

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL052322\
 Data File : VL039106.D
 Acq On : 24 May 2022 5:43
 Operator : SY/AP
 Sample : N2957-04
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 APB-1

Quant Time: May 24 08:44:47 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050522AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 05 10:12:15 2022
 QLast Update : Thu May 05 10:12:15 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1016345	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.15	114	2687137	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	2231123	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.38	95	1815860	10.28	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.80%

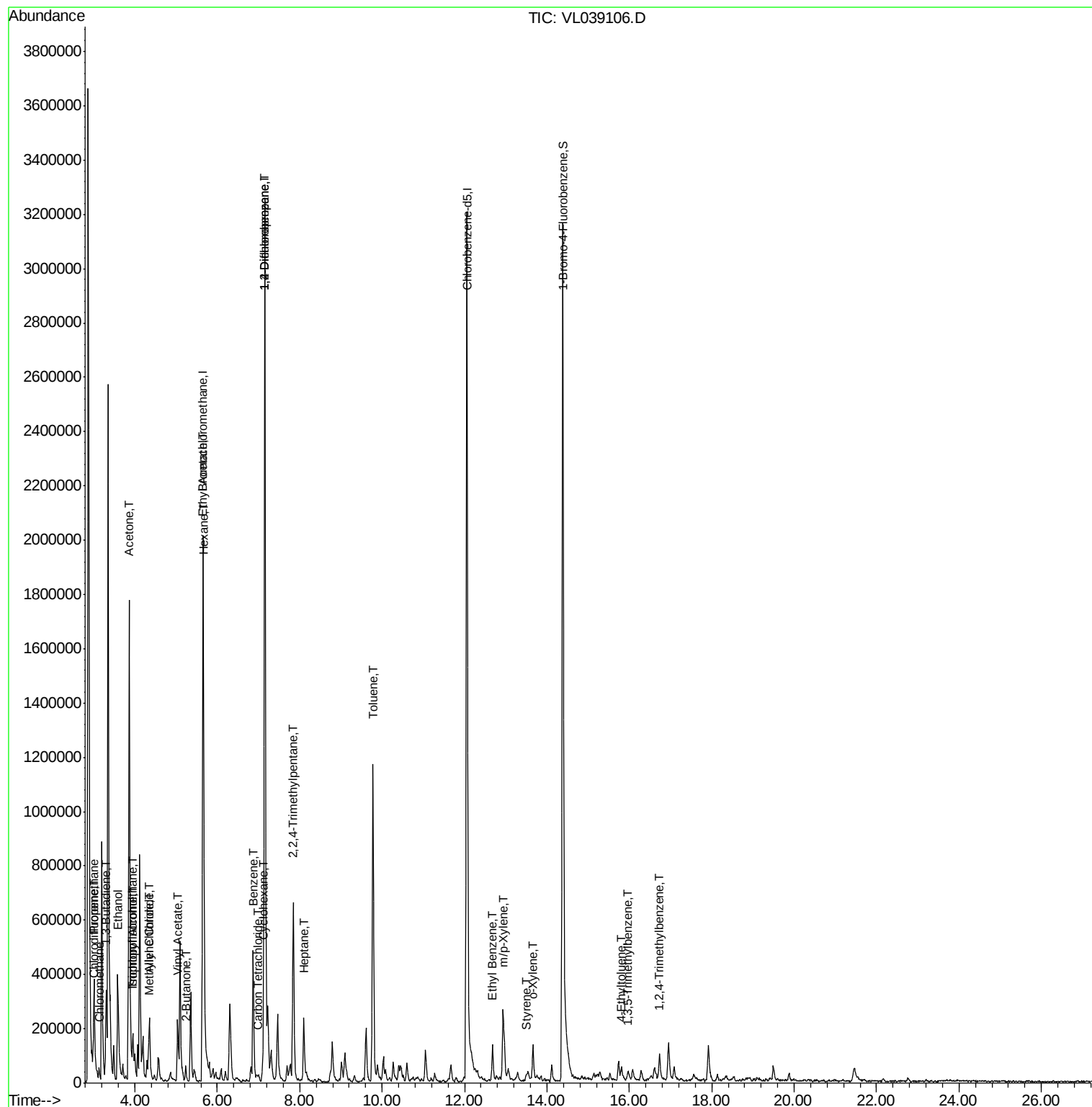
Target Compounds					Ovalue
3) Chlorodifluoromethane	2.98	51	100601	0.798 ppbv #	79
4) Chloromethane	3.13	50	44320	0.702 ppbv #	82
9) Propene	3.00	41	176861	3.211 ppbv	96
10) Heptane	8.10	43	61745	0.457 ppbv #	44
11) Trichlorofluoromethane	3.94	101	35219	0.258 ppbv	84
13) Ethanol	3.59	45	542489	139.186 ppbv	91
15) Acetone	3.86	43	1093580	11.407 ppbv #	73
16) 1,3-Butadiene	3.29	39	118493	2.151 ppbv #	43
19) Isopropyl Alcohol	3.95	45	131193	2.878 ppbv #	83
20) Methylene Chloride	4.33	84	47015	1.301 ppbv	92
21) Allyl Chloride	4.35	41	39637	0.607 ppbv #	61
23) Vinyl Acetate	5.04	43	93866	1.237 ppbv #	1
25) Ethyl Acetate	5.66	43	112961	0.492 ppbv #	92
26) Hexane	5.67	57	246604	2.419 ppbv #	42
30) Cyclohexane	7.11	84	40908	0.479 ppbv #	70
34) 2-Butanone	5.23	43	57745	0.421 ppbv #	86
35) Carbon Tetrachloride	6.99	117	8370	0.047 ppbv #	75
36) Benzene	6.87	78	423097	1.840 ppbv	98
39) 1,2-Dichloropropane	7.15	63	689871	7.710 ppbv #	27
44) 2,2,4-Trimethylpentane	7.85	57	655420	1.624 ppbv	93
53) Toluene	9.78	91	810932	3.146 ppbv	97
58) Ethyl Benzene	12.68	91	74808	0.233 ppbv	95
59) m/p-Xylene	12.95	91	126052	0.460 ppbv #	33
60) o-Xylene	13.66	91	50009	0.194 ppbv #	32
61) Styrene	13.49	104	4242	0.031 ppbv #	1
72) 4-Ethyltoluene	15.80	105	12052	0.041 ppbv #	32
73) 1,3,5-Trimethylbenzene	15.97	105	11832	0.045 ppbv	89
74) 1,2,4-Trimethylbenzene	16.72	105	26302	0.091 ppbv #	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 Instrument: MSVOA_1

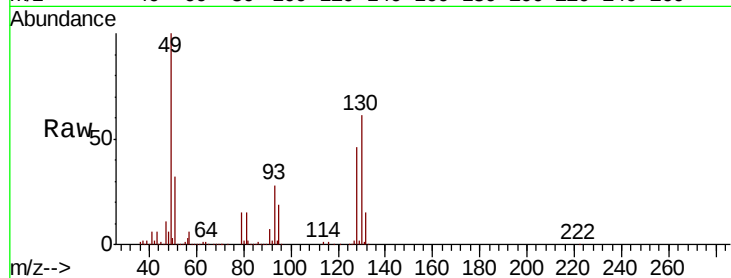
Delta R.T. ClientSampleId:

Lab File: APB-1

Acq: 24 May 2022 5:43

Tot Ion: 49 Resp: 1016345

Ion	Ratio	Lower	Upper
49	100		
128	50.0	23.3	69.8
130	65.4	29.8	89.3

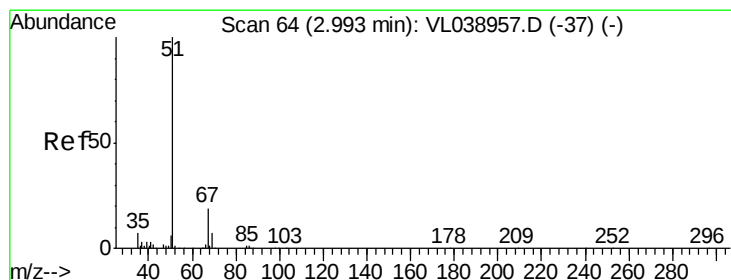
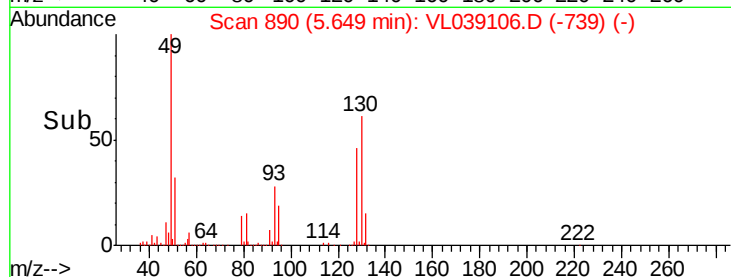


Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V

Time-->



#3

Chlorodifluoromethane

Concen: 0.798 ppbv

RT: 2.98 min Scan# 61

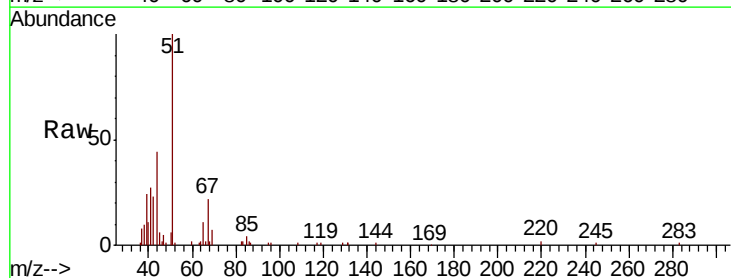
Delta R.T. -0.01 min

Lab File: VL039106.D

Acq: 24 May 2022 5:43

Tgt Ion: 51 Resp: 100601

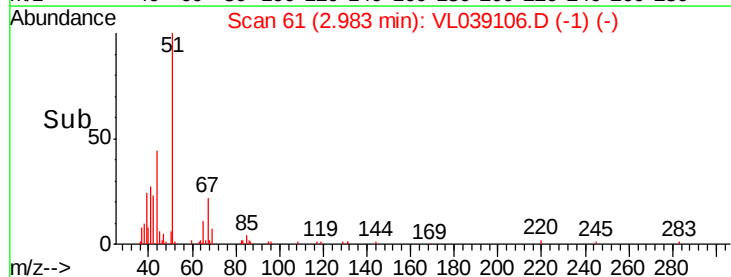
Ion	Ratio	Lower	Upper
51	100		
67	10.4	15.8	23.8

