

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL042821\
 Data File : VL036882.D
 Acq On : 28 Apr 2021 16:42
 Operator : SY/AP
 Sample : M2201-02
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 29 03:10:01 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL042721AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue 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	5.69	49	1495528	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.20	114	3425320	10.00	ppbv	0.03
55) Chlorobenzene-d5	12.11	117	3044826	10.00	ppbv	0.03

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.44	95	2427261	9.93	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.30%

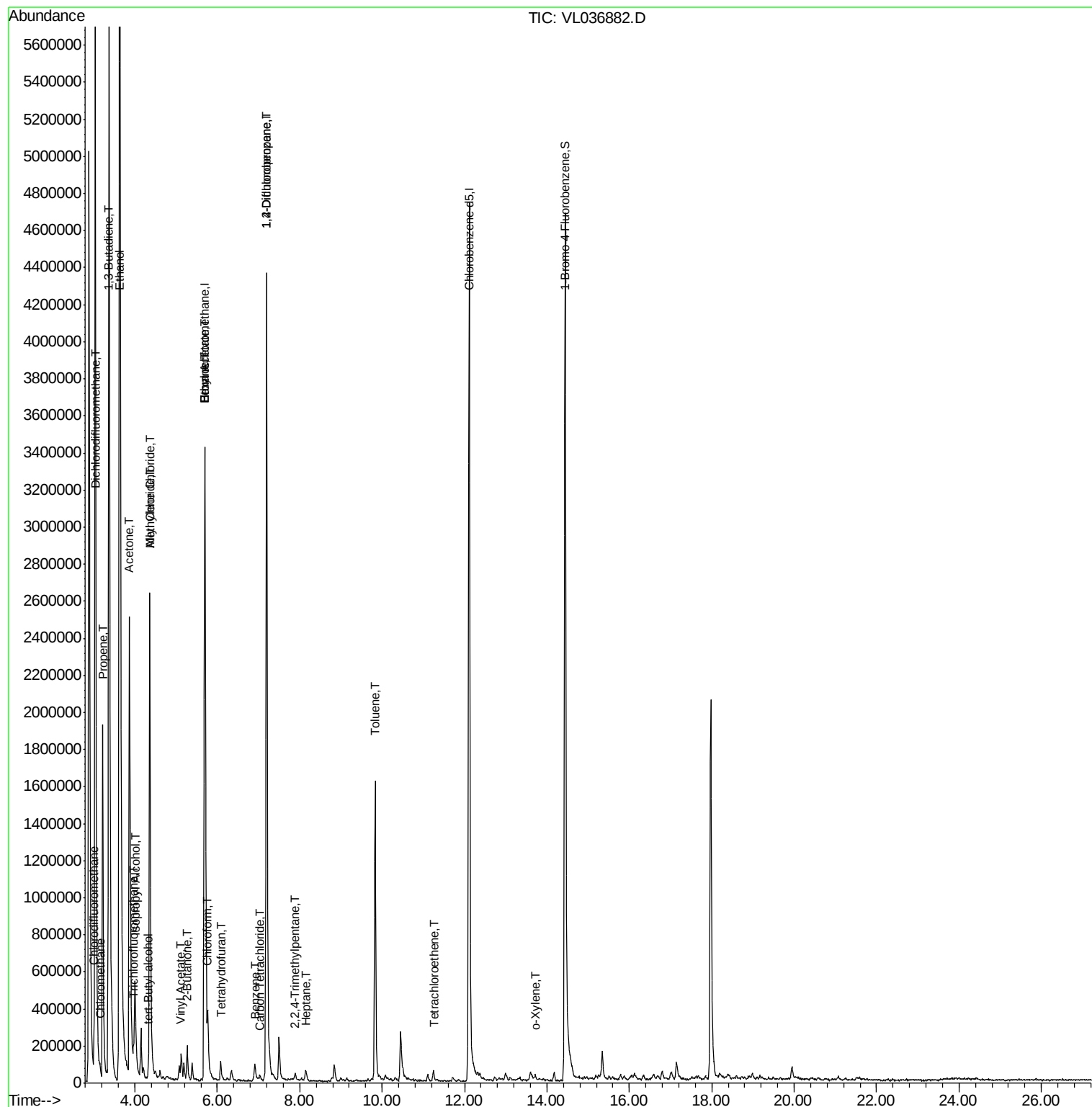
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.06	85	53846	0.229	ppbv 96
3) Chlorodifluoromethane	3.00	51	122043	0.448	ppbv # 86
4) Chloromethane	3.16	50	48269	0.539	ppbv # 86
9) Propene	3.21	41	668549	8.054	ppbv 97
10) Heptane	8.14	43	8328	0.040	ppbv # 1
11) Trichlorofluoromethane	3.96	101	77414	0.368	ppbv 99
13) Ethanol	3.63	45	10972136	1036.465	ppbv 94
15) Acetone	3.86	43	3541678	25.126	ppbv 96
16) 1,3-Butadiene	3.37	39	1696647	18.823	ppbv # 14
17) tert-Butyl alcohol	4.32	59	5789	0.051	ppbv # 72
19) Isopropyl Alcohol	4.00	45	636198	9.109	ppbv # 96
20) Methylene Chloride	4.36	84	1072984	15.918	ppbv 94
21) Allyl Chloride	4.37	41	17325	0.165	ppbv # 29
23) Vinyl Acetate	5.10	43	8101	0.042	ppbv # 78
25) Ethyl Acetate	5.70	43	644616	1.872	ppbv # 81
26) Hexane	5.71	57	804958	4.997	ppbv # 47
29) Chloroform	5.77	83	189032	0.753	ppbv 91
34) 2-Butanone	5.27	43	221284	1.475	ppbv 99
35) Carbon Tetrachloride	7.04	117	8577	0.037	ppbv # 73
36) Benzene	6.91	78	56784	0.197	ppbv # 93
39) 1,2-Dichloropropane	7.20	63	918806	7.947	ppbv # 23
41) Tetrahydrofuran	6.07	42	24979	0.381	ppbv # 38
44) 2,2,4-Trimethylpentane	7.89	57	18228	0.037	ppbv # 29
52) Tetrachloroethene	11.26	164	3014	0.031	ppbv # 52
53) Toluene	9.83	91	1246062	4.126	ppbv 99
60) o-Xylene	13.71	91	13068	0.039	ppbv 89

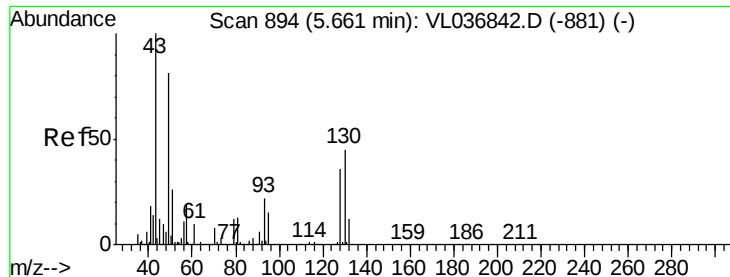
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL042721AIR.M
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QLast Update : Tue Apr 27 16:56:35 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.03 min

Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

Instrument :

MSVOA_L

ClientSampleId :

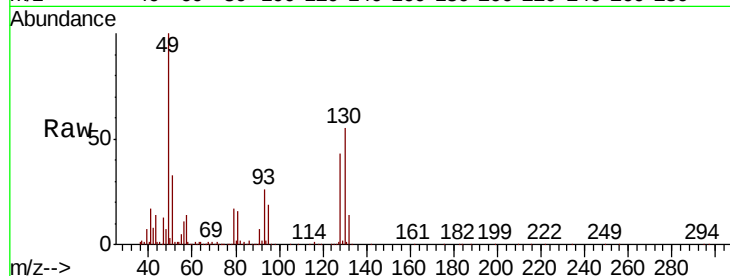
Tot Ion: 49 Resp: 1495528

Ion Ratio Lower Upper

49 100

128 45.3 24.4 73.2

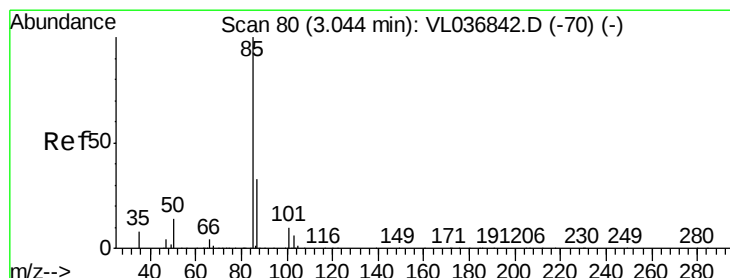
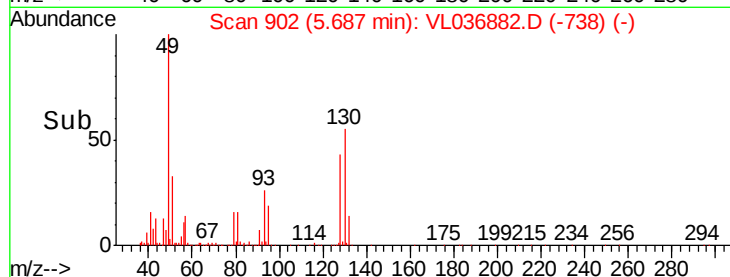
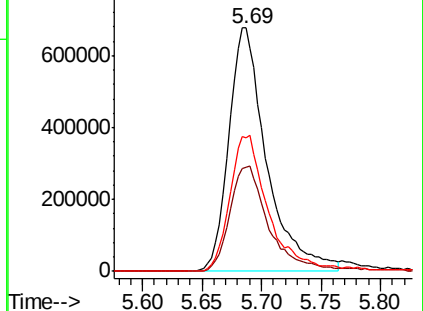
130 58.2 30.3 90.8



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.229 ppbv

RT: 3.06 min Scan# 85

Delta R.T. 0.02 min

Lab File: VL036882.D

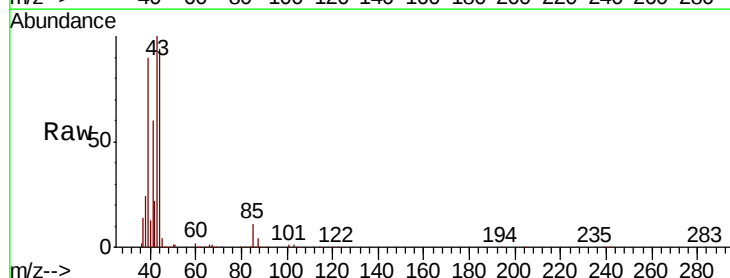
Acq: 28 Apr 2021 16:42

Tgt Ion: 85 Resp: 53846

Ion Ratio Lower Upper

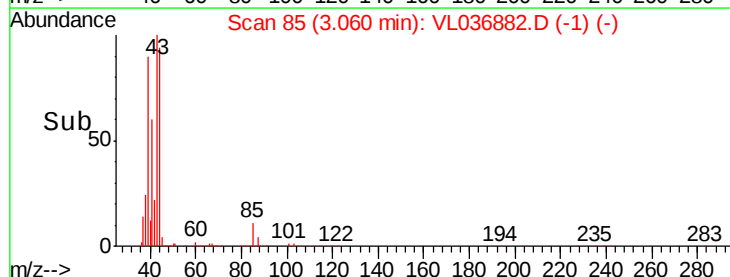
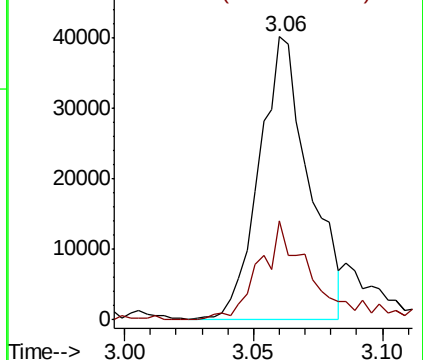
85 100

