

**SUBMISSION CASE NARRATIVE
NDMA**

MAXXAM L.I.M.S. No. A314211

PROJECT: Applied P&CH Laboratory NDMA Analysis

I. Receipt

Sample was received at Maxxam on April 25 2003.
Sample was received in good condition.

II. Holding Times

- A. Sample preparation: all holding times were met.
- B. Sample analysis: all holding times were met.

III. Method

The method followed was Maxxam's in-house method for NDMA analysis, Entitled "EXTRACTION & ANALYSIS OF NITROSAMINES AND NDMA BY HRMS" SOP # TO.1021.08.

IV. Preparation

Sample preparation proceeded normally. Sample was extracted on April 28, 2003.

V. Analysis

Analysis proceeded normally. Sample was analyzed on May 1, 2003.


A. Calibration: All criteria were met.

B. Mass Resolution: All criteria met.

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- C. Method Blank: All acceptance criteria were met for the method blank and no detects have been observed above the MDL.
- D. Laboratory Control Spike: A LCS and LCSDUP were analyzed with all acceptance criteria met and they had a RPD of 5%.
- E. Matrix spike/Matrix spike duplicate: MS and MSD were analyzed not analyzed with these samples.
- F. Surrogate Standards: All samples and QC samples met surrogate Standard criteria
- G. Samples: Sample analysis proceeded normally.
- H. Glass blank: All acceptance criteria for the glass blank were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Maxxam Analytics Inc., both technically and for completeness, except for any conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the HRMS Strategic Business Unit Operational Manager, as verified by the following signature.


AnnMarie Wright, B.Sc.
Laboratory Operations Manager

This report contains 88 pages.

000002

SUMMARY OF SAMPLES SUBMITTED-NDMA						
(YYYY/MM/DD)						
SOTA SAMPLE NO	MAXXAM L.I.M.S. ID	DATE SAMPLED	DATE RECEIVED	DATE EXTRACTED	DATE ANALYZED	ASSOCIATED QC LABEL
MW-4-1	A314211-997113	2003/04/21	2003/04/25	2003/04/28	2003/05/01	470707

000003

Glossary of Definitions

NDMA	N-Nitrosodimethylamine
OPR	Ongoing Performance & Recovery Standard (Matrix spike)
PAR	Performance & Recovery Standard (Spiking Mixture)
IPR	Initial Performance & Recovery Standard (Matrix spike)
K-D	Kuderna-Danish concentrator; a device used to concentrate the analytes in a solvent
LIMS	Laboratory Information Management System
MISA	Municipal Industrial Strategy for Abatement
EPA	see USEPA
USEPA	United States Environmental Protection Agency
CEPA	Canadian Environmental Protection Agency
amp	ampere
cm	centimetre
g	gram
h	hour
ID	internal diameter
OD	outside diameter
In.	inch
L	litre
M	Molecular ion
min	minute
mL	millilitre
mm	millimetre
m/z	mass-to-charge ratio
N	Normal; gram molecular weight of solute divided by hydrogen equivalent of solute, per litre of solution
mg	milligram 10^{-3} g
μ g	microgram 10^{-6} g
ng	nanogram 10^{-9} g
pg	picogram 10^{-12} g
fg	femtogram 10^{-15} g
ppm	parts per million (mg/L, mg/kg)
ppb	parts per billion (μ g/L, μ g/kg)
ppt	parts per trillion (ng/L, ng/kg)
ppq	parts per quadrillion (pg/L, pg/kg)
v/v	volume per unit volume
w/v	weight per unit volume
DCM	Dichloromethane (Methylene Chloride)
PFK	Perfluorokerosene
HIRES	High Resolution
GC	Gas Chromatography

MS Mass Spectrometry
HRMS High Resolution Mass Spectrometry

Acceptance Criteria

Values used by the laboratory in order to determine that a process is in control.

Accuracy It is the degree of agreement of a measured value with the true or expected value of the quantity of concern.

Analyte A Nitrosodimethylamine and/or 1,4-Dioxane parameter tested by a method.

Blind Sample It is a sample submitted for analysis whose composition is known to the submitter but unknown to the analyst. A blind sample is used to test the proficiency of a measurement process.

Calibration Standard (CAL)

Consist of a set of solutions containing known amounts of native & carbon-13-labelled NDMA and/or 1,4-Dioxane. These solutions are used to establish the relationship between the parameter's concentration & MS detector response over the expected range of sample concentration.

Calibration Verification Material

Consists of a calibration standard solution of intermediate level concentration (e.g. CS3), used to assess whether the initial calibration is still valid.

Certified Reference Material

It is a stable, homogenous, and well characterized reference material, one or more of whose property values are certified by repetitive analysis by several operators & different methodologies in one or more qualified laboratories of known precision & accuracy. This material is used to assess the accuracy of a measurement process.

CAS# Chemical Abstracts Compound Registry Number.

Control Sample

It is a reference material of known composition that is analyzed concurrently with test samples to evaluate the accuracy and/or precision of a measurement process.

EDL Estimated detection limit or detection limit.

Glassware Proof Rinse

It is the composite final solvent rinse of each piece of glassware intended for use in processing a batch of samples. Proof rinse samples are analyzed before sample processing begins.

Instrument Detection Limit

It is the smallest concentration/amount of analyte, in a solution containing only the analyte(s) of interest, which produces an instrumental response that satisfies all analyte detection & identification criteria.

IS Internal Standard, a deuterated or ¹³C-labelled analyte that is added to a sample extract prior to instrument analysis.

Isomer A member of a group of compounds that differ from each other only in terms of locations of a specified number of common substituent atoms, or groups of atoms, on the parent compound.

Method Blank Laboratory control sample using reagents, purified water, soil or relevant matrix known to be free of contaminants.

Method Detection Limit (MDL)

It is the smallest test sample concentration/amount of analyte that produces an instrumental response that satisfies all analyte detection & identification criteria when the sample is processed & analyzed according to the requirements of a specific test method. Reported MDL values reflect the composite effect of sample-related variables as well as method-related variables.

MSDS Material Safety Data Sheet

NIOSH National Institute of Occupational Safety & Health

Precision It is the degree of agreement between the data generated from repetitive measurements under specified conditions. It is generally reported as the standard deviation (SD) or relative standard deviation (RSD).

%D Percent Difference.

Quality Assurance (QA)

It is a system of activities whose purpose is to provide the producer or user of a product with the assurance that the product meets a defined standard of quality. The system consists of two separate but related activities, quality control & quality assessment.

Quality Control (QC)

It is the overall system of activities whose purpose is to control the quality of a product so that it meets the needs of users.

Recovery Standards

They are selected compounds that are added to sample extracts immediately before instrumental analysis so that surrogate (internal standard) recoveries can be calculated.

RPD (%) Relative Percent Difference.

Relative Retention Factor (RRF)

It is the quotient of a target analyte response factor (instrument response per unit weight) divided by the response factor (RF) for its corresponding labelled surrogate. An RRF value remains constant over the range of concentration for which instrument response is linear.

RSD Relative Standard Deviation.

SDS Soxhlet/Dean-Stark extractor, an extraction device applied to the extraction of solid & semi-solid materials.

Spiked blank Laboratory control sample that has been fortified with native analytes of interest.

Stock Solution A solution containing an analyte that is prepared using a reference material traceable to EPA, the National Institute of Science & Technology (NIST), or a source that will attest to the purity & authenticity of the reference material.

Surrogate A compound whose composition and chemical properties are nearly identical to those of target analytes, but which is distinguishable from target analytes by some means of detection (i.e. MS). These include deuterated or ¹³C-labelled analogues of the target analytes, which are added to the sample prior to extraction or clean-up steps.

Window Defining Mixture

It is a solution containing the earliest & latest eluting congeners within each homologous group of target analytes on a specified GC column.

SAMPLE DATA

000008

MW-4-1

Lab Name Maxxam Analytics Inc.

Matrix (soil/water): water

Sample wt/vol: 980 (g/mL) mL

Level (low/med) low

% Moisture Not applicable Decanted (Y/N): N

Concentrated Extract Volume 1000 (uL)

Injection Volume 2 (uL)

Acid Wash Cleanup (Y/N): N pH Not analyzed

Lab Sample ID: A314211-997113

Project Name: JPL

Lab File ID: KR23450042

Date Received: April 25, 2003

Date Extracted: April 28, 2003

Lab Batch: 470707

Date Analyzed: May 1, 2003

Calib. Ref.: 20030430

Time Analyzed: 18:52:12

Dilution Factor: 1

CAS No.	Compound	Conc. (ug/L)	Qualifier	EDL (ug/L)	RL (ug/L)
62-75-9	NDMA	0.00200	U	0.000370	0.00200
	Surrogate	Recovery (%)	Acceptance Criteria (%)		
000	D6-NDMA	11	10-85		

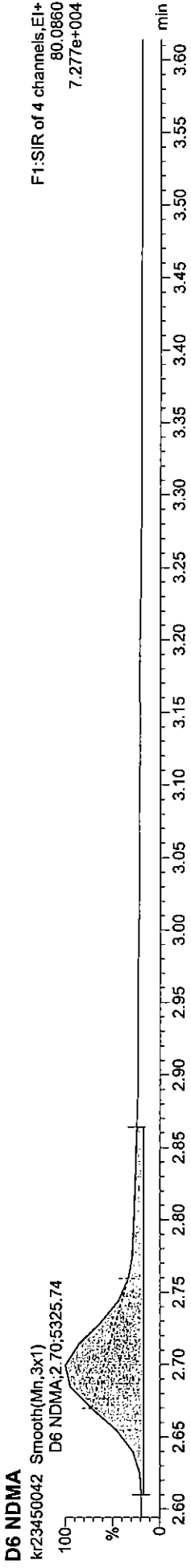
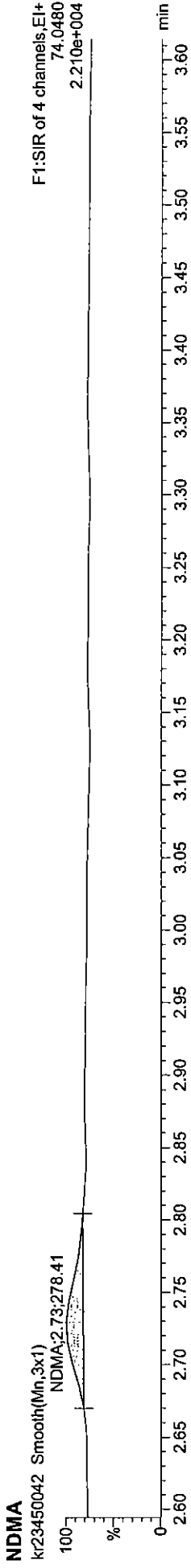
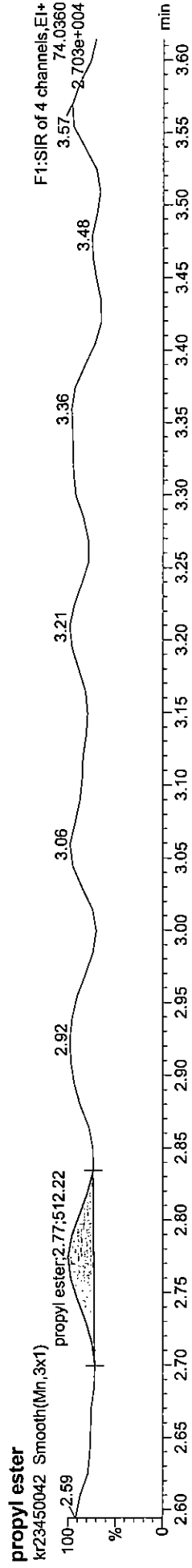
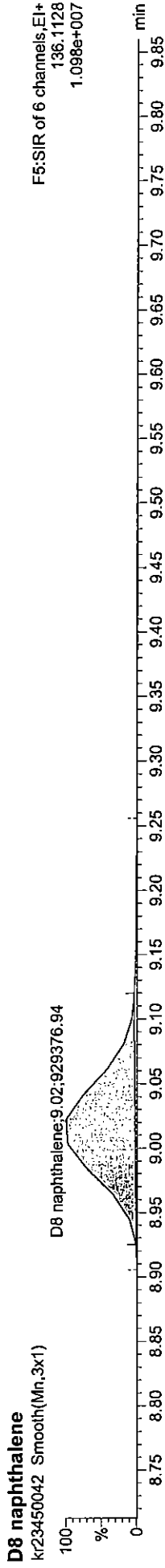
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Quantify Sample Report

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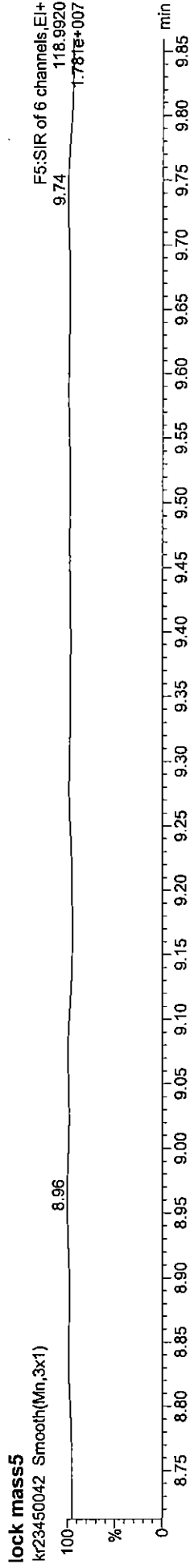
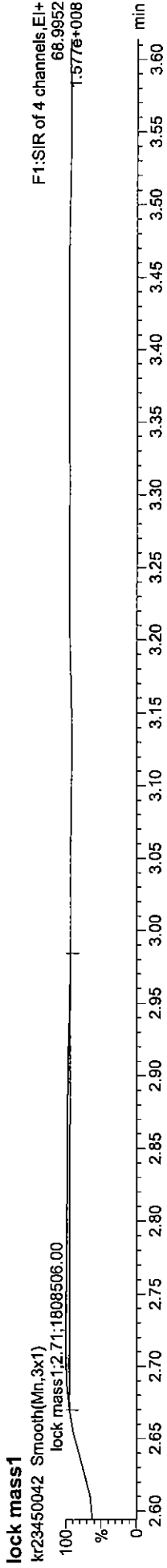
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000010

Quantify Sample Report

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#	Compound Name	Trace	Abs Resp	RT	ng/L	%Rec	Mod Date	Divisor	RRR Mean
1	NDMA	74.0480	278	2.73	0.04 ND		02-May-03	980	1.673
2	D6 NDMA	80.0860	5326	2.70	1033.04	10.54	02-May-03	1	0.139
3	D8 naphthalene	136.1128	929377	9.02	25000.00	100.00	02-May-03	1	1.000
4	propyl ester	74.0360	512	2.77	0.10	10.25	02-May-03	1	4996.306

FDL = 0.37 ug/L

W

TD

000011

LABORATORY BLANK

000012

WATER LABORATORY METHOD BLANK

Lab Name Maxxam Analytics Inc.

Matrix (soil/water): water

Sample wt/vol: 1000 (g/mL) mL

Level (low/med) low

% Moisture Not applicable Decanted N

Concentrated Extract Volume 1000 (uL)

Injection Volume 2 (uL)

Acid Wash Cleanup (Y/N): N pH Not analyzed

Lab Sample ID: A314211-470707B

Project Name: JPL

Lab File ID: KR23450033

Date Received: Not Applicable

Date Extracted: April 28, 2003

Lab Batch: 470707

Date Analyzed: May 1, 2003

Calib. Ref.: 20030430

Time Analyzed: 16:02:59

Dilution Factor: 1

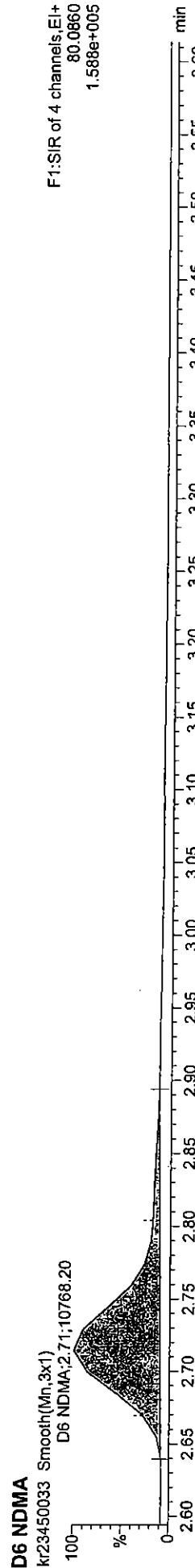
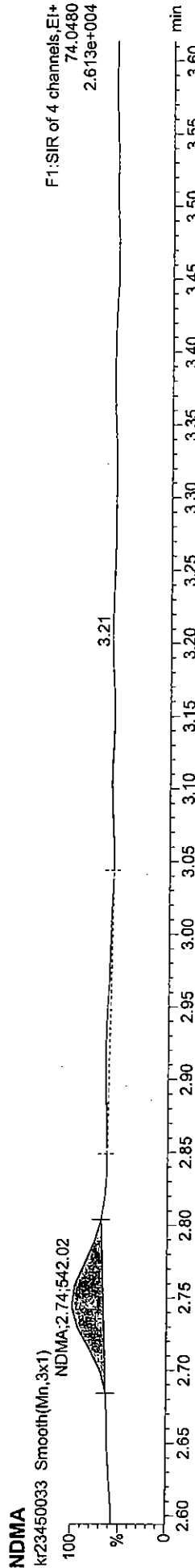
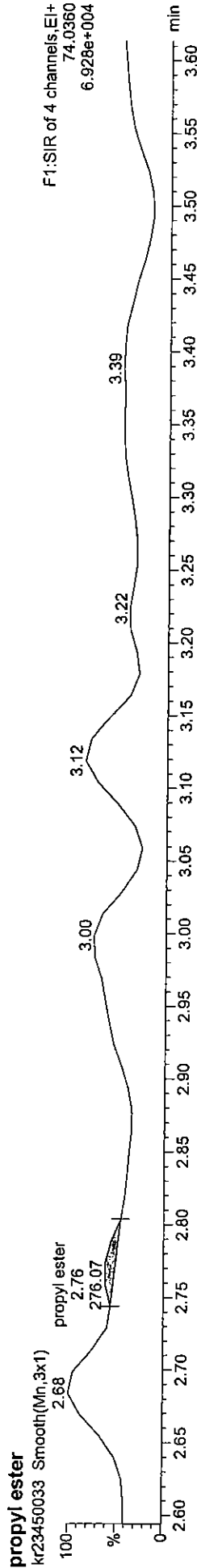
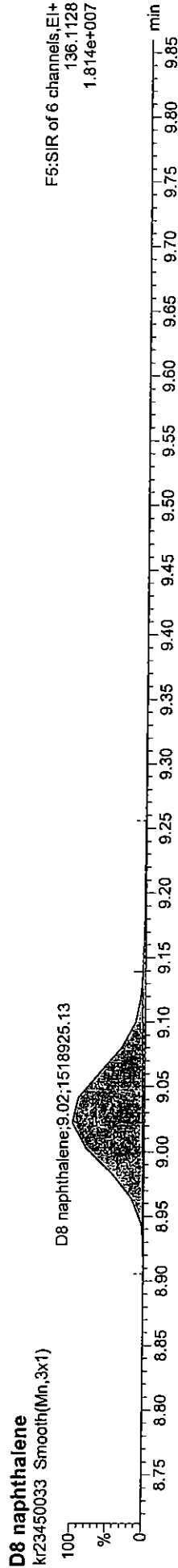
CAS No.	Compound	Conc. (ug/L)	Qualifier	EDL (ug/L)	RL (ug/L)
62-75-9	NDMA	0.00200	U	0.000370	0.00200
	Surrogate	Recovery (%)	Acceptance Criteria (%)		
000	D6-NDMA	13	10-85		

000013

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Name: kr23450033.*, Date: 01-May-2003, Time: 16:02:59, Job: , Description: 470707.blank,N,1,2



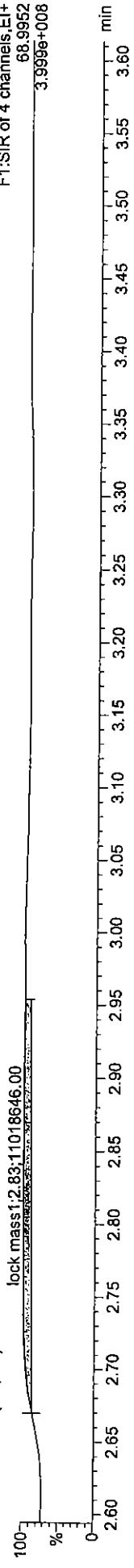
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Quantify Sample Report

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lock mass1

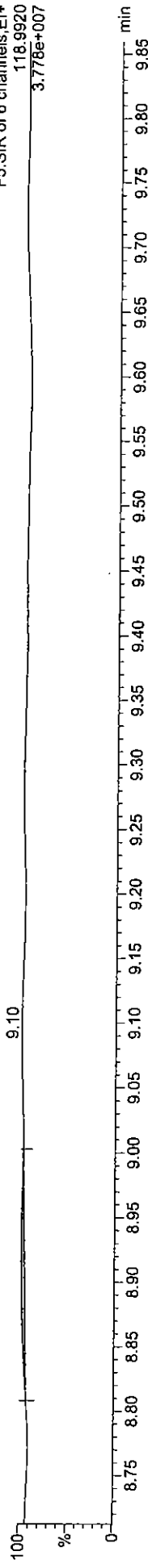
kr23450033 Smooth(Mn,3x1)



F1:SIR of 4 channels, EI+
68.9952
3.9999e+008

lock mass5

kr23450033 Smooth(Mn,3x1)



F5:SIR of 6 channels, EI+
118.9920
3.778e+007

#	Compound Name	RT	Area	%Area	Mod Date	MS	RR	RR
1	NDMA	2.74	6297	ND	02-May-03	1000	1.673	
2	D6 NDMA	2.71	1278.01	13.04	02-May-03	1	0.139	
3	D8 naphthalene	9.02	25000.00	100.00	02-May-03	1	1.000	
4	propyl ester	2.76	0.06	5.53	02-May-03	1	4996.306	

EDI = 0.37 ug/L

PC

DN

000015

LABORATORY CONTROL SAMPLE

000016

WATER LABORATORY SPIKED BLANK

Lab Name Maxxam Analytics Inc.

