PERFORMANCE CHECK

GAS CHROMATOGRAPH/MASS SPECTROMETER

Serial # US61633037

NASHVILLE CRIME LABORATORY

Forensic Chemistry-Drug Identification Unit

14.9

TENNESSEE BUREAU OF INVESTIGATION
FORENSIC SERVICES DIVISION

Validation Review Form

Procedure Performance Check - Gas Chromatograph/MS Serial# US61633037

Check the appropriate: New Validation _____ Modification _____ Performance Check ✓

This form is to be used as a coversheet for any new method, change in method, reagent or kit change. The Forensic Scientist appointed for procedure development/validation is to initial and date the appropriate box and attach documentation of required validation study results. Each applicable area listed below should be clearly labeled in the Validation Notebook (NO POST-IT NOTES).

*Submit all information to the Quality Assurance Manager **prior to implementation** of the procedure/instrument.*

NOTE: Each applicable area listed below should start with a typed summary about that particular section.	**REVIEWED BY:**	**DATE COMPLETED:**
Overall Validation Summary and Section Summaries are included	DJ	7-5-06
Parallel Testing Procedure	DJ	7-5-06
Accuracy	DJ	7-5-06
Limit of Detection (LOD) (if applicable)	NA	
Limit of Quantitation (LOQ) (if applicable)	NA	
Linearity & Range Established (if applicable)	DJ	7-5-06
Specificity Range Established (if applicable)	NA	
Precision	NA	
Robustness - to include: Matrix Effects	NA	
Cross Reactivity	NA	
PH, Ionic Strength, Temperature	NA	
Laboratory Procedure Approved (if applicable)	NA	
LIMS Messages(s) and sample of Final Report Established (if applicable)	NA	
Training and Competency Testing for each Examiner/Technician Completed or Proposed Training Plan Enclosed	NA	
References are listed	DJ	7-5-06
Technical Review of Completed Notebook	DJ	7-5-06

*If all technical staff training has not been completed, please include a proposed training plan and completion schedule.

Sign and date to indicate your acceptance of the procedure/instrument:

Unit Supervisor (if applicable) Helen B. Everett 7/5/06

Technical Leader (if applicable) Helen B. Everett 7/5/06

Regional Laboratory Supervisor Philip R. Smith 7/17/06

Quality Assurance Manager Sheri Horton-Jones Ph.D. 7/20/06

Table of Contents

THIS IS THE OVERALL SUMMARY

WITH RESULTS

PERFORMANCE CHECK OF GAS CHROMATOGRAPH/MASS SPECTROMETER FOR DRUG IDENTIFICATION

Nashville Crime Laboratory

1. Introduction

1.1 Definition and purpose of performance check

The purpose of this performance check study is to verify the performance of forensic chemistry drug identification methods on a Gas Chromatograph/Mass Spectrometer (serial # US61633037). This study will verify the method performance, the linearity of the flame ionization detector, and trueness of identifications by comparative analysis using Fourier Transform Infrared Spectrometer (serial # AEA0001850) and validated Gas Chromatograph/Mass Spectrometer (serial # US40620428) identically configured as the aforementioned instrument.

1.2 Analytical Procedure

1.2.1 Instrument Setup

The instrument is an Agilent Technologies 6890 GC with auto sampler coupled with a 5973 MS (serial # US61633037) and a manufactured installed Flame Ionization Detector interfaced with Agilent Chemstation software using a Dell computer.

Column:	MS: Agilent Technologies Catalog # 19091A-102 Ultra 1, 25m X .200mm, 0.33 Micron (Column cut to 12.5)
	FID: Agilent Technologies Catalog #19091Z-213 HP-1, 25m X 0.2 mm, 0.33 Micron
Injector:	MS: Mode-Split, Tempature-250^0 C
	FID: Mode-Constant Makeup, Makeup-45mls/min, Temperature –250^0 C

1.2 Analytical Procedure cont...

1.2.2 Reference Material

Reference materials were obtained from the Memphis Crime Lab drug standards safe. The reference standards have certificates of analysis provided by manufacture and are tested at the time of receipt on a confirmatory instrument. The qualitative analysis utilized approximately 3-4mg of each certified reference standard. Each standard was weighed using an analytical balance. This amount was then divided in half, with one half being used for this procedure and the other half being used for the performance check of the Golden Gate FTIR accessory.
The linearity analysis was performed using 25mg of methamphetamine that was made into a solution and diluted into 6 different concentrations. (Please refer to Controlled Substance Standard Operating Procedures Manual, Memphis Crime Laboratory, Section 6D for preparation of solutions.) 102 certified reference standards were used for this performance check.

1.2.3 Mass Spectrometer Detector Initial Check

A standard spectra auto tune and an air and water check were performed on the instrument to demonstrate initial performance of the instrument. This check was ran every week the instrument was in use during the study.

1.2.4 Flame Ionization Detector Initial Check

A mixture of amphetamine, methamphetamine, and phentermine was run on the FID to demonstrate initial column separation and column resolution. The mixture was also run on the validated GC/FID for comparison.

1.3 Forensic Chemistry Personnel Training

The questioned GC/MS is identically configured to the validated GC/MS currently used. There are no significant changes in instrumentation that would warrant an initial demonstration of proficiency for this instrument. No additional samples will be analyzed for personnel training because the methods for this instrument are currently in daily use.

1.4 Quality Assurance

Quality assurance procedures are currently established for maintenance of these instruments and methods. All required quality assurance procedures were maintained

during this performance study. Please refer to Controlled Substance Quality Assurance Manual, Nashville Crime Laboratory, Section 13 and Appendix p.1 for further details.

2. Performance Check Plan

2.1 Mass Spectrometer Performance Specifications

The certified reference standards used for this study were injected into the GC/MS using the auto sampler. The obtained spectra of each standard was then individually compared to spectra previously obtained on the validated GC/MS or/and to spectra found in Instrumental Data for Drug Analysis, Volumes 1-6 . Also, a representative sample of certified reference standards were analyzed on the validated GC/MS for comparison.

2.2 Flame Ionization Detector Specification

Linearity of the Flame Ionization Detector was investigated by analyzing a minimum of six different concentrations (See Appendix-Section 2) of methamphetamine. The peak areas were plotted against concentrations, a calibration curve drawn and correlation coefficients calculated.

2.3 Trueness

Confirmatory identifications are made using the MS detector. The trueness of these identifications was demonstrated by comparing all of the certified reference standard identifications on the MS to identifications made using the same certified reference standards ran on the FTIR. A previously examined proficiency sample was also examined and compared for determination of trueness.

3. Results of Performance Study

3.1 MS Detector Identification Results

The certified reference standards were injected into the instrument in batches over a period of 4 weeks. There were 25 spectra obtained. It was determined that the method performed the same on the new instrument as it performed on the previously validated instrument. All obtained spectra were compared by 2 forensic scientists and confirmed to be accurate.

3.2 Flame Ionization Standard Results

Methamphetamine was used for this study because it is currently the only compound routinely quantitated in the Nashville Laboratory. A calibration curve was injected and a curve plotted to establish linearity. The FID proved to be linear over a range of standards from 5 to 100 percent. Appropriately, the FID was proven competent for use in methods and procedures for the Forensic Chemistry Section. (See results in Appendix- Section 2)

3.3 Trueness of Identifications

All identifications made on the MS were concurrent with identifications made on the FTIR. (A group of certified reference standards are included with the GC/MS and FTIR identifications in the Appendix-Section 3) The use of a different instrumental technique yielding the same identification confirmed the trueness of identifications made on the tested GC/MS. Also, proficiency sample, 04-501, was confirmed as secobarbital. This identification is the confirmed analytical identification result. (See results in Appendix-Section 3)

References

The Fitness for Purpose of Analytical Methods, A Laboratory Guide to Method Validation and Related Topics, EURACHEM Guide, 1998

"Guidelines for Forensic Science Laboratories", ILAC-G19: 2002, pg 10.

"Quality Assurance/Validation of Analytical Methods" July 5, 2004, Available at http://www.swgdrug.org/approve.htm

A Guide to Interpreting Detector Specifications for Gas Chromatographs, Agilent Technologies, Inc., Technical Note, Publication 5989-3423EN, August 2005.

Appendix

Section 1

Glossary
Abbreviation List
Review Document

Appendix

Glossary

Validated
Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled.

Trueness
The determination of whether the results reflect the "true" value for the analyte or property.

Certified Reference Standard
Means a material whose assigned value is known relative to national standards or nationally accepted measurement systems. This is also commonly referred to as a traceable standard.

Standard
An accepted or approved example or technique against which other things are judged or measured, or which sets out a set of criteria that serves as a guideline for how something should be done.

Confirmatory Instrument
An instrument that uniquely identifies the presence and identity of an analyte within an established range of certainty.

Priscilla (serial # US00038662)
Instrument designation for the GC/MS evaluated in this performance check.

Graceland (serial # US00038952)
Instrument designation for the validated GC/MS currently in use in the Forensic Chemistry Section.

Abbreviations List

MS-	Mass Spectrometer
GC-	Gas Chromatograph
IDDA-	Instrumental Data for Drug Analysis, Six Volumes
FID-	Flame Ionization Detector
FTIR-	Fourier Transform Infrared Spectroscopy
DF-	Donna Flowers
GBE-	Glenn Everett
PWF-	Phil Freeze
TAB-	Tara Barker
WHS -	William Stanton
KAL-	Karen Linnenkohl
PMC-	Patti Choatie
GJG-	Glen Glenn

PERFORMANCE CHECK OF GAS CHROMATOGRAPH/MASS SPECTROMETER FOR DRUG IDENTIFICATION

Nashville Crime Laboratory

Review Document

This document confirms administrative and technical review of the following:

A. 25 Certified Reference Standards compared to known standards on validated GC/MS or standards in IDDA Volumes 1-6

TECHNICAL REVIEW BY: MBE
DATE: 7/5/06

ADMINISTRATIVE REVIEW BY: MBE
DATE: 7/5/06

B. 25 Certified Reference Standards compared on Validated GC/MS and Performance Check GC/MS

TECHNICAL REVIEW BY: MBE
DATE: 7/5/06

ADMINISTRATIVE REVIEW BY: MBE
DATE: 7/5/06

C. Trueness Comparison

TECHNICAL REVIEW BY: MBE
DATE: 7/5/06

ADMINISTRATIVE REVIEW BY: MBE
DATE: 7/5/06

D. FID Curve-Linearity Analysis

TECHNICAL REVIEW BY: MBE
DATE: 7/5/06

ADMINISTRATIVE REVIEW BY: MBE
DATE: 7/5/06

Appendix

Section 2

FID Curve
Calibration Data

Section Summary

Objective:

Flame Ionization Detector Specification

Linearity of the Flame Ionization Detector was investigated by analyzing a minimum of six different concentrations (See Appendix-Section 2) of methamphetamine. The dilutions were prepared using a calibrated electronic pipette. The peak areas were plotted against concentrations, a calibration curve drawn and correlation coefficients calculated.

Results:

Flame Ionization Standard Results

Methamphetamine was used for this study because it is currently the only compound routinely quantitated in Nashville Laboratory. A calibration curve was injected and a curve plotted to establish linearity. The FID proved to be linear over a range of standards from 5 to 100 percent. Appropriately, the FID was proven competent for use in methods and procedures for the Forensic Chemistry Section.

This section includes the calibration standards used with the concentrations, the curve fit, and the quantitation reports.

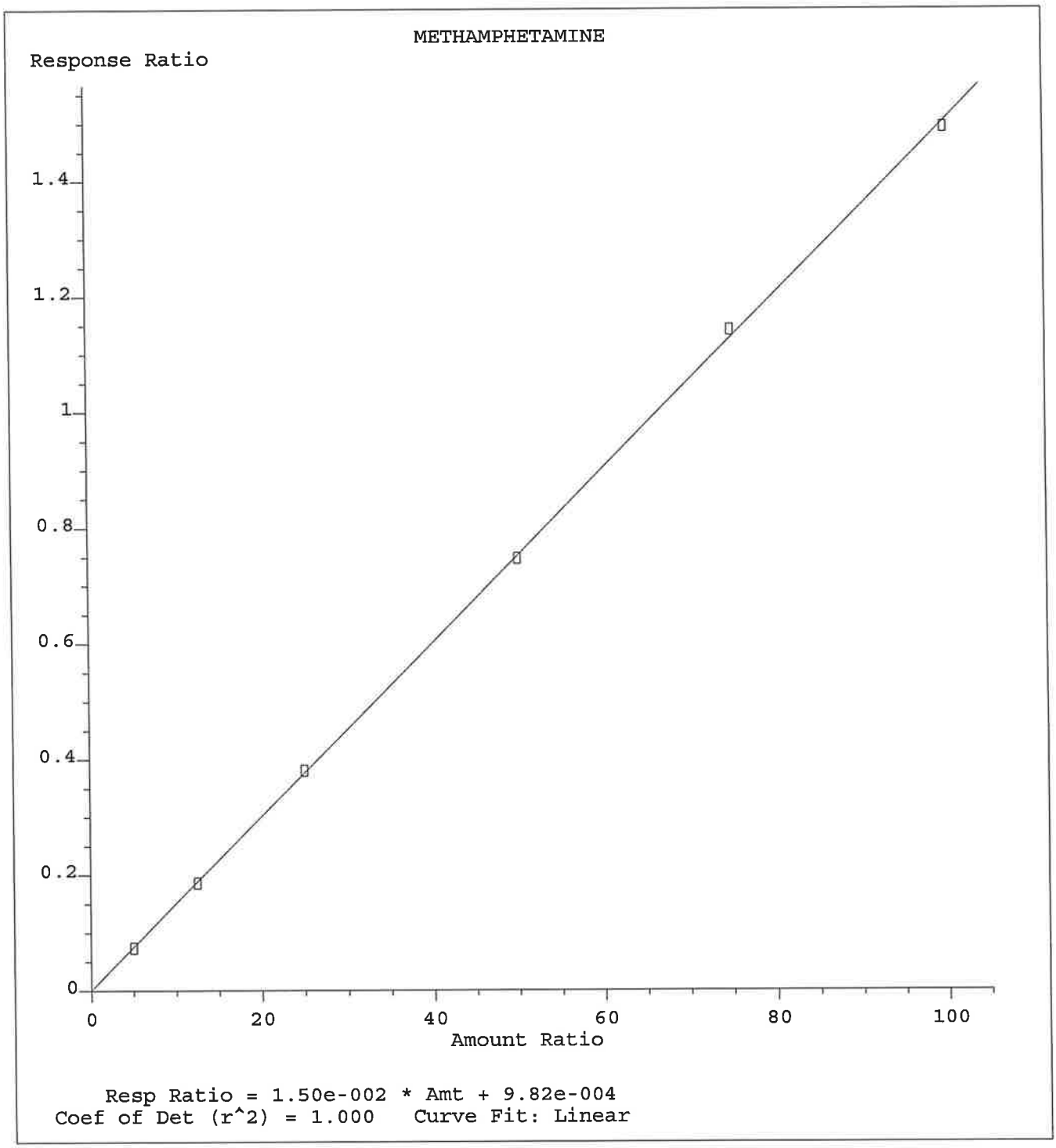
FID Calibration Curve

Concentration Table
(Stock solution = 25mg/ml Methamphetamine)
Methamphetamine Lot # 34H0144

Name	Concentration/Units
Cal Std. 1	5%
Cal Std. 2	12.5%
Cal Std. 3	25%
Cal Std. 4	50%
Cal Std. 5	75%
Cal Std. 6	100%

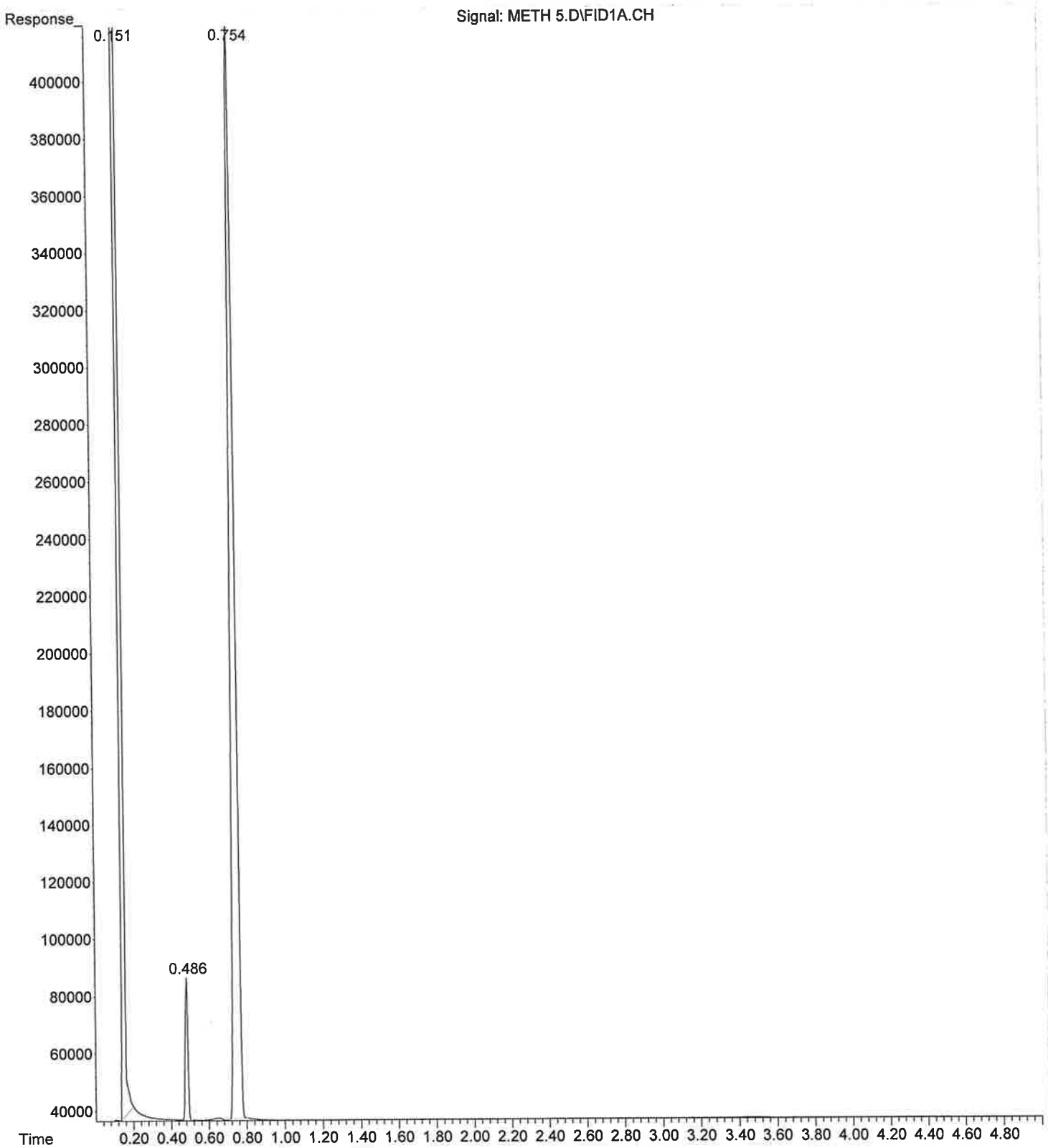
Curve Fit: Linear
R^2 = 1.000

R^2 is simply the square of the correlation coefficient.



Method Name: C:\msdchem\1\METHODS\METHAMPHETAMINEQUANT.M
Calibration Table Last Updated: Thu Jun 29 15:27:11 2006

File :C:\msdchem\1\DATA\df\METH 5.D
Operator :
Acquired : 29 Jun 2006 12:54 using AcqMethod GCMETHQUANT.M
Instrument : HP G1530A
Sample Name: METH STD 5
Misc Info :
Vial Number: 2



Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\DF\
Data File : METH 5.D
Signal(s) : FID1A.CH
Acq On : 29 Jun 2006 12:54
Sample : METH STD 5
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

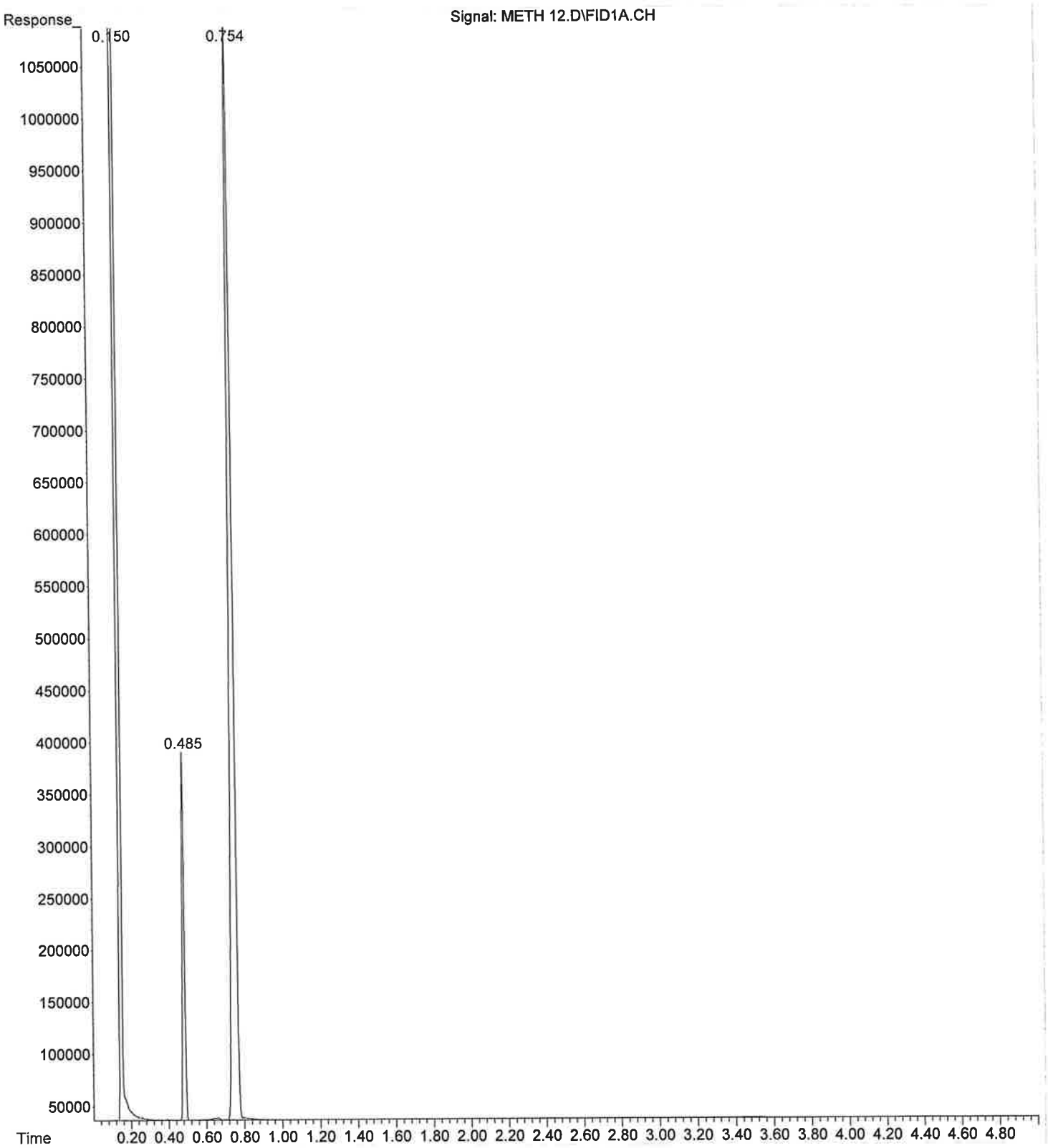
Method : C:\MSDCHEM\1\METHODS\GCMETHQUANT.M
Title : METHAMPHETAMINE

Signal : FID1A.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.151	0.130	0.234	BB	767252174	2443144424	100.00%	99.711%
2	0.485	0.460	0.533	BB	49755	488353	0.02%	0.020%
3	0.754	0.685	0.811	BB	387967	6600607	0.27%	0.269%

Sum of corrected areas: 2450233384

File :C:\msdchem\1\DATA\df\METH 12.D
Operator :
Acquired : 29 Jun 2006 13:01 using AcqMethod GCMETHQUANT.M
Instrument : HP G1530A
Sample Name: METH STD 12.5
Misc Info :
Vial Number: 3



Area Percent Report

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Signal(s) : FID1A.CH
Acq On : 29 Jun 2006 13:01
Sample : METH STD 12.5
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: events.e

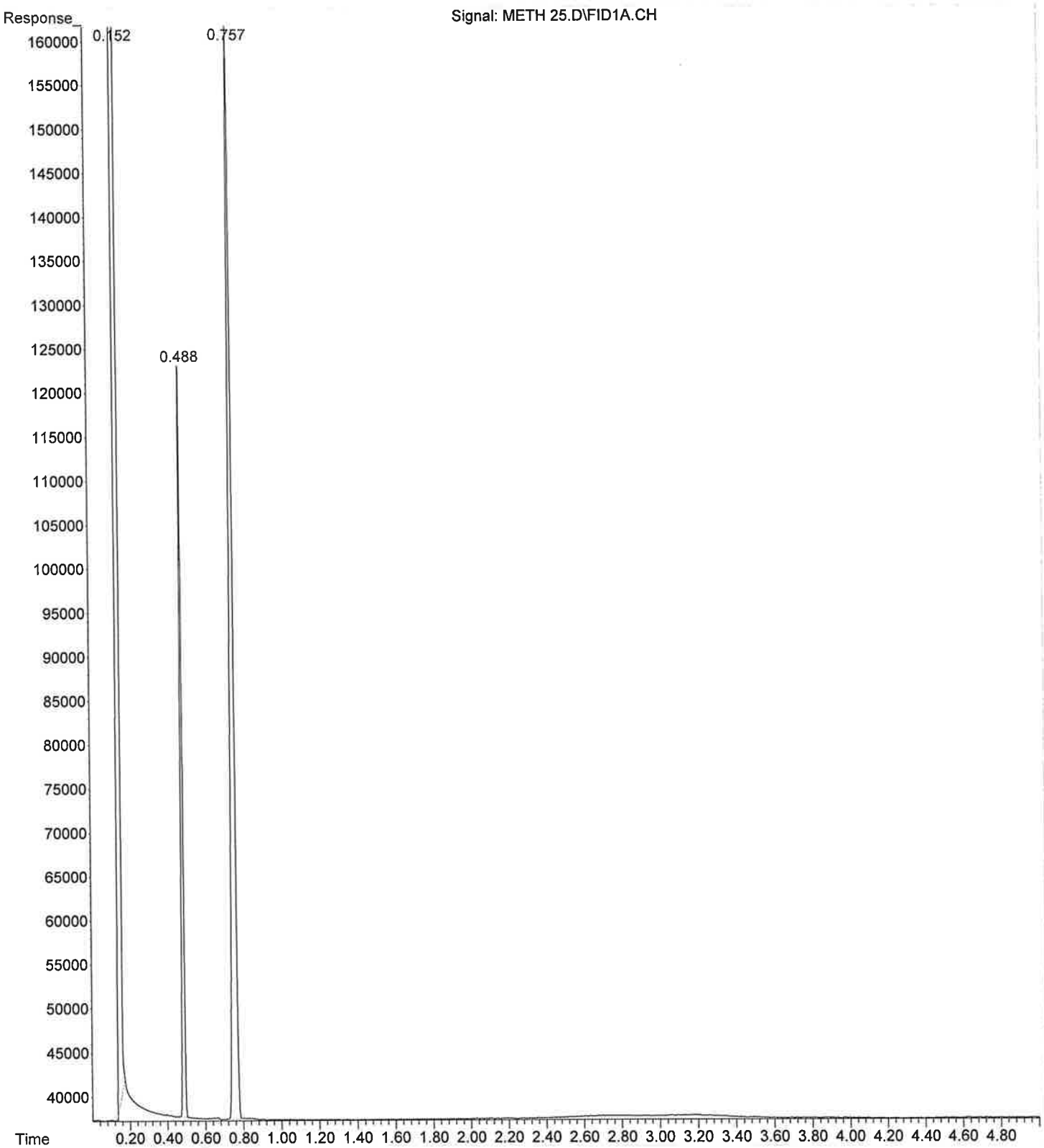
Method : C:\MSDCHEM\1\METHODS\GCMETHQUANT.M
Title : METHAMPHETAMINE

Signal : FID1A.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.150	0.130	0.274	BB	1208613915	3269884963	100.00%	99.464%
2	0.485	0.458	0.532	BB	351428	2765477	0.08%	0.084%
3	0.754	0.677	0.813	BB	1057655	14846226	0.45%	0.452%

Sum of corrected areas: 3287496666

File :C:\msdchem\1\DATA\df\METH 25.D
Operator :
Acquired : 29 Jun 2006 13:08 using AcqMethod GCMETHQUANT.M
Instrument : HP G1530A
Sample Name: METH STD 25
Misc Info :
Vial Number: 4



Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\DF\
Data File : METH 25.D
Signal(s) : FID1A.CH
Acq On : 29 Jun 2006 13:08
Sample : METH STD 25
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e

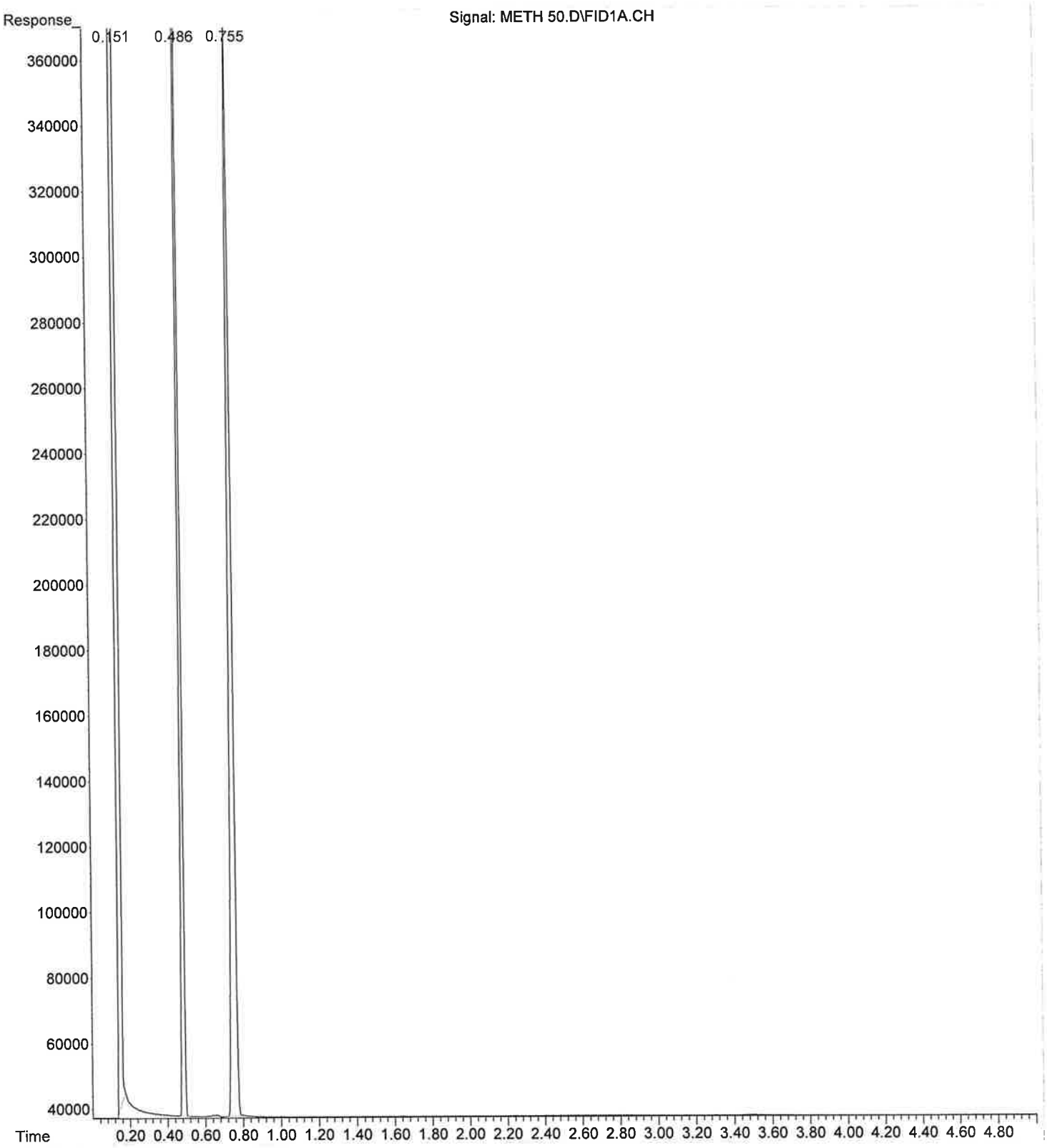
Method : C:\MSDCHEM\1\METHODS\GCMETHQUANT.M
Title : METHAMPHETAMINE

Signal : FID1A.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.152	0.121	0.202	BB	321650230	1006942012	100.00%	99.796%
2	0.488	0.462	0.534	BB	85434	569012	0.06%	0.056%
3	0.758	0.718	0.797	BB	124152	1493315	0.15%	0.148%

Sum of corrected areas: 1009004338

File :C:\msdchem\1\DATA\df\METH 50.D
Operator :
Acquired : 29 Jun 2006 13:15 using AcqMethod GCMETHQUANT.M
Instrument : HP G1530A
Sample Name: METH STD 50
Misc Info :
Vial Number: 5



Area Percent Report

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Signal(s) : FID1A.CH
Acq On : 29 Jun 2006 13:15
Sample : METH STD 50
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: events.e

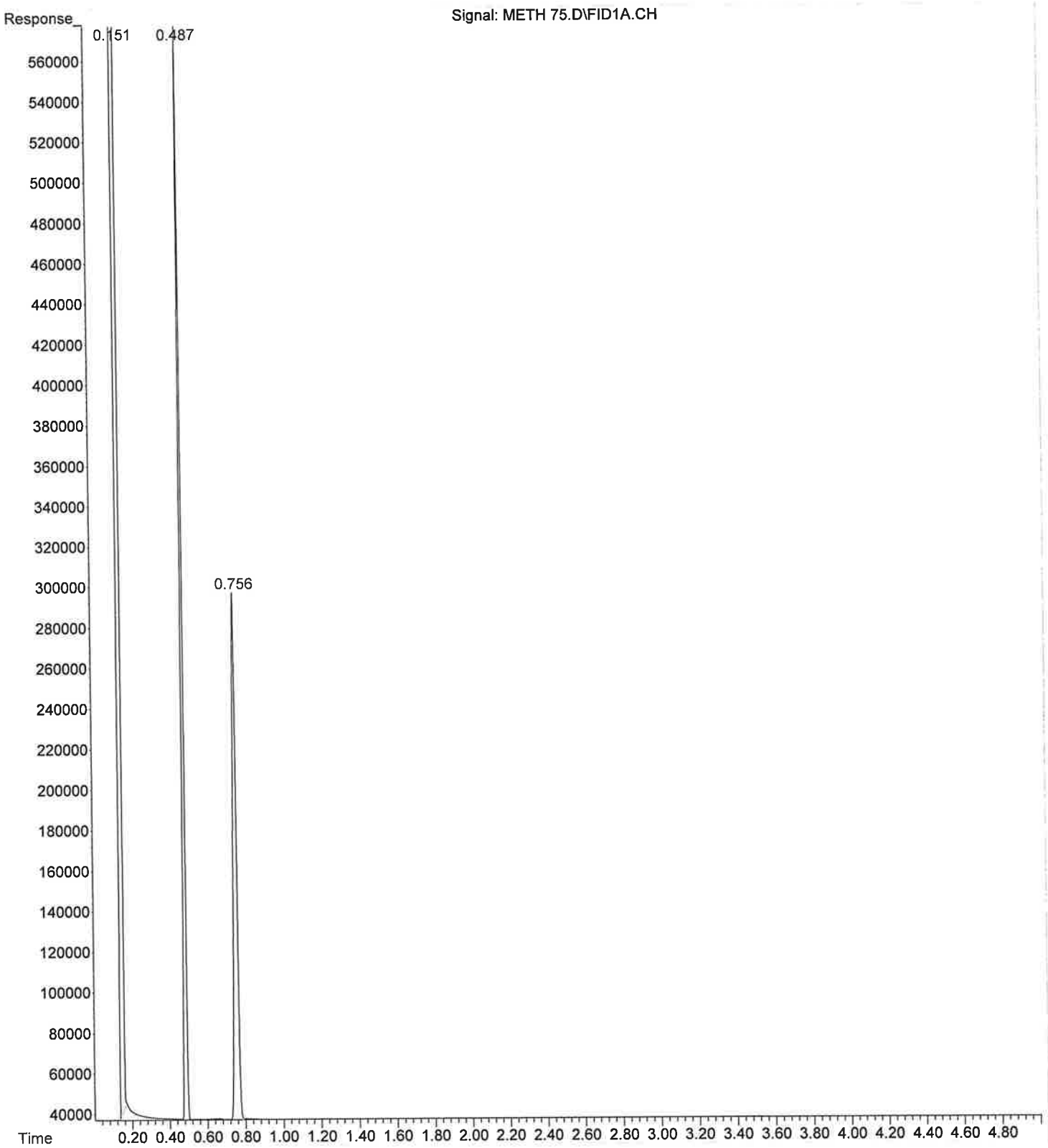
Method : C:\MSDCHEM\1\METHODS\GCMETHQUANT.M
Title : METHAMPHETAMINE

Signal : FID1A.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.151	0.131	0.211	BB	552143226	1758319563	100.00%	99.578%
2	0.486	0.458	0.536	BB	448875	3183644	0.18%	0.180%
3	0.755	0.714	0.807	BB	333097	4266777	0.24%	0.242%

Sum of corrected areas: 1765769984

File :C:\msdchem\1\DATA\df\METH 75.D
Operator :
Acquired : 29 Jun 2006 13:33 using AcqMethod GCMETHQUANT.M
Instrument : HP G1530A
Sample Name: METH STD 75
Misc Info :
Vial Number: 6



Area Percent Report

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Data File : METH 75.D
Signal(s) : FID1A.CH
Acq On : 29 Jun 2006 13:33
Sample : METH STD 75
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File: events.e

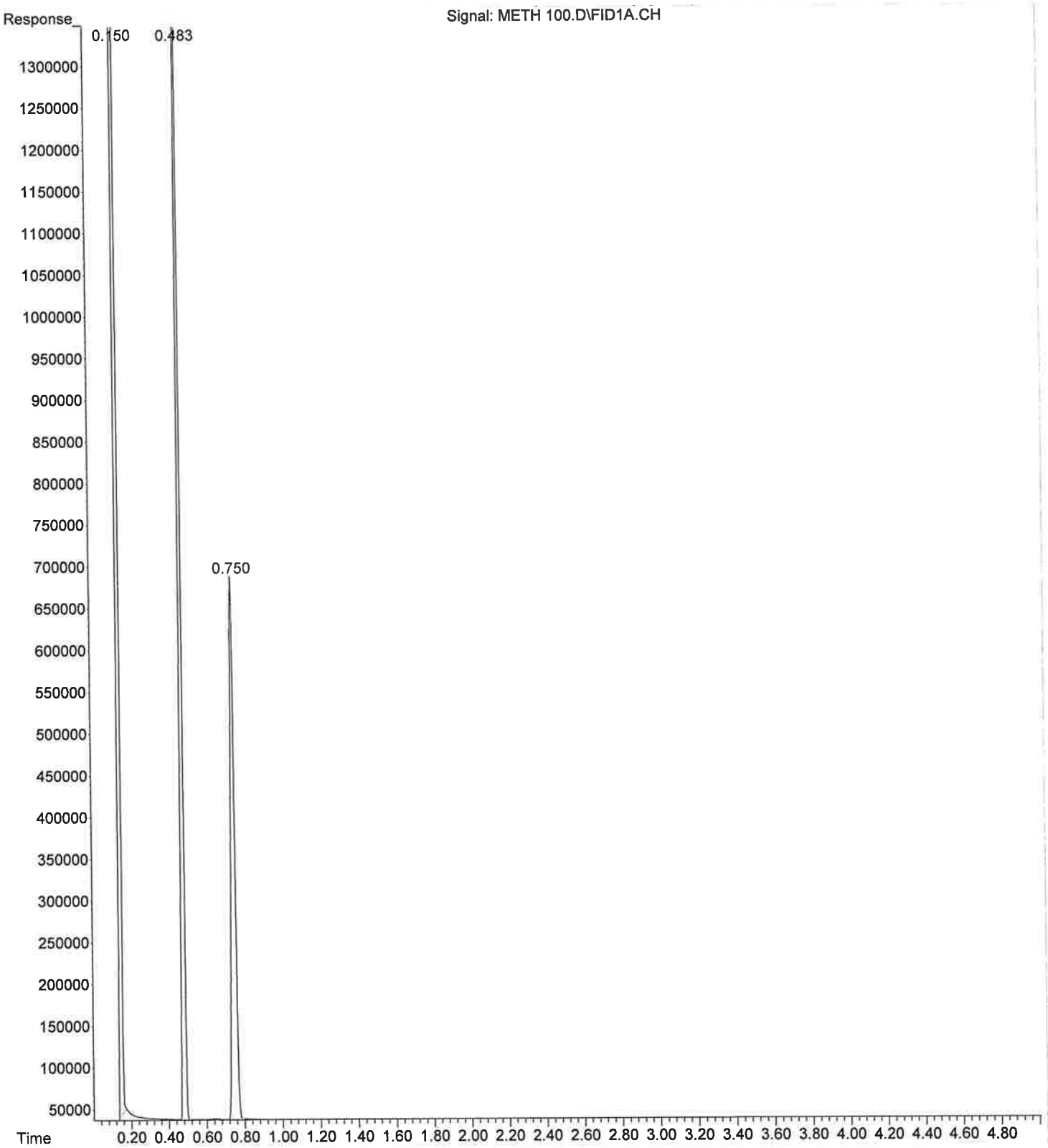
Method : C:\MSDCHEM\1\METHODS\GCMETHQUANT.M
Title : METHAMPHETAMINE

Signal : FID1A.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.151	0.130	0.212	BB	539550644	1688931774	100.00%	99.597%
2	0.487	0.465	0.537	BB	535434	3639809	0.22%	0.215%
3	0.756	0.718	0.806	BB	259849	3190967	0.19%	0.188%

Sum of corrected areas: 1695762551

File :C:\msdchem\1\DATA\df\METH 100.D
Operator :
Acquired : 29 Jun 2006 13:40 using AcqMethod GCMETHQUANT.M
Instrument : HP G1530A
Sample Name: METH STD 100
Misc Info :
Vial Number: 7



Area Percent Report

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Data File : METH 100.D
Signal(s) : FID1A.CH
Acq On : 29 Jun 2006 13:40
Sample : METH STD 100
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File: events.e

Method : C:\MSDCHEM\1\METHODS\GCMETHQUANT.M
Title : METHAMPHETAMINE

Signal : FID1A.CH

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	0.150	0.127	0.245	BB	1103870592	3664747904	100.00%	99.373%
2	0.483	0.458	0.533	BB	1691794	13827446	0.38%	0.375%
3	0.751	0.710	0.809	BB	648850	9280834	0.25%	0.252%

Sum of corrected areas: 3687856184

Appendix

Section 3

Proficiency Sample Data
GC/MS Comparison Data
FTIR Comparison Data

Section Summary

Objective:

Trueness

Confirmatory identifications are made using the MS detector. The trueness of these identifications was demonstrated by comparing all of the certified reference standard identifications on the MS to identifications made using the same certified reference standards ran on the FTIR and the validated GC/MS. A previously examined proficiency sample was also examined and compared for determination of trueness.

Results:

Trueness of Identifications

There were two studies performed to examine and prove the trueness of identifications on the questioned GC/MS.

Comparisons on Questioned GC/MS and Validated GC/MS and FTIR:

All identifications made on the questioned MS were concurrent with identifications made on the FTIR. (A group of certified reference standards are included with the GC/MS and FTIR identifications in the Appendix-Section 3) The use of a different instrumental technique yielding the same identification confirmed the trueness of identifications made on the tested GC/MS.

All identifications made on the questioned MS were concurrent with identifications made on the validated MS. The standards used were the same certified reference standards used for the FITR data and all yielded identical identifications. These examinations proved the trueness of identification on questioned GC/MS.

Analyzation of a Proficiency Test:

Proficiency sample, 04-501, was confirmed as secobarbital. This identification is the confirmed analytical identification result. (See results in Appendix-Section 3) The correct result of a previously analyzed proficiency test proves the trueness of identifications performed on questioned GC/MS.

****This section is separated into three parts. The first section that immediately follows this page is the proficiency test data with the test summary result for the tested sample. The second section contains the GC/MS data for the validated GC/MS versus the questioned GC/MS. The third section includes selected FTIR spectrums that were compared to the questioned GC/MS data.**

Individual Report
Test 04-501:
Controlled Substances Analysis

Participant Code: **U2584Y**
WebCode: **EDAWA4**

Test Summary: Each sample pack consisted of 200 mg of powder containing approximately 10.9% Secobarbital (free acid form). Secobarbital is a Schedule II controlled substance in the United States. *(Please see the Summary Report for additional summary comments and information.)*

Identification	Controlled Substance(s)	Salt Form?
Participant: U2584Y	**Secobarbital**	**Not Determined**
Consensus Results: Participants: 504	Secobarbital	*The majority of participants did not determine, or did not report, results for this question.*

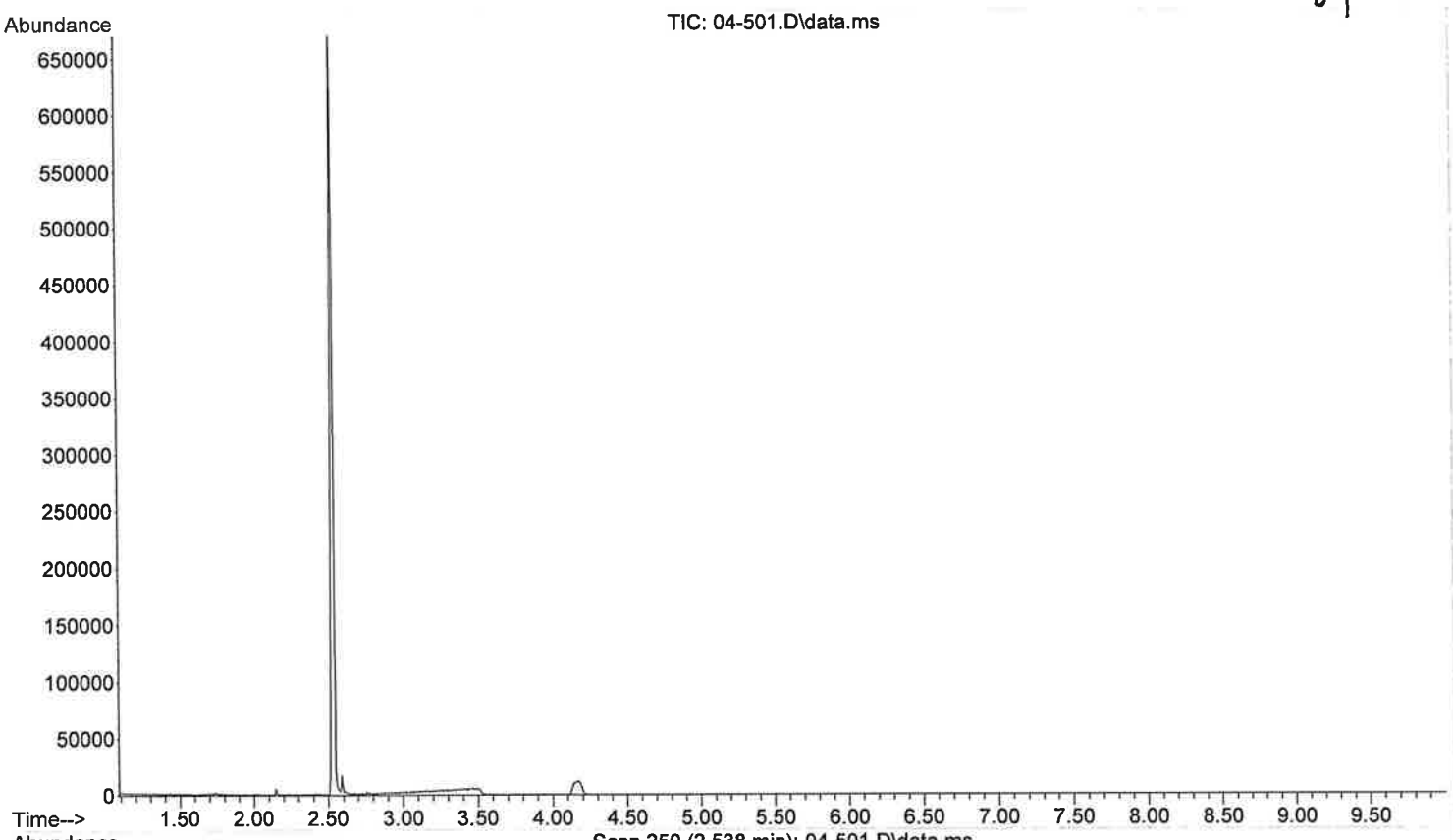
Identification Methods

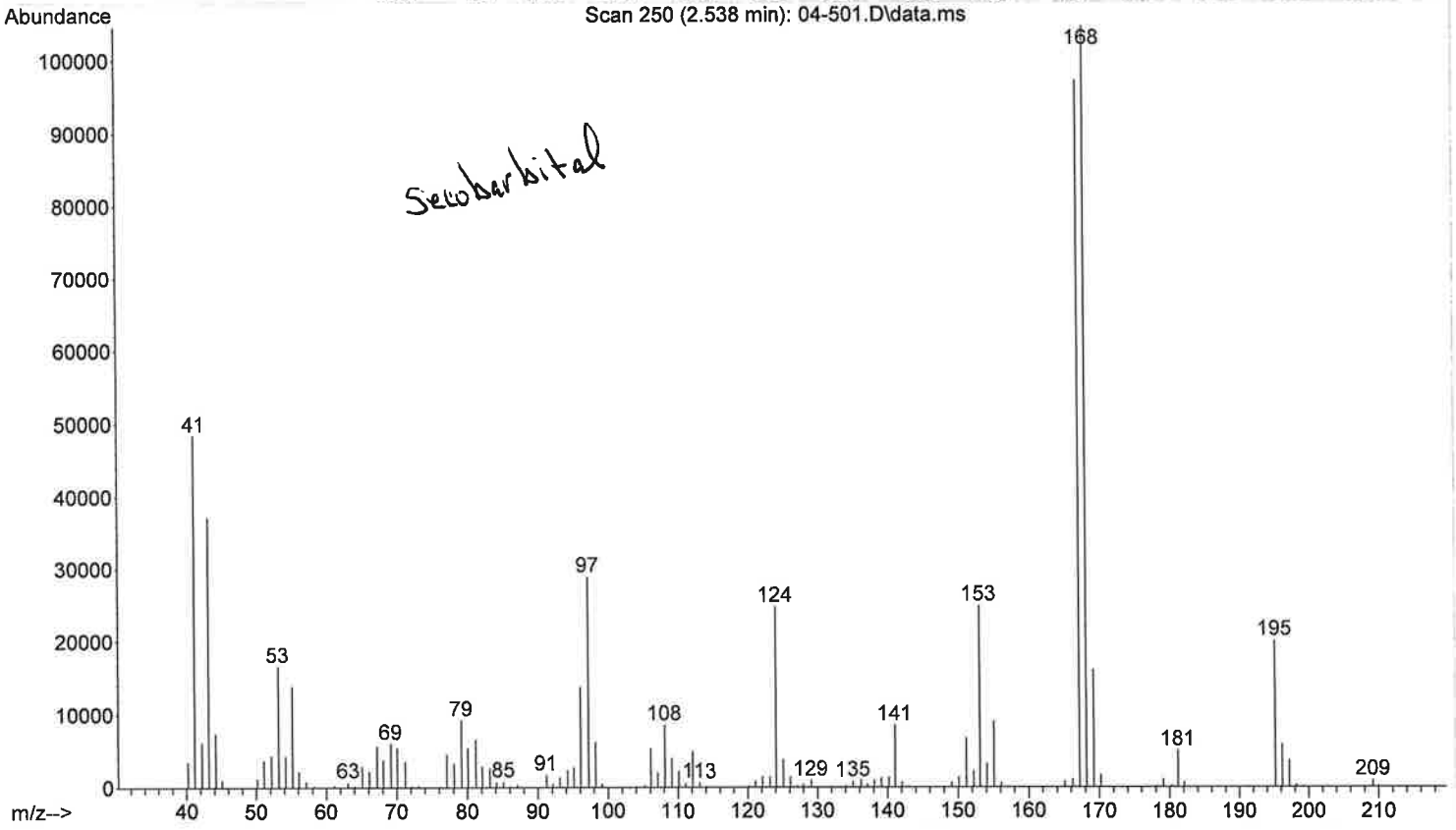
✓ Color	___ Crystal	___ TLC	___ UV
✓ FTIR	___ LC	✓ GC	✓ GC/MS

Other:

File :C:\msdchem\1\DATA\df\04-501.D
Operator :
Acquired : 5 Jul 2006 9:23 using AcqMethod MSDRUGS.M
Instrument : Donna 2
Sample Name: PROFICIENCY SAMPLE 04-501
Misc Info :
Vial Number: 1

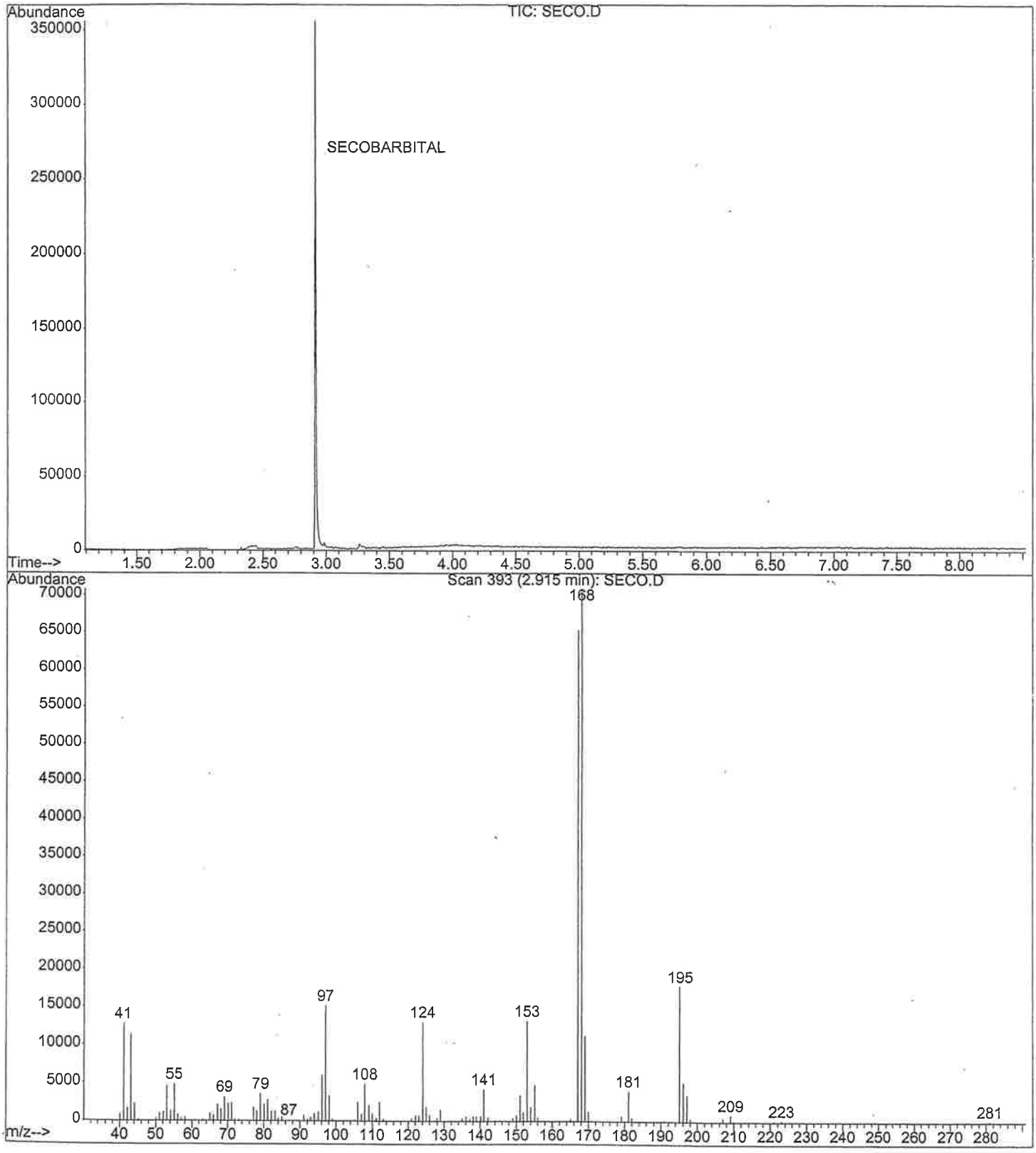
df





Secobarbital

File : C:\HPCHEM\1\DATA\STANDARD\SECO.D
Operator : GBE
Acquired : 1 Mar 2000 11:40 using AcqMethod MSDRUGS
Instrument : GC/MS Ins
Sample Name: SECOBARBITAL STD K&K LABS LOT 137A
Misc Info : ETOH
Vial Number: 1

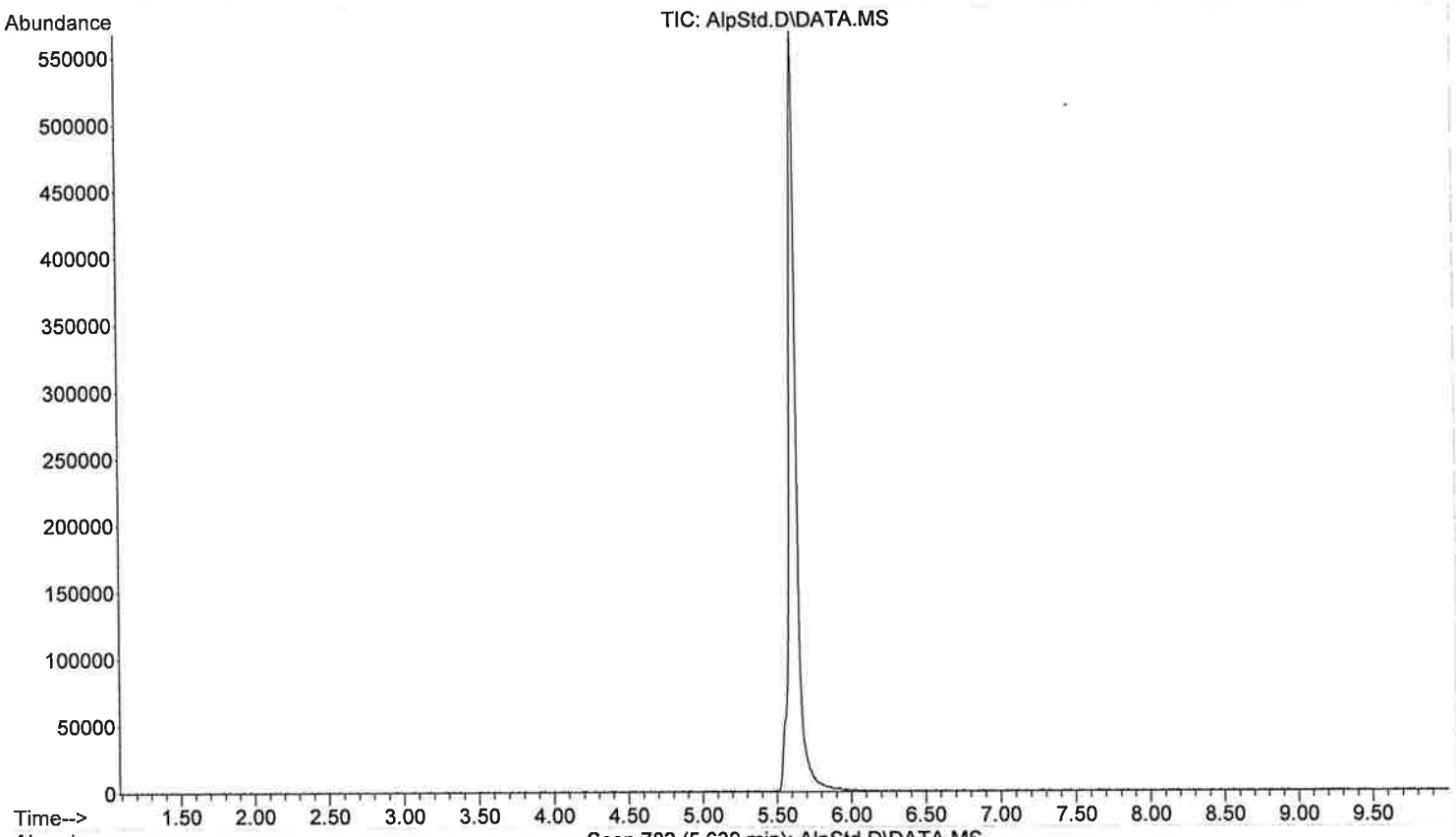


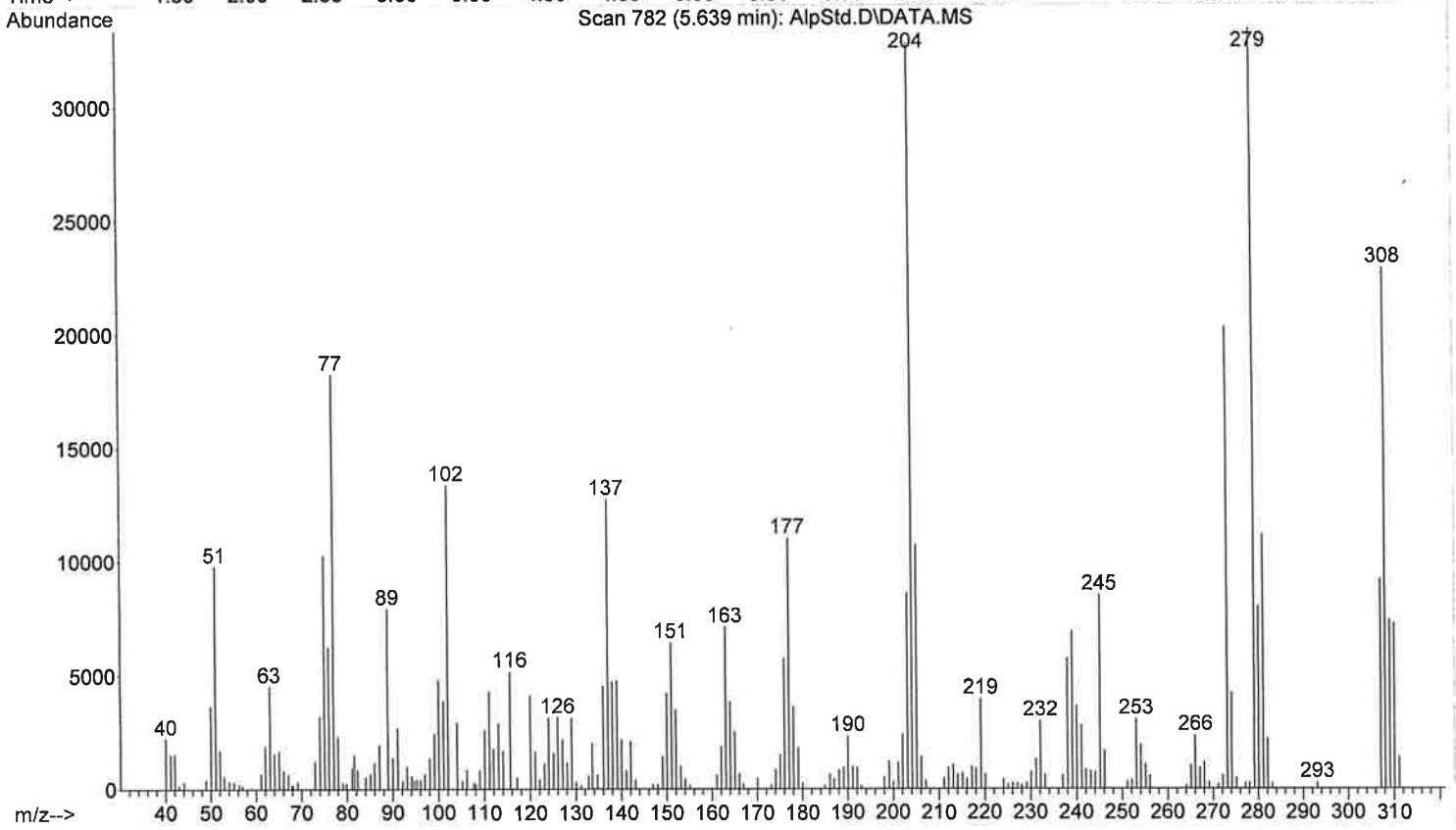
DATA

GC/MS

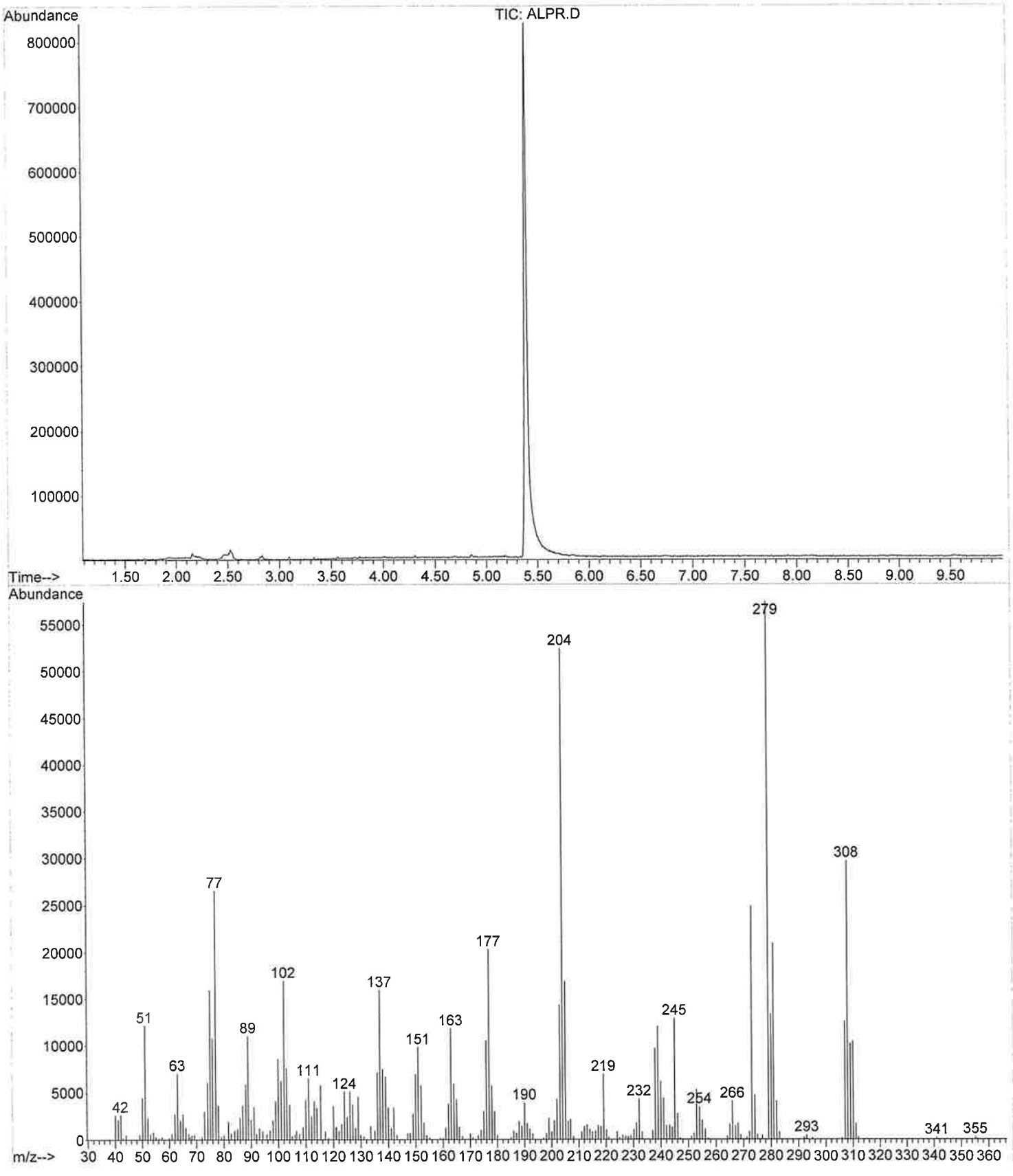
TRUENESS STUDY

File : C:\msdchem\1\DATA\df\07Jun06D.01p\AlpStd.D
Operator :
Acquired : 7 Jun 2006 2:56 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Alprazolam Std.
Misc Info : Upjohn lot# 487RA in MeOH
Vial Number: 2

