

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121118\
 Data File : VL032961.D
 Acq On : 11 Dec 2018 19:20
 Operator : SY/AP
 Sample : J6264-12DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 12 00:51:50 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 07 09:35:17 2018
 QLast Update : Fri Dec 07 09:35:17 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1342358	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3540183	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3427362	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2738950	10.82	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	108.20%

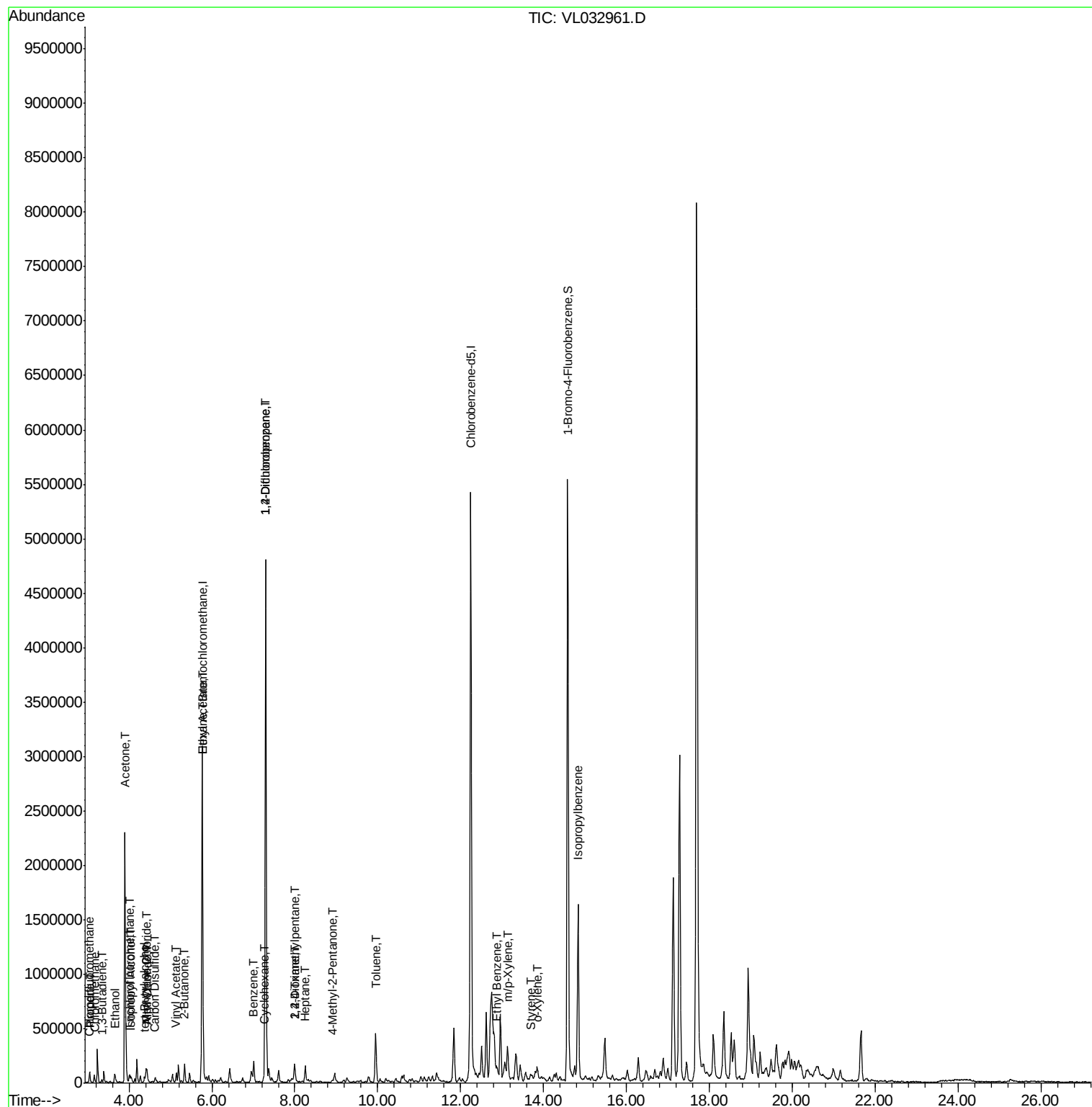
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	3.02	51	5145	0.051	ppbv	92
4) Chloromethane	3.17	50	11161	0.189	ppbv	93
9) Propene	3.04	41	17830	0.444	ppbv	91
10) Heptane	8.26	43	27331	0.181	ppbv #	32
11) Trichlorofluoromethane	4.01	101	40323	0.239	ppbv	92
13) Ethanol	3.66	45	97374	7.035	ppbv	95
15) Acetone	3.90	43	2389815	20.742	ppbv	98
16) 1,3-Butadiene	3.35	39	3336	0.073	ppbv #	60
17) tert-Butyl alcohol	4.38	59	21726	0.741	ppbv #	68
19) Isopropyl Alcohol	4.04	45	62916	0.870	ppbv #	95
20) Methylene Chloride	4.42	84	39110	0.695	ppbv	89
21) Allyl Chloride	4.44	41	7977	0.085	ppbv #	1
23) Vinyl Acetate	5.14	43	21564	0.111	ppbv #	1
25) Ethyl Acetate	5.78	43	73134	0.269	ppbv #	84
26) Hexane	5.78	57	103029	0.820	ppbv #	44
27) Carbon Disulfide	4.62	76	43900	0.279	ppbv #	83
30) Cyclohexane	7.25	84	6223	0.060	ppbv #	1
34) 2-Butanone	5.34	43	190354	1.234	ppbv	98
36) Benzene	7.01	78	145317	0.558	ppbv	94
39) 1,2-Dichloropropane	7.29	63	845810	8.565	ppbv #	21
40) 1,4-Dioxane	8.00	88	26848	0.738	ppbv #	88
44) 2,2,4-Trimethylpentane	7.99	57	98061	0.222	ppbv #	84
50) 4-Methyl-2-Pentanone	8.90	43	9222	0.037	ppbv #	79
53) Toluene	9.95	91	320442	1.160	ppbv	97
58) Ethyl Benzene	12.87	91	23783	0.065	ppbv	89
59) m/p-Xylene	13.13	91	56961	0.172	ppbv #	100
60) o-Xylene	13.86	91	27121	0.081	ppbv	92
61) Styrene	13.69	104	7866	0.035	ppbv #	14
62) Isopropylbenzene	14.83	105	1399955	2.997	ppbv	100

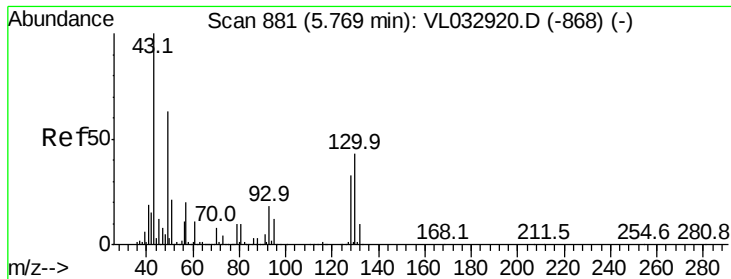
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Fri Dec 07 09:35:17 2018
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

ClientSampled :

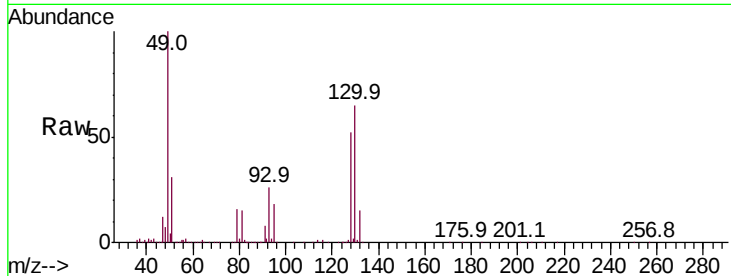
Tot Ion: 49 Resp: 1342358

Ion Ratio Lower Upper

49 100

128 52.3 26.3 78.8

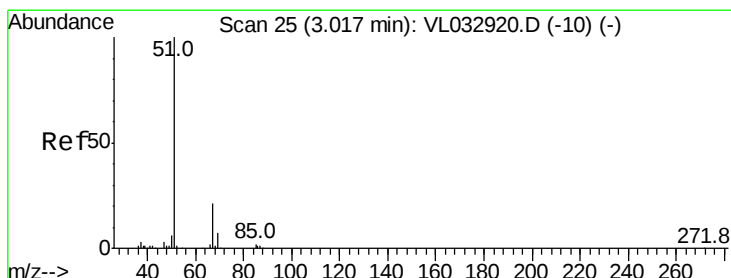
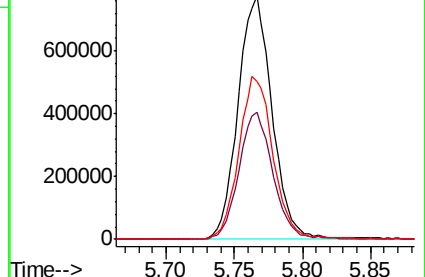
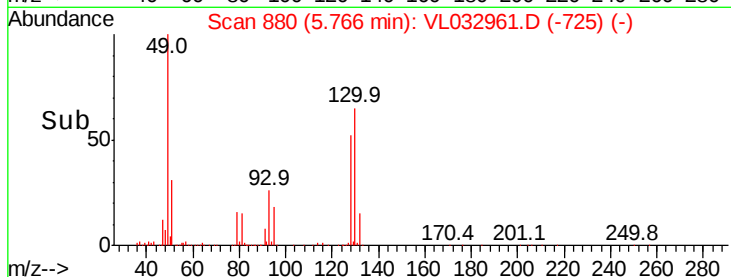
130 67.8 33.9 101.7



