



Houston Forensic Science Center

Comparative and Analytical Division - Toxicology

GC-MS Maintenance Log

Instrument: GCMS-3

Date	He Tank Pressure	Auto Tune	Septum Change	Wash Vials Filled	Syringe Washed	Rough Pump Oil Level Checked	Liner Change	Gold Seal Replaced	Column Cut	Computer Restarted	Comments	Analyst
4/19/2021	70 / 1400	✓	✓	✓	✓	✓	✓	✓	✓	✓	validation/training n=27	oag
4/20/2021	70 / 1300	✓	✓	✓	✓	✓	✓	✓	✓	X	validation/training n=30	oag
4/21/2021	70 / 1300	✓	✓	✓	✓	✓	✓	✓	✓	X	stability study + VC training, n=24	VC
4/22/2021	70 / 1300	✓	✓	✓	✓	✓	✓	✓	✓	X	validation/training n=31	oag
4/23/2021	70 / 1250	✓	✓	✓	✓	✓	✓	✓	✓	✓	validation/training n=29	oag

Signature: Melvin Henry

Date Completed: 4/29/2021

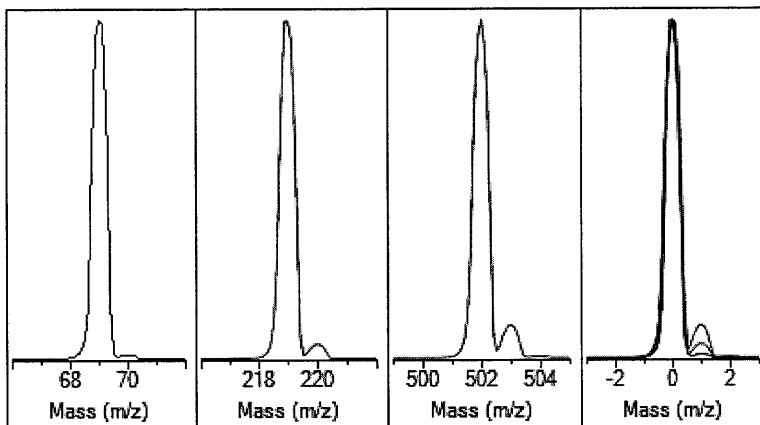
Autotune - 5975

Tune timestamp: 4/19/2021 9:16 AM (UTC-05:00)

GCMS-3

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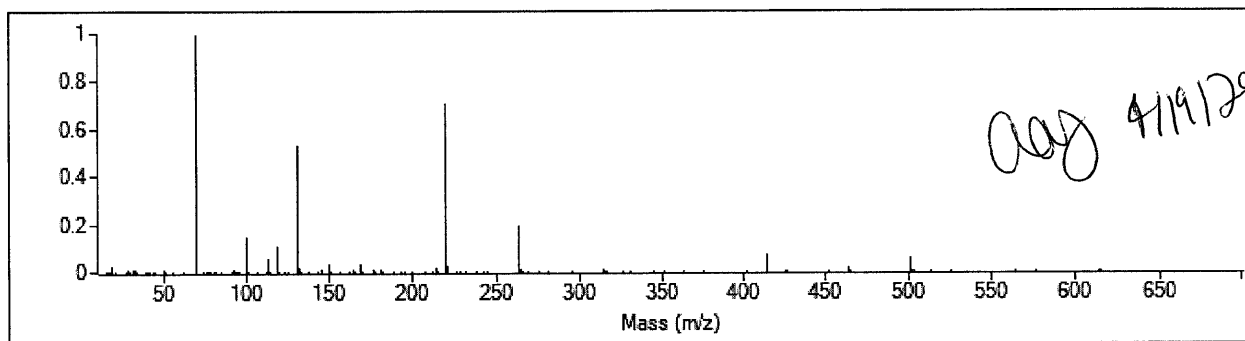


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-842
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1591
Repeller	28.90	Amu Offset	119.94
Ion Focus	90.2	Width219	-0.024
Entrance Lens	25.5	DC Polarity	Pos
Ent Lens Offset	17.82	HED Enable	On
		EM Volts	1424
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50 ✓
69.00	390,422	100.0%	0.60
218.90	278,401	71.3%	0.60
502.00	24,089	6.2%	0.61

