

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121621\
 Data File : VL038198.D
 Acq On : 16 Dec 2021 20:50
 Operator : SY/AP
 Sample : M5136-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 17 05:09:46 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Nov 18 13:16:09 2021
 QLast Update : Thu Nov 18 13:16:09 2021
 Response via : Initial Calibration

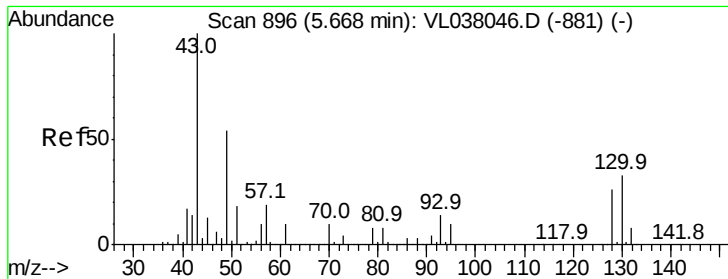
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	988178	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2464056	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2123673	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	1640995	10.71	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	107.10%

Target Compounds					Ovalue
3) Chlorodifluoromethane	3.00	51	26625	0.128 ppbv	96
4) Chloromethane	3.15	50	2605	0.037 ppbv	97
7) Chloroethane	3.57	64	4692	0.191 ppbv	88
9) Propene	3.03	41	32291	0.423 ppbv #	82
11) Trichlorofluoromethane	3.96	101	22974	0.148 ppbv	85
12) 1,1,2-Trichlorotrifluoroet	4.49	101	97338	0.886 ppbv	98
13) Ethanol	3.61	45	273144	36.983 ppbv	93
15) Acetone	3.86	43	297283	3.470 ppbv	92
17) tert-Butyl alcohol	3.98	59	16311	0.157 ppbv	99
18) 1,1-Dichloroethene	4.29	96	64205	1.275 ppbv	97
19) Isopropyl Alcohol	3.98	45	468564	7.569 ppbv #	97
20) Methylene Chloride	4.35	84	518406	10.803 ppbv	98
22) trans-1,2-Dichloroethene	4.89	96	5430	0.106 ppbv	85
24) 1,1-Dichloroethane	5.02	63	261417	2.531 ppbv	99
25) Ethyl Acetate	5.69	43	242359	0.851 ppbv #	83
26) Hexane	5.69	57	284188	2.071 ppbv #	50
32) 1,1,1-Trichloroethane	6.51	97	2591119	12.622 ppbv	97
34) 2-Butanone	5.26	43	35268	0.355 ppbv	94
36) Benzene	6.90	78	11256	0.046 ppbv #	86
37) 1,2-Dichloroethane	6.51	62	97968	0.825 ppbv #	1
39) 1,2-Dichloropropane	7.18	63	668917	7.095 ppbv #	28
53) Toluene	9.81	91	56693	0.200 ppbv	96
58) Ethyl Benzene	12.71	91	28978	0.083 ppbv	93
59) m/p-Xylene	13.00	91	31694	0.107 ppbv #	29
60) o-Xylene	13.69	91	24027	0.088 ppbv #	51
66) Benzyl Chloride	16.99	91	932	0.054 ppbv #	63
74) 1,2,4-Trimethylbenzene	16.76	105	31528	0.105 ppbv #	79
75) 1,3-Dichlorobenzene	17.00	146	21505	0.131 ppbv #	1

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 20:50

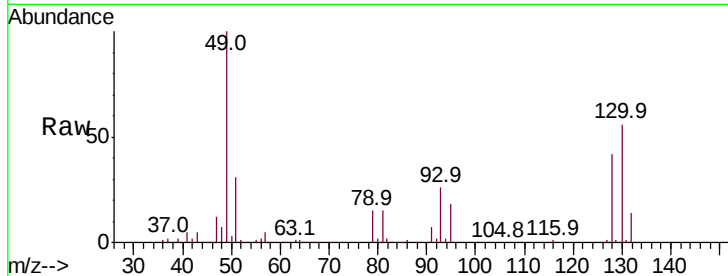
Tot Ion: 49 Resp: 988178

Ion Ratio Lower Upper

49 100

128 45.7 26.5 79.5

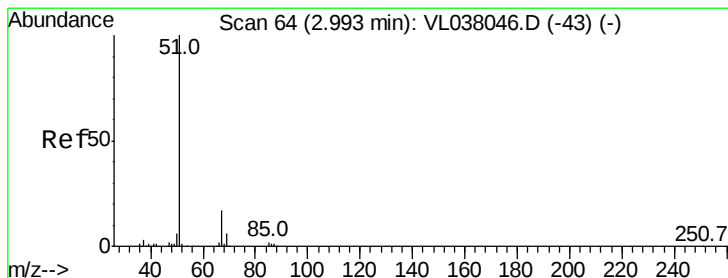
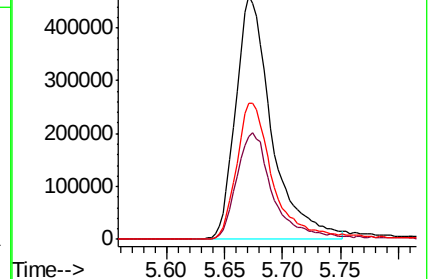
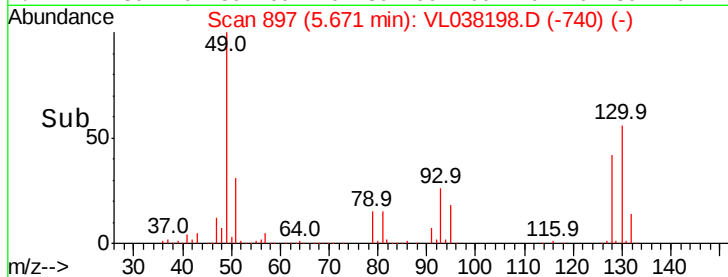
130 58.4 32.5 97.4



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



#3

Chlorodifluoromethane

Concen: 0.128 ppbv

RT: 3.00 min Scan# 66

Delta R.T. 0.01 min

Lab File: VL038198.D

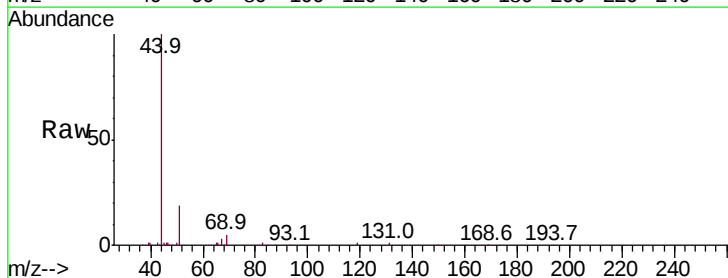
Acq: 16 Dec 2021 20:50

Tgt Ion: 51 Resp: 26625

Ion Ratio Lower Upper

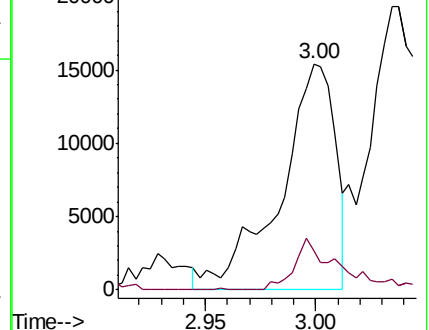
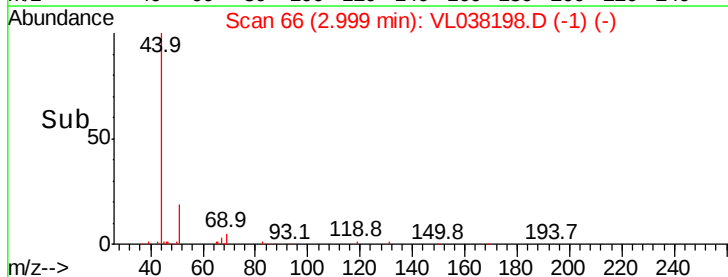
51 100

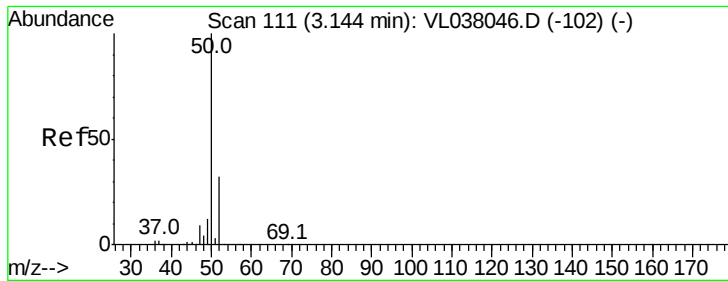
67 19.0 13.8 20.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.037 ppbv

RT: 3.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

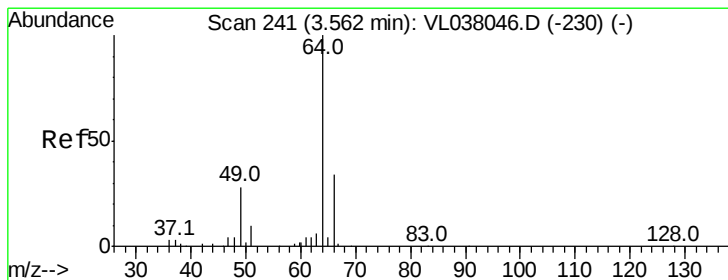
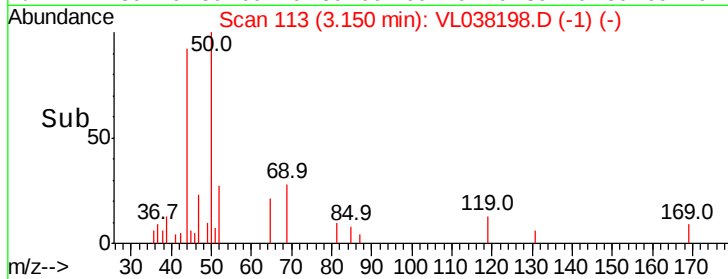
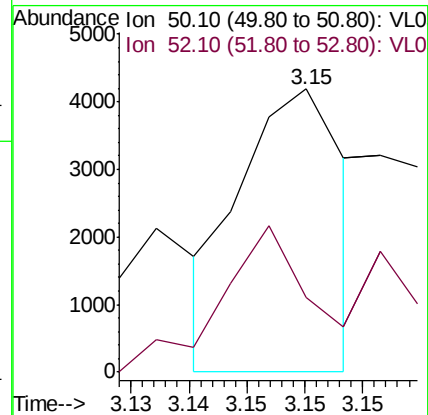
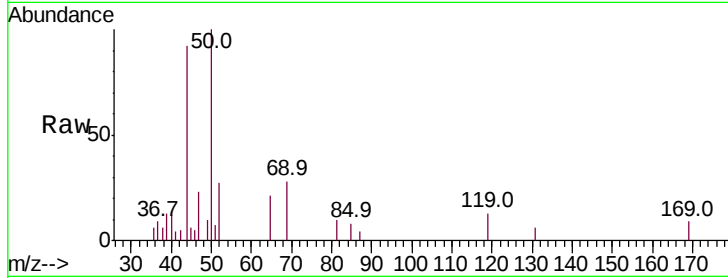
Acq: 16 Dec 2021 20:50

