

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111021\
 Data File : VL038011.D
 Acq On : 10 Nov 2021 16:09
 Operator : SY/AP
 Sample : M4598-03DL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

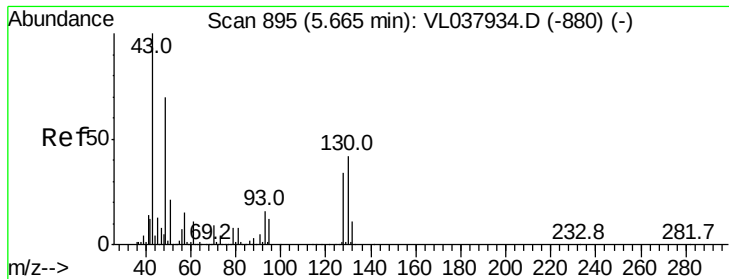
Quant Time: Nov 11 03:43:14 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 02 05:54:07 2021
 QLast Update : Tue Nov 02 05:54:07 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1529982	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4479474	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3934807	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	2845826	9.95	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.50%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	8639	0.040	ppbv 97
3) Chlorodifluoromethane	2.99	51	1092214	3.835	ppbv # 89
9) Propene	3.01	41	190841	1.869	ppbv 88
13) Ethanol	3.60	45	155208	15.066	ppbv 95
15) Acetone	3.84	43	1575509	12.462	ppbv # 78
16) 1,3-Butadiene	3.35	39	3047	0.031	ppbv # 10
17) tert-Butyl alcohol	4.29	59	37854	0.288	ppbv # 80
19) Isopropyl Alcohol	3.97	45	109567	1.355	ppbv # 1
20) Methylene Chloride	4.34	84	78014	1.124	ppbv 92
22) trans-1,2-Dichloroethene	4.88	96	89281	1.167	ppbv 96
23) Vinyl Acetate	5.16	43	44833	0.236	ppbv # 7
25) Ethyl Acetate	5.68	43	64383	0.171	ppbv # 83
26) Hexane	5.68	57	79929	0.449	ppbv # 47
27) Carbon Disulfide	4.55	76	145852	0.830	ppbv 95
29) Chloroform	5.74	83	10408	0.039	ppbv # 83
34) 2-Butanone	5.24	43	951401	5.732	ppbv 98
36) Benzene	6.88	78	31274	0.086	ppbv 95
38) Trichloroethene	7.83	130	247669	1.636	ppbv 90
39) 1,2-Dichloropropane	7.17	63	1044725	7.611	ppbv # 28
41) Tetrahydrofuran	6.04	42	44747	0.551	ppbv # 37
51) 2-Hexanone	10.13	43	19678	0.214	ppbv # 30
52) Tetrachloroethene	11.21	164	632635	4.572	ppbv 97
53) Toluene	9.79	91	412496	1.055	ppbv 99
58) Ethyl Benzene	12.69	91	55210	0.115	ppbv 99
59) m/p-Xylene	12.98	91	53813	0.126	ppbv # 30
60) o-Xylene	13.68	91	95558	0.237	ppbv 96
73) 1,3,5-Trimethylbenzene	15.98	105	14628	0.034	ppbv 94
74) 1,2,4-Trimethylbenzene	16.75	105	15707	0.035	ppbv # 60

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_1

Lab File:

Acq: 10 Nov 2021 16:09

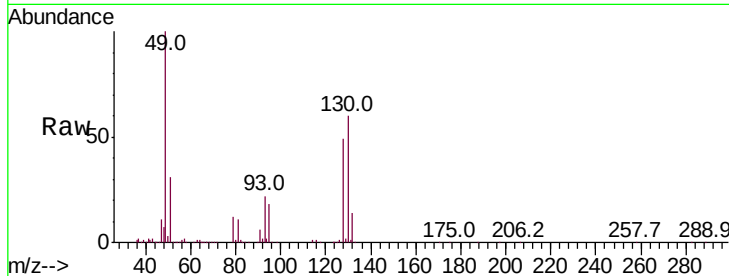
Tot Ion: 49 Resp: 1529982

Ion Ratio Lower Upper

49 100

128 52.2 27.0 81.0

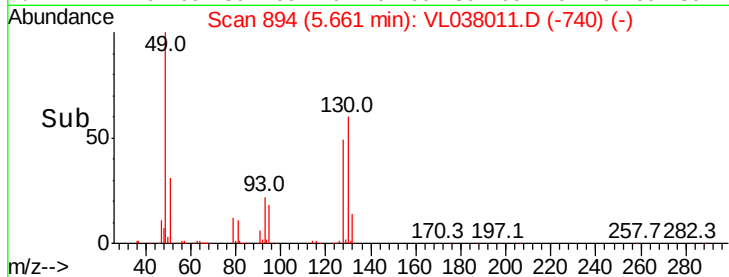
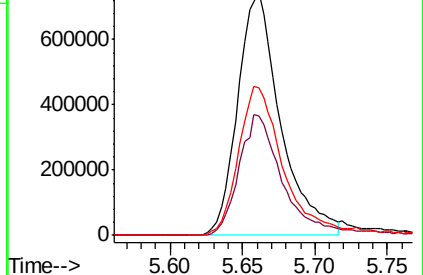
130 67.1 33.4 100.2



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: 0.040 ppbv

RT: 3.05 min Scan# 82

Delta R.T. -0.00 min

Lab File: VL038011.D

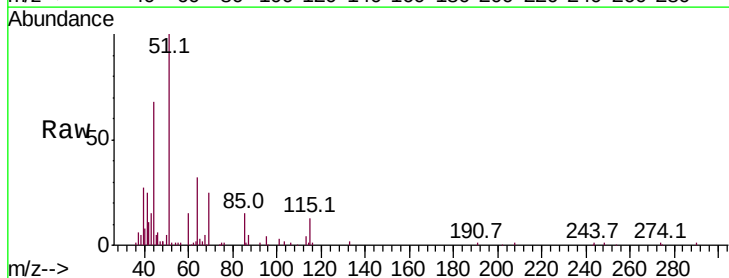
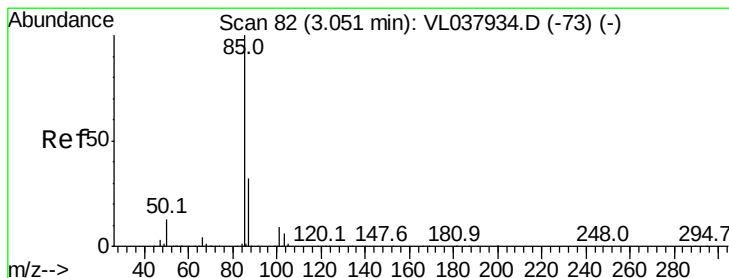
Acq: 10 Nov 2021 16:09

Tgt Ion: 85 Resp: 8639

Ion Ratio Lower Upper

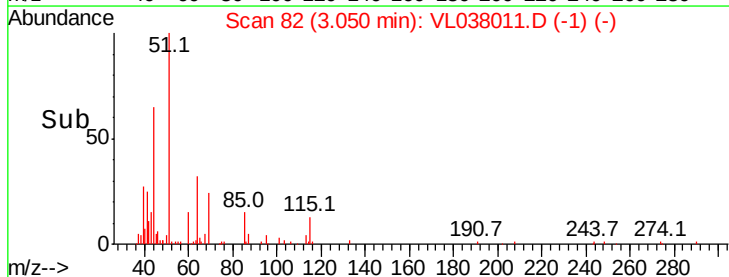
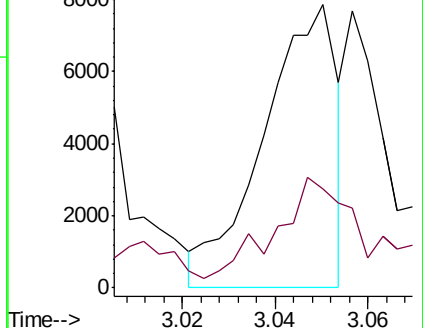
85 100

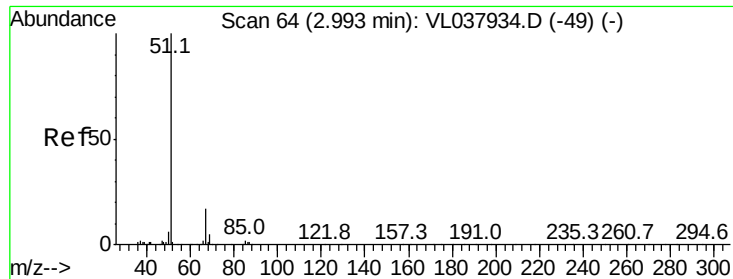
87 33.2 25.3 37.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

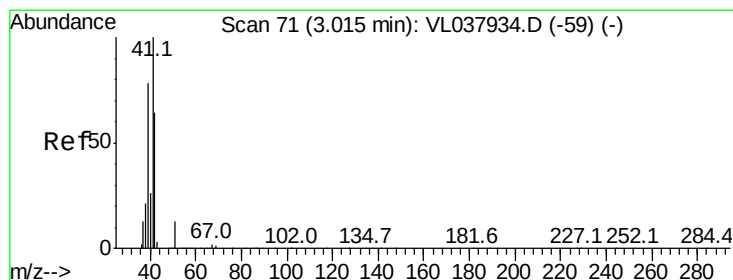
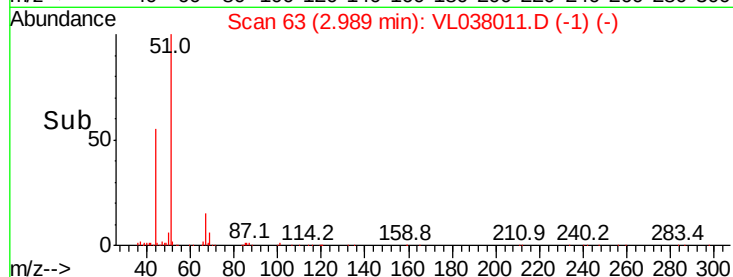
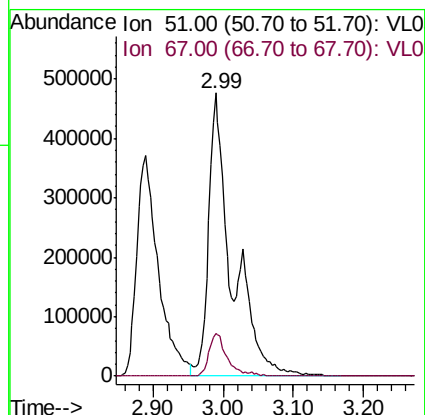
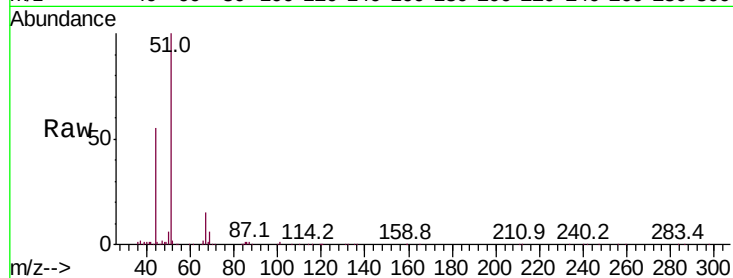
Ion 87.00 (86.70 to 87.70): VL0





