

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112321\
 Data File : VL038120.D
 Acq On : 24 Nov 2021 4:39
 Operator : SY/AP
 Sample : M4805-01 2X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-PURE-BARRE

Quant Time: Nov 26 04:18:25 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

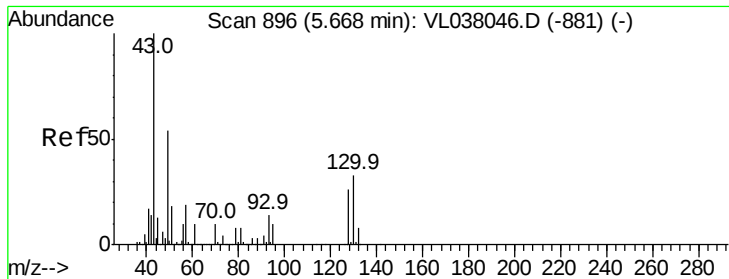
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	891829	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	2458106	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	2138759	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	1779483	11.53	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	115.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	13748	0.093	ppbv	98
3) Chlorodifluoromethane	2.96	51	4437802	23.695	ppbv #	61
4) Chloromethane	3.13	50	8094	0.127	ppbv	91
9) Propene	3.20	41	547228	7.934	ppbv	99
10) Heptane	8.11	43	29548	0.173	ppbv	95
11) Trichlorofluoromethane	3.94	101	244267	1.743	ppbv	99
13) Ethanol	3.60	45	5520426	828.199	ppbv	90
15) Acetone	3.84	43	3875271	50.118	ppbv	99
16) 1,3-Butadiene	3.30	39	16170	0.268	ppbv #	12
17) tert-Butyl alcohol	4.29	59	27138	0.289	ppbv	95
19) Isopropyl Alcohol	3.96	45	4016978	71.900	ppbv	100
20) Methylene Chloride	4.33	84	276525	6.385	ppbv	99
21) Allyl Chloride	4.33	41	8977	0.125	ppbv #	19
23) Vinyl Acetate	5.05	43	52510	0.469	ppbv #	83
25) Ethyl Acetate	5.66	43	309730	1.205	ppbv	98
26) Hexane	5.67	57	164043	1.324	ppbv	90
27) Carbon Disulfide	4.54	76	12693	0.114	ppbv #	33
29) Chloroform	5.74	83	32773	0.180	ppbv	98
34) 2-Butanone	5.23	43	94197	0.950	ppbv	100
36) Benzene	6.87	78	24945	0.102	ppbv #	89
39) 1,2-Dichloropropane	7.16	63	640523	6.810	ppbv #	27
52) Tetrachloroethene	11.19	164	4292	0.047	ppbv #	70
53) Toluene	9.78	91	92181	0.327	ppbv	94
58) Ethyl Benzene	12.68	91	23026	0.065	ppbv	97
59) m/p-Xylene	12.96	91	24837	0.083	ppbv #	29
60) o-Xylene	13.66	91	42746	0.155	ppbv	95
61) Styrene	13.50	104	66826	0.452	ppbv #	28
62) Isopropylbenzene	14.64	105	443715	1.132	ppbv	97
69) p-Isopropyltoluene	17.63	119	18805	0.050	ppbv #	63
74) 1,2,4-Trimethylbenzene	16.73	105	16705	0.055	ppbv #	63

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SG-PURE-BARRE

Acq: 24 Nov 2021 4:39

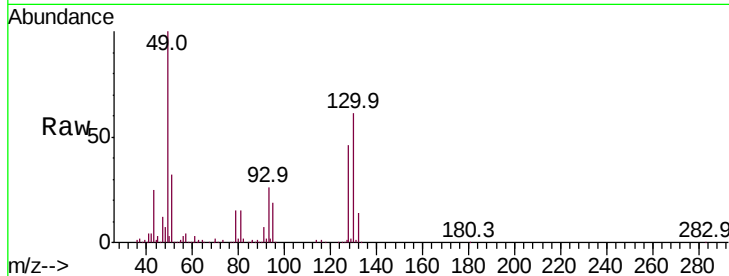
Tot Ion: 49 Resp: 891829

Ion Ratio Lower Upper

49 100

128 48.5 26.5 79.5

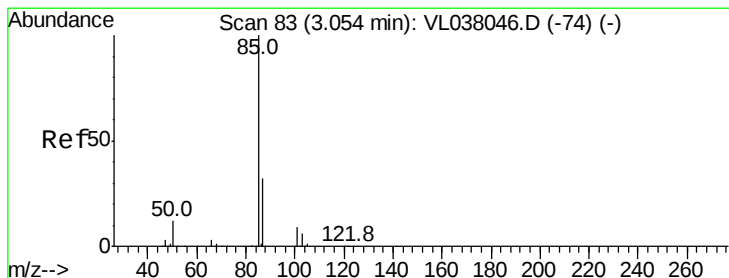
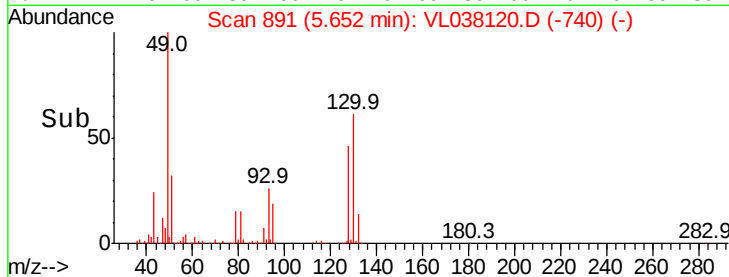
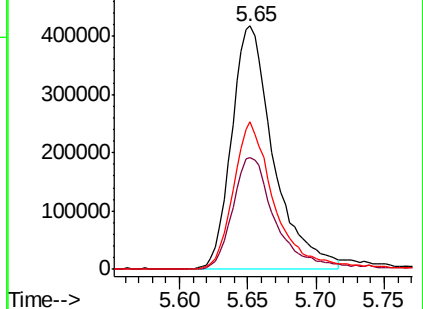
130 61.0 32.5 97.4



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: 0.093 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.01 min

Lab File: VL038120.D

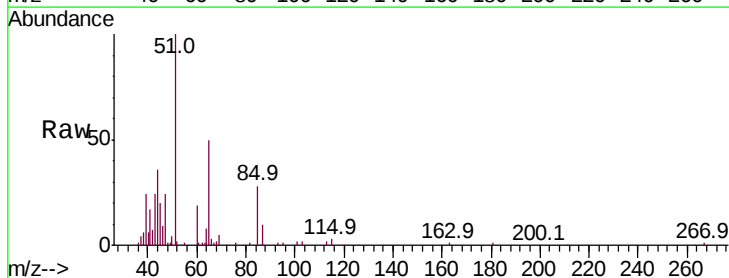
Acq: 24 Nov 2021 4:39

Tgt Ion: 85 Resp: 13748

Ion Ratio Lower Upper

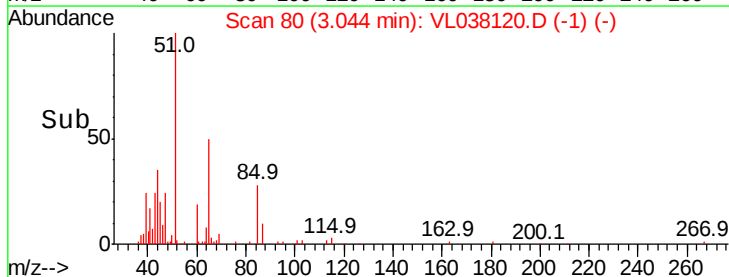
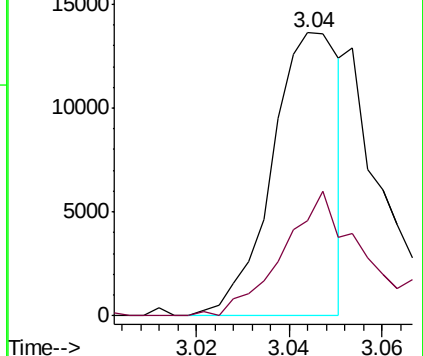
85 100

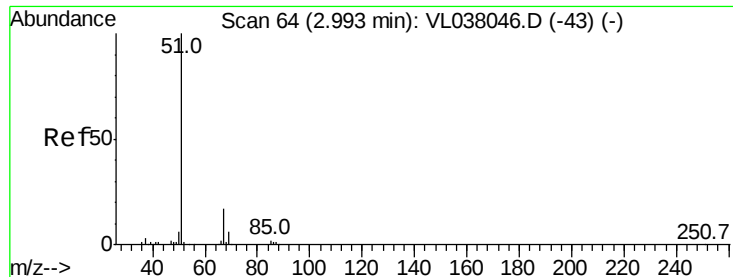
87 33.4 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 23.695 ppbv

RT: 2.96 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

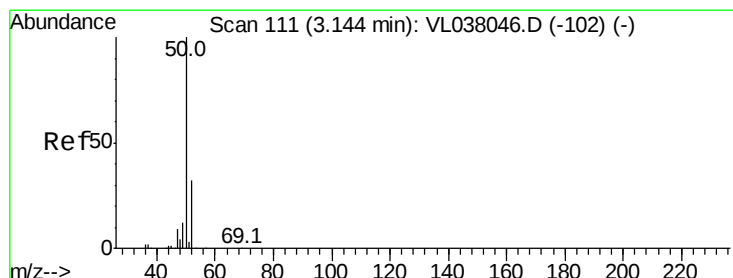
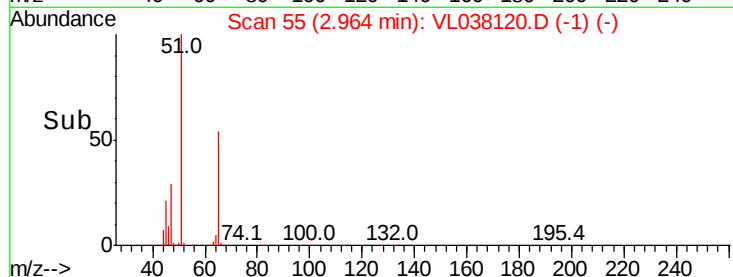
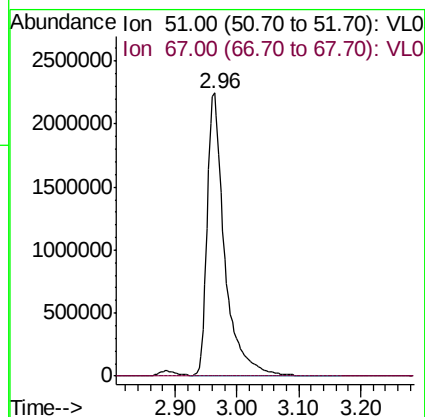
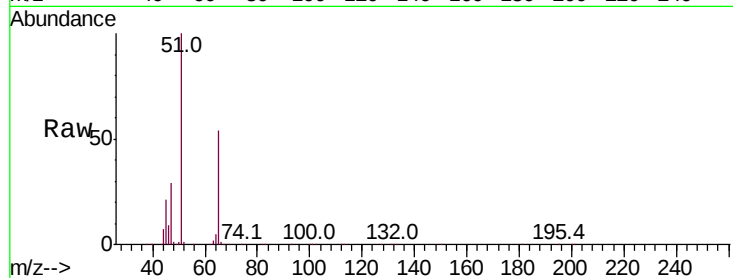
Acq: 24 Nov 2021 4:39