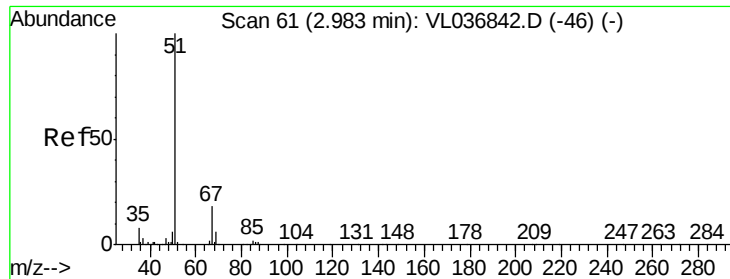
87 35.2 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.448 ppbv

RT: 3.00 min Scan# 67

Delta R.T. 0.02 min

Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

Instrument :

MSVOA_L

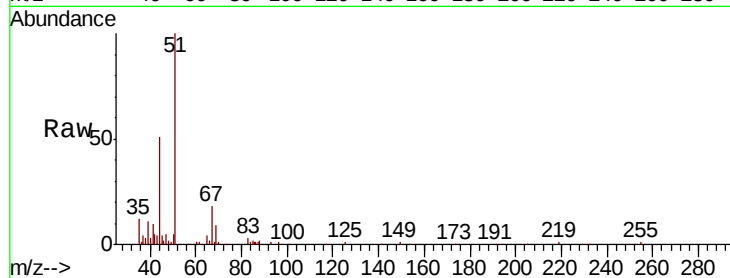
ClientSampleId :

Tot Ion: 51 Resp: 122043

Ion Ratio Lower Upper

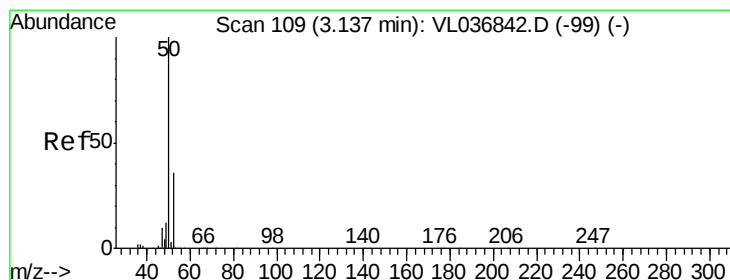
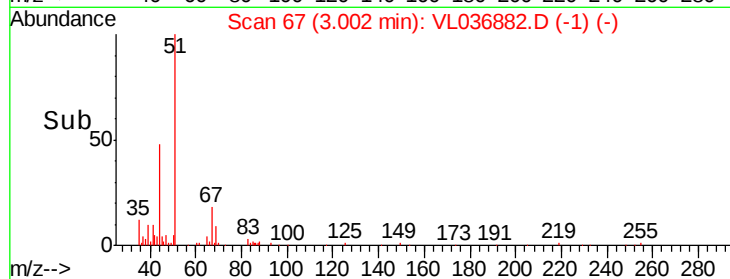
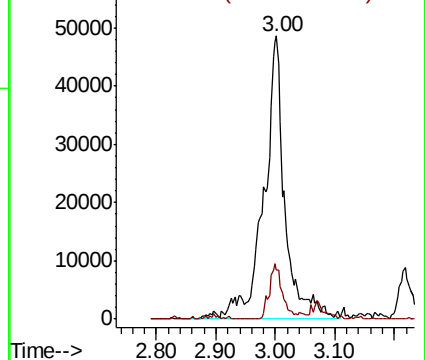
51 100

67 12.1 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: 0.539 ppbv

RT: 3.16 min Scan# 115

Delta R.T. 0.02 min

Lab File: VL036882.D

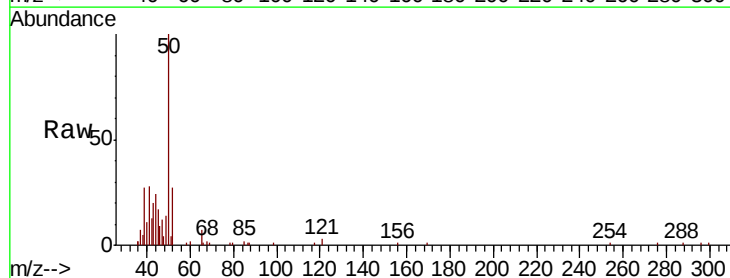
Acq: 28 Apr 2021 16:42

Tgt Ion: 50 Resp: 48269

Ion Ratio Lower Upper

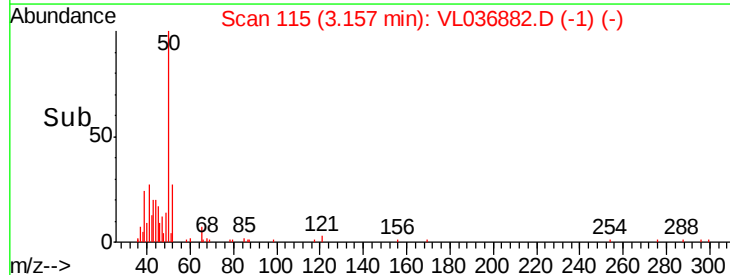
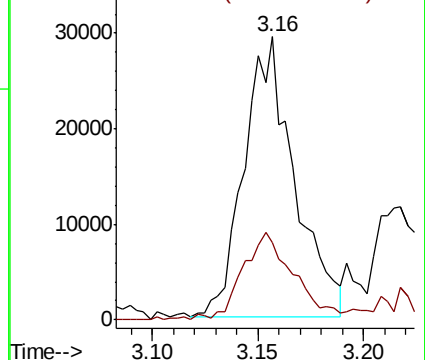
50 100

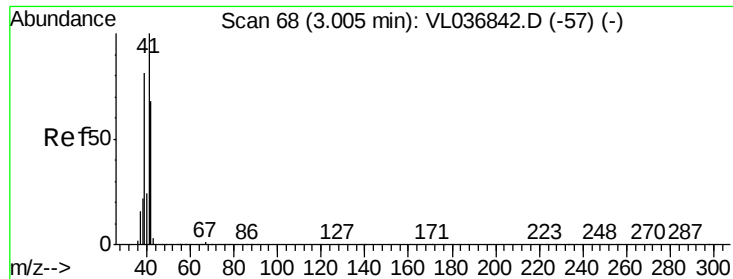
52 27.2 28.5 42.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

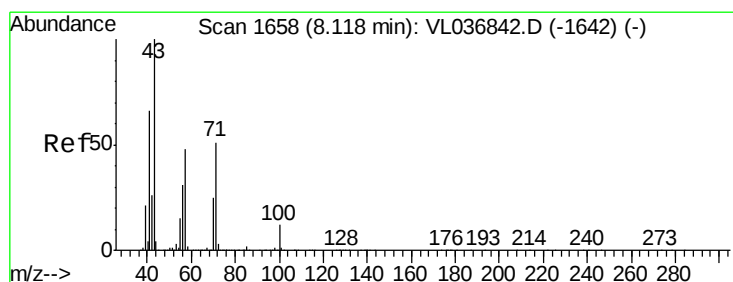
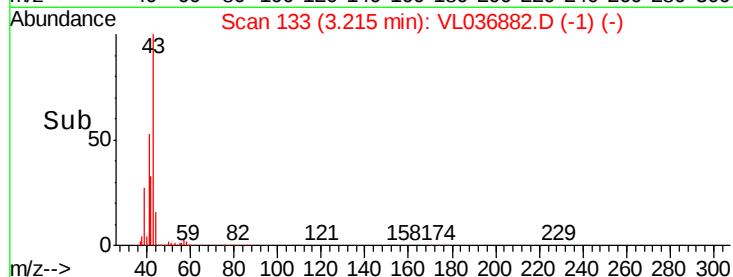
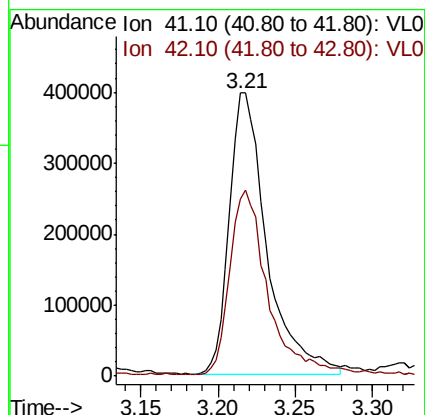
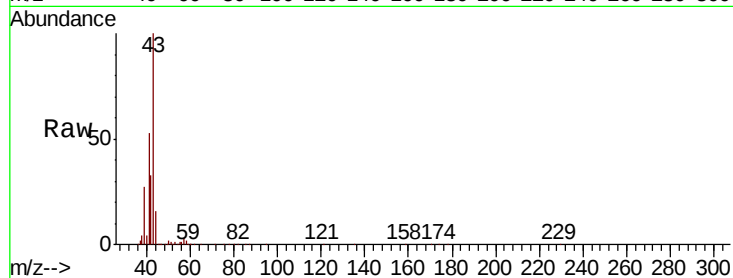




#9
 Propene
 Concen: 8.054 ppbv
 RT: 3.21 min Scan# 133
 Delta R.T. 0.21 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

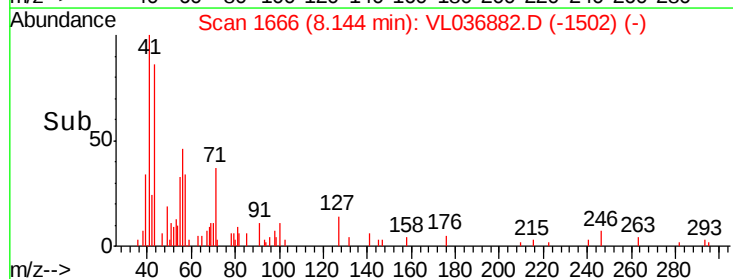
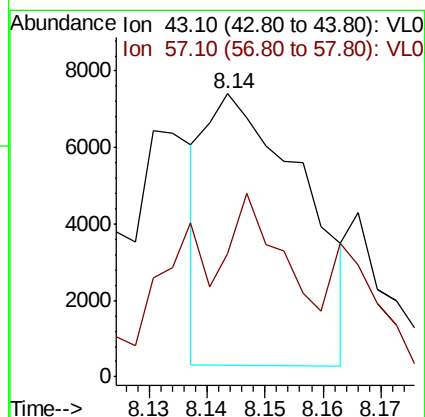
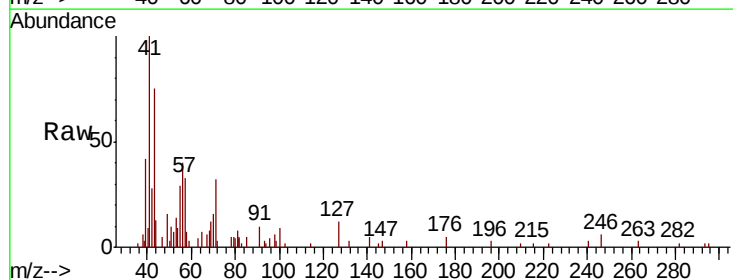
Instrument :
 MSVOA_L
 ClientSampleId :