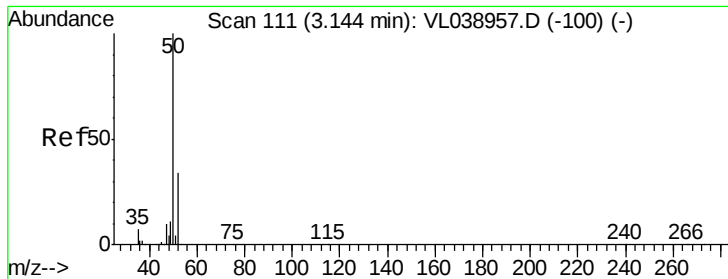


Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

Time-->





#4

Chloromethane

Concen: 0.702 ppbv

RT: 3.13 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

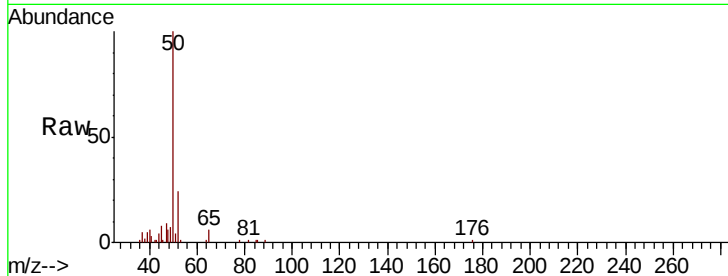
Acq: 24 May 2022 5:43

Tot Ion: 50 Resp: 44320

Ion Ratio Lower Upper

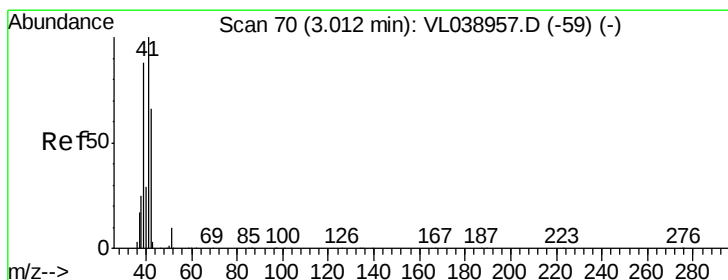
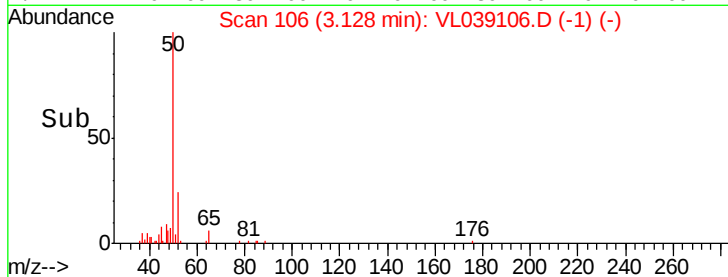
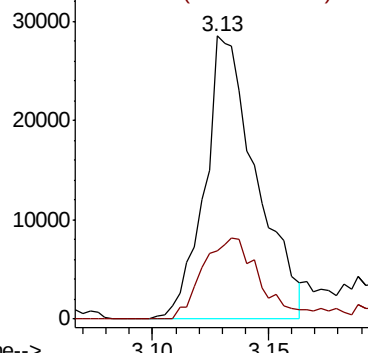
50 100

52 23.9 27.3 40.9#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 3.211 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL039106.D

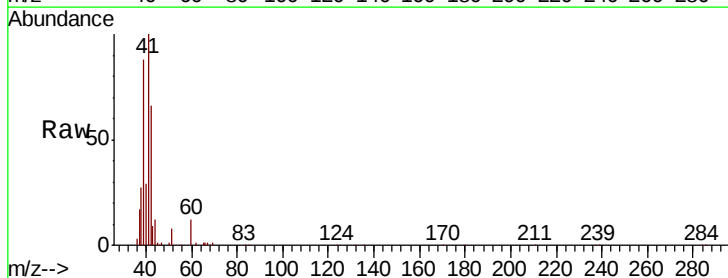
Acq: 24 May 2022 5:43

Tgt Ion: 41 Resp: 176861

Ion Ratio Lower Upper

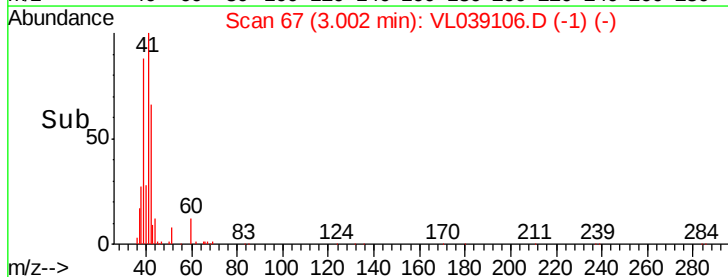
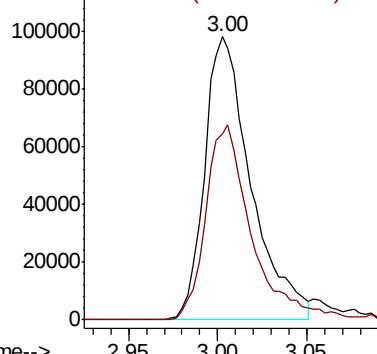
41 100

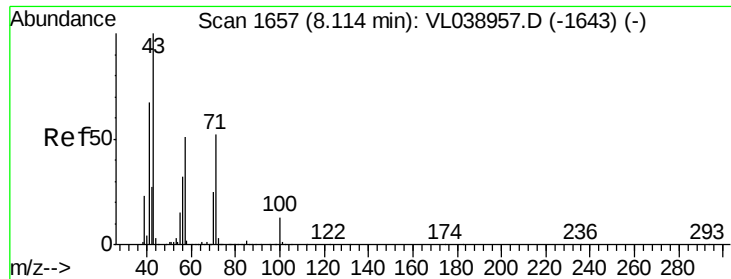
42 69.3 58.3 87.5



Abundance Ion 41.10 (40.80 to 41.80): VL0

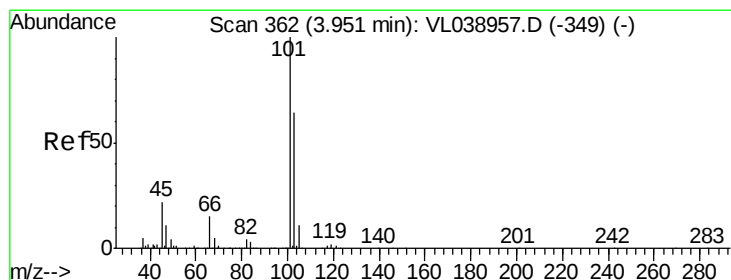
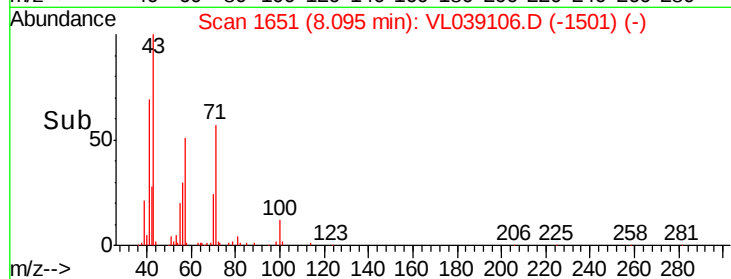
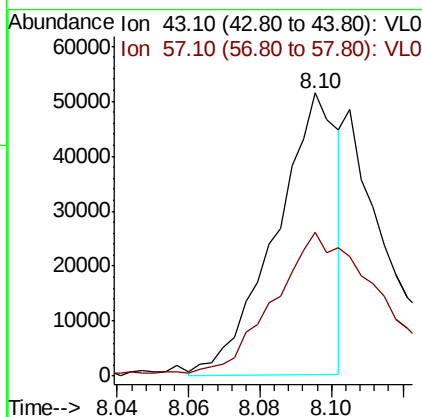
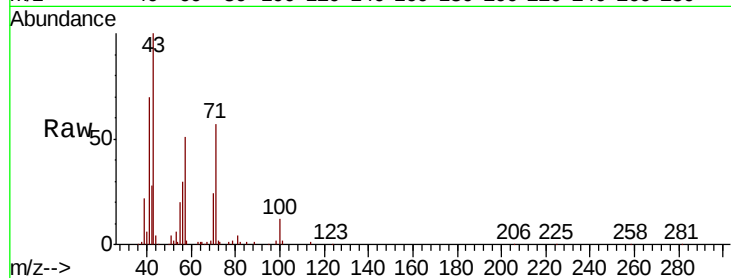
Ion 42.10 (41.80 to 42.80): VL0





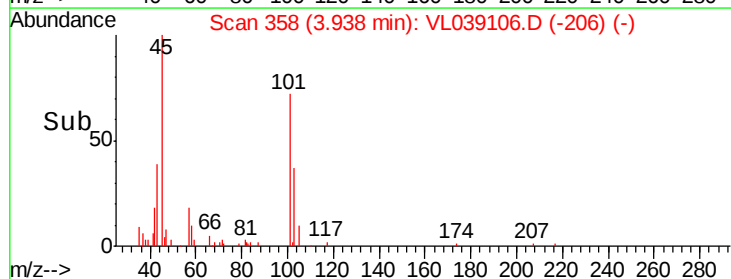
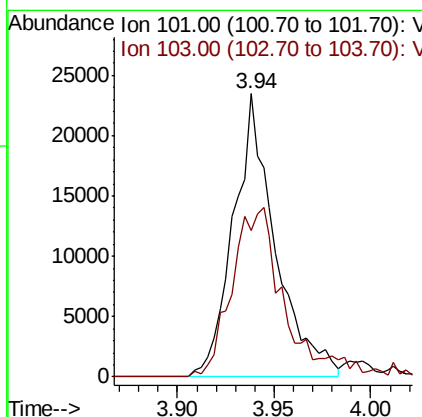
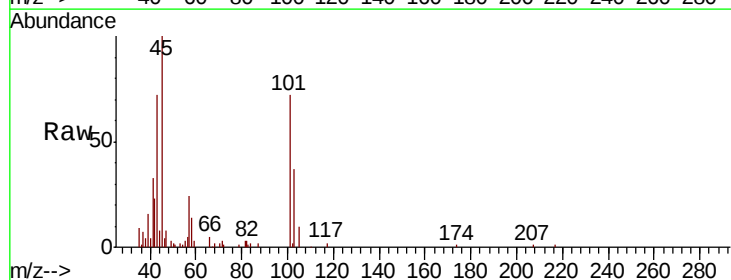
#10
 Heptane
 Concen: 0.457 ppbv
 RT: 8.10
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 APB-1
 Acq: 24 May 2022 5:43

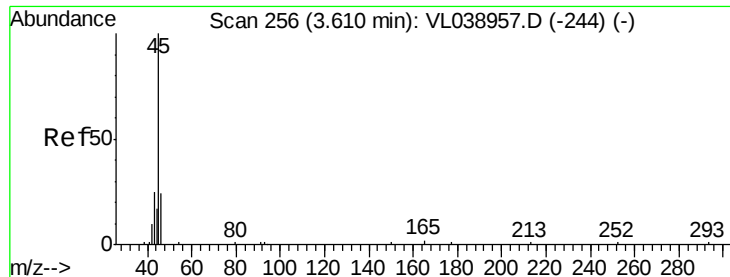
Tot Ion: 43 Resp: 61745
 Ion Ratio Lower Upper
 43 100
 57 89.2 40.5 60.7#



#11
 Trichlorofluoromethane
 Concen: 0.258 ppbv
 RT: 3.94 min Scan# 358
 Delta R.T. -0.01 min
 Lab File: VL039106.D
 Acq: 24 May 2022 5:43

Tgt Ion:101 Resp: 35219
 Ion Ratio Lower Upper
 101 100
 103 51.8 51.5 77.3





#13

Ethanol

Concen: 139.186 ppbv

RT: 3.59 Instrument: MSVOA_1

Delta R.T. 0.01 min

Lab File: ClientSampleId: APB-1

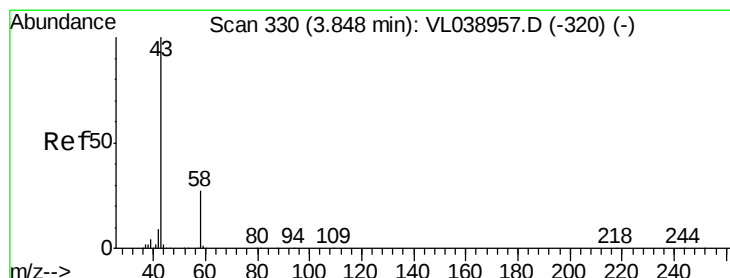
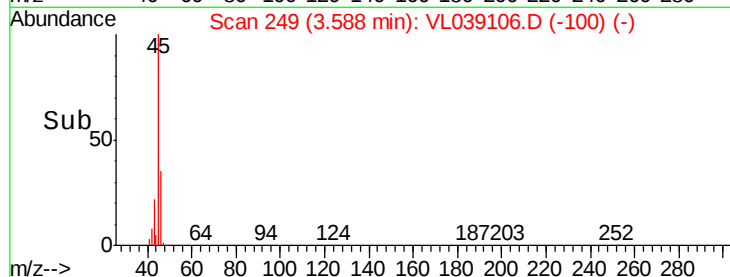
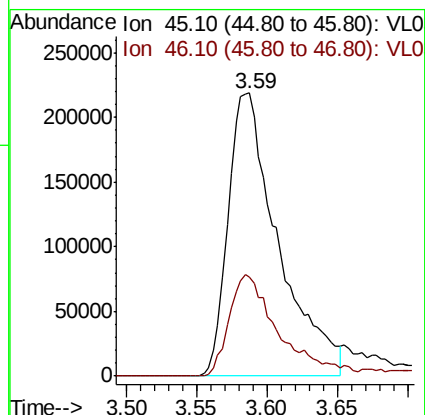
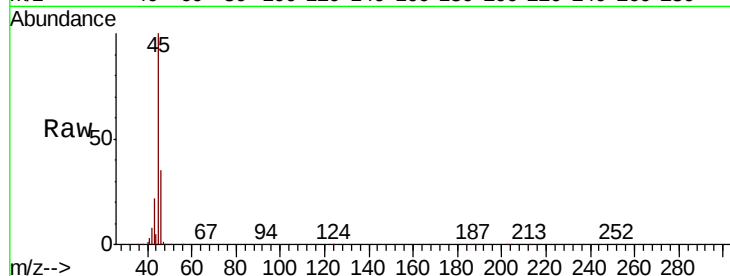
Acq: 24 May 2022 5:43

