

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032719\
 Data File : VL033469.D
 Acq On : 27 Mar 2019 15:23
 Operator : SY/AP
 Sample : K1560-15 0.3 PPB
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 28 07:28:00 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 26 16:00:50 2019
 QLast Update : Tue Mar 26 16:00:50 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	725041	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.28	114	1670954	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.23	117	1660800	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1313505	10.09	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.90%

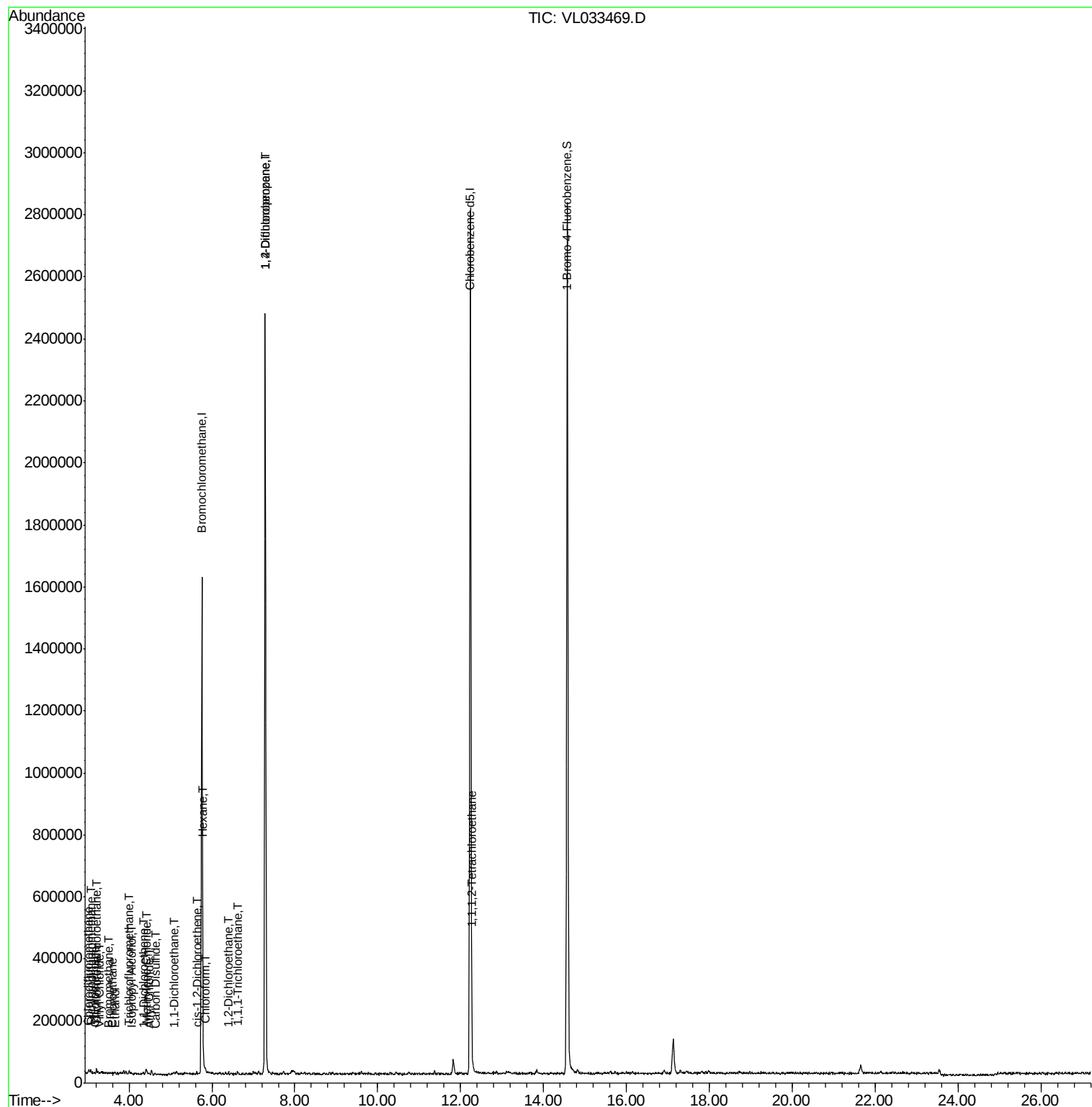
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	6392	0.060	ppbv	97
3) Chlorodifluoromethane	3.01	51	4595	0.055	ppbv	94
4) Chloromethane	3.17	50	1672	0.038	ppbv	97
5) Vinyl Chloride	3.29	62	906	0.021	ppbv #	62
6) Bromomethane	3.52	94	809	0.029	ppbv #	61
7) Chloroethane	3.60	64	340	0.021	ppbv	90
8) Dichlorotetrafluoroethane	3.22	85	5592	0.050	ppbv	85
11) Trichlorofluoromethane	4.00	101	5647	0.043	ppbv	98
13) Ethanol	3.65	45	196	0.022	ppbv #	18
18) 1,1-Dichloroethene	4.35	96	1394	0.037	ppbv #	24
19) Isopropyl Alcohol	4.05	45	1321	0.024	ppbv #	95
20) Methylene Chloride	4.40	84	2852	0.077	ppbv #	53
21) Allyl Chloride	4.48	41	1685	0.031	ppbv #	26
24) 1,1-Dichloroethane	5.08	63	2694	0.029	ppbv #	88
26) Hexane	5.78	57	1810	0.025	ppbv #	21
27) Carbon Disulfide	4.62	76	1807	0.021	ppbv #	1
29) Chloroform	5.84	83	4104	0.033	ppbv	91
31) cis-1,2-Dichloroethene	5.64	61	1910	0.027	ppbv #	46
32) 1,1,1-Trichloroethane	6.61	97	2384	0.020	ppbv #	27
37) 1,2-Dichloroethane	6.40	62	2531	0.027	ppbv #	92
39) 1,2-Dichloropropane	7.28	63	448811	8.172	ppbv #	23
56) 1,1,1,2-Tetrachloroethane	12.27	131	1975	0.026	ppbv #	47

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

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Instrument :

MSVOA_L

ClientSampleId :

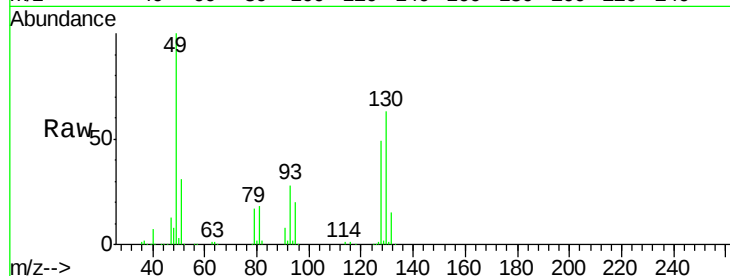
Tot Ion: 49 Resp: 725041

Ion Ratio Lower Upper

49 100

128 48.2 24.0 72.0

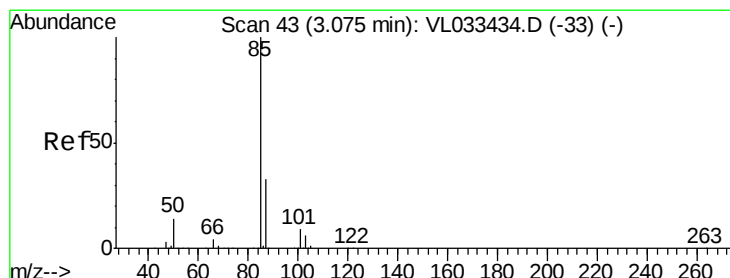
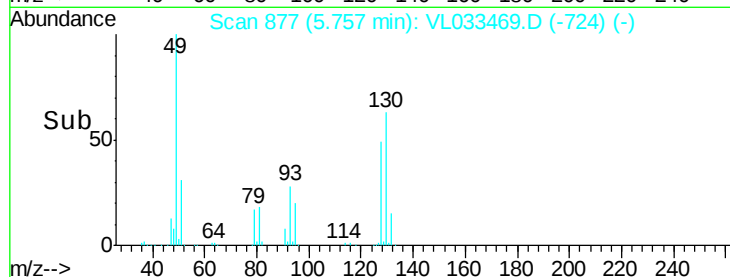
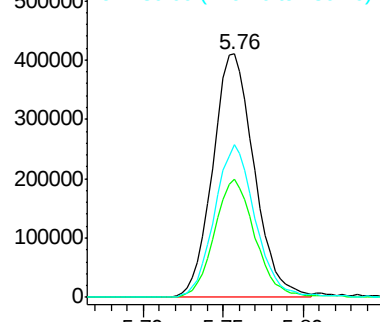
130 62.3 31.2 93.6



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: 0.060 ppbv

RT: 3.07 min Scan# 42

Delta R.T. -0.00 min

Lab File: VL033469.D

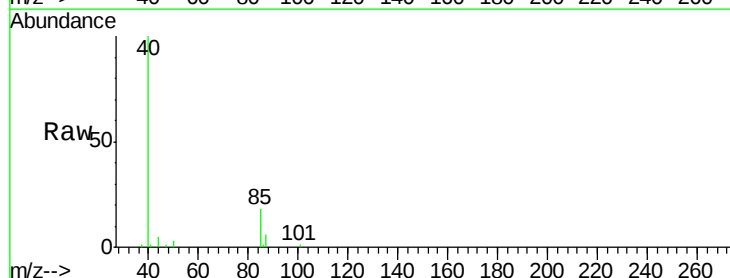
Acq: 27 Mar 2019 15:23

Tgt Ion: 85 Resp: 6392

Ion Ratio Lower Upper

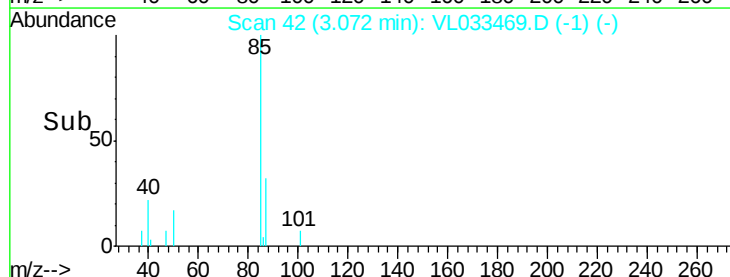
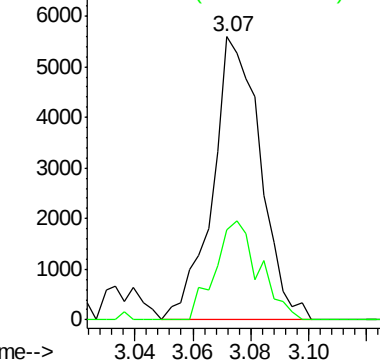
85 100

