



# QQQ Check Tune Report

**Instrument Name** LCMS-1  
**MS Model** G6470A  
**MS Instrument Serial** SG1939G104  
**Software\_Firmware Version** 10.0.142, FW: A.00.08.100  
**Tune Date & Time** 01 November 2022 07:35:07  
**Data Path** D:\MassHunter\Tune\QQQ\G6470A\tunes.TUNE.XML  
**Ion Source** AJS ESI  
**Ionization Mode** AJS ESI  
**Tuned Resolution** All  
**Vacuum Pressure** 1.60E+0 [R] (Torr); 4.75E-5 [H] (Torr)

## Source Parameters

Parameter	Positive	Negative
Gas Temp (°C)	300	300
Gas Flow (l/min)	8	8
Nebulizer (psi)	15	15
Capillary (V)	4000	4000
Nozzle Voltage (V)	1500	1500
Sheath Gas Temp (°C)	250	250
Sheath Gas Flow (l/min)	7	7

## Positive Results

**Analyzer: MS1 Polarity: Positive Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.09	0.00	Pass	0.70	0.70	0.00	Pass	473326
322.05	322.06	0.01	Pass	0.70	0.68	-0.02	Pass	228103
622.03	622.02	-0.01	Pass	0.70	0.68	-0.02	Pass	218399
922.01	922.02	0.01	Pass	0.70	0.69	-0.01	Pass	168268
1521.97	1521.95	-0.02	Pass	0.70	0.67	-0.03	Pass	65906
2121.93	2121.99	0.06	Pass	0.70	0.68	-0.02	Pass	37903

**Analyzer: MS2 Polarity: Positive Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.09	0.00	Pass	0.70	0.70	0.00	Pass	356591
322.05	322.05	0.00	Pass	0.70	0.68	-0.02	Pass	236256
622.03	622.02	-0.01	Pass	0.70	0.70	0.00	Pass	234256
922.01	922.00	-0.01	Pass	0.70	0.68	-0.02	Pass	151363
1521.97	1521.96	-0.01	Pass	0.70	0.67	-0.03	Pass	87899
2121.93	2121.91	-0.02	Pass	0.70	0.68	-0.02	Pass	92588

**Analyzer: MS1 Polarity: Positive Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.10	0.01	Pass	1.20	1.27	0.07	Pass	533086
322.05	322.06	0.01	Pass	1.20	1.53	0.33	Pass	318983
622.03	622.05	0.02	Pass	1.20	1.61	0.41	Pass	361071
922.01	922.03	0.02	Pass	1.20	1.59	0.39	Pass	302044
1521.97	1521.97	0.00	Pass	1.20	1.43	0.23	Pass	146684
2121.93	2121.95	0.02	Pass	1.20	1.20	0.00	Pass	111851

**Analyzer: MS2 Polarity: Positive Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.06	-0.03	Pass	1.20	1.20	0.00	Pass	444562
322.05	322.05	0.00	Pass	1.20	1.40	0.20	Pass	364767
622.03	622.02	-0.01	Pass	1.20	1.53	0.33	Pass	390735
922.01	922.03	0.02	Pass	1.20	1.46	0.26	Pass	320584
1521.97	1521.97	0.00	Pass	1.20	1.36	0.16	Pass	188647
2121.93	2121.82	-0.11	Pass	1.20	1.10	-0.10	Pass	156016

**Analyzer: MS1 Polarity: Positive Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.09	0.00	Pass	2.50	2.43	-0.07	Pass	621312
322.05	322.05	0.00	Pass	2.50	2.66	0.16	Pass	409566
622.03	622.04	0.01	Pass	2.50	2.84	0.34	Pass	442746
922.01	922.02	0.01	Pass	2.50	2.77	0.27	Pass	409170
1521.97	1522.00	0.03	Pass	2.50	2.50	0.00	Pass	232457
2121.93	2121.85	-0.08	Pass	2.50	2.30	-0.20	Pass	226681

# QQQ Check Tune Report



Agilent

Trusted Answers

Analyzer: MS2 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.10	0.01	Pass	2.50	2.48	-0.02	Pass	612743
322.05	322.06	0.01	Pass	2.50	2.66	0.16	Pass	489866
622.03	621.98	-0.05	Pass	2.50	2.84	0.34	Pass	549547
922.01	922.03	0.02	Pass	2.50	2.70	0.20	Pass	516163
1521.97	1521.90	-0.07	Pass	2.50	2.66	0.16	Pass	365814
2121.93	2121.87	-0.06	Pass	2.50	2.42	-0.08	Pass	468681

## Negative Results

**Analyzer: MS1 Polarity: Negative Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	0.70	0.69	-0.01	Pass	194231
302.00	302.00	0.00	Pass	0.70	0.70	0.00	Pass	73394
601.98	601.99	0.01	Pass	0.70	0.68	-0.02	Pass	306687
1033.99	1033.99	0.00	Pass	0.70	0.67	-0.03	Pass	357384
1633.95	1633.94	-0.01	Pass	0.70	0.70	0.00	Pass	719904
2233.91	2233.92	0.01	Pass	0.70	0.63	-0.07	Pass	319623

**Analyzer: MS2 Polarity: Negative Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.70	0.00	Pass	128863
302.00	301.99	-0.01	Pass	0.70	0.71	0.01	Pass	64440
601.98	602.00	0.02	Pass	0.70	0.69	-0.01	Pass	233465
1033.99	1033.99	0.00	Pass	0.70	0.69	-0.01	Pass	346433
1633.95	1633.95	0.00	Pass	0.70	0.68	-0.02	Pass	1143096
2233.91	2233.90	-0.01	Pass	0.70	0.67	-0.03	Pass	553947

**Analyzer: MS1 Polarity: Negative Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.00	0.01	Pass	1.20	1.22	0.02	Pass	233346
302.00	302.01	0.01	Pass	1.20	1.45	0.25	Pass	107609
601.98	602.00	0.02	Pass	1.20	1.66	0.46	Pass	537532
1033.99	1034.04	0.05	Pass	1.20	1.61	0.41	Pass	878655
1633.95	1633.98	0.03	Pass	1.20	1.41	0.21	Pass	2106060
2233.91	2233.89	-0.02	Pass	1.20	1.17	-0.03	Pass	1361263