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



#3

Chlorodifluoromethane

Concen: 0.051 ppbv

RT: 3.02 min Scan# 26

Delta R.T. 0.00 min

Lab File: VL032961.D

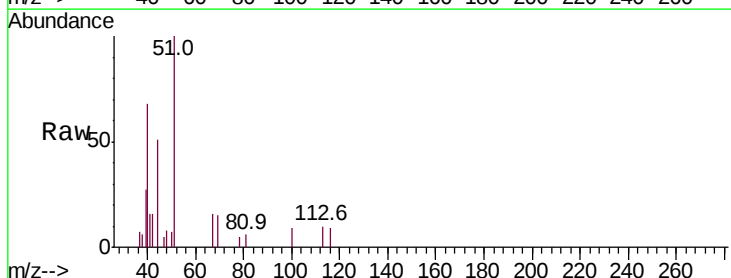
Acq: 11 Dec 2018 19:20

Tgt Ion: 51 Resp: 5145

Ion Ratio Lower Upper

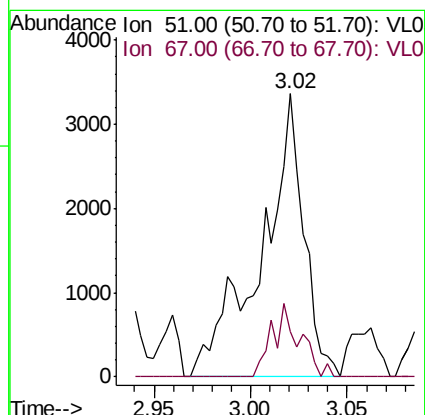
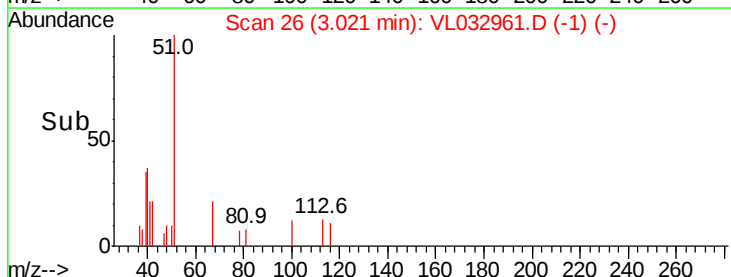
51 100

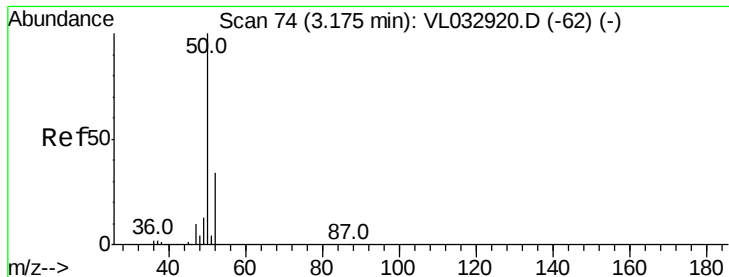
67 17.1 16.8 25.2



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.189 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.00 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

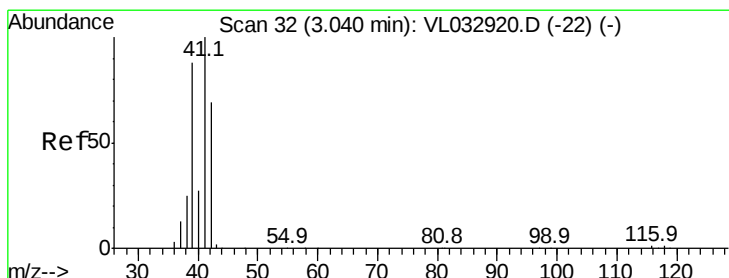
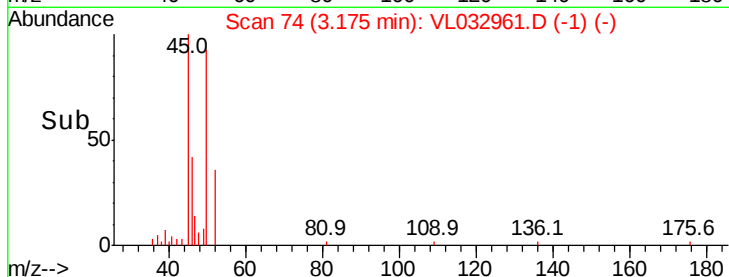
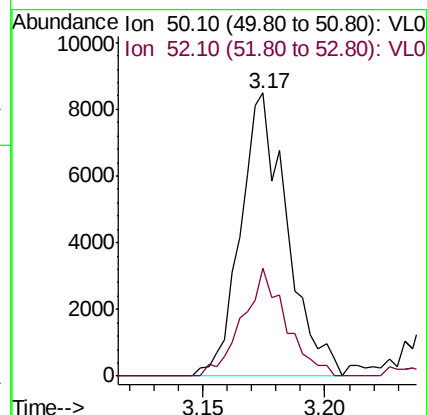
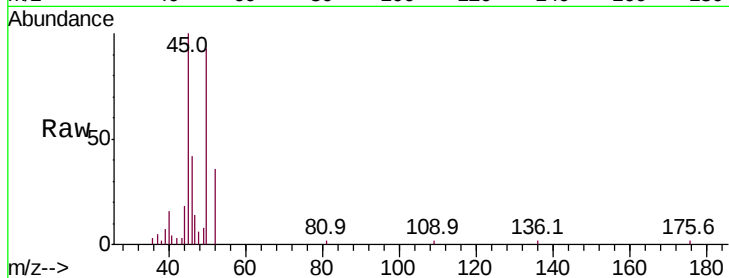
ClientSampleId :

Tot Ion: 50 Resp: 11161

Ion Ratio Lower Upper

50 100

52 38.4 27.3 40.9



#9

Propene

Concen: 0.444 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.00 min

Lab File: VL032961.D

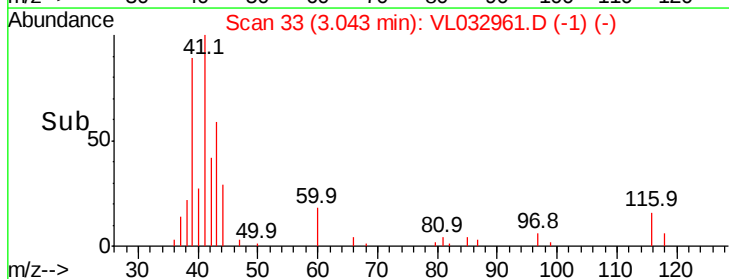
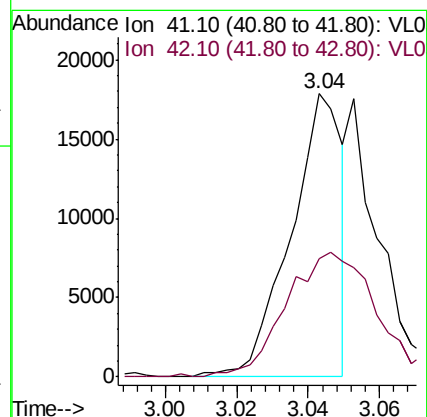
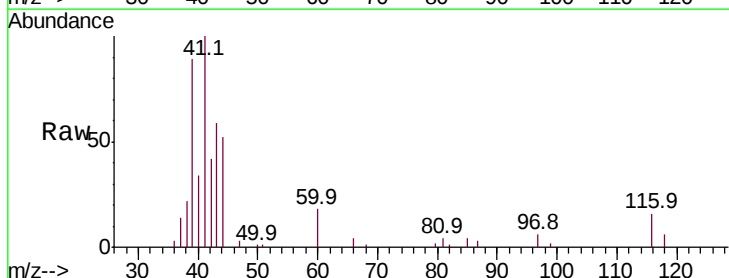
Acq: 11 Dec 2018 19:20

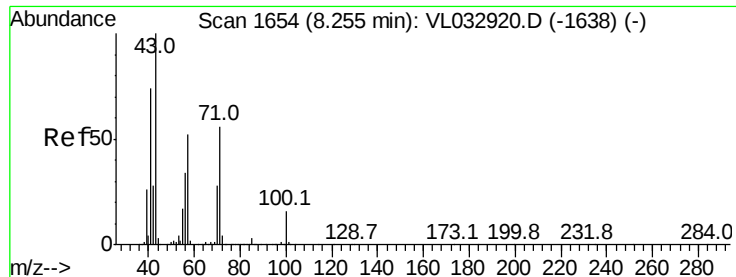
Tgt Ion: 41 Resp: 17830

Ion Ratio Lower Upper

41 100

42 77.6 56.2 84.2

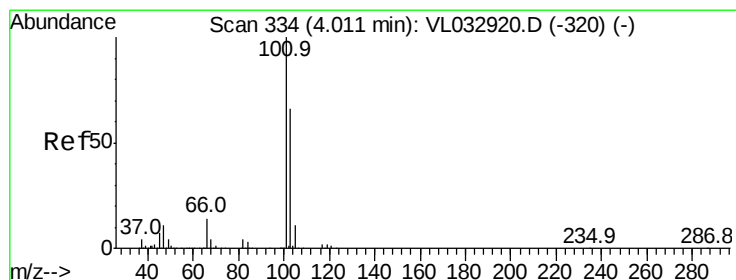
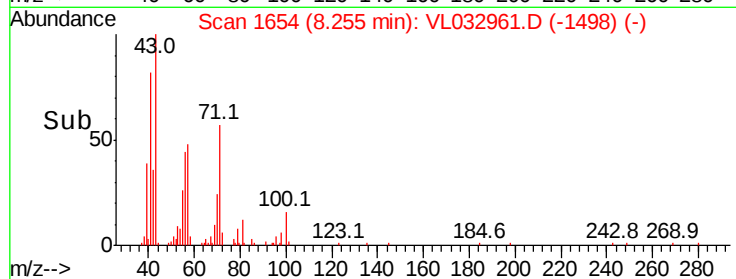
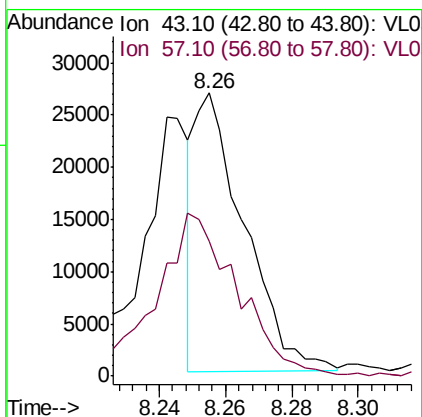
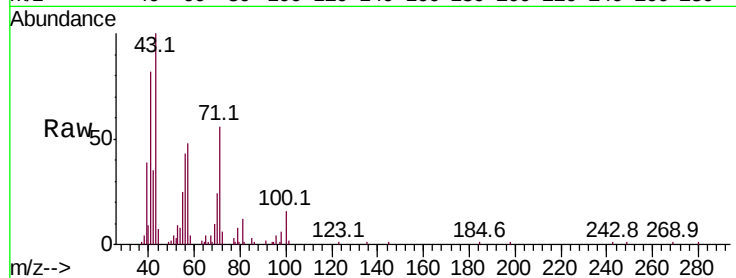




#10
 Heptane
 Concen: 0.181 ppbv
 RT: 8.26 min Scan# 1654
 Delta R.T. 0.00 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