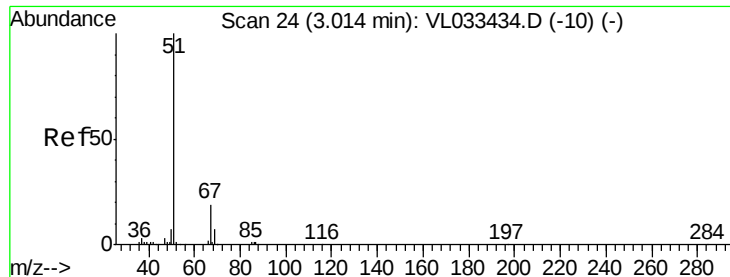
87 31.7 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.055 ppbv

RT: 3.01 min Scan# 24

Delta R.T. -0.00 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Instrument :

MSVOA_L

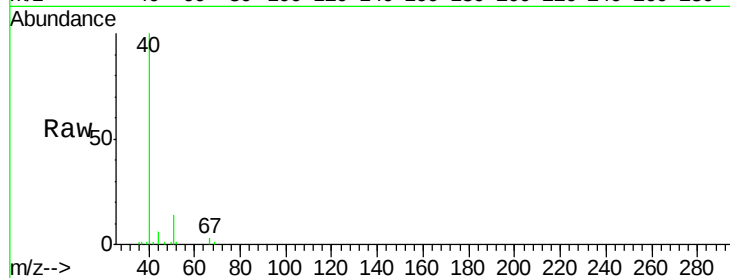
ClientSampleId :

Tot Ion: 51 Resp: 4595

Ion Ratio Lower Upper

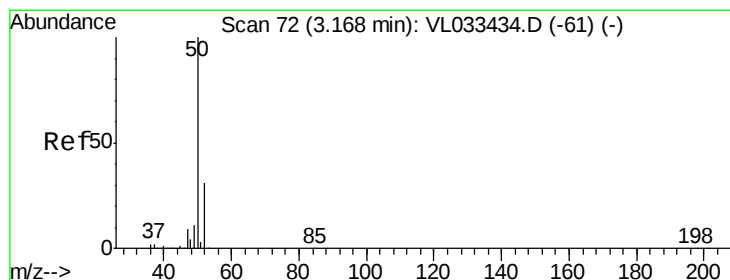
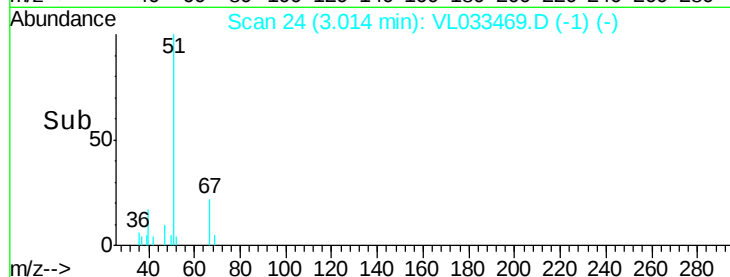
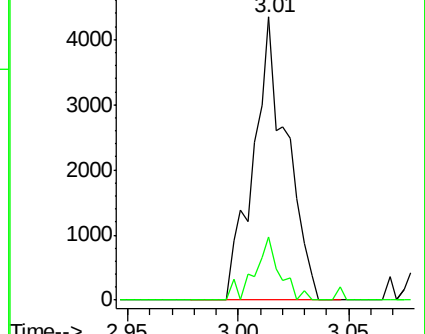
51 100

67 16.7 15.7 23.5



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.038 ppbv

RT: 3.17 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL033469.D

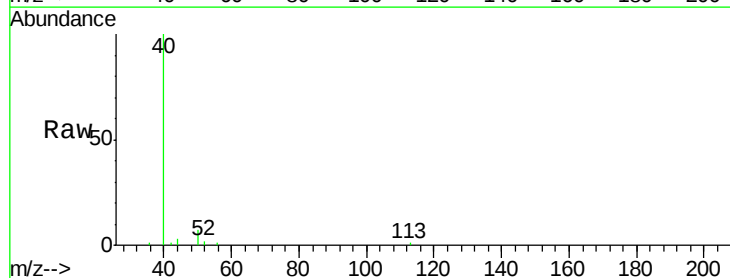
Acq: 27 Mar 2019 15:23

Tgt Ion: 50 Resp: 1672

Ion Ratio Lower Upper

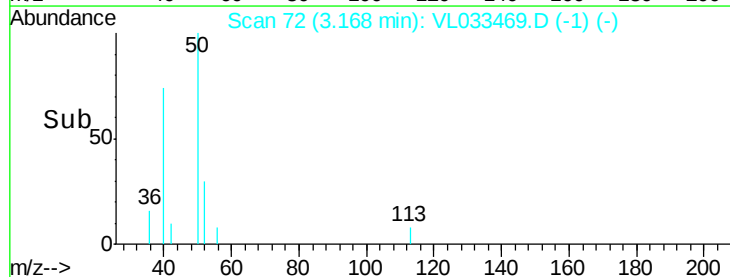
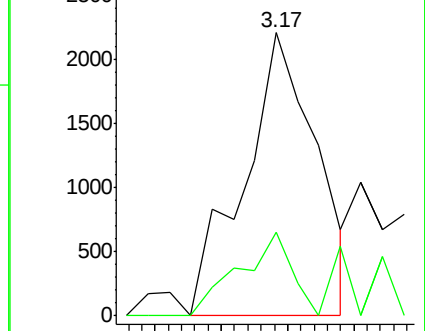
50 100

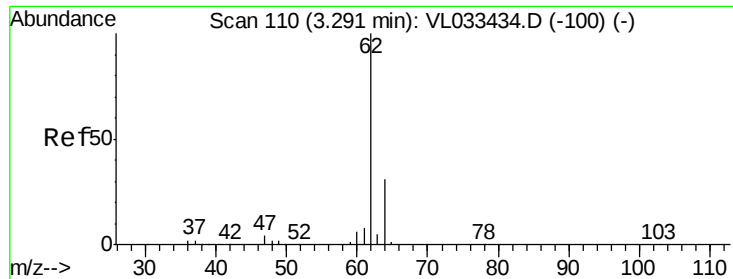
52 29.5 25.0 37.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.021 ppbv

RT: 3.29 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Instrument :

MSVOA_L

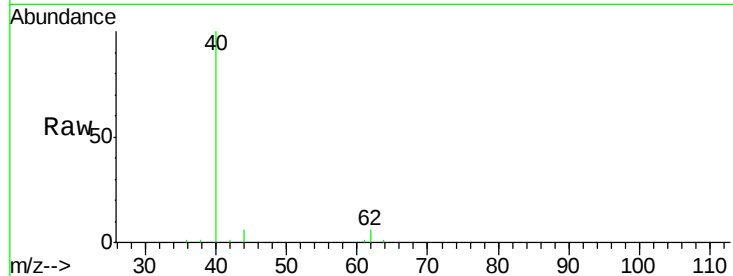
ClientSampled :

Tot Ion: 62 Resp: 906

Ion Ratio Lower Upper

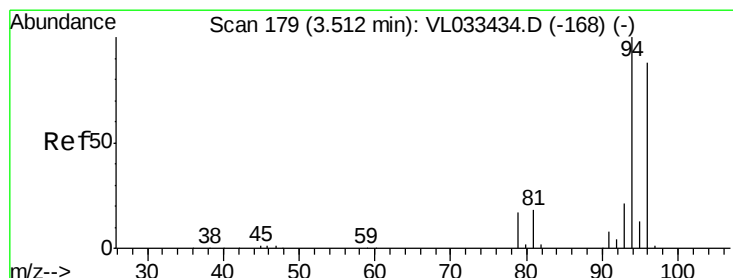
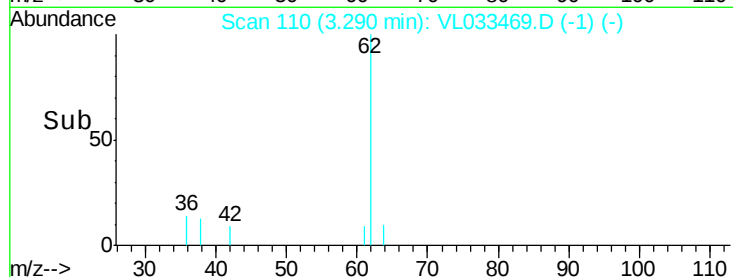
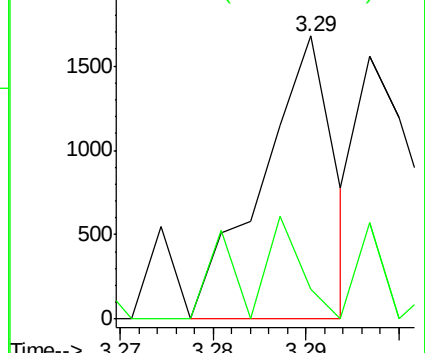
62 100