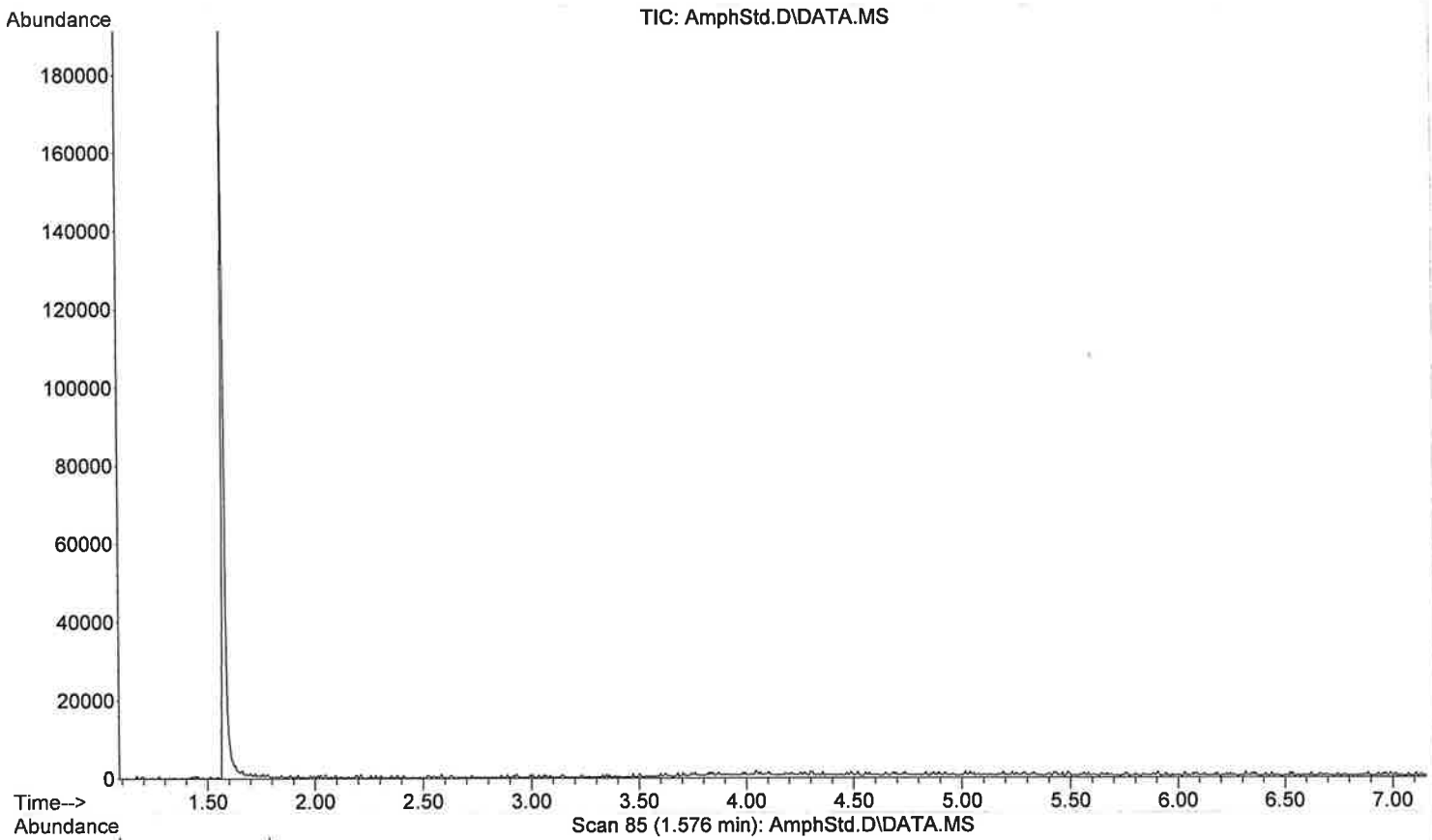


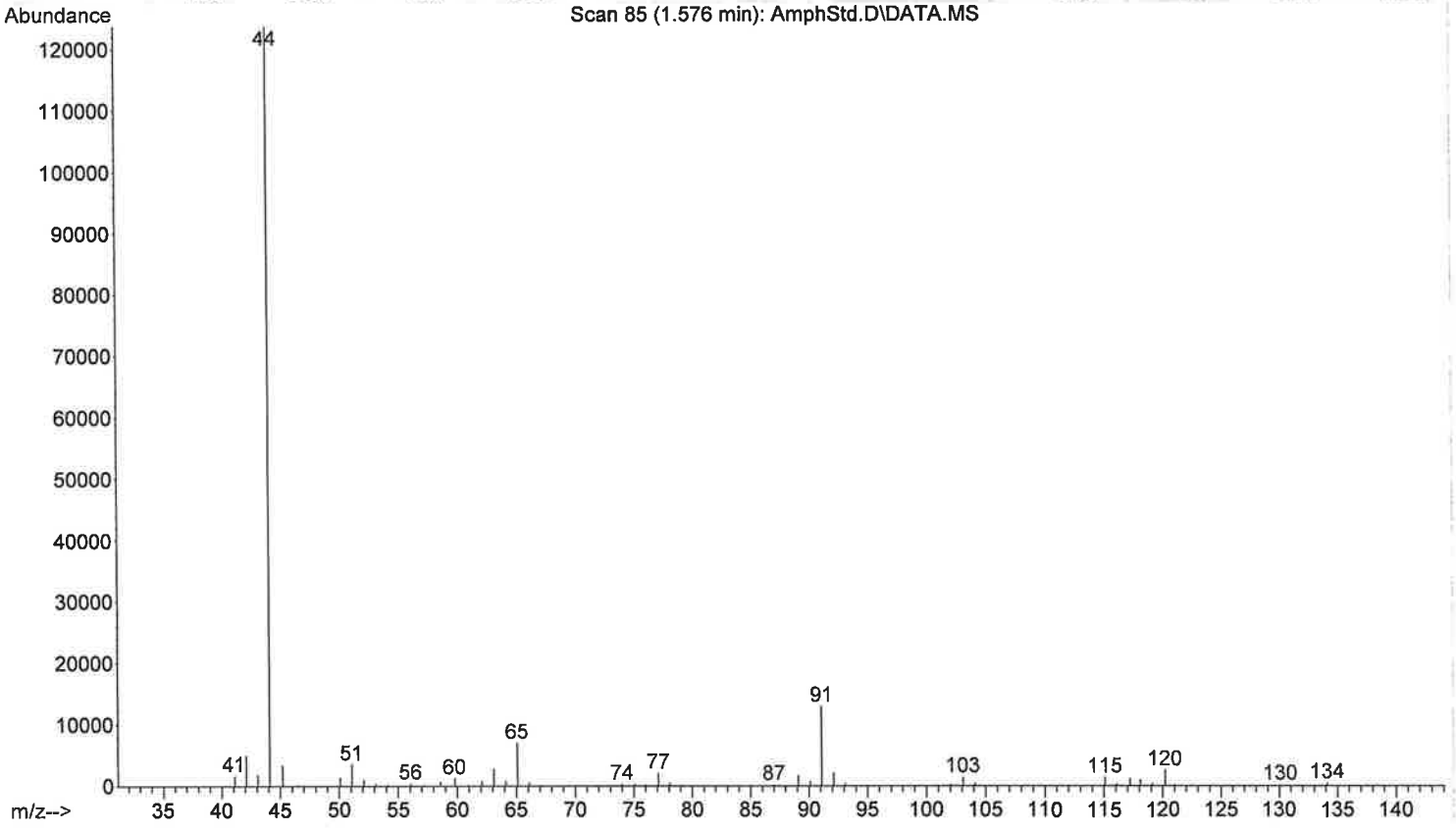


File :C:\MSDChem\1\DATA\DF\ALPR.D
Operator : DONNA
Acquired : 9 Jun 2006 15:51 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: ALPRAZOLAM
Misc Info : UPJOHN LOT#487RA MEOH
Vial Number: 2

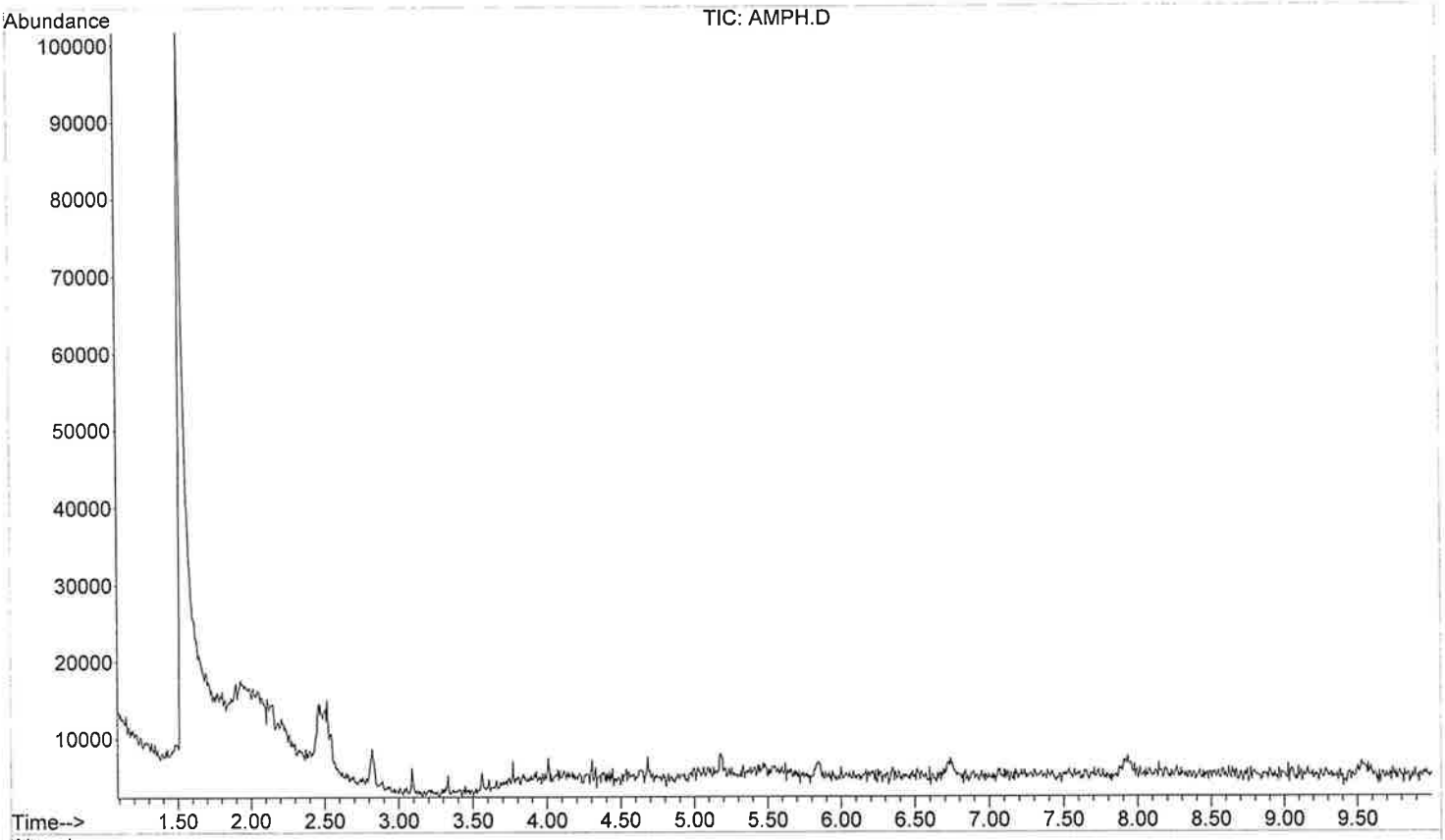


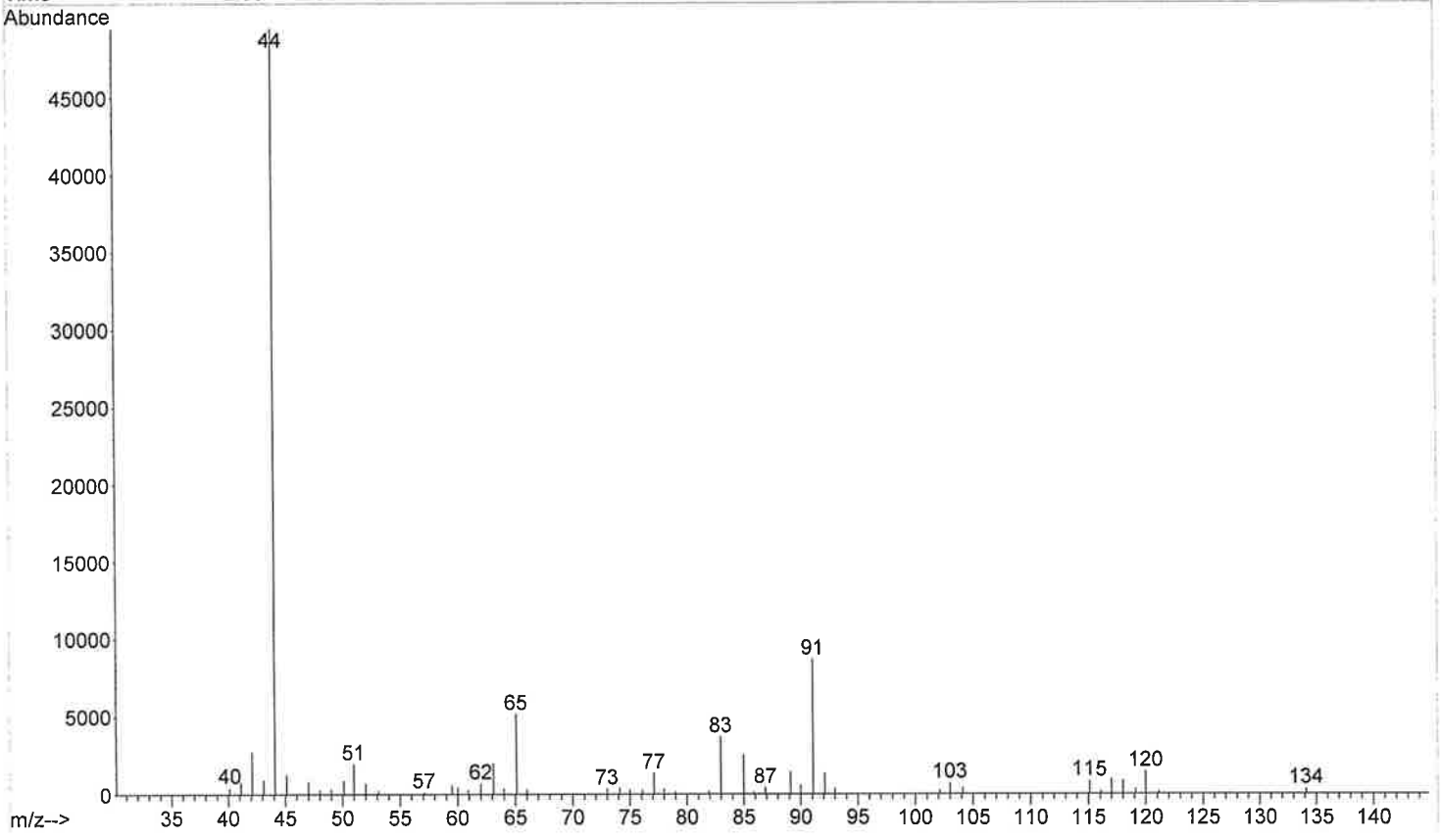
File :C:\MSDCHEM\1\DATA\DF\07JUN06D.01P\Snapshot\AmphStd.D
Operator : DF
Acquired : 7 Jun 2006 3:24 pm using AcqMethod ASMSDRUGS.M
Instrument : Donna 2
Sample Name: Amphetamine Std.
Misc Info : K&K 83567 0.5n NaOH INTO CHCL3
Vial Number: 3



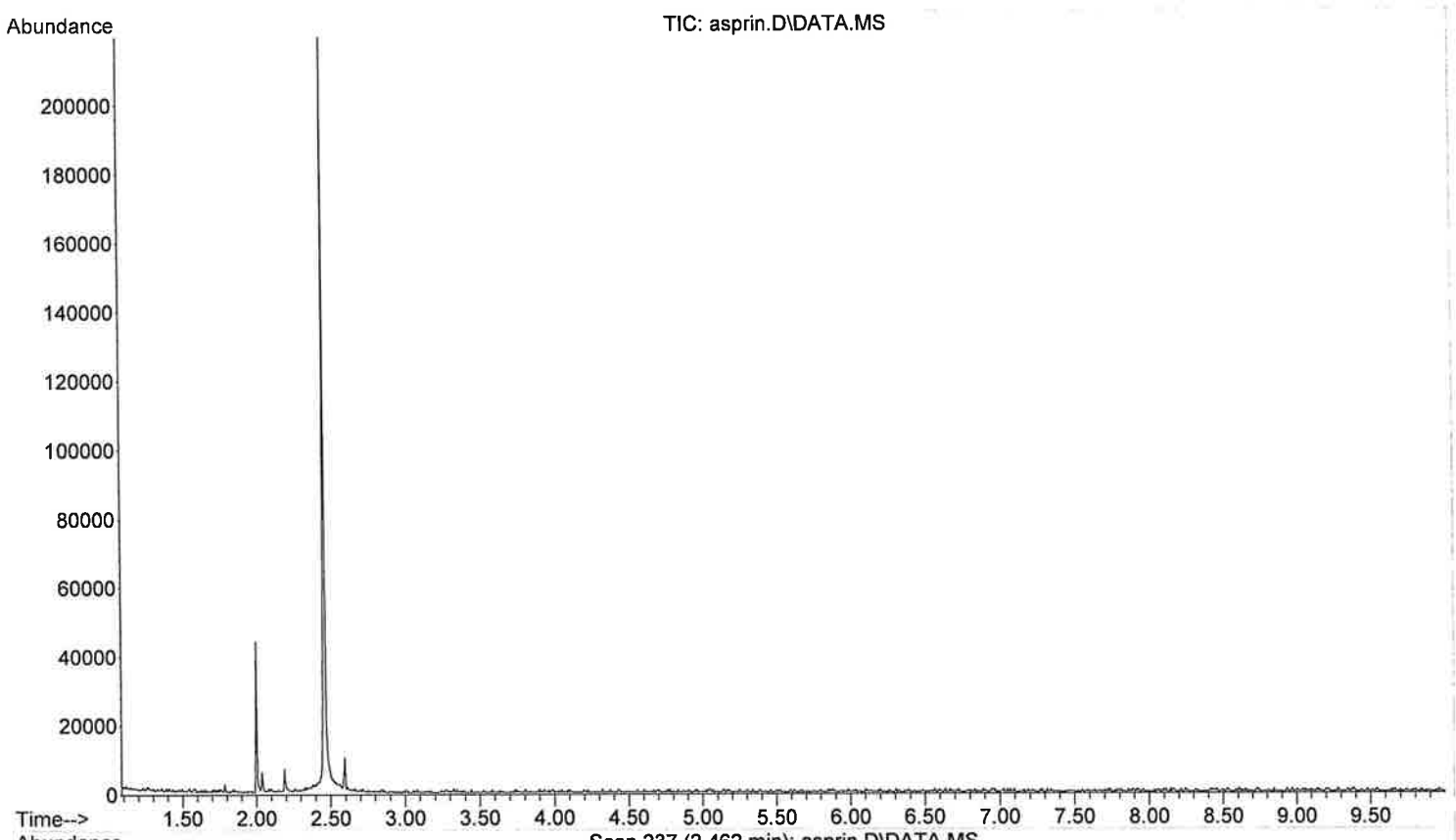


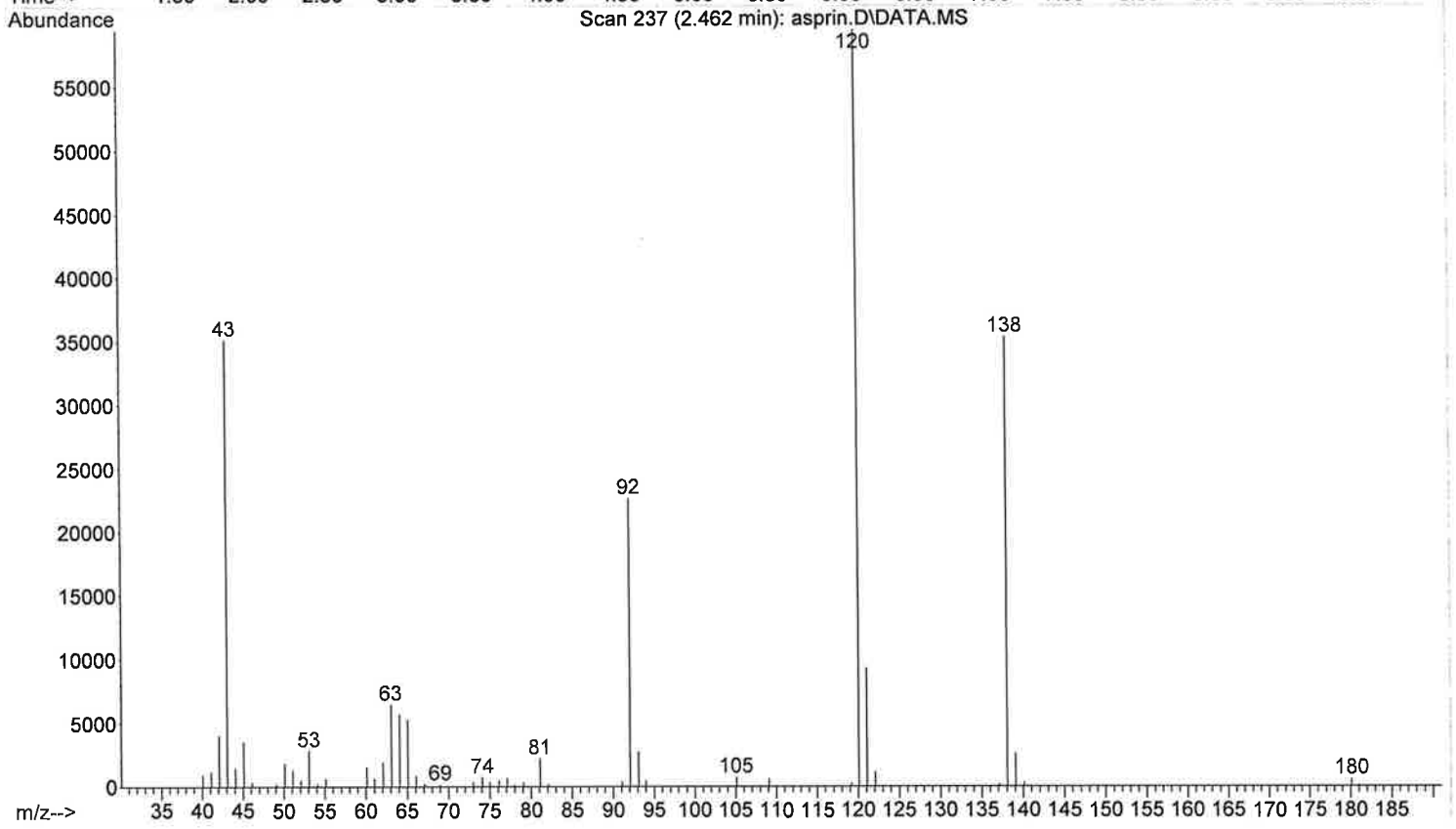
File :C:\MSDChem\1\DATA\DF\AMPH.D
Operator : DONNA
Acquired : 9 Jun 2006 16:20 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: AMPHETAMINE
Misc Info : K&K LOT#83567 0.5N NAOH>CHCL3
Vial Number: 3



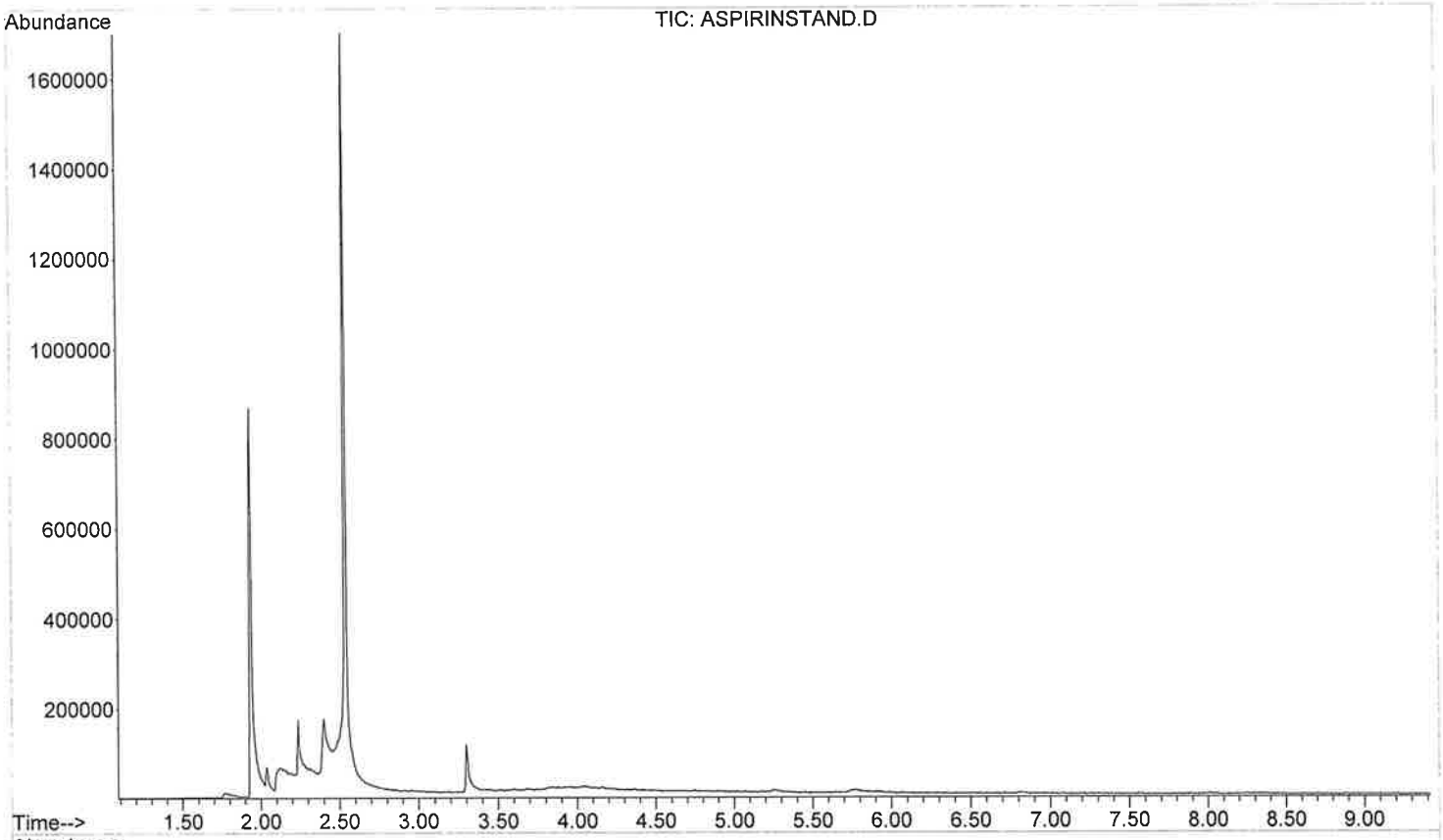


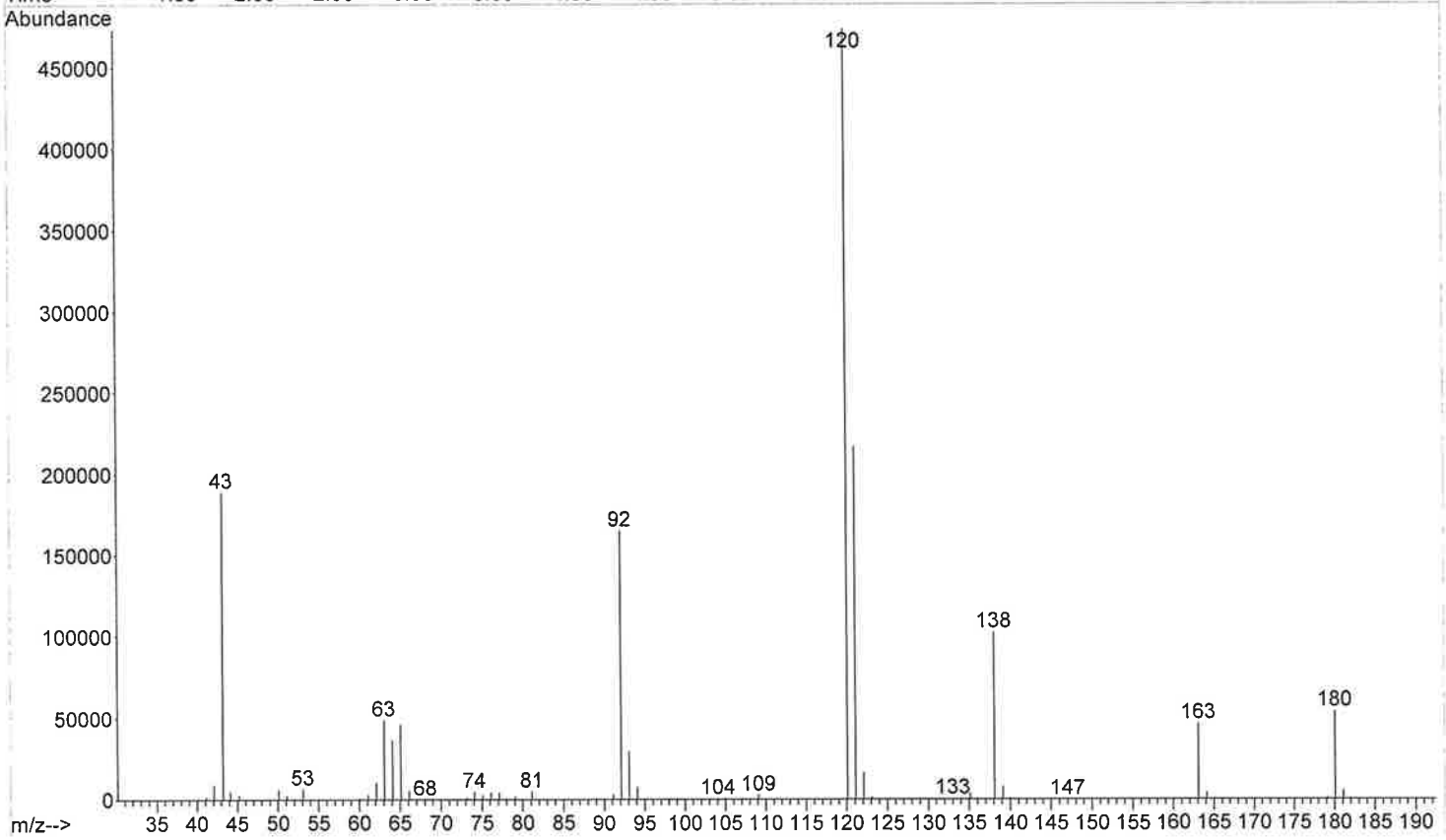
File :C:\msdchem\1\DATA\df\07Jun06D.01p\asprin.D
Operator : DF
Acquired : 7 Jun 2006 3:52 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Aspirin
Misc Info : Sigma Lot# 31k0013 Etoh
Vial Number: 4



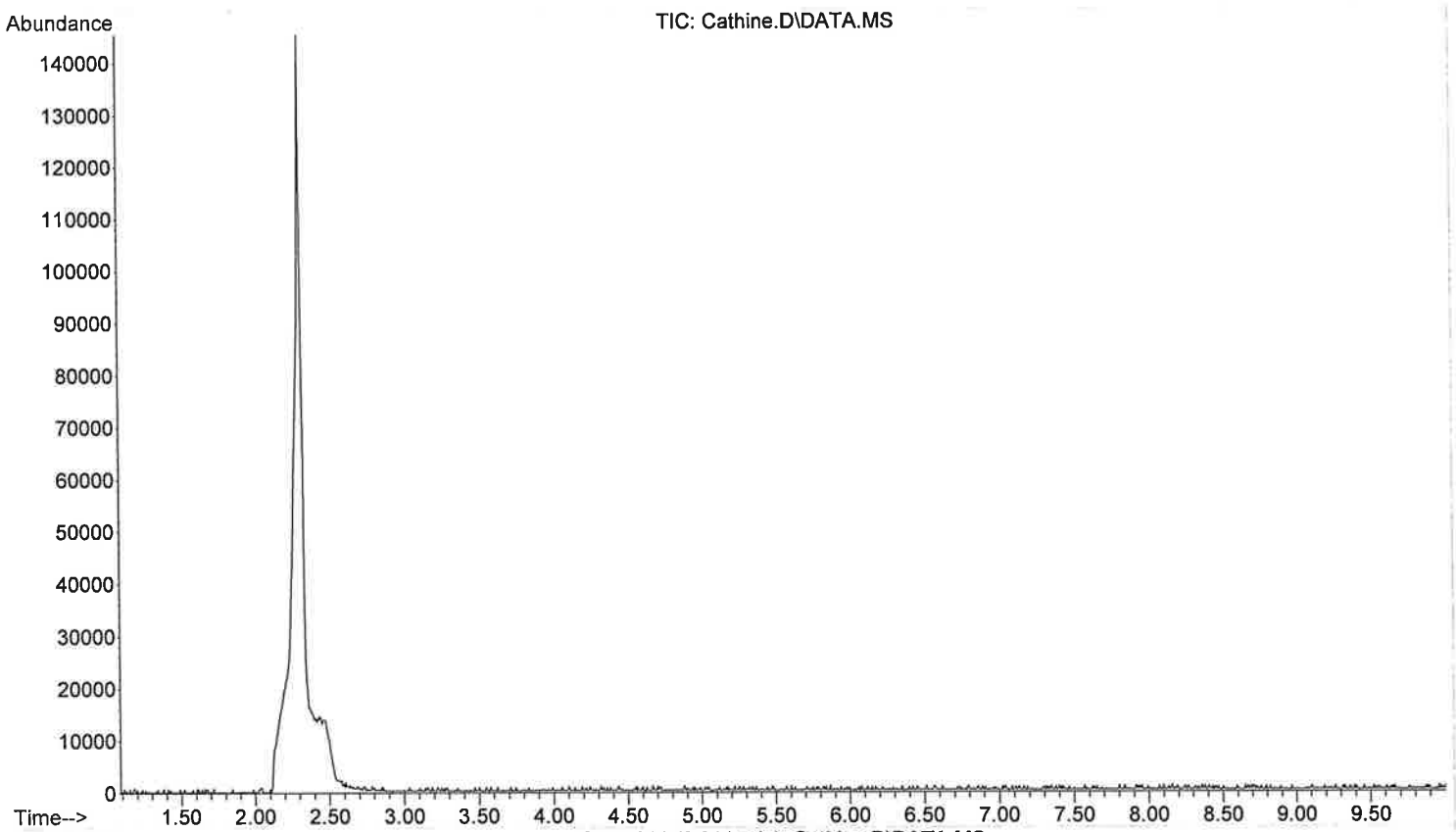


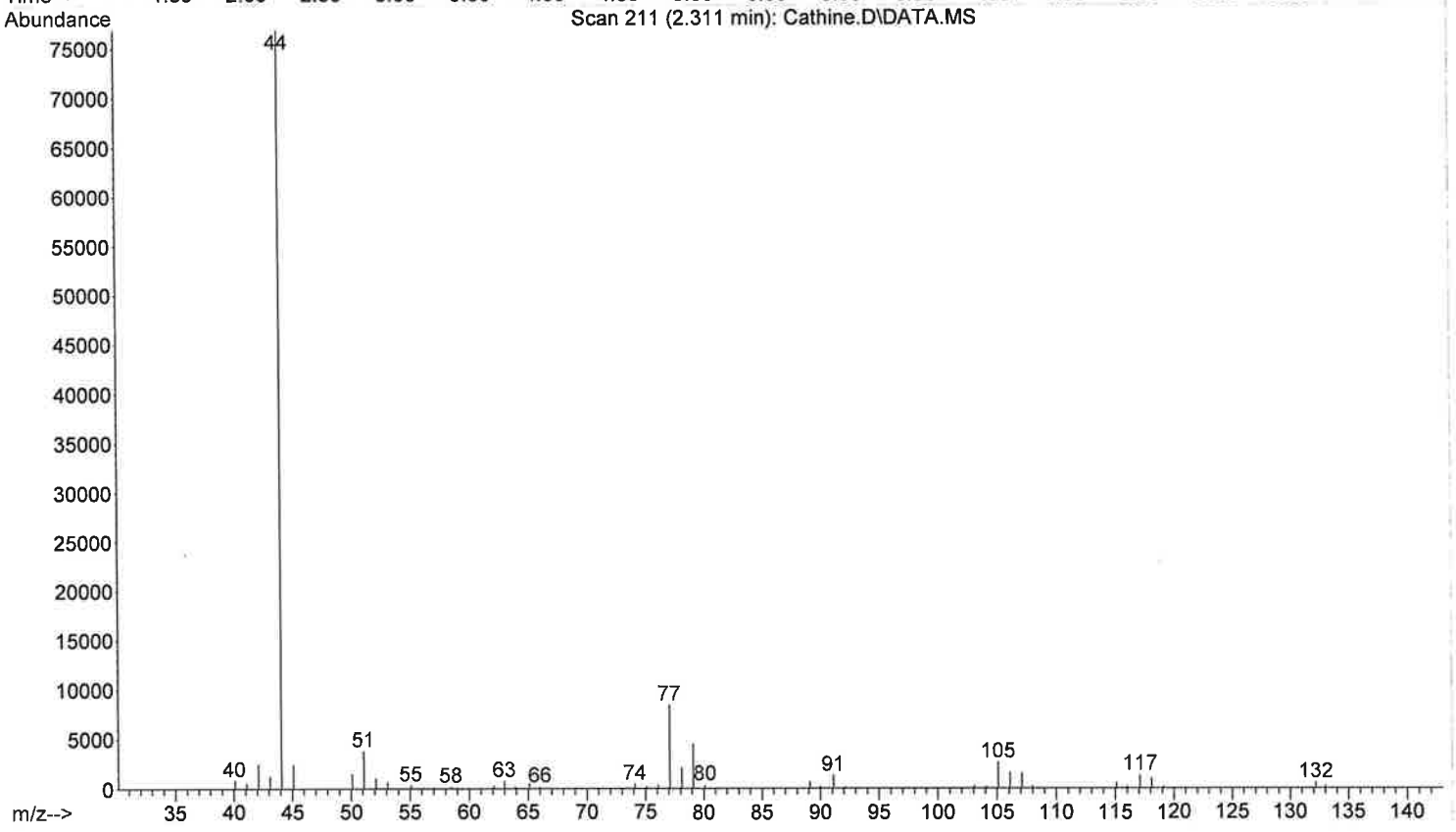
File : C:\MSDChem\1\DATA\DF\ASPIRINSTAND.D
Operator : DF
Acquired : 28 Jun 2006 16:01 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: ASPIRIN STANDARD
Misc Info : SIGMA LOT#31k0013 IN MEOH
Vial Number: 1



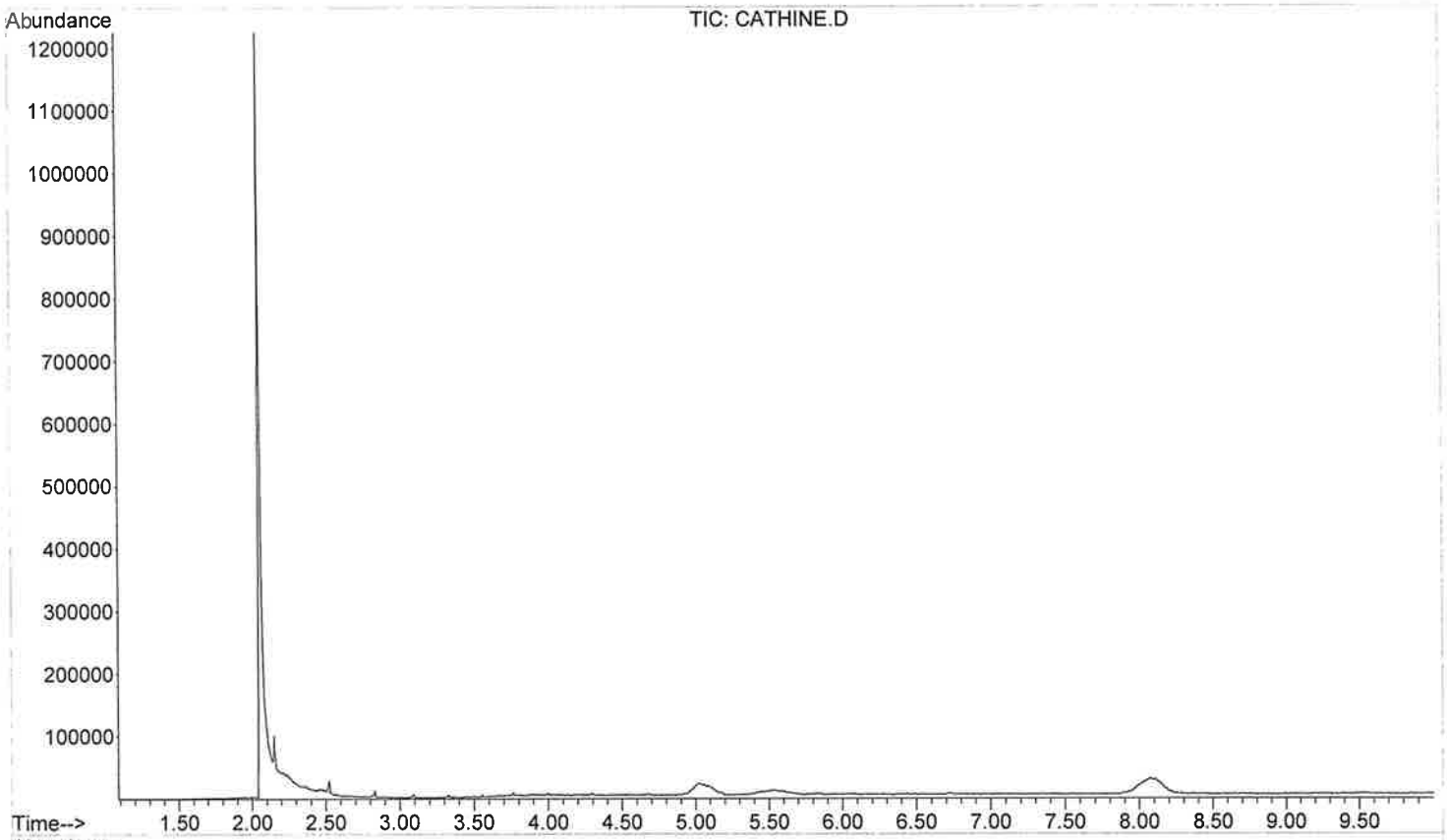


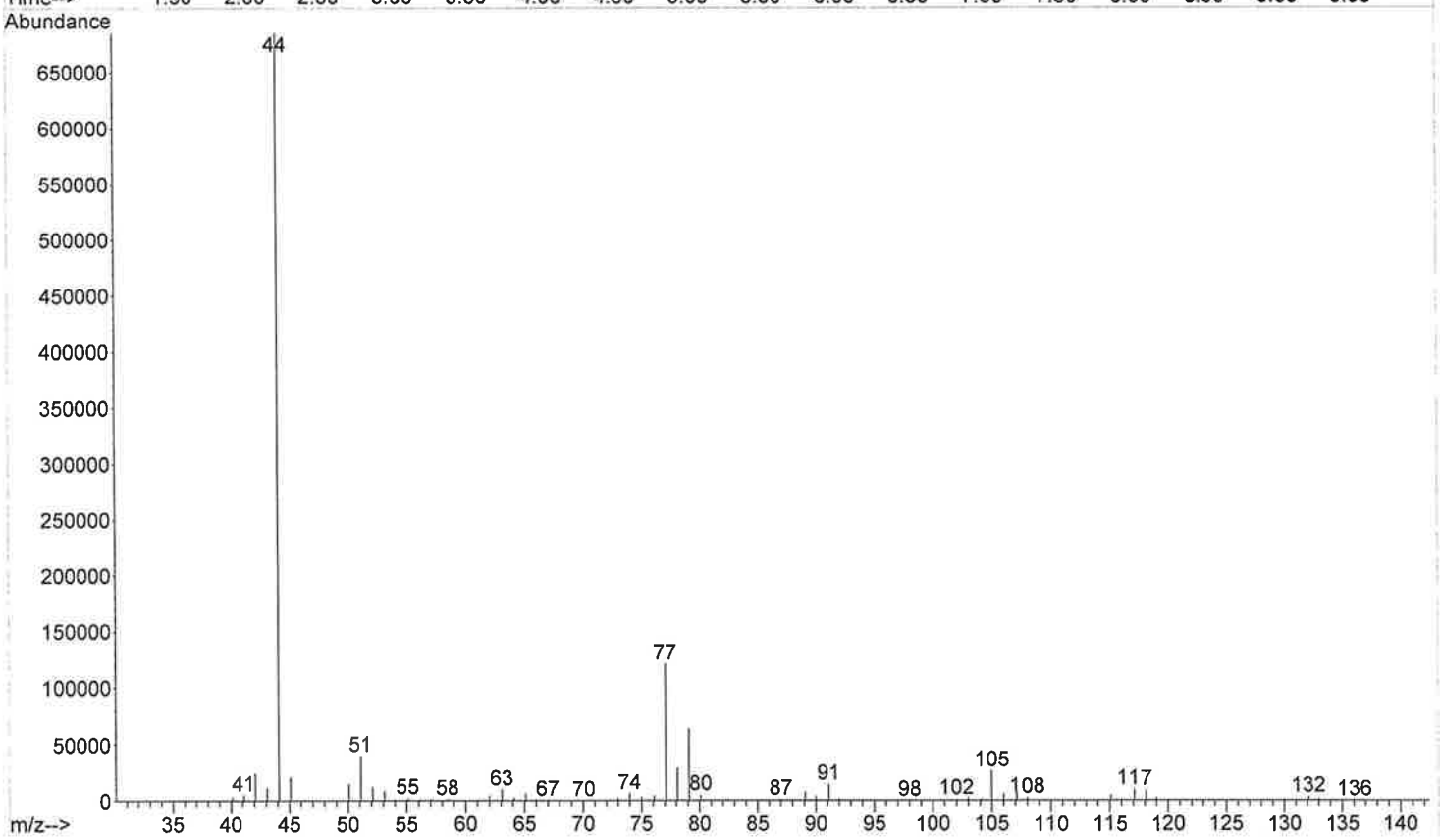
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Cathine.D
Operator : DF
Acquired : 7 Jun 2006 4:21 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Cathine
Misc Info : Altech Lot# 0101 MeOH
Vial Number: 5



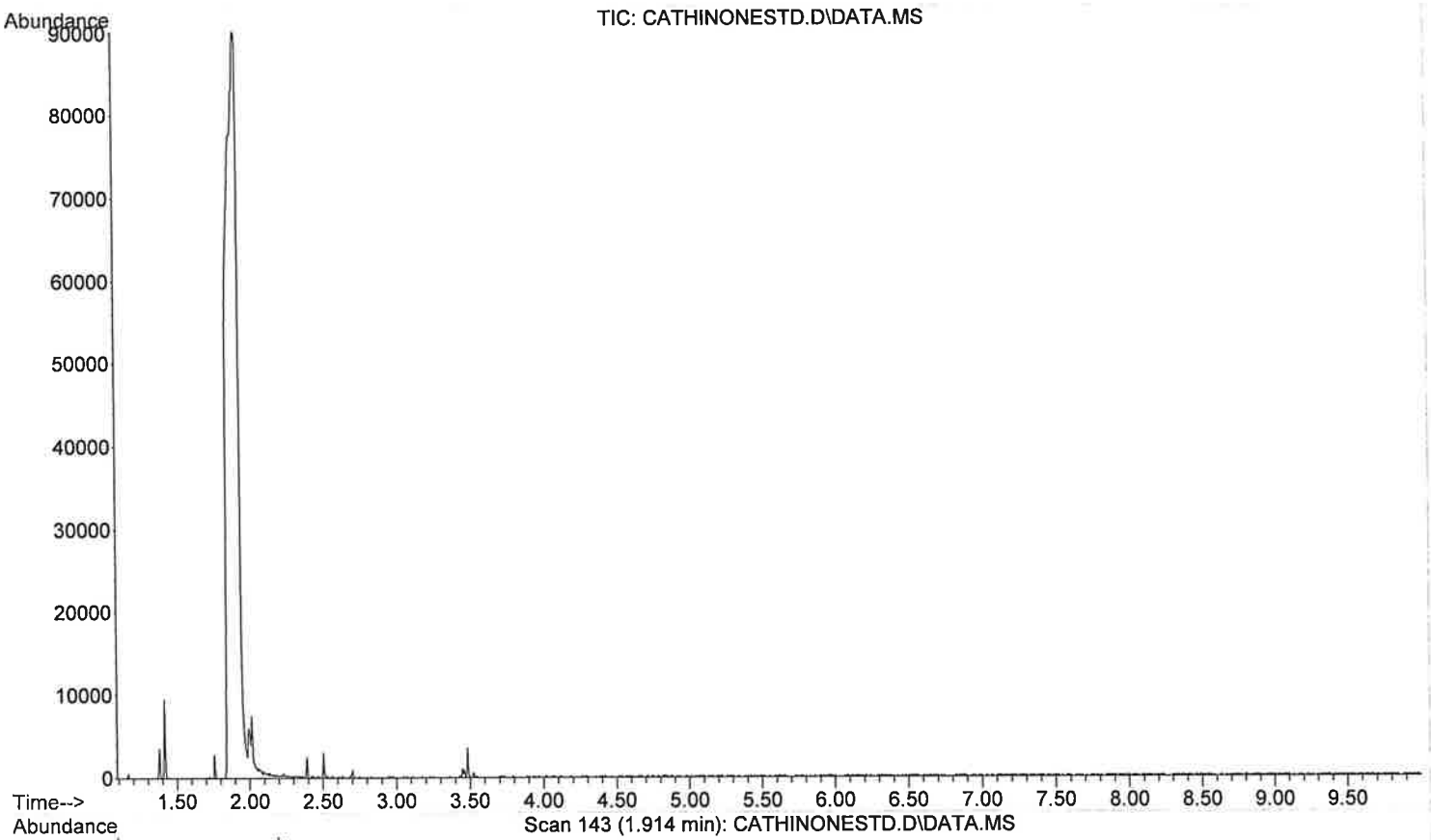


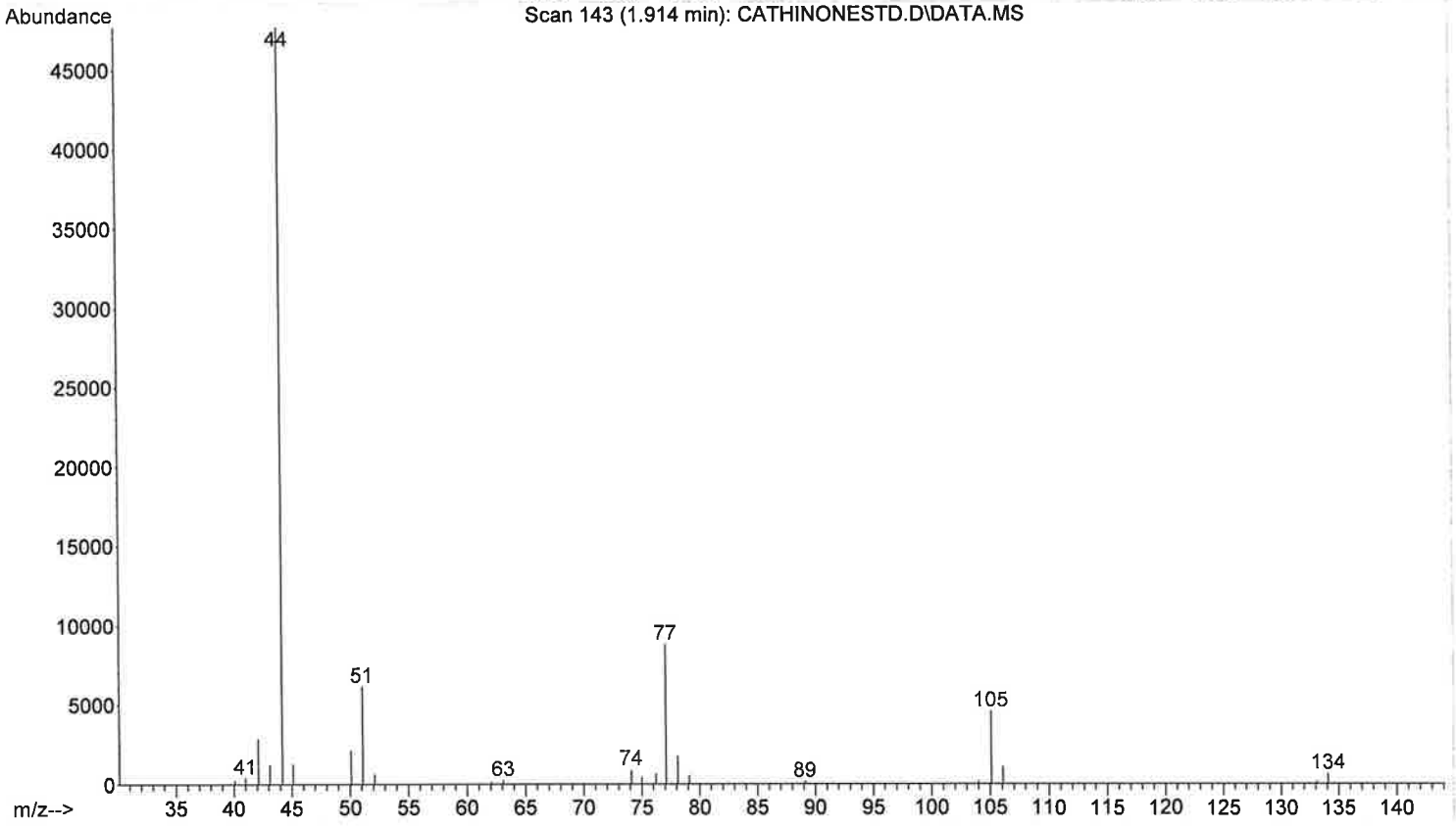
File :C:\MSDChem\1\DATA\DF\CATHINE.D
Operator : DONNA
Acquired : 9 Jun 2006 17:18 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: CATHINE
Misc Info : ALLTECH LOT#0101
Vial Number: 5



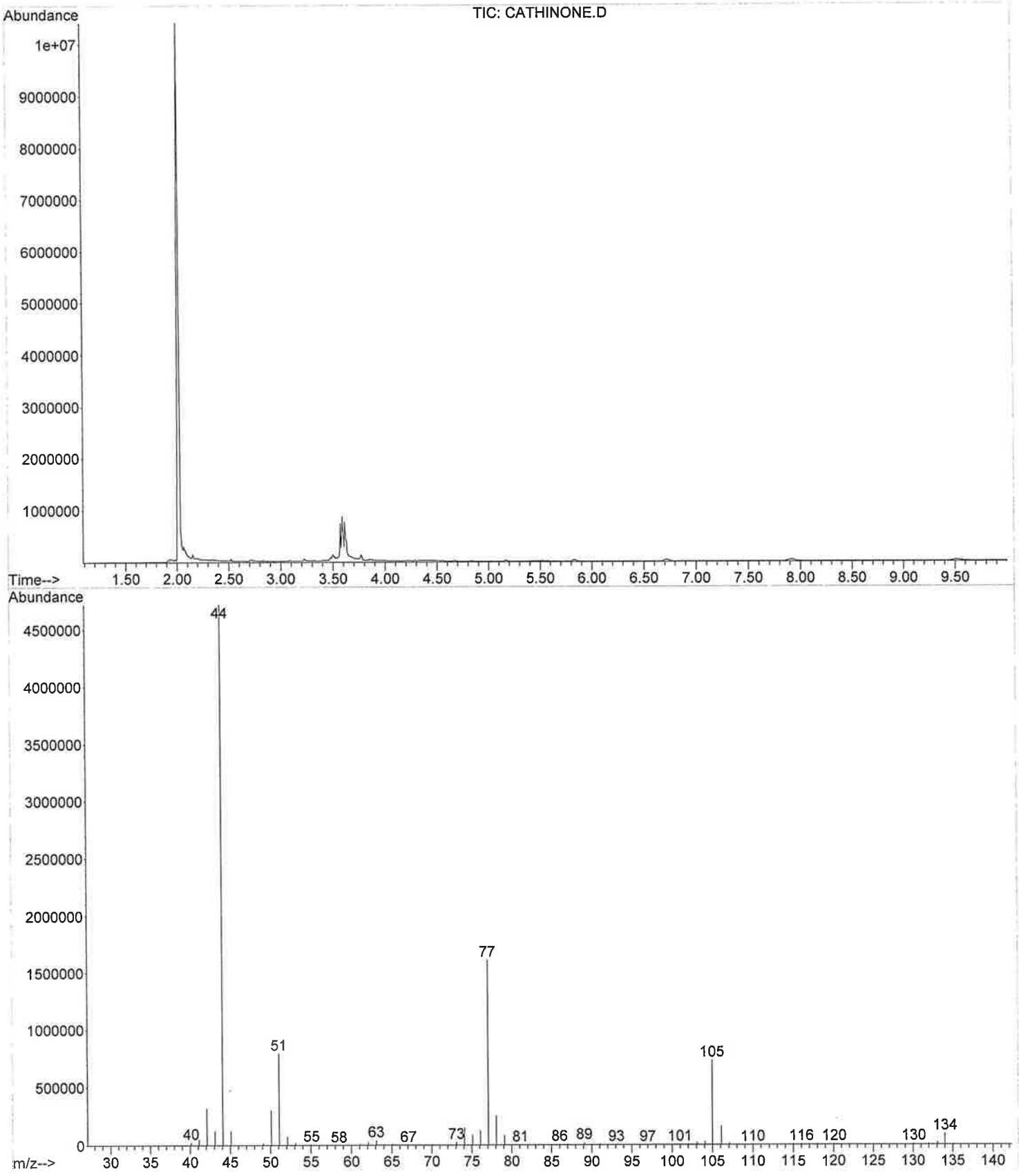


File : C:\msdchem\1\METHODS\MSDRUGS.M\CATHINONESTD.D
Operator : DT
Acquired : 22 Jun 2006 4:12 pm using AcqMethod MSDRUGS.M
Instrument : Donna 2
Sample Name: (D-NORPSEUDOEPHEDRINE) IN MEOH
Misc Info : RBI LOT AL-1-039
Vial Number: 1

