

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112921\
 Data File : VL038137.D
 Acq On : 29 Nov 2021 16:17
 Operator : SY/AP
 Sample : M4827-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Quant Time: Nov 30 05:16:15 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

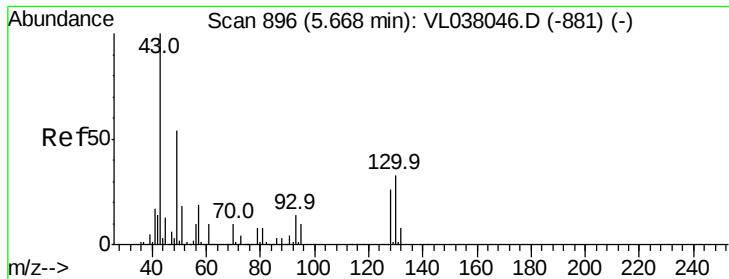
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	934498	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2544971	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2232693	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	1713906	10.64	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.40%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.06	85	29588	0.192 ppbv	91
3) Chlorodifluoromethane	3.00	51	74411	0.379 ppbv #	83
4) Chloromethane	3.15	50	15586	0.233 ppbv	96
7) Chloroethane	3.57	64	232853	10.011 ppbv	99
9) Propene	3.21	41	713130	9.867 ppbv	98
10) Heptane	8.13	43	21883	0.123 ppbv #	26
11) Trichlorofluoromethane	3.96	101	29058	0.198 ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.49	101	3646	0.035 ppbv #	13
13) Ethanol	3.64	45	17083752	2445.954 ppbv	96
15) Acetone	3.86	43	646612	7.981 ppbv	98
16) 1,3-Butadiene	3.37	39	974664	15.419 ppbv #	11
17) tert-Butyl alcohol	4.00	59	191527	1.949 ppbv	100
19) Isopropyl Alcohol	4.00	45	5083785	86.840 ppbv #	99
20) Methylene Chloride	4.36	84	156283	3.444 ppbv	98
21) Allyl Chloride	4.31	41	8310	0.111 ppbv #	10
23) Vinyl Acetate	5.07	43	10928	0.093 ppbv #	1
25) Ethyl Acetate	5.69	43	141765	0.526 ppbv #	86
26) Hexane	5.69	57	166792	1.285 ppbv #	49
29) Chloroform	5.76	83	932857	4.877 ppbv	99
31) cis-1,2-Dichloroethene	5.55	61	8203	0.066 ppbv #	77
34) 2-Butanone	5.25	43	14422	0.141 ppbv #	52
35) Carbon Tetrachloride	7.03	117	7128	0.040 ppbv #	81
36) Benzene	6.90	78	217427	0.856 ppbv	94
38) Trichloroethene	7.84	130	6709	0.070 ppbv #	67
39) 1,2-Dichloropropane	7.18	63	669289	6.873 ppbv #	27
42) Bromodichloromethane	7.80	83	60319	0.324 ppbv #	99
44) 2,2,4-Trimethylpentane	7.87	57	23023	0.054 ppbv #	8
52) Tetrachloroethene	11.23	164	3153173	33.568 ppbv	99
53) Toluene	9.81	91	121416	0.416 ppbv	99
58) Ethyl Benzene	12.97	91	133756	0.362 ppbv	92
59) m/p-Xylene	12.97	91	133756	0.431 ppbv	97
60) o-Xylene	13.69	91	55041	0.191 ppbv	94
74) 1,2,4-Trimethylbenzene	16.77	105	17601	0.056 ppbv #	67

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 29 Nov 2021 16:17

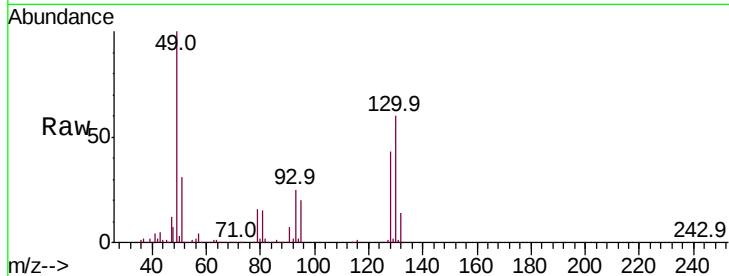
Tot Ion: 49 Resp: 934498

Ion Ratio Lower Upper

49 100

128 48.9 26.5 79.5

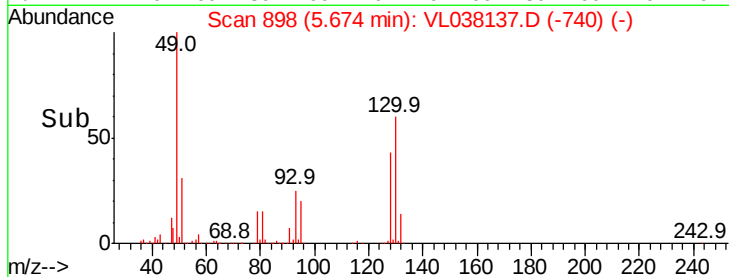
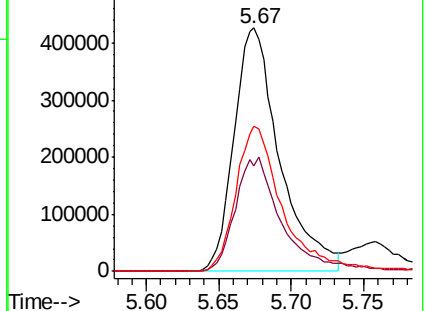
130 61.7 32.5 97.4



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



#2

Dichlorodifluoromethane

Concen: 0.192 ppbv

RT: 3.06 min Scan# 84

Delta R.T. 0.00 min

Lab File: VL038137.D

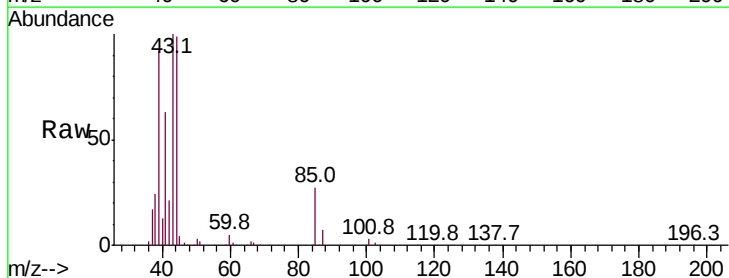
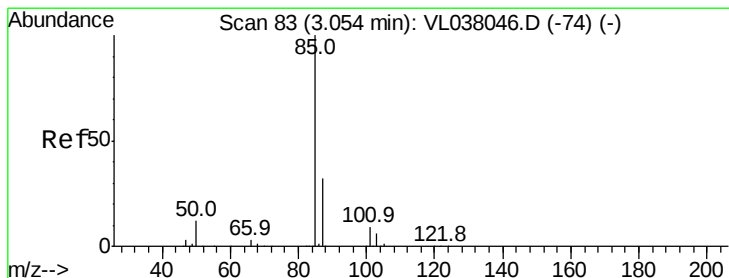
Acq: 29 Nov 2021 16:17

Tgt Ion: 85 Resp: 29588

Ion Ratio Lower Upper

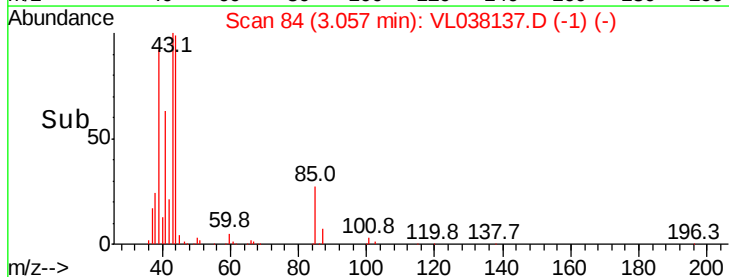
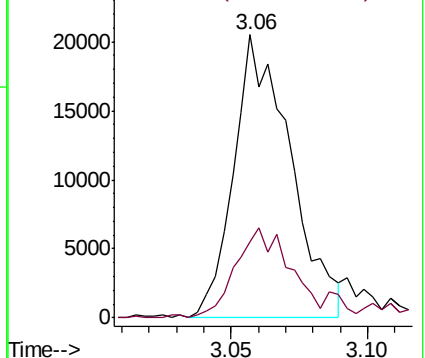
85 100

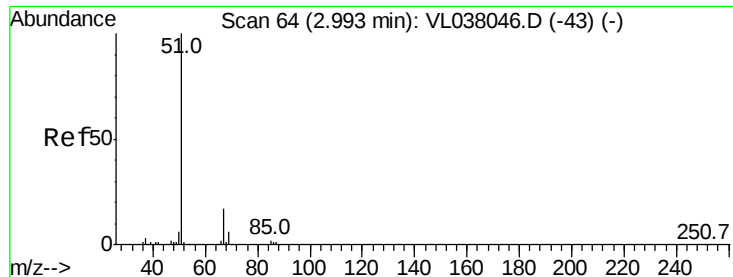
87 27.0 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

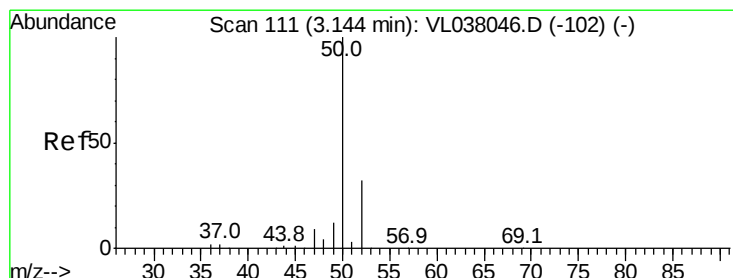
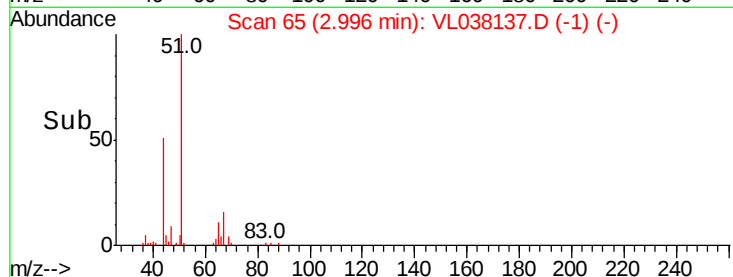
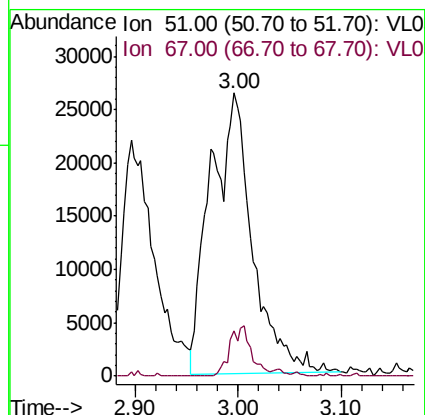
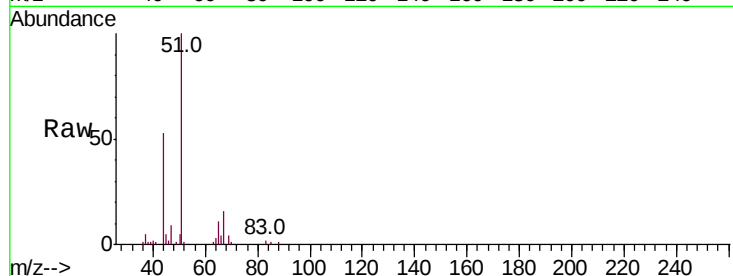
Ion 87.00 (86.70 to 87.70): VL0





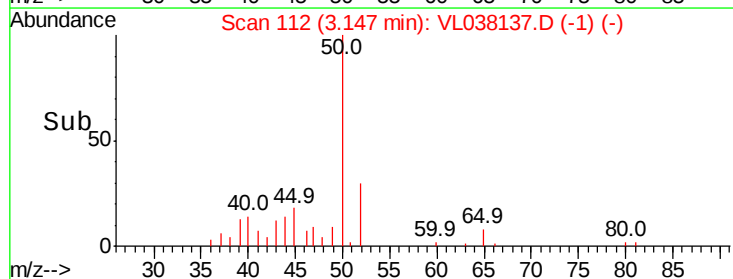
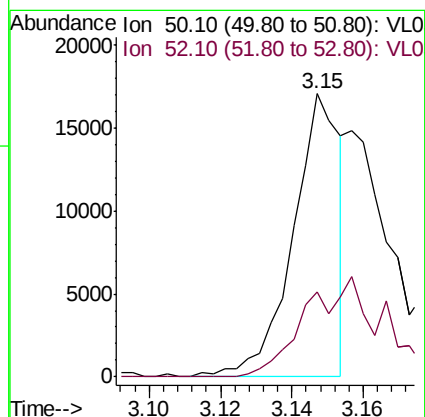
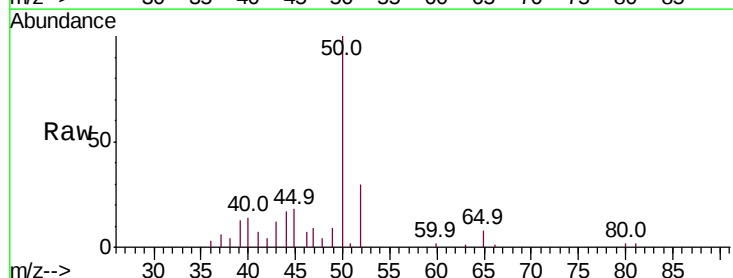
#3
 Chlorodifluoromethane
 Concen: 0.379 ppbv
 RT: 3.00
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 29 Nov 2021 16:17