Tot Ion: 45 Resp: 542489

Ion Ratio Lower Upper

45 100

46 39.3 18.0 72.2



#15

Acetone

Concen: 11.407 ppbv

RT: 3.86 min Scan# 334

Delta R.T. 0.01 min

Lab File: VL039106.D

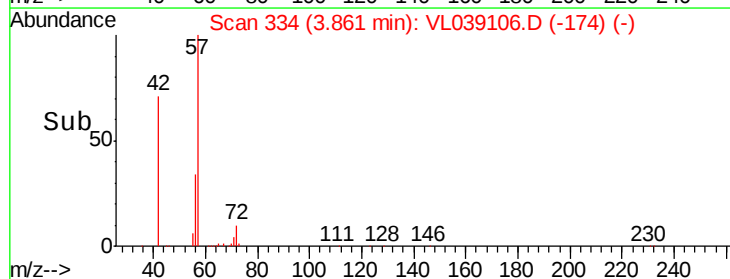
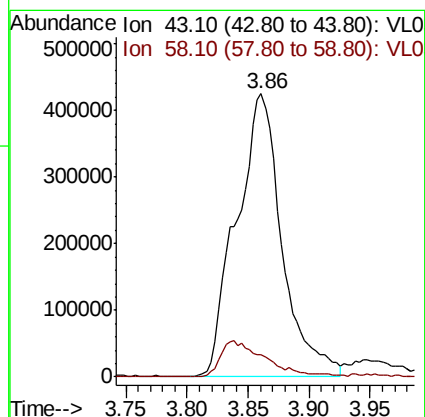
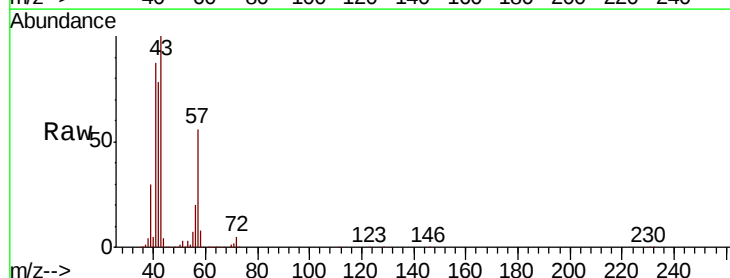
Acq: 24 May 2022 5:43

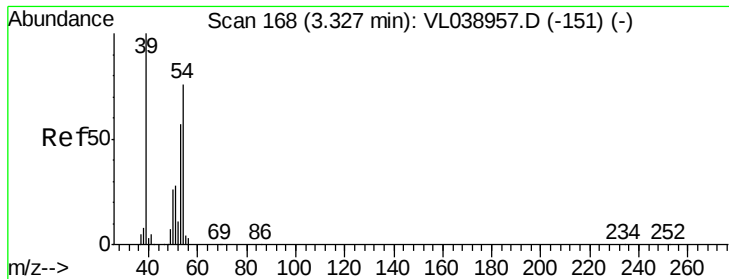
Tgt Ion: 43 Resp: 1093580

Ion Ratio Lower Upper

43 100

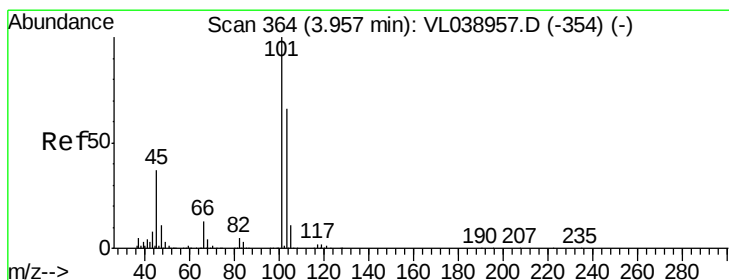
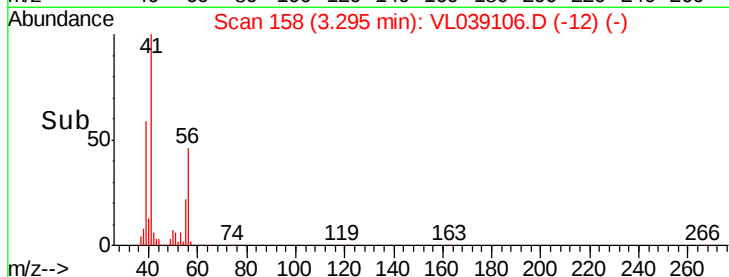
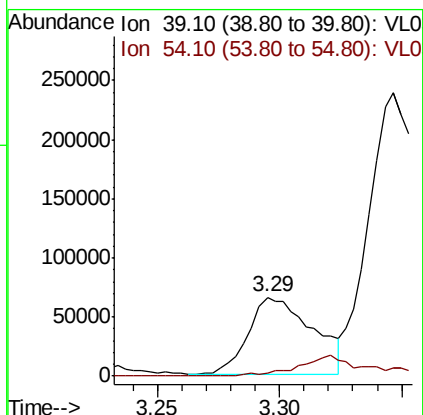
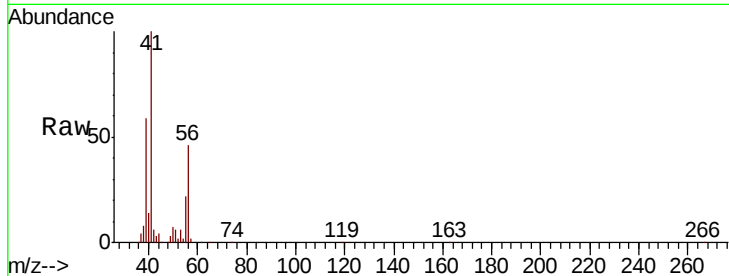
58 12.9 21.3 31.9#





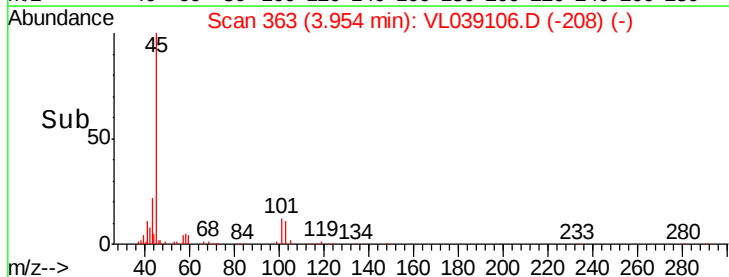
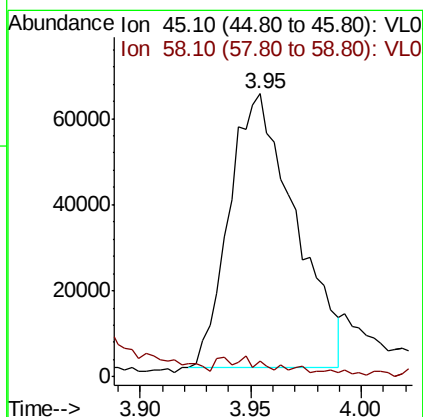
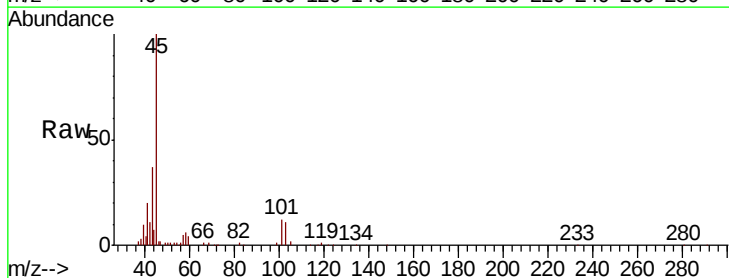
#16
 1,3-Butadiene
 Concen: 2.151 ppbv
 RT: 3.29
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 APB-1
 Acq: 24 May 2022 5:43

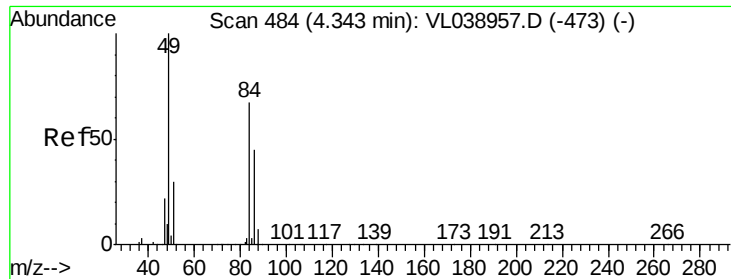
Tot Ion: 39 Resp: 118493
 Ion Ratio Lower Upper
 39 100
 54 30.3 65.2 97.8#



#19
 Isopropyl Alcohol
 Concen: 2.878 ppbv
 RT: 3.95 min Scan# 363
 Delta R.T. -0.00 min
 Lab File: VL039106.D
 Acq: 24 May 2022 5:43

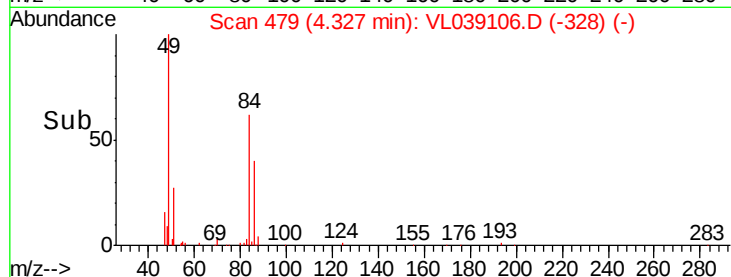
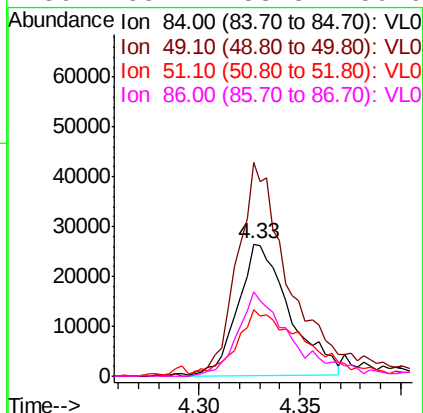
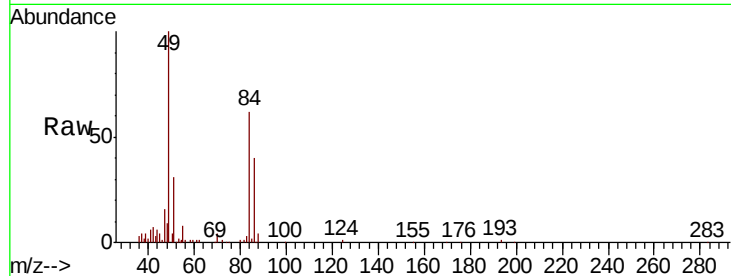
Tgt Ion: 45 Resp: 131193
 Ion Ratio Lower Upper
 45 100
 58 7.9 1.4 2.2#