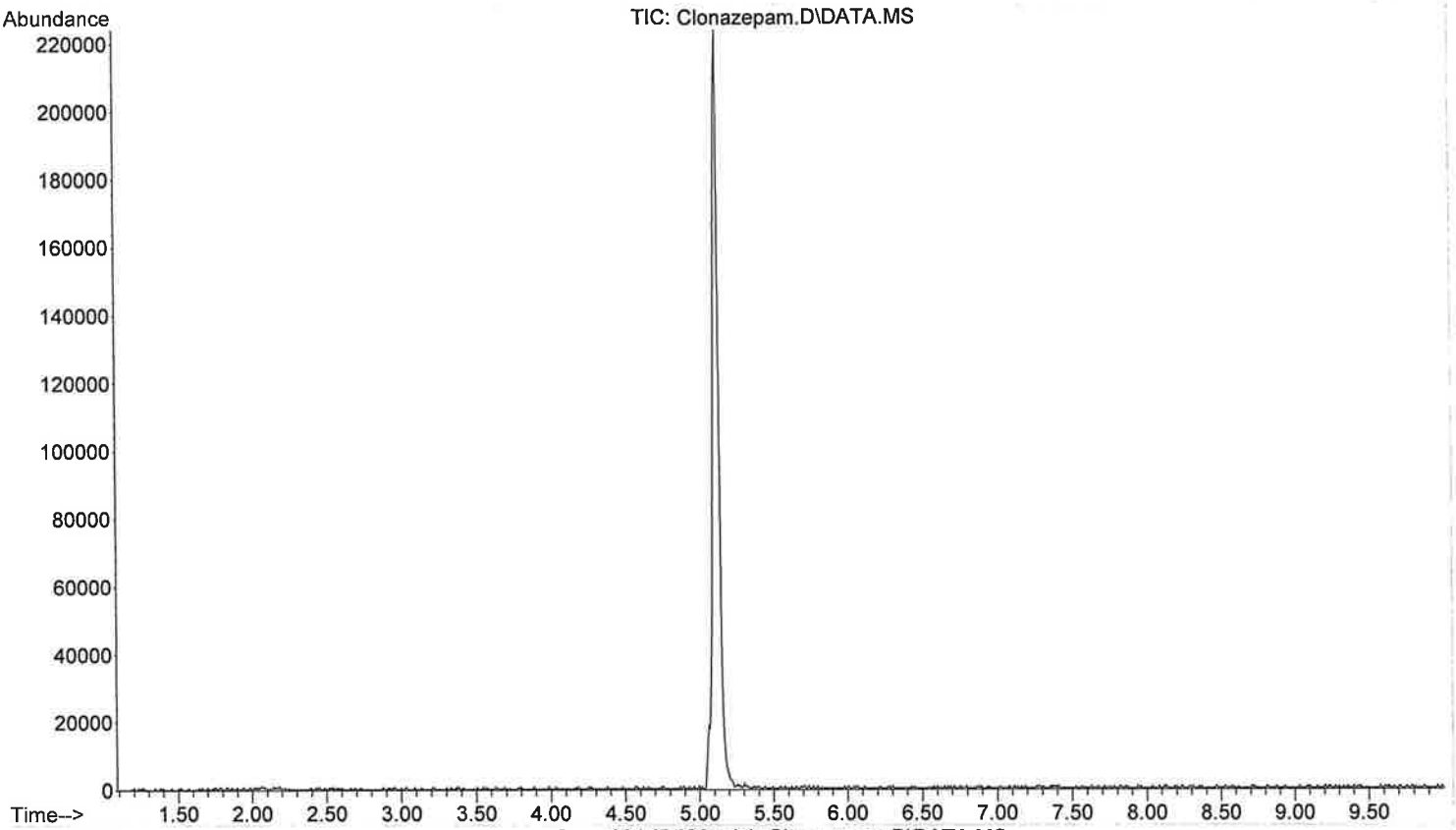


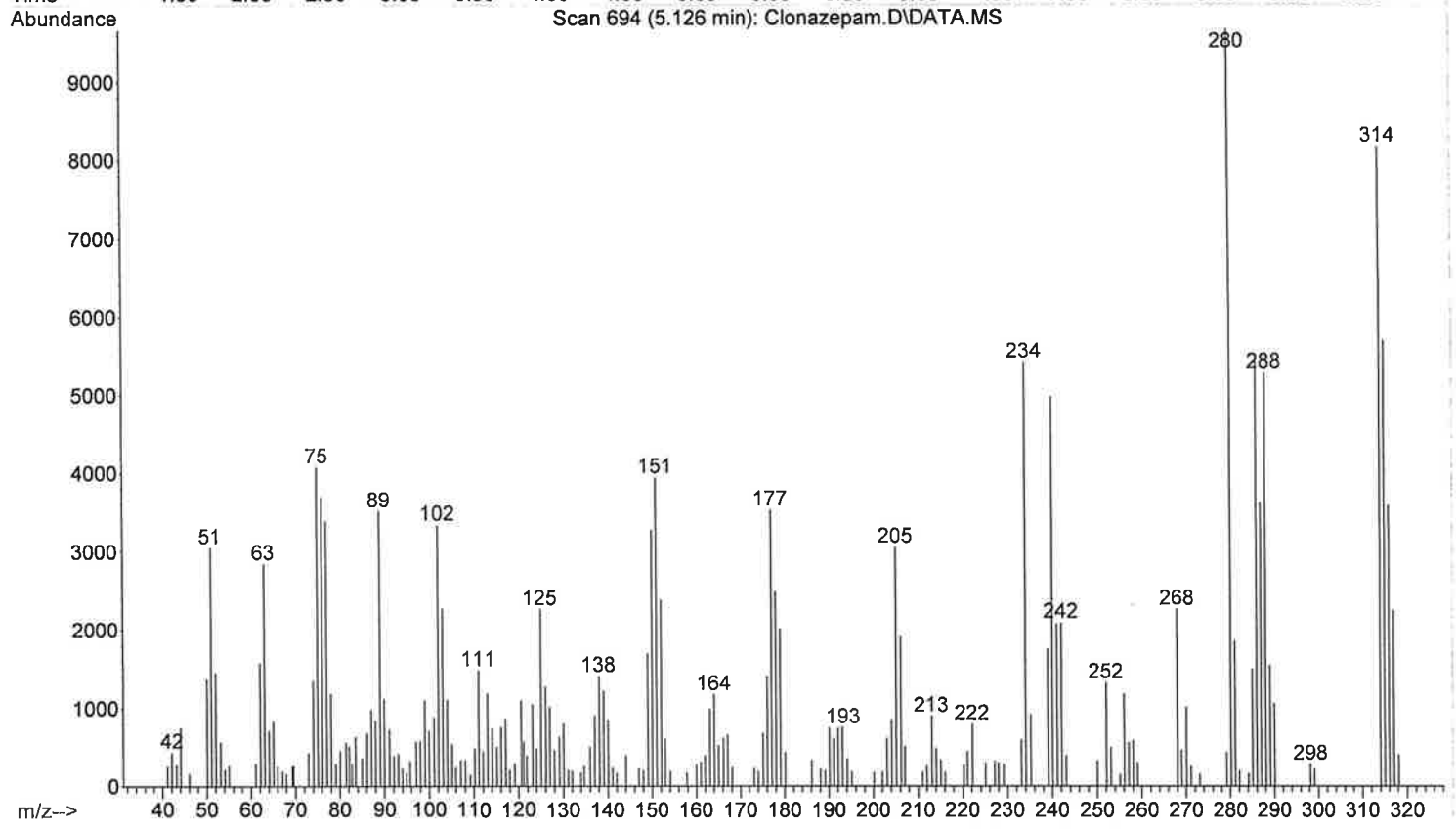


File :C:\MSDChem\1\DATA\DF\CATHINONE.D
Operator : DONNA
Acquired : 9 Jun 2006 17:46 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: CATHINONE
Misc Info : RBI LOT AL-A-039
Vial Number: 6

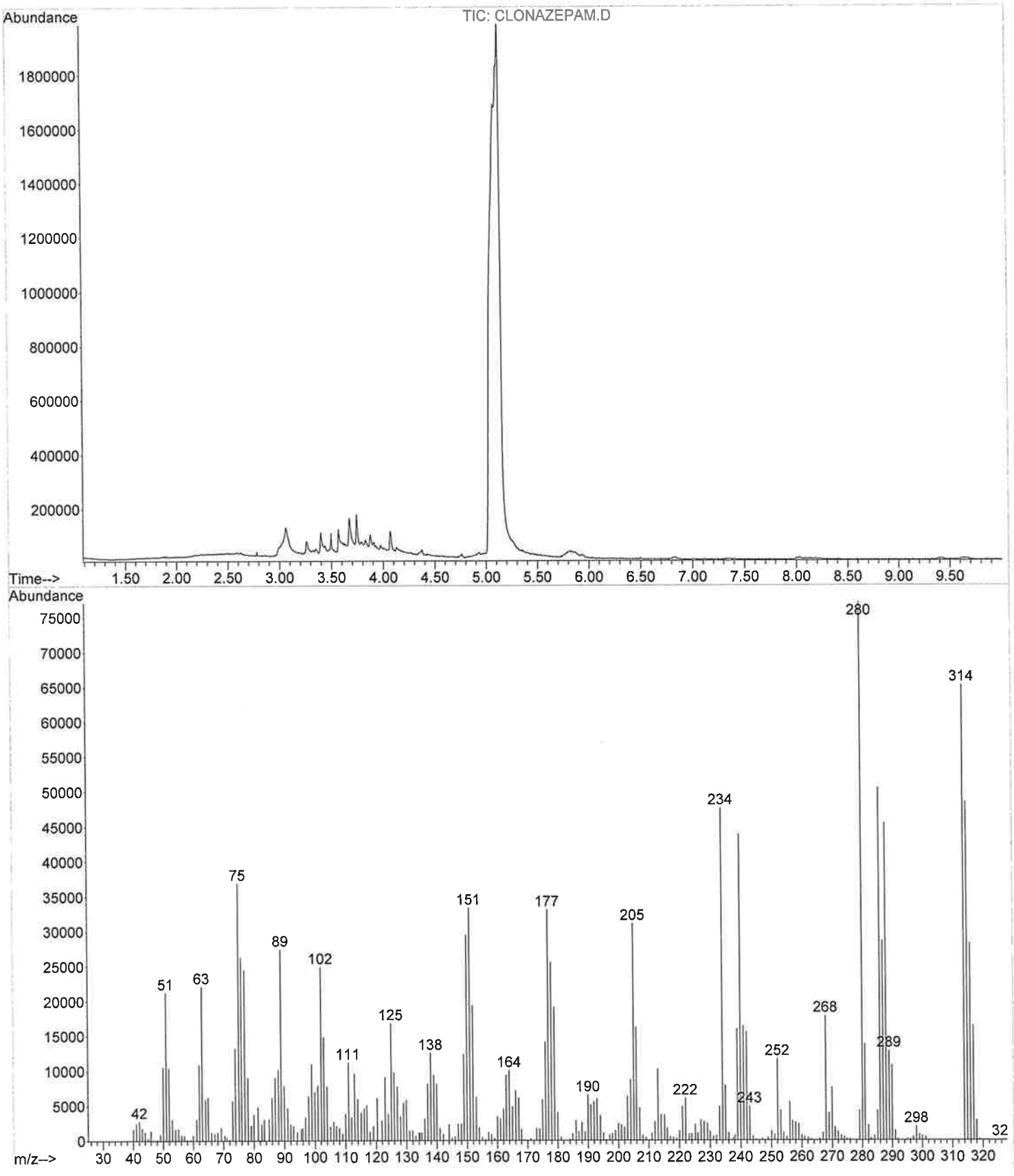


File :C:\msdchem\1\DATA\df\07Jun06D.01p\Clonazepam.D
Operator : DX
Acquired : 7 Jun 2006 5:17 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Clonzapam
Misc Info : Hoffman Roch Lot# 012077 MeOH
Vial Number: 7

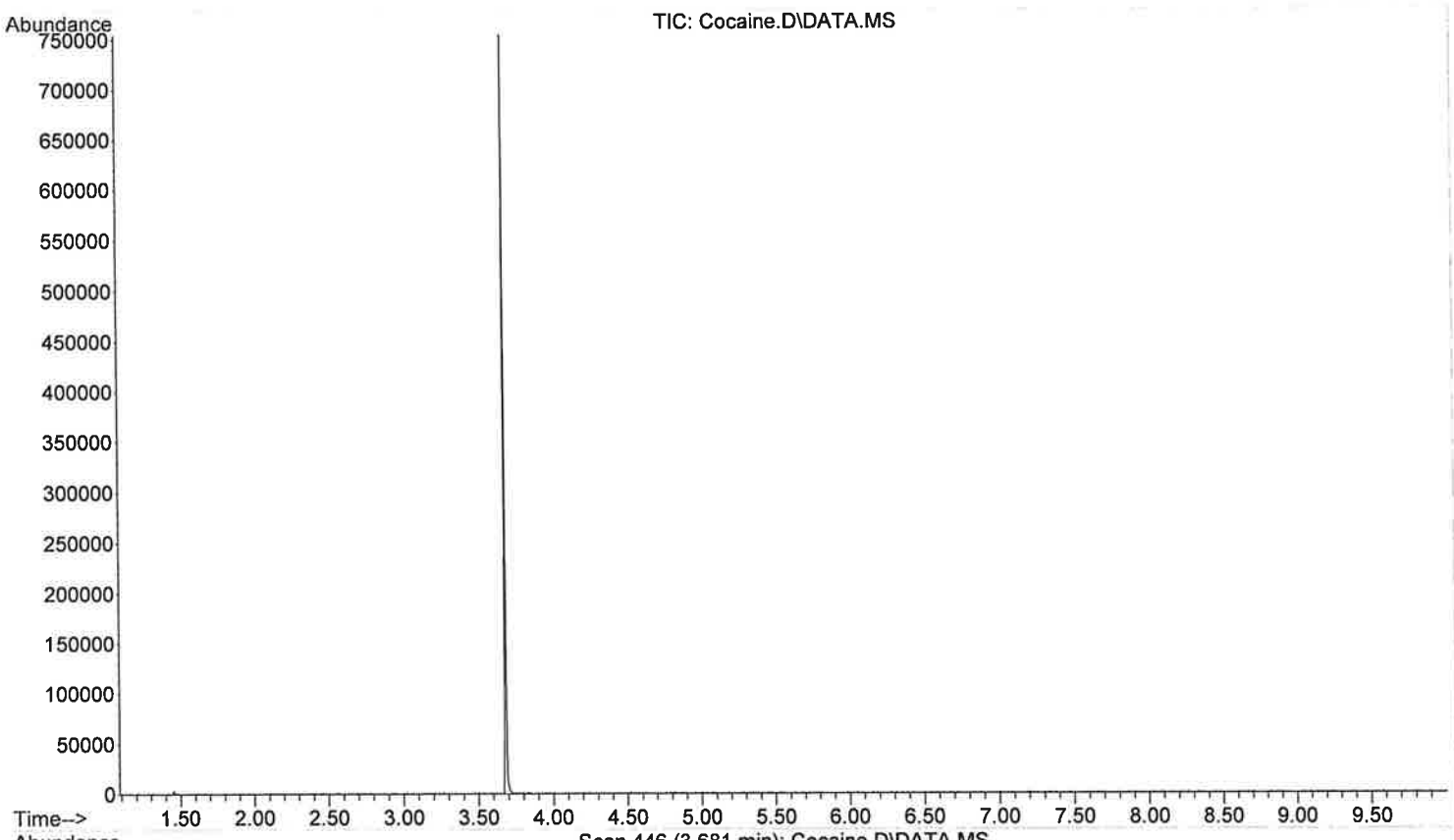


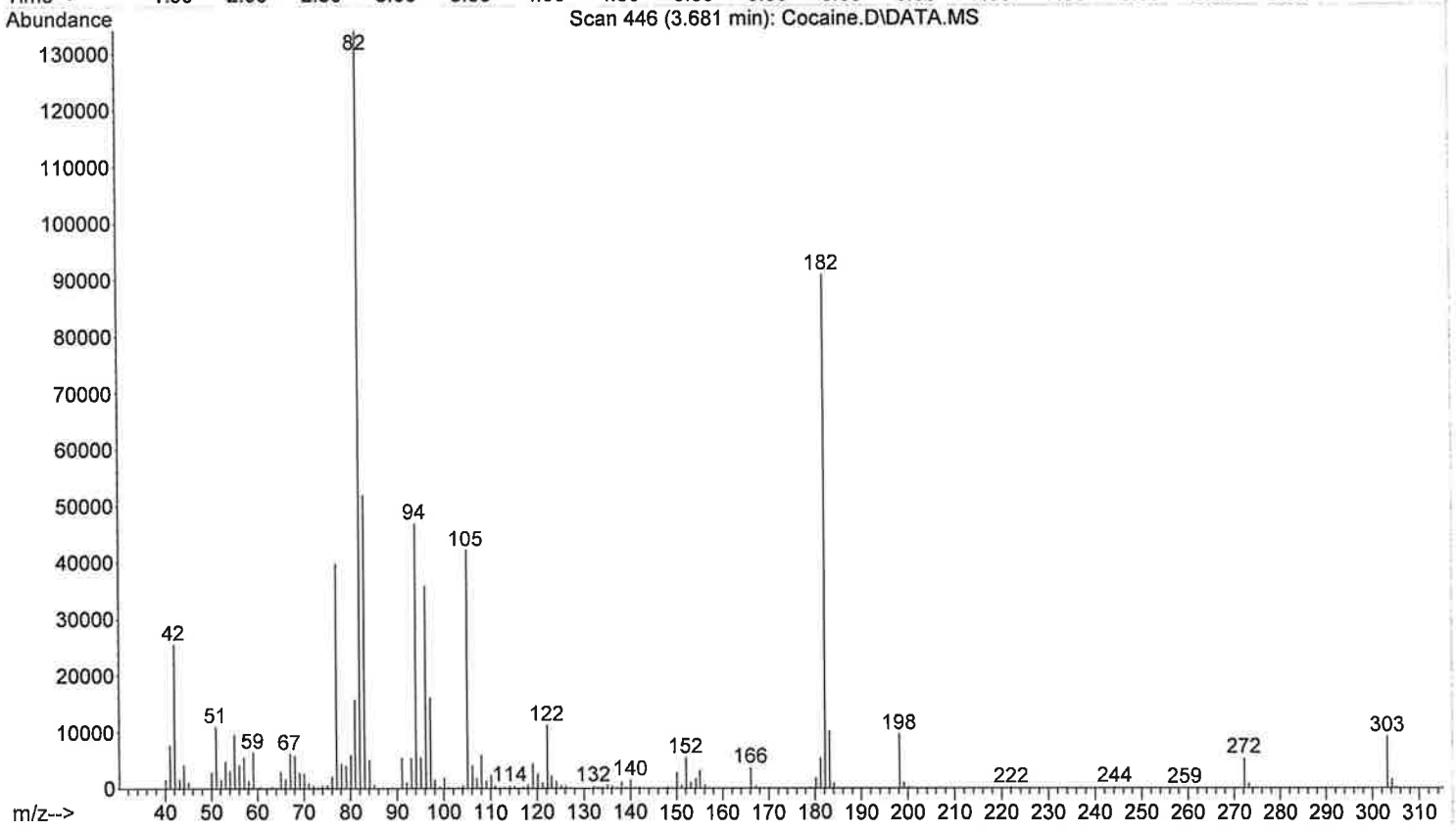


File :C:\MSDChem\1\DATA\DF\CLONAZEPAM.D
Operator : DONNA
Acquired : 23 Jun 2006 13:56 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: CLONAZEPAM
Misc Info : HOFFMAN-ROCHE#012077
Vial Number: 1

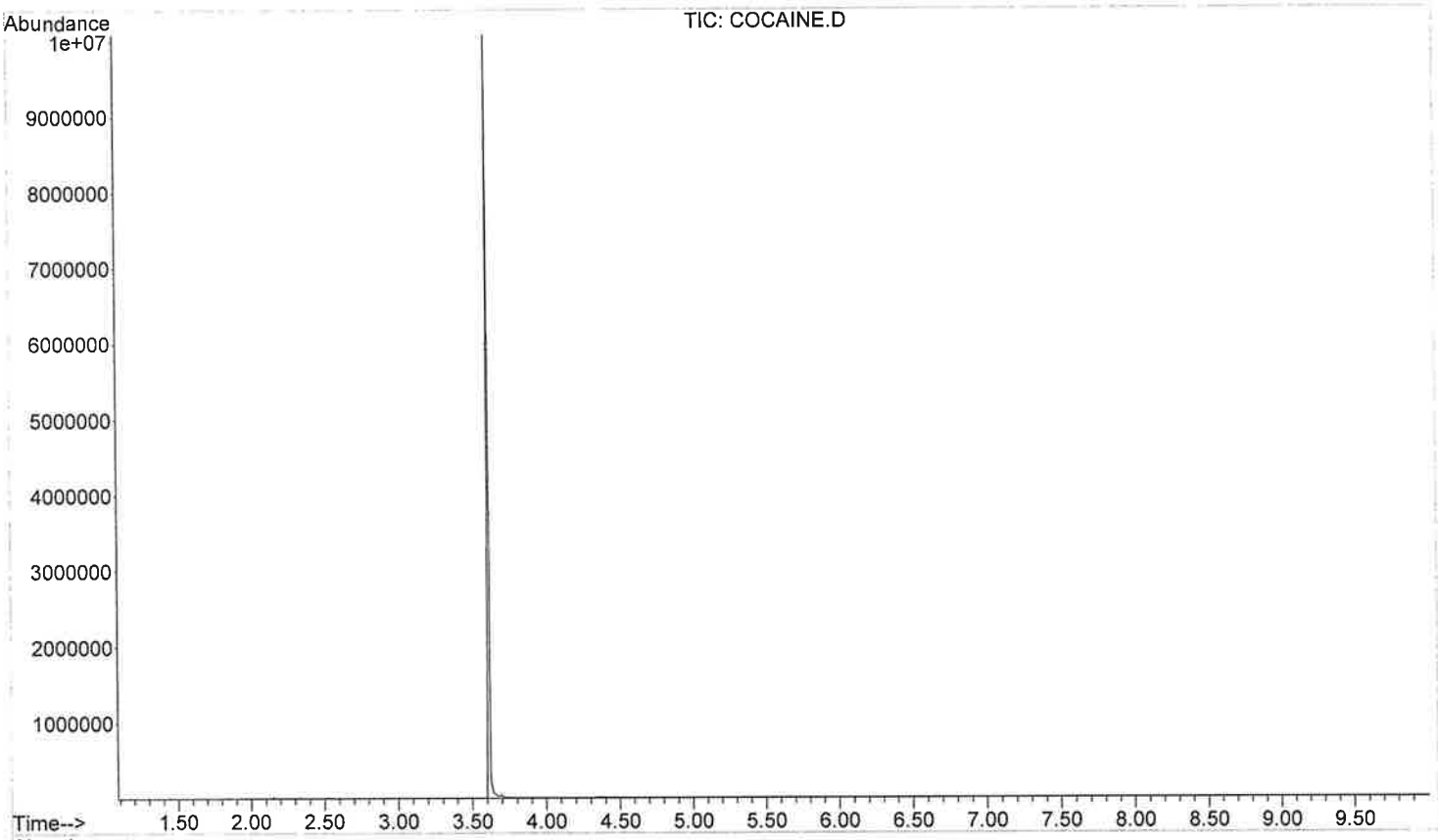


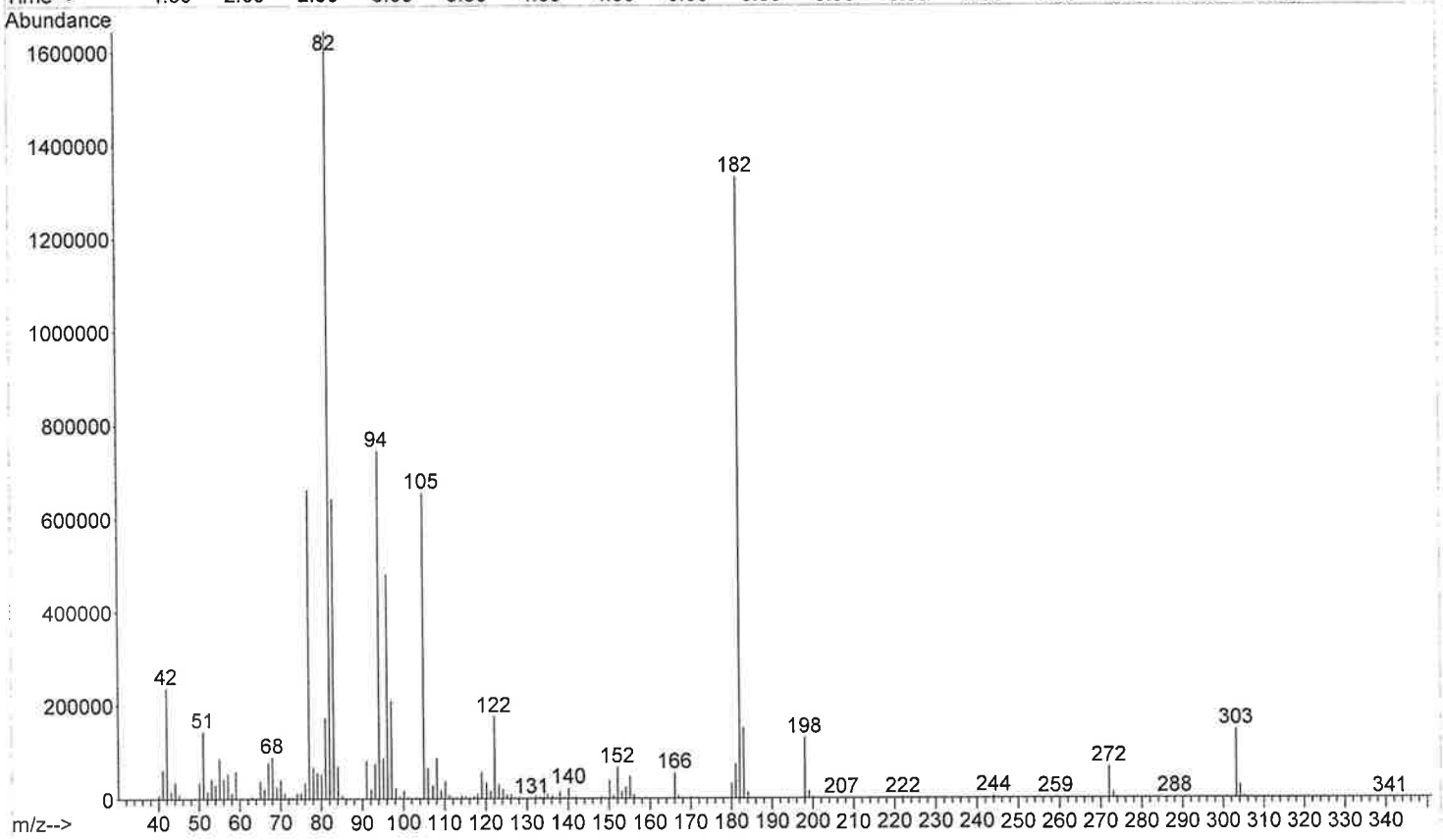
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Cocaine.D
Operator : DF
Acquired : 7 Jun 2006 5:45 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Cocaine
Misc Info : Sigma Lot#50K1124 MeOH
Vial Number: 8



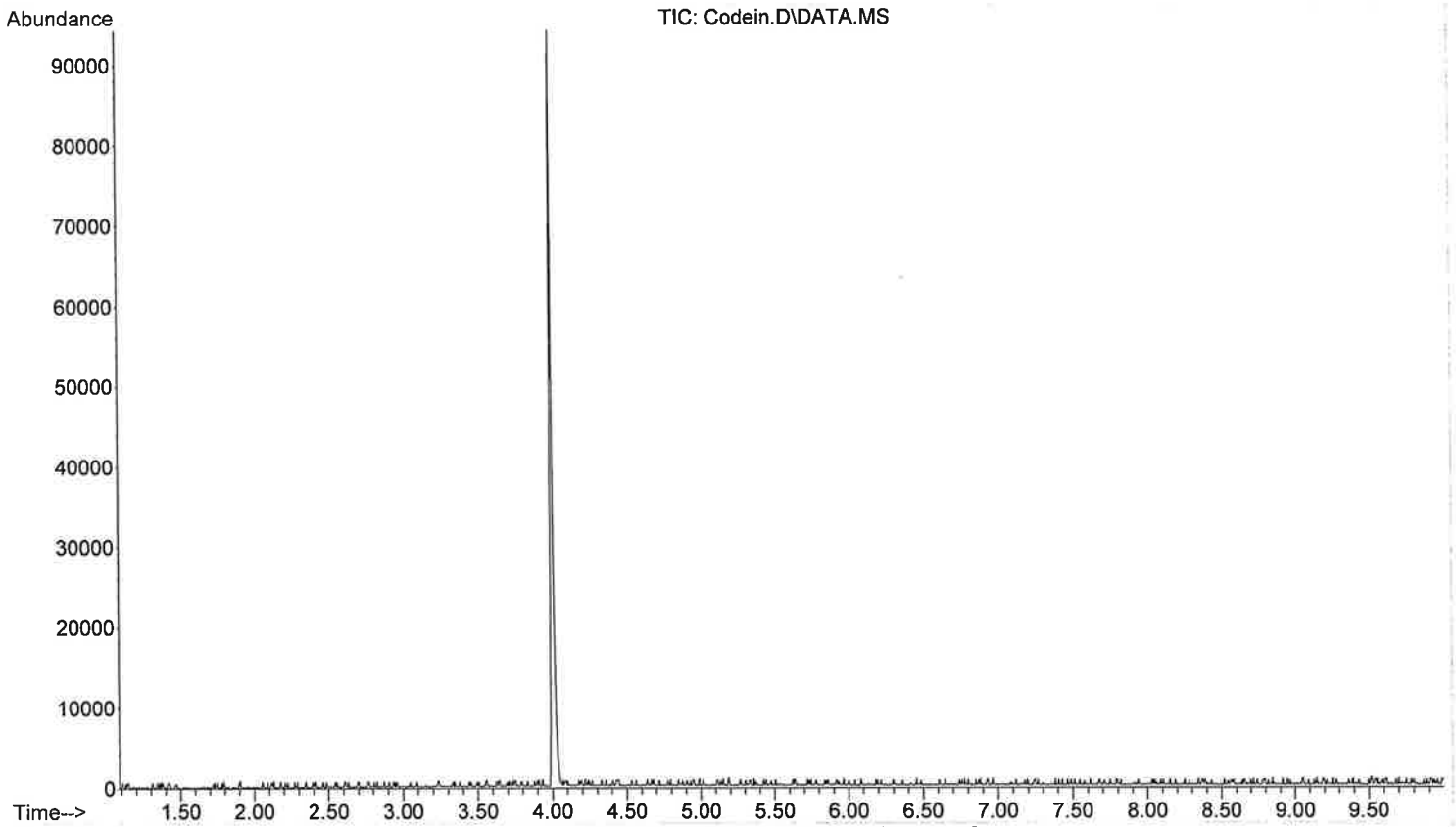


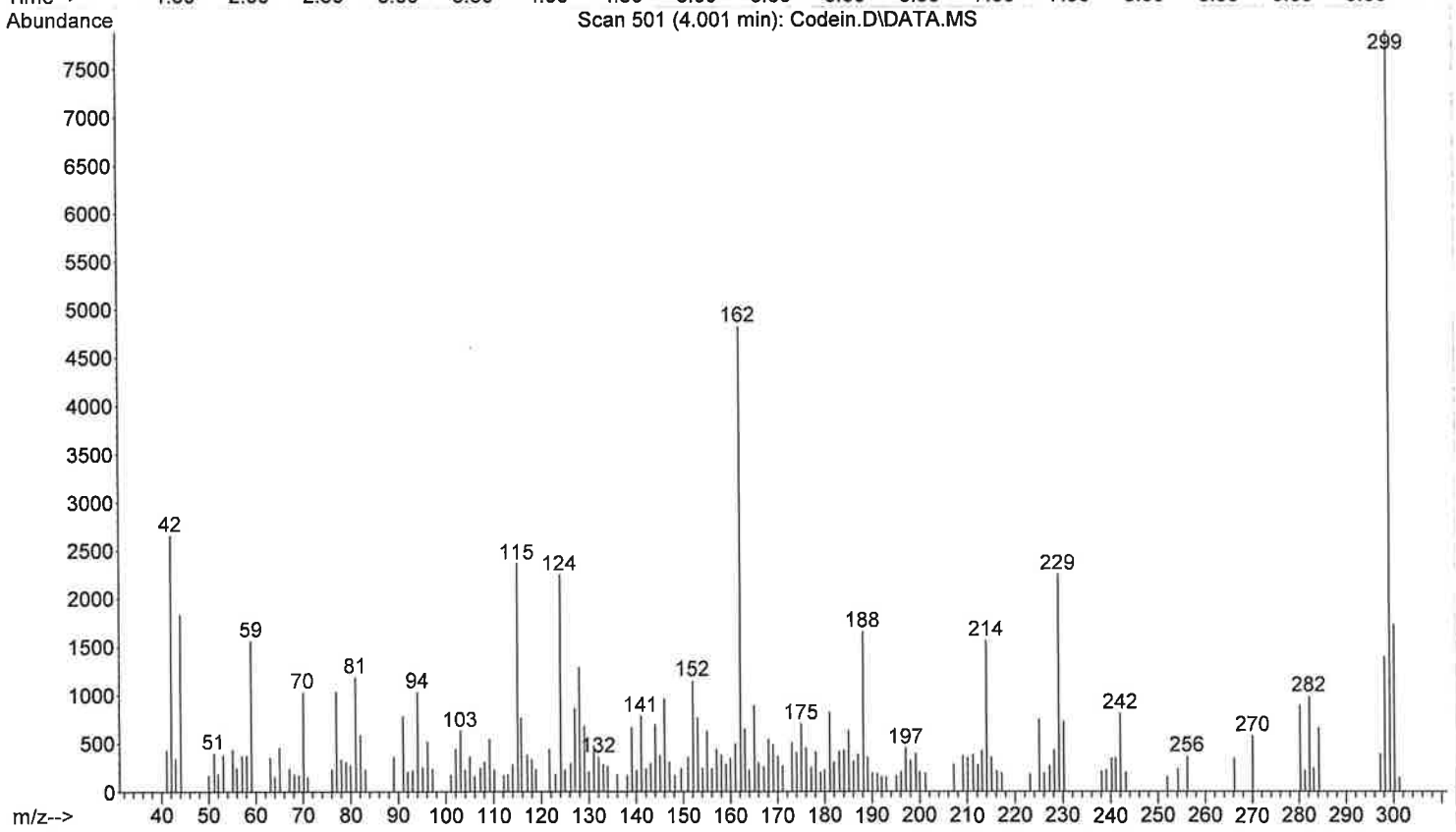
File :C:\MSDChem\1\DATA\DF\COCAINE.D
Operator : DONNA
Acquired : 9 Jun 2006 18:44 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: COCAINE
Misc Info : SIGMA LOT#50K1124 MEOH
Vial Number: 8



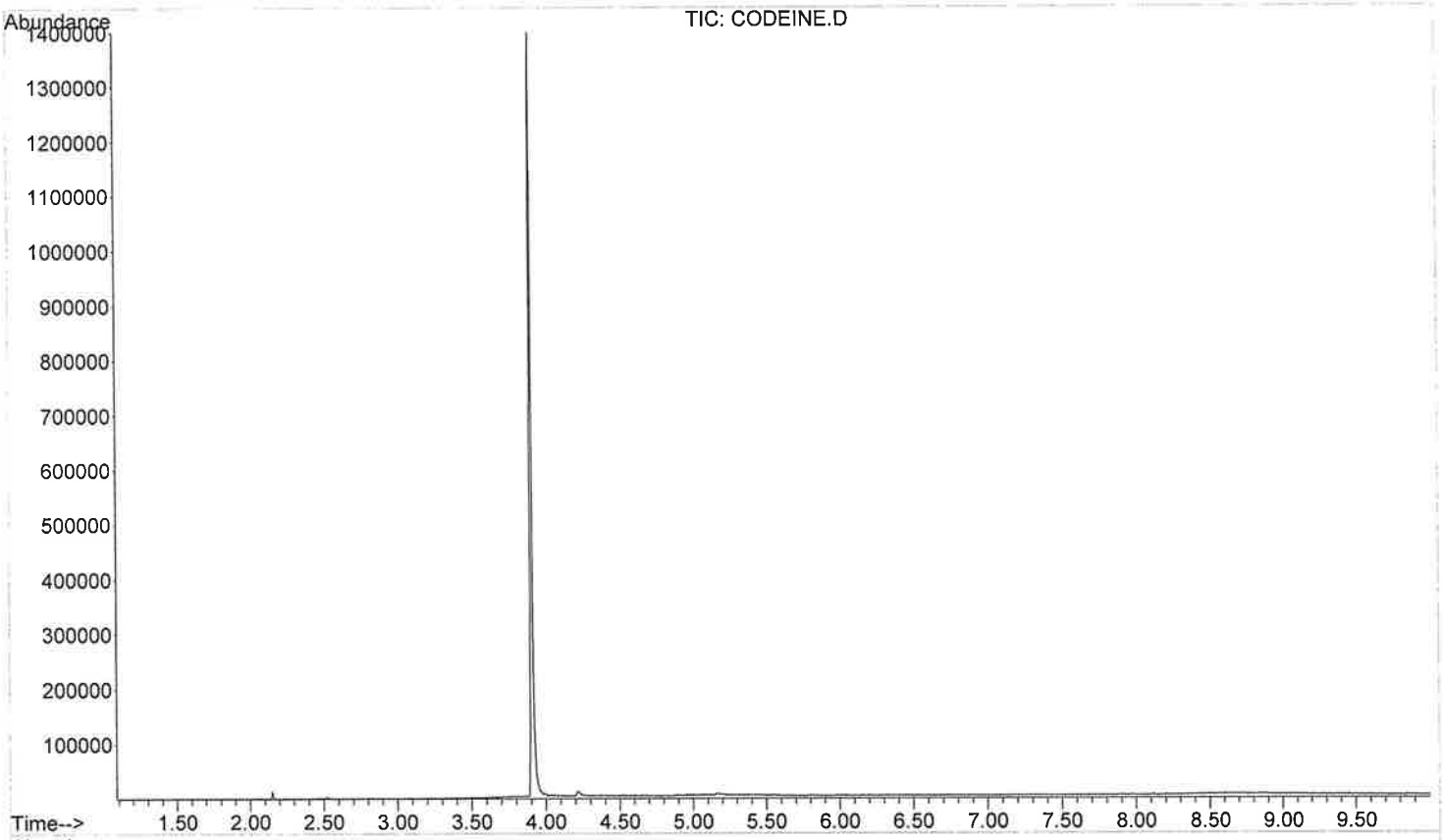


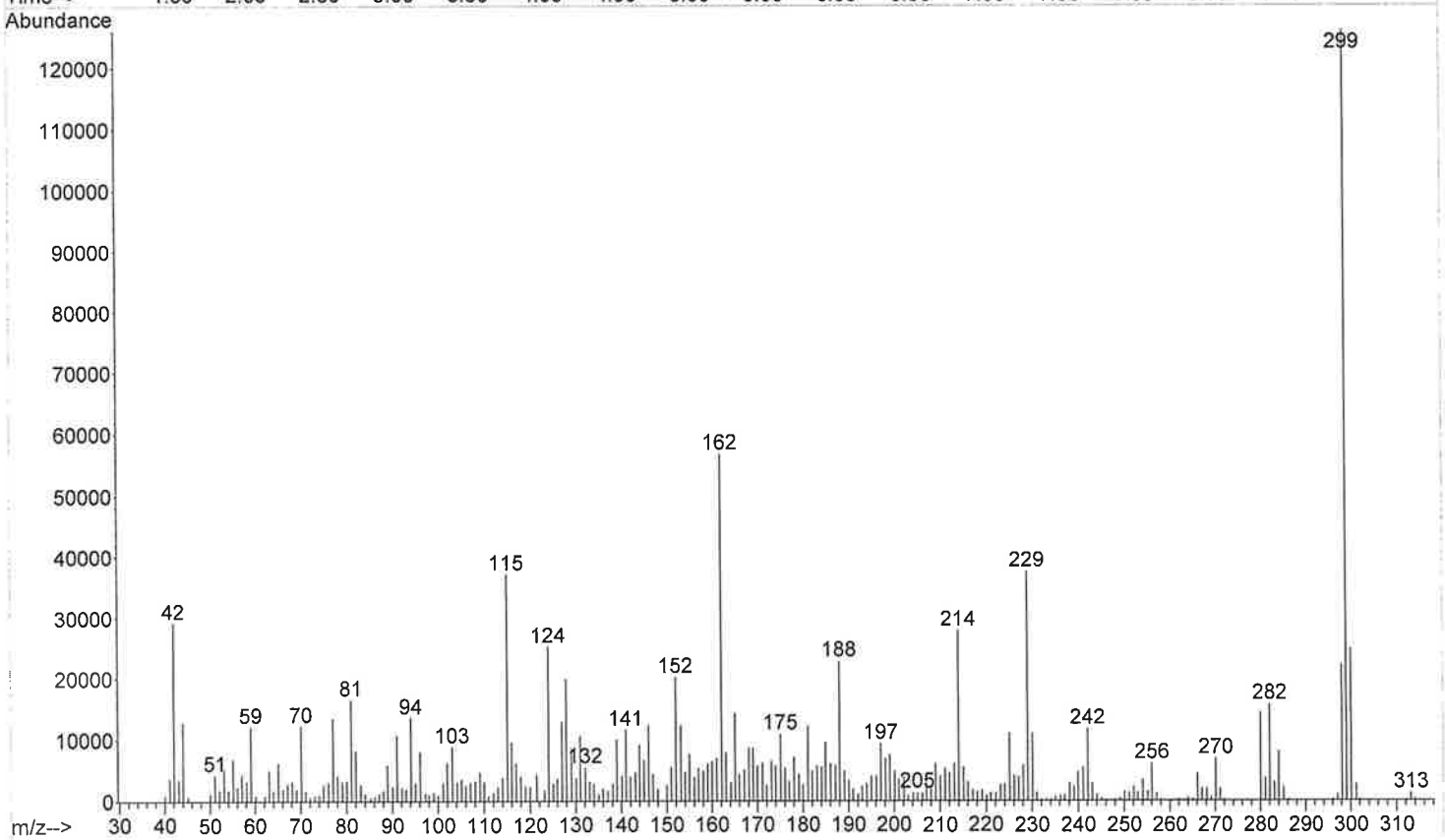
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Codein.D
Operator : DX
Acquired : 7 Jun 2006 6:14 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Codeine
Misc Info : Merck Lot#16804 MeOH
Vial Number: 9



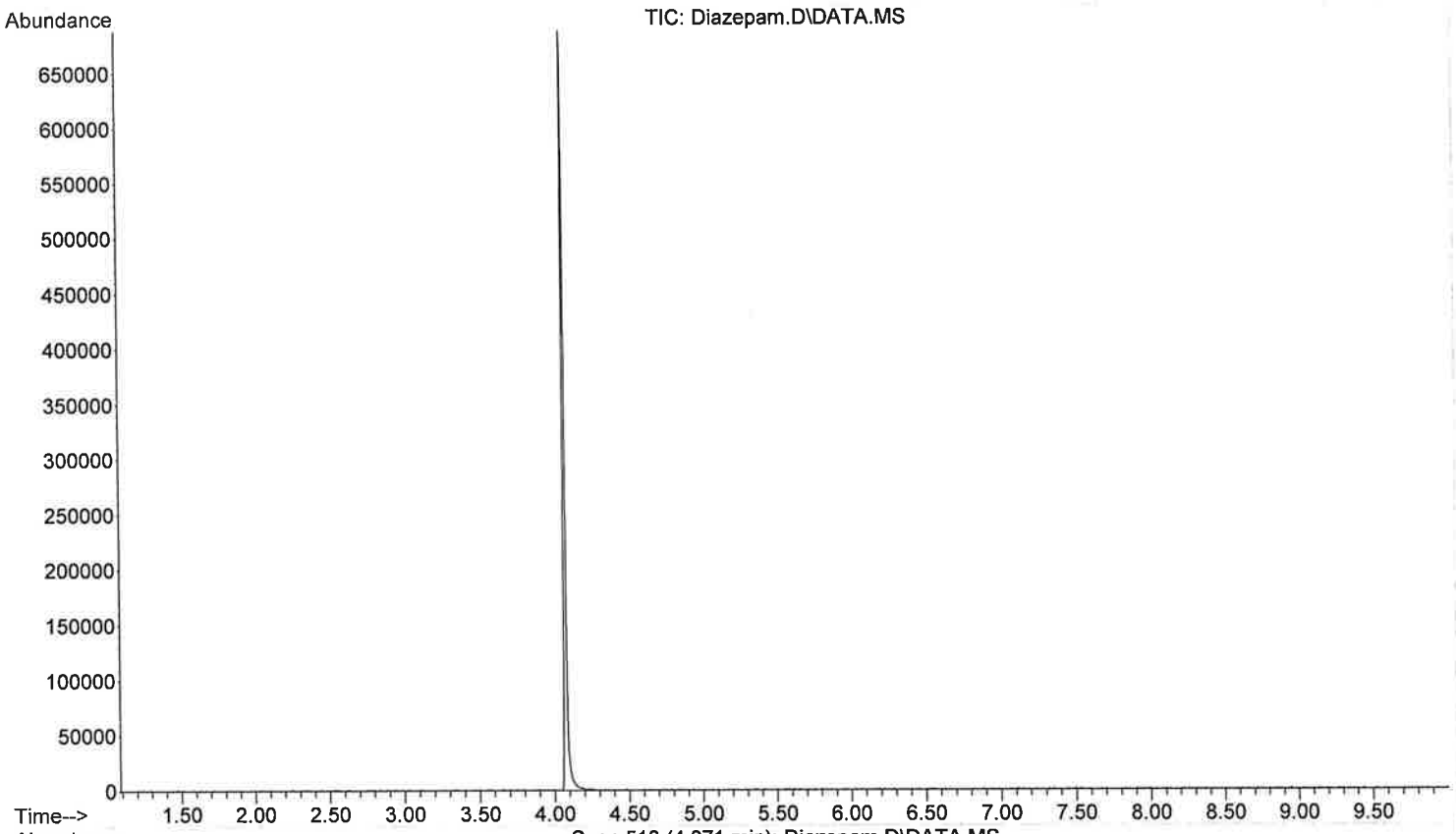


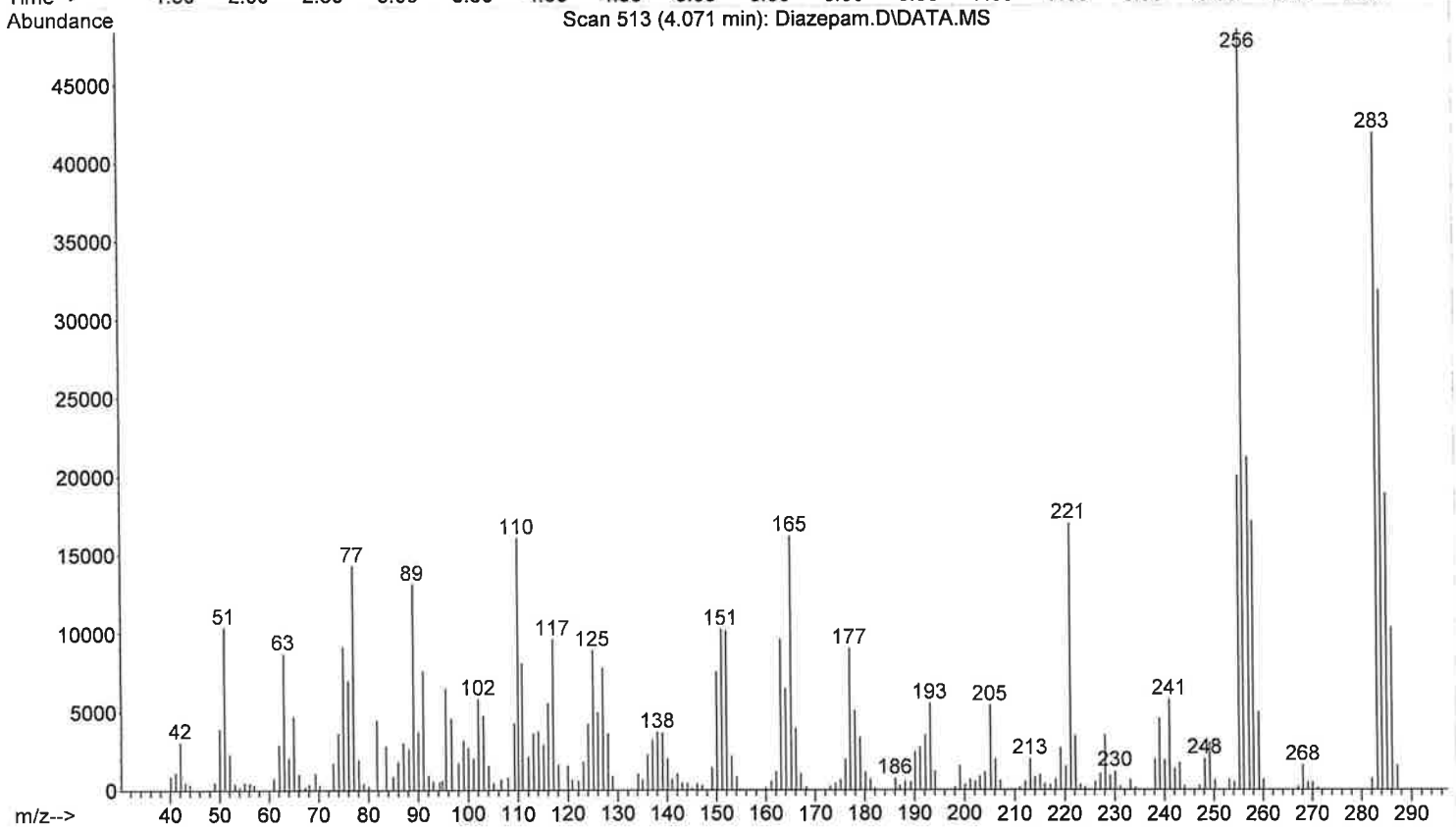
File :C:\MSDChem\1\DATA\DF\CODEINE.D
Operator : DONNA
Acquired : 9 Jun 2006 19:13 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: CODEINE
Misc Info : MERCK LOT#16804 MEOH
Vial Number: 9



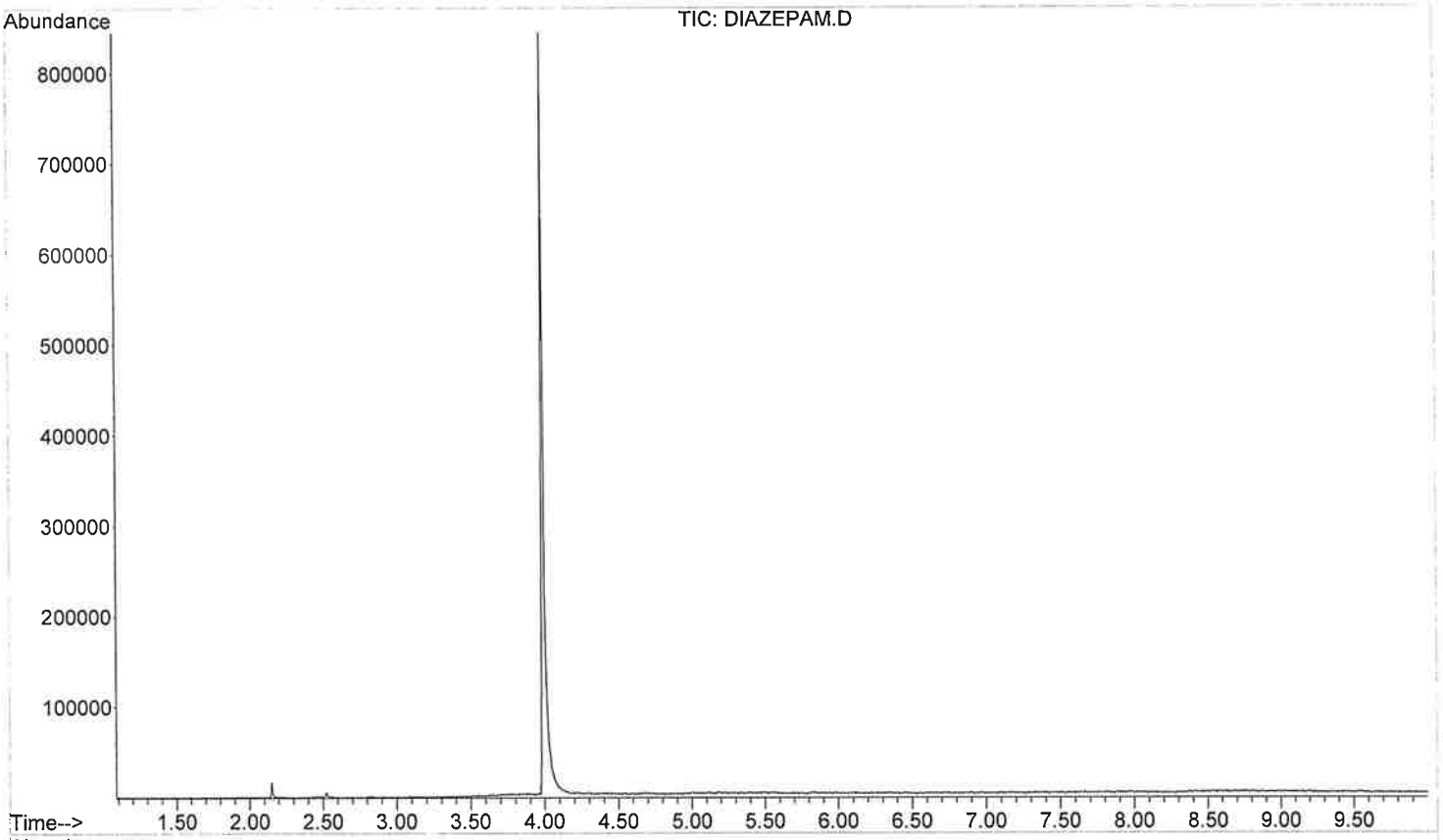


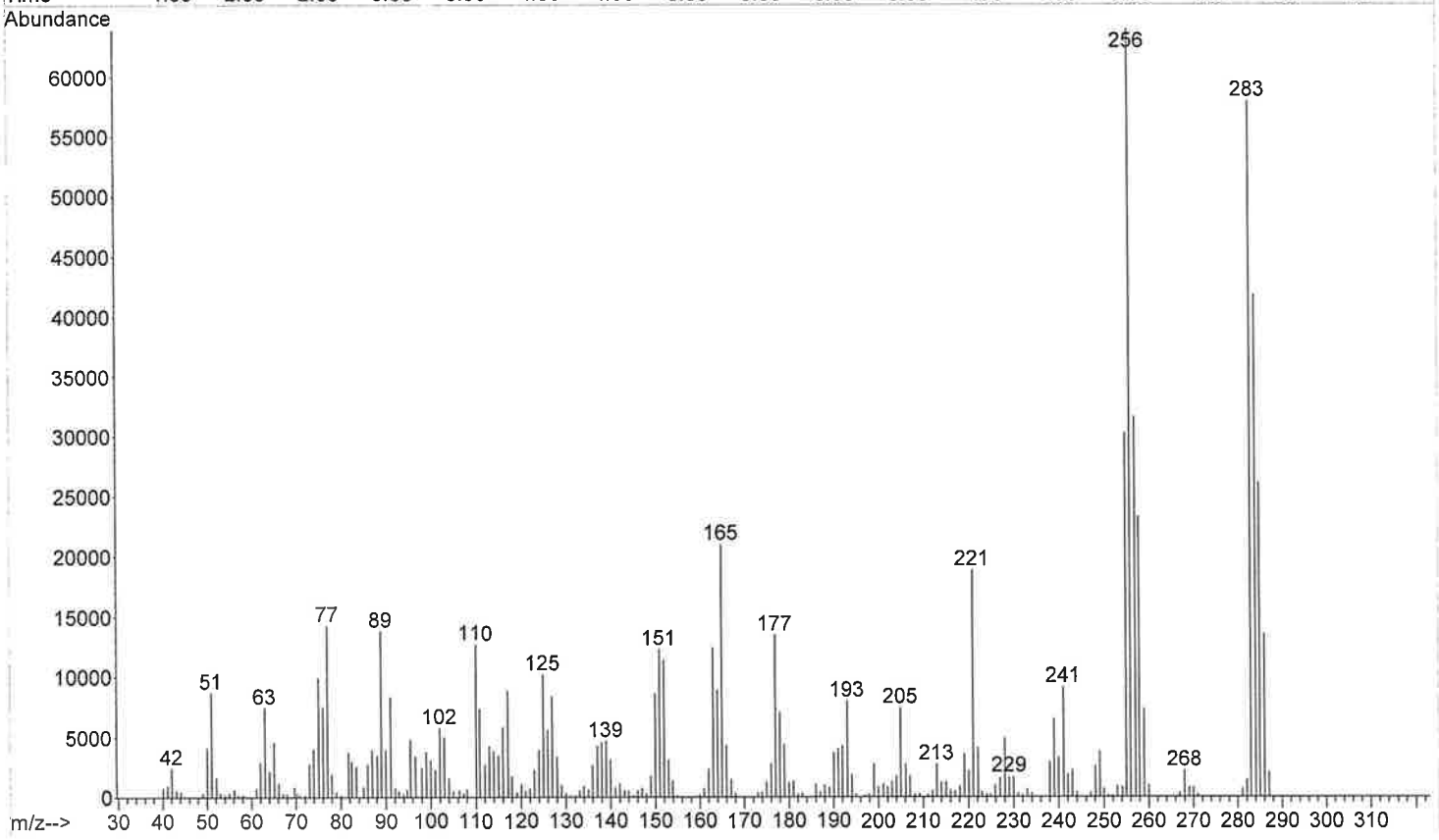
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Diazepam.D
Operator : DX
Acquired : 7 Jun 2006 6:42 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Diazepam
Misc Info : Sigma Lot# 105F0451 MeOH
Vial Number: 10



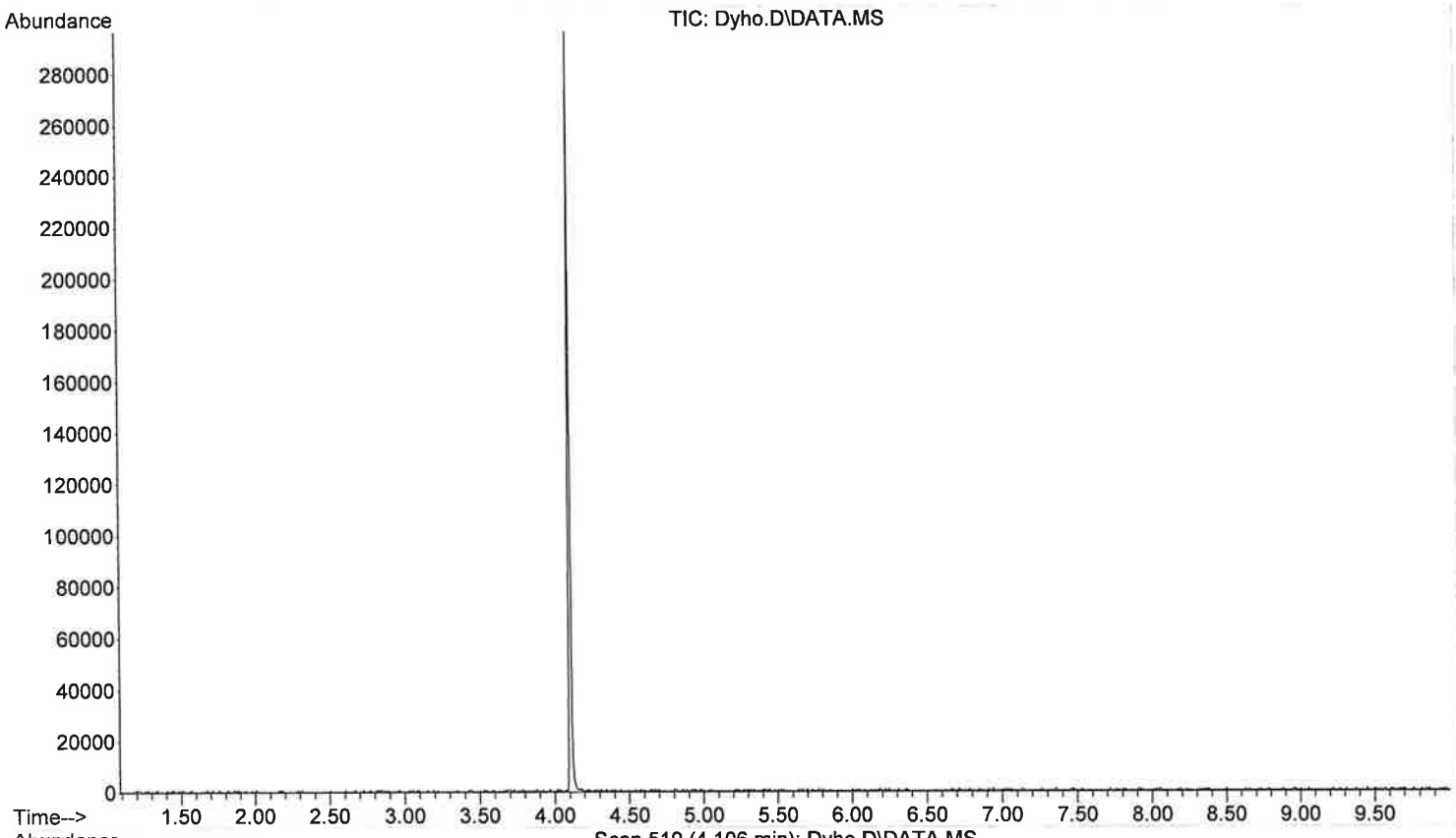


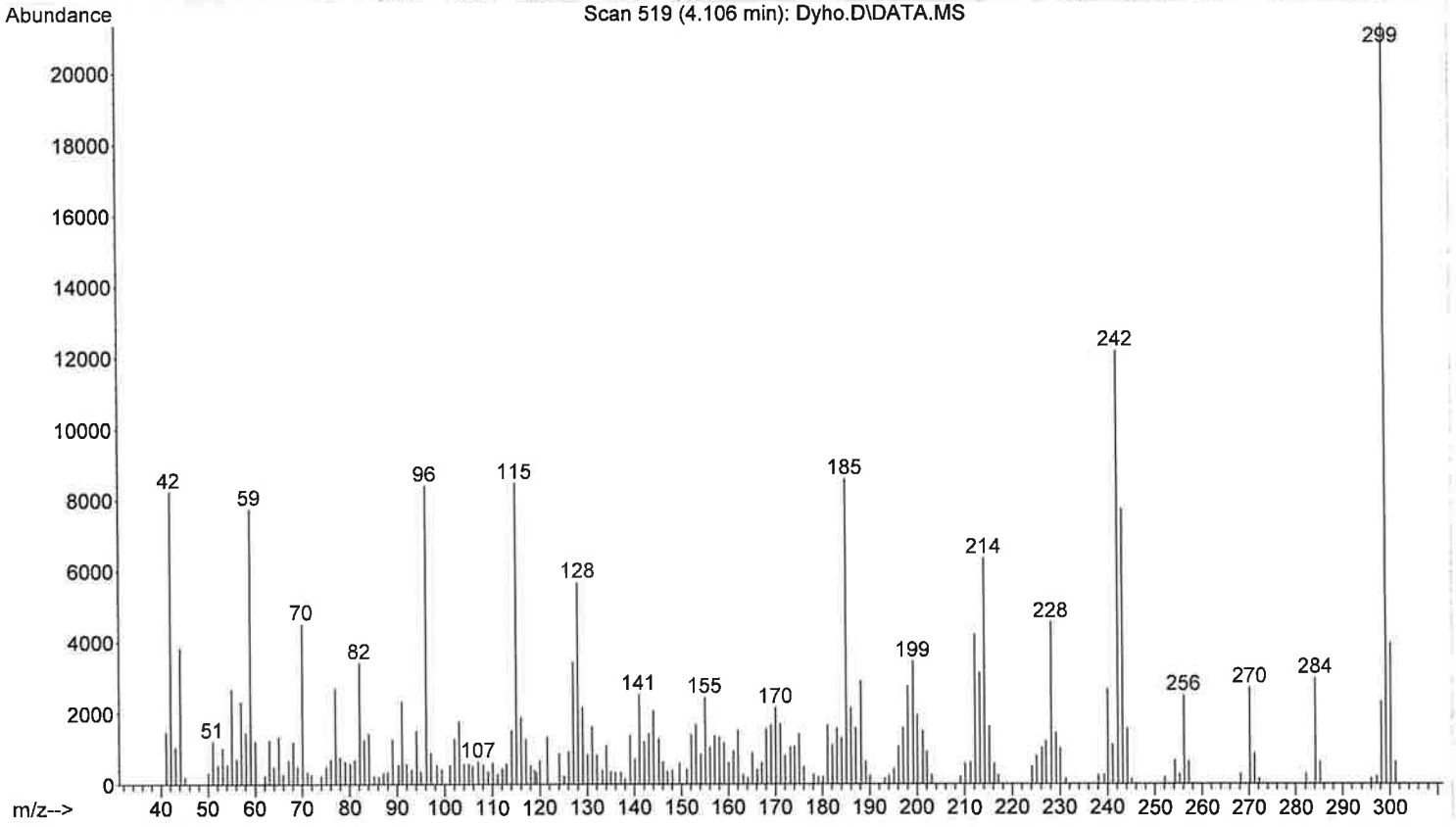
File :C:\MSDChem\1\DATA\DF\DIAZEPAM.D
Operator : DONNA
Acquired : 9 Jun 2006 19:42 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: DIAZEPAM
Misc Info : SIGMA LOT#105F0451 MEOH
Vial Number: 10