Tot Ion: 50 Resp: 2605

Ion Ratio Lower Upper

50 100

52 30.2 25.4 38.0



#7

Chloroethane

Concen: 0.191 ppbv

RT: 3.57 min Scan# 243

Delta R.T. 0.01 min

Lab File: VL038198.D

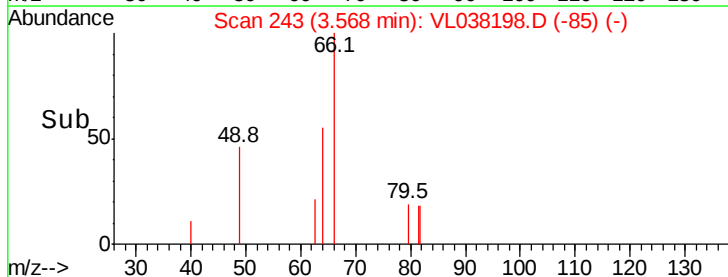
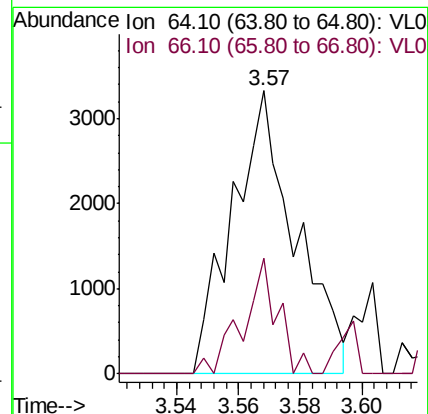
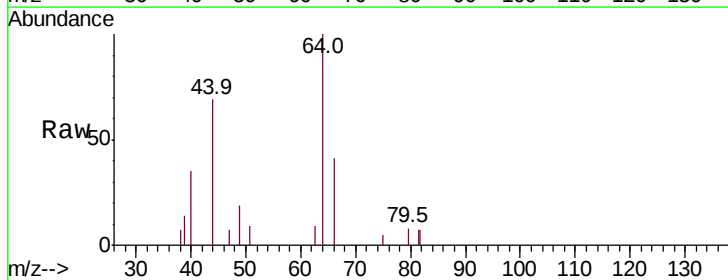
Acq: 16 Dec 2021 20:50

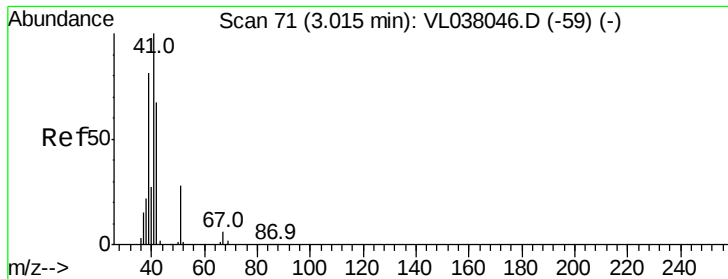
Tgt Ion: 64 Resp: 4692

Ion Ratio Lower Upper

64 100

66 40.6 27.2 40.8





#9

Propene

Concen: 0.423 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

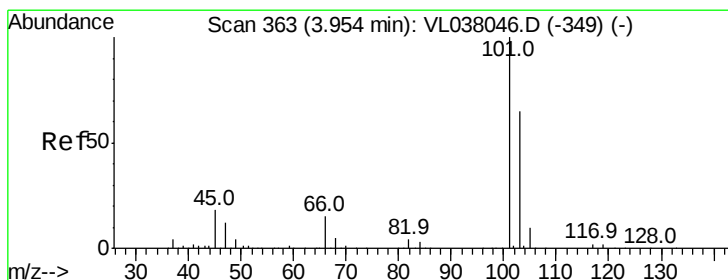
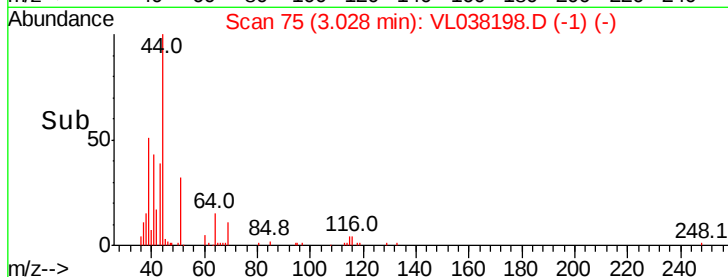
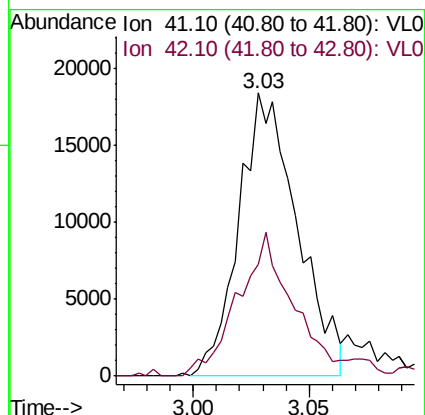
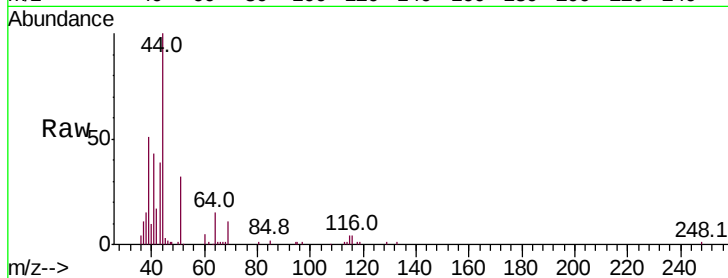
Acq: 16 Dec 2021 20:50

Tot Ion: 41 Resp: 32291

Ion Ratio Lower Upper

41 100

42 53.2 53.8 80.8#



#11

Trichlorofluoromethane

Concen: 0.148 ppbv

RT: 3.96 min Scan# 364

Delta R.T. 0.00 min

Lab File: VL038198.D

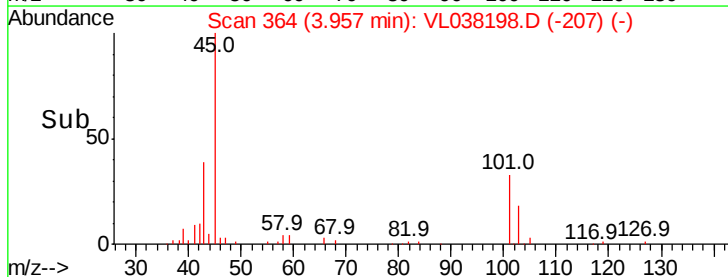
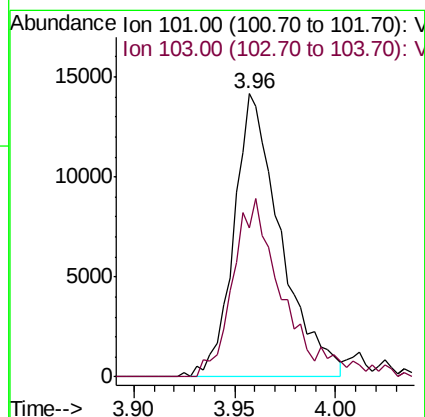
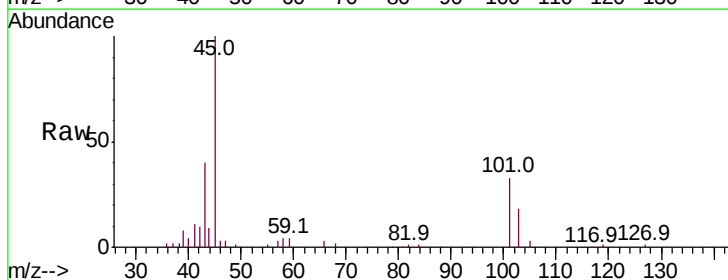
Acq: 16 Dec 2021 20:50

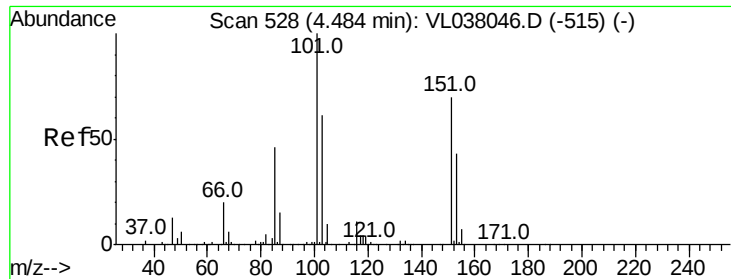
Tgt Ion: 101 Resp: 22974

Ion Ratio Lower Upper

101 100

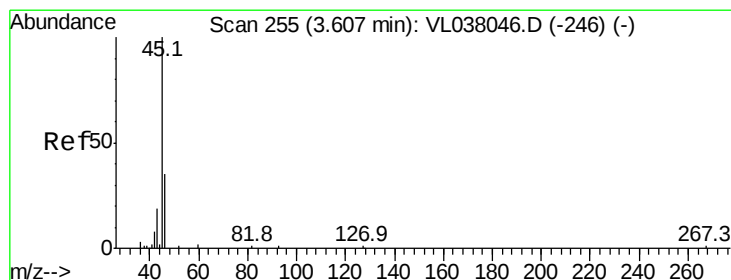
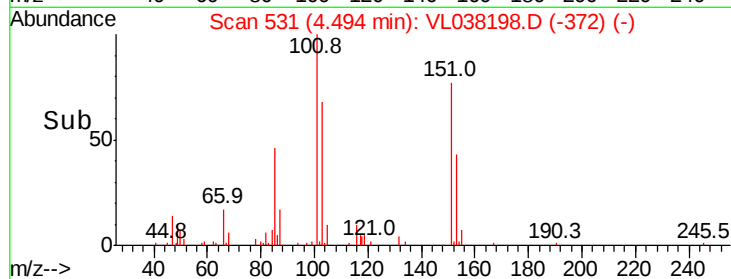
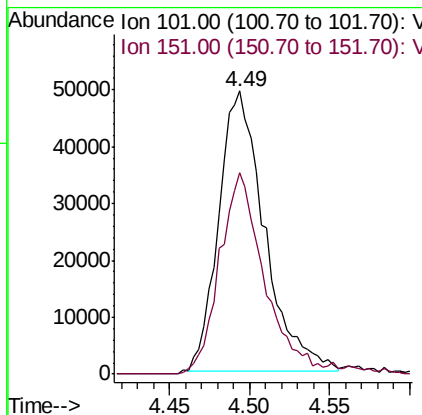
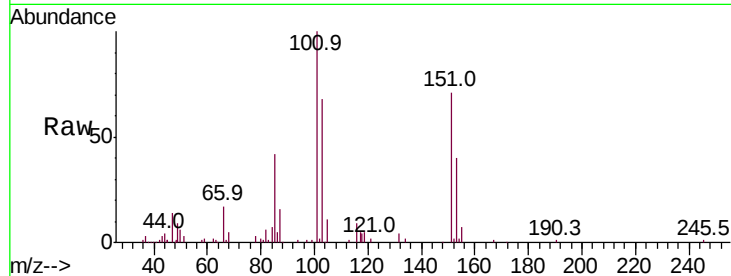
103 52.7 51.8 77.6





