

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL033021\
 Data File : VL036571.D
 Acq On : 30 Mar 2021 16:01
 Operator : SY/AP
 Sample : M1797-02 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 31 05:15:35 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1265578	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	2938131	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	2660991	10.00	ppbv	-0.03

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	2117900	9.99	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.90%

Target Compounds					Ovalue
3) Chlorodifluoromethane	2.97	51	26253	0.111 ppbv	# 89
4) Chloromethane	3.13	50	3006	0.036 ppbv	97
9) Propene	3.00	41	13459	0.179 ppbv	98
11) Trichlorofluoromethane	3.93	101	7451	0.035 ppbv	91
13) Ethanol	3.59	45	854898	95.236 ppbv	96
15) Acetone	3.83	43	1732017	13.905 ppbv	99
16) 1,3-Butadiene	3.30	39	3166	0.037 ppbv	# 59
17) tert-Butyl alcohol	4.29	59	17161	0.158 ppbv	# 60
19) Isopropyl Alcohol	3.99	45	243679	3.556 ppbv	# 1
20) Methylene Chloride	4.33	84	675719	11.586 ppbv	97
24) 1,1-Dichloroethane	5.00	63	8608	0.055 ppbv	# 90
25) Ethyl Acetate	5.67	43	989683	3.342 ppbv	# 77
26) Hexane	5.67	57	1363573	9.922 ppbv	# 47
27) Carbon Disulfide	4.53	76	5534	0.041 ppbv	# 1
29) Chloroform	5.74	83	46824	0.213 ppbv	94
30) Cyclohexane	7.11	84	2507	0.022 ppbv	# 1
32) 1,1,1-Trichloroethane	6.49	97	1333666	6.021 ppbv	99
34) 2-Butanone	5.24	43	24934	0.174 ppbv	# 11
36) Benzene	6.87	78	52053	0.192 ppbv	# 90
37) 1,2-Dichloroethane	6.49	62	89081	0.559 ppbv	# 1
39) 1,2-Dichloropropane	7.21	63	11467	0.104 ppbv	# 21
40) 1,4-Dioxane	7.82	88	2768	0.108 ppbv	# 1
41) Tetrahydrofuran	5.67	42	554352	8.383 ppbv	# 54
52) Tetrachloroethene	11.19	164	3891	0.039 ppbv	95
53) Toluene	9.78	91	17227	0.060 ppbv	# 20
60) o-Xylene	13.67	91	9013	0.028 ppbv	# 49
74) 1,2,4-Trimethylbenzene	16.74	105	13999	0.039 ppbv	# 65

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.02 min

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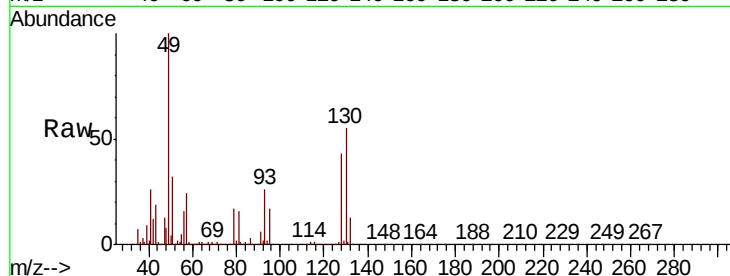
Tot Ion: 49 Resp: 1265578

Ion Ratio Lower Upper

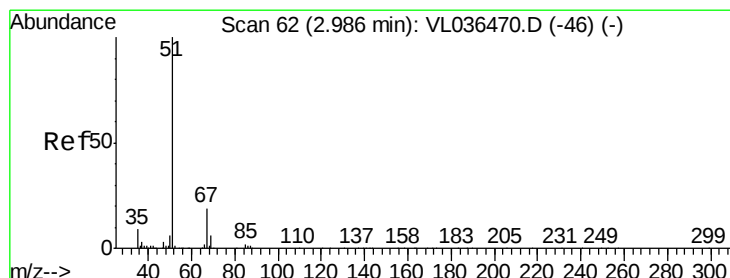
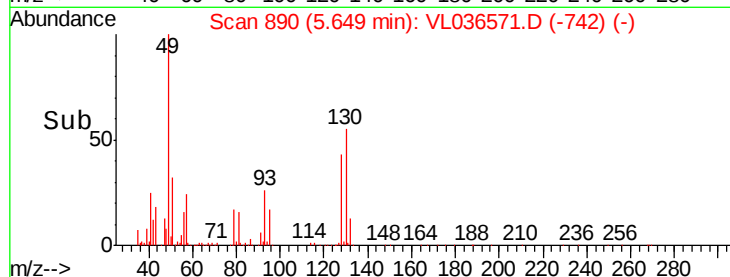
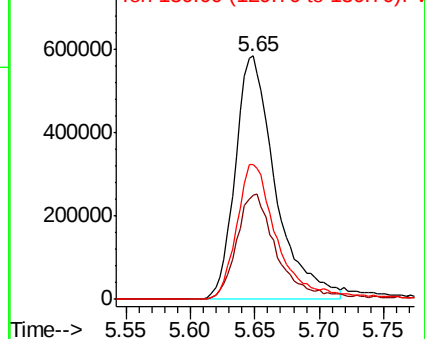
49 100

128 45.4 23.5 70.6

130 58.1 29.1 87.4



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



#3

Chlorodifluoromethane

Concen: 0.111 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.01 min

Lab File: VL036571.D

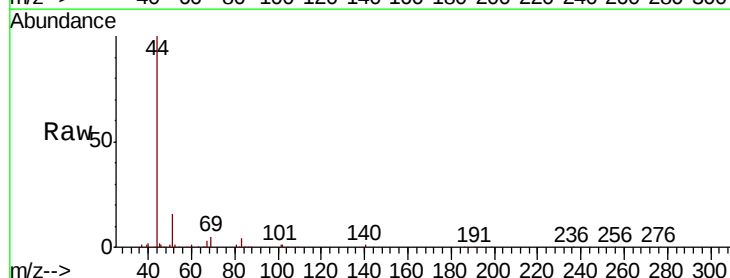
Acq: 30 Mar 2021 16:01

Tgt Ion: 51 Resp: 26253

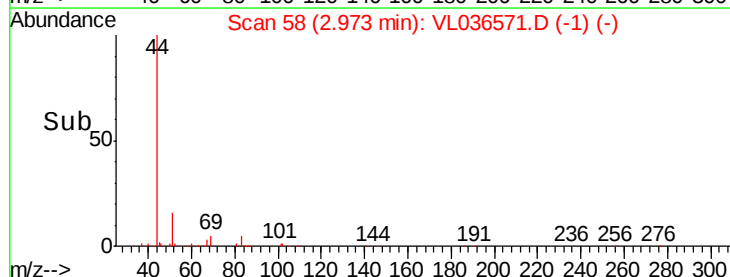
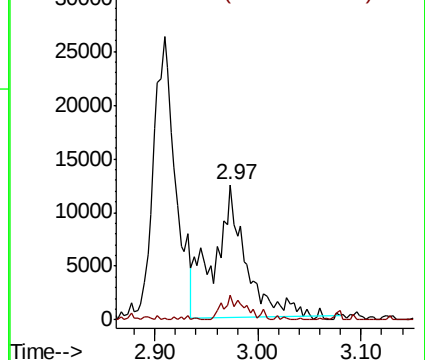
Ion Ratio Lower Upper

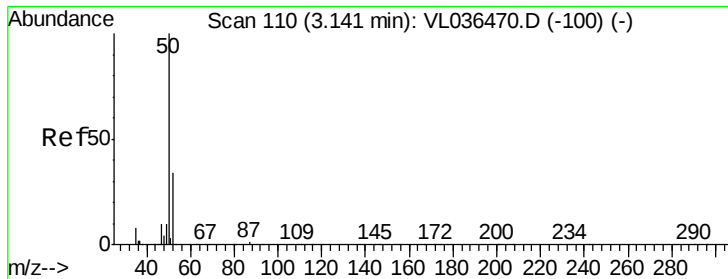
51 100

67 13.6 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0
Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.036 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.01 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

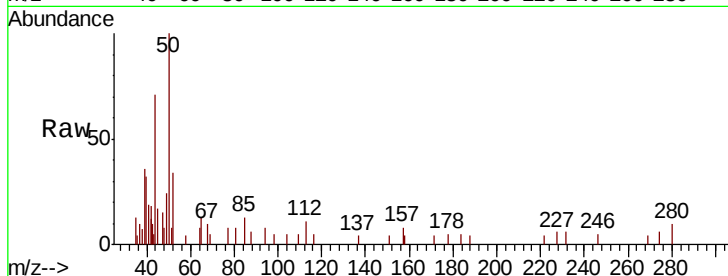
ClientSampleId :

Tot Ion: 50 Resp: 3006

Ion Ratio Lower Upper

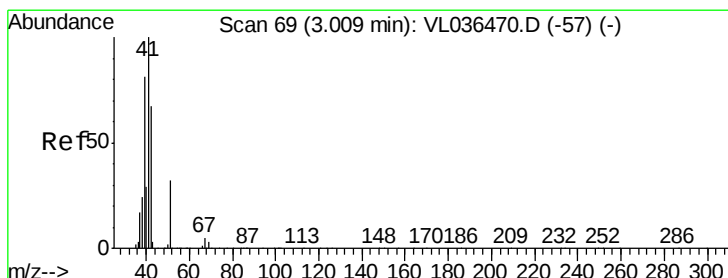
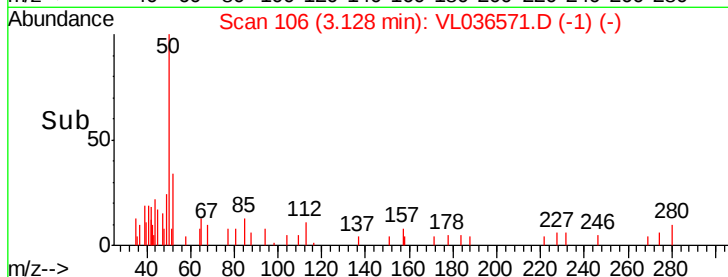
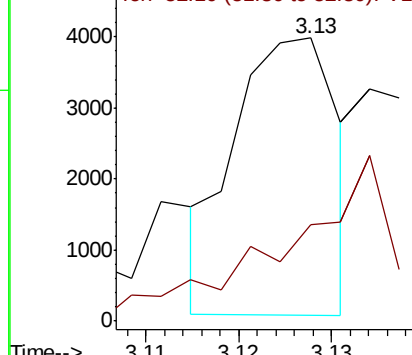
50 100

52 32.2 27.0 40.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.179 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL036571.D