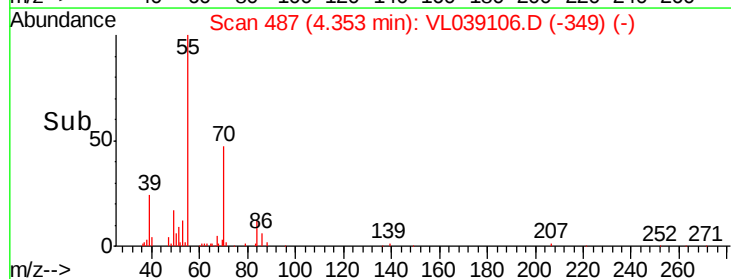
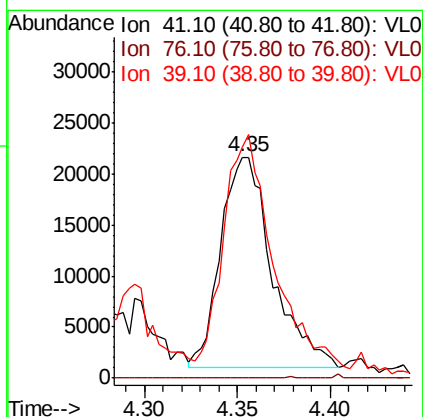
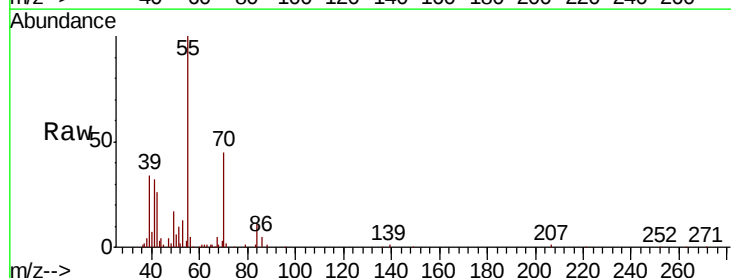
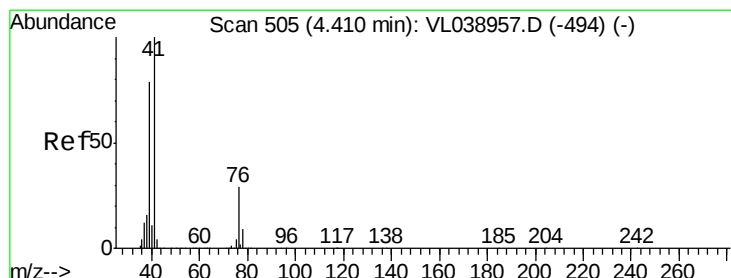
#20
Methylene Chloride
Concen: 1.301 ppbv
RT: 4.33
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 24 May 2022 5:43

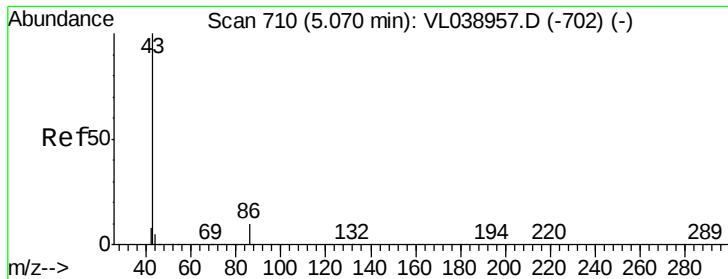
Tot Ion:	84	Resp:	47015
Ion	Ratio	Lower	Upper
84	100		
49	163.5	119.9	179.9
51	48.8	35.7	53.5
86	65.1	53.8	80.6



#21
Allyl Chloride
Concen: 0.607 ppbv
RT: 4.35 min Scan# 487
Delta R.T. -0.06 min
Lab File: VL039106.D
Acq: 24 May 2022 5:43

Tgt Ion:	41	Resp:	39637
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.2	36.4#
39	109.0	63.8	95.8#





#23

Vinyl Acetate

Concen: 1.237 ppbv

RT: 5.04 Instrument:

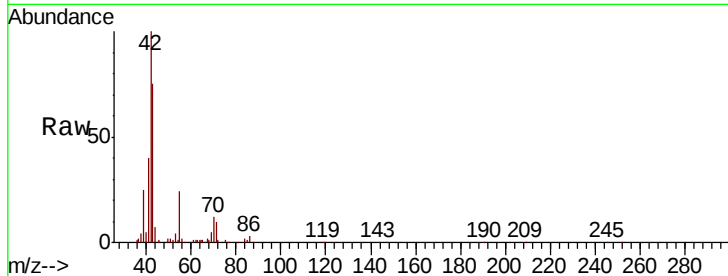
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 24 May 2022 5:43

Tot Ion: 43 Resp: 93866

Ion	Ratio	Lower	Upper
43	100		
86	4.4	6.6	9.8#
42	132.0	8.1	12.1#
44	4.3	3.5	5.3

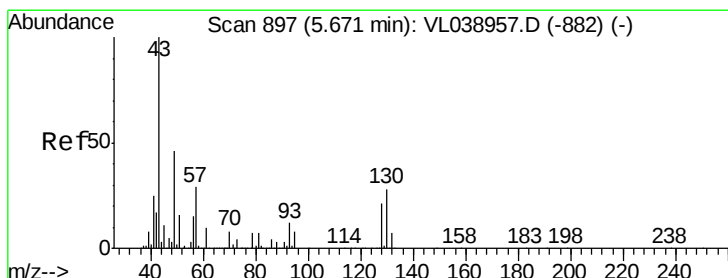
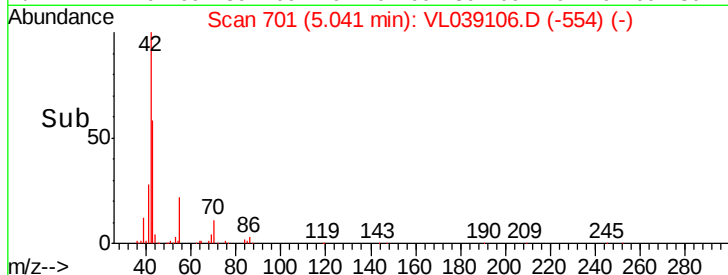
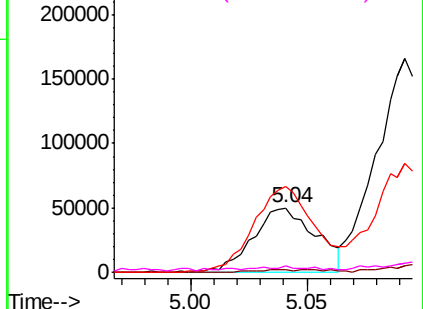


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.492 ppbv

RT: 5.66 min Scan# 895

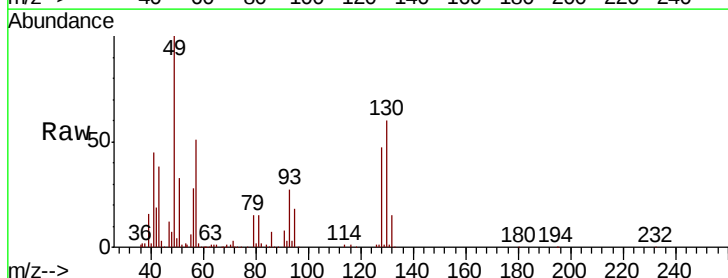
Delta R.T. -0.01 min

Lab File: VL039106.D

Acq: 24 May 2022 5:43

Tgt Ion: 43 Resp: 112961

Ion	Ratio	Lower	Upper
43	100		
45	9.4	8.1	12.1
61	3.5	7.8	11.6#
70	5.1	5.6	8.4#

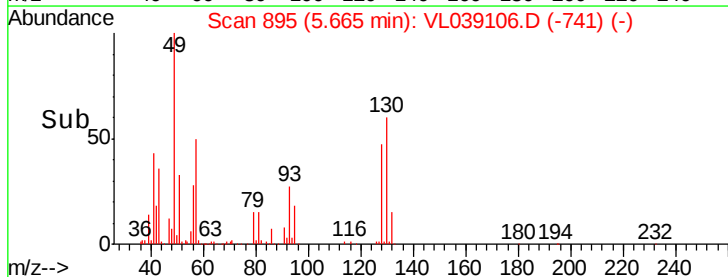
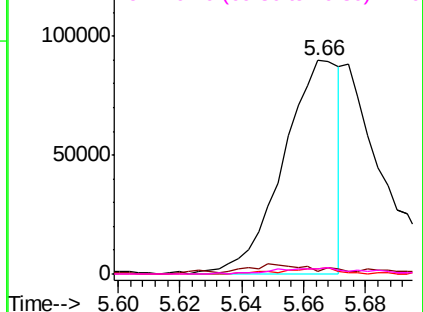


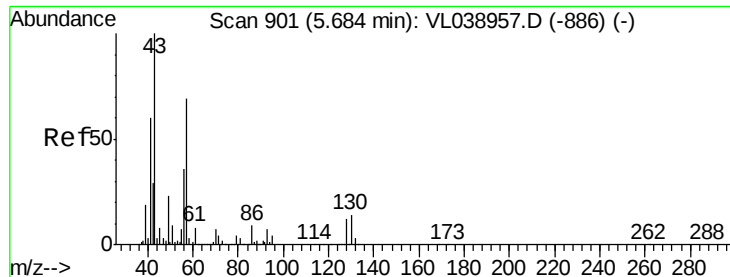
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 2.419 ppbv

RT: 5.67

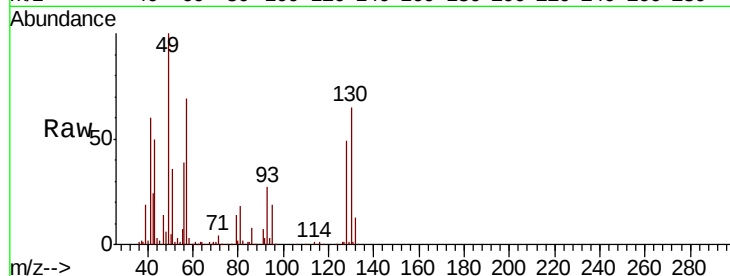
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

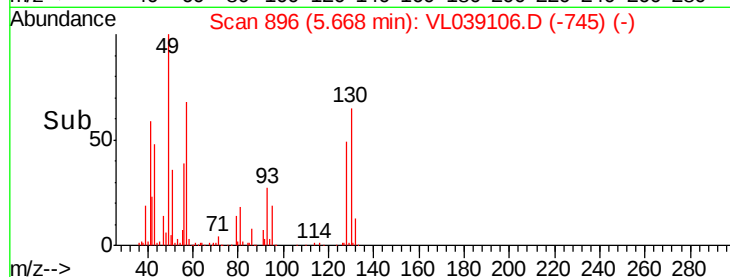
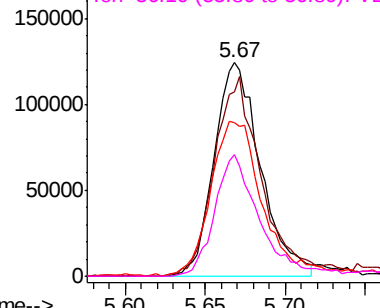
Acq: 24 May 2022 5:43

Tot Ion: 57 Resp: 246604

Ion	Ratio	Lower	Upper
57	100		
41	99.4	75.2	112.8
43	85.8	190.8	286.2#
56	58.8	43.0	64.6



Abundance Ion 57.10 (56.80 to 57.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 43.10 (42.80 to 43.80): VL0
 Ion 56.10 (55.80 to 56.80): VL0



