

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112921\
 Data File : VL038135.D
 Acq On : 29 Nov 2021 14:55
 Operator : SY/AP
 Sample : VIBLK
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 VIBLK

Quant Time: Nov 30 05:15:58 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	975881	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2619164	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2242851	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	1765621	10.91	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	109.10%

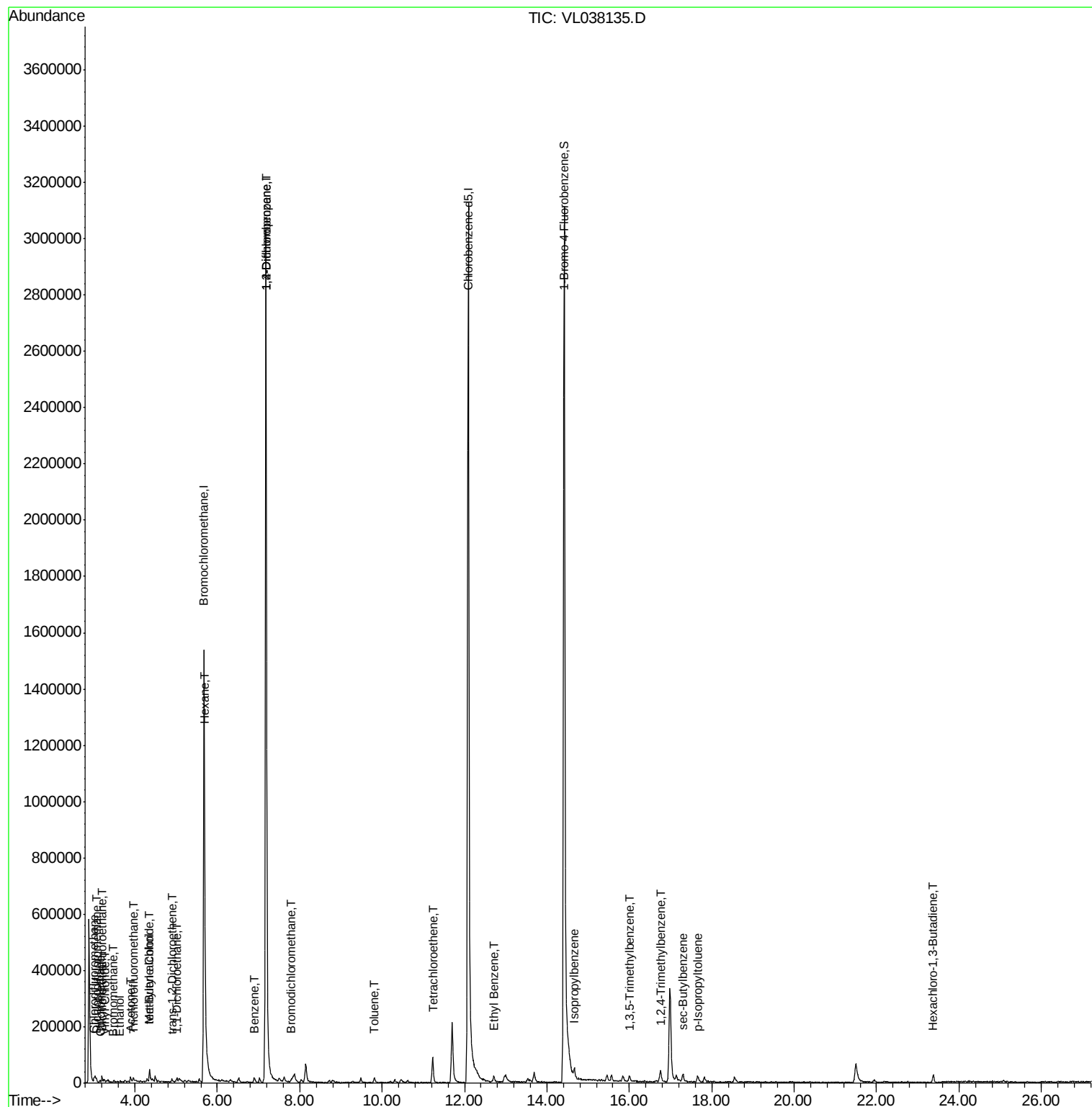
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.06	85	9503	0.059	ppbv	90
3) Chlorodifluoromethane	3.00	51	13273	0.065	ppbv	93
4) Chloromethane	3.15	50	2332	0.033	ppbv #	84
5) Vinyl Chloride	3.27	62	2099	0.031	ppbv #	40
6) Bromomethane	3.48	94	1119	0.031	ppbv #	30
8) Dichlorotetrafluoroethane	3.20	85	9615	0.060	ppbv	98
11) Trichlorofluoromethane	3.96	101	9575	0.062	ppbv #	78
13) Ethanol	3.63	45	340	0.047	ppbv #	1
15) Acetone	3.90	43	18794	0.222	ppbv	94
17) tert-Butyl alcohol	4.35	59	3583	0.035	ppbv #	71
20) Methylene Chloride	4.35	84	14497	0.306	ppbv	87
22) trans-1,2-Dichloroethene	4.90	96	2653	0.053	ppbv #	53
24) 1,1-Dichloroethane	5.02	63	5097	0.050	ppbv #	90
26) Hexane	5.70	57	8299	0.061	ppbv #	1
36) Benzene	6.90	78	13393	0.051	ppbv	93
39) 1,2-Dichloropropane	7.18	63	682268	6.808	ppbv #	28
42) Bromodichloromethane	7.80	83	7652	0.040	ppbv	93
52) Tetrachloroethene	11.23	164	11169	0.116	ppbv	95
53) Toluene	9.81	91	9323	0.031	ppbv #	19
58) Ethyl Benzene	12.72	91	15630	0.042	ppbv	94
62) Isopropylbenzene	14.67	105	14536	0.035	ppbv #	74
67) sec-Butylbenzene	17.30	105	15733	0.031	ppbv #	90
69) p-Isopropyltoluene	17.65	119	11965	0.030	ppbv #	48
73) 1,3,5-Trimethylbenzene	16.01	105	14125	0.046	ppbv	99
74) 1,2,4-Trimethylbenzene	16.77	105	10732	0.034	ppbv #	48
78) Hexachloro-1,3-Butadiene	23.38	225	3619	0.035	ppbv #	32

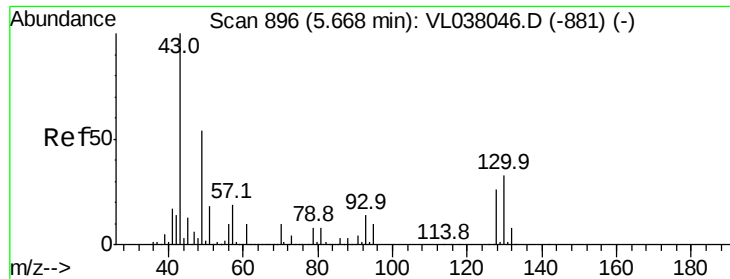
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: VIBLK

Acq: 29 Nov 2021 14:55

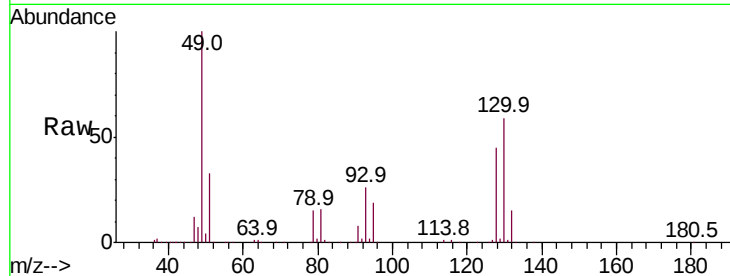
Tot Ion: 49 Resp: 975881

Ion Ratio Lower Upper

49 100

128 47.1 26.5 79.5

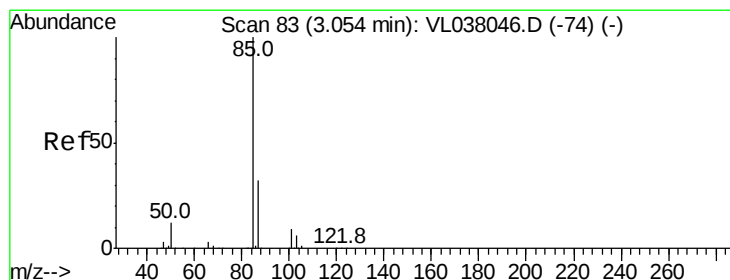
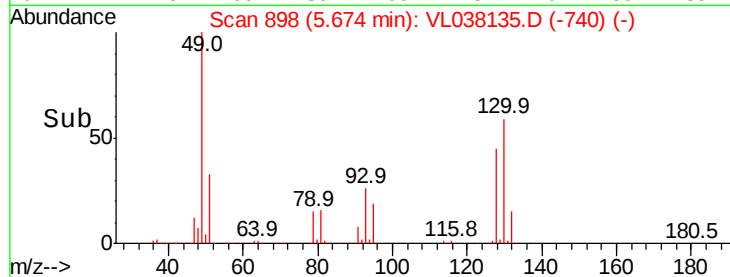
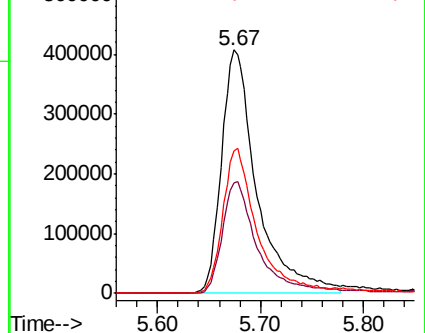
130 60.6 32.5 97.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.059 ppbv

RT: 3.06 min Scan# 85

Delta R.T. 0.01 min

Lab File: VL038135.D

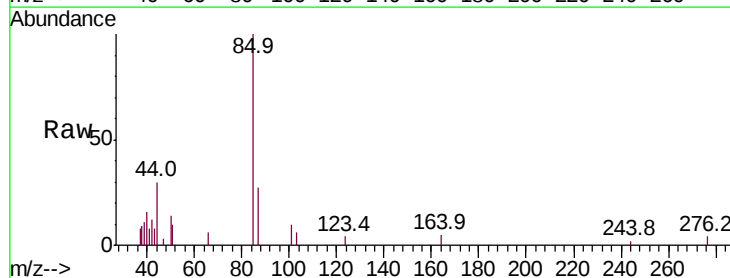
Acq: 29 Nov 2021 14:55

Tgt Ion: 85 Resp: 9503

Ion Ratio Lower Upper

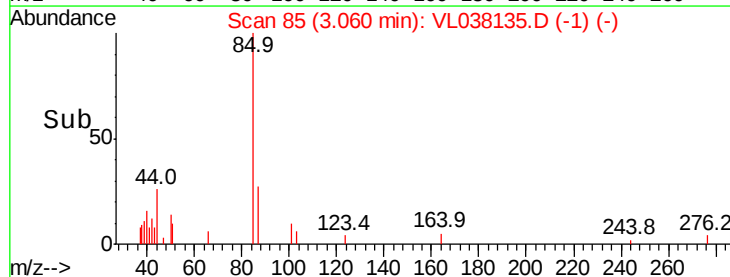
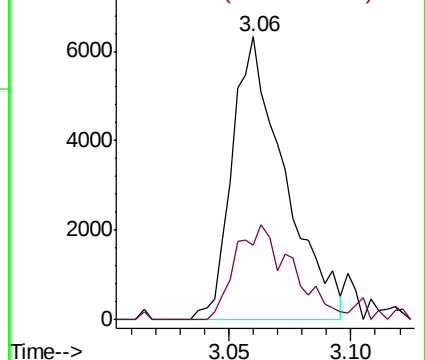
85 100