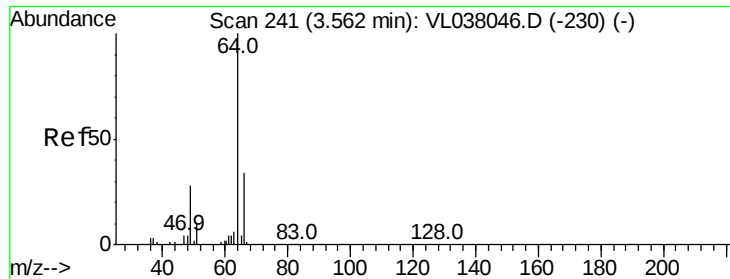
Tot Ion: 51 Resp: 74411
 Ion Ratio Lower Upper
 51 100
 67 10.1 13.8 20.8#



#4
 Chloromethane
 Concen: 0.233 ppbv
 RT: 3.15 min Scan# 112
 Delta R.T. 0.00 min
 Lab File: VL038137.D
 Acq: 29 Nov 2021 16:17

Tgt Ion: 50 Resp: 15586
 Ion Ratio Lower Upper
 50 100
 52 29.4 25.4 38.0





#7

Chloroethane

Concen: 10.011 ppbv

RT: 3.57 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

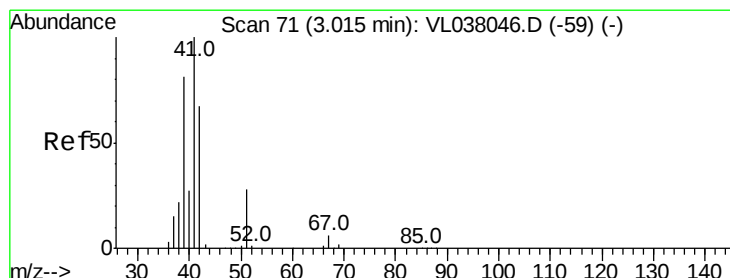
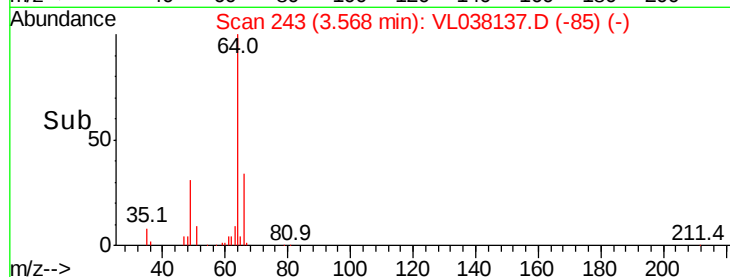
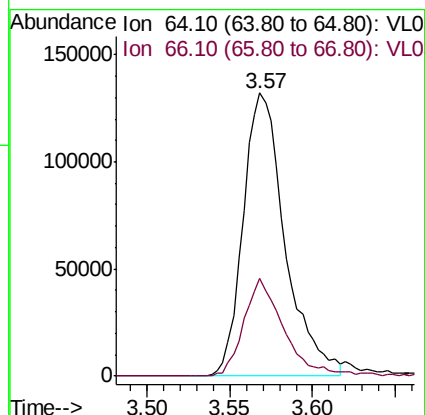
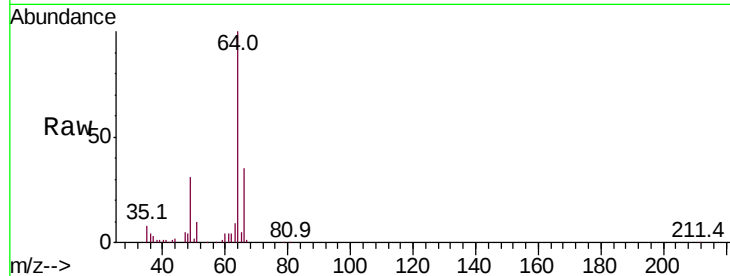
Acq: 29 Nov 2021 16:17

Tot Ion: 64 Resp: 232853

Ion Ratio Lower Upper

64 100

66 34.6 27.2 40.8



#9

Propene

Concen: 9.867 ppbv

RT: 3.21 min Scan# 133

Delta R.T. 0.20 min

Lab File: VL038137.D

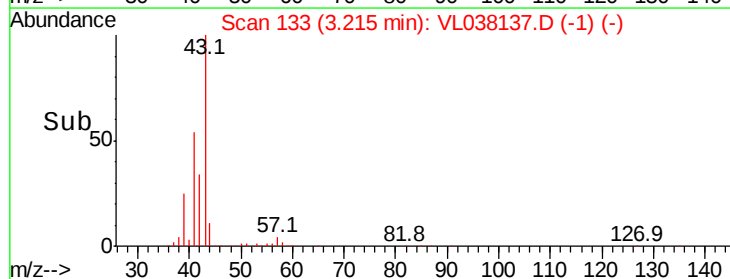
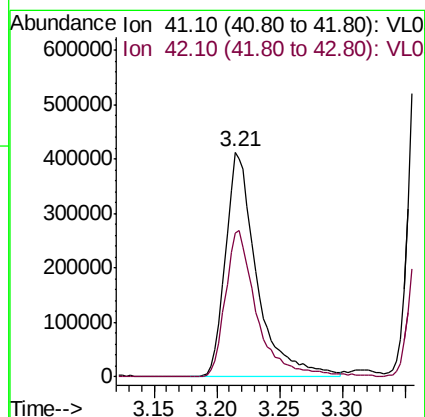
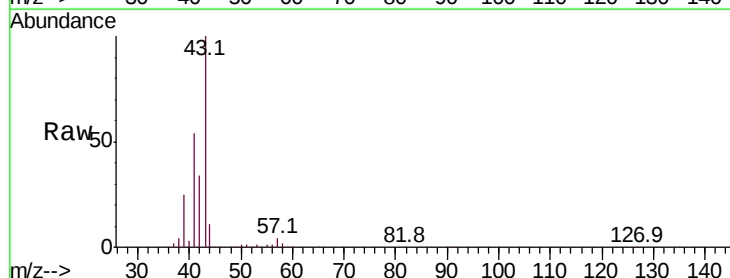
Acq: 29 Nov 2021 16:17

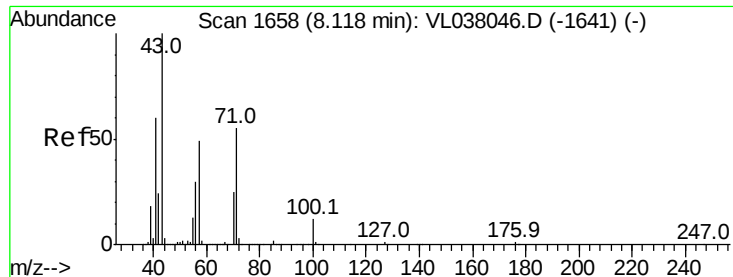
Tgt Ion: 41 Resp: 713130

Ion Ratio Lower Upper

41 100

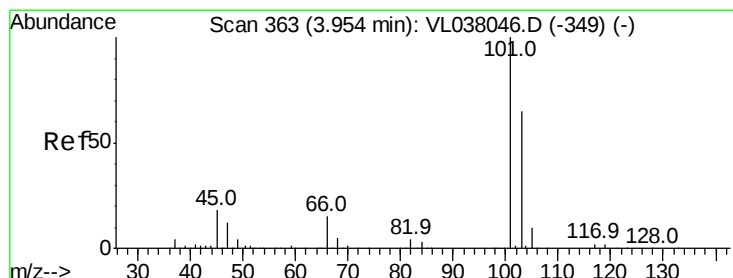
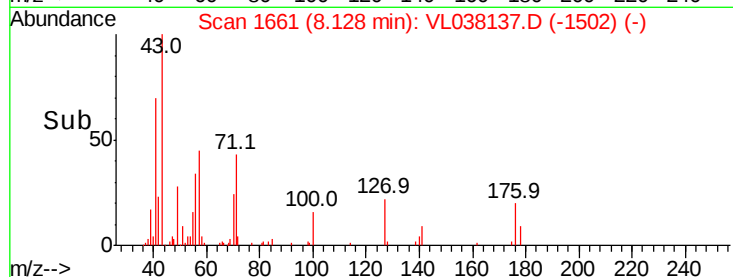
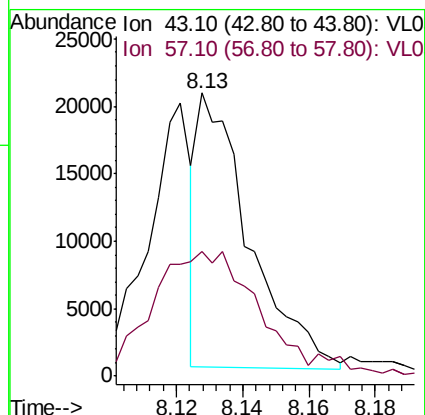
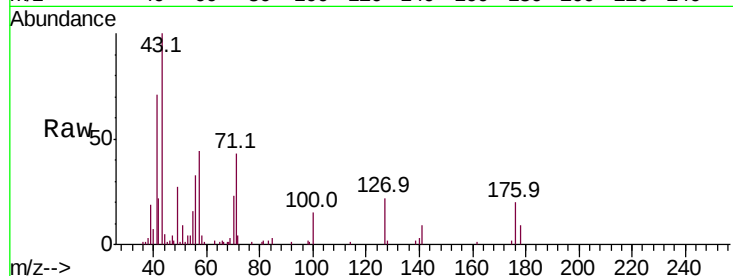
42 66.0 53.8 80.8





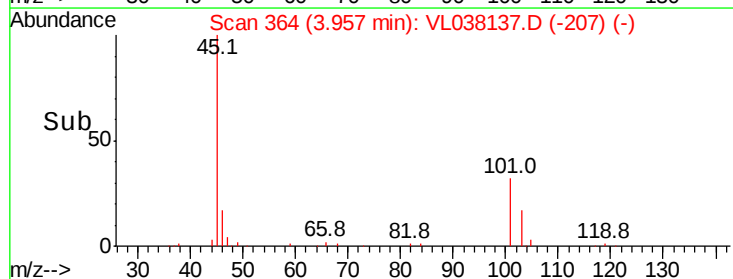
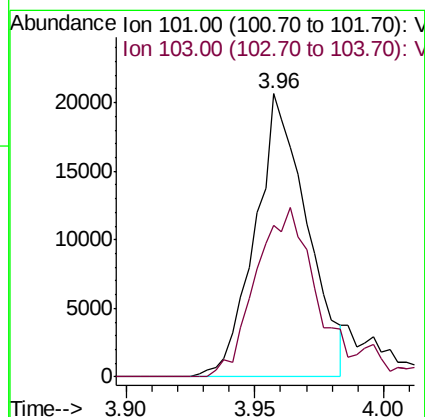
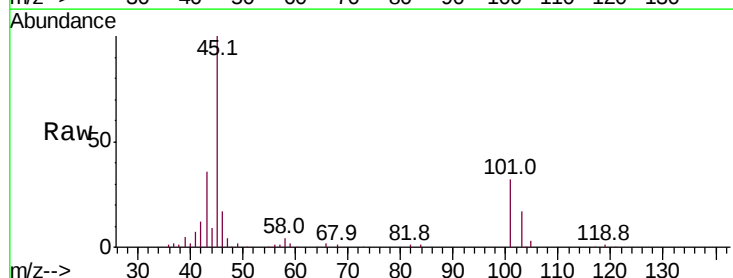
#10
Heptane
Concen: 0.123 ppbv
RT: 8.13
Delta R.T. MSVOA_L
Lab File: ClientSampled :
Acq: 29 Nov 2021 16:17

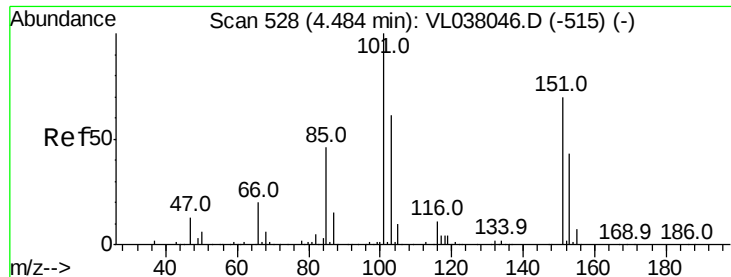
Tot Ion: 43 Resp: 21883
Ion Ratio Lower Upper
43 100
57 101.4 40.4 60.6#



#11
Trichlorofluoromethane
Concen: 0.198 ppbv
RT: 3.96 min Scan# 364
Delta R.T. 0.00 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

