

Luna

Instrument Type: GC/MS

Location: Forensic Chemistry Unit-Knoxville

Manufacturer: Agilent Technologies

Model Numbers: GC/MS-7890A/5975C

Serial Numbers: GC- CN10746039, MS- US73337875

Software: Agilent Mass Hunter GC/MS Data
Acquisition Version 10.0.368 Chemstation Data
Analysis Version F.01.03.2357

Firmware: GC-A.01.16, GC/MS-7.02.29

**Manufacturer instructions are located with the
instrument.**



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ABSTRACT & PERFORMANCE CHECK OVERVIEW

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD – Serial # US73337875

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The following documentation performance checks gas chromatograph mass spectrometer instrumentation acquisitioned from Agilent Technologies for analytical utilization in the Forensic Chemistry Unit (FCU) of the Tennessee Bureau of Investigation Crime Laboratory in Knoxville, Tennessee. Method establishment with parametric consideration of the following parameters-- system temperature (inlet, GC oven ramping and duration, transfer line, MS source, MS quad), column, pressure (inlet, column), flow rates (column, split/split-less), split ratio, liners and autosampler tower specifications and adjustments--inaugurates performance verification of Agilent 7890A GC System and 5975C MSD utilizing a variety of controlled substance analytical standards. These standards ranged in molecular weight and resulting retention time. Because this system is procedurally like GCMS systems currently in use from Agilent Technologies and validated within the FCU, analysis of analytical standards in the initial method configuration guided subsequent manipulation of parameters to the final establishment of method parameters. Methods were verified as acceptable with performance data of total ion chromatographs, spectral analysis of the mass spectrometer, and chromatographic retention time. Also, during the entire process, inlet maintenance, autotune (atune), and analysis of the calibration standard mix (pethidine, cocaine and hydrocodone) for the GCMS were routinely performed to monitor and assess system functionality. The concluding recommendation from the review of method parameters, functionality, data of specified analytical standards for specified GC and MS methods is for this Agilent 7890A GC System and 5975C MSD, Luna, to be utilized for the analysis of controlled substances in the Forensic Chemistry Unit.

INSTRUMENT AND COMPONENT SPECIFICATIONS

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD – Serial # US73337875

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GAS CHROMATOGRAPH

Agilent 7890A GC System (G3440A)

Serial # CN10746039

MASS SPECTROMETER

Agilent 5975C MSD

Serial # US73337875

AUTOSAMPLER TRAY

Agilent G2614A

Serial # CN60638454

AUTOSAMPLER TOWER

MS: Agilent 7683B

Serial # CN74544726

COLUMN

MS: Agilent J&W DB-1MS

Part #128-0112, 12 meters, 0.200 mm diameter, 0.33 µ film thickness

COMPUTER OPERATING SYSTEM**Device specifications:**

Model name	Precision 3660
Device name	EmittToxKnox (waiting on IT for name change)
Processor	13th Gen Intel(R) Core(TM) i5-13600 2.70 GHz
Installed RAM	16.0 GB (15.7 GB usable)
Device ID	80A7DAAF-06D9-412A-B911-AB2A82E159E0
Product ID	00355-61934-19657-AAOEM
System type	64-bit operating system, x64-based processor

Windows Specifications:

Edition	Windows 11 Pro
Version	24H2
Installed on	2/24/2025
OS build	26100.4351
Experience	Windows Feature Experience Pack 1000.26100.107.0

Productivity tools:

Enhanced ChemStation

Agilent Mass Hunter GC/MS Data Acquisition Version 10.0.368

Chemstation Data Analysis Version F.01.03.2357

PURPOSE OF PERFORMANCE CHECK

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD – Serial # US73337875

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Gas Chromatography/ Mass Spectrometry is critically relied upon within the Forensic Chemistry Unit (FCU) for the analysis of controlled substances. Due to adulterants and multiple controlled substances within samples, chromatographic methodology is a necessity for separation, isolation and identification of these compounds. Historically, Agilent Technologies GCMS systems have been utilized in the FCU for the past twenty-two years with ChemStation software that is familiar across each 6890/5973, 6890N/5973 inert, 6890N/5975, 7890A/5975C 7890B/5977A and 8890B/5977C GC/MS systems. Therefore, the purpose of this study is to establish method parameters for the gas chromatograph/mass spectrometer using an autosampler mode of analysis. The methods will then be tested for function and practicality by injecting a variety of analytical standards to demonstrate detection at varying oven temperature initial set points and duration with ramped and isothermal temperature end points.

TRAINING REQUIREMENTS

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD – Serial # US73337875

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The Agilent 7890A GC System and Agilent 5975C MSD performs in concert with ChemStation and MassHunter engine and data analysis software consistent with that of Agilent's 6890/5973, 6890N/5973, 6890N/5975, 7890A/5975C, 7890B/5977A and 8890/5977C. Each analyst within the Forensic Chemistry Unit has training and familiarity navigating this system; therefore, no special training is necessary for utilizing this system for analytical casework.

PERFORMANCE CHECK PROCEDURE

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD – Serial # US73337875

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Instrument Setup

The initial instrument setup and check-out procedure was performed by Jacob White and Victoria Lindsey from the TBI Forensic Chemistry unit in Knoxville, TN. The instrument was moved from Forensic Toxicology to Forensic Chemistry in an existing space where a previously used instrument was setup. All electrical requirements and performance gases (helium) were already in place prior to installation.

Maintenance

Throughout the performance check procedure, regular inlet maintenance, autotunes, and analysis of the GCMS Standard Mix was performed. Note: this was not necessarily performed on a weekly basis but in conjunction with time devoted to the development, testing and establishment of the methods.

Establishing Method Parameters

Utilizing the MassHunter software, method construction begins with loading the system's default.m method and referencing established TBI FCU GCMS methods to first construct DRUG1. From the DRUG1 method, all parameters of the remaining methods will be constructed, named and saved.

General Screening Method

The GCMS Standard Mix (pethidine, cocaine and hydrocodone) was analyzed on general screening method DRUG1. The P-MOX standard (phentermine, methamphetamine, xylazine, 4-ANPP, heroin, para-fluorofentanyl, and fentanyl) was analyzed on all general screening methods (DRUG1, STEROID, XLDRUGS). Additional standards spanning the range of screening analysis were analyzed for the DRUG1 method.

Extended Analysis Methods

Standards of substances known to come out later in extended analysis methods were analyzed on the STEROID and XLDRUGS method. For STEROID: testosterone propionate and buprenorphine. For XLDRUGS: sildenafil.

Drug Specific Methods

Three methods were created for specific drugs/drug classes. Standards that correlate to these methods were analyzed.

AMINE: GCIR Standard Mix containing amphetamine, phentermine, and methamphetamine

BENZOMS: Diazepam standard and GCMS Standard Mix containing pethidine, cocaine and hydrocodone

BUPMS: Buprenorphine standard and GCMS Standard Mix containing pethidine, cocaine and hydrocodone

GHB: GHB Standard

OPIATE: GCMS Standard Mix containing pethidine, cocaine and hydrocodone and P-MOX standard containing phentermine, methamphetamine, xylazine, 4-ANPP, heroin, para-fluorofentanyl, and fentanyl

THCMS: Delta-8 THC standard and Delta-9 THC standard

Increased Sensitivity Method

A method was created for increased sensitivity as needed for weak or trace amount samples. A diluted version of the GCMS Standard Mix was analyzed on the DRUG1LC method. The same diluted standard was analyzed on the DRUG1 method for comparison.

Evaluation

Acquired data from the aforementioned methods were considered in the establishment of methods, ensuring detection, chromatographic quality, total ion chromatograph and ion abundance as well as baseline separation of standard mixtures such as the GCMS Standard Mix (pethidine, cocaine, hydrocodone), the GCIR Standard Mix (amphetamine, methamphetamine and phentermine) and the P-MOX standard (phentermine, methamphetamine, xylazine, 4-ANPP, heroin, fentanyl, para-fluorofentanyl).

ANALYTICAL STANDARD SPECIFICATIONS

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD– Serial # US73337875

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STANDARDS ANALYZED

Buprenorphine

MeOH (Fisher lot 223204 Bottle 3/4 exp. u/c)

(Sigma lot SLBN0684V)

Made by SR 11/14/23 expires 10/24/25

Delta-8-Tetrahydrocannabinol (Delta-8 THC)

MeOH (from ampule)

(Cayman lot 653352)

Made by CNS/AM 6/14/23

Quick check expiration 7/14/25

Delta-9-Tetrahydrocannabinol (Delta-9 THC)

MeOH (from ampule)

(Cayman lot 695424, ampule #7)

Made by AW 6/16/25

Quick check expiration 11/17/26

Diazepam

MeOH (Fisher lot 211779 exp. u/c)

(Sigma lot 105F0451)

Made by MJH 4/8/22 expires 1/17/26

GCIR Standard Mix

CHCl₃ (ACROS lot B0542909B Bottle 3/4 exp. u/c)

W/ DI H₂O cap + NH₄OH (BDH lot 2014061276 exp. u/c)

Amphetamine (Sigma lot 79H0603)

Methamphetamine (Sigma lot 50H02161)

Phentermine HCl (Sigma lot 074K1059)

Made by CNS 6/18/24 expires 5/1/26

GCMS Standard Mix

CHCl₃ (Thermo Scientific lot B0543886A bottle 1/4 exp. u/c)

w/ DI H₂O + base cap NH₄OH (BDH lot 2014061276 Bottle 8/12 exp. u/c)

Pethidine (Penick lot 413NMN-027)

Cocaine (Sigma lot 59H0640)

Hydrocodone (Cayman lot 0616125-6 3/4 and 4/4)

Made by CNS/AJM 3/10/25 expires 3/10/26

GHB

MeOH (Fisher lot 217364 Bottle 4/4 exp. u/c)

(Sigma lot 089H3410)

Made by CNS/AM 6/14/23 expires 3/20/26

P-MOX Standard

CHCl₃ (ACROS lot B0542909B Bottle 2/4 exp. u/c)

w/ DI H₂O + base cap NH₄OH (BDH/VWR lot 2014042806 exp. u/c)

Phentermine (Sigma lot 074K1059)

Methamphetamine (Sigma lot 071K1580)

Xylazine (Cayman lot 0471462-19)

Heroin (Cayman lot 0559235-10)

Para-Fluorofentanyl (Cayman lot 0699563-6)

Fentanyl (Cayman lot 0654205-33)

4-ANPP (Cayman lot 050831-18)

Made by JS 4/14/25 expires 4/14/26

Sildenafil

MeOH (Fisher lot 217364 Bottle 4/4 exp. u/c)

(Cayman lot 0464768-1)

Made by CNS/AM 6/14/23 expires 3/18/26

Testosterone Propionate

MeOH (Fisher lot 223204 Bottle 2/4 exp. u/c)

(Sigma lot 034K0695)

Made by CES 5/24/23 expires 3/19/26

METHODS AND STANDARDS ANALYZED

Agilent 7890A GC System – Serial # CN10746039

Agilent 5975C MSD– Serial # US73337875

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MASS SPEC – AUTO SAMPLE INJECTION

AMINE	GCIR Standard Mix
BENZOMS	DIAZEPAM GCMS Standard mix
BUPMS	BUPRENORPHINE GCMS Standard mix
DRUG1	GCMS Standard Mix P-MOX Standard GCIR Standard Mix GCMS Standard Mix (diluted) - pages 71 - 74 BUPRENORPHINE (Did not elute. See column flush after standard.)
GHB	GHB
DRUG1LC	GCMS Standard Mix (diluted) - pages 108 - 111
OPIATE	GCMS Standard Mix P-MOX Standard
STEROID	P-MOX Standard BUPRENORPHINE TESTOSTERONE PROPIONATE

THCMS

 Δ -8-THC Δ -9-THC

XLDRUGS

P-MOX Standard

SILDENAFIL

Method Information for: C:\MassHunter\GCMS\1\methods\AMINE.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:

AMINE

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\AMINE.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	2.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
2.00	40	550	100	1,562 [N=2]

Timed Events

Time	Type of Event	Parameter
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Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	50	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
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C:\MassHunter\GCMS\1\methods\AMINE.M
Mon Jun 30 15:42:07 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 8.5 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 80 °C
Hold Time 2 min
Post Run 50 °C
Program
#1 Rate 10 °C/min
#1 Value 125 °C
#1 Hold Time 0.5 min
#2 Rate 35 °C/min
#2 Value 160 °C
#2 Hold Time 0.5 min

Equilibration Time 0 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 1
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 3000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 3000 µL/min

Injection Dispense Speed	6000 µL/min	
Viscosity Delay	0 sec	
Sample Depth	Disabled	18
Tower Fan	On	
Solvent Wash Mode	A, B	
Back Injector		
Syringe Size	10 µL	
Injection Volume	1 µL	
Injection Repetitions	1	
Injection Delay	0 sec	
Solvent A Washes (PreInj)	1	
Solvent A Washes (PostInj)	1	
Solvent A Volume	8 µL	
Solvent B Washes (PreInj)	1	
Solvent B Washes (PostInj)	1	
Solvent B Volume	8 µL	
Sample Washes	1	
Sample Wash Volume	8 µL	
Sample Pumps	1	
Dwell Time (PreInj)	0 min	
Dwell Time (PostInj)	0 min	
Solvent Wash Draw Speed	300 µL/min	
Solvent Wash Dispense Speed	3000 µL/min	
Sample Wash Draw Speed	300 µL/min	
Sample Wash Dispense Speed	3000 µL/min	
Injection Dispense Speed	6000 µL/min	
Viscosity Delay	0 sec	
Sample Depth	Disabled	
Tower Fan	On	
Solvent Wash Mode	A, B	
Sample Overlap		
Mode	Sample overlap is not enabled	
ALS Errors	Pause for user interaction	
Front SS Inlet He		
Mode	Split	
Heater	On 250 °C	
Pressure	On 8.1685 psi	
Total Flow	On 42.334 mL/min	
Septum Purge Flow	On 1 mL/min	
Gas Saver	Off	
Split Ratio	44 :1	
Split Flow	40.416 mL/min	
Back SS Inlet He		
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Mode	Split	
Heater	Off	
Pressure	Off	
Total Flow	Off	
Septum Purge Flow	Off	
Gas Saver	Off	
Split Ratio	220.74 :1	
Split Flow	110.37 mL/min	
Thermal Aux 2 (MSD Transfer Line)		
Temperature		
Setpoint	On	
(Initial)	280 °C	

Column #1
Flow
Setpoint On
(Initial) 0.91854 mL/min
Post Run 2 mL/min

Column Information
Description Agilent 128-0112
DB-1ms
Temperature Range -60 °C-340 °C (350 °C)
Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
Heater Oven
In Front SS Inlet He
Out MSD
(Initial) 80 °C
Pressure 8.1685 psi
Flow 0.91854 mL/min
Average Velocity 56.017 cm/sec
Holdup Time 0.35703 min
Control Mode Constant Flow

Column #2
Flow
Setpoint Off
(Initial) 0.5 mL/min
Post Run 2 mL/min

Column Information
Description Agilent 19091Z-211
HP-1
Temperature Range -60 °C-325 °C (350 °C)
Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
Heater Oven
In Back SS Inlet He
Out Back Detector FID
(Initial) 80 °C
Pressure 1.763 psi
Flow 0.5 mL/min
Average Velocity 11.712 cm/sec
Holdup Time 2.1345 min
Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Makeup He
Heater Off
H2 Flow Off
Air Flow Off
Makeup Flow Off
Carrier Gas Flow Correction Constant Makeup and Fuel Flow
Flame Off

Aux EPC 1,2,3
Aux EPC 1 He
Pressure
Setpoint Off
(Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Aux EPC 1 He (unused)

Aux EPC 2 He
Pressure

```

Setpoint      Off
(Initial)     10 psi

Excluded from Readiness      ***Excluded from Affecting GC's Readiness State***20
Aux EPC 2 He                 (unused)

Aux EPC 3 He
Pressure
Setpoint      Off
(Initial)     10 psi

Excluded from Readiness      ***Excluded from Affecting GC's Readiness State***
Aux EPC 3 He                 (unused)

Signals
Signal #1:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment  Front Sample

Signal #2:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment  Front Sample

Signal #3:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment  Front Sample

Signal #4:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment  Front Sample

```

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

```

34.610   :  EMISSION
70.347   :  ENERGY
34.961   :  REPELLER
90.157   :  IONFOCUS
28.500   :  ENTRANCE_LENS
1011.765 :  EMVOLTS

                        1011.765 : Actual EMV
                        0.55   : GAIN FACTOR

2013.000 :  AMUGAIN
122.875  :  AMUOFFSET

```

1.000 : FILAMENT
0.000 : DCPOLARITY
19.576 : ENTLENSOFFSET
-649.000 : MASSGAIN
-36.000 : MASSOFFSET

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END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\AMINE.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No
Printer: Yes
File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search	Minimum Quality
DEMO.L	0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No
Printer: Yes
File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

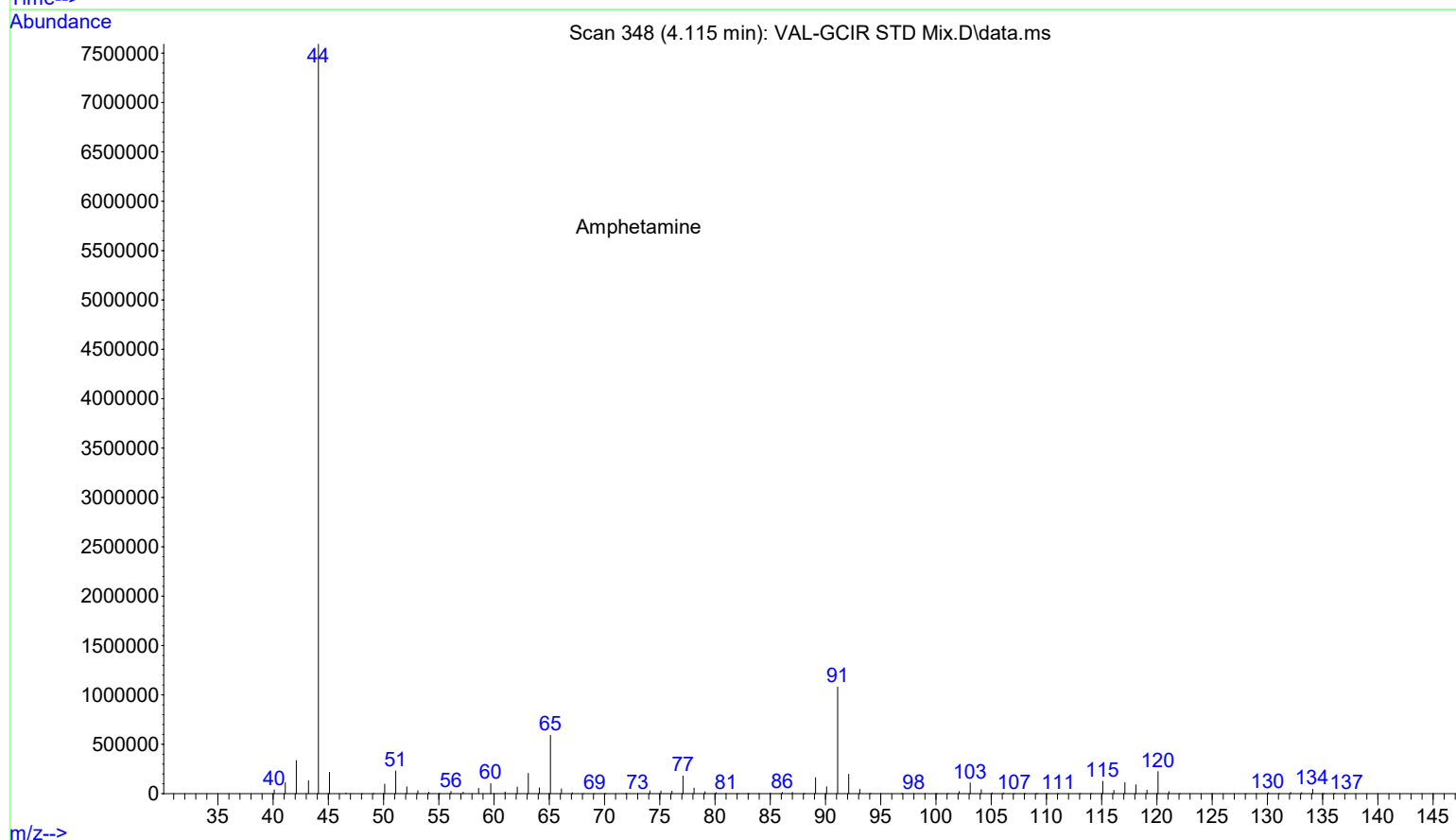
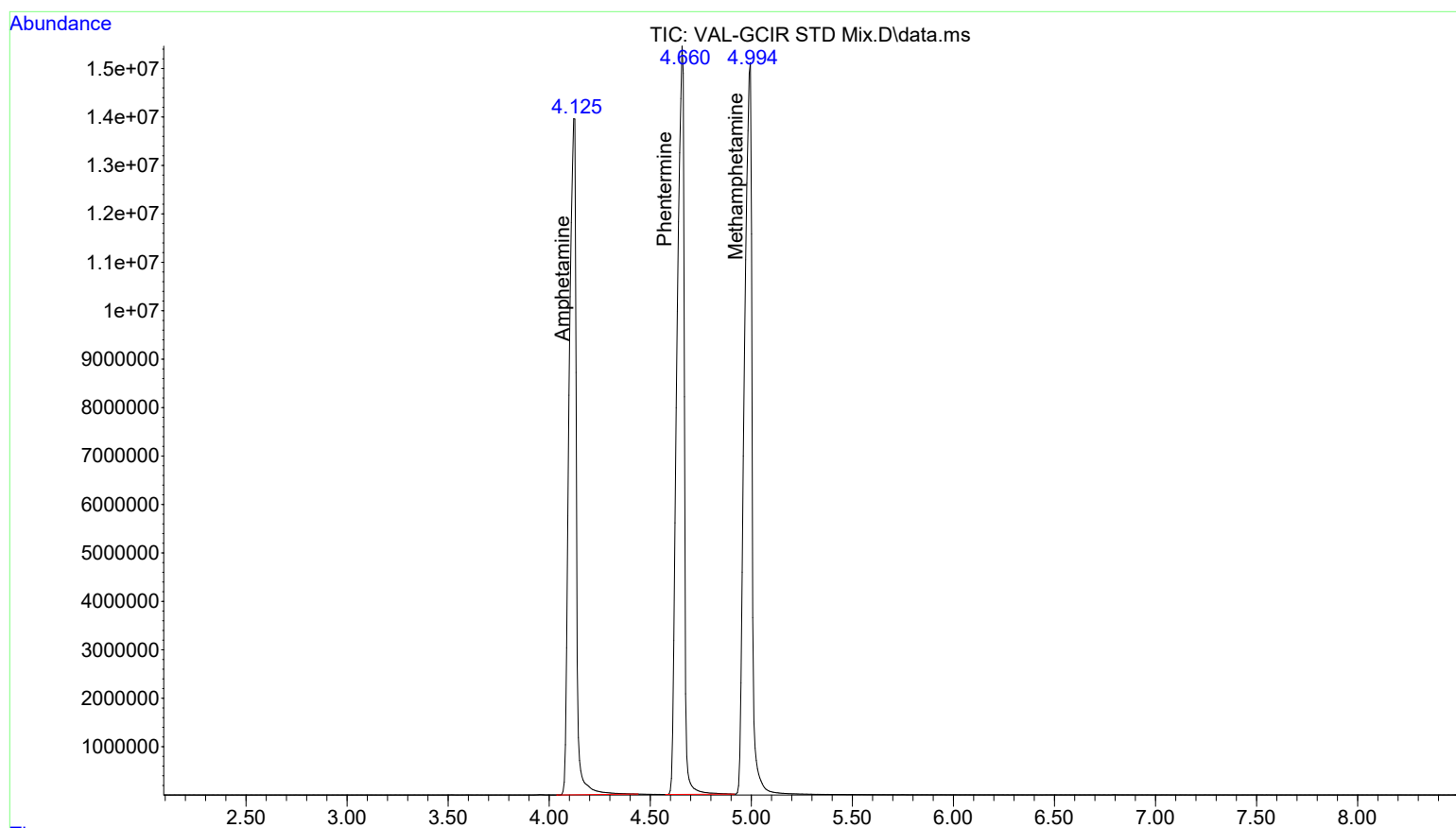
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:42:53 2025

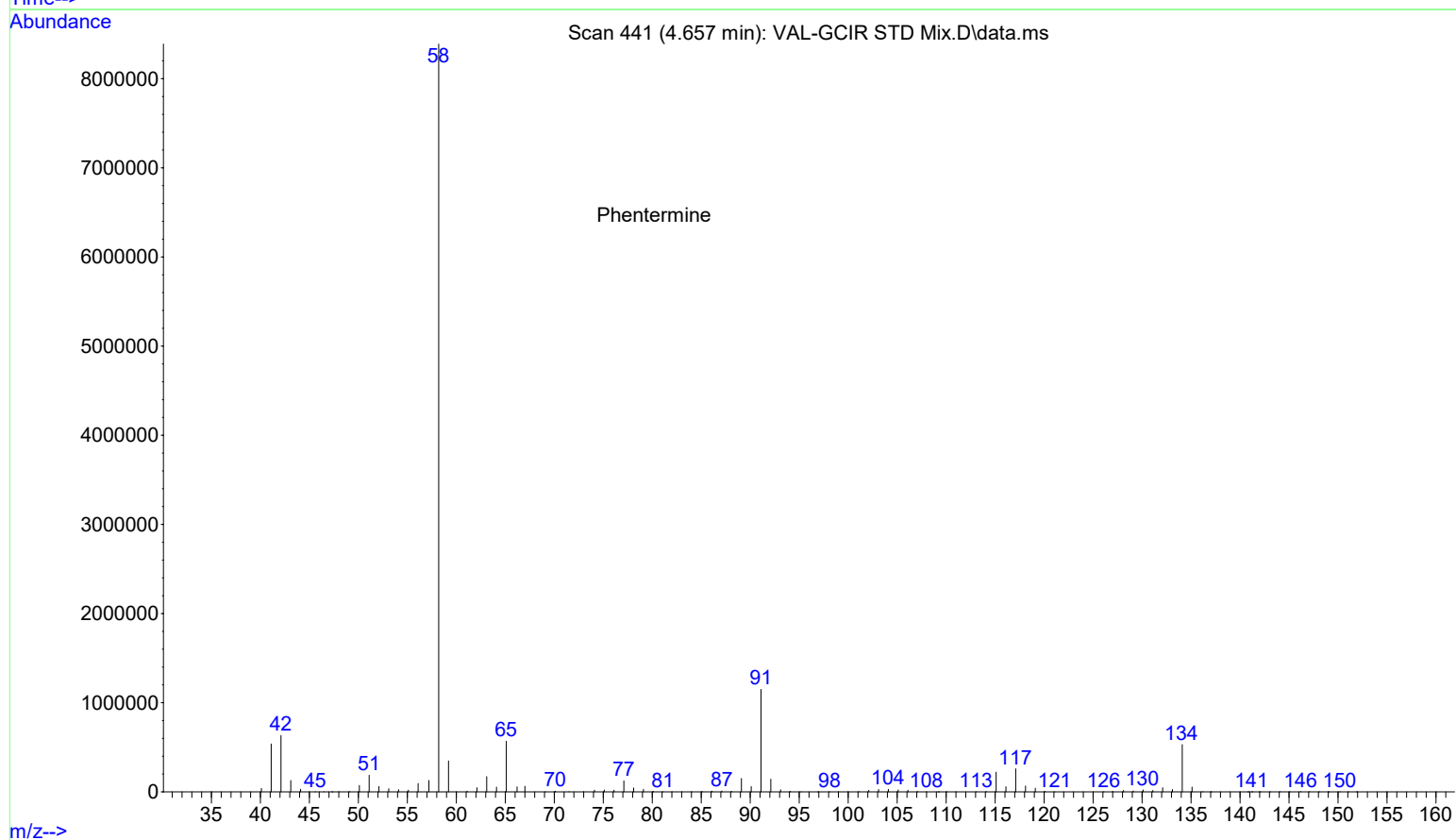
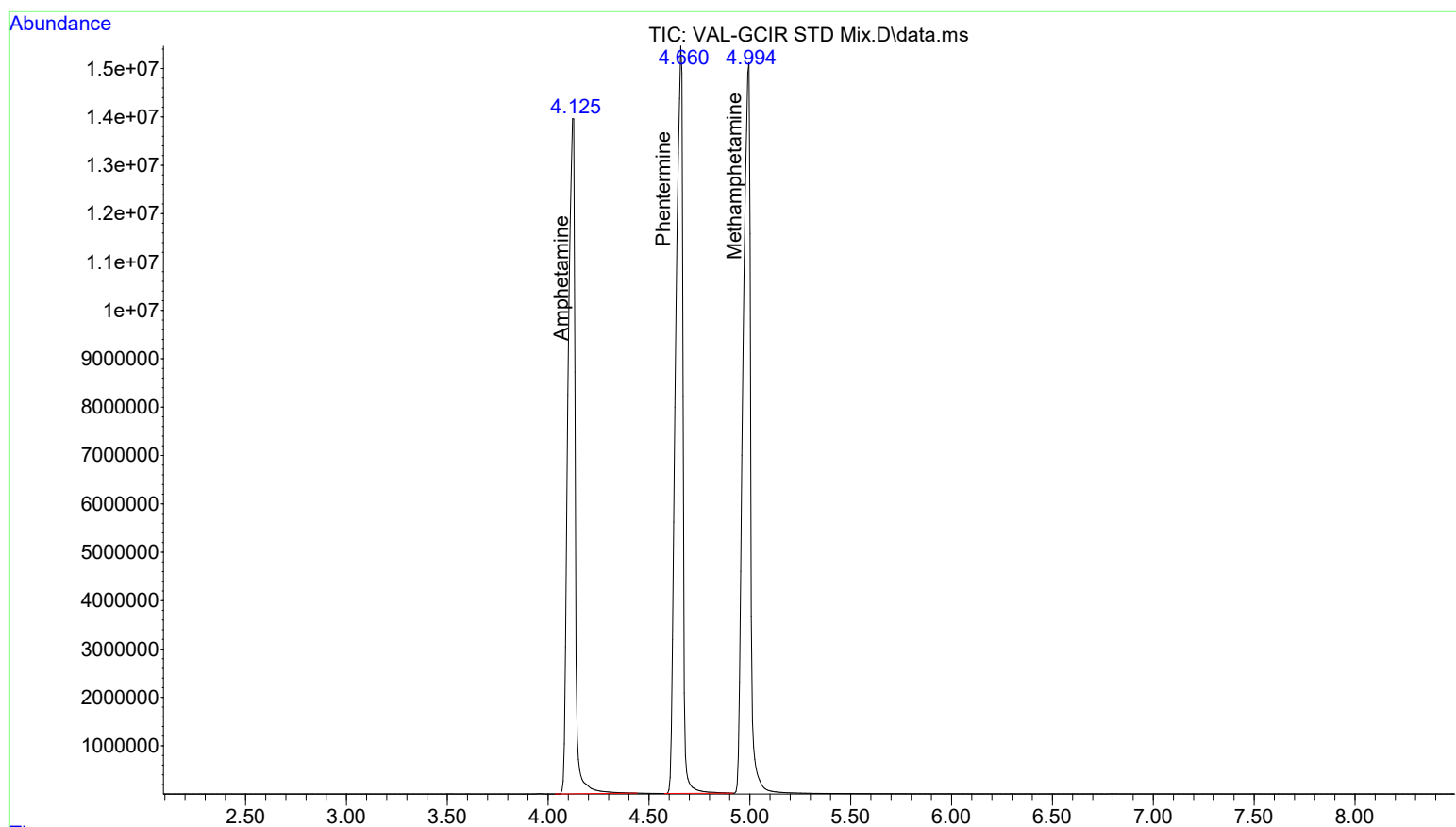
File :Z:\Instr\Luna\2025\6-June\VAL-GCIR STD Mix.D
Operator :
Acquired : 17 Jun 2025 14:27 using AcqMethod AMINE.M
Instrument : Luna
Sample Name: GCIR STD Mix
Misc Info : CHCl3
Vial Number: 13

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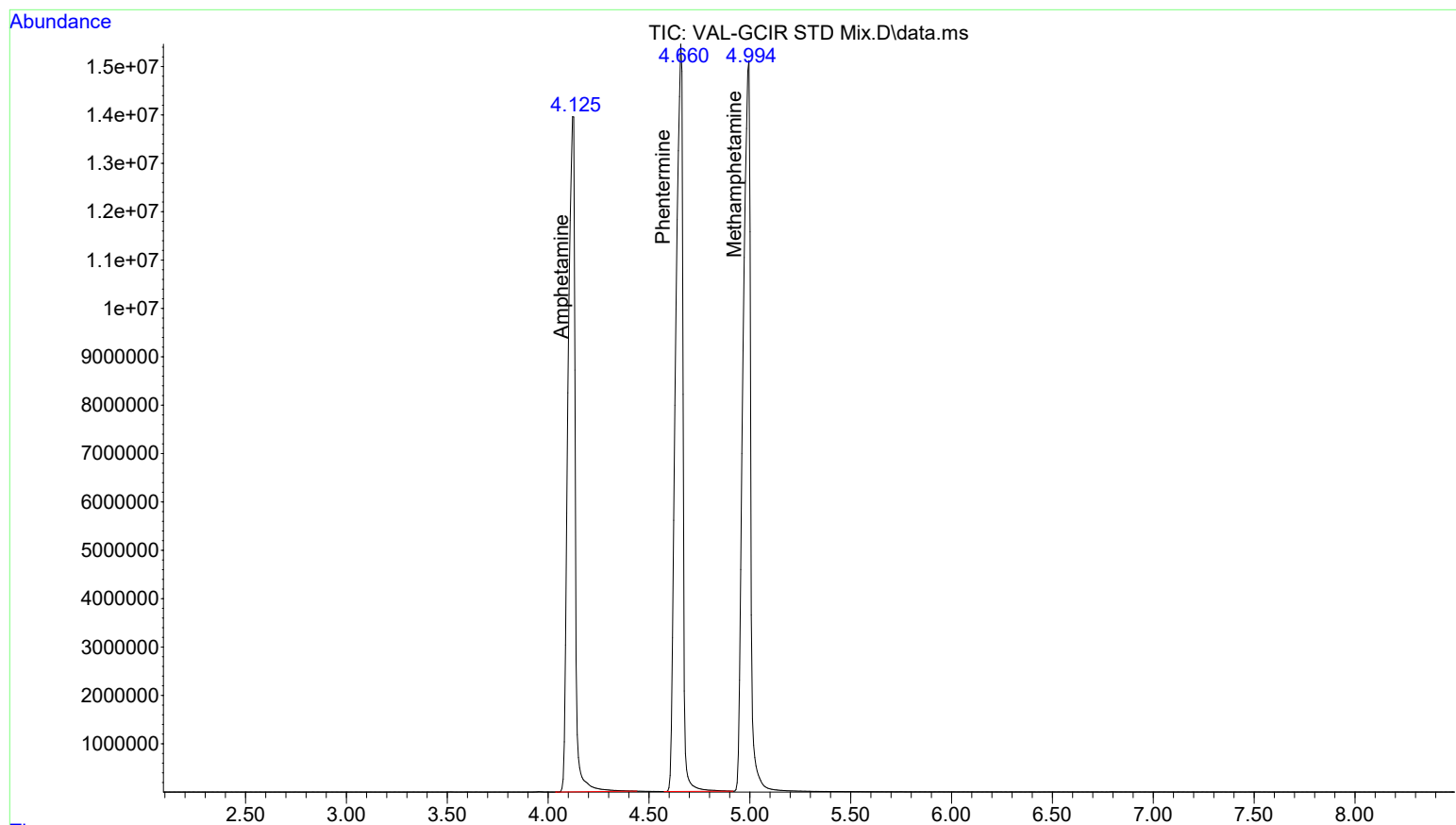
File : Z:\Instr\Luna\2025\6-June\VAL-GCIR STD Mix.D
Operator :
Acquired : 17 Jun 2025 14:27 using AcqMethod AMINE.M
Instrument : Luna
Sample Name: GCIR STD Mix
Misc Info : CHCl3
Vial Number: 13

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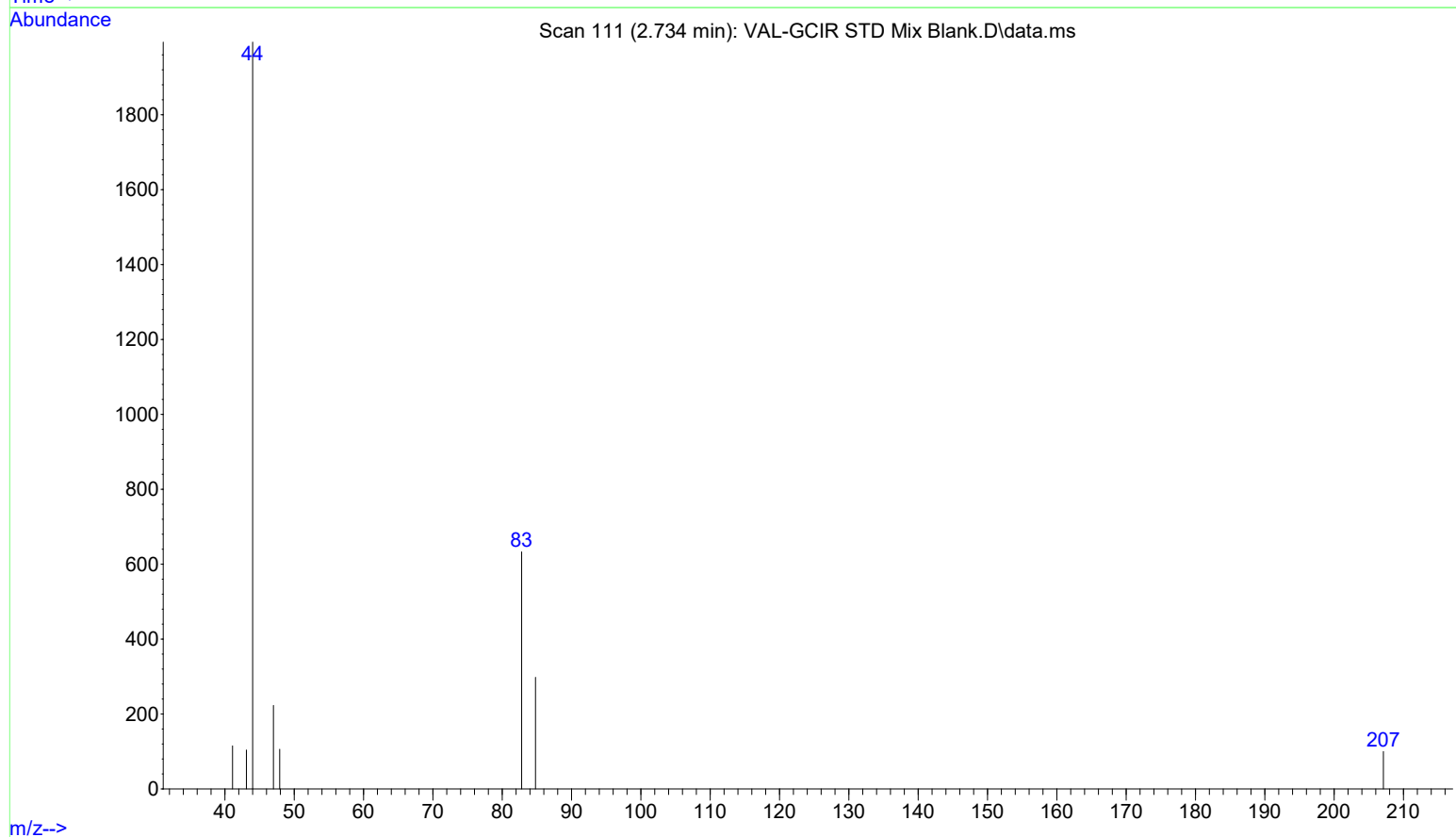
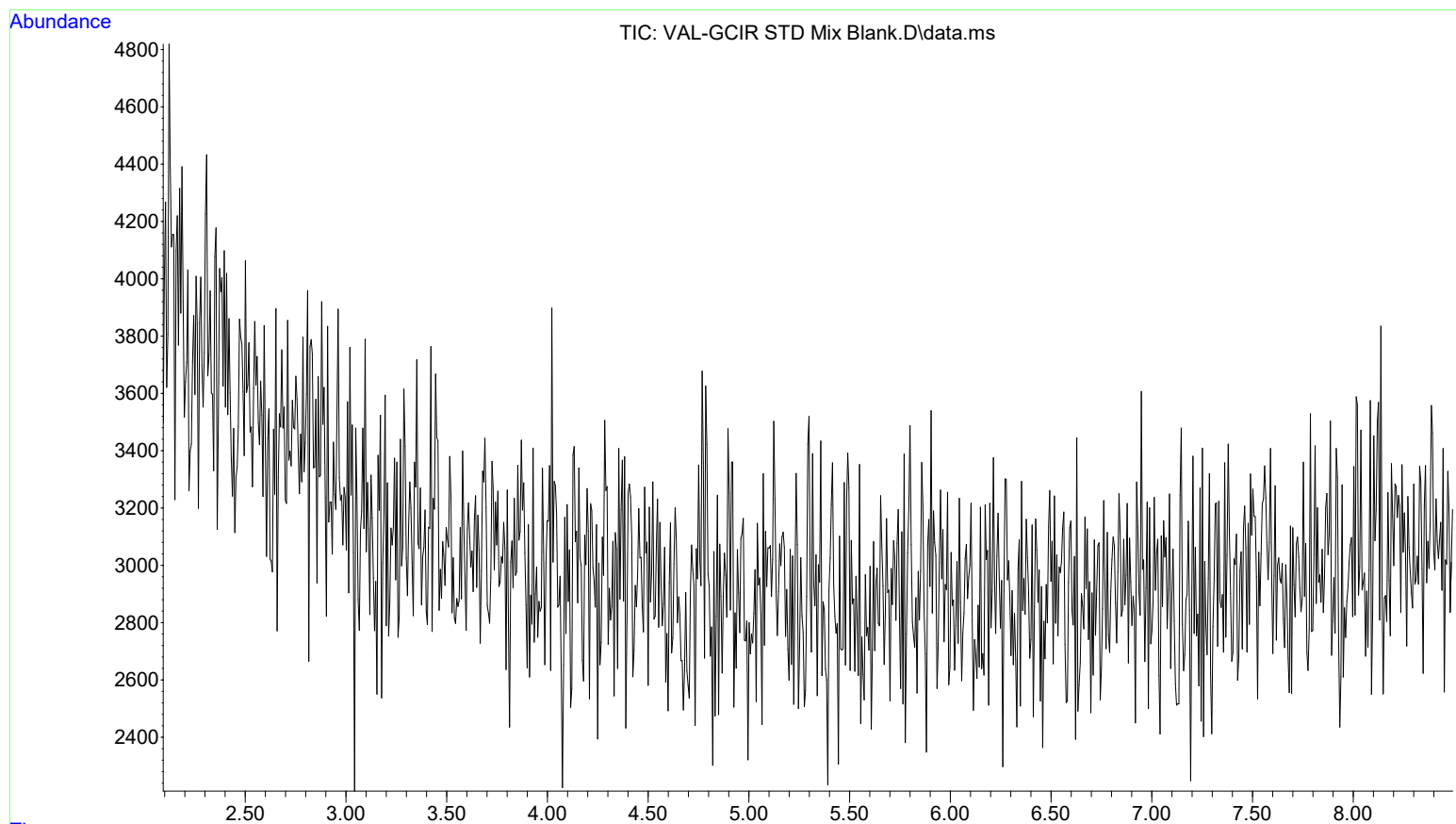
File :Z:\Instr\Luna\2025\6-June\VAL-GCIR STD Mix.D
Operator :
Acquired : 17 Jun 2025 14:27 using AcqMethod AMINE.M
Instrument : Luna
Sample Name: GCIR STD Mix
Misc Info : CHCl3
Vial Number: 13

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File :Z:\Instr\Luna\2025\6-June\VAL-GCIR STD Mix Blank.D
Operator :
Acquired : 17 Jun 2025 14:17 using AcqMethod AMINE.M
Instrument : Luna
Sample Name: GCIR STD Mix Blank
Misc Info : CHCl3
Vial Number: 12

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Method Information for: C:\MassHunter\GCMS\1\methods\BENZOMS.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:

BENZOMS

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\BENZOMS.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	1.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
1.00	40	550	100	1,562 [N=2]

Timed Events

Time	Type of Event	Parameter
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Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	50	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
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C:\MassHunter\GCMS\1\methods\BENZOMS.M
Mon Jun 30 15:44:42 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 7.0333 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 210 °C
Hold Time 0.5 min
Post Run 50 °C
Program
#1 Rate 30 °C/min
#1 Value 280 °C
#1 Hold Time 4.2 min

Equilibration Time 0 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled

Tower Fan On
Solvent Wash Mode A, B

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Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 19.96 psi
Total Flow On 45.869 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 35 :1
Split Flow 43.623 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 1 :1
Split Flow 0.5 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
 (Initial) 1.2464 mL/min
 Post Run 2 mL/min

32

Column Information Agilent 128-0112
 Description DB-1ms
 Temperature Range -60 °C-340 °C (340 °C)
 Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
 Heater Oven
 In Front SS Inlet He
 Out MSD
 (Initial) 210 °C
 Pressure 19.96 psi
 Flow 1.2464 mL/min
 Average Velocity 68.608 cm/sec
 Holdup Time 0.29151 min
 Control Mode Constant Flow

Column #2
 Flow
 Setpoint Off
 (Initial) 0.5 mL/min
 Post Run 2 mL/min

Column Information Agilent 19091Z-211
 Description HP-1
 Temperature Range -60 °C-325 °C (325 °C)
 Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
 Heater Oven
 In Back SS Inlet He
 Out Back Detector FID
 (Initial) 210 °C
 Pressure 2.8815 psi
 Flow 0.5 mL/min
 Average Velocity 15.444 cm/sec
 Holdup Time 1.6188 min
 Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
 Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Makeup He
 Heater Off
 H2 Flow Off
 Air Flow Off
 Makeup Flow Off
 Carrier Gas Flow Correction Constant Makeup and Fuel Flow
 Flame Off

Aux EPC 1,2,3
 Aux EPC 1 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Aux EPC 1 He (unused)

Aux EPC 2 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 2 He	(unused)	
Aux EPC 3 He		33
Pressure		
Setpoint	Off	
(Initial)	10 psi	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 3 He	(unused)	
Signals		
Signal #1: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #2: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	500 Hz	
Dual Injection Assignment	Back Sample	
Signal #3: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	10 Hz	
Dual Injection Assignment	Back Sample	
Signal #4: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\BENZOMS.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No
Printer: Yes
File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search	Minimum Quality
DEMO.L	0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No
Printer: Yes
File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

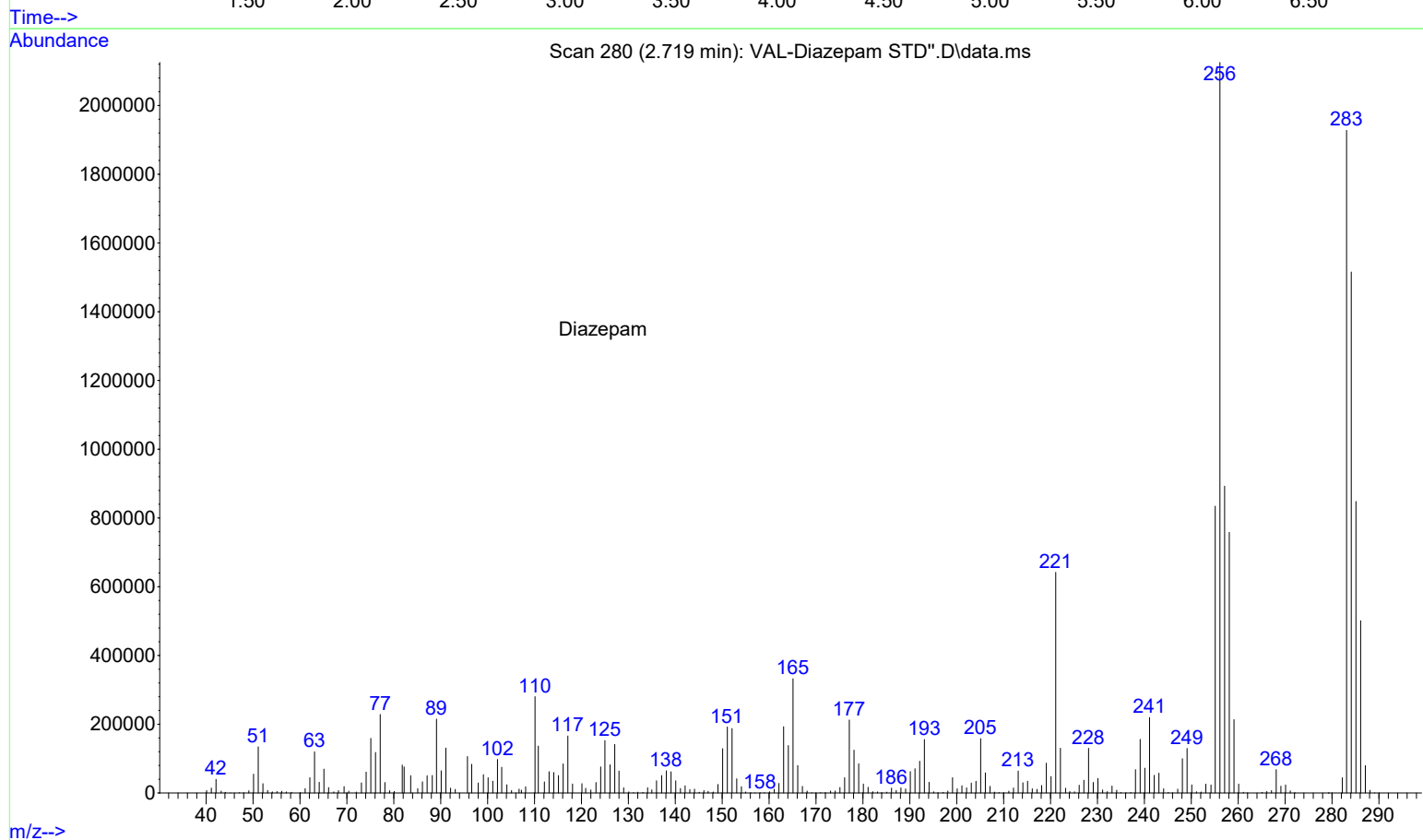
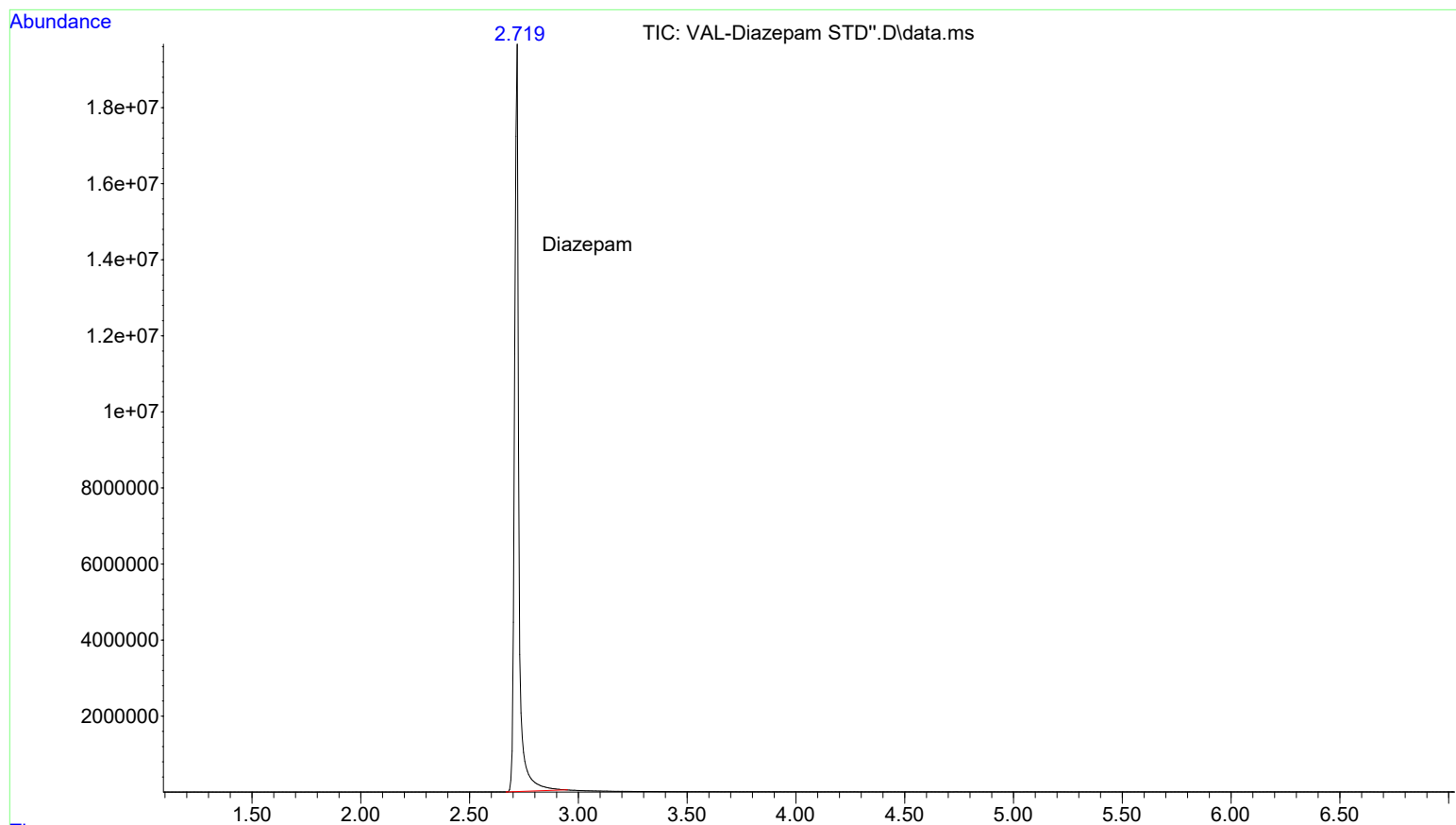
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:44:58 2025

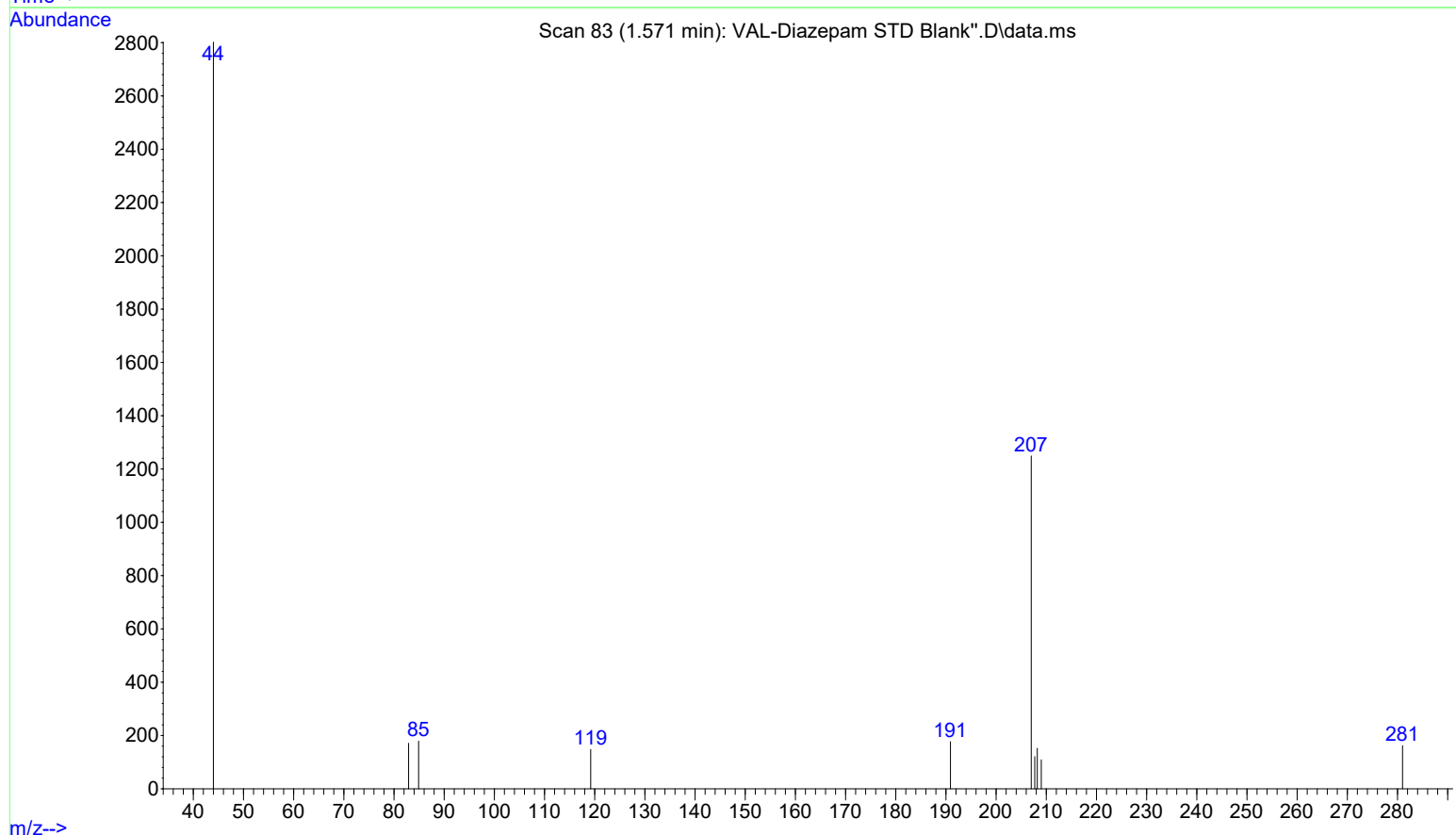
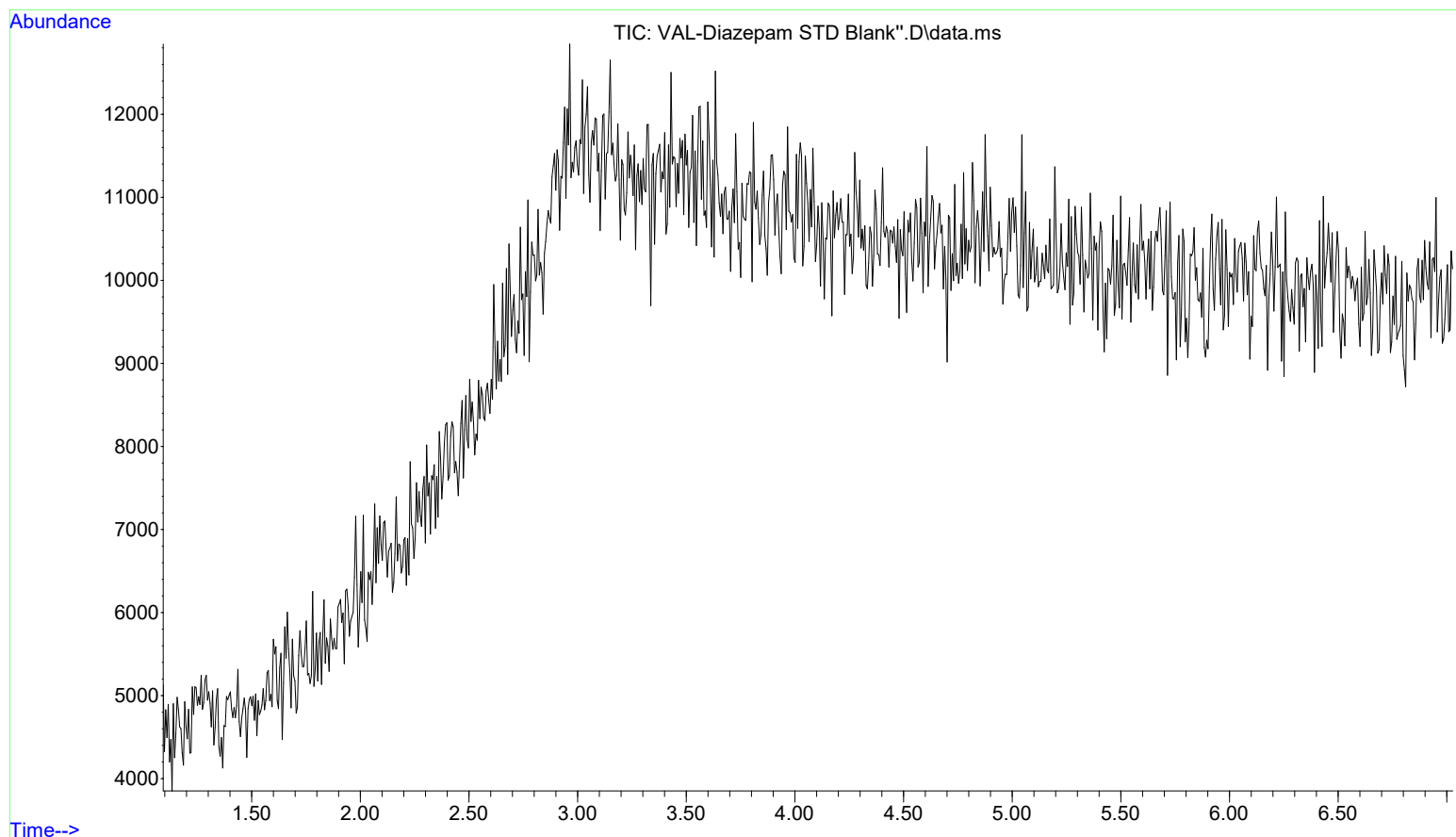
File :Z:\Instr\Luna\2025\6-June\VAL-Diazepam STD''.D
Operator :
Acquired : 18 Jun 2025 13:12 using AcqMethod BENZOMS.M
Instrument : Luna
Sample Name: Diazepam STD
Misc Info : MeOH
Vial Number: 14

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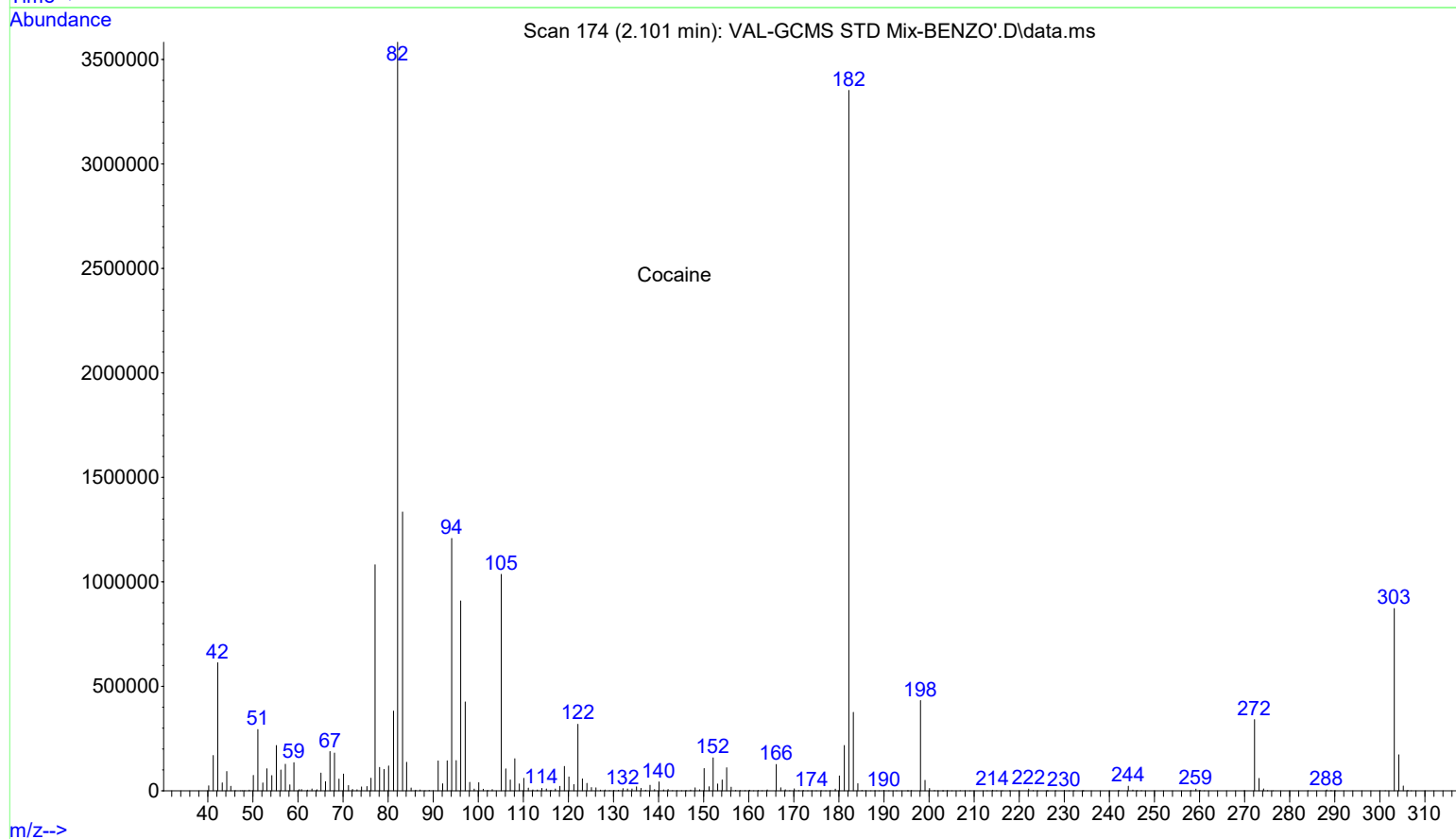
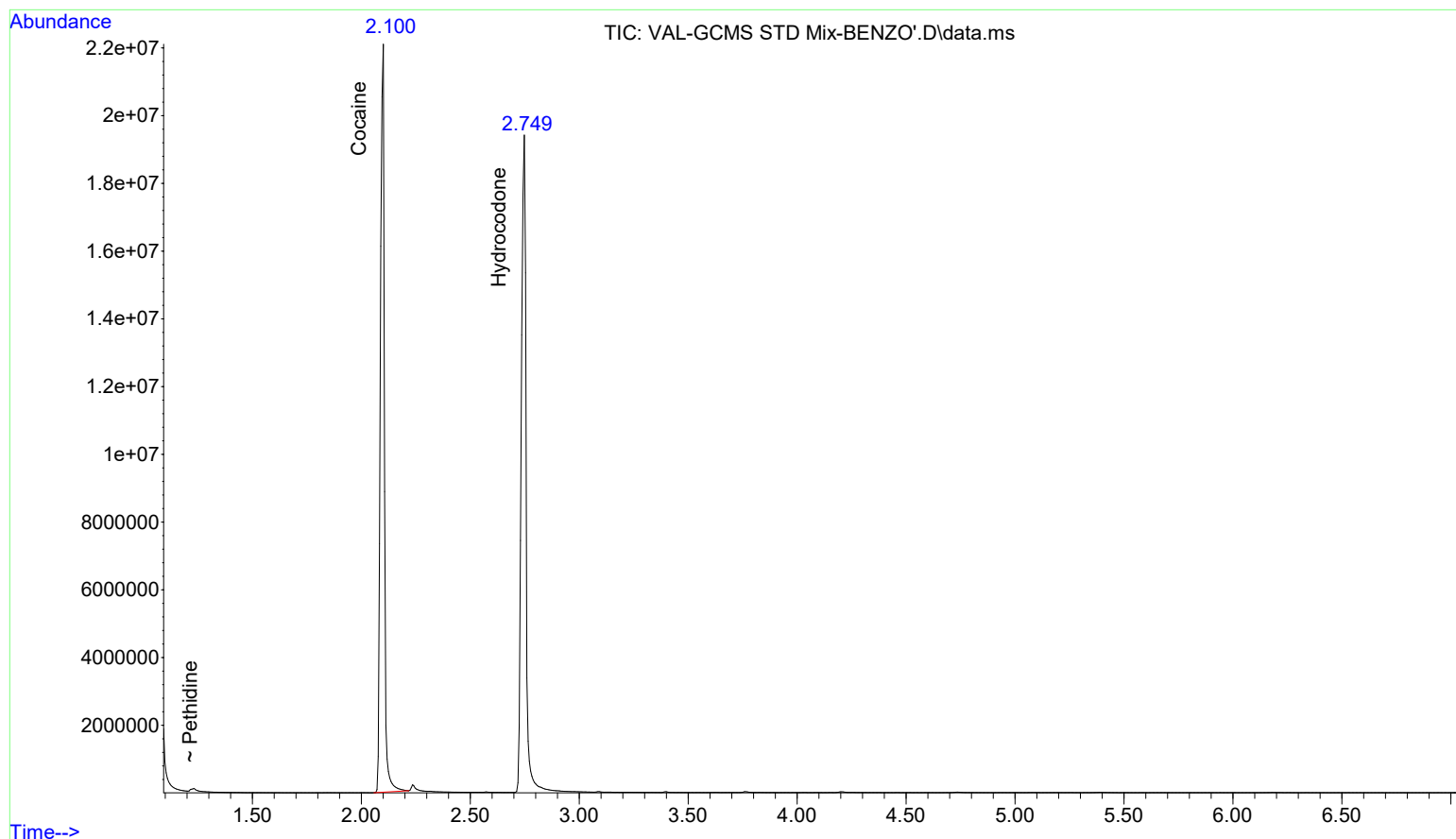
File :Z:\Instr\Luna\2025\6-June\VAL-Diazepam STD Blank''.D
Operator :
Acquired : 18 Jun 2025 13:03 using AcqMethod BENZOMS.M
Instrument : Luna
Sample Name: Diazepam STD Blank
Misc Info : MeOH
Vial Number: 11

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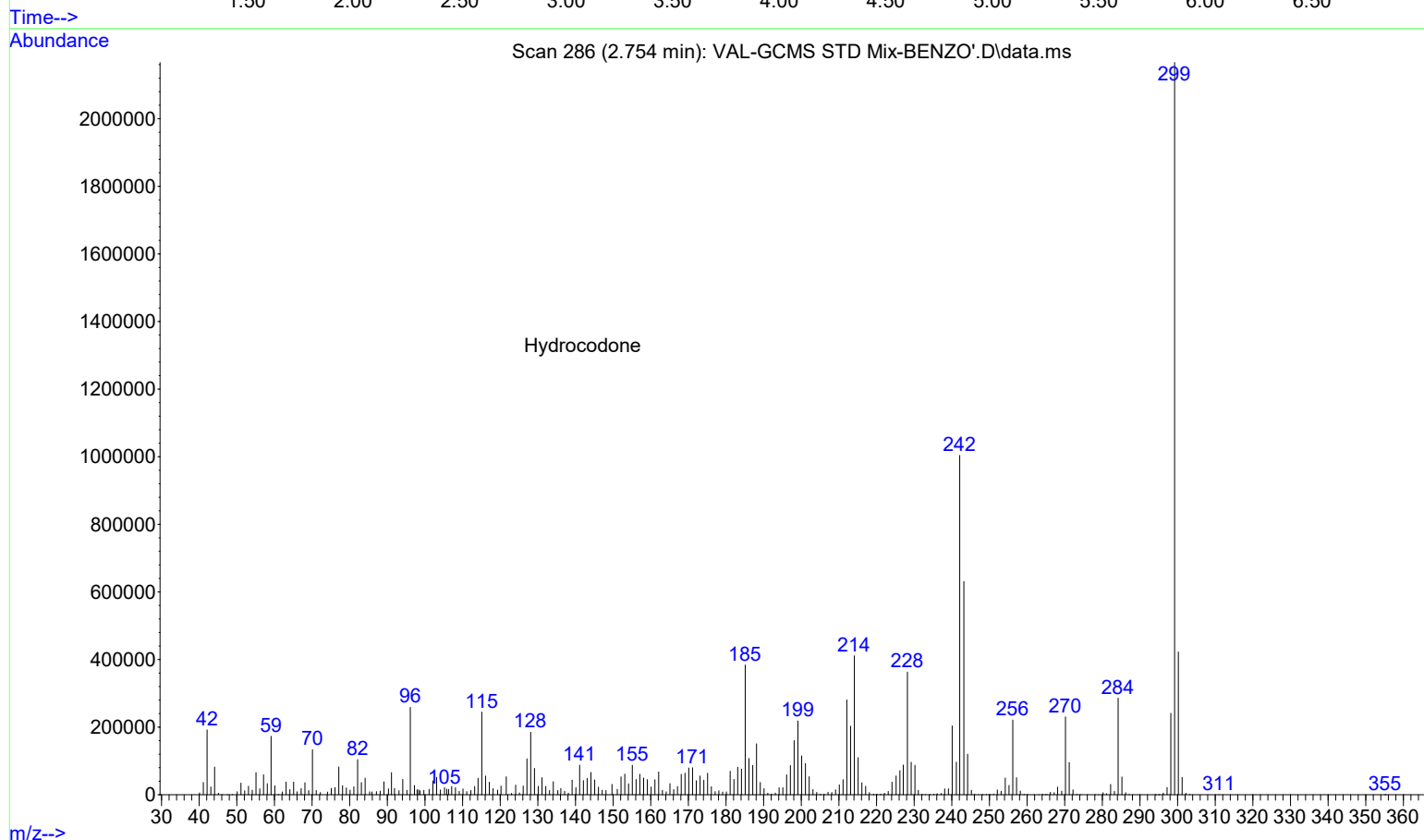
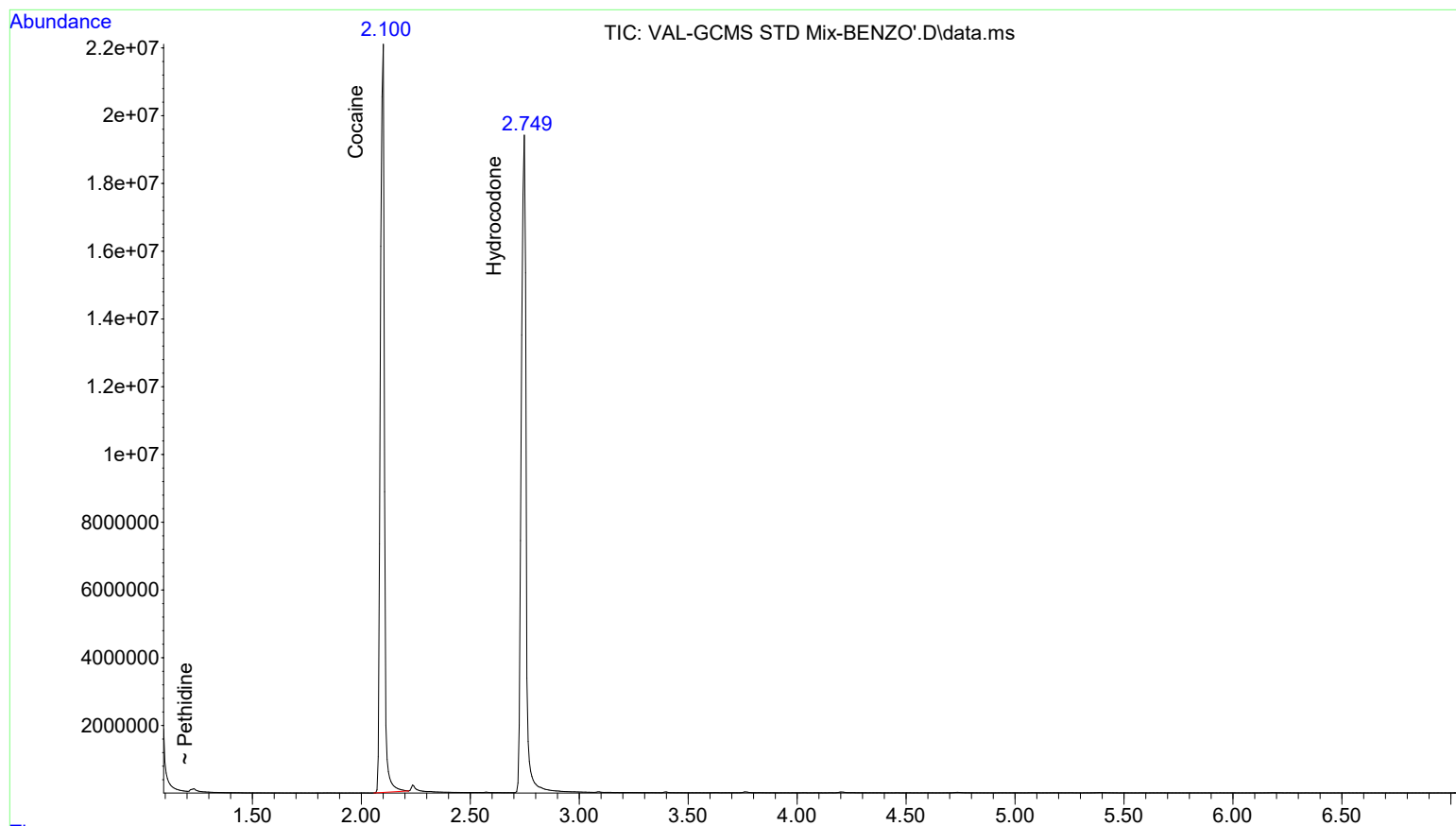
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix-BENZO'.D
Operator :
Acquired : 18 Jun 2025 14:06 using AcqMethod BENZOMS.M
Instrument : Luna
Sample Name: GCMS STD Mix
Misc Info : CHCl3
Vial Number: 15

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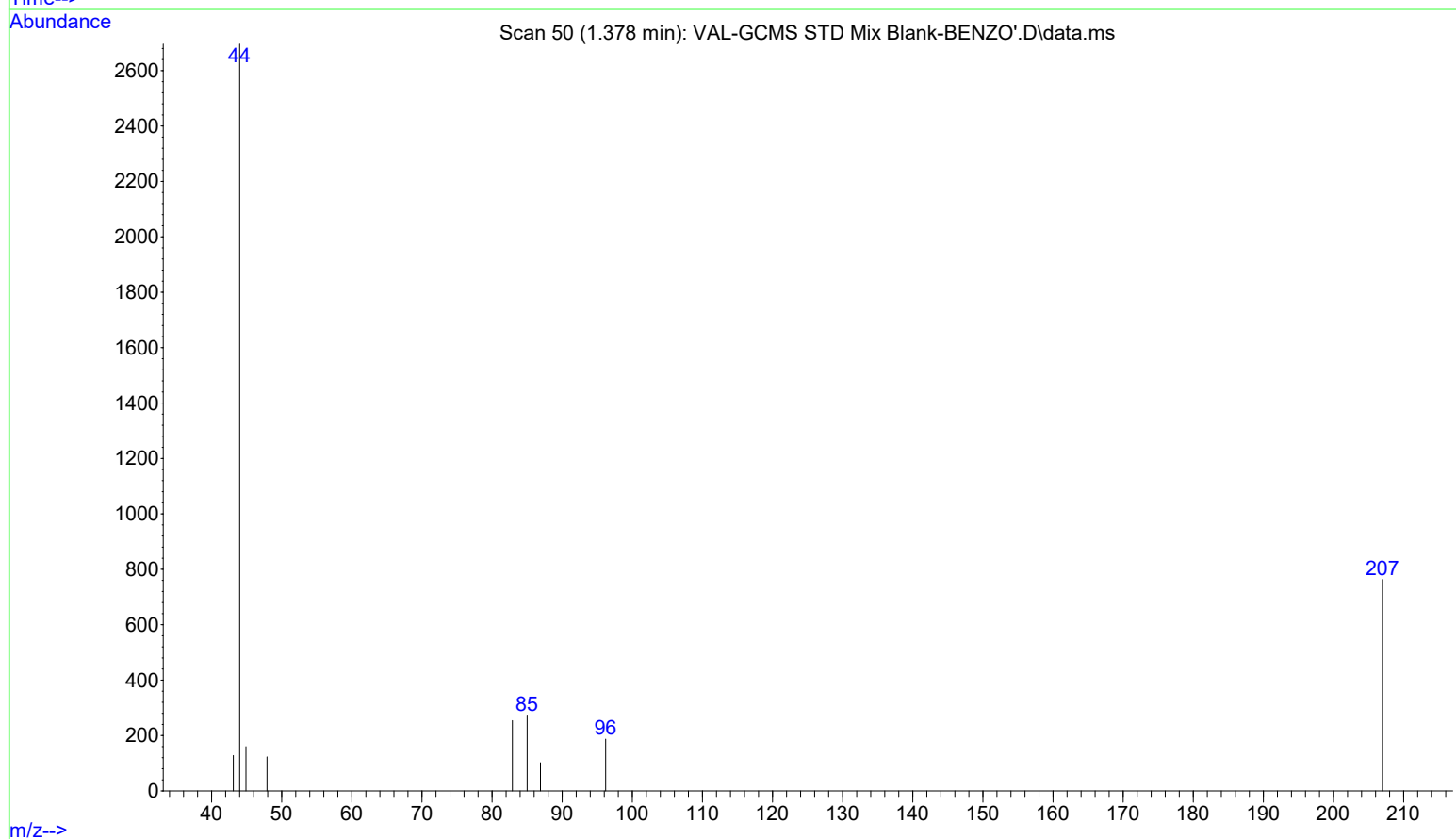
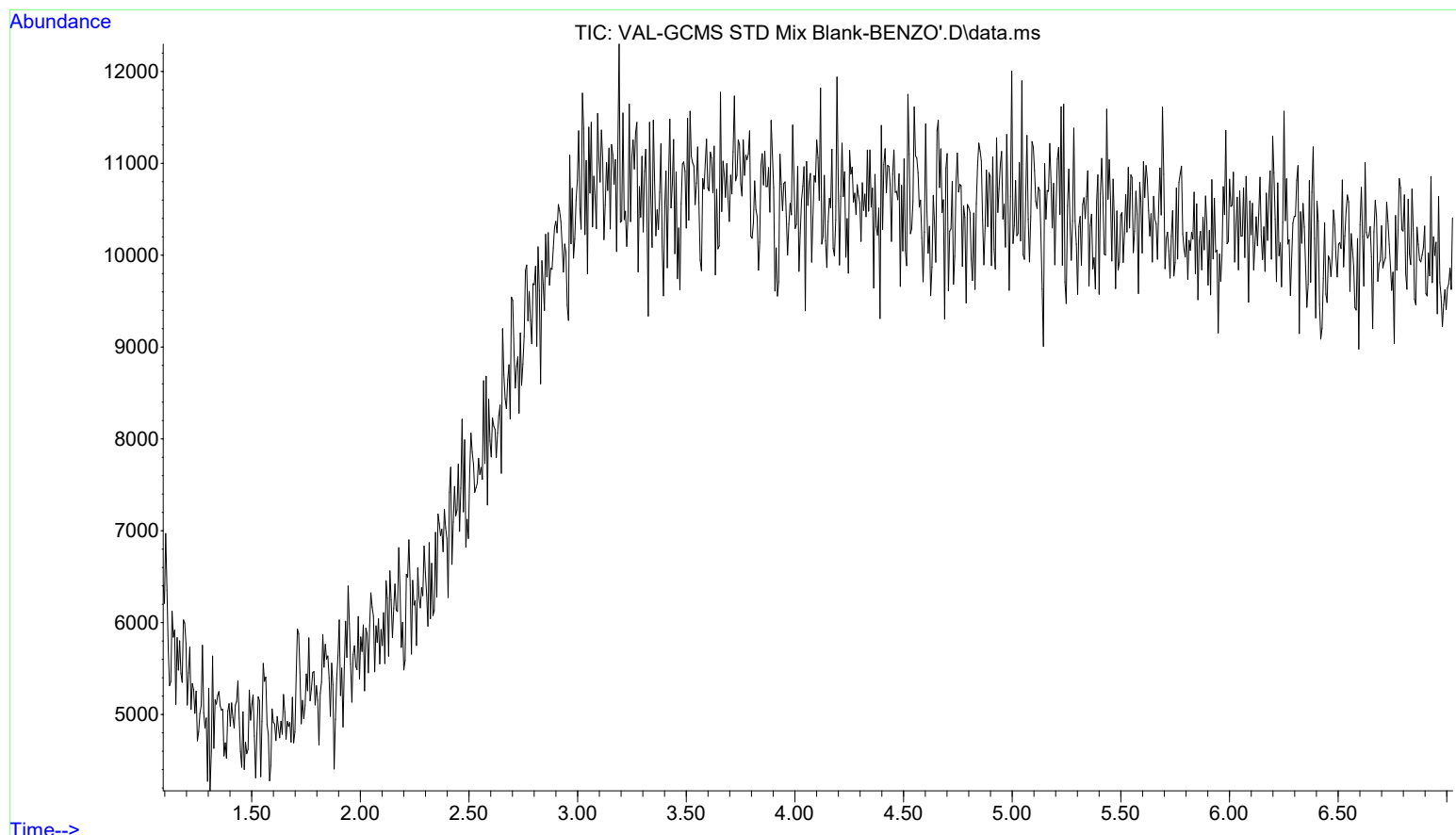
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix-BENZO'.D
Operator :
Acquired : 18 Jun 2025 14:06 using AcqMethod BENZOMS.M
Instrument : Luna
Sample Name: GCMS STD Mix
Misc Info : CHCl3
Vial Number: 15