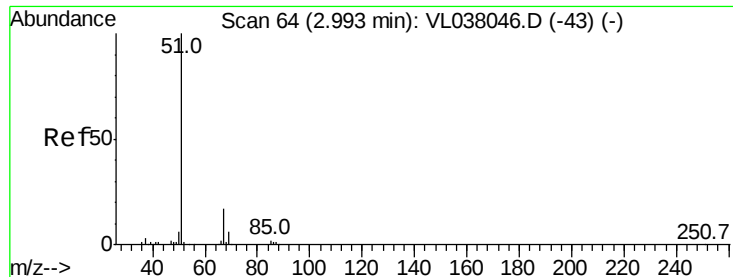
87 26.6 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.065 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

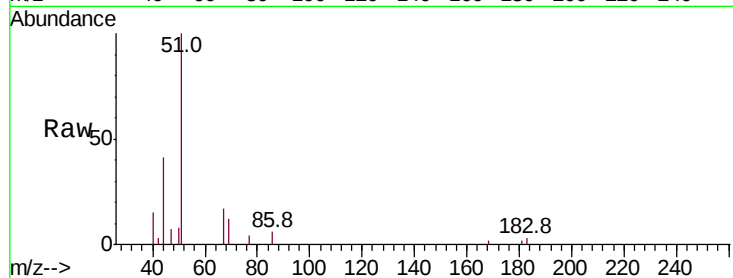
Acq: 29 Nov 2021 14:55

Tot Ion: 51 Resp: 13273

Ion Ratio Lower Upper

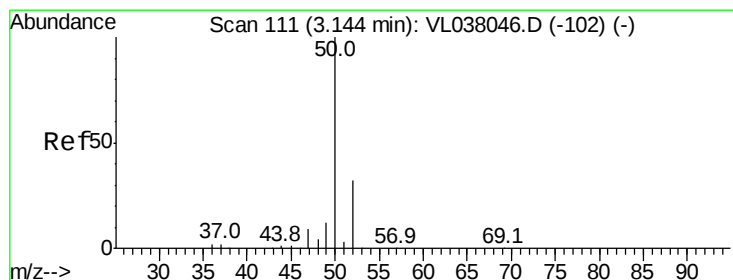
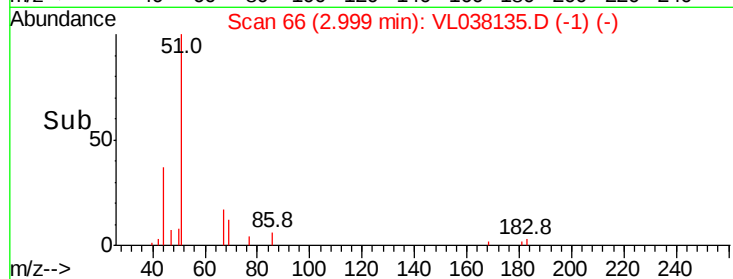
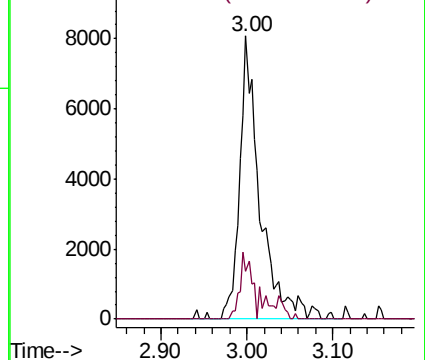
51 100

67 20.5 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: 0.033 ppbv

RT: 3.15 min Scan# 113

Delta R.T. 0.01 min

Lab File: VL038135.D

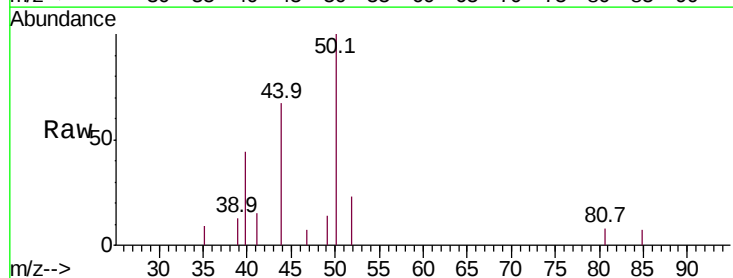
Acq: 29 Nov 2021 14:55

Tgt Ion: 50 Resp: 2332

Ion Ratio Lower Upper

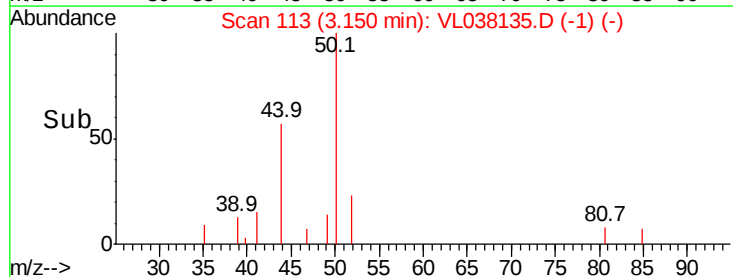
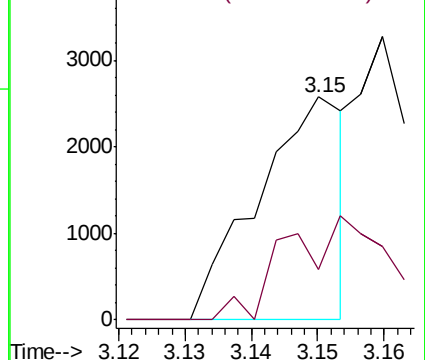
50 100

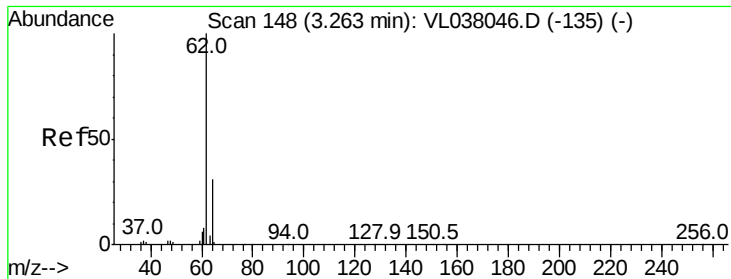
52 22.6 25.4 38.0#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.031 ppbv

RT: 3.27 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

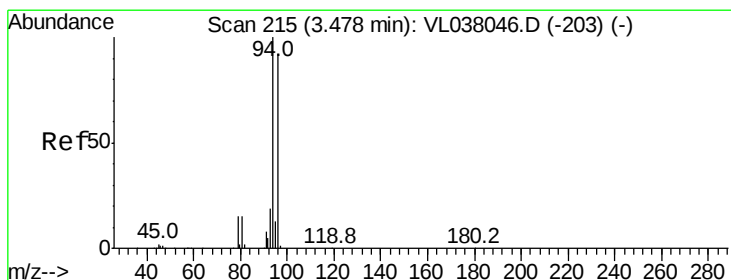
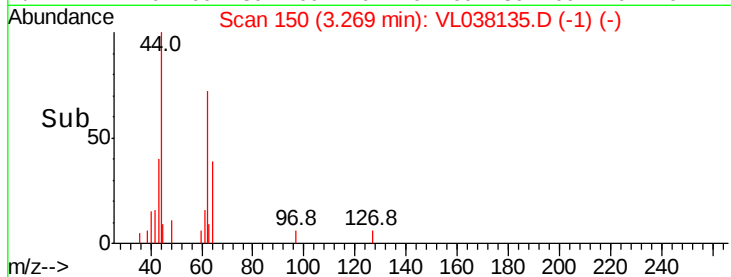
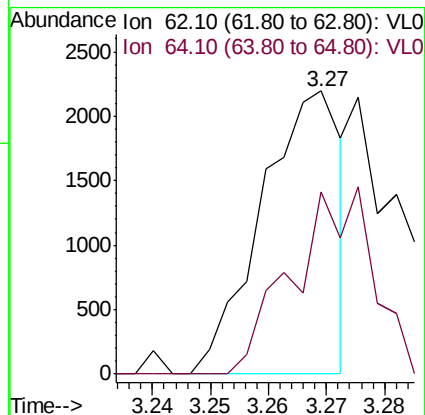
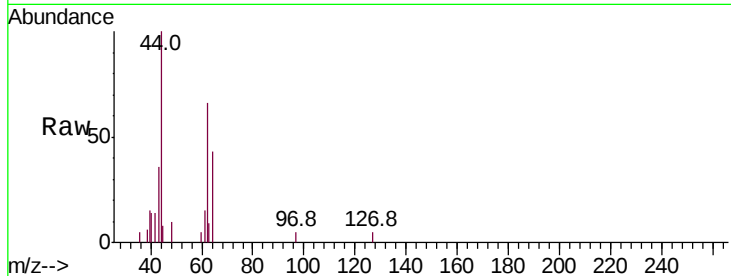
Acq: 29 Nov 2021 14:55

Tot Ion: 62 Resp: 2099

Ion Ratio Lower Upper

62 100

64 64.3 25.1 37.7#



#6

Bromomethane

Concen: 0.031 ppbv

RT: 3.48 min Scan# 216

Delta R.T. 0.00 min

Lab File: VL038135.D

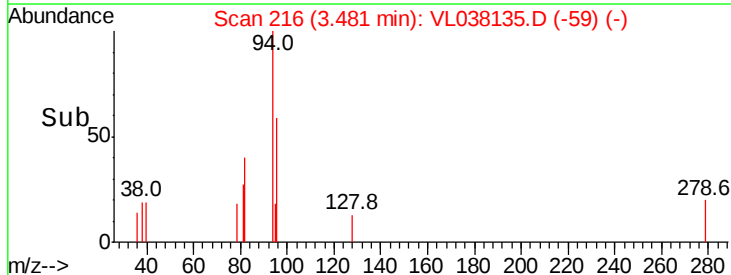
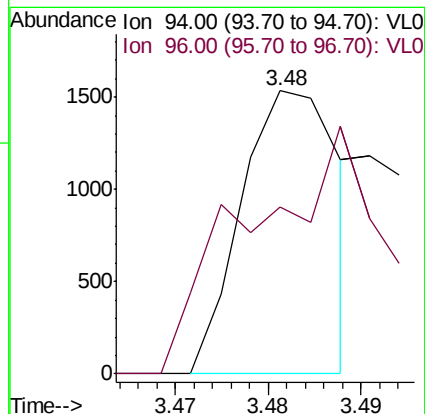
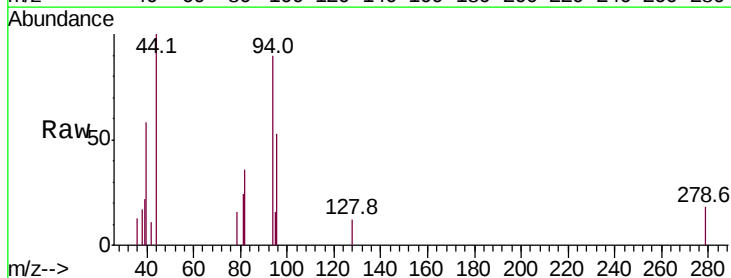
Acq: 29 Nov 2021 14:55