64 10.4 24.9 37.3#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#6

Bromomethane

Concen: 0.029 ppbv

RT: 3.52 min Scan# 180

Delta R.T. 0.00 min

Lab File: VL033469.D

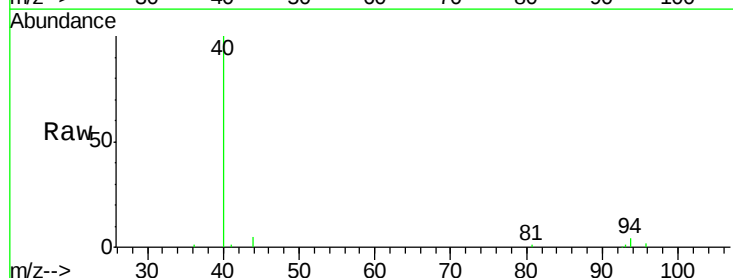
Acq: 27 Mar 2019 15:23

Tgt Ion: 94 Resp: 809

Ion Ratio Lower Upper

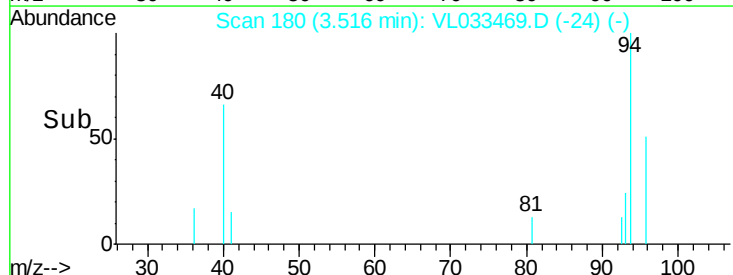
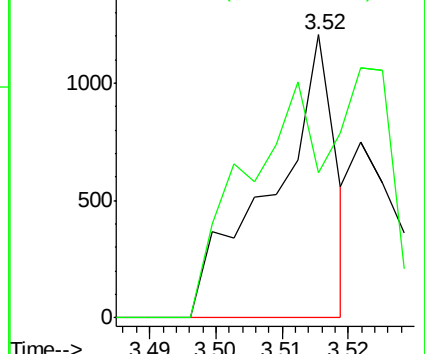
94 100

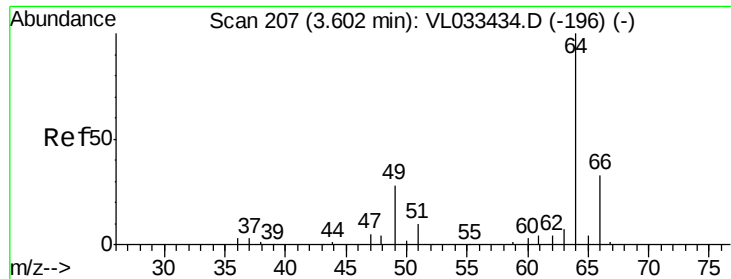
96 51.4 70.2 105.2#



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0





#7

Chloroethane

Concen: 0.021 ppbv

RT: 3.60 min Scan# 205

Delta R.T. -0.01 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Instrument :

MSVOA_L

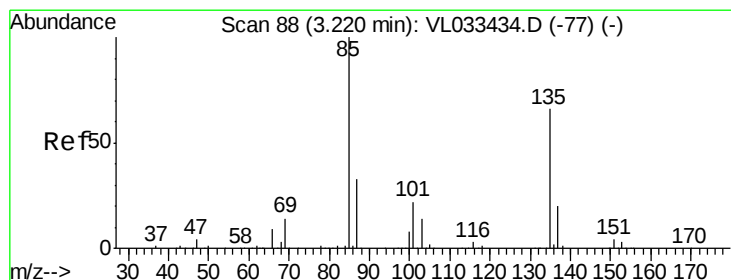
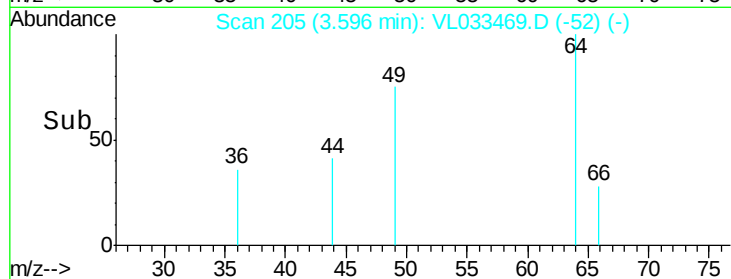
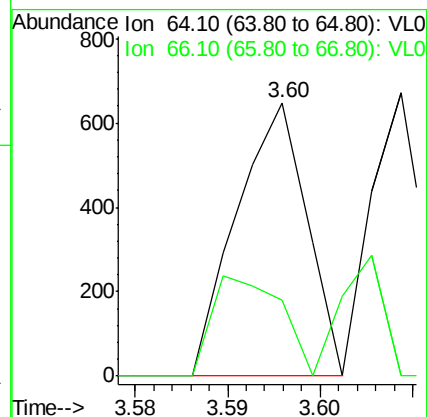
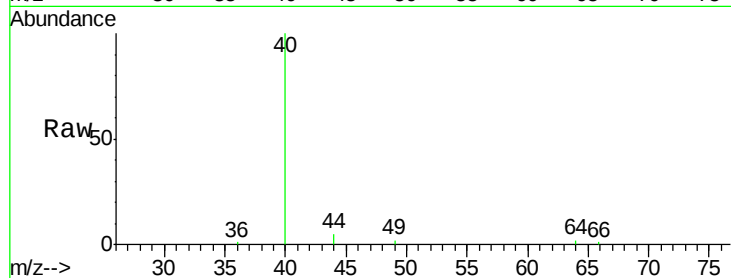
ClientSampleId :

Tot Ion: 64 Resp: 340

Ion Ratio Lower Upper

64 100

66 27.9 26.7 40.1



#8

Dichlorotetrafluoroethane

Concen: 0.050 ppbv

RT: 3.22 min Scan# 88

Delta R.T. -0.00 min

Lab File: VL033469.D

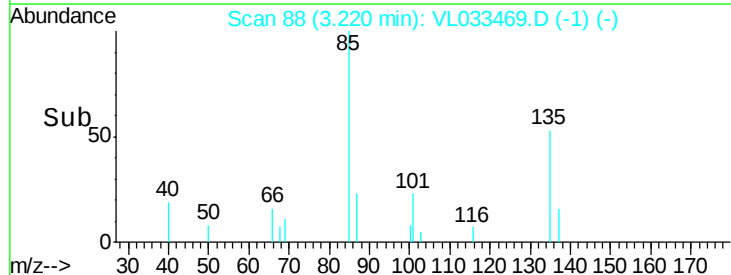
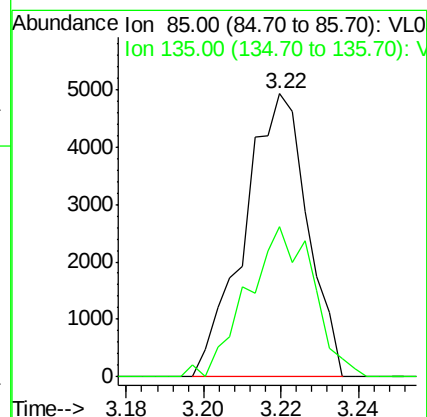
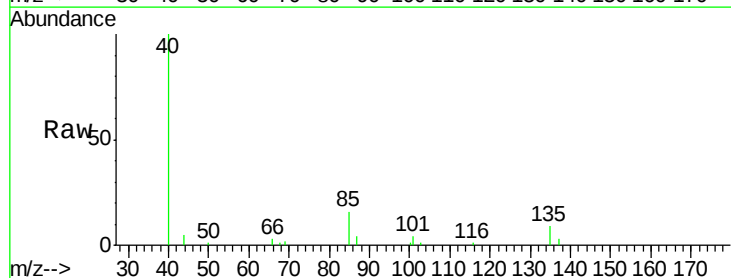
Acq: 27 Mar 2019 15:23

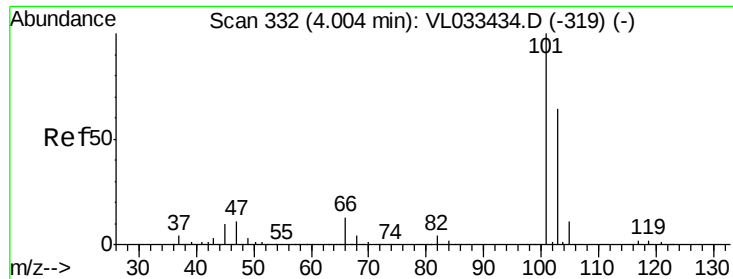
Tgt Ion: 85 Resp: 5592

Ion Ratio Lower Upper

85 100

135 55.4 54.0 81.0

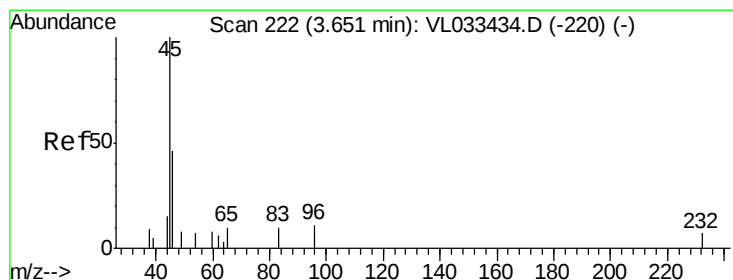
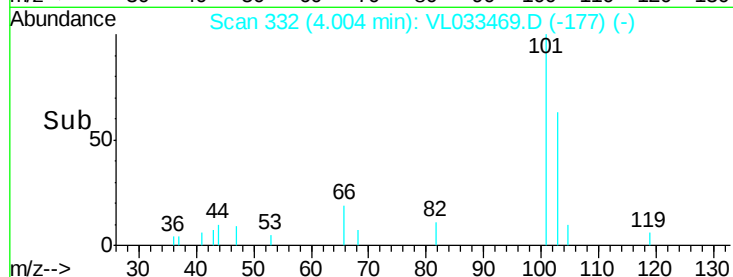
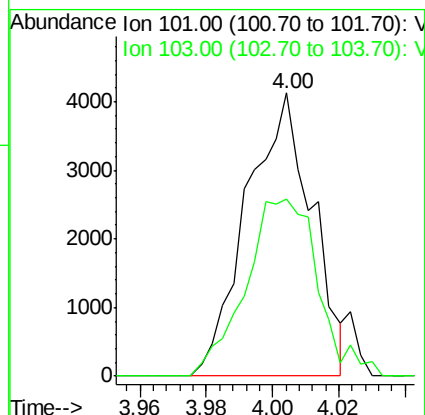
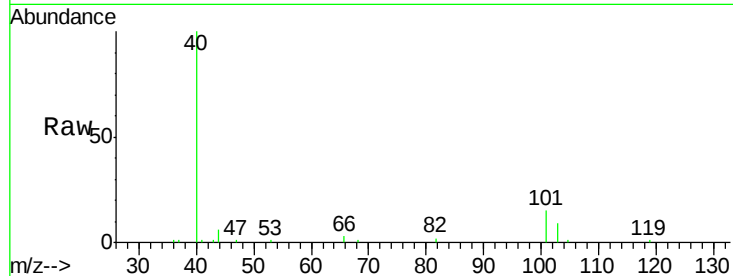