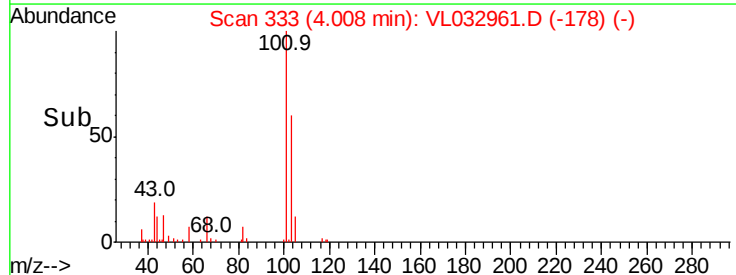
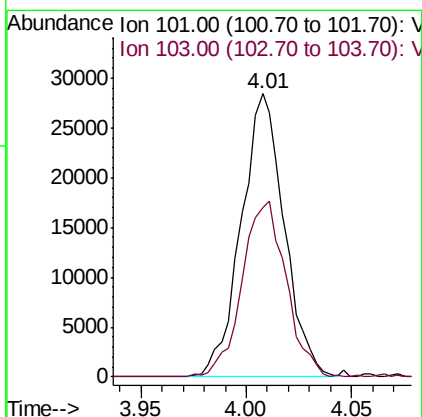
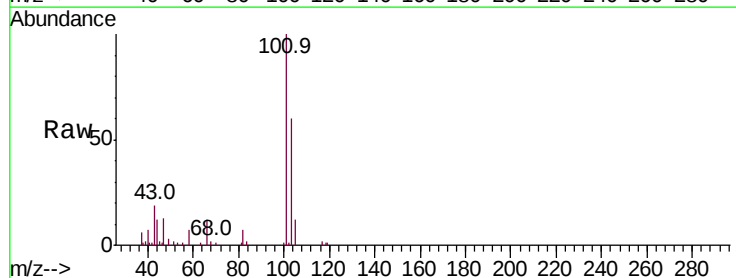
Instrument :
 MSVOA_L
 ClientSampleId :

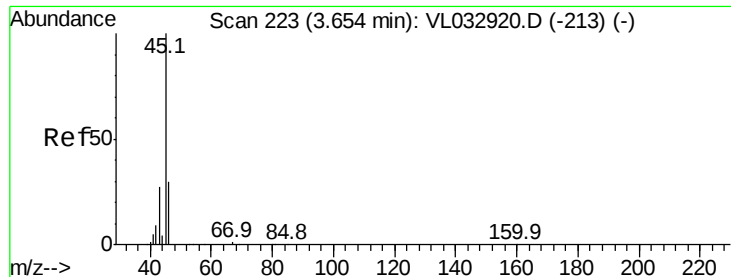
Tot Ion: 43 Resp: 27331
 Ion Ratio Lower Upper
 43 100
 57 100.4 41.8 62.6#



#11
 Trichlorofluoromethane
 Concen: 0.239 ppbv
 RT: 4.01 min Scan# 333
 Delta R.T. -0.00 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

Tgt Ion:101 Resp: 40323
 Ion Ratio Lower Upper
 101 100
 103 59.7 52.7 79.1





#13

Ethanol

Concen: 7.035 ppbv

RT: 3.66 min Scan# 225

Delta R.T. 0.01 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

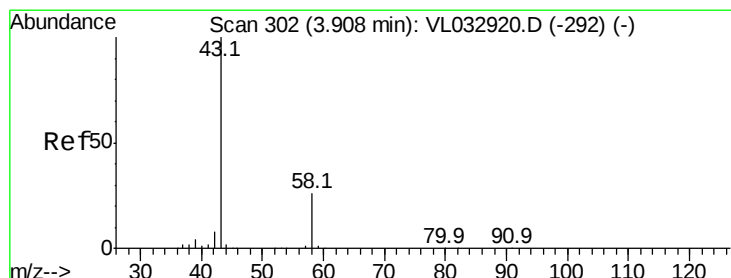
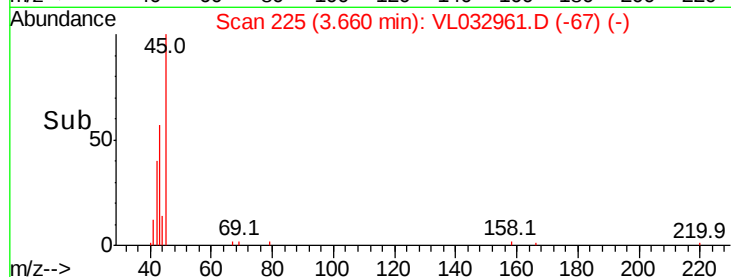
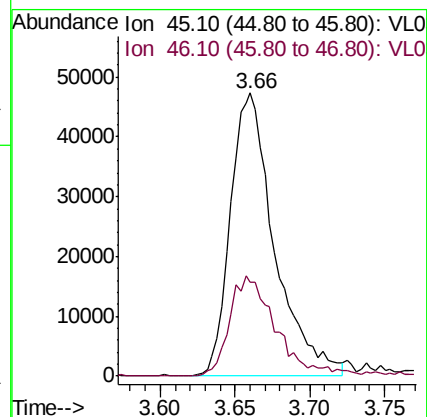
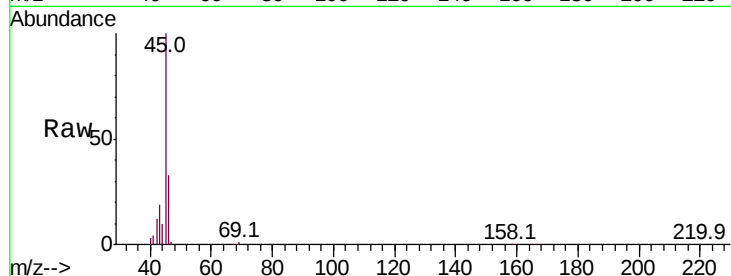
ClientSampled :

Tot Ion: 45 Resp: 97374

Ion Ratio Lower Upper

45 100

46 37.6 13.8 55.4



#15

Acetone

Concen: 20.742 ppbv

RT: 3.90 min Scan# 300

Delta R.T. -0.01 min

Lab File: VL032961.D

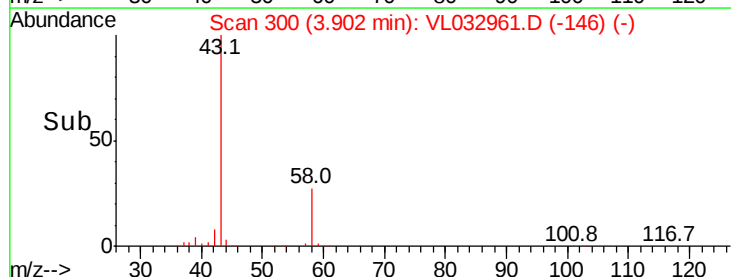
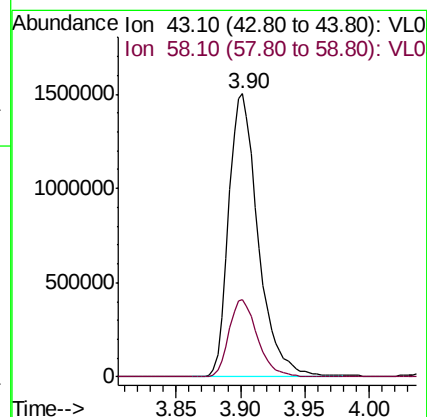
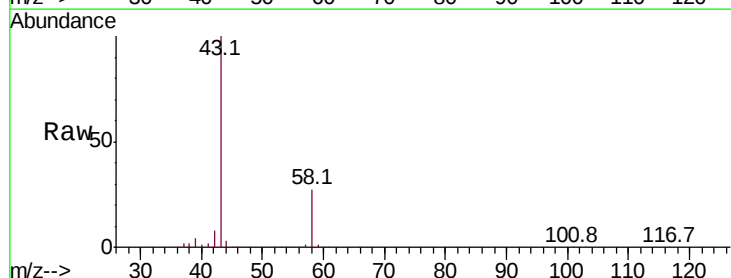
Acq: 11 Dec 2018 19:20

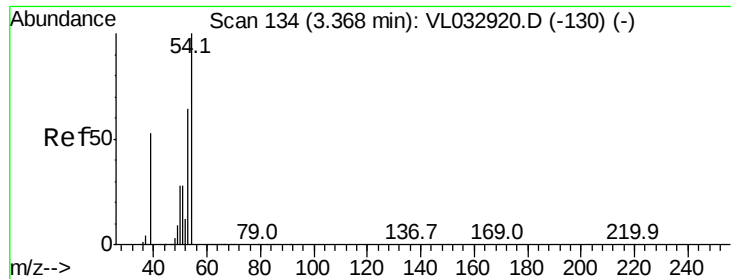
Tgt Ion: 43 Resp: 2389815

Ion Ratio Lower Upper

43 100

58 26.5 20.6 30.8

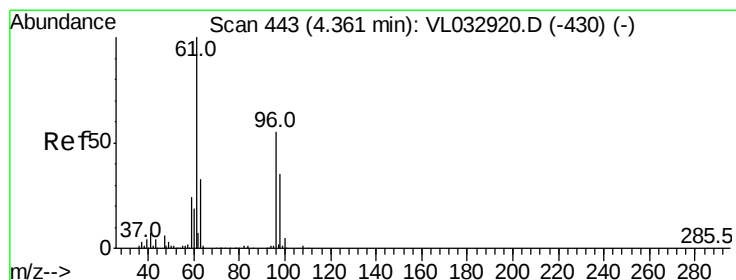
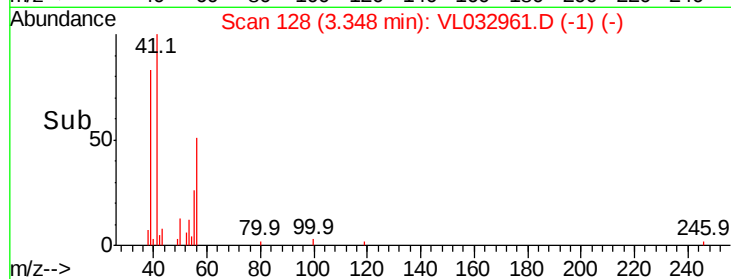
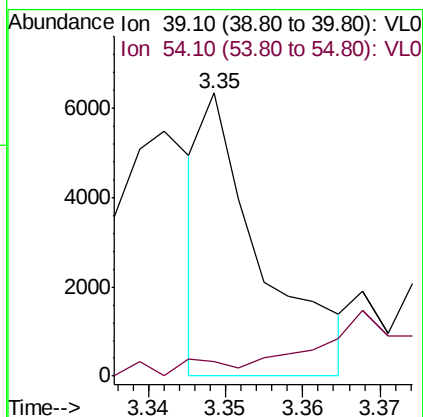
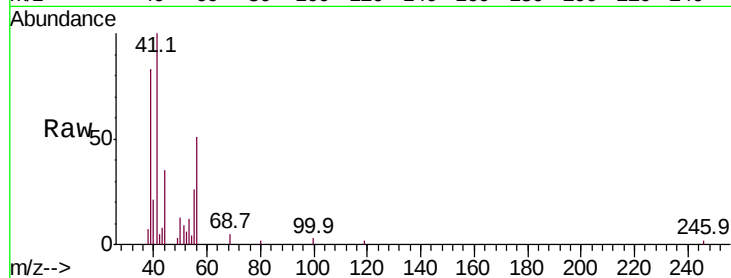




