

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110921\
 Data File : VL037982.D
 Acq On : 9 Nov 2021 16:49
 Operator : SY/AP
 Sample : M4555-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 10 04:47:50 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 02 05:54:07 2021
 QLast Update : Tue Nov 02 05:54:07 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1268005	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3710942	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	2974273	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	2153984	9.96	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.60%

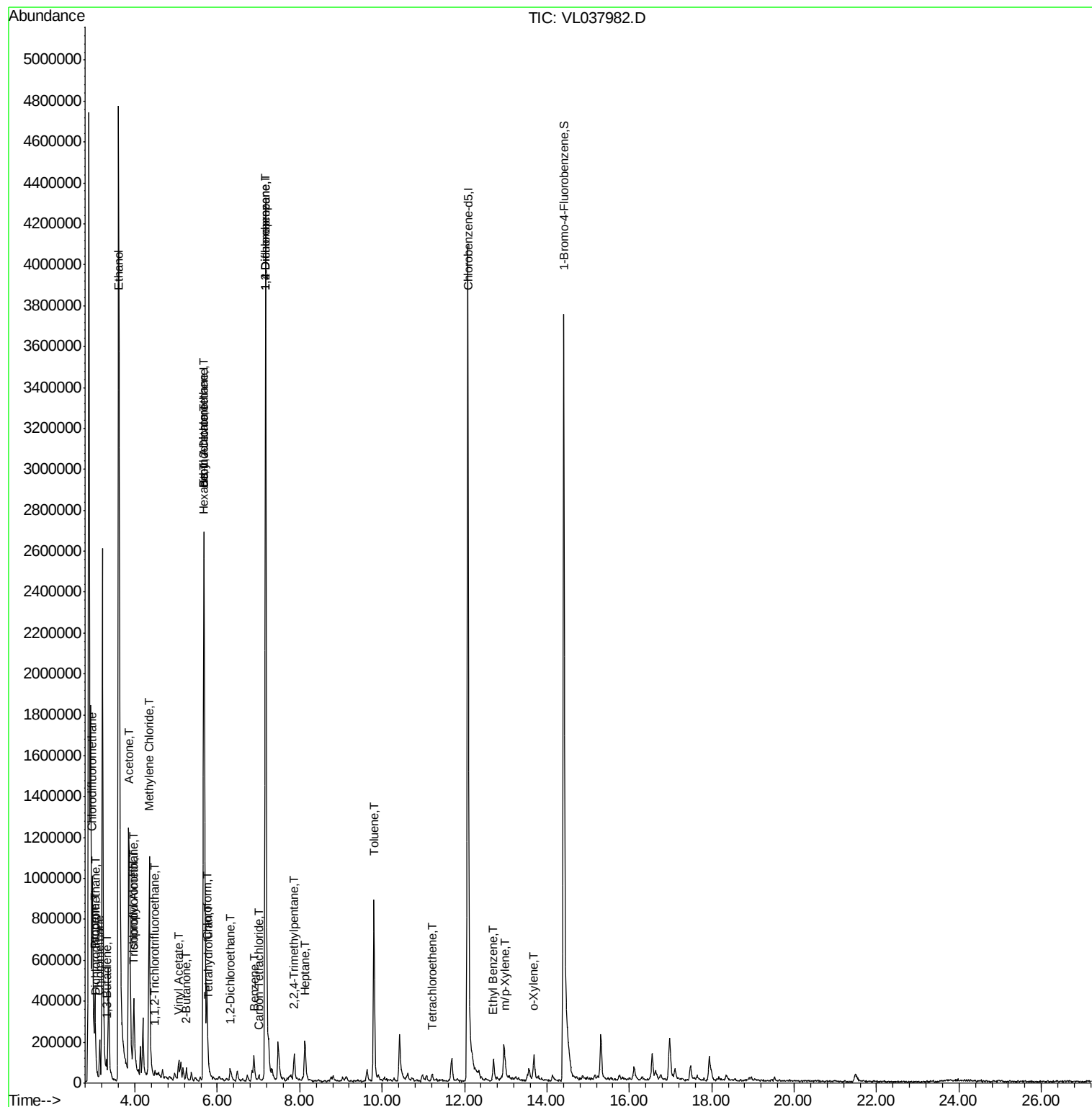
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	33267	0.186 ppbv	92
3) Chlorodifluoromethane	2.97	51	770475	3.264 ppbv #	67
4) Chloromethane	3.14	50	186814	2.082 ppbv	89
9) Propene	3.03	41	125096	1.478 ppbv	83
10) Heptane	8.12	43	32747	0.166 ppbv #	42
11) Trichlorofluoromethane	3.95	101	40748	0.229 ppbv	84
12) 1,1,2-Trichlorotrifluoroet	4.49	101	5670	0.041 ppbv #	8
13) Ethanol	3.60	45	7045606	825.195 ppbv	90
15) Acetone	3.85	43	1755352	16.753 ppbv	94
16) 1,3-Butadiene	3.32	39	9450	0.114 ppbv #	60
19) Isopropyl Alcohol	3.97	45	400282	5.974 ppbv #	1
20) Methylene Chloride	4.35	84	456287	7.932 ppbv	98
23) Vinyl Acetate	5.06	43	85523	0.542 ppbv #	55
25) Ethyl Acetate	5.68	43	520157	1.671 ppbv #	87
26) Hexane	5.69	57	495388	3.360 ppbv #	58
29) Chloroform	5.75	83	272415	1.239 ppbv	98
31) cis-1,2-Dichloroethene	5.67	61	20766	0.154 ppbv #	30
34) 2-Butanone	5.25	43	63745	0.464 ppbv #	84
35) Carbon Tetrachloride	7.01	117	7250	0.032 ppbv #	75
36) Benzene	6.89	78	93493	0.309 ppbv #	90
37) 1,2-Dichloroethane	6.30	62	14462	0.101 ppbv #	86
39) 1,2-Dichloropropane	7.17	63	850663	7.481 ppbv #	28
41) Tetrahydrofuran	5.78	42	2178	0.032 ppbv #	43
44) 2,2,4-Trimethylpentane	7.86	57	53023	0.103 ppbv #	24
52) Tetrachloroethene	11.21	164	3695	0.032 ppbv #	63
53) Toluene	9.80	91	643190	1.985 ppbv	99
58) Ethyl Benzene	12.70	91	44337	0.122 ppbv	95
59) m/p-Xylene	12.99	91	24445	0.076 ppbv #	30
60) o-Xylene	13.68	91	42808	0.140 ppbv	66

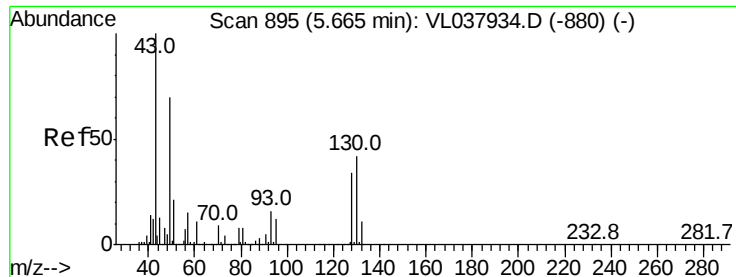
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument: MSVOA_1

Delta R.T. 0.00 min

Lab File: VL037934.D

Acq: 9 Nov 2021 16:49

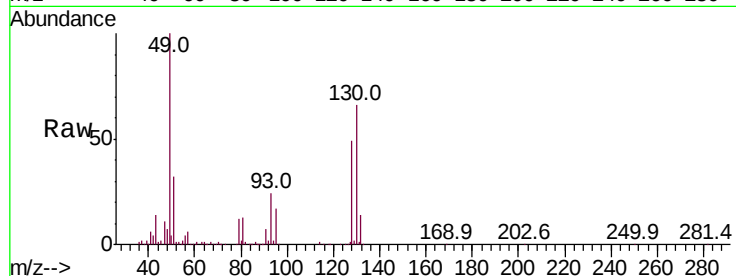
Tot Ion: 49 Resp: 1268005

Ion Ratio Lower Upper

49 100

128 52.5 27.0 81.0

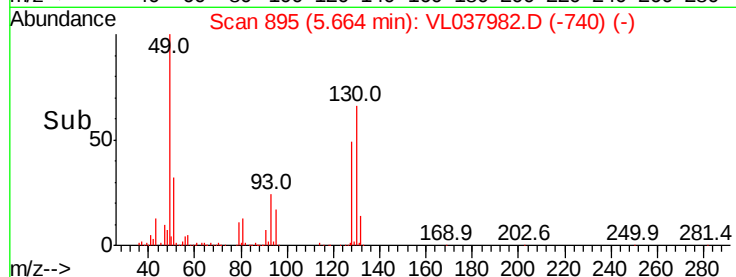
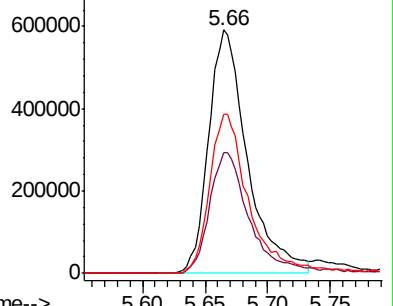
130 67.9 33.4 100.2



Abundance Ion 49.10 (48.80 to 49.80): VL037934.D (-880) (-)

Ion 128.00 (127.70 to 128.70): VL037934.D (-880) (-)

Ion 130.00 (129.70 to 130.70): VL037934.D (-880) (-)



#2

Dichlorodifluoromethane

Concen: 0.186 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.00 min

Lab File: VL037982.D

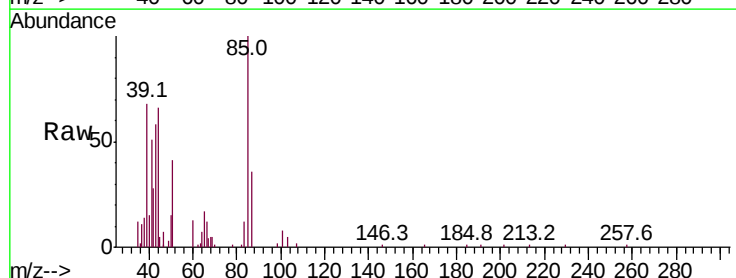
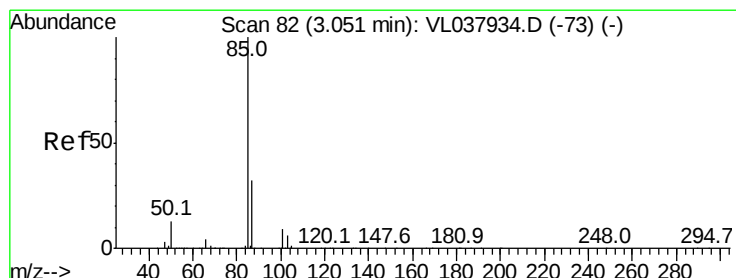
Acq: 9 Nov 2021 16:49

Tgt Ion: 85 Resp: 33267

Ion Ratio Lower Upper

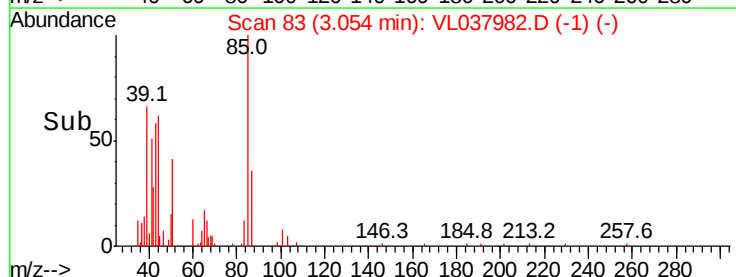
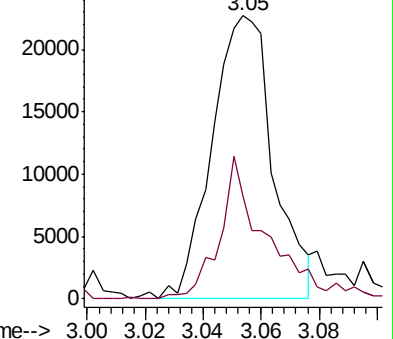
85 100