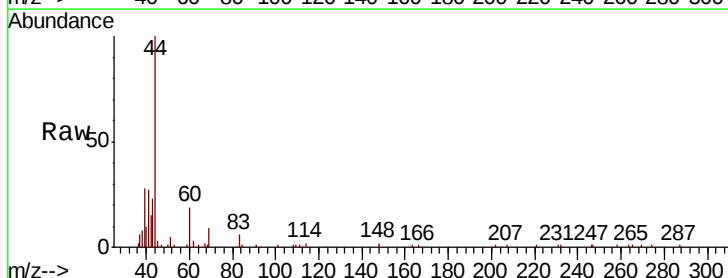
Acq: 30 Mar 2021 16:01

Tgt Ion: 41 Resp: 13459

Ion Ratio Lower Upper

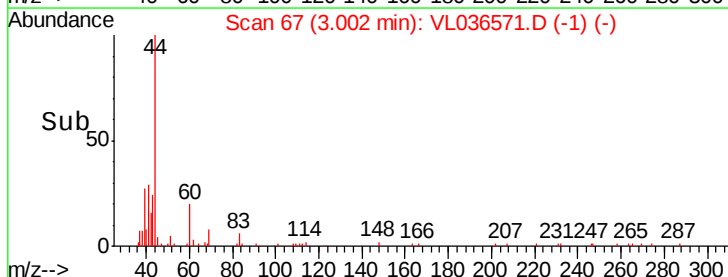
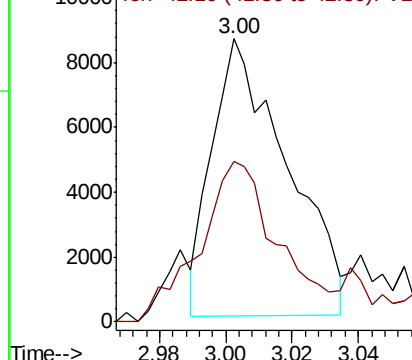
41 100

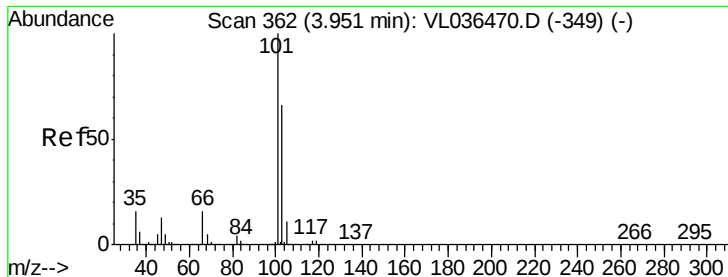
42 73.1 57.0 85.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

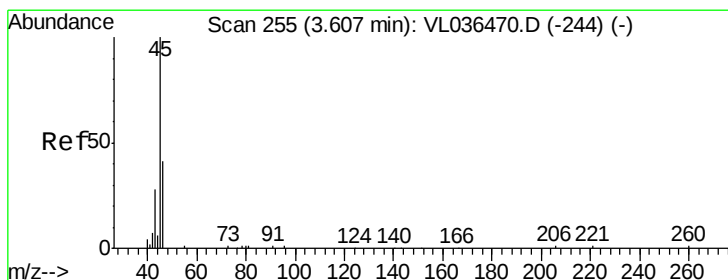
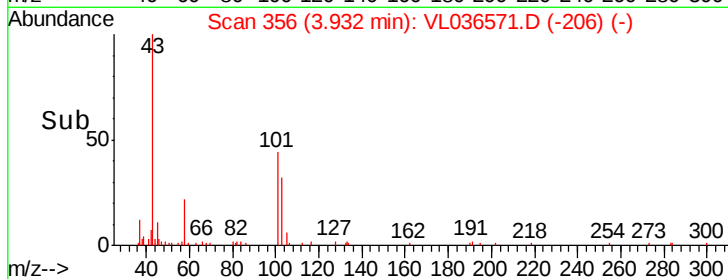
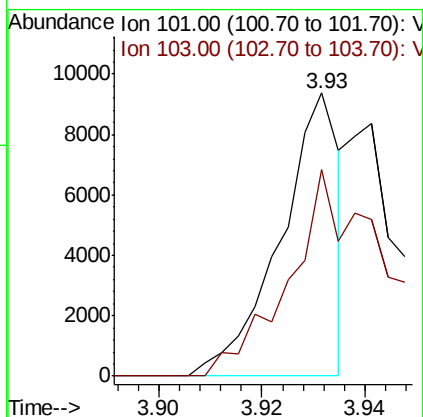
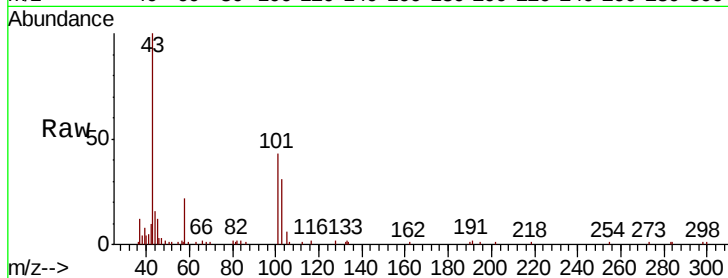




#11
Trichlorofluoromethane
Concen: 0.035 ppbv
RT: 3.93 min Scan# 356
Delta R.T. -0.02 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

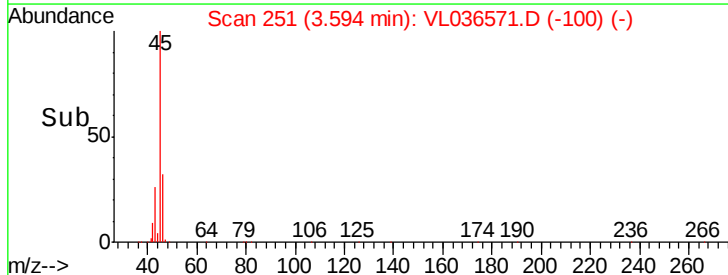
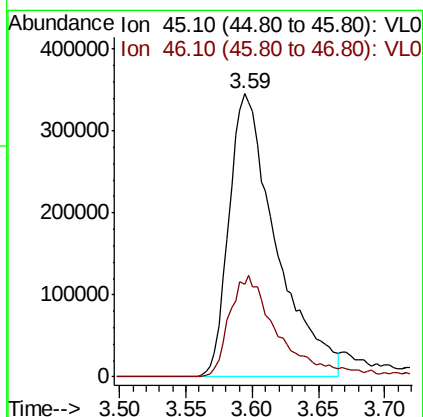
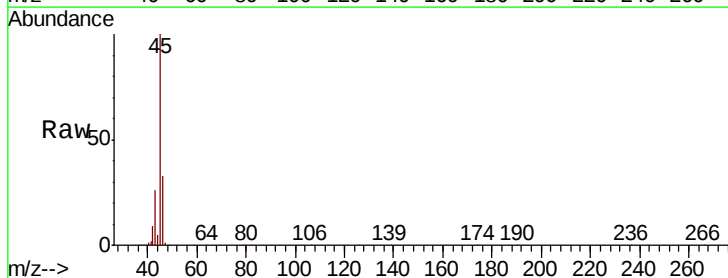
Instrument :
MSVOA_L
ClientSampleId :

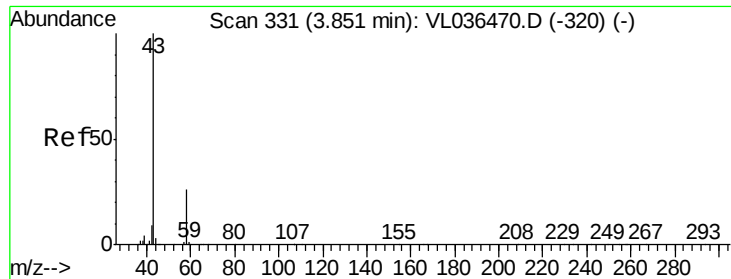
Tot Ion:101 Resp: 7451
Ion Ratio Lower Upper
101 100
103 73.0 52.5 78.7



#13
Ethanol
Concen: 95.236 ppbv
RT: 3.59 min Scan# 251
Delta R.T. -0.01 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

Tgt Ion: 45 Resp: 854898
Ion Ratio Lower Upper
45 100
46 38.9 16.6 66.2

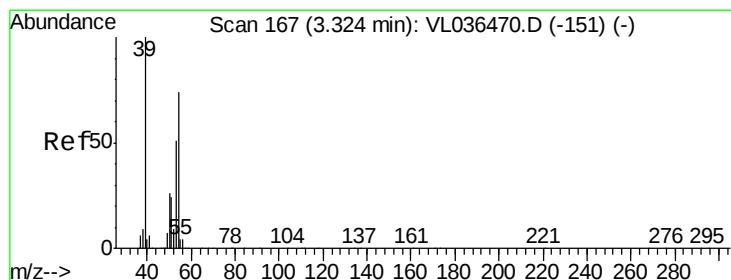
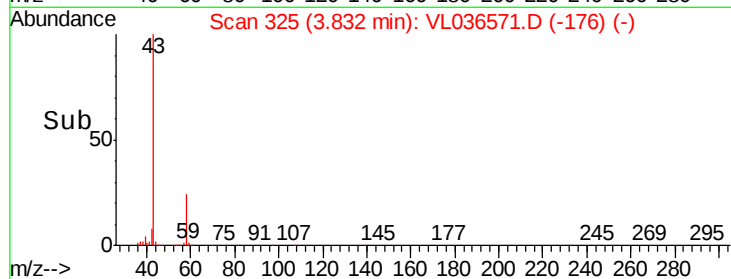
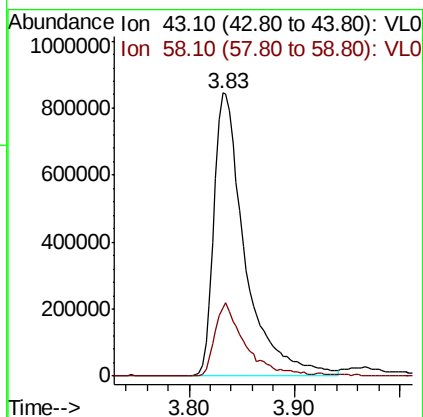
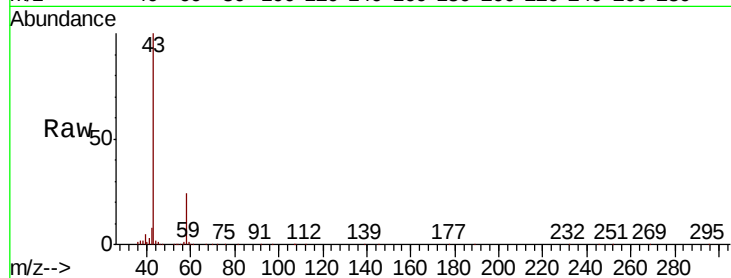




#15
Acetone
Concen: 13.905 ppbv
RT: 3.83 min Scan# 325
Delta R.T. -0.02 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