Temperatures and Pressures		
MS Source	230 Foreline	69.229
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	115	69.00	378,880	1,241,788



Target m/z	Actual m/z ✓	Abund	Rel Abund ✓	Iso m/z	Iso Abund	Iso Ratio ✓
69.00	69.00	378,880	100.0%	70.00	3,847	1.0%
219.00	219.00	268,096	70.8%	220.00	11,433	4.3%
502.00	502.00	21,992	5.8%	503.00	2,289	10.4%

Air/Water Check: H2O ~2.9% N2 ~1.3% O2 ~0.5% CO2 ~0.2% N2/H2O ~45.0%

Column(1) Flow: 1.42 Column(2): 0.00 ml/min Interface Temp: 300

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 56299.054

Repeller maximum 35 volts using ion 219; Gain Factor 0.5630

Mass Gain Values(Scan Speed): -834(3) -828(2) -819(1) -797(0) -710(FS1) -761(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		119.9	119.9	119.9	119.9	119.9	119.9
Entrance Lens Offset		17.8	17.8	17.8	17.8	17.8	17.8

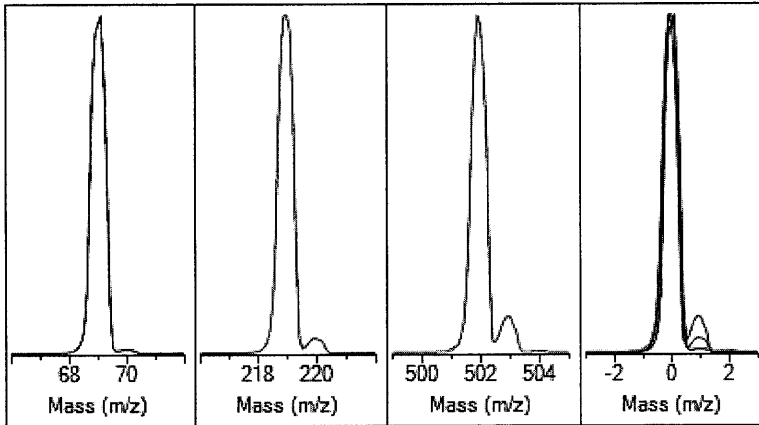
Autotune - 5975

Tune timestamp: 4/20/2021 10:12 AM (UTC-05:00)

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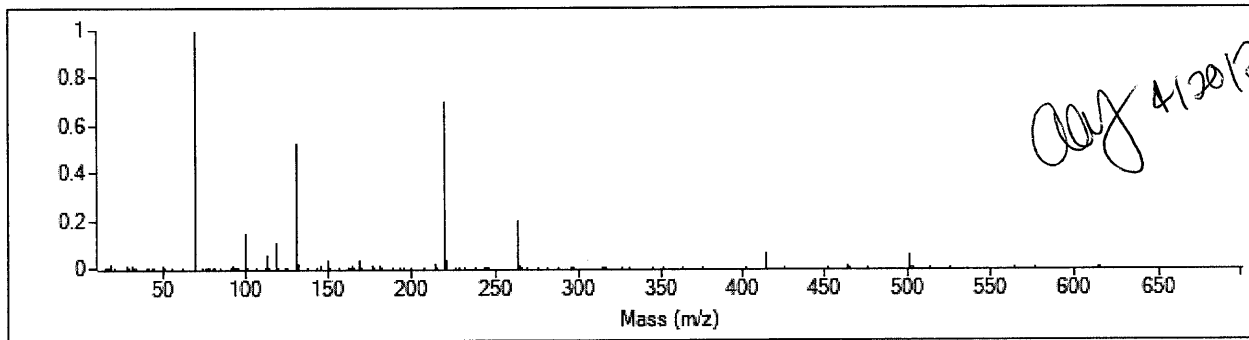


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-847
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1596
Repeller	30.42	Amu Offset	119.56
Ion Focus	90.2	Width219	-0.023
Entrance Lens	22.0	DC Polarity	Pos
Ent Lens Offset	18.07	HED Enable	On
		EM Volts	1435
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50 ✓
69.10	453,514	100.0%	0.61
219.00	313,117	69.0%	0.60
501.90	26,465	5.8%	0.60

