Brazoria County Crime Lab

Seized Drugs Section

GC-MS Maintenance Log

Instrument: GCMS-3 **Month/Year:** May 2025

Entry Number	Date	He Tank Pressure	Autotune	Septum Change	Wash Vials Filled	Liner Change	Gold Seal Replaced	Column Cut	Computer Restarted	Maintenance/ PM	Analyst/ Technician	Comments	Initials
1	5/5/2025	1100	Pass	N/A	✓	N/A	N/A	N/A	N/A	Maintenance	Analyst		KB
2	5/12/2025	2600	Fail	N/A	✓	N/A	N/A	N/A	N/A	Maintenance	Analyst	several failed tunes, dirty source, new HE tank	KB
3	5/16/2025	N/A	Fail	N/A	N/A	N/A	N/A	N/A	N/A	PM	Technician	yearly PM, column replaced	KB
4	5/19/2025	N/A	Pass	N/A	✓	N/A	N/A	✓	N/A	Maintenance	Analyst	column conditioned and placed in MS after annual PM and column change	KB
5	5/19/2025	N/A	Pass	N/A	N/A	N/A	N/A	N/A	N/A	Maintenance	Analyst	Perfomance Check started	KB/DN
6	5/30/2025	2700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Maintenance	Analyst	He cylinder change by MH	DS

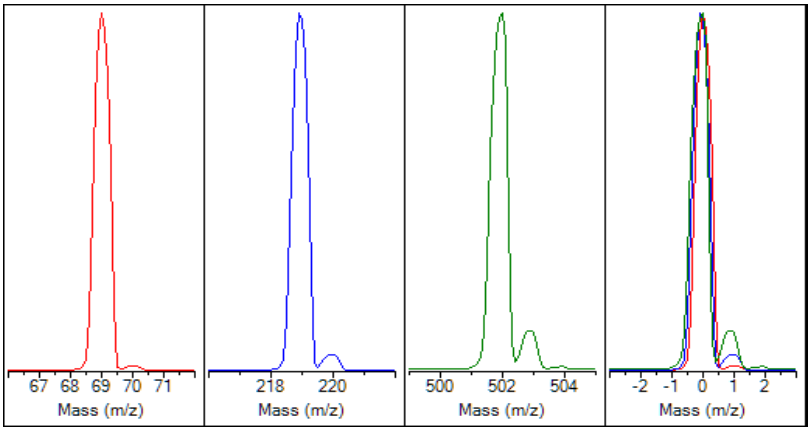
Signature: Derek Sanders

Date: 06/02/2025

Autotune - 5977

5/5/2025 6:54:17 AM (UTC-5:00) BCCL SD GCMS 3

D:\MASSHUNTER\GCMS\1\5977\atune.u US1329M205



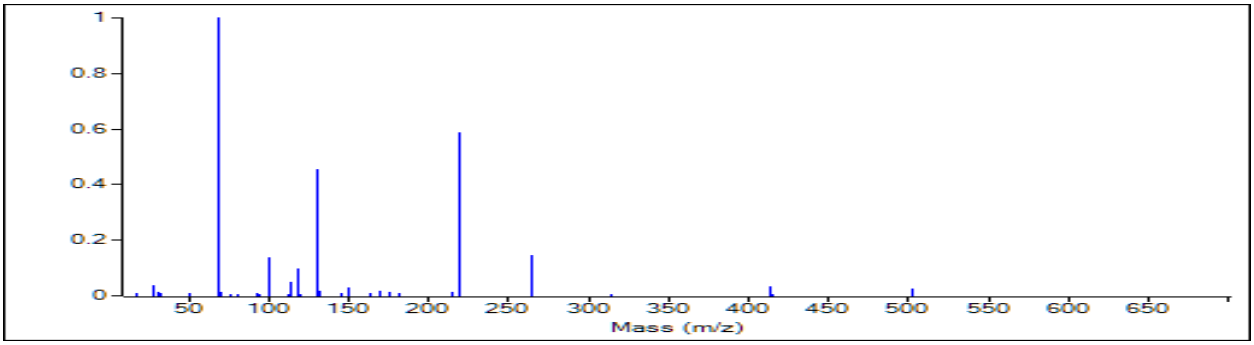
Ion Polarity	Pos	Mass Gain	-372
Emission	34.6	Mass Offset	-33
Electron Energy	70.0	Amu Gain	1678
Filament	2	Amu Offset	120.56
Repeller	34.90	Width219	-0.009
Ion Focus	78.5	DC Polarity	Pos
Entrance Lens	10.1	HED Enable	On
Ent Lens Offset	12.86	EM Volts	1770.6
Ion Body	0.00	Extractor Lens	0.00
		Scan Speed	3
		Averages	3
PFTBA	Open	Step Size	0.10

Temperatures and Pressures

MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	8.62e-06

Mass	Abund	Rel Abund	Pw50
69.00	425,595	100.0%	0.60
218.90	244,980	57.6%	0.60
502.00	10,906	2.6%	0.62

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	96	69.00	407,424	1,150,373



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	407,424	100.00	70.00	4,308	1.06
219.00	238,528	58.55	220.00	10,382	4.35
502.00	10,401	2.55	503.00	1,073	10.32

Air/Water Check: H20 ~0.8% N2 ~3.5% O2 ~0.9% CO2 ~0.1% N2/H20 ~416.6%

Column(1) Flow: 0.80 Column(2): 0.00 ml/min Interface Temp: 280

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 40258.300

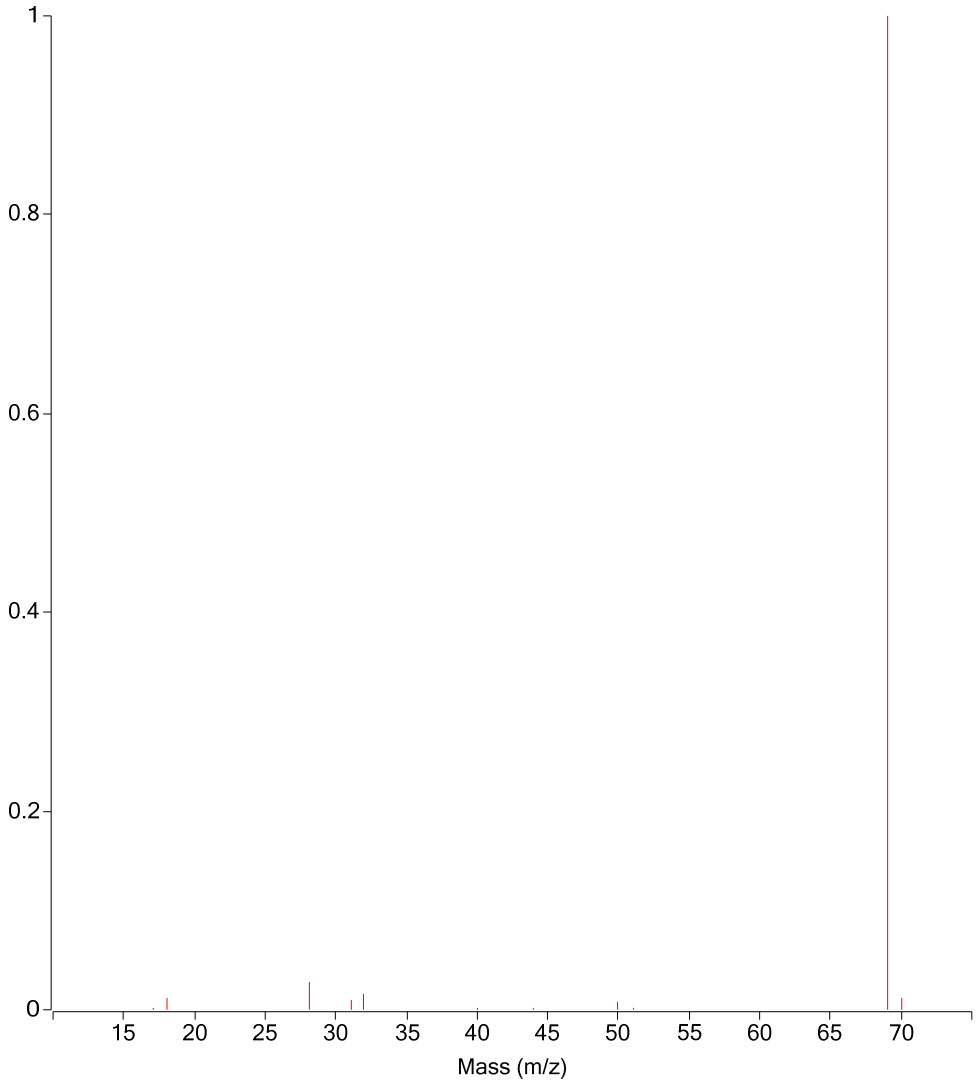
Repeller maximum 35 volts using ion 219; Gain Factor 0.4026

