSB.D#
Date Acquired: Sep 4 2008 03:57 am
Acq. Method: 6020NEW.M
Operator: TEL
Sample Name: ICSAB
Misc Info:
Vial Number: 2109
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal. Update: Sep 04 2008 03:40 am
Sample Type: ICSAB
Dilution Factor: 1.00

QC Summary:
Analytes: Fail
ISTD: Pass

QC Elements

Element	IS	Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
9 Be	6		1	95.360	0.89	100	95.4	80 - 120	
51 V	72		1	103.400	0.10	100	103.4	80 - 120	
52 Cr	72		1	100.400	0.65	100	100.4	80 - 120	
55 Mn	72		1	100.400	0.52	100	100.4	80 - 120	
59 Co	72		1	93.040	1.18	100	93.0	80 - 120	
60 Ni	72		1	95.060	0.77	100	95.1	80 - 120	
63 Cu	72		1	88.320	1.10	100	88.3	80 - 120	
66 Zn	72		1	96.870	0.21	100	96.9	80 - 120	
75 As	72		1	108.900	0.98	100	108.9	80 - 120	
78 Se	72		1	120.600	1.35	100	120.6	80 - 120	Fail NR
95 Mo	115		1	2122.000	0.56	2100	101.0	80 - 120	
107 Ag	115		1	81.620	2.21	100	81.6	80 - 120	
111 Cd	115		1	96.220	0.60	100	96.2	80 - 120	
118 Sn	115		1	100.700	0.21	100	100.7	80 - 120	
121 Sb	115		1	101.700	1.17	100	101.7	80 - 120	
137 Ba	115		1	104.200	0.29	100	104.2	80 - 120	
205 Tl	165		1	92.510	0.26	100	92.5	80 - 120	
208 Pb	165		1	90.390	0.29	100	90.4	80 - 120	
238 U	165		1	98.880	1.12	100	98.9	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	199564	0.22	213096	93.6	30 - 120	
72 Ge	1	407131	0.58	463653	87.8	30 - 120	
115 In	1	1406765	0.54	1573128	89.4	30 - 120	
165 Ho	1	2449481	0.98	2686399	91.2	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

1 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Wash QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\151WASH.D\151WASH.D#
Date Acquired: Sep 4 2008 04:01 am
Operator: TEL
Sample Name: WASH
Misc Info:
Vial Number: 1101
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 04 2008 03:40 am
Sample Type: WASH
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	High Limit	Flag
9 Be	6	1	0.000 ug/l	0.00	10.00	
51 V	72	1	0.100 ug/l	9.59	10.00	
52 Cr	72	1	0.290 ug/l	8.87	10.00	
55 Mn	72	1	0.006 ug/l	120.57	10.00	
59 Co	72	1	0.011 ug/l	40.47	10.00	
60 Ni	72	1	0.012 ug/l	119.90	10.00	
63 Cu	72	1	0.035 ug/l	68.71	10.00	
66 Zn	72	1	-0.694 ug/l	5.91	100.00	
75 As	72	1	-0.002 ug/l	180.52	50.00	
78 Se	72	1	0.353 ug/l	54.80	50.00	
95 Mo	115	1	0.496 ug/l	2.48	10.00	
107 Ag	115	1	0.007 ug/l	28.03	10.00	
111 Cd	115	1	0.006 ug/l	29.71	10.00	
118 Sn	115	1	-0.007 ug/l	193.27	100.00	
121 Sb	115	1	0.008 ug/l	21.78	10.00	
137 Ba	115	1	0.015 ug/l	52.90	10.00	
205 Tl	165	1	0.026 ug/l	16.80	10.00	
208 Pb	165	1	0.006 ug/l	62.12	10.00	
238 U	165	1	0.014 ug/l	11.60	10.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	212712	0.57	213096	99.8	30 - 120	
72 Ge	1	464797	1.38	463653	100.2	30 - 120	
115 In	1	1618772	0.30	1573128	102.9	30 - 120	
165 Ho	1	2749470	1.22	2686399	102.3	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Verification (CCV) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\152 CCV.D\152 CCV.D#
Date Acquired: Sep 4 2008 04:06 am
Operator: TEL
Sample Name: CCV
Misc Info:
Vial Number: 1107
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 04 2008 03:40 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.	RSD(%)	Expected	Rec(%)	QC Range(%)	Flag
9 Be	6	1	49.460 ug/l	1.74	50	98.9	90 - 110	
51 V	72	1	51.050 ug/l	0.59	50	102.1	90 - 110	
52 Cr	72	1	51.280 ug/l	0.91	50	102.6	90 - 110	
55 Mn	72	1	51.850 ug/l	1.59	50	103.7	90 - 110	
59 Co	72	1	50.510 ug/l	0.84	50	101.0	90 - 110	
60 Ni	72	1	51.760 ug/l	0.26	50	103.5	90 - 110	
63 Cu	72	1	52.000 ug/l	0.86	50	104.0	90 - 110	
66 Zn	72	1	50.830 ug/l	1.70	50	101.7	90 - 110	
75 As	72	1	49.910 ug/l	1.79	50	99.8	90 - 110	
78 Se	72	1	51.250 ug/l	1.73	50	102.5	90 - 110	
95 Mo	115	1	52.530 ug/l	1.38	50	105.1	90 - 110	
107 Ag	115	1	52.740 ug/l	1.33	50	105.5	90 - 110	
111 Cd	115	1	52.760 ug/l	1.41	50	105.5	90 - 110	
118 Sn	115	1	52.960 ug/l	0.67	50	105.9	90 - 110	
121 Sb	115	1	51.760 ug/l	1.52	50	103.5	90 - 110	
137 Ba	115	1	52.550 ug/l	1.55	50	105.1	90 - 110	
205 Tl	165	1	51.560 ug/l	0.44	50	103.1	90 - 110	
208 Pb	165	1	51.170 ug/l	0.78	50	102.3	90 - 110	
238 U	165	1	52.240 ug/l	1.93	50	104.5	90 - 110	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	207564	0.77	213096	97.4	30 - 120	
72 Ge	1	443864	0.24	463653	95.7	30 - 120	
115 In	1	1543366	1.03	1573128	98.1	30 - 120	
165 Ho	1	2695845	1.31	2686399	100.4	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Continuing Calibration Blank (CCB) QC Report

Data File: D:\ICPCHEM\1\DATA\AG090308.B\153 CCB.D\153 CCB.D#
Date Acquired: Sep 4 2008 04:11 am
Operator: TEL
Sample Name: CCB
Misc Info:
Vial Number: 1307
Current Method: D:\ICPCHEM\1\METHODS\6020NEW.M
Calibration File: D:\ICPCHEM\1\CALIB\6020NEW.C
Last Cal Update: Sep 04 2008 03:40 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Summary:
Analytes: Pass
ISTD: Pass

QC Elements

Element	IS Ref	Tune	Conc.		RSD(%)	High Limit	Flag
9 Be	6	1	0.000	ug/l	0.00	1.00	
51 V	72	1	-0.003	ug/l	985.73	1.00	
52 Cr	72	1	-0.015	ug/l	73.73	1.00	
55 Mn	72	1	-0.006	ug/l	169.39	1.00	
59 Co	72	1	0.006	ug/l	46.39	1.00	
60 Ni	72	1	0.585	ug/l	3.09	1.00	
63 Cu	72	1	-0.003	ug/l	158.09	1.00	
66 Zn	72	1	-0.434	ug/l	16.12	10.00	
75 As	72	1	0.010	ug/l	112.86	5.00	
78 Se	72	1	0.299	ug/l	31.89	5.00	
95 Mo	115	1	0.070	ug/l	36.92	1.00	
107 Ag	115	1	0.010	ug/l	58.99	1.00	
111 Cd	115	1	0.003	ug/l	239.70	1.00	
118 Sn	115	1	0.011	ug/l	48.26	10.00	
121 Sb	115	1	0.011	ug/l	138.77	1.00	
137 Ba	115	1	0.007	ug/l	55.86	1.00	
205 Tl	165	1	0.007	ug/l	116.85	1.00	
208 Pb	165	1	0.004	ug/l	33.56	1.00	
238 U	165	1	0.008	ug/l	14.88	1.00	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1	206641	1.13	213096	97.0	30 - 120	
72 Ge	1	448566	0.85	463653	96.7	30 - 120	
115 In	1	1546546	1.02	1573128	98.3	30 - 120	
165 Ho	1	2717199	1.37	2686399	101.1	30 - 120	

Tune File# 1 d:\icpchem\1\7500\he.u
Tune File# 2 D:\ICPCHEM\1\7500\
Tune File# 3 D:\ICPCHEM\1\7500\

ISTD Ref File : D:\ICPCHEM\1\DATA\AG090308.B\145CALB.D\145CALB.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

General Chemistry

Supporting Documentation

Sample Sequence, Instrument Printouts, Calculations

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Method: % Moisture

Batch #(s): 8218179-80-81-82-83-447

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: 08/06/08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GRAVIMETRIC CALCULATION BENCHSHEET

ANALYST RMD
REVIEWED BY
BATCH NO. 8218179-80-81-82-83
Prep Code 88
Method Code WM

ANALYSIS DATE 08/05/08
REVIEW DATE 08/06/08

METHOD NO. MOIS
BALANCE NO. BAL
FILE 080508A

Date/Time In 8/5/2008 14:00:00
Date/Time Out 8/6/2008 9:30
Temp In, C 106
Temp Out, C 108

Date/Time In
Date/Time Out
Temp In, C
Temp Out, C

	Lab ID	Lot-Sample	Time	True Conc. %	Dish #	Tare Wt. gram	Initial GW g	Init Dried Wt. g	Final Dried Wt g	Percent Moisture %	%Rec.	Check	Upload by Upload?	%D
1	KRW24	D8G210174 -12	8/5/200		1	1.3500	16.8		7.9100	57.5			Y	
2	KRW28	D8G210174 -16	8/5/200		2	1.3500	15.87		11.0300	33.3			Y	
3	KRW3M	D8G210177 -7	8/5/200		3	1.2700	17.46		14.9200	15.7			Y	
4	KRW3M-X	D8G210177 -7	8/5/200	0	4	1.3000	17.62		15.1400	15.2			Y	3.2%
5	KRW3Q	D8G210177 -8	8/5/200		5	1.2500	15.5		13.1700	16.4			Y	
6	KRW3R	D8G210177 -9	8/5/200		6	1.2900	16.73		15.2300	9.72			Y	
7	KRW3T	D8G210177 -10	8/5/200		7	1.2800	16.52		15.2700	8.2			Y	
8	KRW3V	D8G210177 -11	8/5/200		8	1.2700	16.12		14.4900	11			Y	
9	KRW30	D8G210177 -12	8/5/200		9	1.2800	16.28		14.1800	14			Y	
10	KRW31	D8G210177 -13	8/5/200		10	1.2500	17.03		15.1100	12.2			Y	
11	KRW33	D8G210177 -14	8/5/200		11	1.2900	16.27		14.0400	14.9			Y	
12	KRW36	D8G210177 -15	8/5/200		12	1.2900	16.3		14.2600	13.6			Y	
13	KRW37	D8G210177 -16	8/5/200		13	1.2800	15.49		12.9400	17.9			Y	
14	KR2Q5	D8G230232 -1	8/5/200		14	1.2600	16.02		14.5100	10.2			Y	
15	KR2RW	D8G230232 -2	8/5/200		15	1.2900	16.68		15.8000	5.72			Y	
16	KR2RX	D8G230232 -3	8/5/200		16	1.2800	15.72		15.4600	1.8			Y	
17	KR2R0	D8G230232 -4	8/5/200		17	1.2800	16.13		15.7200	2.76			Y	
18	KR2R2	D8G230232 -5	8/5/200		18	1.2900	16.46		13.3900	20.2			Y	
19	KR2R3	D8G230232 -6	8/5/200		19	1.2800	16.22		15.7200	3.35			Y	
20	KR2R4	D8G230232 -7	8/5/200		20	1.2700	15.74		15.4600	1.94			Y	
21	KR2R5	D8G230232 -8	8/5/200		21	1.2800	15.74		13.3100	16.8			Y	
22	KR2R6	D8G230232 -9	8/5/200		22	1.3100	15.84		12.0400	26.2			Y	
23	KR2R7	D8G230232 -10	8/5/200		23	1.2500	15.28		12.1400	22.4			Y	
24	KR2R8	D8G230232 -11	8/5/200		24	1.2600	15.77		12.2200	24.5			Y	
25	KR2R9	D8G230232 -12	8/5/200		25	1.2600	15.91		11.9600	27			Y	
26	KR2TA	D8G230232 -13	8/5/200		26	1.2700	16.47		14.1200	15.5			Y	
27	KR2TA-X	D8G230232 -13	8/5/200	0	27	1.2900	16.67		13.7700	18.9			Y	19.8%
28	KR2TD	D8G230232 -14	8/5/200		28	1.2800	16.96		13.2600	23.6			Y	
29	KR2TE	D8G230232 -15	8/5/200		29	1.2600	15.94		10.2300	38.9			Y	
30	KR2TF	D8G230232 -16	8/5/200		30	1.2700	17.35		12.4500	30.5			Y	
31	KR2TG	D8G230232 -17	8/5/200		31	1.2700	17.87		11.4400	38.7			Y	
32	KR2TH	D8G230232 -18	8/5/200		32	1.2900	16.53		11.8700	30.6			Y	
33	KR2TJ	D8G230232 -19	8/5/200		33	1.2600	16.24		11.8400	29.4			Y	
34	KR2TK	D8G230232 -20	8/5/200		34	1.3000	15.75		11.6300	28.5			Y	
35	KR2TL	D8G230232 -21	8/5/200		35	1.2900	15.55		10.9000	32.6			Y	
36	KR2TN	D8G230232 -22	8/5/200		36	1.2800	16.61		12.3500	27.8			Y	
37	KR2TQ	D8G230232 -23	8/5/200		37	1.2900	16		11.5500	30.3			Y	
38	KR2TT	D8G230232 -24	8/5/200		38	1.2800	15.94		12.5000	23.5			Y	
39	KR2TW	D8G230232 -25	8/5/200		39	1.2900	15.57		11.1000	31.3			Y	
40	KR2T0	D8G230232 -26	8/5/200		40	1.2800	15.79		11.0700	32.5			Y	
41	KR2T1	D8G230232 -27	8/5/200		41	1.2800	15.24		10.7400	32.2			Y	
42	KR2T2	D8G230232 -28	8/5/200		42	1.2600	15.76		11.3600	30.3			Y	
43	KR2T3	D8G230232 -29	8/5/200		43	1.2900	16.59		11.4400	33.7			Y	
44	KR2T3-X	D8G230232 -29	8/5/200	0	44	1.3000	16.31		11.5000	32			Y	4.9%
45	KR2T4	D8G230232 -30	8/5/200		45	1.2900	15.83		12.4900	23			Y	
46	KR2T6	D8G230232 -31	8/5/200		46	1.2900	15.75		10.1900	38.5			Y	

TestAmerica

GRAVIMETRIC CALCULATION BENCHSHEET

ANALYST RMD
REVIEWED BY
BATCH NO. 8218179-80-81-82-83
Prep Code 88
Method Code WM

ANALYSIS DATE 08/05/08
REVIEW DATE 08/06/08

METHOD NO. MOIS
BALANCE NO. BAL
FILE 080508A

Date/Time In 8/5/2008 14:00:00
Date/Time Out 8/6/2008 9:30
Temp In, C 106
Temp Out, C 108

Date/Time In
Date/Time Out
Temp In, C
Temp Out, C

	Lab ID	Lot-Sample	Time	True Conc. %	Dish #	Tare Wt. gram	Initial GW g	Init Dried Wt. g	Final Dried W g	Percent Moisture %	%Rec.	Check	Upload?	Upload by %D
47	KR2T7	D8G230232 -32	8/5/200		47	1.2900	15.6		10.4200	36.2			Y	
48	KR2T9	D8G230232 -33	8/5/200		48	1.2900	15.24		9.0900	44.1			Y	
49	KR2VA	D8G230232 -34	8/5/200		49	1.2800	15.73		8.2500	51.8			Y	
50	KR2VC	D8G230232 -35	8/5/200		50	1.2900	15.65		6.7700	61.8			Y	
51	KR2VD	D8G230232 -36	8/5/200		51	1.2800	16.58		10.8700	37.3			Y	
52	KR2V4	D8G230232 -37	8/5/200		52	1.2900	15.86		11.1500	32.3			Y	
53	KR2V8	D8G230232 -38	8/5/200		53	1.2900	15.93		11.6500	29.2			Y	
54	KR2WA	D8G230232 -39	8/5/200		54	1.2800	17.13		12.3500	30.2			Y	
55	KR2WC	D8G230232 -40	8/5/200		55	1.2700	16.39		10.6000	38.3			Y	
56	KR2WD	D8G230232 -41	8/5/200		56	1.3000	16.24		11.6200	30.9			Y	
57	KR2WF	D8G230232 -42	8/5/200		57	1.2700	15.92		12.3700	24.2			Y	
58	KR2WJ	D8G230232 -43	8/5/200		58	1.2600	15.82		10.5600	36.1			Y	
59	KR2WK	D8G230232 -44	8/5/200		59	1.2900	16.1		11.4500	31.4			Y	
60	KR2WN	D8G230232 -45	8/5/200		60	1.2600	15.91		10.4700	37.1			Y	
61	KR2WT	D8G230232 -46	8/5/200		61	1.2800	15.88		9.1000	46.4			Y	
62	KR2WW	D8G230232 -47	8/5/200		62	1.2700	16.58		11.0400	36.2			Y	
63	KR2W1	D8G230232 -48	8/5/200		63	1.2800	16.24		9.0100	48.3			Y	
64	KR2W3	D8G230232 -49	8/5/200		64	1.2800	16.46		11.4800	32.8			Y	
65	KR2W3-X	D8G230232 -49	8/5/200	0	65	1.2800	16.5		11.1400	35.2			Y	7.1%
66	KR2W4	D8G230232 -50	8/5/200		66	1.2800	16.48		12.2000	28.2			Y	
67	KR2W5	D8G230232 -51	8/5/200		67	1.2900	16.25		13.1600	20.7			Y	
68	KR2W9	D8G230232 -52	8/5/200		68	1.2800	17.31		12.1200	32.4			Y	
69	KR2XA	D8G230232 -53	8/5/200		69	1.2600	16.71		9.3700	47.5			Y	
70	KR2XD	D8G230232 -54	8/5/200		70	1.2800	16.92		6.2400	68.3			Y	
71	KR2X2	D8G230232 -55	8/5/200		71	1.2600	16.68		11.9900	30.4			Y	
72	KR2X4	D8G230232 -56	8/5/200		72	1.2700	16.19		7.0100	61.5			Y	
73	KR2X6	D8G230232 -57	8/5/200		73	1.3100	16.76		6.2200	68.2			Y	
74	KR2X8	D8G230232 -58	8/5/200		74	1.3000	16.4		7.1500	61.3			Y	
75	KR20A	D8G230232 -59	8/5/200		75	1.2900	17.03		5.1300	75.6			Y	
76	KR20D	D8G230232 -60	8/5/200		76	1.2800	16.29		4.5400	78.3			Y	
77	KR20E	D8G230232 -61	8/5/200		77	1.2900	16.9		12.2300	29.9			Y	
78	KR20G	D8G230232 -62	8/5/200		78	1.2700	17.27		8.0400	57.7			Y	
79	KR20J	D8G230232 -63	8/5/200		79	1.2800	16.61		9.3200	47.6			Y	
80	KR20M	D8G230232 -64	8/5/200		80	1.2800	17.33		11.4800	36.4			Y	
81	KR20N	D8G230232 -65	8/5/200		81	1.2900	16.56		10.7800	37.9			Y	
82	KR20P	D8G230232 -66	8/5/200		82	1.2800	16.89		13.7300	20.2			Y	
83	KR20Q	D8G230232 -67	8/5/200		83	1.2800	16.95		11.3600	35.7			Y	
84	KR20R	D8G230232 -68	8/5/200		84	1.2800	16.52		11.6800	31.8			Y	
85	KR20T	D8G230232 -69	8/5/200		85	1.2900	15.96		9.5600	43.6			Y	
86	KR20T-X	D8G230232 -69	8/5/200	0	86	1.2800	15.86		9.5300	43.4			Y	0.5%
87	KR20V	D8G230232 -70	8/5/200		87	1.2800	15.87		9.9200	40.8			Y	
88	KR20W	D8G230232 -71	8/5/200		88	1.2800	17.37		5.3200	74.9			Y	
89	KR21W	D8G230232 -74	8/5/200		89	1.3000	16.69		9.9100	44.1			Y	
90	KR22A	D8G230232 -75	8/5/200		90	1.2700	17.91		11.0800	41			Y	
91	KR488	D8G240289 -1	8/5/200		91	1.2900	16		11.8800	28			Y	
92	KR5AD	D8G240289 -2	8/5/200		92	1.2900	15.85		12.2200	24.9			Y	
93	KR5AH	D8G240289 -3	8/5/200		93	1.2900	15.96		13.6300	15.9			Y	
94	KR5AR	D8G240289 -4	8/5/200		94	1.2800	16.75		15.0400	11.1			Y	
95	KR5AX	D8G240289 -5	8/5/200		95	1.3000	15.68		13.7700	13.3			Y	
96	KR5A1	D8G240289 -6	8/5/200		96	1.2700	17.5		16.0500	8.93			Y	
97	KR5A4	D8G240289 -7	8/5/200		97	1.2800	16.46		11.7100	31.3			Y	
98	KR5CJ	D8G240289 -8	8/5/200		98	1.2800	17		10.0900	44			Y	
99	KR5CL	D8G240289 -9	8/5/200		99	1.2600	16.88		13.0900	24.3			Y	
100	KR5CM	D8G240289 -10	8/5/200		100	1.3000	17.32		11.8900	33.9			Y	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GRAVIMETRIC CALCULATION BENCHSHEET

ANALYST RMD
REVIEWED BY
BATCH NO. 8218183-447
Prep Code 88
Method Code WM

ANALYSIS DATE 08/05/08
REVIEW DATE 08/06/08

METHOD NO. MOIS
BALANCE NO. BAL
FILE 080508B

Date/Time In 8/5/2008 14:00
Date/Time Out 8/6/2008 09:30:00:
Temp In, C 106
Temp Out, C 108

Date/Time In
Date/Time Out
Temp In, C
Temp Out, C

	Lab ID	Lot-Sample	Time	True Conc. %	Dish #	Tare Wt. gram	Initial GW g	Init Dried Wt. g	Final Dried W g	Percent Moisture %	%Rec.	Check	Upload by Upload?	%D
1	KR5CN	D8G240289 -11	14:00		101	1.2900	16.12		14.8200	8.77			Y	
2	KR5CQ	D8G240289 -12	14:00		102	1.2900	17.13		15.6700	9.22			Y	
3	KR5CW	D8G240289 -13	14:00		103	1.3000	16.39		13.7300	17.6			Y	
4	KTL6F	D8H050176-1	14:00		104	1.2900	17.23		15.0300	13.8			Y	
5	KTL6T	D8H050176-3	14:00		105	1.2700	16.16		14.3900	11.9			Y	
6	KTL6T-X	D8H050176-3	14:00	0	106	1.2800	15.96		13.3700	17.6			Y	39.0%
7	KTL61	D8H050176-7	14:00		107	1.3000	16.39		14.2600	14.1			Y	
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
41														
42														
43														
44														
45														
46														

RD 8/6/08

History of Manual Changes to Automated Data Review Qualifiers

Laboratory Reporting Batch: D8G210174

Analyte	Field Sample ID	Analysis Method	Analysis Type	Result	Data Review Element	Original Qualifier	New Qualifier
1,3,5-TRINITROBENZENE	PJC-MRS01-DU3-SS-02-03	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:13						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-AU1-SS-02-02	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:05						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-AU1-SS-02-03	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:07						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-AU2-SS-02-01	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:07						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-AU2-SS-02-02	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:08						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-AU2-SS-02-03	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:08						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-DU2-SS-02-01	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:08						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-DU2-SS-02-02	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:09						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						

History of Manual Changes to Automated Data Review Qualifiers

Laboratory Reporting Batch: D8G210174

Analyte	Field Sample ID	Analysis Method	Analysis Type	Result	Data Review Element	Original Qualifier	New Qualifier
1,3,5-TRINITROBENZENE	PJC-MRS01-DU2-SS-02-03-A	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:11						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-DU2-SS-02-03-B	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:11						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-DU2-SS-02-03-C	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:12						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-AU1-SS-02-01	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:03						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-DU3-SS-02-02	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:13						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-EB-01	8321A	1RES	0.12 ug/L	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:14						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-SD-01	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:15						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-SD-03	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:15						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						

History of Manual Changes to Automated Data Review Qualifiers

Laboratory Reporting Batch: D8G210174

Analyte	Field Sample ID	Analysis Method	Analysis Type	Result	Data Review Element	Original Qualifier	New Qualifier
1,3,5-TRINITROBENZENE	PJC-MRS01-SW-01	8321A	1RES	0.12 ug/L	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:15						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-SW-02	8321A	1RES	0.12 ug/L	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:16						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-SW-03	8321A	1RES	0.12 ug/L	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:16						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
1,3,5-TRINITROBENZENE	PJC-MRS01-DU3-SS-02-01	8321A	1RES	100 ug/kg	Temperature	**R**	**None**
Changed by: pjf	On : 09/09/2008 15:12						
Reason for change:	R flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
2,4-DINITROTOLUENE	PJC-MRS01-AU1-SS-02-02	8321A	1RES	75 ug/kg	Temperature	**J**	**None**
Changed by: pjf	On : 09/09/2008 15:06						
Reason for change:	J flag for temperature out of recommended 2-6° C range was removed. Cooler temps ranged from 15.1° C to 19.3° C. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals to proceed with analysis.						
COPPER	PJC-MRS01-AU1-SS-02-01	6020	1RES	55 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/09/2008 16:46						
Reason for change:	J flagged as estimated due to non-compliant post digestion spike recovery.						
COPPER	PJC-MRS01-AU1-SS-02-02	6020	1RES	56 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/09/2008 16:47						
Reason for change:	J flagged as estimated due to non-compliant post digestion spike recovery.						
COPPER	PJC-MRS01-AU1-SS-02-03	6020	1RES	60 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/09/2008 16:47						
Reason for change:	J flagged as estimated due to non-compliant post digestion spike recovery.						

History of Manual Changes to Automated Data Review Qualifiers

Laboratory Reporting Batch: D8G210174

Analyte	Field Sample ID	Analysis Method	Analysis Type	Result	Data Review Element	Original Qualifier	New Qualifier
ZINC	PJC-MRS01-AU1-SS-02-03	6020	1RES	90 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/09/2008 16:48						
Reason for change: J flagged as estimated due to non-compliant post digestion spike recovery.							
ZINC	PJC-MRS01-AU1-SS-02-01	6020	1RES	54 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/09/2008 16:47						
Reason for change: J flagged as estimated due to non-compliant post digestion spike recovery.							
ZINC	PJC-MRS01-AU1-SS-02-02	6020	1RES	63 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/09/2008 16:47						
Reason for change: J flagged as estimated due to non-compliant post digestion spike recovery.							

History of Manual Changes to Automated Data Review Qualifiers

Laboratory Reporting Batch: D8G220301

Analyte	Field Sample ID	Analysis Method	Analysis Type	Result	Data Review Element	Original Qualifier	New Qualifier
3-NITROTOLUENE	PJC-MRS01-DU4-SS-02-03	8321A	1RES	100 ug/kg	LCS RPD	**UJ**	**None**
Changed by: pjf	On : 09/02/2008 09:28						
Reason for change: J flag for non-compliant LCS/LCSD RPD was removed because RPD was only 1% above acceptance criteria.							
3-NITROTOLUENE	PJC-MRS01-DU4-SS-02-02	8321A	1RES	100 ug/kg	LCS RPD	**UJ**	**None**
Changed by: pjf	On : 09/02/2008 09:28						
Reason for change: J flag for non-compliant LCS/LCSD RPD was removed because RPD was only 1% above acceptance criteria.							
3-NITROTOLUENE	PJC-MRS01-DU4-SS-02-01	8321A	1RES	100 ug/kg	LCS RPD	**UJ**	**None**
Changed by: pjf	On : 09/02/2008 09:26						
Reason for change: J flag for non-compliant LCS/LCSD RPD was removed because RPD was only 1% above acceptance criteria.							
COPPER	PJC-MRS01-DU4-SS-02-03	6020	1RES	47 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:35						
Reason for change: J flagged as estimated due to non-compliant post digestion spike %R.							
COPPER	PJC-MRS01-DU4-SS-02-02	6020	1RES	56 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:35						
Reason for change: J flagged as estimated due to non-compliant post digestion spike %R.							
COPPER	PJC-MRS01-DU4-SS-02-01	6020	1RES	52 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:34						
Reason for change: J flagged as estimated due to non-compliant post digestion spike %R.							
ZINC	PJC-MRS01-DU4-SS-02-03	6020	1RES	120 mg/kg	Lab Dup	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:39						
Reason for change: J flagged as estimated due to non-compliant RSD among field triplicate results.							
ZINC	PJC-MRS01-DU4-SS-02-02	6020	1RES	170 mg/kg	Lab Dup	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:38						
Reason for change: J flagged as estimated due to non-compliant RSD among field triplicate results.							

History of Manual Changes to Automated Data Review Qualifiers

Laboratory Reporting Batch: D8G220301

Analyte	Field Sample ID	Analysis Method	Analysis Type	Result	Data Review Element	Original Qualifier	New Qualifier
ZINC	PJC-MRS01-DU4-SS-02-01	6020	1RES	88 mg/kg	Lab Dup	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:37						
Reason for change:	J flagged as estimated due to non-compliant RSD among field triplicate results.						
ZINC	PJC-MRS01-DU4-SS-02-03	6020	1RES	120 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:37						
Reason for change:	J flagged as estimated due to non-compliant post digestion spike and dilution test results.						
ZINC	PJC-MRS01-DU4-SS-02-02	6020	1RES	170 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:36						
Reason for change:	J flagged as estimated due to non-compliant post digestion spike and dilution test results.						
ZINC	PJC-MRS01-DU4-SS-02-01	6020	1RES	88 mg/kg	MS Recovery	**None**	**J**
Changed by: pjf	On : 09/02/2008 09:36						
Reason for change:	J flagged as estimated due to non-compliant post digestion spike and dilution test results.						

APPENDIX G

Analytical Data QA/QC Report and USACE-prepared Chemical Data Quality Assurance Report

DATA VALIDATION SUMMARY REPORT

for samples collected from

PACIFIC JUNGLE COMBAT TRAINING CENTER – MANEUVER AREA MRS

ISLAND OF OAHU, HAWAII

Data Validation by: Tammy Chang

Parsons - Austin

INTRODUCTION

The following data validation summary report covers surface soil samples, sediment samples and surface water samples collected from the Pacific Jungle Combat Training Center-Maneuver area MRS, Island of Oahu, Hawaii on from July 11, 14, 15, 16 and 17, 2008. Samples were logged in under the following Sample Delivery Group (SDG):

D8G210174

All samples were analyzed for explosives and metals. The table below details the requested parameters for each sample. The field quality control (QC) samples collected in this SDG included field triplicate samples for each soil sample collected via multi-incremental sampling (MIS) technique, one matrix spike/matrix spike duplicate (MS/MSD) pair for each matrix, one field duplicate (FD) sample for sediment, one FD for surface water, and one equipment blank. All sediment samples were collected as grab samples. The laboratory QC included one set of laboratory triplicate samples for the MIS samples.

All samples were collected by Parsons and shipped to TestAmerica-Denver in four coolers with ice. Coolers were shipped on July 18, 2008 via FedEx overnight but were not delivered to the lab till July 21, 2008. The coolers were received by the laboratory at temperatures of 15.1°C, 19.3°C, 15.6°C, and 16.8°C, all were outside the 2°C – 6°C range recommended by the PSAP. Parsons project chemist obtained USACE Project Manager and QA Chemist's approvals of proceed with analysis.

All soil and sediment samples were dried and sieved by the laboratory by following the sample preparation sections of SW8330B. Processed soil and sediment samples were also ground by following method SW8330B for explosive analyses. The chemical analyses were performed following the procedures outlined in the Standard Subcontract and the Project Sampling and Analysis Plan and Addendum (PSAP) for the Southeast Region.

SAMPLE IDs AND REQUESTED PARAMETERS

Sample ID	Matrix	Explosives	Metals	Comments
PJC-MRS01-SW-02	W	X	X	MS/MSD
PJC-MRS01-DU2-SS-02-01	S	X	X	
PJC-MRS01-DU2-SS-02-02	S	X	X	MS/MSD
PJC-MRS01-DU2-SS-02-03-A	S	X	X	lab triplicate
PJC-MRS01-DU2-SS-02-03-B	S	X	X	lab triplicate
PJC-MRS01-DU2-SS-02-03C	S	X	X	lab triplicate
PJC-MRS01-EB01	W	X	X	equipment blank
PJC-MRS01-AU2-SS-02-01	S	X	X	ambient sample
PJC-MRS01-AU2-SS-02-02	S	X	X	ambient sample
PJC-MRS01-AU2-SS-02-03	S	X	X	ambient sample
PJC-MRS01-SW-03	W	X	X	FD of SW-02
PJC-MRS01-SD-03	SD	X	X	FD of SD-02*
PJC-MRS01-DU3-SS-02-01	S	X	X	
PJC-MRS01-DU3-SS-02-02	S	X	X	
PJC-MRS01-DU3-SS-02-03	S	X	X	
PJC-MRS01-SD-01	SD	X	X	
PJC-MRS01-SW-01	W	X	X	
PJC-MRS01-AU1-SS-02-01	S	X	X	ambient sample
PJC-MRS01-AU1-SS-02-02	S	X	X	ambient sample
PJC-MRS01-AU1-SS-02-03	S	X	X	ambient sample

S = Soil, SD = Sediment, W = Water

*PJC-MRS01-SD-02 was placed in another cooler which was not delivered among this group; this sample was logged in under SDG #D8G220301.

EXTRACTION AND ANALYTICAL METHODS:

PARAMETER	MATRIX	EXTRACTION METHOD	ANALYTICAL METHOD	UNITS	DRY WT. VS. WET WT
Explosives	S/SD	8330B	8321A	µg/kg	Dry Wt.
Explosives	W	3535	8321A	µg/L	NA
ICP/MS Metals	S/SD	3050B	6020	mg/kg	Dry Wt.
ICP/MS Metals	W	3020A	6020	µg/L	NA

ICP/MS = Inductively Coupled Plasma Mass Spectroscopy

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the Project Work Plan. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; cooler receipt forms, and chain-of-custody (COC) forms. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the Work Plan were met.

Due to the flagging requirements of the electronic data deliverable (EDD) software, Automatic Data Review (ADR), the following rules were applied for flagging the data:

If an analyte was detected in the method blank, the associated sample concentrations were examined. If the analyte was detected in a sample at a concentration similar to that found in the blank (five times the blank concentration for most analytes, or ten times the

blank concentration for common laboratory contaminants), the reporting limit for that analyte was raised to the detected level and the result was flagged "U" for that particular sample.

Approval was also received from a United States Army Corps of Engineers (USACE) chemist for laboratory to use the historically developed control limits for the explosive analysis. See table below.

Analyte	LCS/MS/MSD Control Limits for Soil/Sediment	LCS/MS/MSD Control Limits for Water	RPD (%) for Soil/Sediment and Water
HMX	53-115%	57–138	30
RDX	70-121%	74–129	30
1,3,5-Trinitrobenzene	47-131%	47–139	30
1,3-Dinitrobenzene	69-128%	65-133	30
Nitrobenzene	59-150%	39-143	30
Tetryl	10-160%	10-136	30
Nitroglycerin	32-135%	39-144	30
2,4,6-Trinitrotoluene	58-130%	33-142	30
4-Amino-2,6-dinitrotoluene	60-133%	65-129	30
2-Amino-4,6-dinitrotoluene	53-141%	64-136	30
2,4-Dinitrotoluene	61-128%	66-129	30
2,6-Dinitrotoluene	59-134%	63-131	30
3-Nitrotoluene	51-153%	30-134	30
PETN	28-178%	23-175	30
2-Nitrotoluene	55-147%	32-129	30
4-Nitrotoluene	65-146%	35-138	30

For metals, the control limits for accuracy are 80-120% for the LCS, MS, and MSD. The precision control limits for the MS/MSD are RPD $\leq$ 20%.

The RPD limit for the parent and FD of sediment is 70% and for water is 40%.

The precision criteria for the field triplicate MIS samples is <30% relative standard deviation (RSD) and for the lab triplicate samples is <20% RSD. If RSD exceeds the criteria, but less than 50%, all associated results are flagged with "J". If RSD greater than 50% all associated results are flagged with "R".

EXPLOSIVES

General

The explosives portion of this SDG consisted of fourteen (14) soil samples, two (2) sediment samples, three (3) surface water samples, and one (1) equipment blank sample. The samples were collected on July 11, 14, 15, 16, and 17, 2008, and were analyzed for the full list of explosives as specified in the Work Plan.

The explosives analyses were performed according to the USEPA SW846 Method 8330B for sample preparation and 8321A for instrumental analysis. All samples in this SDG were analyzed following the procedures outlined in the laboratory Standard Operation Procedure (SOP) which was approved by USACE. All samples were prepared and analyzed within the holding time required by the method.

The explosives samples were extracted and analyzed in four batches. The soil samples were extracted in batches #8205508 and 8206281; sediment samples were extracted in batch #8206526; and water samples were extracted in batch #8203541. Each batch was analyzed under a separate initial calibration (ICAL).

Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the four laboratory control spike (LCS) samples, one laboratory control spike duplicate (LCSD) sample for water batch, two sets of MS/MSD samples, and the surrogate spikes. Samples PJC-MRS01-DU2-SS-02-02 and PJC-MRS01-SW-02 were designated for MS/MSD analyses on the COC.

All LCS, LCSD, MS, MSD and surrogate spike recoveries were within acceptance criteria.

Precision

Precision was evaluated using the relative percent difference (RPD) obtained from the LCS/LCSD concentration (for water batch only) and MS/MSD concentrations. Precision was further evaluated by comparing the field triplicate, lab triplicate, and FD sample results. All MIS soil samples were collected in triplicate and sample PJC-MRS01-DU2-SS-02-03 was designated as the parent sample for lab triplicate on the COC. Sample PJC-MRS01-SW-03 is the FD of sample PJC-MRS01-SW-02. Sample PJC-MRS01-SD-03 is the FD of sample PJC-MRS01-SD-02 which was reported under SDG #D8G220301.

All LCS/LCSD and MS/MSD RPDs were within acceptance criteria.

All target analytes were non-detect in all field triplicates, lab triplicate, and parent/field duplicate samples including sample PJC-MRS01-SD-02. RPD or RSD calculations were not applicable.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the Work Plan;
- Comparing actual analytical procedures to those described in the Work Plan;

- Evaluating holding times; and
- Examining laboratory blanks and equipment blank for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the Work Plan. All samples were prepared and analyzed within the holding time required by the method and the Work Plan.

- All initial calibration criteria were met.
- All secondary source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- PETN was recovered higher than the control limit in one of the continuing calibration verifications (CCVs) which indicate the instrument was generating high-biased PETN results. All associated soil samples had no PETN detected at MDL level; therefore, the high-biased instrument responses had no impact to the field sample results. All other CCVs were compliant. All "UQ" flags were replaced with "U" flags by Parsons data validator.
- MDLs were developed within 12 months of sample analyses.

One equipment blank and four method blanks were associated with the explosives analyses in this SDG. All blanks were compliant.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All explosives results for the samples in this SDG were considered usable. The completeness for the explosives portion of this SDG is 100%, which meets the minimum acceptance criteria of 95%.

ICP/MS METALS

General

The ICP/MS portion of this SDG consisted of fourteen (14) soil samples, two (2) sediment samples, three (3) surface water samples, and one (1) equipment blank sample. The samples were collected on July 11, 14, 15, 16, and 17, 2008, and were analyzed for antimony, copper, lead, and zinc. All soil and sediment samples were dried and sieved prior to digestion, so all metal results were reported as dry weight.

The ICP/MS metals analyses were performed using USEPA SW846 Method 6020. The samples were analyzed following the procedures outlined in the Work Plan. All samples were prepared and analyzed within the holding time required by the method and the Work Plan.

The samples for ICP/MS metals analyses were digested in four batches, two for soil (#8204479 and #8246402), one for sediment (#8204480), and one for water (#8204435). The samples were analyzed in four batches under four different sets of ICALs.

Accuracy

Accuracy was evaluated using the percent recovery obtained from the LCS samples and the MS/MSD samples. Samples PJC-MRS01-DU2-SS-02-02 and PJC-MRS01-SW-02 were designated for MS/MSD analyses on the COC. In addition, lab also performed MS/MSD analyses with sample PJC-MRS01-SD-03.

Four LCS samples were analyzed, one for each batch. All LCS recoveries were within acceptance criteria.

All non-compliant MS/MSD recoveries are listed below:

PJC-MRS01-DU2-SS-02-02

Metal	MS %R	MSD %R	Criteria
Antimony	3.8	3.3	80 – 120%
Copper	124	73	
Zinc	(102)	64	

It should be noted that the parent sample concentrations for copper and zinc were significantly greater than (more than 5 times) the amount spiked, resulting in the anomalous recoveries. The antimony result of the parent sample is low-biased. All three metals were flagged "J" if detected or "UJ" if non-detect in the parent sample, in accordance with the PSAP. All results are usable, but should be treated as estimated value.

PJC-MRS01-SD-03

Metal	MS %R	MSD %R	Criteria
Antimony	8.1	8.5	80 – 120%
Copper	122	144	
Zinc	(109)	130	

The antimony result of the parent sample is low-biased and the copper and zinc results of the parent sample are high-biased. All results are usable, but should be treated as estimated value. All three metals were flagged "J" if detected or "UJ" if non-detect in the parent sample, in accordance with the PSAP.

Precision

Precision was evaluated using the RPD obtained from the MS/MSD concentrations. Precision was further evaluated by comparing the field triplicate, lab triplicate, and FD results. All MIS soil samples were collected in triplicate and sample PJC-MRS01-DU2-SS-02-03 was designated as the parent sample for lab triplicate on the COC. Sample PJC-MRS01-SW-03 is the FD of sample PJC-MRS01-SW-02. Sample PJC-MRS01-SD-03 is the FD of sample PJC-MRS01-SD-02 which was reported under SDG #D8G220301

All MS/MSD RPDs met acceptance criteria.

The percent RSDs for all metals for the laboratory triplicate samples are listed below:

PJC-MRS01-DU2-SS-02-03

Metal	A (mg/kg)	B (mg/kg)	C (mg/kg)	%RSD	Criteria

Antimony	<PQL	<PQL	<PQL	NA	
Copper	59	58	57	1.7	<20%RSD
Lead	10	11	9.8	6.3	
Zinc	63	61	63	1.9	

The percent RSDs for all metals for the field triplicate samples are listed below:

PJC-MRS01-DU2-SS-02

Metal	-01 (mg/kg)	-02 (mg/kg)	-03 (mg/kg)	%RSD	Criteria
Antimony	<PQL	<PQL	<PQL	NA	
Copper	52	56	59	6.3	<30%RSD
Lead	14	12	10	17	
Zinc	54	54	63	9.1	

PJC-MRS01-AU2-SS-02

Metal	-01 (mg/kg)	-02 (mg/kg)	-03 (mg/kg)	%RSD	Criteria
Antimony	<PQL	<PQL	<PQL	NA	
Copper	33	33	26	13	<30%RSD
Lead	8.7	8.8	6.7	15	
Zinc	17	17	14	11	

PJC-MRS01-DU3-SS-02

Metal	-01 (mg/kg)	-02 (mg/kg)	-03 (mg/kg)	%RSD	Criteria
Antimony	<PQL	<PQL	<PQL	NA	
Copper	45	61	50	16	<30%RSD
Lead	7.0	6.8	6.4	4.5	
Zinc	36	43	35	11	

PJC-MRS01-AU1-SS-02

Metal	-01 (mg/kg)	-02 (mg/kg)	-03 (mg/kg)	%RSD	Criteria
Antimony	<PQL	<PQL	<PQL	NA	
Copper	55	56	60	4.6	<30%RSD
Lead	14	15	16	6.7	
Zinc	54	63	90	27	

PJC-MRS01-SD-02

Metal	Parent, mg/kg*	FD, mg/kg	%RPD	Criteria
Antimony	<PQL	<PQL	NA	
Copper	90	93	3.3	<70%RPD
Lead	4.0	4.0	0	
Zinc	81	87	7.1	

* Results from SDG D8G220301

PJC-MRS01-SW-02

Metal	Parent, µg/L	FD, µg/L	%RPD	Criteria
Antimony	<PQL	<PQL	NA	

Copper	<PQL	<PQL	NA	≤40% RPD
Lead	<PQL	<PQL	NA	
Zinc	<PQL	<PQL	NA	

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the Work Plan;
- Comparing actual analytical procedures to those described in the Work Plan;
- Evaluating preservation and holding times; and
- Examining laboratory blanks and equipment blank for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the Work Plan. The samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All metals met criteria in the RL check standard.
- All second source criteria were met. The ICV was prepared using a secondary source.
- All CCV criteria were met.
- All interference check (ICSA/ICSAB) criteria were met.
- First dilution test (DT) for the soil batch was analyzed on sample PJC-MRS01-DU2-SS-02-02. The DT was applicable for copper, lead and zinc, since only these three metals had at a concentration of 100 times the MDL or greater in the parent sample.

Metal	%D	Criteria
Copper	**12**	≤10%
Lead	3.9	
Zinc	7.8	

- First post digestion spike (PDS) for the soil batch was performed on the same sample as the DT. The PDS was applicable for antimony and copper:

Metal	%R	Criteria
Antimony	96	75 – 125%
Copper	80	

- Second dilution test (DT) for the soil batch was analyzed on sample PJC-MRS01-AU1-SS-02-01. The DT was applicable for copper, lead and zinc, since only these three metals had at a concentration of 100 times the MDL or greater in the

parent sample.

Metal	%D	Criteria
Copper	**15**	≤10%
Lead	5.1	
Zinc	**15**	

- Second post digestion spike (PDS) for the soil batch was performed on the same sample as the DT. The PDS was applicable for antimony, copper, and zinc:

Metal	%R	Criteria
Antimony	96	75 – 125%
Copper	**67**	
Zinc	**72**	

"J" flags were applied to copper and zinc results of all associated samples.

- A DT for the sediment batch was analyzed on sample PJC-MRS01-SD-03. The DT was only applicable for copper and lead since only these three metals had at a concentration of 100 times the MDL or greater in the parent sample.

Metal	%D	Criteria
Copper	10	≤10%
Lead	10	

- A PDS for the sediment batch was performed on the same sample as the DT. The PDS was applicable for antimony and zinc. Both metals met criteria in the sediment PDS as follows:

Metal	%R	Criteria
Antimony	96	75 – 125%
Zinc	88	

- A DT for the water batch was analyzed on sample PJC-MRS01-SW-02. The DT was not applicable since all metals had at a concentration less than 100 times the MDL in the parent sample.

- A PDS for the water batch was performed on the same sample as the DT. The PDS was applicable for all four metals. All metals met criteria in the water PDS as follows:

Metal	%R	Criteria
Antimony	97	75 – 125%
Copper	98	
Lead	95	
Zinc	93	

Four method blanks, one equipment blank, and several calibration blanks were associated with the ICP/MS analyses in this SDG. All laboratory blanks were compliant. The equipment blank had copper detected at 2.1 µg/L, above the PQL of 2.0 µg/L. Since all associated soil samples had copper concentration between 26 mg/kg to 61 mg/kg, the impact of 2.0 µg/L of cooper from the equipment is not significant to cause any data qualifiers.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP/MS results for the samples in this SDG were considered usable. Therefore, the completeness for the ICP/MS portion of this SDG is 100%, which meets the minimum acceptance criteria of 95%.