Temperatures and Pressures		
MS Source	230 Foreline	69.536
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	117	69.00	434,880	1,408,202



Target m/z	Actual m/z ✓	Abund	Rel Abund ✓	Iso m/z	Iso Abund	Iso Ratio ✓
69.00	69.00	434,880	100.0%	70.00	4,784	1.1%
219.00	219.00	304,896	70.1%	220.00	13,426	4.4%
502.00	502.00	25,472	5.9%	503.00	2,408	9.5%

Air/Water Check: H2O ~1.6% N2 ~1.1% O2 ~0.4% CO2 ~0.1% N2/H2O ~70.9%

Column(1) Flow: 1.42 Column(2): 0.00 ml/min Interface Temp: 300

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 62739.713

Repeller maximum 35 volts using ion 219; Gain Factor 0.6274

Mass Gain Values(Scan Speed): -834(3) -828(2) -813(1) -800(0) -713(FS1) -764(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		119.6	119.6	119.6	119.6	119.6	119.6
Entrance Lens Offset		18.1	18.1	18.1	18.1	18.1	18.1

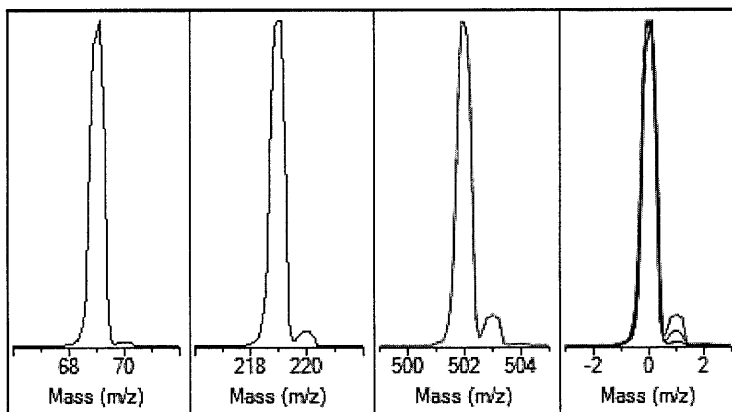
Autotune - 5975

Tune timestamp: 4/21/2021 8:39 AM (UTC-05:00)

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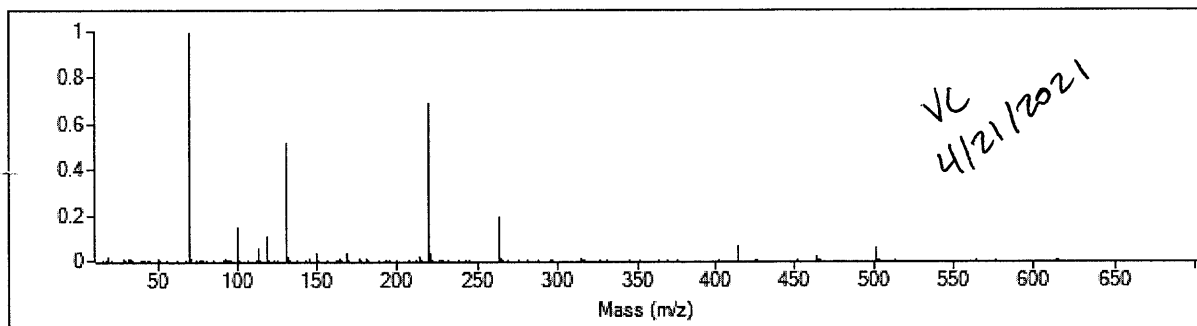


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-841
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1594
Repeller	30.92	Amu Offset	119.38
Ion Focus	90.2	Width219	-0.030
Entrance Lens	22.0	DC Polarity	Pos
Ent Lens Offset	18.07	HED Enable	On
		EM Volts	1471
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.10	466,064	100.0%	0.60
219.10	309,615	66.4%	0.60
501.90	27,052	5.8%	0.58

Temperatures and Pressures		
MS Source	230 Foreline	69.229
MS Quad	150 Hi Vac	Off

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	119	69.00	443,648	1,434,720



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	443,648	100.0%	70.10	4,797	1.1%
219.00	219.00	306,368	69.1%	220.00	13,632	4.4%
502.00	502.00	25,136	5.7%	503.00	2,892	11.5%