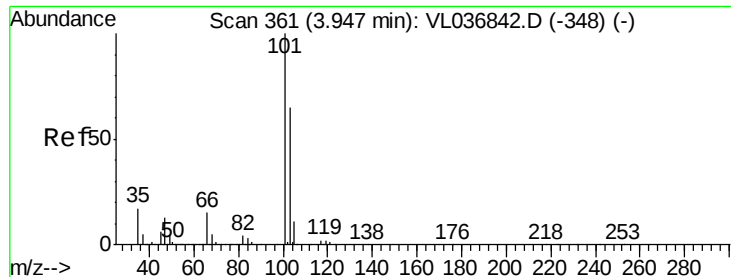
Tot Ion: 41 Resp: 668549
 Ion Ratio Lower Upper
 41 100
 42 67.5 56.0 84.0



#10
 Heptane
 Concen: 0.040 ppbv
 RT: 8.14 min Scan# 1666
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Tgt Ion: 43 Resp: 8328
 Ion Ratio Lower Upper
 43 100
 57 119.3 38.8 58.2#

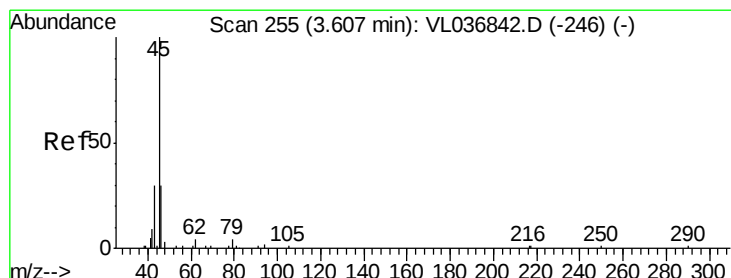
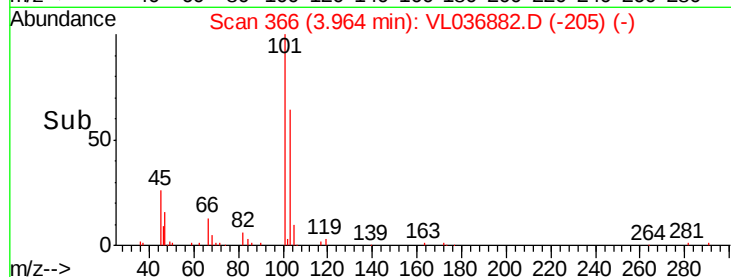
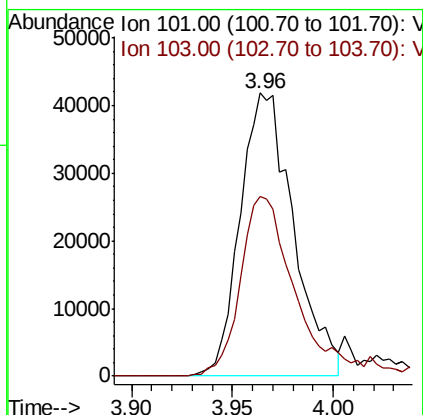
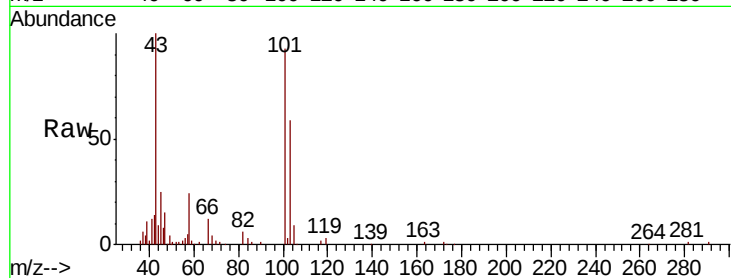




#11
 Trichlorofluoromethane
 Concen: 0.368 ppbv
 RT: 3.96 min Scan# 366
 Delta R.T. 0.02 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

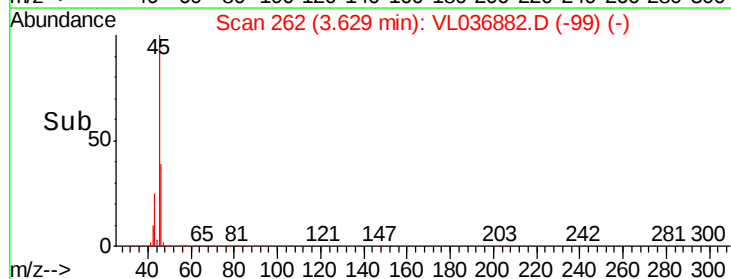
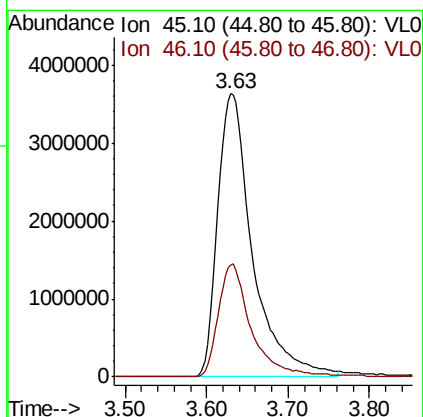
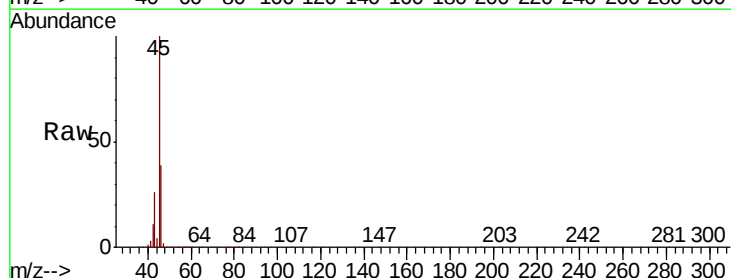
Instrument :
 MSVOA_L
 ClientSampleId :

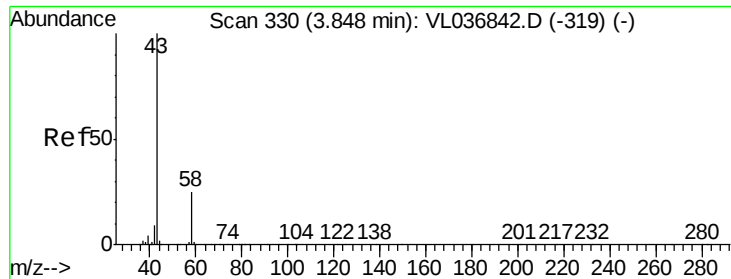
Tot Ion:101 Resp: 77414
 Ion Ratio Lower Upper
 101 100
 103 63.6 51.6 77.4



#13
 Ethanol
 Concen: 1036.465 ppbv
 RT: 3.63 min Scan# 262
 Delta R.T. 0.02 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Tgt Ion: 45 Resp:10972136
 Ion Ratio Lower Upper
 45 100
 46 38.6 16.8 67.4

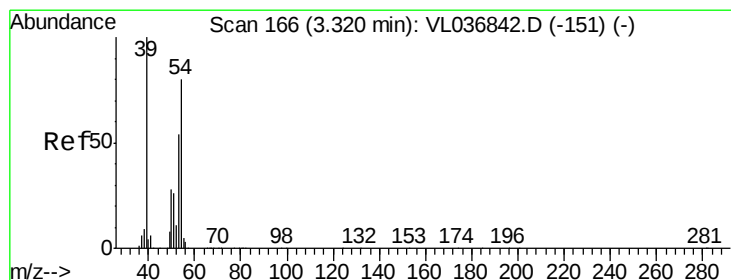
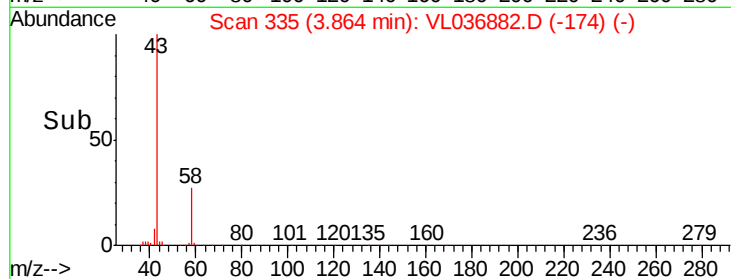
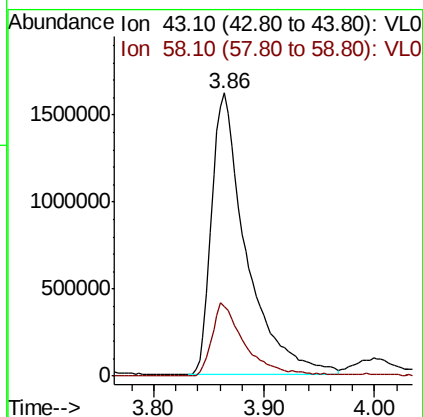
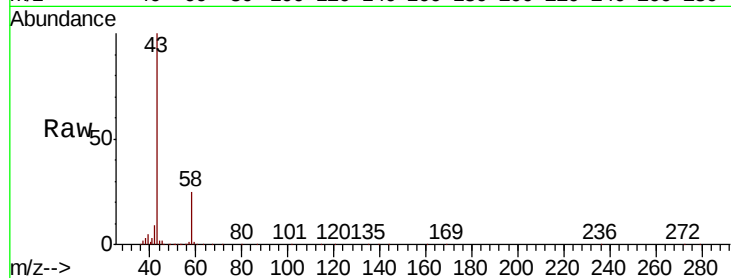




#15
Acetone
Concen: 25.126 ppbv
RT: 3.86 min Scan# 335
Delta R.T. 0.02 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