Tot Ion: 51 Resp: 4437802

Ion Ratio Lower Upper

51 100

67 0.1 13.8 20.8#



#4

Chloromethane

Concen: 0.127 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL038120.D

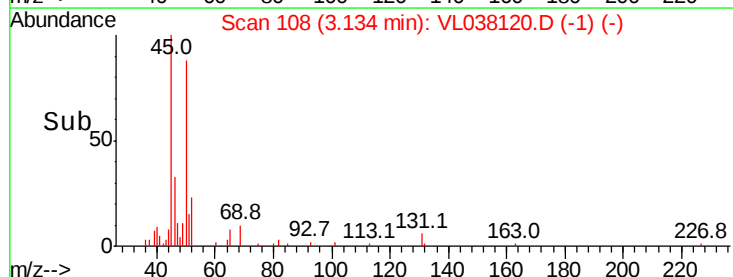
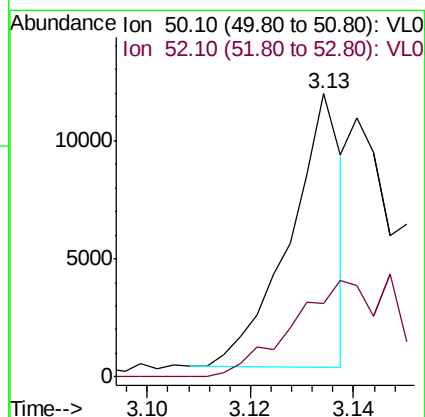
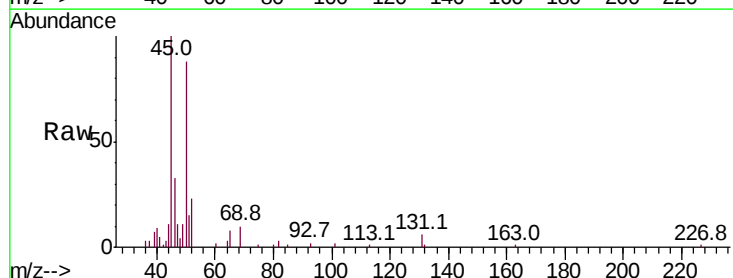
Acq: 24 Nov 2021 4:39

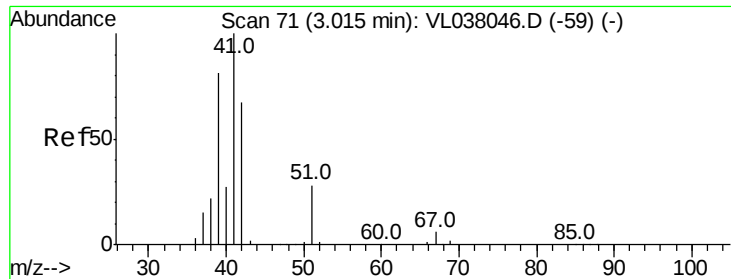
Tgt Ion: 50 Resp: 8094

Ion Ratio Lower Upper

50 100

52 26.9 25.4 38.0





#9

Propene

Concen: 7.934 ppbv

RT: 3.20 Instrument: MSVOA_1

Delta R.T. -0.01 min

Lab File: ClientSampleId: SG-PURE-BARRE

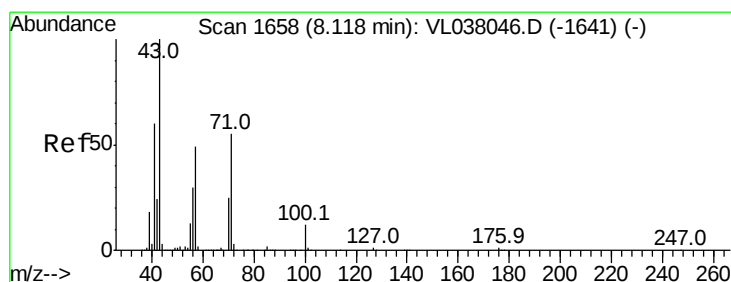
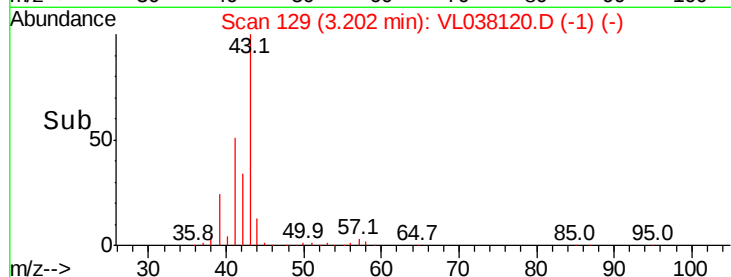
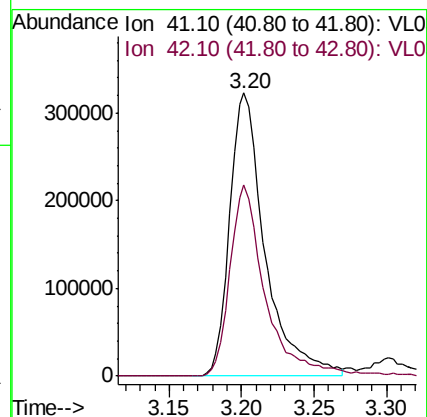
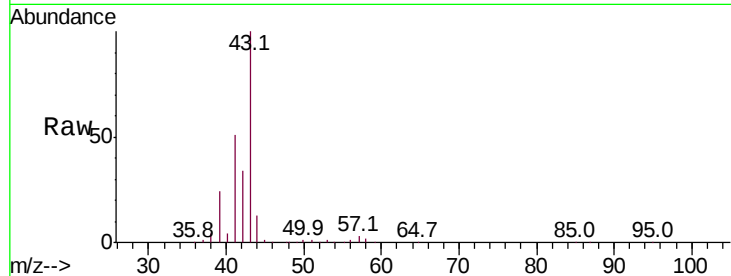
Acq: 24 Nov 2021 4:39

Tot Ion: 41 Resp: 547228

Ion Ratio Lower Upper

41 100

42 67.9 53.8 80.8



#10

Heptane

Concen: 0.173 ppbv

RT: 8.11 min Scan# 1654

Delta R.T. -0.01 min

Lab File: VL038120.D

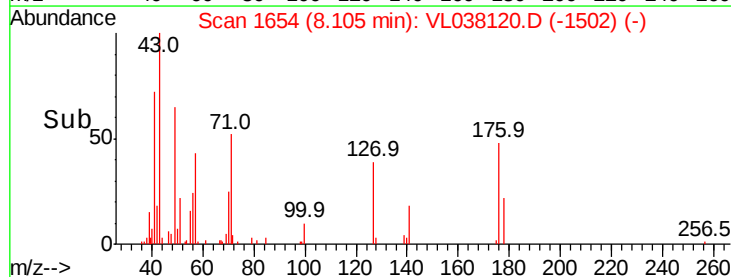
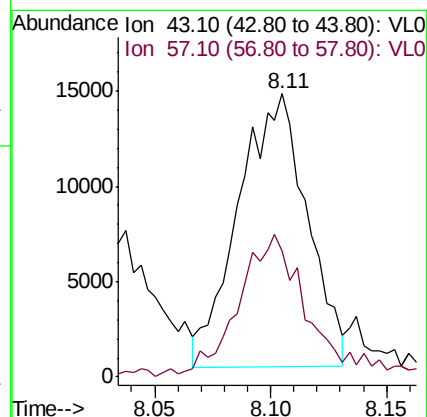
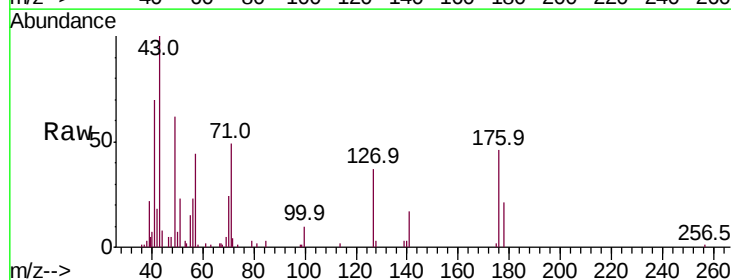
Acq: 24 Nov 2021 4:39

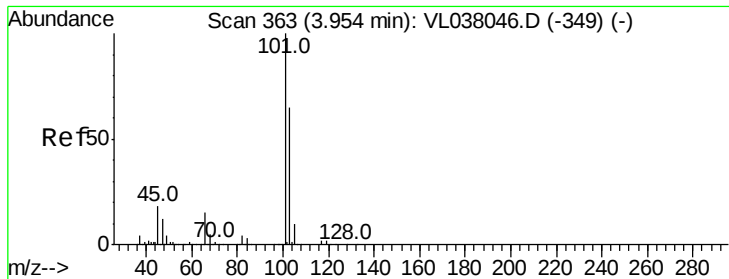
Tgt Ion: 43 Resp: 29548

Ion Ratio Lower Upper

43 100

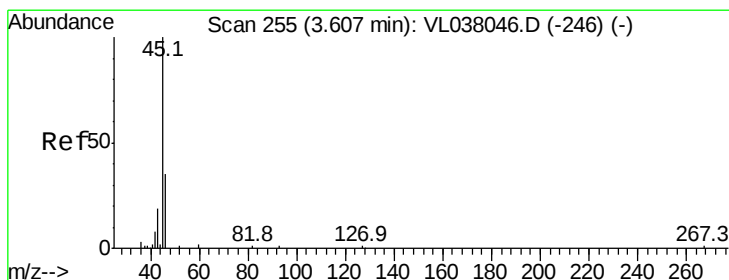
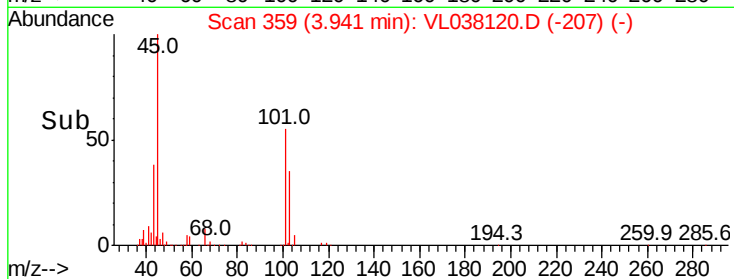
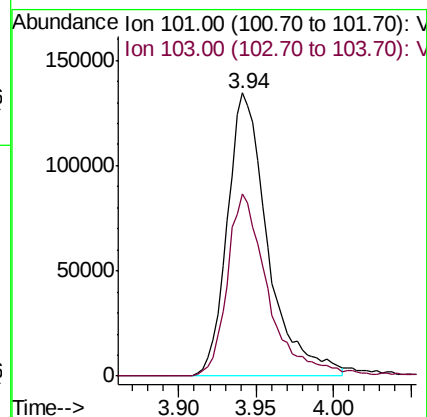
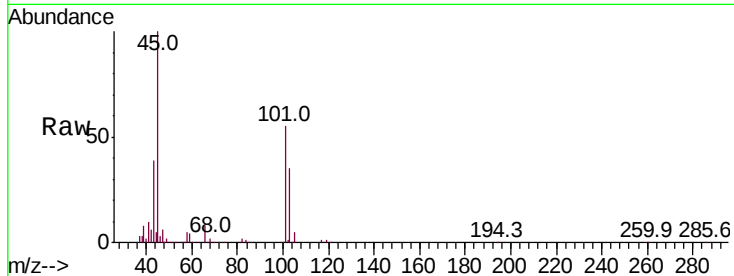
57 54.1 40.4 60.6





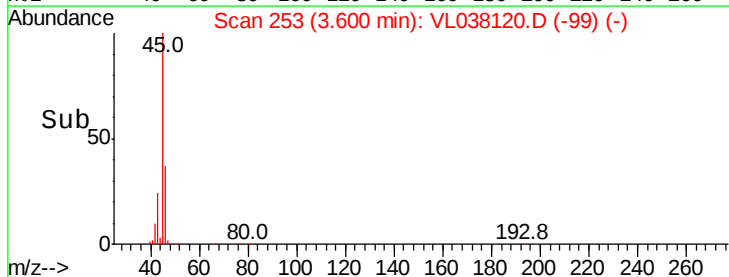
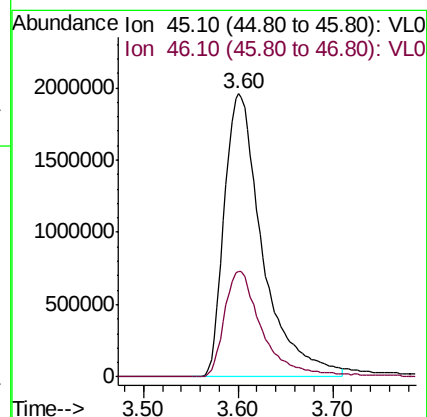
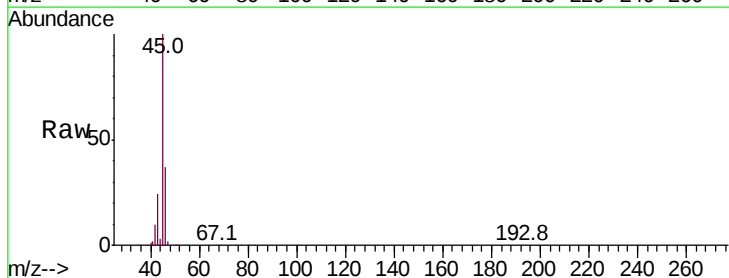
#11
 Trichlorofluoromethane
 Concen: 1.743 ppbv
 RT: 3.94
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Nov 2021 4:39