Air/Water Check: H2O ~1.9% N2 ~1.4% O2 ~0.5% CO2 ~0.1% N2/H2O ~73.1%

Column(1) Flow: 1.42 Column(2): 0.00 ml/min Interface Temp: 300

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 83463.095

Repeller maximum 35 volts using ion 219; Gain Factor 0.8346

Mass Gain Values(Scan Speed): -835(3) -829(2) -816(1) -794(0) -759(FS1) -759(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		119.4	119.4	119.4	119.4	119.4	119.4
Entrance Lens Offset		18.1	18.1	18.1	18.1	18.1	18.1

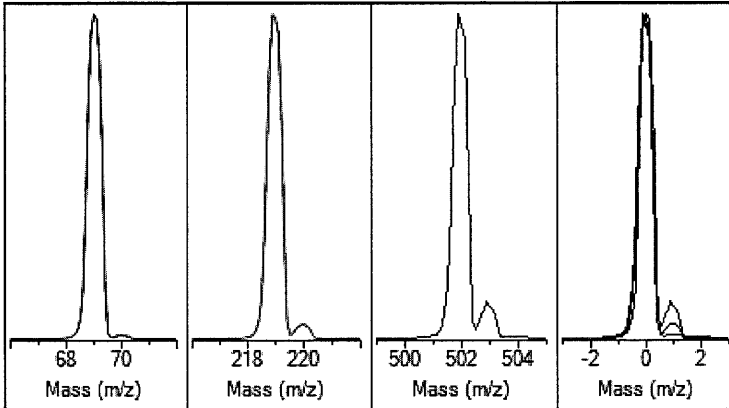
Autotune - 5975

Tune timestamp: 4/22/2021 12:18 PM (UTC-05:00)

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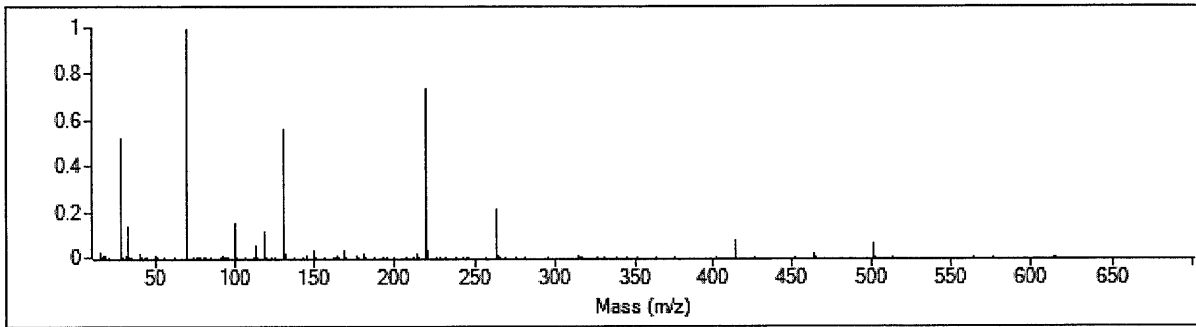


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-843
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1589
Repeller	28.23	Amu Offset	120.13
Ion Focus	90.2	Width219	-0.021
Entrance Lens	25.5	DC Polarity	Pos
Ent Lens Offset	17.82	HED Enable	On
		EM Volts	1447
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.00	365,823	100.0%	0.60
218.90	275,025	75.2%	0.60
501.90	22,882	6.3%	0.61

Temperatures and Pressures		
MS Source	230 Foreline	83.292
MS Quad	150 Hi Vac	Off

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	115	69.00	352,512	1,438,895



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	352,512	100.0%	70.00	3,858	1.1%
219.00	219.00	260,736	74.0%	220.00	11,675	4.5%
502.00	502.00	21,440	6.1%	503.00	2,437	11.4%

Air/Water Check: H2O ~1.1% N2 ~52.9% O2 ~13.5% CO2 ~0.2% N2/H2O ~4833.2%
 Column(1) Flow: 1.81 Column(2): 0.00 ml/min Interface Temp: 300