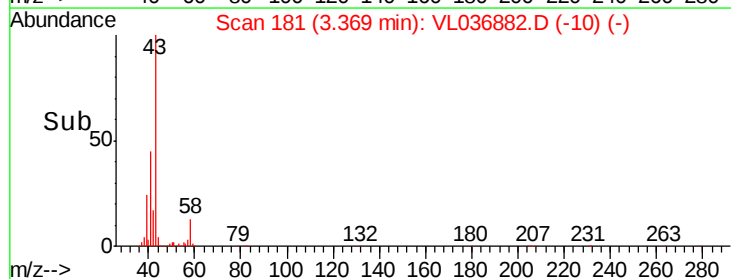
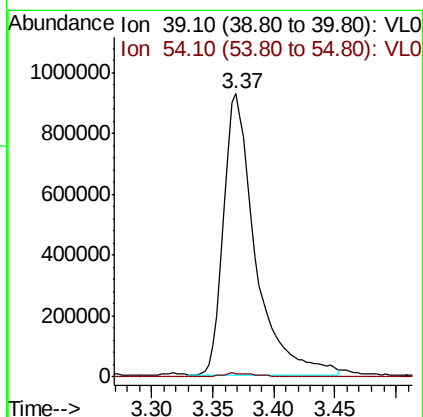
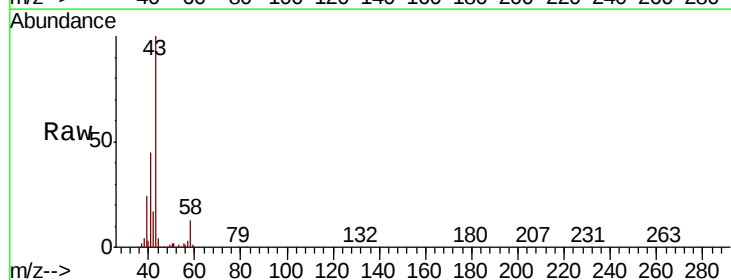
Instrument :
MSVOA_L
ClientSampleId :

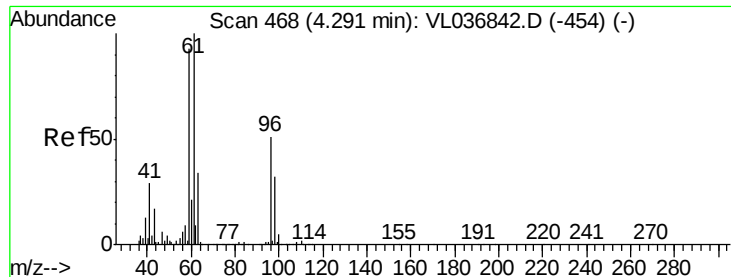
Tot Ion: 43 Resp: 3541678
Ion Ratio Lower Upper
43 100
58 25.2 21.7 32.5



#16
1,3-Butadiene
Concen: 18.823 ppbv
RT: 3.37 min Scan# 181
Delta R.T. 0.05 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

Tgt Ion: 39 Resp: 1696647
Ion Ratio Lower Upper
39 100
54 1.8 59.6 89.4#



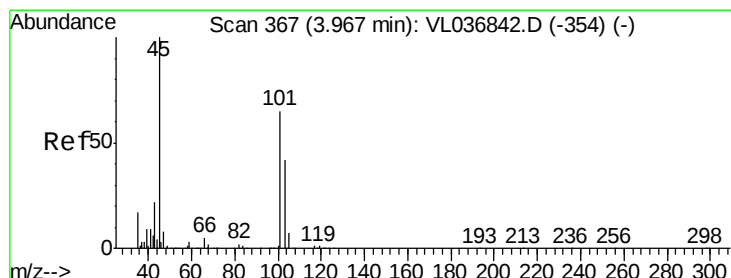
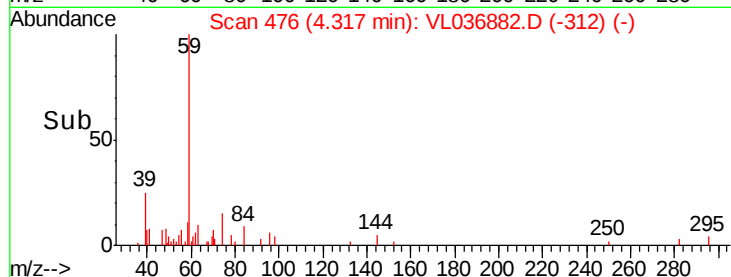
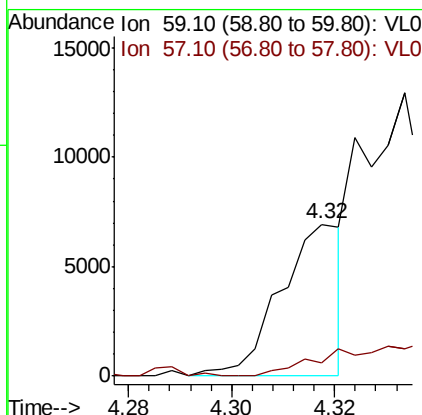
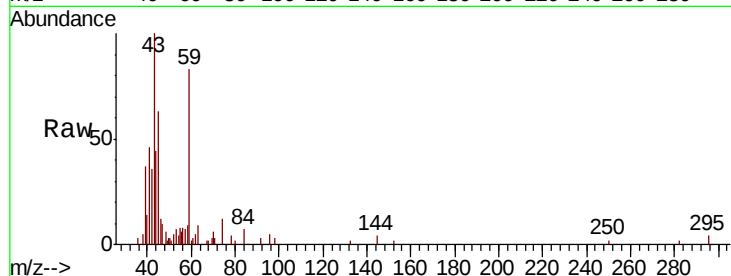


#17

tert-Butyl alcohol
 Concen: 0.051 ppbv
 RT: 4.32 min Scan# 476
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Instrument :
 MSVOA_L
 ClientSampled :

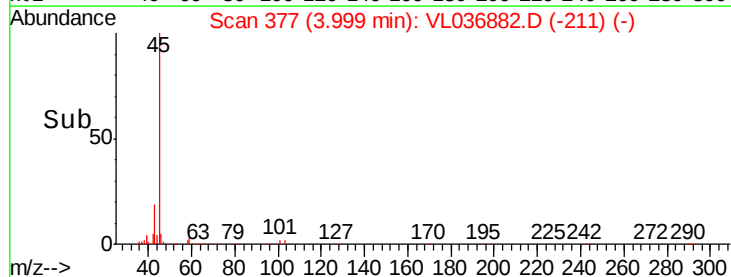
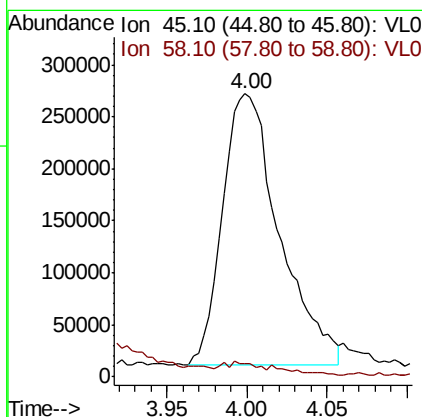
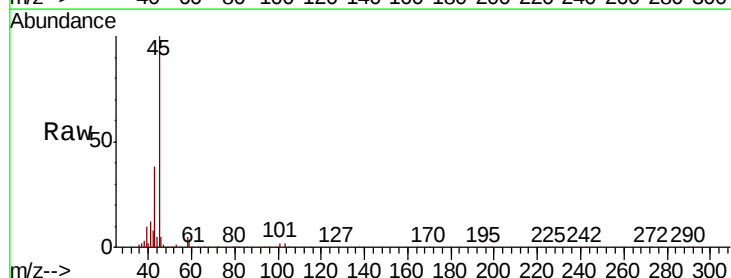
Tot Ion: 59 Resp: 5789
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.3 12.5#

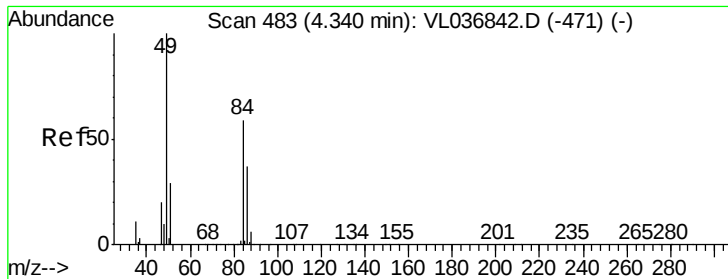


#19

Isopropyl Alcohol
 Concen: 9.109 ppbv
 RT: 4.00 min Scan# 377
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Tgt Ion: 45 Resp: 636198
 Ion Ratio Lower Upper
 45 100
 58 4.9 2.8 4.2#

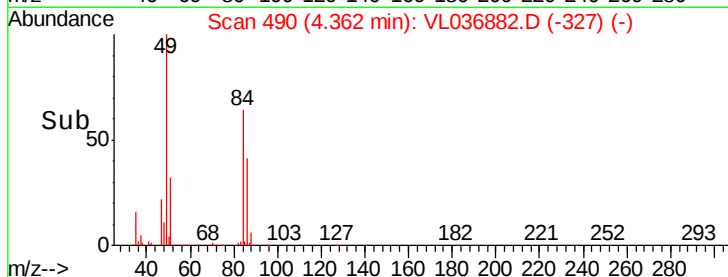
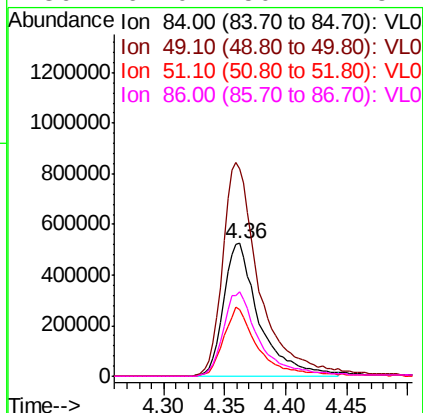
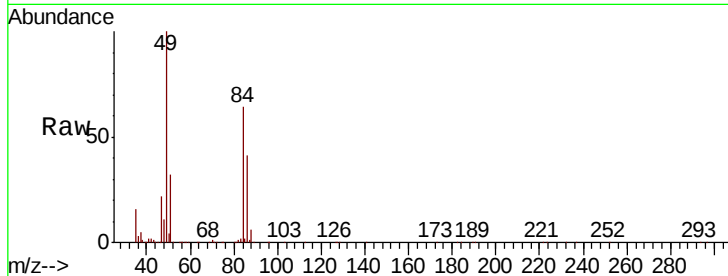




#20
Methylene Chloride
Concen: 15.918 ppbv
RT: 4.36 min Scan# 490
Delta R.T. 0.02 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

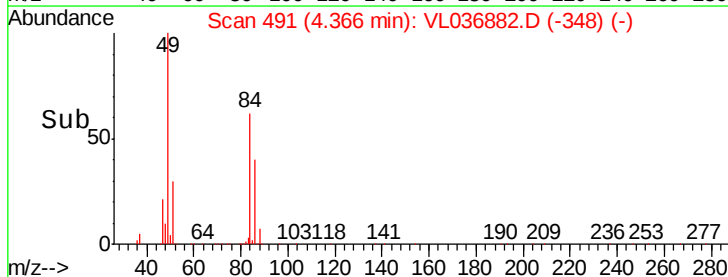
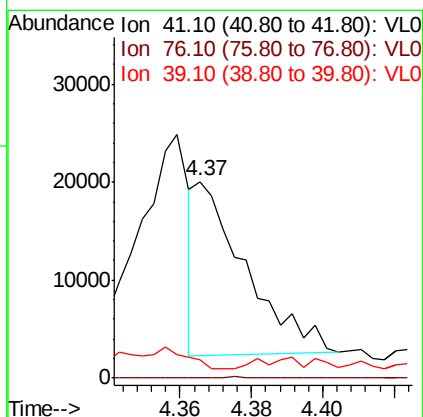
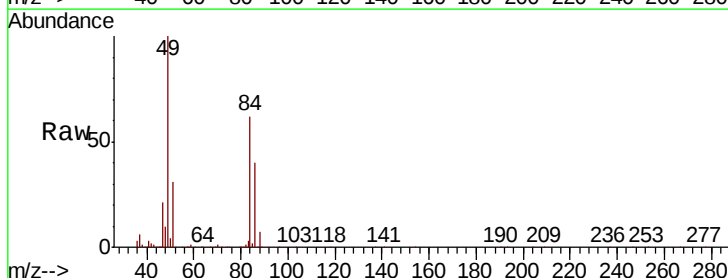
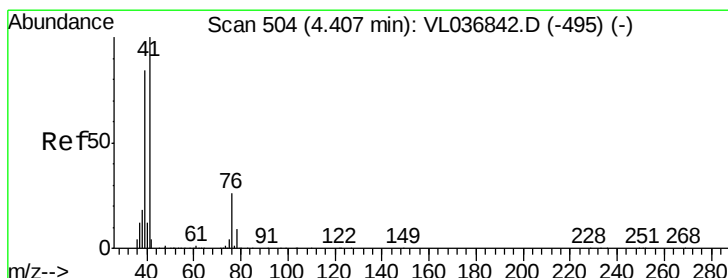
Instrument :
MSVOA_L
ClientSampleId :