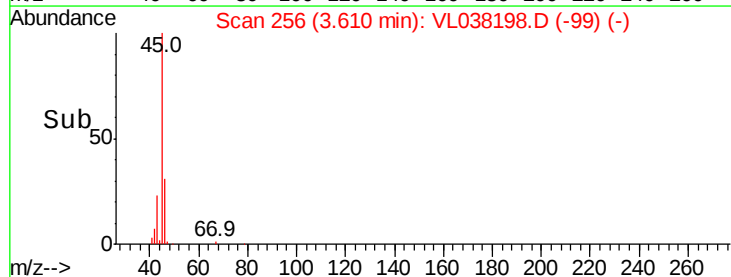
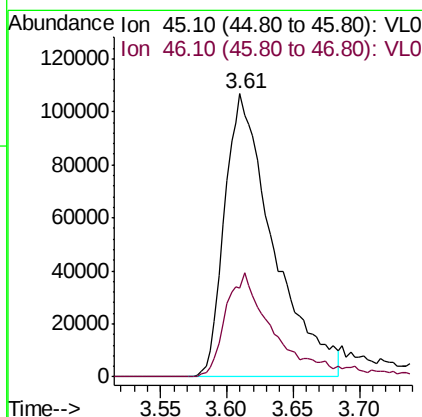
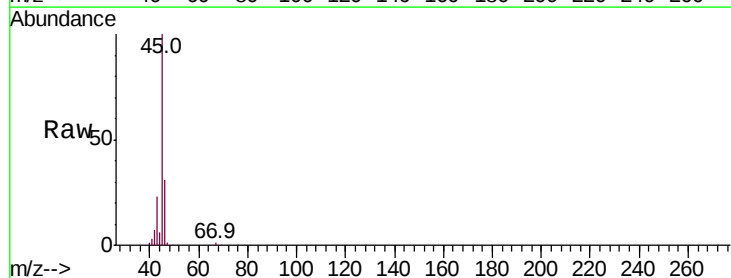
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.886 ppbv
 RT: 4.49
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Dec 2021 20:50

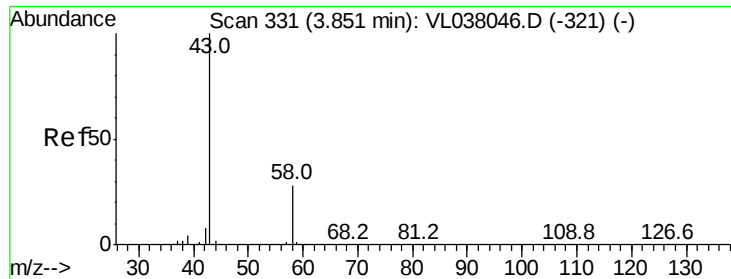
Tot Ion:101 Resp: 97338
 Ion Ratio Lower Upper
 101 100
 151 72.2 59.0 88.4



#13
 Ethanol
 Concen: 36.983 ppbv
 RT: 3.61 min Scan# 256
 Delta R.T. 0.00 min
 Lab File: VL038198.D
 Acq: 16 Dec 2021 20:50

Tgt Ion: 45 Resp: 273144
 Ion Ratio Lower Upper
 45 100
 46 39.4 17.6 70.2





#15

Acetone

Concen: 3.470 ppbv

RT: 3.86 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

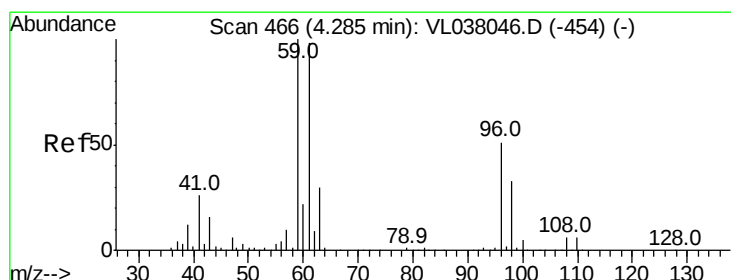
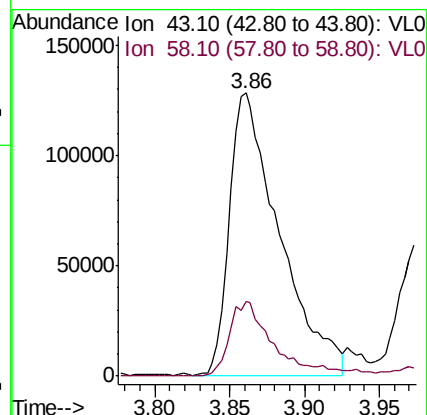
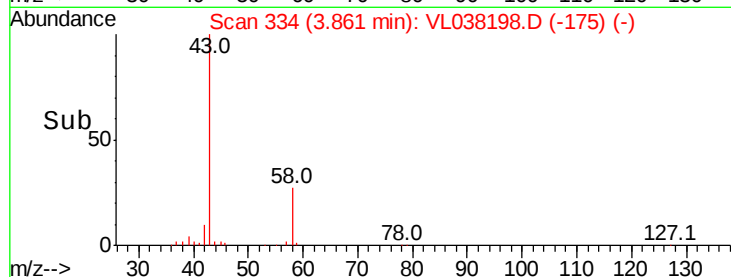
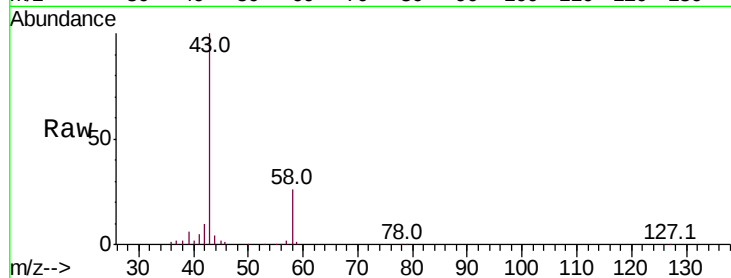
Acq: 16 Dec 2021 20:50

Tot Ion: 43 Resp: 297283

Ion Ratio Lower Upper

43 100

58 23.7 22.4 33.6



#17

tert-Butyl alcohol

Concen: 0.157 ppbv

RT: 3.98 min Scan# 371

Delta R.T. -0.31 min

Lab File: VL038198.D

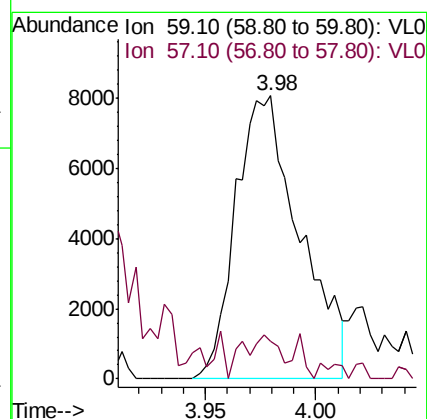
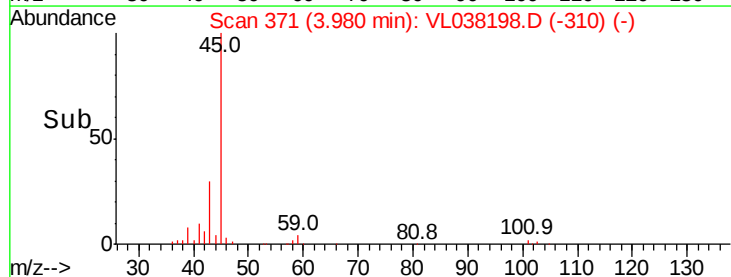
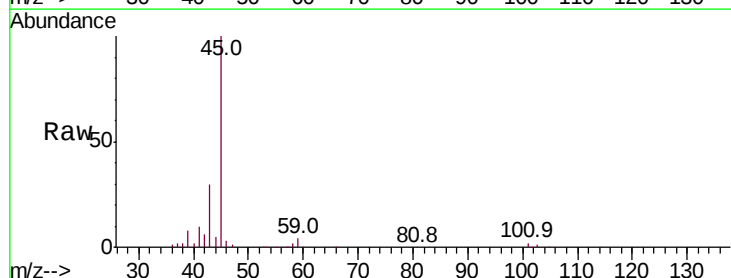
Acq: 16 Dec 2021 20:50

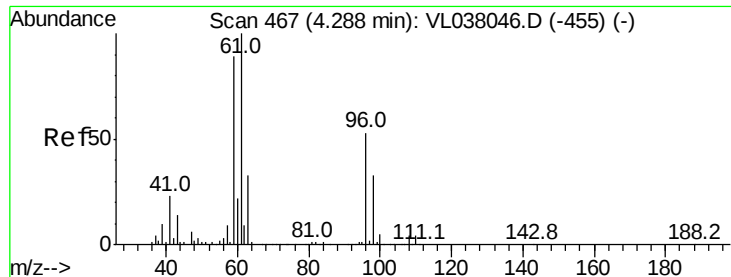
Tgt Ion: 59 Resp: 16311

Ion Ratio Lower Upper

59 100

57 11.3 8.6 13.0





#18

1,1-Dichloroethene

Concen: 1.275 ppbv

RT: 4.29 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 20:50

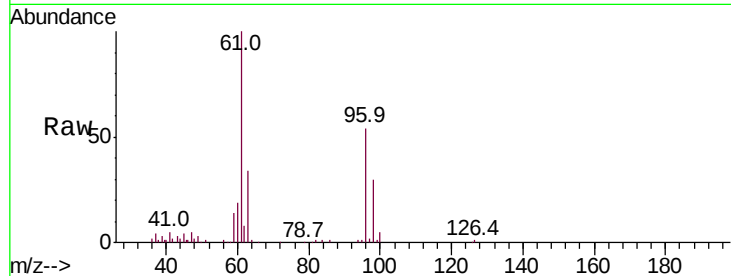
Tot Ion: 96 Resp: 64205

Ion Ratio Lower Upper

96 100

61 185.3 149.8 224.8

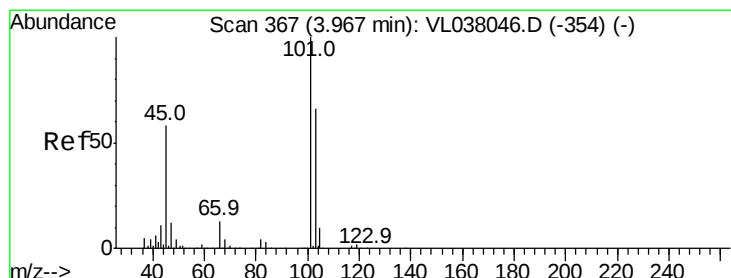
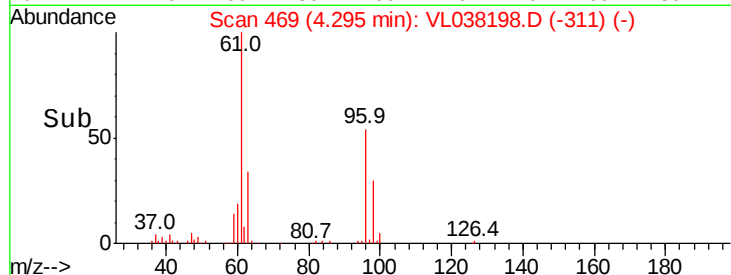
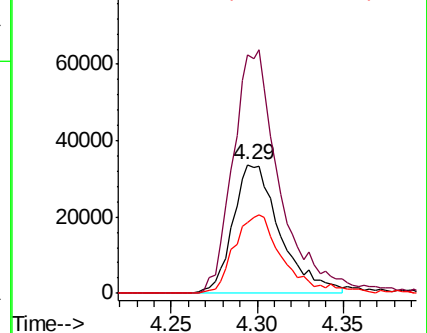
98 55.3 50.2 75.2