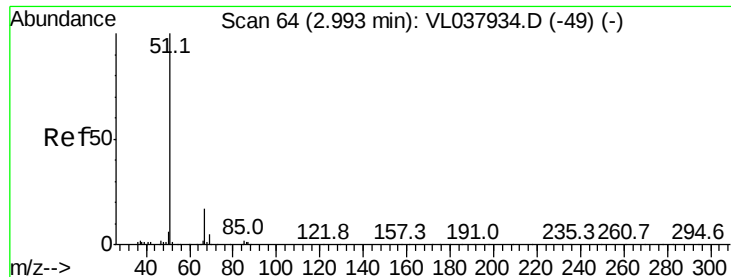
87 36.2 25.3 37.9



Abundance Ion 85.00 (84.70 to 85.70): VL037934.D (-73) (-)

Ion 87.00 (86.70 to 87.70): VL037934.D (-73) (-)





#3

Chlorodifluoromethane

Concen: 3.264 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

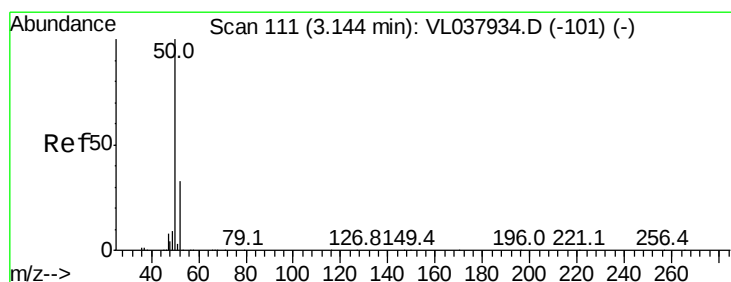
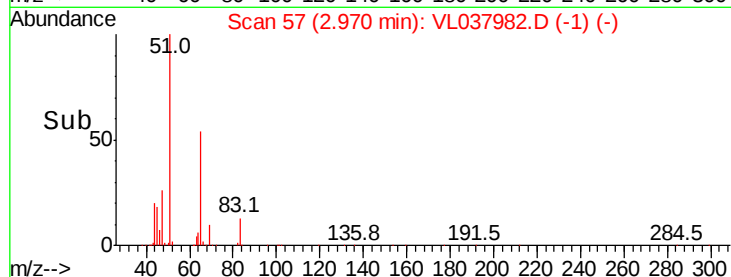
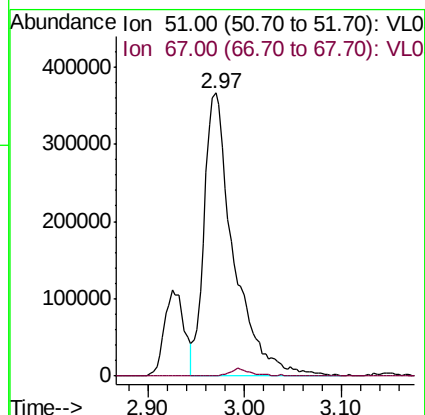
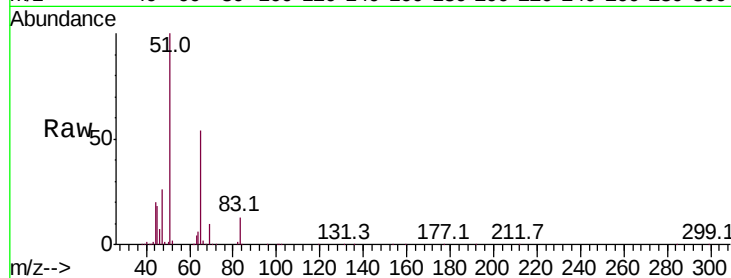
Acq: 9 Nov 2021 16:49

Tot Ion: 51 Resp: 770475

Ion Ratio Lower Upper

51 100

67 2.3 13.4 20.0#



#4

Chloromethane

Concen: 2.082 ppbv

RT: 3.14 min Scan# 111

Delta R.T. -0.00 min

Lab File: VL037982.D

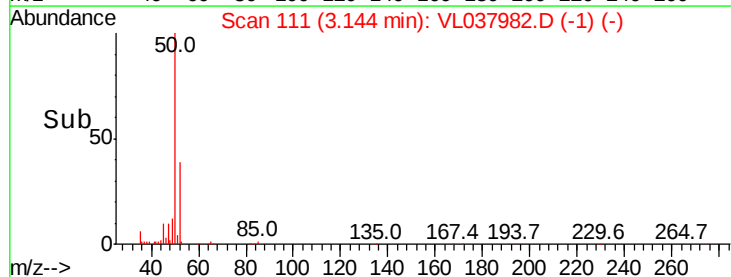
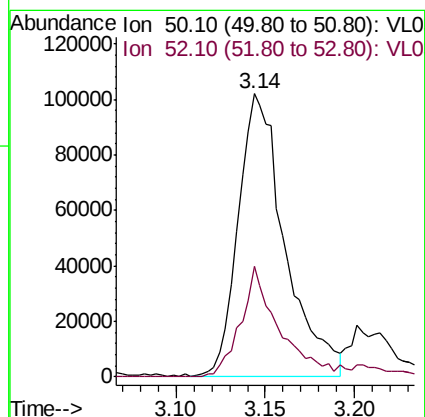
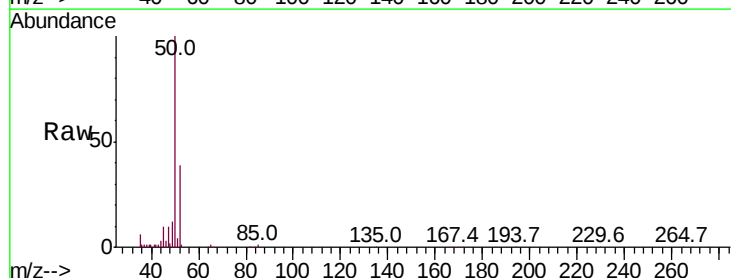
Acq: 9 Nov 2021 16:49

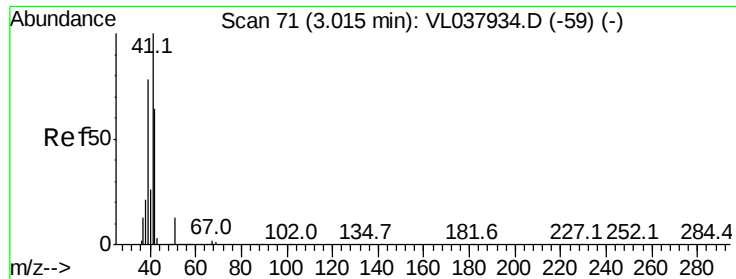
Tgt Ion: 50 Resp: 186814

Ion Ratio Lower Upper

50 100

52 39.1 26.3 39.5





#9

Propene

Concen: 1.478 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

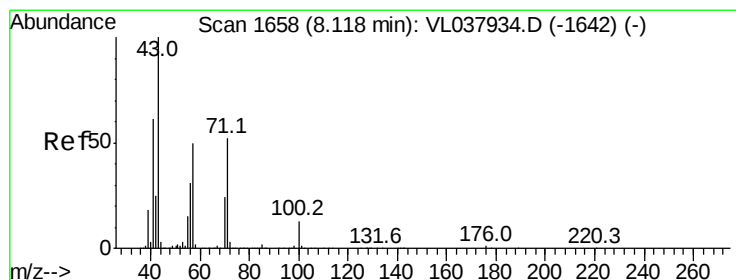
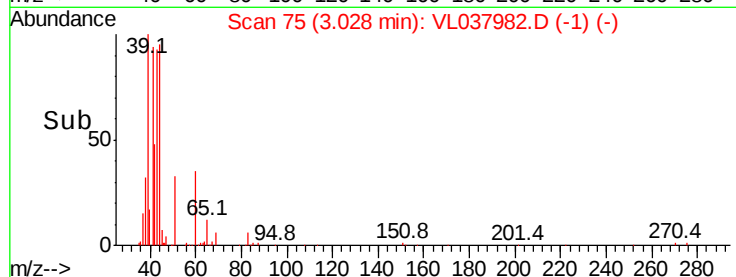
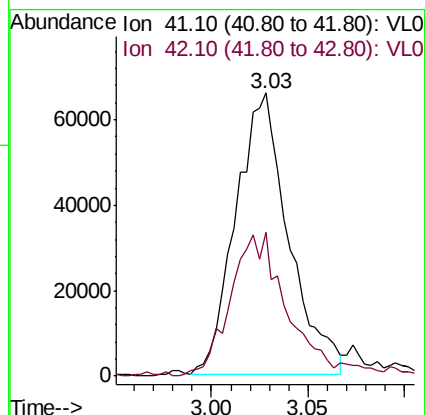
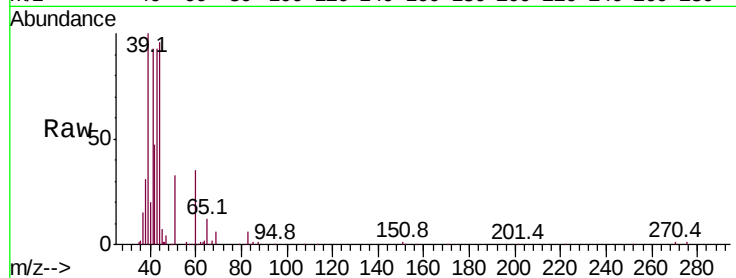
Acq: 9 Nov 2021 16:49

Tot Ion: 41 Resp: 125096

Ion Ratio Lower Upper

41 100

42 57.6 57.6 86.4



#10

Heptane

Concen: 0.166 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.00 min

Lab File: VL037982.D

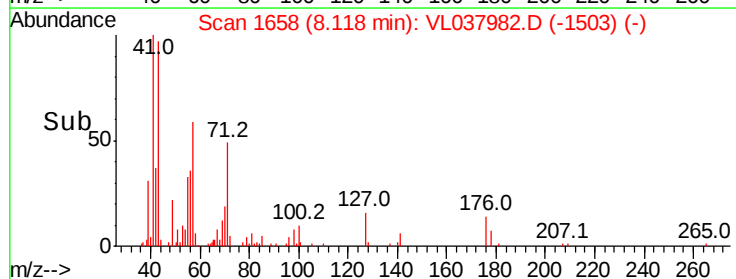
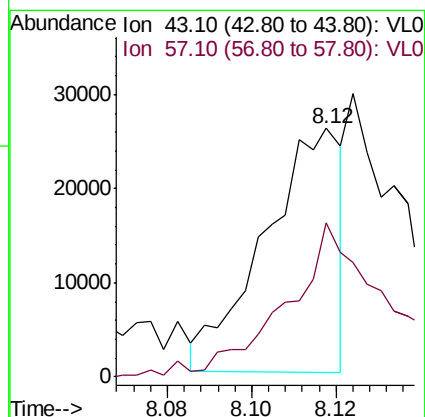
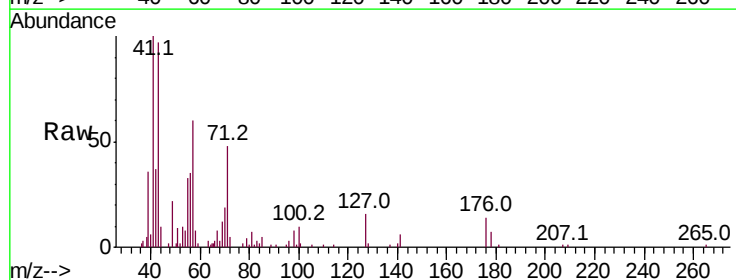
Acq: 9 Nov 2021 16:49