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File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix Blank-BENZO'.D
Operator :
Acquired : 18 Jun 2025 13:57 using AcqMethod BENZOMS.M
Instrument : Luna
Sample Name: GCMS STD Mix Blank
Misc Info : CHCl3
Vial Number: 12

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Method Information for: C:\MassHunter\GCMS\1\methods\BUPMS.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:

BUPMS

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\BUPMS.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	1.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
1.00	40	550	100	1,562 [N=2]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\BUPMS.M
Mon Jun 30 15:45:48 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 11.5 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 240 °C
Hold Time 0 min
Post Run 50 °C
Program
#1 Rate 40 °C/min
#1 Value 280 °C
#1 Hold Time 10.5 min

Equilibration Time 0.5 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled

Tower Fan On
Solvent Wash Mode A, B

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Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 20.96 psi
Total Flow On 37.963 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 30 :1
Split Flow 35.77 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
 (Initial) 1.1923 mL/min
 Post Run 2 mL/min

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Column Information Agilent 128-0112
 Description DB-1ms
 Temperature Range -60 °C-340 °C (340 °C)
 Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
 Heater Oven
 In Front SS Inlet He
 Out MSD
 (Initial) 240 °C
 Pressure 20.96 psi
 Flow 1.1923 mL/min
 Average Velocity 67.755 cm/sec
 Holdup Time 0.29518 min
 Control Mode Constant Flow

Column #2
 Flow
 Setpoint Off
 (Initial) 0.5 mL/min
 Post Run 2 mL/min

Column Information Agilent 19091Z-211
 Description HP-1
 Temperature Range -60 °C-325 °C (325 °C)
 Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
 Heater Oven
 In Back SS Inlet He
 Out Back Detector FID
 (Initial) 240 °C
 Pressure 3.161 psi
 Flow 0.5 mL/min
 Average Velocity 16.254 cm/sec
 Holdup Time 1.5381 min
 Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
 Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Makeup He
 Heater Off
 H2 Flow Off
 Air Flow Off
 Makeup Flow Off
 Carrier Gas Flow Correction Constant Makeup and Fuel Flow
 Flame Off

Aux EPC 1,2,3
 Aux EPC 1 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Aux EPC 1 He (unused)

Aux EPC 2 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness
Aux EPC 2 He

Excluded from Affecting GC's Readiness State
(unused)

Aux EPC 3 He
Pressure
Setpoint
(Initial)

Off
10 psi

Excluded from Readiness
Aux EPC 3 He

Excluded from Affecting GC's Readiness State
(unused)

Signals
Signal #1: Back Signal
Description
Details
Save
Data Rate
Dual Injection Assignment

Back Signal
Back Signal (FID)
Off
50 Hz
Front Sample

Signal #2: Back Signal
Description
Details
Save
Data Rate
Dual Injection Assignment

Back Signal
Back Signal (FID)
Off
500 Hz
Front Sample

Signal #3: Back Signal
Description
Details
Save
Data Rate
Dual Injection Assignment

Back Signal
Back Signal (FID)
Off
10 Hz
Front Sample

Signal #4: Back Signal
Description
Details
Save
Data Rate
Dual Injection Assignment

Back Signal
Back Signal (FID)
Off
50 Hz
Front Sample

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610 : EMISSION
70.347 : ENERGY
34.961 : REPELLER
90.157 : IONFOCUS
28.500 : ENTRANCE_LENS
1011.765 : EMVOLTS

1011.765 : Actual EMV
0.55 : GAIN FACTOR

2013.000 : AMUGAIN
122.875 : AMUOFFSET
1.000 : FILAMENT
0.000 : DCPOLARITY
19.576 : ENTLENSOFFSET

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

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END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\BUPMS.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search Minimum Quality

DEMO.L 0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

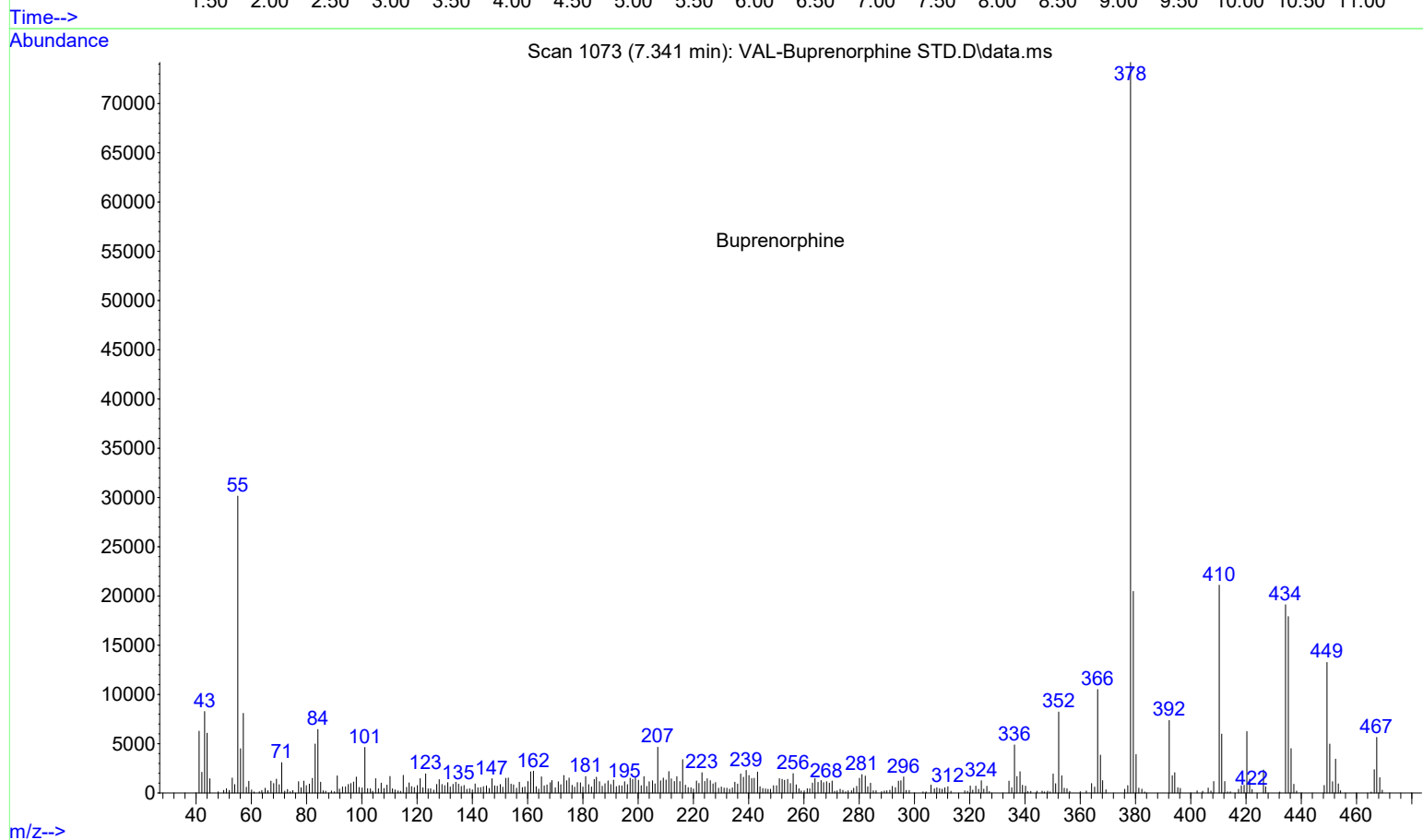
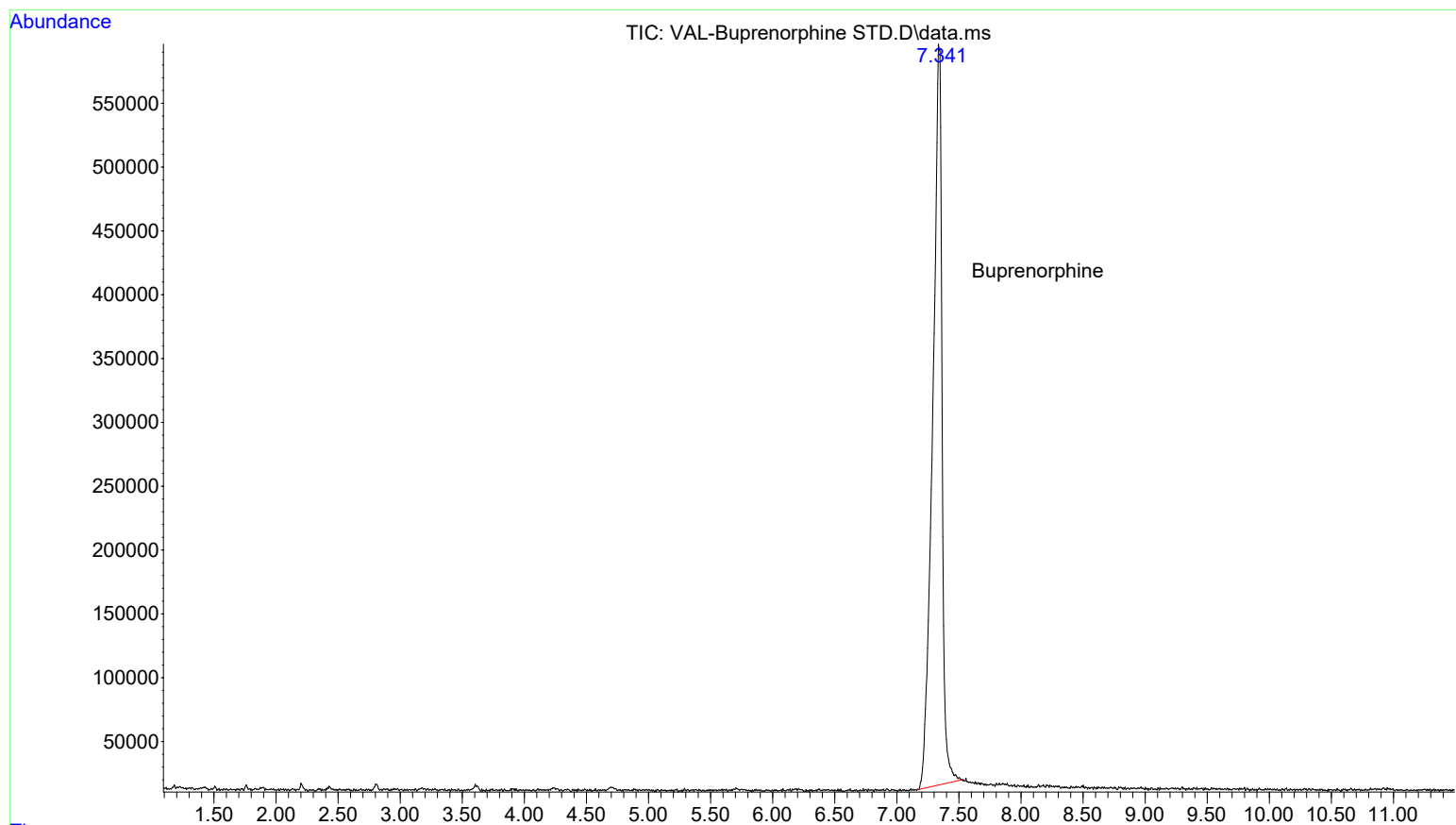
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:46:03 2025

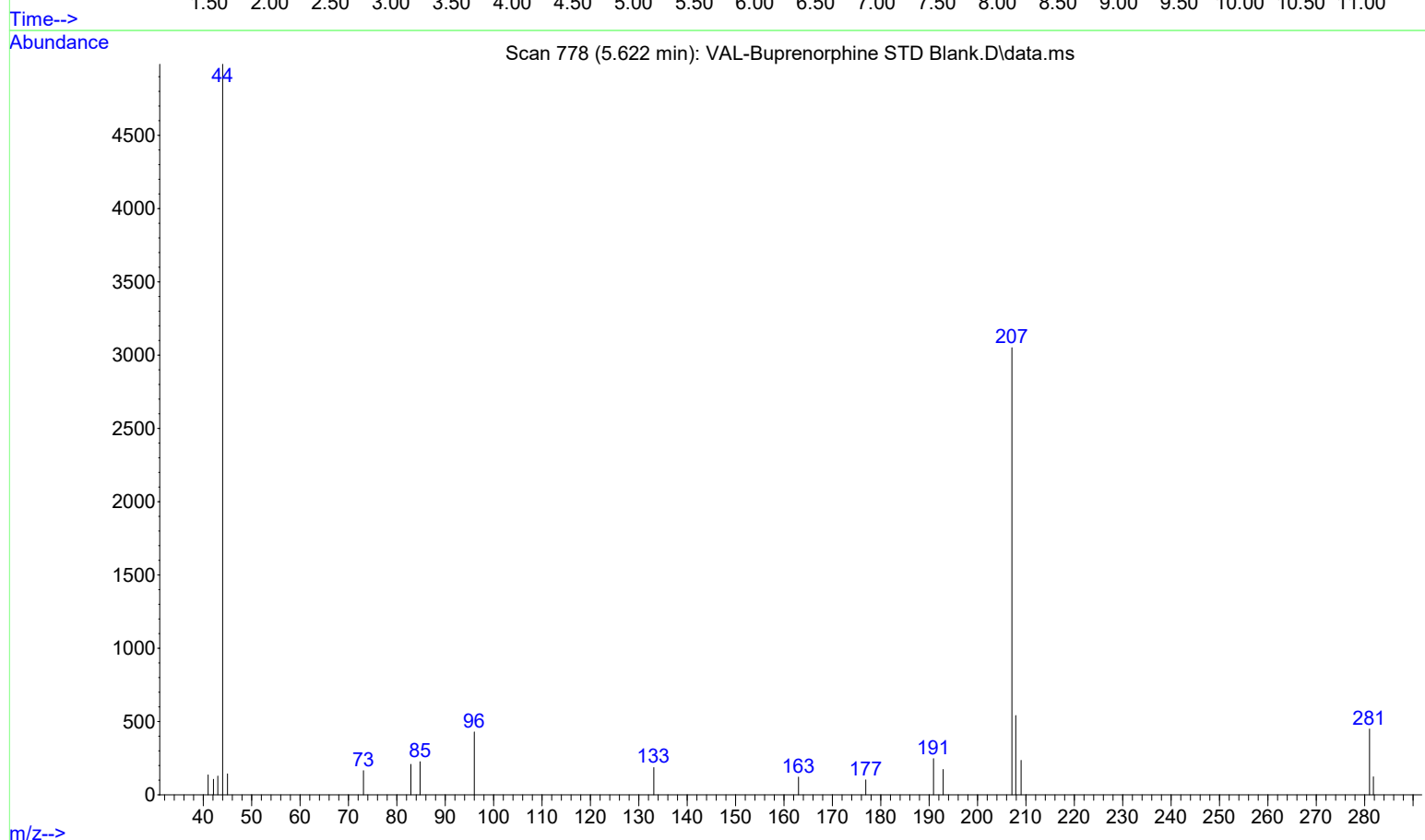
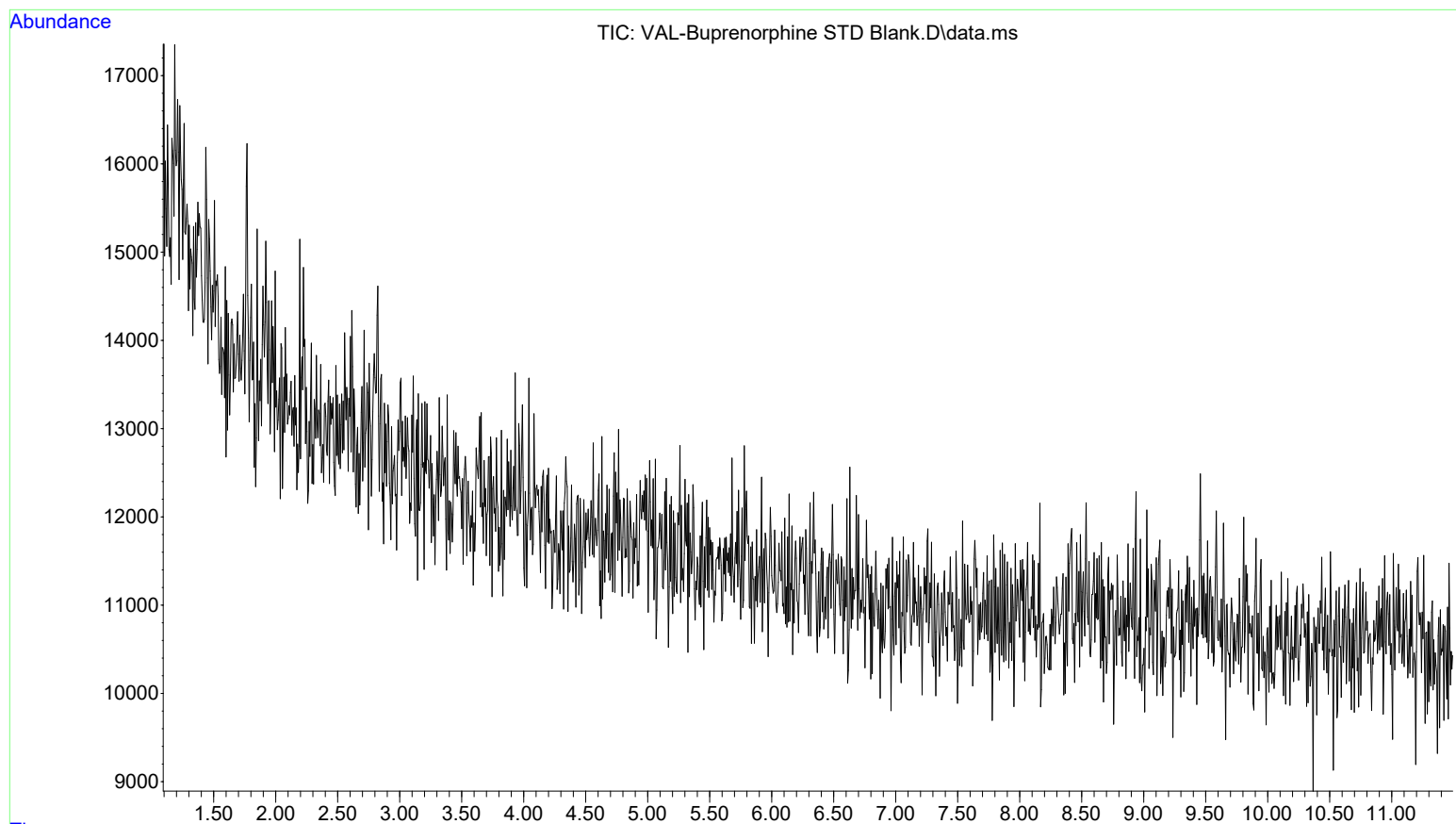
File :Z:\Instr\Luna\2025\6-June\VAL-Buprenorphine STD.D
Operator :
Acquired : 17 Jun 2025 18:43 using AcqMethod BUPMS.M
Instrument : Luna
Sample Name: Buprenorphine STD
Misc Info : MeOH
Vial Number: 16

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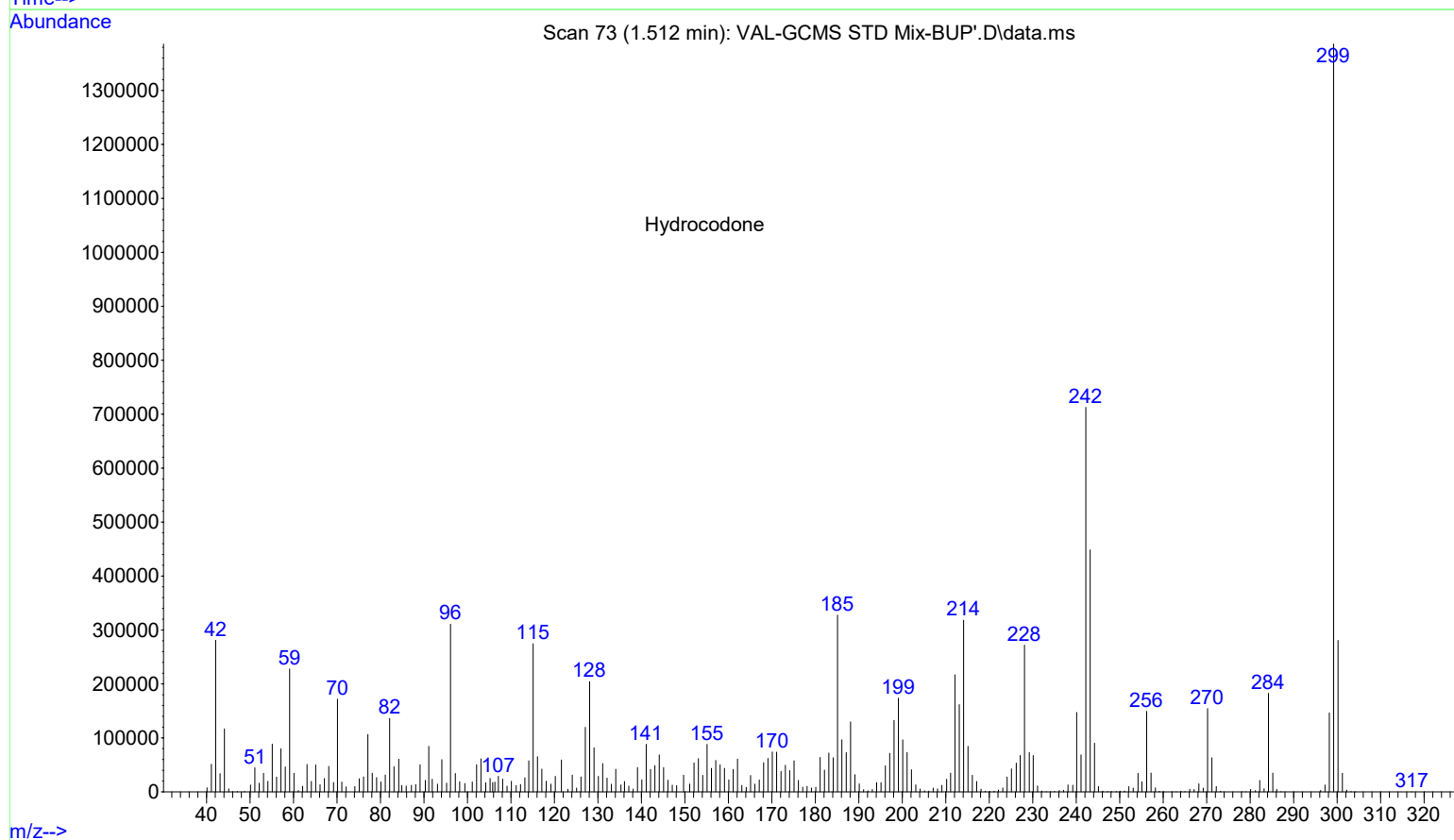
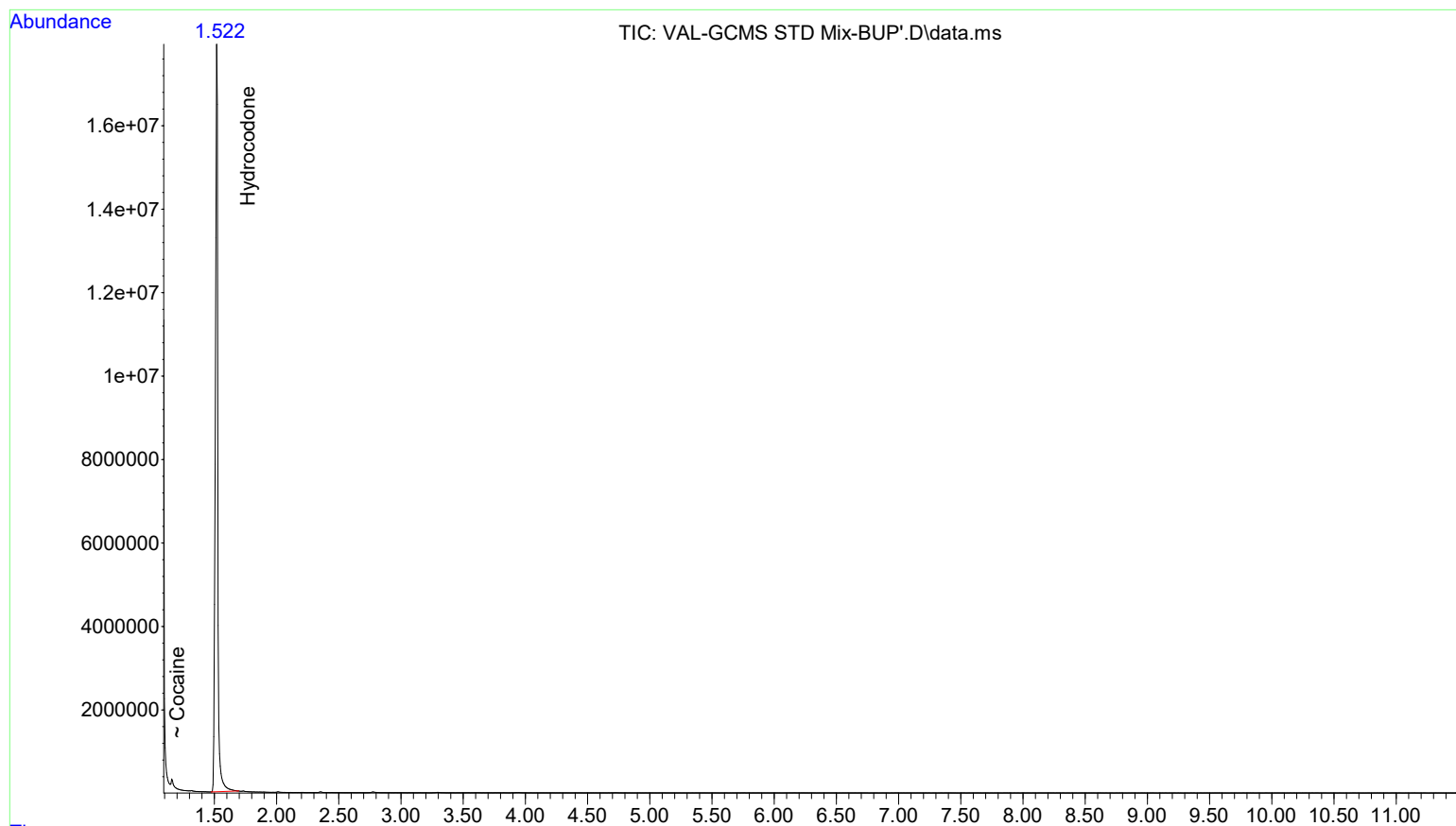
File :Z:\Instr\Luna\2025\6-June\VAL-Buprenorphine STD Blank.D
Operator :
Acquired : 17 Jun 2025 18:29 using AcqMethod BUPMS.M
Instrument : Luna
Sample Name: Buprenorphine STD Blank
Misc Info : MeOH
Vial Number: 11

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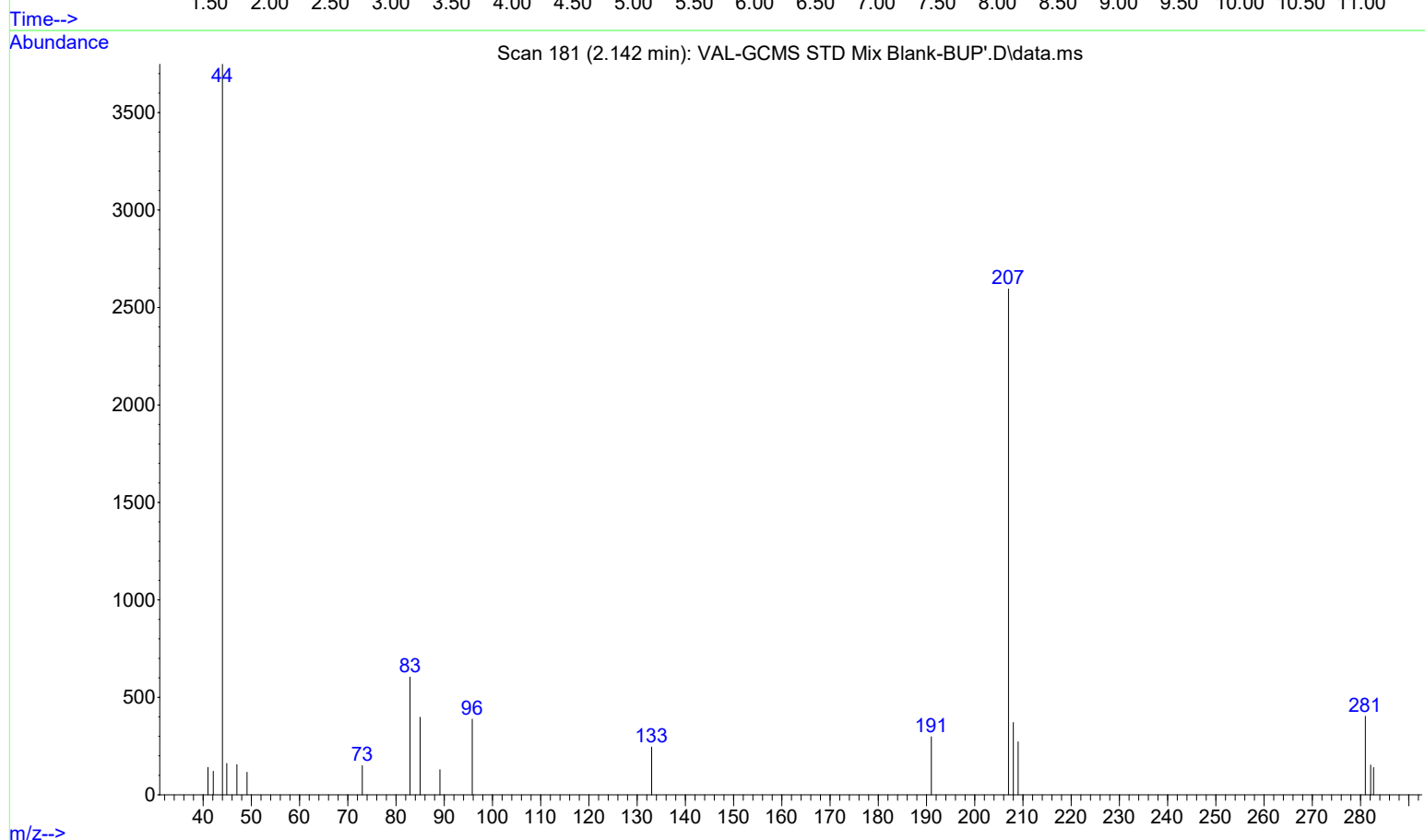
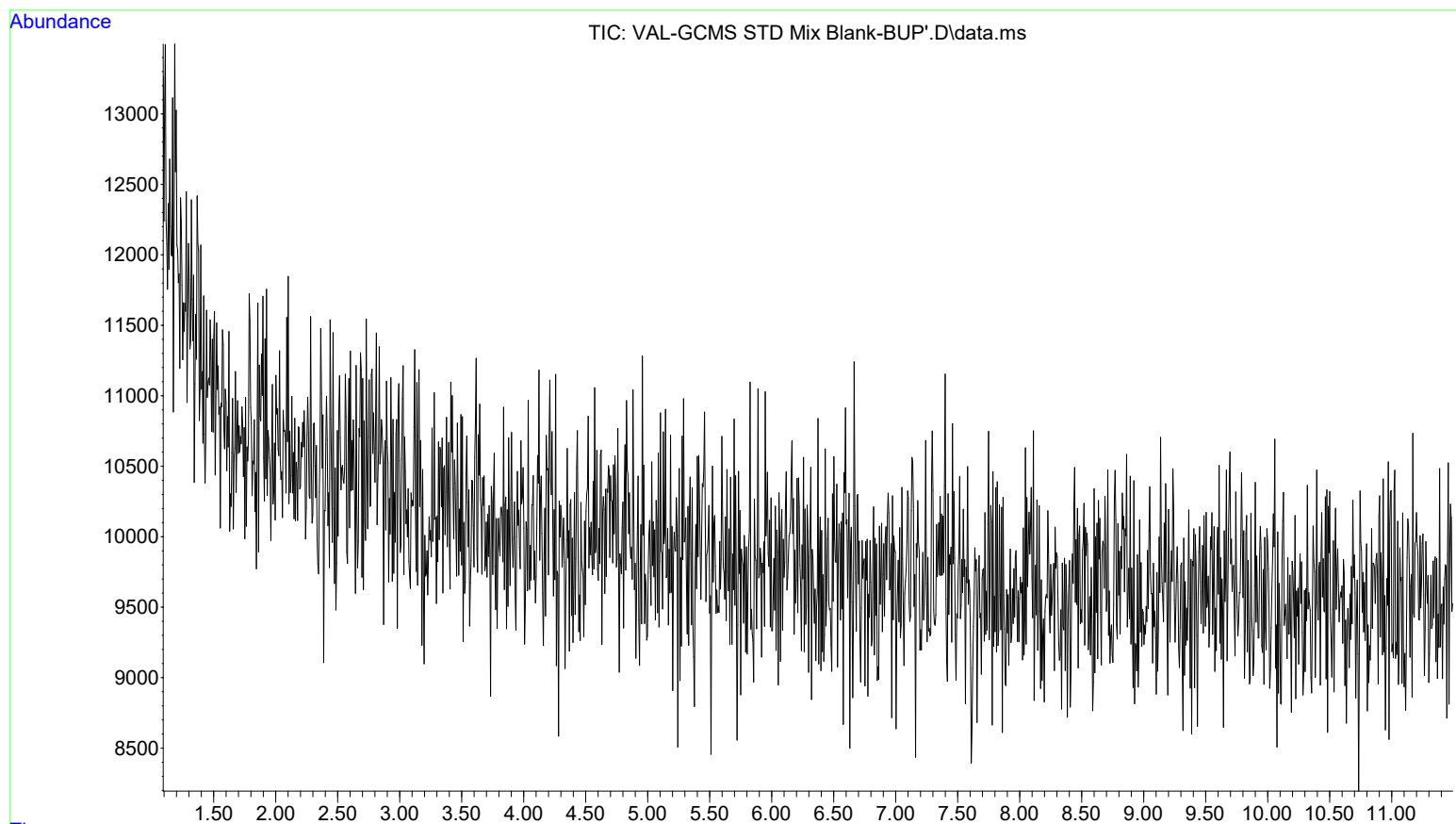
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix-BUP'.D
Operator :
Acquired : 18 Jun 2025 15:07 using AcqMethod BUPMS.M
Instrument : Luna
Sample Name: GCMS STD Mix
Misc Info : CHCl3
Vial Number: 15

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File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix Blank-BUP'.D
Operator :
Acquired : 18 Jun 2025 14:53 using AcqMethod BUPMS.M
Instrument : Luna
Sample Name: GCMS STD Mix Blank
Misc Info : CHCl3
Vial Number: 12

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Method Information for: C:\MassHunter\GCMS\1\methods\DRUG1.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:

DRUGS1

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\DRUG1.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	2.50
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
2.50	40	550	100	3,125 [N=1]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\DRUG1.M
Mon Jun 30 15:47:17 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 14.667 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 80 °C
Hold Time 1.5 min
Post Run 80 °C
Program
#1 Rate 30 °C/min
#1 Value 280 °C
#1 Hold Time 6.5 min

Equilibration Time 0.5 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 1
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled

Tower Fan On
Solvent Wash Mode A, B

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Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 9 psi
Total Flow On 36.516 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 35 :1
Split Flow 34.53 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
 (Initial) 0.98657 mL/min
 Post Run 2 mL/min

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Column Information Agilent 128-0112
 Description DB-1ms
 Temperature Range -60 °C-340 °C (350 °C)
 Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
 Heater Oven
 In Front SS Inlet He
 Out MSD
 (Initial) 80 °C
 Pressure 9 psi
 Flow 0.98657 mL/min
 Average Velocity 58.054 cm/sec
 Holdup Time 0.3445 min
 Control Mode Constant Flow

Column #2
 Flow
 Setpoint Off
 (Initial) 0.5 mL/min
 Post Run 2 mL/min

Column Information Agilent 19091Z-211
 Description HP-1
 Temperature Range -60 °C-325 °C (350 °C)
 Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
 Heater Oven
 In Back SS Inlet He
 Out Back Detector FID
 (Initial) 80 °C
 Pressure 1.763 psi
 Flow 0.5 mL/min
 Average Velocity 11.712 cm/sec
 Holdup Time 2.1345 min
 Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
 Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Makeup He
 Heater Off
 H2 Flow Off
 Air Flow Off
 Makeup Flow Off
 Carrier Gas Flow Correction Constant Makeup and Fuel Flow
 Flame Off

Aux EPC 1,2,3
 Aux EPC 1 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Aux EPC 1 He (unused)

Aux EPC 2 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***
Aux EPC 2 He	(unused)
60	
Aux EPC 3 He	
Pressure	
Setpoint	Off
(Initial)	10 psi
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***
Aux EPC 3 He	(unused)
Signals	
Signal #1: Back Signal	
Description	Back Signal
Details	Back Signal (FID)
Save	Off
Data Rate	50 Hz
Dual Injection Assignment	Front Sample
Signal #2: Back Signal	
Description	Back Signal
Details	Back Signal (FID)
Save	Off
Data Rate	50 Hz
Dual Injection Assignment	Front Sample
Signal #3: Back Signal	
Description	Back Signal
Details	Back Signal (FID)
Save	Off
Data Rate	50 Hz
Dual Injection Assignment	Front Sample
Signal #4: Back Signal	
Description	Back Signal
Details	Back Signal (FID)
Save	Off
Data Rate	50 Hz
Dual Injection Assignment	Back Sample

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\DRUG1.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No
Printer: Yes
File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search	Minimum Quality
DEMO.L	0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No
Printer: Yes
File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

63

Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

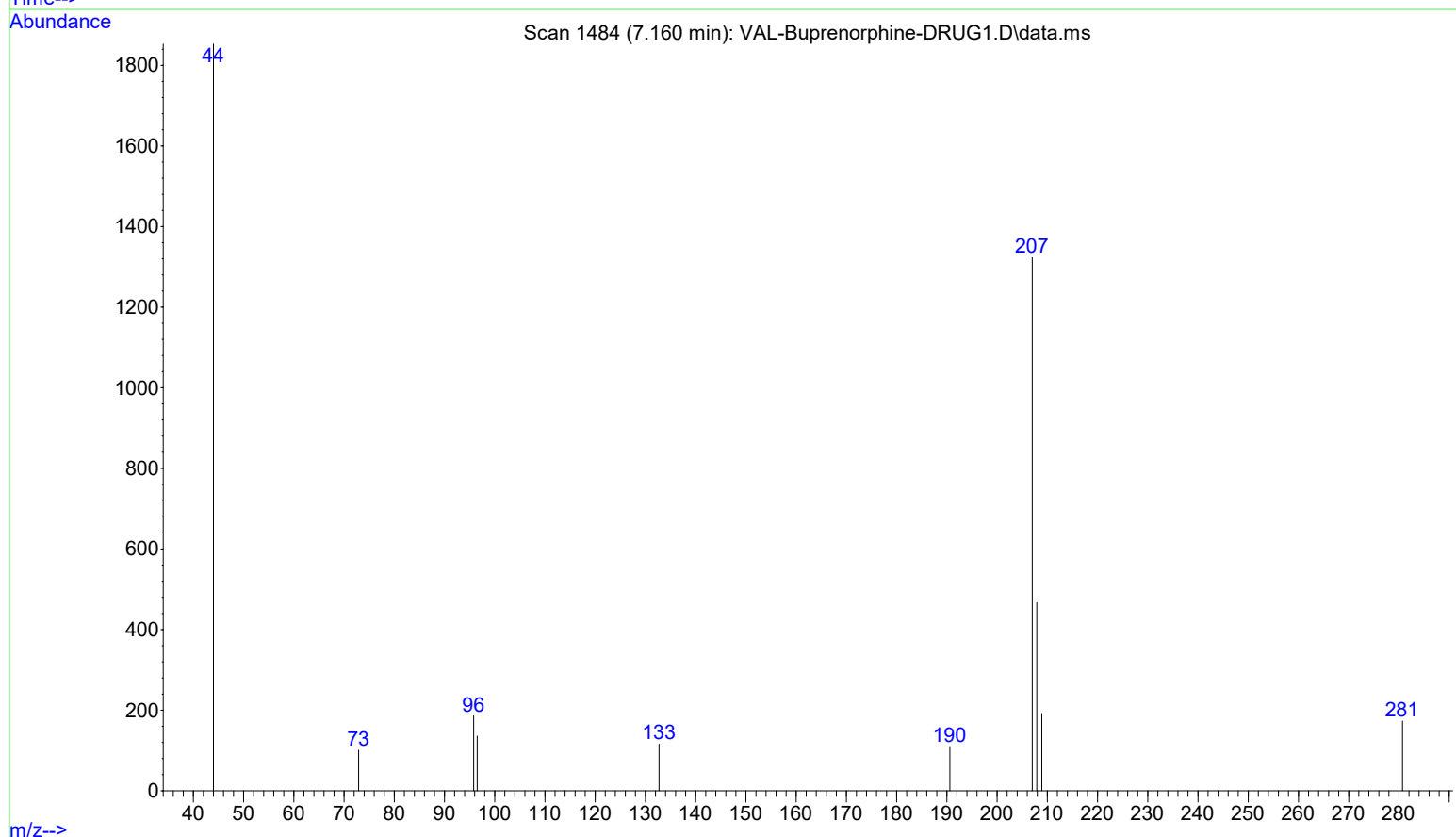
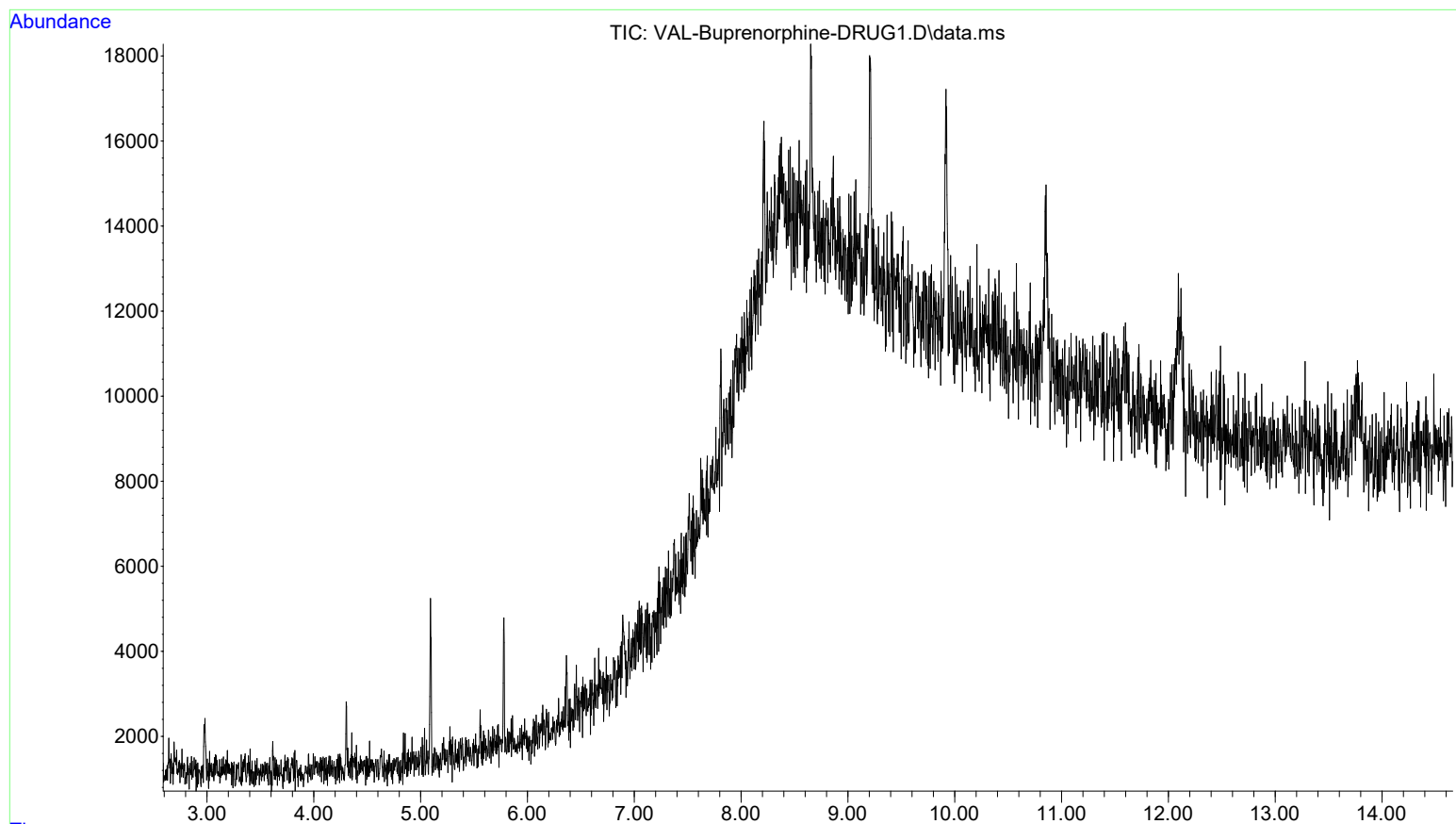
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:47:32 2025

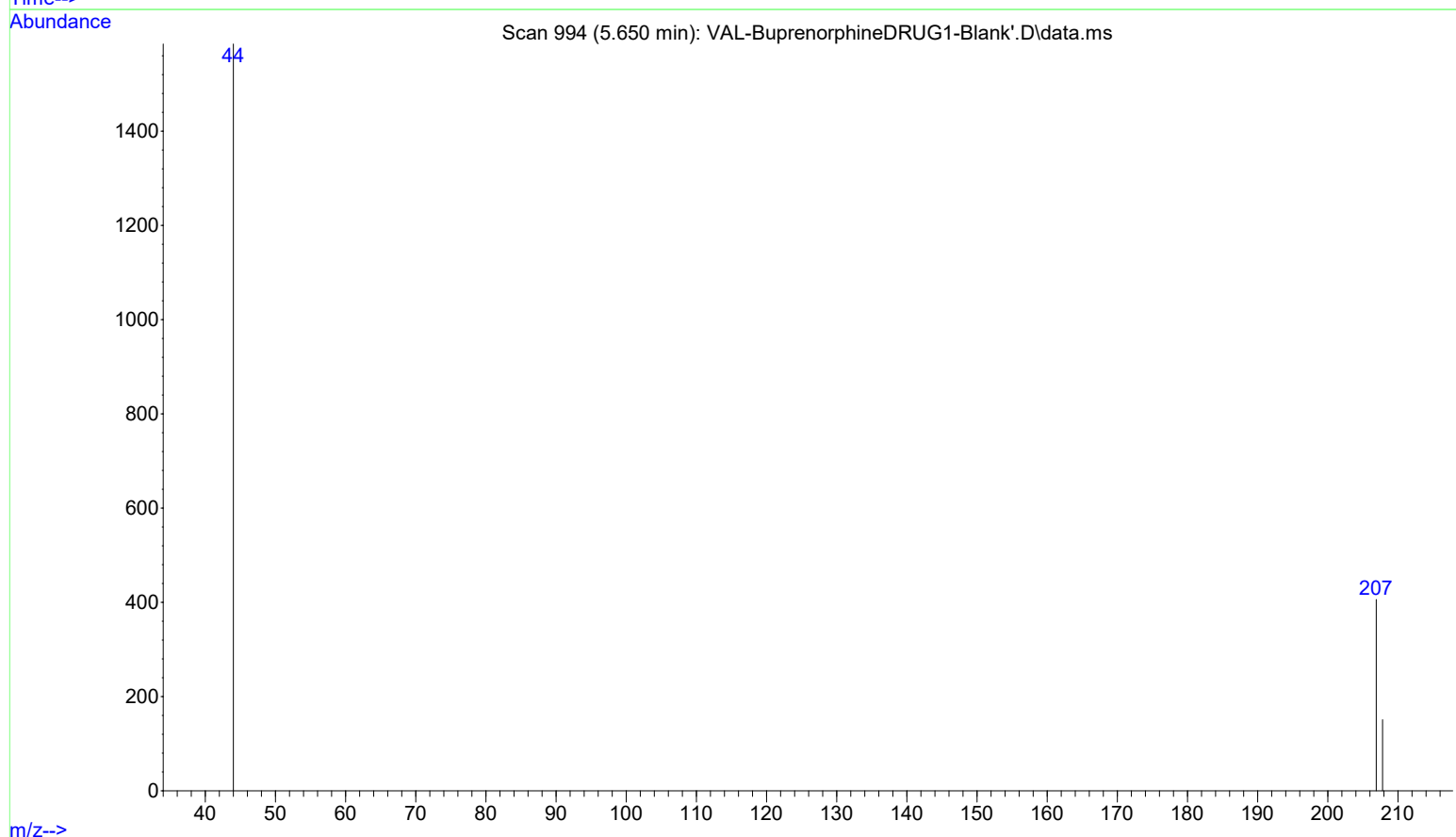
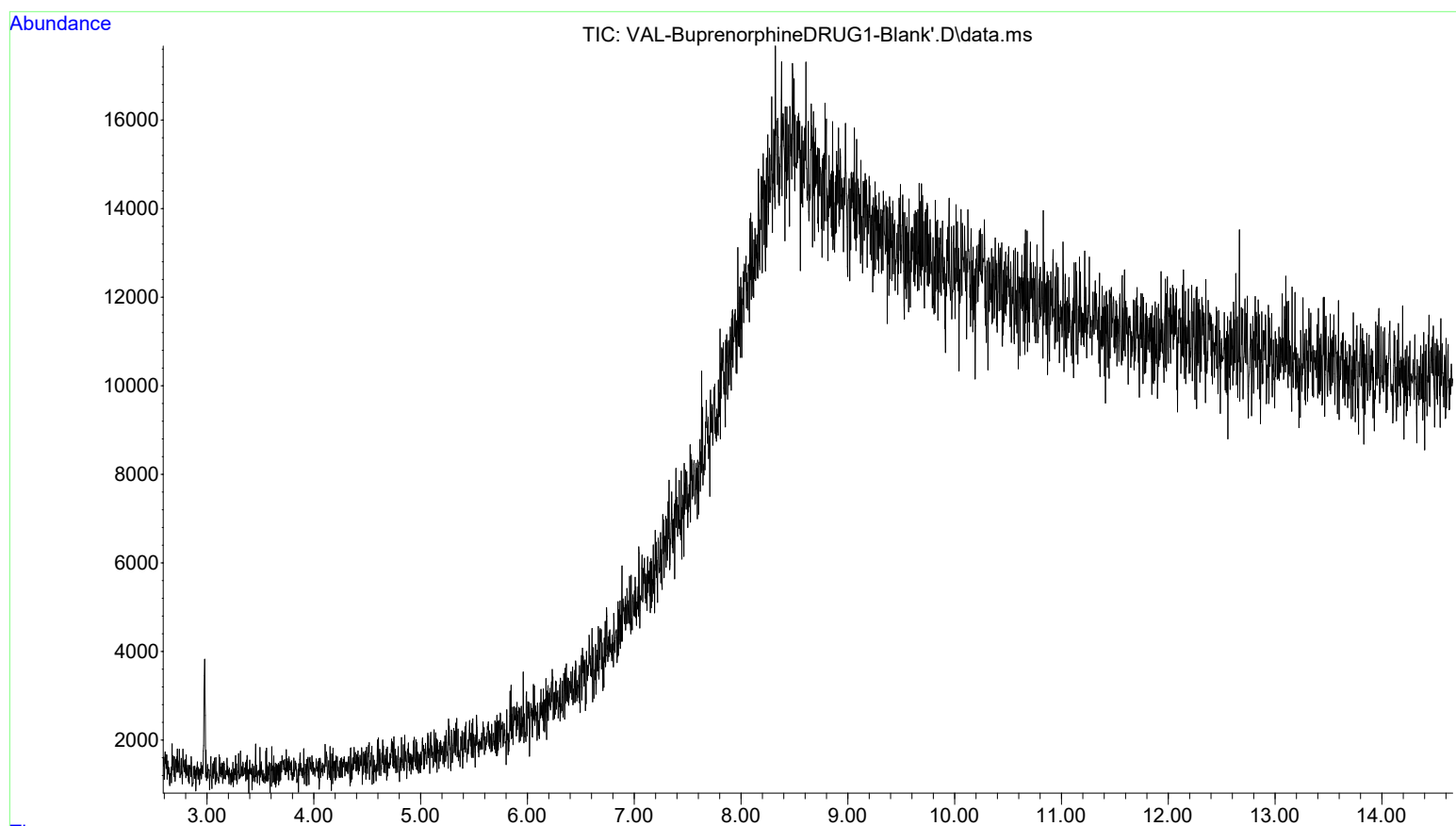
File :Z:\Instr\Luna\2025\6-June\VAL-Buprenorphine-DRUG1.D
Operator :
Acquired : 20 Jun 2025 16:58 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: BuprenorphineDRUG1
Misc Info : MeOH
Vial Number: 16

64



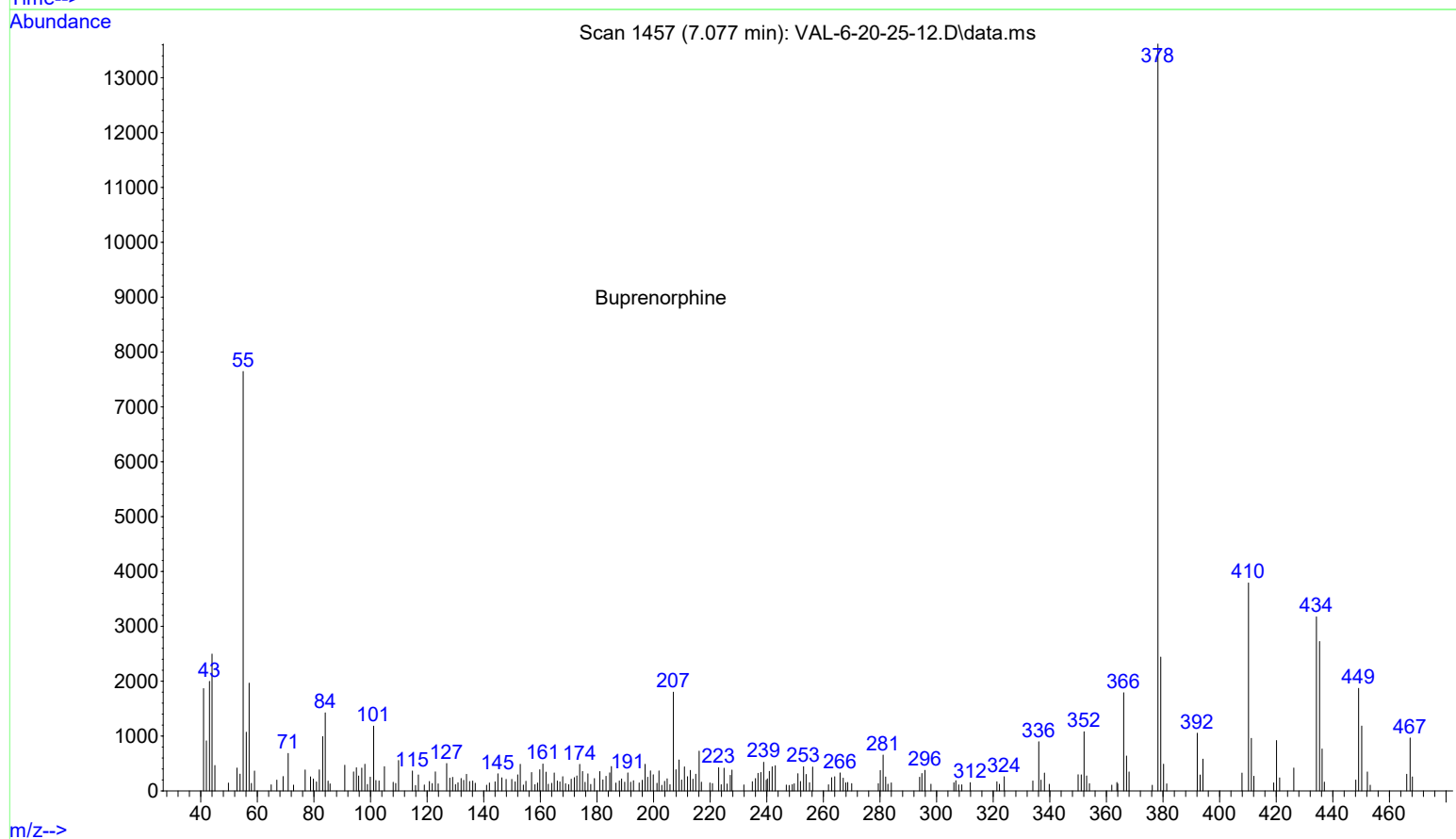
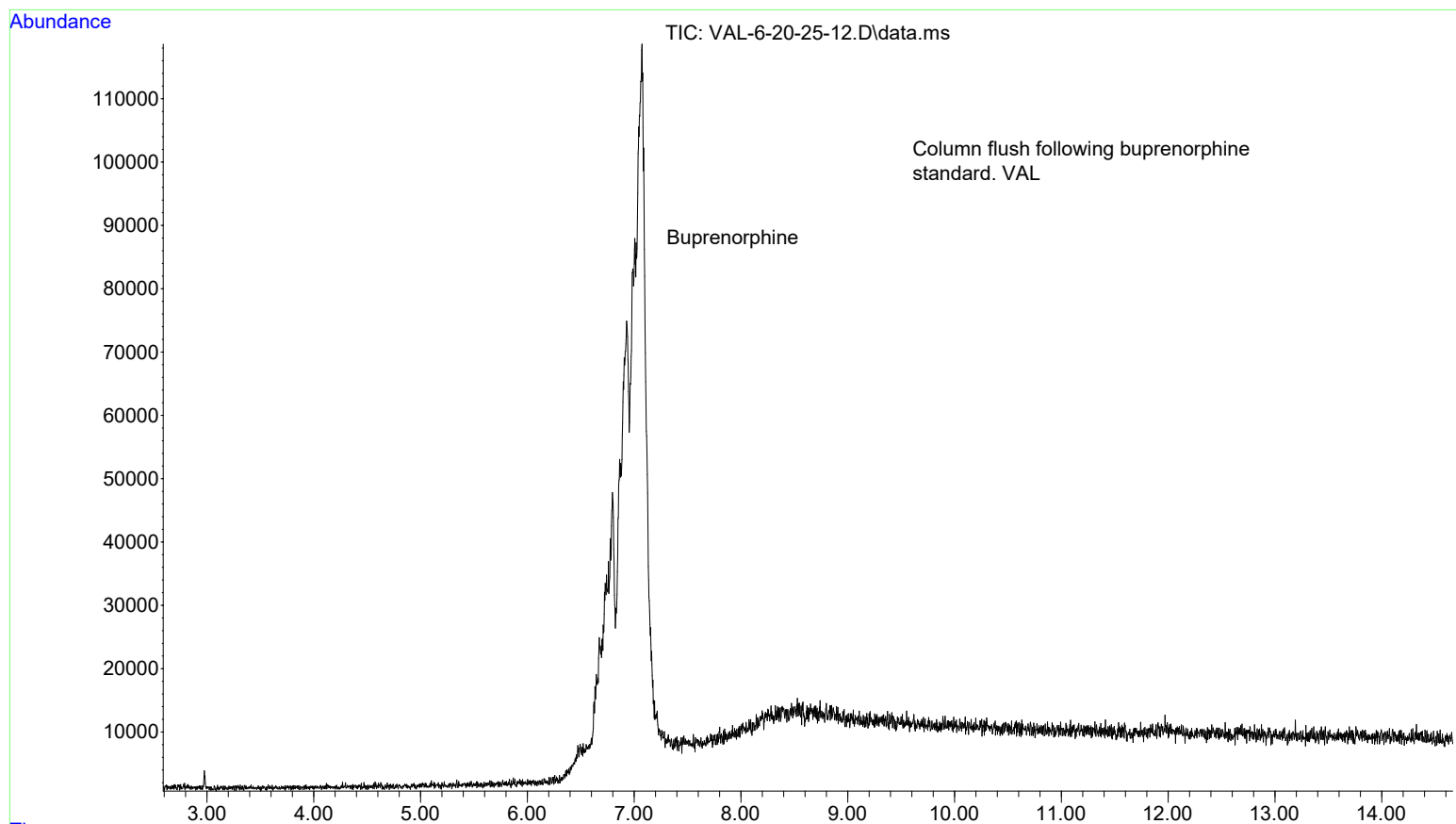
File :Z:\Instr\Luna\2025\6-June\VAL-BuprenorphineDRUG1-Blank'.D
Operator :
Acquired : 20 Jun 2025 16:40 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: BuprenorphineDRUG1-Blank
Misc Info : MeOH
Vial Number: 13

65



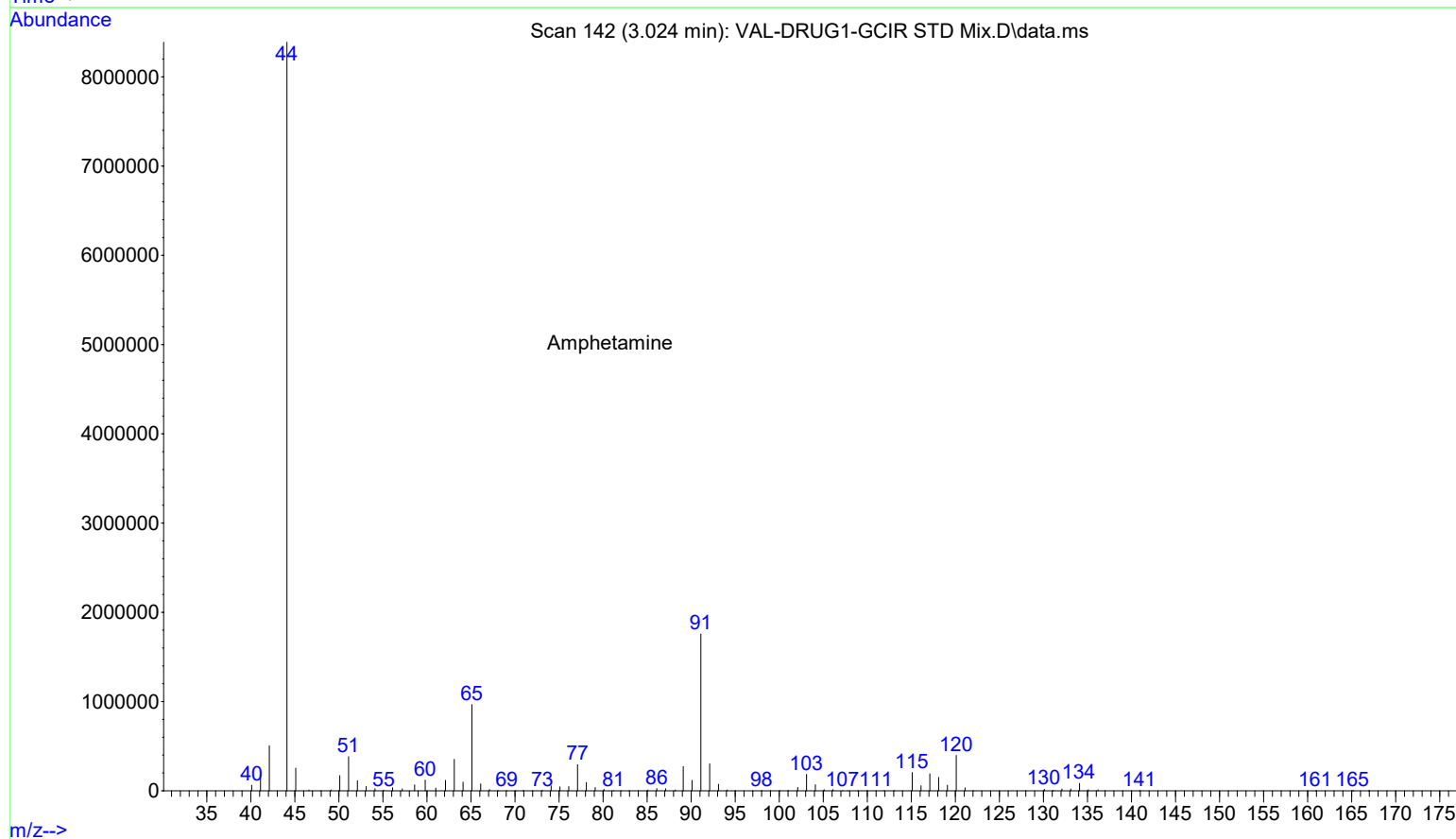
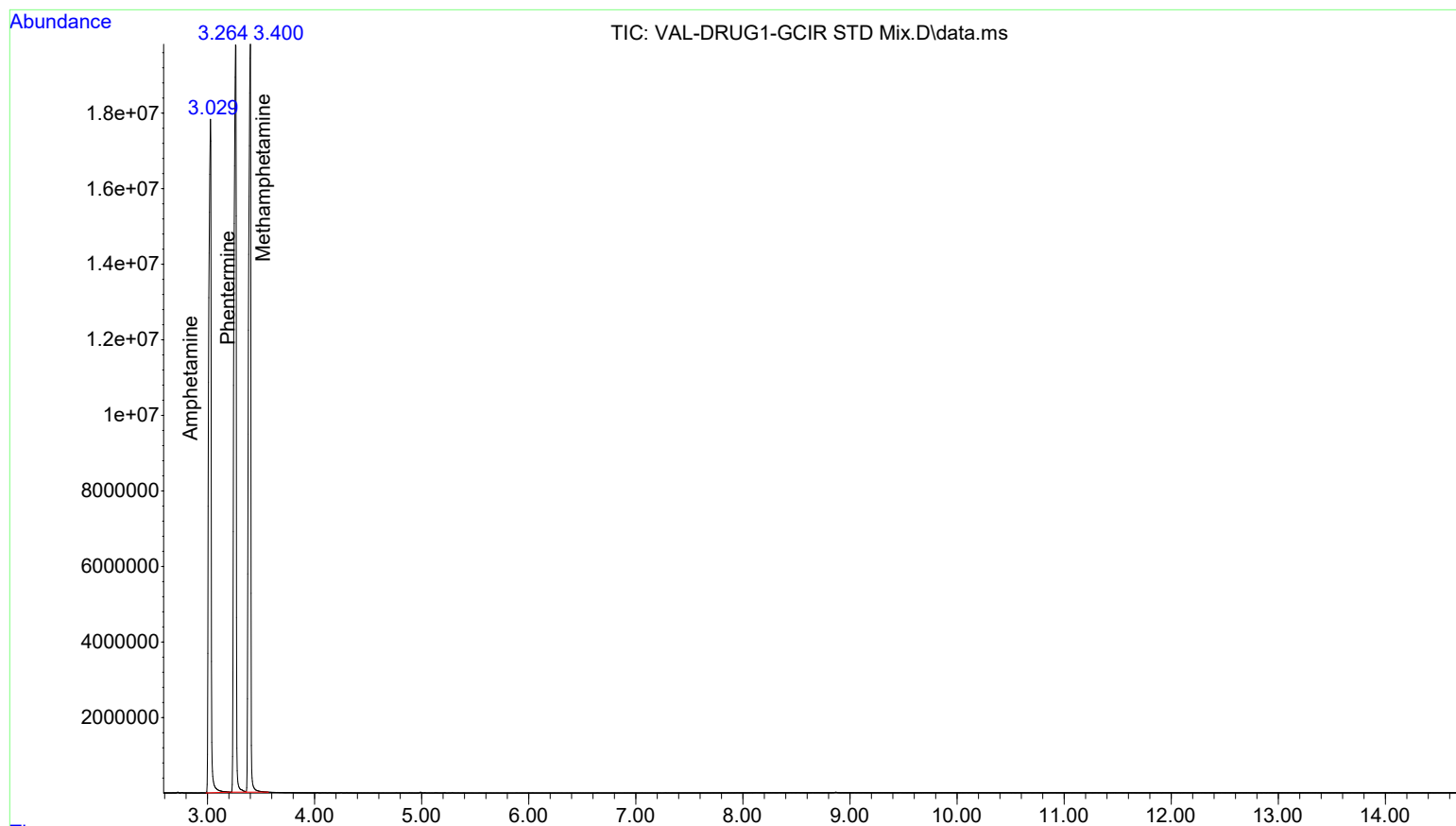
File :Z:\Instr\Luna\2025\6-June\VAL-6-20-25-12.D
Operator :
Acquired : 20 Jun 2025 17:16 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: MeOH CFMS
Misc Info : MeOH
Vial Number: 13

66



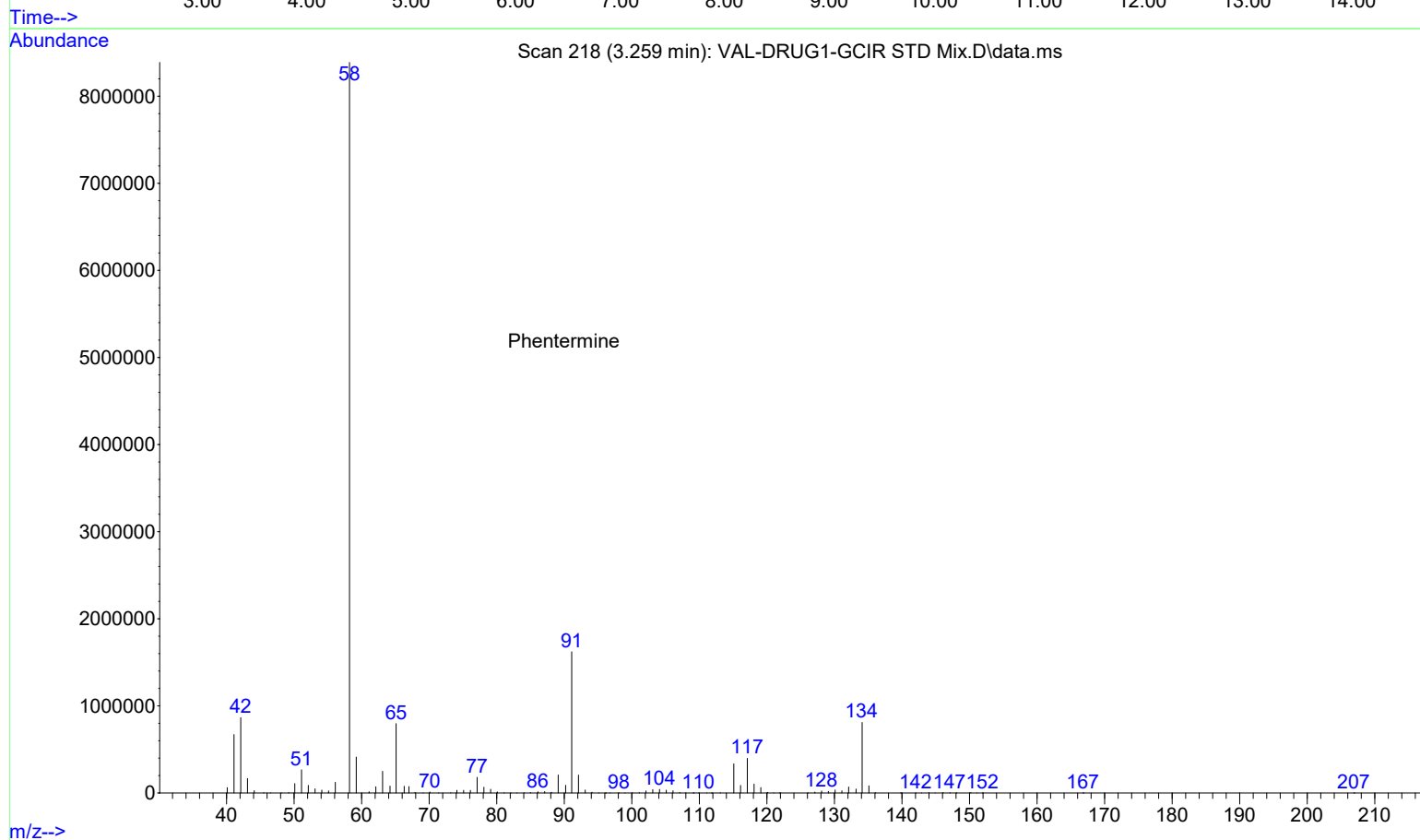
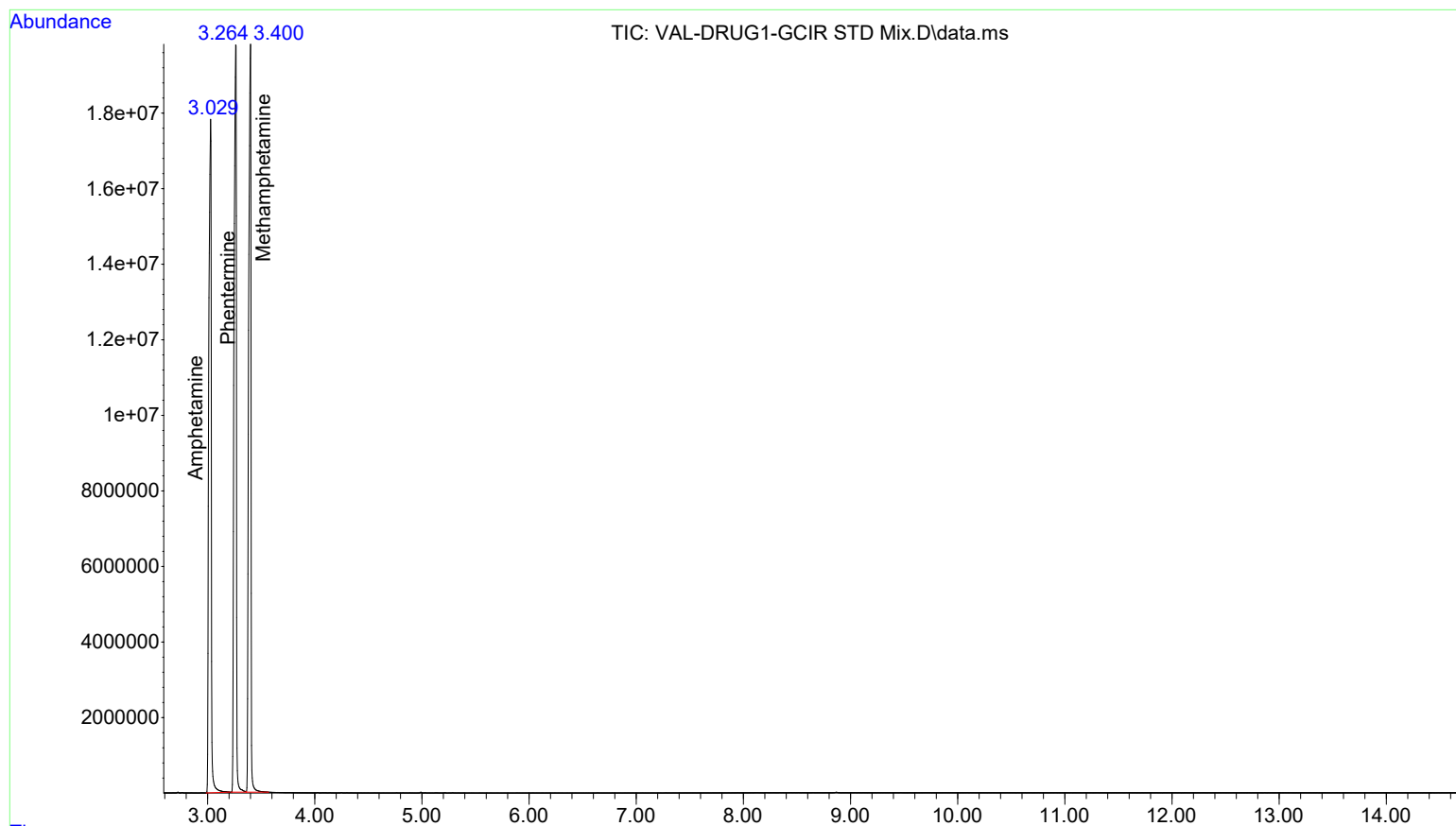
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCIR STD Mix.D
Operator :
Acquired : 23 Jun 2025 16:29 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCIR STD Mix
Misc Info : CHCl3
Vial Number: 16

67



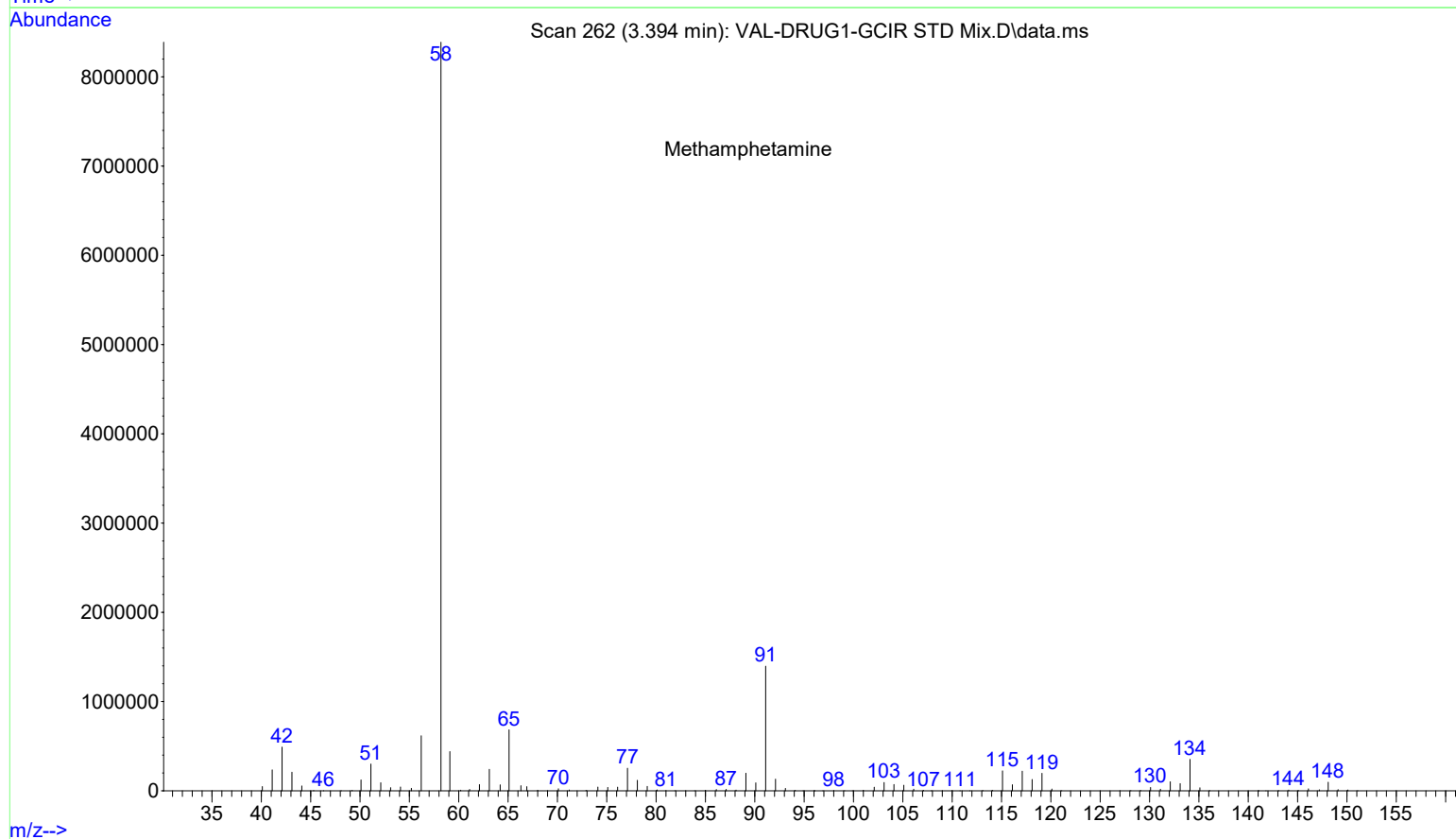
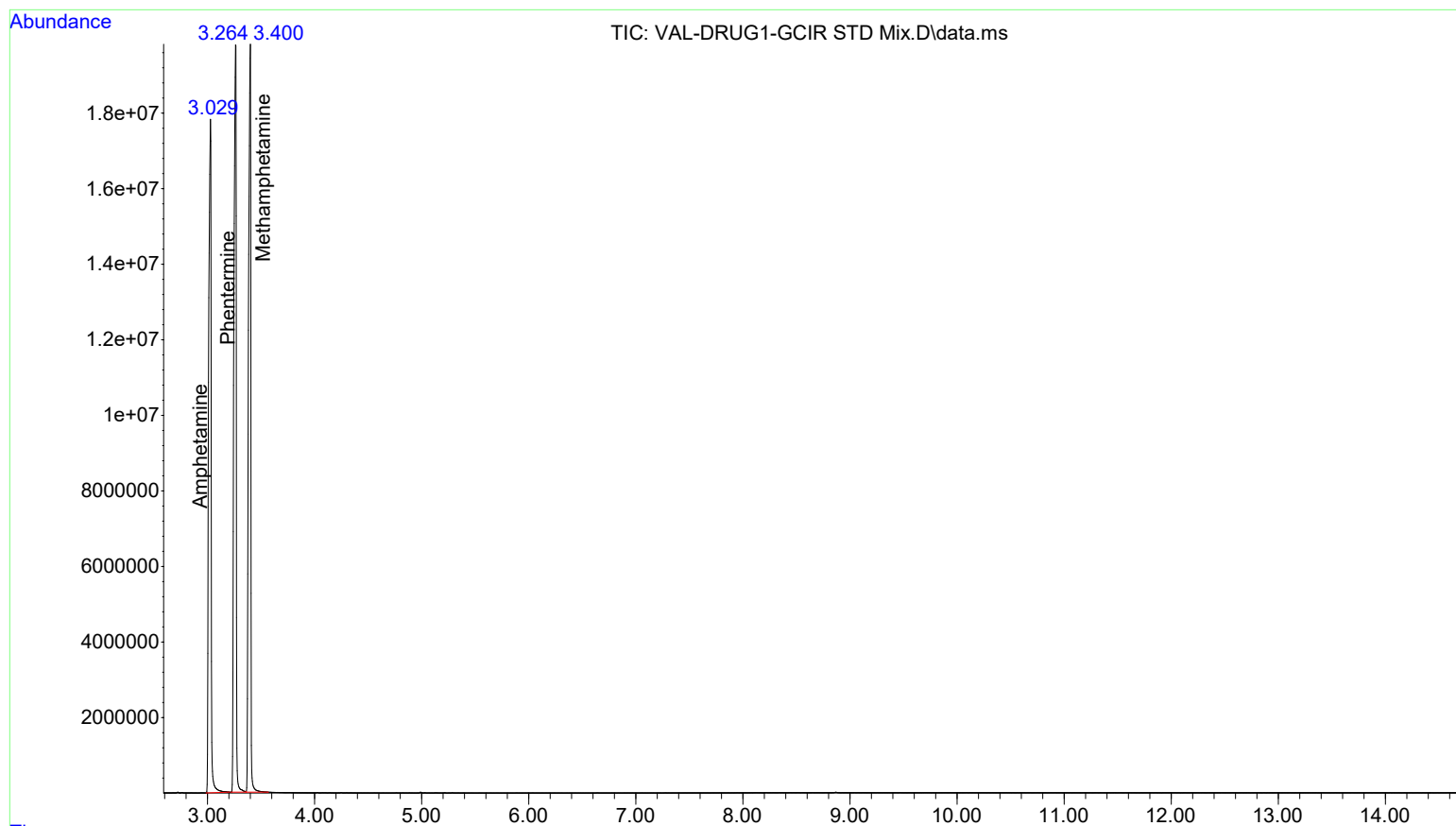
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCIR STD Mix.D
Operator :
Acquired : 23 Jun 2025 16:29 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCIR STD Mix
Misc Info : CHCl3
Vial Number: 16

