

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL042721\
 Data File : VL036853.D
 Acq On : 27 Apr 2021 11:56
 Operator : SY/AP
 Sample : M2174-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 28 05:23:21 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL042721AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Apr 27 16:56:35 2021
 QLast Update : Tue Apr 27 16:56:35 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1352332	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3191653	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2836333	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2323311	10.20	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.00%

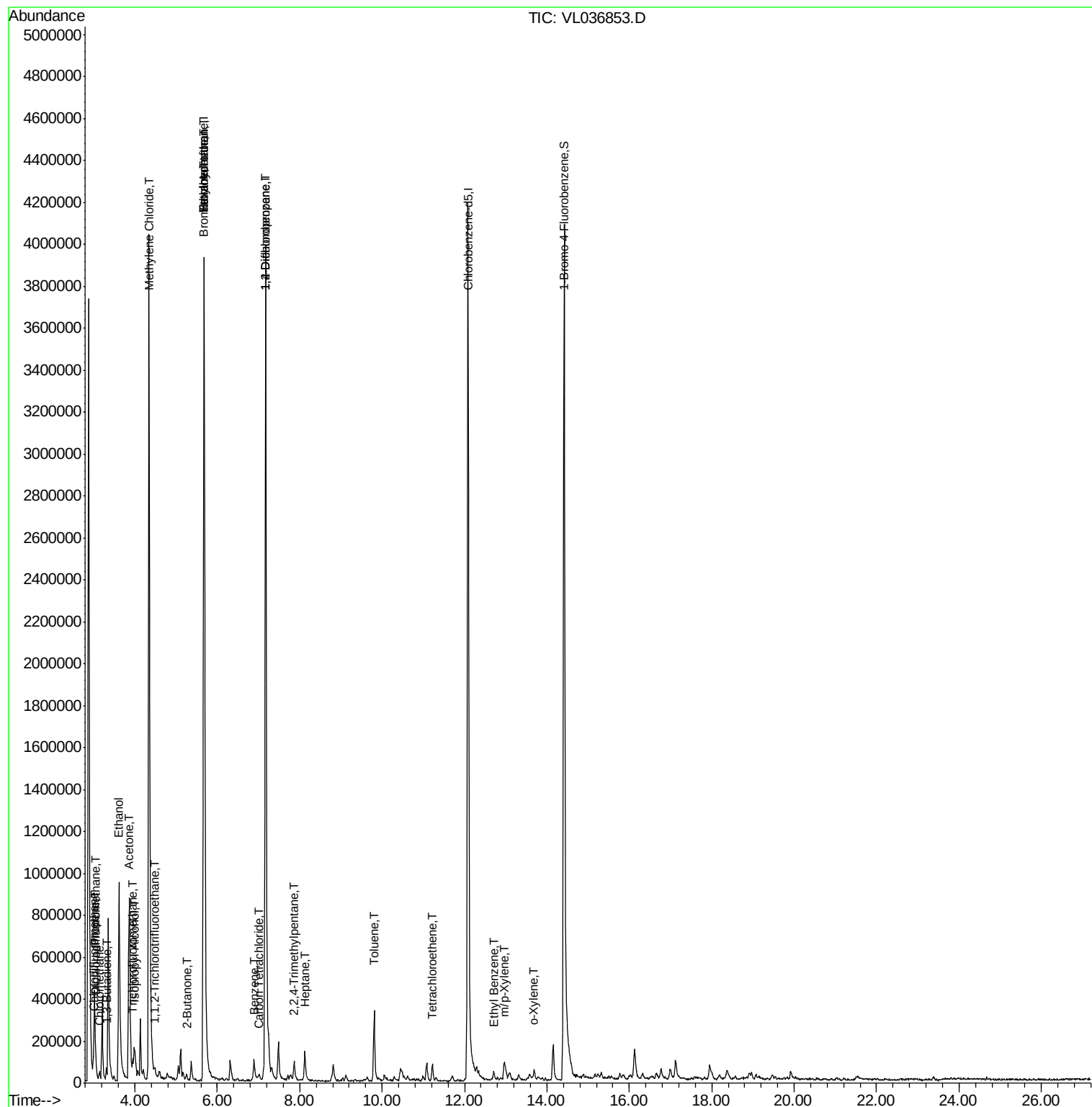
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	54404	0.255 ppbv	89
3) Chlorodifluoromethane	2.99	51	124434	0.505 ppbv	97
4) Chloromethane	3.14	50	30850	0.381 ppbv	98
9) Propene	3.02	41	127534	1.699 ppbv	83
10) Heptane	8.12	43	44347	0.235 ppbv #	85
11) Trichlorofluoromethane	3.95	101	42653	0.224 ppbv #	83
12) 1,1,2-Trichlorotrifluoroet	4.49	101	7747	0.061 ppbv	83
13) Ethanol	3.61	45	1340143	139.999 ppbv	92
15) Acetone	3.85	43	1110426	8.712 ppbv #	89
16) 1,3-Butadiene	3.31	39	18304	0.225 ppbv #	28
19) Isopropyl Alcohol	3.98	45	200165	3.169 ppbv #	97
20) Methylene Chloride	4.34	84	1599161	26.236 ppbv	96
25) Ethyl Acetate	5.68	43	974059	3.129 ppbv #	81
26) Hexane	5.68	57	1221789	8.387 ppbv #	47
34) 2-Butanone	5.25	43	33812	0.242 ppbv #	83
35) Carbon Tetrachloride	7.01	117	7679	0.035 ppbv #	76
36) Benzene	6.89	78	55588	0.207 ppbv #	93
39) 1,2-Dichloropropane	7.17	63	858933	7.973 ppbv #	23
41) Tetrahydrofuran	5.68	42	512425	8.379 ppbv #	51
44) 2,2,4-Trimethylpentane	7.87	57	51778	0.112 ppbv #	54
52) Tetrachloroethene	11.22	164	3613	0.039 ppbv #	55
53) Toluene	9.81	91	246258	0.875 ppbv	100
58) Ethyl Benzene	12.70	91	11791	0.033 ppbv	99
59) m/p-Xylene	12.98	91	34135	0.106 ppbv #	31
60) o-Xylene	13.69	91	10689	0.034 ppbv #	31

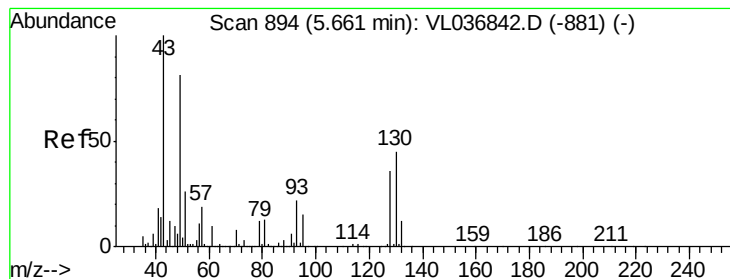
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 11:56

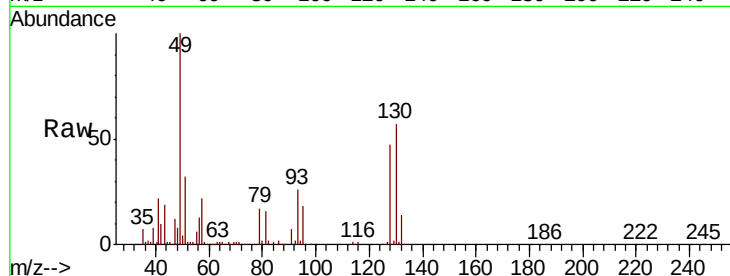
Tot Ion: 49 Resp: 1352332

Ion Ratio Lower Upper

49 100

128 46.8 24.4 73.2

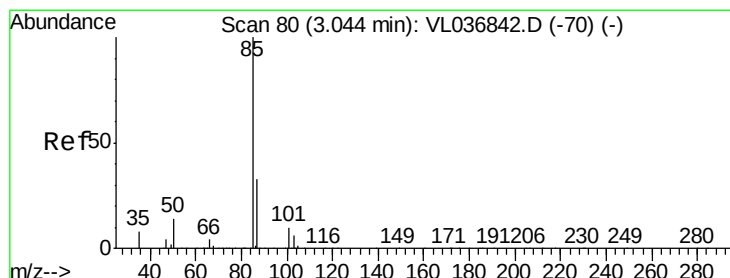
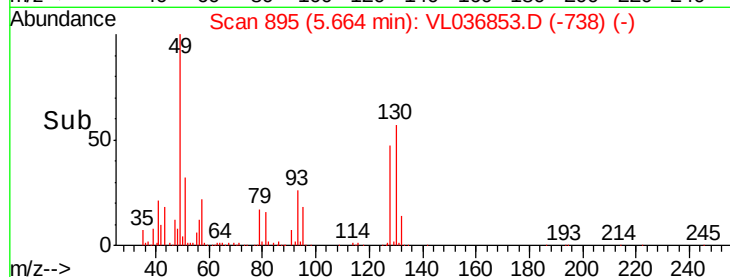
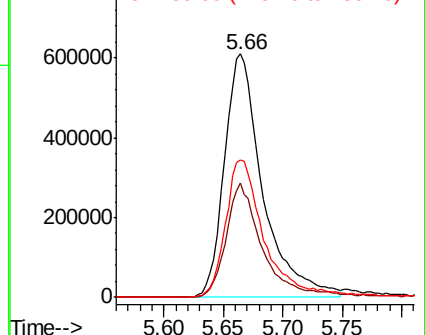
130 58.4 30.3 90.8



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: 0.255 ppbv

RT: 3.05 min Scan# 81

Delta R.T. 0.00 min

Lab File: VL036853.D

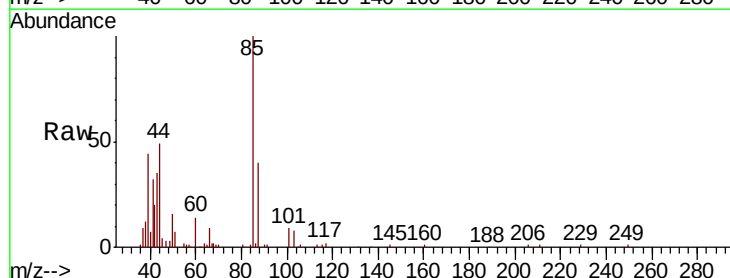
Acq: 27 Apr 2021 11:56

Tgt Ion: 85 Resp: 54404

Ion Ratio Lower Upper

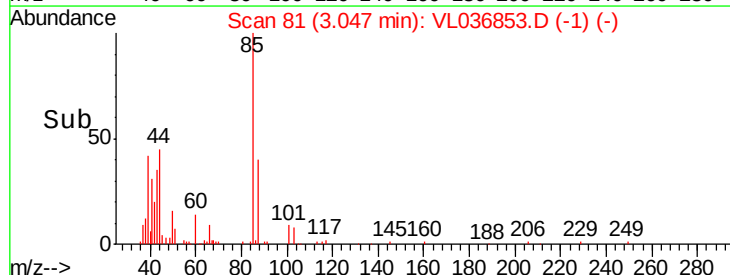
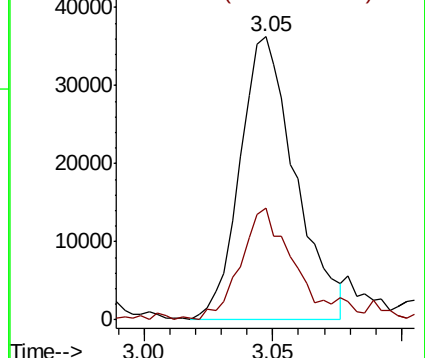
85 100

