Maxxam Analytics Inc

SUBMISSION CASE NARRATIVE
NDMA

MAXXAM L.I.M.S. No. A318878

PROJECT: Applied P&CH Laboratory NDMA Analysis

I. Receipt

Samples were received at Maxxam on May 29, 2003.
Samples were 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. Samples were extracted on June 3, 2003.

V. Analysis

Analysis proceeded normally. Samples were analyzed on June 6, 2003.

A. Calibration: All criteria were met.

B. Mass Resolution: All criteria met.

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Maxxam Analytics Inc

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 4%.

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 96 pages.

SUMMARY OF SAMPLES SUBMITTED-NDMA						
(YYYY/MM/DD)						
JPL SAMPLE NO.	*MAXXAM L.I.M.S. ID*	*DATE SAMPLED*	*DATE RECEIVED*	*DATE EXTRACTED*	*DATE ANALYZED*	*ASSOCIATED QC LABEL*
MW-13	A318878-A19423	2003/05/27	2003/05/29	2003/06/03	2003/06/06	481743
MW-16	A318878-A19424	2003/05/27	2003/05/29	2003/06/03	2003/06/06	481743

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	mililitre
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
µg	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 (µg/L, µg/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 ^{13}C-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 ^{13}C-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

MW-13

Lab Name	Maxxam Analytics Inc.				
Matrix (soil/water):	water			Lab Sample ID:	A318878-A19423
				Project Name:	JPL
Sample wt/vol:	960	(g/mL)	mL	Lab File ID:	KR23600016
Level (low/med)	low			Date Received:	May 29, 2003
% Moisture	Not applicable	Decanted (Y/N):	N	Date Extracted:	June 3, 2003
				Lab Batch:	481743
Concentrated Extract Volume	1000	(uL)		Date Analyzed:	June 6, 2003
				Calib. Ref.:	20030605
Injection Volume	2	(uL)		Time Analyzed:	12:12:17
				Dilution Factor:	1
Acid Wash Cleanup (Y/N):	N	pH	Not analyzed		

CAS No.	Compound	Conc. (ug/L)	Qualifier	EDL (ug/L)	RL (ug/L)
62-75-9	NDMA	0.000760	J	0.000370	0.00200
	Surrogate	Recovery (%)	Acceptance Criteria (%)		
000	D6-NDMA	18	10-85		

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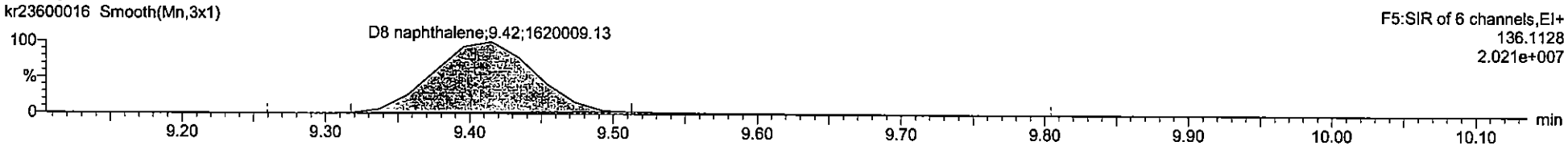
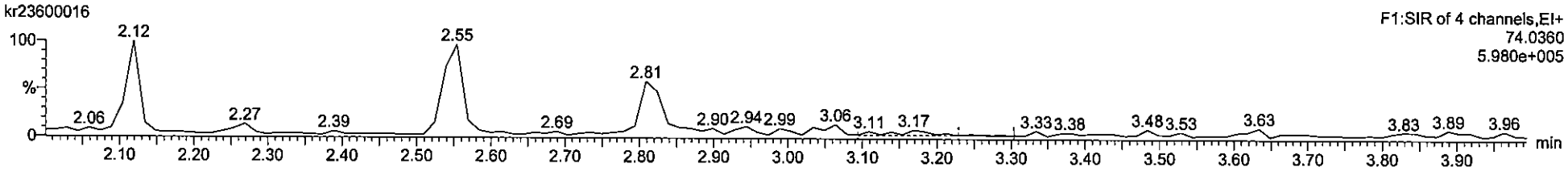
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600016.*, Date: 06-Jun-2003, Time: 12:12:17, Job: , Description: 481743,A19423-01R,N,1,2

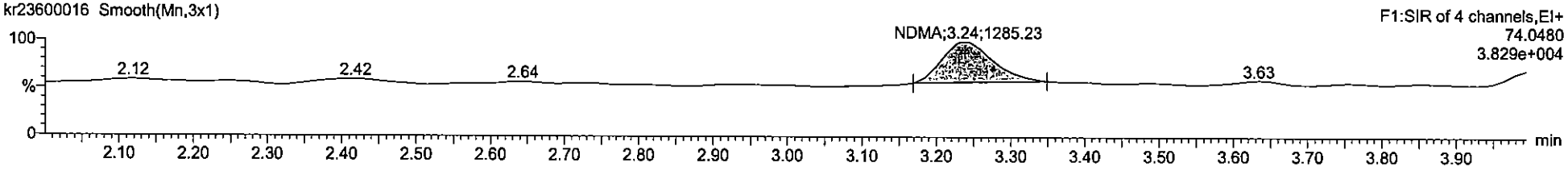
D8 naphthalene



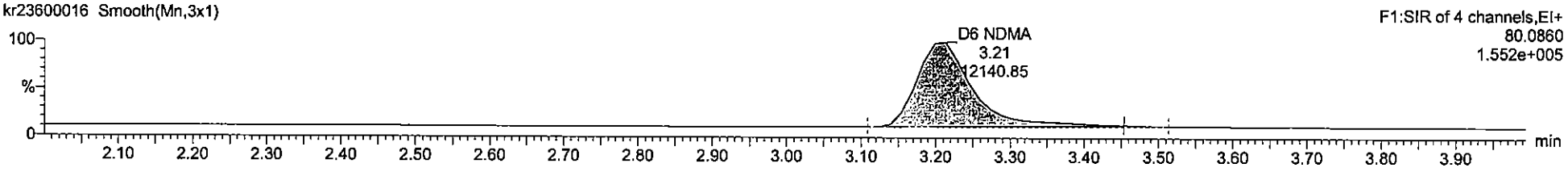
propyl ester



NDMA



D6 NDMA



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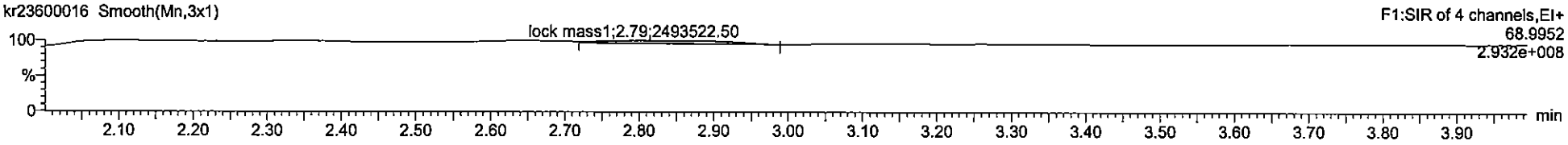
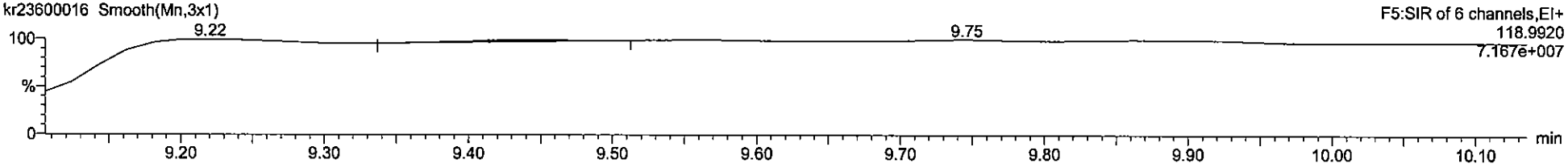
lock mass1



lock mass5



#	Compound Name	Trace	Abs Resp	RT	ng/L	%Rec	Mod Date	Divisor1	RRF Mean
1	NDMA	74.0480	1285	3.24	0.76		06-Jun-03	960	1.414
2	D6 NDMA	80.0860	12141	3.21	1790.52	18.27	06-Jun-03	1	0.105
3	D8 naphthalene	136.1128	1620009	9.42	25000.00	100.00	06-Jun-03	1	1.000
4	propyl ester	74.0360	409	3.26	0.02	2.45	06-Jun-03	1	16713.989

EDL = 0.37 ng/L

000011

MW-16

Lab Name	Maxxam Analytics Inc.				
Matrix (soil/water):	water			Lab Sample ID:	A318878-A19424
				Project Name:	JPL
Sample wt/vol:	990	(g/mL)	mL	Lab File ID:	KR23600017
Level (low/med)	low			Date Received:	May 29, 2003
% Moisture	Not applicable	Decanted (Y/N):	N	Date Extracted:	June 3, 2003
				Lab Batch:	481743
Concentrated Extract Volume	1000	(uL)		Date Analyzed:	June 6, 2003
				Calib. Ref.:	20030605
Injection Volume	2	(uL)		Time Analyzed:	12:31:08
				Dilution Factor:	1
Acid Wash Cleanup (Y/N):	N	pH	Not analyzed		

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	17	10-85		

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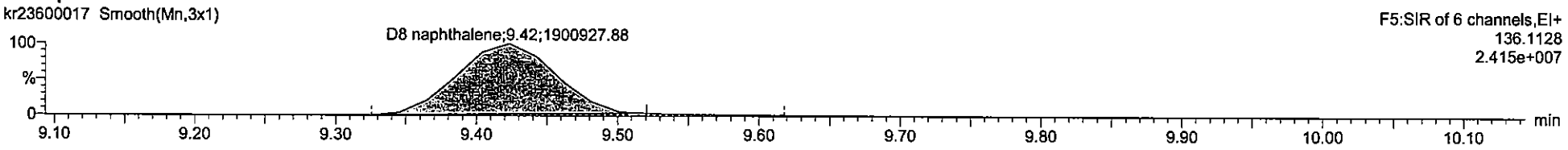
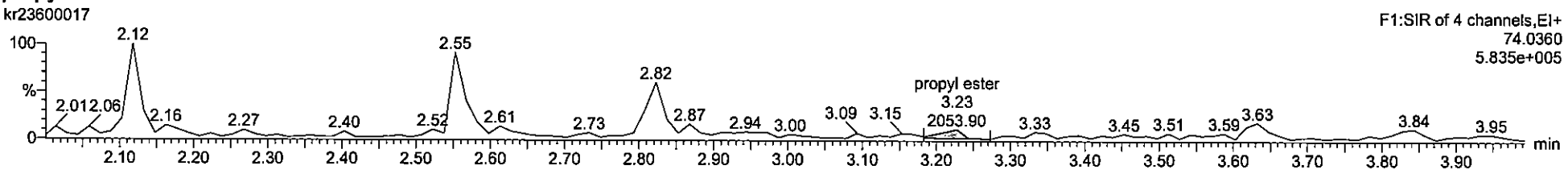
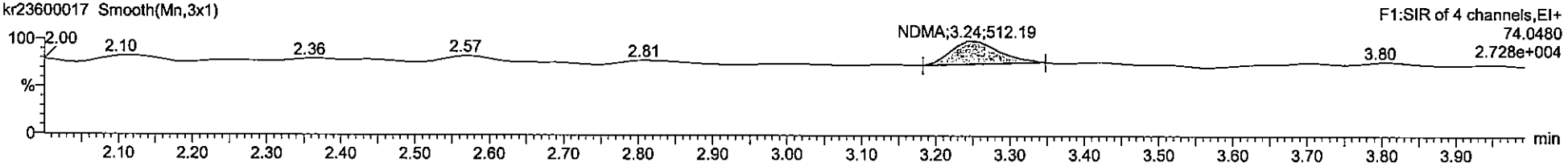
D8 naphthalene



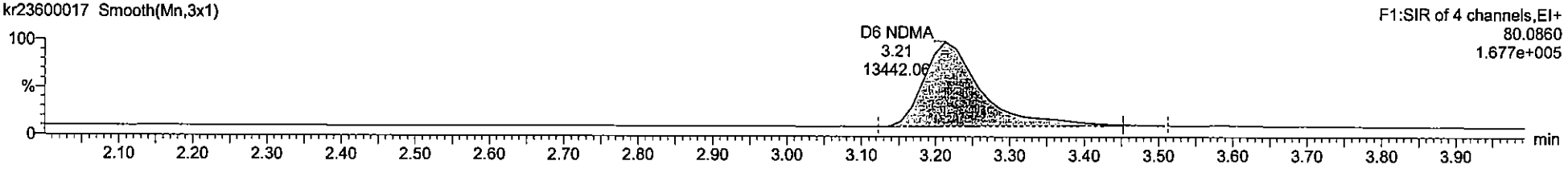
propyl ester



NDMA



D6 NDMA



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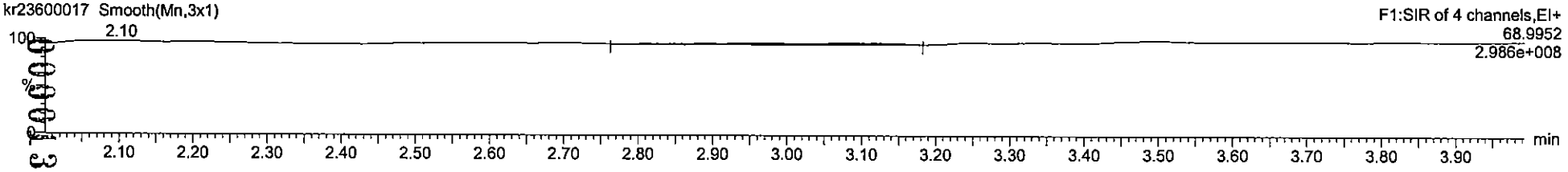

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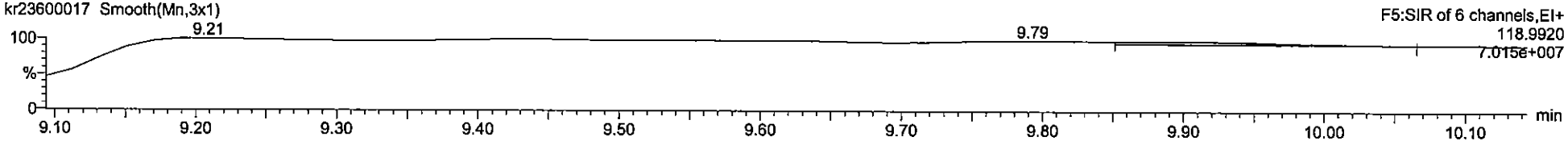
lock mass5



#	Compound Name	Trace	Abs Resp	RT	ng/L	%Rec	Mod Date	Divisor	RRF Mean
1	NDMA	74.0480	512	3.24	~~0.27~~ nd		06-Jun-03	990	1.414
2	D6 NDMA	80.0860	13442	3.21	1689.46	17.24	06-Jun-03	1	0.105
3	D8 naphthalene	136.1128	1900928	9.42	25000.00	100.00	06-Jun-03	1	1.000
4	propyl ester	74.0360	2054	3.23	0.12	12.29	06-Jun-03	1	16713.989

EDL = 0.37 ng/L

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LABORATORY BLANK

WATER LABORATORY METHOD BLANK

Lab Name	Maxxam Analytics Inc.				
Matrix (soil/water):	water			Lab Sample ID:	A318878-481743B
				Project Name:	JPL
Sample wt/vol:	1000	(g/mL)	mL	Lab File ID:	KR23600013
Level (low/med)	low			Date Received:	Not applicable
% Moisture	Not applicable	Decanted	N	Date Extracted:	June 3, 2003
				Lab Batch:	481743
Concentrated Extract Volume	1000	(uL)		Date Analyzed:	June 6, 2003
				Calib. Ref.:	20030605
Injection Volume	2	(uL)		Time Analyzed:	11:15:47
				Dilution Factor:	1
Acid Wash Cleanup (Y/N):	N	pH	Not analyzed		

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	24	10-85		

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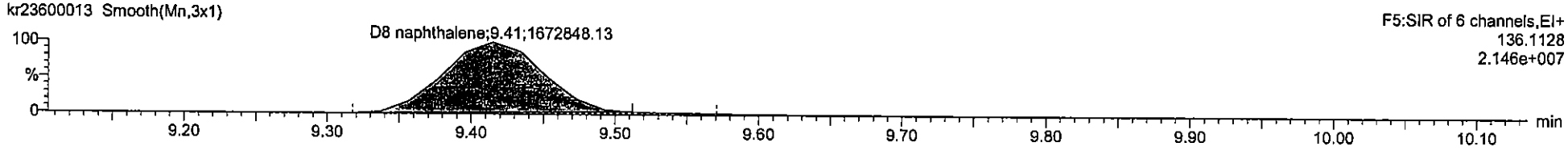
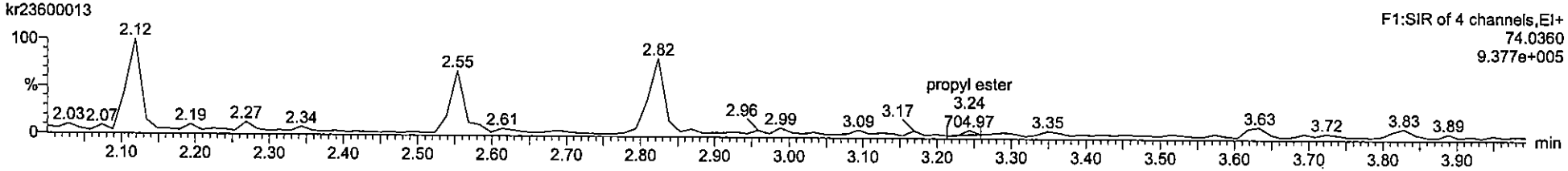
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600013.*, Date: 06-Jun-2003, Time: 11:15:47, Job: , Description: 481743,blank,N,1,2

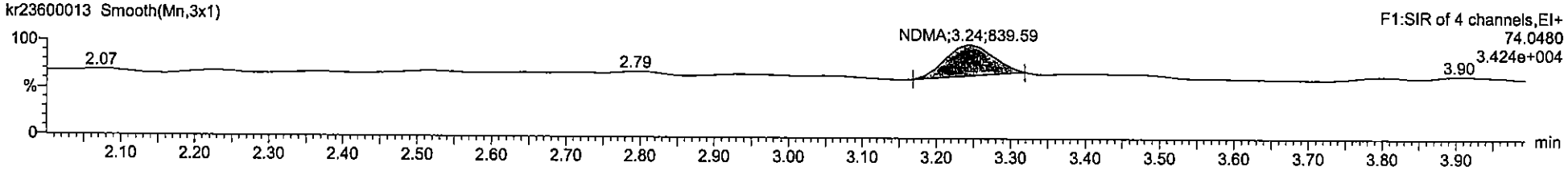
D8 naphthalene



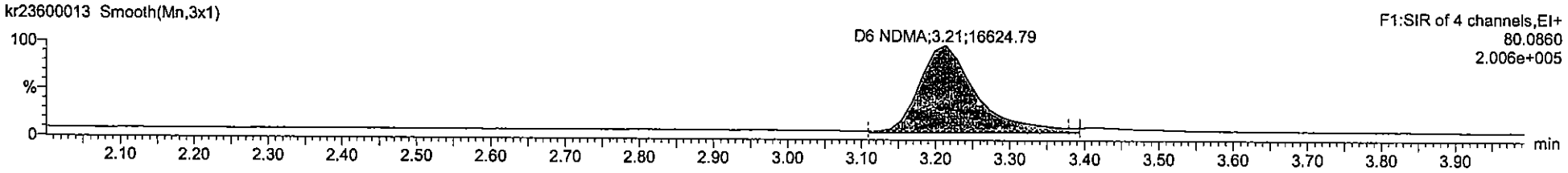
propyl ester



NDMA



D6 NDMA



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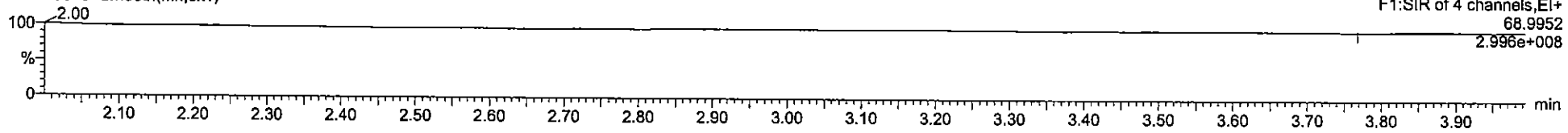
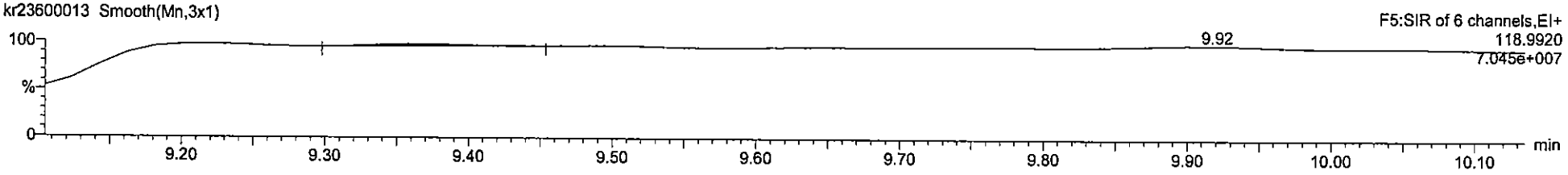
lock mass1

kr23600013 Smooth(Mn,3x1)



lock mass5

kr23600013 Smooth(Mn,3x1)



#	Compound Name	Trace	Abs Resp	RT	Amt/Lvl	%Rec	Mod Date	Dilution	RRF Mean
1	NDMA	74.0480	840	3.24	~~0.35~~ nd		06-Jun-03	1000	1.414
2	D6 NDMA	80.0860	16625	3.21	2374.37	24.23	06-Jun-03	1	0.105
3	D8 naphthalene	136.1128	1672848	9.41	25000.00	100.00	06-Jun-03	1	1.000
4	propyl ester	74.0360	705	3.24	0.04	4.22	06-Jun-03	1	16713.989

EDL = 0.37 ng/L

pc

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LABORATORY CONTROL SAMPLE

WATER LABORATORY SPIKED BLANK

Lab Name	Maxxam Analytics Inc.				
Matrix (soil/water):	water			Lab Sample ID:	A318878-481743S
				Project Name:	JPL
Sample wt/vol:	1000	(g/mL)	mL	Lab File ID:	KR23600011
Level (low/med)	low			Date Received:	Not applicable
% Moisture	Not applicable	Decanted (Y/N):	N	Date Extracted:	June 3, 2003
				Lab Batch:	481743
Concentrated Extract Volume	1000	(uL)		Date Analyzed:	June 6, 2003
				Calib. Ref.:	20030605
Injection Volume	2	(uL)		Time Analyzed:	10:38:09
				Dilution Factor:	1
Acid Wash Cleanup (Y/N):	N	pH	Not analyzed		

CAS No.	Compound	LCS Conc.(ug/L)	Spike Level (ug/L)	Recovery (%)	Acceptance Criteria (%)
62-75-9	NDMA	0.00577	0.00500	115	10-173

	Surrogate	Recovery (%)	Acceptance Criteria (%)
000	D6-NDMA	25	10-85

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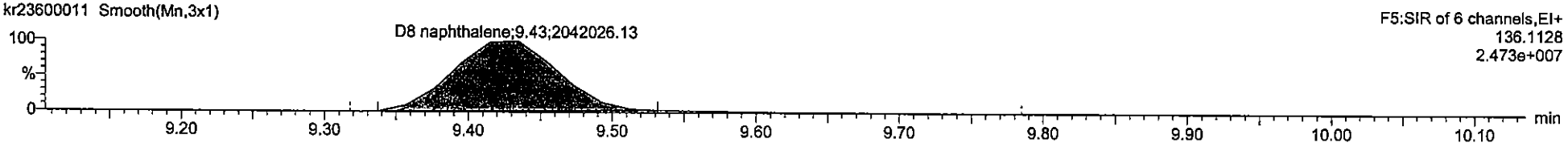
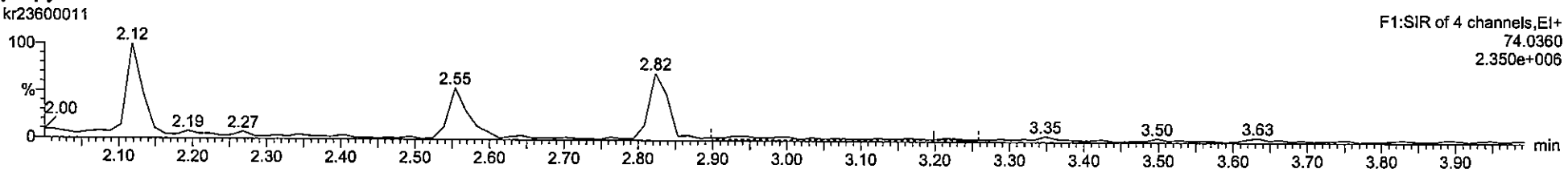
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600011.*, Date: 06-Jun-2003, Time: 10:38:09, Job: , Description: 481743,spike,N,1,2

