

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111621\
 Data File : VL038040.D
 Acq On : 16 Nov 2021 15:10
 Operator : SY/AP
 Sample : M3277-01DL 2X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 17 06:41:01 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 16 09:59:16 2021
 QLast Update : Tue Nov 16 09:59:16 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	853387	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2611652	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2419257	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	1730753	9.90	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.00%

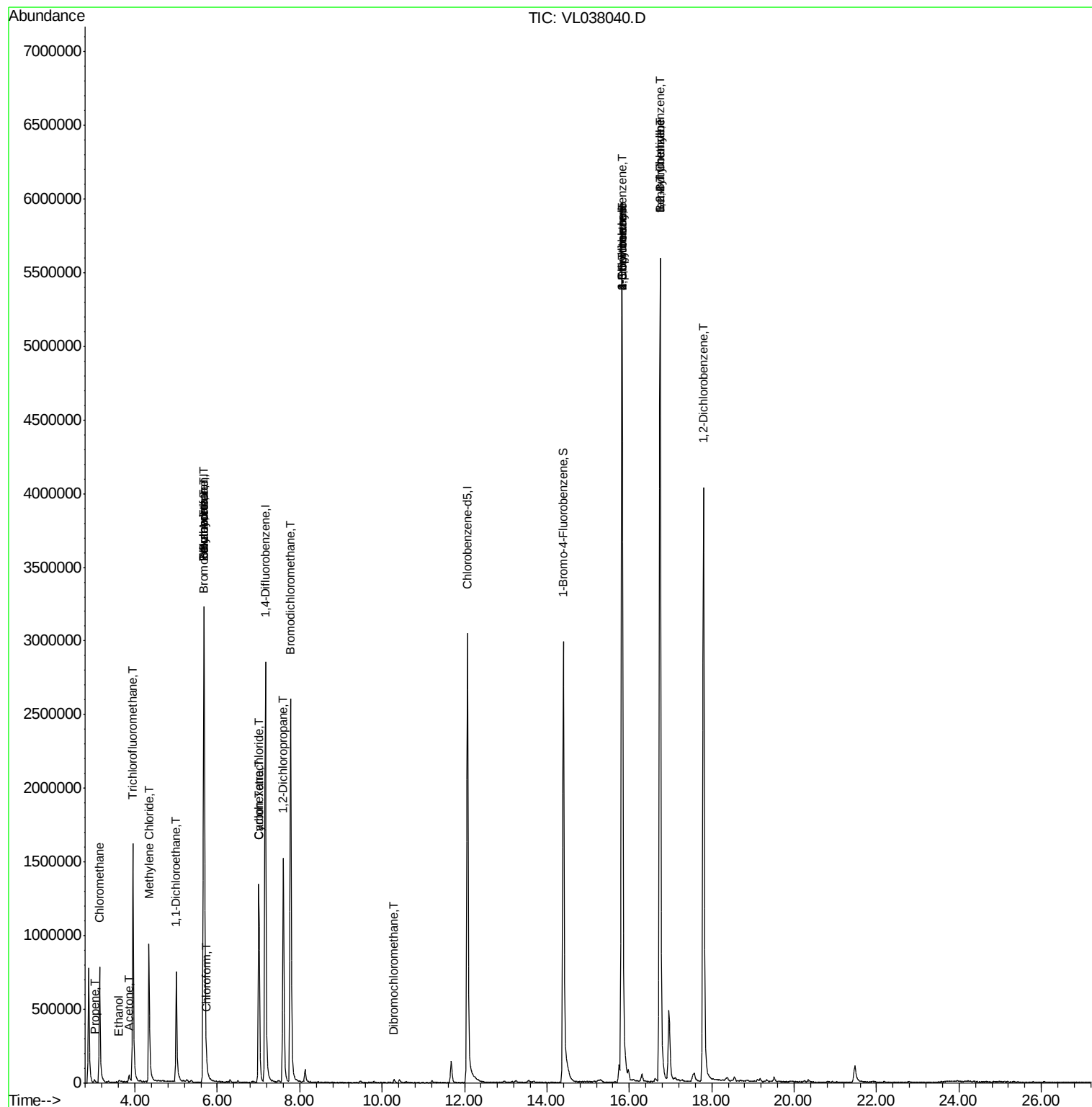
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
4) Chloromethane	3.14	50	933828	11.829	ppbv	99
9) Propene	3.02	41	4498	0.054	ppbv #	15
11) Trichlorofluoromethane	3.95	101	1341471	7.821	ppbv	99
13) Ethanol	3.62	45	4749	0.640	ppbv #	100
15) Acetone	3.86	43	70598	0.704	ppbv	99
20) Methylene Chloride	4.34	84	381193	6.477	ppbv	94
24) 1,1-Dichloroethane	5.01	63	758726	5.854	ppbv	100
25) Ethyl Acetate	5.68	43	931775	3.948	ppbv #	76
26) Hexane	5.68	57	1354423	11.423	ppbv #	45
29) Chloroform	5.75	83	14122	0.079	ppbv #	81
30) Cyclohexane	7.01	84	150362	1.126	ppbv #	15
34) 2-Butanone	5.68	43	890839	10.342	ppbv #	53
35) Carbon Tetrachloride	7.01	117	921950	5.107	ppbv	99
39) 1,2-Dichloropropane	7.60	63	682400	7.106	ppbv	97
41) Tetrahydrofuran	5.68	42	482537	7.807	ppbv #	51
42) Bromodichloromethane	7.78	83	2136672	11.770	ppbv	100
48) Dibromochloromethane	10.28	129	7030	0.044	ppbv #	21
64) n-propylbenzene	15.82	120	1853907	17.747	ppbv #	1
65) tert-Butylbenzene	16.75	119	587709	1.634	ppbv #	70
66) Benzyl Chloride	16.75	91	571455	22.757	ppbv #	62
71) 2-Chlorotoluene	15.82	91	721661	2.460	ppbv #	41
72) 4-Ethyltoluene	15.82	105	6064241	17.945	ppbv	97
73) 1,3,5-Trimethylbenzene	15.82	105	6064241	19.619	ppbv #	76
74) 1,2,4-Trimethylbenzene	16.75	105	5117764	16.445	ppbv #	72
77) 1,2-Dichlorobenzene	17.80	146	2477615	15.043	ppbv	99

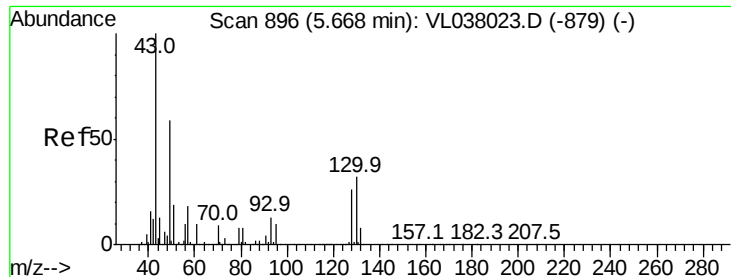
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Nov 16 09:59:16 2021
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Nov 2021 15:10

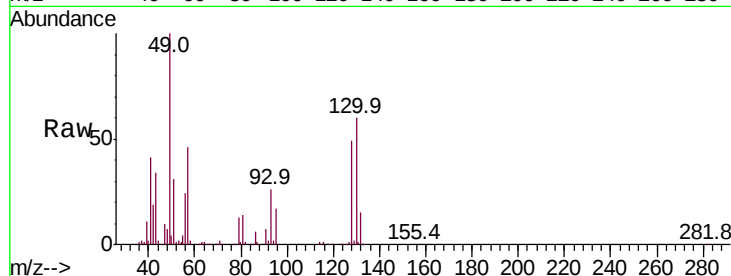
Tot Ion: 49 Resp: 853387

Ion Ratio Lower Upper

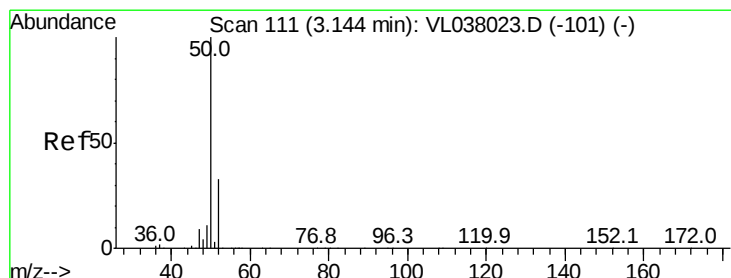
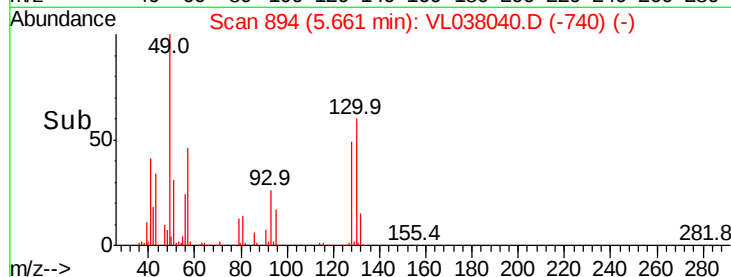
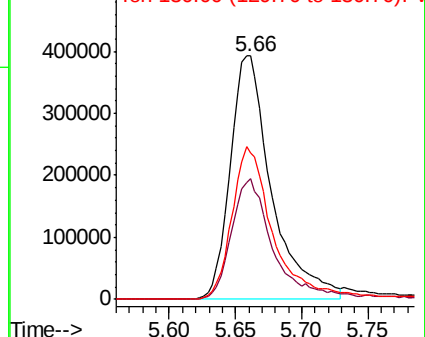
49 100

128 51.7 23.4 70.2

130 64.5 29.1 87.3



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



#4

Chloromethane

Concen: 11.829 ppbv

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL038040.D

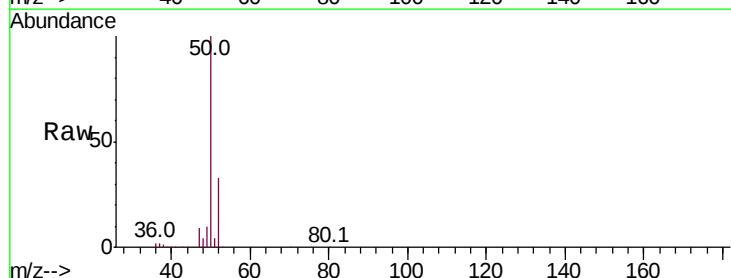
Acq: 16 Nov 2021 15:10

Tgt Ion: 50 Resp: 933828

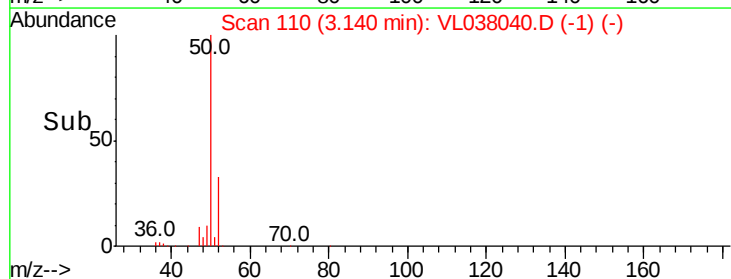
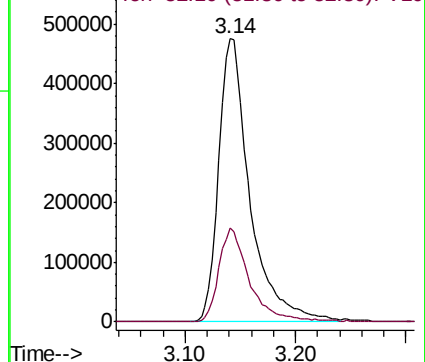
Ion Ratio Lower Upper