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 68750.066

Repeller maximum 35 volts using ion 219; Gain Factor 0.6875

Mass Gain Values(Scan Speed): -830(3) -824(2) -811(1) -794(0) -707(FS1) -758(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		120.1	120.1	120.1	120.1	120.1	120.1
Entrance Lens Offset		17.8	17.8	17.8	17.8	17.8	17.8

N2 high. Tightened source nut. 4/22/2021

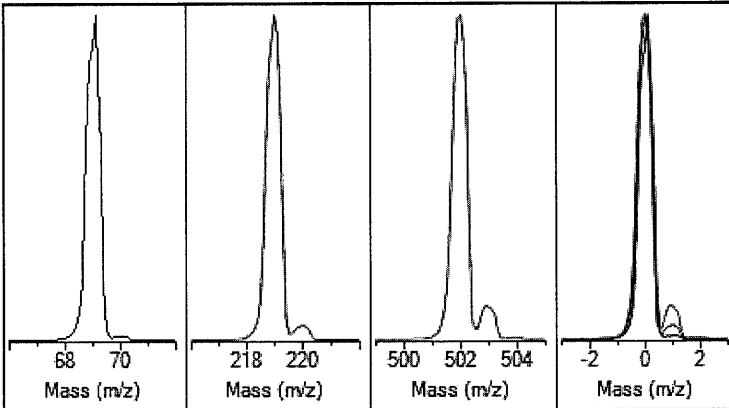
Autotune - 5975

Tune timestamp: 4/22/2021 1:19 PM (UTC-05:00)

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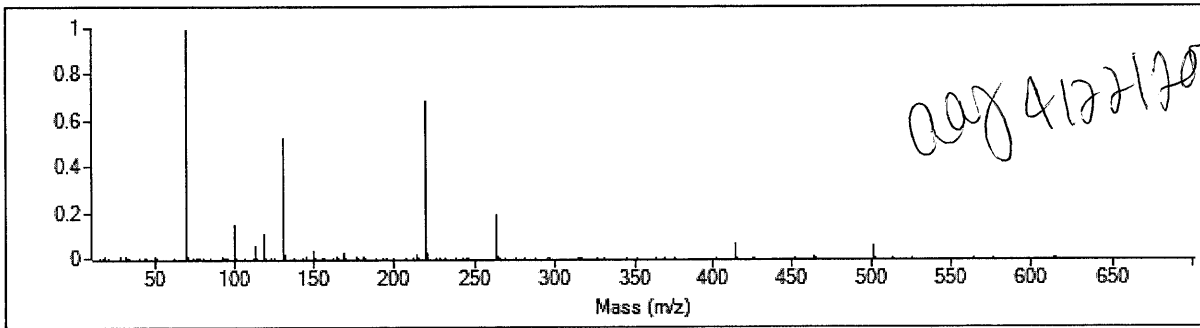


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-843
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1598
Repeller	34.96	Amu Offset	119.44
Ion Focus	90.2	Width219	-0.028
Entrance Lens	22.0	DC Polarity	Pos
Ent Lens Offset	17.07	HED Enable	On
		EM Volts	1435
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50
69.10	460,358	100.0%	0.60
219.00	301,073	65.4%	0.60
502.00	25,378	5.5%	0.60

Temperatures and Pressures		
MS Source	230 Foreline	69.229
MS Quad	150 Hi Vac	Off

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	109	69.00	416,960	1,336,089



Target m/z	Actual m/z	Abund	Rel Abund	Iso m/z	Iso Abund	Iso Ratio
69.00	69.00	416,960	100.0%	70.10	4,724	1.1%
219.00	219.00	285,824	68.5%	220.00	11,975	4.2%
502.00	502.00	24,352	5.8%	503.00	2,314	9.5%

Air/Water Check: H2O ~1.0% N2 ~1.0% O2 ~0.4% CO2 ~0.1% N2/H2O ~104.6%

Column(1) Flow: 1.42 Column(2): 0.00 ml/min Interface Temp: 300

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 59120.908

Repeller maximum 35 volts using ion 219; Gain Factor 0.5912

Mass Gain Values(Scan Speed): -834(3) -828(2) -816(1) -795(0) -760(FS1) -760(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		119.4	119.4	119.4	119.4	119.4	119.4
Entrance Lens Offset		17.1	17.1	17.1	17.1	17.1	17.1