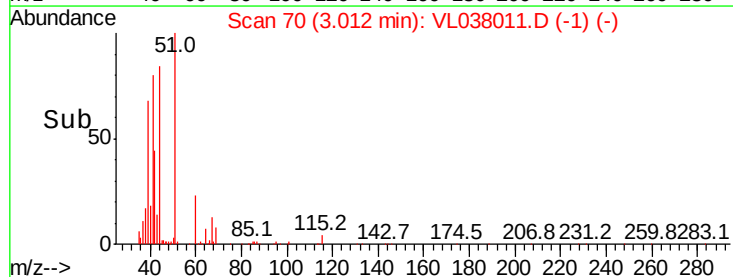
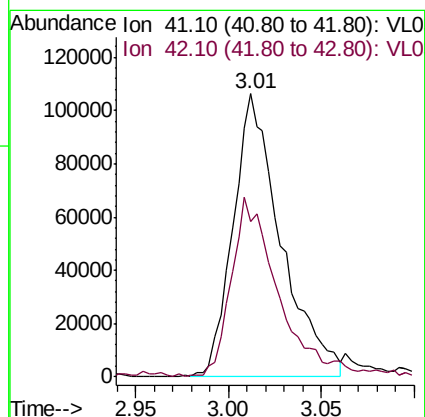
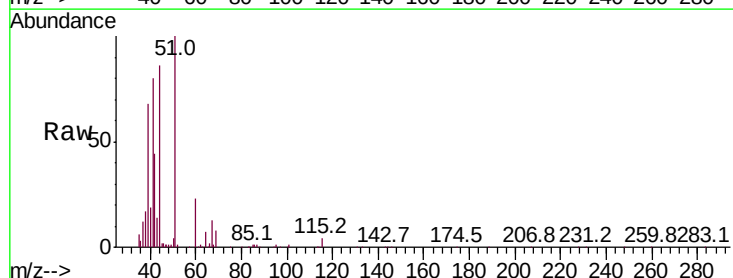
#3
 Chlorodifluoromethane
 Concen: 3.835 ppbv
 RT: 2.99
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 10 Nov 2021 16:09

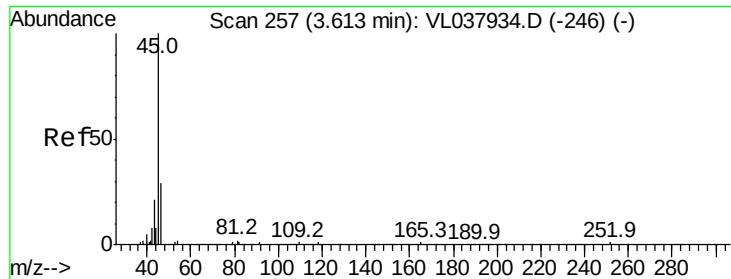
Tot Ion: 51 Resp: 1092214
 Ion Ratio Lower Upper
 51 100
 67 12.0 13.4 20.0#



#9
 Propene
 Concen: 1.869 ppbv
 RT: 3.01 min Scan# 70
 Delta R.T. -0.00 min
 Lab File: VL038011.D
 Acq: 10 Nov 2021 16:09

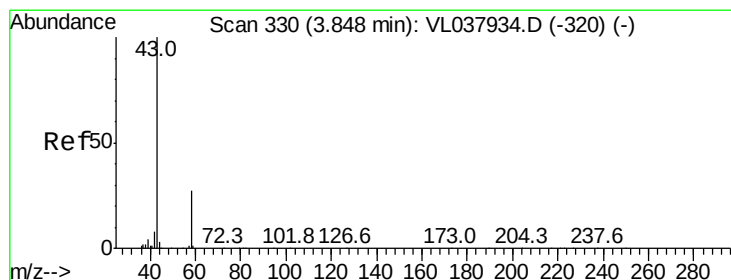
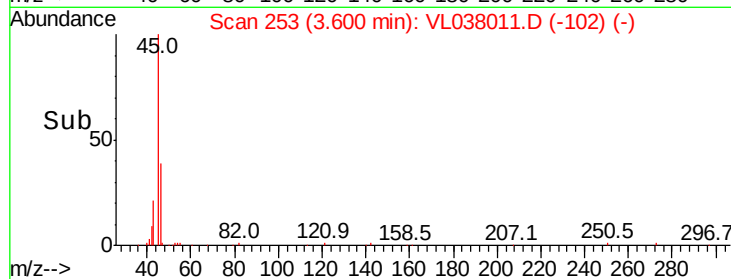
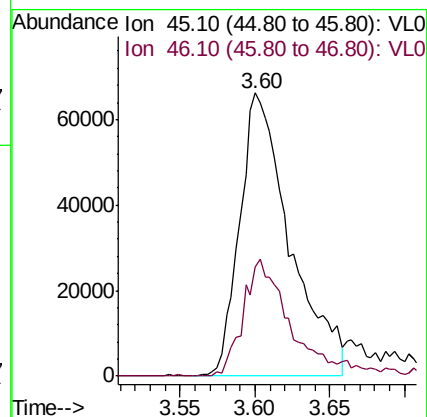
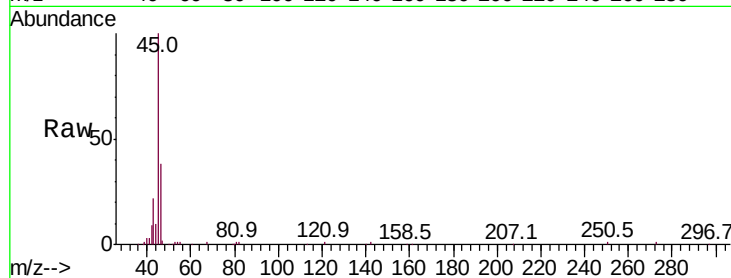
Tgt Ion: 41 Resp: 190841
 Ion Ratio Lower Upper
 41 100
 42 62.2 57.6 86.4





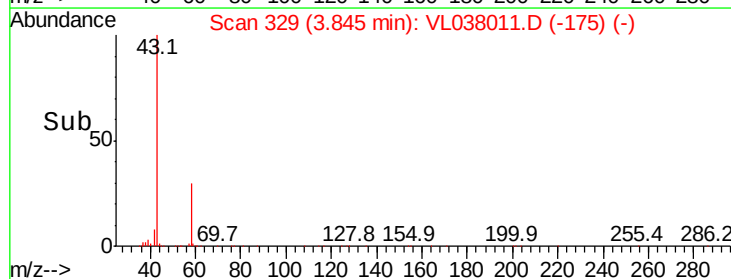
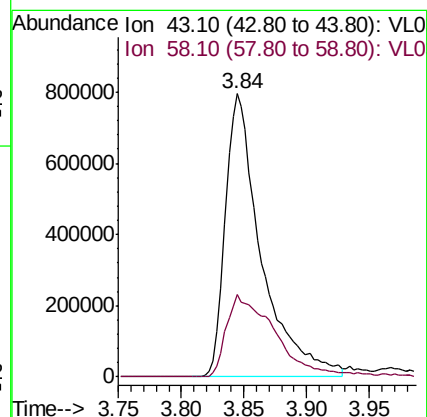
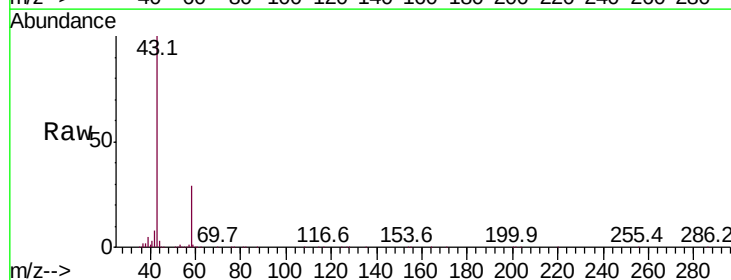
#13
 Ethanol
 Concen: 15.066 ppbv
 RT: 3.60
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 10 Nov 2021 16:09

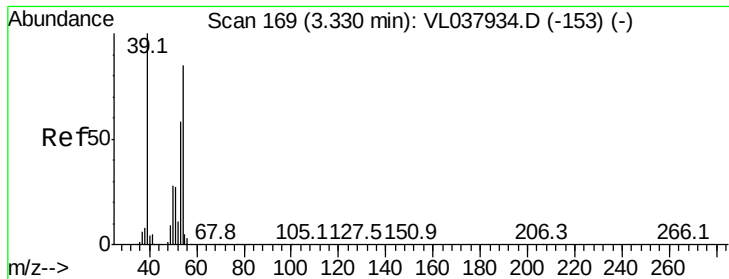
Tot Ion: 45 Resp: 155208
 Ion Ratio Lower Upper
 45 100
 46 40.5 17.4 69.8



#15
 Acetone
 Concen: 12.462 ppbv
 RT: 3.84 min Scan# 329
 Delta R.T. -0.00 min
 Lab File: VL038011.D
 Acq: 10 Nov 2021 16:09

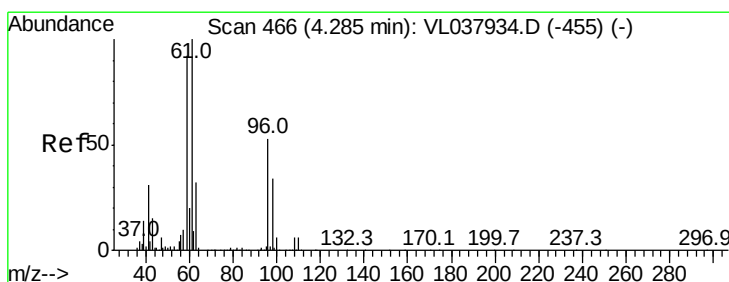
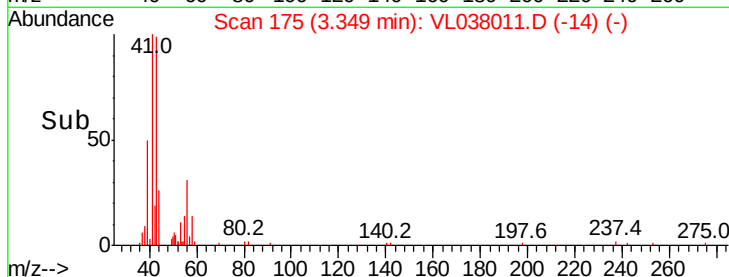
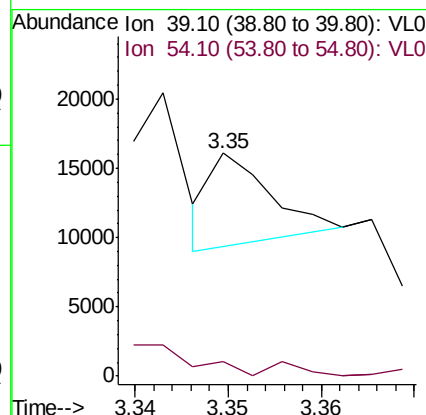
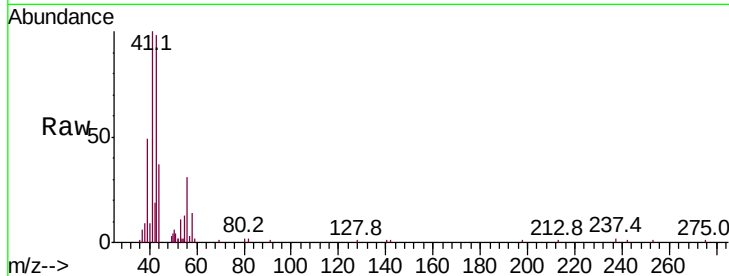
Tgt Ion: 43 Resp: 1575509
 Ion Ratio Lower Upper
 43 100
 58 40.8 23.3 34.9#