Abundance Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0



#19

Isopropyl Alcohol

Concen: 7.569 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.01 min

Lab File: VL038198.D

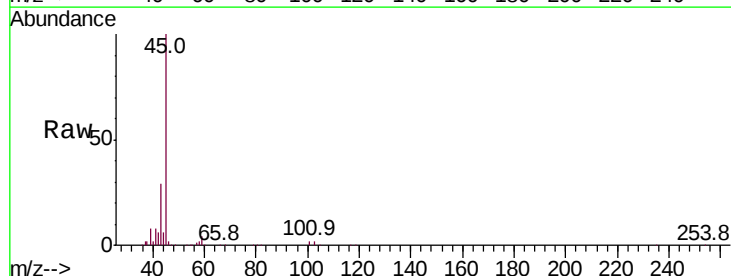
Acq: 16 Dec 2021 20:50

Tgt Ion: 45 Resp: 468564

Ion Ratio Lower Upper

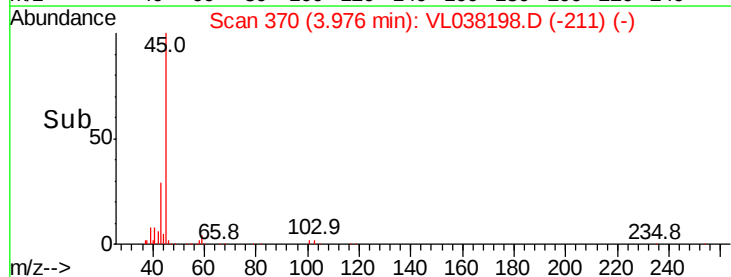
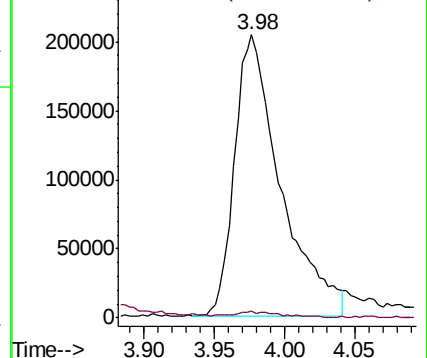
45 100

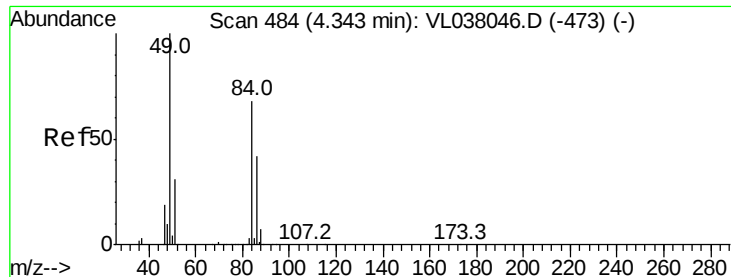
58 2.9 1.4 2.0#



Abundance Ion 45.10 (44.80 to 45.80): VL0

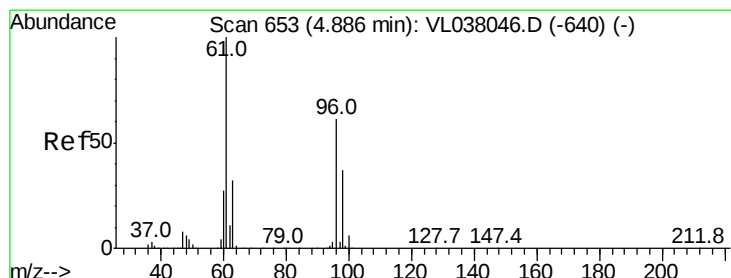
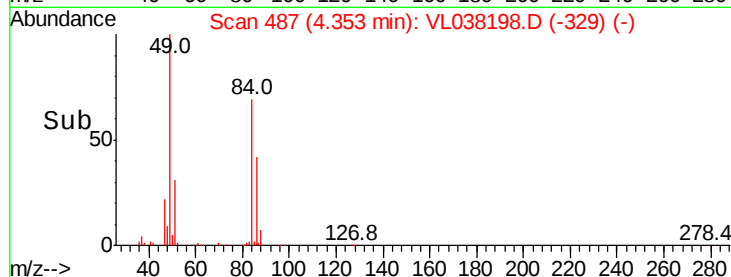
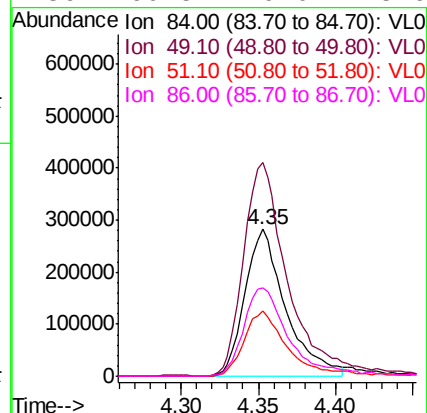
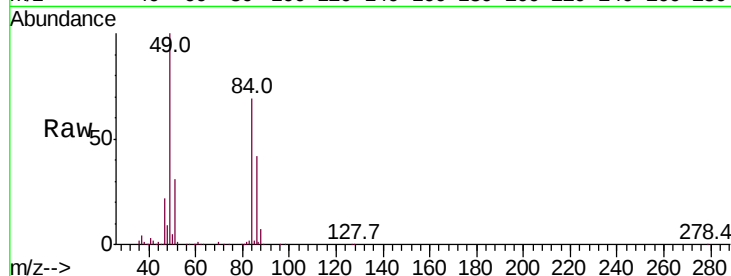
Ion 58.10 (57.80 to 58.80): VL0





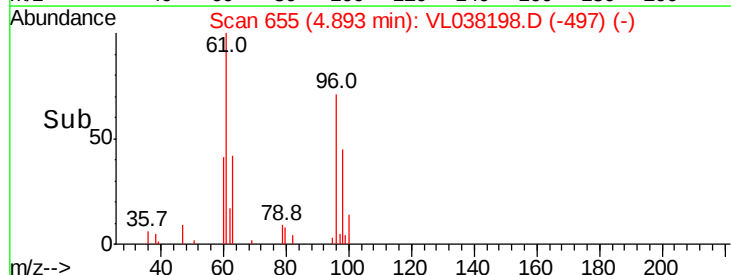
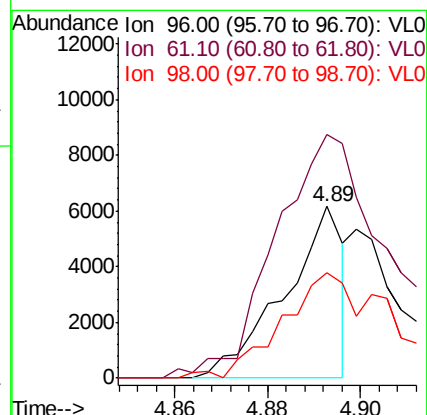
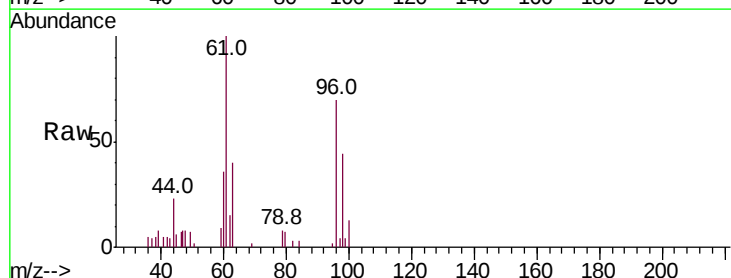
#20
Methylene Chloride
Concen: 10.803 ppbv
RT: 4.35 Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 20:50

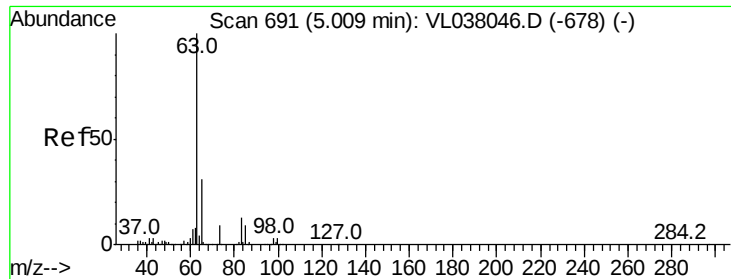
Tot Ion:	84	Resp:	518406
Ion	Ratio	Lower	Upper
84	100		
49	144.9	118.2	177.2
51	44.3	36.8	55.2
86	60.5	49.0	73.6



#22
trans-1,2-Dichloroethene
Concen: 0.106 ppbv
RT: 4.89 min Scan# 655
Delta R.T. 0.01 min
Lab File: VL038198.D
Acq: 16 Dec 2021 20:50

Tgt Ion:	96	Resp:	5430
Ion	Ratio	Lower	Upper
96	100		
61	138.7	131.6	197.4
98	58.2	48.4	72.6





#24

1,1-Dichloroethane

Concen: 2.531 ppbv

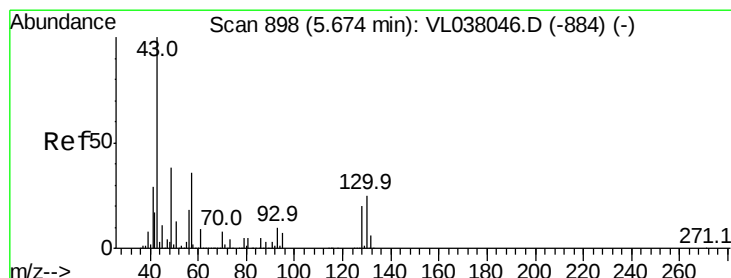
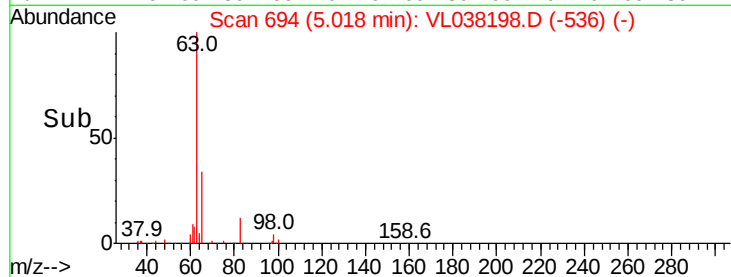
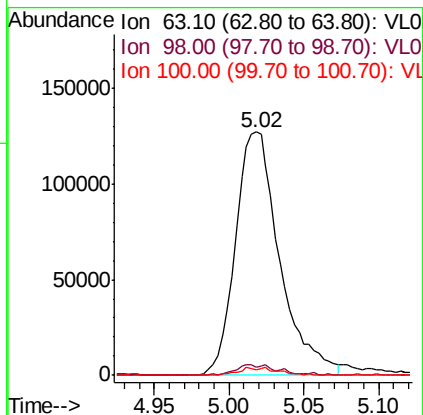
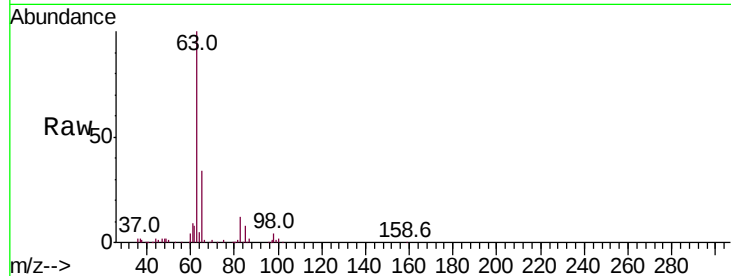
RT: 5.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 20:50

Tot Ion:	63	Resp:	261417
Ion	Ratio	Lower	Upper
63	100		
98	3.3	1.8	5.4
100	2.5	1.4	4.0