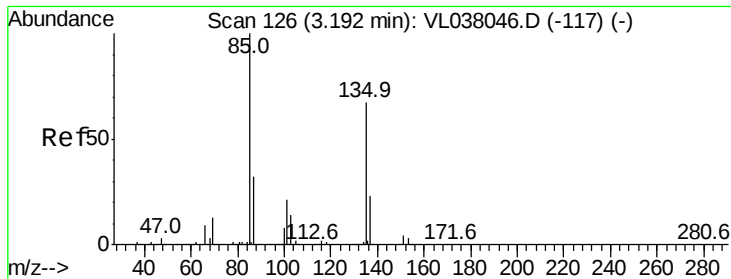
Tgt Ion: 94 Resp: 1119

Ion Ratio Lower Upper

94 100

96 25.7 73.9 110.9#





#8

Dichlorotetrafluoroethane

Concen: 0.060 ppbv

RT: 3.20 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

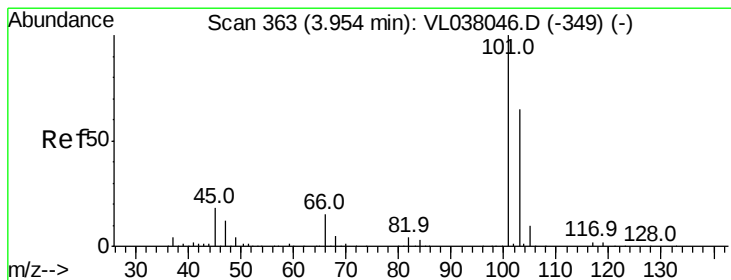
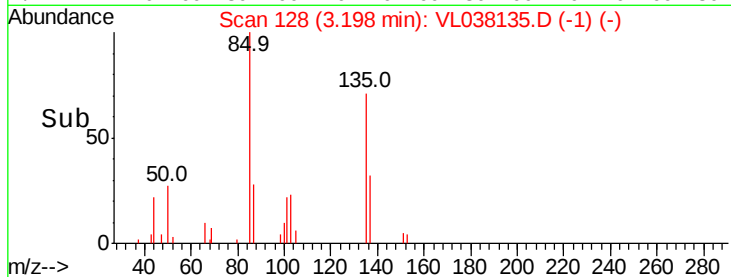
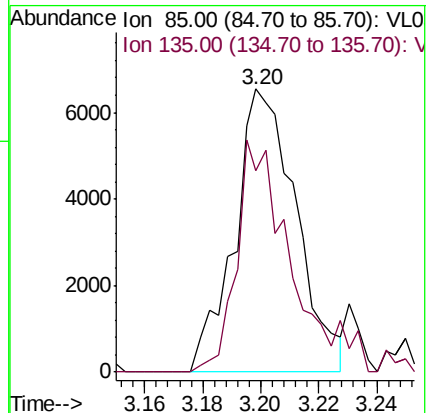
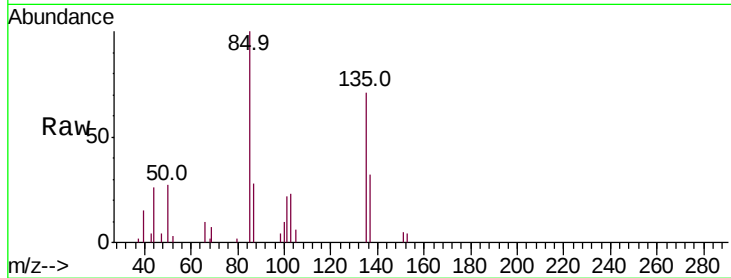
Acq: 29 Nov 2021 14:55

Tot Ion: 85 Resp: 9615

Ion Ratio Lower Upper

85 100

135 74.5 57.9 86.9



#11

Trichlorofluoromethane

Concen: 0.062 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.01 min

Lab File: VL038135.D

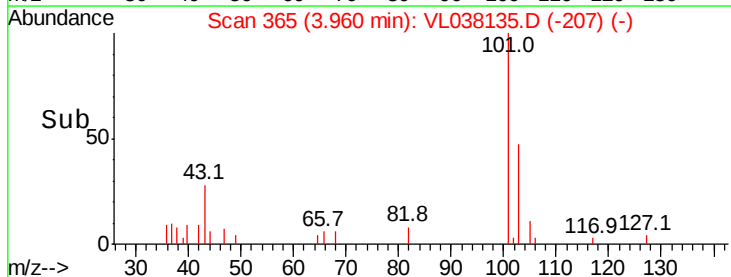
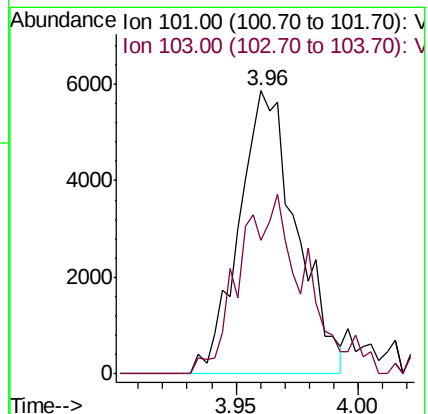
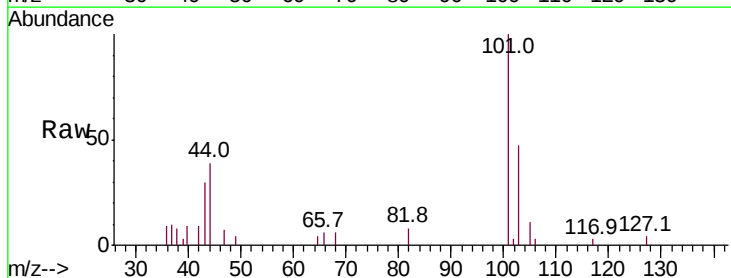
Acq: 29 Nov 2021 14:55

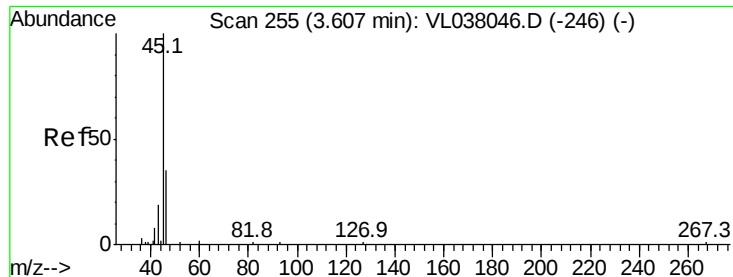
Tgt Ion: 101 Resp: 9575

Ion Ratio Lower Upper

101 100

103 47.4 51.8 77.6#





#13

Ethanol

Concen: 0.047 ppbv

RT: 3.63 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

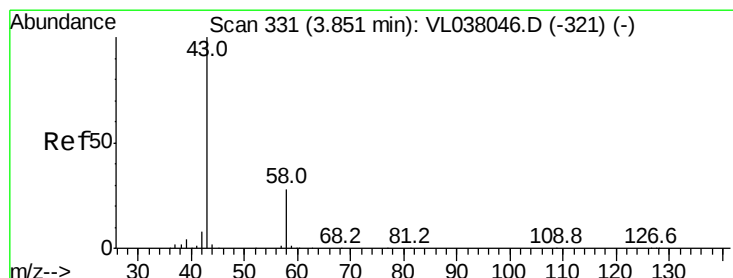
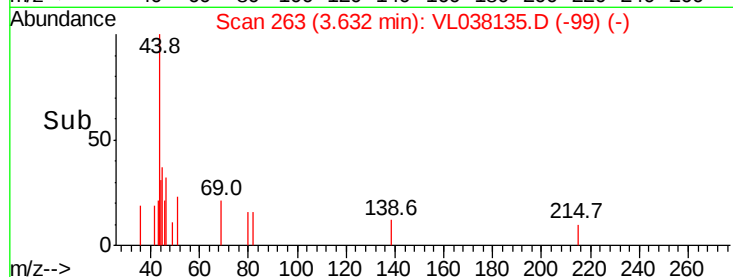
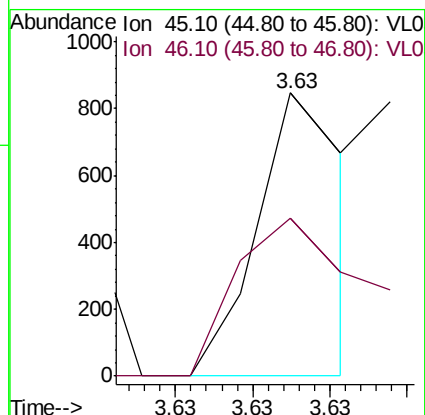
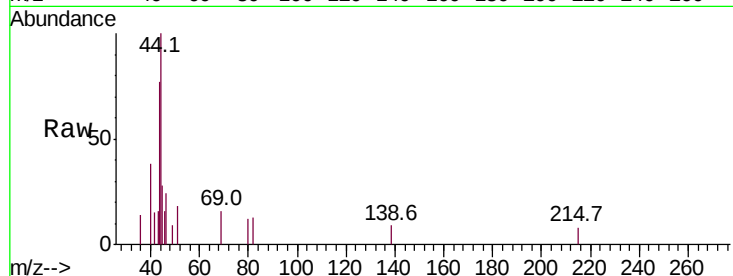
Acq: 29 Nov 2021 14:55

Tot Ion: 45 Resp: 340

Ion Ratio Lower Upper

45 100

46 252.1 17.6 70.2#



#15

Acetone

Concen: 0.222 ppbv

RT: 3.90 min Scan# 345

Delta R.T. 0.05 min

Lab File: VL038135.D

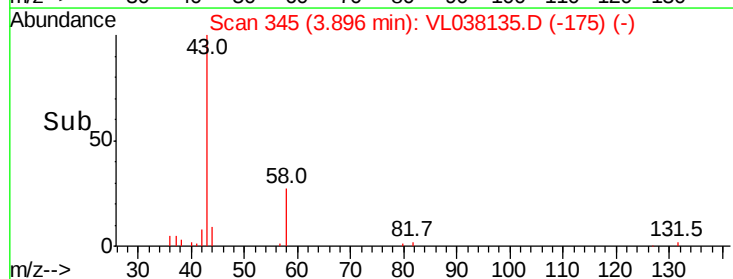
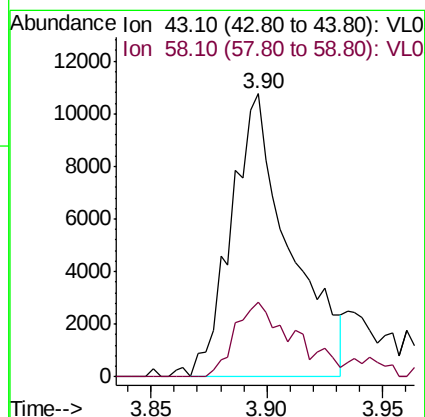
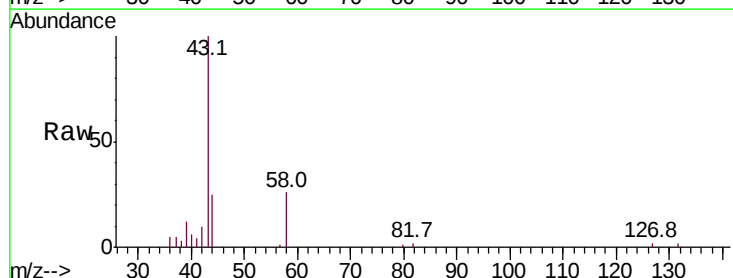
Acq: 29 Nov 2021 14:55

