

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032919\
 Data File : VL033502.D
 Acq On : 29 Mar 2019 14:55
 Operator : SY/AP
 Sample : K2042-17
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 30 01:10:20 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	848921	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1994697	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1941418	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.58	95	1530426	10.06	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.60%

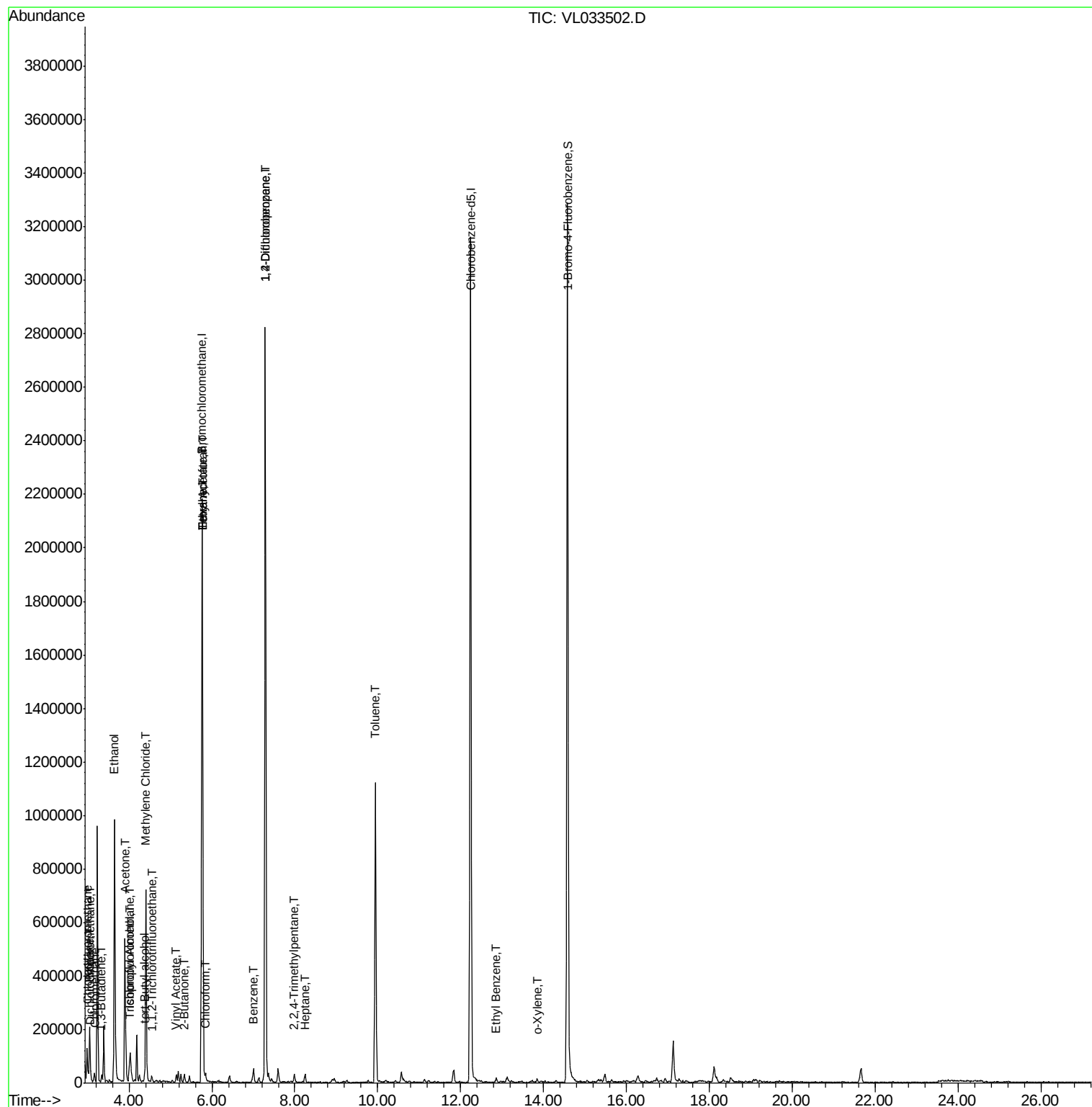
Target Compounds						Ovalue
2) Dichlorodifluoromethane	3.08	85	24485	0.20	ppbv	100
3) Chlorodifluoromethane	2.99	51	96938	0.99	ppbv #	71
4) Chloromethane	3.17	50	27683	0.54	ppbv #	85
9) Propene	3.04	41	24031	0.59	ppbv	86
10) Heptane	8.24	43	6517	0.06	ppbv #	54
11) Trichlorofluoromethane	4.00	101	34980	0.23	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.54	101	3708	0.04	ppbv #	14
13) Ethanol	3.65	45	1022529	96.28	ppbv	65
15) Acetone	3.90	43	543682	5.33	ppbv	99
16) 1,3-Butadiene	3.35	39	2164	0.05	ppbv #	71
17) tert-Butyl alcohol	4.37	59	5000	0.27	ppbv #	73
19) Isopropyl Alcohol	4.03	45	111818	1.73	ppbv #	90
20) Methylene Chloride	4.41	84	250906	5.79	ppbv	96
23) Vinyl Acetate	5.14	43	21358	0.15	ppbv #	67
25) Ethyl Acetate	5.78	43	256942	1.36	ppbv #	81
26) Hexane	5.78	57	329379	3.91	ppbv #	42
29) Chloroform	5.84	83	8505	0.06	ppbv	92
34) 2-Butanone	5.34	43	30910	0.26	ppbv	99
36) Benzene	7.00	78	36694	0.22	ppbv	97
39) 1,2-Dichloropropane	7.29	63	520044	7.93	ppbv #	22
41) Tetrahydrofuran	5.78	42	127787	1.94	ppbv #	51
44) 2,2,4-Trimethylpentane	7.98	57	10508	0.04	ppbv #	6
53) Toluene	9.95	91	827302	4.25	ppbv	99
58) Ethyl Benzene	12.86	91	9081	0.04	ppbv #	80
60) o-Xylene	13.84	91	6989	0.03	ppbv #	33

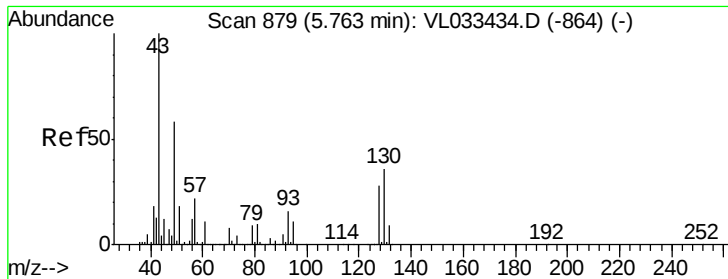
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampled :

Quant Time: Mar 30 01:10:20 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
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QLast Update : Tue Mar 26 16:00:50 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :
MSVOA_L
ClientSampleId :

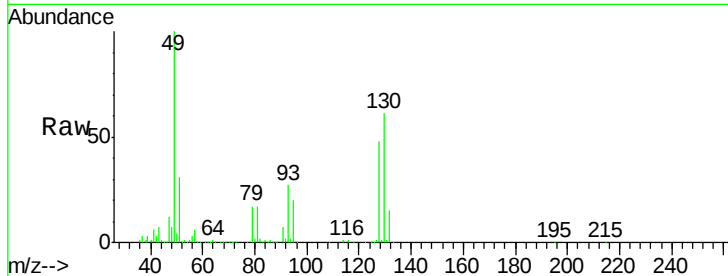
Tot Ion: 49 Resp: 848921

Ion	Ratio	Lower	Upper
49	100		
128	49.2	24.0	72.0
130	62.4	31.2	93.6

49 100

128 49.2 24.0 72.0

130 62.4 31.2 93.6



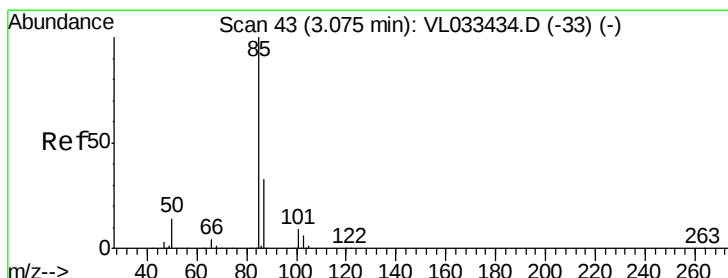
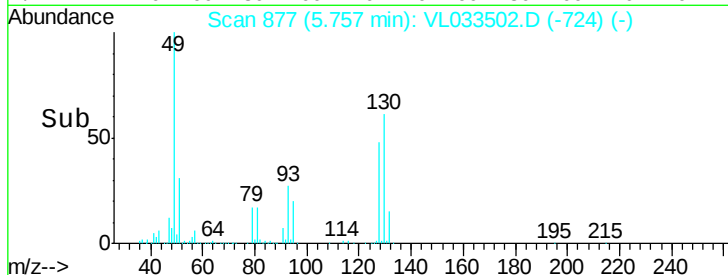
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V

5.76

Time--> 5.65 5.70 5.75 5.80 5.85



#2

Dichlorodifluoromethane

Concen: 0.20 ppbv

RT: 3.08 min Scan# 44

Delta R.T. 0.00 min

Lab File: VL033502.D

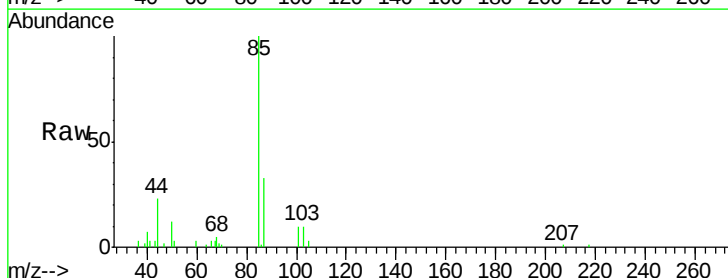
Acq: 29 Mar 2019 14:55

Tgt Ion: 85 Resp: 24485

Ion	Ratio	Lower	Upper
85	100		
87	33.5	26.7	40.1

85 100

87 33.5 26.7 40.1

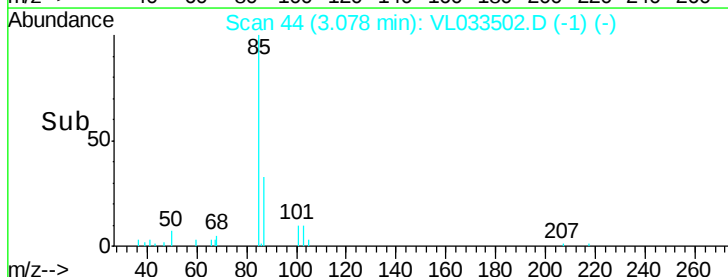


Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.08

Time--> 3.04 3.06 3.08 3.10





#3

Chlorodifluoromethane

Concen: 0.99 ppbv

RT: 2.99 min Scan# 15

Delta R.T. -0.03 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

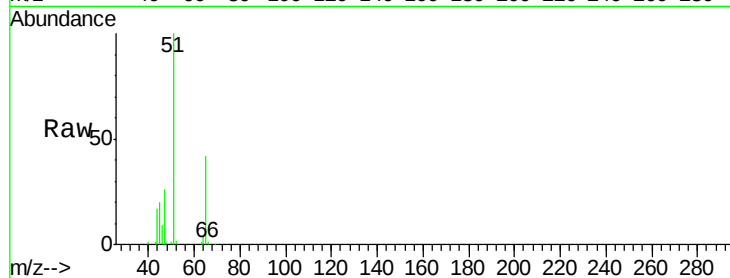
ClientSampleId :