68



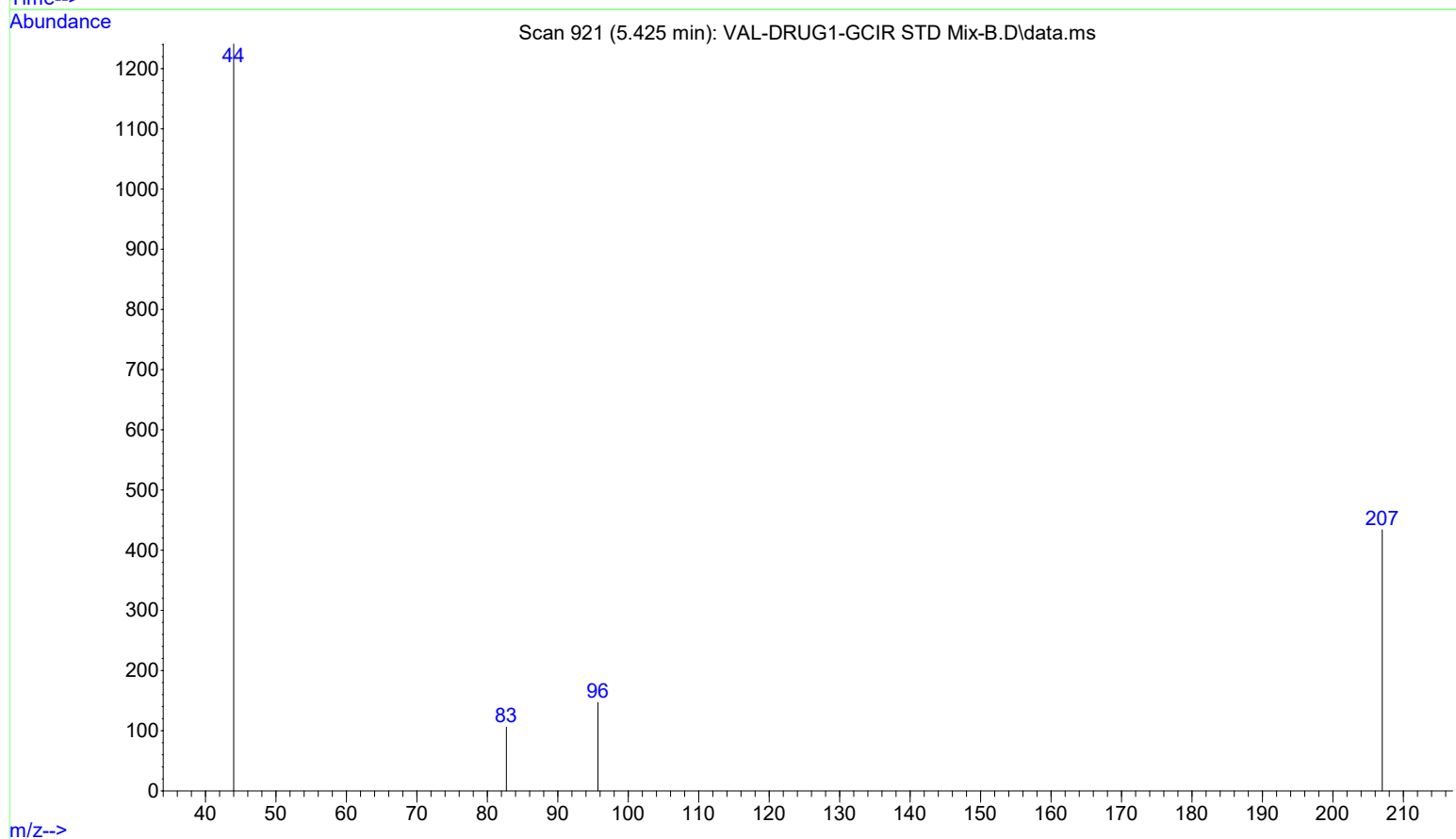
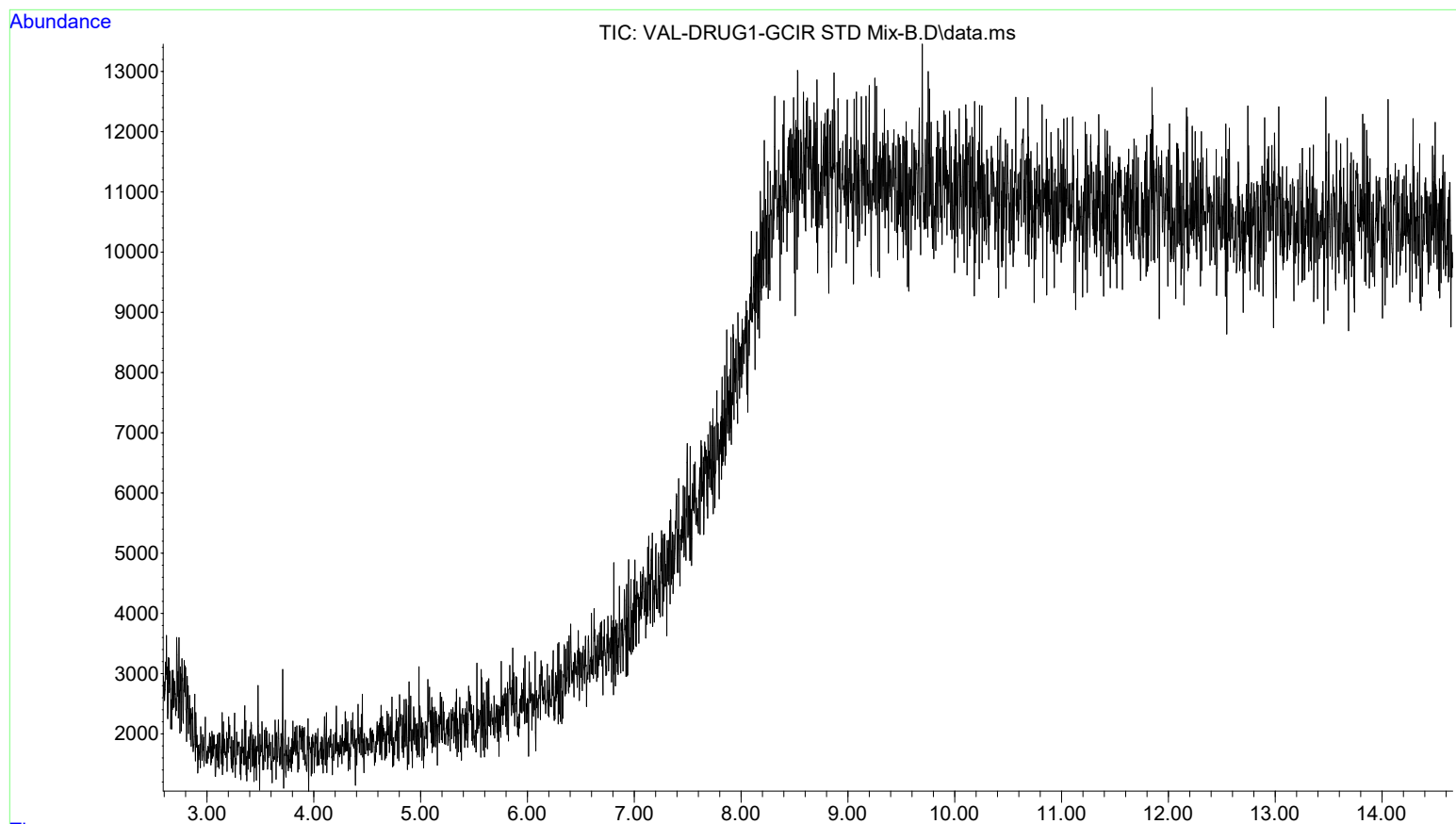
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCIR STD Mix.D
Operator :
Acquired : 23 Jun 2025 16:29 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCIR STD Mix
Misc Info : CHCl3
Vial Number: 16

69



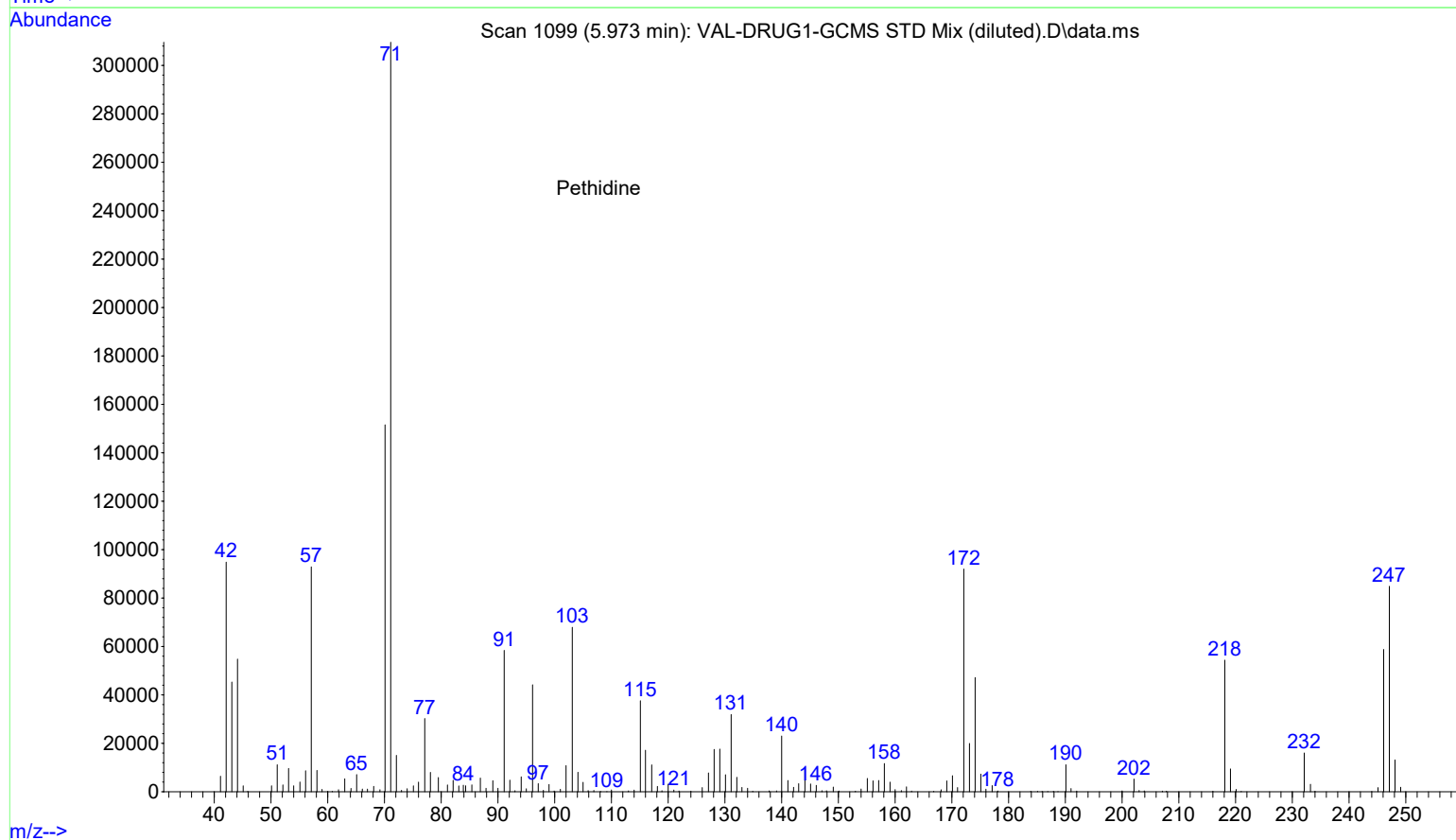
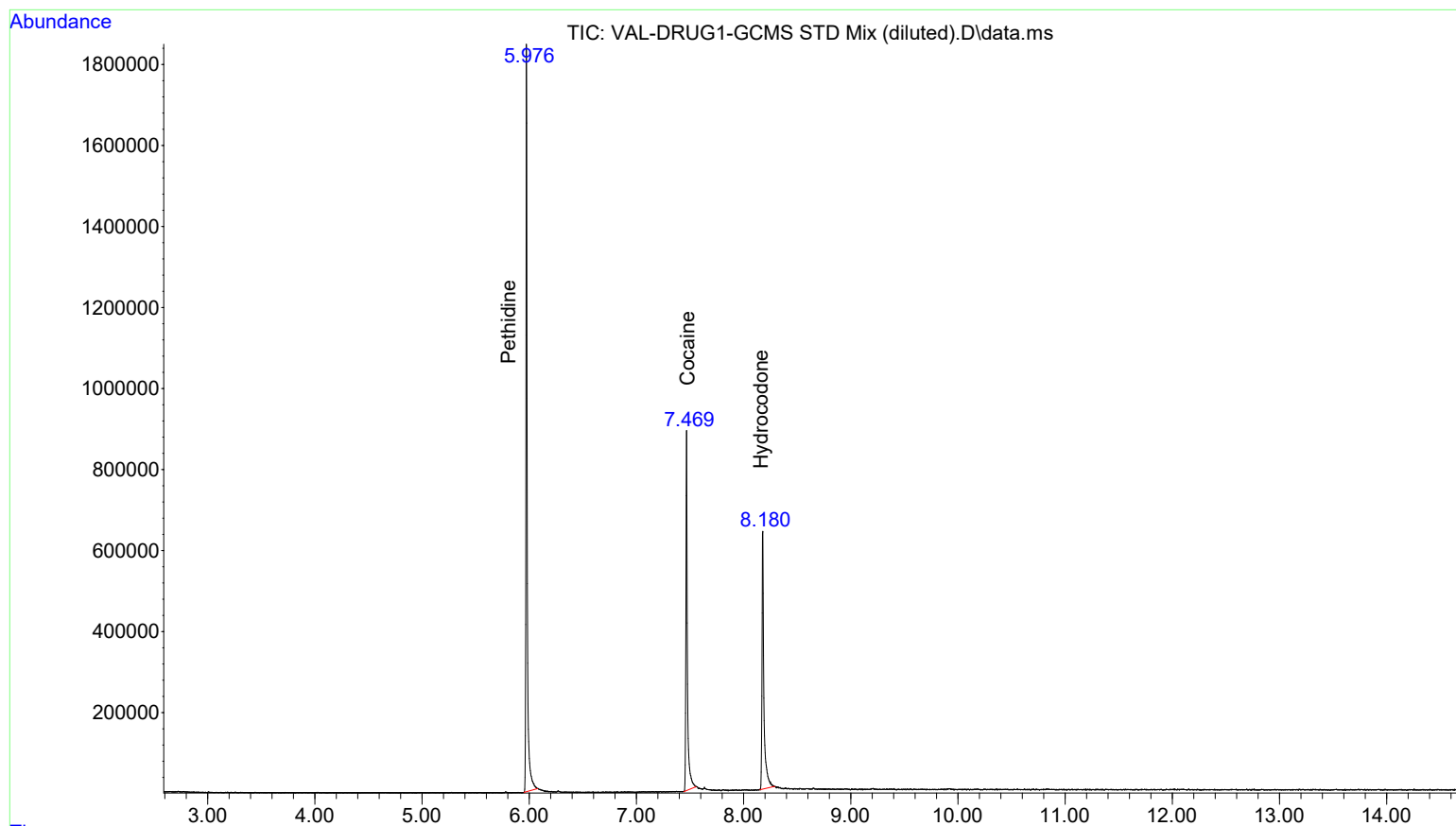
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCIR STD Mix-B.D
Operator :
Acquired : 23 Jun 2025 16:11 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCIR STD Mix-Blank
Misc Info : CHCl3
Vial Number: 12

70



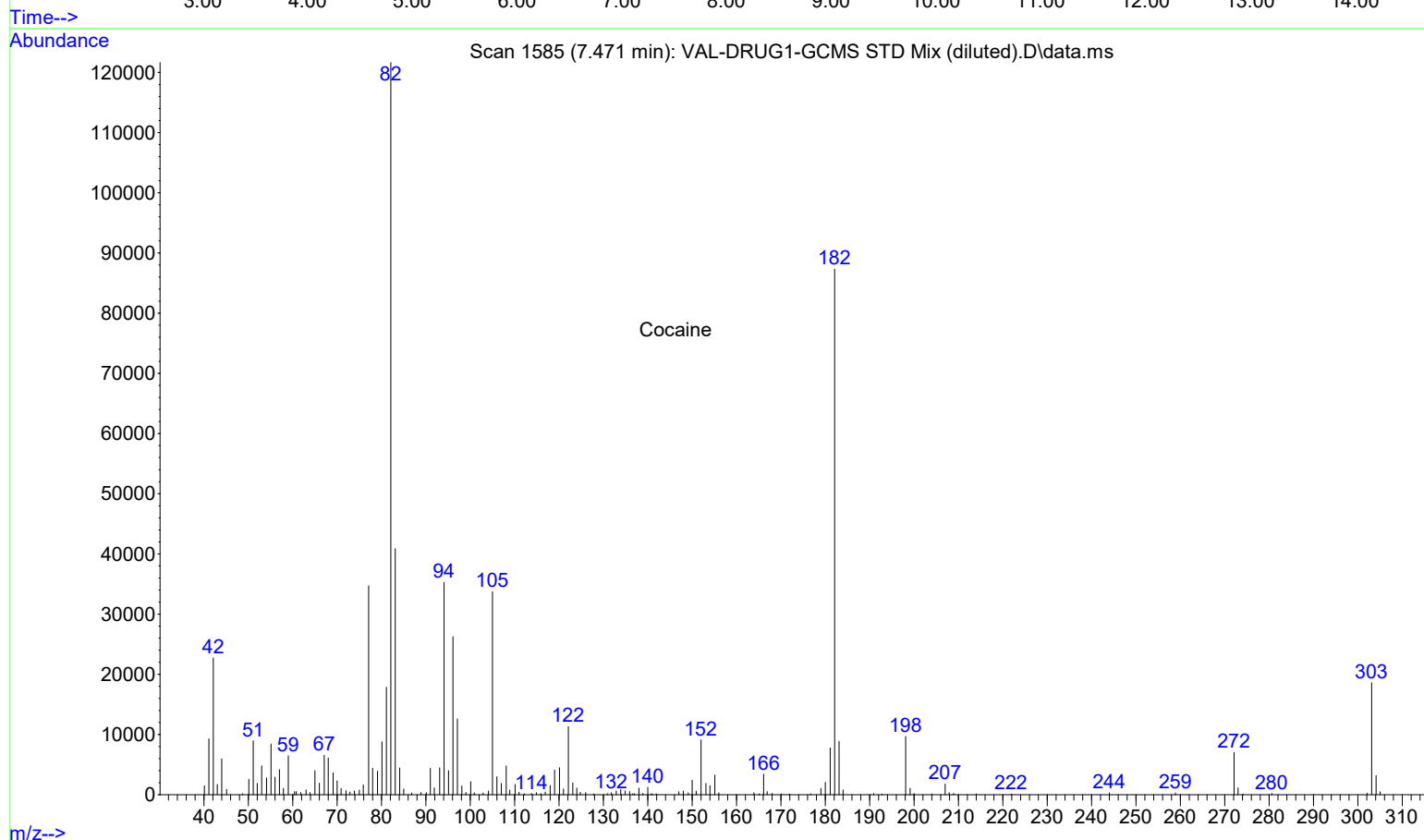
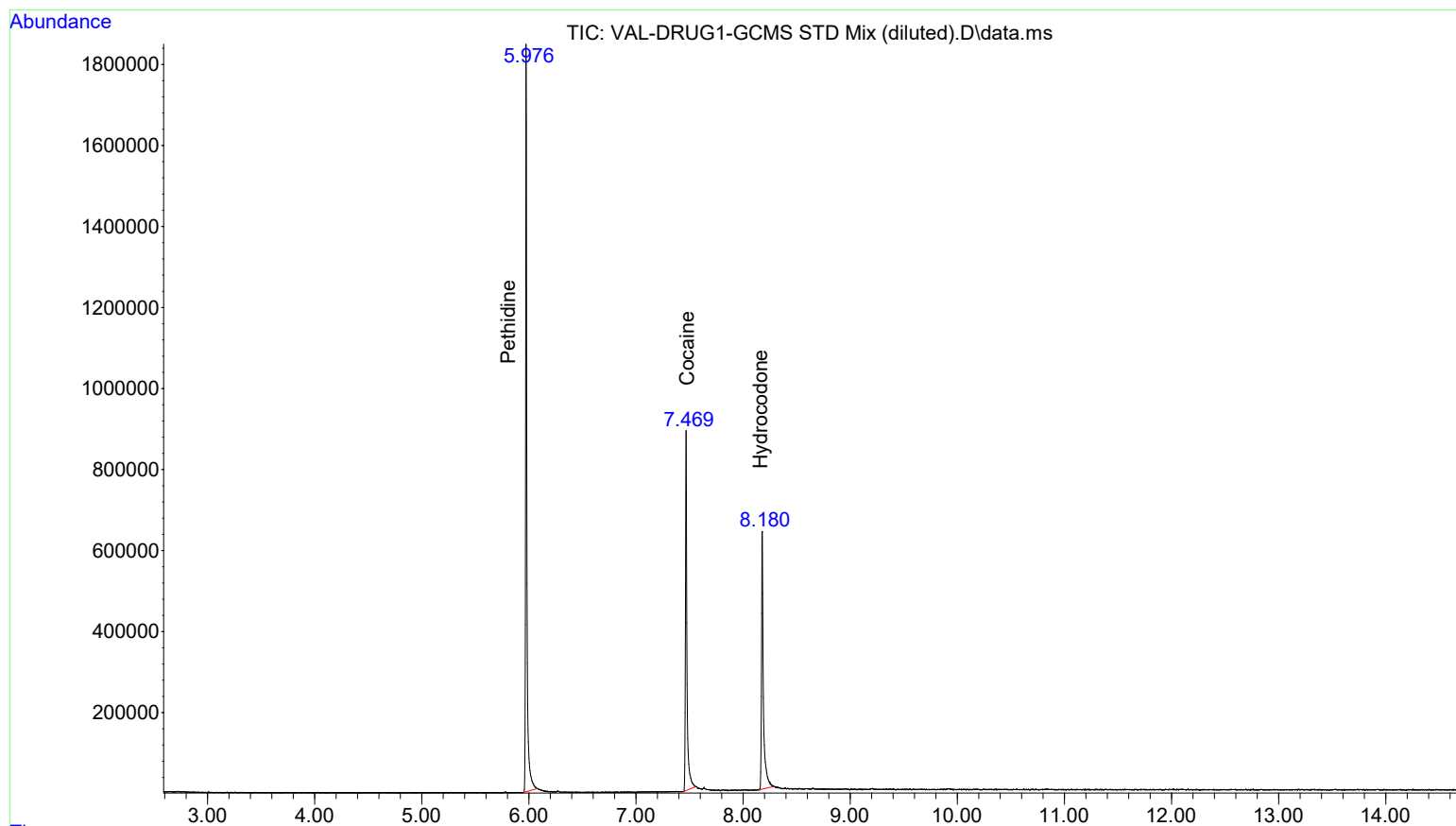
File :Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix (diluted).D
Operator :
Acquired : 23 Jun 2025 14:41 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix (diluted)
Misc Info : CHCl3
Vial Number: 14

71



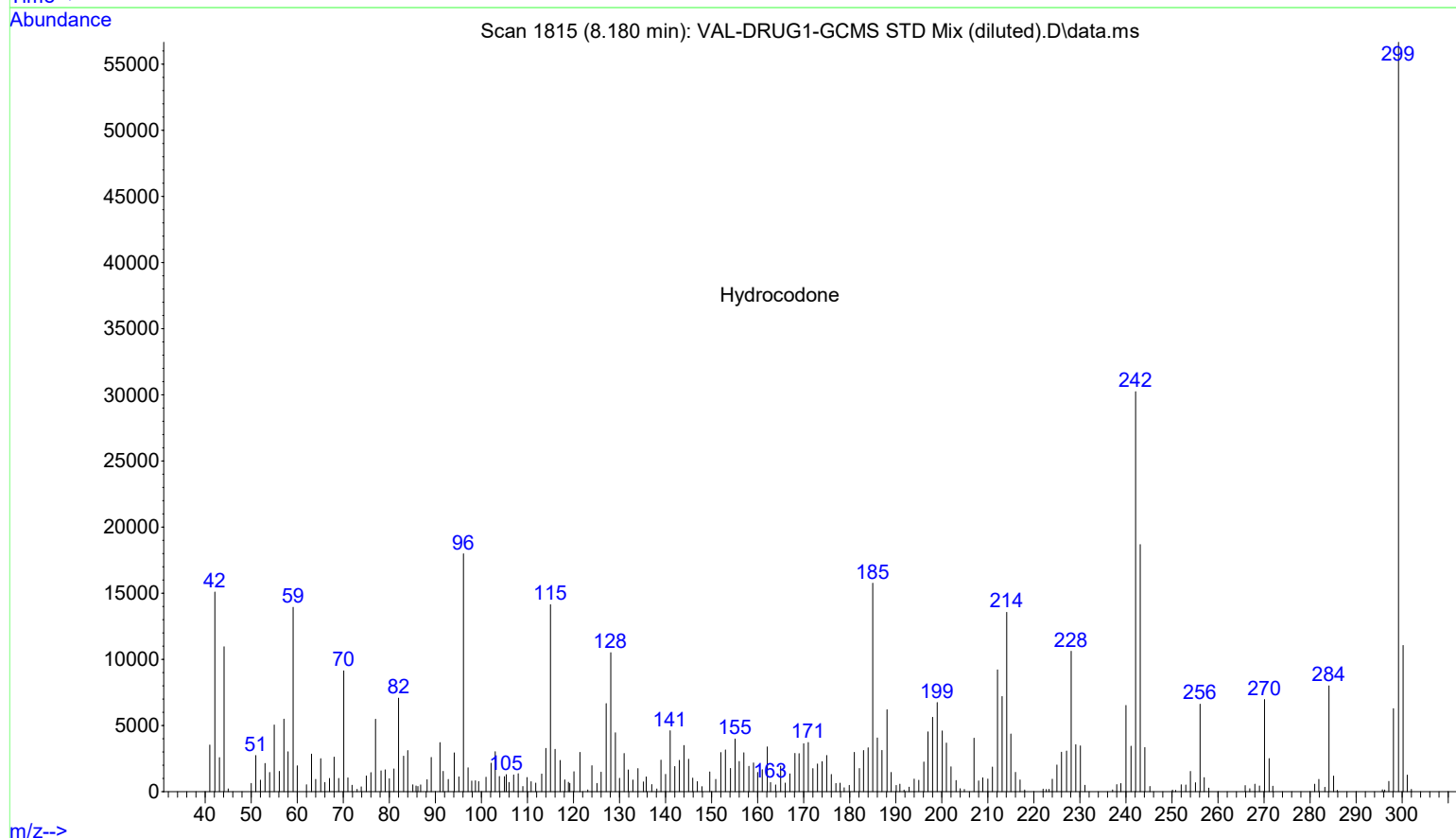
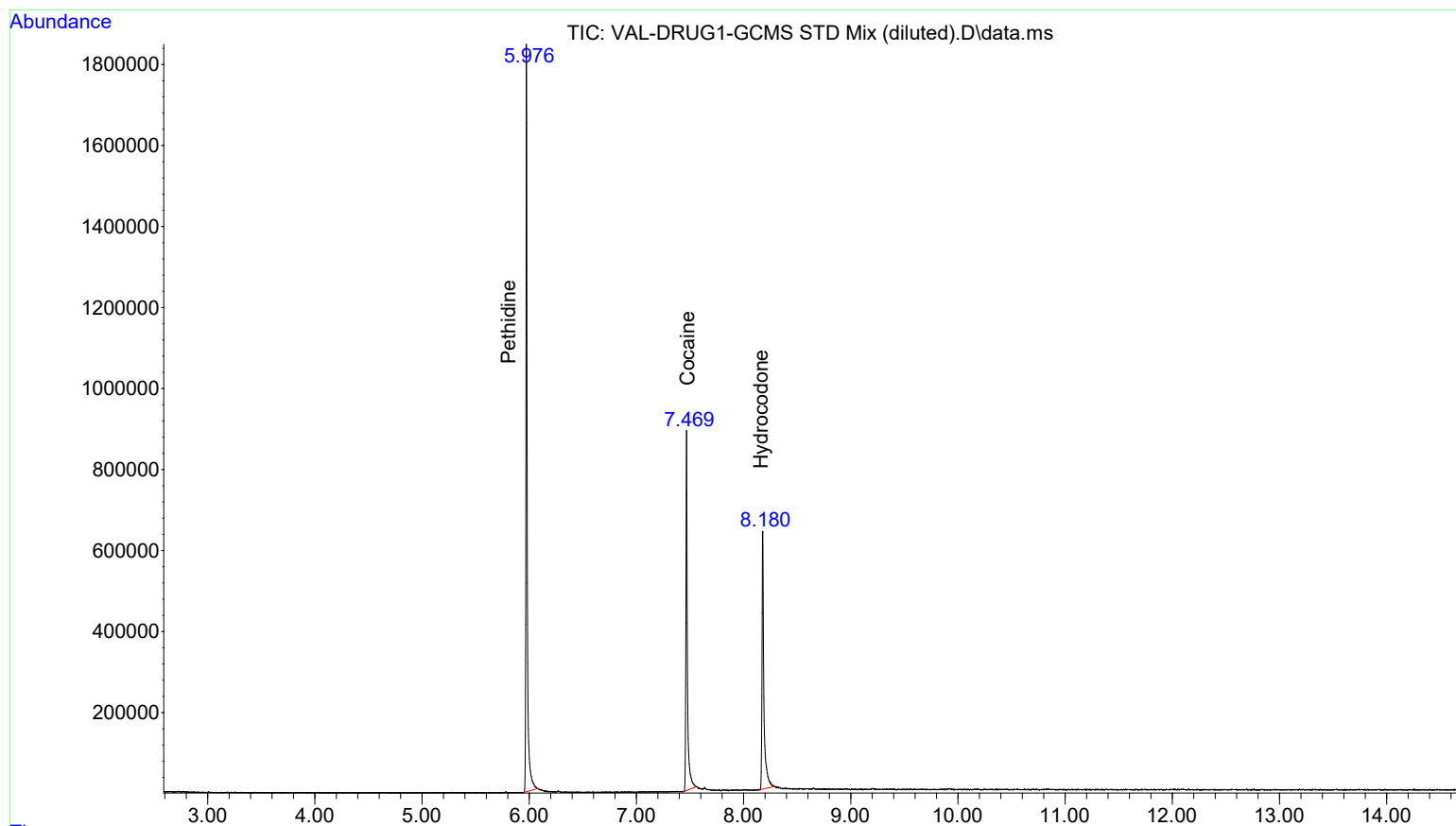
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix (diluted).D
Operator :
Acquired : 23 Jun 2025 14:41 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix (diluted)
Misc Info : CHCl3
Vial Number: 14

72



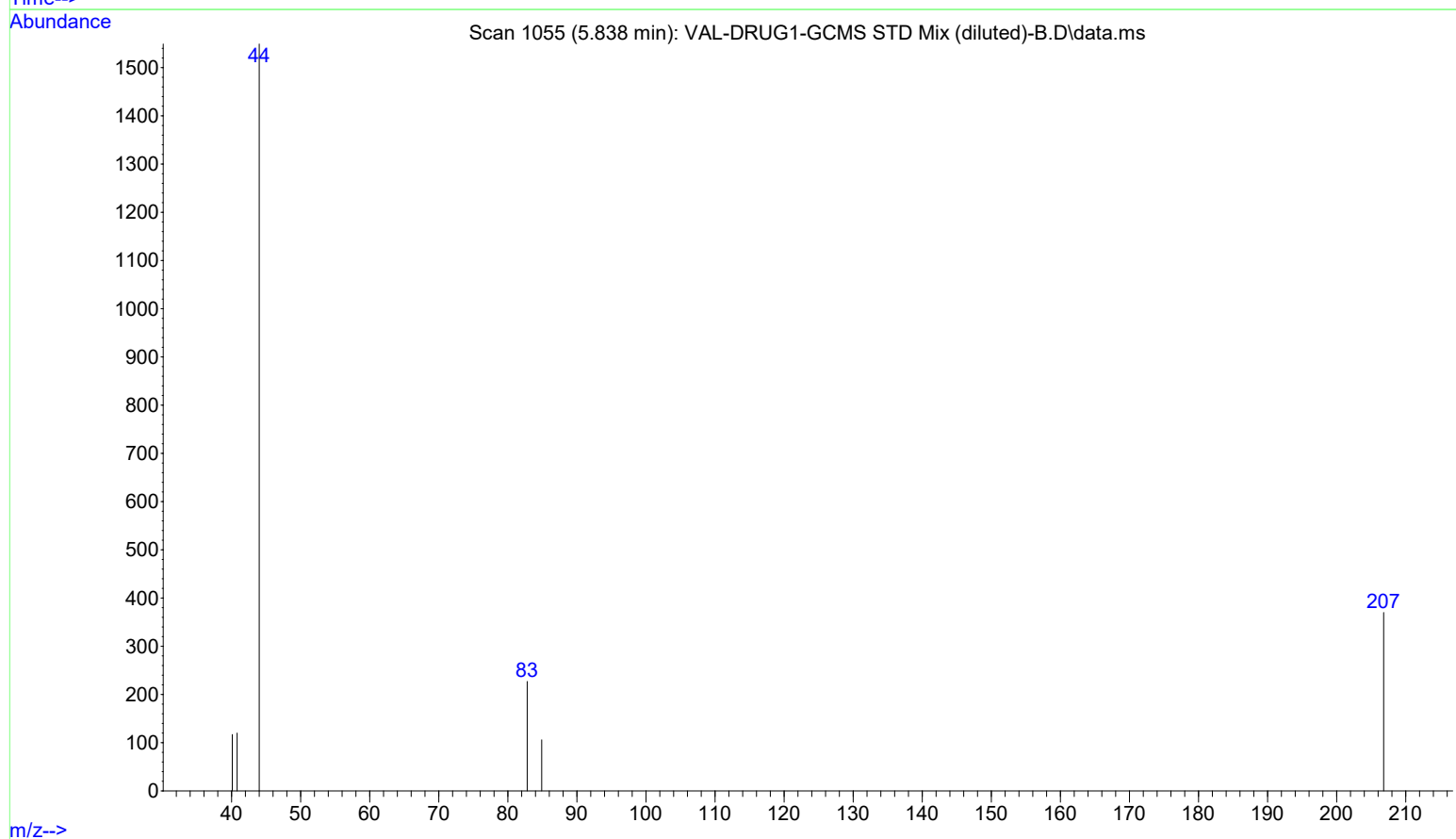
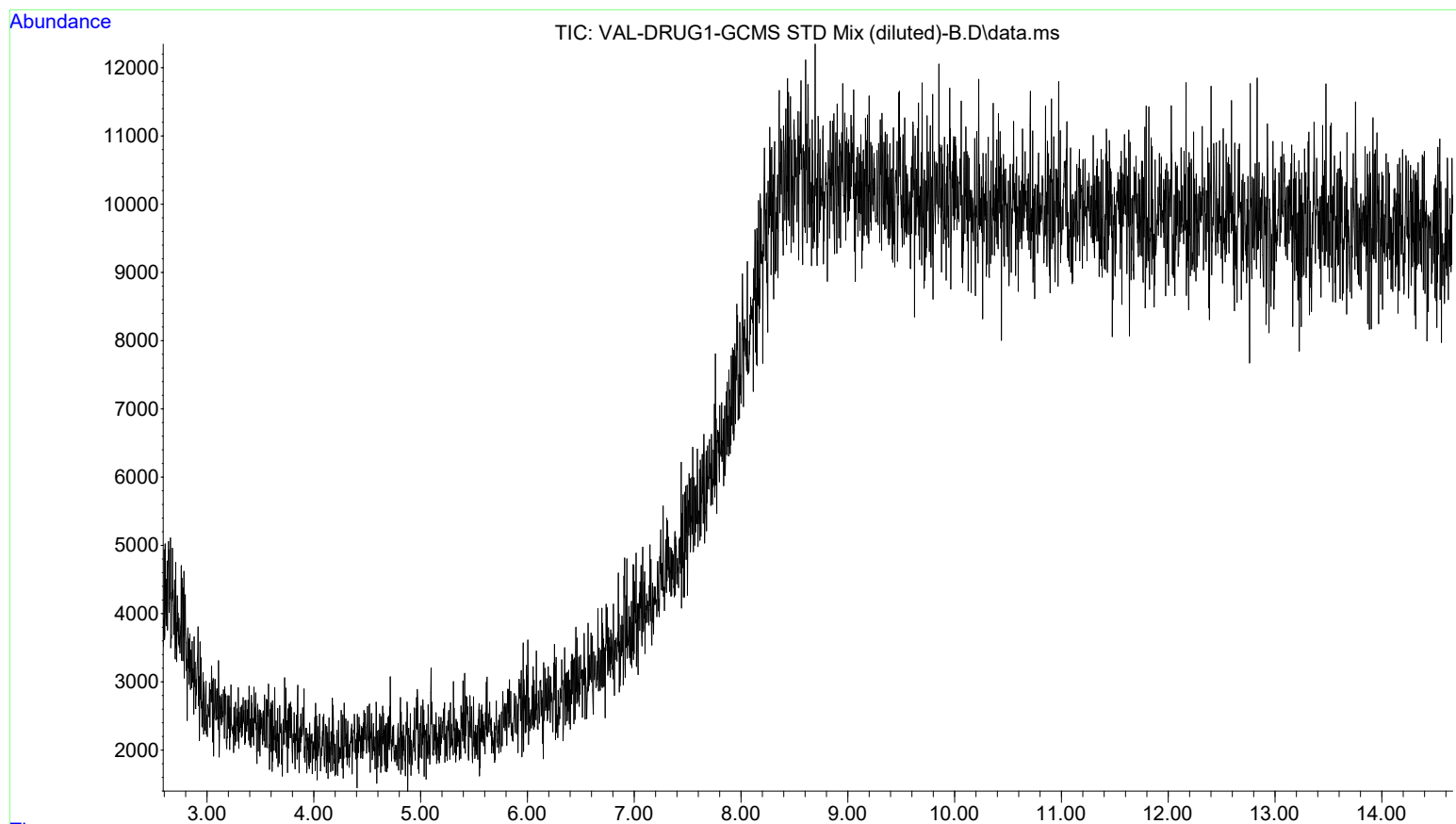
File :Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix (diluted).D
Operator :
Acquired : 23 Jun 2025 14:41 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix (diluted)
Misc Info : CHCl3
Vial Number: 14

73



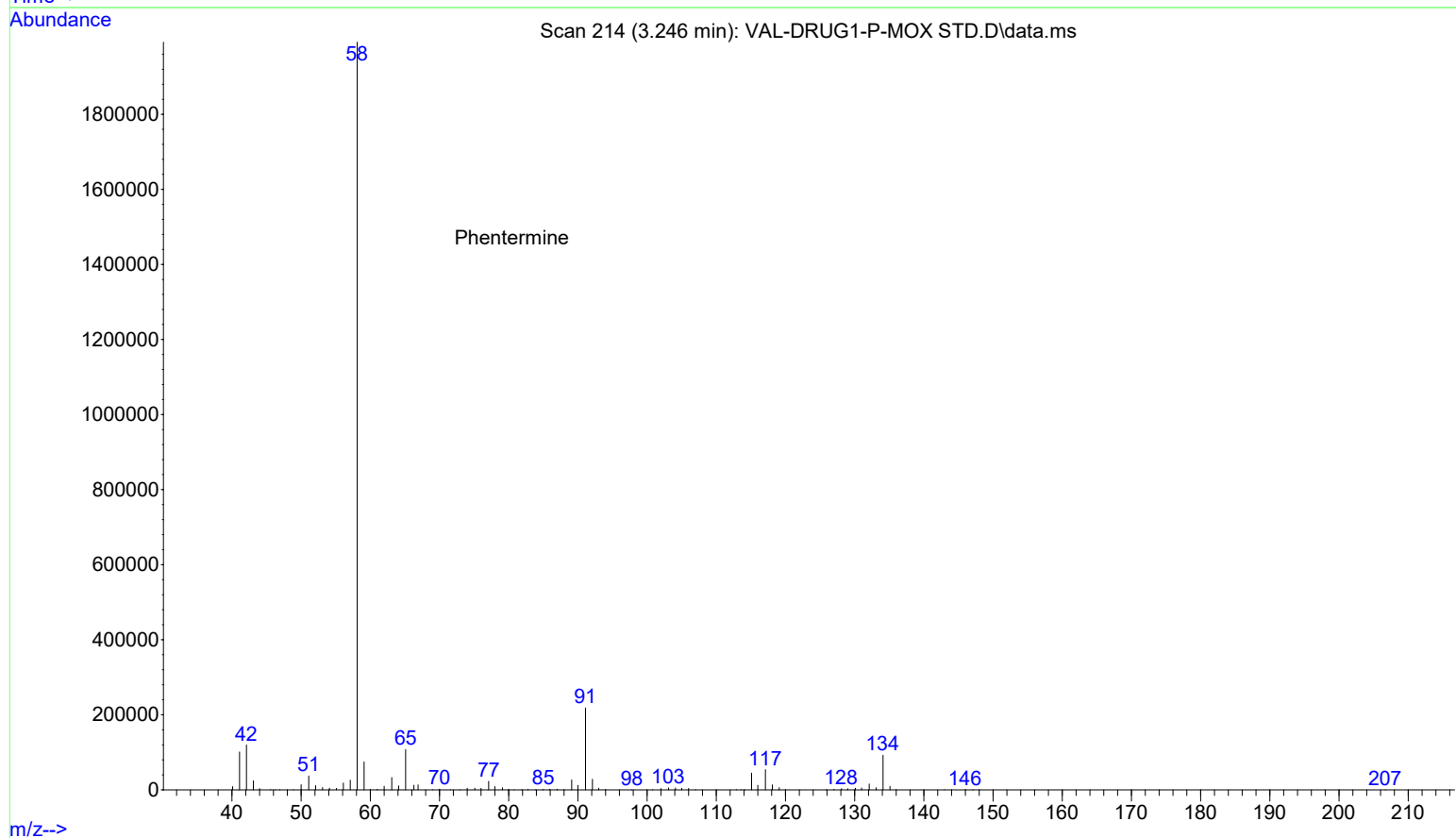
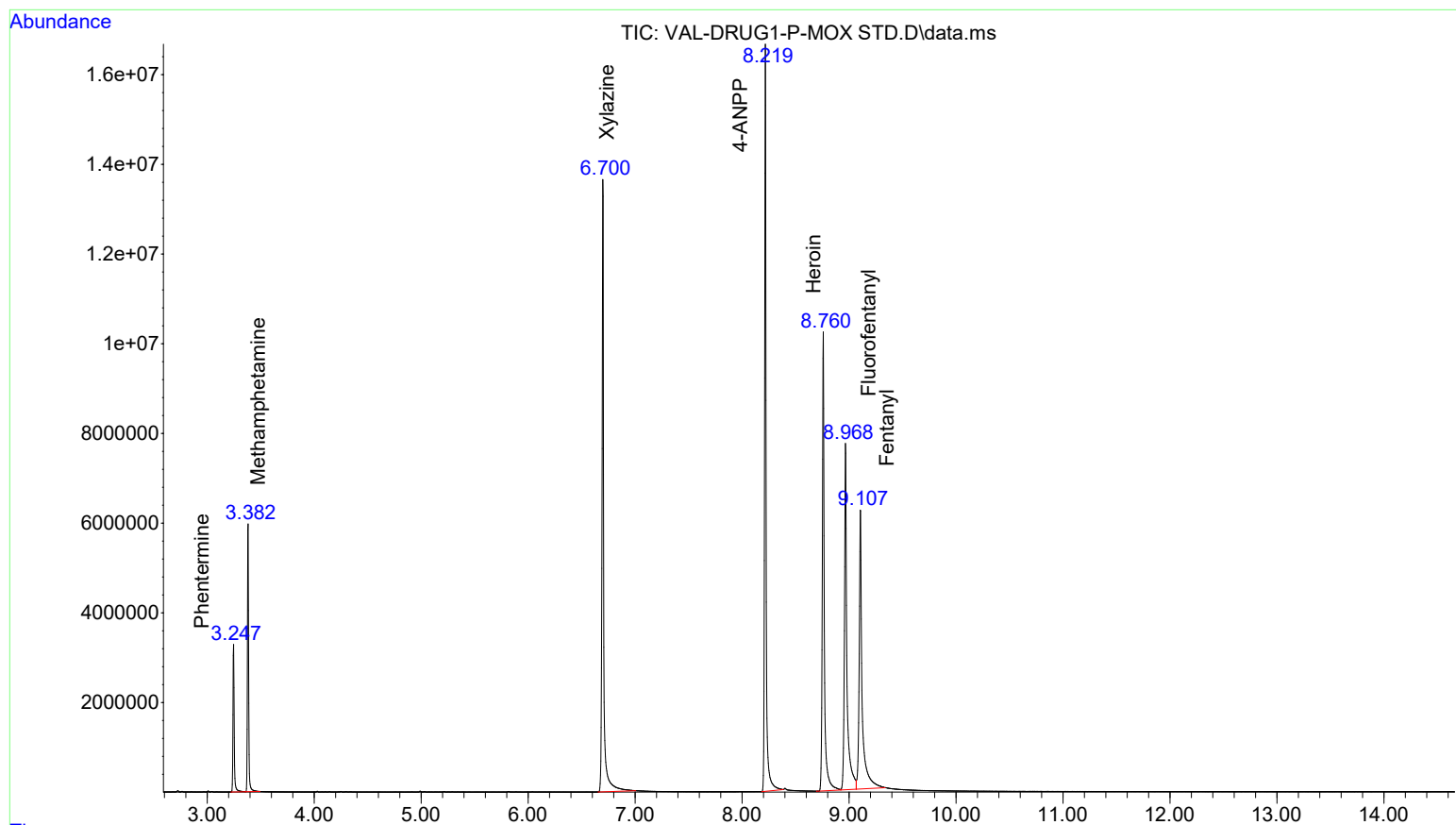
File :Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix (diluted)-B
... .D
Operator :
Instrument : Luna
Acquired : 23 Jun 2025 14:23 using AcqMethod DRUG1.M
Sample Name: DRUG1-GCMS STD Mix (diluted)-Blank
Misc Info : CHCl3

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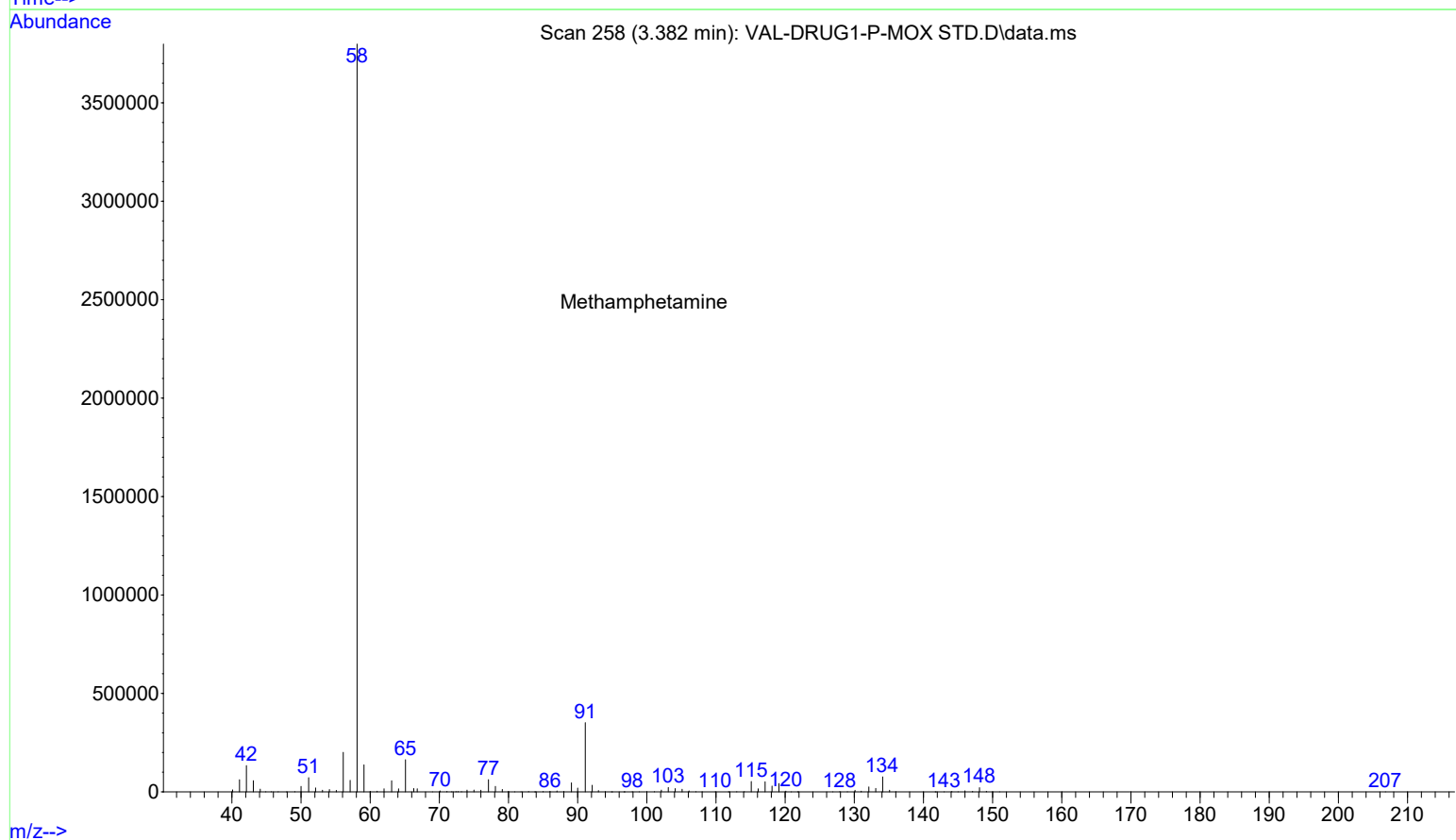
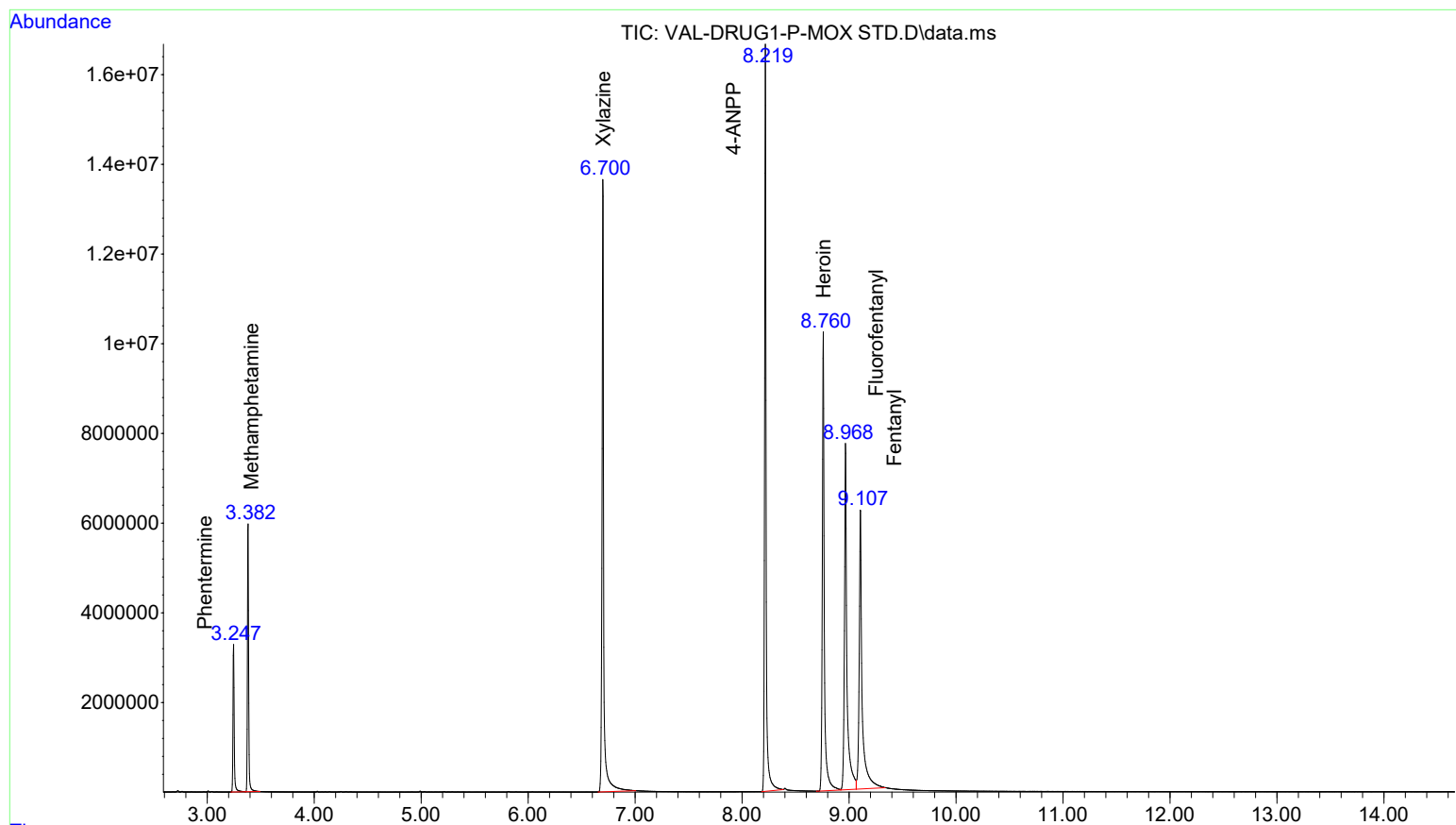
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

75



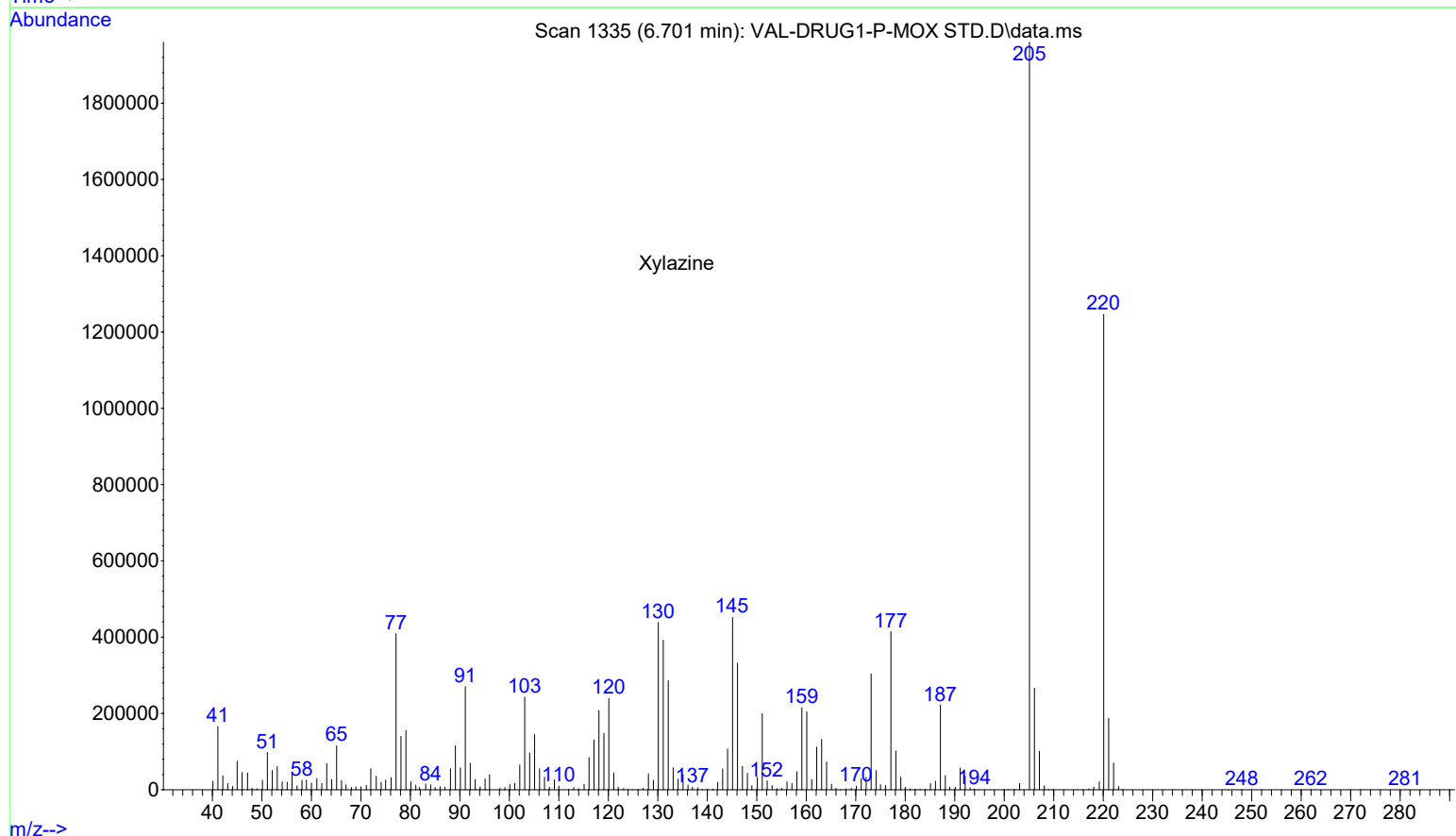
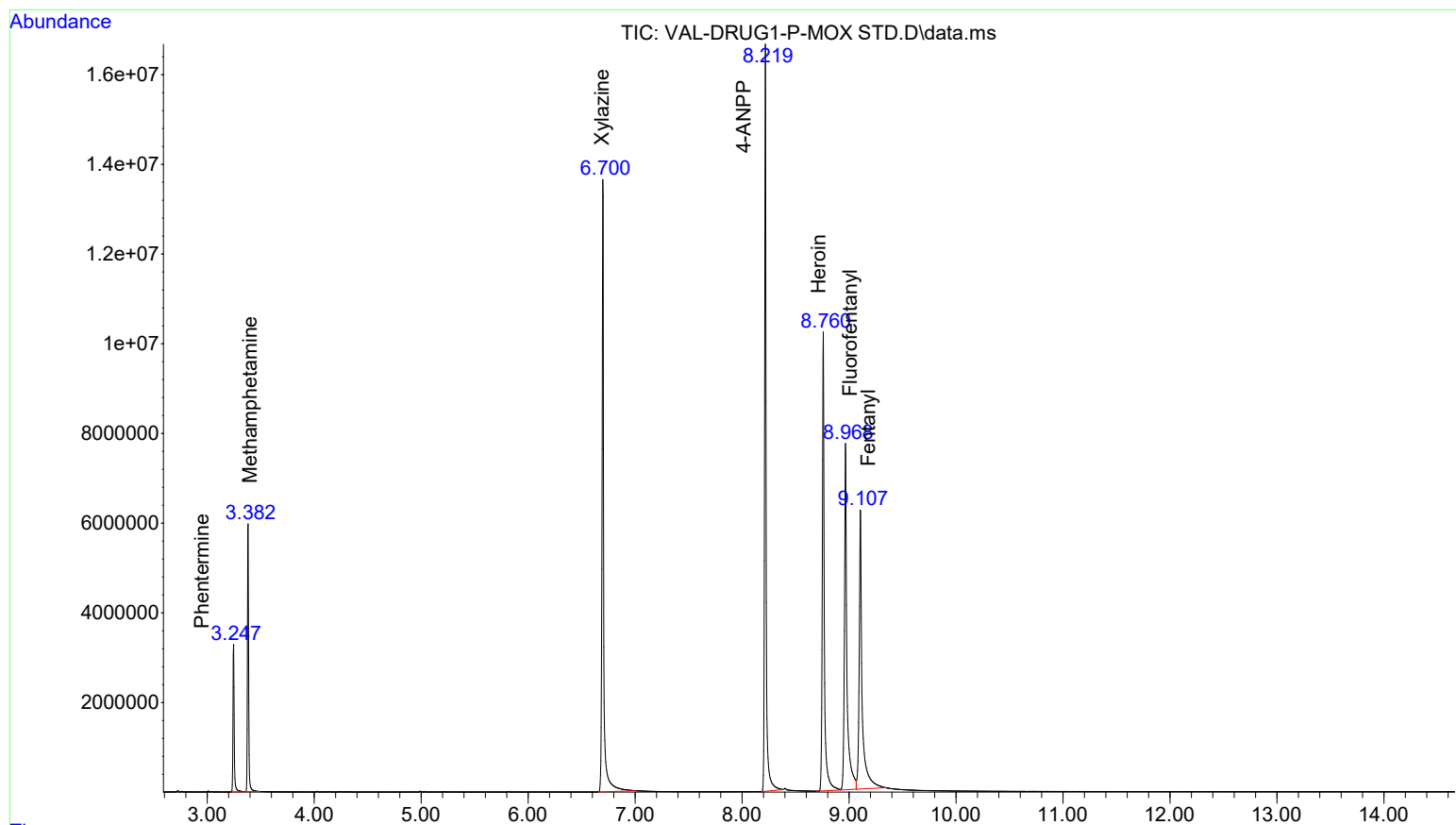
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

76



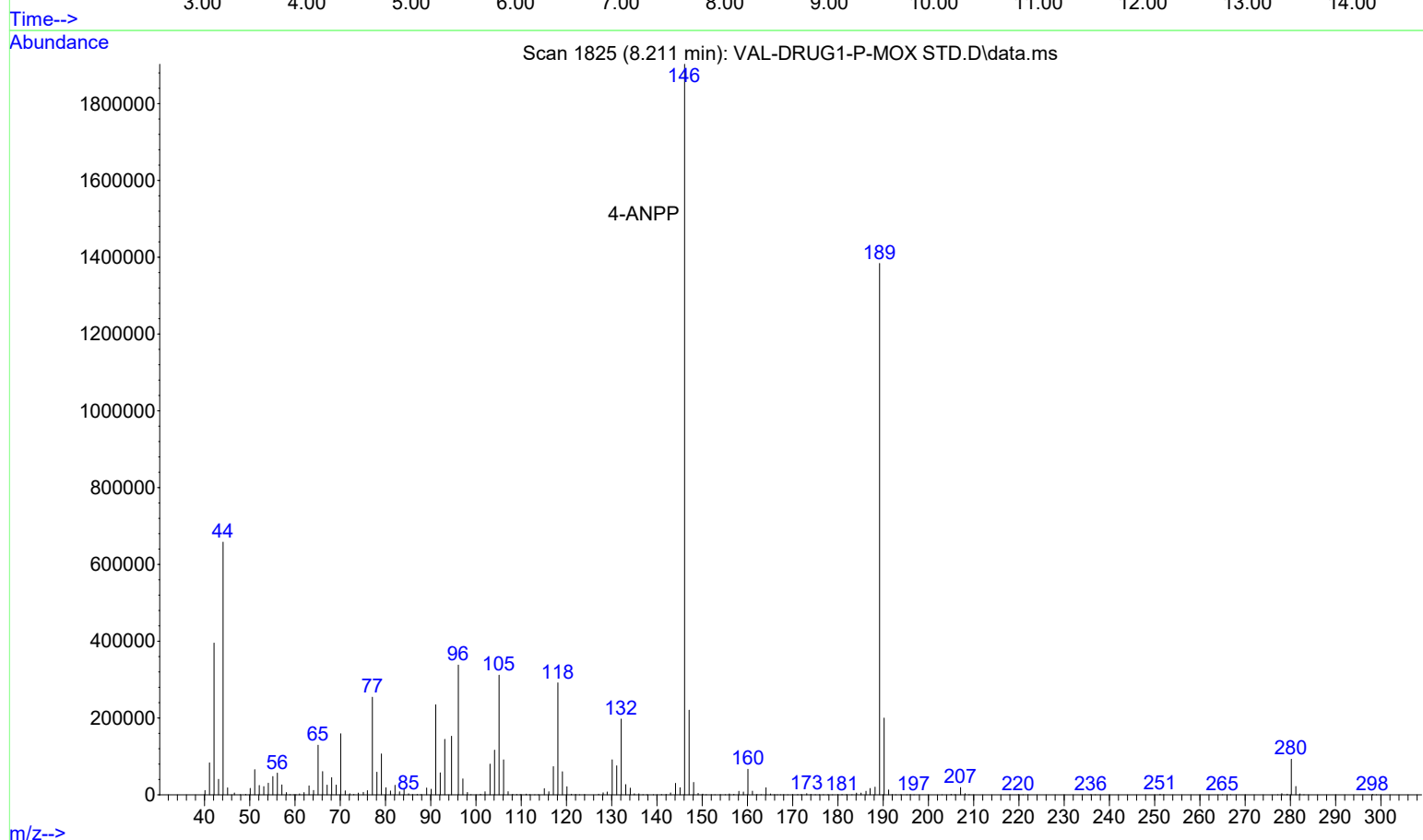
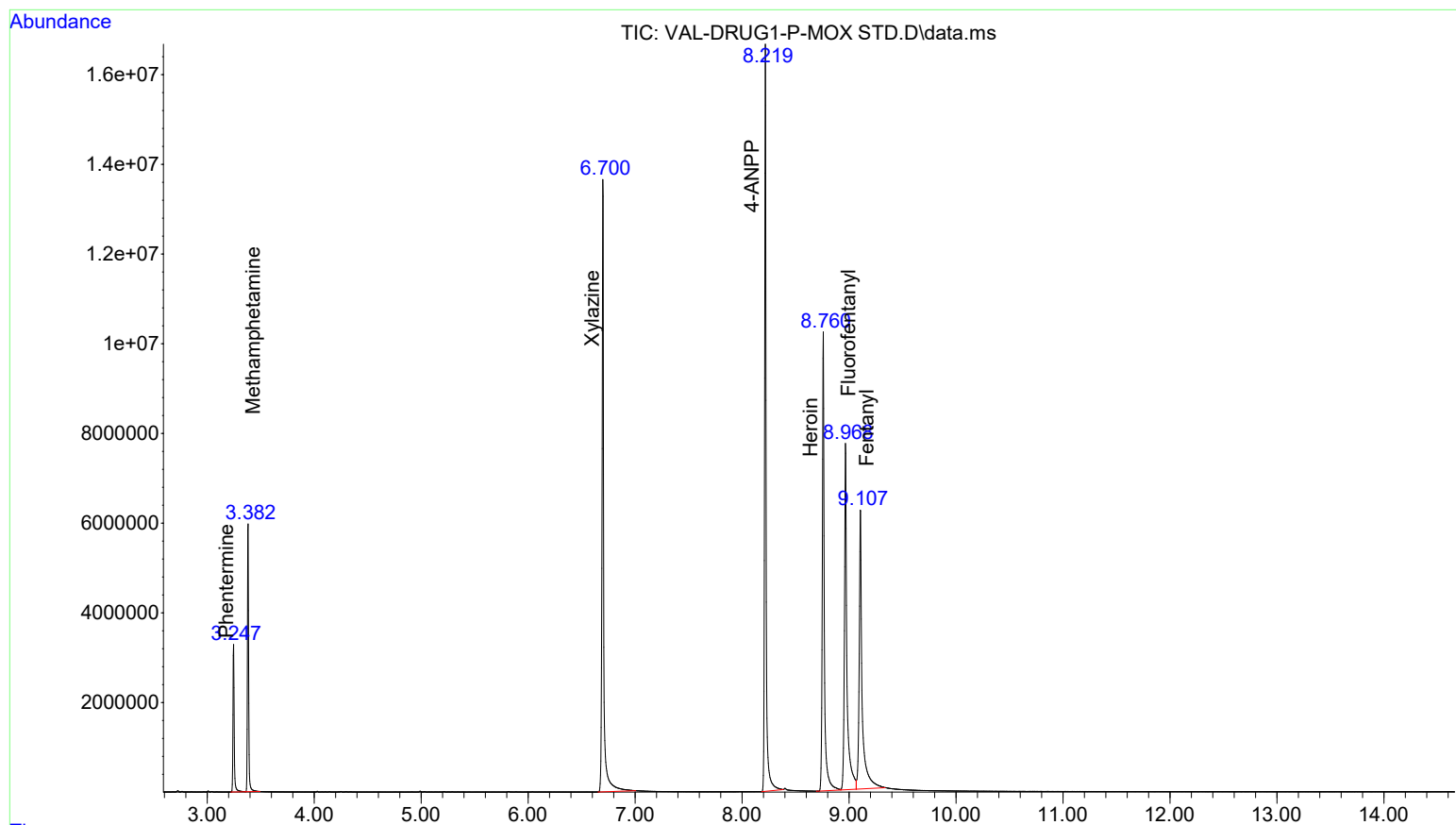
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

77



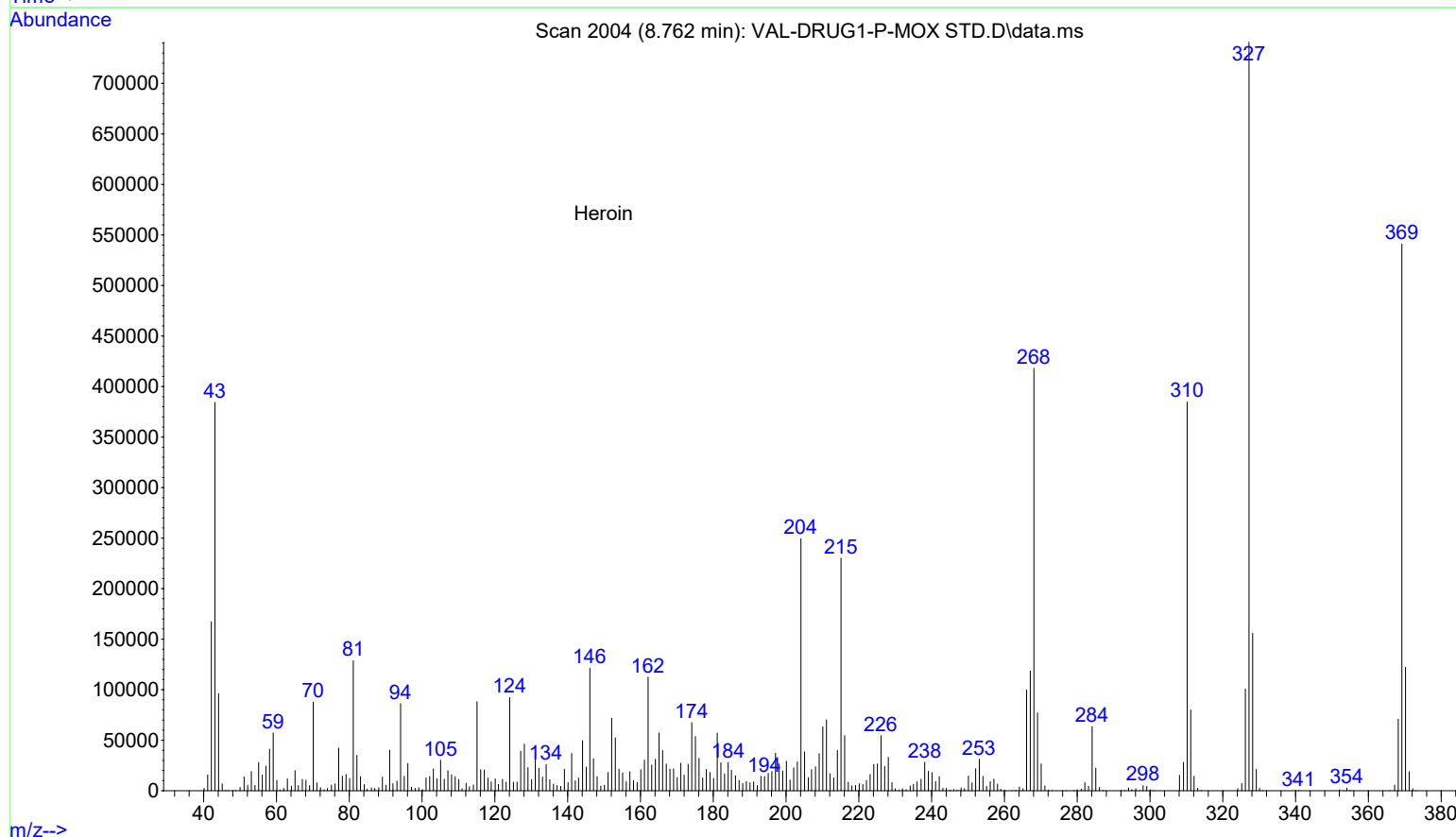
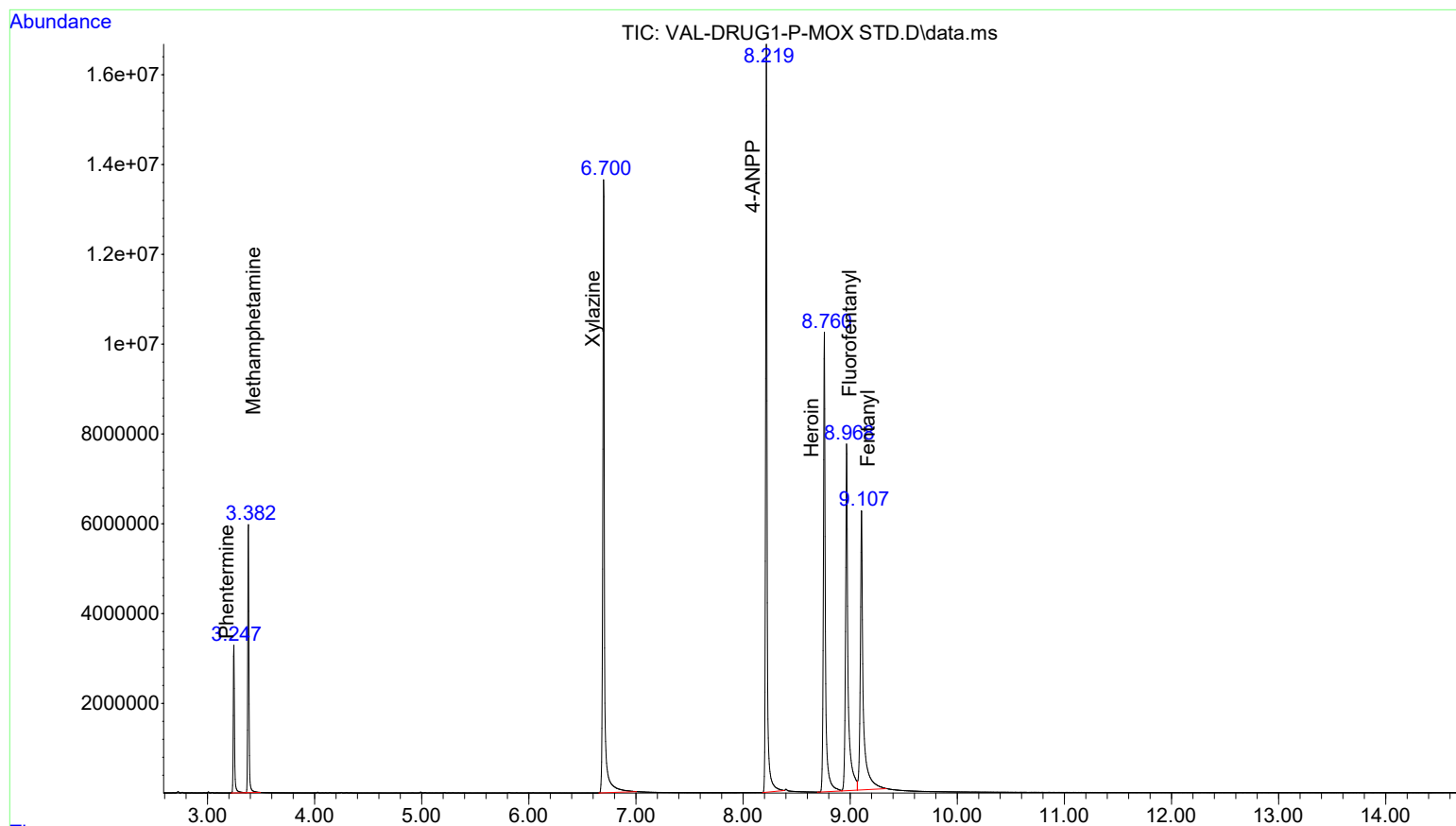
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