Matrix (soil/water): water

Sample wt/vol: 1000 (g/mL) mL

Level (low/med) low

% Moisture Not applicable Decanted (Y/N): N

Concentrated Extract Volume 1000 (uL)

Injection Volume 2 (uL)

Acid Wash Cleanup (Y/N): N pH Not analyzed

Lab Sample ID: A314211-470707S

Project Name: JPL

Lab File ID: KR23450031

Date Received: Not Applicable

Date Extracted: April 28, 2003

Lab Batch: 470707

Date Analyzed: May 1, 2003

Calib. Ref.: 20030430

Time Analyzed: 15:30:14

Dilution Factor: 1

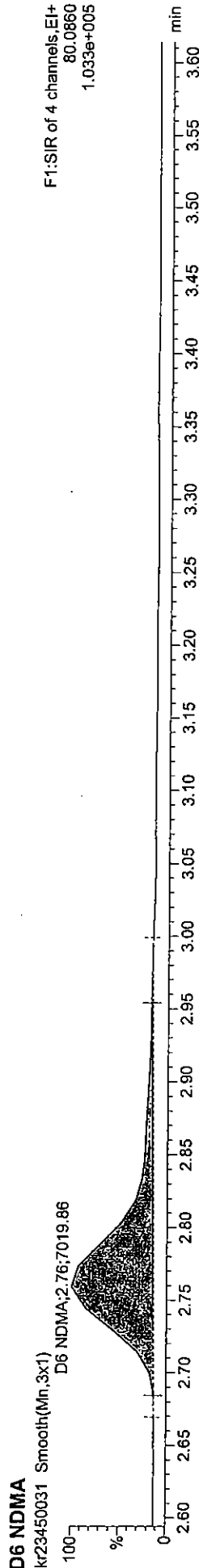
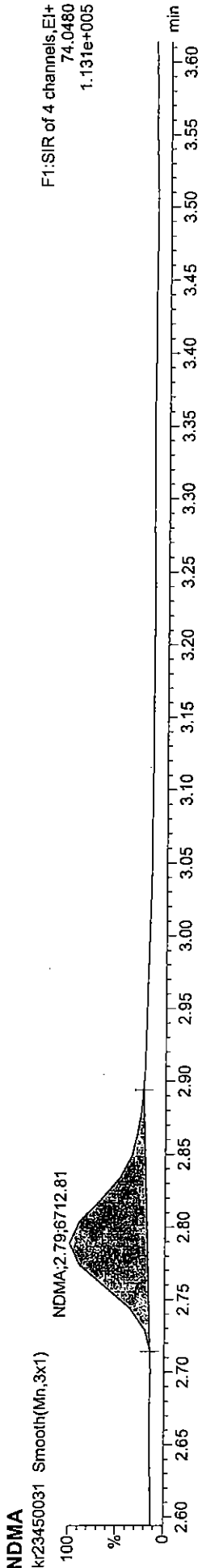
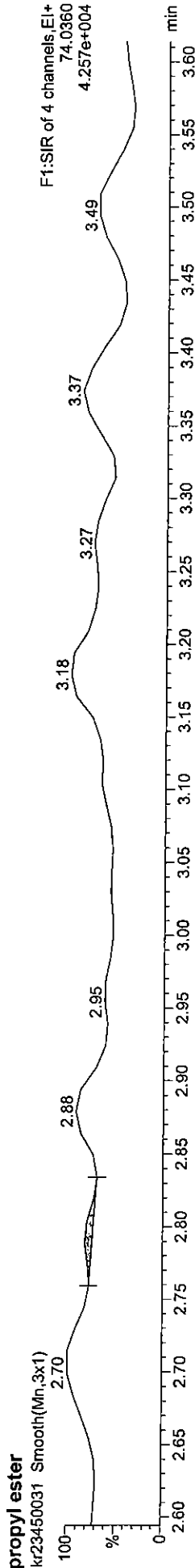
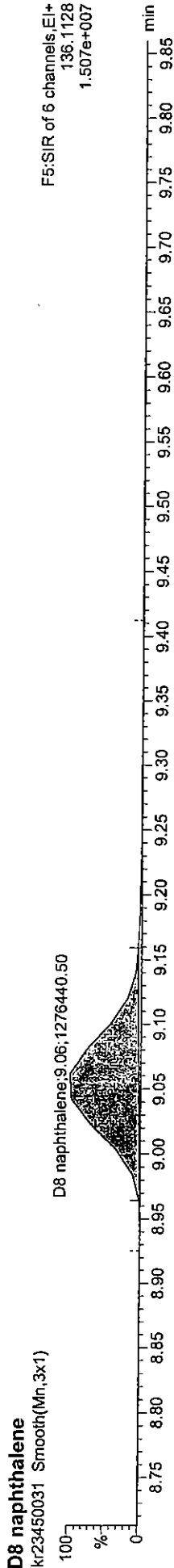
CAS No.	Compound	Extract Conc. (ug/L)	Spike Level (ug/L)	Recovery (%)	Acceptance Criteria (%)
62-75-9	NDMA	0.00560	0.00500	112	10-173
	Surrogate	Recovery (%)	Acceptance Criteria (%)		
000	D6-NDMA	10	10-85		

000017

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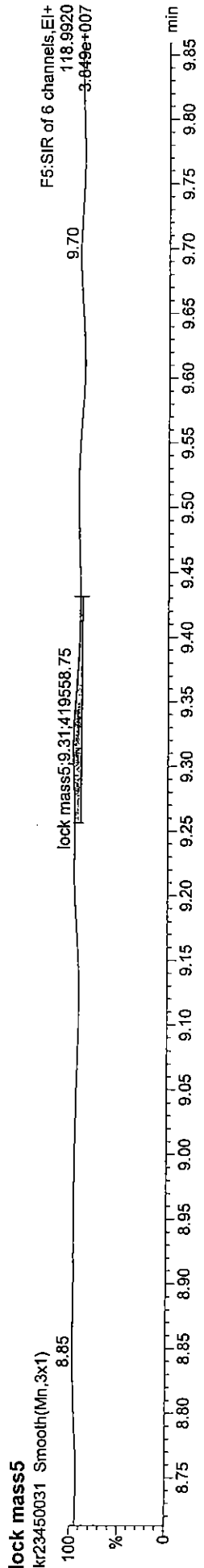
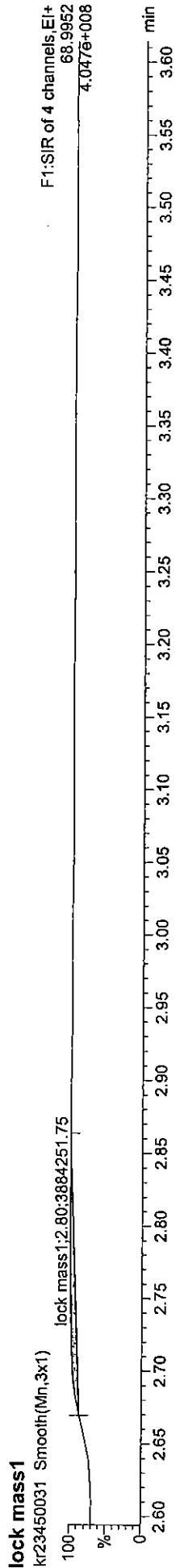
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000018

Quantify Sample Report

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#	Compound Name	Rate	Abs Resp	Ret	Indi	%Reci	Mol Data	Divison	RR Mean
1	NDMA	74.0480	6713	2.79	5.60	112.02	02-May-03	1000	1.673
2	D6 NDMA	80.0860	7020	2.76	991.42	10.12	02-May-03	1	0.139
3	D8 naphthalene	136.1128	1276441	9.06	25000.00	100.00	02-May-03	1	1.000
4	propyl ester	74.0360	130	2.79	0.03	2.60	02-May-03	1	4996.306

LD

000019

WATER LABORATORY SPIKED BLANK DUPLICATE

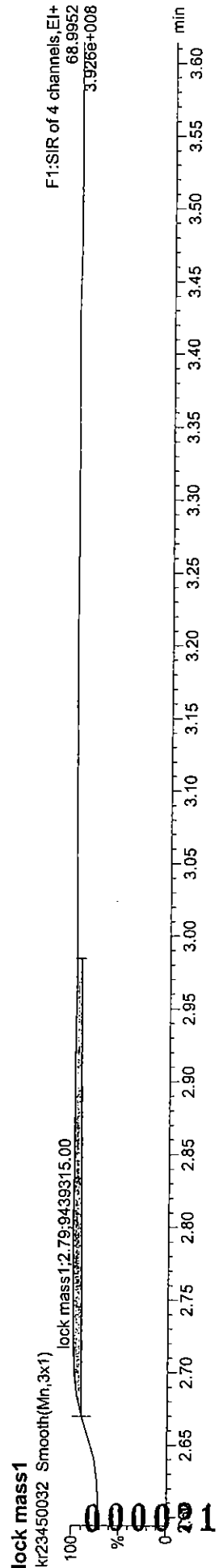
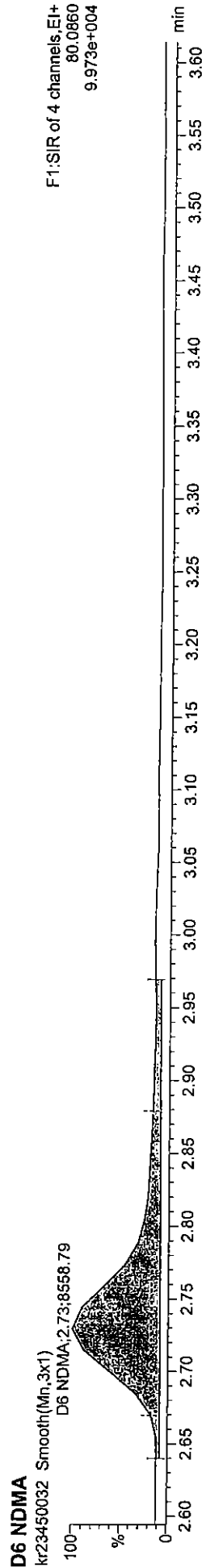
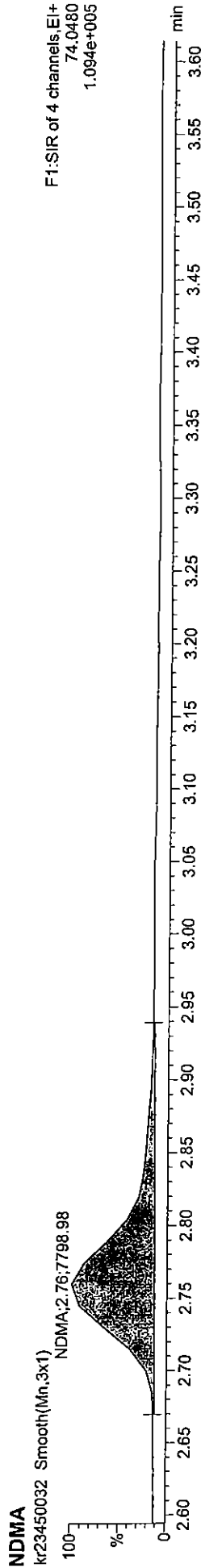
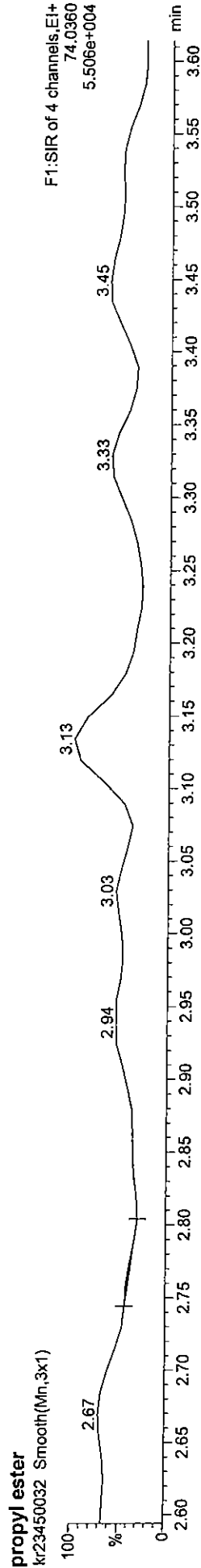
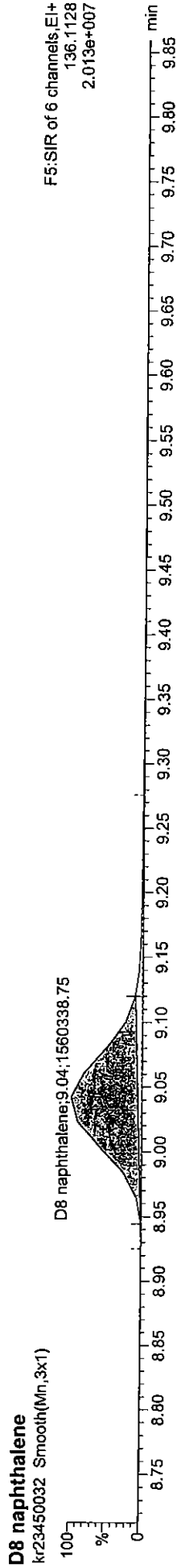
Lab Name	<u>Maxxam Analytics Inc.</u>			Lab Sample ID:	<u>A314211-470707SD</u>
Matrix (soil/water):	<u>water</u>			Project Name:	<u>JPL</u>
Sample wt/vol:	<u>1000</u>	(g/mL)	<u>mL</u>	Lab File ID:	<u>KR23450032</u>
Level (low/med)	<u>low</u>			Date Received:	<u>Not Applicable</u>
% Moisture	<u>Not applicable</u>	Decanted (Y/N):	<u>N</u>	Date Extracted:	<u>April 28, 2003</u>
Concentrated Extract Volume	<u>1000</u>	(uL)		Lab Batch:	<u>470707</u>
Injection Volume	<u>2</u>	(uL)		Date Analyzed:	<u>May 1, 2003</u>
Acid Wash Cleanup (Y/N):	<u>N</u>	pH	<u>Not analyzed</u>	Calib. Ref.:	<u>20030430</u>
				Time Analyzed:	<u>15:44:12</u>
				Dilution Factor:	<u>1</u>

CAS No.	Compound	LCS Extract Conc (ug/L)	Spike Level (ug/L)	Recovery (%)	%RPD LCS/LCSD	Acceptance Criteria (%)
62-75-9	NDMA	0.00534	0.00500	107	5	25
	Surrogate	Recovery (%)	Acceptance Criteria (%)			
000	D6-NDMA	10	10-85			

000020

Dataset: C:\MASSLYN\Default.pro\QuantYnFiles\QC\Blks_Spks\20030428\spk_20030428_Rinj.qld, Time: Fri May 02 09:24:08 2003

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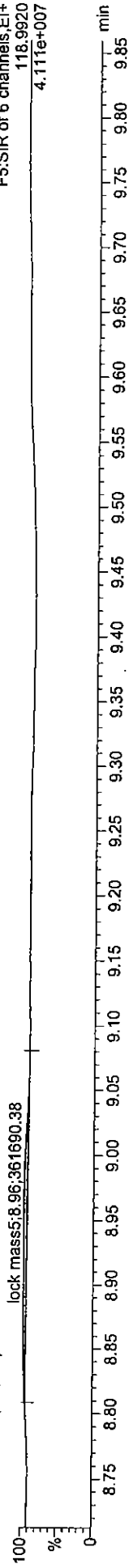


Quantify Sample Report

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lock mass5

kr23450032 Smooth(Mn,3x1)



#	Compound Name	Area	Height	Width	Area%	Height%	Width%	Mod Date	Divisor	IR	Mean
1	NDMA	74.0480	2.76	5.34	106.75	02-May-03	1000	1.673			
2	D6 NDMA	80.0860	2.73	988.83	10.09	02-May-03	1	0.139			
3	D8 naphthalene	136.1128	9.04	25000.00	100.00	02-May-03	1	1.000			
4	propyl ester	74.0360	2.74	0.01	0.63	02-May-03	1	4996.306			

W

2 D

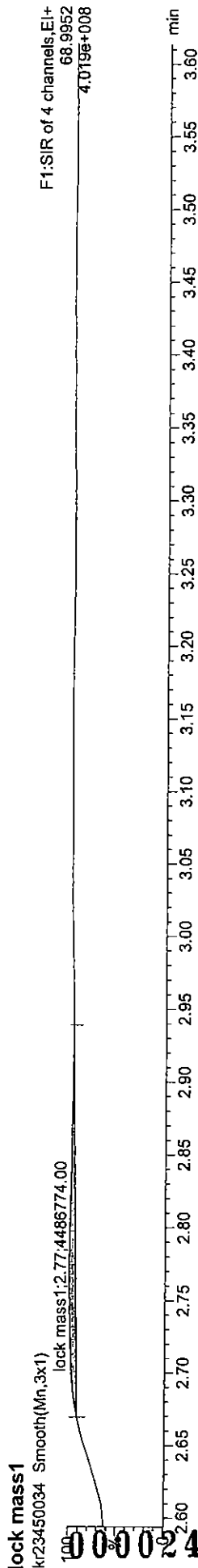
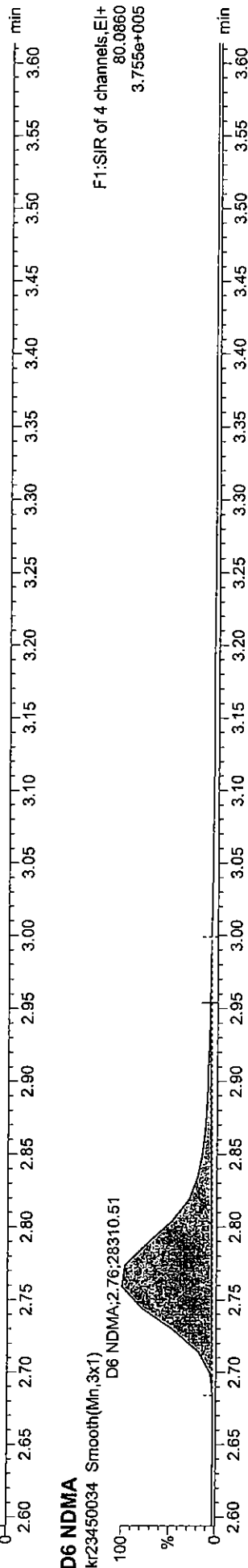
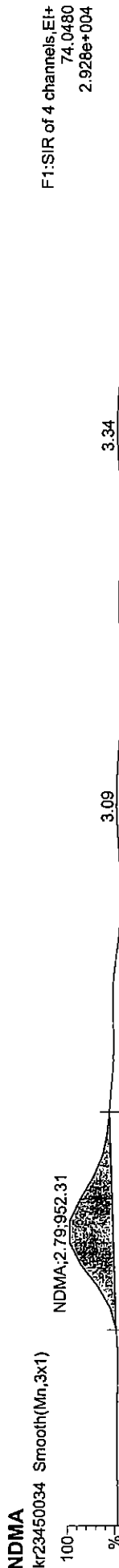
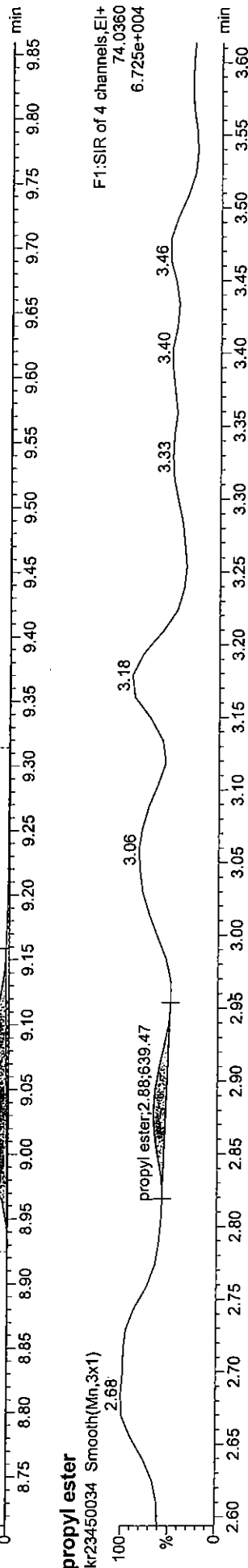
000022

GLASS BLANK

000023

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Name: kr23450034.*, Date: 01-May-2003, Time: 16:21:47, Job: , Description: glass blank (20030428)



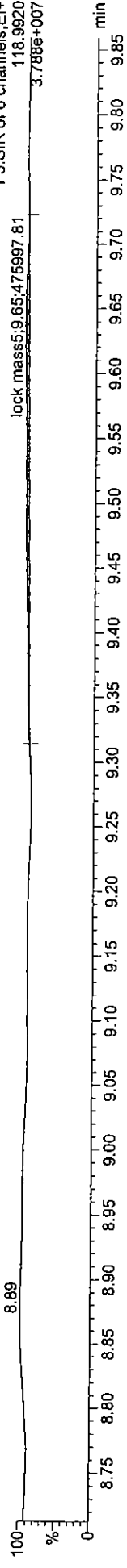
Quantify Sample Report

Dataset: C:\MASSLYNX\Default.pro\QuantynxFiles\QC\Blks_Spks\20030428\blks_20030428_Rinj.qld, Time: Fri May 02 09:43:05 2003

lock mass5

kr23450034 Smooth(Min,3x1)

F5:SIR of 6 channels,EI+
118.9920
3.7866+007



Compound Name	RT	Area	Height	Wt%	Mod. Date	Divisor	Area Mean
1 NDMA	2.79	ND	ND	ND	02-May-03	1000	1.673
2 D6 NDMA	2.76	3036.54	30.99	30.99	02-May-03	1	0.139
3 D8 naphthalene	9.04	25000.00	100.00	100.00	02-May-03	1	1.000
4 propyl ester	2.88	0.13	12.80	12.80	02-May-03	1	4996.306

EDC = 0.37 ng/L

DD

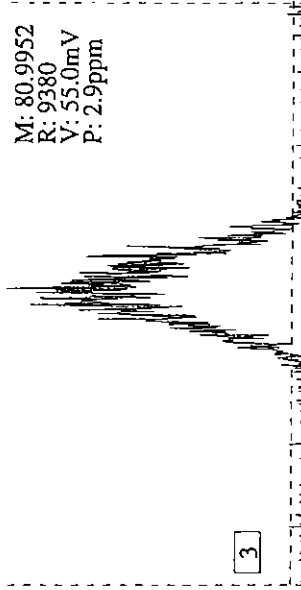
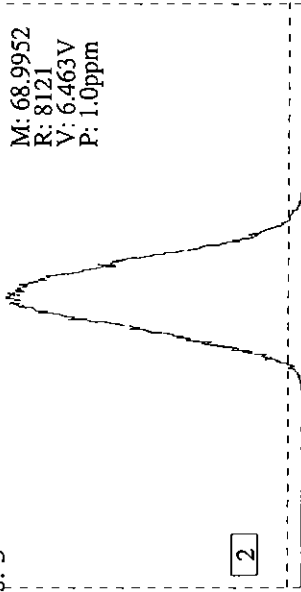
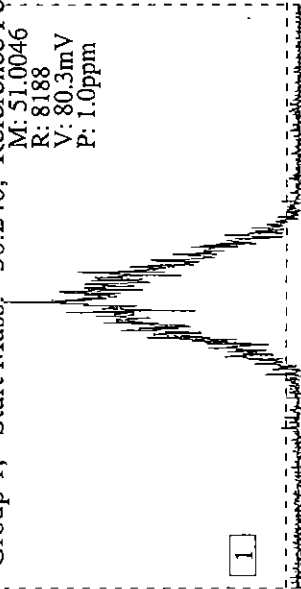
000025

MASS RESOLUTION CALIBRATION

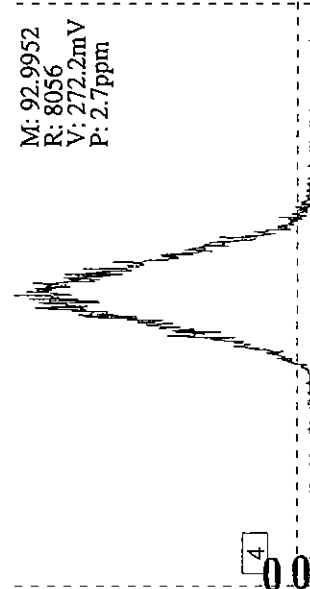
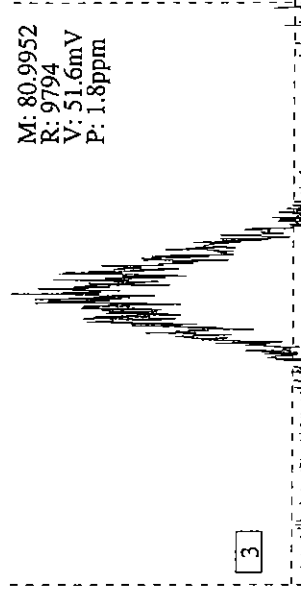
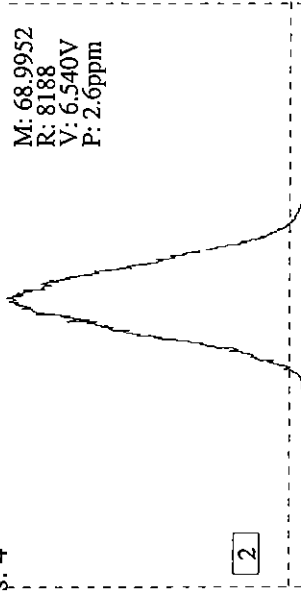
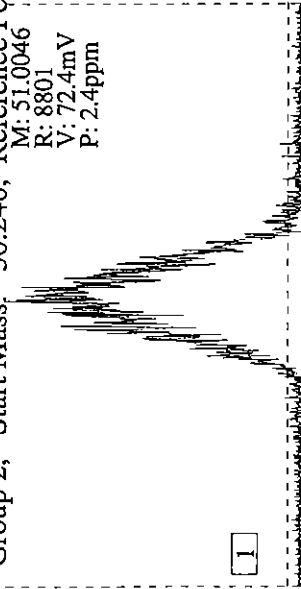
000026

S.I.M. Calibration 30-Apr-2003 17:54, Run: kr23440031, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 1, Start Mass: 50.240, Reference Peaks: 3