Tot Ion: 51 Resp: 96938

Ion Ratio Lower Upper

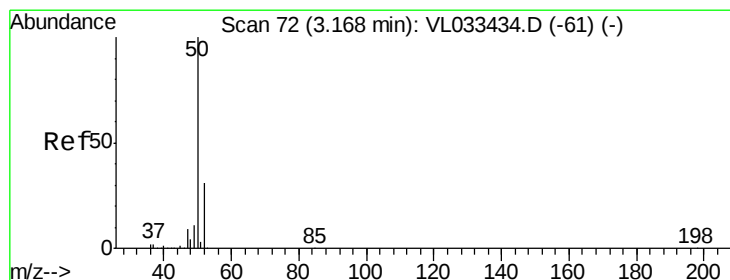
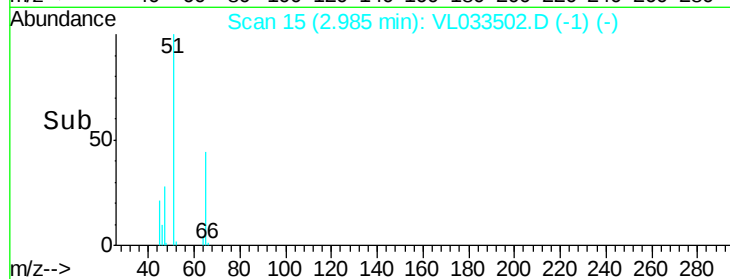
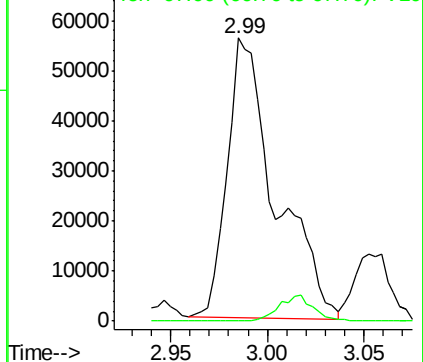
51 100

67 6.5 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: 0.54 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.01 min

Lab File: VL033502.D

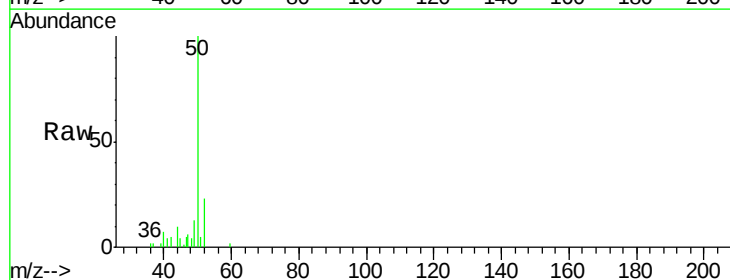
Acq: 29 Mar 2019 14:55

Tgt Ion: 50 Resp: 27683

Ion Ratio Lower Upper

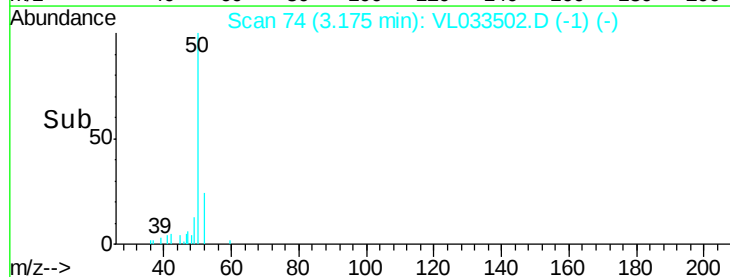
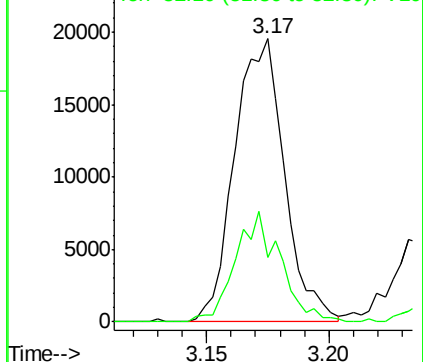
50 100

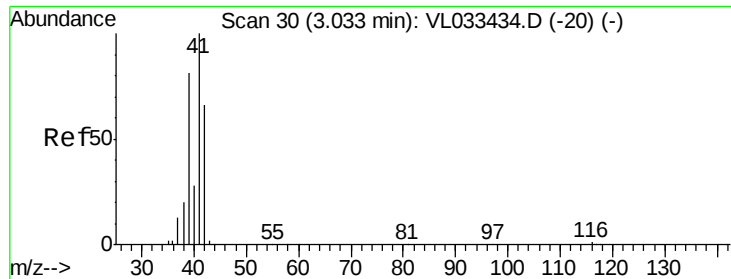
52 23.1 25.0 37.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.59 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

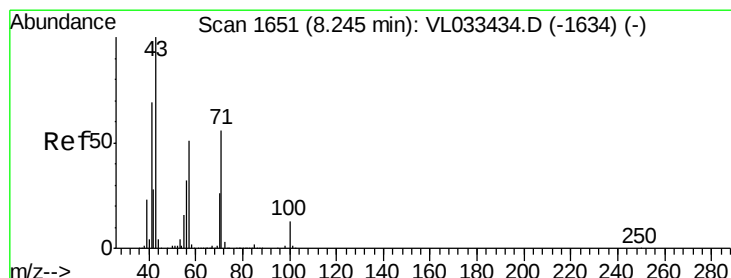
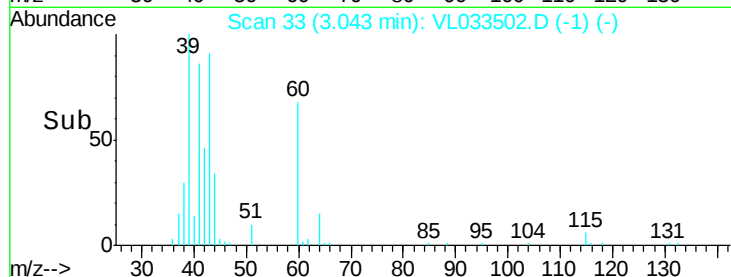
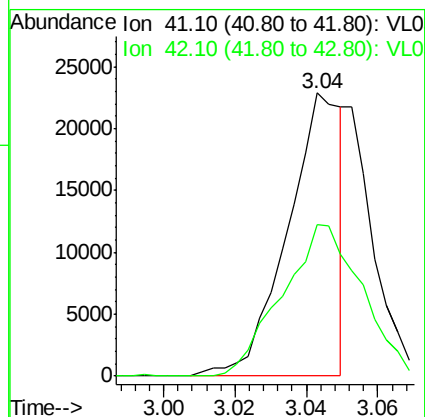
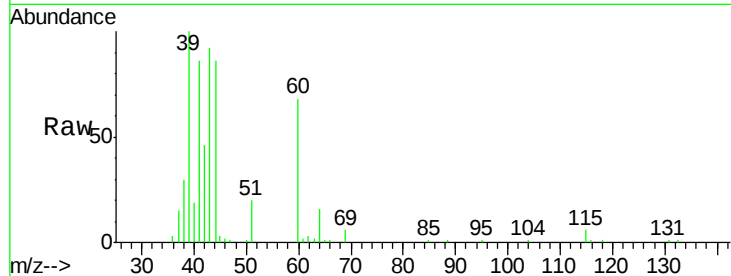
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 41 Resp: 24031

Ion Ratio Lower Upper

41 100

42 79.1 53.9 80.9



#10

Heptane

Concen: 0.06 ppbv

RT: 8.24 min Scan# 1650

Delta R.T. -0.00 min

Lab File: VL033502.D

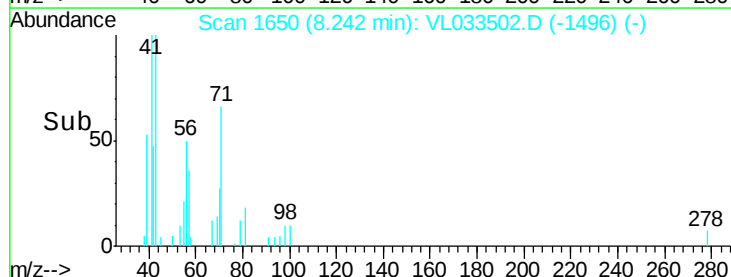
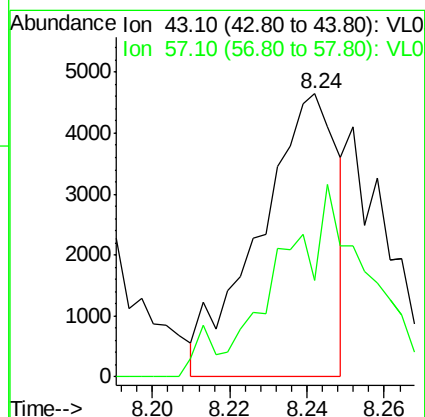
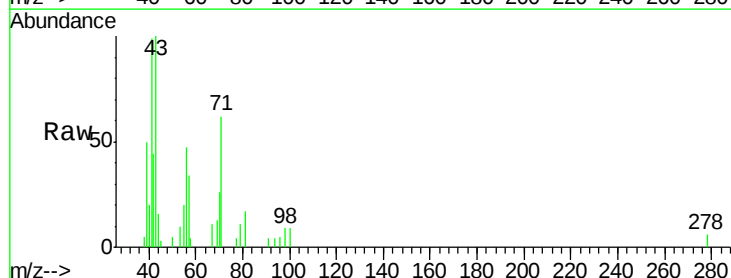
Acq: 29 Mar 2019 14:55