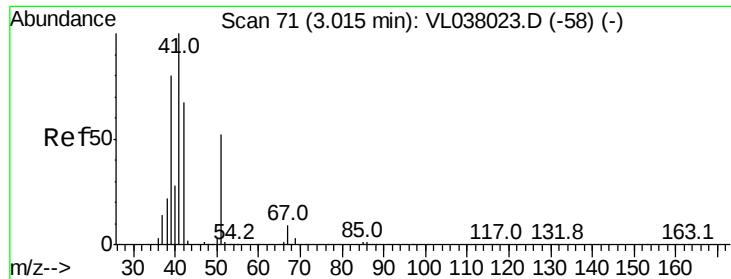
50 100

52 33.3 26.4 39.6



Abundance Ion 50.10 (49.80 to 50.80): VL0
Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.054 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

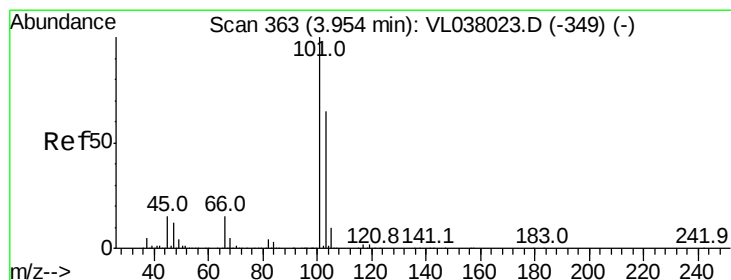
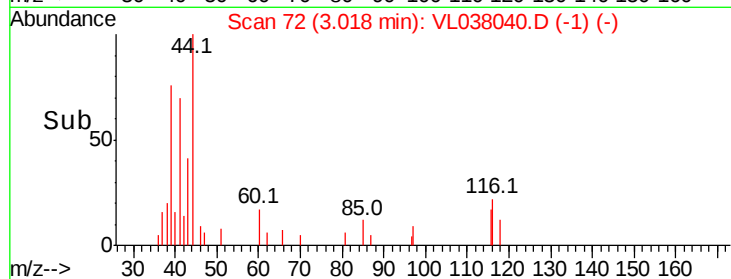
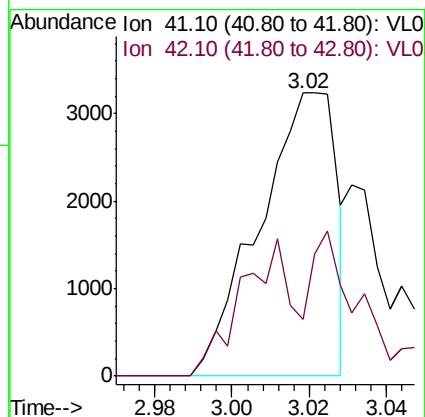
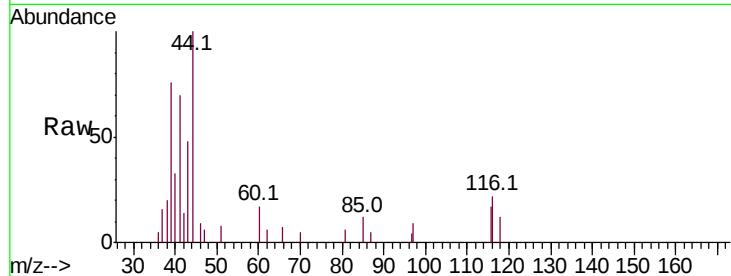
Acq: 16 Nov 2021 15:10

Tot Ion: 41 Resp: 4498

Ion Ratio Lower Upper

41 100

42 0.0 55.4 83.0#



#11

Trichlorofluoromethane

Concen: 7.821 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.01 min

Lab File: VL038040.D

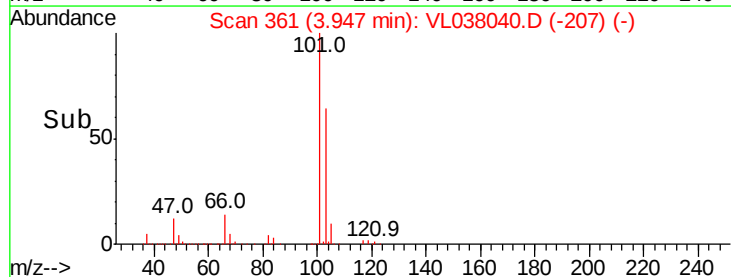
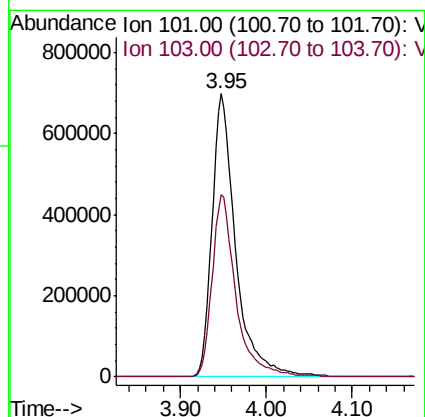
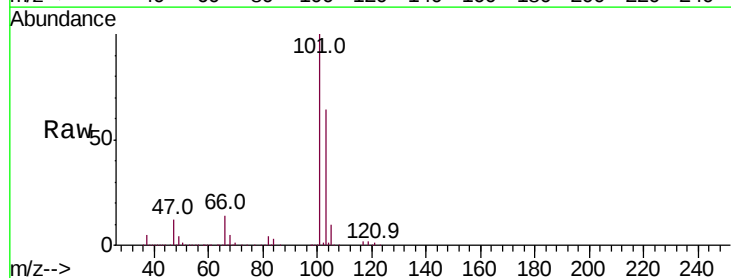
Acq: 16 Nov 2021 15:10

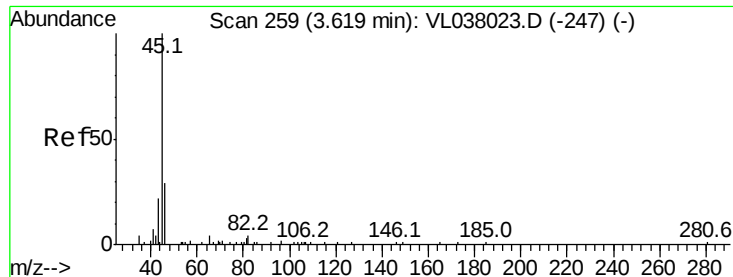
Tgt Ion: 101 Resp: 1341471

Ion Ratio Lower Upper

101 100

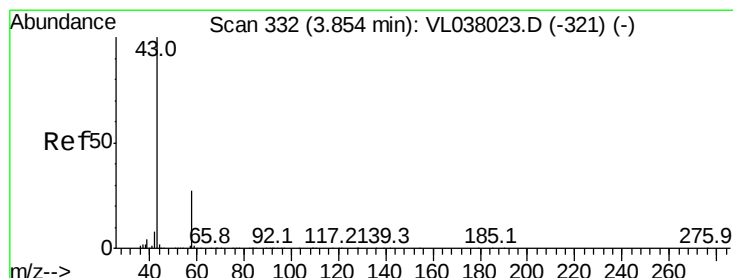
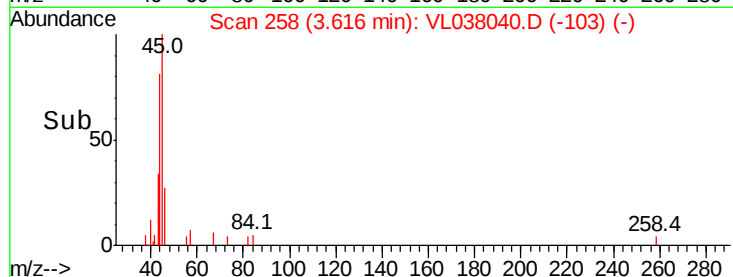
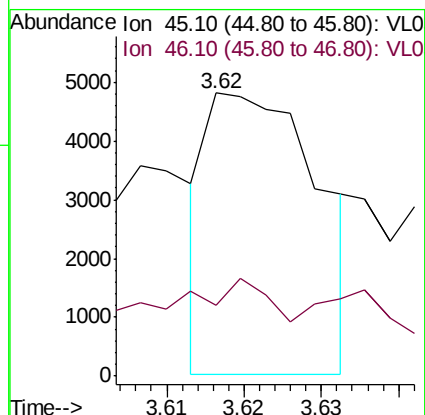
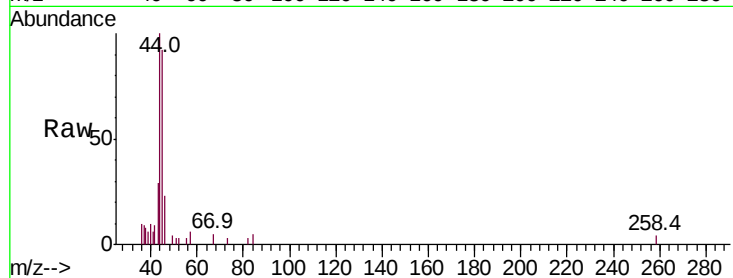
103 64.4 52.3 78.5