**Analyzer: MS2 Polarity: Negative Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.97	-0.02	Pass	1.20	1.22	0.02	Pass	176391
302.00	301.93	-0.07	Pass	1.20	1.41	0.21	Pass	92143
601.98	601.97	-0.01	Pass	1.20	1.59	0.39	Pass	458883
1033.99	1033.99	0.00	Pass	1.20	1.61	0.41	Pass	824497
1633.95	1633.95	0.00	Pass	1.20	1.49	0.29	Pass	2928346
2233.91	2234.05	0.14	Pass	1.20	1.24	0.04	Pass	1480396

**Analyzer: MS1 Polarity: Negative Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.97	-0.02	Pass	2.50	2.50	0.00	Pass	279185
302.00	302.02	0.02	Pass	2.50	2.80	0.30	Pass	129909
601.98	601.79	-0.19	Pass	2.50	2.97	0.47	Pass	791250
1033.99	1034.03	0.04	Pass	2.50	2.94	0.44	Pass	1496264
1633.95	1633.96	0.01	Pass	2.50	2.81	0.31	Pass	4679467
2233.91	2233.98	0.07	Pass	2.50	2.58	0.08	Pass	4349456

**Analyzer: MS2 Polarity: Negative Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.97	-0.02	Pass	2.50	2.49	-0.01	Pass	257762
302.00	302.01	0.01	Pass	2.50	2.67	0.17	Pass	118856
601.98	602.01	0.03	Pass	2.50	2.86	0.36	Pass	646215
1033.99	1034.01	0.02	Pass	2.50	2.79	0.29	Pass	1321539
1633.95	1633.99	0.04	Pass	2.50	2.71	0.21	Pass	5367146
2233.91	2233.83	-0.08	Pass	2.50	2.32	-0.18	Pass	4407495

**Instrument Name** LCMS-1  
**MS Model** G6470A  
**MS Instrument Serial** SG1939G104  
**Software\_Firmware Version** 10.0.142, FW: A.00.08.100  
**Tune Date & Time** 02 November 2022 10:00:28  
**Data Path** D:\MassHunter\Tune\QQQ\G6470A\atunes.TUNE.XML  
**Ion Source** AJS ESI  
**Ionization Mode** AJS ESI  
**Tuned Resolution** All  
**Vacuum Pressure** 1.60E+0 [R] (Torr); 4.75E-5 [H] (Torr)

**Source Parameters**

Parameter	Positive	Negative
Gas Temp (°C)	300	300
Gas Flow (l/min)	8	8
Nebulizer (psi)	15	15
Capillary (V)	4000	4000
Nozzle Voltage (V)	1500	1500
Sheath Gas Temp (°C)	250	250
Sheath Gas Flow (l/min)	7	7

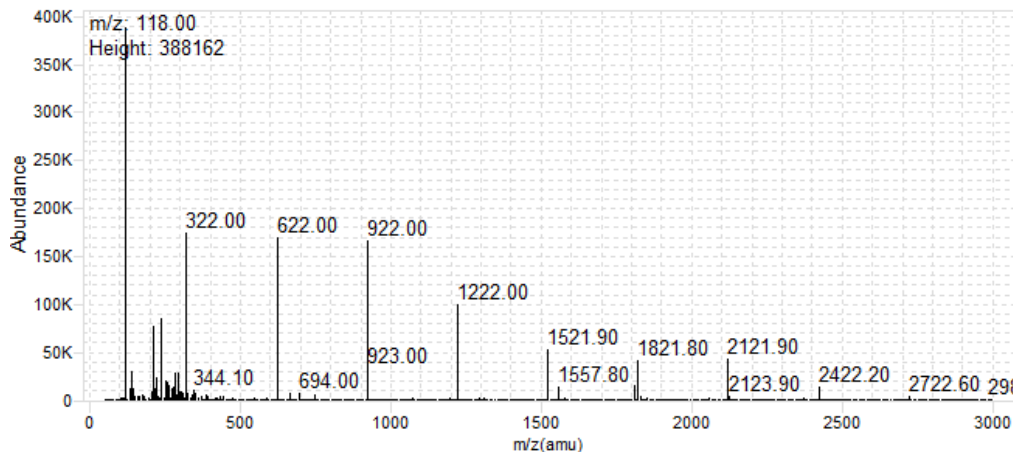
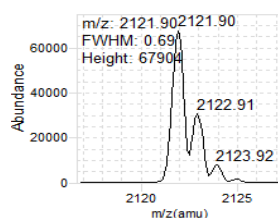
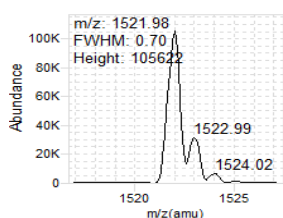
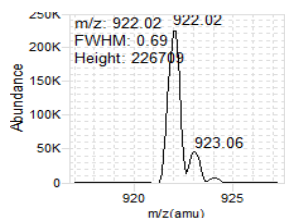
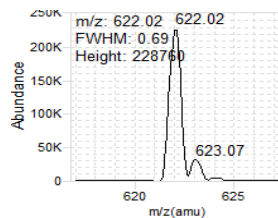
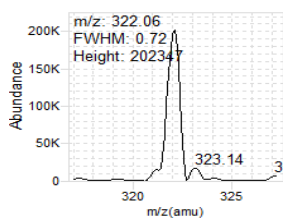
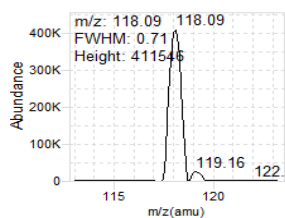
**Positive Results**