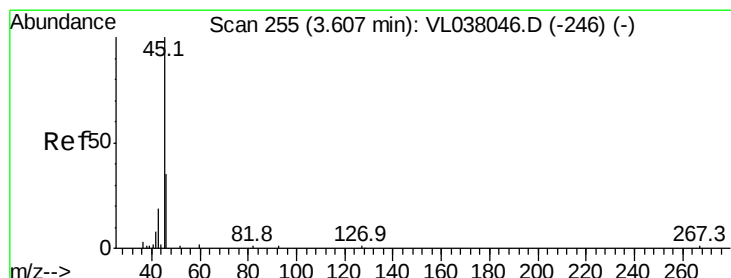
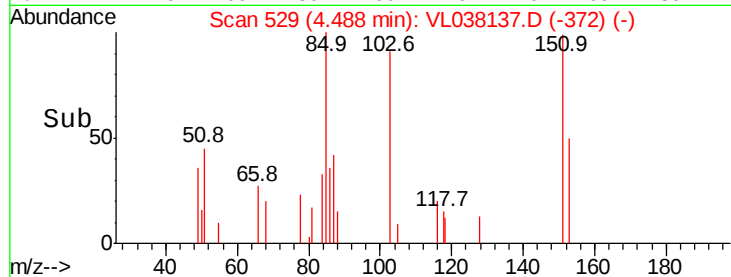
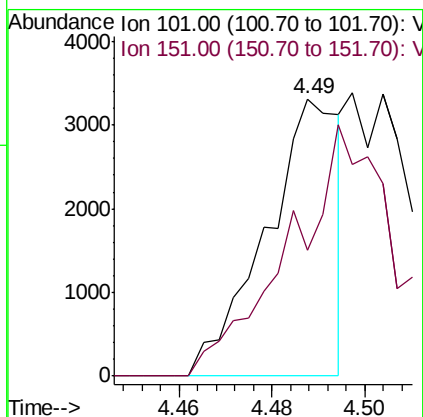
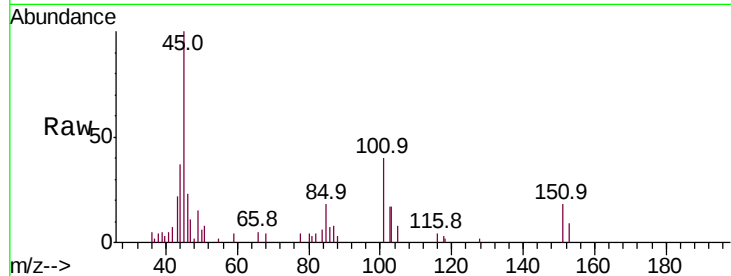
Tgt Ion:101 Resp: 29058
Ion Ratio Lower Upper
101 100
103 53.4 51.8 77.6





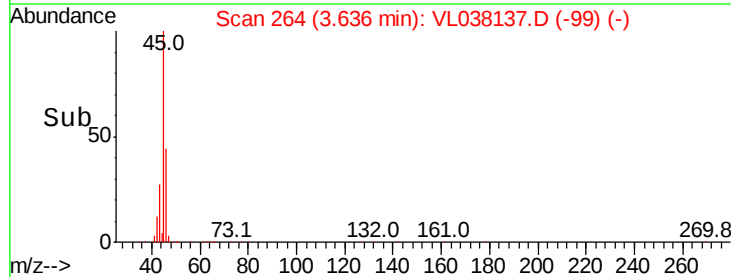
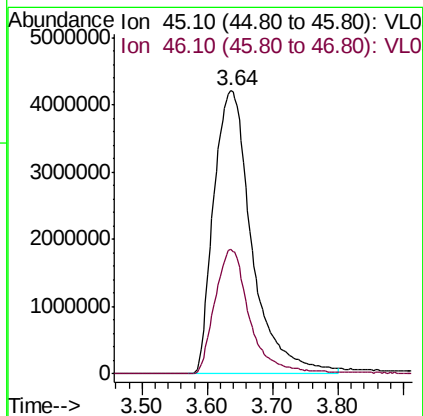
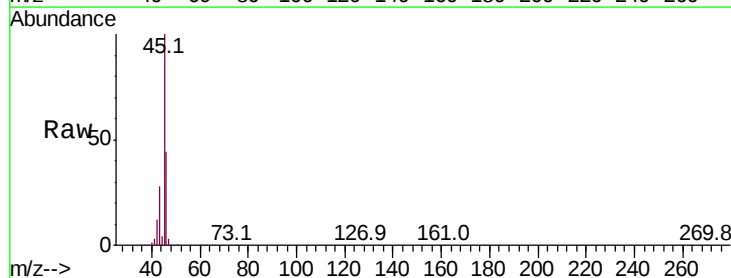
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.035 ppbv
 RT: 4.49
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 Acq: 29 Nov 2021 16:17

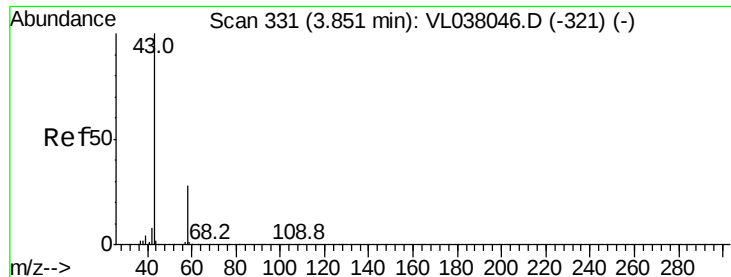
Tot Ion:101 Resp: 3646
 Ion Ratio Lower Upper
 101 100
 151 0.0 59.0 88.4#



#13
 Ethanol
 Concen: 2445.954 ppbv
 RT: 3.64 min Scan# 264
 Delta R.T. 0.03 min
 Lab File: VL038137.D
 Acq: 29 Nov 2021 16:17

Tgt Ion: 45 Resp:17083752
 Ion Ratio Lower Upper
 45 100
 46 41.0 17.6 70.2





#15

Acetone

Concen: 7.981 ppbv

RT: 3.86 Instrument :

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

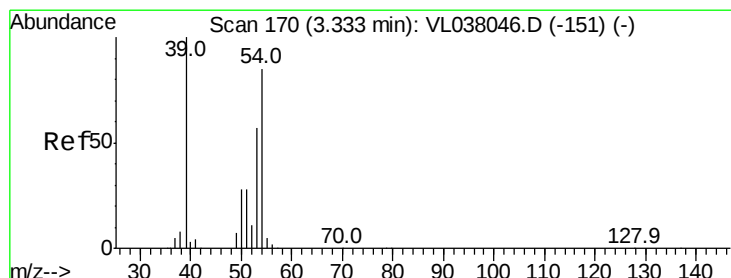
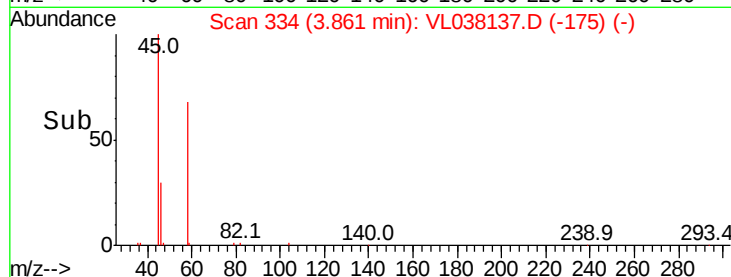
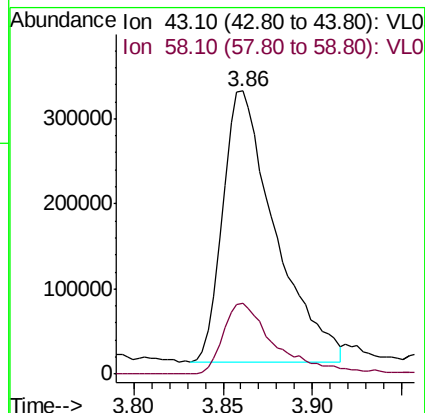
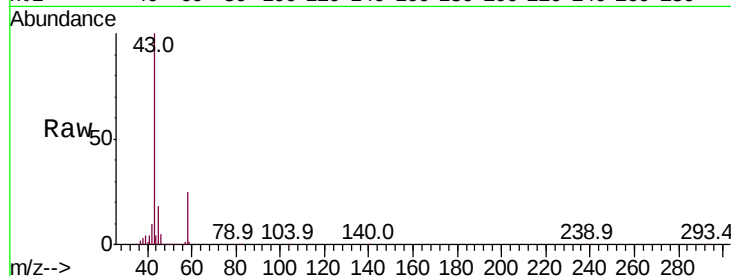
Acq: 29 Nov 2021 16:17

Tot Ion: 43 Resp: 646612

Ion Ratio Lower Upper

43 100

58 26.8 22.4 33.6



#16

1,3-Butadiene

Concen: 15.419 ppbv

RT: 3.37 min Scan# 180

Delta R.T. 0.03 min

Lab File: VL038137.D

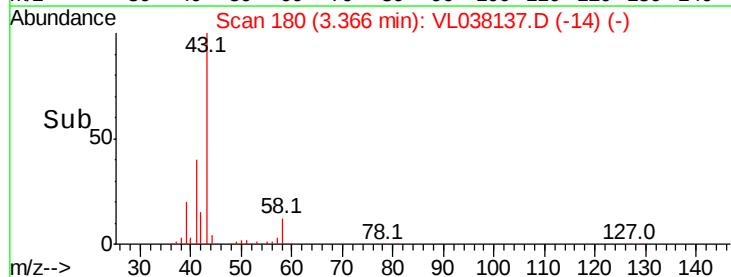
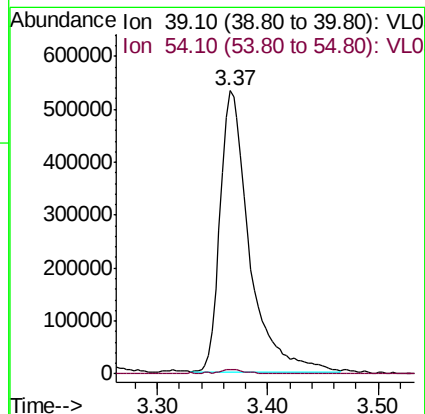
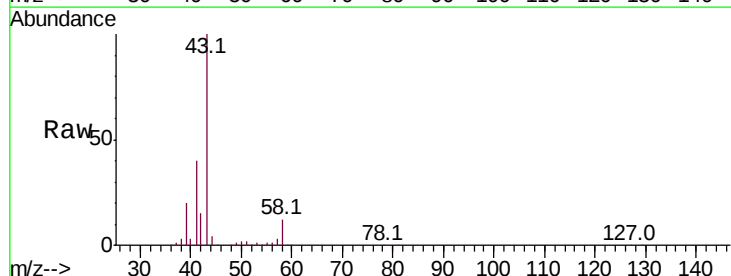
Acq: 29 Nov 2021 16:17

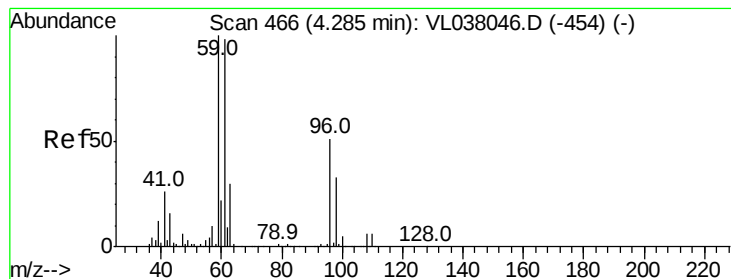
Tgt Ion: 39 Resp: 974664

Ion Ratio Lower Upper

39 100

54 2.0 64.4 96.6#





#17

tert-Butyl alcohol

Concen: 1.949 ppbv

RT: 4.00 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

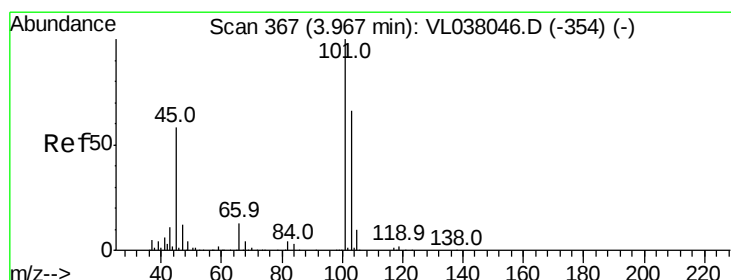
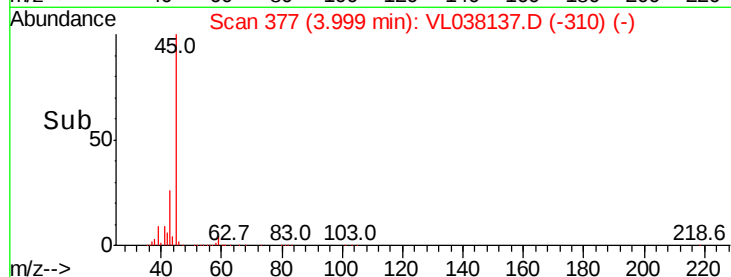
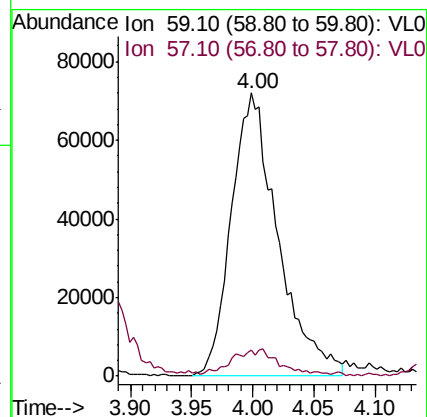
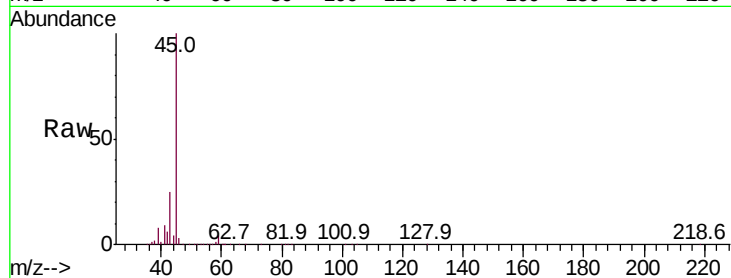
Acq: 29 Nov 2021 16:17