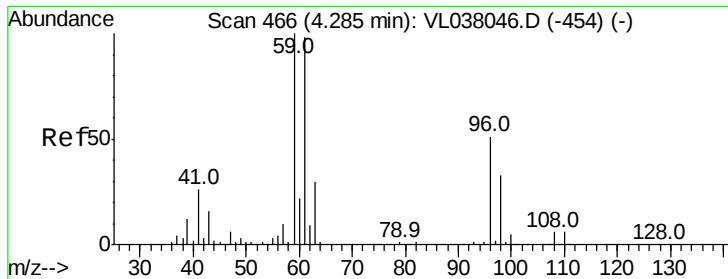
Tgt Ion: 43 Resp: 18794

Ion Ratio Lower Upper

43 100

58 31.3 22.4 33.6





#17

tert-Butyl alcohol

Concen: 0.035 ppbv

RT: 4.35 Instrument: MSVOA_1

Delta R.T. 0.01 min

Lab File: VL038135.D ClientSampleId: VIBLK

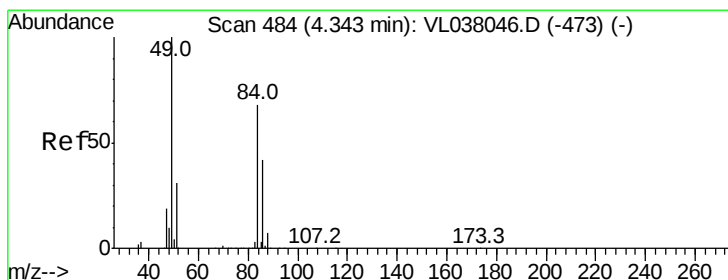
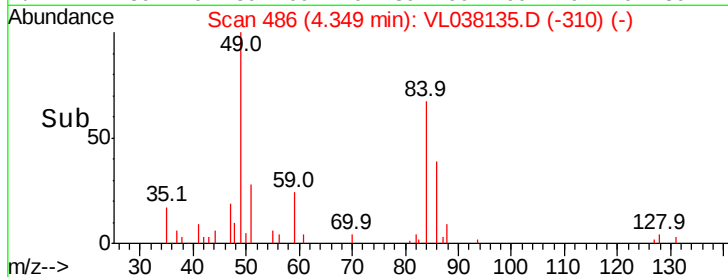
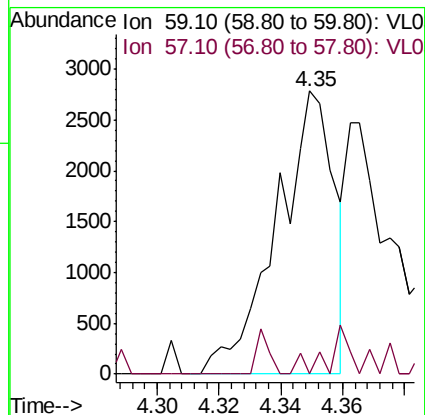
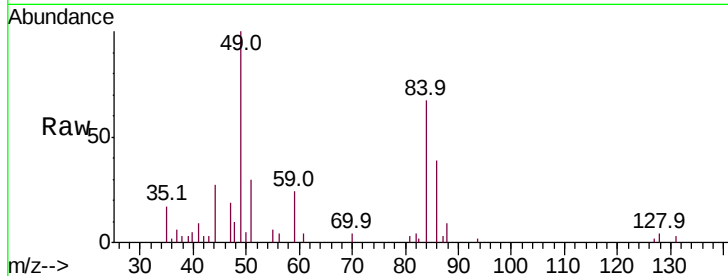
Acq: 29 Nov 2021 14:55

Tot Ion: 59 Resp: 3583

Ion Ratio Lower Upper

59 100

57 0.0 8.6 13.0#



#20

Methylene Chloride

Concen: 0.306 ppbv

RT: 4.35 min Scan# 487

Delta R.T. 0.01 min

Lab File: VL038135.D

Acq: 29 Nov 2021 14:55

Tgt Ion: 84 Resp: 14497

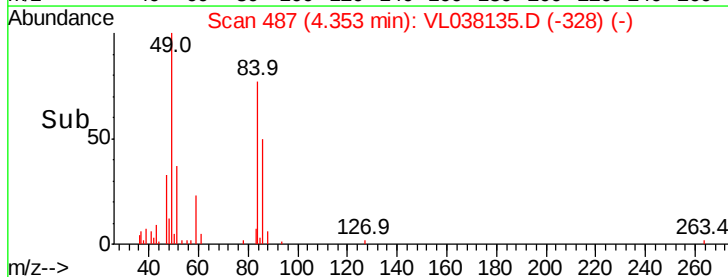
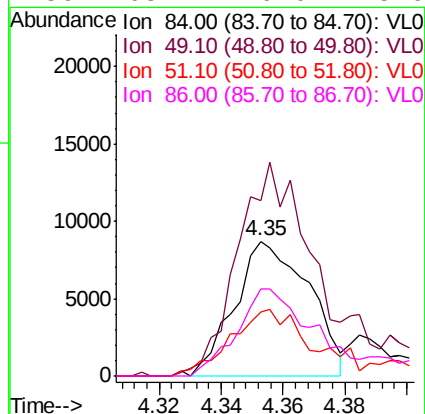
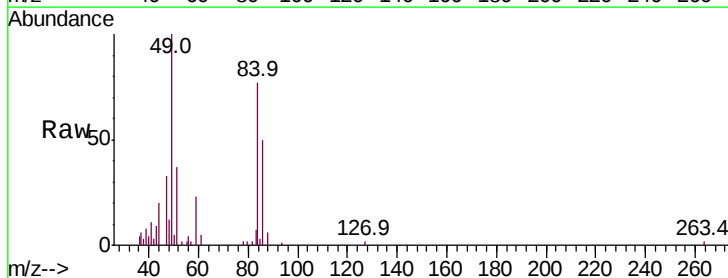
Ion Ratio Lower Upper

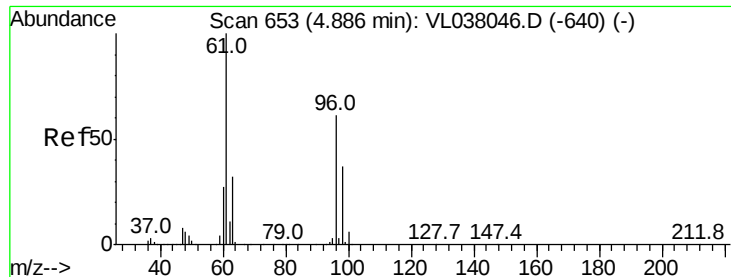
84 100

49 124.9 118.2 177.2

51 43.1 36.8 55.2

86 65.2 49.0 73.6





#22

trans-1,2-Dichloroethene

Concen: 0.053 ppbv

RT: 4.90 Instrument: MSVOA_1

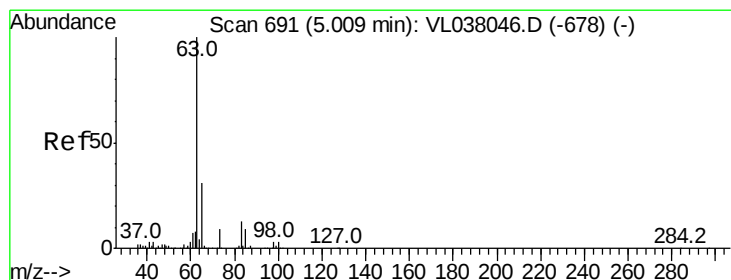
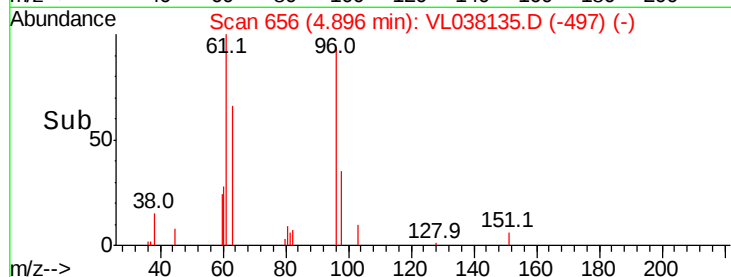
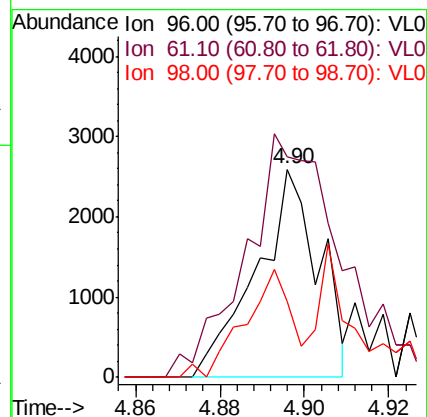
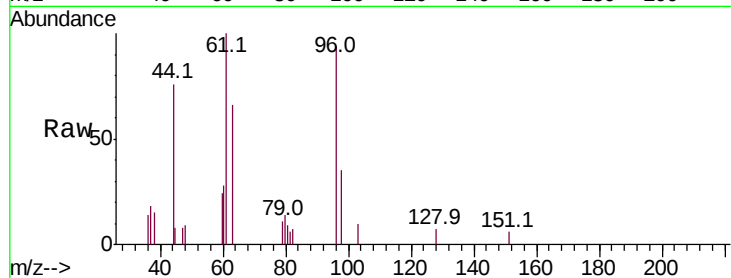
Delta R.T.

