

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032822\
 Data File : VL038789.D
 Acq On : 29 Mar 2022 2:57
 Operator : SY/AP
 Sample : N2136-02DL 5X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Quant Time: Mar 29 06:13:53 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 21 17:09:26 2022
 QLast Update : Mon Mar 21 17:09:26 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	932037	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2699185	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2464527	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1801198	9.53	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.30%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	16828	0.134	ppbv 90
3) Chlorodifluoromethane	2.89	51	450164	4.573	ppbv # 62
4) Chloromethane	3.15	50	3501	0.065	ppbv 89
7) Chloroethane	3.56	64	1226	0.067	ppbv # 83
9) Propene	3.03	41	222985	4.692	ppbv # 62
10) Heptane	8.11	43	143393	1.262	ppbv 98
11) Trichlorofluoromethane	3.96	101	5387	0.049	ppbv 87
13) Ethanol	3.61	45	3652	0.697	ppbv # 37
15) Acetone	3.85	43	448148	5.572	ppbv 97
16) 1,3-Butadiene	3.31	39	30644	0.671	ppbv # 14
17) tert-Butyl alcohol	4.31	59	33717	0.480	ppbv # 90
20) Methylene Chloride	4.34	84	34643	1.023	ppbv 92
21) Allyl Chloride	4.32	41	2045	0.035	ppbv # 69
23) Vinyl Acetate	5.07	43	364882	4.685	ppbv # 96
25) Ethyl Acetate	5.68	43	700198	3.459	ppbv # 79
26) Hexane	5.68	57	975429	10.762	ppbv # 28
27) Carbon Disulfide	4.55	76	4441	0.050	ppbv # 56
28) Methyl tert-Butyl Ether	5.04	73	42873	0.635	ppbv 99
29) Chloroform	5.74	83	55068	0.379	ppbv 84
30) Cyclohexane	7.12	84	19402	0.246	ppbv # 45
34) 2-Butanone	5.25	43	51762	0.485	ppbv # 85
36) Benzene	6.88	78	32232	0.155	ppbv # 92
39) 1,2-Dichloropropane	7.17	63	586533	7.202	ppbv # 28
41) Tetrahydrofuran	6.31	42	12757	0.160	ppbv # 35
43) Methyl Methacrylate	7.97	69	4103	0.053	ppbv # 1
44) 2,2,4-Trimethylpentane	7.86	57	19801	0.057	ppbv # 44
51) 2-Hexanone	10.14	43	30058	0.211	ppbv # 83
52) Tetrachloroethene	11.21	164	43634	0.572	ppbv 96
53) Toluene	9.79	91	18949	0.085	ppbv 92

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 29 Mar 2022 2:57 SV1DL

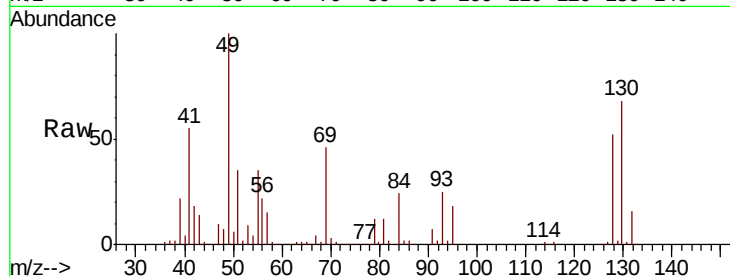
Tot Ion: 49 Resp: 932037

Ion Ratio Lower Upper

49 100

128 56.4 26.2 78.6

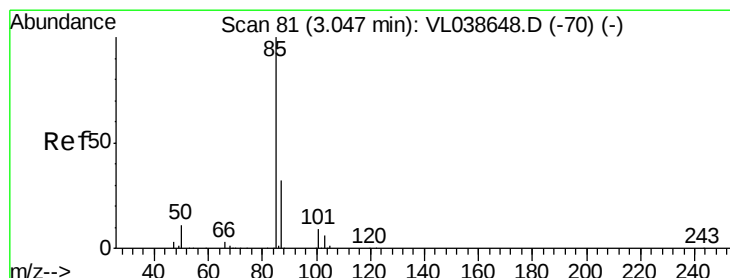
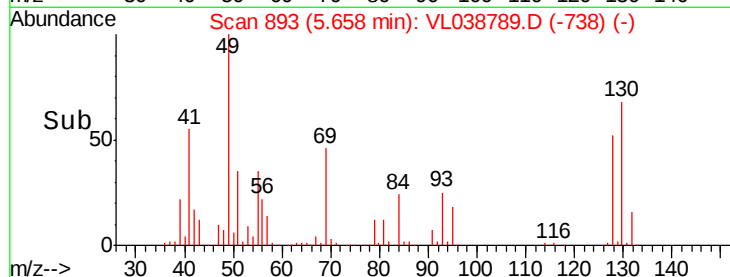
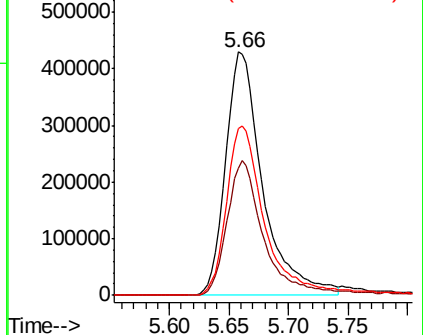
130 73.9 33.7 101.1



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



#2

Dichlorodifluoromethane

Concen: 0.134 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.01 min

Lab File: VL038789.D

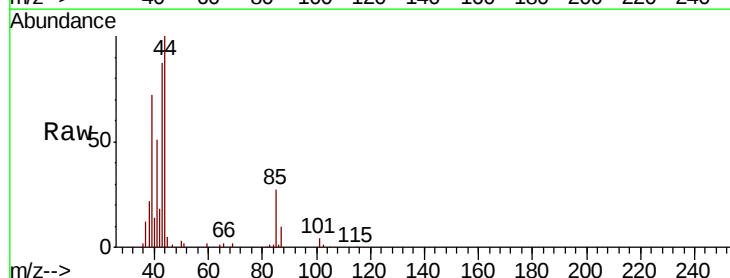
Acq: 29 Mar 2022 2:57

Tgt Ion: 85 Resp: 16828

Ion Ratio Lower Upper

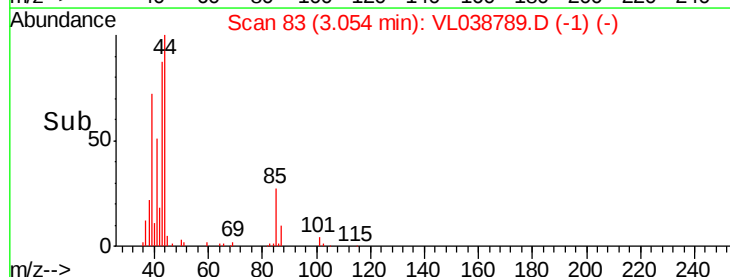
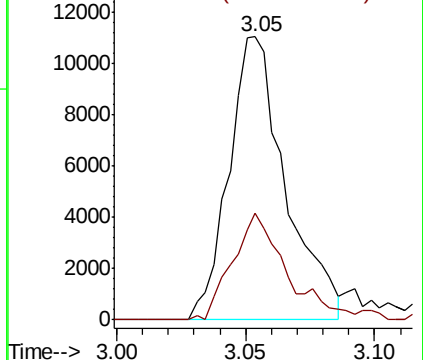
85 100

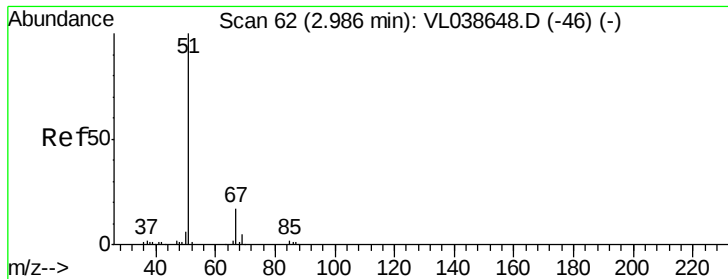
87 37.9 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

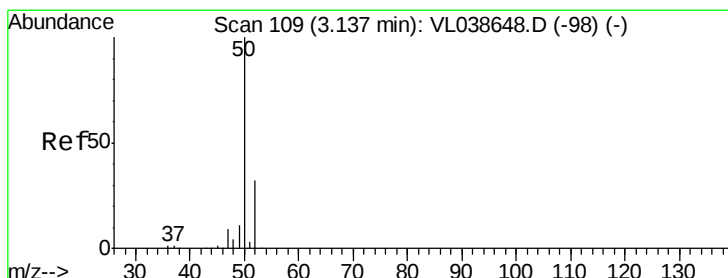
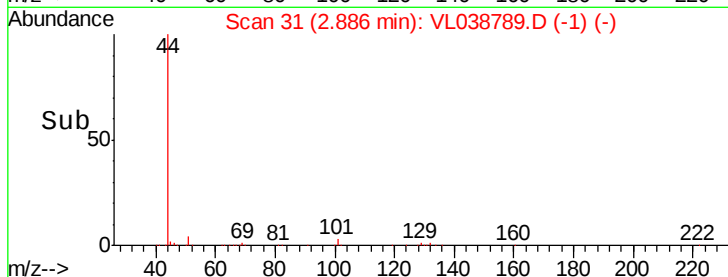
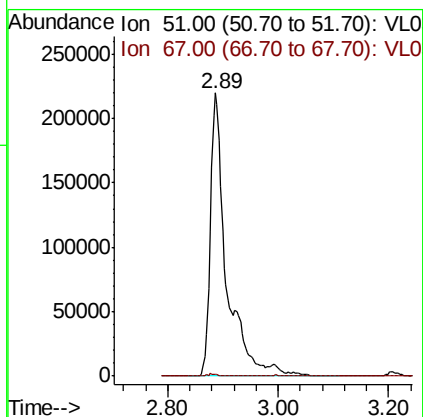
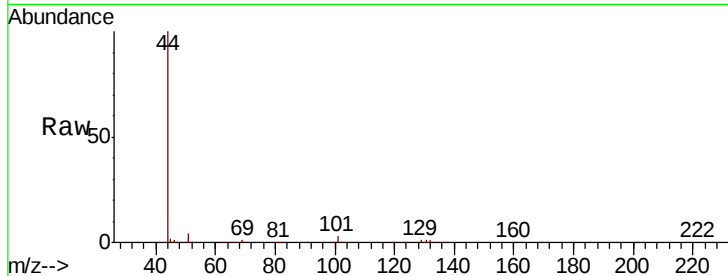
Ion 87.00 (86.70 to 87.70): VL0





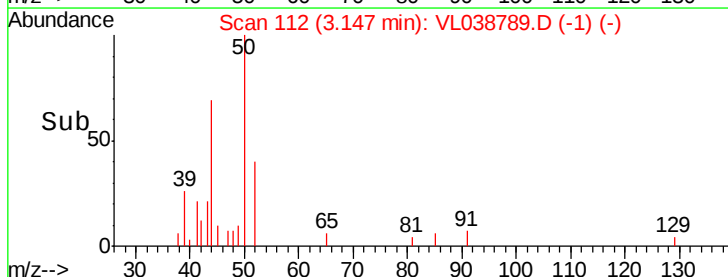
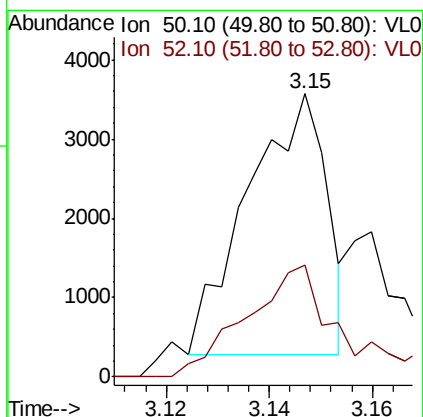
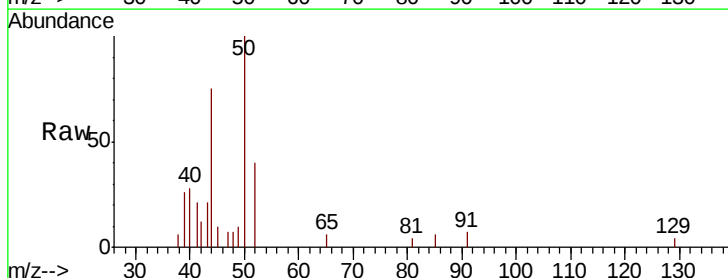
#3
Chlorodifluoromethane
Concen: 4.573 ppbv
RT: 2.89
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
SV1DL
Acq: 29 Mar 2022 2:57