Tot Ion: 59 Resp: 191527

Ion Ratio Lower Upper

59 100

57 10.7 8.6 13.0



#19

Isopropyl Alcohol

Concen: 86.840 ppbv

RT: 4.00 min Scan# 377

Delta R.T. 0.03 min

Lab File: VL038137.D

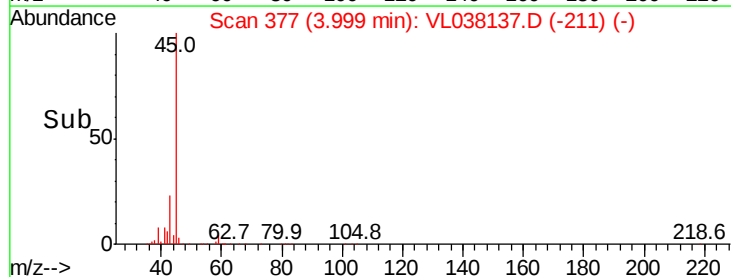
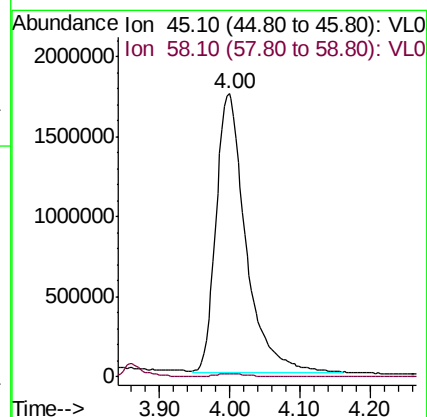
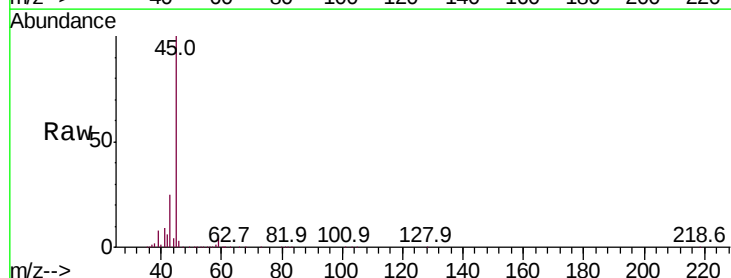
Acq: 29 Nov 2021 16:17

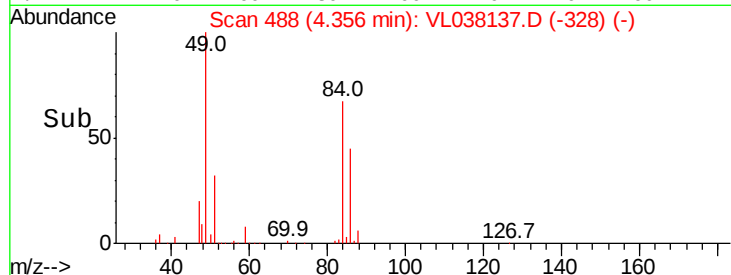
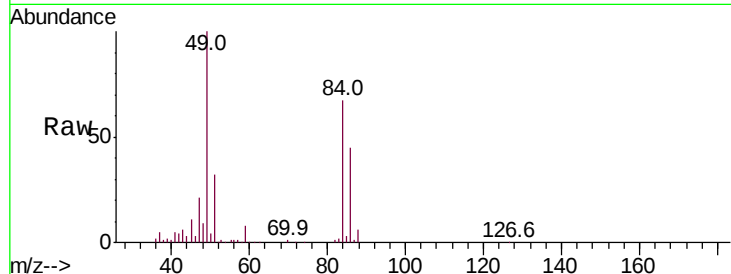
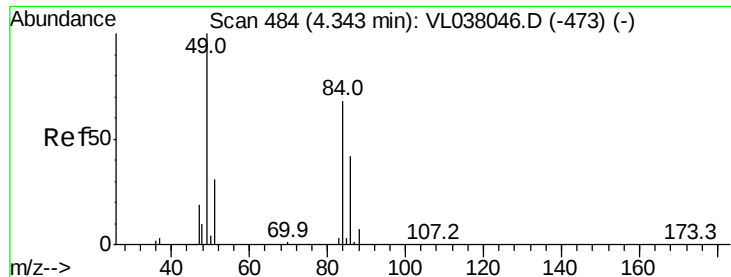
Tgt Ion: 45 Resp: 5083785

Ion Ratio Lower Upper

45 100

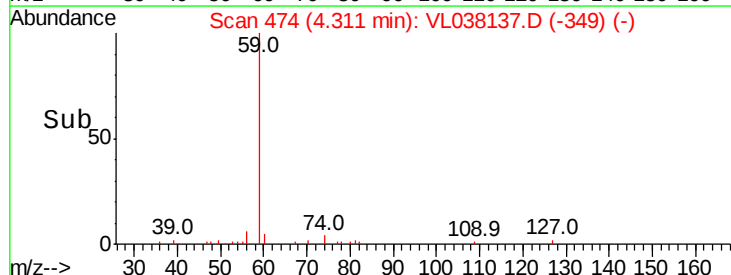
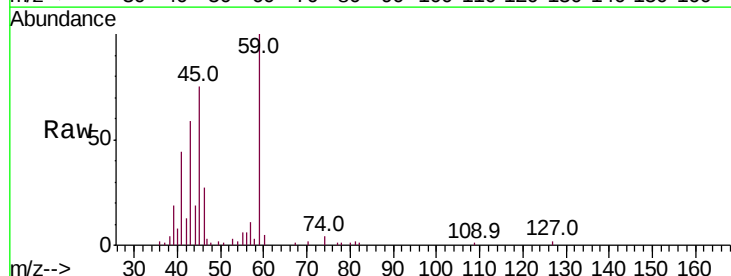
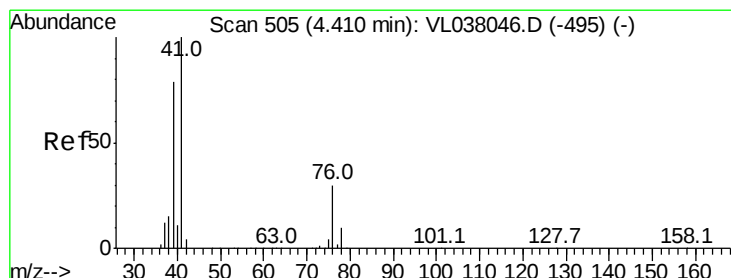
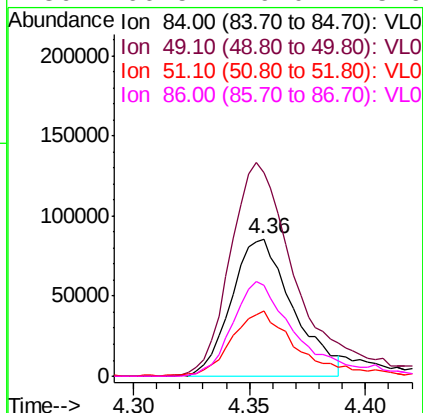
58 1.3 1.4 2.0#





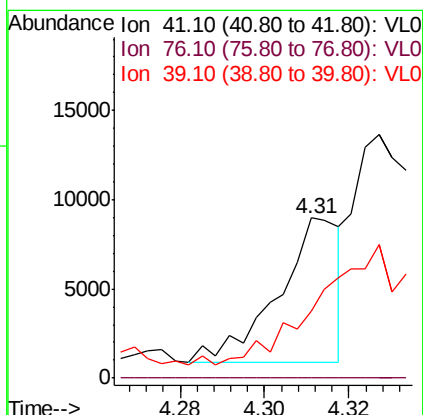
#20
Methvlene Chloride
Concen: 3.444 ppbv
RT: 4.36
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Nov 2021 16:17

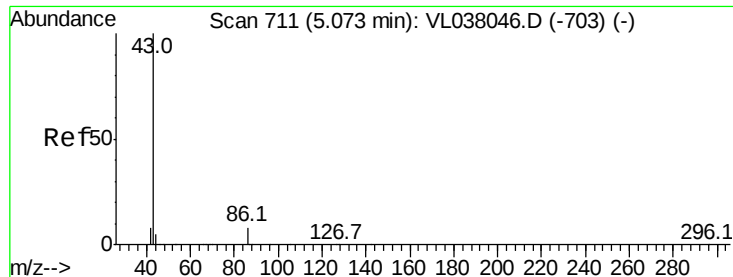
Tot Ion:	84	Resp:	156283
Ion	Ratio	Lower	Upper
84	100		
49	146.6	118.2	177.2
51	46.5	36.8	55.2
86	66.5	49.0	73.6



#21
Allyl Chloride
Concen: 0.111 ppbv
RT: 4.31 min Scan# 474
Delta R.T. -0.10 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

Tgt Ion:	41	Resp:	8310
Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.6	36.8#
39	169.1	63.4	95.0#





#23

Vinyl Acetate

Concen: 0.093 ppbv

RT: 5.07 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 29 Nov 2021 16:17

Tot Ion: 43 Resp: 10928

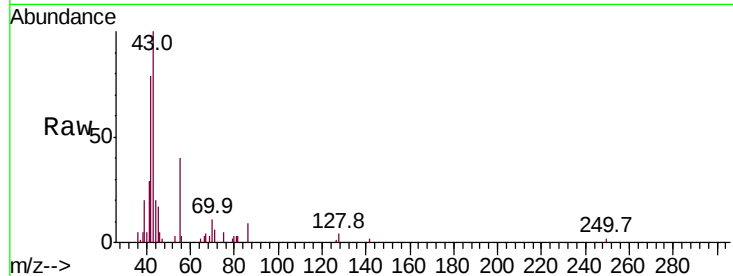
Ion Ratio Lower Upper

43 100

86 13.1 5.3 7.9#

42 89.8 7.0 10.6#

44 0.0 4.0 6.0#

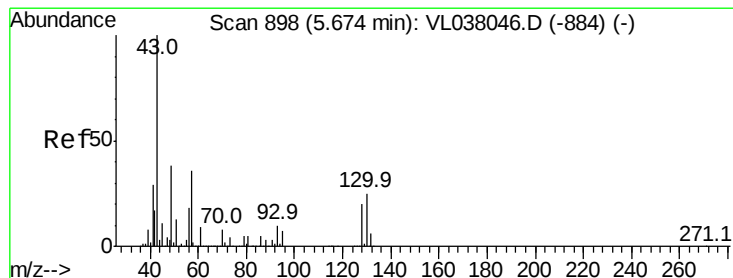
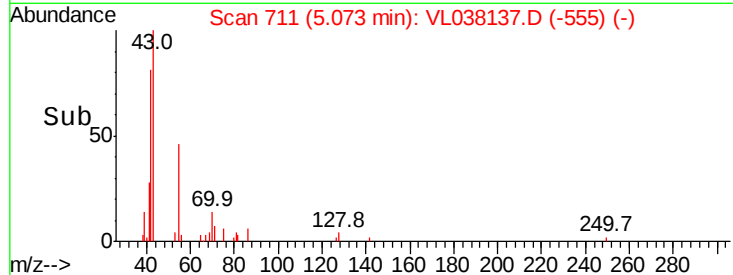
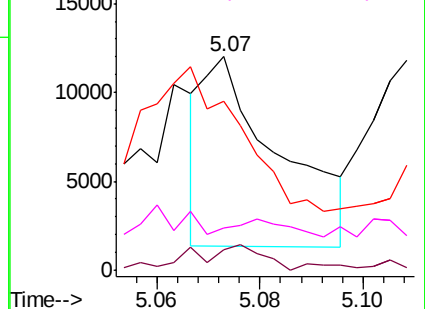


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.526 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.02 min

Lab File: VL038137.D

Acq: 29 Nov 2021 16:17

Tgt Ion: 43 Resp: 141765

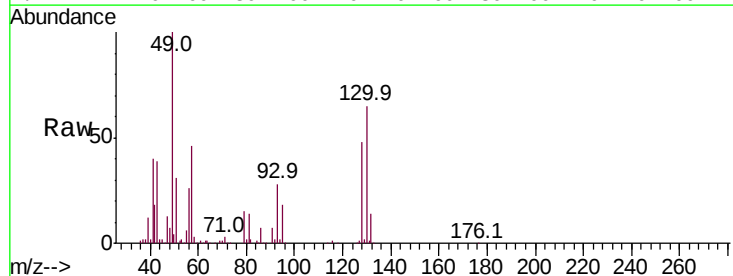
Ion Ratio Lower Upper

43 100

45 5.5 7.9 11.9#

61 2.9 7.8 11.6#

70 3.1 5.8 8.8#

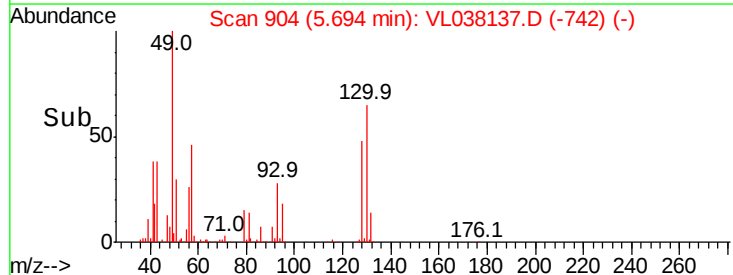
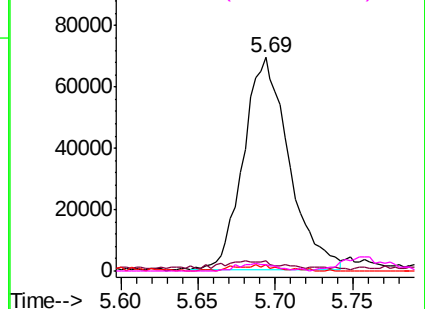