#30

Cyclohexane

Concen: 0.479 ppbv

RT: 7.11 min Scan# 1346

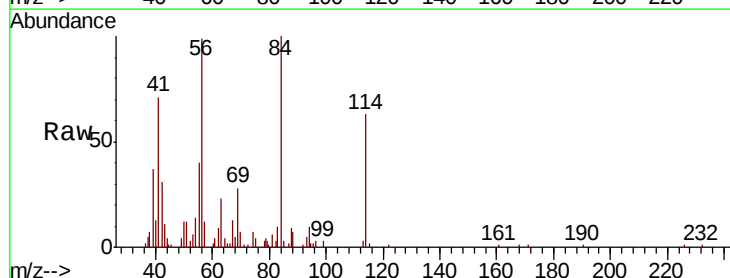
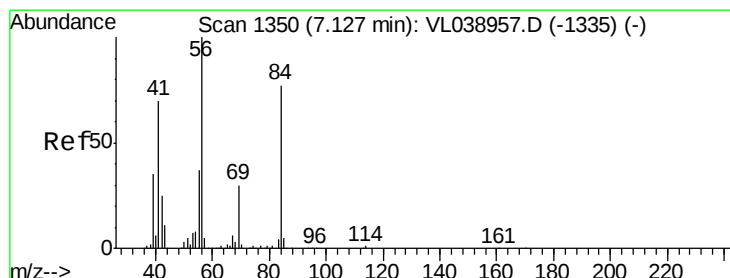
Delta R.T. -0.01 min

Lab File: VL039106.D

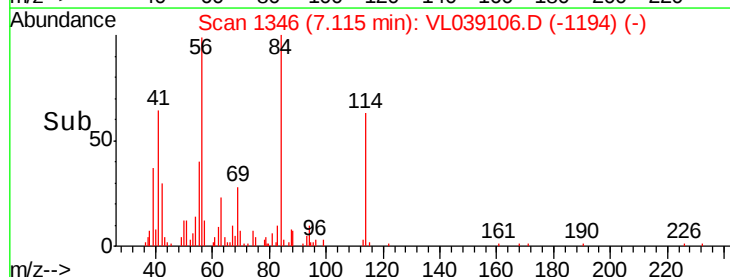
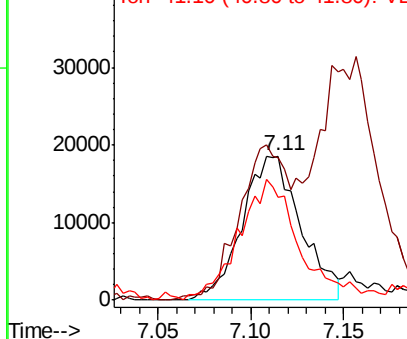
Acq: 24 May 2022 5:43

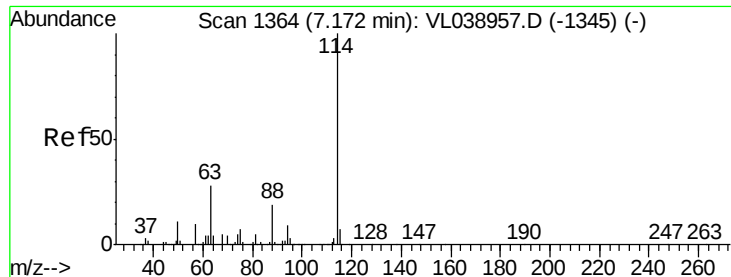
Tgt Ion: 84 Resp: 40908

Ion	Ratio	Lower	Upper
84	100		
56	87.3	115.3	172.9#
41	84.8	72.0	108.0



Abundance Ion 84.20 (83.90 to 84.90): VL0
 Ion 56.10 (55.80 to 56.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 May 2022 5:43

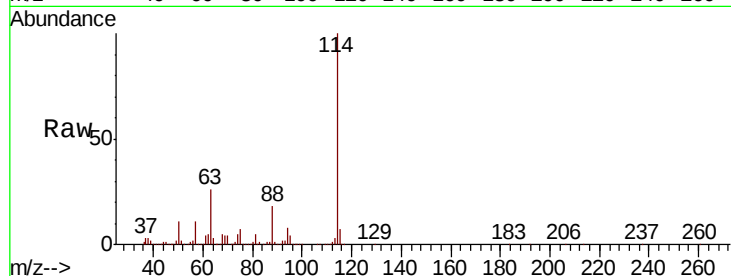
Tot Ion:114 Resp: 2687137

Ion Ratio Lower Upper

114 100

63 26.5 22.6 33.8

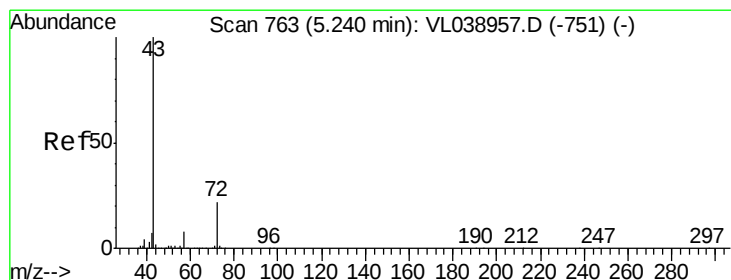
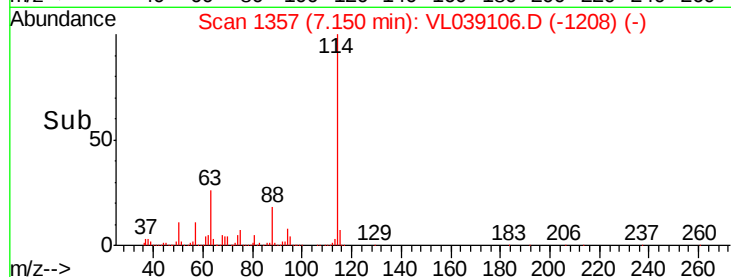
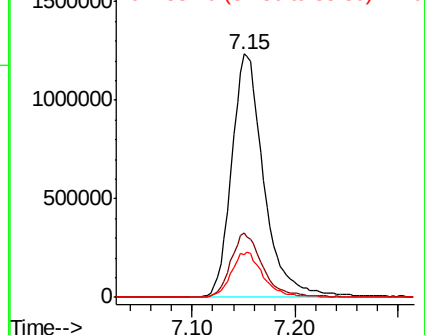
88 18.7 15.4 23.0



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.421 ppbv

RT: 5.23 min Scan# 760

Delta R.T. -0.01 min

Lab File: VL039106.D

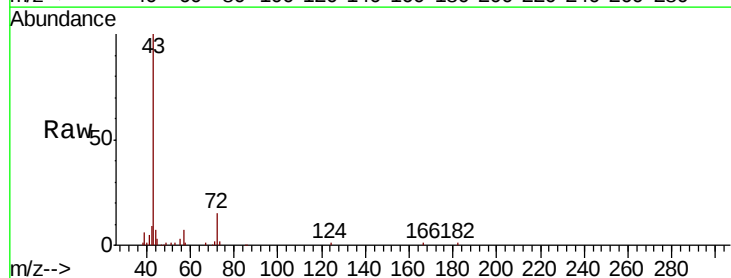
Acq: 24 May 2022 5:43

Tgt Ion: 43 Resp: 57745

Ion Ratio Lower Upper

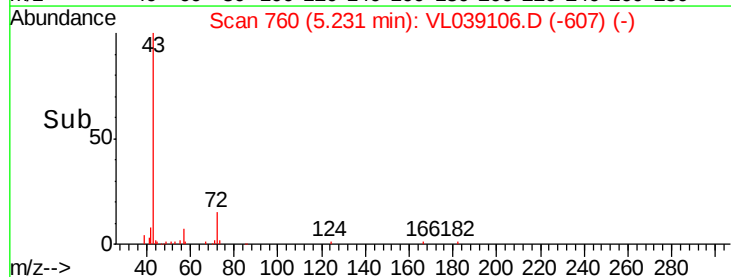
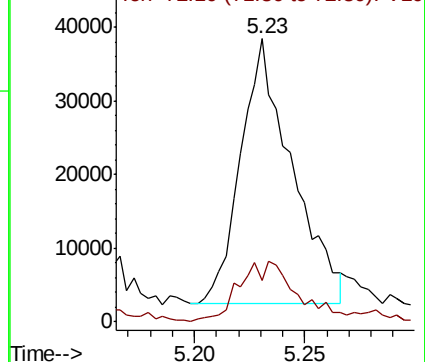
43 100

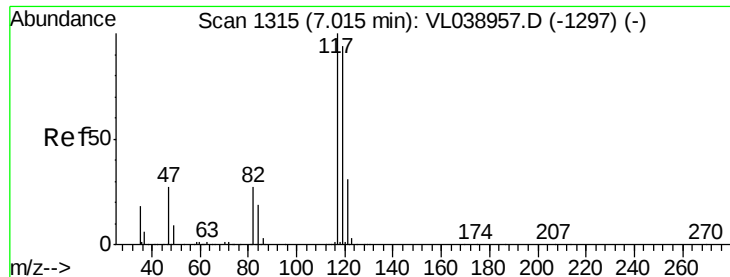
72 29.0 17.8 26.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.047 ppbv

RT: 6.99 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 May 2022 5:43

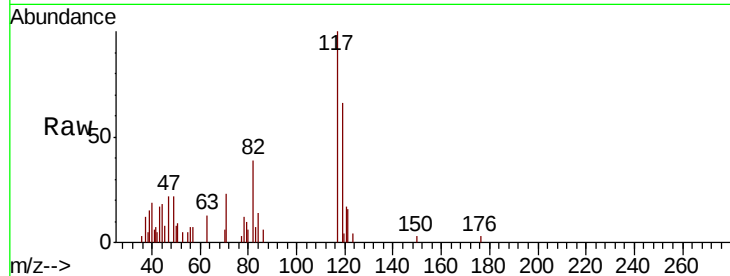
Tot Ion:117 Resp: 8370

Ion Ratio Lower Upper

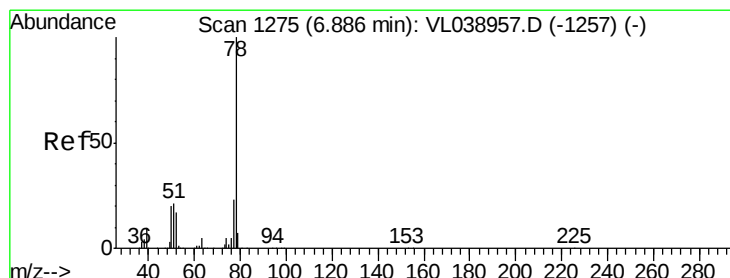
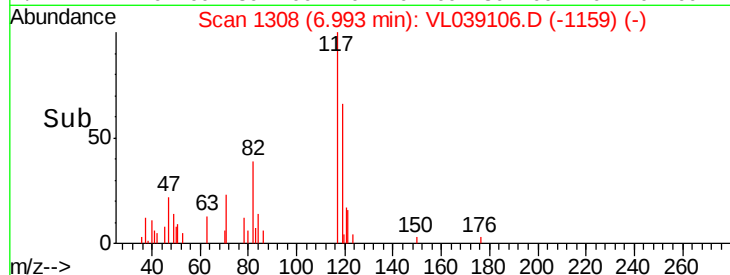
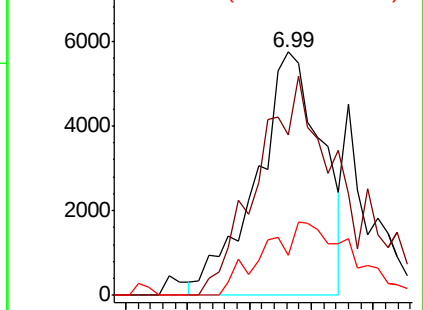
117 100