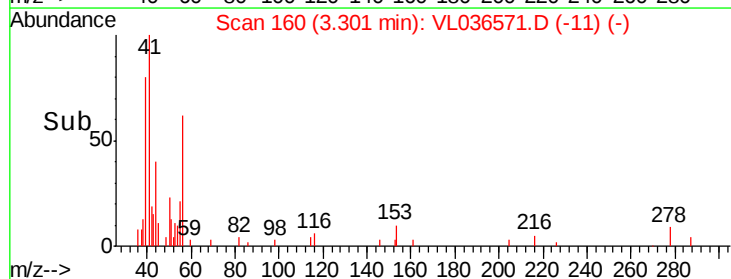
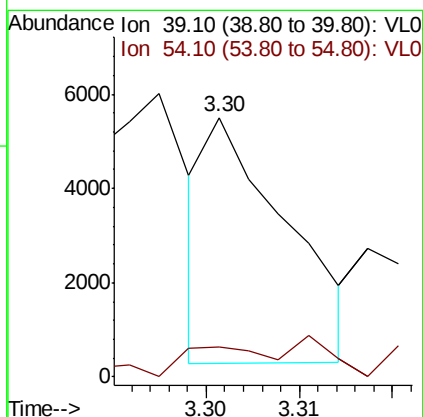
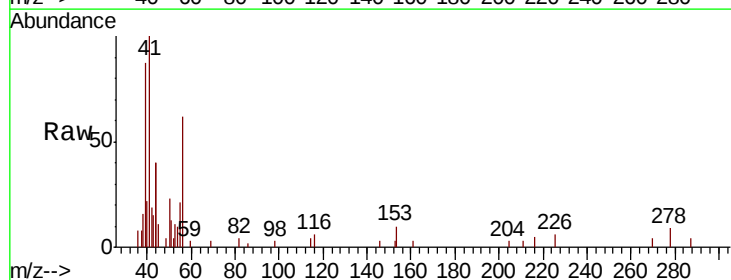
Instrument :
MSVOA_L
ClientSampleId :

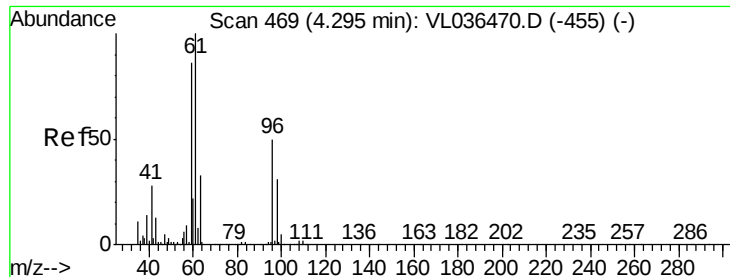
Tot Ion: 43 Resp: 1732017
Ion Ratio Lower Upper
43 100
58 26.8 21.2 31.8



#16
1,3-Butadiene
Concen: 0.037 ppbv
RT: 3.30 min Scan# 160
Delta R.T. -0.02 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

Tgt Ion: 39 Resp: 3166
Ion Ratio Lower Upper
39 100
54 39.3 58.8 88.2#





#17

tert-Butyl alcohol

Concen: 0.158 ppbv

RT: 4.29 min Scan# 469

Delta R.T. -0.00 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

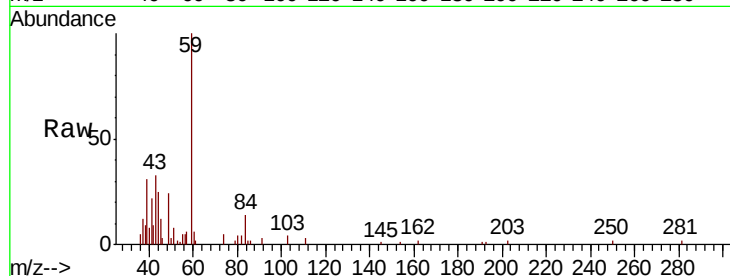
ClientSampled :

Tot Ion: 59 Resp: 17161

Ion Ratio Lower Upper

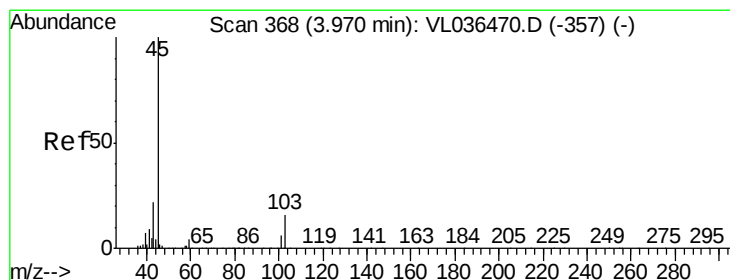
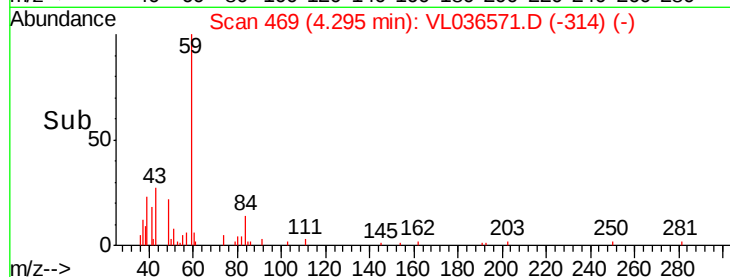
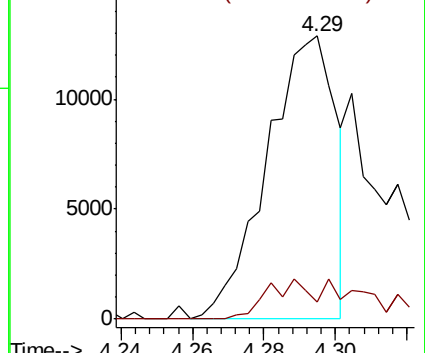
59 100

57 25.8 8.6 12.8#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 3.556 ppbv

RT: 3.99 min Scan# 374

Delta R.T. 0.02 min

Lab File: VL036571.D

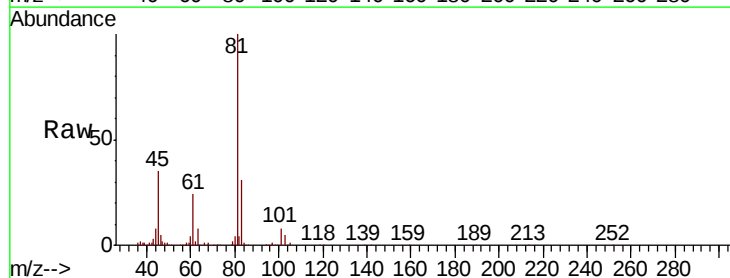
Acq: 30 Mar 2021 16:01

Tgt Ion: 45 Resp: 243679

Ion Ratio Lower Upper

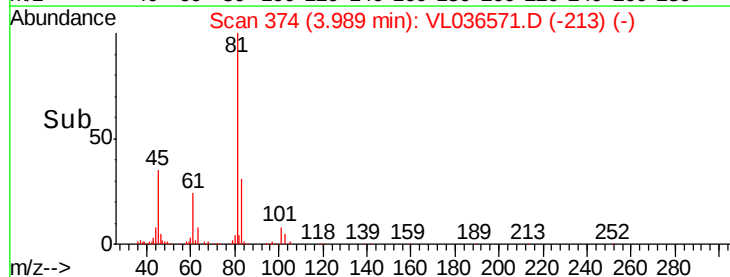
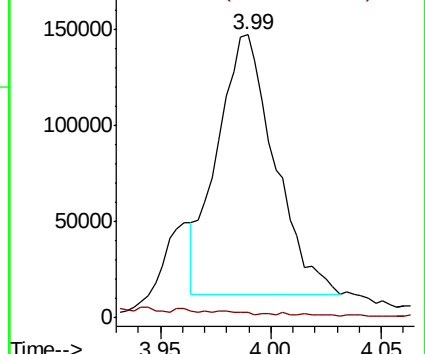
45 100

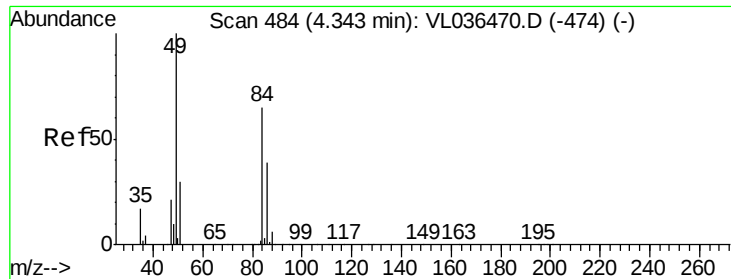
58 183.2 2.9 4.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

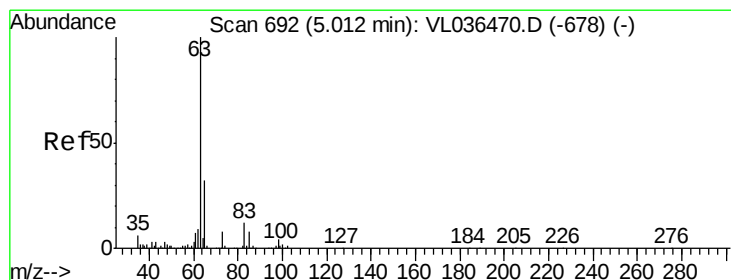
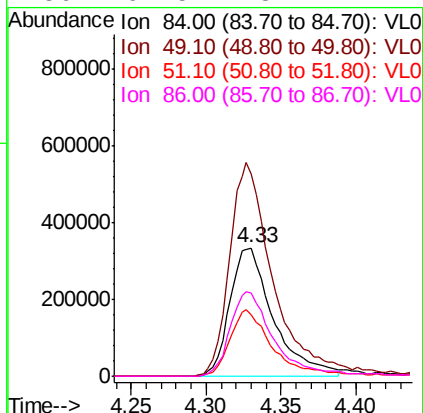
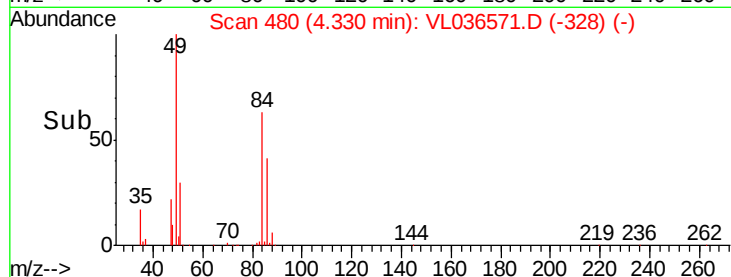
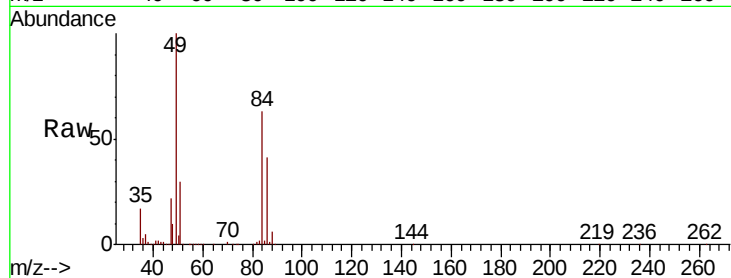




#20
Methvlene Chloride
Concen: 11.586 ppbv
RT: 4.33 min Scan# 480
Delta R.T. -0.01 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