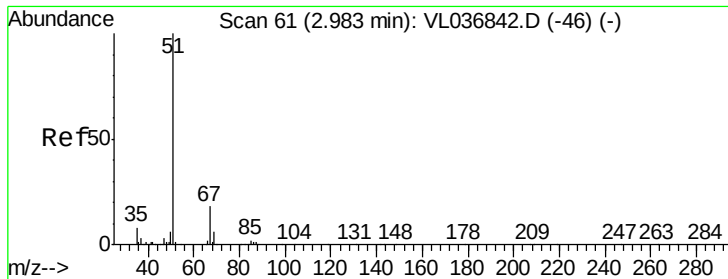
87 38.9 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.505 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

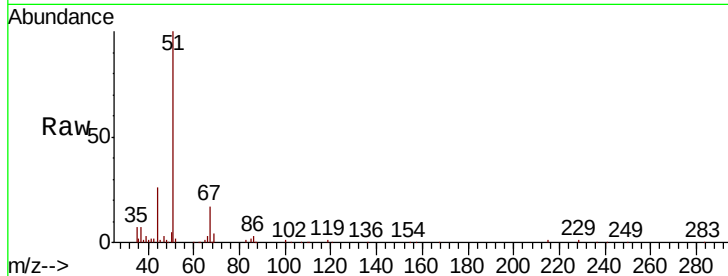
Acq: 27 Apr 2021 11:56

Tot Ion: 51 Resp: 124434

Ion Ratio Lower Upper

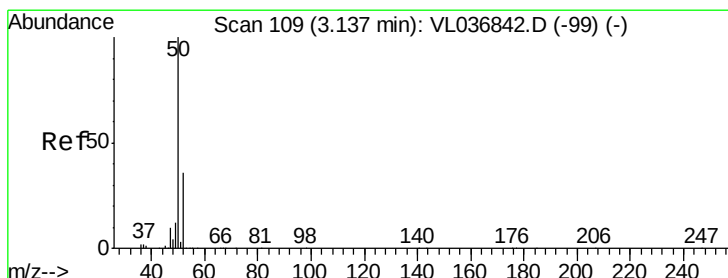
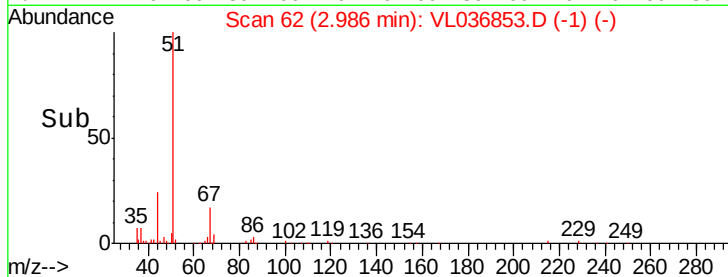
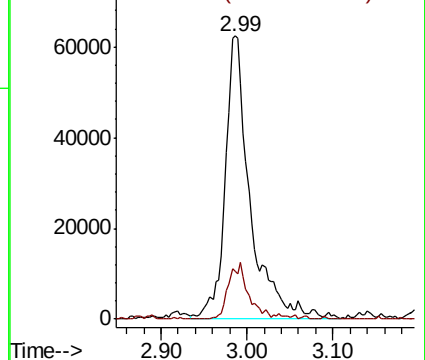
51 100

67 17.0 14.8 22.2



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.381 ppbv

RT: 3.14 min Scan# 109

Delta R.T. 0.00 min

Lab File: VL036853.D

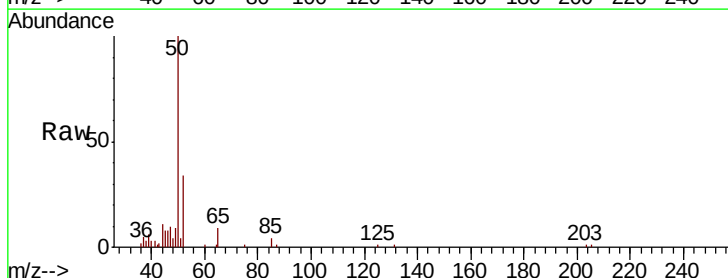
Acq: 27 Apr 2021 11:56

Tgt Ion: 50 Resp: 30850

Ion Ratio Lower Upper

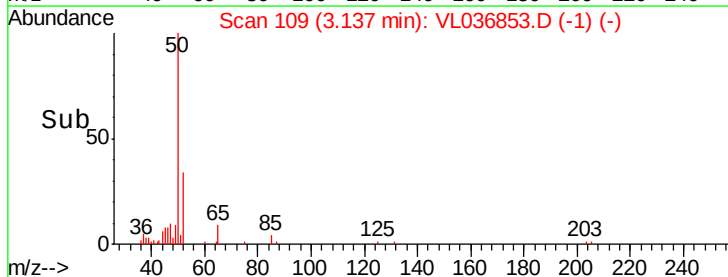
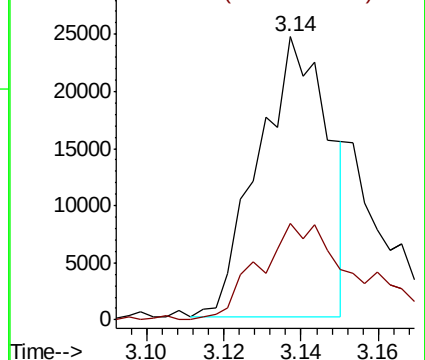
50 100

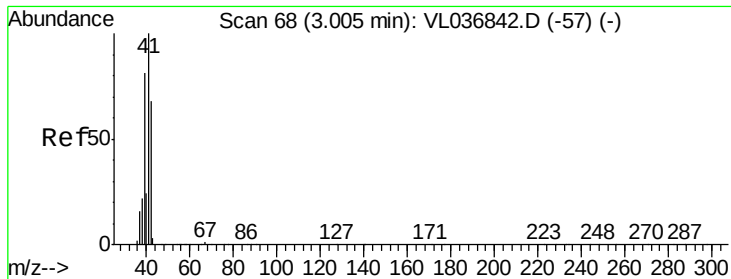
52 34.6 28.5 42.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.699 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

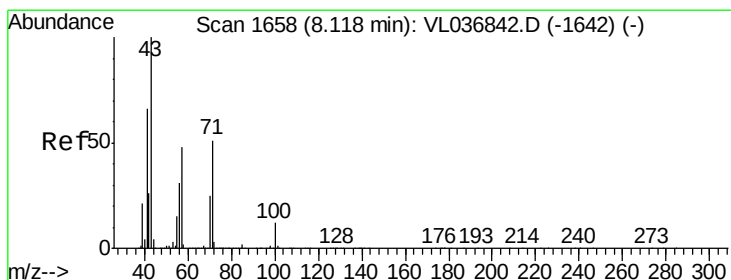
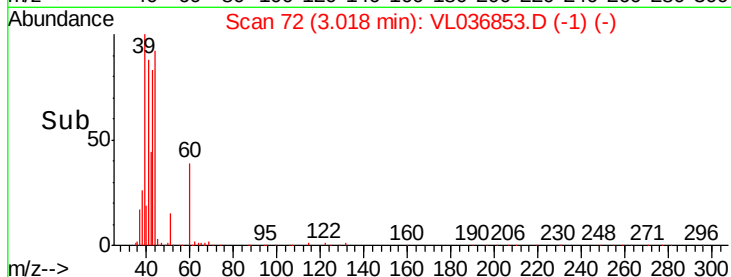
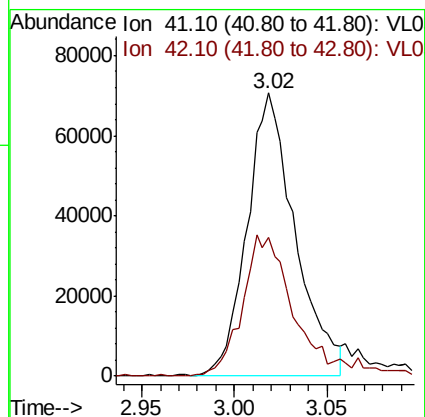
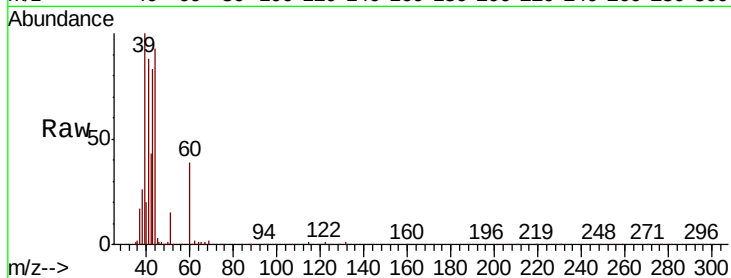
Acq: 27 Apr 2021 11:56

Tot Ion: 41 Resp: 127534

Ion Ratio Lower Upper

41 100

42 56.1 56.0 84.0



#10

Heptane

Concen: 0.235 ppbv

RT: 8.12 min Scan# 1660

Delta R.T. 0.01 min

Lab File: VL036853.D

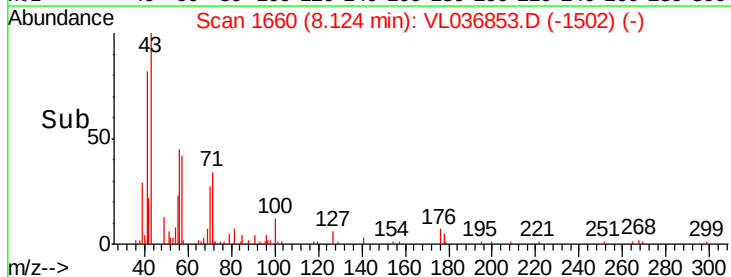
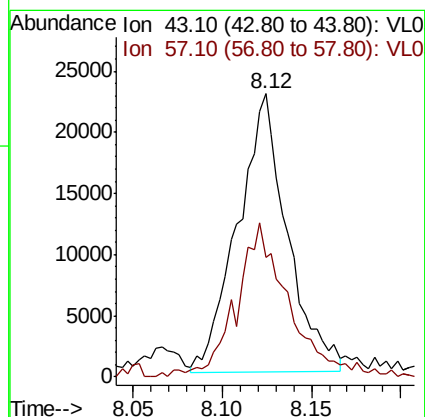
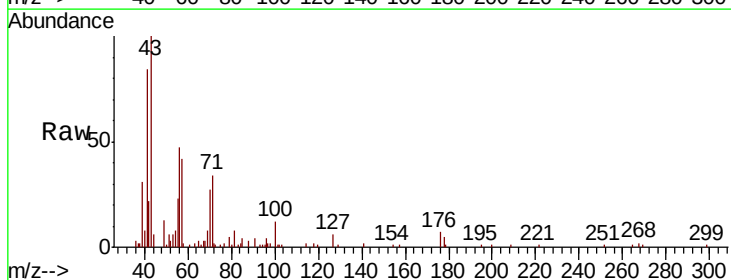
Acq: 27 Apr 2021 11:56