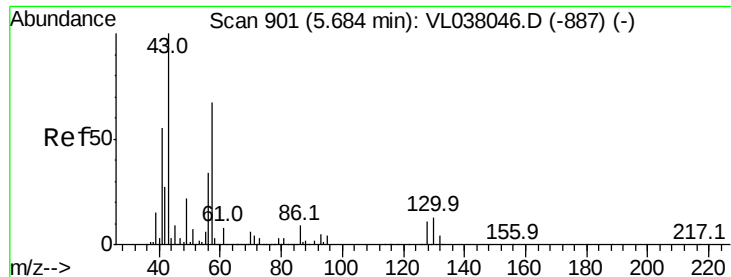
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

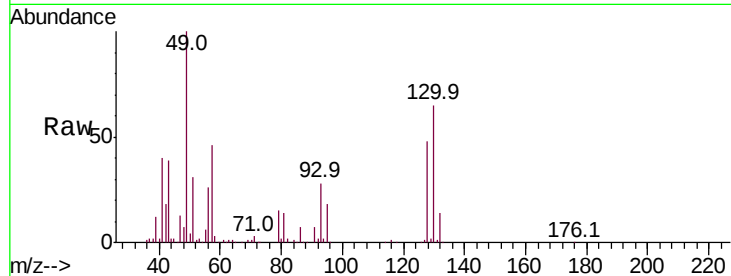
Ion 70.10 (69.80 to 70.80): VL0



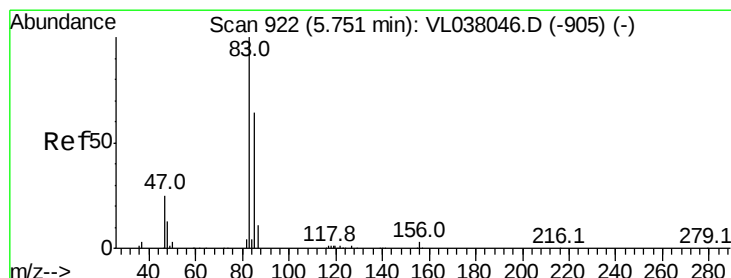
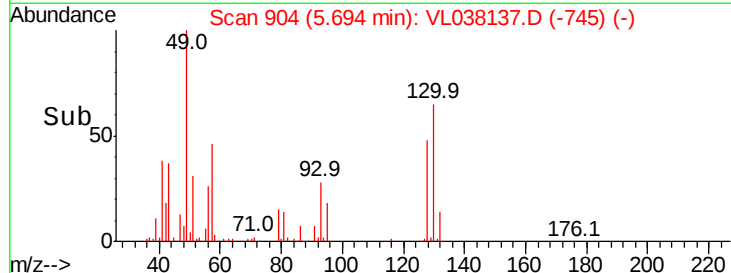
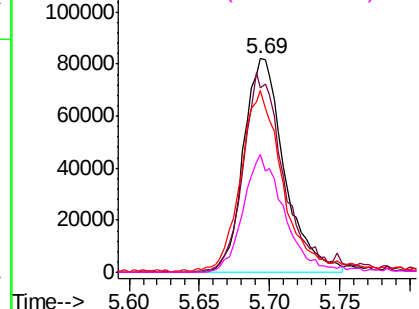


#26
Hexane
Concen: 1.285 ppbv
RT: 5.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Nov 2021 16:17

Tot Ion: 57 Resp: 166792
Ion Ratio Lower Upper
57 100
41 97.2 71.4 107.2
43 90.9 174.6 261.8#
56 56.7 43.2 64.8

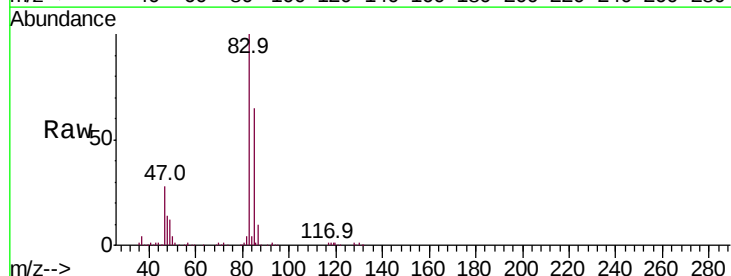


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

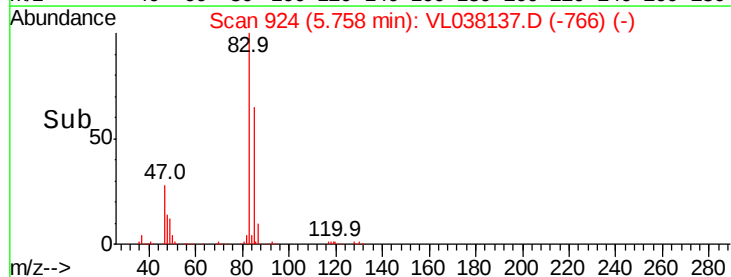
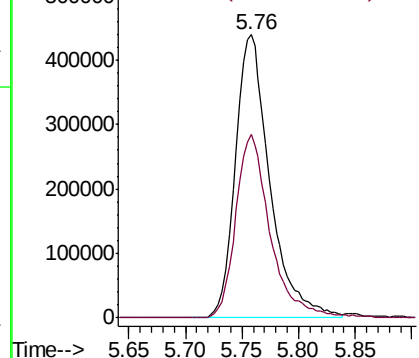


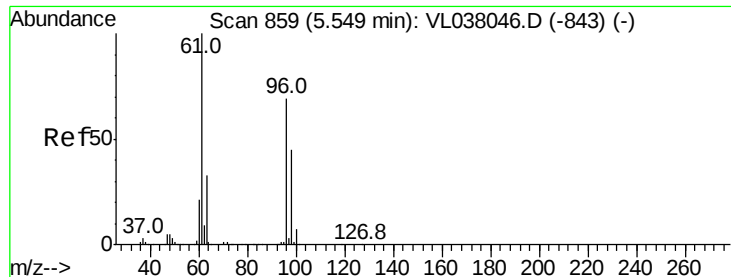
#29
Chloroform
Concen: 4.877 ppbv
RT: 5.76 min Scan# 924
Delta R.T. 0.01 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

Tgt Ion: 83 Resp: 932857
Ion Ratio Lower Upper
83 100
85 64.8 51.0 76.6



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





#31

cis-1,2-Dichloroethene

Concen: 0.066 ppbv

RT: 5.55

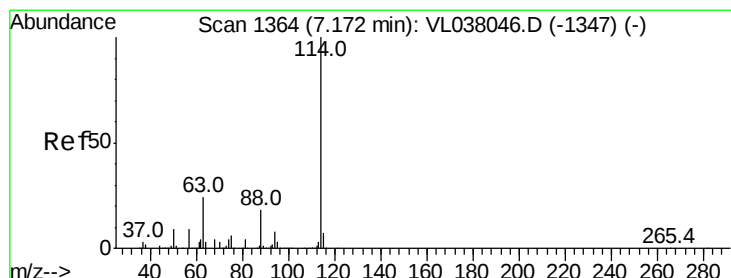
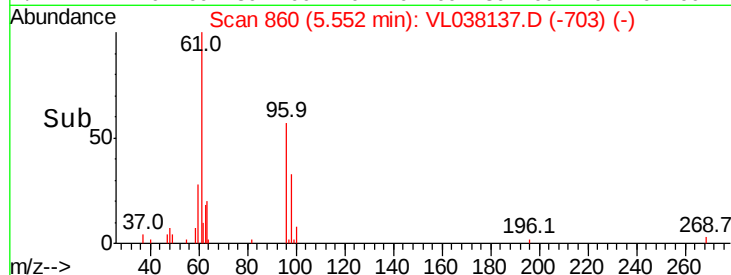
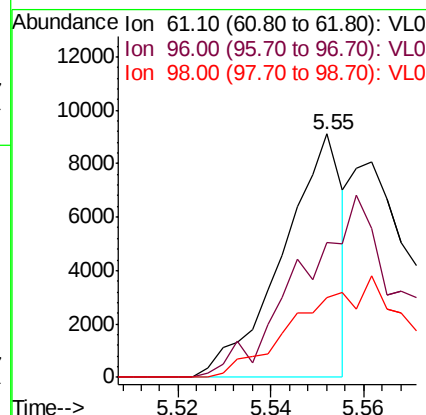
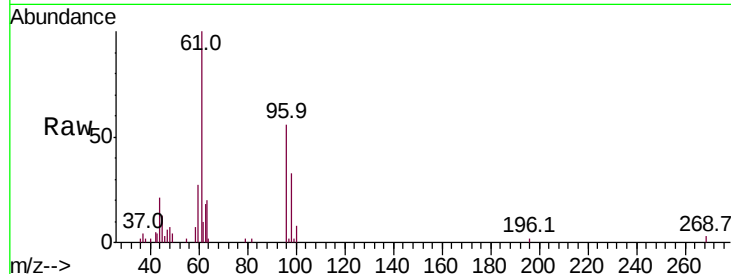
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 29 Nov 2021 16:17

Tot Ion: 61 Resp: 8203

Ion	Ratio	Lower	Upper
61	100		
96	50.5	55.4	83.2#
98	29.7	35.7	53.5#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1366

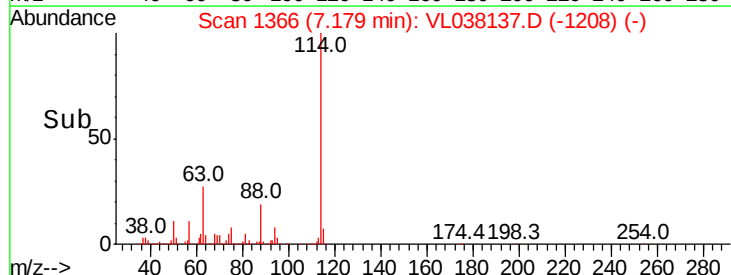
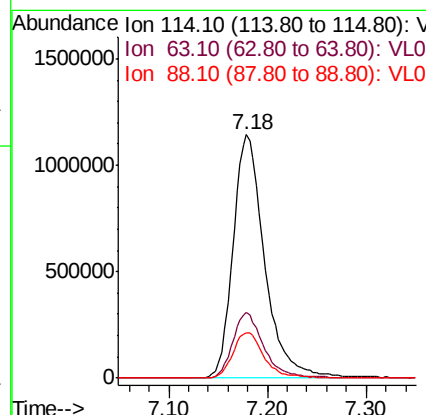
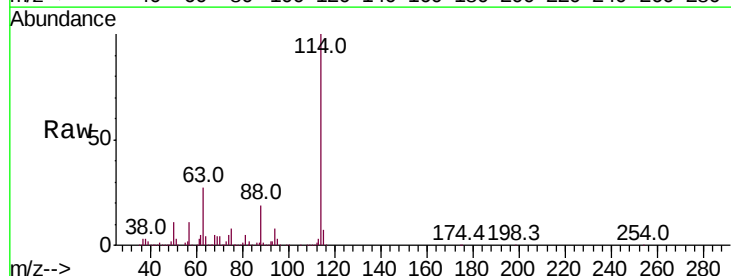
Delta R.T. 0.01 min