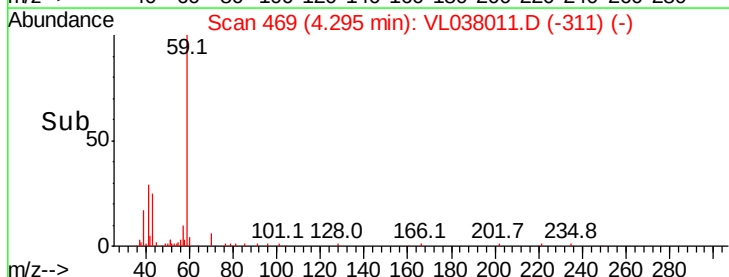
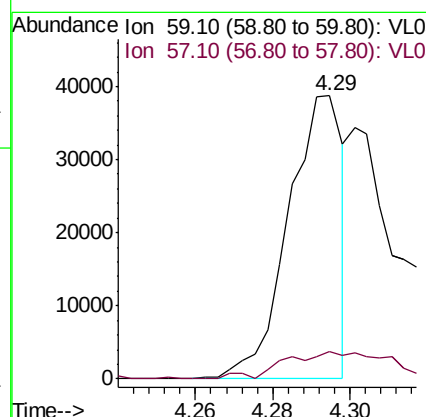
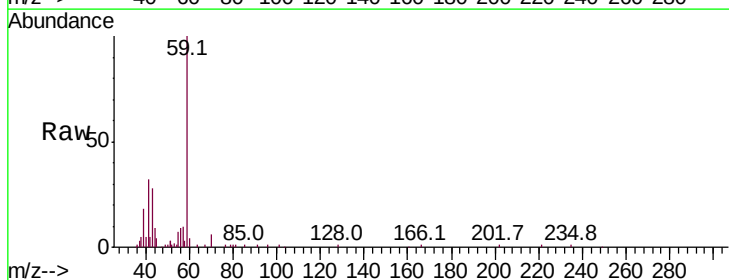
#16
 1,3-Butadiene
 Concen: 0.031 ppbv
 RT: 3.35
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId:
 Acq: 10 Nov 2021 16:09

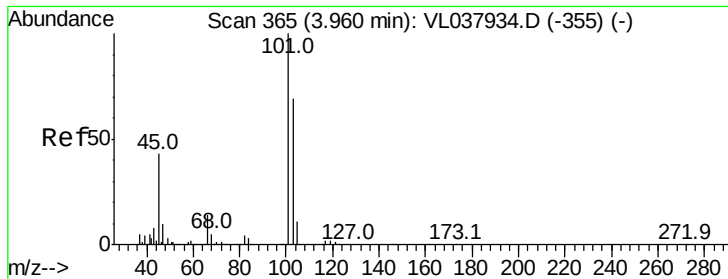
Tot Ion: 39 Resp: 3047
 Ion Ratio Lower Upper
 39 100
 54 0.0 62.6 93.8#



#17
 tert-Butyl alcohol
 Concen: 0.288 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.01 min
 Lab File: VL038011.D
 Acq: 10 Nov 2021 16:09

Tgt Ion: 59 Resp: 37854
 Ion Ratio Lower Upper
 59 100
 57 18.8 8.9 13.3#





#19

Isopropyl Alcohol

Concen: 1.355 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

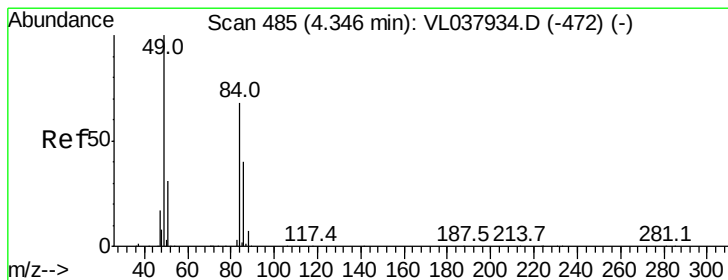
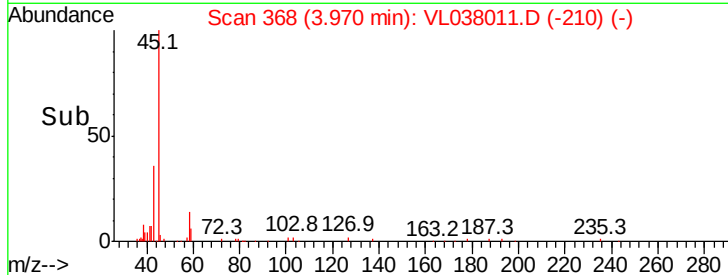
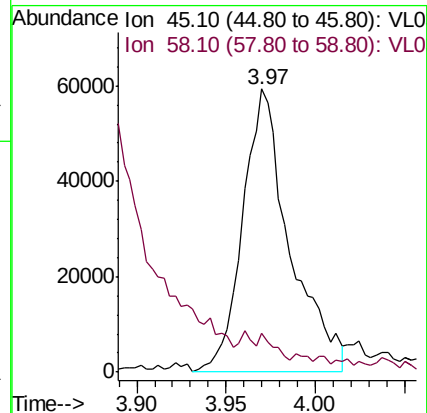
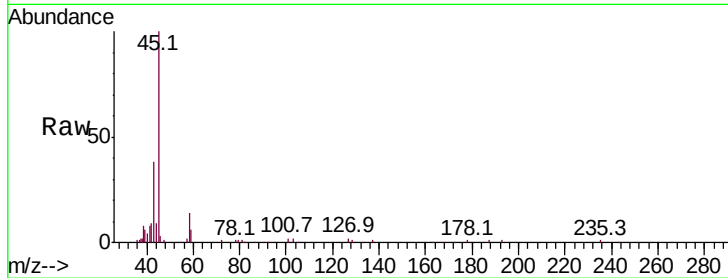
Acq: 10 Nov 2021 16:09

Tot Ion: 45 Resp: 109567

Ion Ratio Lower Upper

45 100

58 584.4 4.0 6.0#



#20

Methylene Chloride

Concen: 1.124 ppbv

RT: 4.34 min Scan# 484

Delta R.T. -0.00 min

Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

Tgt Ion: 84 Resp: 78014

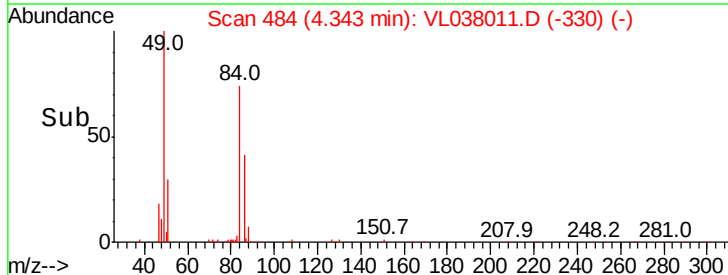
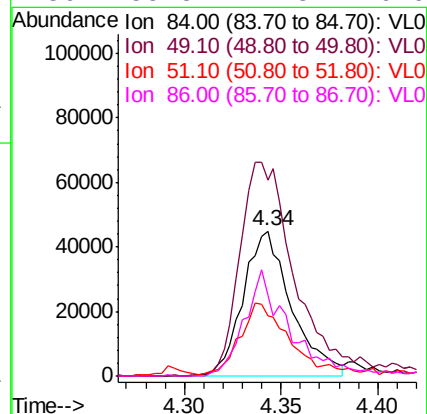
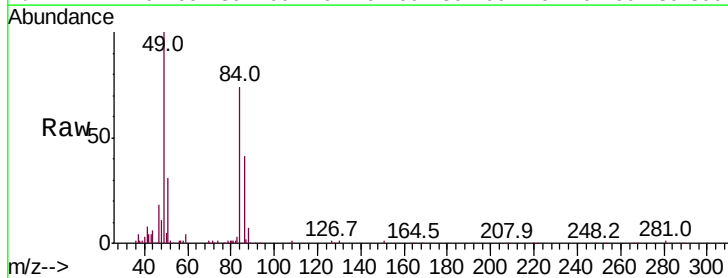
Ion Ratio Lower Upper

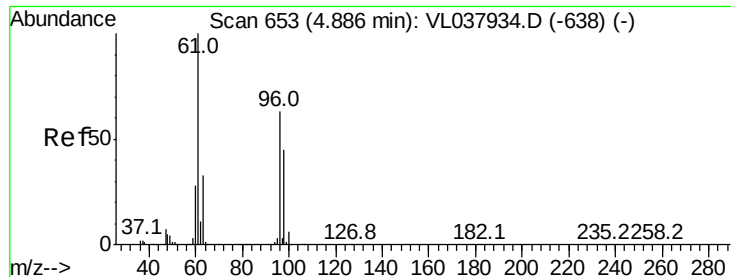
84 100

49 134.8 117.5 176.3

51 39.4 35.9 53.9

86 55.3 47.3 70.9





#22

trans-1,2-Dichloroethene

Concen: 1.167 ppbv

RT: 4.88 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 10 Nov 2021 16:09

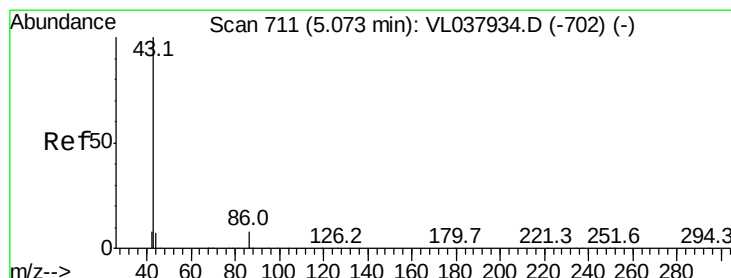
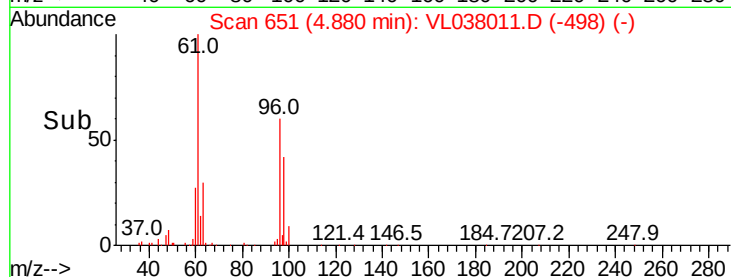
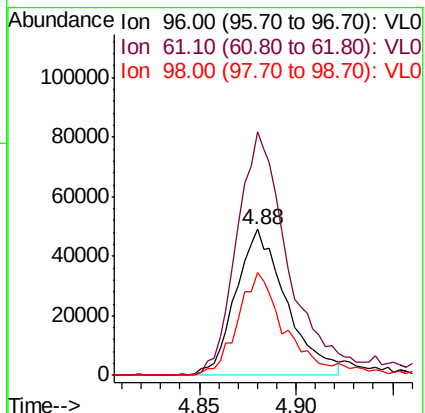
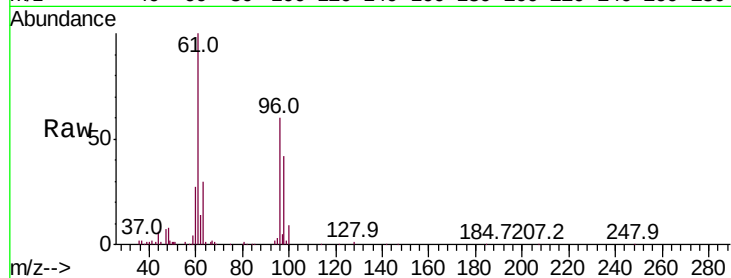
Tot Ion: 96 Resp: 89281