#25

Ethyl Acetate

Concen: 0.851 ppbv

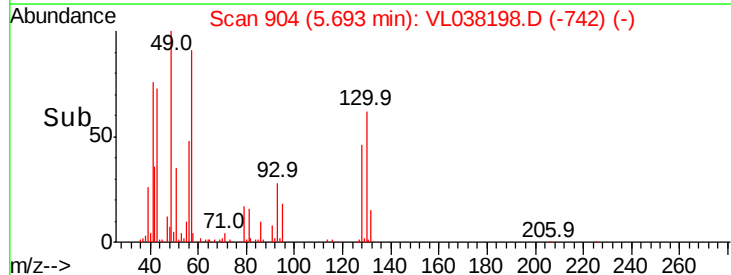
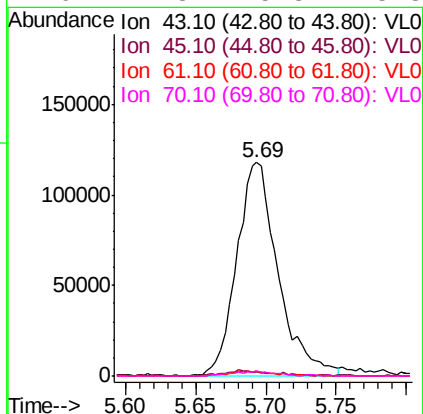
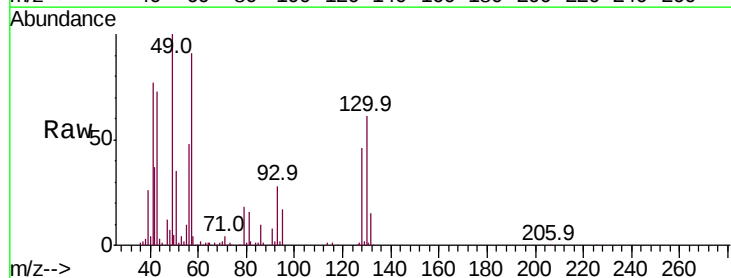
RT: 5.69 min Scan# 904

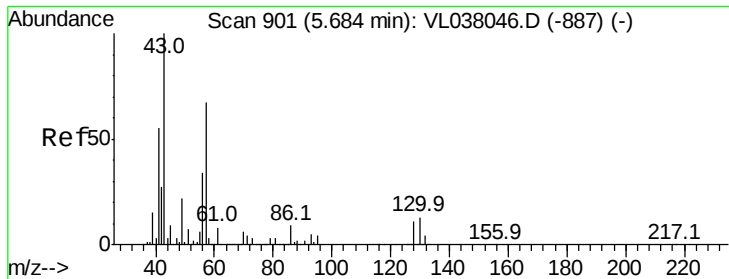
Delta R.T. 0.02 min

Lab File: VL038198.D

Acq: 16 Dec 2021 20:50

Tgt Ion:	43	Resp:	242359
Ion	Ratio	Lower	Upper
43	100		
45	3.2	7.9	11.9#
61	2.8	7.8	11.6#
70	2.3	5.8	8.8#





#26

Hexane

Concen: 2.071 ppbv

RT: 5.69 Instrument :

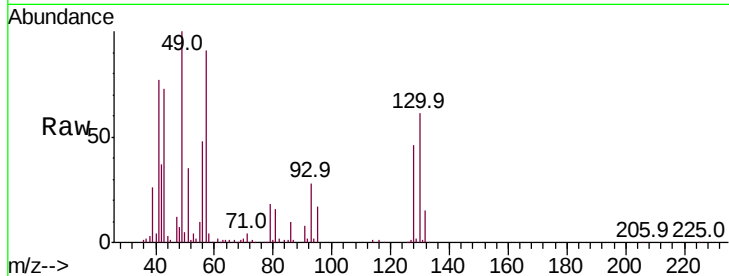
Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 16 Dec 2021 20:50

Tot Ion: 57 Resp: 284188

Ion	Ratio	Lower	Upper
57	100		
41	95.5	71.4	107.2
43	89.0	174.6	261.8#
56	54.5	43.2	64.8

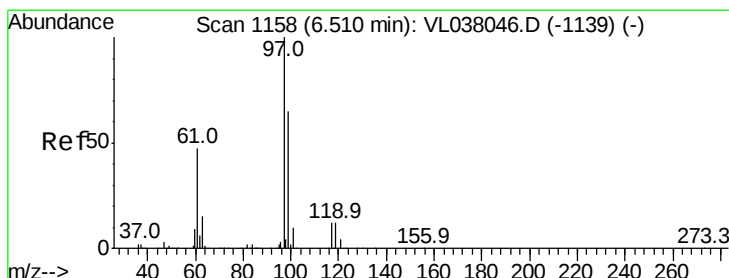
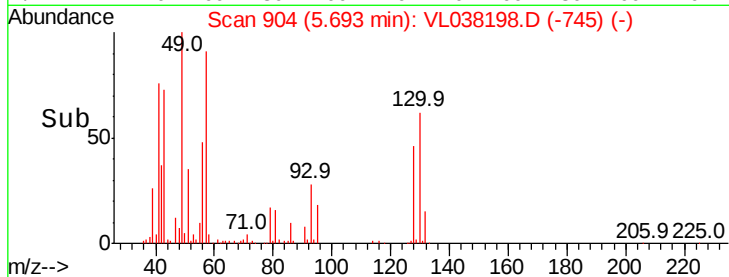
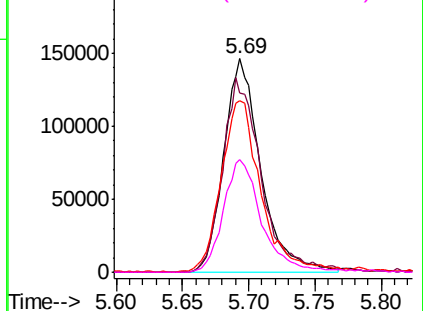


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#32

1,1,1-Trichloroethane

Concen: 12.622 ppbv

RT: 6.51 min Scan# 1159

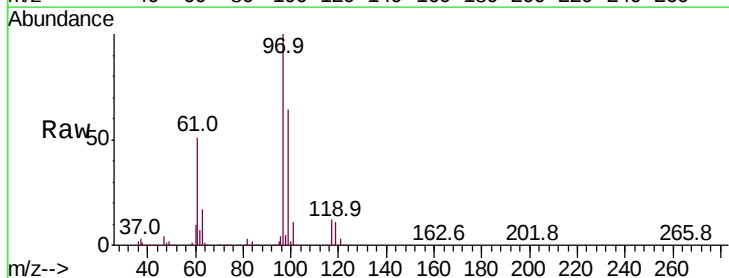
Delta R.T. 0.00 min

Lab File: VL038198.D

Acq: 16 Dec 2021 20:50

Tgt Ion: 97 Resp: 2591119

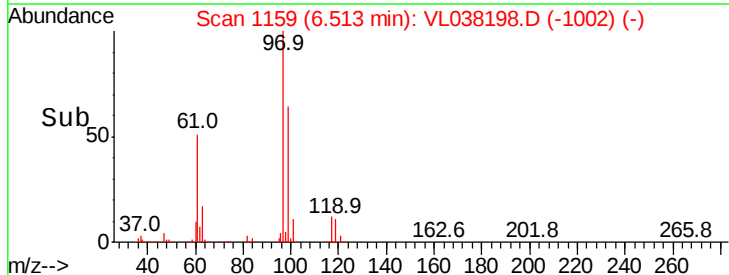
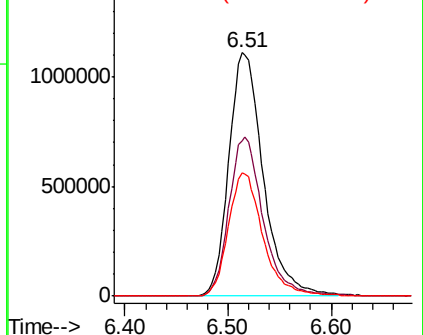
Ion	Ratio	Lower	Upper
97	100		
99	65.1	52.2	78.4
61	50.9	37.7	56.5

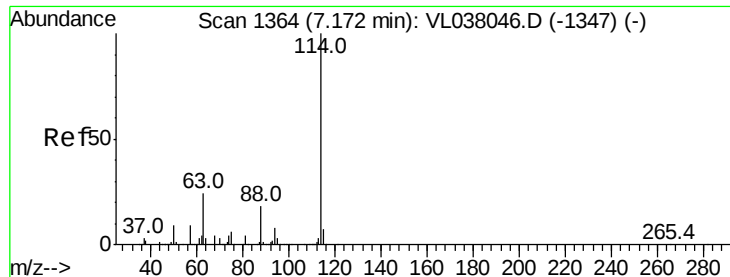


Abundance Ion 97.00 (96.70 to 97.70): VL0

Ion 99.00 (98.70 to 99.70): VL0

Ion 61.10 (60.80 to 61.80): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 20:50

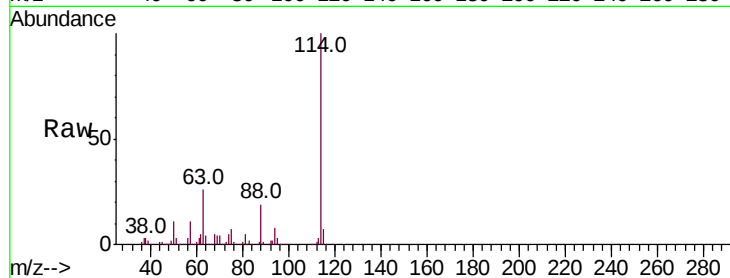
Tot Ion:114 Resp: 2464056

Ion Ratio Lower Upper

114 100

63 27.8 19.7 29.5

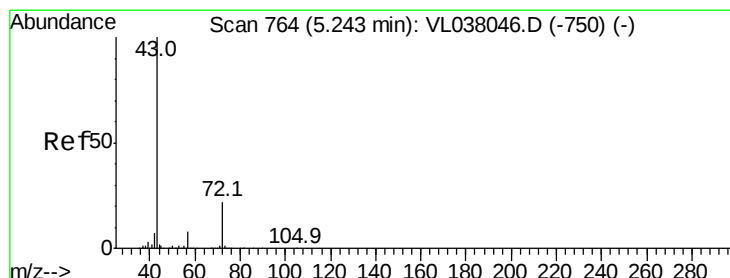
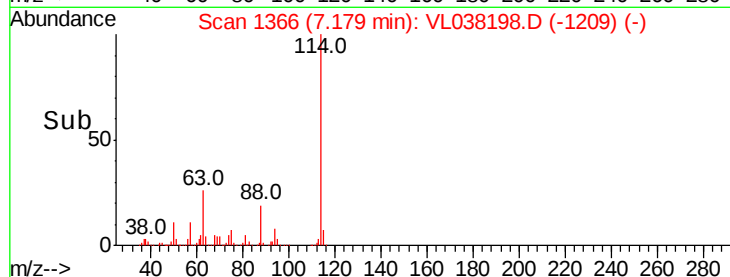
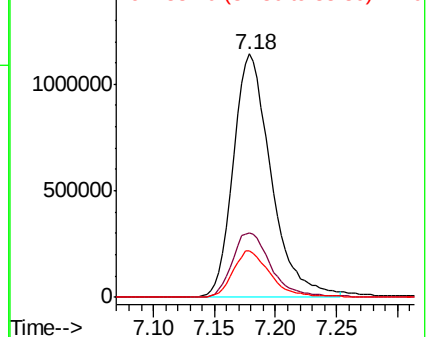
88 19.2 14.4 21.6