#11
 Trichlorofluoromethane
 Concen: 0.043 ppbv
 RT: 4.00 min Scan# 332
 Delta R.T. -0.00 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

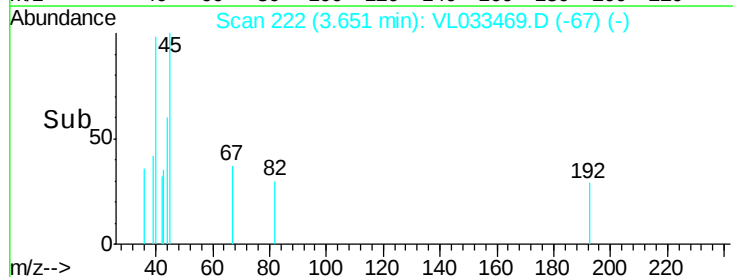
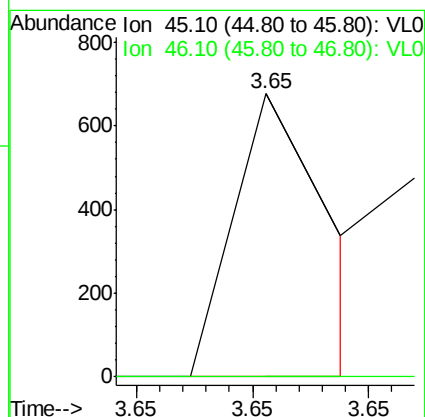
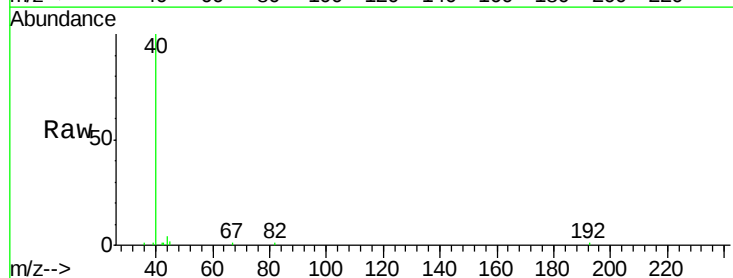
Instrument :
 MSVOA_L
 ClientSampleId :

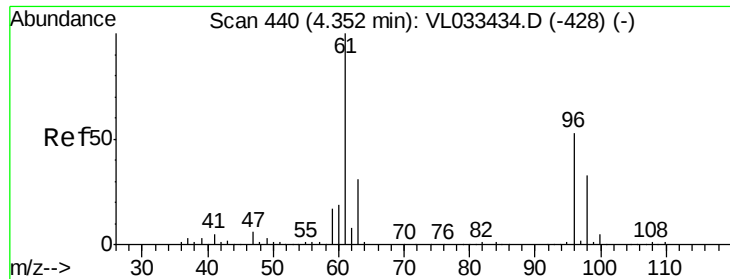
Tot Ion:101 Resp: 5647
 Ion Ratio Lower Upper
 101 100
 103 62.7 51.3 76.9



#13
 Ethanol
 Concen: 0.022 ppbv
 RT: 3.65 min Scan# 222
 Delta R.T. -0.00 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

Tgt Ion: 45 Resp: 196
 Ion Ratio Lower Upper
 45 100
 46 0.0 25.4 101.8#





#18

1,1-Dichloroethene

Concen: 0.037 ppbv

RT: 4.35 min Scan# 438

Delta R.T. -0.01 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Instrument :
MSVOA_L
ClientSampleId :

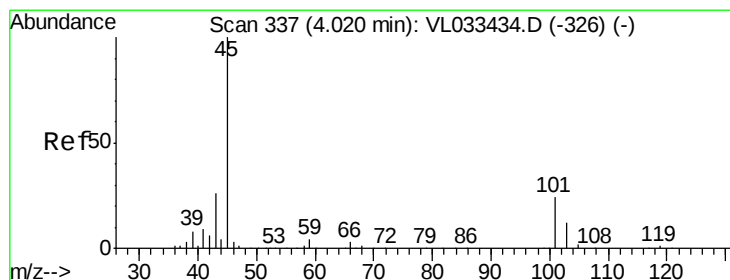
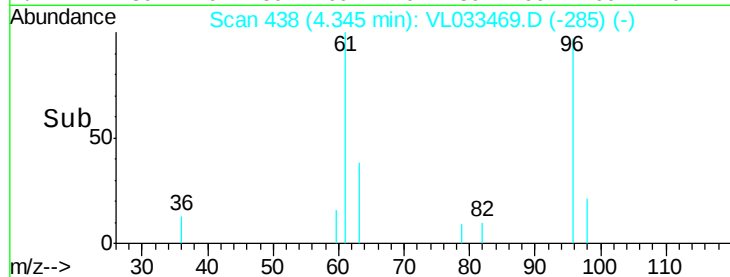
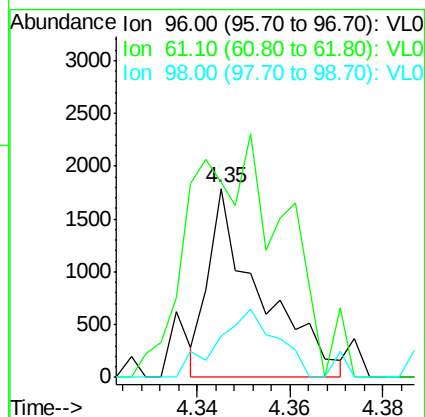
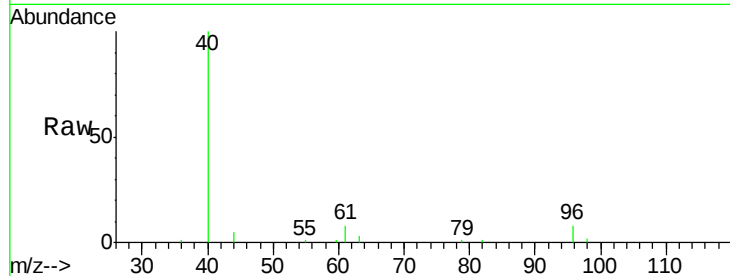
Tot Ion: 96 Resp: 1394

Ion Ratio Lower Upper

96 100

61 73.2 149.8 224.6#

98 9.5 48.7 73.1#



#19

Isopropyl Alcohol

Concen: 0.024 ppbv

RT: 4.05 min Scan# 346

Delta R.T. 0.03 min

Lab File: VL033469.D

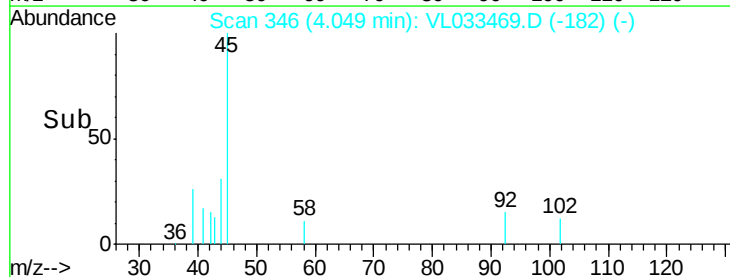
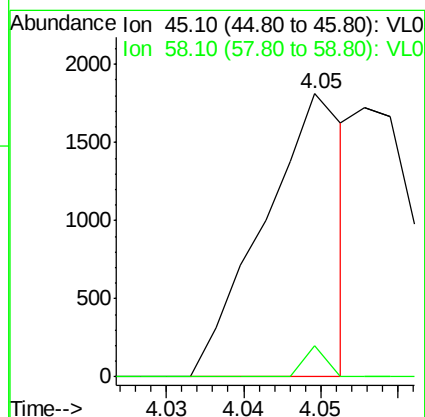
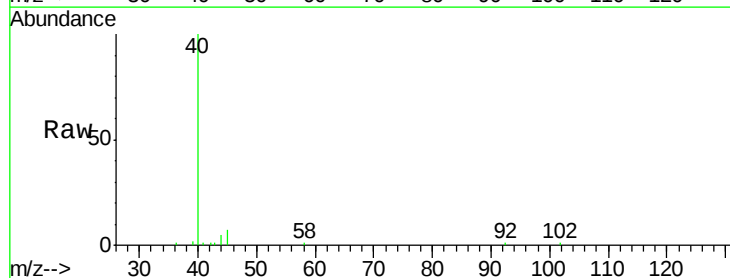
Acq: 27 Mar 2019 15:23