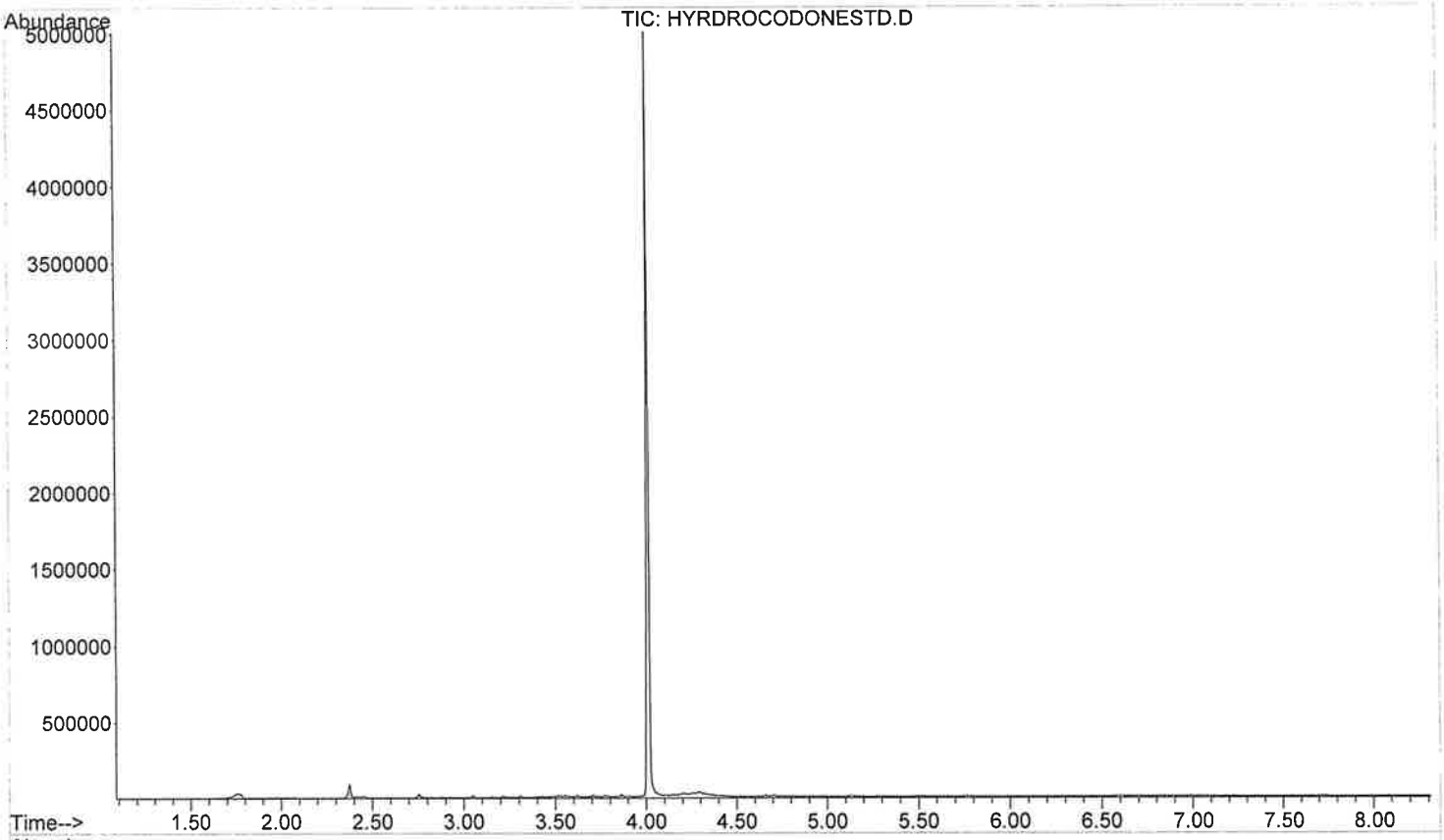


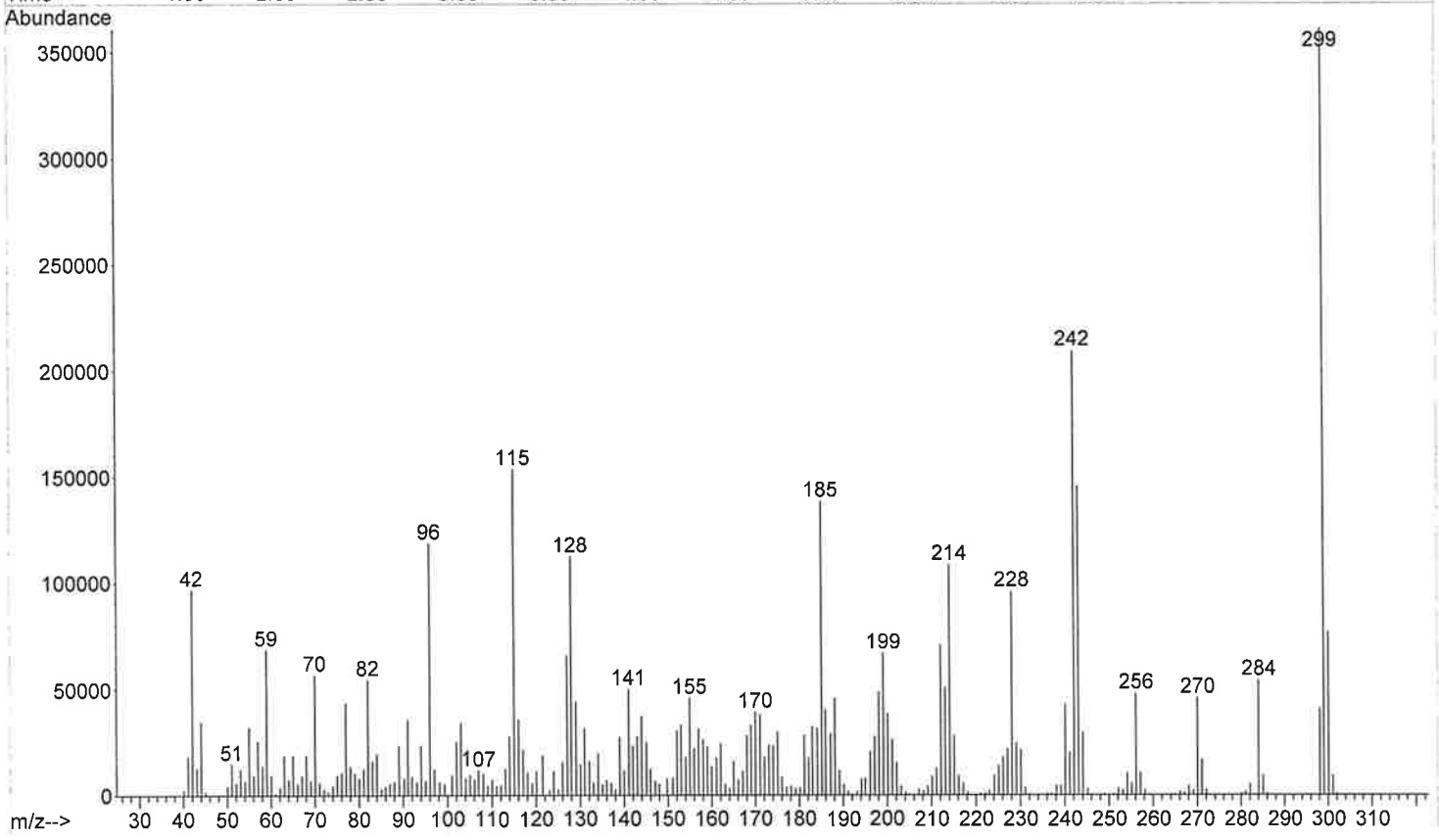
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Dyho.D
Operator : DT
Acquired : 7 Jun 2006 7:10 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Dihydrocodeinone
Misc Info : Merck Lot# V1526 MeOH
Vial Number: 11



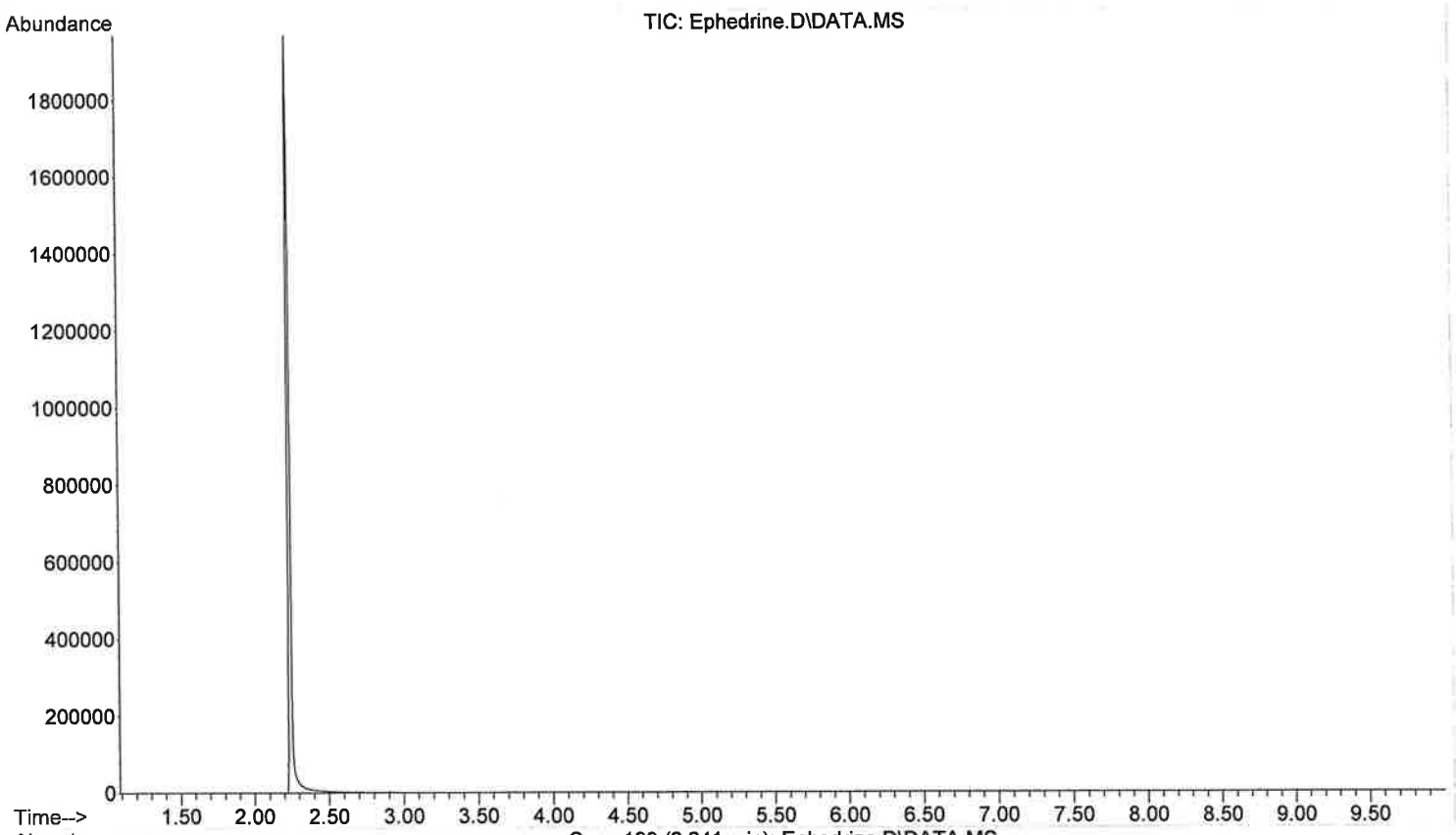


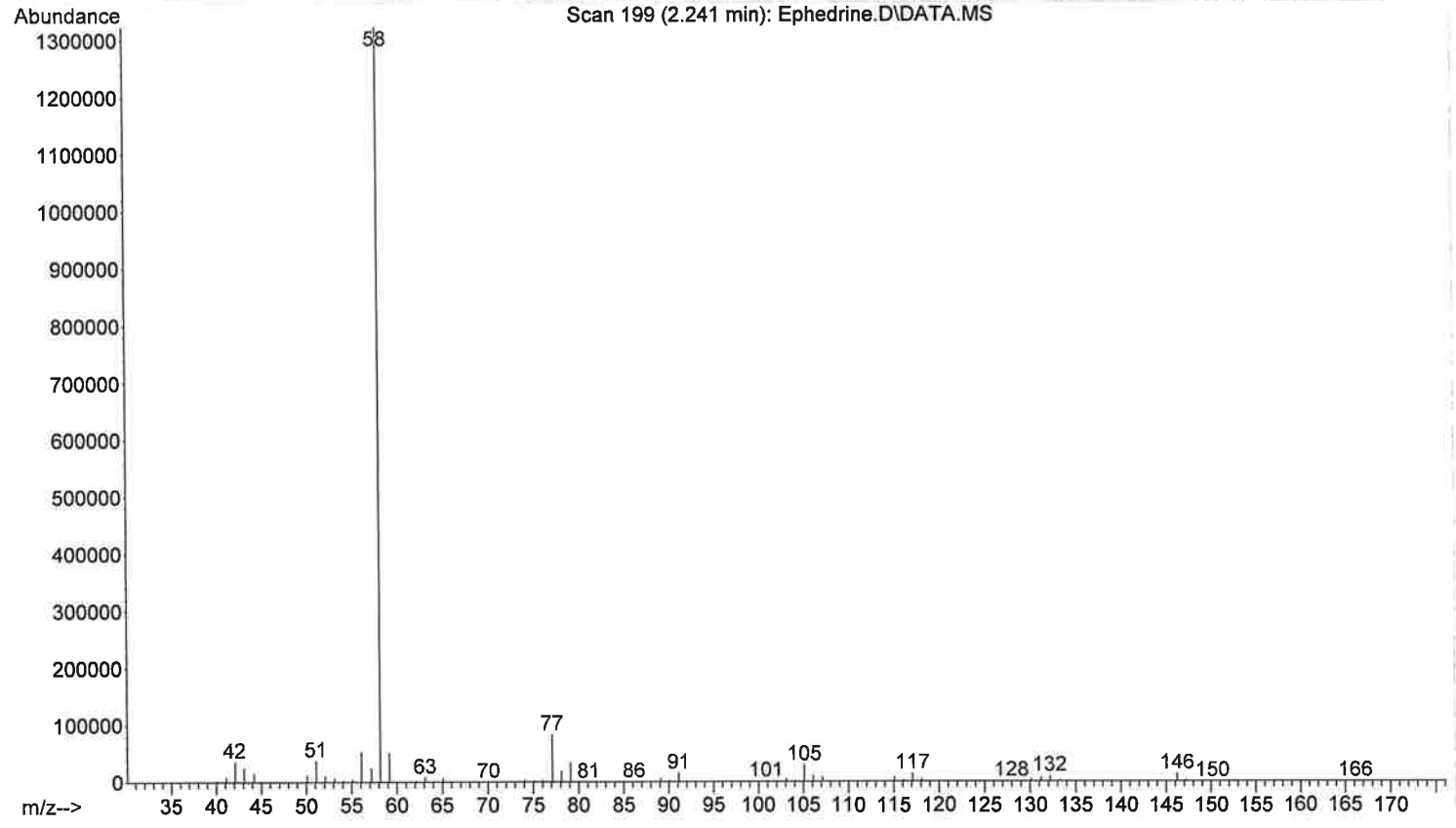
File :C:\MSDCHEM\1\DATA\DF\Snapshot\HYRDROCODONESTD.D
Operator : DONNA FLOWERS
Acquired : 19 Jul 2006 15:17 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: HYRDROCODONE STD IN MEOH
Misc Info : MERCK LOT#V1526
Vial Number: 1



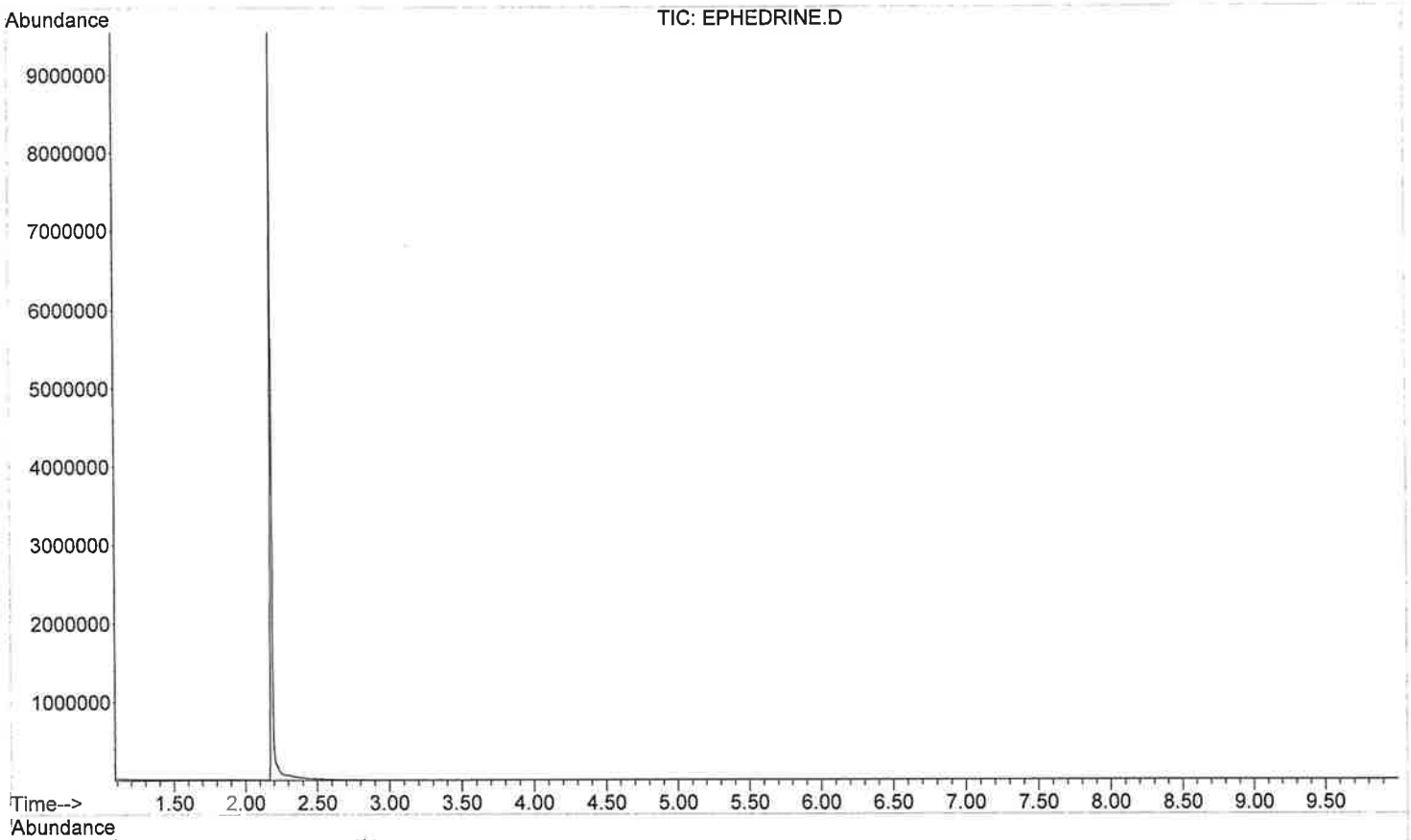


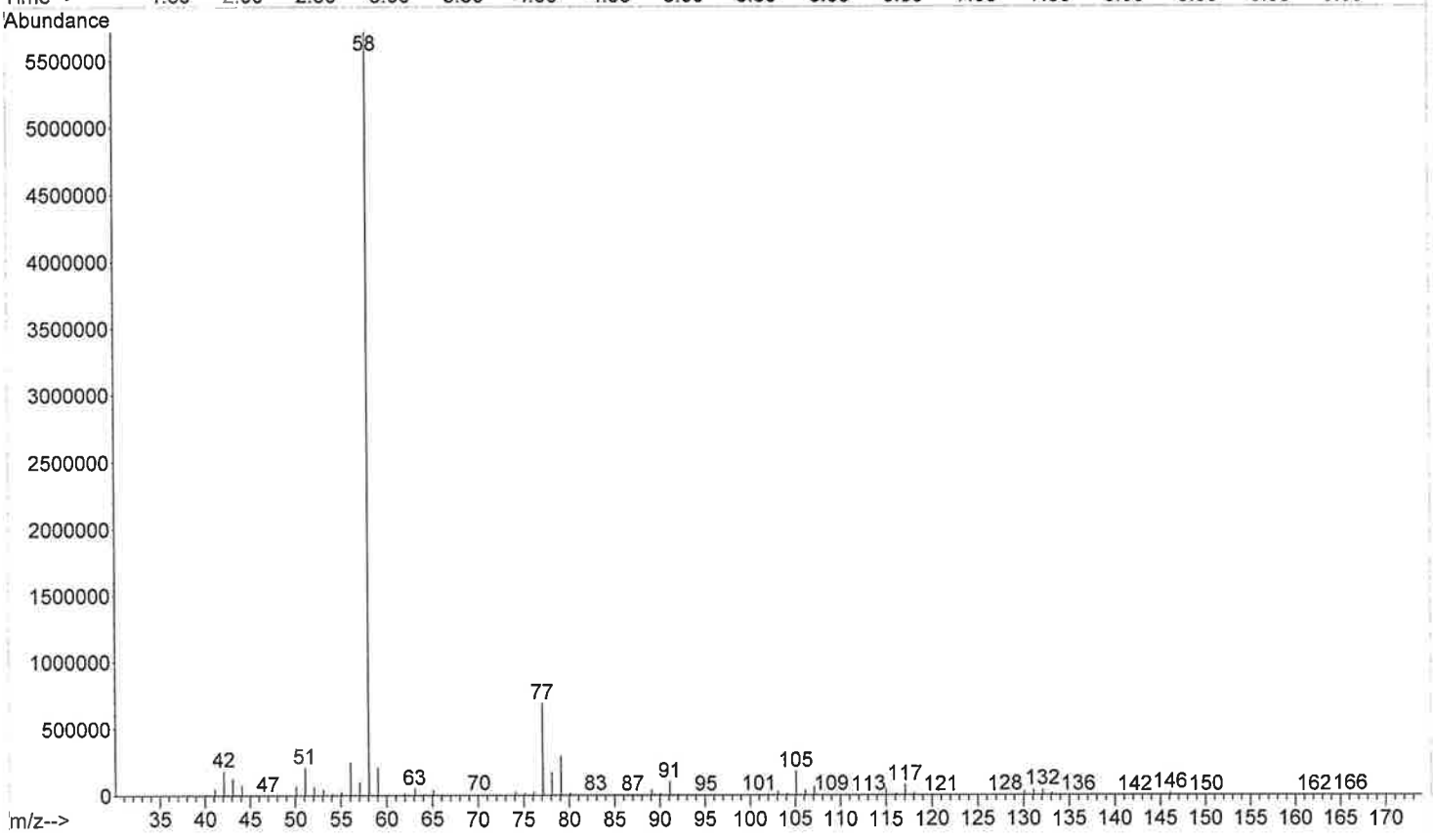
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Ephedrine.D
Operator : DM
Acquired : 7 Jun 2006 7:38 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Ephedrine
Misc Info : Sigma Lot# 128F3541 NaOH>CHCL#
Vial Number: 12



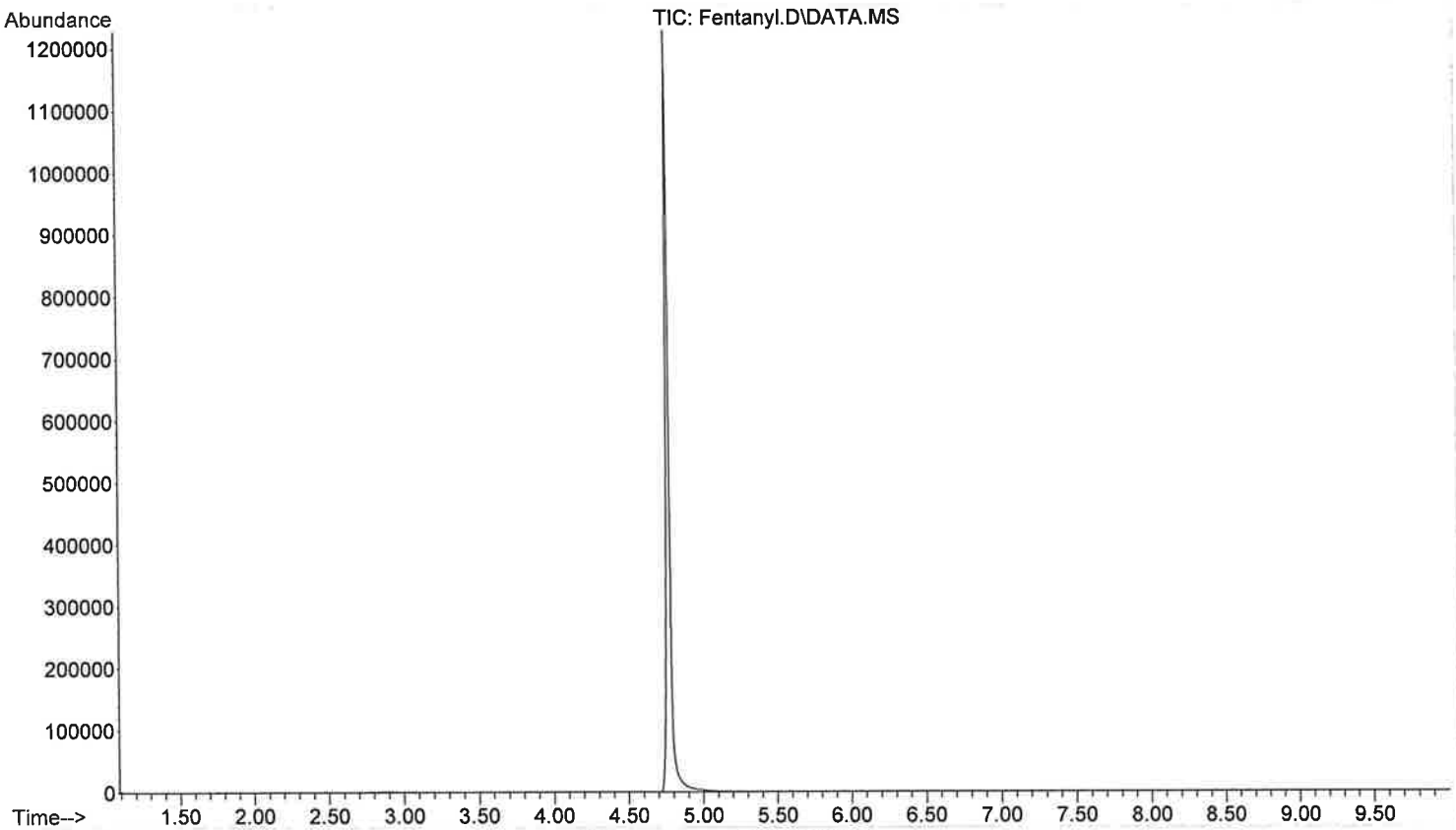


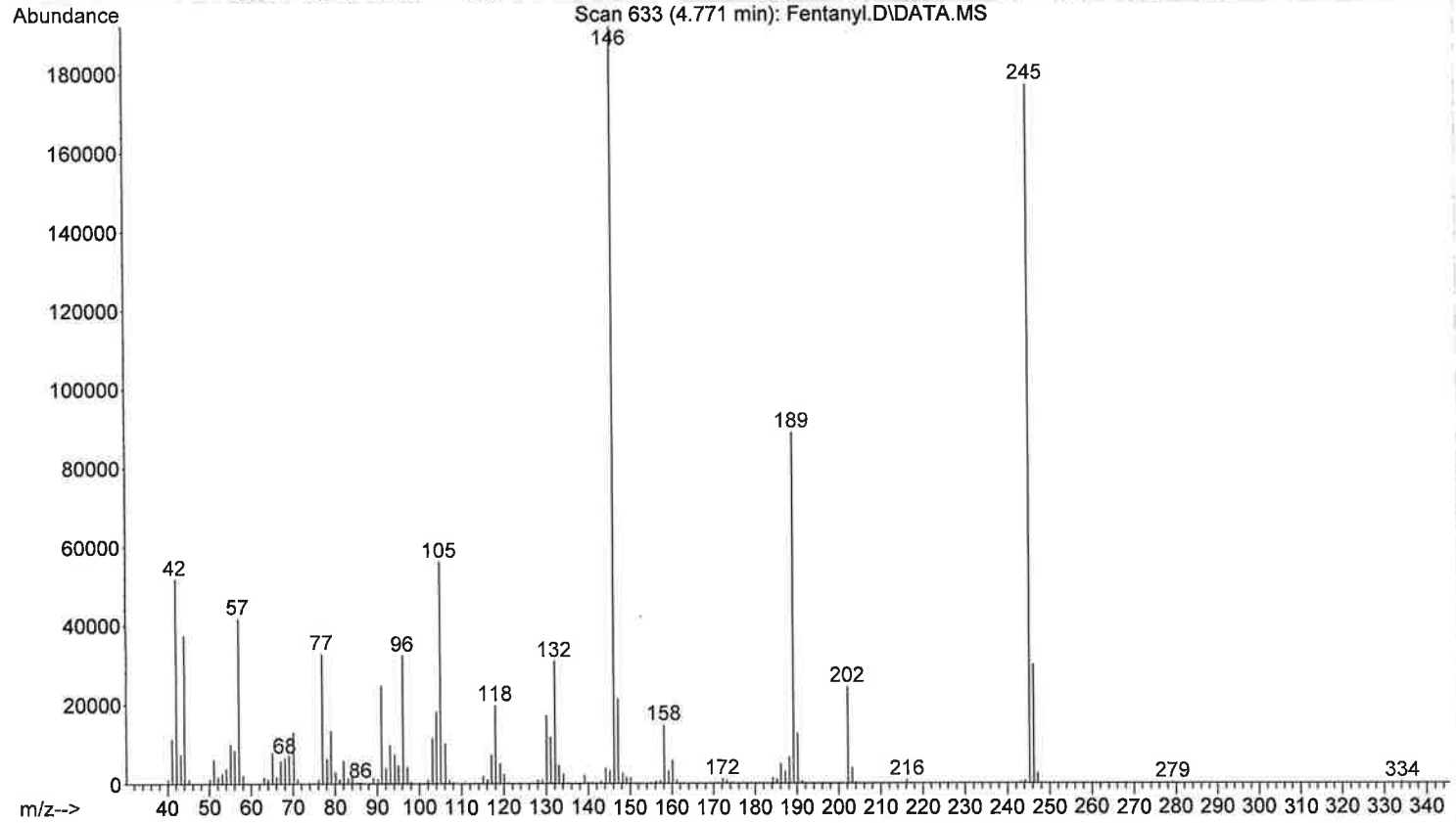
File :C:\MSDChem\1\DATA\DF\EPHEDRINE.D
Operator : DONNA
Acquired : 9 Jun 2006 20:39 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: EPHEDRINE
Misc Info : SIGMA LOT#128F3541
Vial Number: 12



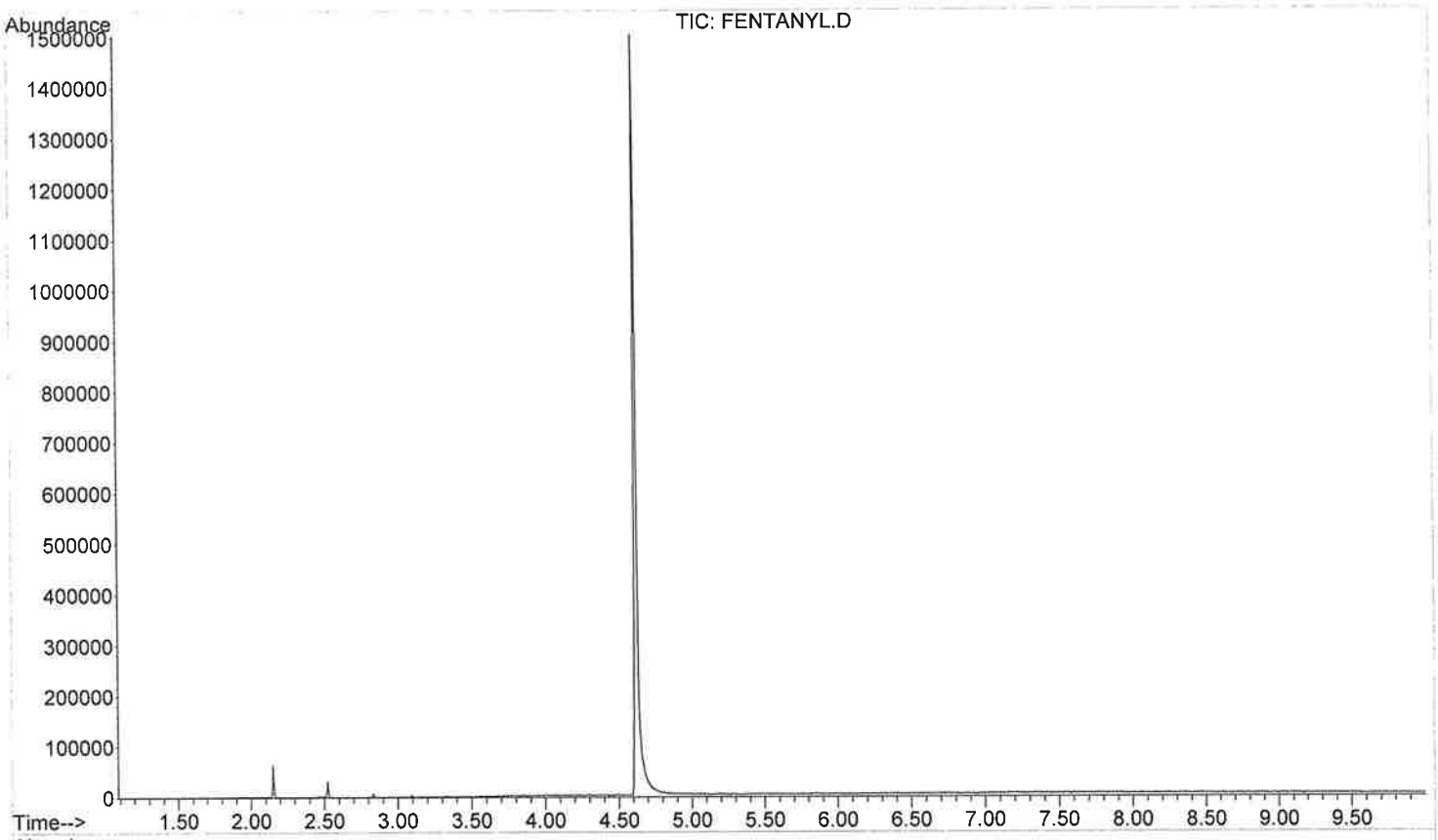


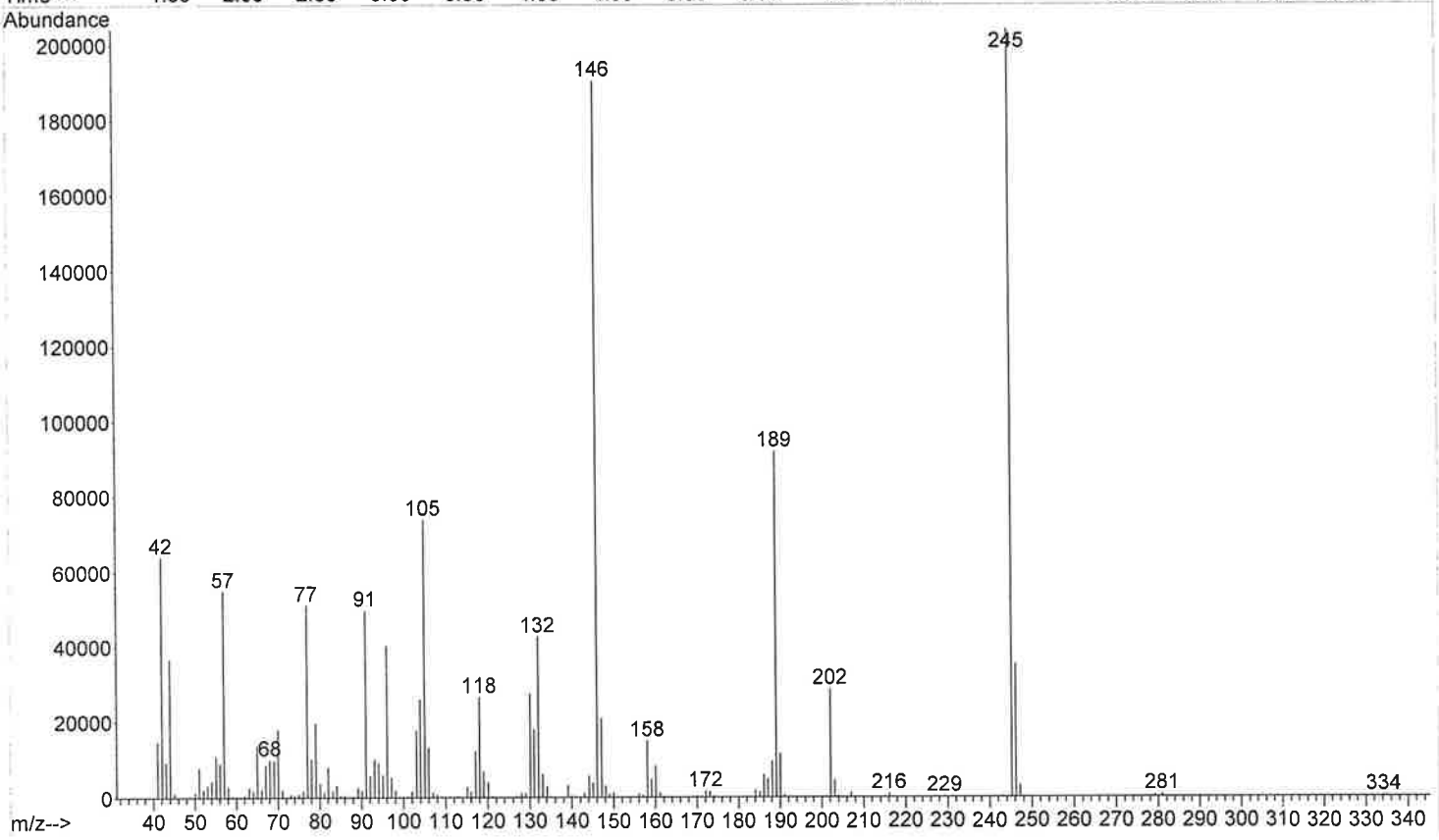
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Fentanyl.D
Operator :
Acquired : 7 Jun 2006 8:07 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Fentanyl
Misc Info : USP Lot# 1275F MeOH
Vial Number: 13



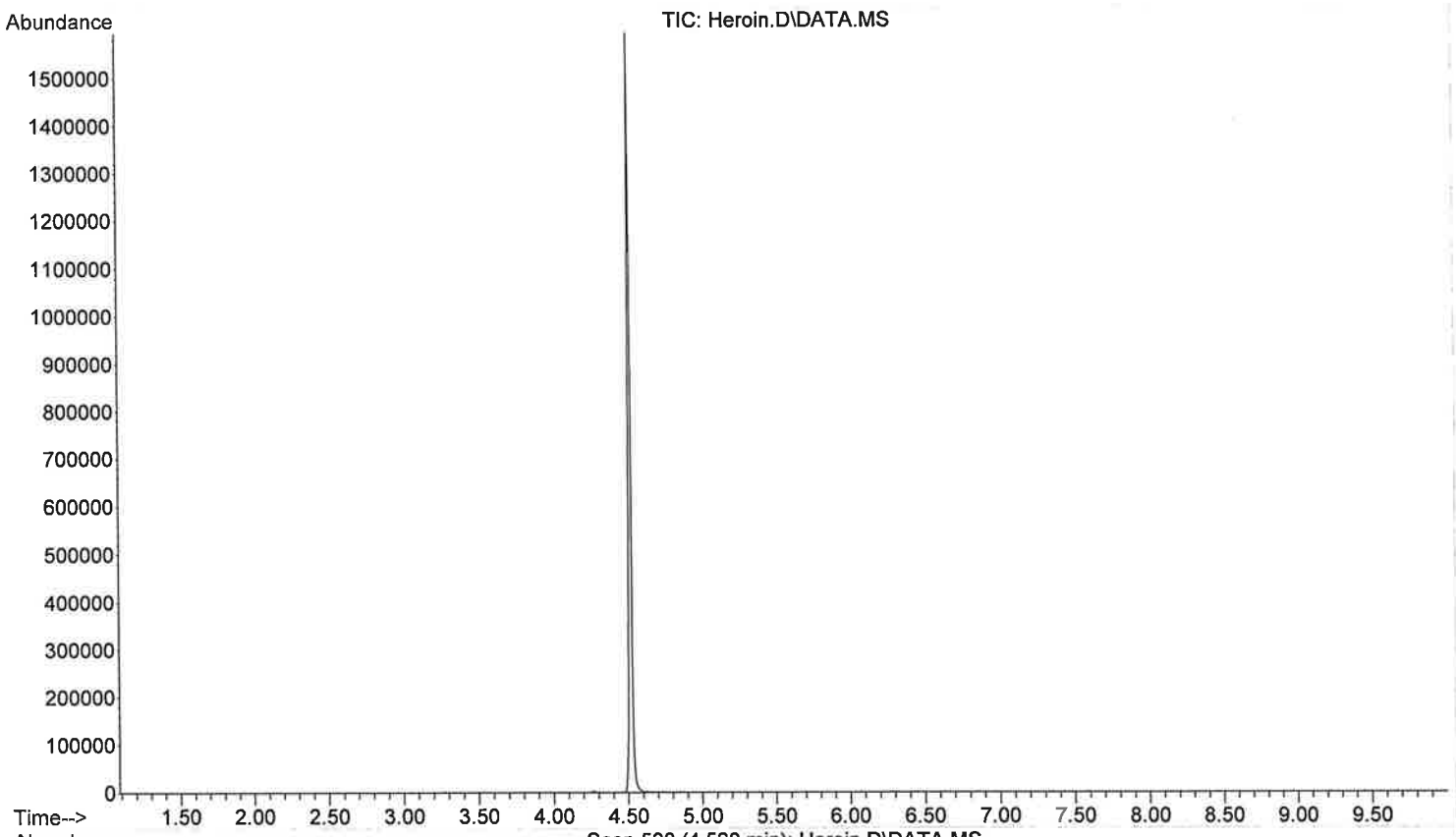


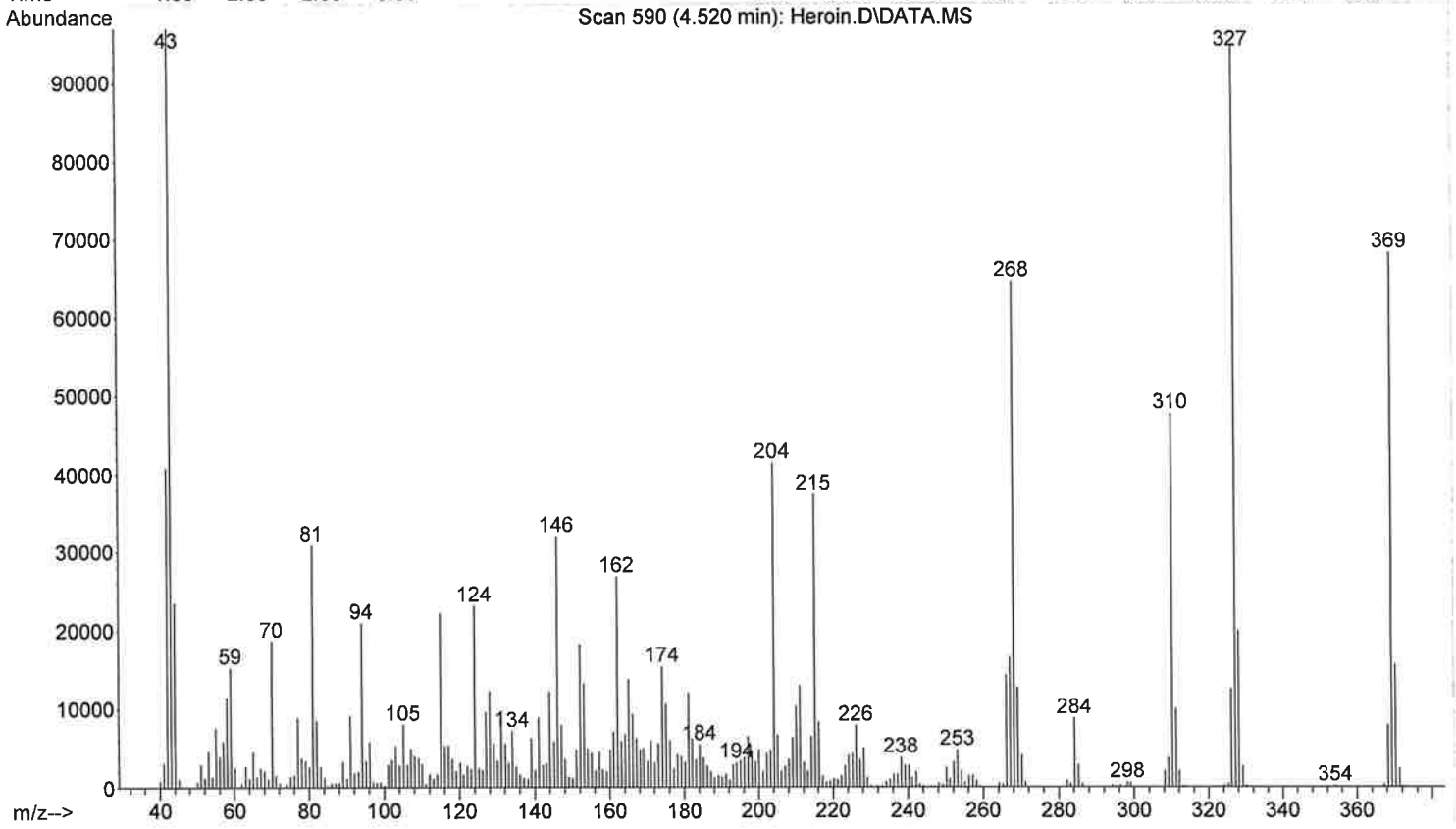
File :C:\MSDChem\1\DATA\DF\FENTANYL.D
Operator : DONNA
Acquired : 9 Jun 2006 21:08 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: FENTANYL
Misc Info : USP 1275-f MEOH
Vial Number: 13



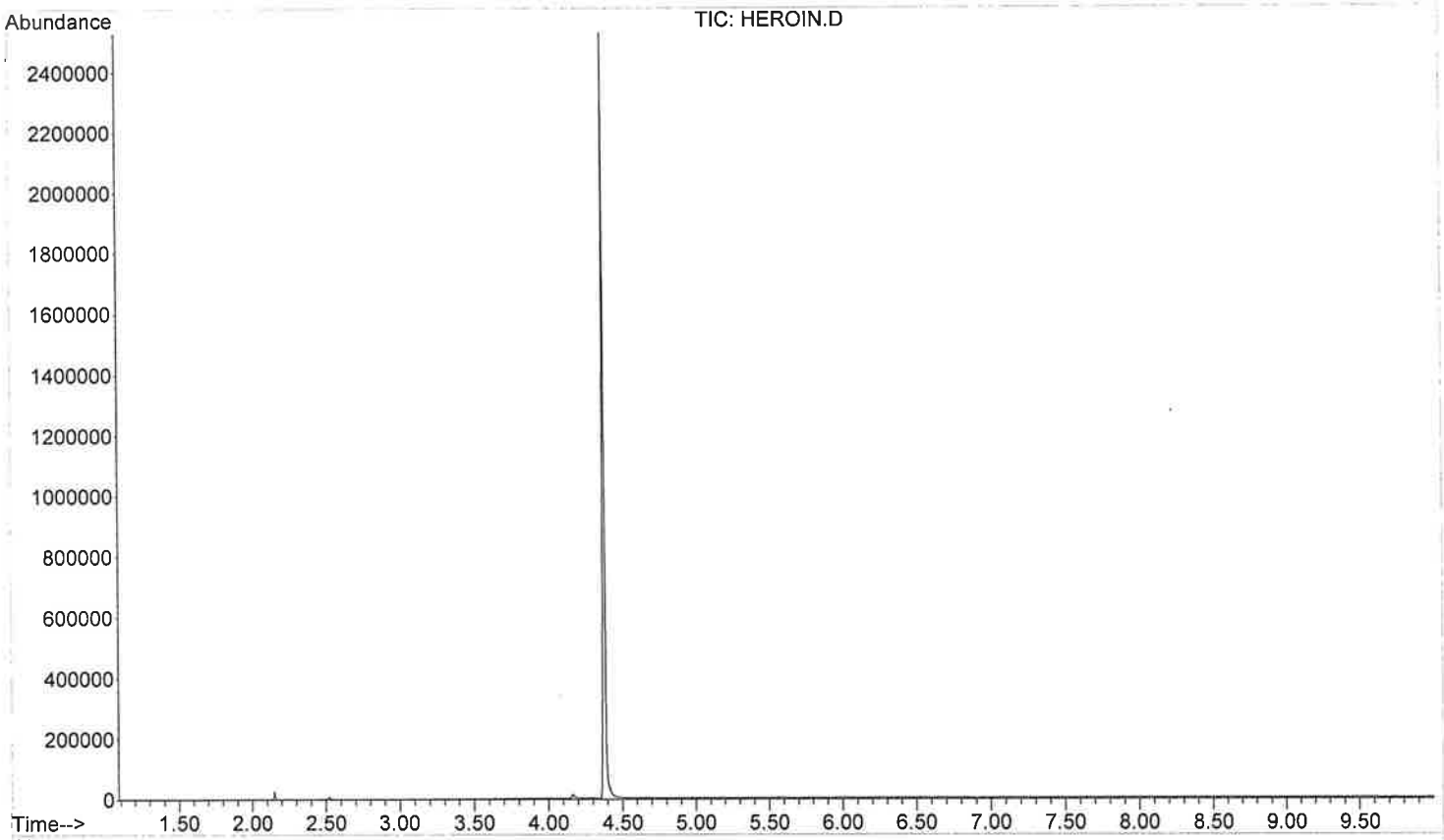


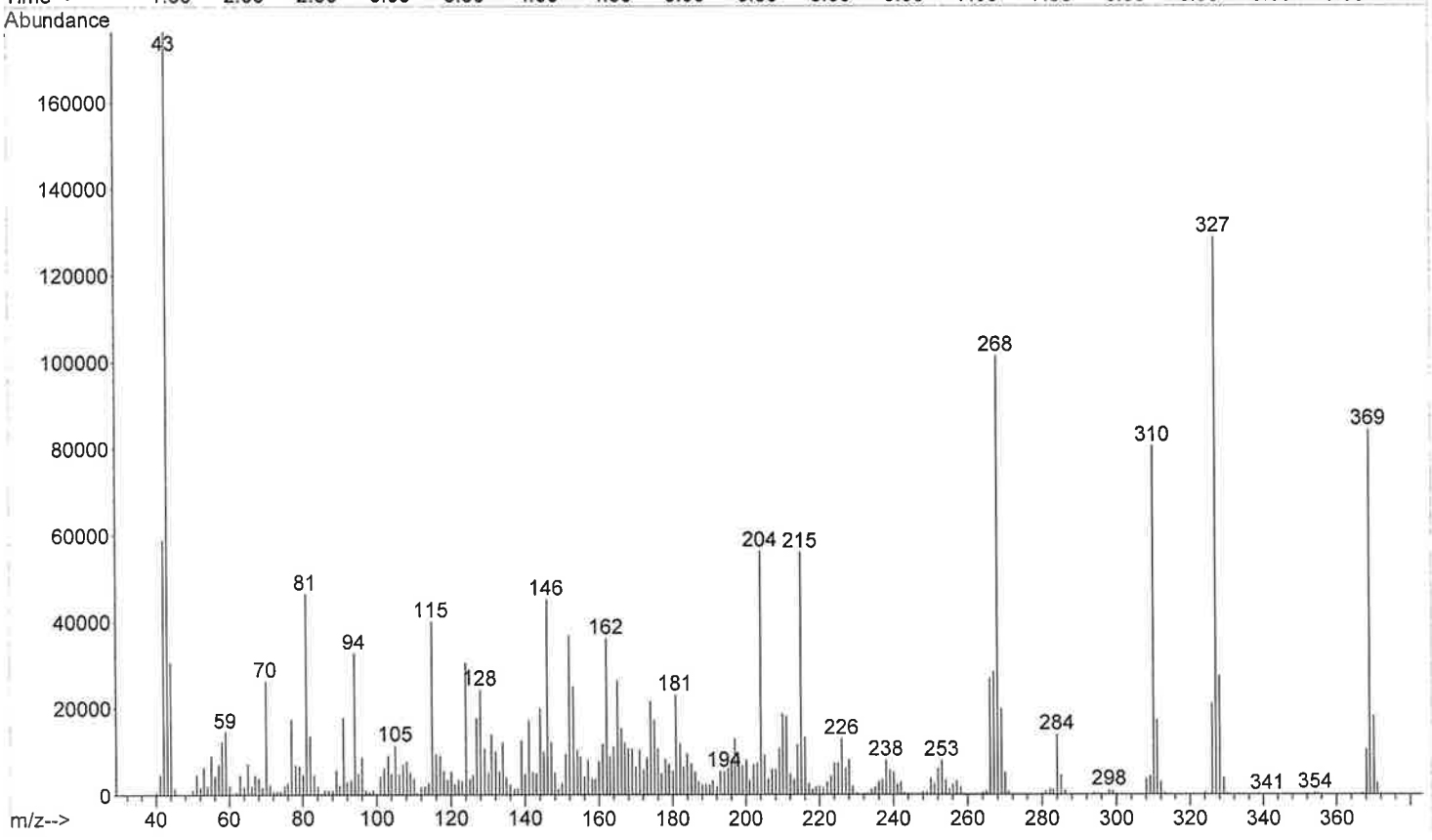
File : C:\msdchem\1\DATA\df\07Jun06D.01p\Heroin.D
Operator : DF
Acquired : 7 Jun 2006 8:35 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Heroin
Misc Info : Altech Lot# 308 MeOH
Vial Number: 14



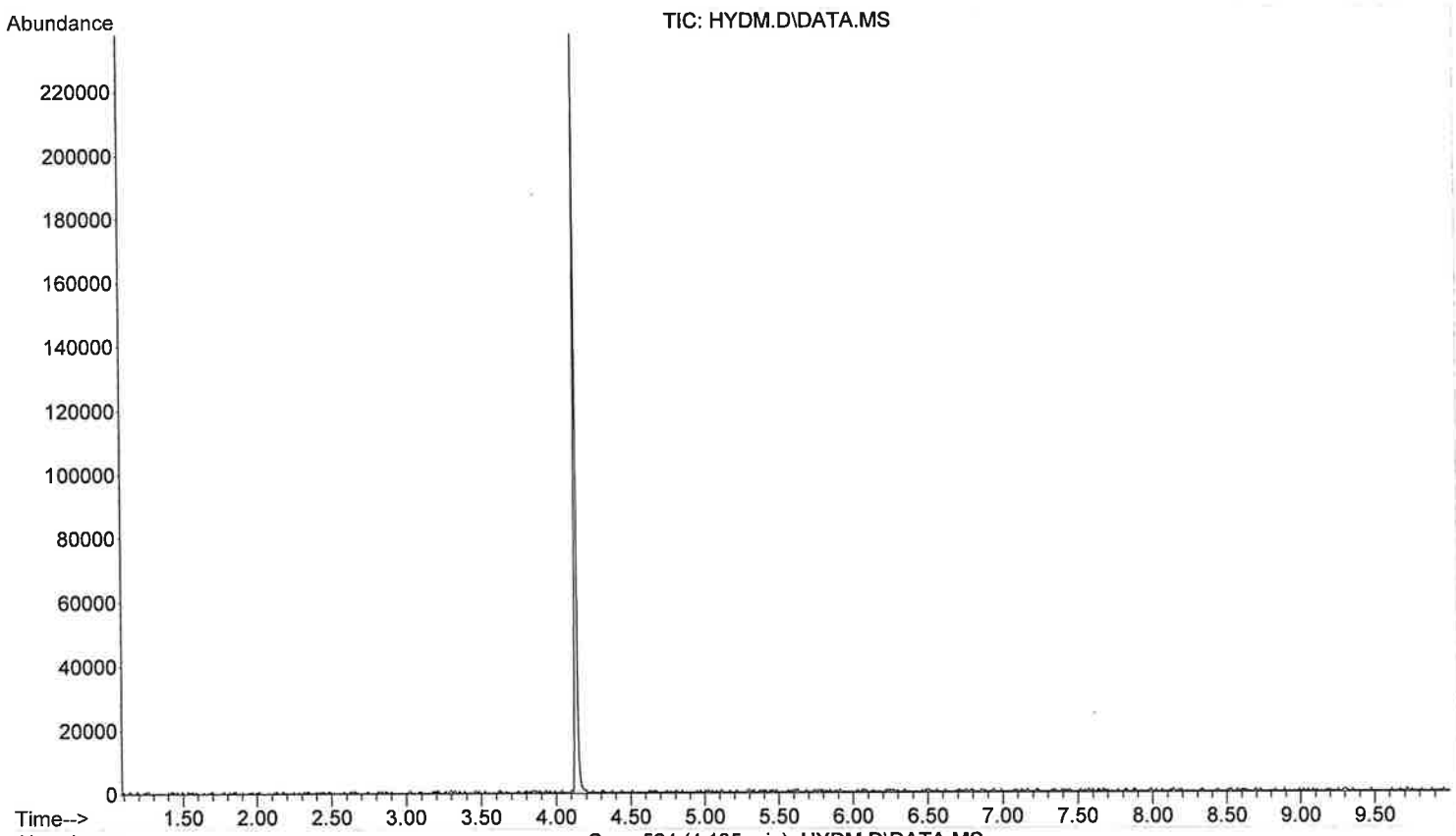


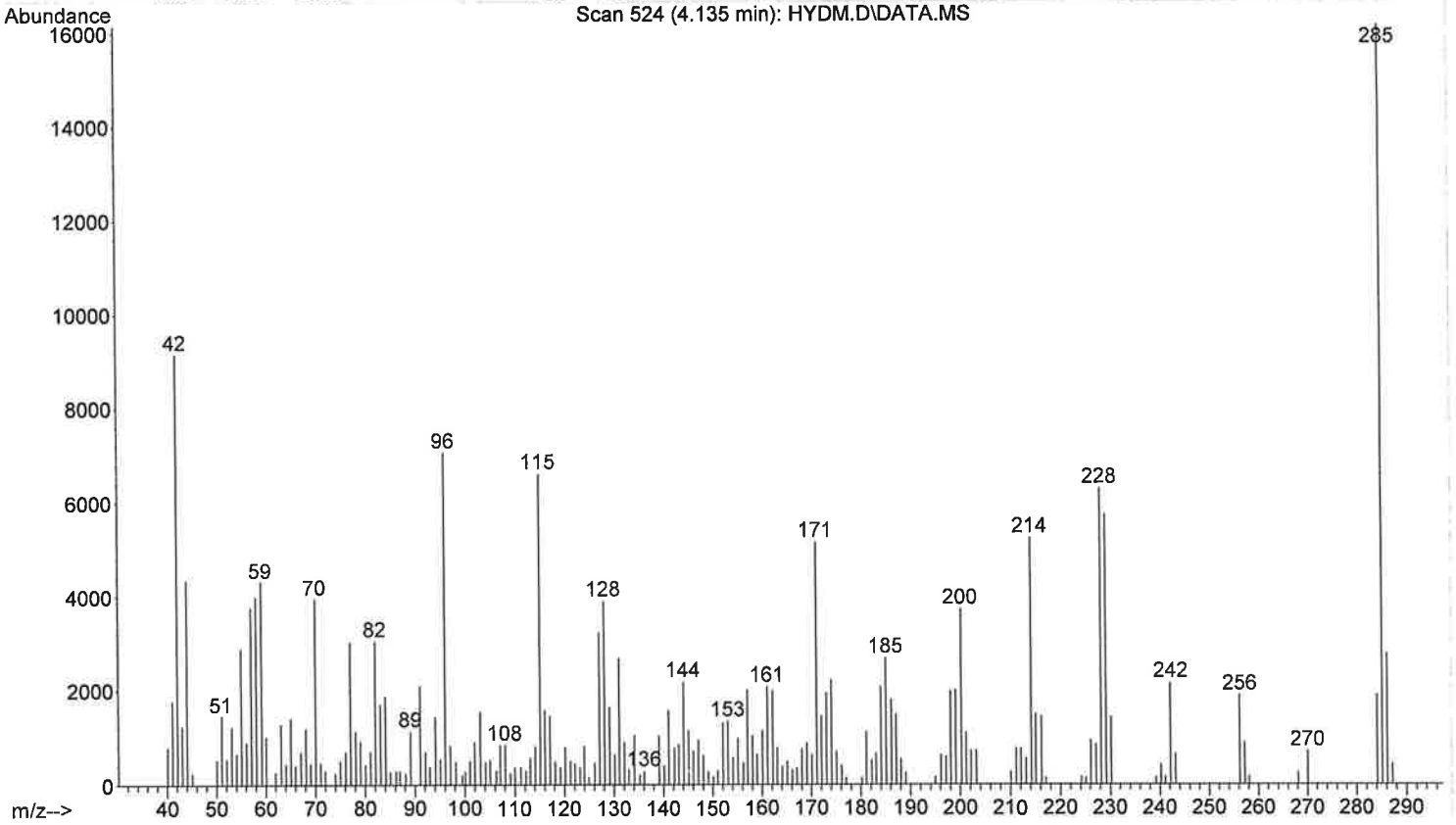
File :C:\MSDChem\1\DATA\DF\HEROIN.D
Operator : DONNA
Acquired : 9 Jun 2006 21:37 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: HEROIN
Misc Info : ALLTECH LOT#308 MEOH
Vial Number: 14



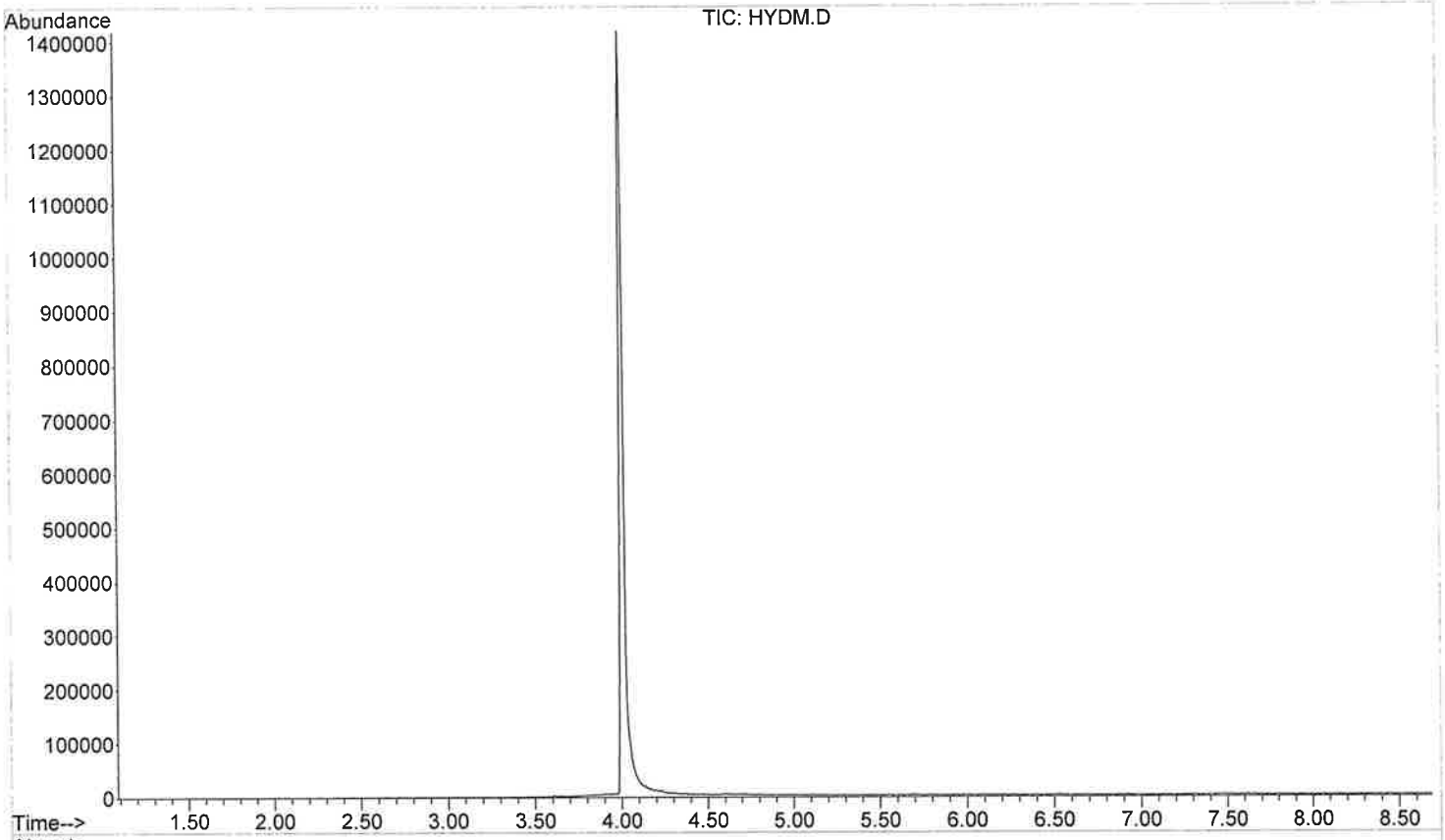


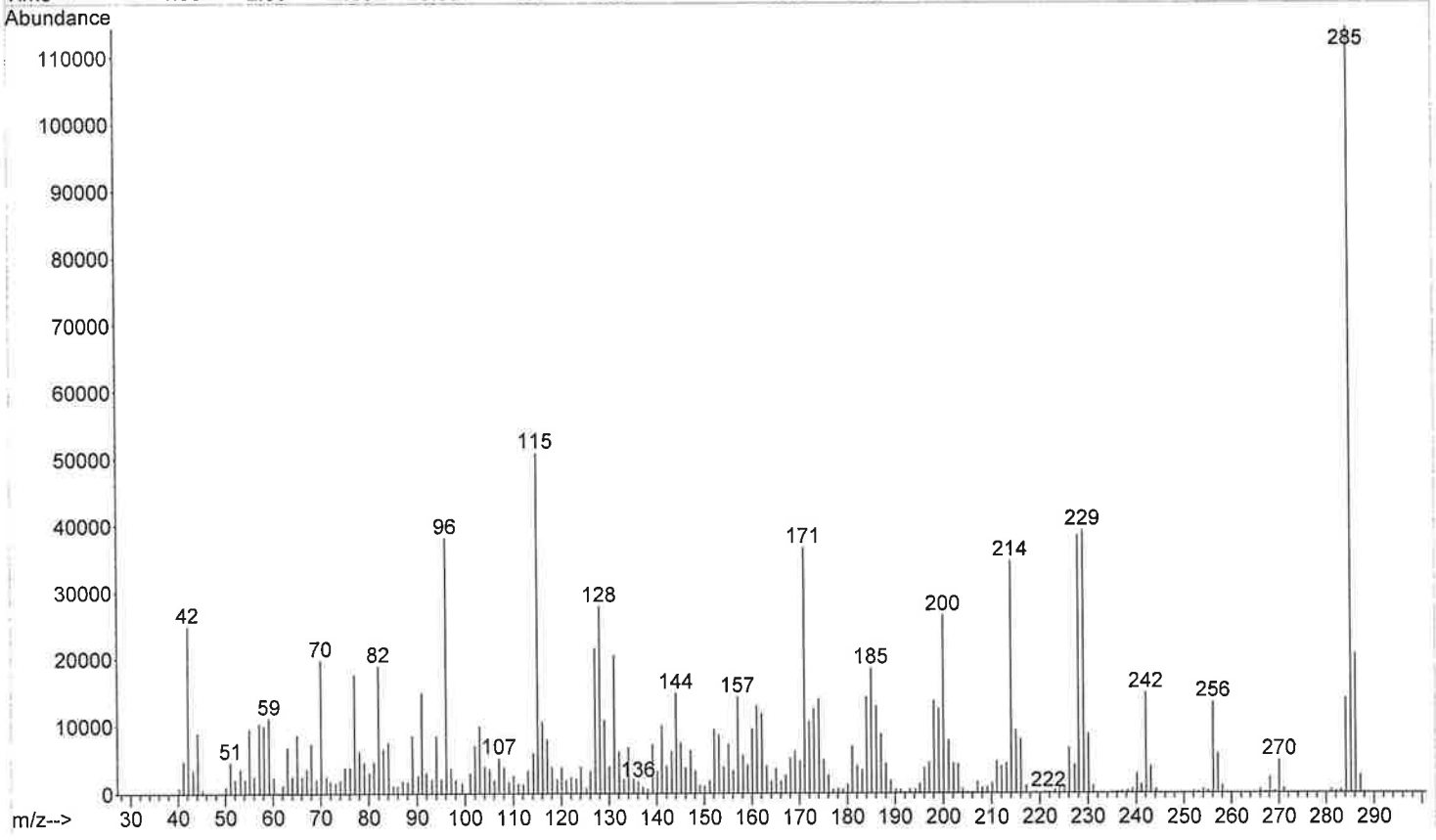
File :C:\msdchem\1\DATA\df\07Jun06D.01p\HYDM.D
Operator : DX
Acquired : 7 Jun 2006 9:03 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Hydromorphone
Misc Info : Sigma Lot# 69H0625 MeOH
Vial Number: 15