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: 0.355 ppbv

RT: 5.26 min Scan# 768

Delta R.T. 0.01 min

Lab File: VL038198.D

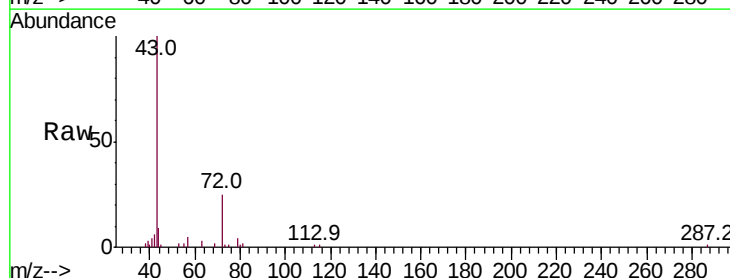
Acq: 16 Dec 2021 20:50

Tgt Ion: 43 Resp: 35268

Ion Ratio Lower Upper

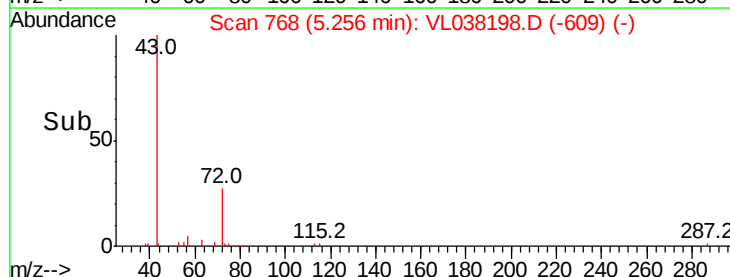
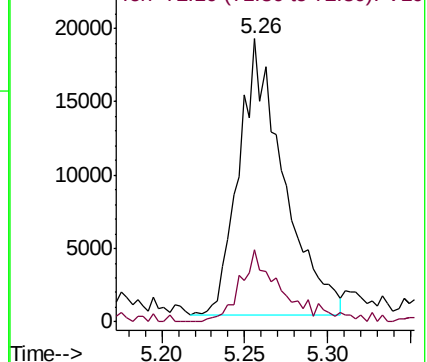
43 100

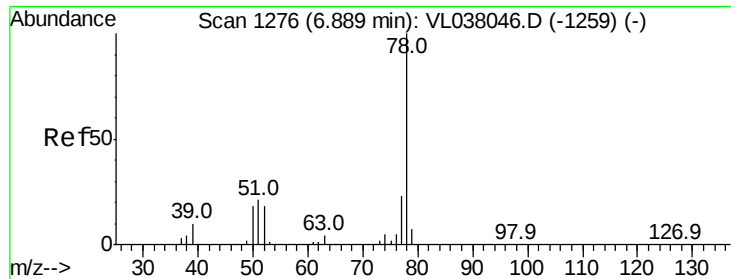
72 26.2 18.8 28.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

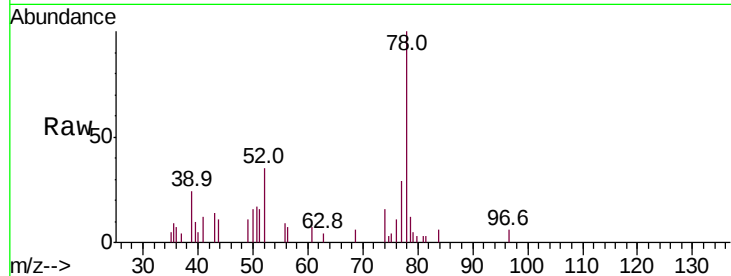
Ion 72.10 (71.80 to 72.80): VL0





#36
Benzene
Concen: 0.046 ppbv
RT: 6.90
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 20:50

Tot Ion	78	Resp	11256
Ion Ratio	Lower	Upper	
78	100		
77	21.6	18.2	27.4
50	31.1	14.7	22.1#

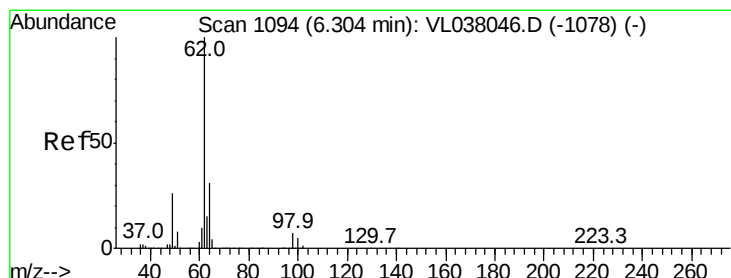
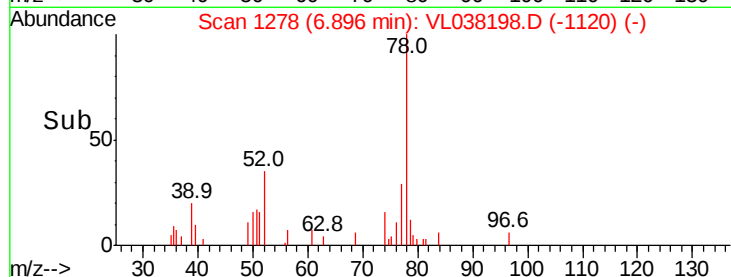
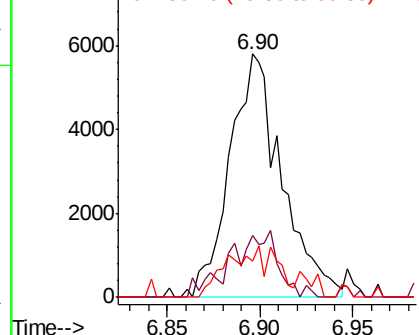


Abundance

Ion 78.10 (77.80 to 78.80): VL0

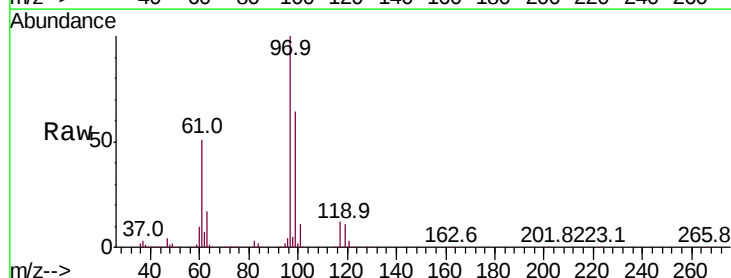
Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#37
1,2-Dichloroethane
Concen: 0.825 ppbv
RT: 6.51 min Scan# 1159
Delta R.T.: 0.21 min
Lab File: VL038198.D
Acq: 16 Dec 2021 20:50

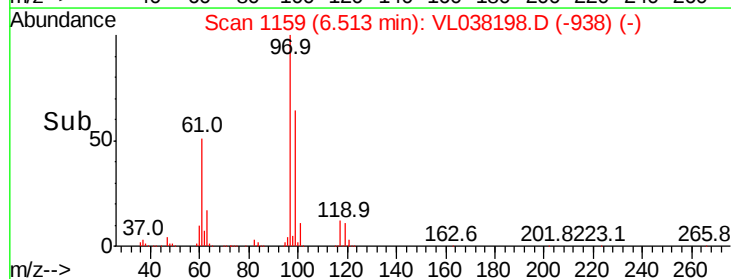
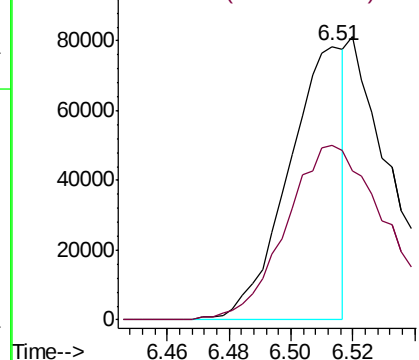
Tgt Ion	62	Resp	97968
Ion Ratio	Lower	Upper	
62	100		
98	121.0	5.8	8.6#

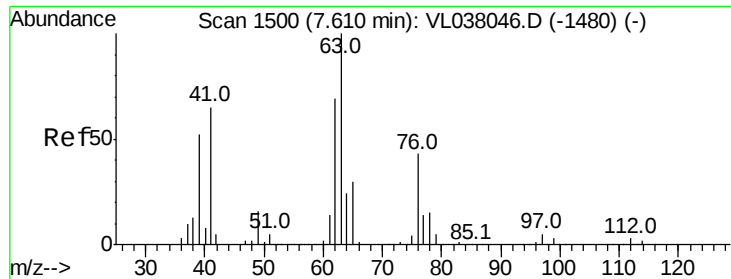


Abundance

Ion 62.10 (61.80 to 62.80): VL0

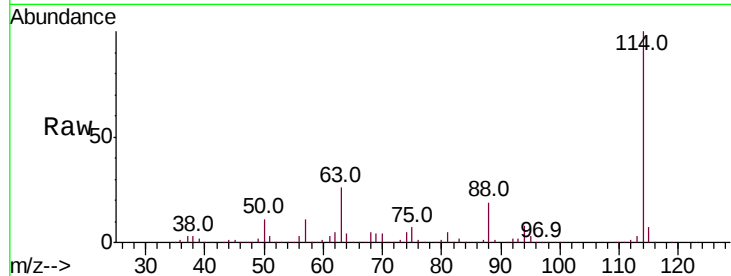
Ion 98.00 (97.70 to 98.70): VL0



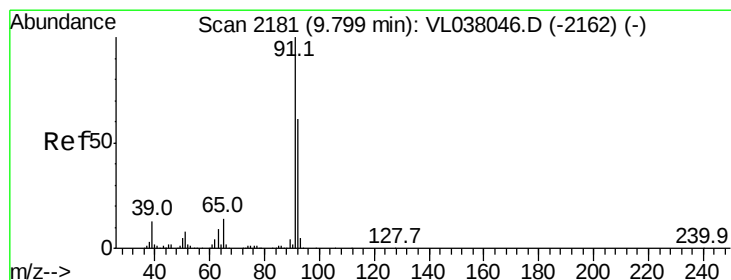
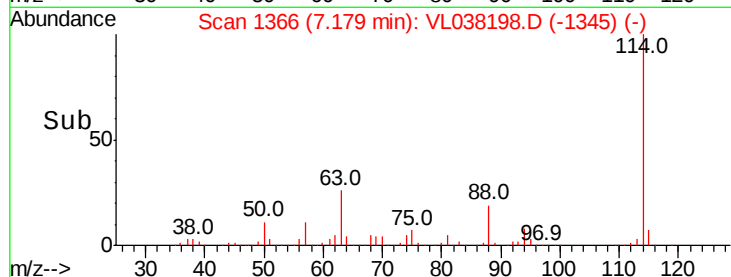
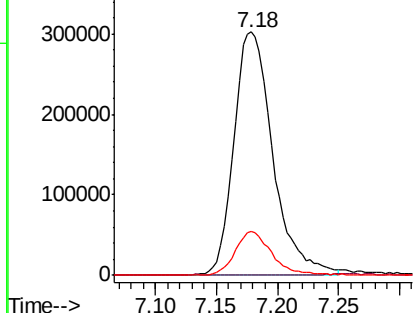


#39
 1,2-Dichloropropane
 Concen: 7.095 ppbv
 RT: 7.18
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Dec 2021 20:50

Tot Ion	63	Resp	668917
Ion	Ratio	Lower	Upper
63	100		
41	0.0	52.3	78.5#
62	18.0	55.1	82.7#