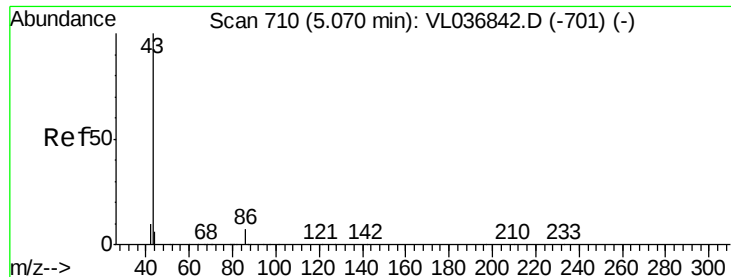
Tot Ion: 84 Resp: 1072984
Ion Ratio Lower Upper
84 100
49 156.2 135.4 203.0
51 50.0 39.3 58.9
86 64.0 50.2 75.2



#21
Allyl Chloride
Concen: 0.165 ppbv
RT: 4.37 min Scan# 491
Delta R.T. -0.04 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

Tgt Ion: 41 Resp: 17325
Ion Ratio Lower Upper
41 100
76 0.0 22.4 33.6#
39 15.5 68.4 102.6#

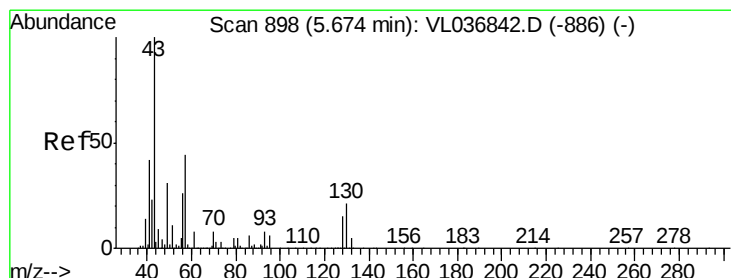
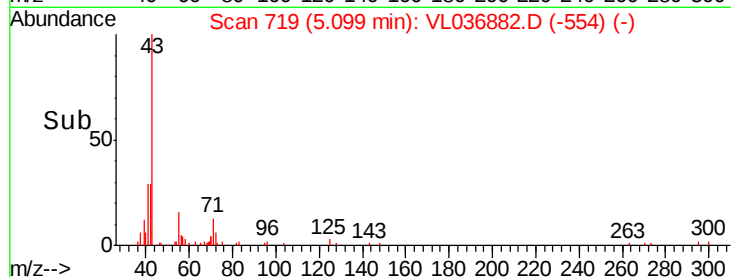
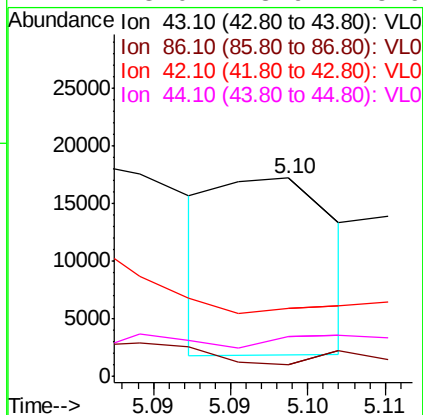
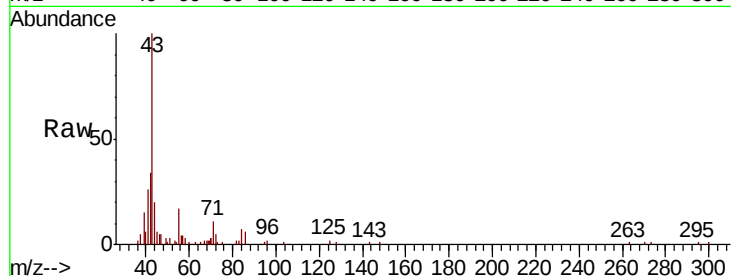




#23
 Vinyl Acetate
 Concen: 0.042 ppbv
 RT: 5.10 min Scan# 719
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

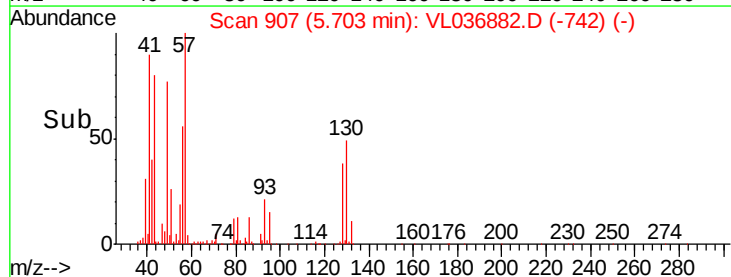
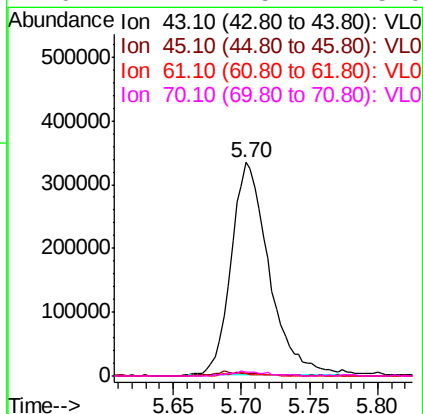
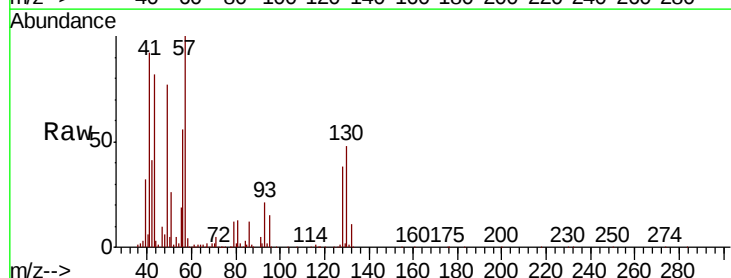
Instrument :
 MSVOA_L
 ClientSampleID :

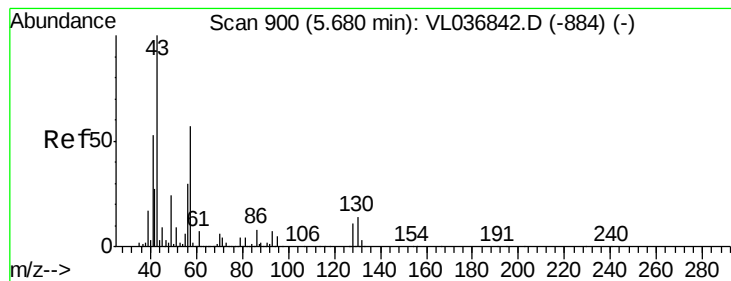
Tot Ion:	43	Resp:	8101
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.3	7.9#
42	0.0	8.7	13.1#
44	8.0	3.9	5.9#



#25
 Ethyl Acetate
 Concen: 1.872 ppbv
 RT: 5.70 min Scan# 907
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Tgt Ion:	43	Resp:	644616
Ion	Ratio	Lower	Upper
43	100		
45	2.1	7.8	11.8#
61	1.5	7.4	11.0#
70	2.1	5.4	8.0#





#26

Hexane

Concen: 4.997 ppbv

RT: 5.71 min Scan# 908

Delta R.T. 0.03 min

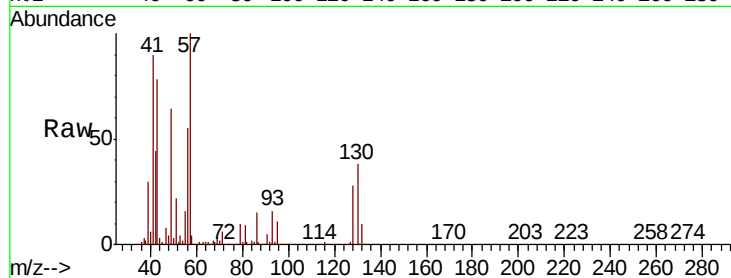
Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

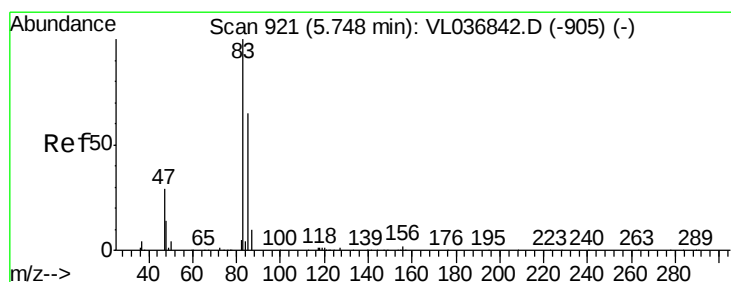
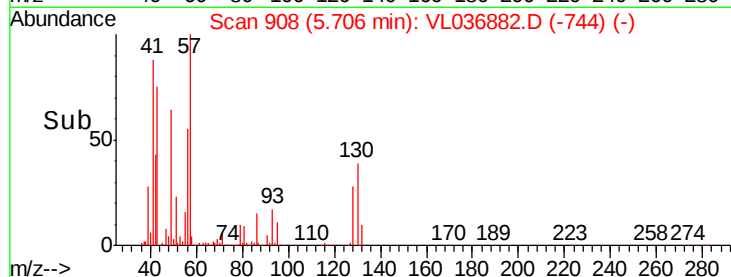
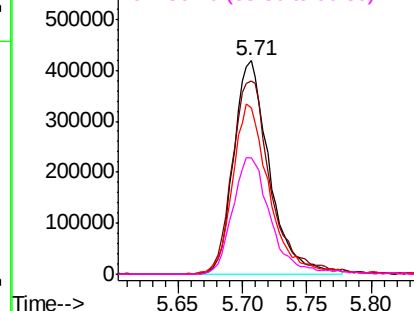
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 804958

Ion	Ratio	Lower	Upper
57	100		
41	98.7	77.7	116.5
43	82.0	180.5	270.7#
56	58.6	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