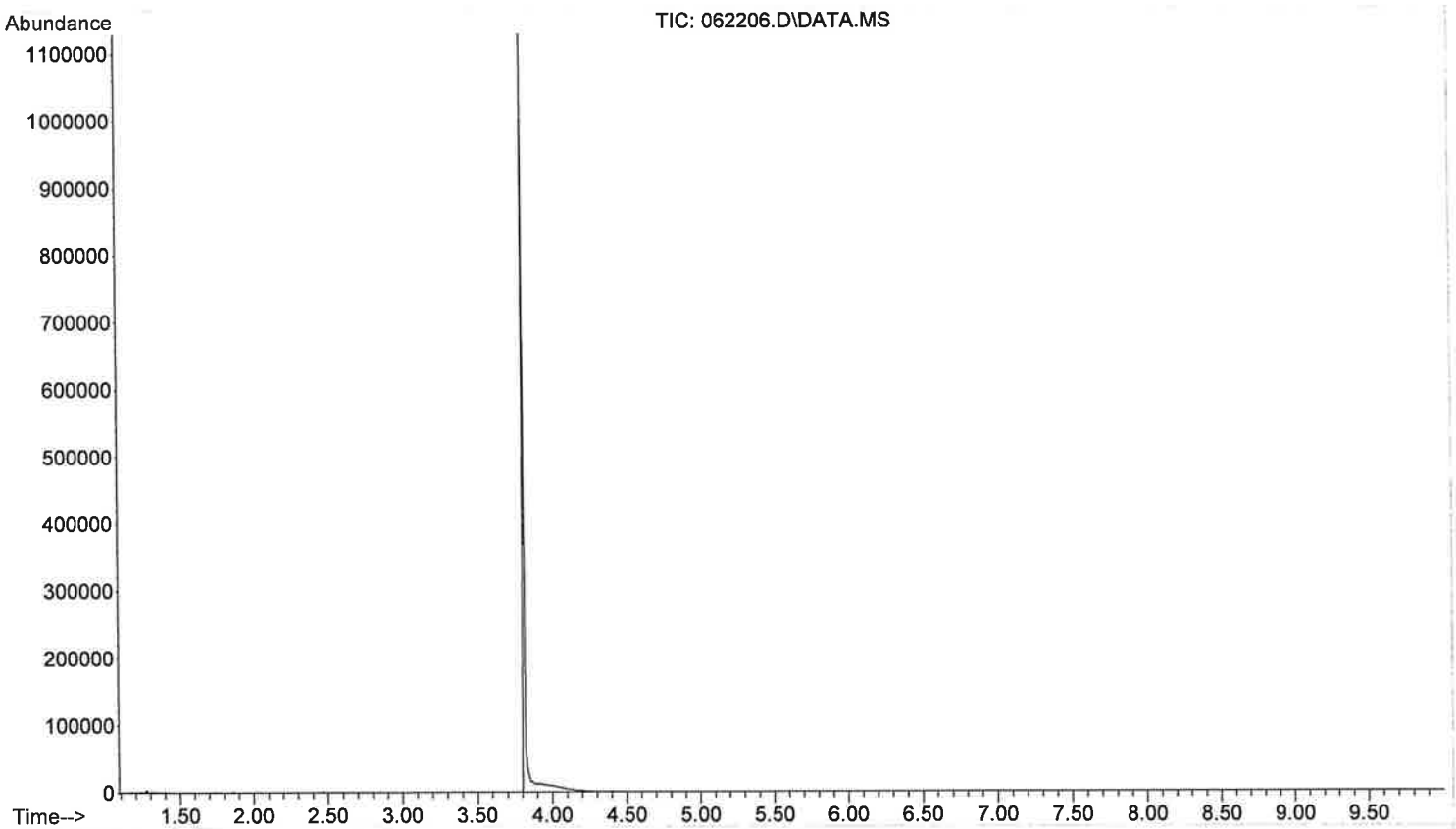


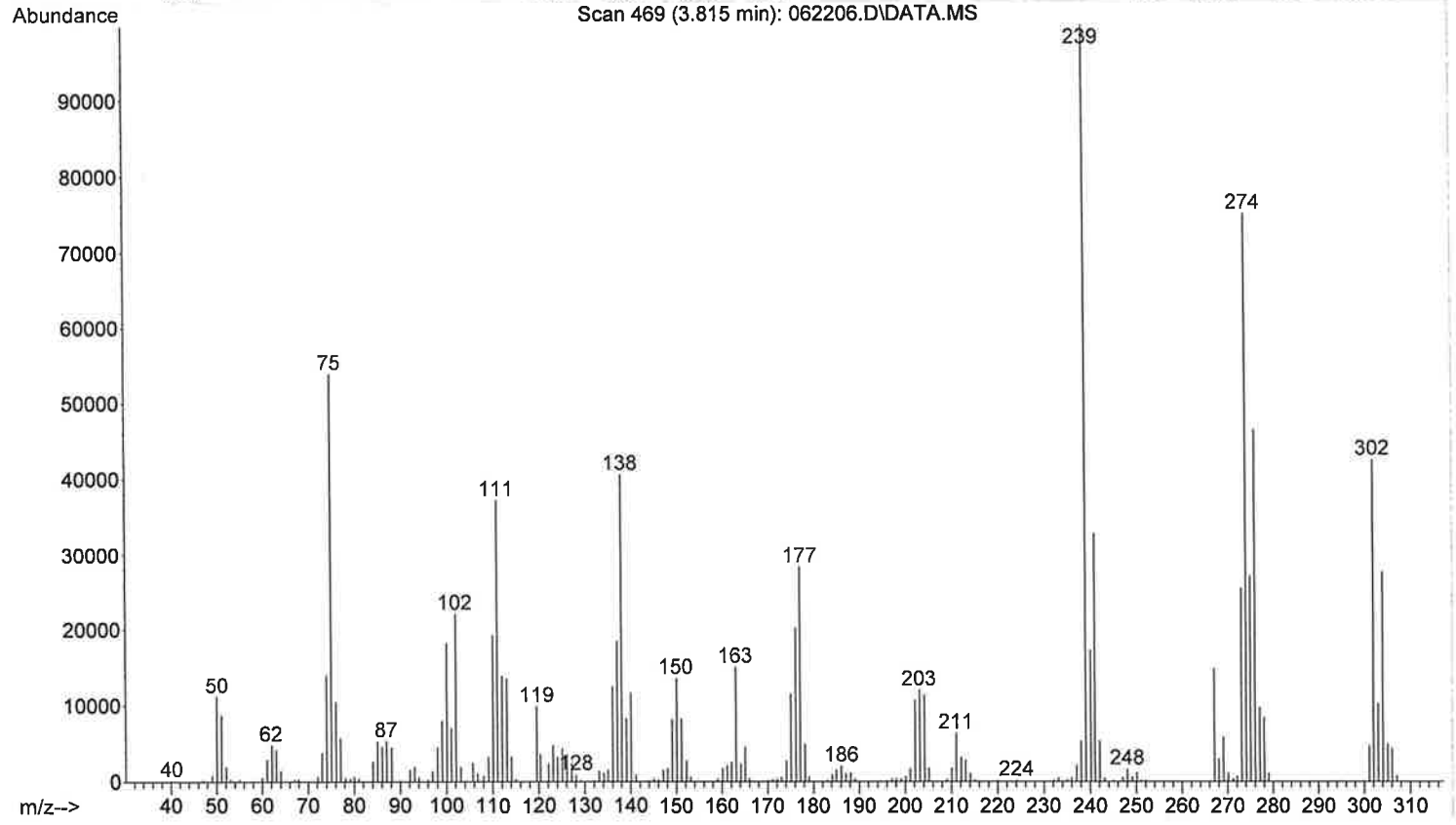
File :C:\MSDCHEM\1\DATA\DF\HYDM.D
Operator : DF
Acquired : 3 Jul 2006 17:07 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: Hydromorphone
Misc Info : Sigma Lot#69H0625 in MeOH
Vial Number: 1



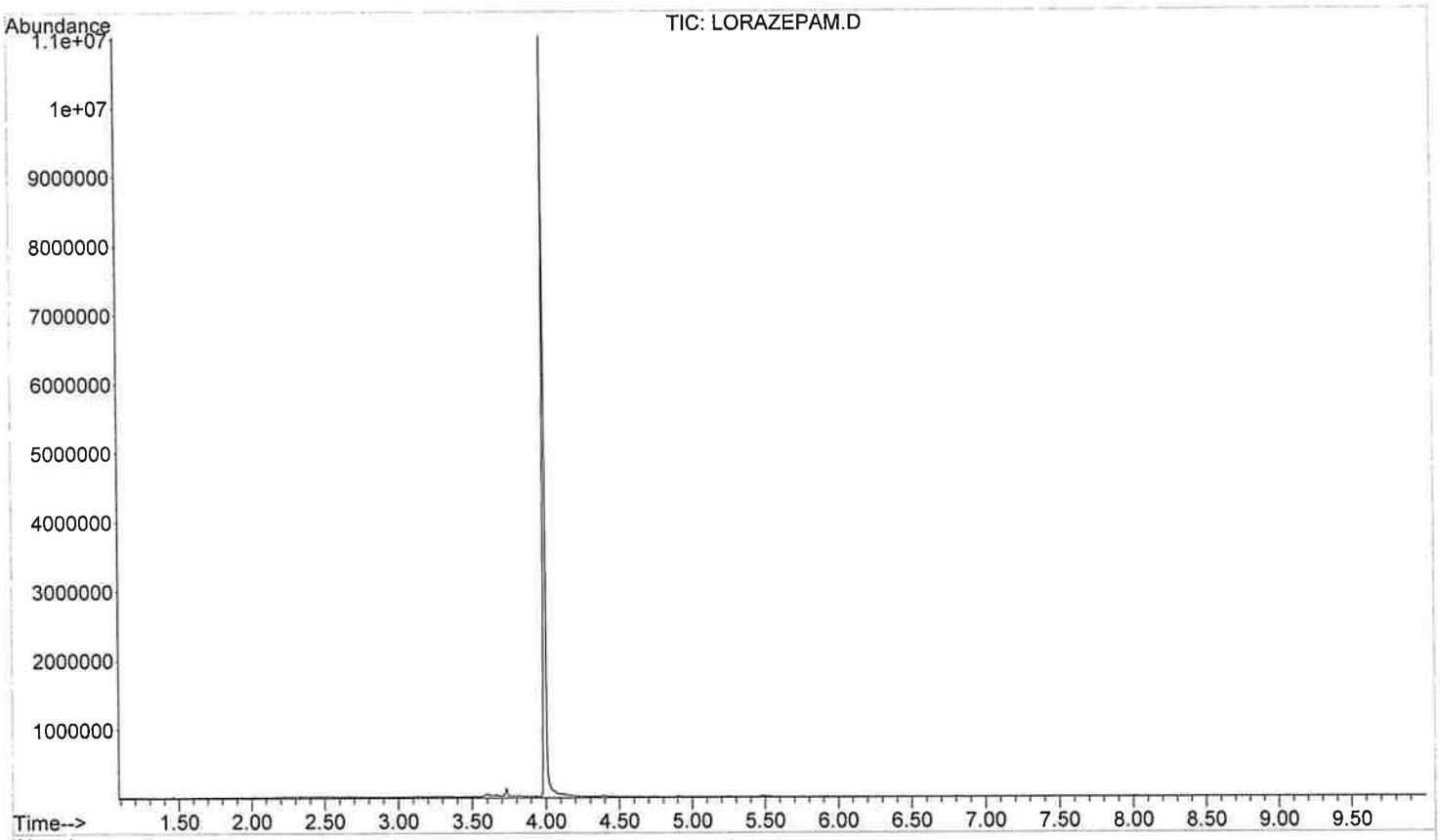


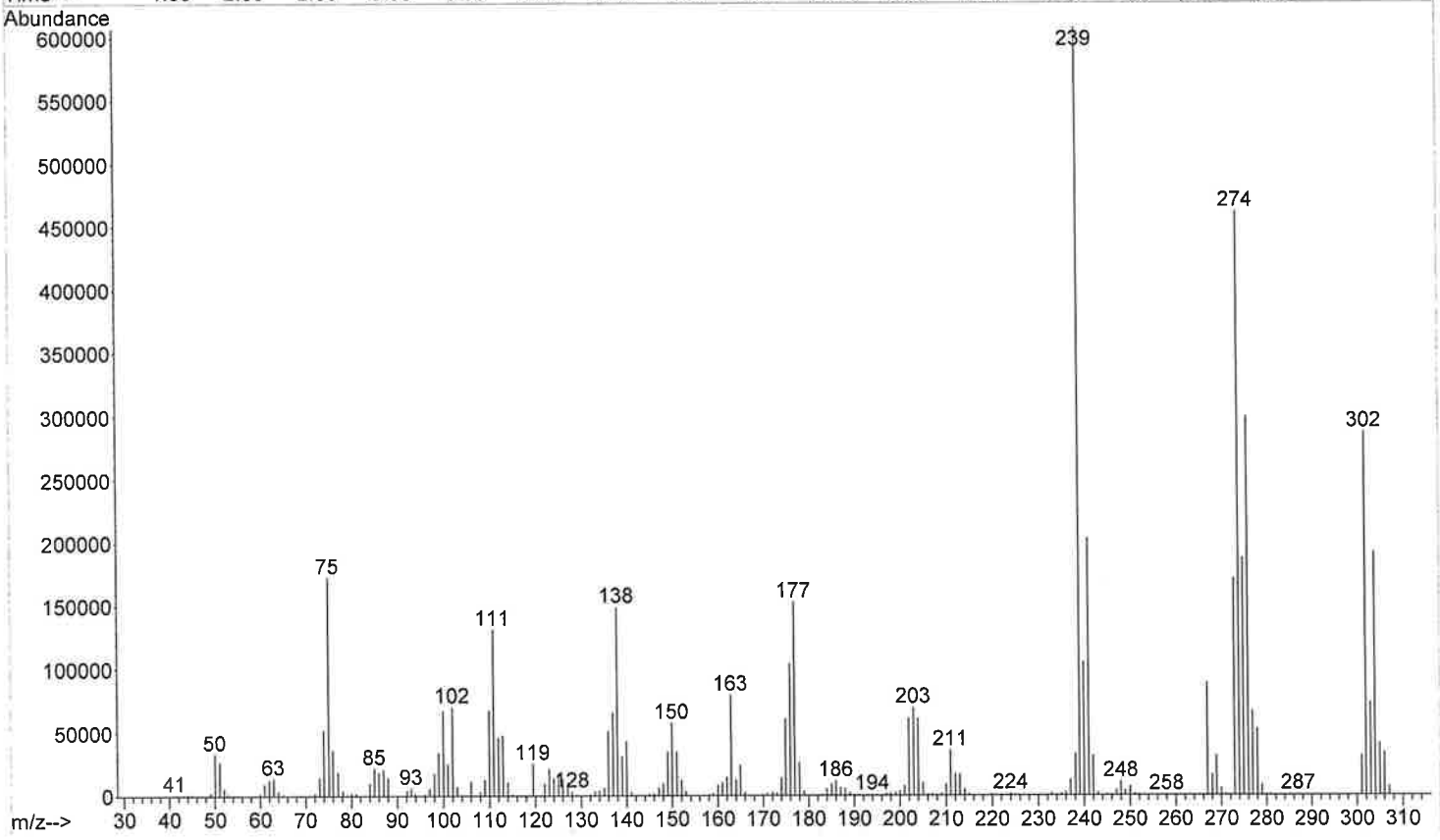
File :C:\msdchem\1\METHODS\MSDRUGS.M\062206.D
Operator : DT
Acquired : 22 Jun 2006 2:11 pm using AcqMethod MSDRUGS.M
Instrument : Donna 2
Sample Name: LORAZEPAM LOT #35F0115
Misc Info : BASIC >CHCL3
Vial Number: 7



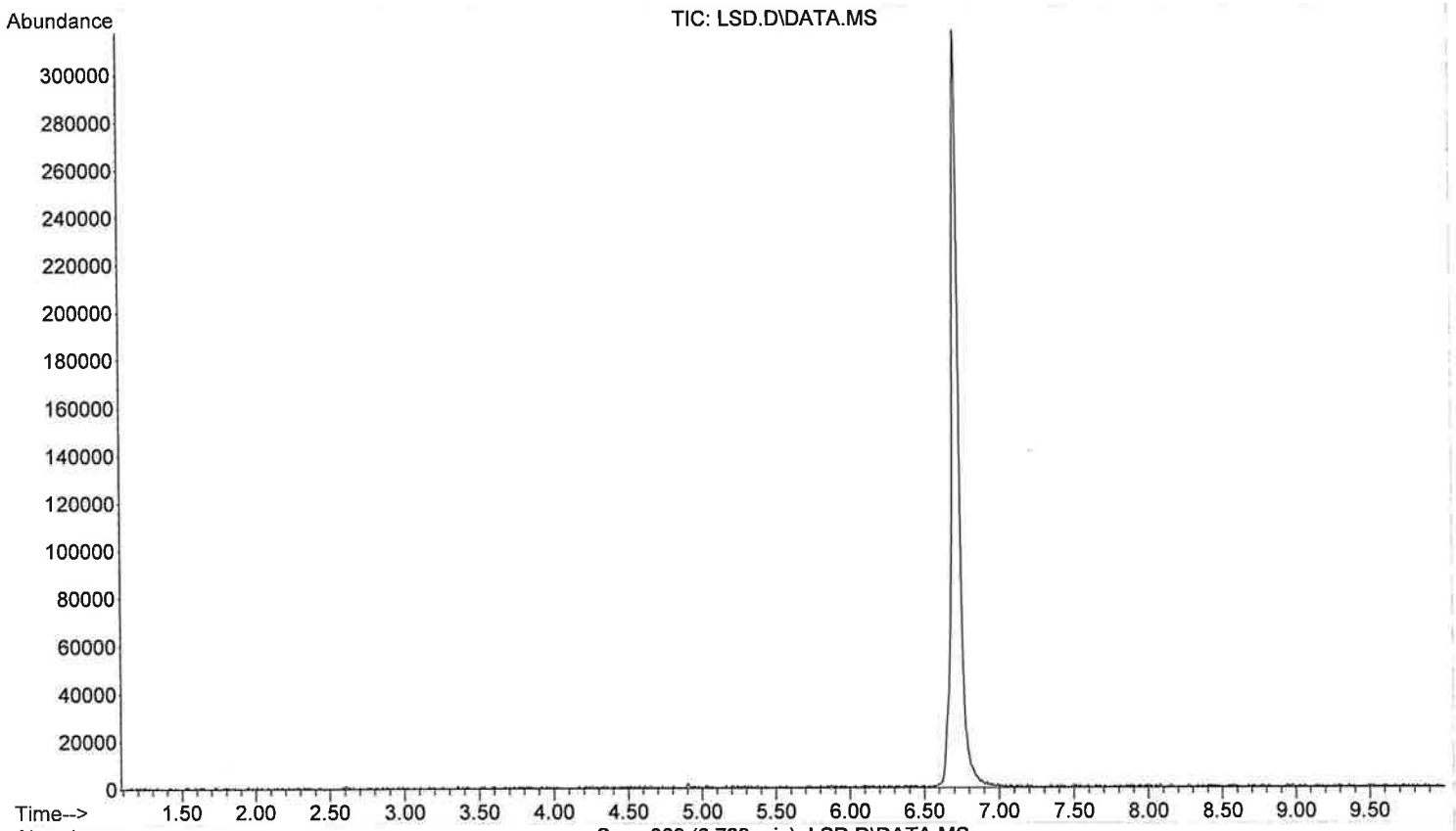


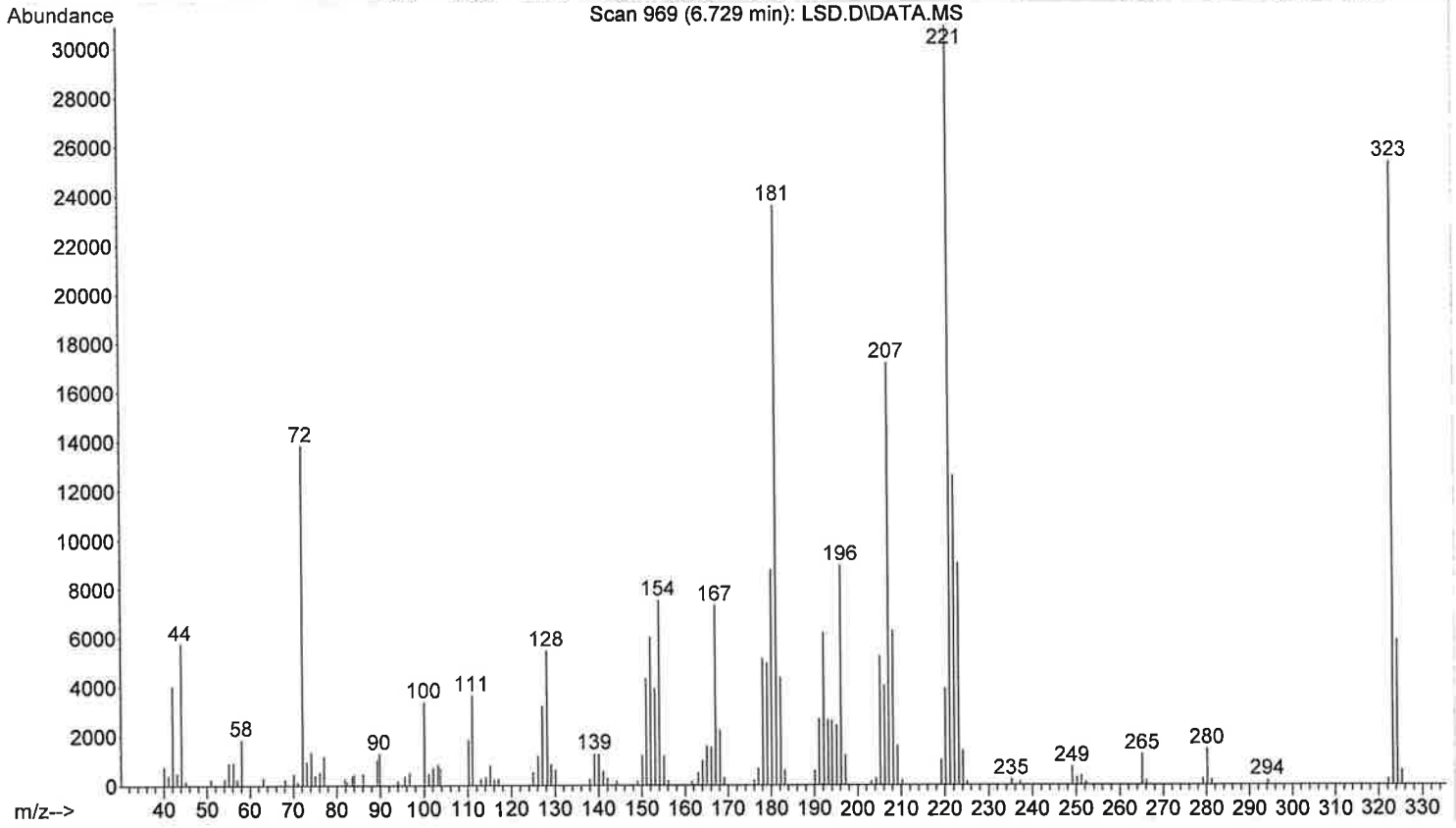
File : C:\MSDChem\1\DATA\DF\LORAZEPAM.D
Operator : DF
Acquired : 22 Jun 2006 13:50 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: Lorazepam
Misc Info : Sigma Lot#35F0115 Basic>CHCl3
Vial Number: 1



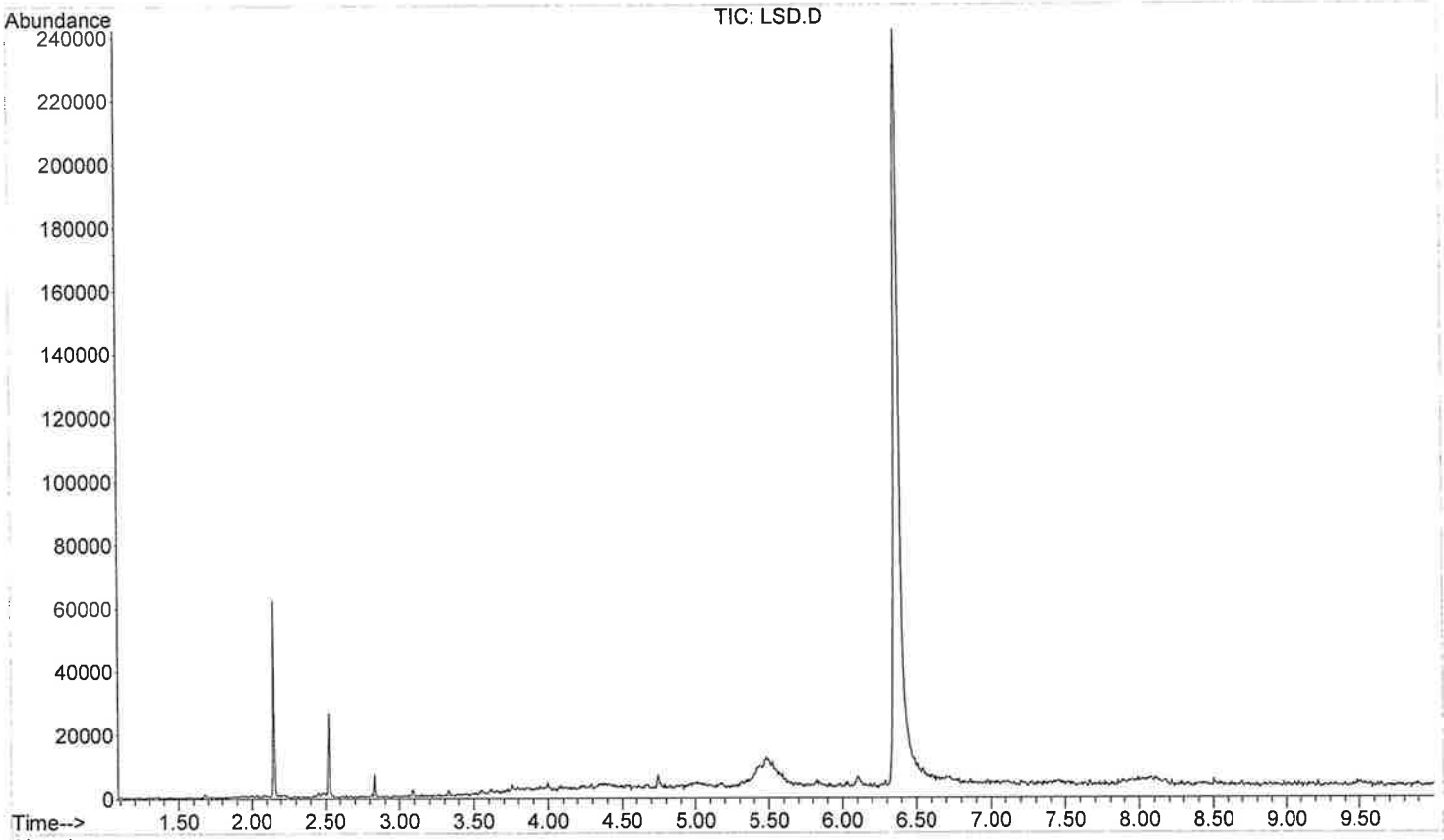


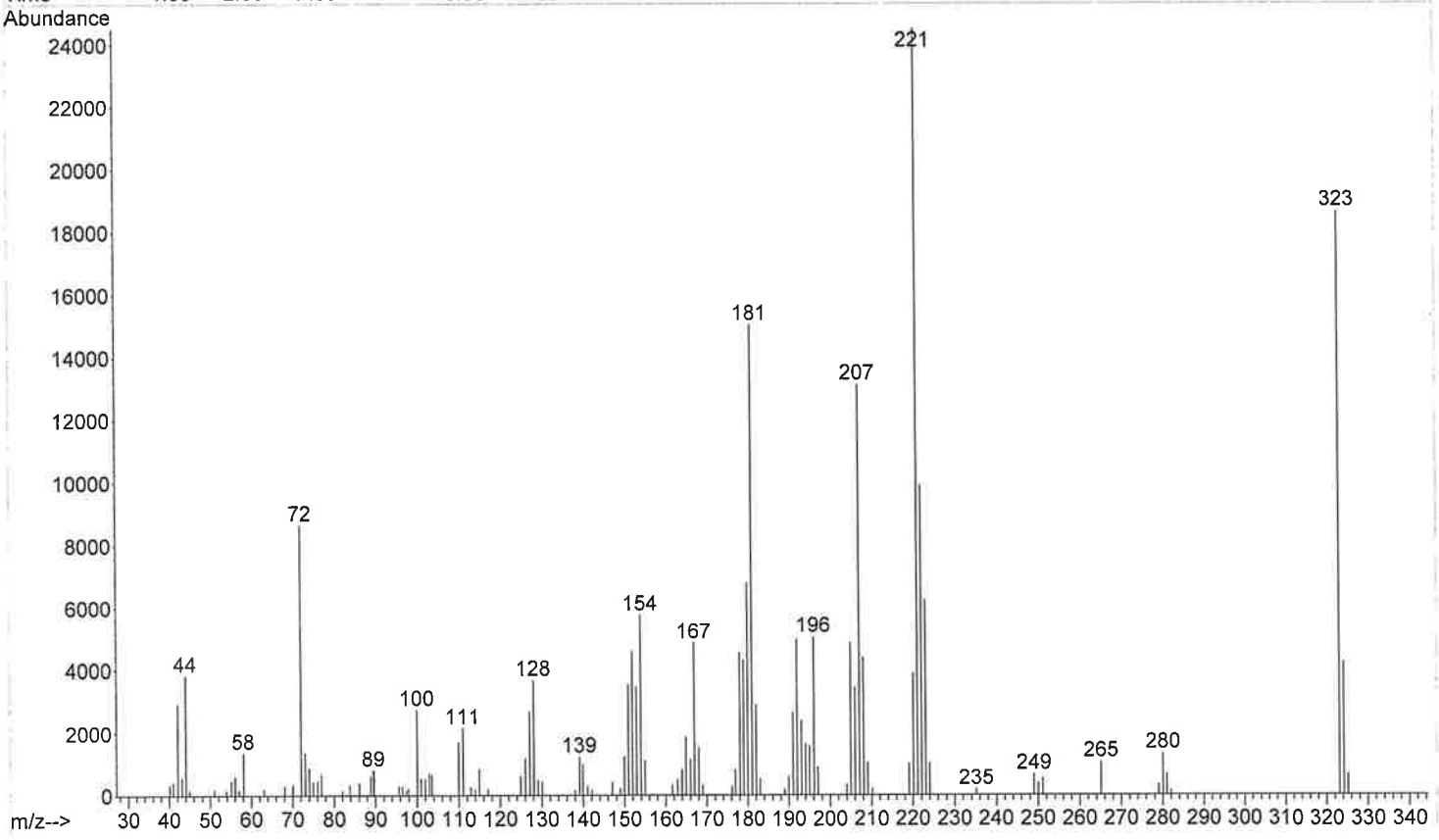
File :C:\msdchem\1\DATA\df\07Jun06D.01p\LSD.D
Operator : DF
Acquired : 7 Jun 2006 10:00 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: LSD
Misc Info : Altech Lot# 081198B MeOH
Vial Number: 17



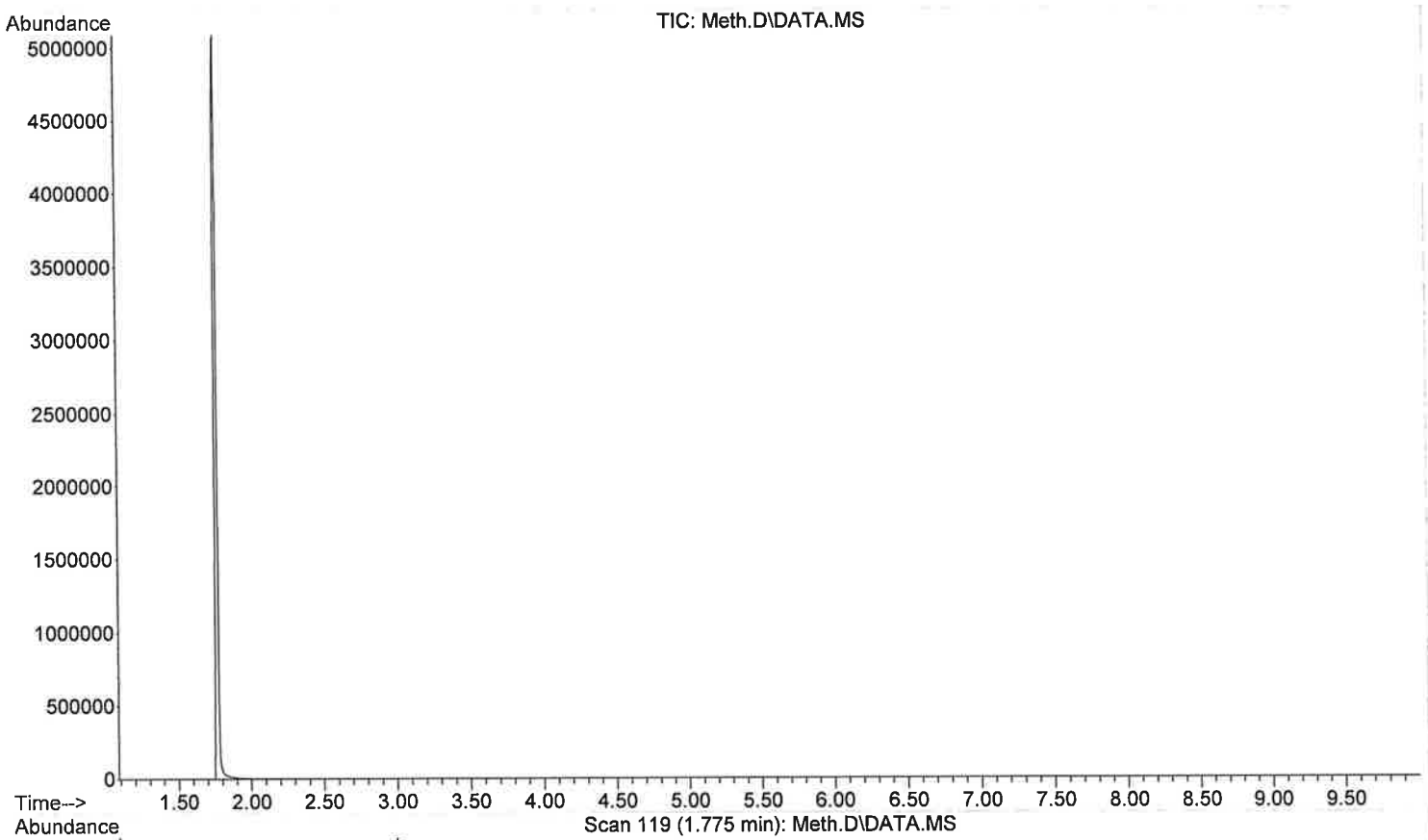


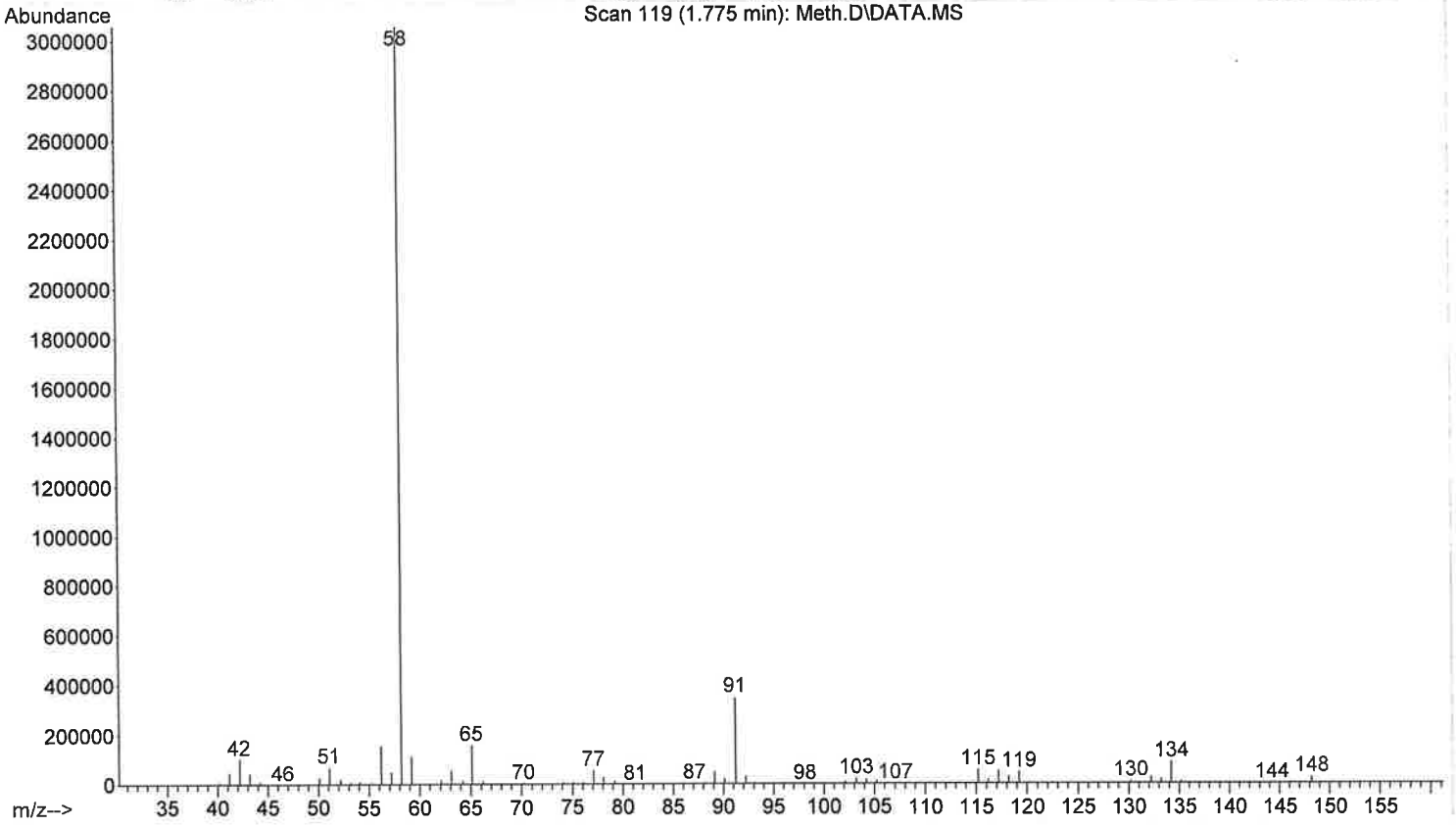
File :C:\MSDChem\1\DATA\DF\LSD.D
Operator : DONNA
Acquired : 9 Jun 2006 23:03 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: LSD
Misc Info : ALLTECH LOT#081198B MEOH
Vial Number: 17



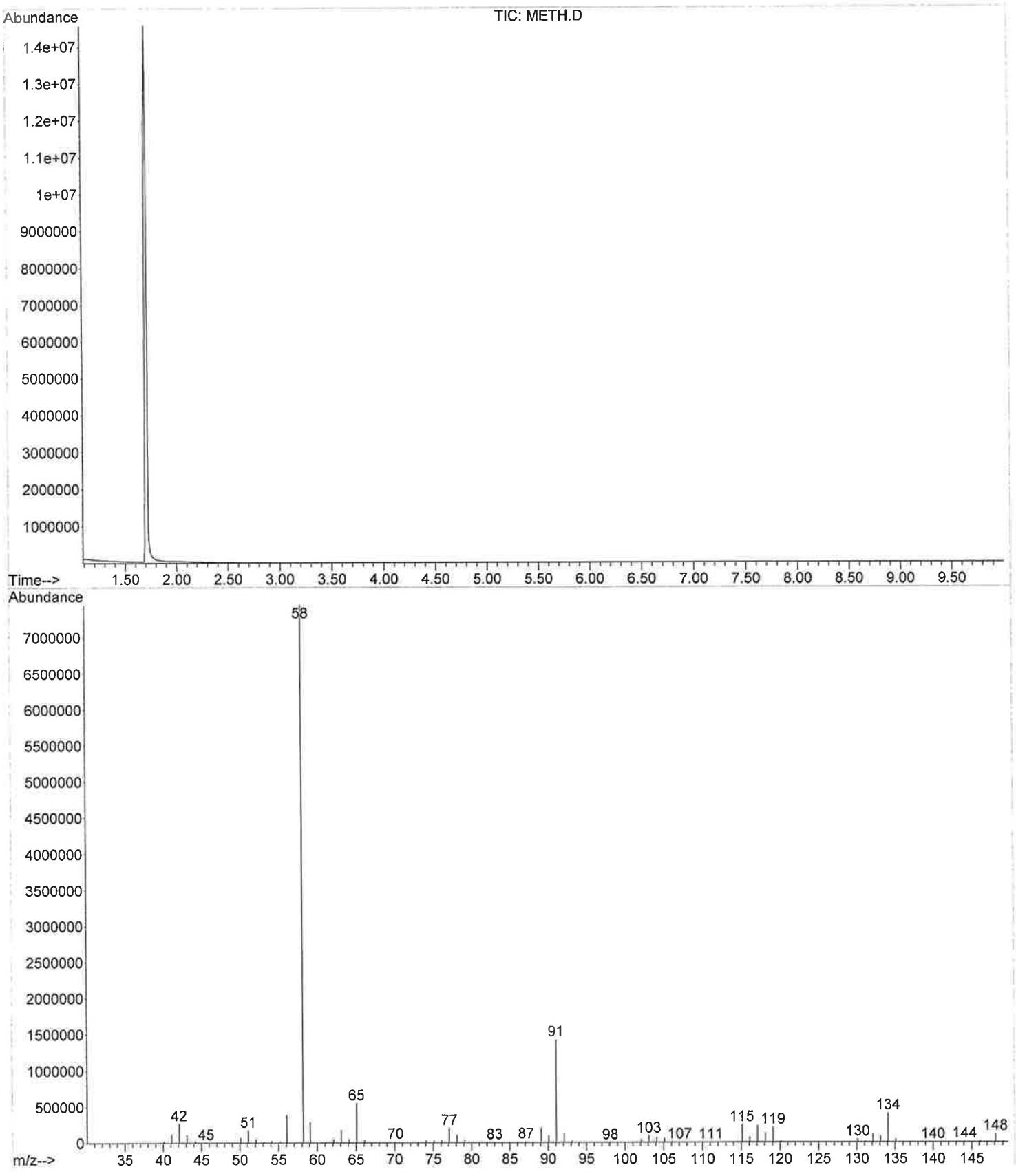


File :C:\msdchem\1\DATA\df\07Jun06D.01p\Meth.D
Operator : DF
Acquired : 7 Jun 2006 10:56 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Methamphetamine
Misc Info : Sigma Lot# 34H0144 NaOH>CHCL3
Vial Number: 19

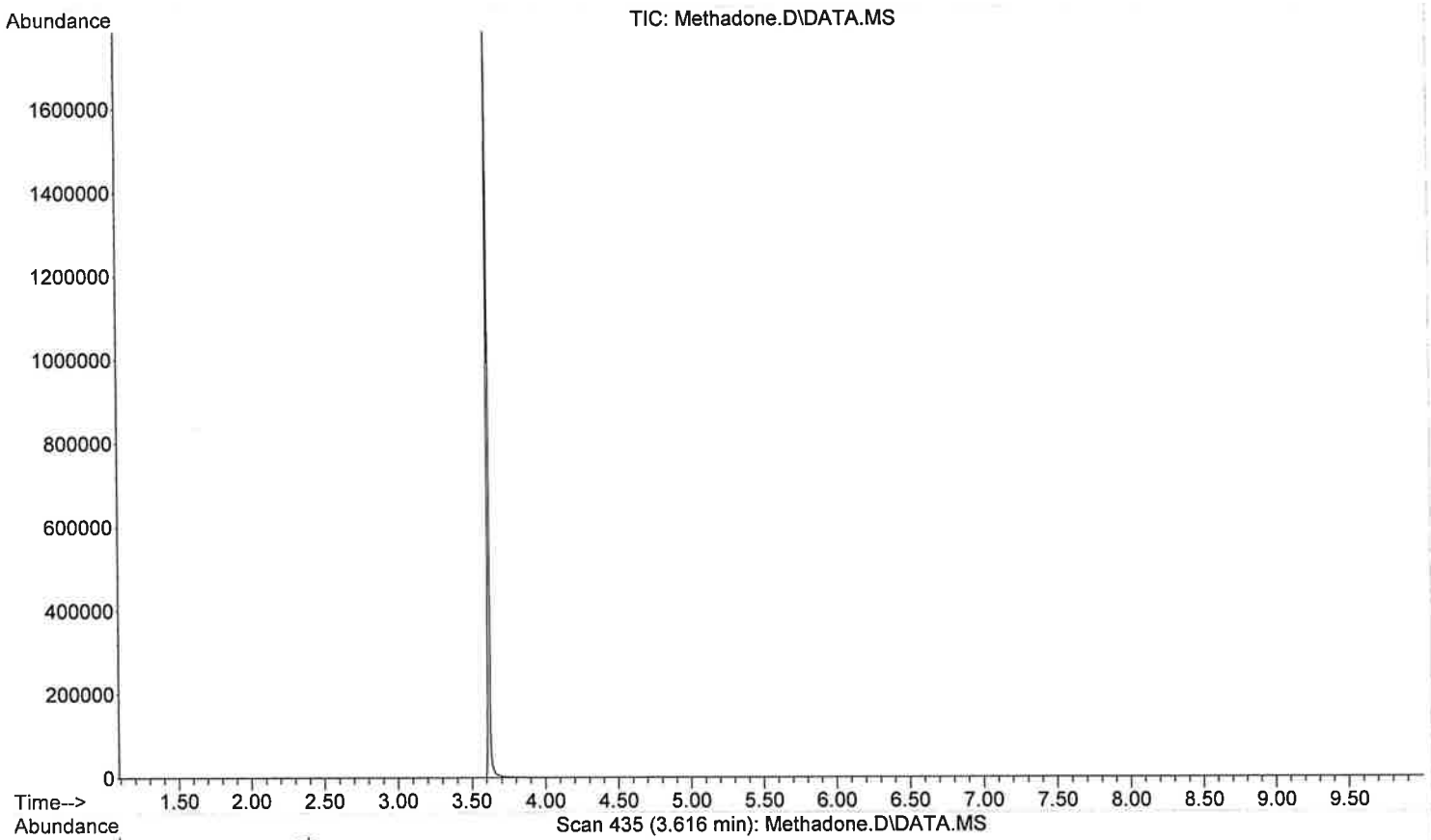


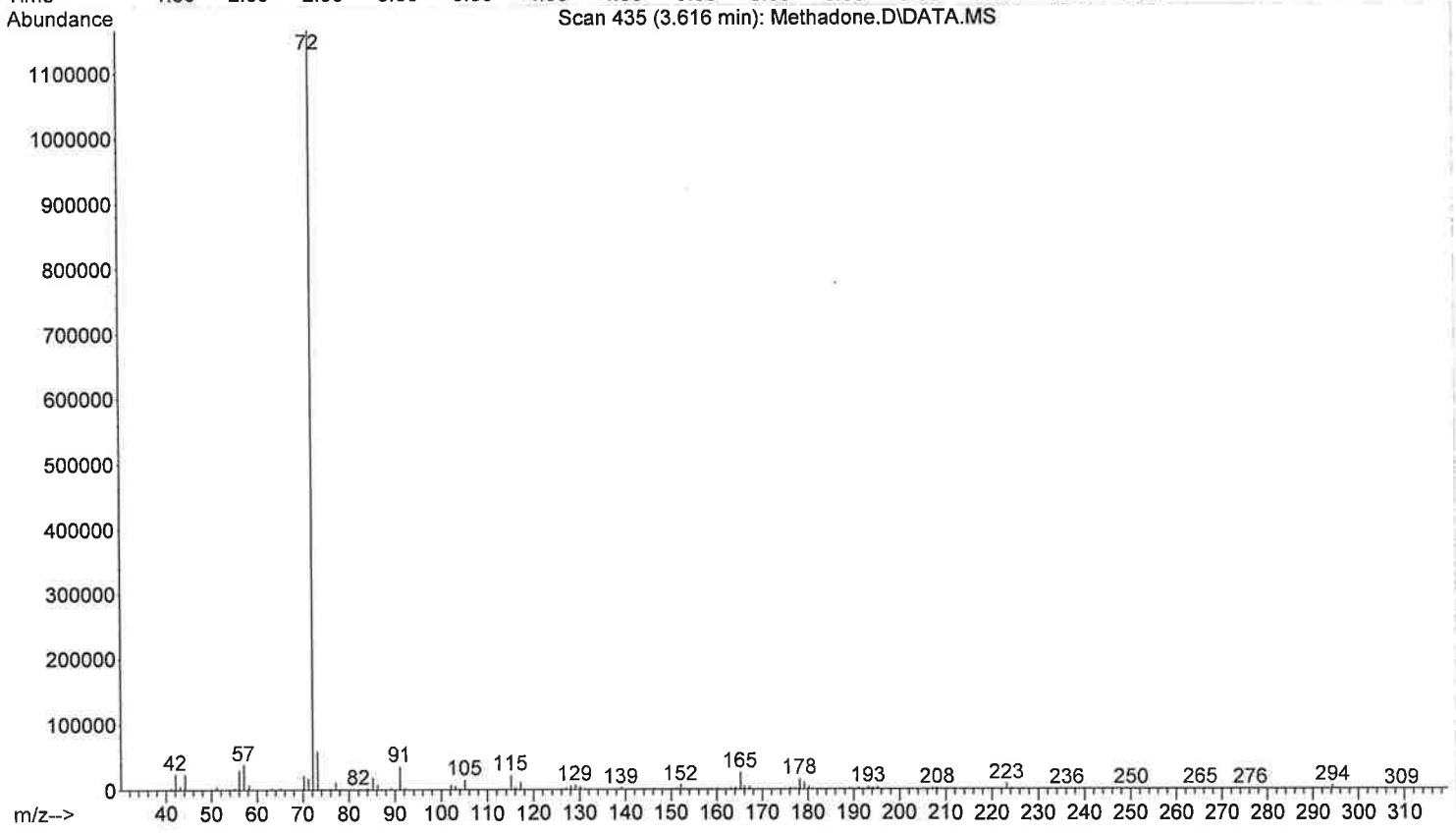


File :C:\MSDChem\1\DATA\DF\METH.D
Operator : DONNA
Acquired : 10 Jun 2006 00:01 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: METHAMPHETAMINE
Misc Info : SIGMA LOT#34H0144 BASIC>CHCL3
Vial Number: 19

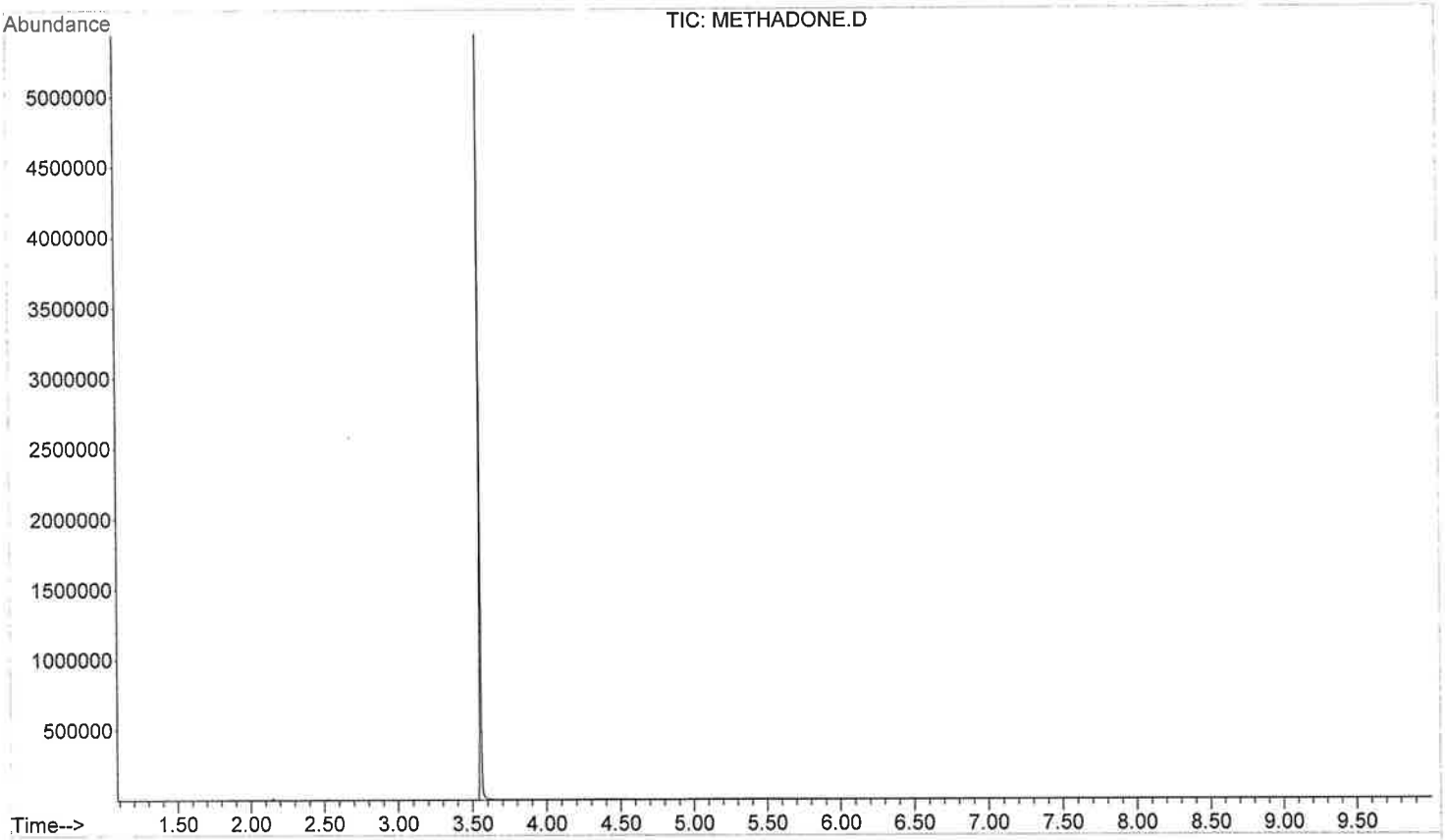


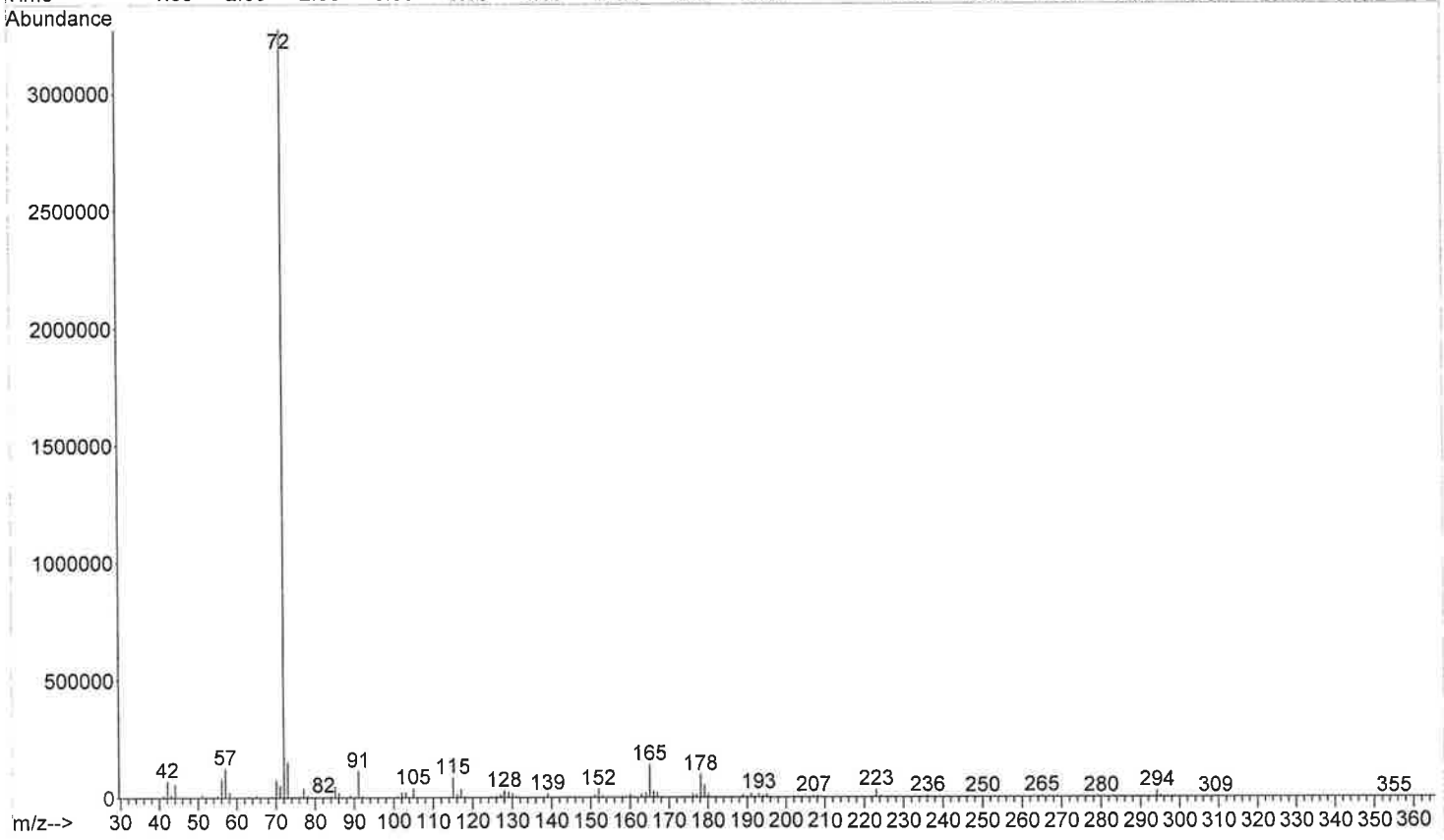
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Methadone.D
Operator : DF
Acquired : 7 Jun 2006 10:28 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Methadone
Misc Info : NDC #00216-1306-05 MeOH
Vial Number: 18



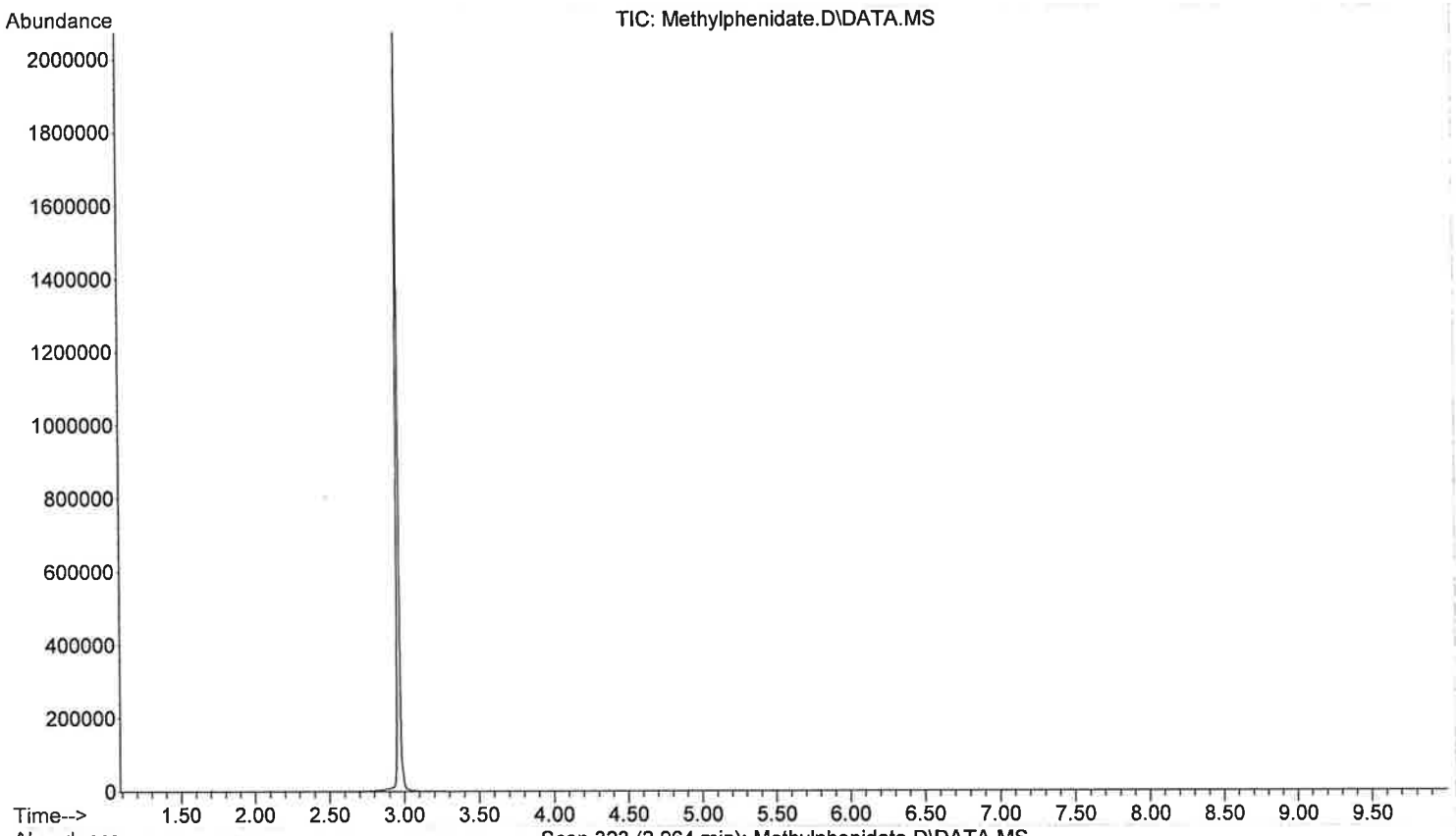


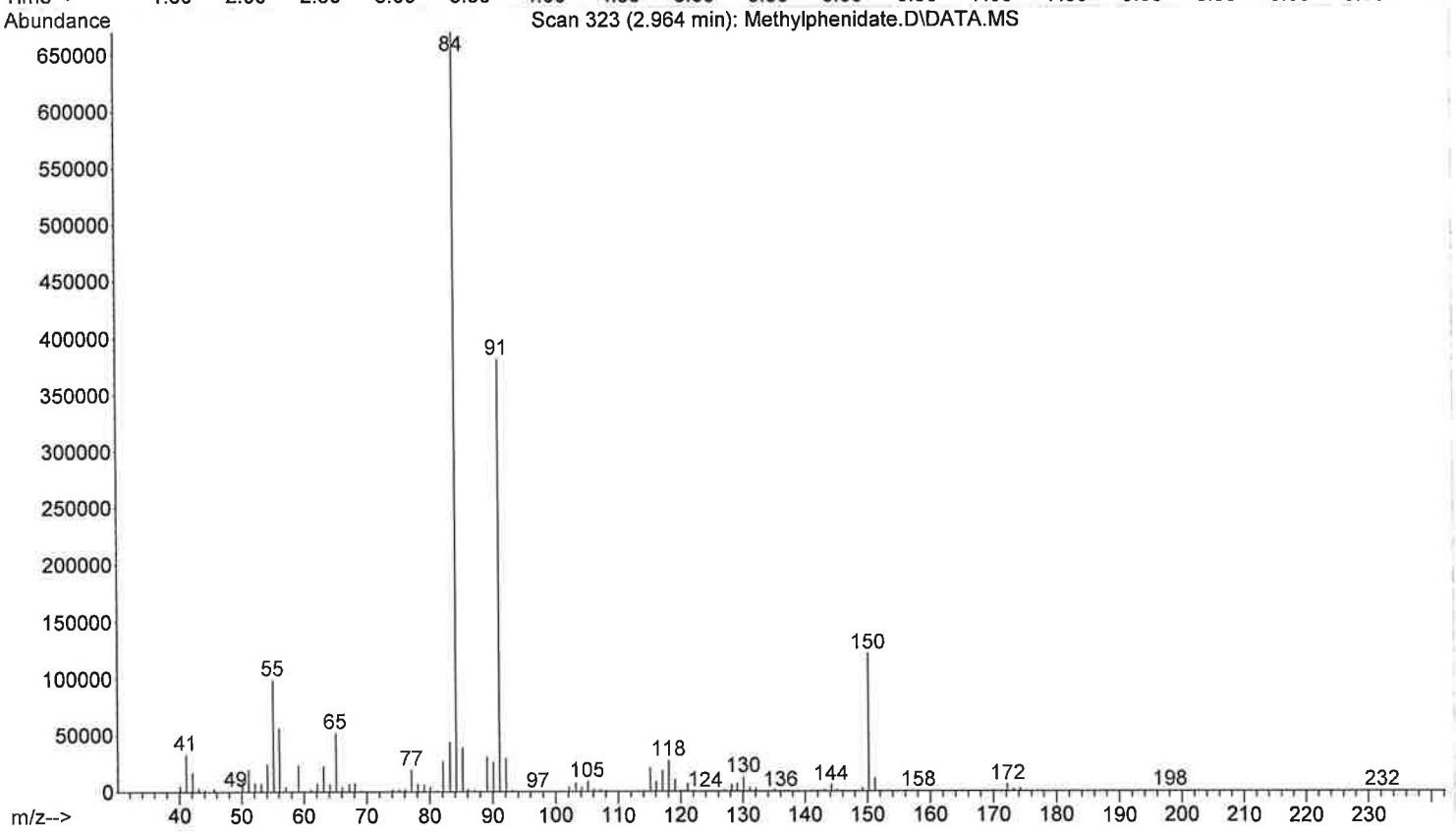
File :C:\MSDChem\1\DATA\DF\METHADONE.D
Operator : DONNA
Acquired : 9 Jun 2006 23:32 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: METHADONE
Misc Info : NDC#00216-1306-05
Vial Number: 18