119 69.9 75.2 112.8#

121 17.4 24.6 37.0#



Abundance Ion 117.00 (116.70 to 117.70): V
Ion 119.00 (118.70 to 119.70): V
Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 1.840 ppbv

RT: 6.87 min Scan# 1269

Delta R.T. -0.02 min

Lab File: VL039106.D

Acq: 24 May 2022 5:43

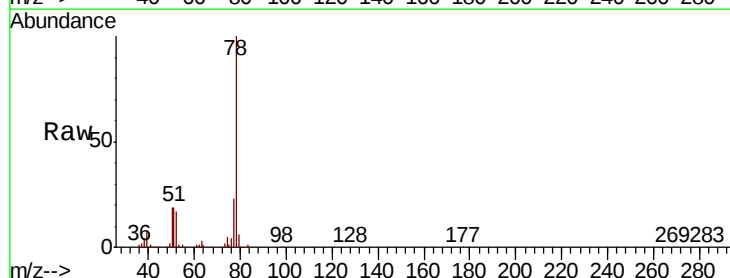
Tgt Ion: 78 Resp: 423097

Ion Ratio Lower Upper

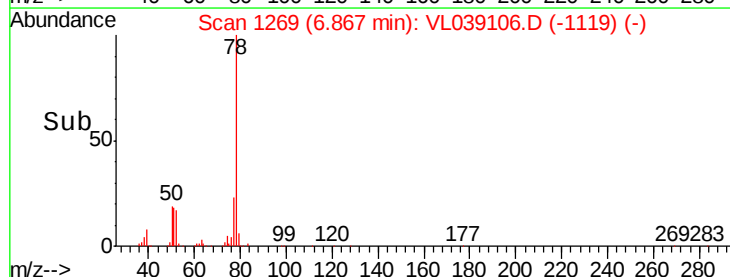
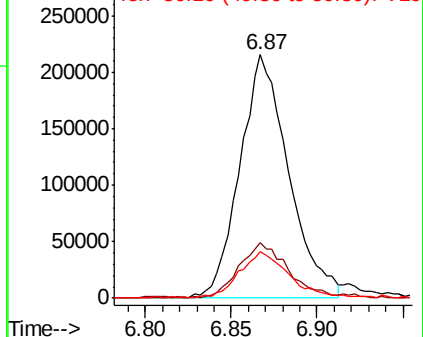
78 100

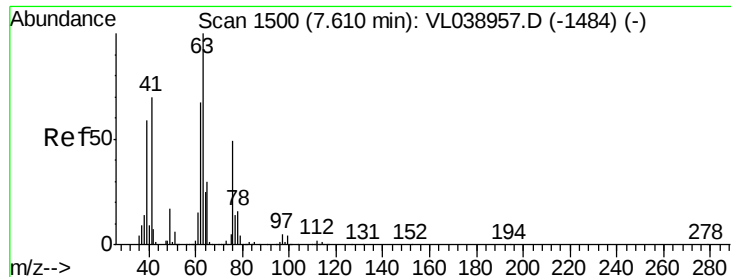
77 22.3 18.6 28.0

50 18.5 15.6 23.4



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 7.710 ppbv

RT: 7.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 May 2022 5:43

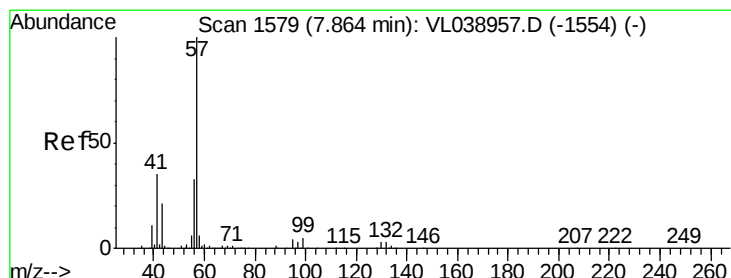
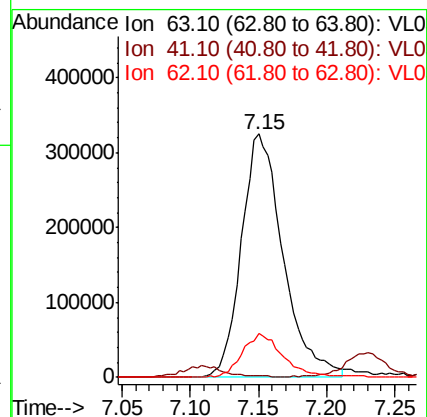
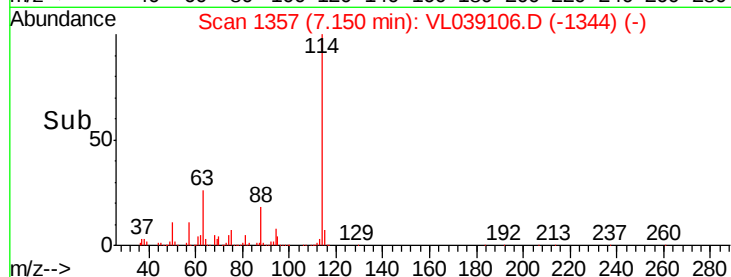
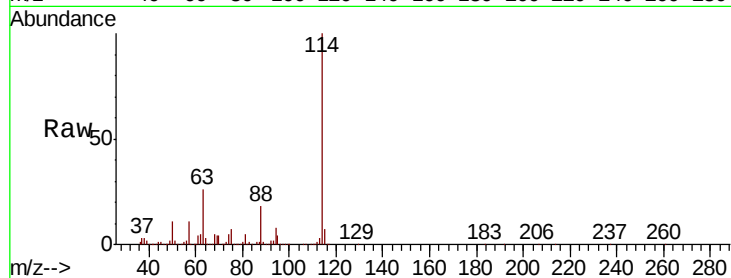
Tot Ion: 63 Resp: 689871

Ion Ratio Lower Upper

63 100

41 0.0 55.9 83.9#

62 18.1 53.8 80.6#



#44

2,2,4-Trimethylpentane

Concen: 1.624 ppbv

RT: 7.85 min Scan# 1574

Delta R.T. -0.02 min

Lab File: VL039106.D

Acq: 24 May 2022 5:43

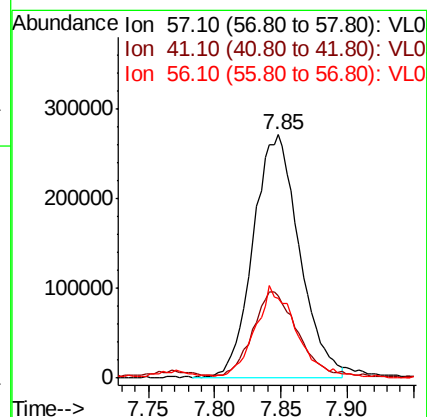
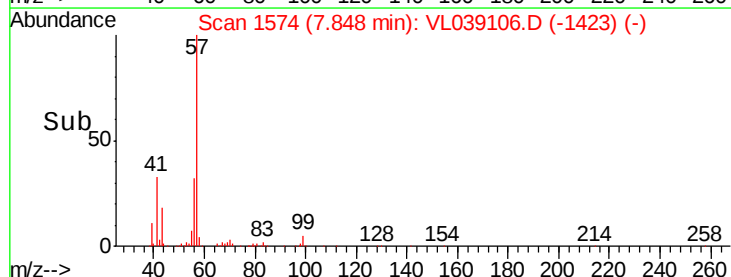
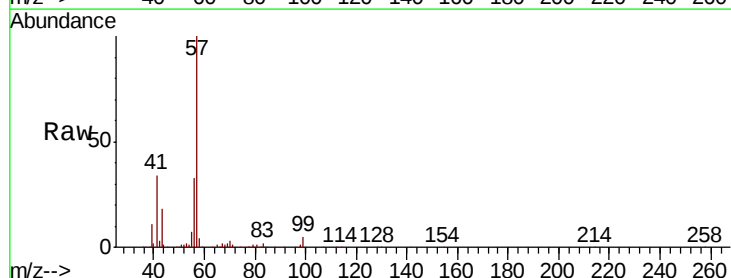
Tgt Ion: 57 Resp: 655420

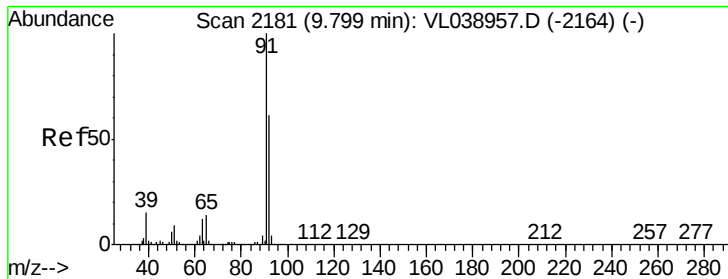
Ion Ratio Lower Upper

57 100

41 36.8 26.3 39.5

56 34.9 24.6 37.0





#53

Toluene

Concen: 3.146 ppbv

RT: 9.78 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: APB-1

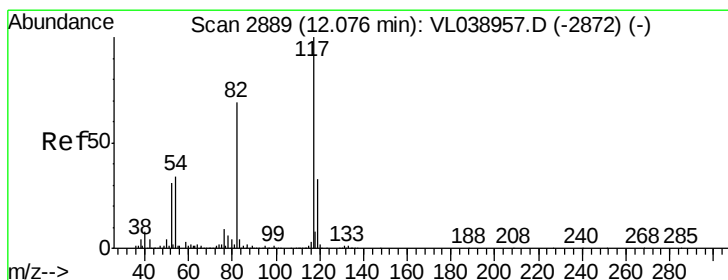
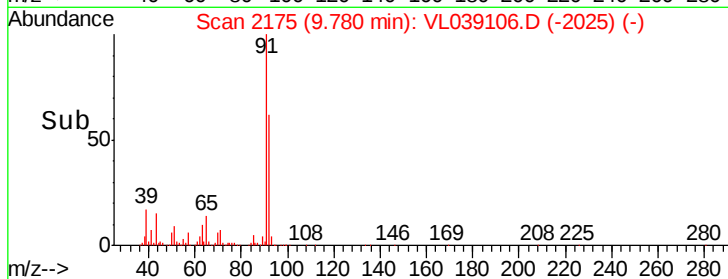
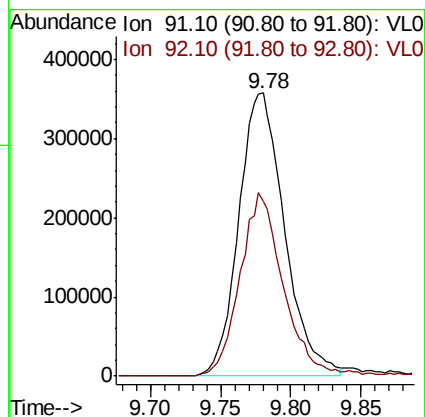
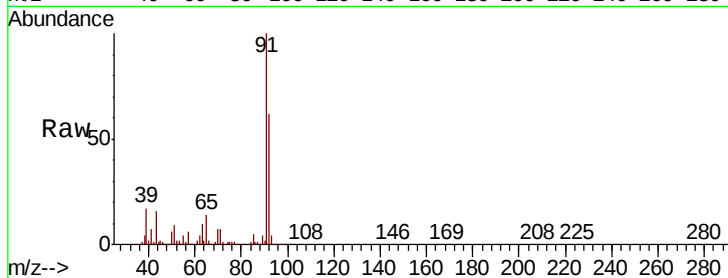
Acq: 24 May 2022 5:43