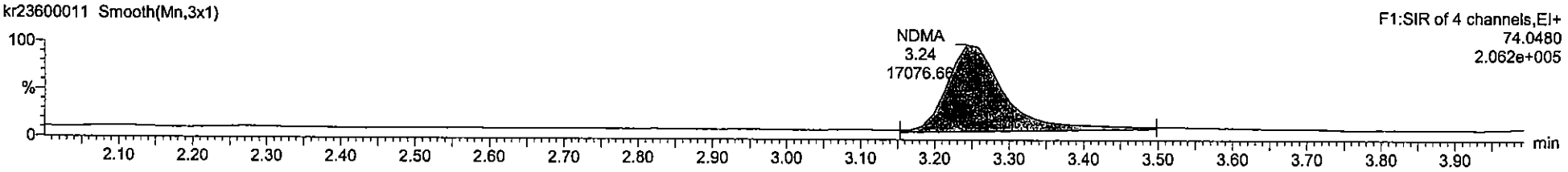
D8 naphthalene



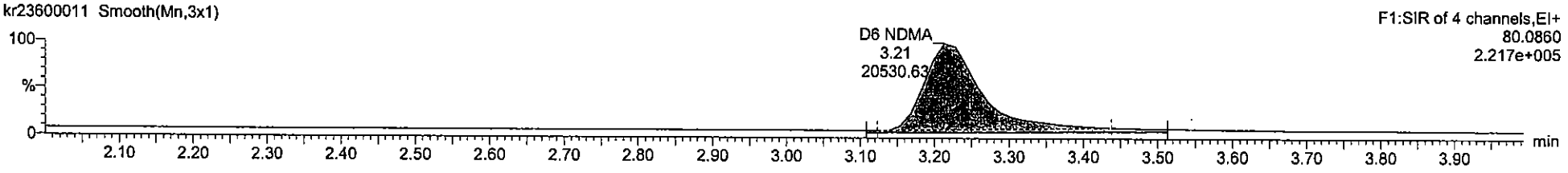
propyl ester



NDMA



D6 NDMA



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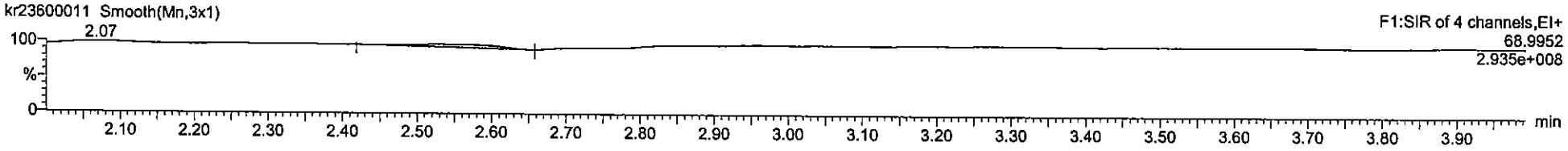
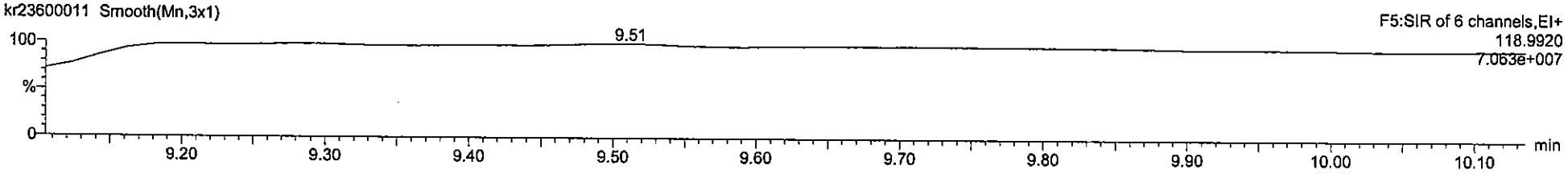


lock mass5



#	Compound Name	Date	Abs Resp	RT	ng/L	%Rec	Mod Date	Divisor	RRF Mean
1	NDMA	74.0480	17077	3.24	5.77	115.32	06-Jun-03	1000	1.414
2	D6 NDMA	80.0860	20531	3.21	2402.09	24.51	06-Jun-03	1	0.105
3	D8 naphthalene	136.1128	2042026	9.43	25000.00	100.00	06-Jun-03	1	1.000
4	propyl ester	74.0360	1492	3.21	0.09	8.92	06-Jun-03	1	16713.989

220000

WATER LABORATORY SPIKED BLANK DUPLICATE

Lab Name	Maxxam Analytics Inc.				
Matrix (soil/water):	water			Lab Sample ID:	A318878-481743SD
				Project Name:	JPL
Sample wt/vol:	1000	(g/mL)	mL	Lab File ID:	KR23600012
Level (low/med)	low			Date Received:	Not applicable
% Moisture	Not applicable	Decanted (Y/N):	N	Date Extracted:	June 3, 2003
				Lab Batch:	481743
Concentrated Extract Volume	1000	(uL)		Date Analyzed:	June 6, 2003
				Calib. Ref.:	20030605
Injection Volume	2	(uL)		Time Analyzed:	10:56:58
				Dilution Factor:	1
Acid Wash Cleanup (Y/N):	N	pH	Not analyzed		

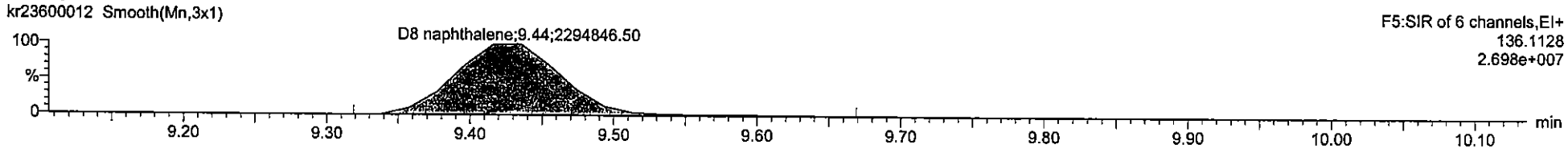
CAS No.	Compound	LCSD Conc.(ug/L)	Spike Level (ug/L)	Recovery (%)	%RPD LCS/LCSD	Acceptance Criteria (%)
62-75-9	NDMA	0.00553	0.00500	111	4	25

	Surrogate	Recovery (%)	Acceptance Criteria (%)
000	D6-NDMA	30	10-85

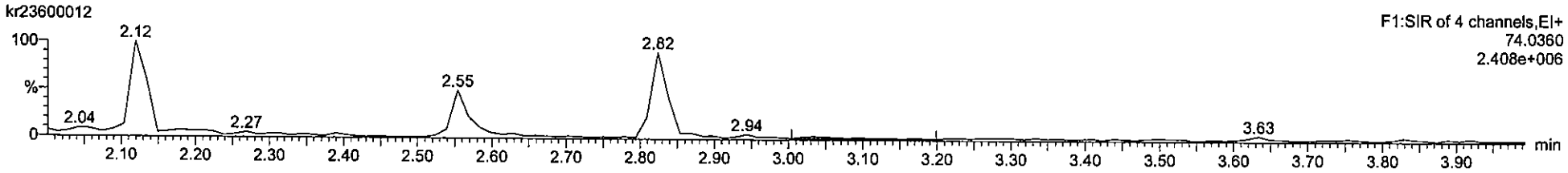
Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Blks_Spks\20030603\spks_20030603.qld, Time: Fri Jun 06 12:53:11 2003

Name: kr23600012.*, Date: 06-Jun-2003, Time: 10:56:58, Job: , Description: 481743,spike,D,1,2

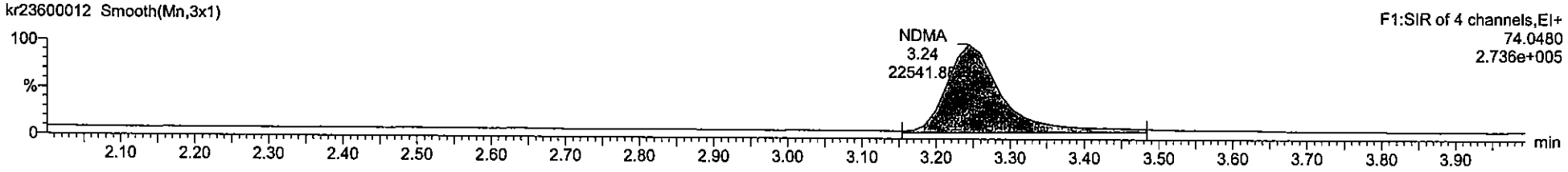
D8 naphthalene



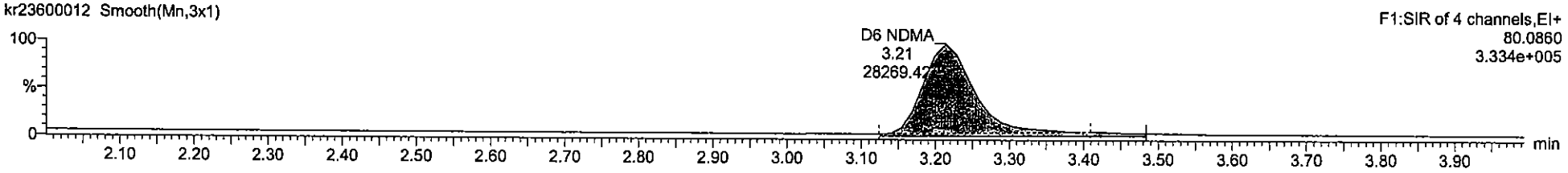
propyl ester



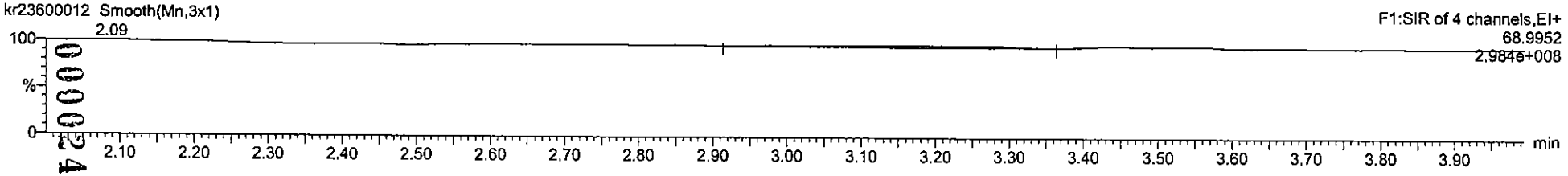
NDMA



D6 NDMA



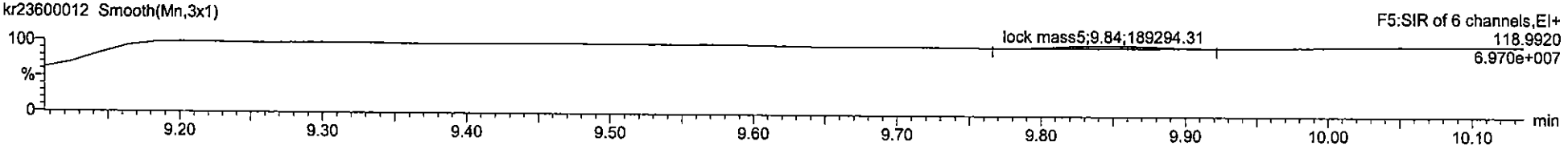
lock mass1



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Blks_Spks\20030603\spks_20030603.qld, Time: Fri Jun 06 12:53:11 2003

lock mass5

kr23600012 Smooth(Mn,3x1)



#	Compound Name	Trace	Abs Resp	RRT	ng/L	%Rec	Mod Date	Dil Sor	RRF Mean
1	NDMA	74.0480	22542	3.24	5.53	110.55	06-Jun-03	1000	1.414
2	D6 NDMA	80.0860	28269	3.21	2943.14	30.03	06-Jun-03	1	0.105
3	D8 naphthalene	136.1128	2294847	9.44	25000.00	100.00		1	1.000
4	propyl ester	74.0360	6034	3.03	0.36	36.10		1	16713.989

020002

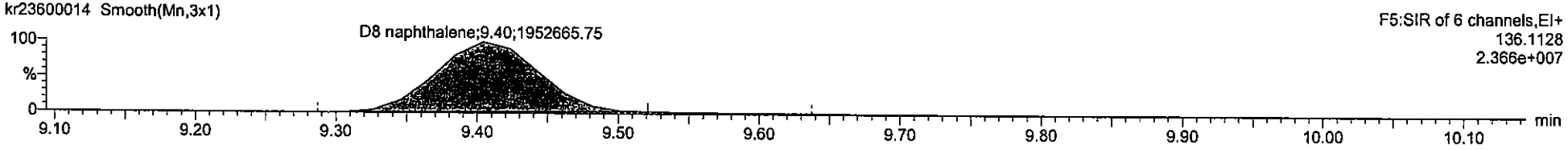
GLASS BLANK

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Blks_Spks\20030603\blks_20030603.qld, Time: Fri Jun 06 13:12:57 2003

Name: kr23600014.*, Date: 06-Jun-2003, Time: 11:34:35, Job: , Description: glass blank,20030603,N,1,2

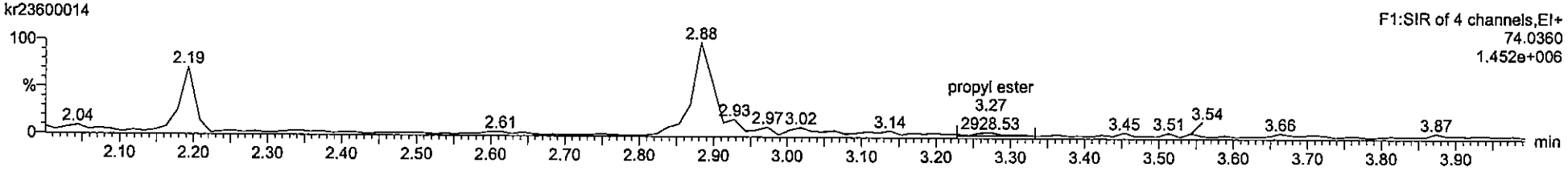
D8 naphthalene

kr23600014 Smooth(Mn,3x1)



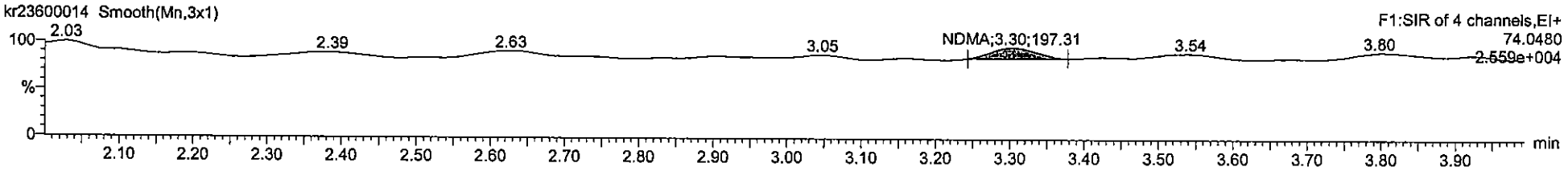
propyl ester

kr23600014



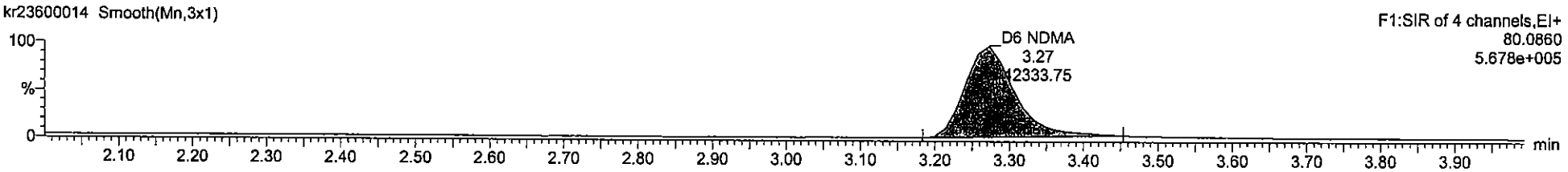
NDMA

kr23600014 Smooth(Mn,3x1)



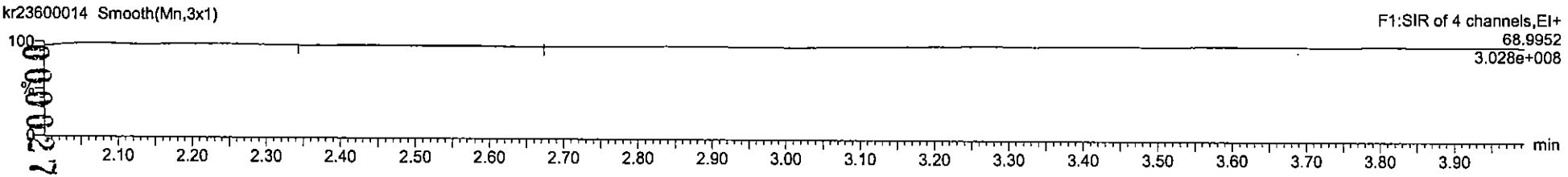
D6 NDMA

kr23600014 Smooth(Mn,3x1)



lock mass1

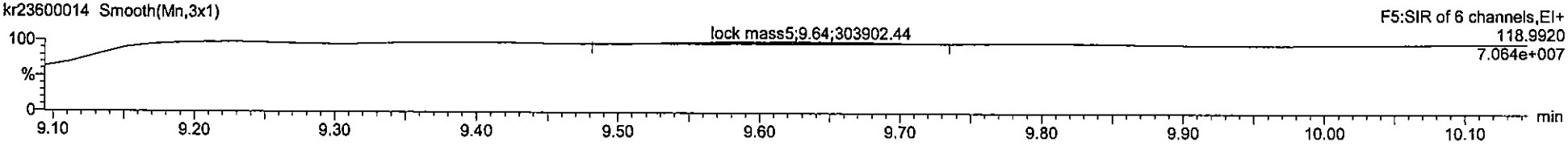
kr23600014 Smooth(Mn,3x1)



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Blks_Spks\20030603\blks_20030603.qld, Time: Fri Jun 06 13:12:57 2003

lock mass5

kr23600014 Smooth(Mn,3x1)



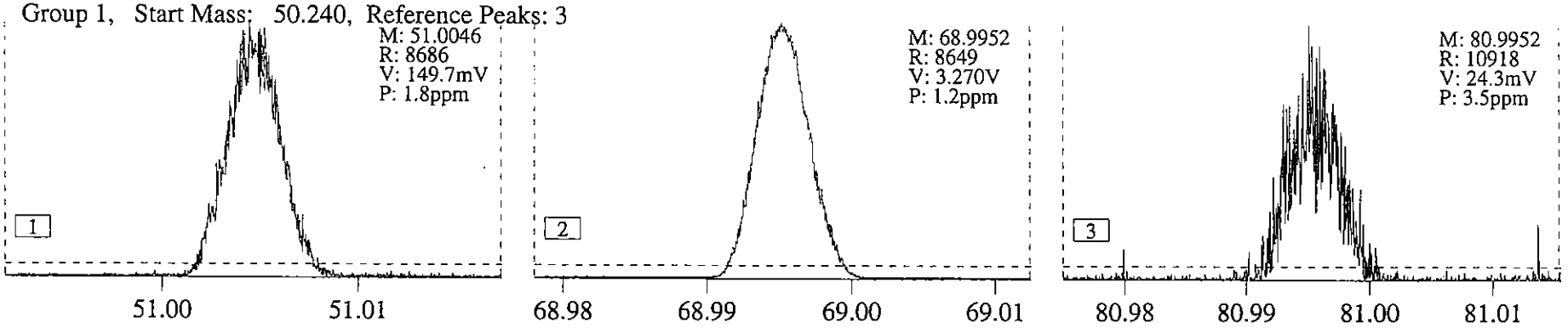
#	Compound Name	Face	Abs Resp	RT	ng/L	%Rec	Mod Date	Divisor	RRF Mean
1	NDMA	74.0480	197	3.30	~~0.03~~ nd		06-Jun-03	1000	1.414
2	D6 NDMA	80.0860	42334	3.27	5179.73	52.85		1	0.105
3	D8 naphthalene	136.1128	1952666	9.40	25000.00	100.00	06-Jun-03	1	1.000
4	propyl ester	74.0360	2929	3.27	0.18	17.52		1	16713.989

EDL = 0.37 ng/L

820028

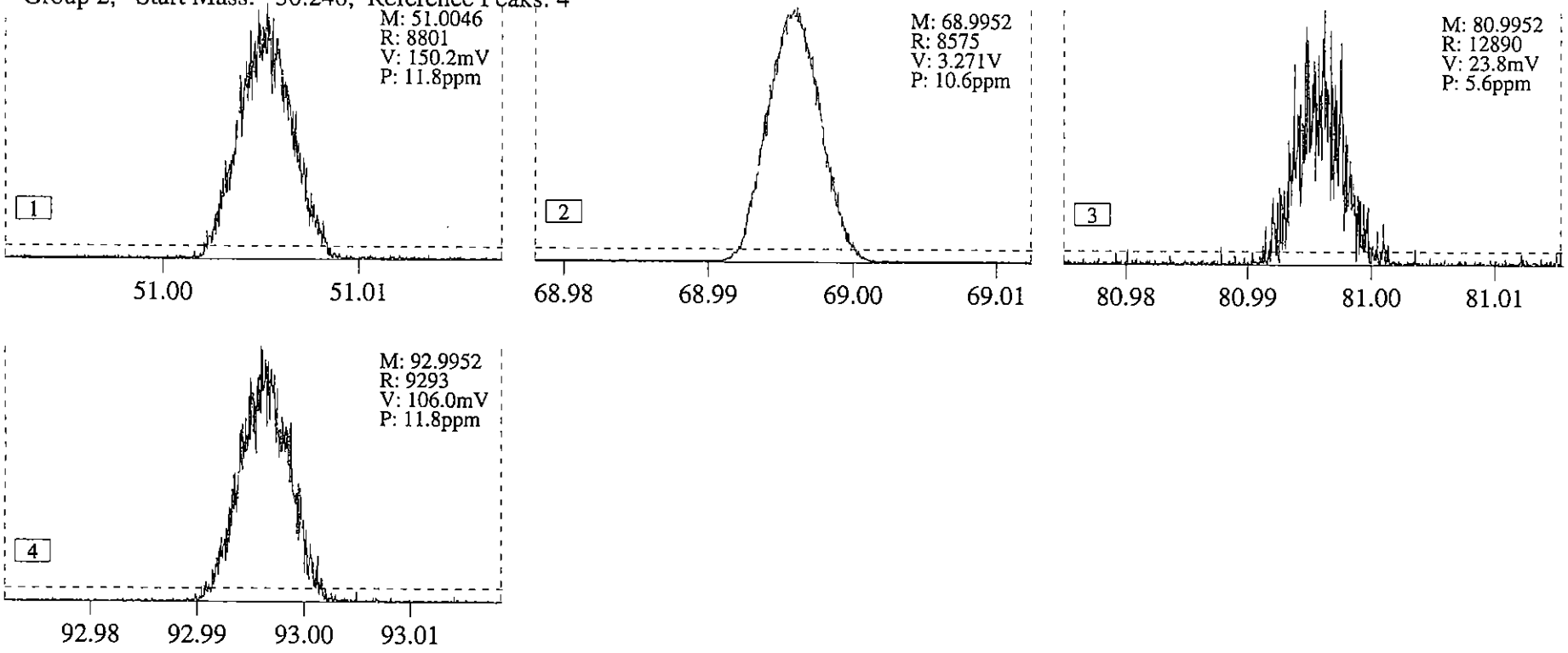
MASS RESOLUTION CALIBRATION

S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



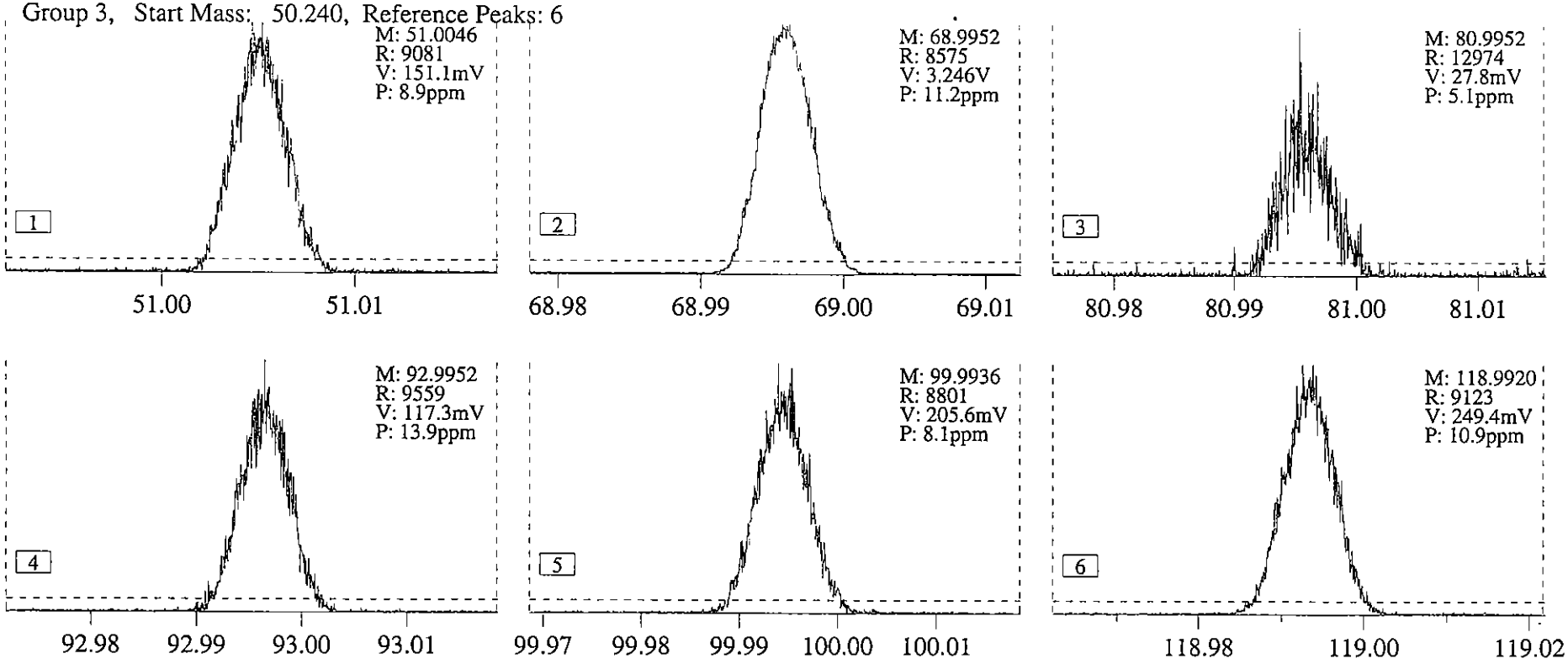
S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