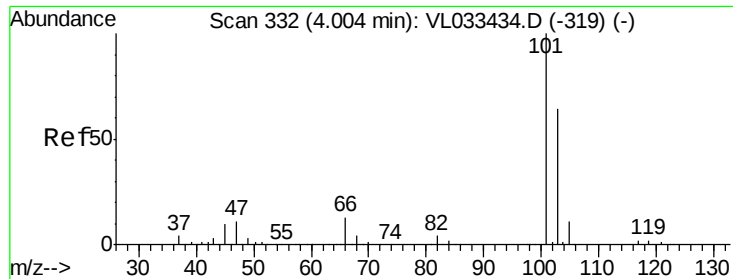
Tgt Ion: 43 Resp: 6517

Ion Ratio Lower Upper

43 100

57 82.8 40.6 60.8#

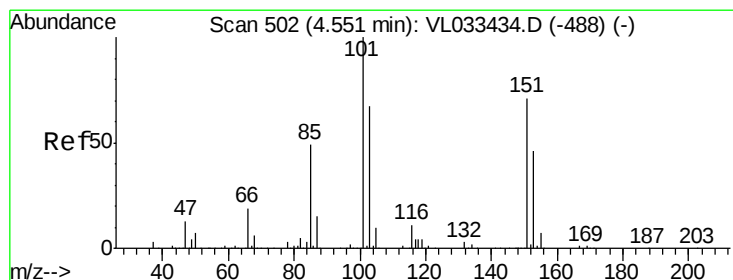
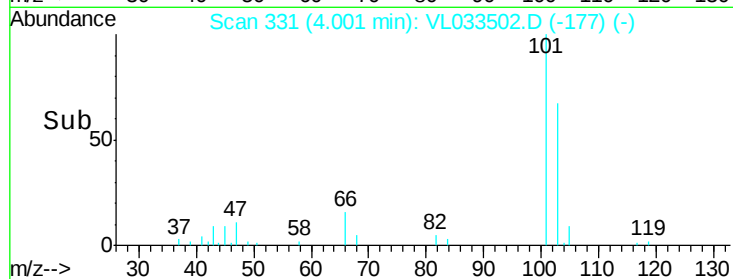
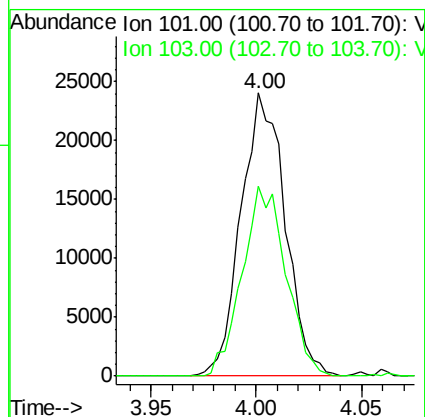
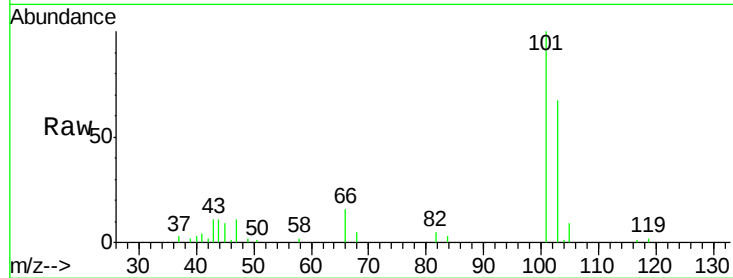




#11
 Trichlorofluoromethane
 Concen: 0.23 ppbv
 RT: 4.00 min Scan# 331
 Delta R.T. -0.00 min
 Lab File: VL033502.D
 Acq: 29 Mar 2019 14:55

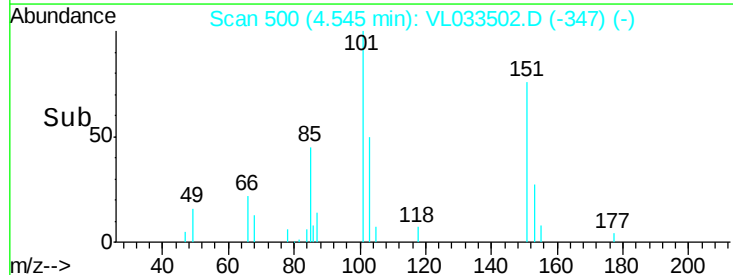
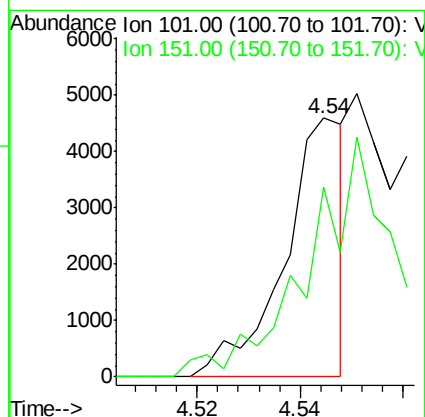
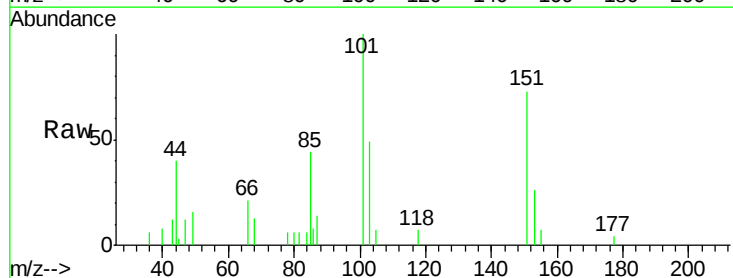
Instrument :
 MSVOA_L
 ClientSampleId :

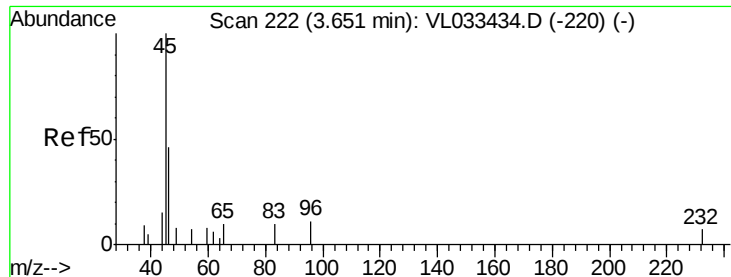
Tot Ion:101 Resp: 34980
 Ion Ratio Lower Upper
 101 100
 103 67.2 51.3 76.9



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.04 ppbv
 RT: 4.54 min Scan# 500
 Delta R.T. -0.01 min
 Lab File: VL033502.D
 Acq: 29 Mar 2019 14:55

Tgt Ion:101 Resp: 3708
 Ion Ratio Lower Upper
 101 100
 151 0.0 57.7 86.5#

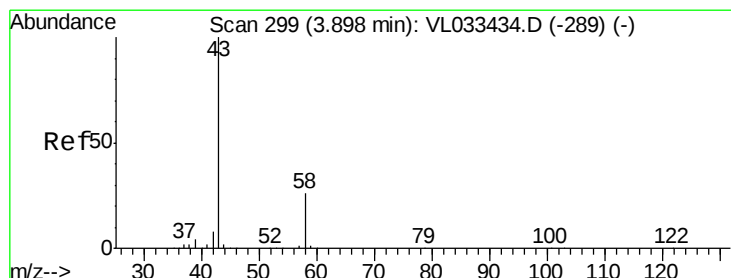
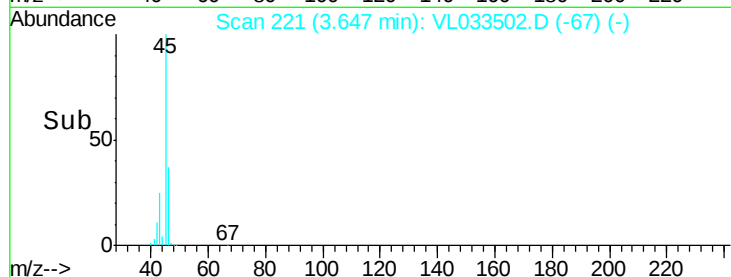
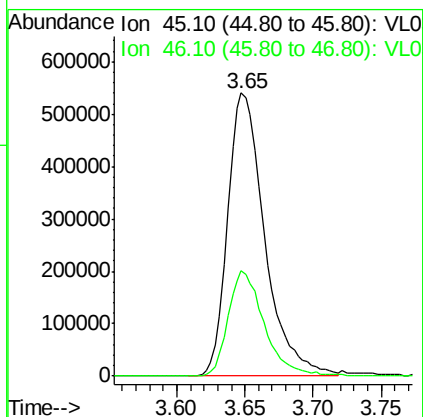
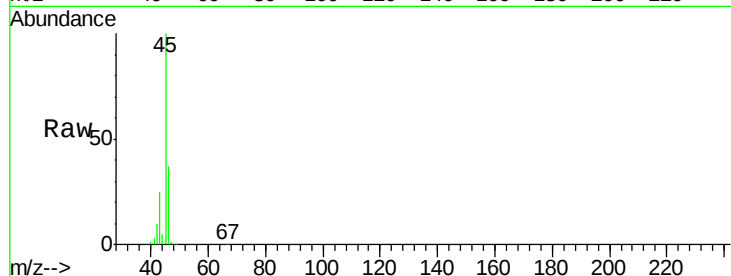




#13
Ethanol
Concen: 96.28 ppbv
RT: 3.65 min Scan# 221
Delta R.T. -0.00 min
Lab File: VL033502.D
Acq: 29 Mar 2019 14:55

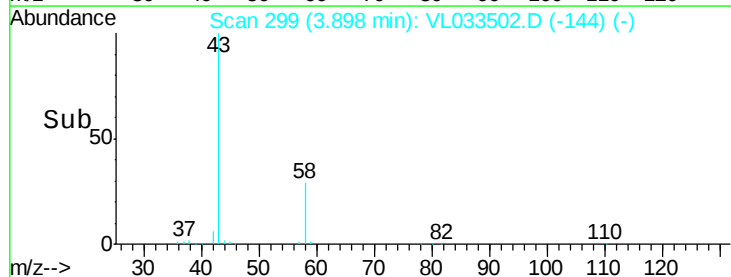
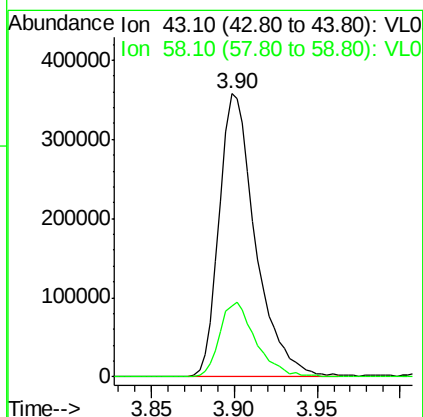
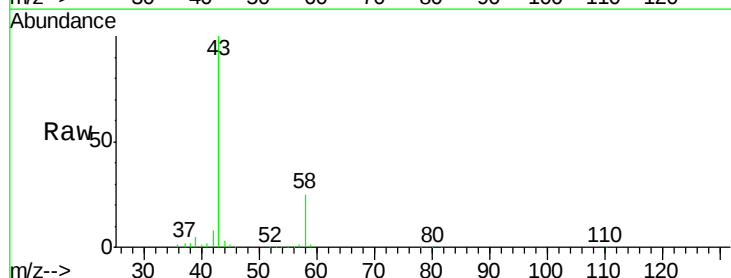
Instrument :
MSVOA_L
ClientSampled :