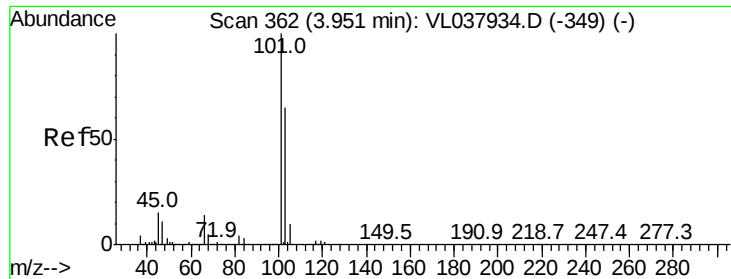
Tgt Ion: 43 Resp: 32747

Ion Ratio Lower Upper

43 100

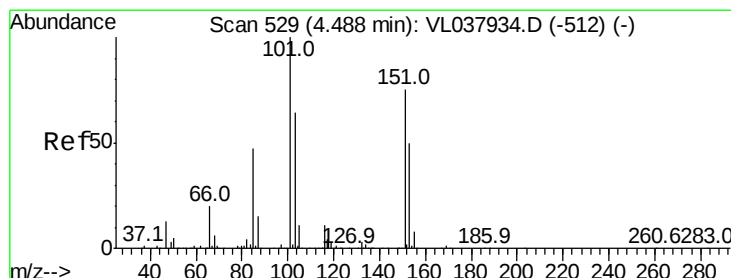
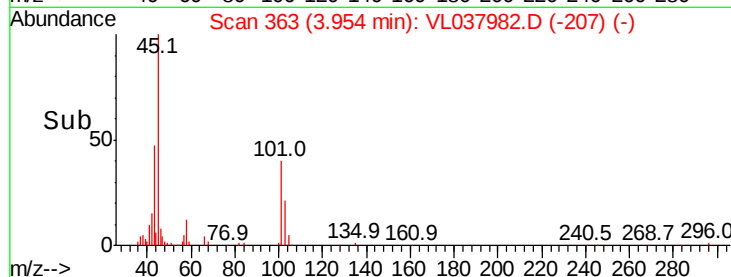
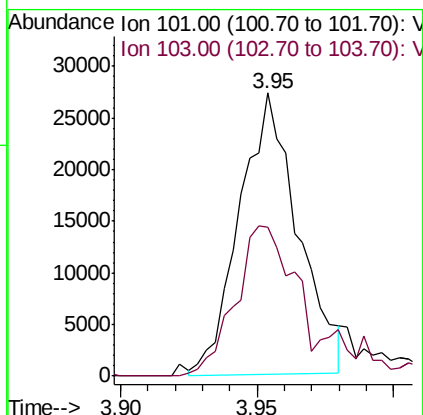
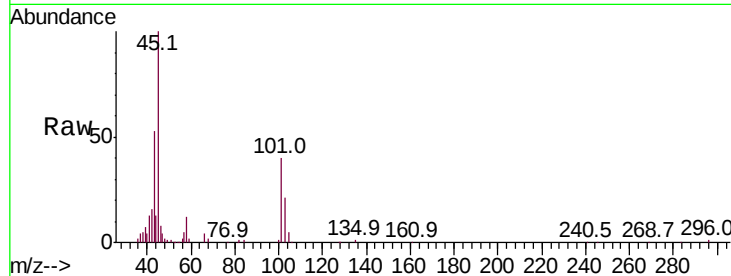
57 89.7 39.8 59.8#





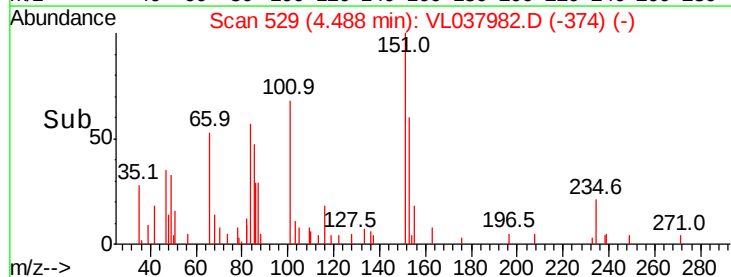
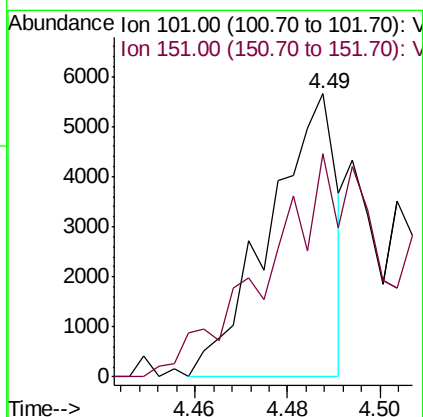
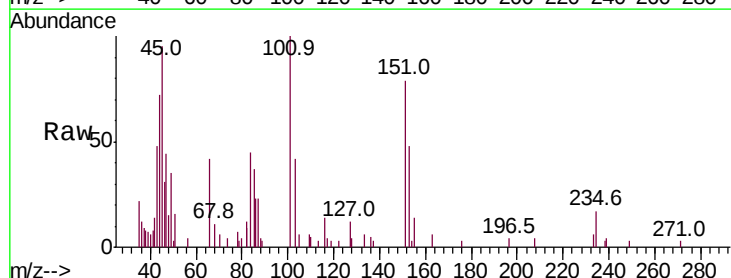
#11
 Trichlorofluoromethane
 Concen: 0.229 ppbv
 RT: 3.95
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 9 Nov 2021 16:49

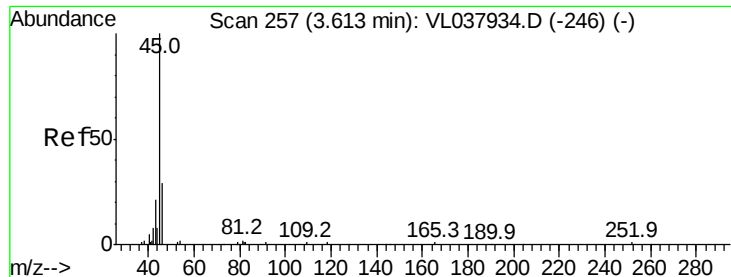
Tot Ion:101 Resp: 40748
 Ion Ratio Lower Upper
 101 100
 103 52.1 52.0 78.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.041 ppbv
 RT: 4.49 min Scan# 529
 Delta R.T. -0.00 min
 Lab File: VL037982.D
 Acq: 9 Nov 2021 16:49

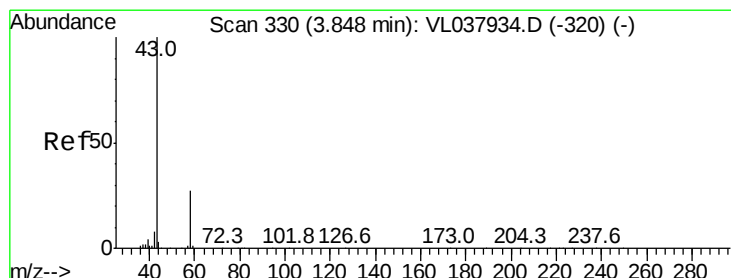
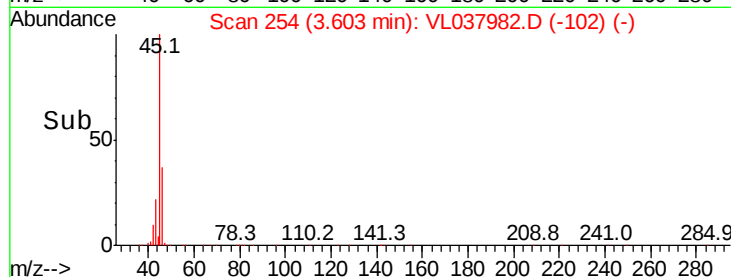
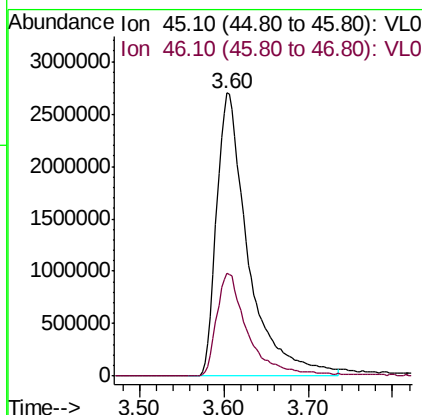
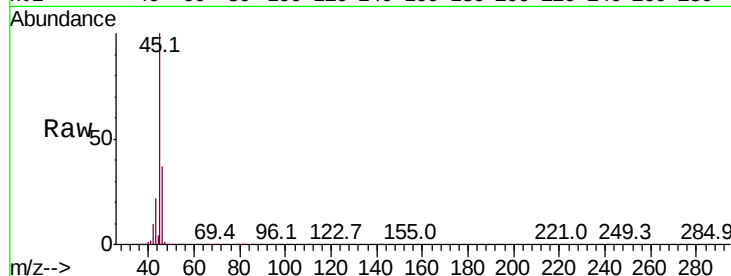
Tgt Ion:101 Resp: 5670
 Ion Ratio Lower Upper
 101 100
 151 157.0 61.8 92.8#





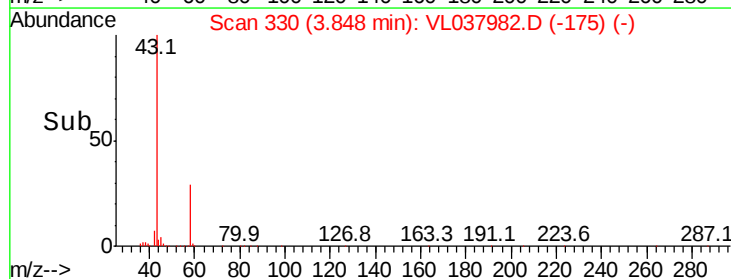
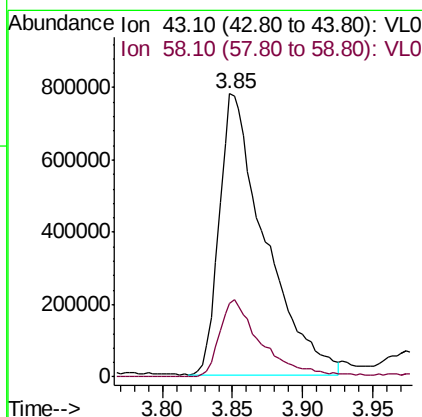
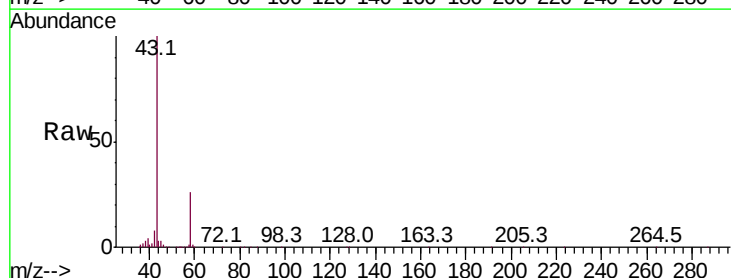
#13
 Ethanol
 Concen: 825.195 ppbv
 RT: 3.60
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 9 Nov 2021 16:49

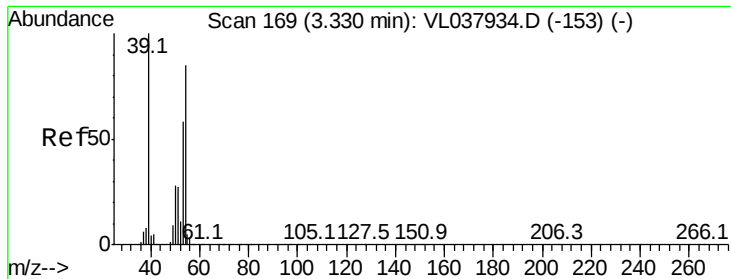
Tot Ion: 45 Resp: 7045606
 Ion Ratio Lower Upper
 45 100
 46 37.2 17.4 69.8



#15
 Acetone
 Concen: 16.753 ppbv
 RT: 3.85 min Scan# 330
 Delta R.T. -0.00 min
 Lab File: VL037982.D
 Acq: 9 Nov 2021 16:49

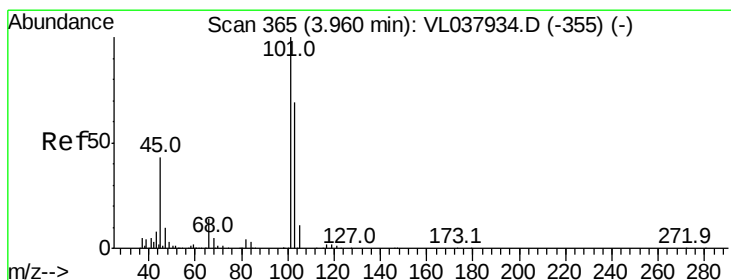
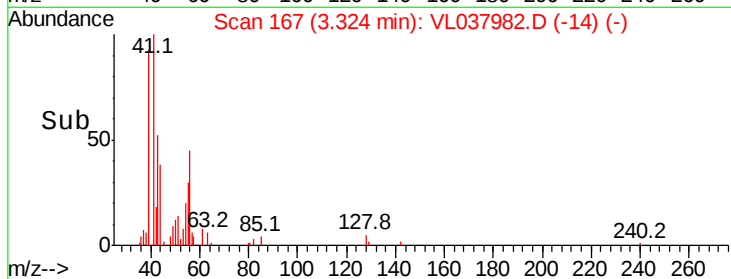
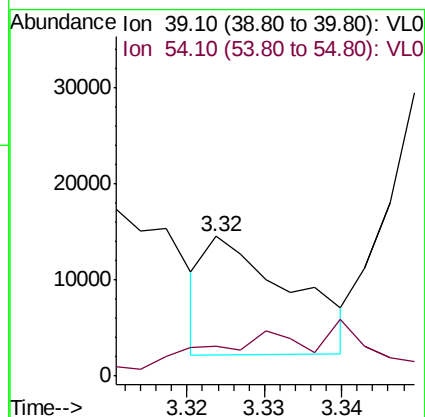
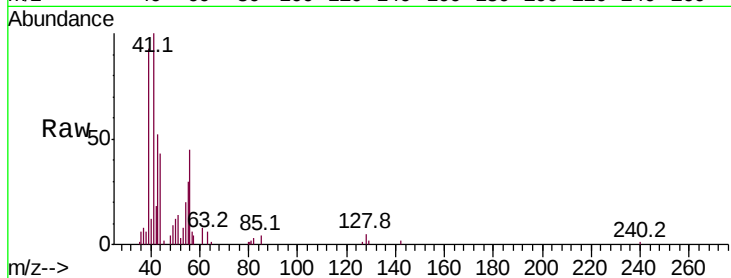
Tgt Ion: 43 Resp: 1755352
 Ion Ratio Lower Upper
 43 100
 58 25.8 23.3 34.9