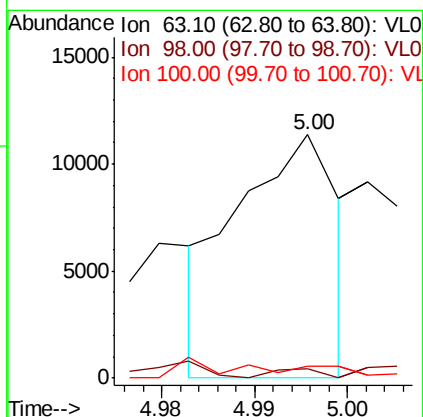
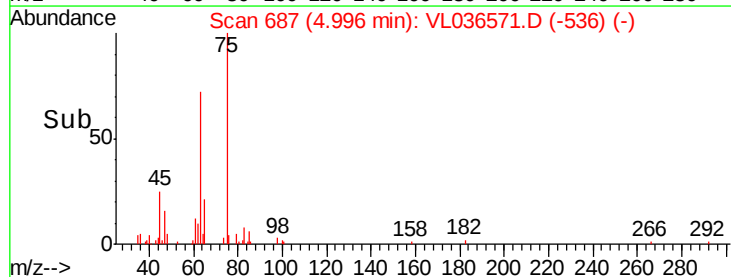
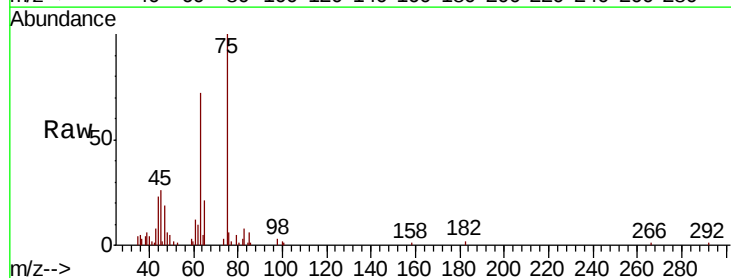
Instrument :
MSVOA_L
ClientSampleId :

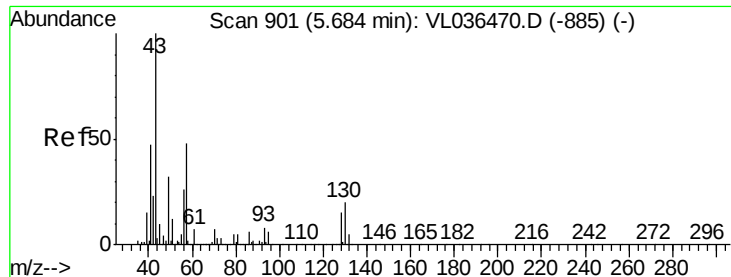
Tot Ion: 84 Resp: 675719
Ion Ratio Lower Upper
84 100
49 157.5 122.9 184.3
51 47.7 36.9 55.3
86 64.5 48.2 72.4



#24
1,1-Dichloroethane
Concen: 0.055 ppbv
RT: 5.00 min Scan# 687
Delta R.T. -0.02 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

Tgt Ion: 63 Resp: 8608
Ion Ratio Lower Upper
63 100
98 7.9 2.1 6.2#
100 0.0 0.9 2.8#

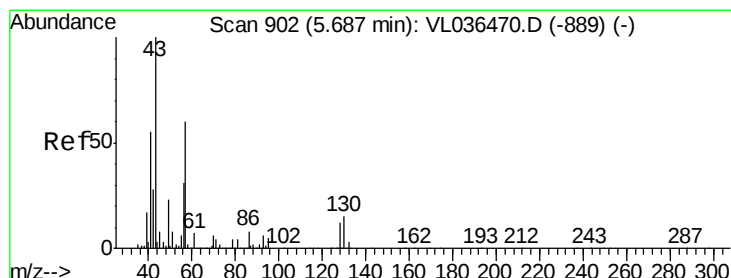
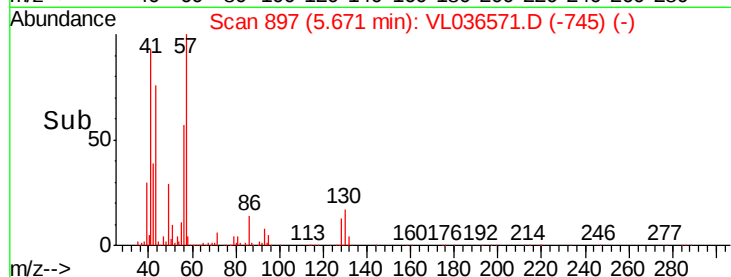
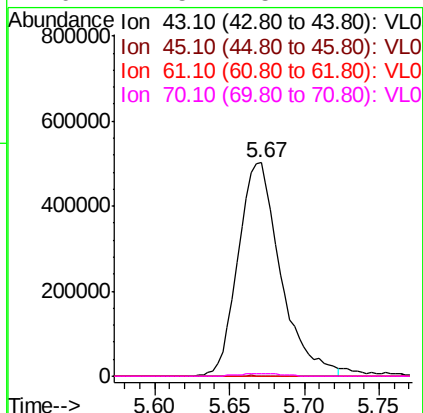
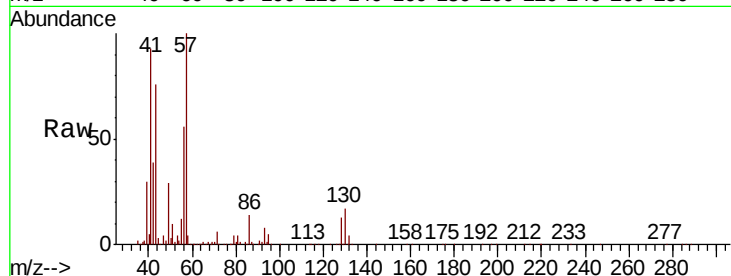




#25
Ethyl Acetate
Concen: 3.342 ppbv
RT: 5.67 min Scan# 897
Delta R.T. -0.01 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

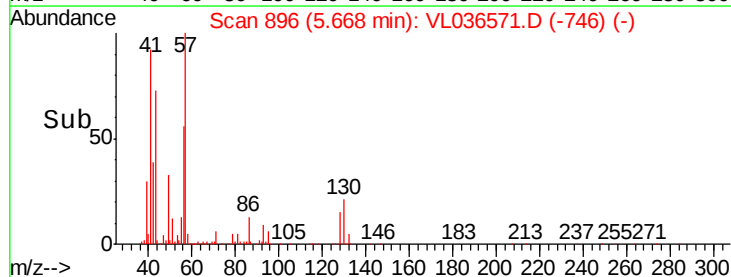
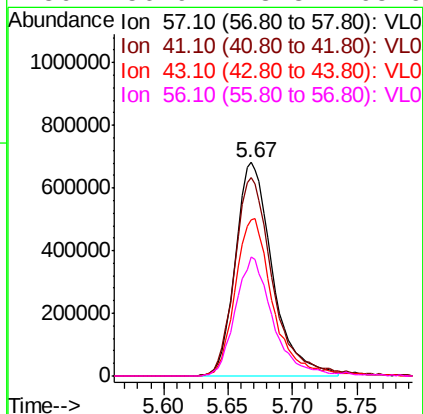
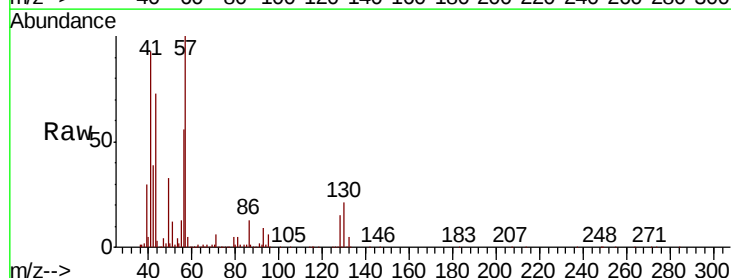
Instrument :
MSVOA_L
ClientSampleId :

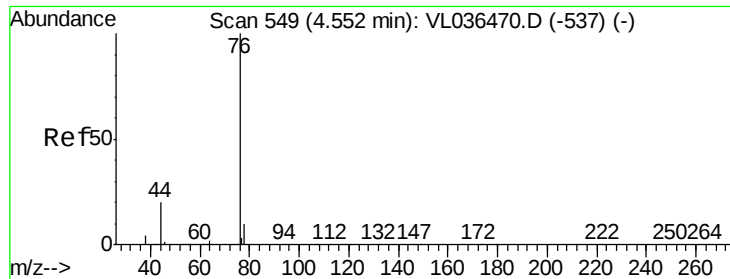
Tot Ion:	43	Resp:	989683
Ion	Ratio	Lower	Upper
43	100		
45	0.3	7.9	11.9#
61	0.2	7.4	11.2#
70	1.5	5.1	7.7#



#26
Hexane
Concen: 9.922 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.02 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

Tgt Ion:	57	Resp:	1363573
Ion	Ratio	Lower	Upper
57	100		
41	96.5	77.2	115.8
43	74.5	173.8	260.6#
56	56.9	43.8	65.6





#27

Carbon Disulfide

Concen: 0.041 ppbv

RT: 4.53 min Scan# 543

Delta R.T. -0.02 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

ClientSampleId :

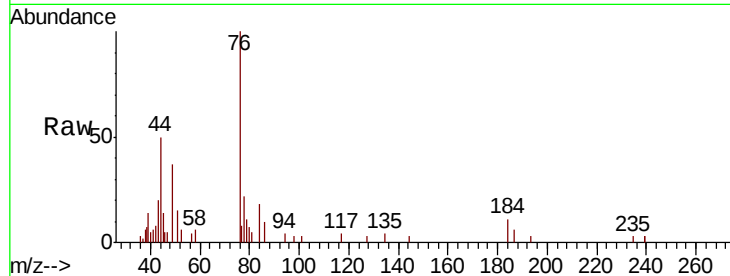
Tot Ion: 76 Resp: 5534

Ion Ratio Lower Upper

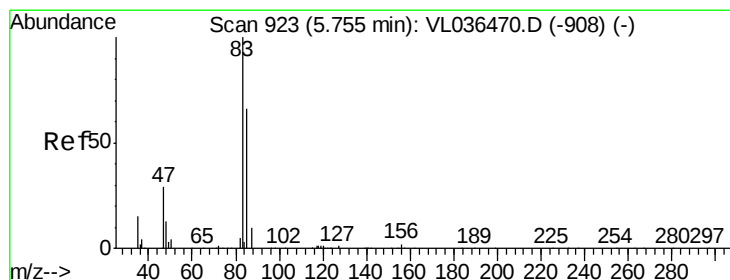
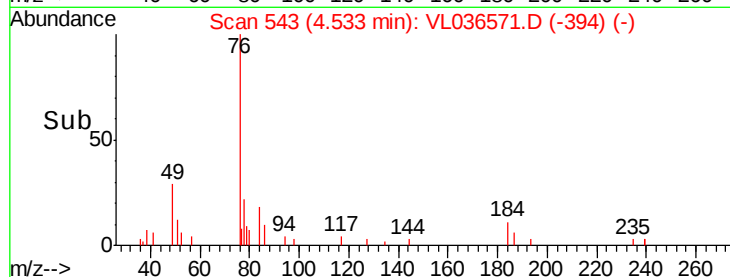
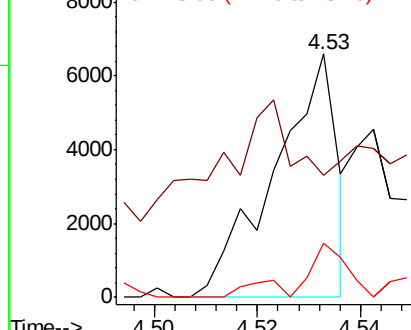
76 100