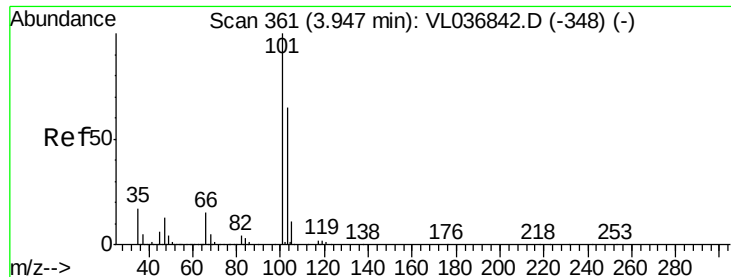
Tgt Ion: 43 Resp: 44347

Ion Ratio Lower Upper

43 100

57 58.9 38.8 58.2#





#11

Trichlorofluoromethane

Concen: 0.224 ppbv

RT: 3.95 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

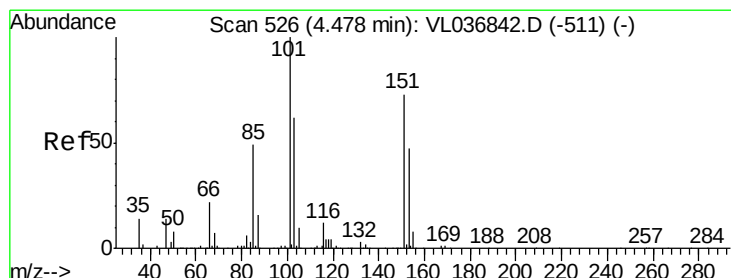
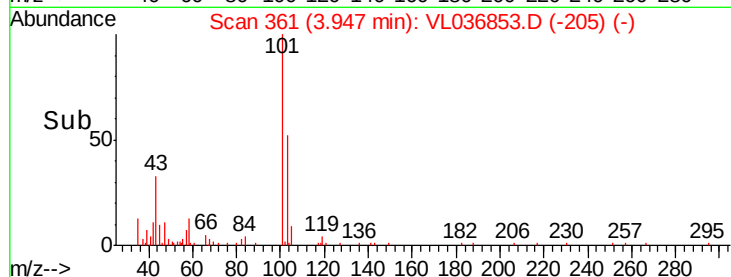
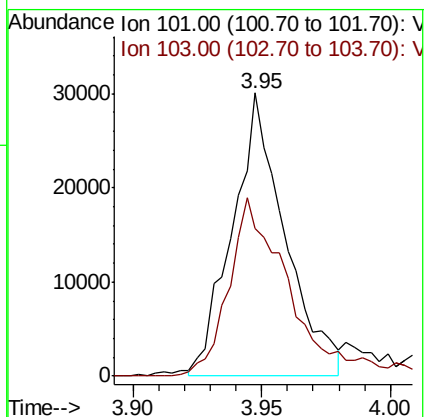
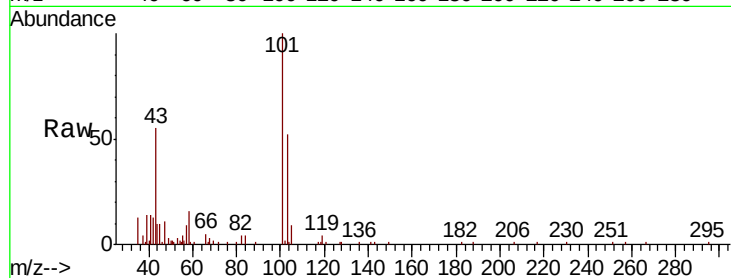
Acq: 27 Apr 2021 11:58

Tot Ion:101 Resp: 42653

Ion Ratio Lower Upper

101 100

103 51.5 51.6 77.4#



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.061 ppbv

RT: 4.49 min Scan# 529

Delta R.T. 0.01 min

Lab File: VL036853.D

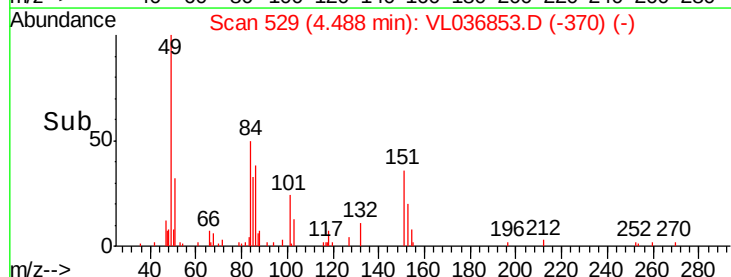
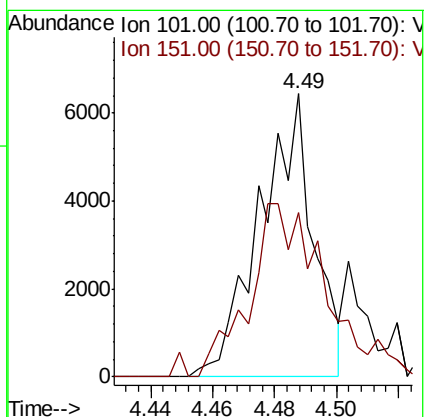
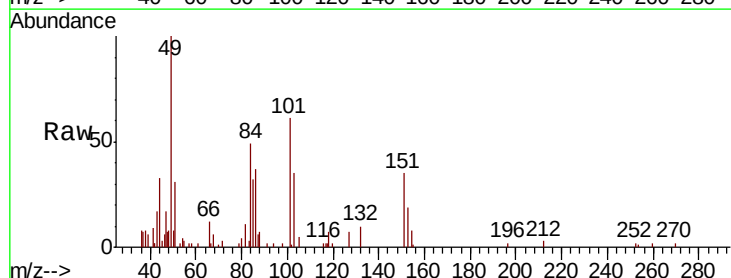
Acq: 27 Apr 2021 11:56

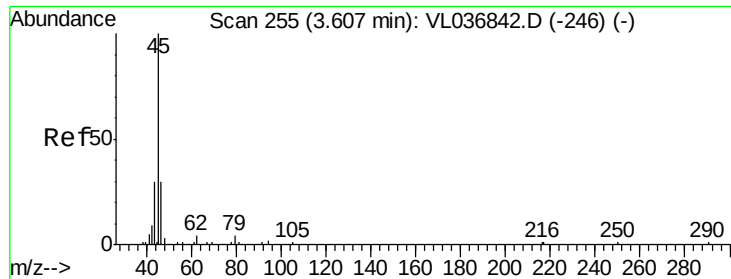
Tgt Ion:101 Resp: 7747

Ion Ratio Lower Upper

101 100

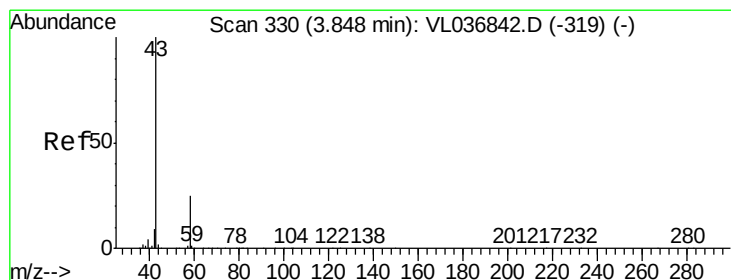
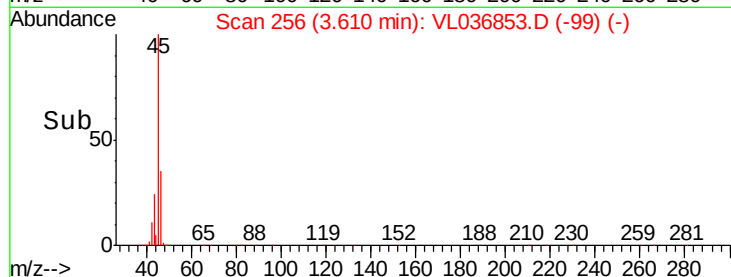
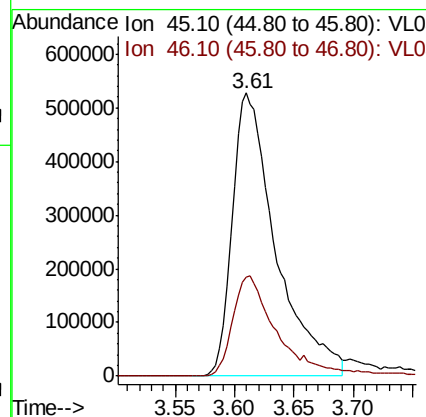
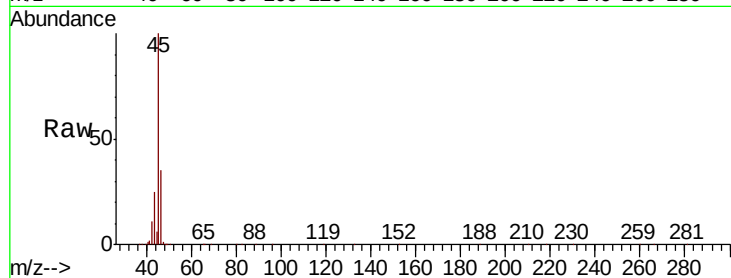
151 91.4 61.1 91.7