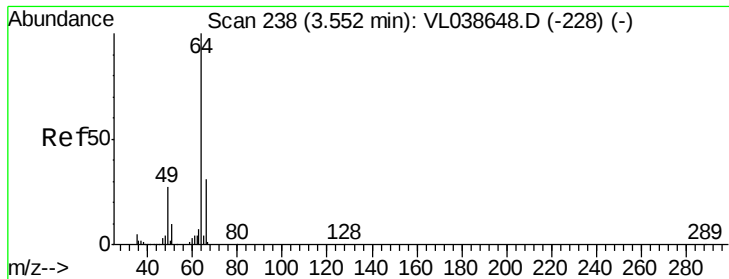
Tot Ion: 51 Resp: 450164
Ion Ratio Lower Upper
51 100
67 0.8 14.1 21.1#



#4
Chloromethane
Concen: 0.065 ppbv
RT: 3.15 min Scan# 112
Delta R.T. 0.01 min
Lab File: VL038789.D
Acq: 29 Mar 2022 2:57

Tgt Ion: 50 Resp: 3501
Ion Ratio Lower Upper
50 100
52 38.1 25.5 38.3





#7

Chloroethane

Concen: 0.067 ppbv

RT: 3.56 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

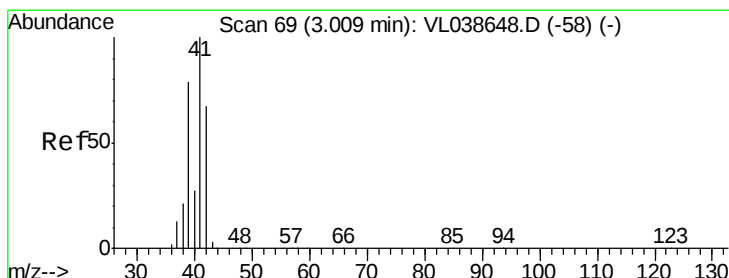
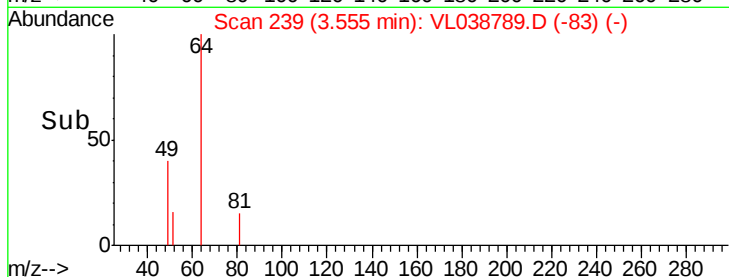
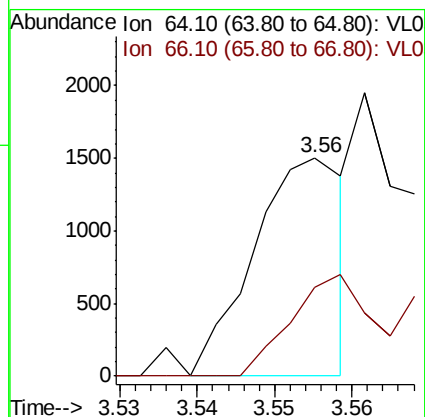
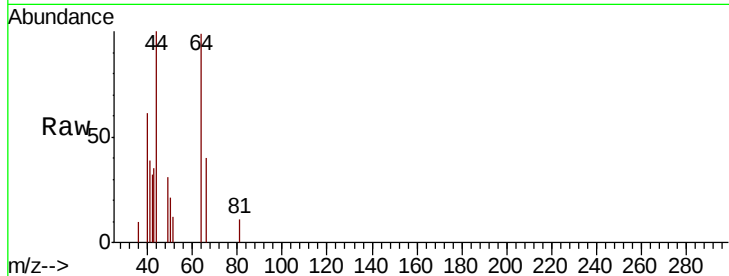
Acq: 29 Mar 2022 2:57

Tot Ion: 64 Resp: 1226

Ion Ratio Lower Upper

64 100

66 40.7 25.0 37.6#



#9

Propene

Concen: 4.692 ppbv

RT: 3.03 min Scan# 75

Delta R.T. 0.02 min

Lab File: VL038789.D

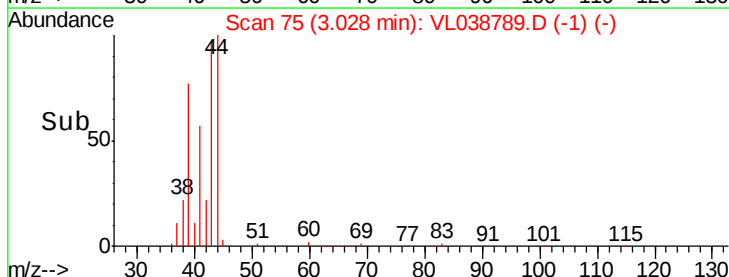
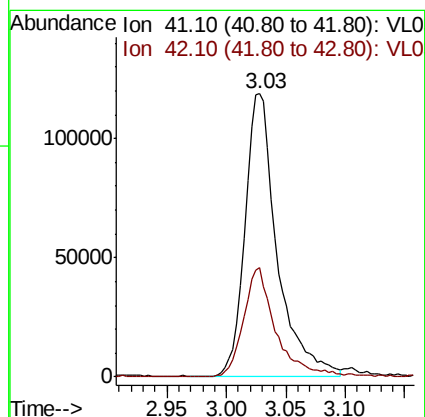
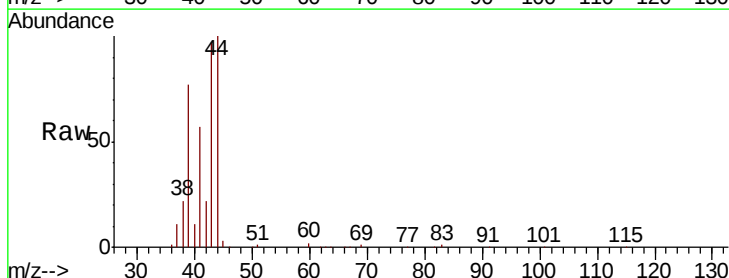
Acq: 29 Mar 2022 2:57

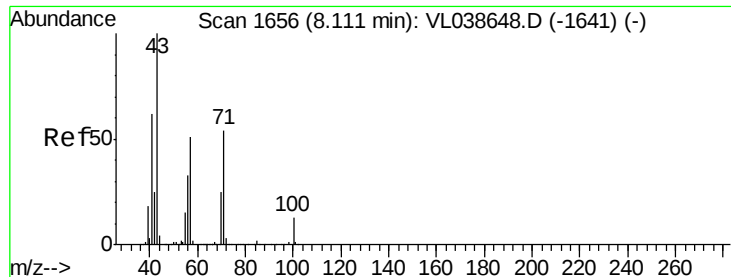
Tgt Ion: 41 Resp: 222985

Ion Ratio Lower Upper

41 100

42 39.3 56.2 84.4#





#10

Heptane

Concen: 1.262 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

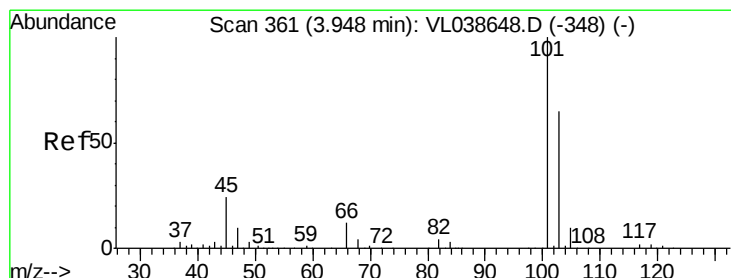
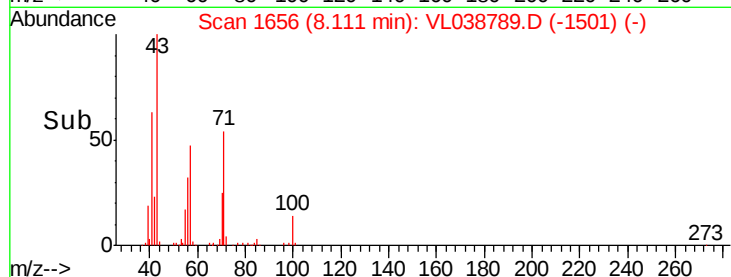
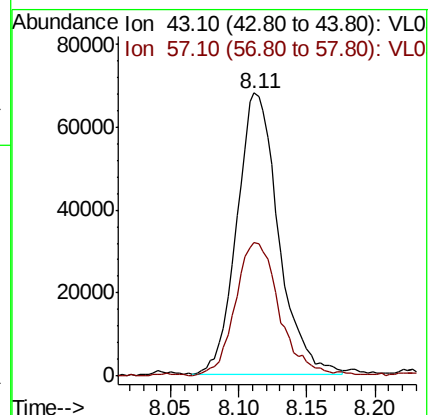
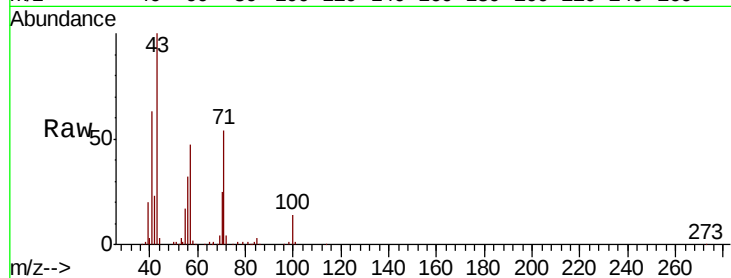
Acq: 29 Mar 2022 2:57 SV1DL

Tot Ion: 43 Resp: 143393

Ion Ratio Lower Upper

43 100

57 50.4 41.4 62.2



#11

Trichlorofluoromethane

Concen: 0.049 ppbv

RT: 3.96 min Scan# 364

Delta R.T. 0.01 min

Lab File: VL038789.D

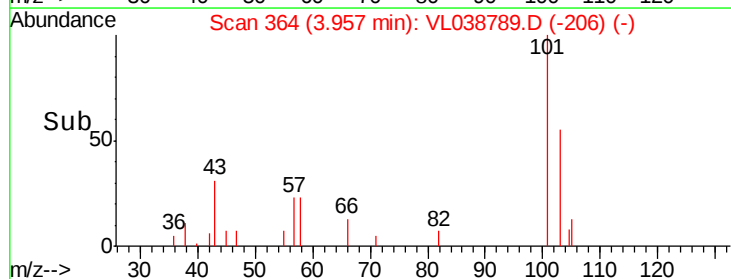
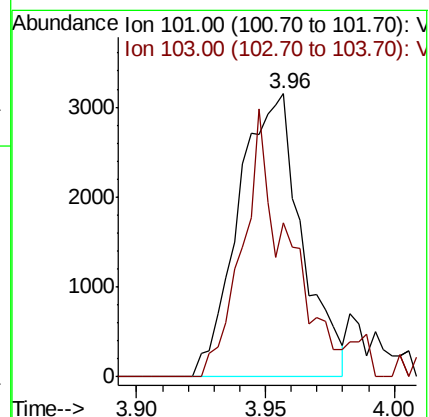
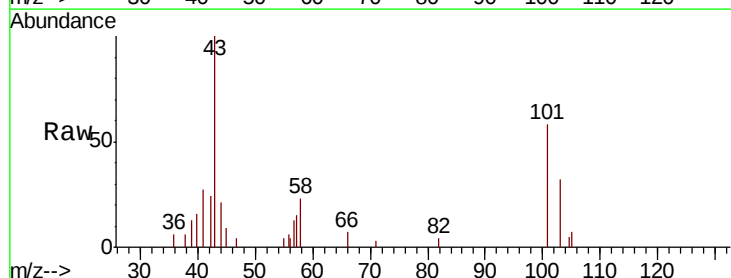
Acq: 29 Mar 2022 2:57