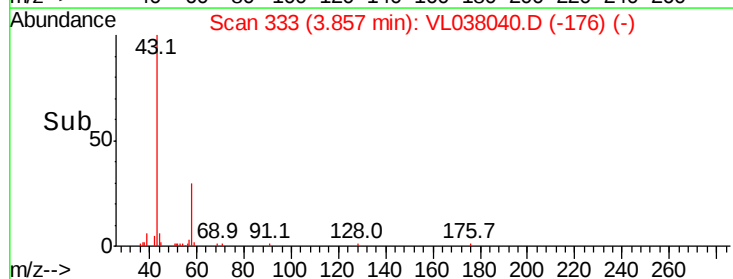
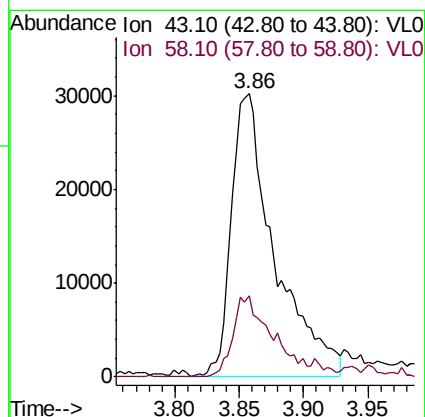
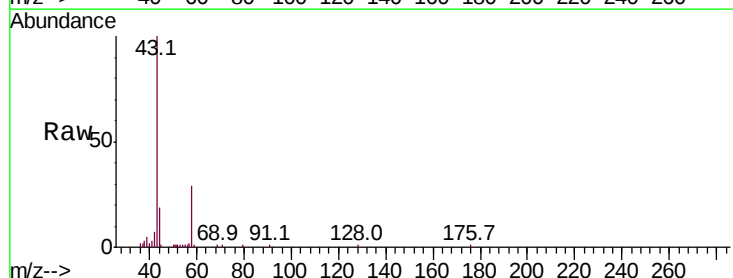
#13
 Ethanol
 Concen: 0.640 ppbv
 RT: 3.62
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 15:10

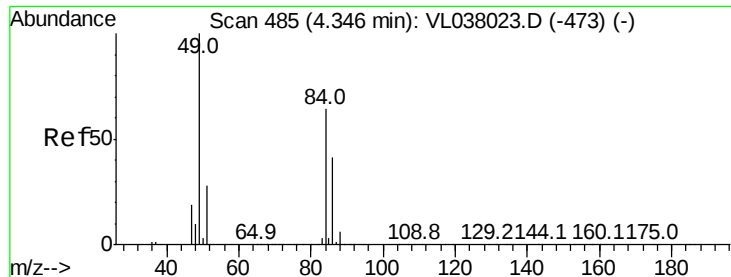
Tot Ion: 45 Resp: 4749
 Ion Ratio Lower Upper
 45 100
 46 46.0 0.0 0.0#



#15
 Acetone
 Concen: 0.704 ppbv
 RT: 3.86 min Scan# 333
 Delta R.T. 0.00 min
 Lab File: VL038040.D
 Acq: 16 Nov 2021 15:10

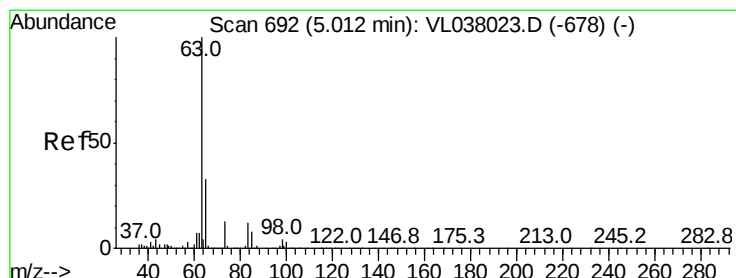
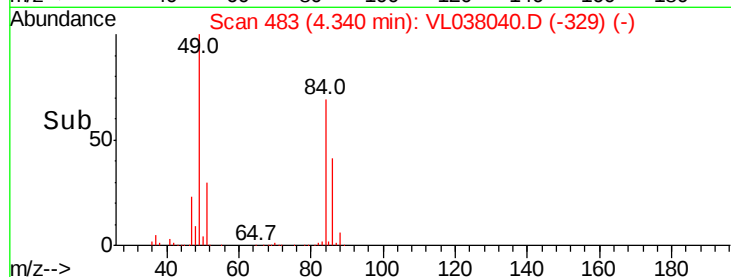
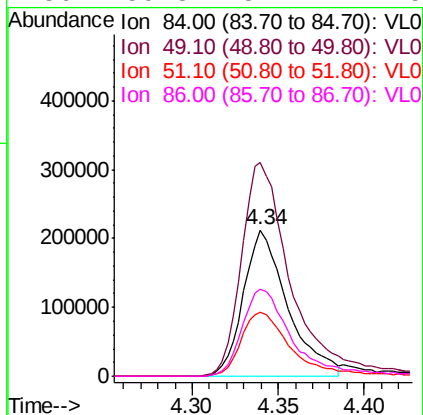
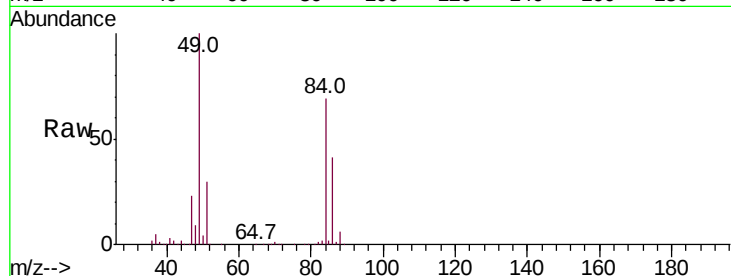
Tgt Ion: 43 Resp: 70598
 Ion Ratio Lower Upper
 43 100
 58 27.9 23.0 34.4





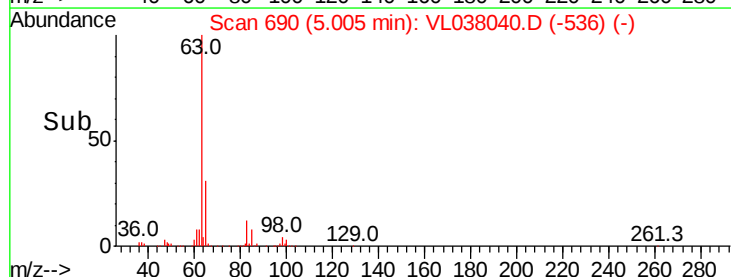
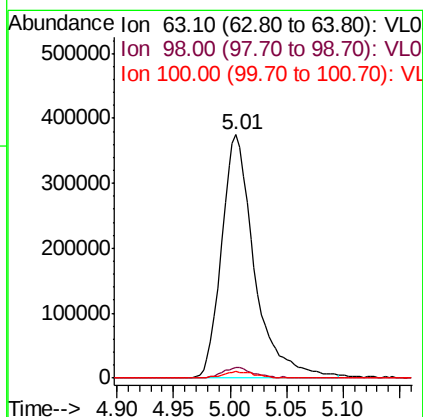
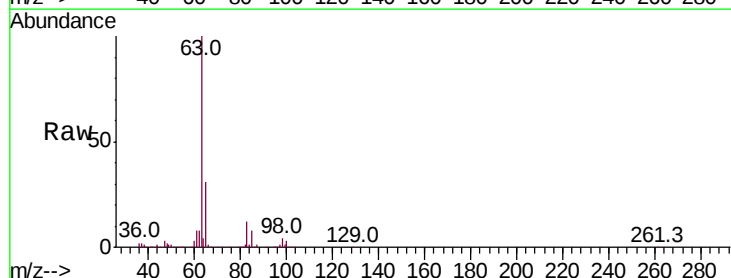
#20
Methylene Chloride
Concen: 6.477 ppbv
RT: 4.34
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 16 Nov 2021 15:10

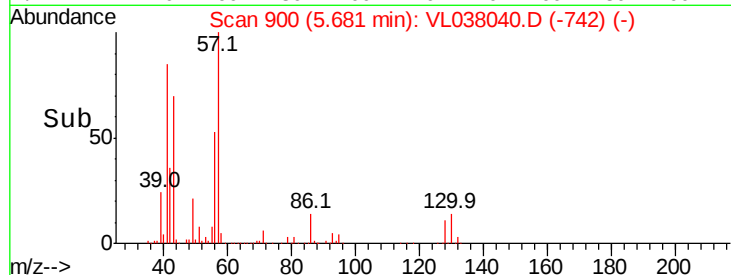
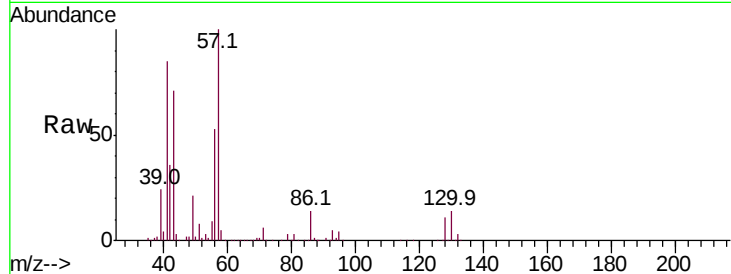
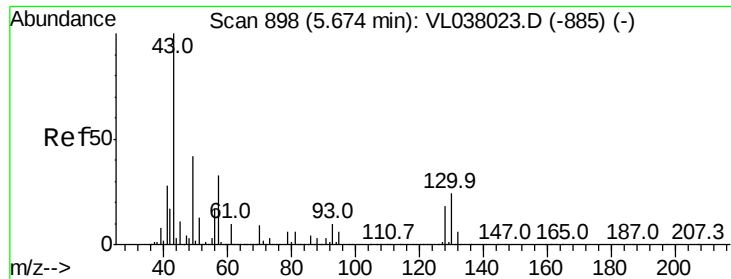
Tot Ion:	84	Resp:	381193
Ion	Ratio	Lower	Upper
84	100		
49	145.9	125.1	187.7
51	43.6	35.3	52.9
86	59.8	51.7	77.5



#24
1,1-Dichloroethane
Concen: 5.854 ppbv
RT: 5.01 min Scan# 690
Delta R.T. -0.01 min
Lab File: VL038040.D
Acq: 16 Nov 2021 15:10

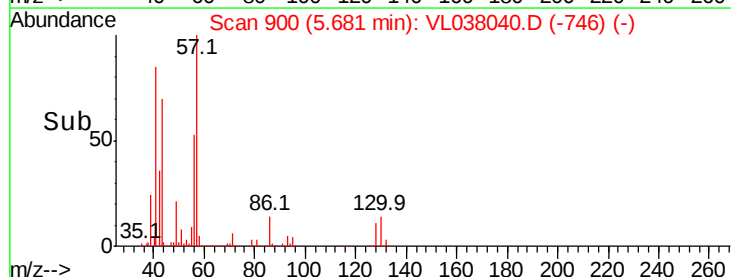
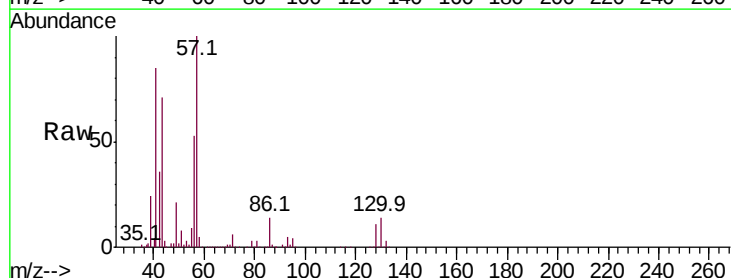
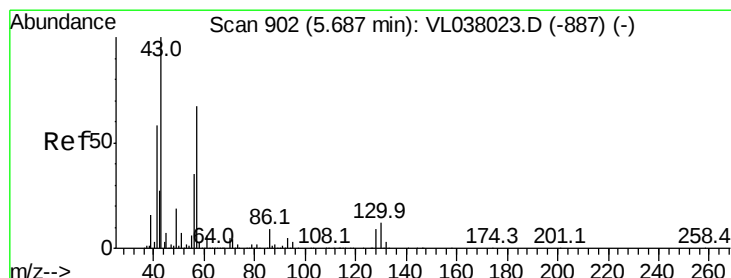
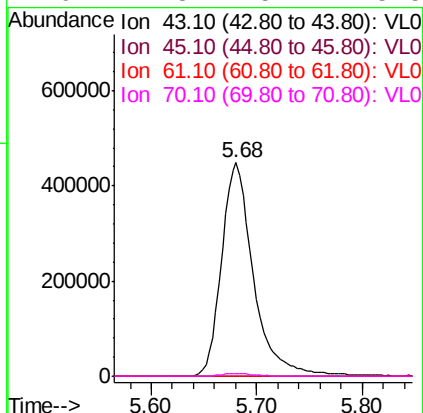
Tgt Ion:	63	Resp:	758726
Ion	Ratio	Lower	Upper
63	100		
98	4.4	2.3	6.9
100	2.8	1.5	4.4