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



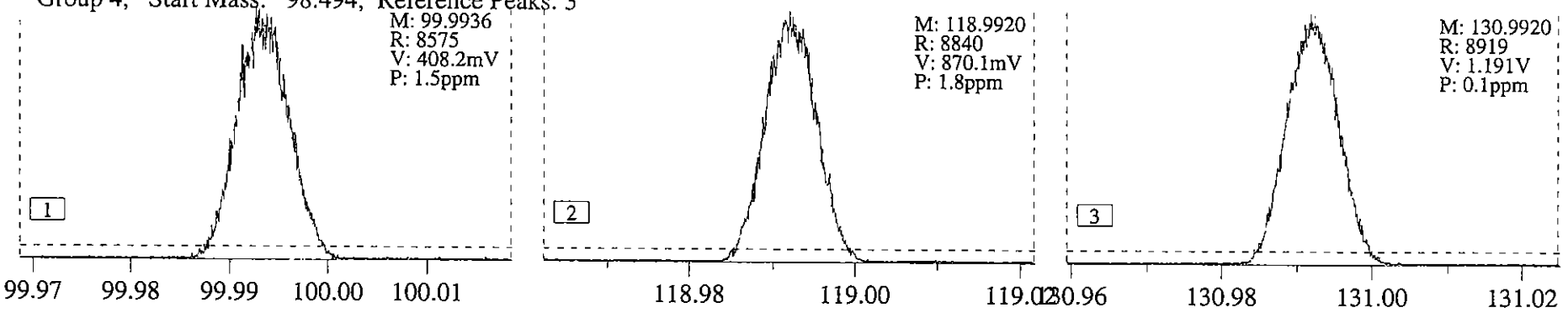
S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

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



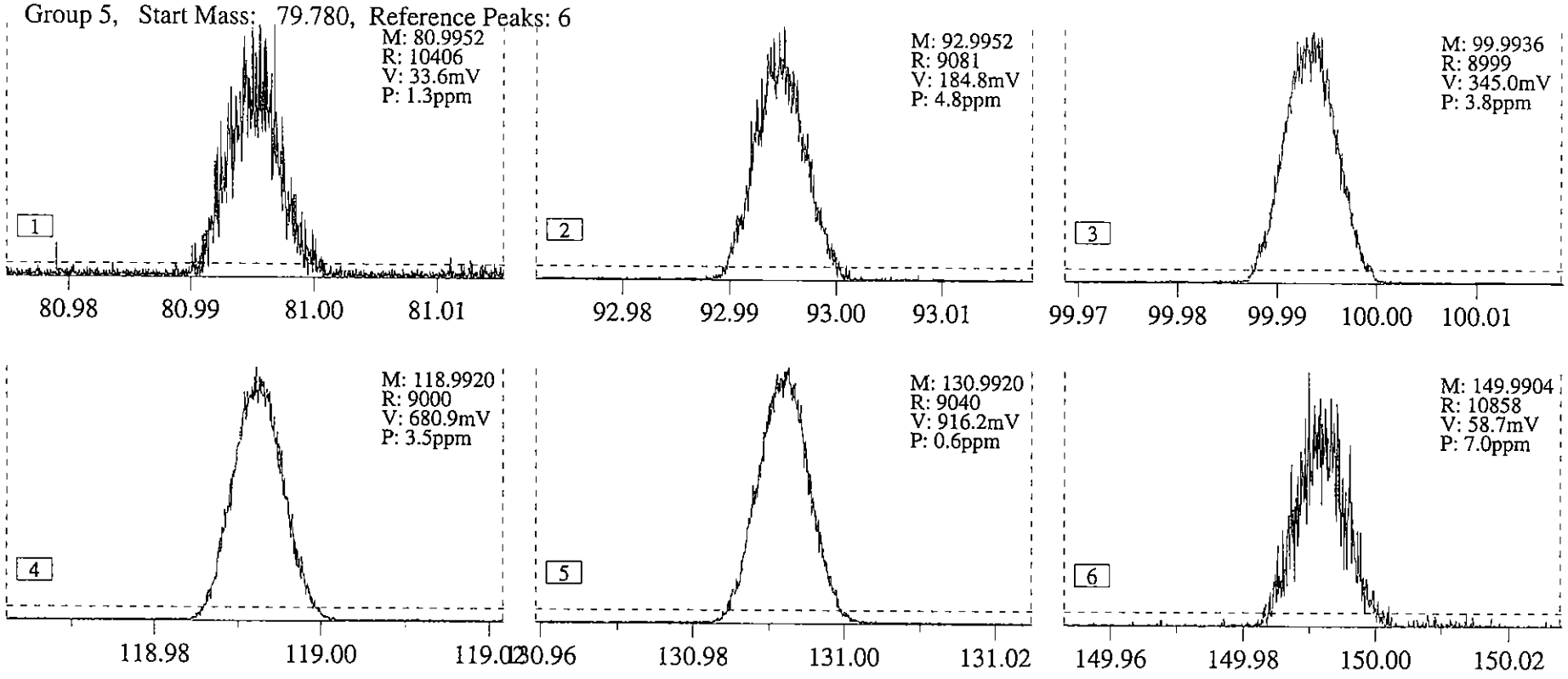
S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

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



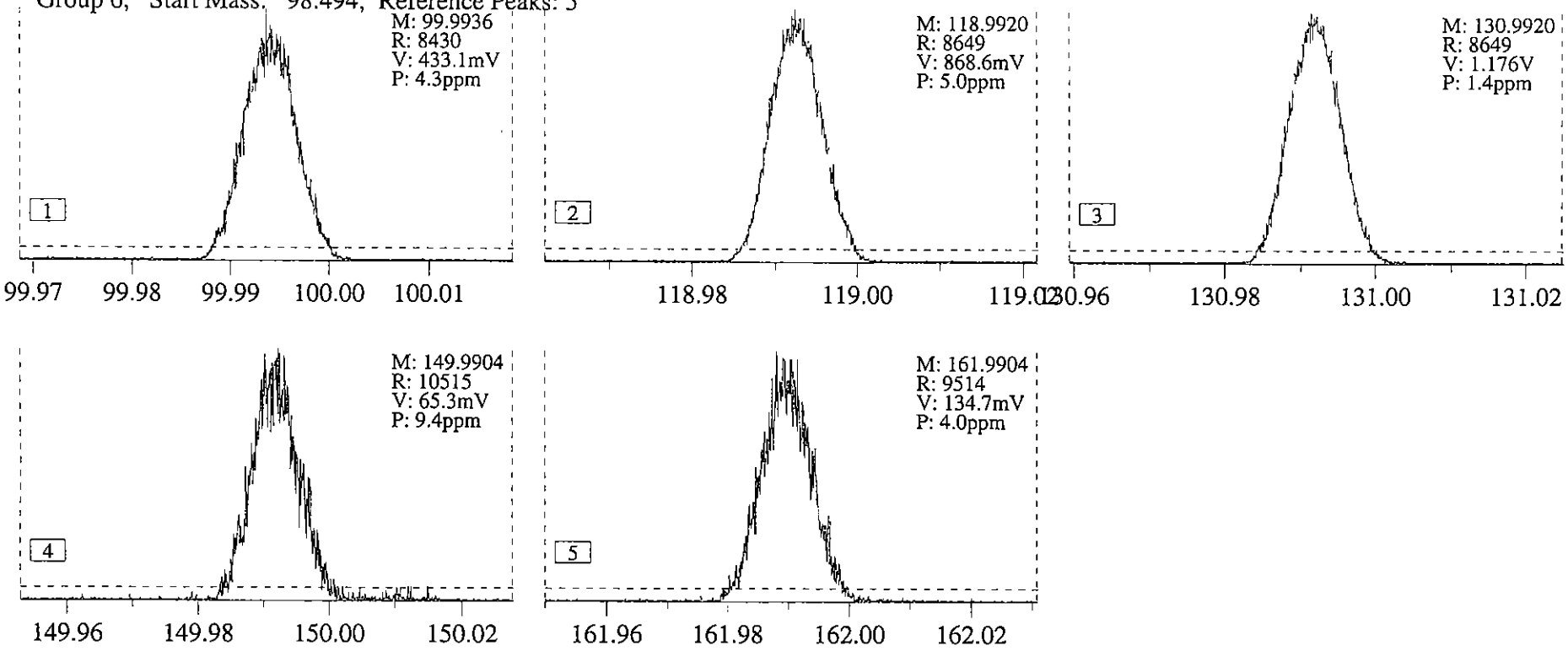
000033

S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

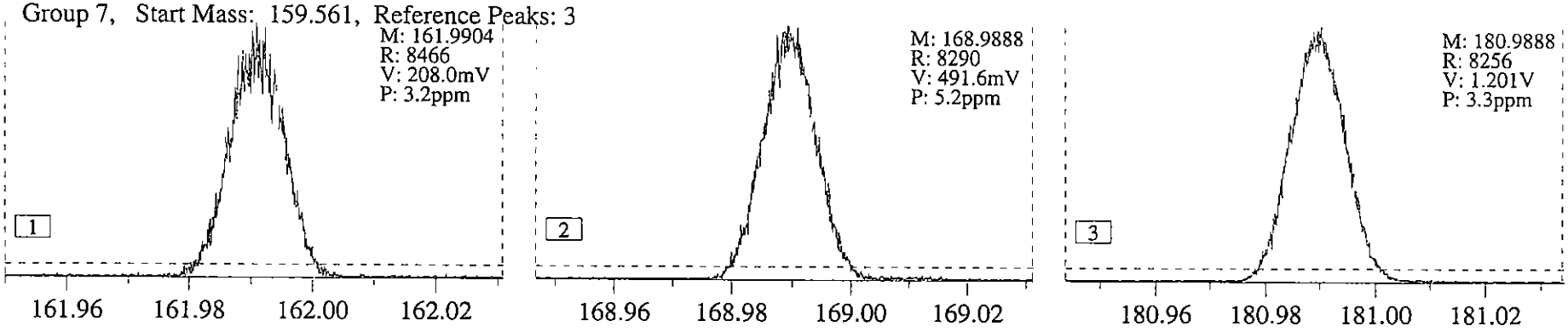


S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

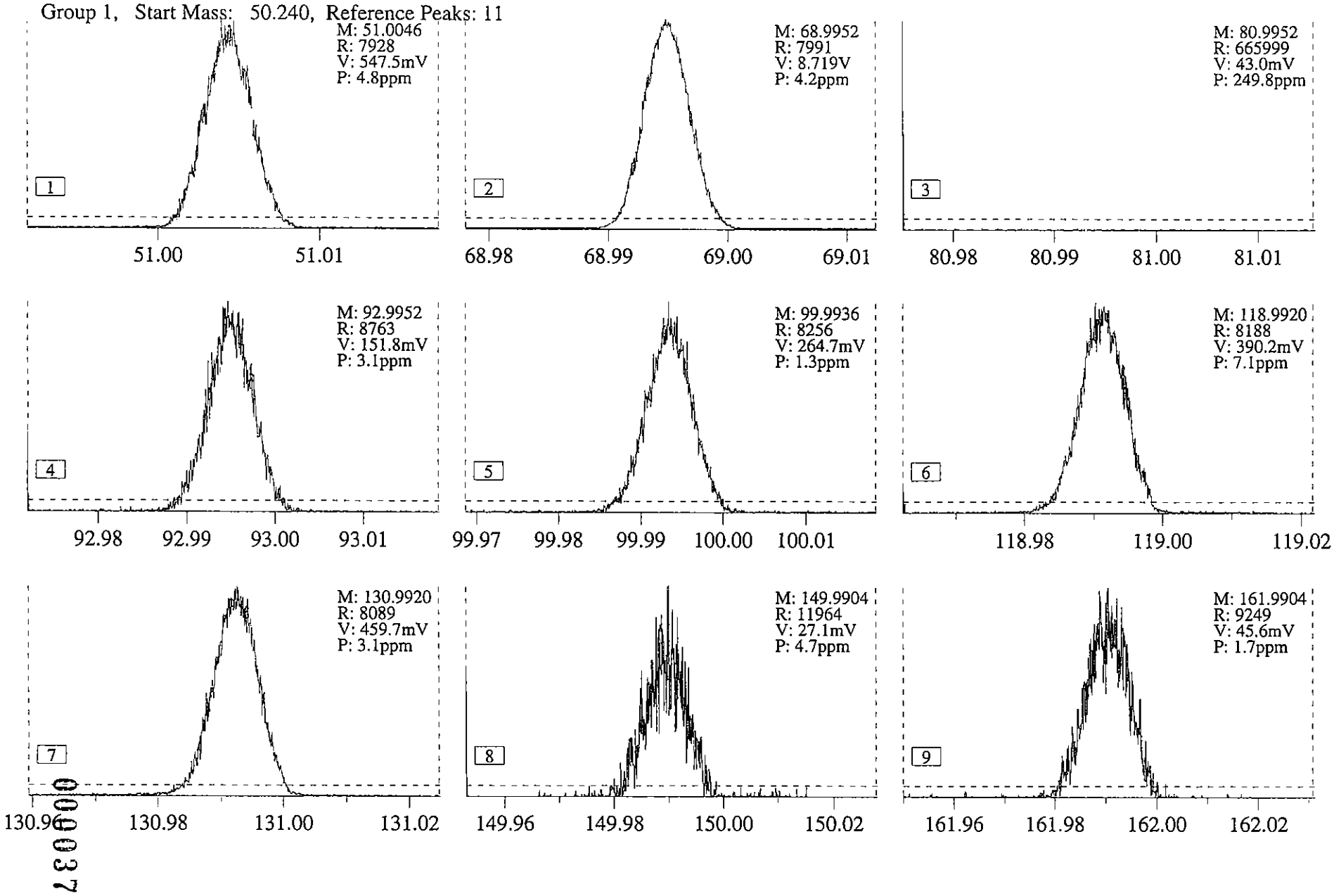
Group 6, Start Mass: 98.494, Reference Peaks: 5



S.I.M. Calibration 05-Jun-2003 09:53, Run: kr23590003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



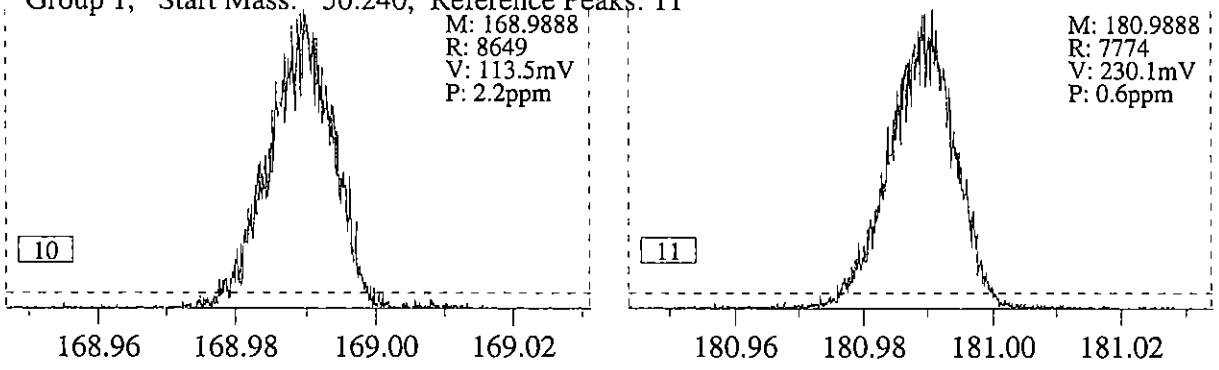
S.I.M. Calibration 05-Jun-2003 10:44, Run: kr23080006, Expt: nitrozone Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



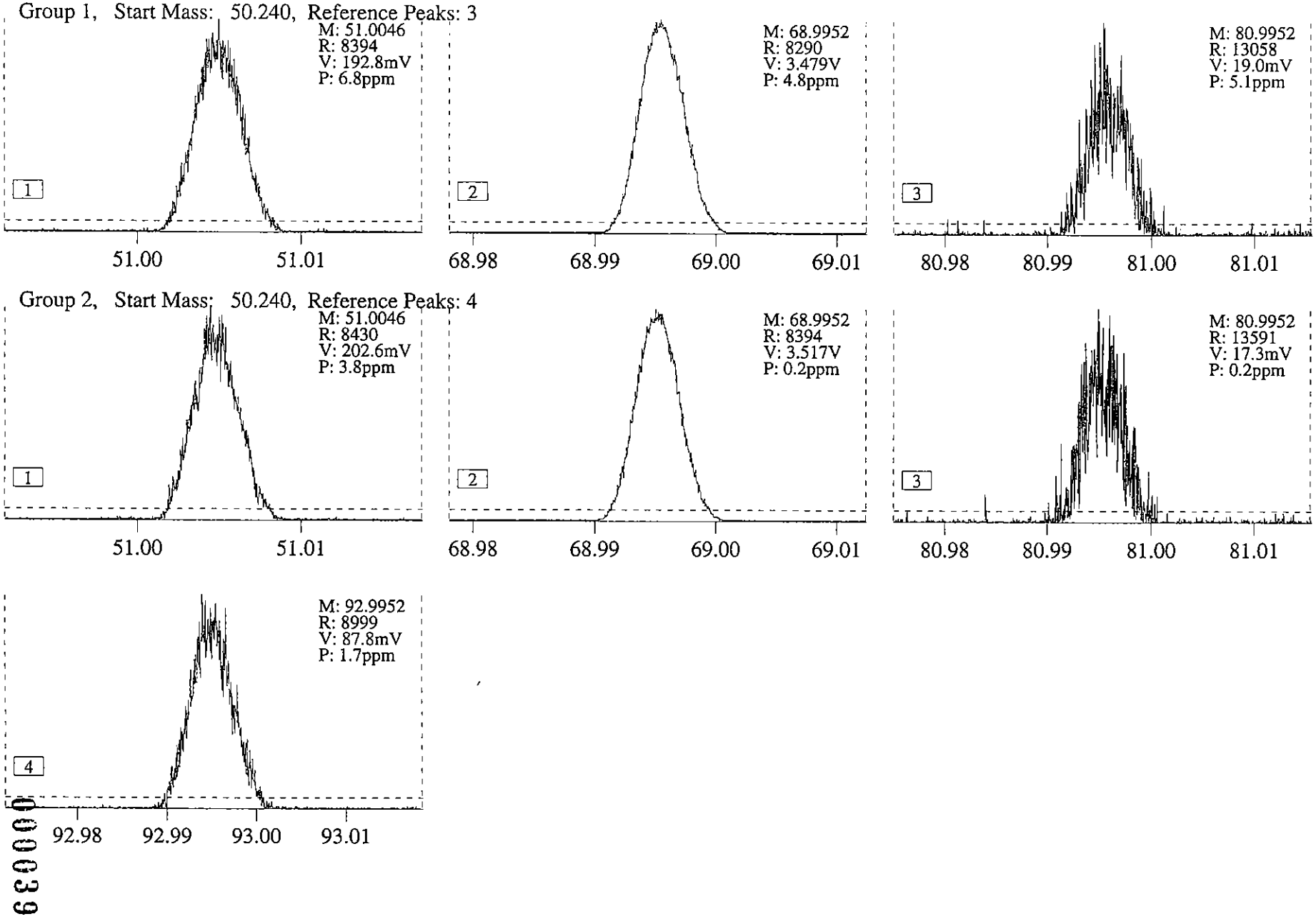
000037

S.I.M. Calibration 05-Jun-2003 10:44, Run: kr23080006, Expt: nitrozone Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

Group 1, Start Mass: 50.240, Reference Peaks: 11

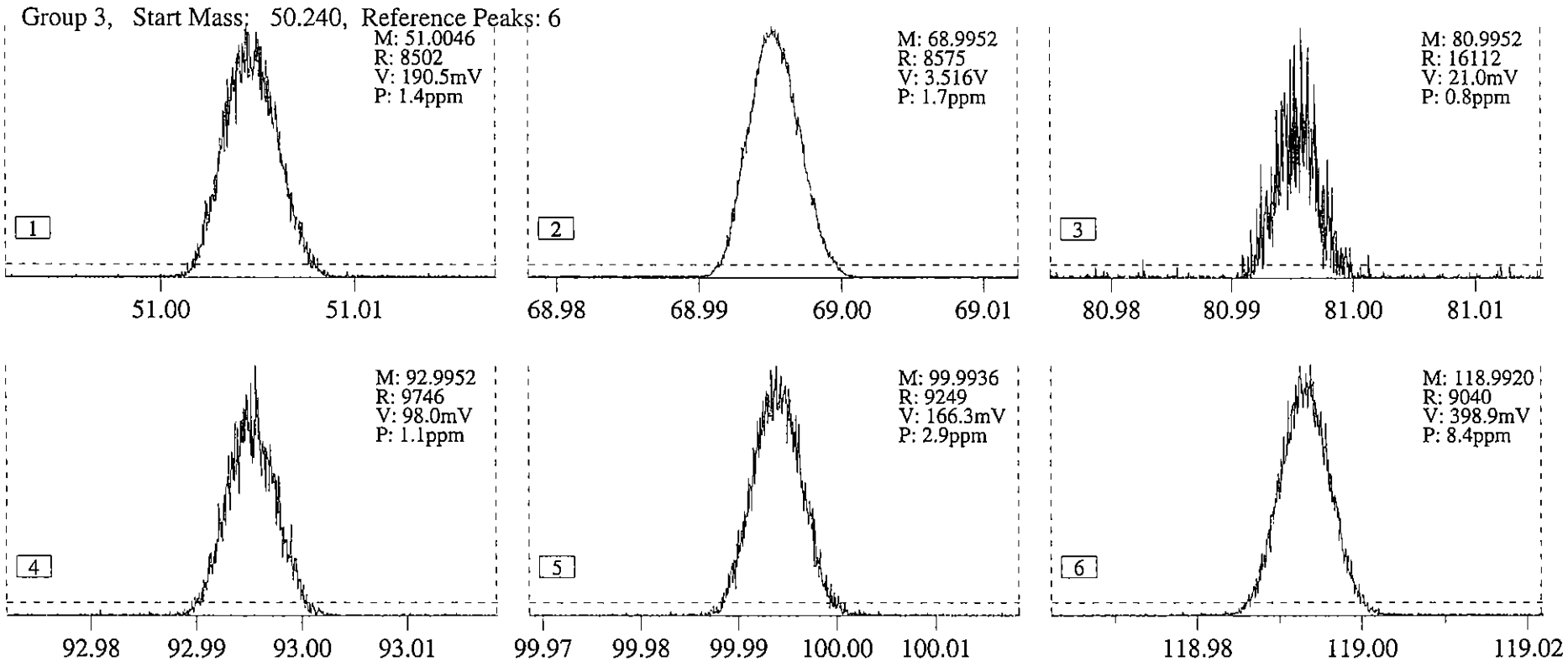


S.I.M. Calibration 05-Jun-2003 13:07, Run: kr23590009, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



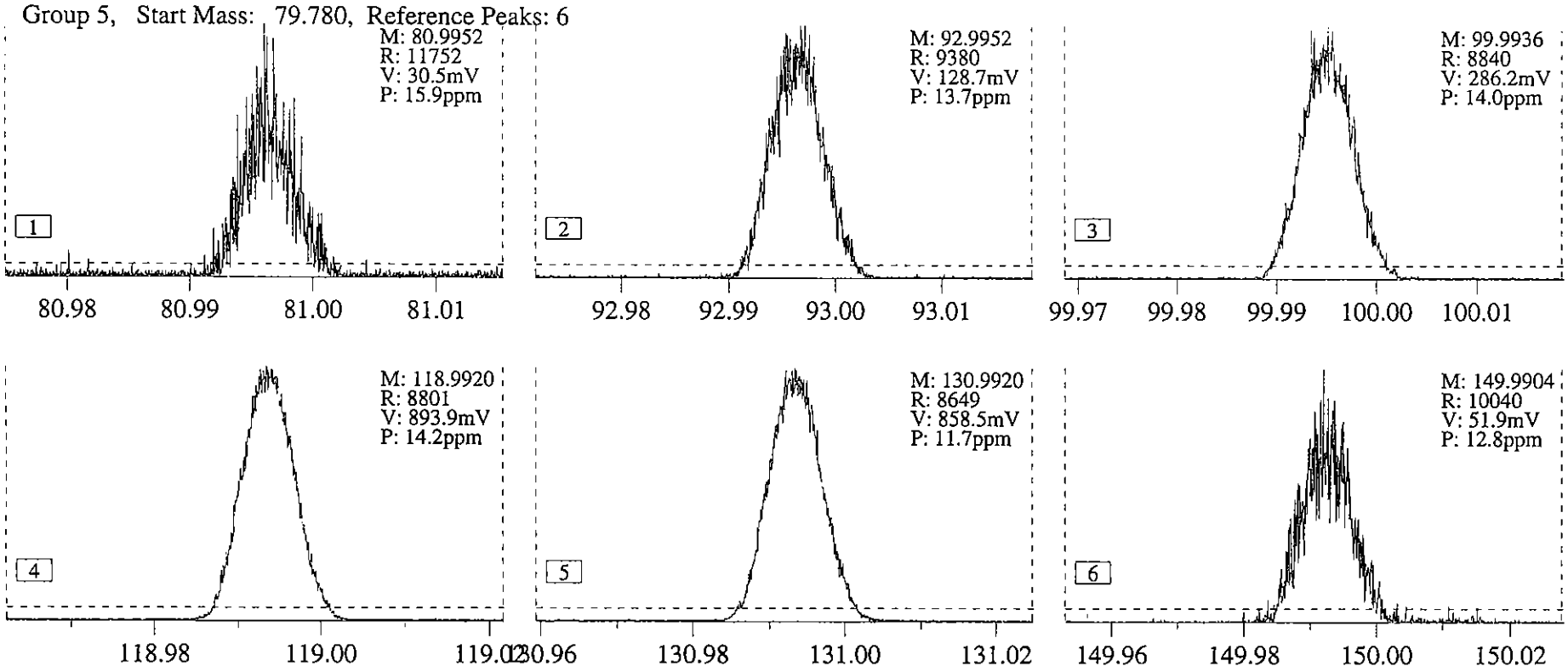
000039

S.I.M. Calibration 05-Jun-2003 13:07, Run: kr23590009, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