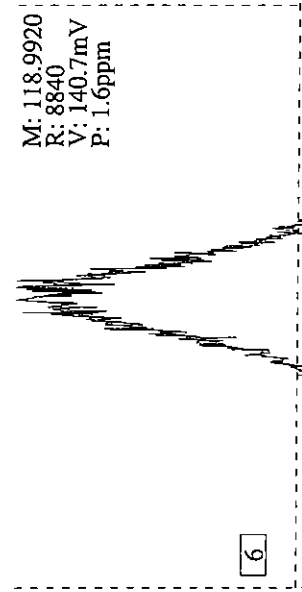
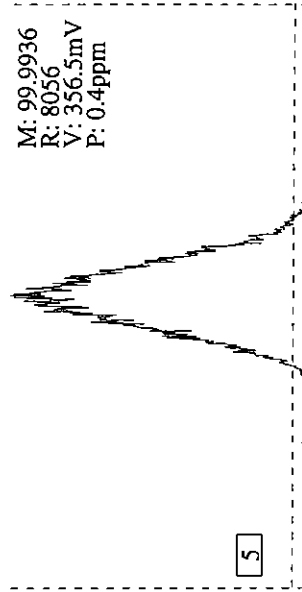
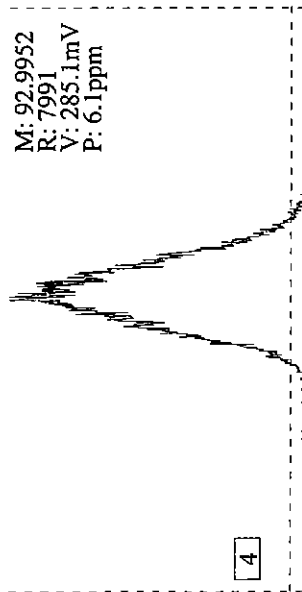
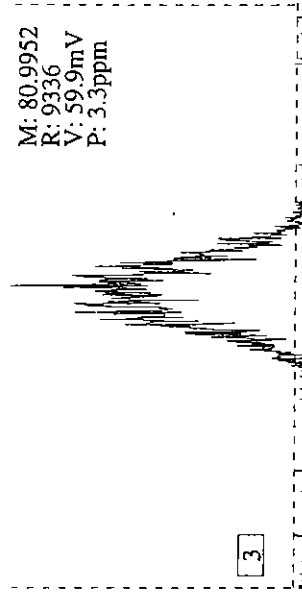
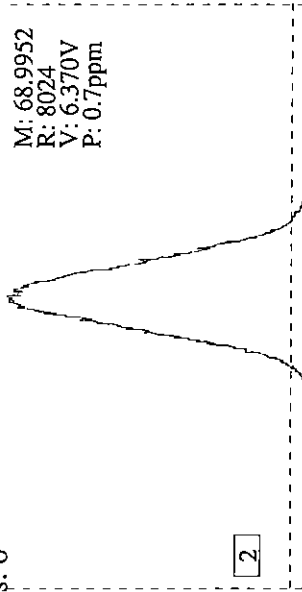
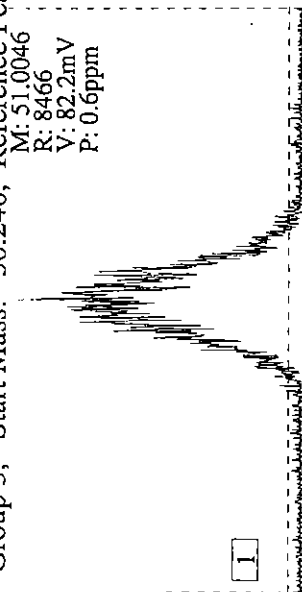
Group 2, Start Mass: 50.240, Reference Peaks: 4



000027

S.I.M. Calibration 30-Apr-2003 17:54, Run: kr23440031, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

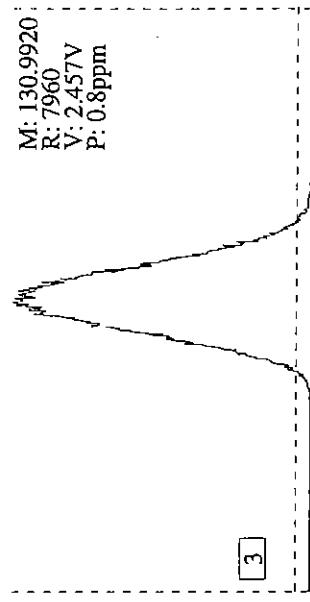
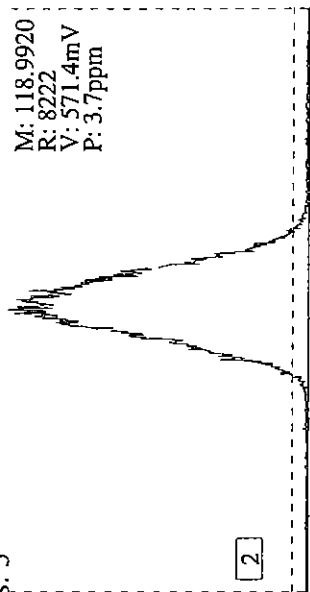
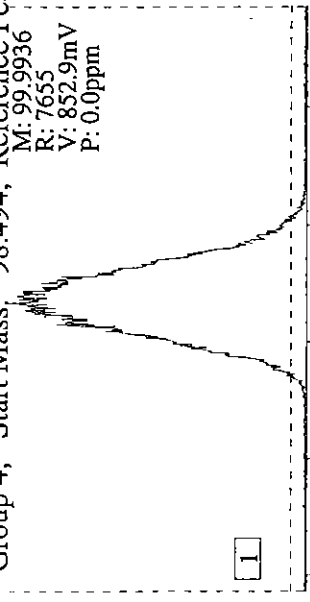
Group 3, Start Mass: 50.240, Reference Peaks: 6



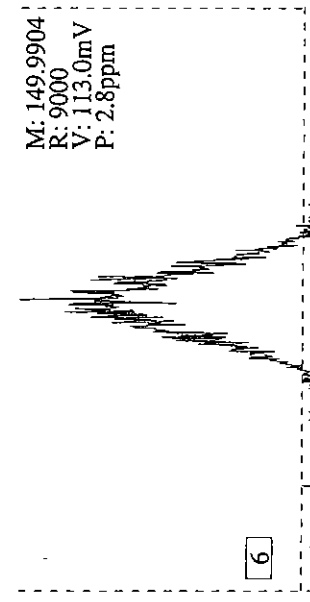
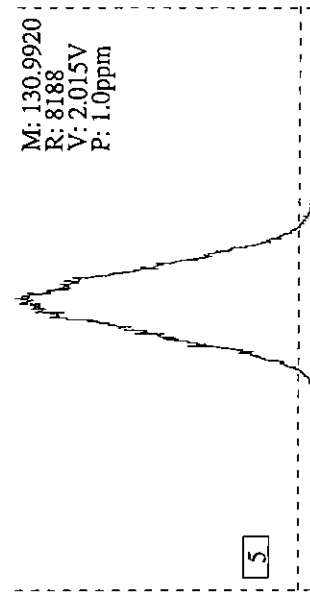
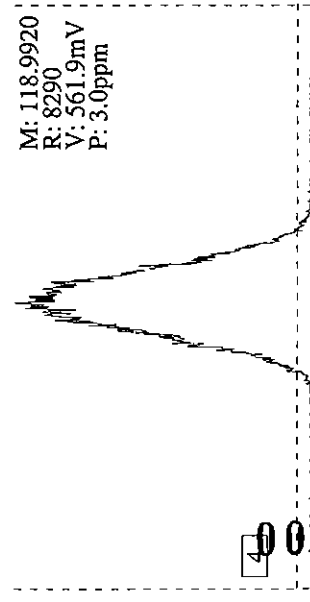
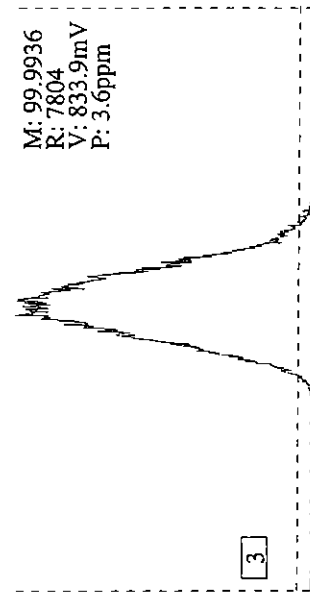
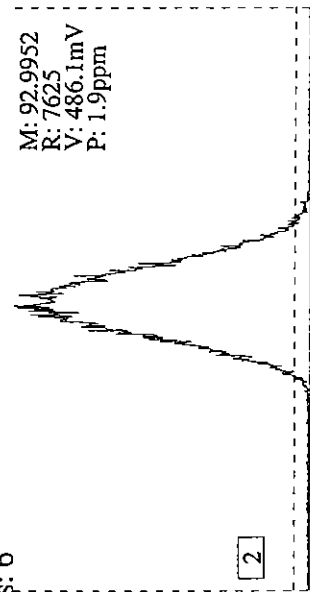
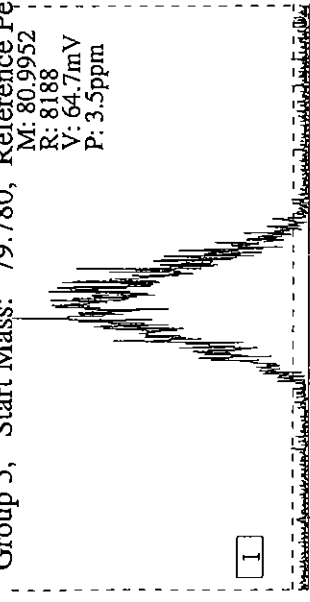
000028

S.I.M. Calibration 30-Apr-2003 17:54, Run: kr23440031, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 4, Start Mass: 98.494, Reference Peaks: 3



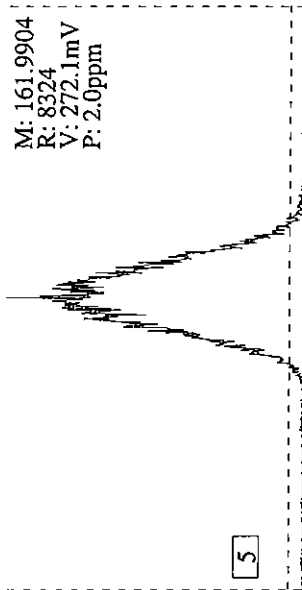
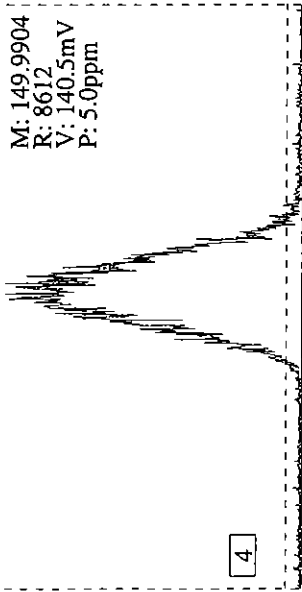
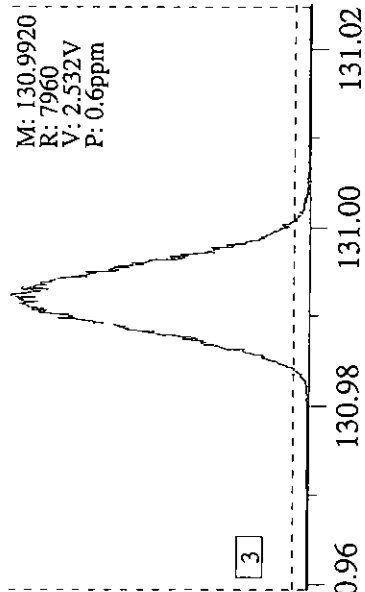
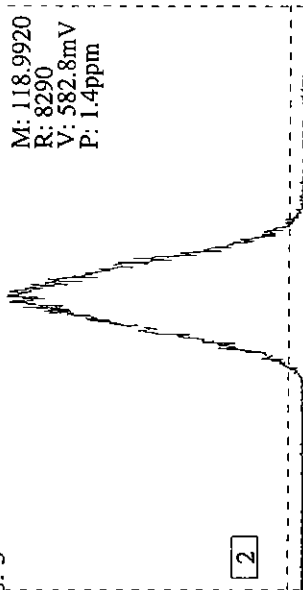
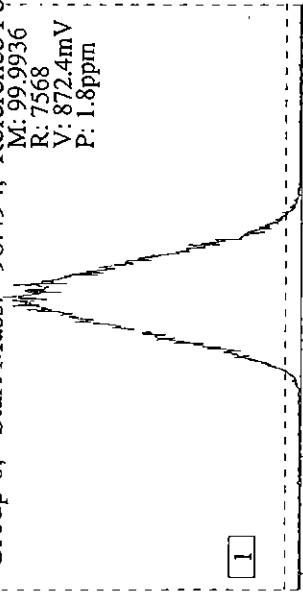
Group 5, Start Mass: 79.780, Reference Peaks: 6



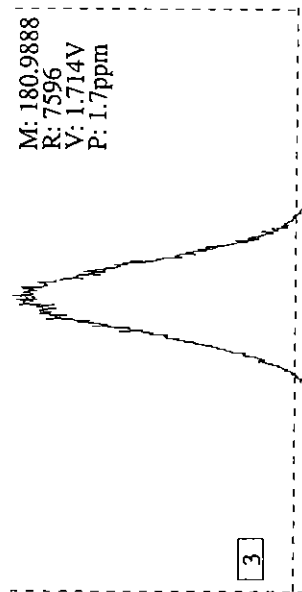
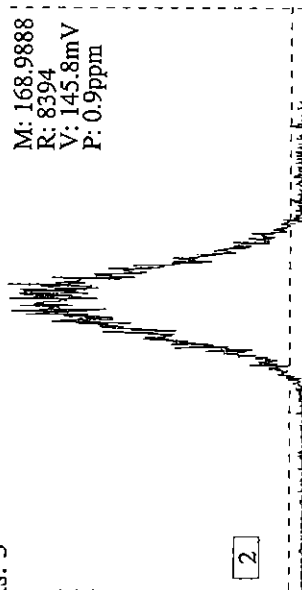
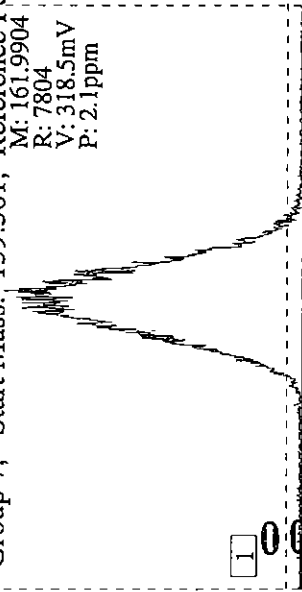
000029

S.I.M. Calibration 30-Apr-2003 17:54, Run: kr23440031, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 6, Start Mass: 98.494, Reference Peaks: 5



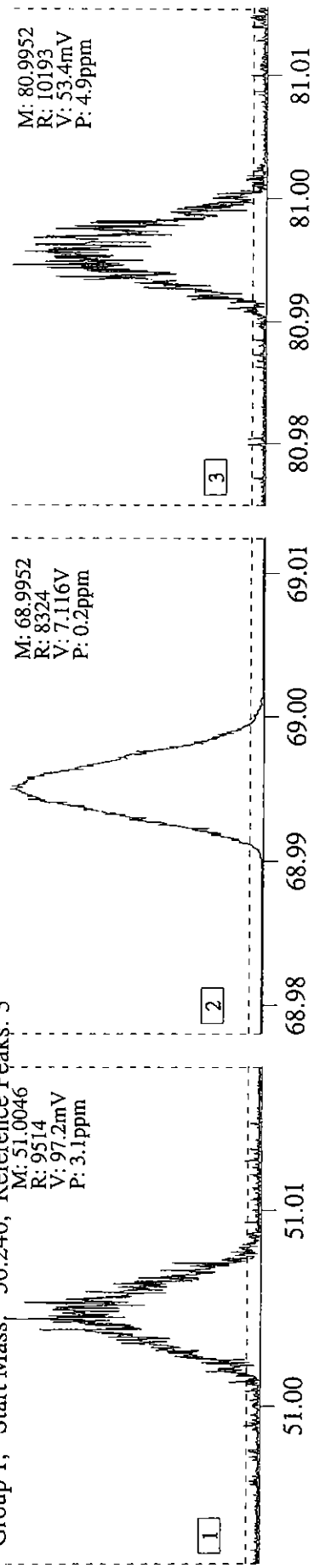
Group 7, Start Mass: 159.561, Reference Peaks: 3



000030

S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 1, Start Mass: 50.240, Reference Peaks: 3

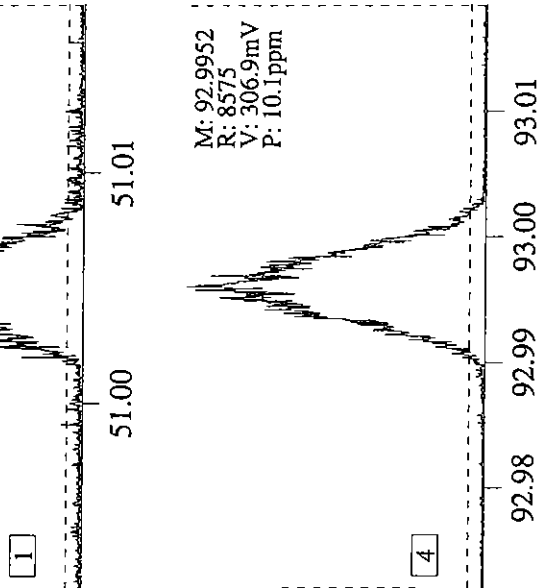


000031

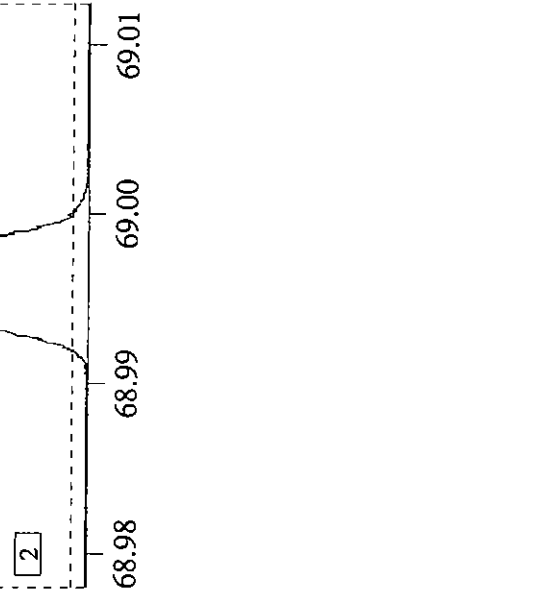
S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 2, Start Mass: 50.240, Reference Peaks: 4

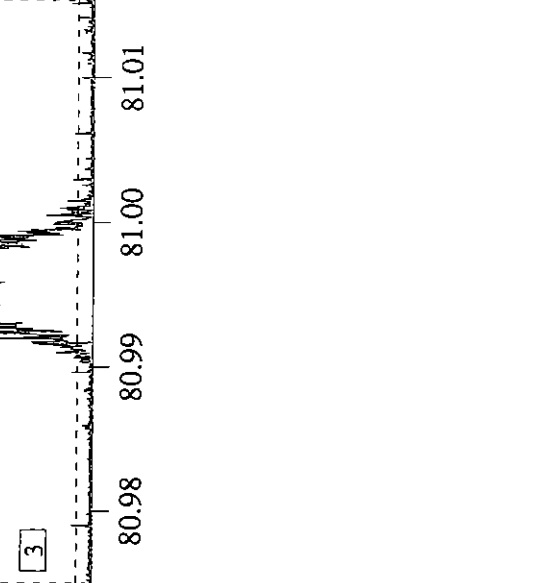
M: 51.0046
R: 8649
V: 93.1mV
P: 7.1ppm



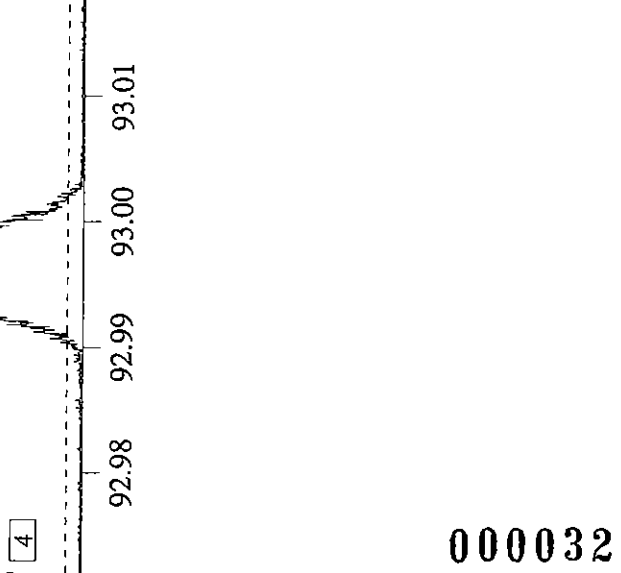
M: 68.9952
R: 8502
V: 7.030V
P: 10.0ppm



M: 80.9952
R: 10352
V: 64.0mV
P: 4.5ppm



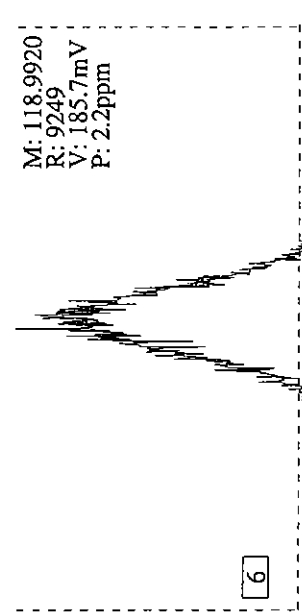
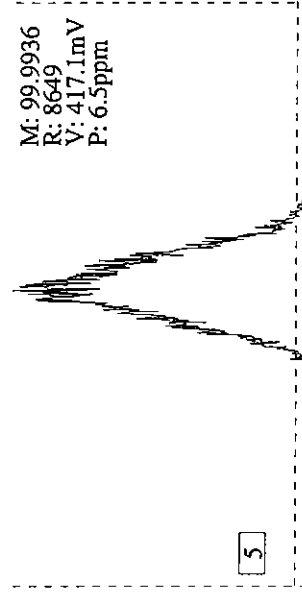
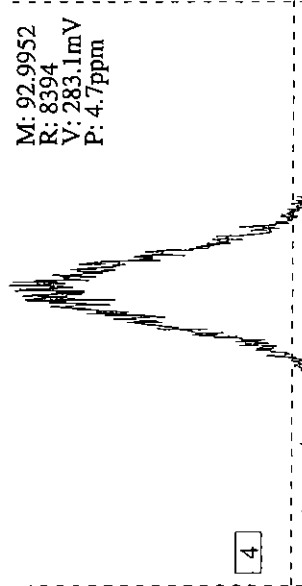
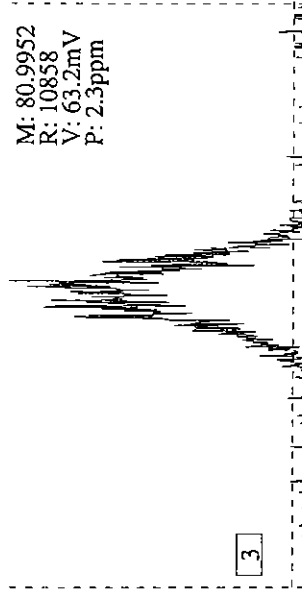
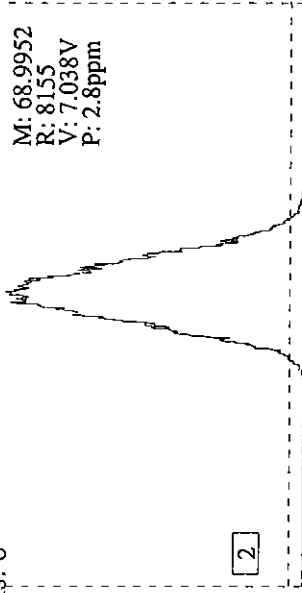
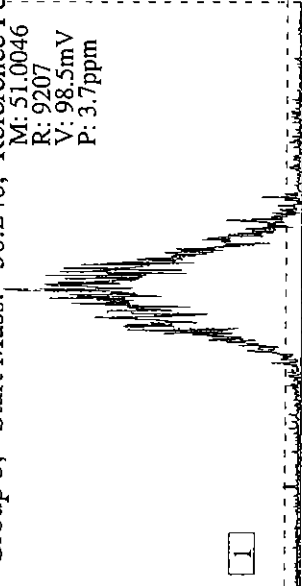
M: 92.9952
R: 8575
V: 306.9mV
P: 10.1ppm



000032

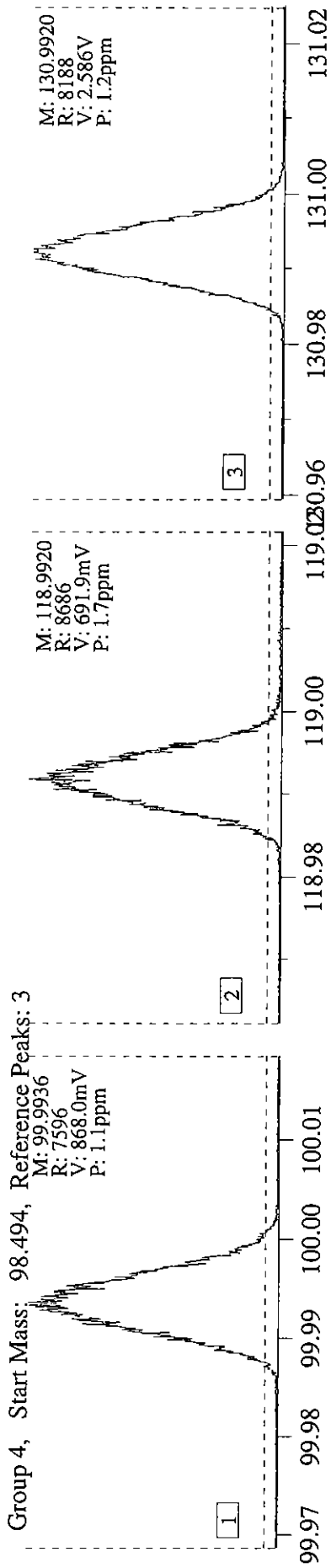
S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 3, Start Mass: 50.240, Reference Peaks: 6