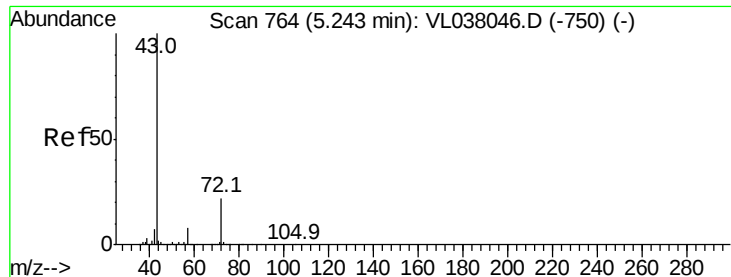
Lab File: VL038137.D

Acq: 29 Nov 2021 16:17

Tgt Ion: 114 Resp: 2544971

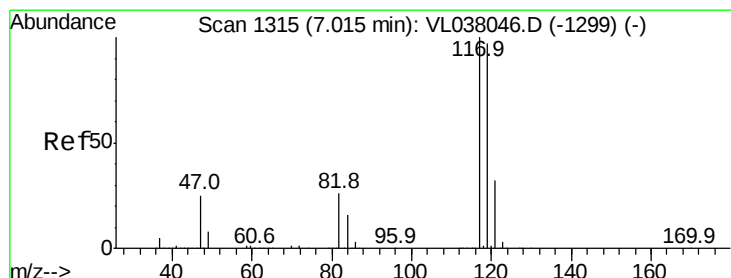
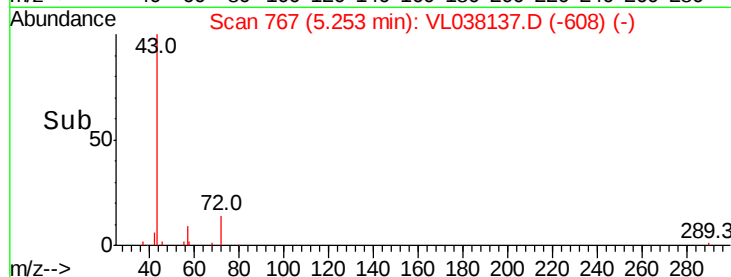
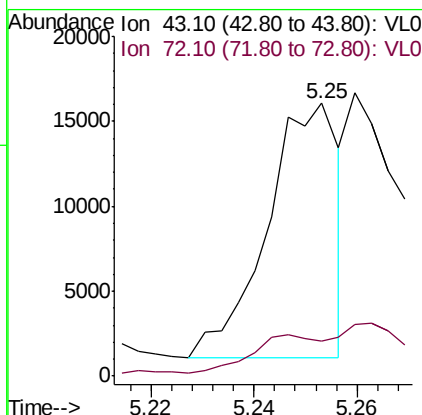
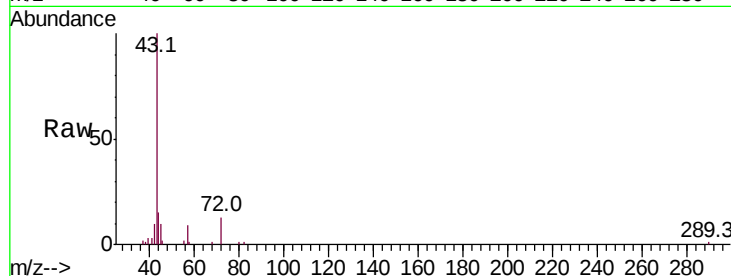
Ion	Ratio	Lower	Upper
114	100		
63	26.7	19.7	29.5
88	18.6	14.4	21.6





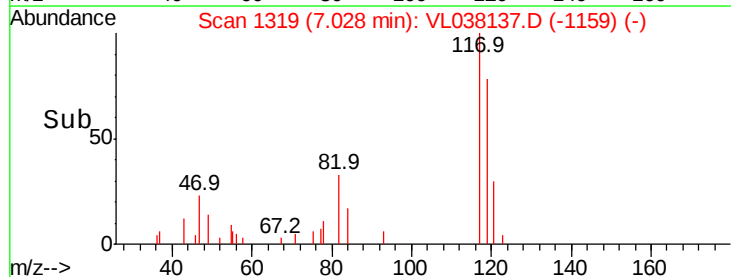
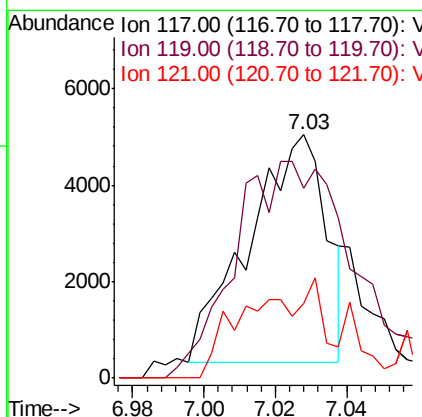
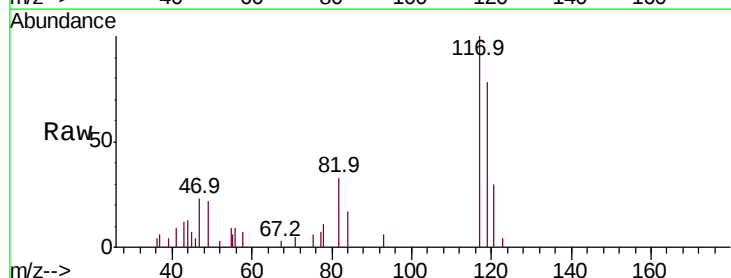
#34
2-Butanone
Concen: 0.141 ppbv
RT: 5.25
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Nov 2021 16:17

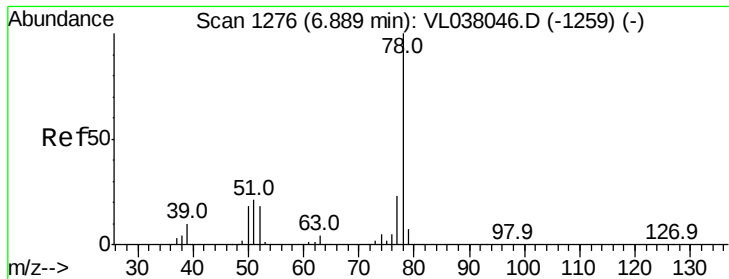
Tot Ion: 43 Resp: 14422
Ion Ratio Lower Upper
43 100
72 0.0 18.8 28.2#



#35
Carbon Tetrachloride
Concen: 0.040 ppbv
RT: 7.03 min Scan# 1319
Delta R.T. 0.01 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

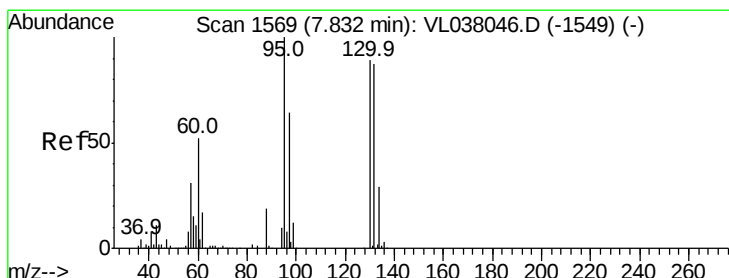
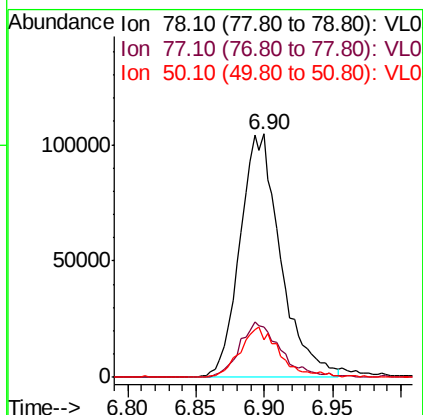
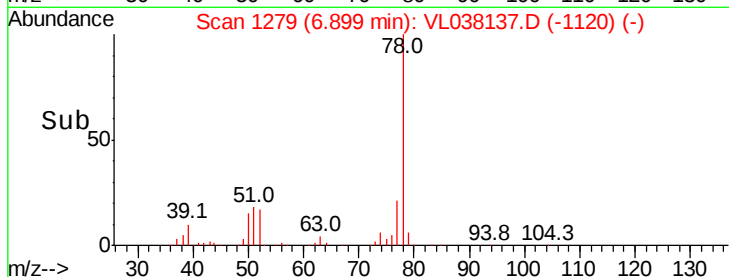
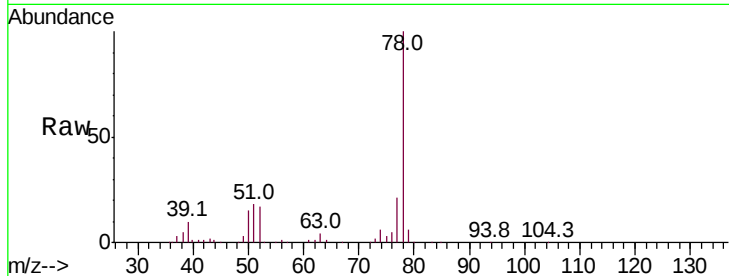
Tgt Ion: 117 Resp: 7128
Ion Ratio Lower Upper
117 100
119 72.3 77.7 116.5#
121 32.5 25.6 38.4





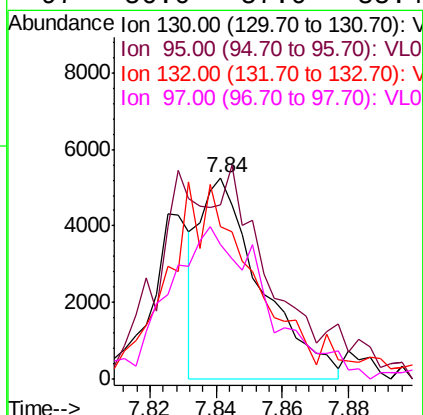
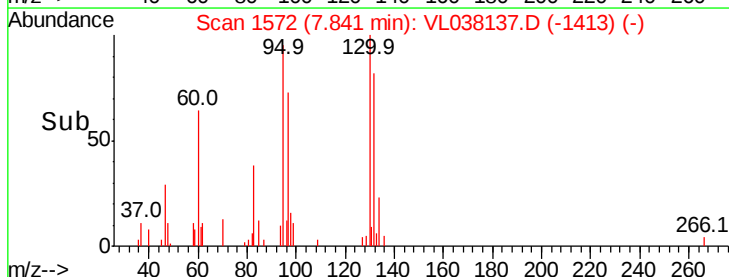
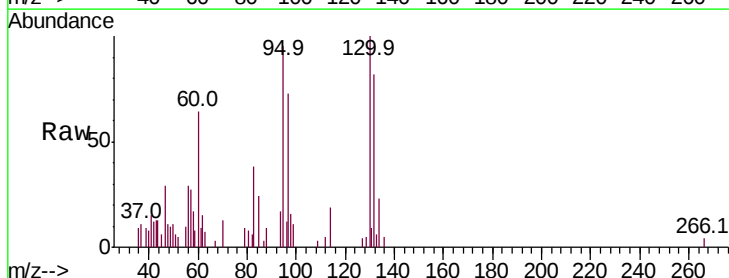
#36
Benzene
Concen: 0.856 ppbv
RT: 6.90
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Nov 2021 16:17

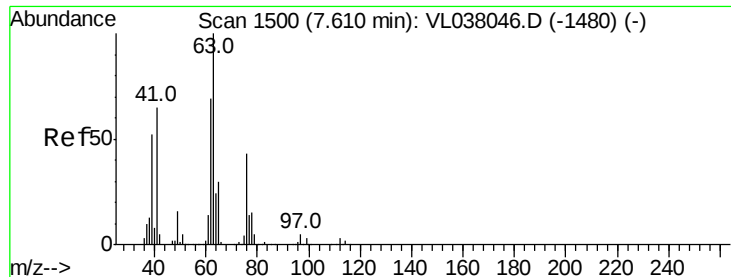
Tot Ion	Ratio	Lower	Upper
78	100		
77	20.8	18.2	27.4
50	15.1	14.7	22.1



#38
Trichloroethene
Concen: 0.070 ppbv
RT: 7.84 min Scan# 1572
Delta R.T. 0.01 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

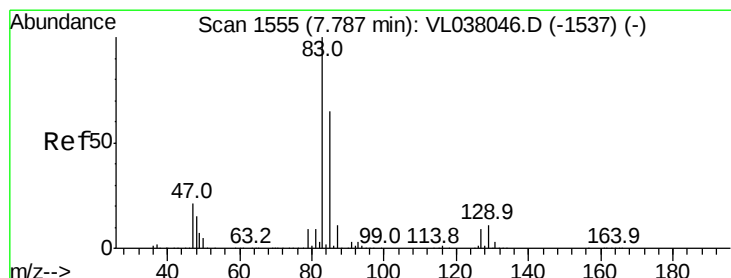
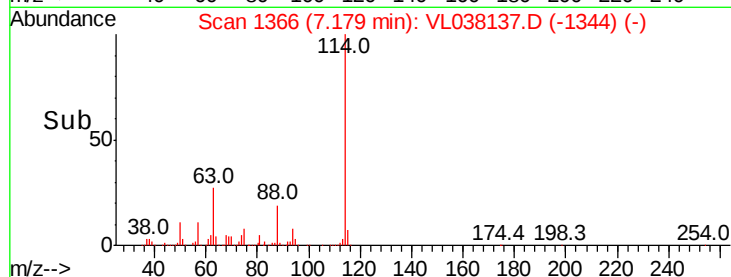
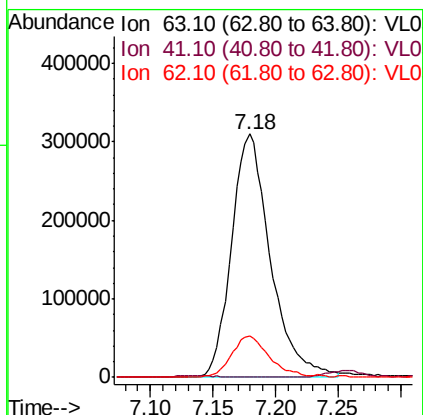
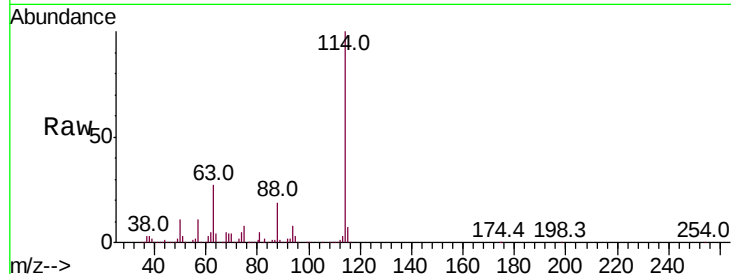
Tgt Ion	Ratio	Lower	Upper
130	100		
95	63.0	89.4	134.2#
132	69.5	78.2	117.2#
97	56.0	57.0	85.4#