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Analyzer: MS1

Polarity: Positive

Width: Unit

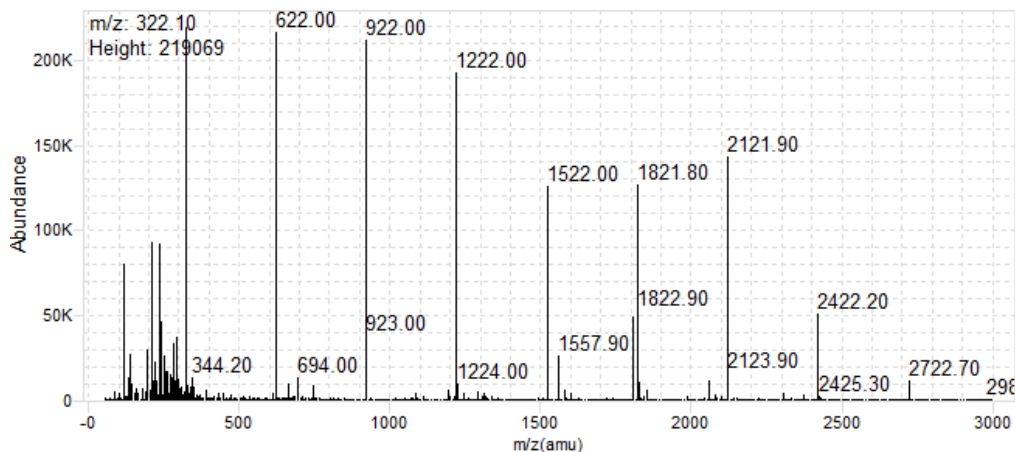
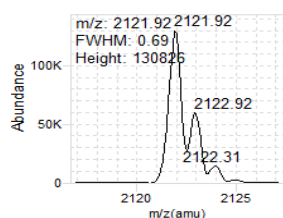
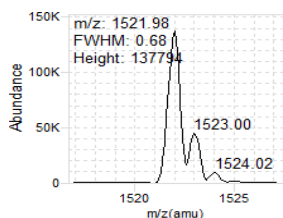
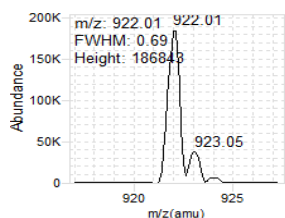
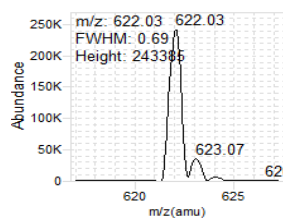
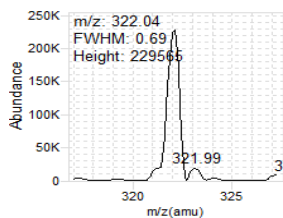
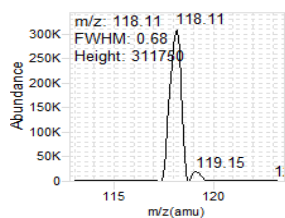


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.09	118.09	0.71	0.70	411546
322.06	322.05	0.72	0.70	202347
622.02	622.03	0.69	0.70	228760
922.02	922.01	0.69	0.70	226709
1521.98	1521.97	0.70	0.70	105622
2121.91	2121.93	0.69	0.70	67904

Analyzer: MS2

Polarity: Positive

Width: Unit

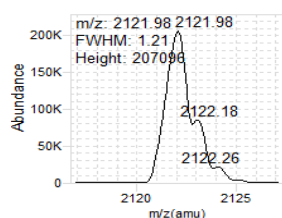
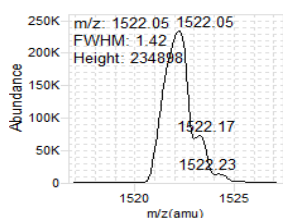
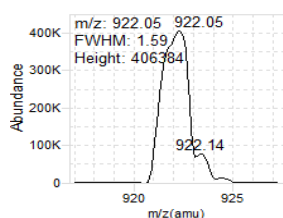
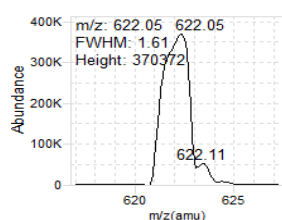
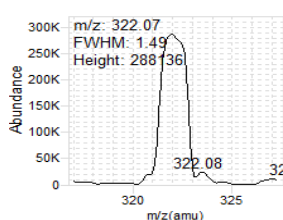
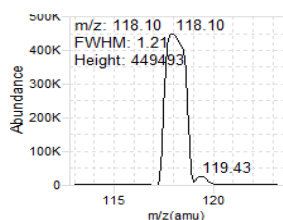


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.11	118.09	0.68	0.70	311750
322.04	322.05	0.69	0.70	229565
622.03	622.03	0.69	0.70	243385
922.01	922.01	0.69	0.70	186843
1521.98	1521.97	0.68	0.70	137794
2121.93	2121.93	0.69	0.70	130826

**Analyzer: MS1**

**Polarity: Positive**

**Width: Wide**

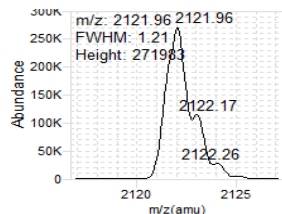
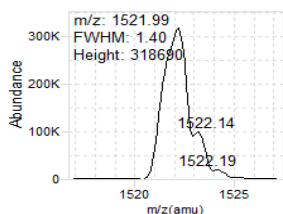
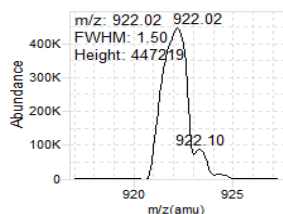
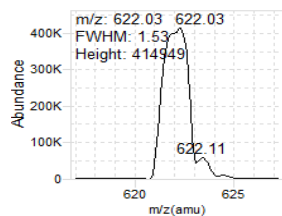
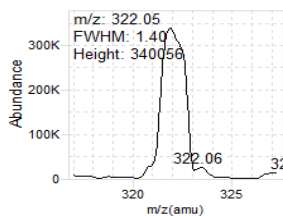
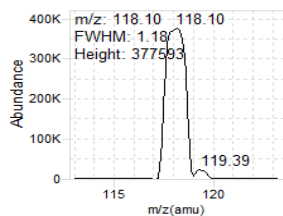