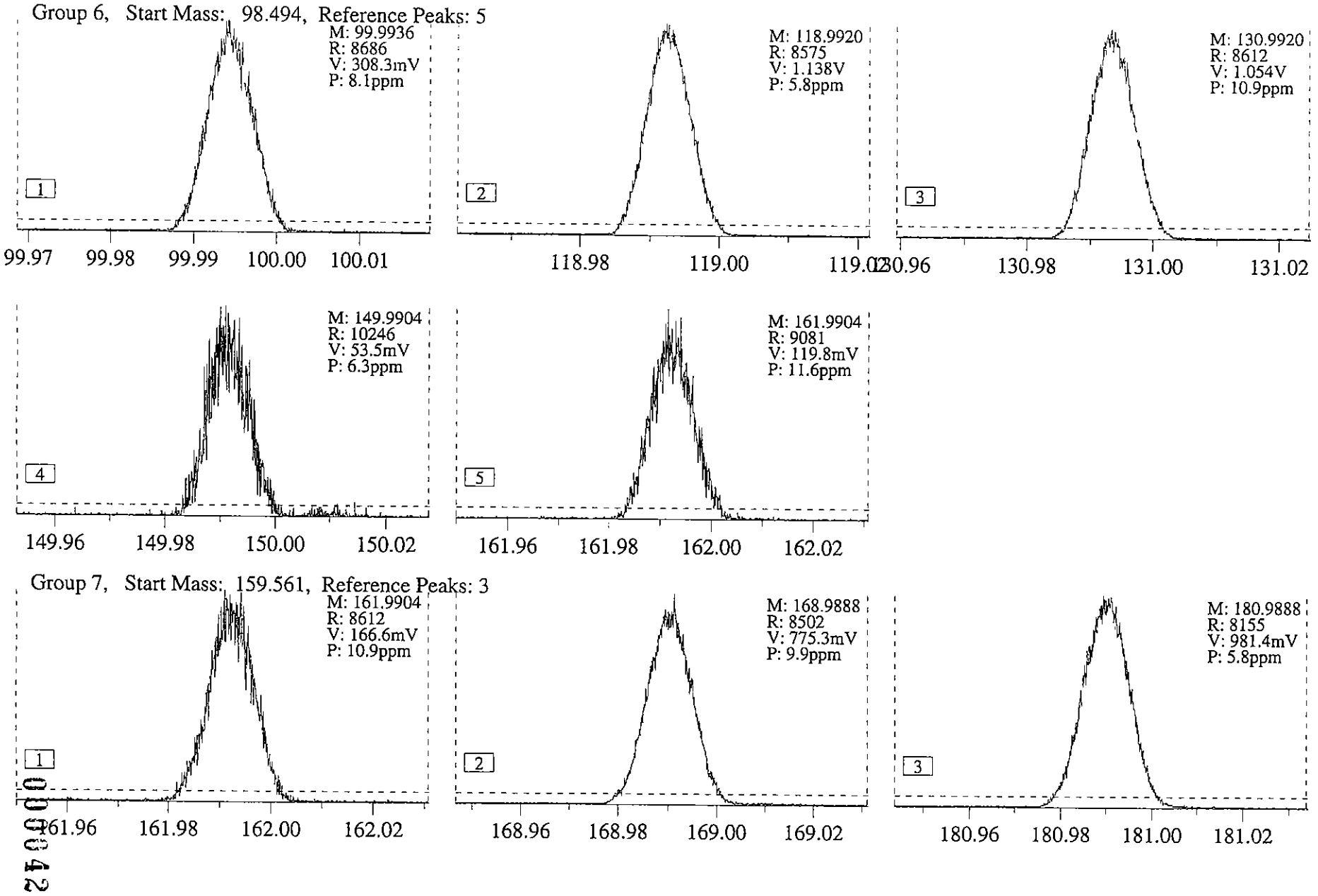


00000040

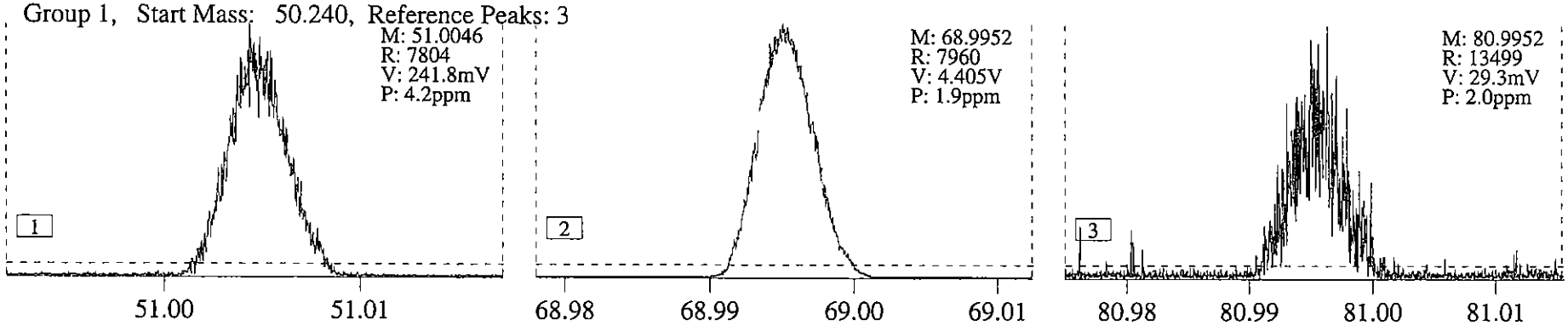
S.I.M. Calibration 05-Jun-2003 13:07, Run: kr23590009, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



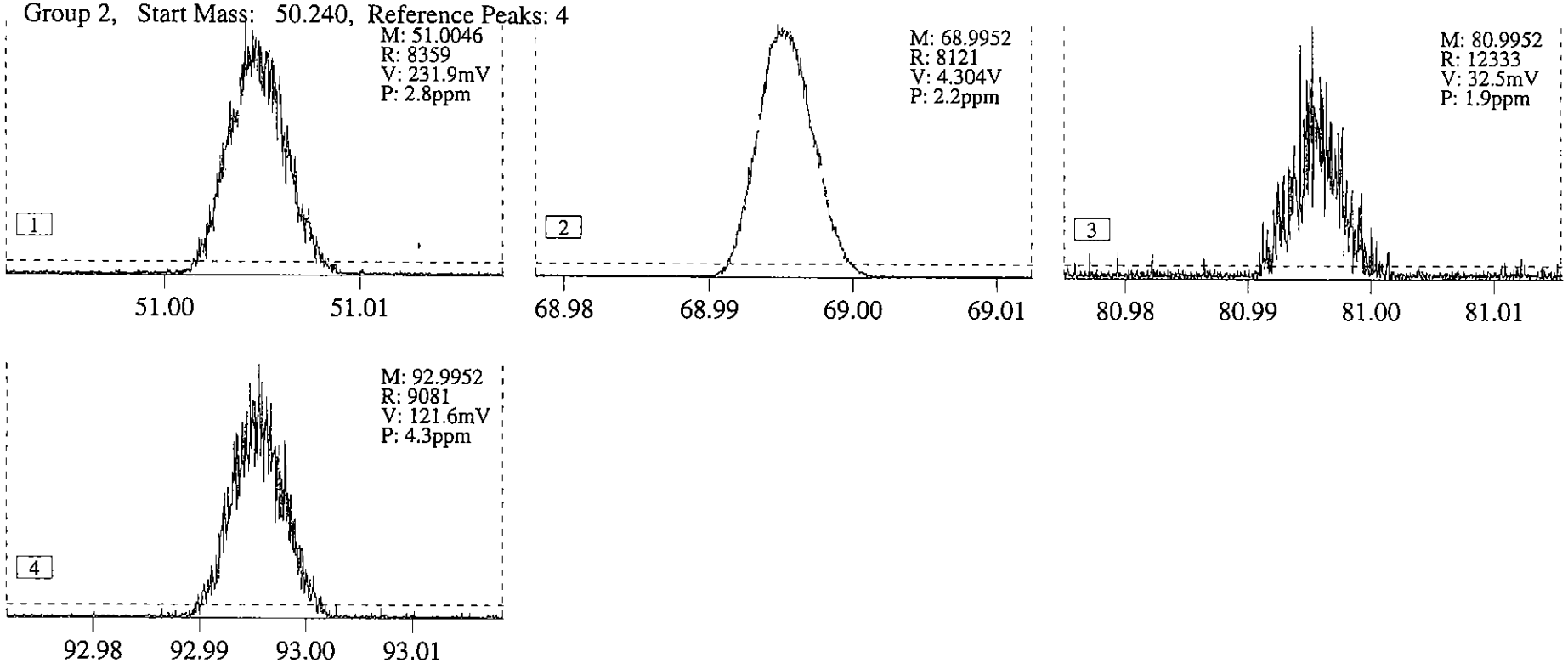
S.I.M. Calibration 05-Jun-2003 13:07, Run: kr23590009, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



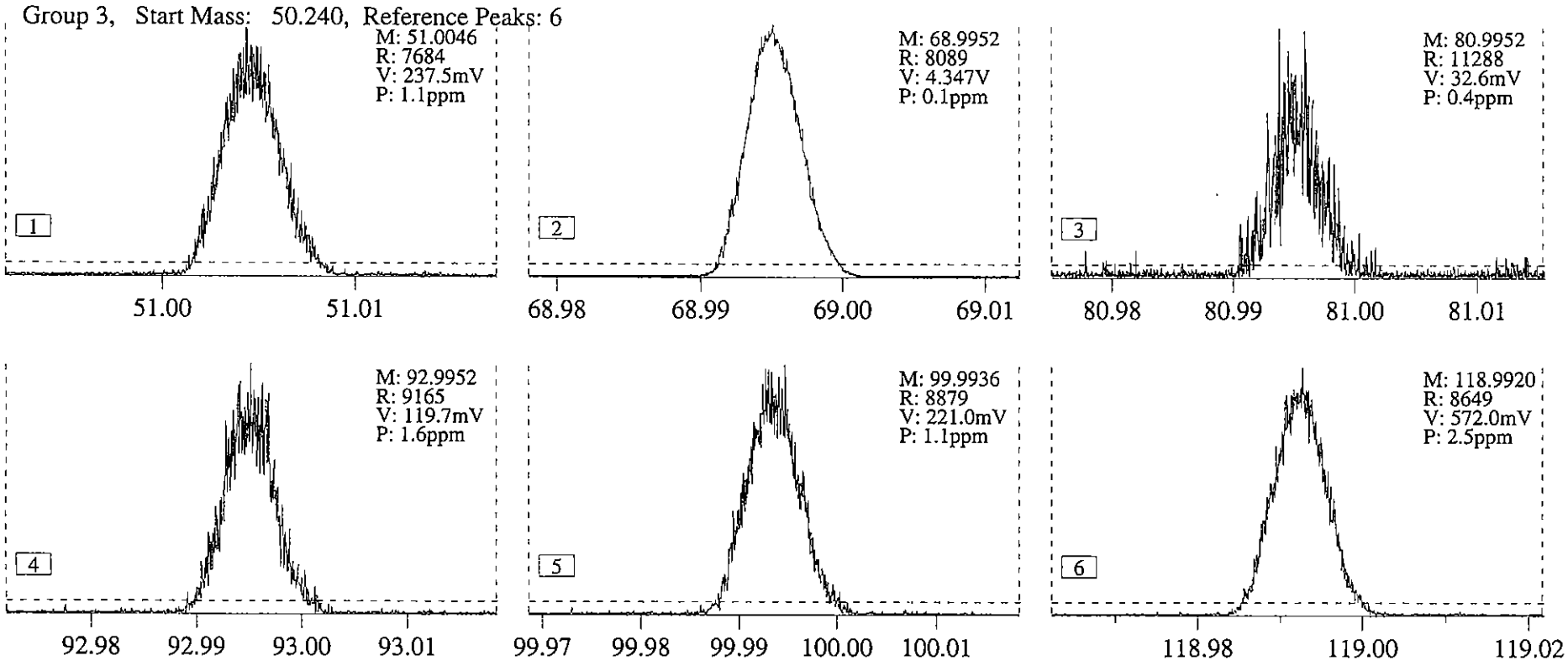
S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



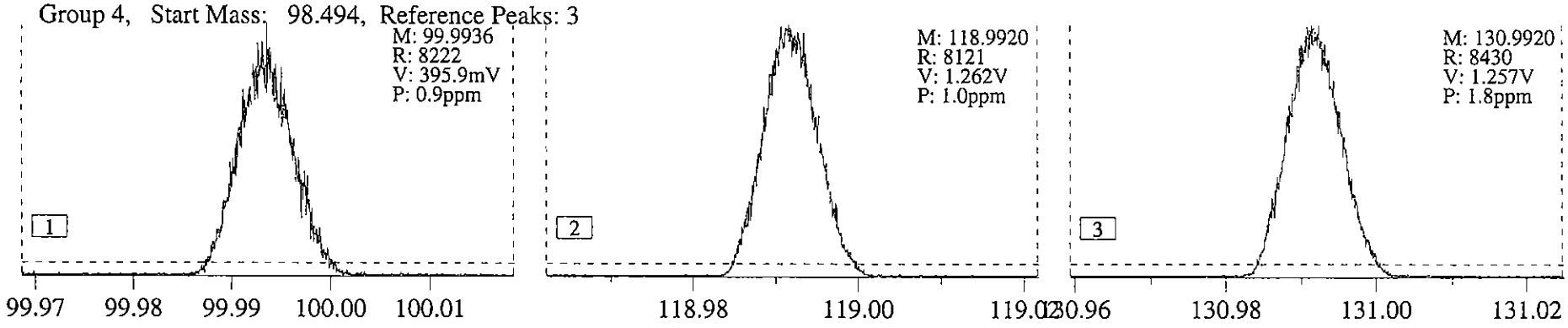
S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

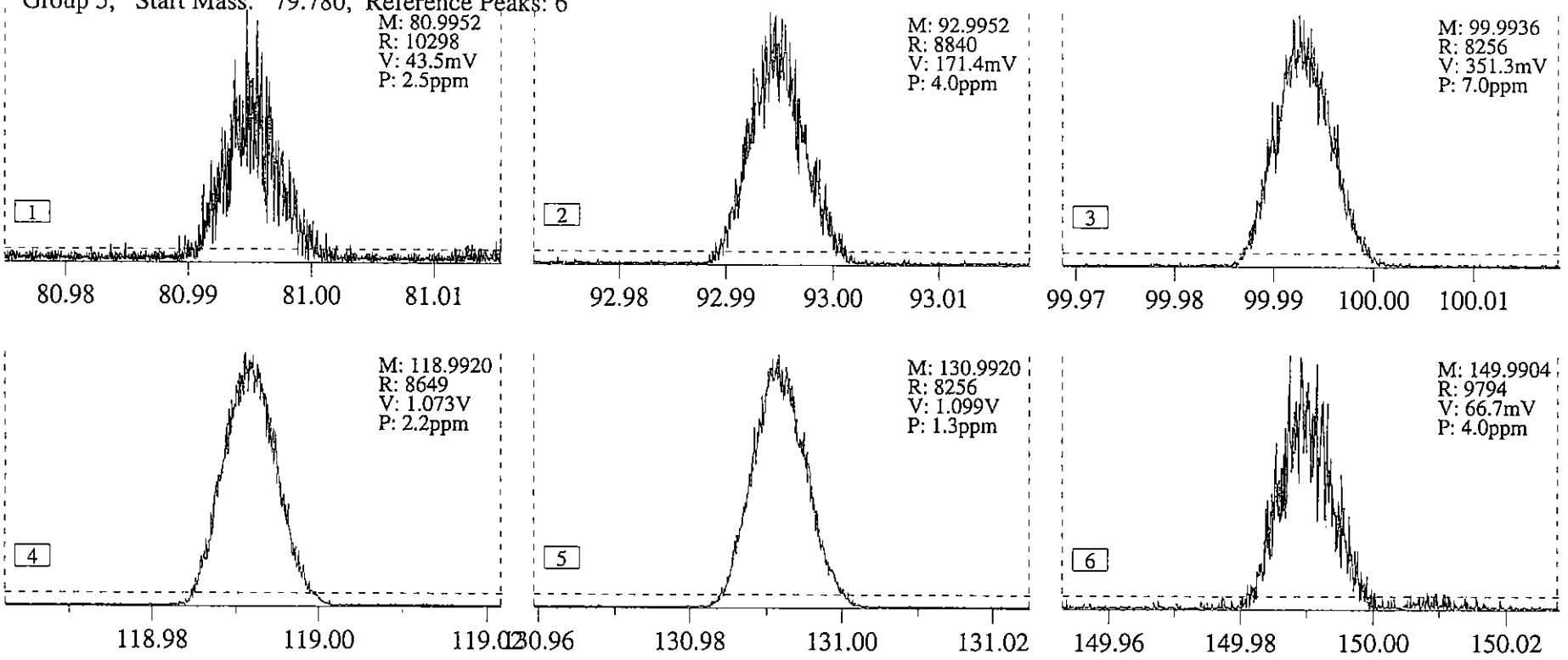


S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

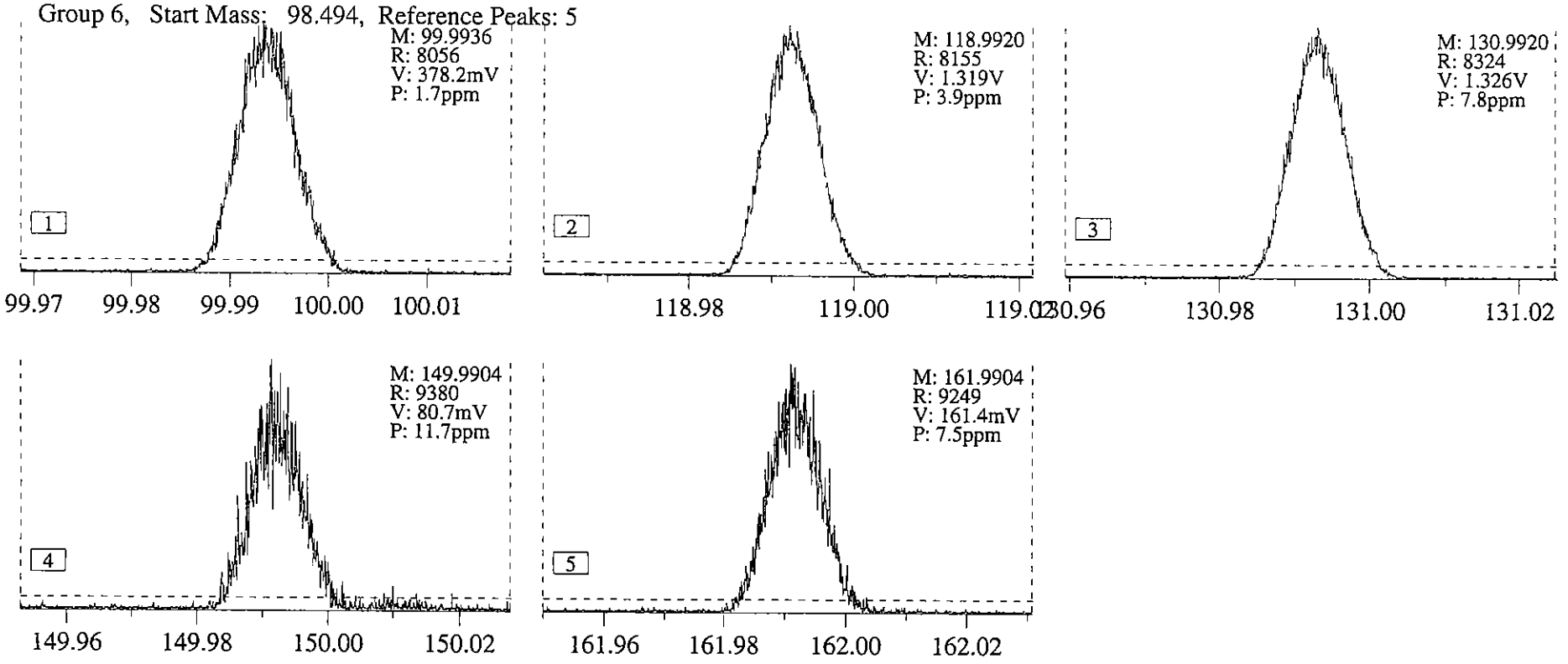


S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm

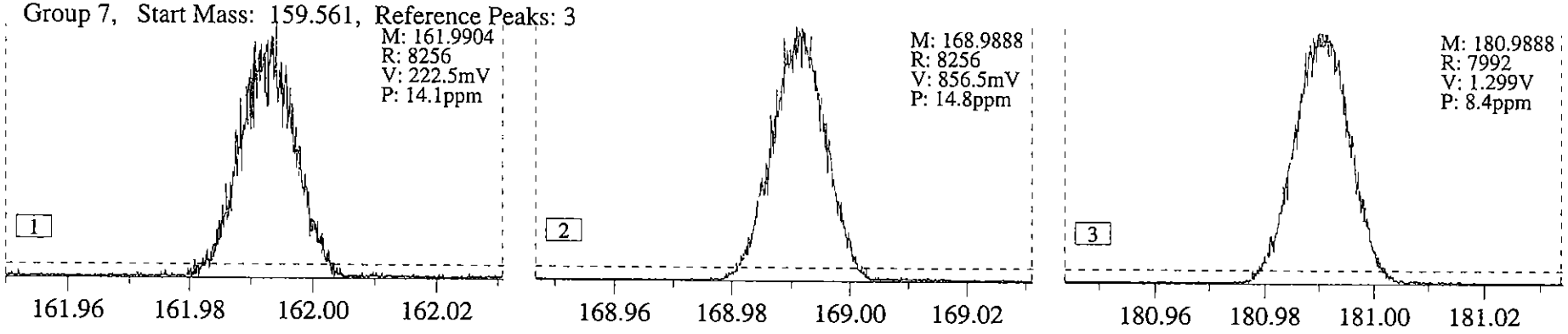
Group 5, Start Mass: 79.780, Reference Peaks: 6



S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



S.I.M. Calibration 06-Jun-2003 08:03, Run: kr23600003, Expt: nitros200 Normalised Plot Sweep: 500 ppm, Threshold: 0.00mV, Tolerance: 500 ppm



INITIAL CALIBRATION

INITIAL CALIBRATION

Lab Name: Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date: 2003/06/05

LAB FILE ID.		
	KR23590013	CS1
	KR23590014	CS2
	KR23590015	CS3
	KR23590012	CS4
	KR23590016	CS5
	KR23590017	CS6

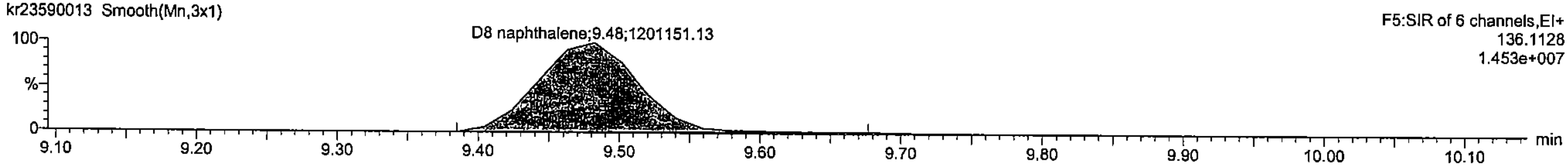
Compound	RRF CS1 (5.00ng/mL)	RRF CS2 (50.0ng/mL)	RRF CS3 (80.00ng/mL)	RRF CS4 (200.0ng/mL)	RRF CS5 (1000ng/mL)	RRF CS6 (2000ng/mL)	Average RRF	%RSD	Max %RSD
NDMA	1.33	1.48	1.51	1.35	1.38	1.46	1.41	5	25
D6 NDMA	0.110	0.110	0.0940	0.113	0.105	0.0950	0.105	8	25

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

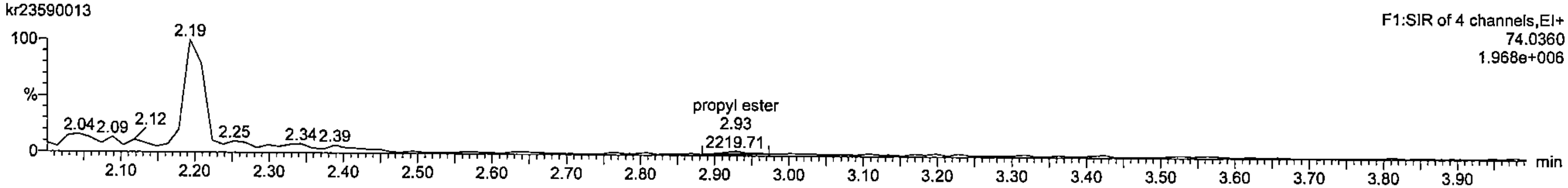
Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Thu May 15 11:50:59 2003
Calibration: Untitled, Time: Thu Jun 05 16:42:48 2003

Name: kr23590013.*, Date: 05-Jun-2003, Time: 14:33:35, ID: , Description: ~~200~~ 5.0 ng/mL,72-24NDMW-128~~4~~3