78



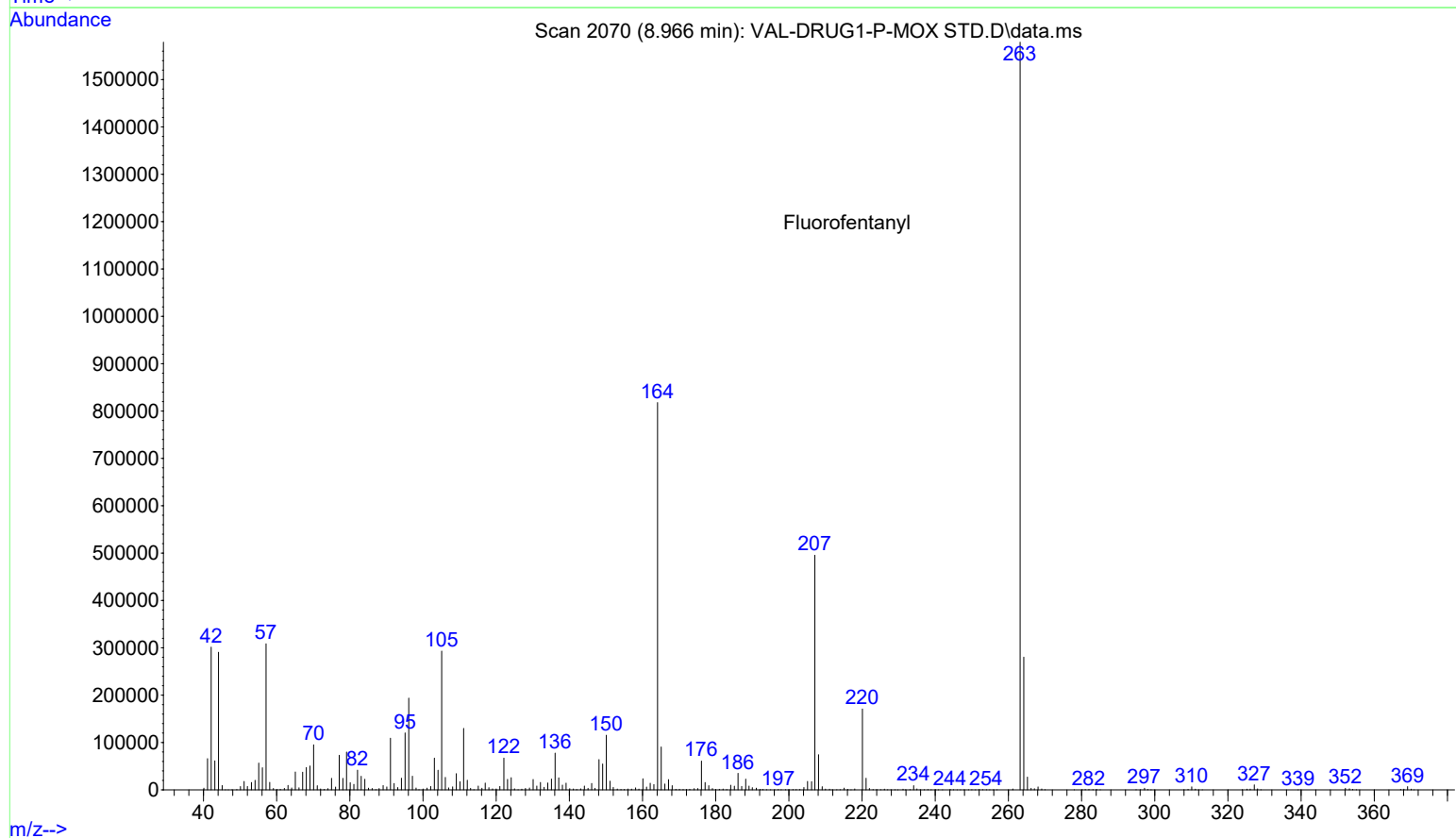
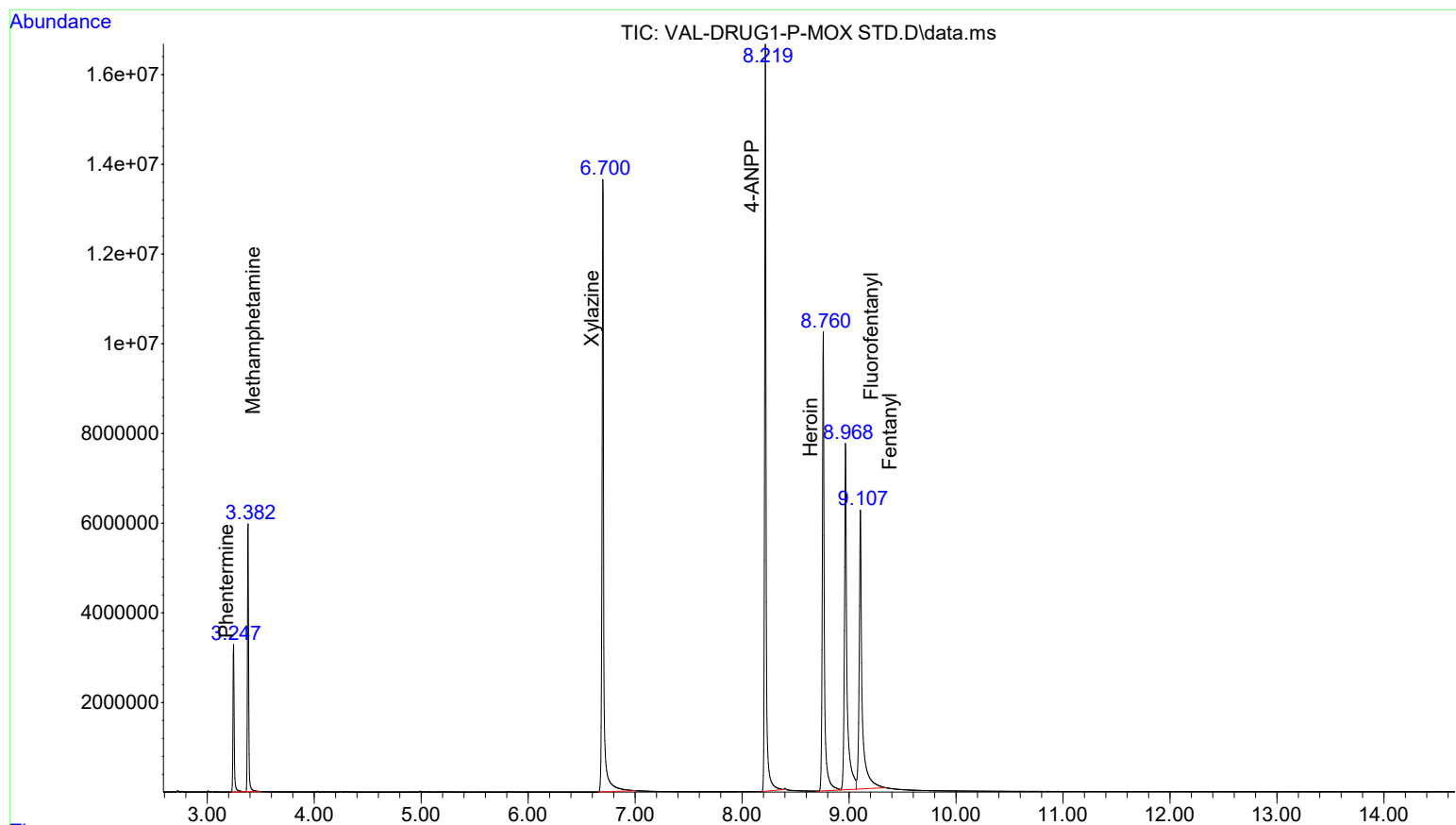
File :Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

79



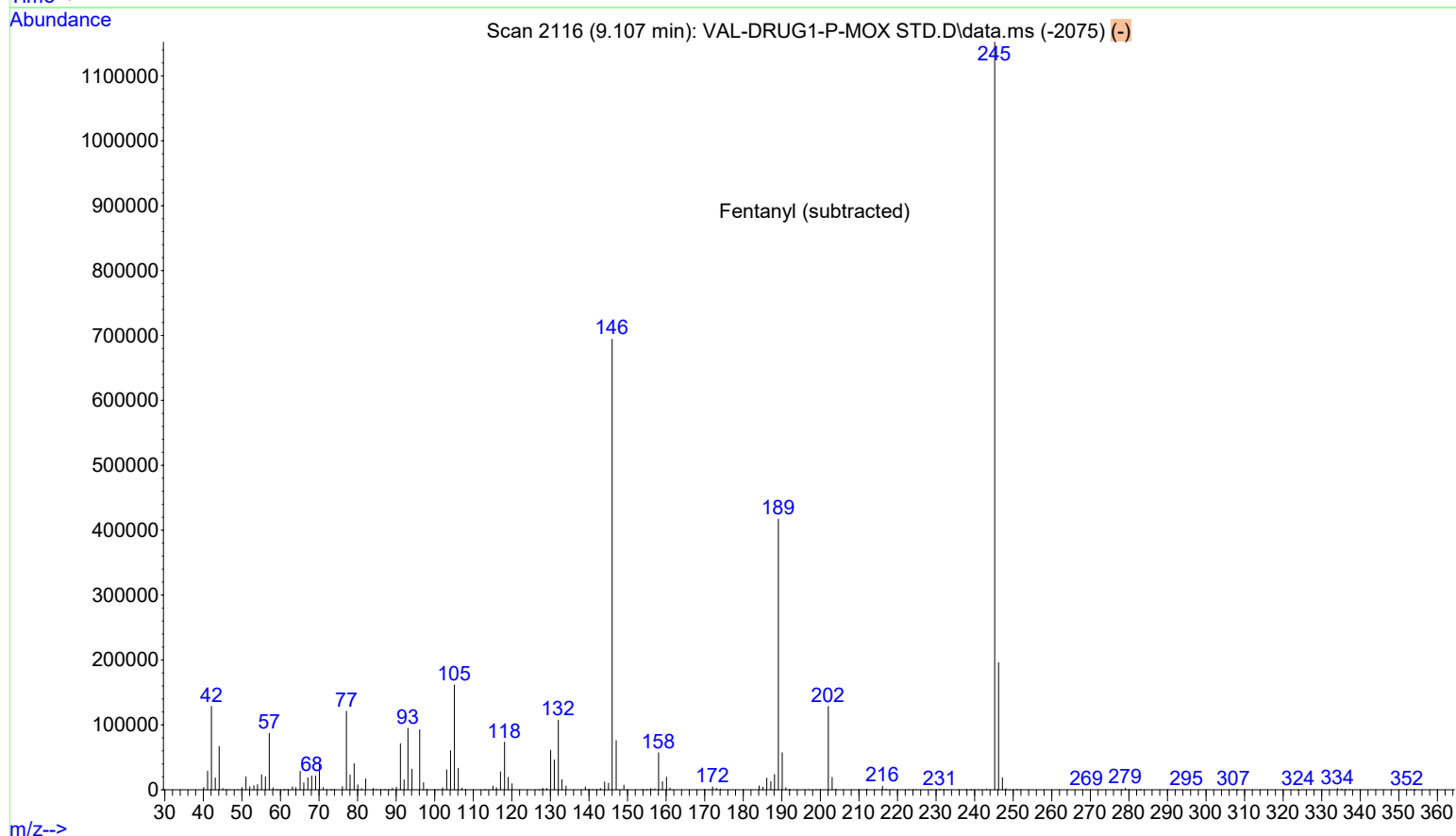
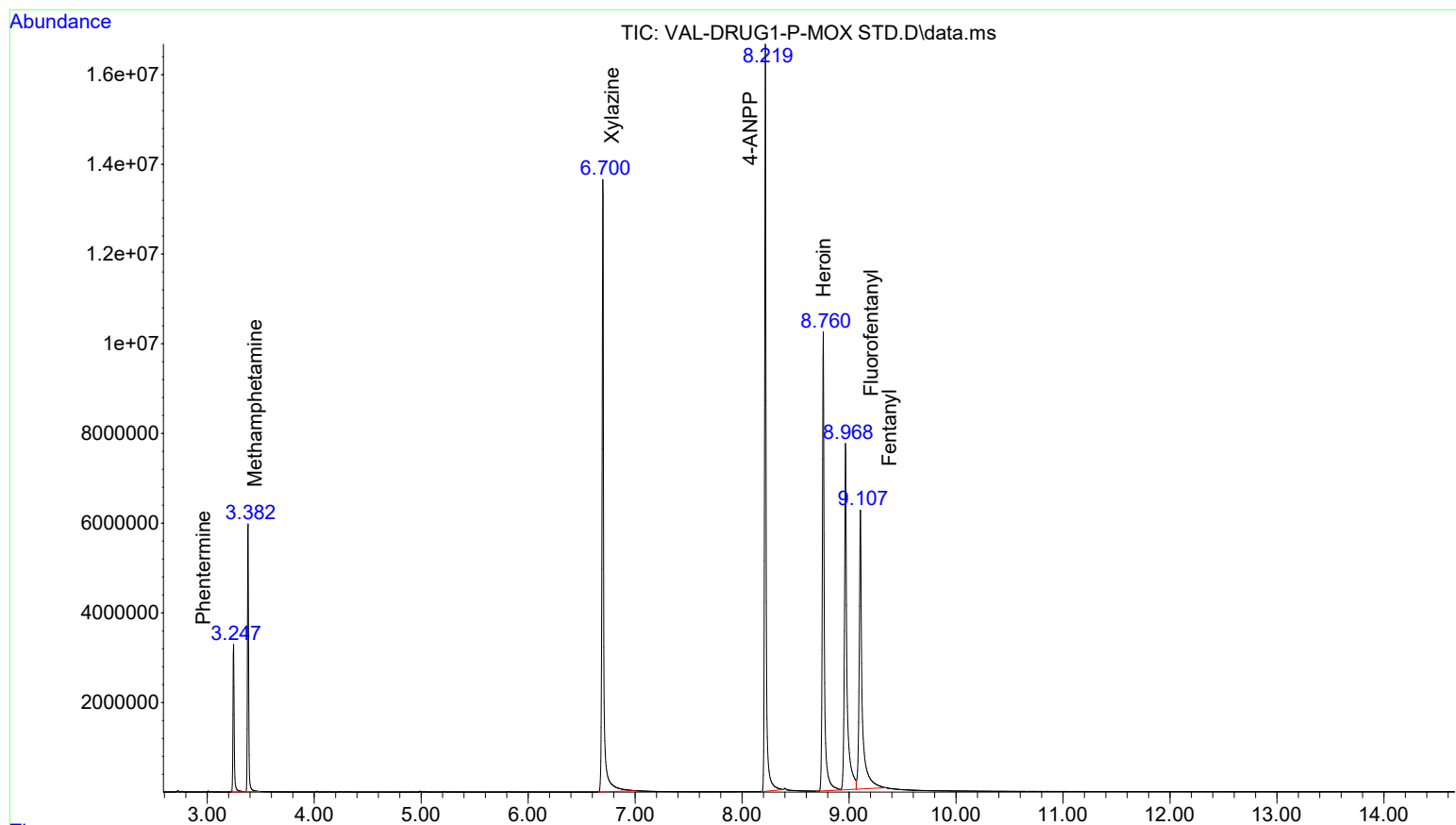
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

80



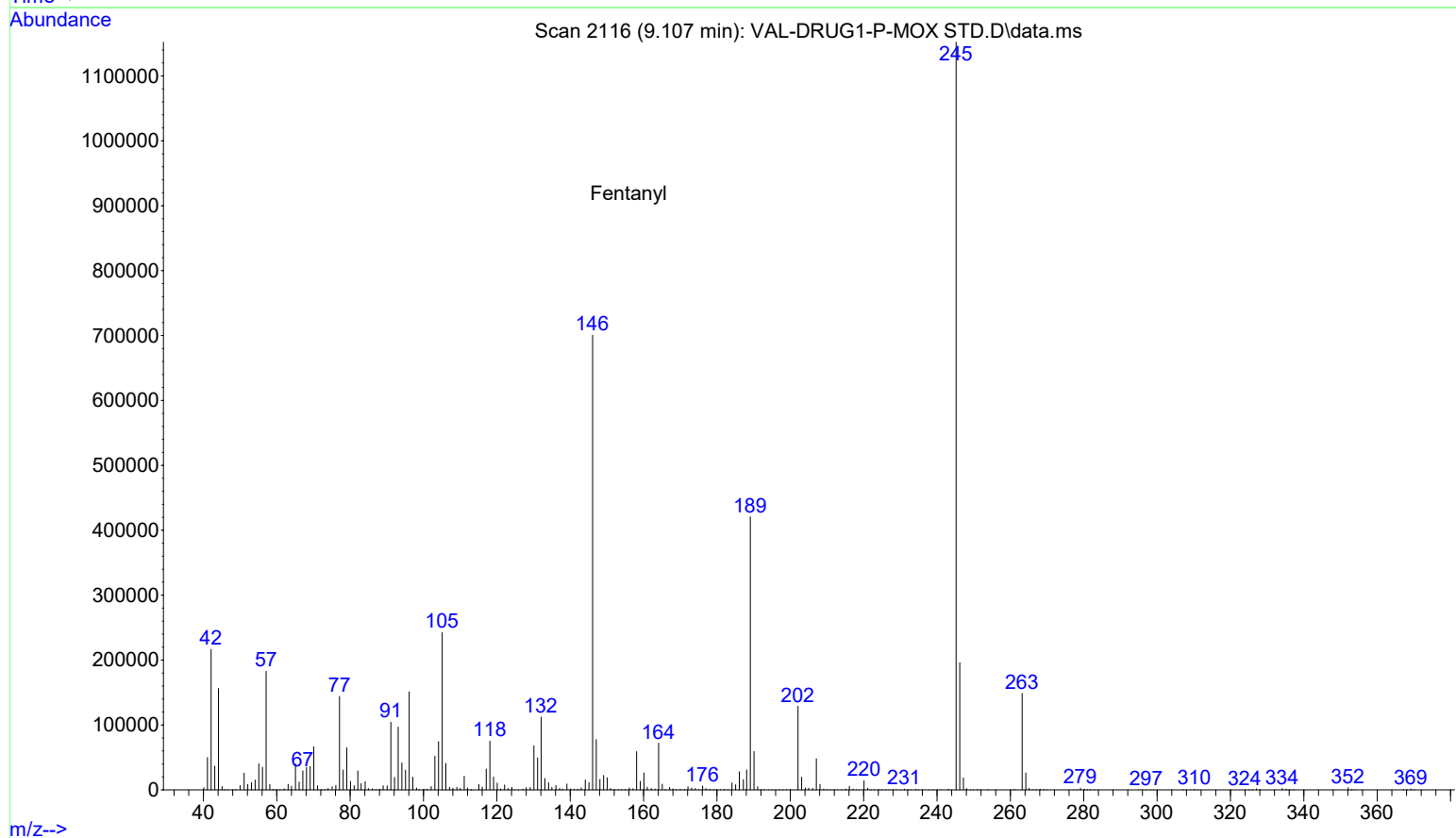
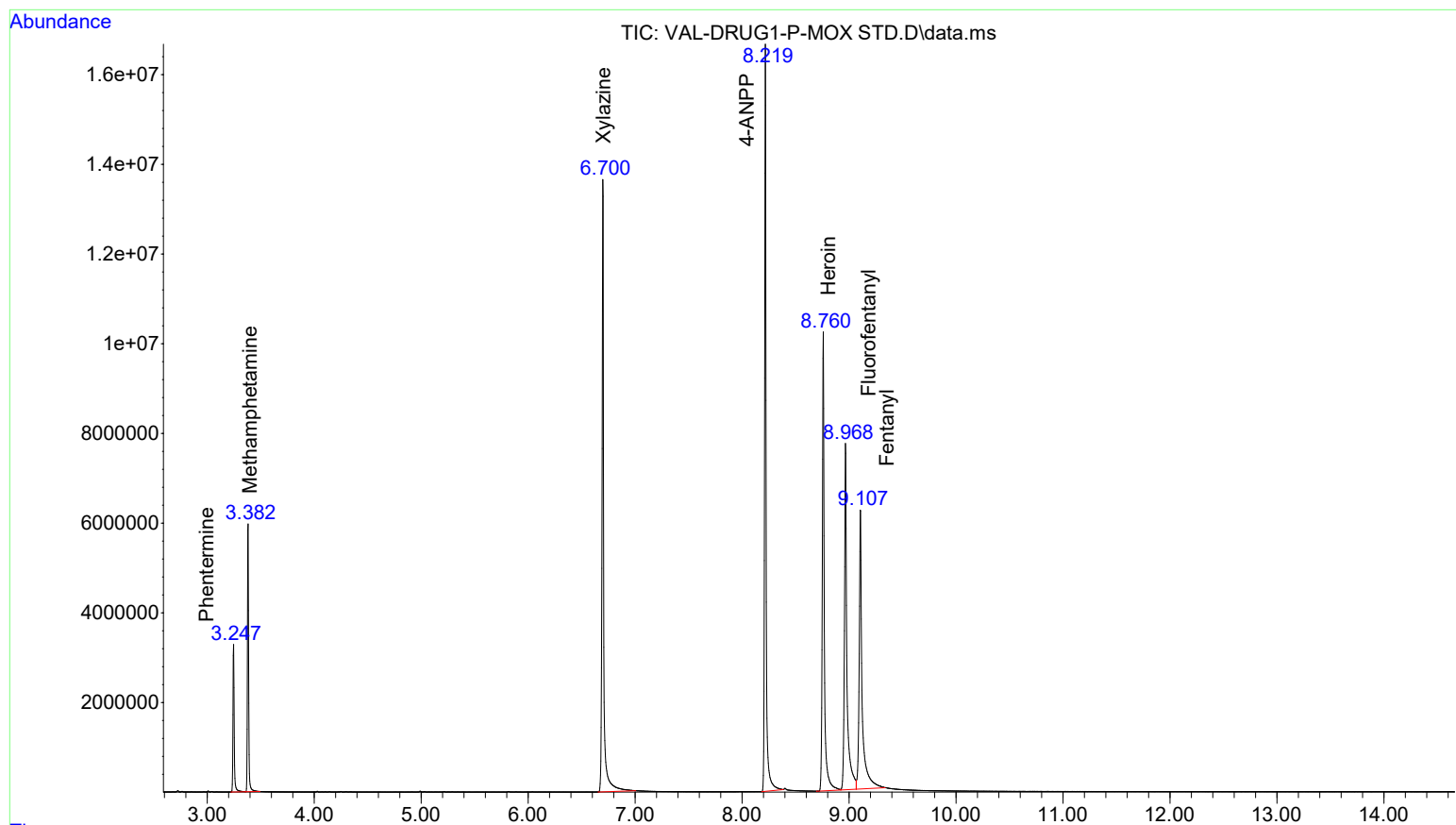
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

81



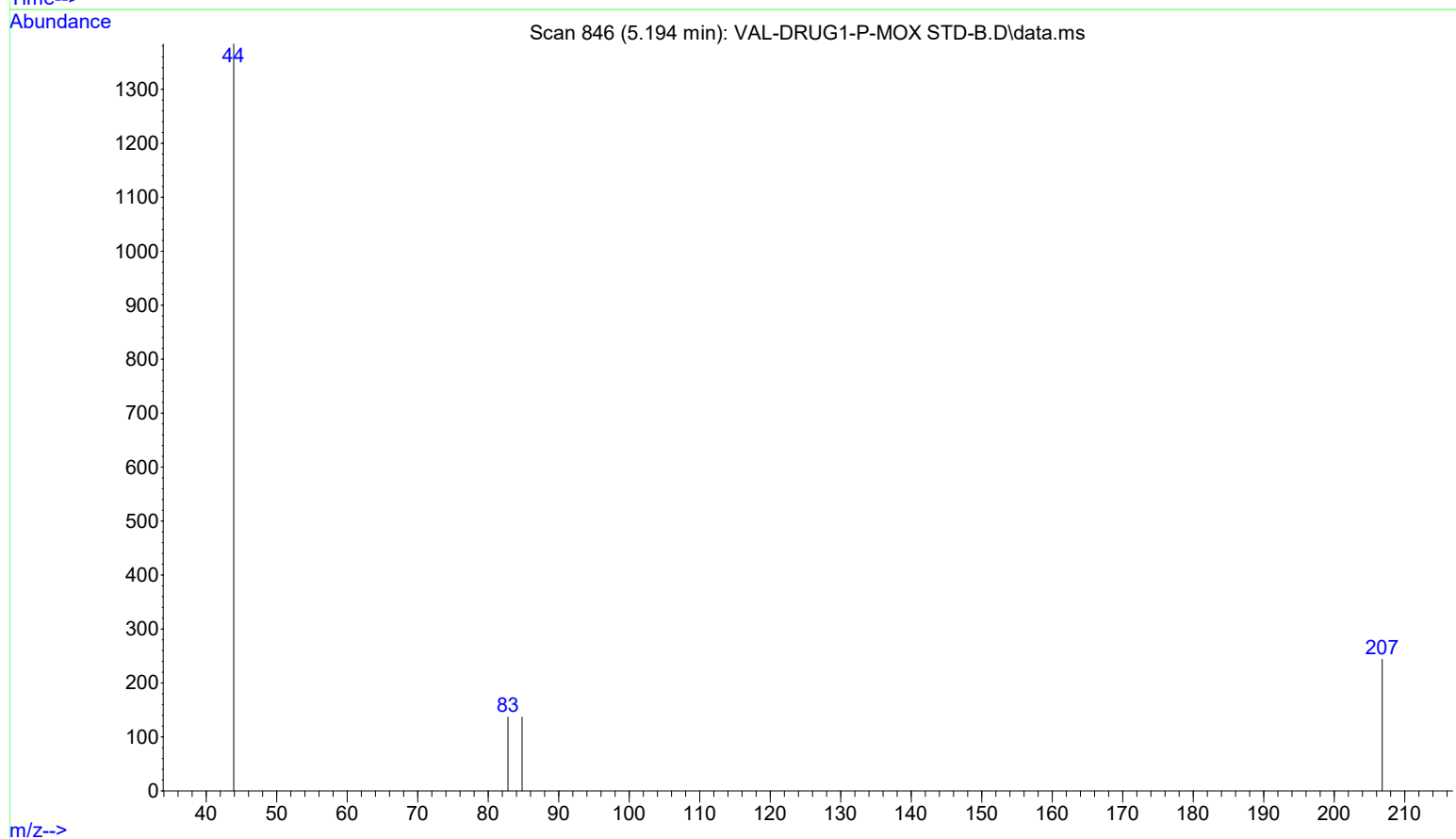
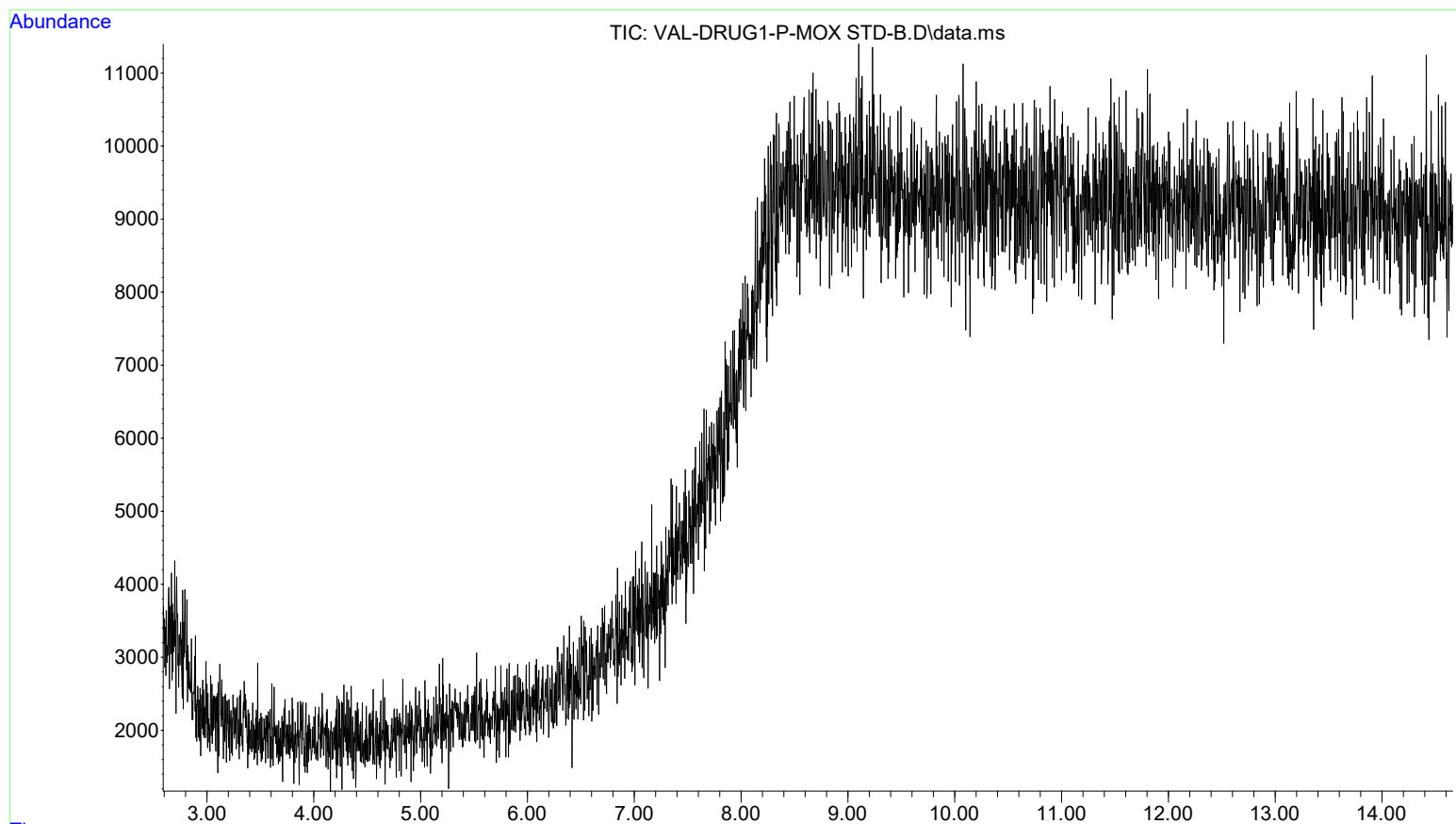
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 15:35 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

82



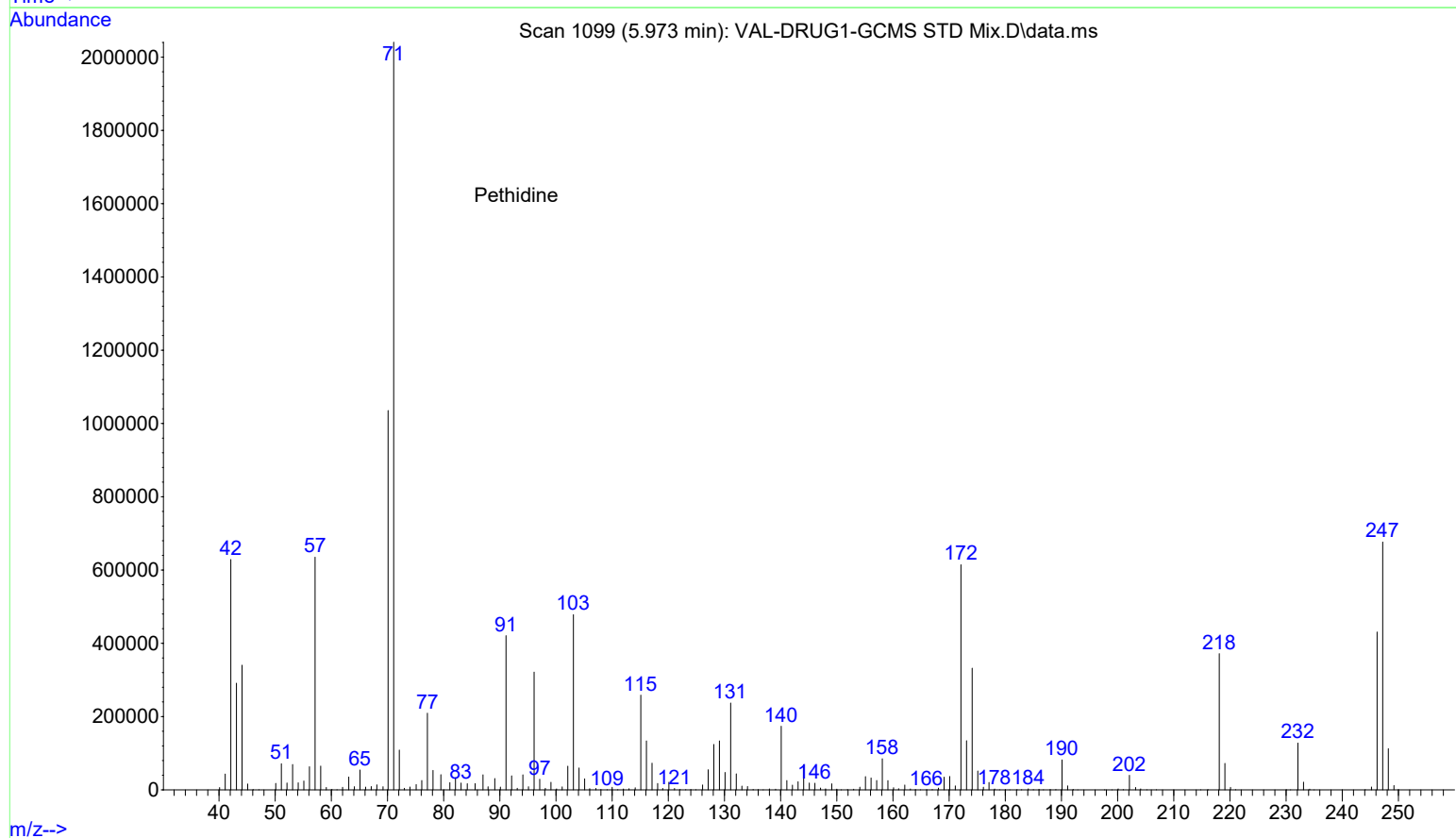
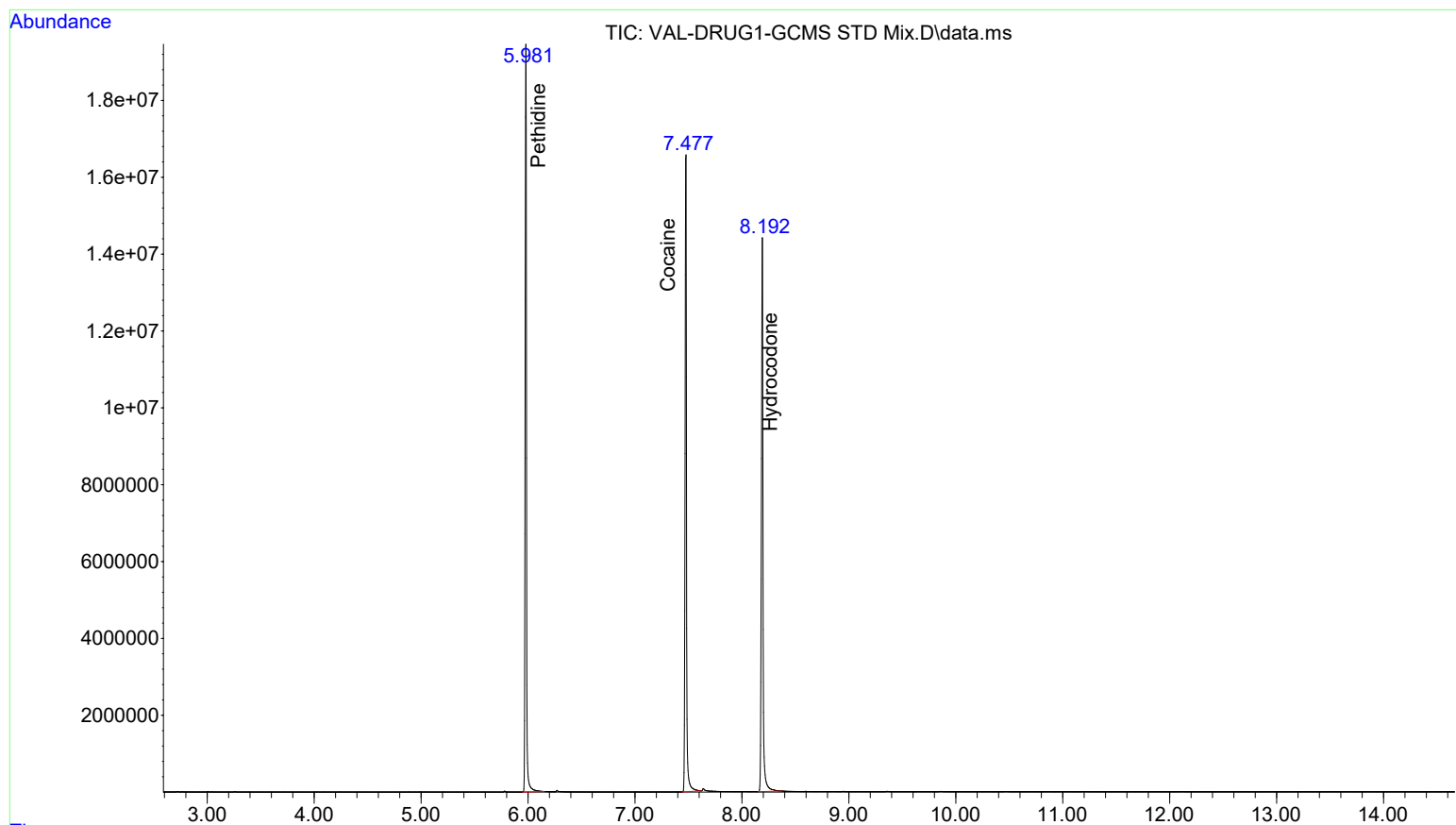
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-P-MOX STD-B.D
Operator :
Acquired : 23 Jun 2025 15:17 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-P-MOX STD-Blank
Misc Info : CHCl3
Vial Number: 12

83



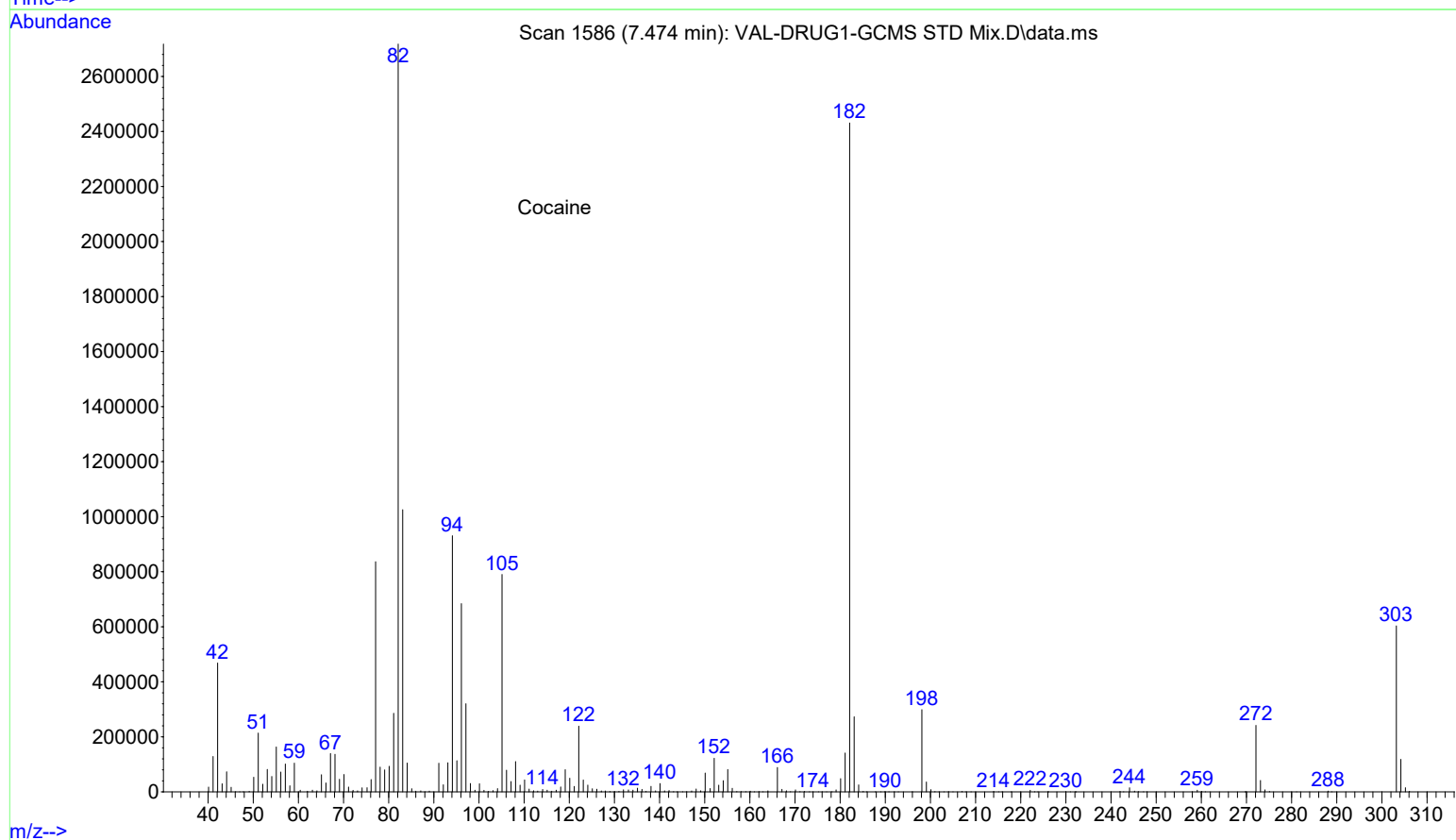
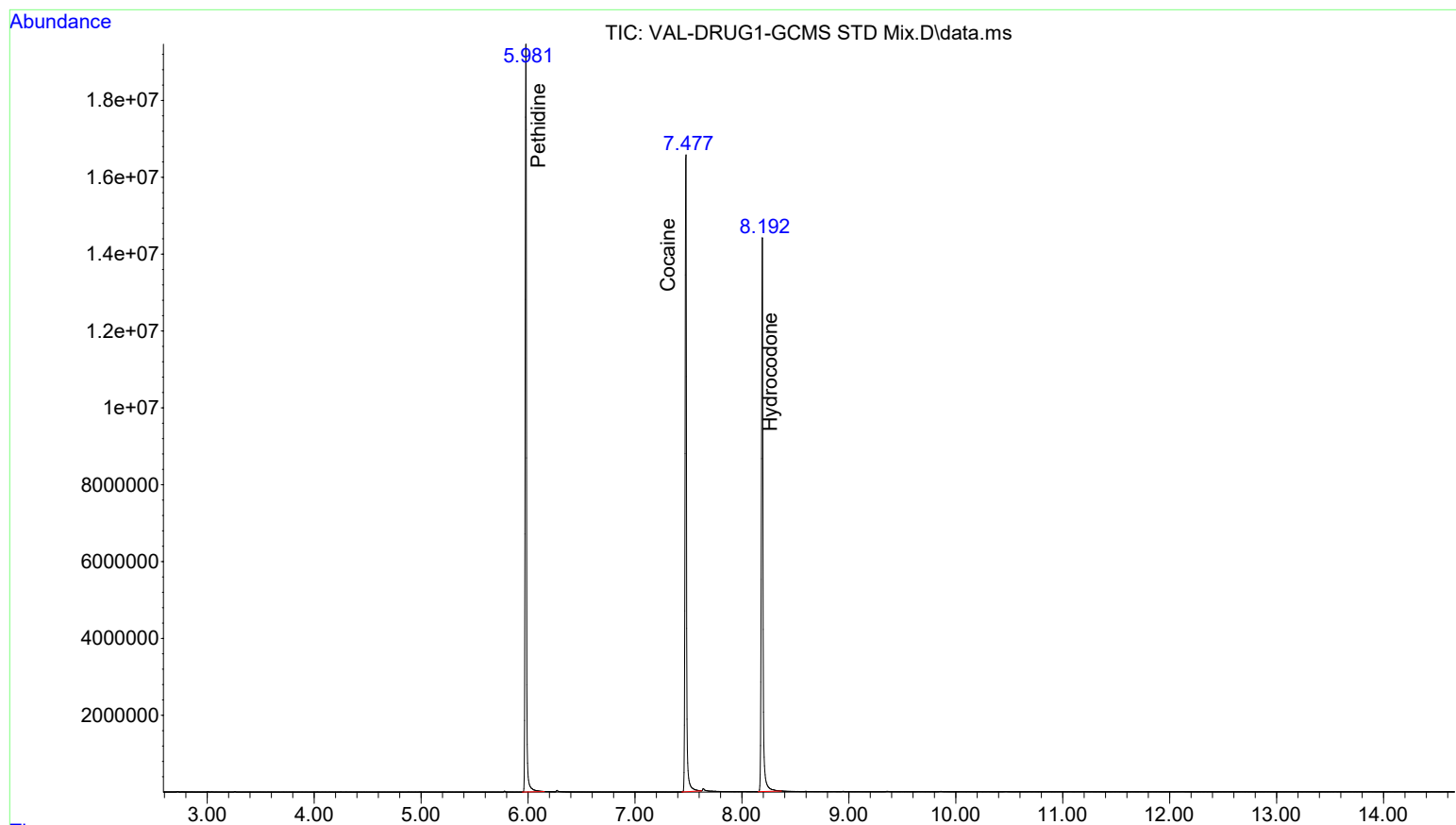
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix.D
Operator :
Acquired : 23 Jun 2025 13:47 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix
Misc Info : CHCl3
Vial Number: 13

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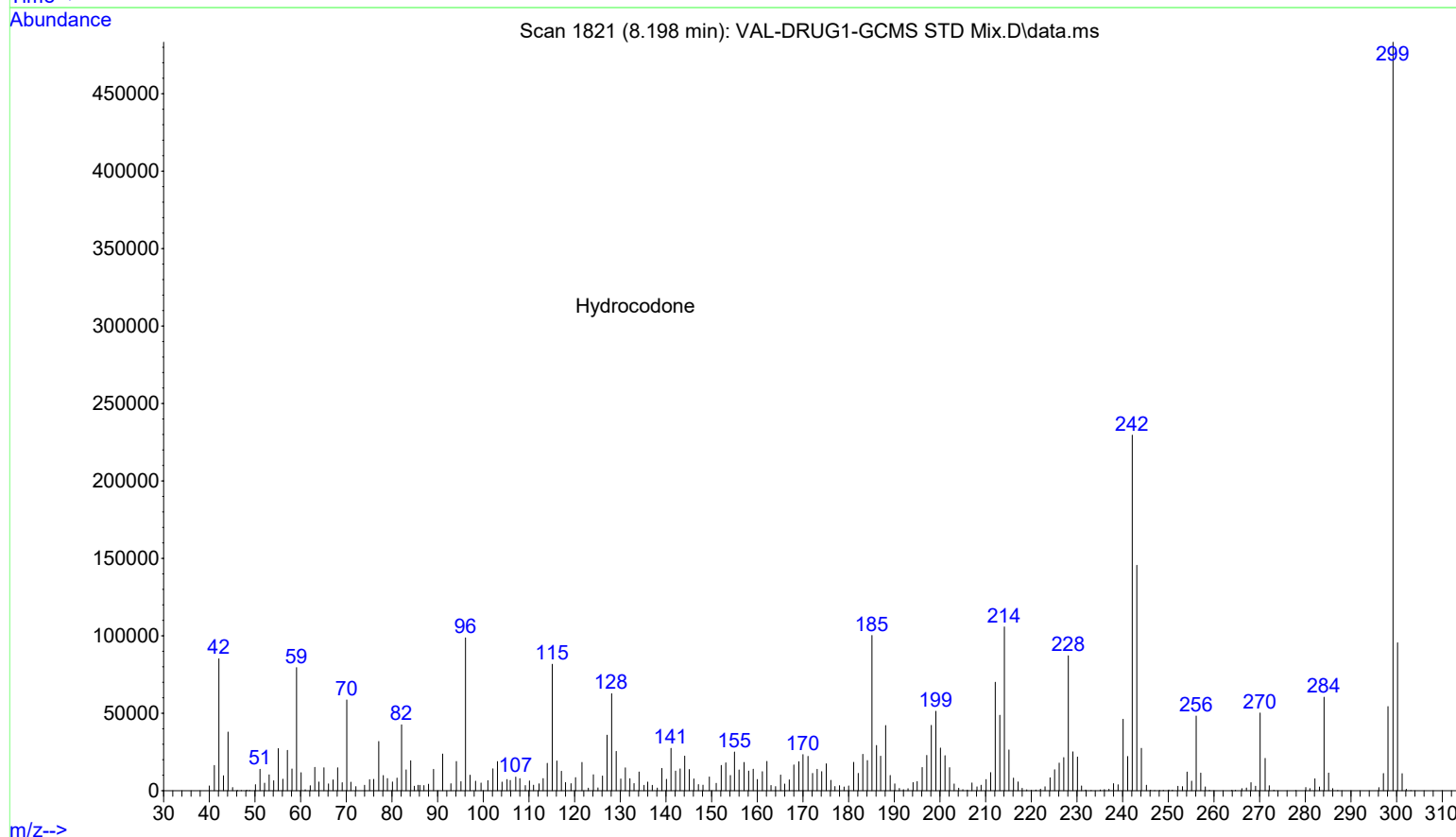
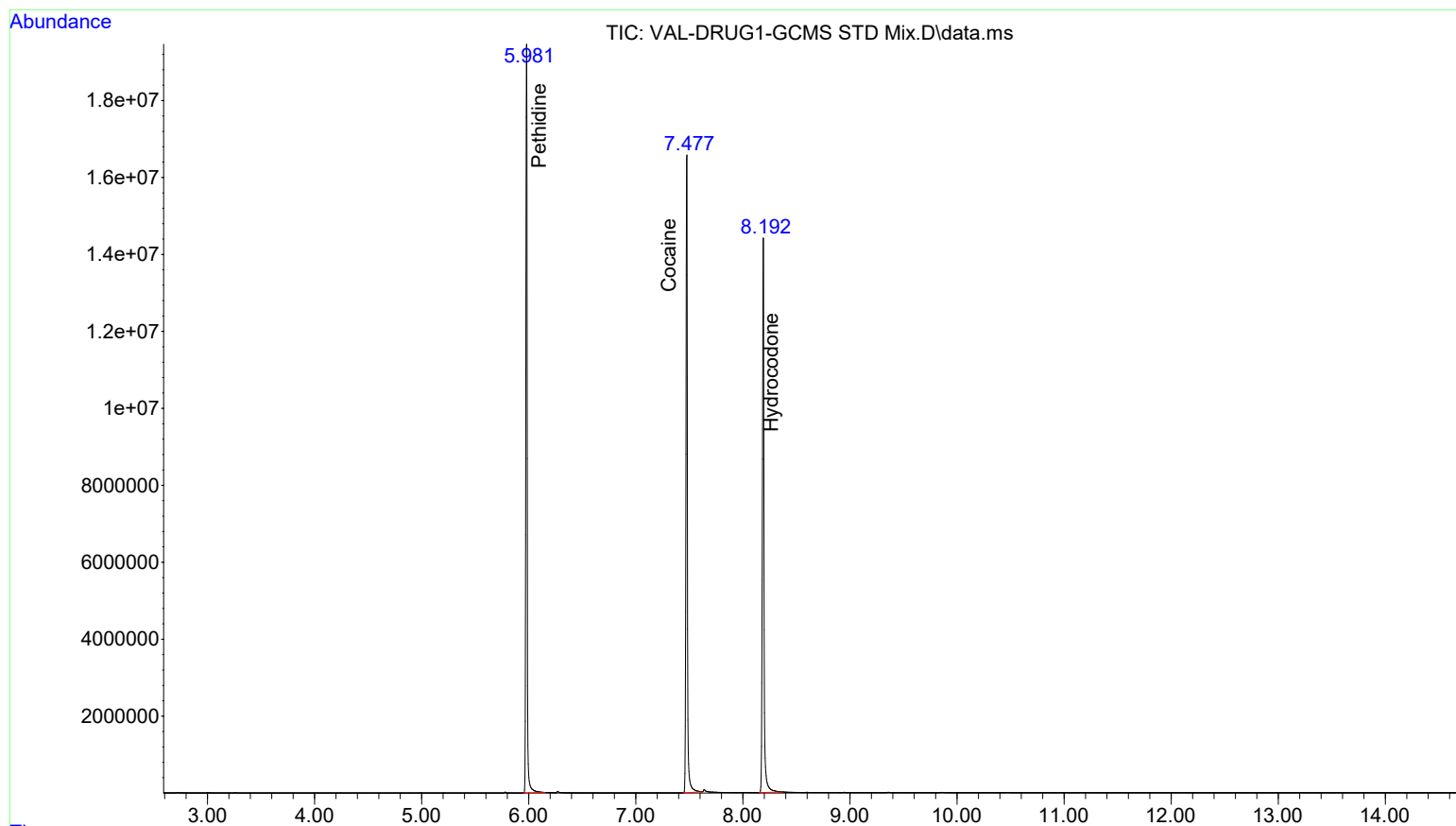
File : Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix.D
Operator :
Acquired : 23 Jun 2025 13:47 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix
Misc Info : CHCl3
Vial Number: 13

85



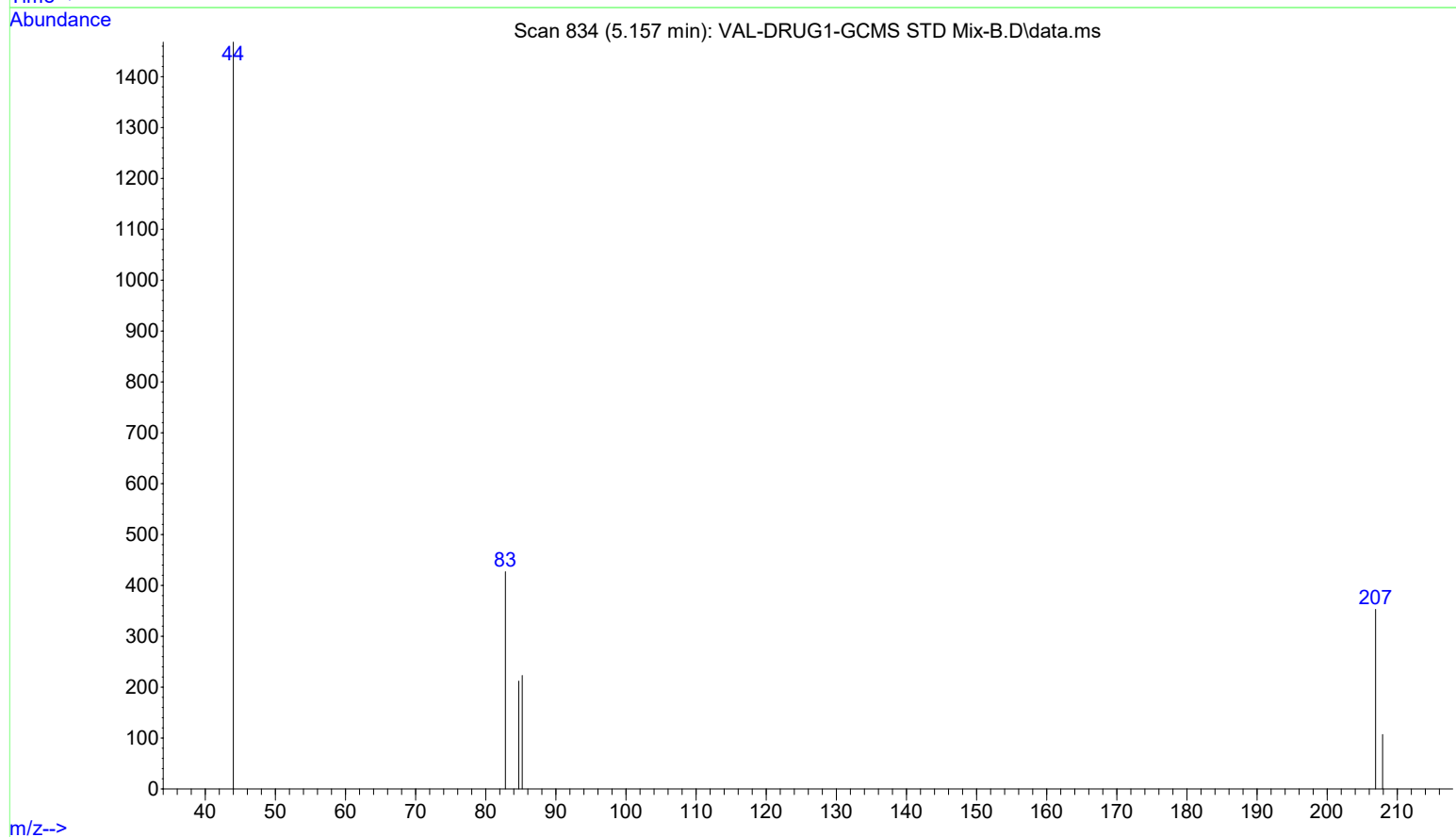
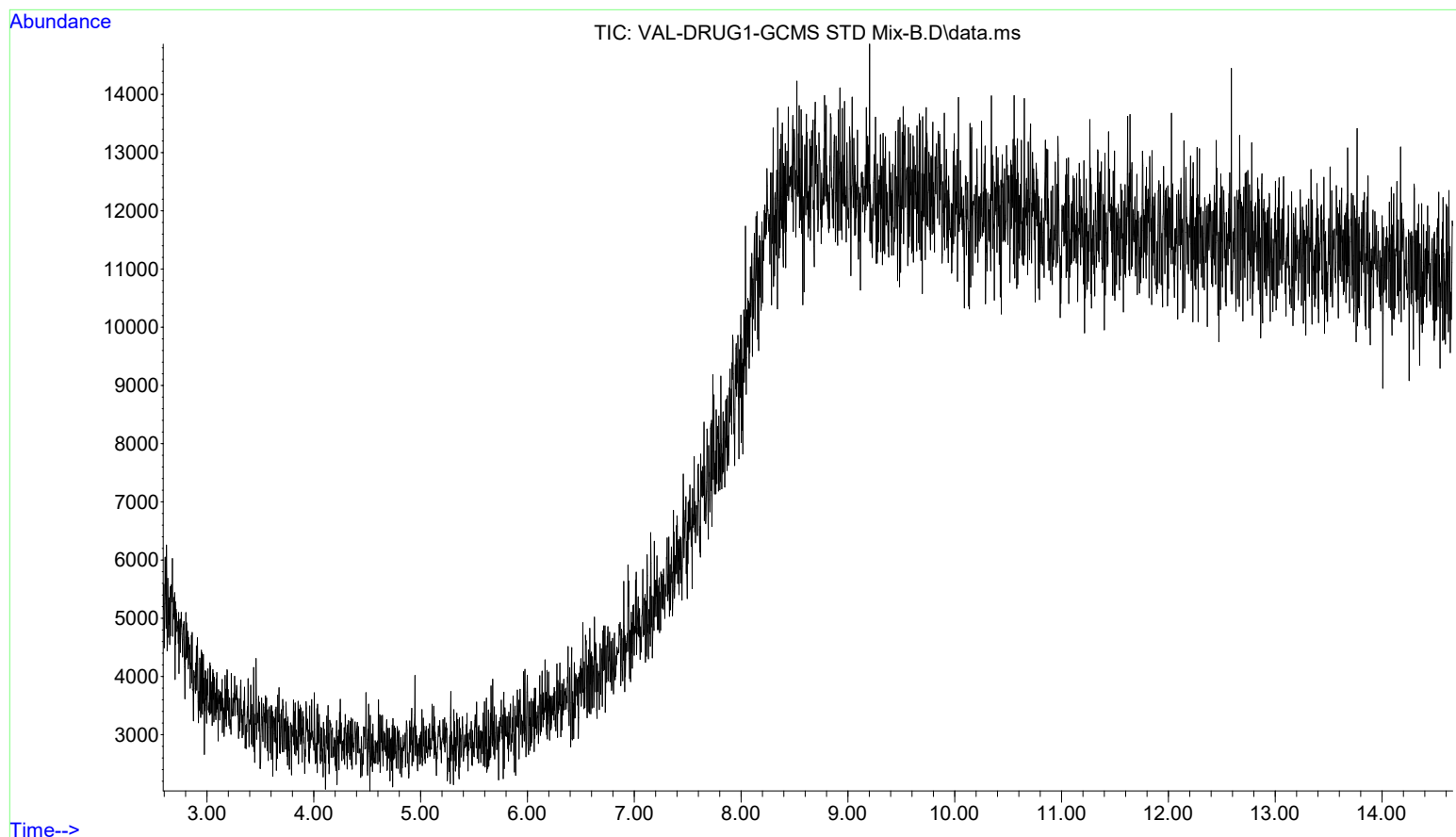
File :Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix.D
Operator :
Acquired : 23 Jun 2025 13:47 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix
Misc Info : CHCl3
Vial Number: 13

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File :Z:\Instr\Luna\2025\6-June\VAL-DRUG1-GCMS STD Mix-B.D
Operator :
Acquired : 23 Jun 2025 13:29 using AcqMethod DRUG1.M
Instrument : Luna
Sample Name: DRUG1-GCMS STD Mix-Blank
Misc Info : CHCl3
Vial Number: 12

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Method Information for: C:\MassHunter\GCMS\1\methods\GHB.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:

GHB

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\GHB.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	0.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
0.00	40	500	100	1,562 [N=2]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	500

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\GHB.M
Mon Jun 30 15:48:28 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 14.667 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 80 °C
Hold Time 1 min
Post Run 50 °C
Program
#1 Rate 30 °C/min
#1 Value 280 °C
#1 Hold Time 7 min

Equilibration Time 0 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled

Lower Fan On
Solvent Wash Mode A, B

91

Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 10.98 psi
Total Flow On 36.908 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 30 :1
Split Flow 34.75 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
 (Initial) 1.1583 mL/min
 Post Run 2 mL/min

92

Column Information Agilent 128-0112
 Description DB-1ms
 Temperature Range -60 °C-340 °C (340 °C)
 Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
 Heater Oven
 In Front SS Inlet He
 Out MSD
 (Initial) 80 °C
 Pressure 10.98 psi
 Flow 1.1583 mL/min
 Average Velocity 62.905 cm/sec
 Holdup Time 0.31794 min
 Control Mode Constant Flow

Column #2
 Flow
 Setpoint Off
 (Initial) 0.5 mL/min
 Post Run 2 mL/min

Column Information Agilent 19091Z-211
 Description HP-1
 Temperature Range -60 °C-325 °C (325 °C)
 Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
 Heater Oven
 In Back SS Inlet He
 Out Back Detector FID
 (Initial) 80 °C
 Pressure 1.763 psi
 Flow 0.5 mL/min
 Average Velocity 11.712 cm/sec
 Holdup Time 2.1345 min
 Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
 Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Makeup He
 Heater Off
 H2 Flow Off
 Air Flow Off
 Makeup Flow Off
 Carrier Gas Flow Correction Constant Makeup and Fuel Flow
 Flame Off

Aux EPC 1,2,3
 Aux EPC 1 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Aux EPC 1 He (unused)

Aux EPC 2 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 2 He	(unused)	
Aux EPC 3 He		93
Pressure		
Setpoint	Off	
(Initial)	10 psi	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 3 He	(unused)	
Signals		
Signal #1: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #2: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	500 Hz	
Dual Injection Assignment	Back Sample	
Signal #3: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	10 Hz	
Dual Injection Assignment	Back Sample	
Signal #4: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\GHB.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search Minimum Quality

DEMO.L 0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

96

Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

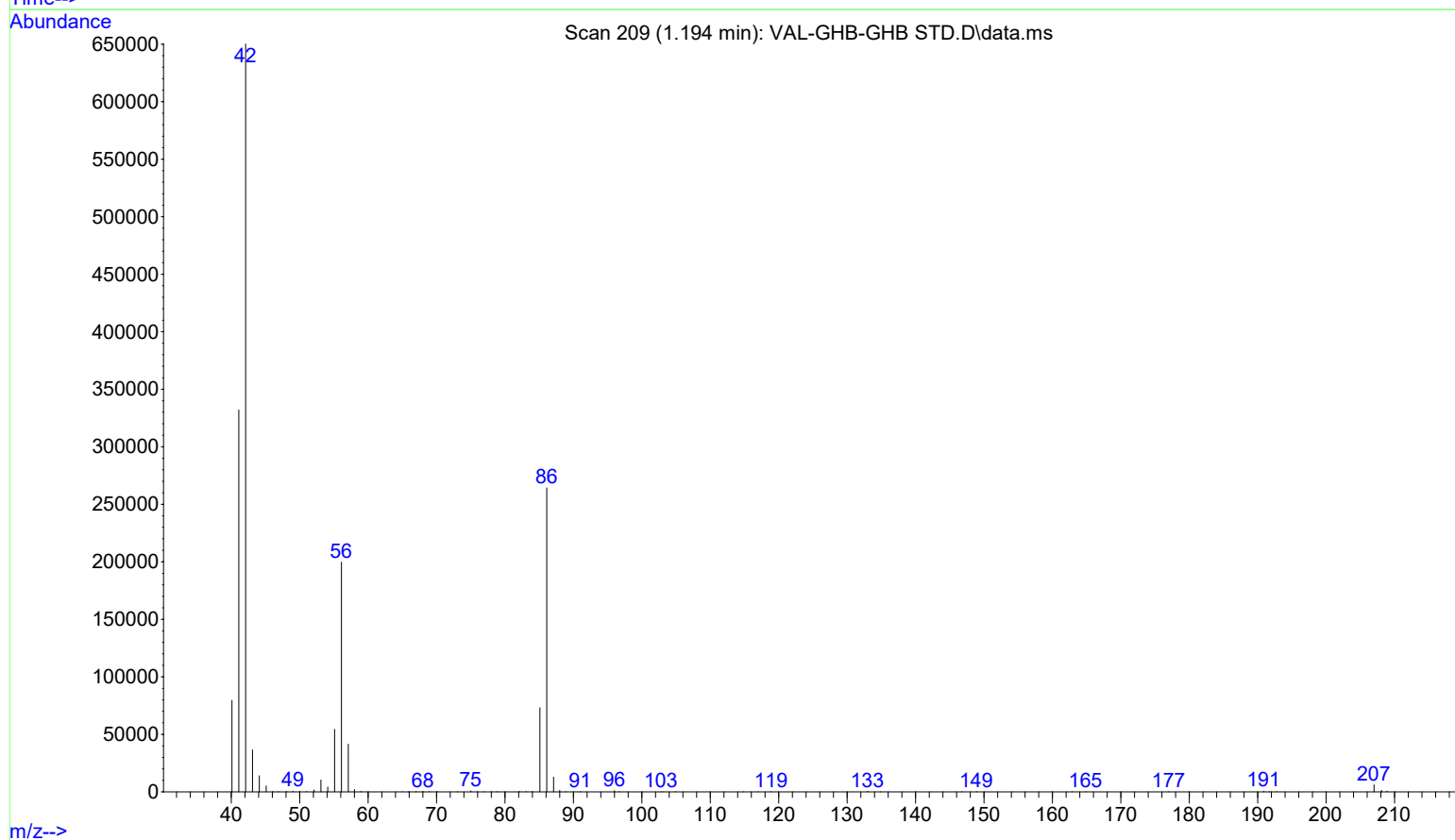
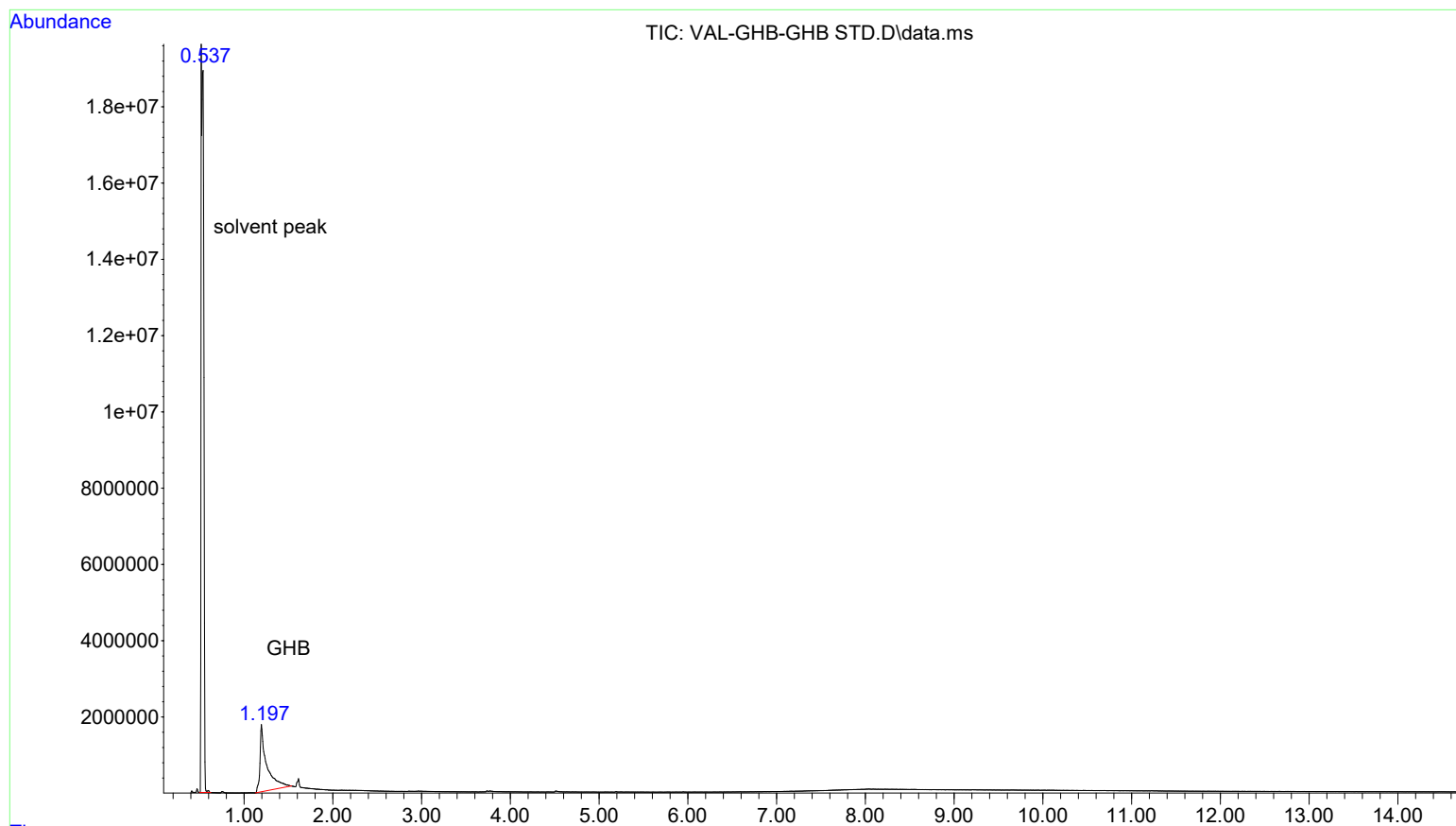
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:48:44 2025

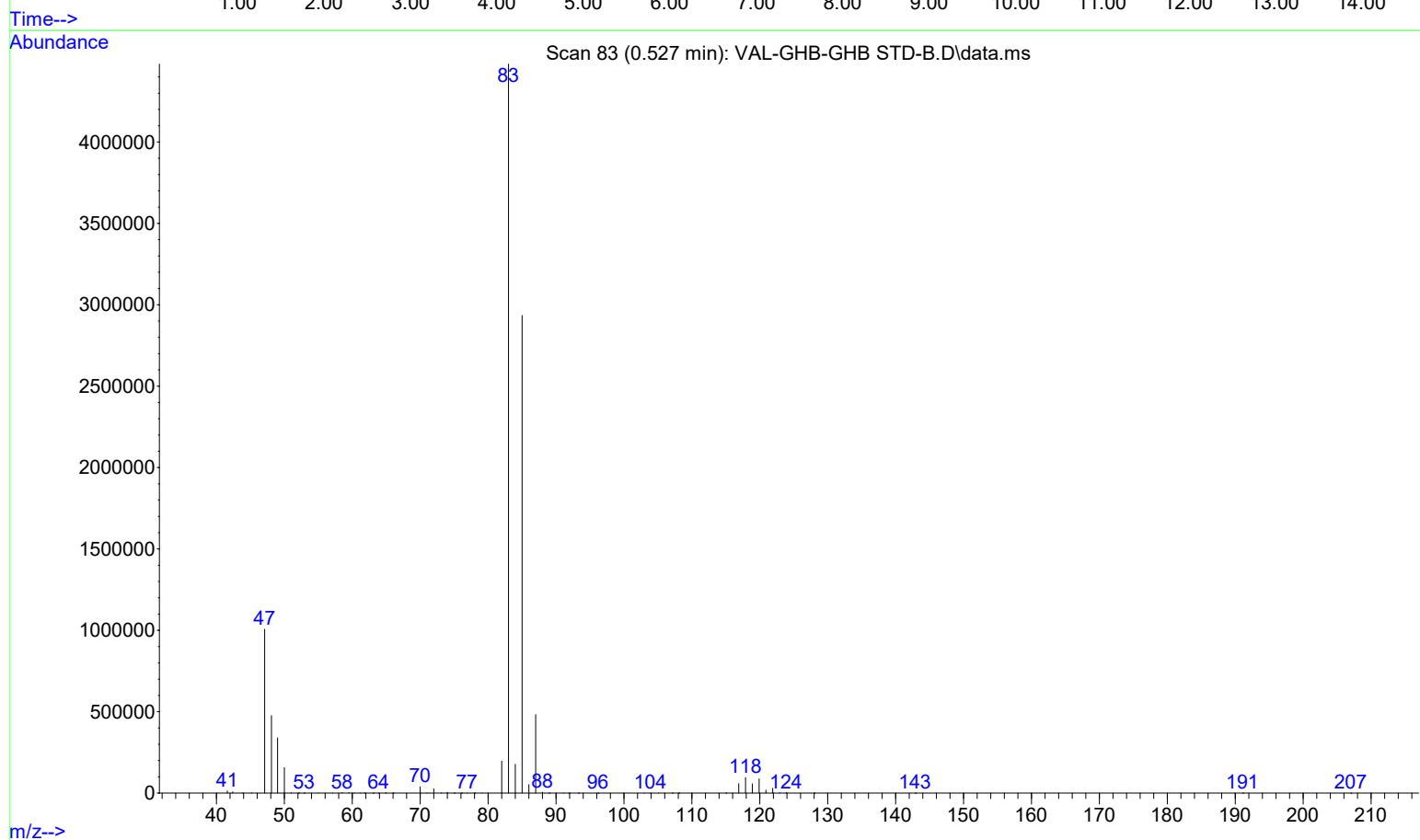
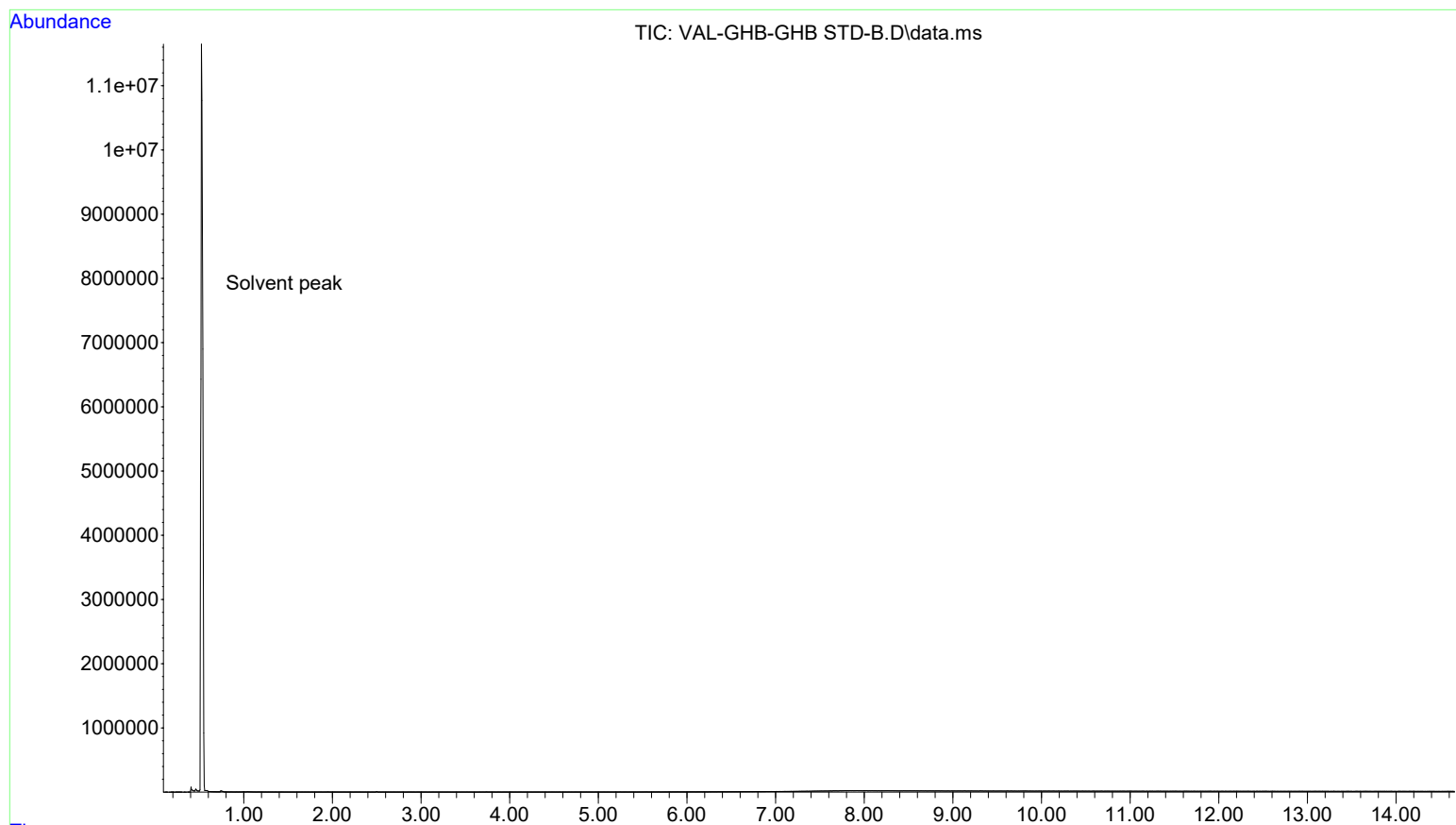
File : Z:\Instr\Luna\2025\6-June\VAL-GHB-GHB STD.D
Operator :
Acquired : 23 Jun 2025 17:22 using AcqMethod GHB.M
Instrument : Luna
Sample Name: GHB-GHB STD
Misc Info : MeOH
Vial Number: 17

97



File : Z:\Instr\Luna\2025\6-June\VAL-GHB-GHB STD-B.D
Operator :
Acquired : 23 Jun 2025 17:04 using AcqMethod GHB.M
Instrument : Luna
Sample Name: GHB-GHB STD-Blank
Misc Info : MeOH
Vial Number: 11

98



Method Information for: C:\MassHunter\GCMS\1\methods\DRUG1LC.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:

DRUG1LC

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\DRUG1LC.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	2.50
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
2.50	40	500	100	1,562 [N=2]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\DRUG1LC.M
Mon Jun 30 15:50:17 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 14.667 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 80 °C
Hold Time 1 min
Post Run 50 °C
Program
#1 Rate 30 °C/min
#1 Value 280 °C
#1 Hold Time 7 min

Equilibration Time 0 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled

Tower Fan On
Solvent Wash Mode A, B

102

Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 11.32 psi
Total Flow On 3.3784 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver On 20 mL/min after 2 min
Split Ratio 1 :1
Split Flow 1.1892 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
(Initial) 1.1892 mL/min
Post Run 2 mL/min

103

Column Information Agilent 128-0112
Description DB-1ms
Temperature Range -60 °C-340 °C (340 °C)
Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
Heater Oven
In Front SS Inlet He
Out MSD
(Initial) 80 °C
Pressure 11.32 psi
Flow 1.1892 mL/min
Average Velocity 63.738 cm/sec
Holdup Time 0.31378 min
Control Mode Constant Flow

Column #2
Flow
Setpoint Off
(Initial) 0.5 mL/min
Post Run 2 mL/min

Column Information Agilent 19091Z-211
Description HP-1
Temperature Range -60 °C-325 °C (325 °C)
Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
Heater Oven
In Back SS Inlet He
Out Back Detector FID
(Initial) 80 °C
Pressure 1.763 psi
Flow 0.5 mL/min
Average Velocity 11.712 cm/sec
Holdup Time 2.1345 min
Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Makeup He
Heater Off
H2 Flow Off
Air Flow Off
Makeup Flow Off
Carrier Gas Flow Correction Constant Makeup and Fuel Flow
Flame Off

Aux EPC 1,2,3
Aux EPC 1 He
Pressure
Setpoint Off
(Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Aux EPC 1 He (unused)

Aux EPC 2 He
Pressure
Setpoint Off
(Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 2 He	(unused)	
Aux EPC 3 He		104
Pressure		
Setpoint	Off	
(Initial)	10 psi	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 3 He	(unused)	
Signals		
Signal #1: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #2: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	500 Hz	
Dual Injection Assignment	Back Sample	
Signal #3: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	10 Hz	
Dual Injection Assignment	Back Sample	
Signal #4: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\DRUG1LC.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search	Minimum Quality
DEMO.L	0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

107

Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

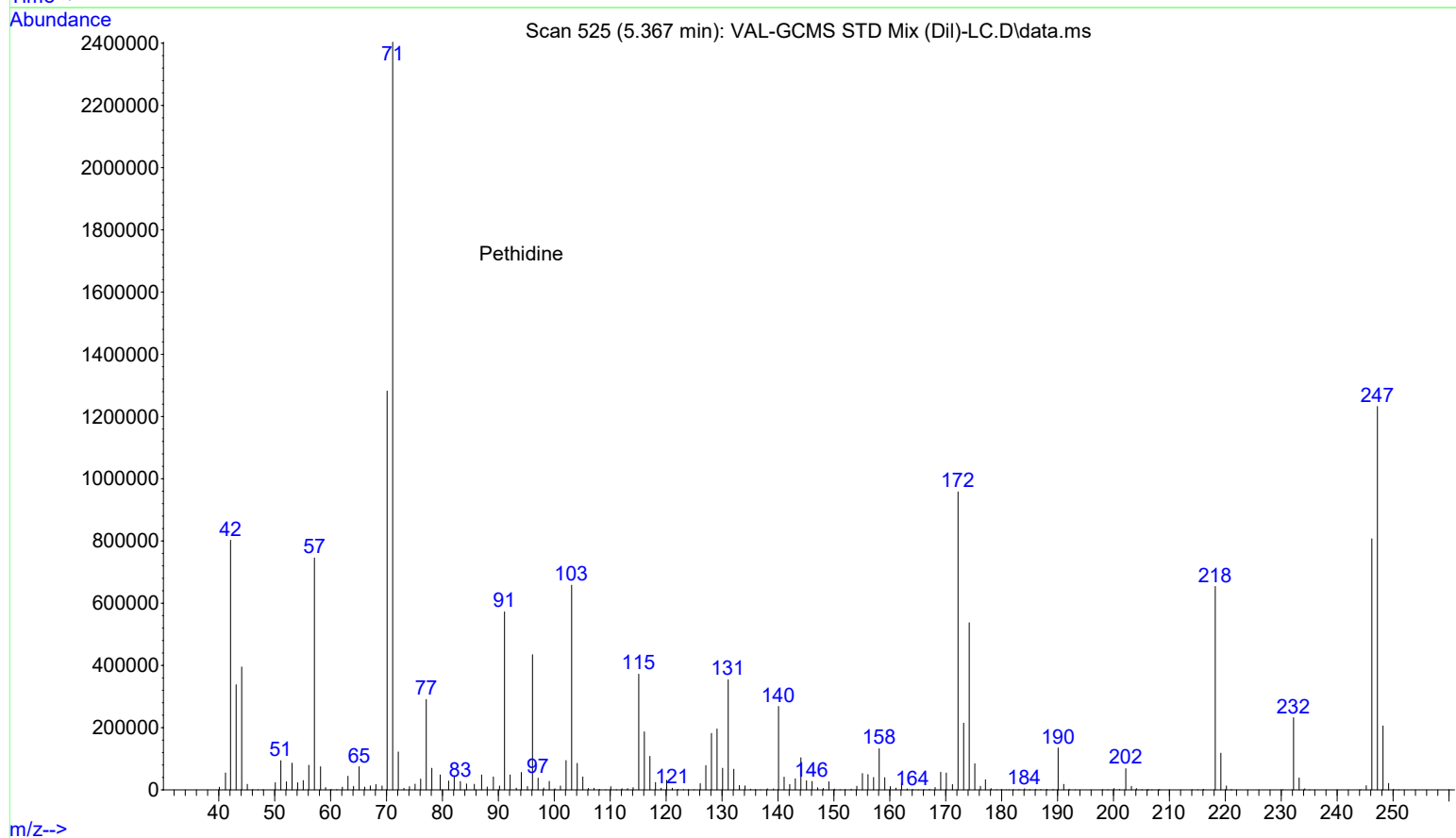
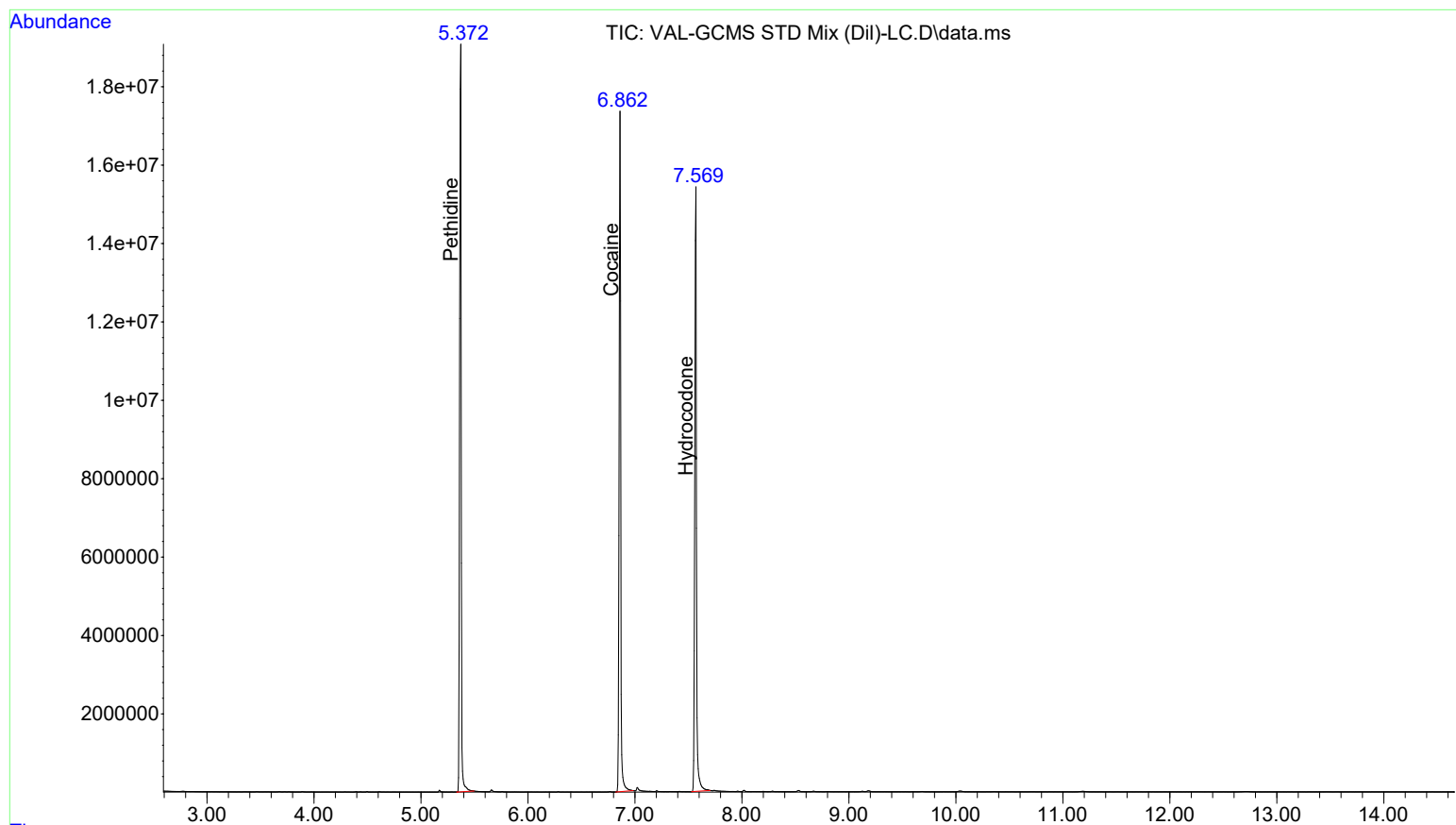
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:50:33 2025