000033

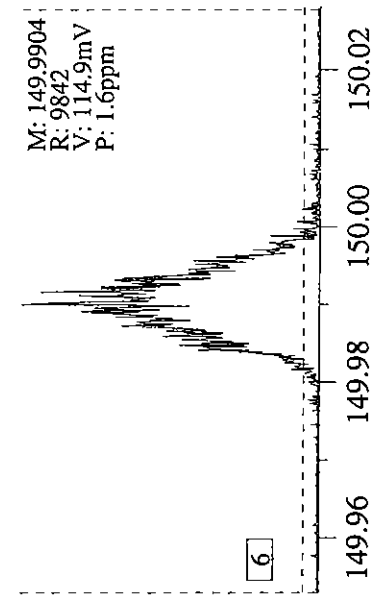
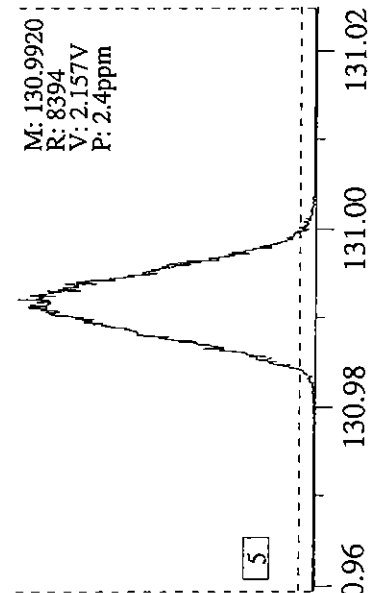
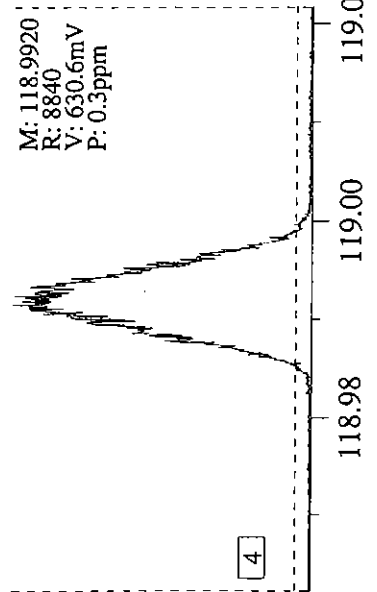
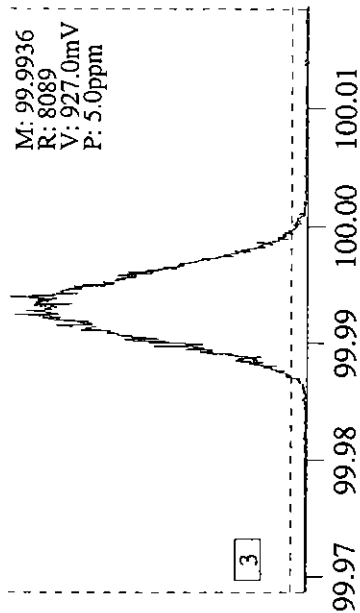
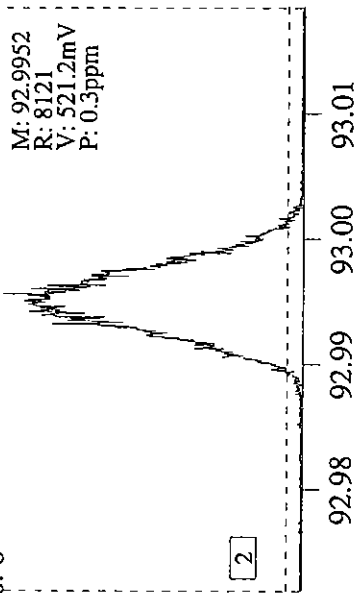
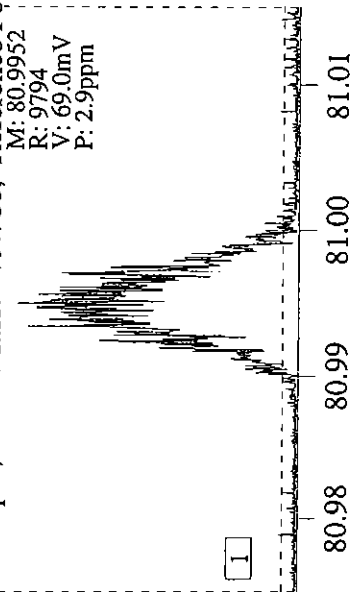
S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



000034

S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

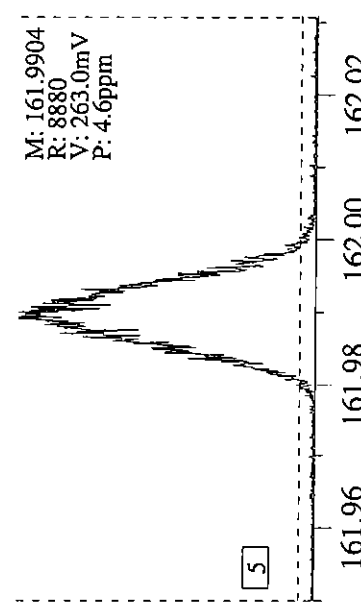
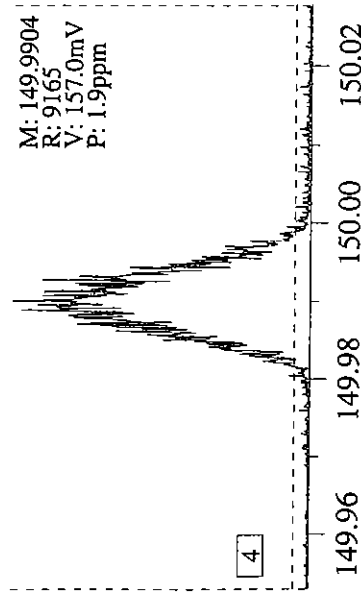
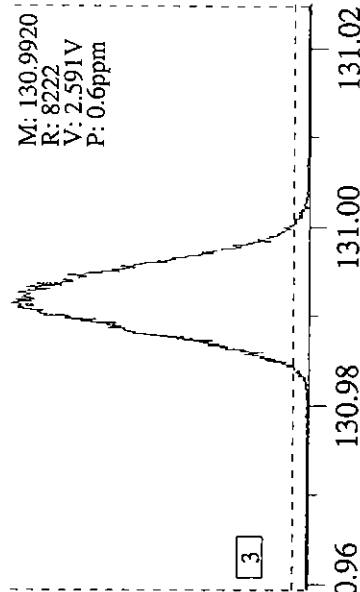
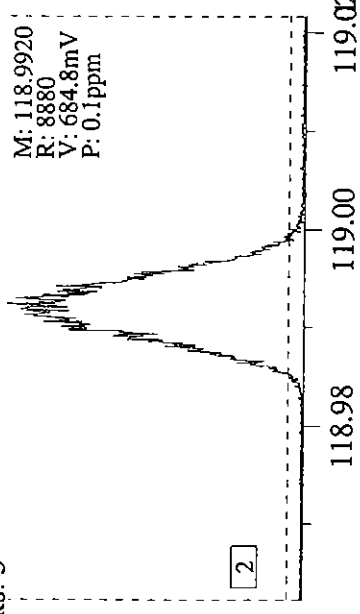
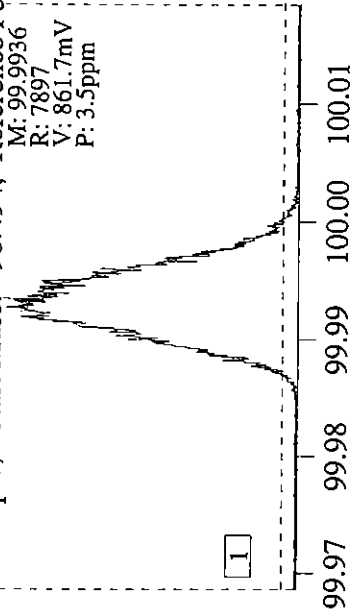
Group 5, Start Mass: 79.780, Reference Peaks: 6



000035

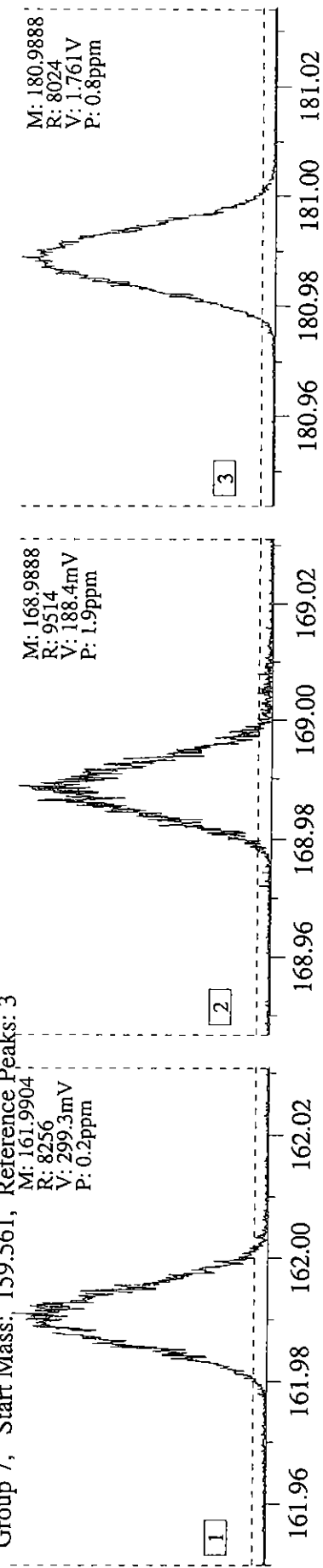
S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 6, Start Mass: 98.494, Reference Peaks: 5



S.I.M. Calibration 01-May-2003 10:17, Run: kr23450012, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 7, Start Mass: 159.561, Reference Peaks: 3



000037

INITIAL CALIBRATION

000038

INITIAL CALIBRATION

Lab Name Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date 2003/04/30

LAB FILE ID. KR23440033 CS1
 KR23440034 CS2
 KR23440035 CS3
 KR23440036 CS4
 KR23440037 CS5
 KR23440038 CS6

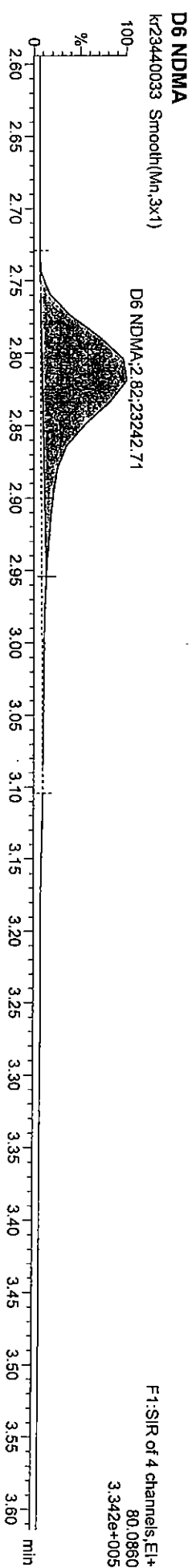
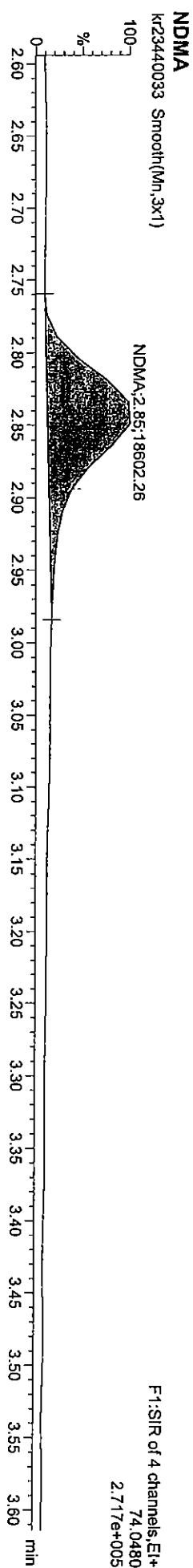
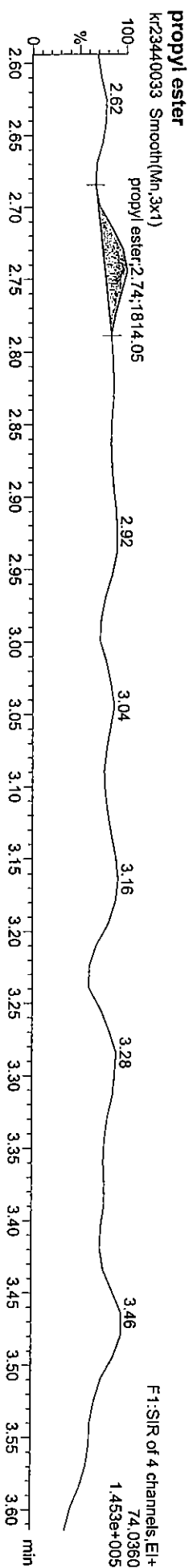
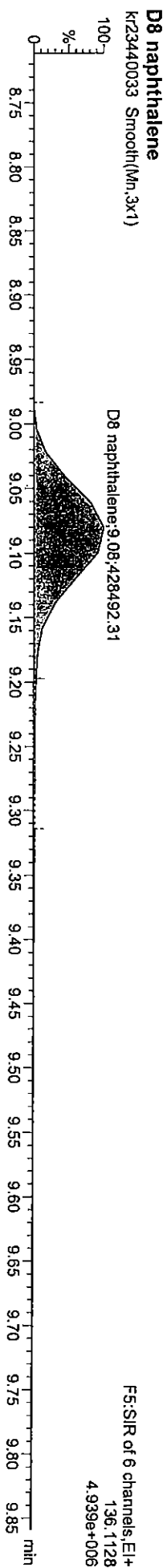
Compound	RRF CS1 (5.00ng/mL)	RRF CS2 (50.0ng/mL)	RRF CS3 (80.00ng/mL)	RRF CS4 (200.0ng/mL)	RRF CS5 (1000ng/mL)	RRF CS6 (2000ng/mL)	AVERAGE RRF	%RSD	Max %RSD
NDMA	1.57	1.73	1.69	1.66	1.62	1.77	1.67	4	25
D6 NDMA	0.138	0.127	0.138	0.135	0.147	0.146	0.139	5	25

000039

Dataset: C:\MASSL\YNXIDefault.pro\Quant\ynxFiles\QC\Calibration\20030430\Indmacall2_20030430.qld, Time: Thu May 01 09:25:34 2003

Method: C:\MASSL\YNXIDefault.pro\METHODS\Intros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: Unfiled, Time: Thu May 01 09:25:34 2003

Name: kr23440033.*, Date: 30-Apr-2003, Time: 18:40:02, Job: , Description: 5.0 ng/ml 70-202NDMW-1238

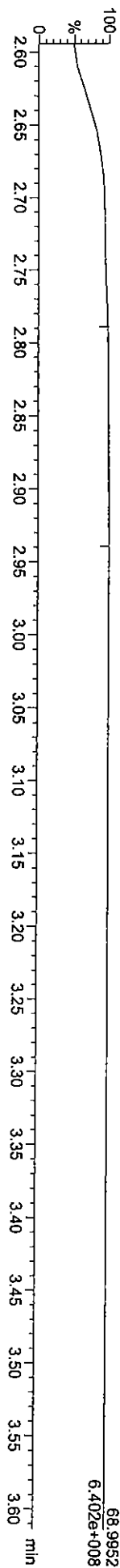


Dataset: C:\MASSL\YNX\Default.pro\Quant\ynxFiles\QC\Calibration\20030430\ndrnacal12_20030430.qld, Time: Thu May 01 09:25:34 2003

lock mass1

K123440033 Smooth(Mn,3x1)

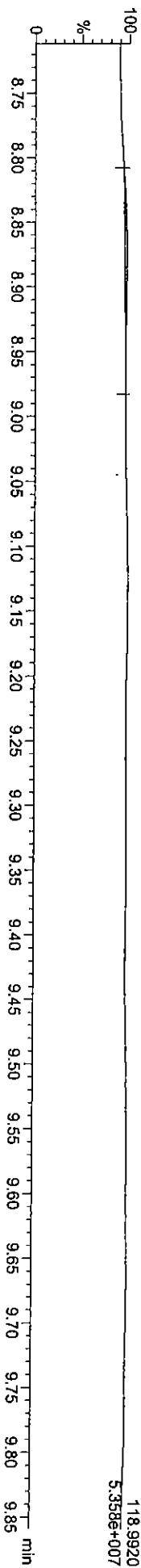
F1:SIR of 4 channels, EI+



lock mass5

K123440033 Smooth(Mn,3x1)

F5:SIR of 6 channels, EI+



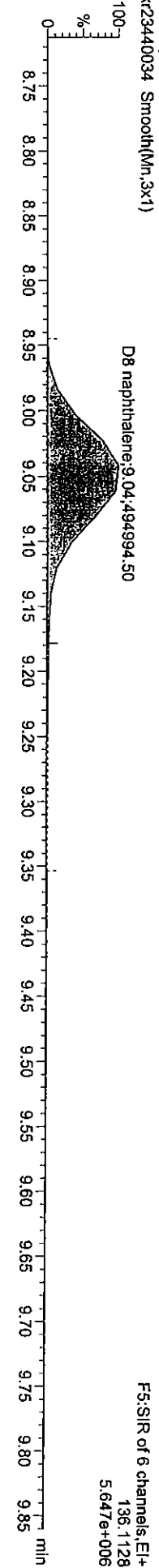
Retention Name	Retention	Area	Height	%Area	%Height	Integration	Integration
1 NDMA	74.0480	18602	2.85	93.76	-6.24	01-May-03	1.569
2 D6 NDMA	80.0860	23243	2.82	99.78	-0.22	01-May-03	0.138
3 D8 naphthalene	136.1128	428492	9.08	100.00	0.00	01-May-03	1.000
4 propyl ester	74.0360	1814	2.74	36.31	-63.69	01-May-03	1814....

000041

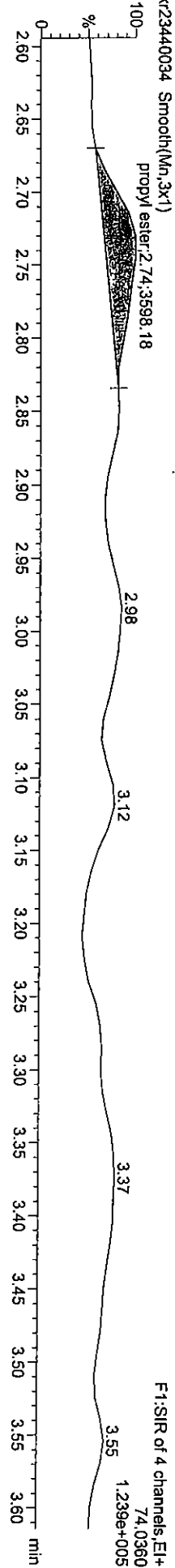
Dataset: C:\MASSLYNX\Default\pro\Quant\mxf\files\QC\Calibration\20030430\ndm\acall2_20030430.qld, Time: Thu May 01 09:25:34 2003

Name: kr23440034.*, Date: 30-Apr-2003, Time: 18:54:08, Job: , Description: 50 ng/ml,70-202NDMW-1239

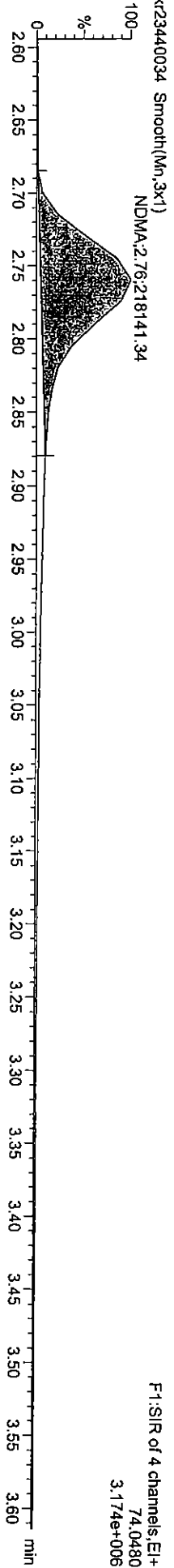
D8 naphthalene



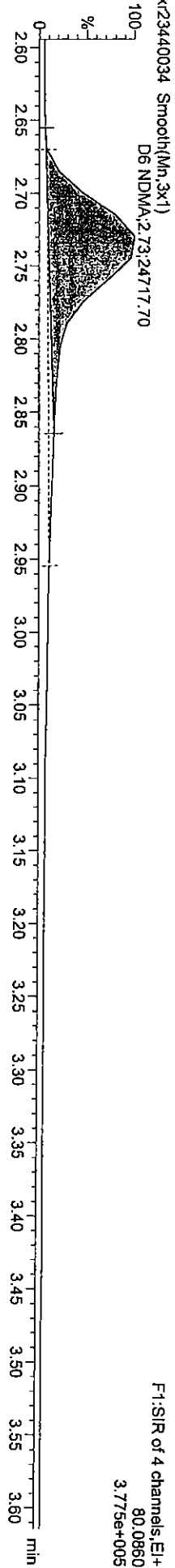
propyl ester



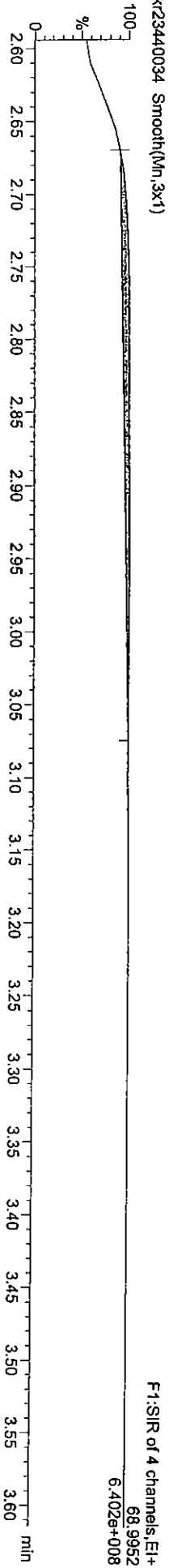
NDMA



D6 NDMA



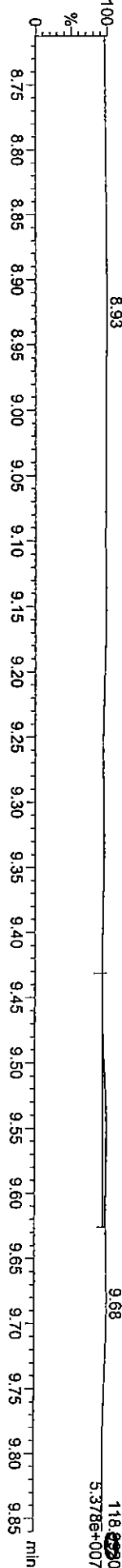
lock mass1



Dataset: C:\MASSLYNX\Default.pro\Quant\Files\QC\Calibration\20030430\ndmaccall2_20030430.qld, Time: Thu May 01 09:25:34 2003

lock mass5

K123440034 Smooth(Mn,3x1)