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.10	118.09	1.21	1.20	449493
322.07	322.05	1.49	1.20	288136
622.04	622.03	1.61	1.20	370372
922.05	922.01	1.59	1.20	406384
1522.05	1521.97	1.42	1.20	234898
2121.99	2121.93	1.21	1.20	207096

**Analyzer: MS2**

**Polarity: Positive**

**Width: Wide**



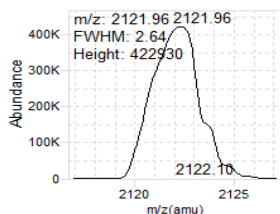
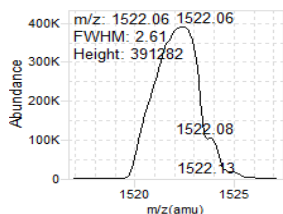
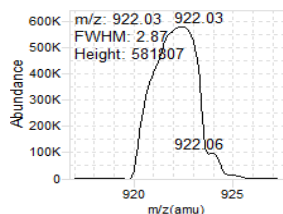
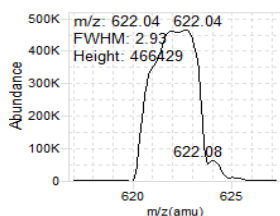
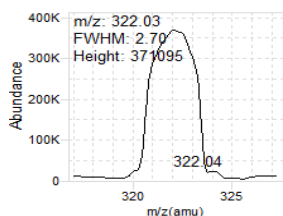
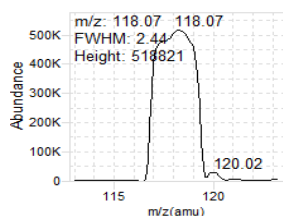
m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.10	118.09	1.18	1.20	377593
322.05	322.05	1.40	1.20	340056
622.03	622.03	1.53	1.20	414949
922.02	922.01	1.50	1.20	447219
1521.98	1521.97	1.40	1.20	318690
2121.97	2121.93	1.21	1.20	271983



**Analyzer: MS1**

**Polarity: Positive**

**Width: Widest**

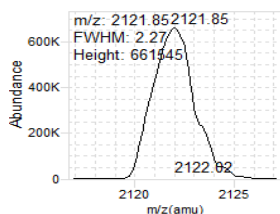
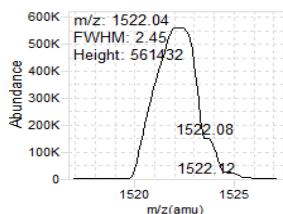
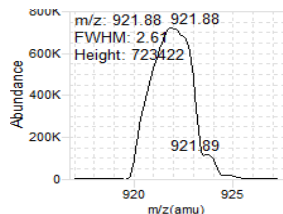
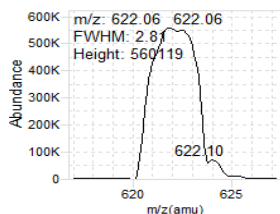
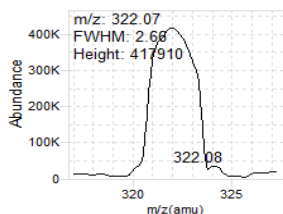
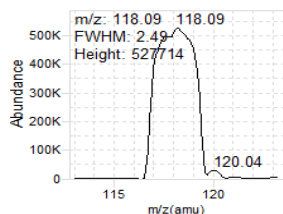


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.07	118.09	2.44	2.50	518821
322.03	322.05	2.70	2.50	371095
622.04	622.03	2.93	2.50	466429
922.03	922.01	2.86	2.50	581807
1522.06	1521.97	2.61	2.50	391282
2121.96	2121.93	2.64	2.50	422930

**Analyzer: MS2**

**Polarity: Positive**

**Width: Widest**



m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.09	118.09	2.49	2.50	527714
322.07	322.05	2.66	2.50	417910
622.06	622.03	2.81	2.50	560119
921.88	922.01	2.61	2.50	723422
1522.04	1521.97	2.45	2.50	561432
2121.86	2121.93	2.27	2.50	661545

**Positive Results**

**Tune Parameters**

<b>Parameters</b>	<b>Setting</b>
Fragmentor	135
Skimmer	15
Octopole DC	5
Octopole RF	600
Lens 1	3.50
MS1 PreFilter	-10
MS1 DC	3.00
MS1 PostFilter	2.00
MS1 Axis Offset	0.93
MS1 Axis Gain	0.25
MS1 Width Offset	0.08
MS1 Width Gain	-15
MS1 Heater	100
MS2 DC	-10
MS2 PreFilter	-30
MS2 Axis Offset	0.89
MS2 Axis Gain	-10.95
MS2 Width Offset	0
MS2 Width Gain	1
MS2 Heater	100
Cell Entry	1
Hexapole DC	0.00
Hexapole RF	500
Hexapole Accel	5
Cell Exit	-7
Collision Gas	1
Iris	-150
HED	-10
EMV	1040
Collision Energy	0
Lens 1[MS2]	1.90
MS1 PreFilter[MS2]	1.60

**Dynamic Ramp Tables**

**MS1 PreFilter**

<b>m/z</b>	<b>Setting</b>
118.09	-12.2
322.05	-6
622.03	-8.6
922.01	-12.6
1521.97	-11.7
2121.93	-14.8

**MS1 Axis Offset**

<b>m/z</b>	<b>Setting</b>
118.09	0.928
322.05	1.16
622.03	1.285
922.01	1.311
1521.97	1.175
2121.93	0.928

**MS1 Width Offset**

<b>m/z</b>	<b>Setting</b>
118.09	0.08
322.05	-0.15
622.03	-0.26
922.01	-0.22
1521.97	-0.09
2121.93	0.08

**MS2 PreFilter**

m/z	Setting
58	-16.4
79	-21.4
117.97	-30
118	-13
154	-16.6
290	-33.2

**MS2 Axis Offset**

m/z	Setting
118.09	0.89
322.05	1.086
622.03	1.232
922.01	1.228
1521.97	1.173
2121.93	0.89