Tot Ion: 91 Resp: 810932

Ion Ratio Lower Upper

91 100

92 62.2 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2883

Delta R.T. -0.02 min

Lab File: VL039106.D

Acq: 24 May 2022 5:43

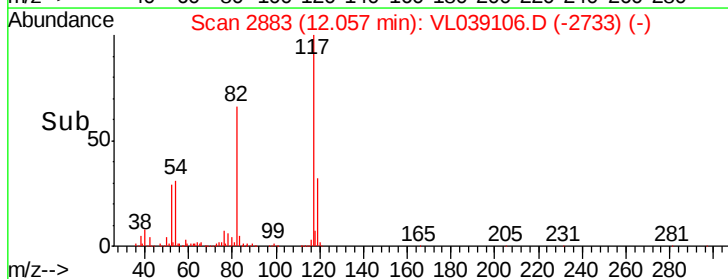
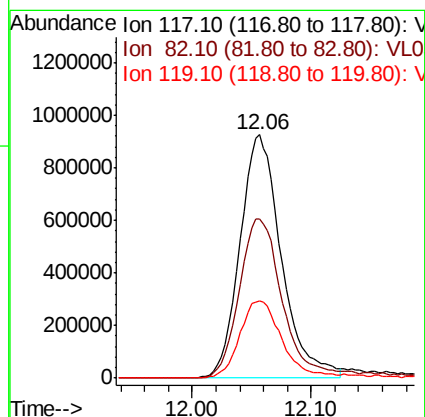
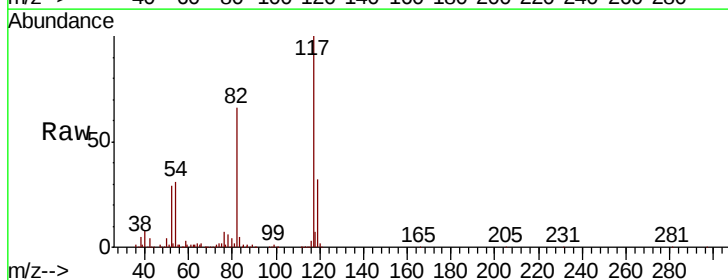
Tgt Ion: 117 Resp: 2231123

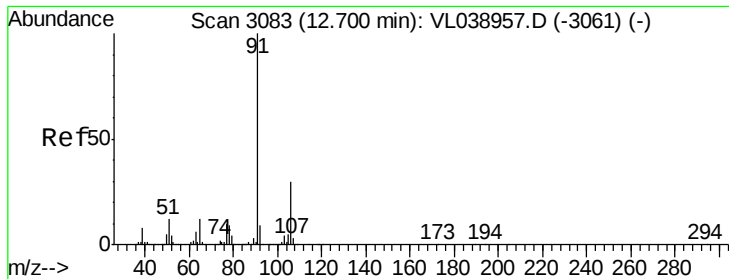
Ion Ratio Lower Upper

117 100

82 71.4 57.0 85.6

119 33.5 27.2 40.8





#58

Ethyl Benzene

Concen: 0.233 ppbv

RT: 12.68

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

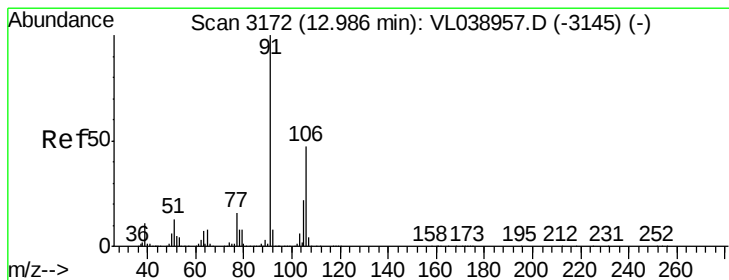
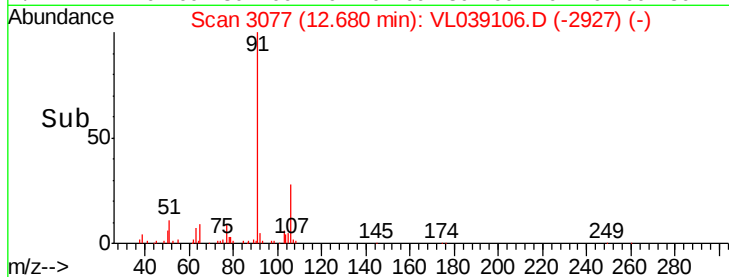
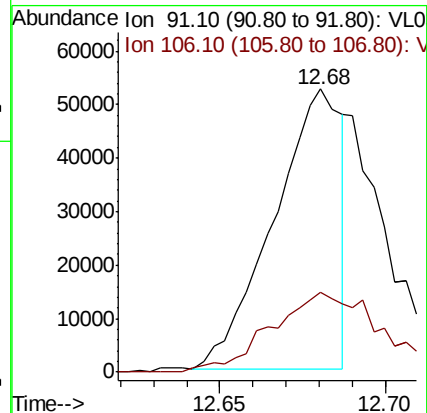
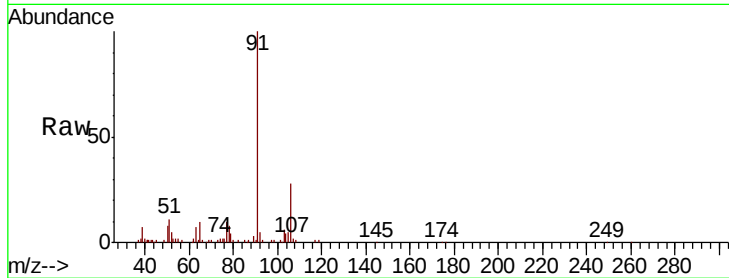
Acq: 24 May 2022 5:43

Tot Ion: 91 Resp: 74808

Ion Ratio Lower Upper

91 100

106 27.3 24.2 36.4



#59

m/p-Xylene

Concen: 0.460 ppbv

RT: 12.95 min Scan# 3161

Delta R.T. -0.04 min

Lab File: VL039106.D

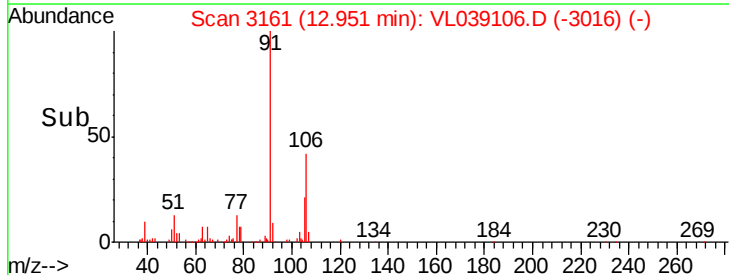
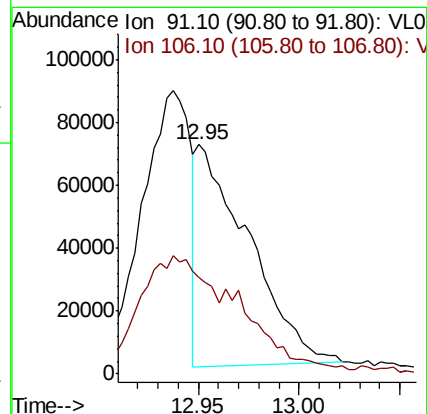
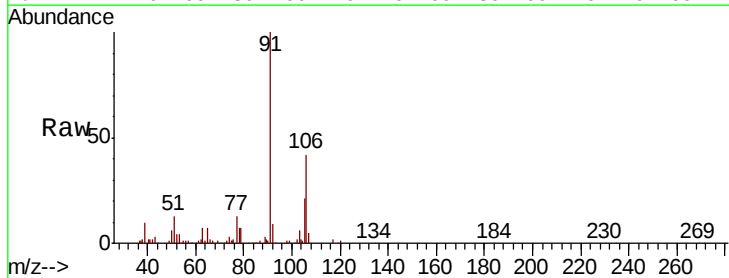
Acq: 24 May 2022 5:43

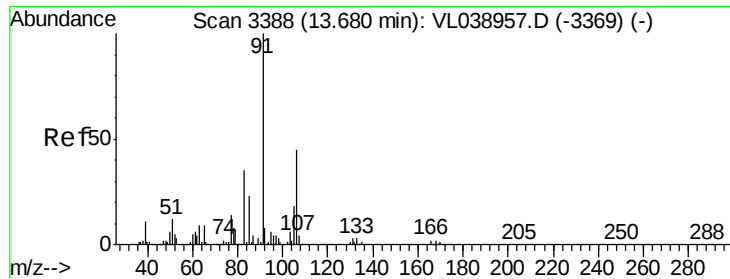
Tgt Ion: 91 Resp: 126052

Ion Ratio Lower Upper

91 100

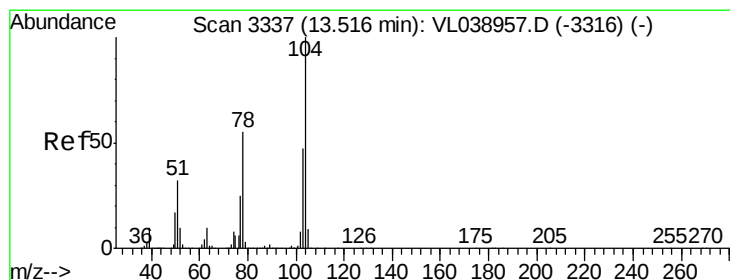
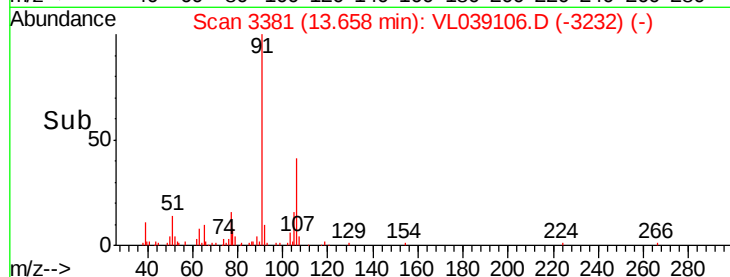
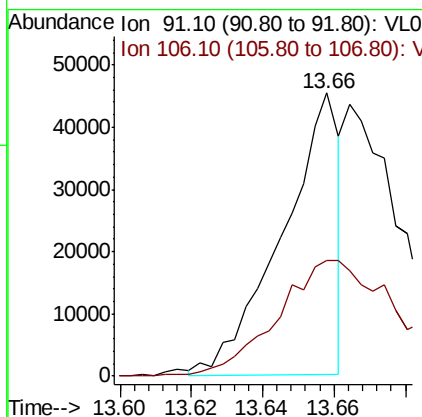
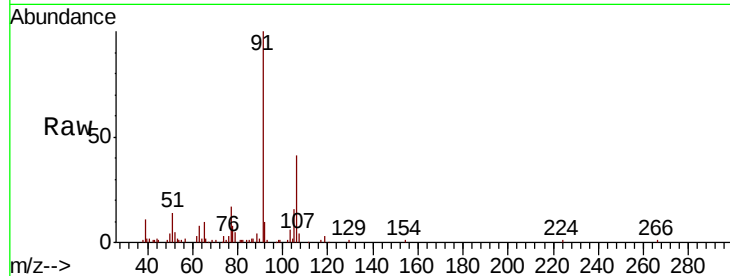
106 0.0 34.6 52.0#