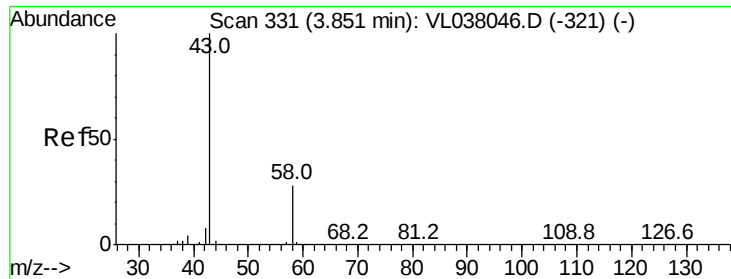
Tot Ion:101 Resp: 244267
 Ion Ratio Lower Upper
 101 100
 103 64.1 51.8 77.6



#13
 Ethanol
 Concen: 828.199 ppbv
 RT: 3.60 min Scan# 253
 Delta R.T. -0.01 min
 Lab File: VL038120.D
 Acq: 24 Nov 2021 4:39

Tgt Ion: 45 Resp: 5520426
 Ion Ratio Lower Upper
 45 100
 46 37.7 17.6 70.2





#15

Acetone

Concen: 50.118 ppbv

RT: 3.84 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

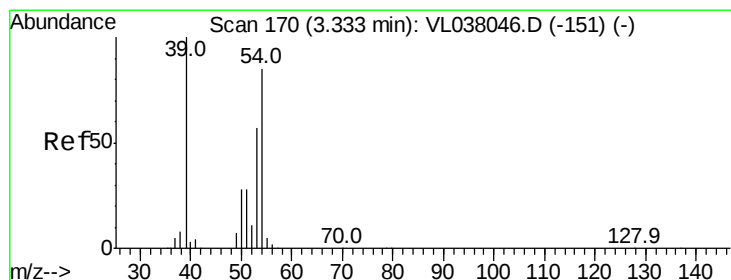
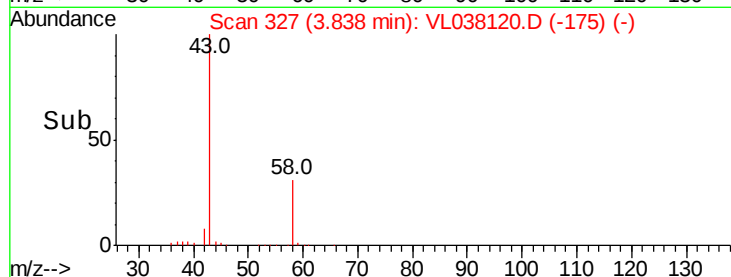
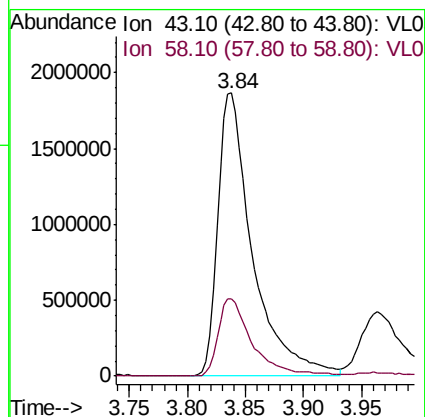
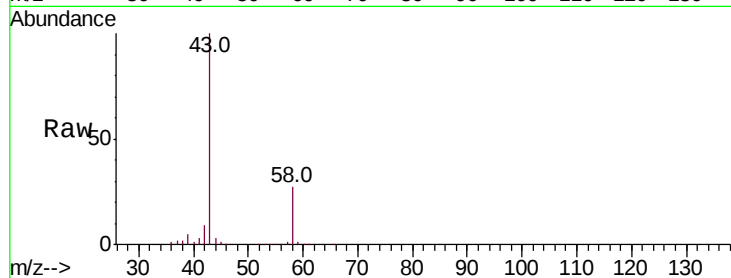
Acq: 24 Nov 2021 4:39 SG-PURE-BARRE

Tot Ion: 43 Resp: 3875271

Ion Ratio Lower Upper

43 100

58 27.2 22.4 33.6



#16

1,3-Butadiene

Concen: 0.268 ppbv

RT: 3.30 min Scan# 160

Delta R.T. -0.03 min

Lab File: VL038120.D

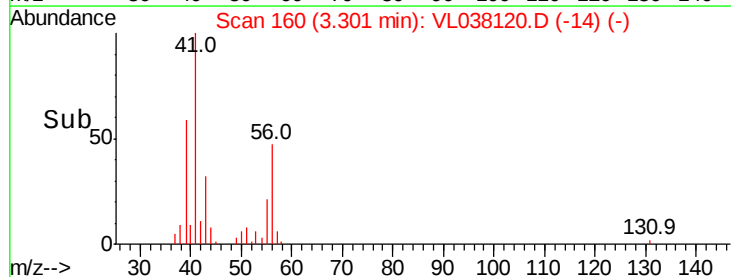
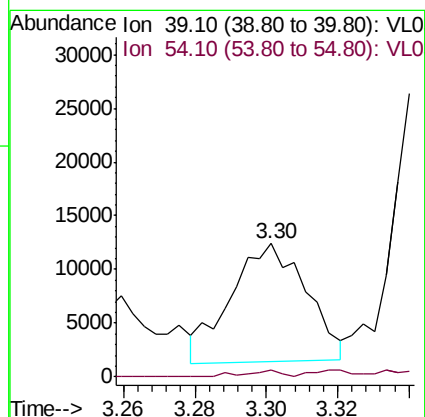
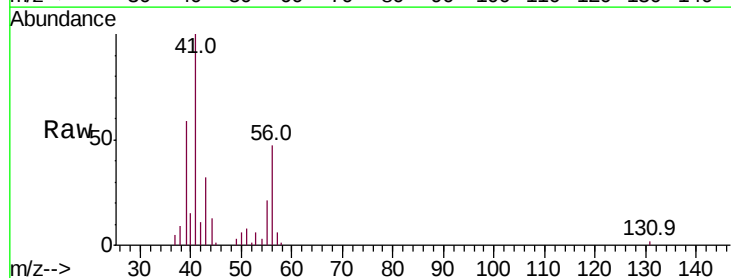
Acq: 24 Nov 2021 4:39

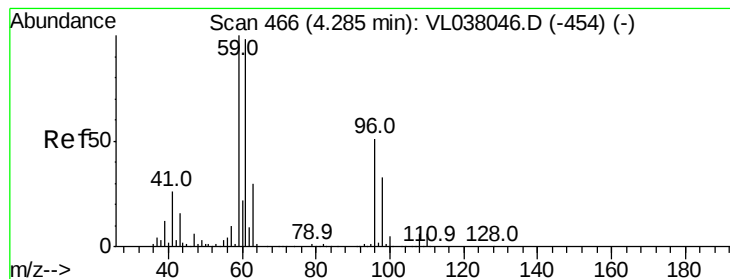
Tgt Ion: 39 Resp: 16170

Ion Ratio Lower Upper

39 100

54 2.7 64.4 96.6#





#17

tert-Butyl alcohol

Concen: 0.289 ppbv

RT: 4.29 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

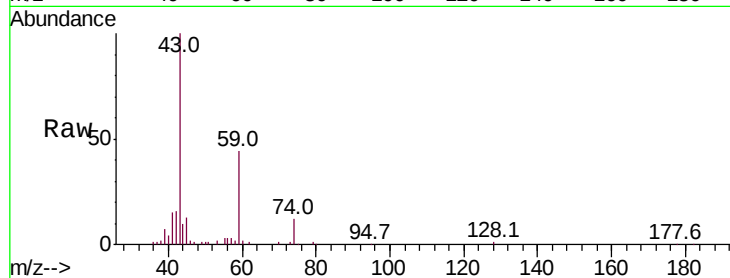
Acq: 24 Nov 2021 4:39 SG-PURE-BARRE

Tot Ion: 59 Resp: 27138

Ion Ratio Lower Upper

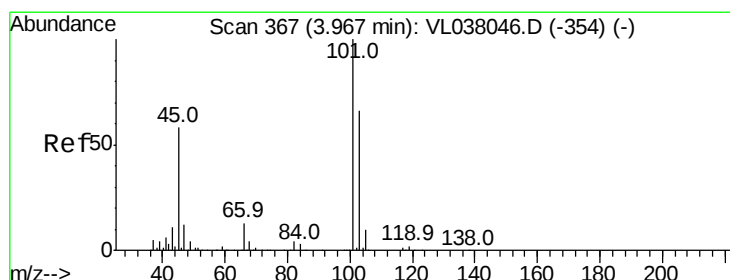
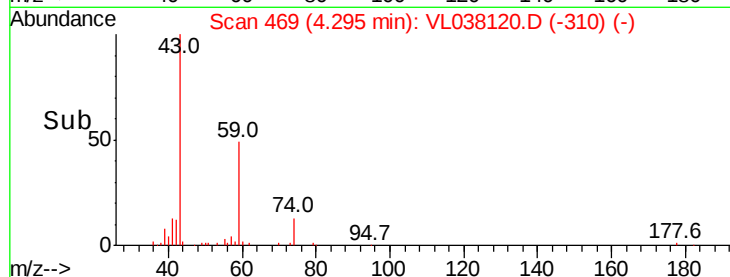
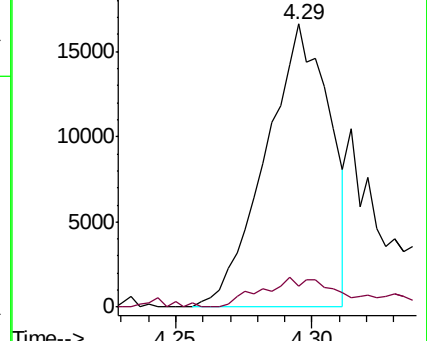
59 100

57 12.8 8.6 13.0



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 71.900 ppbv

RT: 3.96 min Scan# 366

Delta R.T. -0.00 min

Lab File: VL038120.D

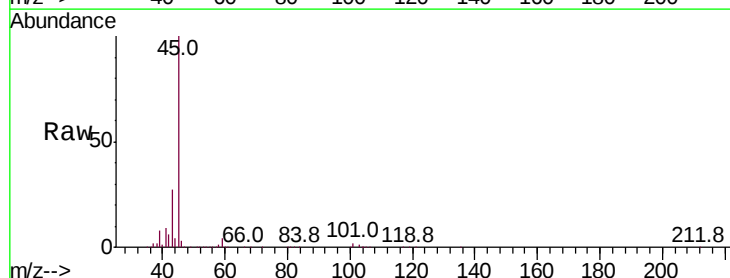
Acq: 24 Nov 2021 4:39

Tgt Ion: 45 Resp: 4016978

Ion Ratio Lower Upper

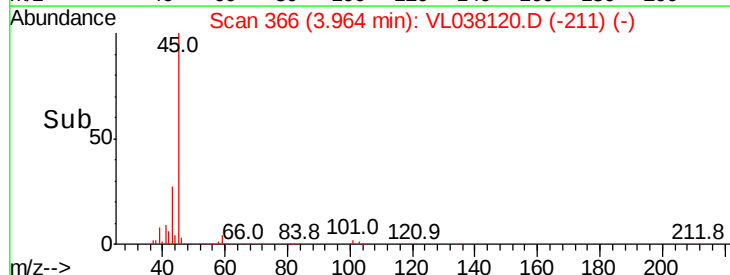
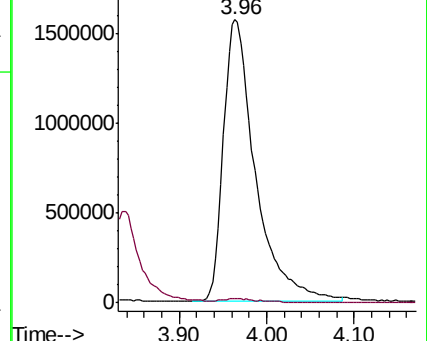
45 100