COMPARABILITY

All data was generated using contract-specific standard methods and reported with known data quality, type of analysis, units, etc.

DATA USABILITY

All calculations were spot checked and verified. All data in this SDG are considered usable for the purposes of this project.

DATA VALIDATION SUMMARY REPORT

for samples collected from

PACIFIC JUNGLE COMBAT TRAINING CENTER – MANEUVER AREA MRS

ISLAND OF OAHU, HAWAII

Data Validation by: Tammy Chang

Parsons - Austin

INTRODUCTION

The following data validation summary report covers surface soil samples and sediment samples collected from the Pacific Jungle Combat Training Center-Maneuver area MRS, Island of Oahu, Hawaii on July 15, 2008. Samples were logged in under the following Sample Delivery Group (SDG):

D8G220301

All samples were analyzed for explosives and metals. The table below details the requested parameters for each sample. The field quality control (QC) samples collected in this SDG included one set of field triplicate soil samples collected via multi-incremental sampling (MIS) technique and one matrix spike/matrix spike duplicate (MS/MSD) pair for sediment. All sediment samples were collected as grab samples.

All samples were collected by Parsons and shipped to TestAmerica-Denver in one cooler with ice. Cooler was shipped on July 18, 2008 via FedEx overnight but were not delivered to the lab till July 22, 2008. The cooler was received by the laboratory at temperatures of 4.4°C which was within the 2°C – 6°C range recommended by the PSAP.

All soil and sediment samples were dried and sieved by the laboratory by following the sample preparation sections of SW8330B. Processed soil and sediment samples were also ground by following method SW8330B for explosive analyses. The chemical analyses were performed following the procedures outlined in the Standard Subcontract and the Project Sampling and Analysis Plan and Addendum (PSAP) for the Southeast Region.

SAMPLE IDs AND REQUESTED PARAMETERS

Sample ID	Matrix	Explosives	Metals	Comments
PJC-MRS01-SD-02	SD	X	X	MS/MSD
PJC-MRS01-DU4-SS-02-01	S	X	X	
PJC-MRS01-DU4-SS-02-02	S	X	X	
PJC-MRS01-DU4-SS-02-03	S	X	X	

S = Soil, SD = Sediment

EXTRACTION AND ANALYTICAL METHODS:

PARAMETER	MATRIX	EXTRACTION METHOD	ANALYTICAL METHOD	UNITS	DRY WT. VS. WET WT
Explosives	S/SD	8330B	8321A	µg/kg	Dry Wt.
ICP/MS Metals	S/SD	3050B	6020	mg/kg	Dry Wt.

ICP/MS = Inductively Coupled Plasma Mass Spectroscopy

EVALUATION CRITERIA

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the Project Work Plan. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; cooler receipt forms, and chain-of-custody (COC) forms. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the Work Plan were met.

Due to the flagging requirements of the electronic data deliverable (EDD) software, Automatic Data Review (ADR), the following rules were applied for flagging the data:

If an analyte was detected in the method blank, the associated sample concentrations were examined. If the analyte was detected in a sample at a concentration similar to that found in the blank (five times the blank concentration for most analytes, or ten times the blank concentration for common laboratory contaminants), the reporting limit for that analyte was raised to the detected level and the result was flagged "U" for that particular sample.

Approval was also received from a United States Army Corps of Engineers (USACE) chemist for laboratory to use the historically developed control limits for the explosive analysis. See table below.

Analyte	LCS/MS/MSD Control Limits for Soil/Sediment	RPD (%) for Soil/Sediment
HMX	53-115%	30
RDX	70-121%	30
1,3,5-Trinitrobenzene	47-131%	30
1,3-Dinitrobenzene	69-128%	30
Nitrobenzene	59-150%	30

Tetryl	10-160%	30
Nitroglycerin	32-135%	30
2,4,6-Trinitrotoluene	58-130%	30
4-Amino-2,6-dinitrotoluene	60-133%	30
2-Amino-4,6-dinitrotoluene	53-141%	30
2,4-Dinitrotoluene	61-128%	30
2,6-Dinitrotoluene	59-134%	30
3-Nitrotoluene	51-153%	30
PETN	28-178%	30
2-Nitrotoluene	55-147%	30
4-Nitrotoluene	65-146%	30

For metals, the control limits for accuracy are 80-120% for the LCS, MS, and MSD. The precision control limits for the MS/MSD are RPD $\leq$ 20%.

The precision criteria for the field triplicate MIS samples is <30% relative standard deviation (RSD). If RSD exceeds the criteria, but less than 50%, all associated results are flagged with "J". If RSD greater than 50% all associated results are flagged with "R".

EXPLOSIVES

General

The explosives portion of this SDG consisted of three (3) soil samples and one (1) sediment sample. The samples were collected on July 15, 2008, and were analyzed for the full list of explosives as specified in the Work Plan.

The explosives analyses were performed according to the USEPA SW846 Method 8330B for sample preparation and 8321A for instrumental analysis. All samples in this SDG were analyzed following the procedures outlined in the laboratory Standard Operation Procedure (SOP) which was approved by USACE. All samples were prepared and analyzed within the holding time required by the method.

The explosives samples were extracted and analyzed in two analytical batches, #8207215 for sediment and #8207439 for soil. and were analyzed under a set of initial calibration (ICAL).

Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two laboratory control spike (LCS) samples, one laboratory control spike duplicate (LCSD) sample for soil matrix only, one set of MS/MSD samples for sediment batch, and the surrogate spikes. Sample PJC-MRS01-SD-02 was designated for MS/MSD analyses on the COC.

All LCS, LCSD, MS, MSD and surrogate spike recoveries were within acceptance criteria,

Precision

Precision was evaluated using the relative percent difference (RPD) obtained from the LCS/LCSD concentration (for soil batch only), MS/MSD concentrations. Precision was further evaluated by comparing the field triplicate sample results.

All MS/MSD RPDs were within acceptance criteria for the sediment batch.

The RPD of 3-nitrotoluene of the LCS/LCSD was 31 which exceeded the 30%RPD requirement. Lab flagged all 3-nitrotoluene data of soil samples with "UQ" flags and Parsons data validator changed to "U" flags due to minor exceedance.

All target analytes were non-detect in all field triplicates, therefore, RSD calculations were not applicable.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the Work Plan;
- Comparing actual analytical procedures to those described in the Work Plan;
- Evaluating holding times; and
- Examining laboratory blanks and equipment blank for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the Work Plan. All samples were prepared and analyzed within the holding time required by the method and the Work Plan.

- All initial calibration criteria were met.
- All secondary source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- PETN was recovered higher than the control limit in one of the continuing calibration verifications (CCVs) which indicate the instrument was generating high-biased PETN results. The associated sediment sample had no PETN detected at MDL level; therefore, the high-biased instrument responses had no impact to the field sample result. All other CCVs were compliant. The "UQ" flag was replaced with "U" flags by Parsons data validator.
- MDLs were developed within 12 months of sample analyses.

There were two method blanks associated with the explosives analyses in this SDG. Both blanks were compliant.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All explosives results for the samples in this SDG were considered usable. The completeness for the explosives portion of this SDG is 100%, which meets the minimum acceptance criteria of 95%.

ICP/MS METALS

General

The ICP/MS portion of this SDG consisted of three (3) soil samples and one (1) sediment sample. These samples were collected on July 15, 2008, and were analyzed for antimony, copper, lead, and zinc. All soil and sediment samples were dried and sieved prior to digestion, so all metal results were reported as dry weight.

The ICP/MS metals analyses were performed using USEPA SW846 Method 6020. The samples were analyzed following the procedures outlined in the Work Plan. All samples were prepared and analyzed within the holding time required by the method and the Work Plan.

The samples for ICP/MS metals analyses were digested in two batches, one for soil (#8212314) and one for sediment (#8211534). The samples were analyzed in two injection batches under two different sets of ICALs.

Accuracy

Accuracy was evaluated using the percent recovery obtained from the two LCS samples and the MS/MSD samples. Sample PJC-MRS01-SD-02 was designated for MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria.

All non-compliant MS/MSD recoveries are listed below:

PJC-MRS01-SD-02

Metal	MS %R	MSD %R	Criteria
Antimony	6.3	6.4	80 – 120%

The antimony result of the parent sample has been flagged with “UJ and is low-biased. It should be considered as estimated value.

Precision

Precision was evaluated using the RPD obtained from the MS/MSD concentrations. Precision was further evaluated by comparing the field triplicate results.

All MS/MSD RPDs for the soil pair met acceptance criteria.

The percent RSDs for all metals for the field triplicate samples are listed below:

PJC-MRS01-DU4-SS-02

Metal	-01 (mg/kg)	-02 (mg/kg)	-03 (mg/kg)	%RSD	Criteria
Antimony	<PQL	<PQL	<PQL	NA	
Copper	52	56	47	8.7	<30%RSD
Lead	31	36	25	18	
Zinc	88	170	120	33	

The only non-compliant results were the zinc data. "J" flags were applied to all zinc results of this set of field triplicate samples.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the Work Plan;
- Comparing actual analytical procedures to those described in the Work Plan;
- Evaluating preservation and holding times; and
- Examining laboratory blanks and equipment blank for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the Work Plan. The samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All metals met criteria in the RL check standard.
- All second source criteria were met. The ICV was prepared using a secondary source.
- All CCV criteria were met.
- All interference check (ICSA/ICSAB) criteria were met.
- A dilution test (DT) for the soil batch was analyzed on a batch sample. The DT was applicable for copper, lead and zinc, since only these three metals had at a concentration of 100 times the MDL or greater in the parent sample.

Metal	%D	Criteria
Copper	**31**	
Lead	0.1	≤10%
Zinc	**26**	

- A post digestion spike (PDS) for the soil batch was performed on the same sample as the DT. The PDS was applicable for antimony and copper:

Metal	%R	Criteria
Antimony	94	75 – 125%

Copper	**67**	
Zinc	**66**	

"J" flags were applied to the copper and zinc results of all soil samples in this SDG.

- A DT for the sediment batch was analyzed on a batch sample. The DT was only applicable for copper and lead since only these three metals had at a concentration of 100 times the MDL or greater in the parent sample.

Metal	%D	Criteria
Copper	**30**	≤10%
Lead	**33**	

- A PDS for the sediment batch was performed on the same sample as the DT. The PDS was applicable for all four target metals. Both metals met criteria in the sediment PDS as follows:

Metal	%R	Criteria
Antimony	92	75 – 125%
Copper	86	
Lead	82	
Zinc	76	

Two method blanks and several calibration blanks were associated with the ICP/MS analyses in this SDG. All laboratory blanks were compliant.

Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP/MS results for the samples in this SDG were considered usable. Therefore, the completeness for the ICP/MS portion of this SDG is 100%, which meets the minimum acceptance criteria of 95%.

COMPARABILITY

All data was generated using contract-specific standard methods and reported with known data quality, type of analysis, units, etc.

DATA USABILITY

All calculations were spot checked and verified. All data in this SDG are considered usable for the purposes of this project.

APPENDIX H

Geographic Information Systems Data
Electronic Only

APPENDIX I

Geophysical Data
Not Applicable

APPENDIX J

Conceptual Site Model

CONCEPTUAL SITE MODEL
PACIFIC JUNGLE COMBAT TRAINING CENTER – MANEUVER AREA MRS
ISLAND OF OAHU, HAWAII

MRS	Acreage	Suspect Past DoD Activities	Potential MEC/MD Presence	MEC/MD Found Since Closure	Previous Investigation/Clearance Actions	Post-DoD Land Use and Current Land Use	Potential Receptors	Potential Source and Receptor Interaction	Field Sampling/ Qualitative Reconnaissance
MANEUVER AREA	2,545	Jungle Combat Training	Small Arms; 105mm, HE, M1; 75mm, AP, M72; 81mm, HE, M43	Small Arms, 75 AP or HE projectile, 105mm AP projectile, 81mm mortar, smoke grenade.	Yes, based on interviews, the US Army EOD has conducted Ordnance Removal and Disposal Operations.	State Park, Nature Reserve, Residential	Residents, Park and Reserve Employees, Visitors, Trespassers	Possible- intrusive and non-intrusive, possible MEC at surface and subsurface.	3 decision units (**DU2, DU3, DU4**), 50 increments in triplicate for DU4, 100 increments in triplicate for DU2 and DU3, and 2 Surface Water Samples and 2 Sediment Samples; 2 Ambient multi-incremental samples, 30 increments each, in triplicate,& QR (see Figures 3.1 & 3.2).
TOTAL	2,545								

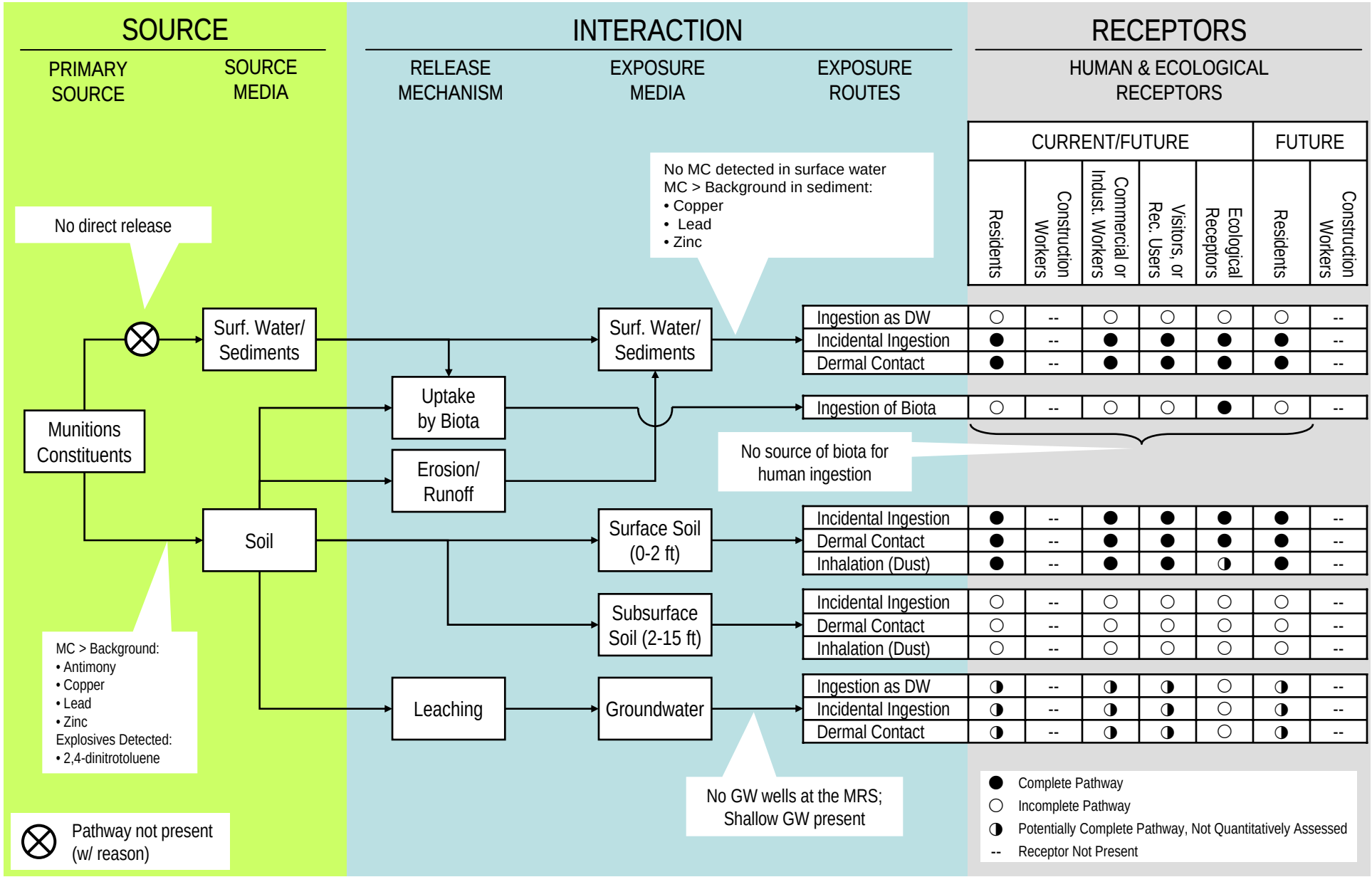
Source
1 = INPR (1993)
2 = INPR supplement (2004)
3 = Other government correspondence

AP = Armor Piercing
DoD = Department of Defense
DU = Decision Unit
EOD = Explosive Ordnance Disposal
HE = High Explosive
INPR = Inventory Project Report
MD = Munitions debris
MEC = Munitions and Explosives of Concern
MRS = Munitions Response Site
QR = Qualitative Reconnaissance
TBD = To Be Determined
US- United States

CONCEPTUAL SITE EXPOSURE MODEL

MRS Name: Pacific Jungle Combat Training Center – Maneuver Area MRS

Completed By: Steve Rembish - Parsons ***Date Completed:*** November 6, 2008



APPENDIX K

Munitions Response Site Prioritization Protocol Evaluations (MRSPP)

Table A

MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from DoD databases, such as RMIS. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS summary, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental non-munitions related contaminants found at the MRS (e.g., benzene, trichloroethylene), and any potentially exposed human and ecological receptors. Include a map of the MRS, if one is available.

Munitions Response Site Name: Maneuver Area

Component: US Army

Installation/Property Name: Pacific Jungle Combat

Location (City, County, State): Island of Oahu, Honolulu County, Hawaii

Site Name (RMIS ID)/Project Name (Project No.)/FFID: H09HI0027401R01/H09HI0274/HI9799F4004

Date Information Entered/Updated: December 16, 2008
Point of Contact (Name/Phone): Ms. Helene Takemoto /(808) 438-6931
Project Phase (check only one):

❑ PA	✓SI	❑ RI	❑ FS	❑ RD
❑ RA-C	❑ RIP	❑ RA-O	❑ RC	❑ LTM

Media Evaluated (check all that apply):

❑Groundwater	☑ Sediment (human receptor)
☑ Surface soil	☑ Surface Water (ecological receptor)
☑Sediment (ecological receptor)	☑Surface Water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM (by type of munition, if known) or munitions constituents (by type, if known) known or suspected to be present):
The Pacific Jungle Combat Training Center was established and used as a unit level jungle combat center to supplement Department Ranger and Combat School Training from 1943 to 1950. Training included jungle first aid and evacuation, hand to hand combat training, construction and passage of wire entanglements, booby traps, patrolling and ambushing, assault of Japanese fortified areas, combat reaction proficiency, and jungle living. Munitions known to have been used or recovered at the MRS include 75mm (M72) AP rounds, 105mm (M1) HE rounds, 81mm (M43A1) HE and practice mortar rounds, .30 and .50 caliber small arms ammunition, M18 smoke grenades, and M201A1 Grenade Fuze. Several MEC and MD in the form of an expended 105mm AP round, unexpended .30 caliber bullets, expended M1 and M2 cartridges, a 75mm HE or AP round, and a live 81mm mortar round during site surveys conducted in support of the 1993 INPR. The 2008 SI site visit team found MEC in the form of an unexpended smoke grenade and MD in the form of spent .30 caliber casings.

Description of Pathways for Human and Ecological Receptors:
Direct release of MC from munitions activities at the site would have been to surface soil. MC released to surface soil could leach to groundwater and migrate to surface water and sediment through runoff and erosion.

Description of Receptors (Human and Ecological):
Based on the current and future land use of the MRS, current and future residents, commercial or industrial workers (e.g., park personnel), and current or future site visitors or recreational users and ecological receptors.

Table 1

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the score(s) that correspond with **all** munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	All UXO that are considered likely to function upon any interaction with exposed persons [e.g., submunitions, 40mm high-explosive (HE) grenades, white phosphorus (WP) munitions, high-explosive antitank (HEAT) munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions]. All hand grenades containing energetic filler. Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30
High explosive (used or damaged)	All UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." All DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	***25***
Pyrotechnic (used or damaged)	All UXO containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades). All DMM containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	***20***
High explosive (unused)	All DMM containing a high explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	All UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). All DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	All DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor), that are deteriorated. Bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	All DMM containing a pyrotechnic fillers (i.e., red phosphorous), other than white phosphorous filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	All UXO that are practice munitions that are not associated with a sensitive fuze. All DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	***5***
Riot control	All UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	All used munitions or DMM that are categorized as small arms ammunition [Physical evidence or historical evidence that no other types of munitions (e.g., grenades, subcaliber training rockets, demolition charges) were used or are present on the MRS is required for selection of this category.].	***2***
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	***25***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

The munitions known or suspected to have been used on the MRS include 75mm (M72) AP rounds, 105mm (M1) HE rounds, 81mm (M43A1) HE and practice mortar rounds, .30 and .50 caliber small arms ammunition, M18 smoke grenades, and M201A1 Grenade Fuze. (2008 SI Report, Subchapter 6.1.4.2 and Table 4.1)

Table 2

EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the score(s) that correspond with **all** sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms *former range, practice munitions, small arms, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include: impact or target areas, associated buffer and safety zones, firing points, and live-fire maneuver areas.	***10***
Former munitions treatment (i.e., OB/OD) unit	The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	***5***
Former burial pit or other disposal area	The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	The MRS is a former military range where only small arms ammunition was used [There must be evidence that no other types of munitions (e.g., grenades) were used or are present to place an MRS into this category.].	1
Evidence of no munitions	Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	***10***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Source of Hazard*** classifications in the space provided.

The MRS was used as used as a training/maneuver area from 1943 to 1950. (2008 SI Report, Subchapter 2.3)

Table 3

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the score(s) that correspond with **all** locations where munitions are located or suspected of being found at the MRS.

Note: The terms *surface, subsurface, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are UXO or DMM on the surface of the MRS ◆ Historical evidence (e.g., a confirmed incident report or accident report) indicates there are UXO or DMM on the surface of the MRS.	***25***
Confirmed subsurface, active	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	15
Suspected (physical evidence)	◆ There is physical evidence (e.g., munitions debris, such fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	***10***
Suspected (historical evidence)	◆ There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	◆ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability [There must be evidence that no other types of munitions (e.g., grenades) were used or are present at the MRS to place an MRS into this category.].	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	***25***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of Munitions*** classifications in the space provided.

MEC/MD in the form of an expended 105mm AP round, unexpended .30 caliber bullets, expended M1 and M2 cartridges, a 75mm HE or AP round, and a live 81mm mortar round was found on the MRS during the site investigations conducted for the 1993 INPR. MEC. MEC in the form of an unexpended smoke grenade was found in Punaluu Valley and MD in the form of spent .30 caliber casings in Kahana Valley during the 2008 SI field effort. (2008 SI Report, Subchapters 2.5.1 and 6.1.4.1)

Table 4

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to any explosive materiel. Circle the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	◆ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	***10***
Barrier to MRS access is incomplete	◆ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	◆ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	◆ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	***10***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

The Kahana Valley portion of the MRS is easily accessible by State Highway 83. Although access to the Punaluu Valley portion of the MRS is generally restricted only to valley residents and guests, hunters, and landowner and lessee, there are no barriers preventing access to any parts of the MRS. (2008 SI Report Subchapter 6.1.4.3)

Table 5

EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies.	***5***
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the rule is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	***5***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

Much of the area in Kahana Valley and Punaluu Valley is within the Hauula Forest Reserve. In 1960, Kahana Valley was designated a state park and is currently under the purview of the Hawaii Department of Land and Natural Resources (DLNR). Punaluu Valley is currently owned by several private owners. (2008 SI Report, Subchapter 2.2.8)

Table 6

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications of population density and their descriptions. Determine the population density per square mile in the vicinity of the MRS and circle the score that corresponds with the associated population density.

Note: If an MRS is located in more than one county, use the largest population density value among the counties. If the MRS is within or borders a city or town, use the population density for the city or town, rather than that of the county.

Classification	Description	Score
> 500 persons per square mile	◆ There are more than 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	***5***
100–500 persons per square mile	◆ There are 100 to 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	3
< 100 persons per square mile	◆ There are fewer than 100 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	1
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	***5***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

The US Census Bureau 2000 population for the Island of Oahu, Honolulu County is 876,156, with a population density of 1460.3 persons per square mile. (2008 SI Report, Subchapter 2.2.7.2)

Table 7

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the population near the hazard. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the associated population near the known or suspected hazard.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	◆ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	***5***
16 to 25 inhabited structures	◆ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	◆ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	◆ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	◆ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	◆ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	***5***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

There are greater than 26 inhabited structures within two miles of the site. (2008 SI Report, Table 2.1)

Table 8

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures near the hazard and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the score(s) that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	***5***
Parks and recreational areas	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	***4***
Agricultural, forestry	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	***3***
Industrial or warehousing	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	◆ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	***5***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

The site currently includes residential and recreational areas in the valleys near the coast. Further inland the site is mountainous and undeveloped. Much of the area in Kahana Valley and Punaluu Valley is within the Hauula Forest Reserve. In 1960, Kahana Valley was designated a state park and is currently under the purview of the Hawaii Department of Land and Natural Resources (DLNR). Punaluu Valley is currently owned by several private owners and used for residential and agricultural purposes. (2008 SI Report, Subchapter 2.2.8)

Table 9

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resource classifications at the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	◆ There are both ecological and cultural resources present on the MRS.	***5***
Ecological resources present	◆ There are ecological resources present on the MRS.	3
Cultural resources present	◆ There are cultural resources present on the MRS.	3
No ecological or cultural resources present	◆ There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	***5***

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

Cultural resources are present on the MRS. (2008 SI Report, Subchapter 2.2.5)

Ecological resources are present the site (2008 SI Report Subchapter 5.2.5).

Table 10
Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	25	35
Source of Hazard	Table 2	10	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	25	40
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	5	20
Population Near Hazard	Table 7	5	
Types of Activities/ Structures	Table 8	5	
Ecological and /or Cultural Resources	Table 9	5	
EHE MODULE TOTAL			95

EHE Module Total	EHE Module Rating
92 to 100	***A***
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE MODULE RATING	***A***

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the score(s) that correspond to **all** CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, explosive configuration either UXO or damaged DMM	The CWM known or suspected of being present at the MRS is: ◆ Explosively configured CWM that are UXO (i.e., CWM/UXO). ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged, or nonexplosively configured CWM/DMM, or CWM not configured as a munition, that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS is: ◆ Nonexplosively configured CWM/DMM. ◆ Bulk CWM/DMM (e.g., ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS is CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ Only CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	***0***
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	***0***

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

There is no historical evidence that CWM are present on the MRS. (2008 SI Report, Subchapters 2.4 and 2.5). Therefore, Tables 12-19 have been omitted.

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12	0	
Accessibility Factor Data Elements			
Location of CWM	Table 13	0	0
Ease of Access	Table 14	0	
Status of Property	Table 15	0	
Receptor Factor Data Elements			
Population Density	Table 16	0	0
Population Near Hazard	Table 17	0	
Types of Activities/ Structures	Table 18	0	
Ecological and /or Cultural Resources	Table 19	0	
CHE MODULE TOTAL			0

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	***No Known or Suspected CWM Hazard***

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** for each medium together, including additional contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Note: **Use dissolved, rather than total, metals analyses when both are available.**

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios

CHF Scale	CHF Value	Sum The Ratios
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$
100 > CHF > 2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to geological structures or physical controls).	L

MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L

RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☐

Groundwater was not sampled as there are no wells on the MRS. One explosive and MC metals were detected above ambient concentrations in the surface soil. Due to the relatively shallow groundwater in some locations, it is possible that MC contamination could leach to groundwater. (2008 SI Report, Subchapter 5.3.2.6)

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** for each medium together, including additional contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for human endpoints present in the surface water, select the box at the bottom of the table.

Note: **Use dissolved, rather than total, metals analyses when both are available.**

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
None detected			
CHF Scale	**CHF Value**	**Sum The Ratios**	
CHF > 100	**H (High)**		
100 > CHF > 2	**M (Medium)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to The right (maximum value = H).	

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ☑

No explosives or MC metals were detected in surface water samples (2008 SI Report, Subchapter 5.3.3.5). Rating is per USACE guidance provided in Memorandum, CEHNC-OE-CX. (200-1c, 07-04-07)

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the site's sediment and their **comparison values** (from Appendix B) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** for each medium together, including additional contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
Copper	98	3100	0.032
Lead	4.0	400	0.010
Zinc	95	23000	0.0041
CHF Scale	**CHF Value**	**Sum The Ratios**	**0.046**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right maximum value = H).	**L**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	***M***
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**M**

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	***M***
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**M**

No Known or Suspected Sediment (Human Endpoint) MC Hazard ☐

No explosives were detected in the sediment samples. Background levels are not available. Copper, lead, and zinc were detected in the sediment samples. (2008 SI Report, Table 5.13). Rating is per USACE guidance provided in Memorandum, CEHNC-OE-CX. (200-1c, 07-04-07)

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** for each medium together, including additional contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for ecological endpoints present in the surface water, select the box at the bottom of the table.

Note: Use dissolved, rather than total, metals analyses when both are available.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
None detected			

CHF Scale	CHF Value	Sum the Ratios
CHF > 100	H (High)	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$
100 > CHF > 2	M (Medium)	
2 > CHF	L (Low)	

CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).	

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard	☑

No explosives or MC metals were detected in surface water samples (2008 SI Report, Subchapter 5.3.3.5). Rating is per USACE guidance provided in Memorandum, CEHNC-OE-CX. (200-1c, 07-04-07)

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** for each medium together, including additional contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard for ecological endpoints present in the sediment, select the box at the bottom of the table.

.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
Copper	98	31.6	3.1
Lead	4.0	35.8	0.11
Zinc	95	121	0.79
CHF Scale	**CHF Value**	**Sum the Ratios**	**4.0**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		**M**

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	***M***
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**M**

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	***H***
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	**H**

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ☐

No explosives were detected in the sediment samples. Background levels are not available. Copper, lead, and zinc were detected in the sediment samples. (2008 SI Report, Table 5.13). MPF is rated M given available information. RF is rated H as habitat for threatened and endangered species and wetlands are present on the MRS. (2008 SI Report, Table 5.2)

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **ratios** for each medium together, including additional contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
2,4-Dinitrotoluene	0.075	120	0.00062
Antimony	0.071	31	0.0023
Copper	36	3100	0.012
Lead	36	400	0.090
CHF Scale	**CHF Value**	**Sum the Ratios**	**0.10**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		***L***

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	***M***
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	***M***

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	***M***
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	***M***

No Known or Suspected Surface Soil MC Hazard ☐

Samples were analyzed for explosives and metals. All detections exceeding background concentrations with MRSPP comparison values contribute to the score. (2008 SI Report, Tables 5.8 and 5.14) Scoring is consistent with guidance provided in USACE CEHNC-OE-CX (200-1c) July 2007.

Table 27

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Remember not to add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
Surface Soil	Zinc	170	23000	0.0074

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard, Migration Pathway, and Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the reference provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)	-	-	-	-	-
Surface Water/Human Endpoint (Table 22)	-	-	-	-	-
Sediment/Human Endpoint (Table 23)	L	M	M	MML	E
Surface Water/Ecological Endpoint (Table 24)	-	-	-	-	-
Sediment/Ecological Endpoint (Table 25)	M	M	H	HMM	C
Surface Soil (Table 26)	L	M	M	MML	E

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box below.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	**C**

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	C
HML	D
MMM	D
HLL	E
MML	E
MLL	F
LLL	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard

Table 29
MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the **MRS or Alternative Priority** box at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	***2***	B	2	A	2
B	3	C	3	B	3
C	4	D	4	***C***	***4***
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		***No Known or Suspected CWM Hazard***		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				***2***	

APPENDIX L

Reference Copies

(ASR, INPR and GSA Release Files are Located in Electronic File)

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

August 27, 2008

CLIENT

PARSONS, INC.-NORCROSS

5390 Triangle Parkway, Ste 100

Norcross, GA 30092

SITE

Pacific Jungle Combat Training Center

Island of Oahu, Hawaii

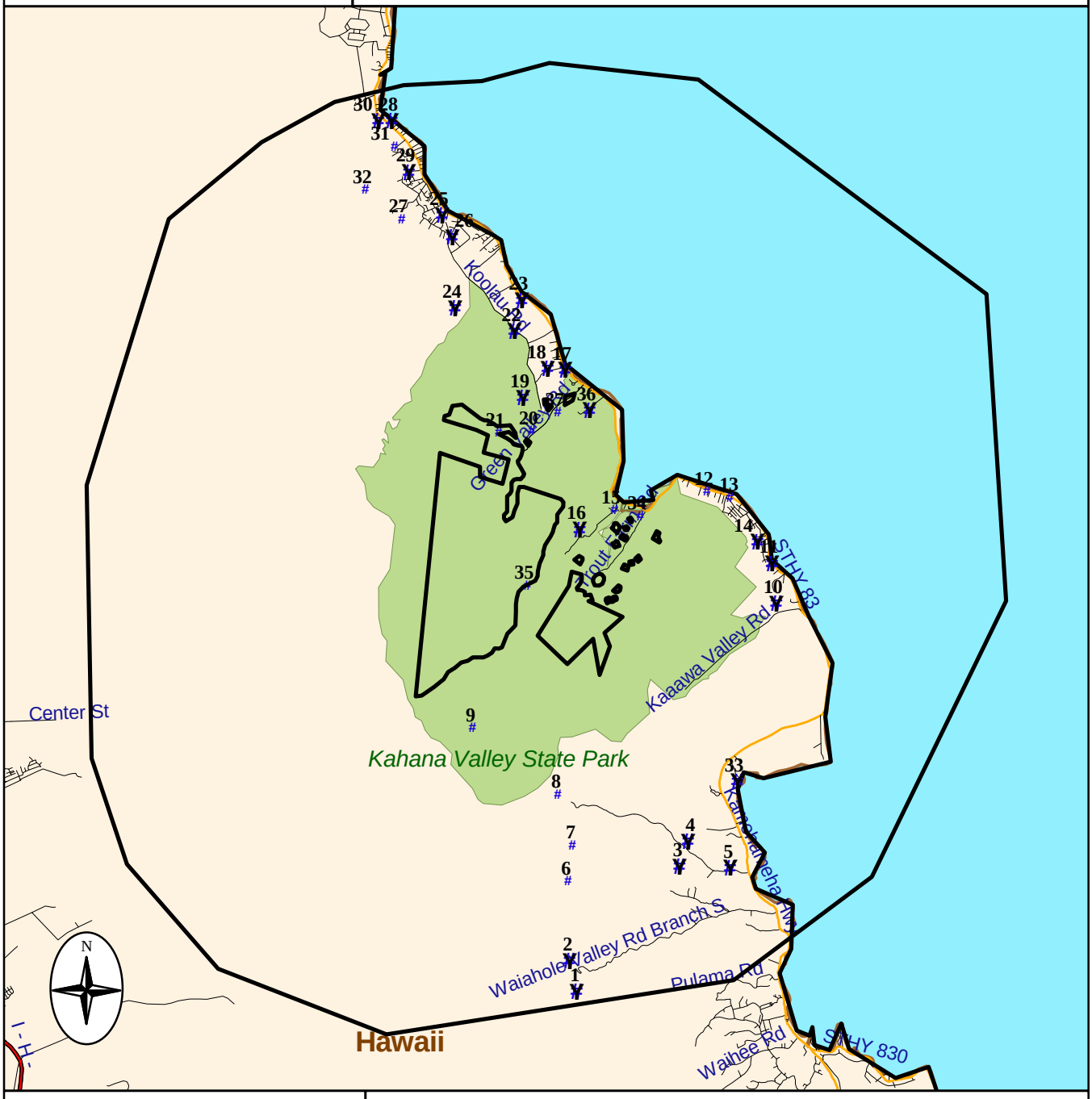
744647-51000

ES40356

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

Map of Wells within Four Miles of Polygons



Subject Site
Ground Water Wells (Cluster)
Ground Water Well
Airport
Hospital
Highway
Primary road
Secondary and connecting road
Local road
Access road
Water body
Park
State

Banks Environmental Data, Inc.
P.O. Box 12851, Capitol Station Austin, Texas 78711
512-478-0059 FAX 512-478-1433 E Mail: BANKS@BANKSINFO.COM

August 27, 2008

Water Well Report™

DETAILS

State ID	2853-02
Banks ID	1500301387
Owner Of Well	WAIAHOLE WATER
Type Of Well	Unused
Depth Drilled	N/A '
Completion Date	1/1/2015
Longitude	-157.88611
Latitude	21.47083

MAP ID
1

State ID	2853-01
Banks ID	1500301386
Owner Of Well	WAIAHOLE WATER
Type Of Well	Irrigation
Depth Drilled	3500 '
Completion Date	1/1/2015
Longitude	-157.88666
Latitude	21.47277

MAP ID
2

State ID	2853-03
Banks ID	1500301388
Owner Of Well	WAIAHOLE WATER
Type Of Well	Unused
Depth Drilled	N/A '
Completion Date	1/1/2015
Longitude	-157.8875
Latitude	21.47638

MAP ID
2

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	2853-04
Banks ID	1500301389
Owner Of Well	STATE HFCD
Type Of Well	Municipal
Depth Drilled	186 '
Completion Date	6/25/1986
Longitude	-157.88388
Latitude	21.47361

MAP ID
2

State ID	2853-05
Banks ID	1500301390
Owner Of Well	STATE HFCD
Type Of Well	Municipal
Depth Drilled	251 '
Completion Date	8/1/1986
Longitude	-157.88388
Latitude	21.47361

MAP ID
2

State ID	2951-02
Banks ID	1500301430
Owner Of Well	WAIKANE DEV CO
Type Of Well	Unused
Depth Drilled	400 '
Completion Date	2/1/1989
Longitude	-157.86638
Latitude	21.49333

MAP ID
3

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report ™

DETAILS

State ID	2951-01
Banks ID	1500301429
Owner Of Well	WAIKANE DEV CO
Type Of Well	Unused
Depth Drilled	500 '
Completion Date	10/1/1988
Longitude	-157.86611
Latitude	21.495

MAP ID
4

State ID	2951-03
Banks ID	1500301431
Owner Of Well	WAIKANE DEV CO
Type Of Well	Unused
Depth Drilled	250 '
Completion Date	4/28/1989
Longitude	-157.86472
Latitude	21.49777

MAP ID
4

State ID	2951-04
Banks ID	1500301432
Owner Of Well	ROBERTS H
Type Of Well	Other
Depth Drilled	N/A '
Completion Date	N/A
Longitude	-157.85666
Latitude	21.49305

MAP ID
5

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	2951-05
Banks ID	1500301433
Owner Of Well	ROBERTS H
Type Of Well	Other
Depth Drilled	15 '
Completion Date	1/1/1990
Longitude	-157.85583
Latitude	21.49305

MAP ID
5

State ID	2953-01
Banks ID	1500301434
Owner Of Well	WAIAHOLE WATER
Type Of Well	Irrigation
Depth Drilled	2300 '
Completion Date	1/1/1932
Longitude	-157.88777
Latitude	21.49083

MAP ID
6

State ID	2953-02
Banks ID	1500301435
Owner Of Well	WAIAHOLE WATER
Type Of Well	Irrigation
Depth Drilled	2500 '
Completion Date	1/1/2029
Longitude	-157.88694
Latitude	21.49722

MAP ID
7

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3053-01
Banks ID	1500301464
Owner Of Well	WAIAHOLE WATER
Type Of Well	Irrigation
Depth Drilled	N/A '
Completion Date	1/1/2027
Longitude	-157.88972
Latitude	21.50638

MAP ID: 8

State ID	3154-01
Banks ID	1500301473
Owner Of Well	WAIAHOLE WATER
Type Of Well	Irrigation
Depth Drilled	2000 '
Completion Date	1/1/1931
Longitude	-157.90611
Latitude	21.51833

MAP ID: 9

State ID	3250-01
Banks ID	1500301484
Owner Of Well	SWANZY F
Type Of Well	Lost
Depth Drilled	N/A '
Completion Date	1/1/2000
Longitude	-157.84777
Latitude	21.54055

MAP ID: 10

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	3251-03
Banks ID	1500301936
Owner Of Well	KUALOA RANCH
Type Of Well	Unused
Depth Drilled	N/A '
Completion Date	N/A
Longitude	-157.85083
Latitude	21.54166

MAP ID
10

State ID	3250-02
Banks ID	1500301485
Owner Of Well	CHO A
Type Of Well	Sealed
Depth Drilled	90 '
Completion Date	1/1/1939
Longitude	-157.84861
Latitude	21.54777

MAP ID
11

State ID	3251-01
Banks ID	1500301486
Owner Of Well	KUALOA RANCH
Type Of Well	Irrigation
Depth Drilled	500 '
Completion Date	1/1/2000
Longitude	-157.85
Latitude	21.54527

MAP ID
11

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3251-02
Banks ID	1500301487
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	14 '
Completion Date	1/1/1940
Longitude	-157.85055
Latitude	21.545

MAP ID
11

State ID	3351-02
Banks ID	1500301530
Owner Of Well	LEE H
Type Of Well	Unused
Depth Drilled	98 '
Completion Date	1/1/1937
Longitude	-157.86111
Latitude	21.56083

MAP ID
12

State ID	3351-03
Banks ID	1500301531
Owner Of Well	KUALOA RANCH
Type Of Well	Unused
Depth Drilled	133 '
Completion Date	1/1/1945
Longitude	-157.85666
Latitude	21.55972

MAP ID
13

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	3350-01
Banks ID	1500301528
Owner Of Well	STATE OF HAW
Type Of Well	Unused
Depth Drilled	226 '
Completion Date	1/1/1937
Longitude	-157.84944
Latitude	21.55111

MAP ID
14

State ID	3351-01
Banks ID	1500301529
Owner Of Well	WILLIAMS H
Type Of Well	Unused
Depth Drilled	126 '
Completion Date	1/1/2025
Longitude	-157.85083
Latitude	21.55361

MAP ID
14

State ID	3351-04
Banks ID	1500301532
Owner Of Well	KUALOA RANCH
Type Of Well	Irrigation
Depth Drilled	10 '
Completion Date	1/1/1989
Longitude	-157.85138
Latitude	21.55166

MAP ID
14

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	3352-01
Banks ID	1500301533
Owner Of Well	STATE PARKS
Type Of Well	Domestic
Depth Drilled	441 '
Completion Date	1/1/1932
Longitude	-157.87888
Latitude	21.5575

MAP ID
15

State ID	3353-01
Banks ID	1500301534
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	520 '
Completion Date	6/1/1973
Longitude	-157.88555
Latitude	21.55388

MAP ID
16

State ID	3353-02
Banks ID	1500301535
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	521 '
Completion Date	2/1/1975
Longitude	-157.88638
Latitude	21.55416

MAP ID
16

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report ™

DETAILS

State ID	3353-03
Banks ID	1500301536
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	600 '
Completion Date	2/1/1975
Longitude	-157.88861
Latitude	21.5525

MAP ID
16

State ID	3353-04
Banks ID	1500301537
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	600 '
Completion Date	5/1/1975
Longitude	-157.88777
Latitude	21.5525

MAP ID
16

State ID	3453-01
Banks ID	1500301650
Owner Of Well	QUONG C
Type Of Well	Domestic
Depth Drilled	236 '
Completion Date	1/1/2025
Longitude	-157.88833
Latitude	21.5825

MAP ID
17

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3453-02
Banks ID	1500301651
Owner Of Well	KAAPU D
Type Of Well	Unused
Depth Drilled	103 '
Completion Date	1/1/2026
Longitude	-157.88666
Latitude	21.58055

MAP ID
17

State ID	3453-04
Banks ID	1500301653
Owner Of Well	KAAPU D
Type Of Well	Lost
Depth Drilled	379 '
Completion Date	1/1/1959
Longitude	-157.88638
Latitude	21.58

MAP ID
17

State ID	3453-05
Banks ID	1500301654
Owner Of Well	SPROAT K & K
Type Of Well	Unused
Depth Drilled	750 '
Completion Date	1/1/1959
Longitude	-157.88638
Latitude	21.58

MAP ID
17

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3453-03
Banks ID	1500301652
Owner Of Well	OTA G
Type Of Well	Irrigation
Depth Drilled	441 '
Completion Date	1/1/1958
Longitude	-157.89166
Latitude	21.58277

MAP ID
18

State ID	3453-08
Banks ID	1500301657
Owner Of Well	CASEY B G
Type Of Well	Domestic
Depth Drilled	160 '
Completion Date	1/1/1979
Longitude	-157.89527
Latitude	21.58138

MAP ID
18

State ID	3453-11
Banks ID	1500301660
Owner Of Well	HILTBRAND R
Type Of Well	Domestic
Depth Drilled	100 '
Completion Date	11/1/1990
Longitude	-157.89416
Latitude	21.58277

MAP ID
18

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3453-06
Banks ID	1500301655
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	560 '
Completion Date	2/1/1974
Longitude	-157.89638
Latitude	21.5775

MAP ID
19

State ID	3453-07
Banks ID	1500301656
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	560 '
Completion Date	11/4/1974
Longitude	-157.89555
Latitude	21.57805

MAP ID
19

State ID	3453-09
Banks ID	1500301658
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	410 '
Completion Date	1/1/1981
Longitude	-157.89555
Latitude	21.57722

MAP ID
19

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3453-10
Banks ID	1500301659
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	445 '
Completion Date	8/1/1982
Longitude	-157.89472
Latitude	21.57166

MAP ID: 20

State ID	3454-01
Banks ID	1500301661
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	567 '
Completion Date	9/1/1982
Longitude	-157.90111
Latitude	21.57138

MAP ID: 21

State ID	3553-02
Banks ID	1500301704
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	305 '
Completion Date	1/1/1958
Longitude	-157.89416
Latitude	21.5875

MAP ID: 22

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3553-03
Banks ID	1500301705
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	369 '
Completion Date	1/1/1965
Longitude	-157.89888
Latitude	21.59

MAP ID
22

State ID	3553-04
Banks ID	1500301706
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	380 '
Completion Date	2/21/1966
Longitude	-157.89805
Latitude	21.58944

MAP ID
22

State ID	3553-06
Banks ID	1500301708
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	378 '
Completion Date	1/1/1967
Longitude	-157.89694
Latitude	21.58805

MAP ID
22

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3553-07
Banks ID	1500301709
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	378 '
Completion Date	1/1/1967
Longitude	-157.89611
Latitude	21.58722

MAP ID
22

State ID	3554-03
Banks ID	1500301713
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	378 '
Completion Date	1/1/1967
Longitude	-157.90111
Latitude	21.59222

MAP ID
22

State ID	3553-01
Banks ID	1500301703
Owner Of Well	HANOHANO ENT
Type Of Well	Other
Depth Drilled	268 '
Completion Date	N/A
Longitude	-157.89388
Latitude	21.5925

MAP ID
23

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3553-05
Banks ID	1500301707
Owner Of Well	HONOLULU BWS
Type Of Well	Observation
Depth Drilled	1007 '
Completion Date	1/1/1967
Longitude	-157.89666
Latitude	21.595

MAP ID
23

State ID	3553-08
Banks ID	1500301710
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	380 '
Completion Date	1/1/1967
Longitude	-157.89972
Latitude	21.59083

MAP ID
23

State ID	3554-04
Banks ID	1500301714
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	315 '
Completion Date	5/1/1982
Longitude	-157.90944
Latitude	21.59361

MAP ID
24

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3554-05
Banks ID	1500301715
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	440 '
Completion Date	1/1/1987
Longitude	-157.90916
Latitude	21.595

MAP ID
24

State ID	3554-06
Banks ID	1500301963
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	343 '
Completion Date	5/28/1996
Longitude	-157.90833
Latitude	21.59666

MAP ID
24

State ID	3654-01
Banks ID	1500301742
Owner Of Well	STATE OF HAW
Type Of Well	Sealed
Depth Drilled	N/A '
Completion Date	N/A
Longitude	-157.91194
Latitude	21.61027

MAP ID
25

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3554-01
Banks ID	1500301711
Owner Of Well	HAWAII RES INC
Type Of Well	Unused
Depth Drilled	291 '
Completion Date	1/1/1932
Longitude	-157.90805
Latitude	21.59944

MAP ID: 26

State ID	3554-02
Banks ID	1500301712
Owner Of Well	HAWAII RES INC
Type Of Well	Lost
Depth Drilled	264 '
Completion Date	1/1/1932
Longitude	-157.90805
Latitude	21.59944

MAP ID: 26

State ID	3654-02
Banks ID	1500301743
Owner Of Well	HOLT LW
Type Of Well	Irrigation
Depth Drilled	176 '
Completion Date	N/A
Longitude	-157.91
Latitude	21.60638

MAP ID: 26

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report ™

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

DETAILS

State ID	3654-03
Banks ID	1500301744
Owner Of Well	HAWAII RES INC
Type Of Well	Unused
Depth Drilled	N/A '
Completion Date	N/A
Longitude	-157.90833
Latitude	21.60222

MAP ID
26

State ID	3654-04
Banks ID	1500301745
Owner Of Well	STATE PARKS
Type Of Well	Unused
Depth Drilled	253 '
Completion Date	N/A
Longitude	-157.90583
Latitude	21.60027

MAP ID
26

State ID	3655-02
Banks ID	1500301747
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	350 '
Completion Date	5/1/1990
Longitude	-157.91972
Latitude	21.60972

MAP ID
27

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report ™

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

DETAILS

State ID	3755-02
Banks ID	1500301751
Owner Of Well	C&C HONOLULU
Type Of Well	Irrigation
Depth Drilled	155 '
Completion Date	1/1/1964
Longitude	-157.92166
Latitude	21.62722

MAP ID 28

State ID	3655-01
Banks ID	1500301746
Owner Of Well	HONOLULU BWS
Type Of Well	Municipal
Depth Drilled	253 '
Completion Date	N/A
Longitude	-157.91777
Latitude	21.61555

MAP ID 29

State ID	3755-03
Banks ID	1500301752
Owner Of Well	ELC FOUNDATION
Type Of Well	Unused
Depth Drilled	315 '
Completion Date	N/A
Longitude	-157.91833
Latitude	21.61805

MAP ID 29

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report ™

DETAILS

State ID	3755-04
Banks ID	1500301753
Owner Of Well	HAWAII RES INC
Type Of Well	Other
Depth Drilled	204 '
Completion Date	1/1/2000
Longitude	-157.92416
Latitude	21.62722

MAP ID
30

State ID	3755-06
Banks ID	1500301755
Owner Of Well	HAWAII RES INC
Type Of Well	Irrigation
Depth Drilled	315 '
Completion Date	1/1/1932
Longitude	-157.92694
Latitude	21.63138

MAP ID
30

State ID	3755-05
Banks ID	1500301754
Owner Of Well	JONES&SHINTAK
Type Of Well	Irrigation
Depth Drilled	192 '
Completion Date	1/1/2003
Longitude	-157.92111
Latitude	21.62277

MAP ID
31

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	3655-03
Banks ID	1500301908
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	370 '
Completion Date	6/4/1993
Longitude	-157.92666
Latitude	21.615

MAP ID
32

State ID	3051-01
Banks ID	1500301463
Owner Of Well	U OF HAWAII
Type Of Well	Other
Depth Drilled	7 '
Completion Date	1/1/1978
Longitude	-157.85694
Latitude	21.51111

MAP ID
33

State ID	3051-02
Banks ID	1500301933
Owner Of Well	U OF HAWAII
Type Of Well	Other
Depth Drilled	N/A '
Completion Date	N/A
Longitude	-157.85527
Latitude	21.50861

MAP ID
33

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	3352-02
Banks ID	1500301937
Owner Of Well	GEORGE S
Type Of Well	Irrigation
Depth Drilled	15 '
Completion Date	N/A
Longitude	-157.87388
Latitude	21.55638

MAP ID: 34

State ID	3453-15
Banks ID	1500301942
Owner Of Well	HONOLULU BWS
Type Of Well	Unused
Depth Drilled	402 '
Completion Date	10/9/1995
Longitude	-157.89555
Latitude	21.54388

MAP ID: 35

State ID	3452-01
Banks ID	1500301649
Owner Of Well	KOOLAU AGRICUL
Type Of Well	Unused
Depth Drilled	163 '
Completion Date	1/1/1937
Longitude	-157.88194
Latitude	21.57555

MAP ID: 36

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report™

DETAILS

State ID	3452-02
Banks ID	1500301959
Owner Of Well	KOOLAU AG CO
Type Of Well	Unused
Depth Drilled	150 '
Completion Date	1/23/1996
Longitude	-157.8825
Latitude	21.57472

MAP ID
36

State ID	3453-16
Banks ID	1500301996
Owner Of Well	KOOLAU AG CO
Type Of Well	Unused
Depth Drilled	243 '
Completion Date	1/18/1997
Longitude	-157.88361
Latitude	21.57527

MAP ID
36

State ID	3453-12
Banks ID	1500302004
Owner Of Well	KOOLAU AG CO
Type Of Well	Observation
Depth Drilled	294 '
Completion Date	6/15/1997
Longitude	-157.885
Latitude	21.57527

MAP ID
36

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

Water Well Report ™

DETAILS

State ID	3453-13
Banks ID	1500301999
Owner Of Well	KOOLAU AG CO
Type Of Well	Unused
Depth Drilled	219 '
Completion Date	3/14/1997
Longitude	-157.88972
Latitude	21.575

MAP ID
37

P.O. Box 12851, Capitol Station, Austin, TX 78711
1601 Rio Grande Street, Suite 500 Austin, TX 78701
512.478.0059 FAX 512.478.1433 e-mail banks@banksinfo.com
Copyright 1998 by Banks Information Solutions, Inc.