**MS2 Width Offset**

m/z	Setting
118.09	0
322.05	-0.19
622.03	-0.32
922.01	-0.34
1521.97	-0.25
2121.93	0

**MS1 Calibrations**

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	0.25	0.928	-15	0.08
Wide	0.25	1.088	-14.5	0.43
Widest	0.1	1.48	-13.8	1.37

**MS2 Calibrations**

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	-10.95	0.89	0.6	0
Wide	-11.05	1.062	0.7	0.38
Widest	-11.5	1.51	0.9	1.4

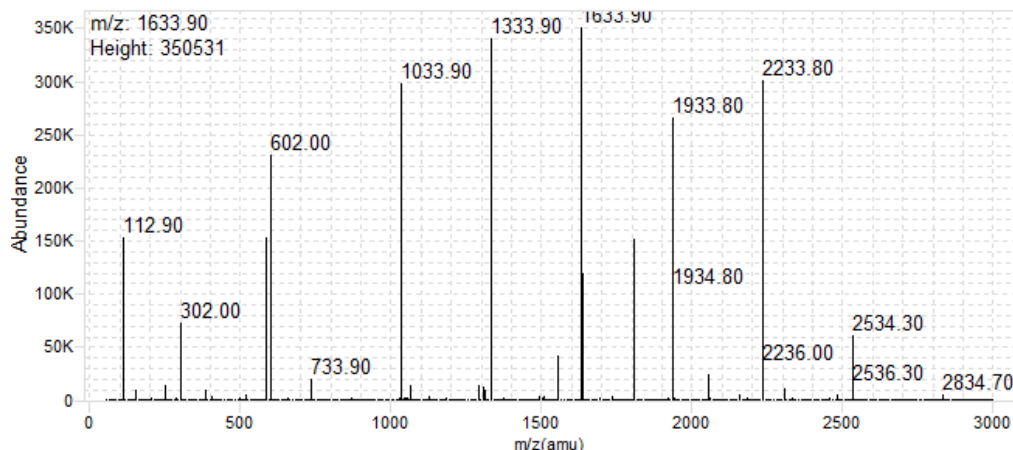
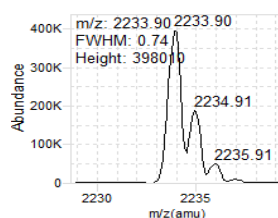
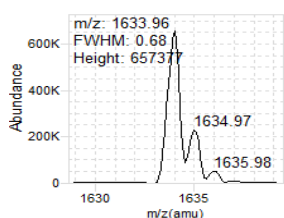
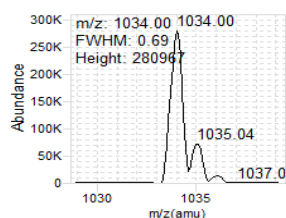
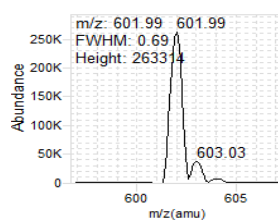
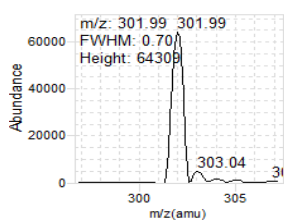
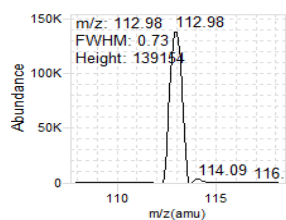
**Negative Results**

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Analyzer: MS1

Polarity: Negative

Width: Unit

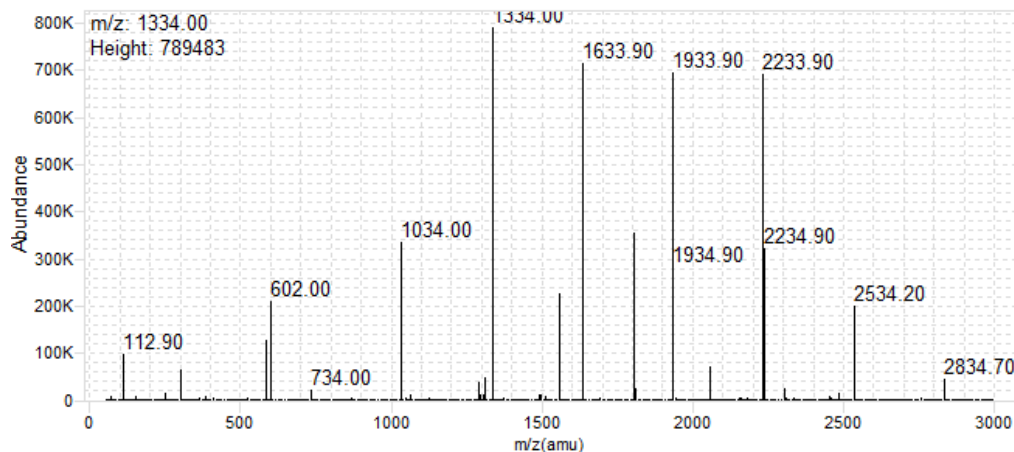
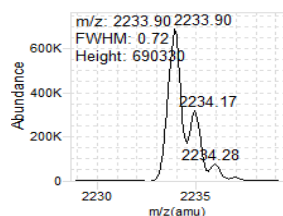
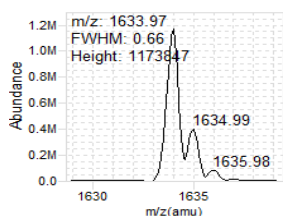
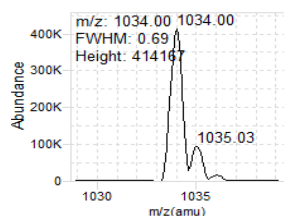
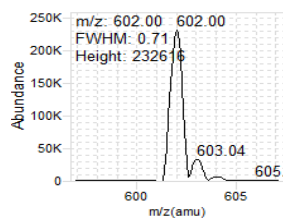
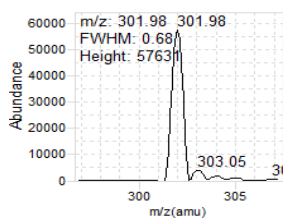
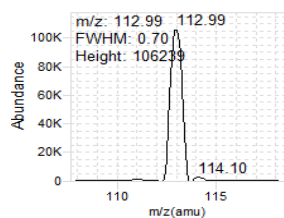