Ion Ratio Lower Upper

96 100

61 165.9 127.8 191.6

98 69.5 56.9 85.3



#23

Vinyl Acetate

Concen: 0.236 ppbv

RT: 5.16 min Scan# 739

Delta R.T. 0.09 min

Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

Tgt Ion: 43 Resp: 44833

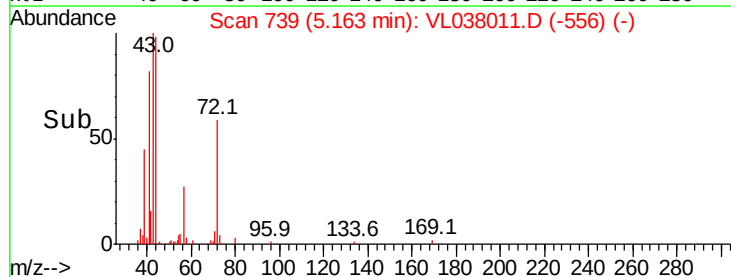
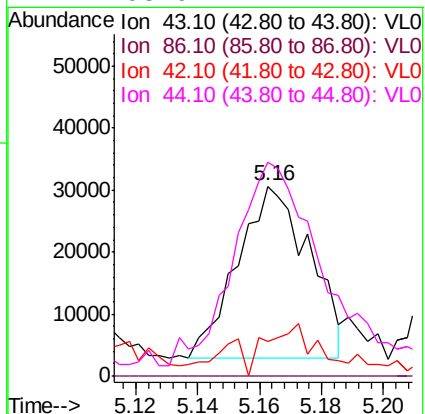
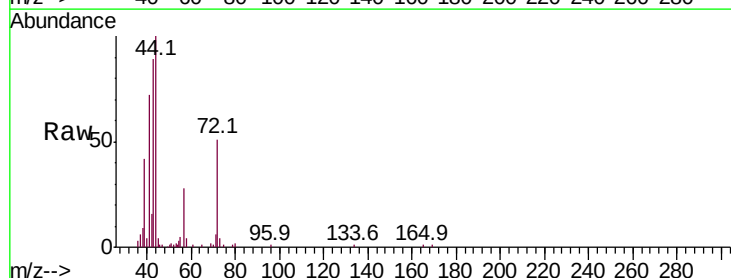
Ion Ratio Lower Upper

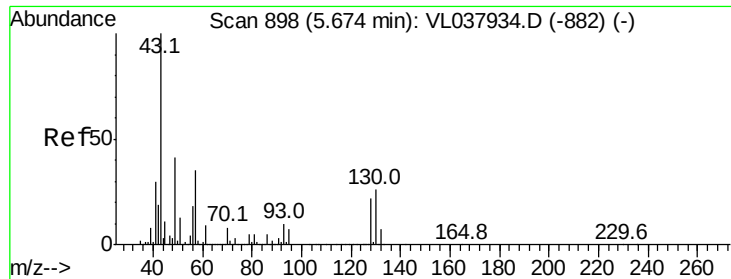
43 100

86 0.0 5.5 8.3#

42 13.5 7.4 11.2#

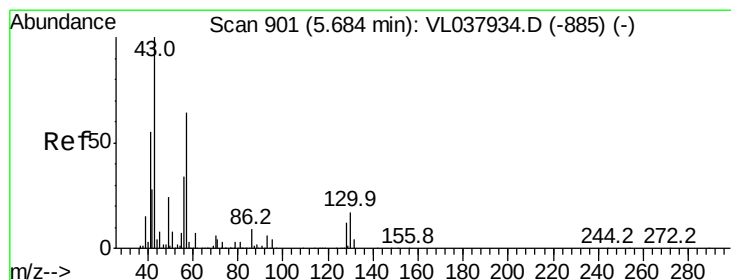
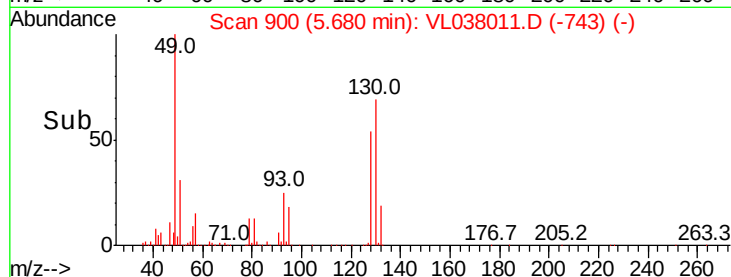
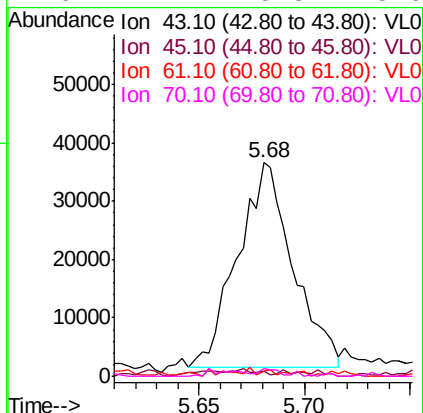
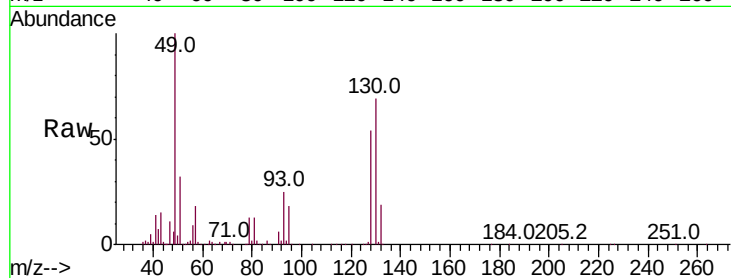
44 108.9 4.7 7.1#





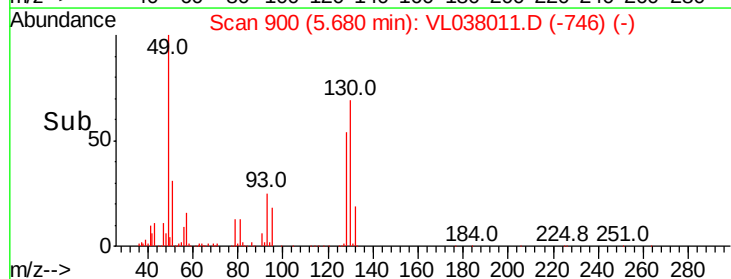
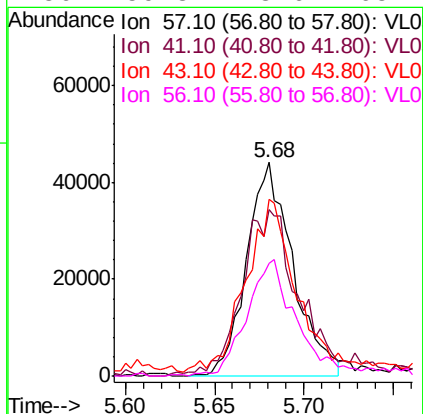
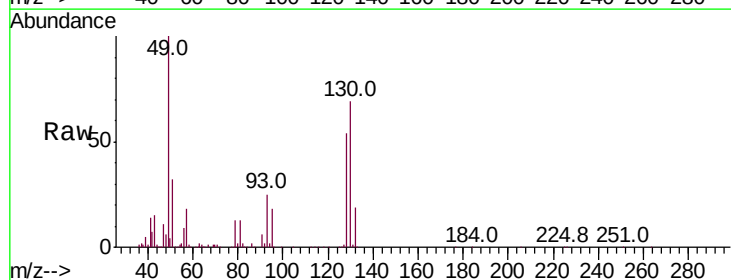
#25
Ethyl Acetate
Concen: 0.171 ppbv
RT: 5.68 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 10 Nov 2021 16:09

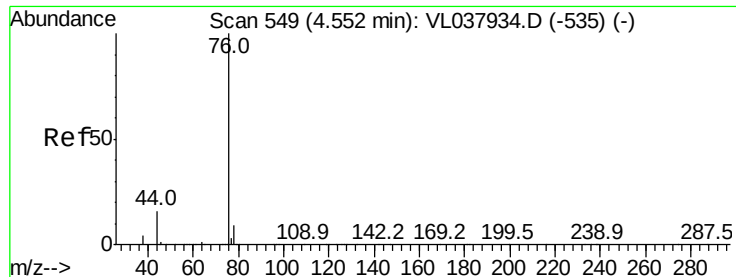
Tot Ion:	43	Resp:	64383
Ion	Ratio	Lower	Upper
43	100		
45	3.2	8.1	12.1#
61	4.0	8.1	12.1#
70	1.7	5.8	8.6#



#26
Hexane
Concen: 0.449 ppbv
RT: 5.68 min Scan# 900
Delta R.T. -0.00 min
Lab File: VL038011.D
Acq: 10 Nov 2021 16:09

Tgt Ion:	57	Resp:	79929
Ion	Ratio	Lower	Upper
57	100		
41	106.4	71.0	106.6
43	91.3	173.0	259.6#
56	59.3	43.6	65.4





#27

Carbon Disulfide

Concen: 0.830 ppbv

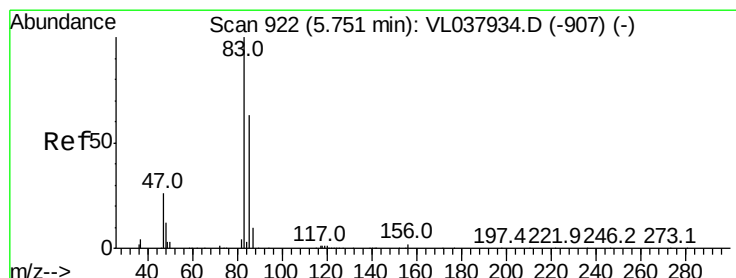
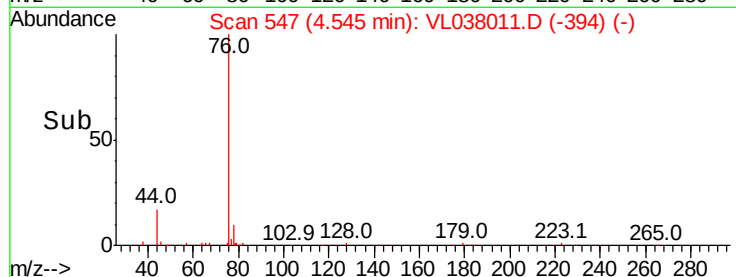
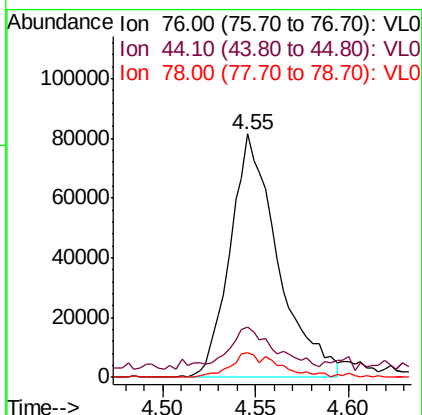
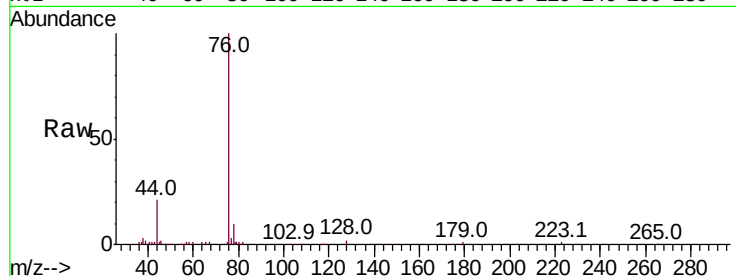
RT: 4.55 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File:

Acq: 10 Nov 2021 16:09

Tot Ion:	76	Resp:	145852
Ion	Ratio	Lower	Upper
76	100		
44	18.9	13.2	19.8
78	10.0	7.2	10.8