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

DISCLAIMER

Banks Environmental Data Water Well Report™ is prepared from the groundwater well database produced by the State of Hawaii Commission on Water Resource Management; a division of the Hawaii Department of Land and Natural Resources. With this information, groundwater wells are mapped using a GIS application, ArcView 3.0a, and the water well report is produced from a database created in Microsoft Access.

Banks Environmental Data has performed a thorough and diligent search of all groundwater well information provided and recorded with the State of Hawaii Commission on Water Resource Management. All mapped locations are based on information obtained from the HCWRM. Although Banks performs quality assurance and quality control on all research projects, we recognize that any inaccuracies of the records and mapped well locations could possibly be traced to the appropriate regulatory authority or the actual driller. It may be possible that some water well schedules and logs have never been submitted to the regulatory authority by the water driller and, thus, may explain the possible unaccountability of privately drilled wells. It is uncertain if the above listing provides 100% of the existing wells within the area of review. Therefore, Banks Environmental Data cannot fully guarantee the accuracy of the data or well location(s) of those maps and records maintained by the State of Hawaii regulatory authorities.

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

APPENDIX A

MUNITIONS DATASHEETS

MUNITIONS LIST:

ID	NAME	DATA SHEET
CTT01	SMALL ARMS, GENERAL	YES
CTT18	105MM, HE, M1	YES
CTT18	75MM, AP, M72	YES
CTT22	81MM, HE, M43	YES

CTT01

SMALL ARMS

SMALL-ARMS AMMUNITION

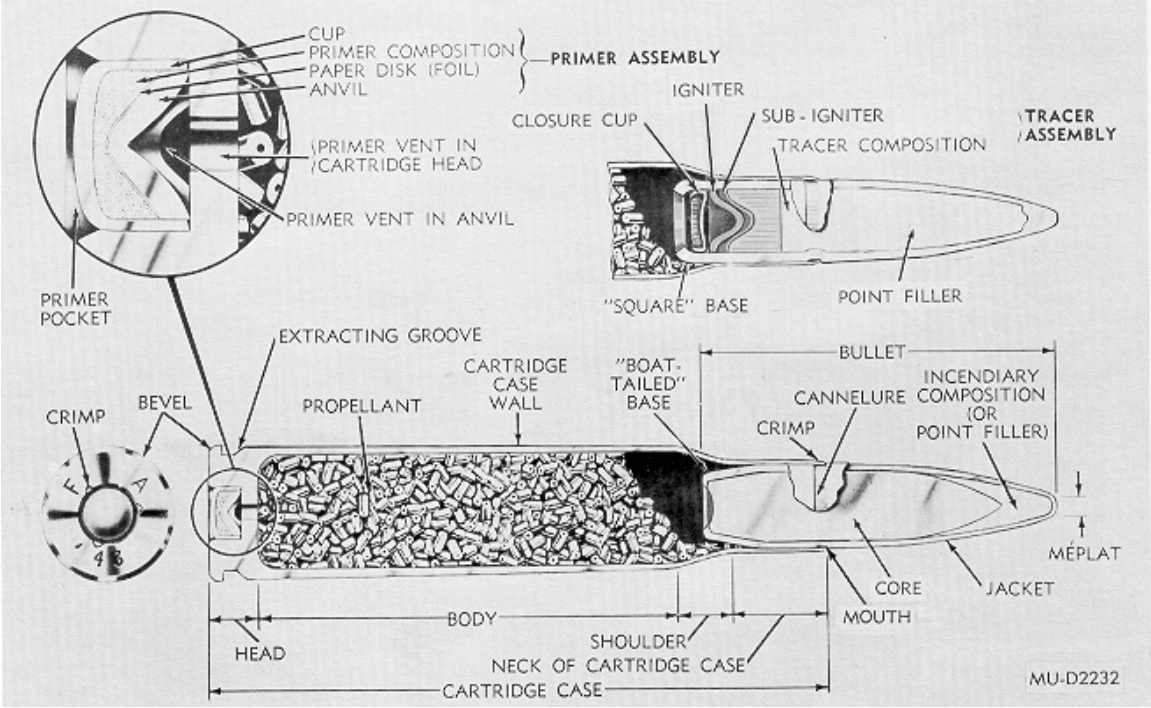


Figure 1. Typical cartridge (sectional)

General. Small-arms ammunition, as used herein, describes a cartridge or families of cartridges intended for use in various types of hand-held or mounted weapons through 30 millimeter. Within a caliber designation, these weapons may include one or more of the following: rifles (except recoilless), carbines, pistols, revolvers, machineguns and shotguns. For purposes of this publication, small-arms ammunition may be grouped as cartridges intended primarily for combat or training purposes (API, HEI, tracer or ball); for training purposes only (blank or dummy); or for special purposes (rifle grenade or spotter-tracer). Refer to TM 9-1306-200 for more detailed information on small-arms ammunition.

Cartridges. In general, a small-arms cartridge is identified as an assembly of a cartridge case, primer, a quantity of propellant within the cartridge case, and a bullet or projectile. Blank and rifle grenade cartridges are sealed with paper closure disks in lieu of bullets. Dummy cartridges are composed of a cartridge case and a bullet. Some dummy cartridges contain inert granular materials to simulate the weight and balance of live cartridges. A typical cartridge and the terminology of its components are shown in figure 1.

Case. Although steel, aluminum, zinc and plastic materials have been used experimentally, brass, a composition of 70 percent copper and 30 percent zinc, is the most commonly used material for cartridge cases. Steel, as well as brass, is an approved material for caliber .45 cartridge cases. Brass, paper and plastic are used for 12 gage shotshell bodies. Aluminum is used for military-type .410 gage shotshell bodies. Configurations of cartridges and bullets are illustrated in figures 2 through 9.

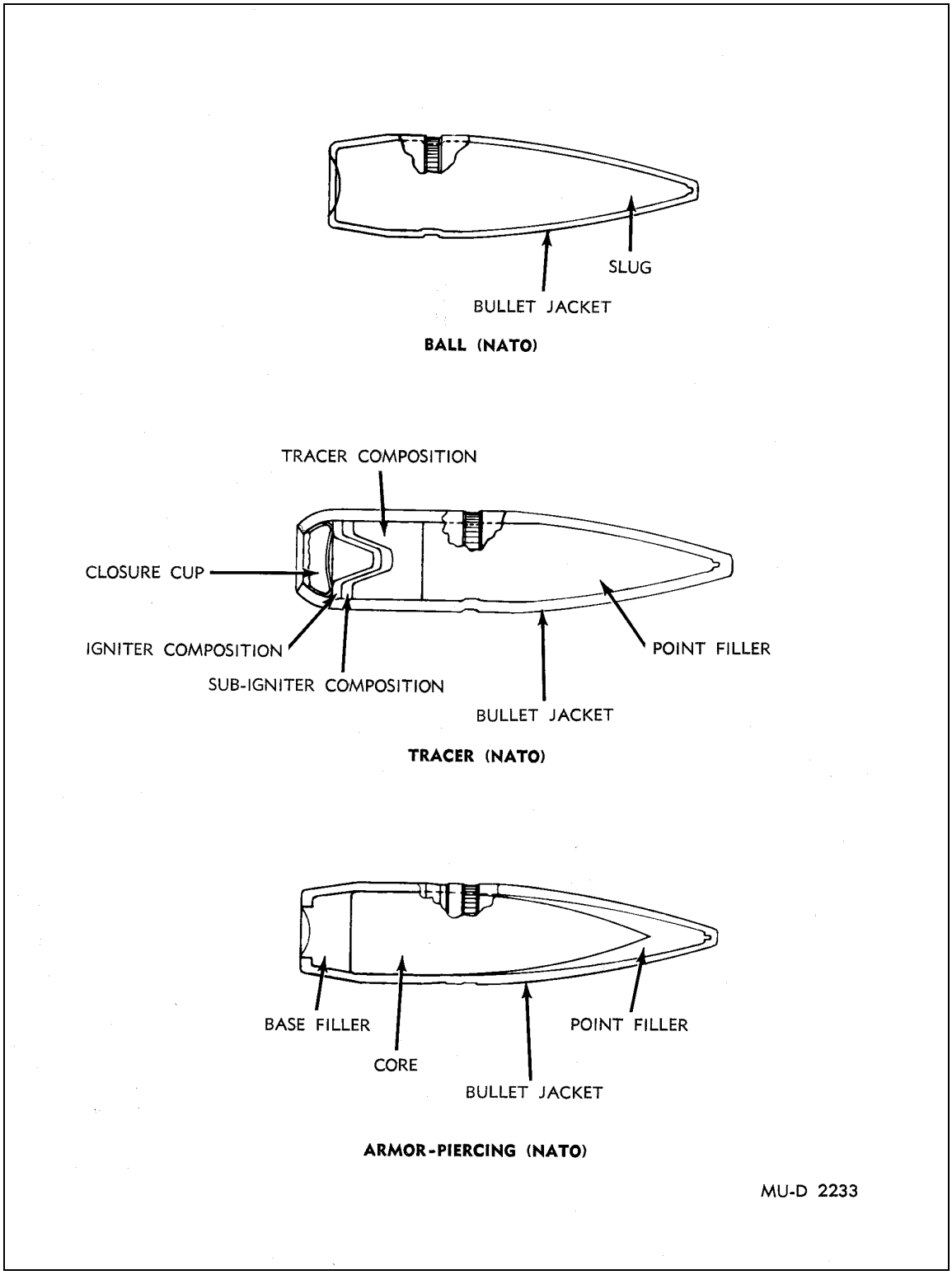


Figure 2. 7.62 mm bullets (sectional)

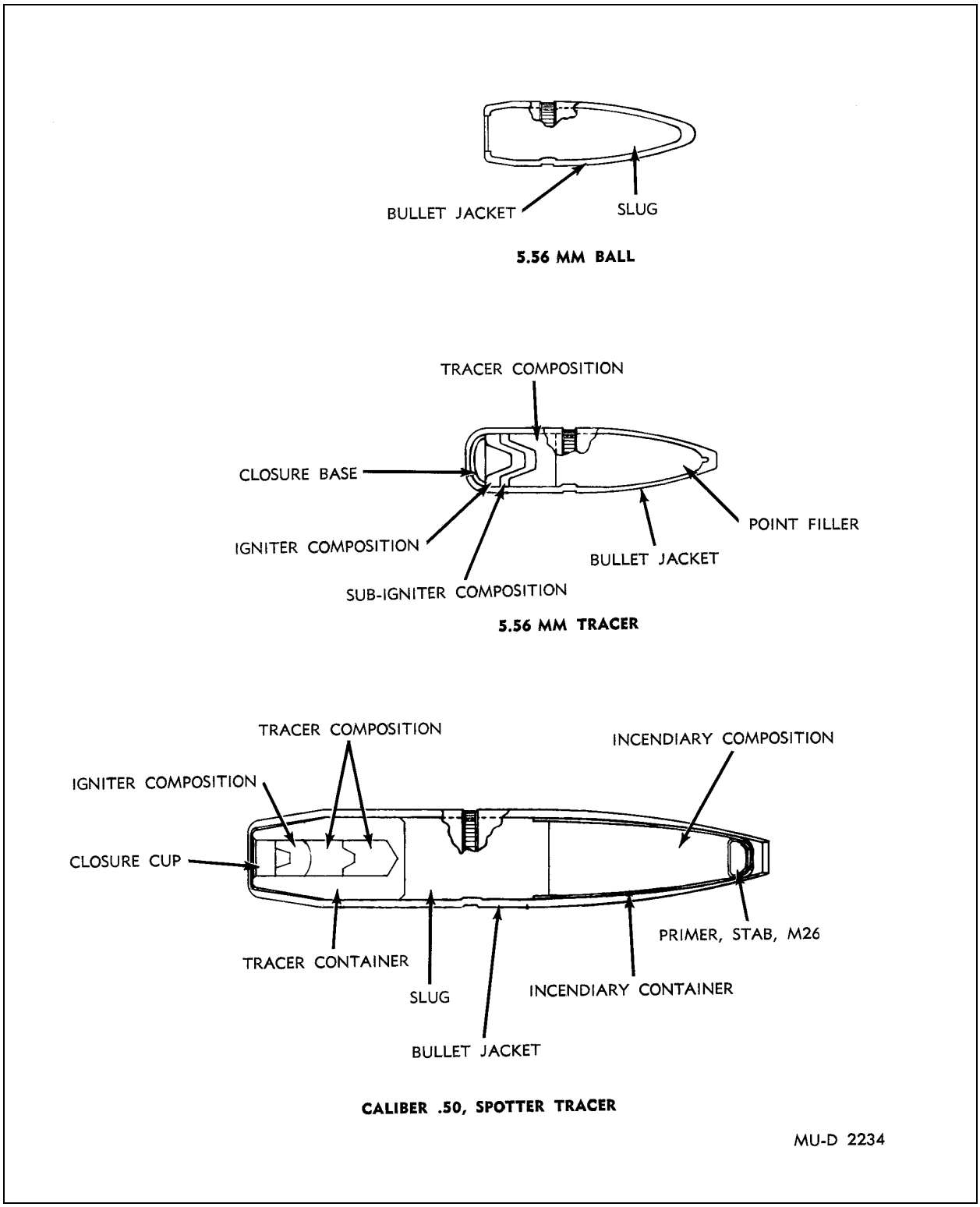


Figure 3. 5.56mm and caliber .50 spotter tracer bullets (sectioned)

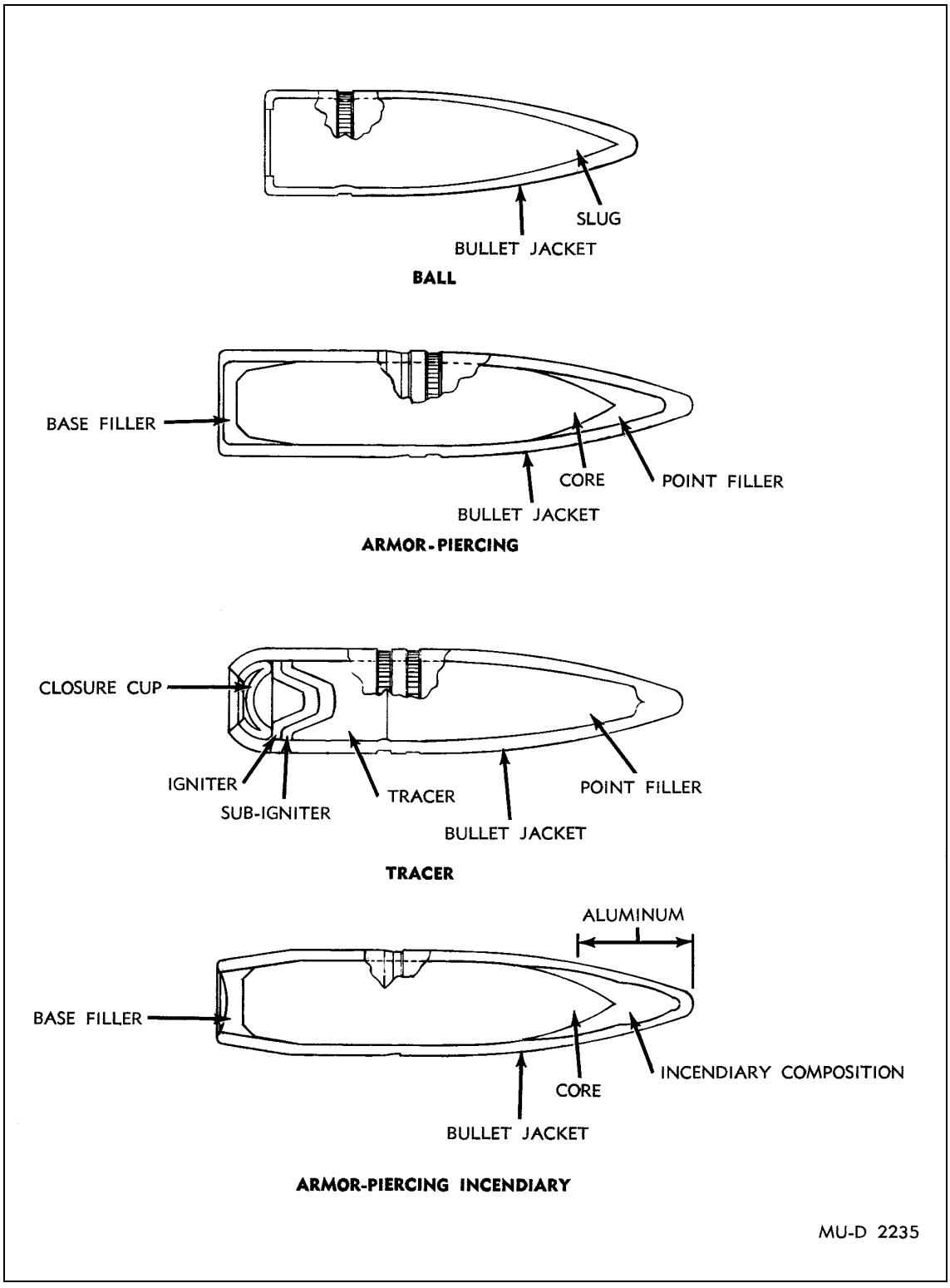


Figure 4. Caliber .30 bullets (sectional)

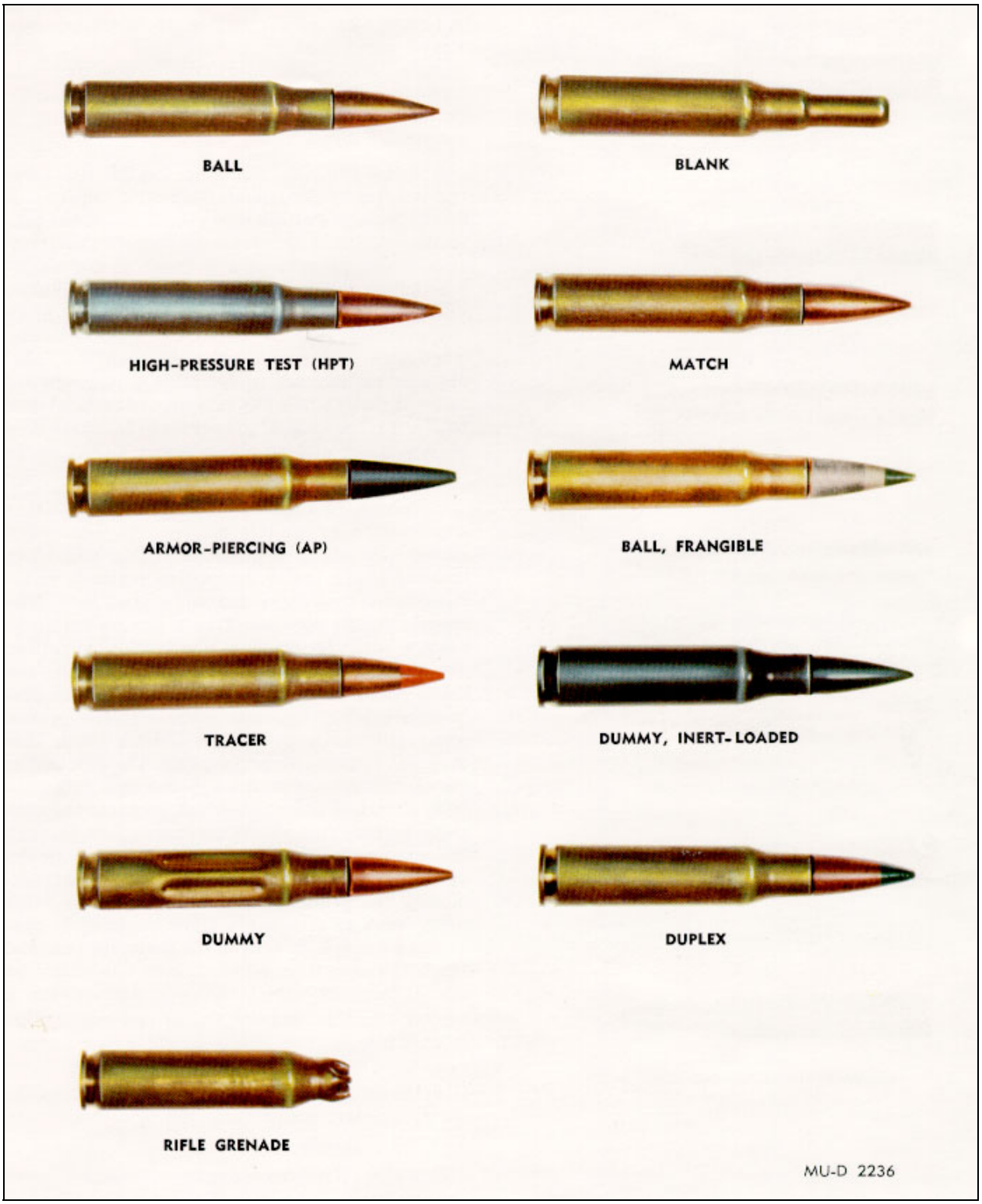


Figure 5. 7.62mm cartridges

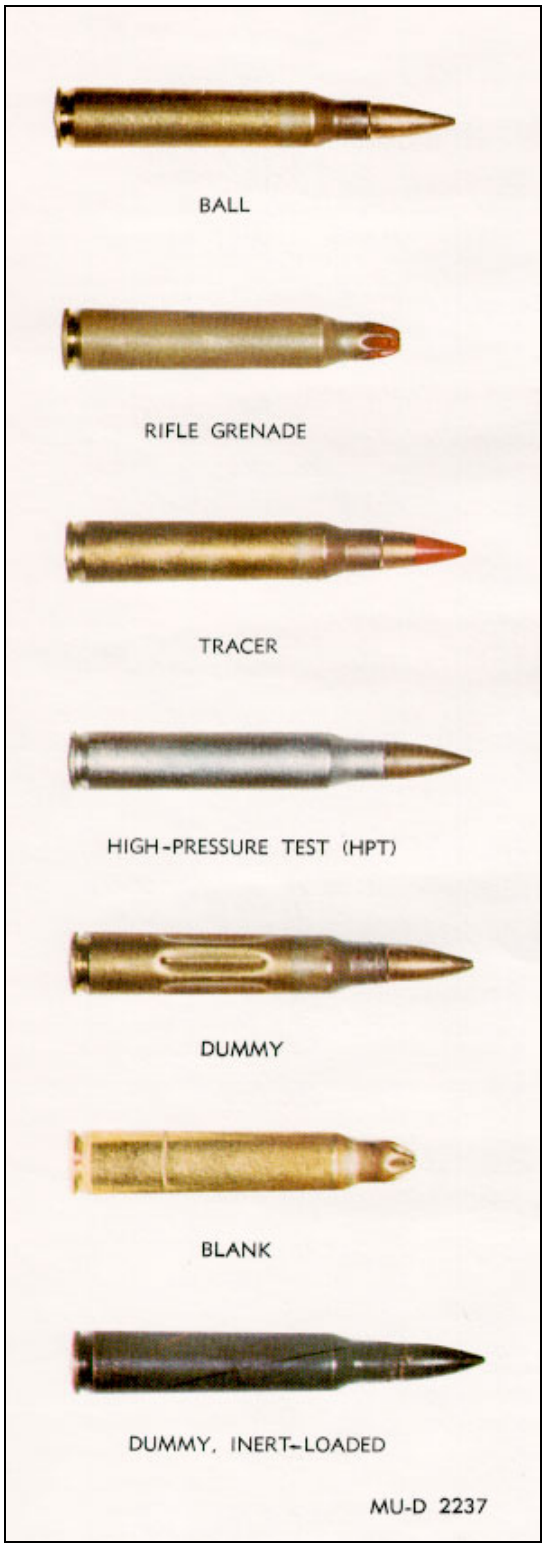


Figure 6. 5.56mm cartridges

Propellant. Cartridges are loaded with varying weights of propellant. This is to impart sufficient velocity (within safe pressures) to the projectile to obtain the required ballistic performance. These propellants are either of the single-base (nitrocellulose) or double-base (nitrocellulose and nitroglycerine) type. The propellant grain configuration may be cylindrical with a single, lengthwise perforation, spheroid (ball) or flake. Most propellants are coated with a deterrent (to assist in controlling the rate of combustion) and with a final coating of graphite (to facilitate flow of propellant and eliminate static electricity in loading cartridges).

Primer. Small-arms cartridges contain either a percussion or electric primer. The percussion primer consists of a brass or gilding metal cup that contains a pellet of sensitive explosive material secured by a paper disk and a brass anvil. The electric primer consists of an electrode button in contact with the priming composition, a primer cup assembly and insulator. A blow from the firing pin of the weapon on the center of the percussion primer cup base compresses the primer composition between the cup and the anvil. This causes the composition to explode. The function of the electric primer is accomplished by a firing pin with electrical potential, which contacts the electrode button. This allows current to flow through the energy-sensitive priming composition to the grounded primer cup and cartridge case, exploding the priming composition. Holes or vents in the anvil or closure cup allow the flame to pass through the primer vent in the cartridge case and ignite the propellant. Rimfire ammunition, such as the caliber .22 cartridge, does not contain a primer assembly. Instead, the primer composition is spun into the rim of the cartridge case and the propellant is in intimate contact with the composition. On firing, the firing pin strikes the rim of the cartridge case, compressing the primer composition and initiating its explosion.

Bullet. With few exceptions, bullets through caliber .50 are assemblies of a jacket and a lead or steel core. They may contain other components or chemicals which provide the terminal ballistic characteristics of the bullet type. The bullet jacket may be either gliding metal, gliding-metal clad steel, or copper plated steel. Caliber .30 and 7.62mm frangible bullets are molded of powdered lead and a friable plastic which pulverizes into dust upon impact with the target. The pellets used in the shotgun shells are spheres of lead alloys varying from 0.08 inch to 0.33 inch in diameter.

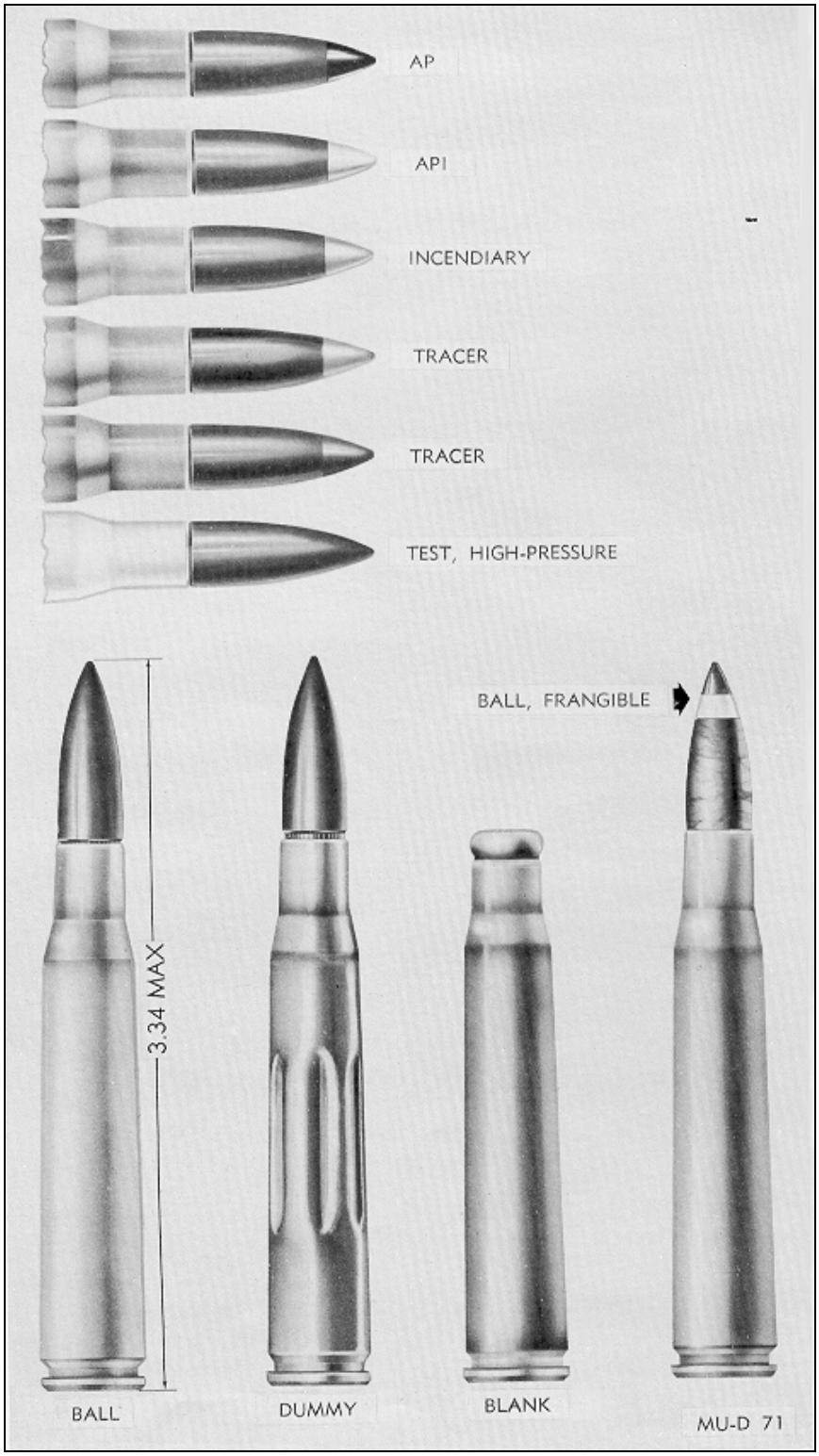


Figure 7. Caliber .30 cartridges

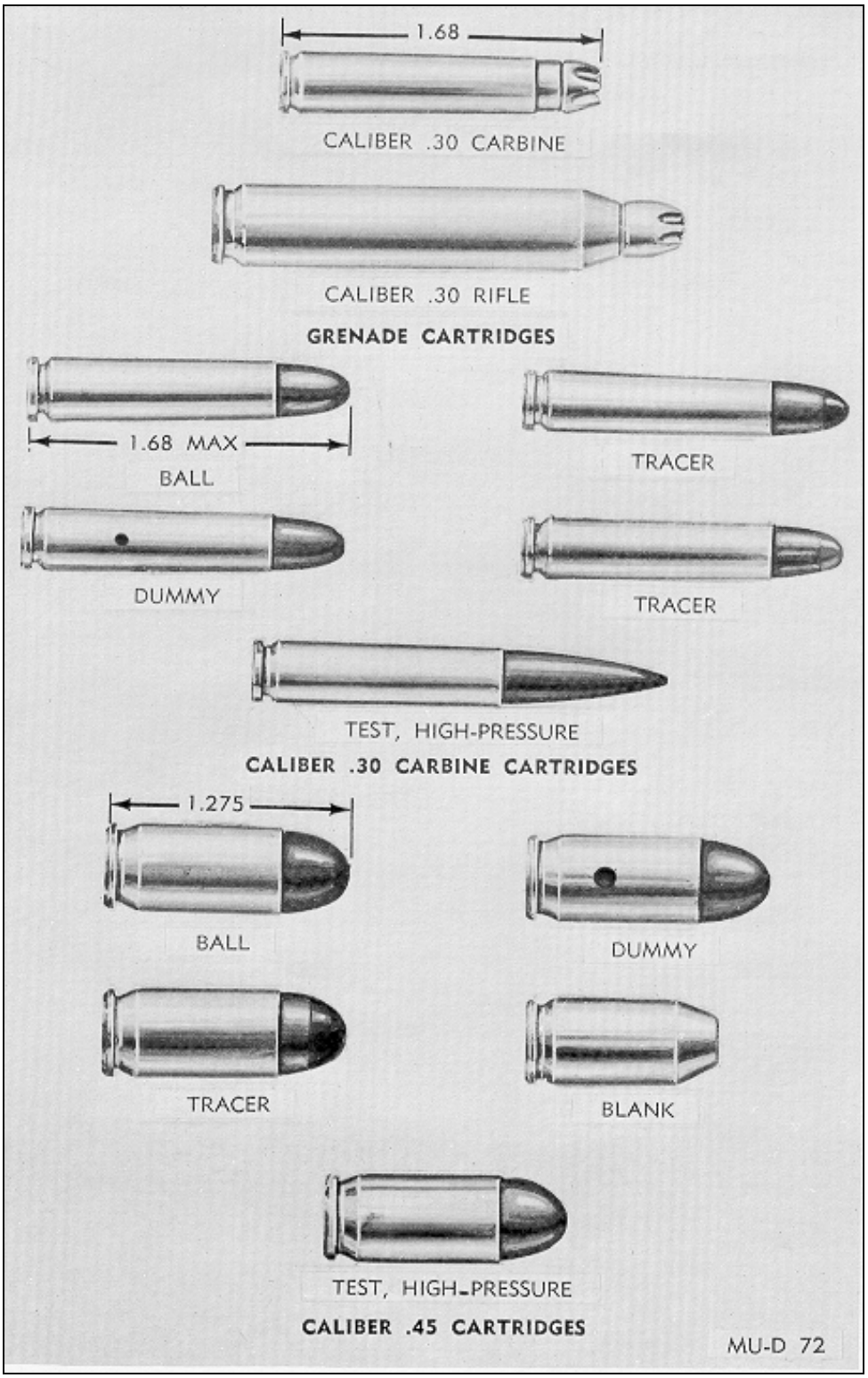


Figure 8. Caliber .30 carbine and caliber .45 cartridges



Figure 9. Caliber .50 cartridges

Ball Cartridge. The ball cartridge is intended for use in rifles, carbines, pistols, revolvers and/or machineguns against personnel and unarmored targets. The bullet, as designed for general purpose combat and training requirements, normally consists of a metal jacket and a lead slug. Caliber .50 ball bullet and 7.62-mm, Ball M59 bullet contain soft steel cores.

Tracer Cartridge. By means of a trail of flame and smoke, the tracer cartridge is intended to permit visible observation of the bullet's in-flight path or trajectory and the point of impact. It is used primarily to observe the line of fire. It may also be used to pinpoint enemy targets to ignite flammable materials and for signaling purposes. The tracer element consists of a compressed, flammable, pyrotechnic composition in the base of the bullet. This composition is ignited by the propellant when the cartridge is fired. In flight, the bullet emits a bright flame which is visible to the gunner. Trace burnout occurs at a range between 400 and 1,600 yards, depending upon the caliber of ammunition.

Match Cartridge. The match cartridge is used in National and International Match Shooting competitions. The bullet consists of a gliding-metal jacket over a lead slug. The cartridges are identified on the head face with the designation NM (National Match) or Match.

Armor-Piercing Cartridges. The armor-piercing cartridge is intended for use in machine-guns or rifles against personnel and light armored and unarmored targets, concrete shelters, and similar bullet-resisting targets. The bullet consists of a metal jacket and a hardened steel-alloy core. In addition, it may have a base filler and/or a point filler of lead.

Armor-Piercing-Incendiary Cartridge. The armor-piercing-incendiary cartridge is used in rifles or machineguns as a single combination cartridge in lieu of separate armor-piercing and incendiary cartridges. The bullet is similar to the armor-piercing bullet, except that the point filler is incendiary mixture instead of lead. Upon impact with the target, the incendiary mixture burst into flame and ignites flammable material.

Armor-Piercing-Incendiary Tracer Cartridge. The bullet of the armor-piercing- incendiary-tracer cartridge combines the features of the armor-piercing, incendiary, and tracer bullets and may be used to replace those cartridges. The bullet consists of a hard steel core with compressed pyrotechnic mixture in the cavity in the base of the core. The core is covered by a gilding-metal jacket with incendiary mixture between the core point and jacket. This cartridge is for use in caliber .50 weapons only.

Duplex Cartridge. The duplex cartridge contains two special ball type bullets in tandem. The front bullet is positioned partially in the case neck, similarly to a standard ball bullet. The rear bullet, positioned completely within the case, is held in position by a compressed propellant charge. The base of the rear bullet is angled so that in flight, it follows a path slightly dispersed from that of the front bullet.

Spotter-Tracer Cartridge. The spotter-tracer cartridge is intended for use in coaxially mounted caliber .50 spotting rifles. The bullet trajectory closely approximates that of

106mm projectiles. Thus, this cartridge serves as a fire control device to verify weapon sight settings before firing 106mm weapons. The bullet contains an impact detonator and incendiary composition which identify the point of impact by flash and smoke.

Blank Cartridge. The blank cartridge is distinguished by absence of a bullet. It is used for simulated fire, in training maneuvers, and for saluting purposes. It is fired in rifles and machineguns equipped with blank firing attachments.

Grenade Cartridge. The grenade cartridge is used to propel rifle grenades and ground signals from launchers attached to rifles or carbines. All rifle grenade cartridges are distinguished by the rose petal (rosette crimp) closure of the case mouth.

Frangible Cartridge. The caliber .30 frangible cartridge, designed for aerial target training purposes, is also used in rifles and machineguns for target shooting. Caliber .30 and 7.62mm frangible cartridges are used in tank machineguns, firing single shot, for training in tank gunnery. At its normal velocity, the bullet, which is composed of powdered lead and friable plastic, will completely disintegrate upon striking a 3/16-inch aluminum alloy plate at 100 yards from the muzzle of the gun. These cartridges are not to be used on any but well ventilated indoor ranges to preclude buildup of toxic bullet dust. Inhalation of bullet dust may be injurious to health.

Incendiary Cartridge. The incendiary cartridge was designed for aircraft and ground weapon use to ignite combustible targets (e.g., vehicular and aircraft fuel tanks). The bullet contains a compressed incendiary mixture which ignites upon impact with the target. The incendiary cartridge has been superseded by the API and APIT cartridges because of their improved terminal ballistic effects.

Special Purpose Cartridge

Cartridges of various calibers. (figures. 10 through 12), which consist of different types of projectiles and bullets, are used for training and special purposes. They include the following:

(1) Caliber .22 long rifle and caliber .38 and .45 wad-cutter cartridge for target shooting.

(2) Caliber .45 blank cartridges fired in exercises to condition dogs to gun fire.

(3) Caliber .22 hornet and .410 shotgun cartridges for firing in Air Force combination (survival) weapons for hunting purposes.

(4) Caliber.45 line-throwing cartridges for firing in caliber .45 line-throwing rifles. The Navy uses these for throwing lines from ship-to-ship. The Army Signal Corps uses these for projecting signal wires over elevated terrain.

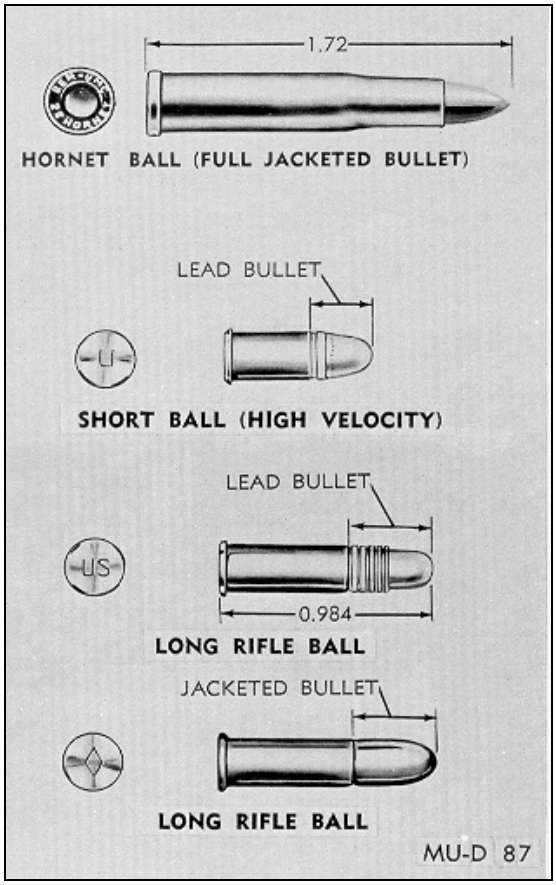


Figure 10. Caliber .22 cartridges

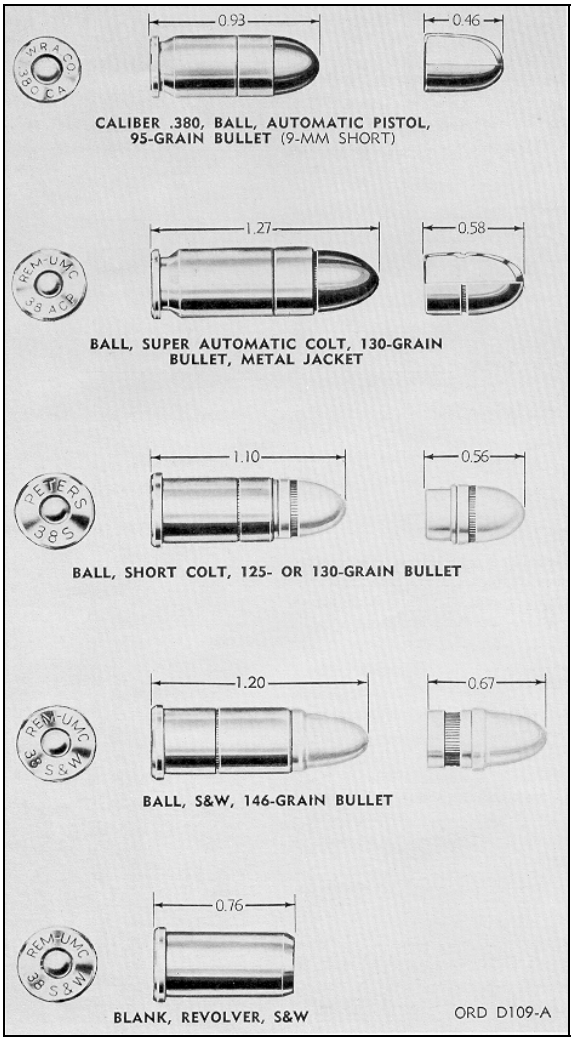


Figure 11. Caliber .38 cartridges

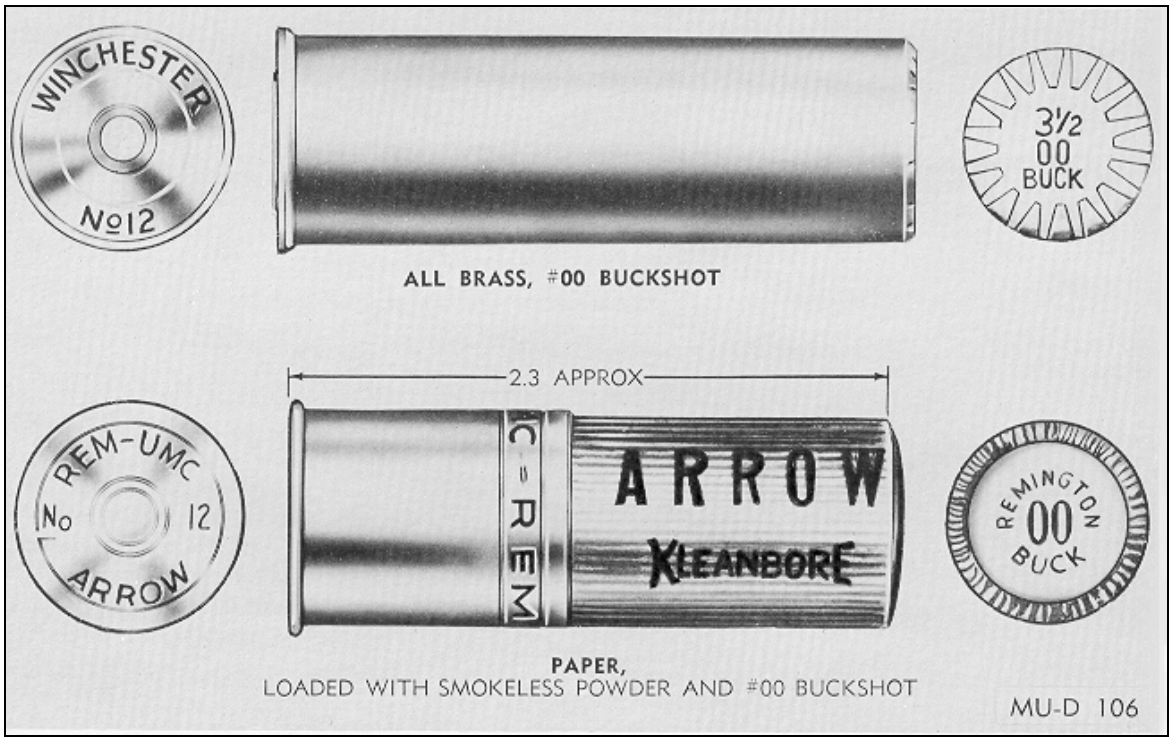


Figure 12. 12 gage shotgun shells

(5) Shotshells containing the designated shot sizes as required for the following:

12 gage #00 Buck for guard duty
12 gage #4 Buck for guerrilla purposes.
12 gage #6, 7½ and 8 shot for clay target shooting for training purposes.
.410 gage #7 shot for caliber .22/.410 survival weapons maintained by aircraft

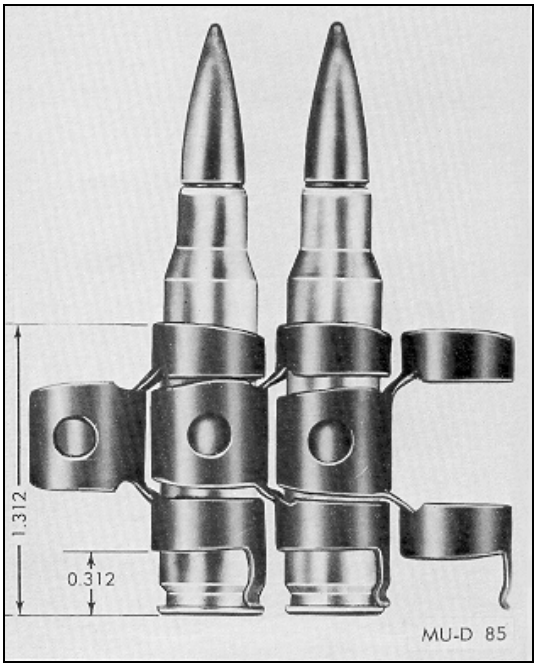


Figure 13. Linked 7.62-mm cartridges

Special purpose cartridges also include the following types of military cartridges:

(1) Dummy. The dummy cartridge is used for practice in loading weapons and simulated firing to detect flinching of personnel when firing weapons. It consists of a cartridge case and a ball bullet. Cartridge identification is by means of holes through the side of the case or longitudinal corrugations in the case and by the empty primer pocket.