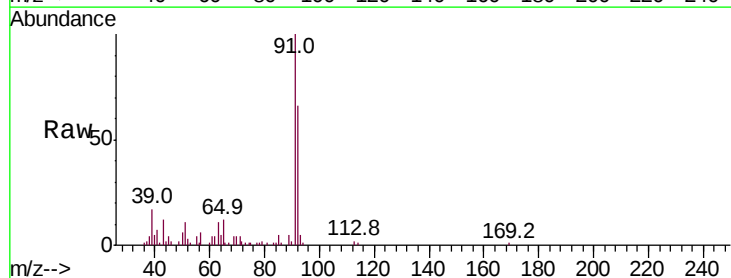


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

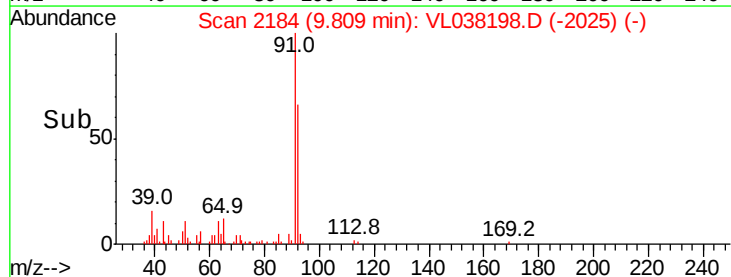
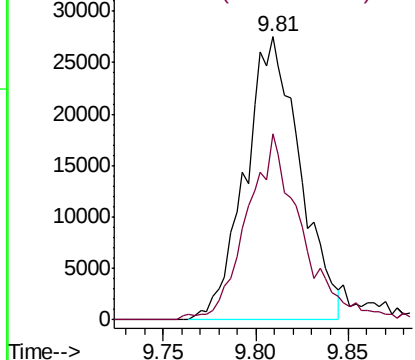


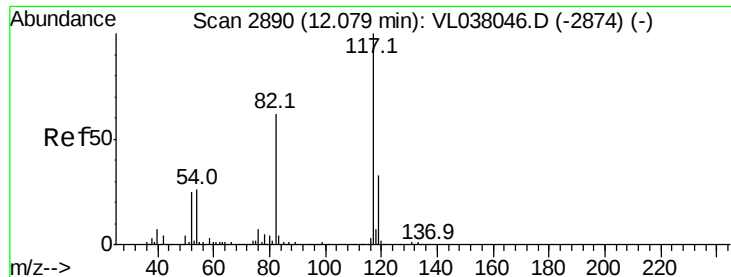
#53
 Toluene
 Concen: 0.200 ppbv
 RT: 9.81 min Scan# 2184
 Delta R.T.: 0.01 min
 Lab File: VL038198.D
 Acq: 16 Dec 2021 20:50

Tgt Ion	91	Resp	56693
Ion	Ratio	Lower	Upper
91	100		
92	65.3	49.7	74.5



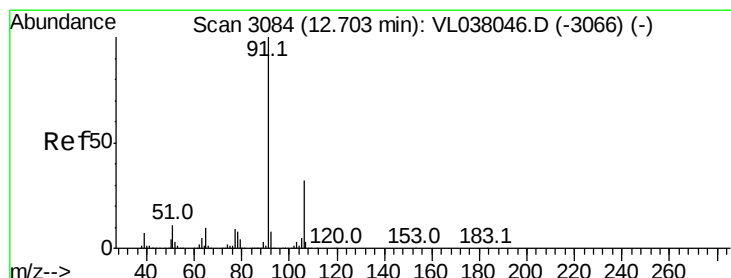
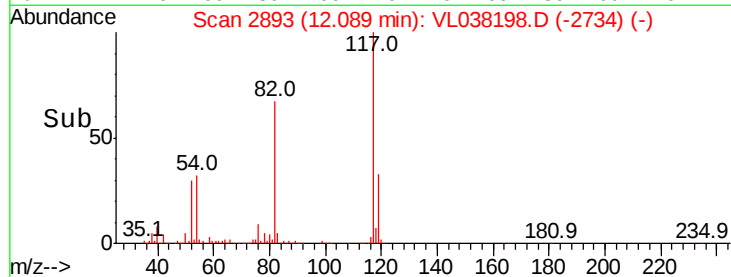
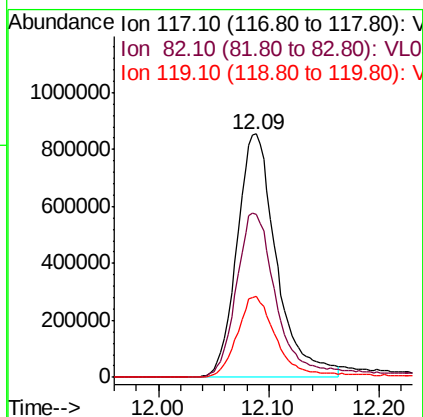
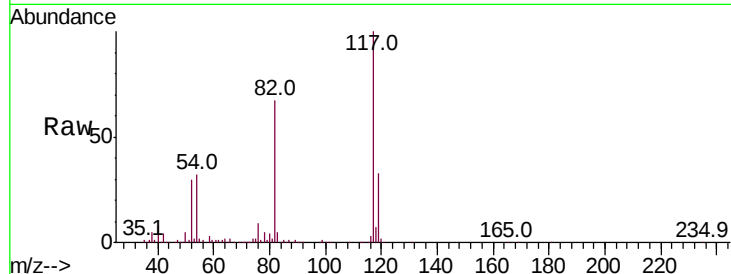
Abundance Ion 91.10 (90.80 to 91.80): VL0
 Ion 92.10 (91.80 to 92.80): VL0





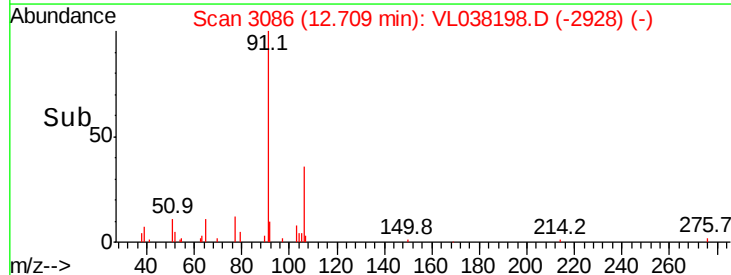
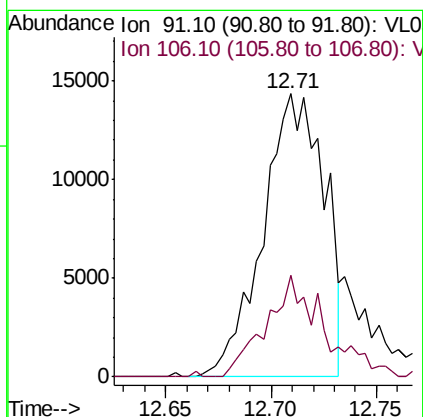
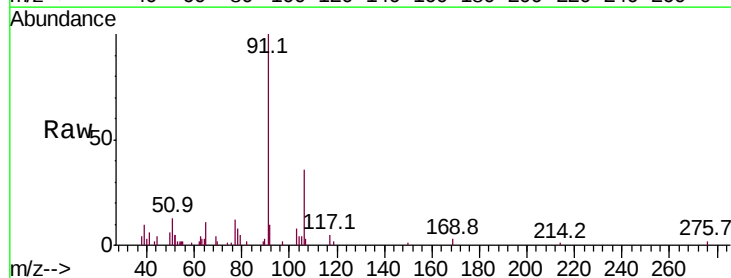
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 20:50

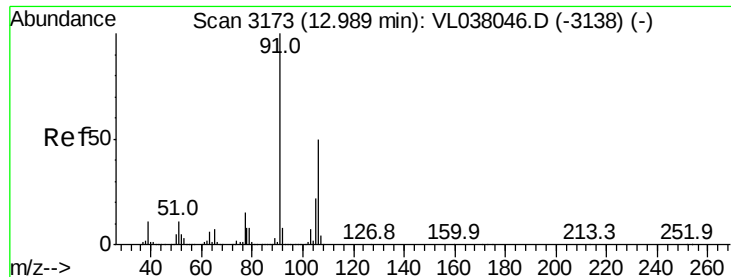
Tot Ion: 117 Resp: 2123673
Ion Ratio Lower Upper
117 100
82 72.8 52.8 79.2
119 35.3 26.8 40.2



#58
Ethyl Benzene
Concen: 0.083 ppbv
RT: 12.71 min Scan# 3086
Delta R.T.: 0.01 min
Lab File: VL038198.D
Acq: 16 Dec 2021 20:50

Tgt Ion: 91 Resp: 28978
Ion Ratio Lower Upper
91 100
106 36.0 25.8 38.6





#59

m/p-Xylene

Concen: 0.107 ppbv

RT: 13.00

Delta R.T. MSVOA_1

Lab File:

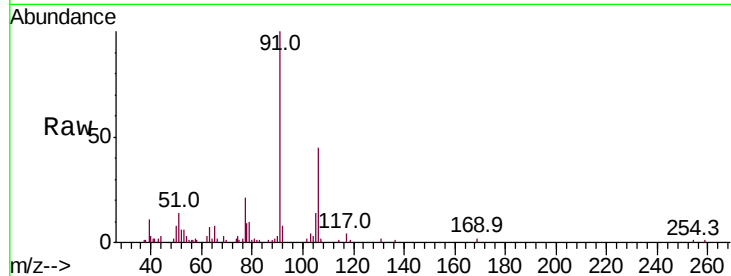
Acq: 16 Dec 2021 20:50

Tot Ion: 91 Resp: 31694

Ion Ratio Lower Upper

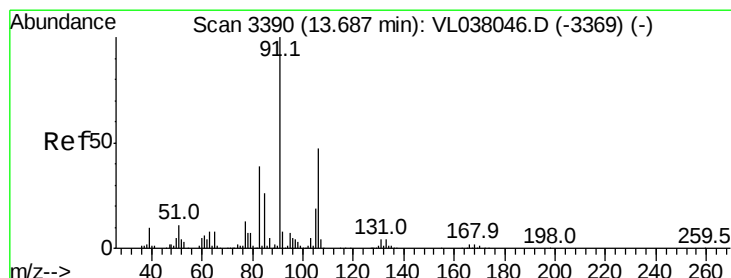
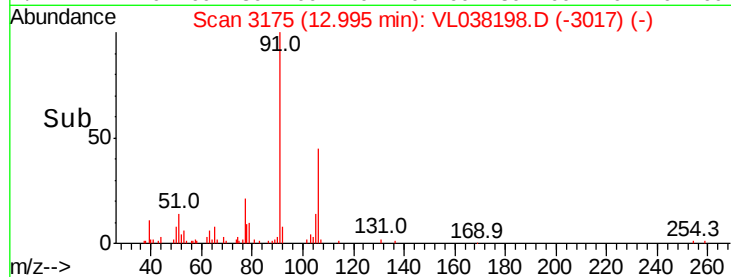
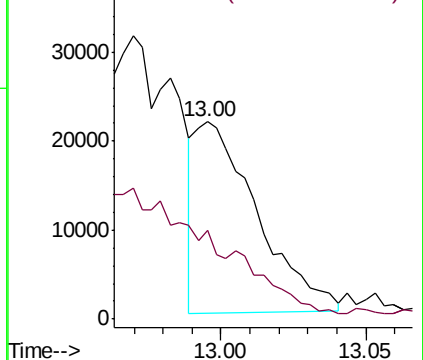
91 100