#16
 1,3-Butadiene
 Concen: 0.073 ppbv
 RT: 3.35 min Scan# 128
 Delta R.T. -0.02 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

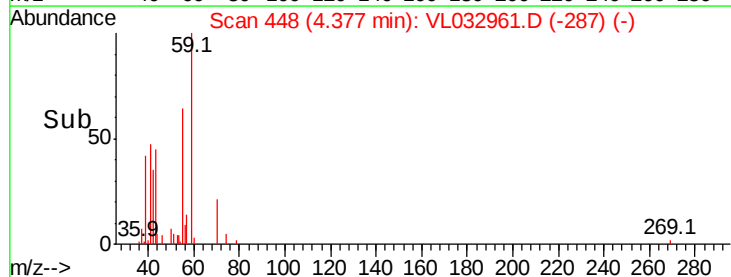
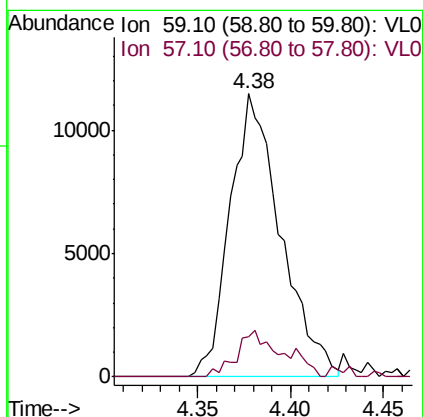
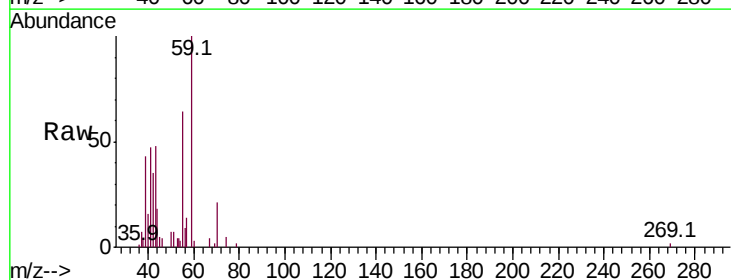
Instrument :
 MSVOA_L
 ClientSampleId :

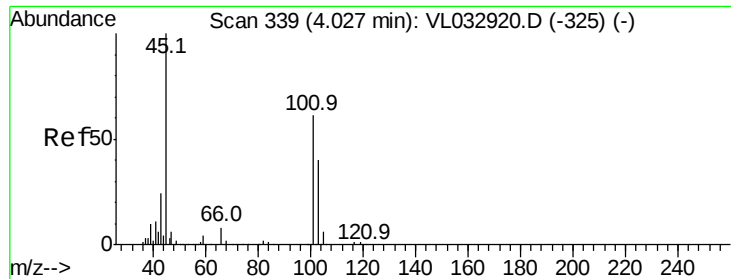
Tot Ion: 39 Resp: 3336
 Ion Ratio Lower Upper
 39 100
 54 52.9 72.7 109.1#



#17
 tert-Butyl alcohol
 Concen: 0.741 ppbv
 RT: 4.38 min Scan# 448
 Delta R.T. 0.02 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

Tgt Ion: 59 Resp: 21726
 Ion Ratio Lower Upper
 59 100
 57 16.4 0.6 1.0#





#19

Isopropyl Alcohol

Concen: 0.870 ppbv

RT: 4.04 min Scan# 343

Delta R.T. 0.01 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

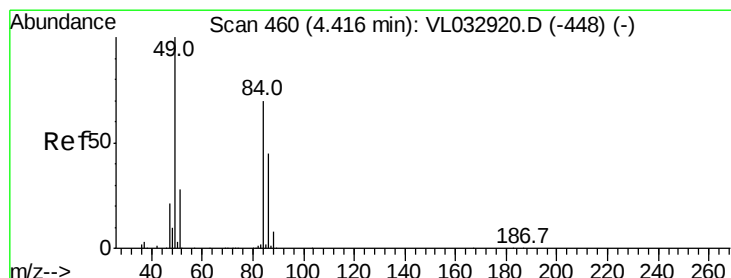
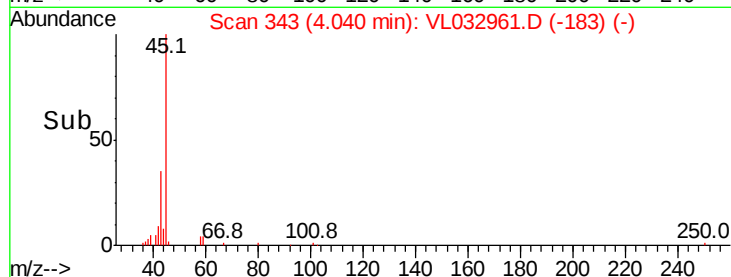
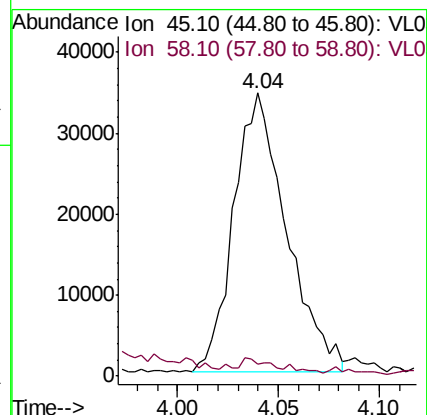
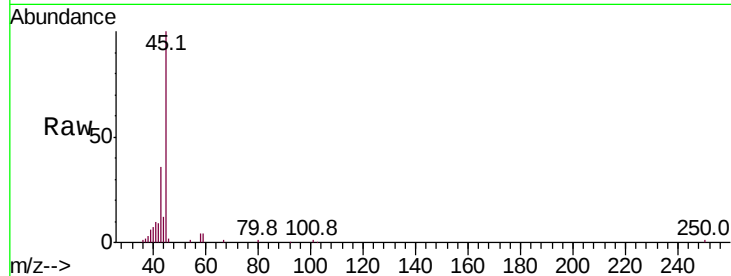
ClientSampleId :

Tot Ion: 45 Resp: 62916

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.2#



#20

Methylene Chloride

Concen: 0.695 ppbv

RT: 4.42 min Scan# 460

Delta R.T. 0.00 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Tgt Ion: 84 Resp: 39110

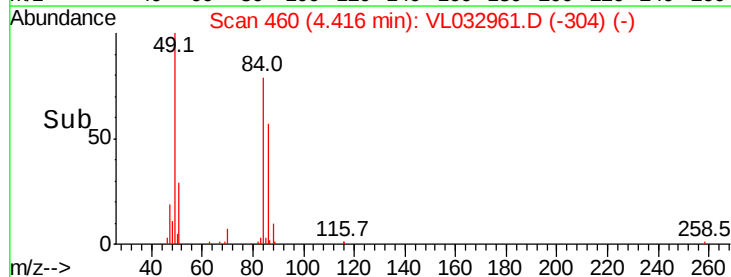
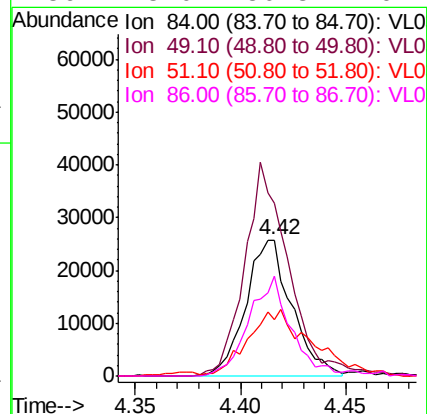
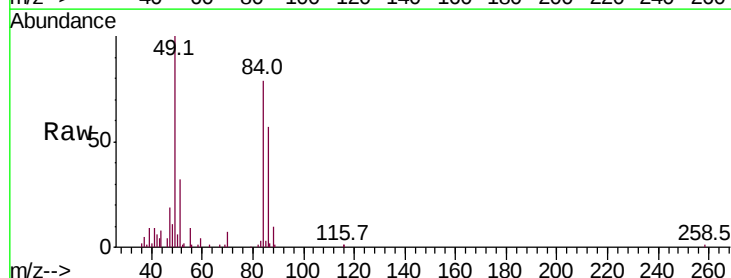
Ion Ratio Lower Upper

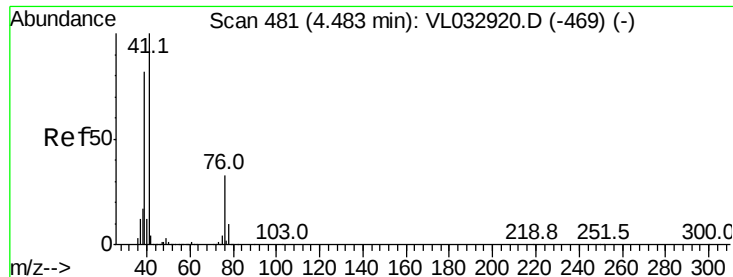
84 100

49 127.0 113.8 170.8

51 37.8 31.8 47.8

86 73.0 50.8 76.2





#21

Allvl Chloride

Concen: 0.085 ppbv

RT: 4.44 min Scan# 468

Delta R.T. -0.04 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

ClientSampleId :

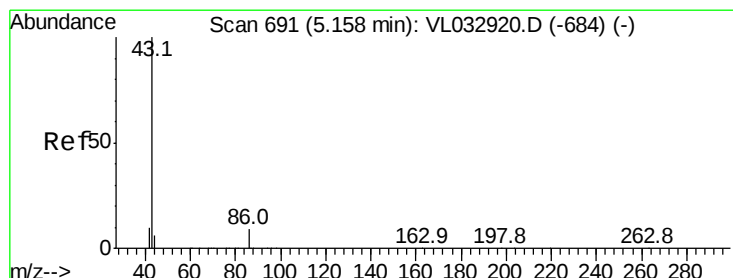
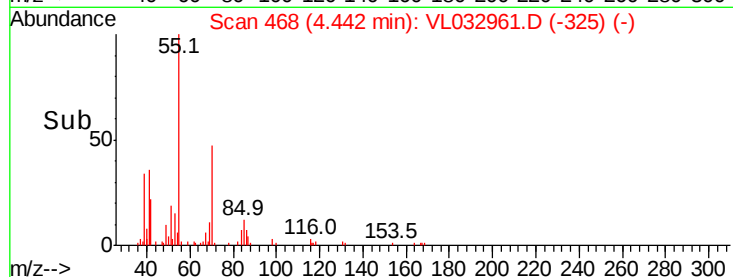
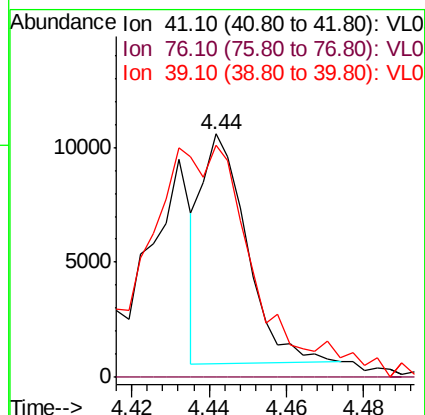
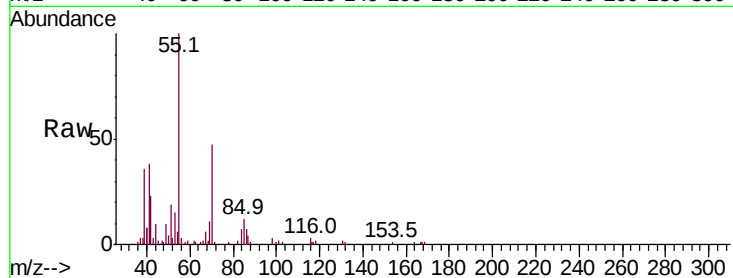
Tot Ion: 41 Resp: 7977