44 115.6 17.5 26.3#

78 24.9 8.6 13.0#



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0



#29

Chloroform

Concen: 0.213 ppbv

RT: 5.74 min Scan# 917

Delta R.T. -0.02 min

Lab File: VL036571.D

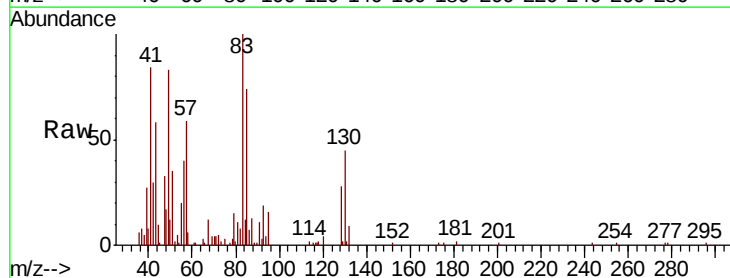
Acq: 30 Mar 2021 16:01

Tgt Ion: 83 Resp: 46824

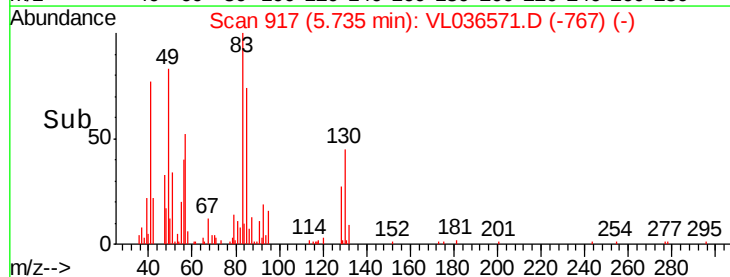
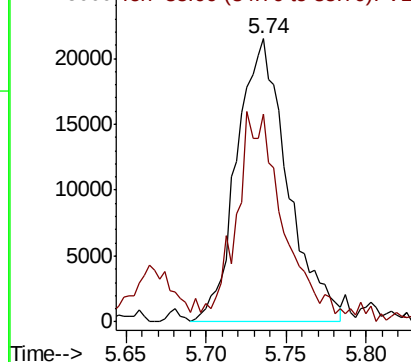
Ion Ratio Lower Upper

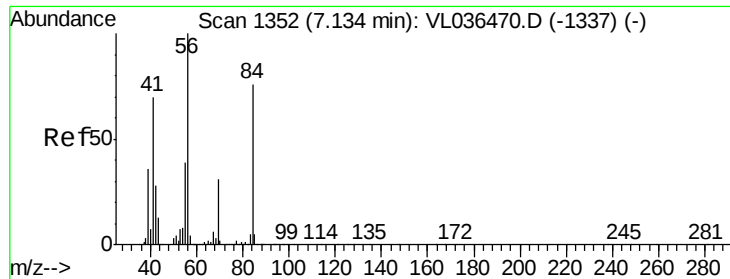
83 100

85 70.1 52.6 78.8



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

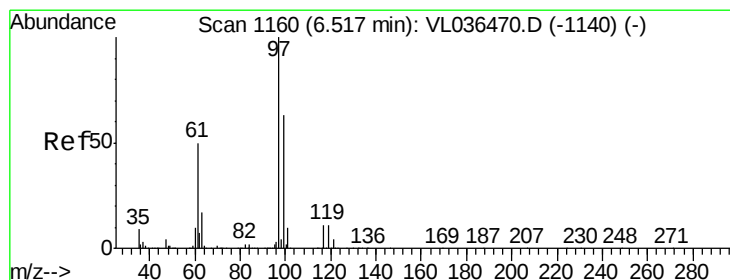
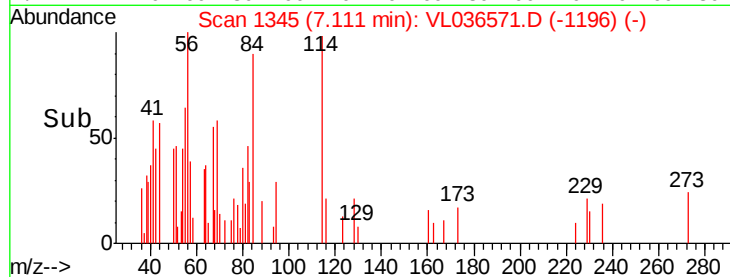
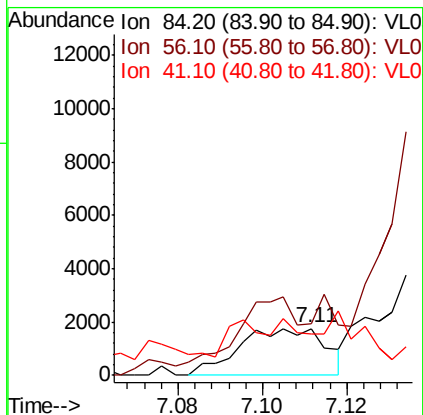
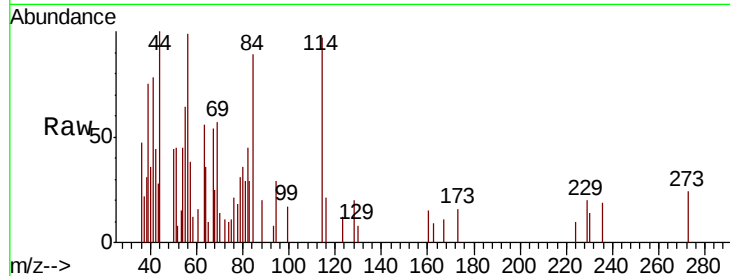




#30
Cvclohexane
Concen: 0.022 ppbv
RT: 7.11 min Scan# 1345
Delta R.T. -0.02 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

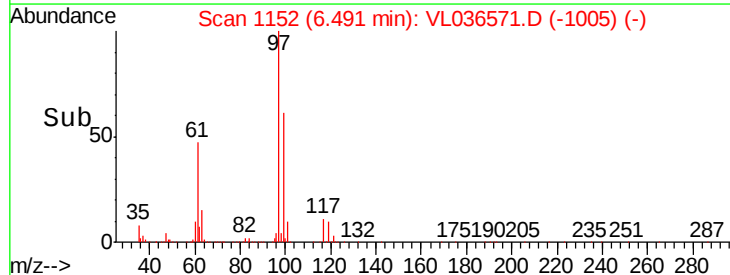
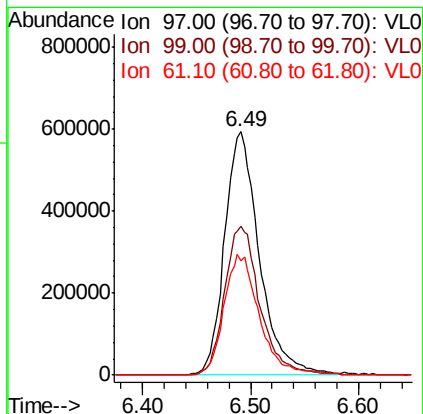
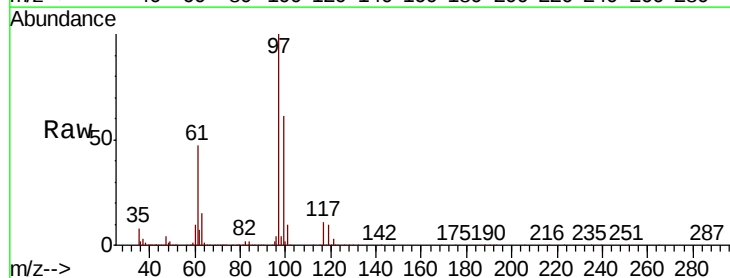
Instrument :
MSVOA_L
ClientSampled :

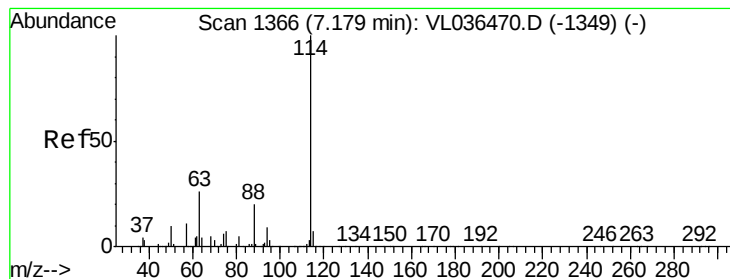
Tot Ion: 84 Resp: 2507
Ion Ratio Lower Upper
84 100
56 0.0 114.6 171.8#
41 230.6 75.3 112.9#



#32
1,1,1-Trichloroethane
Concen: 6.021 ppbv
RT: 6.49 min Scan# 1152
Delta R.T. -0.03 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

Tgt Ion: 97 Resp: 1333666
Ion Ratio Lower Upper
97 100
99 62.4 51.4 77.0
61 50.6 40.6 60.8





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.02 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

ClientSampleId :

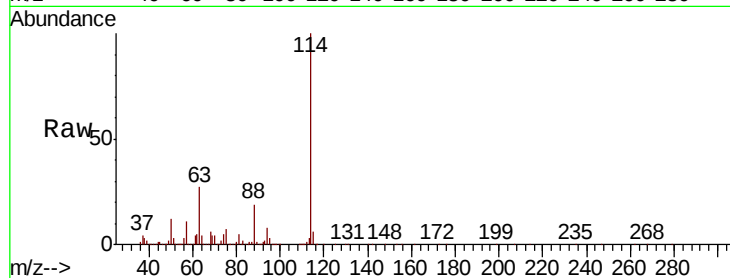
Tot Ion:114 Resp: 2938131

Ion Ratio Lower Upper

114 100

63 28.3 22.4 33.6

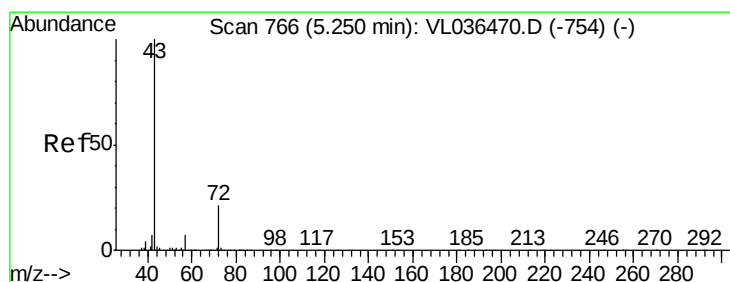
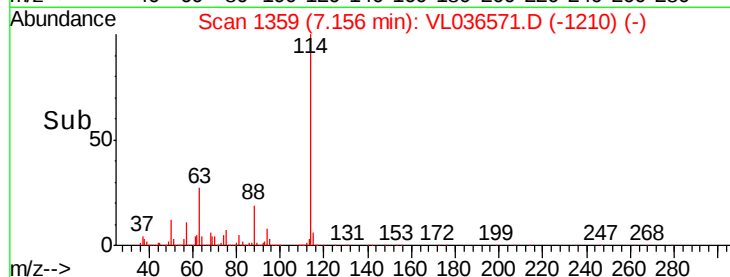
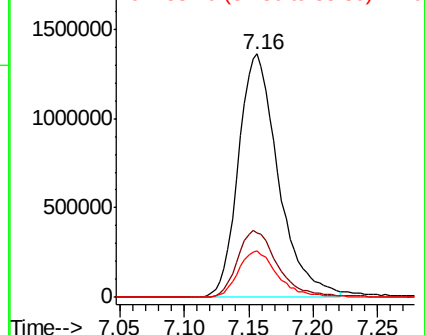
88 19.2 15.4 23.0