Lab File: ClientSampleId:

Acq: 29 Nov 2021 14:55

Tot Ion: 96 Resp: 2653

Ion	Ratio	Lower	Upper
96	100		
61	98.6	131.6	197.4#
98	30.1	48.4	72.6#



#24

1,1-Dichloroethane

Concen: 0.050 ppbv

RT: 5.02 min Scan# 695

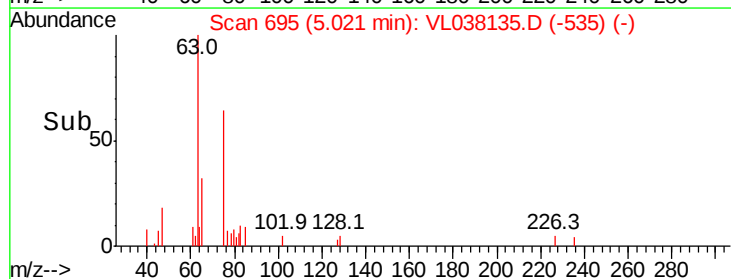
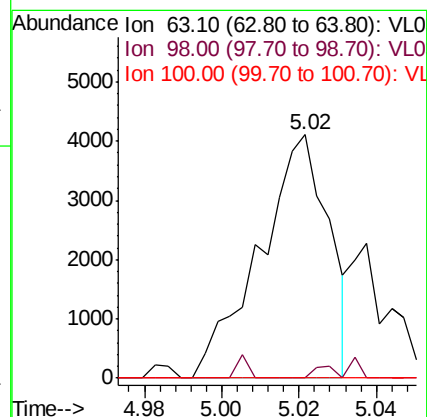
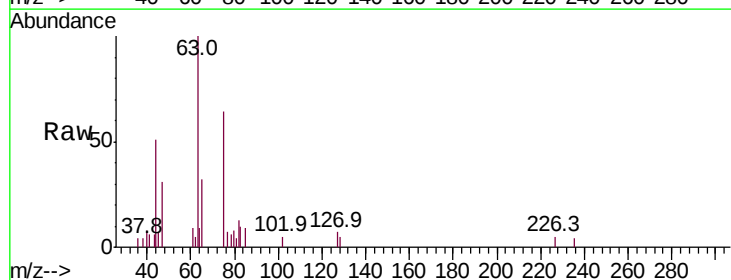
Delta R.T. 0.01 min

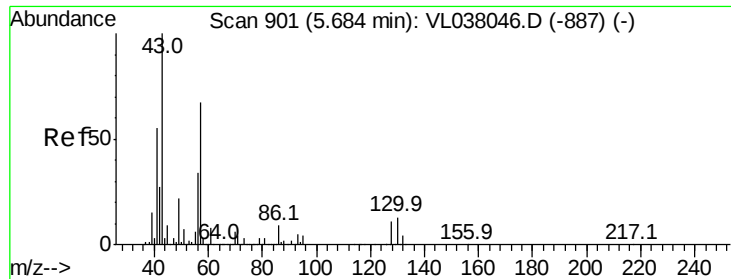
Lab File: VL038135.D

Acq: 29 Nov 2021 14:55

Tgt Ion: 63 Resp: 5097

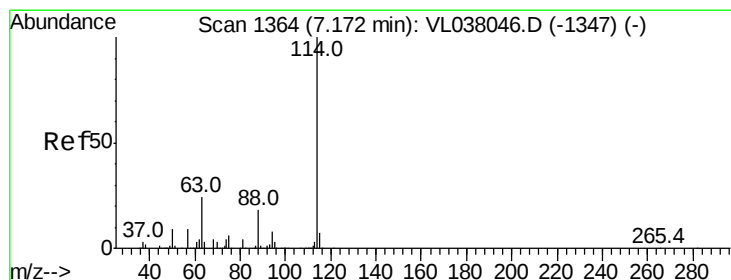
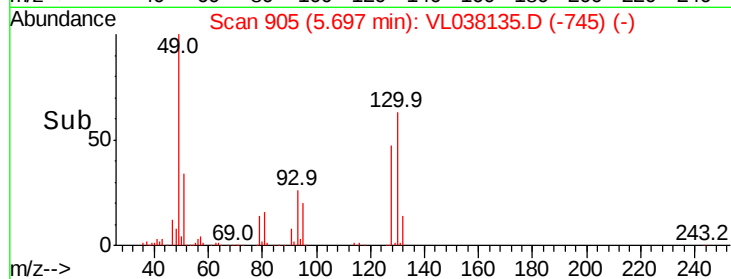
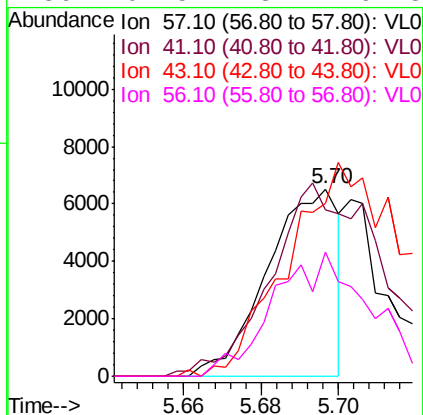
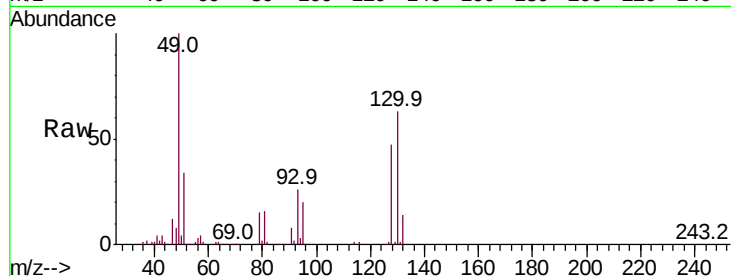
Ion	Ratio	Lower	Upper
63	100		
98	0.0	1.8	5.4#
100	0.0	1.4	4.0#





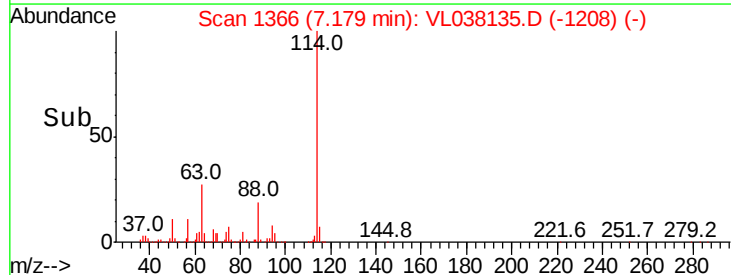
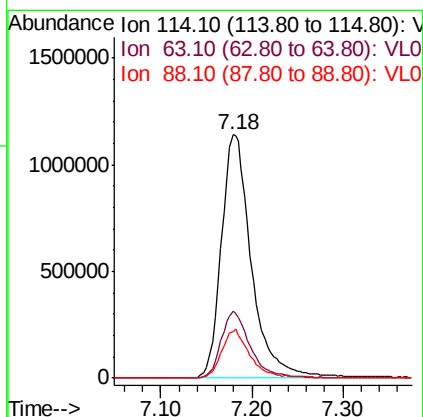
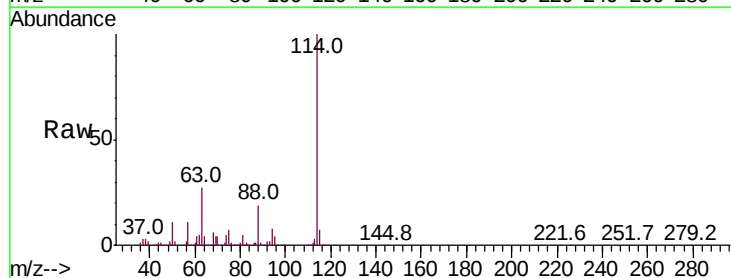
#26
Hexane
Concen: 0.061 ppbv
RT: 5.70
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Nov 2021 14:55

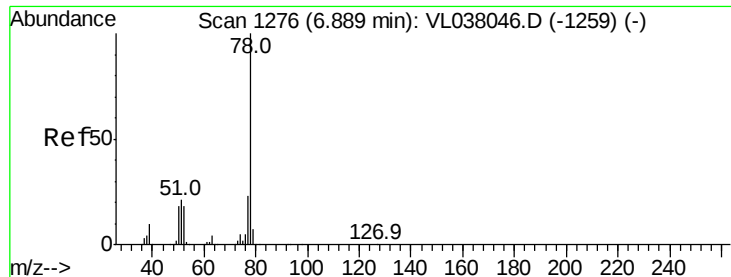
Tot Ion:	57	Resp:	8299
Ion	Ratio	Lower	Upper
57	100		
41	182.2	71.4	107.2#
43	0.0	174.6	261.8#
56	101.5	43.2	64.8#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1366
Delta R.T. 0.01 min
Lab File: VL038135.D
Acq: 29 Nov 2021 14:55

Tgt Ion:	114	Resp:	2619164
Ion	Ratio	Lower	Upper
114	100		
63	26.9	19.7	29.5
88	19.1	14.4	21.6





#36

Benzene

Concen: 0.051 ppbv

RT: 6.90 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 29 Nov 2021 14:55

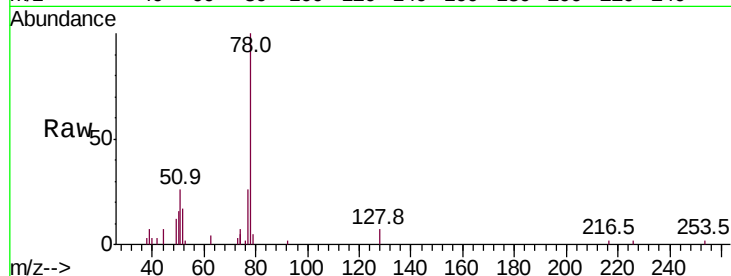
Tot Ion: 78 Resp: 13393

Ion Ratio Lower Upper

78 100

77 27.3 18.2 27.4

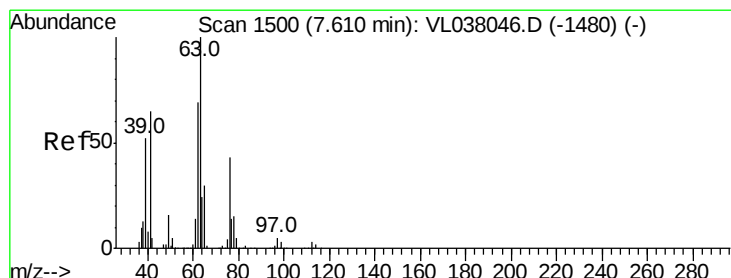
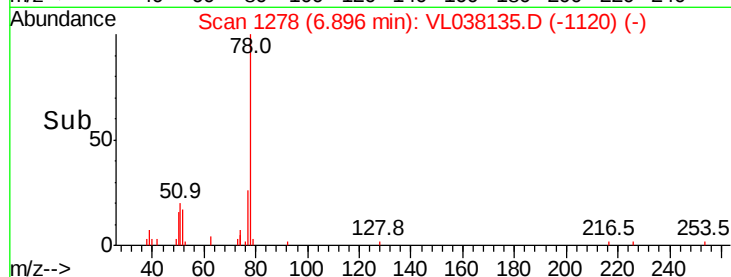
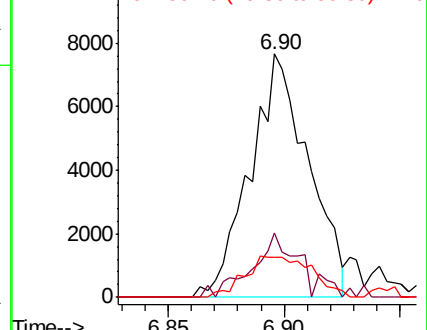
50 17.0 14.7 22.1