(2) Dummy inert-loaded. This cartridge consists of a cartridge case, a ball bullet and inert granular material in the case simulating the weight and balance of a live cartridge. The exterior of the cartridge is identified by a black chemical finish and by the absence of a primer. This cartridge is used by installations for testing weapon function, linkage and feed chutes.

(3) High-pressure test. High-pressure test ammunition is specially loaded to produce pressures substantially in excess of the maximum average or individual pressures of the corresponding service cartridge. This cartridge is not for field issue. It is used only by armorers and weapons mechanics for proof firing of weapons (rifles, pistols, machine guns) at place of manufacture, test and repair. Because of excessive pressures developed by this type of ammunition, and the potential danger involved in firing, proofing of weapons is conducted only by authorized personnel from fixed and shielded rests by means of a lanyard or other remote control methods.

Metallic Links and Clip

Metallic links. (figures. 13 and 14) are used with caliber .30, caliber .50, 5.56mm, 7.62mm and 20mm cartridges in machine guns. The links are made of steel, surface treated for rust prevention. They are used to assemble cartridges into linked belts of 100 to 750 cartridges per belt. The links must meet specific test and dimension requirements to assure satisfactory ammunition feed and functioning in the machine gun under all training and combat service conditions.

Different configurations of cartridge clips. These permit unitized packages of ammunition. This facilitates transfer of cartridges to appropriate magazines for caliber .30, 7.62mm and 5.56mm rifles. The caliber .30 eight-round clip feeds eight cartridges as a unit into the receiver of the rifle. The caliber .45 clip feeds three cartridges as a unit into the revolver cylinder. Five-round and eight-round clips are used with caliber .30 cartridges; five-round clips with 7.62mm cartridges; ten- round clips with caliber .30 carbine and 5.56-mm cartridges; and three-round clips with caliber .45 cartridges.

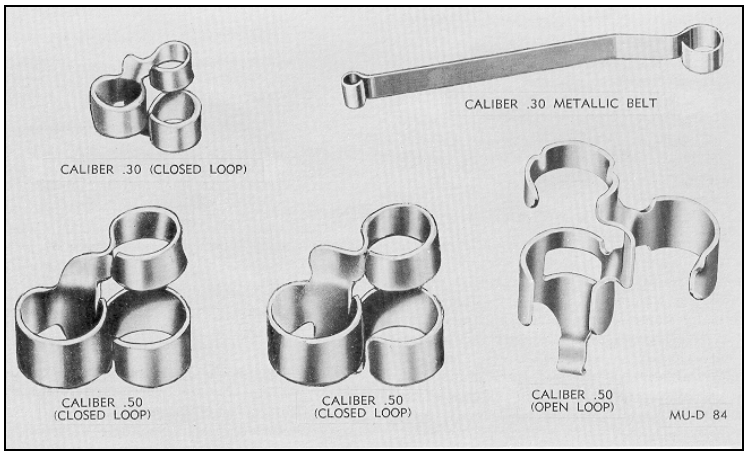


Figure 14. Links for caliber .30 and caliber .50 ammunition

Identification Markings. Each outer shipping container and all inner containers are fully marked to identify the ammunition. Wire- bound boxes are marked in black and ammunition boxes are painted olive drab, with markings in yellow. When linked ammunition is functionally packed, component lot numbers are replaced by a functional lot number. Typical packing and identification markings are illustrated in figures 15 through 17.

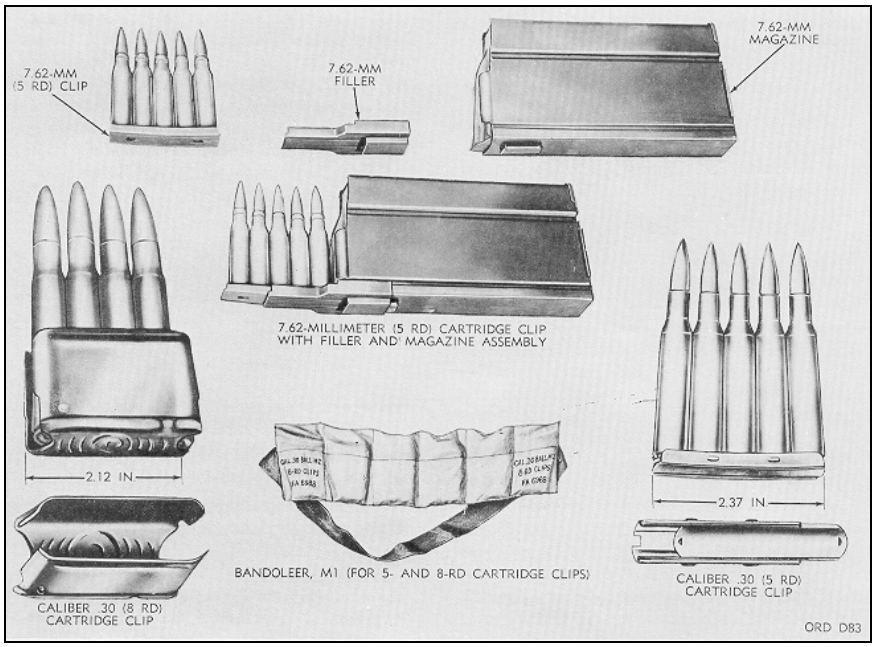


Figure 15. Cartridges, links, belt, cartons, bandoleers and ammunition box

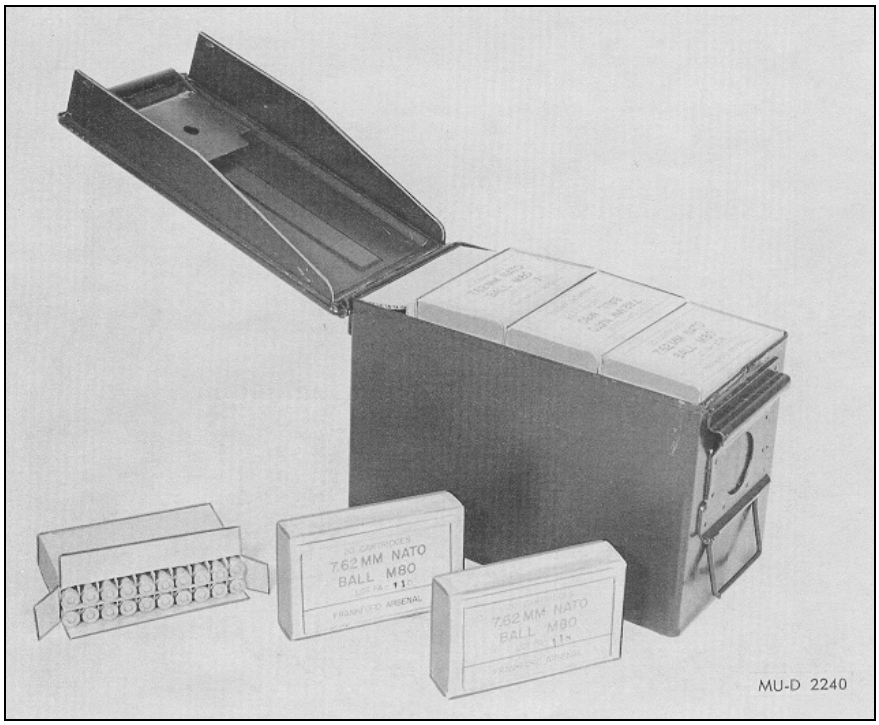


Figure 16. Cartridges, link belt, cartons, bandoleers and ammunition box

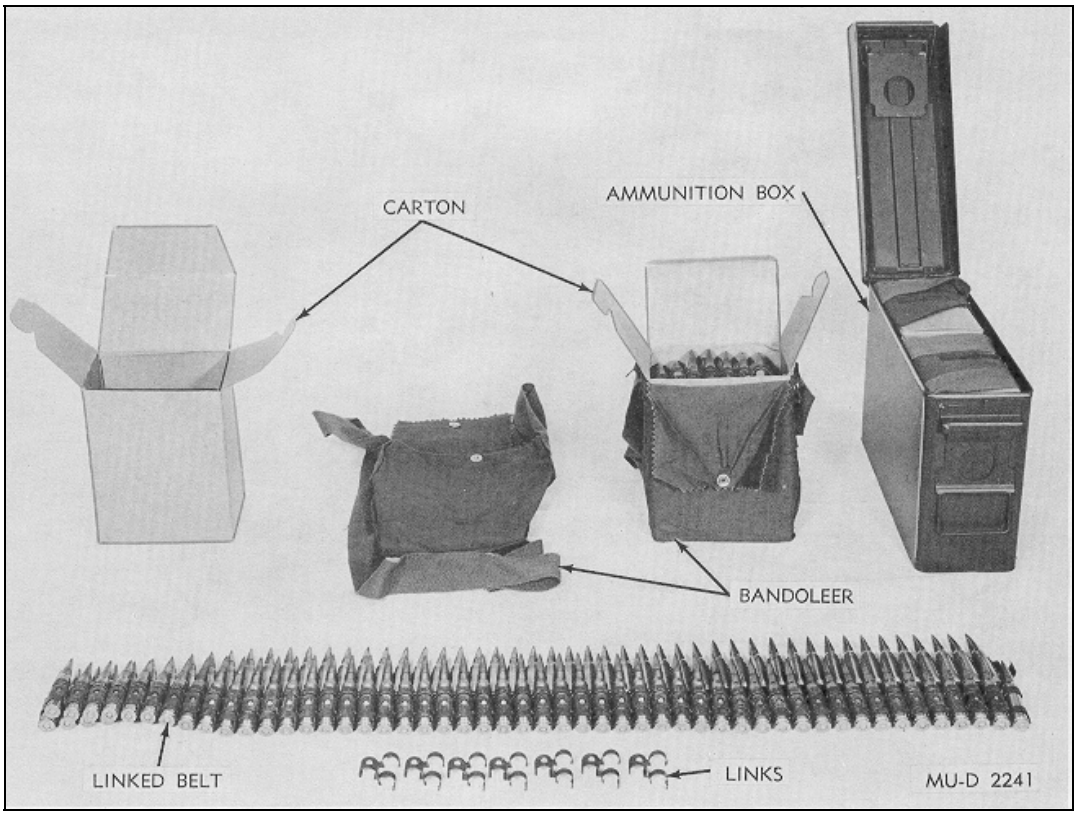


Figure 17. Cartridges, link belt, cartons, bandoleers and ammunition box

Care, Handling and Preservation

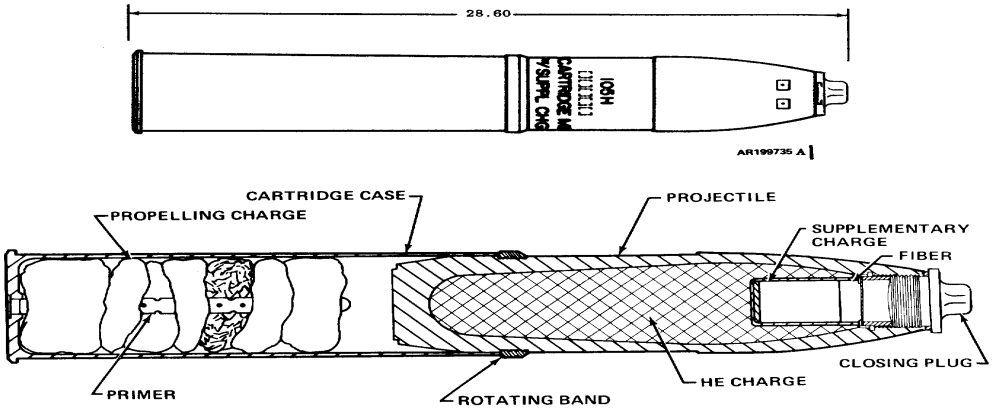
Small-arms ammunition is comparatively safe to handle. It is packed to withstand transportation, handling and storage conditions normally encountered in the field. However, consideration should be given to general handling precautions pertaining to ammunition and explosives.

Reference: This data is a reprint of Chapter 3, TM 9-1300-200, *Ammunition General,* October 1969

CTT18

LARGE CALIBER (37MM AND LARGER), HE

CARTRIDGE, 105mm, HE, M1



Use. The projectile of this cartridge contains high explosive and is used for fragmentation, blast, and mining in support of ground troops and armored columns.

Description. The projectile consists of a hollow steel forging with a boattail base, a streamlined ogive, and gliding metal rotating band. A base cover is welded to the base of the projectile for added protection against the entrance of hot gases from the propelling charge during firing. The high explosive filler within the projectile may be either cast TNT or Composition B. A fuze cavity is either drilled or formed in the filler at the nose end of the projectile. This cavity may be either shallow or deep. A cavity liner, to preclude dusting of HE during transportation and handling, is seated in the cavity and expanded into the lower projectile fuze threads. A supplementary charge is placed in the fuze cavity of projectiles having deep cavities. Projectiles with shallow cavities or deep cavities containing a supplementary charge use only short intrusion fuzes, PD, or MT. Those with deep cavities will accept the long intrusion proximity fuse after removing the supplementary charge. The cartridge case contains a percussion primer assembly and seven individually bagged and numbered propelling charge increments. The percussion primer assembly consists of a percussion ignition element and a perforated flash tube containing black powder. The seven numbered increment bags are tied together. These are assembled into the cartridge case, around the primer flash tube.

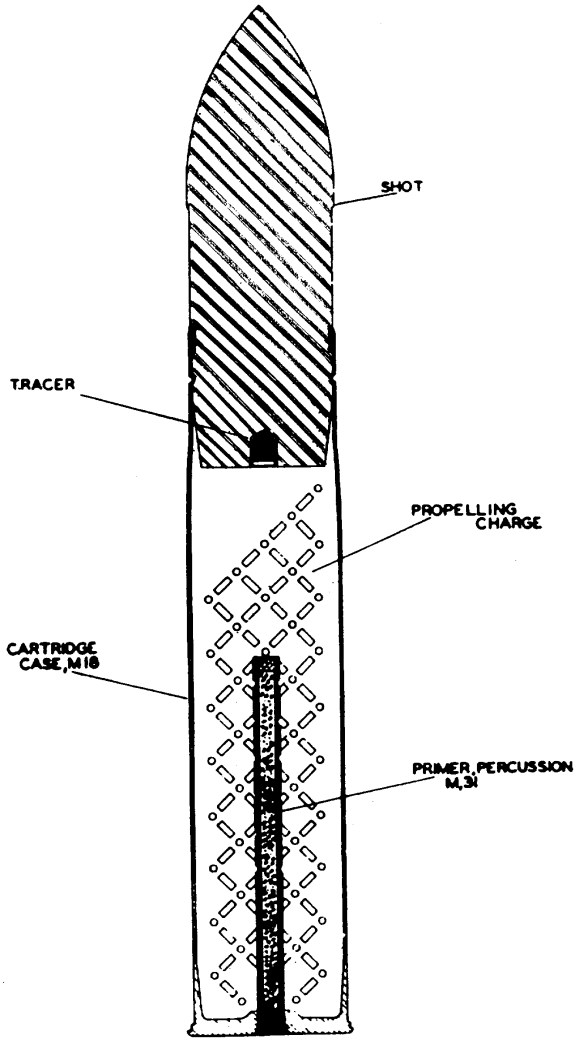
Weight.....39.92 pounds
Length with Closing Plug.....28.60 inches
Filler and Weight
Normal Cavity.....Comp B, 5.08 pounds
TNT, 4.80 pounds
Deep Cavity.....Comp B, 4.60 pounds
TNT, 4.25 pounds
Propellant Charge (max weight).....2.83 pounds
Color.....Olive drab w / yellow markings

Reference: TM 43-0001-28, *Army Ammunition Data Sheets, Artillery Ammunition*, April 1977

SHELL, 75mm, ARMOR PIERCING, M72

General. This round was developed as a substitute for the M61 & M61A1. It has no armor-piercing cap. It does, however, fulfill the requirement of the using arms for armor-piercing ammunition.

Projectile. This projectile is a solid hardened steel shot with a small cavity in the base in which is incorporated a tracer element similar to that of the M66A1 base detonating Fuze and that of the M61 Projectile. It has a 1.5-caliber radius of ogive, a rotating band of gliding metal, a fringing groove, a single groove for stab crimping of the cartridge case to the projectile, and a boat-tail base with a 9-degree taper. The absence of the armor-piercing cap as stated above caused it to be lesser efficiency than the M61 APC Projectile, having a greater tendency to ricochet on angled impacts and no protection against breaking of the nose on impact. The projectile is painted black and stenciled in white with designations of the weapon and the complete round.



Propelling charge. A super charge of average weight of 1.90 pounds of FNH powder.

Guns. This round is provided , as described above, for all types of 75-mm guns.

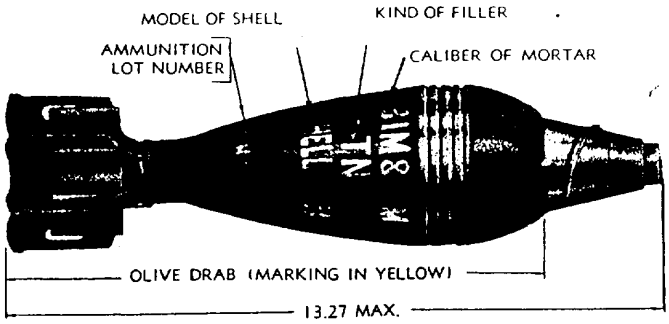
Cartridge Case..... M18
Propellant..... 1.90 lb. FNH powder
Primer..... M31
Fuze..... None
Painting and markings..... Black with white w markings

Reference: TM 9-1904, *Ammunition Inspection Guide*, March 1944; *Department of Ordnance, Complete Round Chart, No 5981*, December 1940

CTT22

MORTARS, HE

MORTAR, 81mm, HE AND PRACTICE, M43A1



Shell, HE, M43A1, Shell Body. It is constructed of forged steel. It is tear-dropped in shape; that is, blunt nose and tapered tail. It has a bourrelet machined near the nose of the shell consisting of several annular grooves which serves to act as a forward bearing surface and a gas check The nose is machined and threaded to receive an adapter. The adapter is threaded and acts as a bushing for a bakelite fuze well cup and the fuze. The fuze used is the Point-detonating Fuze M45. This fuze has a selective element and can be set for either superquick or delay action. The shell filler is 1.22 pounds of TNT. The total weight of the completely assembled round is 7.05 pounds. Entire length of the fuzed shell is 13 1/4 inches.

Fin assembly. The fin assembly consists of a machined cartridge container to which are attached six stationary fins. One end is threaded and screwed on to the body of the shell. The other end is machined and hollow inside so as to receive the ignition cartridge. Several holes leading from the interior to the exterior periphery of the cartridge container serve to conduct the flames from the ignition cartridge to the propellant increments which are seated in the fins.

Shell, Practice, M43A1. The shell body, components used, and packing are identical to the shell previously described. It differs in that the filler consists of 0.16 pound of black powder to act as a spotting charge, and 1.06 pounds of inert filler such as wax, talcum, or rosin. The body is painted blue with white stencil to indicate a practice shell.

Over-all Length ..... 13.25 inches
Diameter (body) ..... 3.16 inches
Total Weight ..... 7.05 pounds
Filler
- **HE** ..... TNT, 1.22 pound
- **Practice** ..... Black powder, 0.16 pound

Propellant ..... Ballistite
Fuze ..... M45, point-detonating

Painting and markings

- **HE** ..... Olive drab, yellow markings
- **Practice** ..... Blue, white markings

Reference: TM 9-1904, *Ammunition Inspection Guide*, March 1944

APPENDIX B

RANGE INFORMATION/DESCRIPTIONS/CELLS

APPENDIX B

RANGE INFORMATION / DESCRIPTIONS / CELLS

Range cells included in this appendix were created, which included *historical* regulations, manuals, photos, drawings, and documents. They represent typical (general) layouts, which include firing lines, target areas, target berms, and danger areas (aka SDZ). Each cell is a two-dimensional model, which does not take into account (during time of use) terrain, boundaries, or local requirements and/or restrictions.

As stated in an obsolete Army Regulation, AR 750-10, *Range Regulations for Firing Ammunition in Time of Peace,* dated May 22, 1939, "It is obviously impossible for any general range regulation to cover each local situation completely. Such additional regulations as may be necessary to meet local condition will therefore, be prepared and enforced by the post, camp, or station commander."

When the ranges were established, regulations such as AR 750-10 (now obsolete), along with others, such as TM 9-855, *Targets, Target Material, and Training Course Lay-Outs,* dated August 17, 1944 (now obsolete) would have been referenced. These guidelines would have been applied to the local environment at the time of construction.

Where applicable, right and left firing limits and down-range limits were required and set based on the local conditions. Taking in-to account the scores of ranges and the lack of first-hand knowledge, many ranges were estimated using the best available resources. Topographic maps were analyzed to determine if terrain features could be used to limit the extent of the range.

For most sites it's likely to locate numerous historical maps displaying firing ranges drawn in a various configurations, but not necessarily with a true representation. For instance, they may show the range as nothing more than a dot, a box, circles, or a V-shaped fan. However, in rare cases, a range map displays what appears to be a true fan with a calculated danger area. In these cases, the range fans may be a true representation of the actual range boundaries, and therefore be considered for use instead of the general *Range Cells.* An example where this applies is shown below:

A historical range map found for Fort Custer, Michigan identified numerous ranges, all having range fans drawn. The fans displayed on this map appear to be proportioned, and closely represent correct angles and distances according to regulations. It is believed this map was done with a high degree of accuracy; therefore the range fans were used instead of the general *Range Cells.* Also recovered, was a document referring to the artillery range. It explained the necessity to discontinue firing of artillery on this facility because of the inconvenience of reducing the propelling charges

on 155mm Artillery Shells. The rational behind this reduced charge was to minimize the down-range distance the projectile would travel. At charge 7 (max), a 155mm projectile had a maximum range of approximately 17,400 yards. In addition to this distance, regulations required a mandatory 1,000-yard buffer zone beyond the max range. If the max charge had been used to calculate the danger area, the downrange distance for this artillery range would have extended more than 6-miles beyond the installation boundary. Maximum distance on artillery munitions can be calculated using appropriate Ammunition Firing Tables.

Unfortunately, this detailed information is seldom available. Other options to consider are included in the following example where the use of topographic maps and site inspections were used to determine the boundaries of Spencer Mountain Rifle Range in North Carolina.

The only available map displayed the range as a small rectangular box. Documents recovered stated that the range was positioned at the base of the mountain in order to reduce the danger area. The *range cell* for a rifle range was designed to include 50 firing positions, which calculates to a width of 400 yards. However, during the site inspection, the actual width of the range was determined to be no more than 150 feet. By reducing the width of the *range cell,* and using contour lines on a topographic map the delineated boundaries was realistically reduced from the standard 1259 acres down to 72 acres.

As indicated, there are many variables to account for when developing range boundaries, and it is unlikely that all of the data used when the range was originally laid out will be available. Therefore, the historical data found during research (maps, aerial photos, documentation, etc.) was utilized to represent the range as accurately as possible. In most cases, the only option was to use the general *Range Cell*.

Each range description contains a list of Ammunition Data sheets. The intention of this list is to provide a general idea of the ordnance that could have been used on the range. It is not intended to be all-inclusive and by no-means is an indication that these munitions are actually present.

A significant number of manuals, drawings, letters, instructions, reports, and miscellaneous documents were referenced in order to calculate the *Range Cells*. The following non-inclusive list are published Range Manuals that were referenced to create the range cells.

- TR 140-5, *Range Regulations for Firing Ammunition in Time of Peace,* dated November 1931
- AR 750-10, *Range Regulations for Firing Ammunition in Time of Peace,* dated May 1939

- AAF Manual 85-0.1, *Army Air Forces Gunnery and Bombardment Ranges,* dated June 1945
- AD-A954 905, *Training in the Ground Army 1942-1945, Study No. 11,* dated May 1948
- *Second Air Force Ground Gunnery Range*, dated July 24, 1943
- TM 9-855, *Targets, Target Material, and Training Course Lay-Outs,* dated August 1944
- TM 9-855, *Targets, Target Material, and Training Course Lay-Outs,* dated November 1951
- AFM No. 66, *Poorman Flexible Gunnery Trainer,* dated March 1945
- TC 25-1, *Training Land*, dated August 1978
- TC 25-8, *Training Ranges,* dated February 1992
- AFI 13-212, Vols 1,2,3, *Space, Missile, Command, and Control, Weapons Ranges,* dated July 1994
- AR 210-21¸ *Army Ranges and Training Land Programs,* dated May 1997
- AR 385-62¸ *Regulation for Firing Guided Missiles and Heavy Rockets for Training, Target Practice, and Combat,* dated June 1983
- AR 385-63, *Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat,* dated November 1983

HISTORIC USE: TRAINING AREA/MANEUVER AREA

CAVE

Range Type: Training Area / Maneuver Area

Cell Name(s): None available

Training areas are established locally to meet specific requirements. They typically utilize available terrain features such as natural caves to simulate mountain type fortifications. No available references describe these areas. A description of this training area would come from historical documents relating to a particular site; and the boundaries delineated on historical maps should be used in lieu of a standard cell.

It is speculated that practice munitions would have been used on an area such as this. All weapons available to the infantry may have been utilized. These would have included: small arms, rockets, mortars, rifle grenades, hand grenades, and flame-throwers.

Ammunition (probable)	Max Range (yards)
Small Arms, Blanks	N/A
Rocket, 2.36", Practice	700
Rifle Grenade, Practice	< 400
60mm, Training	350
60mm, Practice	1,935
81mm, Training	350
81mm, Practice	3,300
Practice Hand Grenades	N/A
Pyrotechnics	N/A
Flame Thrower	N/A

Data sheet(s):

CTT01	Small arms, General
CTT04	M21, Practice Hand Grenade
	Mk1A1 Training Hand Grenade
CTT10	M7A1 Practice Rocket, 2.36"
	M112A2 Practice Rifle Grenade
CTT18	60mm, Training, M69
	60mm, Practice, M50A2
	81mm, Training, M68
	81mm, Practice, M43A1

Pyrotechnic data sheets from this era are not available in the database

Reference(s): No references available

COMBAT IN CITIES COURSE (aka: Village, Jungle Village, Mock City, MOUT Site)

Range Type: Training Area / Maneuver Area

Cell Name(s)s: CCI3W

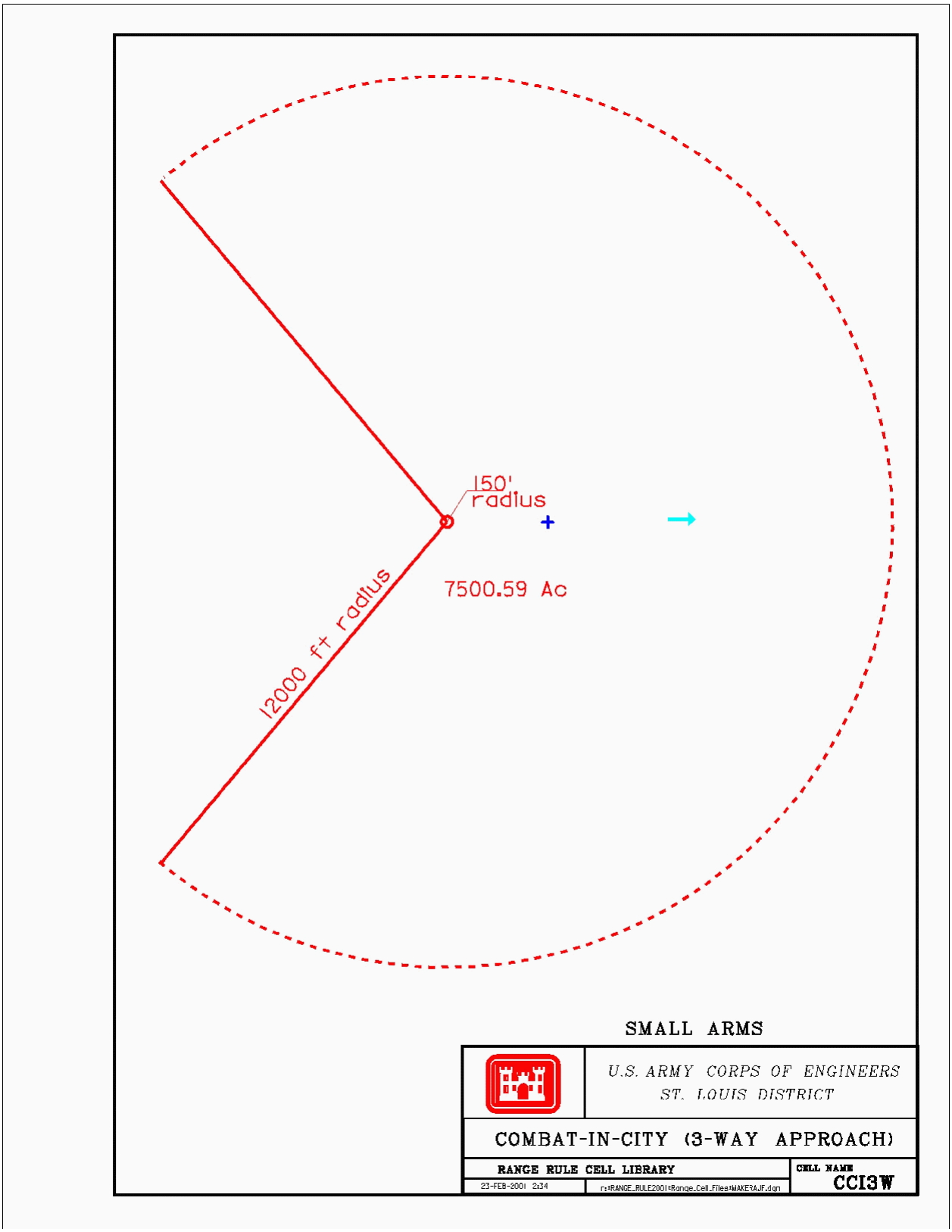
Mock villages may consist of anything from a few grass huts to as much as a small city complete with full size buildings, roads, wells, fountains etc. Facilities were constructed to meet specific training requirements. Regardless of the structures, training was designed for house-to-house fighting. The 3-way approach course permits a 180° field of fire, versus direct fire for the single approach course. Ammunition use was restricted by regulations to M2, cal. .30 or others that do not require a danger area that exceeds 4,000 yards. Training may have included the use of pyrotechnics, booby traps, and land mines.

Ammunition (probable)	Max Range (yards)	Muzzle Velocity (fps)
.45 caliber	1,600	802
.30 caliber	3,450	2,700
.22 caliber	1,500	1,100
Small arms Blanks		
Pyrotechnics		

Data sheet(s):

CTT01 Small arms, General
Pyrotechnic data sheets from this era are not available in the database

Reference(s): *AR 750-10, Range Regulations for Firing Ammunition in Time of Peace,* May 1939 – January 1944; *TM 9-855, Targets, Target Material, and Training Course Lay-outs*, August 1944 & November 1951


150'
radius
7500.59 Ac
12000 ft radius
SMALL ARMS
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
COMBAT-IN-CITY (3-WAY APPROACH)
RANGE RULE CELL LIBRARY
23-FEB-2001 2:34
r:\RANGE_RULE2001\Range_Cell_Files\MAKERAJF.dgn
CELL NAME
CCI3W

COMBAT IN CITIES COURSE (aka: Village, Jungle Village, Mock City, MOUT Site)

Range Type: Training Area / Maneuver Area

Cell Name(s)s: CCITY

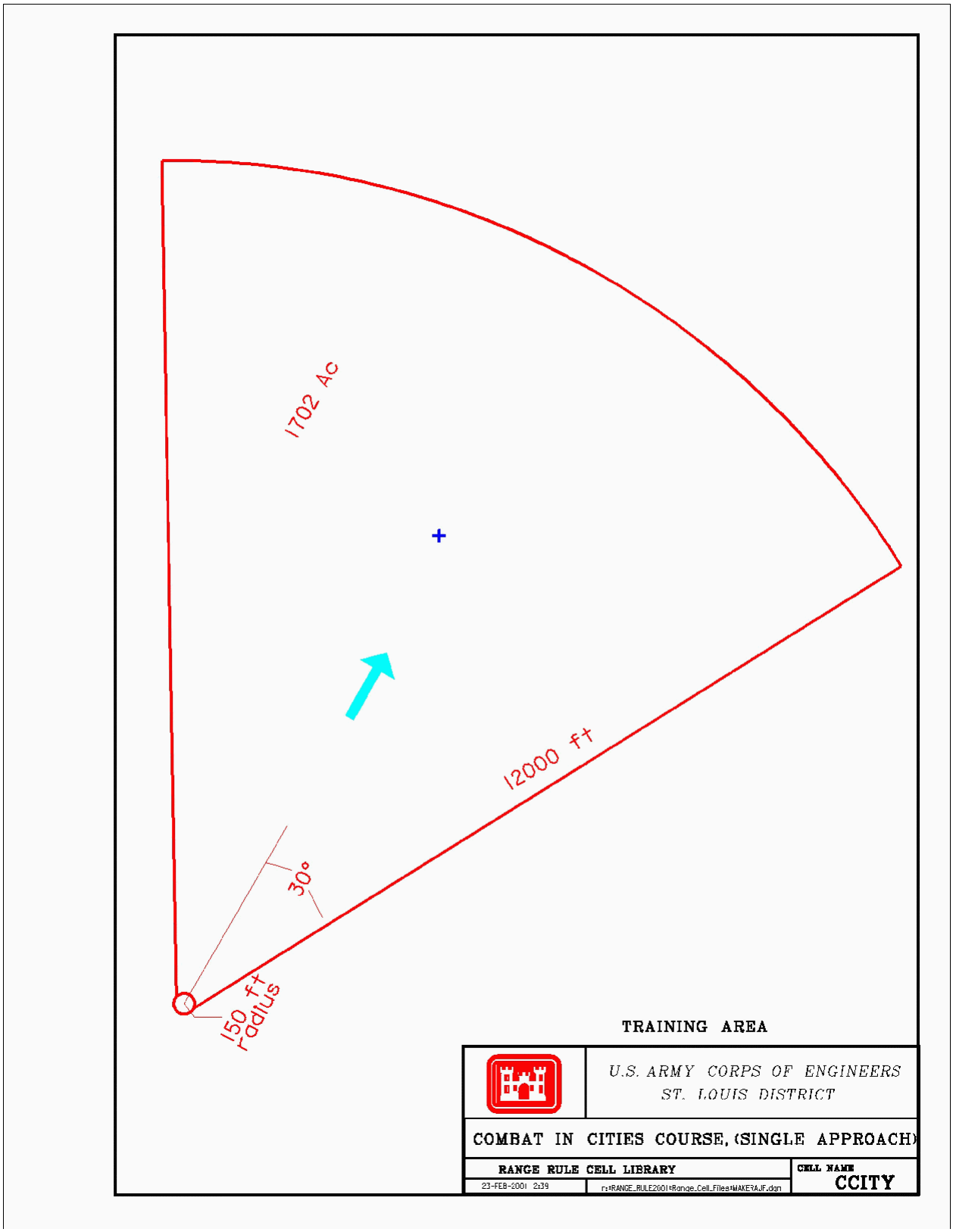
Mock villages may consist of anything from a few grass huts to as much as a small city complete with full size buildings, roads, wells, fountains etc. Facilities were constructed to meet specific training requirements. Regardless of the structures, training was designed for house-to-house fighting. The 3-way approach course permits a 180° field of fire, versus direct fire for the single approach course. Ammunition use was restricted by regulations to M2, cal. .30 or others that do not require a danger area that exceeds 4,000 yards. Training may have included the use of pyrotechnics, booby traps, and land mines.

Ammunition (probable)	Max Range (yards)	Muzzle Velocity (fps)
.45 caliber	1,600	802
.30 caliber	3,450	2,700
.22 caliber	1,500	1,100
Small arms Blanks		
Pyrotechnics		

Data sheet(s):

CTT01 Small arms, General
Pyrotechnic data sheets from this era are not available in the database

Reference(s): *AR 750-10, Range Regulations for Firing Ammunition in Time of Peace,* May 1939 – January 1944; *TM 9-855, Targets, Target Material, and Training Course Lay-outs*, August 1944 & November 1951


1702 Ac
12000 ft
30°
150 ft
radius
TRAINING AREA
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
COMBAT IN CITIES COURSE, (SINGLE APPROACH)
RANGE RULE CELL LIBRARY
23-FEB-2001 2:39
r:\RANGE_RULE2001\Range_Cell_Files\MAKERAJF.dgn
CELL NAME
CCITY

FLAME THROWER

Range Type: Training Area

Cell Name(s): FLAME

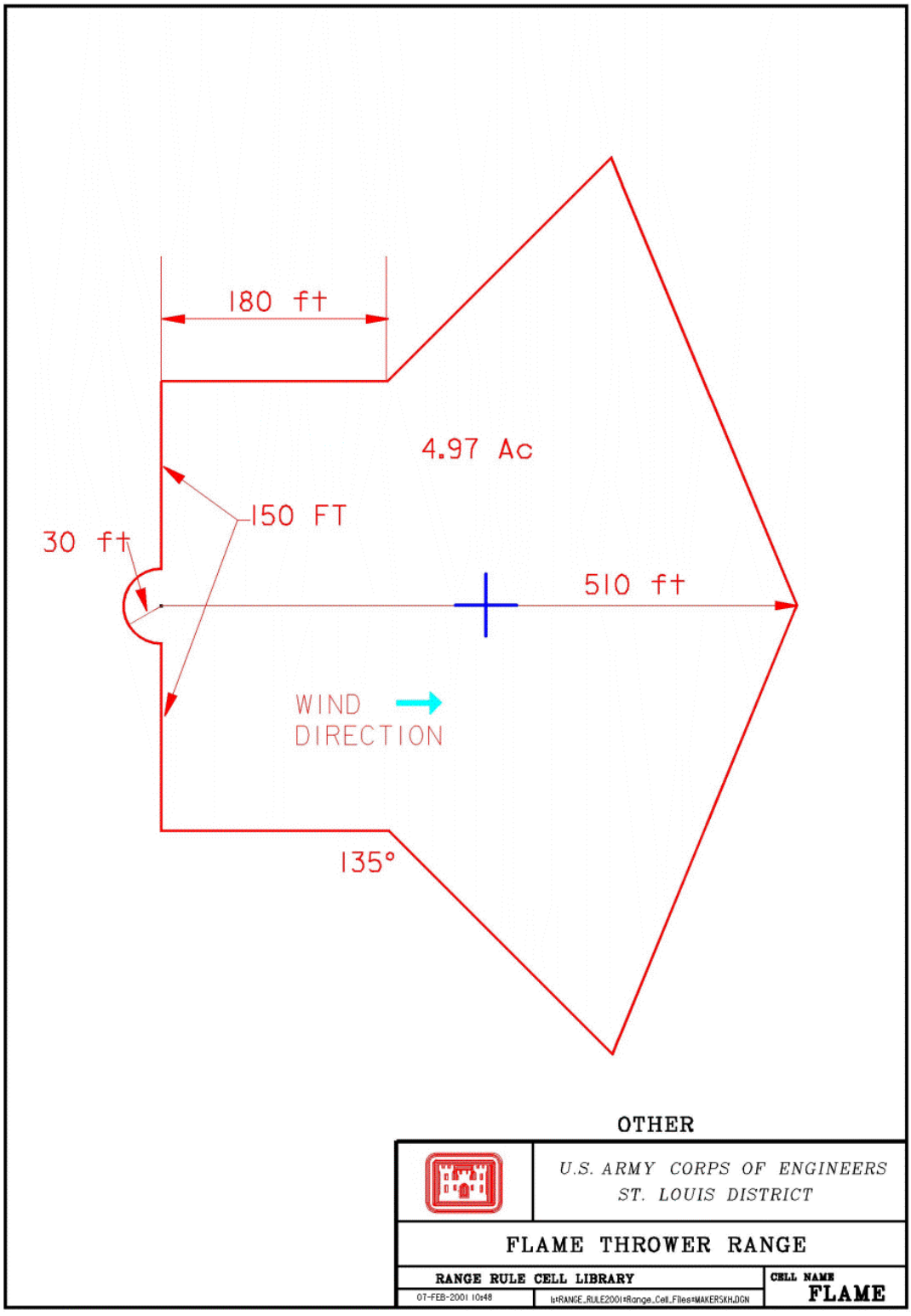
A flame-thrower range is 10 yards wide at the firing line and has a safety fan that extends a distance of 50-yards on each side of the firing line. The danger area begins at each end of the safety fan, extends down range a distance of 60 yards, at which point it continues on a 45° angle from the centerline an additional 50 yards. Typical targets used were concrete structures resembling pillboxes.

Ammunition (probable)	Max Range (yards)	Muzzle Velocity (fps)
None	N/A	N/A

Data sheet(s):

No data sheets available

Reference(s): *TM 9-855, Targets, Target Material, and Training Course Lay-outs*, August 1944 & November 1951


180 ft
4.97 Ac
150 FT
30 ft
510 ft
WIND
DIRECTION
135°
OTHER
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
FLAME THROWER RANGE
RANGE RULE CELL LIBRARY
07-FEB-2001 10:48
I:\RANGE_RULE2001\Range_Cell_Files\MAKERSKH.DGN
CELL NAME
FLAME

PILL BOX

Range Type: Training Area / Maneuver Area

Cell Name(s): None available

In general, the training area consists of a single or multiple concrete fortifications, commonly referred to as pillboxes. The area may be a 10-foot by 10-foot concrete box or a large concrete gun emplacement on the side of mountain. No available references describe these areas. A description of this training area would come from historical documents relating to a particular site; and the boundaries delineated on historical maps should be used in lieu of a standard cell.

It is assumed that practice munitions would have been used on an area such as this. All weapons available to the infantry may have been utilized. These include: small arms, rockets, mortars, rifle grenades, hand grenades, and flame-throwers.

Ammunition (probable)	Max Range (yards)
Small Arms, Blanks	N/A
Rocket, 2.36", Practice	700
Rifle Grenade, Practice	< 400
60mm, Training	350
60mm, Practice	1,935
81mm, Training	350
81mm, Practice	3,300
Practice Hand Grenades	N/A
Pyrotechnics	N/A
Flame Thrower	N/A

Data sheet(s):

CTT01	Small arms, General
CTT04	M21, Practice Hand Grenade
	Mk1A1 Training Hand Grenade
CTT10	M7A1 Practice Rocket, 2.36"
	M112A2 Practice Rifle Grenade
CTT18	60mm, Training, M69
	60mm, Practice, M50A2
	81mm, Training, M68
	81mm, Practice, M43A1

Pyrotechnic data sheets from this era are not available in the database.

Reference(s): No references available

TYPES OF TRAINING AREAS

There are six different types of training areas: Institutional Area, Garrison Area, Local Training Area, Major Training Area, Range and Impact Area, and National Training Center.

An **Institutional Area** is usually associated with service schools and training centers. But, the division post also has an institutional setting. For example, schools at division posts conduct Primary Noncommissioned Officer Courses (PNCOC), Basic Noncommissioned Officer Co (BNCOC), Primary Leadership Courses (PLC), and NCO Academies. The skills acquired at institutions focus on individual proficiency. Institutional courses cannot be taught at other training areas because they require educational devices, which can only be used cost effectively in the classroom.

A **Garrison Area** includes such things as barracks, dayrooms, motor pools, battalion classrooms, parade fields, and installation warehouse facilities. Garrison training areas are usually controlled by a company or battalion commander. While in the garrison area, soldiers learn by using Soldier's Manuals, Training Extension Courses (TEC), Army Correspondence Courses (ACCP), field manuals, training circulars, simulation devices, and some actual weapons. Garrison training concentrates on individual proficiency. A garrison area requires small amounts of land.

A **Local Training Area** consists of sites close to the garrison area. Usually, these sites are only large enough to conduct training up to the company level. The local training area is normally controlled by the post or division headquarters. Sometimes, individual training takes place in this area; but more often, it is used for the collective training of crew through company units. In many instances, it is at the local training area where the collective training process begins.