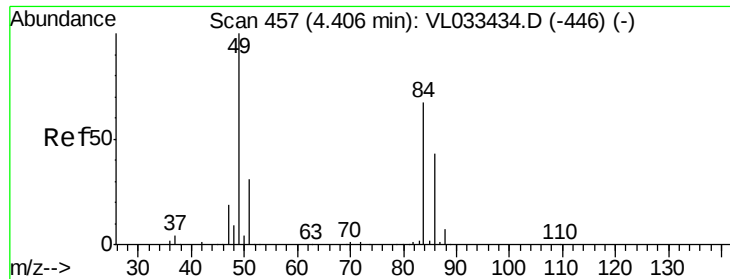
Tgt Ion: 45 Resp: 1321

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.2#

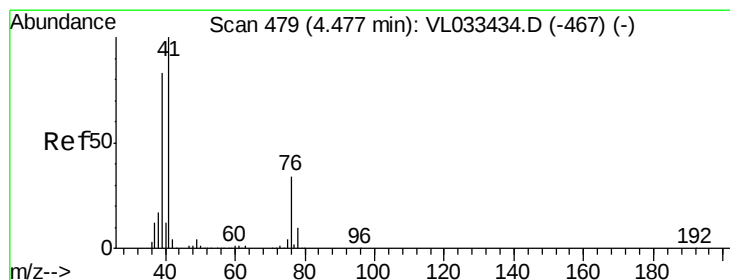
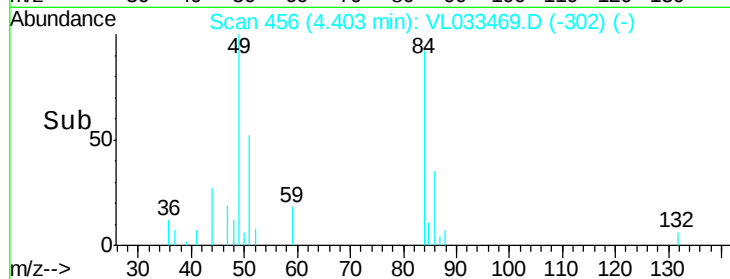
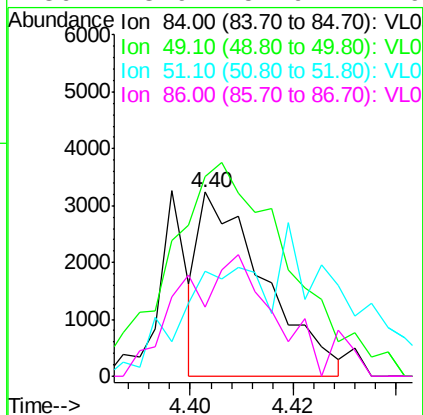
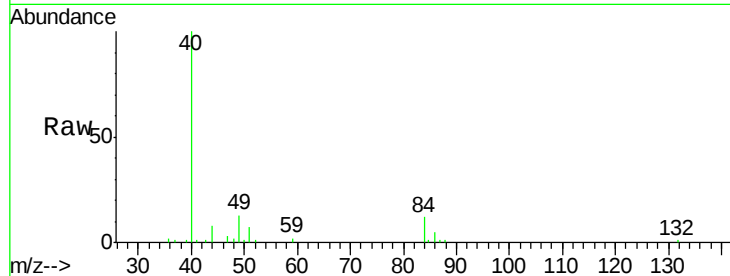




#20
Methylene Chloride
Concen: 0.077 ppbv
RT: 4.40 min Scan# 456
Delta R.T. -0.00 min
Lab File: VL033469.D
Acq: 27 Mar 2019 15:23

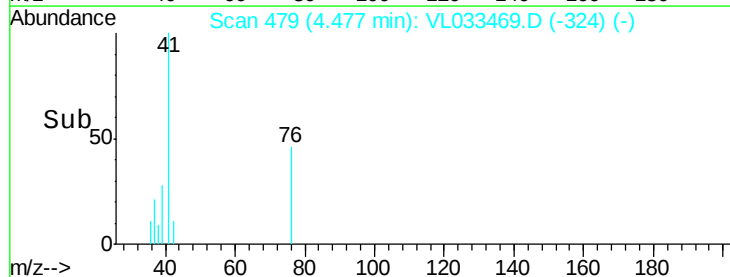
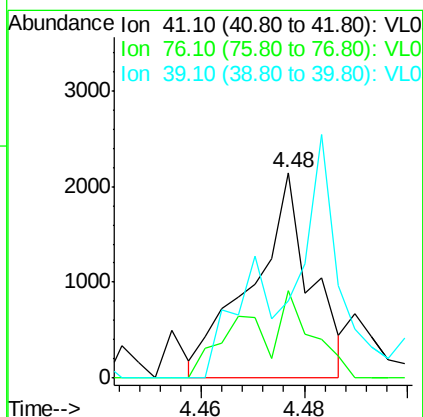
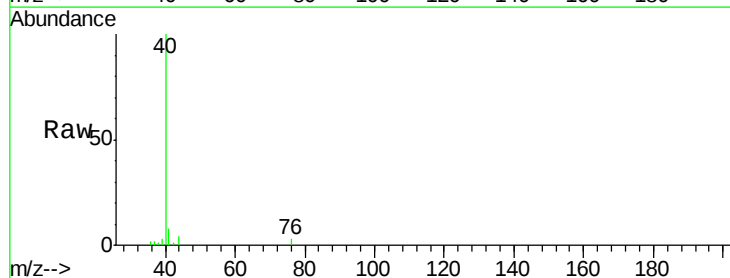
Instrument :
MSVOA_L
ClientSampleId :

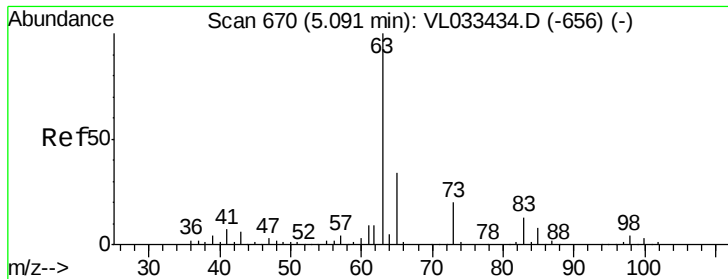
Tot Ion: 84 Resp: 2852
Ion Ratio Lower Upper
84 100
49 98.4 120.0 180.0#
51 18.9 36.7 55.1#
86 13.9 51.9 77.9#



#21
Allyl Chloride
Concen: 0.031 ppbv
RT: 4.48 min Scan# 479
Delta R.T. -0.00 min
Lab File: VL033469.D
Acq: 27 Mar 2019 15:23

Tgt Ion: 41 Resp: 1685
Ion Ratio Lower Upper
41 100
76 47.6 25.4 38.2#
39 0.0 65.3 97.9#





#24

1,1-Dichloroethane

Concen: 0.029 ppbv

RT: 5.08 min Scan# 668

Delta R.T. -0.01 min

Lab File: VL033469.D

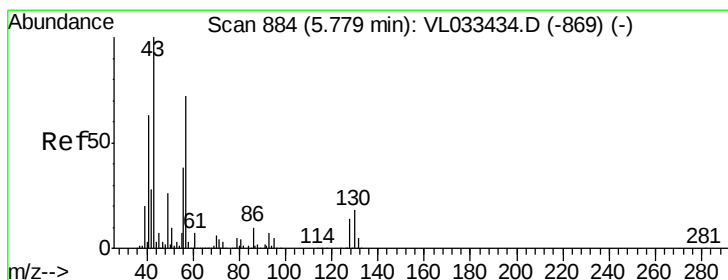
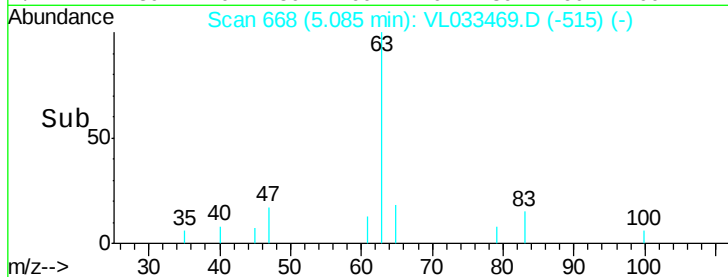
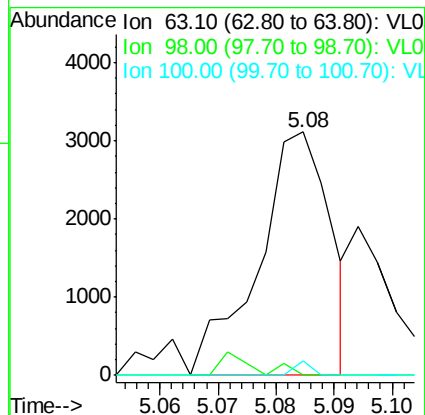
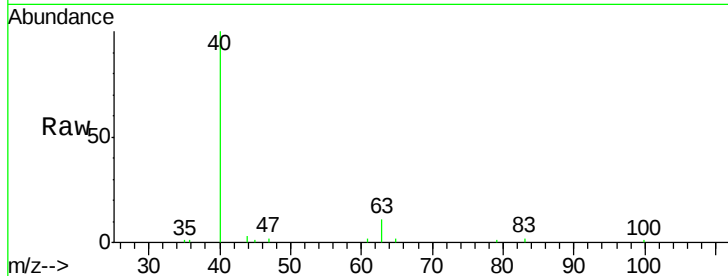
Acq: 27 Mar 2019 15:23

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	63	Resp:	2694
Ion	Ratio	Lower	Upper
63	100		
98	0.0	2.2	6.6#
100	6.1	1.5	4.4#