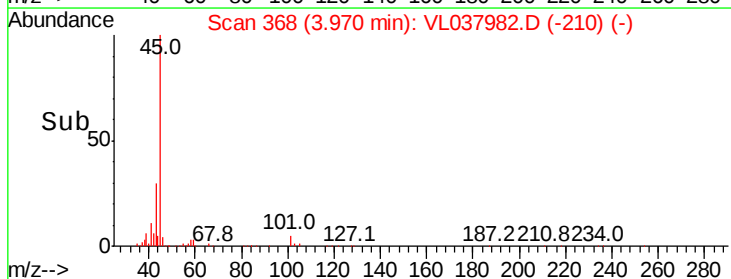
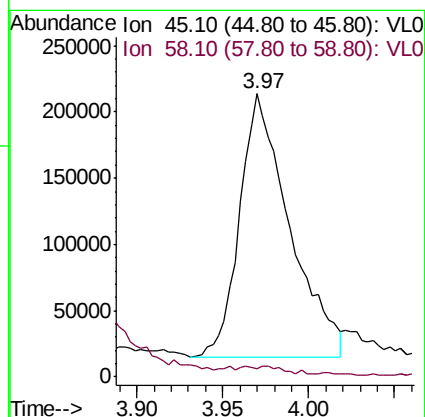
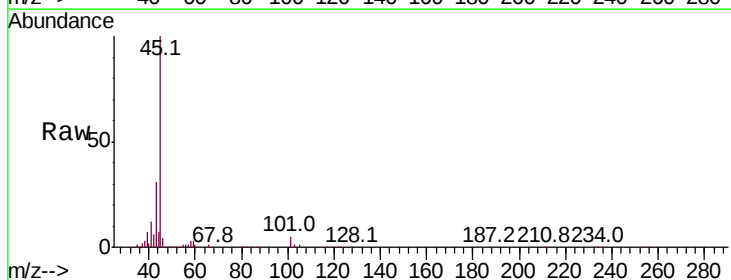
#16
 1,3-Butadiene
 Concen: 0.114 ppbv
 RT: 3.32
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 9 Nov 2021 16:49

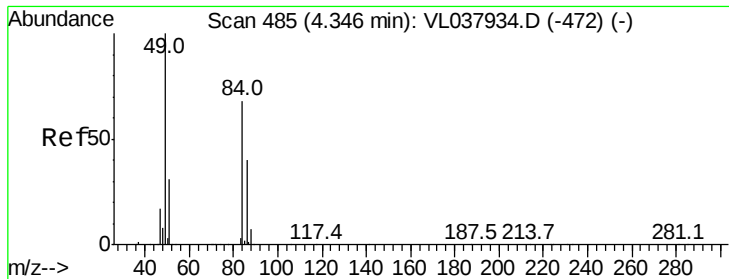
Tot Ion: 39 Resp: 9450
 Ion Ratio Lower Upper
 39 100
 54 112.8 62.6 93.8#



#19
 Isopropyl Alcohol
 Concen: 5.974 ppbv
 RT: 3.97 min Scan# 368
 Delta R.T. 0.01 min
 Lab File: VL037982.D
 Acq: 9 Nov 2021 16:49

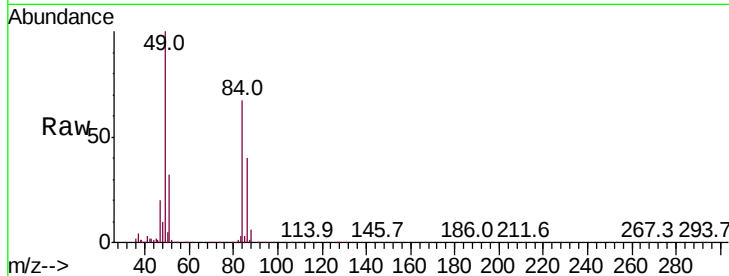
Tgt Ion: 45 Resp: 400282
 Ion Ratio Lower Upper
 45 100
 58 112.0 4.0 6.0#





#20
Methvlene Chloride
Concen: 7.932 ppbv
RT: 4.35
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 9 Nov 2021 16:49

Tot Ion:	84	Resp:	456287
Ion	Ratio	Lower	Upper
84	100		
49	148.9	117.5	176.3
51	48.4	35.9	53.9
86	60.0	47.3	70.9



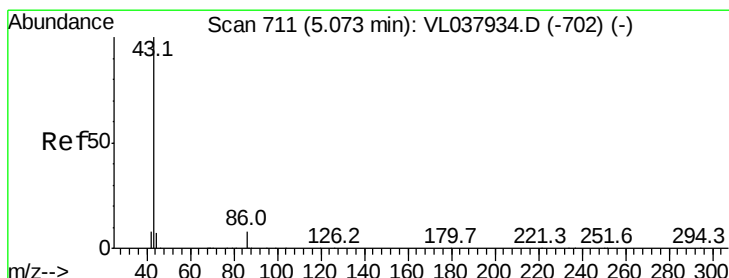
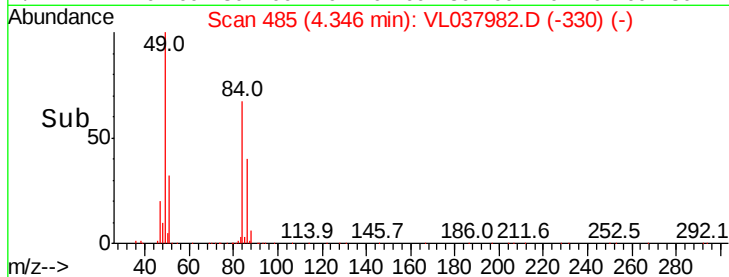
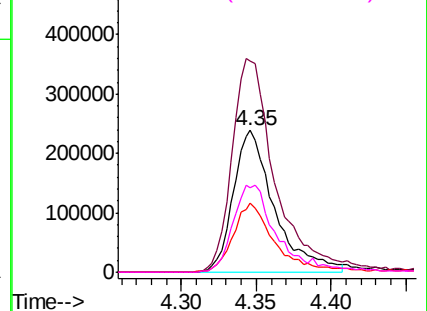
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

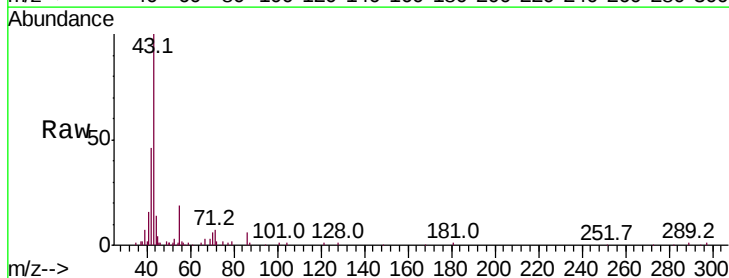
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#23
Vinyl Acetate
Concen: 0.542 ppbv
RT: 5.06 min Scan# 708
Delta R.T. -0.01 min
Lab File: VL037982.D
Acq: 9 Nov 2021 16:49

Tgt Ion:	43	Resp:	85523
Ion	Ratio	Lower	Upper
43	100		
86	5.7	5.5	8.3
42	46.8	7.4	11.2#
44	6.5	4.7	7.1



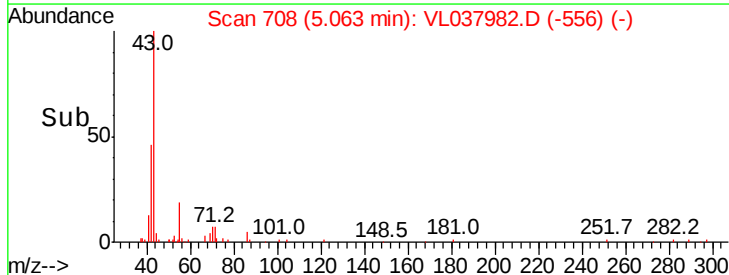
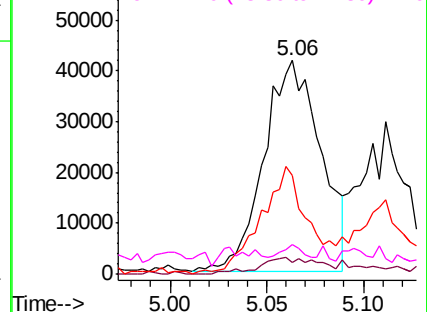
Abundance

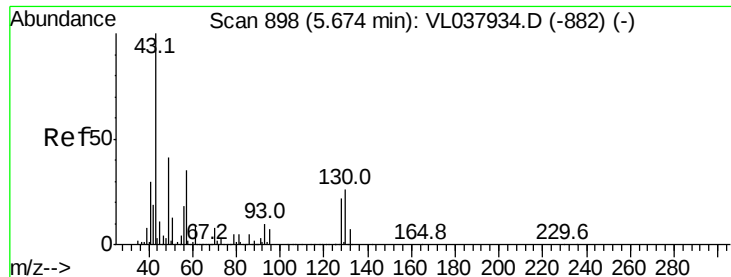
Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

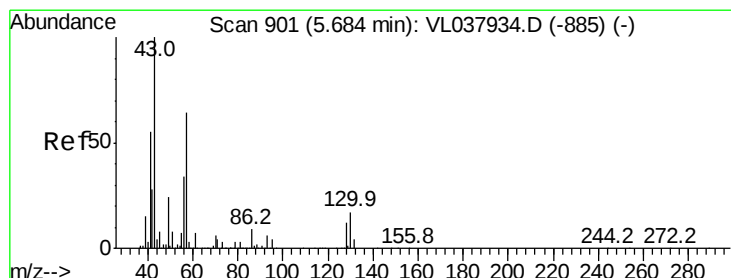
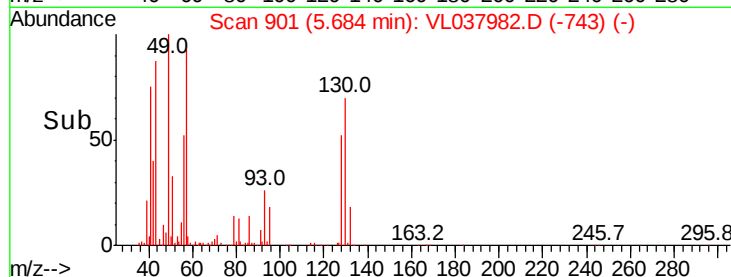
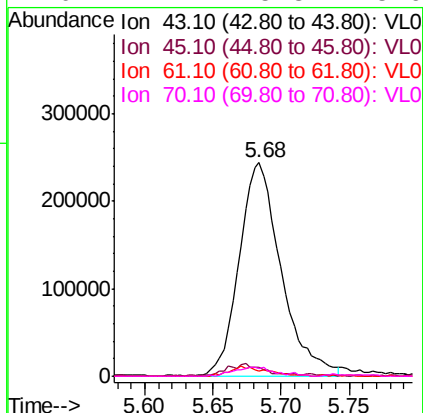
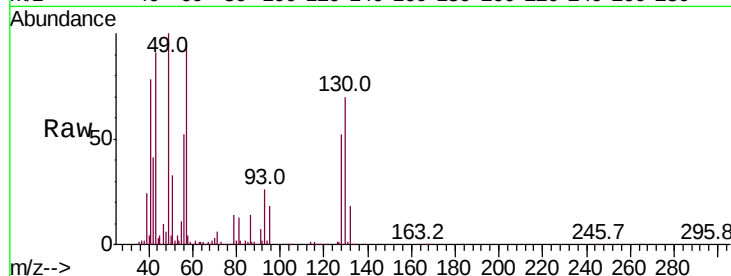
Ion 44.10 (43.80 to 44.80): VL0