The **Major Training Area** is a large site used to train units above company level. As a minimum, the major training area at the division post should be large enough to let battalions meet their ARTEP requirements. The type of training conducted in this area varies with the unit and the characteristics of the training site. However, it usually consists of live fire exercises, unit maneuvers, simulation engagements, and Army Training and Evaluation Program (ARTEP) tasks without troops. Because of the size of the major training area, units may have to travel many miles from their garrison area.

A **Range and Impact Area** is located at the division post where units can fire their major weapon systems, which include armor, anti-armor, infantry, artillery, air defense, and Army air-delivered weapons. The impact area is that portion of the training area contaminated by duds. Because of this, it cannot be used for maneuver training. Munitions that do not explode (SABOT projectiles and small arms rounds) may be used in maneuver areas as long as troops stay out of the safety fan during firing.

National Training Center information can be obtained from the cited reference below.

Reference(s): TC 25-1, *Training Land*, August 1978

Revised 29 Oct 2003
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
MILITARY MUNITIONS RESPONSE PROJECTS

Property Name: PACIFIC JUNGLE COMBAT
Range Name: Maneuver Area
Property Location: PUNALUU/KAHANA, HI
DERP Project #: H09HI027401
Property Type: FUDS
Score: 2

Raters Name: CEMVS-ED-DO
Phone: 309-794-5504
Organization: CEMVR-ED-DO
Date Completed: May 01, 2003

RISK ASSESSMENT

This risk assessment (RAC) procedure was developed to address explosives safety hazards related to munitions. This procedure does not address environmental hazards associated with munitions constituents. The U.S. Army Engineering and Support Center, Huntsville (USAESCH), Ordnance and Explosives Directorate (CEHNC-OE) developed this procedure in accordance with MIL STD 882C and AR 385 10. The Risk Assessment Code (RAC) score will be used by the U.S. Army Corps of Engineers to prioritize the response action(s) at Formerly Used Defense Sites (FUDS). The risk assessment should be based on the best available information resulting from record searches, reports of Explosive Ordnance Disposal (EOD) actions, field observations (site visits), and interviews. This information is used to assess the risk involved based on the potential MMR hazards identified for the project. The risk assessment evaluates two factors, hazard severity and hazard probability.

PART I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of unexploded ordnance.

TYPE OF ORDNANCE: (Check all that apply)

A. InvestiConventional Ordnance and Ammunition

Other explosive item not previously stated	10
Bombs, explosive	10
Landmine, explosive	10
Rockets, guided missile, explosive	10
Grenades, hand or rifle, explosive	10
Explosive Projectiles (20 millimeter and larger)	**10**
Detonators, blasting caps, fuzes, boosters, bursters	6
Bombs, practice (w/spotting charges)	6
Practice ordnance (w/spotting charges)	4
Small arms (ball only or blank), complete round (.50 cal or less)	1
Small arms (ball only or blank), expended (.50 cal or less)	**0**
Practice ordnance (w/o spotting charges)	0
InvestiConventional Ordnance and Ammunition (Largest single value)	10

What evidence do you have regarding conventional unexploded ordnance?

No evidence

B. Pyrotechnics

Munition containing White Phosphorus (WP) or other pyrophoric material (i.e., spontaneously flammable)	10
Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)	10
Containers containing WP or other pyrophoric material or flame or incendiary material	6
Flares, signals, simulators, screening/burning smokes (other than WP)	4
Pyrotechnics (Largest single value)	0

What evidence do you have regarding pyrotechnics?

No evidence

C. Bulk High Explosives

Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Secondary Explosives (Demolition Charges, PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Insensitive explosve substances (explosive contaminated soils, ammonium nitrate,	3
Bulk High Explosives (Largest single value)	0

What evidence do you have regarding bulk explosives?

No evidence

D. Bulk Propellants

Solid or Liquid Propellants	6
Bulk Propellants (Largest single value)	0

What evidence do you have regarding bulk propellants?

No evidence

E. Chemical Warfare Material (CWM) and Radiological Weapons

Toxic Chemical Agents (H-Mustard, G-Nerve, V-Nerve and L-Lewisite)	25
Chemical Agent Identification Sets	20
Radiological Materiel (If rad waste is identified, please call the HTRW-CX at (402) 697-2555)	15
Weaponized Industrial Chemicals (Hydrogen Cyanide AC; Cyanogen Chloride, CK; Phosgene, CG)	10
Riot Control Agents (vomiting, tear)	5

Chemical Warfare Material (CWM) and Radiological Weapons (Largest single value)	0

What evidence do you have regarding chemical/radiological OEW?

No evidence

Total Hazard Severity value: 10

Hazard Severity

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 OR GREATER
CRITICAL	II	10 TO 20
MARGINAL	III	5 TO 9
NEGLIGIBLE	IV	1 TO 4
*** NONE	V	0

* IF HAZARD SEVERITY IS 0, YOU DO NOT NEED TO COMPLETE PART II OF THIS FORM.

Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

PART II. Hazard Probability. The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance, explosives, incendiary, pyrotechnic, radiological, or RCWM materials on a formerly used Department of Defense (DOD) site.

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD

(Check all that apply)

A. Location of OEW Hazards

On the surface	**5**
Within tanks, pipes, vessels or other confined areas	4
Inside walls, ceilings, or other building/structure	3
Subsurface	**2**
Location of OEW Hazards (Largest single value)	5

What evidence do you have regarding location of OE?

No evidence

B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard

Less than 1,250 feet	**5**
1,250 feet to 0.5 mile	4
0.5 mile to 1.0 mile	3
1.0 mile to 2.0 Miles	2
Over 2 miles	1
Distance to nearest inhabited location/structure likely to be at risk from OE hazard (Largest single value)	5

What are the nearest inhabited structures/buildings?

None

C. Number of buildings within a 2 mile radius measured from the OE hazard area, not the installation boundary

26 and over	**5**
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0
Number of buildings within a 2 mile radius measured from the OE hazard area, not the installation boundary (Largest single value)	5

Narrative

No narrative

D. Types of Buildings

Educational, child care, residential, hospitals, hotels, commercial, shopping centers	**5**
Industrial, warehouse, etc.	4
Agricultural, forestry, etc.	3
Detention, correctional	2
No buildings	0
Types of Buildings (Largest single value)	5

Describe the types of buildings

No description

None

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance

No barrier nor security system	**5**
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security Guard, but no barrier	2
Discontinued Question (Isolated Site)	0
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the ar	0
Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance (Largest single value)	5

Describe the site accessibility

No description

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility

Expected	5
None Anticipated	**0**

Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility (Largest single value) 0

Describe the site dynamics

No description

Total Hazard Probability value: 25

	TABLE 2	
	HAZARD PROBABILITY	
Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 TO 20
REMOTE	D	8 to 14
IMPROBABLE	E	Less than 8
* Apply Hazard Probability Level to Table 3.		

Part III - Risk Assessment. The risk assessment value for this site is determined using the following table.

Table 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASSIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	1	1	2	3	4
CRITICAL II	1	2	3	4	4
MARGINABLE III	2	3	4	4	4
NEGLIGIBLE IV	3	4	4	4	4
NONE (V) = RAC 5					

RISK ASSESSMENT CODE (RAC)

RAC 1-4 Recommend and approve further action as appropriate. Refer to EP 1110-1-18 for discussion of MMR Projects and the process to be followed for project execution.

RAC 5 Usually indicates that No DOD Action Indicated (NDAI) is neccessary. Recommend and approve NDAI and follow instructions for project closeout in accordance with current program guidance.

PART IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

The site was used as a maneuver area for jungle warfare training. 105mm, 75mm projectiles and a 81mm mortar have been found in the subject area.

INPR SUPPLEMENT

INSTALLATION NAME: PACIFIC JUNGLE COMBAT

FFID: HI9799F4004

FUDS PROPERTY NUMBER: H09HI0274

TOTAL PROPERTY ACREAGE: 2266.77

MSC: Pacific Ocean Division - 41505
PUNALUU/KAHANA, HI

POC for this data:
Robert Hoffman, Rock Island District
Phone: 309-794-5504
Email: robert.e.hoffman@mvr02.usace.army.mil

DOES THE INSTALLATION HAVE ANY A/I RANGES? NO

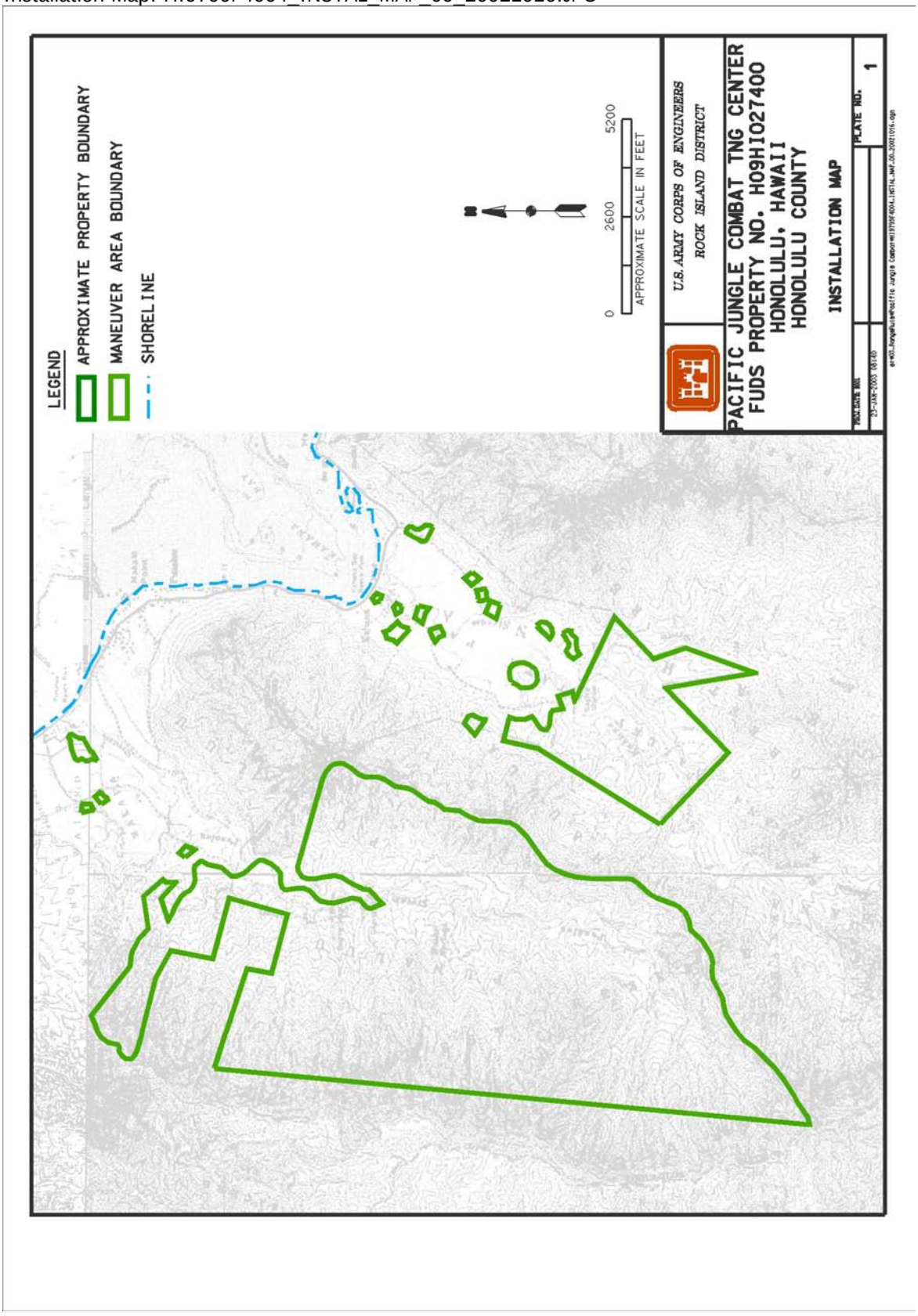
DOES THE INSTALLATION HAVE ANY CTT RANGES? YES

TYPES OF MUNITIONS USED ON THIS INSTALLATION: Conventional

INFORMATION IN THIS SUPPLEMENT WAS GATHERED FROM THE: INPR

MMR AREA SUMMARY						
PROJECT NO.	**PLATE NO.**	**RANGE NAME**	**SUB-RANGE NAME**	**ACREAGE**	**AARS AOC**	**RMIS RANGE ID**
01	R01	Maneuver Area		2545	A	H09HI027401R01

Installation Map: HI9799F4004_INSTAL_MAP_00_20021016.JPG



INSTALLATION NAME
PACIFIC JUNGLE COMBAT
PUNALUU/KAHANA, HI

FUDS PROJECT
H09HI027401 -

PROJECT COMMENTS: This project site consisted of two parcels totaling 2,266.77 acres located in two valleys along the northeast coast of Oahu, Hawaii. The Army leased 485.25 acres in Kahana Valley in November 1944 retroactive to May 1943. They acquired the second parcel (1,781.52 acre) in neighboring Punaluu Valley, between 1943 and 1947. These two properties were established as a unit jungle combat training center beginning in September1943 teaching basic and advanced jungle warfare, as well as instructor training. Subjects taught during a one-week course at the center included warfare tactics necessary for jungle warfare. Due to a change in training policy the center became know as Unit Combat Training Centers in March 1945. The following month it was redisignated it Pacific Combat Training Center. In all, over 241,000 men received either basic, advanced, or instructor training at the center. Postwar plans called for closing the majority of the center except for an area in Punaluu Valley which was to be retained to fulfill the Army's postwar training requirements. De-dudding efforts were conducted by an engineer search and range clearance team in Punaluu Valley in 1949 as a result of live ammunition use during training. Between 1945 and 1950 the Army terminated all leases, licenses, and permits and the land reverted to its previous owners. Much of the former training areea in Kahana and Punaluu Valleys is within Hauula Forest Reserve, with all of Kahana Valley also being designated a state park. Both the forest reserve and park are under the purview of the Hawaii Department of Land and Natural Resources. Thirty-one families presently live in Kahana Valley in support of the living park concept whereby residents are regarded as park personnel portraying traditional Hawaiian cultural practices for visitors.

MMR AREA NAME: Maneuver Area

RMIS Range ID: H09HI027401R01

HISTORIC USE:

HISTORIC USE	START YEAR	END YEAR	COMMENTS
TRAINING AREA/MANEUVER AREA	1943	1950	N/A

CURRENT USE:

CURRENT USE	START YEAR	COMMENTS
Recreational	1950	N/A

ACREAGE:

Land:	2545
Tidal Water:	0
Inland Water:	0
Total:	2545
Tidal Water with Public Exposure Pathway:	No

MMR ACREAGE:

Identified:	0
Suspected:	2545
Not Suspected:	0

RISK ASSESSMENT CODE:

Hazard Severity:	II
Hazard Probability:	B
RAC Score:	2

CLASSIFICATION(S):
Training
Small Arms Range

RANGE / NON-RANGE: Range

LAND USE RESTRICTIONS: Unrestricted Public Access

CONSTRUCTION DATE: (YYYYMMDD) 19430501

THE FOLLOWING TYPES OF MUNITIONS WERE USED ON THIS RANGE:
Conventional

DESCRIPTION: This was a typical manuver/training area for the purpose of teaching unit and juncle survival skills. Live ammunition was reportedly used during the exercises.

COMMENTS: This project site consisted of two parcels totaling 2,266.77 acres located in two valleys along the northeast coast of Oahu, Hawaii. The Army leased 485.25 acres in Kahana Valley in November 1944 retroactive to May 1943. They acquired the second parcel (1,781.52 acre) in neighboring Punaluu Valley, between 1943 and 1947. These two properties were established as a unit jungle combat training center beginning in September1943 teaching basic and advanced jungle warfare, as well as instructor training. Subjects taught during a one-week course at the center included warfare tactics necessary for jungle warfare. Due to a change in training policy the center became know as Unit Combat Training Centers in March 1945. The following month it was redisignated it Pacific Combat Training Center. In all, over 241,000 men received either basic, advanced, or instructor training at the center. Between 1945 and 1950 the Army terminated all leases, licenses, and permits and the land reverted to its previous owners. Much of the former training area in Kahana and Punaluu Valleys is within Hauula Forest Reserve, with all of Kahana Valley also being designated a state park. Both the forest reserve and park are under the purview of the Hawaii Department of Land and Natural Resources. Thirty-one families presently live in Kahana Valley in support of the living park concept whereby residents are regarded as park personnel portraying traditional Hawaiian cultural practices for visitors.

HAVE THERE BEEN ANY DOCUMENTED INCIDENTS ON THIS RANGE? Yes - Dedudding efforts were conducted by an engineer team in the Punaluu Valley in 1949. Ordnance continues to be found in the valleys.

RANGE MUNITIONS:

MUNITIONS ID	MUNITIONS	USED START DATE	USED END DATE
SMALL ARMS(CTT01)	Small Arms, General	194305	195011
LARGE CALIBER (37MM AND LARGER), HE(CTT18)	105mm, HE, M1	194303	195011
LARGE CALIBER (37MM AND LARGER), HE(CTT18)	75mm, AP, M72	194305	195011
MORTARS, HE(CTT22)	81mm, HE, M43	194305	195011

RANGE LAND ACCESS AND RESTRICTIONS:

RESTRICTION TYPE	RESTRICTION	DESCRIPTION
A	NO CONTROLS	Description is not on file
L	OTHER (Must Describe)	No known Land Use Restrictions

RANGE OWNERS:

OWNER TYPE	OWNER DESCRIPTION	LEASE	LEASE TERMINATION	REVOCATION OF LAND
S	Hawaii Department of Land and Natural Resources		NO	NO
O	Numerous small land owners		NO	NO

RANGE DEMOGRAPHICS:

TYPE	NAME	STATE	COUNTRY
CO	Honolulu	HI	UNITED STATES
CT	Honolulu	HI	UNITED STATES
CT	Kahana	HI	UNITED STATES

SOIL TYPE: ROCK

TOPOGRAPHY: ROLLING WITH GORGES OR GULLIES

VEGETATION: FOREST

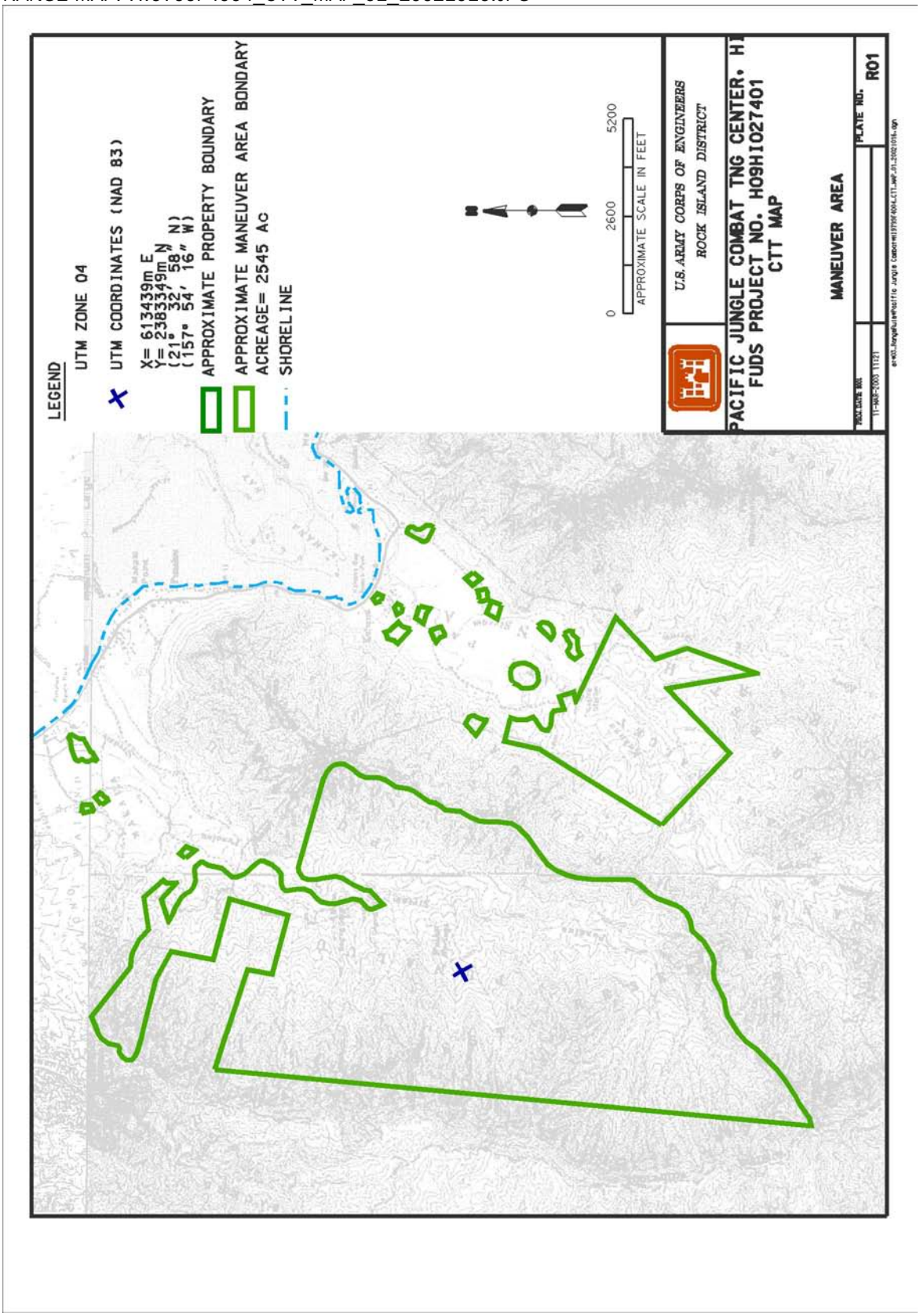
GROUNDWATER

AVG DEPTH (IN FEET)	NOT SPECIFIED
DRINKING WATER SUPPLY	UNKNOWN
RANGE CONTAMINATION FROM RESIDUE OF MUNITIONS	UNKNOWN

COORDINATES:

DATUM:	NAD83
UTM X: (meters)	613439.00
UTM Y: (meters)	2383349.00
UTM ZONE:	4
Latitude:	21° 32' 57" N
Longitude:	157° 54' 16" W

RANGE MAP: HI9799F4004_CTT_MAP_01_20021016.JPG



DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

1-302

CEPOD-ED-ES (200)

12 January 1994

MEMORANDUM FOR Commander, U.S. Army Engineer Division, Huntsville, ATTN: CEHND-ED-PM, P.O. Box 1600, Huntsville, AL 35807-4301

SUBJECT: DERP FUDS Inventory Project Report (INPR) for Site NO. H09HI027400, Pacific Jungle Training Center, Kahana and Punaluu Valley, Island of Oahu, Hawaii

1. I am forwarding the INPR for the Pacific Jungle Training Center for appropriate action. The site is eligible for DERP FUDS. The proposed ordnance explosive waste (OEW) project is eligible for DERP FUDS.

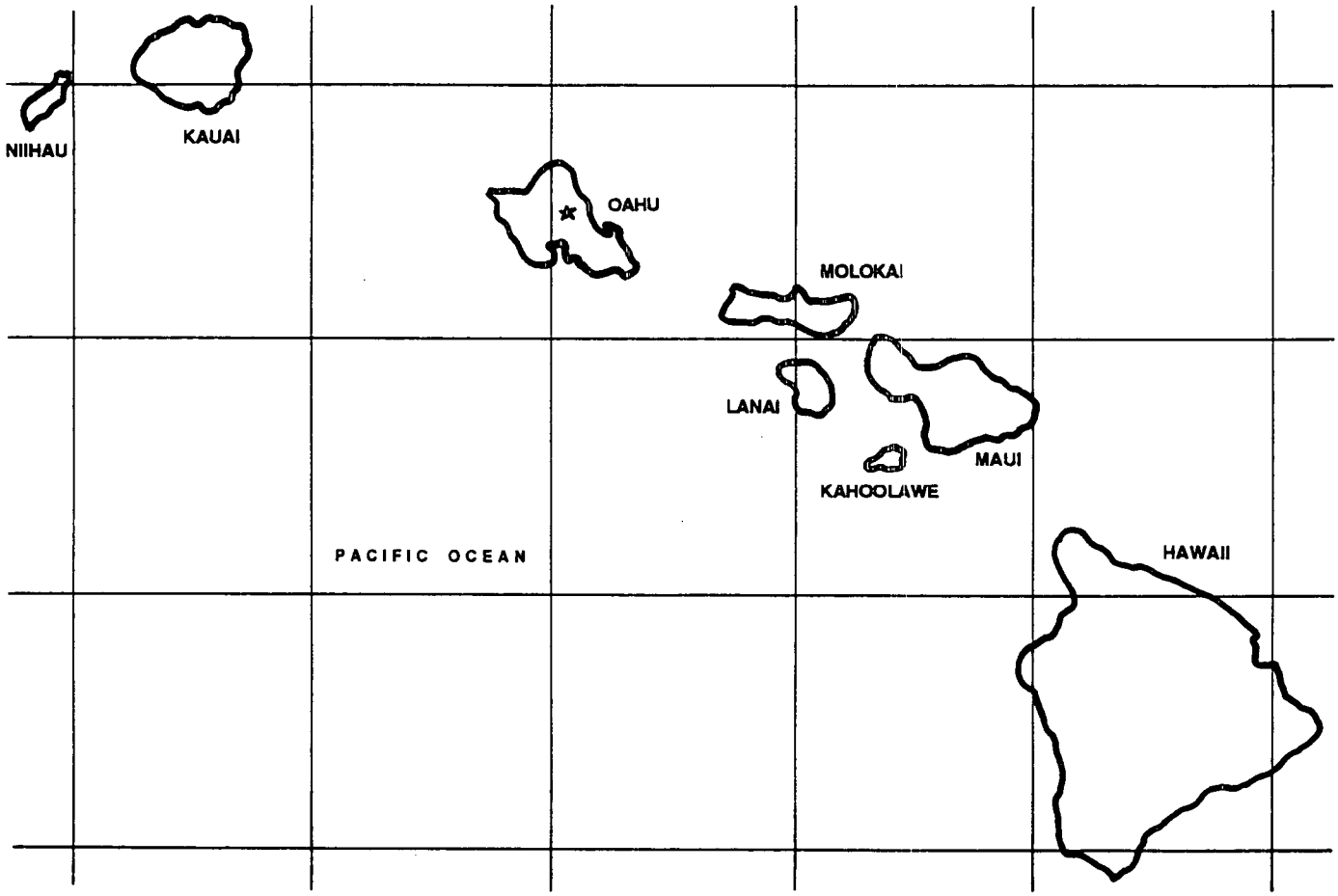
2. I recommend that HND determine if further study and remedial action are needed at this site.

Encl

RALPH V. LOCURCIO
Brigadier General, USA
Commanding

CF:
CDRUSACE (CEMP-R), 20 Mass. Ave. NW., WASH DC 20314-1000
(W/enclosure)

DERP-FUDS
Inventory Project Report



Pacific Jungle Combat Training Center
Kahana and Punaluu Valleys,
Island of Oahu, Hawaii
Site No. H09HI027400

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

SITE SURVEY SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
3 DECEMBER 1993

SITE NAME(S): Pacific Jungle Combat Training Center, also known as Unit Jungle Training Center; Unit Combat Training Center; Pacific Combat Training Center; Jungle Training; Punaluu Training Camp; and Green Valley Jungle Training Camp.

LOCATION: Kahana and Punaluu Valleys, District of Koolauloa, Island of Oahu. TMKs 5-2-02; various parcels; 5-3-04,05, and 1: various parcels.

SITE HISTORY: Pacific Jungle Combat Training Center consisted of approximately 2,266.77 acres of land located in two valleys along the northeast coast of the island of Oahu, Hawaii. The Army acquired 485.25 acres in Kahana Valley by license in November 1944 retroactive to May 1943. Leases, license, and informal agreements were executed by the Army between October 1943 and March 1947, several instruments retroactive to October 1943, to acquire approximately 1,781.52 acres in neighboring Punaluu Valley. The valleys were established and used as a unit jungle combat training center in September 1943 in response to a directive from the Commanding General, Hawaiian Department to establish a school on Oahu to supplement Department Ranger and Combat School training. Training was divided among Blue, Red, and Green Courses. Basic jungle warfare training was conducted at Blue and Red Courses while advanced jungle warfare training and the Instructor Jungle Training School were conducted on Green Course. All jungle training centers became known as Unit Combat Training Centers in March 1945 and Pacific Combat Training Centers the following month in a move to de-emphasize jungle warfare. Parcels in Kahana Valley were returned to its landowner in August 1946 while leases and licenses for parcels in Punaluu Valley were officially terminated from April 1945 to November 1950. De-dudding efforts were conducted by an engineer search and range clearance team in Punaluu Valley in 1949 as a result of the use of live ammunition during training. Unexploded ordnance continues to be discovered in both Kahana and Punaluu Valleys which are now a state park and agricultural community, respectively.

SITE VISIT: A site visit was conducted in Kahana Valley on 14 April 1992 by Randall Kurashige (CEPOD-ED-EH), Farley Watanabe (CEPOD-ED-ES), Senior UXO Supervisor Byron Donaldson (Donaldson Enterprises, Inc.), and Derek Yasaka (Wil Chee - Planning). They discovered concrete pillboxes and numerous tank traps in the rear of the valley. OEW discovered near the pillboxes include the tail section to a 2.36-inch bazooka round and what may be a portion of an expended 105 mm AP projectile. A second site visit was conducted on 22 January 1993 in Punaluu Valley by Louis Fung (Wil Chee - Planning) and Messrs. Donaldson and Yasaka. Observed military remnants include a coralline road, earthen bunkers, and a concrete bunker. Messrs. Donaldson and Yasaka returned to Punaluu Valley on 9 February 1993 to meet with and interview a valley resident whose son claims to frequently encounter OEW items while hiking in the valley. In the son's possession were unexpended .30 caliber bullets, expended M1 and M2 cartridges, and a 75 mm AP or HE projectile. The resident was advised to contact the Honolulu Police Department for proper disposal of the 75 mm round. Messrs. Donaldson and Yasaka were then guided to the location of a live 81 mm mortar wedged in some tree roots. The lessee was apprised of its existence and the item subsequently removed by an EOD team.

SITE SURVEY SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

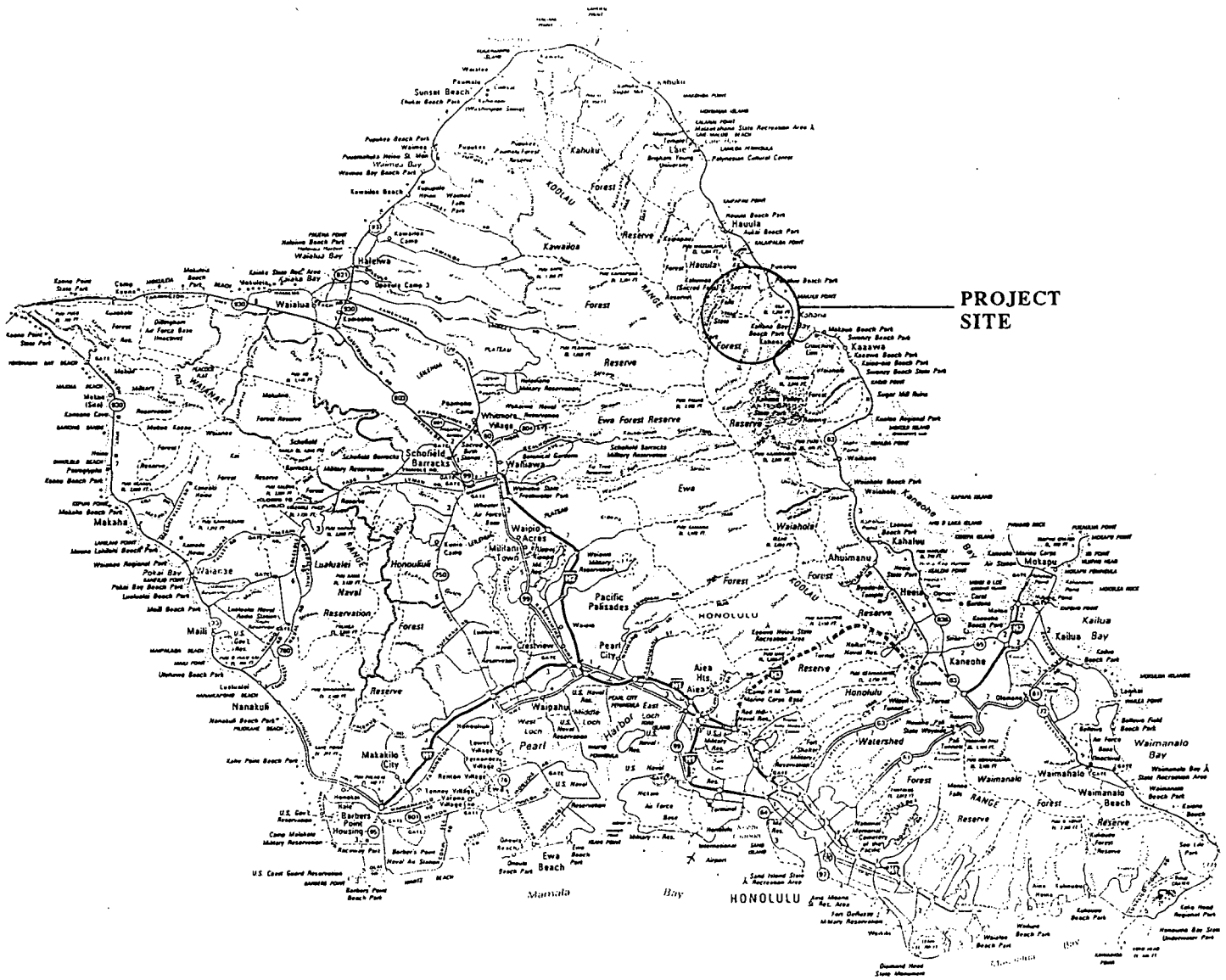
CATEGORY OF HAZARD: OEW.

PROJECT DESCRIPTION: There is one potential project at this site.

a. OEW. Kahana and Punaluu Valleys were utilized as jungle combat training areas by the Army during World War II. Live ammunition was used during training exercises, consequently assorted OEW continue to exist and are occasionally discovered in both valleys. OEW discovered in Kahana Valley during performance of this preliminary site assessment include the tail section to a 2.36-inch bazooka round and what is surmised to be a portion of an expended 105 mm AP projectile. In Punaluu Valley, OEW discovered include a 75 mm AP or HE projectile, an 81 mm mortar, unexpended .30 caliber bullets, and expended M1 and M2 cartridges. A Risk Assessment Code (RAC) worksheet has been prepared and is attached herewith. The RAC for this site was determined to be 1. It is recommended that this INPR be referred to CEHND for final determination of the next appropriate action as it requires further investigation beyond the scope of this preliminary site assessment.

AVAILABLE STUDIES AND REPORTS: None identified.

PA POC: Helene Takemoto, CEPOD-ED-ES, 808-438-6931.



Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

Prepared by:

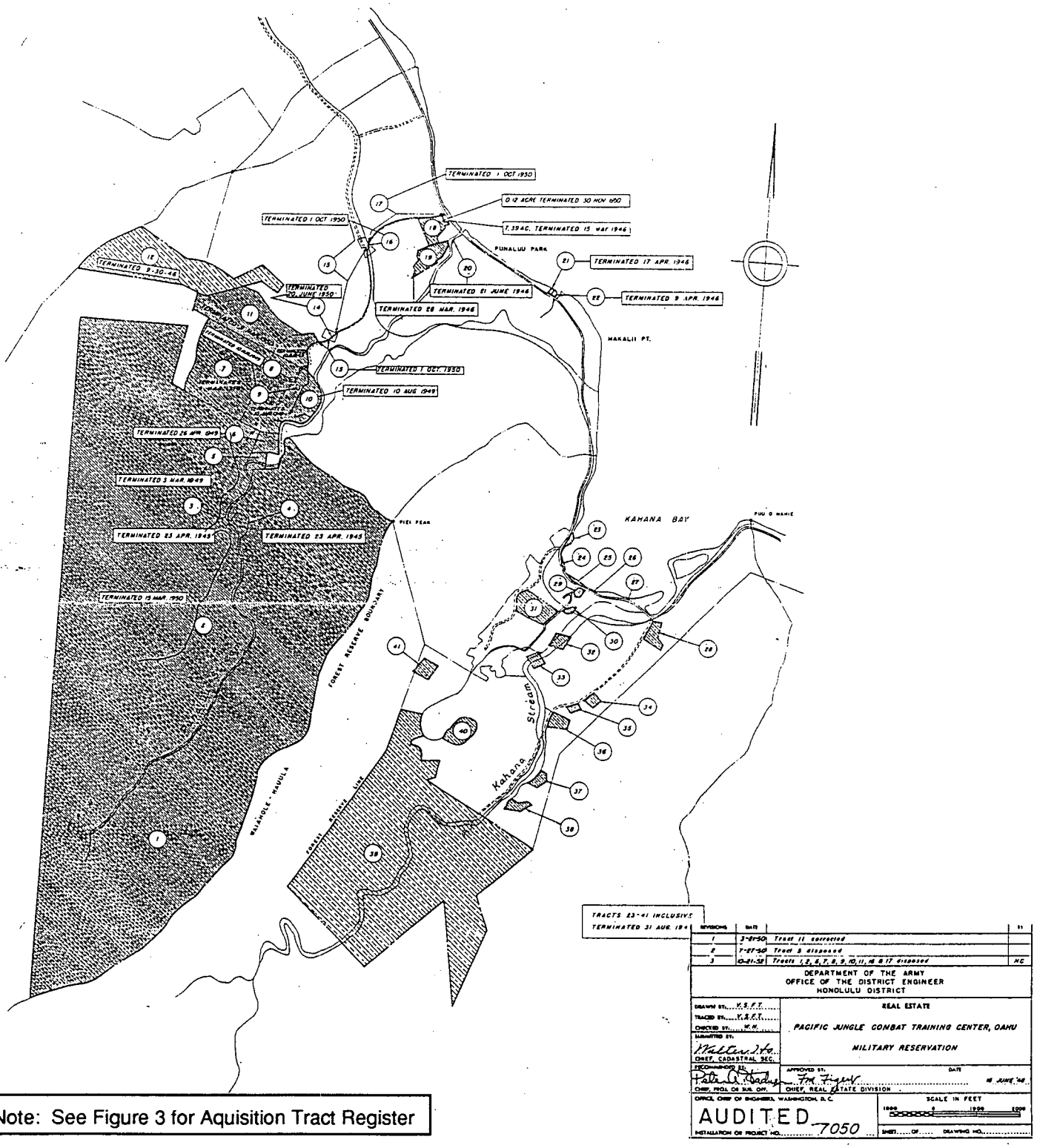
Wil Chee - Planning

DERP-FUDS Inventory Project Report

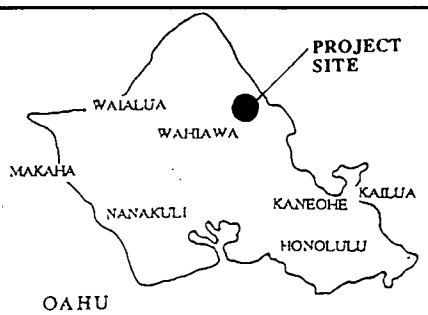
Pacific Jungle Combat Training Center
Kahana and Punaluu Valleys,
Island of Oahu, Hawaii

Site No. H09HI027400

Figure 1



Note: See Figure 3 for Aquisition Tract Register



Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

Prepared by:

Wil Chee - Planning

DERP - FUDS Inventory Project Report

Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Island of Oahu, Hawaii

Site No. H09HI027400
Figure 2

ACQUISITION TRACT REGISTER

TRACT NO.	LAND OWNER	ACREAGE			REMARKS
		LEASE	LICENSE	INFORMAL PERMIT	
1	B P. BISHOP ESTATE		1500.00		LIC.DTD. 7 AUG. '44, EFF. 1 OCT. '43 (800 AC.) S. A. NO. 1 DTD. 30 JUNE '46 (700 AC.)
2	" " "				LIC. DTD. 23 OCT. '45 AREA INCLUDED IN TRACT NO. 1
3	ANTHONY AKI			0.40	INFORMAL PERMIT DATED 15 OCT. 1943
4	" "			1.82	" " " " " "
5	SARAH K. HOKE		5.25		LICENSE DATED 16 FEB. 1945 EFFECTIVE 13 OCT. 1943
6	OLIVER H. KUPAU ESTATE OF LINCOLN L. MC CANDLESS	6.70			15 OCT. '43 CONT. NO W-414-ENG-6546 15 OCT. '43 CONT. NO. W-414-ENG-6538
7	KAHUKU PLANTATION COMPANY	58.00			CONT. NO W-4M-ENG-6588 DATED 1 NOV. 1943
8	" " "	0.25			S.A. NO 1 DATED 15 NOV. 1944 TO CONT. NO W-414-ENG-6588
9	" " "	0.25			" " "
10	" " "	11.50			" " "
11	EDWARD AUWAE ET. AL., KAHUKU PLANTATION COMPANY	57.00	57.00		CONT. NO. W-00-000-ENG-101, DTD. 1 MAR '47 SUPERSEDES LIC. FROM E. AUWAE ET AL, DTD. 30 JAN. '45, TERM, 28 F.B. '47
12	REGINALD TREVENEN & ANNIE K. TREVENEN		62.00		LICENSE DATED 15 JAN. 1945
13	KAHUKU PLANTATION COMPANY			0.08	INFORMAL PERMIT DATED 15 OCT. 1943
14	REGINALD TREVENEN & ANNIE K. TREVENEN		0.09		LICENSE DATED 26 SEPT. 1944 EFFECTIVE 18 OCT. 1943
15	KAHUKU PLANTATION COMPANY			1.15	INFORMAL PERMIT DATED 15 OCT. 1943
16	KAHUKU PLANTATION COMPANY		0.07		LICENSE DATED 4 APR. 1944
17	KAHUKU PLANTATION COMPANY		0.75		LICENSE DATED 4 APR. 1944
18	CHUNG YAN HOON		7.31		LICENSE DATED 11 NOV. 1943 0.12 AC ALSO COVERED BY LIC 15 MAY '46
19	GORO TANAKA			9.87	INFORMAL PERMIT DATED 29 OCT. 1943
20	ELI E. KEOLANUI			0.75	INFORMAL PERMIT DATED 29 OCT. 1943
21	DOUGLAS S. GUILD JACK R. REED	0.46			CONT. NO. W-414-ENG-6573 DATED 10 MAR. 1944
22	JOHN LAI EILEEN LAI		0.62		LICENSE DATED 19 JAN. 1944
23	HUI OF KAHANA, ET. AL.		0.47		LICENSE DATED 1 NOV. 1944 EFFECTIVE 20 MAY 1943
24	" " " " "		0.20		" " " "
25	" " " " "		0.37		" " " "
26	" " " " "		0.23		" " " "
27	" " " " "		0.04		" " " "
28	" " " " "		4.22		" " " "
29	" " " " "		1.20		" " " "
30	" " " " "		0.66		" " " "
31	" " " " "		12.85		" " " "
32	" " " " "		3.44		" " " "
33	" " " " "		2.52		" " " "
34	" " " " "		2.28		" " " "
35	" " " " "		1.60		" " " "
36	" " " " "		3.40		" " " "
37	" " " " "		6.19		" " " "
38	" " " " "		5.05		" " " "
39	" " " " "		428.83		" " " "
40	" " " " "		8.72		" " " "
41	" " " " "		2.98		" " " "

Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

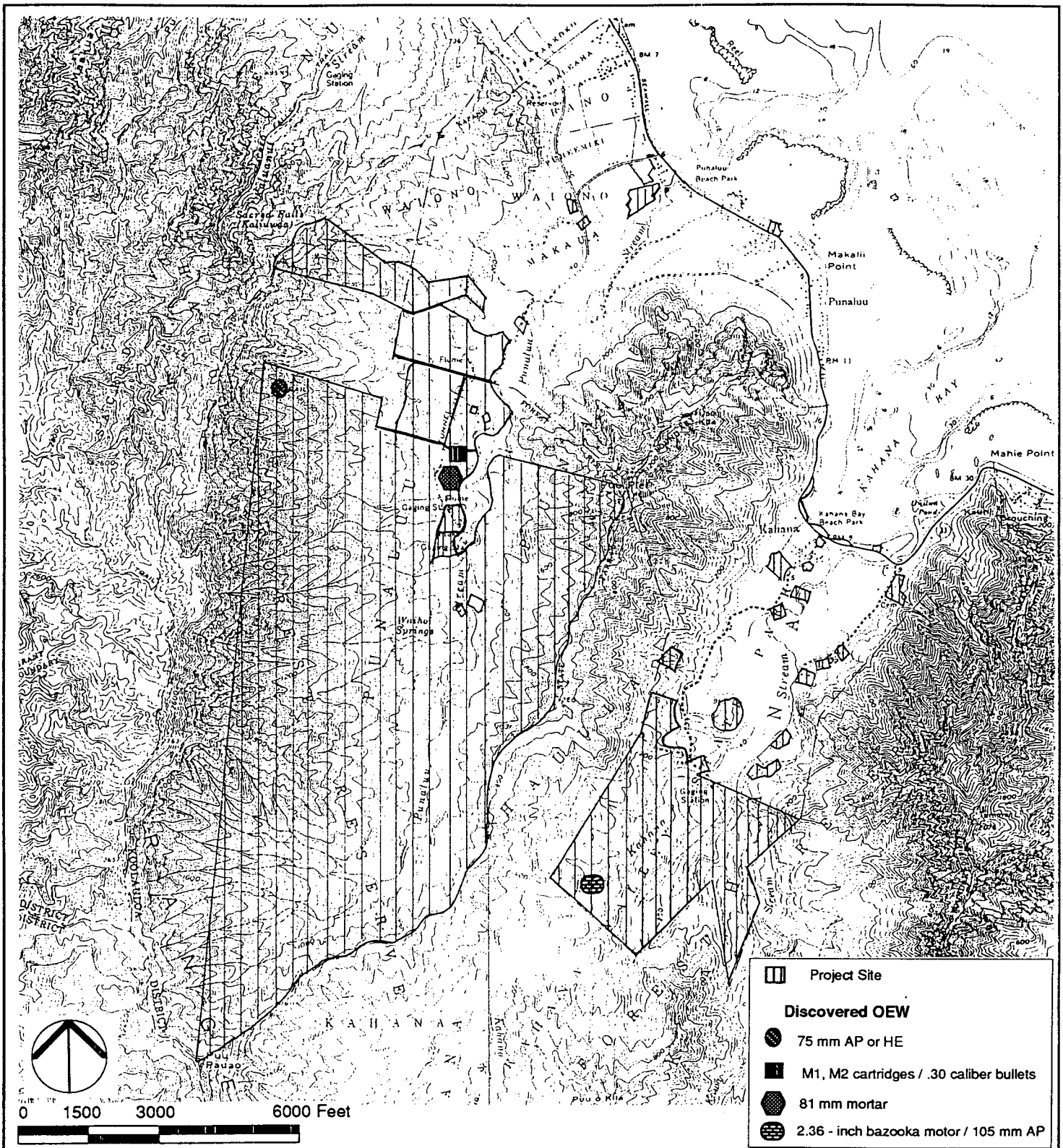
Prepared by:

Wil Chee - Planning

DERP - FUDS Inventory Project Report

Pacific Jungle Combat Training Center
Kahana and Punaluu Valleys, Island of Oahu, Hawaii

Site No. H09HI027400
Figure 3



Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

Prepared by:

Wil Chee - Planning

DERP - FUDS Inventory Project Report

Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Island of Oahu, Hawaii

Site No. H09HI027400
Figure 4

PROJECT SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993

PROJECT DESCRIPTION: Pacific Jungle Combat Training Center consisted of approximately 2,266.77 acres of land located in Kahana and Punaluu Valleys on the northeast coast of the island of Oahu. It was established as a unit jungle combat training center during World War II teaching basic and advanced jungle warfare, as well as instructor training. A public warning was issued in October 1949 not to enter an impact area in Punaluu Valley being cleared of OEW.