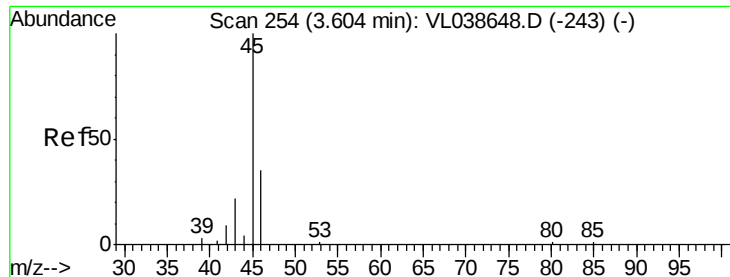
Tgt Ion: 101 Resp: 5387

Ion Ratio Lower Upper

101 100

103 54.6 51.9 77.9





#13

Ethanol

Concen: 0.697 ppbv

RT: 3.61 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

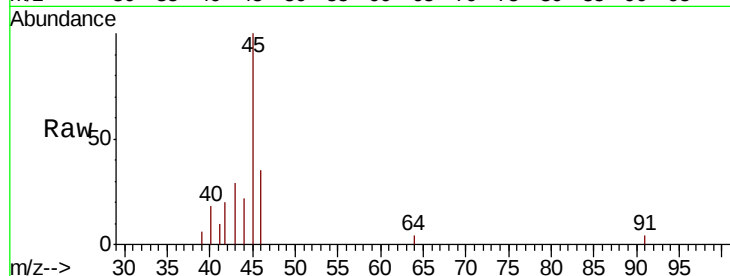
Acq: 29 Mar 2022 2:57 SV1DL

Tot Ion: 45 Resp: 3652

Ion Ratio Lower Upper

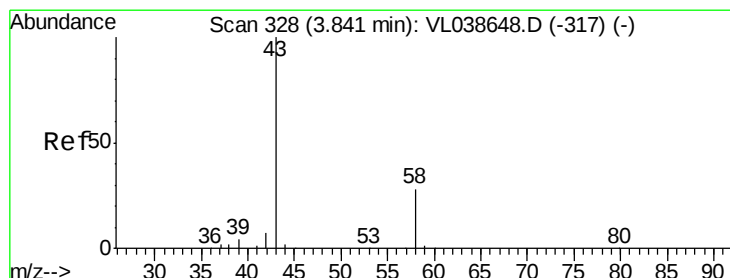
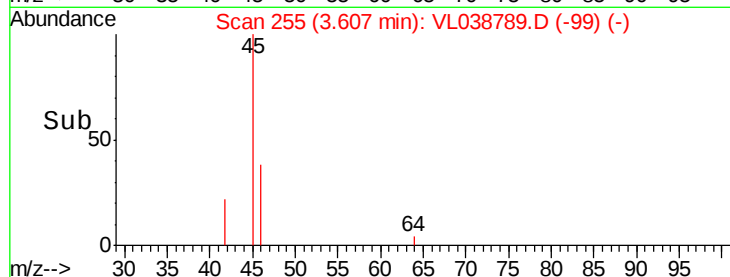
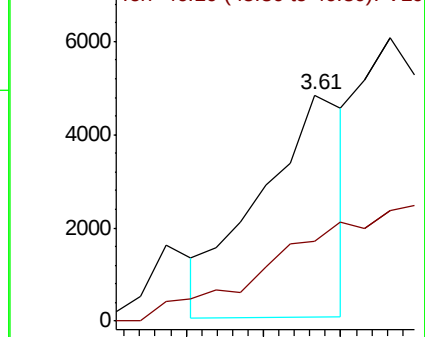
45 100

46 0.0 15.1 60.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0



#15

Acetone

Concen: 5.572 ppbv

RT: 3.85 min Scan# 331

Delta R.T. 0.01 min

Lab File: VL038789.D

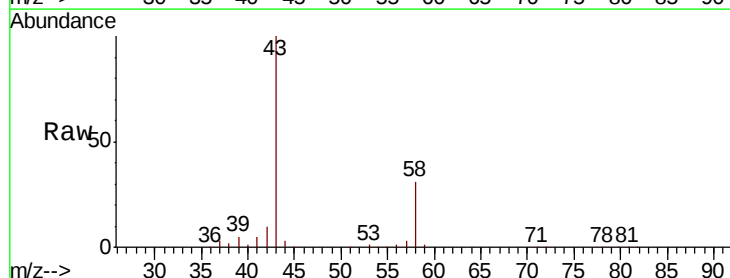
Acq: 29 Mar 2022 2:57

Tgt Ion: 43 Resp: 448148

Ion Ratio Lower Upper

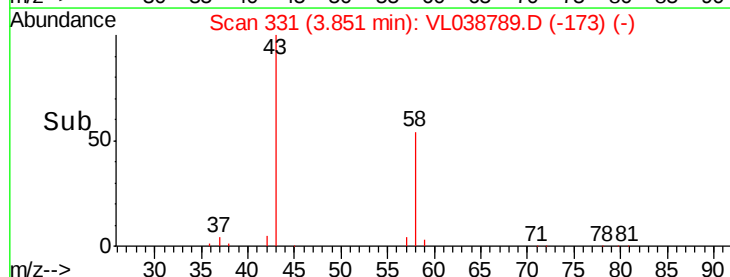
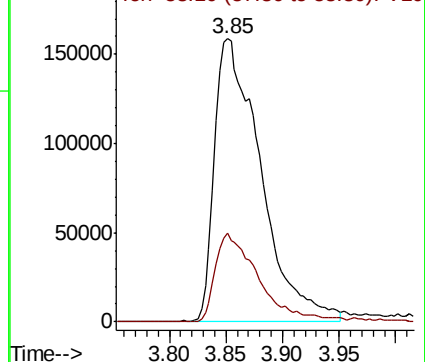
43 100

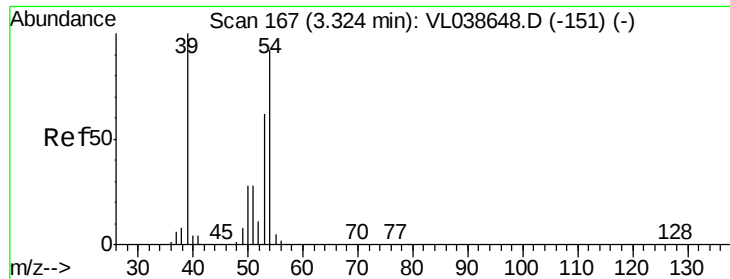
58 30.7 23.3 34.9



Abundance Ion 43.10 (42.80 to 43.80): VL0

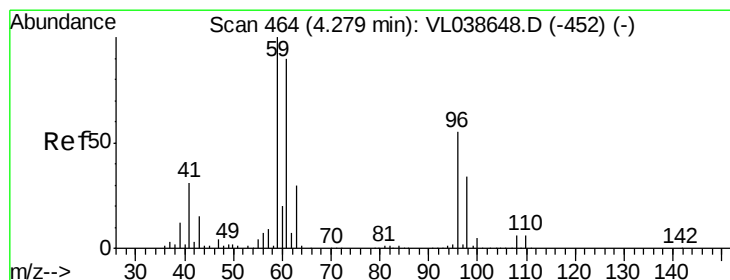
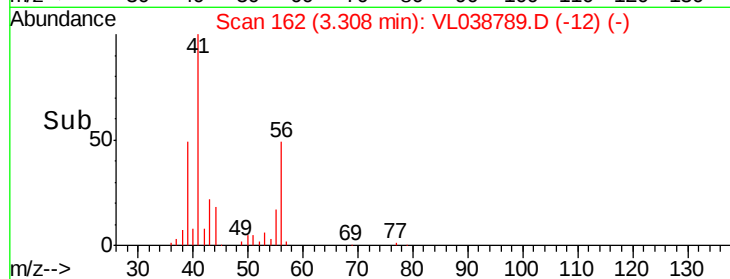
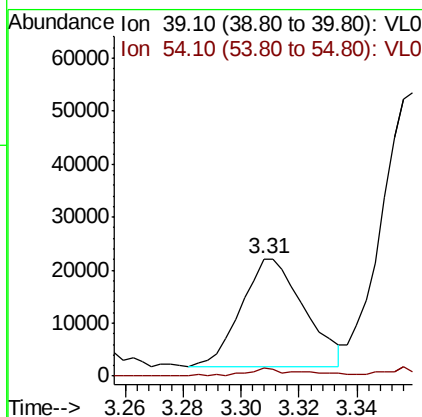
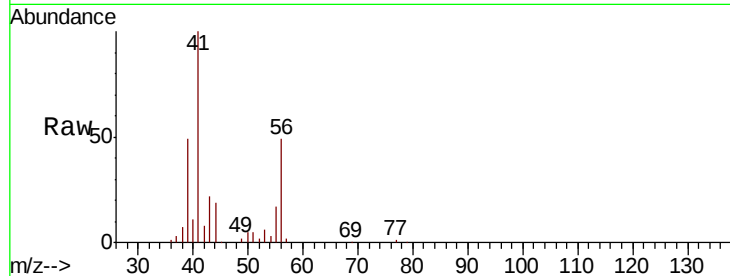
Ion 58.10 (57.80 to 58.80): VL0





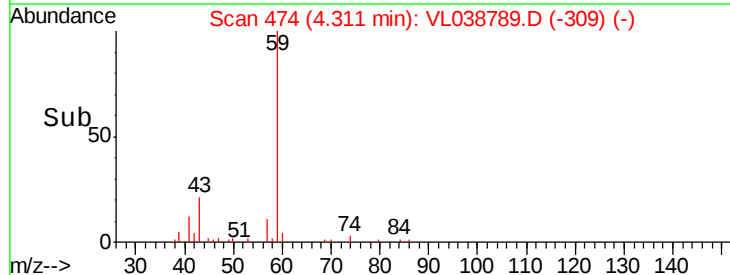
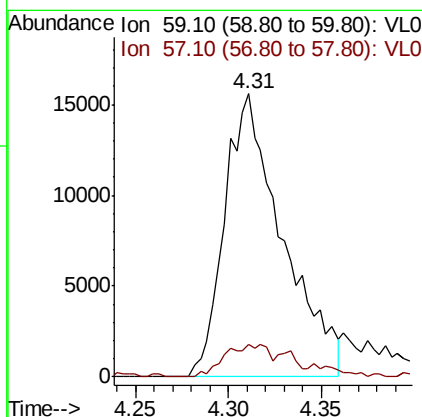
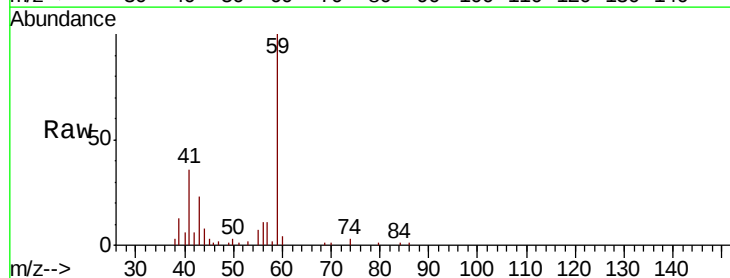
#16
 1,3-Butadiene
 Concen: 0.671 ppbv
 RT: 3.31
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 SV1DL
 Acq: 29 Mar 2022 2:57