Ion Ratio Lower Upper

41 100

76 0.0 25.2 37.8#

39 233.8 65.2 97.8#



#23

Vinyl Acetate

Concen: 0.111 ppbv

RT: 5.14 min Scan# 684

Delta R.T. -0.02 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Tgt Ion: 43 Resp: 21564

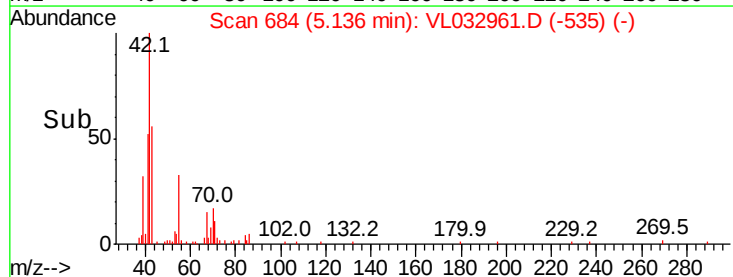
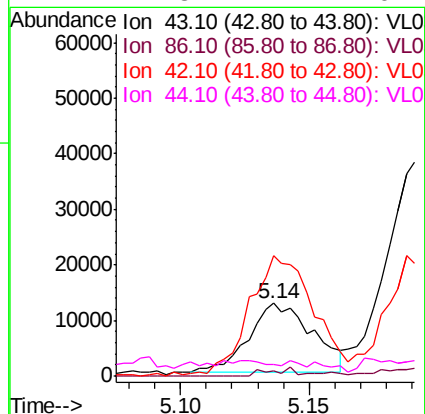
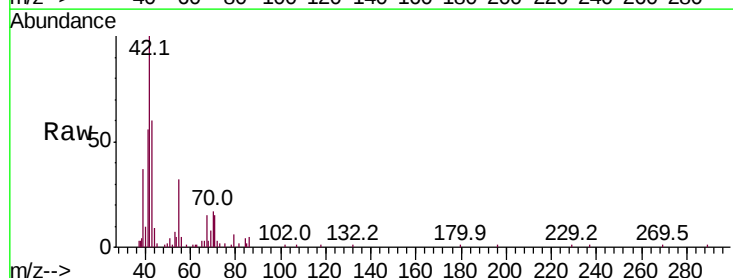
Ion Ratio Lower Upper

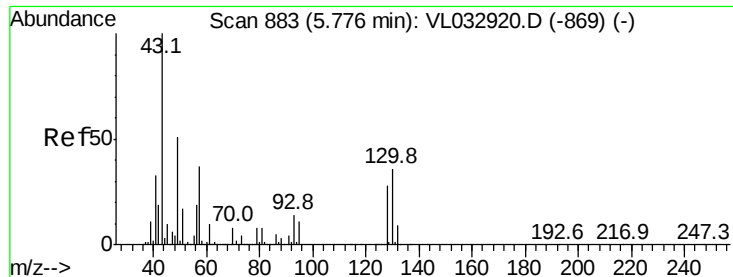
43 100

86 8.2 6.6 9.8

42 170.7 8.3 12.5#

44 2.3 4.2 6.4#





#25

Ethyl Acetate

Concen: 0.269 ppbv

RT: 5.78 min Scan# 885

Delta R.T. 0.01 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 73134

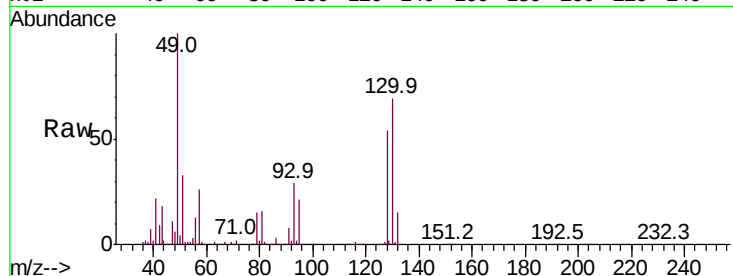
Ion Ratio Lower Upper

43 100

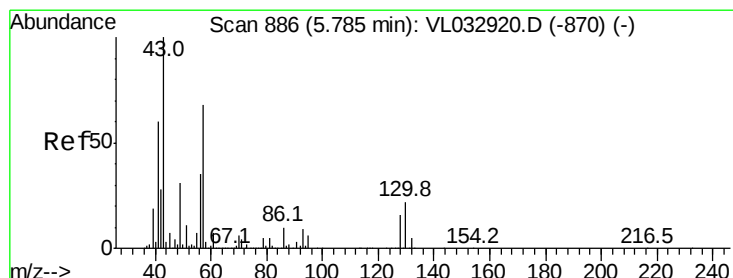
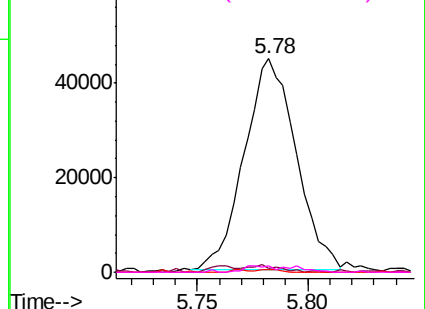
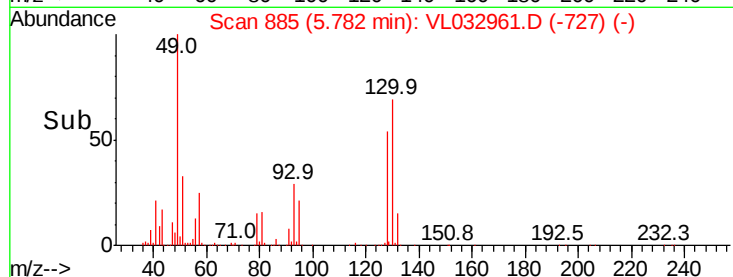
45 4.7 7.8 11.6#

61 1.0 7.4 11.2#

70 3.2 5.7 8.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 0.820 ppbv

RT: 5.78 min Scan# 885

Delta R.T. -0.00 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Tgt Ion: 57 Resp: 103029

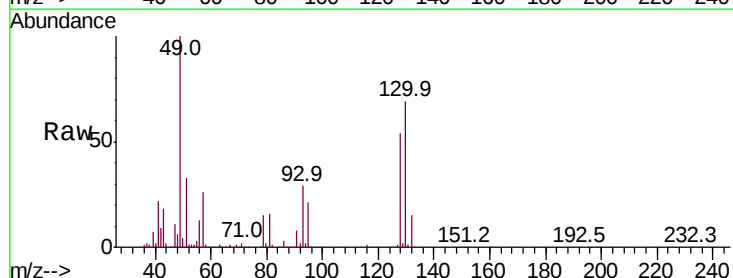
Ion Ratio Lower Upper

57 100

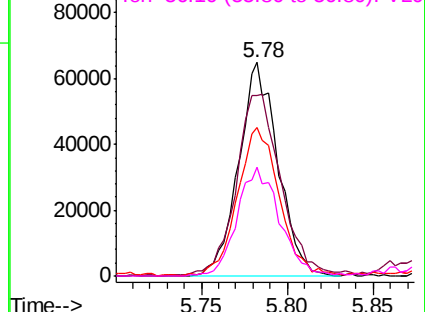
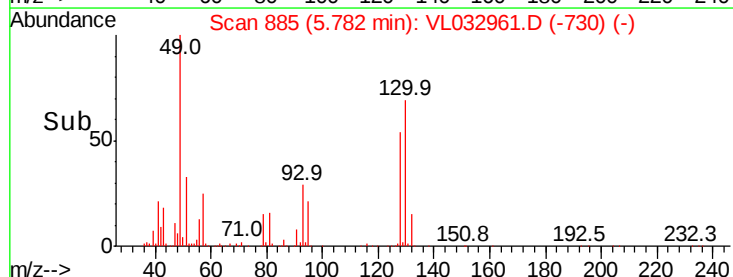
41 97.8 72.2 108.2

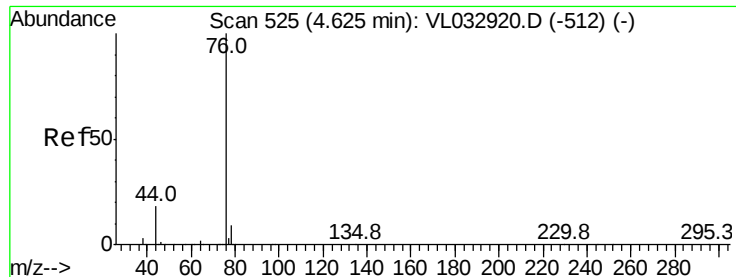
43 74.5 171.9 257.9#

56 55.7 42.2 63.2



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





#27

Carbon Disulfide

Concen: 0.279 ppbv

RT: 4.62 min Scan# 525

Delta R.T. 0.00 min

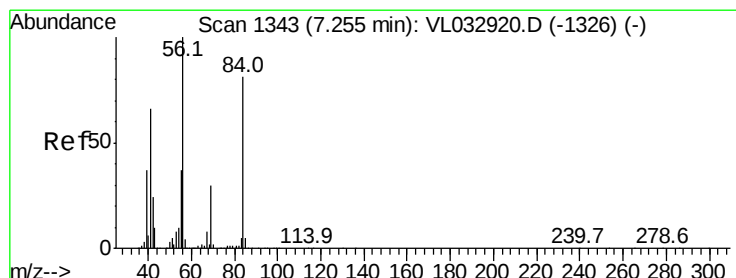
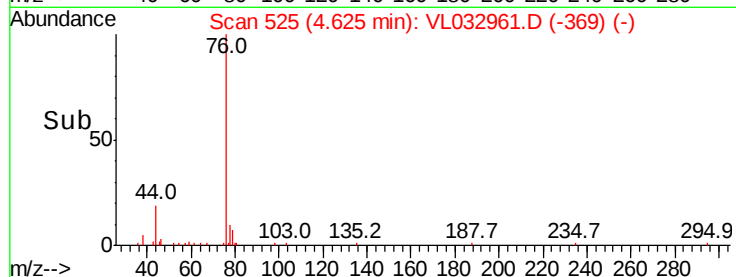
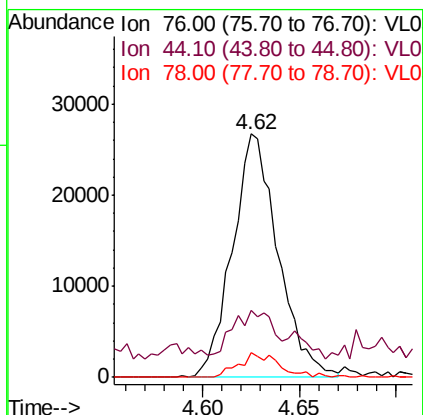
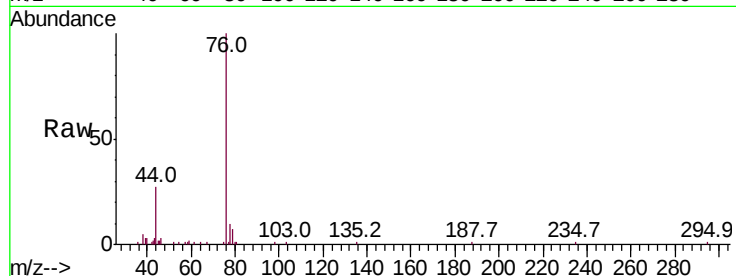
Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 76 Resp: 43900