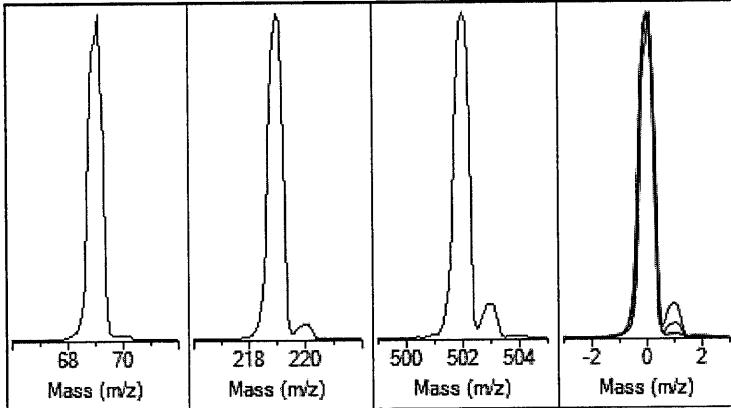
Autotune - 5975

Tune timestamp: 4/23/2021 10:30 AM (UTC-05:00)

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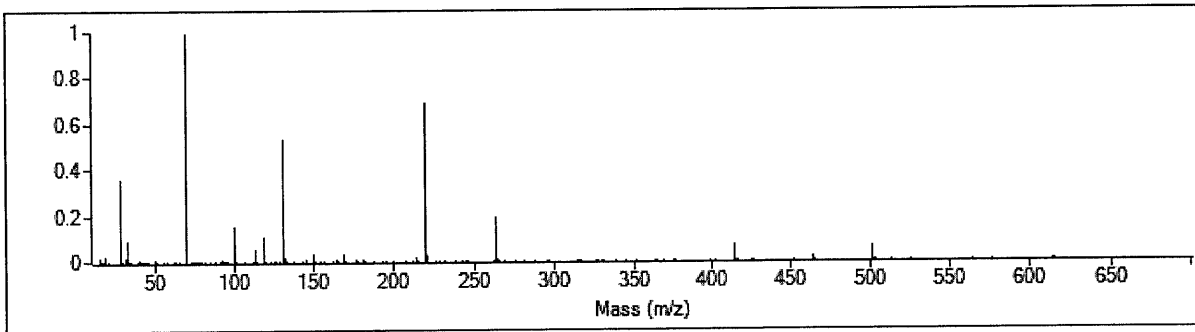


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-843
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1596
Repeller	33.95	Amu Offset	119.38
Ion Focus	90.2	Width219	-0.029
Entrance Lens	22.0	DC Polarity	Pos
Ent Lens Offset	17.07	HED Enable	On
		EM Volts	1482
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50 ✓
69.10	523,435	100.0%	0.60
219.00	354,594	67.7%	0.61
502.00	30,643	5.9%	0.62

Temperatures and Pressures		
MS Source	230 Foreline	70.152
MS Quad	150 Hi Vac	Off

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	141	69.00	487,872	1,826,145



Target m/z	Actual m/z ✓	Abund	Rel Abund ✓	Iso m/z	Iso Abund	Iso Ratio ✓
69.00	69.00	487,872	100.0%	70.00	5,364	1.1%
219.00	219.00	337,152	69.1%	220.00	14,108	4.2%
502.00	502.00	29,784	6.1%	503.00	3,151	10.6%

Air/Water Check: H2O ~2.3% N2 ~35.8% O2 ~9.5% CO2 ~0.3% N2/H2O ~1528.2%
 Column(1) Flow: 1.42 Column(2): 0.00 ml/min Interface Temp: 300

*177 high. Source nut tightened.
 @ 4/23/2021*

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 84041.851

Repeller maximum 35 volts using ion 219; Gain Factor 0.8404

Mass Gain Values(Scan Speed): -838(3) -832(2) -814(1) -795(0) -759(FS1) -759(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		119.4	119.4	119.4	119.4	119.4	119.4
Entrance Lens Offset		17.1	17.1	17.1	17.1	17.1	17.1