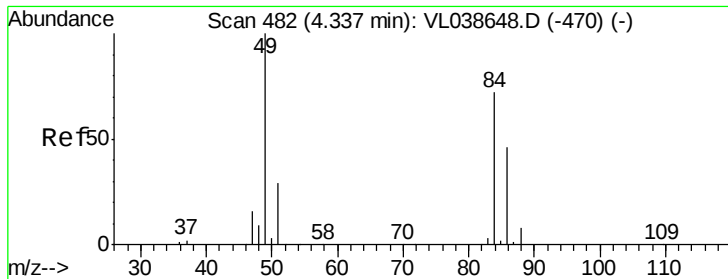
Tot Ion: 39 Resp: 30644
 Ion Ratio Lower Upper
 39 100
 54 7.0 69.1 103.7#



#17
 tert-Butyl alcohol
 Concen: 0.480 ppbv
 RT: 4.31 min Scan# 474
 Delta R.T.: 0.03 min
 Lab File: VL038789.D
 Acq: 29 Mar 2022 2:57

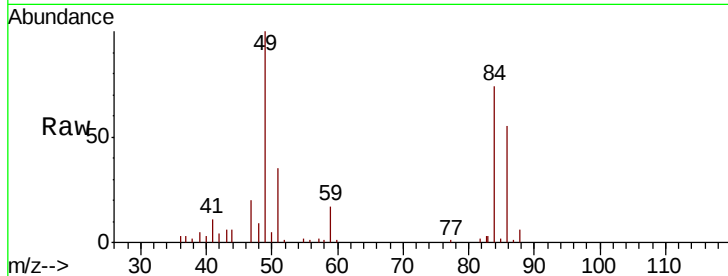
Tgt Ion: 59 Resp: 33717
 Ion Ratio Lower Upper
 59 100
 57 14.1 8.2 12.2#



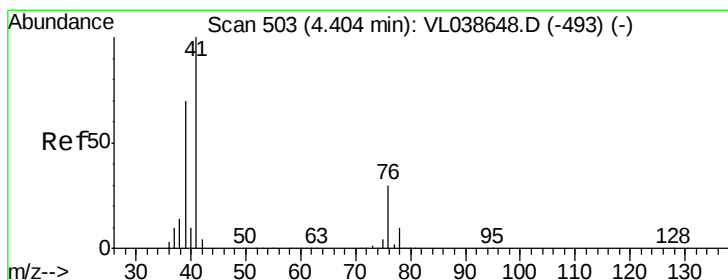
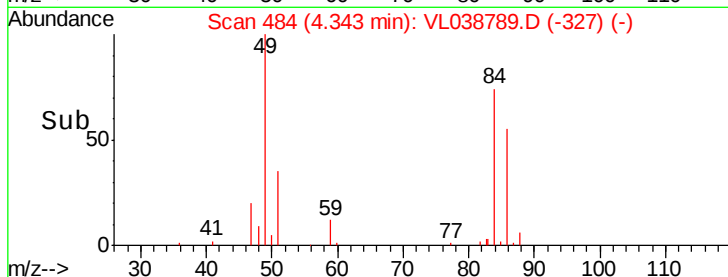
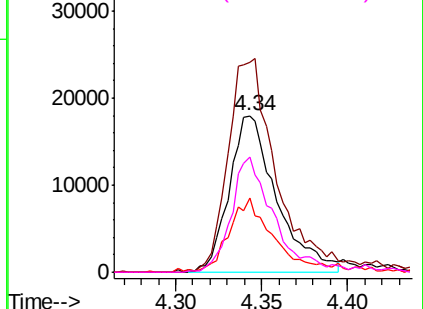


#20
Methylene Chloride
Concen: 1.023 ppbv
RT: 4.34
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
SV1DL
Acq: 29 Mar 2022 2:57

Tot Ion: 84 Resp: 34643
Ion Ratio Lower Upper
84 100
49 132.5 111.2 166.8
51 47.5 32.8 49.2
86 72.4 51.4 77.0

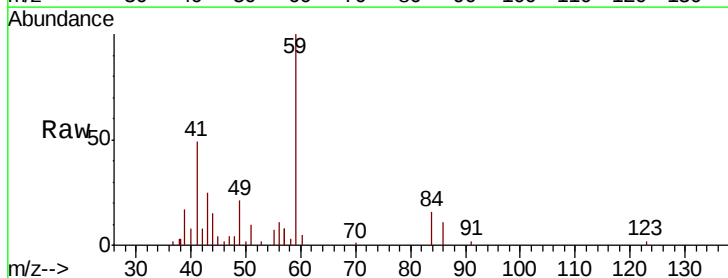


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

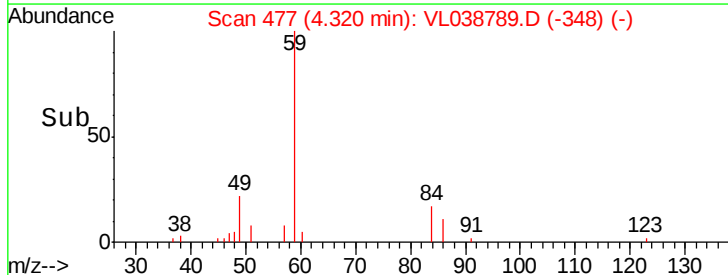
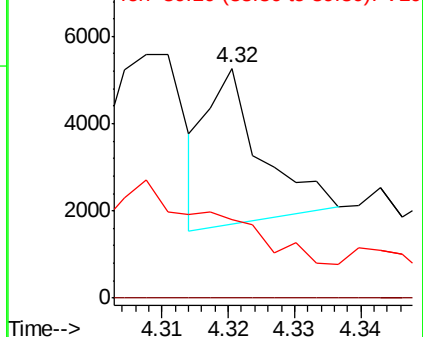


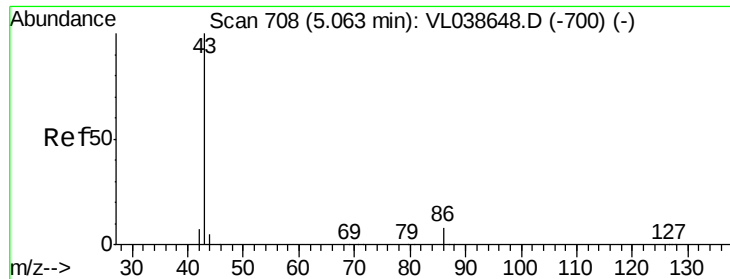
#21
Allyl Chloride
Concen: 0.035 ppbv
RT: 4.32 min Scan# 477
Delta R.T. -0.08 min
Lab File: VL038789.D
Acq: 29 Mar 2022 2:57

Tgt Ion: 41 Resp: 2045
Ion Ratio Lower Upper
41 100
76 0.0 25.0 37.6#
39 87.2 56.6 85.0#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0





#23

Vinyl Acetate

Concen: 4.685 ppbv

RT: 5.07 Instrument:

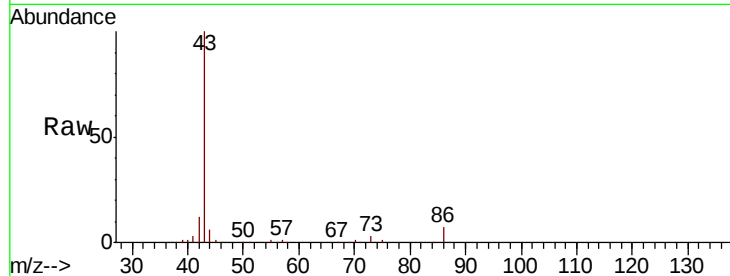
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

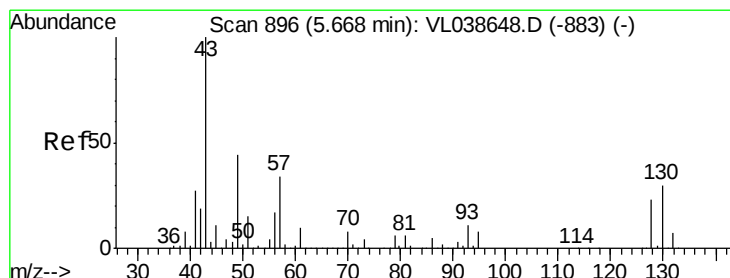
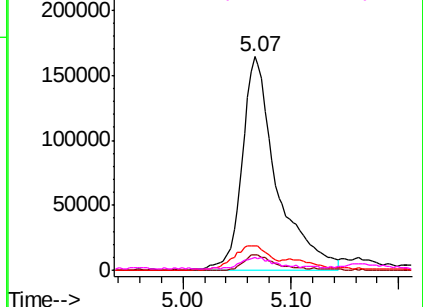
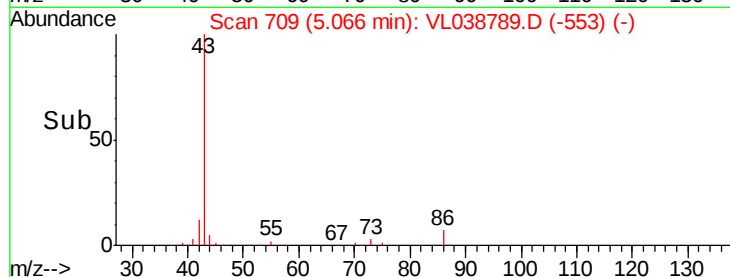
Acq: 29 Mar 2022 2:57 SV1DL

Tot Ion: 43 Resp: 364882

Ion	Ratio	Lower	Upper
43	100		
86	7.2	5.6	8.4
42	11.5	6.8	10.2#
44	4.6	4.2	6.2



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: 3.459 ppbv

RT: 5.68 min Scan# 900

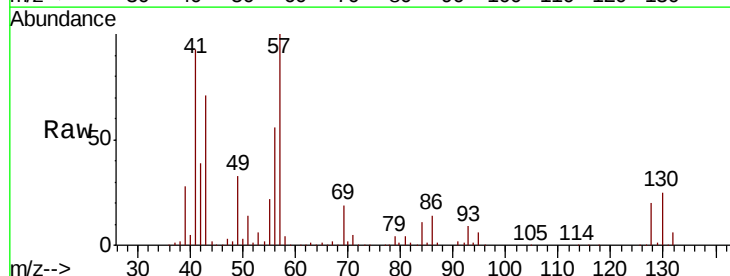
Delta R.T. 0.01 min

Lab File: VL038789.D

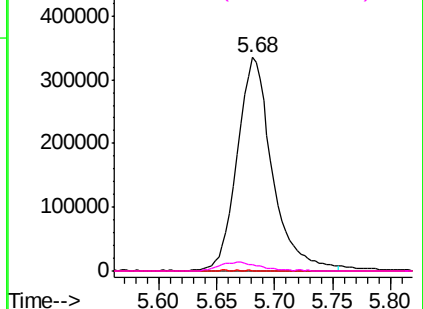
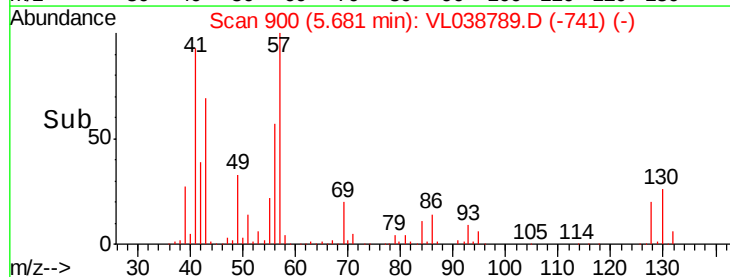
Acq: 29 Mar 2022 2:57