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



#39

1,2-Dichloropropane

Concen: 6.808 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. -0.43 min

Lab File: VL038135.D

Acq: 29 Nov 2021 14:55

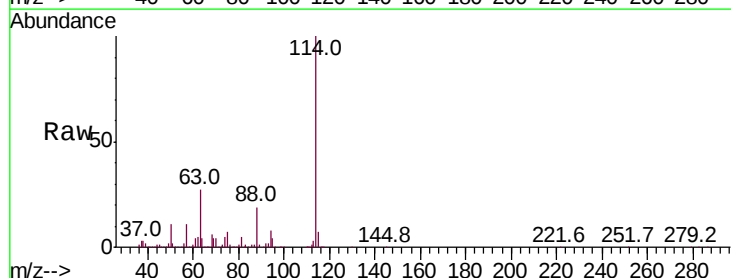
Tgt Ion: 63 Resp: 682268

Ion Ratio Lower Upper

63 100

41 0.2 52.3 78.5#

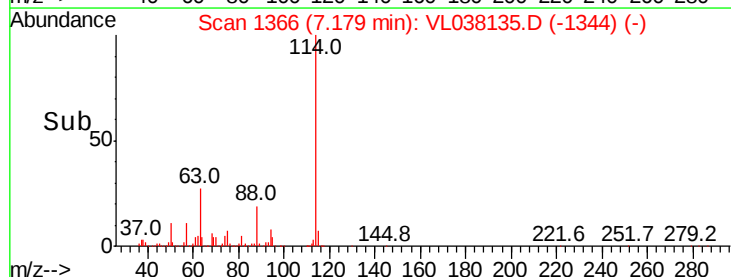
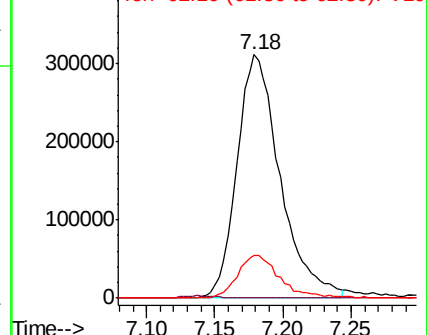
62 17.7 55.1 82.7#

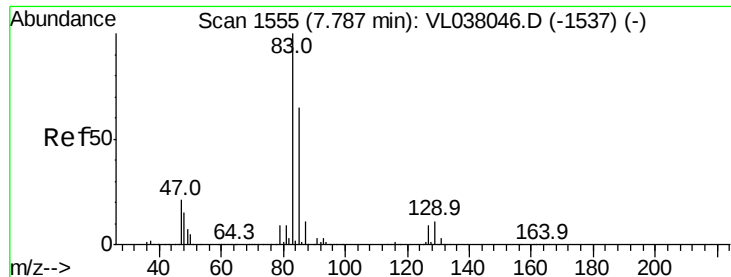


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

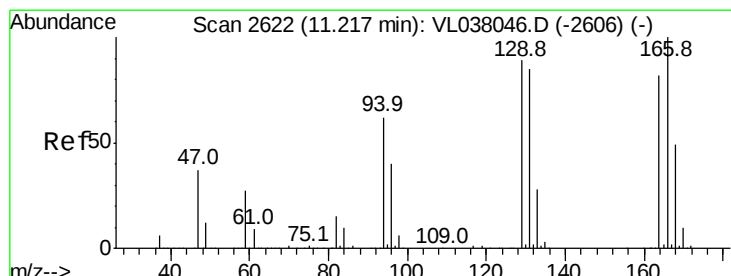
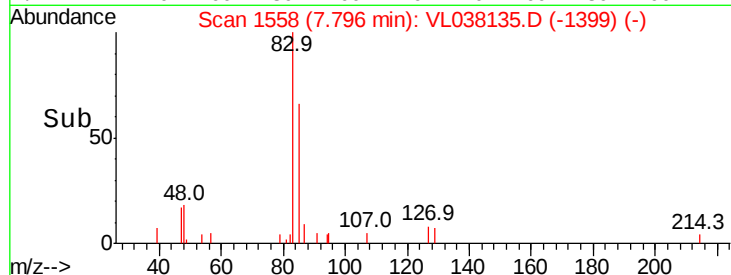
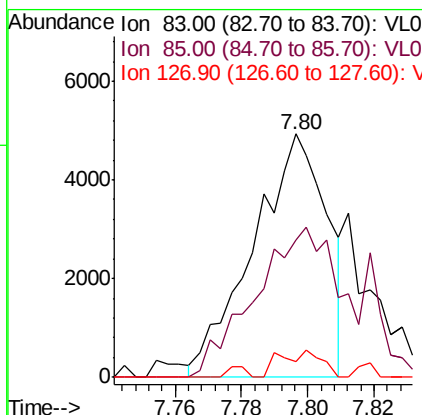
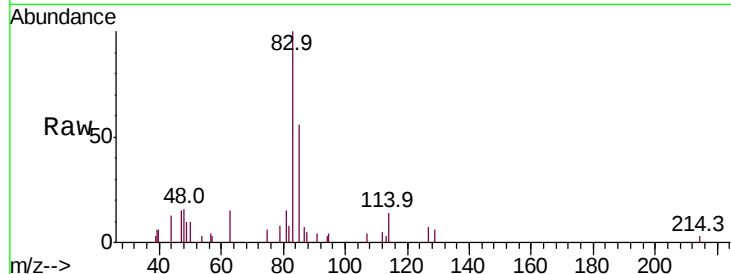
Ion 62.10 (61.80 to 62.80): VL0





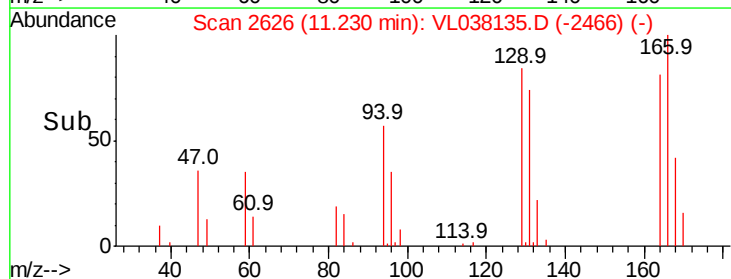
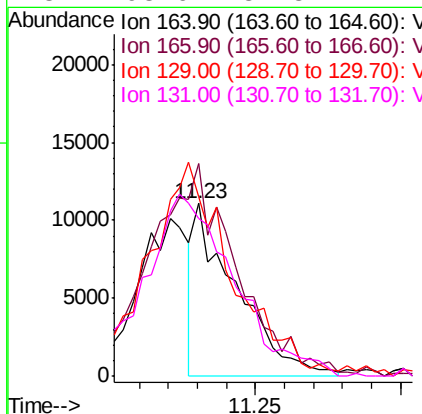
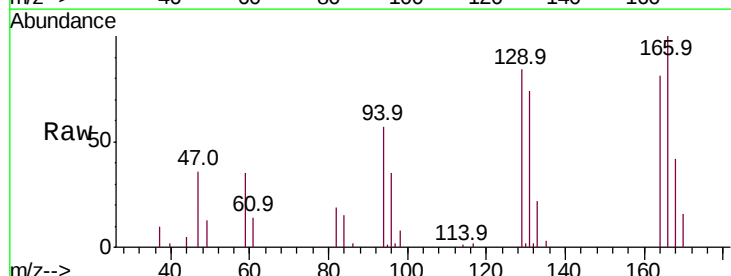
#42
 Bromodichloromethane
 Concen: 0.040 ppbv
 RT: 7.80
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 29 Nov 2021 14:55

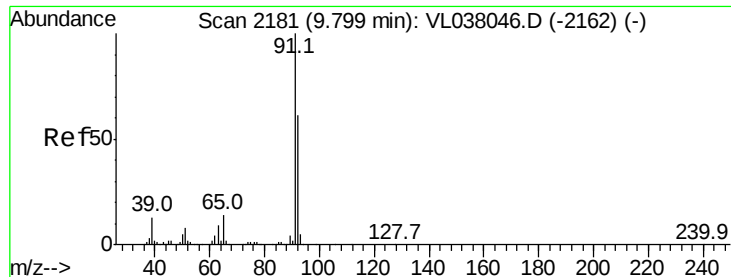
Tot Ion: 83 Resp: 7652
 Ion Ratio Lower Upper
 83 100
 85 59.4 51.9 77.9
 127 6.9 6.8 10.2



#52
 Tetrachloroethene
 Concen: 0.116 ppbv
 RT: 11.23 min Scan# 2626
 Delta R.T.: 0.01 min
 Lab File: VL038135.D
 Acq: 29 Nov 2021 14:55

Tgt Ion: 164 Resp: 11169
 Ion Ratio Lower Upper
 164 100
 166 124.1 97.2 145.8
 129 103.9 86.9 130.3
 131 93.6 82.8 124.2





#53

Toluene

Concen: 0.031 ppbv

RT: 9.81 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

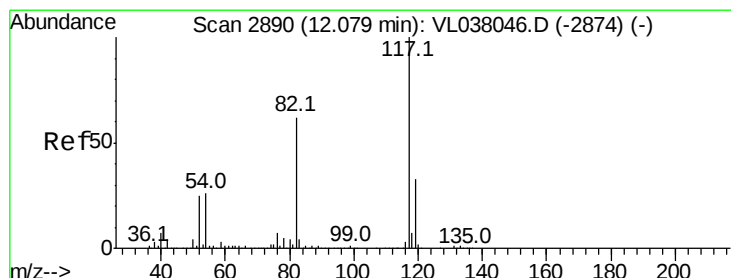
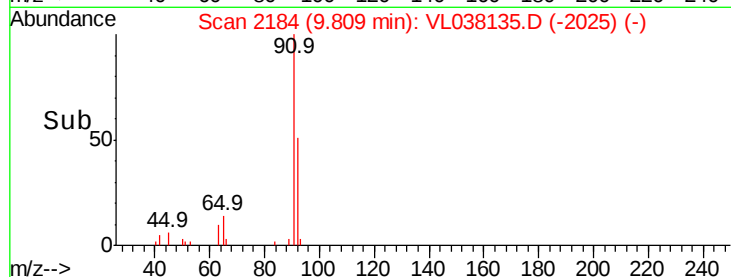
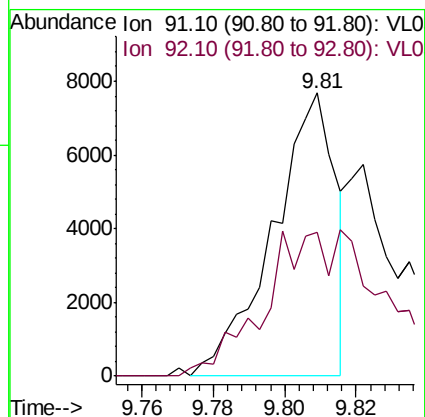
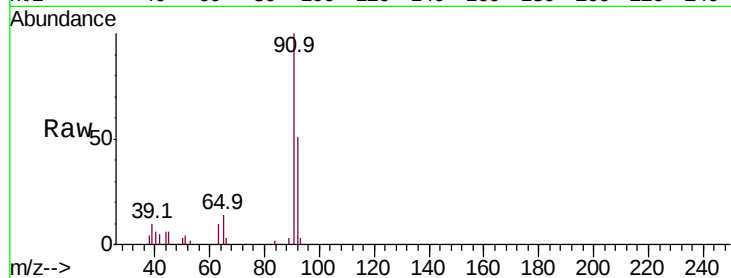
Acq: 29 Nov 2021 14:55