#26

Hexane

Concen: 0.025 ppbv

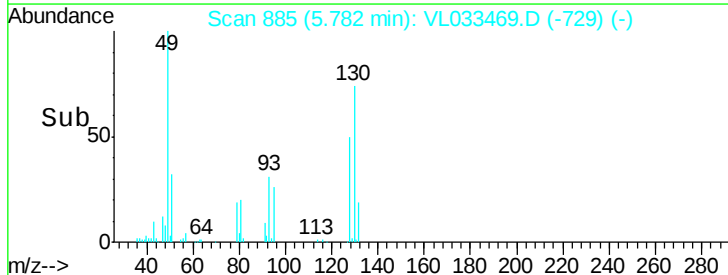
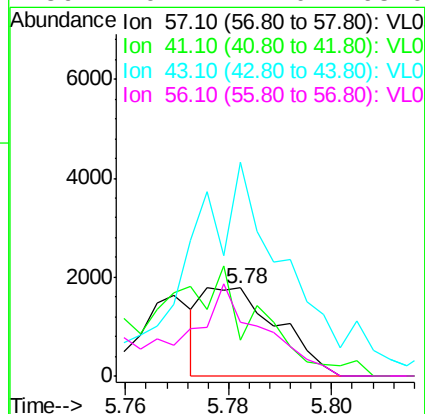
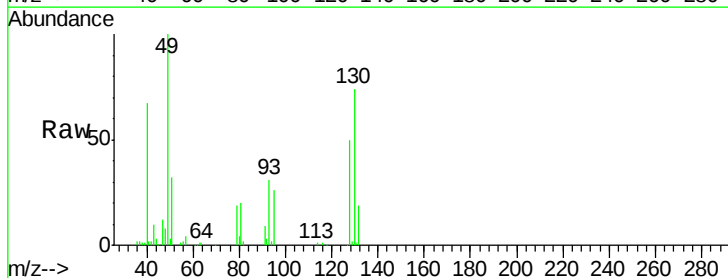
RT: 5.78 min Scan# 885

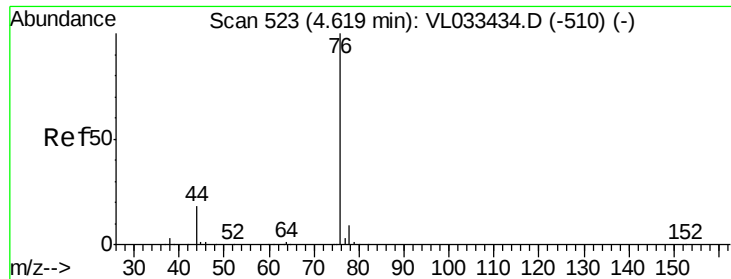
Delta R.T. 0.00 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Tgt Ion:	57	Resp:	1810
Ion	Ratio	Lower	Upper
57	100		
41	173.6	70.7	106.1#
43	344.4	182.6	274.0#
56	119.1	42.0	63.0#

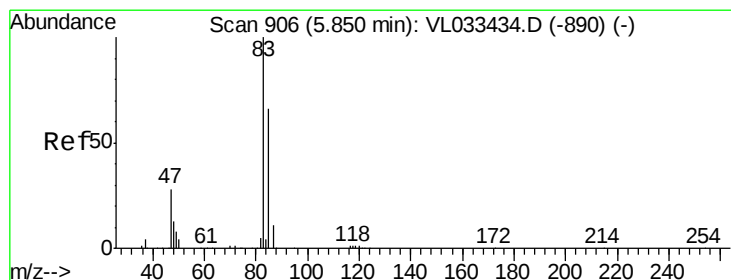
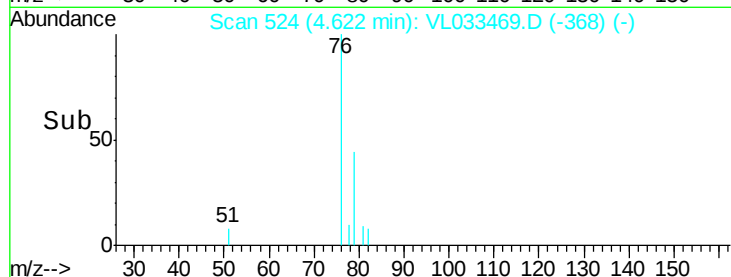
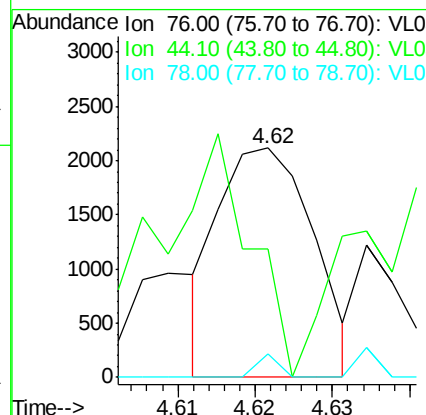
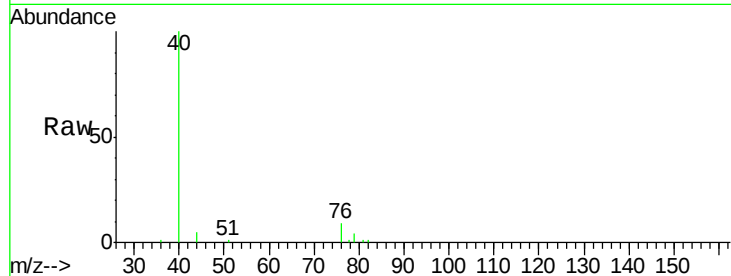




#27
Carbon Disulfide
Concen: 0.021 ppbv
RT: 4.62 min Scan# 524
Delta R.T. 0.00 min
Lab File: VL033469.D
Acq: 27 Mar 2019 15:23

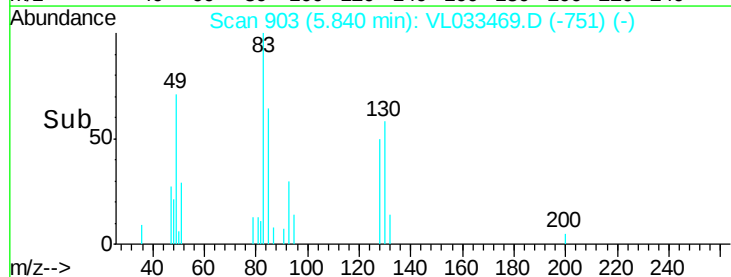
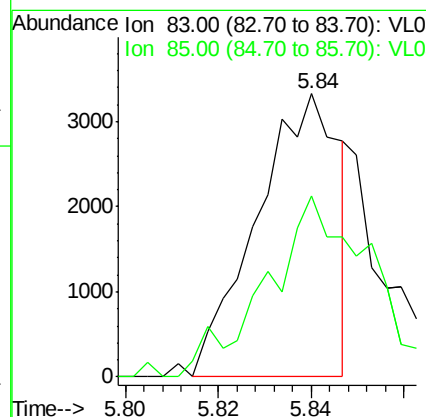
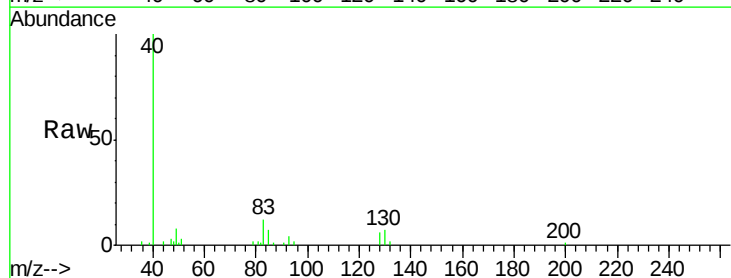
Instrument :
MSVOA_L
ClientSampled :

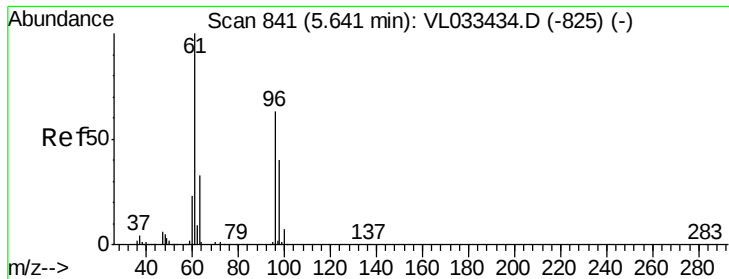
Tot Ion: 76 Resp: 1807
Ion Ratio Lower Upper
76 100
44 234.8 14.8 22.2#
78 0.0 7.6 11.4#



#29
Chloroform
Concen: 0.033 ppbv
RT: 5.84 min Scan# 903
Delta R.T. -0.01 min
Lab File: VL033469.D
Acq: 27 Mar 2019 15:23

Tgt Ion: 83 Resp: 4104
Ion Ratio Lower Upper
83 100
85 58.3 52.6 79.0



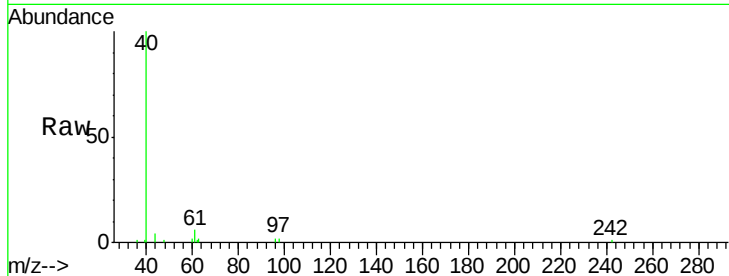


#31

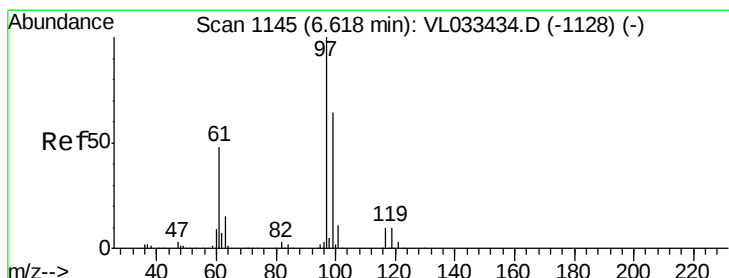
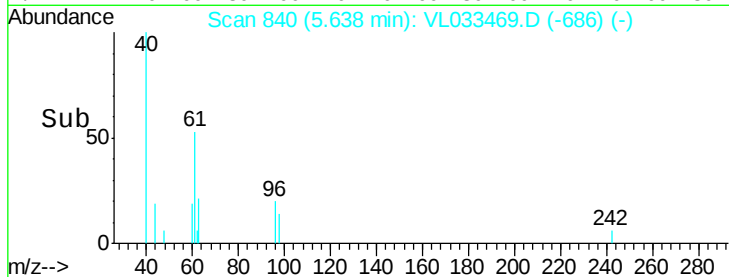
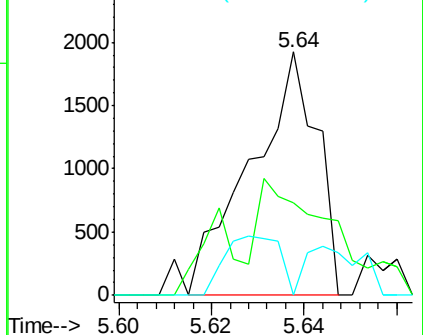
cis-1,2-Dichloroethene
 Concen: 0.027 ppbv
 RT: 5.64 min Scan# 840
 Delta R.T. -0.00 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion: 61 Resp: 1910
 Ion Ratio Lower Upper
 61 100
 96 27.2 50.6 76.0#
 98 0.0 32.2 48.2#