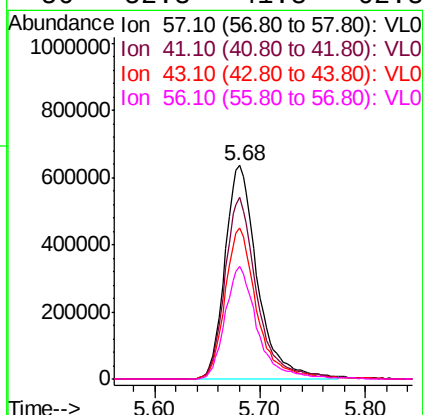
#25
Ethyl Acetate
Concen: 3.948 ppbv
RT: 5.68 min
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 16 Nov 2021 15:10

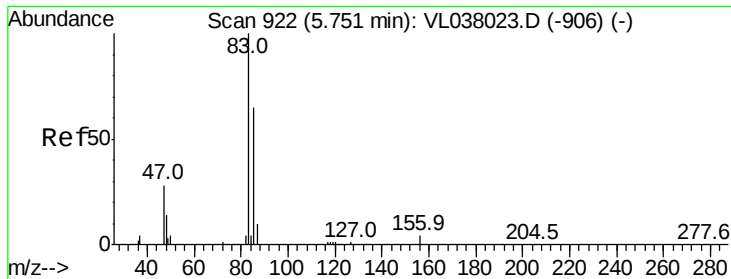
Tot Ion:	43	Resp:	931775
Ion	Ratio	Lower	Upper
43	100		
45	0.1	8.0	12.0#
61	0.1	8.3	12.5#
70	1.3	5.7	8.5#



#26
Hexane
Concen: 11.423 ppbv
RT: 5.68 min Scan# 900
Delta R.T. -0.01 min
Lab File: VL038040.D
Acq: 16 Nov 2021 15:10

Tgt Ion:	57	Resp:	1354423
Ion	Ratio	Lower	Upper
57	100		
41	84.8	70.8	106.2
43	69.8	169.4	254.0#
56	52.3	41.8	62.8





#29

Chloroform

Concen: 0.079 ppbv

RT: 5.75 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

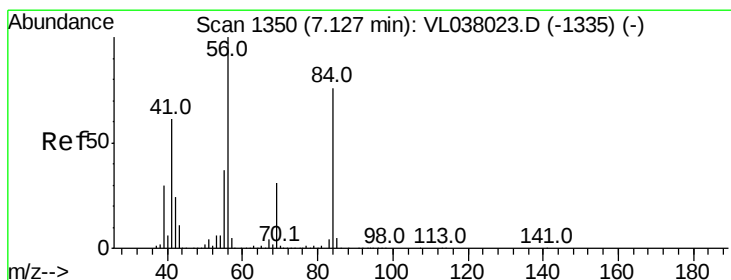
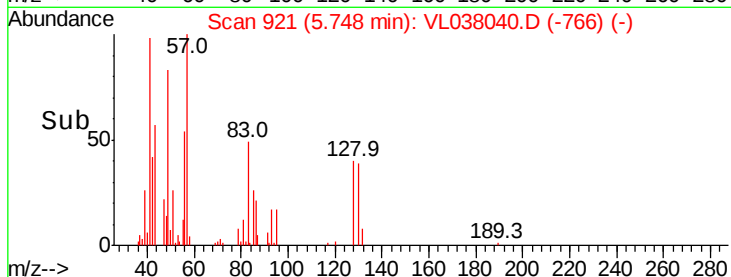
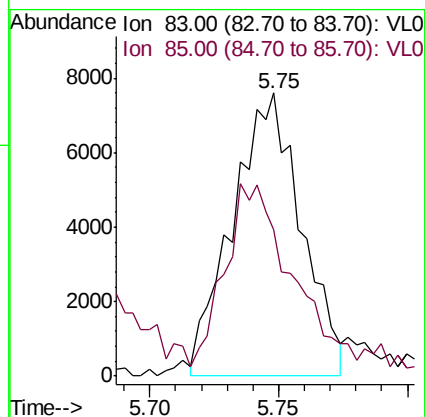
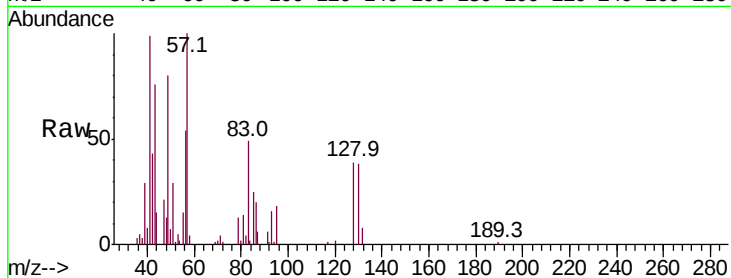
Acq: 16 Nov 2021 15:10

Tot Ion: 83 Resp: 14122

Ion Ratio Lower Upper

83 100

85 50.3 52.1 78.1#



#30

Cyclohexane

Concen: 1.126 ppbv

RT: 7.01 min Scan# 1313

Delta R.T. -0.12 min

Lab File: VL038040.D

Acq: 16 Nov 2021 15:10

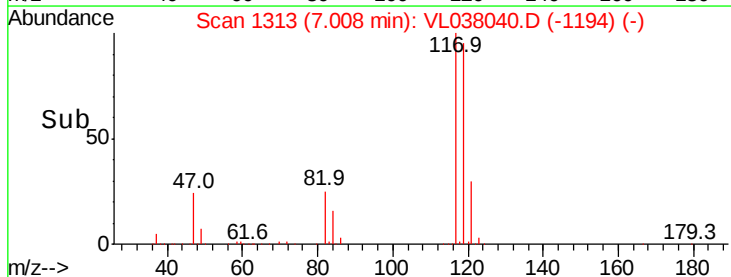
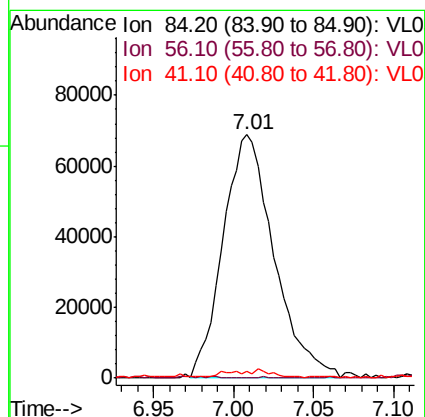
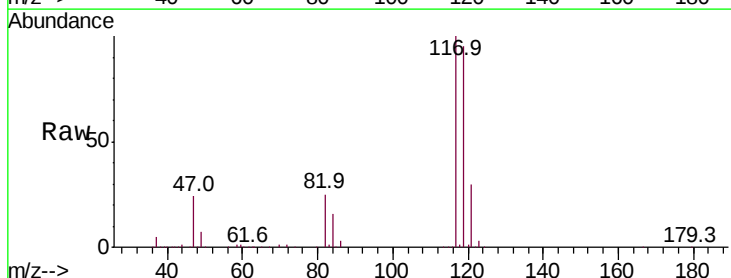
Tgt Ion: 84 Resp: 150362

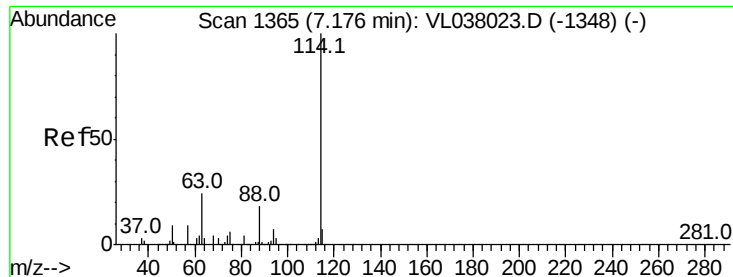
Ion Ratio Lower Upper

84 100

56 38.6 109.5 164.3#

41 0.0 65.1 97.7#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17

Instrument: MSVOA_1

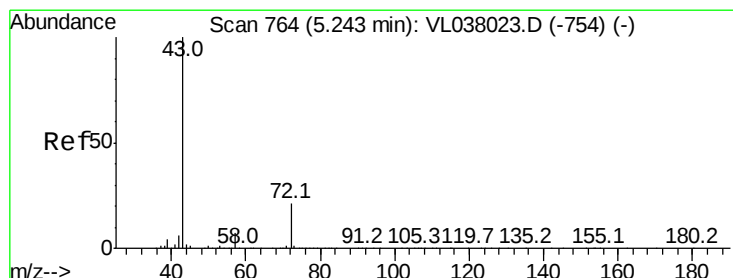
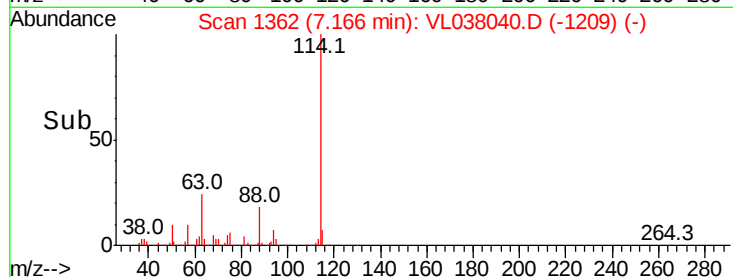
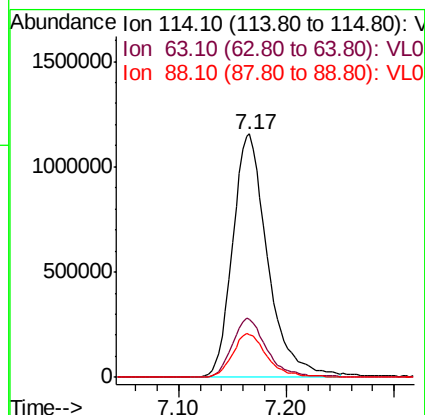
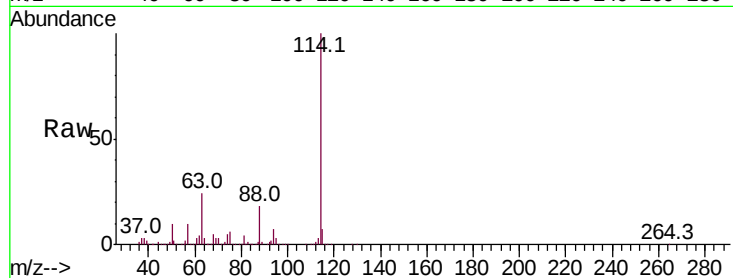
Delta R.T.:

Lab File: ClientSampleId:

Acq: 16 Nov 2021 15:10

Tot Ion:114 Resp: 2611652

Ion	Ratio	Lower	Upper
114	100		
63	24.3	19.8	29.6
88	18.0	14.6	21.8



#34

2-Butanone

Concen: 10.342 ppbv

RT: 5.68 min Scan# 900

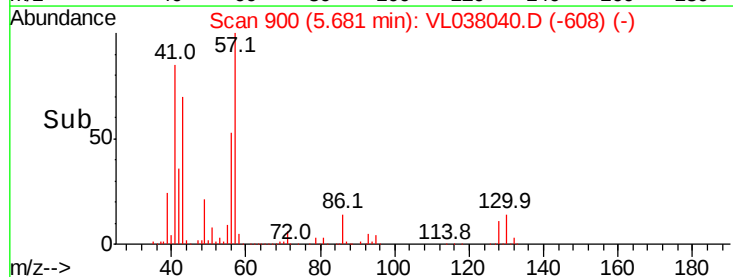
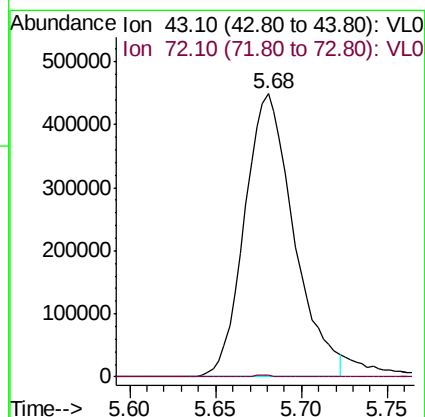
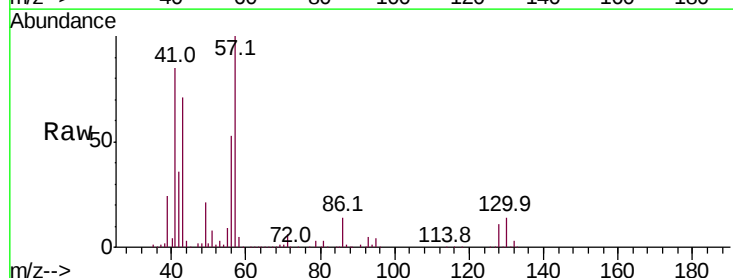
Delta R.T. 0.44 min

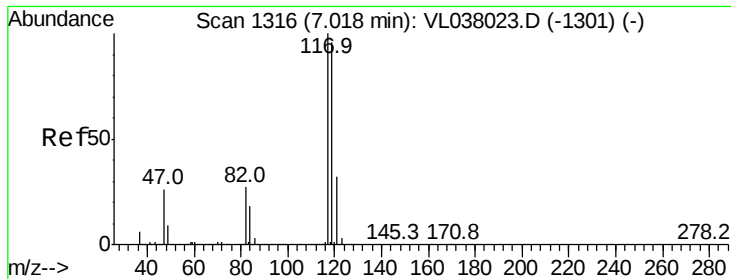
Lab File: VL038040.D

Acq: 16 Nov 2021 15:10

Tgt Ion: 43 Resp: 890839

Ion	Ratio	Lower	Upper
43	100		
72	0.0	18.2	27.2#





#35

Carbon Tetrachloride

Concen: 5.107 ppbv

RT: 7.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 15:10

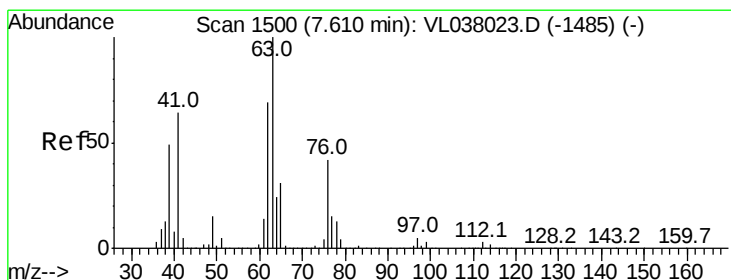
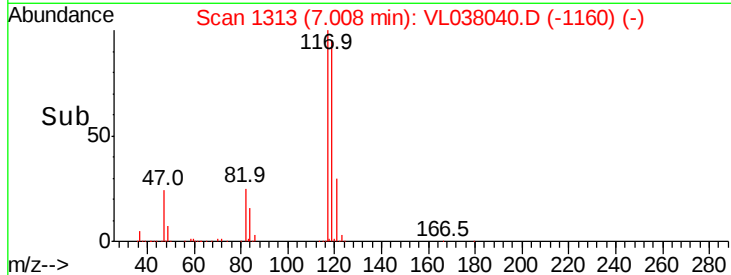
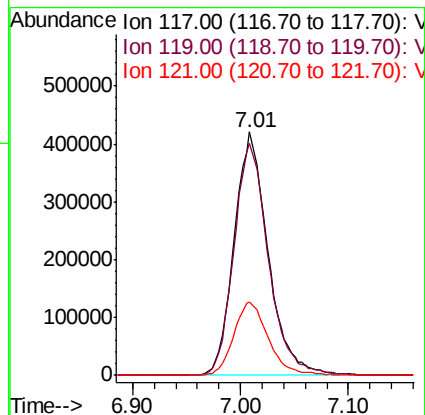
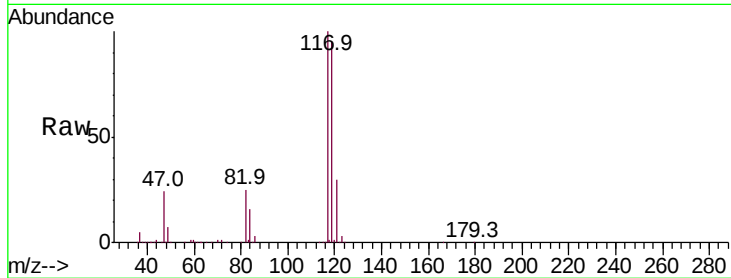
Tot Ion: 117 Resp: 921950

Ion Ratio Lower Upper

117 100

119 95.3 76.5 114.7

121 30.3 25.3 37.9



#39

1,2-Dichloropropane

Concen: 7.106 ppbv

RT: 7.60 min Scan# 1497

Delta R.T. -0.01 min

Lab File: VL038040.D

Acq: 16 Nov 2021 15:10

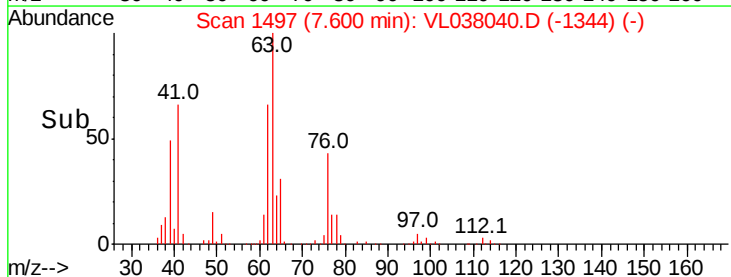
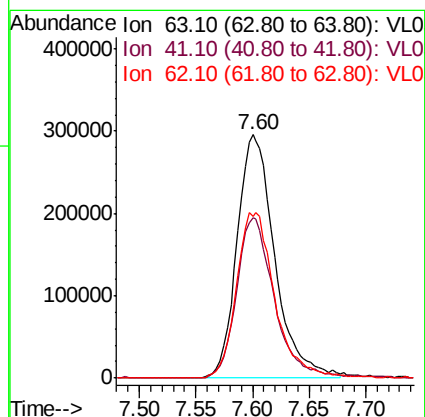
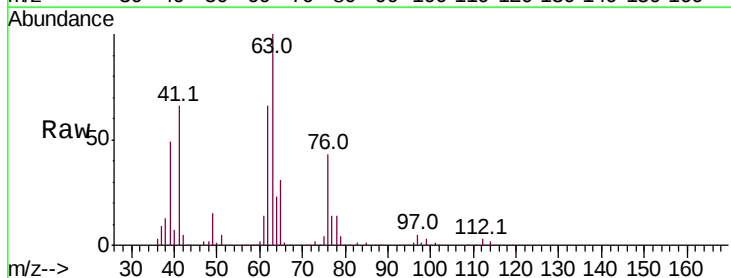
Tgt Ion: 63 Resp: 682400