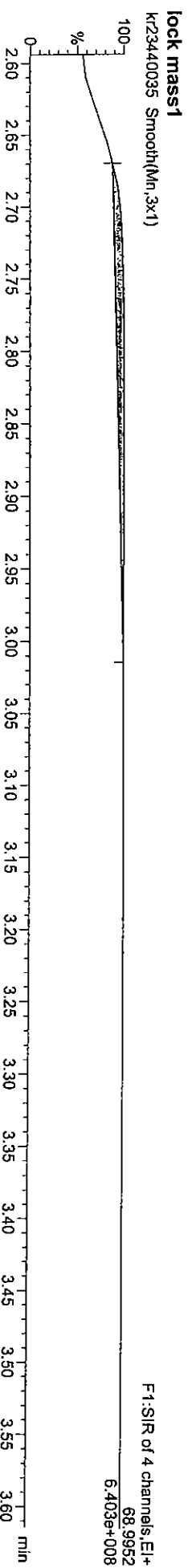
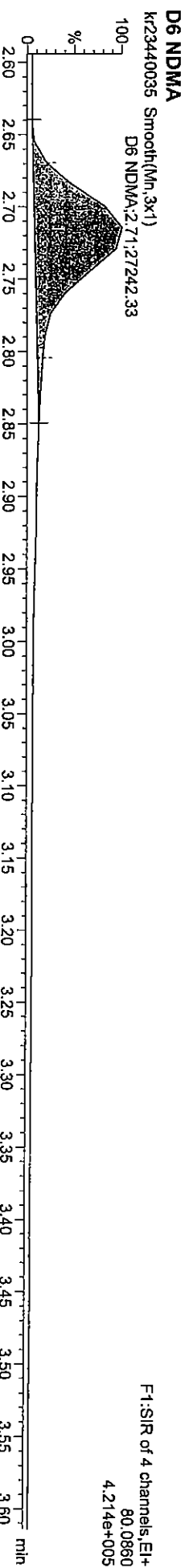
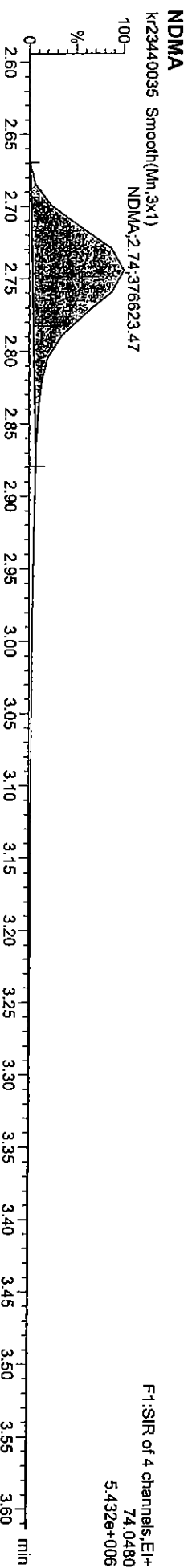
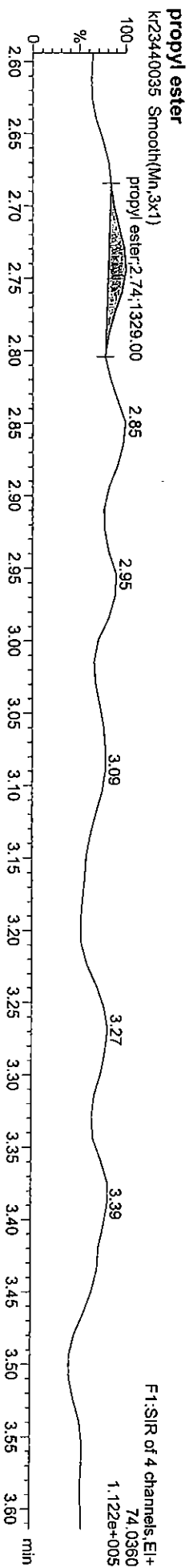
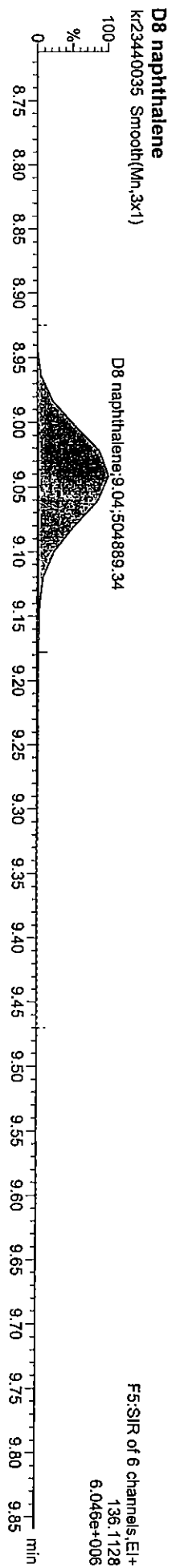


Peak #	Retention Time (min)	Area	Height	Width	Integration	Integration	Integration
1	NDMA	74.0480	218141	2.76	51692	103.38	3.38
2	D6 NDMA	80.0860	24718	2.73	9002	91.86	-8.14
3	D8 naphthalene	136.1128	494995	9.04	25000	100.00	0.00
4	propyl ester	74.0360	3598	2.74	1	72.02	-27.98

Dataset: C:\MASSL\YNX\Default\pro\Quant\ynxFiles\OC\Calibration\20030430\ndm\macali2_20030430.qld, Time: Thu May 01 09:25:34 2003

Name: kr23440035.*, Date: 30-Apr-2003, Time: 19:12:56, Job: , Description: 80 ng/ml 70-202NDMW-1240

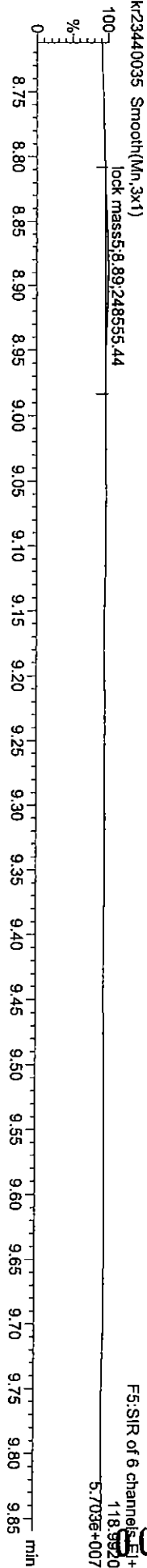
00004



Dataset: C:\MASSL\YNX1\Default.pro\Quant\ynxFiles\QC\Calibration\20030430\ndmnaacal2_20030430.qtd, Time: Thu May 01 09:25:34 2003

lock mass5

K/23440035 Smooth(Mn,3x1)

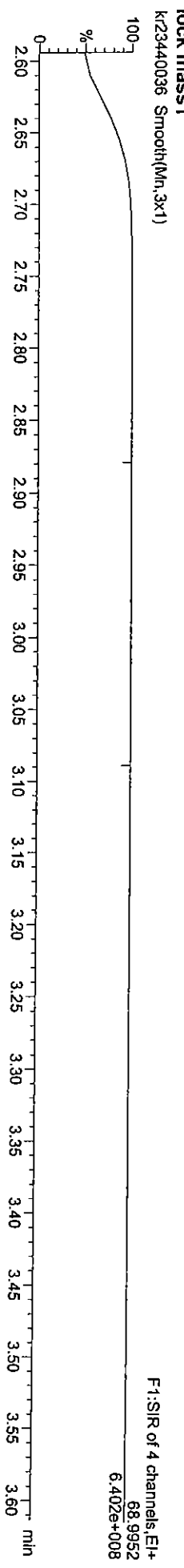
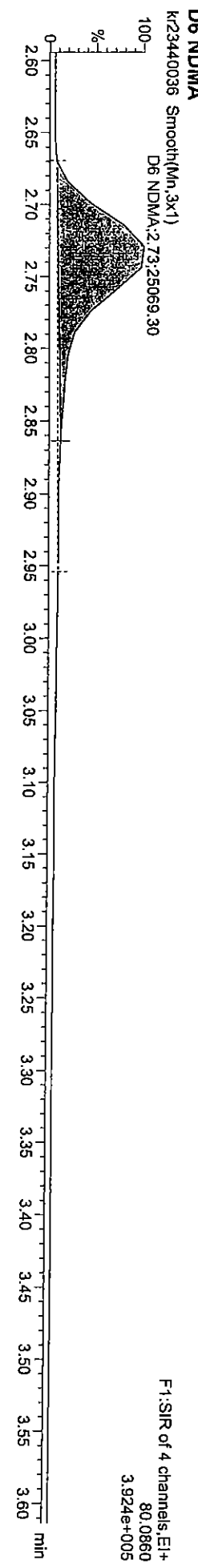
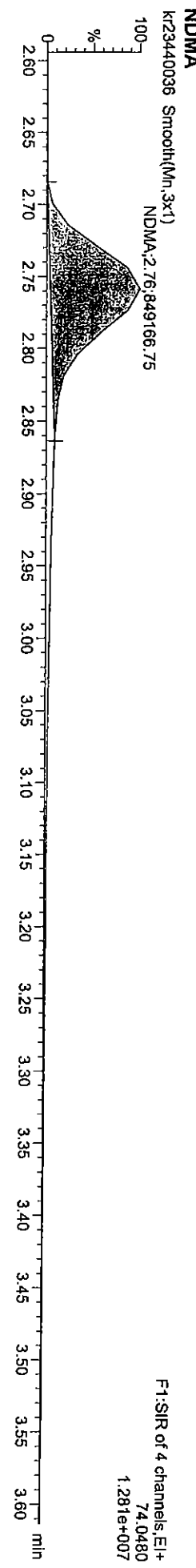
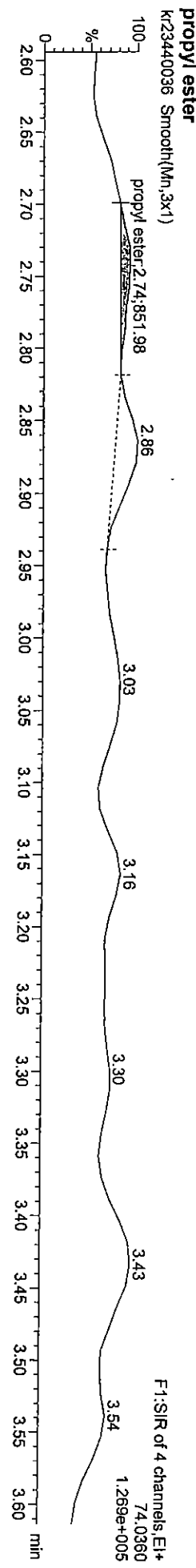
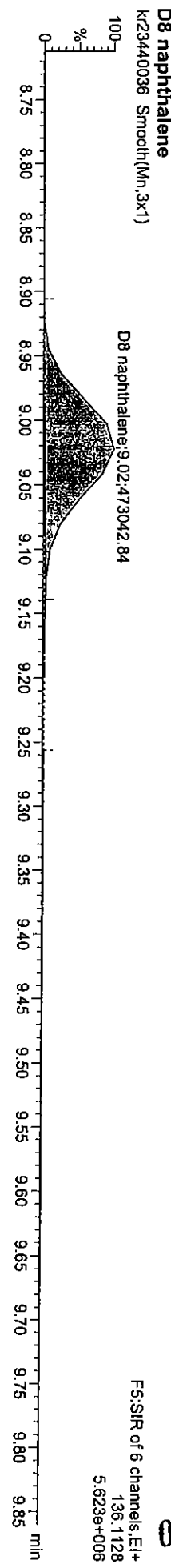


Compound Name	Trace	Area	Height	Width	Retention	Volume	Weight	Conc	Mod Date	RRR
1 NDMA	74.0480	376623	2.74	80977	101.22	1.22	01-May-03	1.694		
2 D6 NDMA	80.0860	27242	2.71	9727	99.25	-0.75	01-May-03	0.138		
3 D8 naphthalene	136.1128	504889	9.04	25000	100.00	0.00	01-May-03	1.000		
4 propyl ester	74.0360	1329	2.74	0	26.60	-73.40	01-May-03	1329....		

Dataset: C:\MASSL\YNX\Default.pro\Quant\ynxFiles\QC\Calibration\20030430\ndmcaali2_20030430.qld, Time: Thu May 01 09:25:34 2003

Name: K123440036 *, Date: 30-Apr-2003, Time: 19:31:59, Job: , Description: 200ng/ml70-202NDMW-1241

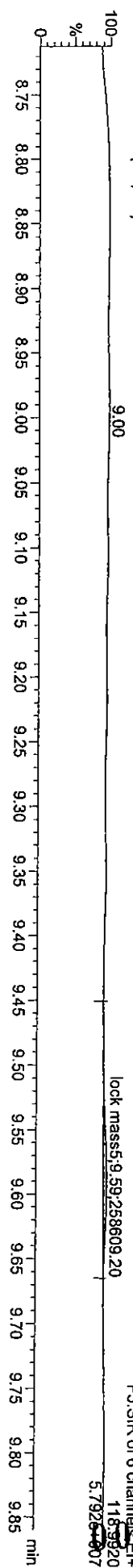
000046



Dataset: C:\MASSL\YNXIDDefault.pro\Quant\ynxFiles\QC\Calibration\20030430\ndmracal12_20030430.qld, Time: Thu May 01 09:25:34 2003

lock mass5

K123440036 Smooth(Mn,3x1)

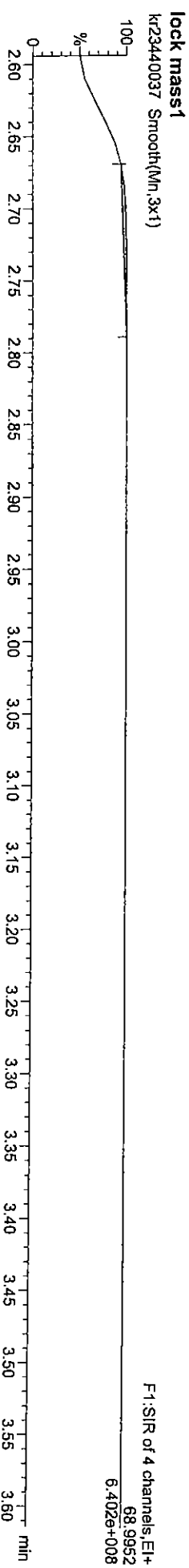
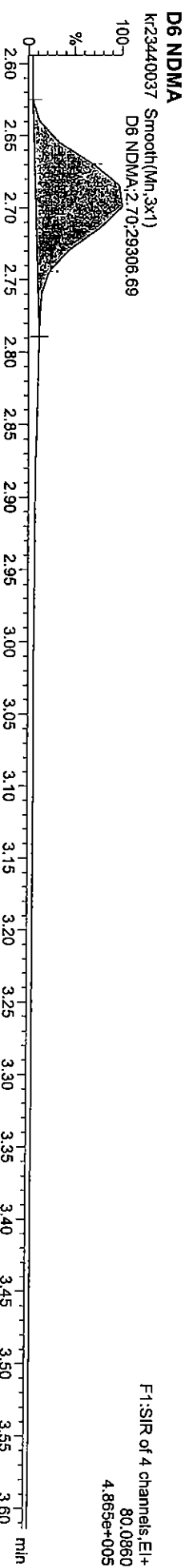
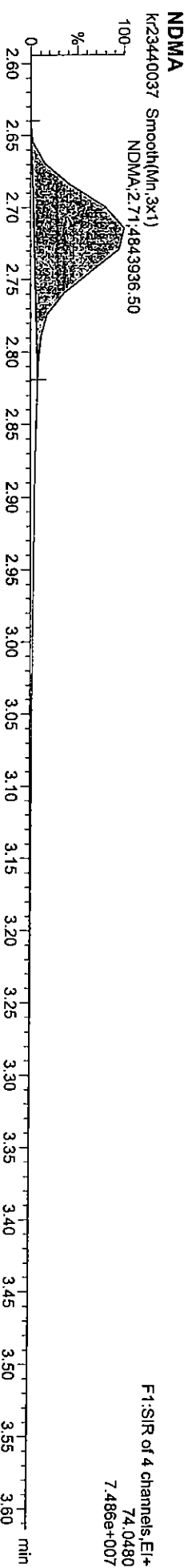
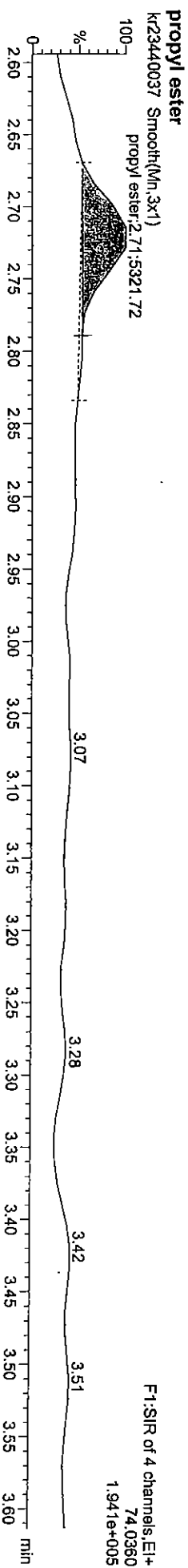
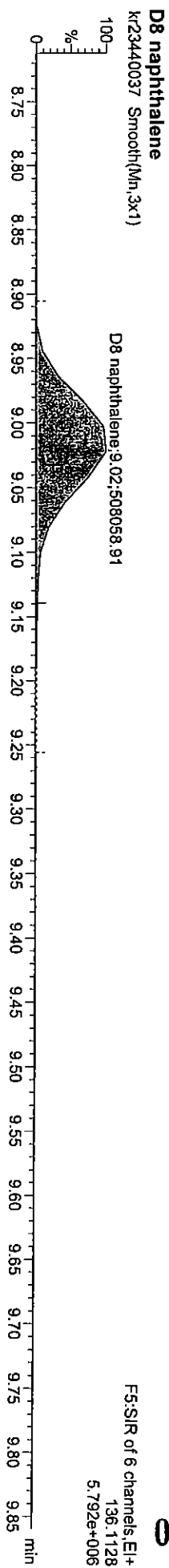


#	Compound Name	Area	Abundance	Retention Time	Resolution	Integration	Modulation	RRR
1	NDMA	74.0480	849167	2.76	198402	99.20	01-May-03	1.660
2	D6 NDMA	80.0860	25069	2.73	9554	97.49	01-May-03	0.135
3	D8 naphthalene	136.1128	473043	9.02	25000	100.00	01-May-03	1.000
4	propyl ester	74.0360	852	2.74	0	17.05	01-May-03	851.979

Dataset: C:\MASSLYNX\Default.pro\Quant\ynxFiles\QC\Calibration\20030430\ndmcalil2_20030430.qld, Time: Thu May 01 09:25:34 2003

Name: kr23440037 *, Date: 30-Apr-2003, Time: 19:50:55, Job: , Description: 1000ng/ml,70-202NDMW-1242

000048

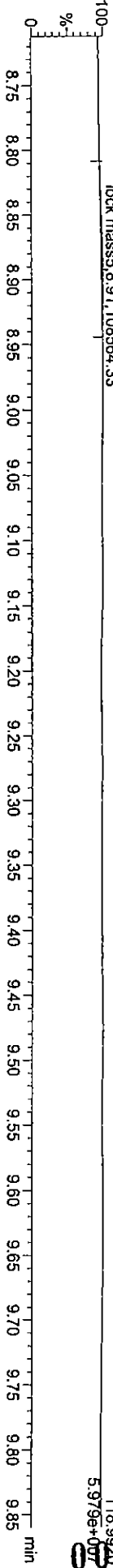


Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030430\ndmcalil2_20030430.qld, Time: Thu May 01 09:25:34 2003

lock mass5

K23440037 Smooth(Mn,3x1)

lock mass5:8.91:108564.33

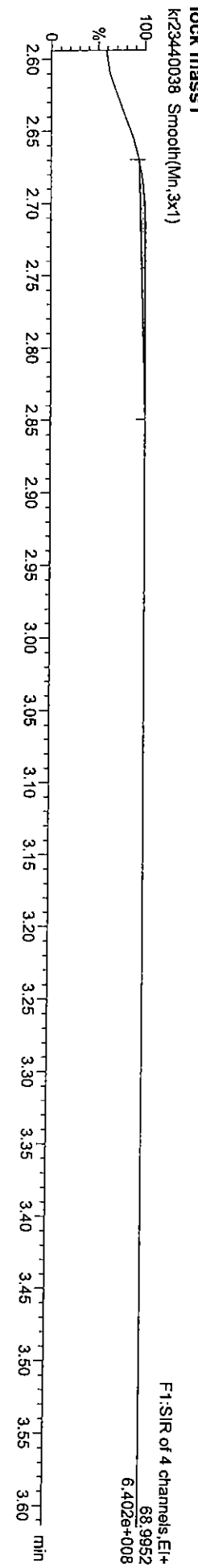
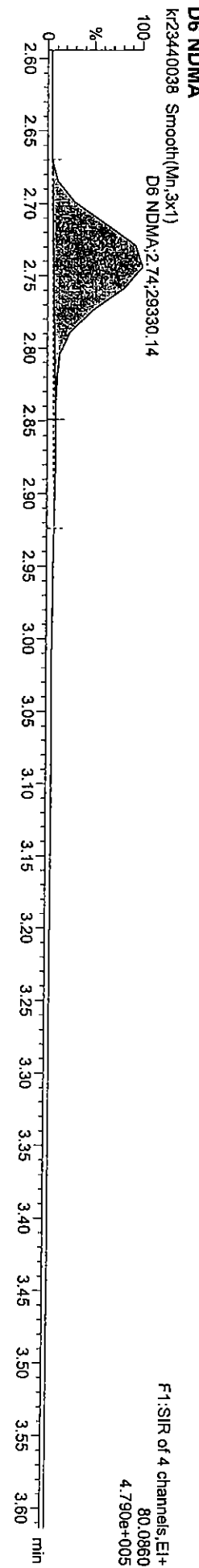
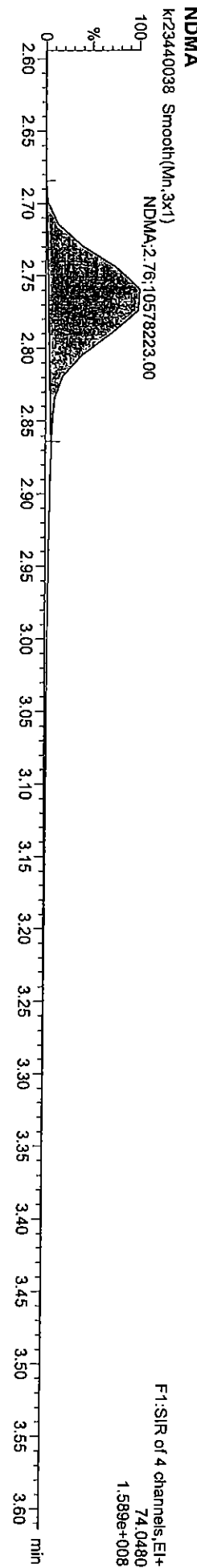
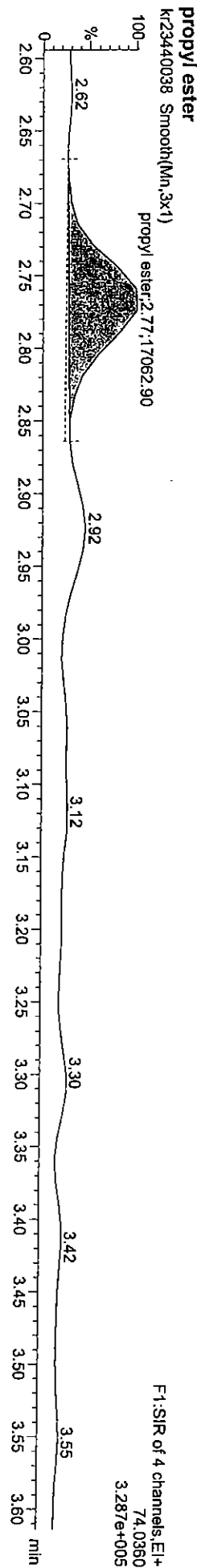
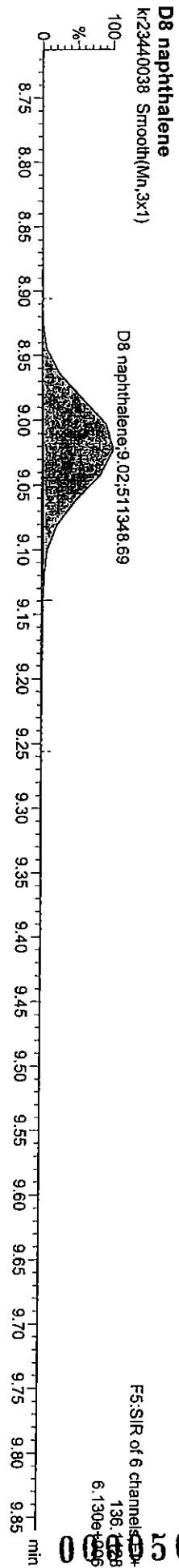


#	NAME	RT	AREA	RT	AREA	RT	AREA	RT	AREA
1	NDMA	74.0480	4843937	2.71	968117	96.81	-3.19	01-May-03	1.620
2	D6 NDMA	80.0860	29307	2.70	10399	106.11	6.11	01-May-03	0.147
3	D8 naphthalene	136.1128	508059	9.02	25000	100.00	0.00	01-May-03	1.000
4	propyl ester	74.0360	5322	2.71	1	106.51	6.51	01-May-03	5321....