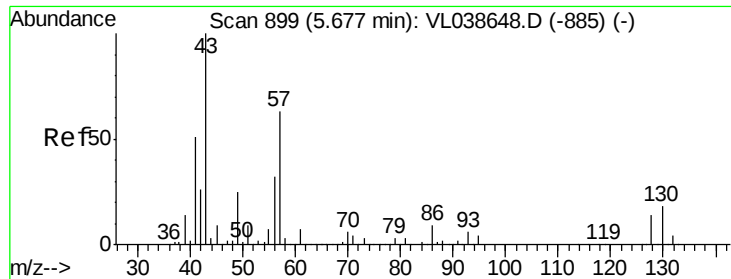
Tgt Ion: 43 Resp: 700198

Ion	Ratio	Lower	Upper
43	100		
45	0.3	8.2	12.4#
61	0.5	8.3	12.5#
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: 10.762 ppbv

RT: 5.68 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 29 Mar 2022 2:57

Tot Ion: 57 Resp: 975429

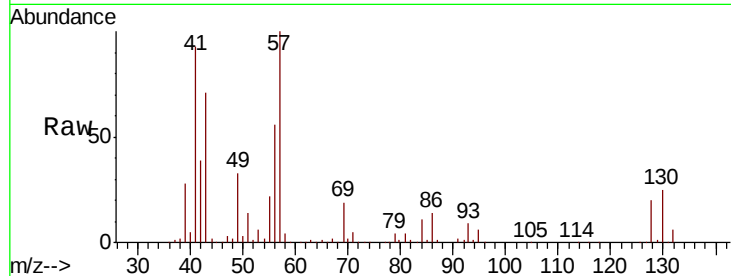
Ion Ratio Lower Upper

57 100

41 122.9 67.0 100.4#

43 73.3 184.2 276.2#

56 67.4 42.6 64.0#

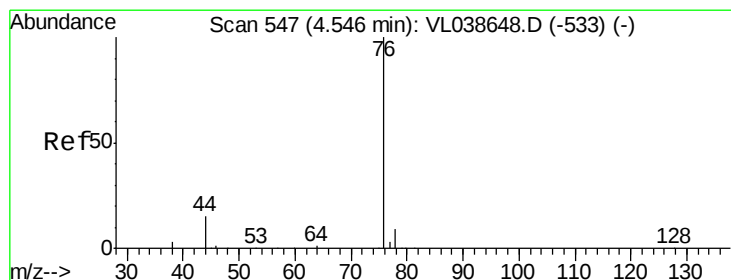
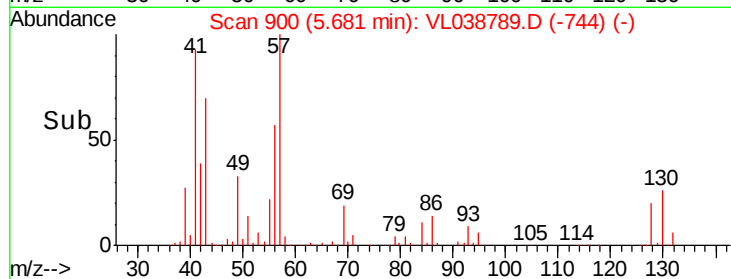
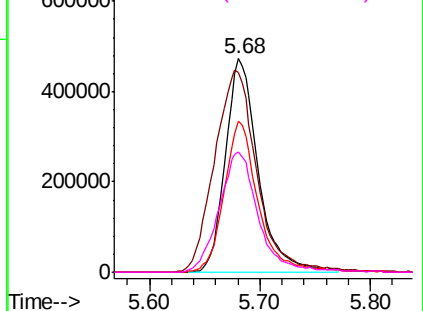


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#27

Carbon Disulfide

Concen: 0.050 ppbv

RT: 4.55 min Scan# 547

Delta R.T. -0.00 min

Lab File: VL038789.D

Acq: 29 Mar 2022 2:57

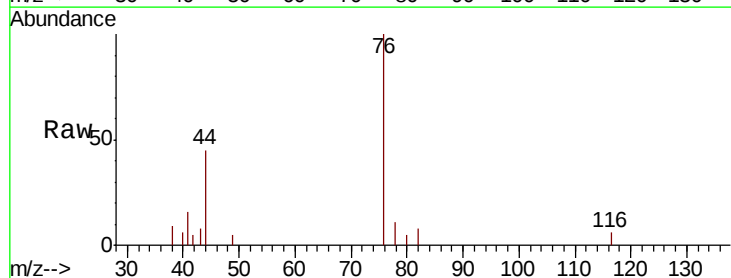
Tgt Ion: 76 Resp: 4441

Ion Ratio Lower Upper

76 100

44 38.8 12.4 18.6#

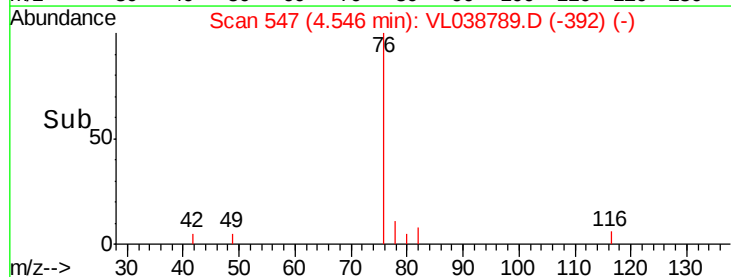
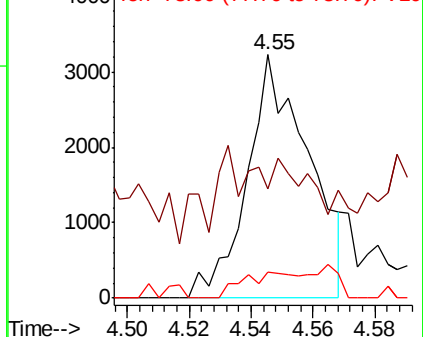
78 0.0 7.8 11.8#

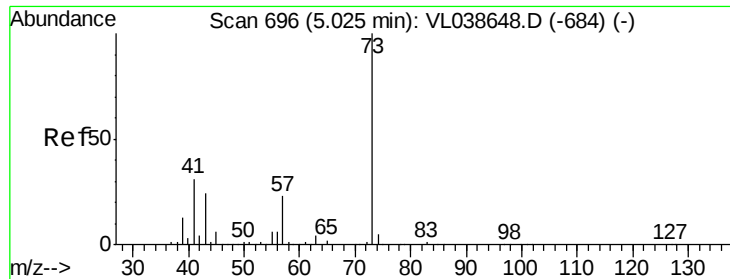


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

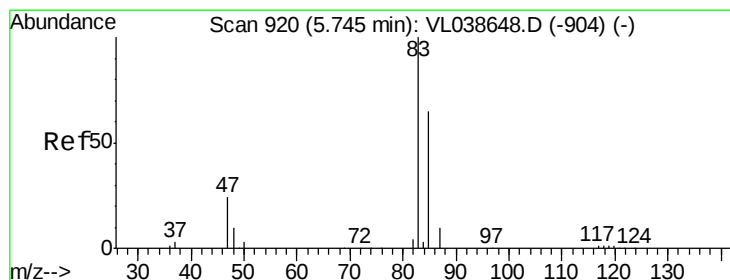
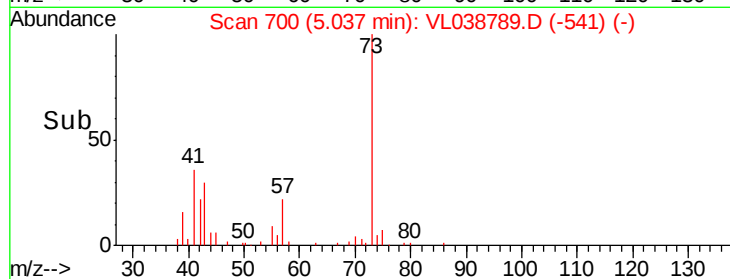
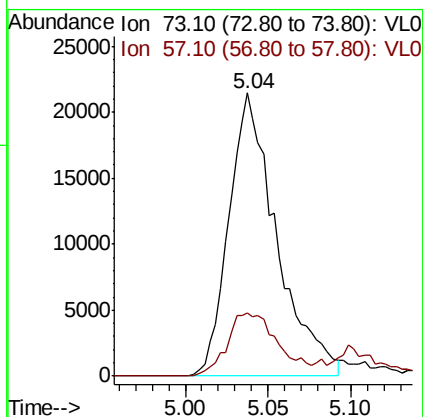
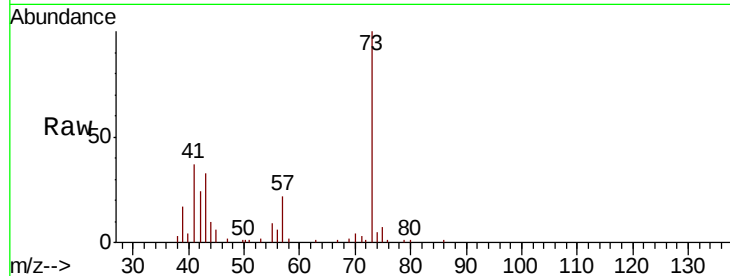
Ion 78.00 (77.70 to 78.70): VL0





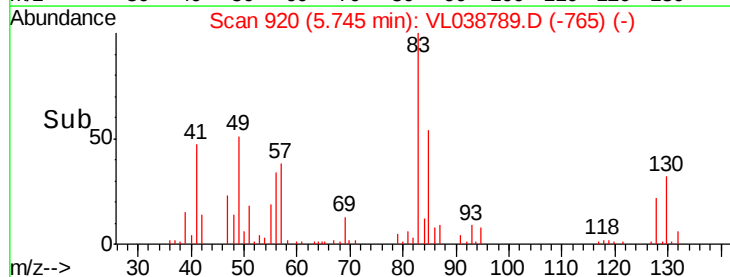
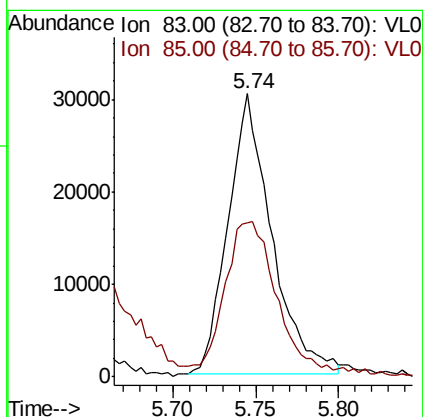
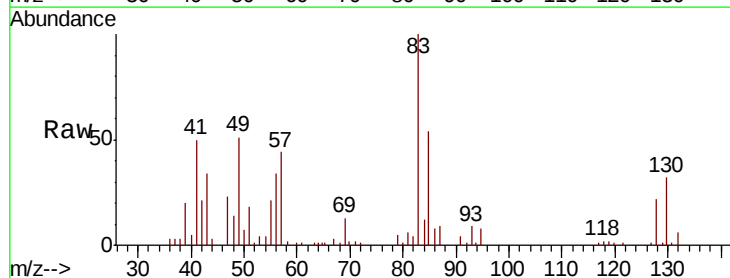
#28
Methvl tert-Butvl Ether
Concen: 0.635 ppbv
RT: 5.04
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
SV1DL
Acq: 29 Mar 2022 2:57

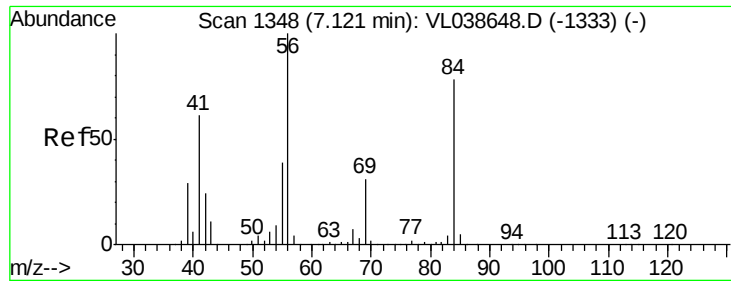
Tot Ion: 73 Resp: 42873
Ion Ratio Lower Upper
73 100
57 23.4 19.2 28.8