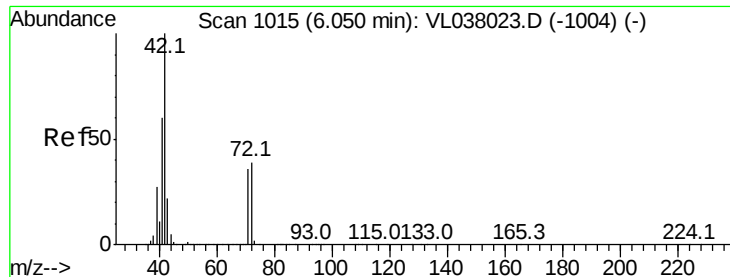
Ion Ratio Lower Upper

63 100

41 66.0 51.1 76.7

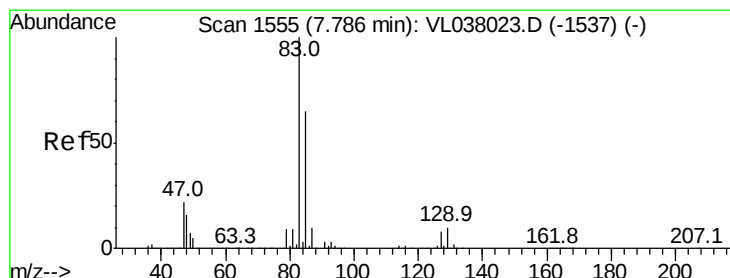
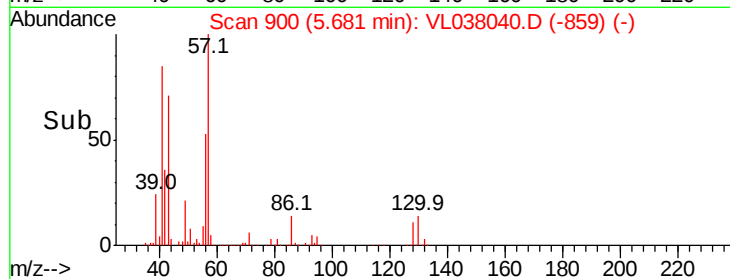
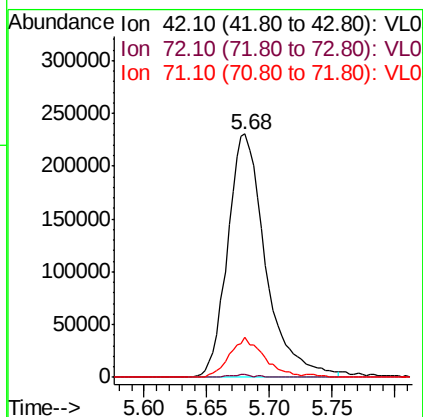
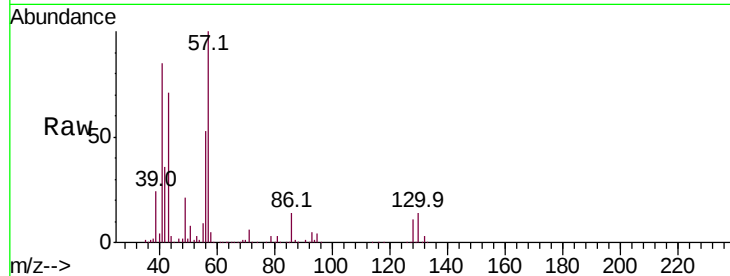
62 66.4 55.2 82.8





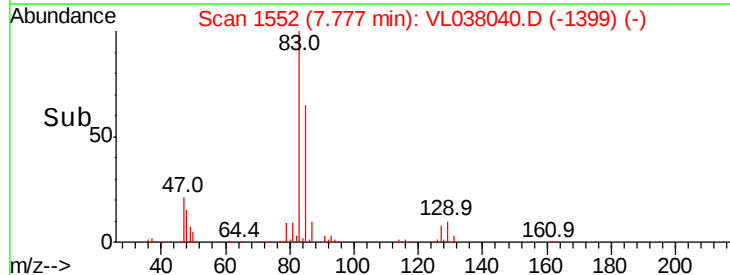
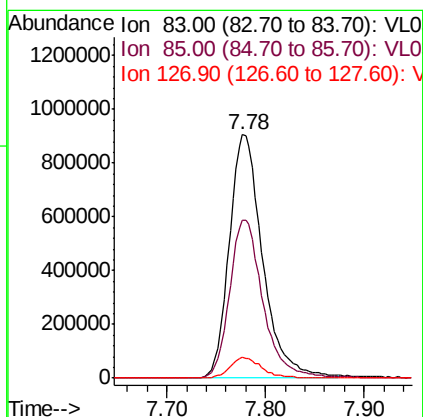
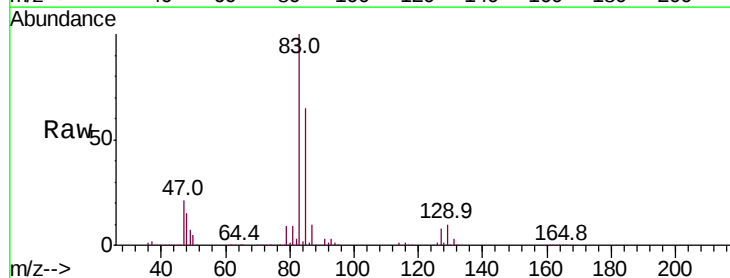
#41
Tetrahydrofuran
Concen: 7.807 ppbv
RT: 5.68
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 15:10

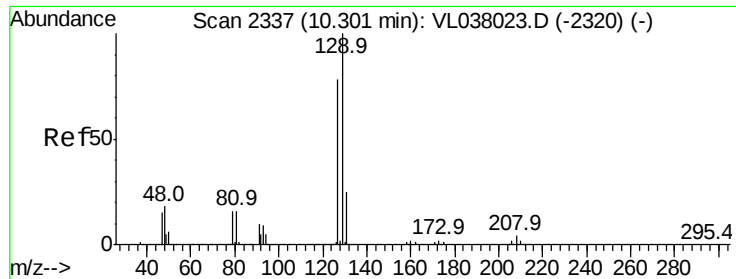
Tot Ion	Ratio	Lower	Upper
42	100		
72	0.9	31.3	46.9#
71	15.9	29.7	44.5#



#42
Bromodichloromethane
Concen: 11.770 ppbv
RT: 7.78 min Scan# 1552
Delta R.T.: -0.01 min
Lab File: VL038040.D
Acq: 16 Nov 2021 15:10

Tgt Ion	Ratio	Lower	Upper
83	100		
85	64.7	51.6	77.4
127	8.5	6.6	10.0





#48

Dibromochloromethane

Concen: 0.044 ppbv

RT: 10.28

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

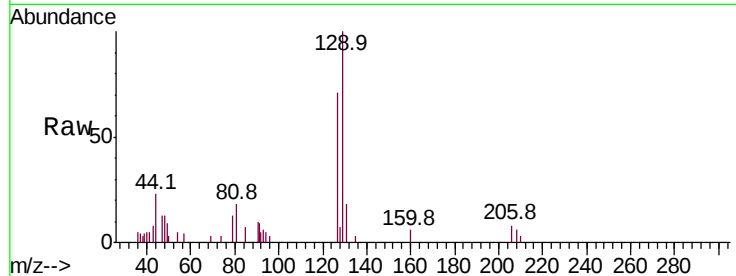
Acq: 16 Nov 2021 15:10

Tot Ion:129 Resp: 7030

Ion Ratio Lower Upper

129 100

127 149.9 40.1 120.3#



Abundance Ion 129.00 (128.70 to 129.70): V

Ion 127.00 (126.70 to 127.70): V

6000

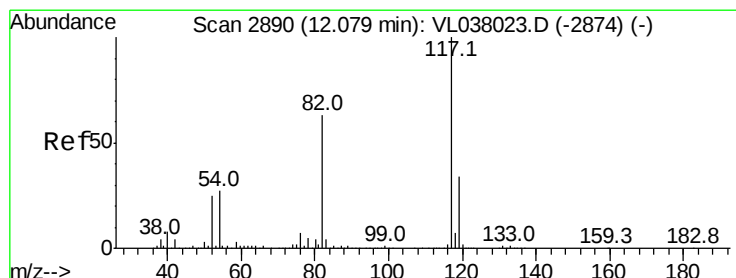
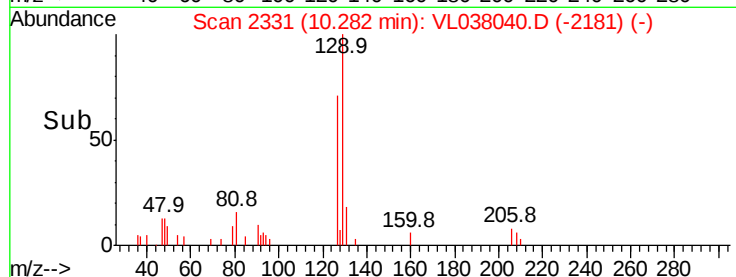
4000

2000

0

10.24 10.26 10.28 10.30

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. -0.01 min

Lab File: VL038040.D

Acq: 16 Nov 2021 15:10

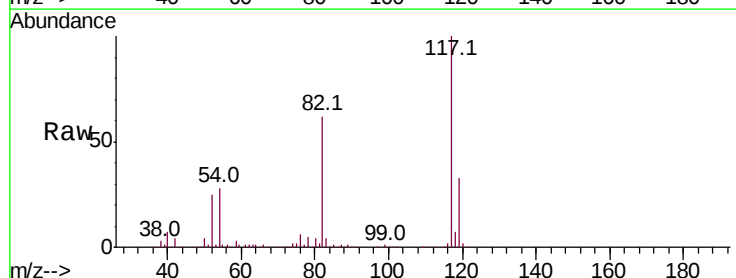
Tgt Ion:117 Resp: 2419257

Ion Ratio Lower Upper

117 100

82 63.6 50.0 75.0

119 33.3 44.6 67.0#



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

1200000

1000000

800000

600000

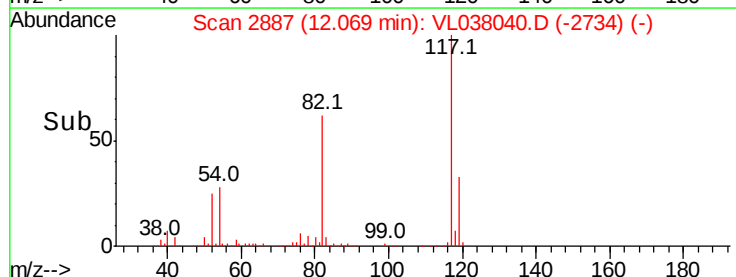
400000

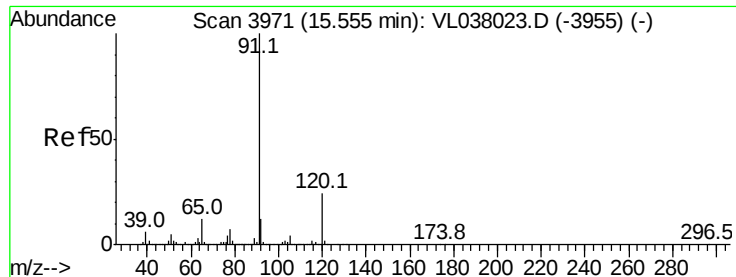
200000

0

12.00 12.10 12.20

Time-->





#64

n-propylbenzene

Concen: 17.747 ppbv

RT: 15.82

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

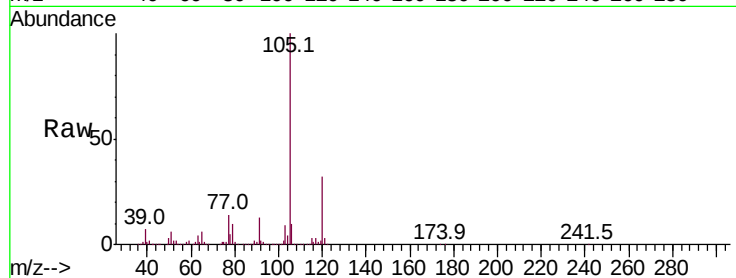
Acq: 16 Nov 2021 15:10

Tot Ion:120 Resp: 1853907

Ion Ratio Lower Upper

120 100

91 42.0 366.7 550.1#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

15.82

800000

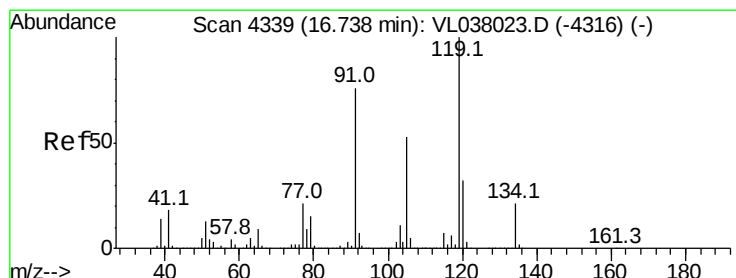
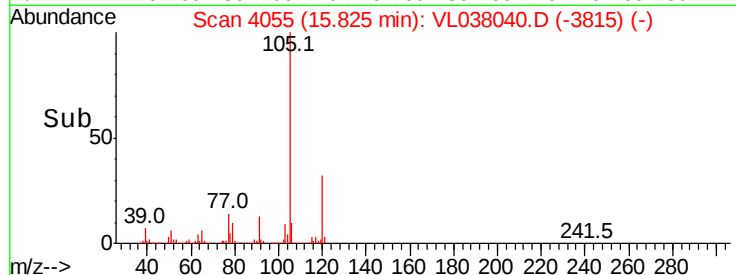
600000