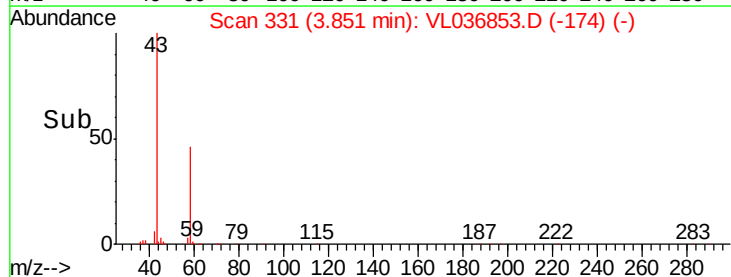
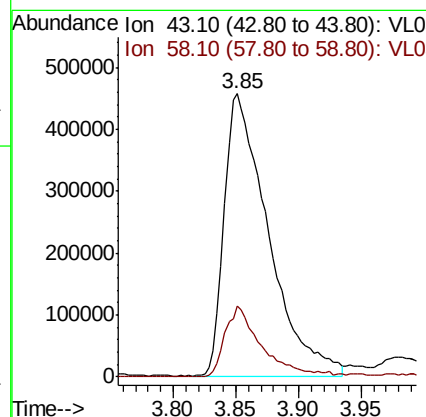
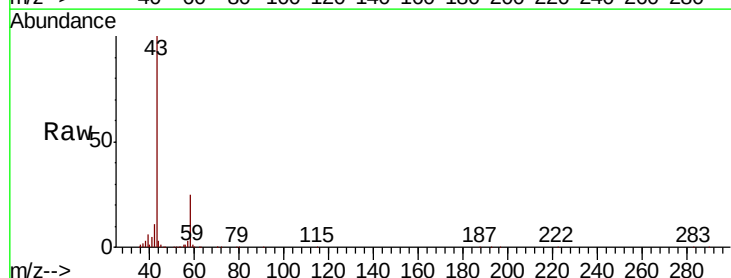
#13
 Ethanol
 Concen: 139.999 ppbv
 RT: 3.61
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 11:56

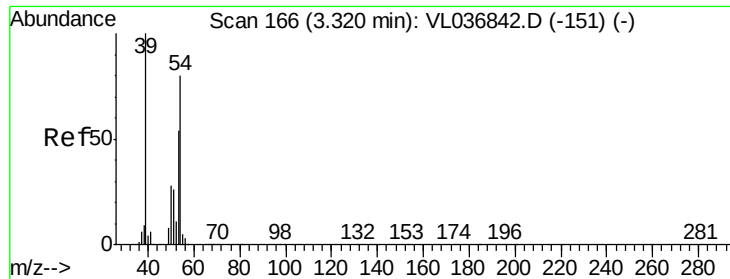
Tot Ion: 45 Resp: 1340143
 Ion Ratio Lower Upper
 45 100
 46 37.1 16.8 67.4



#15
 Acetone
 Concen: 8.712 ppbv
 RT: 3.85 min Scan# 331
 Delta R.T. 0.00 min
 Lab File: VL036853.D
 Acq: 27 Apr 2021 11:56

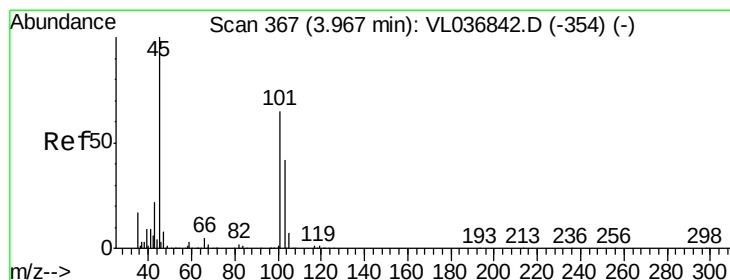
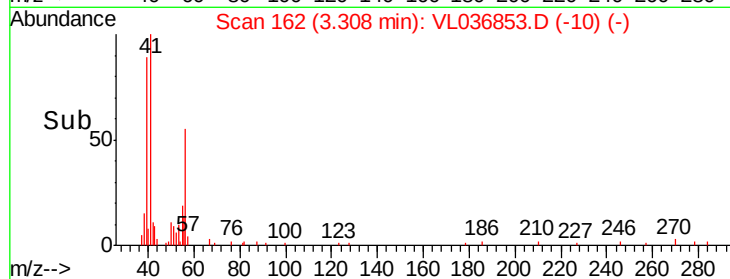
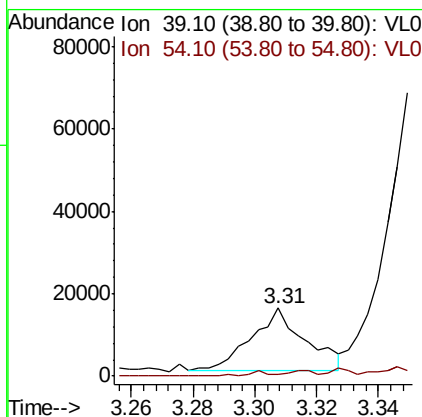
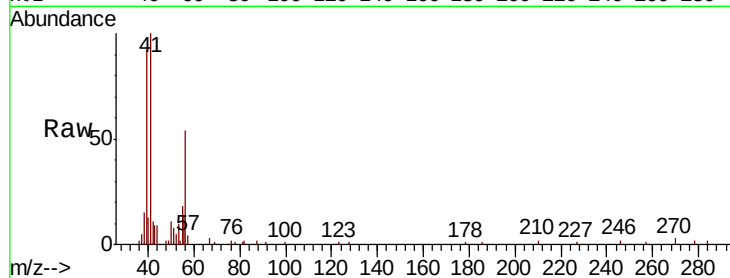
Tgt Ion: 43 Resp: 1110426
 Ion Ratio Lower Upper
 43 100
 58 21.2 21.7 32.5#





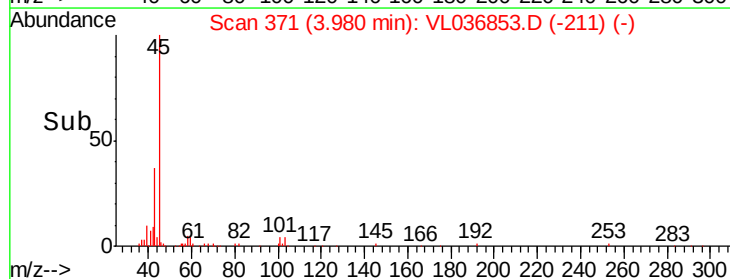
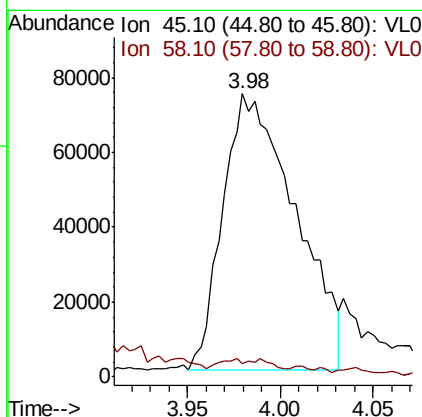
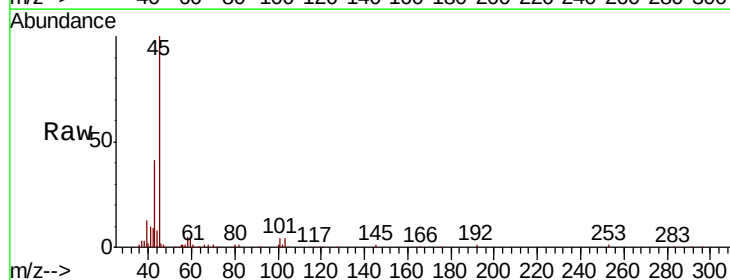
#16
 1,3-Butadiene
 Concen: 0.225 ppbv
 RT: 3.31
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 11:56

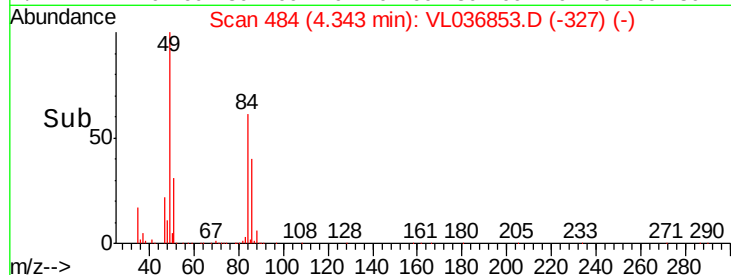
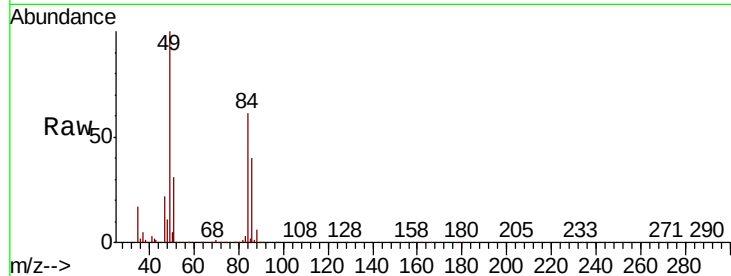
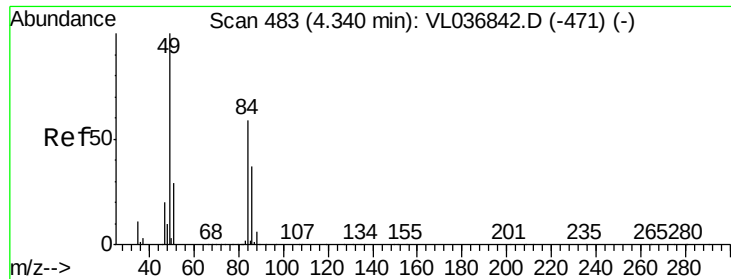
Tot Ion: 39 Resp: 18304
 Ion Ratio Lower Upper
 39 100
 54 13.0 59.6 89.4#



#19
 Isopropyl Alcohol
 Concen: 3.169 ppbv
 RT: 3.98 min Scan# 371
 Delta R.T. 0.01 min
 Lab File: VL036853.D
 Acq: 27 Apr 2021 11:56