Kahana Valley was set aside and established as a state park during the 1960s. Thirty-one families presently live in Kahana Valley in support of the living park concept whereby residents are regarded as park personnel portraying traditional Hawaiian cultural practices for visitors. Family residences are clustered primarily near the valley and park entrance off Kamehameha Highway and just inland of Kahana Bay. The valley is open to the public for cultural enrichment as well as for hiking and hunting. A former military jeep trail toward the rear of the valley is presently utilized as a foot trail. Vegetation is dense and valley walls are steep.

Residential dwellings in Punaluu Valley are generally located at the valley mouth near Kamehameha Highway, along Green Valley Road, and just inland of the Hauula Forest Reserve boundary along Punaluu Stream. An irrigation system service road extends approximately halfway into the valley terminating at an irrigation ditch intake. This service road also serves as an Oahu Civil Defense Agency evacuation route for coastal inhabitants to move to higher ground in the event of a tsunami Foot trails ascend further into the valley. Although hunters are allowed in Punaluu Valley, access is generally restricted only to valley residents and guests, and landowner and lessee personnel.

Live ammunition was reportedly utilized during jungle warfare training scenarios. This was corroborated by a senior UXO supervisor during site visits to Kahana and Punaluu Valleys in association with preliminary assessment of the Pacific Jungle Combat Training Center. OEW items discovered in Kahana Valley include the tail section of a 2.36-inch bazooka round and a portion of a 105 mm AP round. A 75 mm AP or HE round, an 81 mm mortar round, unexpended .30 caliber bullets, and expended M1 and M2 cartridges were discovered in Punaluu Valley.

PROJECT ELIGIBILITY: Hui of Kahana et al. issued a license to the Army in November 1944 retroactive to May 1943 for use of Kahana Valley for training purposes. Numerous leases, licenses, and informal permits were issued by various landowners, including Bernice Pauahi Bishop Estate, to the Army for use of Punaluu Valley. Leases, licenses, and permits were terminated from April 1945 to November 1950, and the land in both valleys reverted to their owners.

POLICY CONSIDERATIONS: Although extant residential dwellings on former training center grounds are small in number, at least one area resident in Punaluu Valley reports occasionally unearthing small arms munitions (e.g., .30 caliber bullets) around her property Much of the former training area in Kahana and Punaluu Valleys is within Hauula Forest Reserve, with all of Kahana Valley also being designated a state park. Both the forest reserve and park are under the purview of the Hawaii Department of Land and Natural Resources (DLNR). OEW survey and clearance efforts may require conservation district use permits in addition to consultations with the DLNR Division of Historic Preservation for potential impacts to archaeologically significant

resources. An ancient wet taro system is believed to have dominated Kahana Valley at one time. Remnants of the system include as many as 120 small wet terraces and 12 irrigation canals. A temple or *heiau* is located in Kahana Valley in addition to three fishing shrines.[8] Huilua Fishpond at the mouth of Kahana Valley is listed on both the National and Hawaii registers of historic sites.[8,12]

The Hawaiian Coot (*Fulica americana alai*) and Hawaiian Gallinule (*Gallinula chloropus sandvicensis*) inhabit Huilua Fishpond and lowland areas of Kahana Valley. The upper regions of both valleys supports native bird species such as the *'Apapane* (*Himatione sanguinea*) and the Oahu *'Amakihi* (*Himignathus v. chloris*).[8] Consultation with the United States Fish and Wildlife Service would, therefore, be required.

PROPOSED PROJECT: A surface sweep and clearance of approximately 2,000 accessible acres of Kahana and Punaluu Valleys is proposed utilizing a team of ten UXO specialists and technicians under the guidance of a senior UXO supervisor. Discovered OEW would be prepared for off-site transport and disposal. Render safe procedures (RSP) would be employed to the greatest extent possible during OEW access and recovery. Blast mitigation techniques in accordance with Blow In Place (BIP) protocol would be utilized to minimize habitat damage when an OEW item must be detonated in place. Training pertinent DLNR personnel and area residents in OEW recognition and notification protocol is also proposed to effect proper safety precautions subsequent to the survey and clearance effort. It is recommended that this INPR be referred to CEHND for final determination of the next appropriate action.

RAC: The Risk Assessment Code for this site is 1. The RAC worksheet is attached herewith.

DD FORM 1391: Attached herewith.

DISTRICT POC: Helene Takemoto, CEPOD-ED-ES, 808-438-6931.

10 Feb 93
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name: Pacific Jungle Combat Training Center
Site Location: Kahana/Punaluu Valleys, Oahu, Hawaii
DERP Project #: H09HI027401
Date Completed: 3 Dec 93

Rater's Name: Byron Donaldson
Phone No.: (808) 235-2662
Organization: Donaldson Enterprises Inc.
RAC Score: 1

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at this site. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition

	VALUE
Medium/Large Caliber (20 mm and larger)	(10)
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/ spotting charges)	6
Grenades, Practice (w/ spotting charges	4
Landmines, Practice (w/ spotting charges)	4
Small Arms (.22 cal. - .50 cal)	(1)
Conventional Ordnance and Ammunition Value (Select the largest single value)	**10**

What evidence do you have regarding conventional OEW? See Part IV of this worksheet.

B. Pyrotechnics (For munitions not described above)

	VALUE	
Munition (Container) Containing White Phosphorus or Other Pyrophoric Material (i.e., Spontaneously Flammable)	10	
Munition Containing a Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6	
Flares, Signals, Simulators	4	
Pyrotechnics Value (Select the largest single value)		**0**

What evidence do you have regarding pyrotechnics? _____

_____

C. Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized)

	VALUE	
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10	
Demolition Charges	10	
Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8	
Military Dynamite	6	
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3	
Bulk High Explosives Value (Select the largest single value)		**0**

What evidence do you have regarding bulk explosives? _____

_____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE	
Solid or Liquid Propellants	6	
Propellants Value		**0**

What evidence do you have regarding bulk propellants? _____

_____

E. Radiological/Chemical Agent/Weapons

	VALUE	
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	
War Gas Identification Sets	20	
Radiological	15	
Riot Control and Miscellaneous (Vomiting, Tear, Incendiary and Smoke)	5	
Radiological/Chemical Agent (Select the largest single value)		**0**

What evidence do you have of chemical/radiological OEW? _____

_____

==========

Total Hazard Severity Value **10**
(Sum of Largest Value for A through E – Maximum of 61)

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	II	≥10 <21
MARGINAL	III	≥5 <10
NEGLIGIBLE	IV	≥1 <5
**NONE		0

*** Apply Hazard Severity Category to Table 3.**

_____

_____

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD
(Circle all values that apply)

A. Locations of Contamination

	VALUE
On the surface	(5)
Within Tanks, Pipes, Vessels or Other Confined Locations.	4
Inside Walls, Ceilings, or Other Parts of Buildings or Structures	3
Subsurface	(2)

Location (Select the single largest value) **5**

What evidence do you have regarding the location of OEW? Ordnance was observed on the surface during a site visit. Anecdotal information from knowledgeable persons also indicates surface discoveries of OEW. Unearthing of small arms by a Punaluu Valley resident corroborates the existence of subsurface contamination.

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW site (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	(5)
1250 feet to 0.5 mile	4
0.5 mile to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1

Distance (Select the single largest value) **5**

What are the nearest inhabited structures? Unpaved roads, foot trails, and residential dwellings.

C. Number of buildings within a 2-mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	(5)
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) **5**

Narrative. Buildings are situated within and adjacent to the OEW hazard area. Numerous buildings of mixed use are situated along Kamehameha Highway which fronts both valleys, follows the coastline, and serves as valley residents'/visitors' primary artery to and from the island's urban areas. Nearby rural residential communities situated along the coastline include Kaaawa, Punaluu, and Hauula.

D. Types of Buildings (within a 2-mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	(5)
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	(3)
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the single largest value) **5**

Describe types of buildings in the area. Residential dwellings are situated within the project site as well as agricultural warehouses and the Kahana State Park administration office. Public facilities include a hotel, restaurants, and park pavilions and comfort stations.

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

	VALUE
No barrier or security system	(5)
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or An artificial or natural barrier (e.g., a fence combined with a cliff) which completely surrounds the facility; and a means to control entry at all times through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) **5**

Describe the site accessibility. Kahana Valley is a state park open to the public. Punaluu Valley is privately owned and access is restricted. Punaluu Valley residents and guests, however, are capable of traversing the site with little impedance. Hunters are allowed in both valleys.

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	(5)
None Anticipated	0

Site Dynamics (Select largest value) **5**

Describe the site dynamics. Kahana Valley continues to be developed into a park, thus patronage is anticipated to increase over time. Agricultural activities, which predominate in Punaluu Valley, may expand to interior sections of the valley.

Total Hazard Probability Value
(Sum of Largest Values for A through F – Maximum of 30) **30**

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	B	≥21 <27
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	<8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	(1)	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Imminent Hazard – Expedite INPR – Immediately call CEHND-ED-SY commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR – Recommend further action by CEHND.

RAC 3 Complete INPR – Recommend further action by CEHND.

RAC 4 Complete INPR – Recommend further action by CEHND.

RAC 5 Recommend no further action. Submit NOFA and RAC to CEHND.

==========

Part IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

From Part I.A. - Live ordnance was reportedly used at the site. The tail section to a 2.36 bazooka round and a portion of a 105 mm AP projectile were discovered in Kahana Valley during a site visit. A 75 mm AP or HE projectile, an 81 mm mortar, unexpended.30 caliber bullets, and expended M1 and M2 cartridges identified by a senior UXO supervisor were discovered in Punaluu Valley by area residents. A 21 October 1949 newspaper article announced the clearance of dud shells in Punaluu Valley by the Army and warned the public to avoid the area being searched. At least one area resident reports occasional discovery of OEW while hiking in the valley.

Refer to additional narration in Parts I and II above.

1. COMPONENT Army	FY 19 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 3 Dec 93

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Oahu, Hawaii	DERP-FUDS

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	OEW	H09HI027401	12,544.9

4. COST ESTIMATES

4. PROJECT TITLE	U/M	QUANTITY	UNIT COST	COST ($000)
REMEDIAL DESIGN				
1. Environmental Compliance	LS			50.0
2. Archaeological / Historic Preservation Compliance	LS			100.0
3. Engineering and Design	LS			50.0
REMEDIAL ACTION				
1. Mobilization and Preparatory Work	LS			3.0
2. Drums/Tanks/Structures/Miscellaneous Demolition and Removal	LS			10,000.0
3. Disposal (Commercial)	LS			220.0
4. Demobilization	LS			3.0
5. Training	LS			0.8
6. Environmental Monitoring	LS			50.0
7. Contingency @ 10%	LS			1,027.7
S&A @ 8.5%				977.9
EDC				62.5
TOTAL				12,544.9

10. DESCRIPTION OF PROPOSED CONSTRUCTION

a. Perform surface and limited subsurface survey and clearance of OEW.

COST ESTIMATE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993

The attendant DD Form 1391 contains a cost estimate to conduct an OEW survey and clearance effort at Kahana and Punaluu Valleys located on the northeast coast of the island of Oahu pursuant to RAC 1 requirements. Although total acreage of the jungle combat training center was 2,266.77 acres, 2,000 acres comprising both valleys is being used as the basis for this cost estimate. The difference in acreage represents acquired parcels not used for jungle combat training (e.g., beachfront parcels used for bivouacking), and inaccessible areas such as steeply sloped valley walls and perennial stream beds.

REMEDIAL DESIGN

1. ENVIRONMENTAL COMPLIANCE. This includes preparation of necessary permits and clearances in satisfaction of Coastal Zone Management, Fish and Wildlife, and other federal, state, or local environmental quality control requirements including Section 7 threatened/endangered species consultation.

Cost Breakdown:	
Preparation of Permits, Clearances	50,000
Total	50,000

2. ARCHAEOLOGICAL / HISTORIC PRESERVATION COMPLIANCE. Because the site may be considered archaeologically significant, Section 106 and other historic preservation parameters must be complied with through site studies, permits, and clearances.

Cost Breakdown:	
Preparation of Permits, Clearances	100,000
Total	100,000

3. ENGINEERING AND DESIGN. This includes the preparation of work plans, site safety and health plans, and other plans as required by the proponent.

Cost Breakdown:	
Preparation of Plans, Reports	50,000
Total	50,000

REMEDIAL ACTION

1. MOBILIZATION AND PREPARATORY WORK. This includes mobilization of equipment and facilities.

Cost Breakdown:	
Mobilization of Construction Equipment and Facilities	3,000
Total	3,000

COST ESTIMATE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

2. DRUMS/TANKS/STRUCTURES/MISCELLANEOUS DEMOLITION AND REMOVAL. The cost estimate for ordnance survey and removal presumes surface and shallow subsurface (i.e., to three feet) OEW contamination over a total of 2,000 densely vegetated acres. Transects would be established, and both valleys visually surveyed and toned along said transects for unexploded ordnance. OEW discovered during a sweep/search phase would be marked for disposition. RSP techniques would be employed during access and recovery to the fullest extent possible. OEW items subject to BIP protocol would be detonated utilizing blast mitigating techniques to minimize habitat damage. A quality assurance and quality control team would follow access and recovery to ensure adequate coverage and clearance. Staffing would consist of ten individuals comprised of a senior UXO supervisor supported by UXO specialists and technicians.

Cost Breakdown:

Surface Sweep/Search @ $2,000 per acre	4,000,000
Surface Access/Recovery @ $2,000 per acre	4,000,000
Surface QA/QC Team @ $1,000 per acre	2,000,000
Total	10,000,000

3. DISPOSAL (COMMERCIAL). Disposal of OEW (e.g., small arms, shrapnel, brass, inert items) collected at the site would be transported to a solid waste landfill. The cost includes the services of a semi-truck driver and trailer once a week for 80 weeks presuming 25 acres a week are cleared during the OEW access and recovery phase. Disposal fees and taxes are based on an estimated volume of 0.5 ton per acre or 1,000 tons.

Cost Breakdown:

Transportation @ $800 per day	20,000
Disposal Fees and Taxes @ $200 per ton	200,000
Total	220,000

4. DEMOBILIZATION. This includes the demobilization of equipment and facilities.

Cost Breakdown:

Demobilization of Equipment and Facilities	3,000
Total	3,000

5. TRAINING. Pertinent DLNR personnel and area residents would be trained in OEW recognition, hazard, and reporting procedures following completion of the survey and clearance effort at Kahana and Punaluu Valleys. The training would be designed to enable said individuals to recognize any subsurface OEW items that may become exposed by erosive forces, and to respond accordingly. The training would consist of one 8-hour session conducted by a senior UXO supervisor.

Cost Breakdown:

Training @ $100 per hour	800
Total	800

COST ESTIMATE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

6. ENVIRONMENTAL MONITORING. Residual effects of OEW survey and clearance on archaeological/historical resources and threatened/endangered species would be measured by archaeologists and biologists.

Cost Breakdown:	
Monitoring	50,000
Total	50,000

Unexploded ordnance continues to be discovered in both Kahana and Punaluu Valleys.[4] OEW discovered during performance of this preliminary assessment include the tail section to a 2.36-inch bazooka round and a portion of an expended 105 mm AP projectile in Kahana Valley, and.a 75 mm AP or HE projectile, 81 mm mortar, unexpended .30 caliber bullets, and expended M1 and M2 cartridges in Punaluu Valley. Most of the concrete bunkers and pillboxes constructed by the Army in both valleys continue to exist.[3,5,8]

3. Licenses for usage of Kahana Valley were terminated on 31 August 1946. Leases, licenses, and informal permits comprising the various Punaluu Valley parcels were terminated commencing on 23 April 1945, and the final license terminated on 30 November 1950.[10] Documentation evidencing property disposal could not be located following research at the United States Army Corps of Engineers, Directorate of Real Estate; City and County of Honolulu Department of Finance, Real Property Assessment Division; Hawaii Department of Land and Natural Resources, Bureau of Conveyances; Hawaii Department of Accounting and General Services, Division of Archives, and Kamehameha Schools / Bernice Pauahi Bishop Estate. Kahana Valley is presently under the purview of the Hawaii Department of Land and Natural Resources, and was set aside as a state park in the 1960s.[11] Punaluu Valley is comprised of numerous small landowners and Kamehameha Schools / Bernice Pauahi Bishop Estate lessees engaged in the cultivation of diversified agricultural crops.[5] The interior section of Punaluu Valley is located within Hauula Forest Reserve.

DETERMINATION

Based on the foregoing findings of fact, the site has been determined to be formerly used by the Department of Defense. It is therefore eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites established under 10 USC 2701 et seq.

12 January 1994
Date

RALPH V. LOCURCIO
Brigadier General, USA
Commanding

FINDINGS AND DETERMINATION OF ELIGIBILITY

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400

FINDINGS OF FACT

1. Pacific Jungle Combat Training Center was located in Kahana and Punaluu Valleys along the northeast coast of the island of Oahu, Hawaii.[1,6,7,9,14] The Hui of Kahana et al. issued a license dated 1 November 1944, retroactive to 20 May 1943, to the Army for use of approximately 485.25 acres of land in Kahana Valley. Approximately 1,781.52 acres in neighboring Punaluu Valley west of Kahana Valley were acquired by the Army through leases, licenses, and informal permits issued by various valley landowners between 15 October 1943 and 1 March 1947. Several instruments were executed retroactively to 1, 15, and 18 October 1943. The largest landowner, licensing approximately 1,500 acres of Punaluu Valley, was Bernice Pauahi Bishop Estate.[10] Documentation evidencing property acquisition could not be located following research at the United States Army Corps of Engineers, Directorate of Real Estate; City and County of Honolulu Department of Finance, Real Property Assessment Division; Hawaii Department of Land and Natural Resources, Bureau of Conveyances; Hawaii Department of Accounting and General Services, Division of Archives, and Kamehameha Schools / Bernice Pauahi Bishop Estate.

2. Kahana and Punaluu Valleys were utilized as a unit jungle combat training center commencing on 6 September 1943 in response to a 9 August 1943 directive from the Commanding General, Hawaiian Department to establish a school on Oahu to supplement Department Ranger and Combat School training.[1,6,7,13] Training emphasized basic jungle warfare subjects and was divided among three courses, Blue, Red, and Green, accommodating battalion combat teams. Basic jungle warfare training was conducted at Blue and Red Courses while advanced jungle warfare training and the Instructor Jungle Training School were conducted at Green Course. Subjects taught during a one-week course at the training center included jungle first aid and evacuation; hand to hand combat; construction and passage of wire entanglements; booby traps and demolitions; patrolling and ambushing; hip shooting and infiltration; stream crossing expedients; assault with bayonets; assault of Japanese fortified areas; combat reaction proficiency; and jungle living.[3,7,14] The Army reportedly constructed Japanese villages and pillboxes with pop up dummies for training purposes. They also erected temporary barracks, a mess hall, a bakery, and shower facilities all of which no longer exist.[3,5,8,14] Advanced training on Green Course was discontinued on 28 May 1944 after only its second class as it became necessary to utilize the course for basic jungle warfare training of divisions being staged for the Western Carolines operations. Jungle warfare was de-emphasized as the war progressed from tropical regions to areas where jungle fighting was not a primary consideration. A change in training policy brought about redesignation of all jungle training centers on 1 March 1945 to become known as Unit Combat Training Centers. Redesignation occurred again on 10 April 1945 when the centers were referred to as Pacific Combat Training Centers.[7] In all, over 241,000 Army, Marine Corps, and Navy troops underwent basic jungle training at this center, with over 300,000 men receiving either basic, advanced, or instructor training there.[1,7,9,14] Postwar plans called for the closing of the majority of Pacific Jungle Combat Training Center except for Green Course in Punaluu Valley which was to be retained to fulfill the Army's postwar training requirements. Punaluu Valley was abruptly reopened by the Army on 1 April 1946 to provide emergency shelter for area residents whose homes were damaged by a tsunami which struck the island of Oahu. Tents were erected for sleeping quarters, to render medical treatment, and to feed the approximately 1,700 displaced individuals.[14] De-dudding efforts were conducted by an engineer search and range clearance team in at least Punaluu Valley in 1949 as a result of the use of live ammunition during training.[2]

TRIP REPORT

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
DATES OF SITE VISIT: 14 APRIL 1992; 22 JANUARY 1993; 9 FEBRUARY 1993

Individuals participating in the site visit of Pacific Jungle Combat Training Center, Kahana Valley included Randall Kurashige (CEPOD-ED-EH), Farley Watanabe (CEPOD-ED-ES), Senior UXO Supervisor Byron Donaldson (Donaldson Enterprises, Inc.), and Derek Yasaka (Wil Chee - Planning). Kahana Valley is located approximately 26 miles from Honolulu along Kamehameha Highway between Kaneohe and Laie. It is presently under the purview of the Hawaii Department of Land and Natural Resources, Division of State Parks as a "living park".

The team met with A. L. Rogers, manager of Kahana Valley State Park, upon arrival. Mr. Rogers informed the team that 31 families presently reside within Kahana Valley on land leased to them from the State of Hawaii, though the valley is open to the public for hiking and hunting. When queried about World War II military artifacts, he described the presence of a bakery, mess hall, and showers at the mouth of the valley which have since been demolished. Mr. Rogers also indicated the existence of concrete bunkers and tank traps located along a hiking trail near a City and County of Honolulu Board of Water Supply water reservoir approximately two miles in the valley. When asked about the presence of OEW, Mr. Rogers stated that during his tenure as park manager (approximately two years), the only reported findings were of live .30 caliber rounds. Mr. Rogers further explained that said rounds could have post-dated the Army training center as the valley is a hunting area.

Mr. Rogers then referred the team to "Aunty" Lydia Dela Cerna, a longtime Kahana Valley resident. She reiterated the existence of concrete bunkers in the valley, though was unsure if anyone had ever discovered any OEW. Admittedly, her recollection of Kahana Valley as a military training center was vague.

Upon acquisition of gate keys from Mr. Rogers, the team then proceeded by vehicle to a Kawa Stream weir approximately 1.4 miles into the valley from the park office. Observed on the banks of the stream at the weir were two 2-foot tall concrete piers and a 7-foot tall wood timber A-frame support, reportedly remnants of a trolley that at one time traversed the stream to pass materials and personnel from one side to the other. The system's steel cable was discovered underwater adjacent to the west bank of the stream. According to a park representative, the trolley was dismantled by the Division of State Parks following injury to a park visitor. She did not known if said weir and trolley were installed by the Department of the Army.

Upslope and north of the wier at a gate leading to the above mentioned Board of Water Supply water reservoir is a loop hiking trail approximately three miles long. The trail leads to four concrete pillboxes situated at a former military jeep trail crossroad. Exterior dimensions of two quadrangular pillboxes are 10 feet by 10 feet by 6.5 feet tall with 1-foot thick walls. Unlike these, the remaining two pillboxes each have three flat sides and one side which is curved. Their exterior dimensions are 13 feet by 7 feet by 6.5 feet tall with 1-foot thick walls. Their pockmarked walls indicate these pillboxes were frequently fired at. Discovered OEW at the base of one pillbox include the tail section of a 2.36-inch bazooka round and what is surmised to be a portion of a 105 mm armor piercing (AP) round.

Near the pillboxes and obscured by fallen lauhala leaves are as many as 50 rusting tetrahedron angle iron tank traps. The 3.5-foot tall tank traps are, in general, neatly aligned in rows.

Upon returning to the park office, the secretary informed the team that several more remnant concrete structures exist along the east face of the valley. Names of long time residents were provided to the team to contact for more information.

A visual survey of the valley mouth revealed concrete curbing, a floor slab, and large concrete footings adjacent to a park comfort station. Their weathered appearance and predominance of aggregate suggests these remnants to be of World War II Army construction.

TRIP REPORT

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
DATES OF SITE VISIT: 14 APRIL 1992; 22 JANUARY 1993; 9 FEBRUARY 1993
(continuation)

On 22 January 1993, Louis Fung (Wil Chee - Planning), and Messrs. Donaldson and Yasaka performed a site visit of Punaluu Valley, also a part of Pacific Jungle Combat Training Center. They were met by John Primacio, Jr., vice president and manager of Koolau Agricultural Company, Ltd. who also escorted the team throughout the valley. The agricultural cooperative leases approximately 3,400 acres of Punaluu Valley from Kamehameha Schools / Bernice Pauahi Bishop Estate. Mr. Primacio explained that prior to World War II, the basic valley crops were taro and rice. Following the cessation of wartime hostilities, Kahuku Sugar Plantation began propagating sugar cane in Punaluu Valley.

Mr. Primacio recalled Punaluu Valley being referred to as "Green Valley" by the Army while Kahana Valley was designated "Red Valley" during utilization of the valleys as a training area. An Army-built coralline surfaced service road is still referred to as "Green Valley Road" by area residents. This road is also designated by Oahu Civil Defense Agency as an evacuation route to allow coastal inhabitants access to higher ground in the event of a tsunami.

While restoring and maintaining Punaluu Valley's irrigation ditches and tunnels, Mr. Primacio discovered remnants of several Army-constructed buildings including barracks, latrines, a mess hall, and a concrete bunker. He guided the team to one area in the rear of the valley in the vicinity of the cooperative's irrigation Tunnel No. 6. Observed by the team was a coral aggregate road partially obscured by fallen leaves and low lying vegetation. Near the road were segments of steel piping purportedly used to convey water to facilities downslope of Tunnel No. 6 where the Army tapped the irrigation ditch for its water supply. Rotting upright timbers set into the ground bear possible evidence of a barrack.

Observed alongside the irrigation system service road were several collapsed earthen bunkers. Still visible were wood beams and corrugated sheet metal siding. A visual search of these bunkers by Mr. Donaldson confirmed the absence of surficial OEW.

At the southern end of the irrigation system service road toward the rear of Punaluu Valley and near Koolau Agricultural Company's west irrigation ditch intake is a quadrangular concrete bunker. This structure measures eight feet square and four feet tall. Metal rings at each corner indicates the structure to have been fabricated off-site, then transported to its present location. Discarded food wrappers and packaging litter the interior. Reconnaissance performed by Mr. Donaldson again failed to locate any surficial OEW.

Prior to departure from Punaluu Valley, Mr. Primacio informed the team of the existence of a "Japanese tank" located on property in the valley not leased by Koolau Agricultural Company. He suggested contacting the Fely family who lease that parcel for authorization to conduct a reconnaissance of the premises.

On 9 February 1993, Messrs. Donaldson and Yasaka returned to Punaluu Valley to meet with Debbie Fely and visually survey the 6.7-acre parcel (TMK 5-3-011: 005) for remnants associated with the former training center. As stated by Mr. Primacio, a Japanese tank does indeed exist on this parcel. Upended, it resides approximately 100 yards north of the Fely home. Although pockmarked, expended projectiles were not visually observed by the team nor detected with a Schonstedt Instrument Company Model GA-52C flux gate magnetometer. Mr. Donaldson surmises the tank was transported into the valley as a prop during jungle training.

Mrs. Fely informed the team that her son Keola frequently discovers OEW items both on their property and in other areas of Punaluu Valley. Keola allowed the team to peruse his collection of unexpended .30 caliber rounds, and expended M1 and M2 cartridges discovered while preparing garden plots around the Fely house. Another item in his possession was a 75 mm AP or high explosive (HE) round. Citing her concerns about the potential for detonation, Mr. Donaldson advised Mrs. Fely that the Honolulu Police Department be notified to properly dispose this OEW item.

Keola stated that he and his friends have encountered other OEW items in the valley while hiking. He escorted the team to the location of a live 81 mm mortar round wedged between the roots of a Java plum tree. The tree is located along the north edge of Green Valley Road near the Tukuafu residence on land leased by Koolau Agricultural Company. According to Mr. Donaldson, the round was fired but failed to detonate.

On 11 February 1993, Mr. Yasaka telephonically apprised Valerie Mendes, president of Koolau Agricultural Company, regarding the existence of said 81 mm round. She was instructed to contact the Honolulu Police Department that would in turn notify the 6th EOD Detachment for proper action. The telephone conversation was followed by written correspondence dated 16 February 1993, a copy of which is attached herewith.

Ms. Mendes telephoned Mr. Yasaka on 18 March 1993 that the OEW item was removed by an Army EOD detachment.

February 16, 1993

Ms. Valerie L. Mendes
Koolau Agricultural Company, Ltd.
915 Fort Street
6th Floor
Honolulu, HI 96813

Dear Ms. Mendes:

As per our telephone conversation on February 11, 1993, a fired, but unexpended, 81 mm mortar round was discovered by the undersigned and explosive ordnance specialist Byron Donaldson (Donaldson Enterprises, Inc.) on property belonging to the Bernice Pauahi Bishop Estate and leased by Koolau Agricultural Company, Ltd. The discovery was made during visual reconnaissance of Punaluu Valley on 9 February 1993 pursuant to the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS). The mortar round is lodged between the roots of a tree situated along the north edge of the valley's irrigation system service road approximately 50 yards southwest of the Tukuafu residence driveway (map enclosed).

We recommend you notify the Honolulu Police Department to report the existence and location of said unexploded mortar round. They will likely in turn contact the Army's explosive ordnance detachment for assistance.

This discovery suggests that more unexploded ordnance may continue to exist in the valley despite earlier clearance efforts by the U. S. military. We therefore recommend that Koolau Agricultural Company advise its personnel, valley residents, and occasional valley users to this potential hazard, to exercise caution, and to immediately report any unexploded ordnanced discoveries to local authorities for mitigation. We also recommend that ordnance not be handled whatsoever as such items can still detonate causing serious injury or death.

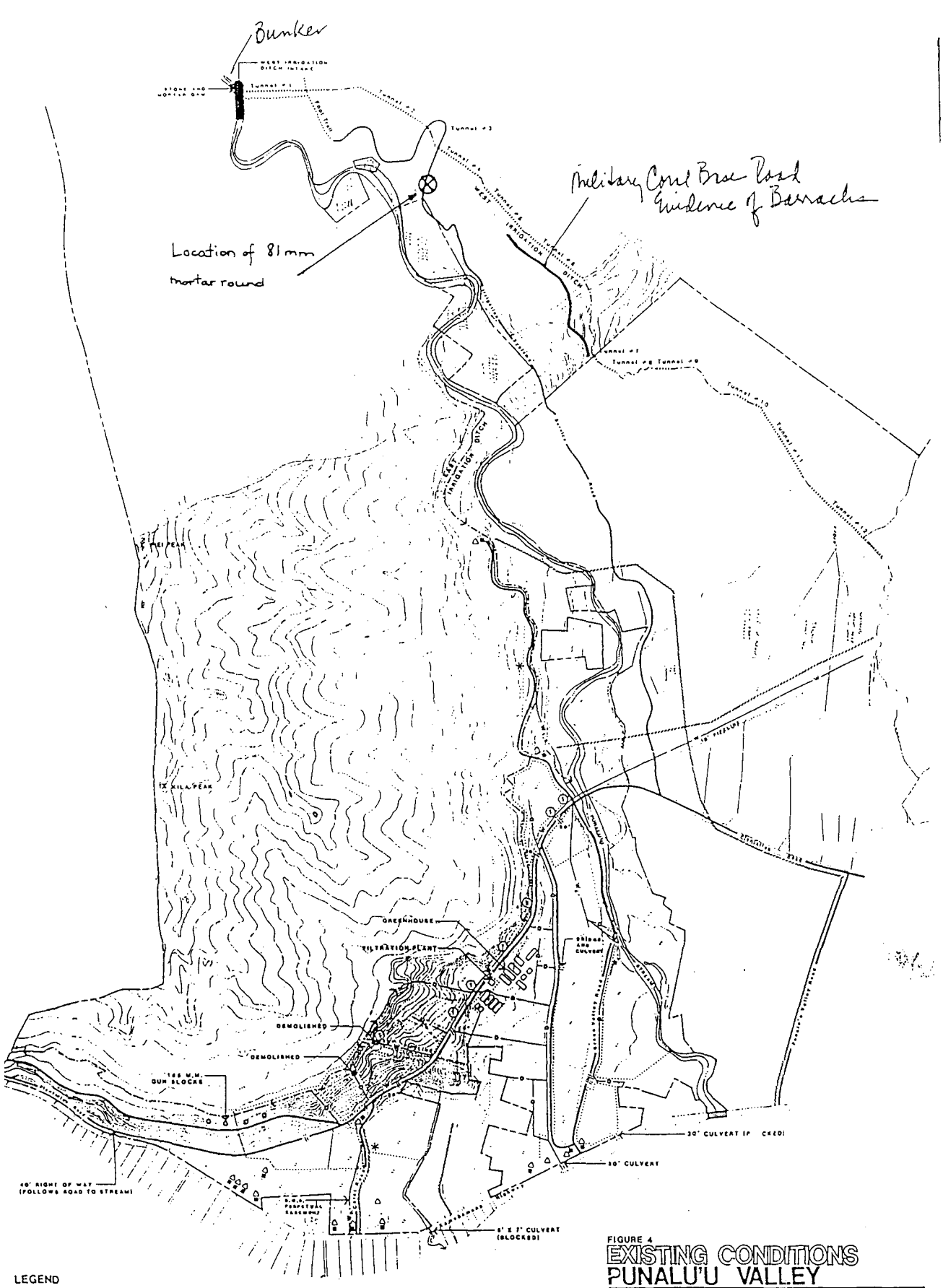
Sincerely,

Derek Yasaka
Environmental Scientist

Enclosure

WIL CHEE - PLANNING
Land Use Planners and Environmental Consultants

Ala Moana Pacific Center
1585 Kapiolani Boulevard
Suite # 818
Honolulu, HI 96814
Phone 808-955-6088
FAX 808-942-1851



LEGEND

- ROADS
- ELECTRICAL LINE
- CESSPOOL
- RESIDENTIAL
- FENCE

IRRIGATION WATER SYSTEM

- WATER LINE
- VALVE (NO. OF VALVES)
- IRRIGATION DITCH
- WELL
- WATER TANK BASE

DRAINAGE SYSTEM

- DRAINAGE DITCH
- CULVERT

FIGURE 4

EXISTING CONDITIONS PUNALU'U VALLEY

ISLAND OF OAHU

SOURCES OF INFORMATION

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
3 DECEMBER 1993

1. Allen, Gwenfread. 1950. *Hawaii's War Years, 1941-1945*. Honolulu: University of Hawaii Press. Reprinted by Greenwood Press, Westport, Connecticut, 1971.

2. Anonymous. 1949. "Dud Shells to Be Cleared Form Green Valley Area." *Honolulu Star-Bulletin*. 21 October.

3. Davis, Ellen. 1946. "War's End: One Year Later." *Paradise of the Pacific* 58 (August): 2.

4. Fely, Debbie and Keola. Address and telephone number withheld by request.

5. Primacio, John Jr. Vice President / Manager, Koolau Agricultural Company, Ltd. 915 Fort Street, 6th Floor, Honolulu, HI 96813. Telephone 808-526-4566.

6. Richardson, Lieutenant General Robert C. Jr. No date. *Historical Review Corps of Engineers, United States Army — Covering Operations During World War II, Pacific Ocean Area*. Volume I. Honolulu: United States Army Forces, Middle Pacific, Headquarters Oahu Engineer Service.

7. Richardson, Lieutenant General Robert C. Jr. No date. *U. S. Army History of G-3, Headquarters, Army Forces Middle Pacific — Functions and Activities 7 December 1941 - 2 December 1944*.

8. Rogers, A. L. Park Manager, Kahana Valley State Park. 52-290 Kamehameha Highway., Hauula, HI 96717. Telephone 808-237-8266.

9. Thompson, Erwin N. No date. *Pacific Ocean Engineers — History of the U. S. Army Corps of Engineers in the Pacific, 1905-1980*.

10. United States Army Corps of Engineers, Directorate of Real Estate. Fort Shafter, HI 96858-5440. Telephone 808-438-0911.

11. Watanabe, June. 1992. "Kahana didn't lack for ideas." *Honolulu Star-Bulletin,* 26 May, A-4.

12. Watanabe, June. 1992. "Huilua Fishpond restoration is a major project." *Honolulu Star-Bulletin*, 27 May, A-6.

13. Watanabe, June. 1992. "Living park once had more life." *Honolulu Star-Bulletin*, 27 May, A-1,A-6.

14. Wreckfinders. Post Office Box 1554, Kailua, HI 96734. Telephone 808-254-4891.

DONALDSON ENTERPRISES, INC.
EOD Services
45-645 Pua AloWalo Street
Kaneohe, Hawaii 96744
Tele/Fax (808) 235-BOMB

2-9-93

WIL CHEE PLANNING
1585 Kapiolani Blvd, Suite 818
Honolulu, Hawaii 96814
ATTN: Derek Yasaka

SUBJ: PACIFIC JUNGLE WARFARE TRAINING CENTER TRIP REPORT (UXO).

A uxo survey was conducted at the former Pacific Jungle Warfare Training Center located in Kahana Valley (Blue) and Punaluu Valley (Green). The survey was conducted on 4-19-92, 1-22-93, and 2-9-93. It consisted of a visual walk-through search for surface oew/uxo and a ferro-magnetic locator (Schonstedt GA-52) search for subsurface uxo.

On 4-19-92 Kahana Valley was investigated to determine the extent and magnitude of uxo contamination. Both of what appeared to be the military trails were searched and portions of the river that runs through the valley was also searched. The trails had indications of what appeared to be fighting holes which were probably loacations of ambush sites. At the apex of the two trails were three (3) portable concrete pillboxes of the type that are found on the beaches surrounding Oahu. Lying partially buried (found with the Schonstedt) was a 2.36 bazooka motor and base of a low order 105mm which was empty. Also the pillboxes appeared to have been fired upon with rifle fire. My first reaction was that this was a target in a impact area. After my interview with a former resident in the Valley, Mr. Howard Furuya (247-0969, born in the valley in 1933 and had a lease till 1979) these rounds and bunkers may have been brought to this location and destroyed. No warnings were given in newspapers that this area was going to be dedudded as was the normal practice at that time.

Punaluu Valley (Green Valley) was investigated on 1-22-93 in the same manner as Kahana Valley. This valley only had one (1) trail which ended at a steep dropoff over looking the Punaluu Stream. Located at this point was a single concrete pillbox buried partially in the ground which is of the same construction as those found in Kahana valley. At various points along the trail were covered fighting holes that supported each other and were probably utilized as ambush points. In september 1949 warnings were posted in the newspaper that this valley was being "dedudded". The portion of this valley that may have been the impact area was not accessible at this time.

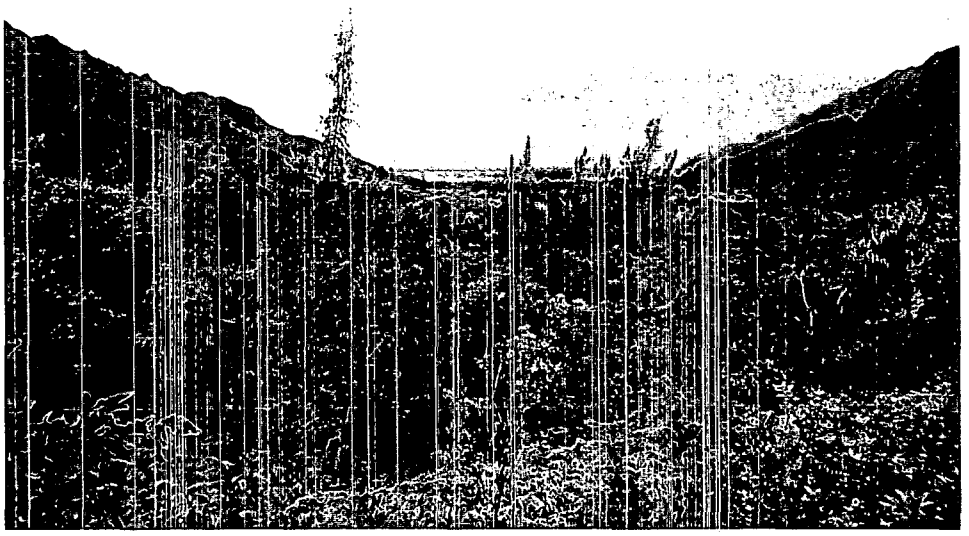
On 2-9-93 a uxo survey was conducted at the kuleana belonging to the Eve family. During the previous investigation this area had been pointed out as containing a WW II Japanese tank but was inaccessible to the investigating party. The current resident (Mrs Fealy) met us upon arrival at her property and briefed us on what she had seen during their 1 year stay on the site. Her son displayed his collection of smallarms (M1 rifle/M2 Carbine) which he found in the garden in front of the house, d a 75mm ap-t and a expended MK 28 sea marker, all of which he found on the property. Also, he directed us to a 81mm mortar that appeared to be HE filled. A tree root had grown around it and identification was difficult but I was able to determine it was in the fired condition with the safety pin missing (indicating it was probably fired there and not discarded). We then visited a WW II Japanese tank and searched the area but failed to locate any oew/uxo. I feel this tank was probably placed at this site for instruction purposes, however, it had sustained rifle fire of a unknown caliber. The search continued until late in the afternoon with nothing further being located.

Byron L Donaldson

BYRON L DONALDSON
VICE PRESIDENT



1. Concrete curbing, a floor slab, and footings located next to a parking lot and comfort station at the entrance to Kahana Valley State Park. View facing southwest.



2. View of Kahana Valley facing north towards its mouth. The viewpoint is approximately 2.1 miles inland from the park headquarters.



3. Concrete footings and a timber A-frame located along the west bank of Kawa Stream in Kahana Valley. The items are surmised to be remnants of a trolley which conveyed individuals and supplies across the stream.



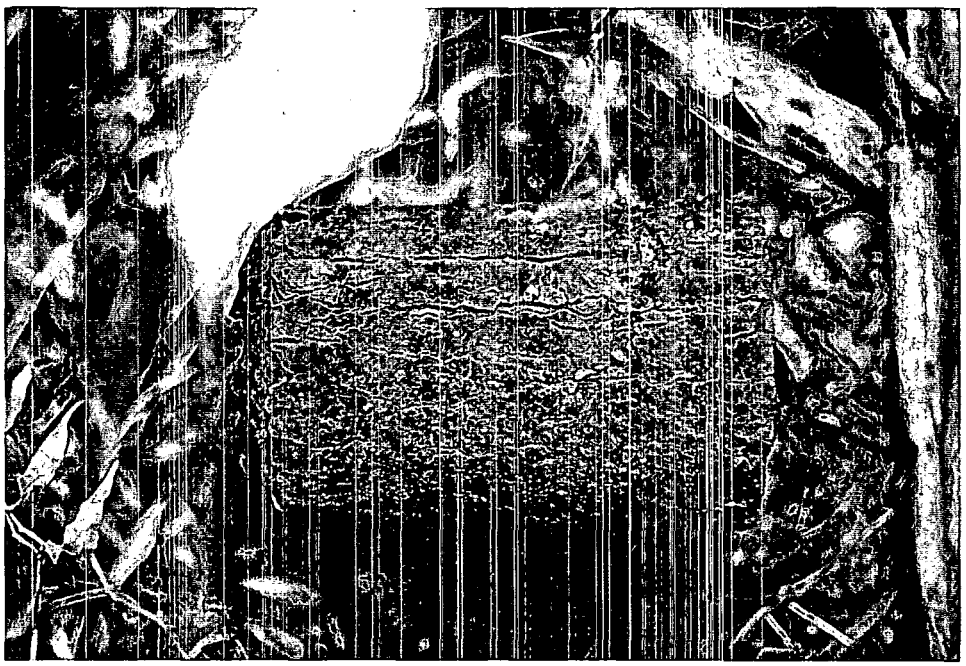
4. View of Kawa Stream and a weir from the location of the trolley remnants pictured above. Submerged near the bank is a length of steel cable which was likely strung across the stream and which supported the trolley.



5. Three of four concrete pillboxes situated just off a loop hiking trail in the rear of Kahana Valley near a Honolulu Board of Water Supply reservoir.



6. Tail section of a 2.36-inch bazooka round located at the base of a concrete pillbox in Kahana Valley.



7. Possible section of a 105 mm AP projectile located at the base of a concrete pillbox in Kahana Valley.



8. Rows of tetrahedron tank traps situated within a stand of lauhala trees in Kahana Valley.



9. Coral aggregate service road in Punaluu Valley reportedly constructed by the Army.



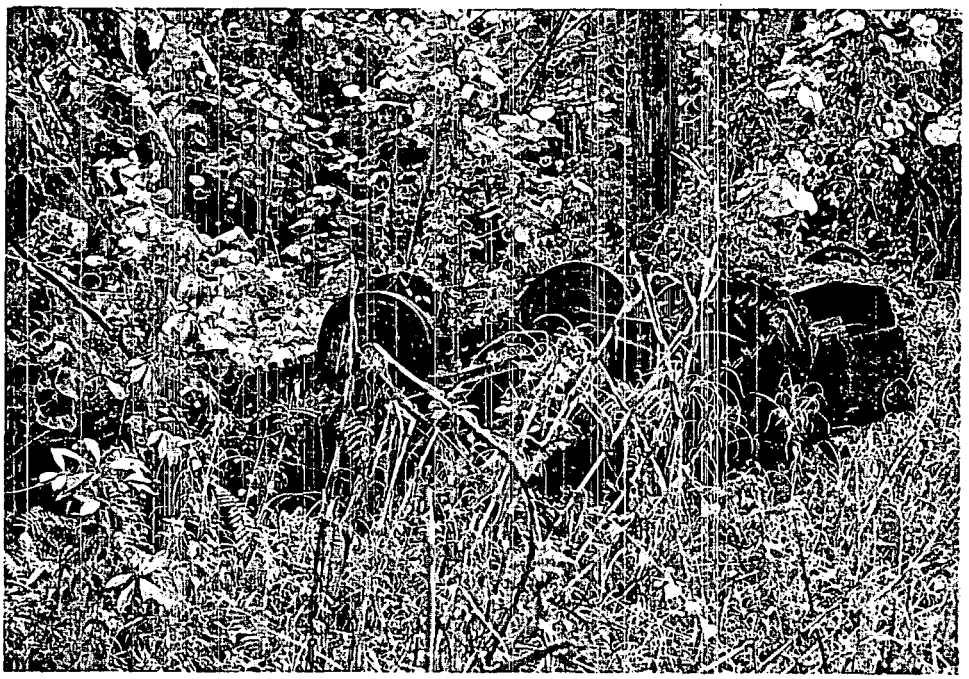
10. Upright timber footings to a military structure near the coral aggregate service road pictured above.



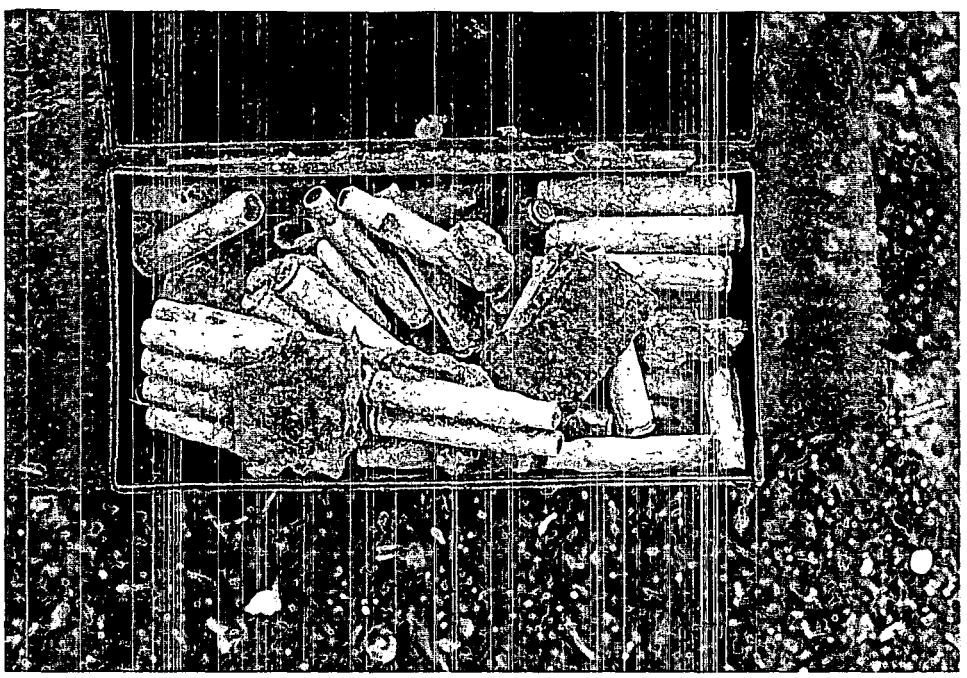
11. Corrugated sheet metal and timber bunker located along the side of Koolau Agriculture Company's irrigation system service road in Punaluu Valley.