Mass Gain Values(Scan Speed): -364(3) -347(2) -333(1) -322(0) -270(FS1) -269(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset	120.6	120.6	120.6	120.6	120.6	120.6	120.6
Entrance Lens Offset	12.9	12.9	12.9	12.9	12.9	12.9	12.9

597x Air and Water Check

Instrument: BCCL SD GCMS 3
Mon May 05 06:43:42 2025 D:\MassHunter\GCMS\1\5977\



Current Params used: atune.u

Relative abundances:

18/69 =	1.16	Water%	(counts=12961)
28/69 =	2.80	Nitrogen%	(counts=31328)
32/69 =	1.56	Oxygen%	(counts=17464)
44/69 =	0.17	Carbon Dioxide%	(counts=1957)
28/18 =	241.71	Nitrogen/Water%	

Instrument Name	: BCCL SD GCMS 3	
DC Polarity	: Positive	
Filament	2	
BasePeak should be 69 or 219		OK
Position of mass 69	69.00	OK
Position of mass 219	219.00	OK
Position of mass 502	502.00	OK
Position of isotope mass 70	70.00	OK
Position of isotope mass 220	220.00	OK
Position of isotope mass 503	503.00	OK
Ratio of mass 70 to mass 69(0.5 - 1.6%)	1.09	OK
Ratio of mass 220 to mass 219(3.2 - 5.4%)	4.34	OK
Ratio of mass 503 to mass 502(7.9 - 12.3%)	10.08	OK
Ratio of 219 to 69 should be > 40% and is	60.88	OK
Ratio of 502 to 69 should be > 2.4% and is	3.00	OK
Mass 69 Precursor (<= 3%)	0.09	OK
Mass 219 Precursor (<= 6%)	0.23	OK
Mass 502 Precursor (<= 12%)	1.30	OK

597x Air and Water Check

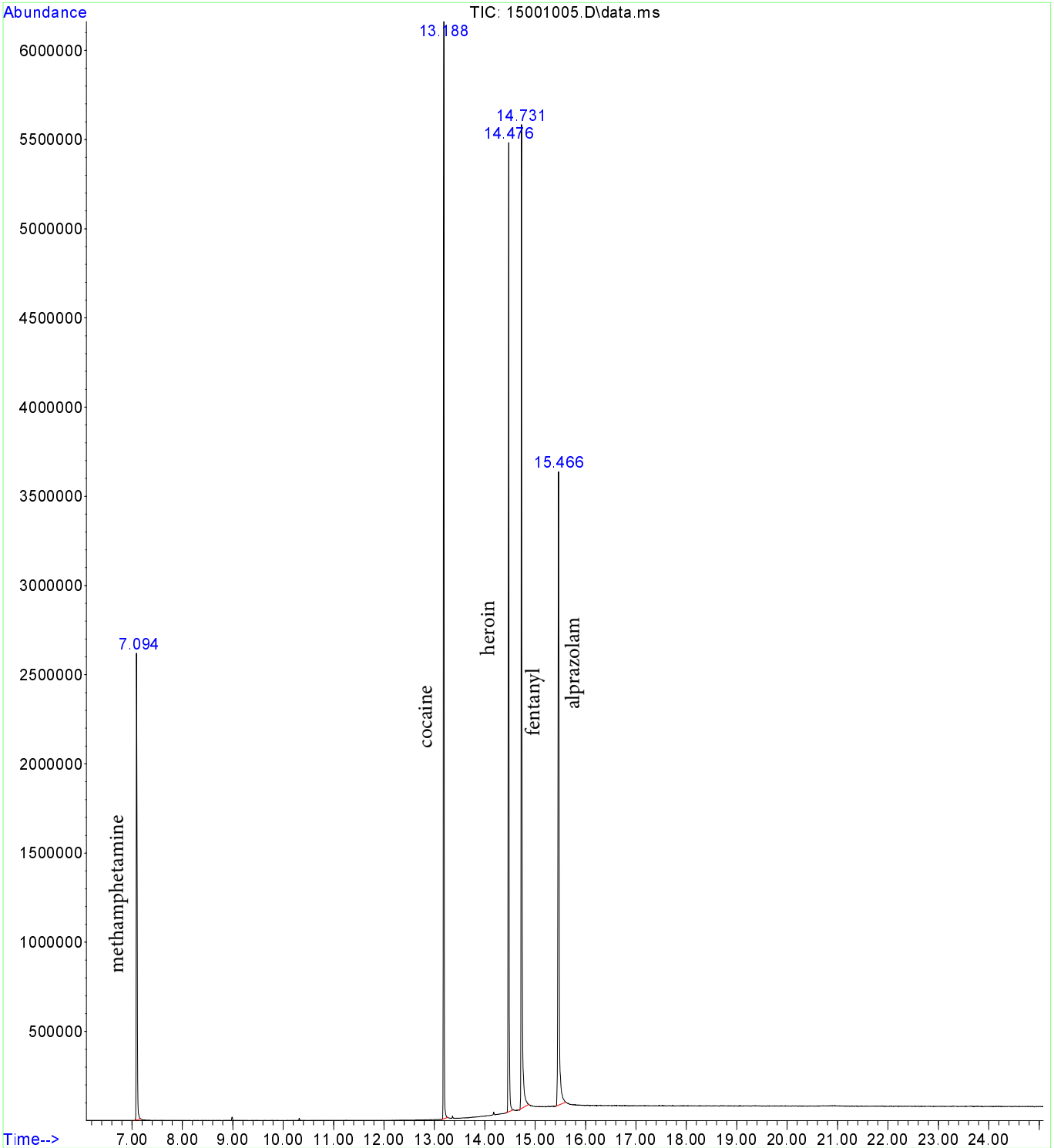
Mon May 05 07:29:49 2025	Instrument: BCCL SD GCMS 3
D:\MASSHUNTER\GCMS\1\5977\atune.u	US1329M205