#29
Chloroform
Concen: 0.379 ppbv
RT: 5.74 min Scan# 920
Delta R.T. -0.00 min
Lab File: VL038789.D
Acq: 29 Mar 2022 2:57

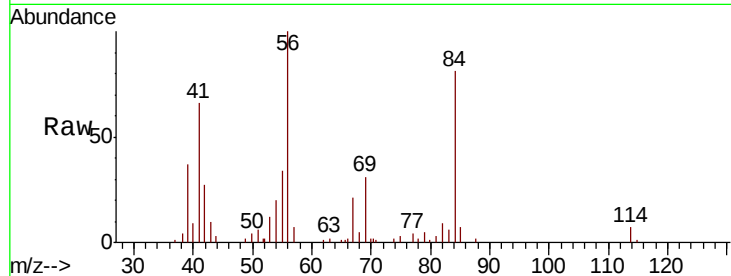
Tgt Ion: 83 Resp: 55068
Ion Ratio Lower Upper
83 100
85 52.2 51.7 77.5





#30
Cyclohexane
Concen: 0.246 ppbv
RT: 7.12
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
SV1DL
Acq: 29 Mar 2022 2:57

Tot Ion	84.20	Resp	19402
Ion Ratio	Lower	Upper	
84	100		
56	183.2	108.2	162.4#
41	148.0	61.8	92.6#

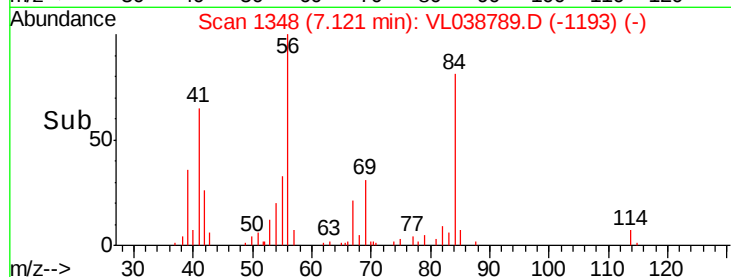
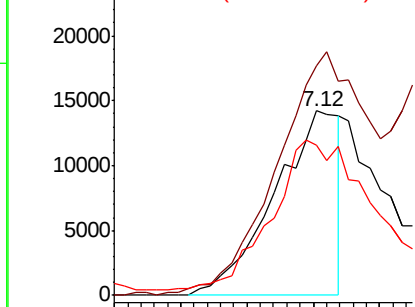


Abundance

Ion 84.20 (83.90 to 84.90): VL0

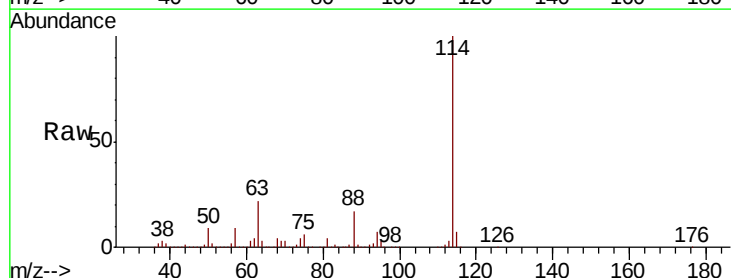
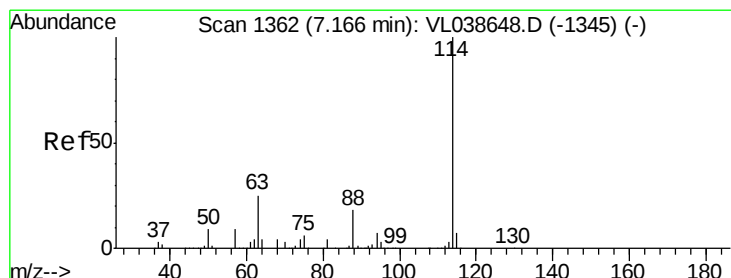
Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.00 min
Lab File: VL038789.D
Acq: 29 Mar 2022 2:57

Tgt Ion	114	Resp	2699185
Ion Ratio	Lower	Upper	
114	100		
63	22.2	19.4	29.0
88	16.6	13.9	20.9

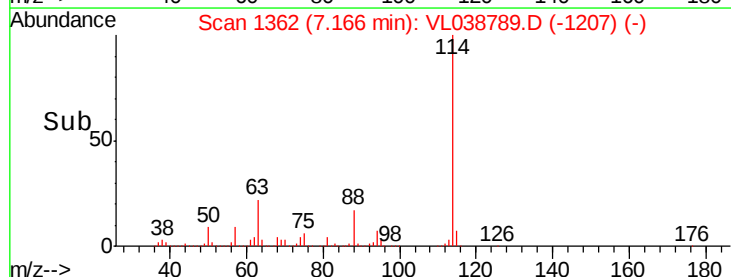
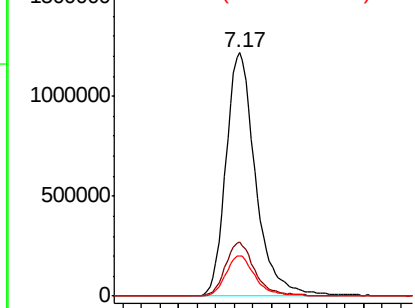


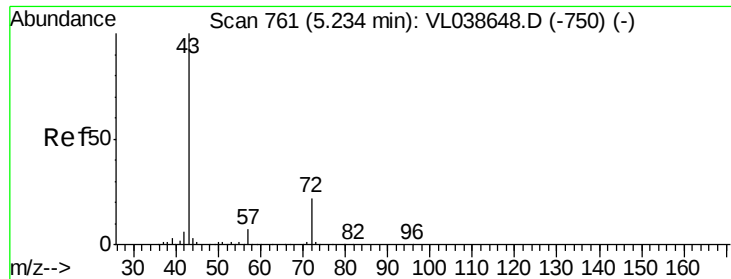
Abundance

Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

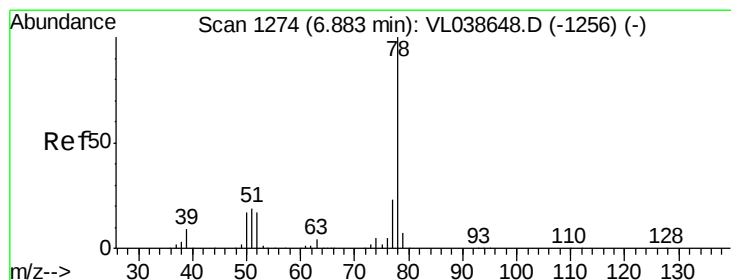
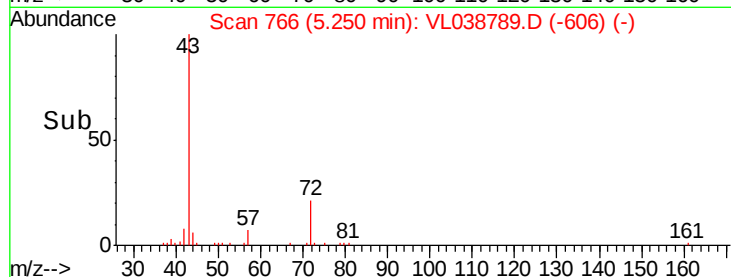
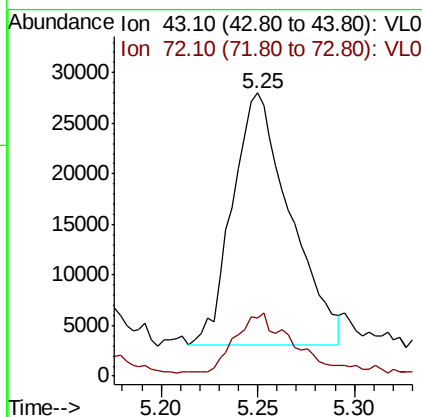
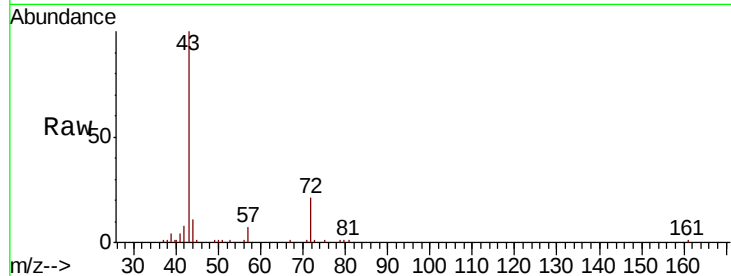
Ion 88.10 (87.80 to 88.80): VL0





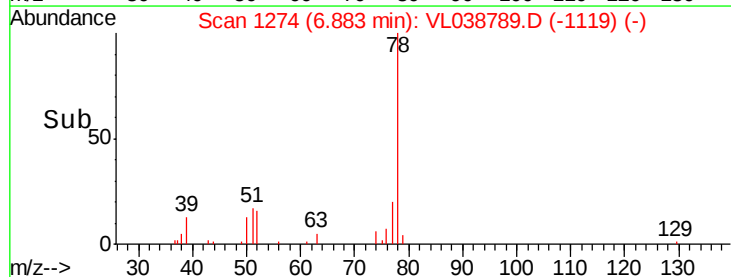
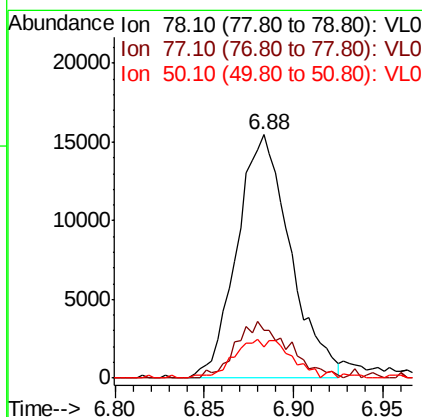
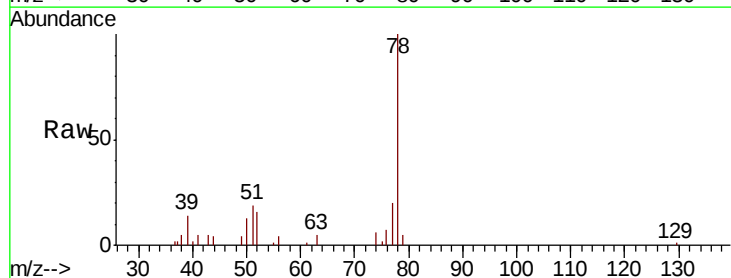
#34
 2-Butanone
 Concen: 0.485 ppbv
 RT: 5.25
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SV1DL
 Acq: 29 Mar 2022 2:57

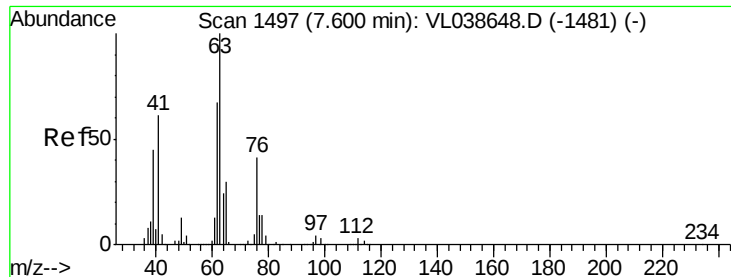
Tot Ion: 43 Resp: 51762
 Ion Ratio Lower Upper
 43 100
 72 29.5 17.8 26.8#



#36
 Benzene
 Concen: 0.155 ppbv
 RT: 6.88 min Scan# 1274
 Delta R.T. -0.00 min
 Lab File: VL038789.D
 Acq: 29 Mar 2022 2:57

Tgt Ion: 78 Resp: 32232
 Ion Ratio Lower Upper
 78 100
 77 19.7 18.1 27.1
 50 12.7 13.6 20.4#