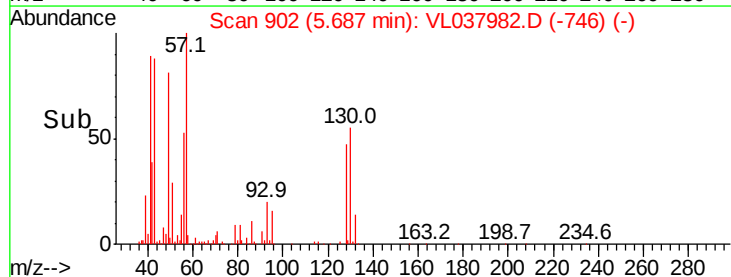
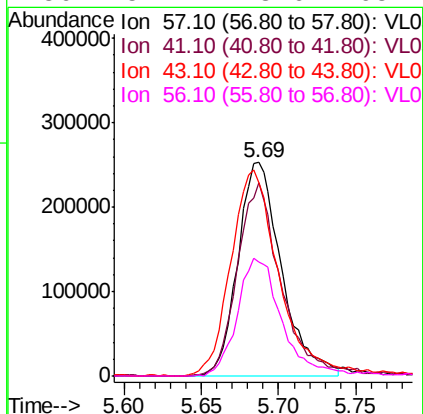
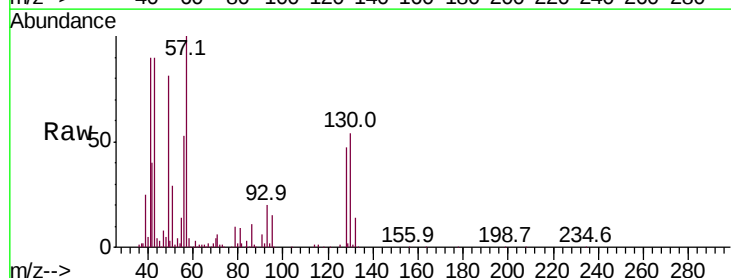
#25
Ethyl Acetate
Concen: 1.671 ppbv
RT: 5.68 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 9 Nov 2021 16:49

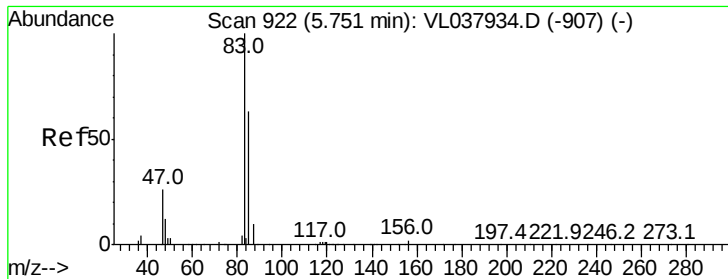
Tot Ion:	43	Resp:	520157
Ion	Ratio	Lower	Upper
43	100		
45	5.7	8.1	12.1#
61	4.1	8.1	12.1#
70	4.2	5.8	8.6#



#26
Hexane
Concen: 3.360 ppbv
RT: 5.69 min Scan# 902
Delta R.T. 0.00 min
Lab File: VL037982.D
Acq: 9 Nov 2021 16:49

Tgt Ion:	57	Resp:	495388
Ion	Ratio	Lower	Upper
57	100		
41	91.4	71.0	106.6
43	107.6	173.0	259.6#
56	57.4	43.6	65.4





#29

Chloroform

Concen: 1.239 ppbv

RT: 5.75 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

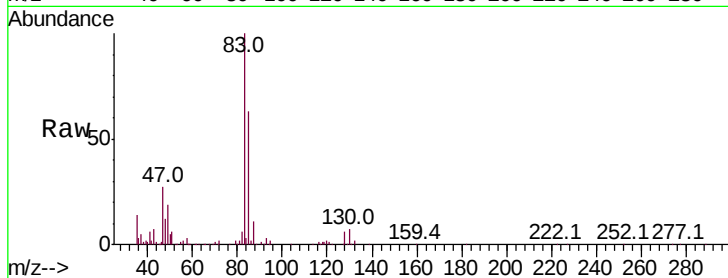
Acq: 9 Nov 2021 16:49

Tot Ion: 83 Resp: 272415

Ion Ratio Lower Upper

83 100

85 61.7 50.6 76.0



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

150000

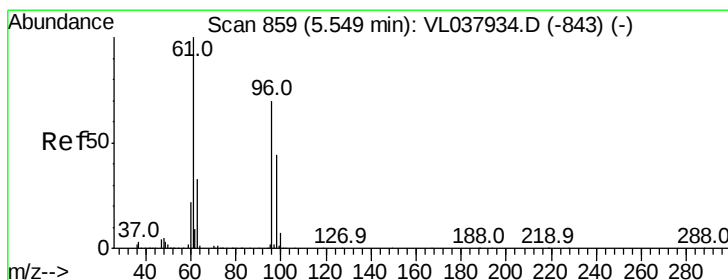
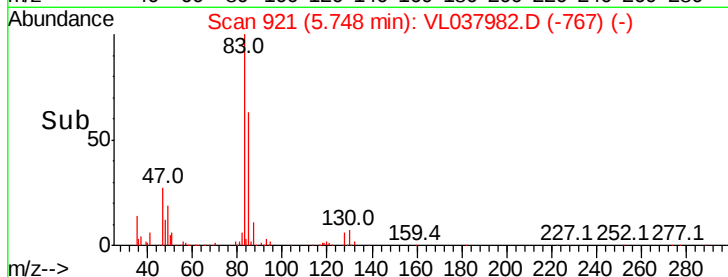
100000

50000

0

5.70 5.75 5.80

Time-->



#31

cis-1,2-Dichloroethene

Concen: 0.154 ppbv

RT: 5.67 min Scan# 897

Delta R.T. 0.12 min

Lab File: VL037982.D

Acq: 9 Nov 2021 16:49

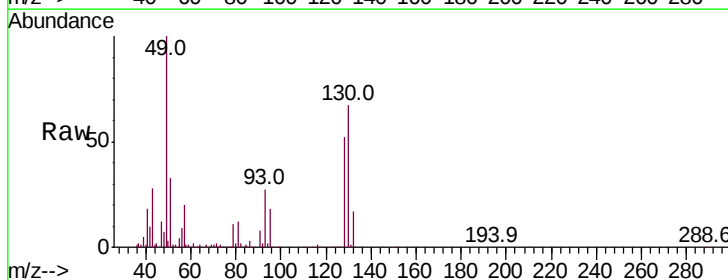
Tgt Ion: 61 Resp: 20766

Ion Ratio Lower Upper

61 100

96 9.3 55.6 83.4#

98 1.6 34.9 52.3#



Abundance Ion 61.10 (60.80 to 61.80): VL0

Ion 96.00 (95.70 to 96.70): VL0

Ion 98.00 (97.70 to 98.70): VL0

15000

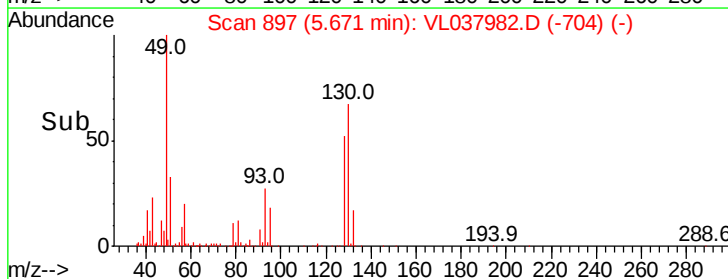
10000

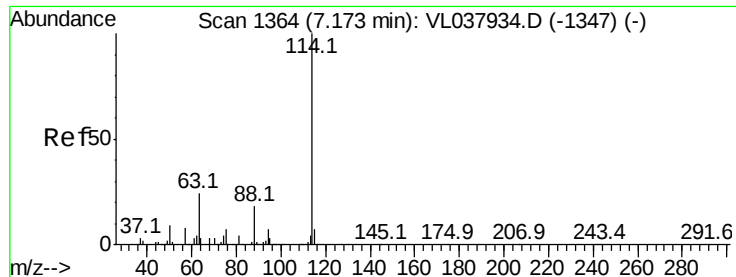
5000

0

5.65 5.70

Time-->





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17

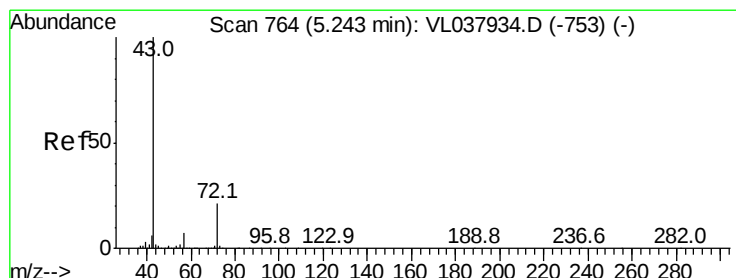
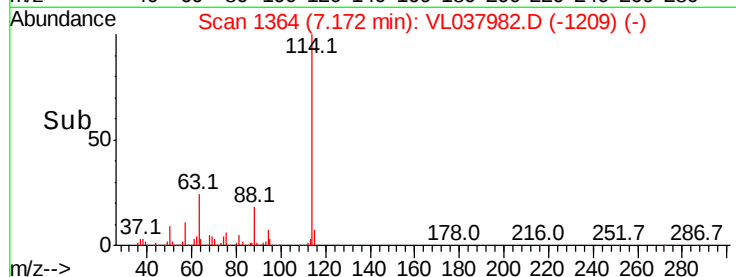
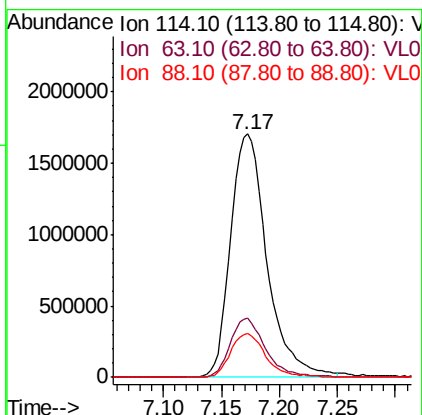
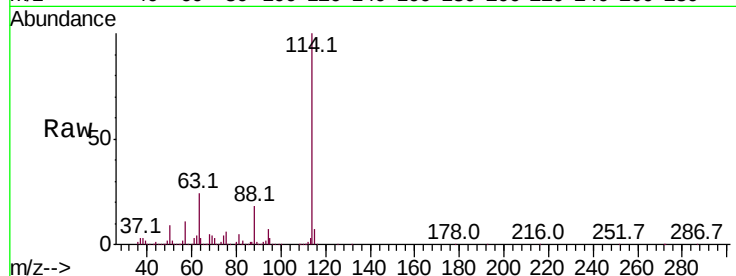
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 9 Nov 2021 16:49