Testing for a leak in the system

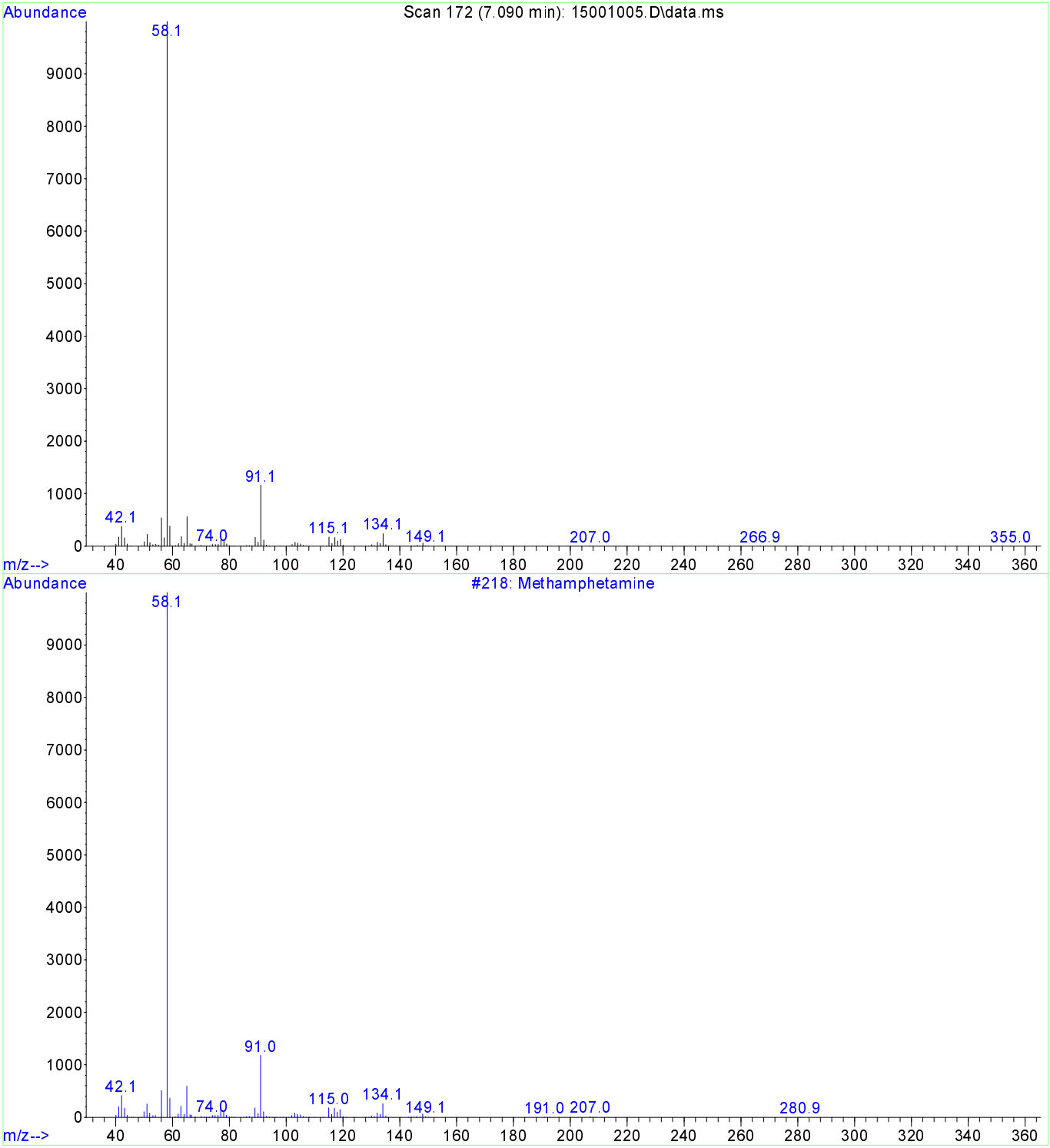
Ratio of 18 to 69 (<20%)	0.76	OK
Ratio of 28 to 69 (<10%)	2.81	OK
Electron Multiplier Voltage	1771	OK

Tune portion of System Verification passed.

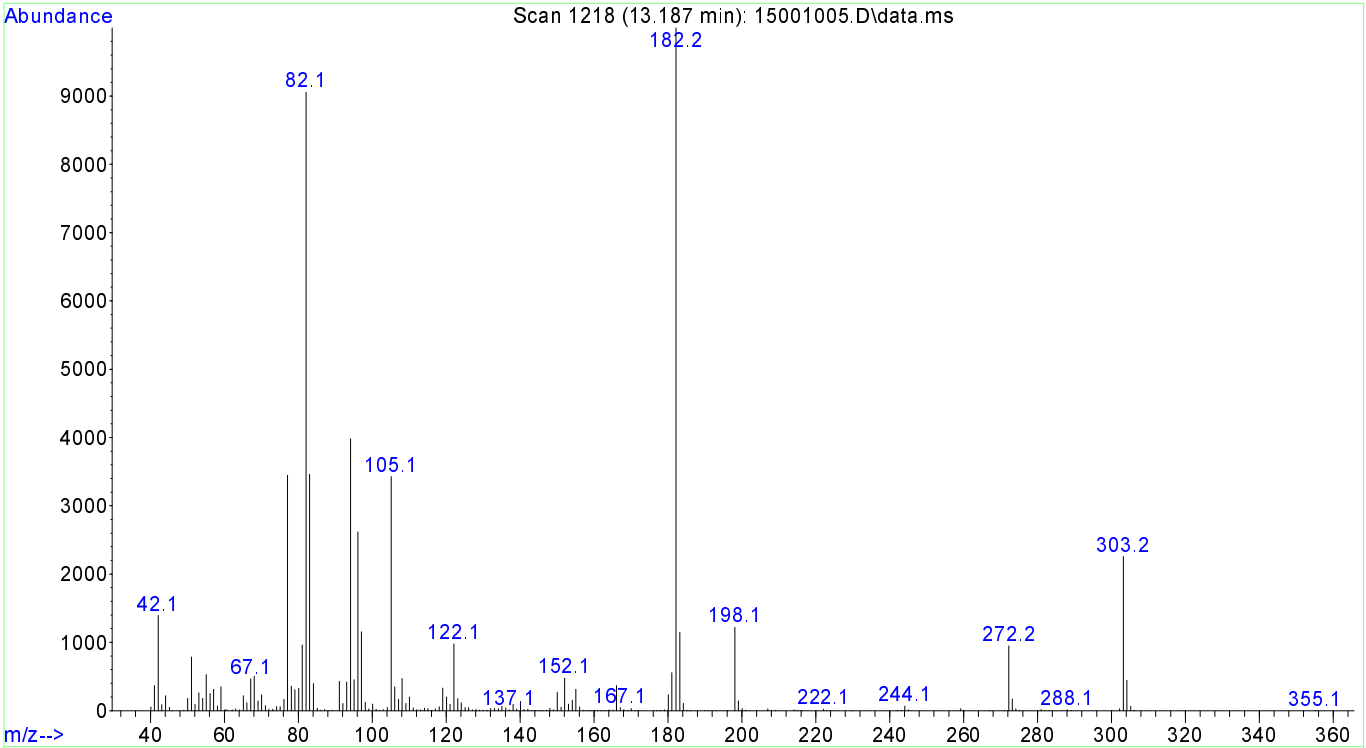
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Operator   : DrugChem-HP\admin
Instrument :   BCCL SD GCMS 3
Acquired   : 05 May 2025  09:41     using AcqMethod DrugTest35.M
Sample Name: CAYMAN GC/MS MIX 3 (R-24-060)                    000002667
Misc Info  :                                                  000002667
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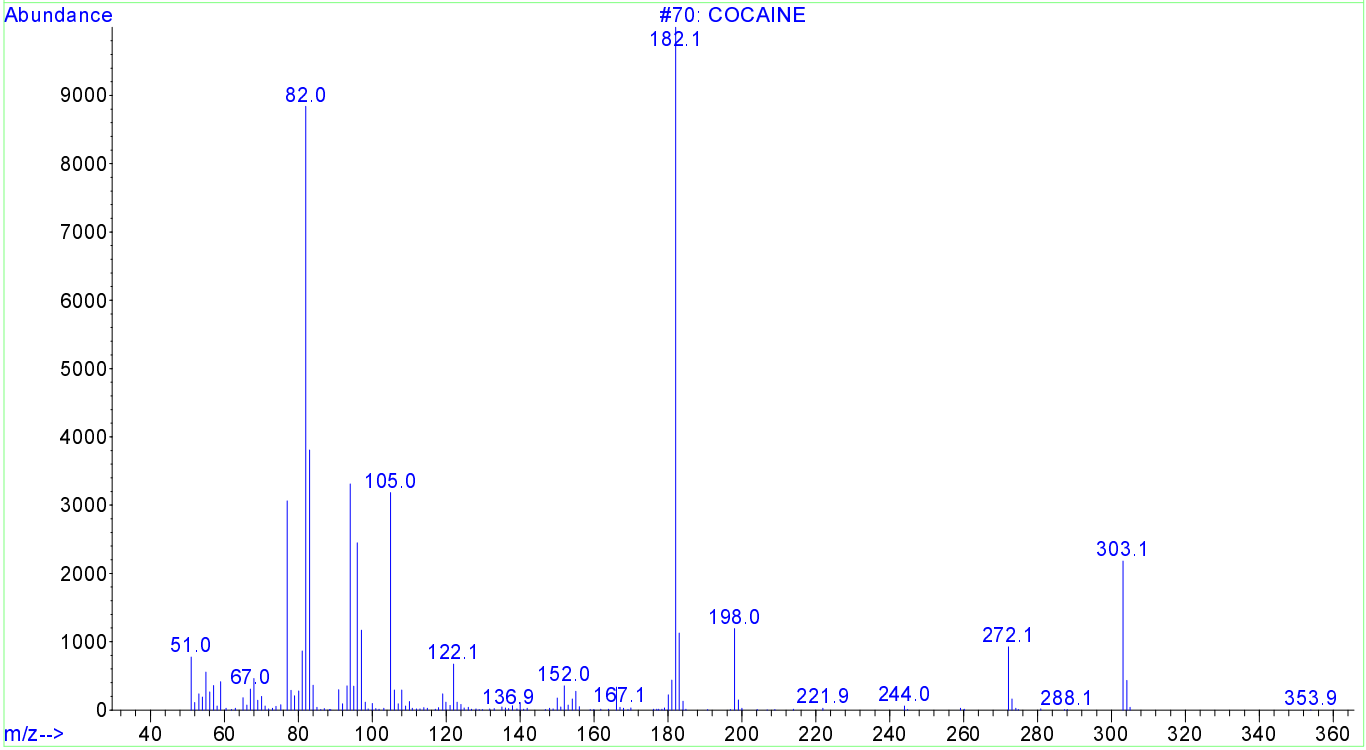