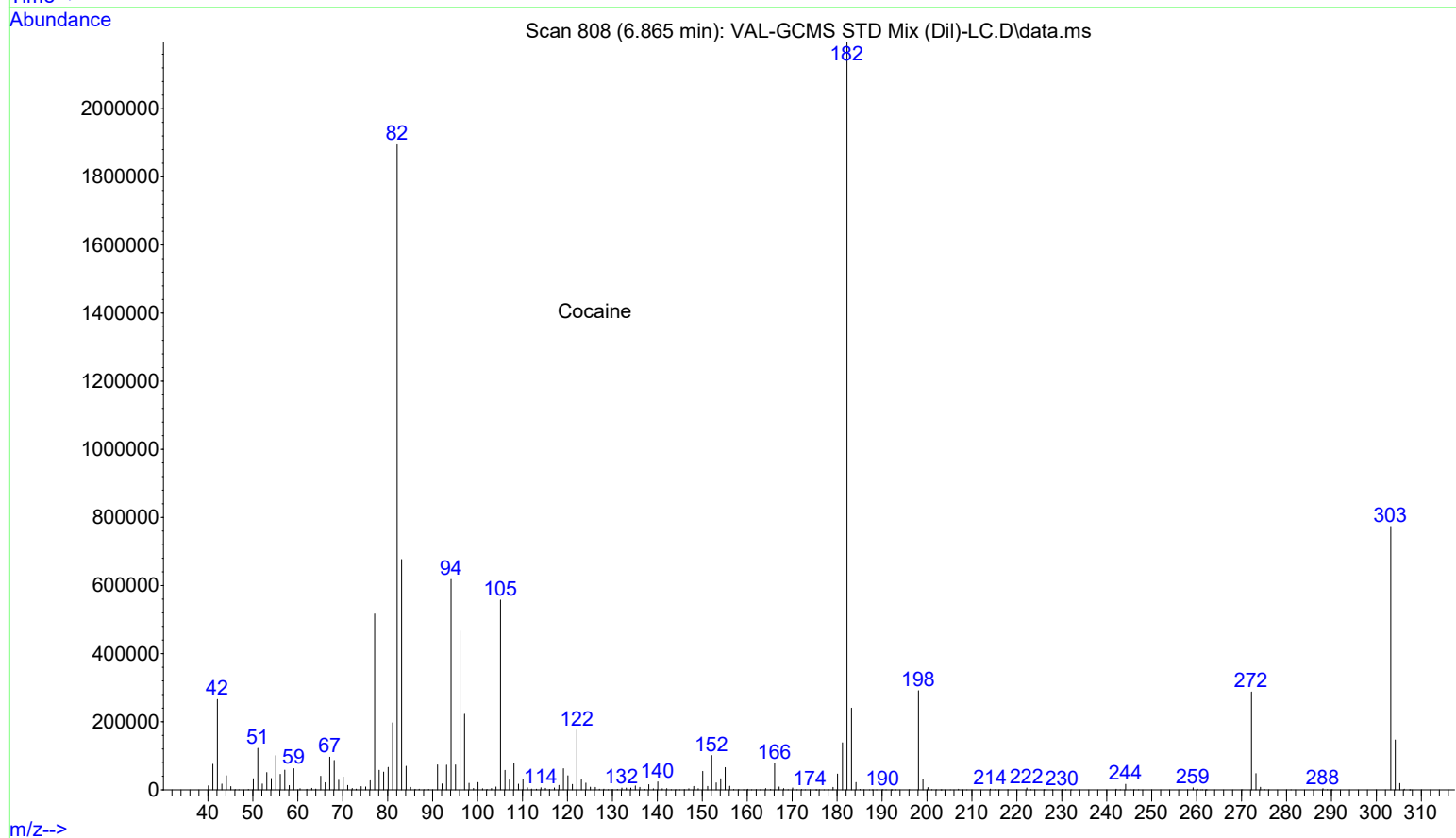
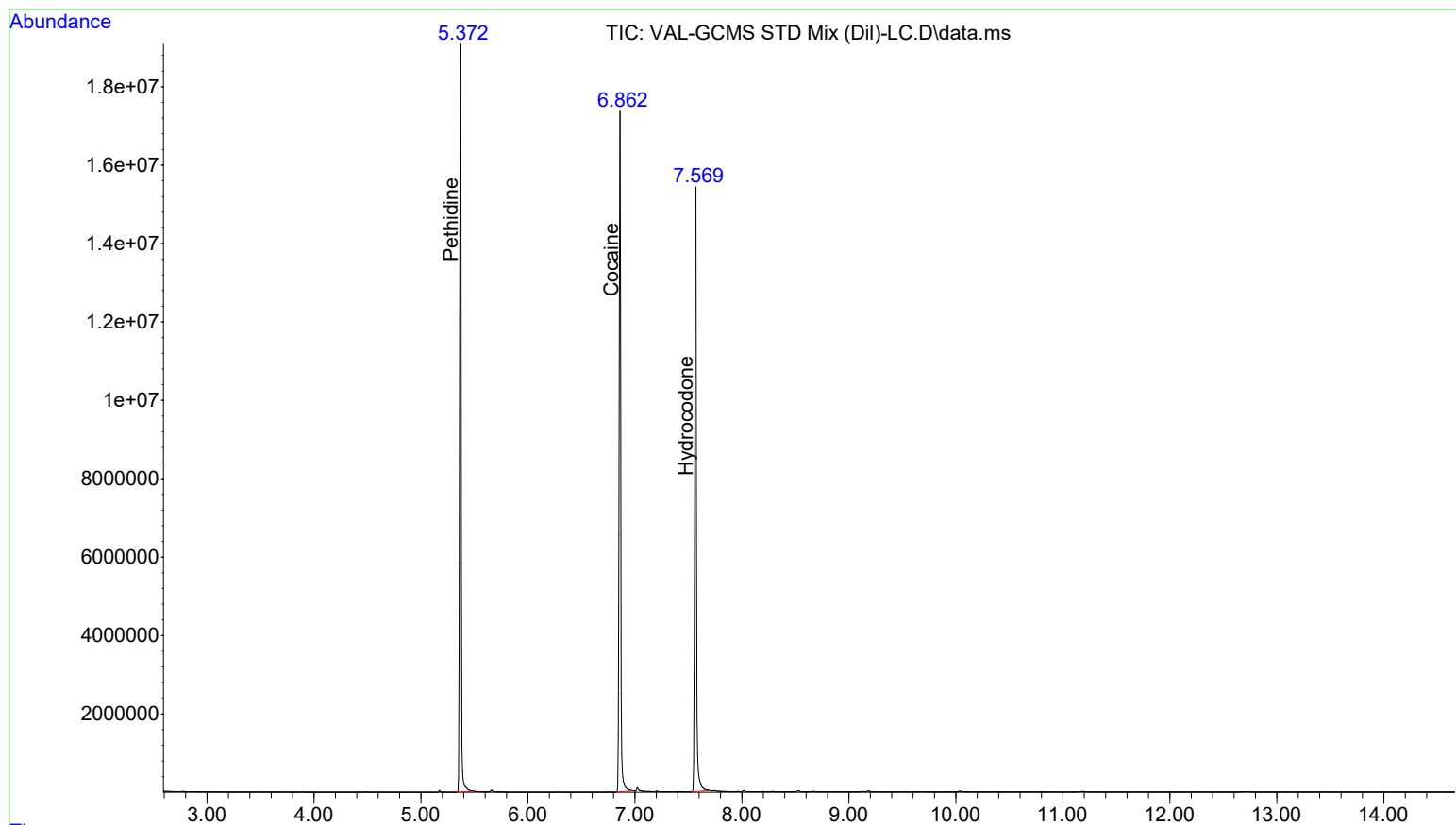
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix (Diluted)-LC.D
Operator :
Acquired : 20 Jun 2025 12:34 using AcqMethod DRUG1LC.M
Instrument : Luna
Sample Name: GCMS STD Mix (Diluted)-LC
Misc Info : CHCl3
Vial Number: 15

108



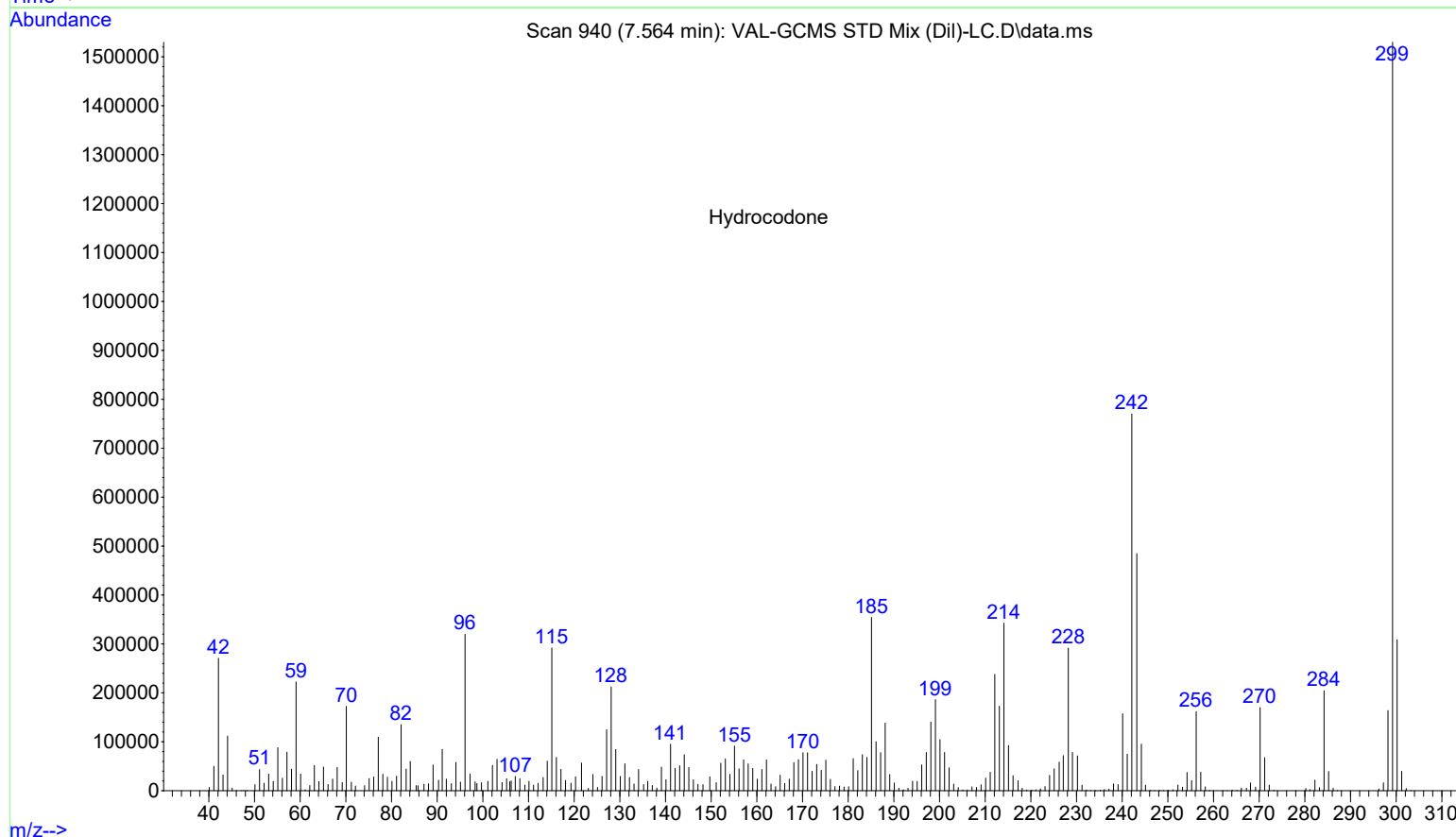
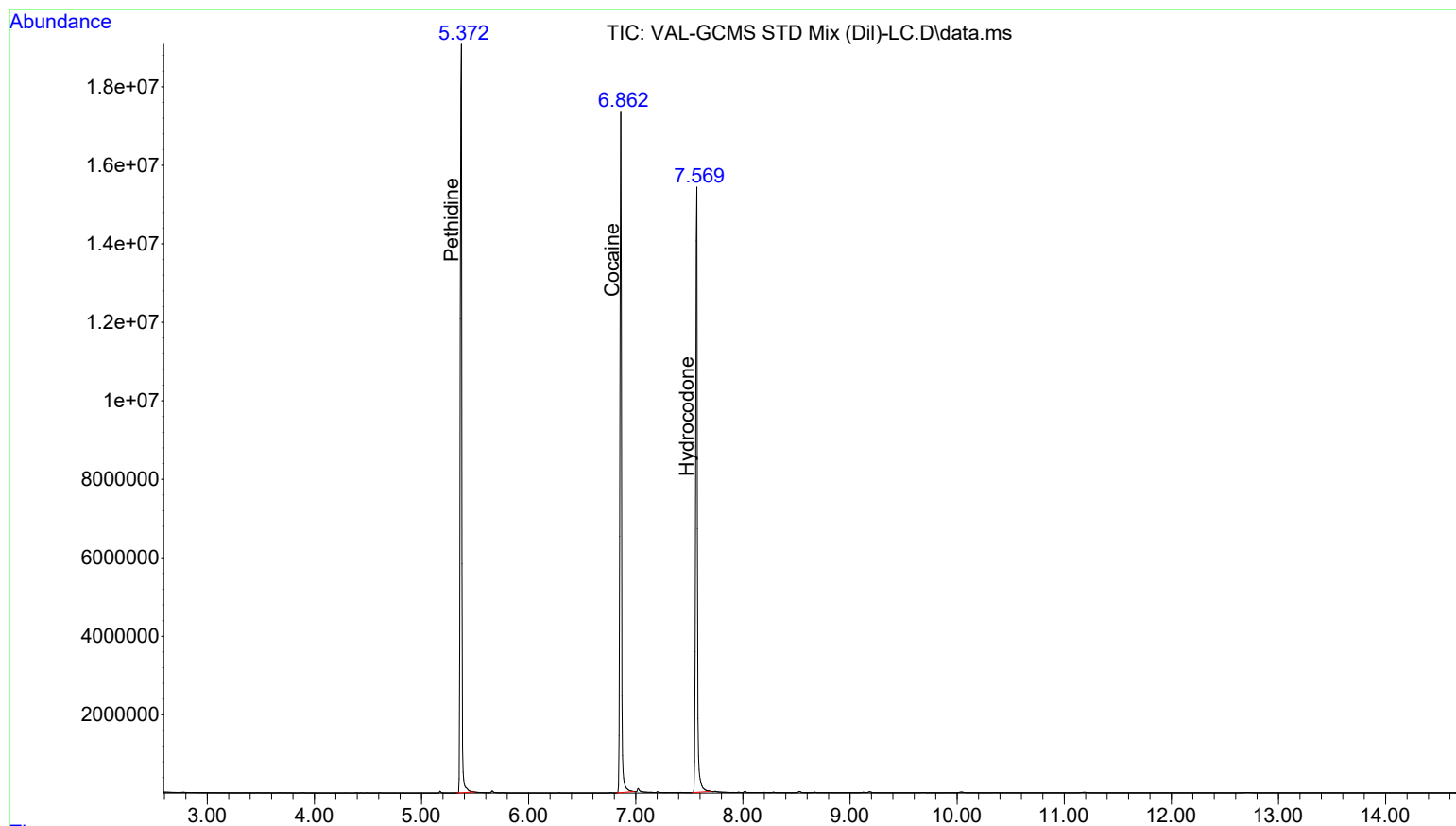
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix (Diluted)-LC.D
Operator :
Acquired : 20 Jun 2025 12:34 using AcqMethod DRUG1LC.M
Instrument : Luna
Sample Name: GCMS STD Mix (Diluted)-LC
Misc Info : CHCl3
Vial Number: 15

109



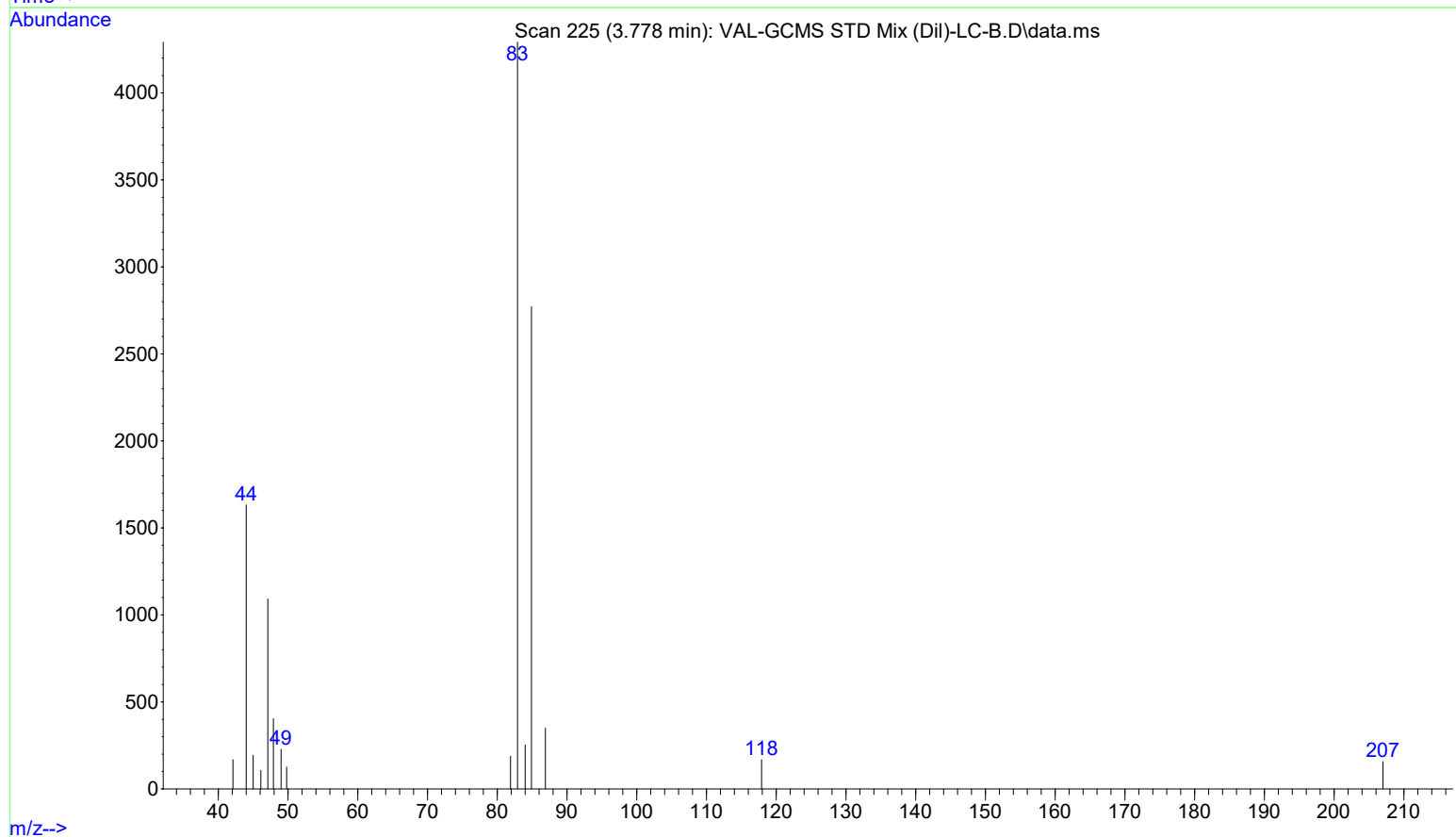
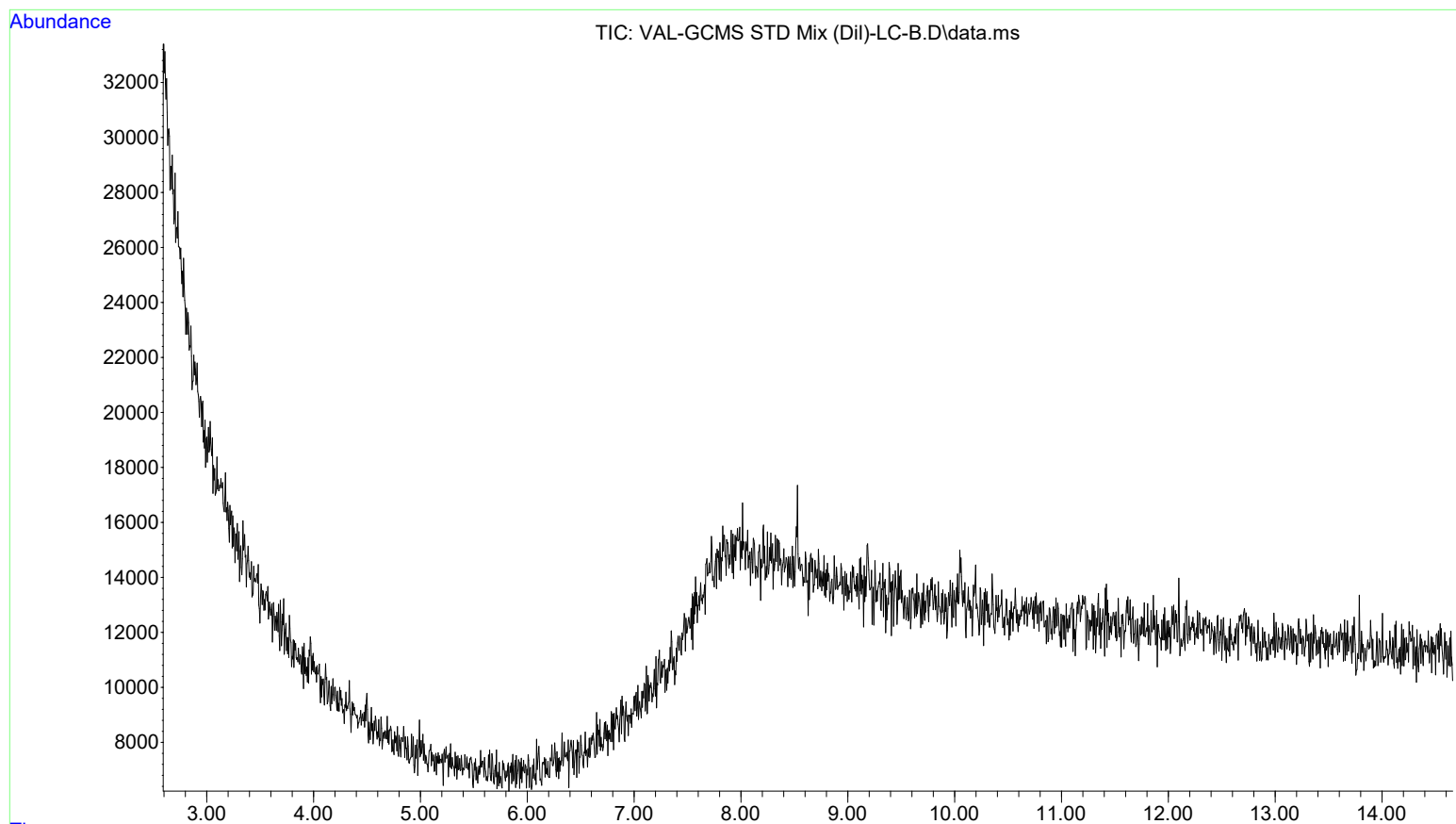
File : Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix (Diluted)-LC.D
Operator :
Acquired : 20 Jun 2025 12:34 using AcqMethod DRUG1LC.M
Instrument : Luna
Sample Name: GCMS STD Mix (Diluted)-LC
Misc Info : CHCl3
Vial Number: 15

110



File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix (Diluted)-LC-B.D
Operator :
Acquired : 20 Jun 2025 12:17 using AcqMethod DRUG1LC.M
Instrument : Luna
Sample Name: GCMS STD Mix (Diluted)-LC-Blank
Misc Info : CHCl3
Vial Number: 12

111



Method Information for: C:\MassHunter\GCMS\1\methods\OPIATE.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:
OPIATE

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\OPIATE.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	2.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
2.00	40	550	100	3,125 [N=1]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	50	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\OPIATE.M
Mon Jun 30 15:51:35 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 6.6667 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 200 °C
Hold Time 1 min
Post Run 80 °C
Program
#1 Rate 30 °C/min
#1 Value 280 °C
#1 Hold Time 3 min

Equilibration Time 0 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled

Tower Fan On
Solvent Wash Mode A, B

115

Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 18.31 psi
Total Flow On 49.009 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 40 :1
Split Flow 46.838 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
(Initial) 1.1709 mL/min
Post Run 2 mL/min

116

Column Information Agilent 128-0112
Description DB-1ms
Temperature Range -60 °C-340 °C (350 °C)
Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
Heater Oven
In Front SS Inlet He
Out MSD
(Initial) 200 °C
Pressure 18.31 psi
Flow 1.1709 mL/min
Average Velocity 66.278 cm/sec
Holdup Time 0.30176 min
Control Mode Constant Flow

Column #2
Flow
Setpoint Off
(Initial) 0.5 mL/min
Post Run 2 mL/min

Column Information Agilent 19091Z-211
Description HP-1
Temperature Range -60 °C-325 °C (350 °C)
Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
Heater Oven
In Back SS Inlet He
Out Back Detector FID
(Initial) 200 °C
Pressure 2.7899 psi
Flow 0.5 mL/min
Average Velocity 15.169 cm/sec
Holdup Time 1.6481 min
Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Makeup He
Heater Off
H2 Flow Off
Air Flow Off
Makeup Flow Off
Carrier Gas Flow Correction Constant Makeup and Fuel Flow
Flame Off

Aux EPC 1,2,3
Aux EPC 1 He
Pressure
Setpoint Off
(Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Aux EPC 1 He (unused)

Aux EPC 2 He
Pressure
Setpoint Off
(Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 2 He	(unused)	
Aux EPC 3 He		117
Pressure		
Setpoint	Off	
(Initial)	10 psi	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 3 He	(unused)	
Signals		
Signal #1: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #2: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #3: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #4: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\OPIATE.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search Minimum Quality

DEMO.L 0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

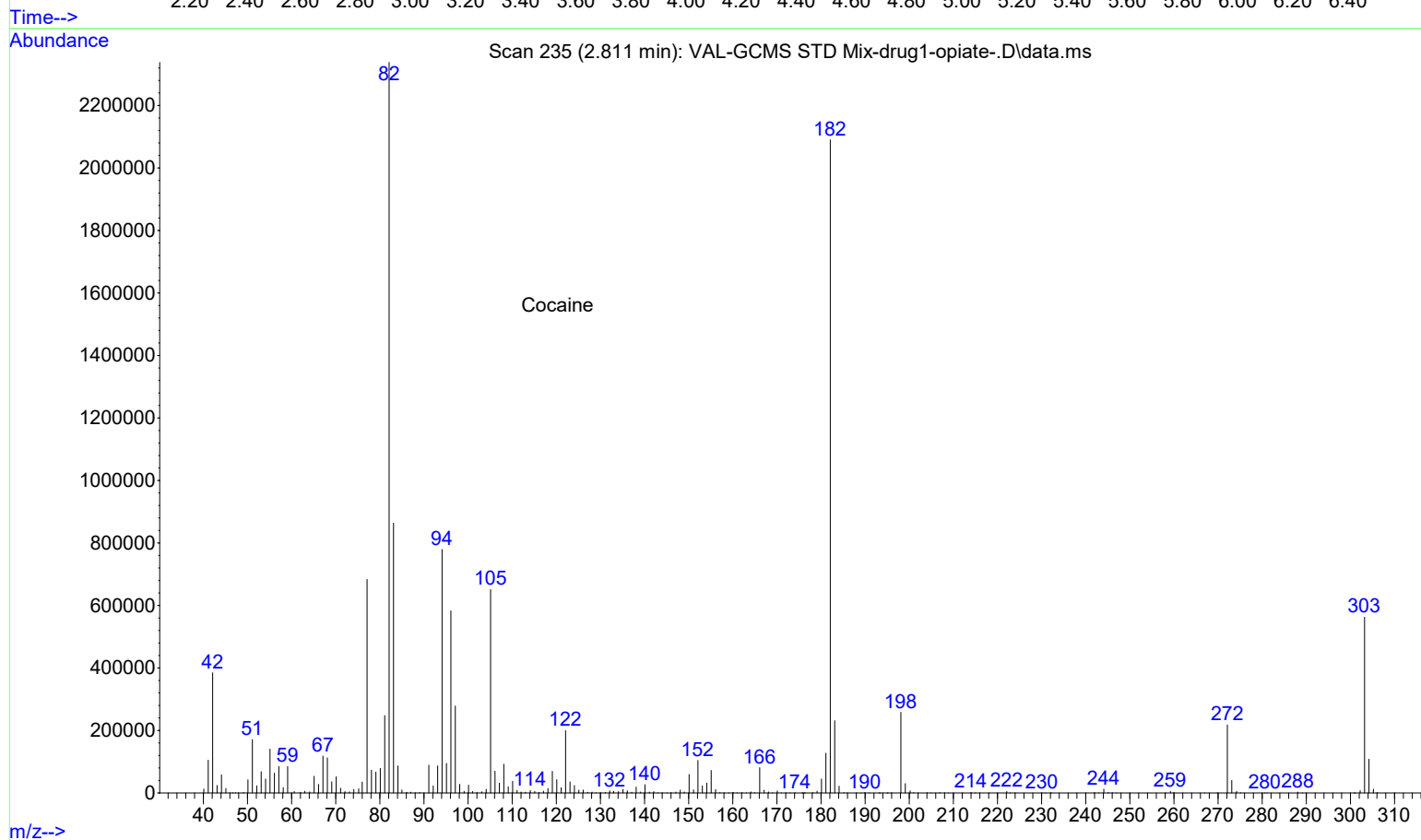
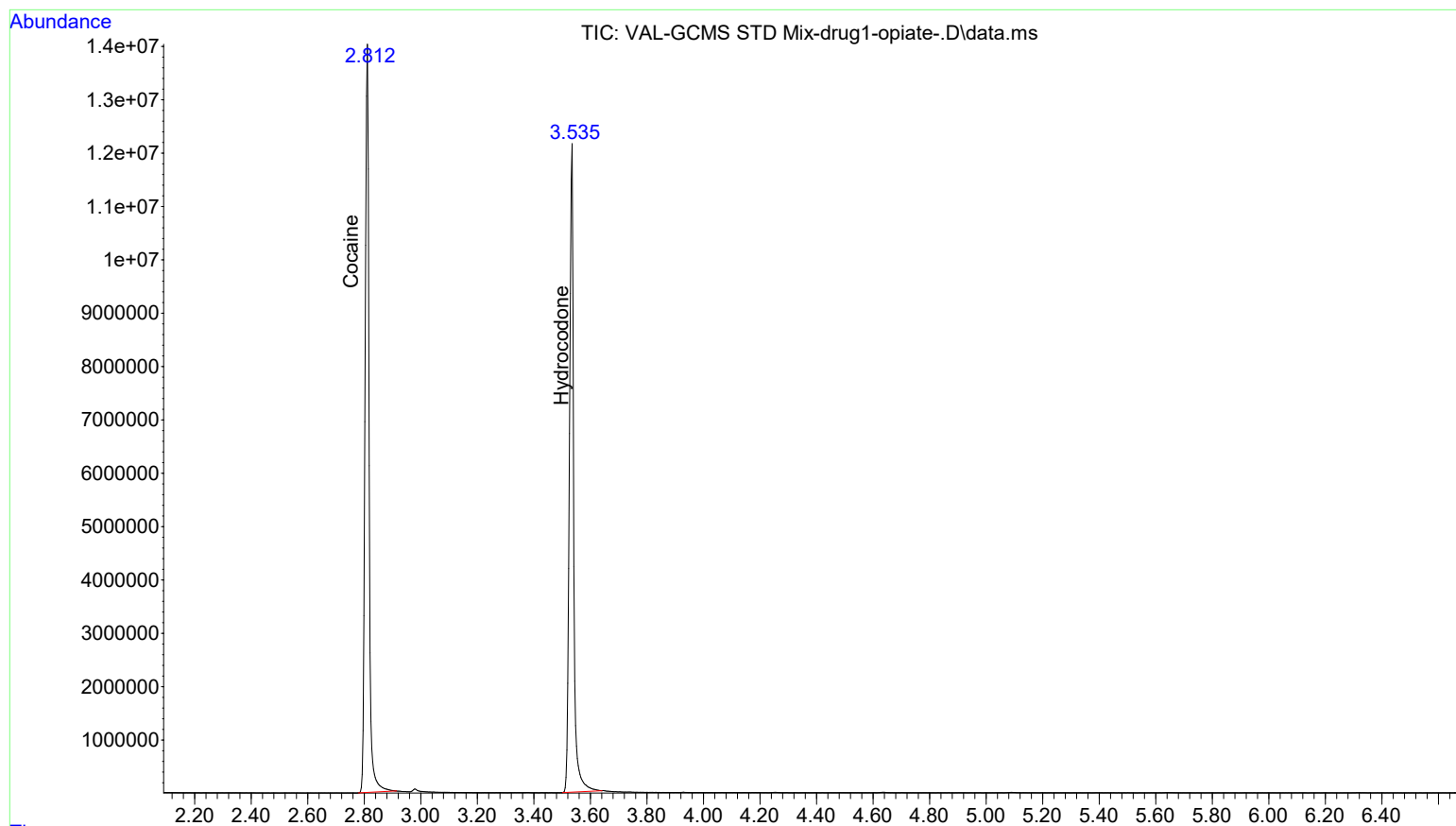
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:51:48 2025

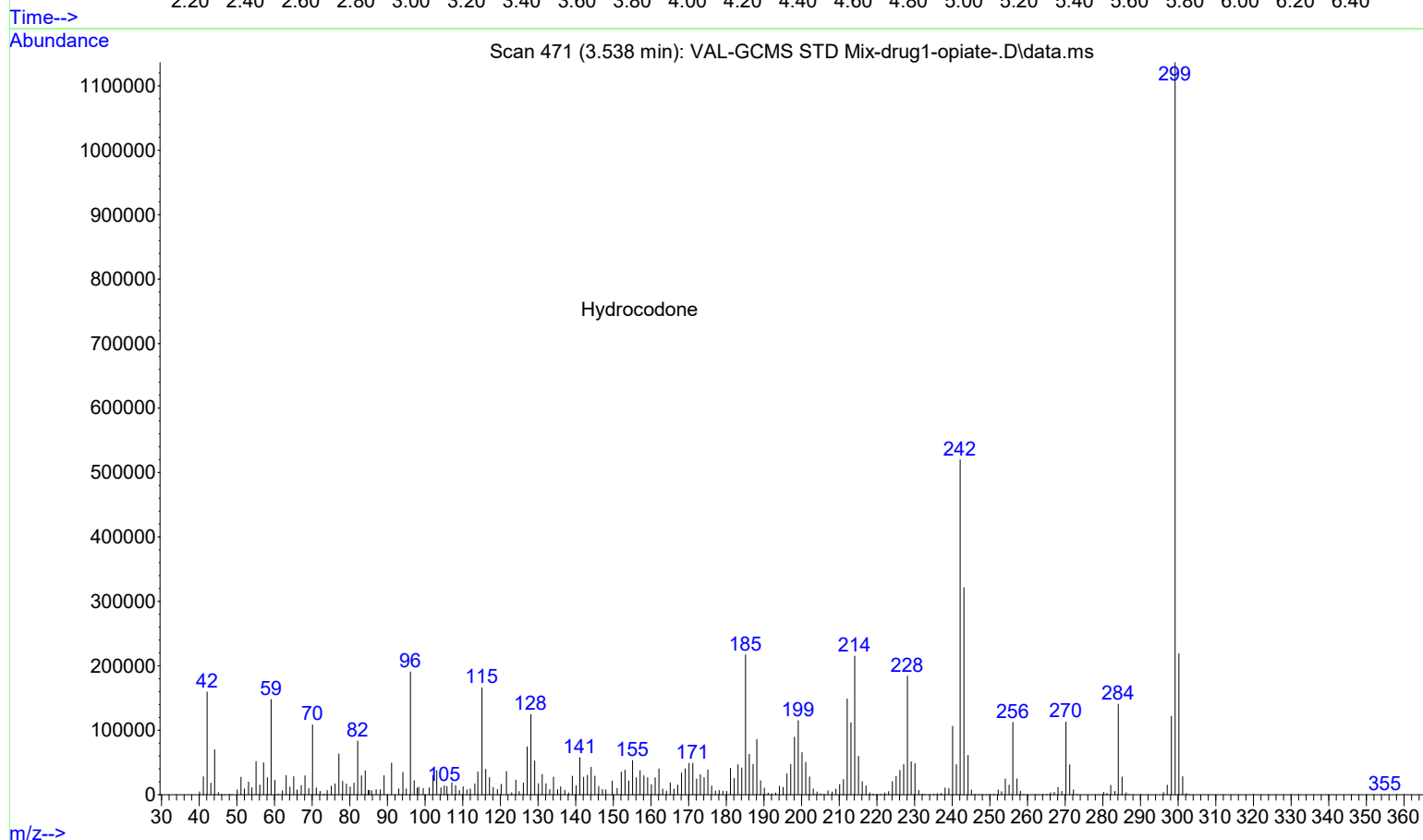
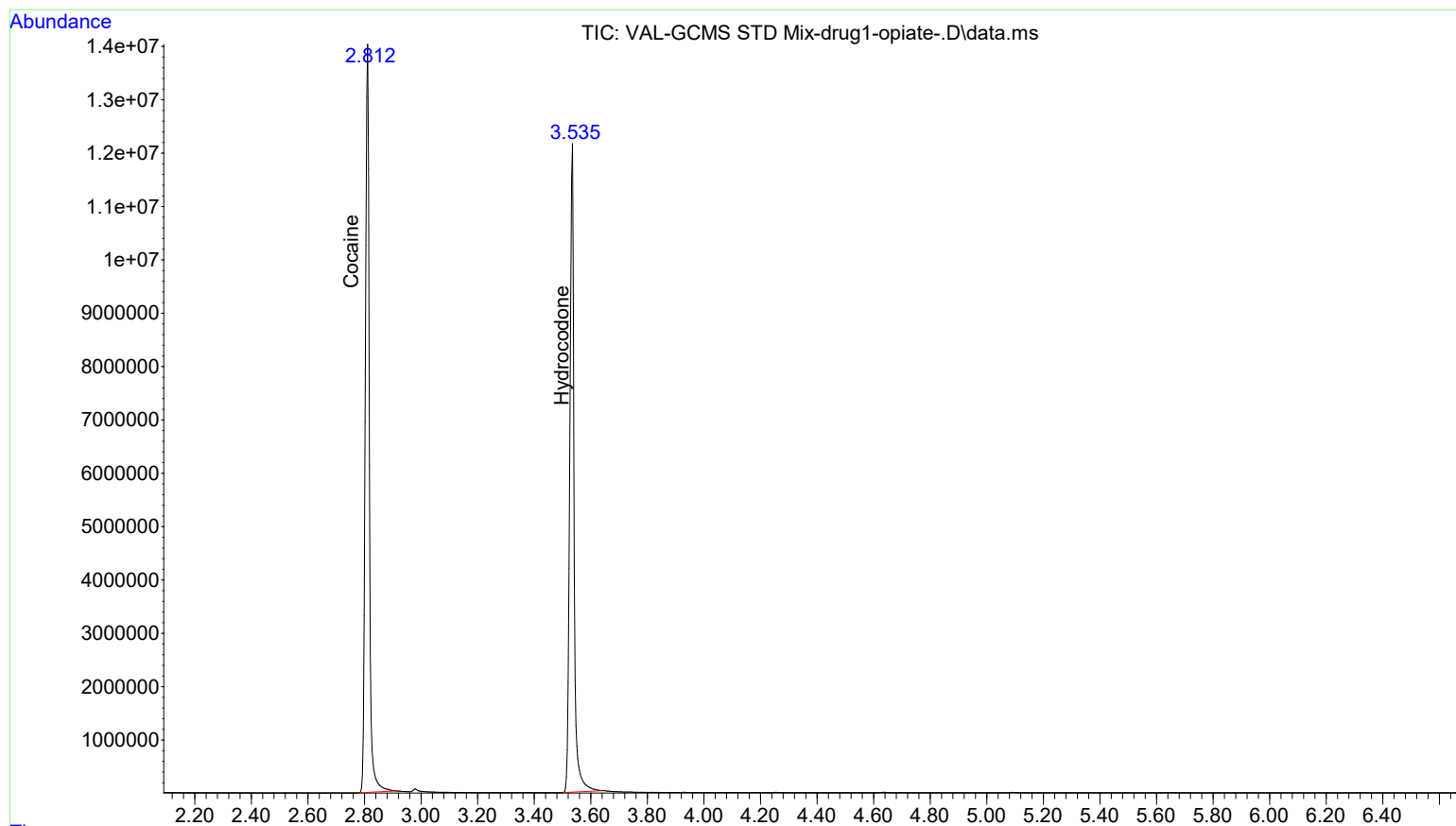
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix-drug1-opiate-.D
Operator :
Acquired : 19 Jun 2025 16:09 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: GCMS STD Mix
Misc Info : CHCl3
Vial Number: 15

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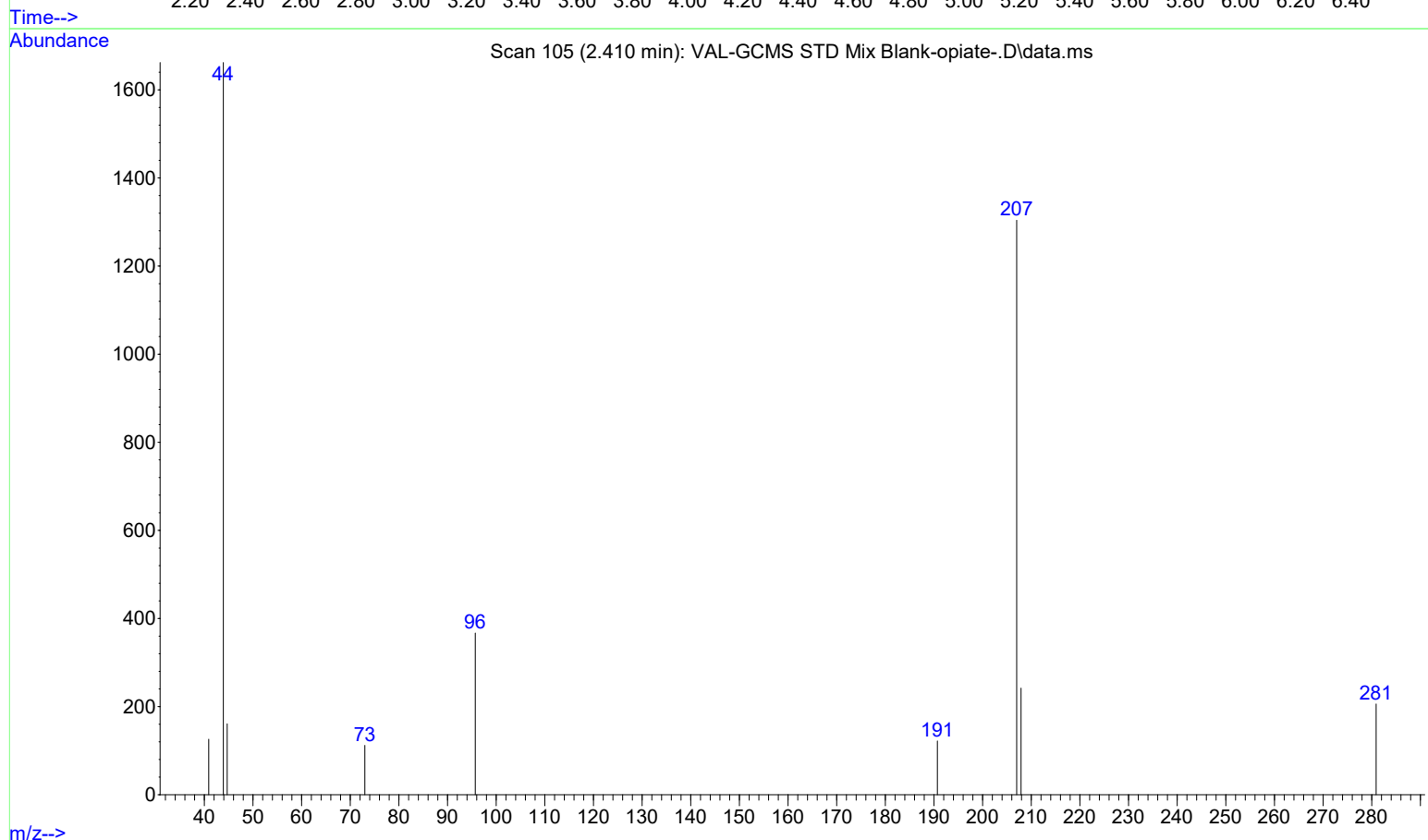
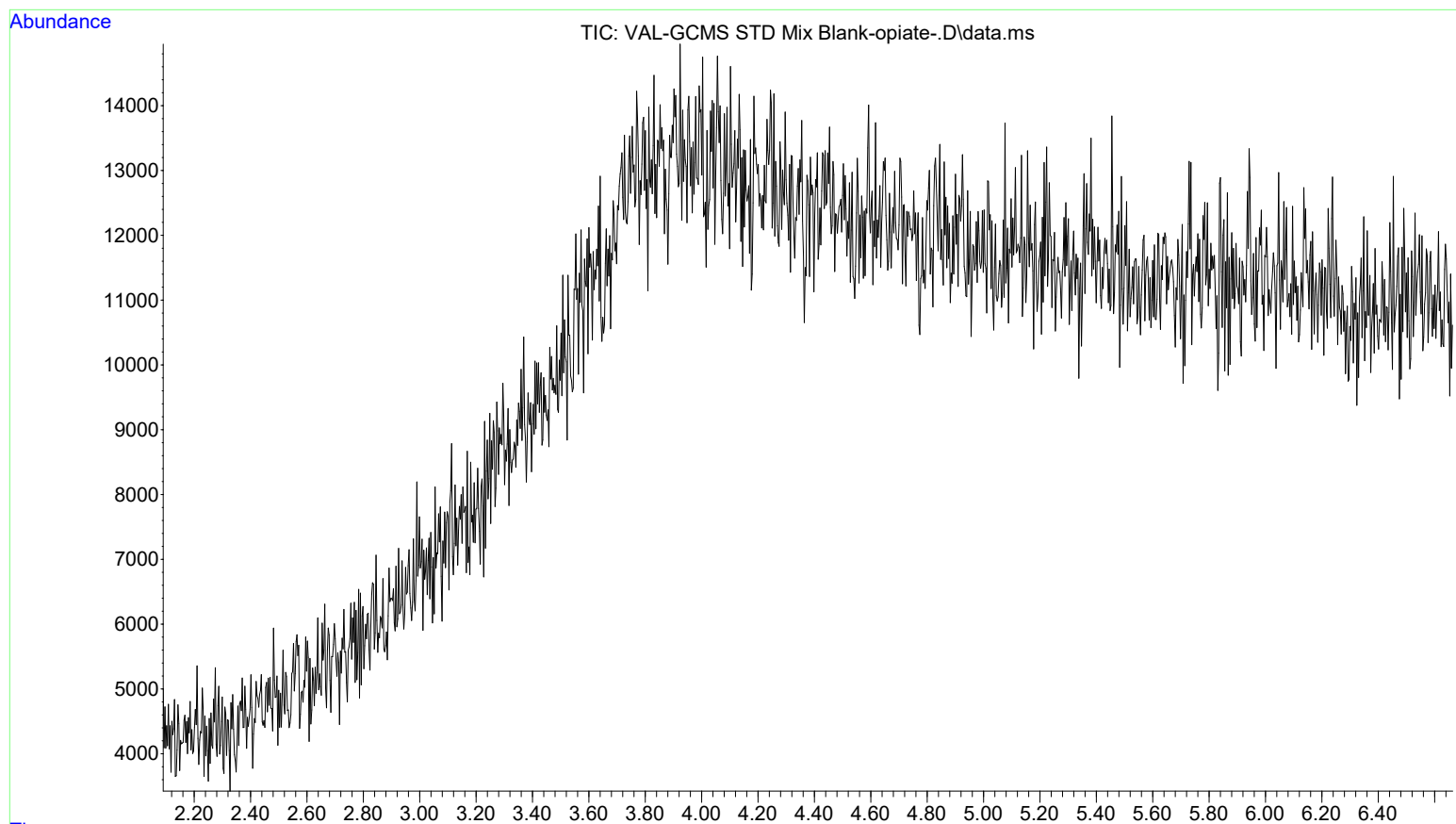
File : Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix-drug1-opiate-.D
Operator :
Acquired : 19 Jun 2025 16:09 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: GCMS STD Mix
Misc Info : CHCl3
Vial Number: 15

122



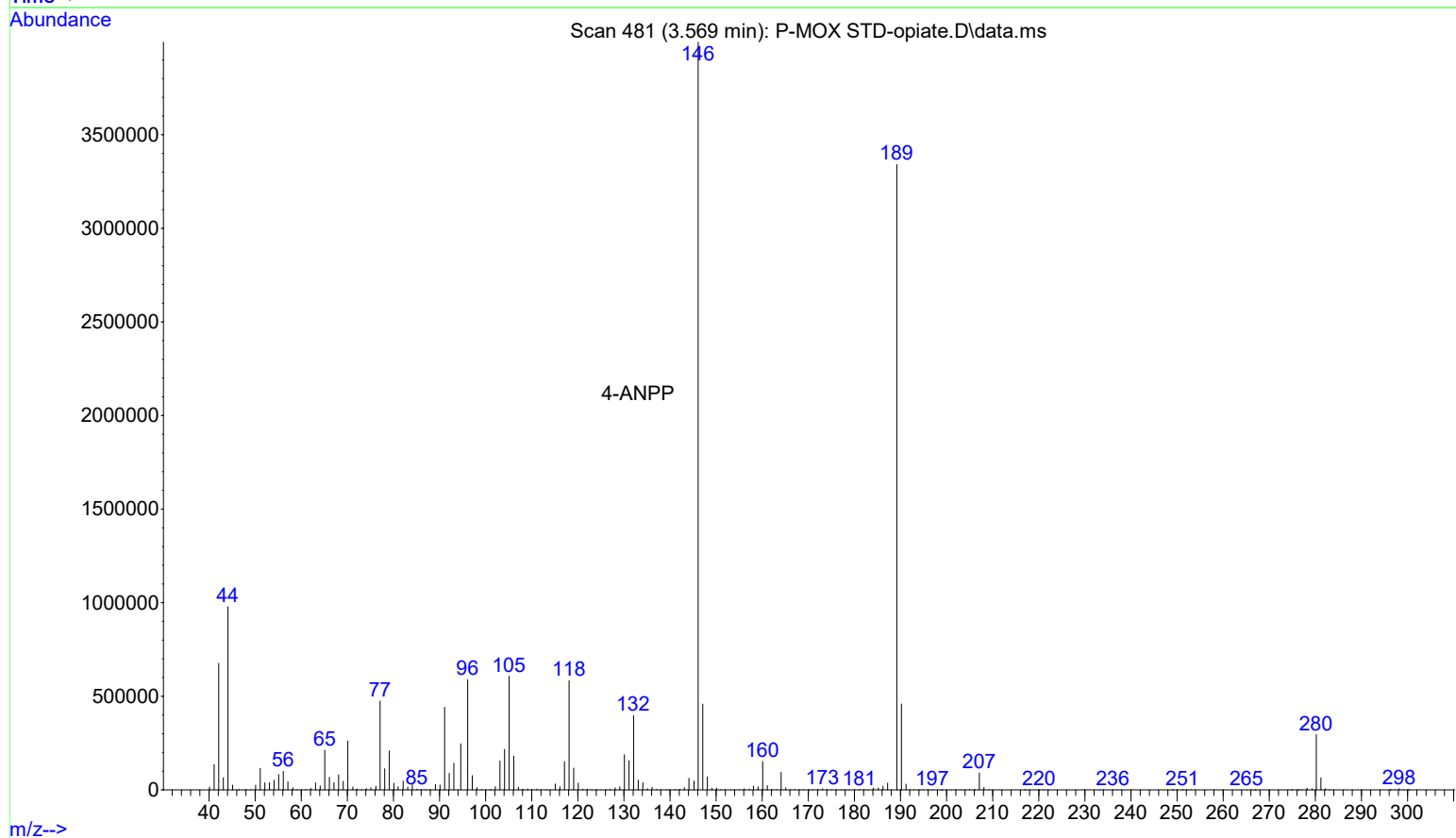
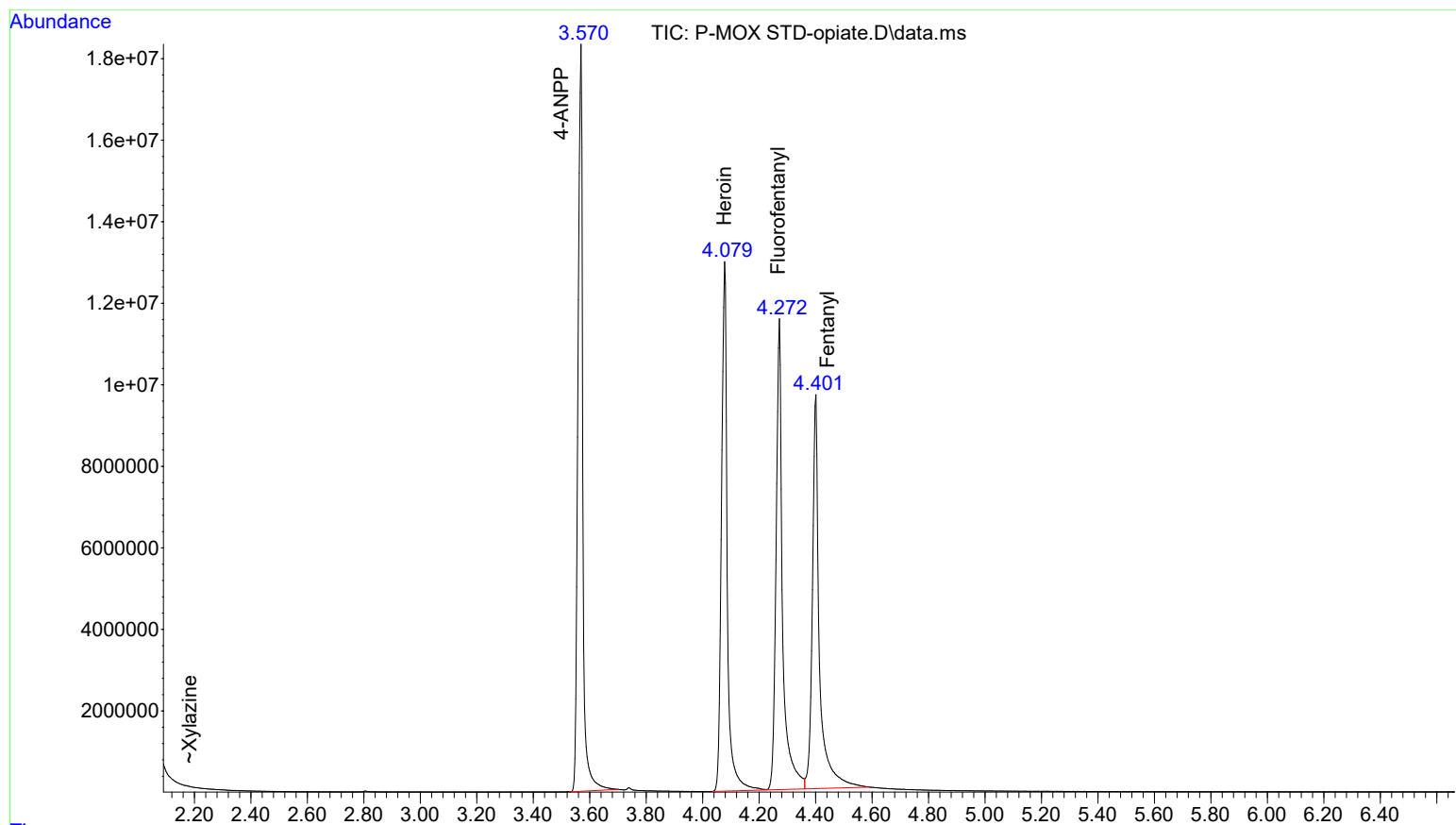
File :Z:\Instr\Luna\2025\6-June\VAL-GCMS STD Mix Blank-opiate-.D
Operator :
Acquired : 19 Jun 2025 16:01 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: GCMS STD Mix Blank
Misc Info : CHCl3
Vial Number: 12

123



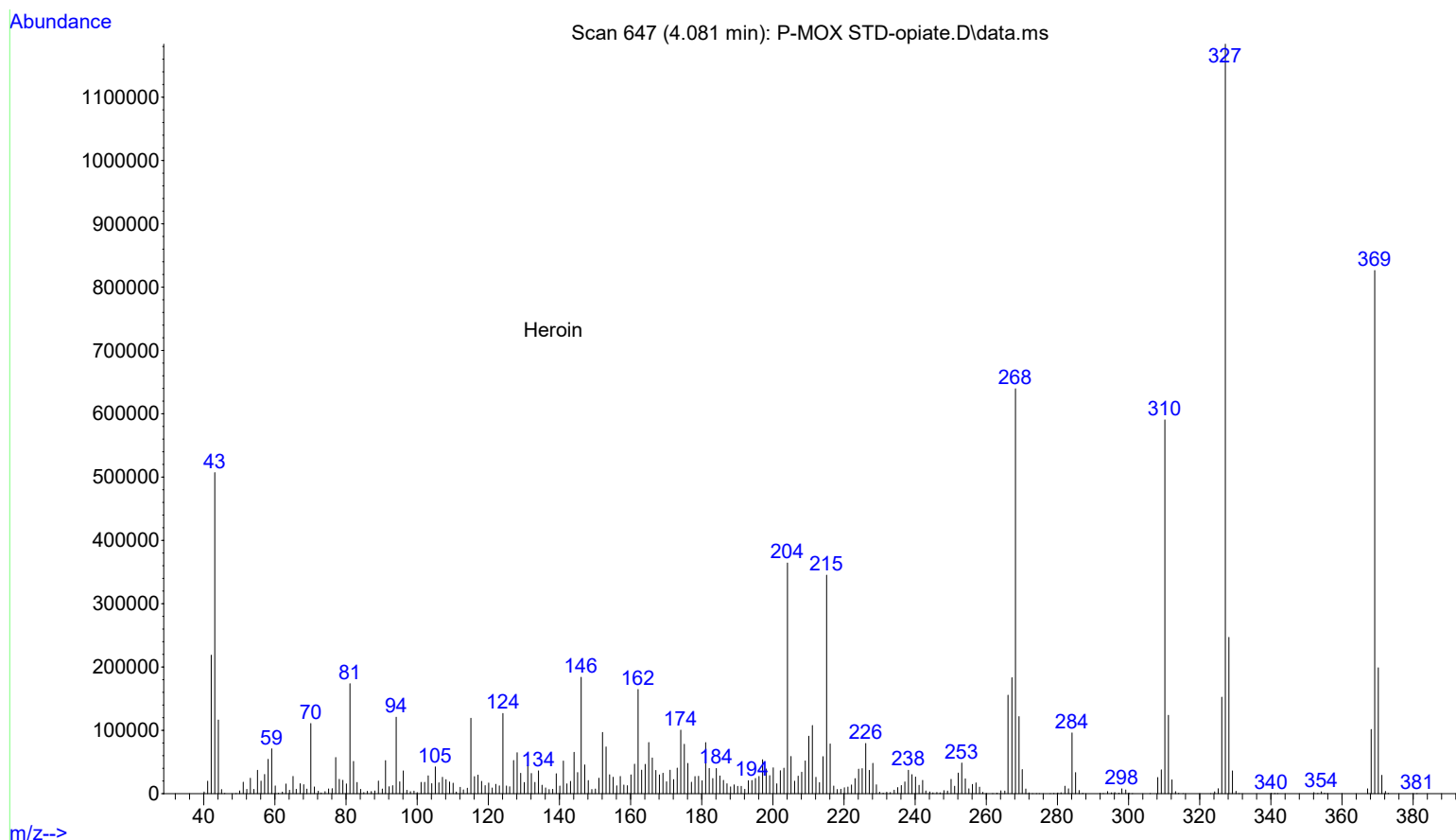
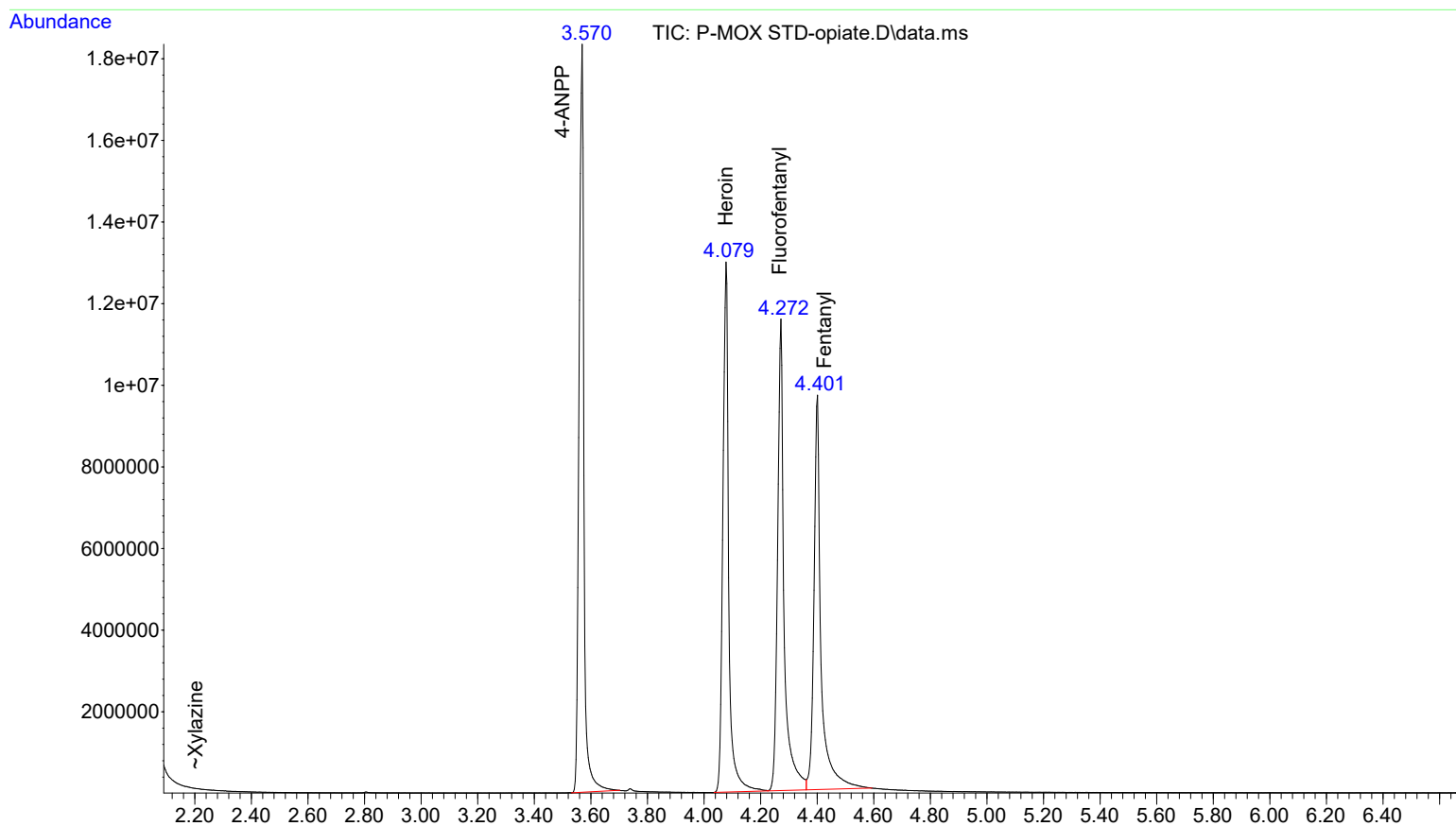
File : Z:\Instr\Luna\2025\6-June\P-MOX STD-opiate.D
Operator :
Acquired : 19 Jun 2025 17:03 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: P-MOX STD
Misc Info : CHCl3
Vial Number: 17

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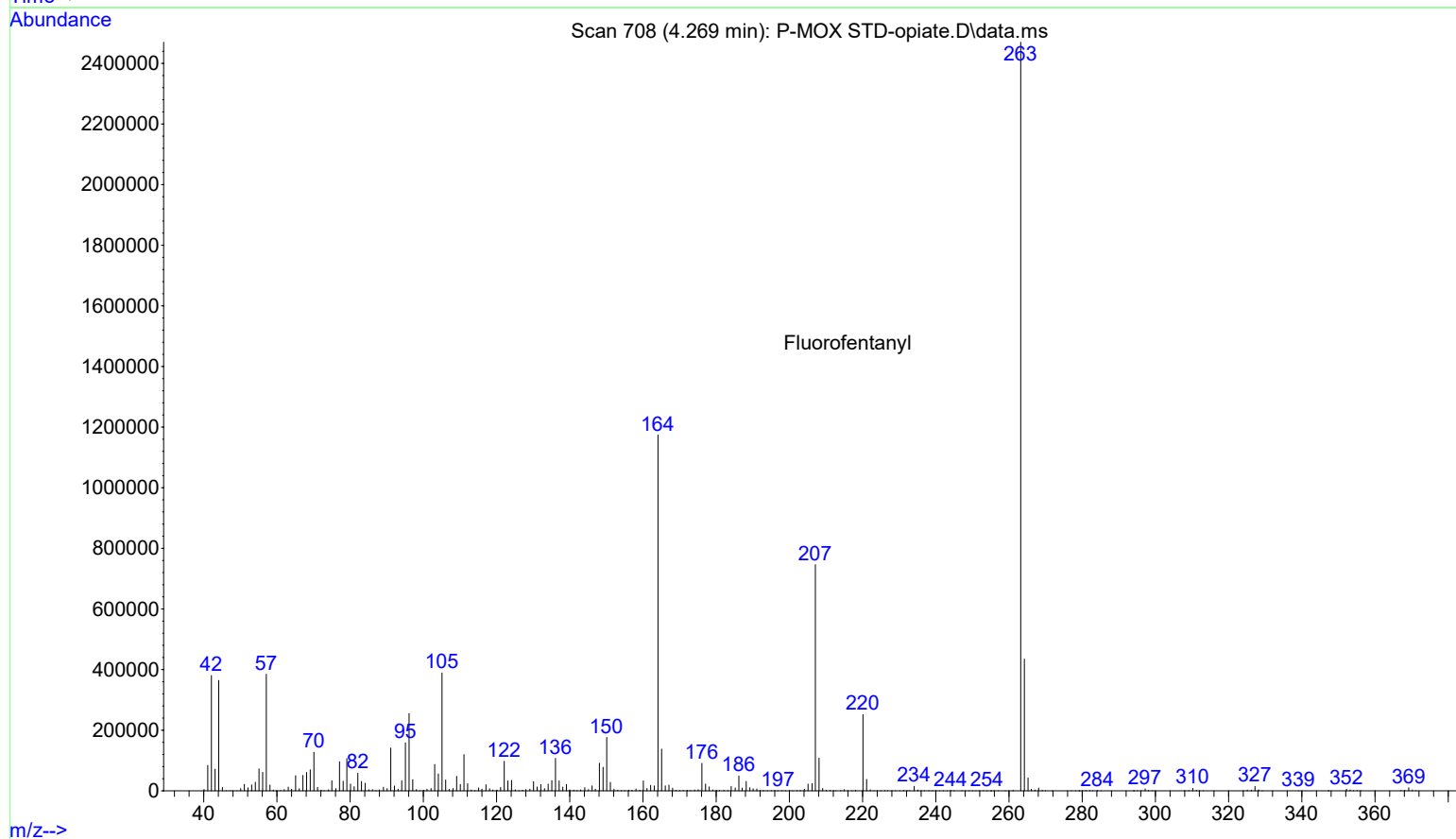
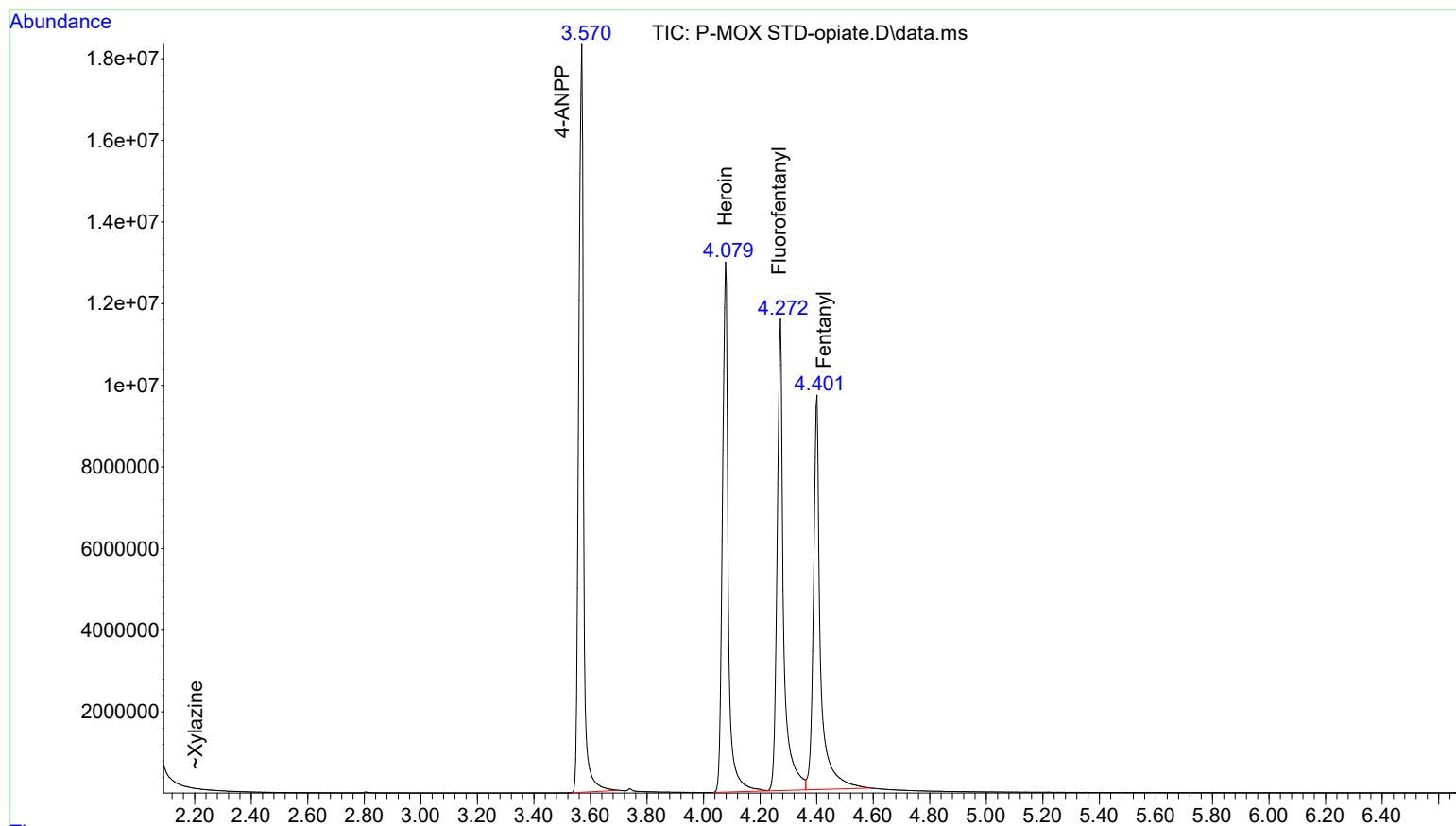
File :Z:\Instr\Luna\2025\6-June\P-MOX STD-opiate.D
Operator :
Acquired : 19 Jun 2025 17:03 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: P-MOX STD
Misc Info : CHCl3
Vial Number: 17

125



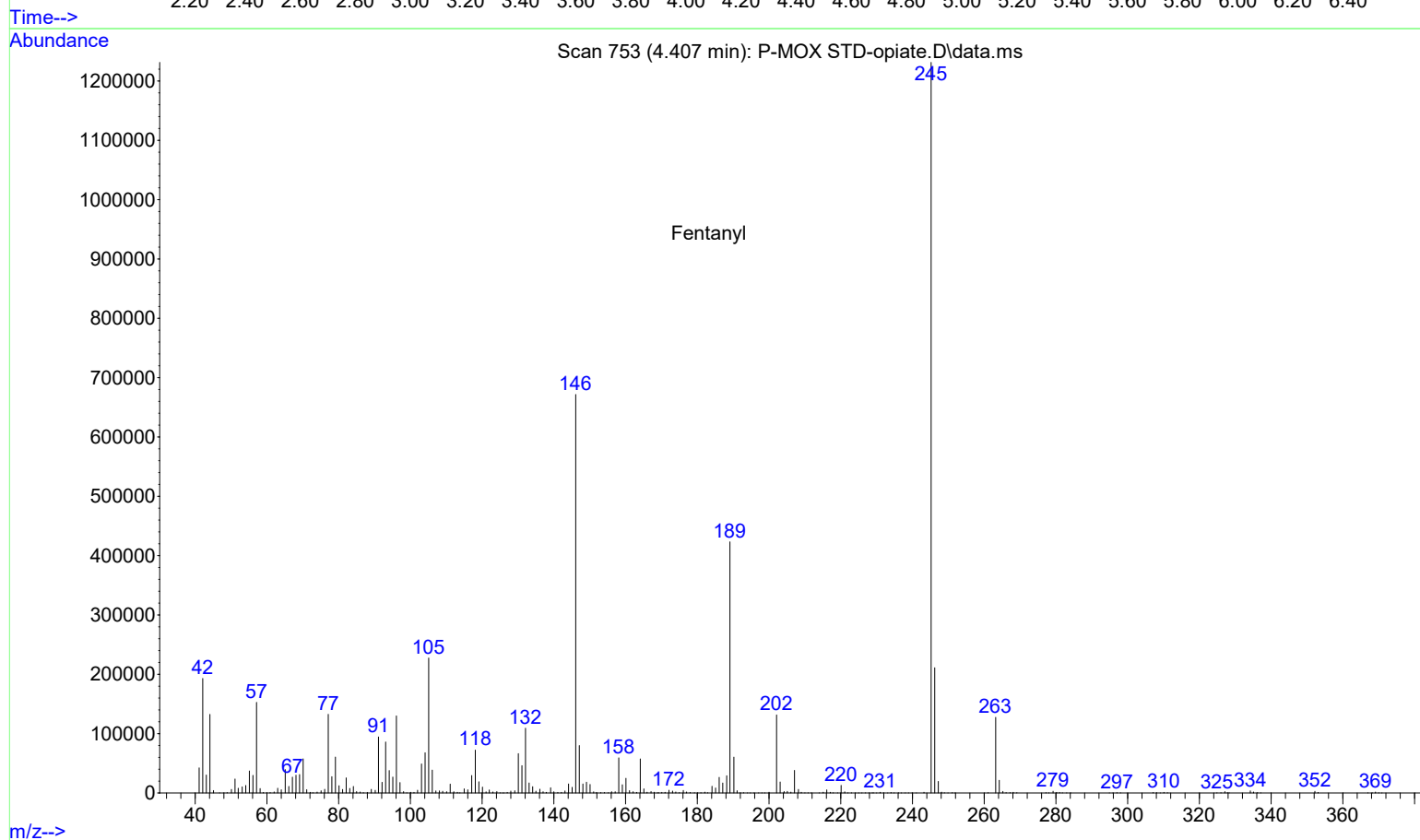
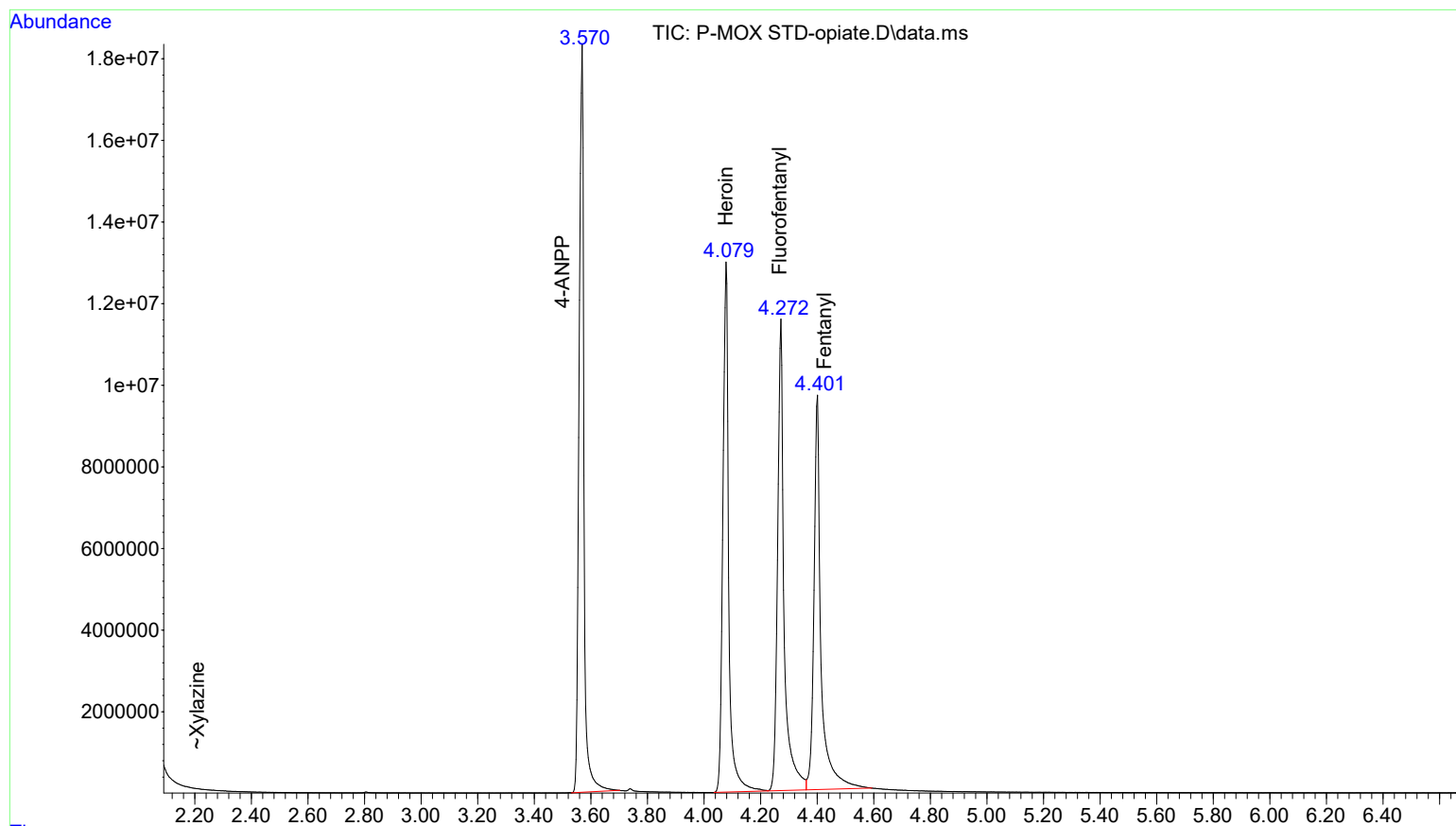
File :Z:\Instr\Luna\2025\6-June\P-MOX STD-opiate.D
Operator :
Acquired : 19 Jun 2025 17:03 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: P-MOX STD
Misc Info : CHCl3
Vial Number: 17