081049

Dataset: C:\MASSL\YNX\Default.pro\Quant\Files\QC\Calibration\20030430\ndmcali2_20030430.qld, Time: Thu May 01 09:25:34 2003

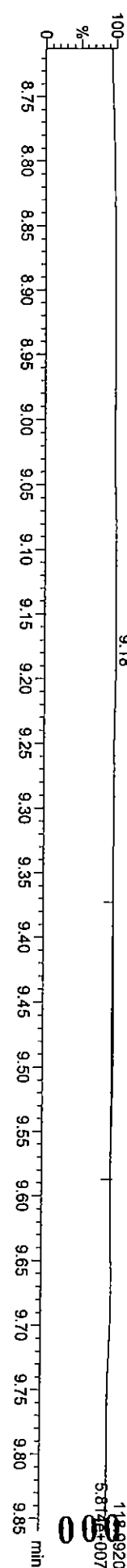
Name: kr23440038.*, Date: 30-Apr-2003, Time: 20:09:49, Job: , Description: 2000ng/ml,70-202NDMW-1243



Dataset: C:\MASSL\YNXID\Default.pro\Quant\ynxfiles\QC\Calibration\20030430\ndmnaCALI2_20030430.qld, Time: Thu May 01 09:25:34 2003

lock mass5

Kr23440038 Smooth(Mn,3x1)



Compound Name	Retention Time	Area	Height	Width	Resolution	Modulation	Response
1 NDMA	74.0480	10578223	2.76	2112490	105.62	5.62	01-May-03 1.767
2 D6 NDMA	80.0860	29330	2.74	10340	105.51	5.51	01-May-03 0.146
3 D8 naphthalene	136.1128	511349	9.02	25000	100.00	0.00	01-May-03 1.000
4 propyl ester	74.0360	17063	2.77	3	341.51	241.51	01-May-03 17062...

SECOND SOURCE CALIBRATION CHECK

000052

SECOND SOURCE CALIBRATION CHECK

Lab Name Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date 2003/05/01

LAB FILE ID. KR23450014

Compound	REPORTED CONC. (ug/L)	ACTUAL CONC. (ug/L)	%D	% D LIMIT
NDMA	7.99	10.87	20	25

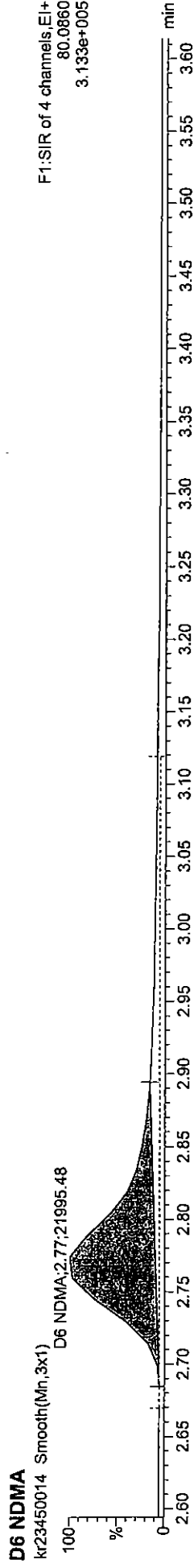
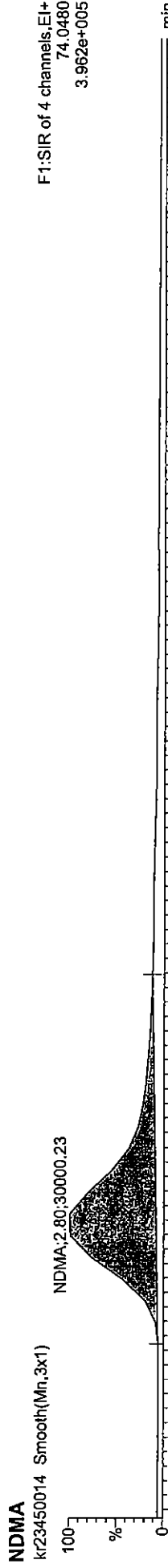
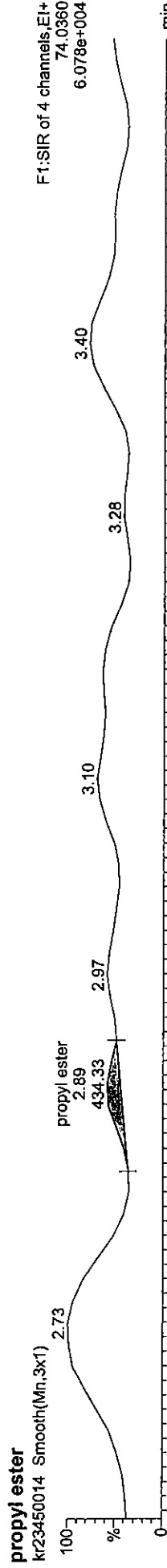
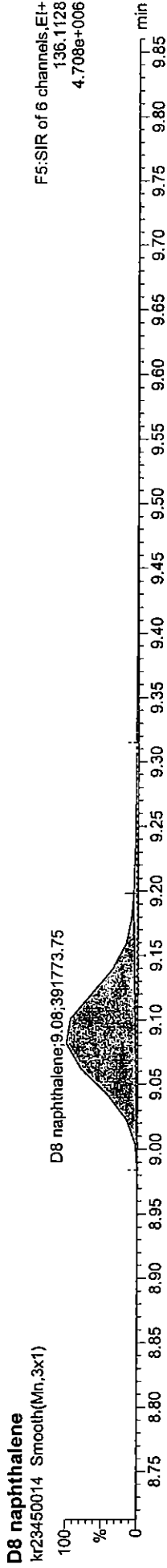
Compound	%RECOVERY
D6-NDMA	103

000053

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\2hdsorce_20030501.qld, Time: Thu May 01 11:22:25 2003

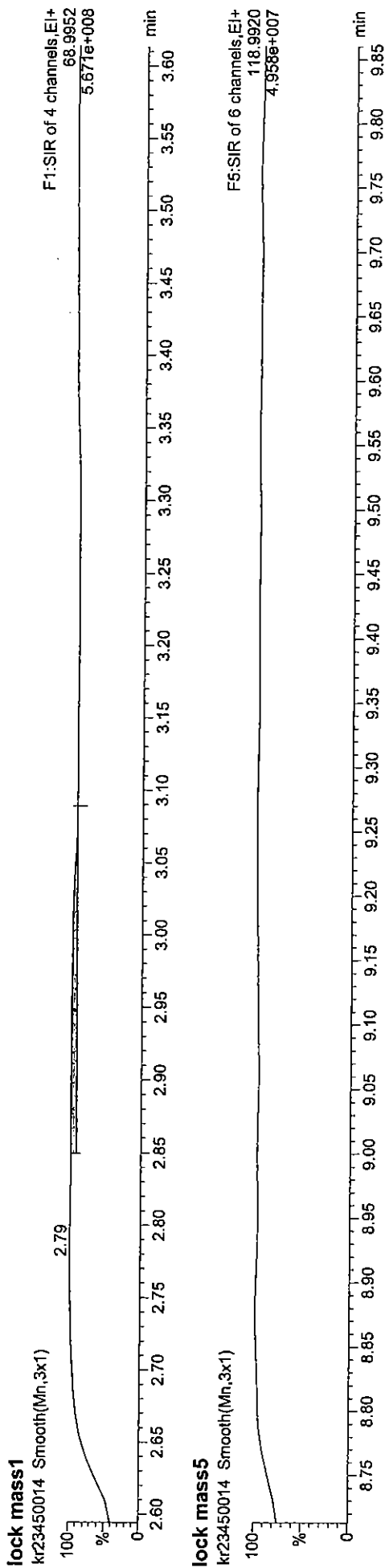
Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\ndmacal12_20030430.cdb, Time: Thu May 01 09:25:34 2003

Name: kr23450014.*, Date: 01-May-2003, Time: 10:43:53, Job: , Description: 10.0ng/ml 70-202NDMW-1244



Quantify Sample Report

Dataset: C:\MASSLYNX\Default.pro\QuantYnxFiles\QC\Calibration\20030501\2ndsource_20030501.qld, Time: Thu May 01 11:22:25 2003



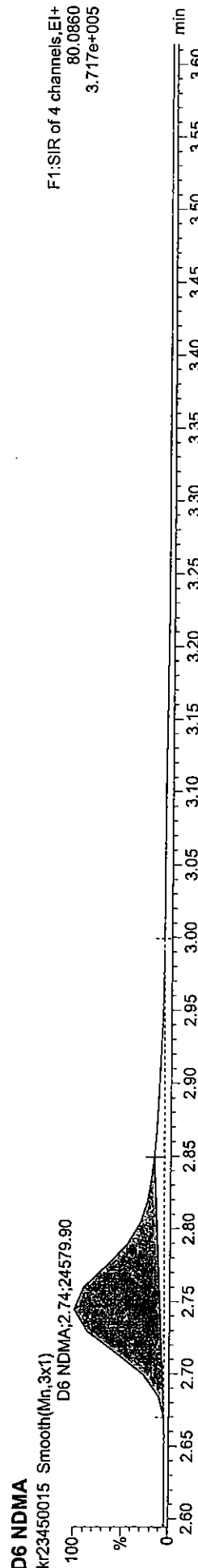
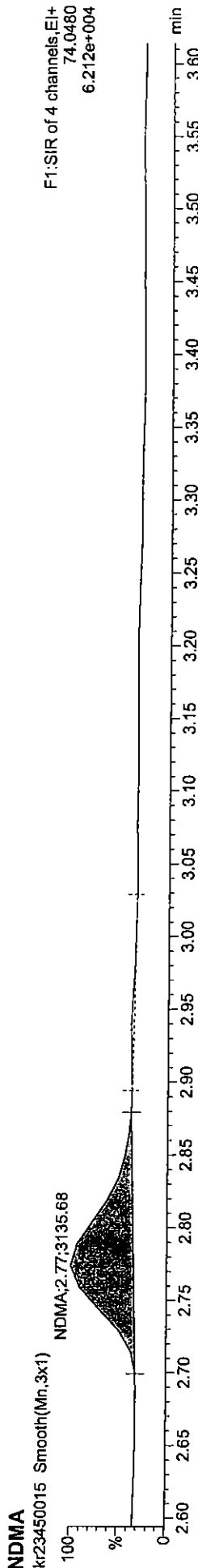
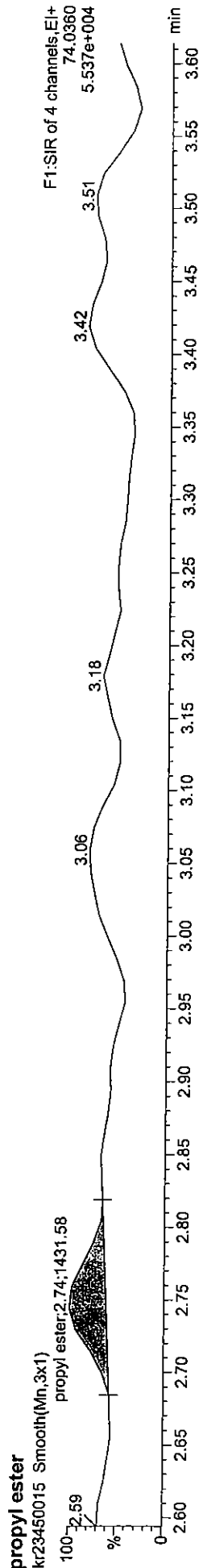
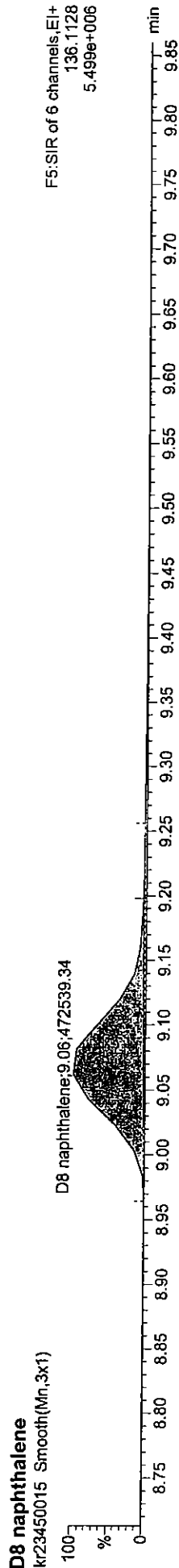
Compound Name	Area	Abundance	Retention Time (min)	Integration Date
1 NDMA	74.0480	30000	2.80	01-May-03
2 D6 NDMA	80.0860	21995	2.77	01-May-03
3 D8 naphthalene	136.1128	391774	9.08	01-May-03
4 propyl ester	74.0360	434	2.89	01-May-03

000055

Dataset: C:\MASSLYNX\Default.pro\QuantifyFiles\QC\Calibration\20030501\Threshold_20030501.qld, Time: Thu May 01 11:28:12 2003

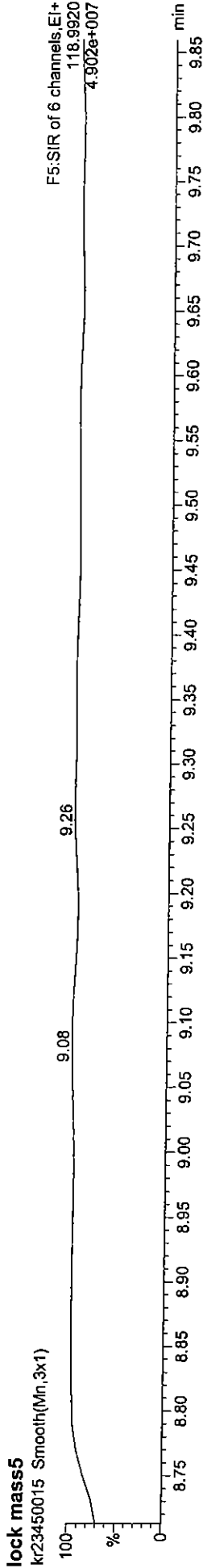
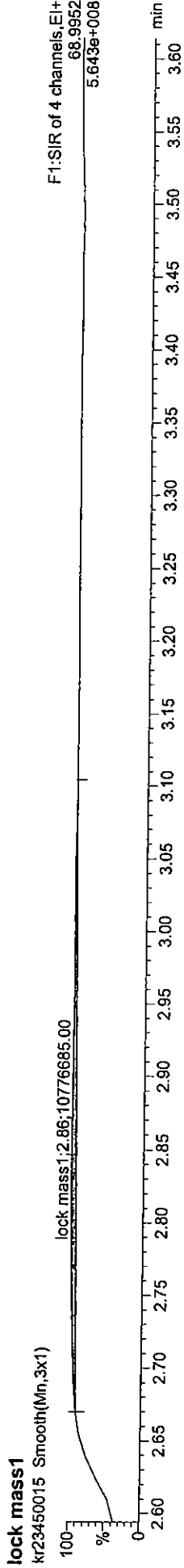
Method: C:\MASSLYNX\Default.pro\METHOD\nitros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\Indmacal2_20030430.cdb, Time: Thu May 01 09:25:34 2003

Name: kr23450015.*, Date: 01-May-2003, Time: 11:01:34, Job: , Description: 1.0ng/ml 70-202NDMW-1245



Quantify Sample Report

Dataset: C:\MASSL\YNX\Default.pro\Quant\ynxFiles\QC\Calibration\20030501\Threshold_20030501.qld, Time: Thu May 01 11:28:12 2003



Compound Name	Area	Abundance	Retention Time (min)	Response	Divisor	Weight
1 NDMA	74.0480	3136	2.77	747.22	1	1.673
2 D6 NDMA	80.0860	24580	2.74	9377.16	1	0.139
3 D8 naphthalene	136.1128	472539	9.06	25000.00	1	1.000
4 propyl ester	74.0360	1432	2.74	0.29	1	4996.306

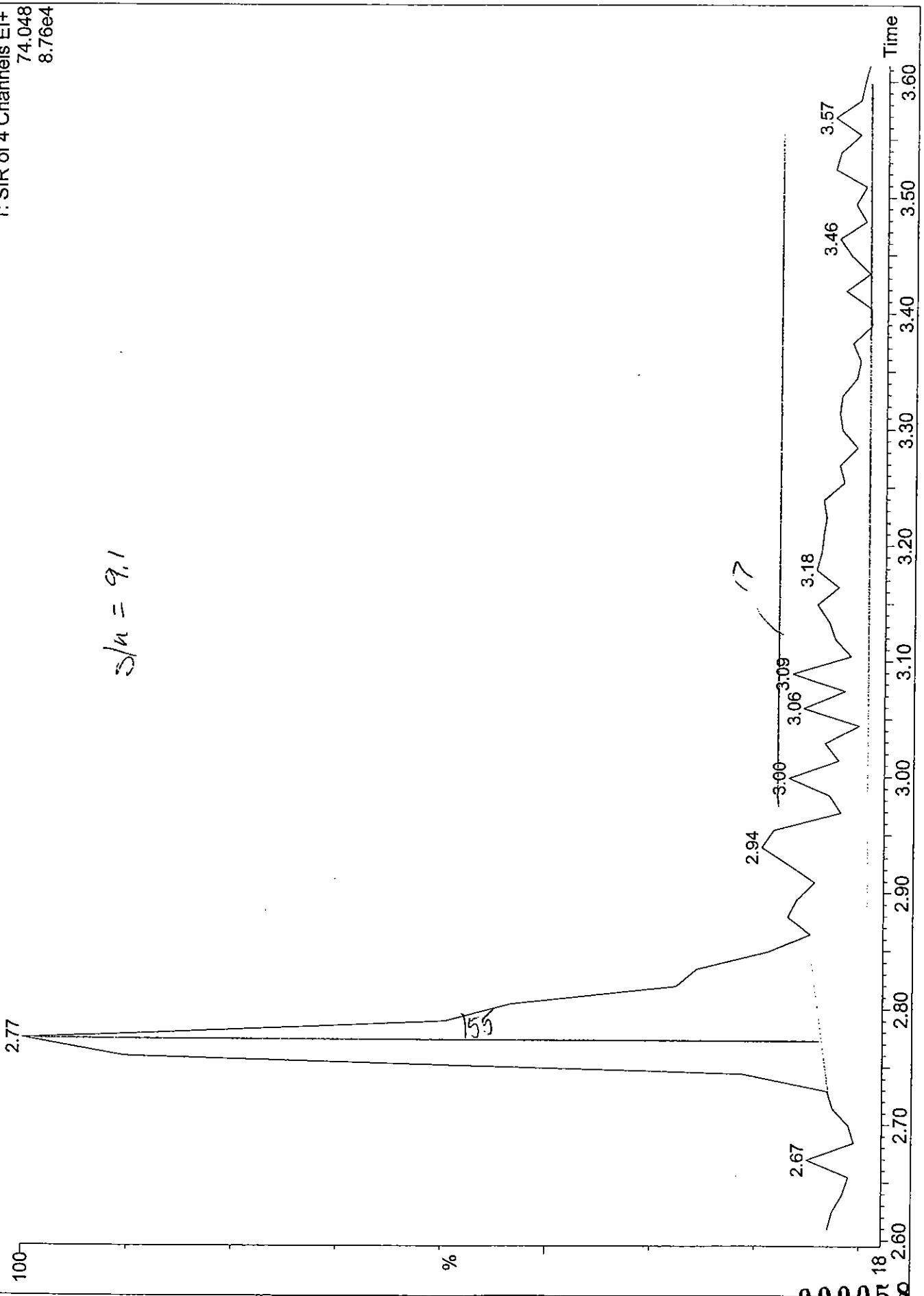
000057

1.0ng/ml 70-202NDMW-1245

Kr23450015

1: SIR of 4 Channels EI+
74.048
8.76e4

$S/N = 9.1$



0000518

CONTINUING CALIBRATION

000059

CONTINUING CALIBRATION CHECK

Lab Name Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date 2003/05/01 Time 10:21:31

LAB FILE ID. KR23450013 CS4

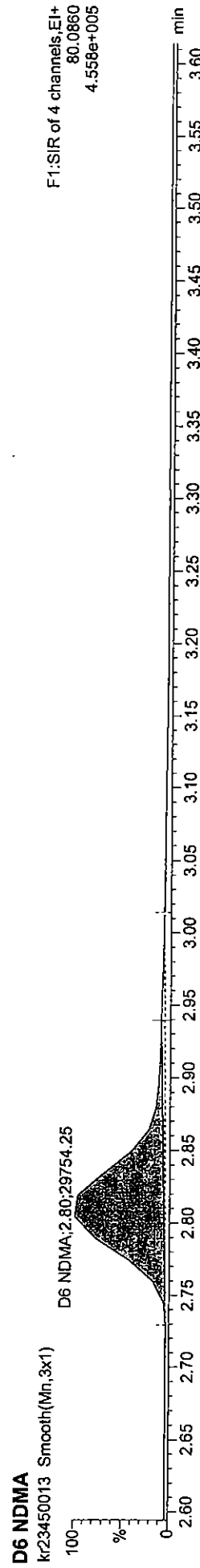
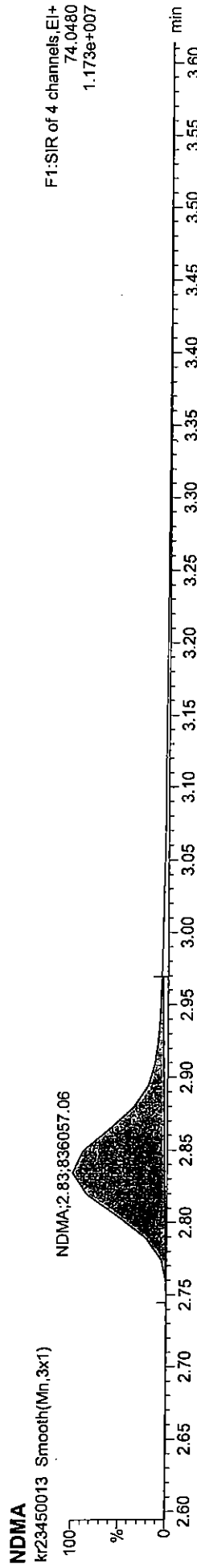
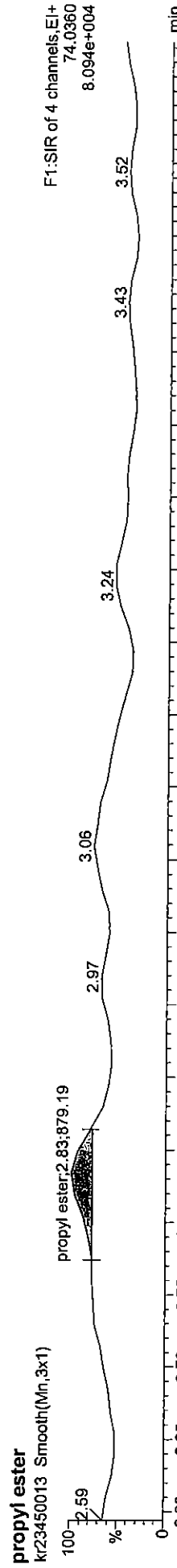
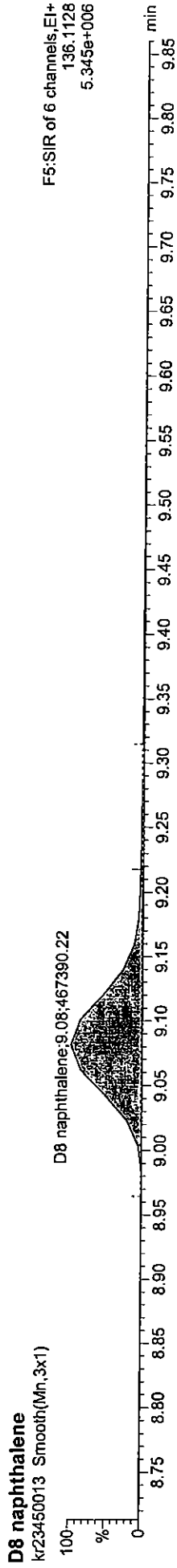
Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.67	1.38	18	25
D6-NDMA	0.139	0.162	17	25

000060

Dataset: C:\MASSLYNX\Default.pro\QuantifyFiles\QC\Calibration\20030501\ndmaconcalb_20030501.qld, Time: Thu May 01 10:50:29 2003

Method: C:\MASSLYNX\Default.pro\METHOD\nitros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\ndmacalib_20030430.cdb, Time: Thu May 01 09:25:34 2003

Name: kr23450013.*, Date: 01-May-2003, Time: 10:21:31, Job: , Description: 200ng/ml 70-202NDMMW-1241

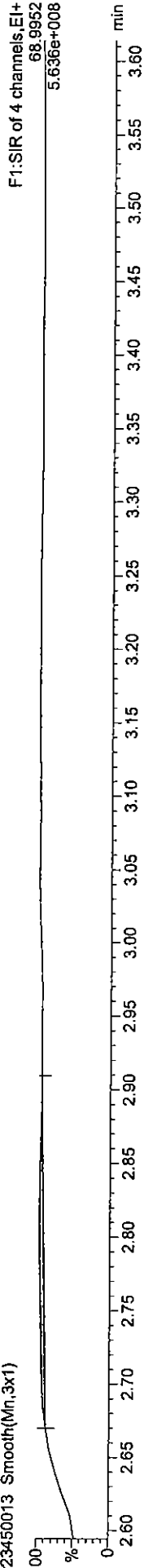


000061

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\ndmaconcalb_20030501.qld, Time: Thu May 01 10:50:29 2003