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.98	112.99	0.73	0.70	139154
301.99	302.00	0.70	0.70	64309
601.99	601.98	0.69	0.70	263314
1034.00	1033.99	0.69	0.70	280967
1633.95	1633.95	0.68	0.70	657377
2233.91	2233.91	0.74	0.70	398010

**Analyzer: MS2**

**Polarity: Negative**

**Width: Unit**

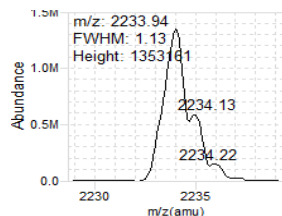
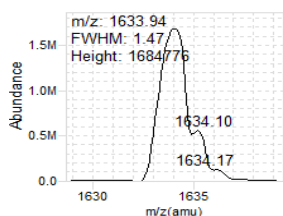
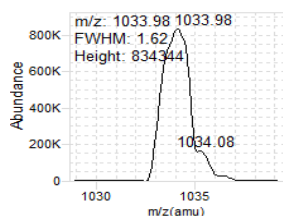
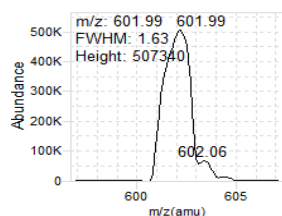
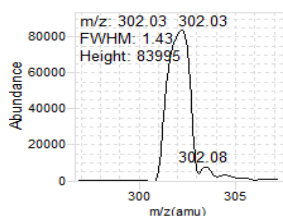
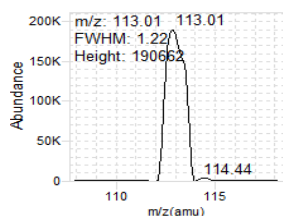


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.99	112.99	0.70	0.70	106239
301.98	302.00	0.68	0.70	57631
601.99	601.98	0.71	0.70	232616
1033.99	1033.99	0.69	0.70	414167
1633.96	1633.95	0.66	0.70	1173847
2233.90	2233.91	0.72	0.70	690331

**Analyzer: MS1**

**Polarity: Negative**

**Width: Wide**

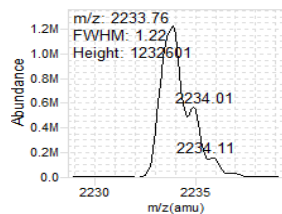
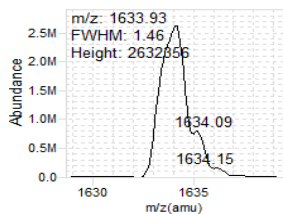
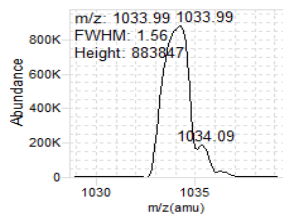
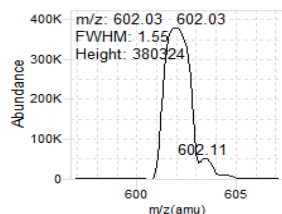
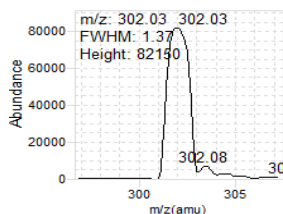
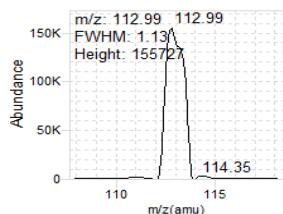


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
113.01	112.99	1.22	1.20	190662
302.03	302.00	1.43	1.20	83995
601.99	601.98	1.63	1.20	507340
1033.98	1033.99	1.62	1.20	834344
1633.94	1633.95	1.47	1.20	1684776
2233.94	2233.91	1.13	1.20	1353161

**Analyzer: MS2**

**Polarity: Negative**

**Width: Wide**

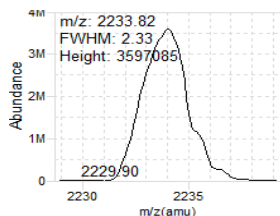
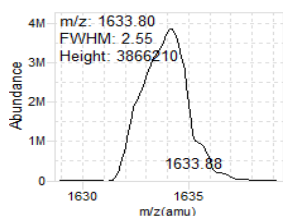
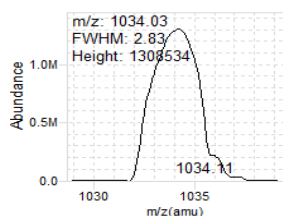
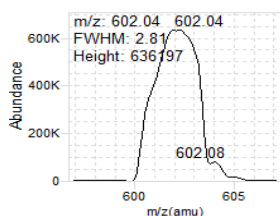
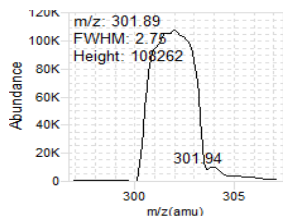
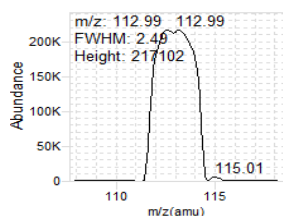


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.99	112.99	1.13	1.20	155727
302.03	302.00	1.37	1.20	82150
602.03	601.98	1.55	1.20	380324
1033.98	1033.99	1.56	1.20	883847
1633.93	1633.95	1.46	1.20	2632356
2233.77	2233.91	1.22	1.20	1232601