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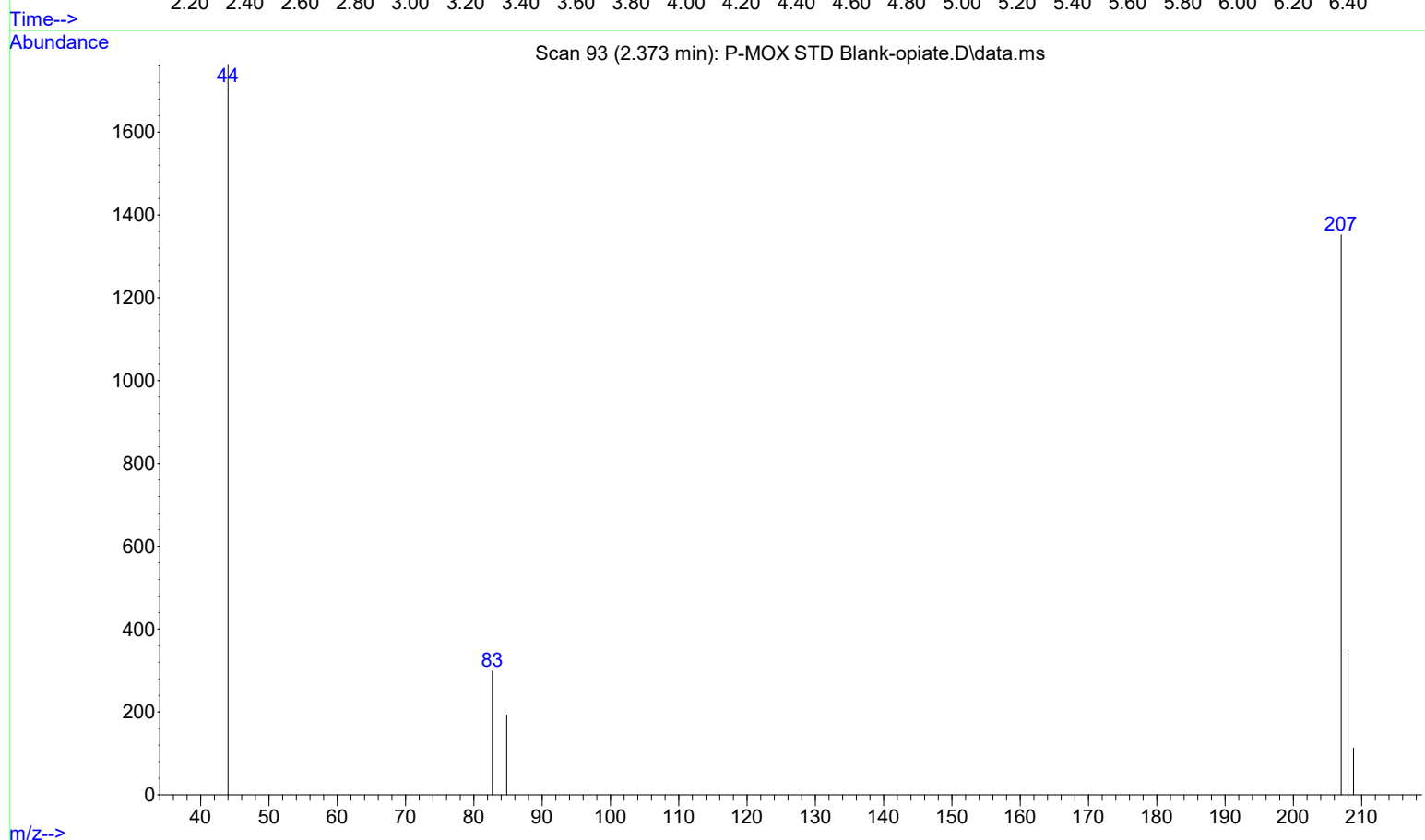
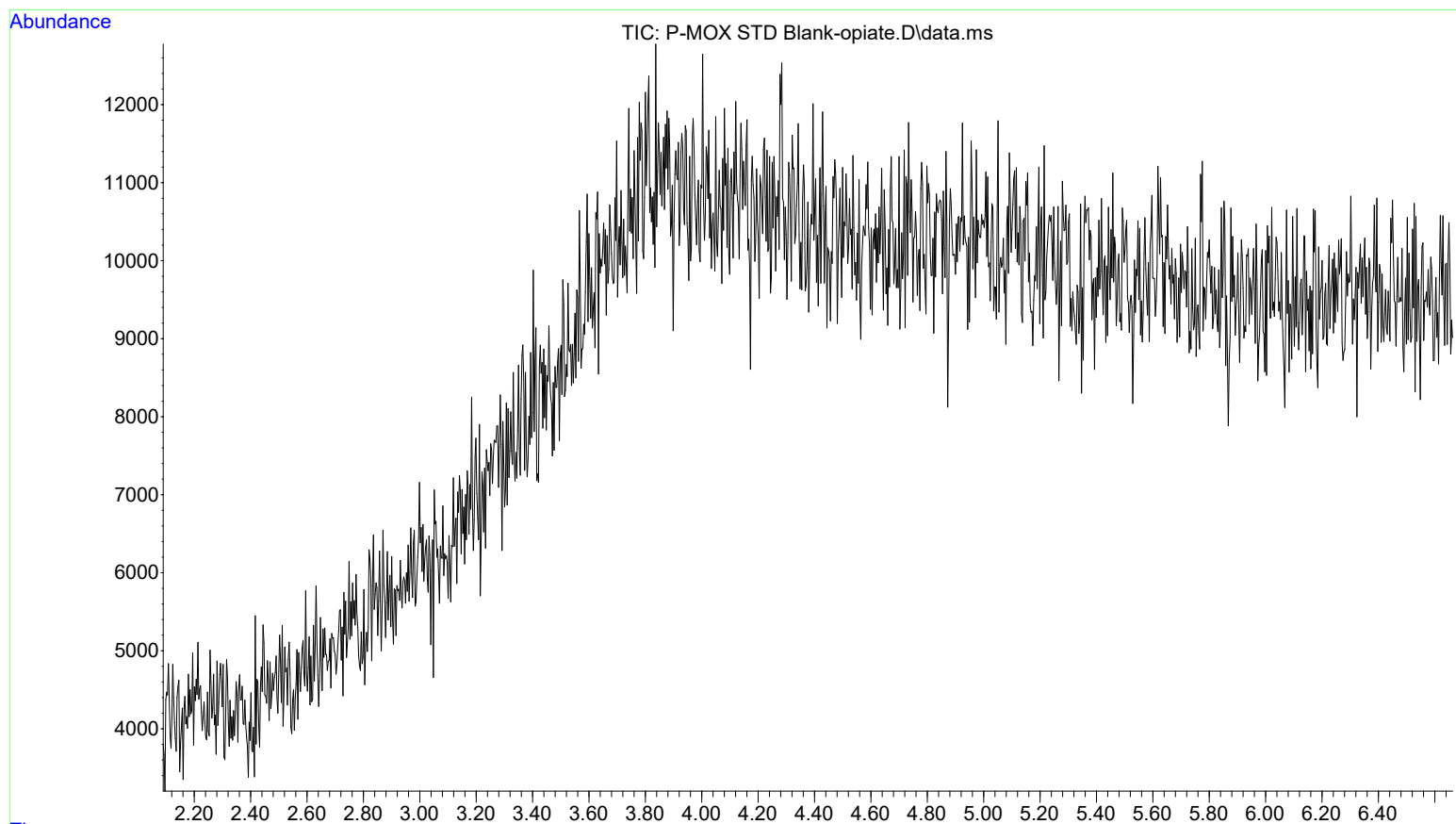
File :Z:\Instr\Luna\2025\6-June\P-MOX STD-opiate.D
Operator :
Acquired : 19 Jun 2025 17:03 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: P-MOX STD
Misc Info : CHCl3
Vial Number: 17

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File :Z:\Instr\Luna\2025\6-June\P-MOX STD Blank-opiate.D
Operator :
Acquired : 19 Jun 2025 16:54 using AcqMethod OPIATE.M
Instrument : Luna
Sample Name: P-MOX STD Blank
Misc Info : CHCl3
Vial Number: 12

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Method Information for: C:\MassHunter\GCMS\1\methods\STEROID.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:
STEROID

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\STEROID.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	2.50
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
2.50	40	550	80	1,562 [N=2]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	500

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\STEROID.M
Mon Jun 30 15:52:48 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 20 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 70 °C
Hold Time 1 min
Post Run 80 °C
Program
#1 Rate 30 °C/min
#1 Value 280 °C
#1 Hold Time 12 min

Equilibration Time 0.5 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 1
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled

Tower Fan On
Solvent Wash Mode A, B

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Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 250 °C
Pressure On 8.21 psi
Total Flow On 44.439 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 43.9 :1
Split Flow 42.472 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
 (Initial) 0.96746 mL/min
 Post Run 2 mL/min

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Column Information Agilent 128-0112
 Description DB-1ms
 Temperature Range -60 °C-340 °C (340 °C)
 Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
 Heater Oven
 In Front SS Inlet He
 Out MSD
 (Initial) 70 °C
 Pressure 8.21 psi
 Flow 0.96746 mL/min
 Average Velocity 57.226 cm/sec
 Holdup Time 0.34949 min
 Control Mode Constant Flow

Column #2
 Flow
 Setpoint Off
 (Initial) 0.5 mL/min
 Post Run 2 mL/min

Column Information Agilent 19091Z-211
 Description HP-1
 Temperature Range -60 °C-325 °C (325 °C)
 Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
 Heater Oven
 In Back SS Inlet He
 Out Back Detector FID
 (Initial) 70 °C
 Pressure 1.6842 psi
 Flow 0.5 mL/min
 Average Velocity 11.41 cm/sec
 Holdup Time 2.191 min
 Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
 Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Makeup He
 Heater Off
 H2 Flow Off
 Air Flow Off
 Makeup Flow Off
 Carrier Gas Flow Correction Constant Makeup and Fuel Flow
 Flame Off

Aux EPC 1,2,3
 Aux EPC 1 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Aux EPC 1 He (unused)

Aux EPC 2 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 2 He	(unused)	
Aux EPC 3 He		134
Pressure		
Setpoint	Off	
(Initial)	10 psi	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 3 He	(unused)	
Signals		
Signal #1: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	
Signal #2: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	500 Hz	
Dual Injection Assignment	Back Sample	
Signal #3: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	10 Hz	
Dual Injection Assignment	Back Sample	
Signal #4: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\STEROID.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search	Minimum Quality
DEMO.L	0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

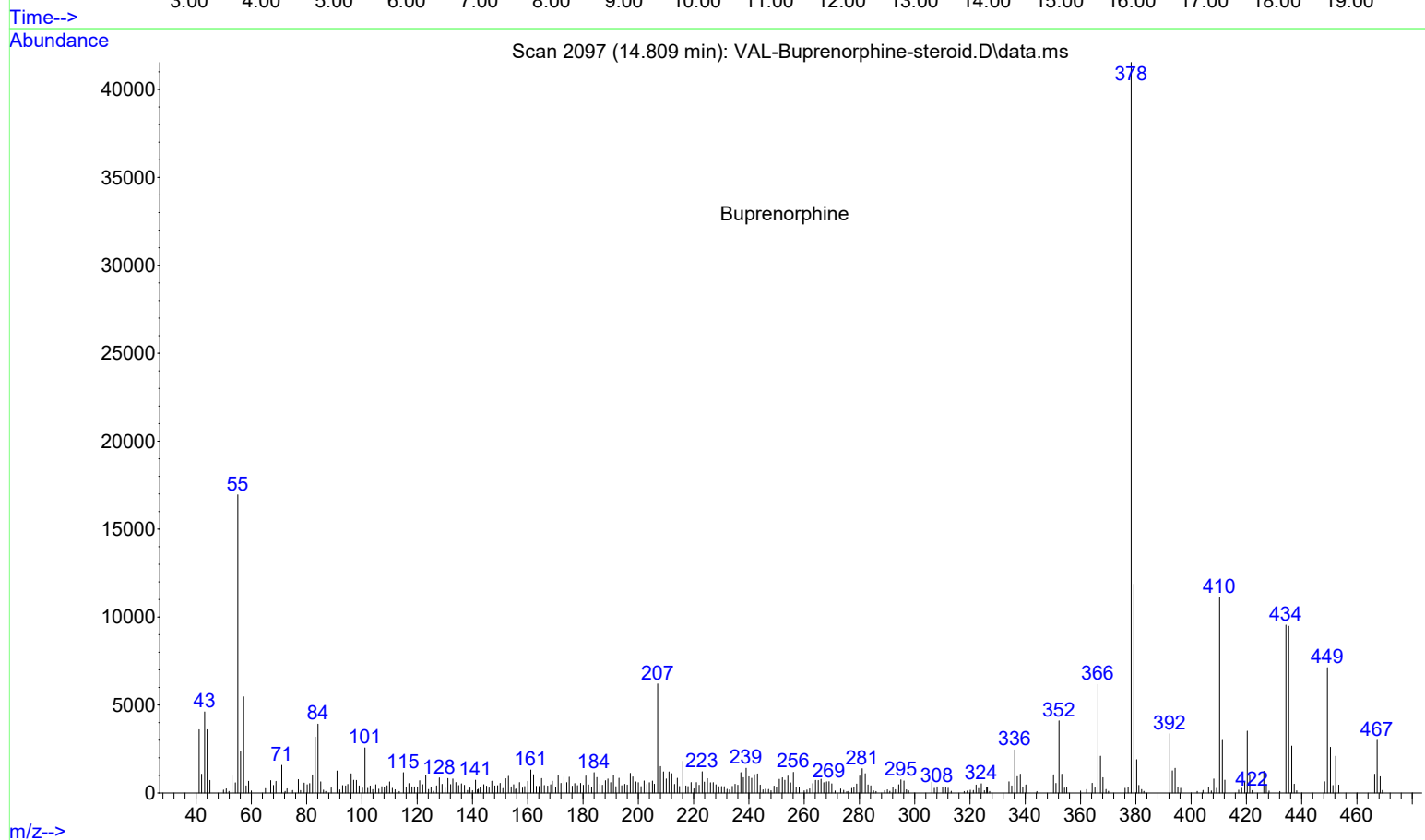
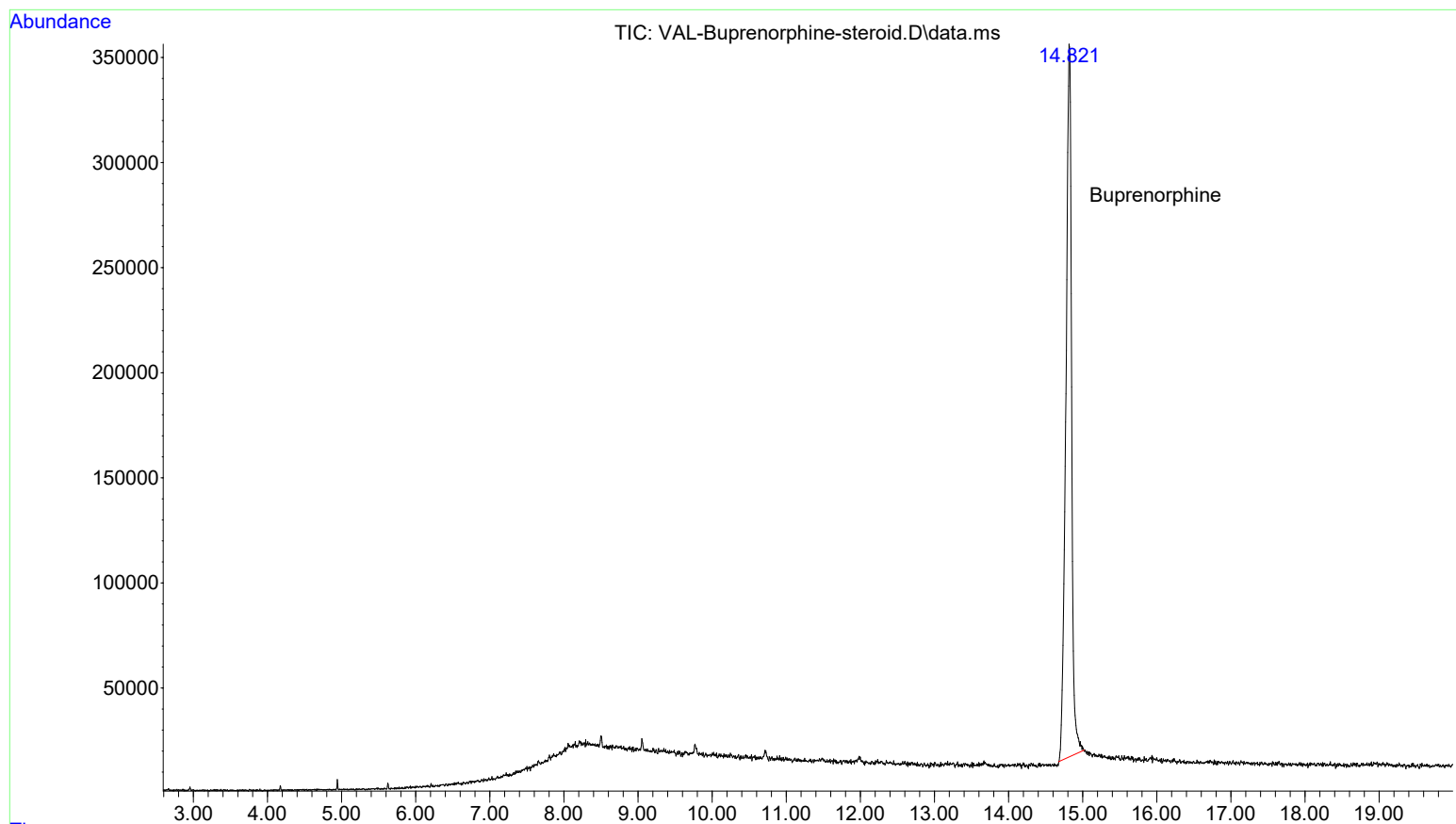
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:53:19 2025

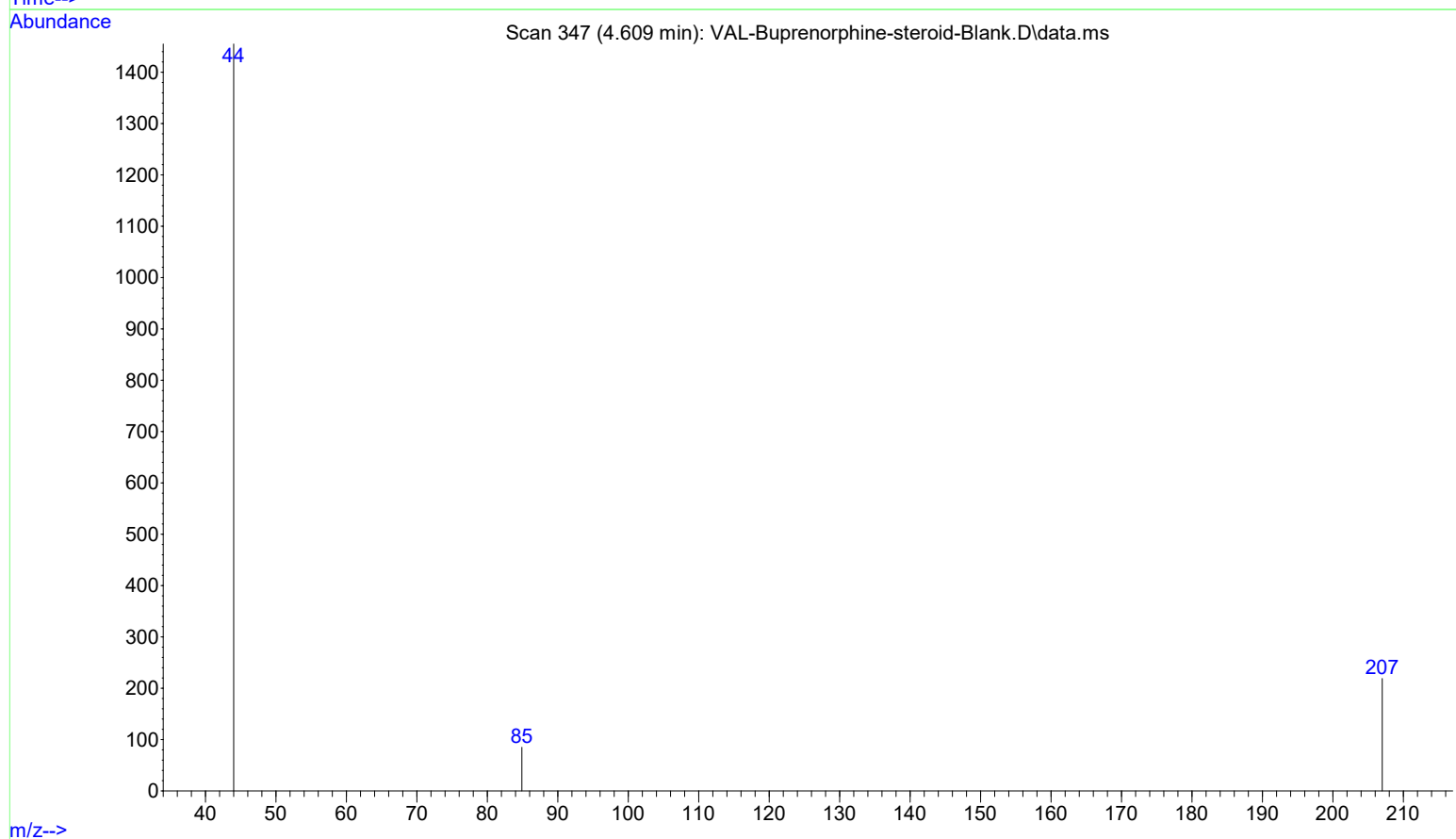
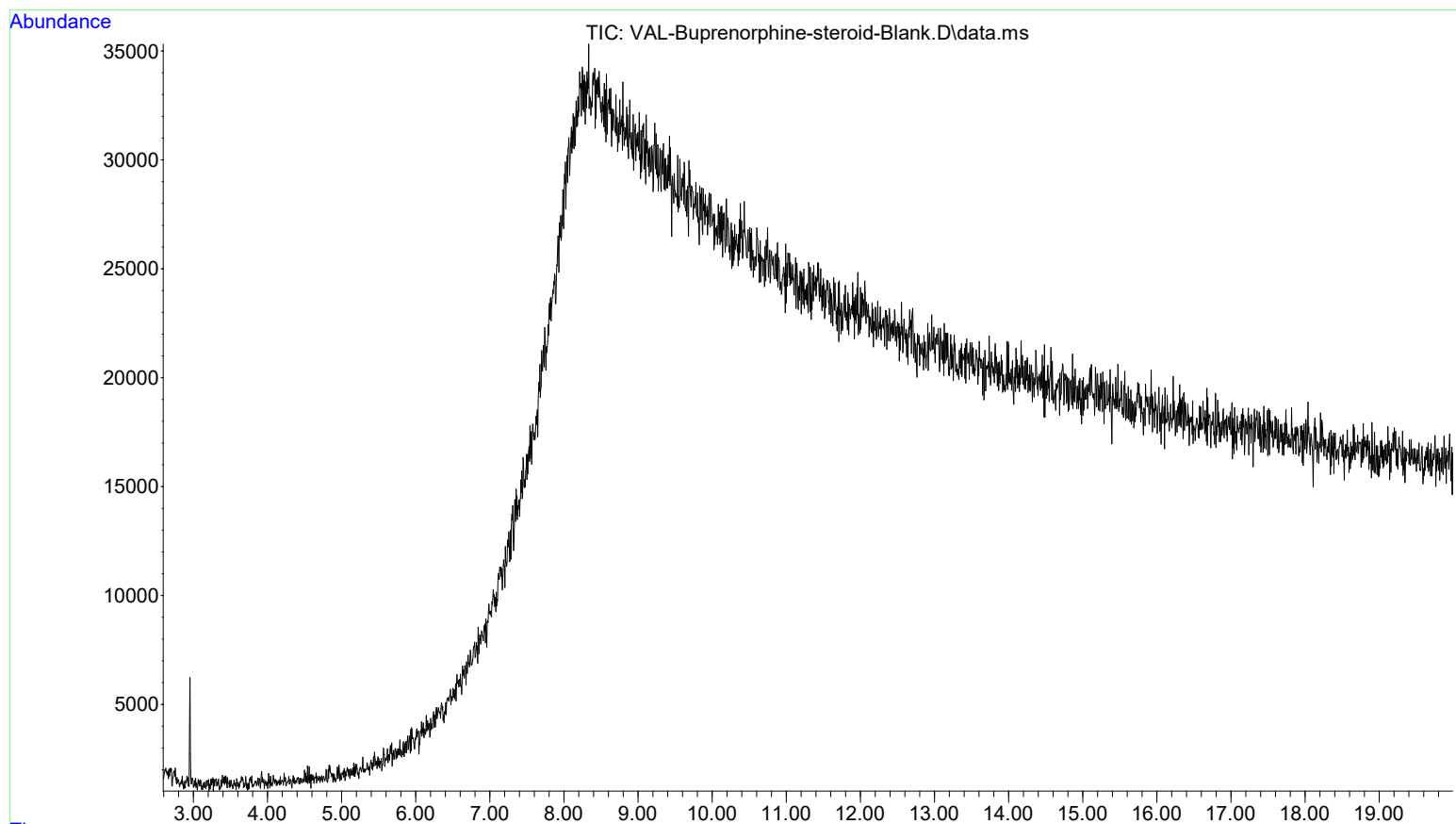
File : Z:\Instr\Luna\2025\6-June\VAL-Buprenorphine-steroid.D
Operator :
Acquired : 20 Jun 2025 13:52 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: Buprenorphine-steroid
Misc Info : MeOH
Vial Number: 16

138



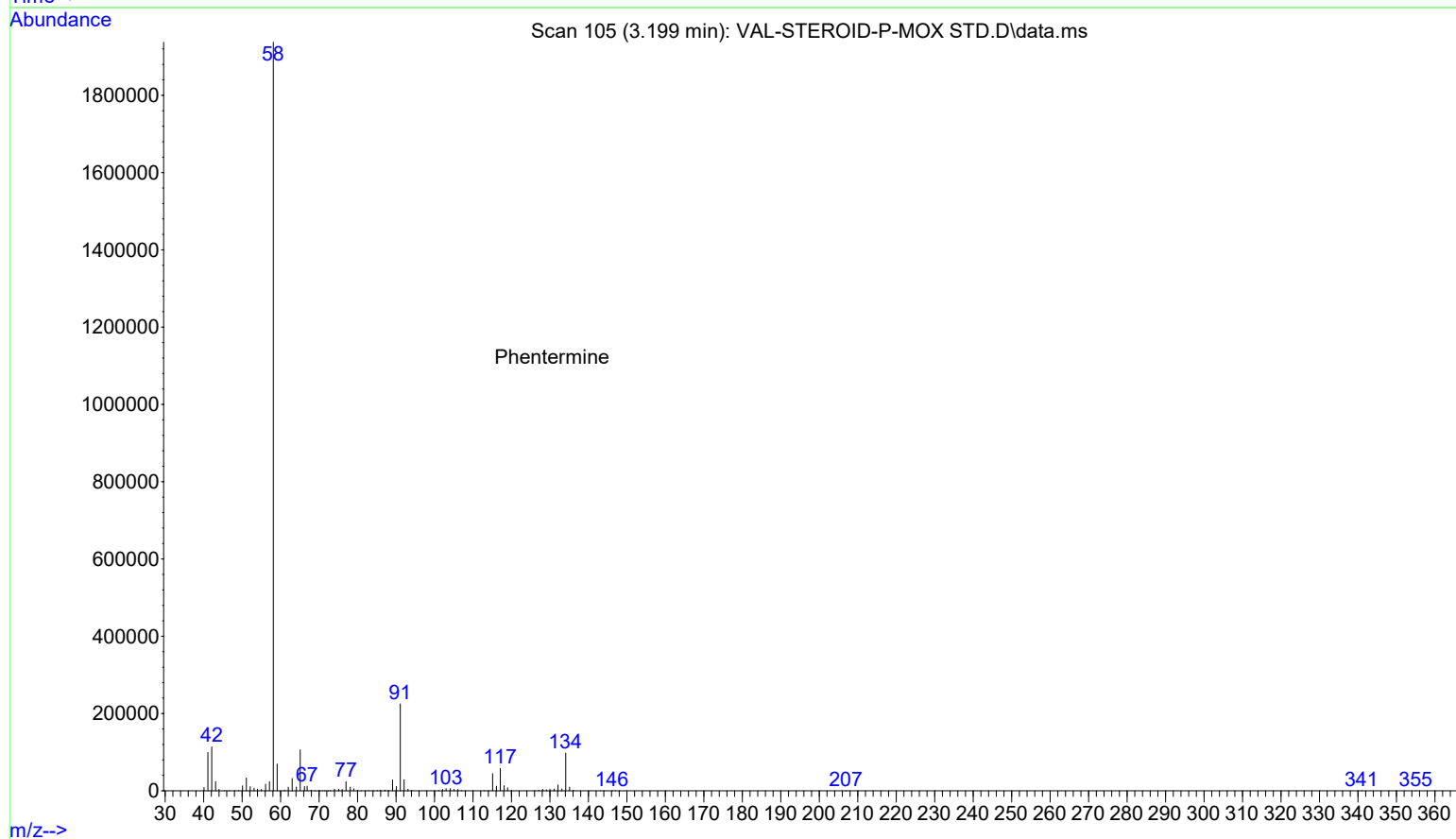
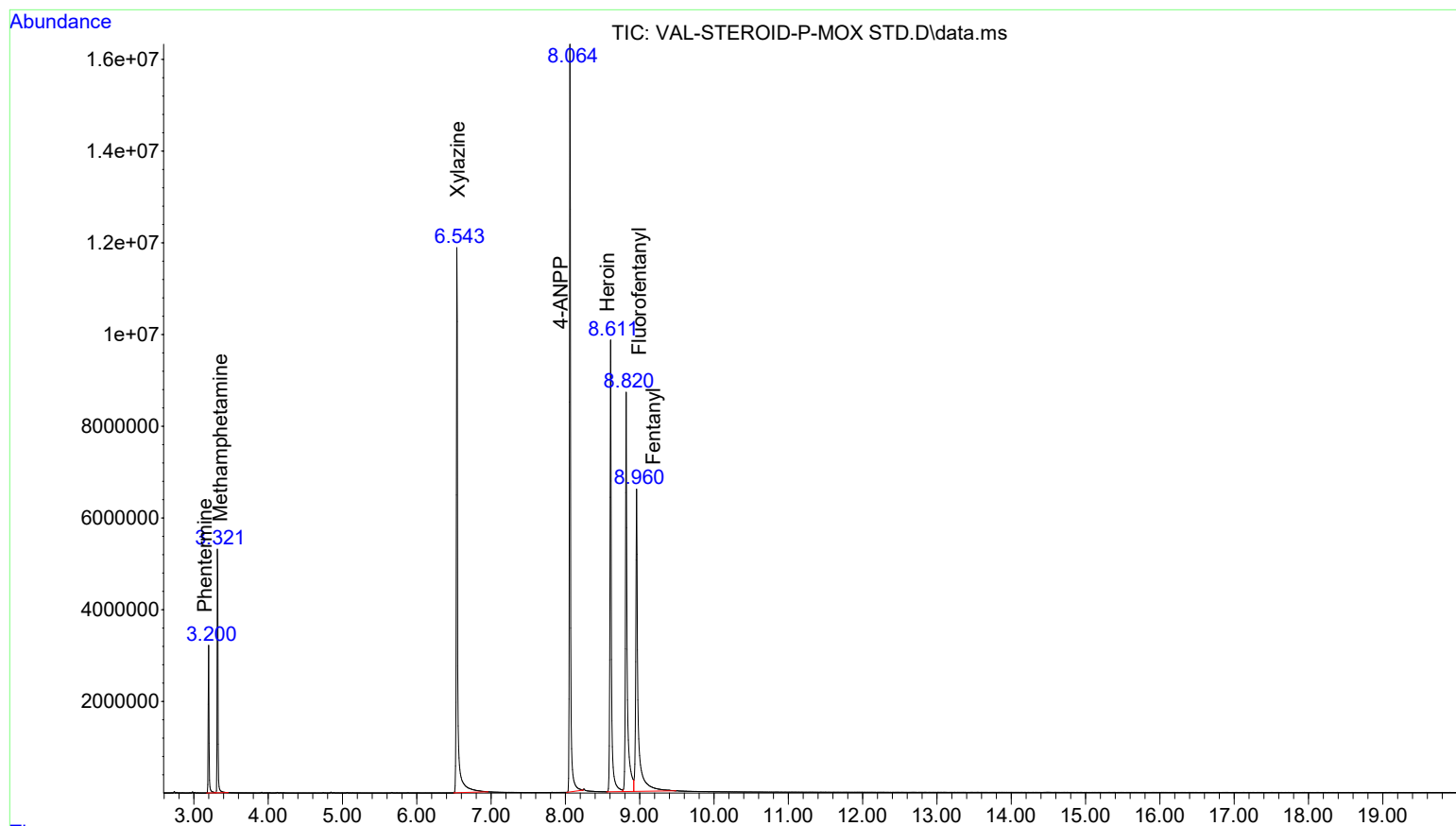
File : Z:\Instr\Luna\2025\6-June\VAL-Buprenorphine-steroid-Blank.D
Operator :
Acquired : 20 Jun 2025 13:28 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: Buprenorphine-steroid-Blank
Misc Info : MeOH
Vial Number: 13

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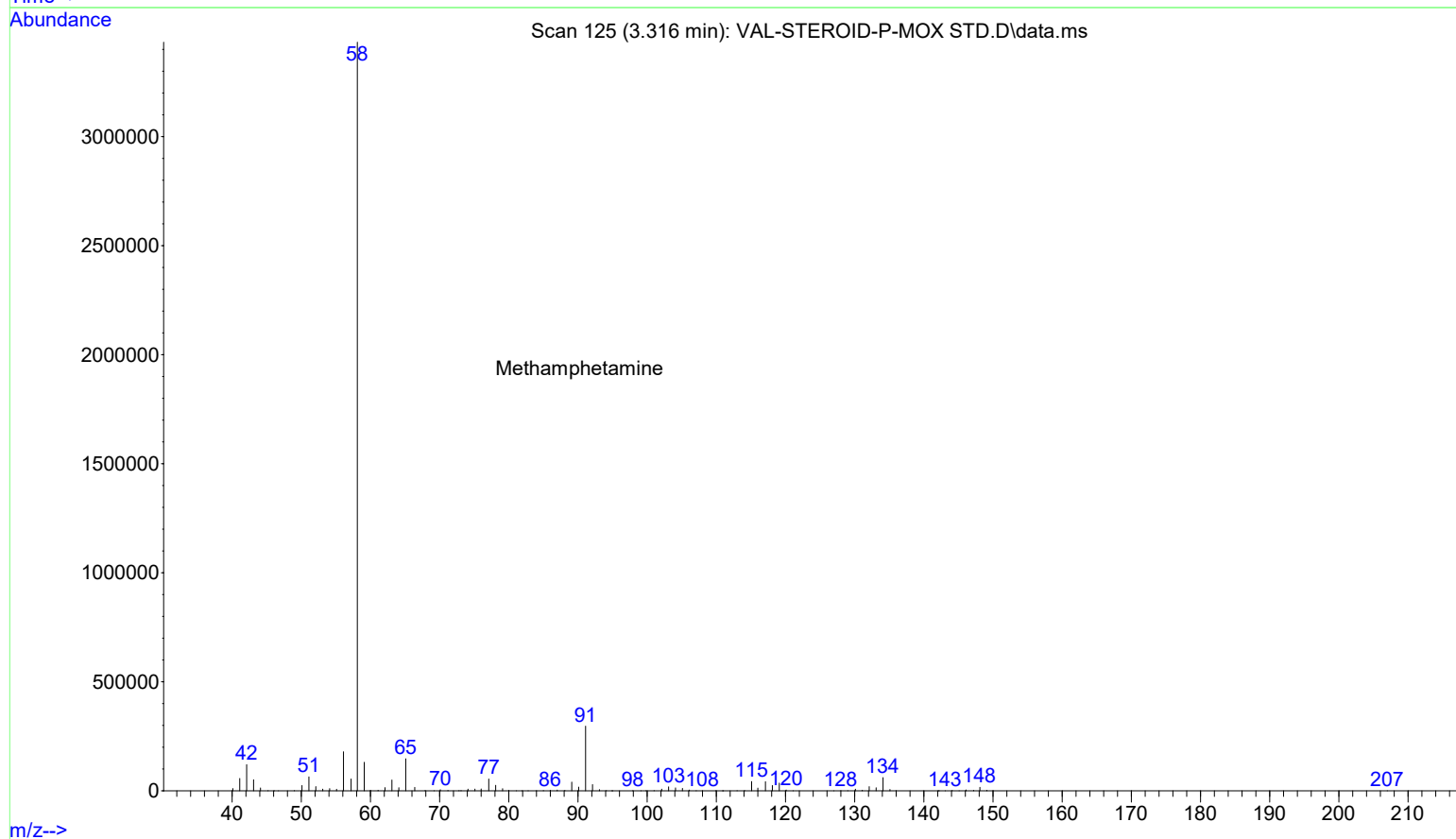
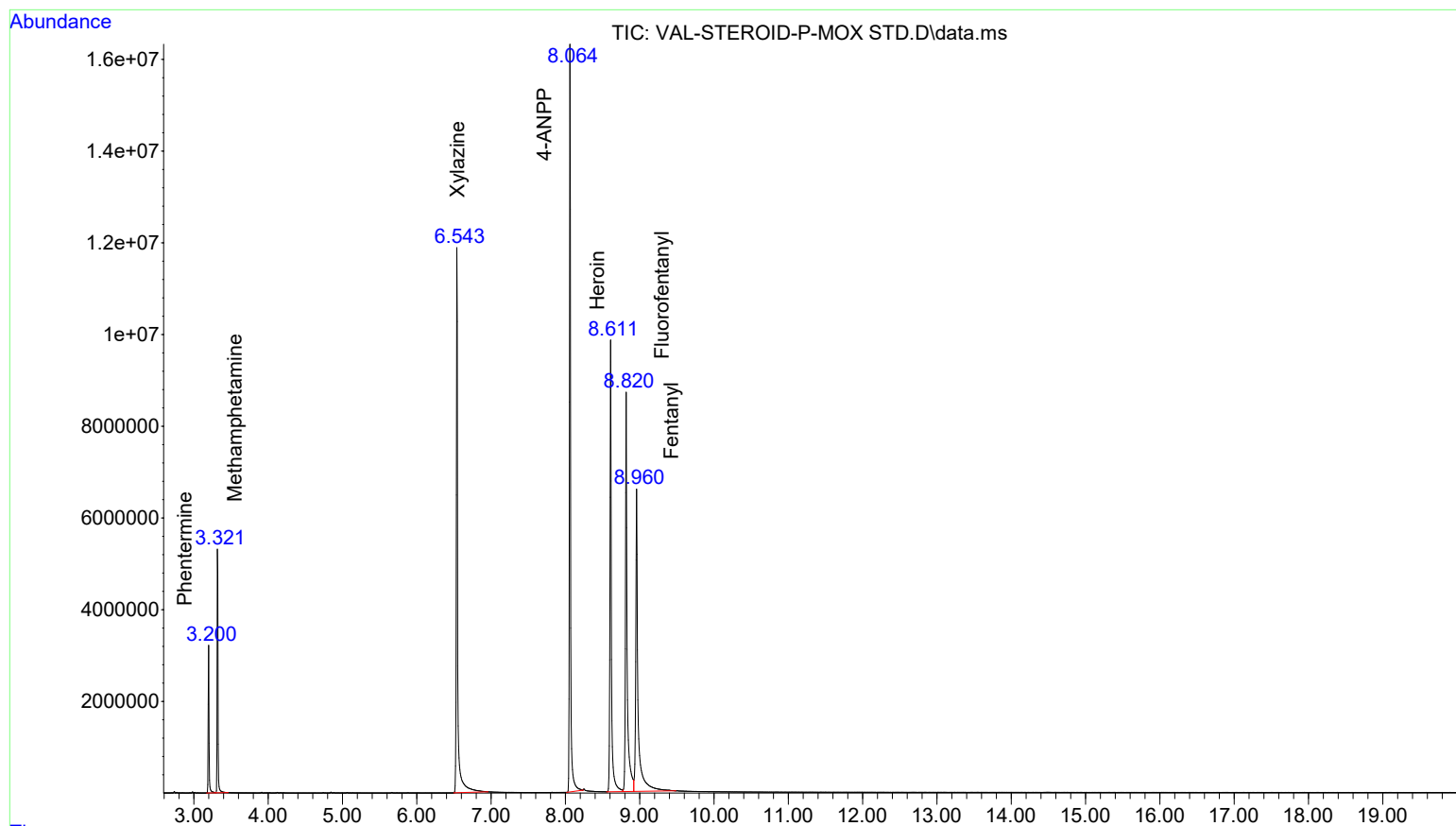
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

140



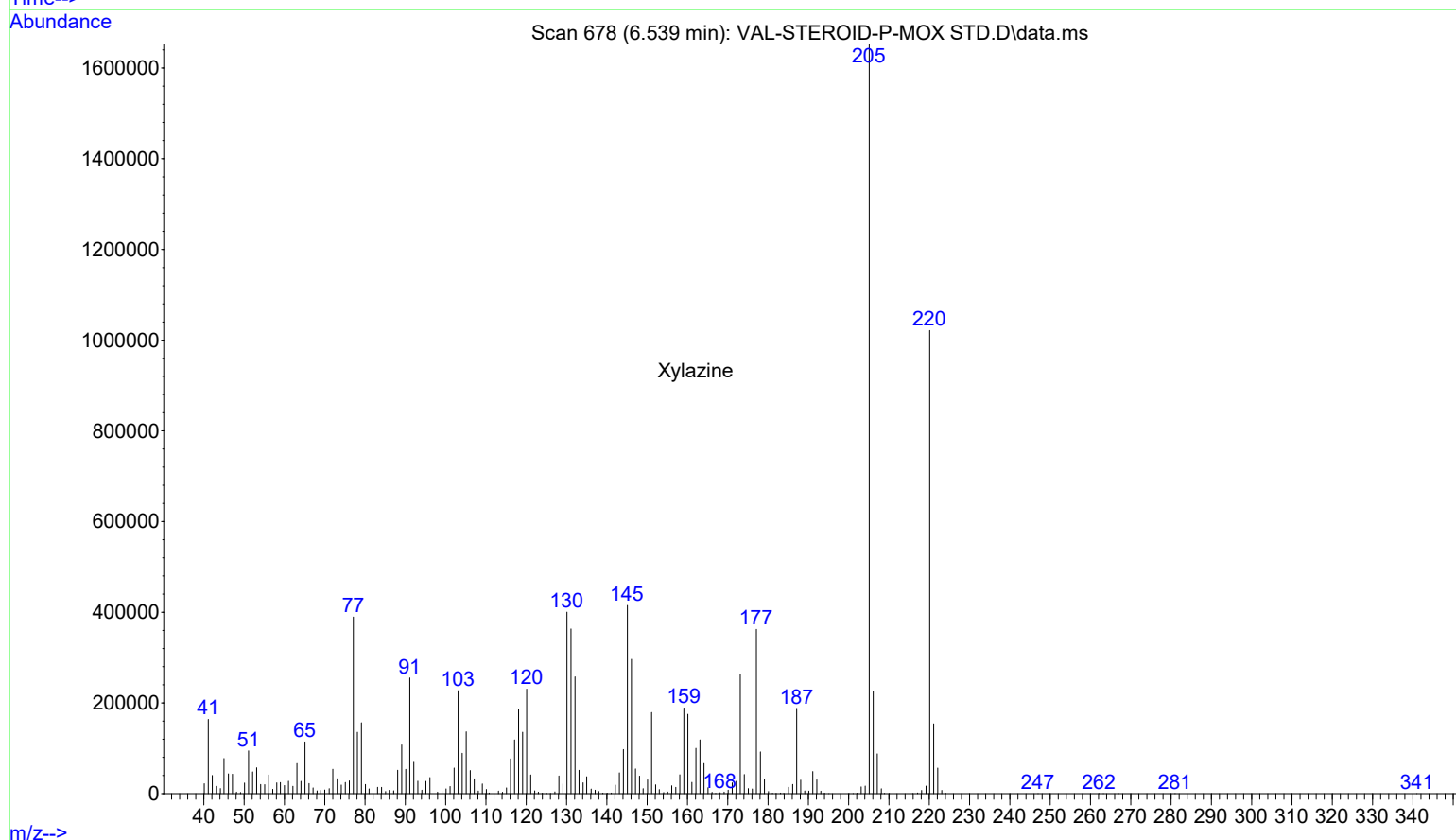
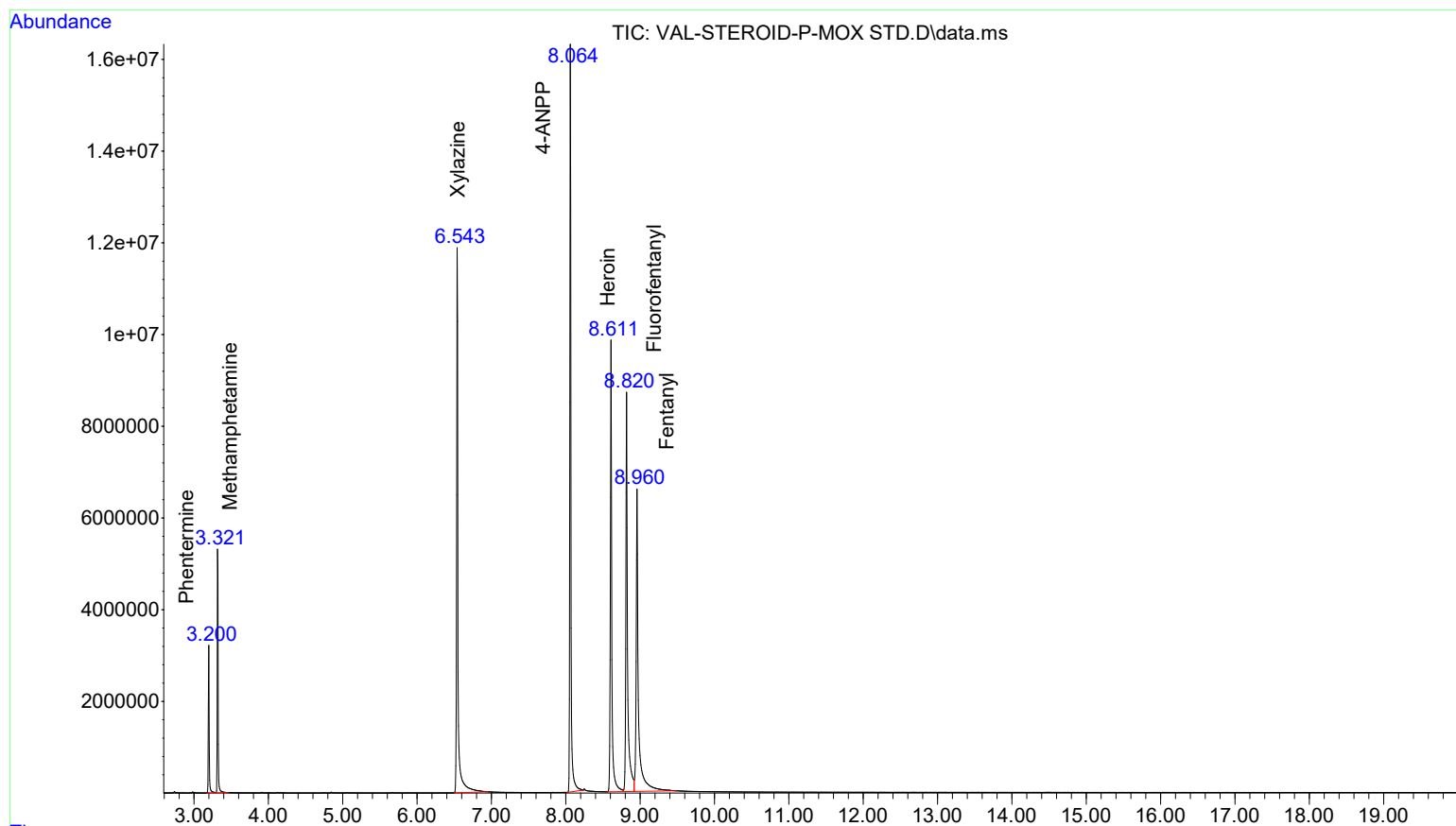
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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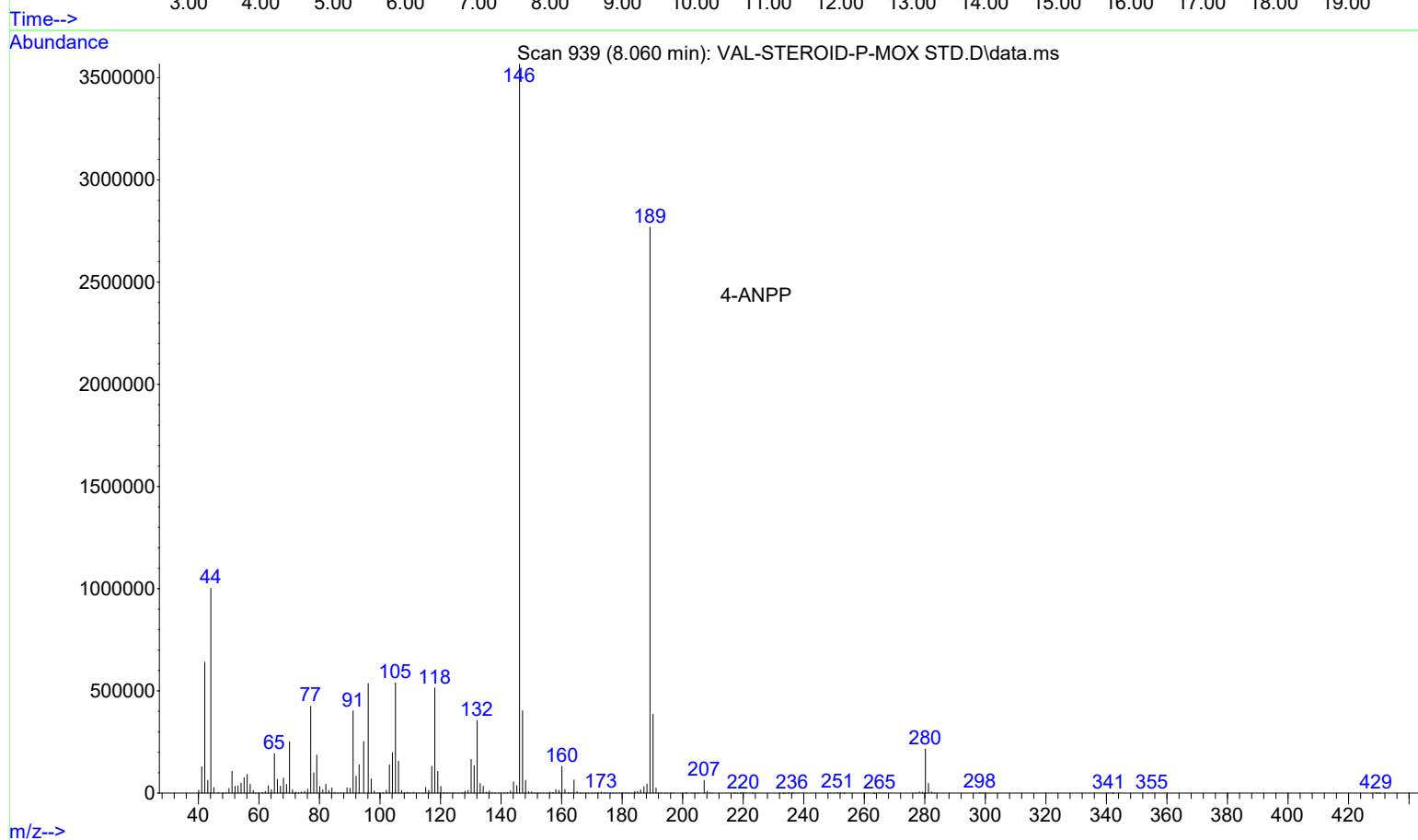
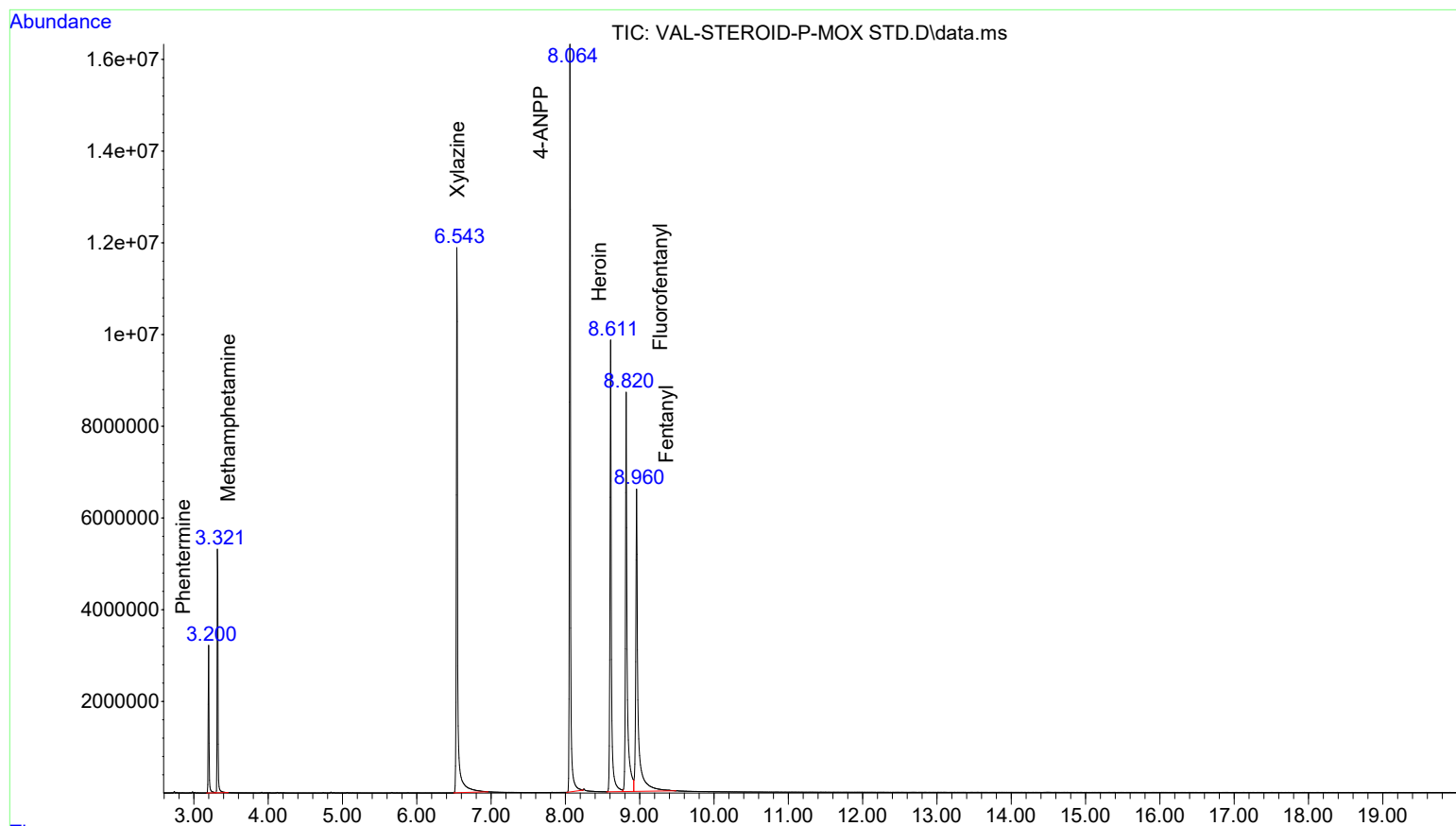
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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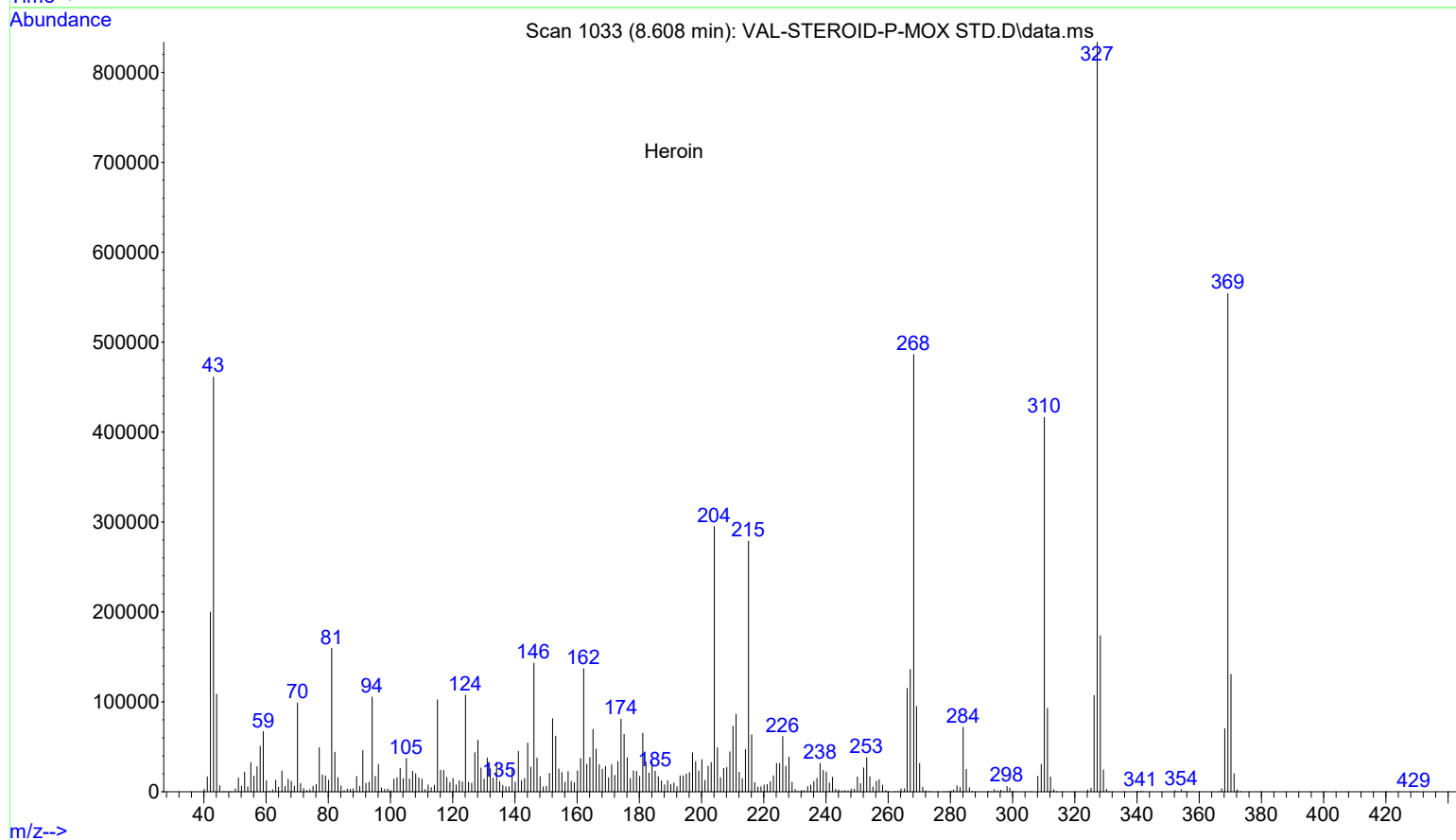
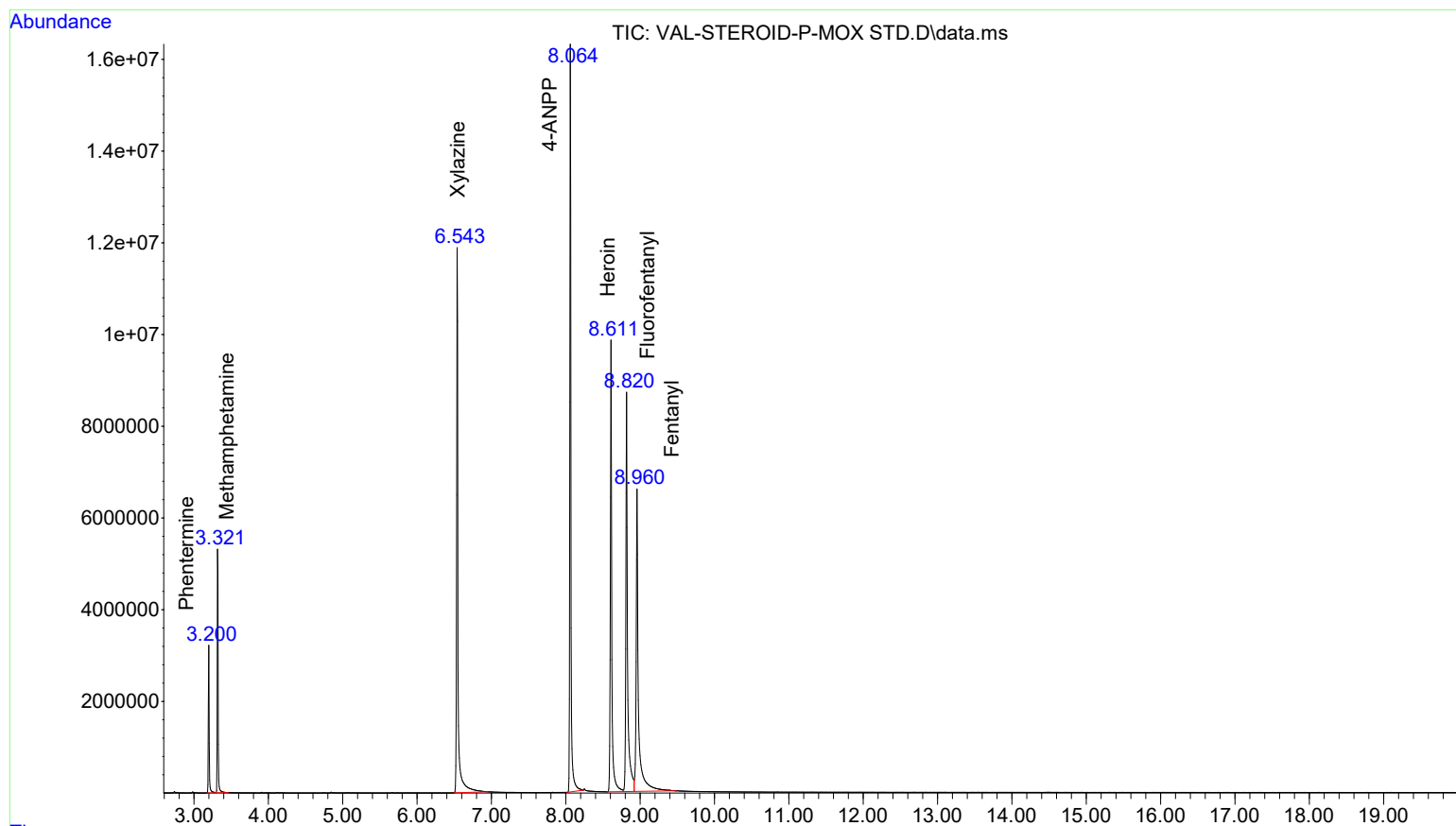
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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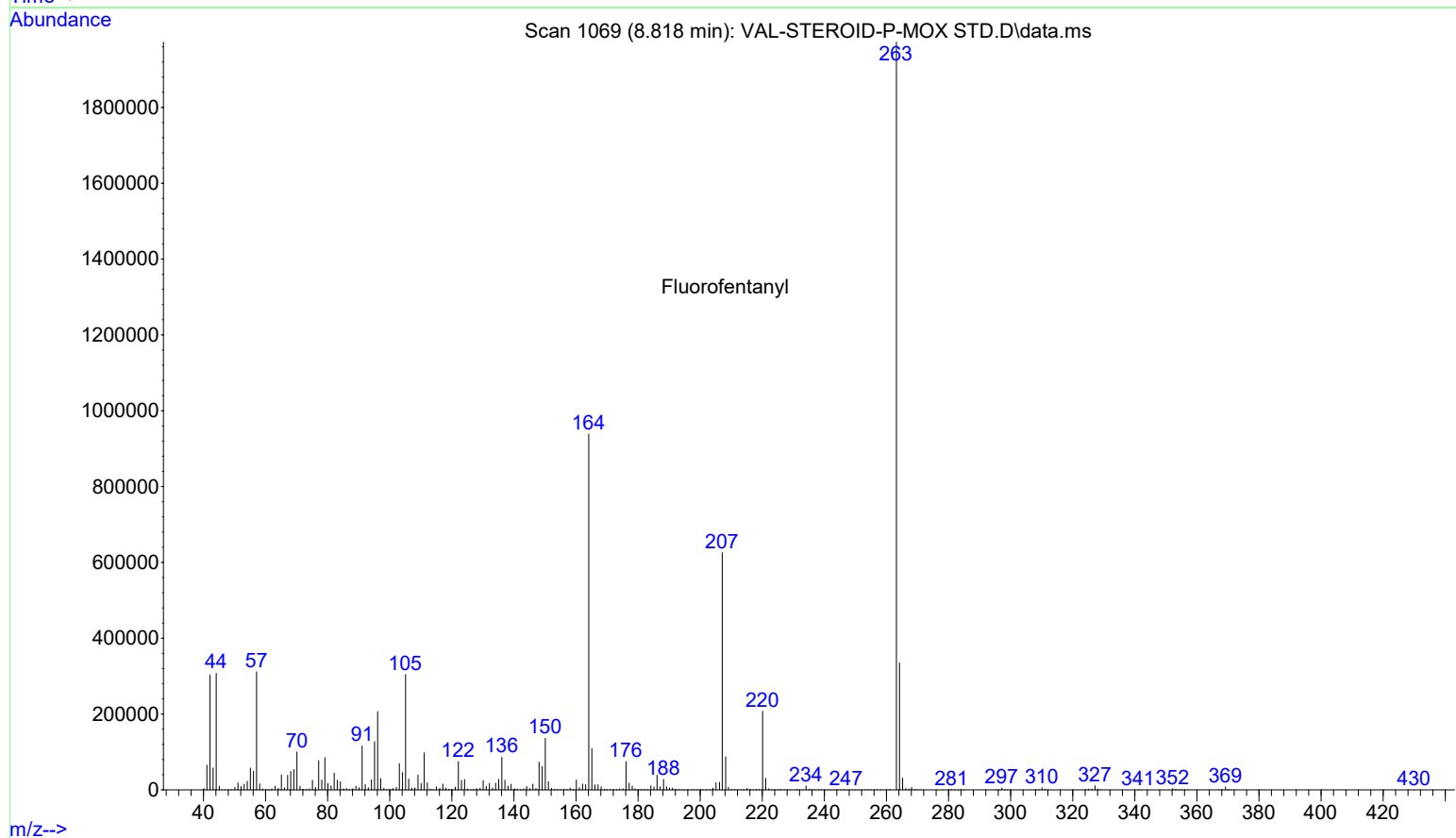
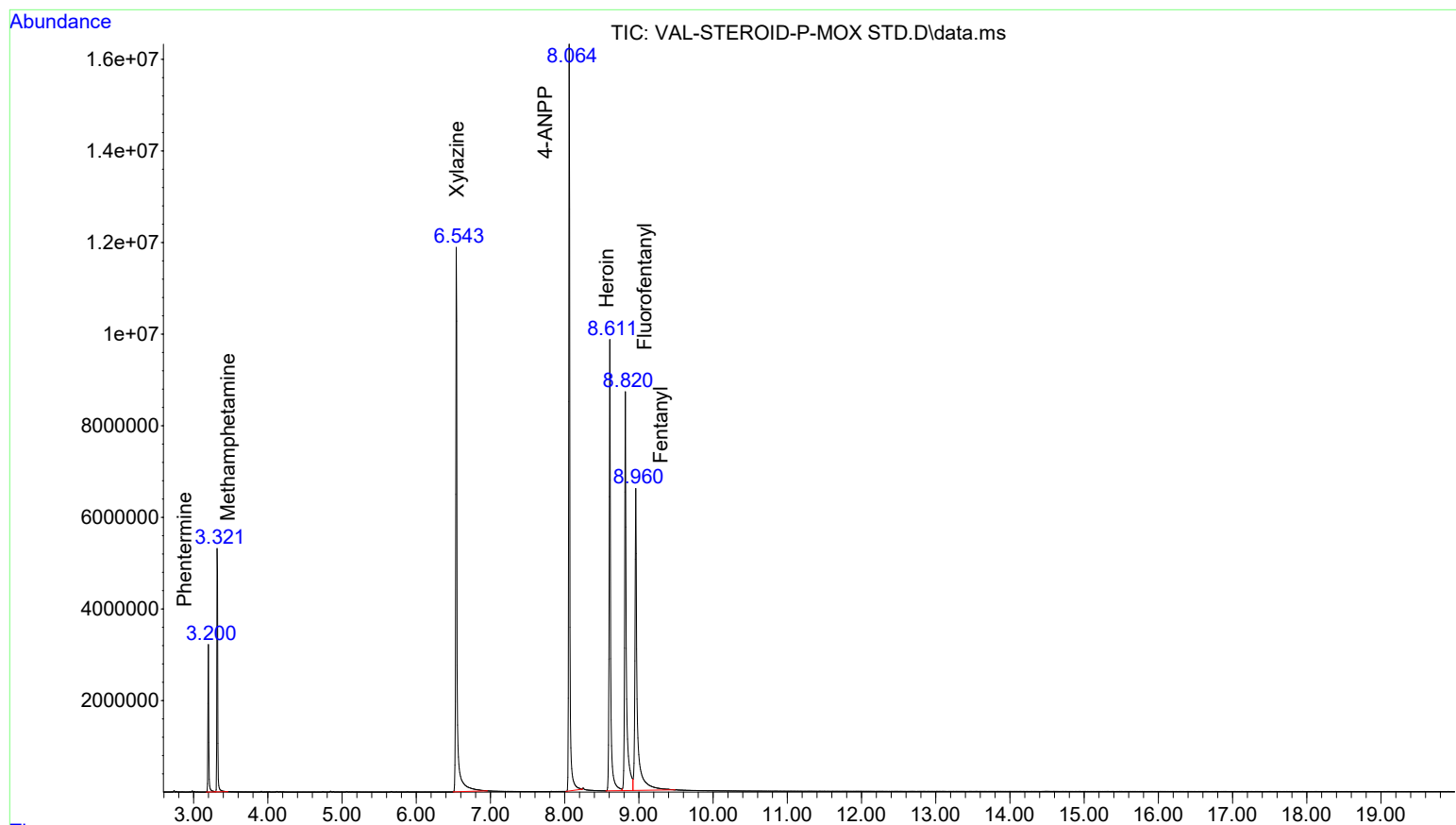
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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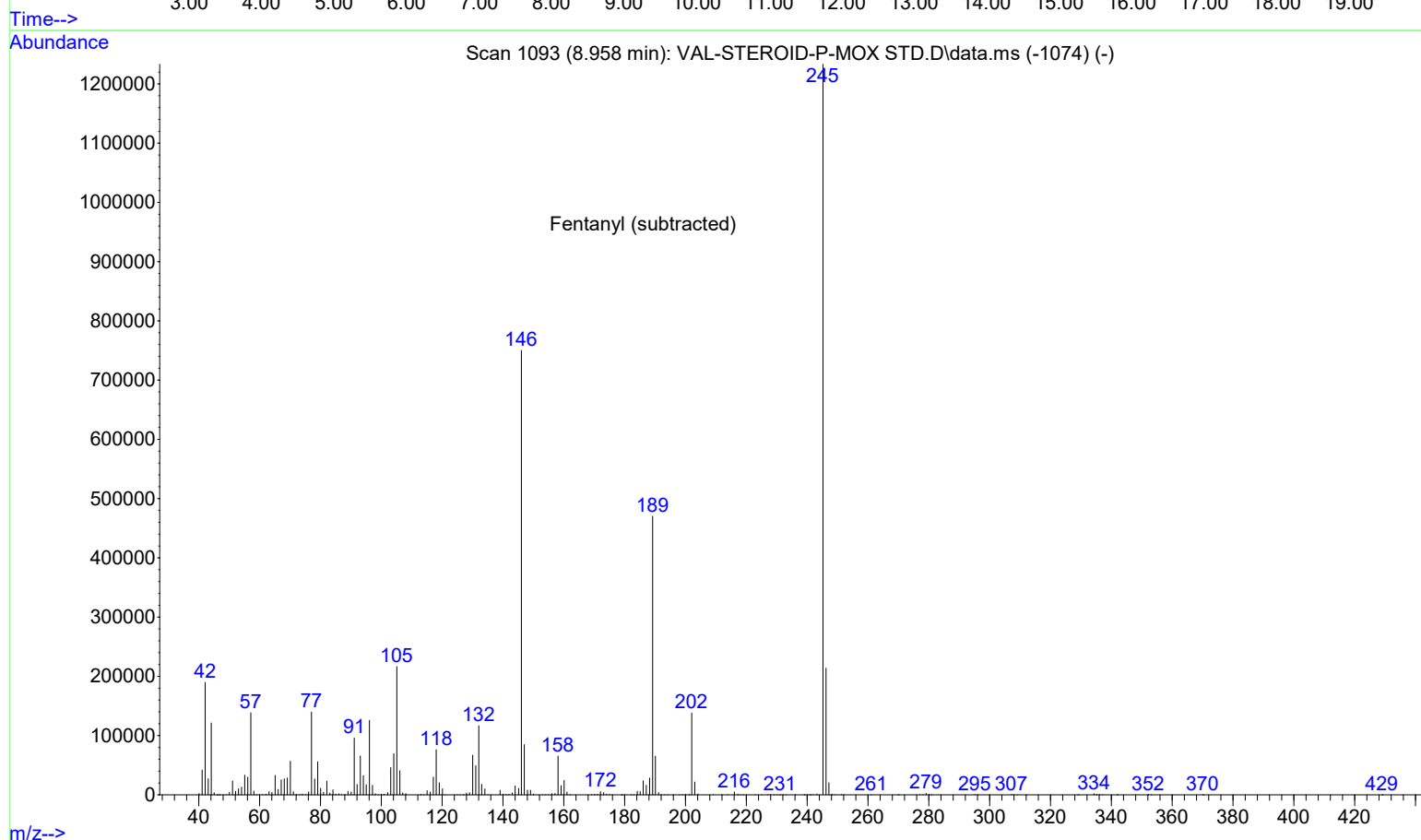
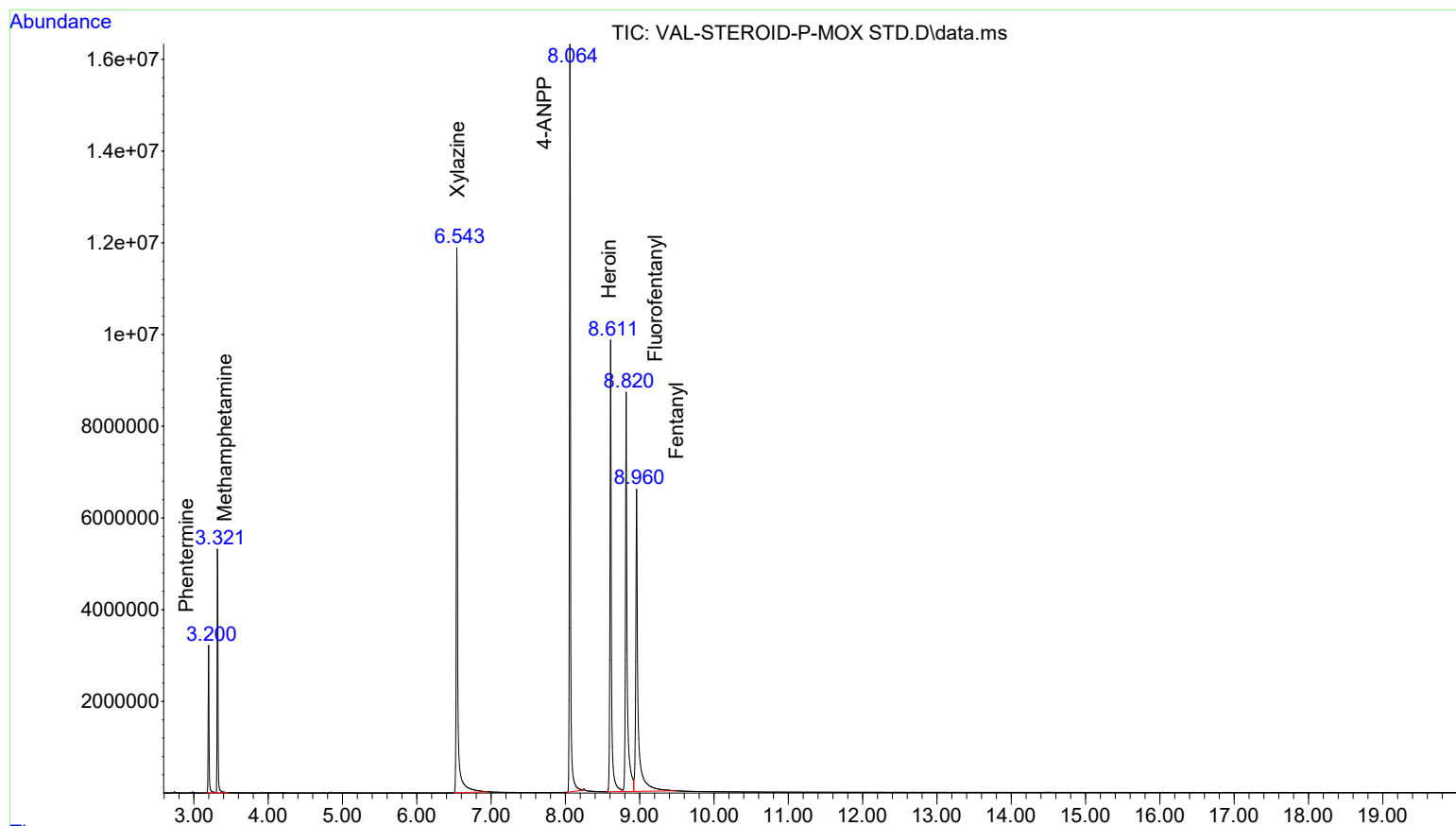
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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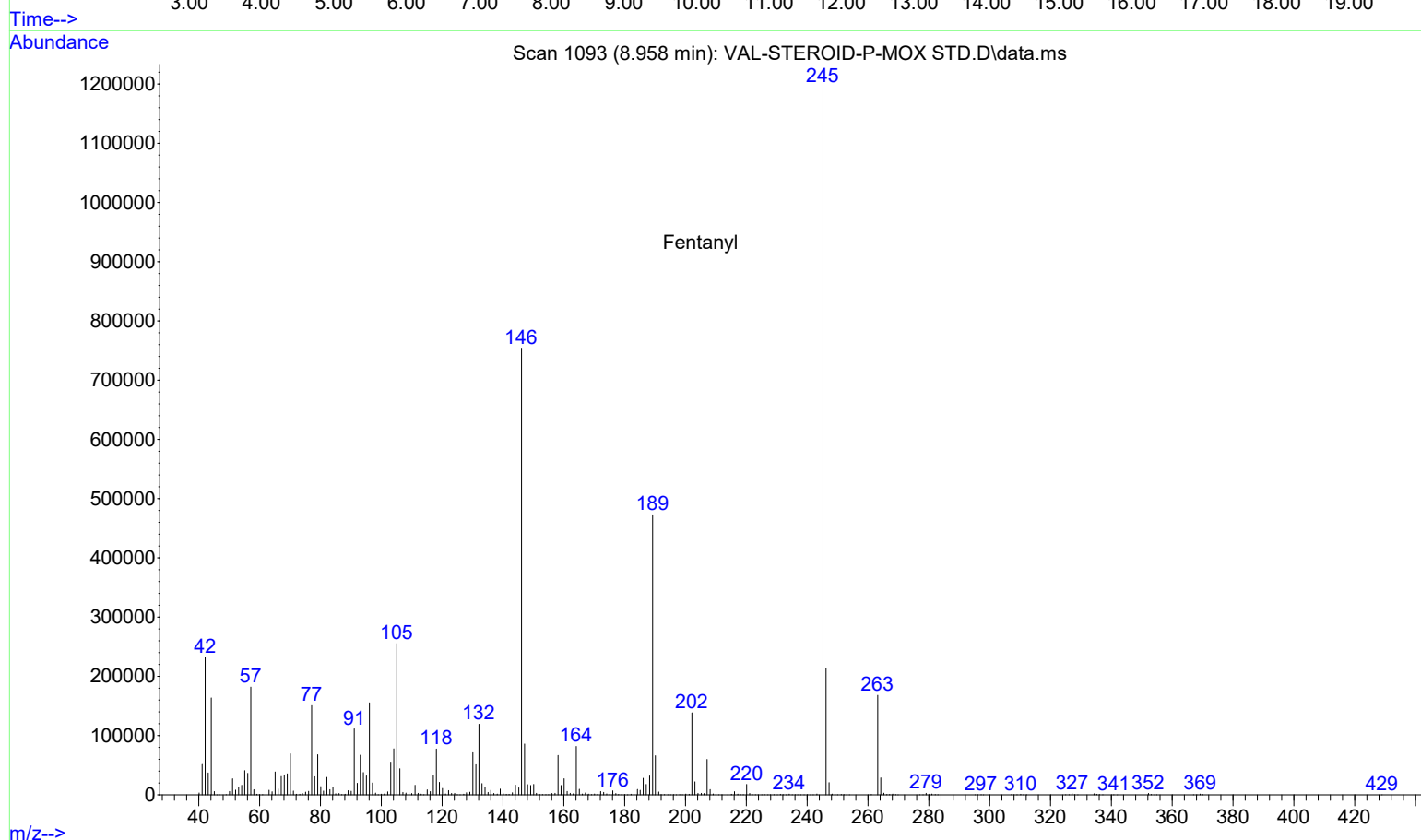
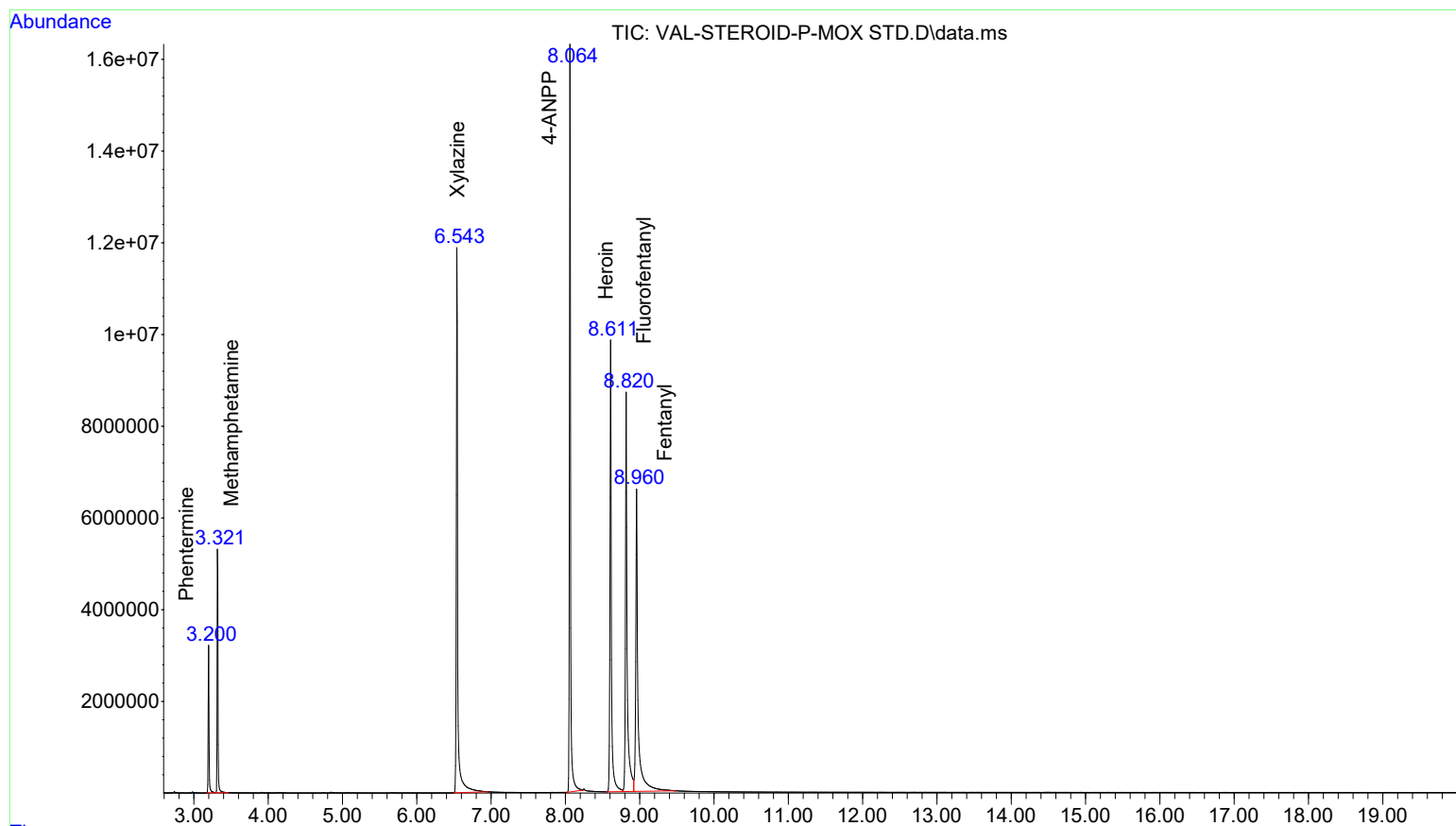
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