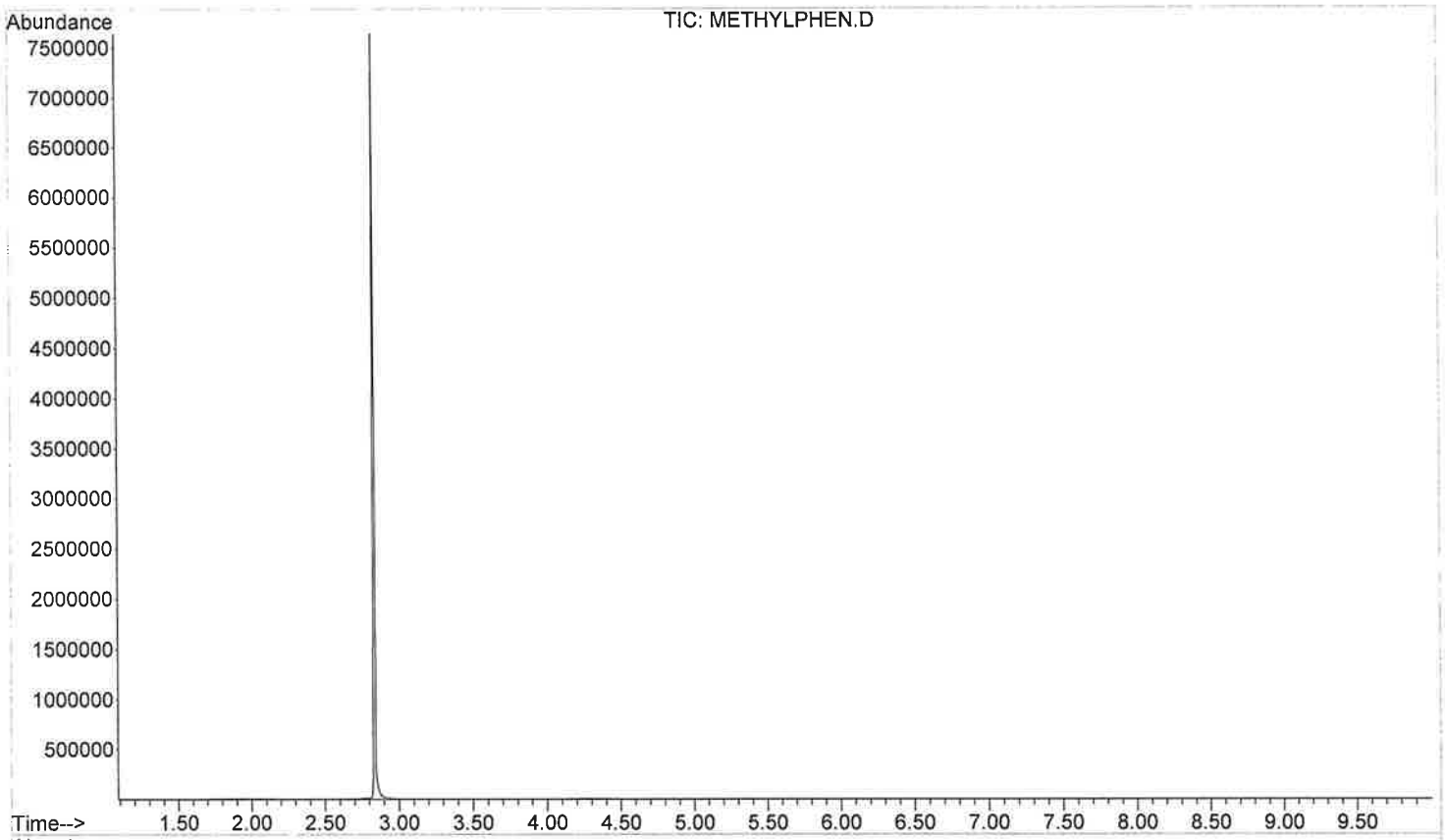


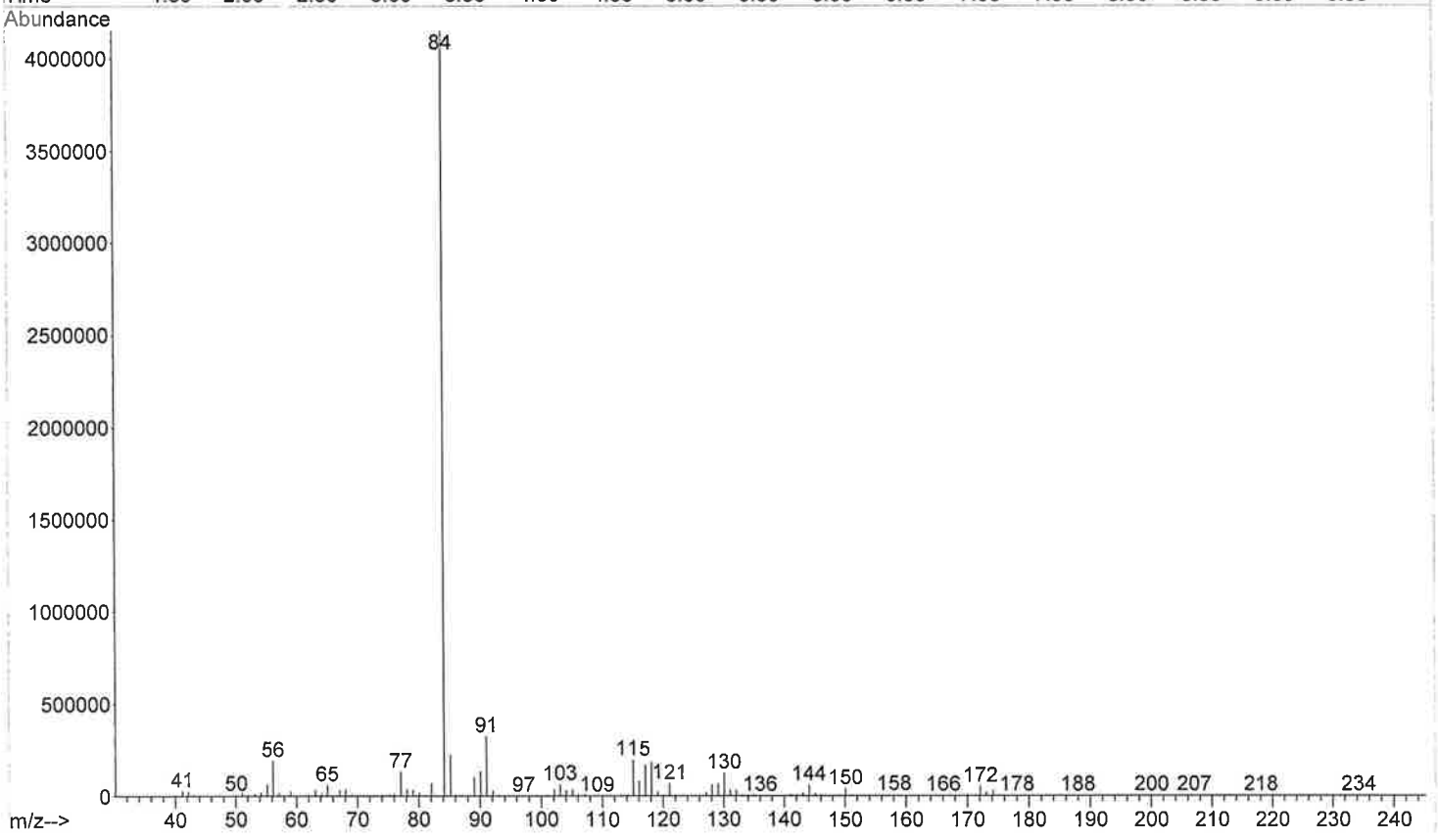
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Methylphenidate.D
Operator : DK
Acquired : 7 Jun 2006 11:25 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Methylphenidate
Misc Info : USP #770 MeOH
Vial Number: 20



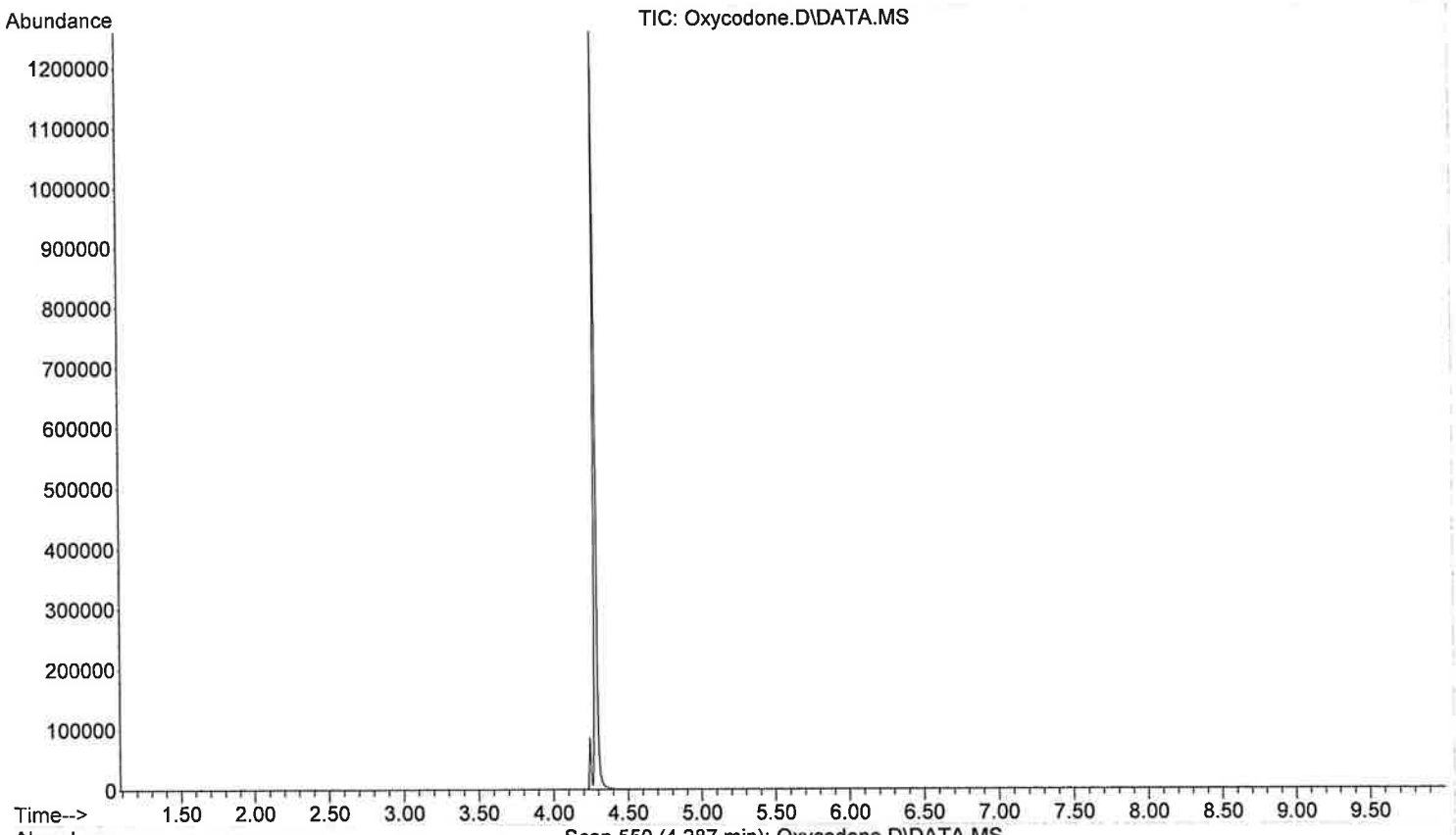


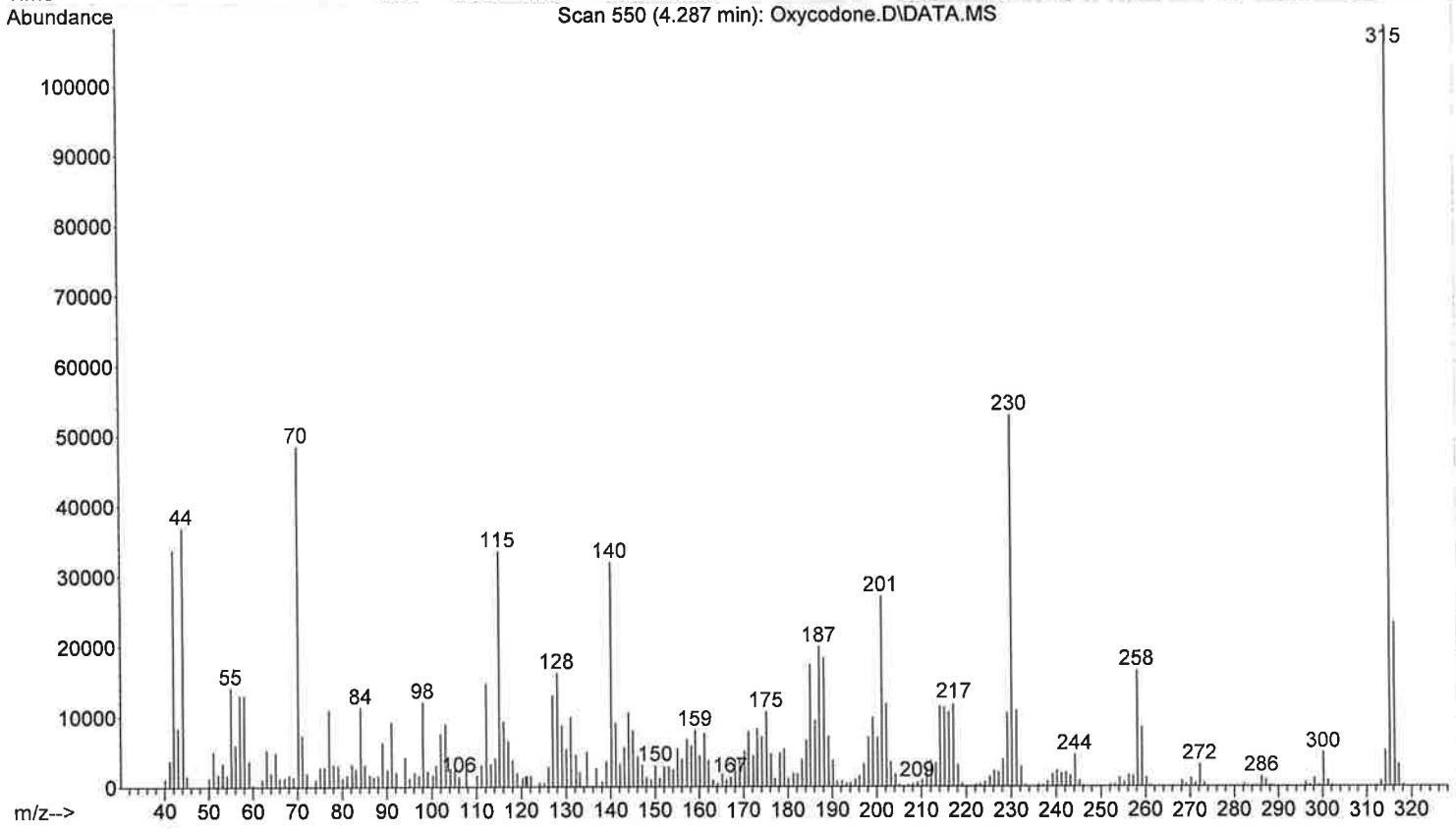
File : C:\MSDCHEM\1\DATA\DF\METHYLPHEN.D
Operator : DF
Acquired : 4 Jul 2006 9:30 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: METHYLPHENIDATE STD IN MEOH
Misc Info : USP#770
Vial Number: 1



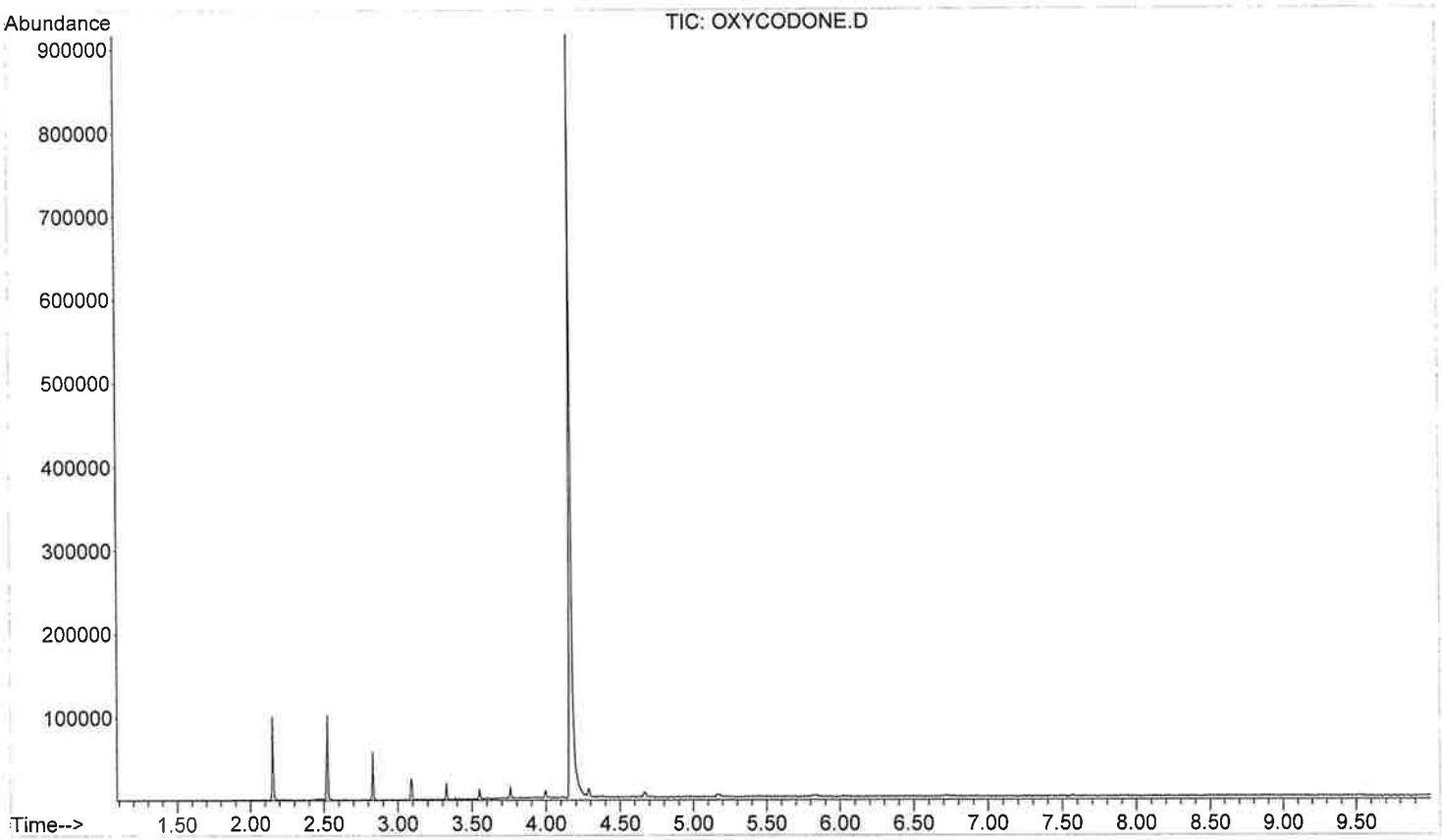


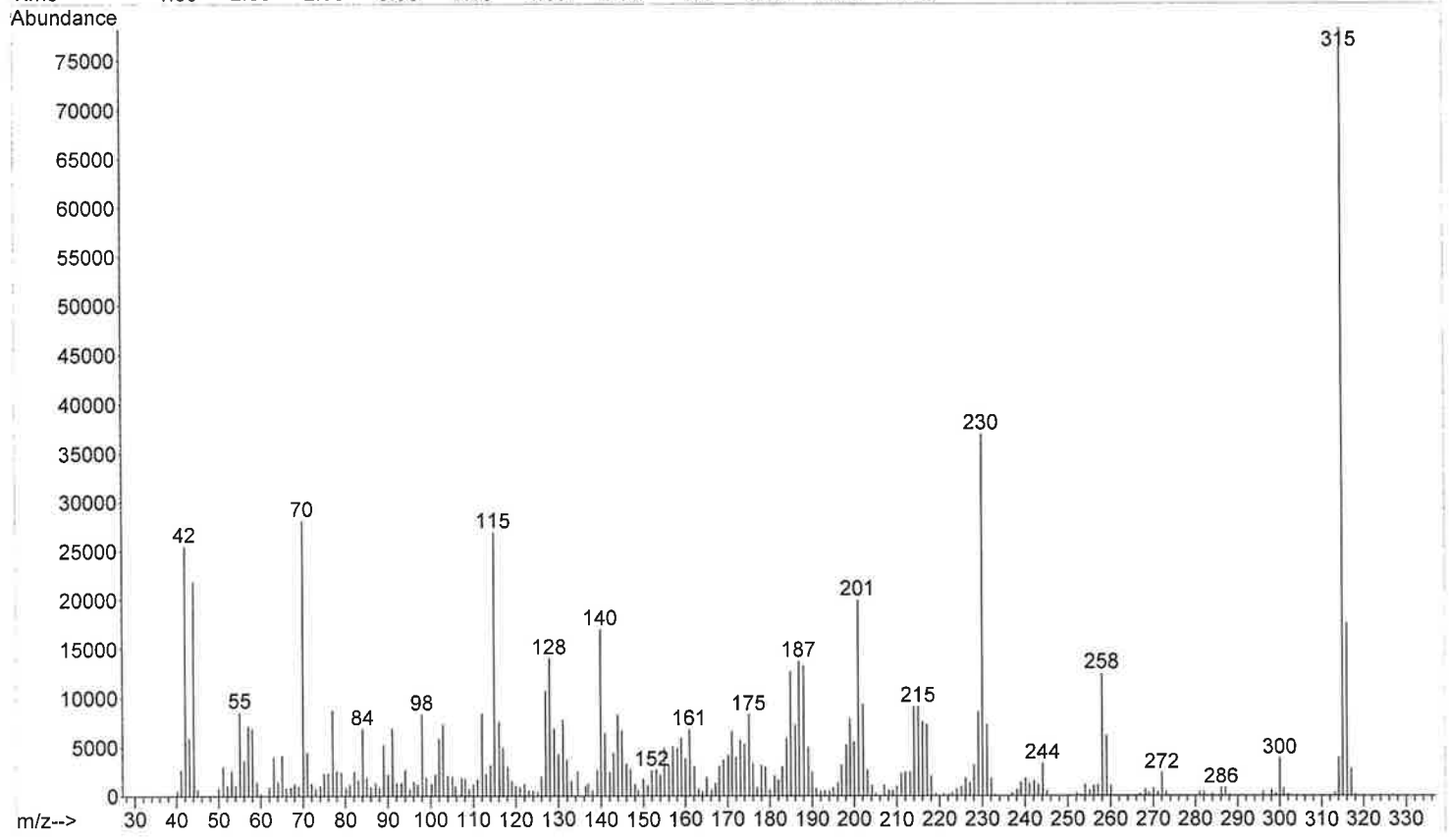
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Oxycodone.D
Operator : DK
Acquired : 7 Jun 2006 11:53 pm using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Oxycodone
Misc Info : Sigma Lot# 128H1012 MeOH
Vial Number: 21



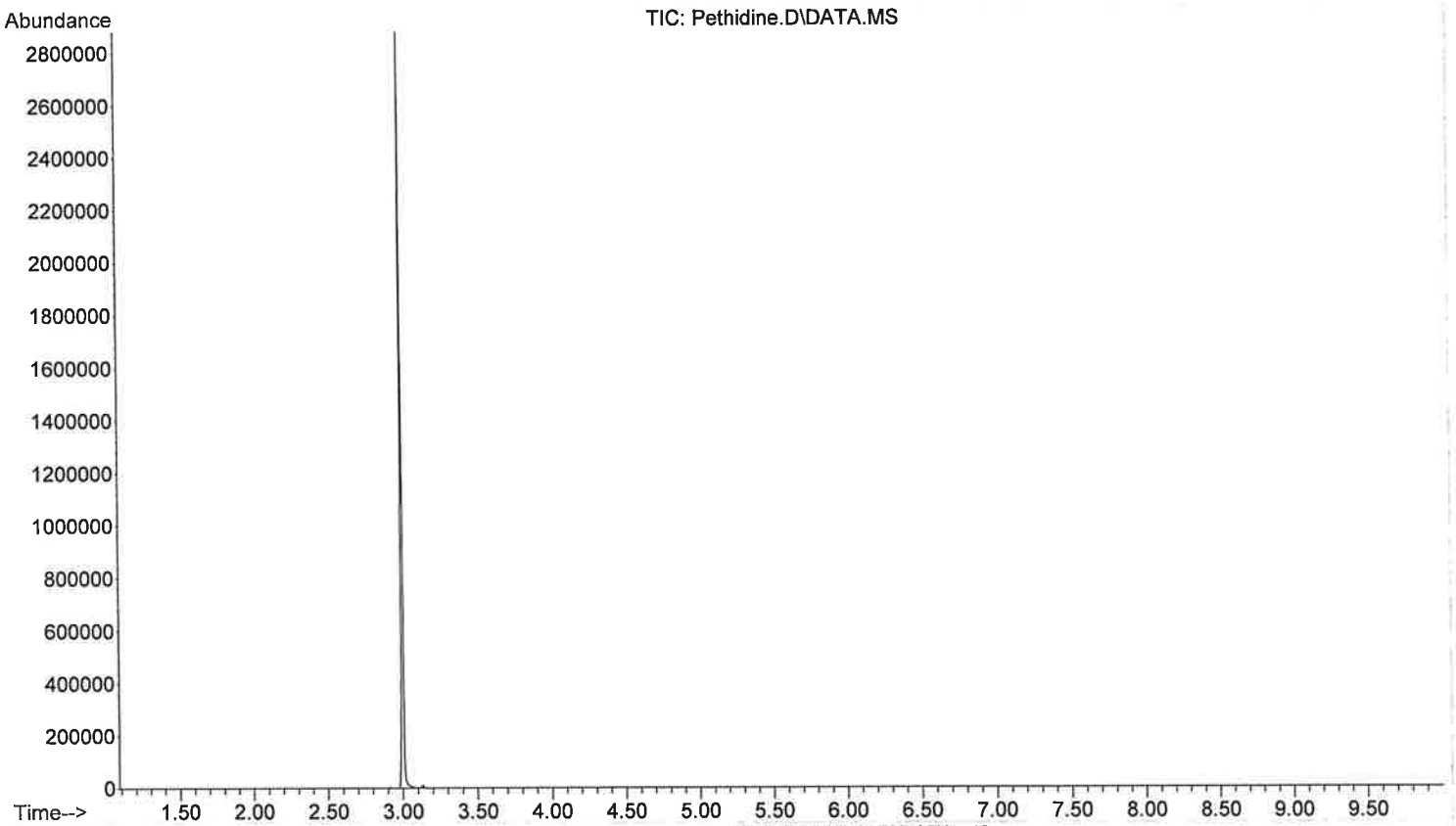


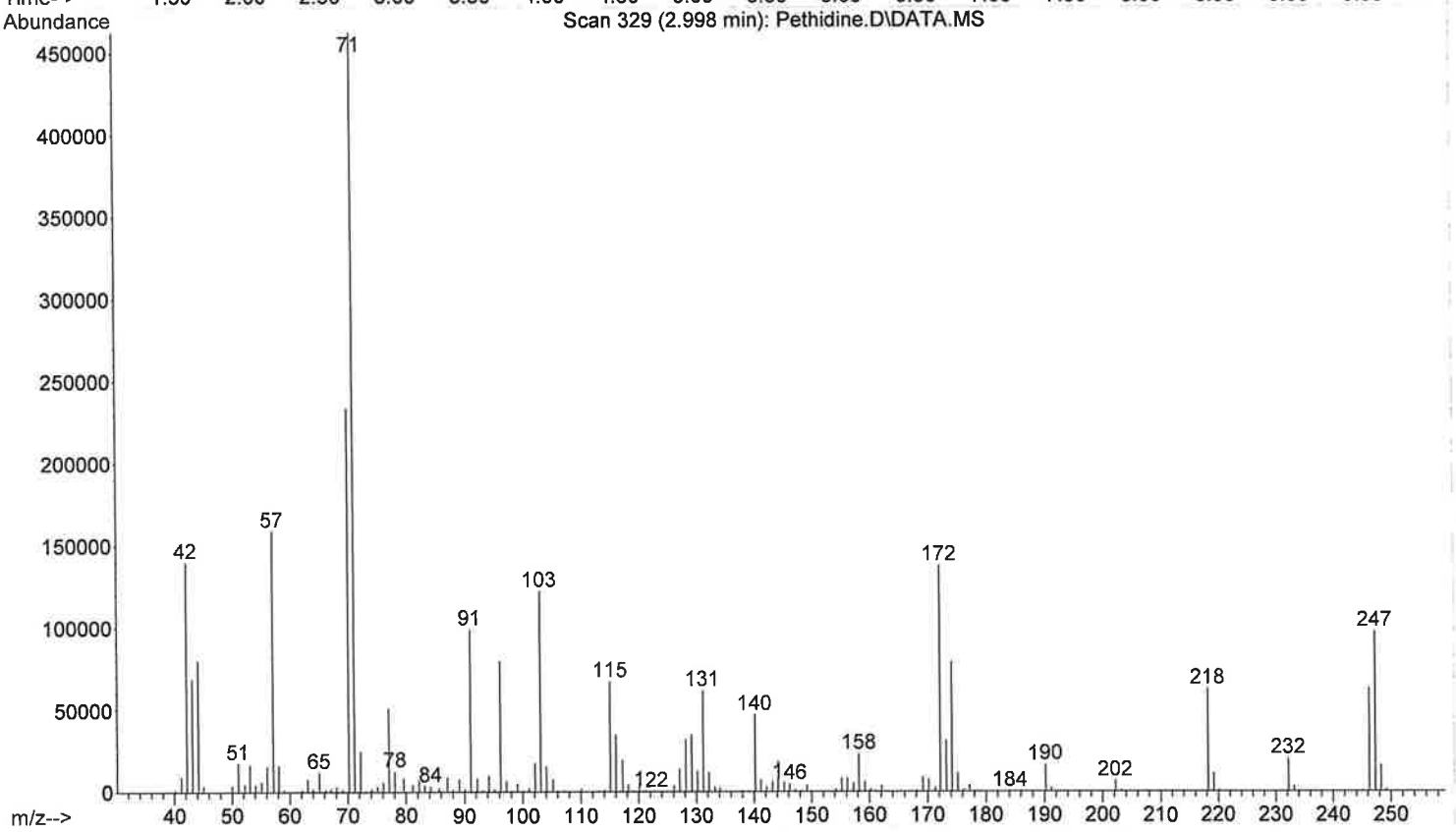
File :C:\MSDChem\1\DATA\DF\OXYCODONE.D
Operator : DONNA
Acquired : 10 Jun 2006 00:59 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: OXYCODONE
Misc Info : SIGMA LOT#128H1012
Vial Number: 21



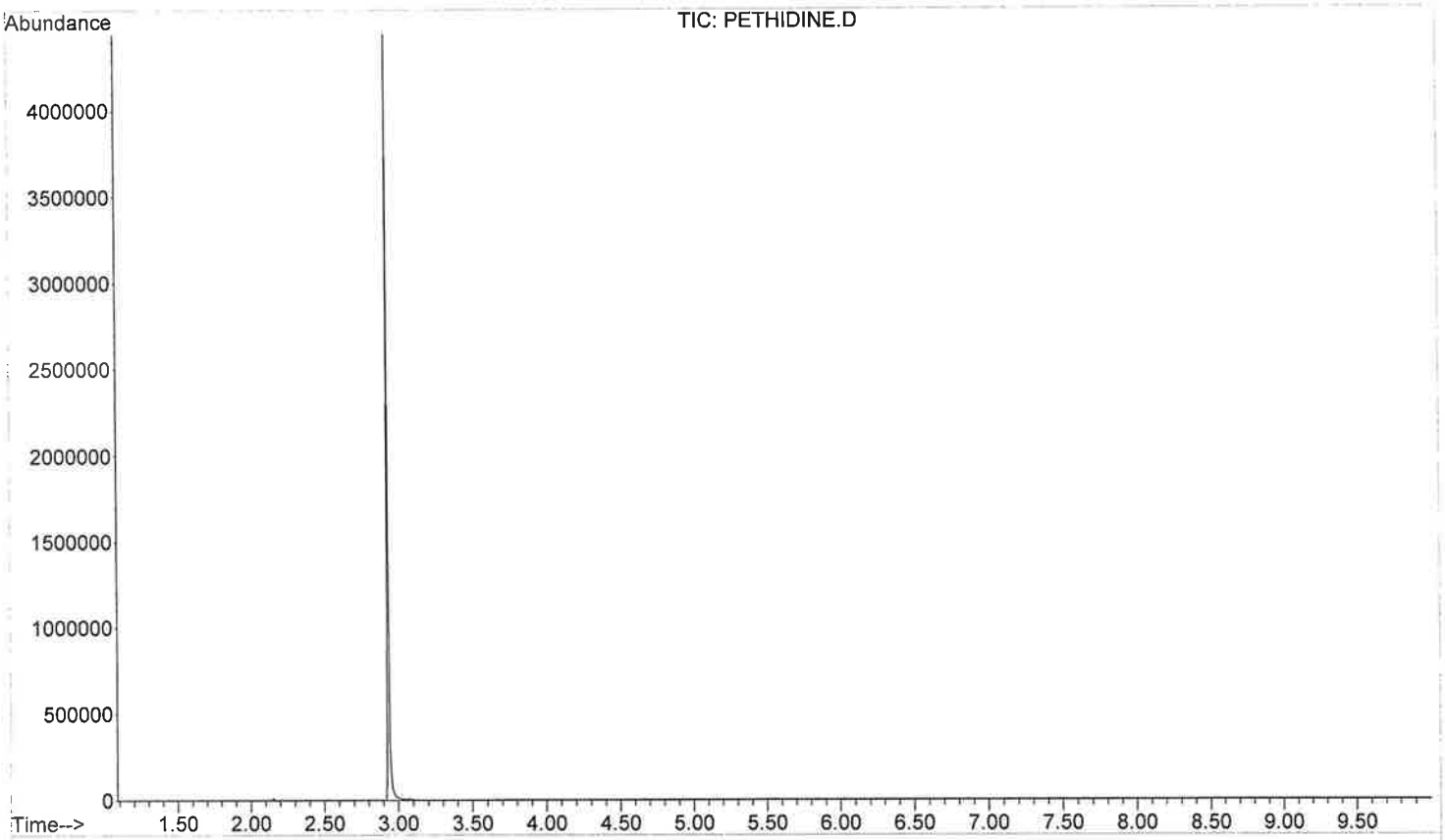


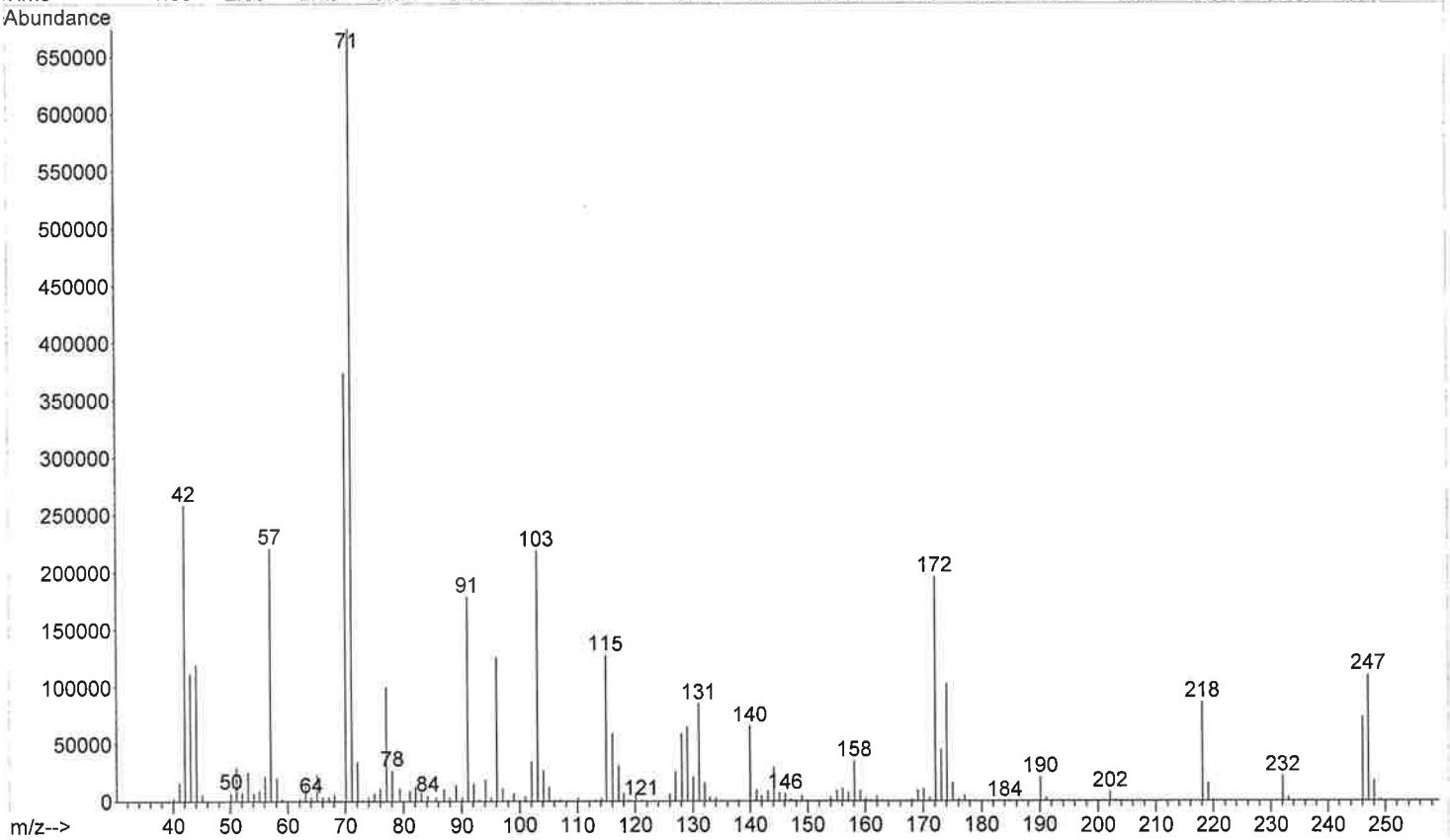
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Pethidine.D
Operator : DK
Acquired : 8 Jun 2006 12:21 am using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Pethidine
Misc Info : Pennick Lot# 413NMN-027 MeOH
Vial Number: 22



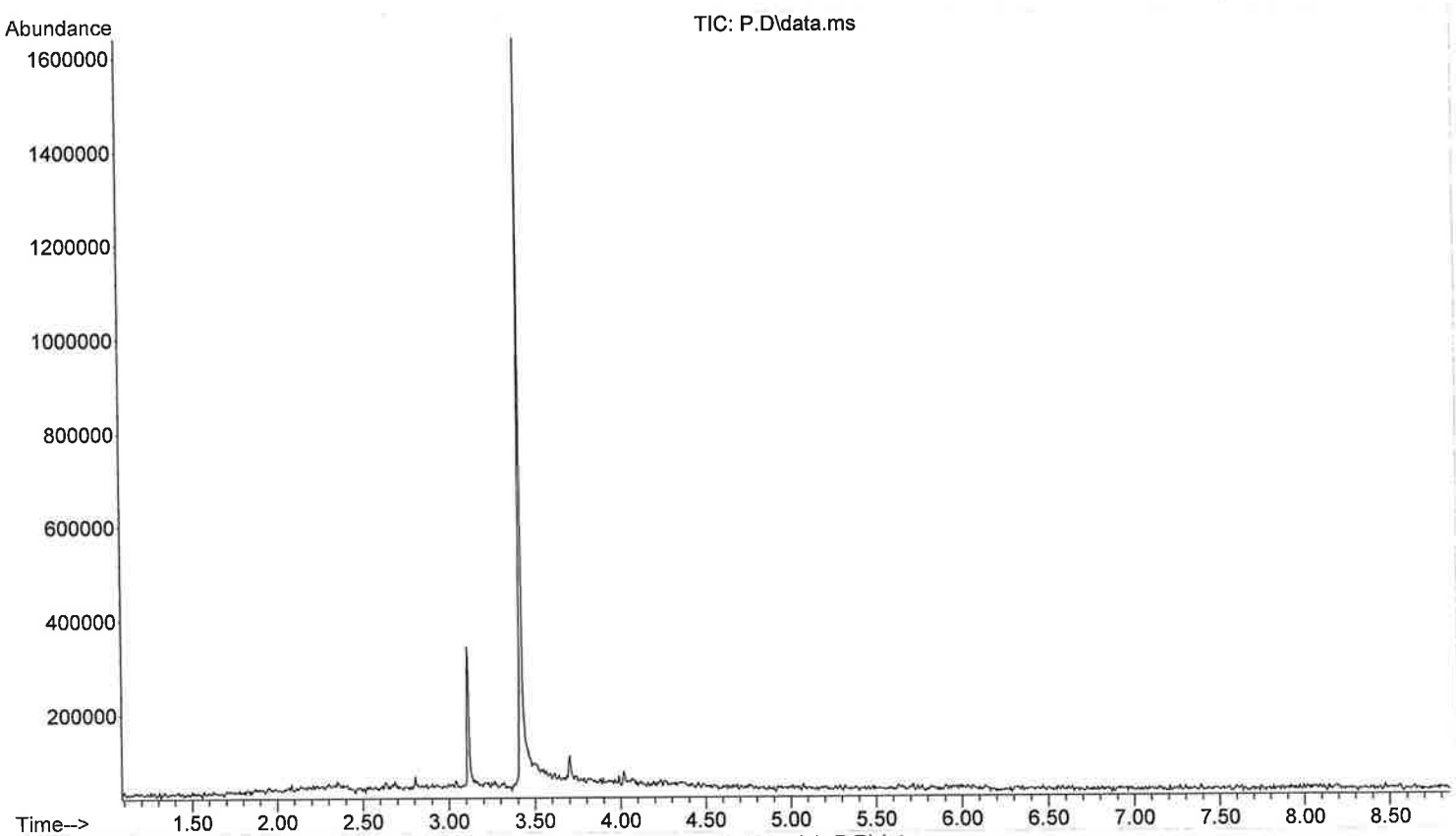


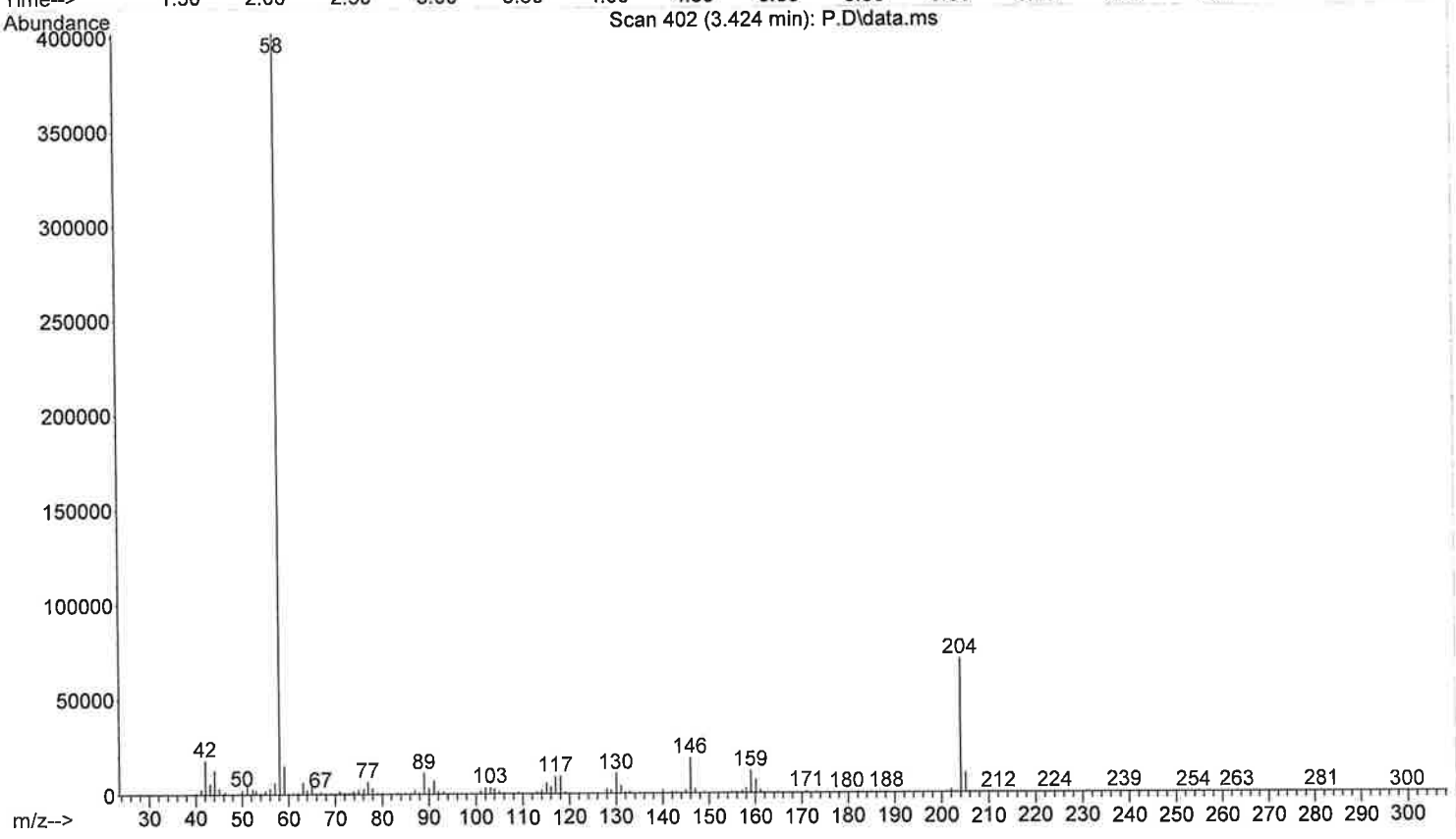
File :C:\MSDChem\1\DATA\DF\PETHIDINE.D
Operator : DONNA
Acquired : 10 Jun 2006 1:28 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: PETHIDINE
Misc Info : PENICK LOT#413NMN027
Vial Number: 22



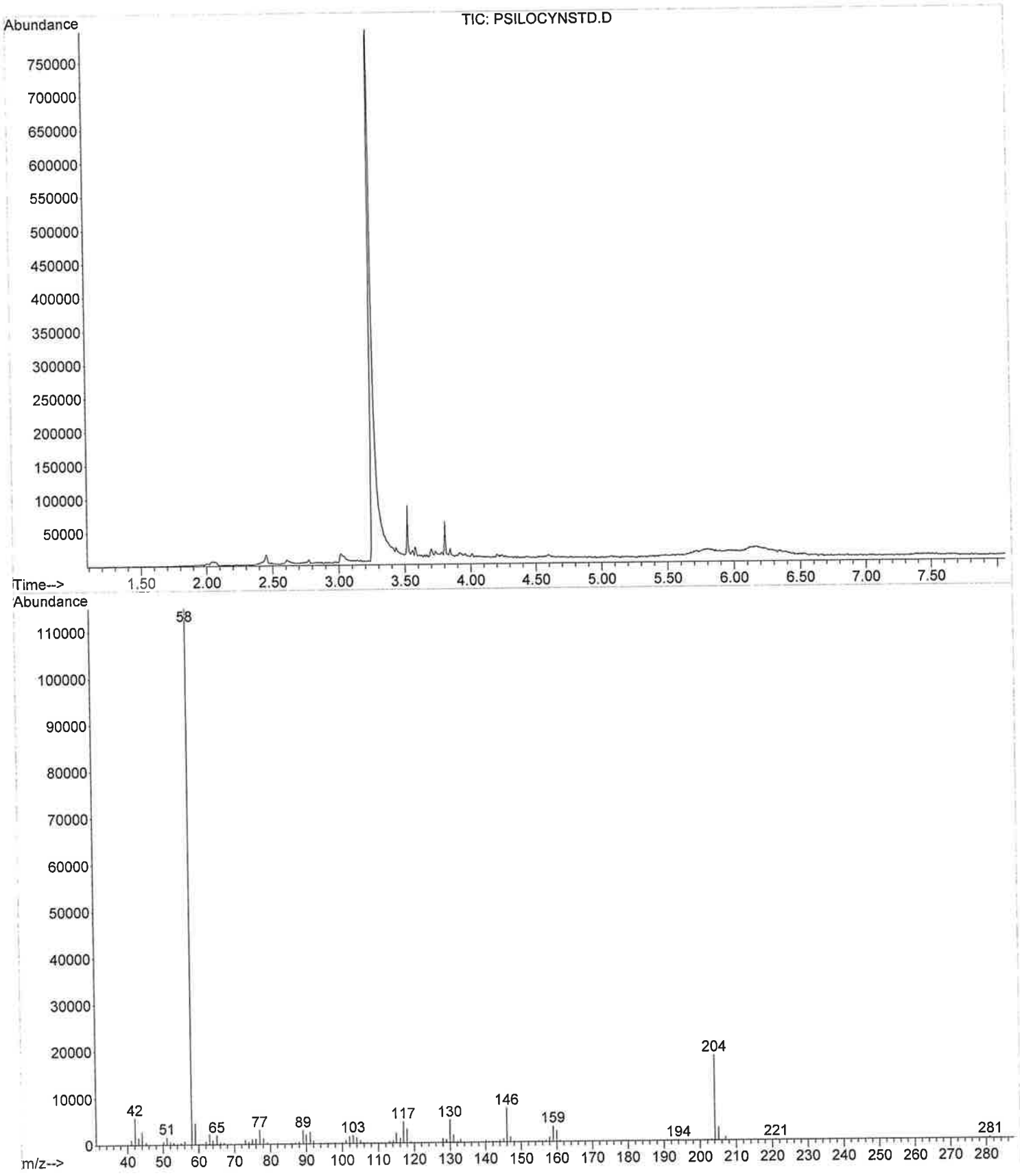


File : C:\MSDCHEM\1\DATA\DF\Snapshot\P.D
Operator : DF
Acquired : 4 Jul 2006 10:27 using AcqMethod MSDRUGS.M
Instrument : Donna 2
Sample Name: Psilocyn in MeOH
Misc Info :
Vial Number: 1

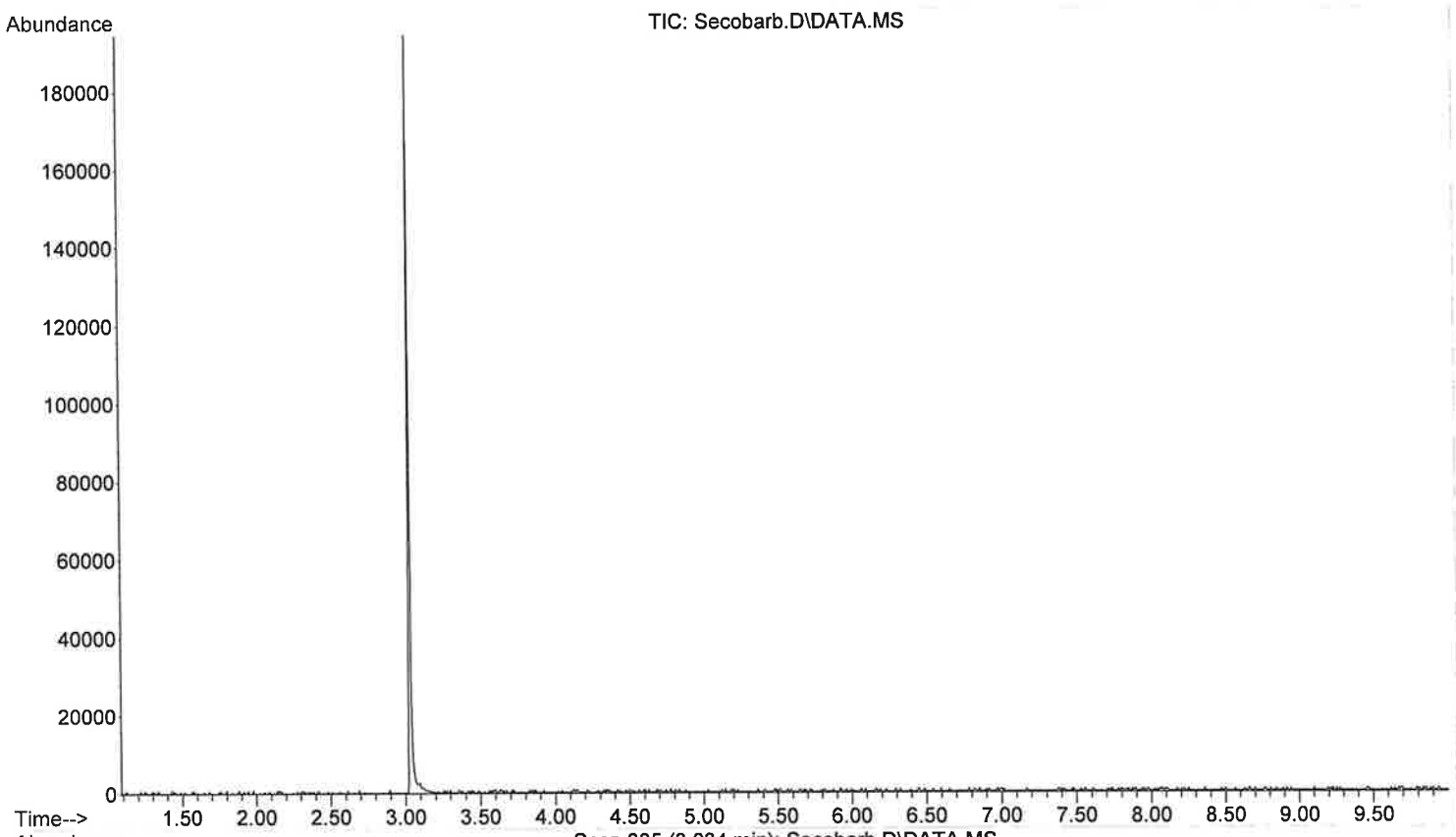


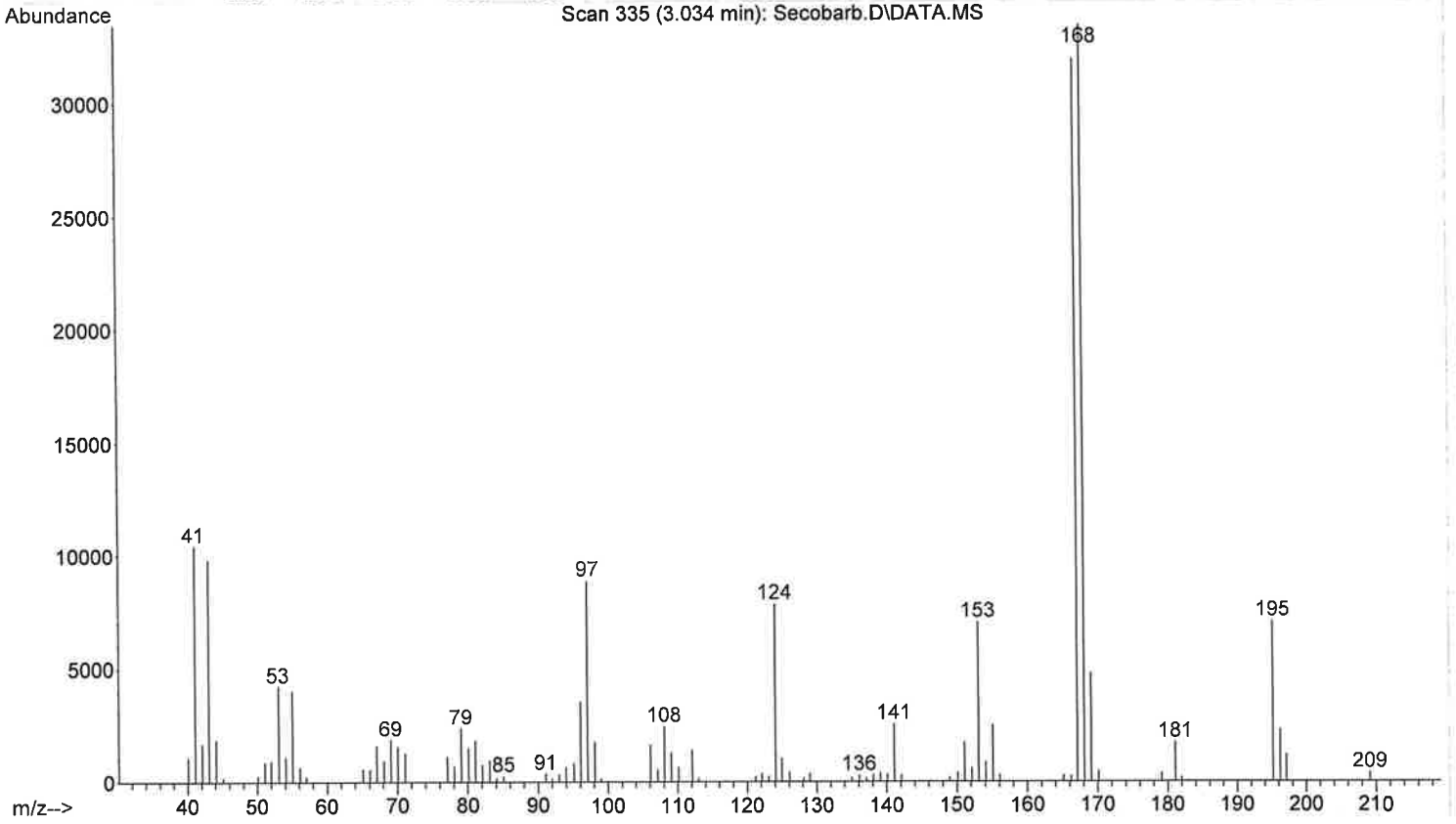


File : C:\MSDChem\1\DATA\DF\PSILOCYNSTD.D
Operator : DF
Acquired : 18 Jul 2006 17:30 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name:
Misc Info :
Vial Number: 1

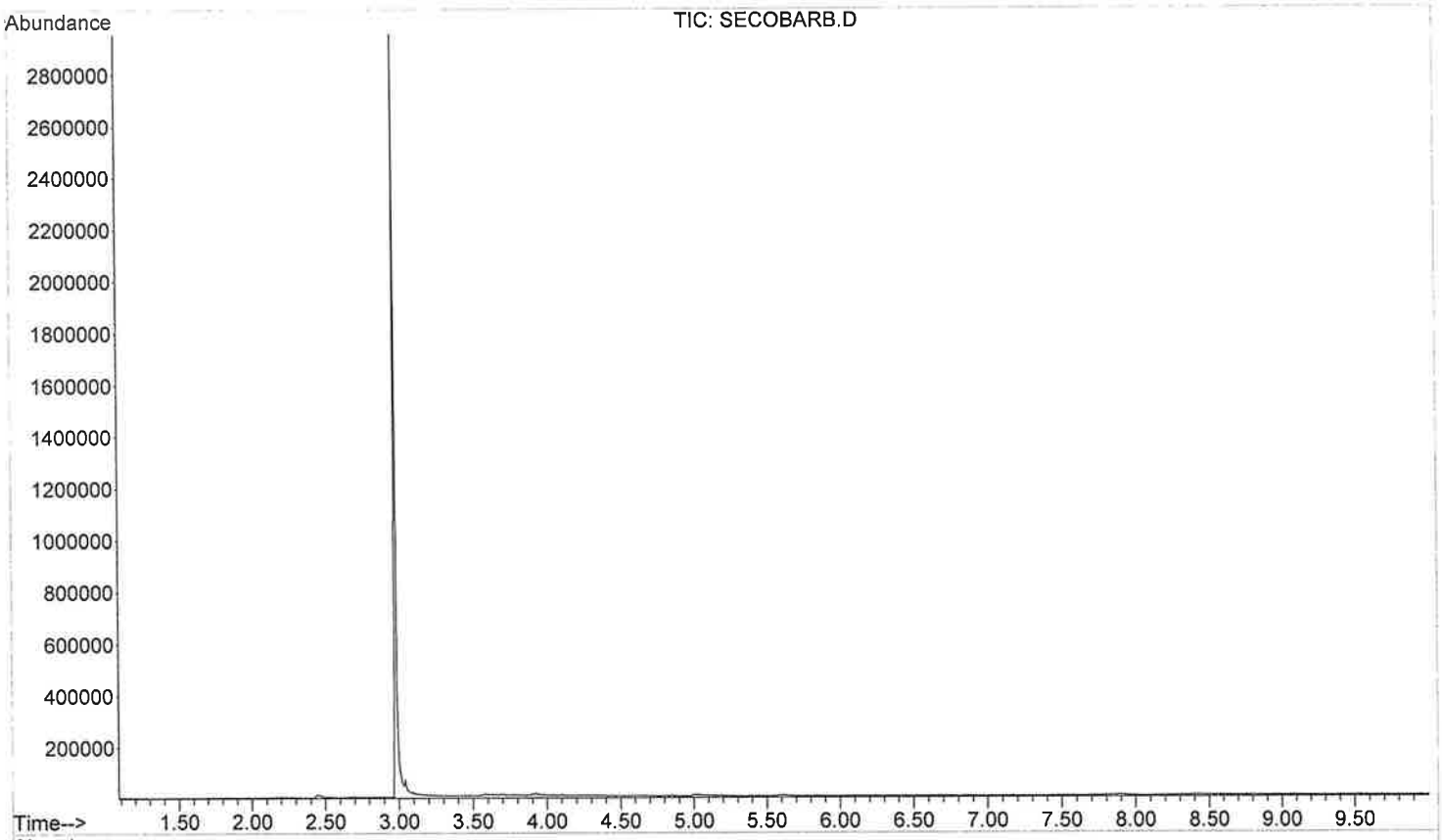


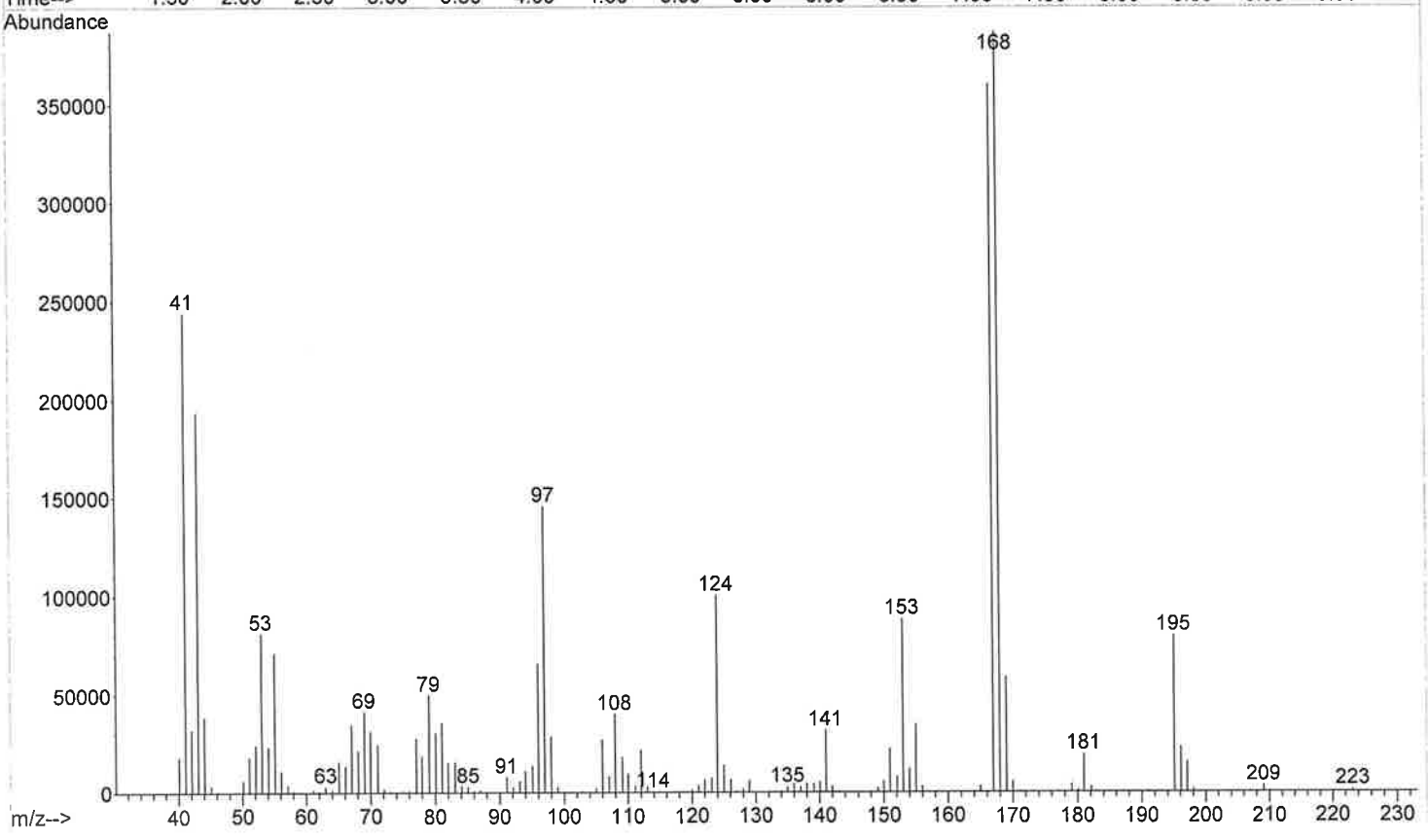
File : C:\msdchem\1\DATA\df\07Jun06D.01p\Secobarb.D
Operator : DF
Acquired : 8 Jun 2006 12:49 am using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Secobarbital
Misc Info : KDK Lot#137A MeOH
Vial Number: 23