Ion	Ratio	Lower	Upper
76	100		
44	29.5	14.7	22.1#
78	9.2	7.4	11.2



#30

Cyclohexane

Concen: 0.060 ppbv

RT: 7.25 min Scan# 1342

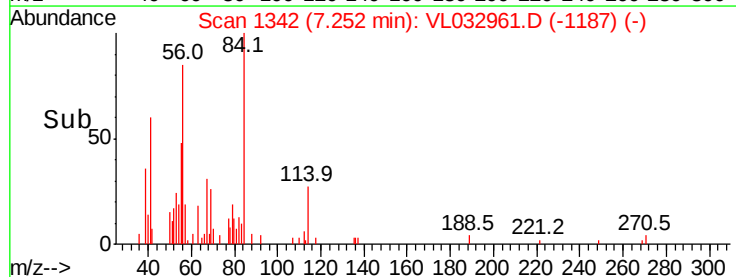
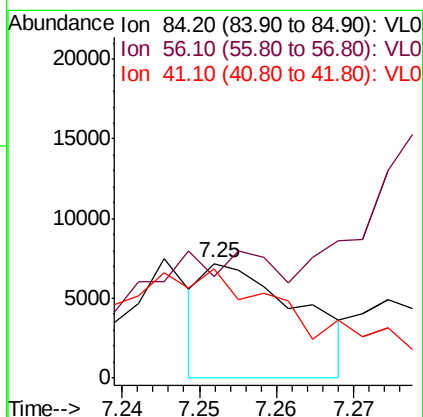
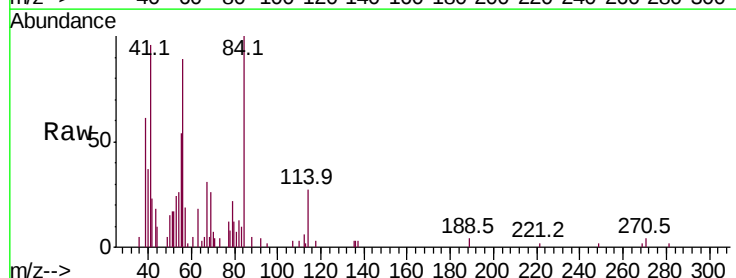
Delta R.T. -0.00 min

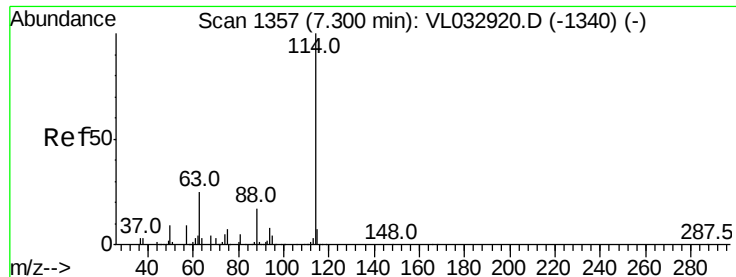
Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Tgt Ion: 84 Resp: 6223

Ion	Ratio	Lower	Upper
84	100		
56	0.0	102.5	153.7#
41	253.7	64.1	96.1#

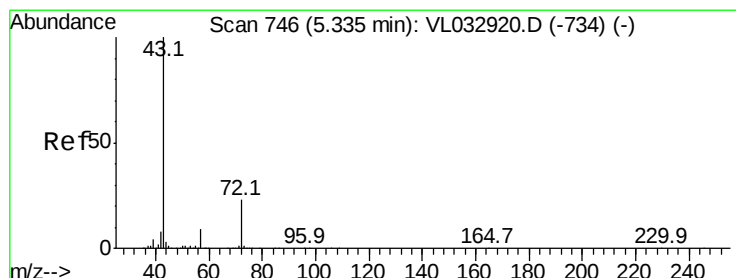
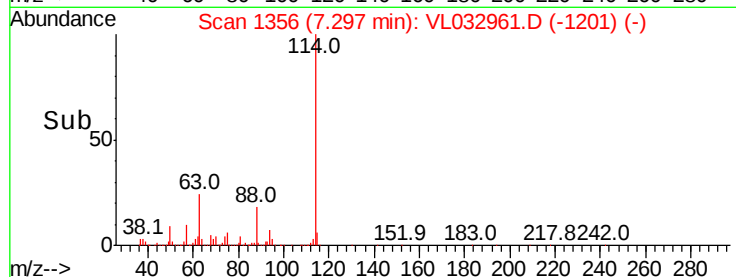
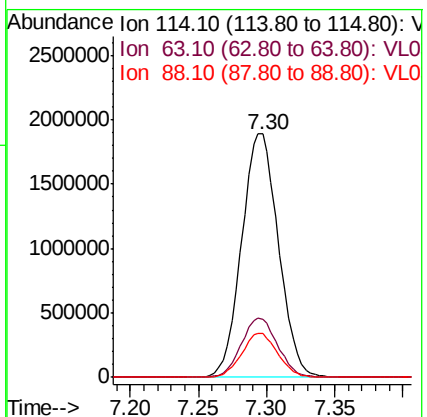
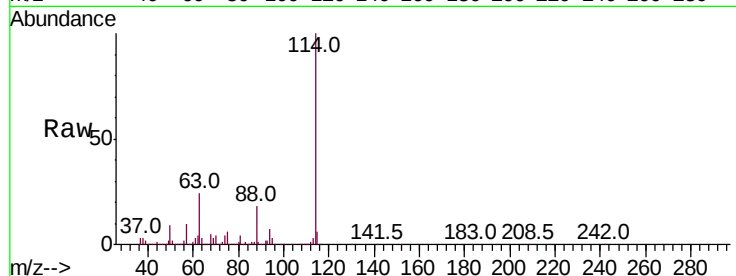




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.30 min Scan# 1356
 Delta R.T. -0.00 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

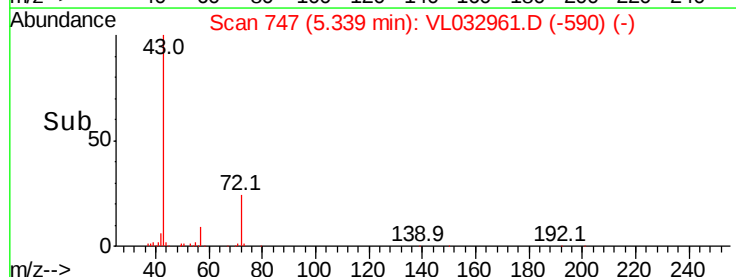
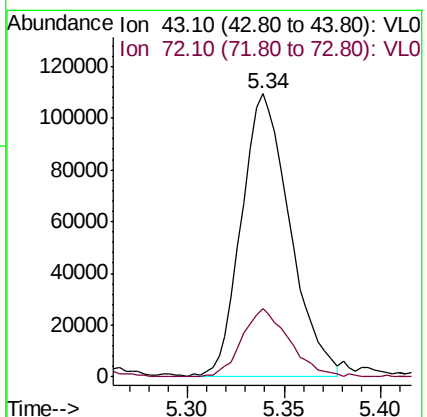
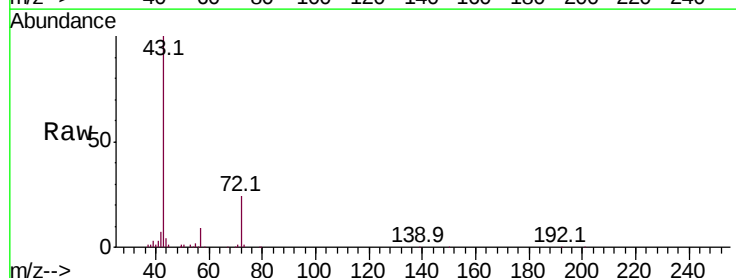
Instrument :
 MSVOA_L
 ClientSampleId :

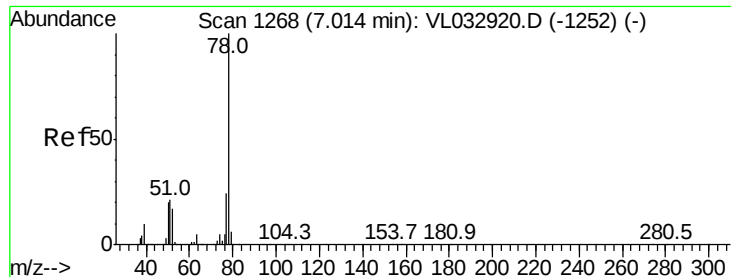
Tot Ion:114 Resp: 3540183
 Ion Ratio Lower Upper
 114 100
 63 24.1 20.1 30.1
 88 17.7 14.2 21.4



#34
 2-Butanone
 Concen: 1.234 ppbv
 RT: 5.34 min Scan# 747
 Delta R.T. 0.00 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

Tgt Ion: 43 Resp: 190354
 Ion Ratio Lower Upper
 43 100
 72 24.3 18.8 28.2





#36

Benzene

Concen: 0.558 ppbv

RT: 7.01 min Scan# 1266

Delta R.T. -0.01 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

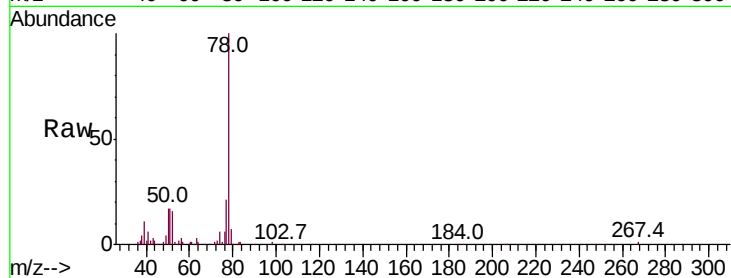
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 78 Resp: 145317