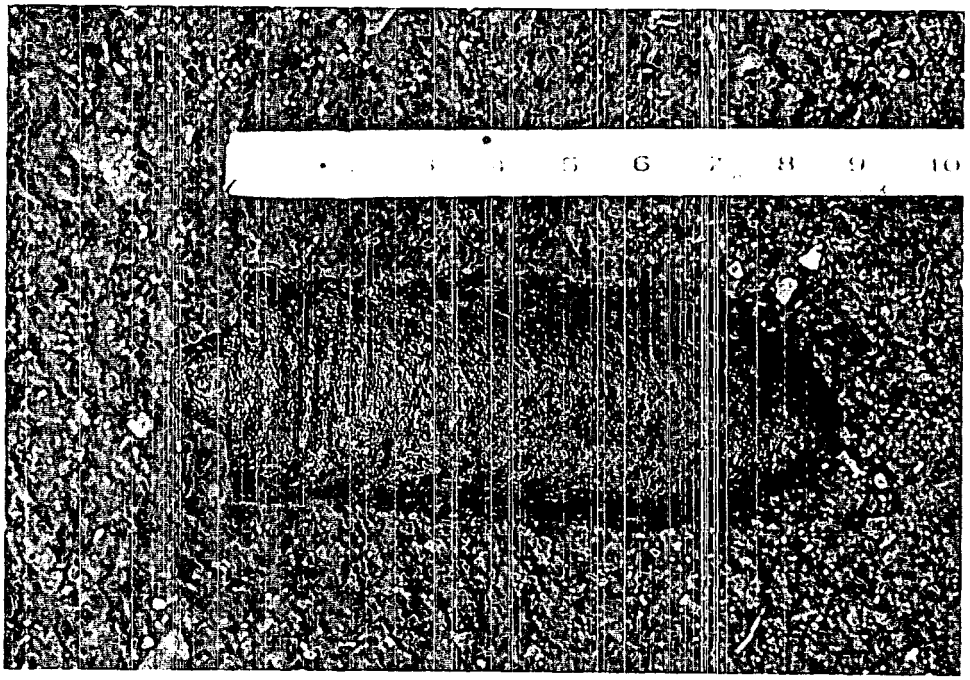
12. Quadrangular concrete bunker located near Koolau Agriculture Company's west irrigation ditch intake at Punaluu Stream.



13. Upended Japanese tank located at the Fely residence in Punaluu Valley.



14. Expended M1 and M2 cartridges, and an unexpended .30 caliber round unearthed at the Fely residence.



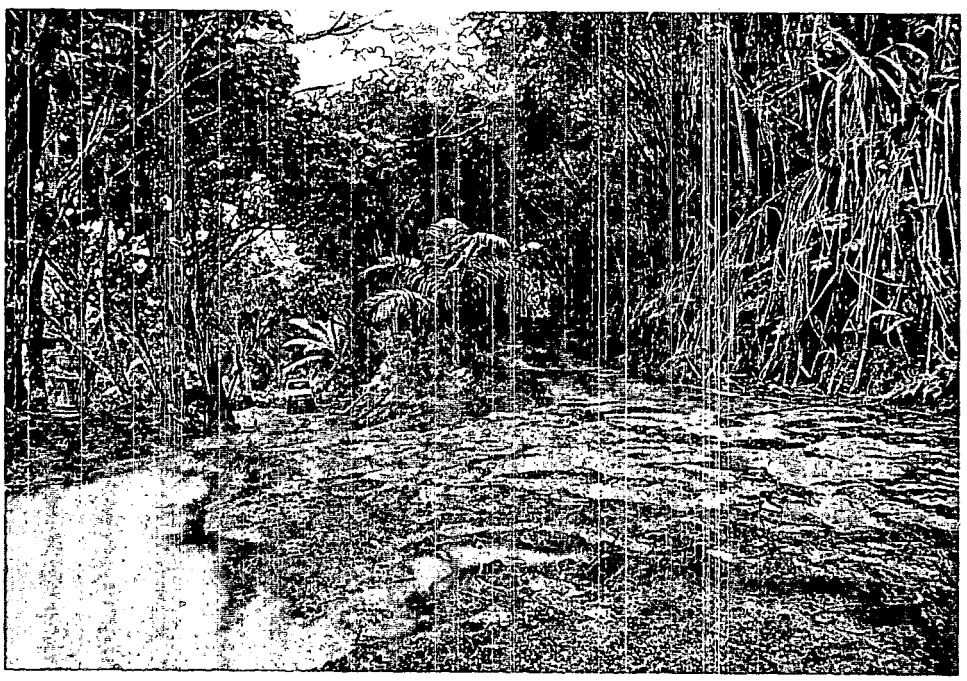
15. Portion of a 75 mm AP or HE in the possession of K. Fely. The round was reportedly discovered along the west face of Punaluu Valley.



16. Live 81 mm mortar wedged in the roots of a Java plum tree located along Green Valley Road in Punaluu Valley.



17. Java plum tree, at center in the photograph, where the 81 mm mortar was wedged. View facing west from across Green Valley Road.



18. View of Green Valley Road facing south with the Tukuafu residence driveway visible at left center in the photograph. The 81 mm mortar was discovered approximately 25 yards past (south of) the driveway entrance on the right side of Green Valley Road.

CEHND-ED-SY

Control Number: 1-302

DUE DATE: 18 FEB 94

18 Feb 94

MEMORANDUM THRU CEHND-ED-ES

OR CEHND-PM

SUBJECT: DERP FUDS IS OF OAHU PACIFIC JUNGLE TRAINING CENTER INPR HO9HI027400

1. Subject data has been reviewed and comments by Branch are as indicated:

Comments Enclosed	No Comment	N/A	No. Hours		
( )	( )	( )	( )	Systems Engineering Div	Reviewed by
( )	( )	( )	( )	Advanced Technology	Reviewed by
( )	( )	( )	( )	Analysis	Reviewed by
( )	( )	( )	( )	Operations	Reviewed by
(✓)	( )	( )	(1)	Systems Safety	Reviewed by

2. Additional comments:

Encl

K. A. EDMUNDSON
Chief, Systems Engineering Division

D. DOUTHAT

18 FEB 94 13:44

1. COMPONENT	FY 19 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
		26 January 1994

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
Former Pacific Jungle Combat Training Center Island of Oahu HI	DERP FUDS

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	QEW	HO9HI027401	$652.3

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)				
PHASE I				
Archives Search				$ 25.
Site Visit				30.
Aerial Photographs				5.
State of Hawaii Environmental Concerns				25.
S&A (8%)				6.8
		Phase I Total		$ 91.8
PHASE II				
Work Plan				15.
On-Site Investigation				75.
Surface sampling 100 acres @$3,000				300.
Subsurface sampling 10 acres @$5,000.				50.
Engineering Report				35.
Phase II Subtotal				$ 475.
S&A (8%)				38.
CEHND QA Management (10%)				47.5
		Phase II Total		$ 560.5
		EE/CA Total		$ 652.3

10. Description of Proposed Construction

1. Archives Search will determine land use, types of ordnance, etc. Will include site visit during which interviews of former employees and current land owners will be conducted. Aerial photographs will be collected and analyzed for past disposal practices and uses.
2. Site investigation, if justified by archives search results, will include development of a work plan for surface and subsurface sampling of suspect areas of ordnance and then extent of contamination if confirmed. Site investigation will determine environmental concerns.
3. The Engineering Evaluation will consider the various alternatives for remedial action (including no action), evaluate the costs for each and recommend the appropriate removal action.
4. This site contains approximately 2,265 acres.

U. S. ARMY ENGINEER DIVISION HUNTSVILLE — CORPS OF ENGINEERS

DESIGN REVIEW COMMENTS

PROJECT DERP FUDS is of Oahu Pacific Jungle Training Center H09HI027400 #1-302

- ☐ SITE DEV & GEO
- ☐ ENVIR PROT&UTIL
- ☐ ARCHITECTURAL
- ☐ STRUCTURAL
- ☐ MECHANICAL
- ☐ MFG TECHNOLOGY
- ☐ ELECTRICAL
- ☐ INST&CONTROLS
- ☒ SAFETY
- ☐ ADV TECH
- ☐ ESTIMATING
- ☐ SPECIFICATIONS
- ☐ SYSTEMS ENG
- ☐ VALUE ENG
- ☐ OTHER

REVIEW TYPE: INPR
DATE: 3 Feb 94
NAME: Jim Ferris/cb

ITEM	DRAWING NO. OR REFERENCE	COMMENT	ACTION
1.		This approximately 2,270 acre site was used as a jungle combat training center between 1943-47. A surface clearance action was conducted in 1949, but OEW continues to be found on this site, which is now a state park and an agricultural community. An UXO was recovered from a person during the site visit. A CEPOD contractor prepared and CEHND verified Risk Assessment Worksheet is attached; RAC 1. The RAC 1 is because of the high probability value. Because of the size of the site and the unknown degree of contamination, recommend an OEW EE/CA be scheduled. A CEHND prepared DD Form 1391 is attached which replaces the one submitted by CEPOD.	

ACTION CODES:
A - ACCEPTED/CONCUR
D - ACTION DEFERRED
W - WITHDRAWN
N - NON-CONCUR
VE - VE POTENTIAL/VEP ATTACHED

DISPOSITION OF INFORMATION/DATA FORM

CONTROL NUMBER	SUSPENSE DATE (NLT COB)	DATE
1-302	18 FEB 94	24 JAN 94

REVIEW OFFICE

SITE DEV	MFG TECH	ANALY
GEOTEC	MECH	ADV TEC
ENVIRON	ELEC	OPNS
STRUCT	I & C	SAFETY ~~DATA REV~~
ARCH	ET	
EST		
SPECS		

SERVICE BRANCH (Map Files/~~Room 1~~) 1 CY DATA ON FILE

PROJ MGR ELST DF

PROJECT MANAGER	PHONE NUMBER	PROJECT NUMBER
ELST		H09HI027400

PROGRAM DESIGNATION	REVISION NUMBER
DERP FUDS	

CONTRACT NUMBER (IFB/RFP/DO)	PROJECT DESCRIPTION
NA	PACIFIC JUNGLE TRAINING CENTER

PROJECT LOCATION	DESIGN STATUS
ISLAND OAHU	INPR

COST ACCT NUMBER	FILE IDENTIFIER	TRANSMITTAL #
L01070	NA	NA

ALL COMMENTS WILL BE DELIVERED TO SVC BR ON CEHND 7 AS SUSPENSED, UNLESS OTHERWISE NOTED.

SPECIAL INSTRUCTIONS

12C

SIGNATURE

CEHND FORM 893 (REVISED) 1 OCT 93

(PREVIOUS EDITION MAY BE USED UNTIL EXHAUSTED.)

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

1-302

CEPOD-ED-ES (200)

12 January 1994

MEMORANDUM FOR Commander, U.S. Army Engineer Division, Huntsville, ATTN: CEHND-ED-PM, P.O. Box 1600, Huntsville, AL 35807-4301

SUBJECT: DERP FUDS Inventory Project Report (INPR) for Site NO. H09HI027400, Pacific Jungle Training Center, Kahana and Punaluu Valley, Island of Oahu, Hawaii

1. I am forwarding the INPR for the Pacific Jungle Training Center for appropriate action. The site is eligible for DERP FUDS. The proposed ordnance explosive waste (OEW) project is eligible for DERP FUDS.

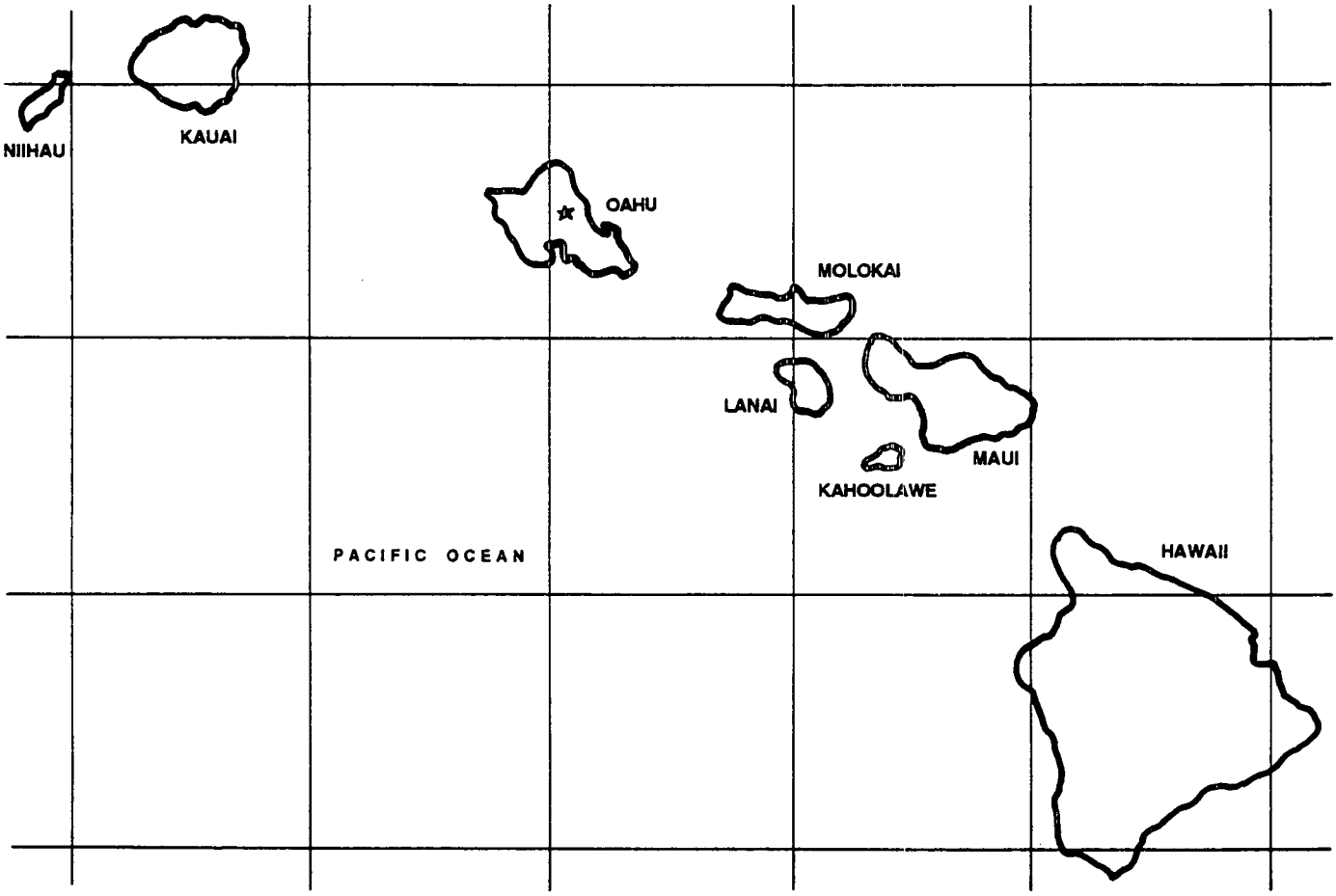
2. I recommend that HND determine if further study and remedial action are needed at this site.

Encl

RALPH V. LOCURCIO
Brigadier General, USA
Commanding

CF:
CDRUSACE (CEMP-R), 20 Mass. Ave. NW., WASH DC 20314-1000
(W/enclosure)

DERP-FUDS
Inventory Project Report



Pacific Jungle Combat Training Center
Kahana and Punaluu Valleys,
Island of Oahu, Hawaii
Site No. H09HI027400

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

SITE SURVEY SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
3 DECEMBER 1993

SITE NAME(S): Pacific Jungle Combat Training Center, also known as Unit Jungle Training Center; Unit Combat Training Center; Pacific Combat Training Center; Jungle Training; Punaluu Training Camp; and Green Valley Jungle Training Camp.

LOCATION: Kahana and Punaluu Valleys, District of Koolauloa, Island of Oahu. TMKs 5-2-02; various parcels; 5-3-04,05, and 1: various parcels.

SITE HISTORY: Pacific Jungle Combat Training Center consisted of approximately 2,266.77 acres of land located in two valleys along the northeast coast of the island of Oahu, Hawaii. The Army acquired 485.25 acres in Kahana Valley by license in November 1944 retroactive to May 1943. Leases, license, and informal agreements were executed by the Army between October 1943 and March 1947, several instruments retroactive to October 1943, to acquire approximately 1,781.52 acres in neighboring Punaluu Valley. The valleys were established and used as a unit jungle combat training center in September 1943 in response to a directive from the Commanding General, Hawaiian Department to establish a school on Oahu to supplement Department Ranger and Combat School training. Training was divided among Blue, Red, and Green Courses. Basic jungle warfare training was conducted at Blue and Red Courses while advanced jungle warfare training and the Instructor Jungle Training School were conducted on Green Course. All jungle training centers became known as Unit Combat Training Centers in March 1945 and Pacific Combat Training Centers the following month in a move to de-emphasize jungle warfare. Parcels in Kahana Valley were returned to its landowner in August 1946 while leases and licenses for parcels in Punaluu Valley were officially terminated from April 1945 to November 1950. De-dudding efforts were conducted by an engineer search and range clearance team in Punaluu Valley in 1949 as a result of the use of live ammunition during training. Unexploded ordnance continues to be discovered in both Kahana and Punaluu Valleys which are now a state park and agricultural community, respectively.

SITE VISIT: A site visit was conducted in Kahana Valley on 14 April 1992 by Randall Kurashige (CEPOD-ED-EH), Farley Watanabe (CEPOD-ED-ES), Senior UXO Supervisor Byron Donaldson (Donaldson Enterprises, Inc.), and Derek Yasaka (Wil Chee - Planning). They discovered concrete pillboxes and numerous tank traps in the rear of the valley. OEW discovered near the pillboxes include the tail section to a 2.36-inch bazooka round and what may be a portion of an expended 105 mm AP projectile. A second site visit was conducted on 22 January 1993 in Punaluu Valley by Louis Fung (Wil Chee - Planning) and Messrs. Donaldson and Yasaka. Observed military remnants include a coralline road, earthen bunkers, and a concrete bunker. Messrs. Donaldson and Yasaka returned to Punaluu Valley on 9 February 1993 to meet with and interview a valley resident whose son claims to frequently encounter OEW items while hiking in the valley. In the son's possession were unexpended .30 caliber bullets, expended M1 and M2 cartridges, and a 75 mm AP or HE projectile. The resident was advised to contact the Honolulu Police Department for proper disposal of the 75 mm round. Messrs. Donaldson and Yasaka were then guided to the location of a live 81 mm mortar wedged in some tree roots. The lessee was apprised of its existence and the item subsequently removed by an EOD team.

SITE SURVEY SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

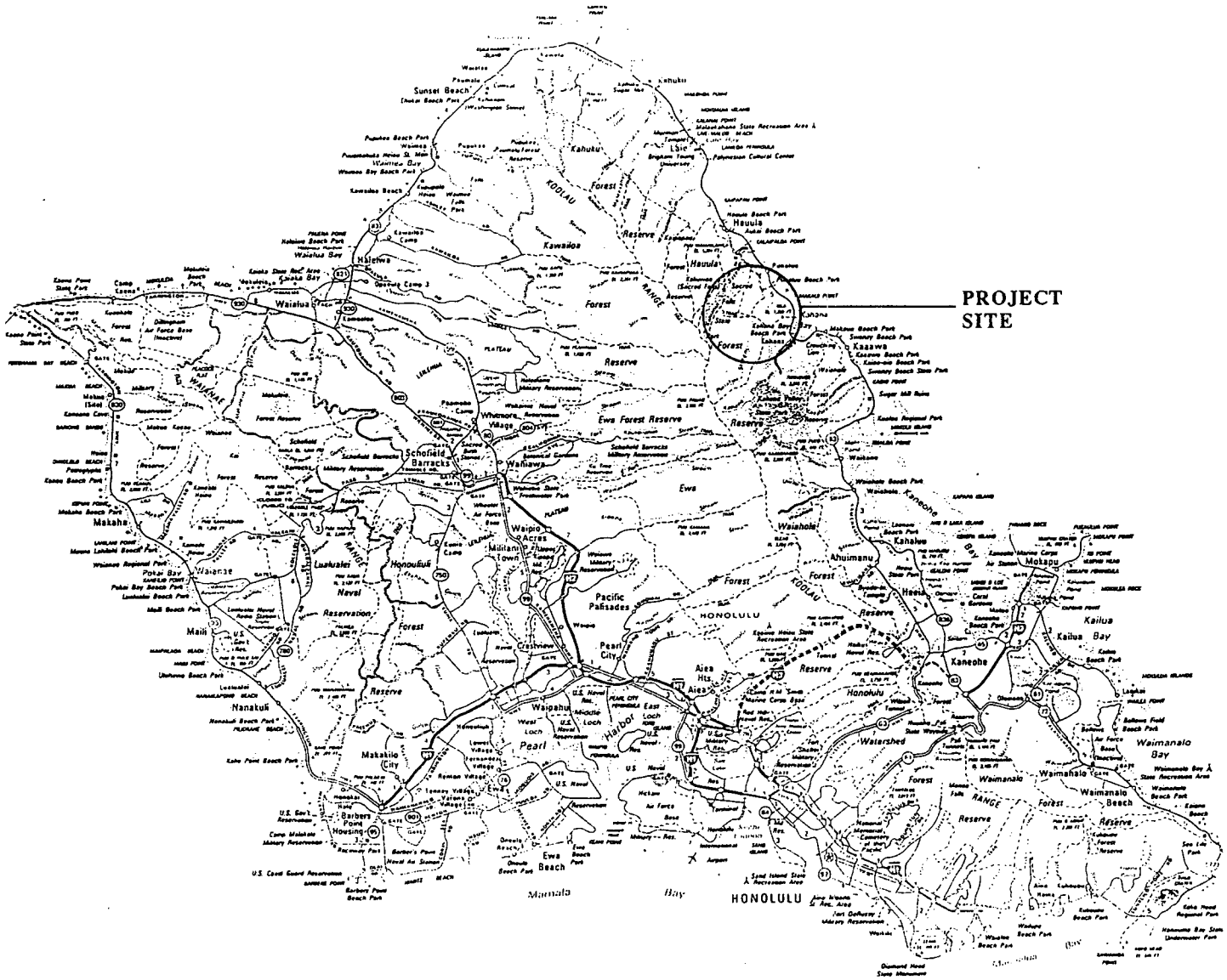
CATEGORY OF HAZARD: OEW.

PROJECT DESCRIPTION: There is one potential project at this site.

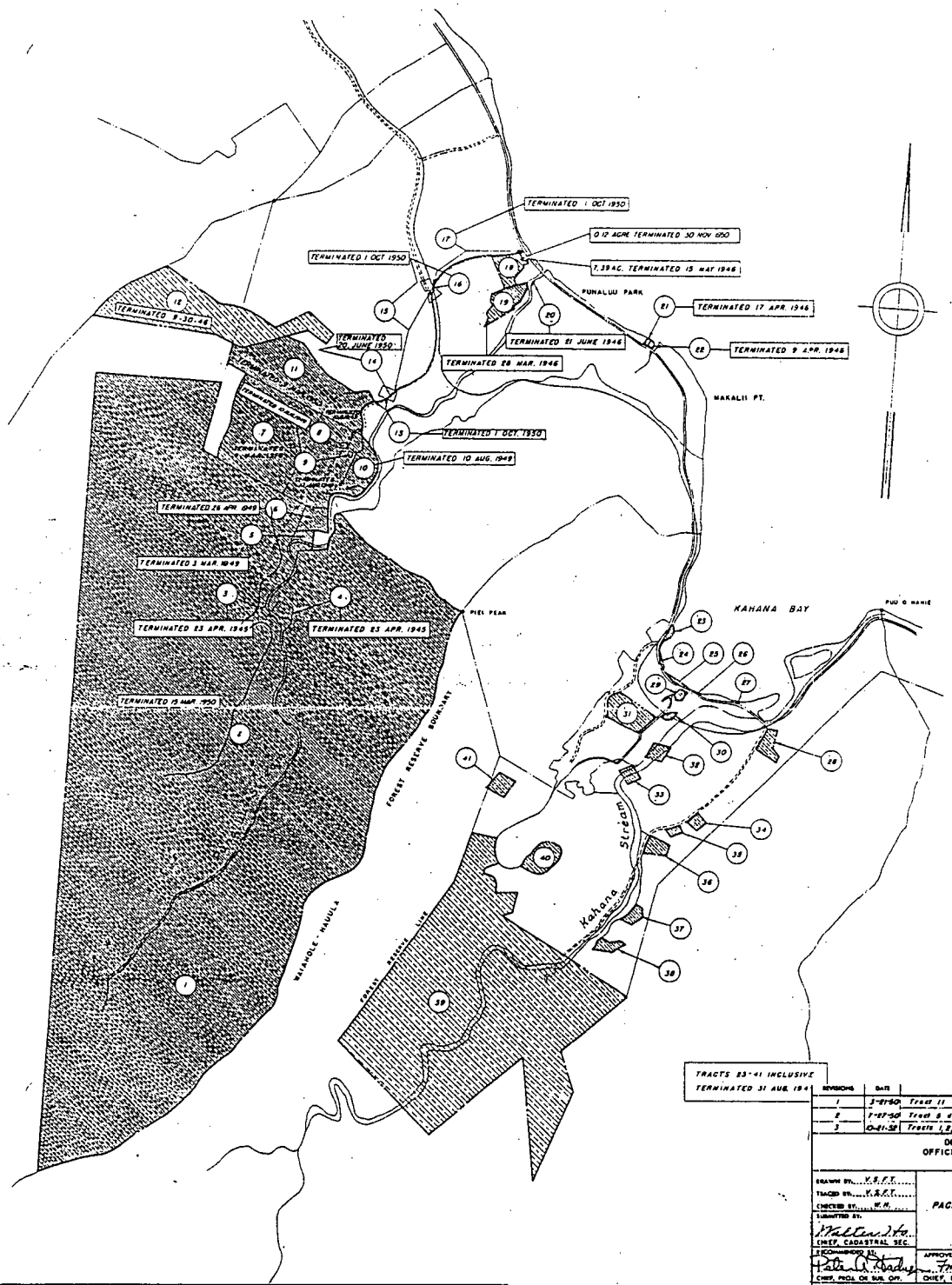
a. OEW. Kahana and Punaluu Valleys were utilized as jungle combat training areas by the Army during World War II. Live ammunition was used during training exercises, consequently assorted OEW continue to exist and are occasionally discovered in both valleys. OEW discovered in Kahana Valley during performance of this preliminary site assessment include the tail section to a 2.36-inch bazooka round and what is surmised to be a portion of an expended 105 mm AP projectile. In Punaluu Valley, OEW discovered include a 75 mm AP or HE projectile, an 81 mm mortar, unexpended .30 caliber bullets, and expended M1 and M2 cartridges. A Risk Assessment Code (RAC) worksheet has been prepared and is attached herewith. The RAC for this site was determined to be 1. It is recommended that this INPR be referred to CEHND for final determination of the next appropriate action as it requires further investigation beyond the scope of this preliminary site assessment.

AVAILABLE STUDIES AND REPORTS: None identified.

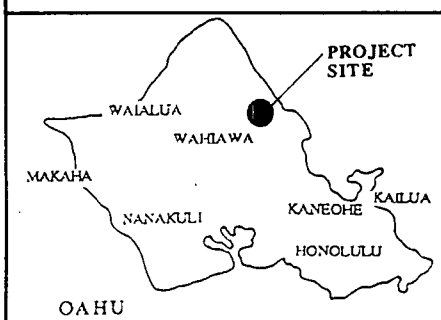
PA POC: Helene Takemoto, CEPOD-ED-ES, 808-438-6931.



Prepared for:	DERP-FUDS Inventory Project Report
U.S. Army Engineer District Pacific Ocean Division Fort Shafter, Hawaii	**Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Island of Oahu, Hawaii**
Prepared by:	Site No. H09HI027400
Wil Chee - Planning	Figure 1



Note: See Figure 3 for Aquisition Tract Register



Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

Prepared by:

Wil Chee - Planning

DERP - FUDS Inventory Project Report

Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Island of Oahu, Hawaii

Site No. H09HI027400
Figure 2

ACQUISITION TRACT REGISTER

TRACT NO.	LAND OWNER	ACREAGE			REMARKS
		LEASE	LICENSE	INFORMAL PERMIT	
1	B. P. BISHOP ESTATE		1500.00		LIC. DTD. 7 AUG. '44, EFF. 1 OCT. '43 (800 AC.) S. A. NO. 1 DTD. 30 JUNE '46 (700 AC.)
2	" " "				LIC. DTD. 23 OCT. '45 AREA INCLUDED IN TRACT NO. 1
3	ANTHONY AKI			0.40	INFORMAL PERMIT DATED 15 OCT. 1943
4	" "			1.82	" " " " " "
5	SARAH K. HOKE		5.25		LICENSE DATED 18 FEB. 1945 EFFECTIVE 15 OCT. 1943
6	OLIVER H. KUPAU ESTATE OF LINCOLN L. MC CANDLESS	6.70			15 OCT. '43 CONT. NO W-414-ENG-6546 15 OCT '43 CONT. NO. W-414-ENG-6538
7	KAHUKU PLANTATION COMPANY	38.00			CONT. NO W-4M-ENG-6588 DATED 1 NOV. 1943
8	" " "	0.25			S.A. NO 1 DATED 15 NOV. 1944 TO CONT. NO W-414-ENG-6588
9	" " "	0.25			" " "
10	" " "	11.50			" " "
11	EDWARD AUWAE ET. AL., KAHUKU PLANTATION COMPANY	57.00	57.00		CONT. NO. W-00-008-ENG-101, DTD. 1 MAR. '47 SUPERSEDES LIC. FROM E. AUWAE ET AL, DTD. 30 JAN. 45, TERM, 28 FEB. 47
12	REGINALD TREVENEN & ANNIE K. TREVENEN		62.00		LICENSE DATED 15 JAN 1945
13	KAHUKU PLANTATION COMPANY			0.08	INFORMAL PERMIT DATED 15 OCT. 1943
14	REGINALD TREVENEN & ANNIE K. TREVENEN		0.09		LICENSE DATED 26 SEPT. 1944 EFFECTIVE 18 OCT. 1943
15	KAHUKU PLANTATION COMPANY			1.15	INFORMAL PERMIT DATED 15 OCT. 1943
16	KAHUKU PLANTATION COMPANY		0.07		LICENSE DATED 4 APR. 1944
17	KAHUKU PLANTATION COMPANY		0.75		LICENSE DATED 4 APR. 1944
18	CHUNG YAN HOON		7.51		LICENSE DATED 11 NOV. 1943 0.18 AC ALSO COVERED BY LIC. 15 MAY '46
19	GORO TANAKA			9.87	INFORMAL PERMIT DATED 29 OCT. 1943
20	ELI E. KEOLANUI			0.75	INFORMAL PERMIT DATED 29 OCT. 1943
21	DOUGLAS S. GUILD JACK R. REED	0.46			CONT. NO. W-414-ENG-6373 DATED 10 MAR. 1944
22	JOHN LAI ELLEN LAI		0.62		LICENSE DATED 15 JAN. 1944
23	HUI OF KAHANA, ET. AL.		0.47		LICENSE DATED 1 NOV. 1944 EFFECTIVE 20 MAY 1943
24	" " " " "		0.20		" " " "
25	" " " " "		0.37		" " " "
26	" " " " "		0.23		" " " "
27	" " " " "		0.04		" " " "
28	" " " " "		4.22		" " " "
29	" " " " "		1.20		" " " "
30	" " " " "		0.66		" " " "
31	" " " " "		12.85		" " " "
32	" " " " "		3.44		" " " "
33	" " " " "		2.52		" " " "
34	" " " " "		2.28		" " " "
35	" " " " "		1.60		" " " "
36	" " " " "		3.40		" " " "
37	" " " " "		6.19		" " " "
38	" " " " "		5.05		" " " "
39	" " " " "		428.83		" " " "
40	" " " " "		8.72		" " " "
41	" " " " "		2.98		" " " "

Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

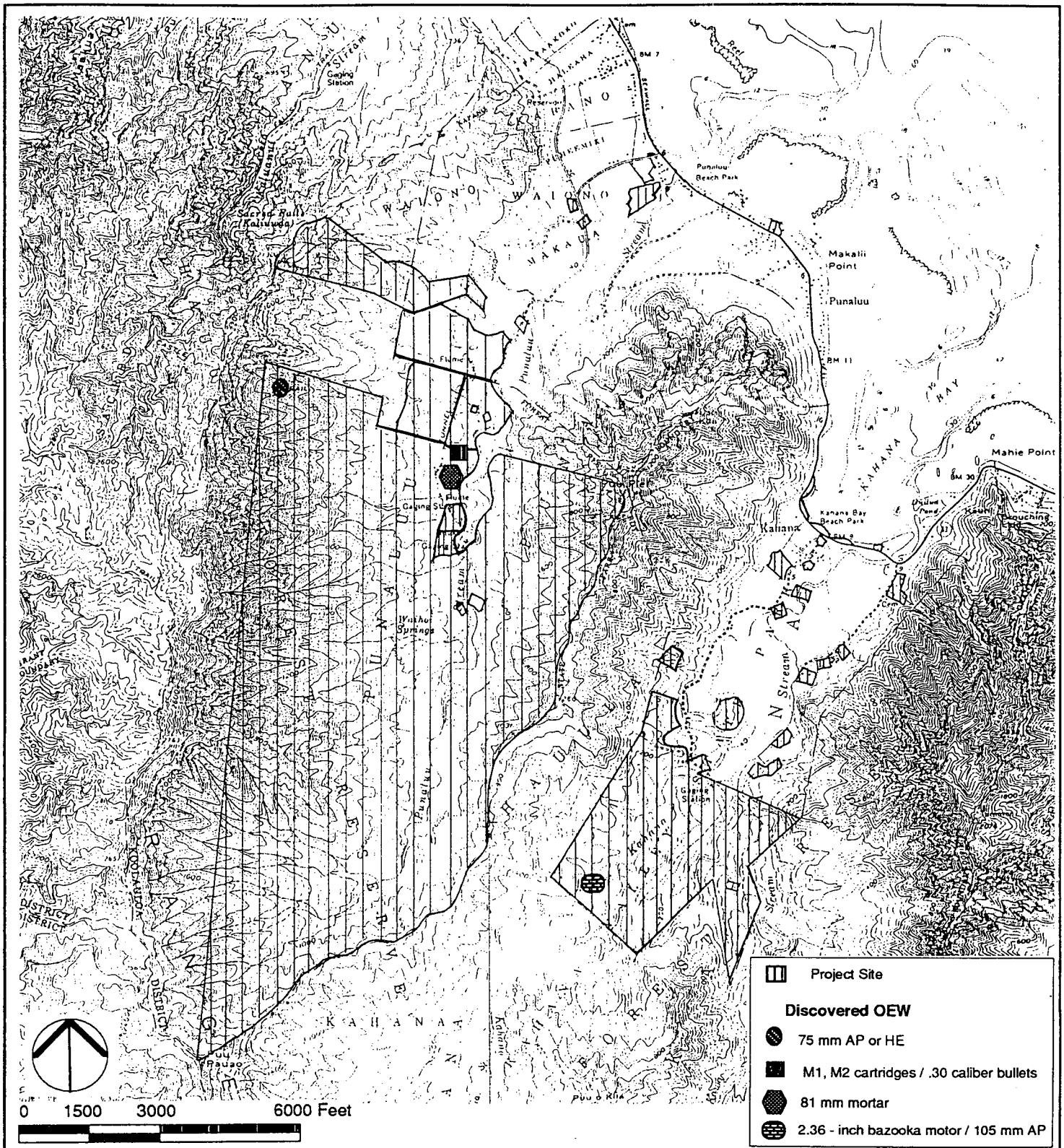
Prepared by:

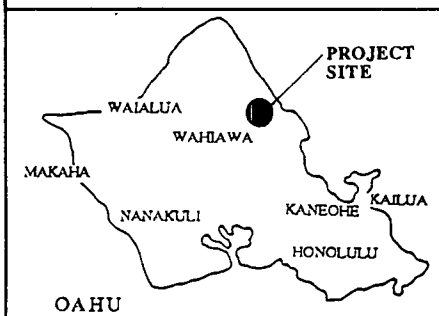
Wil Chee - Planning

DERP - FUDS Inventory Project Report

Pacific Jungle Combat Training Center
Kahana and Punaluu Valleys, Island of Oahu, Hawaii

Site No. H09HI027400
Figure 3





Prepared for:

U.S. Army Engineer District
Pacific Ocean Division
Fort Shafter, Hawaii

Prepared by:

Wil Chee - Planning

DERP - FUDS Inventory Project Report

Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Island of Oahu, Hawaii

Site No. H09HI027400
Figure 4

FINDINGS AND DETERMINATION OF ELIGIBILITY

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400

FINDINGS OF FACT

1. Pacific Jungle Combat Training Center was located in Kahana and Punaluu Valleys along the northeast coast of the island of Oahu, Hawaii.[1,6,7,9,14] The Hui of Kahana et al. issued a license dated 1 November 1944, retroactive to 20 May 1943, to the Army for use of approximately 485.25 acres of land in Kahana Valley. Approximately 1,781.52 acres in neighboring Punaluu Valley west of Kahana Valley were acquired by the Army through leases, licenses, and informal permits issued by various valley landowners between 15 October 1943 and 1 March 1947. Several instruments were executed retroactively to 1, 15, and 18 October 1943. The largest landowner, licensing approximately 1,500 acres of Punaluu Valley, was Bernice Pauahi Bishop Estate.[10] Documentation evidencing property acquisition could not be located following research at the United States Army Corps of Engineers, Directorate of Real Estate; City and County of Honolulu Department of Finance, Real Property Assessment Division; Hawaii Department of Land and Natural Resources, Bureau of Conveyances; Hawaii Department of Accounting and General Services, Division of Archives, and Kamehameha Schools / Bernice Pauahi Bishop Estate.

2. Kahana and Punaluu Valleys were utilized as a unit jungle combat training center commencing on 6 September 1943 in response to a 9 August 1943 directive from the Commanding General, Hawaiian Department to establish a school on Oahu to supplement Department Ranger and Combat School training.[1,6,7,13] Training emphasized basic jungle warfare subjects and was divided among three courses, Blue, Red, and Green, accommodating battalion combat teams. Basic jungle warfare training was conducted at Blue and Red Courses while advanced jungle warfare training and the Instructor Jungle Training School were conducted at Green Course. Subjects taught during a one-week course at the training center included jungle first aid and evacuation; hand to hand combat; construction and passage of wire entanglements; booby traps and demolitions; patrolling and ambushing; hip shooting and infiltration; stream crossing expedients; assault with bayonets; assault of Japanese fortified areas; combat reaction proficiency; and jungle living.[3,7,14] The Army reportedly constructed Japanese villages and pillboxes with pop up dummies for training purposes. They also erected temporary barracks, a mess hall, a bakery, and shower facilities all of which no longer exist.[3,5,8,14] Advanced training on Green Course was discontinued on 28 May 1944 after only its second class as it became necessary to utilize the course for basic jungle warfare training of divisions being staged for the Western Carolines operations. Jungle warfare was de-emphasized as the war progressed from tropical regions to areas where jungle fighting was not a primary consideration. A change in training policy brought about redesignation of all jungle training centers on 1 March 1945 to become known as Unit Combat Training Centers. Redesignation occurred again on 10 April 1945 when the centers were referred to as Pacific Combat Training Centers.[7] In all, over 241,000 Army, Marine Corps, and Navy troops underwent basic jungle training at this center, with over 300,000 men receiving either basic, advanced, or instructor training there.[1,7,9,14] Postwar plans called for the closing of the majority of Pacific Jungle Combat Training Center except for Green Course in Punaluu Valley which was to be retained to fulfill the Army's postwar training requirements. Punaluu Valley was abruptly reopened by the Army on 1 April 1946 to provide emergency shelter for area residents whose homes were damaged by a tsunami which struck the island of Oahu. Tents were erected for sleeping quarters, to render medical treatment, and to feed the approximately 1,700 displaced individuals.[14] De-dudding efforts were conducted by an engineer search and range clearance team in at least Punaluu Valley in 1949 as a result of the use of live ammunition during training.[2]

Unexploded ordnance continues to be discovered in both Kahana and Punaluu Valleys.[4] OEW discovered during performance of this preliminary assessment include the tail section to a 2.36-inch bazooka round and a portion of an expended 105 mm AP projectile in Kahana Valley, and.a 75 mm AP or HE projectile, 81 mm mortar, unexpended .30 caliber bullets, and expended M1 and M2 cartridges in Punaluu Valley. Most of the concrete bunkers and pillboxes constructed by the Army in both valleys continue to exist.[3,5,8]

3. Licenses for usage of Kahana Valley were terminated on 31 August 1946. Leases, licenses, and informal permits comprising the various Punaluu Valley parcels were terminated commencing on 23 April 1945, and the final license terminated on 30 November 1950.[10] Documentation evidencing property disposal could not be located following research at the United States Army Corps of Engineers, Directorate of Real Estate; City and County of Honolulu Department of Finance, Real Property Assessment Division; Hawaii Department of Land and Natural Resources, Bureau of Conveyances; Hawaii Department of Accounting and General Services, Division of Archives, and Kamehameha Schools / Bernice Pauahi Bishop Estate. Kahana Valley is presently under the purview of the Hawaii Department of Land and Natural Resources, and was set aside as a state park in the 1960s.[11] Punaluu Valley is comprised of numerous small landowners and Kamehameha Schools / Bernice Pauahi Bishop Estate lessees engaged in the cultivation of diversified agricultural crops.[5] The interior section of Punaluu Valley is located within Hauula Forest Reserve.

DETERMINATION

Based on the foregoing findings of fact, the site has been determined to be formerly used by the Department of Defense. It is therefore eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites established under 10 USC 2701 et seq.

12 January 1994
Date

RALPH V. LOCURCIO
Brigadier General, USA
Commanding

PROJECT SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993

PROJECT DESCRIPTION: Pacific Jungle Combat Training Center consisted of approximately 2,266.77 acres of land located in Kahana and Punaluu Valleys on the northeast coast of the island of Oahu. It was established as a unit jungle combat training center during World War II teaching basic and advanced jungle warfare, as well as instructor training. A public warning was issued in October 1949 not to enter an impact area in Punaluu Valley being cleared of OEW.

Kahana Valley was set aside and established as a state park during the 1960s. Thirty-one families presently live in Kahana Valley in support of the living park concept whereby residents are regarded as park personnel portraying traditional Hawaiian cultural practices for visitors. Family residences are clustered primarily near the valley and park entrance off Kamehameha Highway and just inland of Kahana Bay. The valley is open to the public for cultural enrichment as well as for hiking and hunting. A former military jeep trail toward the rear of the valley is presently utilized as a foot trail. Vegetation is dense and valley walls are steep.

Residential dwellings in Punaluu Valley are generally located at the valley mouth near Kamehameha Highway, along Green Valley Road, and just inland of the Hauula Forest Reserve boundary along Punaluu Stream. An irrigation system service road extends approximately halfway into the valley terminating at an irrigation ditch intake. This service road also serves as an Oahu Civil Defense Agency evacuation route for coastal inhabitants to move to higher ground in the event of a tsunami Foot trails ascend further into the valley. Although hunters are allowed in Punaluu Valley, access is generally restricted only to valley residents and guests, and landowner and lessee personnel.

Live ammunition was reportedly utilized during jungle warfare training scenarios. This was corroborated by a senior UXO supervisor during site visits to Kahana and Punaluu Valleys in association with preliminary assessment of the Pacific Jungle Combat Training Center. OEW items discovered in Kahana Valley include the tail section of a 2.36-inch bazooka round and a portion of a 105 mm AP round. A 75 mm AP or HE round, an 81 mm mortar round, unexpended .30 caliber bullets, and expended M1 and M2 cartridges were discovered in Punaluu Valley.

PROJECT ELIGIBILITY: Hui of Kahana et al. issued a license to the Army in November 1944 retroactive to May 1943 for use of Kahana Valley for training purposes. Numerous leases, licenses, and informal permits were issued by various landowners, including Bernice Pauahi Bishop Estate, to the Army for use of Punaluu Valley. Leases, licenses, and permits were terminated from April 1945 to November 1950, and the land in both valleys reverted to their owners.

POLICY CONSIDERATIONS: Although extant residential dwellings on former training center grounds are small in number, at least one area resident in Punaluu Valley reports occasionally unearthing small arms munitions (e.g., .30 caliber bullets) around her property Much of the former training area in Kahana and Punaluu Valleys is within Hauula Forest Reserve, with all of Kahana Valley also being designated a state park. Both the forest reserve and park are under the purview of the Hawaii Department of Land and Natural Resources (DLNR). OEW survey and clearance efforts may require conservation district use permits in addition to consultations with the DLNR Division of Historic Preservation for potential impacts to archaeologically significant

PROJECT SUMMARY SHEET

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

resources. An ancient wet taro system is believed to have dominated Kahana Valley at one time. Remnants of the system include as many as 120 small wet terraces and 12 irrigation canals. A temple or *heiau* is located in Kahana Valley in addition to three fishing shrines.[8] Huilua Fishpond at the mouth of Kahana Valley is listed on both the National and Hawaii registers of historic sites.[8,12]

The Hawaiian Coot (*Fulica americana alai*) and Hawaiian Gallinule (*Gallinula chloropus sandvicensis*) inhabit Huilua Fishpond and lowland areas of Kahana Valley. The upper regions of both valleys supports native bird species such as the *'Apapane* (*Himatione sanguinea*) and the Oahu *'Amakihi* (*Himignathus v. chloris*).[8] Consultation with the United States Fish and Wildlife Service would, therefore, be required.

PROPOSED PROJECT: A surface sweep and clearance of approximately 2,000 accessible acres of Kahana and Punaluu Valleys is proposed utilizing a team of ten UXO specialists and technicians under the guidance of a senior UXO supervisor. Discovered OEW would be prepared for off-site transport and disposal. Render safe procedures (RSP) would be employed to the greatest extent possible during OEW access and recovery. Blast mitigation techniques in accordance with Blow In Place (BIP) protocol would be utilized to minimize habitat damage when an OEW item must be detonated in place. Training pertinent DLNR personnel and area residents in OEW recognition and notification protocol is also proposed to effect proper safety precautions subsequent to the survey and clearance effort. It is recommended that this INPR be referred to CEHND for final determination of the next appropriate action.

RAC: The Risk Assessment Code for this site is 1. The RAC worksheet is attached herewith.

DD FORM 1391: Attached herewith.

DISTRICT POC: Helene Takemoto, CEPOD-ED-ES, 808-438-6931.

10 Feb 93
Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name: Pacific Jungle Combat Training Center
Site Location: Kahana/Punaluu Valleys, Oahu, Hawaii
DERP Project #: H09HI027401
Date Completed: 3 Dec 93

Rater's Name: Byron Donaldson
Phone No.: (808) 235-2662
Organization: Donaldson Enterprises Inc.
RAC Score: 1

Verified JF 1/26/94

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at this site. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability**. Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition

	VALUE
Medium/Large Caliber (20 mm and larger)	(10)
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	(10)
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/ spotting charges)	6
Grenades, Practice (w/ spotting charges	4
Landmines, Practice (w/ spotting charges)	4
Small Arms (.22 cal. - .50 cal)	(1)

Conventional Ordnance and Ammunition Value (Select the largest single value) **10**

What evidence do you have regarding conventional OEW? See Part IV of this worksheet.