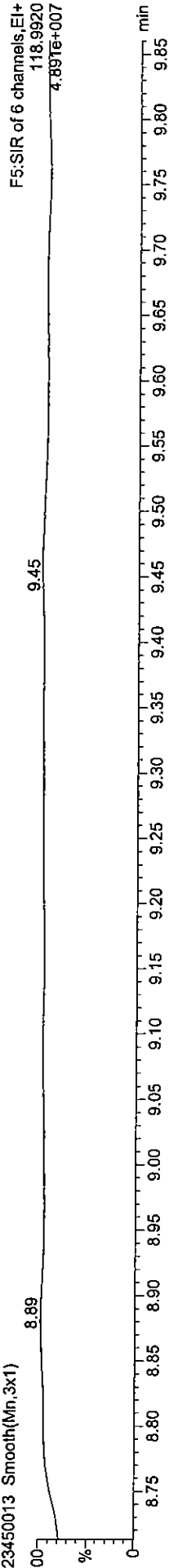
lock mass1

kr23450013 Smooth(Mn,3x1)



lock mass5

kr23450013 Smooth(Mn,3x1)



Compound Name	Area	%Area	Height	Width	Retention Time (min)	Mod Date
1 NDMA	74.0480	836057	2.83	164582	9.20	01-May-03
2 D6 NDMA	80.0860	29754	2.80	11476	9.20	01-May-03
3 D8 naphthalene	136.1128	467390	9.08	25000	9.20	01-May-03
4 propyl ester	74.0360	879	2.83	0	9.20	01-May-03

000062

CONTINUING CALIBRATION CHECK

Lab Name Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date 2003/05/01 Time 13:29:08

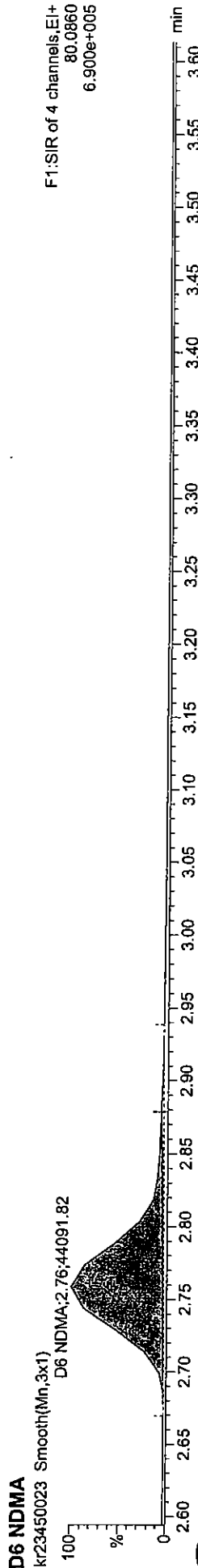
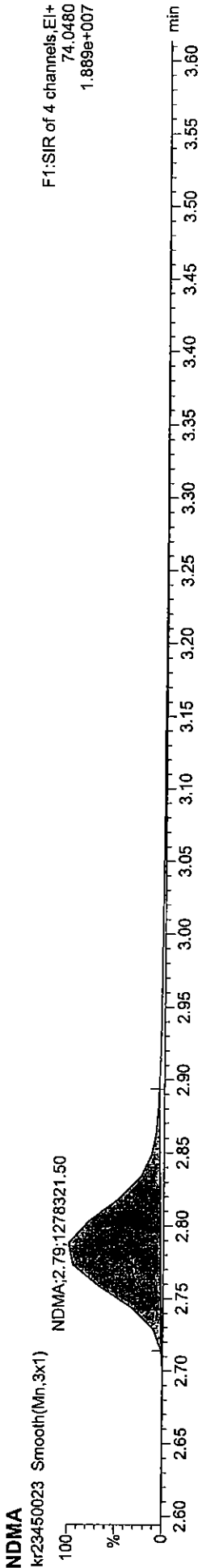
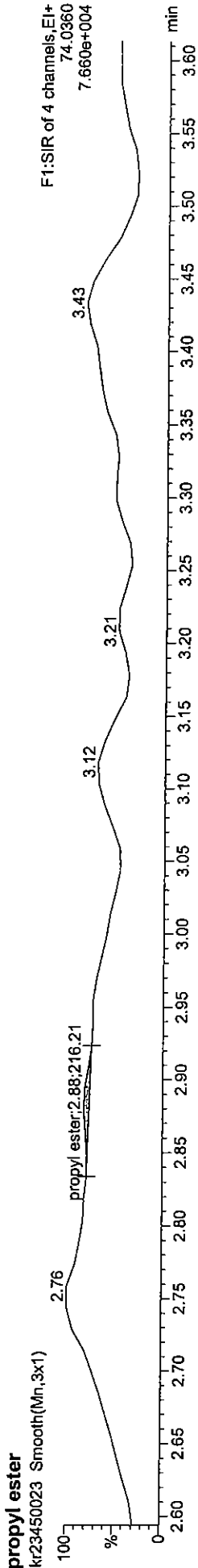
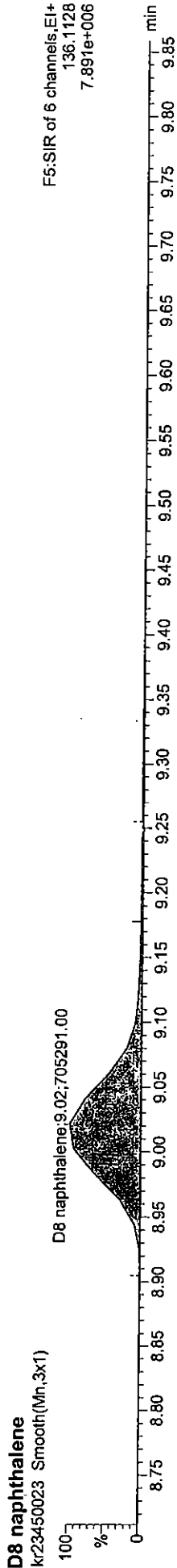
LAB FILE ID. KR23450023 CS4

Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.67	1.42	15	25
D6-NDMA	0.139	0.159	15	25

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\ndmaconcalc_20030501.qld, Time: Thu May 01 14:09:38 2003

Method: C:\MASSLYNX\Default.pro\METHOD\nitros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\ndmacalib_20030430.cdb, Time: Thu May 01 09:25:34 2003

Name: kr23450023.*, Date: 01-May-2003, Time: 13:29:08, Job: , Description: 200ng/ml,70-202NDMW-1241

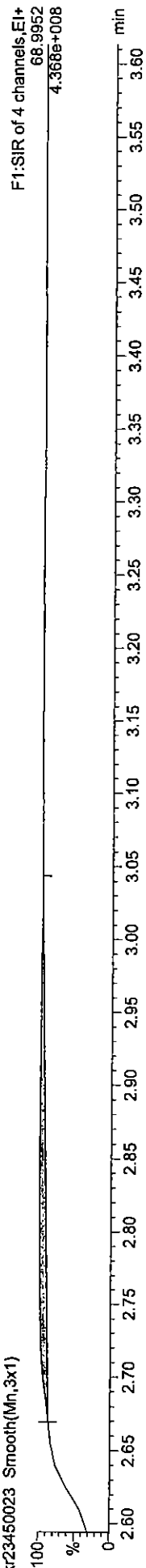


Quantify Sample Report

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\ndmaconcalc_20030501.qld, Time: Thu May 01 14:09:38 2003

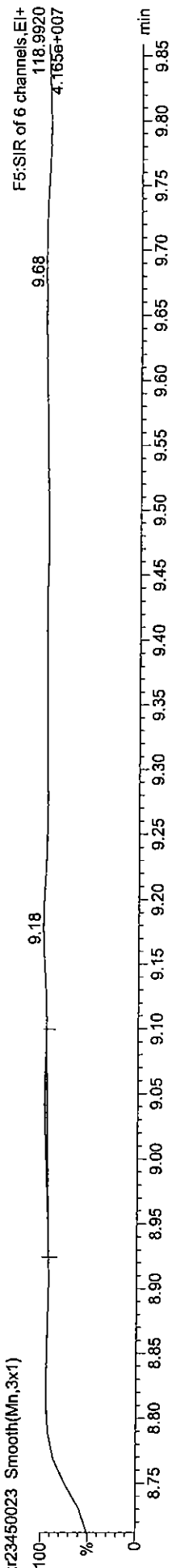
lock mass1

kr23450023 Smooth(Mn,3x1)



lock mass5

kr23450023 Smooth(Mn,3x1)



Component Name	Area	%Area	Response	Retention	Integration	Resolution	Integration	Resolution	Integration	Resolution
1 NDMA	74.0480	1278322	2.79	169816	84.91	-15.09	01-May-03	1.421		
2 D6 NDMA	80.0860	44092	2.76	11270	115.00	15.00	01-May-03	0.159		
3 D8 naphthalene	136.1128	705291	9.02	25000	100.00	0.00	01-May-03	1.000		
4 propyl ester	74.0360	216	2.88	0	4.33	-95.67	01-May-03	216.210		

000065

CONTINUING CALIBRATION CHECK

Lab Name Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date 2003/05/01 Time 14:25:47

LAB FILE ID. KR23450026 CS4

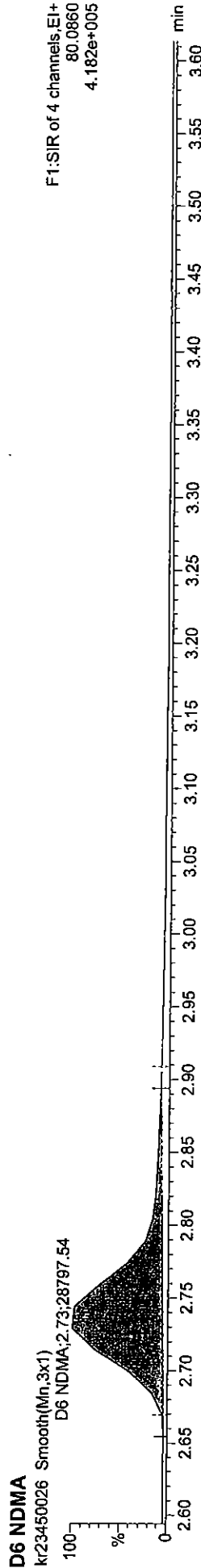
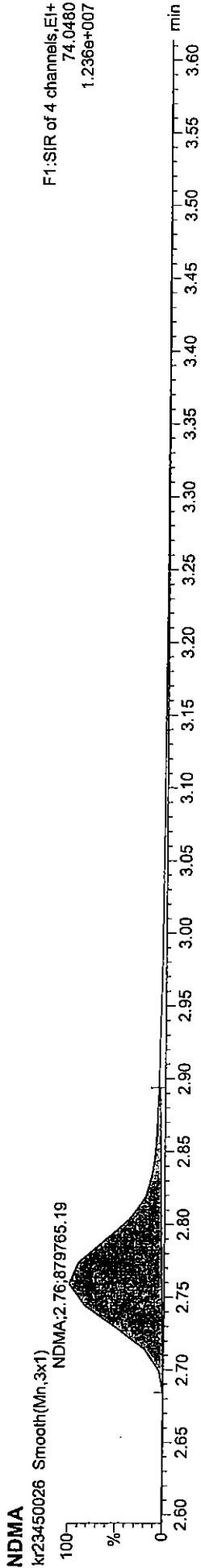
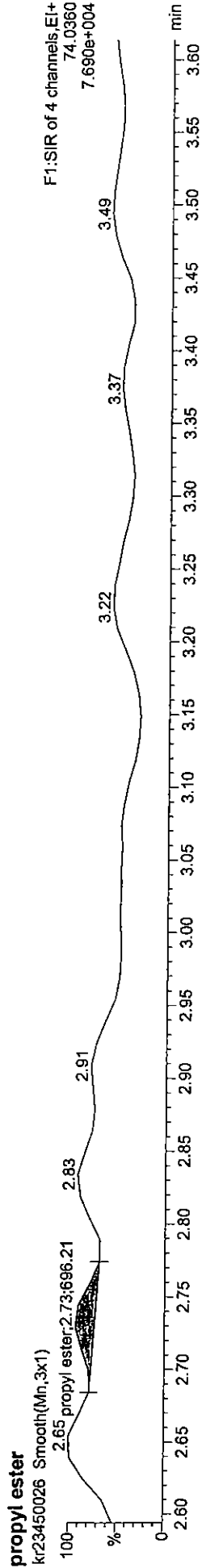
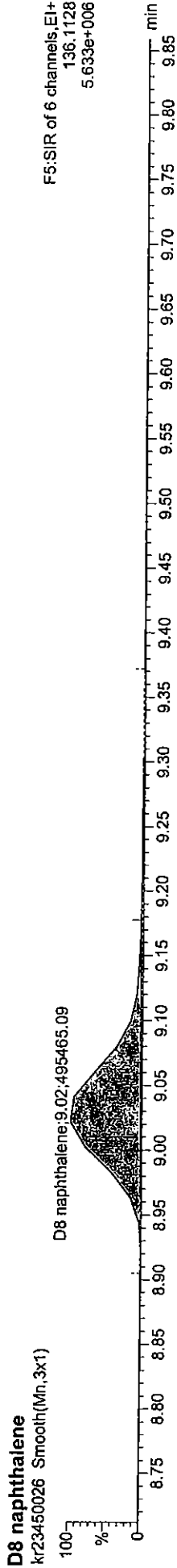
Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.67	1.50	11	25
D6-NDMA	0.139	0.148	7	25

000066

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\ndmaconcald_20030501.qld, Time: Thu May 01 15:37:07 2003

Method: C:\MASSLYNX\Default.pro\METHOD\B\nitros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\ndmacal2_20030430.cdb, Time: Thu May 01 09:25:34 2003

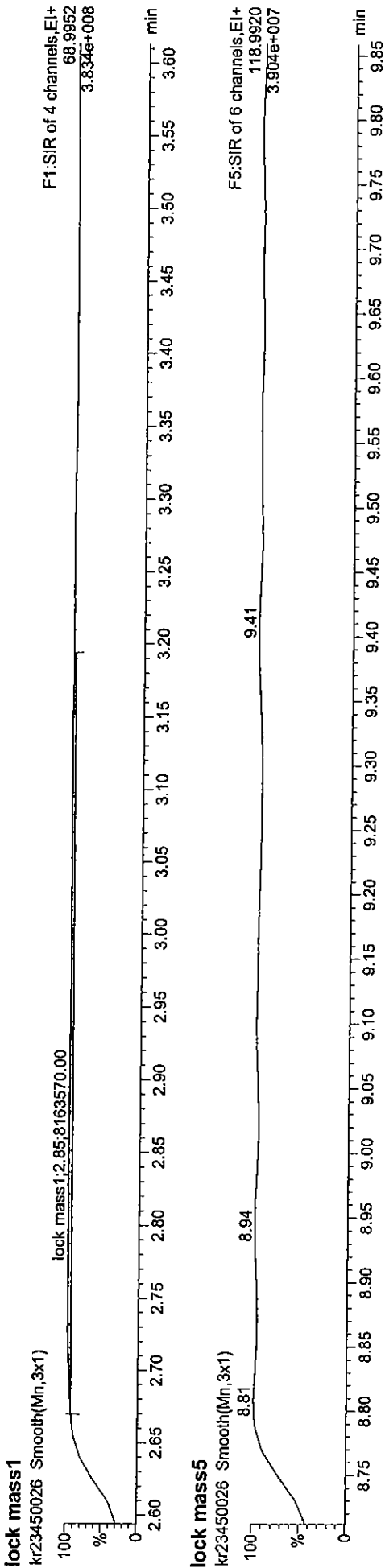
Name: kr23450026.*, Date: 01-May-2003, Time: 14:25:47, Job: , Description: 200ng/ml,70-202NDMMW-1241



000067

Quantify Sample Report

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\ndmaconcald_20030501.qld, Time: Thu May 01 15:37:07 2003



Compound Name	Area	Height	Retention Time	Integration	Integration	Integration	Integration	Integration	Integration	Integration
1 NDMA	74.0480	879765	2.76	178940	89.47	-10.53	01-May-03	1.497		
2 D6 NDMA	80.0860	28798	2.73	10478	106.92	6.92	01-May-03	0.148		
3 D8 naphthalene	136.1128	495465	9.02	25000	100.00	0.00	01-May-03	1.000		
4 propyl ester	74.0360	696	2.73	0	13.93	-86.07	01-May-03	696.205		

000068

CONTINUING CALIBRATION CHECK

Lab Name Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date 2003/05/01 Time 19:29:56

LAB FILE ID. KR23450044 CS4

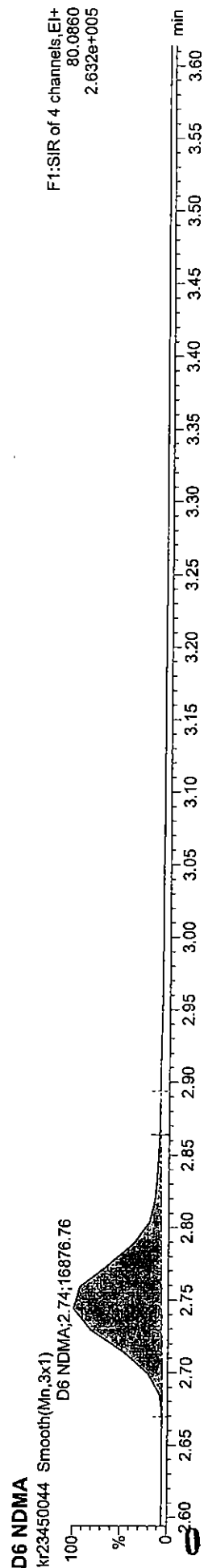
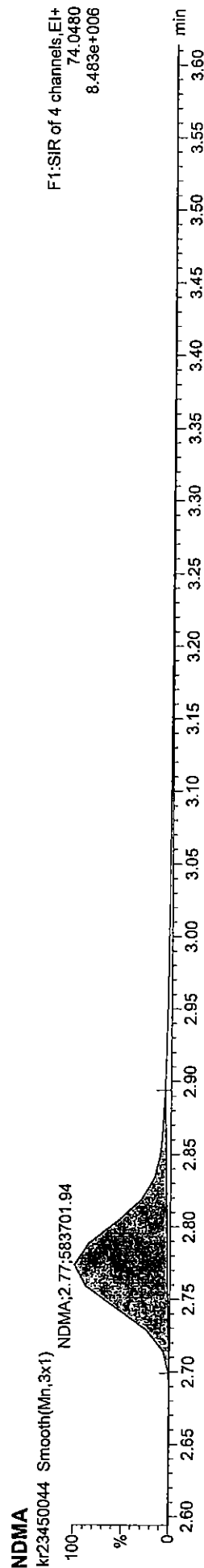
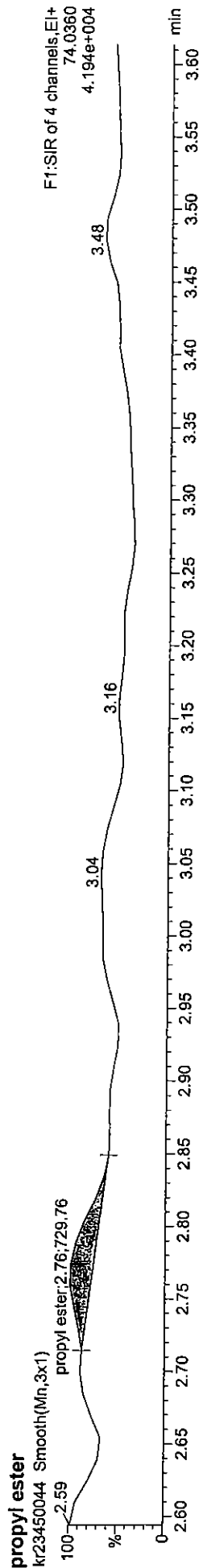
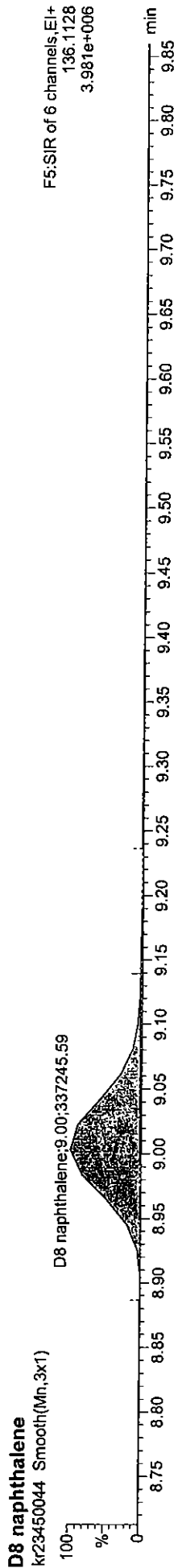
Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.67	1.70	1	25
D6-NDMA	0.139	0.128	8	25

000069

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030501\ndmaconcale_20030501.qld, Time: Fri May 02 08:10:43 2003

Method: C:\MASSLYNX\Default.pro\METHOD\nitros_ET.mdb, Time: Tue Mar 11 10:16:54 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\ndmacall2_20030430.cdb, Time: Thu May 01 09:25:34 2003

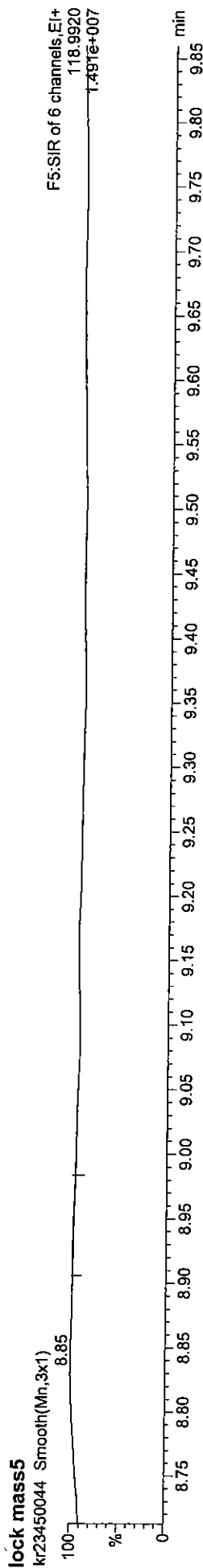
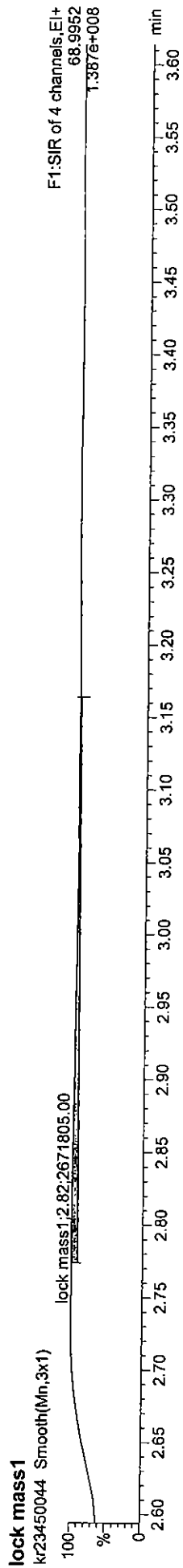
Name: kr23450044.*; Date: 01-May-2003, Time: 19:29:56, Job.: , Description: 200ng/ml,70-202NDMMW-1241



000070

Quantify Sample Report

Dataset: C:\MASSLYNX\Default.pro\QuantlynxFiles\QC\Calibration\20030501\ndmaconcale_20030501.qld, Time: Fri May 02 08:10:43 2003



Compound Name	Area	Height	Area%	Height%	Mod Date
1 NDMA	74.0480	583702	101.29	1.29	02-May-03
2 D6 NDMA	80.0860	16877	92.05	-7.95	02-May-03
3 D8 naphthalene	136.1128	337246	100.00	0.00	02-May-03
4 propyl ester	74.0360	730	14.61	-85.39	729,758

000071

SAMPLE PREPARATION RECORDS

000072

Chart Marked # 470159

IV	FV	SF	FB	Rotosep	Int Std.	Comments
500	1ml	21	L20	2	Int. standard 70-182,000 PR-21	cont. egg yolk white in set
		24	L25	3		cont. egg yolk yellow in set
		18	L53	2		cont. extract cont. egg yolk
		10	L16	1		extract only cont. yellow
		14	L22	3		cont. extract cont. yellow
		-	G82	1		blank ext.