#29

Chloroform

Concen: 0.039 ppbv

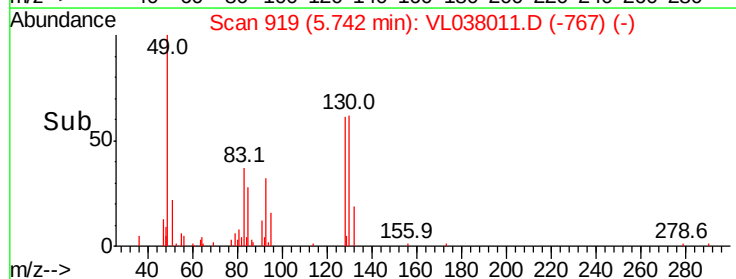
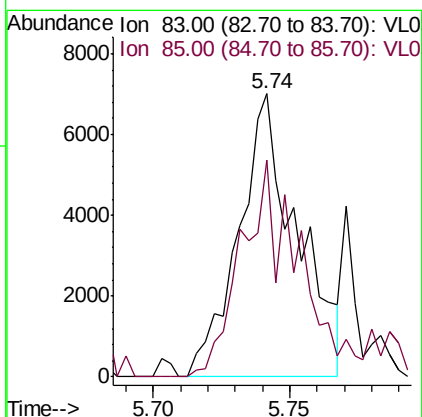
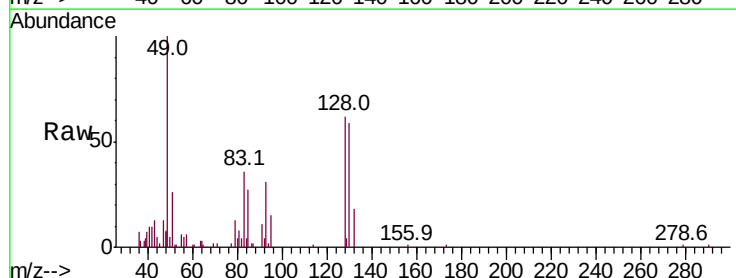
RT: 5.74 min Scan# 919

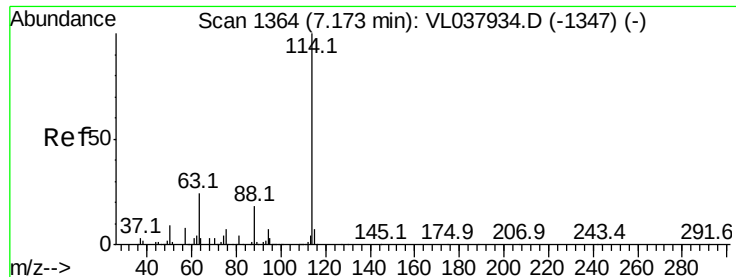
Delta R.T. -0.01 min

Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

Tgt Ion:	83	Resp:	10408
Ion	Ratio	Lower	Upper
83	100		
85	76.6	50.6	76.0#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 10 Nov 2021 16:09

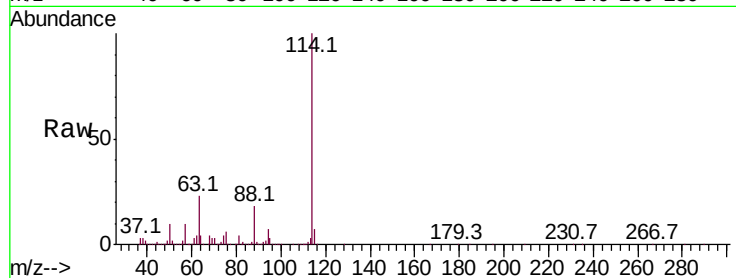
Tot Ion:114 Resp: 4479474

Ion	Ratio	Lower	Upper
-----	-------	-------	-------

114	100		
-----	-----	--	--

63	24.0	19.4	29.0
----	------	------	------

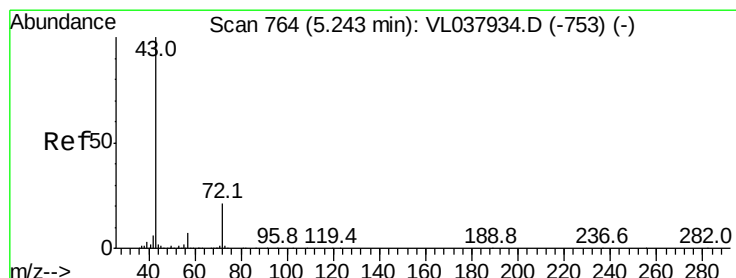
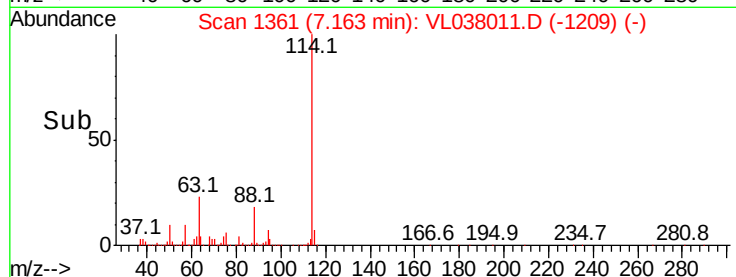
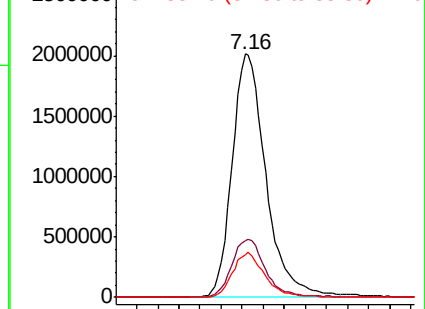
88	17.7	14.2	21.4
----	------	------	------



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 5.732 ppbv

RT: 5.24 min Scan# 762

Delta R.T. -0.01 min

Lab File: VL038011.D

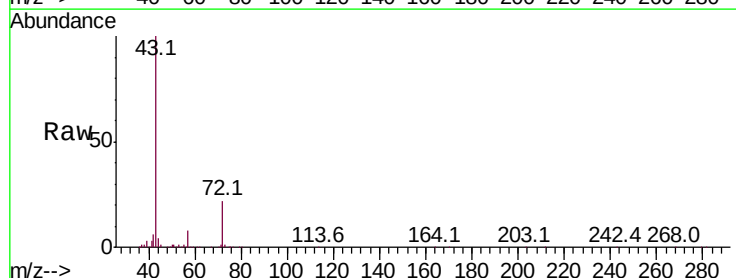
Acq: 10 Nov 2021 16:09

Tgt Ion: 43 Resp: 951401

Ion	Ratio	Lower	Upper
-----	-------	-------	-------

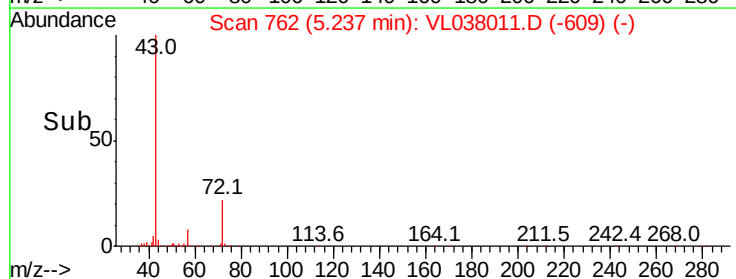
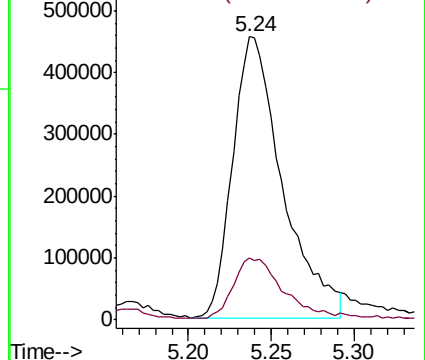
43	100		
----	-----	--	--

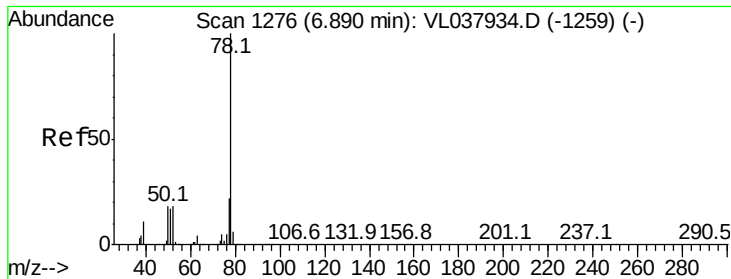
72	24.1	18.3	27.5
----	------	------	------



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.086 ppbv

RT: 6.88 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 10 Nov 2021 16:09

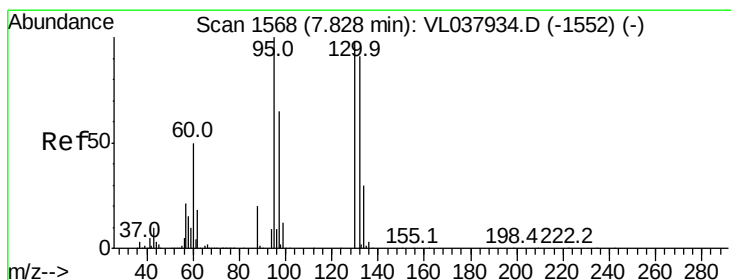
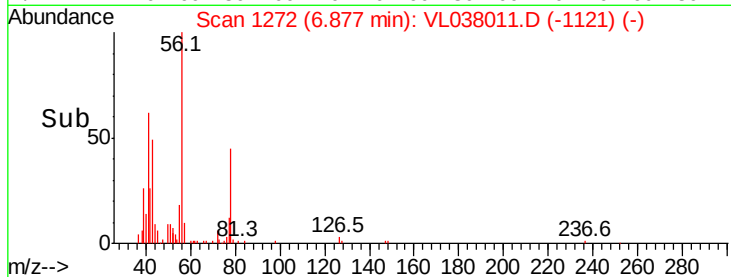
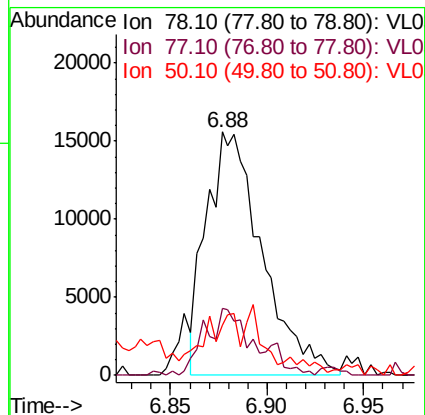
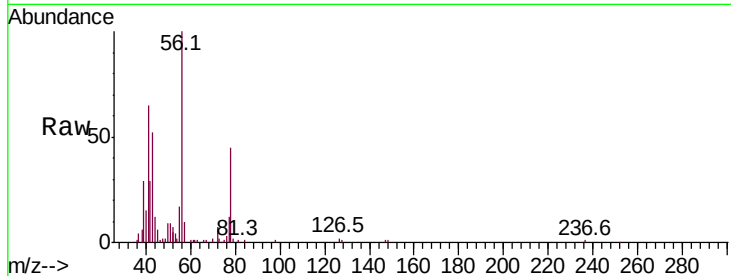
Tot Ion: 78 Resp: 31274