Tot Ion:114 Resp: 3710942

Ion	Ratio	Lower	Upper
114	100		
63	23.9	19.4	29.0
88	17.8	14.2	21.4



#34

2-Butanone

Concen: 0.464 ppbv

RT: 5.25 min Scan# 765

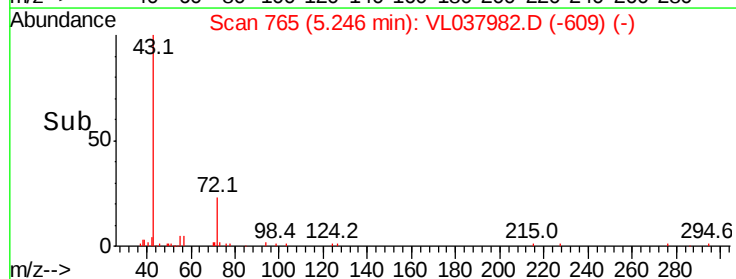
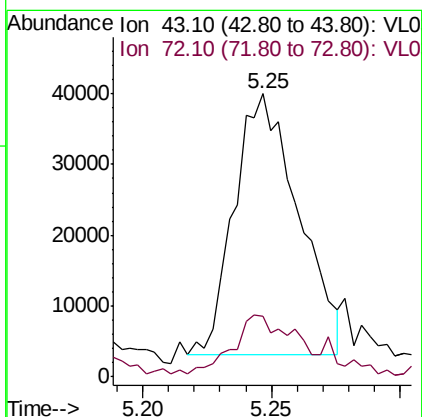
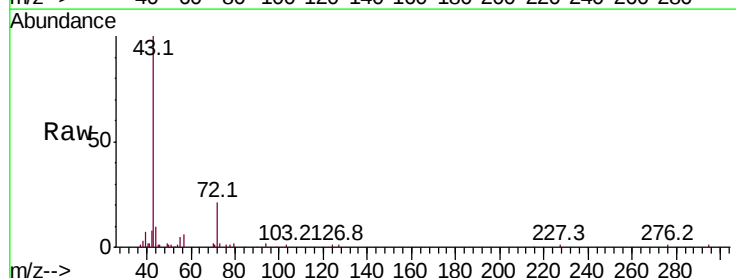
Delta R.T. 0.00 min

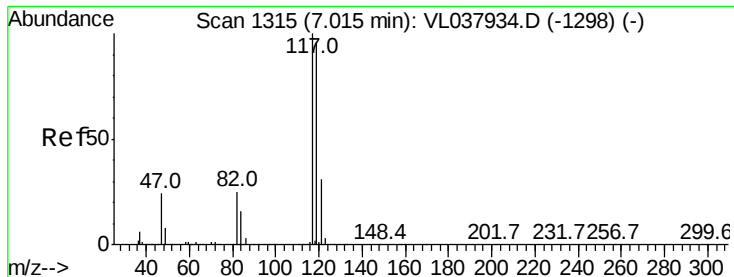
Lab File: VL037982.D

Acq: 9 Nov 2021 16:49

Tgt Ion: 43 Resp: 63745

Ion	Ratio	Lower	Upper
43	100		
72	30.6	18.3	27.5#





#35

Carbon Tetrachloride

Concen: 0.032 ppbv

RT: 7.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 9 Nov 2021 16:49

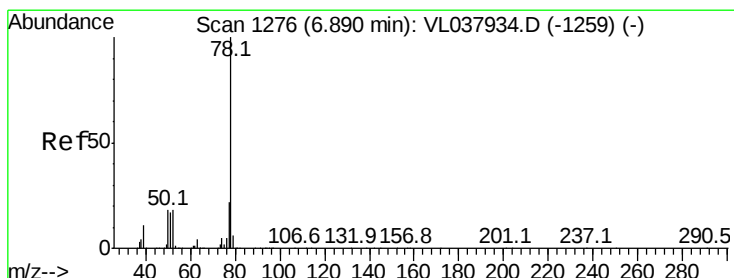
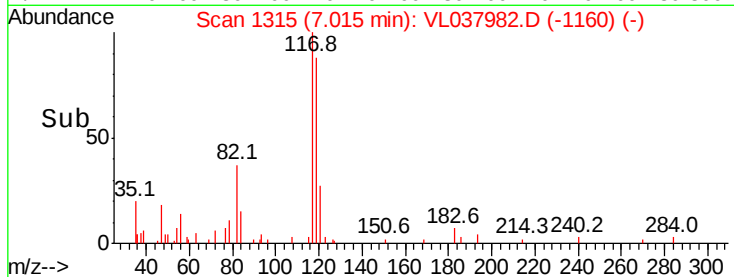
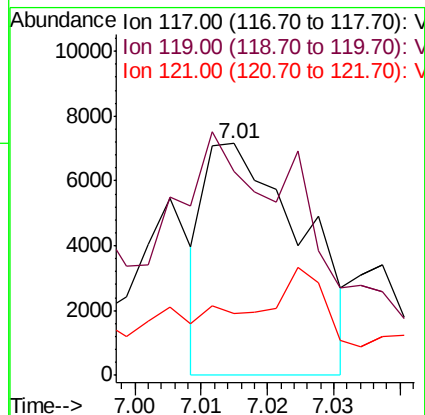
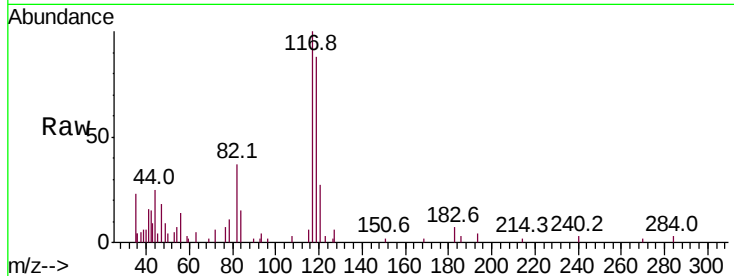
Tot Ion:117 Resp: 7250

Ion Ratio Lower Upper

117 100

119 70.6 76.6 114.8#

121 18.8 25.1 37.7#



#36

Benzene

Concen: 0.309 ppbv

RT: 6.89 min Scan# 1275

Delta R.T. -0.00 min

Lab File: VL037982.D

Acq: 9 Nov 2021 16:49

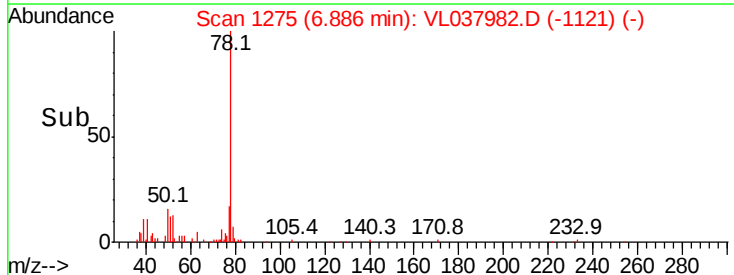
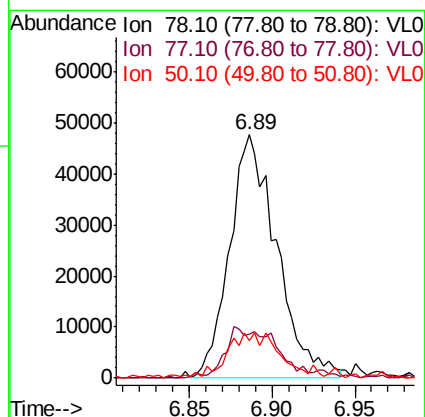
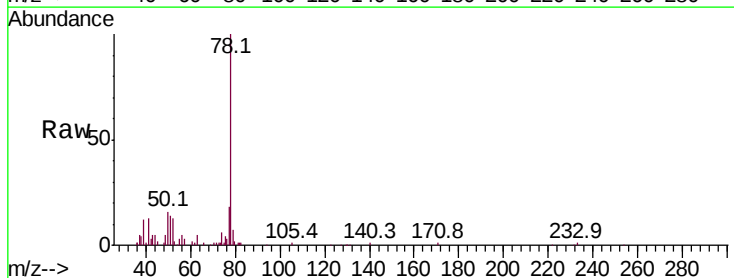
Tgt Ion: 78 Resp: 93493

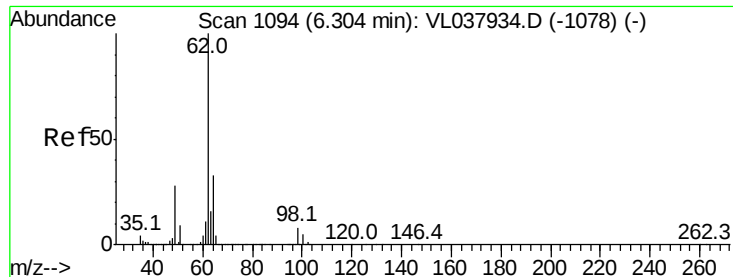
Ion Ratio Lower Upper

78 100

77 17.6 17.9 26.9#

50 14.0 14.4 21.6#





#37

1,2-Dichloroethane

Concen: 0.101 ppbv

RT: 6.30 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

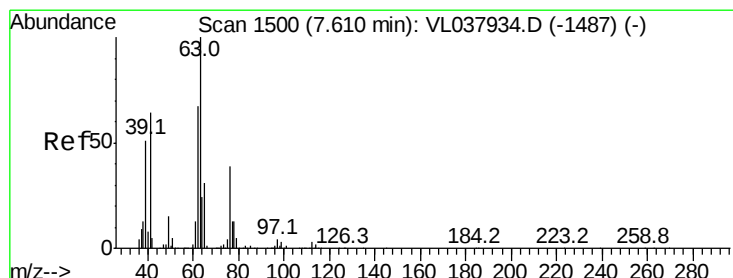
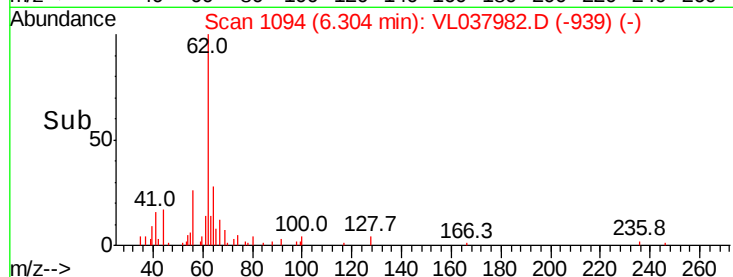
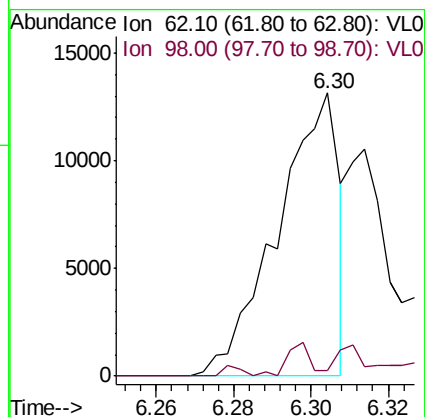
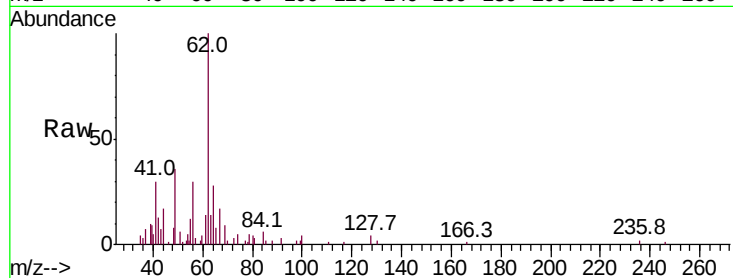
Acq: 9 Nov 2021 16:49

Tot Ion: 62 Resp: 14462

Ion Ratio Lower Upper

62 100

98 12.9 6.5 9.7#



#39

1,2-Dichloropropane

Concen: 7.481 ppbv

RT: 7.17 min Scan# 1364

Delta R.T. -0.44 min

Lab File: VL037982.D

Acq: 9 Nov 2021 16:49

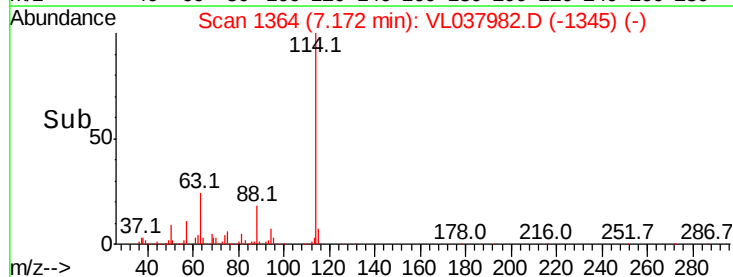
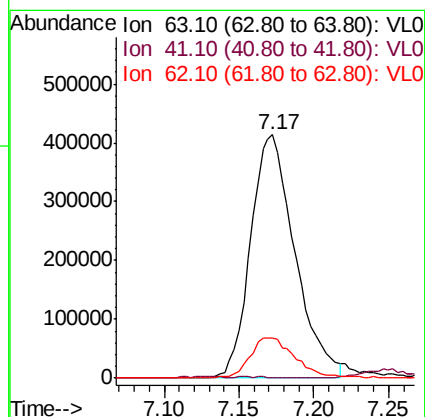
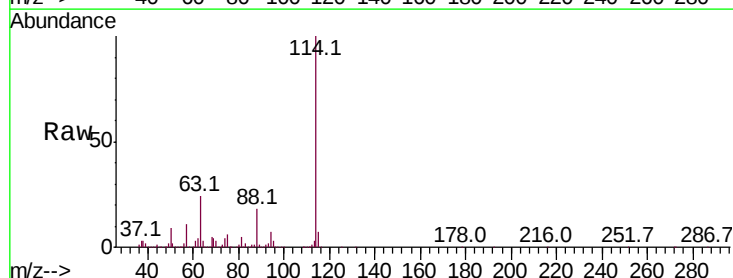
Tgt Ion: 63 Resp: 850663