#29

Chloroform

Concen: 0.753 ppbv

RT: 5.77 min Scan# 927

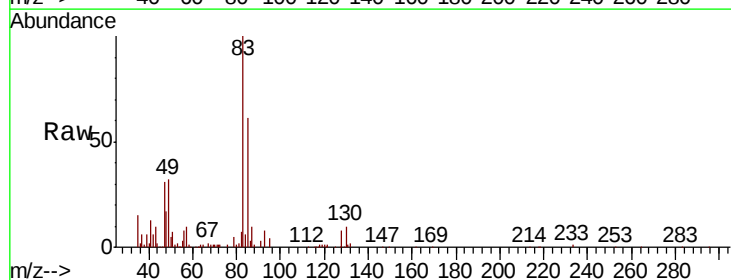
Delta R.T. 0.02 min

Lab File: VL036882.D

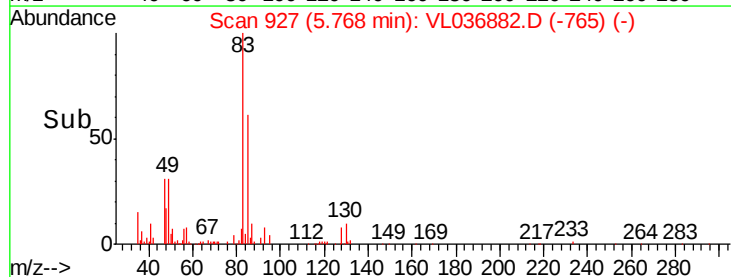
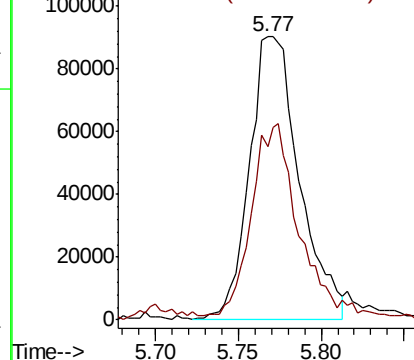
Acq: 28 Apr 2021 16:42

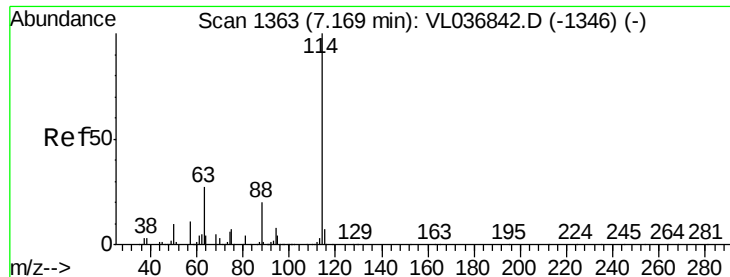
Tgt Ion: 83 Resp: 189032

Ion	Ratio	Lower	Upper
83	100		
85	58.5	52.2	78.4



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0

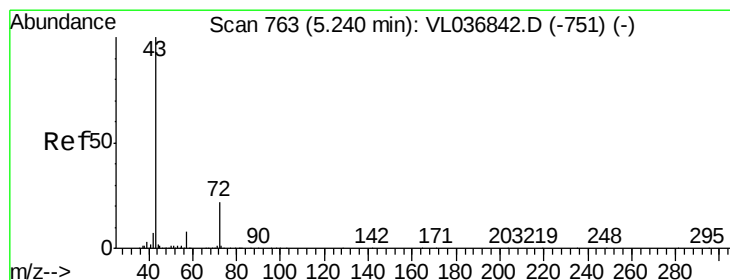
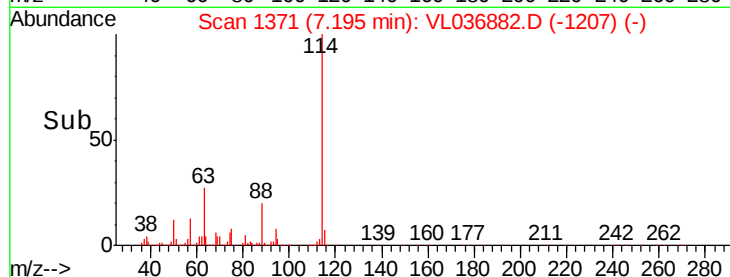
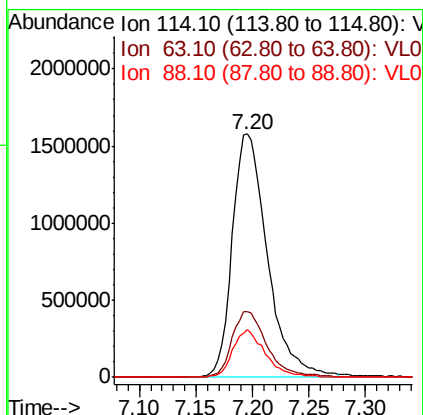
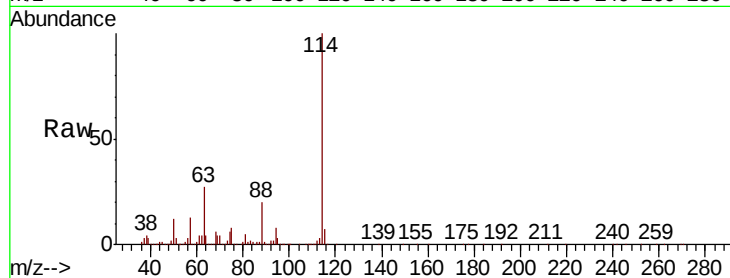




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.20 min Scan# 1371
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

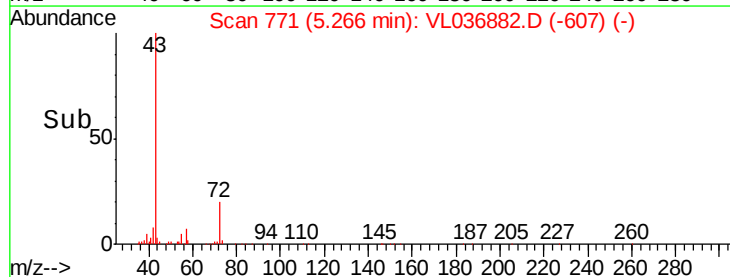
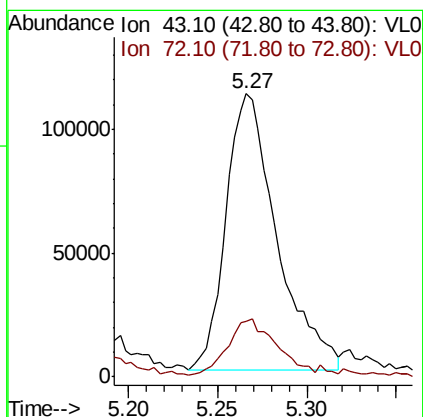
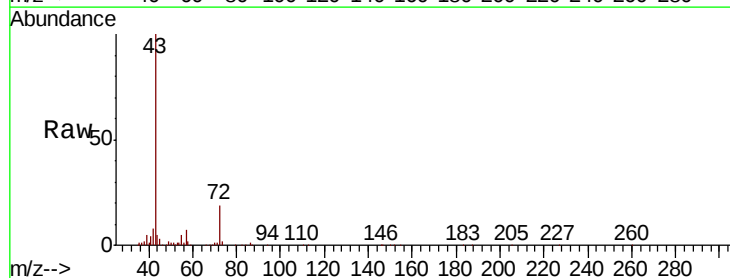
Instrument :
 MSVOA_L
 ClientSampleId :

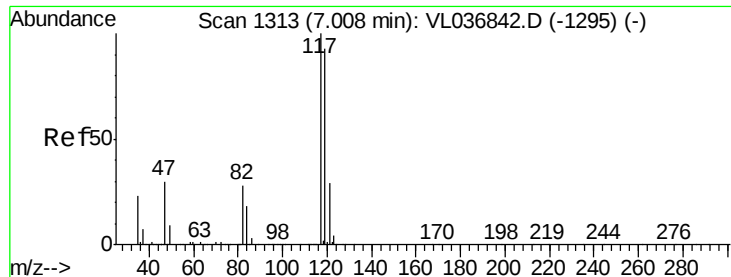
Tot Ion:114 Resp: 3425320
 Ion Ratio Lower Upper
 114 100
 63 27.3 21.9 32.9
 88 18.7 15.1 22.7



#34
 2-Butanone
 Concen: 1.475 ppbv
 RT: 5.27 min Scan# 771
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Tgt Ion: 43 Resp: 221284
 Ion Ratio Lower Upper
 43 100
 72 22.6 17.6 26.4





#35

Carbon Tetrachloride

Concen: 0.037 ppbv

RT: 7.04 min Scan# 1323

Delta R.T. 0.03 min

Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

Instrument :

MSVOA_L

ClientSampleId :

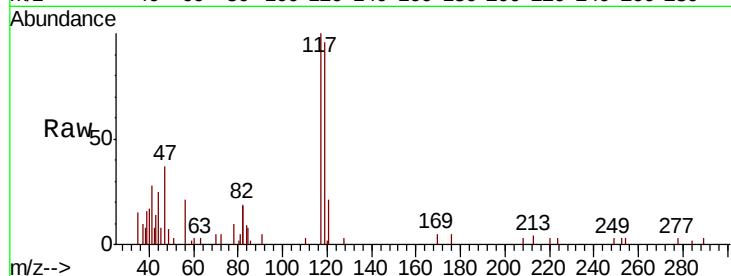
Tot Ion:117 Resp: 8577

Ion Ratio Lower Upper

117 100

119 71.1 74.6 111.8#

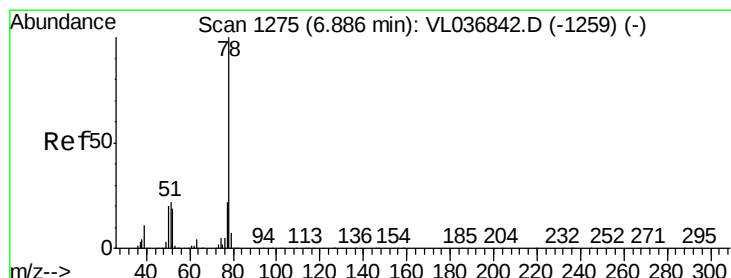
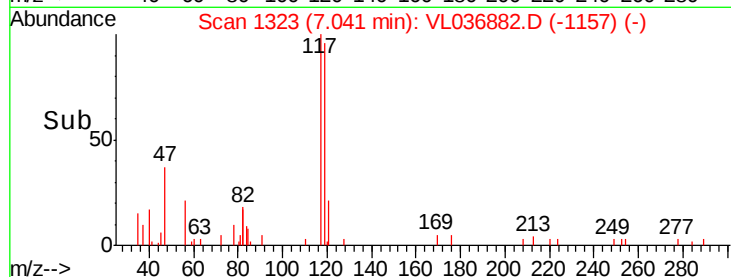
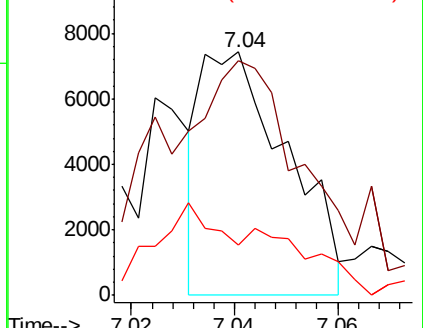
121 8.2 23.3 34.9#