Ion Ratio Lower Upper

78 100

77 26.1 17.9 26.9

50 18.7 14.4 21.6



#38

Trichloroethene

Concen: 1.636 ppbv

RT: 7.83 min Scan# 1567

Delta R.T. -0.00 min

Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

Tgt Ion: 130 Resp: 247669

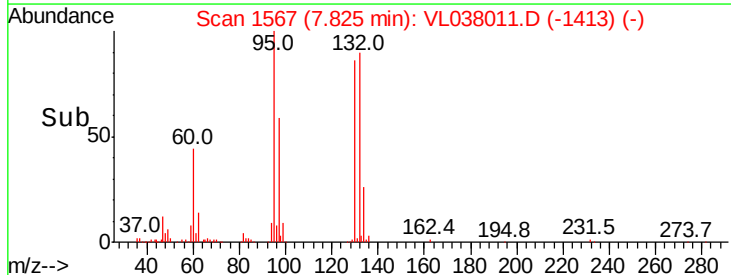
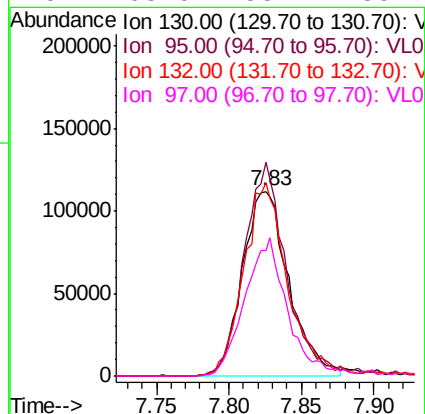
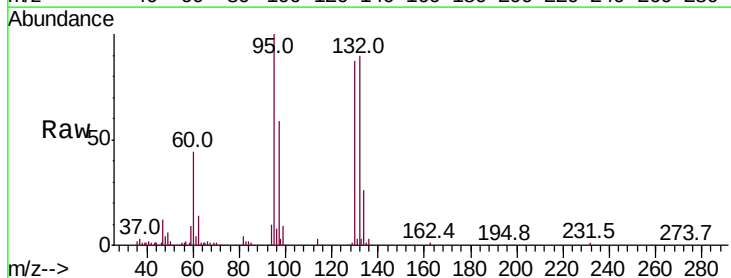
Ion Ratio Lower Upper

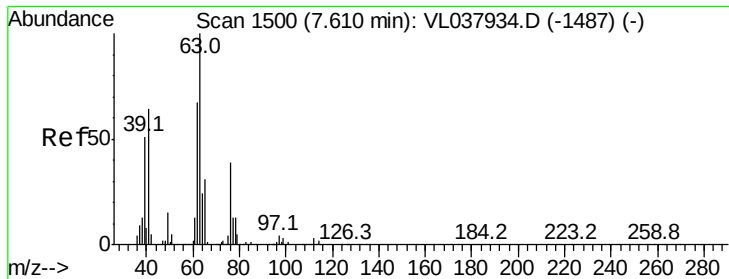
130 100

95 115.6 81.8 122.8

132 104.4 74.2 111.2

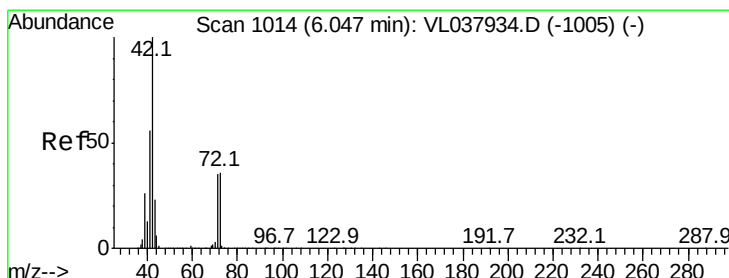
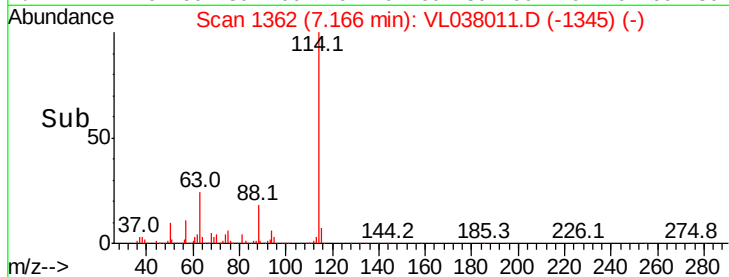
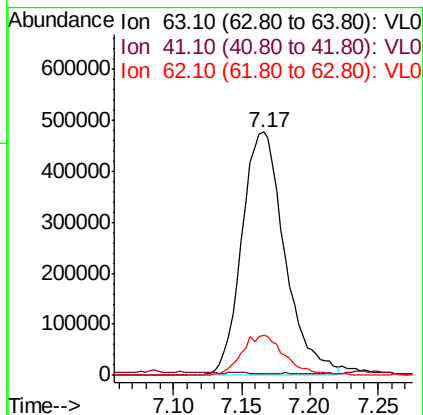
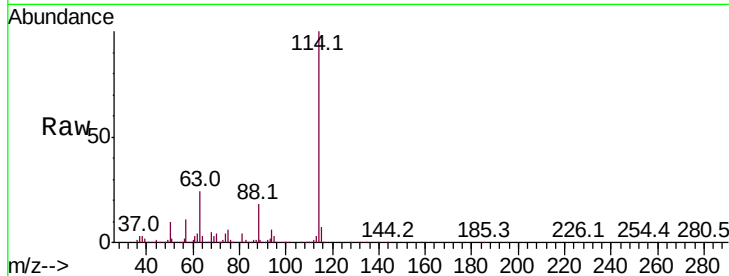
97 68.0 53.4 80.2





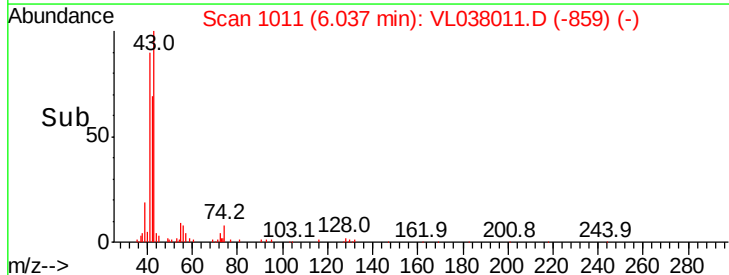
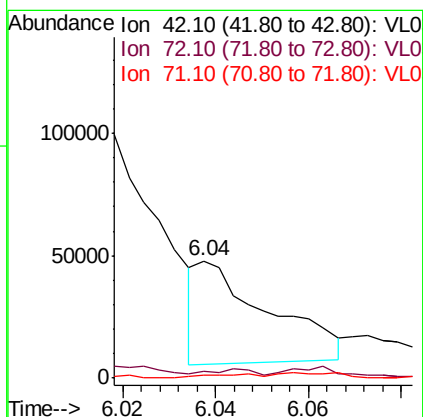
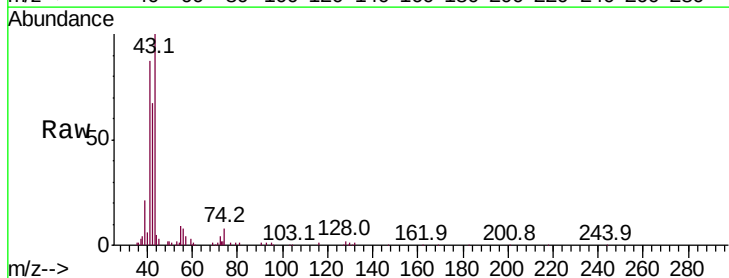
#39
 1,2-Dichloropropane
 Concen: 7.611 ppbv
 RT: 7.17
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 10 Nov 2021 16:09

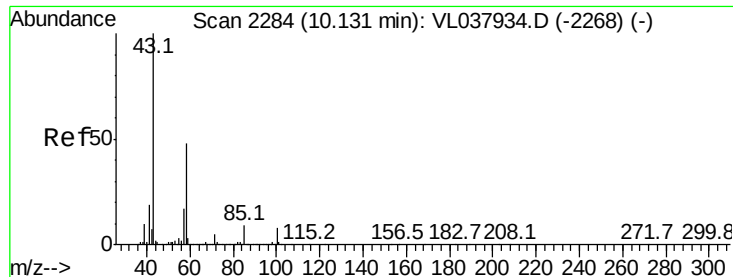
Tot Ion: 63 Resp: 1044725
 Ion Ratio Lower Upper
 63 100
 41 0.4 51.6 77.4#
 62 16.4 53.5 80.3#



#41
 Tetrahydrofuran
 Concen: 0.551 ppbv
 RT: 6.04 min Scan# 1011
 Delta R.T. -0.01 min
 Lab File: VL038011.D
 Acq: 10 Nov 2021 16:09

Tgt Ion: 42 Resp: 44747
 Ion Ratio Lower Upper
 42 100
 72 0.0 31.5 47.3#
 71 1.4 30.5 45.7#





#51

2-Hexanone

Concen: 0.214 ppbv

RT: 10.13

Instrument: MSVOA_1

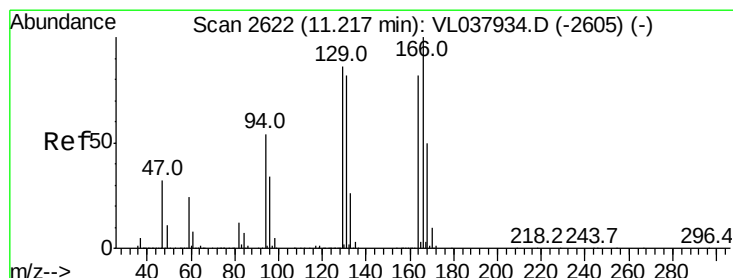
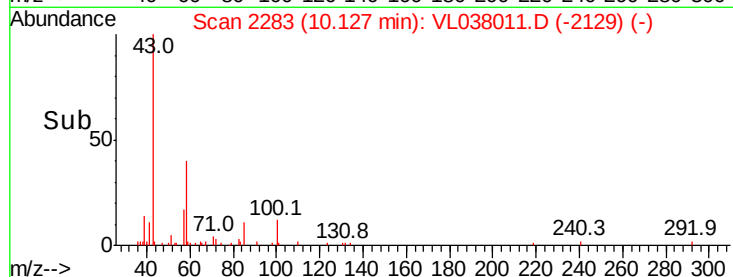
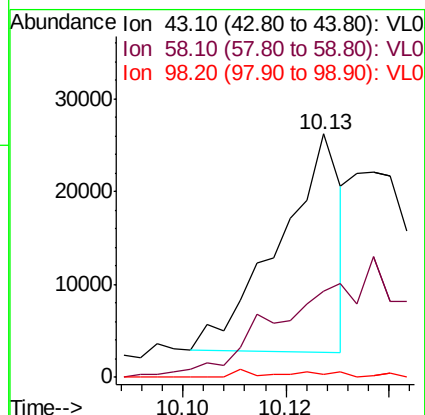
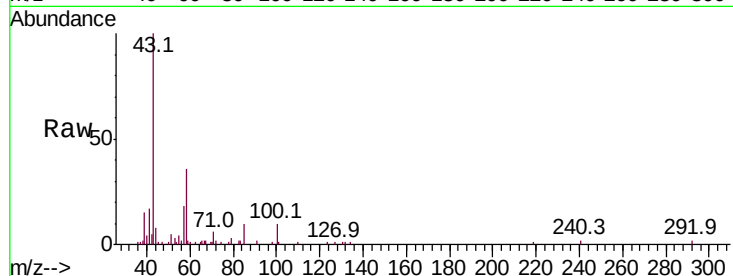
Delta R.T.:

Lab File: ClientSampleId:

Acq: 10 Nov 2021 16:09

Tot Ion: 43 Resp: 19678

Ion	Ratio	Lower	Upper
43	100		
58	0.0	38.6	57.8#
98	3.7	1.0	1.4#



#52

Tetrachloroethene

Concen: 4.572 ppbv

RT: 11.21 min Scan# 2620

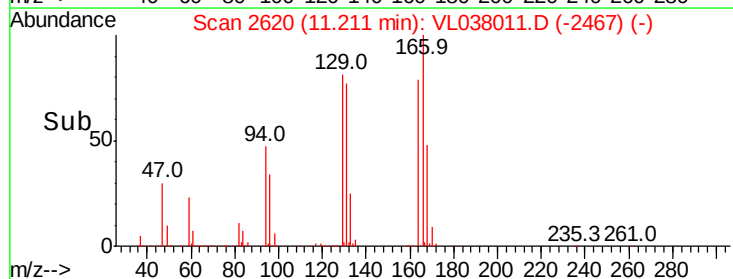
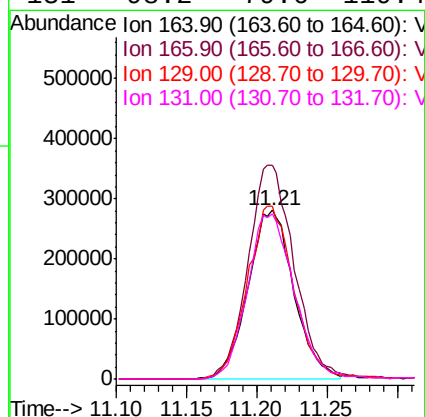
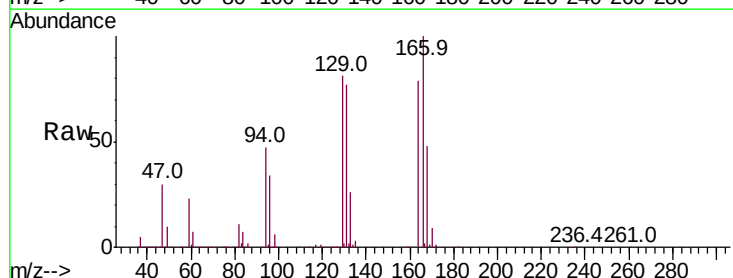
Delta R.T. -0.01 min

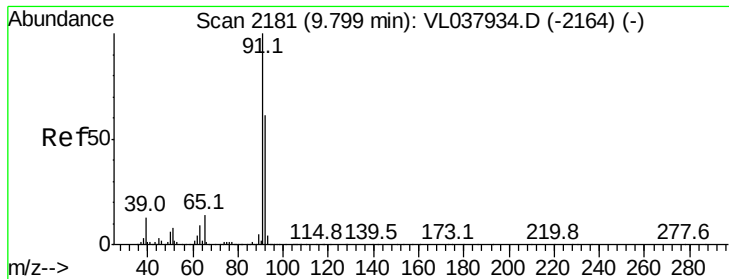
Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

Tgt Ion: 164 Resp: 632635

Ion	Ratio	Lower	Upper
164	100		
166	126.8	97.6	146.4
129	102.2	84.2	126.2
131	98.2	79.6	119.4





#53

Toluene

Concen: 1.055 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

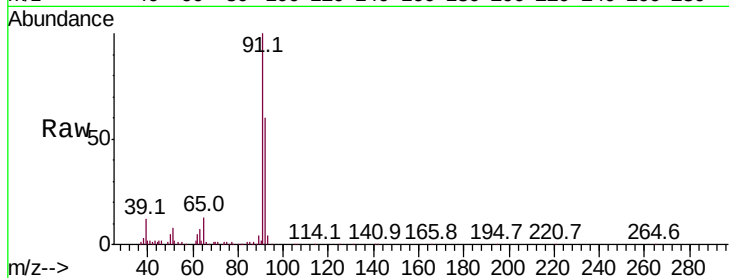
Acq: 10 Nov 2021 16:09

Tot Ion: 91 Resp: 412496

Ion Ratio Lower Upper

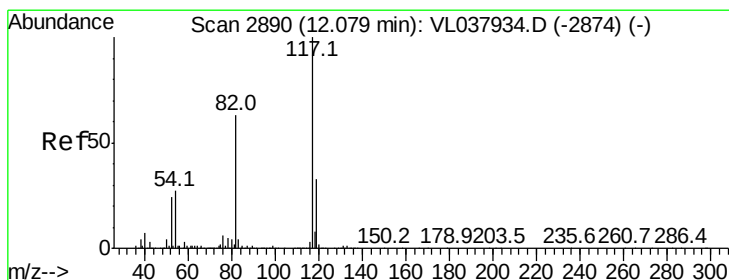
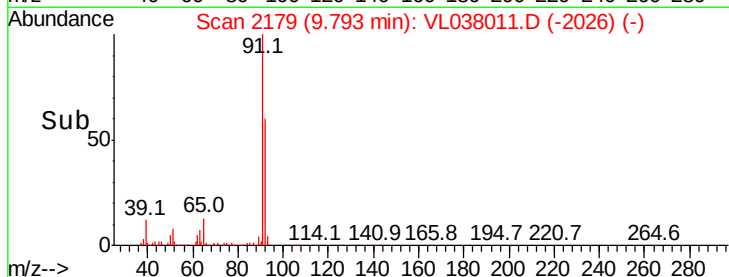
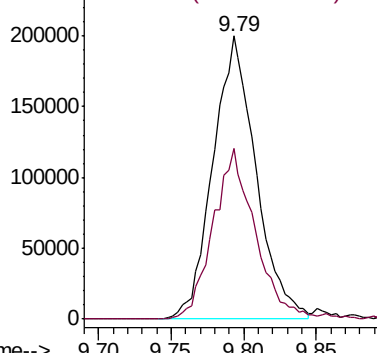
91 100

92 59.9 48.2 72.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.01 min

Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

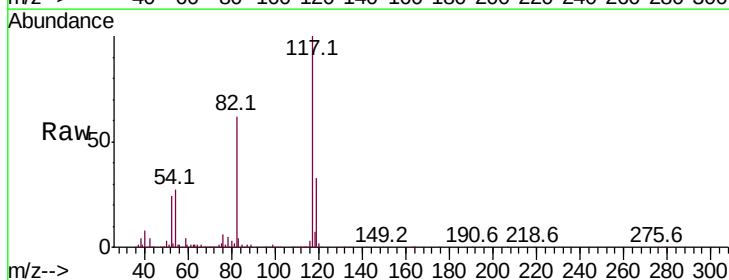
Tgt Ion: 117 Resp: 3934807

Ion Ratio Lower Upper

117 100

82 63.3 51.0 76.6

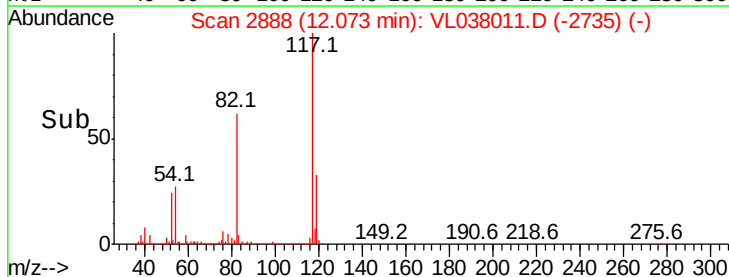
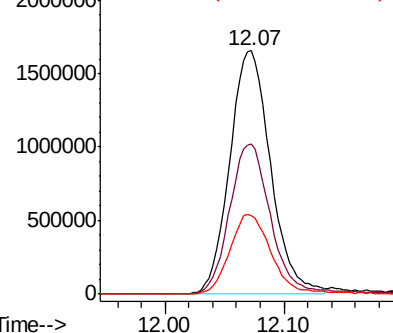
119 33.7 26.9 40.3

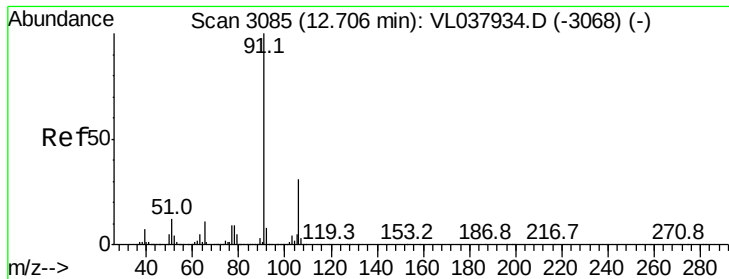


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.115 ppbv

RT: 12.69

Delta R.T. MSVOA_1

Lab File:

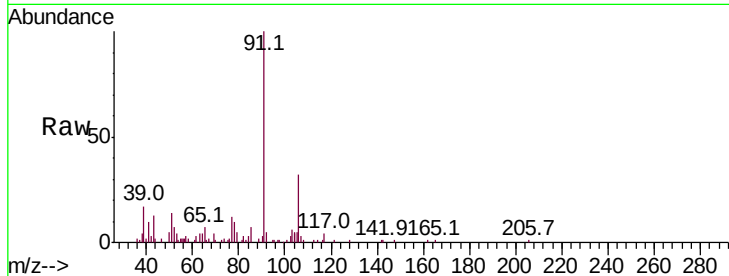
Acq: 10 Nov 2021 16:09

Tot Ion: 91 Resp: 55210

Ion Ratio Lower Upper

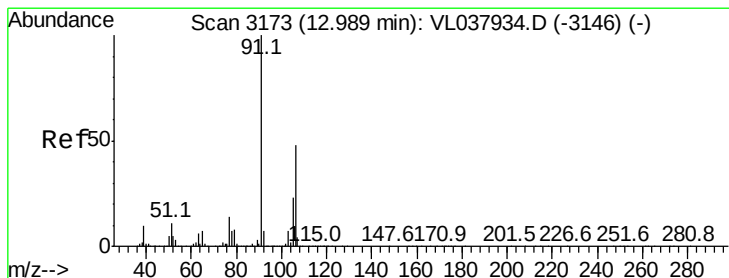
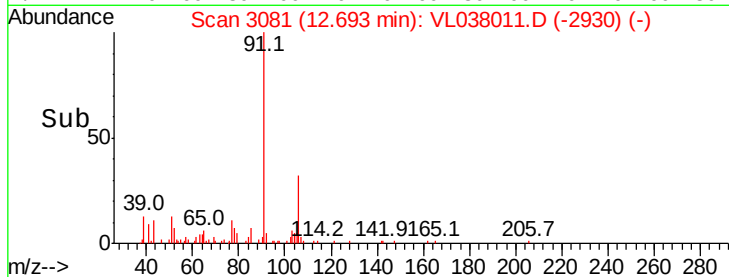
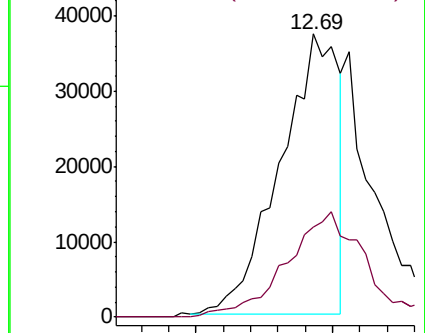
91 100