400000

200000

0

Time--> 15.70 15.80 15.90



#65

tert-Butylbenzene

Concen: 1.634 ppbv

RT: 16.75 min Scan# 4342

Delta R.T. 0.01 min

Lab File: VL038040.D

Acq: 16 Nov 2021 15:10

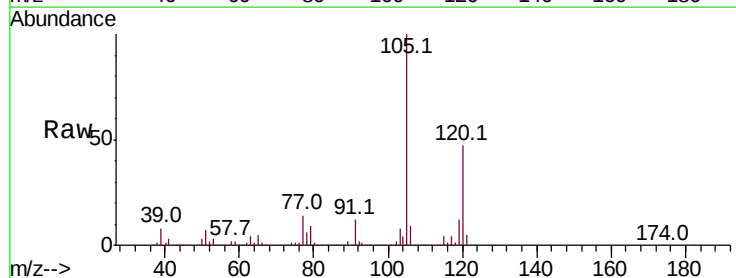
Tgt Ion:119 Resp: 587709

Ion Ratio Lower Upper

119 100

91 101.4 62.6 94.0#

134 0.0 16.1 24.1#



Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V

300000

250000

200000

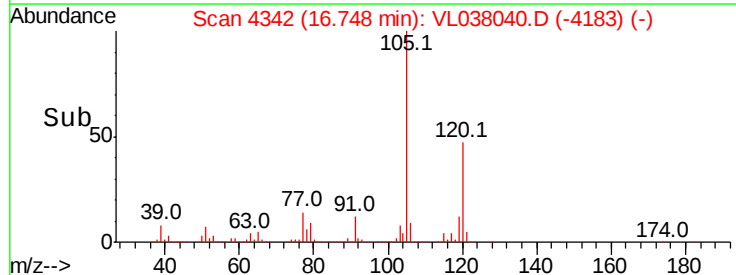
150000

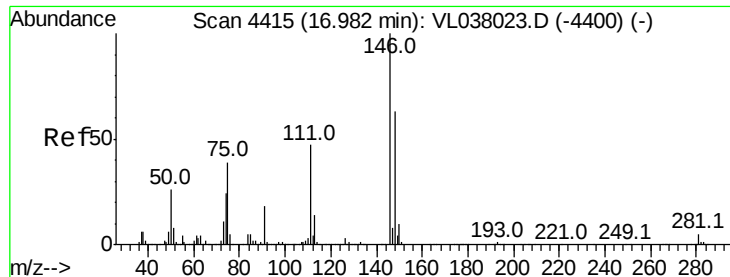
100000

50000

0

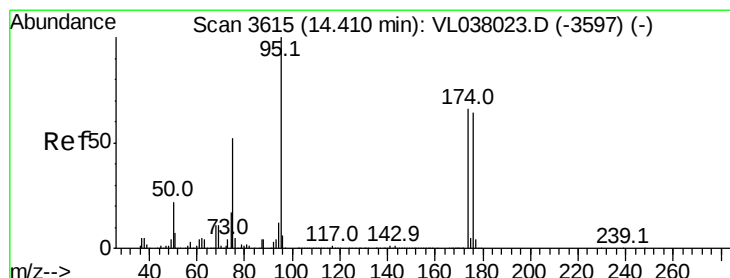
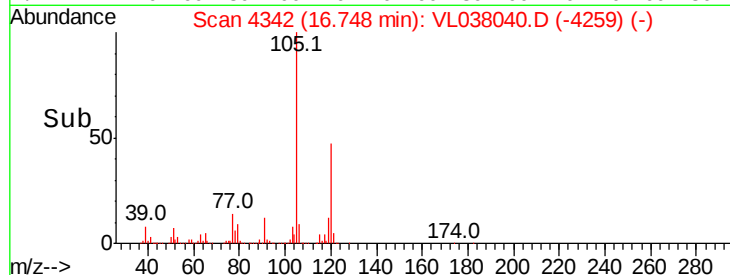
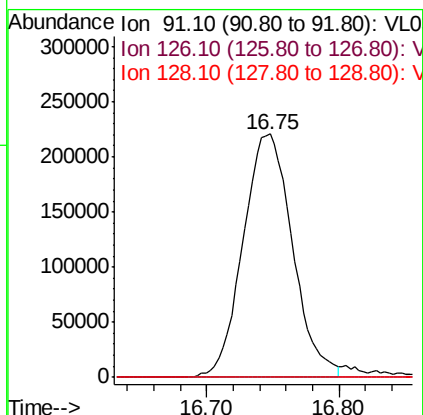
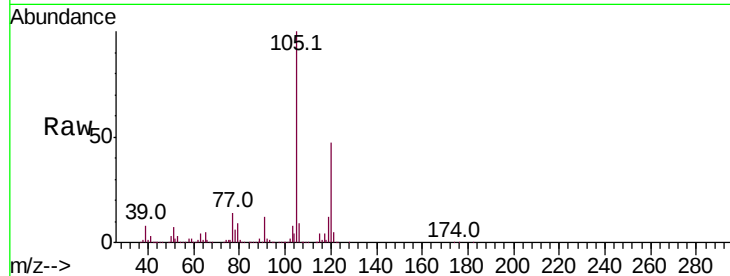
Time--> 16.70 16.80





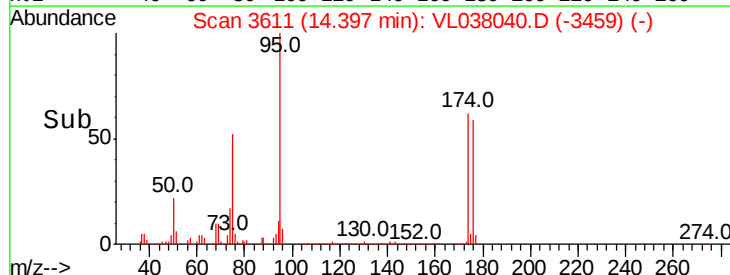
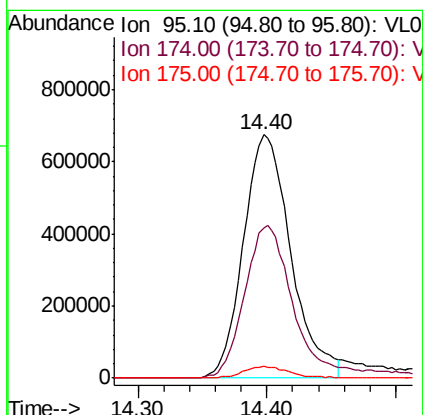
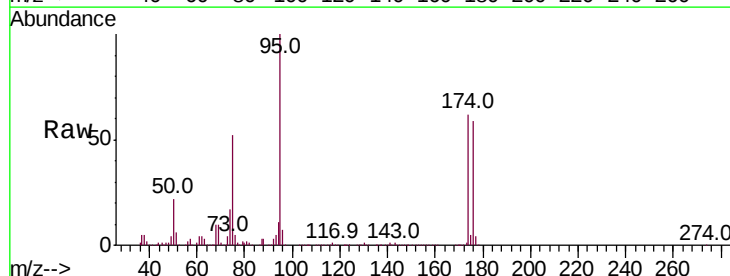
#66
Benzyl Chloride
Concen: 22.757 ppbv
RT: 16.75
Delta R.T. MSVOA.L
Lab File: ClientSampleId :
Acq: 16 Nov 2021 15:10

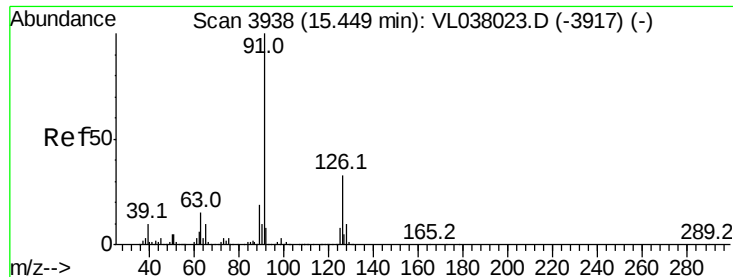
Tot Ion	Ratio	Lower	Upper
91	100		
126	0.0	16.4	24.6#
128	0.0	5.6	8.4#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.902 ppbv
RT: 14.40 min Scan# 3611
Delta R.T. -0.01 min
Lab File: VL038040.D
Acq: 16 Nov 2021 15:10