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... Data\050525\15001005.D
Operator : DrugChem-HP\admin
Instrument : BCCL SD GCMS 3
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Misc Info : 000002667

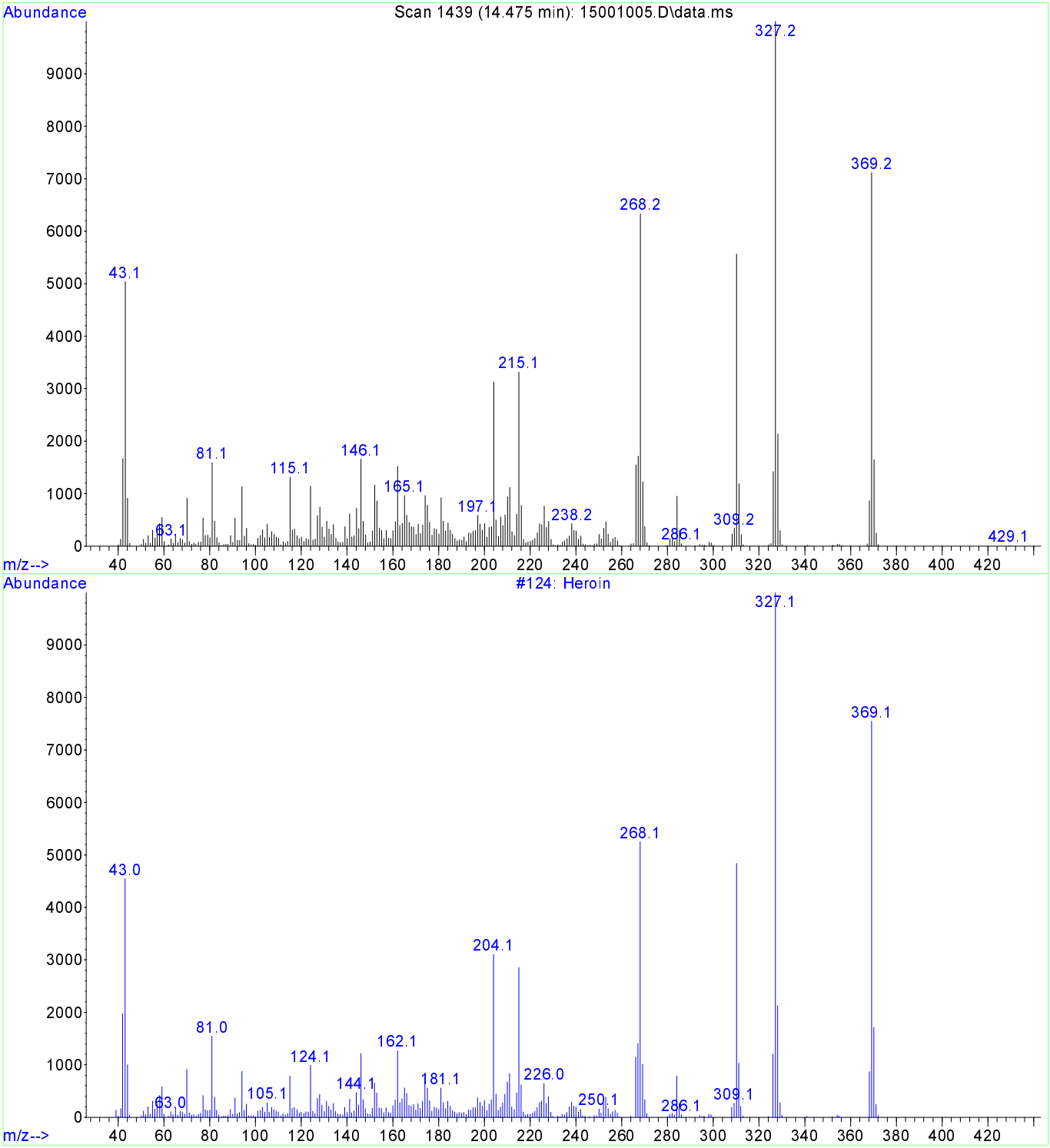


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Operator : DrugChem-HP\admin
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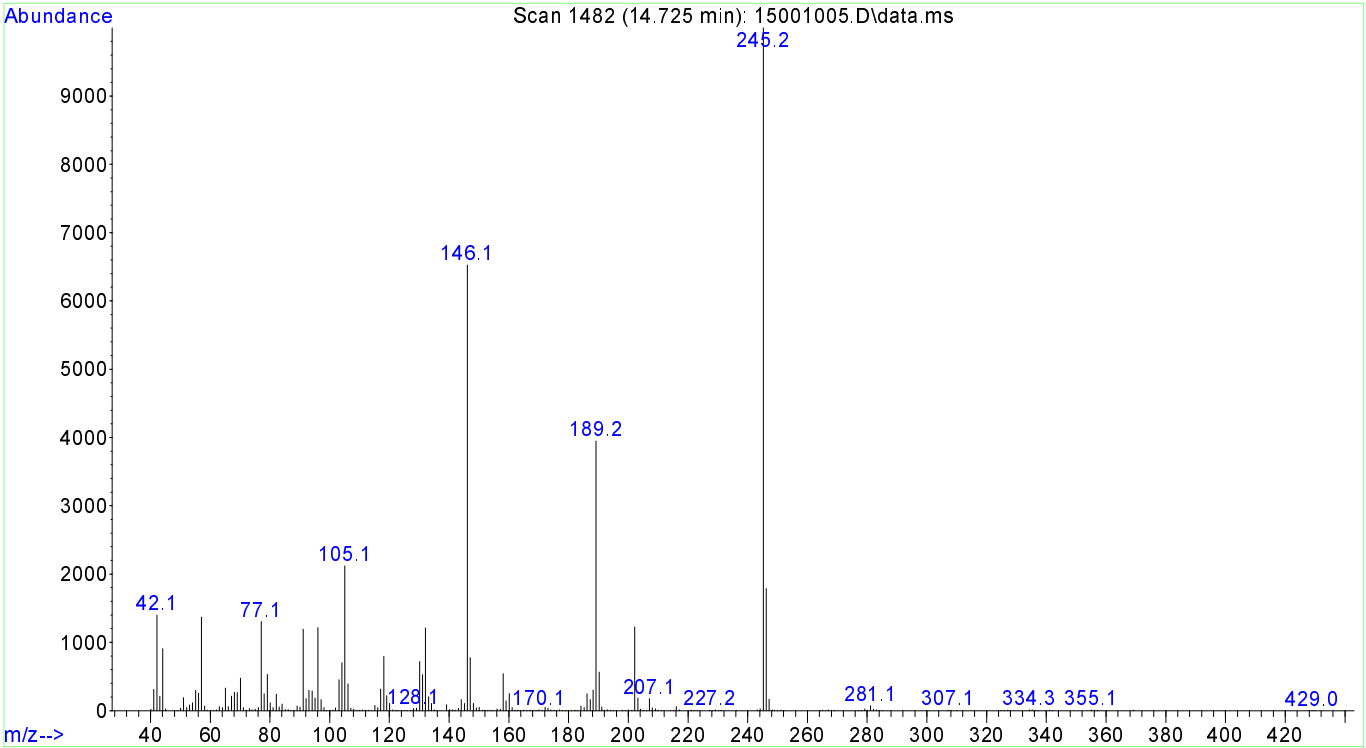