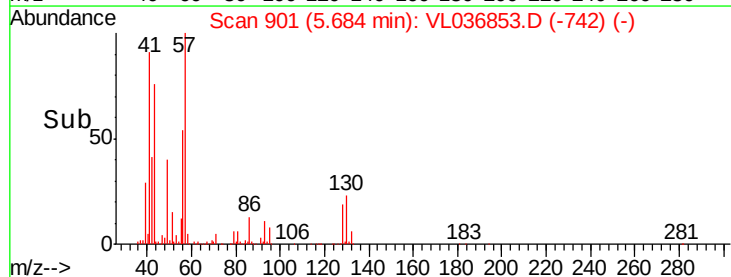
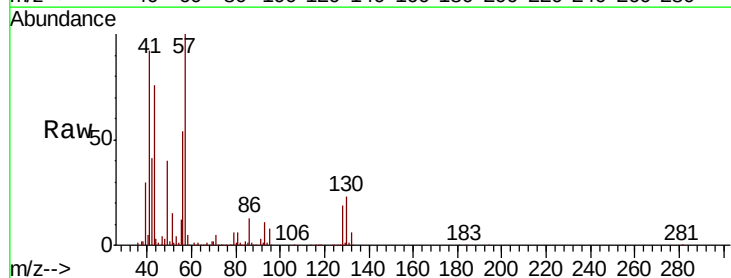
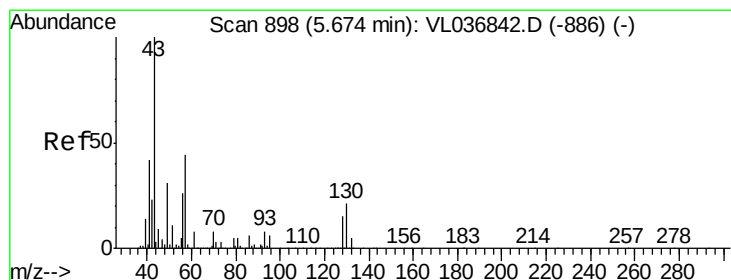
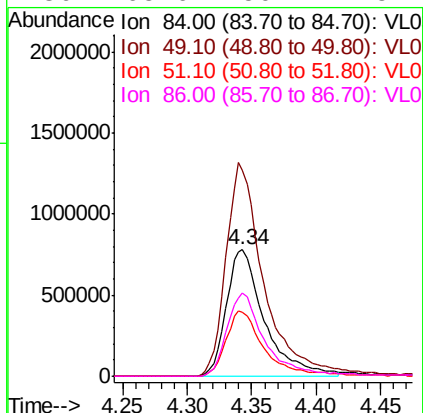
Tgt Ion: 45 Resp: 200165
 Ion Ratio Lower Upper
 45 100
 58 4.4 2.8 4.2#





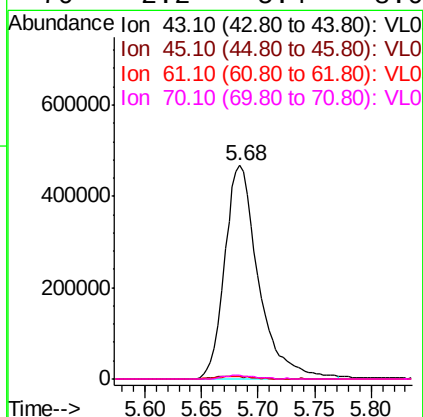
#20
Methvlene Chloride
Concen: 26.236 ppbv
RT: 4.34 Instrument :
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 27 Apr 2021 11:56

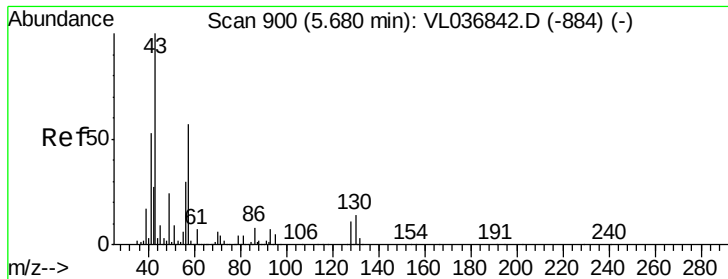
Tot Ion:	84	Resp:	1599161
Ion	Ratio	Lower	Upper
84	100		
49	163.6	135.4	203.0
51	50.7	39.3	58.9
86	65.6	50.2	75.2



#25
Ethyl Acetate
Concen: 3.129 ppbv
RT: 5.68 min Scan# 901
Delta R.T. 0.01 min
Lab File: VL036853.D
Acq: 27 Apr 2021 11:56

Tgt Ion:	43	Resp:	974059
Ion	Ratio	Lower	Upper
43	100		
45	1.8	7.8	11.8#
61	1.4	7.4	11.0#
70	2.2	5.4	8.0#





#26

Hexane

Concen: 8.387 ppbv

RT: 5.68 Instrument :

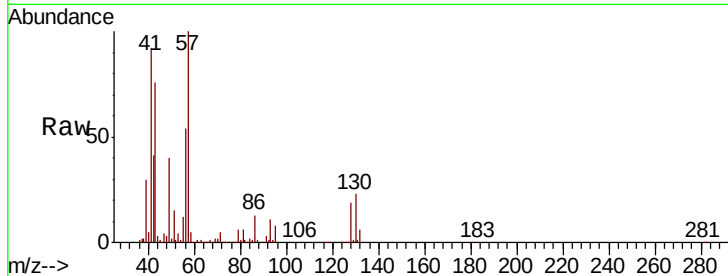
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

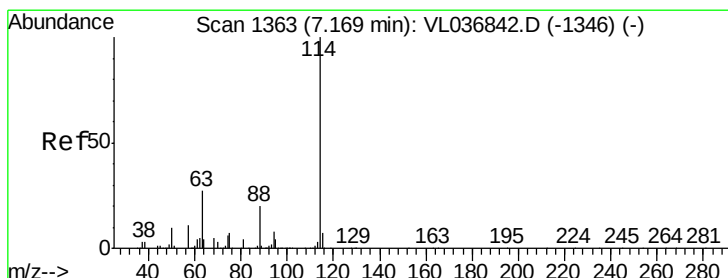
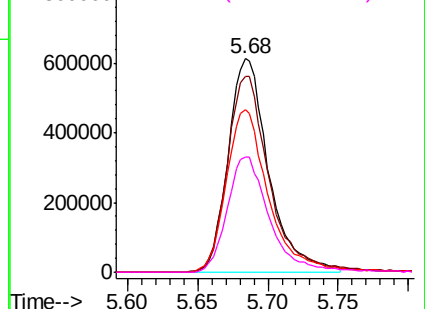
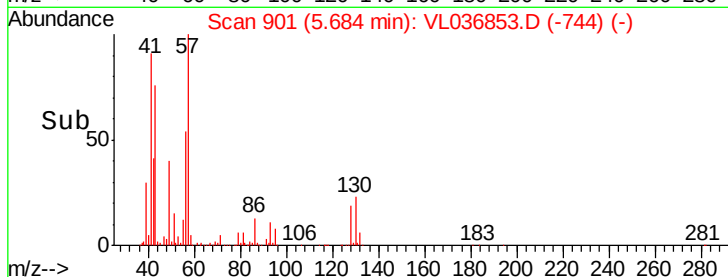
Acq: 27 Apr 2021 11:56

Tot Ion: 57 Resp: 1221789

Ion	Ratio	Lower	Upper
57	100		
41	98.0	77.7	116.5
43	81.1	180.5	270.7#
56	57.3	44.6	66.8



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



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1364

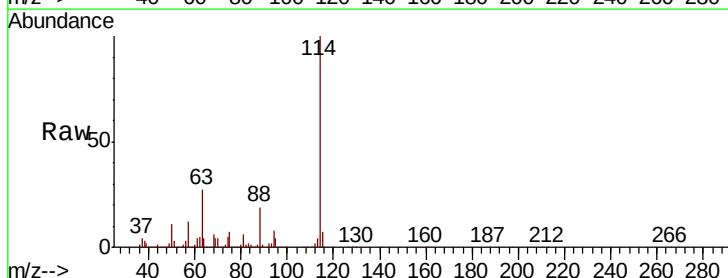
Delta R.T. 0.00 min

Lab File: VL036853.D

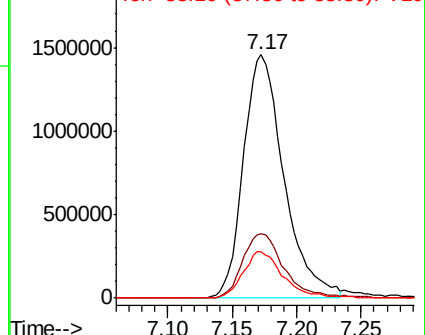
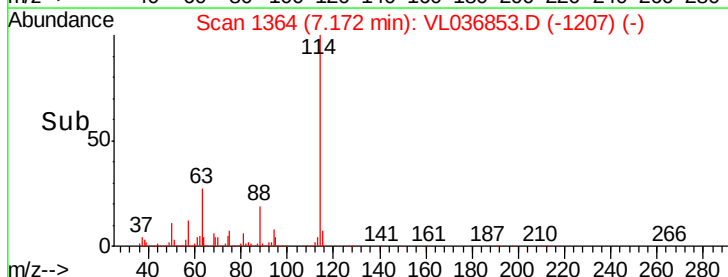
Acq: 27 Apr 2021 11:56

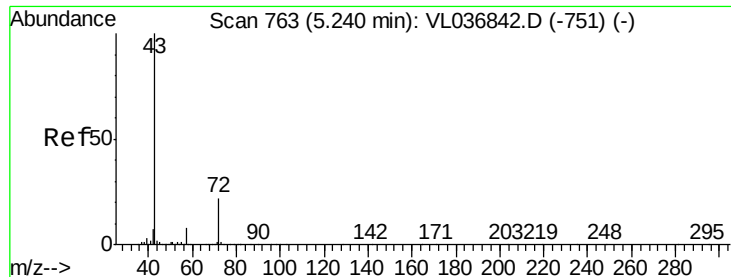
Tgt Ion: 114 Resp: 3191653

Ion	Ratio	Lower	Upper
114	100		
63	27.5	21.9	32.9
88	19.4	15.1	22.7



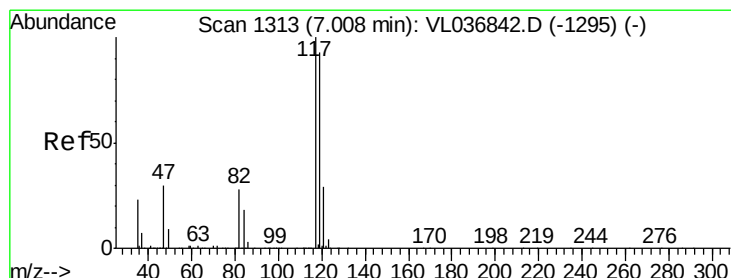
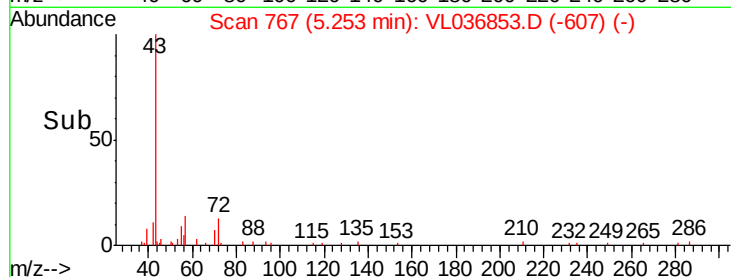
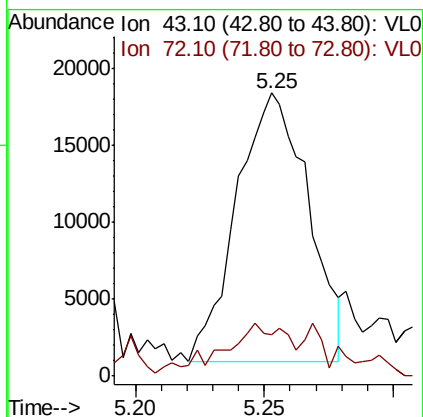
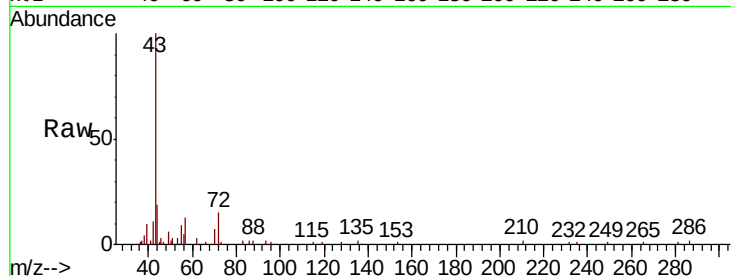
Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