#39

1,2-Dichloropropane

Concen: 7.202 ppbv

RT: 7.17 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 29 Mar 2022 2:57

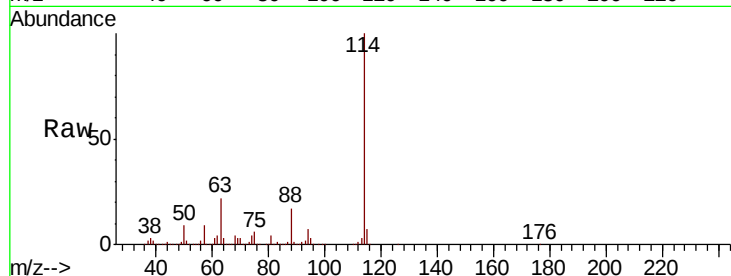
Tot Ion: 63 Resp: 586533

Ion Ratio Lower Upper

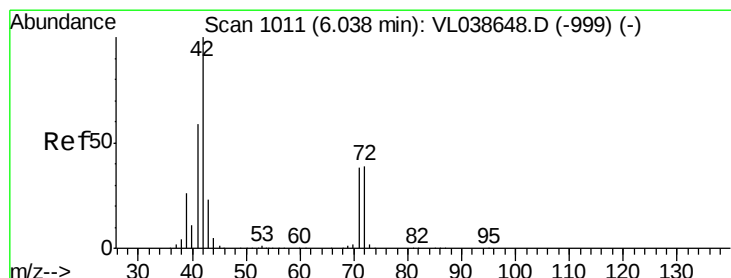
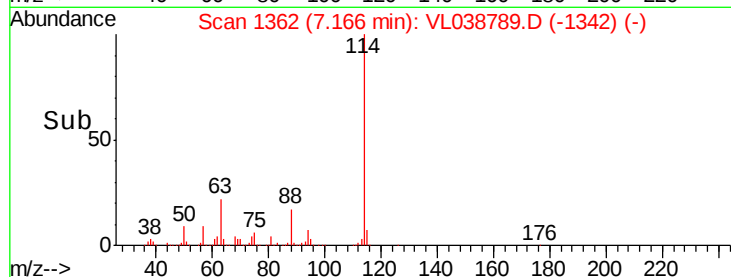
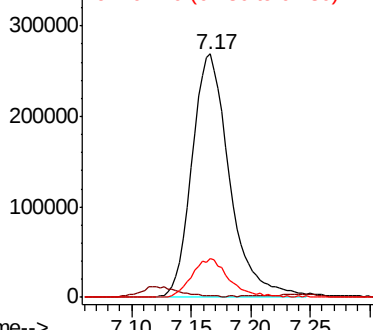
63 100

41 0.0 49.0 73.6#

62 16.1 53.9 80.9#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.160 ppbv

RT: 6.31 min Scan# 1096

Delta R.T. 0.27 min

Lab File: VL038789.D

Acq: 29 Mar 2022 2:57

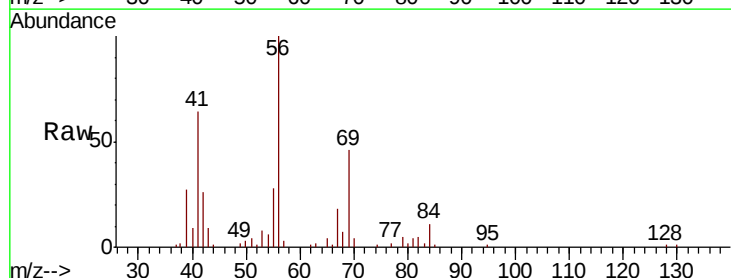
Tgt Ion: 42 Resp: 12757

Ion Ratio Lower Upper

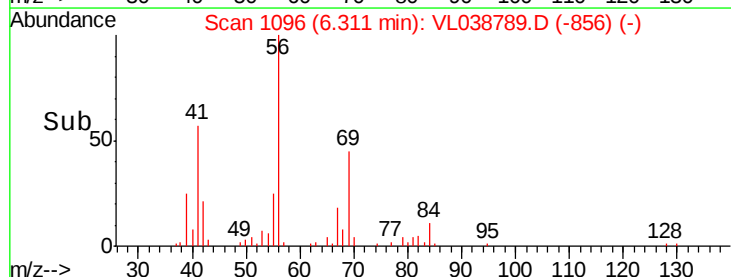
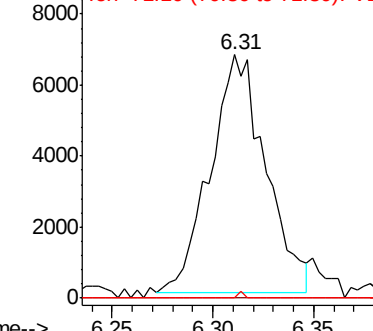
42 100

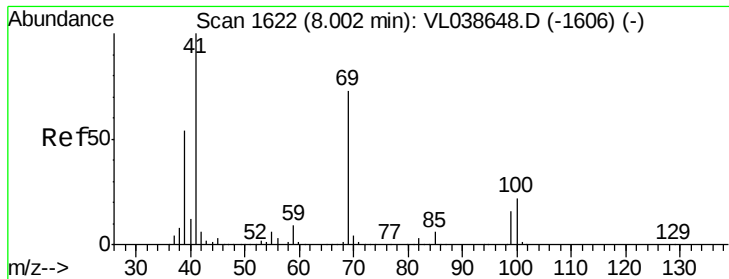
72 0.0 32.5 48.7#

71 0.0 31.4 47.2#



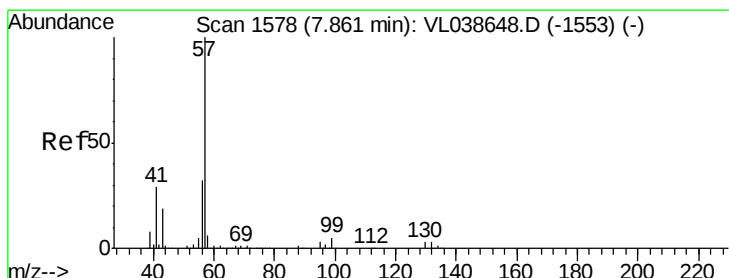
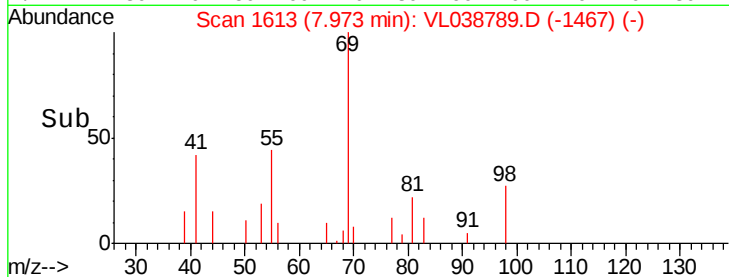
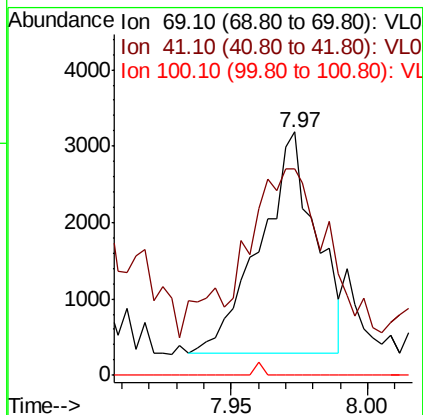
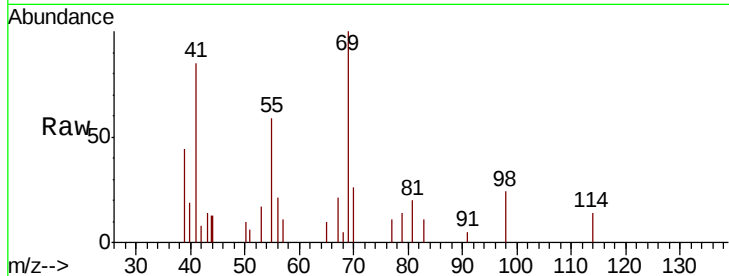
Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0





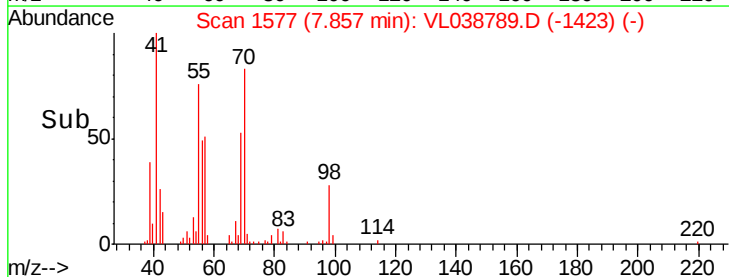
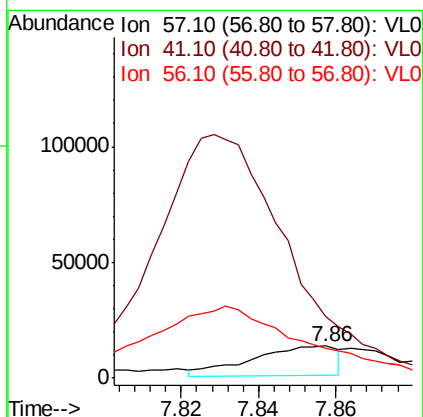
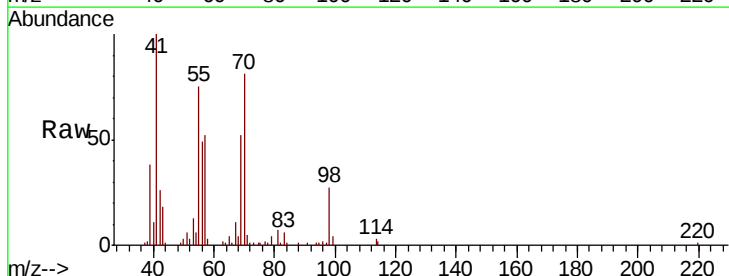
#43
Methyl Methacrylate
Concen: 0.053 ppbv
RT: 7.97
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
SV1DL
Acq: 29 Mar 2022 2:57

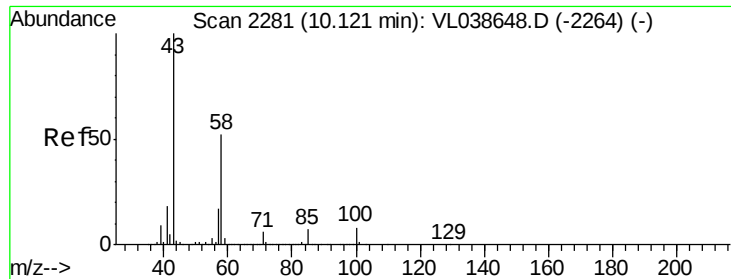
Tot Ion: 69 Resp: 4103
Ion Ratio Lower Upper
69 100
41 0.0 110.3 165.5#
100 0.0 24.8 37.2#



#44
2,2,4-Trimethylpentane
Concen: 0.057 ppbv
RT: 7.86 min Scan# 1577
Delta R.T. -0.00 min
Lab File: VL038789.D
Acq: 29 Mar 2022 2:57