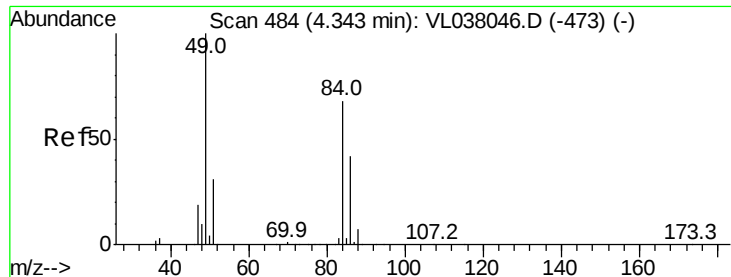
58 1.9 1.4 2.0



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





#20

Methylene Chloride

Concen: 6.385 ppbv

RT: 4.33

Instrument: MSVOA_1

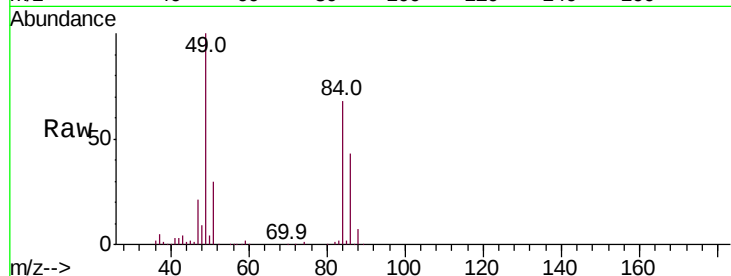
Delta R.T. ClientSampleId:

Lab File: SG-PURE-BARRE

Acq: 24 Nov 2021 4:39

Tot Ion: 84 Resp: 276525

Ion	Ratio	Lower	Upper
84	100		
49	147.7	118.2	177.2
51	43.8	36.8	55.2
86	63.4	49.0	73.6



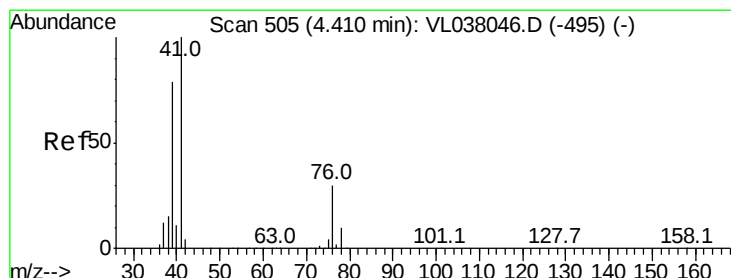
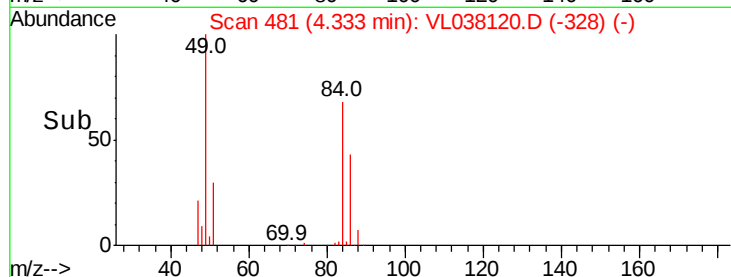
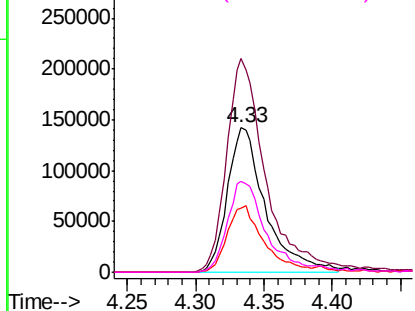
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#21

Allyl Chloride

Concen: 0.125 ppbv

RT: 4.33 min Scan# 481

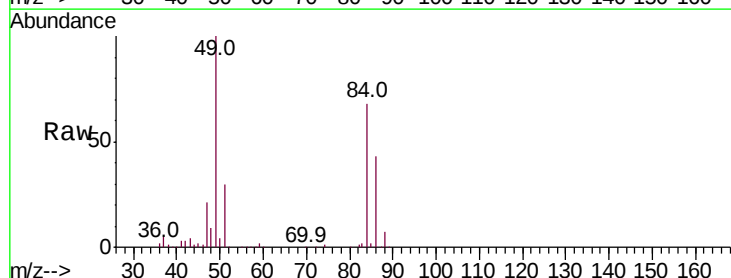
Delta R.T. -0.08 min

Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

Tgt Ion: 41 Resp: 8977

Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.6	36.8#
39	0.0	63.4	95.0#

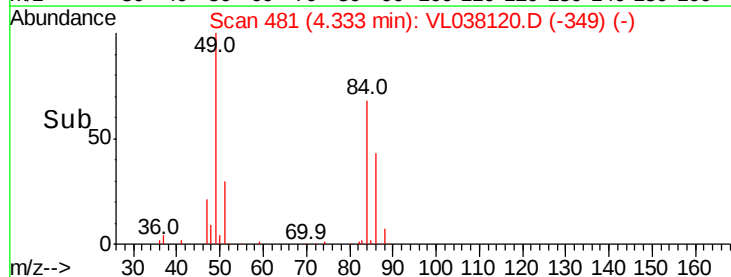
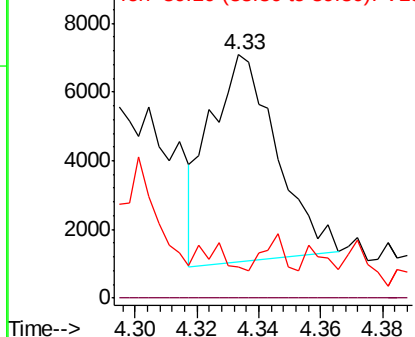


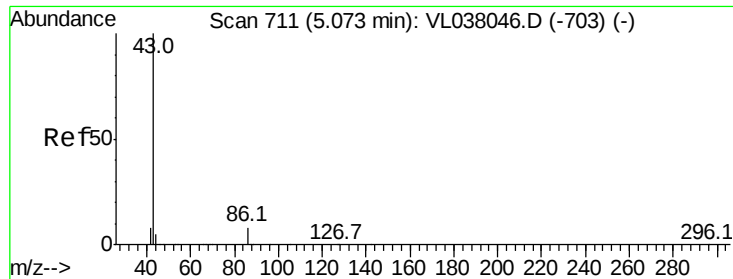
Abundance

Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0





#23

Vinyl Acetate

Concen: 0.469 ppbv

RT: 5.05 Instrument:

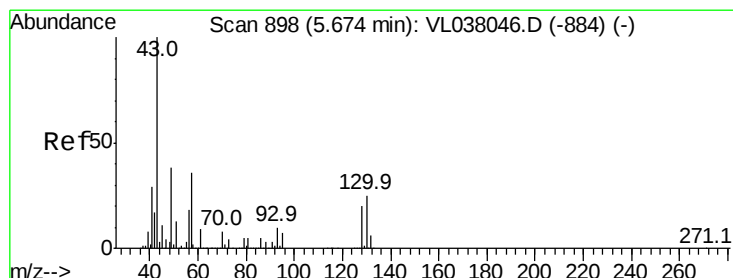
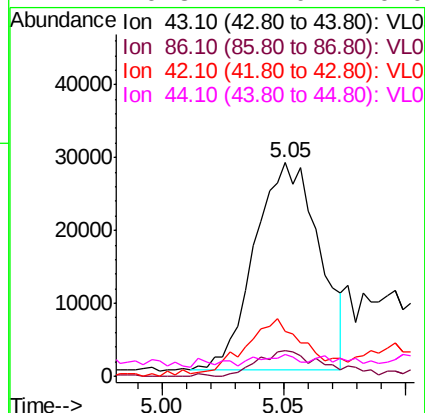
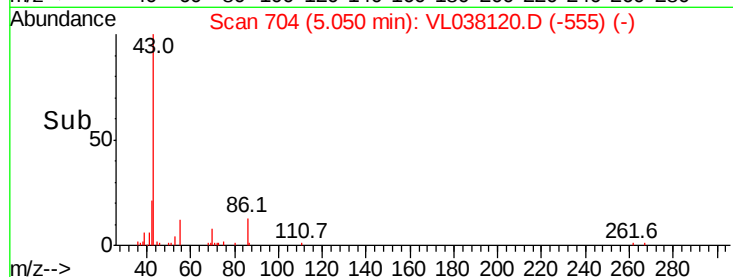
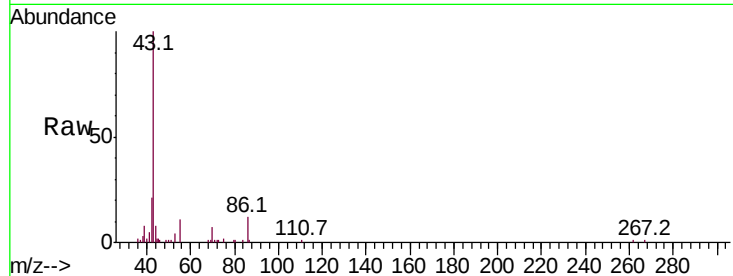
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 24 Nov 2021 4:39

Tot Ion: 43 Resp: 52510

Ion	Ratio	Lower	Upper
43	100		
86	12.5	5.3	7.9#
42	17.8	7.0	10.6#
44	6.3	4.0	6.0#



#25

Ethyl Acetate

Concen: 1.205 ppbv

RT: 5.66 min Scan# 894

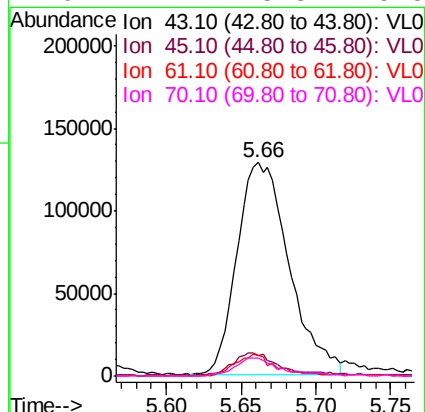
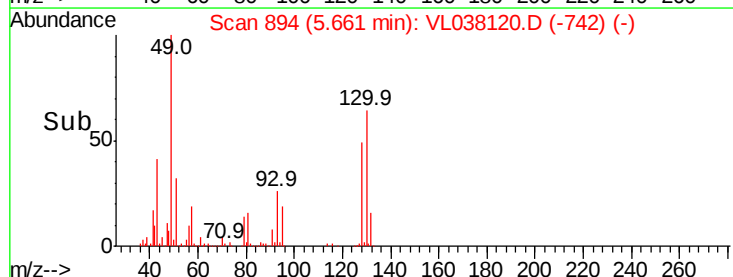
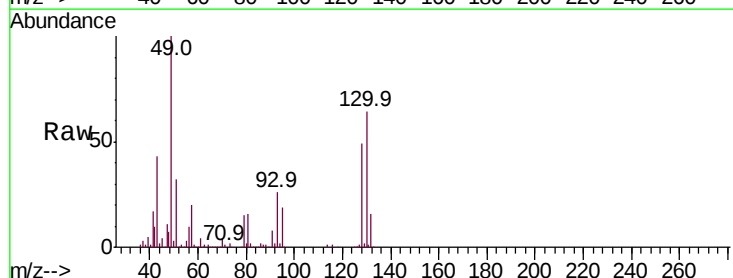
Delta R.T. -0.01 min

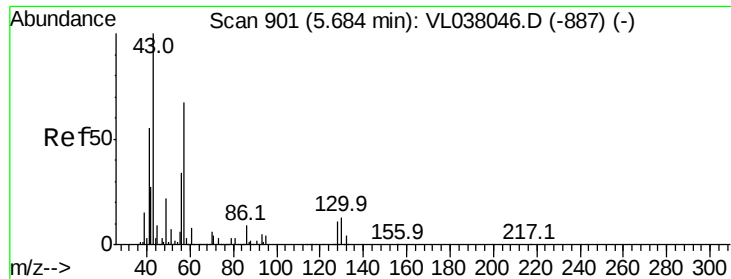
Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