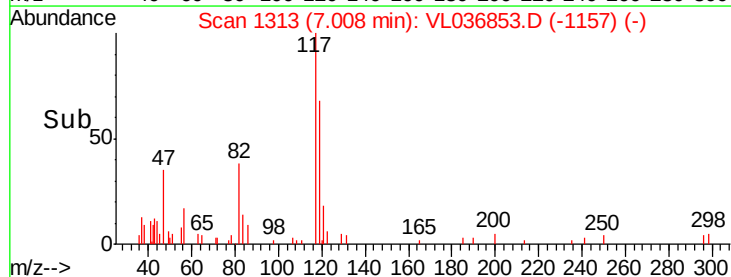
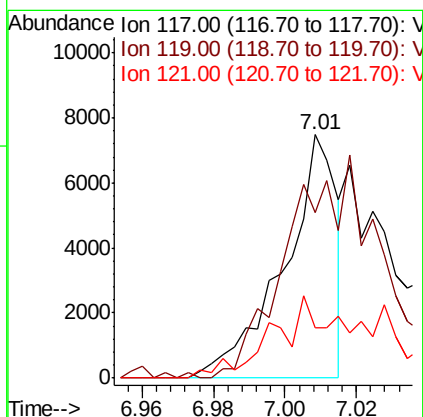
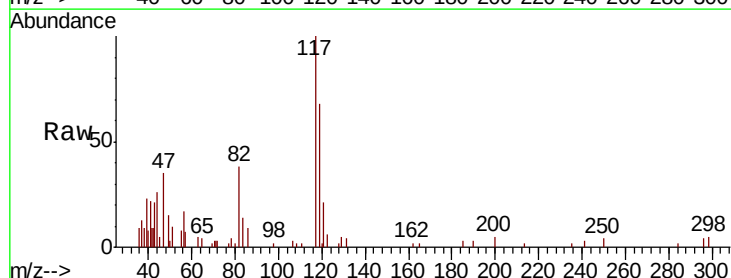
#34
 2-Butanone
 Concen: 0.242 ppbv
 RT: 5.25 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 11:56

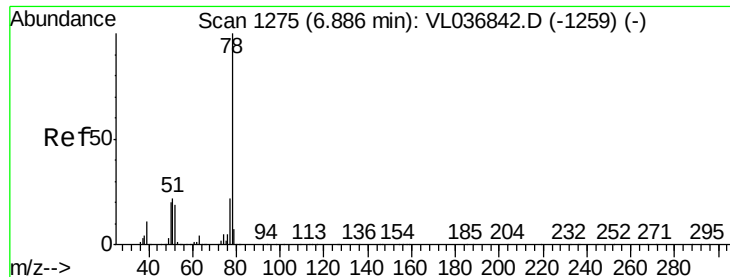
Tot Ion: 43 Resp: 33812
 Ion Ratio Lower Upper
 43 100
 72 30.1 17.6 26.4#



#35
 Carbon Tetrachloride
 Concen: 0.035 ppbv
 RT: 7.01 min Scan# 1313
 Delta R.T. 0.00 min
 Lab File: VL036853.D
 Acq: 27 Apr 2021 11:56

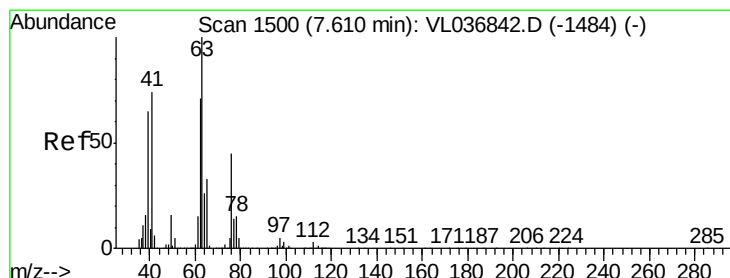
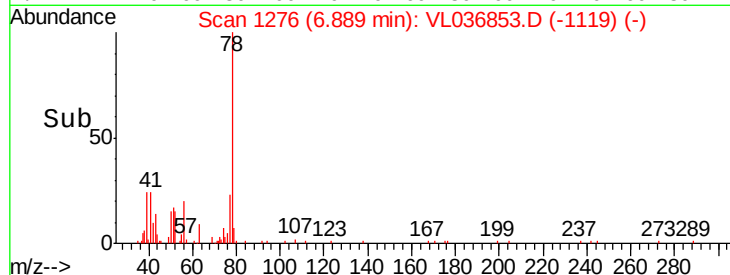
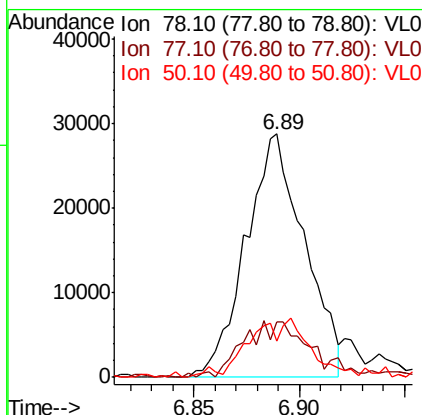
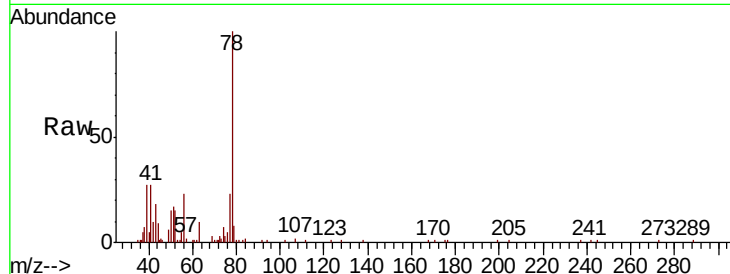
Tgt Ion: 117 Resp: 7679
 Ion Ratio Lower Upper
 117 100
 119 67.1 74.6 111.8#
 121 21.0 23.3 34.9#





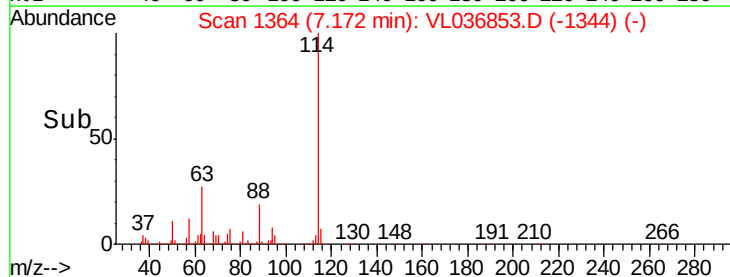
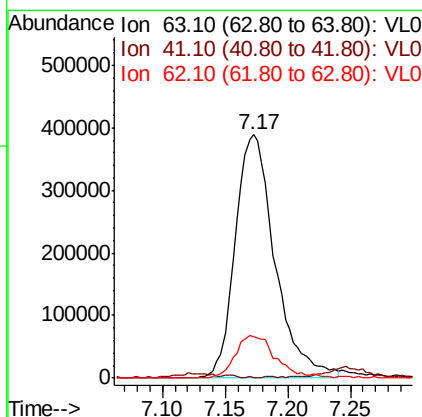
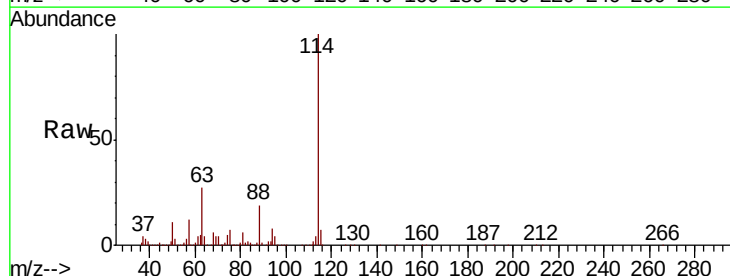
#36
Benzene
Concen: 0.207 ppbv
RT: 6.89
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Apr 2021 11:56

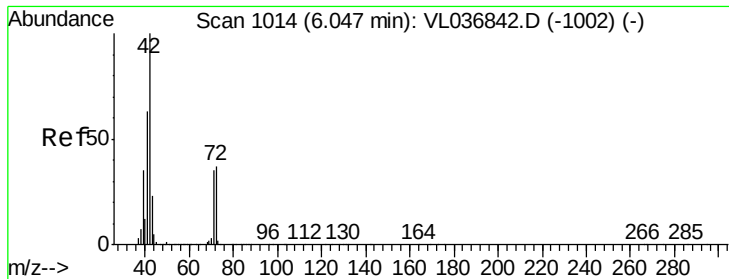
Tot Ion	Ratio	Lower	Upper
78	100		
77	21.0	17.6	26.4
50	14.8	16.3	24.5



#39
1,2-Dichloropropane
Concen: 7.973 ppbv
RT: 7.17 min Scan# 1364
Delta R.T. -0.44 min
Lab File: VL036853.D
Acq: 27 Apr 2021 11:56

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	59.1	88.7
62	17.2	56.9	85.3





#41

Tetrahydrofuran

Concen: 8.379 ppbv

RT: 5.68 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 11:56

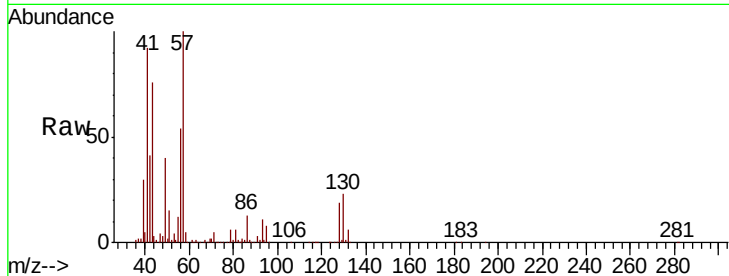
Tot Ion: 42 Resp: 512425

Ion Ratio Lower Upper

42 100

72 1.1 29.7 44.5#

71 13.8 29.0 43.6#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0

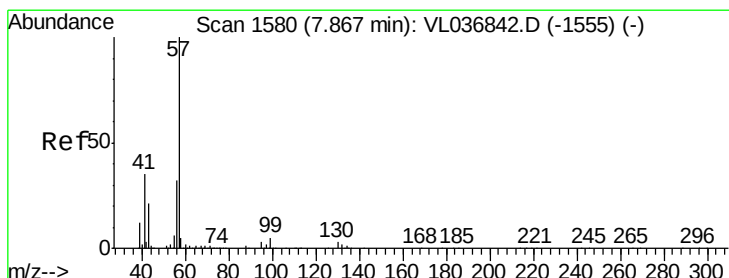
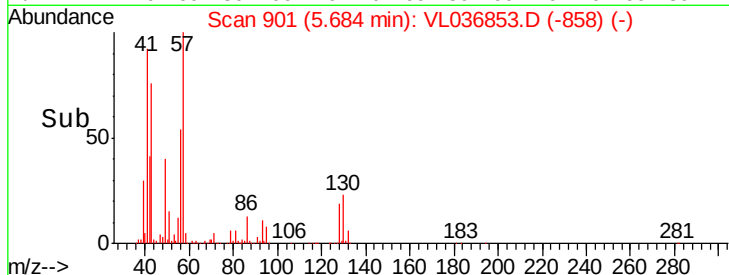
5.68