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: 0.174 ppbv

RT: 5.24 min Scan# 762

Delta R.T. -0.01 min

Lab File: VL036571.D

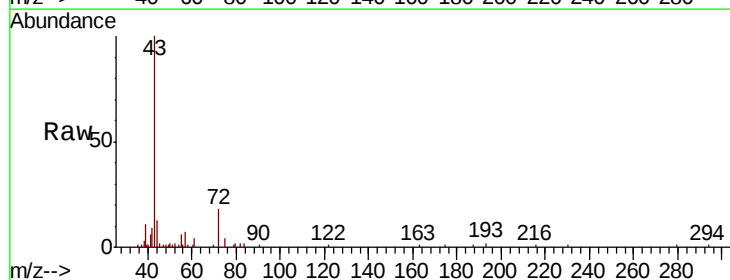
Acq: 30 Mar 2021 16:01

Tgt Ion: 43 Resp: 24934

Ion Ratio Lower Upper

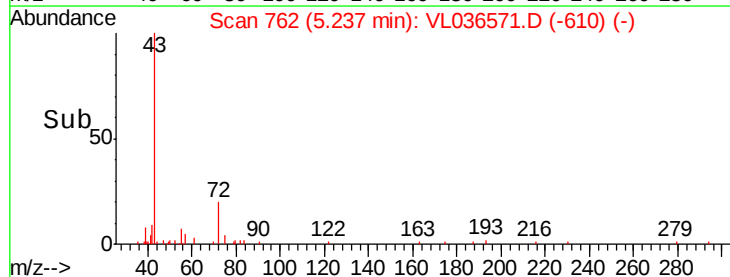
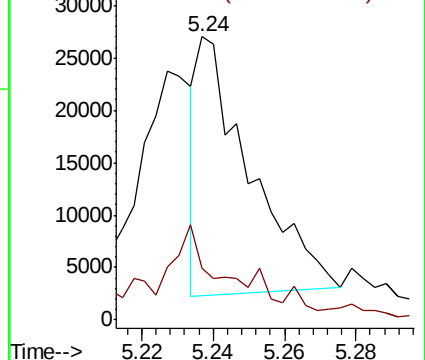
43 100

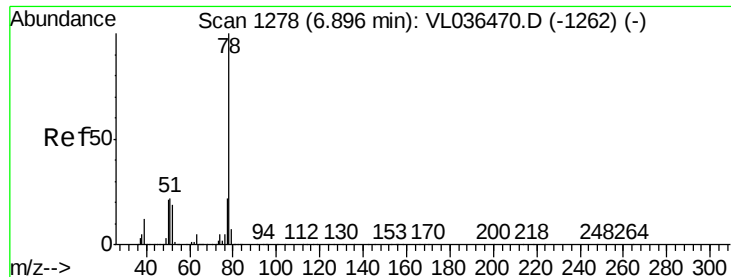
72 63.4 17.0 25.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.192 ppbv

RT: 6.87 min Scan# 1270

Delta R.T. -0.03 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

ClientSampleId :

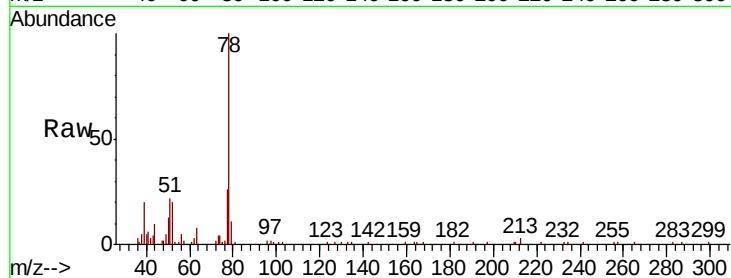
Tot Ion: 78 Resp: 52053

Ion Ratio Lower Upper

78 100

77 24.9 18.0 27.0

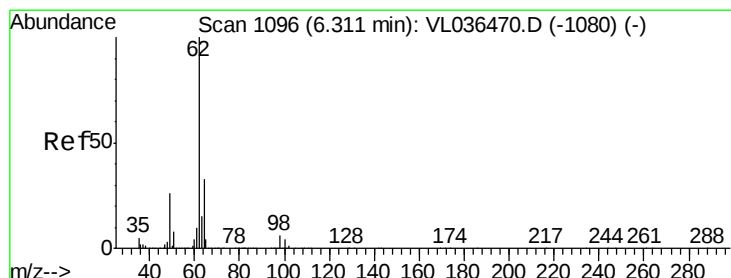
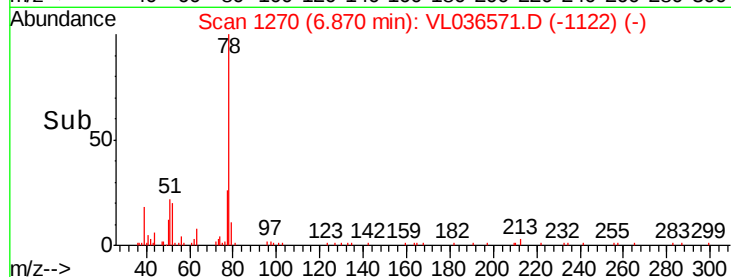
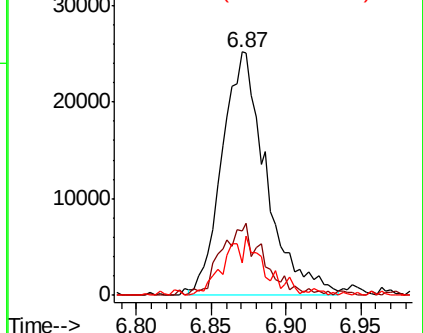
50 13.8 16.5 24.7#



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



#37

1,2-Dichloroethane

Concen: 0.559 ppbv

RT: 6.49 min Scan# 1151

Delta R.T. 0.18 min

Lab File: VL036571.D

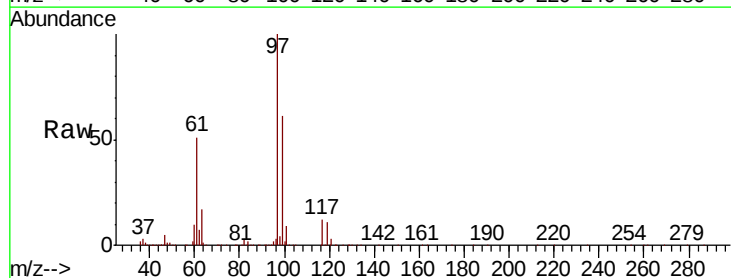
Acq: 30 Mar 2021 16:01

Tgt Ion: 62 Resp: 89081

Ion Ratio Lower Upper

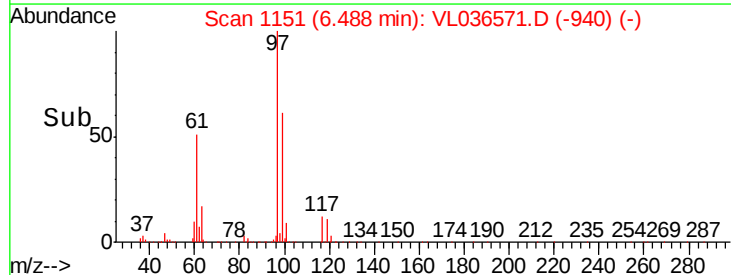
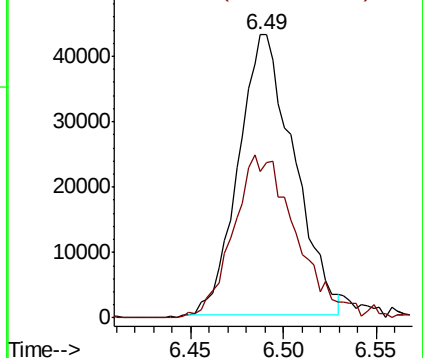
62 100

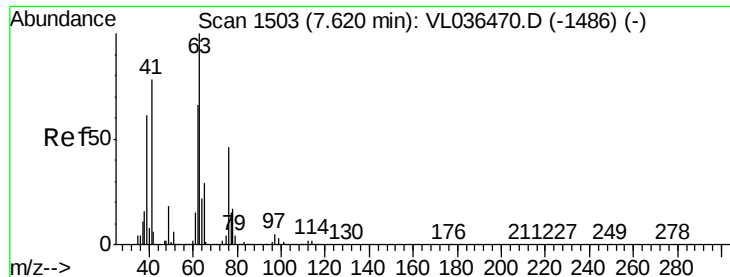
98 67.0 4.9 7.3#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

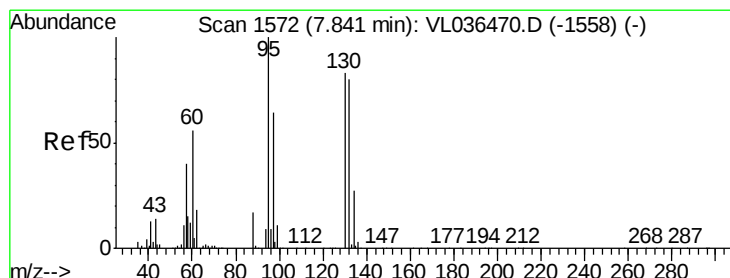
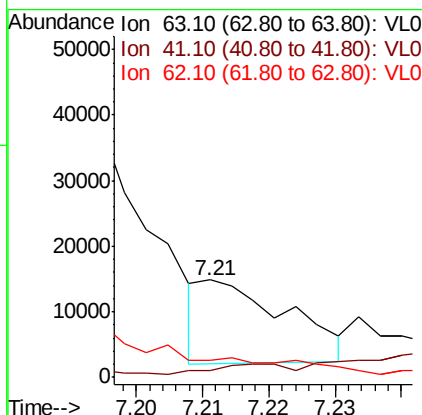
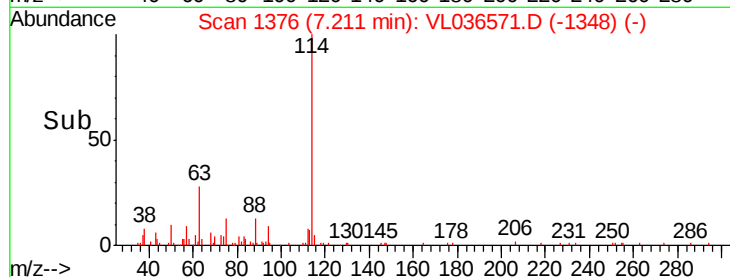
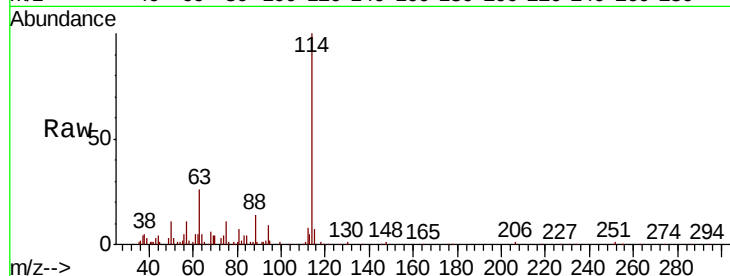