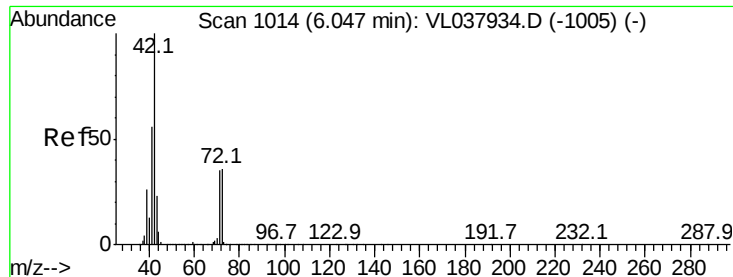
Ion Ratio Lower Upper

63 100

41 0.0 51.6 77.4#

62 16.3 53.5 80.3#





#41

Tetrahydrofuran

Concen: 0.032 ppbv

RT: 5.78 Instrument:

Delta R.T. MSVOA_1

Lab File:

Acq: 9 Nov 2021 16:49

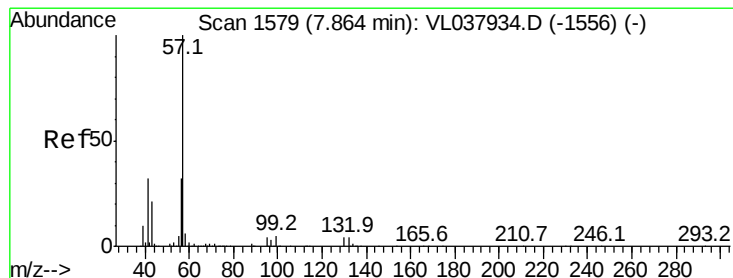
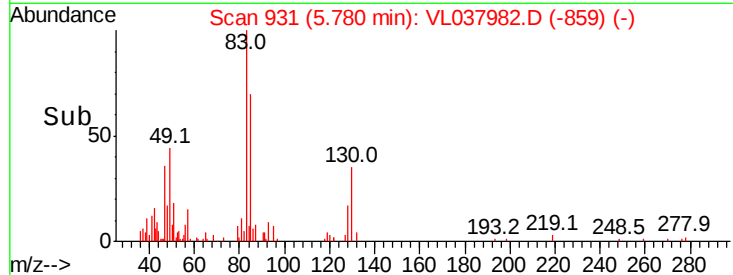
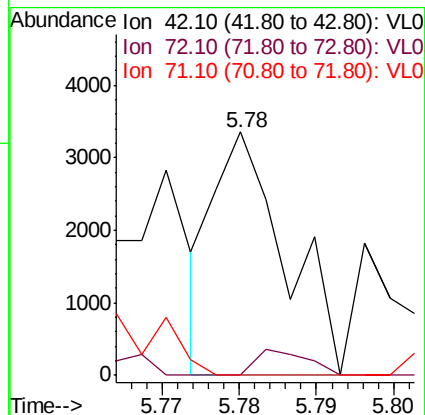
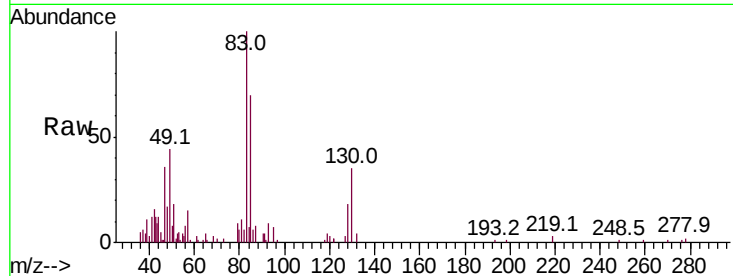
Tot Ion: 42 Resp: 2178

Ion Ratio Lower Upper

42 100

72 7.6 31.5 47.3#

71 0.0 30.5 45.7#



#44

2,2,4-Trimethylpentane

Concen: 0.103 ppbv

RT: 7.86 min Scan# 1579

Delta R.T. -0.00 min

Lab File: VL037982.D

Acq: 9 Nov 2021 16:49

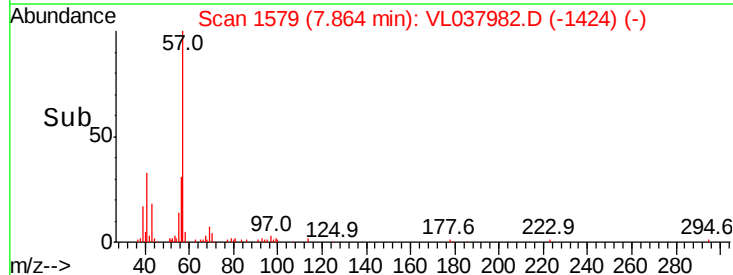
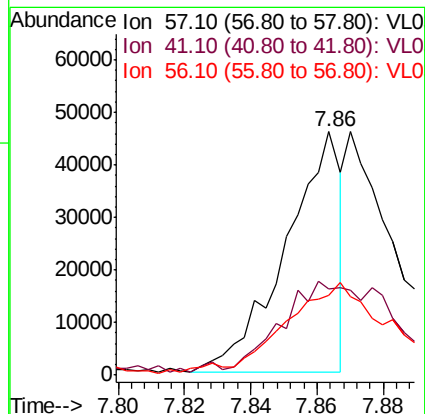
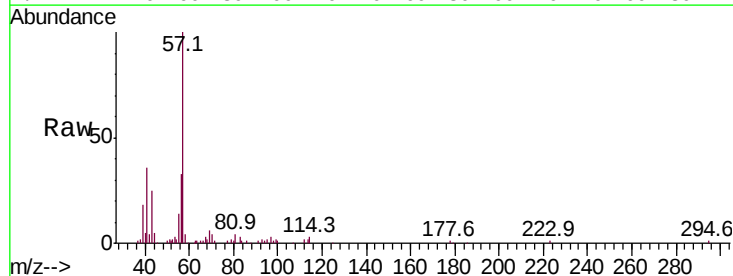
Tgt Ion: 57 Resp: 53023

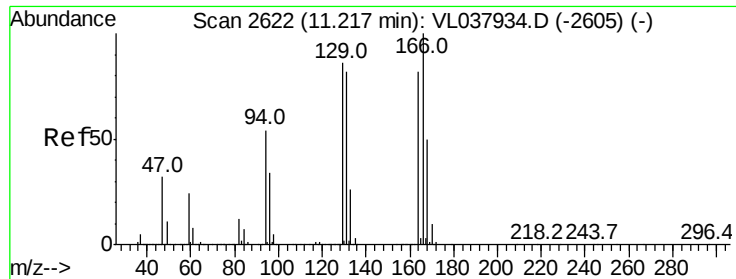
Ion Ratio Lower Upper

57 100

41 84.7 25.8 38.8#

56 0.0 25.9 38.9#





#52

Tetrachloroethene

Concen: 0.032 ppbv

RT: 11.21

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 9 Nov 2021 16:49

Tot Ion:164 Resp: 3695

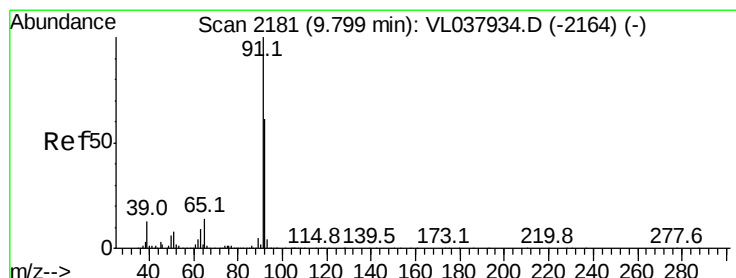
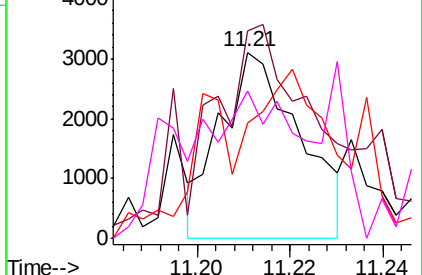
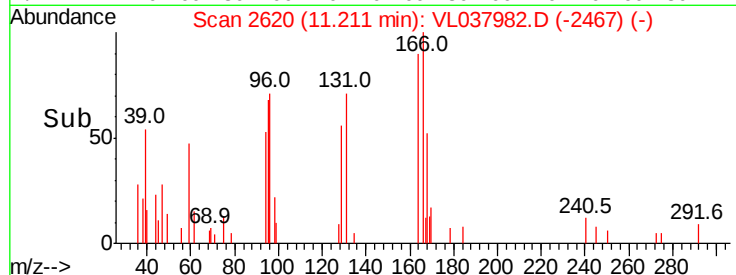
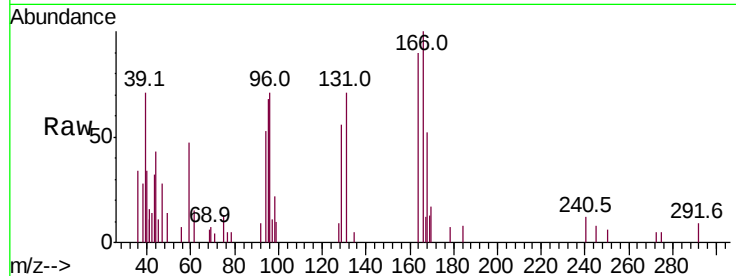
Ion Ratio Lower Upper

164 100

166 140.2 97.6 146.4

129 52.1 84.2 126.2#

131 53.7 79.6 119.4#



#53

Toluene

Concen: 1.985 ppbv

RT: 9.80 min Scan# 2181

Delta R.T. -0.00 min

Lab File: VL037982.D

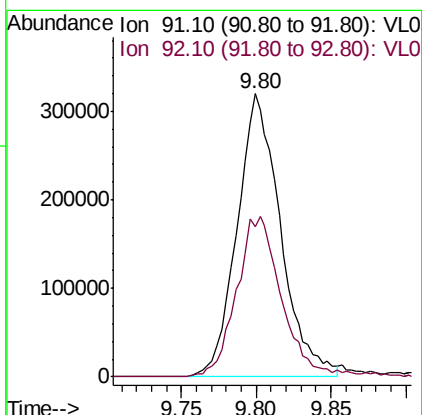
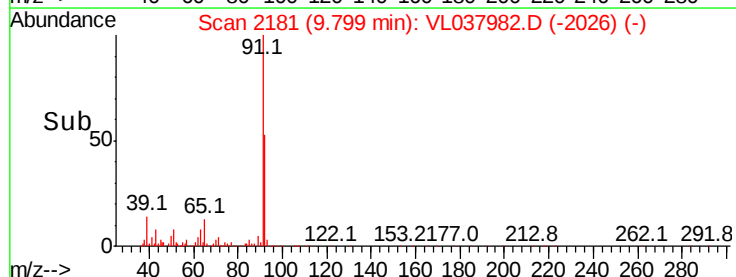
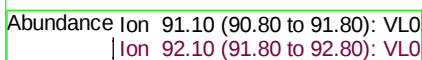
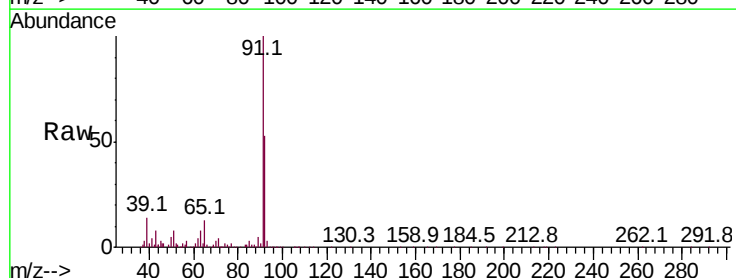
Acq: 9 Nov 2021 16:49