200000

100000

0

Time--> 5.60 5.65 5.70 5.75



#44

2,2,4-Trimethylpentane

Concen: 0.112 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. 0.00 min

Lab File: VL036853.D

Acq: 27 Apr 2021 11:56

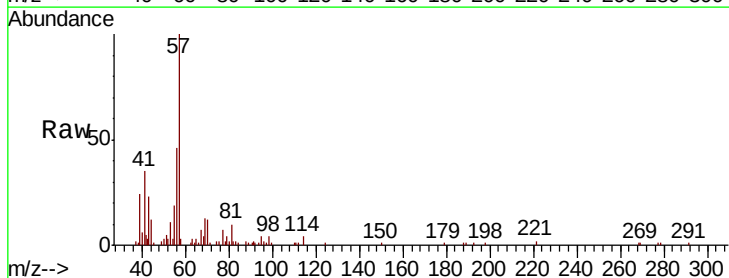
Tgt Ion: 57 Resp: 51778

Ion Ratio Lower Upper

57 100

41 63.0 28.2 42.4#

56 57.1 25.9 38.9#



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

7.87

25000

20000

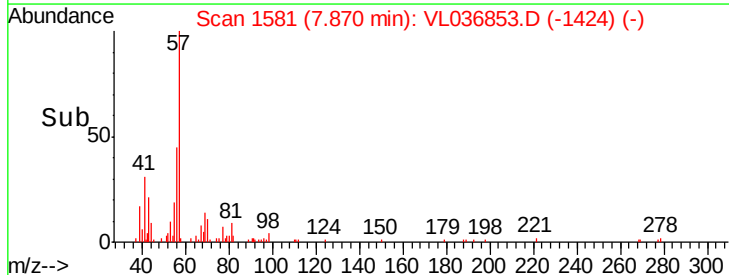
15000

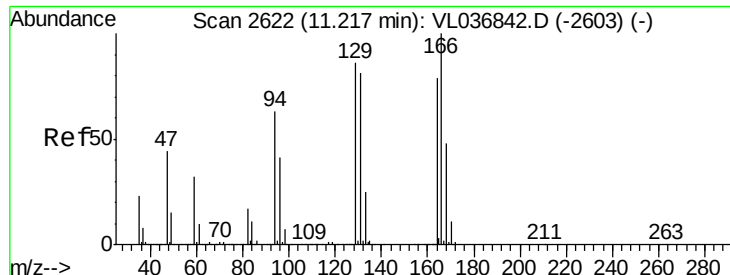
10000

5000

0

Time--> 7.80 7.85 7.90





#52

Tetrachloroethene

Concen: 0.039 ppbv

RT: 11.22

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 11:56

Tot Ion:164 Resp: 3613

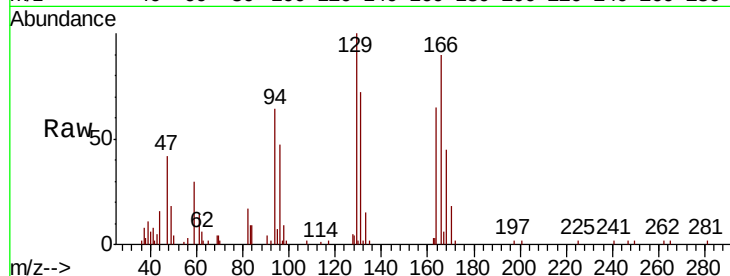
Ion Ratio Lower Upper

164 100

166 215.4 100.9 151.3#

129 84.8 87.0 130.4#

131 130.0 81.7 122.5#



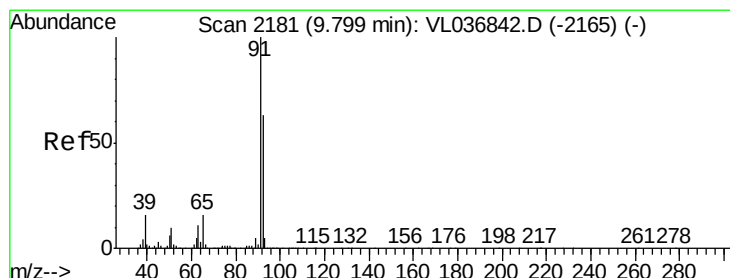
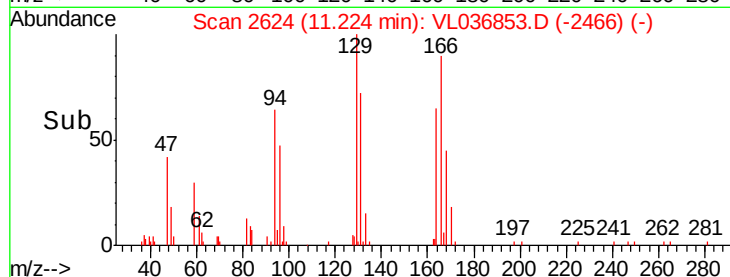
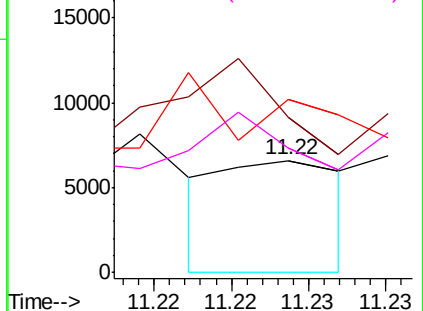
Abundance

Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.875 ppbv

RT: 9.81 min Scan# 2183

Delta R.T. 0.01 min

Lab File: VL036853.D

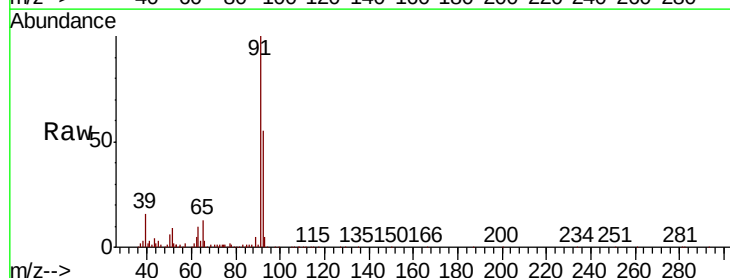
Acq: 27 Apr 2021 11:56

Tgt Ion: 91 Resp: 246258

Ion Ratio Lower Upper

91 100

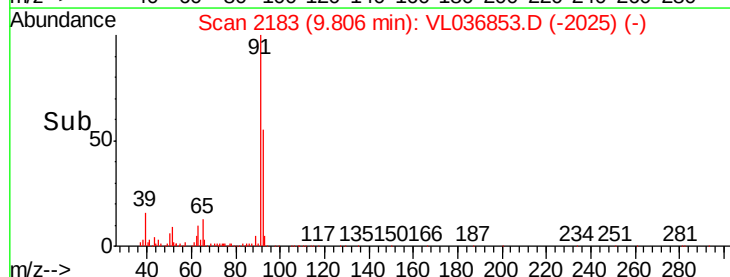
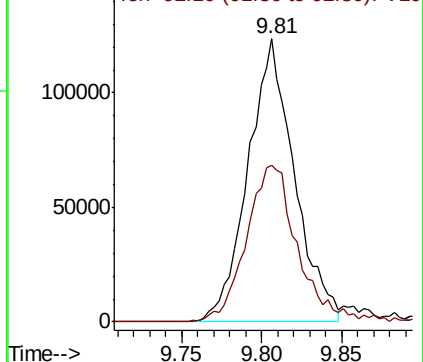
92 61.4 49.0 73.4

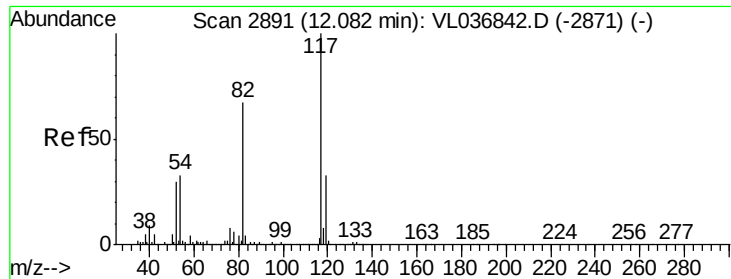


Abundance

Ion 91.10 (90.80 to 91.80): VL0

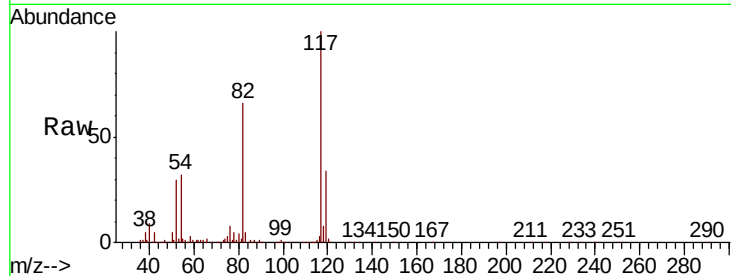
Ion 92.10 (91.80 to 92.80): VL0



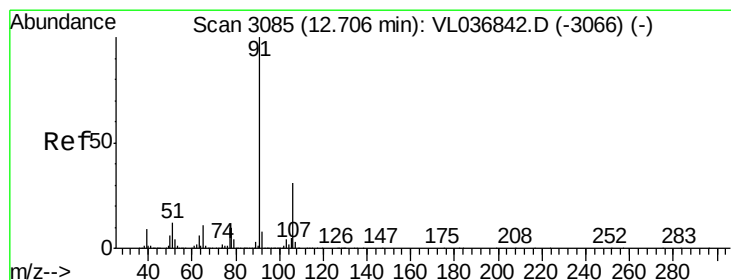
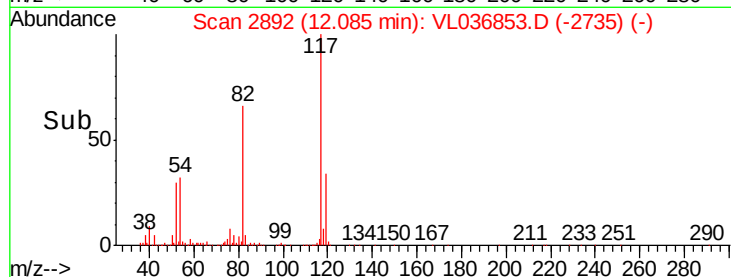
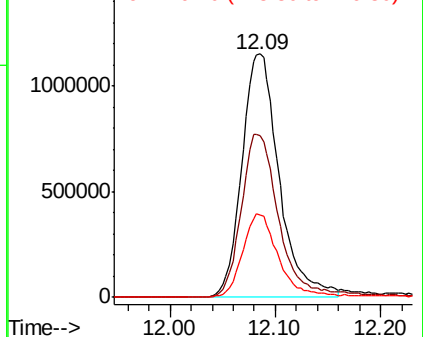