**Analyzer: MS1**

**Polarity: Negative**

**Width: Widest**

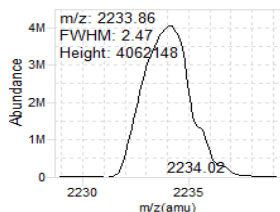
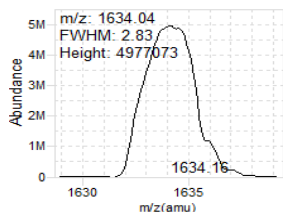
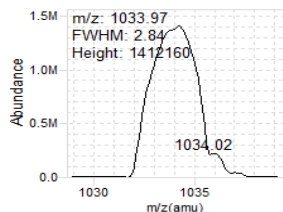
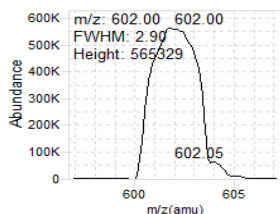
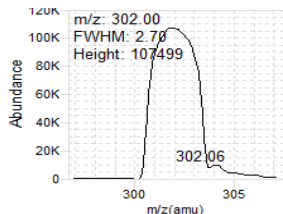
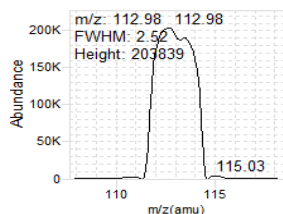


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.99	112.99	2.49	2.50	217102
301.89	302.00	2.75	2.50	108262
602.04	601.98	2.81	2.50	636197
1034.03	1033.99	2.83	2.50	1308534
1633.80	1633.95	2.55	2.50	3866210
2233.82	2233.91	2.33	2.50	3597085

**Analyzer: MS2**

**Polarity: Negative**

**Width: Widest**



m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.98	112.99	2.52	2.50	203839
302.00	302.00	2.70	2.50	107499
602.00	601.98	2.90	2.50	565329
1033.97	1033.99	2.84	2.50	1412160
1634.04	1633.95	2.82	2.50	4977073
2233.86	2233.91	2.48	2.50	4062148

## Negative Results

### Tune Parameters

Parameters	Setting
Fragmentor	115
Skimmer	15
Octopole DC	5
Octopole RF	600
Lens 1	-3.50
MS1 PreFilter	16
MS1 DC	-3.00
MS1 PostFilter	-2.00
MS1 Axis Offset	0.91
MS1 Axis Gain	0
MS1 Width Offset	0.12
MS1 Width Gain	-15
MS1 Heater	100
MS2 DC	10
MS2 PreFilter	30
MS2 Axis Offset	0.90
MS2 Axis Gain	-11.05
MS2 Width Offset	-0.05
MS2 Width Gain	1
MS2 Heater	100
Cell Entry	1
Hexapole DC	0.00
Hexapole RF	500
Hexapole Accel	5
Cell Exit	7.00
Collision Gas	1
Iris	150
HED	18
EMV	1070
Collision Energy	0
Lens 1[MS2]	-3.70
MS1 PreFilter[MS2]	-2.40

### Dynamic Ramp Tables

#### MS1 PreFilter

m/z	Setting
112.99	9.6
302	8
601.98	8.4
1033.99	19.5
1633.95	16.7
2233.91	14.3

#### MS1 Axis Offset

m/z	Setting
112.99	0.912
302	1.135
601.98	1.304
1033.99	1.323
1633.95	1.175
2233.91	0.912

#### MS1 Width Offset

m/z	Setting
112.99	0.12
302	-0.09
601.98	-0.24
1033.99	-0.22
1633.95	-0.09
2233.91	0.12



**MS2 PreFilter**

m/z	Setting
69	18.6
112.97	30
113	10
207	22.6
232	24.4
302	34

**MS2 Axis Offset**

m/z	Setting
112.99	0.904
302	1.09
601.98	1.26
1033.99	1.29
1633.95	1.226
2233.91	0.904

**MS2 Width Offset**

m/z	Setting
112.99	-0.05
302	-0.21
601.98	-0.37
1033.99	-0.42
1633.95	-0.34
2233.91	-0.05

**MS1 Calibrations**

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	0.2	0.912	-15.1	0.12
Wide	-0.05	1.154	-14.8	0.55
Widest	-0.35	1.554	-14.4	1.53

**MS2 Calibrations**

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	-11.05	0.904	0.8	-0.05
Wide	-11.4	1.09	0.8	0.35
Widest	-11.45	1.538	1.3	1.39

# QQQ Check Tune Report

**Instrument Name** LCMS-1  
**MS Model** G6470A  
**MS Instrument Serial** SG1939G104  
**Software\_Firmware Version** 10.0.142, FW: A.00.08.100  
**Tune Date & Time** 02 November 2022 10:00:28  
**Data Path** D:\MassHunter\Tune\QQQ\G6470A\tunes.TUNE.XML  
**Ion Source** AJS ESI  
**Ionization Mode** AJS ESI  
**Tuned Resolution** All  
**Vacuum Pressure** 1.60E+0 [R] (Torr); 4.75E-5 [H] (Torr)

## Source Parameters

Parameter	Positive	Negative
Gas Temp (°C)	300	300
Gas Flow (l/min)	8	8
Nebulizer (psi)	15	15
Capillary (V)	4000	4000
Nozzle Voltage (V)	1500	1500
Sheath Gas Temp (°C)	250	250
Sheath Gas Flow (l/min)	7	7

## Positive Results

**Analyzer: MS1 Polarity: Positive Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.09	0.00	Pass	0.70	0.71	0.01	Pass	411546
322.05	322.06	0.01	Pass	0.70	0.72	0.02	Pass	202347
622.03	622.02	-0.01	Pass	0.70	0.69	-0.01	Pass	228760
922.01	922.02	0.01	Pass	0.70	0.69	-0.01	Pass	226709
1521.97	1521.98	0.01	Pass	0.70	0.70	0.00	Pass	105622
2121.93	2121.91	-0.02	Pass	0.70	0.69	-0.01	Pass	67904

**Analyzer: MS2 Polarity: Positive Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.11	0.02	Pass	0.70	0.68	-0.02	Pass	311750
322.05	322.04	-0.01	Pass	0.70	0.69	-0.01	Pass	229565
622.03	622.03	0.00	Pass	0.70	0.69	-0.01	Pass	243385
922.01	922.01	0.00	Pass	0.70	0.69	-0.01	Pass	186843
1521.97	1521.98	0.01	Pass	0.70	0.68	-0.02	Pass	137794
2121.93	2121.93	0.00	Pass	0.70	0.69	-0.01	Pass	130826