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.197 ppbv

RT: 6.91 min Scan# 1283

Delta R.T. 0.03 min

Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

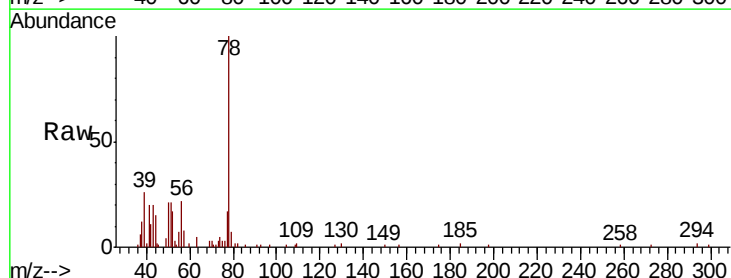
Tgt Ion: 78 Resp: 56784

Ion Ratio Lower Upper

78 100

77 16.1 17.6 26.4#

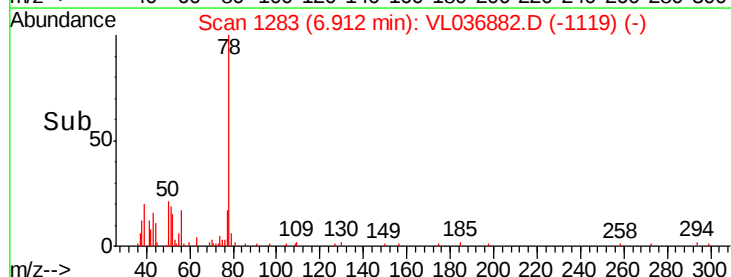
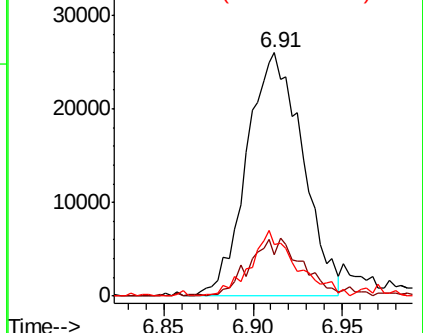
50 21.0 16.3 24.5

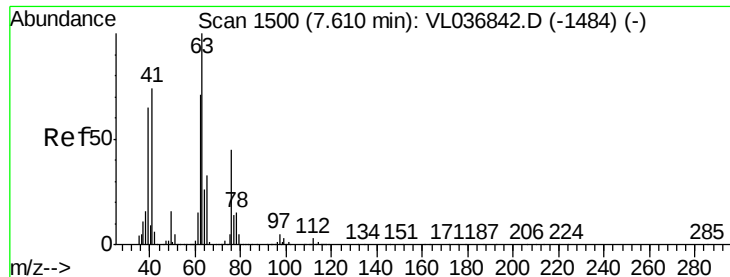


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

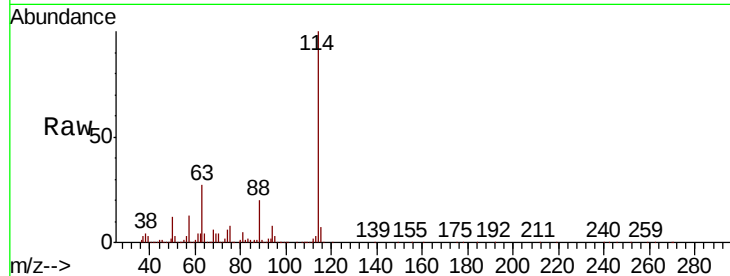




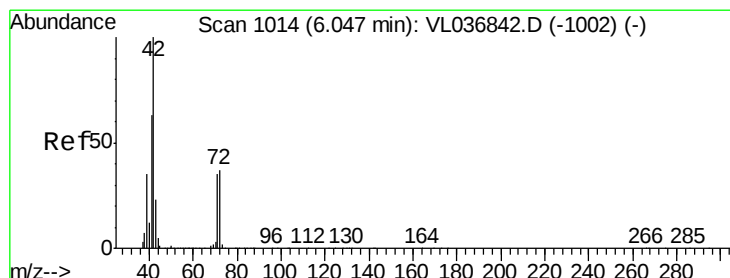
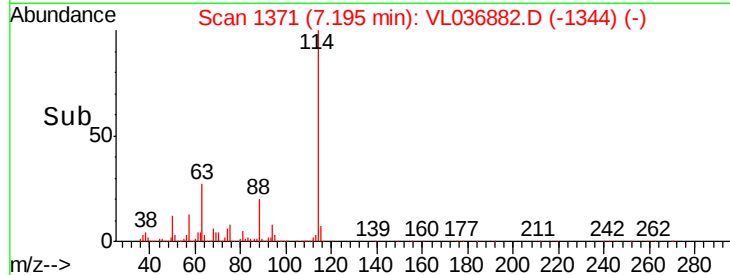
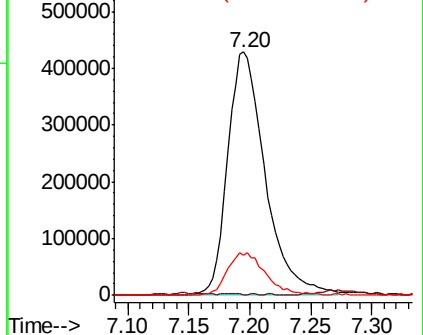
#39
 1,2-Dichloropropane
 Concen: 7.947 ppbv
 RT: 7.20 min Scan# 1371
 Delta R.T. -0.41 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	59.1	88.7#
62	16.2	56.9	85.3#

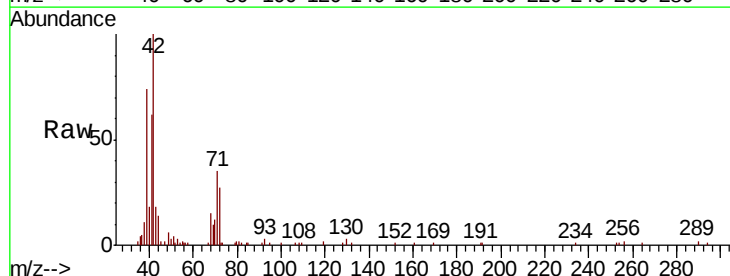


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

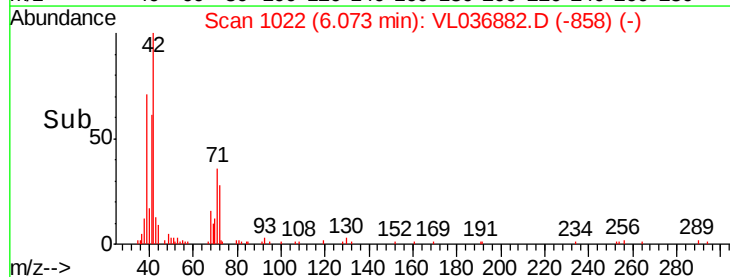
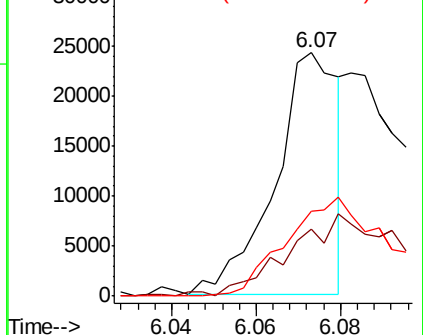


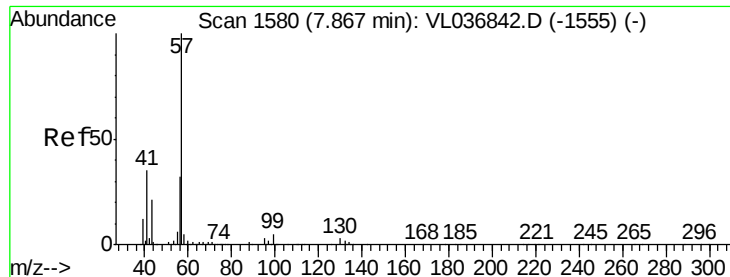
#41
 Tetrahydrofuran
 Concen: 0.381 ppbv
 RT: 6.07 min Scan# 1022
 Delta R.T. 0.03 min
 Lab File: VL036882.D
 Acq: 28 Apr 2021 16:42

Tgt Ion	Ratio	Lower	Upper
42	100		
72	0.0	29.7	44.5#
71	0.0	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

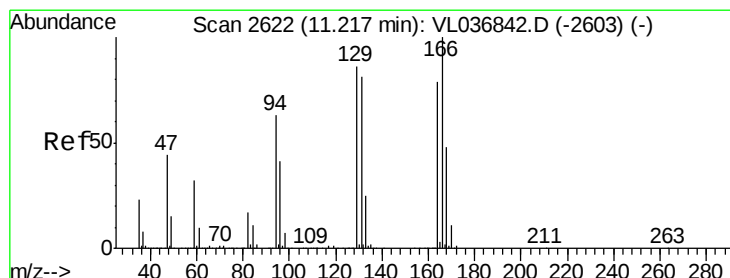
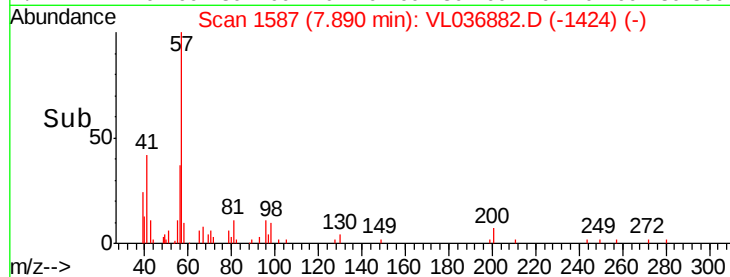
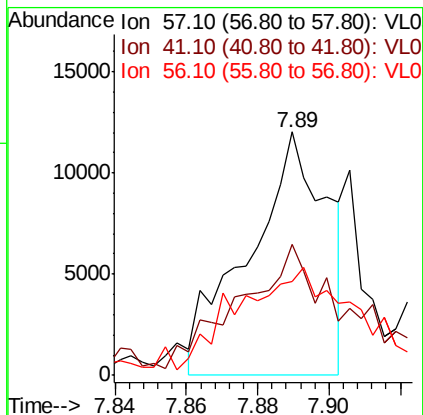
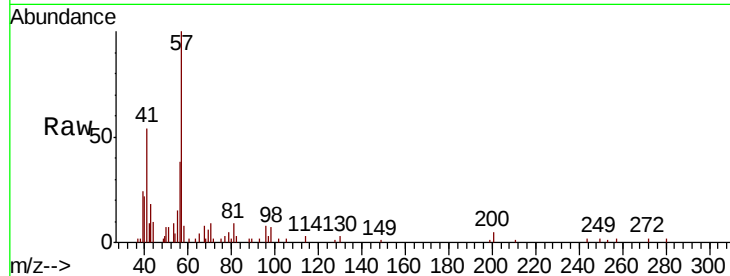




#44
2,2,4-Trimethylpentane
Concen: 0.037 ppbv
RT: 7.89 min Scan# 1587
Delta R.T. 0.02 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