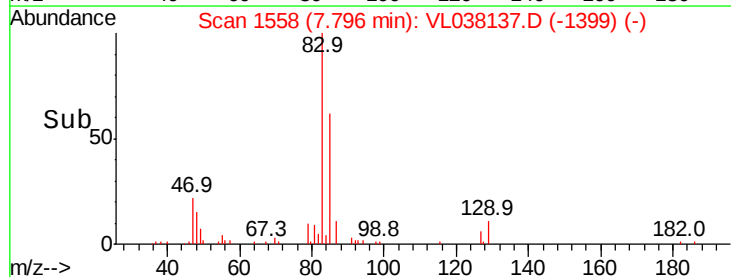
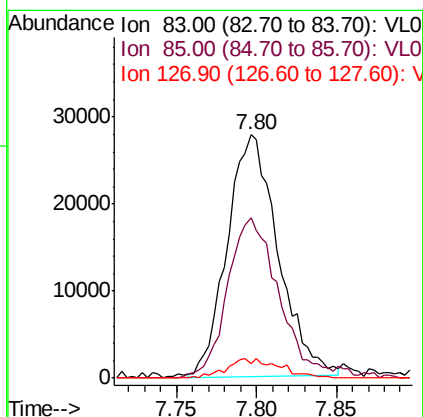
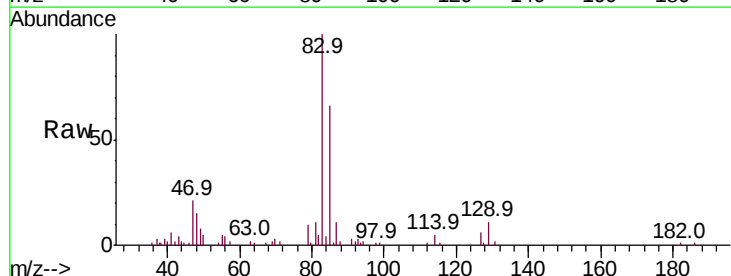
#39
 1,2-Dichloropropane
 Concen: 6.873 ppbv
 RT: 7.18
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 29 Nov 2021 16:17

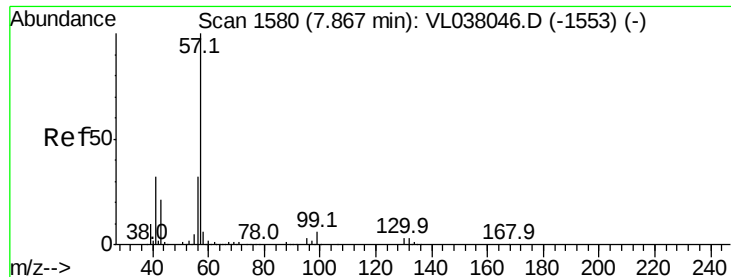
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	52.3	78.5#
62	16.8	55.1	82.7#



#42
 Bromodichloromethane
 Concen: 0.324 ppbv
 RT: 7.80 min Scan# 1558
 Delta R.T. 0.01 min
 Lab File: VL038137.D
 Acq: 29 Nov 2021 16:17

Tgt Ion	Ratio	Lower	Upper
83	100		
85	65.0	51.9	77.9
127	6.4	6.8	10.2#





#44

2,2,4-Trimethylpentane

Concen: 0.054 ppbv

RT: 7.87 Instrument:

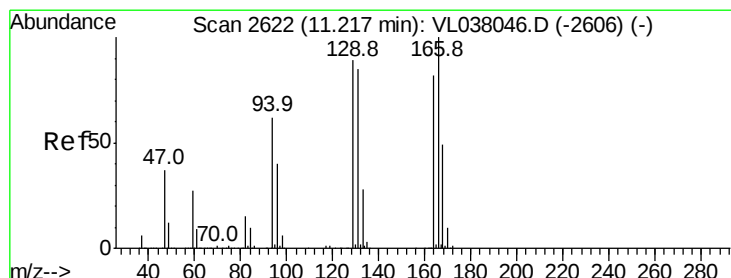
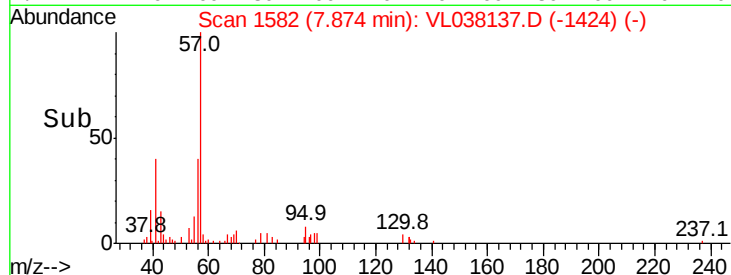
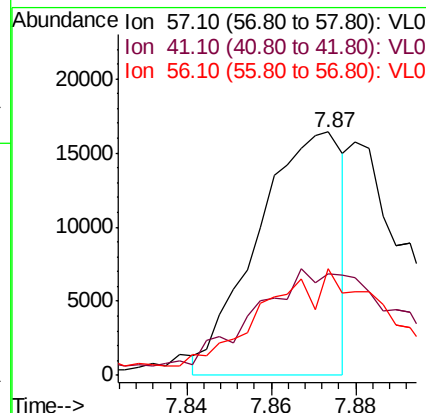
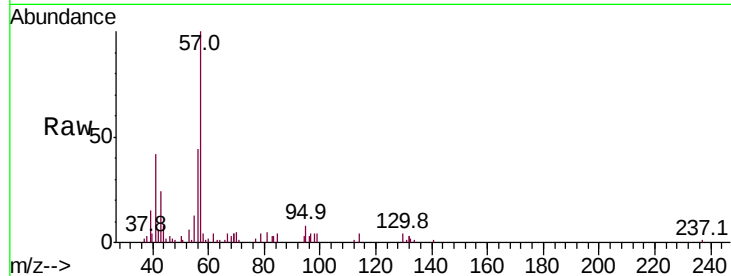
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 29 Nov 2021 16:17

Tot Ion: 57 Resp: 23023

Ion	Ratio	Lower	Upper
57	100		
41	92.0	25.8	38.6#
56	74.7	25.6	38.4#



#52

Tetrachloroethene

Concen: 33.568 ppbv

RT: 11.23 min Scan# 2626

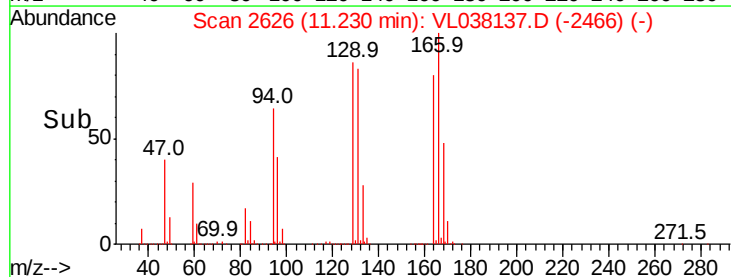
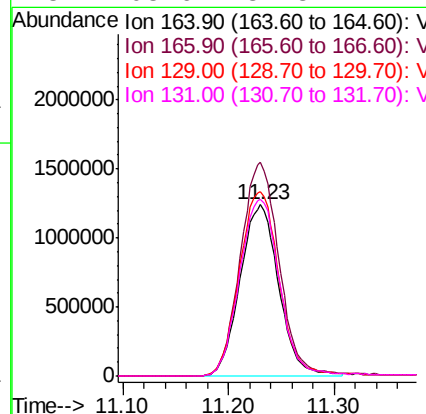
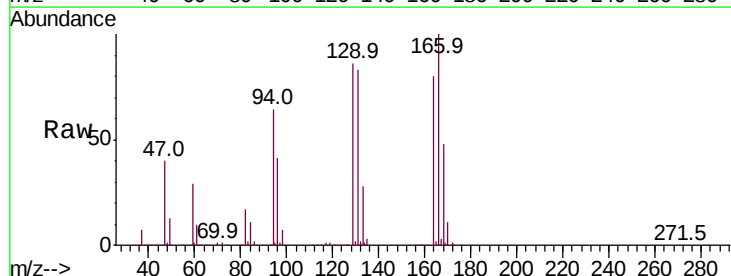
Delta R.T. 0.01 min

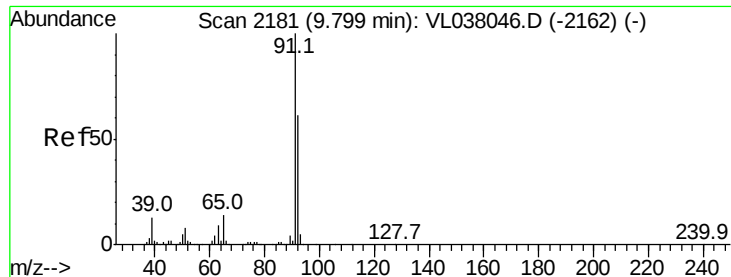
Lab File: VL038137.D

Acq: 29 Nov 2021 16:17

Tgt Ion:164 Resp: 3153173

Ion	Ratio	Lower	Upper
164	100		
166	124.8	97.2	145.8
129	107.7	86.9	130.3
131	103.6	82.8	124.2





#53

Toluene

Concen: 0.416 ppbv

RT: 9.81 Instrument: MSVOA_1

Delta R.T. 0.01 min

Lab File: ClientSampleId: IA-1DUP

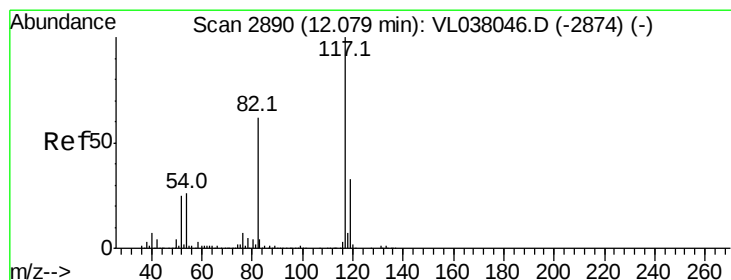
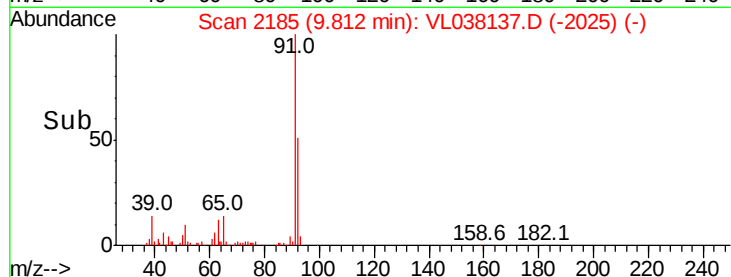
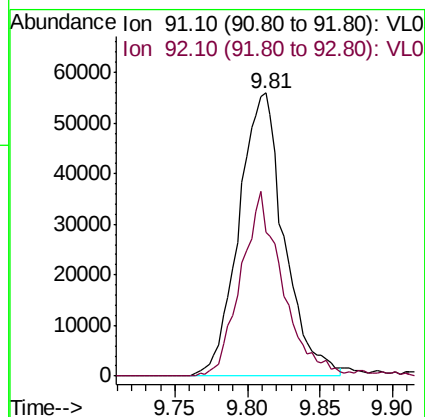
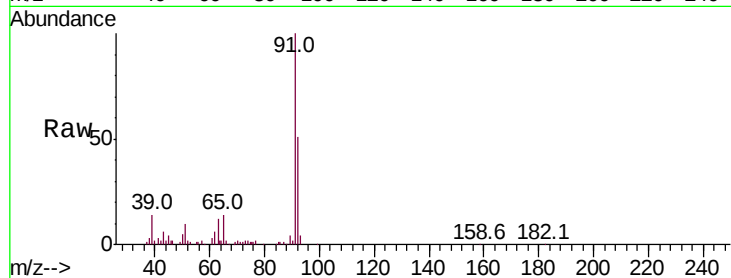
Acq: 29 Nov 2021 16:17

Tot Ion: 91 Resp: 121416

Ion Ratio Lower Upper

91 100

92 61.3 49.7 74.5



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2892

Delta R.T. 0.01 min

Lab File: VL038137.D

Acq: 29 Nov 2021 16:17

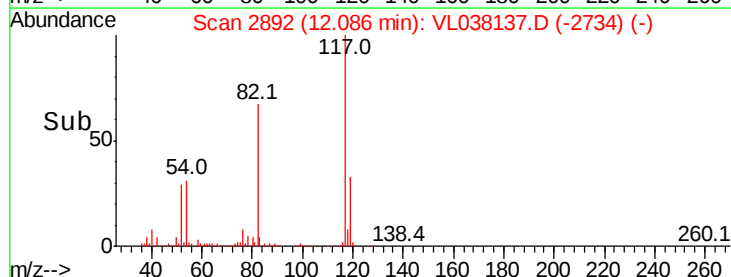
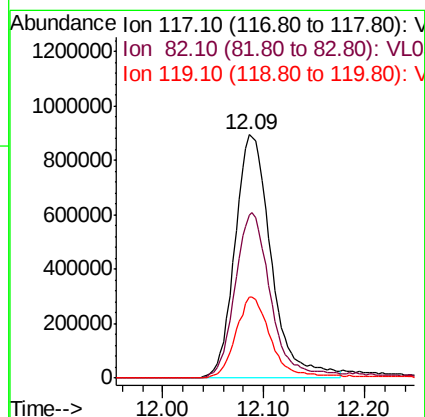
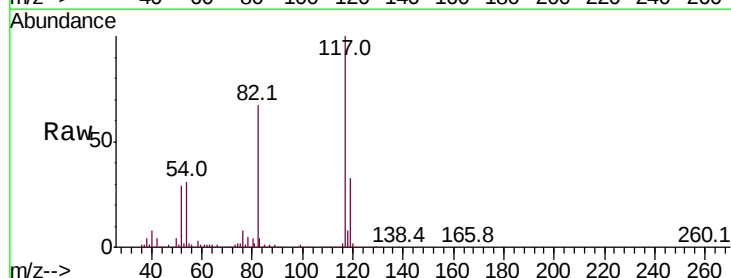
Tgt Ion: 117 Resp: 2232693