#39
 1,2-Dichloropropane
 Concen: 0.104 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. -0.41 min
 Lab File: VL036571.D
 Acq: 30 Mar 2021 16:01

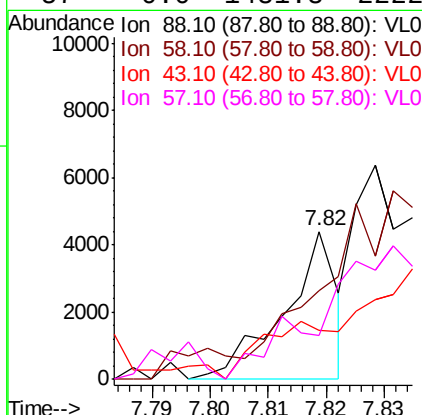
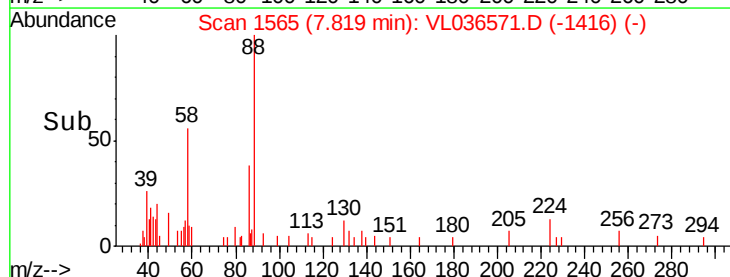
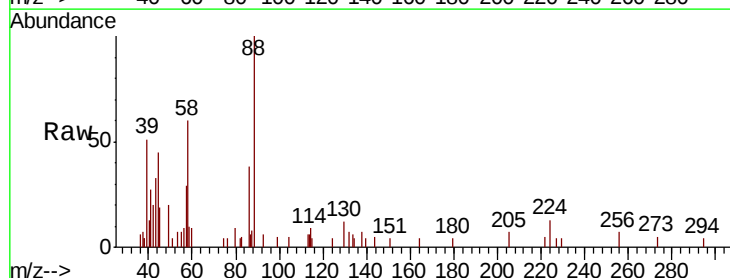
Instrument :
 MSVOA_L
 ClientSampled :

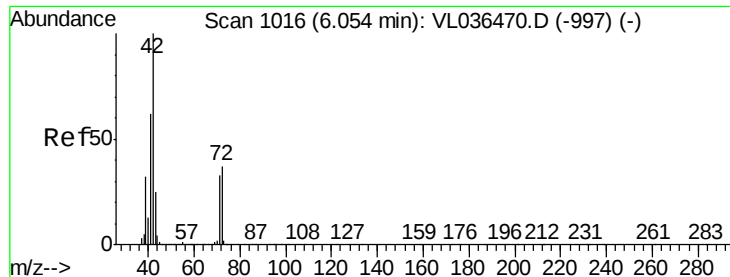
Tot Ion: 63 Resp: 11467
 Ion Ratio Lower Upper
 63 100
 41 0.4 62.4 93.6#
 62 12.5 52.8 79.2#



#40
 1,4-Dioxane
 Concen: 0.108 ppbv
 RT: 7.82 min Scan# 1565
 Delta R.T. -0.02 min
 Lab File: VL036571.D
 Acq: 30 Mar 2021 16:01

Tgt Ion: 88 Resp: 2768
 Ion Ratio Lower Upper
 88 100
 58 0.0 134.1 201.1#
 43 0.0 346.6 520.0#
 57 0.0 1481.8 2222.8#





#41

Tetrahydrofuran

Concen: 8.383 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.39 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

ClientSampleId :

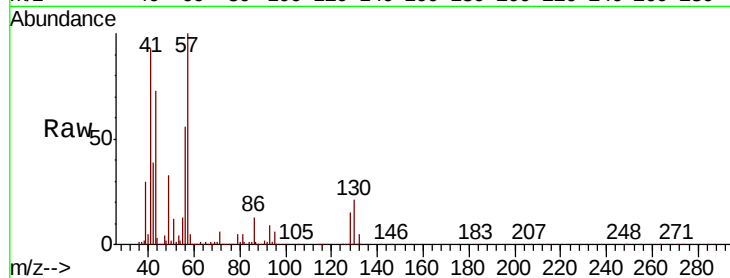
Tot Ion: 42 Resp: 554352

Ion Ratio Lower Upper

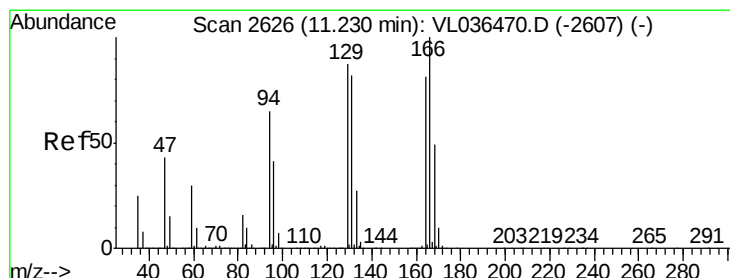
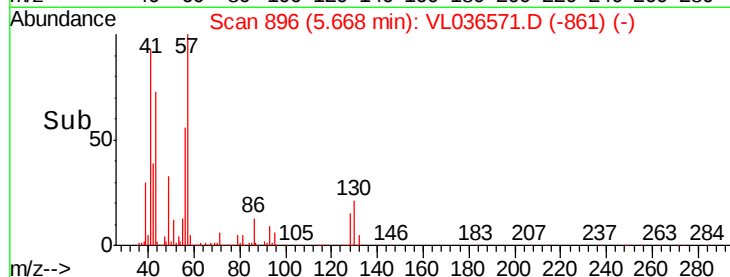
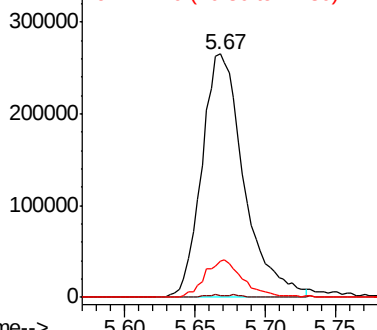
42 100

72 0.9 27.6 41.4#

71 14.2 27.0 40.4#



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



#52

Tetrachloroethene

Concen: 0.039 ppbv

RT: 11.19 min Scan# 2614

Delta R.T. -0.04 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Tgt Ion: 164 Resp: 3891

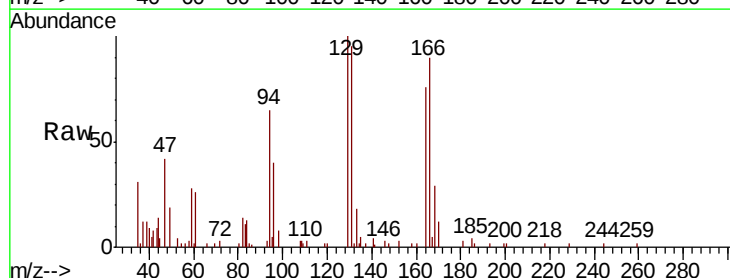
Ion Ratio Lower Upper

164 100

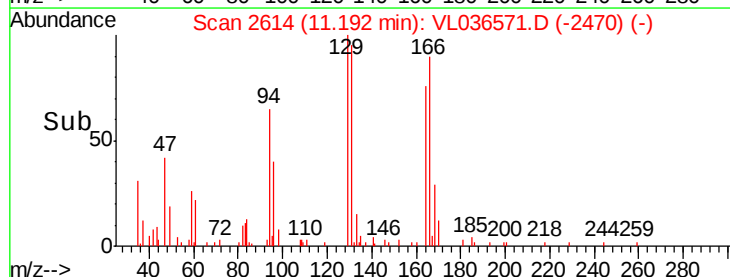
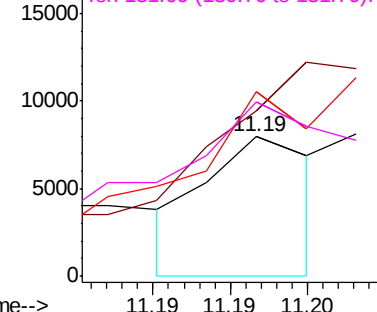
166 124.0 98.3 147.5

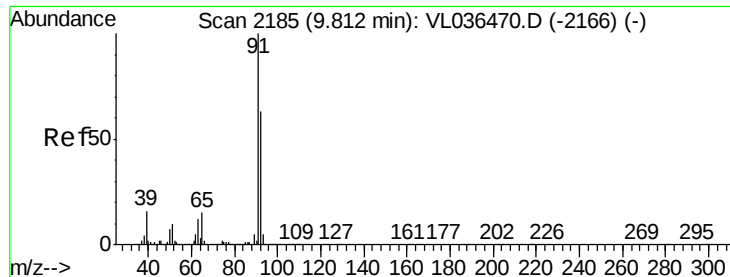
129 110.9 85.8 128.8

131 111.8 80.9 121.3



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: 0.060 ppbv

RT: 9.78 min Scan# 2174

Delta R.T. -0.04 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

Instrument :