146



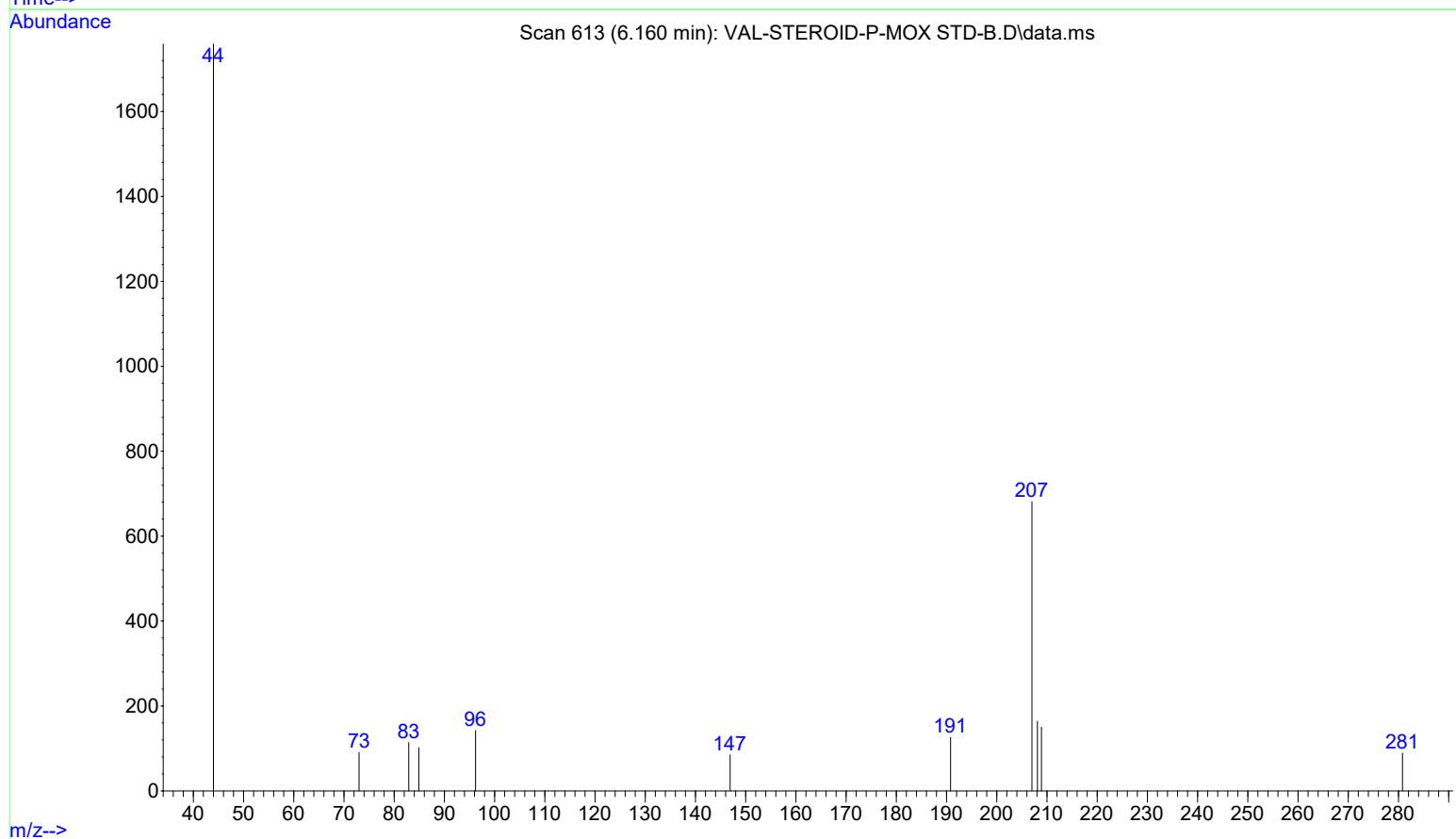
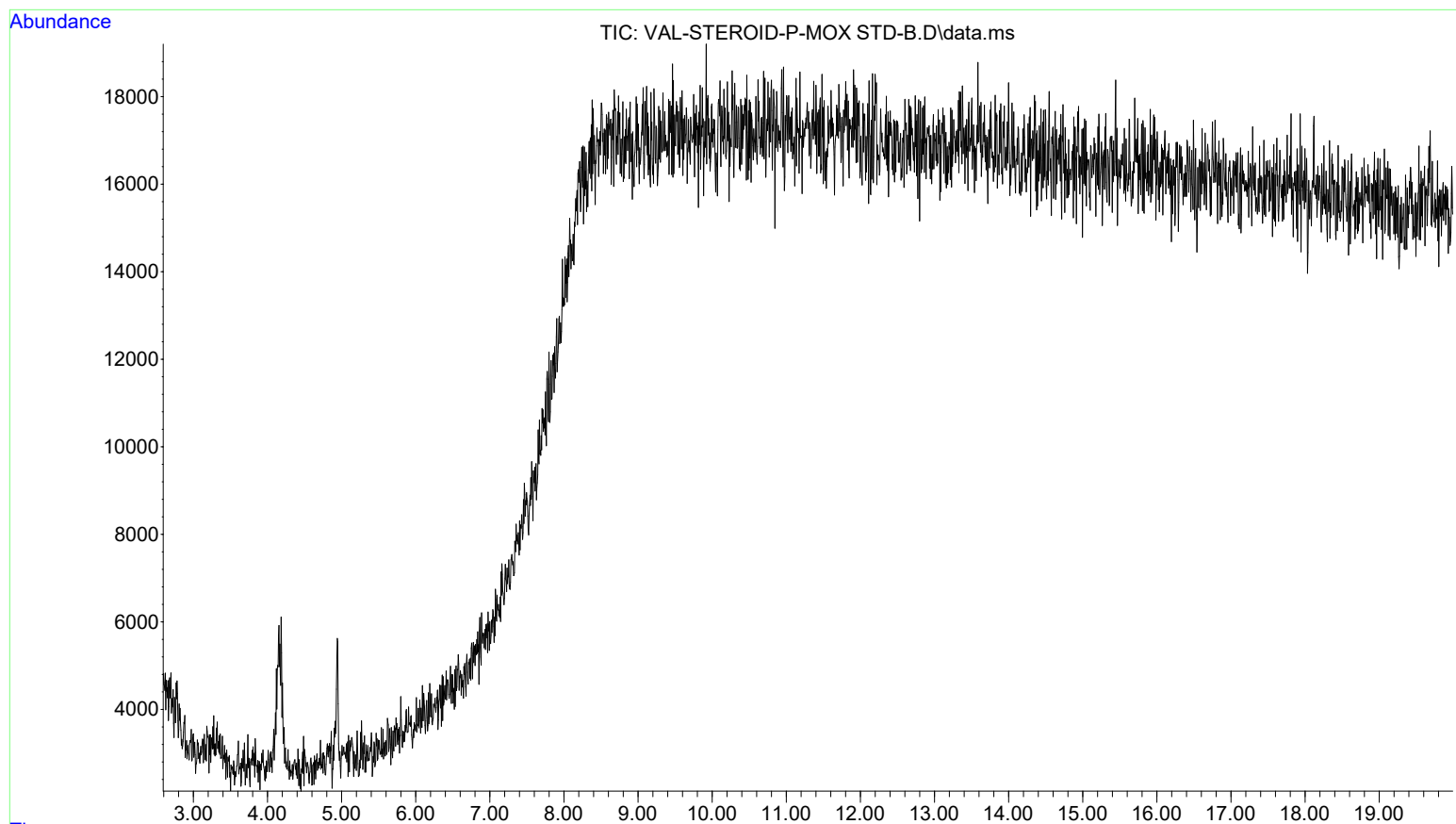
File :Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 18:22 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

147



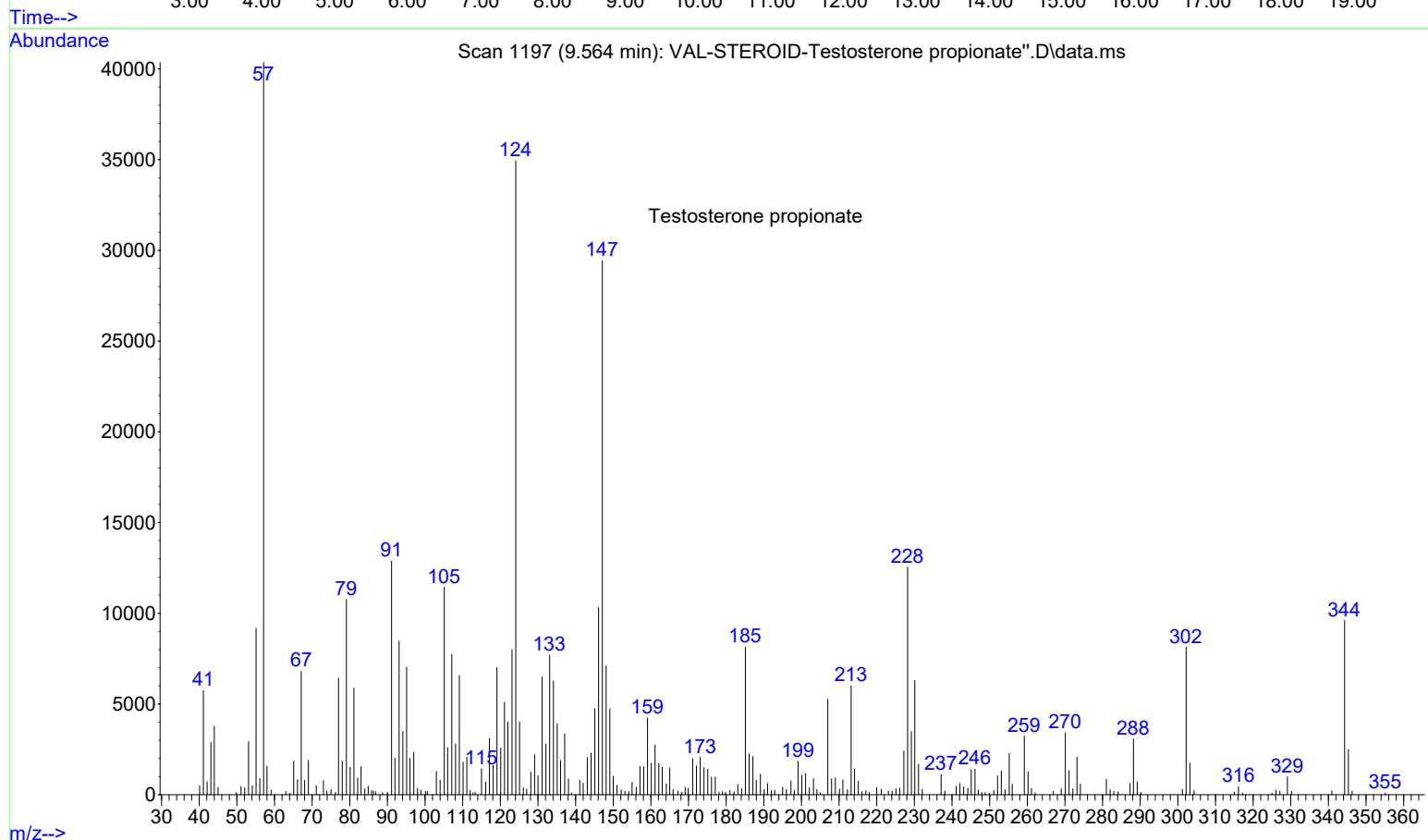
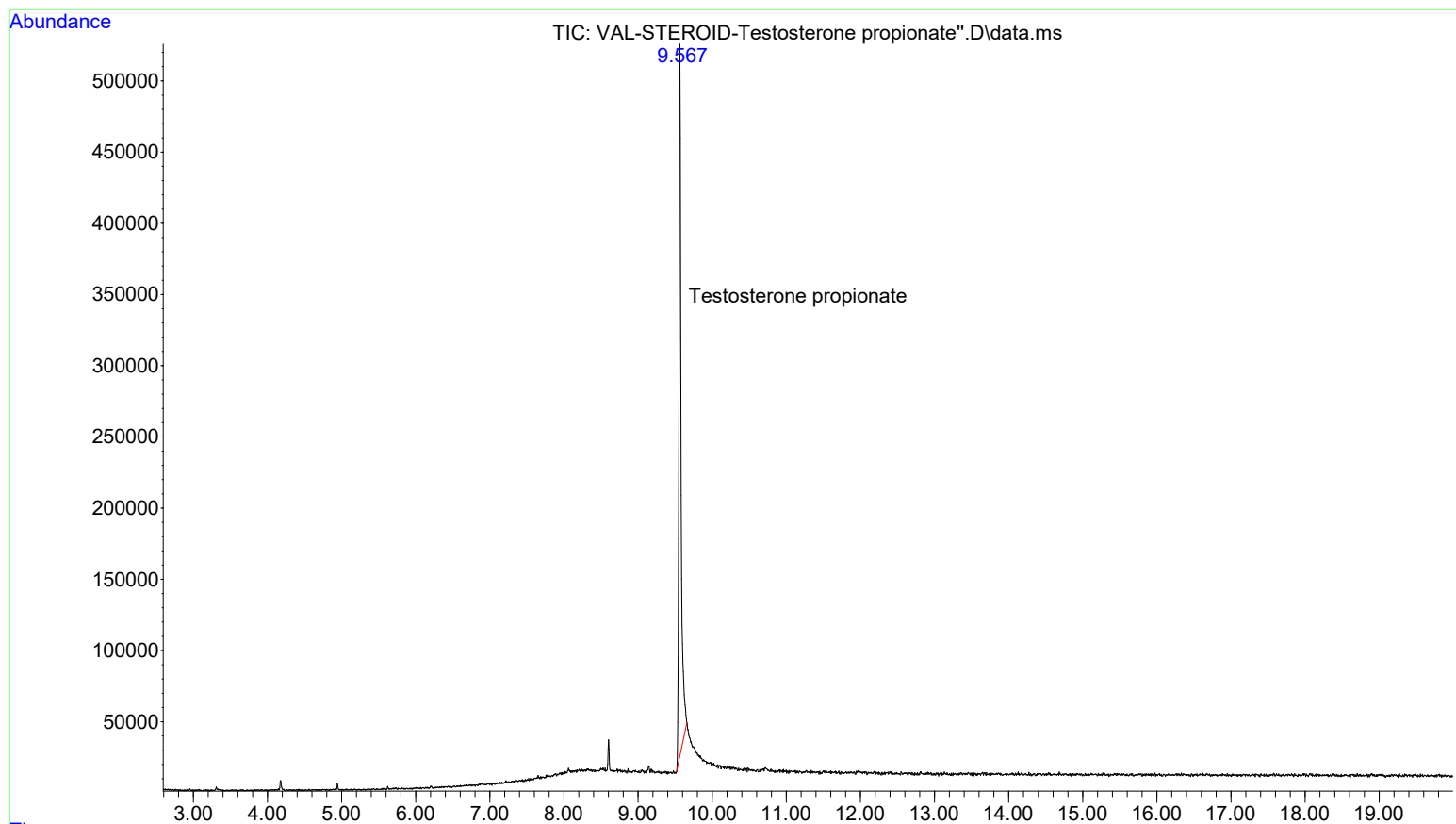
File : Z:\Instr\Luna\2025\6-June\VAL-STEROID-P-MOX STD-B.D
Operator :
Acquired : 23 Jun 2025 17:58 using AcqMethod STERIOD.M
Instrument : Luna
Sample Name: STERIOD-P-MOX STD-Blank
Misc Info : CHCl3
Vial Number: 12

148



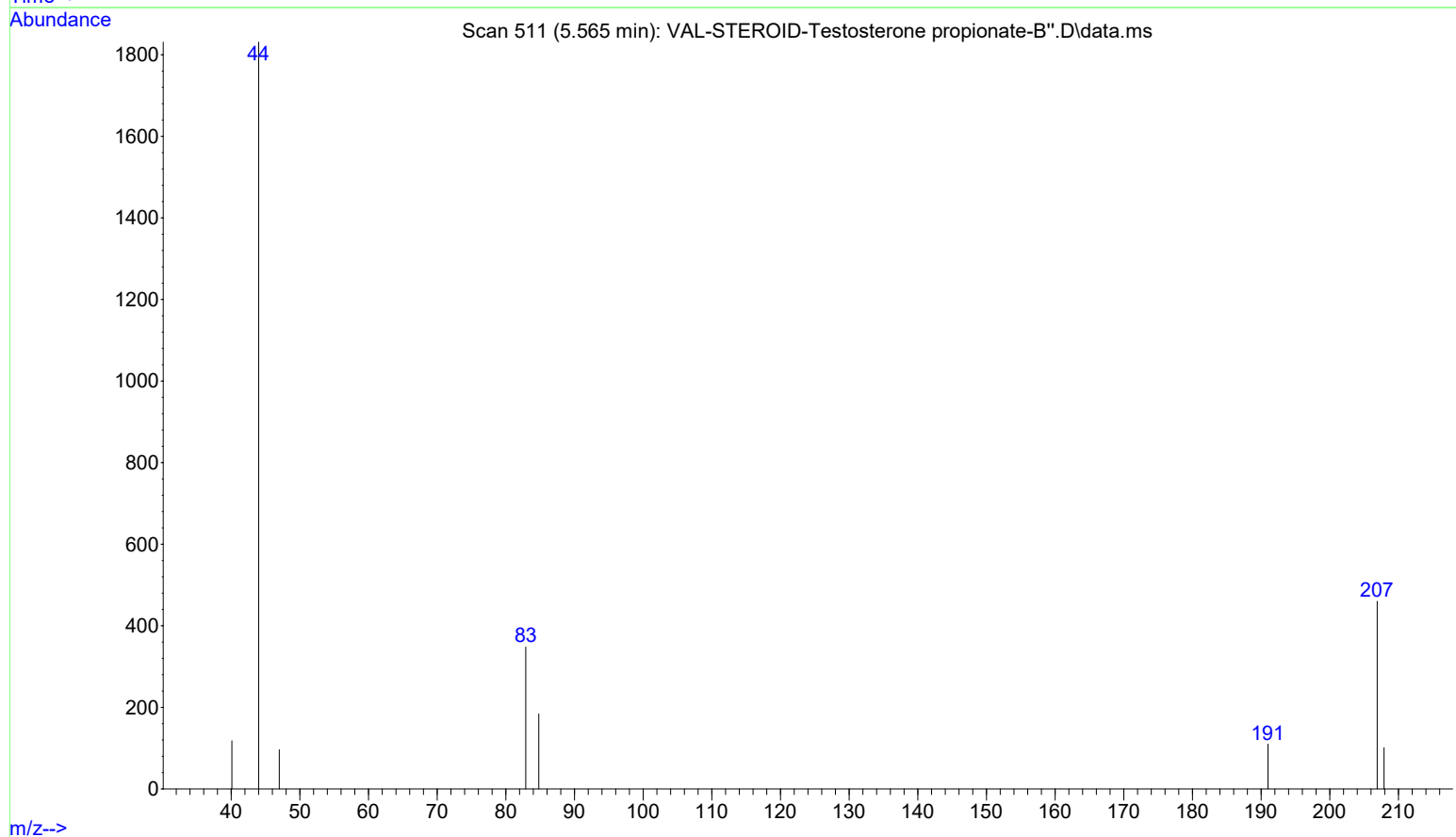
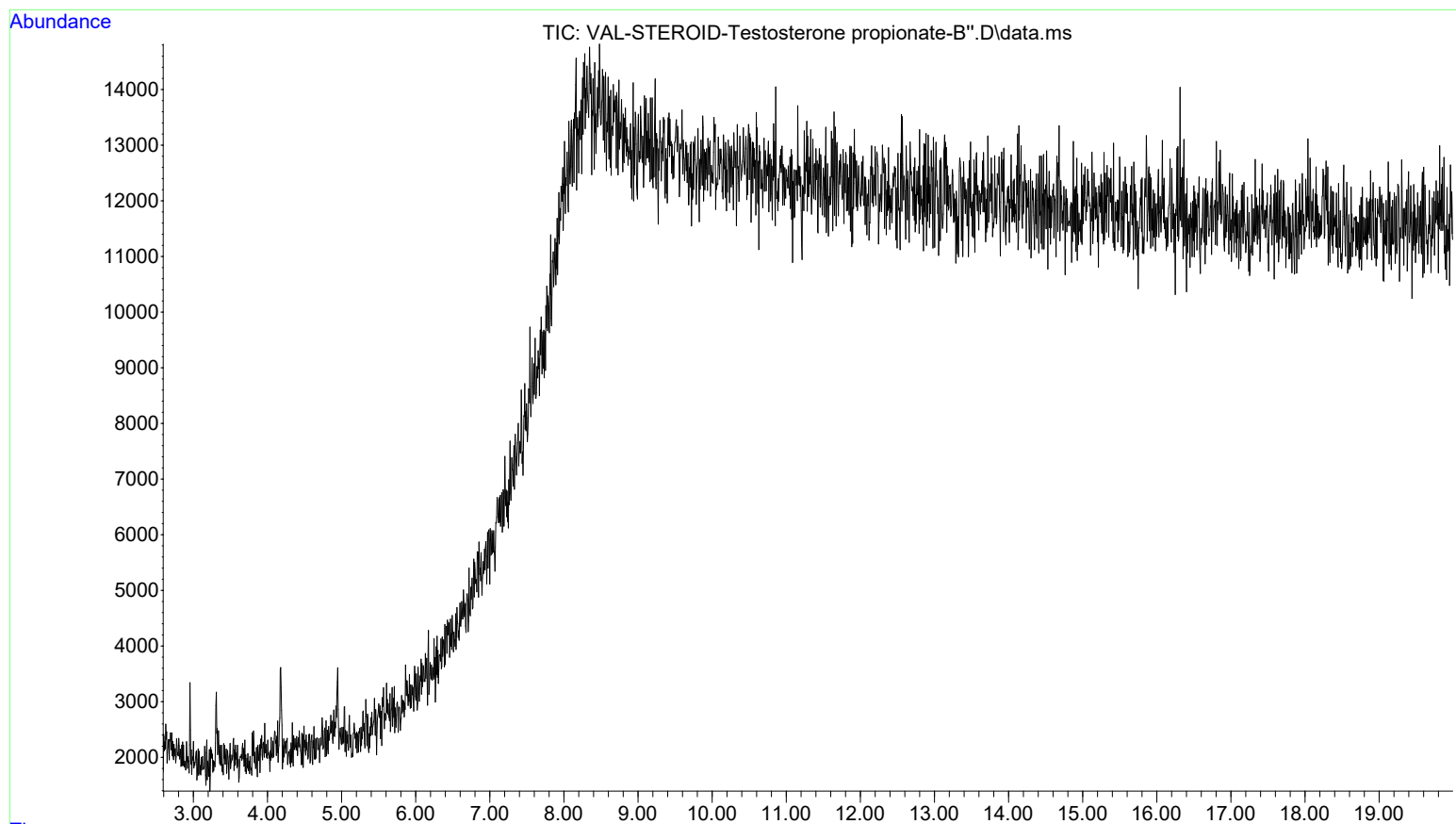
File :Z:\Instr\Luna\2025\6-June\VAL-STEROID-Testosterone propionat
... e''.D
Operator :
Instrument : Luna
Acquired : 24 Jun 2025 14:44 using AcqMethod STEROID.M
Sample Name: STEROID-Testosterone propionate''
Misc Info : MeOH

149



File :Z:\Instr\Luna\2025\6-June\VAL-STEROID-Testosterone propionat
... e-B''.D
Operator :
Instrument : Luna
Acquired : 24 Jun 2025 14:21 using AcqMethod STERIOD.M
Sample Name: STERIOD-Testosterone propionate-Blank''
Misc Info : MeOH

150



Method Information for: C:\MassHunter\GCMS\1\methods\THCMS.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:
THCMS

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\THCMS.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	1.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
1.00	40	550	100	3,125 [N=1]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\THCMS.M
Mon Jun 30 15:54:34 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 8 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 200 °C
Hold Time 2 min
Post Run 80 °C
Program
#1 Rate 10 °C/min
#1 Value 240 °C
#1 Hold Time 2 min

Equilibration Time 0.5 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 2 sec
Sample Depth Disabled

Lower Fan On
Solvent Wash Mode A, B

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Back Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 0
Solvent A Washes (PostInj) 0
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 0
Solvent B Washes (PostInj) 0
Solvent B Volume 8 µL
Sample Washes 0
Sample Wash Volume 8 µL
Sample Pumps 0
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min
Injection Dispense Speed 6000 µL/min
Viscosity Delay 0 sec
Sample Depth Disabled
Tower Fan On
Solvent Wash Mode A, B

Sample Overlap
Mode Sample overlap is not enabled

ALS Errors Pause for user interaction

Front SS Inlet He
Mode Split
Heater On 280 °C
Pressure On 17.295 psi
Total Flow On 57.201 mL/min
Septum Purge Flow On 1 mL/min
Gas Saver Off
Split Ratio 50.091 :1
Split Flow 55.101 mL/min

Back SS Inlet He
Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
Mode Split
Heater Off
Pressure Off
Total Flow Off
Septum Purge Flow Off
Gas Saver Off
Split Ratio 50 :1
Split Flow 25 mL/min

Thermal Aux 2 (MSD Transfer Line)
Temperature
Setpoint On
(Initial) 280 °C

Column
Column #1
Flow

Setpoint On
 (Initial) 1.1 mL/min
 Post Run 2 mL/min

155

Column Information Agilent 128-0112
 Description DB-1ms
 Temperature Range -60 °C-340 °C (350 °C)
 Dimensions 12 m x 200 µm x 0.33 µm (Uncalibrated)
 Heater Oven
 In Front SS Inlet He
 Out MSD
 (Initial) 200 °C
 Pressure 17.295 psi
 Flow 1.1 mL/min
 Average Velocity 64.239 cm/sec
 Holdup Time 0.31134 min
 Control Mode Constant Flow

Column #2
 Flow
 Setpoint Off
 (Initial) 0.5 mL/min
 Post Run 2 mL/min

Column Information Agilent 19091Z-211
 Description HP-1
 Temperature Range -60 °C-325 °C (350 °C)
 Dimensions 15 m x 320 µm x 1 µm (Uncalibrated)
 Heater Oven
 In Back SS Inlet He
 Out Back Detector FID
 (Initial) 200 °C
 Pressure 2.7899 psi
 Flow 0.5 mL/min
 Average Velocity 15.169 cm/sec
 Holdup Time 1.6481 min
 Control Mode Constant Flow

Column Outlet Pressure 0 psi

Back Detector FID
 Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Makeup He
 Heater Off
 H2 Flow Off
 Air Flow Off
 Makeup Flow Off
 Carrier Gas Flow Correction Constant Makeup and Fuel Flow
 Flame Off

Aux EPC 1,2,3
 Aux EPC 1 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness ***Excluded from Affecting GC's Readiness State***
 Aux EPC 1 He (unused)

Aux EPC 2 He
 Pressure
 Setpoint Off
 (Initial) 10 psi

Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 2 He	(unused)	
Aux EPC 3 He		156
Pressure		
Setpoint	Off	
(Initial)	10 psi	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Aux EPC 3 He	(unused)	
Signals		
Signal #1: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #2: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #3: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Front Sample	
Signal #4: Back Signal		
Description	Back Signal	
Details	Back Signal (FID)	
Save	Off	
Data Rate	50 Hz	
Dual Injection Assignment	Back Sample	

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

34.610	:	EMISSION	
70.347	:	ENERGY	
34.961	:	REPELLER	
90.157	:	IONFOCUS	
28.500	:	ENTRANCE_LENS	
1011.765	:	EMVOLTS	
			1011.765 : Actual EMV
			0.55 : GAIN FACTOR
2013.000	:	AMUGAIN	
122.875	:	AMUOFFSET	
1.000	:	FILAMENT	
0.000	:	DCPOLARITY	
19.576	:	ENTLENSOFFSET	

-649.000 : MASSGAIN
-36.000 : MASSOFFSET

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\THCMS.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search Minimum Quality

DEMO.L 0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

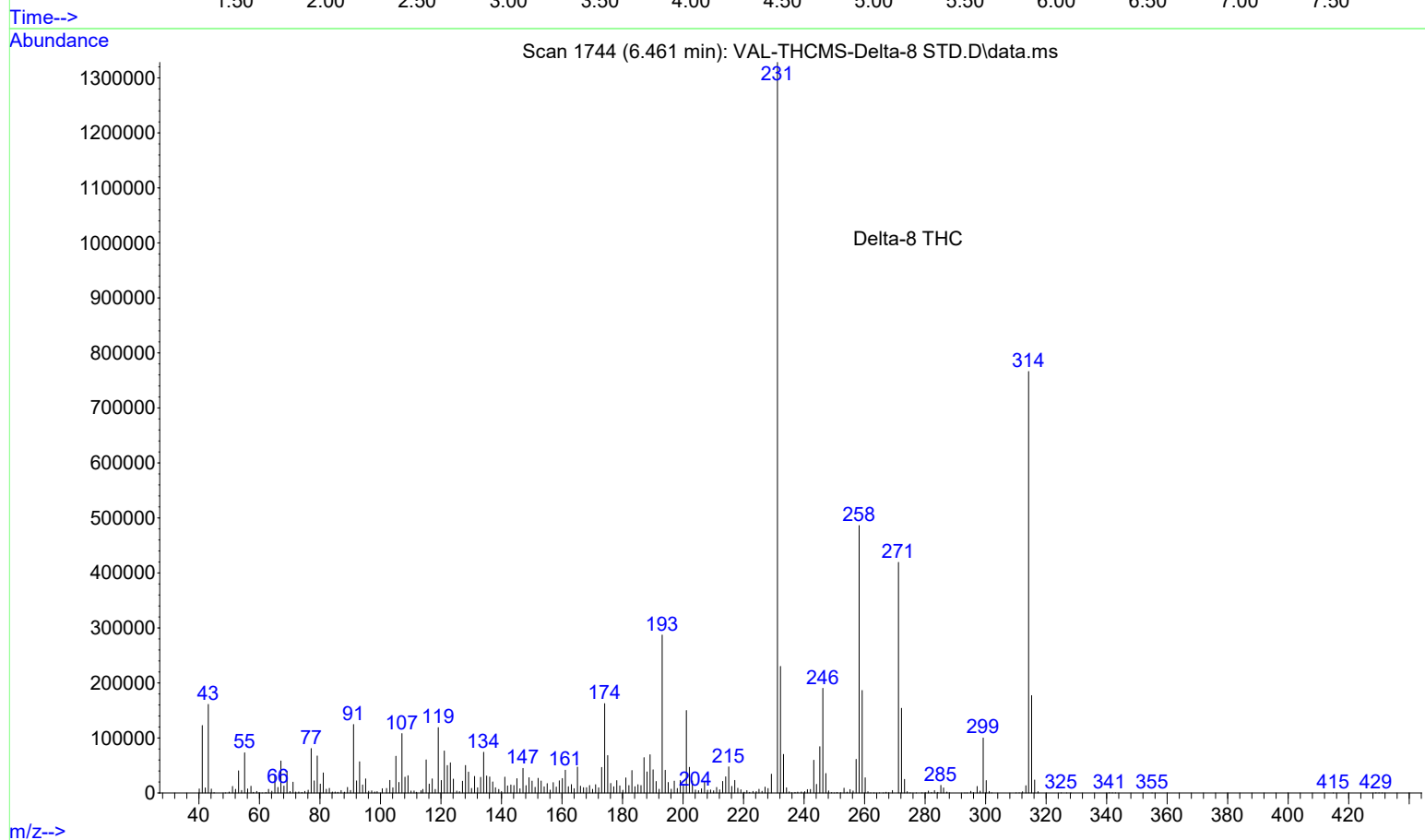
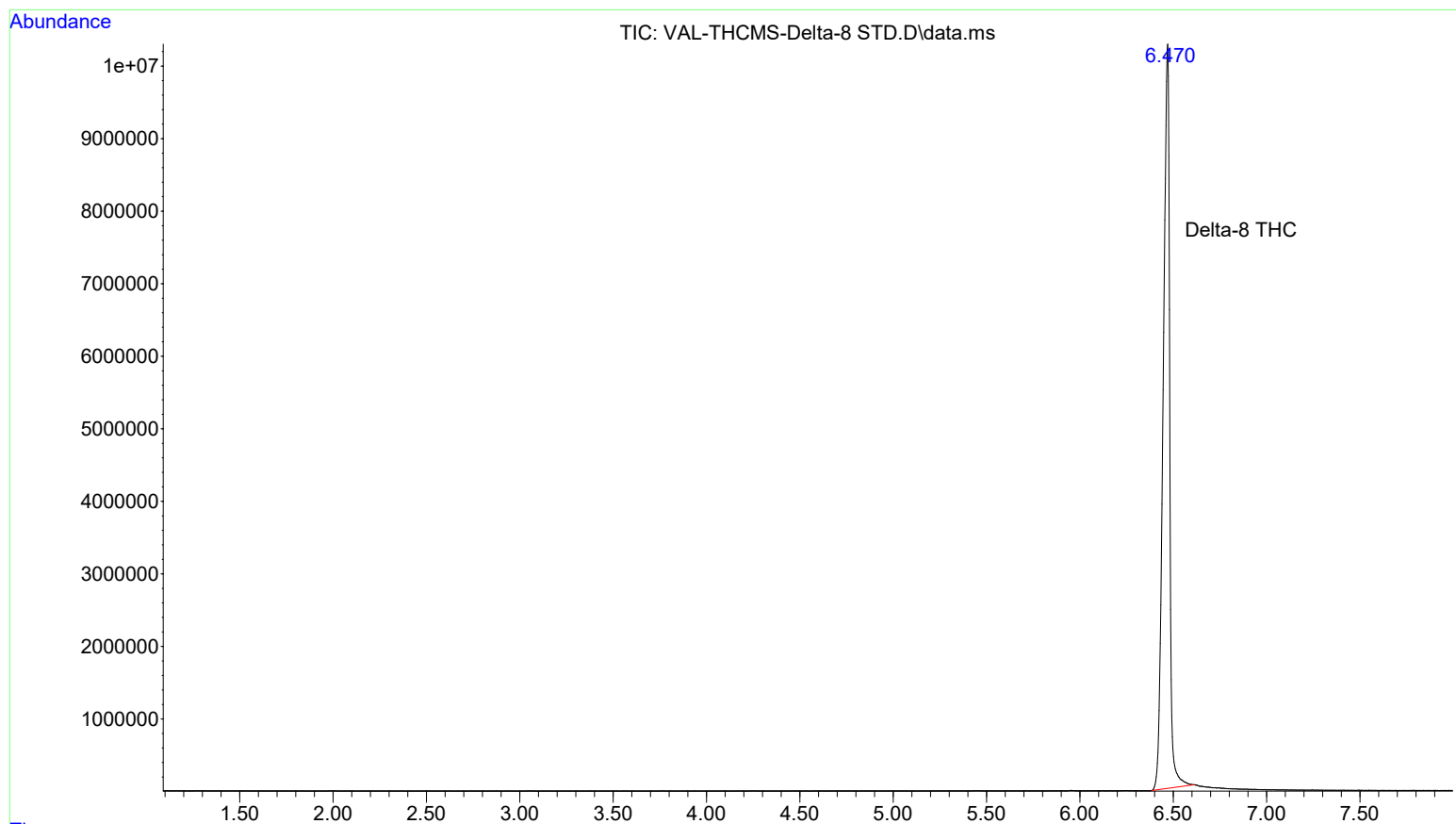
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:54:50 2025

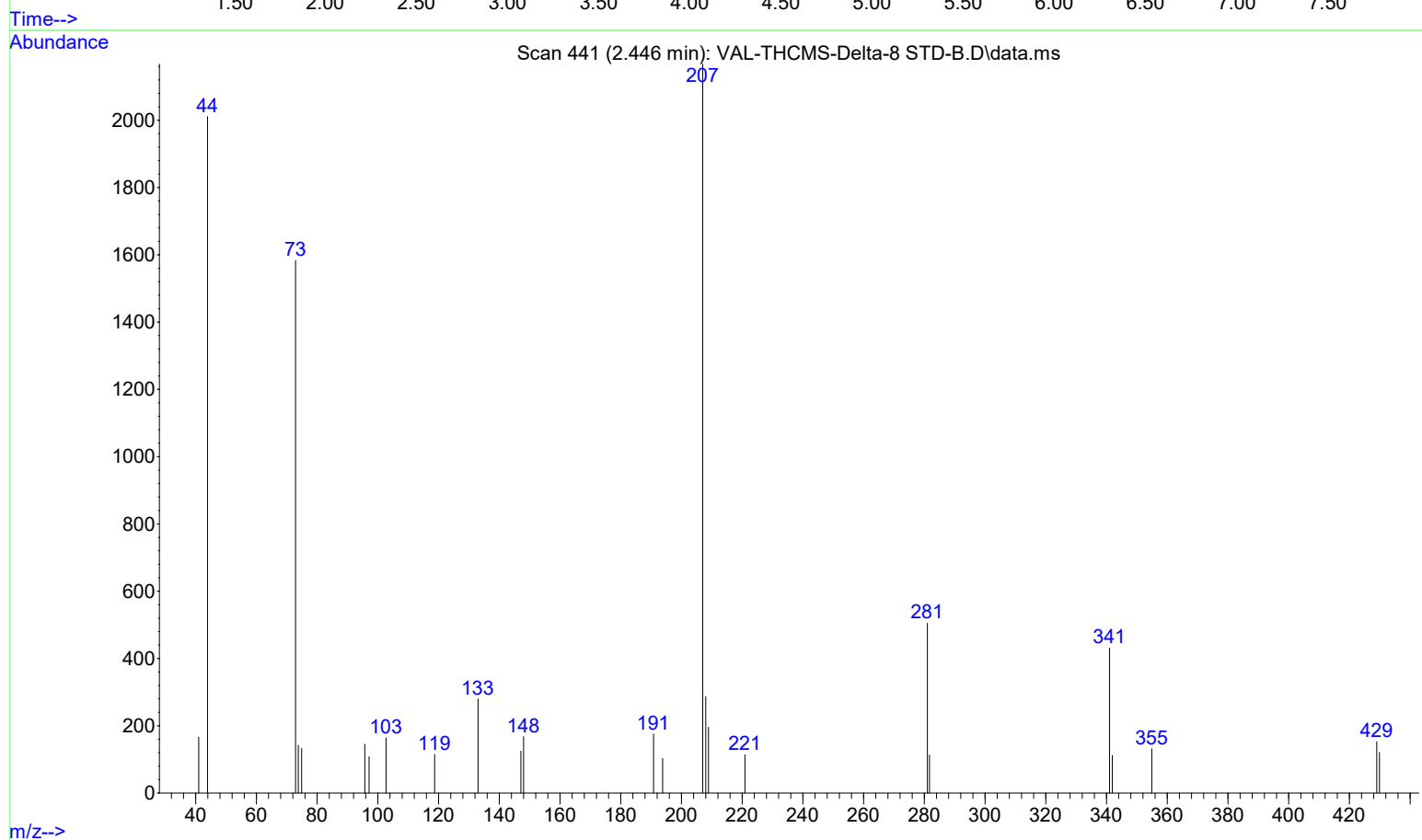
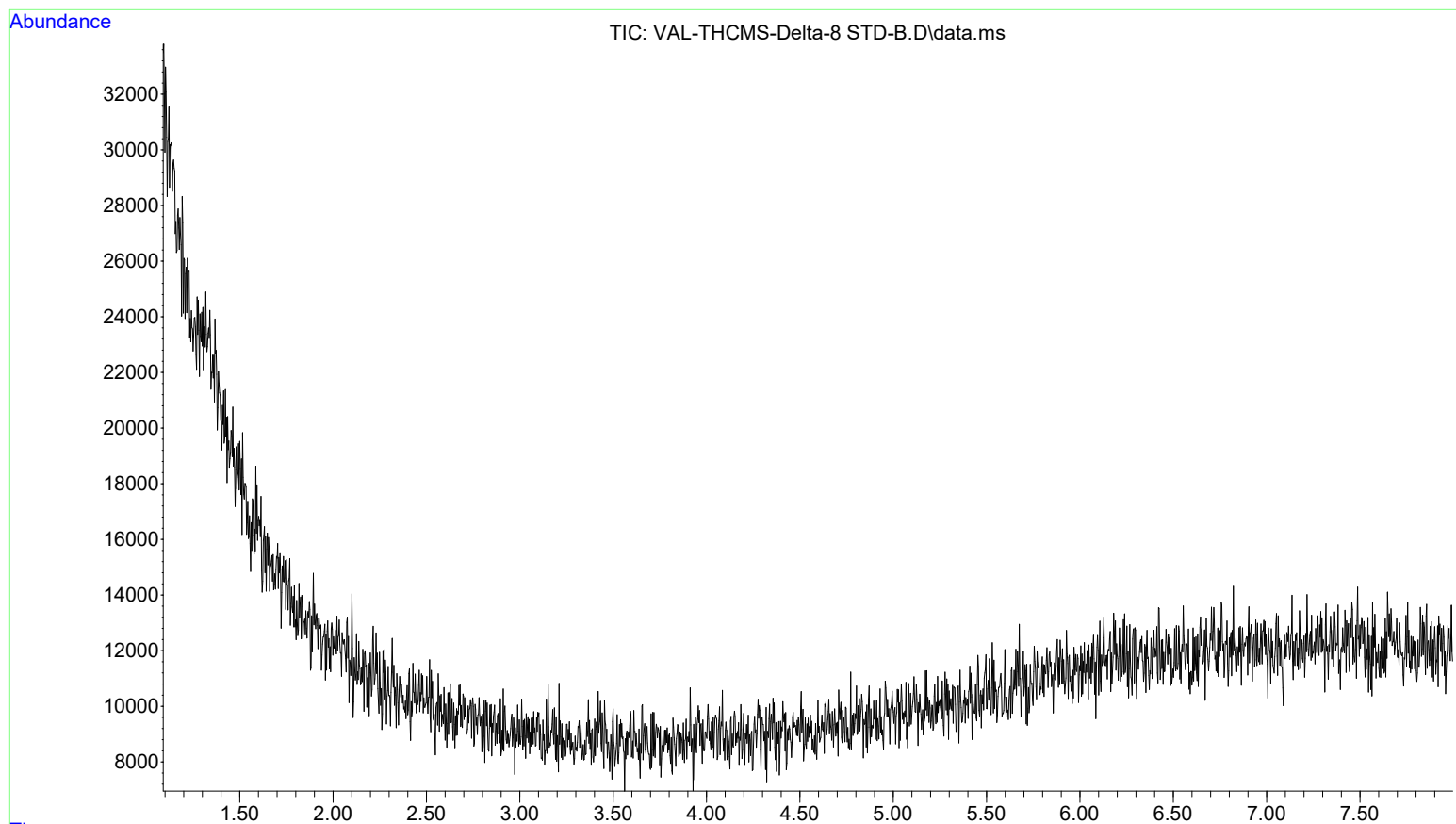
File : Z:\Instr\Luna\2025\6-June\VAL-THCMS-Delta-8 STD.D
Operator :
Acquired : 23 Jun 2025 20:20 using AcqMethod THCMS.M
Instrument : Luna
Sample Name: THCMS-Delta-8 STD
Misc Info : MeOH
Vial Number: 19

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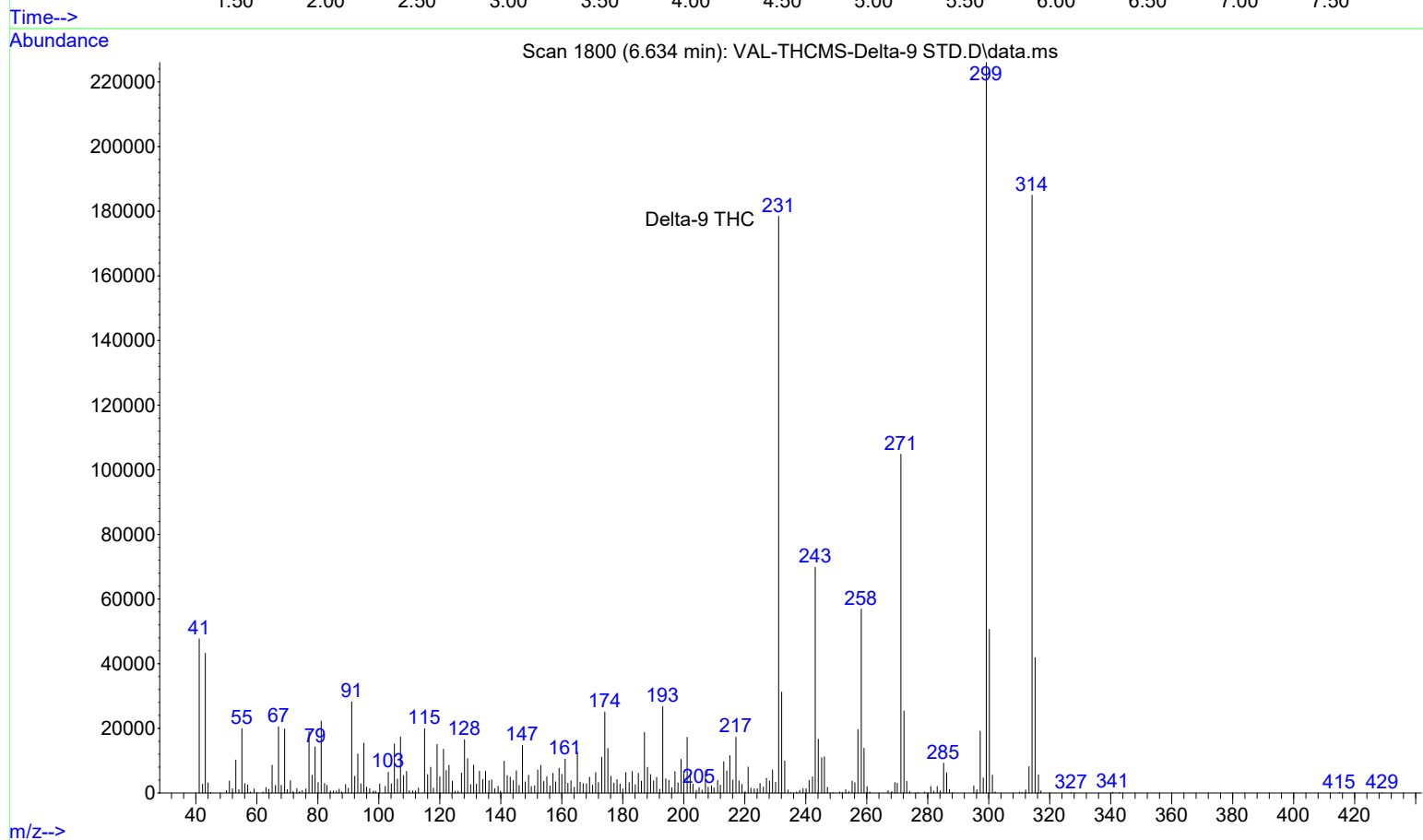
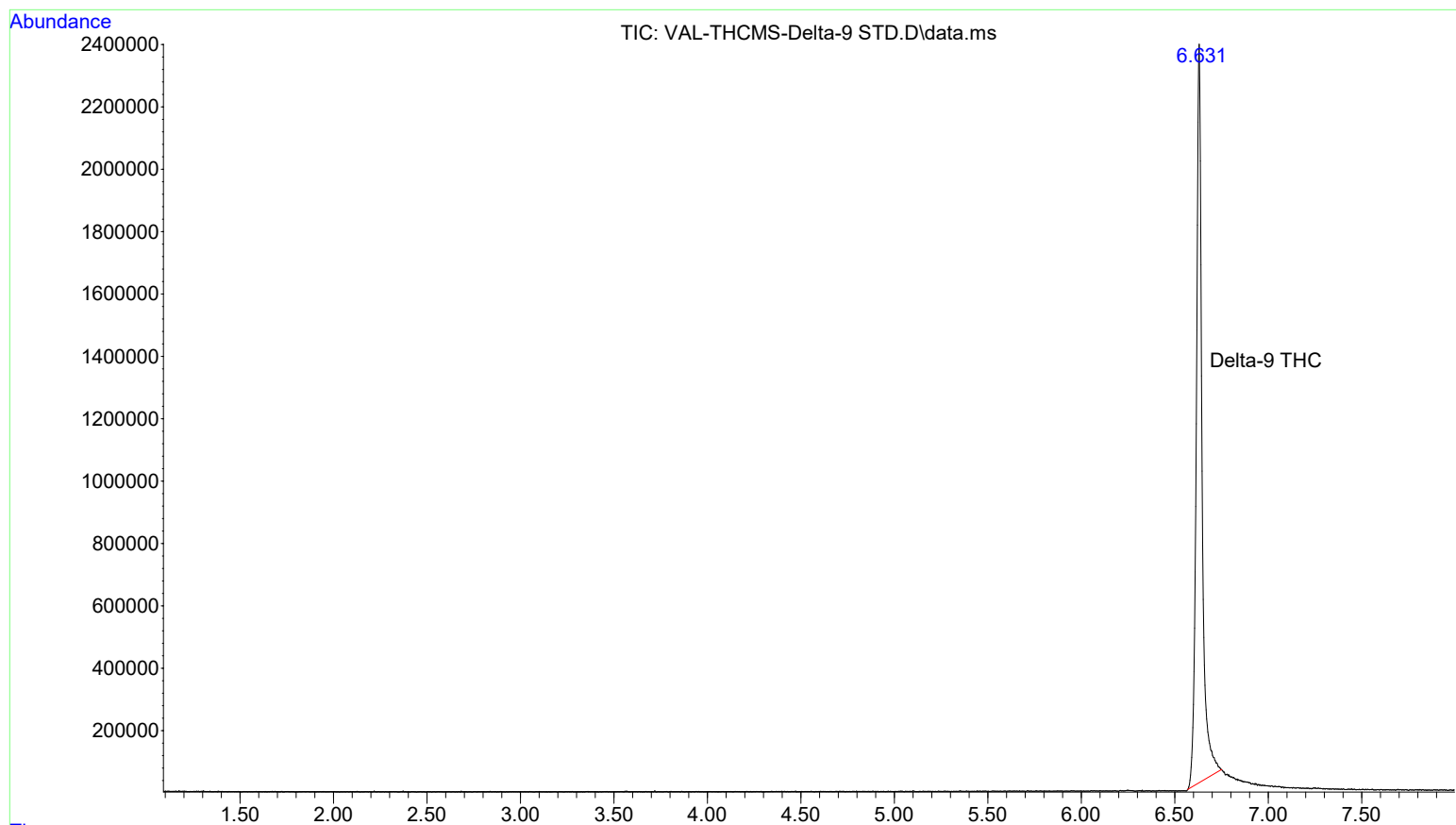
File : Z:\Instr\Luna\2025\6-June\VAL-THCMS-Delta-8 STD-B.D
Operator :
Acquired : 23 Jun 2025 20:10 using AcqMethod THCMS.M
Instrument : Luna
Sample Name: THCMS-Delta-8 STD-Blank
Misc Info : MeOH
Vial Number: 11

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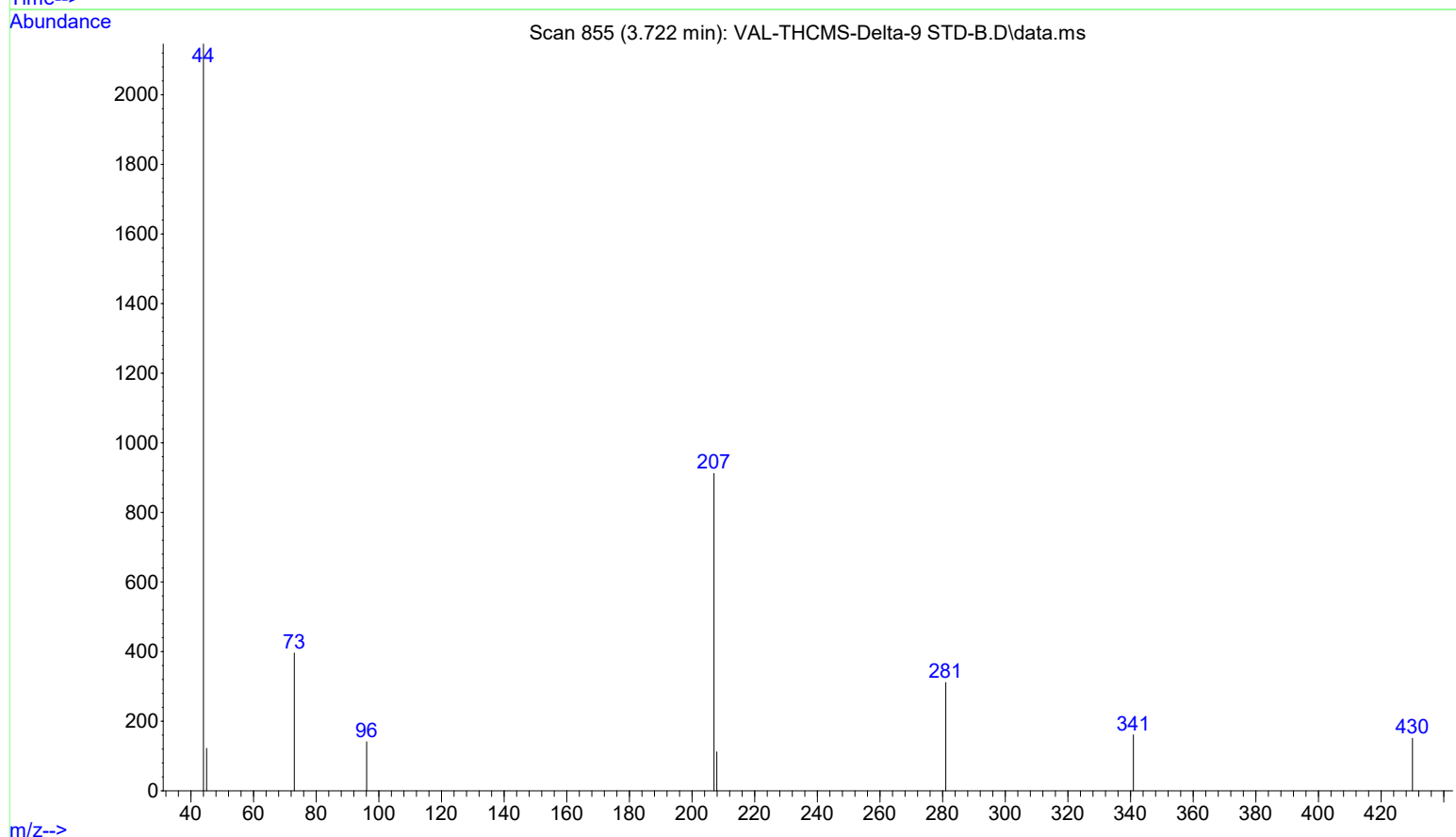
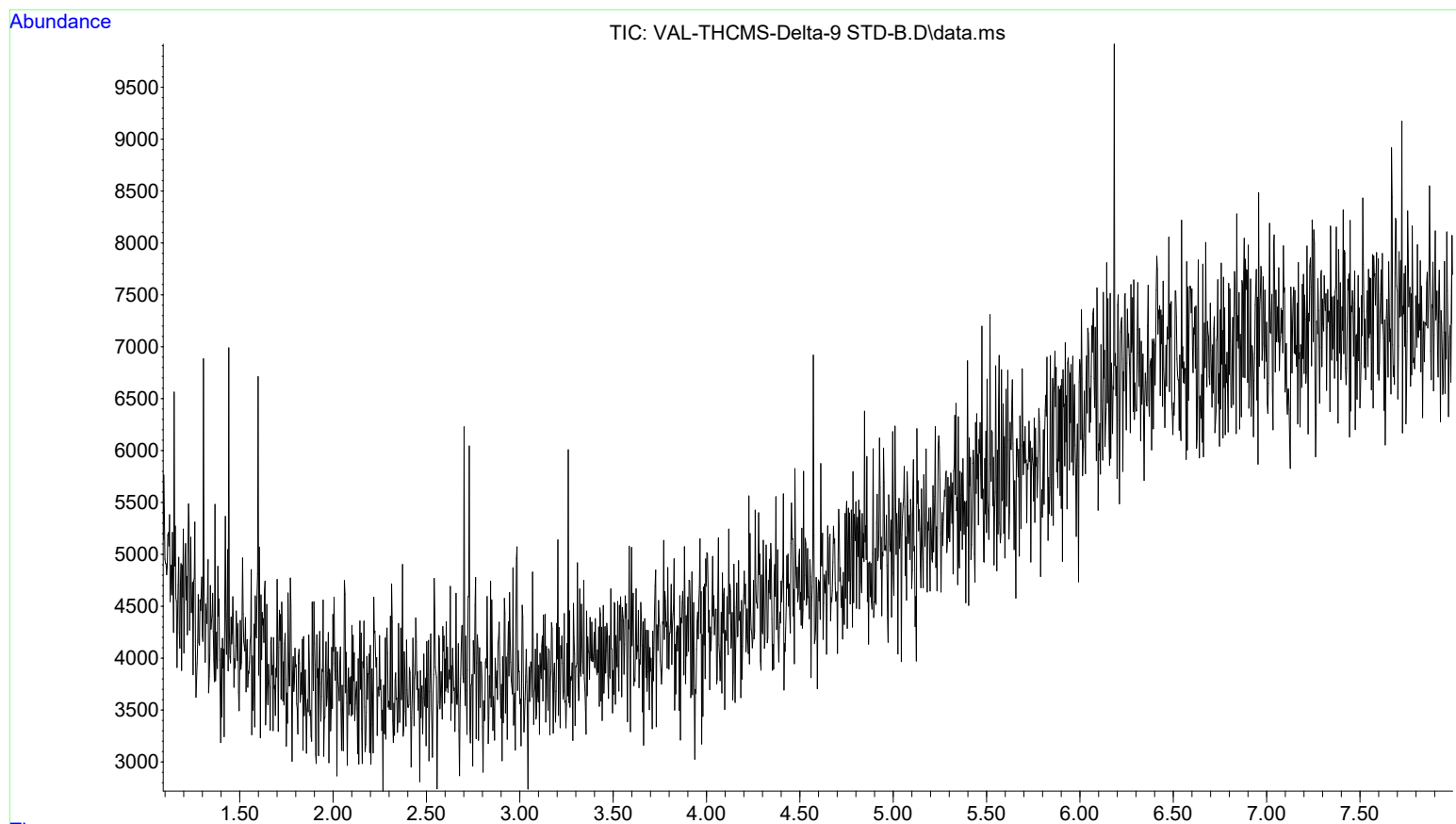
File : Z:\Instr\Luna\2025\6-June\VAL-THCMS-Delta-9 STD.D
Operator :
Acquired : 23 Jun 2025 21:21 using AcqMethod THCMS.M
Instrument : Luna
Sample Name: THCMS-Delta-9 STD
Misc Info : MeOH
Vial Number: 20

162



File :Z:\Instr\Luna\2025\6-June\VAL-THCMS-Delta-9 STD-B.D
Operator :
Acquired : 23 Jun 2025 21:10 using AcqMethod THCMS.M
Instrument : Luna
Sample Name: THCMS-Delta-9 STD-Blank
Misc Info : MeOH
Vial Number: 11

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Method Information for: C:\MassHunter\GCMS\1\methods\XLDRUGS.M

Method Sections To Run:

() Save Copy of Method With Data
() Instrument Control Pre-Run Cmd/Macro =
() Data Analysis Pre-Run Cmd/Macro =
(X) Data Acquisition
(X) Data Analysis
() Instrument Control Post-Run Cmd/Macro =
() Data Analysis Post-Run Cmd/Macro =

Method Comments:
XLDRUGS

END OF METHOD CONTROL PARAMETERS

Single Quadrupole Acquisition Method - MS Parameters Report

Method file	C:\MassHunter\GCMS\1\methods\XLDRUGS.M
Tune file	ATUNE.U
Ion source	EI
Source temperature (°C)	230
Quad temperature (°C)	150
Fixed Electron energy (eV)	70.3
Acquisition Type	Scan
Stop time (min)	10.00
Solvent delay (min)	2.00
Trace Ion Detection	False
Gain Factor	1
EM Saver	False
EM Saver Limit	N/A

Scan Time Segments

Time	Start Mass	End Mass	Threshold	Scan Speed
2.00	40	550	100	3,125 [N=1]

Timed Events

Time	Type of Event	Parameter
------	---------------	-----------

Real-Time Plots

Type of Plot	Label	Low Mass	High Mass
Total Ion	N/A	N/A	N/A
Spectrum	N/A	N/A	N/A
Extracted Ion	Scan 1-1	40	550

Self-Cleaning Ion Source Parameters

Mode	No Cleaning
------	-------------

C:\MassHunter\GCMS\1\methods\XLDRUGS.M
Mon Jun 30 15:55:49 2025

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Injection Location: Front
Mass Spectrometer : Enabled

No Sample Prep method has been assigned to this method.

GC
GC Summary
Run Time 28.058 min
Post Run Time 0 min

Oven
Temperature
Setpoint On
(Initial) 70 °C
Hold Time 0 min
Post Run 80 °C
Program
#1 Rate 15 °C/min
#1 Value 150 °C
#1 Hold Time 3 min
#2 Rate 40 °C/min
#2 Value 299 °C
#2 Hold Time 16 min

Equilibration Time 0 min
Max Temperature 325 °C
Maximum Temperature Override Disabled
Slow Fan Disabled

ALS
Front Injector
Syringe Size 10 µL
Injection Volume 1 µL
Injection Repetitions 1
Injection Delay 0 sec
Solvent A Washes (PreInj) 1
Solvent A Washes (PostInj) 1
Solvent A Volume 8 µL
Solvent B Washes (PreInj) 1
Solvent B Washes (PostInj) 1
Solvent B Volume 8 µL
Sample Washes 1
Sample Wash Volume 8 µL
Sample Pumps 2
Dwell Time (PreInj) 0 min
Dwell Time (PostInj) 0 min
Solvent Wash Draw Speed 300 µL/min
Solvent Wash Dispense Speed 6000 µL/min
Sample Wash Draw Speed 300 µL/min
Sample Wash Dispense Speed 6000 µL/min

Injection Dispense Speed	6000 µL/min	
Viscosity Delay	2 sec	
Sample Depth	Disabled	
Tower Fan	On	167
Solvent Wash Mode	A, B	
Back Injector		
Syringe Size	10 µL	
Injection Volume	1 µL	
Injection Repetitions	1	
Injection Delay	0 sec	
Solvent A Washes (PreInj)	0	
Solvent A Washes (PostInj)	0	
Solvent A Volume	8 µL	
Solvent B Washes (PreInj)	0	
Solvent B Washes (PostInj)	0	
Solvent B Volume	8 µL	
Sample Washes	0	
Sample Wash Volume	8 µL	
Sample Pumps	0	
Dwell Time (PreInj)	0 min	
Dwell Time (PostInj)	0 min	
Solvent Wash Draw Speed	300 µL/min	
Solvent Wash Dispense Speed	6000 µL/min	
Sample Wash Draw Speed	300 µL/min	
Sample Wash Dispense Speed	6000 µL/min	
Injection Dispense Speed	6000 µL/min	
Viscosity Delay	0 sec	
Sample Depth	Disabled	
Tower Fan	On	
Solvent Wash Mode	A, B	
Sample Overlap		
Mode	Sample overlap is not enabled	
ALS Errors	Pause for user interaction	
Front SS Inlet He		
Mode	Split	
Heater	On	250 °C
Pressure	On	9.96 psi
Total Flow	On	35.749 mL/min
Septum Purge Flow	On	1 mL/min
Gas Saver	Off	
Split Ratio	30 :1	
Split Flow	33.628 mL/min	
Back SS Inlet He		
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***	
Mode	Split	
Heater	Off	
Pressure	Off	
Total Flow	Off	
Septum Purge Flow	Off	
Gas Saver	Off	
Split Ratio	50 :1	
Split Flow	25 mL/min	
Thermal Aux 2 (MSD Transfer Line)		
Temperature		
Setpoint	On	
(Initial)	280 °C	

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Column	
Column #1	
Flow	
Setpoint	On
(Initial)	1.1209 mL/min
Post Run	2 mL/min
Column Information	Agilent 128-0112
Description	DB-1ms
Temperature Range	-60 °C-340 °C (350 °C)
Dimensions	12 m x 200 µm x 0.33 µm (Uncalibrated)
Heater	Oven
In	Front SS Inlet He
Out	MSD
(Initial)	70 °C
Pressure	9.96 psi
Flow	1.1209 mL/min
Average Velocity	61.598 cm/sec
Holdup Time	0.32469 min
Control Mode	Constant Flow
Column #2	
Flow	
Setpoint	Off
(Initial)	0.5 mL/min
Post Run	2 mL/min
Column Information	Agilent 19091Z-211
Description	HP-1
Temperature Range	-60 °C-325 °C (350 °C)
Dimensions	15 m x 320 µm x 1 µm (Uncalibrated)
Heater	Oven
In	Back SS Inlet He
Out	Back Detector FID
(Initial)	70 °C
Pressure	1.6842 psi
Flow	0.5 mL/min
Average Velocity	11.41 cm/sec
Holdup Time	2.191 min
Control Mode	Constant Flow
Column Outlet Pressure	0 psi
Back Detector FID	
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***
Makeup	He
Heater	Off
H2 Flow	Off
Air Flow	Off
Makeup Flow	Off
Carrier Gas Flow Correction	Constant Makeup and Fuel Flow
Flame	Off
Aux EPC 1,2,3	
Aux EPC 1 He	
Pressure	
Setpoint	Off
(Initial)	10 psi
Excluded from Readiness	***Excluded from Affecting GC's Readiness State***
Aux EPC 1 He	(unused)
Aux EPC 2 He	
Pressure	

```

Setpoint      Off
(Initial)     10 psi

Excluded from Readiness      ***Excluded from Affecting GC's Readiness State***169
Aux EPC 2 He      (unused)

Aux EPC 3 He
Pressure
Setpoint      Off
(Initial)     10 psi

Excluded from Readiness      ***Excluded from Affecting GC's Readiness State***
Aux EPC 3 He      (unused)

Signals
Signal #1:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment      Front Sample

Signal #2:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment      Front Sample

Signal #3:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment      Front Sample

Signal #4:  Back Signal
Description      Back Signal
Details          Back Signal (FID)
Save            Off
Data Rate       50 Hz
Dual Injection Assignment      Back Sample

```

TUNE PARAMETERS for SN: US73337875

Trace Ion Detection is OFF.

```

34.610   :  EMISSION
70.347   :  ENERGY
34.961   :  REPELLER
90.157   :  IONFOCUS
28.500   :  ENTRANCE_LENS
1011.765 :  EMVOLTS

                1011.765 : Actual EMV
                0.55   : GAIN FACTOR

2013.000 :  AMUGAIN
122.875  :  AMUOFFSET

```

1.000 : FILAMENT
0.000 : DCPOLARITY
19.576 : ENTLENSOFFSET
-649.000 : MASSGAIN
-36.000 : MASSOFFSET

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END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

DATA ANALYSIS PARAMETERS

Method Name: C:\MassHunter\GCMS\1\methods\XLDRUGS.M

Percent Report Settings

Sort By: Signal

Output Destination

Screen: No

Printer: Yes

File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Qualitative Report Settings

Peak Location of Unknown: Apex

Library to Search Minimum Quality

DEMO.L 0

Integration Events: AutoIntegrate

Report Type: Summary

Output Destination

Screen: No

Printer: Yes

File: No

Generate Report During Run Method: No

Quantitative Report Settings

Report Type: Summary

Output Destination

Screen: Yes
Printer: No
File: No

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Generate Report During Run Method: No

Calibration Last Updated:

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

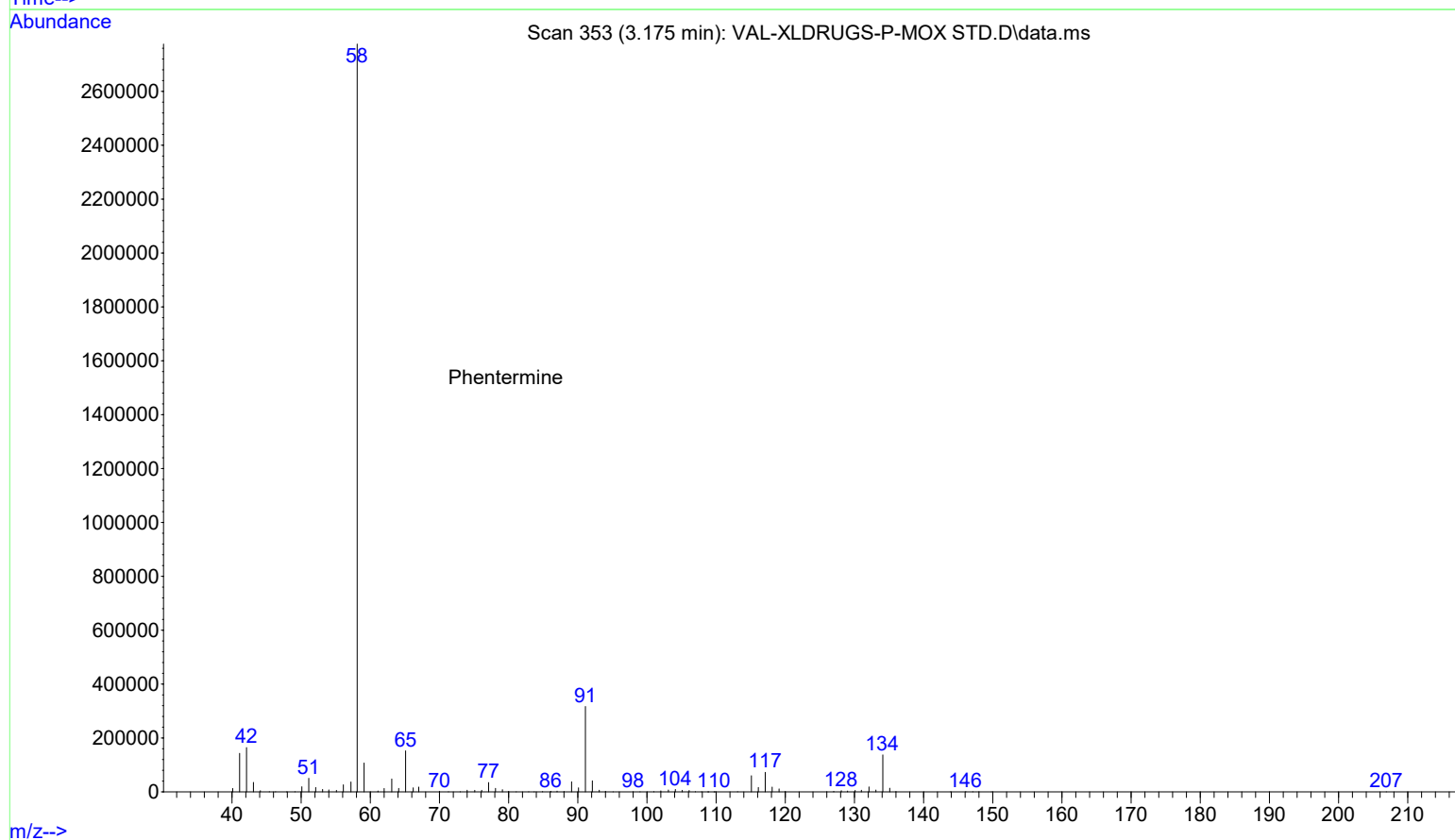
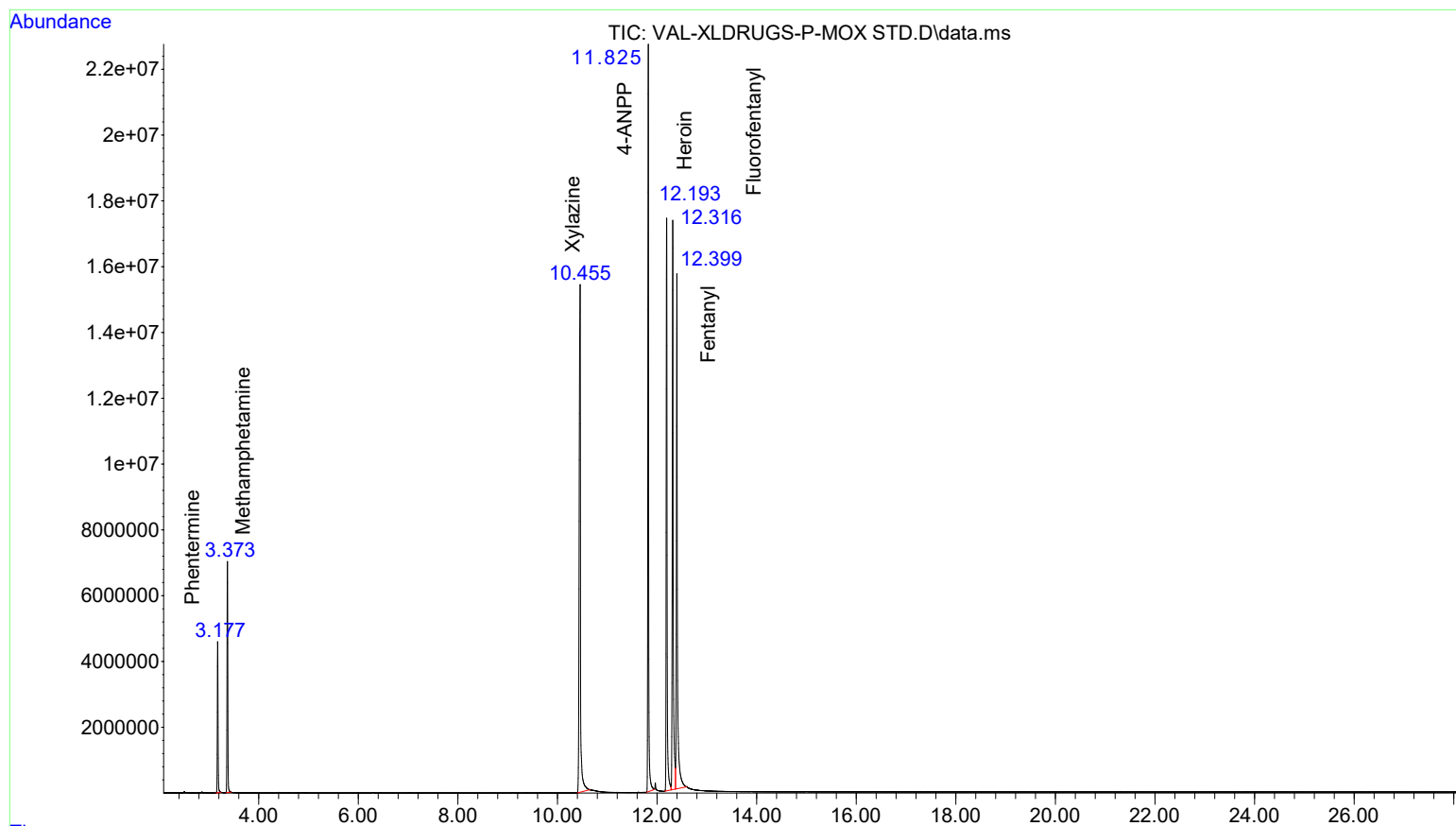
*** Empty Quantitation Database ***