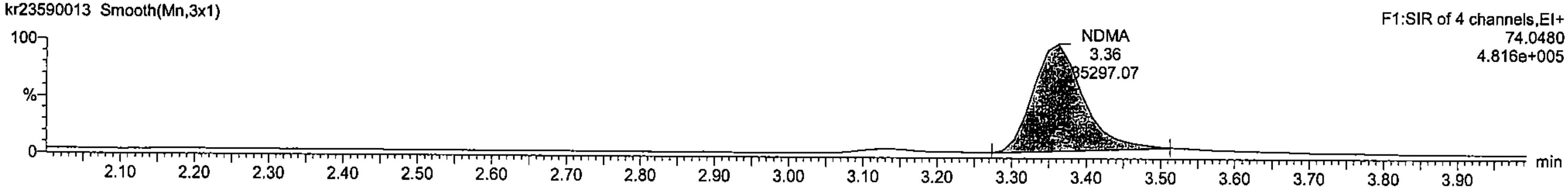
D8 naphthalene
kr23590013 Smooth(Mn,3x1)



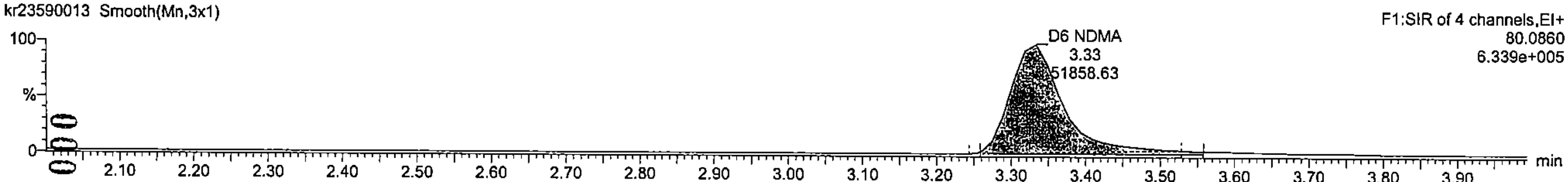
propyl ester
kr23590013



NDMA
kr23590013 Smooth(Mn,3x1)



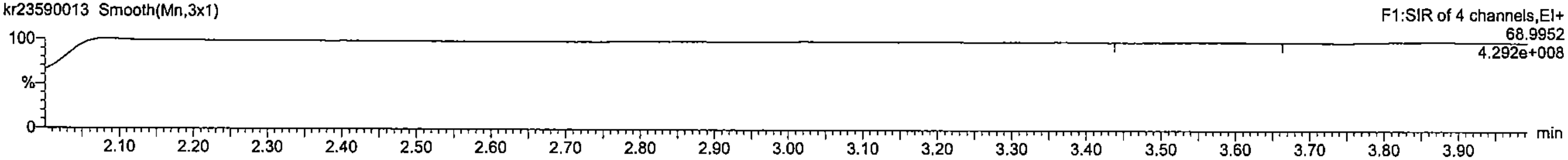
D6 NDMA
kr23590013 Smooth(Mn,3x1)



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

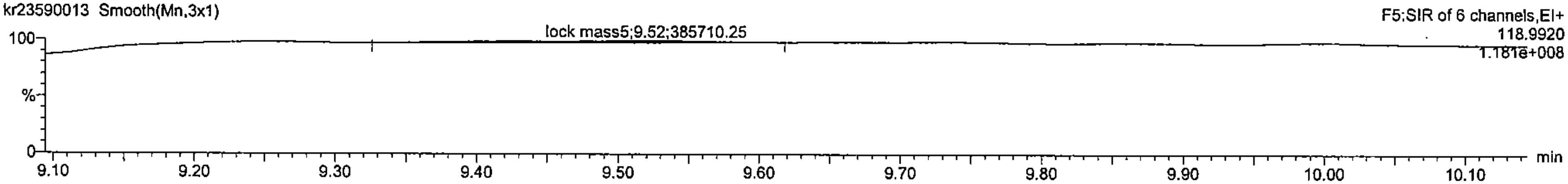
lock mass1

kr23590013 Smooth(Mn,3x1)



lock mass5

kr23590013 Smooth(Mn,3x1)

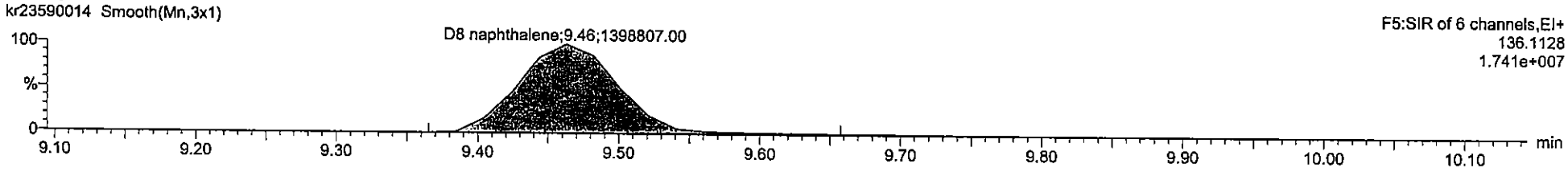


#	Compound Name	Trace	Abs Resp	RT	ng/L	%Dev	RRF	Mod Date
1	NDMA	74.0480	35297	3.36	4718	-5.64	1.334	05-Jun-03
2	D6 NDMA	80.0860	51859	3.33	10315	5.26	0.110	05-Jun-03
3	D8 naphthalene	136.1128	1201151	9.48	25000	0.00	1.000	
4	propyl ester	74.0360	2220	2.93	0	-86.72	2219....	

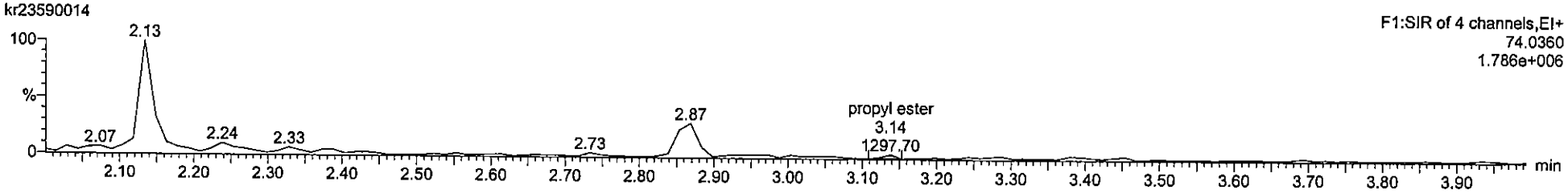
Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

Name: kr23590014.*, Date: 05-Jun-2003, Time: 14:52:49, ID: , Description: 50ng/mL,72-22NDMW-1274

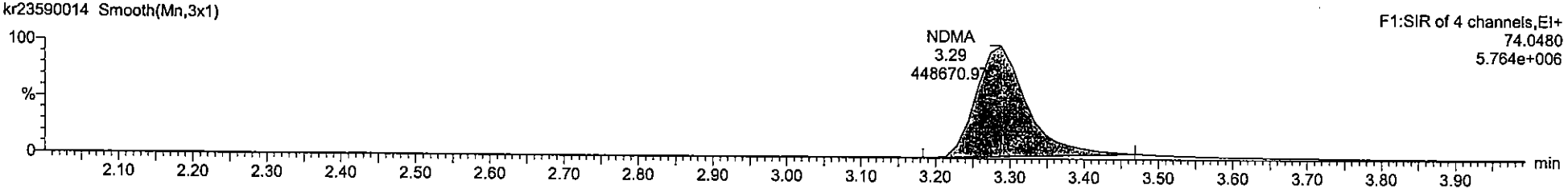
D8 naphthalene



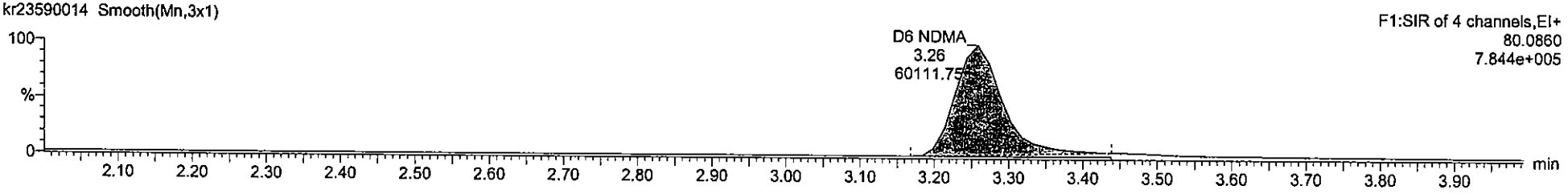
propyl ester



NDMA



D6 NDMA

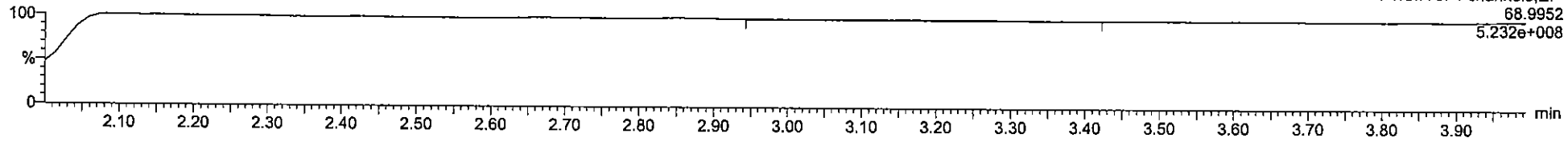


000054

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

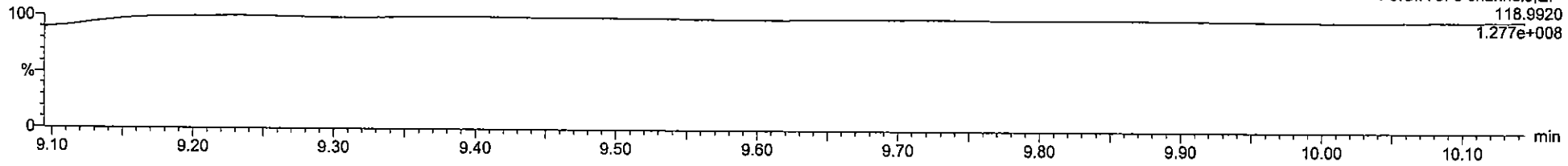
lock mass1

kr23590014 Smooth(Mn,3x1)



lock mass5

kr23590014 Smooth(Mn,3x1)



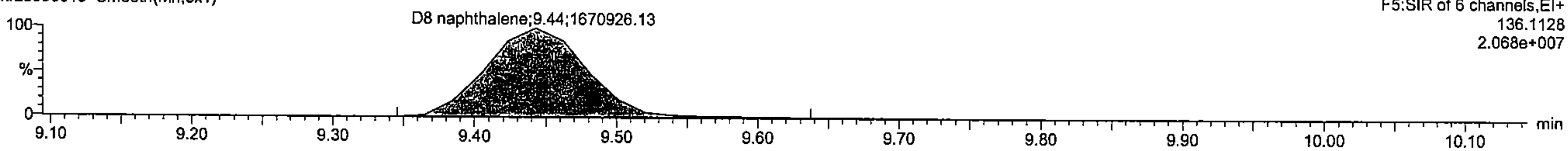
#	Compound Name	Trace	Abs Resp	RT	Lmt/L	%Dev	RRF	Mod Date
1	NDMA	74.0480	448671	3.29	51740	3.48	1.463	05-Jun-03
2	D6 NDMA	80.0860	60112	3.26	10267	4.77	0.110	05-Jun-03
3	D8 naphthalene	136.1128	1398807	9.46	25000	0.00	1.000	
4	propyl ester	74.0360	1298	3.14	0	-92.24	1297....	

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

Name: kr23590015.*, Date: 05-Jun-2003, Time: 15:08:03, ID: , Description: 80ng/mL,72-22NDMW-1275

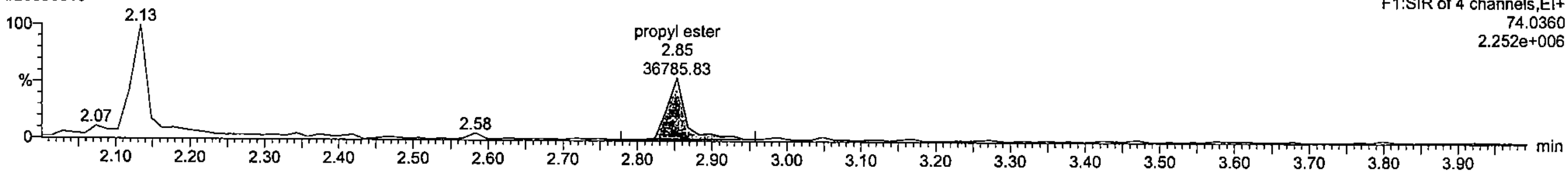
D8 naphthalene

kr23590015 Smooth(Mn,3x1)



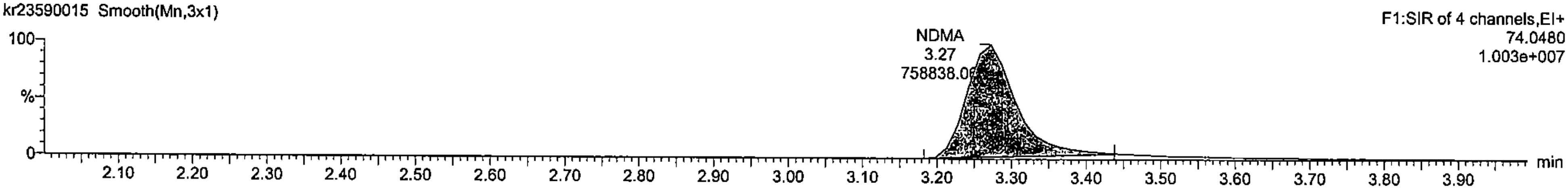
propyl ester

kr23590015



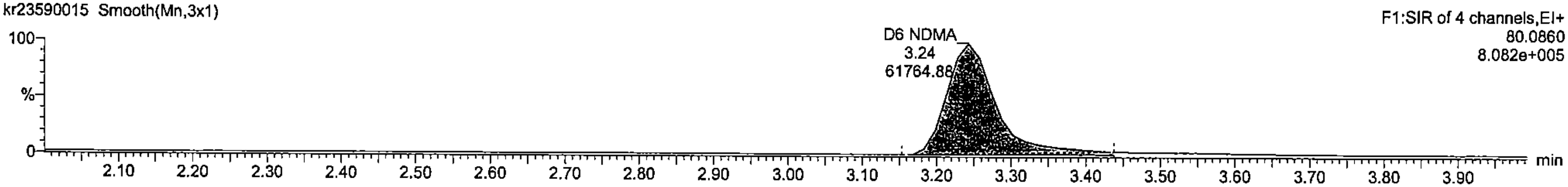
NDMA

kr23590015 Smooth(Mn,3x1)



D6 NDMA

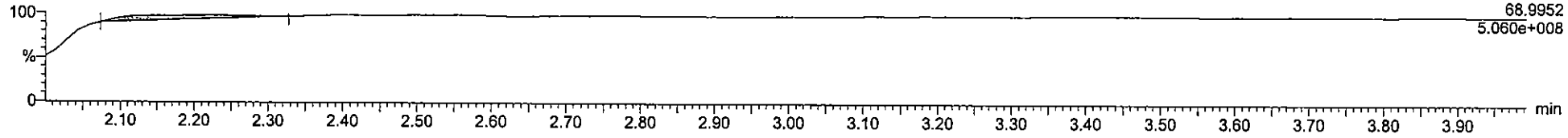
kr23590015 Smooth(Mn,3x1)



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

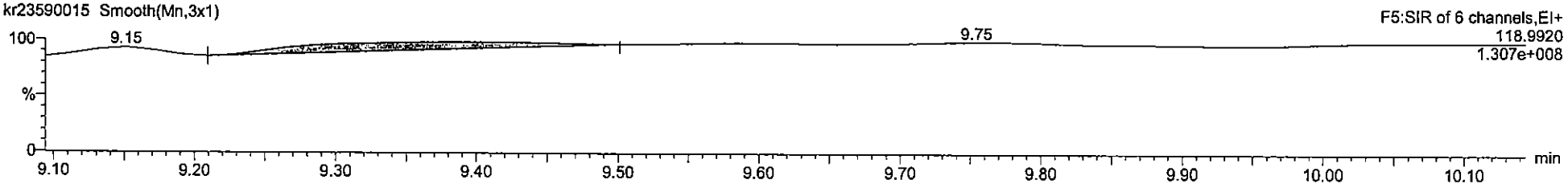
lock mass1

kr23590015 Smooth(Mn,3x1)



lock mass5

kr23590015 Smooth(Mn,3x1)

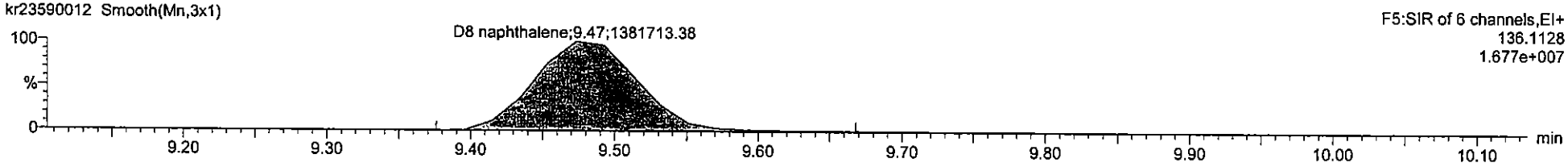


#	Compound Name	Exp Trace	Abs Resp	%RT	Sn/LS	%Dev	%RRF	Mod Date
1	NDMA	74.0480	758838	3.27	85165	6.46	1.505	05-Jun-03
2	D6 NDMA	80.0860	61765	3.24	8831	-9.88	0.094	05-Jun-03
3	D8 naphthalene	136.1128	1670926	9.44	25000	0.00	1.000	
4	propyl ester	74.0360	36786	2.85	2	120.09	36785...	

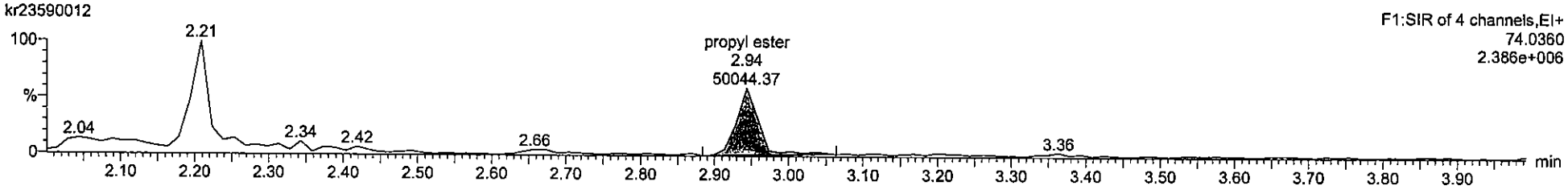
Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

Name: kr23590012.*, Date: 05-Jun-2003, Time: 14:11:12, ID: , Description: 200ng/mL,72-24NDMW-1284

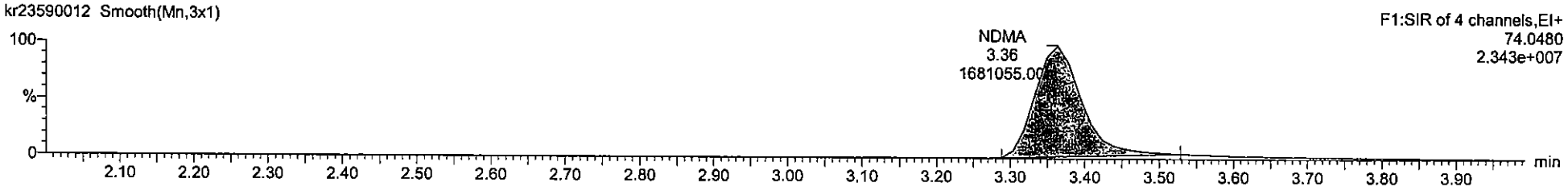
D8 naphthalene



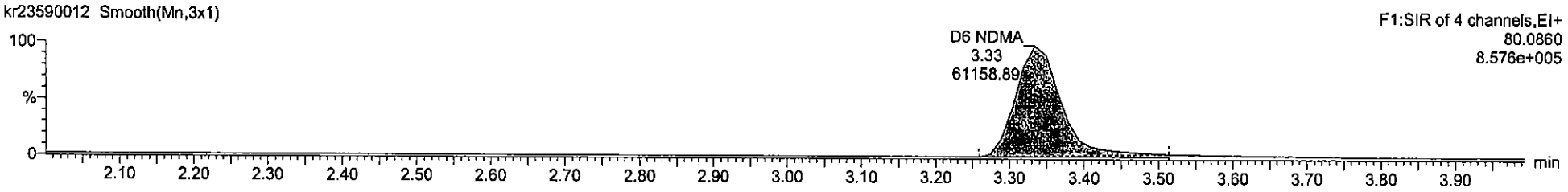
propyl ester



NDMA



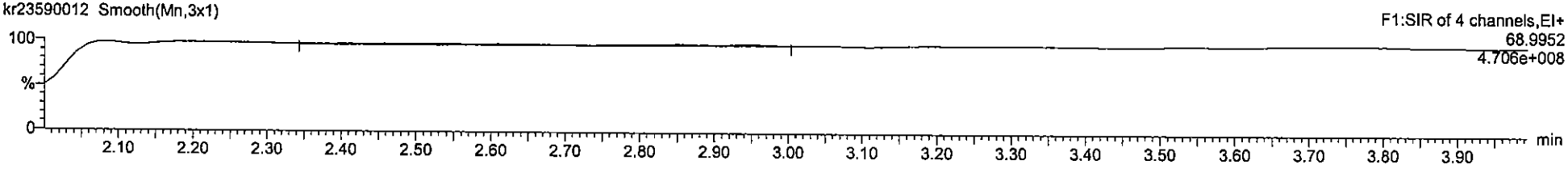
D6 NDMA



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

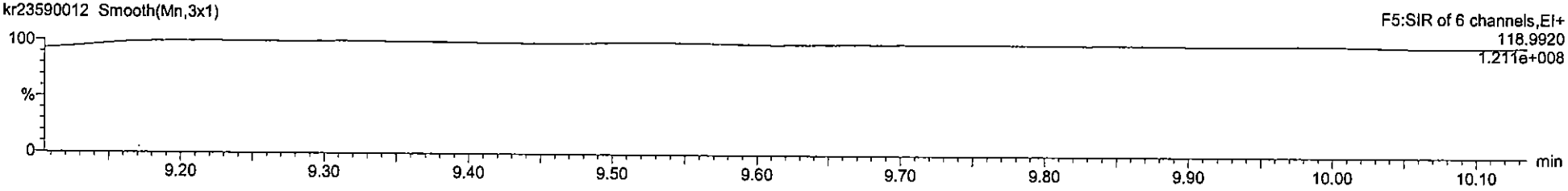
lock mass1

kr23590012 Smooth(Mn,3x1)



lock mass5

kr23590012 Smooth(Mn,3x1)



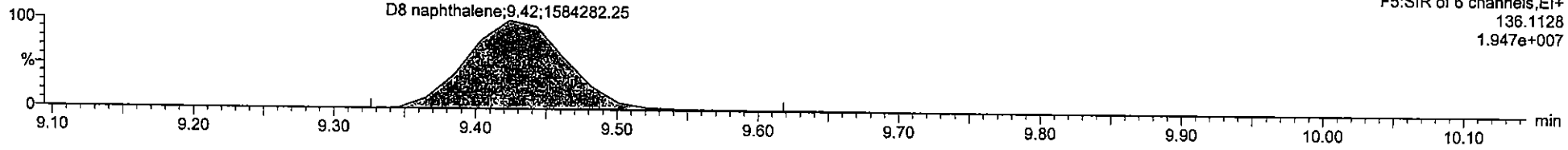
	Compound Name	Trace	Abs Resp	RT	Conc	%Dev	RRF	Mod Date
1	NDMA	74.0480	1681055	3.36	190536	-4.73	1.347	05-Jun-03
2	D6 NDMA	80.0860	61159	3.33	10575	7.91	0.113	05-Jun-03
3	D8 naphthalene	136.1128	1381713	9.47	25000	0.00	1.000	
4	propyl ester	74.0360	50044	2.94	3	199.42	50044...	