Worksheet # 470707

IV	FV	SF	FB	Rotosep	Int Std.	Comments
1000	1ml	14	DW22	3	Int. standard 70-182,000 PR-21	
		10	DW2	2		
		21	DW4	1		
		24	230	3		
		19	221	2		
		18	208	1		
		8	458	1		
		29	454	3		
		4	228	2		
		20	421	1		
		12	451	3		
		-	G83	2		

Worksheet # 470708

IV	FV	SF	FB	Rotosep	Int Std.	Comments
1000	1ml	14	DW22	3	Int. standard 70-182,000 PR-21	
		10	DW2	2		
		21	DW4	1		
		13	231	2		extract cont. yellow
		1	457	1		extract cont. yellow
		6	454	2		Int. standard 70-182,000 PR-21
		22	406	3		Int. standard 70-182,000 PR-21
		-	G83	2		

Chart Marked # 470159

IV	FV	SF	FB	Rotosep	Int Std.	Comments
A313990	995998					
	995998					
	996000					
	996001					
	996002					
	BLK					

Worksheet # 470707

IV	FV	SF	FB	Rotosep	Int Std.	Comments
470707S						
470707SD						
Blank						
A313972	995927					
A313975	995936					
	995938					
A314001	996031					
	996039					
	996040					
	996041					
A314211	997113					
	BLK					

Worksheet # 470708

IV	FV	SF	FB	Rotosep	Int Std.	Comments
470707S						
470707SD						
Blank						
A313116	992362					
A313152	991929					
	991930					
	991933					
	BLK					

INSTRUMENT LOG

000074

fail (Run out of PFA - valve closed); last signal

fail

OK

26 200 ug/ml 70-202 NDMW-1241

OK

27-31 Mass resolution / Accuracy for wires

OK

32 200 ug/ml 70-202 NDMW-1241

OK

33 5.0 ug/ml 70-202 NDMW-1238

OK

34 50 ug/ml 70-202 NDMW-1239

OK

35 80 ug/ml 70-202 NDMW-1240

OK

36 200 ug/ml 70-202 NDMW-1241

OK

37 1000 ug/ml 70-202 NDMW-1242

OK

38 2000 ug/ml 70-202 NDMW-1243

OK

39 clean blank

OK

40 10.0 ug/ml 70-202 NDMW-1244

OK

41 1.0 ug/ml 70-202 NDMW-1245

OK

42 471 449 spike, N, 1, 2

OK

43 spike 0, 1, 2

OK

44 blank N, 1, 2

OK

45 glass blank (2003/04/20)

OK

46 471 449 999 393-01R, N, 1, 2

OK

47 999 394 01R, N, 1, 2

OK

48 999 395 01R, N, 1, 2

OK

49 200 ug/ml 70-202 NDMW-1241

OK

50 471 449 998 429 01R, N, 1, 2

OK

51 998 931 01R, N, 1, 2

OK

52 200 ug/ml 70-202 NDMW-1241

OK

53 reference of no file

OK

Autosampler is not responding. After out again

Reject

OK 2003/10/21

2003/05/01

K12345	01-04	Blank resolution / Accuracy for nitro	PC
086	200 ng/ml	70-202 NDMW-1241	PC
087	10 ng/ml	70-202 NDMW-1244	PC
088	1.0 ng/ml	70-202 NDMW-1245	PC
09-12	Blank resolution / Accuracy for nitro		PC
13	200 ng/ml	70-202 NDMW-1241	PC
14	10 ng/ml	70-202 NDMW-1244	PC
15	1.0 ng/ml	70-202 NDMW-1245	PC
16	471449	spike, N, 1, 2	PC
17		spike, A, 1, 1, 2	PC
18		blank, N, 1, 1, 2	PC
19	glass blank	(2003/04/30)	PC
20	471449	999393 01R, N, 1, 1, 2	PC
21		999394 01R, N, 1, 1, 2	PC
22		999395 01R, N, 1, 1, 2	PC
23	200 ng/ml	70-202 NDMW-1241	PC
24	471449	998429 01R, N, 1, 1, 2	PC
25		998931 01R, N, 1, 1, 2	PC
26	200 ng/ml	70-202 NDMW-1241	PC
27	(no file)		PC
28-30	Blank resolution / Accuracy for nitro		PC
31	470707	spike, N, 1, 1, 2	PC
32		spike, D, 1, 1, 2	PC
33		blank, N, 1, 1, 2	PC
34	glass blank	(2003/04/28)	PC
35	470707	995927 01R, N, 1, 1, 2	PC
36		995936 01R, N, 1, 1, 2	PC

fair (Time focus on the wrong ions)

A314635

A314638

A314443

A314536

A313972

A313975

A 313975
A 314001

A 314211

A 313990

✓

✓

✓

✓

fail

K1234537 470707, 995938 -01R, N,1,2

996031 -01R, N,1,2

996039 01R, N,1,2

996040 01R, N,1,2

996041 -01R, N,1,2

997113 01R, N,1,2

471450, 997216 -03R, N,1,2

200 ng/ml 70-202 NDMW-1241

470159 spike, N,1,2

spike D,1,2

blank, N,1,2

995995 -01R, N,1,2 dx 1/10

995996 -01R, N,1,2 dx 1/10

995997 -01R, N,1,2 dx 1/10

995998 -01R, N,1,2 dx 1/10

995999 01R, N,1,2 dx 1/10

996000 -01R, N,1,2 dx 1/10

996001 -01R, N,1,2 dx 1/10

996002 -01R, N,1,2

200 ng/ml 70 - 202 NDMW-1241

no file

2003105102

206 sham mutation / accuracy for w/h

207 200 ng/ml 70-202 NDMW-1241

208 10 ng/ml 70-202 NDMW-1244

STANDARDS PREPARATION RECORDS

000078

162

Date

Lot #

What used

Final conc

Final Vol

Solvent

Use

Code

Final conc

Expiry

Comments

163

Initials

DATE	LOT #	AMOUNT USED	INITIAL CONC	PIPET VOLUME	SOLVENT	USE	CODE	FRAC CONC	EXPIRY DATE	COMMENTS	189
2003/02/17	13LCS0602	100µL	100 µg/mL	10 mL	ACETONE	AT-SPRINGER	70-188NDMIN-183	1/2 µg/mL	2003/08/17		11/18/03
							18162-251				OK
							18162-252				
2003/02/17	70-174NDMIN-37	100 µL	2000 µg/mL	1 mL	DCM	NITROGEN WATER	70-188NDMIN-183	2000 µg/mL	2003/02/18	added: 5 µL 70-174NARP-20 100 µL 70-182NDML-120	11/18/03
2003/02/17	70-146WARD-20	500 µL	5000 µg/mL	10 mL	DCM	NITROGEN WATER	70-188NDMIN-183	2500 µg/mL	2003/02/26	- use 5 µL in F.V. = 50 µL - use 3 µL in F.V. = 30 µL - add in each: 100 µL 70-182NDML-120	11/18/03
2003/02/18	70-146GEMIN-10	10 µL	500 µg/mL	1 mL	DCM	GEOMIN WATER	70-188NDMIN-182	5.0 µg/mL	2003/02/26	5 µL 70-186NDOR-07	11/18/03
		50 µL					153	25.0			
		10 µL					154	50.0			
		25 µL	5000 µg/mL				155	125.0			
	70-142GEMIN-03	50 µL					156	250.0			
2003/02/18	70-174NDMIN-34	100 µL	50 µg/mL	1 mL	DCM	NITROGEN WATER	70-188NDMIN-184	5.0 µg/mL	2003/02/28	added: 5 µL 70-174NARP-20 100 µL 70-182NDML-120	11/18/03
	70-162NDMIN-37	25 µL	2000 µg/mL				185	50 µg/mL			
		40 µL					186	80 µg/mL			
		100 µL					187	200 µg/mL			
	70-162NDMIN-36	50 µL	20,000 µg/mL				188	1000 µg/mL			
		100 µL					189	2000 µg/mL			
	70-184NDMIN-39	100 µL	100 µg/mL				190	10 µg/mL			
	70-184NDMIN-186	100 µL	10 µg/mL				191	1.00 µg/mL			
2003/02/20	13C50602	1.0 mL	40 µg/mL	5 mL	Hexane	10% OF Hexane, S.D.	70-188162L-05	0.008 µg/mL	2003/08/20	use 25 µL / extract.	OK
2003/02/20		100 µL	100/200 µg/mL	10 mL	Acetone	AT-SPRINGER	70-188162L-253	1/2 µg/mL	2003/08/20		11/18/03
							18162-254				
							18162-255				
							18162-256				
							18162-257				
							18162-258				
2003/02/26	ULTRA SCIENTIFIC US-113 N	1 mL	2000 µg/mL	10 mL	Meat	NITROGEN WATER	70-188NDMIN-180	200 µg/mL	2004/02/26	STOCK NITROGEN	11/18/03
	70-188NDMIN-032	1 mL	200 µg/mL	10 mL	Meat	NITROGEN WATER	70-188NDMIN-180	20,000 µg/mL	2003/08/26	INTERM. #1 NITROS	11/18/03

190

Arche	Lot #	Amount used	Final conc.	Final vol.	Solvent	Use	Code	Final conc	Expiry Date	Comments	Init
2003/02/26	70-188NDMMN-40	1 mL	20000 ng/mL	10 mL	MeOH	NITROGENOUS INTERMEDIATE # 2	70-190NDMMN-41	2000 ng/mL	2003/08/26	INTERM. #2 NITROS	HC
	70-190NDMMN-41	250 µL	2000 ng/mL	10 mL	MeOH	NITROGENOUS INTERMEDIATE SPIKE (LAB)	70-190NDMMN-42	50 ng/mL	2003/05/26	5444 NITROS LAB SPIKE	
	70-190NDMMN-41	250 µL	2000 ng/mL	10 mL	MeOH	NITROGENOUS INTERMEDIATE SPIKE	70-190NDMMN-192	5.00 ng/mL	2003/05/26	5444 NITROS WORKING SPIKE	
	70-190-NDMMN-40	100 µL	50 ng/mL	10 mL	DCM	NITROGENOUS INTERMEDIATE SPIKE	70-190NDMMN-193	↓	2003/03/26	added: 5 µL 70-179NDMMN-20 100 µL 70-182NDMMN-190 Method spike to test used Stalls	
	70-190-NDMMN-43	100 µL	↓	↓	↓	↓	70-190NDMMN-194	1/2 mg/L	2003/03/26		DK
2003/02/26	13LCS0602	100 µL	10000 ng/mL	10 mL	ACETONE	D/F-SURROGATE	-259				
							-260				
							-261				
							-262				
							-263				
							-264				
							-215				
							-266				
							-267				
							-268				
							-289				
2003/02/27	70-190NDMMN-41	100 µL	2000 ng/mL	1 mL	DCM	NITROS ALKYL INTERMEDIATE	70-190NDMMN-194	200 ng/mL	2003/03/27	added in each 5 µL 70-179NDMMN-20 100 µL 70-182NDMMN-190	HC
	70-184NDMMN-39	100 µL	100 ng/mL	1 mL	DCM	NITROS ALKYL INTERMEDIATE	70-190NDMMN-195	10 ng/mL			
	70-190NDMMN-195	100 µL	100 ng/mL	1 mL	DCM	THIOPHENOL CARBOXYLIC ACIDS	70-190NDMMN-196	1.0 ng/mL			
2003/02/27	MC950898	100 µL	100 mg/mL	10 µL	Acetone	Chlorophenols Sur.	70-190CPHL-12	1 ng/L	2003/08/27		OK
2003/02/27	MC950199	100 µL	100 mg/mL	10 µL	Acetone	Chlorobenzenes Sur.	70-190CPHL-12	1 ng/L	2003/08/27		OK
2003/02/27	CP9708	100 µL	100 mg/mL	10 µL	MeOH	Chlorophenols Spike	70-190CPHL-12	1 ng/L	2003/08/27		OK
2003/02/27	CB9708	100 µL	100 mg/mL	10 µL	MeOH	Chlorobenzenes Spike	70-190CPHL-12	1 ng/L	2003/08/27		OK
	MAX-SOL-4	↓	↓	↓	↓	↓	70-190CHBL-07	1 ng/L	2003/08/27		DK
2003/03/03	SPH165100X LOT 10 STK 0603	250 µL	400000000 ng/mL	10 mL	Acetone	3IF 3H ₂ O INTERMEDIATE	70-19016ZN-02	10/50/100 ng/mL	2003/03/03		DK
2003/03/03	70-19016ZN-02	1 mL	10/50/100	10 µL	Acetone	3IF spike daily	70-19016ZN-13	1/5/10 ng/mL	2003/09/03	use 100 µL	DK
2003/03/05	68A-CS0900	50 µL	1 µg/mL	25 µL	Acetone	POB surrogate daily	70-190-NOP-20/17	2 ng/mL	2003/09/05	use 200 µL	SC

Date	Lot #	Amount Used	Initial Conc.	Final Vol.	Solvent	Use	Code	Final Conc.	Expiry Date	Comments	Units
2003/04/15	70-172NMIN-14	50µL	2000 µg/mL	10mL	DCM	2nd Source		1000 µg/L			H.L.
	70-180NMIN-16	10mL	12.68 µg/mL			sol		1268 µg/L			
	70-172NMIN-02	150µL	100 µg/mL					1500 µg/L	2003/06/15		
2003/04/17	70-200NMIN-03	100µL	100 µg/mL	10 mL	ACETONE	1,4 Dioxane 70-202NMIN-05 PES-7 DVE SPICE daily 70-202NMIN-29		0.1 µg/mL	2003/10/17	OPC 1.0mL For TRACE	µg
						70-202NMIN-30					
						70-202NMIN-31					
2003/04/22	70-190NMIN-42	100 µL	50 µg/mL	1 mL	DCM	W/FAVOR sol with 10µL DMSO		50 µg/mL	2003/05/22	W each added: 5 µL 70-198NMIN-26 70-198NMIN-125 → 100 µL	µg
	70-190NMIN-41	25 µL	2000 µg/mL					50.0 µg/mL			
		40 µL						80.0 µg/mL			
		100 µL						200 µg/mL			
	70-188NMIN-40	50 µL	20,000 µg/mL					1000 µg/mL			
		100 µL						2000 µg/mL			
	70-184NMIN-39	100 µL	100 µg/mL			2nd source with 10µL DMSO		10.0 µg/mL			
		100 µL				Third source with 10µL DMSO		1.0 µg/mL			
	70-202NMIN-123	100 µL	10 µg/mL					10.0 µg/mL			
2003/05/28	70-190NMIN-42	100 µL	50 µg/mL	1 mL	DCM	Nitrocellulose with 10µL DMSO		5.0 µg/mL	2003/05/28	W each added: 5 µL 70-198NMIN-26 100 µL 70-198NMIN-125	µg
	70-184NMIN-39	100 µL	100 µg/mL			2nd source with 10µL DMSO		10.0 µg/mL			
	70-202NMIN-123	100 µL	10.0 µg/mL			Third source with 10µL DMSO		1.00 µg/mL			
	70-190NMIN-41	100 µL	2000 µg/mL			Nitrocellulose with 10µL DMSO		200 µg/mL			
2003/05/28	70-190NMIN-42	100 µL	50 µg/mL	1 mL	DCM	Nitrocellulose with 10µL DMSO		5.0 µg/mL	2003/05/28	W each added: 5 µL 70-198NMIN-26 100 µL 70-198NMIN-125	µg
	70-190NMIN-41	25 µL	2000 µg/mL			2nd source with 10µL DMSO		50			
		40 µL						80			
		100 µL						200			
	70-188NMIN-40	50 µL	20,000 µg/mL					1000			
		100 µL						2000			
	70-184NMIN-39	100 µL	100 µg/mL			2nd source with 10µL DMSO		10.0	2003/05/06		
	70-202NMIN-124	100 µL	10 µg/mL			Third source with 10µL DMSO		1.00			

CHAIN OF CUSTODY DOCUMENTATION

000085

Report Name: Entry

Job #: A314211

Page #: 1

Client: APPLIED P & CH LABORATORY
13769 MAGNOLIA AVE
CHINO CA
USA 91710-7018

Inv Attn: Kenny Chan

Printed: 2003/04/25 Version 1
Reception Date: 2003/04/25
Reception Time: 17:03
Login Date: 2003/04/25
REQUIRED DATE: 2003/05/16
Quote Number: A20018

Report: same

Attention: Kenny Chan
Phone: (909) 590 - 1828 Ext: 263
Fax: (909) 902 - 1661

P.O. Number:
Project Number: JPL

Client Number: 9417
Rpt Address #:
Q.C. Samples: No

Project Coordinator: AGY

Maxxam Client Number	Sample ID	Cont's	Store Recd. Code	OK	Sampling Date	Matrix	Test Codes
997113-01R	MW-4-1	2-ILAG	WWI-512	Yes	2003/04/21	LIQ	W-NDMA-L

Remarks: EPA 1625. LEVEL 4 5

Quote Remarks:

EPA Level 4 reporting (15% surcharge).
For Extract & Hold samples, charge US\$175

000086



SAMPLE RECEIPT RECORD

Way Bill #838068291057
Received 2003-04-25 1:00M
Courier Company FEDEX
Assigned Job # A314211
Project #JPL
Client Name Applied P and CH
Project Contact Kenny Chan

Verification of Sample conditions

Observation	Yes	NO
Were custody seals on the outside of the cooler?	✓	
Was the Chain of custody inside the cooler?	✓	
Was the Chain of Custody properly filled out?	✓	
Was ice or ice packs used to keep samples cool?	✓	
Temperature of the cooler or blank.	1.0°c	
Was the temperature acceptance limit of <8 c met?	✓	
Were the sample containers in good condition?	✓	

If the answer to any of the questions above is NO, a sample exceptions report must be completed.

Date Logged in 2003-04-25


Sample Entry

Tracy Strelau

Maxxam Analytics Inc

50 Bathurst Dr, Unit #12
Waterloo, ON
N2V 2C5
(519) 747 2575 ext.21

Comments:

000088

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

GEOFON, Inc.

Attention: Leo Williamson

22632 Golden Spring Dr Ste 270

Diamond Bar 91765

Tel: (909)396-7662 Fax: (909)396-1455

APCL Analytical Report

Service ID #: 801-033393

Received: 05/27/03

Collected by:

Extracted: N/A

Collected on: 05/27/03

Tested: N/A

Reported: 06/20/03

Sample Description: Water

Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result	
				MW-13	MW-16
				03-03393-1	03-03393-2

NITROSAMINES BY HRMS ^(a)

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

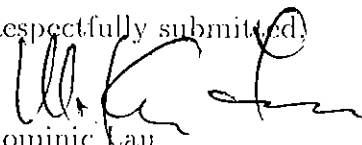
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

^(a) Subcontracted to Maxxam Analytics Inc. See attached.

Respectfully submitted,



Dominic Lau

Laboratory Director

Applied P & Ch Laboratory



INCORPORATED
 22632 GOLDEN SPRINGS DR., SUITE 270
 DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

SHARON WELLS 0035

GEOFON LAB COORDINATOR		LAB COORDINATOR'S PHONE		LAB COORDINATOR'S FAX		LABORATORY SERVICE ID		LABORATORY CONTACT		MAIL REPORT (COMPANY NAME)	
Brad Shojae		(909) 396-7662		(909) 396-1455		-		Kenny Chan		GEOFON, INC.	
PROJECT NAME		PROJECT LOCATION		PROJECT NUMBER		LABORATORY PHONE		LABORATORY FAX		RECIPIENT NAME	
SPL MW Mon-2903		MW-13 MW-16		64-4428.10		(909) 396-1455		(909) 590-1498		Leo W. Williamson	
PROJECT CONTACT		PROJECT PHONE NUMBER		PROJECT FAX		LABORATORY ADDRESS		LABORATORY CONTACT		ADDRESS	
Leo W. Williamson		(714) 920-8729		(909) 396-1455		13760 Magnolia Ave		Kenny Chan		22632 Golden Springs Dr. #270	
PROJECT ADDRESS		CITY, STATE AND ZIP CODE		CLIENT		LABORATORY ADDRESS		LABORATORY CONTACT		CITY, STATE AND ZIP CODE	
1800 Oak Grove Dr.		Pasadena, CA		US NAVY SW DIV		Chgo, IL 60610		Kenny Chan		Diamond Bar, CA. 91765	
PROJECT MANAGER		PROJECT MANAGER'S PHONE		PROJECT MANAGER'S FAX		LABORATORY ADDRESS		LABORATORY CONTACT		CITY, STATE AND ZIP CODE	
Hsiao Fokheem		(909) 396-7662		(909) 396-7662		1625 M (INDMA)		Kenny Chan		Diamond Bar, CA. 91765	

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses	Comments
1	MW-13									
2	MW-16									
3										
4										
5										
6										
7										
8										
9										
10										

SAMPLES COLLECTED BY: Leo W. Williamson		CORNER AND AIR BILL NUMBER:		DATE		TIME		COOLER TEMPERATURE UPON RECEIPT	
RELINQUISHED BY: Leo W. Williamson		RECEIVED BY: S. Wells		5/27/03 12:45		13:35			
SIGNED: Leo W. Williamson		SIGNED: S. Wells							

3393

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Sample Receiving Checklist

APCL ServiceID: **3393** Client Name/Project: Geon / JPL

1. Sample Arrival

Date/Time Received 5/27/03 1330 Date/Time Opened 5/27/03 1330 By (name): Vernon Chan
Custody Transfer: Client Golden State UPS US Mail FedEx APCL Empl. Scott B.

2. Chain-of-Custody (CoC)

With Samples? Faxed? Client has Copy? Signed, dated? By: _____
 Project ID? Analyses Clear? Hold Samples? #on Hold _____ # Received 2
 CoC/Docs Zip-Locked under lid? Compos.#: _____ #Samples OK?
 Discrepancies? Client notified? Response (attach docs): _____

3. Shipping Container/Cooler

Cooler Used? # of 1 Cooled by: Ice Blue Ice Dry Ice None
Temp °C 30
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? Absent Intact Tampered?

4. Sample Preservation

pH <2 pH >12
If Not, pH = _____ Preserved by: Client APCL Third Party _____

5. Holding-time Requirements

pH 24hr BACT 6/24hr Cr^{VI} 24hr NO₃⁻ 48hr BOD 48hr
 Cl₂ ASAP Turbidity 48hr DO ASAP Fe(II) ASAP
 HT Expired? Client notified?

6. Sample Container Condition

Intact? Broken? Documented? Number: _____
Type: plastic glass Tube: brass/SS Tedlar Bag
 Quantity OK? Leaking? Anomaly?
 Caps tight? Air Bubbles? Anomaly?
Labels: Unique ID? Date/Time Preserved?

7. Turn Around Time

RUSH TAT: _____ Std (7-10 days) Not Marked

8. Sample Matrix

Drinking H₂O Other Liq Soil Wipe Polymer Air Other: _____
 Ground H₂O Sludge Filter Oil/Petro Paint W. Water Extract Unknown

9. Pre-Login Check List Completed & OK?

ALL OK? (if not, attach docs) Client Contact? (Name: _____) Date/Time: _____
Received/Checked by: [Signature] Date: 27 May 2003 Time: 7:34 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

03-03393 (0470_ 150) (2202777_ 150)

05/27/03

Part 1: General Information

<input type="checkbox"/> Company Information	Name:	<i>GEOFON, Inc.</i>
	Address:	<i>22692 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765</i>
<input type="checkbox"/> Project Information	Project Description:	<i>JPL</i>
	Project #:	<i>04-4428.10</i>
<input type="checkbox"/> Billing Information	P.O. #:	
	Bill Address:	<i>22692 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765</i>
	Lab Project ID:	
	Client Database #:	<i>3</i>
<input type="checkbox"/> Receiving Information	Who Received Sample?	<i>Kenny Chan</i>
	Receiving Date/Time:	<i>05/27/03 1330</i>
	COC No.	
<input type="checkbox"/> Shipping Information	Shipping Company	<i>APCL pick up</i>
	Packing Information:	<i>Cooler/Ice Chester</i>
	Cooler Temperature:	<i>3.8 °C</i>
<input type="checkbox"/> Container Information	Container Provider:	<i>Client</i>
<input type="checkbox"/> Sampling Information	Sampling Person:	
	Sampling Company:	<i>Client</i>
<input type="checkbox"/> Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
<input type="checkbox"/> QC Option:		<i>NEESA C</i>
<input type="checkbox"/> Disposal Option:		<i>Not specify</i>

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont- tainer	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	MW-13	NDMA	03-03393-1	W	G		1000	2	G	052703	N	0	7 <input type="checkbox"/>
2	MW-16	NDMA	03-03393-2	W	G		1000	2	G	052703	N	0	7 <input type="checkbox"/>

Part 3: Analysis Information

Test Items:



Customized-13, Sub-contract

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	CUSTOM
1	MW-13	NDMA	03-03393-1	W	X <input type="checkbox"/>
2	MW-16	NDMA	03-03393-2	W	X <input type="checkbox"/>

Login By En-Yu Paul Kou

Check By PK