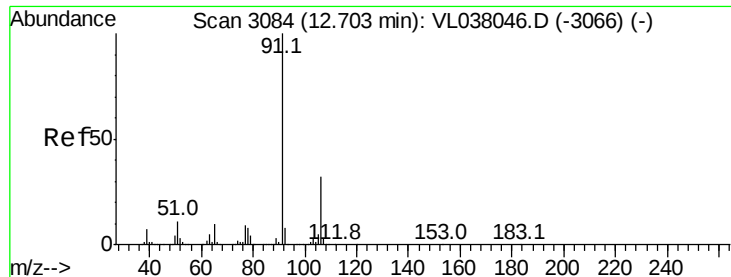
Ion Ratio Lower Upper

117 100

82 71.4 52.8 79.2

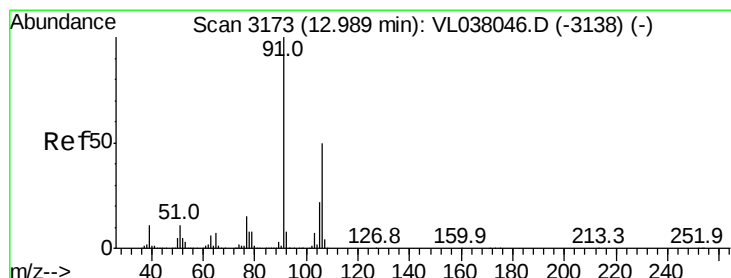
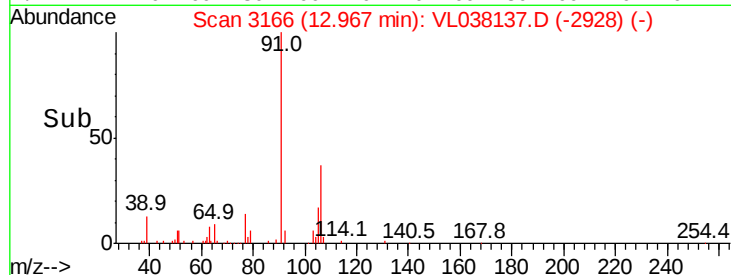
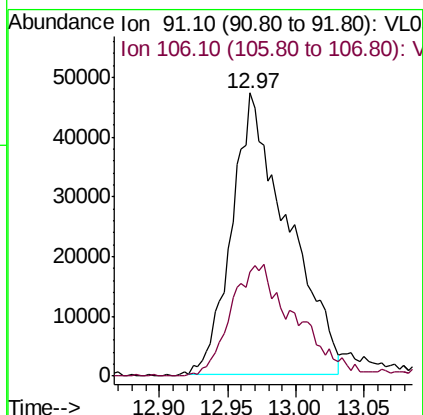
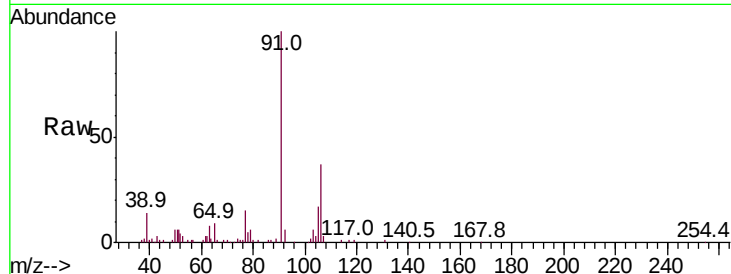
119 34.0 26.8 40.2





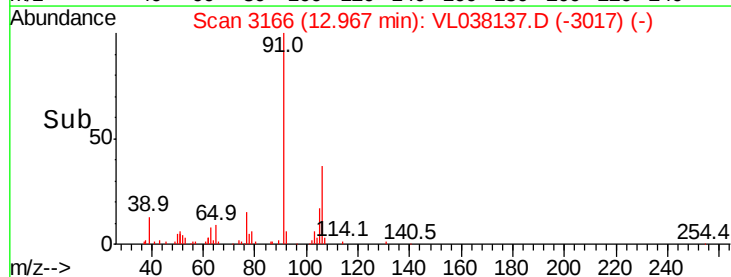
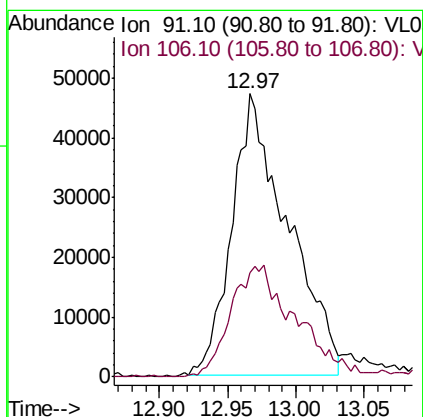
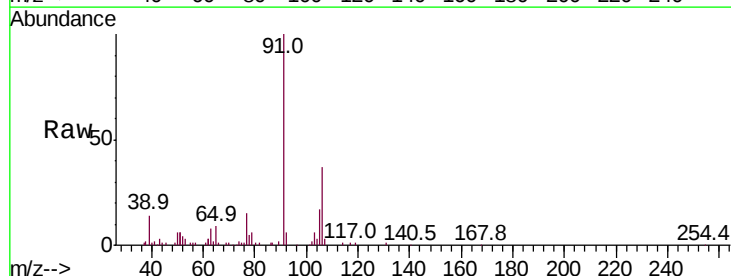
#58
Ethyl Benzene
Concen: 0.362 ppbv
RT: 12.97 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 29 Nov 2021 16:17

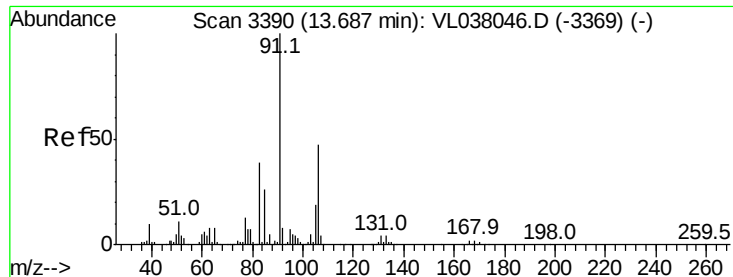
Tot Ion: 91 Resp: 133756
Ion Ratio Lower Upper
91 100
106 36.5 25.8 38.6



#59
m/p-Xylene
Concen: 0.431 ppbv
RT: 12.97 min Scan# 3166
Delta R.T.: -0.02 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

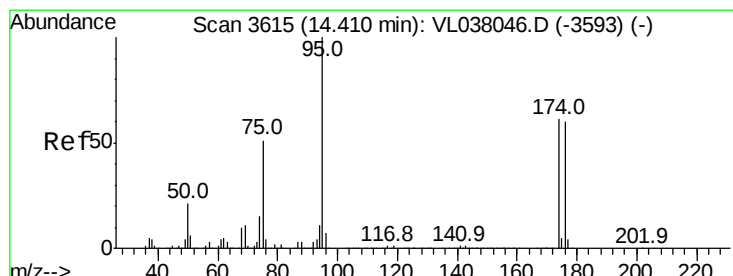
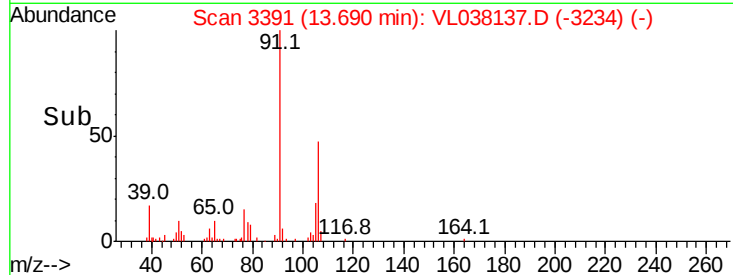
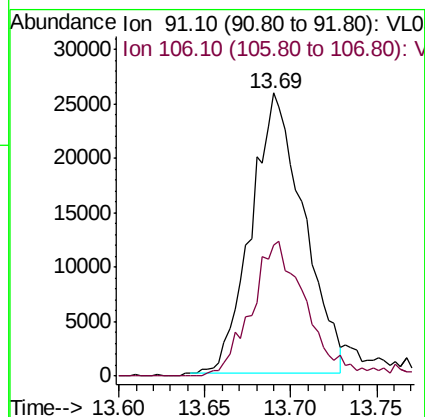
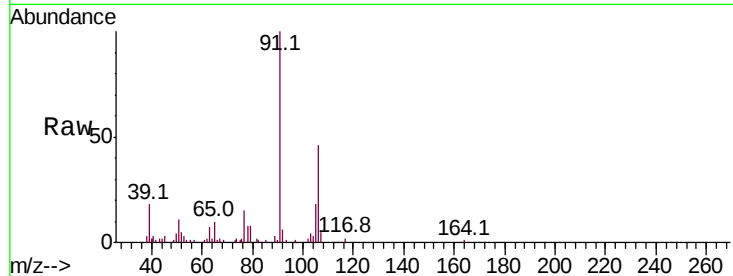
Tgt Ion: 91 Resp: 133756
Ion Ratio Lower Upper
91 100
106 45.9 38.1 57.1





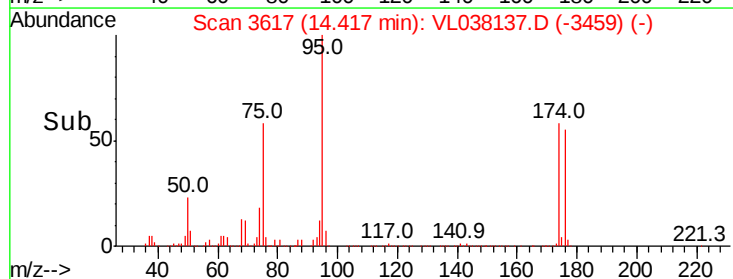
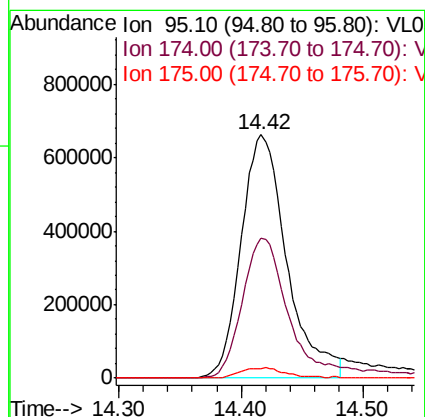
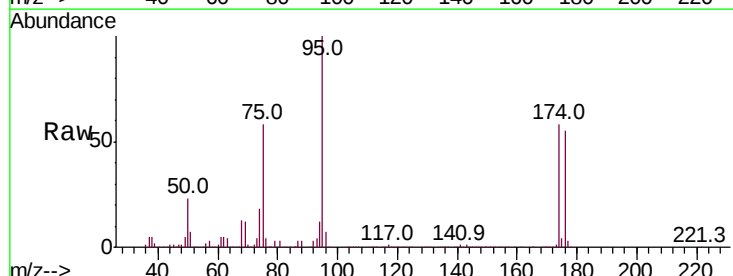
#60
o-Xylene
Concen: 0.191 ppbv
RT: 13.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 29 Nov 2021 16:17

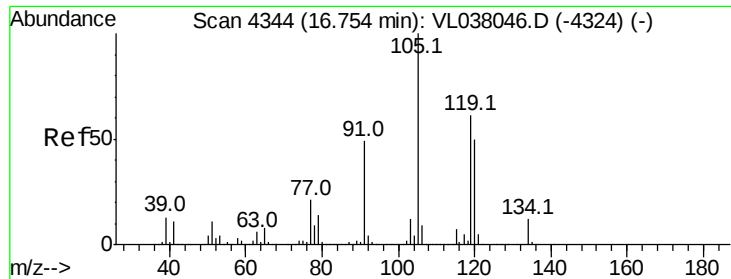
Tot Ion: 91 Resp: 55041
Ion Ratio Lower Upper
91 100
106 52.2 24.2 72.6



#68
1-Bromo-4-Fluorobenzene
Concen: 10.642 ppbv
RT: 14.42 min Scan# 3617
Delta R.T. 0.01 min
Lab File: VL038137.D
Acq: 29 Nov 2021 16:17

Tgt Ion: 95 Resp: 1713906
Ion Ratio Lower Upper
95 100
174 63.3 53.1 79.7
175 4.7 4.0 6.0





#74
 1,2,4-Trimethylbenzene
 Concen: 0.056 ppbv
 RT: 16.77
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 29 Nov 2021 16:17

Tot Ion:	105	Resp:	17601
Ion	Ratio	Lower	Upper
105	100		
120	43.2	40.1	60.1
91	7.8	39.8	59.8#
77	11.7	16.6	25.0#