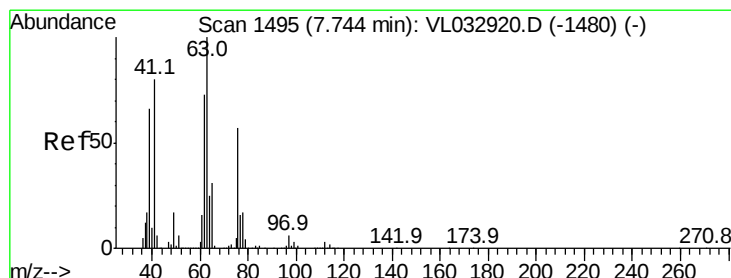
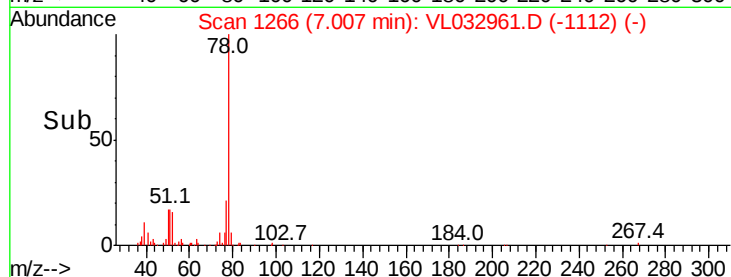
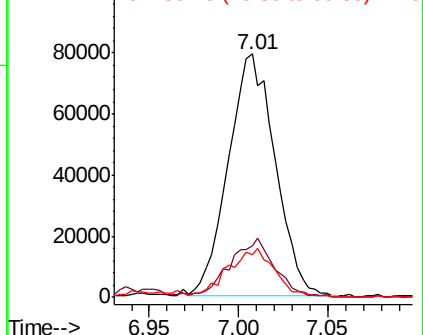
Ion	Ratio	Lower	Upper
78	100		
77	21.0	18.9	28.3
50	17.4	16.1	24.1



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: 8.565 ppbv

RT: 7.29 min Scan# 1355

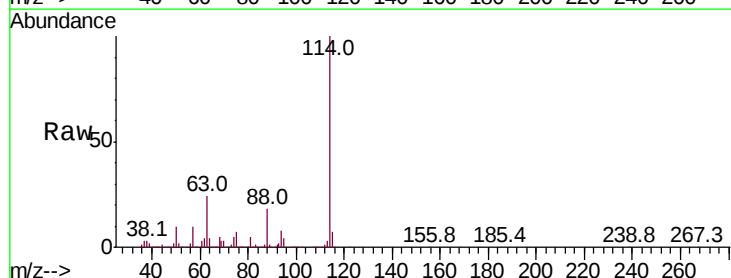
Delta R.T. -0.45 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Tgt Ion: 63 Resp: 845810

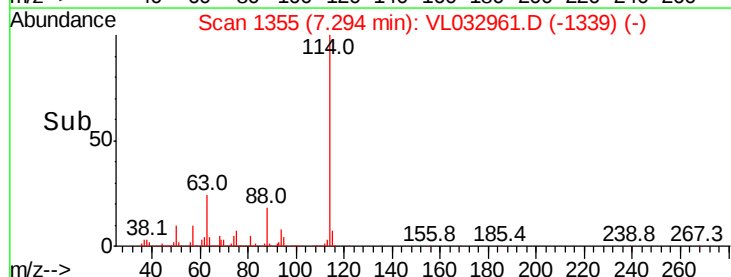
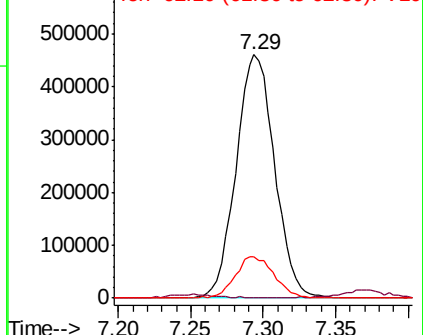
Ion	Ratio	Lower	Upper
63	100		
41	0.0	63.9	95.9#
62	17.1	58.8	88.2#

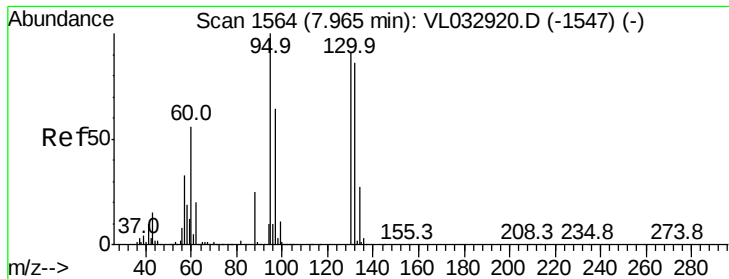


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#40

1,4-Dioxane

Concen: 0.738 ppbv

RT: 8.00 min Scan# 1575

Delta R.T. 0.04 min

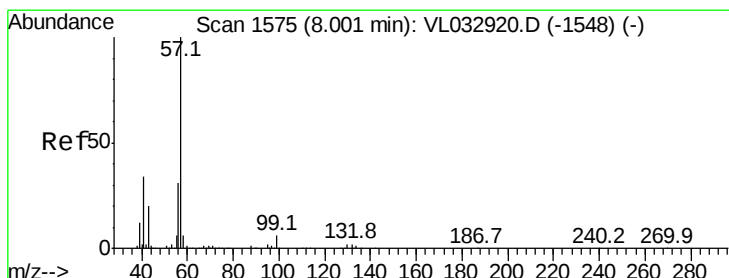
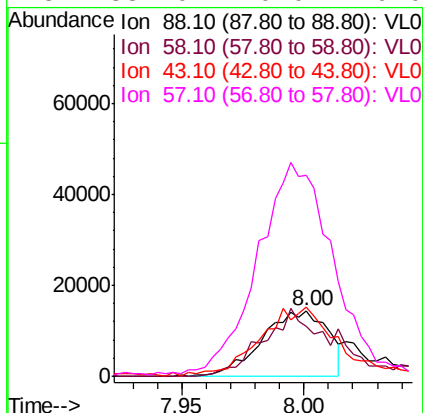
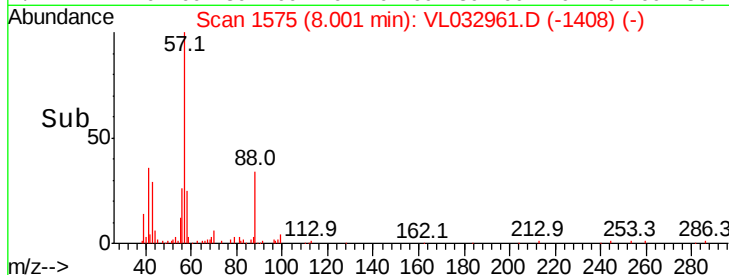
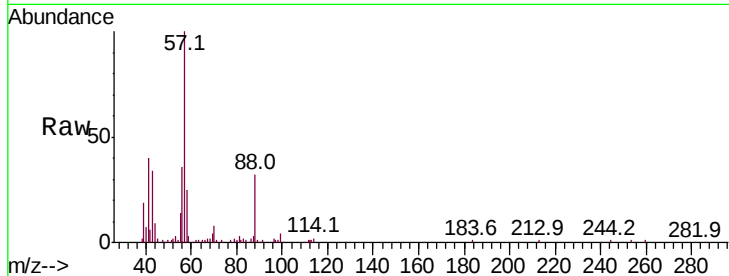
Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 88 Resp: 26848

Ion	Ratio	Lower	Upper
88	100		
58	119.7	107.4	161.2
43	128.0	0.0	0.0#
57	387.0	0.0	0.0#



#44

2,2,4-Trimethylpentane

Concen: 0.222 ppbv

RT: 7.99 min Scan# 1573

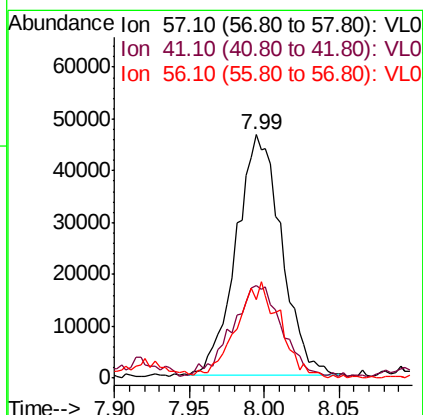
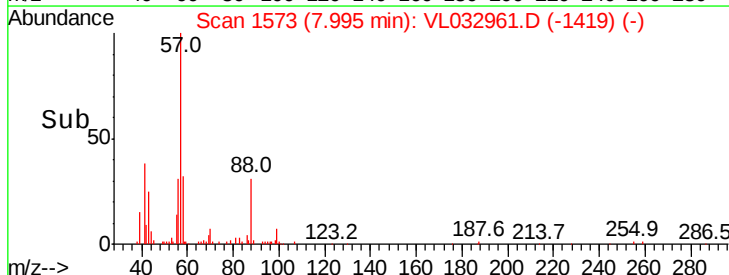
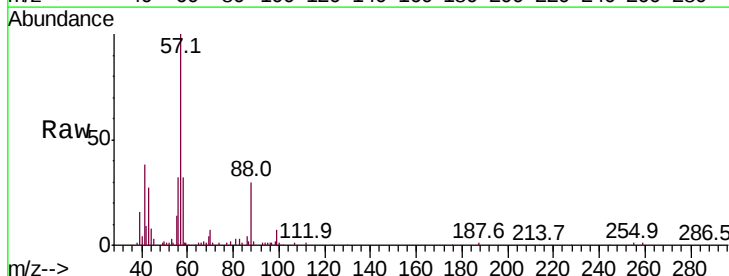
Delta R.T. -0.01 min

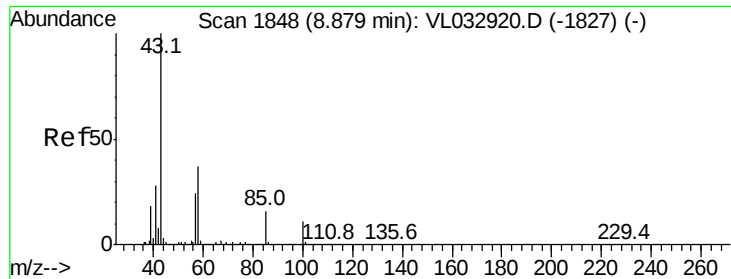
Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Tgt Ion: 57 Resp: 98061