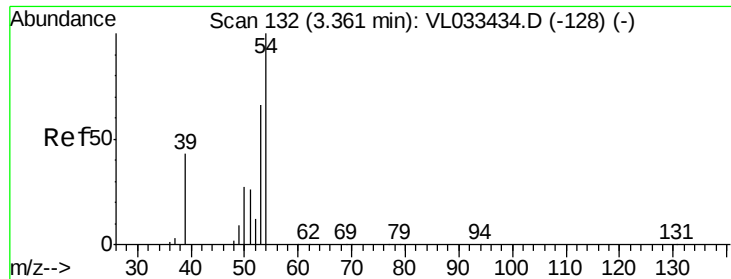
Tot Ion: 45 Resp: 1022529
Ion Ratio Lower Upper
45 100
46 36.5 25.4 101.8



#15
Acetone
Concen: 5.33 ppbv
RT: 3.90 min Scan# 299
Delta R.T. -0.00 min
Lab File: VL033502.D
Acq: 29 Mar 2019 14:55

Tgt Ion: 43 Resp: 543682
Ion Ratio Lower Upper
43 100
58 26.2 20.5 30.7

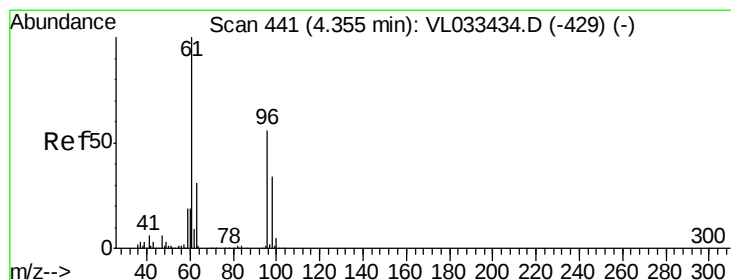
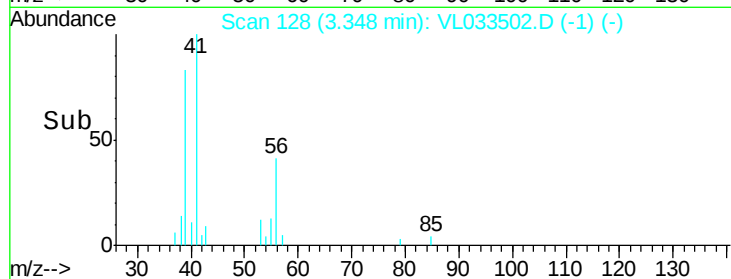
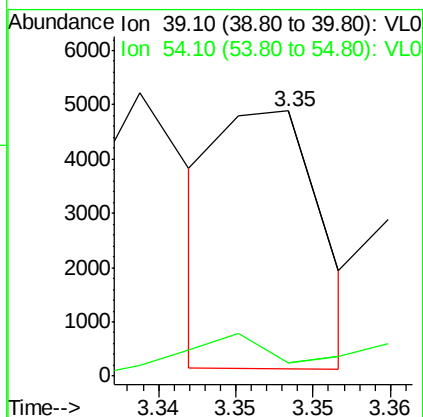
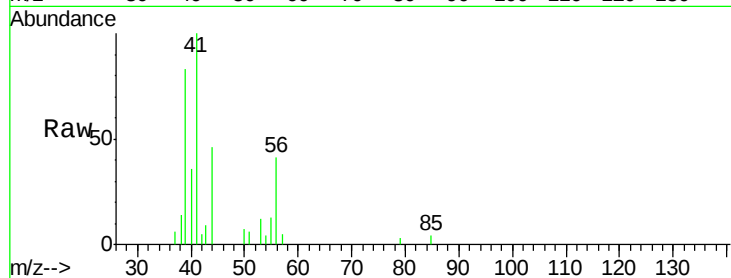




#16
 1,3-Butadiene
 Concen: 0.05 ppbv
 RT: 3.35 min Scan# 128
 Delta R.T. -0.01 min
 Lab File: VL033502.D
 Acq: 29 Mar 2019 14:55

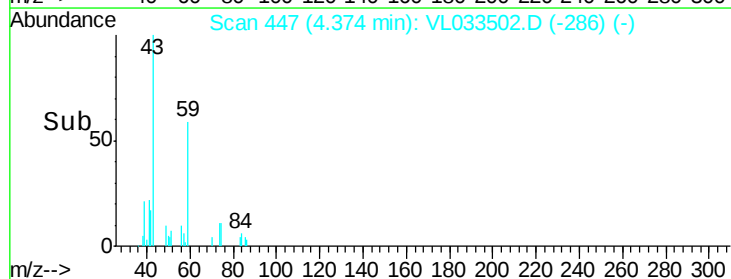
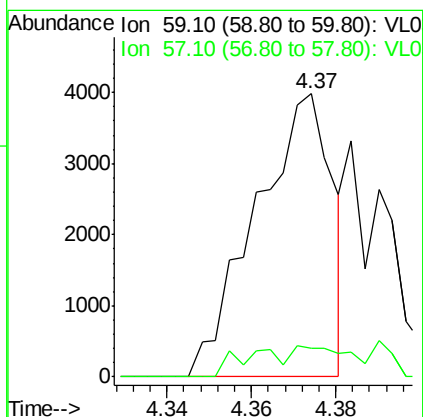
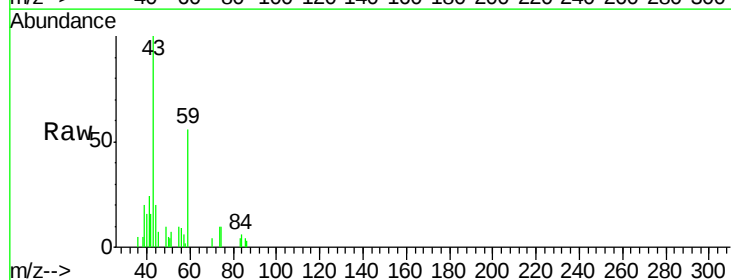
Instrument :
 MSVOA_L
 ClientSampleId :

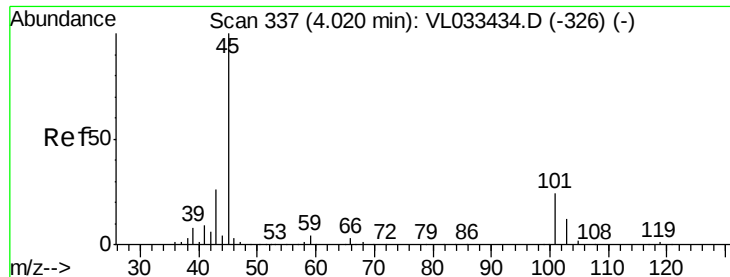
Tot Ion: 39 Resp: 2164
 Ion Ratio Lower Upper
 39 100
 54 113.7 69.4 104.2#



#17
 tert-Butyl alcohol
 Concen: 0.27 ppbv
 RT: 4.37 min Scan# 447
 Delta R.T. 0.02 min
 Lab File: VL033502.D
 Acq: 29 Mar 2019 14:55

Tgt Ion: 59 Resp: 5000
 Ion Ratio Lower Upper
 59 100
 57 0.0 7.8 11.8#





#19

Isopropyl Alcohol

Concen: 1.73 ppbv

RT: 4.03 min Scan# 339

Delta R.T. 0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

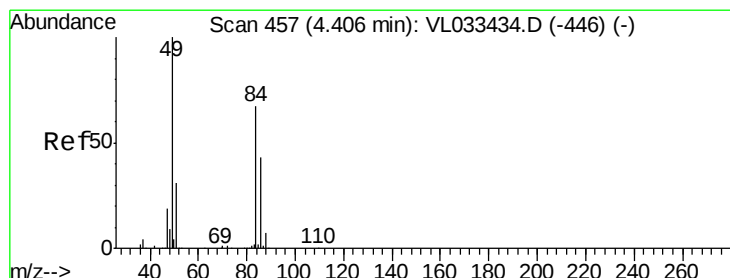
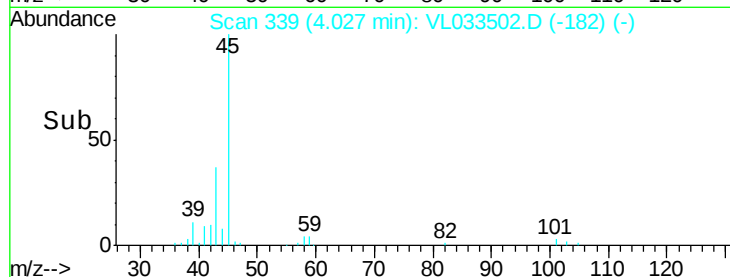
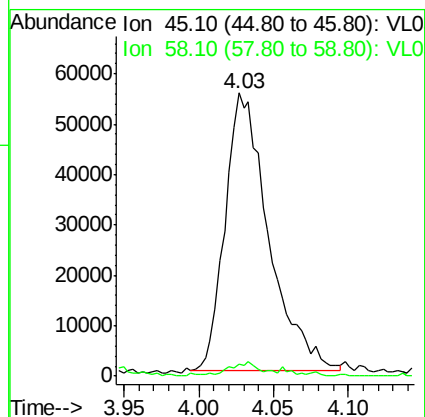
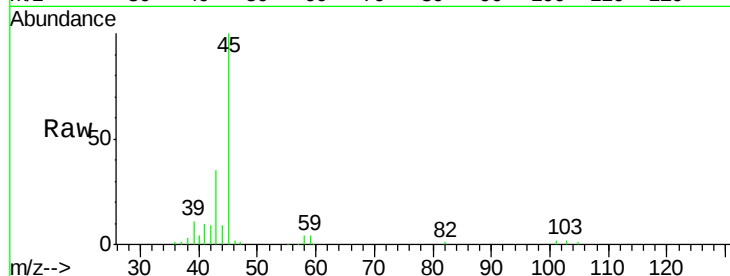
ClientSampleId :

Tot Ion: 45 Resp: 111818

Ion Ratio Lower Upper

45 100

58 5.4 1.4 2.2#



#20

Methylene Chloride

Concen: 5.79 ppbv

RT: 4.41 min Scan# 457

Delta R.T. -0.00 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Tgt Ion: 84 Resp: 250906