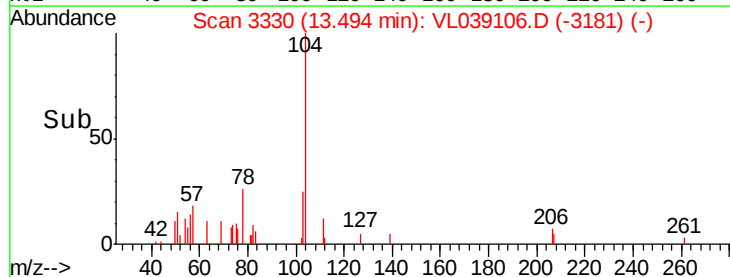
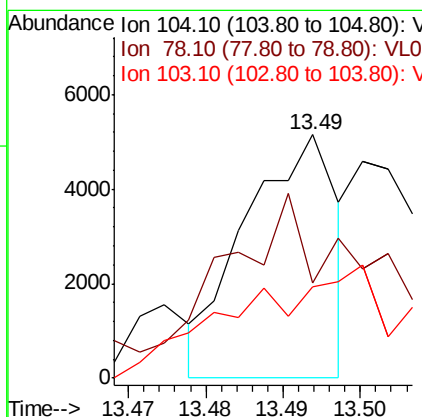
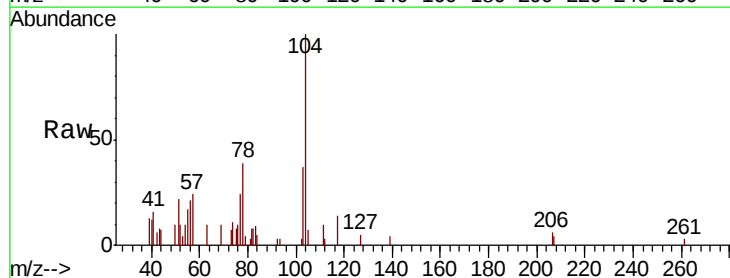
#60
o-Xylene
Concen: 0.194 ppbv
RT: 13.66
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 May 2022 5:43

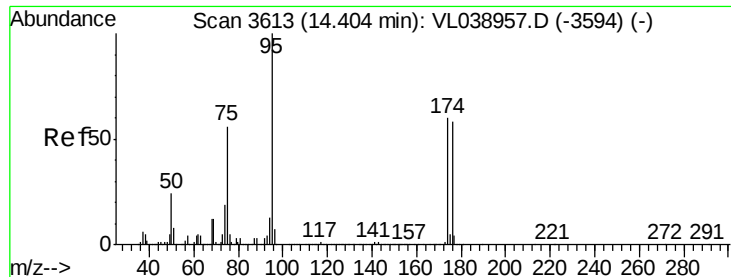
Tot Ion: 91 Resp: 50009
Ion Ratio Lower Upper
91 100
106 0.0 22.2 66.6#



#61
Styrene
Concen: 0.031 ppbv
RT: 13.49 min Scan# 3330
Delta R.T. -0.02 min
Lab File: VL039106.D
Acq: 24 May 2022 5:43

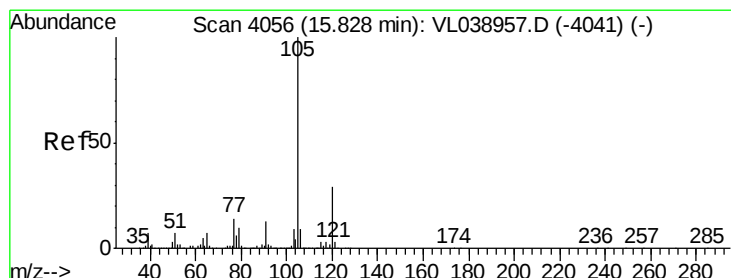
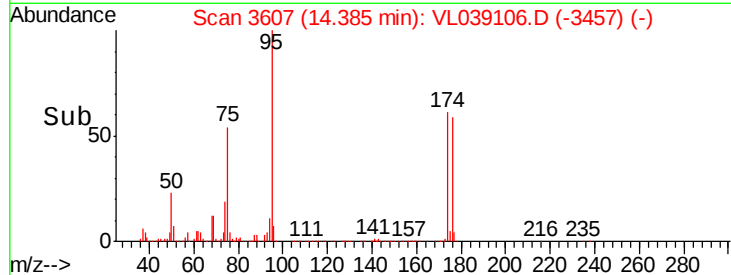
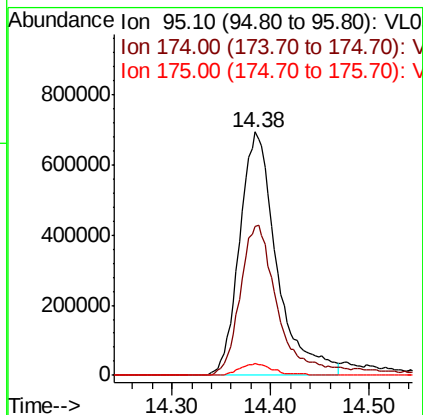
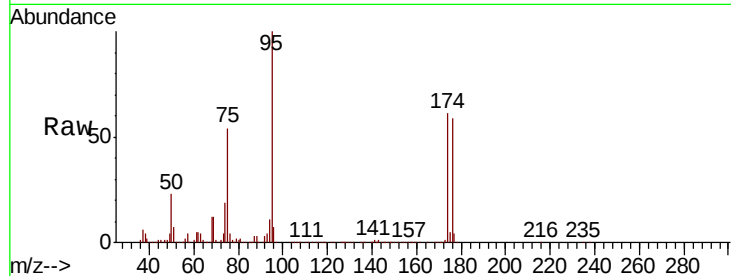
Tgt Ion: 104 Resp: 4242
Ion Ratio Lower Upper
104 100
78 181.4 46.4 69.6#
103 0.0 39.3 58.9#





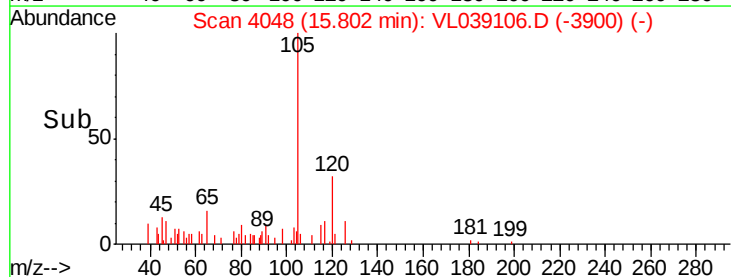
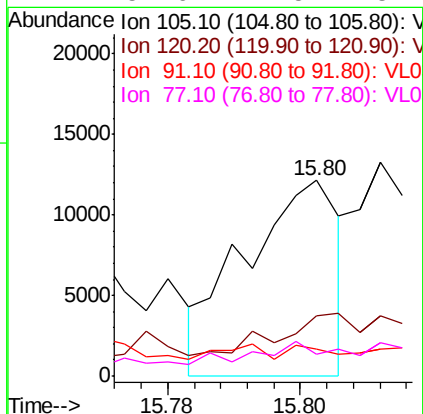
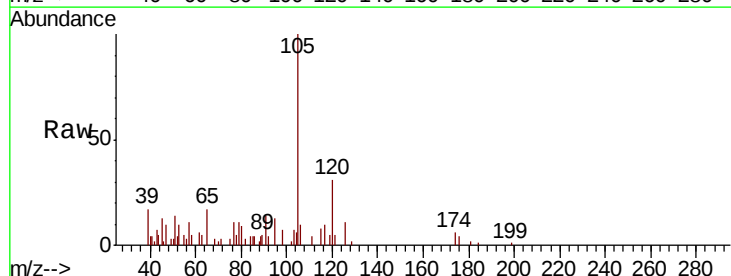
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.277 ppbv
 RT: 14.38 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampled :
 APB-1
 Acq: 24 May 2022 5:43

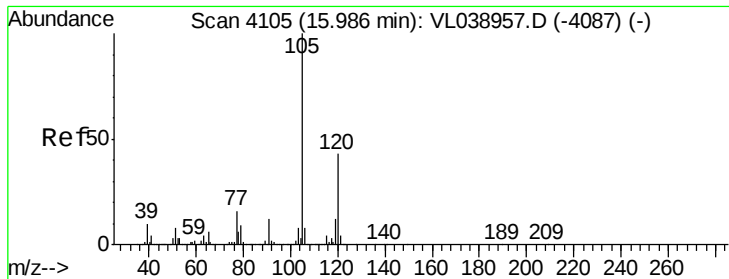
Tot Ion: 95 Resp: 1815860
 Ion Ratio Lower Upper
 95 100
 174 66.1 50.8 76.2
 175 4.8 3.8 5.6



#72
 4-Ethyltoluene
 Concen: 0.041 ppbv
 RT: 15.80 min Scan# 4048
 Delta R.T. -0.03 min
 Lab File: VL039106.D
 Acq: 24 May 2022 5:43

Tgt Ion: 105 Resp: 12052
 Ion Ratio Lower Upper
 105 100
 120 68.9 23.4 35.0#
 91 0.0 10.6 16.0#
 77 51.6 12.5 18.7#





#73

1,3,5-Trimethylbenzene

Concen: 0.045 ppbv

RT: 15.97 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

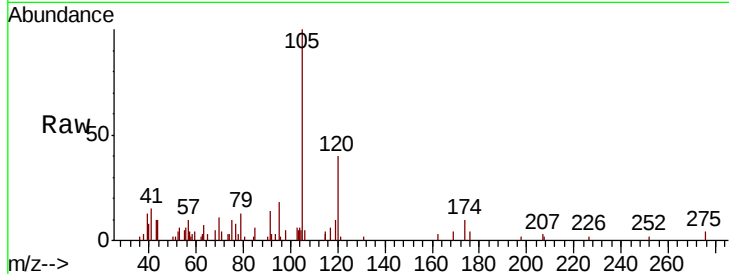
Acq: 24 May 2022 5:43

Tot Ion:105 Resp: 11832

Ion Ratio Lower Upper

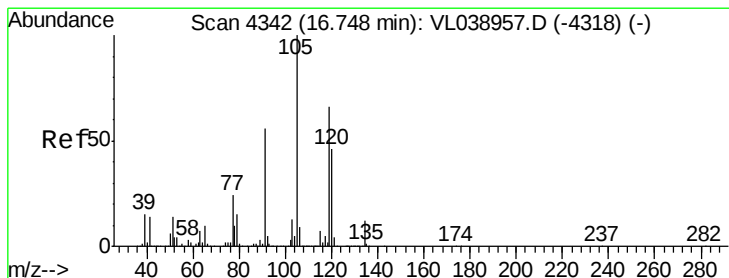
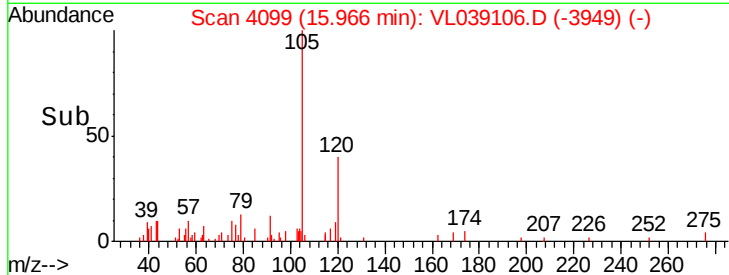
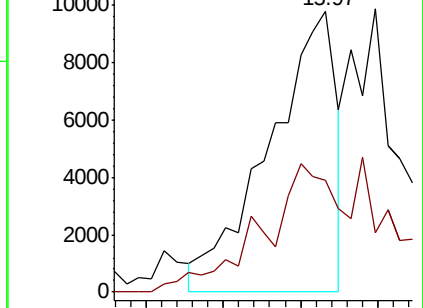
105 100

120 36.2 34.4 51.6



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.091 ppbv

RT: 16.72 min Scan# 4334

Delta R.T. -0.03 min

Lab File: VL039106.D

Acq: 24 May 2022 5:43

Tgt Ion:105 Resp: 26302

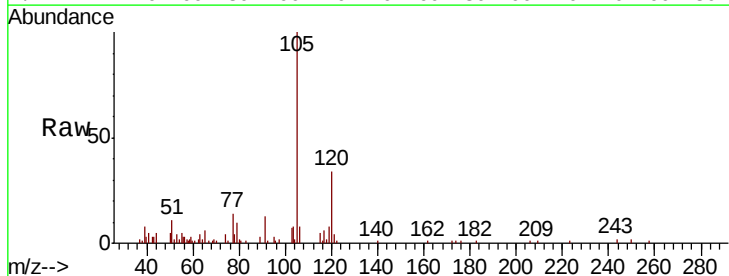
Ion Ratio Lower Upper

105 100

120 35.2 36.9 55.3#

91 11.0 45.0 67.4#

77 14.2 19.2 28.8#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