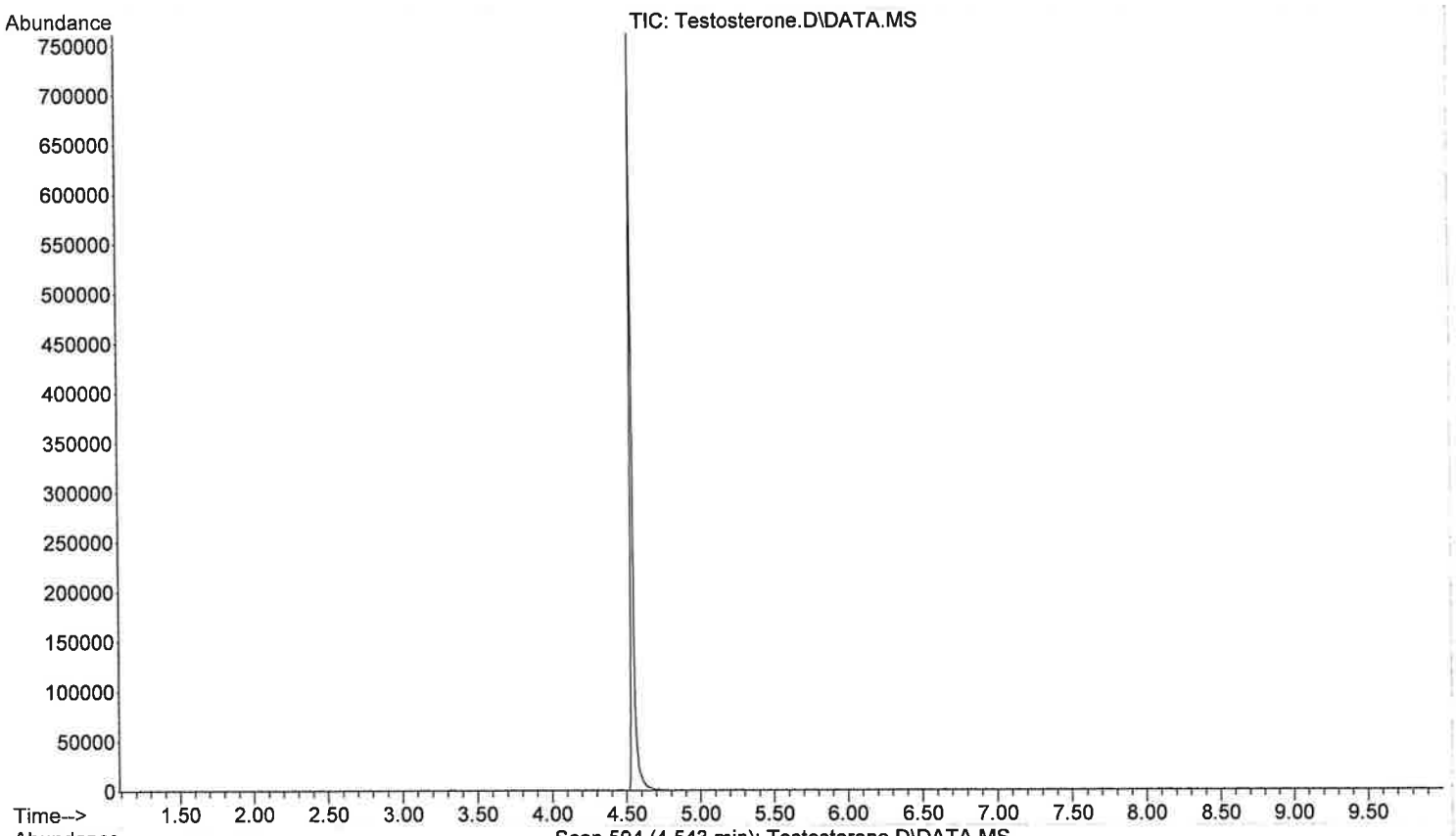


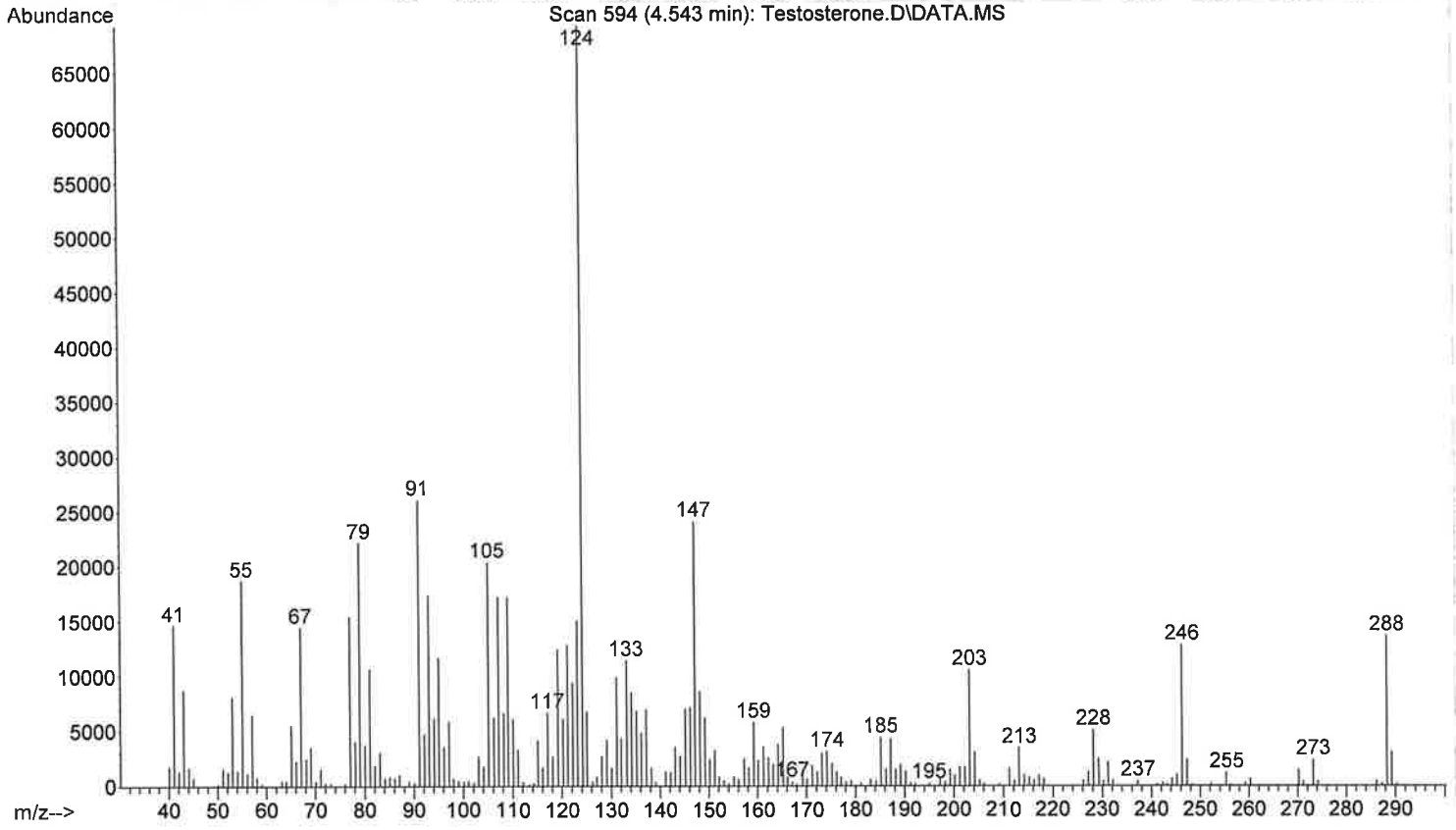
File :C:\MSDChem\1\DATA\DF\SECOBARB.D
Operator : DONNA
Acquired : 22 Jun 2006 14:24 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: SECOBARBITAL
Misc Info : K&K LOT#137A MEOH
Vial Number: 1



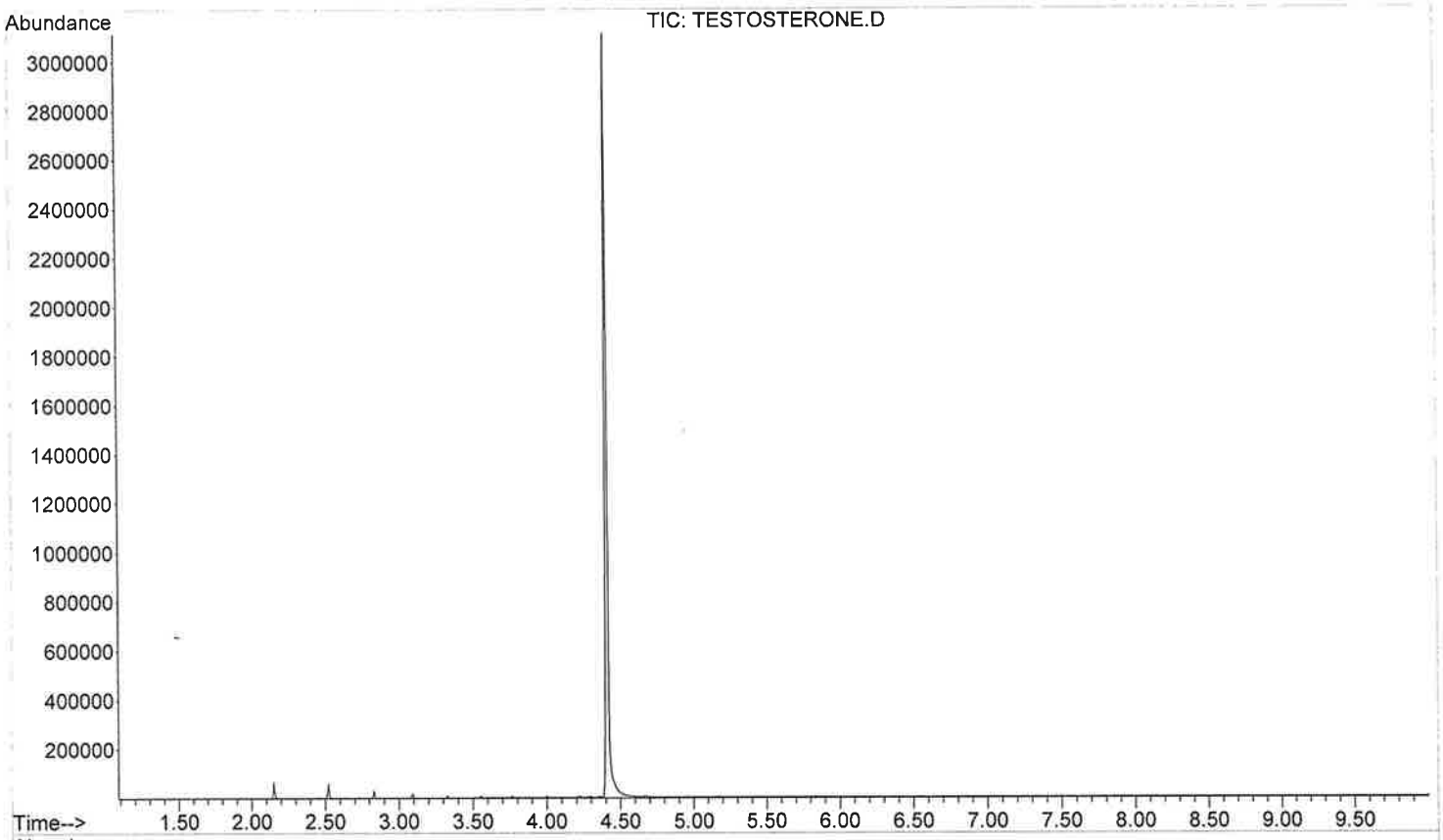


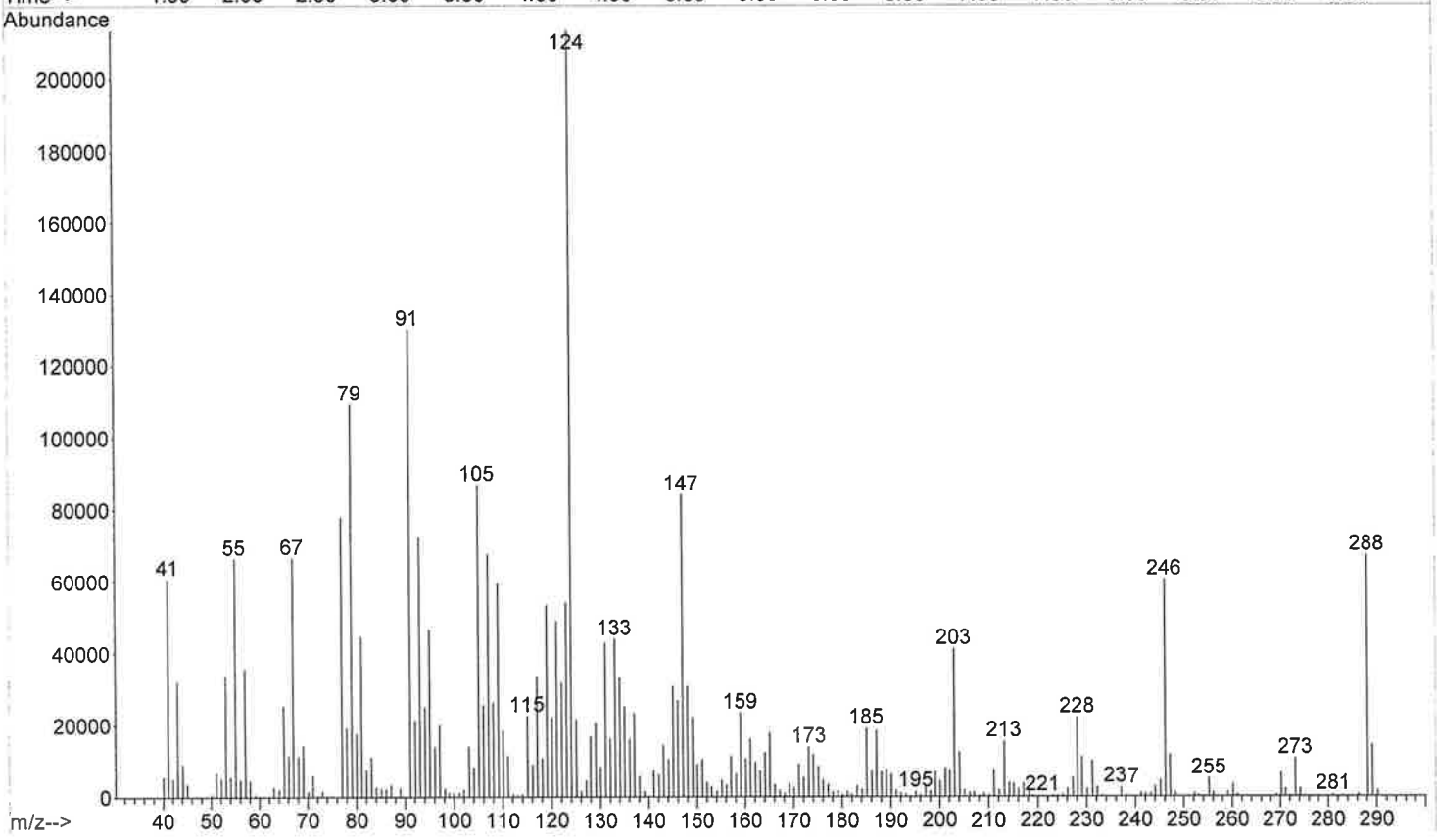
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Testosterone.D
Operator :
Acquired : 8 Jun 2006 1:18 am using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Testosterone
Misc Info : Sigma Lot#50H0345 MeOH
Vial Number: 24



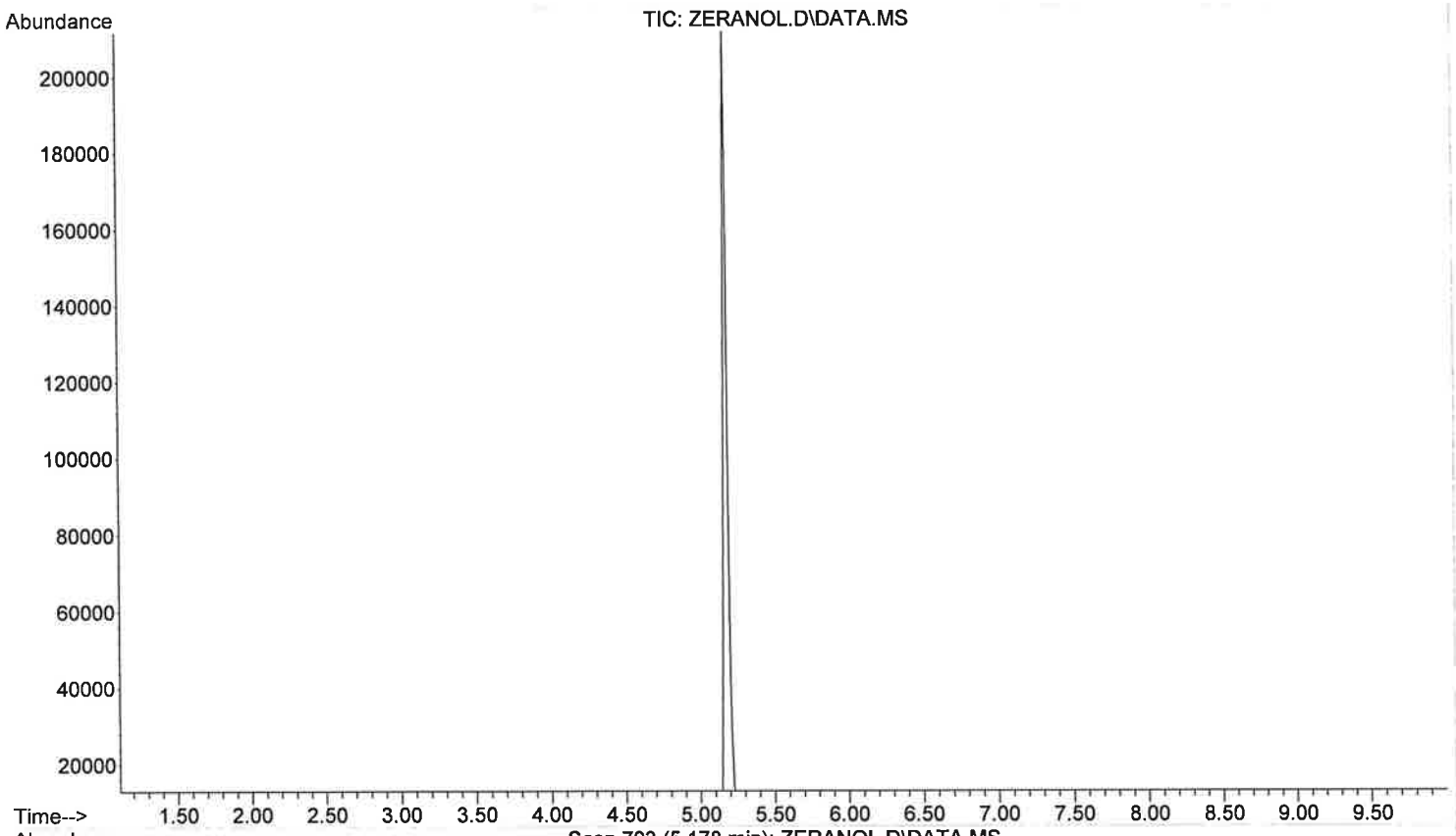


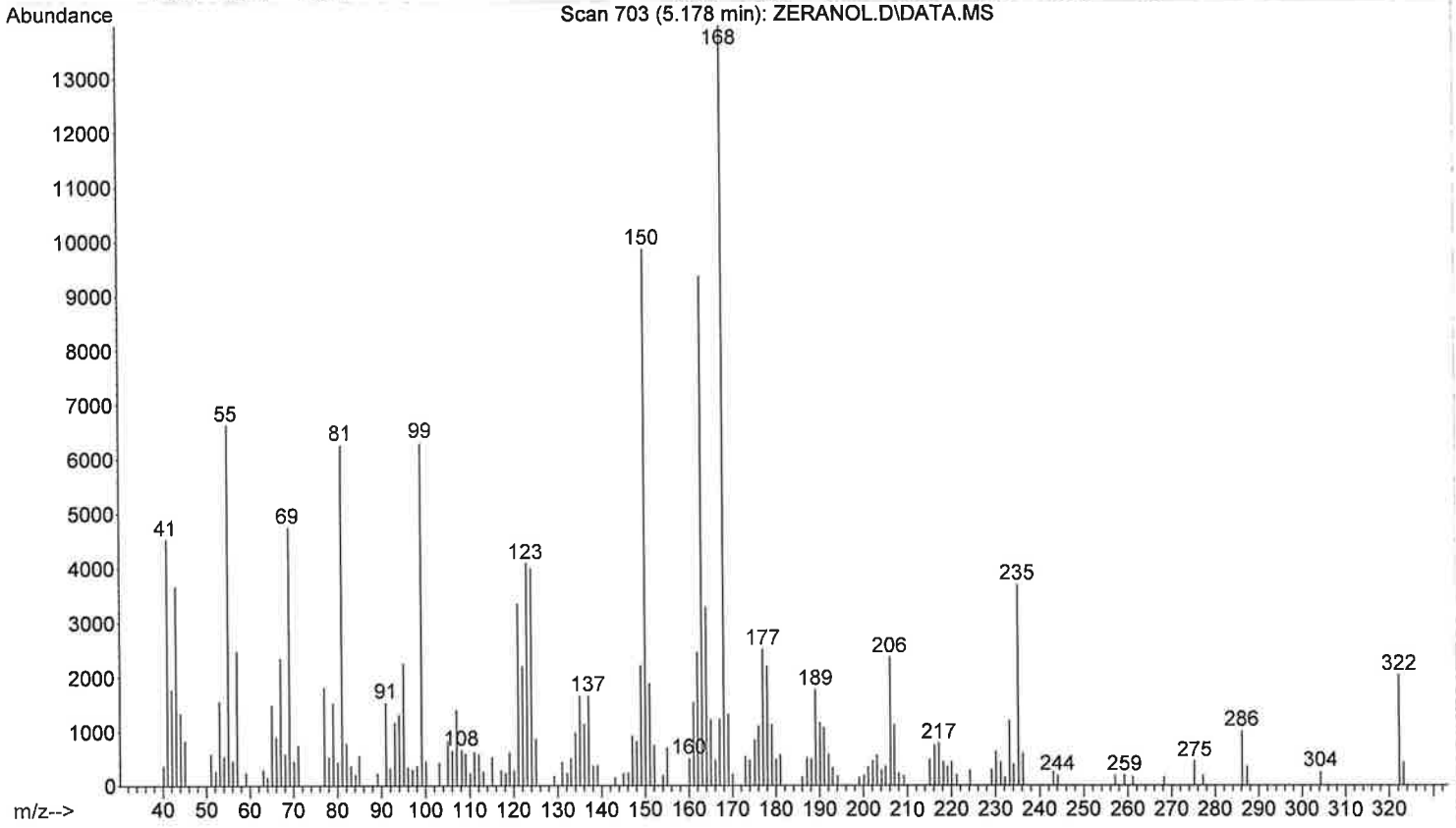
File :C:\MSDChem\1\DATA\DF\TESTOSTERONE.D
Operator : DONNA
Acquired : 10 Jun 2006 2:25 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: TESTOSTERONE
Misc Info : SIGMA LOT#50H0345 MEOH
Vial Number: 24



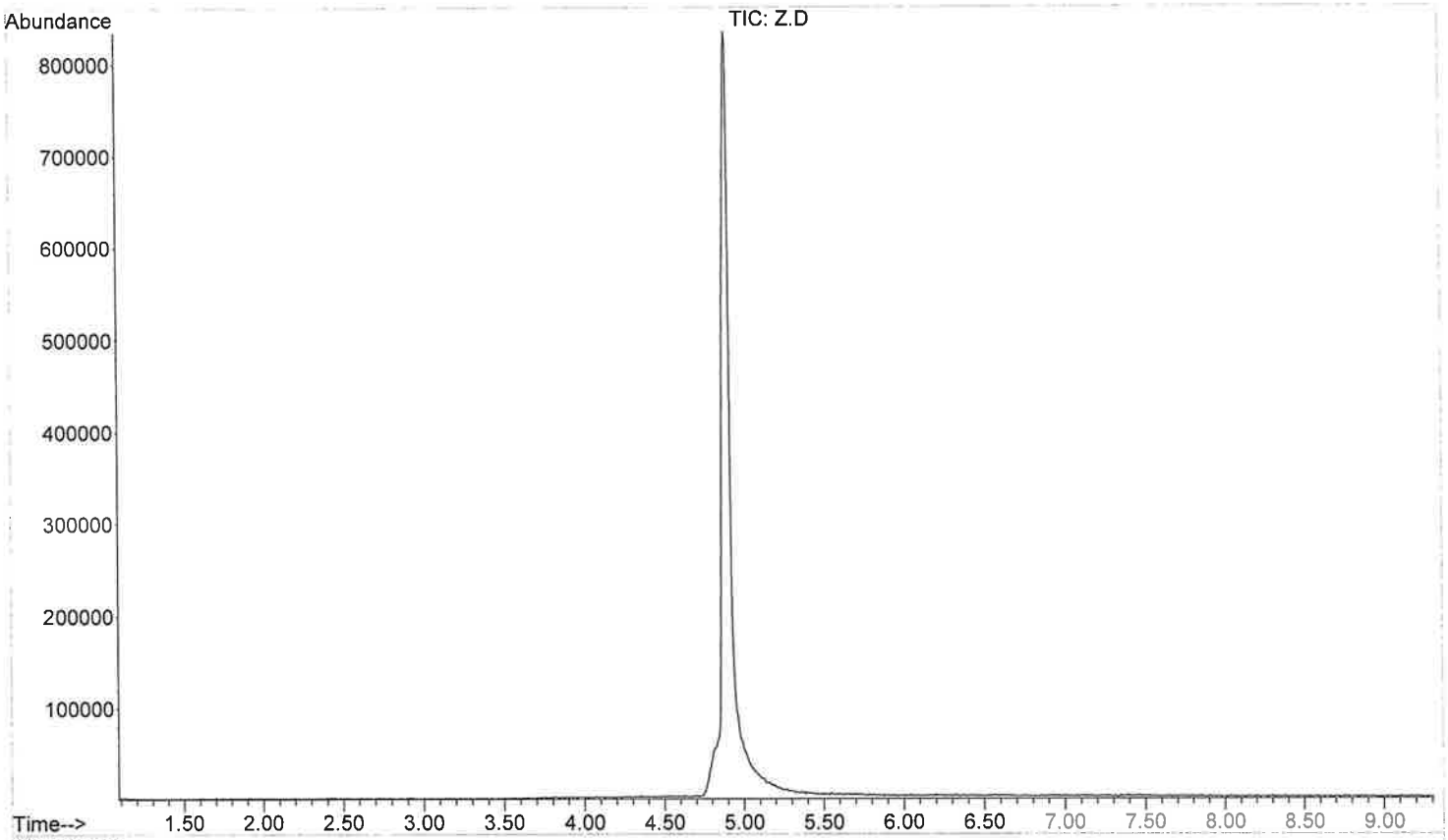


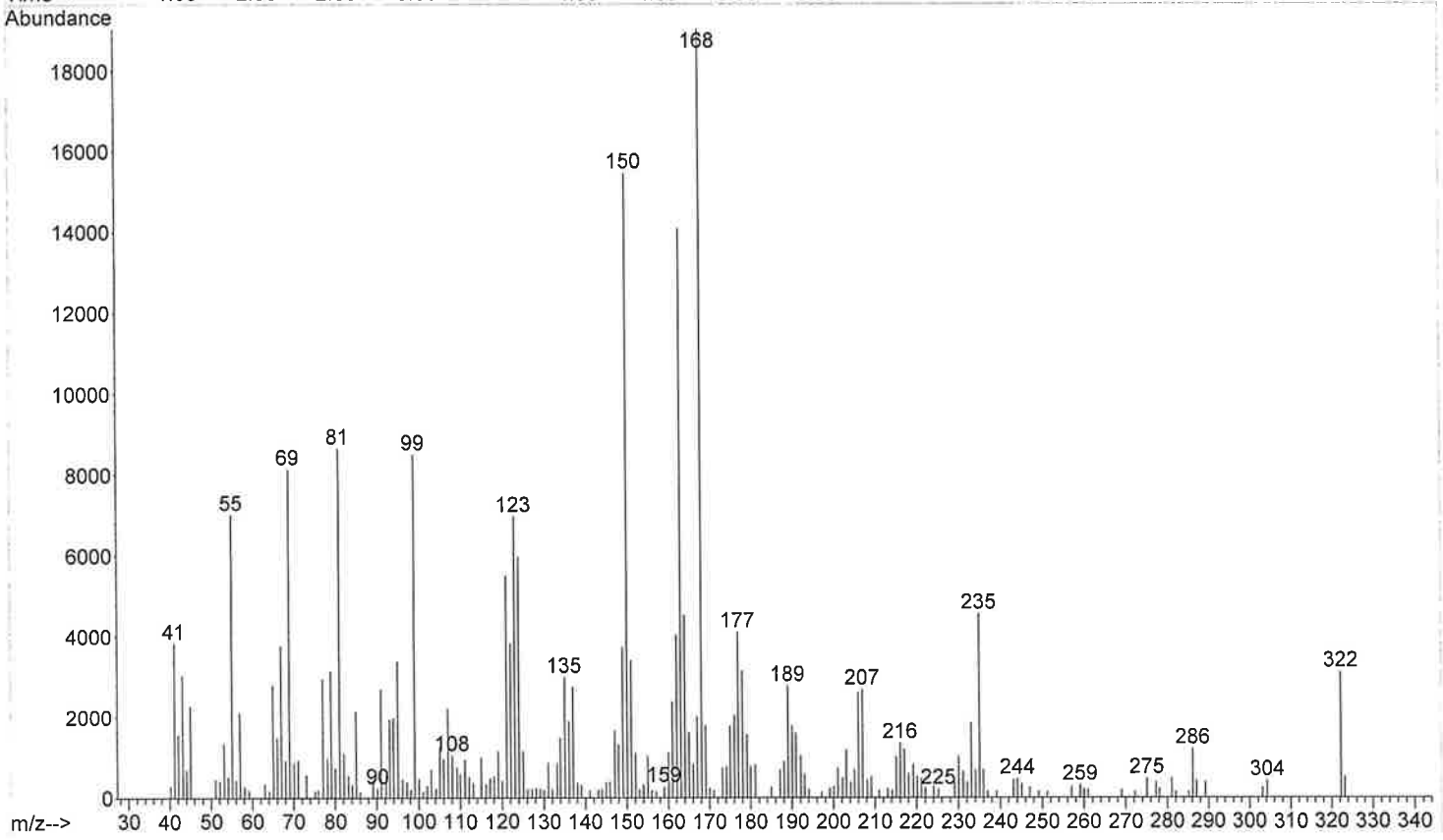
File : C:\msdchem\1\DATA\df\ZERANOL.D
Operator : DK
Acquired : 9 Jun 2006 9:33 am using AcqMethod MSDRUGS.M
Instrument : Donna 2
Sample Name: Zeranol
Misc Info : Pittman-Moore Lot #86-88 MEOH
Vial Number: 1



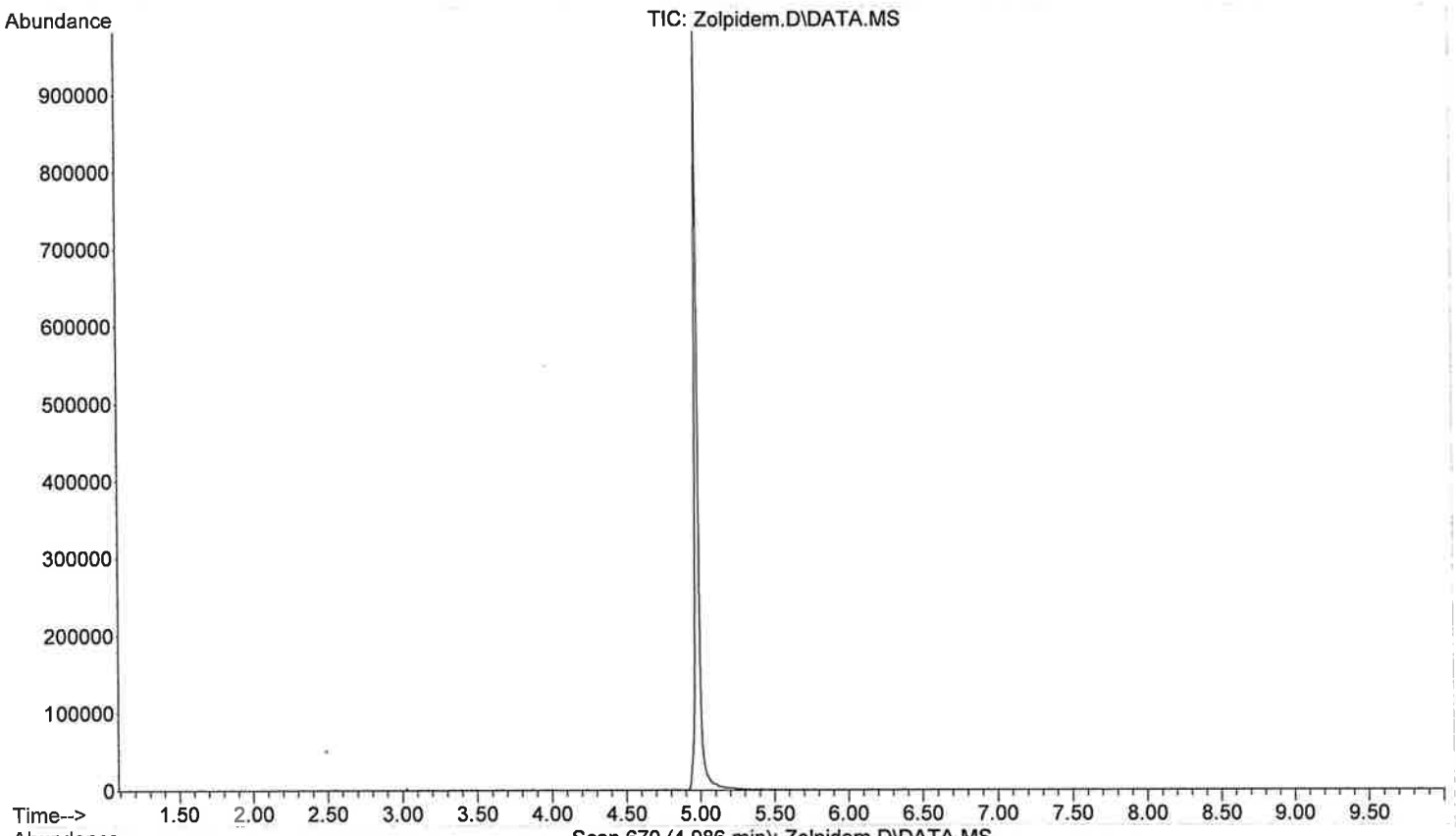


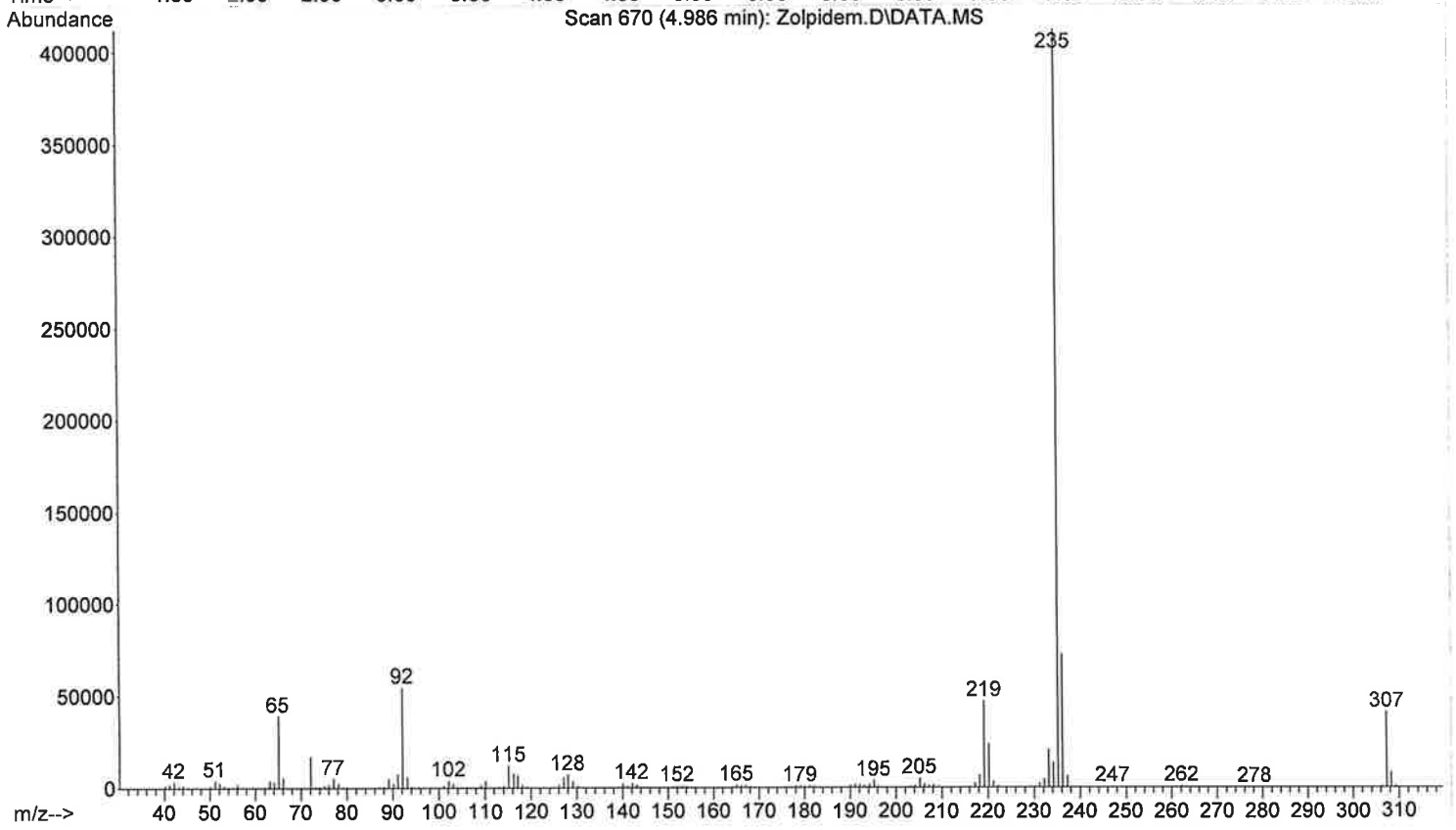
File : C:\MSDCHEM\1\DATA\DF\Snapshot\Z.D
Operator : DF
Acquired : 4 Jul 2006 9:49 using AcqMethod MSDRUGS
Instrument : Gumbo
Sample Name: ZERANOL
Misc Info : PITMAN-MOORE LOT #86-88
Vial Number: 1



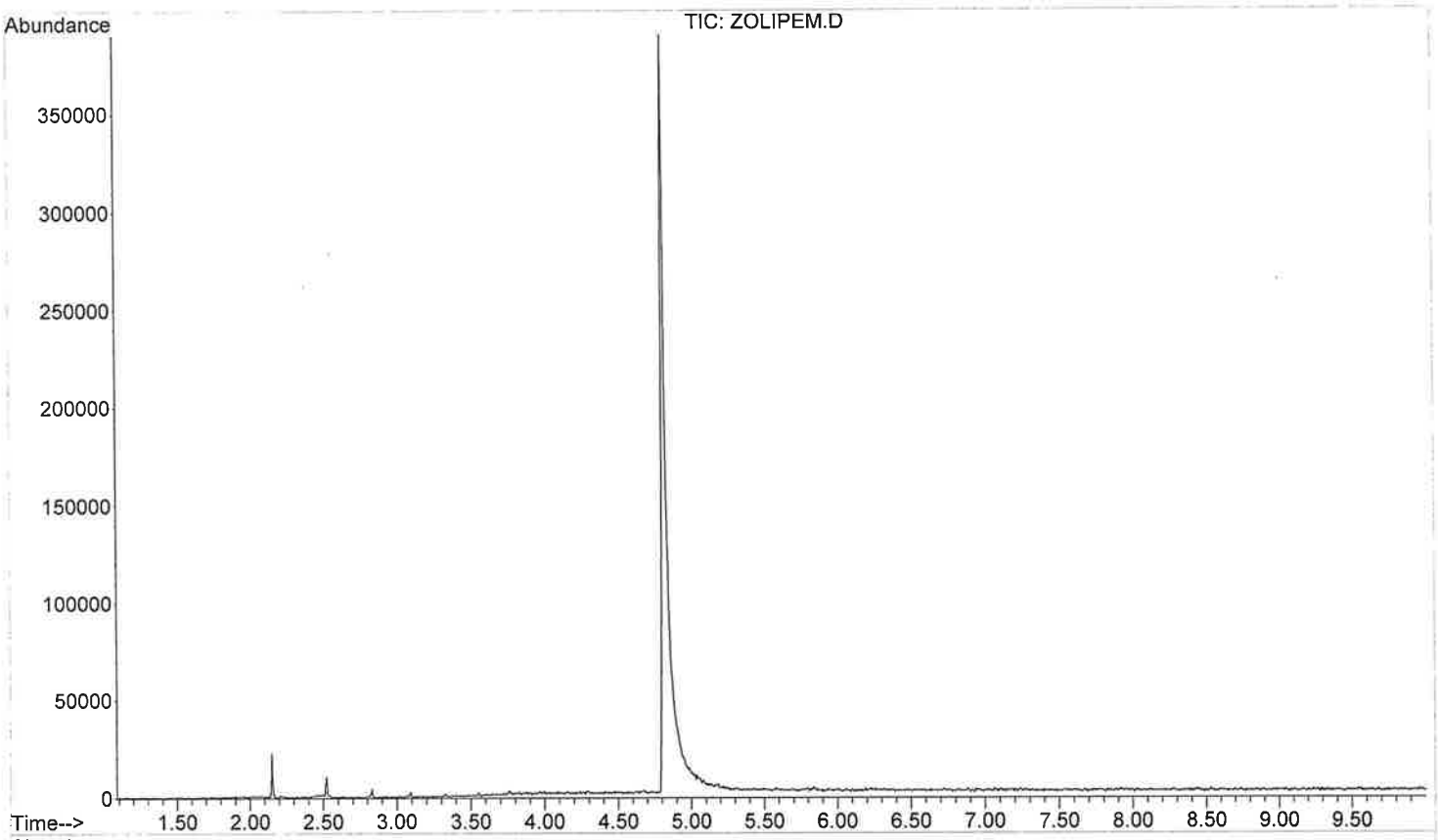


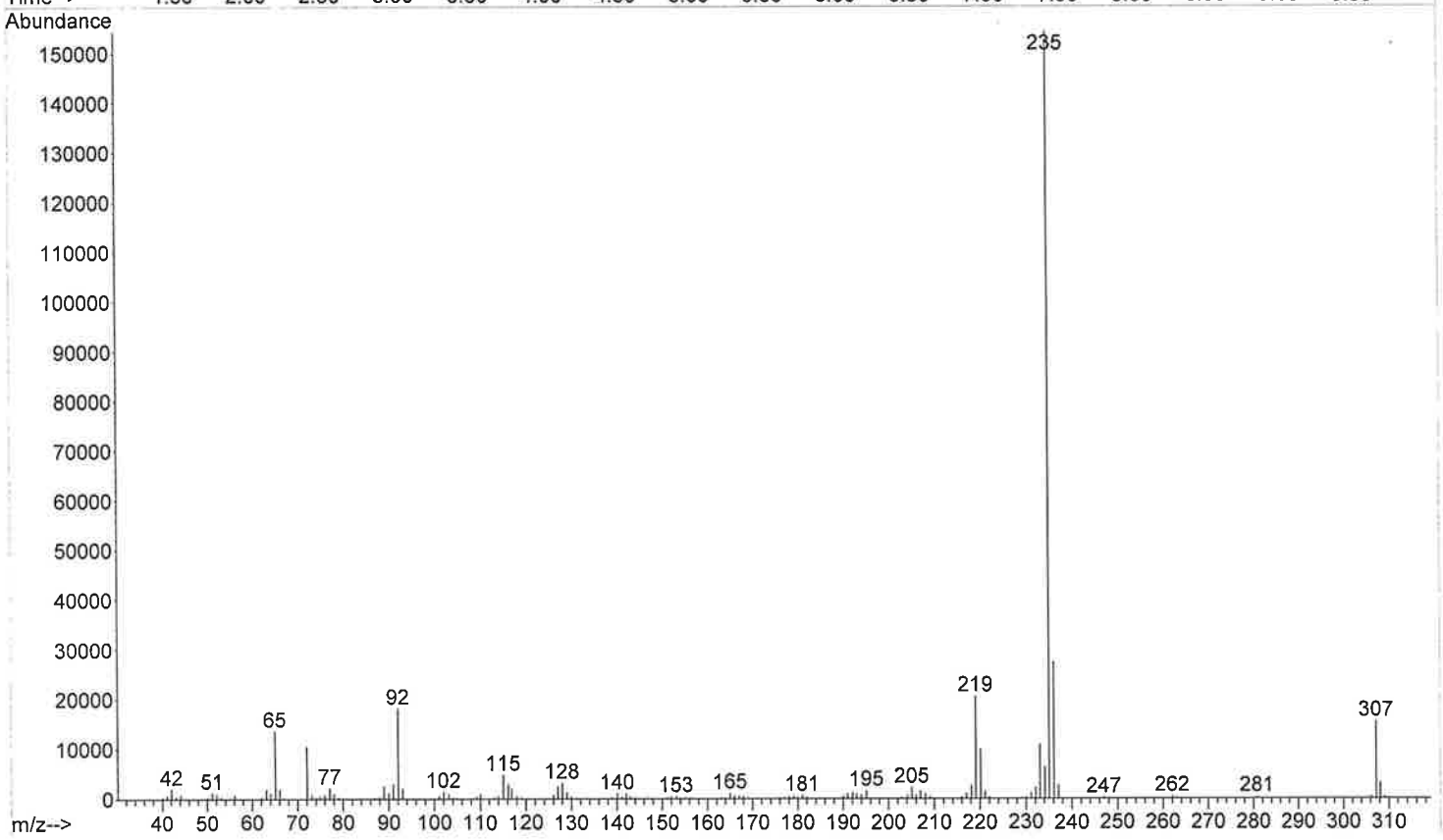
File :C:\msdchem\1\DATA\df\07Jun06D.01p\Zolpidem.D
Operator : DK
Acquired : 8 Jun 2006 2:14 am using AcqMethod ASMSDRUG.M
Instrument : Donna 2
Sample Name: Zolpidem
Misc Info : Lorex Lot#16010 MeOH
Vial Number: 26





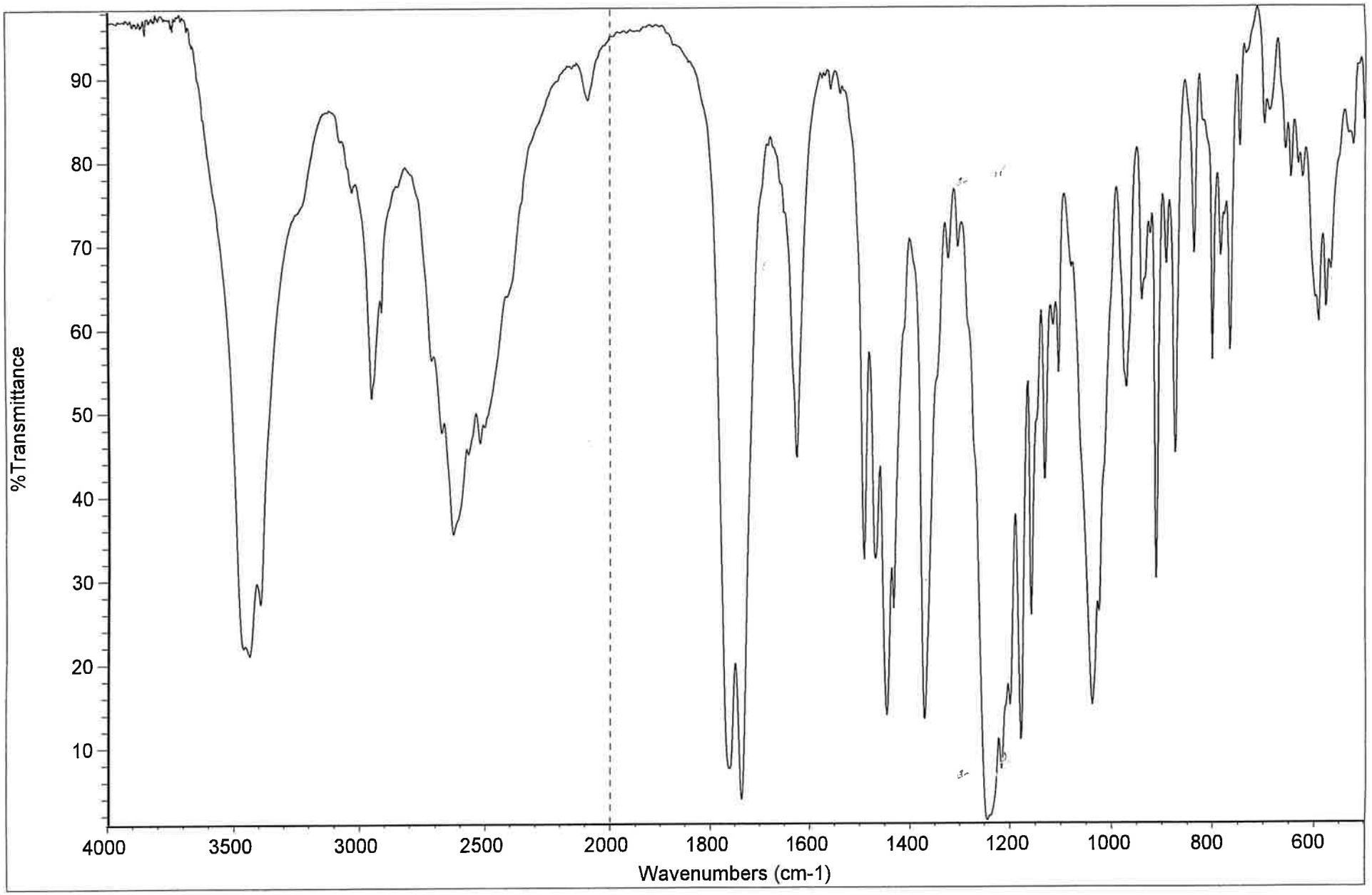
File :C:\MSDChem\1\DATA\DF\ZOLIPEM.D
Operator : DONNA
Acquired : 10 Jun 2006 3:23 using AcqMethod ASMSDRUGS
Instrument : Gumbo
Sample Name: ZOLPIDEM
Misc Info : LOREX LOT#16010 MEOH
Vial Number: 26





FTIR DATA

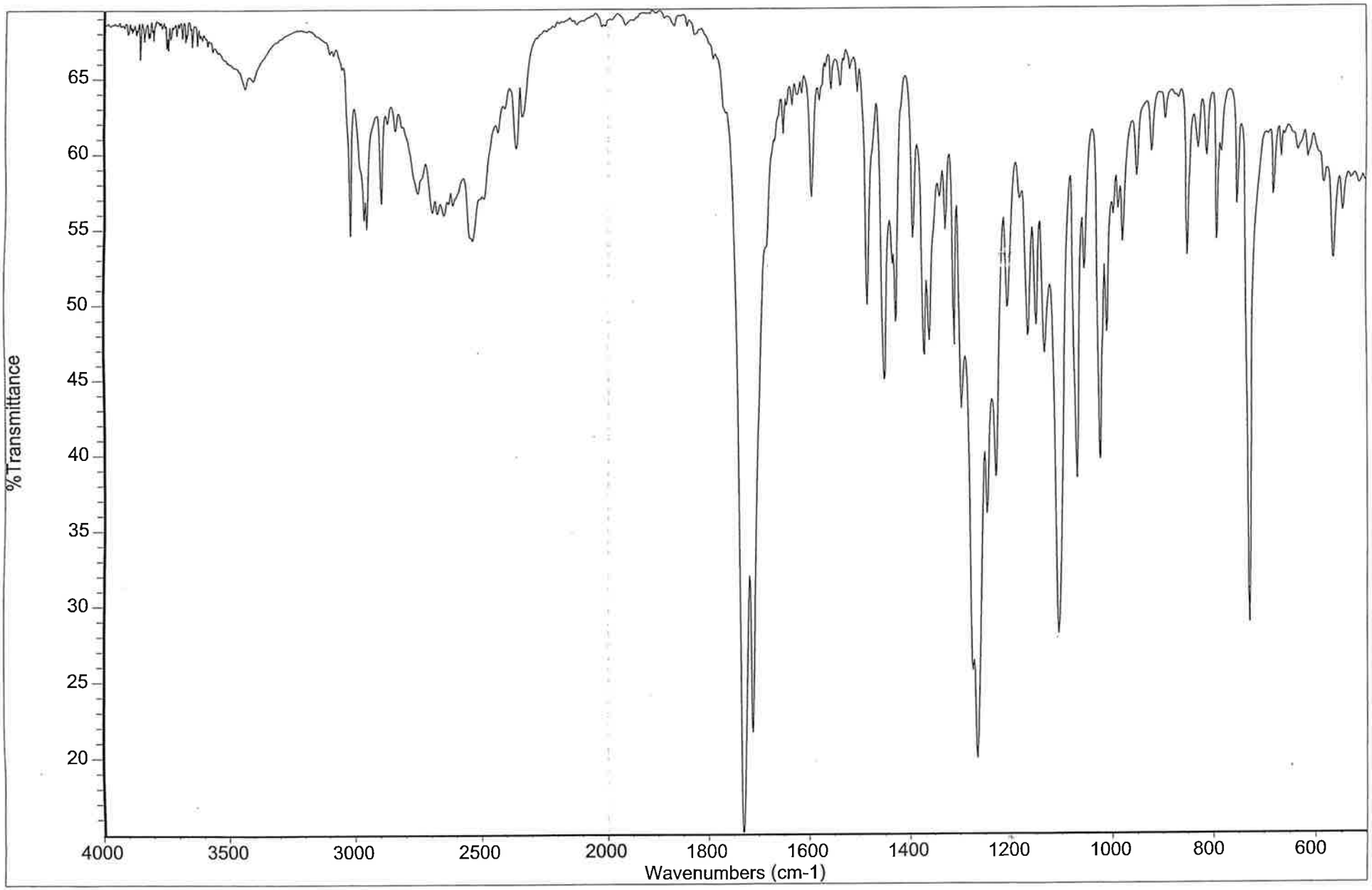
AS COMPARED WITH GC/MS



*HEROIN HCL ALLTECH LOT 308 NEAT WITH KBR PWF

IR #1

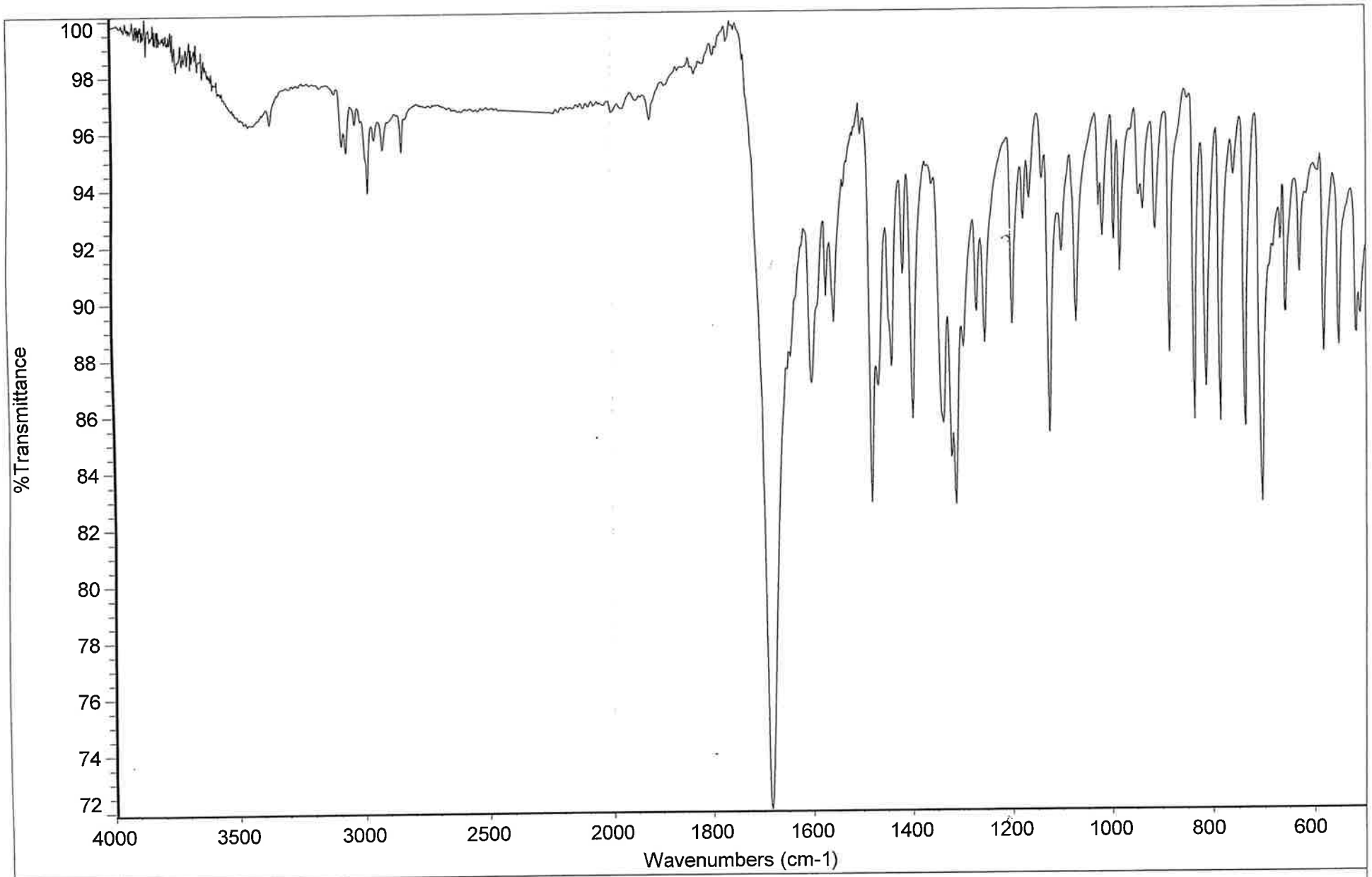
Collection time: Wed Apr 18 10:00:36 2001