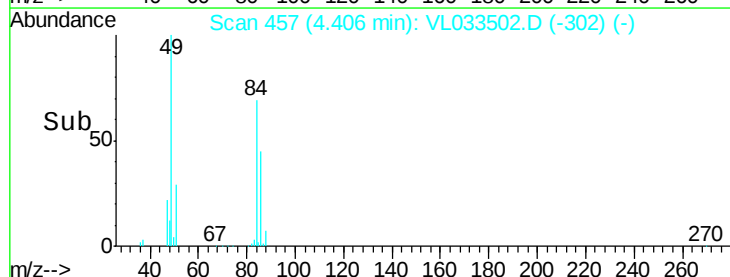
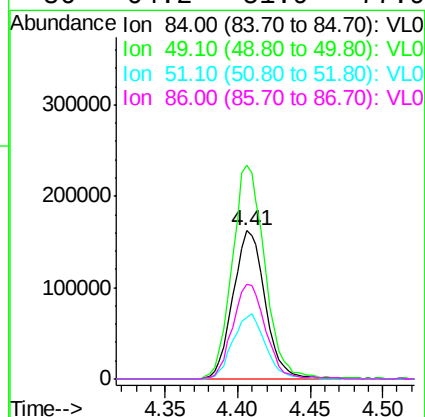
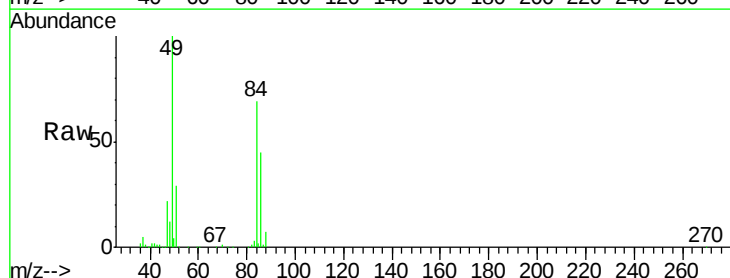
Ion Ratio Lower Upper

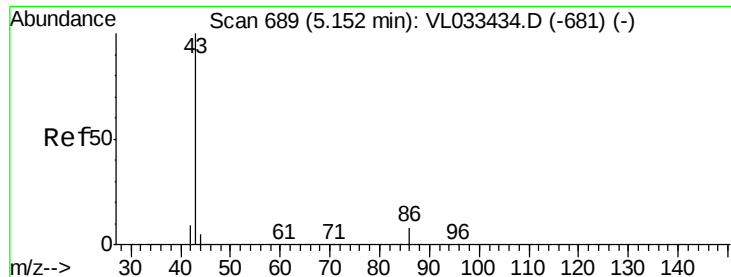
84 100

49 144.2 120.0 180.0

51 41.1 36.7 55.1

86 64.2 51.9 77.9





#23

Vinyl Acetate

Concen: 0.15 ppbv

RT: 5.14 min Scan# 686

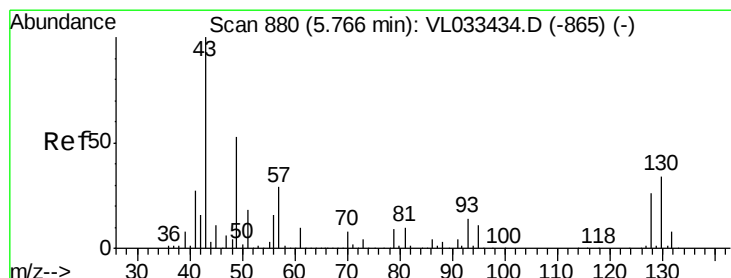
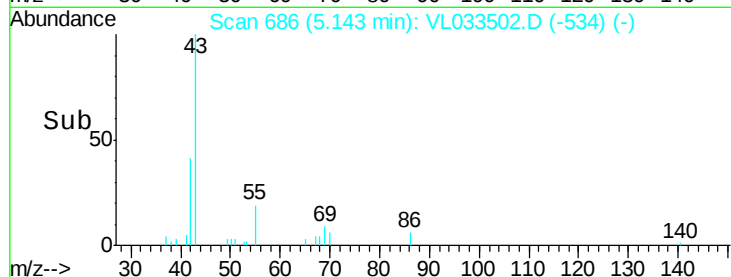
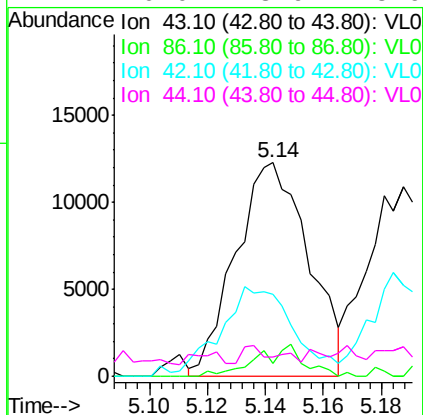
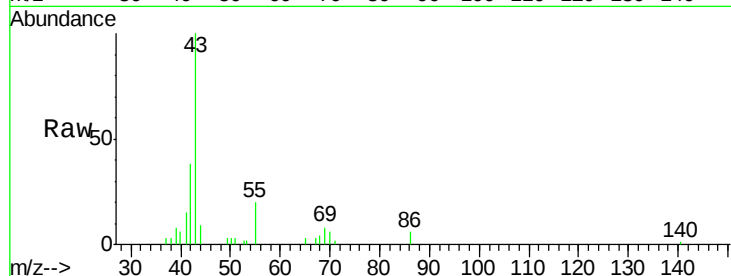
Delta R.T. -0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	43	Resp:	21358
Ion	Ratio	Lower	Upper
43	100		
86	6.2	5.6	8.4
42	33.5	8.0	12.0#
44	0.0	3.9	5.9#



#25

Ethyl Acetate

Concen: 1.36 ppbv

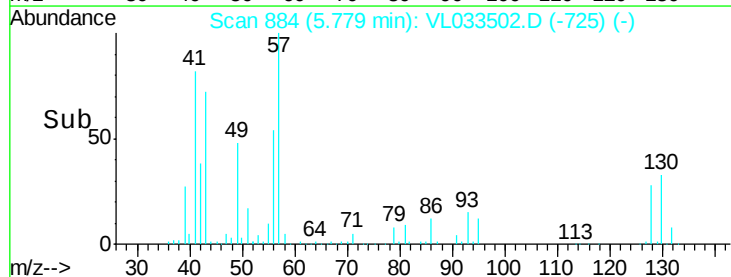
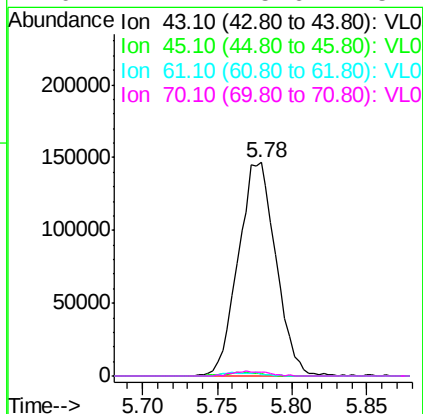
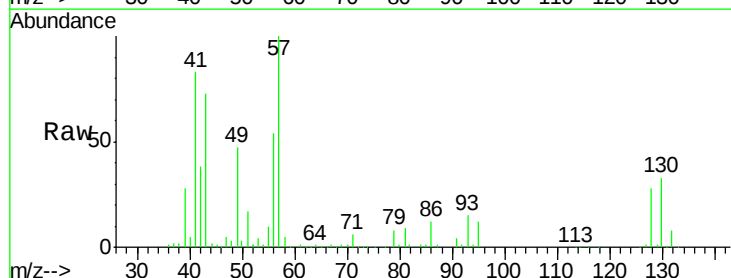
RT: 5.78 min Scan# 884

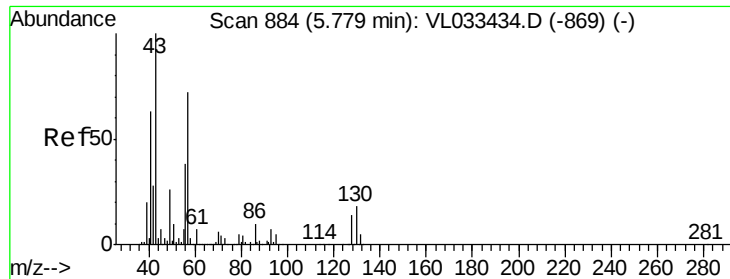
Delta R.T. 0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Tgt Ion:	43	Resp:	256942
Ion	Ratio	Lower	Upper
43	100		
45	1.7	7.8	11.6#
61	1.5	7.3	10.9#
70	2.2	5.6	8.4#

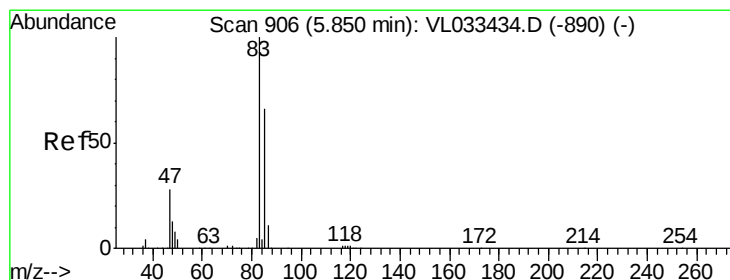
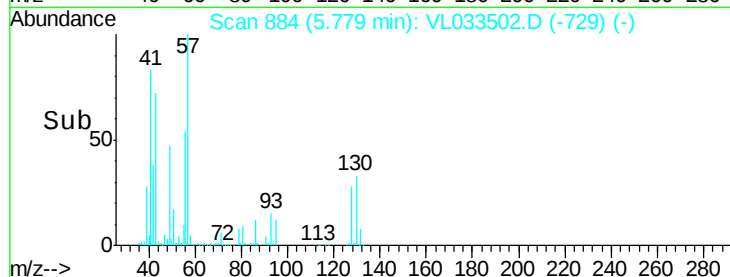
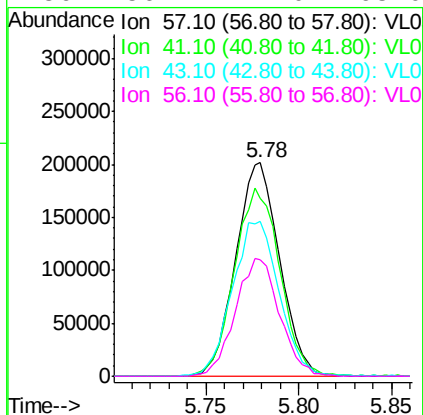
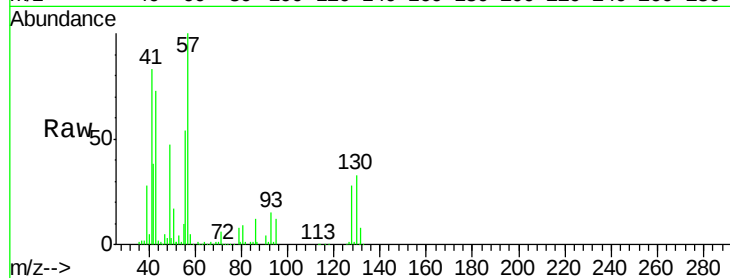