Tgt Ion: 43 Resp: 309730

Ion	Ratio	Lower	Upper
43	100		
45	10.4	7.9	11.9
61	8.3	7.8	11.6
70	7.4	5.8	8.8





#26

Hexane

Concen: 1.324 ppbv

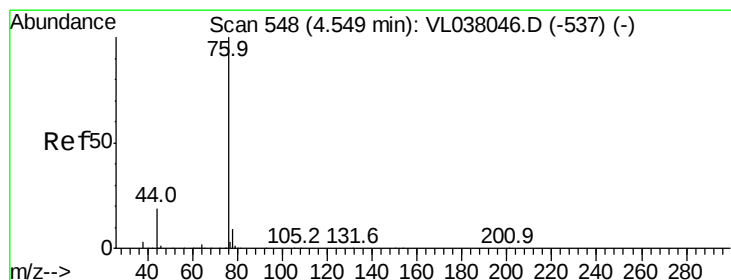
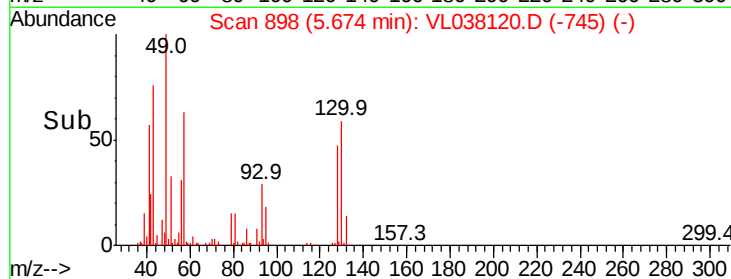
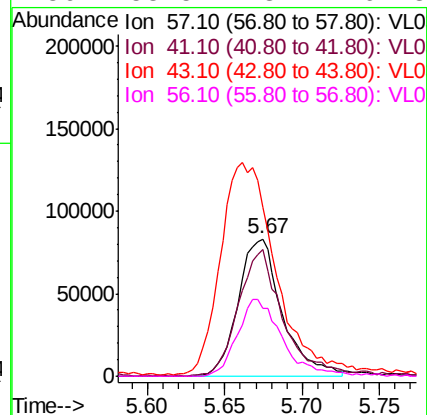
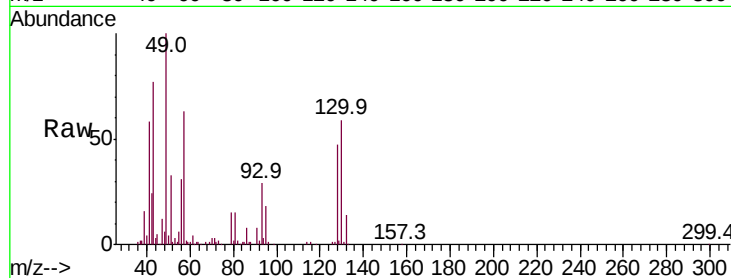
RT: 5.67

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 24 Nov 2021 4:39

Tot Ion:	57	Resp:	164043
Ion	Ratio	Lower	Upper
57	100		
41	95.3	71.4	107.2
43	198.9	174.6	261.8
56	58.5	43.2	64.8



#27

Carbon Disulfide

Concen: 0.114 ppbv

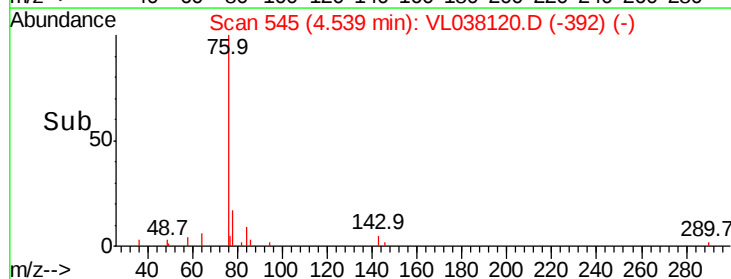
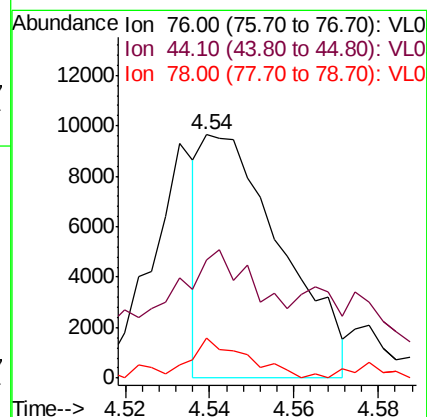
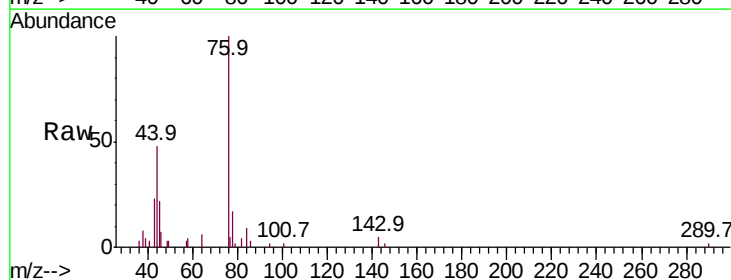
RT: 4.54 min Scan# 545

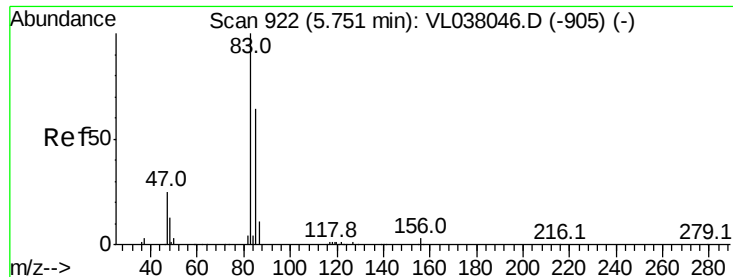
Delta R.T. -0.01 min

Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

Tgt Ion:	76	Resp:	12693
Ion	Ratio	Lower	Upper
76	100		
44	61.6	14.9	22.3#
78	13.6	7.6	11.4#





#29

Chloroform

Concen: 0.180 ppbv

RT: 5.74 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

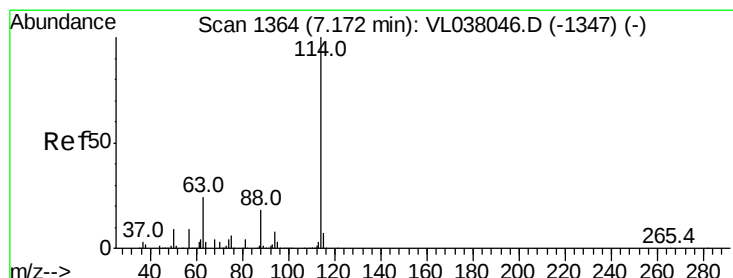
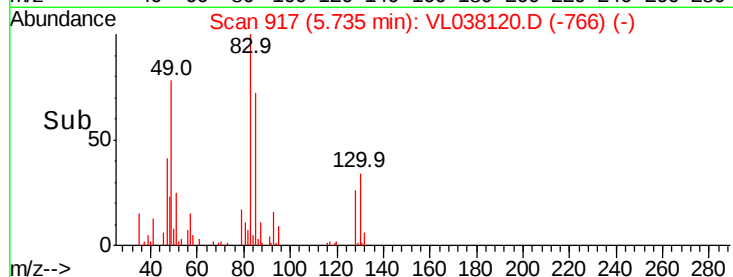
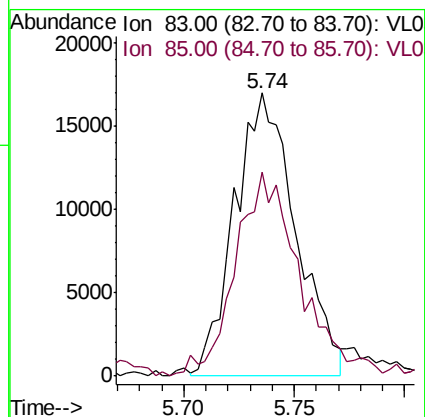
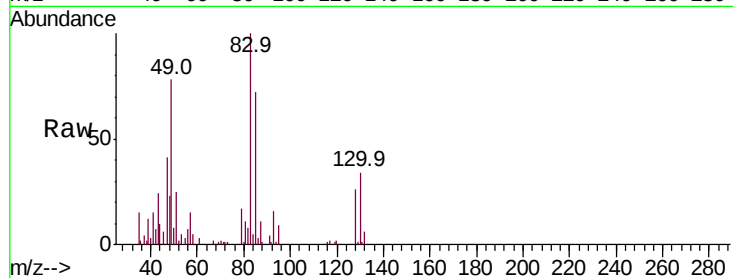
Acq: 24 Nov 2021 4:39 SG-PURE-BARRE

Tot Ion: 83 Resp: 32773

Ion Ratio Lower Upper

83 100

85 65.5 51.0 76.6



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.02 min

Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

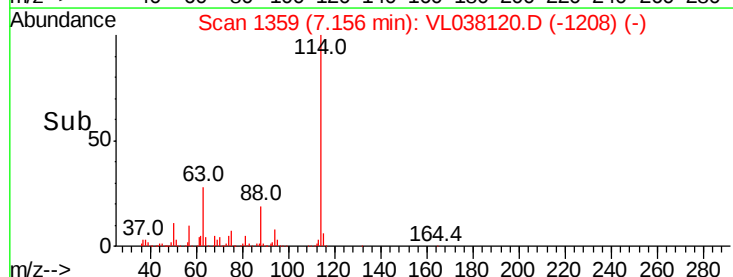
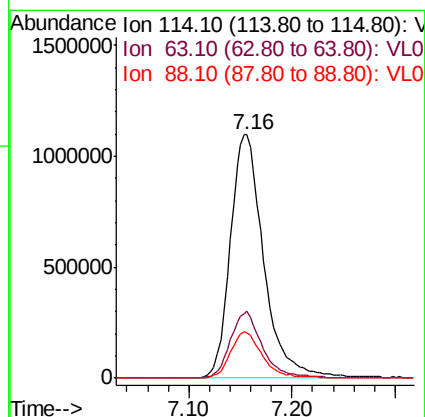
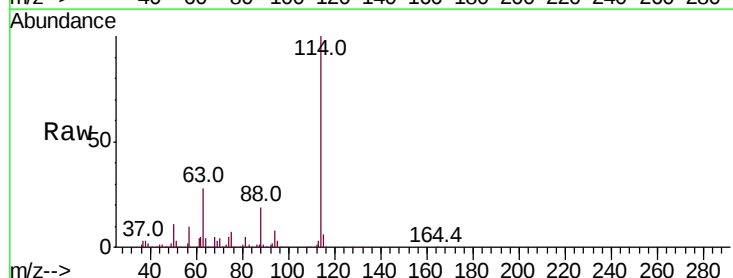
Tgt Ion: 114 Resp: 2458106

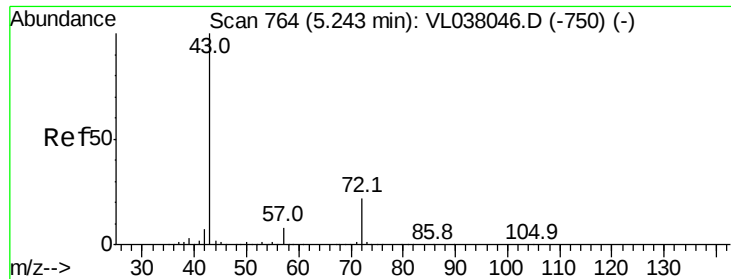
Ion Ratio Lower Upper

114 100

63 26.7 19.7 29.5

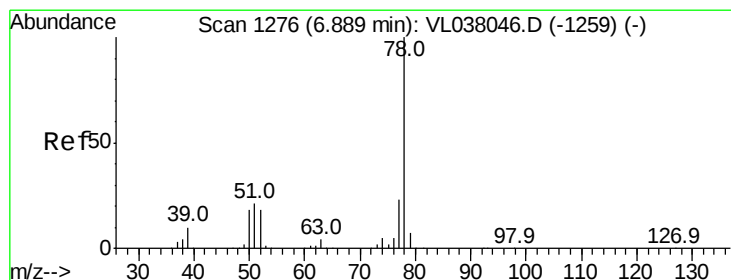
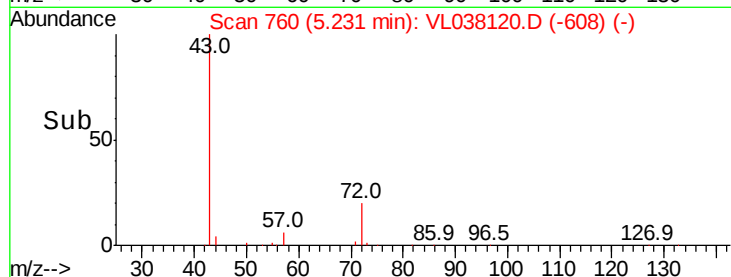
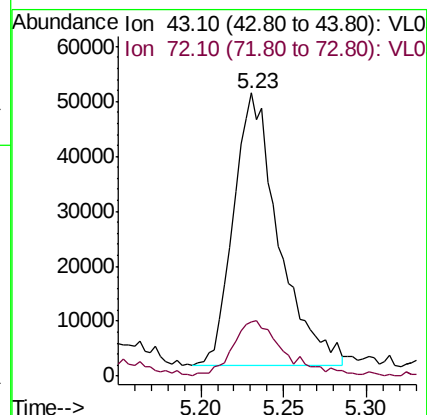
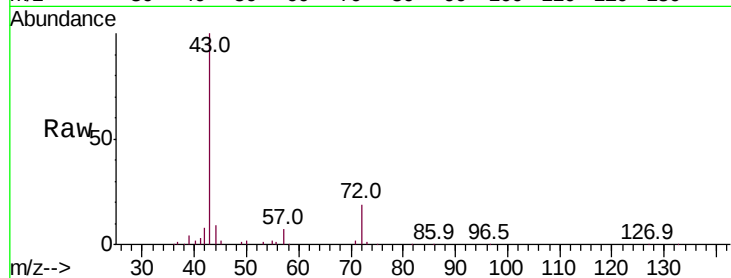
88 18.5 14.4 21.6