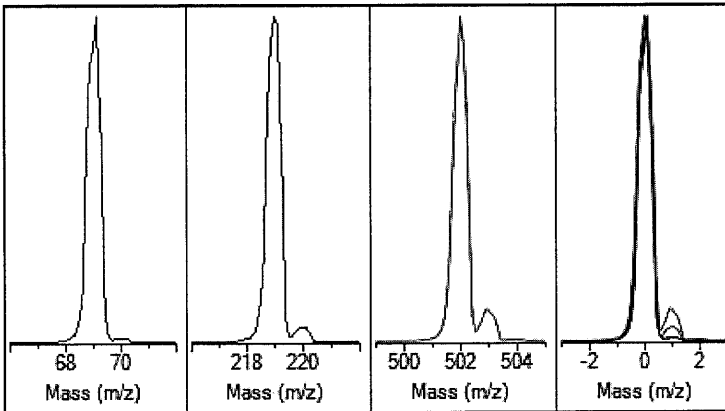
Autotune - 5975

Tune timestamp: 4/23/2021 11:48 AM (UTC-05:00)

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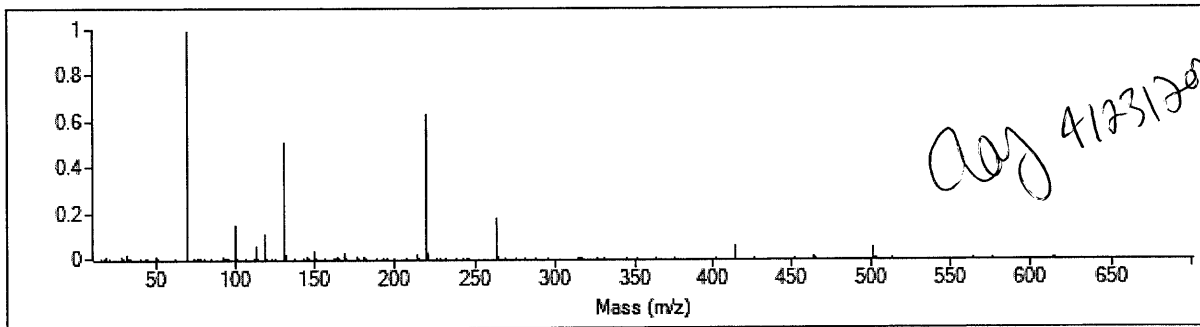


Ion Polarity	Pos	PFTBA	Open
Emission	34.6	Mass Gain	-841
Electron Energy	70.3	Mass Offset	-38
Filament	1	Amu Gain	1598
Repeller	34.96	Amu Offset	119.31
Ion Focus	90.2	Width219	-0.031
Entrance Lens	22.0	DC Polarity	Pos
Ent Lens Offset	17.07	HED Enable	On
		EM Volts	1447
		Scan Speed	3
JetClean Flow Actual/[Setpoint]	0.00 [0.00]	Averages	3

Actual m/z	Abund	Rel Abund	Pw50 ✓
69.10	427,817	100.0%	0.60
219.00	256,113	59.9%	0.60
502.00	22,209	5.2%	0.58

Temperatures and Pressures		
MS Source	230 Foreline	70.461
MS Quad	150 Hi Vac	Off

Low	High	Step	Speed	Threshold	Peaks	Base	Abundance	Total Ion
10.00	701.00	0.10	3	100	106	69.00	387,968	1,202,177



Target m/z	Actual m/z ✓	Abund	Rel Abund ✓	Iso m/z	Iso Abund	Iso Ratio ✓
69.00	69.00	387,968	100.0%	70.00	4,109	1.1%
219.00	219.00	244,416	63.0%	220.00	11,047	4.5%
502.00	502.00	19,752	5.1%	503.00	2,087	10.6%

Air/Water Check: H2O ~1.3% N2 ~1.2% O2 ~0.4% CO2 ~0.1% N2/H2O ~93.5%

Column(1) Flow: 1.42 Column(2): 0.00 ml/min Interface Temp: 300

Ramp Criteria:

Ion Focus maximum 90 volts using ion 502; Electron Multiplier Gain 64578.391

Repeller maximum 35 volts using ion 219; Gain Factor 0.6458

Mass Gain Values(Scan Speed): -837(3) -830(2) -818(1) -797(0) -762(FS1) -762(FS2)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset		119.3	119.3	119.3	119.3	119.3	119.3
Entrance Lens Offset		17.1	17.1	17.1	17.1	17.1	17.1