#26
Hexane
Concen: 3.91 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.00 min
Lab File: VL033502.D
Acq: 29 Mar 2019 14:55

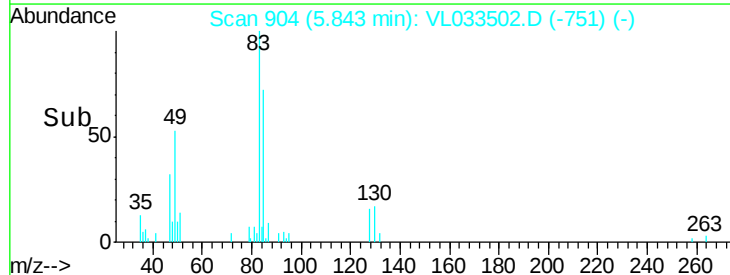
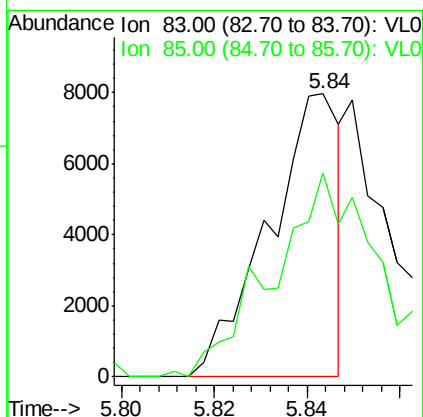
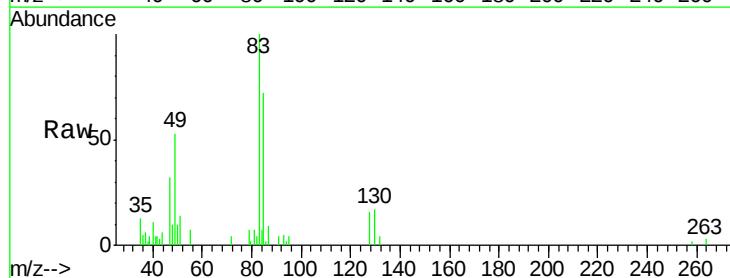
Instrument :
MSVOA_L
ClientSampleId :

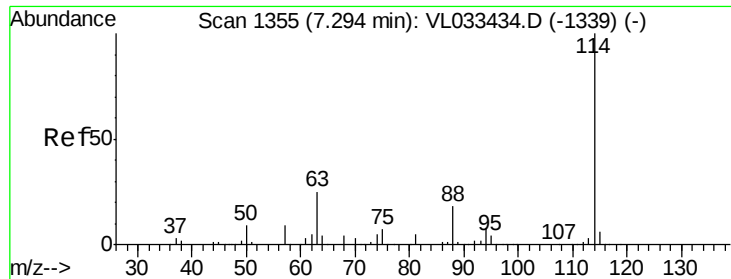
Tot Ion: 57 Resp: 329379
Ion Ratio Lower Upper
57 100
41 92.2 70.7 106.1
43 78.3 182.6 274.0#
56 56.1 42.0 63.0



#29
Chloroform
Concen: 0.06 ppbv
RT: 5.84 min Scan# 904
Delta R.T. -0.01 min
Lab File: VL033502.D
Acq: 29 Mar 2019 14:55

Tgt Ion: 83 Resp: 8505
Ion Ratio Lower Upper
83 100
85 72.0 52.6 79.0





#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.00 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

ClientSampleId :

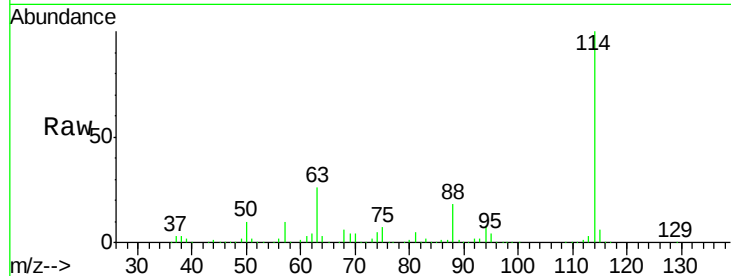
Tot Ion:114 Resp: 1994697

Ion Ratio Lower Upper

114 100

63 26.2 21.5 32.3

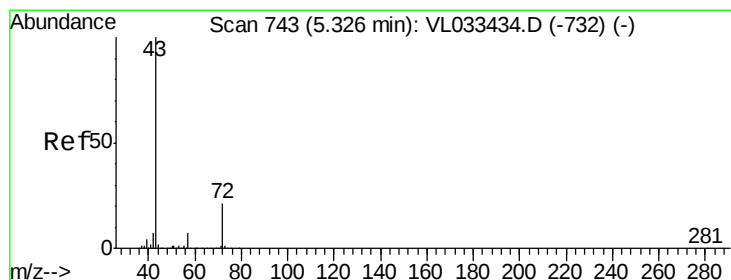
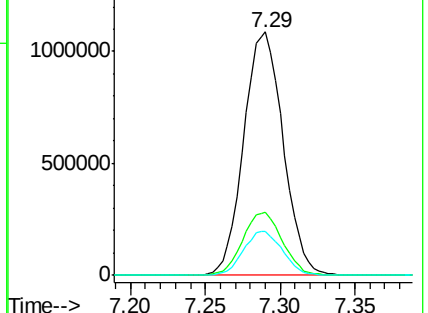
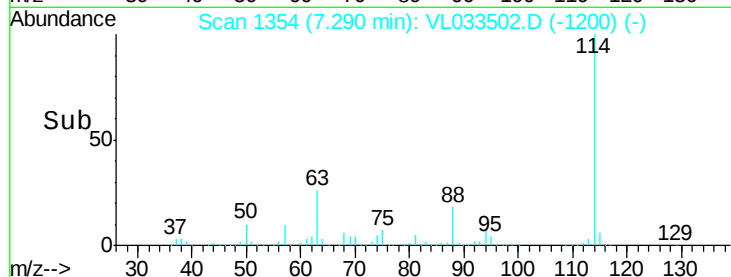
88 18.1 14.5 21.7



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: 0.26 ppbv

RT: 5.34 min Scan# 746

Delta R.T. 0.01 min

Lab File: VL033502.D

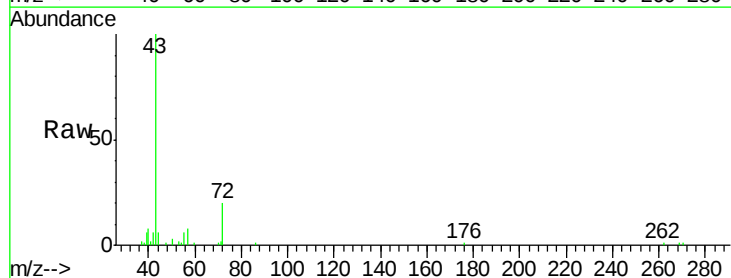
Acq: 29 Mar 2019 14:55

Tgt Ion: 43 Resp: 30910

Ion Ratio Lower Upper

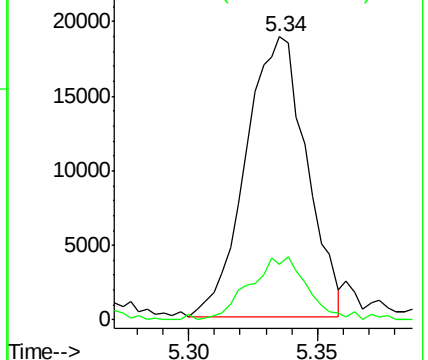
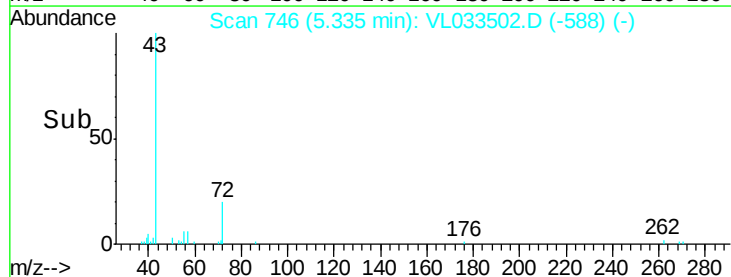
43 100

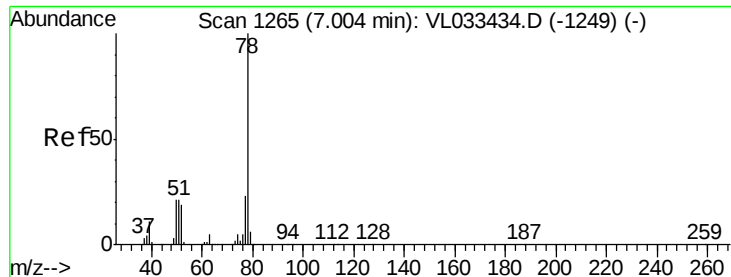
72 22.1 17.4 26.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.22 ppbv

RT: 7.00 min Scan# 1264

Delta R.T. -0.00 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

ClientSampleId :

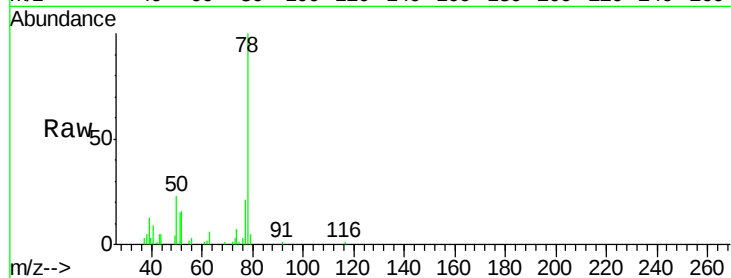
Tot Ion: 78 Resp: 36694

Ion Ratio Lower Upper

78 100

77 21.1 18.1 27.1

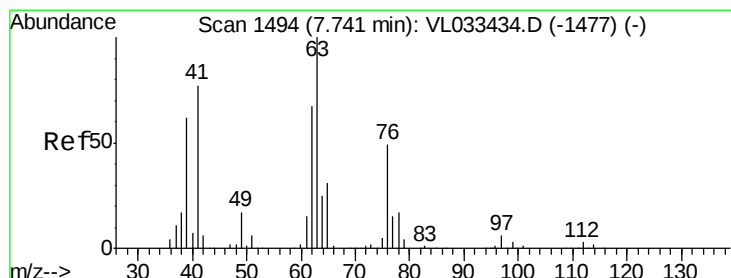
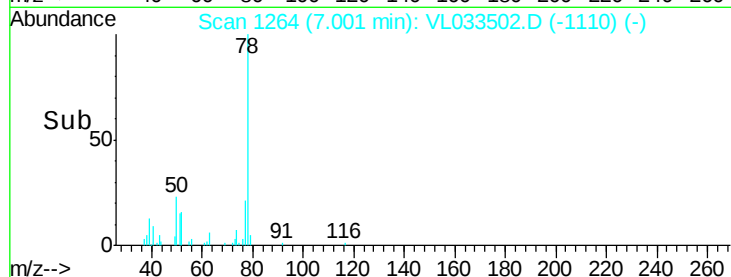
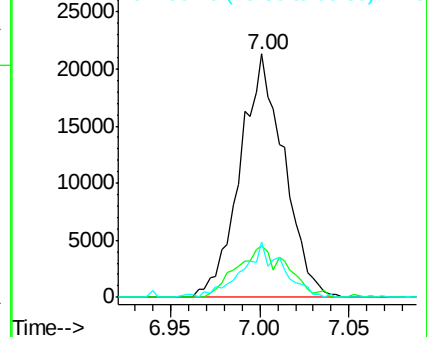
50 22.6 16.7 25.1