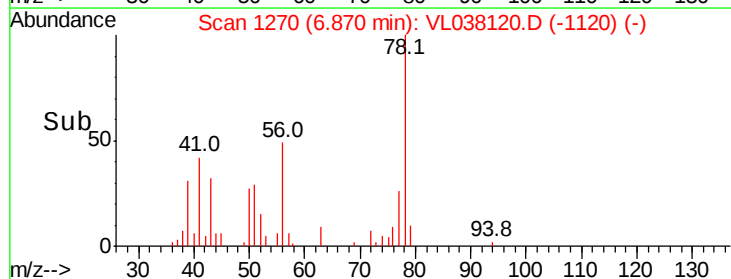
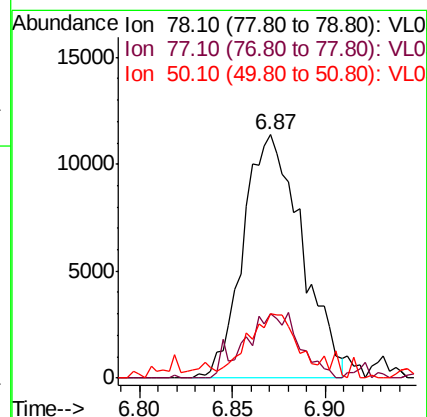
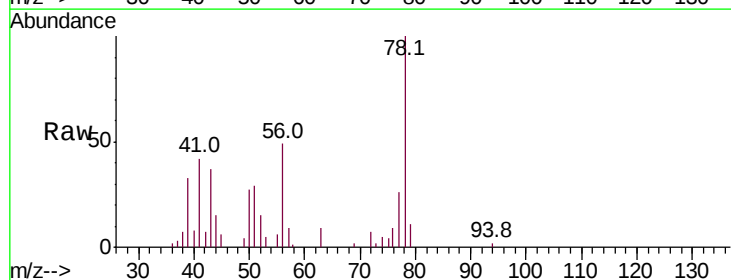
#34
2-Butanone
Concen: 0.950 ppbv
RT: 5.23
Delta R.T. MSVOA_L
Lab File: ClientSampled :
Acq: 24 Nov 2021 4:39

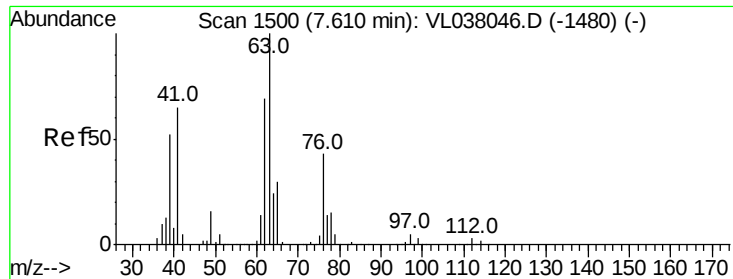
Tot Ion: 43 Resp: 94197
Ion Ratio Lower Upper
43 100
72 23.6 18.8 28.2



#36
Benzene
Concen: 0.102 ppbv
RT: 6.87 min Scan# 1270
Delta R.T. -0.02 min
Lab File: VL038120.D
Acq: 24 Nov 2021 4:39

Tgt Ion: 78 Resp: 24945
Ion Ratio Lower Upper
78 100
77 26.3 18.2 27.4
50 25.2 14.7 22.1#





#39

1,2-Dichloropropane

Concen: 6.810 ppbv

RT: 7.16 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 Nov 2021 4:39 SG-PURE-BARRE

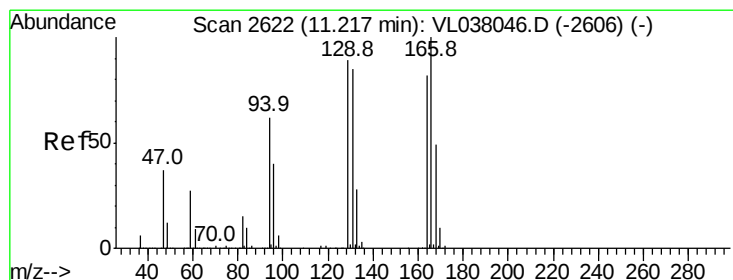
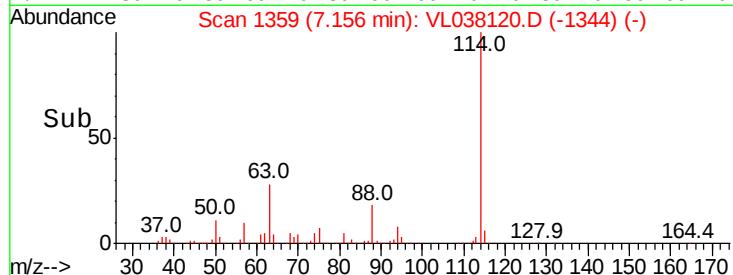
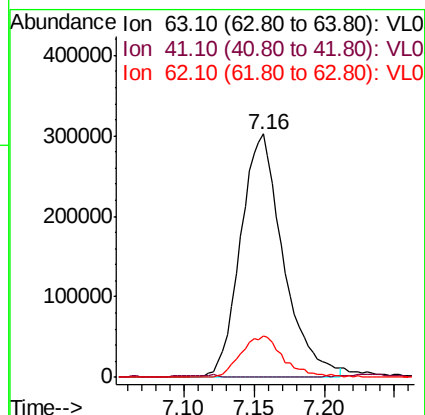
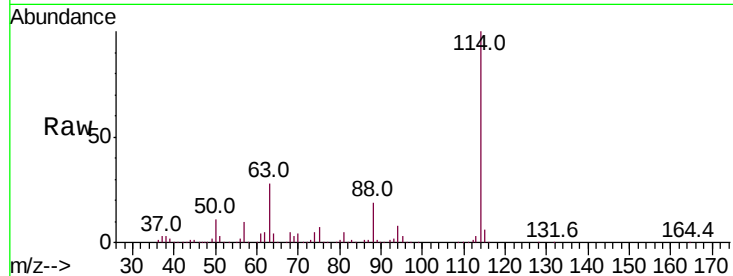
Tot Ion: 63 Resp: 640523

Ion Ratio Lower Upper

63 100

41 0.0 52.3 78.5#

62 17.0 55.1 82.7#



#52

Tetrachloroethene

Concen: 0.047 ppbv

RT: 11.19 min Scan# 2615

Delta R.T. -0.02 min

Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

Tgt Ion: 164 Resp: 4292

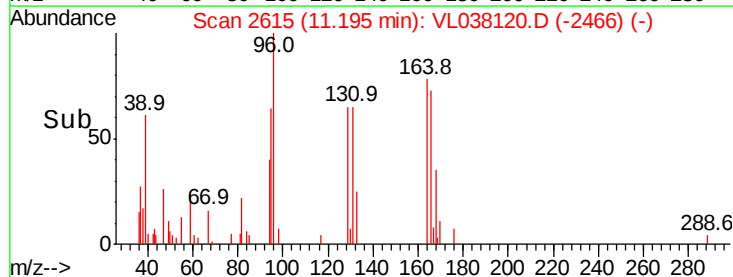
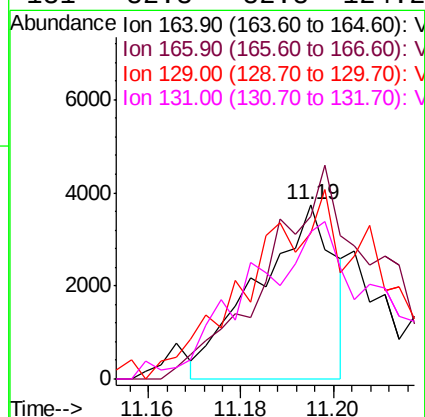
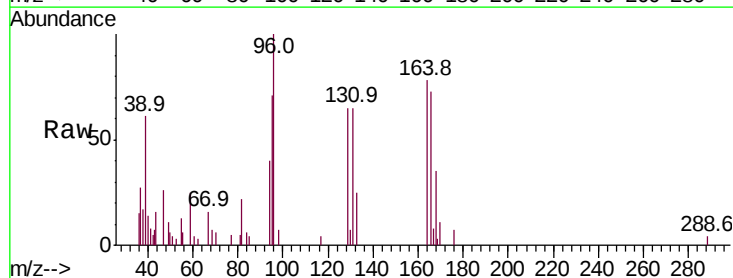
Ion Ratio Lower Upper

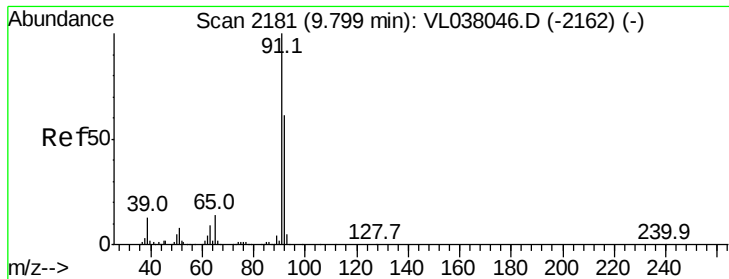
164 100

166 88.8 97.2 145.8#

129 68.5 86.9 130.3#

131 82.3 82.8 124.2#





#53

Toluene

Concen: 0.327 ppbv

RT: 9.78 Instrument: MSVOA_1

Delta R.T. -0.02 min

Lab File: ClientSampleId: SG-PURE-BARRE

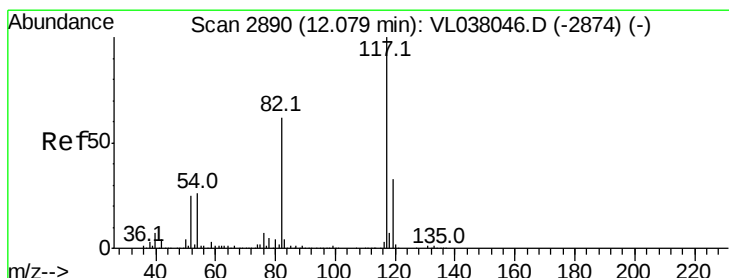
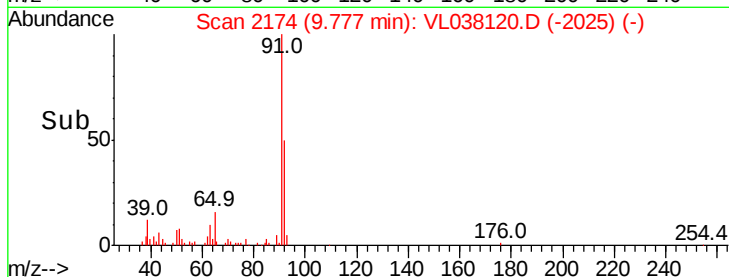
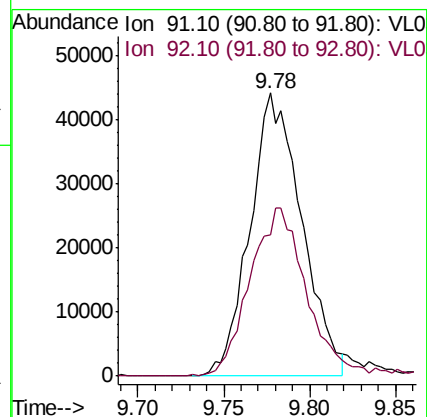
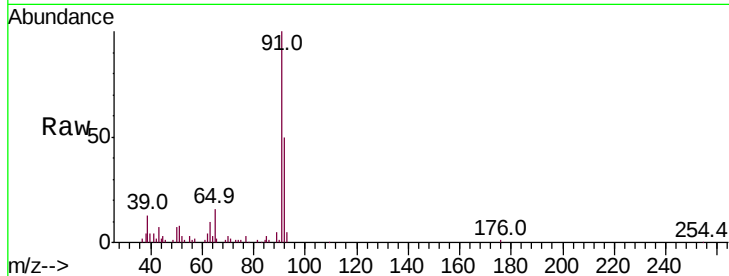
Acq: 24 Nov 2021 4:39