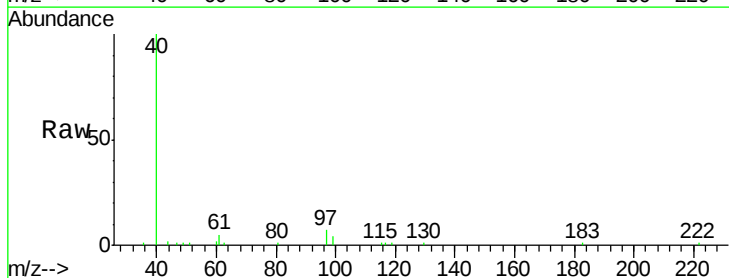
Abundance Ion 61.10 (60.80 to 61.80): VL0
 Ion 96.00 (95.70 to 96.70): VL0
 Ion 98.00 (97.70 to 98.70): VL0



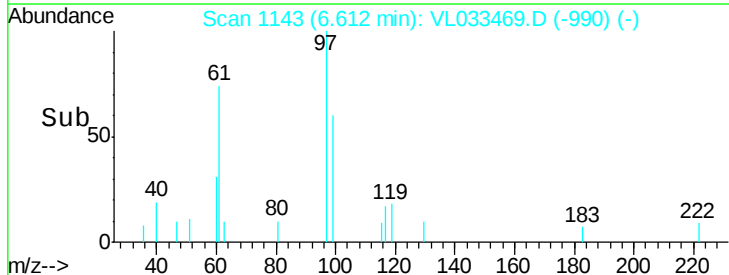
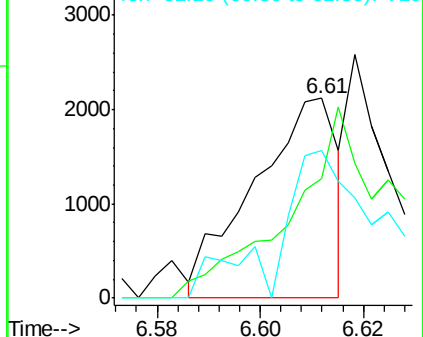
#32

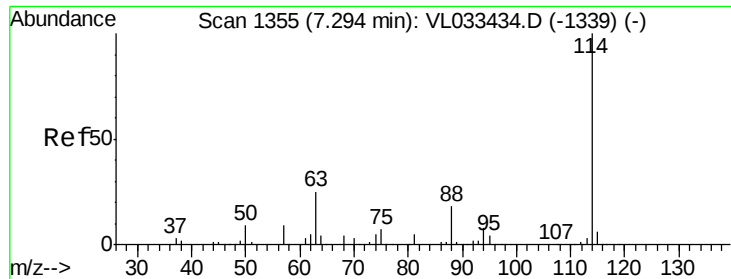
1,1,1-Trichloroethane
 Concen: 0.020 ppbv
 RT: 6.61 min Scan# 1143
 Delta R.T. -0.01 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

Tgt Ion: 97 Resp: 2384
 Ion Ratio Lower Upper
 97 100
 99 0.0 51.5 77.3#
 61 90.6 38.8 58.2#



Abundance Ion 97.00 (96.70 to 97.70): VL0
 Ion 99.00 (98.70 to 99.70): VL0
 Ion 61.10 (60.80 to 61.80): VL0

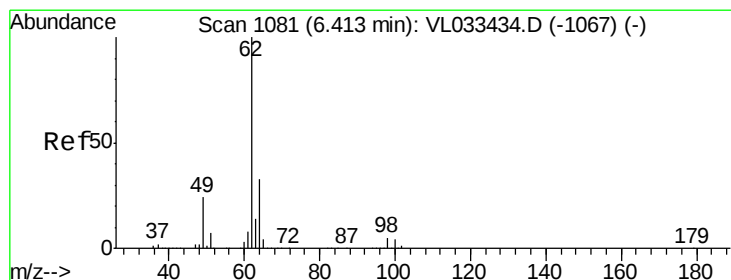
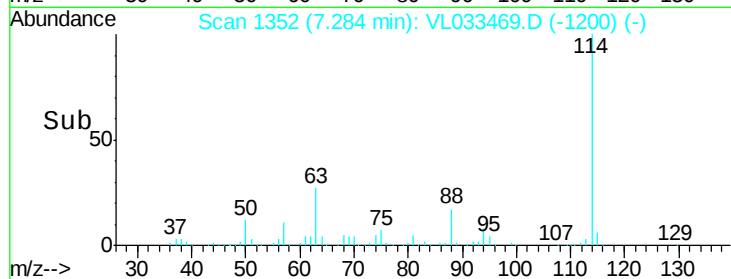
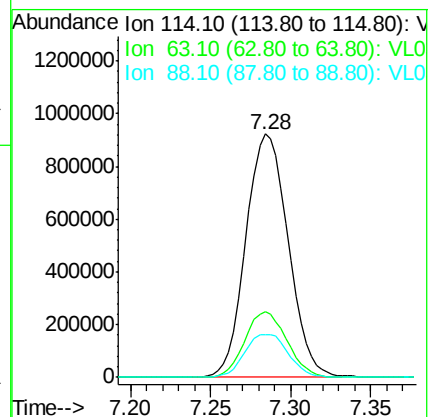
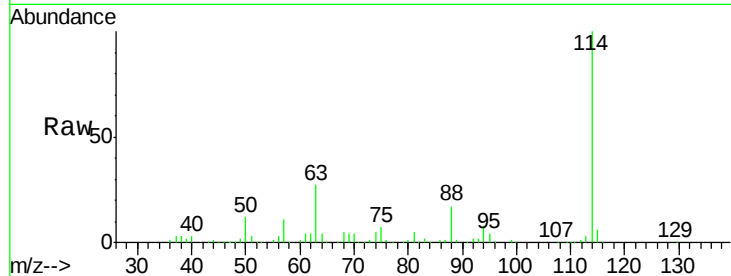




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.28 min Scan# 1352
 Delta R.T. -0.01 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

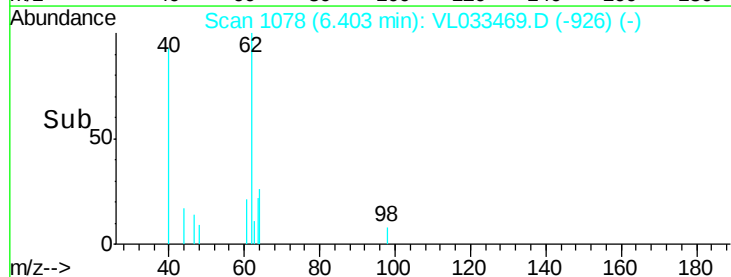
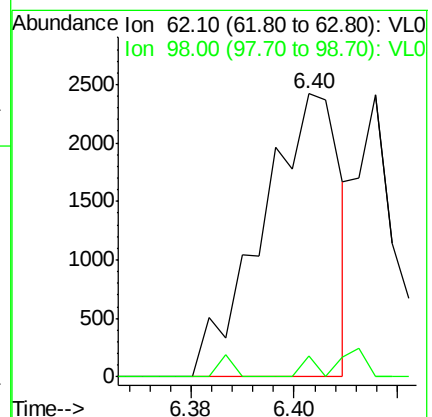
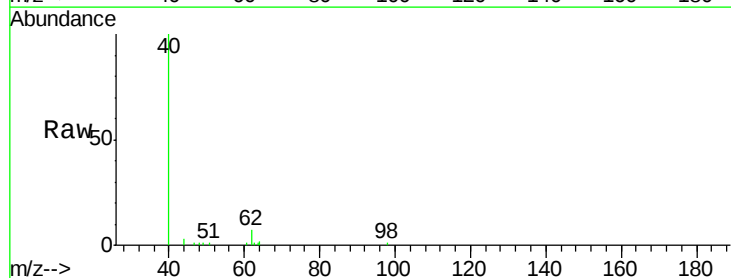
Instrument :
 MSVOA_L
 ClientSampleId :

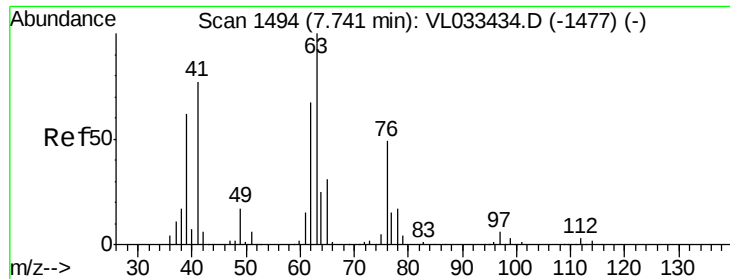
Tot Ion:114 Resp: 1670954
 Ion Ratio Lower Upper
 114 100
 63 27.0 21.5 32.3
 88 18.2 14.5 21.7



#37
 1,2-Dichloroethane
 Concen: 0.027 ppbv
 RT: 6.40 min Scan# 1078
 Delta R.T. -0.01 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