106 0.0 38.1 57.1#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#60

o-Xylene

Concen: 0.088 ppbv

RT: 13.69 min Scan# 3392

Delta R.T. 0.01 min

Lab File: VL038198.D

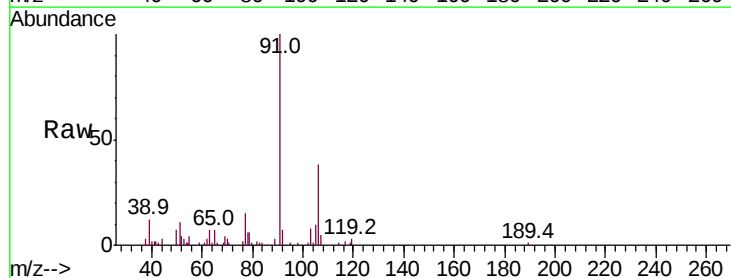
Acq: 16 Dec 2021 20:50

Tgt Ion: 91 Resp: 24027

Ion Ratio Lower Upper

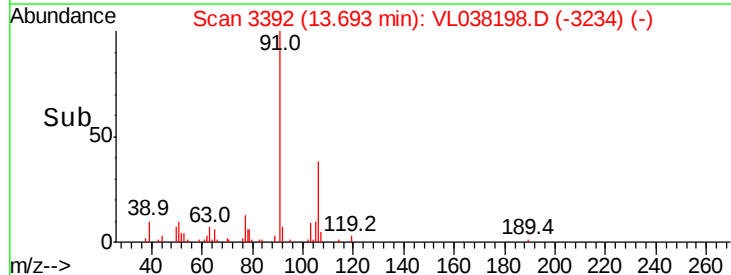
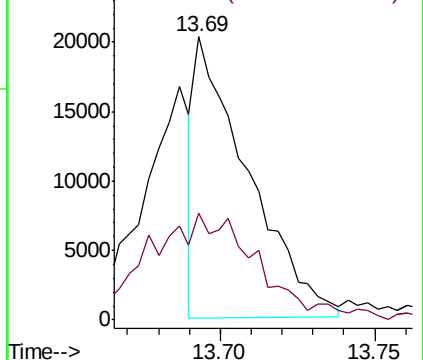
91 100

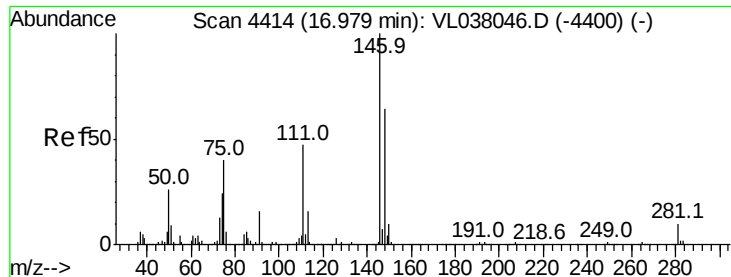
106 81.7 24.2 72.6#



Abundance Ion 91.10 (90.80 to 91.80): VL0

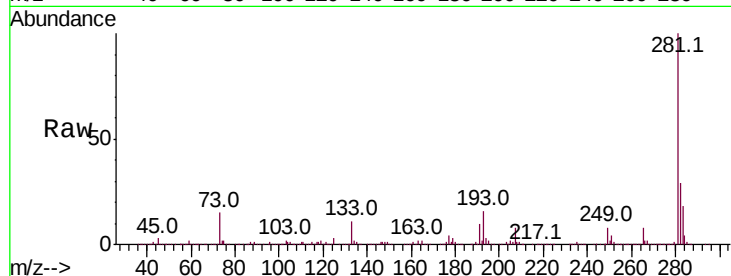
Ion 106.10 (105.80 to 106.80): V



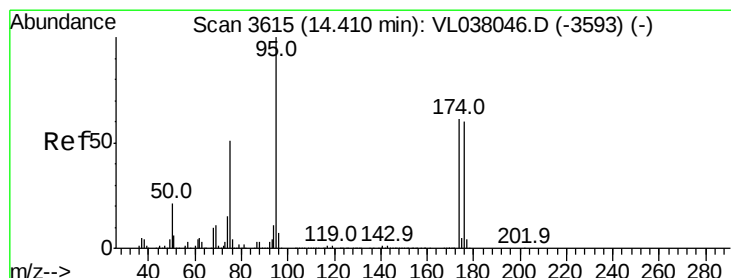
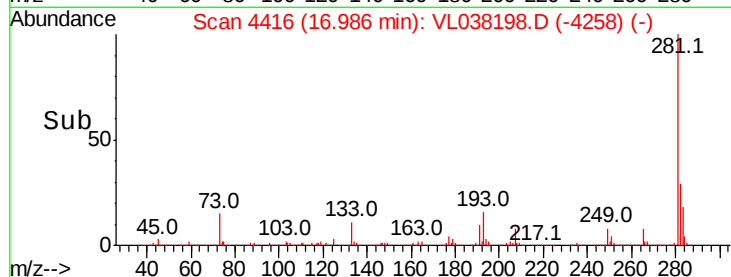
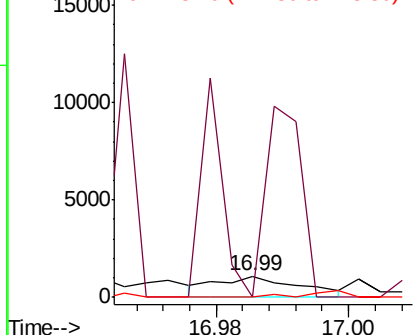


#66
Benzvl Chloride
Concen: 0.054 ppbv
RT: 16.99
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 20:50

Tot Ion	Ratio	Lower	Upper
91	100		
126	0.0	15.5	23.3#
128	0.0	5.6	8.4#

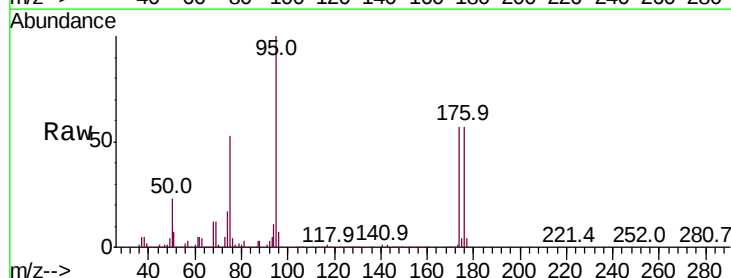


Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 126.10 (125.80 to 126.80): V
Ion 128.10 (127.80 to 128.80): V

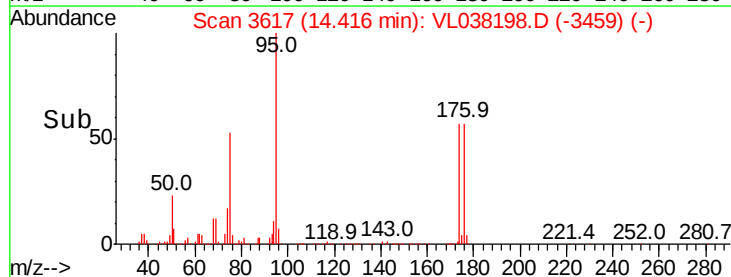
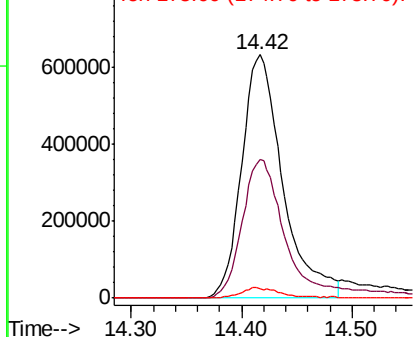


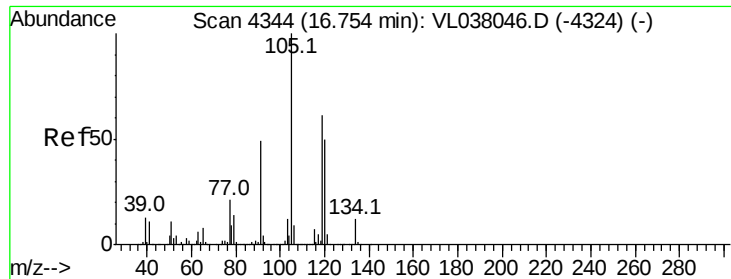
#68
1-Bromo-4-Fluorobenzene
Concen: 10.713 ppbv
RT: 14.42 min Scan# 3617
Delta R.T. 0.01 min
Lab File: VL038198.D
Acq: 16 Dec 2021 20:50

Tgt Ion	Ratio	Lower	Upper
95	100		
174	63.8	53.1	79.7
175	4.6	4.0	6.0



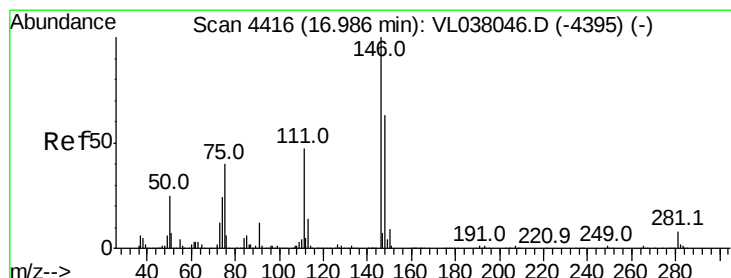
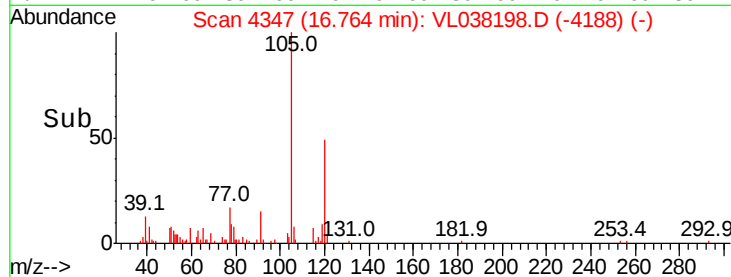
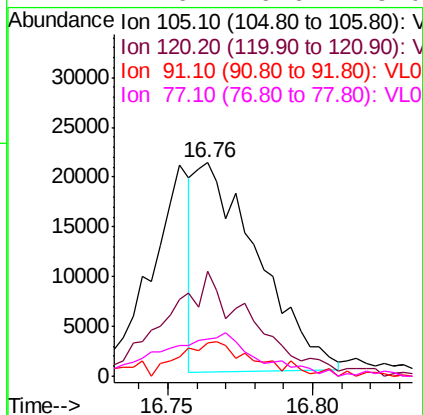
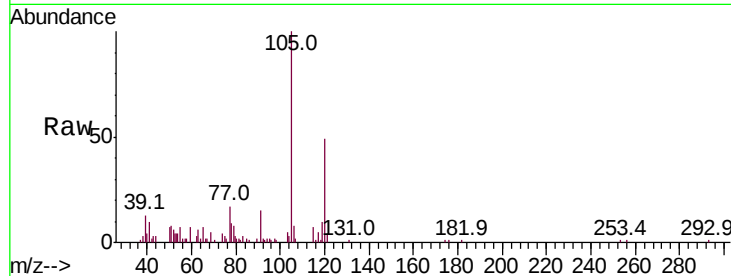
Abundance Ion 95.10 (94.80 to 95.80): VL0
Ion 174.00 (173.70 to 174.70): V
Ion 175.00 (174.70 to 175.70): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.105 ppbv
 RT: 16.76 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Dec 2021 20:50

Tot Ion:	105	Resp:	31528
Ion	Ratio	Lower	Upper
105	100		
120	49.8	40.1	60.1
91	16.4	39.8	59.8#
77	17.6	16.6	25.0



#75
 1,3-Dichlorobenzene
 Concen: 0.131 ppbv
 RT: 17.00 min Scan# 4421
 Delta R.T. 0.02 min
 Lab File: VL038198.D
 Acq: 16 Dec 2021 20:50

Tgt Ion:	146	Resp:	21505
Ion	Ratio	Lower	Upper
146	100		
111	0.0	23.5	70.6#
148	189.9	32.1	96.3#