Tot Ion: 91 Resp: 92181

Ion Ratio Lower Upper

91 100

92 66.5 49.7 74.5



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2883

Delta R.T. -0.02 min

Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

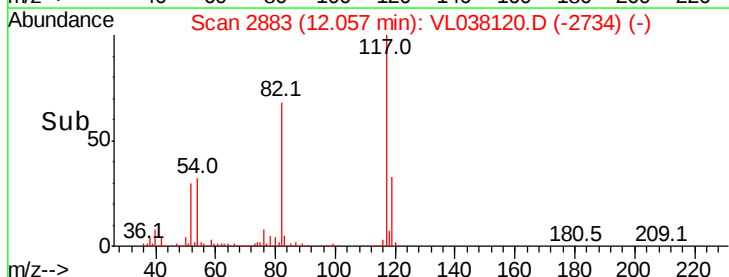
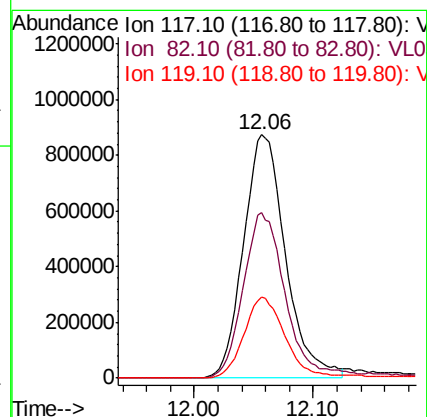
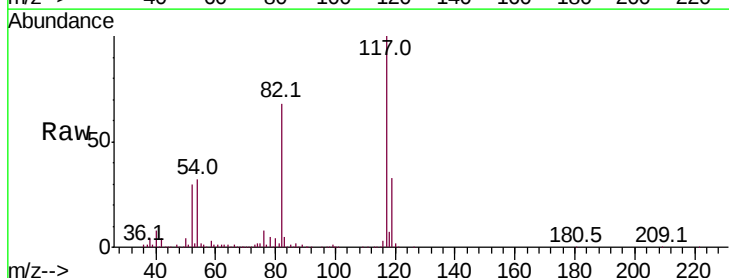
Tgt Ion: 117 Resp: 2138759

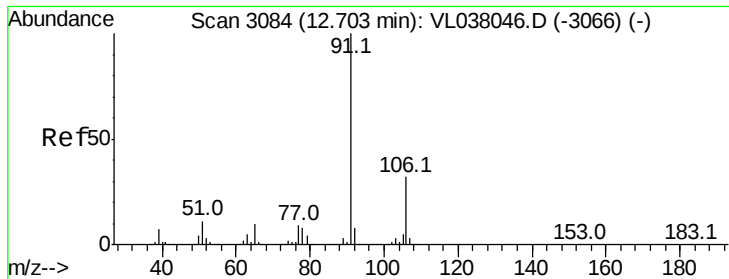
Ion Ratio Lower Upper

117 100

82 71.5 52.8 79.2

119 34.9 26.8 40.2





#58

Ethyl Benzene

Concen: 0.065 ppbv

RT: 12.68

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

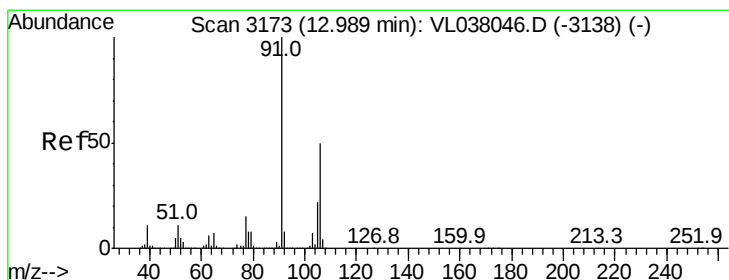
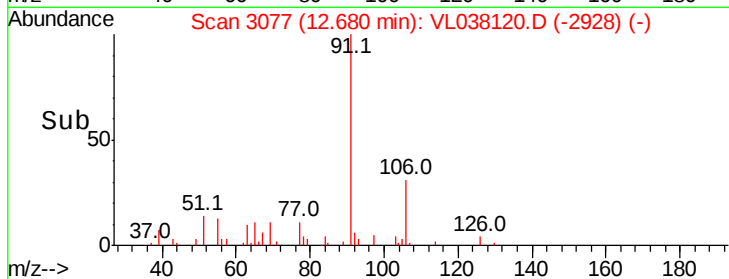
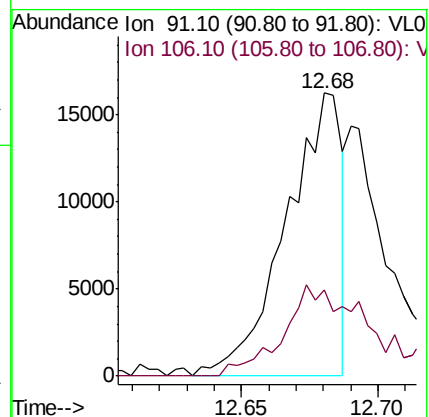
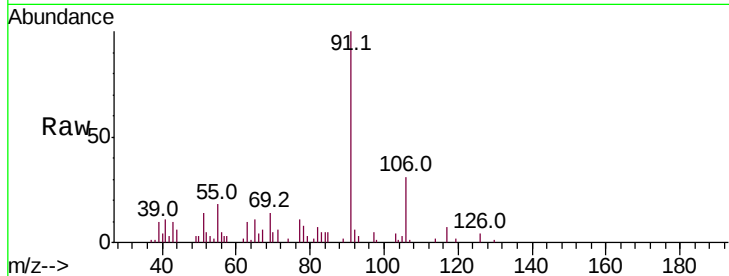
Acq: 24 Nov 2021 4:39

Tot Ion: 91 Resp: 23026

Ion Ratio Lower Upper

91 100

106 30.7 25.8 38.6



#59

m/p-Xylene

Concen: 0.083 ppbv

RT: 12.96 min Scan# 3164

Delta R.T. -0.03 min

Lab File: VL038120.D

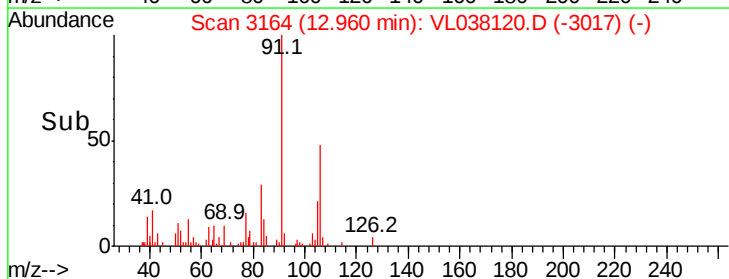
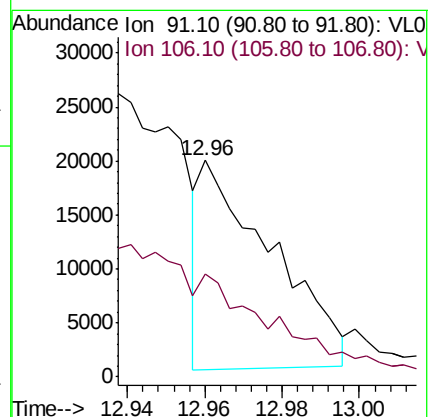
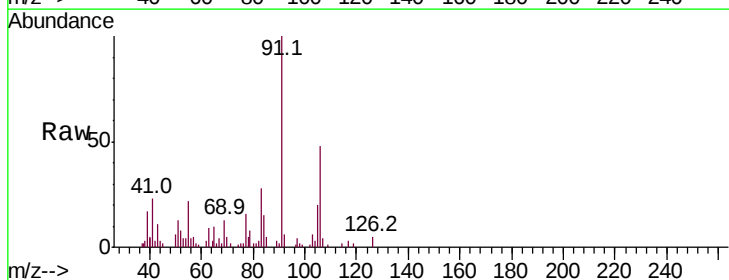
Acq: 24 Nov 2021 4:39

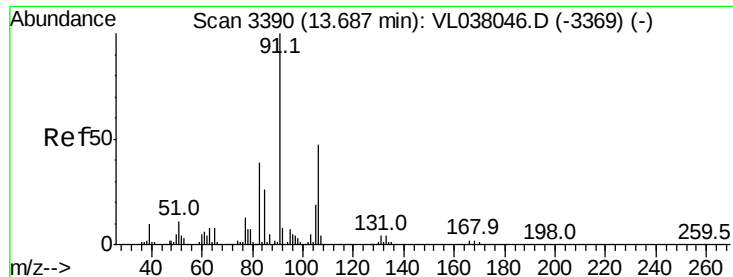
Tgt Ion: 91 Resp: 24837

Ion Ratio Lower Upper

91 100

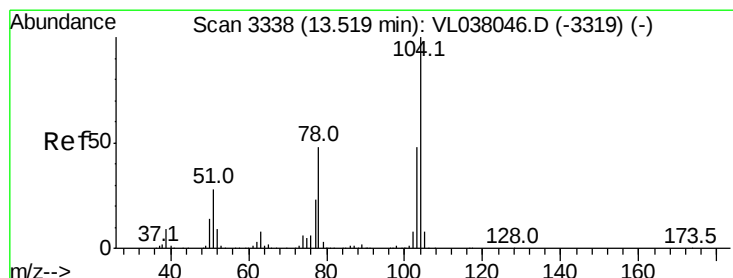
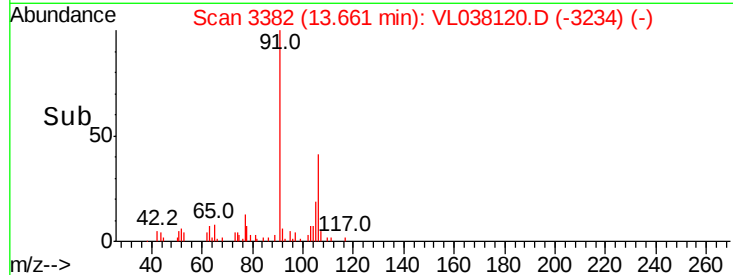
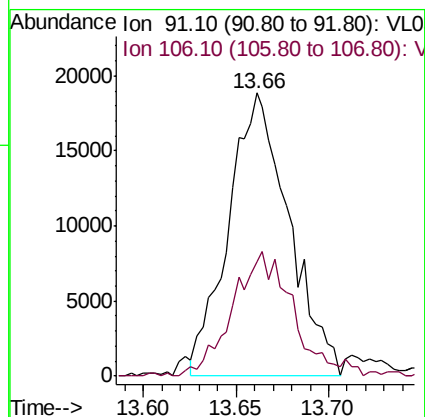
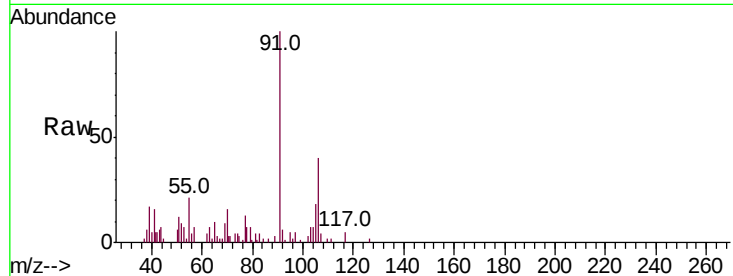
106 0.0 38.1 57.1#