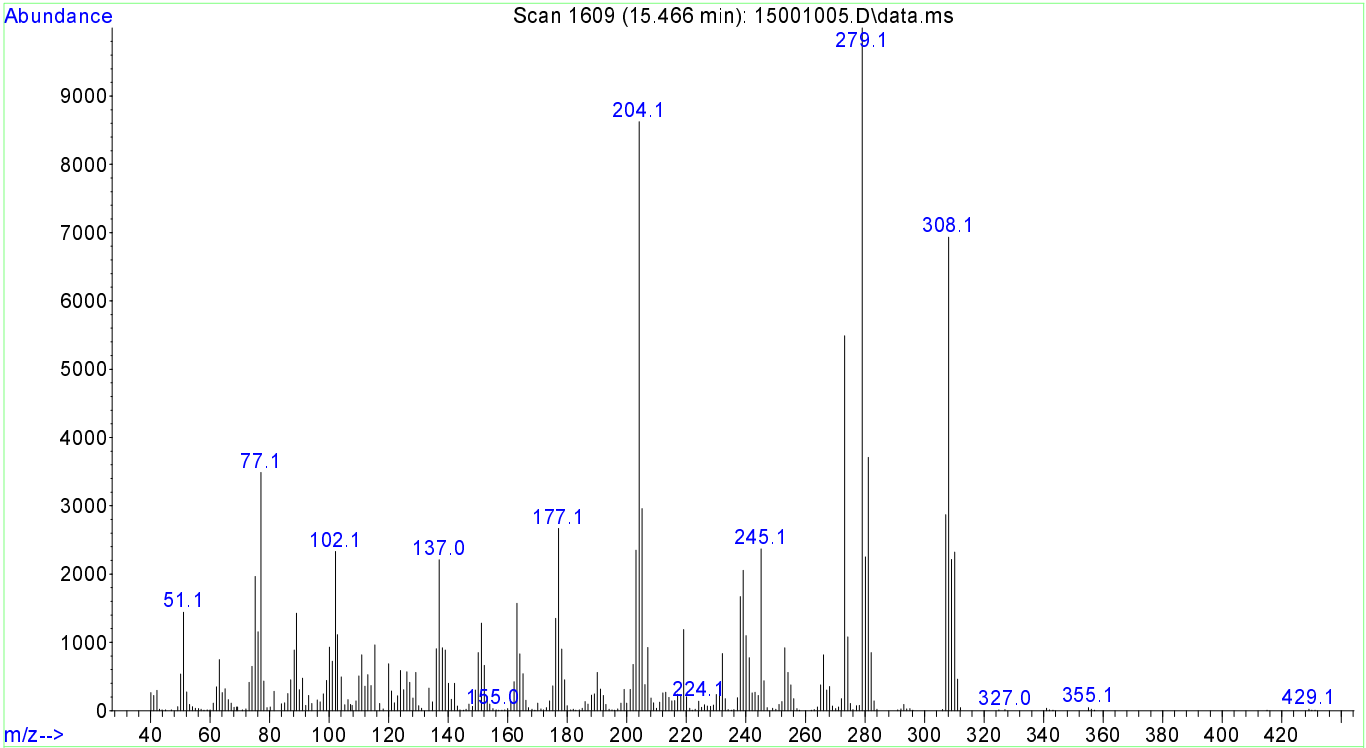
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Operator : DrugChem-HP\admin
Instrument : BCCL SD GCMS 3
Acquired : 05 May 2025 09:41 using AcqMethod DrugTest35.M
Sample Name: CAYMAN GC/MS MIX 3 (R-24-060) 000002667
Misc Info : 000002667