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

Name: kr23590016.*, Date: 05-Jun-2003, Time: 15:27:17, ID: , Description: 1000ng/mL,72-22NDMW-1277

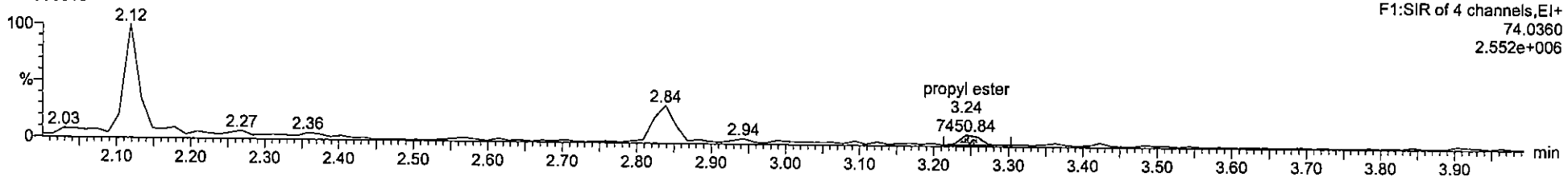
D8 naphthalene

kr23590016 Smooth(Mn,3x1)



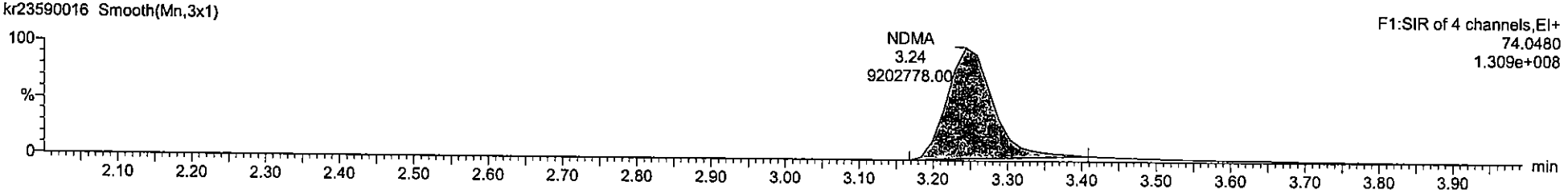
propyl ester

kr23590016



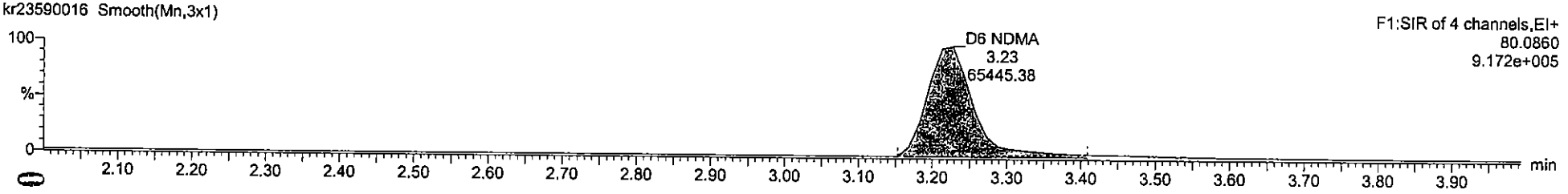
NDMA

kr23590016 Smooth(Mn,3x1)



D6 NDMA

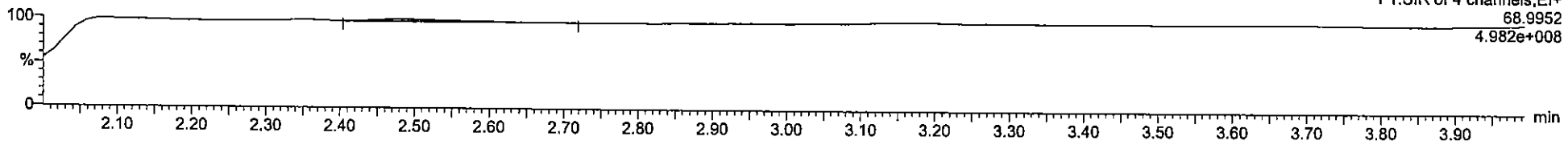
kr23590016 Smooth(Mn,3x1)



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

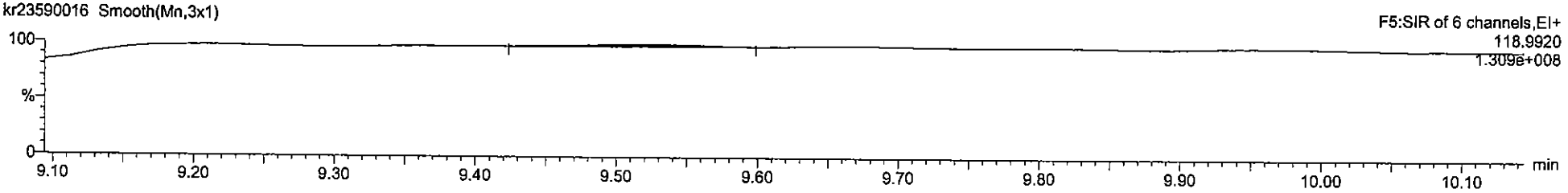
lock mass1

kr23590016 Smooth(Mn,3x1)



lock mass5

kr23590016 Smooth(Mn,3x1)



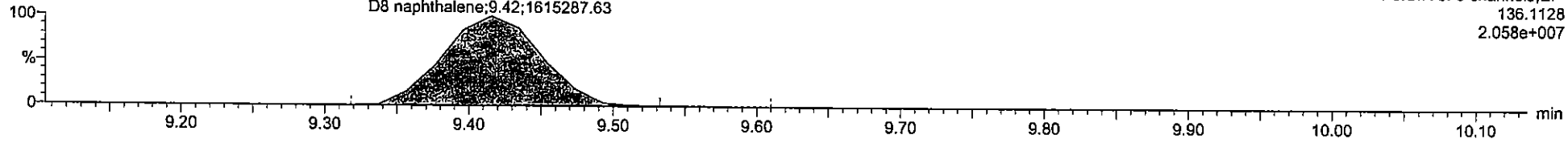
	Compound Name	Trace	Abs.Resp	RT	Conc	%Dev	RRF	Mod Date
1	NDMA	74.0480	9202778	3.24	974756	-2.52	1.378	05-Jun-03
2	D6 NDMA	80.0860	65445	3.23	9869	0.71	0.105	05-Jun-03
3	D8 naphthalene	136.1128	1584282	9.42	25000	0.00	1.000	
4	propyl ester	74.0360	7451	3.24	0	-55.42	7450....	

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

Name: kr23590017.*, Date: 05-Jun-2003, Time: 15:47:11, ID: , Description: 2000ng/mL,72-22NDMW-1278

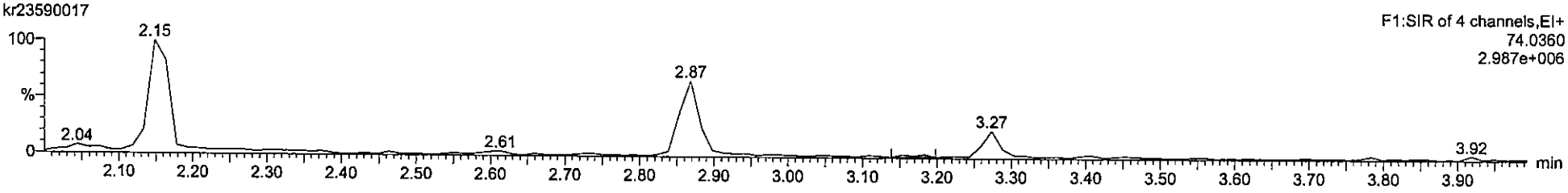
D8 naphthalene

kr23590017 Smooth(Mn,3x1)



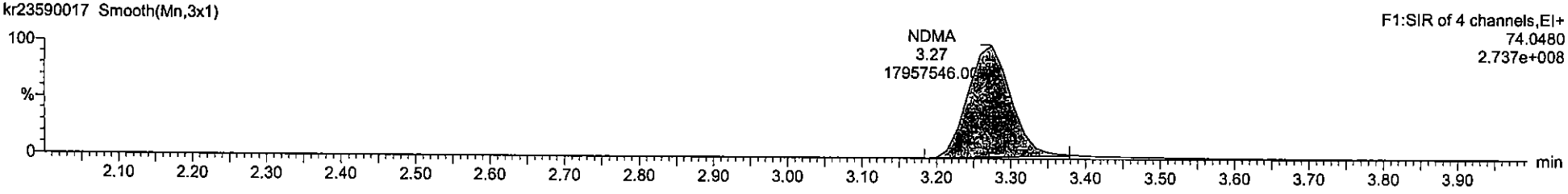
propyl ester

kr23590017



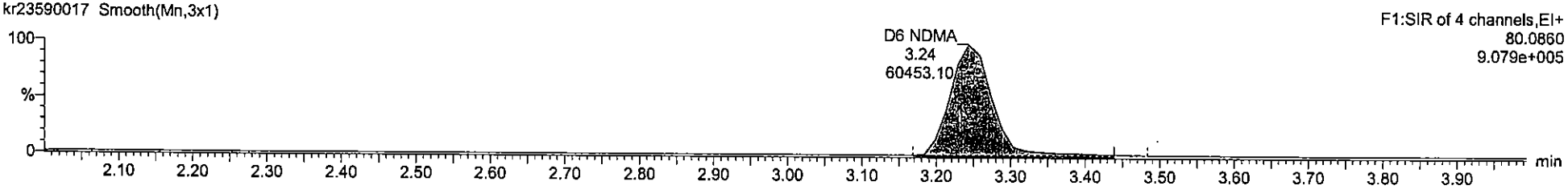
NDMA

kr23590017 Smooth(Mn,3x1)



D6 NDMA

kr23590017 Smooth(Mn,3x1)

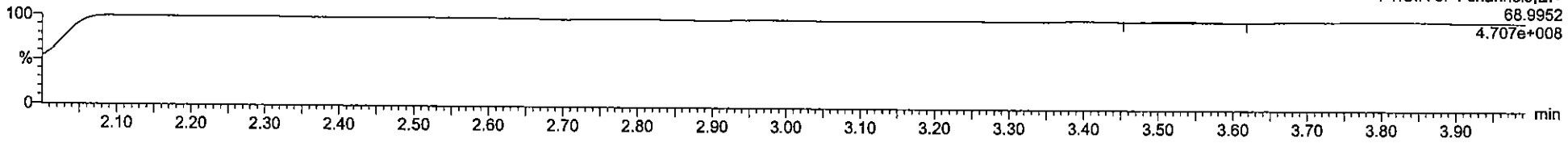


290000

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030605\nitroscali_20030605.qld, Time: Thu Jun 05 16:42:48 2003

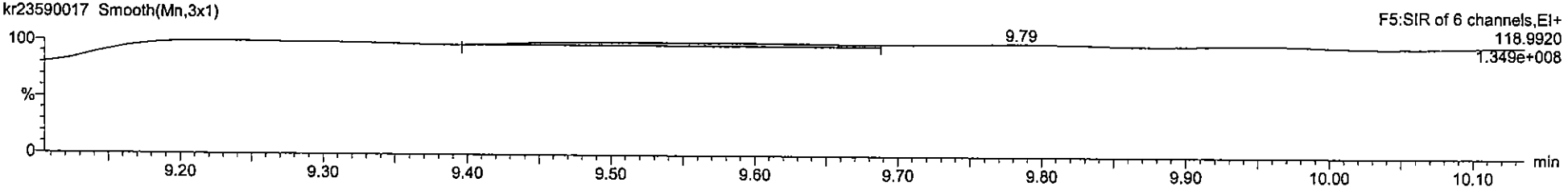
lock mass1

kr23590017 Smooth(Mn,3x1)



lock mass5

kr23590017 Smooth(Mn,3x1)



	Compound Name	Trace	Abs Resp	RT	Ind	%Dev	RRF	Mod Date
1	NDMA	74.0480	17957546	3.27	2059132	2.96	1.456	05-Jun-03
2	D6 NDMA	80.0860	60453	3.24	8942	-8.76	0.095	05-Jun-03
3	D8 naphthalene	136.1128	1615288	9.42	25000	0.00	1.000	05-Jun-03
4	propyl ester	74.0360	2485	3.18	0	-85.13	2485....	

000063

SECOND SOURCE CALIBRATION CHECK

SECOND SOURCE CALIBRATION CHECK

Lab Name: Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date: 2003/06/06

LAB FILE ID. KR23600006

Compound	REPORTED CONC. (ug/L)	ACTUAL CONC. (ug/L)	%D	% D LIMIT
NDMA	10.1	10.00	1	25

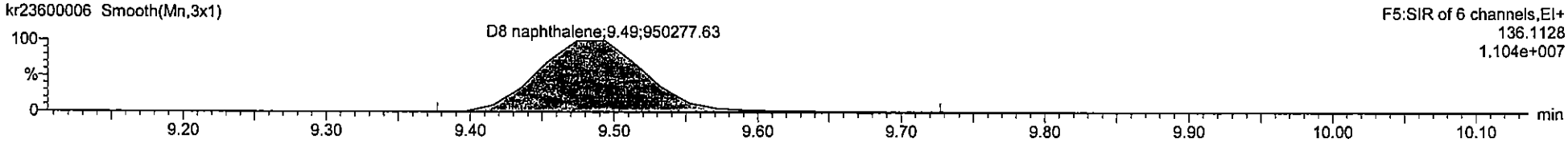
Compound	%RECOVERY
D6-NDMA	90

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\2ndsource_20030606.qld, Time: Fri Jun 06 09:44:04 2003

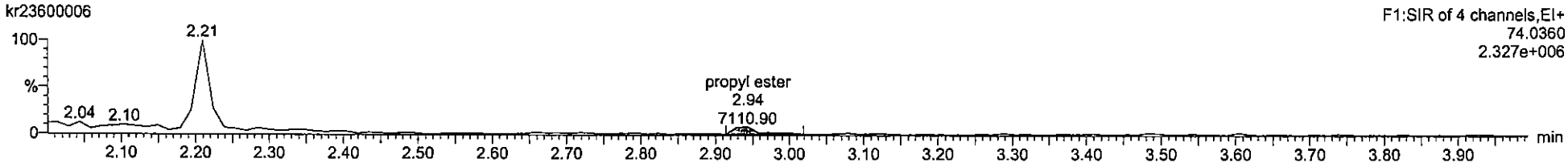
Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Thu May 15 11:50:59 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600006.*, Date: 06-Jun-2003, Time: 09:08:43, Job: , Description: 10.0ng/mL,72-24NDMW-1285

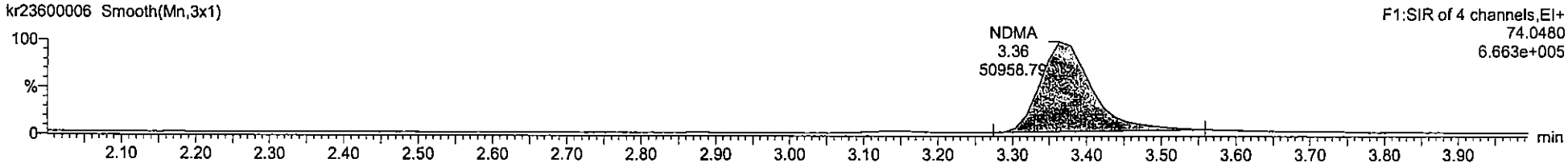
D8 naphthalene



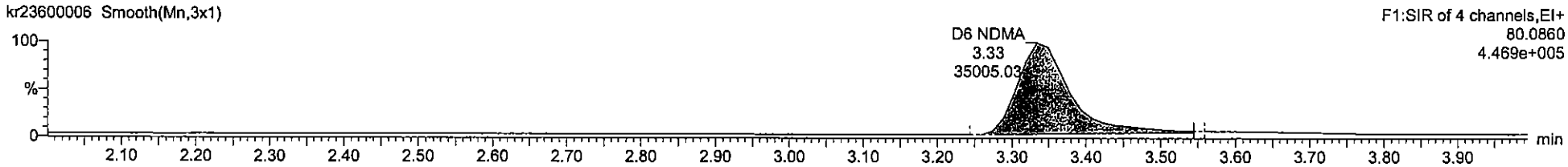
propyl ester



NDMA



D6 NDMA

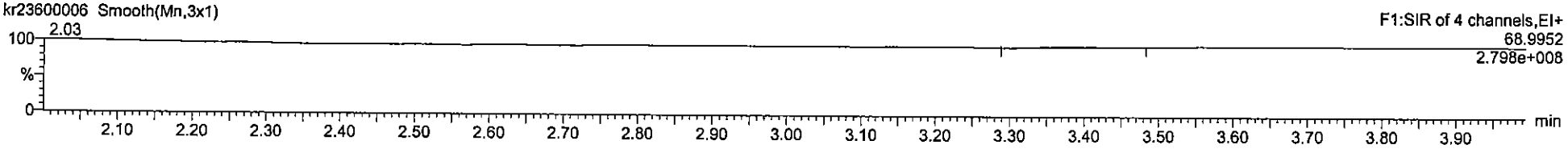


990006

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\2ndsource_20030606.qld, Time: Fri Jun 06 09:44:04 2003

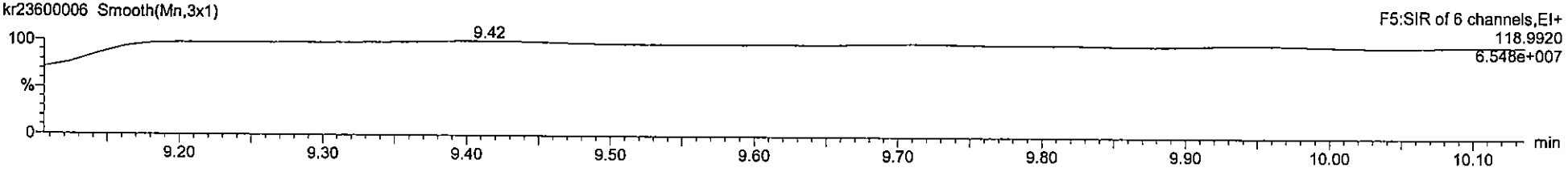
lock mass1

kr23600006 Smooth(Mn,3x1)



lock mass5

kr23600006 Smooth(Mn,3x1)



#	Compound Name	Trace	Abs Resp	RT	ng/L	%Rec	%Dev	Mod Date	RRF
1	NDMA	74.0480	50959	3.36	10091	100.91	0.91	06-Jun-03	1.427
2	D6 NDMA	80.0860	35005	3.33	8801	89.81	-10.19	06-Jun-03	0.094
3	D8 naphthalene	136.1128	950278	9.49	25000	100.00	0.00		1.000
4	propyl ester	74.0360	7111	2.94	0	42.54	-57.46		7110....

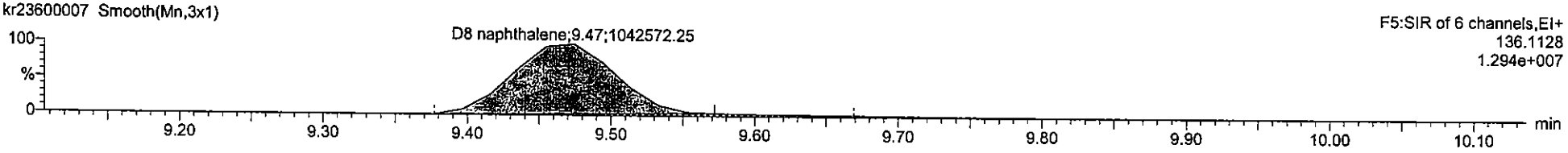
Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\Threshold_20030606.qld, Time: Fri Jun 06 10:02:05 2003

Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Thu May 15 11:50:59 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600007.*, Date: 06-Jun-2003, Time: 09:24:39, Job: , Description: 1.0ng/mL,72-24NDMW-1286

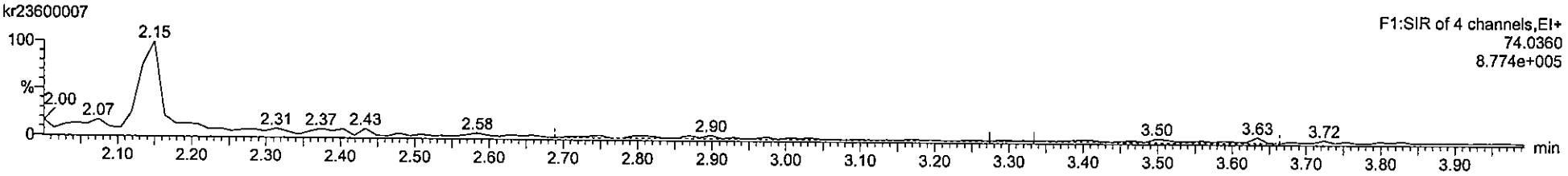
D8 naphthalene

kr23600007 Smooth(Mn,3x1)



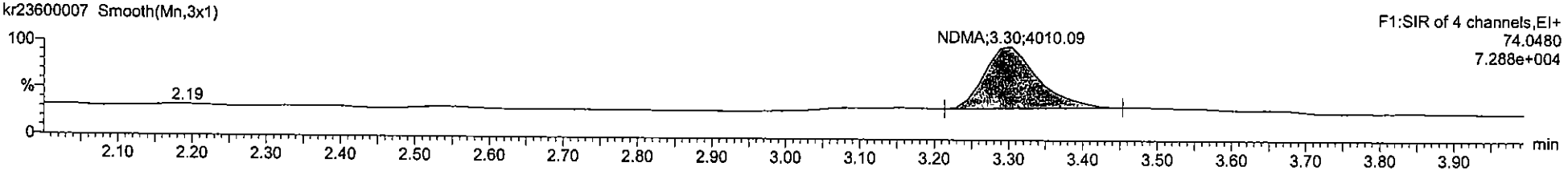
propyl ester

kr23600007



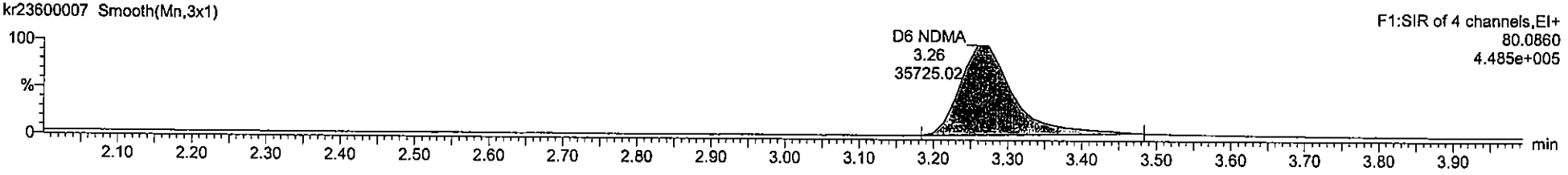
NDMA

kr23600007 Smooth(Mn,3x1)



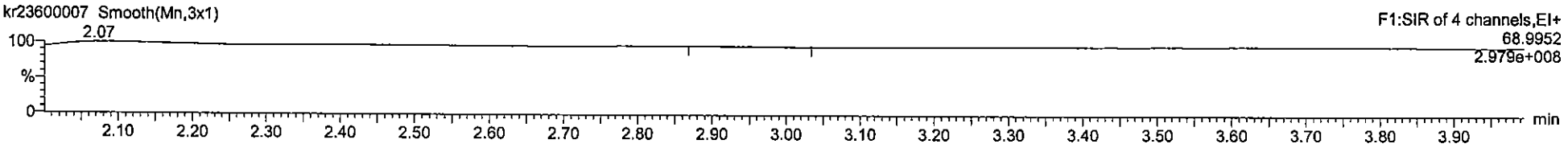
D6 NDMA

kr23600007 Smooth(Mn,3x1)

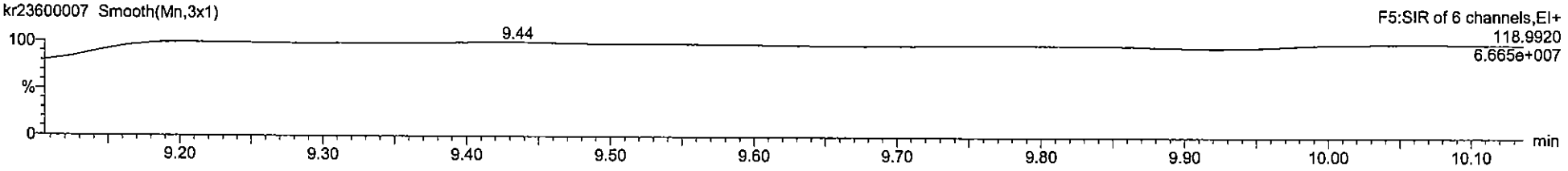


Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\Threshold_20030606.qld, Time: Fri Jun 06 10:02:05 2003

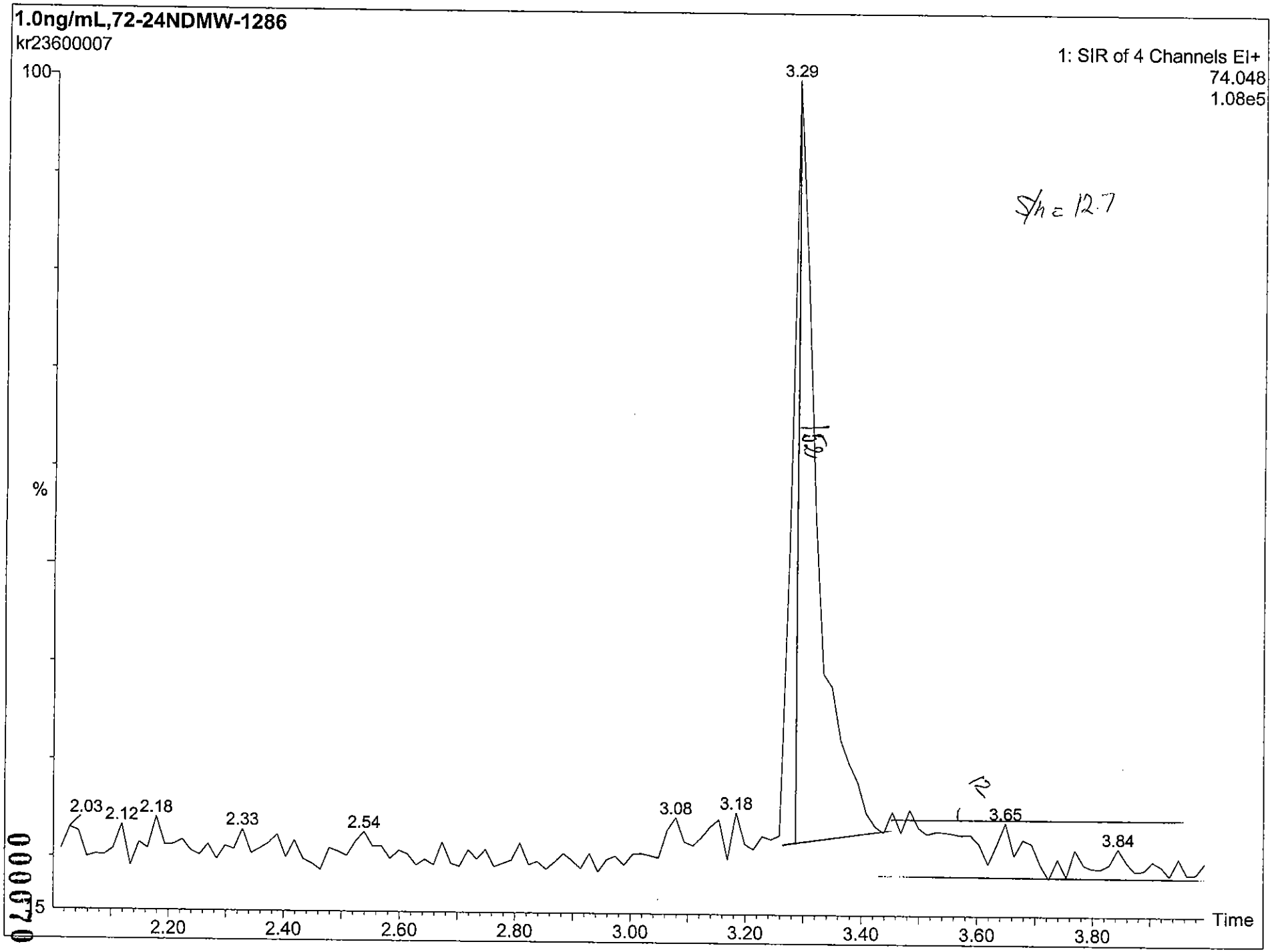
lock mass1



lock mass5



#	Compound Name	Trace	Abs Resp	RT	ng/L	%Rec	Mod Date	DM sort	RRF Mean
1	NDMA	74.0480	4010	3.30	778.10		06-Jun-03	1	1.414
2	D6 NDMA	80.0860	35725	3.26	8186.80	83.54		1	0.105
3	D8 naphthalene	136.1128	1042572	9.47	25000.00	100.00	06-Jun-03	1	1.000
4	propyl ester	74.0360	424	3.29	0.03	2.54	06-Jun-03	1	16713.989