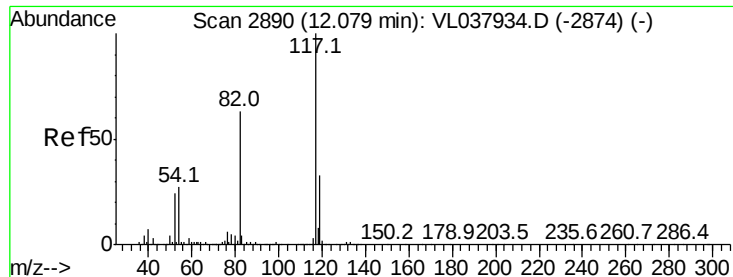
Tgt Ion: 91 Resp: 643190

Ion Ratio Lower Upper

91 100

92 59.6 48.2 72.4

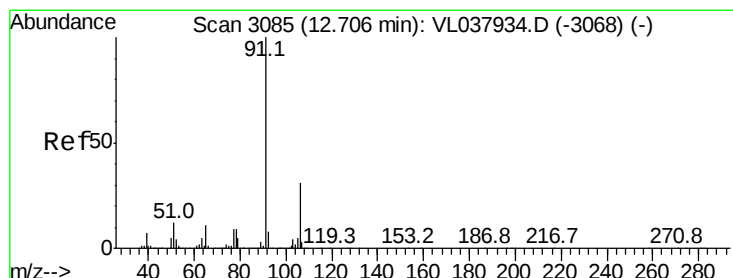
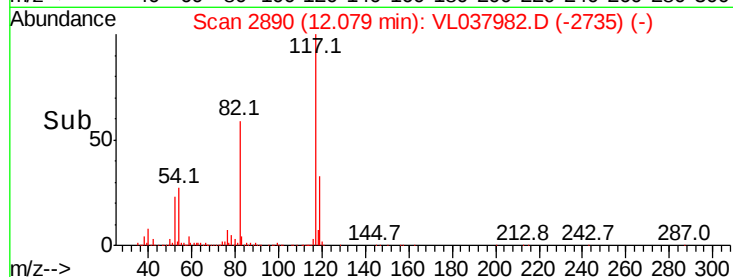
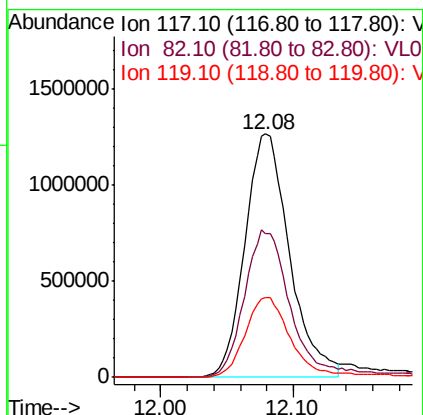
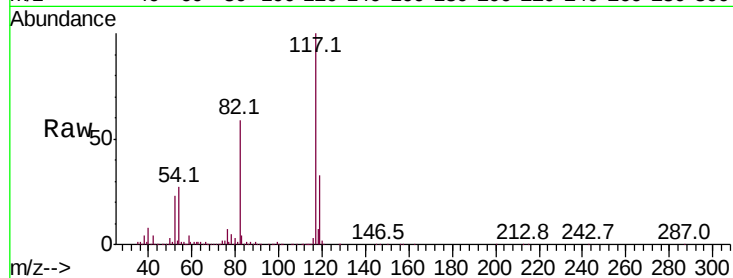




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 9 Nov 2021 16:49

Tot Ion: 117 Resp: 2974273

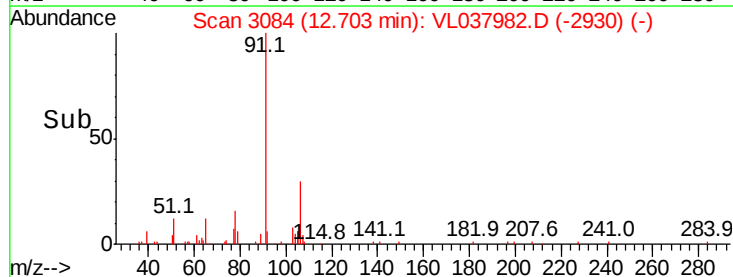
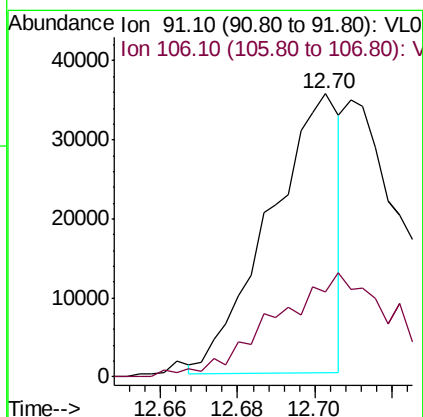
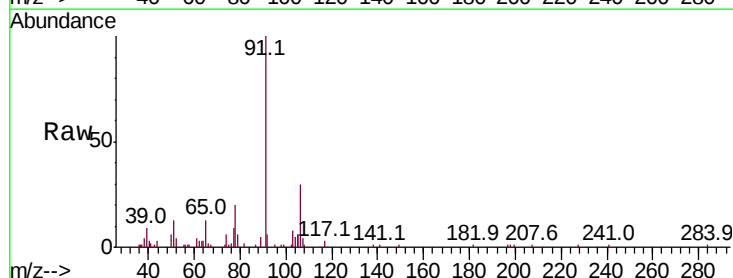
Ion	Ratio	Lower	Upper
117	100		
82	65.3	51.0	76.6
119	35.0	26.9	40.3

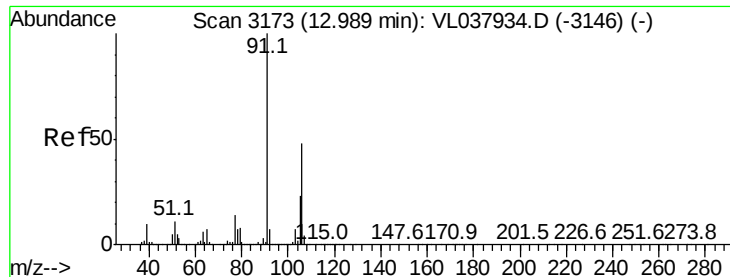


#58
Ethyl Benzene
Concen: 0.122 ppbv
RT: 12.70 min Scan# 3084
Delta R.T.: -0.00 min
Lab File: VL037982.D
Acq: 9 Nov 2021 16:49

Tgt Ion: 91 Resp: 44337

Ion	Ratio	Lower	Upper
91	100		
106	28.5	25.1	37.7





#59

m/p-Xylene

Concen: 0.076 ppbv

RT: 12.99

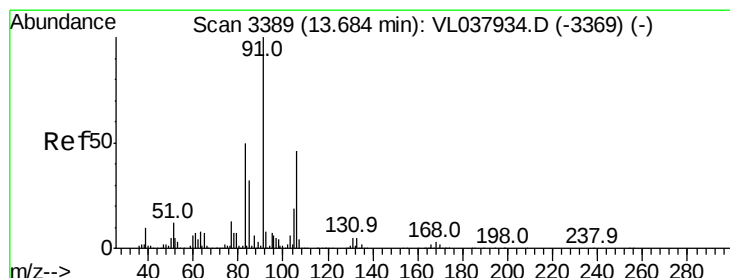
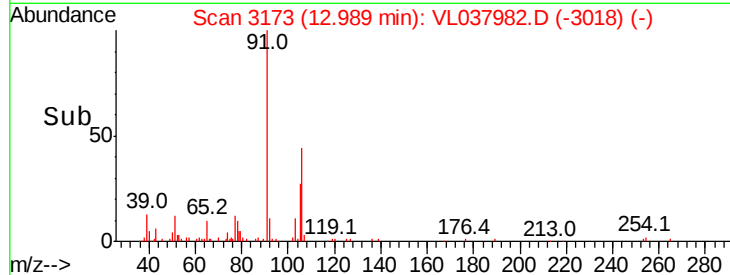
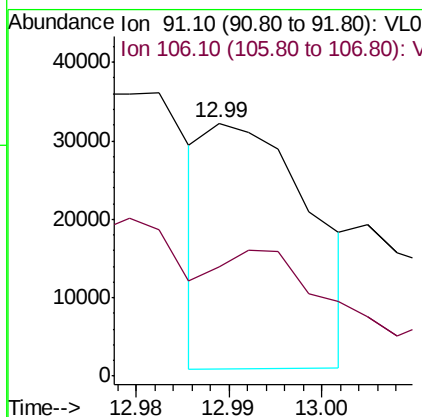
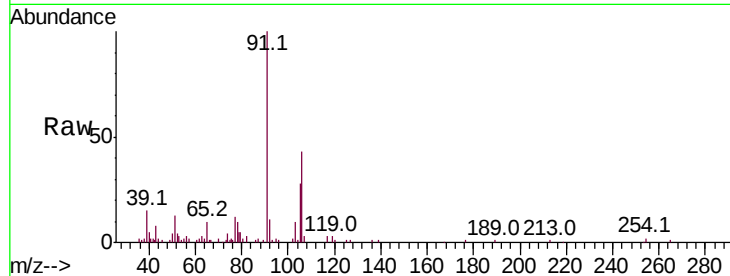
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 9 Nov 2021 16:49

Tot Ion: 91 Resp: 24445

Ion	Ratio	Lower	Upper
91	100		
106	0.0	37.1	55.7#



#60

o-Xylene

Concen: 0.140 ppbv

RT: 13.68 min Scan# 3388

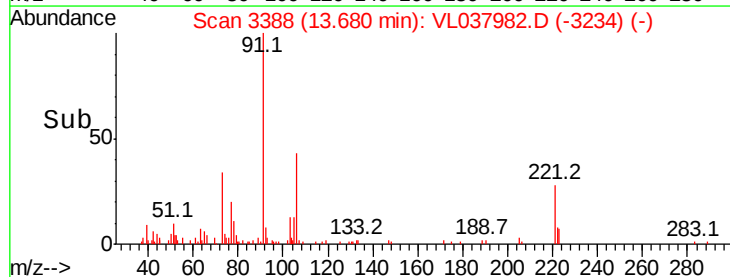
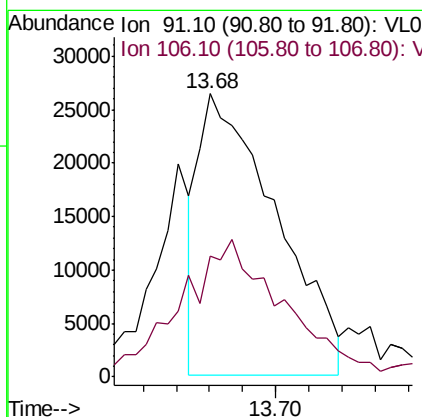
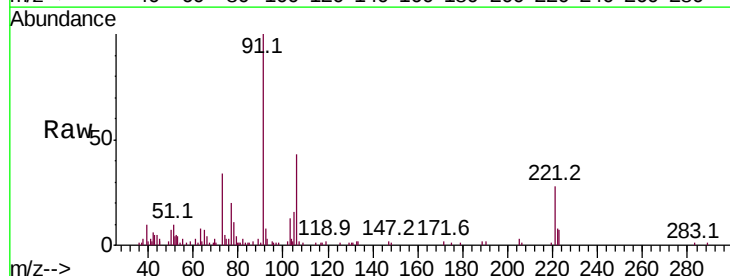
Delta R.T. -0.00 min

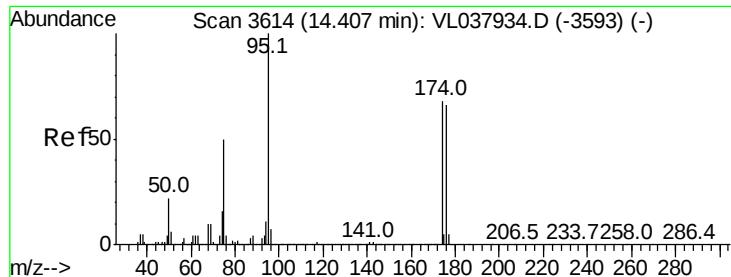
Lab File: VL037982.D

Acq: 9 Nov 2021 16:49

Tgt Ion: 91 Resp: 42808

Ion	Ratio	Lower	Upper
91	100		
106	69.8	23.5	70.6





#68

1-Bromo-4-Fluorobenzene

Concen: 9.963 ppbv

RT: 14.41

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 9 Nov 2021 10:49

Tot Ion: 95 Resp: 2153984

Ion Ratio Lower Upper

95 100

174 75.9 58.3 87.5

175 5.4 4.6 6.8