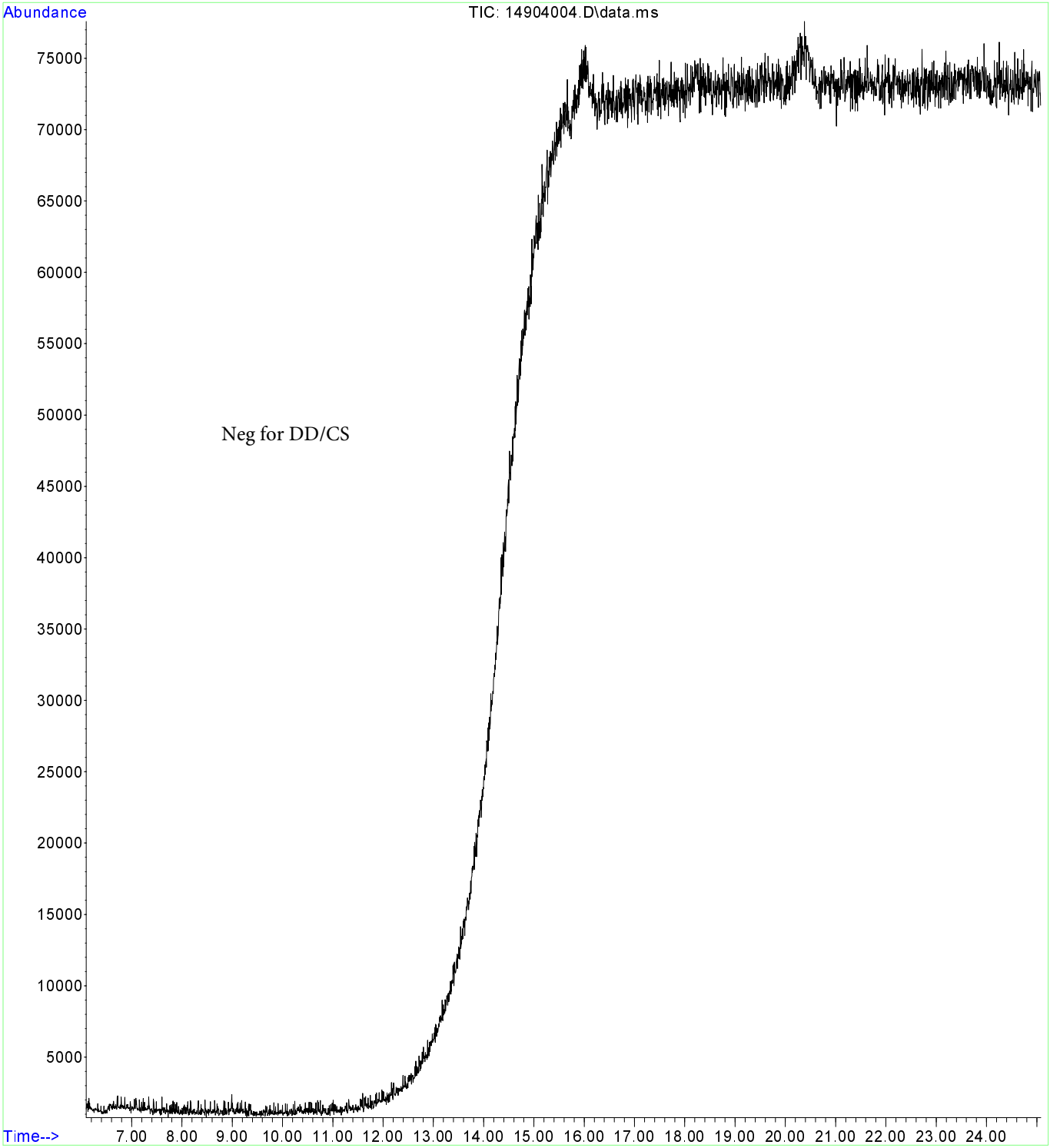
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Operator   : DrugChem-HP\admin
Instrument :   BCCL SD GCMS 3
Acquired   : 05 May 2025  09:41     using AcqMethod DrugTest35.M
Sample Name: CAYMAN GC/MS MIX 3 (R-24-060)                    000002667
Misc Info  :                                                  000002667
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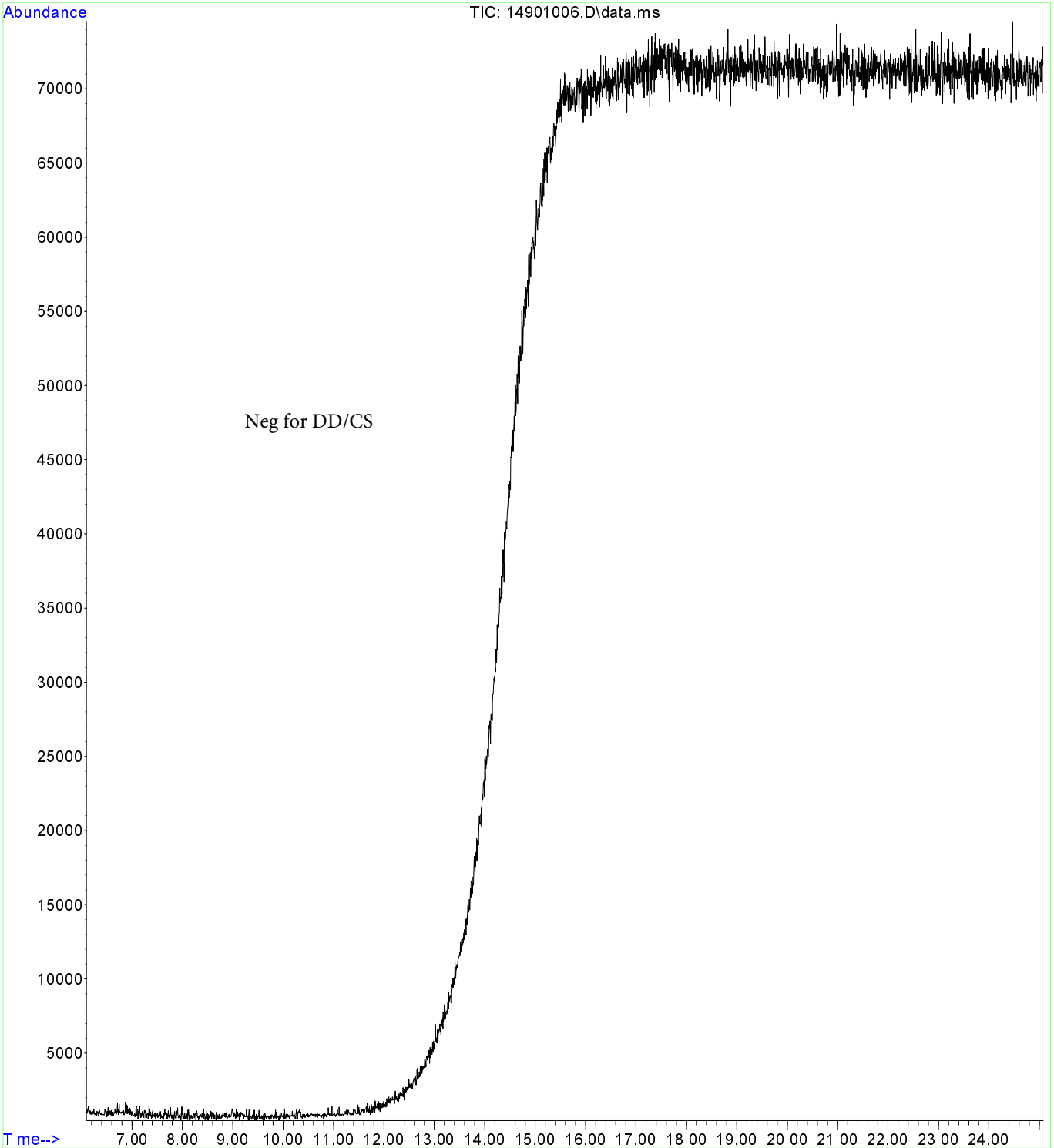
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...          Data\050525\15001005.D
Operator   : DrugChem-HP\admin
Instrument :   BCCL SD GCMS 3
Acquired   : 05 May 2025  09:41     using AcqMethod DrugTest35.M
Sample Name: CAYMAN GC/MS MIX 3 (R-24-060)                    000002667
Misc Info  :                                                  000002667
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File :D:\MassHunter\GCMS\1\GCMS 3 data\Standards\Weekly Check\2025
... Data\050525\14904004.D
Operator : DrugChem-HP\admin
Instrument : BCCL SD GCMS 3
Acquired : 05 May 2025 09:12 using AcqMethod DrugTest35.M
Sample Name: BLANK (C-19-0068) PRIOR TO CAYMAN GC/MS MIX 3 (R-24-060) 000002666
Misc Info : 000002666



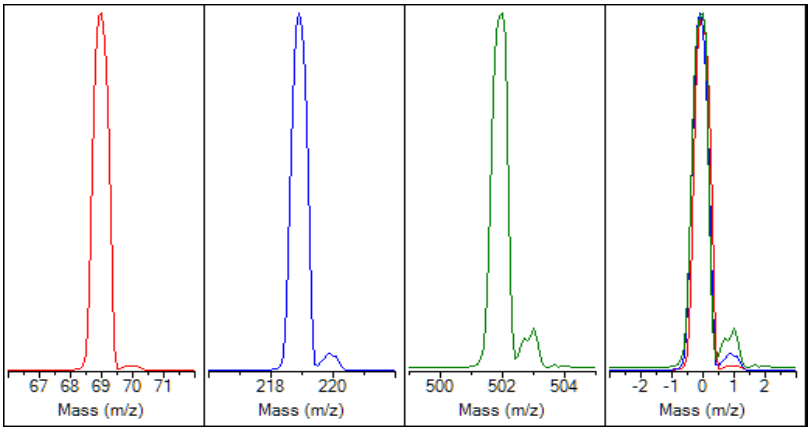
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Operator : DrugChem-HP\admin
Instrument : BCCL SD GCMS 3
Acquired : 05 May 2025 10:09 using AcqMethod DrugTest35.M
Sample Name: BLANK (C-19-0068) - INSTRUMENT READY 000002666
Misc Info : 000002666