Tot Ion: 91 Resp: 9323

Ion Ratio Lower Upper

91 100

92 0.0 49.7 74.5#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. 0.01 min

Lab File: VL038135.D

Acq: 29 Nov 2021 14:55

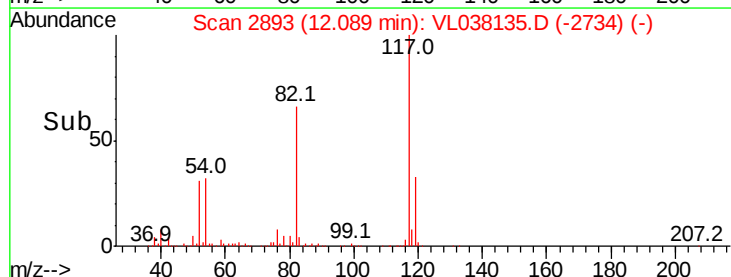
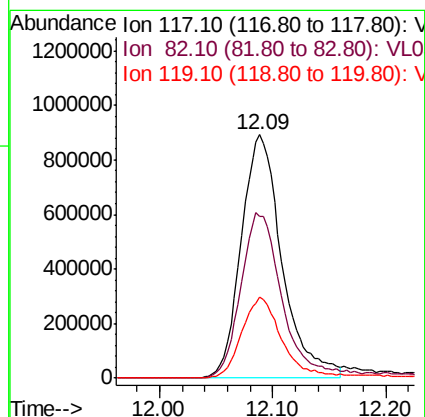
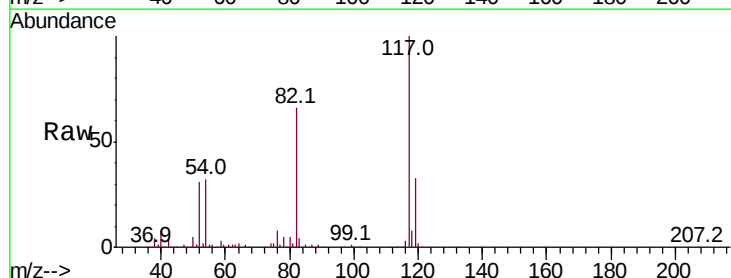
Tgt Ion: 117 Resp: 2242851

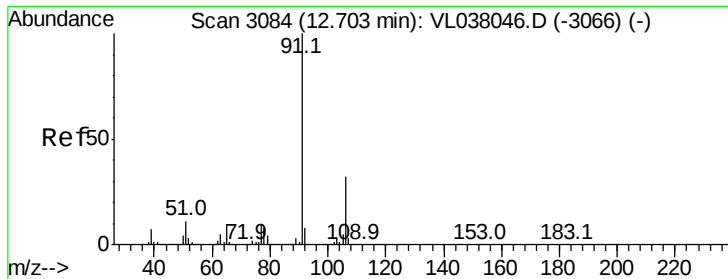
Ion Ratio Lower Upper

117 100

82 74.5 52.8 79.2

119 34.9 26.8 40.2





#58

Ethyl Benzene

Concen: 0.042 ppbv

RT: 12.72

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

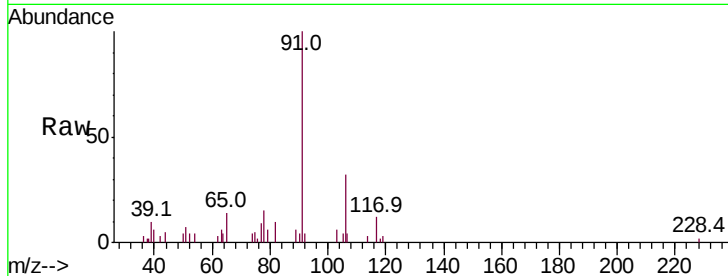
Acq: 29 Nov 2021 14:55

Tot Ion: 91 Resp: 15630

Ion Ratio Lower Upper

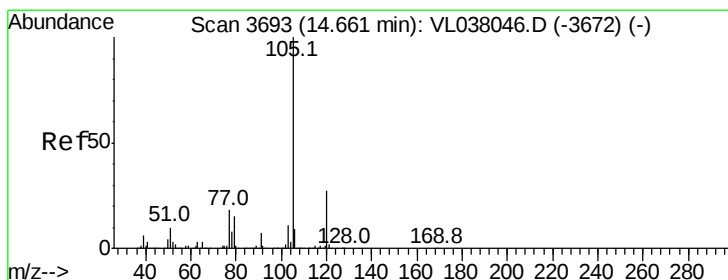
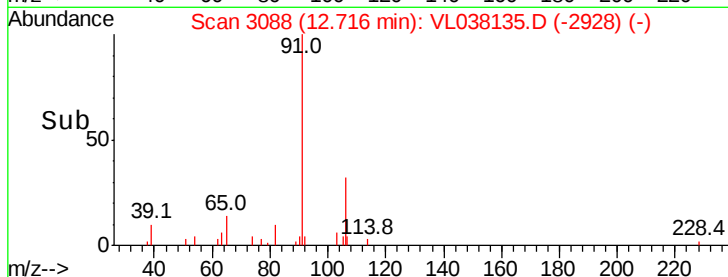
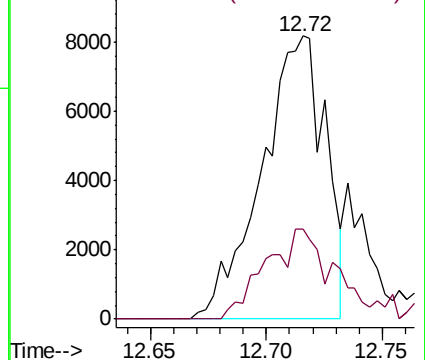
91 100

106 35.6 25.8 38.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#62

Isopropylbenzene

Concen: 0.035 ppbv

RT: 14.67 min Scan# 3696

Delta R.T. 0.01 min

Lab File: VL038135.D

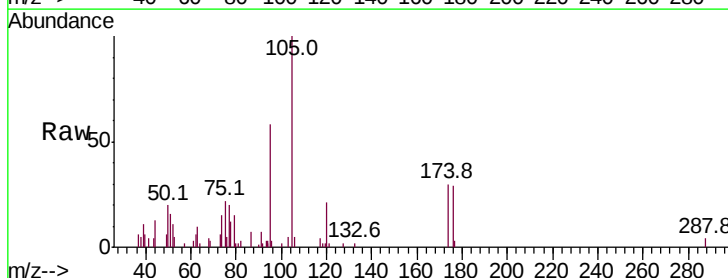
Acq: 29 Nov 2021 14:55

Tgt Ion:105 Resp: 14536

Ion Ratio Lower Upper

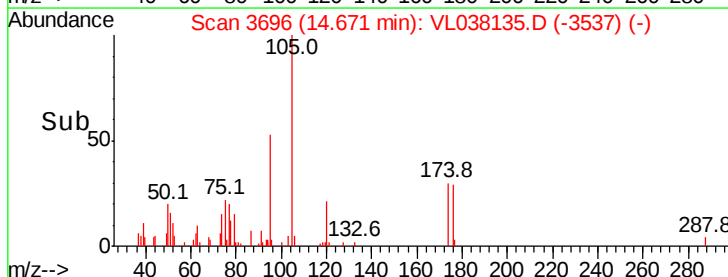
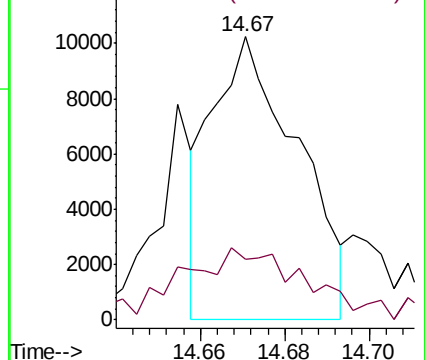
105 100

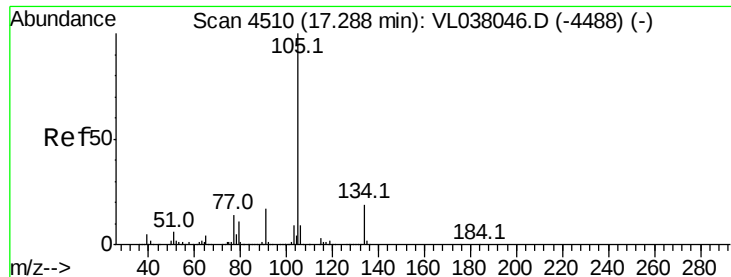
120 40.8 21.8 32.6#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#67

sec-Butylbenzene

Concen: 0.031 ppbv

RT: 17.30

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

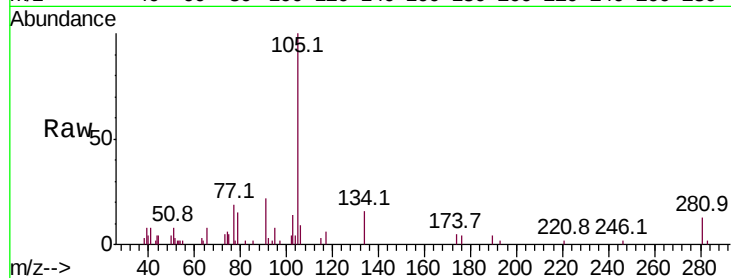
Acq: 29 Nov 2021 14:55

Tot Ion: 105 Resp: 15733

Ion Ratio Lower Upper

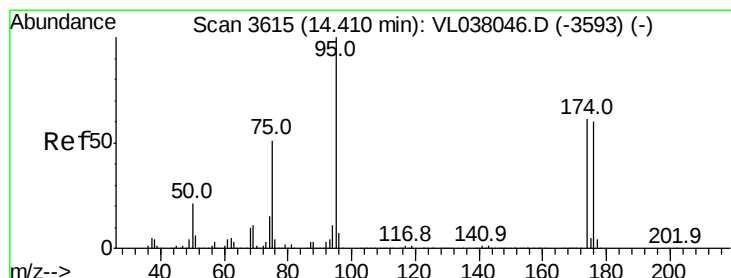
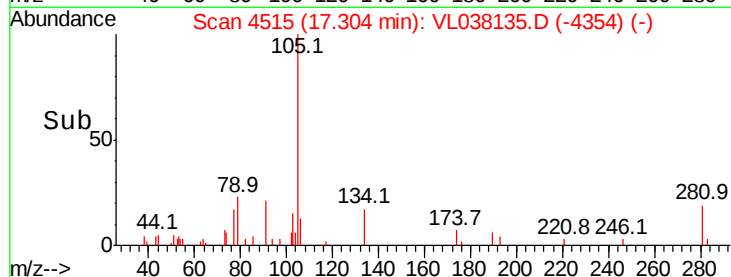
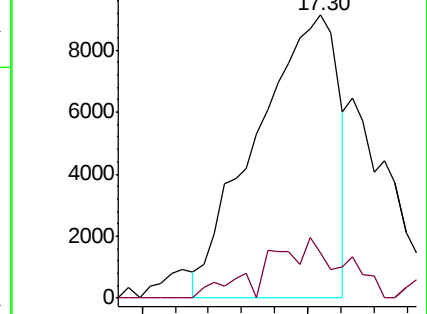
105 100

134 22.8 14.7 22.1#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.914 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. 0.01 min