END OF DATA ANALYSIS PARAMETERS

Mon Jun 30 15:56:13 2025

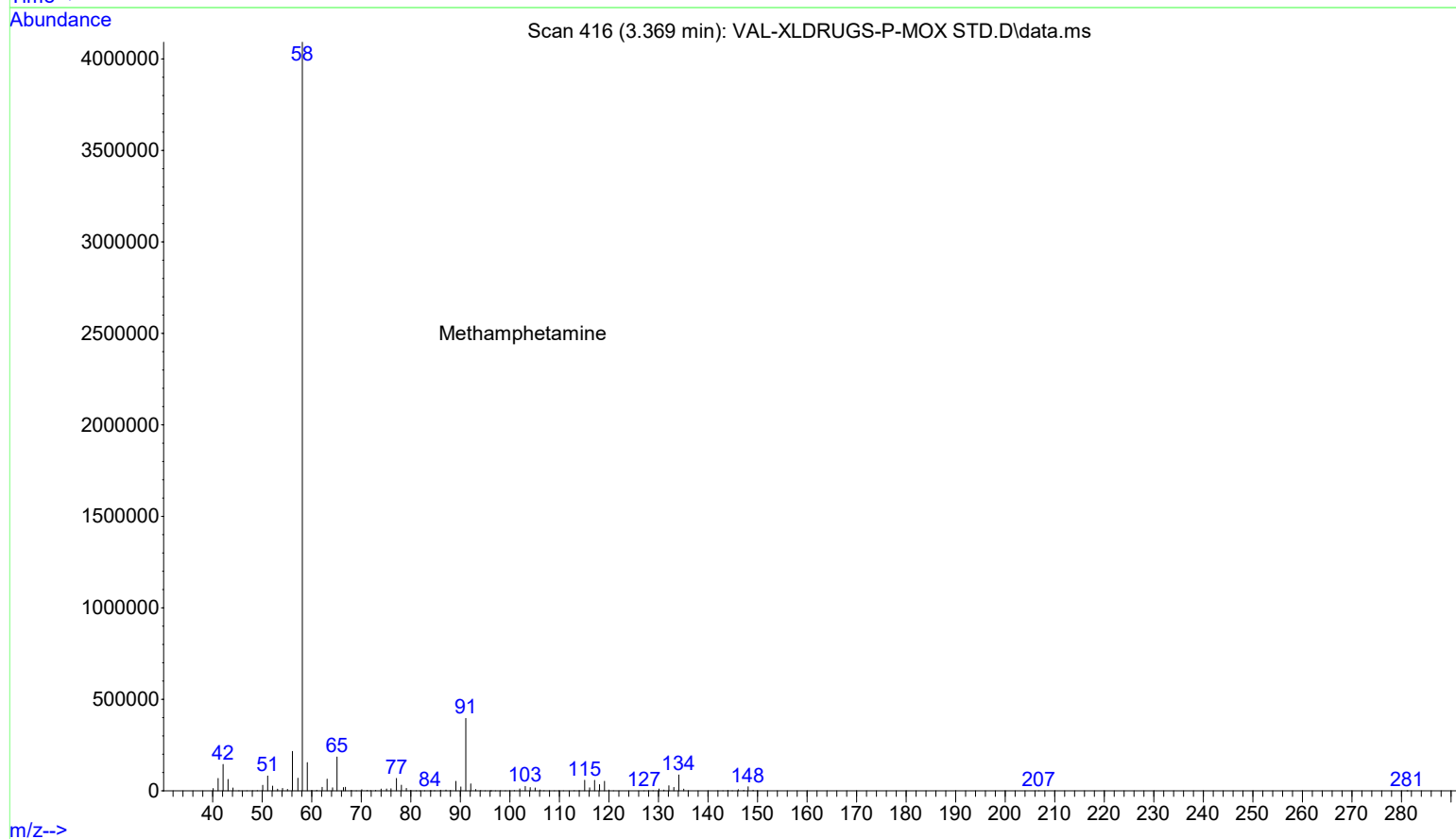
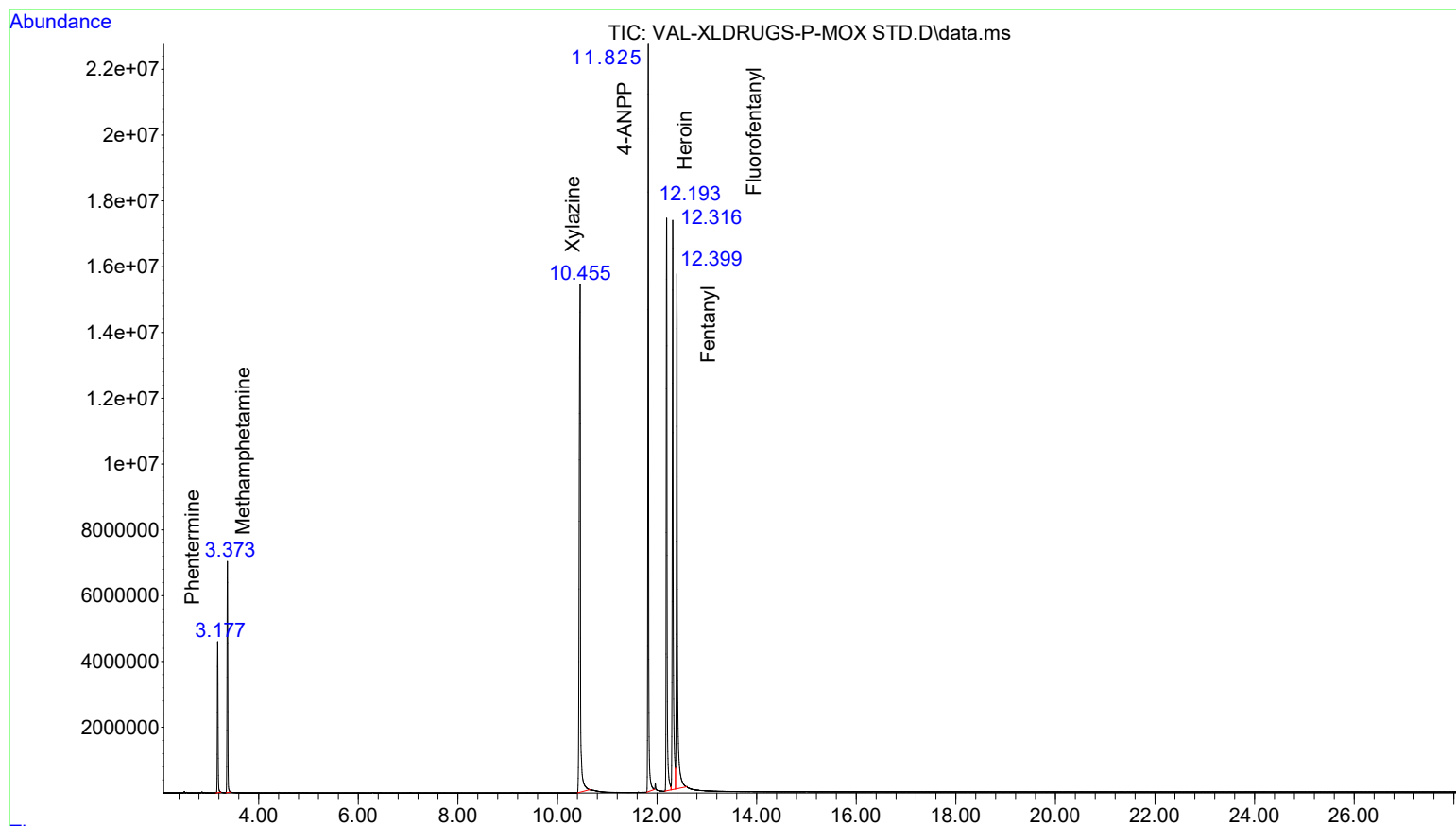
File :Z:\Instr\Luna\2025\6-June\VAL-XLDRUGS-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 22:41 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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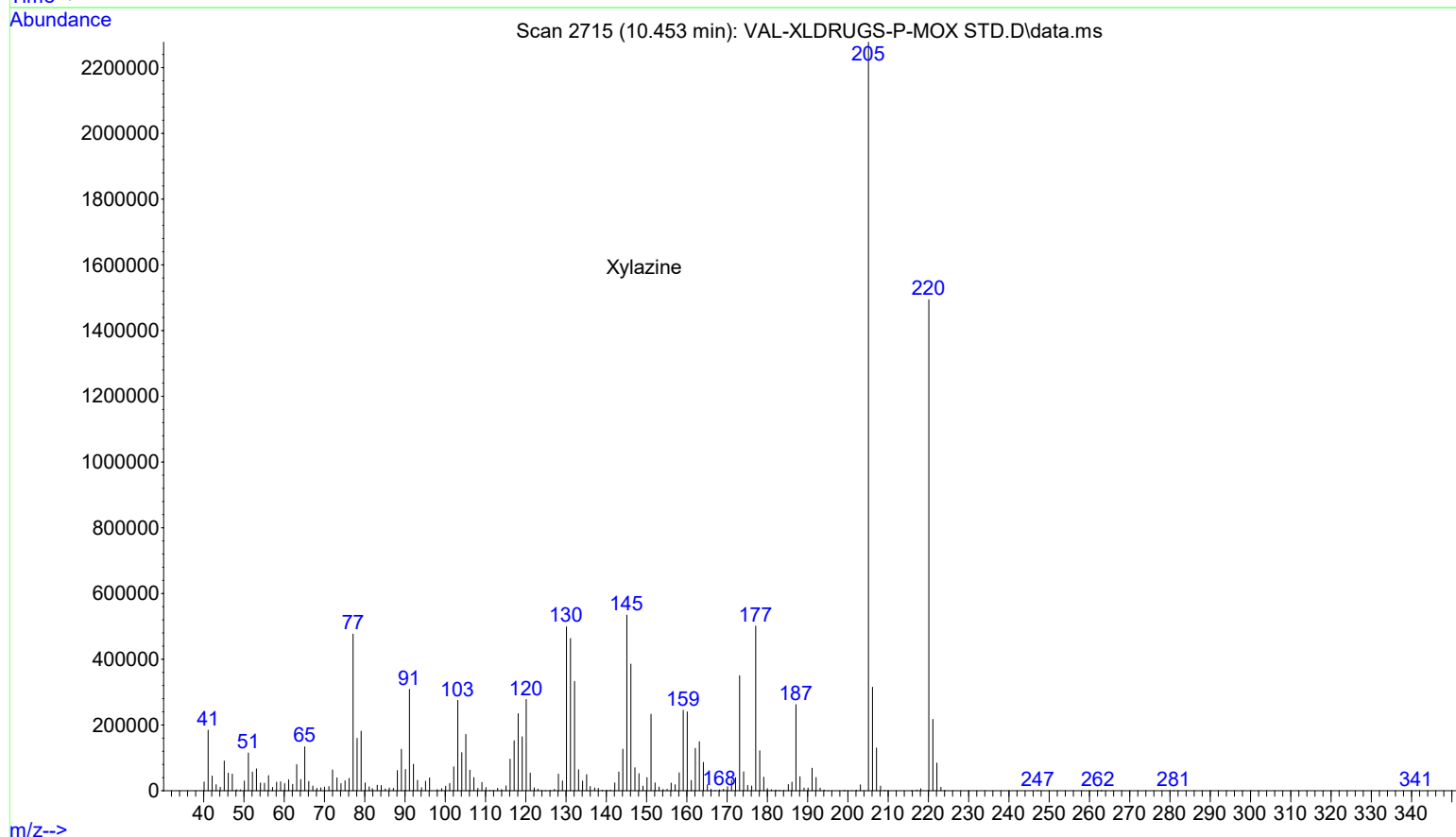
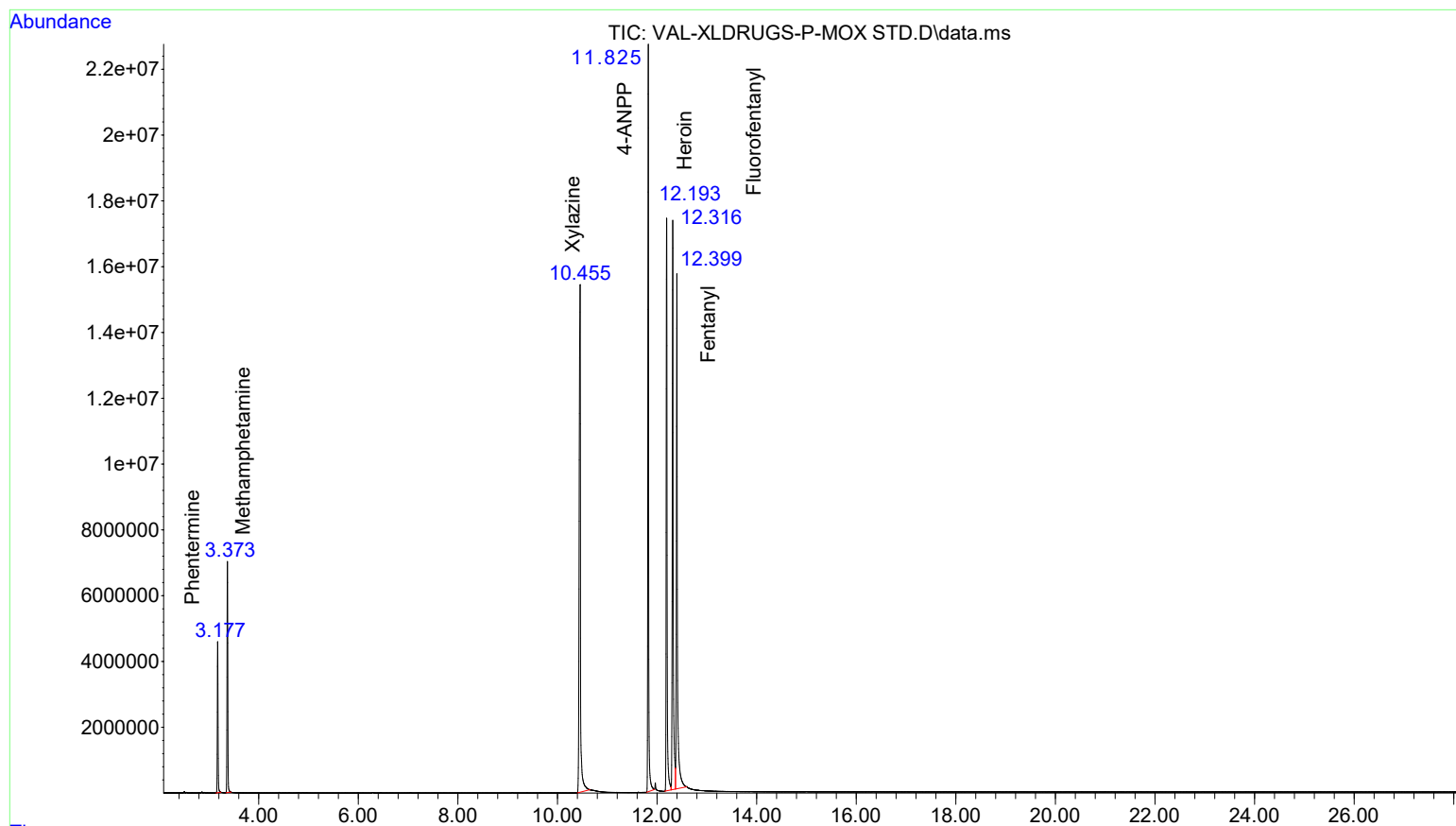
File : Z:\Instr\Luna\2025\6-June\VAL-XLDRUGS-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 22:41 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

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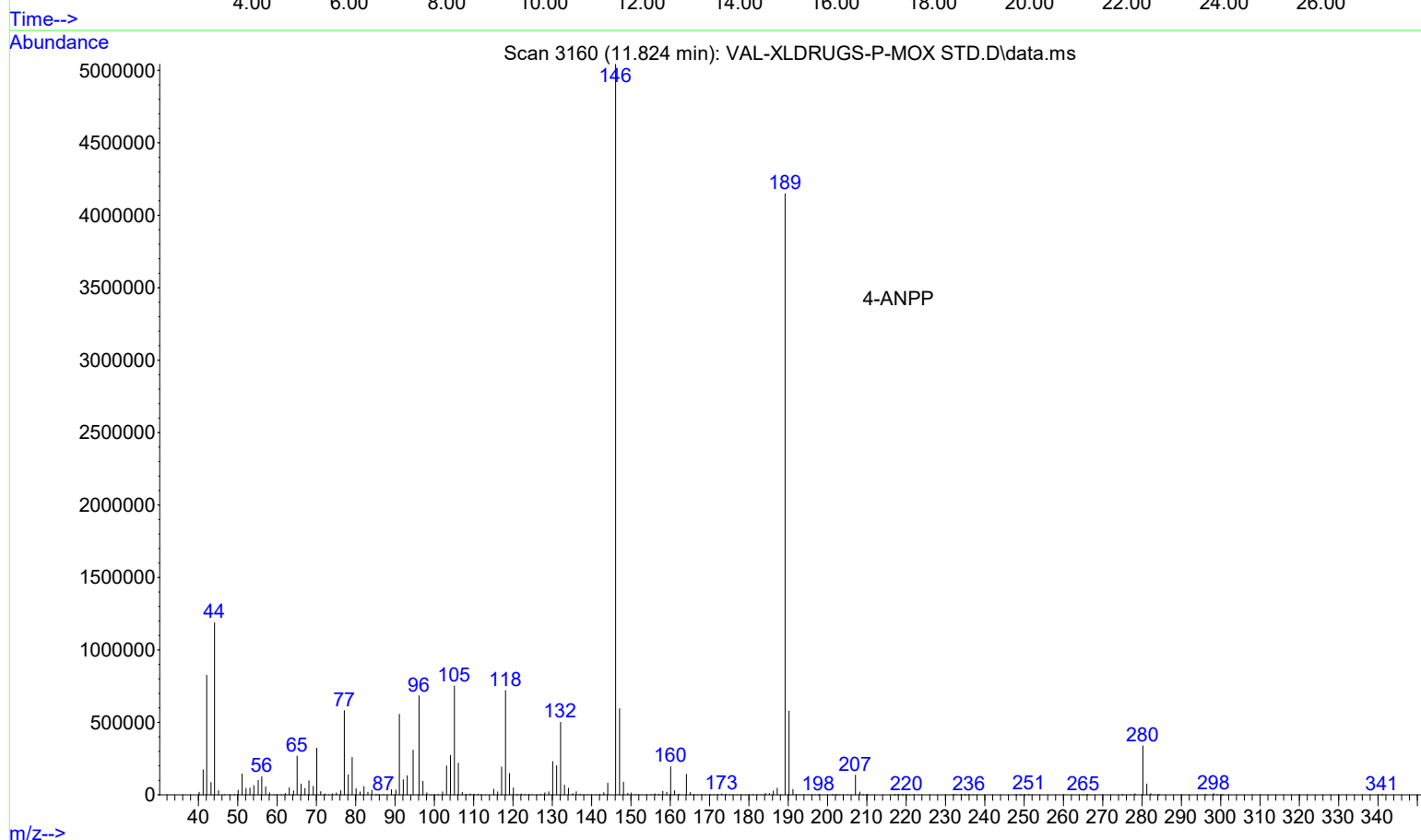
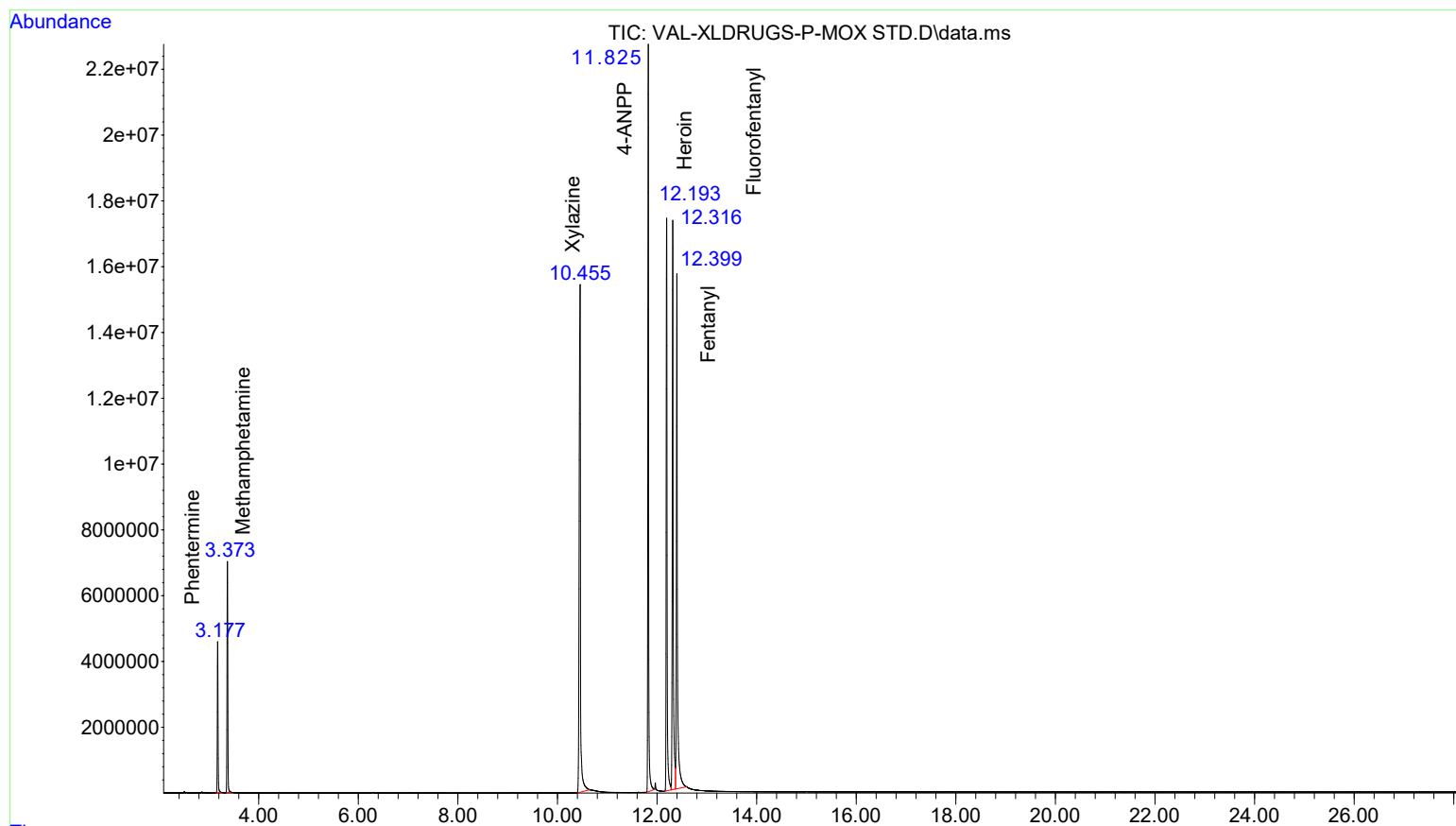
File : Z:\Instr\Luna\2025\6-June\VAL-XLDRUGS-P-MOX STD.D
Operator :
Acquired : 23 Jun 2025 22:41 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

175



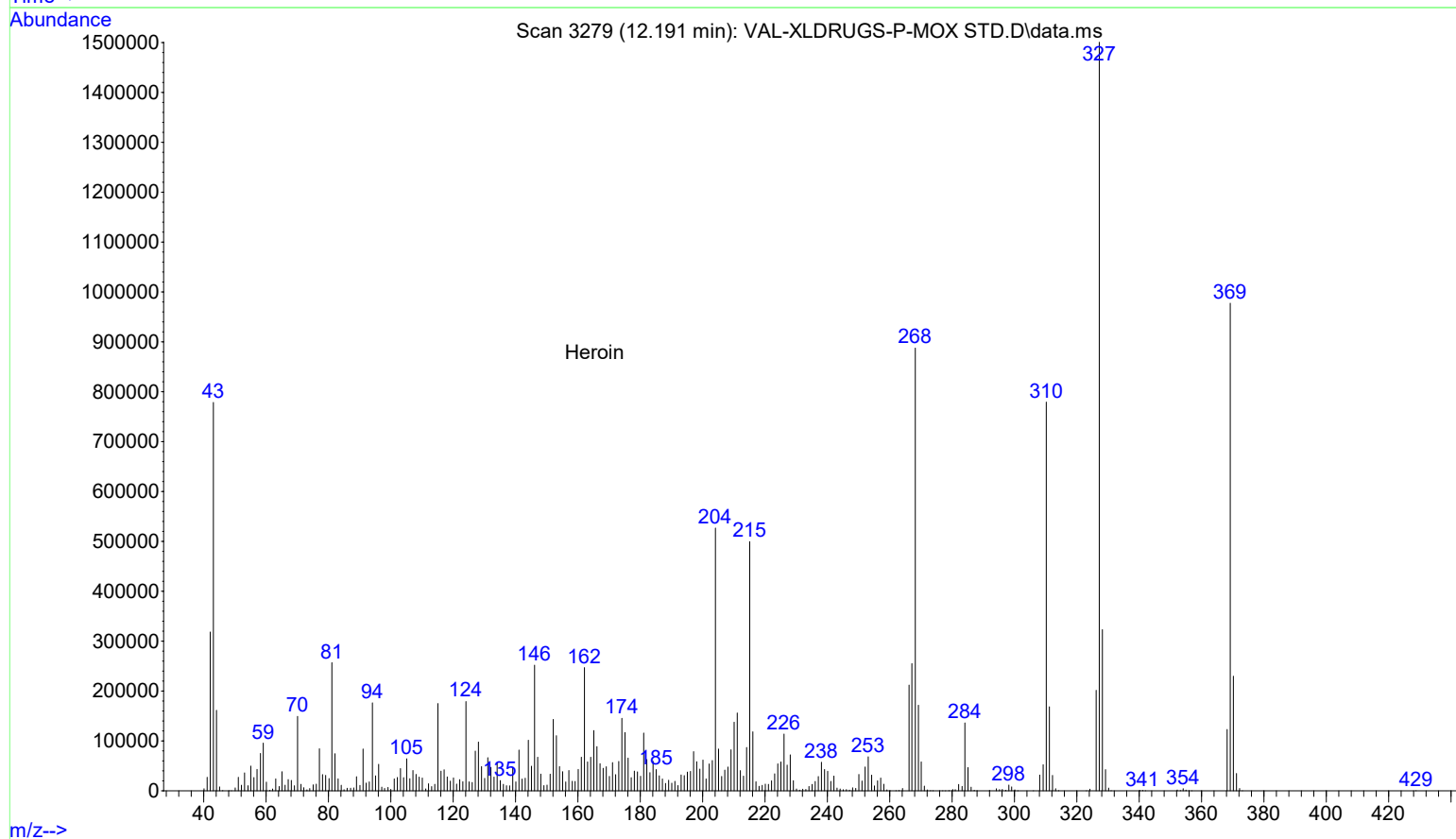
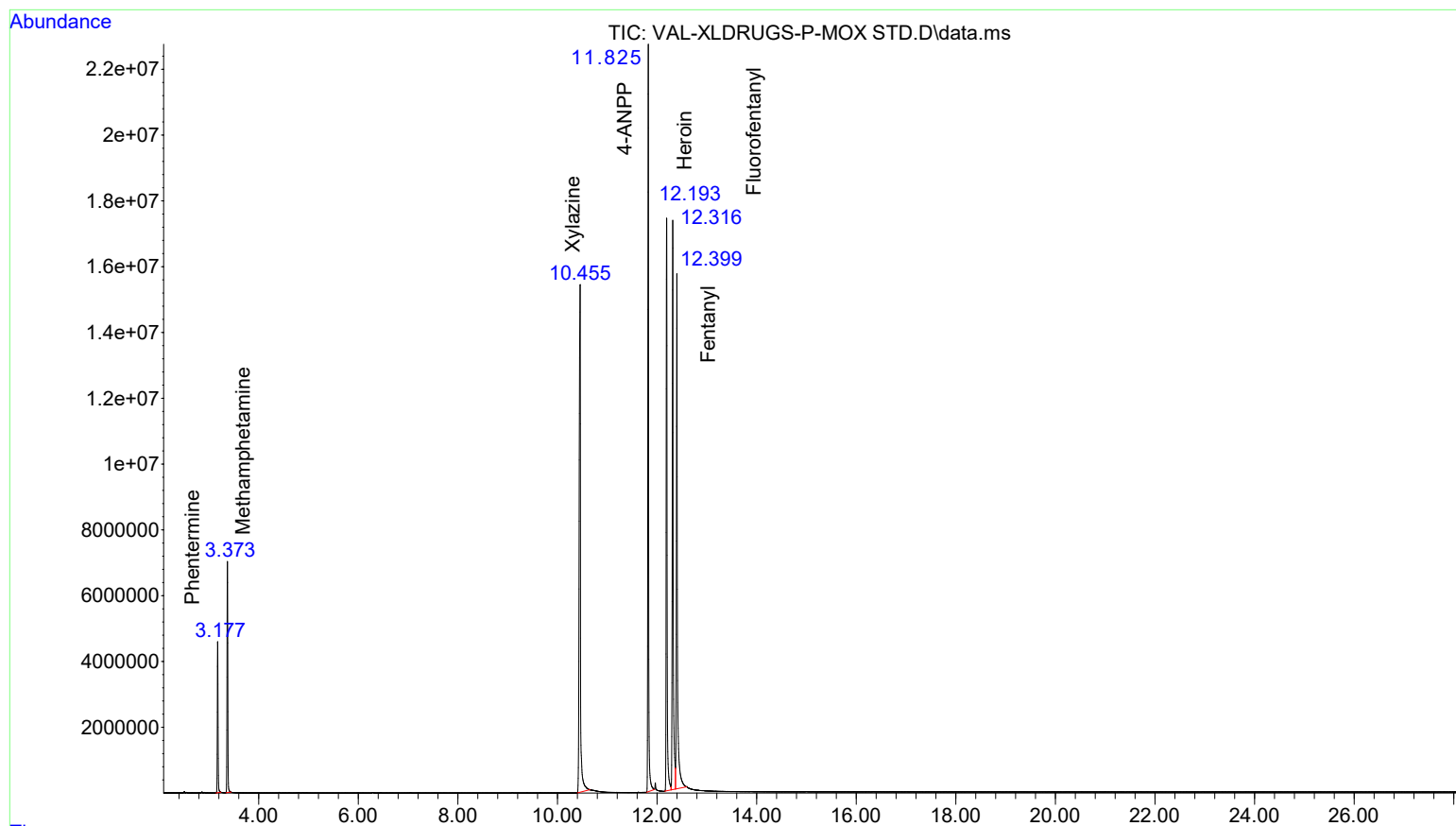
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Operator :
Acquired : 23 Jun 2025 22:41 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

176



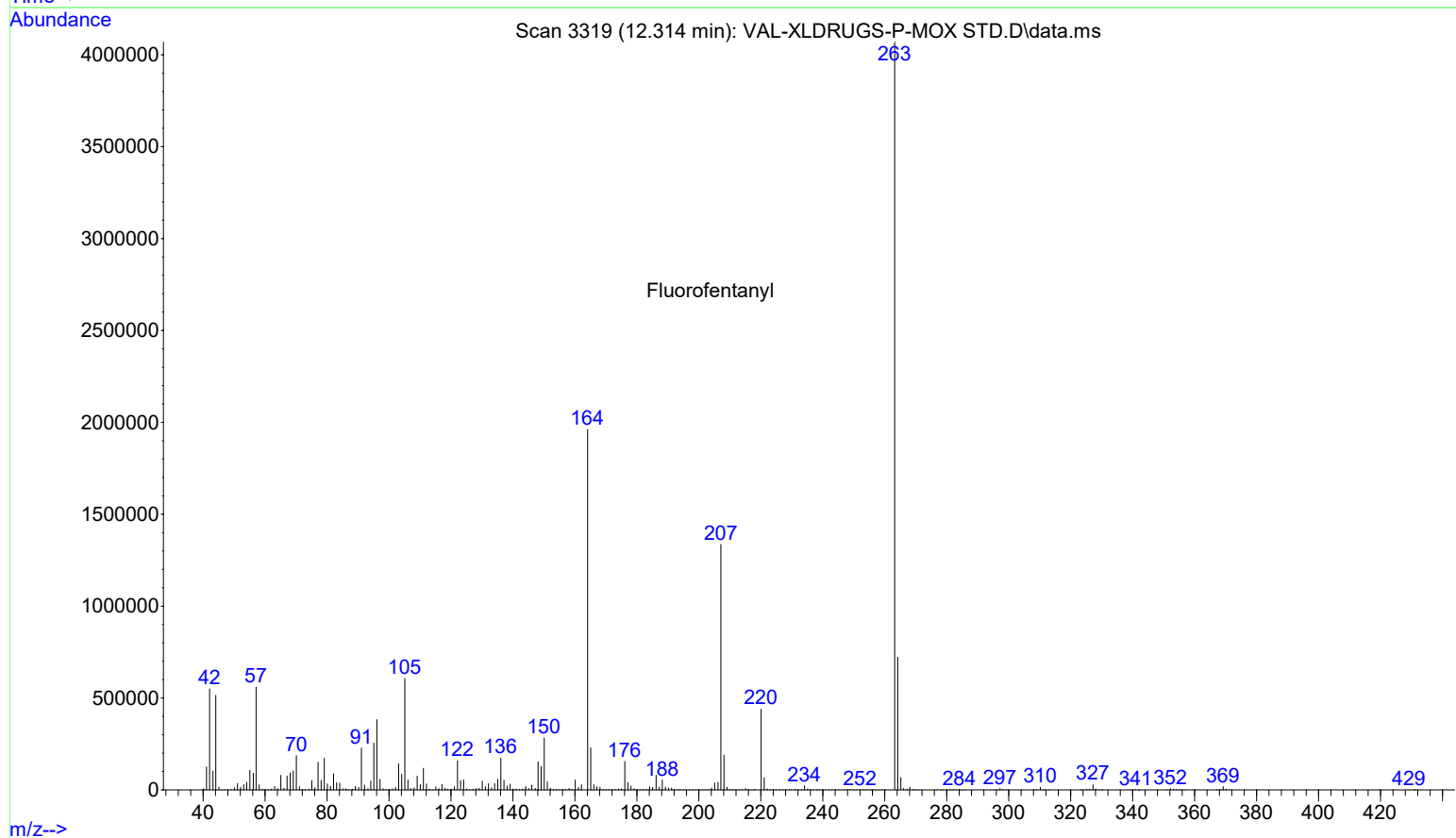
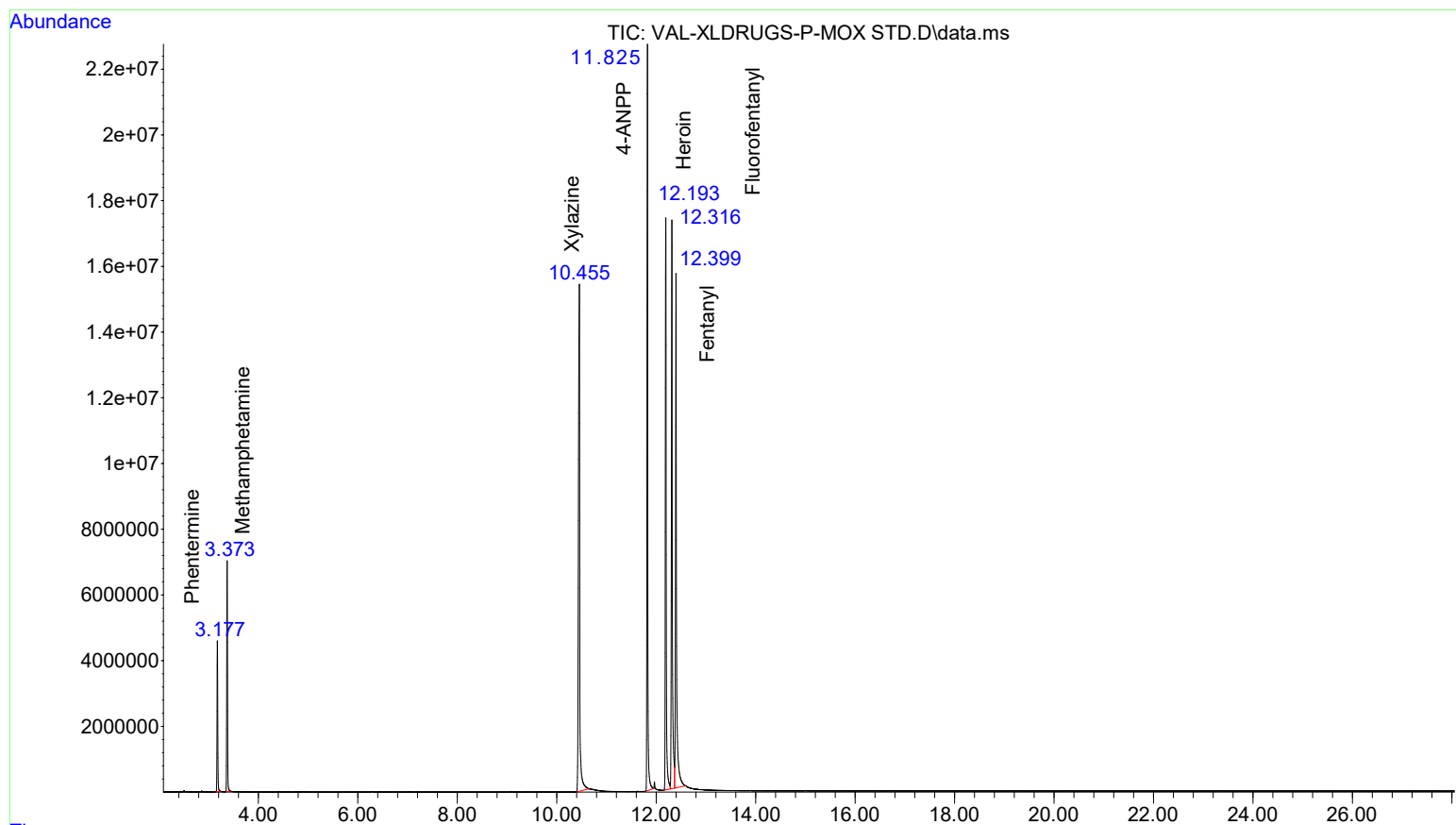
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Operator :
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Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

177



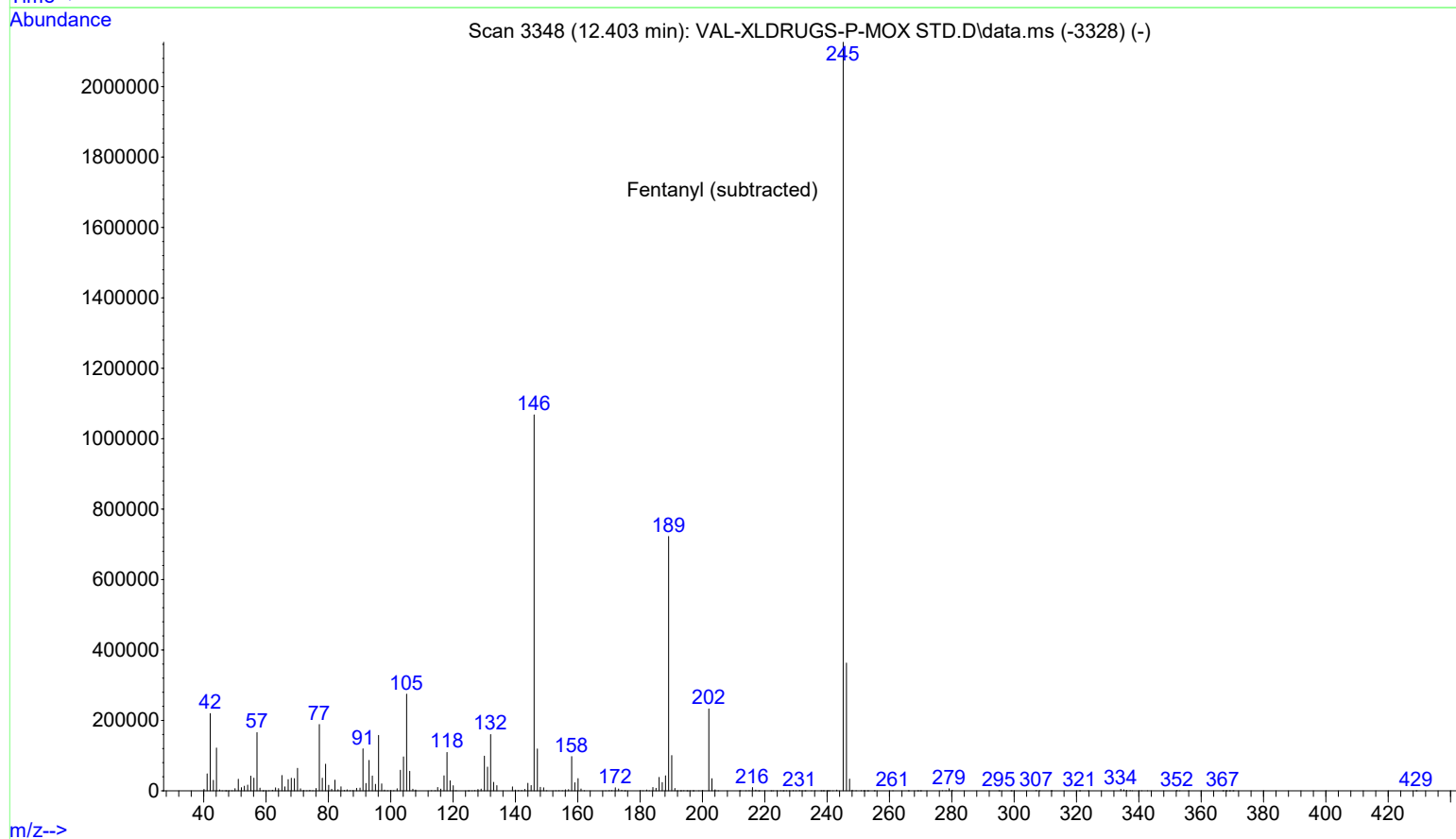
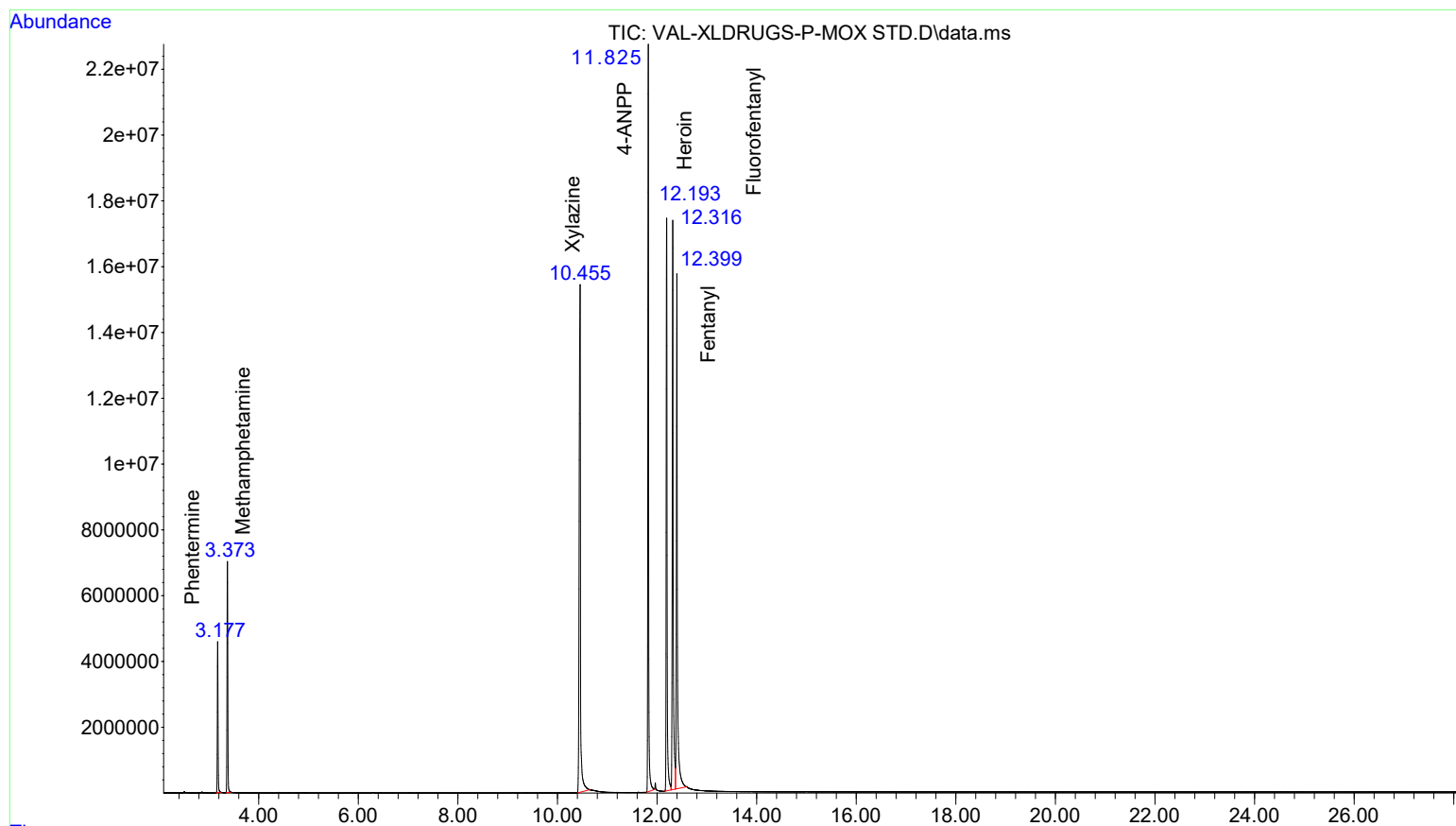
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Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

178



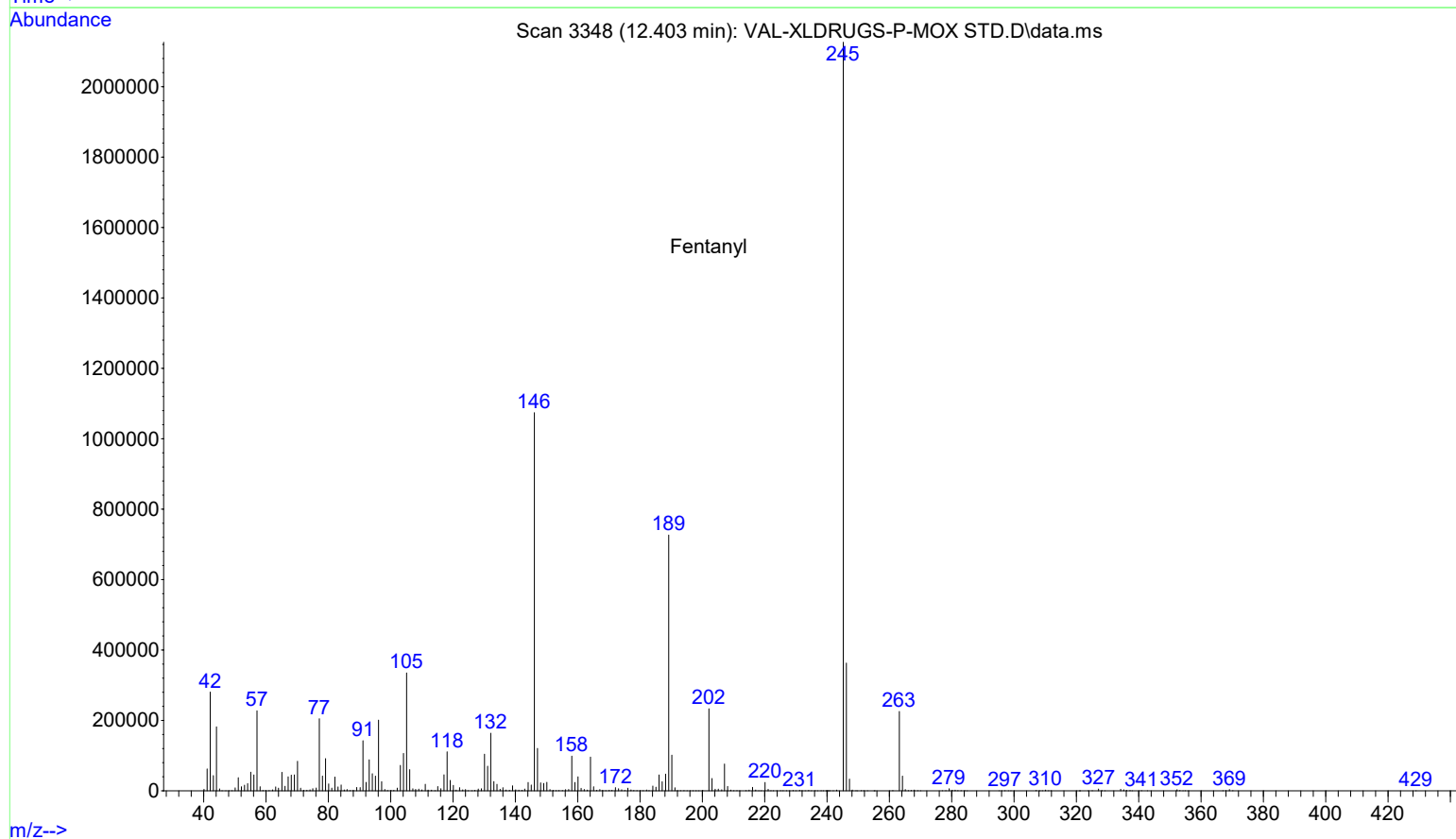
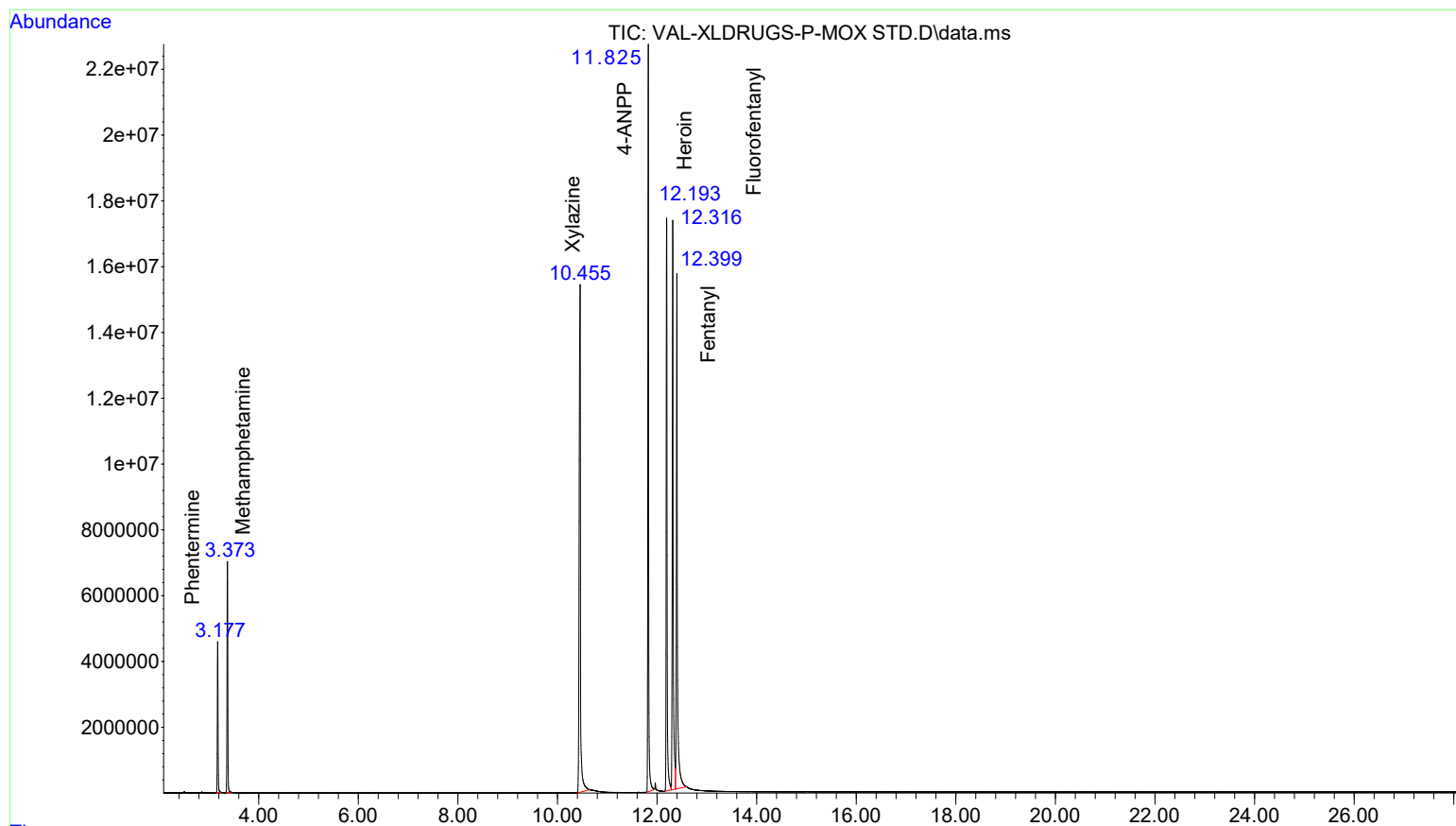
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Operator :
Acquired : 23 Jun 2025 22:41 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

179



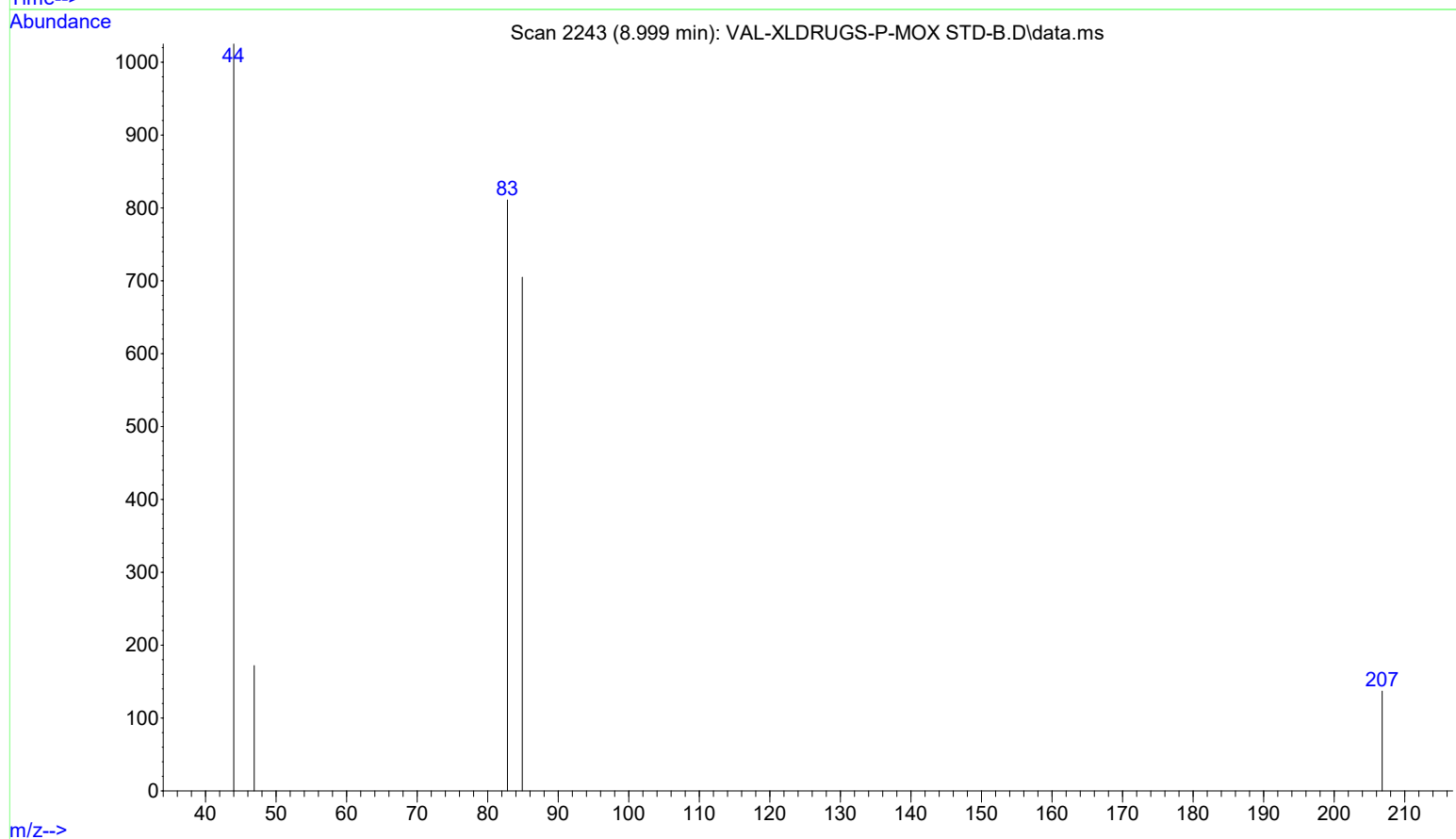
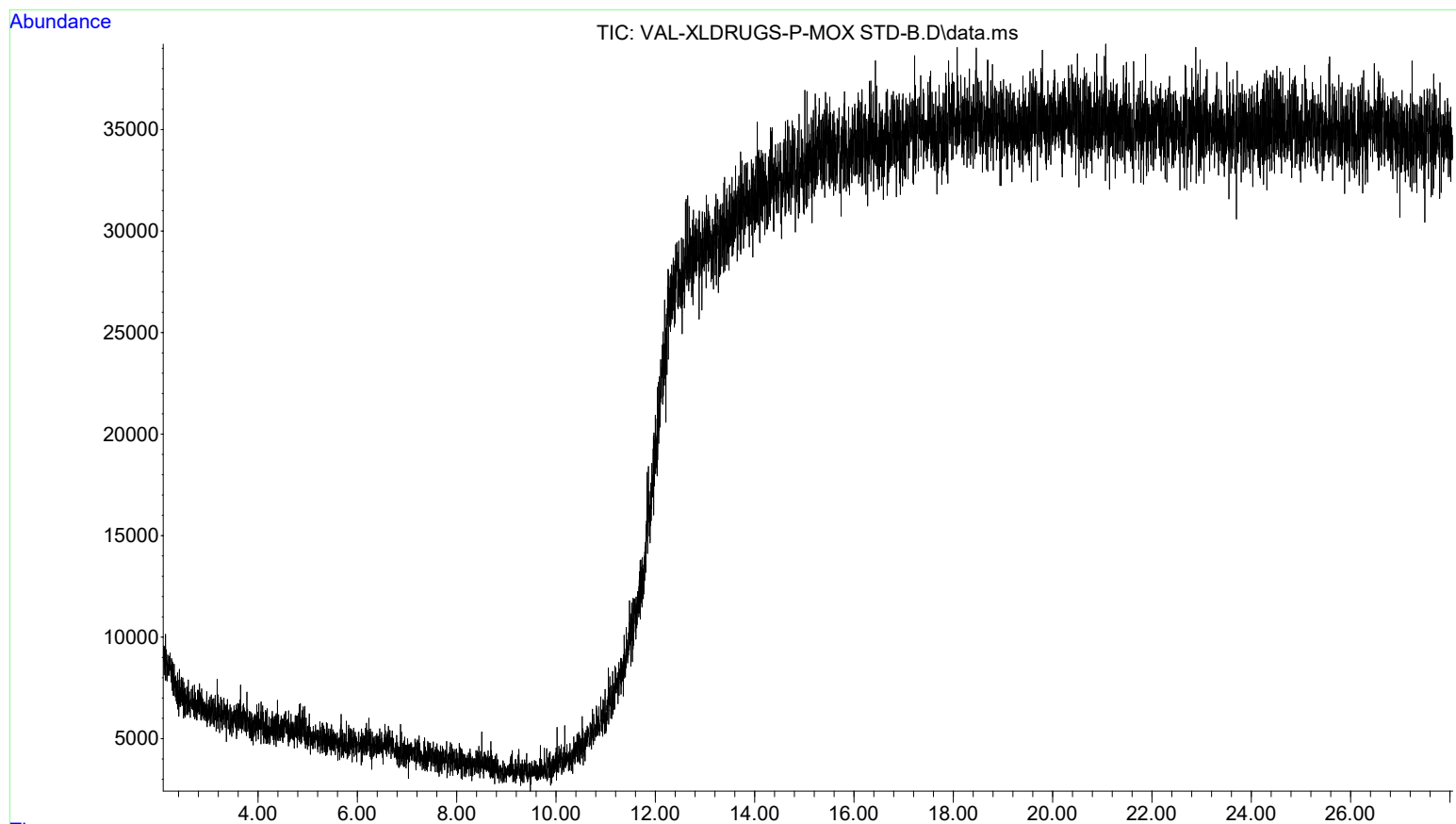
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Operator :
Acquired : 23 Jun 2025 22:41 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD
Misc Info : CHCl3
Vial Number: 15

180



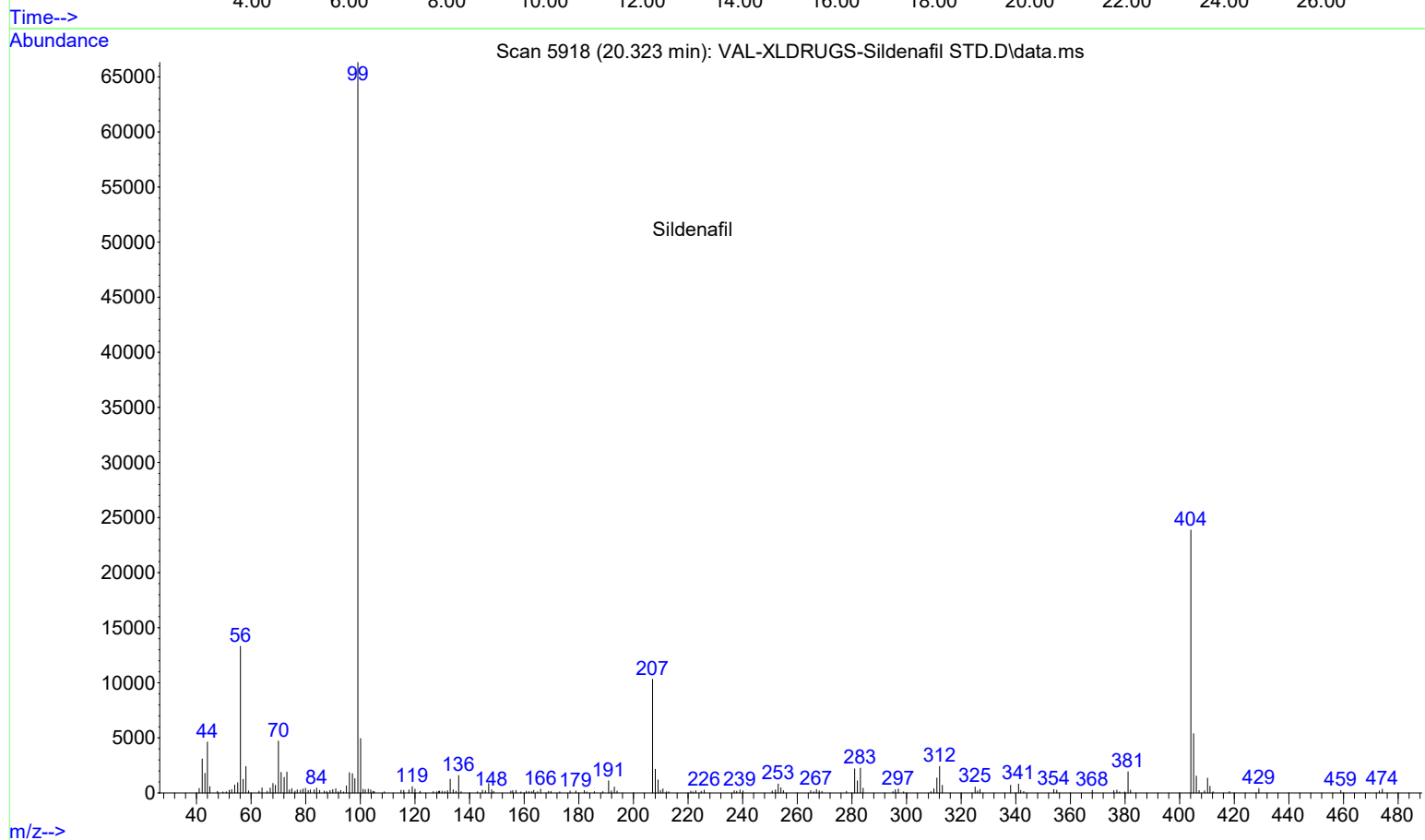
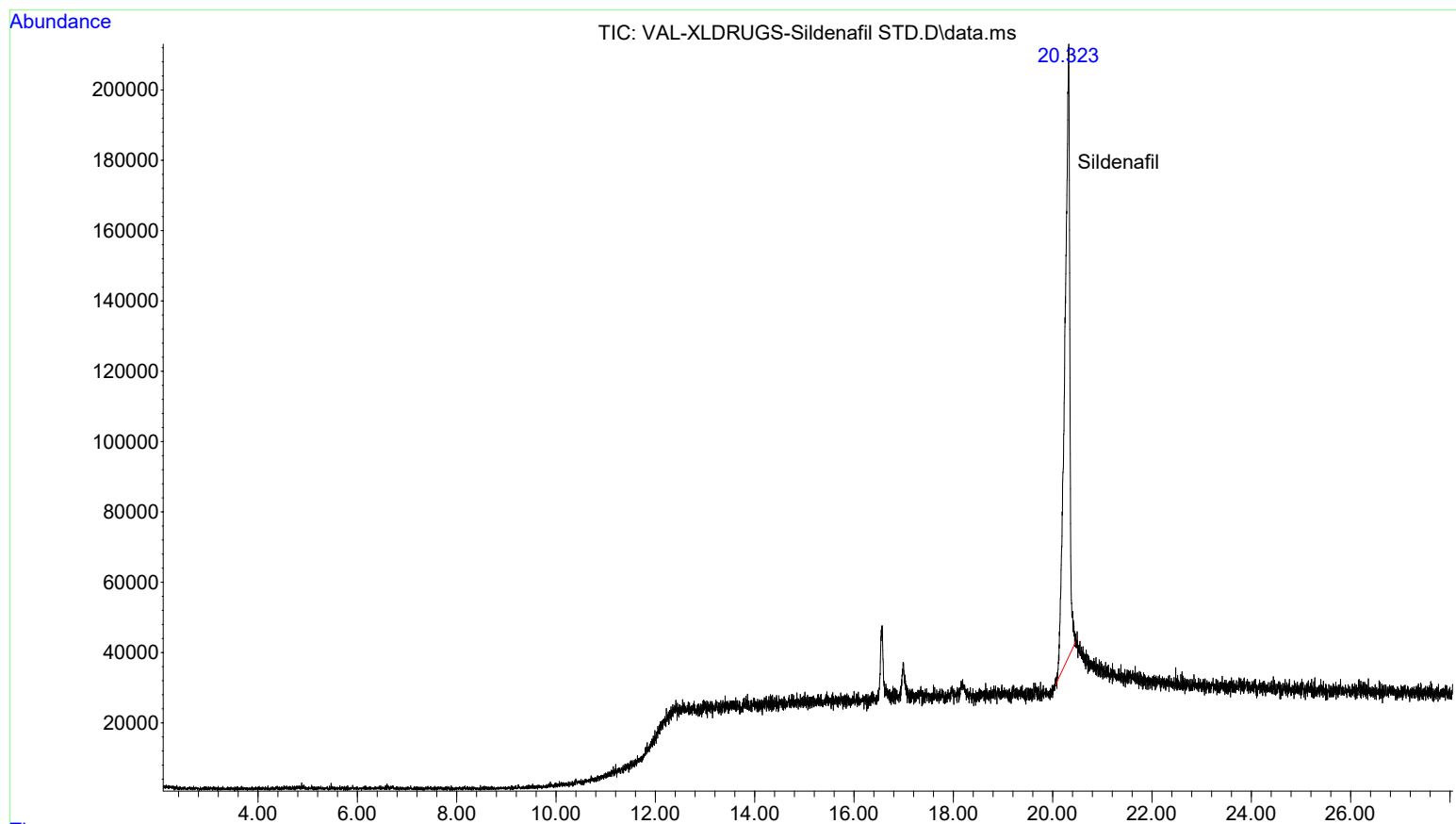
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Operator :
Acquired : 23 Jun 2025 22:09 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-P-MOX STD-Blank
Misc Info : CHCl3
Vial Number: 12

181



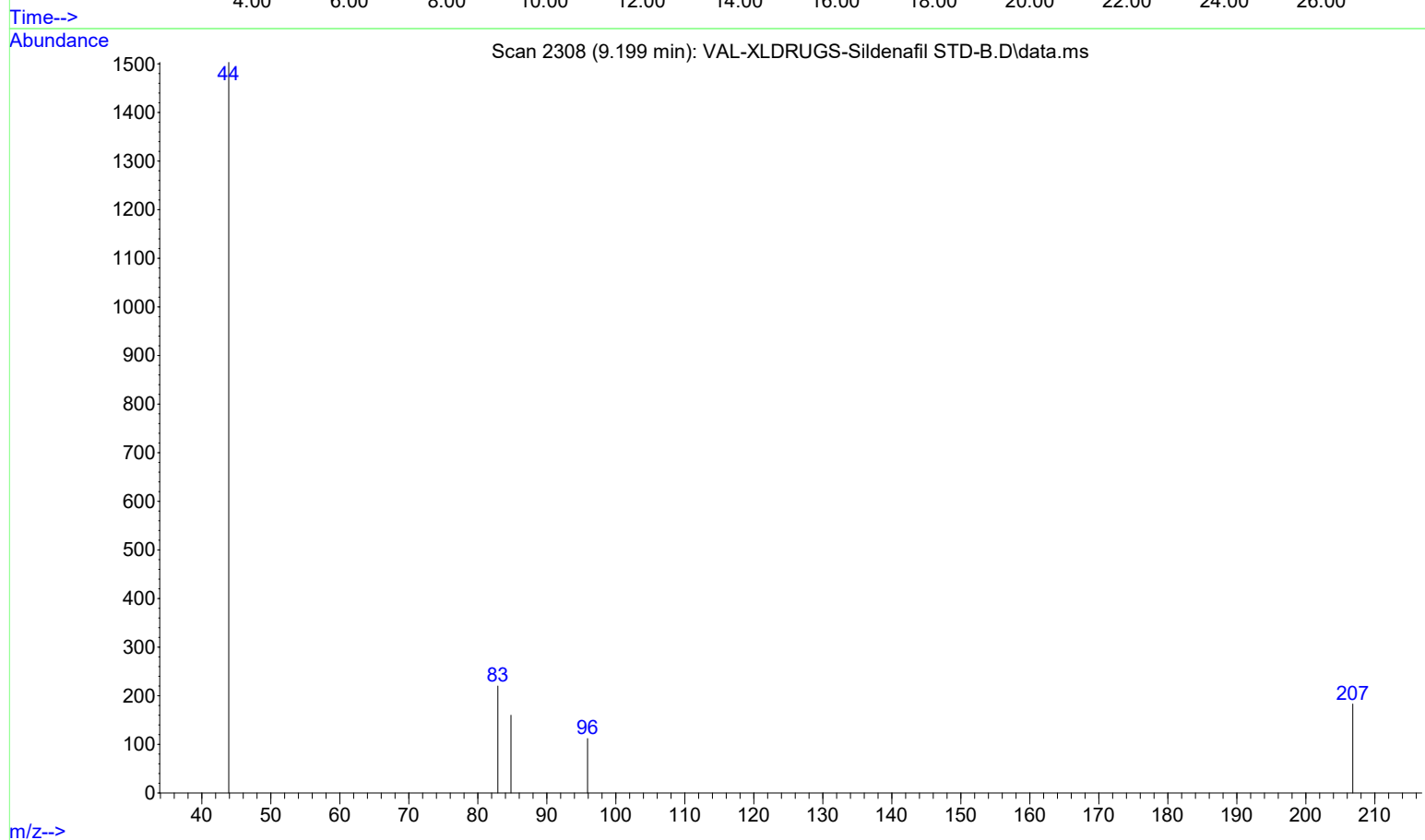
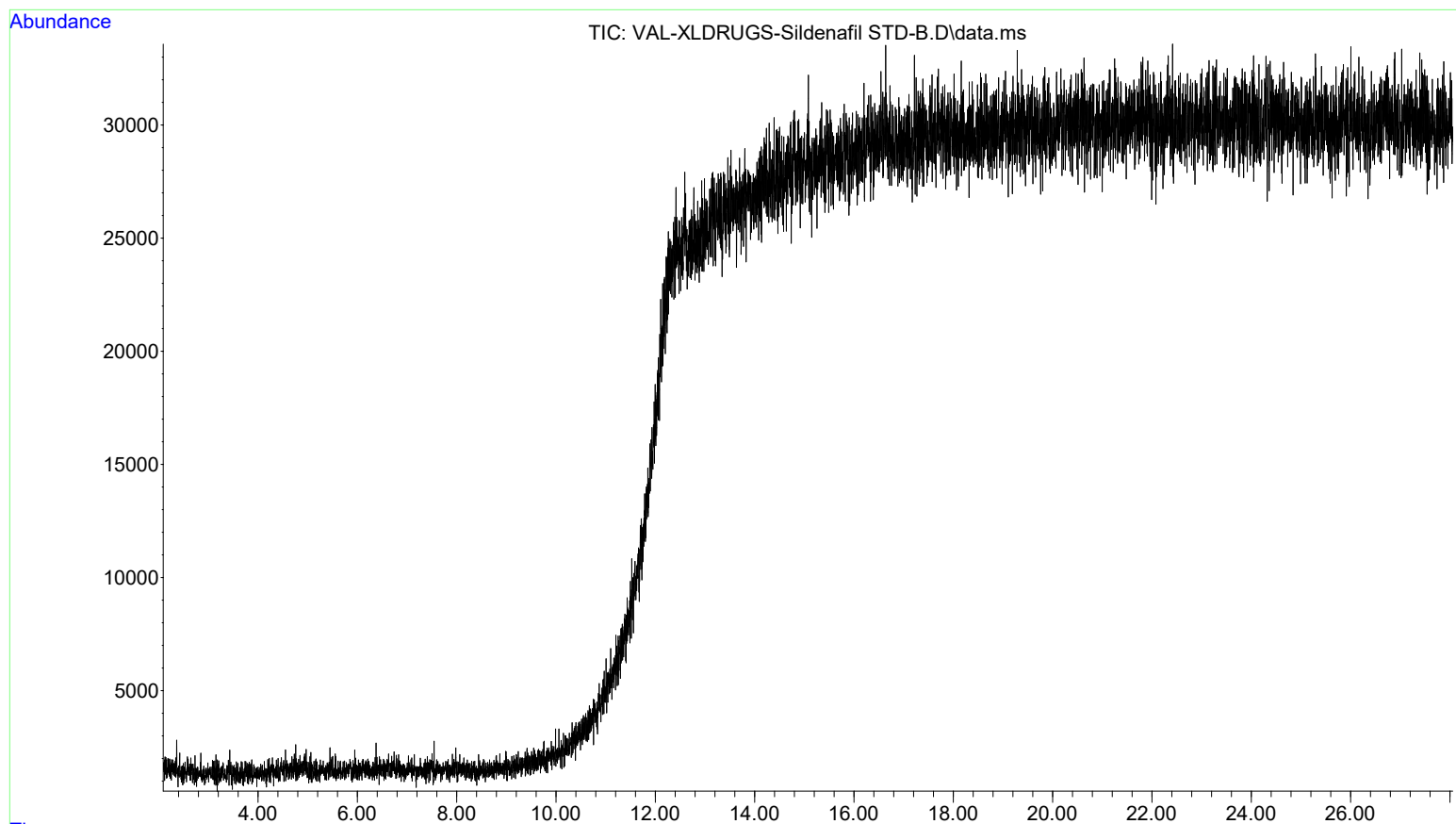
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Operator :
Acquired : 24 Jun 2025 00:01 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-Sildenafil STD
Misc Info : MeOH
Vial Number: 21

182



File :Z:\Instr\Luna\2025\6-June\VAL-XLDRUGS-Sildenafil STD-B.D
Operator :
Acquired : 23 Jun 2025 23:30 using AcqMethod XLDRUGS.M
Instrument : Luna
Sample Name: XLDRUGS-Sildenafil STD-Blank
Misc Info : MeOH
Vial Number: 11

183



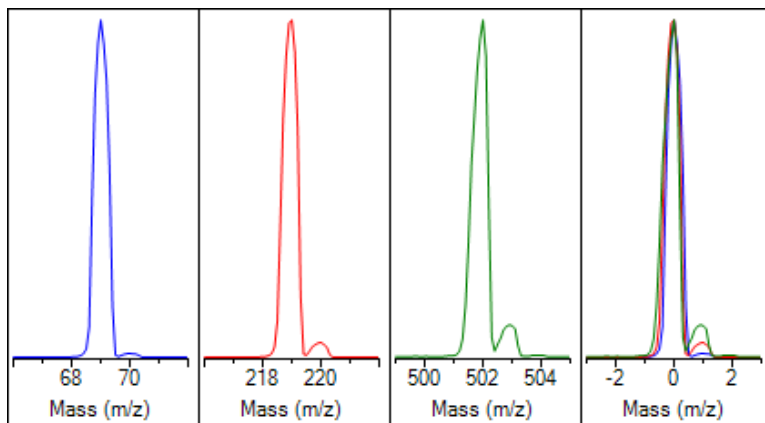
Autotune - 5975

Tune timestamp: 6/16/2025 8:59 AM (UTC-04:00)

Luna

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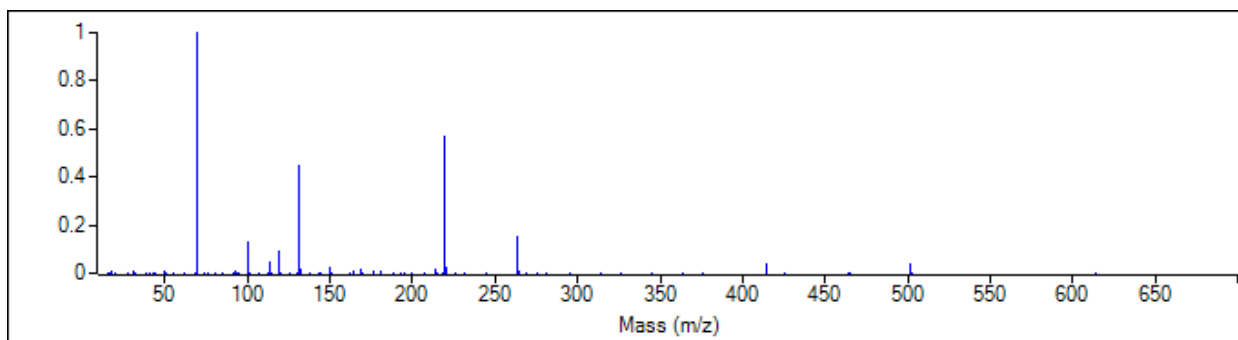
Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-651
Electron Energy	70.3	Mass Offset	-36
Filament	1	Amu Gain	1992
Repeller	29.07	Amu Offset	123.50
Ion Focus	81.6	Width219	-0.032
Entrance Lens	25.5	DC Polarity	Pos
Ent Lens Offset	18.82	HED Enable	On
		EM Volts	1035
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.00	465,475	100.0%	0.60
219.00	258,163	55.5%	0.60
502.00	21,419	4.6%	0.62

Temperatures and Pressures

MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	N/C

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	98	69.00	440,576	1,245,670



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	440,576	100.0%	70.00	4,950	1.1%
219.00	219.00	253,120	57.5%	220.00	10,620	4.2%
502.00	502.00	19,952	4.5%	503.00	2,018	10.1%

Air/Water Check: H2O ~1.3% N2 ~0.6% O2 ~0.2% CO2 ~0.4% N2/H2O ~48.4%

Column(1) Flow: 0.99 Column(2): 0.05 ml/min Interface Temp: 280

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 66404.249

Repeller maximum 35 volts using ion 219; Gain Factor 0.6640

Mass Gain Values(Scan Speed): -639(3) -624(2) -609(1) -576(0) -497(FS1) -496(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset	123.5	123.5	123.5	123.5	123.5	123.5	123.5
Entrance Lens Offset	18.8	18.8	18.8	18.8	18.8	18.8	18.8

Report Created: 6/16/2025 8:59 AM (UTC-04:00)

Autotune - 5975

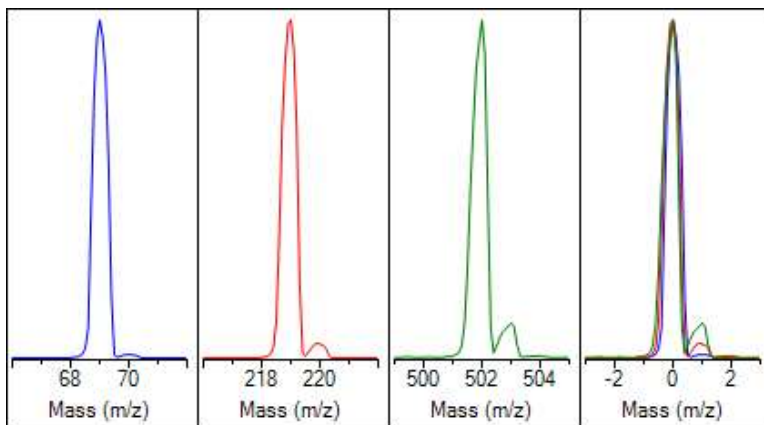
VAL

Tune timestamp: 6/23/2025 10:36 AM (UTC-04:00)

Luna

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US73337875



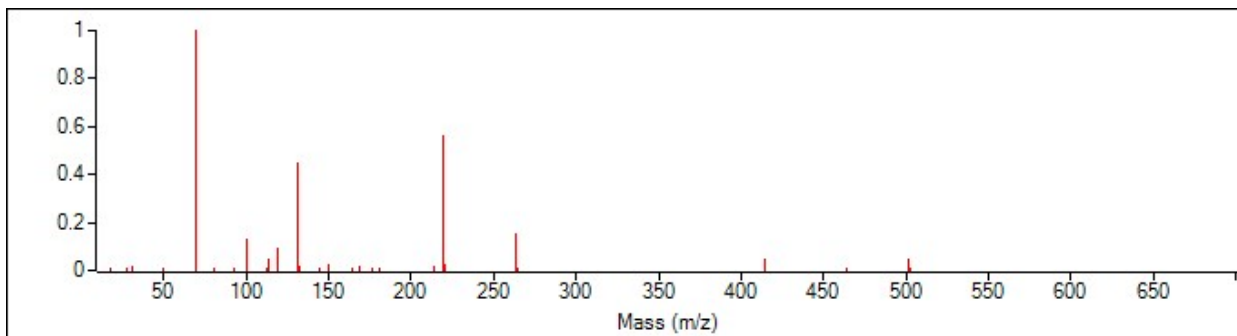
Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-651
Electron Energy	70.3	Mass Offset	-36
Filament	1	Amu Gain	2004
Repeller	31.09	Amu Offset	123.38
Ion Focus	83.5	Width219	-0.021
Entrance Lens	28.5	DC Polarity	Pos
Ent Lens Offset	18.57	HED Enable	On
		EM Volts	1000
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.00	444,091	100.0%	0.60
219.00	245,867	55.4%	0.60
502.00	19,637	4.4%	0.60

Temperatures and Pressures

MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	N/C

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	98	69.00	420,096	1,171,327



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	420,096	100.0%	70.00	4,523	1.1%
219.00	219.00	235,136	56.0%	220.00	10,284	4.4%
502.00	502.00	17,792	4.2%	503.00	1,842	10.4%

Air/Water Check: H2O ~0.9% N2 ~0.7% O2 ~0.3% CO2 ~0.1% N2/H2O ~81.9%

Column(1) Flow: 0.99 Column(2): 0.05 ml/min Interface Temp: 280

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 51760.734

Repeller maximum 35 volts using ion 219; Gain Factor 0.5176

Mass Gain Values(Scan Speed): -640(3) -628(2) -615(1) -585(0) -507(FS1) -506(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset	123.4	123.4	123.4	123.4	123.4	123.4	123.4
Entrance Lens Offset	18.6	18.6	18.6	18.6	18.6	18.6	18.6

Autotune - 5975

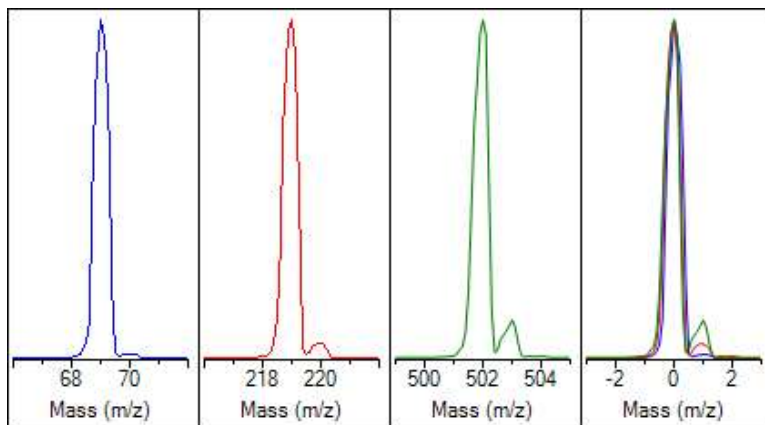
VAL

Tune timestamp: 6/26/2025 4:04 PM (UTC-04:00)

Luna

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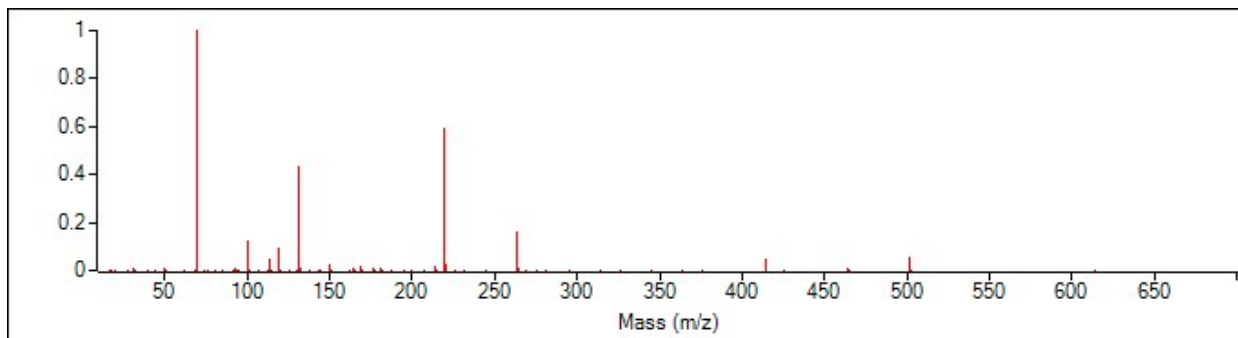
Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-649
Electron Energy	70.3	Mass Offset	-36
Filament	1	Amu Gain	2013
Repeller	34.96	Amu Offset	123.19
Ion Focus	89.2	Width219	-0.011
Entrance Lens	28.5	DC Polarity	Pos
Ent Lens Offset	19.58	HED Enable	On
		EM Volts	988
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.00	415,176	100.0%	0.61
219.00	245,587	59.2%	0.60
502.00	23,766	5.7%	0.58

Temperatures and Pressures

MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	N/C

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	89	69.00	394,368	1,120,960



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	394,368	100.0%	70.00	4,211	1.1%
219.00	219.00	233,984	59.3%	220.00	10,055	4.3%
502.00	502.00	22,336	5.7%	503.00	2,269	10.2%

Air/Water Check: H2O ~0.7% N2 ~0.5% O2 ~0.3% CO2 ~0.1% N2/H2O ~79.0%

Column(1) Flow: 0.99 Column(2): 0.05 ml/min Interface Temp: 280

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 47779.949

Repeller maximum 35 volts using ion 219; Gain Factor 0.4778

Mass Gain Values(Scan Speed): -639(3) -633(2) -618(1) -591(0) -504(FS1) -503(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset	123.2	123.2	123.2	123.2	123.2	123.2	123.2
Entrance Lens Offset	19.6	19.6	19.6	19.6	19.6	19.6	19.6

Report Created: 6/26/2025 4:05 PM (UTC-04:00)