Autotune - 5977

5/16/2025 8:18:43 AM (UTC-5:00) BCCL SD GCMS 3

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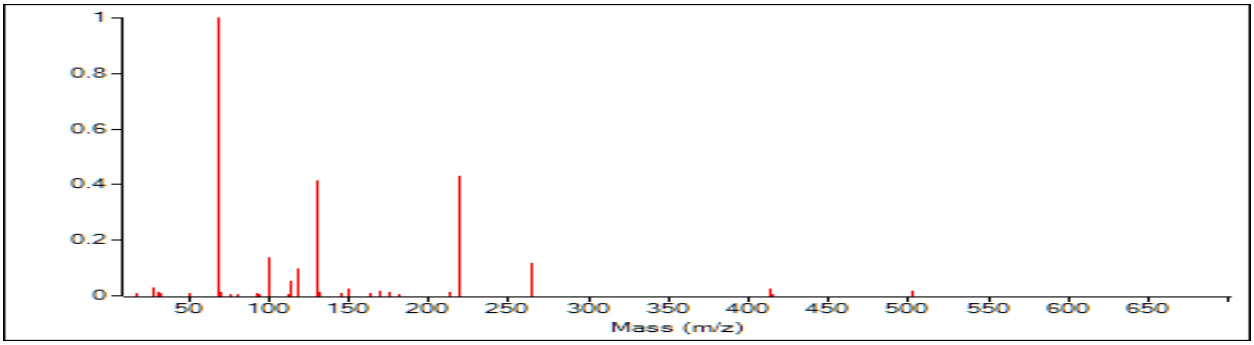
Ion Polarity	Pos	Mass Gain	-362
Emission	34.6	Mass Offset	-35
Electron Energy	70.0	Amu Gain	1676
Filament	1	Amu Offset	120.75
Repeller	34.90	Width219	0.004
Ion Focus	74.5	DC Polarity	Pos
Entrance Lens	5.0	HED Enable	On
Ent Lens Offset	13.18	EM Volts	1829.3
Ion Body	0.00	Extractor Lens	0.00
		Scan Speed	3
		Averages	3
PFTBA	Open	Step Size	0.10

Temperatures and Pressures

MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	9.17e-06

Mass	Abund	Rel Abund	Pw50
69.00	405,574	100.0%	0.60
218.90	175,089	43.2%	0.60
502.00	6,788	1.7%	0.58

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	82	69.00	395,968	1,012,898



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	395,968	100.00	70.00	4,359	1.10
218.90	169,728	42.86	219.90	7,365	4.34
501.90	6,803	1.72	502.90	641	9.42

Air/Water Check: H20 ~0.8% N2 ~2.9% O2 ~1.0% CO2 ~0.1% N2/H20 ~379.4%

Column(1) Flow: 0.80 Column(2): 0.00 ml/min Interface Temp: 280

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 55376.051

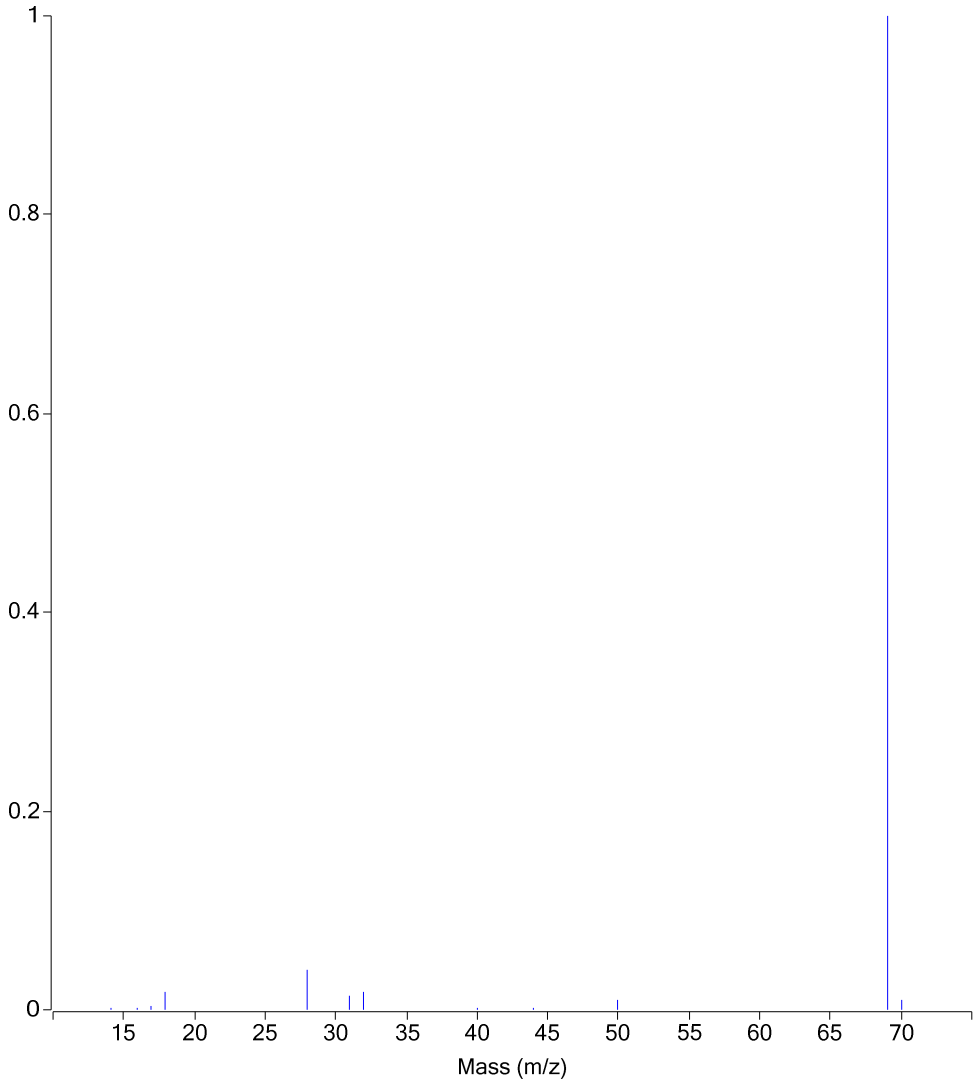
Repeller maximum 35 volts using ion 219; Gain Factor 0.5538

Mass Gain Values(Scan Speed): -370(3) -361(2) -337(1) -329(0) -251(FS1) -328(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset	120.8	120.8	120.8	120.8	120.8	120.8	120.8
Entrance Lens Offset	13.2	13.2	13.2	13.2	13.2	13.2	13.2

597x Air and Water Check

Instrument: BCCL SD GCMS 3
Fri May 16 08:13:38 2025 D:\MassHunter\GCMS\1\5977\



Current Params used: atune.u

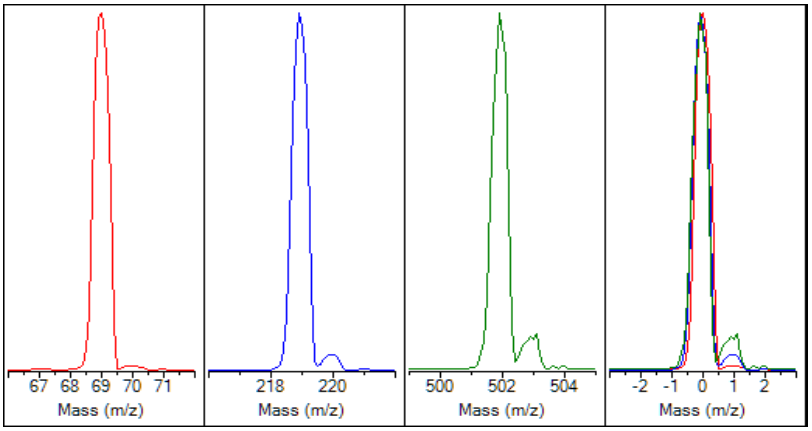
Relative abundances:

18/69 =	1.81	Water%	(counts=27680)
28/69 =	4.01	Nitrogen%	(counts=61368)
32/69 =	1.91	Oxygen%	(counts=29168)
44/69 =	0.15	Carbon Dioxide%	(counts=2338)
28/18 =	221.71	Nitrogen/Water%	