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Apr 2021 11:50

Tot Ion:117 Resp: 2836333
Ion Ratio Lower Upper
117 100
82 69.3 53.5 80.3
119 34.0 25.6 38.4

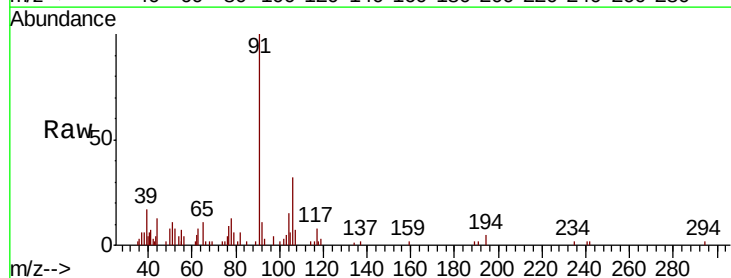


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

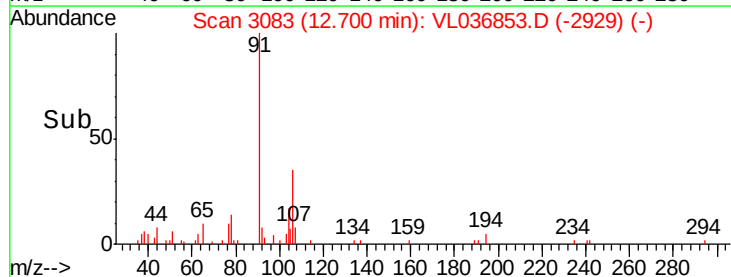
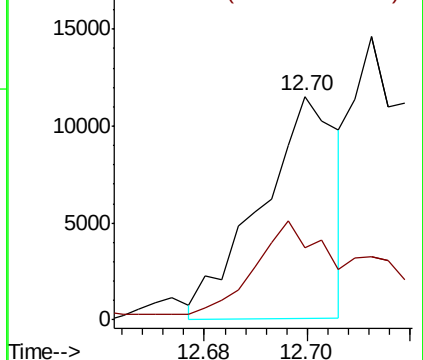


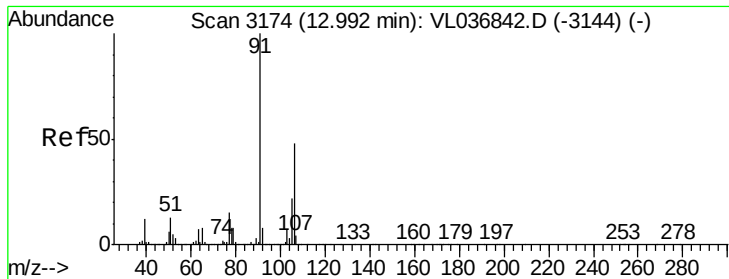
#58
Ethyl Benzene
Concen: 0.033 ppbv
RT: 12.70 min Scan# 3083
Delta R.T. -0.01 min
Lab File: VL036853.D
Acq: 27 Apr 2021 11:56

Tgt Ion: 91 Resp: 11791
Ion Ratio Lower Upper
91 100
106 32.1 25.1 37.7



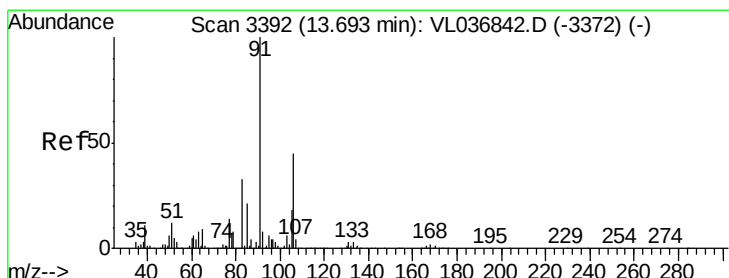
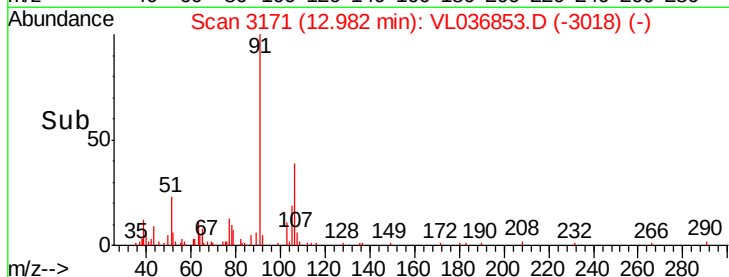
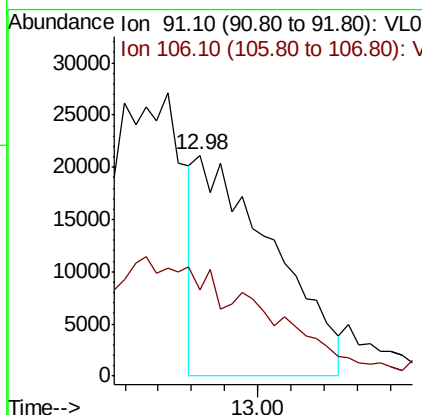
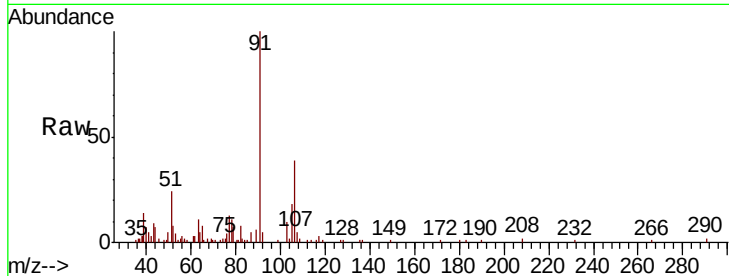
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





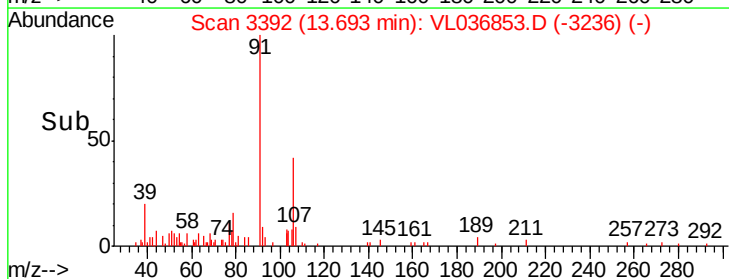
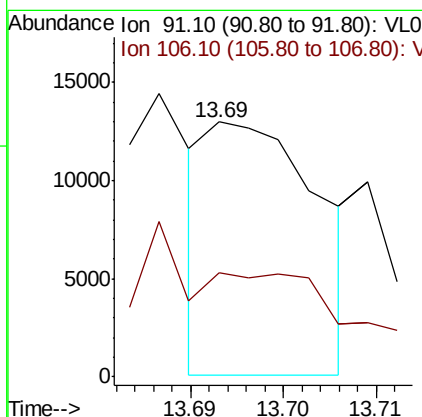
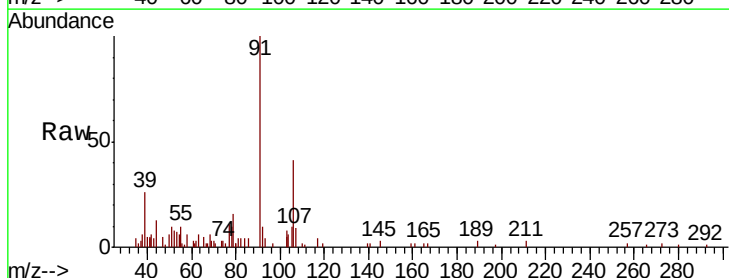
#59
m/p-Xylene
Concen: 0.106 ppbv
RT: 12.98 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Apr 2021 11:58

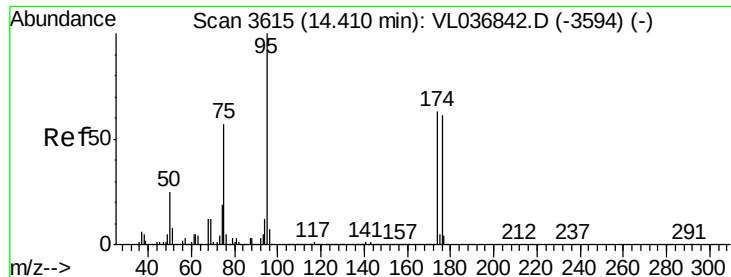
Tot Ion: 91 Resp: 34135
Ion Ratio Lower Upper
91 100
106 0.0 35.8 53.6#



#60
o-Xylene
Concen: 0.034 ppbv
RT: 13.69 min Scan# 3392
Delta R.T. 0.00 min
Lab File: VL036853.D
Acq: 27 Apr 2021 11:56

Tgt Ion: 91 Resp: 10689
Ion Ratio Lower Upper
91 100
106 0.0 22.6 67.7#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.204 ppbv

RT: 14.42 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 27 Apr 2021 11:50

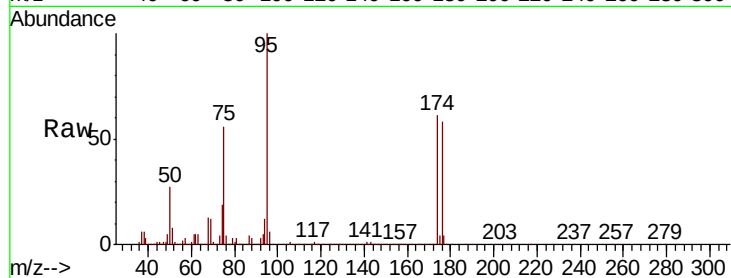
Tot Ion: 95 Resp: 2323311

Ion Ratio Lower Upper

95 100

174 64.9 52.2 78.2

175 4.4 4.0 6.0



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