106 32.2 25.1 37.7



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.126 ppbv

RT: 12.98 min Scan# 3170

Delta R.T. -0.01 min

Lab File: VL038011.D

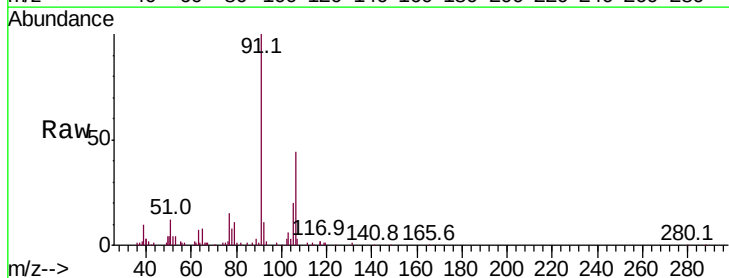
Acq: 10 Nov 2021 16:09

Tgt Ion: 91 Resp: 53813

Ion Ratio Lower Upper

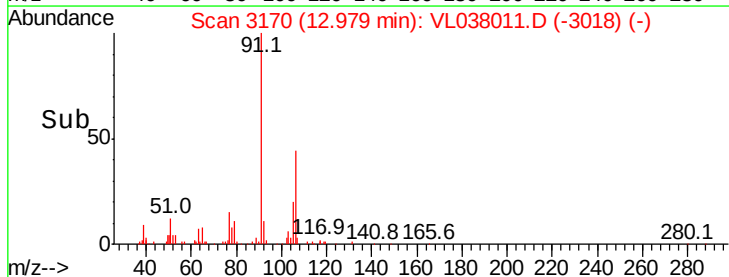
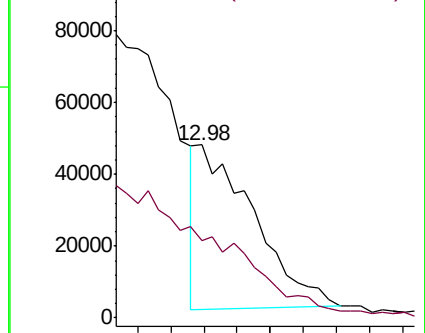
91 100

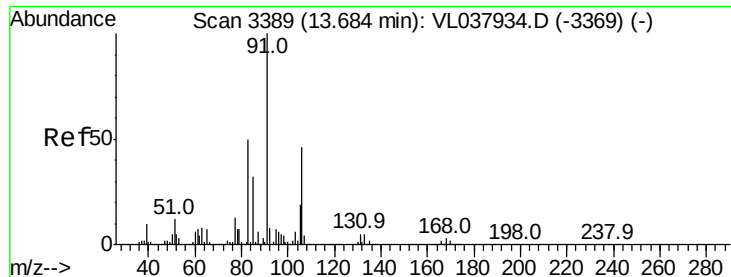
106 0.0 37.1 55.7#



Abundance Ion 91.10 (90.80 to 91.80): VL0

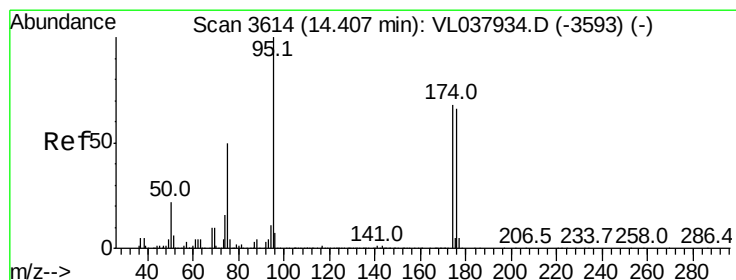
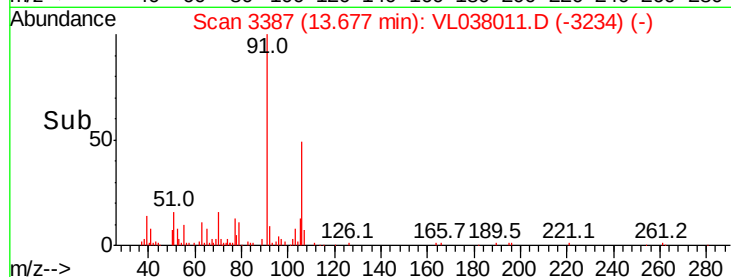
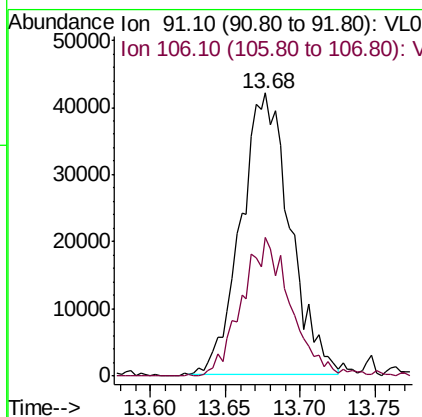
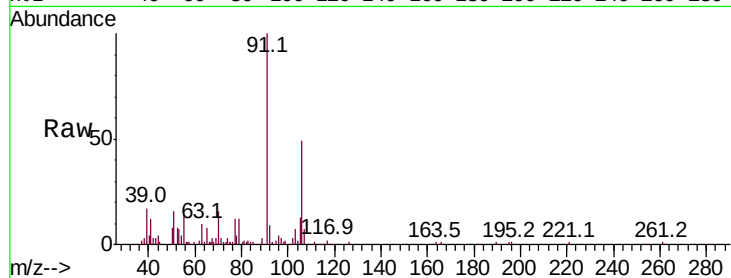
Ion 106.10 (105.80 to 106.80): V





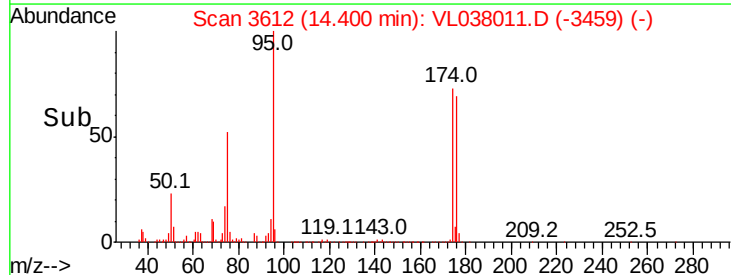
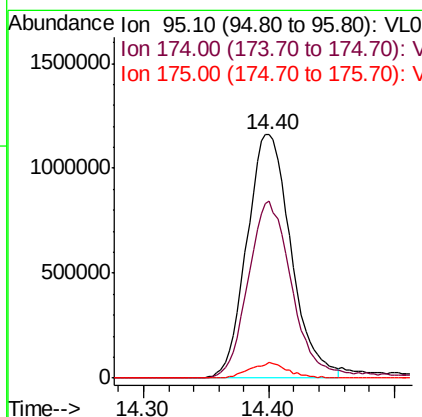
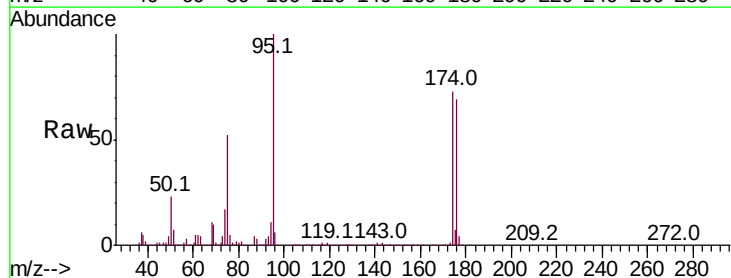
#60
o-Xylene
Concen: 0.237 ppbv
RT: 13.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 10 Nov 2021 16:09

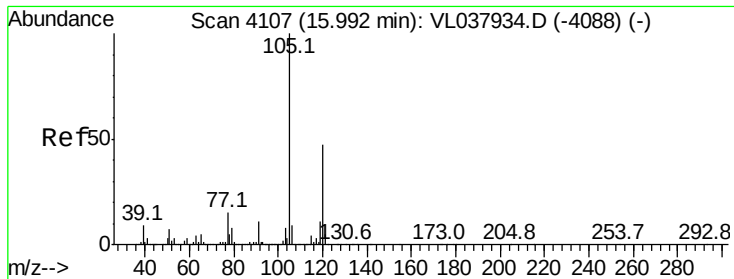
Tot Ion: 91 Resp: 95558
Ion Ratio Lower Upper
91 100
106 49.6 23.5 70.6



#68
1-Bromo-4-Fluorobenzene
Concen: 9.950 ppbv
RT: 14.40 min Scan# 3612
Delta R.T. -0.01 min
Lab File: VL038011.D
Acq: 10 Nov 2021 16:09

Tgt Ion: 95 Resp: 2845826
Ion Ratio Lower Upper
95 100
174 74.5 58.3 87.5
175 5.7 4.6 6.8





#73

1,3,5-Trimethylbenzene

Concen: 0.034 ppbv

RT: 15.98 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

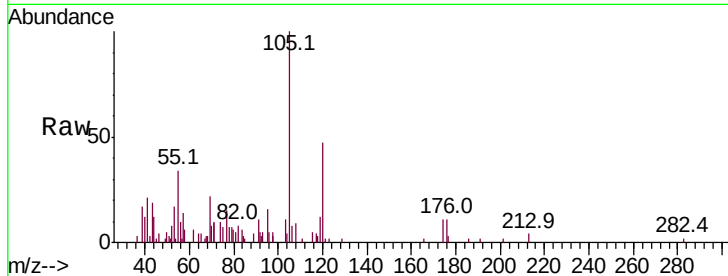
Acq: 10 Nov 2021 16:09

Tot Ion:105 Resp: 14628

Ion Ratio Lower Upper

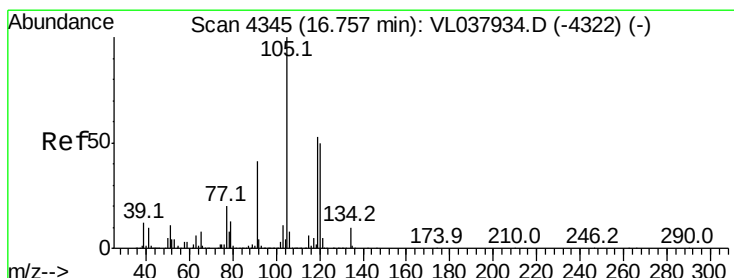
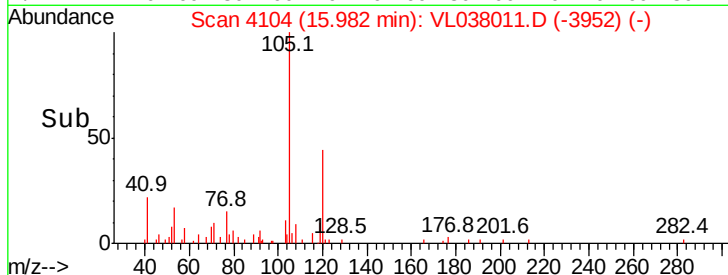
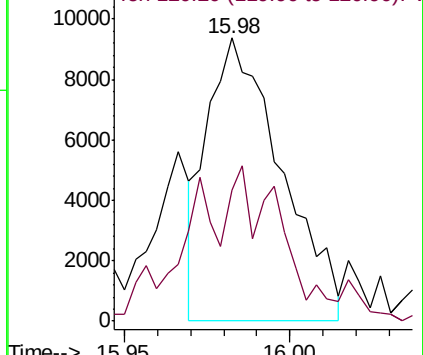
105 100

120 43.3 37.9 56.9



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.035 ppbv

RT: 16.75 min Scan# 4343

Delta R.T. -0.01 min

Lab File: VL038011.D

Acq: 10 Nov 2021 16:09

Tgt Ion:105 Resp: 15707

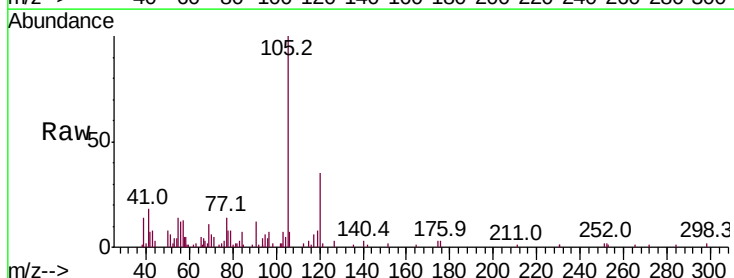
Ion Ratio Lower Upper

105 100

120 22.5 40.0 60.0#

91 13.2 32.6 49.0#

77 5.7 15.8 23.8#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