**Analyzer: MS1 Polarity: Positive Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.10	0.01	Pass	1.20	1.21	0.01	Pass	449493
322.05	322.07	0.02	Pass	1.20	1.49	0.29	Pass	288136
622.03	622.04	0.01	Pass	1.20	1.61	0.41	Pass	370372
922.01	922.05	0.04	Pass	1.20	1.59	0.39	Pass	406384
1521.97	1522.05	0.08	Pass	1.20	1.42	0.22	Pass	234898
2121.93	2121.99	0.06	Pass	1.20	1.21	0.01	Pass	207096

**Analyzer: MS2 Polarity: Positive Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.10	0.01	Pass	1.20	1.18	-0.02	Pass	377593
322.05	322.05	0.00	Pass	1.20	1.40	0.20	Pass	340056
622.03	622.03	0.00	Pass	1.20	1.53	0.33	Pass	414949
922.01	922.02	0.01	Pass	1.20	1.50	0.30	Pass	447219
1521.97	1521.98	0.01	Pass	1.20	1.40	0.20	Pass	318690
2121.93	2121.97	0.04	Pass	1.20	1.21	0.01	Pass	271983

**Analyzer: MS1 Polarity: Positive Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.07	-0.02	Pass	2.50	2.44	-0.06	Pass	518821
322.05	322.03	-0.02	Pass	2.50	2.70	0.20	Pass	371095
622.03	622.04	0.01	Pass	2.50	2.93	0.43	Pass	466429
922.01	922.03	0.02	Pass	2.50	2.86	0.36	Pass	581807
1521.97	1522.06	0.09	Pass	2.50	2.61	0.11	Pass	391282
2121.93	2121.96	0.03	Pass	2.50	2.64	0.14	Pass	422930

# QQQ Check Tune Report



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Trusted Answers

Analyzer: MS2 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.09	0.00	Pass	2.50	2.49	-0.01	Pass	527714
322.05	322.07	0.02	Pass	2.50	2.66	0.16	Pass	417910
622.03	622.06	0.03	Pass	2.50	2.81	0.31	Pass	560119
922.01	921.88	-0.13	Pass	2.50	2.61	0.11	Pass	723422
1521.97	1522.04	0.07	Pass	2.50	2.45	-0.05	Pass	561432
2121.93	2121.86	-0.07	Pass	2.50	2.27	-0.23	Pass	661545

## Negative Results

**Analyzer: MS1 Polarity: Negative Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	0.70	0.73	0.03	Pass	139154
302.00	301.99	-0.01	Pass	0.70	0.70	0.00	Pass	64309
601.98	601.99	0.01	Pass	0.70	0.69	-0.01	Pass	263314
1033.99	1034.00	0.01	Pass	0.70	0.69	-0.01	Pass	280967
1633.95	1633.95	0.00	Pass	0.70	0.68	-0.02	Pass	657377
2233.91	2233.91	0.00	Pass	0.70	0.74	0.04	Pass	398010

**Analyzer: MS2 Polarity: Negative Width: Unit**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	0.70	0.70	0.00	Pass	106239
302.00	301.98	-0.02	Pass	0.70	0.68	-0.02	Pass	57631
601.98	601.99	0.01	Pass	0.70	0.71	0.01	Pass	232616
1033.99	1033.99	0.00	Pass	0.70	0.69	-0.01	Pass	414167
1633.95	1633.96	0.01	Pass	0.70	0.66	-0.04	Pass	1173847
2233.91	2233.90	-0.01	Pass	0.70	0.72	0.02	Pass	690331

**Analyzer: MS1 Polarity: Negative Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	113.01	0.02	Pass	1.20	1.22	0.02	Pass	190662
302.00	302.03	0.03	Pass	1.20	1.43	0.23	Pass	83995
601.98	601.99	0.01	Pass	1.20	1.63	0.43	Pass	507340
1033.99	1033.98	-0.01	Pass	1.20	1.62	0.42	Pass	834344
1633.95	1633.94	-0.01	Pass	1.20	1.47	0.27	Pass	1684776
2233.91	2233.94	0.03	Pass	1.20	1.13	-0.07	Pass	1353161

**Analyzer: MS2 Polarity: Negative Width: Wide**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	1.20	1.13	-0.07	Pass	155727
302.00	302.03	0.03	Pass	1.20	1.37	0.17	Pass	82150
601.98	602.03	0.05	Pass	1.20	1.55	0.35	Pass	380324
1033.99	1033.98	-0.01	Pass	1.20	1.56	0.36	Pass	883847
1633.95	1633.93	-0.02	Pass	1.20	1.46	0.26	Pass	2632356
2233.91	2233.77	-0.14	Pass	1.20	1.22	0.02	Pass	1232601

**Analyzer: MS1 Polarity: Negative Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.99	0.00	Pass	2.50	2.49	-0.01	Pass	217102
302.00	301.89	-0.11	Pass	2.50	2.75	0.25	Pass	108262
601.98	602.04	0.06	Pass	2.50	2.81	0.31	Pass	636197
1033.99	1034.03	0.04	Pass	2.50	2.83	0.33	Pass	1308534
1633.95	1633.80	-0.15	Pass	2.50	2.55	0.05	Pass	3866210
2233.91	2233.82	-0.09	Pass	2.50	2.33	-0.17	Pass	3597085

**Analyzer: MS2 Polarity: Negative Width: Widest**

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.98	-0.01	Pass	2.50	2.52	0.02	Pass	203839
302.00	302.00	0.00	Pass	2.50	2.70	0.20	Pass	107499
601.98	602.00	0.02	Pass	2.50	2.90	0.40	Pass	565329
1033.99	1033.97	-0.02	Pass	2.50	2.84	0.34	Pass	1412160
1633.95	1634.04	0.09	Pass	2.50	2.82	0.32	Pass	4977074
2233.91	2233.86	-0.05	Pass	2.50	2.48	-0.02	Pass	4062148