Autotune - 5977

5/19/2025 4:34:09 PM (UTC-5:00) BCCL SD GCMS 3

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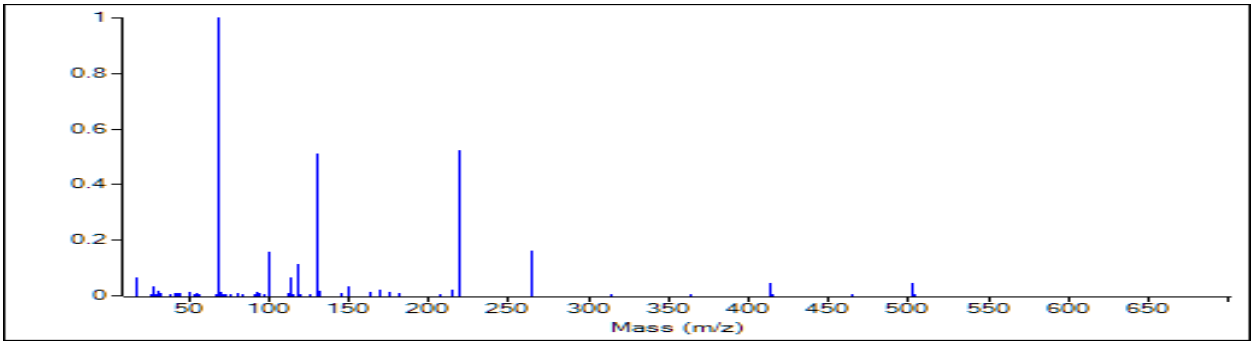
Ion Polarity	Pos	Mass Gain	-367
Emission	34.6	Mass Offset	-34
Electron Energy	70.0	Amu Gain	1678
Filament	1	Amu Offset	117.06
Repeller	25.34	Width219	-0.010
Ion Focus	90.3	DC Polarity	Pos
Entrance Lens	17.6	HED Enable	On
Ent Lens Offset	12.36	EM Volts	2017.6
Ion Body	0.00	Extractor Lens	0.00
		Scan Speed	3
		Averages	3
PFTBA	Open	Step Size	0.10

Mass	Abund	Rel Abund	Pw50
69.00	470,033	100.0%	0.60
218.90	247,034	52.6%	0.60
501.90	20,726	4.4%	0.58

Temperatures and Pressures

MS Source	230	Turbo Speed	100.0
MS Quad	150	Hi Vac	9.70e-06

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	203	69.00	460,288	1,462,808



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	460,288	100.00	70.00	6,209	1.35
219.00	240,320	52.21	220.00	10,272	4.27
502.00	20,912	4.54	503.10	1,957	9.36

Air/Water Check: H20 ~6.5% N2 ~3.2% O2 ~0.8% CO2 ~0.7% N2/H20 ~49.7%

Column(1) Flow: 0.80 Column(2): 0.00 ml/min Interface Temp: 280

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 205596.492

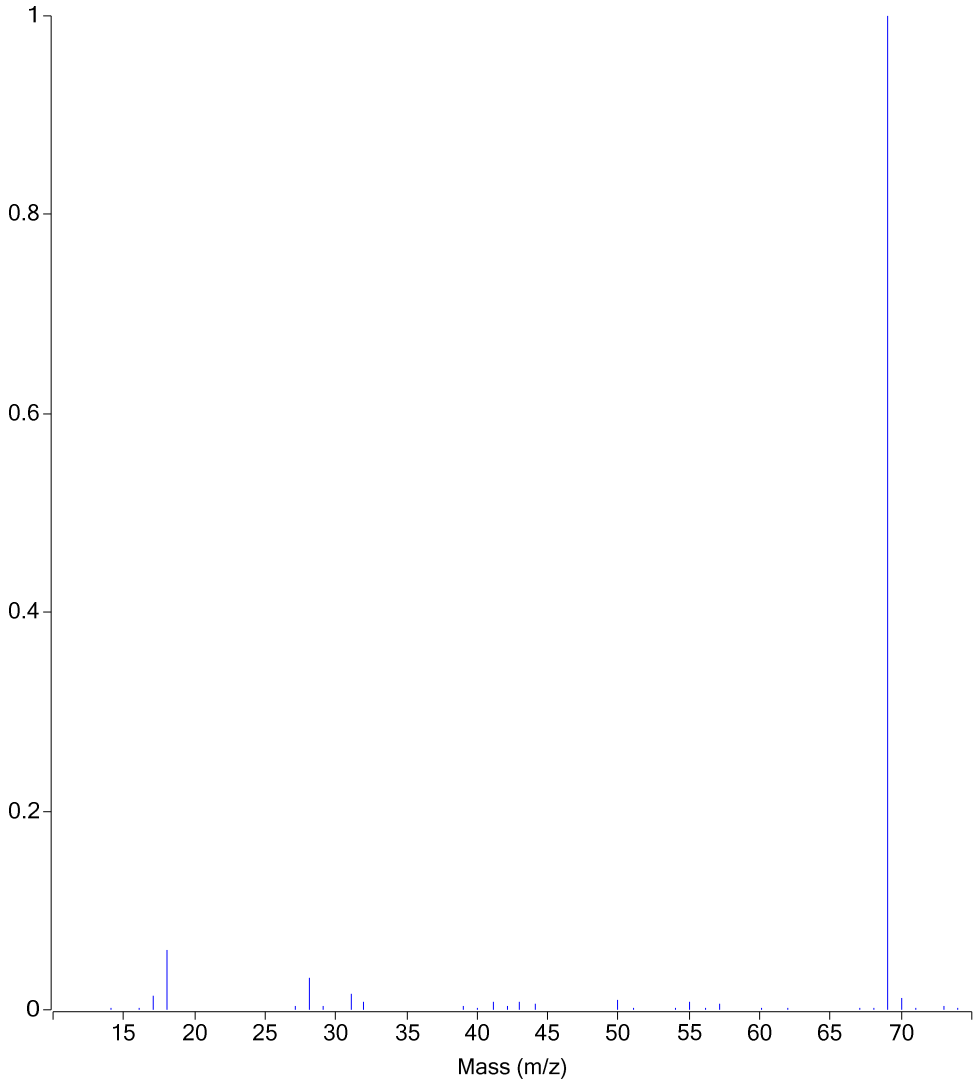
Repeller maximum 35 volts using ion 219; Gain Factor 2.0560

Mass Gain Values(Scan Speed): -352(3) -345(2) -352(1) -340(0) -331(FS1) -227(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset	117.1	117.1	117.1	117.1	117.1	117.1	117.1
Entrance Lens Offset	12.4	12.4	12.4	12.4	12.4	12.4	12.4

597x Air and Water Check

Instrument: BCCL SD GCMS 3
Mon May 19 16:36:10 2025 D:\MASSHUNTER\GCMS\1\5977\



Current Params used: atune.u

Relative abundances:

18/69 =	6.10	Water%	(counts=28704)
28/69 =	3.27	Nitrogen%	(counts=15363)
32/69 =	0.78	Oxygen%	(counts=3666)
44/69 =	0.69	Carbon Dioxide%	(counts=3266)
28/18 =	53.52	Nitrogen/Water%	

Instrument Name	: BCCL SD GCMS 3	
DC Polarity	: Positive	
Filament	1	
BasePeak should be 69 or 219		OK
Position of mass 69	69.00	OK
Position of mass 219	219.00	OK
Position of mass 502	502.06	OK
Position of isotope mass 70	70.03	OK
Position of isotope mass 220	220.00	OK
Position of isotope mass 503	503.05	OK
Ratio of mass 70 to mass 69(0.5 - 1.6%)	1.29	OK
Ratio of mass 220 to mass 219(3.2 - 5.4%)	4.30	OK
Ratio of mass 503 to mass 502(7.9 - 12.3%)	10.42	OK
Ratio of 219 to 69 should be > 40% and is	52.23	OK
Ratio of 502 to 69 should be > 2.4% and is	4.39	OK
Mass 69 Precursor (<= 3%)	0.23	OK
Mass 219 Precursor (<= 6%)	0.30	OK
Mass 502 Precursor (<= 12%)	0.93	OK

597x Air and Water Check

Mon May 19 16:39:12 2025	Instrument: BCCL SD GCMS 3
D:\MASSHUNTER\GCMS\1\5977\atune.u	US1329M205

Testing for a leak in the system

Ratio of 18 to 69 (<20%)	6.19	OK
Ratio of 28 to 69 (<10%)	3.12	OK
Electron Multiplier Voltage	2018	OK

Tune portion of System Verification passed.