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: 7.93 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.45 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

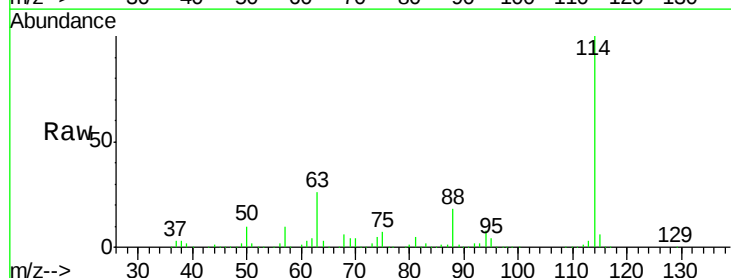
Tgt Ion: 63 Resp: 520044

Ion Ratio Lower Upper

63 100

41 0.0 61.2 91.8#

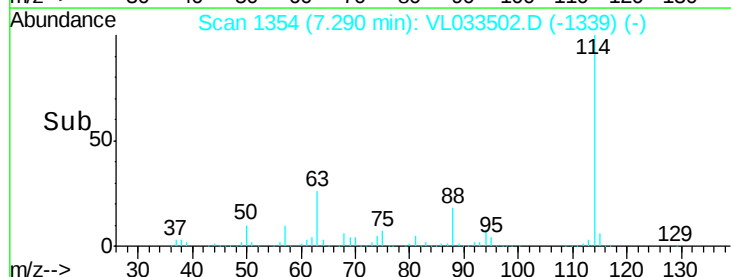
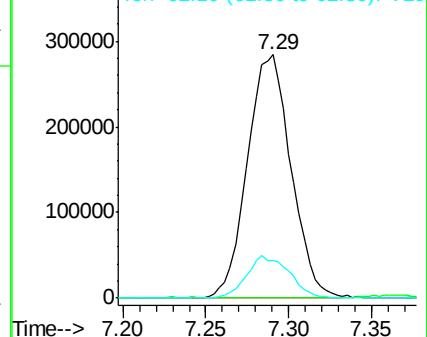
62 15.4 54.0 81.0#

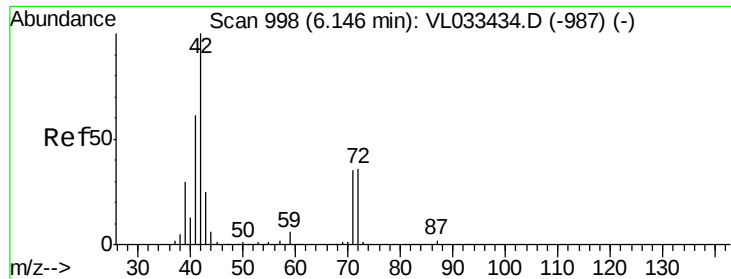


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 1.94 ppbv

RT: 5.78 min Scan# 884

Delta R.T. -0.37 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :
MSVOA_L
ClientSampleId :

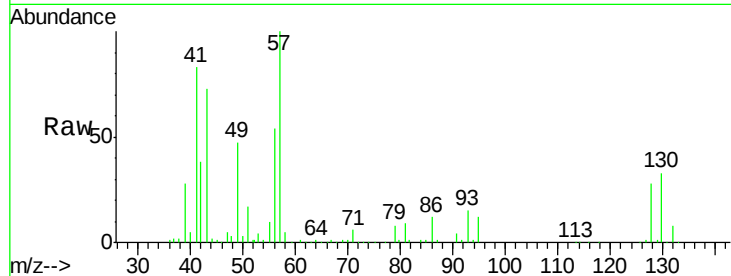
Tot Ion: 42 Resp: 127787

Ion Ratio Lower Upper

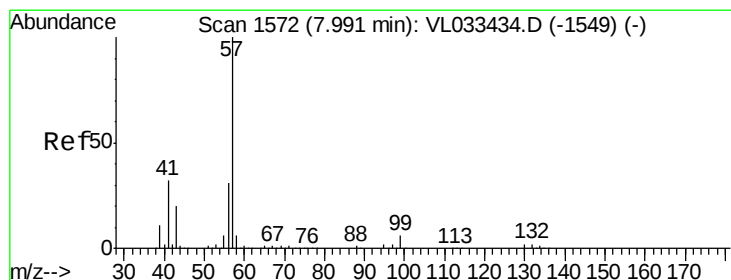
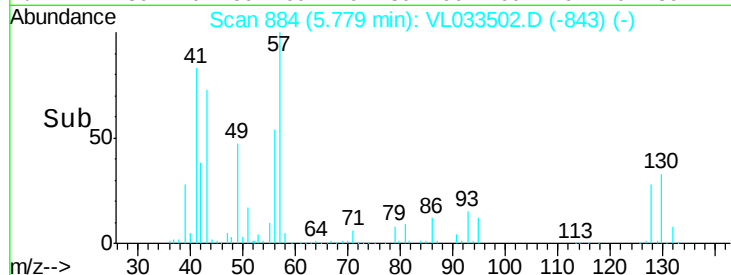
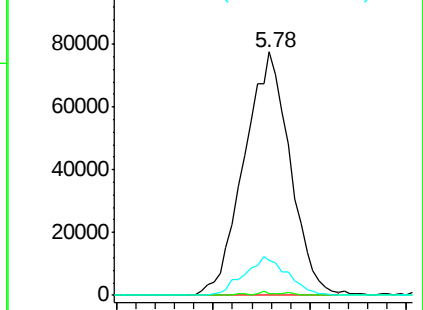
42 100

72 1.1 30.2 45.2#

71 15.1 29.4 44.2#



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: 0.04 ppbv

RT: 7.98 min Scan# 1570

Delta R.T. -0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

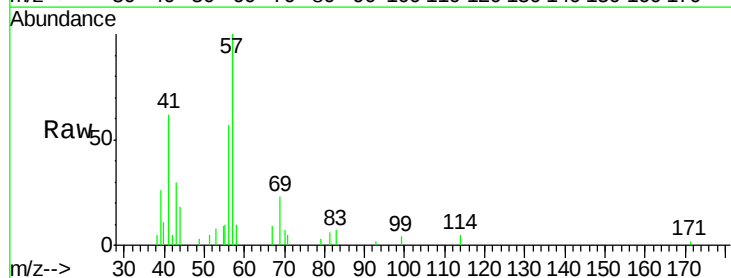
Tgt Ion: 57 Resp: 10508

Ion Ratio Lower Upper

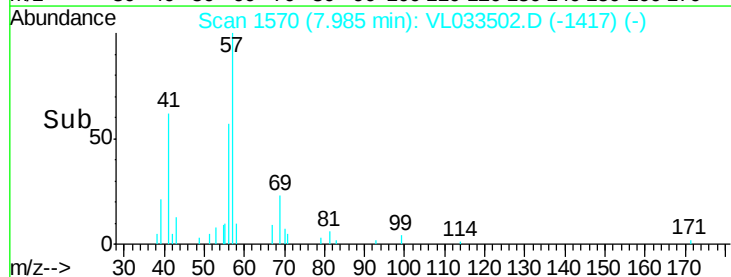
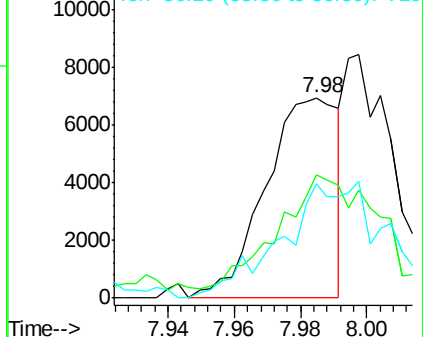
57 100

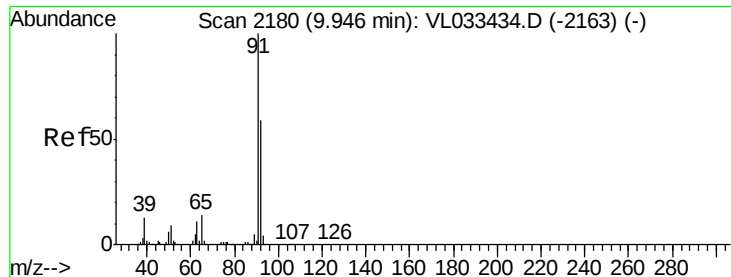
41 105.2 26.0 39.0#

56 0.0 24.6 37.0#



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





#53

Toluene

Concen: 4.25 ppbv

RT: 9.95 min Scan# 2180

Delta R.T. -0.00 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

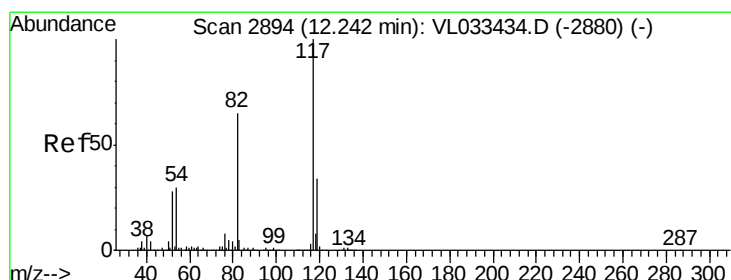
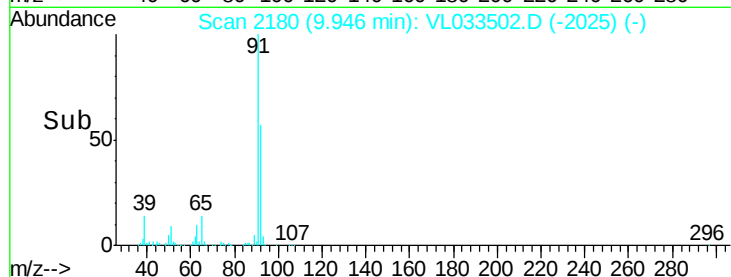
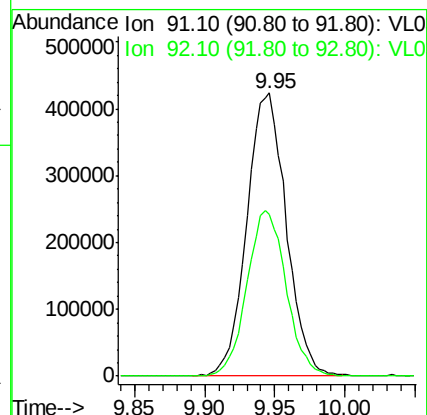
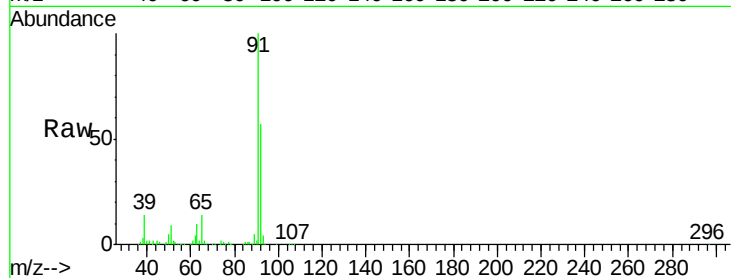
ClientSampleId :