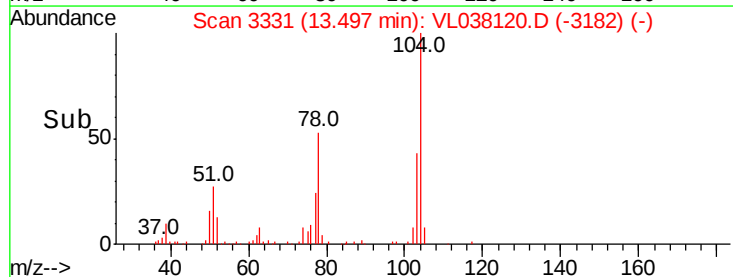
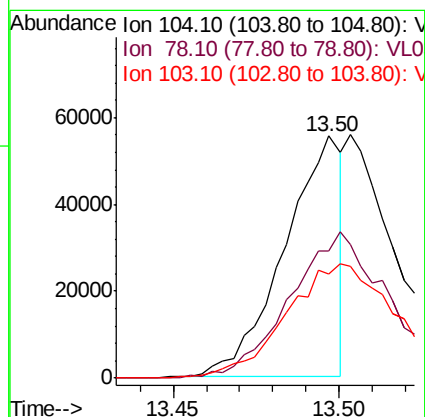
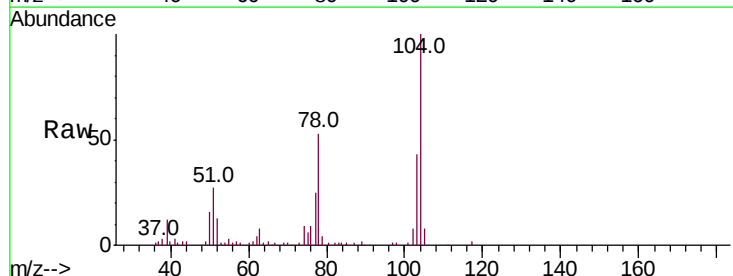
#60
o-Xylene
Concen: 0.155 ppbv
RT: 13.66
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 Nov 2021 4:39

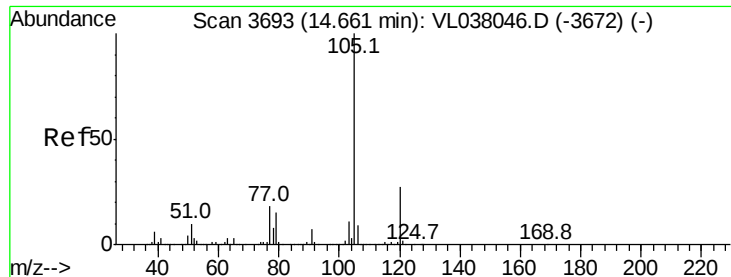
Tot Ion: 91 Resp: 42746
Ion Ratio Lower Upper
91 100
106 44.9 24.2 72.6



#61
Styrene
Concen: 0.452 ppbv
RT: 13.50 min Scan# 3331
Delta R.T. -0.02 min
Lab File: VL038120.D
Acq: 24 Nov 2021 4:39

Tgt Ion: 104 Resp: 66826
Ion Ratio Lower Upper
104 100
78 0.0 39.8 59.6#
103 0.0 38.2 57.2#





#62

Isopropylbenzene

Concen: 1.132 ppbv

RT: 14.64

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

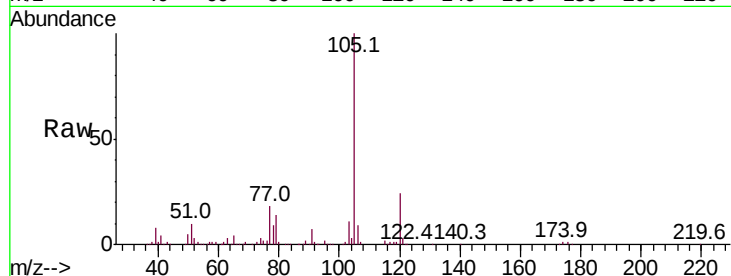
Acq: 24 Nov 2021 4:39

Tot Ion: 105 Resp: 443715

Ion Ratio Lower Upper

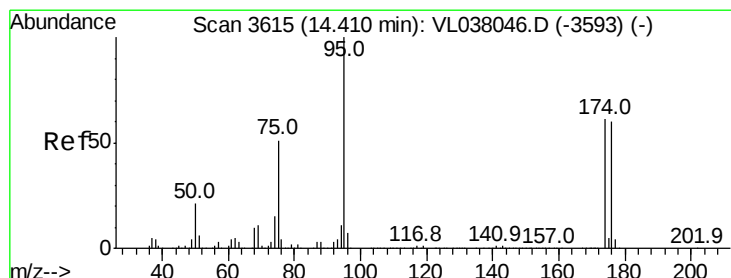
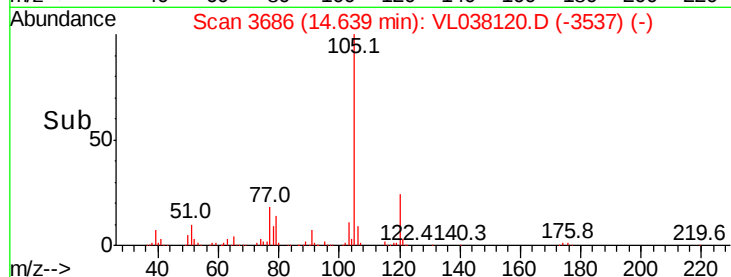
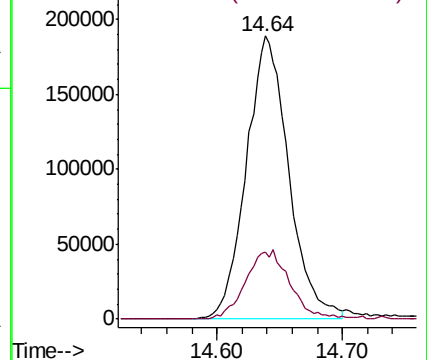
105 100

120 25.6 21.8 32.6



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 11.535 ppbv

RT: 14.39 min Scan# 3608

Delta R.T. -0.02 min

Lab File: VL038120.D

Acq: 24 Nov 2021 4:39

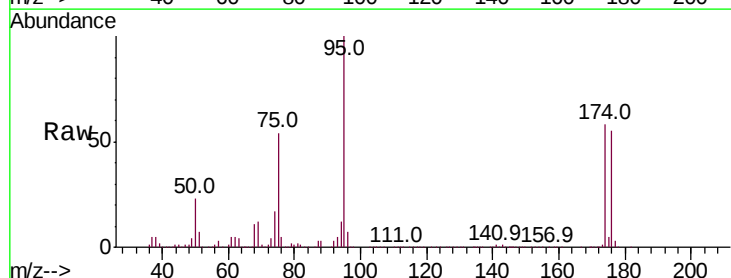
Tgt Ion: 95 Resp: 1779483

Ion Ratio Lower Upper

95 100

174 60.0 53.1 79.7

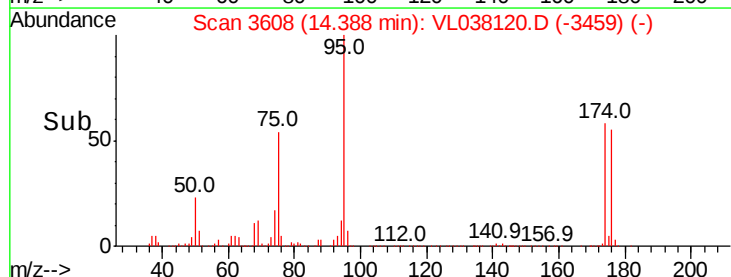
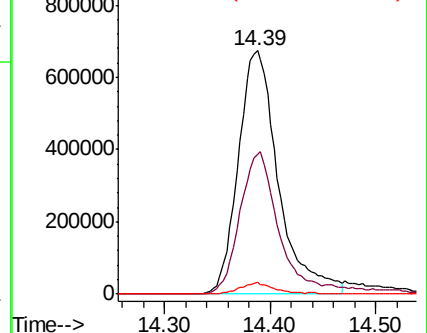
175 4.4 4.0 6.0

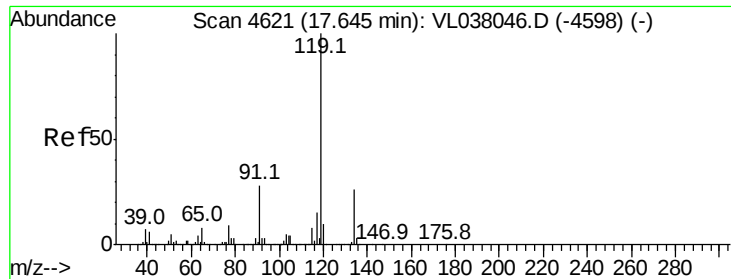


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

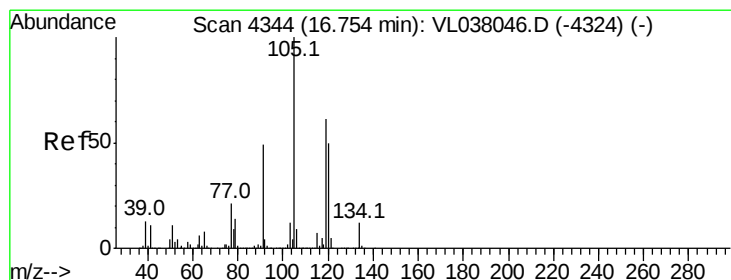
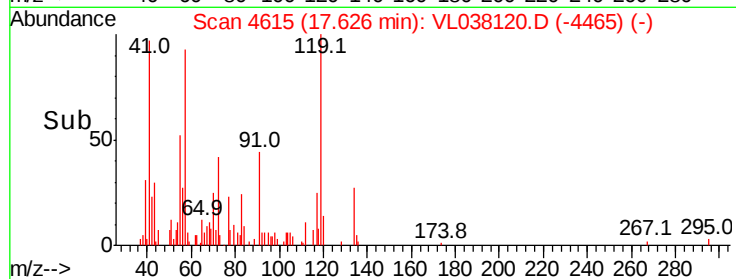
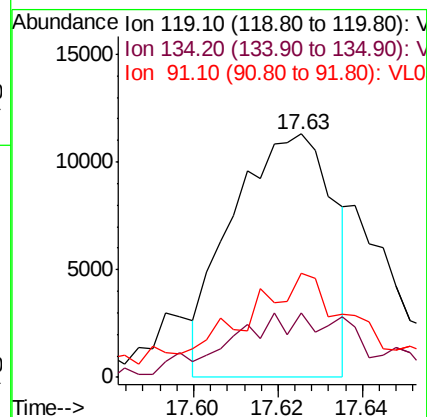
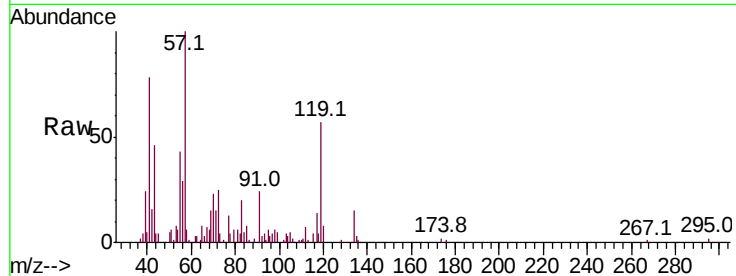
Ion 175.00 (174.70 to 175.70): V





#69
 p-Isopropyltoluene
 Concen: 0.050 ppbv
 RT: 17.63
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 24 Nov 2021 4:39

Tot Ion	Ratio	Lower	Upper
119	100		
134	38.0	20.6	30.8#
91	53.7	22.2	33.4#



#74
 1,2,4-Trimethylbenzene
 Concen: 0.055 ppbv
 RT: 16.73 min Scan# 4337
 Delta R.T. -0.02 min
 Lab File: VL038120.D
 Acq: 24 Nov 2021 4:39

Tgt Ion	Ratio	Lower	Upper
105	100		
120	27.6	40.1	60.1#
91	13.8	39.8	59.8#
77	15.1	16.6	25.0#