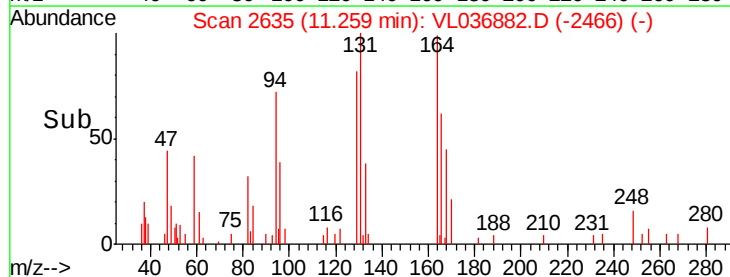
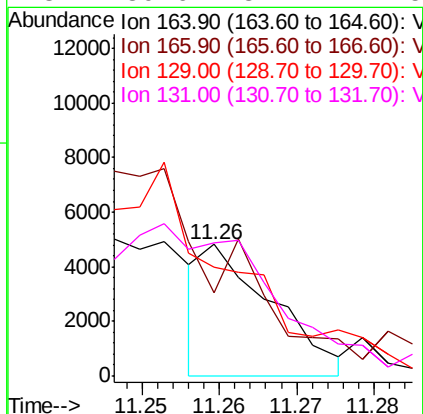
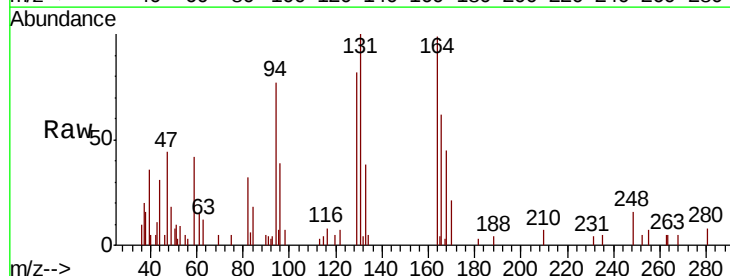
Instrument :
MSVOA_L
ClientSampleId :

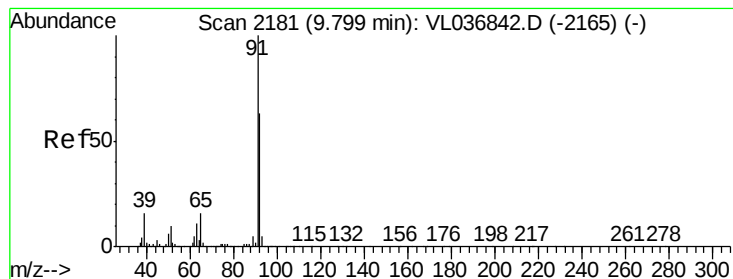
Tot Ion: 57 Resp: 18228
Ion Ratio Lower Upper
57 100
41 70.0 28.2 42.4#
56 79.6 25.9 38.9#



#52
Tetrachloroethene
Concen: 0.031 ppbv
RT: 11.26 min Scan# 2635
Delta R.T. 0.04 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

Tgt Ion: 164 Resp: 3014
Ion Ratio Lower Upper
164 100
166 40.3 100.9 151.3#
129 55.9 87.0 130.4#
131 89.6 81.7 122.5





#53

Toluene

Concen: 4.126 ppbv

RT: 9.83 min Scan# 2190

Delta R.T. 0.03 min

Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

Instrument :

MSVOA_L

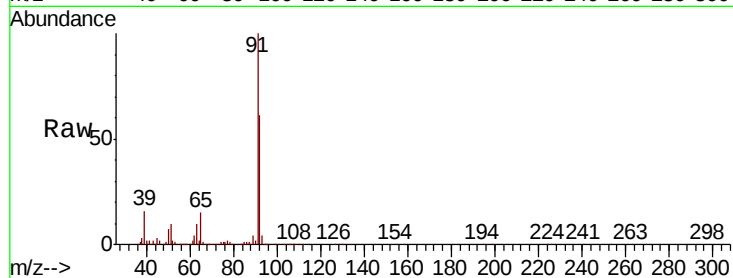
ClientSampleId :

Tot Ion: 91 Resp: 1246062

Ion Ratio Lower Upper

91 100

92 60.3 49.0 73.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

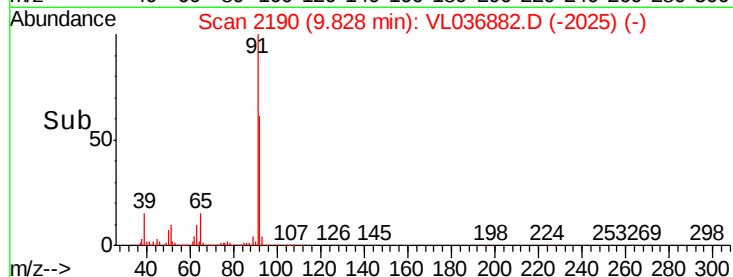
600000

400000

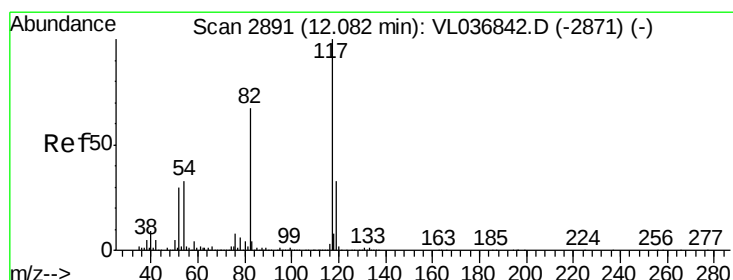
200000

0

9.75 9.80 9.85 9.90



Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.11 min Scan# 2900

Delta R.T. 0.03 min

Lab File: VL036882.D

Acq: 28 Apr 2021 16:42

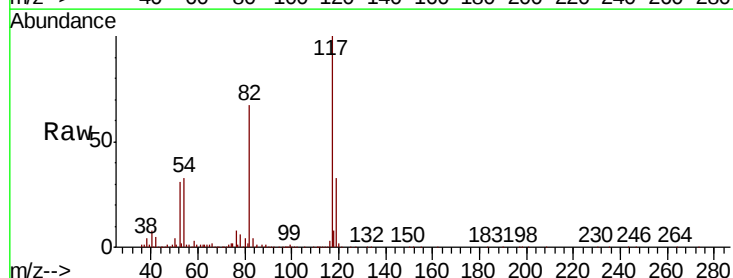
Tgt Ion: 117 Resp: 3044826

Ion Ratio Lower Upper

117 100

82 70.6 53.5 80.3

119 34.1 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

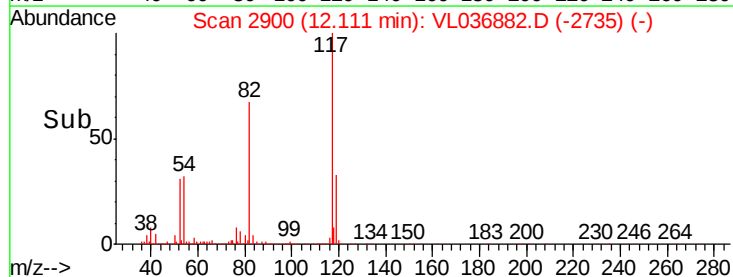
1500000

1000000

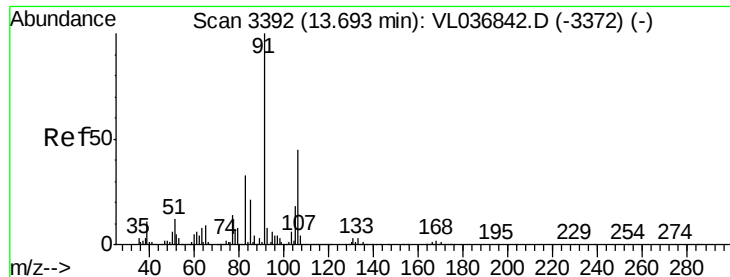
500000

0

12.00 12.10 12.20



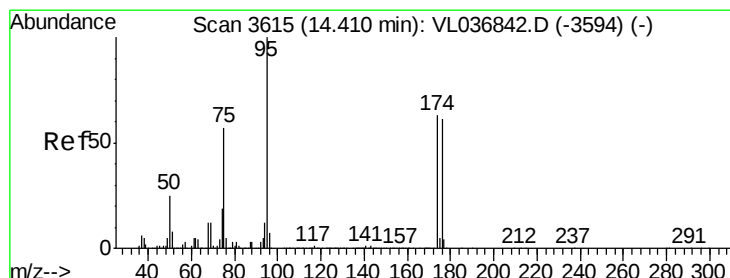
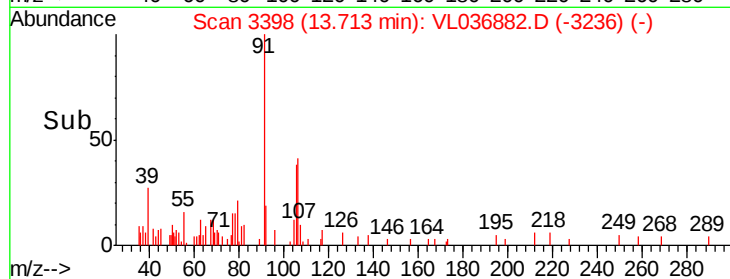
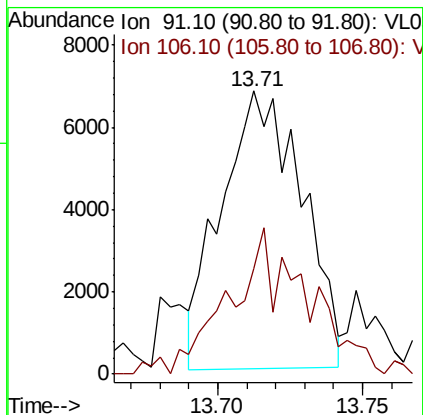
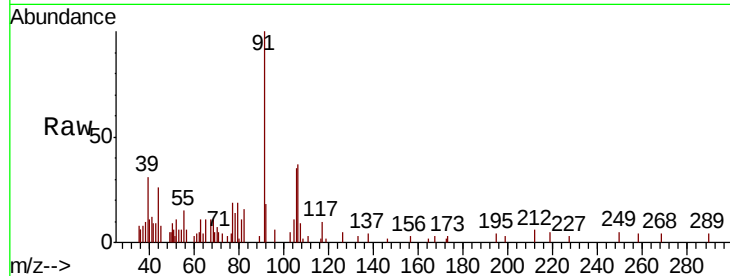
Time-->



#60
o-Xylene
Concen: 0.039 ppbv
RT: 13.71 min Scan# 3398
Delta R.T. 0.02 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 91 Resp: 13068
Ion Ratio Lower Upper
91 100
106 52.1 22.6 67.7



#68
1-Bromo-4-Fluorobenzene
Concen: 9.931 ppbv
RT: 14.44 min Scan# 3625
Delta R.T. 0.03 min
Lab File: VL036882.D
Acq: 28 Apr 2021 16:42

Tgt Ion: 95 Resp: 2427261
Ion Ratio Lower Upper
95 100
174 66.2 52.2 78.2
175 4.9 4.0 6.0