Tot Ion: 91 Resp: 827302

Ion Ratio Lower Upper

91 100

92 58.7 47.4 71.0



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

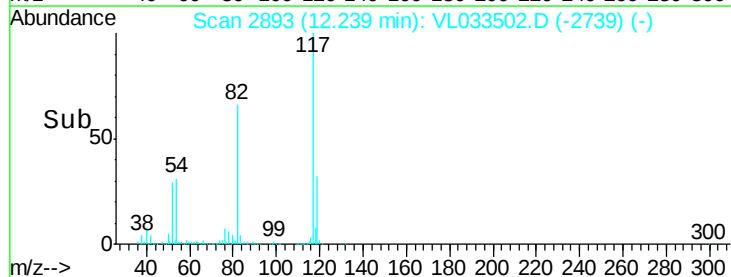
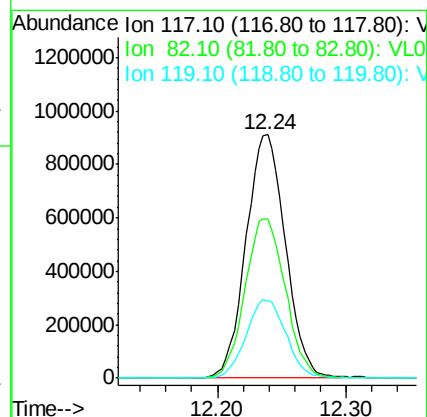
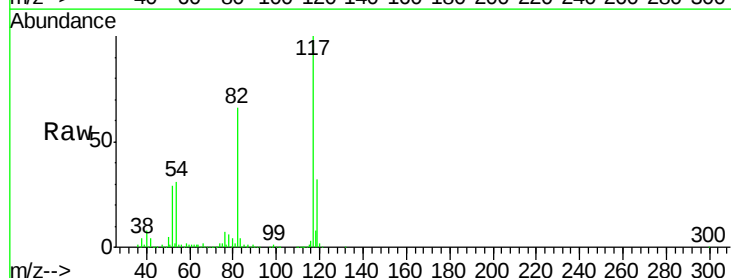
Tgt Ion: 117 Resp: 1941418

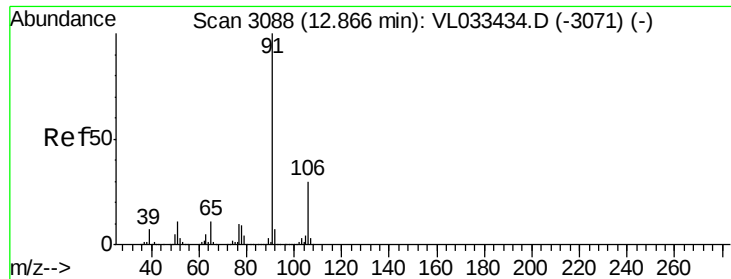
Ion Ratio Lower Upper

117 100

82 67.5 51.5 77.3

119 32.8 25.5 38.3





#58

Ethyl Benzene

Concen: 0.04 ppbv

RT: 12.86 min Scan# 3086

Delta R.T. -0.01 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

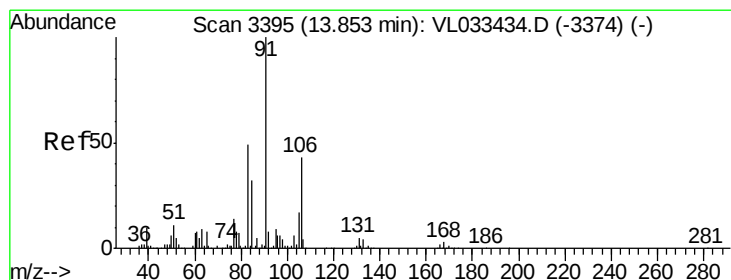
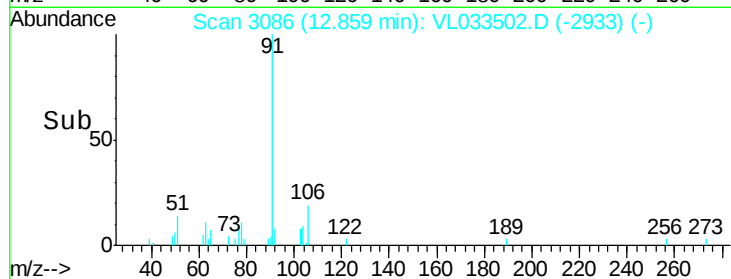
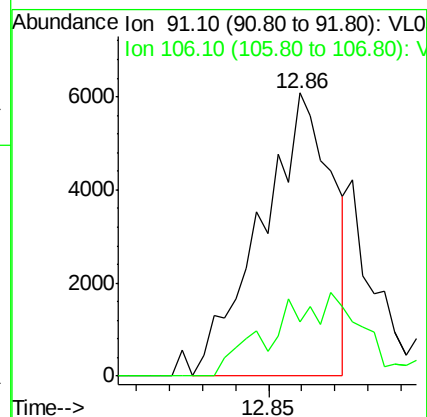
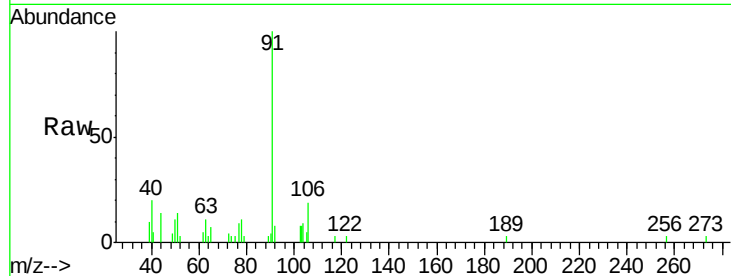
ClientSampleId :

Tot Ion: 91 Resp: 9081

Ion Ratio Lower Upper

91 100

106 19.0 23.8 35.6#



#60

o-Xylene

Concen: 0.03 ppbv

RT: 13.84 min Scan# 3392

Delta R.T. -0.01 min

Lab File: VL033502.D

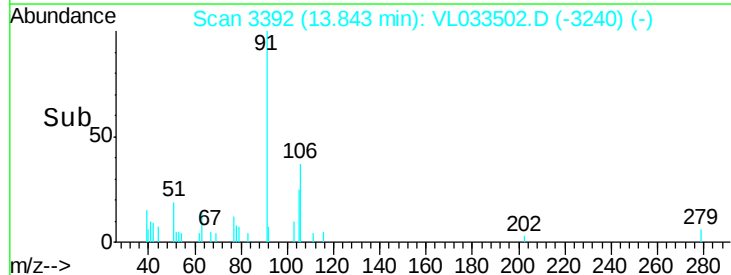
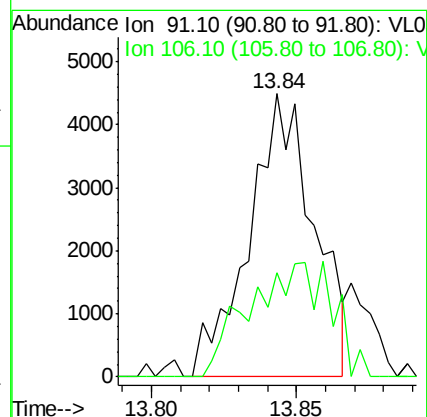
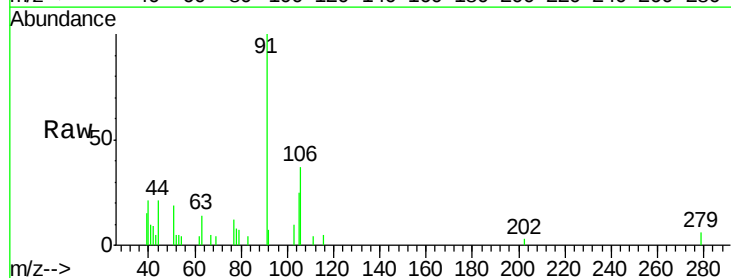
Acq: 29 Mar 2019 14:55

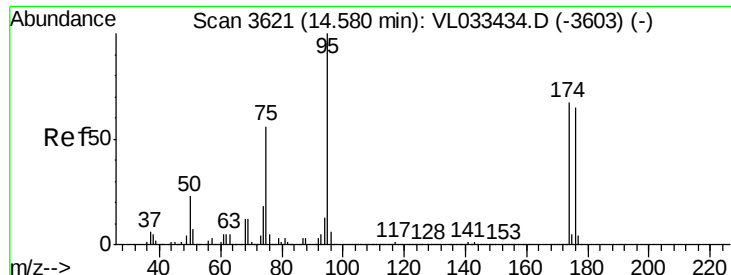
Tgt Ion: 91 Resp: 6989

Ion Ratio Lower Upper

91 100

106 0.0 21.4 64.3#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.06 ppbv

RT: 14.58 min Scan# 3620

Delta R.T. -0.00 min

Lab File: VL033502.D

Acq: 29 Mar 2019 14:55

Instrument :

MSVOA_L

ClientSampleId :

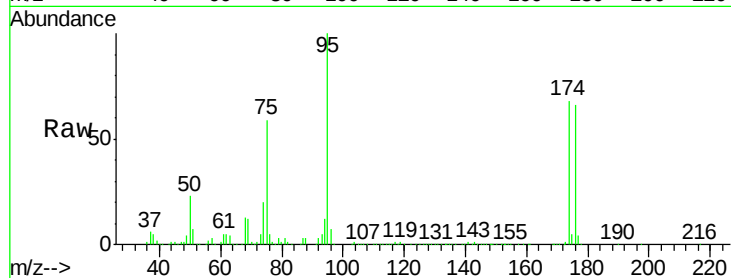
Tot Ion: 95 Resp: 1530426

Ion Ratio Lower Upper

95 100

174 66.2 52.9 79.3

175 4.8 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