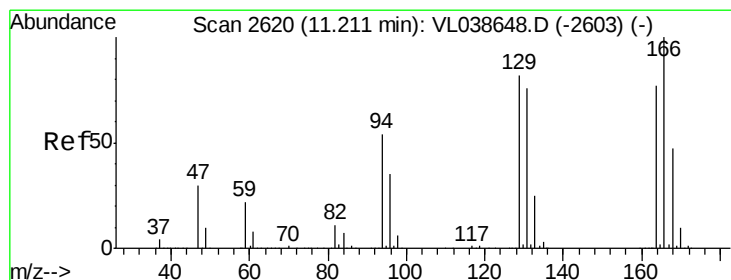
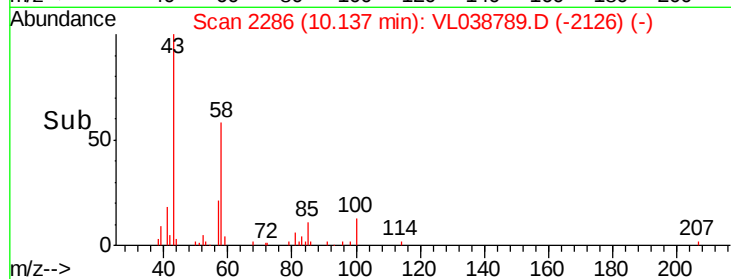
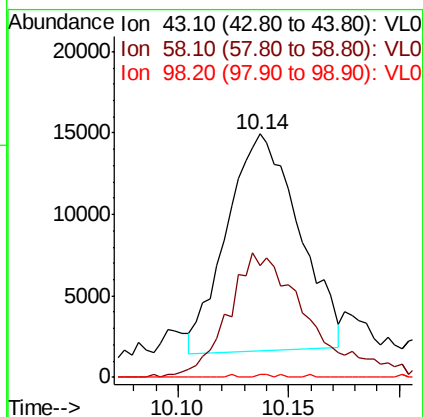
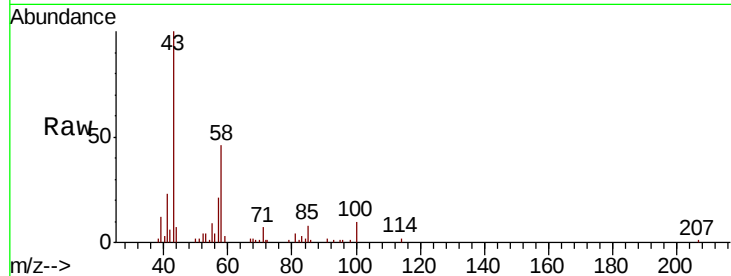
Tgt Ion: 57 Resp: 19801
Ion Ratio Lower Upper
57 100
41 0.0 23.0 34.4#
56 0.0 25.3 37.9#





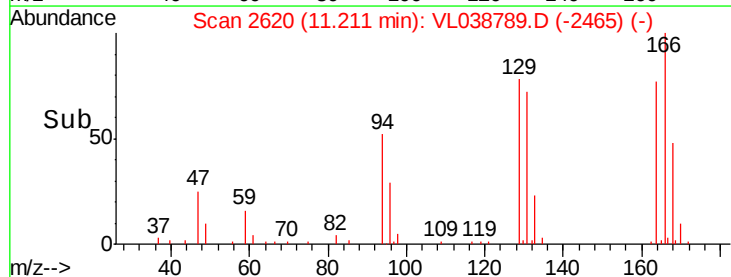
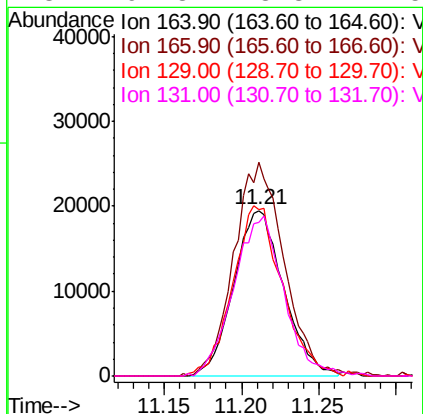
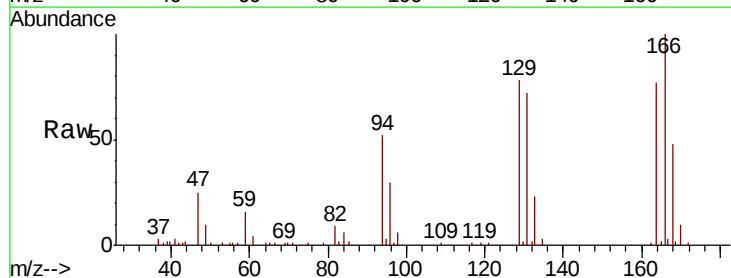
#51
2-Hexanone
Concen: 0.211 ppbv
RT: 10.14
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Mar 2022 2:57

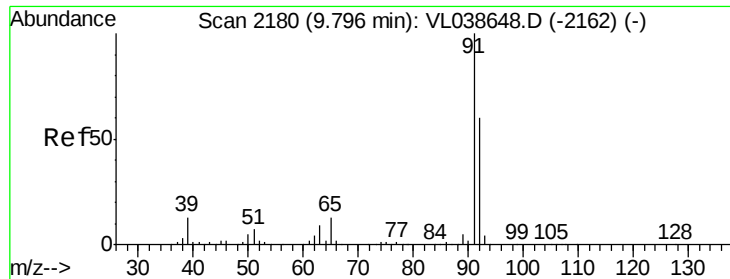
Tot Ion	Ratio	Lower	Upper
43	100		
58	63.8	41.2	61.8#
98	0.6	0.2	0.4#



#52
Tetrachloroethene
Concen: 0.572 ppbv
RT: 11.21 min Scan# 2620
Delta R.T. -0.00 min
Lab File: VL038789.D
Acq: 29 Mar 2022 2:57

Tgt Ion	Ratio	Lower	Upper
164	100		
166	129.3	103.3	154.9
129	99.1	85.2	127.8
131	91.8	78.3	117.5





#53

Toluene

Concen: 0.085 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

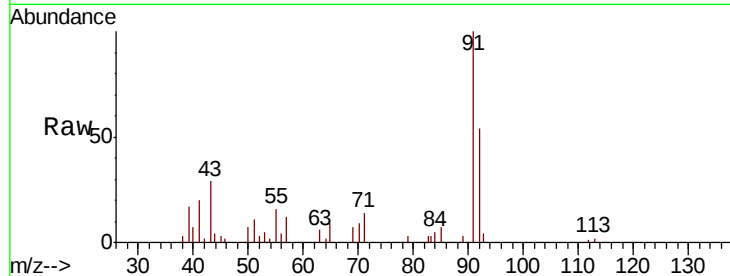
Acq: 29 Mar 2022 2:57 SV1DL

Tot Ion: 91 Resp: 18949

Ion Ratio Lower Upper

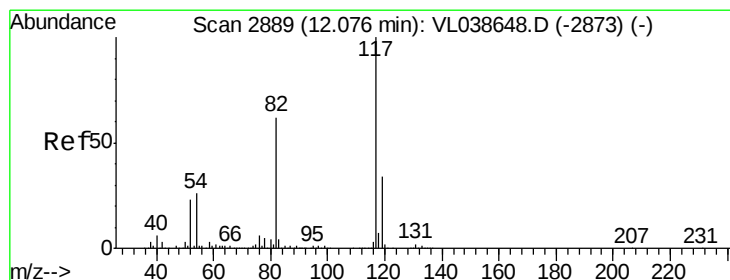
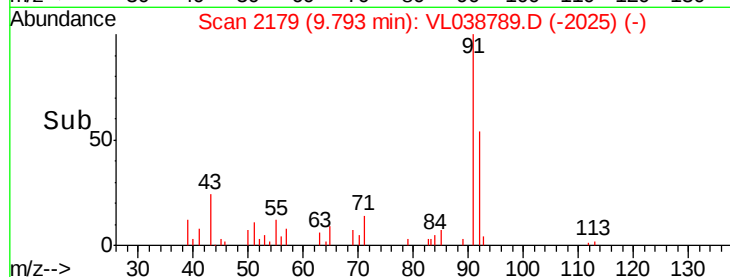
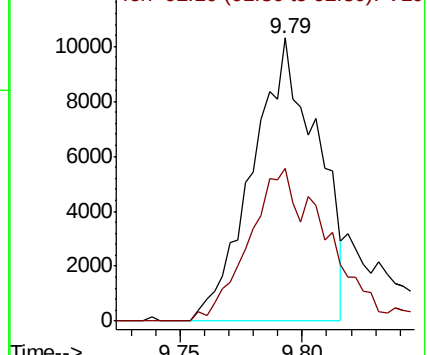
91 100

92 67.1 48.7 73.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.00 min

Lab File: VL038789.D

Acq: 29 Mar 2022 2:57

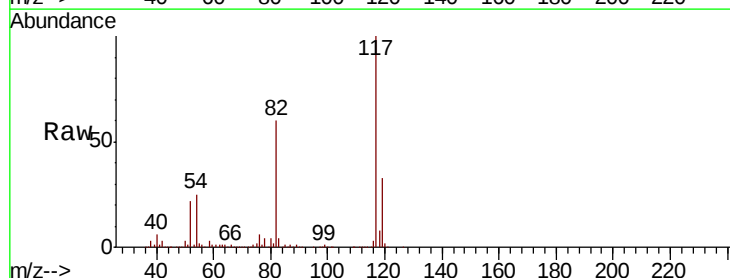
Tgt Ion: 117 Resp: 2464527

Ion Ratio Lower Upper

117 100

82 60.9 51.6 77.4

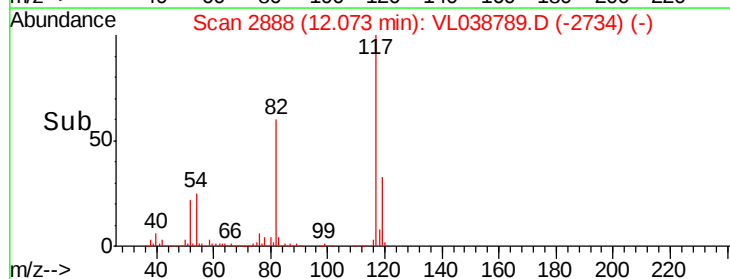
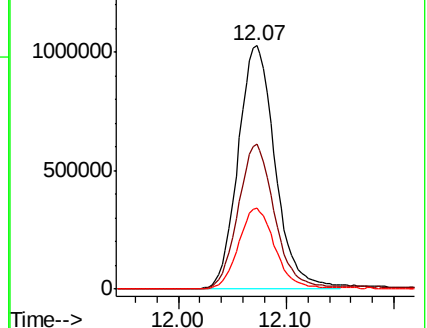
119 33.9 26.9 40.3

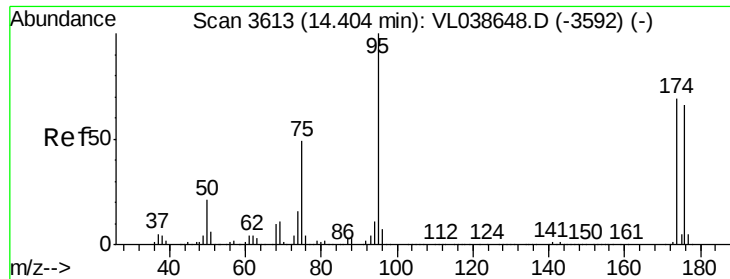


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 9.533 ppbv

RT: 14.40 Instrument:

Delta R.T MSVOA_L

Lab File: ClientSampleId :

SV1DL

Acq: 29 Mar 2022 2:37

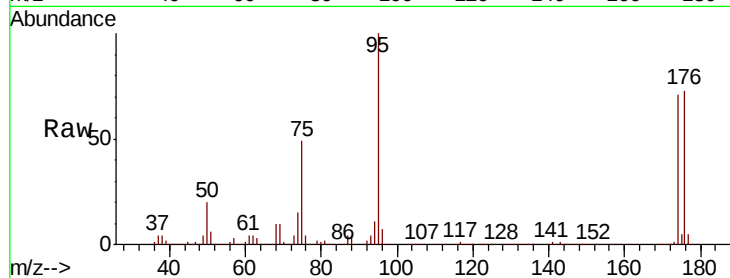
Tot Ion: 95 Resp: 1801198

Ion Ratio Lower Upper

95 100

174 76.6 56.1 84.1

175 5.5 4.2 6.2



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