COCAINE SIGMA LOT 50K1124 TAB

IR #3

Collection time: Wed Dec 27 15:04:34 2000

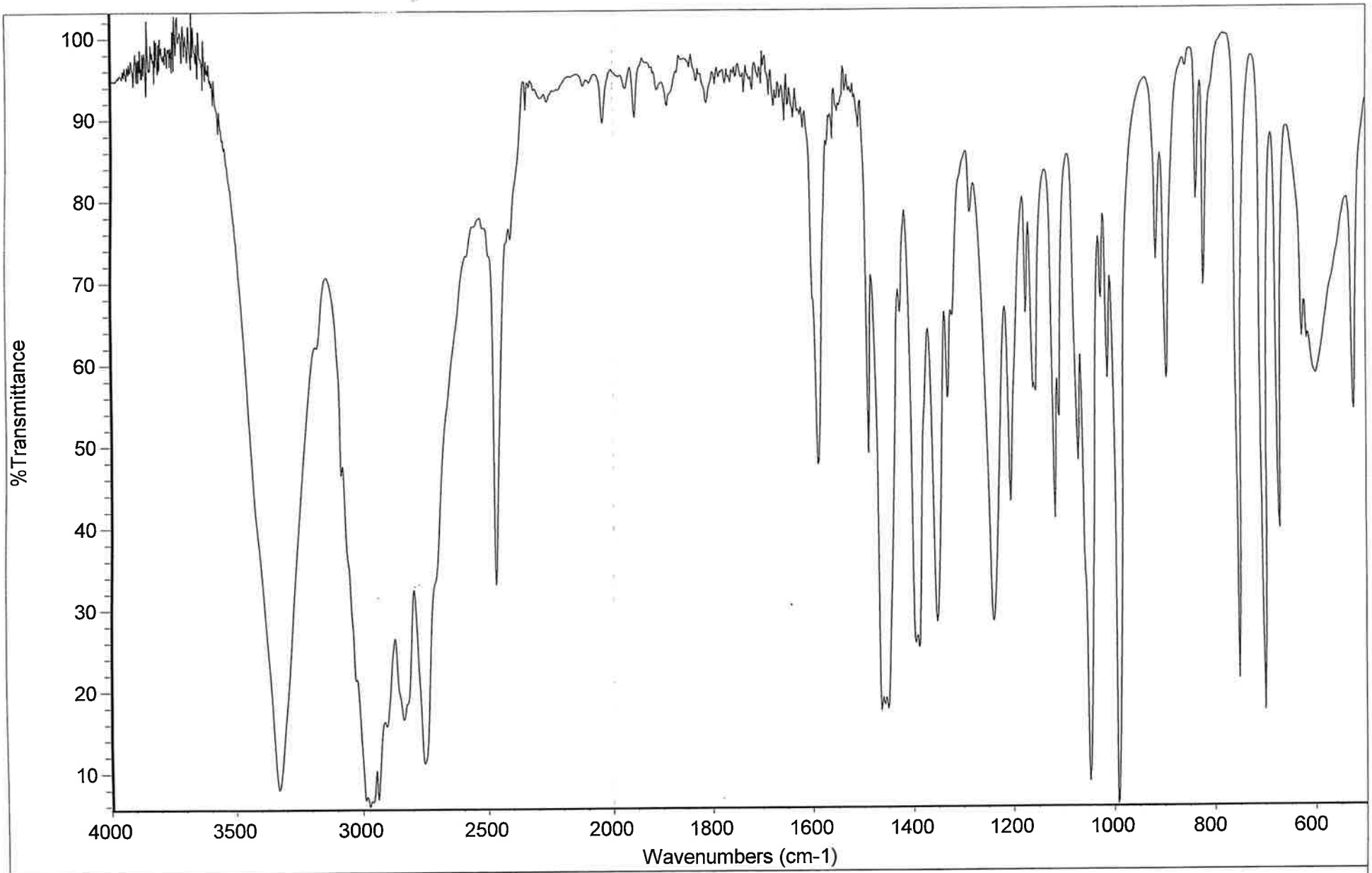


Date: Tue Feb 29 15:00:17 2000

DIAZEPAM SIGMA LOT#105F0451 NEAT IN KBR DF

Scans: 10

Resolution: 4.000

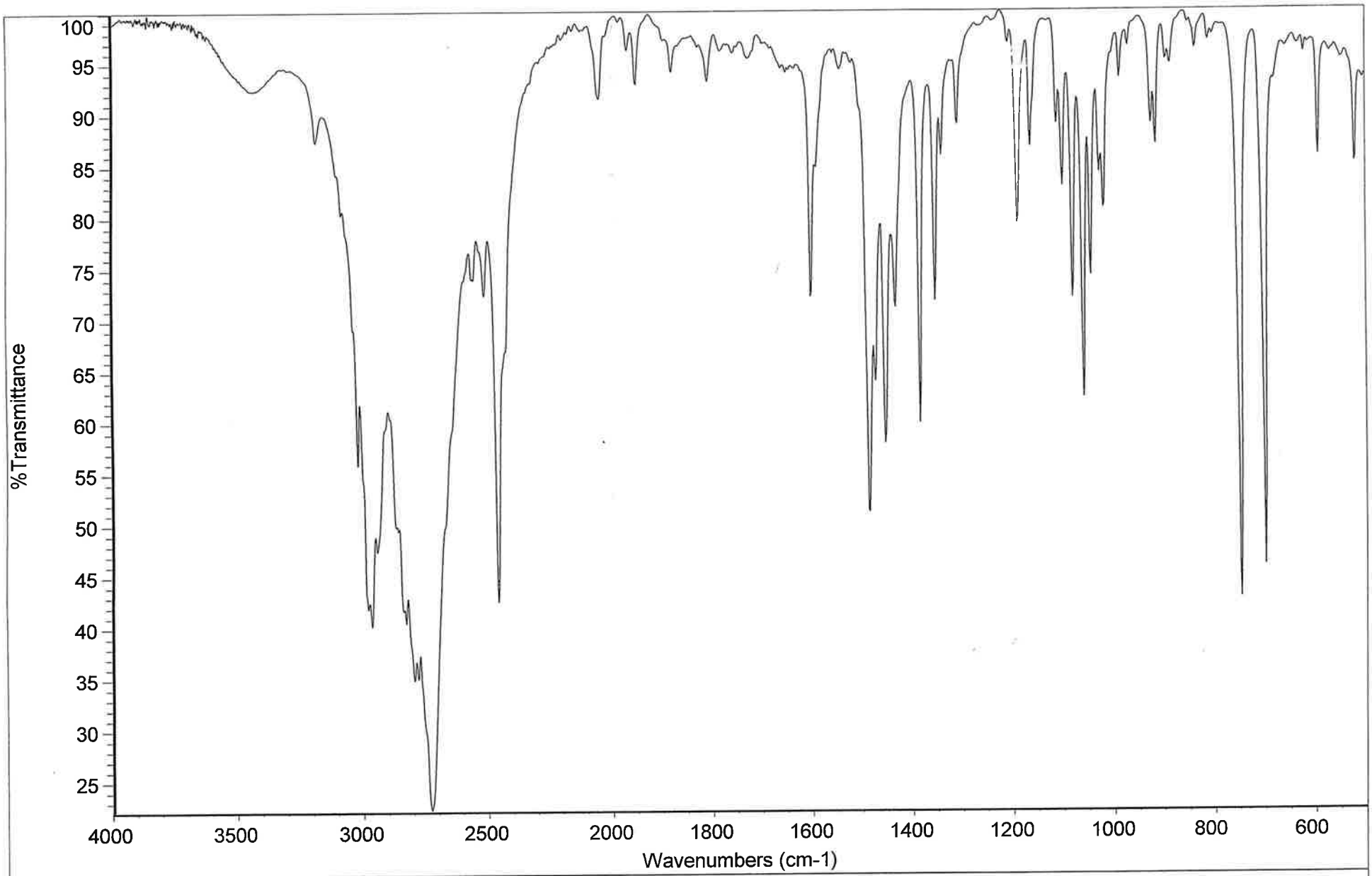


Date: Wed Apr 12 16:09:09 2000

*EPHEDRINE SIGMA LOT 128F3541 NEAT WITH KBR PWF

Scans: 10

Resolution: 4.000

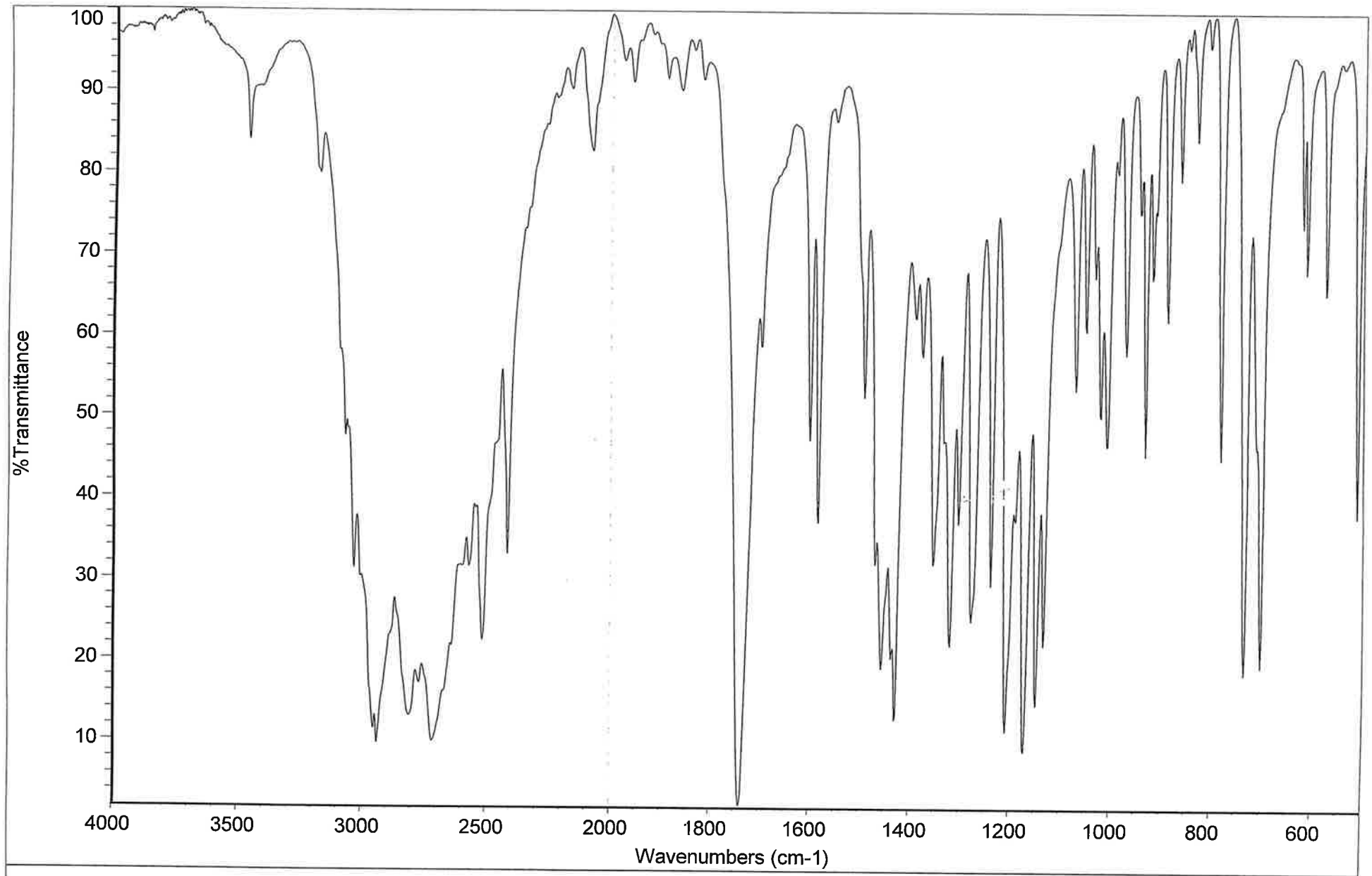


Date: Mon Feb 28 10:47:21 2000

METHAMPHETAMINE HCL SIGMA LOT 34H0144 NEAT IN KBR WHS

Scans: 10

Resolution: 4.000

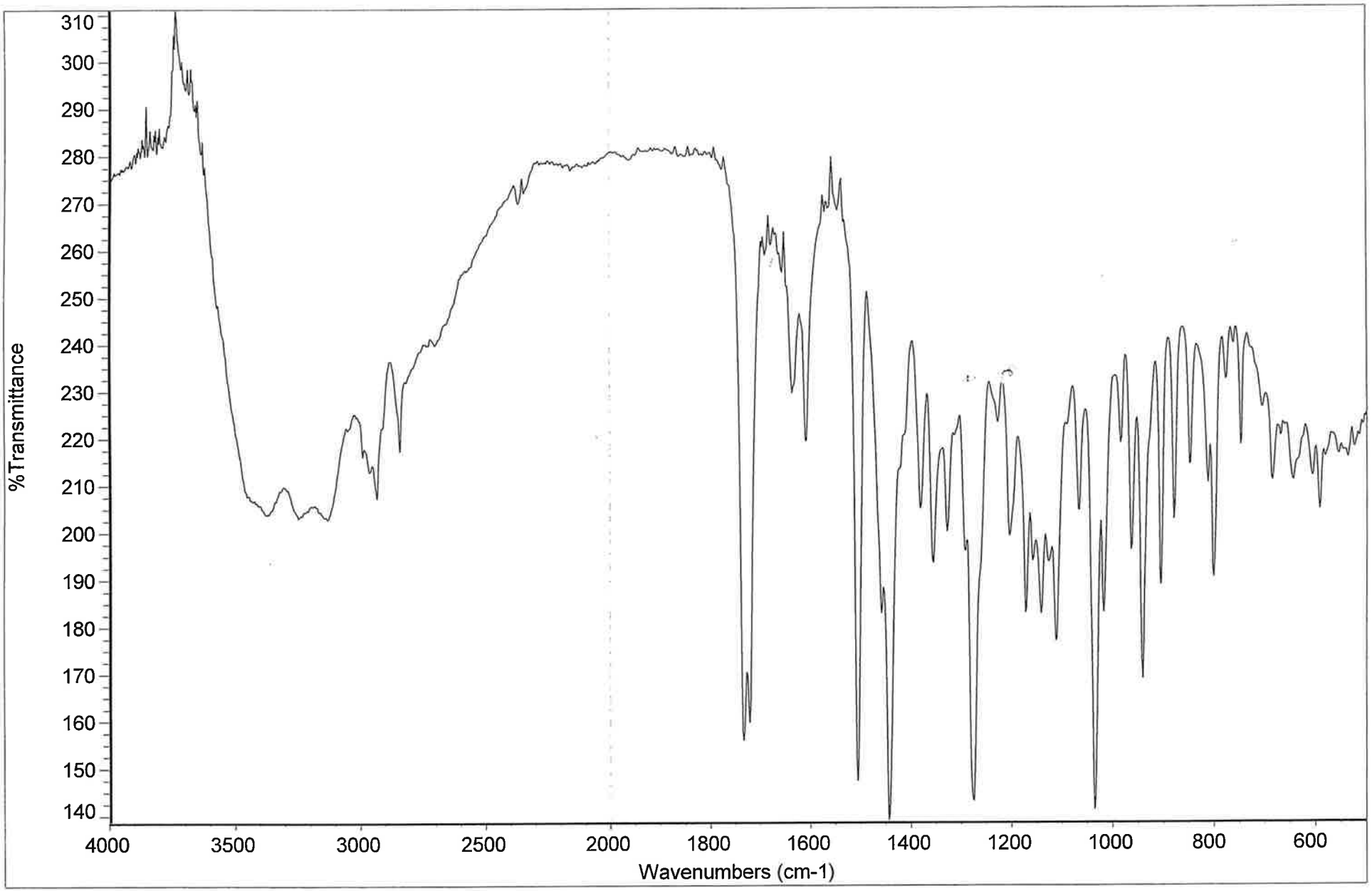


Date: Wed Feb 23 13:14:41 2000

METHYLPHENIDATE HCL U.S.P. LOT 770 NEAT WITH KBR PMC

Scans: 10

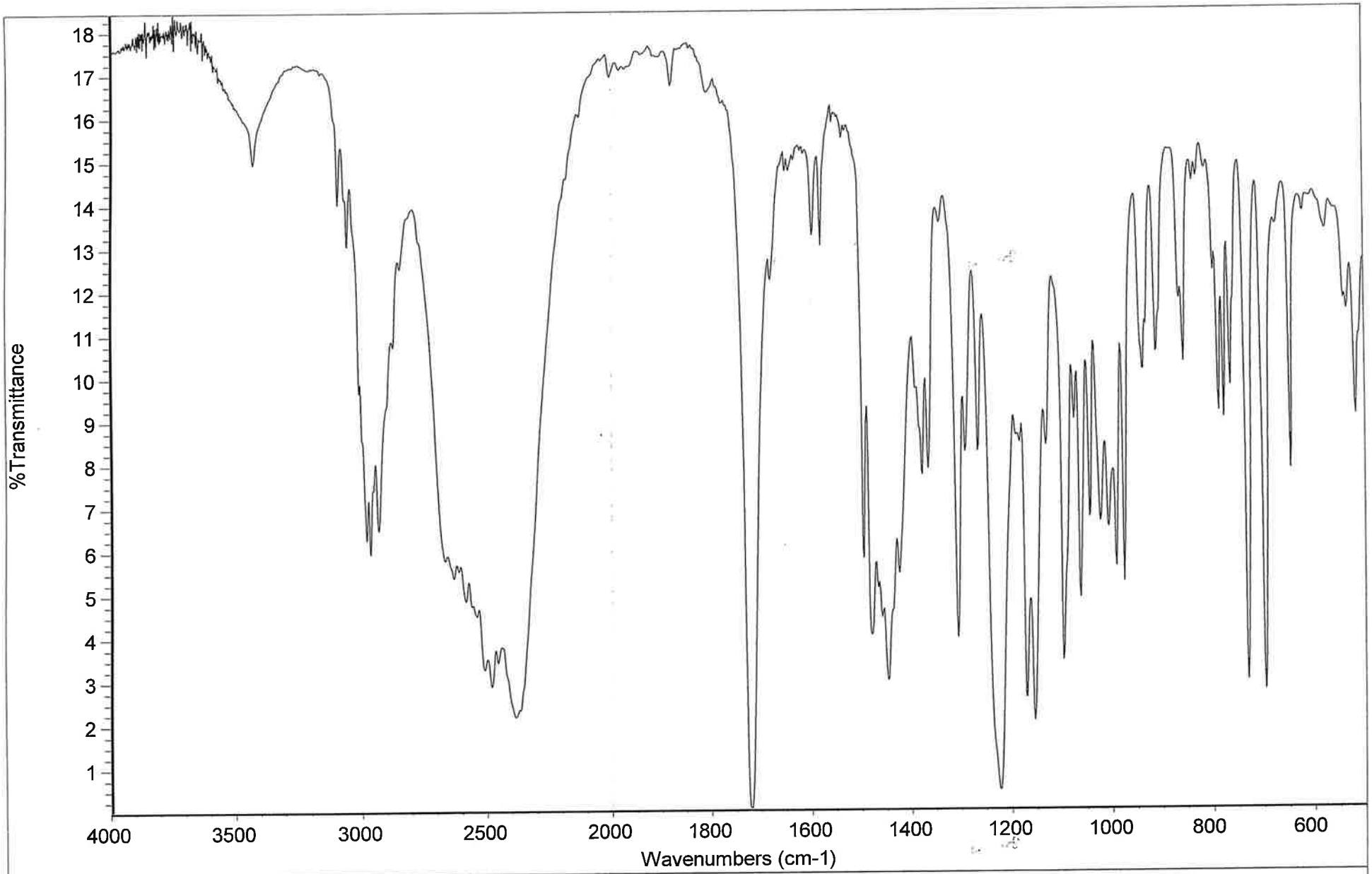
Resolution: 4.000



OXYCODONE HCL NEAT PWF SIGMA LOT 128H1012

IR #2

Collection time: Wed Feb 28 11:39:45 2001

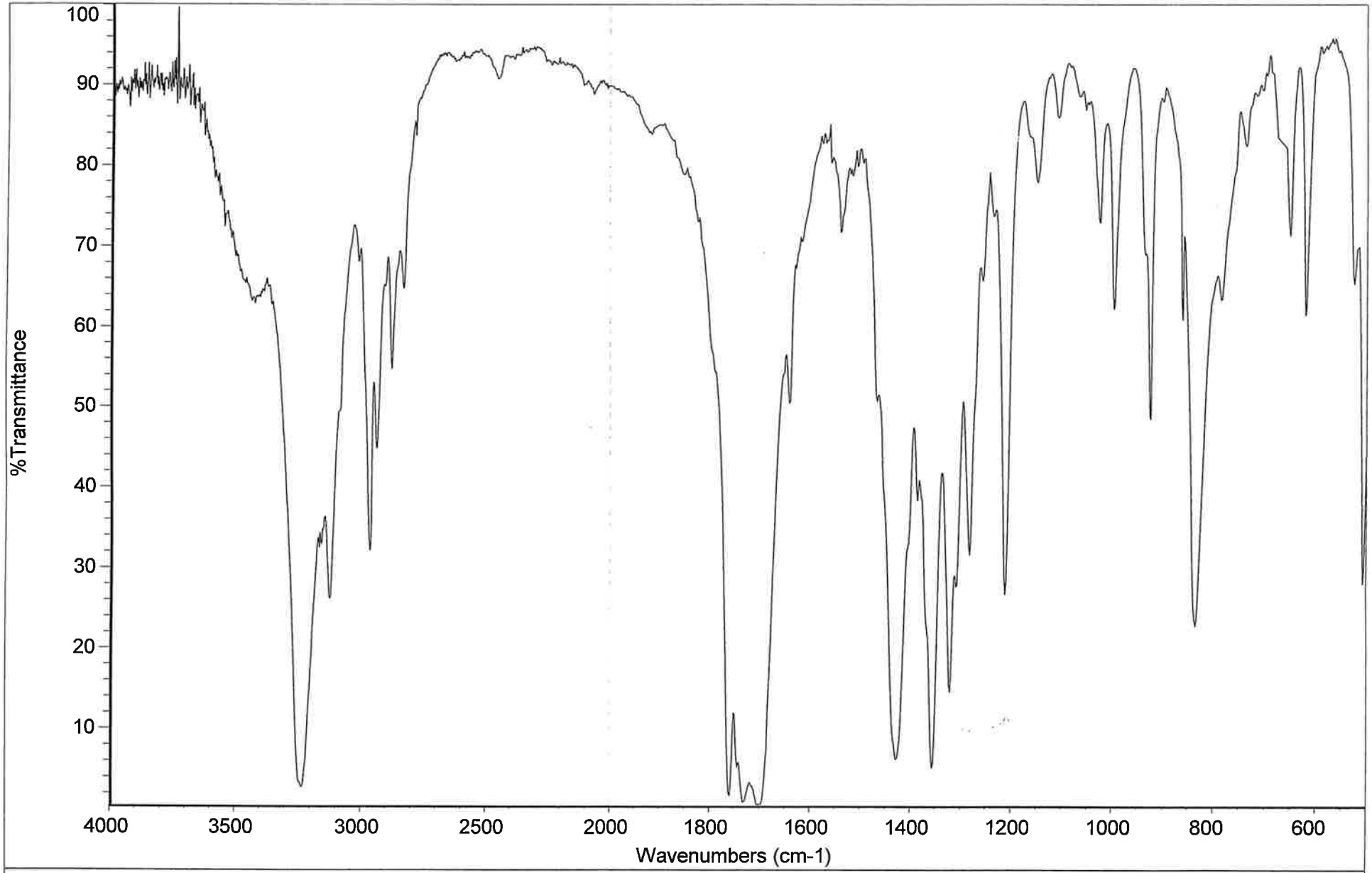


Date: Tue Feb 29 11:15:15 2000

PETHIDINE HCL S.B. PENICK & CO. LOT# 413 NMN-027 WITH KBR GJG

Scans: 10

Resolution: 4.000

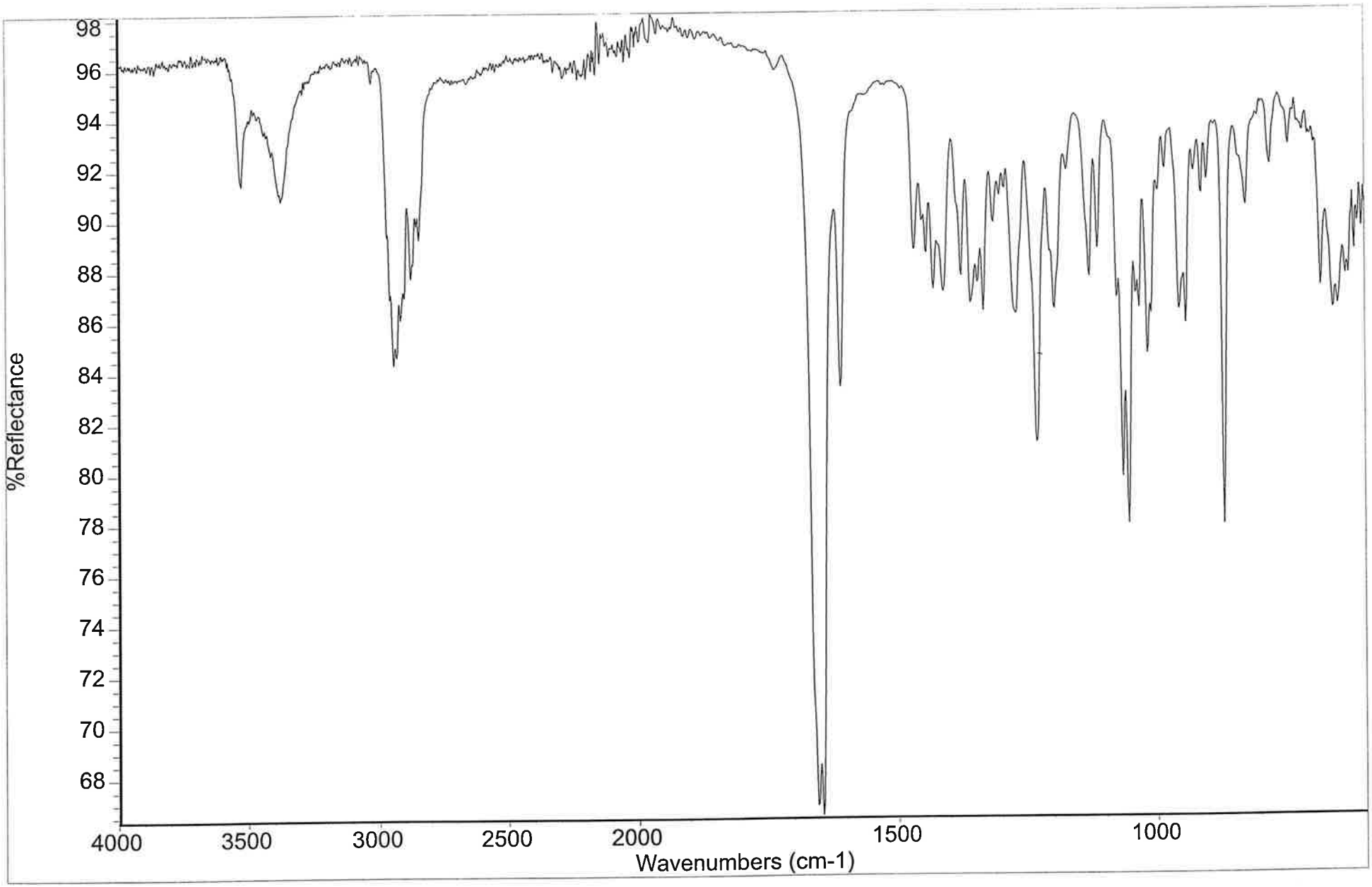


Date: Thu Oct 06 11:17:54 1988

SECOBARBITAL K&K LABS LOT 137A 0.1N HCL/CHCL3 EXT KAL

Scans: 10

Resolution: Unknown



TESTOSTERONE STD SIGMA LOT#50H0345

IR #4

Collection time: Wed Jul 05 08:06:39 2006

Appendix

Section 4

Initial Checks for MS
Initial Check for FID

****This section is separated into three parts. The first section that immediately follows this page is the proficiency test data with the test summary result for the tested sample. The second section contains the GC/MS data for the validated GC/MS versus the questioned GC/MS. The third section includes selected FTIR spectrums that were compared to the questioned GC/MS data.**

Section Summary

Objective:

Mass Spectrometer Detector Initial Check

A standard spectra auto tune and an air and water check were performed on the instrument to demonstrate initial performance of the instrument. This check was ran every week the instrument was in use during the study.

Flame Ionization Detector Initial Check

A mixture of amphetamine, methamphetamine, and phentermine was run on the FID to demonstrate initial column separation and column resolution. The mixture was also run on the validated GC/FID for comparison.

Results:

Mass Spectrometer Detector Initial Check Results

Each week that the questioned GC/MS was in use, an initial check was performed. The checks performed are outlined in Controlled Substance Quality Assurance Manual, Memphis Crime Laboratory, Section 13 and Appendix p.1. The initial checks for the MS detector passed.

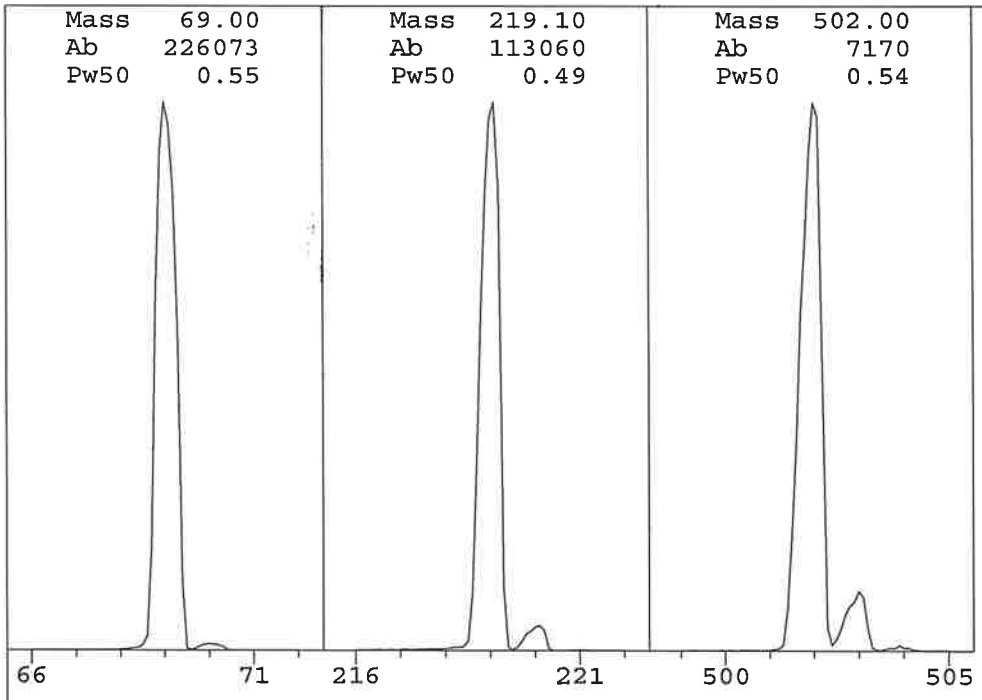
Flame Ionization Detector Initial Results

An initial check was performed on the FID on the questioned GC/MS by running a standard mixture and checking for resolution. A mixture of amphetamine, methamphetamine, and phentermine was run and the FID proved to have adequate separation and column resolution.

****This section is divided into two sections. The first section that immediately follows this page is the initial check for the questioned GC/MS. The second section contains the initial check ran on the FID of the question GC/MS.**

5975 Standard Spectra Target Tune

Thu Jun 01 14:46:51 2006 Instrument: Donna 2
C:\MSDCHEM\1\5975\stune.u

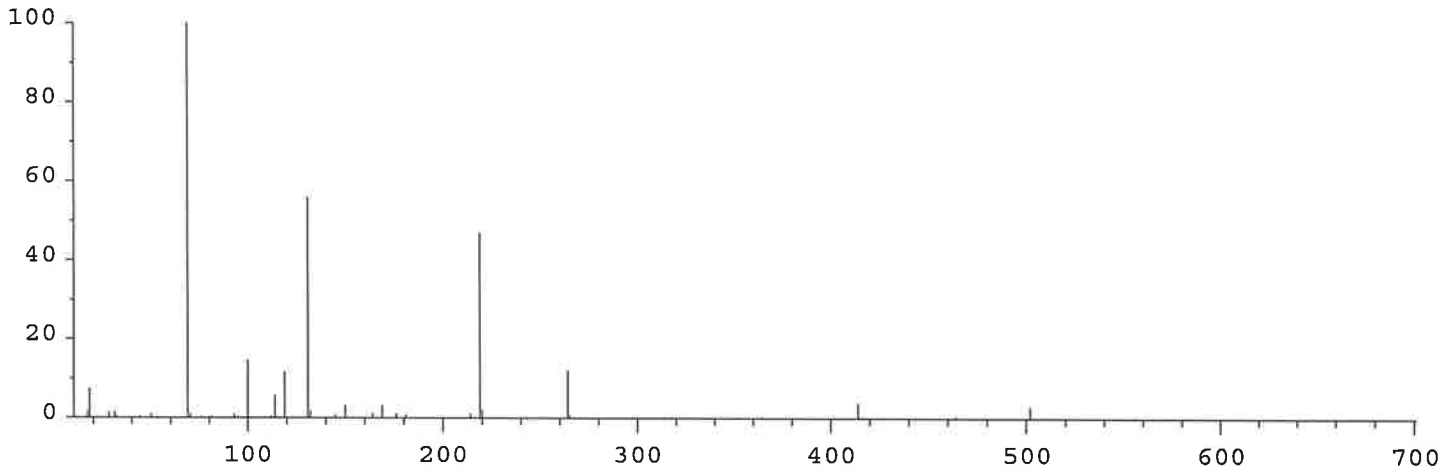


Ion Pol	POS	MassGain	-822
		MassOffs	-36
Emission	34.6	AmuGain	1627
EIEnrgy	69.9	AmuOffs	129.688
Filament	1	Wid219	-0.041
		DC Pol	POS
Repeller	19.90		
IonFcus	81.6	HEDEnab	ON
EntLens	0.0	EMVolts	1094
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10

Zones:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.53e-05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
88 peaks Base: 69.00 Abundance: 212800



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	212800	100.00	70.10	2417	1.14
219.00	100088	47.03	220.00	4487	4.48
502.00	6061	2.85	503.00	590	9.73

Air/Water Check: H20~7.38% N2~1.36% O2~0.43% CO2~0.48% N2/H2O~18.50%

Column Flow: Front: 1 Back: 2 ml/min. Interface Temp: 280

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 40512
Repeller Maximum 20 volts using ion 219;

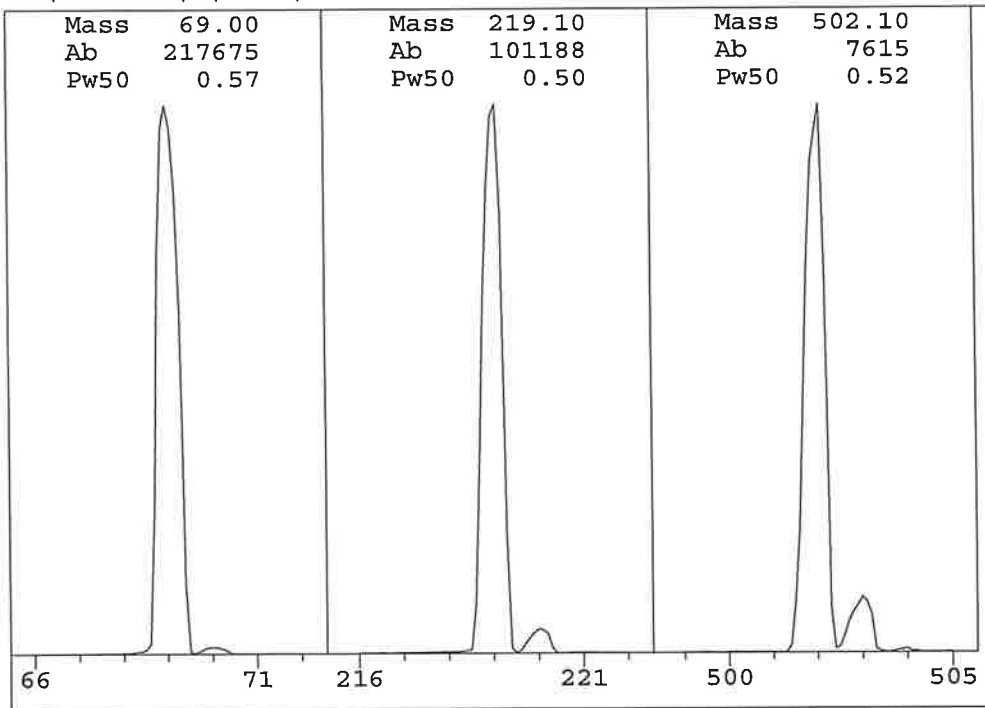
MassGain Values @Samples: -813@3 -797@2 -774@1 -727@0 -683@FS

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.7	129.7	129.7	129.7	129.7	129.7	129.7
Entrance Lens Offset:	15.3	12.3	13.1	11.3	12.8	12.0	12.0
Target Abund(%):	1.0	100.0	55.0	45.0	3.5	2.5	
Actual Tune Abund(%):	1.0	100.0	56.0	47.0	3.9	2.8	

5975 Std Spectra Auto Tune

Thu Jun 08 14:10:52 2006
C:\MSDCHEM\1\5975\stune.u

Instrument: Donna 2

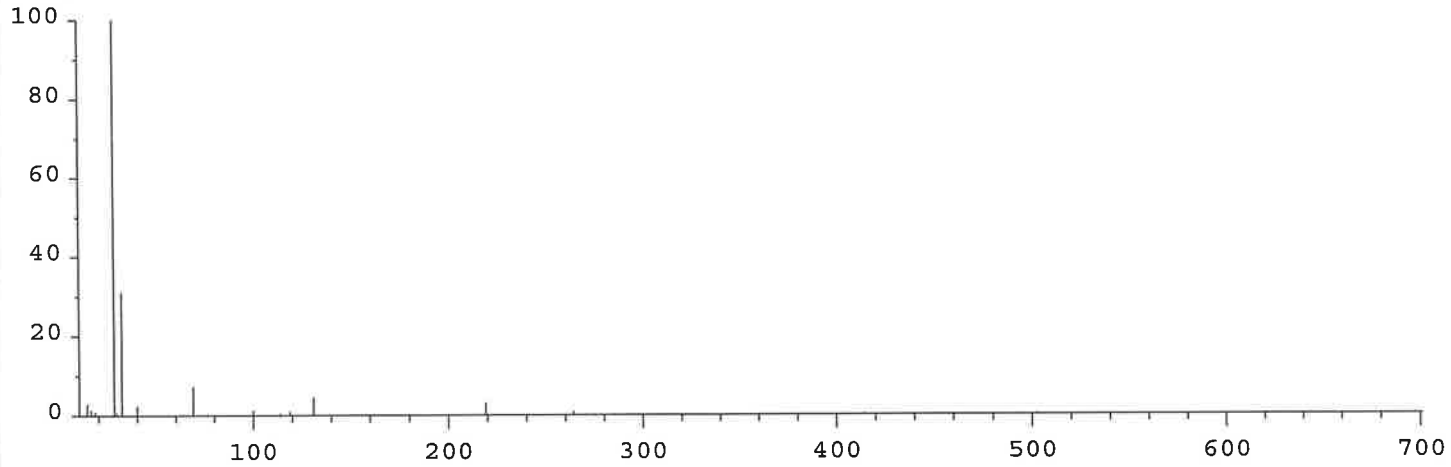


Ion Pol	POS	MassGain	-817
		MassOffs	-35
Emission	34.6	AmuGain	1642
EIEnrgy	69.9	AmuOffs	127.688
Filament	1	Wid219	-0.030
		DC Pol	POS
Repeller	19.90		
IonFcus	80.7	HEDEnab	ON
EntLens	0.0	EMVolts	1153
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10

Zones:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	9.48e-06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
98 peaks Base: 28.10 Abundance: 2787328



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	203072	100.00	70.00	2209	1.09
219.10	88104	43.39	220.00	4031	4.58
502.10	6488	3.19	503.00	703	10.84

Air/Water Check: H20~12.87% N2~1372.58% O2~427.14% CO2~2.22% N2/H2O~10667.97%

Column Flow: Front: 6.348 Back: 2.94 ml/min. Interface Temp: 256

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 45682
Repeller Maximum 20 volts using ion 219;

MassGain Values @Samples: -808@3 -797@2 -772@1 -724@0 -612@FS

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	127.7	127.7	127.7	127.7	127.7	127.7	127.7
Entrance Lens Offset:	15.6	12.0	13.6	11.0	13.8	13.6	13.6
Target Abund(%):	1.0	100.0	55.0	45.0	3.5	2.5	
Actual Tune Abund(%):	1.1	100.0	62.8	43.4	4.2	3.2	

5975 Std Spectra Auto Tune

Thu Jun 15 14:23:35 2006
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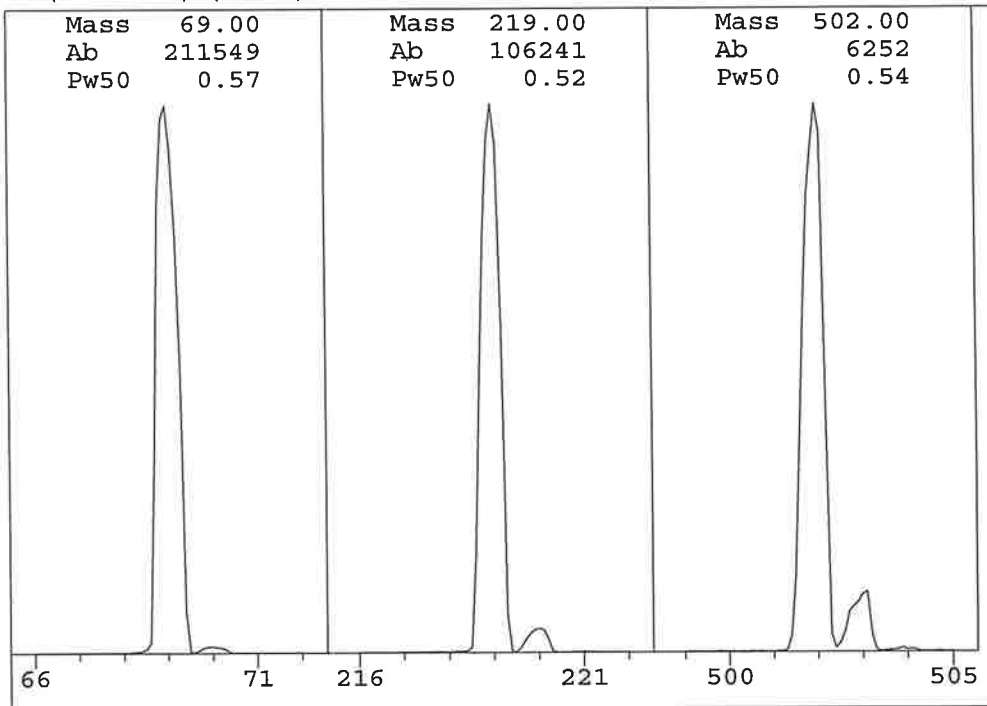
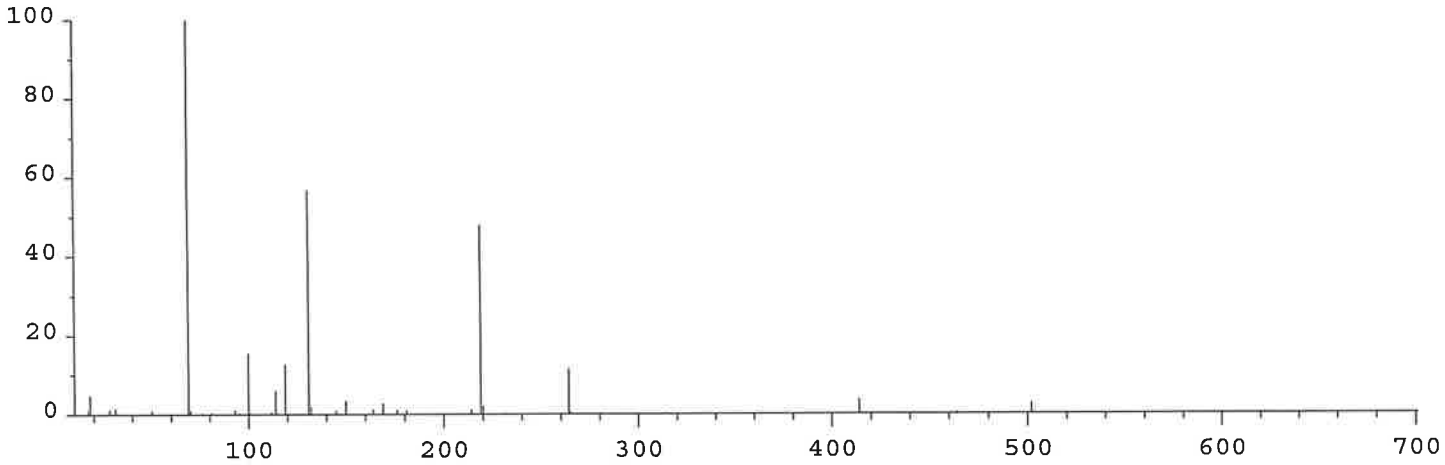
Instrument: Donna 2



Ion Pol	POS	MassGain	-819
		MassOffs	-36
Emission	34.6	AmuGain	1641
EIEnrgy	69.9	AmuOffs	127.250
Filament	1	Wid219	-0.030
		DC Pol	POS
Repeller	19.90		
IonFcus	79.7	HEDEnab	ON
EntLens	0.0	EMVolts	1153
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	230	TurboSpd	100
MS Quad	150	HiVac	9.12e-06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
75 peaks Base: 69.00 Abundance: 198784



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	198784	100.00	70.00	2260	1.14
219.00	95160	47.87	220.00	4207	4.42
502.00	5364	2.70	503.00	617	11.50

Air/Water Check: H20~4.79% N2~1.19% O2~0.33% CO2~0.24% N2/H2O~24.92%

Column Flow: Front: 0.379 Back: 2.822 ml/min. Interface Temp: 280

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 45231
Repeller Maximum 20 volts using ion 219;

MassGain Values @Samples: -808@3 -794@2 -769@1 -720@0 -615@FS

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	127.3	127.3	127.3	127.3	127.3	127.3	127.3
Entrance Lens Offset:	17.1	12.5	14.3	11.3	14.1	13.8	13.8
Target Abund(%):	1.0	100.0	55.0	45.0	3.5	2.5	
Actual Tune Abund(%):	1.0	100.0	56.8	47.9	3.6	2.7	

5975 Std Spectra Auto Tune

Thu Jun 22 14:30:26 2006
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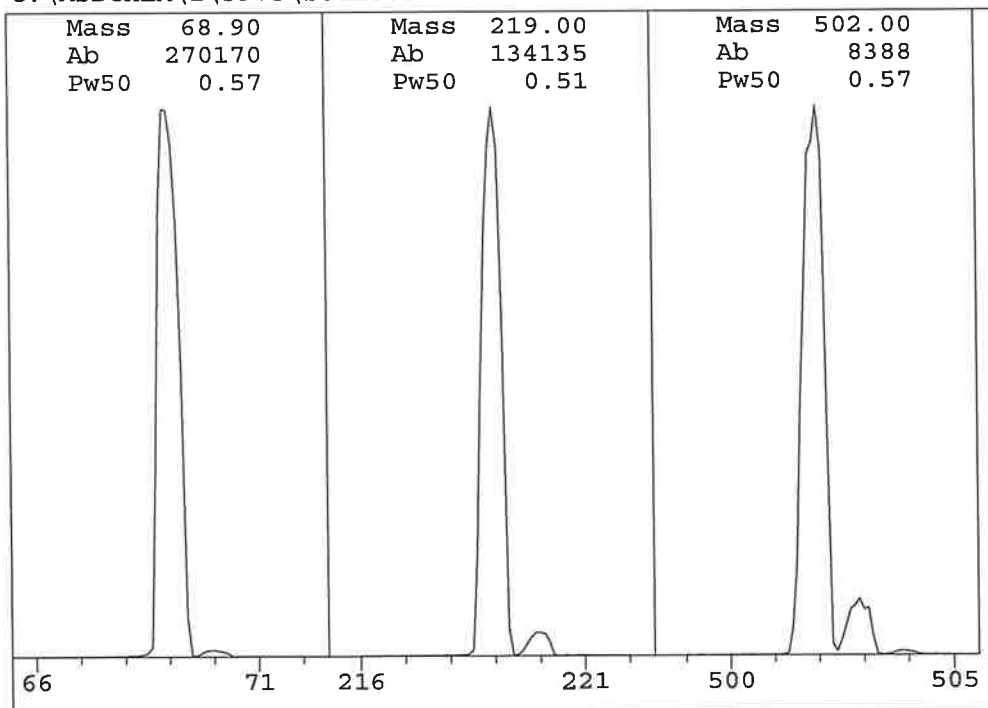
Instrument: Donna 2

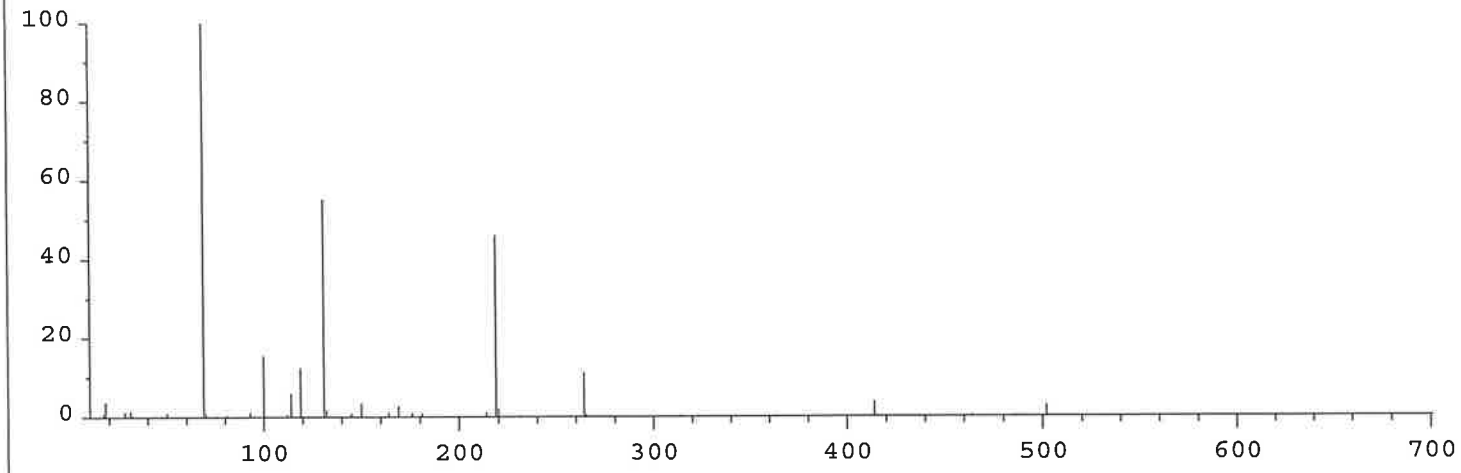


Ion Pol	POS	MassGain	-821
		MassOffs	-36
Emission	34.6	AmuGain	1639
EIEnrgy	69.9	AmuOffs	128.000
Filament	1	Wid219	-0.030
		DC Pol	POS
Repeller	19.90		
IonFcus	76.9	HEDEnab	ON
EntLens	0.0	EMVolts	1200
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10

Zones:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	9.20e-06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
83 peaks Base: 69.00 Abundance: 260352



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	260352	100.00	70.00	2700	1.04
219.00	119816	46.02	220.00	5393	4.50
502.00	7408	2.85	503.00	690	9.31

Air/Water Check: H20~3.71% N2~1.24% O2~0.36% CO2~0.23% N2/H2O~33.31%

Column Flow: Front: 0.379 Back: 2.822 ml/min. Interface Temp: 280

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 61727
Repeller Maximum 20 volts using ion 219;

MassGain Values @Samples: -806@3 -798@2 -773@1 -722@0 -618@FS

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	128.0	128.0	128.0	128.0	128.0	128.0	128.0
Entrance Lens Offset:	15.6	12.0	13.6	11.0	13.8	13.8	13.8
Target Abund(%):	1.0	100.0	55.0	45.0	3.5	2.5	
Actual Tune Abund(%):	1.0	100.0	55.1	46.0	3.8	2.8	

5975 Std Spectra Auto Tune

Thu Jun 29 14:56:42 2006
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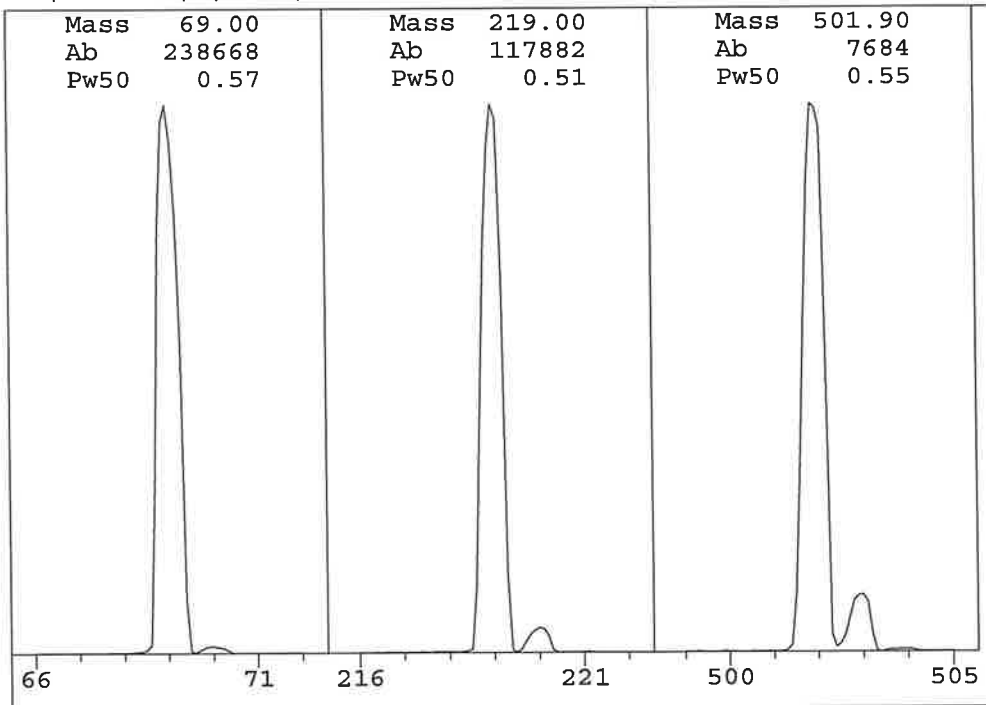
Instrument: Donna 2

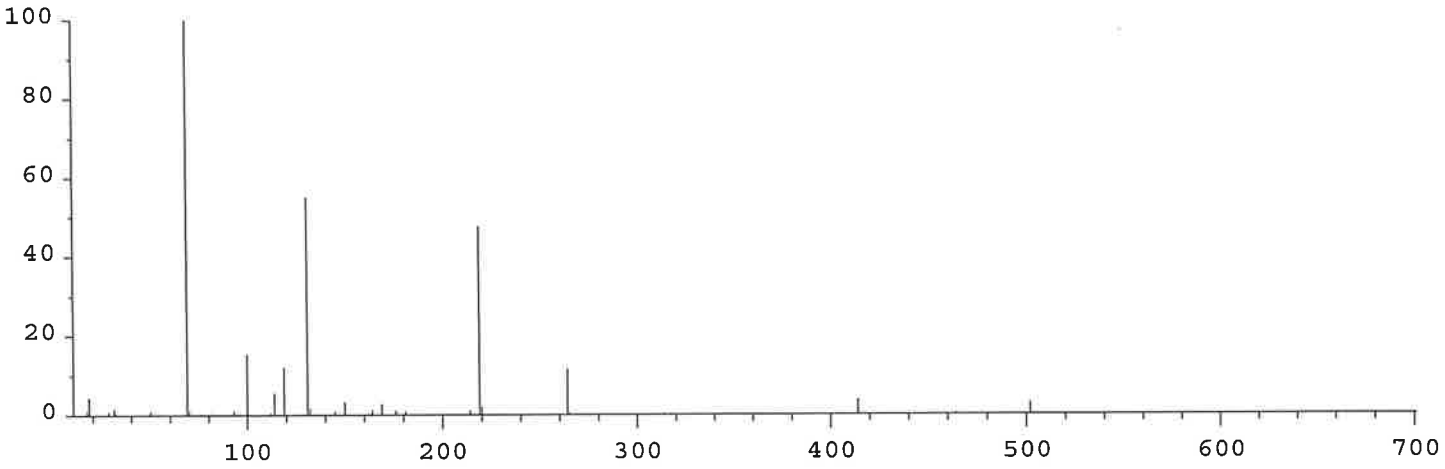


Ion Pol	POS	MassGain	-819
		MassOffs	-35
Emission	34.6	AmuGain	1643
EIEnrgy	69.9	AmuOffs	127.250
Filament	1	Wid219	-0.030
		DC Pol	POS
Repeller	19.90		
IonFcus	79.7	HEDEnab	ON
EntLens	0.0	EMVolts	1188
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10

Zones:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	9.29e-06

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
79 peaks Base: 69.00 Abundance: 225664



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	225664	100.00	70.00	2540	1.13
219.00	107296	47.55	220.00	4705	4.39
502.00	6835	3.03	503.00	719	10.52

Air/Water Check: H20~4.42% N2~0.86% O2~0.24% CO2~0.12% N2/H2O~19.43%

Column Flow: Front: 0.379 Back: 2.822 ml/min. Interface Temp: 280

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 54156
Repeller Maximum 20 volts using ion 219;

MassGain Values @Samples: -807@3 -799@2 -770@1 -729@0 -615@FS

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	127.3	127.3	127.3	127.3	127.3	127.3	127.3
Entrance Lens Offset:	14.8	12.0	13.6	11.3	14.1	14.3	14.3
Target Abund(%):	1.0	100.0	55.0	45.0	3.5	2.5	
Actual Tune Abund(%):	1.0	100.0	55.1	47.5	3.7	3.0	

5975 Std Spectra Auto Tune

Tue Jul 04 11:20:10 2006
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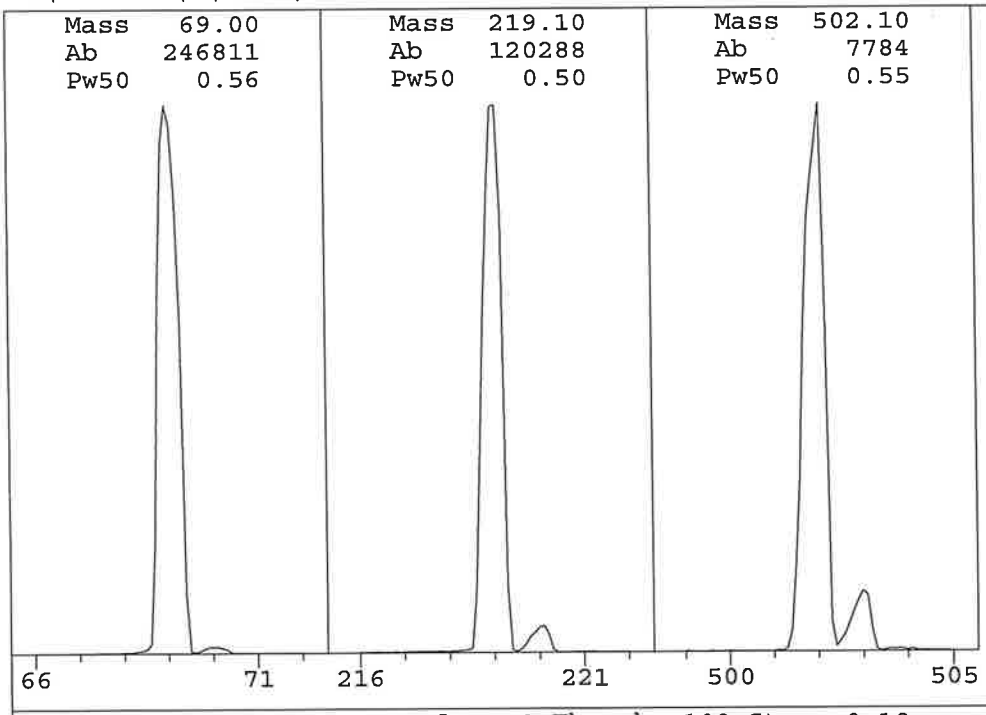
Instrument: Donna 2

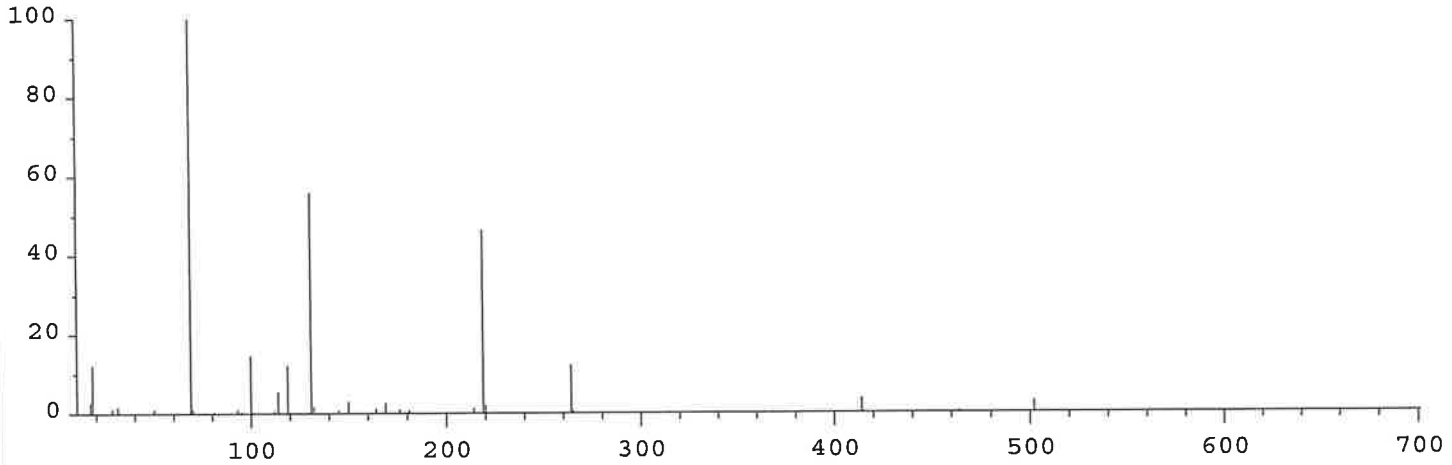


Ion Pol	POS	MassGain	-818
		MassOffs	-36
Emission	34.6	AmuGain	1629
EIEnrgy	69.9	AmuOffs	129.688
Filament	1	Wid219	-0.030
		DC Pol	POS
Repeller	19.90		
IonFcus	78.8	HEDEnab	ON
EntLens	0.0	EMVolts	1153
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10

Zones:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.31e-05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
80 peaks Base: 69.00 Abundance: 229824



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	229824	100.00	70.00	2529	1.10
219.00	106616	46.39	220.00	4751	4.46
502.10	6806	2.96	503.00	662	9.73

Air/Water Check: H20~12.14% N2~1.12% O2~0.20% CO2~0.10% N2/H2O~9.24%

Column Flow: Front: 0.933 Back: 2.822 ml/min. Interface Temp: 280

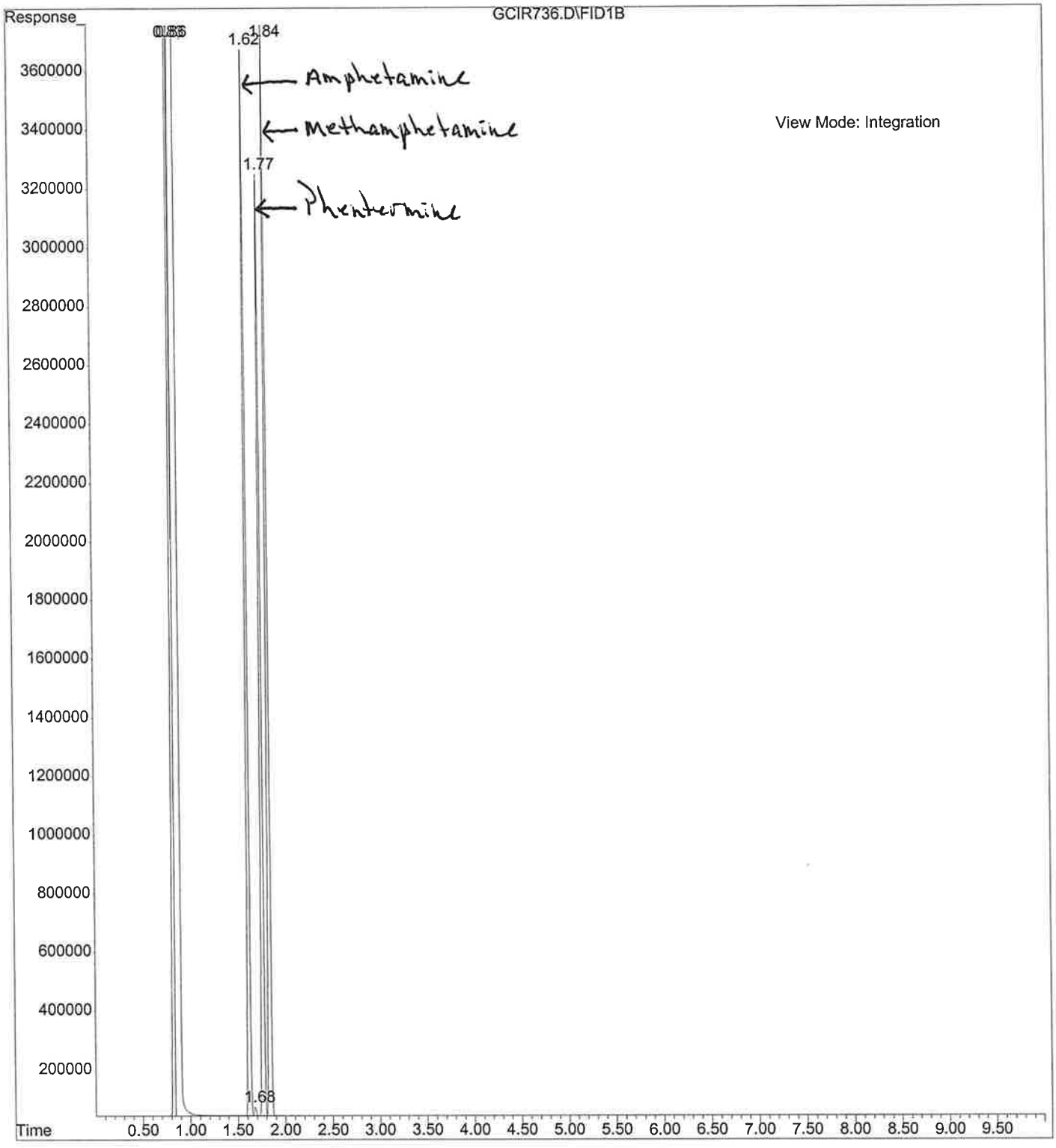
Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 58007
Repeller Maximum 20 volts using ion 219;

MassGain Values @Samples: -808@3 -792@2 -774@1 -723@0 -671@FS

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.7	129.7	129.7	129.7	129.7	129.7	129.7
Entrance Lens Offset:	13.8	10.5	11.8	10.5	12.3	12.0	12.0
Target Abund(%):	1.0	100.0	55.0	45.0	3.5	2.5	
Actual Tune Abund(%):	1.0	100.0	55.9	46.4	3.7	3.0	

GC/FID CHECKS

File : C:\HPCHEM\1\DATA\DF\GCIR736.D
Operator :
Acquired : 7-3-2006 17:09:55 using AcqMethod GCISO120.M
Instrument : HP G1530A
Sample Name: GC/IR Test Solution made 2-28-06
Misc Info : Amphetamine K&K Labs Lot # 83560
Vial Number: 1 Methamphetamine K&K Labs Lot # 732A
Phentermine Sigma Lot # 47H0208



File :C:\msdchem\1\DATA\df\COMBOSTD.D
Operator :
Acquired : 30 Jun 2006 10:52 using AcqMethod GCISO100.M
Instrument : HP G1530A Donna 2
Sample Name: GC/DR Test Solution made 2-28-06
Misc Info : Amphetamine K&K Labs Lot # 83560
Vial Number: 7 Methamphetamine K&K Labs Lot # 732A
Phentermine Signe Lot # 47H0208