Tgt Ion: 62 Resp: 2531
 Ion Ratio Lower Upper
 62 100
 98 2.8 4.4 6.6#

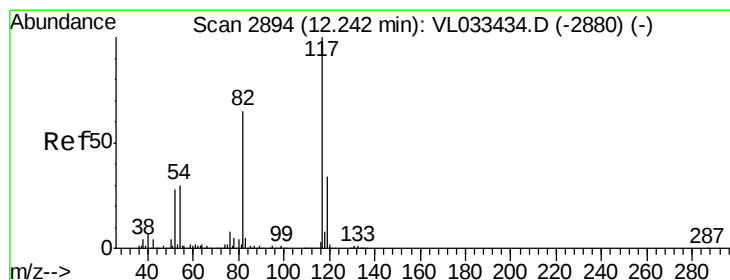
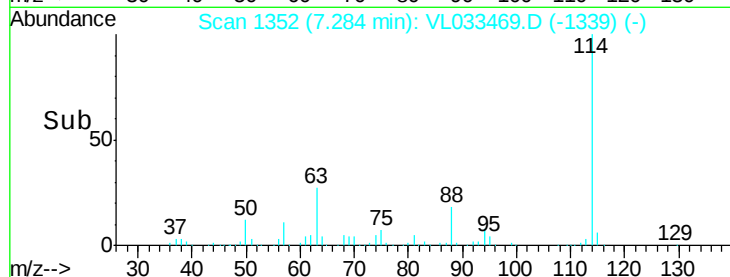
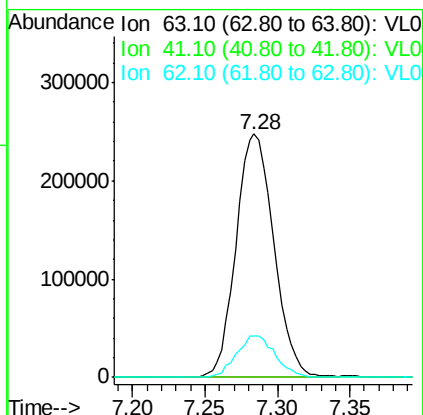
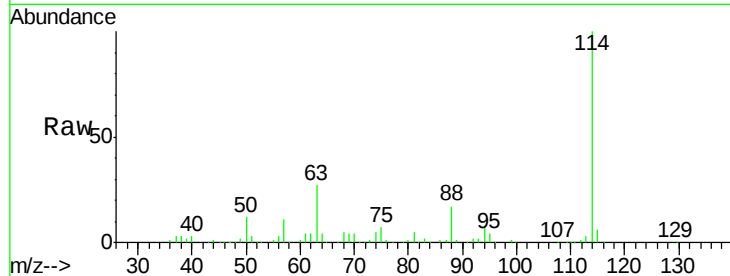




#39
 1,2-Dichloropropane
 Concen: 8.172 ppbv
 RT: 7.28 min Scan# 1352
 Delta R.T. -0.46 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

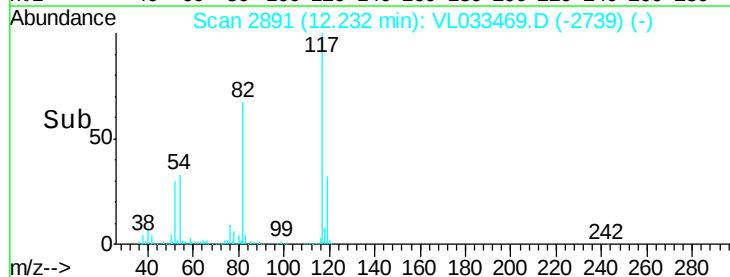
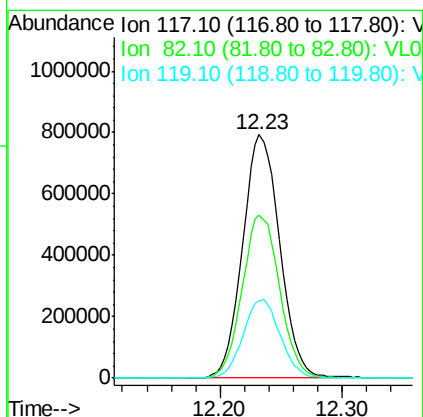
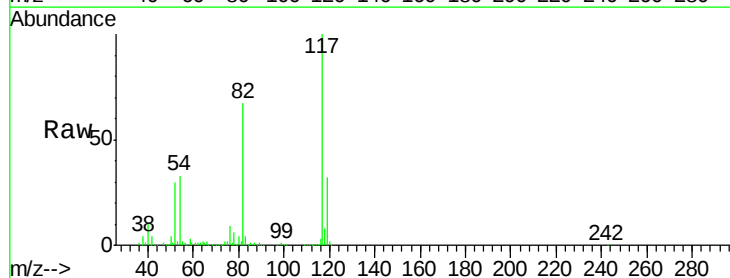
Instrument :
 MSVOA_L
 ClientSampleId :

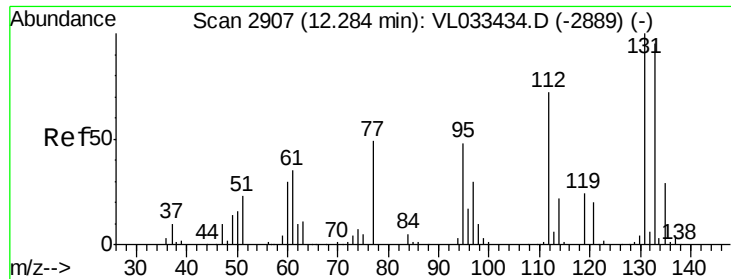
Tot Ion: 63 Resp: 448811
 Ion Ratio Lower Upper
 63 100
 41 0.0 61.2 91.8#
 62 16.7 54.0 81.0#



#55
 Chlorobenzene-d5
 Concen: 10.000 ppbv
 RT: 12.23 min Scan# 2891
 Delta R.T. -0.01 min
 Lab File: VL033469.D
 Acq: 27 Mar 2019 15:23

Tgt Ion: 117 Resp: 1660800
 Ion Ratio Lower Upper
 117 100
 82 68.1 51.5 77.3
 119 32.5 25.5 38.3





#56

1,1,1,2-Tetrachloroethane

Concen: 0.026 ppbv

RT: 12.27 min Scan# 2904

Delta R.T. -0.01 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

Instrument :

MSVOA_L

ClientSampleId :

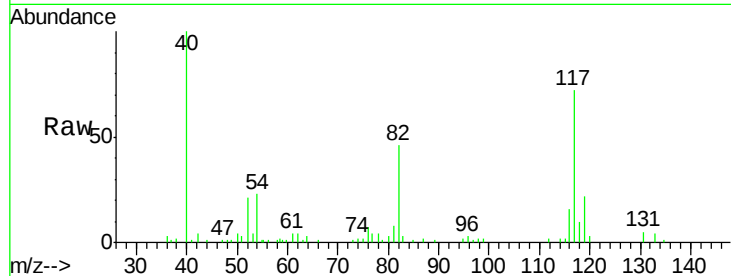
Tot Ion:131 Resp: 1975

Ion Ratio Lower Upper

131 100

133 133.6 76.2 114.4#

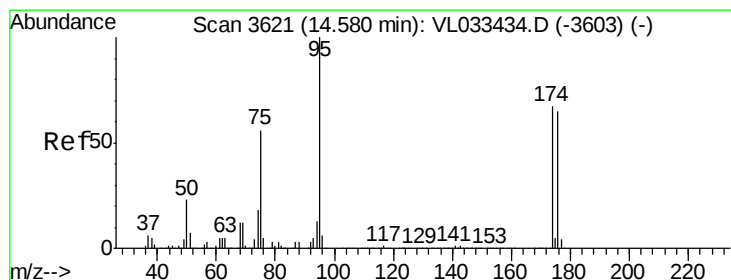
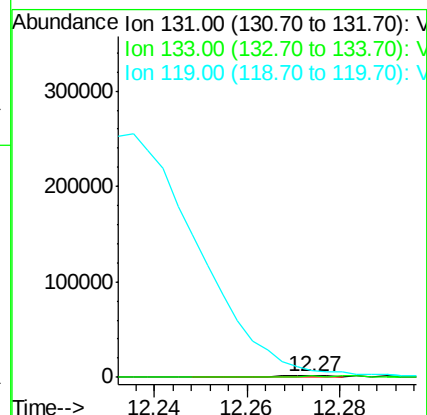
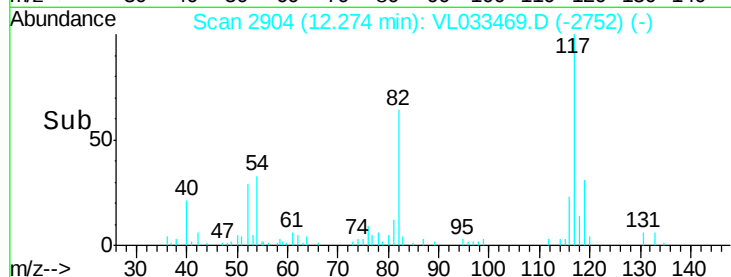
119 0.0 45.0 67.6#



Abundance Ion 131.00 (130.70 to 131.70): V

Ion 133.00 (132.70 to 133.70): V

Ion 119.00 (118.70 to 119.70): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.088 ppbv

RT: 14.57 min Scan# 3619

Delta R.T. -0.01 min

Lab File: VL033469.D

Acq: 27 Mar 2019 15:23

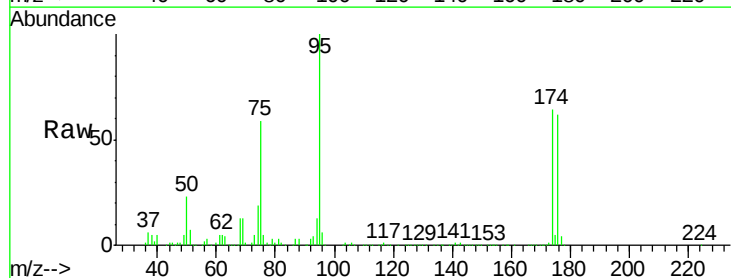
Tgt Ion: 95 Resp: 1313505

Ion Ratio Lower Upper

95 100

174 66.3 52.9 79.3

175 4.7 3.8 5.6



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