Lab File: VL038135.D

Acq: 29 Nov 2021 14:55

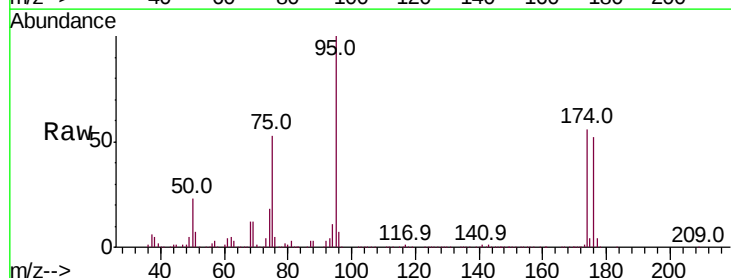
Tgt Ion: 95 Resp: 1765621

Ion Ratio Lower Upper

95 100

174 63.8 53.1 79.7

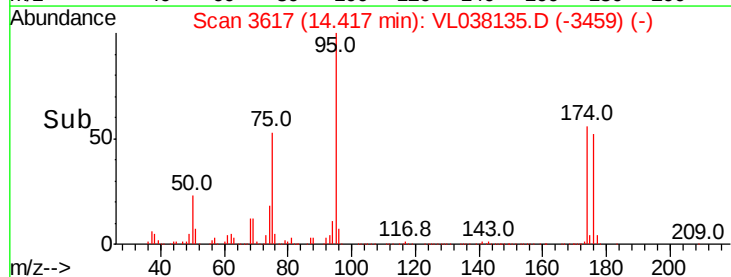
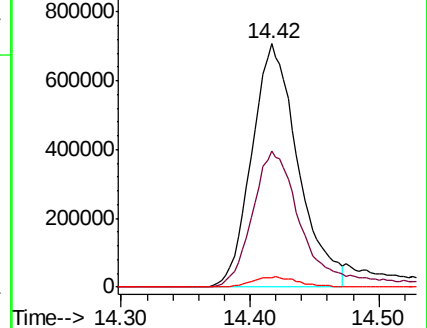
175 4.4 4.0 6.0

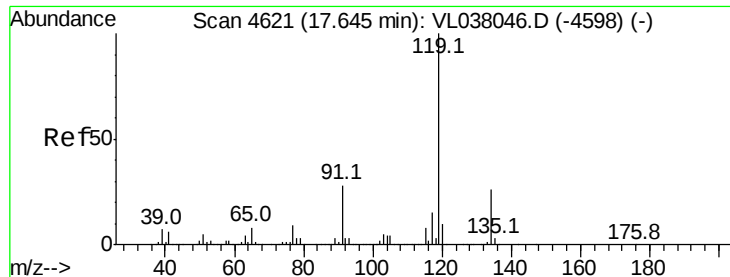


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

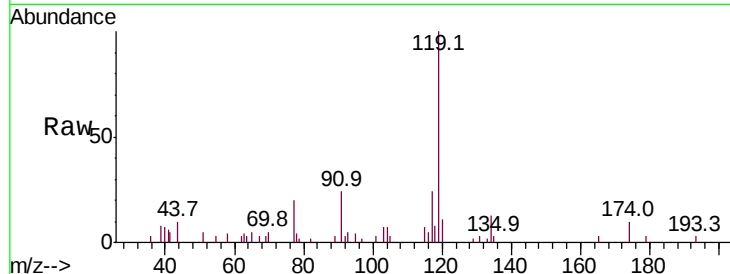
Ion 175.00 (174.70 to 175.70): V



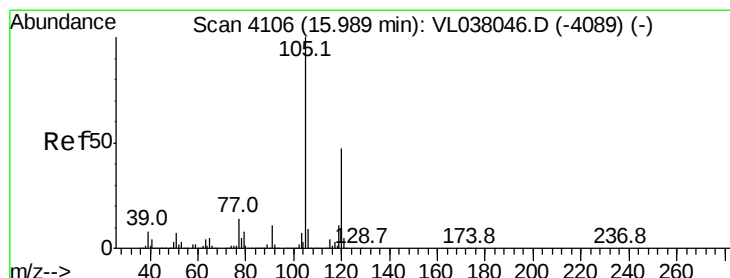
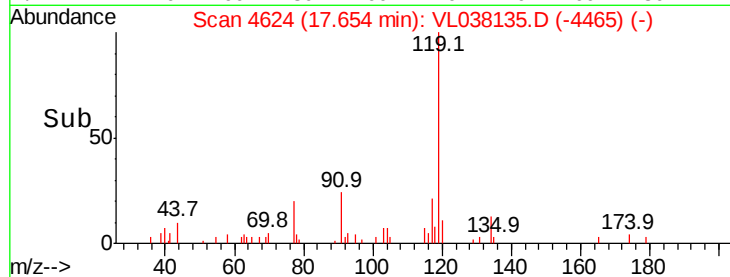
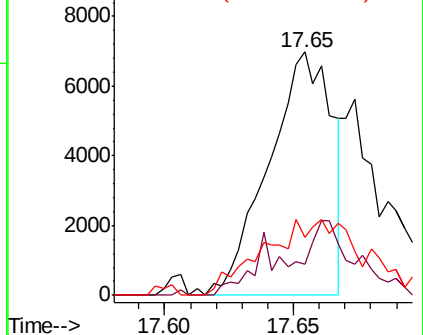


#69
 p-Isopropyltoluene
 Concen: 0.030 ppbv
 RT: 17.65 min
 Delta R.T. MSVOA.L
 Lab File: ClientSampleId:
 VIBLK
 Acq: 29 Nov 2021 14:55

Tot Ion	Ratio	Lower	Upper
119	100		
134	0.0	20.6	30.8
91	56.1	22.2	33.4

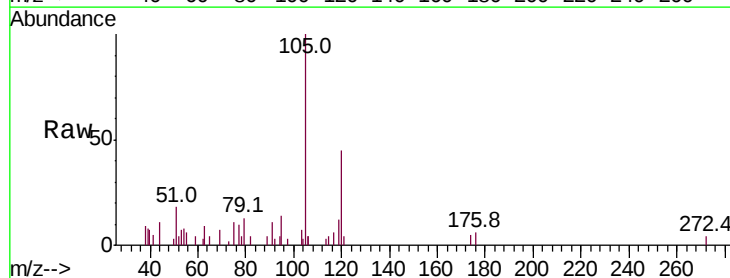


Abundance Ion 119.10 (118.80 to 119.80): V
 Ion 134.20 (133.90 to 134.90): V
 Ion 91.10 (90.80 to 91.80): V

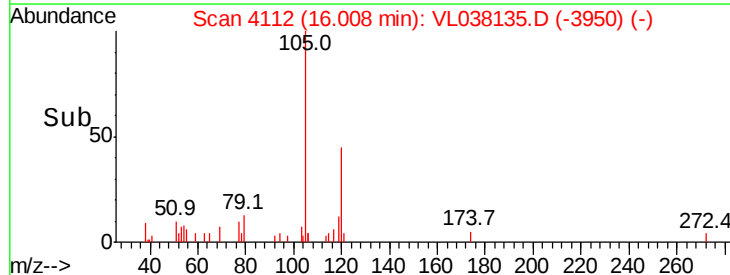
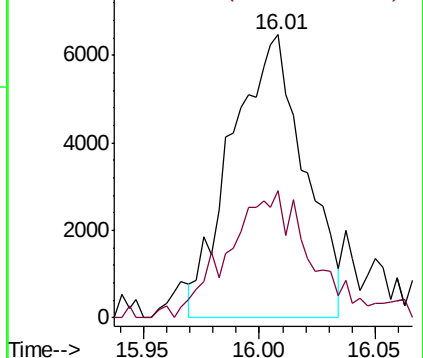


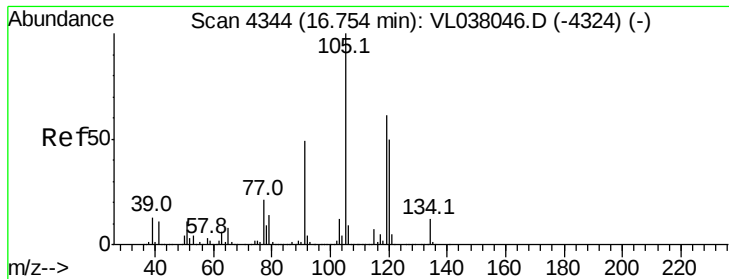
#73
 1,3,5-Trimethylbenzene
 Concen: 0.046 ppbv
 RT: 16.01 min Scan# 4112
 Delta R.T. 0.02 min
 Lab File: VL038135.D
 Acq: 29 Nov 2021 14:55

Tgt Ion	Ratio	Lower	Upper
105	100		
120	48.0	37.8	56.6



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: 0.034 ppbv

RT: 16.77

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 29 Nov 2021 14:55

Tot Ion:105 Resp: 10732

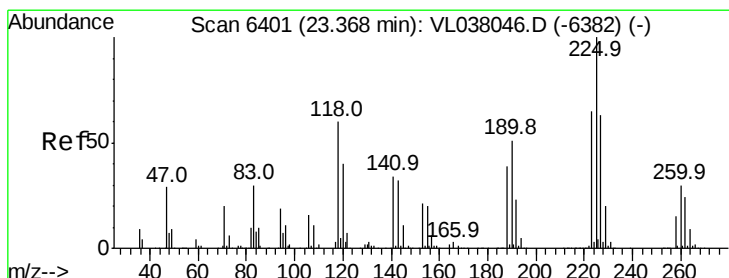
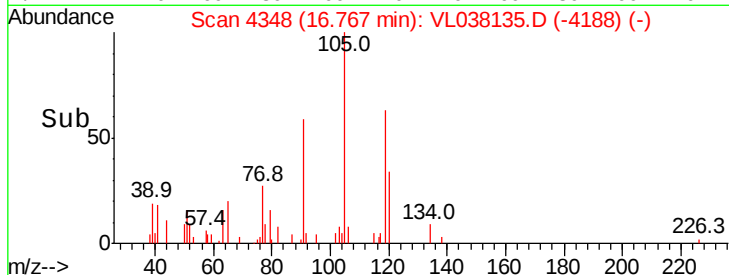
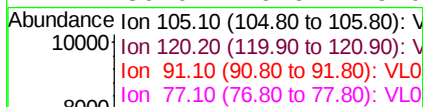
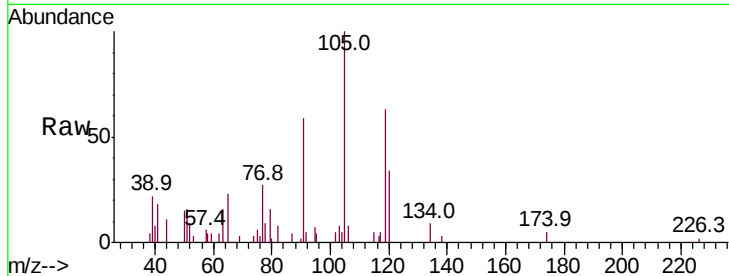
Ion Ratio Lower Upper

105 100

120 15.2 40.1 60.1#

91 95.3 39.8 59.8#

77 30.0 16.6 25.0#



#78

Hexachloro-1,3-Butadiene

Concen: 0.035 ppbv

RT: 23.38 min Scan# 6404

Delta R.T. 0.01 min

Lab File: VL038135.D

Acq: 29 Nov 2021 14:55

Tgt Ion:225 Resp: 3619

Ion Ratio Lower Upper

225 100

223 0.0 52.3 78.5#

227 108.0 52.4 78.6#