1.0ng/mL,72-24NDMW-1286
kr23600007
1: SIR of 4 Channels EI+
74.048
1.08e5
100
%
0
3.29
1.53
S/n = 12.7
2.03
2.12
2.18
2.33
2.54
3.08
3.18
3.65
3.84
2.20
2.40
2.60
2.80
3.00
3.20
3.40
3.60
3.80
Time

CONTINUING CALIBRATION

CONTINUING CALIBRATION CHECK

Lab Name: Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date: 2003/06/06 Time: 08:17:50

LAB FILE ID. KR23600004 CS4

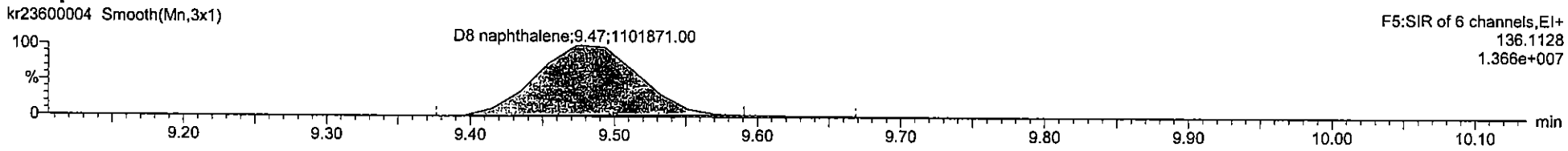
Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.41	1.63	15	25
D6-NDMA	0.105	0.0970	7	25

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\nitrosoconcal_20030606.qld, Time: Fri Jun 06 09:19:05 2003

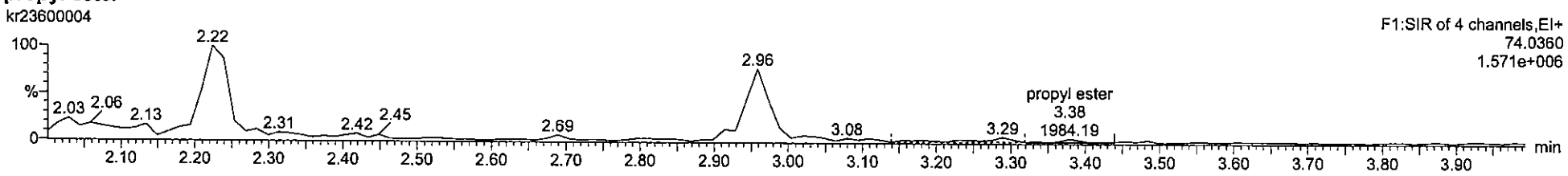
Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Thu May 15 11:50:59 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscall_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600004.*, Date: 06-Jun-2003, Time: 08:17:50, Job: , Description: 200ng/mL,72-24NDMW-1284

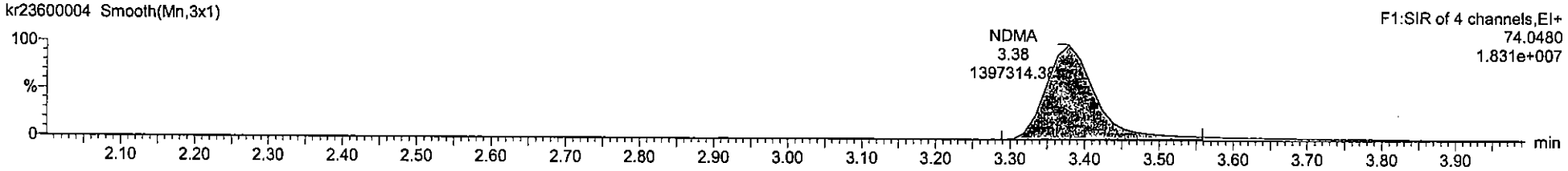
D8 naphthalene



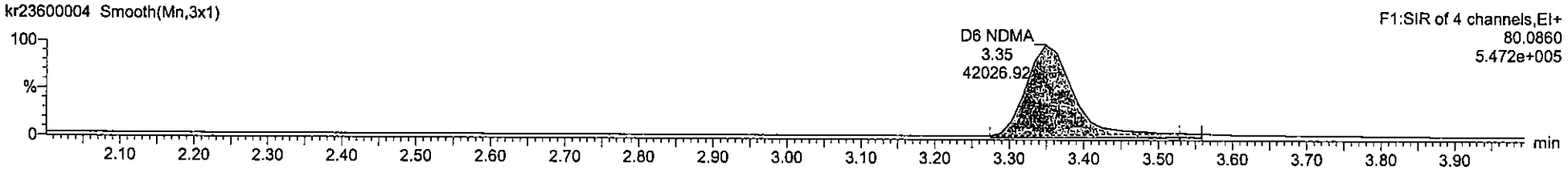
propyl ester



NDMA



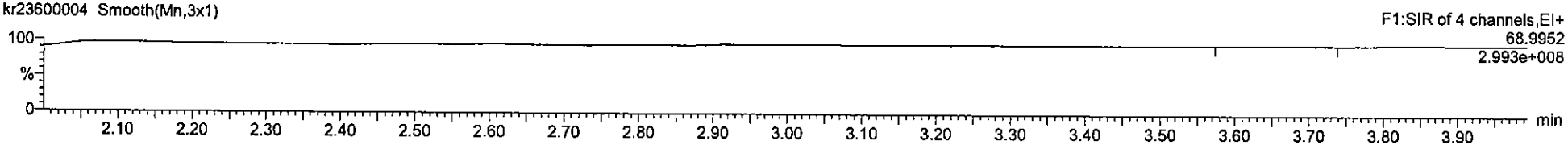
D6 NDMA



Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\nitrosoconcal_20030606.qld, Time: Fri Jun 06 09:19:05 2003

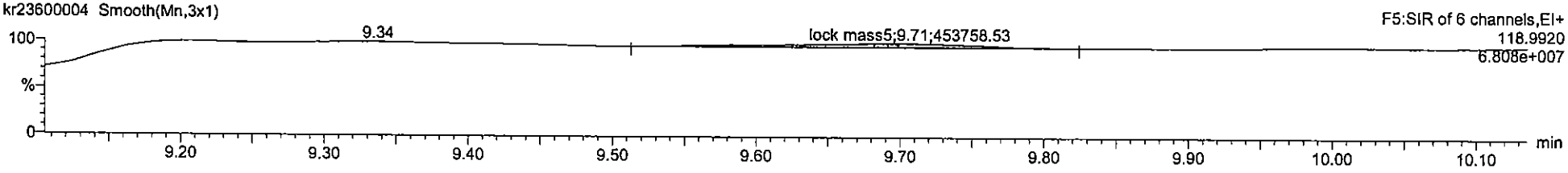
lock mass1

kr23600004 Smooth(Mn,3x1)



lock mass5

kr23600004 Smooth(Mn,3x1)



#	Compound Name	Trace	Abs Resp	RT	Amt/LS	%Rec	%Dev	Mod Date	RRF
1	NDMA	74.0480	1397314	3.38	230474	115.24	15.24	06-Jun-03	1.629
2	D6 NDMA	80.0860	42027	3.35	9113	92.99	-7.01	06-Jun-03	0.097
3	D8 naphthalene	136.1128	1101871	9.47	25000	100.00	0.00	06-Jun-03	1.000
4	propyl ester	74.0360	1984	3.38	0	11.87	-88.13	06-Jun-03	1984....

000074

CONTINUING CALIBRATION CHECK

Lab Name: Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date: 2003/06/06 Time: 10:19:19

LAB FILE ID. KR23600010 CS4

Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.41	1.54	9	25
D6-NDMA	0.105	0.0920	12	25

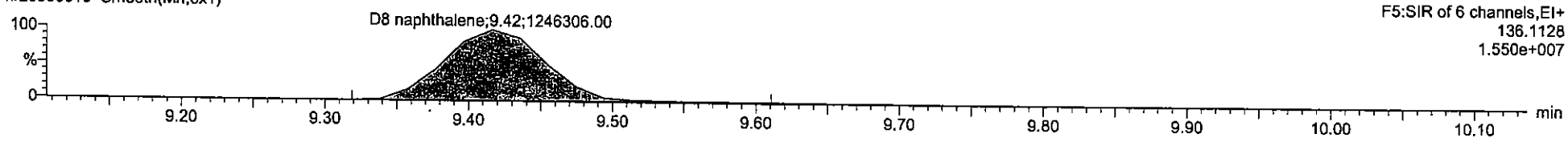
Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\nitrosoconcala_20030606.qld, Time: Fri Jun 06 11:30:41 2003

Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Thu May 15 11:50:59 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600010.*, Date: 06-Jun-2003, Time: 10:19:19, Job: , Description: 200ng/ml,72-22NDMW-1276

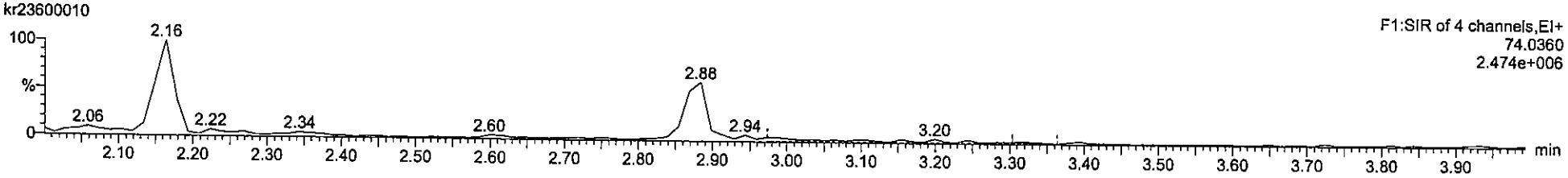
D8 naphthalene

kr23600010 Smooth(Mn,3x1)



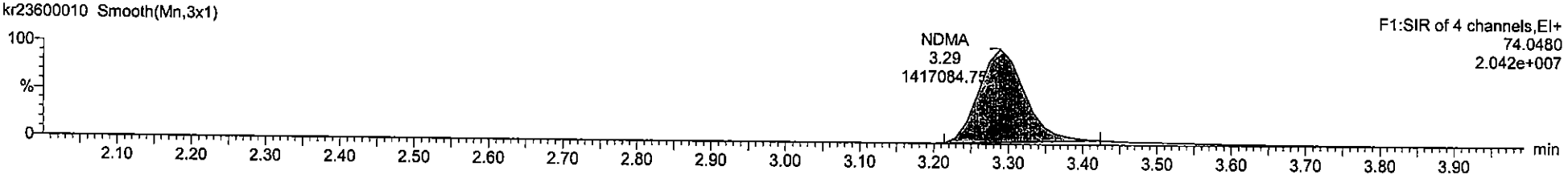
propyl ester

kr23600010



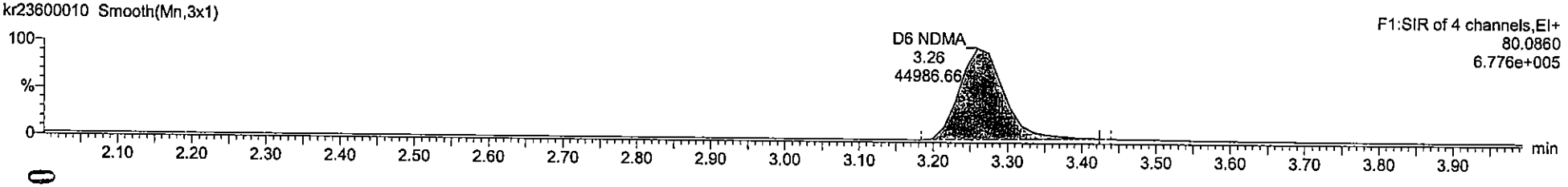
NDMA

kr23600010 Smooth(Mn,3x1)



D6 NDMA

kr23600010 Smooth(Mn,3x1)

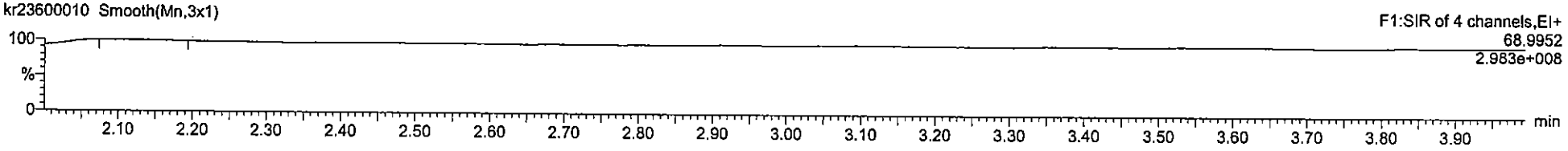


000076

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\nitrosoconcala_20030606.qld, Time: Fri Jun 06 11:30:41 2003

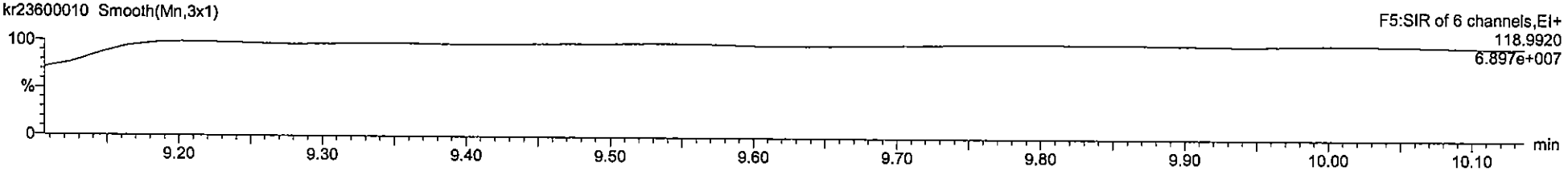
lock mass1

kr23600010 Smooth(Mn,3x1)



lock mass5

kr23600010 Smooth(Mn,3x1)



#	Compound Name	Trace	Abs Resp	RT	Int/Exp	%Rec	%Dev	Mod Date	RRF
1	NDMA	74.0480	1417085	3.29	218357	109.18	9.18	06-Jun-03	1.544
2	D6 NDMA	80.0860	44987	3.26	8624	88.00	-12.00	06-Jun-03	0.092
3	D8 naphthalene	136.1128	1246306	9.42	25000	100.00	0.00		1.000
4	propyl ester	74.0360	677	3.32	0	4.05	-95.95	06-Jun-03	676.557

CONTINUING CALIBRATION CHECK

Lab Name: Maxxam Analytics Inc.

Instrument: Kratos HRGC/HRMS Calibration Date: 2003/06/06 Time: 12:49:57

LAB FILE ID. KR23600018 CS4

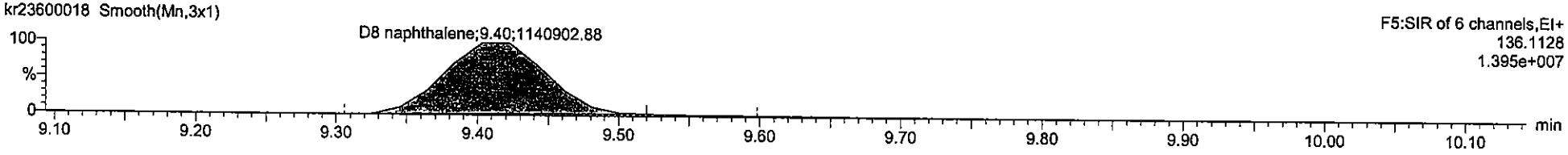
Compound	AVERAGE RRF	RRF CS4	%D	% D LIMIT
NDMA	1.41	1.59	12	25
D6-NDMA	0.105	0.0980	7	25

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\nitrosoconcalb_20030606.qld, Time: Fri Jun 06 13:53:09 2003

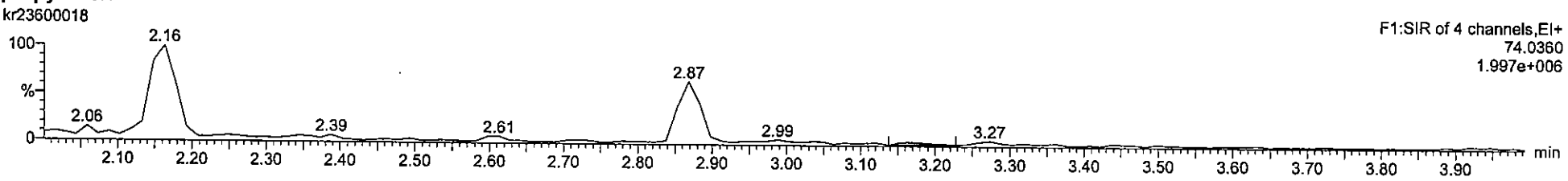
Method: C:\MASSLYNX\Default.pro\METHDB\nitros_ET.mdb, Time: Thu May 15 11:50:59 2003
Calibration: C:\MASSLYNX\Default.pro\CURVEDB\nitroscali_20030605.cdb, Time: Thu Jun 05 16:42:48 2003

Name: kr23600018.*, Date: 06-Jun-2003, Time: 12:49:57, Job: , Description: 200 ng/mL,72-24NDMW-1284

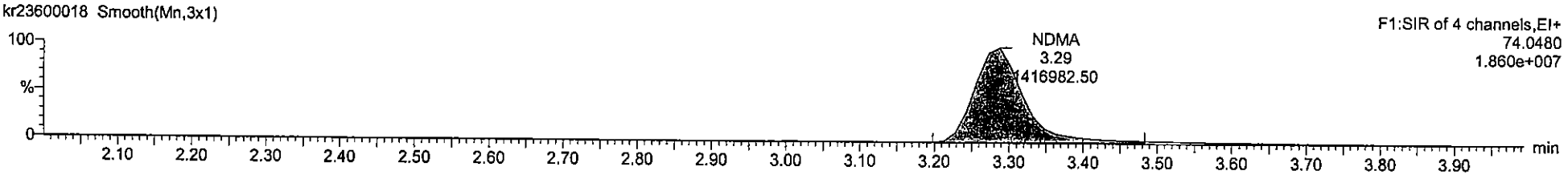
D8 naphthalene



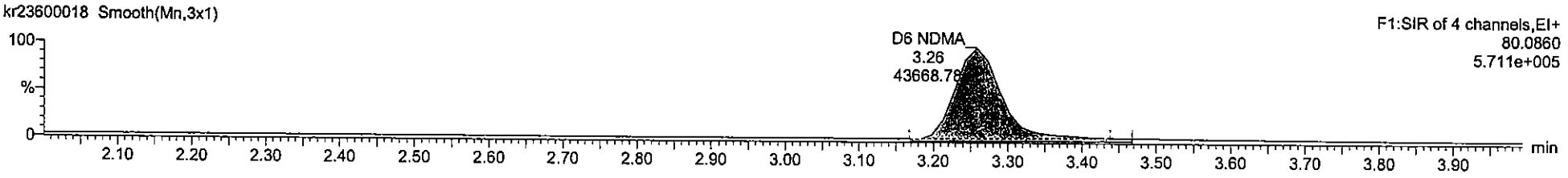
propyl ester



NDMA



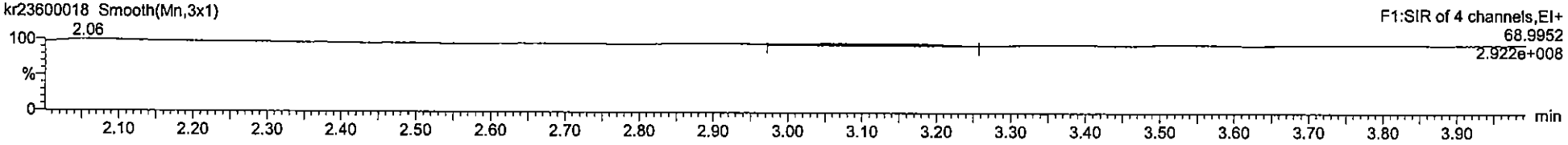
D6 NDMA



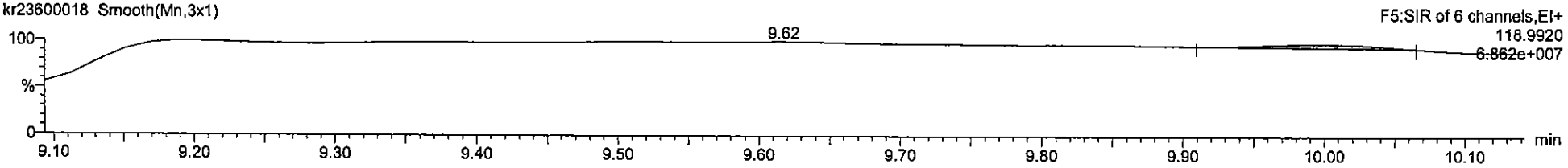
620009

Dataset: C:\MASSLYNX\Default.pro\QuanlynxFiles\QC\Calibration\20030606\nitrosoconcalb_20030606.qld, Time: Fri Jun 06 13:53:09 2003

lock mass1



lock mass5



#	Compound Name	Qz Trace	Abs Resp	RT	Lvl/Exp	%Rec	%Dev	Mod Date	RRF
1	NDMA	74.0480	1416983	3.29	224931	112.47	12.47	06-Jun-03	1.590
2	D6 NDMA	80.0860	43669	3.26	9145	93.31	-6.69	06-Jun-03	0.098
3	D8 naphthalene	136.1128	1140903	9.40	25000	100.00	0.00	06-Jun-03	1.000
4	propyl ester	74.0360	2666	3.17	0	15.95	-84.05		2665....