B. Pyrotechnics (For munitions not described above)

	VALUE
Munition (Container) Containing White Phosphorus or Other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing a Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
Flares, Signals, Simulators	4
Pyrotechnics Value (Select the largest single value)	**0**

What evidence do you have regarding pyrotechnics? _____

_____

C. Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized)

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
Bulk High Explosives Value (Select the largest single value)	**0**

What evidence do you have regarding bulk explosives? _____

_____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants Value	**0**

What evidence do you have regarding bulk propellants? _____

_____

E. Radiological/Chemical Agent/Weapons

	VALUE	
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	
War Gas Identification Sets	20	
Radiological	15	
Riot Control and Miscellaneous (Vomiting, Tear, Incendiary and Smoke)	5	
Radiological/Chemical Agent (Select the largest single value)		**0**

What evidence do you have of chemical/radiological OEW? _____

_____

==========

Total Hazard Severity Value **10**
(Sum of Largest Value for A through E – Maximum of 61)

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	II	≥10 <21
MARGINAL	III	≥5 <10
NEGLIGIBLE	IV	≥1 <5
**NONE		0

*** Apply Hazard Severity Category to Table 3.**

_____

_____

** If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD
(Circle all values that apply)

A. Locations of Contamination

	VALUE
On the surface	(5)
Within Tanks, Pipes, Vessels or Other Confined Locations.	4
Inside Walls, Ceilings, or Other Parts of Buildings or Structures	3
Subsurface	(2)
Location (Select the single largest value)	**5**

What evidence do you have regarding the location of OEW? Ordnance was observed on the surface during a site visit. Anecdotal information from knowledgeable persons also indicates surface discoveries of OEW. Unearthing of small arms by a Punaluu Valley resident corroborates the existence of subsurface contamination.

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW site (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	(5)
1250 feet to 0.5 mile	4
0.5 mile to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	**5**

What are the nearest inhabited structures? Unpaved roads, foot trails, and residential dwellings.

C. Number of buildings within a 2-mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	(5)
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of Buildings (Select the single largest value) **5**

Narrative. Buildings are situated within and adjacent to the OEW hazard area. Numerous buildings of mixed use are situated along Kamehameha Highway which fronts both valleys, follows the coastline, and serves as valley residents'/visitors' primary artery to and from the island's urban areas. Nearby rural residential communities situated along the coastline include Kaaawa, Punaluu, and Hauula.

D. Types of Buildings (within a 2-mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	(5)
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	(3)
Detention, Correctional	2
No Buildings	0

Types of Buildings (Select the single largest value) **5**

Describe types of buildings in the area. Residential dwellings are situated within the project site as well as agricultural warehouses and the Kahana State Park administration office. Public facilities include a hotel, restaurants, and park pavilions and comfort stations.

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

	VALUE
No barrier or security system	(5)
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or An artificial or natural barrier (e.g., a fence combined with a cliff) which completely surrounds the facility; and a means to control entry at all times through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0

Accessibility (Select the single largest value) **5**

Describe the site accessibility. Kahana Valley is a state park open to the public. Punaluu Valley is privately owned and access is restricted. Punaluu Valley residents and guests, however, are capable of traversing the site with little impedance. Hunters are allowed in both valleys.

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	(5)
None Anticipated	0

Site Dynamics (Select largest value) **5**

Describe the site dynamics. Kahana Valley continues to be developed into a park, thus patronage is anticipated to increase over time. Agricultural activities, which predominate in Punaluu Valley, may expand to interior sections of the valley.

Total Hazard Probability Value **30**
(Sum of Largest Values for A through F – Maximum of 30)

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	B	≥21 <27
OCCASIONAL	C	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	<8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	(1)	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1 Imminent Hazard – Expedite INPR – Immediately call CEHND-ED-SY commercial 205-955-4968 or DSN 645-4968.

RAC 2 High priority on completion of INPR – Recommend further action by CEHND.

RAC 3 Complete INPR – Recommend further action by CEHND.

RAC 4 Complete INPR – Recommend further action by CEHND.

RAC 5 Recommend no further action. Submit NOFA and RAC to CEHND.

==========

Part IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

From Part I.A. - Live ordnance was reportedly used at the site. The tail section to a 2.36 bazooka round and a portion of a 105 mm AP projectile were discovered in Kahana Valley during a site visit. A 75 mm AP or HE projectile, an 81 mm mortar, unexpended.30 caliber bullets, and expended M1 and M2 cartridges identified by a senior UXO supervisor were discovered in Punaluu Valley by area residents. A 21 October 1949 newspaper article announced the clearance of dud shells in Punaluu Valley by the Army and warned the public to avoid the area being searched. At least one area resident reports occasional discovery of OEW while hiking in the valley.

Refer to additional narration in Parts I and II above.

See CEHND DD Form 1391

1. COMPONENT	FY 19 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
Army		3 Dec 93

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
Pacific Jungle Combat Training Center Kahana and Punaluu Valleys, Oahu, Hawaii	DERP-FUDS

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	OEW	H09HI027401	12,544.9

4. COST ESTIMATES

4. PROJECT TITLE	U/M	QUANTITY	UNIT COST	COST ($000)
REMEDIAL DESIGN				
1. Environmental Compliance	LS			50.0
2. Archaeological / Historic Preservation Compliance	LS			100.0
3. Engineering and Design	LS			50.0
REMEDIAL ACTION				
1. Mobilization and Preparatory Work	LS			3.0
2. Drums/Tanks/Structures/Miscellaneous Demolition and Removal	LS			10,000.0
3. Disposal (Commercial)	LS			220.0
4. Demobilization	LS			3.0
5. Training	LS			0.8
6. Environmental Monitoring	LS			50.0
7. Contingency @ 10%	LS			1,027.7
S&A @ 8.5%				977.9
EDC				62.5
TOTAL				12,544.9

10. DESCRIPTION OF PROPOSED CONSTRUCTION

a. Perform surface and limited subsurface survey and clearance of OEW.

COST ESTIMATE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993

The attendant DD Form 1391 contains a cost estimate to conduct an OEW survey and clearance effort at Kahana and Punaluu Valleys located on the northeast coast of the island of Oahu pursuant to RAC 1 requirements. Although total acreage of the jungle combat training center was 2,266.77 acres, 2,000 acres comprising both valleys is being used as the basis for this cost estimate. The difference in acreage represents acquired parcels not used for jungle combat training (e.g., beachfront parcels used for bivouacking), and inaccessible areas such as steeply sloped valley walls and perennial stream beds.

REMEDIAL DESIGN

1. ENVIRONMENTAL COMPLIANCE. This includes preparation of necessary permits and clearances in satisfaction of Coastal Zone Management, Fish and Wildlife, and other federal, state, or local environmental quality control requirements including Section 7 threatened/endangered species consultation.

Cost Breakdown:	
Preparation of Permits, Clearances	50,000
Total	50,000

2. ARCHAEOLOGICAL / HISTORIC PRESERVATION COMPLIANCE. Because the site may be considered archaeologically significant, Section 106 and other historic preservation parameters must be complied with through site studies, permits, and clearances.

Cost Breakdown:	
Preparation of Permits, Clearances	100,000
Total	100,000

3. ENGINEERING AND DESIGN. This includes the preparation of work plans, site safety and health plans, and other plans as required by the proponent.

Cost Breakdown:	
Preparation of Plans, Reports	50,000
Total	50,000

REMEDIAL ACTION

1. MOBILIZATION AND PREPARATORY WORK. This includes mobilization of equipment and facilities.

Cost Breakdown:	
Mobilization of Construction Equipment and Facilities	3,000
Total	3,000

COST ESTIMATE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

2. DRUMS/TANKS/STRUCTURES/MISCELLANEOUS DEMOLITION AND REMOVAL. The cost estimate for ordnance survey and removal presumes surface and shallow subsurface (i.e., to three feet) OEW contamination over a total of 2,000 densely vegetated acres. Transects would be established, and both valleys visually surveyed and toned along said transects for unexploded ordnance. OEW discovered during a sweep/search phase would be marked for disposition. RSP techniques would be employed during access and recovery to the fullest extent possible. OEW items subject to BIP protocol would be detonated utilizing blast mitigating techniques to minimize habitat damage. A quality assurance and quality control team would follow access and recovery to ensure adequate coverage and clearance. Staffing would consist of ten individuals comprised of a senior UXO supervisor supported by UXO specialists and technicians.

Cost Breakdown:

Surface Sweep/Search @ $2,000 per acre	4,000,000
Surface Access/Recovery @ $2,000 per acre	4,000,000
Surface QA/QC Team @ $1,000 per acre	2,000,000
Total	10,000,000

3. DISPOSAL (COMMERCIAL). Disposal of OEW (e.g., small arms, shrapnel, brass, inert items) collected at the site would be transported to a solid waste landfill. The cost includes the services of a semi-truck driver and trailer once a week for 80 weeks presuming 25 acres a week are cleared during the OEW access and recovery phase. Disposal fees and taxes are based on an estimated volume of 0.5 ton per acre or 1,000 tons.

Cost Breakdown:

Transportation @ $800 per day	20,000
Disposal Fees and Taxes @ $200 per ton	200,000
Total	220,000

4. DEMOBILIZATION. This includes the demobilization of equipment and facilities.

Cost Breakdown:

Demobilization of Equipment and Facilities	3,000
Total	3,000

5. TRAINING. Pertinent DLNR personnel and area residents would be trained in OEW recognition, hazard, and reporting procedures following completion of the survey and clearance effort at Kahana and Punaluu Valleys. The training would be designed to enable said individuals to recognize any subsurface OEW items that may become exposed by erosive forces, and to respond accordingly. The training would consist of one 8-hour session conducted by a senior UXO supervisor.

Cost Breakdown:

Training @ $100 per hour	800
Total	800

COST ESTIMATE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
DERP - FUDS OEW PROJECT NO. H09HI027401
SITE NO. H09HI027400
3 DECEMBER 1993
(continuation)

6. ENVIRONMENTAL MONITORING. Residual effects of OEW survey and clearance on archaeological/historical resources and threatened/endangered species would be measured by archaeologists and biologists.

Cost Breakdown:	
Monitoring	50,000
Total	50,000

TRIP REPORT

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
DATES OF SITE VISIT: 14 APRIL 1992; 22 JANUARY 1993; 9 FEBRUARY 1993

Individuals participating in the site visit of Pacific Jungle Combat Training Center, Kahana Valley included Randall Kurashige (CEPOD-ED-EH), Farley Watanabe (CEPOD-ED-ES), Senior UXO Supervisor Byron Donaldson (Donaldson Enterprises, Inc.), and Derek Yasaka (Wil Chee - Planning). Kahana Valley is located approximately 26 miles from Honolulu along Kamehameha Highway between Kaneohe and Laie. It is presently under the purview of the Hawaii Department of Land and Natural Resources, Division of State Parks as a "living park".

The team met with A. L. Rogers, manager of Kahana Valley State Park, upon arrival. Mr. Rogers informed the team that 31 families presently reside within Kahana Valley on land leased to them from the State of Hawaii, though the valley is open to the public for hiking and hunting. When queried about World War II military artifacts, he described the presence of a bakery, mess hall, and showers at the mouth of the valley which have since been demolished. Mr. Rogers also indicated the existence of concrete bunkers and tank traps located along a hiking trail near a City and County of Honolulu Board of Water Supply water reservoir approximately two miles in the valley. When asked about the presence of OEW, Mr. Rogers stated that during his tenure as park manager (approximately two years), the only reported findings were of live .30 caliber rounds. Mr. Rogers further explained that said rounds could have post-dated the Army training center as the valley is a hunting area.

Mr. Rogers then referred the team to "Aunty" Lydia Dela Cerna, a longtime Kahana Valley resident. She reiterated the existence of concrete bunkers in the valley, though was unsure if anyone had ever discovered any OEW. Admittedly, her recollection of Kahana Valley as a military training center was vague.

Upon acquisition of gate keys from Mr. Rogers, the team then proceeded by vehicle to a Kawa Stream weir approximately 1.4 miles into the valley from the park office. Observed on the banks of the stream at the weir were two 2-foot tall concrete piers and a 7-foot tall wood timber A-frame support, reportedly remnants of a trolley that at one time traversed the stream to pass materials and personnel from one side to the other. The system's steel cable was discovered underwater adjacent to the west bank of the stream. According to a park representative, the trolley was dismantled by the Division of State Parks following injury to a park visitor. She did not known if said weir and trolley were installed by the Department of the Army.

Upslope and north of the wier at a gate leading to the above mentioned Board of Water Supply water reservoir is a loop hiking trail approximately three miles long. The trail leads to four concrete pillboxes situated at a former military jeep trail crossroad. Exterior dimensions of two quadrangular pillboxes are 10 feet by 10 feet by 6.5 feet tall with 1-foot thick walls. Unlike these, the remaining two pillboxes each have three flat sides and one side which is curved. Their exterior dimensions are 13 feet by 7 feet by 6.5 feet tall with 1-foot thick walls. Their pockmarked walls indicate these pillboxes were frequently fired at. Discovered OEW at the base of one pillbox include the tail section of a 2.36-inch bazooka round and what is surmised to be a portion of a 105 mm armor piercing (AP) round.

Near the pillboxes and obscured by fallen lauhala leaves are as many as 50 rusting tetrahedron angle iron tank traps. The 3.5-foot tall tank traps are, in general, neatly aligned in rows.

Upon returning to the park office, the secretary informed the team that several more remnant concrete structures exist along the east face of the valley. Names of long time residents were provided to the team to contact for more information.

A visual survey of the valley mouth revealed concrete curbing, a floor slab, and large concrete footings adjacent to a park comfort station. Their weathered appearance and predominance of aggregate suggests these remnants to be of World War II Army construction.

TRIP REPORT

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
DATES OF SITE VISIT: 14 APRIL 1992; 22 JANUARY 1993; 9 FEBRUARY 1993
(continuation)

On 22 January 1993, Louis Fung (Wil Chee - Planning), and Messrs. Donaldson and Yasaka performed a site visit of Punaluu Valley, also a part of Pacific Jungle Combat Training Center. They were met by John Primacio, Jr., vice president and manager of Koolau Agricultural Company, Ltd. who also escorted the team throughout the valley. The agricultural cooperative leases approximately 3,400 acres of Punaluu Valley from Kamehameha Schools / Bernice Pauahi Bishop Estate. Mr. Primacio explained that prior to World War II, the basic valley crops were taro and rice. Following the cessation of wartime hostilities, Kahuku Sugar Plantation began propagating sugar cane in Punaluu Valley.

Mr. Primacio recalled Punaluu Valley being referred to as "Green Valley" by the Army while Kahana Valley was designated "Red Valley" during utilization of the valleys as a training area. An Army-built coralline surfaced service road is still referred to as "Green Valley Road" by area residents. This road is also designated by Oahu Civil Defense Agency as an evacuation route to allow coastal inhabitants access to higher ground in the event of a tsunami.

While restoring and maintaining Punaluu Valley's irrigation ditches and tunnels, Mr. Primacio discovered remnants of several Army-constructed buildings including barracks, latrines, a mess hall, and a concrete bunker. He guided the team to one area in the rear of the valley in the vicinity of the cooperative's irrigation Tunnel No. 6. Observed by the team was a coral aggregate road partially obscured by fallen leaves and low lying vegetation. Near the road were segments of steel piping purportedly used to convey water to facilities downslope of Tunnel No. 6 where the Army tapped the irrigation ditch for its water supply. Rotting upright timbers set into the ground bear possible evidence of a barrack.

Observed alongside the irrigation system service road were several collapsed earthen bunkers. Still visible were wood beams and corrugated sheet metal siding. A visual search of these bunkers by Mr. Donaldson confirmed the absence of surficial OEW.

At the southern end of the irrigation system service road toward the rear of Punaluu Valley and near Koolau Agricultural Company's west irrigation ditch intake is a quadrangular concrete bunker. This structure measures eight feet square and four feet tall. Metal rings at each corner indicates the structure to have been fabricated off-site, then transported to its present location. Discarded food wrappers and packaging litter the interior. Reconnaissance performed by Mr. Donaldson again failed to locate any surficial OEW.

Prior to departure from Punaluu Valley, Mr. Primacio informed the team of the existence of a "Japanese tank" located on property in the valley not leased by Koolau Agricultural Company. He suggested contacting the Fely family who lease that parcel for authorization to conduct a reconnaissance of the premises.

On 9 February 1993, Messrs. Donaldson and Yasaka returned to Punaluu Valley to meet with Debbie Fely and visually survey the 6.7-acre parcel (TMK 5-3-011: 005) for remnants associated with the former training center. As stated by Mr. Primacio, a Japanese tank does indeed exist on this parcel. Upended, it resides approximately 100 yards north of the Fely home. Although pockmarked, expended projectiles were not visually observed by the team nor detected with a Schonstedt Instrument Company Model GA-52C flux gate magnetometer. Mr. Donaldson surmises the tank was transported into the valley as a prop during jungle training.

TRIP REPORT

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
DATES OF SITE VISIT: 14 APRIL 1992; 22 JANUARY 1993; 9 FEBRUARY 1993
(continuation)

Mrs. Fely informed the team that her son Keola frequently discovers OEW items both on their property and in other areas of Punaluu Valley. Keola allowed the team to peruse his collection of unexpended .30 caliber rounds, and expended M1 and M2 cartridges discovered while preparing garden plots around the Fely house. Another item in his possession was a 75 mm AP or high explosive (HE) round. Citing her concerns about the potential for detonation, Mr. Donaldson advised Mrs. Fely that the Honolulu Police Department be notified to properly dispose this OEW item.

Keola stated that he and his friends have encountered other OEW items in the valley while hiking. He escorted the team to the location of a live 81 mm mortar round wedged between the roots of a Java plum tree. The tree is located along the north edge of Green Valley Road near the Tukuafu residence on land leased by Koolau Agricultural Company. According to Mr. Donaldson, the round was fired but failed to detonate.

On 11 February 1993, Mr. Yasaka telephonically apprised Valerie Mendes, president of Koolau Agricultural Company, regarding the existence of said 81 mm round. She was instructed to contact the Honolulu Police Department that would in turn notify the 6th EOD Detachment for proper action. The telephone conversation was followed by written correspondence dated 16 February 1993, a copy of which is attached herewith.

Ms. Mendes telephoned Mr. Yasaka on 18 March 1993 that the OEW item was removed by an Army EOD detachment.

February 16, 1993

Ms. Valerie L. Mendes
Koolau Agricultural Company, Ltd.
915 Fort Street
6th Floor
Honolulu, HI 96813

Dear Ms. Mendes:

As per our telephone conversation on February 11, 1993, a fired, but unexpended, 81 mm mortar round was discovered by the undersigned and explosive ordnance specialist Byron Donaldson (Donaldson Enterprises, Inc.) on property belonging to the Bernice Pauahi Bishop Estate and leased by Koolau Agricultural Company, Ltd. The discovery was made during visual reconnaissance of Punaluu Valley on 9 February 1993 pursuant to the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS). The mortar round is lodged between the roots of a tree situated along the north edge of the valley's irrigation system service road approximately 50 yards southwest of the Tukuafu residence driveway (map enclosed).

We recommend you notify the Honolulu Police Department to report the existence and location of said unexploded mortar round. They will likely in turn contact the Army's explosive ordnance detachment for assistance.

This discovery suggests that more unexploded ordnance may continue to exist in the valley despite earlier clearance efforts by the U. S. military. We therefore recommend that Koolau Agricultural Company advise its personnel, valley residents, and occasional valley users to this potential hazard, to exercise caution, and to immediately report any unexploded ordnanced discoveries to local authorities for mitigation. We also recommend that ordnance not be handled whatsoever as such items can still detonate causing serious injury or death.

Sincerely,

Derek Yasaka
Environmental Scientist

Enclosure

WIL CHEE - PLANNING
Land Use Planners and Environmental Consultants

Ala Moana Pacific Center
1585 Kapiolani Boulevard
Suite # 818
Honolulu, HI 96814
Phone 808-955-6088
FAX 808-942-1851

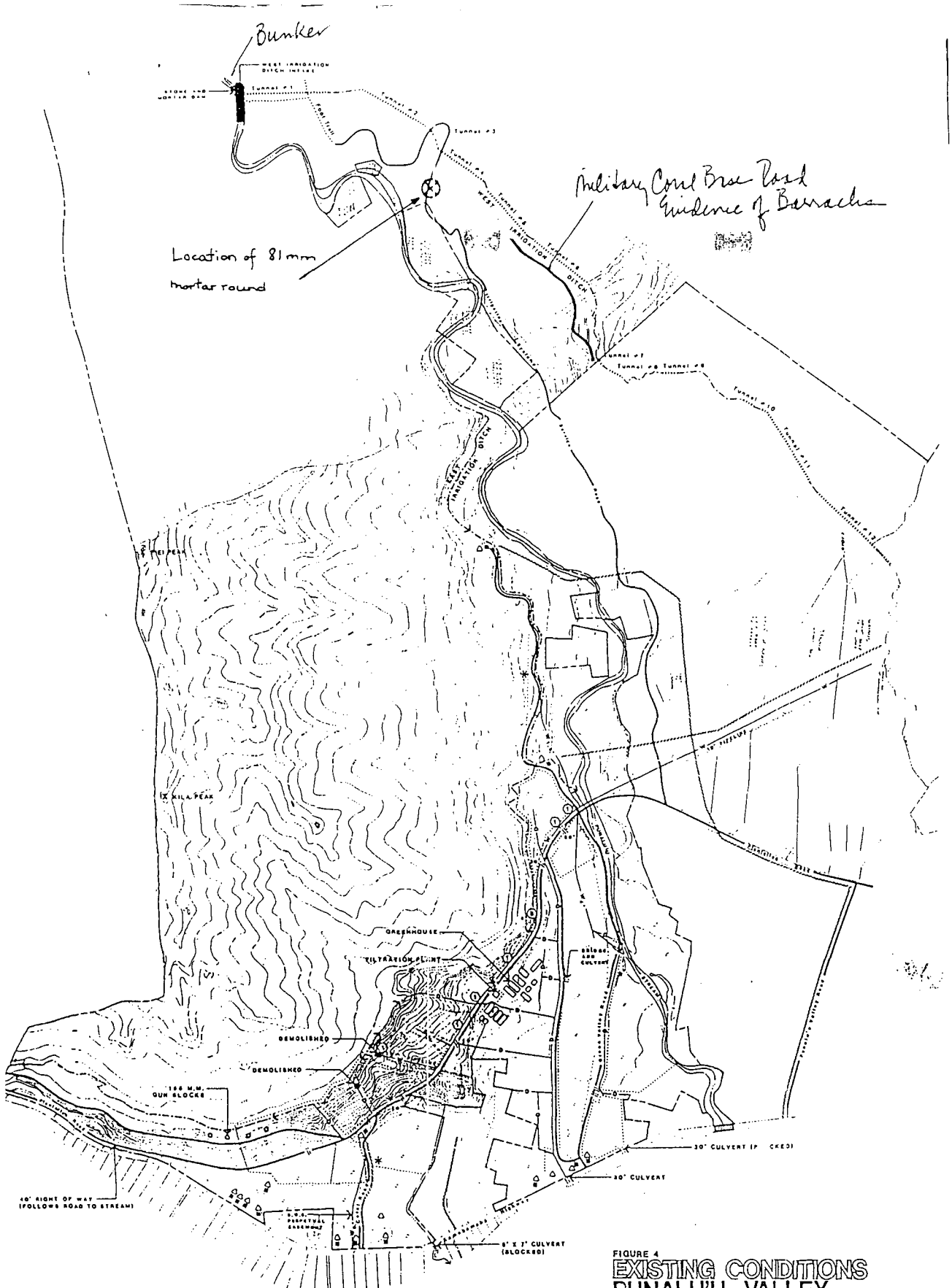


FIGURE 4

EXISTING CONDITIONS PUNALU'U VALLEY

ISLAND OF OAHU

SOURCES OF INFORMATION

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES
PACIFIC JUNGLE COMBAT TRAINING CENTER
KAHANA AND PUNALUU VALLEYS, ISLAND OF OAHU, HAWAII
SITE NO. H09HI027400
3 DECEMBER 1993

1. Allen, Gwenfread. 1950. *Hawaii's War Years, 1941-1945*. Honolulu: University of Hawaii Press. Reprinted by Greenwood Press, Westport, Connecticut, 1971.

2. Anonymous. 1949. "Dud Shells to Be Cleared Form Green Valley Area." *Honolulu Star-Bulletin.* 21 October.

3. Davis, Ellen. 1946. "War's End: One Year Later." *Paradise of the Pacific* 58 (August): 2.

4. Fely, Debbie and Keola. Address and telephone number withheld by request.

5. Primacio, John Jr. Vice President / Manager, Koolau Agricultural Company, Ltd. 915 Fort Street, 6th Floor, Honolulu, HI 96813. Telephone 808-526-4566.

6. Richardson, Lieutenant General Robert C. Jr. No date. *Historical Review Corps of Engineers, United States Army — Covering Operations During World War II, Pacific Ocean Area.* Volume I. Honolulu: United States Army Forces, Middle Pacific, Headquarters Oahu Engineer Service.

7. Richardson, Lieutenant General Robert C. Jr. No date. *U. S. Army History of G-3, Headquarters, Army Forces Middle Pacific — Functions and Activities 7 December 1941 - 2 December 1944.*

8. Rogers, A. L. Park Manager, Kahana Valley State Park. 52-290 Kamehameha Highway., Hauula, HI 96717. Telephone 808-237-8266.

9. Thompson, Erwin N. No date. *Pacific Ocean Engineers — History of the U. S. Army Corps of Engineers in the Pacific, 1905-1980.*

10. United States Army Corps of Engineers, Directorate of Real Estate. Fort Shafter, HI 96858-5440. Telephone 808-438-0911.

11. Watanabe, June. 1992. "Kahana didn't lack for ideas." *Honolulu Star-Bulletin,* 26 May, A-4.

12. Watanabe, June. 1992. "Huilua Fishpond restoration is a major project." *Honolulu Star-Bulletin*, 27 May, A-6.

13. Watanabe, June. 1992. "Living park once had more life." *Honolulu Star-Bulletin*, 27 May, A-1,A-6.

14. Wreckfinders. Post Office Box 1554, Kailua, HI 96734. Telephone 808-254-4891.

DONALDSON ENTERPRISES,INC.
EOD Services
45-645 Pua AloWalo Street
Kaneohe, Hawaii 96744
Tele/Fax (808) 235-BOMB

2-9-93

WIL CHEE PLANNING
1585 Kapiolani Blvd, Suite 818
Honolulu, Hawaii 96814
ATTN: Derek Yasaka

SUBJ: PACIFIC JUNGLE WARFARE TRAINING CENTER TRIP REPORT (UXO).

A uxo survey was conducted at the former Pacific Jungle Warfare Training Center located in Kahana Valley (Blue) and Punaluu Valley (Green). The survey was conducted on 4-19-92, 1-22-93, and 2-9-93. It consisted of a visual walk-through search for surface oew/uxo and a ferro-magnetic locator (Schonstedt GA-52) search for subsurface uxo.

On 4-19-92 Kahana Valley was investigated to determine the extent and magnitude of uxo contamination. Both of what appeared to be the military trails were searched and portions of the river that runs through the valley was also searched. The trails had indications of what appeared to be fighting holes which were probably loacations of ambush sites. At the apex of the two trails were three (3) portable concrete pillboxes of the type that are found on the beaches surrounding Oahu. Lying partially buried (found with the Schonstedt) was a 2.36 bazooka motor and base of a low order 105mm which was empty. Also the pillboxes appeared to have been fired upon with rifle fire. My first reaction was that this was a target in a impact area. After my interview with a former resident in the Valley, Mr. Howard Furuya (247-0969, born in the valley in 1933 and had a lease till 1979) these rounds and bunkers may have been brought to this location and destroyed. No warnings were given in newspapers that this area was going to be dedudded as was the normal practice at that time.

Punaluu Valley (Green Valley) was investigated on 1-22-93 in the same manner as Kahana Valley. This valley only had one (1) trail which ended at a steep dropoff over looking the Punaluu Stream. Located at this point was a single concrete pillbox buried partially in the ground which is of the same construction as those found in Kahana valley. At various points along the trail were covered fighting holes that supported each other and were probably utilized as ambush points. In september 1949 warnings were posted in the newspaper that this valley was being "dedudded". The portion of this valley that may have been the impact area was not accessible at this time.

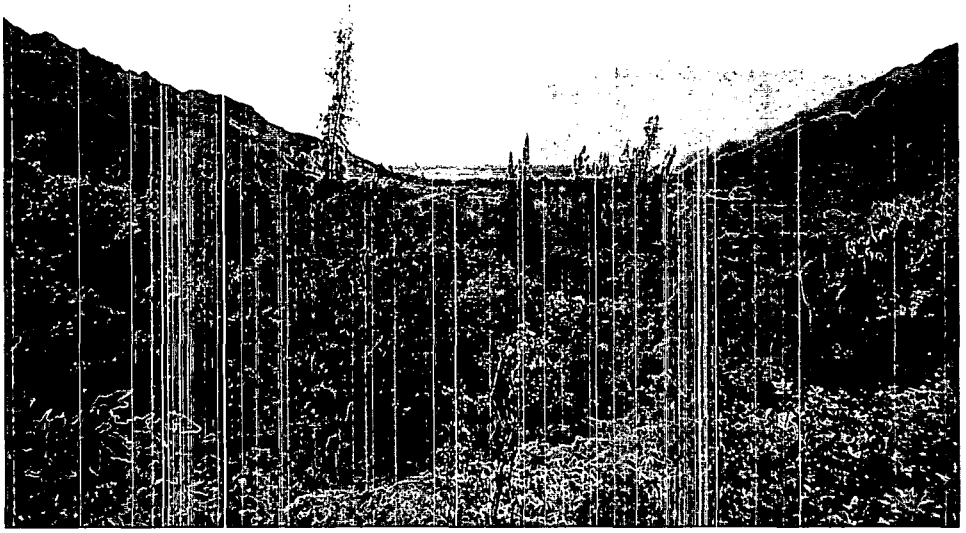
On 2-9-93 a uxo survey was conducted at the kuleana belonging to the Eve family. During the previous investigation this area had been pointed out as containing a WW II Japanese tank but was inaccessible to the investigating party. The current resident (Mrs Fealy) met us upon arrival at her property and briefed us on what she had seen during their 1 year stay on the site. Her son displayed his collection of smallarms (M1 rifle/M2 Carbine) which he found in the garden in front of the house,d a 75mm ap-t and a expended MK 28 sea marker, all of which he found on the property. Also, he directed us to a 81mm mortar that appeared to be HE filled. A tree root had grown around it and identification was difficult but I was able to determine it was in the fired condition with the safety pin missing (indicating it was probably fired there and not discarded). We then visited a WW II Japanese tank and searched the area but failed to locate any oew/uxo. I feel this tank was probably placed at this site for instruction purposes, however, it had sustained rifle fire of a unknown caliber. The search continued until late in the afternoon with nothing further being located.

Byron L Donaldson

BYRON L DONALDSON
VICE PRESIDENT



1. Concrete curbing, a floor slab, and footings located next to a parking lot and comfort station at the entrance to Kahana Valley State Park. View facing southwest.



2. View of Kahana Valley facing north towards its mouth. The viewpoint is approximately 2.1 miles inland from the park headquarters.



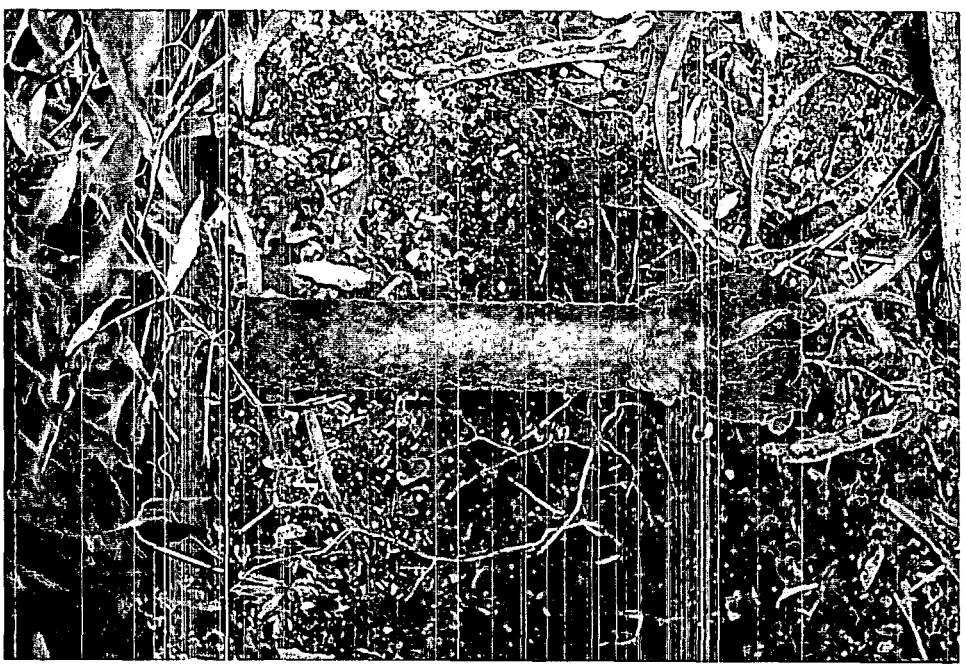
3. Concrete footings and a timber A-frame located along the west bank of Kawa Stream in Kahana Valley. The items are surmised to be remnants of a trolley which conveyed individuals and supplies across the stream.



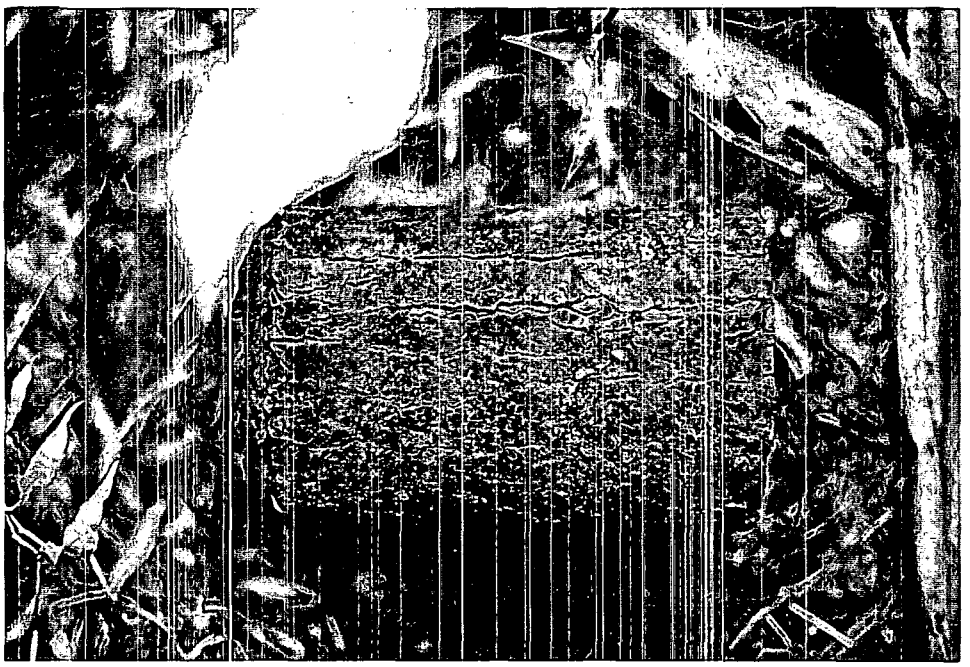
4. View of Kawa Stream and a weir from the location of the trolley remnants pictured above. Submerged near the bank is a length of steel cable which was likely strung across the stream and which supported the trolley.



5. Three of four concrete pillboxes situated just off a loop hiking trail in the rear of Kahana Valley near a Honolulu Board of Water Supply reservoir.



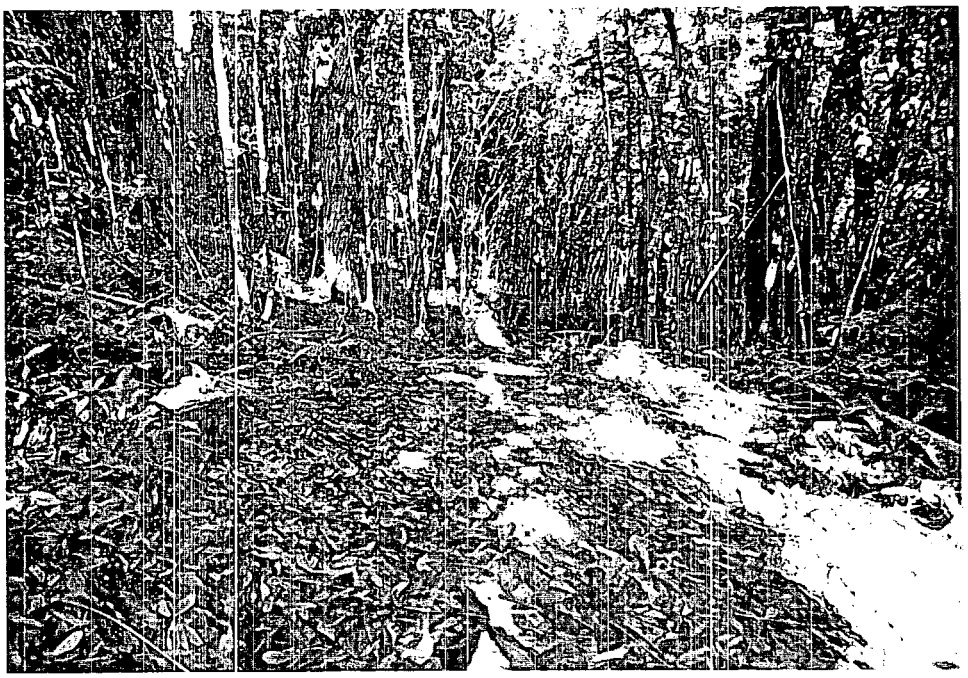
6. Tail section of a 2.36-inch bazooka round located at the base of a concrete pillbox in Kahana Valley.



7. Possible section of a 105 mm AP projectile located at the base of a concrete pillbox in Kahana Valley.



8. Rows of tetrahedron tank traps situated within a stand of lauhala trees in Kahana Valley.



9. Coral aggregate service road in Punaluu Valley reportedly constructed by the Army.



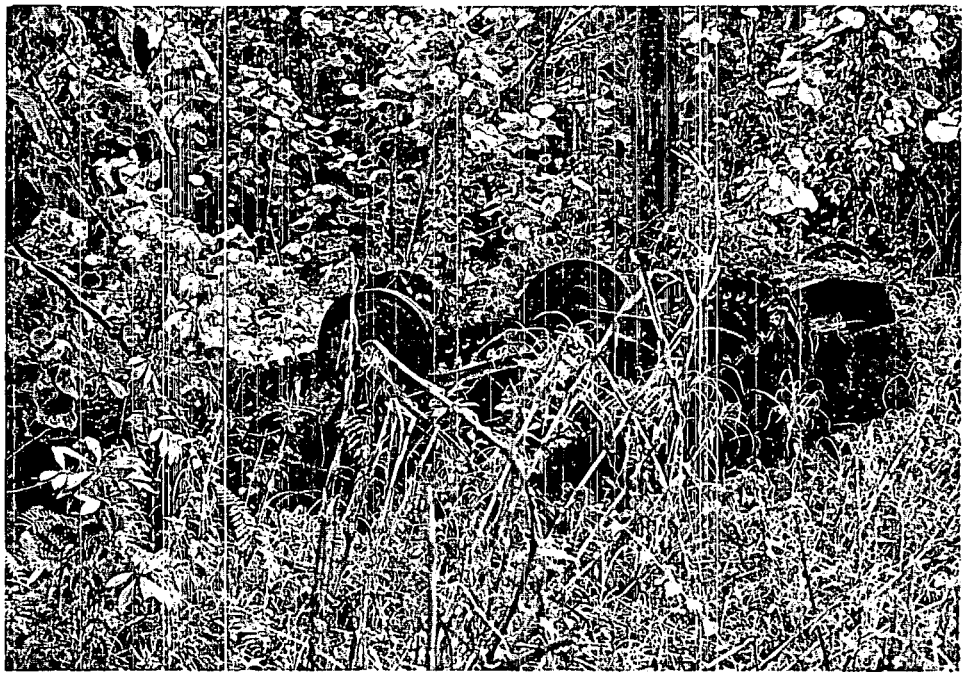
10. Upright timber footings to a military structure near the coral aggregate service road pictured above.



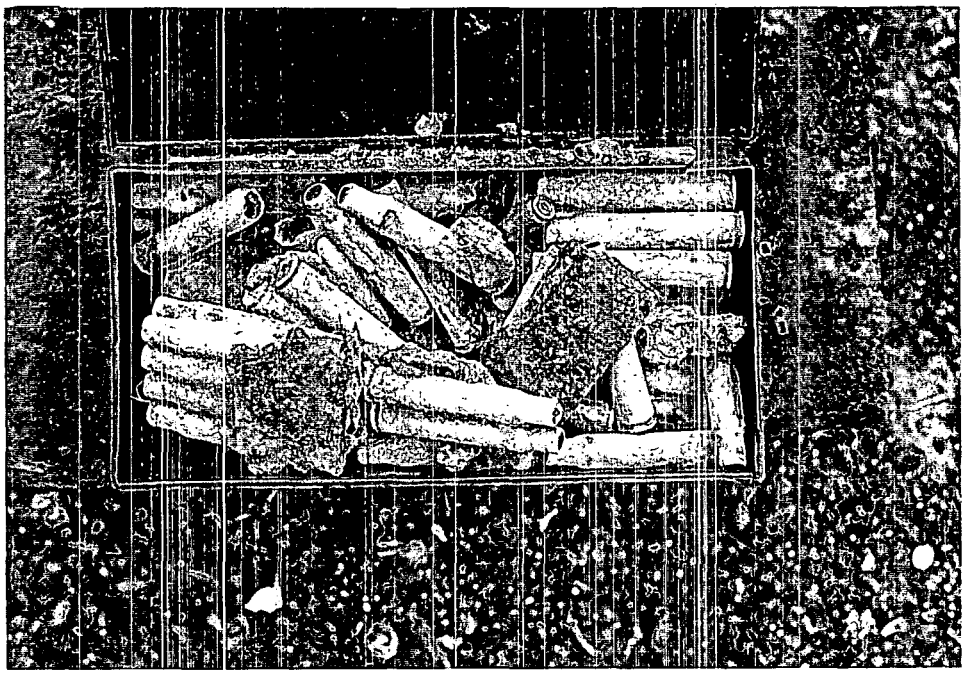
11. Corrugated sheet metal and timber bunker located along the side of Koolau Agriculture Company's irrigation system service road in Punaluu Valley.



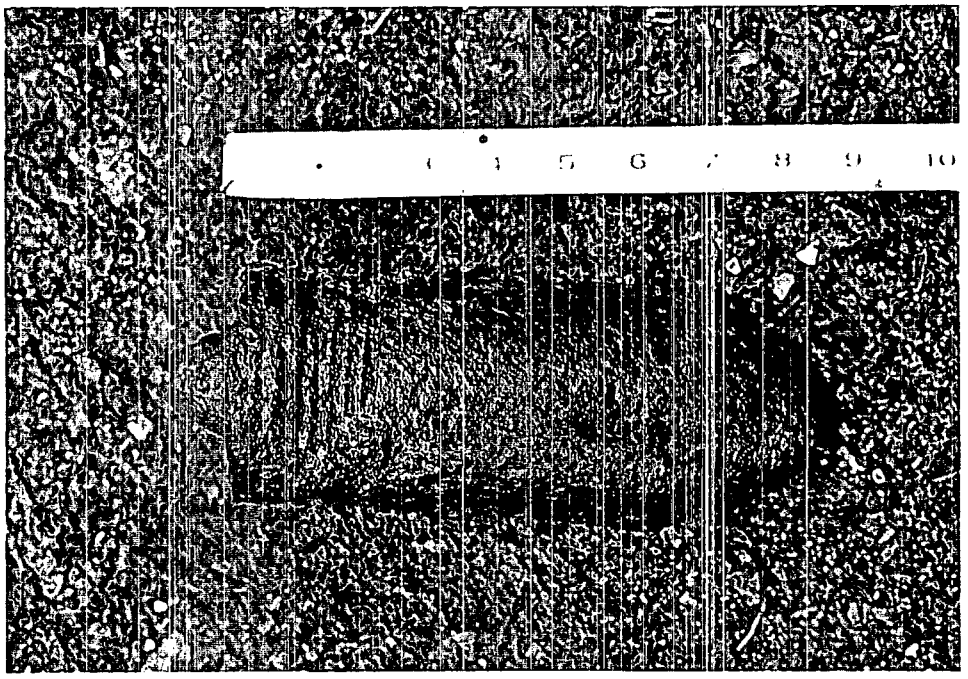
12. Quadrangular concrete bunker located near Koolau Agriculture Company's west irrigation ditch intake at Punaluu Stream.



13. Upended Japanese tank located at the Fely residence in Punaluu Valley.



14. Expended M1 and M2 cartridges, and an unexpended .30 caliber round unearthed at the Fely residence.



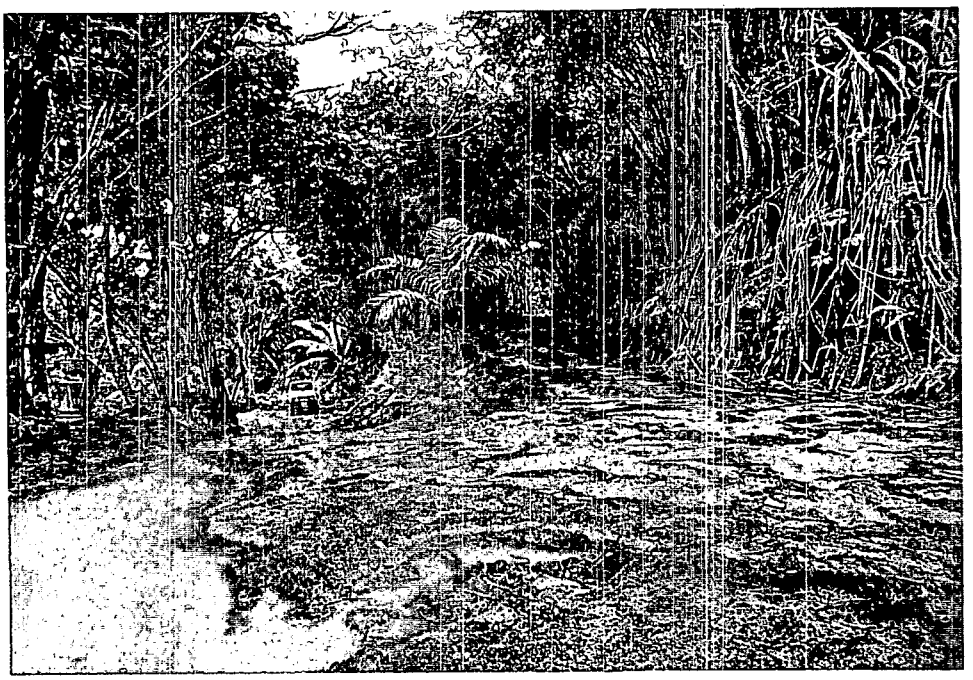
15. Portion of a 75 mm AP or HE in the possession of K. Fely. The round was reportedly discovered along the west face of Punaluu Valley.



16. Live 81 mm mortar wedged in the roots of a Java plum tree located along Green Valley Road in Punaluu Valley.



17. Java plum tree, at center in the photograph, where the 81 mm mortar was wedged. View facing west from across Green Valley Road.



18. View of Green Valley Road facing south with the Tukuafu residence driveway visible at left center in the photograph. The 81 mm mortar was discovered approximately 25 yards past (south of) the driveway entrance on the right side of Green Valley Road.