MSVOA_L

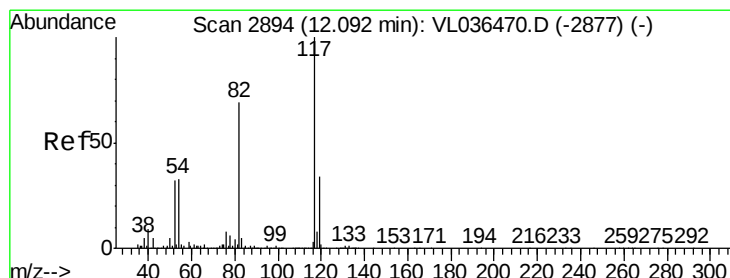
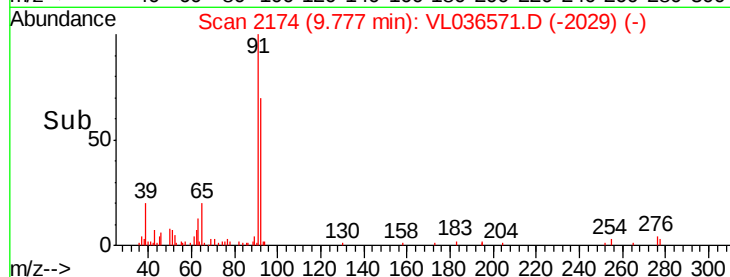
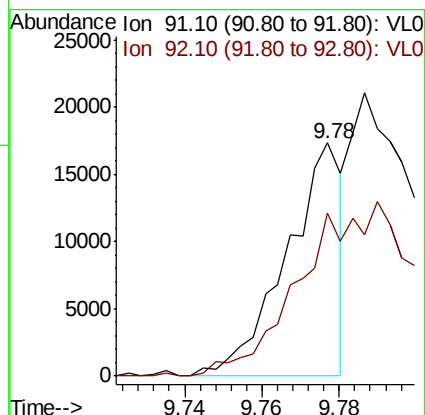
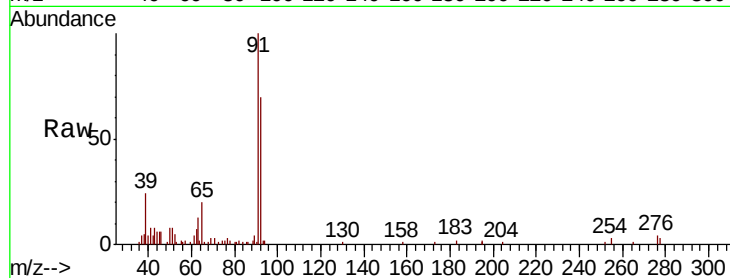
ClientSampleId :

Tot Ion: 91 Resp: 17227

Ion Ratio Lower Upper

91 100

92 0.0 48.8 73.2#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2885

Delta R.T. -0.03 min

Lab File: VL036571.D

Acq: 30 Mar 2021 16:01

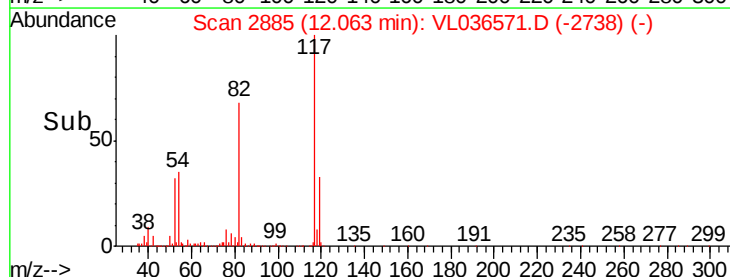
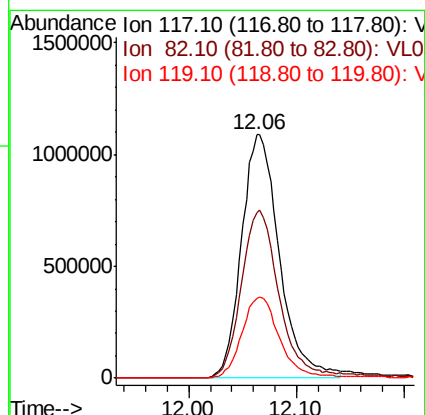
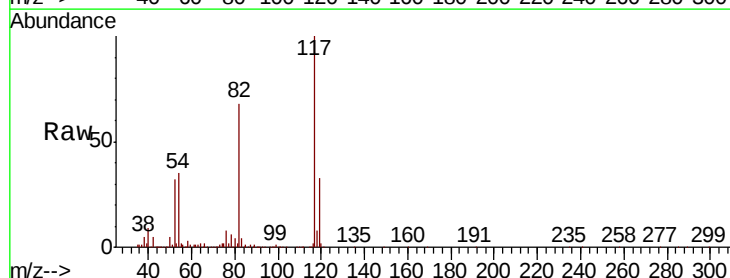
Tgt Ion: 117 Resp: 2660991

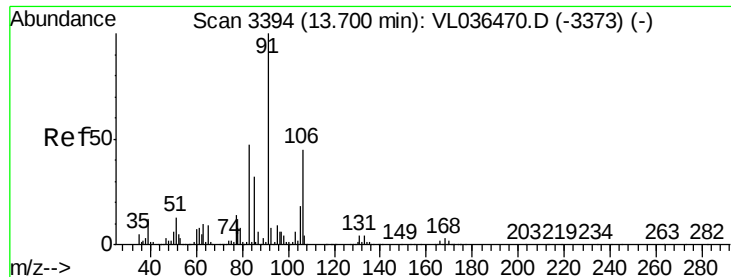
Ion Ratio Lower Upper

117 100

82 71.2 57.4 86.0

119 33.5 47.4 71.0#

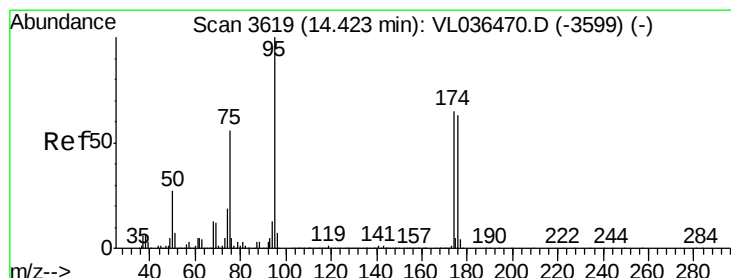
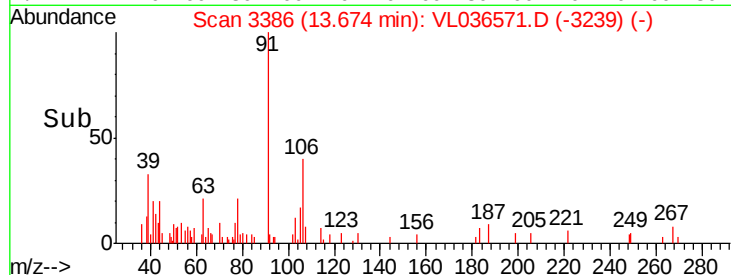
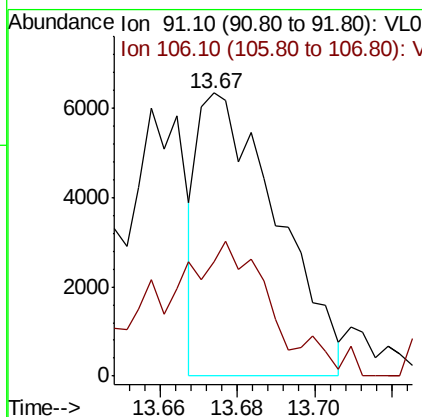
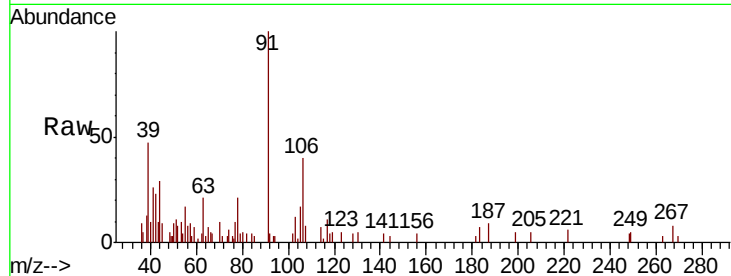




#60
o-Xylene
Concen: 0.028 ppbv
RT: 13.67 min Scan# 3386
Delta R.T. -0.03 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

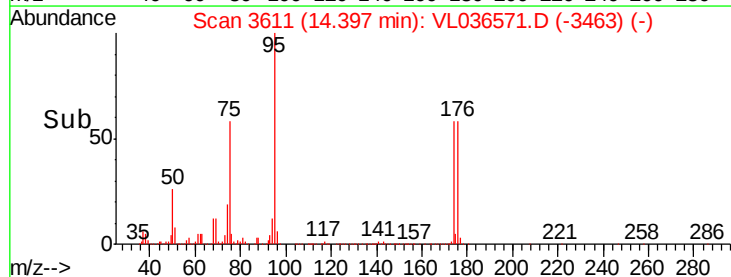
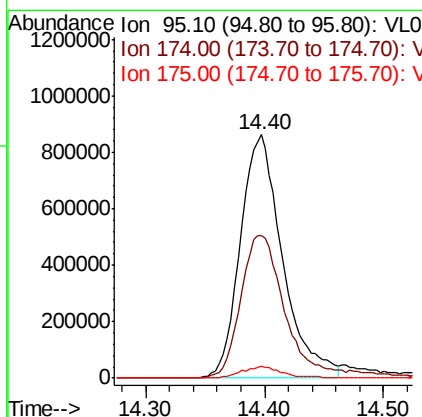
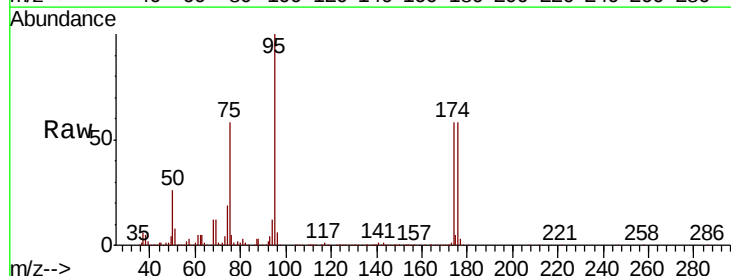
Instrument :
MSVOA_L
ClientSampled :

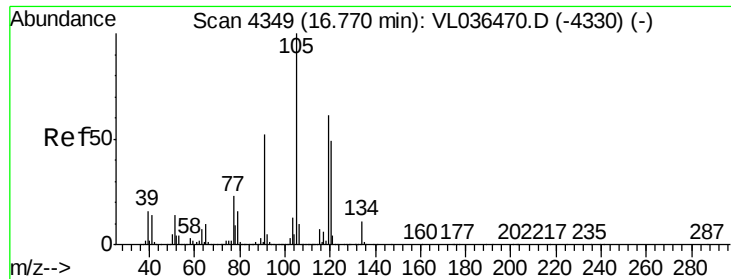
Tot Ion: 91 Resp: 9013
Ion Ratio Lower Upper
91 100
106 77.6 22.3 66.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.986 ppbv
RT: 14.40 min Scan# 3611
Delta R.T. -0.03 min
Lab File: VL036571.D
Acq: 30 Mar 2021 16:01

Tgt Ion: 95 Resp: 2117900
Ion Ratio Lower Upper
95 100
174 64.2 51.0 76.6
175 4.7 3.9 5.9





#74
 1,2,4-Trimethylbenzene
 Concen: 0.039 ppbv
 RT: 16.74 min Scan# 4340
 Delta R.T. -0.03 min
 Lab File: VL036571.D
 Acq: 30 Mar 2021 16:01

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:	105	Resp:	13999
Ion	Ratio	Lower	Upper
105	100		
120	34.3	39.2	58.8#
91	11.1	42.6	64.0#
77	27.0	18.6	28.0