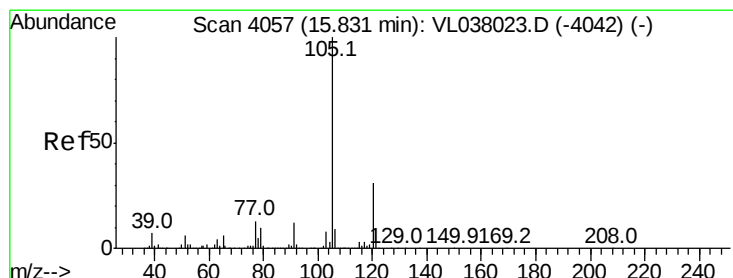
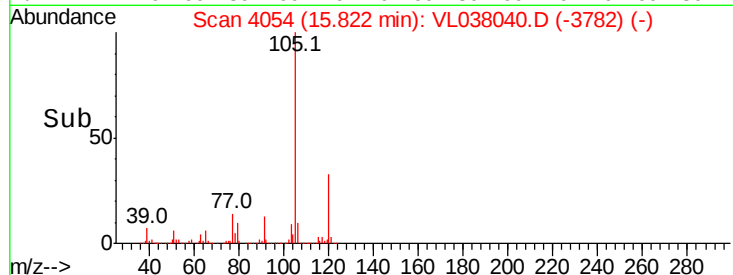
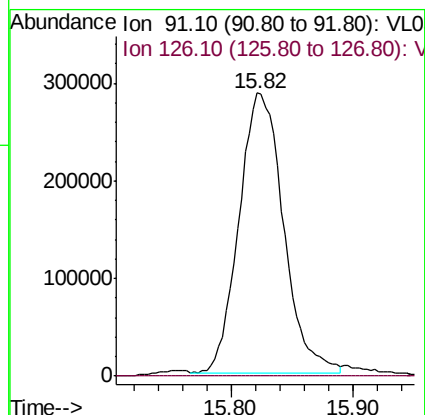
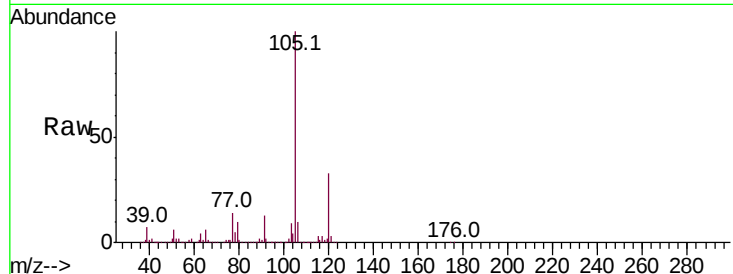
Tgt Ion	Ratio	Lower	Upper
95	100		
174	68.7	55.0	82.6
175	4.9	4.2	6.2





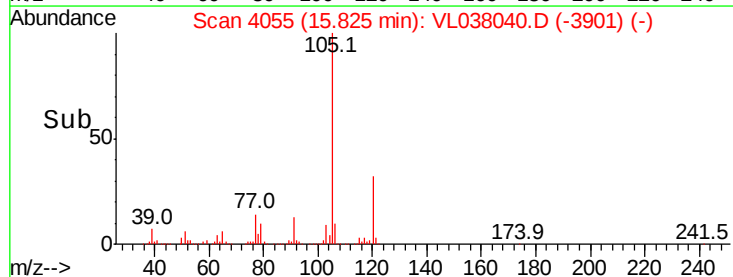
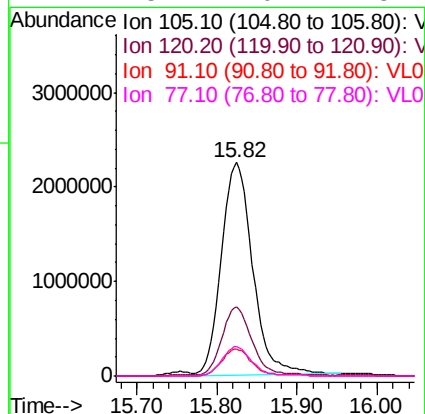
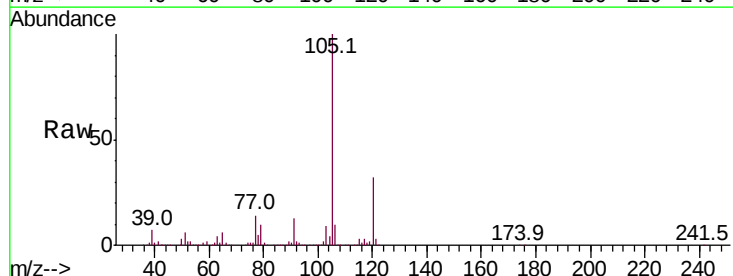
#71
 2-Chlorotoluene
 Concen: 2.460 ppbv
 RT: 15.82 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 15:10

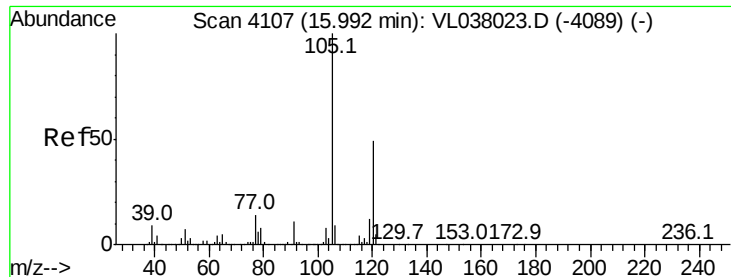
Tot Ion: 91 Resp: 721661
 Ion Ratio Lower Upper
 91 100
 126 0.0 13.6 54.2#



#72
 4-Ethyltoluene
 Concen: 17.945 ppbv
 RT: 15.82 min Scan# 4055
 Delta R.T. -0.01 min
 Lab File: VL038040.D
 Acq: 16 Nov 2021 15:10

Tgt Ion: 105 Resp: 6064241
 Ion Ratio Lower Upper
 105 100
 120 32.2 24.7 37.1
 91 12.8 9.3 13.9
 77 13.7 10.2 15.4





#73

1,3,5-Trimethylbenzene

Concen: 19.619 ppbv

RT: 15.82

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

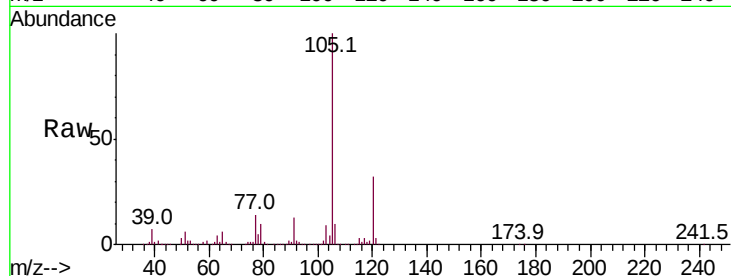
Acq: 16 Nov 2021 15:10

Tot Ion:105 Resp: 6064241

Ion Ratio Lower Upper

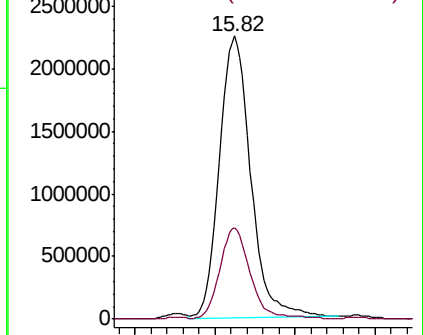
105 100

120 32.2 38.8 58.2#

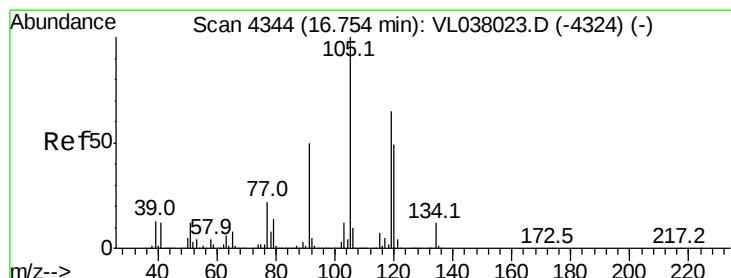
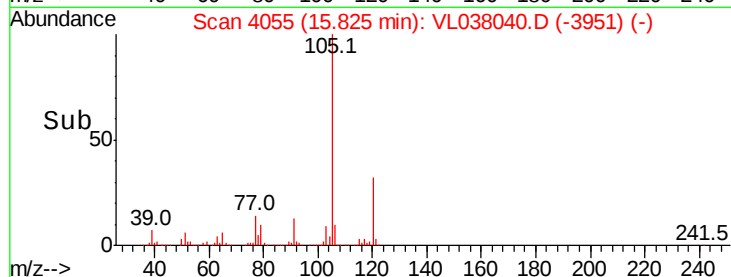


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



Time--> 15.70 15.80 15.90 16.00



#74

1,2,4-Trimethylbenzene

Concen: 16.445 ppbv

RT: 16.75 min Scan# 4342

Delta R.T. -0.01 min

Lab File: VL038040.D

Acq: 16 Nov 2021 15:10

Tgt Ion:105 Resp: 5117764

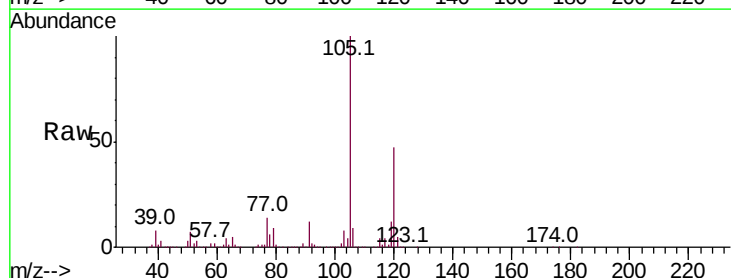
Ion Ratio Lower Upper

105 100

120 46.6 39.5 59.3

91 11.6 40.9 61.3#

77 14.1 17.2 25.8#

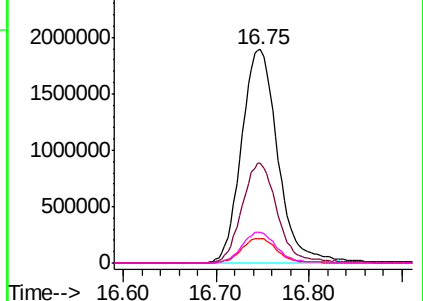


Abundance Ion 105.10 (104.80 to 105.80): V

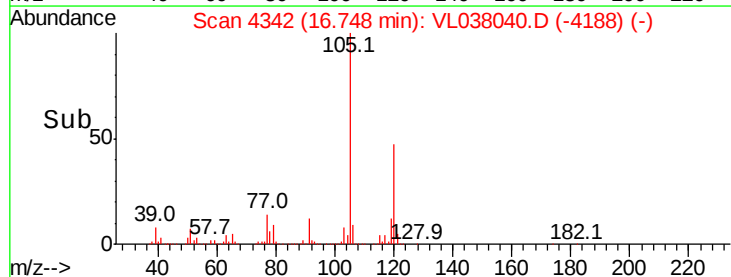
Ion 120.20 (119.90 to 120.90): V

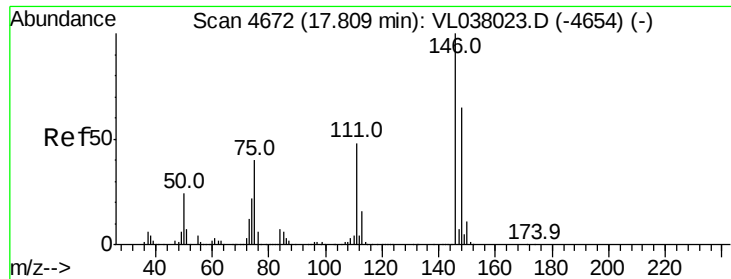
Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



Time--> 16.60 16.70 16.80





#77
 1,2-Dichlorobenzene
 Concen: 15.043 ppbv
 RT: 17.80
 Delta R.T: MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 15:10

Tot Ion:146 Resp: 2477615
 Ion Ratio Lower Upper
 146 100
 111 49.5 24.3 73.0
 148 64.8 32.5 97.4