00080

SAMPLE PREPARATION RECORDS

			(W,E,H-D-L)	Spike (100µL)	Surr (100µL)	IV	FV	SF	FB	Rotovap	Int. Std. (5µL)	Comments
2003/06/02 10:00 ext. st. KG, NN	worksheet #481317											
	Spike	481317S	1,4D	70-204DANN-09	70-204DANL-F	1000 ml	1 ml	510	13	1	70-204NAPR-15	
	Spike Dup	481317SD						509	18	2		
	Blank	481317B						555	17	1		
A319096	A20412					970		507	22	3		
	A20413					990		512	23	3		
	A20414					960		519	12	3		
	A20415					1000		503	15	2		
	A20416					940		516	19	2		
	A20417					930		502	20	1		almost dr on rotovap
	Gl. Blk					–		–	GB1-4	3		
2003/06/03 10:00 ext. st. KG, NN, DK	worksheet #481743		(W-NDMA) NDMA	(100µL) 70-204NDMN-45	(100µL) 70-204NDML-128	1000 ml	1 ml	26	DW3	1	(5µL) 70-204NAPR-27	
	Spike	481743S						18	DW1	1		
	Spike Dup	481743SD						6	DW6	2		
	Blank	481743B				960		14	221	2		
A318878	A19423					990		22	228	3		
	A19424					—		–	GB3	1		
	Gl. Blk.											
2003/06/03 10:00 ext. st. KG, NN, DK	worksheet #481744											
	Spike	481743S	NDMA	(100µL) 70-204NDMN-45	(100µL) 70-204NDML-128	1000	1 ml	26	DW3	1	(5µL) 70-204NAPR-27	
	Spike Dup	481743SD						18	DW1	1		
	Blank	481743B						6	DW6	2		
A318461	A17260					1010		32	DW13	3		
A318929	A19656					1010		4	DW9	2		
A319129	A20673					1010		17	DW18	3		
A319190	A21353					1010		13	DW5	1		centrifuged extract
A319351	A22171					1000		38	208	1		went dry on rotovap
	A22172					1010		10	454	3		
	Gl. Blk.					–		–	GB3	1		

INSTRUMENT LOG

Kr 2357 13 480635 blank, N, 1, 2
14 ↓ glass blank, N, 1, 2 (2003/05/30)
15 480638, A 14540-01R, N, 1, 2
16 A 14551-01R, N, 1, 2 14550 Kr 2003/05/30
17 A 14875-01R, N, 1, 2 14905 Kr 2003/05/30
18 A 14965-01R, N, 1, 2 15025 Kr 2003/05/30
19 A 15025-01R, N, 1, 2
20 A 15026-01R, N, 1, 2
21 A 14875-01R, N, 1, 2
22 200 ng/ml 72-22 NDMW - 1276
23 480638, A 13342-03R, N, 1, 2

2003/06/02

Kr 2358 01-03 Mass Resolution / Accuracy for nitros
04 200 ng/ml 72-22 NDMW - 1276
05 no file

2003/06/05

Kr 2359 01-03 Mass Resolution / Accuracy for nitros
2359 04 200 ng/ml 72-24 NDMW - 1284
2308 01-06 Nitrosamine check
2359 05 200 ng/ml 72-24 NDMW - 1284
2359 06-09 Mass Resolution / Accuracy for nitros
2359 10 200 ng/ml 72-24 NDMW - 1284 Kr 2003/06/05
2359 11 200 ng/ml 72-24 NDMW - 1284
2359 12 200 ng/ml 72-24 NDMW - 1284
2359 13 50 ng/ml 72-24 NDMW - 1283
2359 14 50 ng/ml 72-24 NDMW - 1274 Kr 2003/06/05

A 317865
↓
A 317956
A 317986
↓
A 317949
✓
To be reinj. Communication lost

✓ GC run out of helium; reinj.
Lost communication. Malfunction power supply box

✓
✓
✓

Kr 2359 15 80 ng/mL, 72-22 NDMW-1275 ✓
16 1000 ng/mL, 72-22 NDMW-1277 ✓
17 2000 ng/mL, 72-22 NDMW-1278 ✓
18 DCM blank
19 DCM blank
20 10 ng/mL, 72-24 NDMW-1285
21 1.0 ng/mL, 72-24-NDMW-1286 ✓
22 10 ng/mL 72-24-NDMW-1285 ✓
23 480635, spike, N, 1, 2 Reinj
24 480635, A16037-02R, N, 1, 2 Autosampler stopped, no data acquired

2003/06/06

Kr 2360 01-03 Mass resolution / Accuracy for mixes
04 200 ng/mL 72-24 NDMW-1284 ✓
05 DCM blank
06 10 ng/mL 72-24 NDMW-1285 ✓
07 1.0 ng/mL 72-24 NDMW-1286
08 480635, A16037-02R, N, 1, 2 A318188 ↓
09 480635 A16040-01R, N, 1, 2 ✓
10 200 ng/mL 72-24 NDMW-1284
11 481743, spike, N, 1, 2
12 ↓ spike 0, 1, 2
13 ↓ blank, N, 1, 2
14 glass blank 2003/06/03, N, 1, 2
15 481755 A19423-02R, N, 1, 2 A318946
16 481743 A19423-01R, N, 1, 2 A318878 ↓
17 ↓ A19424-01R, N, 1, 2

Kr 2360	18	200 ng/ml	T2-24 NDMW-1284	tc	
	19	480638	A15759-01R, N, 1,2	tc	A318127
	20	↓	A16881-01R, N, 1,2	tc	A318380
	21	481744	A17260-01R, N, 1,2	tc	A318461
	22	↓	A19656-02R, N, 1,2	tc	A318929
	23		A20673-01R, N, 1,2	tc	A319129
	24		A21353-01R, N, 1,2	tc	A319190
	25	200 ng/ml	T2-24 NDMW-127584 (tc 20031006)	tc	
	26	no file			

STANDARDS PREPARATION RECORDS

DATE	LOT #	AMOUNT USED	INITIAL CONC	FINAL VOLUME	SOLVENT	USE
2003/02/17	13LCS0602	100µL	100/200 ng/mL	10 mL	ACETONE	A/E-SURROGATE
2003/02/17	70-174 NDMIN-37	100 µL	2000 ng/mL	1 mL	DCM	Nitrosamines Working std
2003/02/17	70-146 NARP-20	500 µL	5000 ng/mL	10 mL	DCM	NITROSAMINES INTERNAL STD DILUTE
2003/02/18	70-176 GEMN-10	10 µL	500 ng/mL	1 mL	DCM	GEOMIN/NIS Working std.
		50 µL				
		10 µL				
	70-142 GEMIN-03	25 µL	5000 ng/mL			
		50 µL				
2003/02/18	70-174 NDMN-34	100 µL	50 ng/mL	1 mL	DCM	Nitrosamines working
	70-162 NDMIN-37	25 µL	2000 ng/mL			
		40 µL				
		100 µL				
	70-162 NDMIN-36	50 µL	20,000 ng/mL			
		100 µL				
	70-184 NDMIN-39	100 µL	100 ng/mL			2nd source nitrosamines
	70-184 NDMW-190	100 µL	10 ng/mL			Threshold nitrosamines
2003/02/20	13CSS0602	1.0 mL	40 mg/mL	5 mL	Hexane	1613 A/E Cleanup Std.
2003/02/20	13LCS0602	100µL	100/200 ng/mL	10 mL	Acetone	A/E-SURROGATE
2003/02/26	ULTRA SCIENTIFIC US-113 N	1 mL	2000 µg/mL	10 mL	MeOH	Nitrosamines STOCK STD
	70-188 NDMSN-03	1 mL	200 µg/mL	10 mL	MeOH	Intermediate #1 NITROSAMINES

CODE	FINAL CONC.	EXPIRY DATE	COMMENTS	INITIALS
70-188 16ZL-250	1/2 ng/mL	2003/08/17		VI
70-188 16ZL-251				
70-188 16ZL-252				
70-188 NDMW-1183	200 ng/mL	2003/02/28	added: 5µL 70-174 NARP-20 100µL 70-182 NDML-120	PE
70-188 NARR24	250 ng/mL	2003/05/27	- use 5µL in F.V. = 50µL - use 3µL in F.V. = 30µL	JD
70-188 GEMW-152	5.0 ng/mL	2003/02/26	add in each: 100µL 70-166 GEML-14 5µL 70-A6810R-07	PE
153	25.0			
154	50.0			
155	125.0			
156	250.0			
70-188 NDMW-1184	5.0 ng/mL	2003/02/28	added: 70-174 NARP-20 5µL 100µL 70-182 NDML-120	PE
1185	50 ng/mL			
1186	80 ng/mL			
1187	200 ng/mL			
1188	1000 ng/mL			
1189	2000 ng/mL			
1190	10 ng/mL			
1191	1.00 ng/mL			
70-188 16ZL-05	0.008 ng/mL	2003/08/20	use 25-µL / extract.	OK
70-188 16ZL-253	1/2 ng/mL	2003/08/20		VI
70-188 16ZL-254				
70-188 16ZL-255				
70-188 16ZL-256				
70-188 16ZL-257				
70-188 16ZL-258				
70-188 NDMSN-03	200 µg/mL	2004/02/26	STOCK NITROSAMINES	PE
70-188 NDM-IN-40	20,000 mg/mL	2003/08/26	INTERM. #1 NITROS	

Date	Lot #	Amt used	Initial conc.	Final vol.	Solvent	Use	Code	Final conc	Expiry date	Comments	Initials
2003/02/26	70-188NDMIN-40	1 mL	20,000 ng/ml	10 mL	MeOH	Nitrosamines intermediate # 2	70-190NDMIN-41	2000 ng/mL	2003/08/26	INTERM. #2 NITROS	KE
↓	70-190NDMIN-41	250 µL	2000 ng/ml	10 mL	MeOH	Nitrosamines daily spike (LAB)	70-190NDMN-43	50 ng/mL	2003/05/26	DAILY NITROS LAB SPIKE	↓
	70-190NDMIN-41	250 µL	2000 ng/ml	10 mL	MeOH	Nitrosamines working spike	70-190NDMN-42	50 ng/mL	2003/05/26	DAILY NITROS WORKING SPIKE	
	70-190-NDMIN-42	100 µL	50 ng/ml	1.0 mL	DCM	Nitrosamines method spike	70-190NDMW-1192	5.00 ng/mL	2003/03/26	added: 5µL 70-17YNARP-20, 100µL 70-182NDML-120	
↓	70-190-NDMIN-43	100 µL	↓	↓	↓	↓	70-190NDMW-1193	↓	↓	Method spike to test new stds	↓
2003/02/26	13LCS0602	100 ul	100/200 ng/ul	10 ml	ACETONE	D/F-SURROGATE	70-19016IL-259	1/2 ng/ul	2003/08/26		DK
↓	↓	↓	↓	↓	↓	↓	-260	↓	↓		↓
							-261				
							-262				
							-263				
							-264				
							-265				
							-266				
							-267				
							-268				
							-269				
2003/02/27	70-190NDMIN-41	100 µL	2000 ng/ml	1 mL	DCM	Nitrosamines working std	70-190NDMW-1194	200 ng/mL	2003/03/27	added in each: 5µL 70-17YNARP-20, 100µL 70-182NDML-120	KE
	70-184NDMIN-39	100 µL	100 ng/ml	1 mL	DCM	2nd source working std nitros.	70-190NDMW-1195	10 ng/mL	↓		
	70-190NDMW-1195	100 µL	10.0 ng/mL	1 mL	DCM	Threshold nitrosamines	70-190NDMW-1196	1.0 ng/ml		↓	
2003/02/27	MCPS0898	100 ul	100 ng/ul	10 ml	Acetone	Chlorophenols Surr.	70-190CPHL-12	1 ng/ul	2003/08/27		OK
2003/02/27	MCBS0199	100 ul	100 ng/ul	10 ul	Acetone	Chlorobenzenes Surr	70-190CHBL-12	1 ng/ul	2003/08/27		OK
2003/02/27	CPS9708	100 ul	100 ng/ul	10 ul	MeOH	Chlorophenols Spike	70-190CPAN-07	1 ng/ul	2003/08/27		OK
2003/02/27	CBS9708	100 ul	100 ng/ul	10 ul	MeOH	Chlorobenzenes Spike	70-190CHBN-07	1 ng/ul	2003/08/27		DK
↓	MAX-SOL-4	↓	↓	↓	↓	↓	↓	↓	↓		↓
2003/03/03	EPA1613 STOCK lot DSTK 0602	250 µL	400/2000/4000 ng/ml	10 mL	Acetone	D/F spike intermediate	70-19016IN-02	10/50/100 ng/ml	2003/03/03		VT
2003/03/03	70-19016IN-02	1 mL	10/50/100	10 ml	Acetone	D/F spike daily	70-19016IN-13	1/5/10 ng/ml	2003/09/03	use 100µL	VT
2003/03/05	68ALCS0900	50 µL	1 µg/ml	25 ml	Aceton.	PCB-surrogate daily	70-190-ACP-20	2 ng/mL	2003/09/05	use 200µL	SL

Date	Lot #	Amt used	Initial conc	Final vol	Solvent	Use	Code	Final conc	Expiry date	Comments	Initials
2003/04/30	Ultra Scientific R-1212 IST 200	1 ml	1000 mg/ml	5 ml	DCM	D8-naphthalene int. std for 1-4 D	70-204 NAPR-15	200 mg/ml	2003/10/30	use 5 ml	OK
2003/04/30	Ultra Scientific S1116	1.5 ml	100 mg/ml	10 ml	MeOH	1,4 Dioxane Spk	70-204 DANN-09	15 mg/ml	2003/10/30	use 100 ml	OK
2003/04/30	CIL DLM-28 P30 18-147	0.1018 g	neat 99%	10 ml	MeOH	d8 1,4 Dioxane intermediate stock	70-204 DANIL-17	10.18 mg/ml	2003/10/30	use as stock	OK
2003/04/30	70-204 DANIL-17	125 ml	10180 mg/ml	10 ml	MeOH	d8 1,4 Dioxane intermediate surr	70-204 DANIL-18	127.25 mg/ml	2003/10/30	use as intermediate	OK
2003/04/30	70-204 DANIL-18	1.0 ml	127.25 mg/ml	10 ml	MeOH	d8 1,4 Dioxane Surrogate	70-204 DANL-19	12.73 mg/ml	2003/10/30	use 100 ml	OK
2003/04/30	13LCS0602	100 µL	100/200 ng/mL	10 mL	ACETONE	DF-SURROGATE	70-204/GTL-291	1/2 ng/mL	2003/10/30 (2003/04/30/04)	USE 1.0 mL	VT
							70-204/GTL-292				
							70-204/GTL-293				
							70-204/GTL-294				
							70-204/GTL-295				
↓	↓	↓	↓	↓	↓	↓	70-204/GTL-296	↓	↓	↓	↓
2003 04 30	ultra R1212	50 µL	1000 µg/mL	10 mL	DCM	NDMA D8 int. std.	70-204 NAPR-27	5 µg/mL	2003.07.30	use 5 µL	KG
2003.05.01	70-162 NDMSL-04	100 µL	9.8 ng/mL	10 mL	MeOH	NDMA D6 surr.	70-204 NDML-127	98 ng/mL	2003 08.01	use 100 µL	KG
↓	↓	↓	↓	↓	↓	↓	70-204 NDML-128	↓	↓	↓	↓
2003.05.01	70-190 NDMIN-41	250 µL	2000 ng/mL	10 mL	MeOH	NDMA daily spk.	70-204 NDMN-45	50 ng/mL	2003.08.01	use 100 µL	PJ
2003.05.05	70-190 NDMN-42	100 µL	50 ng/mL	1 mL	DCM	Nitrosamines working std	70-204 NDMW-1246	5.0 ng/mL	2003/05/26	4 each added: 5 mL 70-198 NAPR-26; 100 µL 70-NDML-125	lt
	70-190 NDMIN-41	25 µL	2000 ng/mL				1247	50 ng/mL	2003/06/05		
		40 µL					1248	80 ng/mL			
	↓	100 µL	↓				1249	200 ng/mL			
	70-188 NDMIN-40	50 µL	20,000 ng/mL				1250	1000 ng/mL	↓		
	↓	100 µL	↓			↓	1251	2000 ng/mL	2003/06/05		
	70-184 204 NDMIN-46 (lt 2003/05/05)	100 µL	100 ng/mL			2nd source nitrosamines	1252	10.0 ng/mL			
	70-204 NDMW-1252	100 µL	10 ng/mL	↓	↓	Threshold nitrosamines	↓ 1253	1.0 ng/mL	↓	↓	↓
↓	70-184 NDMIN-38	500 µL	2000 ng/mL	10 mL	MeOH	Nitrosamines 2nd source intermediate	70-204 NDMIN-46	100 ng/mL	2003/08/06		lt
2003.05.05	70-198 GEMN-11	10 µL	500 ng/mL	1 mL	DCM	GEO/MIN 2MIB working std	70-204 GEMW-157	5.0 ng/mL	2003/06/05	added w each: 100 µL 70-198 GEML-15; 5 µL 70-198 ... -08	lt
		50 µL					158	25 ng/mL			
↓	↓	100 µL	↓	↓	↓	↓	159	50 ng/mL	↓	↓	↓

DATE	LOT #	AMT USED	Initial conc	FINAL VOLUME	SOLVENT	USE	CODE	FINAL conc	EXPIRE DATE	COMMENTS	Initials
2003/05/27	13LGS06092	100µL	100/200ng/mL	10 mL	ACETONE	DF-SURROGATE	70-22/6IC-311	1/2 ng/mL	2003/11/27	USE 1.0mL	VT
2003/05/27	70-190NOMIN-41	250µL	2000ng/mL	10mL	MeOH	Nitrosamines working spike	72-22NOMN-467	50 ng/mL (re 2003/05/27)	2003/08/26	DAILY NITROS WORKING SPIKE	VC
	72-22NOMN-47	100µL	50ng/mL	1mL	DCM	Nitrosamines working std	12-22NOMW-1273	5.0 ng/mL	2003/06/27	1µl each added: 5µL 70-198 NAPR-26 100µL 70-198 NAMI-125	VC
	70-190NOMIN-41	25µL	2000ng/mL				1274	50 ng/mL			
		40µL					1275	80 ng/mL			
		100µL					1276	200 ng/mL			
	70-188NOMIN-46	50µL	20,000ng/mL				1277	1000 ng/mL			
		100µL					1278	2000 ng/mL			
	70-204NOMN-46	100µL	100ng/mL			2nd source nitrosamines	1279	10.0 ng/mL			
	72-22-NOMN-1279	100µL	10 ng/mL			Threshold nitrosamines	1280	1.0 ng/mL			
2003/05/27	70-162NOMSL-04 (to 2003/05/27)	100µL	9.8µg/mL	10mL	MeOH	Nitrosamines surrogate D6	72-22.NSML-129	98 ng/mL	2003/11/04		VC
2003-05-27	70-204DANIL-18	1.0mL	127.25ng/mL	10mL	MeOH	d8 1,4 Dioxane surrogate	72-22DANL-20	12.73 ng/mL	2003 08.27	use 100µL liquids, 1mL for solids	KH
2003/05/28	70-204NAPR-15	50ml	200mg/ml	10 ml	DCM	1-4 Dioxane		1000 mg/L	2003/10/30		OK
	70-204DANL-18	100ml	127.25mg/l			Wrking Std	72-22DANW-01	1273 mg/L		LEVEL ONE	
	70-204DANN-09	100ml	15 mg/ml			LEVEL ONE		150 mg/L			
2003/05/28	70-204NAPR-15	50ml	200mg/ml	10 ml	DCM	1-4 Dioxane		1000 mg/L	2003/10/30		OK
	70-204DANL-18	100ml	127.25mg/l			Wrking Std	72-22DANW-02	1273 mg/L		LEVEL TWO	
	70-204DANN-09	500ml	15 mg/ml			LEVEL TWO		750 mg/L			
2003/05/28	70-204NAPR-15	50ml	200 mg/ml	10 ml	DCM	1-4 Dioxane		1000 mg/L	2003/10/30		OK
	70-204DANL-18	100ml	127.25mg/l			Wrking Std	72-22DANW-03	1273 mg/L		LEVEL THREE	
	S-1116	150ml	100mg/ml			LEVEL THREE		1500 mg/L			
2003/05/28	70-204NAPR-15	50ml	200mg/ml	10 ml	DCM	1-4 Dioxane		1000 mg/L	2003/10/30		OK
	70-204DANL-18	100 ml	127.25mg/l			Wrking Std	72-22DANW-04	1273 mg/L		LEVEL FOUR	
	S-1116	300ml	100mg/ml			LEVEL FOUR		3000 mg/L			
2003/05/28	70-204NAPR-15	50ml	200mg/ml	10 ml	DCM	1-4 Dioxane		1000 mg/L	2003/10/30		OK
	70-204DANL-18	100ml	127.25mg/l			Wrking Std	72-22DANW-05	1273 mg/L		LEVEL FIVE	
	S-1116	600ml	100mg/ml			LEVEL FIVE		6000 mg/L			

Date	Lot #	Aliquot used	Initial Conc	Final vol	Solvent	Use	Code	Final conc	Expire date	Comments	Initials
2003/06/03	70-204NDMIN-46	100 µL	100 ng/mL	1 mL	DCM	2nd source nitrosamines	72-24NDMW-1281	10 ng/mL	2003/07/03	IS each used: 100 µL 72-22NDML-129 5 µL 70-198NAPR-26	IK
↓	72-24NDMW-1281	10 µL	10 ng/mL	↓	↓	Threshold nitrosamines	72-24NDMW-1282	1.0 ng/mL	↓	↓	↓
2003.06.03	70-162NDMSL-04	100 µL	9.8 µg/mL	10 mL	MeOH	NDMA D_6 surr.	72-24NDML-130	98 ng/mL	2003.09.03	use 100 µL	KH
↓	↓	↓	↓	↓	↓	↓	72-24NDML-131	↓	↓	↓	↓
2003/06/04	72-22NDMN-47	100 µL	50 ng/mL	1 mL	DCM	Nitrosamines working std	72-24NDMW-1283	5.0 ng/mL	2003/07/04	IS each added: 100 µL 72-22NDML-129 5 µL 70-198NAPR-26	IK
	70-190NDMIN-41	100 µL	2000 ng/mL			↓	72-24NDMW-1284	200 ng/mL			
	70-204NDMIN-46	100 µL	100 ng/mL			2nd source nitrosamines	72-24NDMW-1285	10.0 ng/mL			
↓	72-24NDMW-1285	100 µL	10 ng/mL	↓	↓	Threshold nitrosamines	72-24NDMW-1286	1.0 ng/mL	↓	↓	↓
2003/06/09	13LCS0602	100 µL	100/200 ng/mL	10 mL	ACETONE	A/P-SURROGATE	70-2416IL-312	1/2 ng/mL	2003/12/09	USE 1.0 mL	VH
							70-2416IL-313				
							70-2416IL-314				
							70-2416IL-315				
↓	↓	↓	↓	↓	↓	↓	70-2416IL-316	↓	↓	↓	↓

CHAIN OF CUSTODY DOCUMENTATION

Report Name: Entry

Job #: A318878

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

Inv Attn: Kenny Chan

Printed: 2003/05/29 Version 1
Reception Date: 2003/05/29
Reception Time: 13:48
Login Date: 2003/05/29
REQUIRED DATE: 2003/06/19
Quote Number: A20018

Report: same

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

P.O. Number:
Project Number: JPL

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

Maxxam Number	Client Sample ID	Cont's	Store Code	Recd. OK	Sampling Date	Matrix	Test Codes
A19423-01R	MW-13	2-1LAG	WWI	Yes	2003/05/27	LIQ	W-NDMA-L
A19424-01R	MW-16	2-1LAG	WWI	Yes	2003/05/27	LIQ	W-NDMA-L

Remarks: LEVEL 5 AND EDD REQUIRED

Quote Remarks:
EPA Level 4 reporting (15% surcharge).
For Extract & Hold samples, charge U$175

000094

Applied P & Ch Laboratory

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

Subcontract Chain of Custody

Please Print in pen Page ____ of ____

Subcontract Lab: Maxxam Analytical Lab Contact: Ann Sawatzsky Tel #: (519) 747-2575 Fax #:
Address: 50 Bathurst Dr. #12 City: Waterloo State: ONT Zip code:
APCL Client: 03-3393 APCL Contact: Kenny Chan
Project Name/Code JPL Job #
BILL TO APCL Sub Quotation #
Due Date: ☐regular ☒rush: ___ days ___ hours Sampled by: Leo Williamson

Field Sample ID No.	Sample Description	Date Collected	Time	Sample Matrix	Preservation	# of Containers	Analysis Items: 1625m (NDMA)	Remarks
MW-13		5/27/03	0830	W	–	2	X	
MW-16		↓	1050	↓	–	2	X	Level 5 + EDD

White – With report
Yellow – Lab copy
Pink – Originator

QC Requirement: ☐Regular; ☐QA/QC Report; ☐WIP; ☐Raw Data; ☐Extended Raw Data ☐CLP; ☐ACE ☐AFCEE ☐NEESA ___(E, C or D); ☐Other _____(Please specify)
Sample Disposal: ☐Return ☐Disposal by APCL ☐Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**
Sample Conditions: ☐Intact; ☐Broken. Cooler Seal: ☐Intact; ☐Broken; ☐None. Tag # _____ Temperature: ☐Room ☐Cold (____°C).

Relinquished by [signature] Date/Time 5/28/03 1600 Received by [signature] Date/Time [illegible]
Relinquished by Date/Time / Received by Date/Time /

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.

APCL Form 4-101, Ver. 4.0, Jan. 17, 2003

060095

Maxxam Analytics Inc

Maxxam Analytics Inc

SAMPLE RECEIPT RECORD

Shipment # 833068821403 Courier Company FedEx

Date Received 2003/05/29

Assigned Job # A318878

Client Name APACH

Project # JPL

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?	✓	
Enter Temperature of the cooler or blank.	Temp ✓	
Was the temperature acceptance limit of <8 c met?	0.1° ✓	
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.

A Schwatecky — 2003/05/29

Observations ~~made~~ by — Date

Sample Reception

Maxxam Analytics Inc
50 Bathurst Dr, Unit #12
Waterloo, ON
N2v 2C5
1 519 747 2575 ext.21

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
GEOFON, Inc.
Attention: Leo Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-032937
Collected by:
Collected on: 04/28/03

Received: 04/28/03
Extracted: N/A
Tested: N/A
Reported: 05/28/03

Sample Description: Water
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-17-4 03-02937-1
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

GEOFON INCORPORATED

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

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-17 0024

GEOFON's LAB COORDINATOR: Brad Shojaee	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: —	LABORATORY CONTACT: Kenny Chan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GW MON-2903	PROJECT LOCATION: MW-17 (Harriet & Casitas)	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 590-1828	LABORATORY FAX: (909) 590-1498	RECIPIENT NAME: Lea W. Williamson
PROJECT CONTACT: Lea W. Williamson	PROJECT PHONE NUMBER: (714) 920-8729	PROJECT FAX: (909) 396-1455	LABORATORY ADDRESS: 13760 Magnolia Ave.		ADDRESS: 22632 Golden Springs Dr. #270
PROJECT ADDRESS: 4900 Oak Grove Dr.	CITY, STATE AND ZIPCODE: Pasadena, CA	CLIENT: US NAVY SWDIV	CITY, STATE AND ZIPCODE: Chino, CA 91710		CITY, STATE AND ZIPCODE: Diamond Bar, CA 91765
PROJECT MANAGER: Ascar Faheem	PROJECT MANAGER'S PHONE: (909) 396-7662	PROJECT MANAGER'S FAX: (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	Analyses: 8270 SIM (1,4-Dioxane)	Analyses: 1625M (NDMA)	Comments
1	MW-17-4	H_2O	4/28/03	950	NONE	2L + 2L	III	NORMAL	X	X	
2											
3											
4											
5											
6											
7											
8											
9											
10											

2937

SAMPLES COLLECTED BY: Lea W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME
Lea W. Williamson		4/28/03	1400
		4/28/03	1510

SAMPLE'S CONDITION UPON RECEIPT

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

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

03-02937 (0470_ 135) (2202777_ 135)

04/28/03

Part 1: General Information

☐ Company Information	Name:	*GEOFON, Inc.*
	Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
☐ Project Information	Project Description:	*JPL*
	Project #:	*04-4428.10*
☐ Billing Information	P.O. #:	
	Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
	Lab Project ID:	
	Client Database #:	*3*
☐ Receiving Information	Who Received Sample?	*Kenny Chan*
	Receiving Date/Time:	*04/28/03 1510*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*3.8 4.2 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Rush 5 working day(s)*
☐ QC Option:		*NEESA C*
☐ Disposal Option:		*Not specify*

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-17-4	NDMA	03-02937-1	W	G		1000	2	G	042803	N	0	6	☐

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-17-4	NDMA	03-02937-1	W	X	☐

Login By En-Yu Paul Kou

Check By PK