Ion	Ratio	Lower	Upper
57	100		
41	43.4	27.0	40.4#
56	39.4	24.6	37.0#

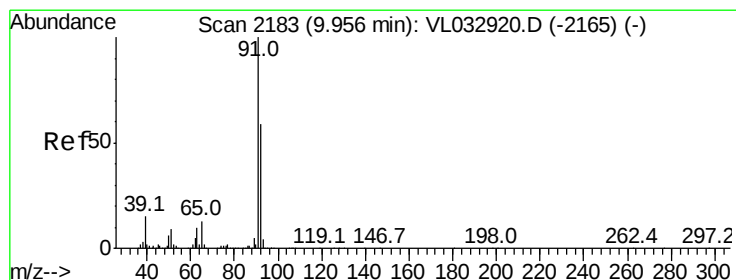
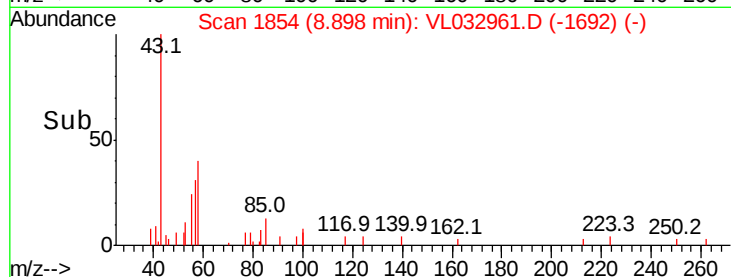
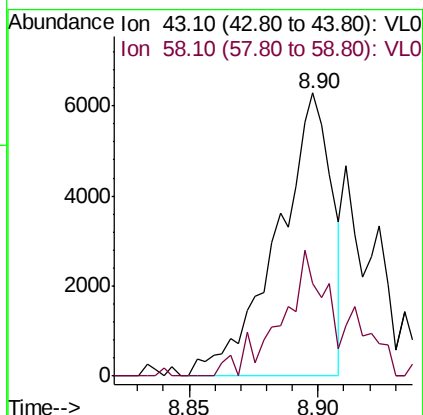
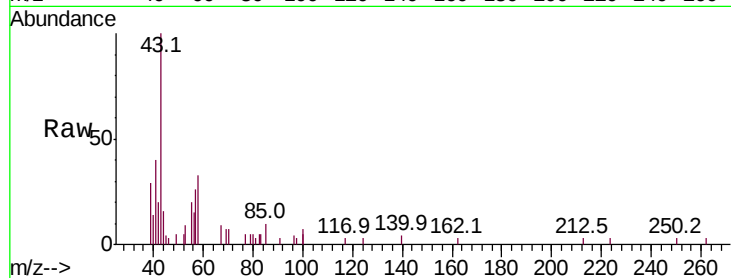




#50
 4-Methyl-2-Pentanone
 Concen: 0.037 ppbv
 RT: 8.90 min Scan# 1854
 Delta R.T. 0.02 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

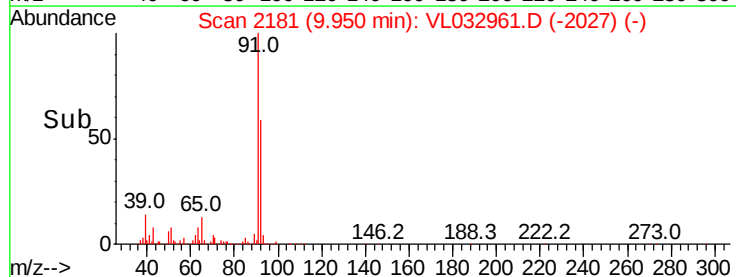
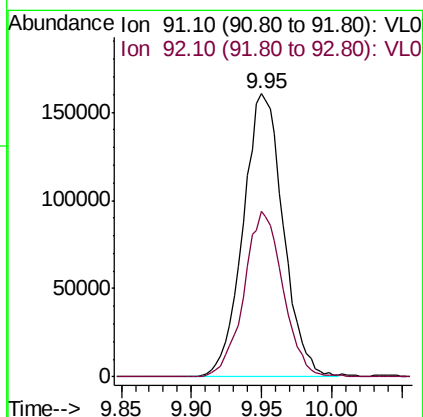
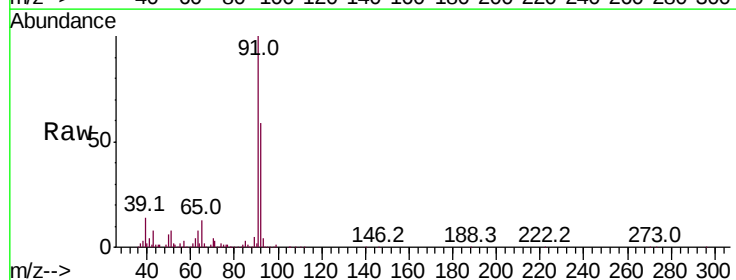
Instrument :
 MSVOA_L
 ClientSampleId :

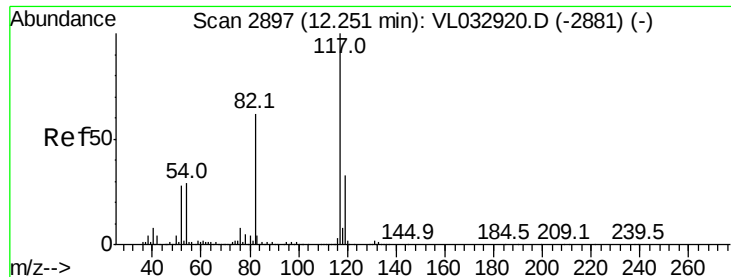
Tot Ion: 43 Resp: 9222
 Ion Ratio Lower Upper
 43 100
 58 48.6 29.0 43.4#



#53
 Toluene
 Concen: 1.160 ppbv
 RT: 9.95 min Scan# 2181
 Delta R.T. -0.01 min
 Lab File: VL032961.D
 Acq: 11 Dec 2018 19:20

Tgt Ion: 91 Resp: 320442
 Ion Ratio Lower Upper
 91 100
 92 56.6 47.4 71.0

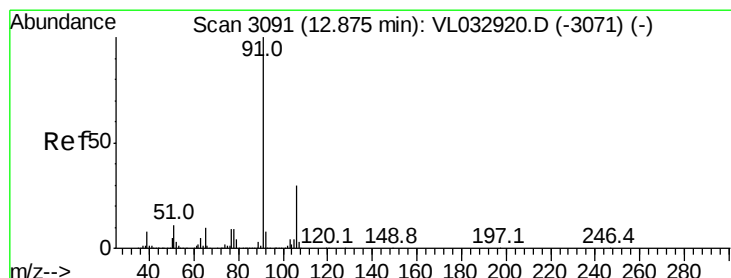
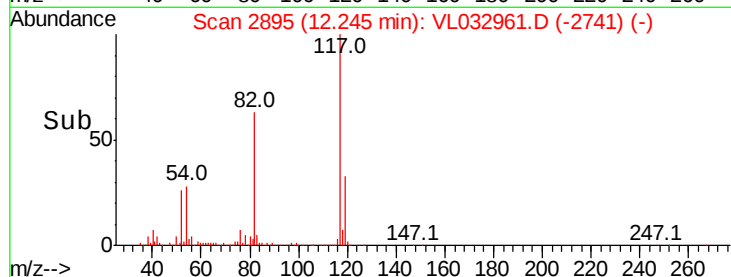
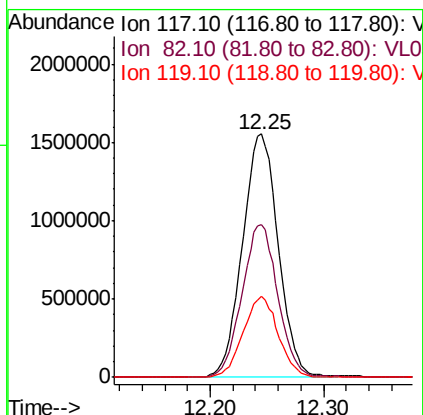
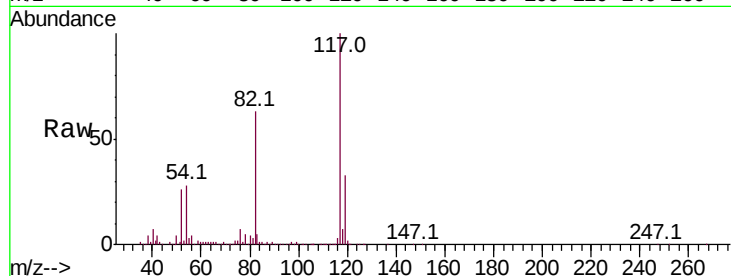




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.25 min Scan# 2895
Delta R.T. -0.01 min
Lab File: VL032961.D
Acq: 11 Dec 2018 19:20

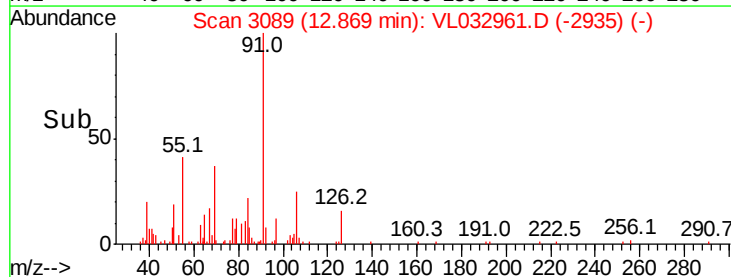
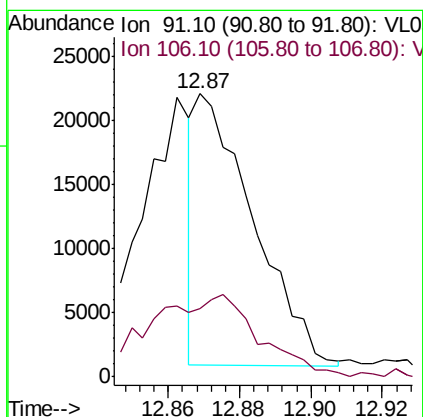
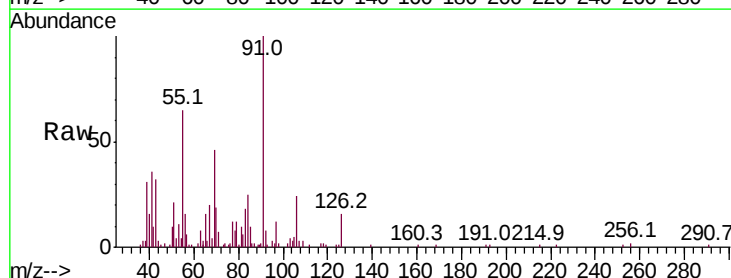
Instrument :
MSVOA_L
ClientSampleId :

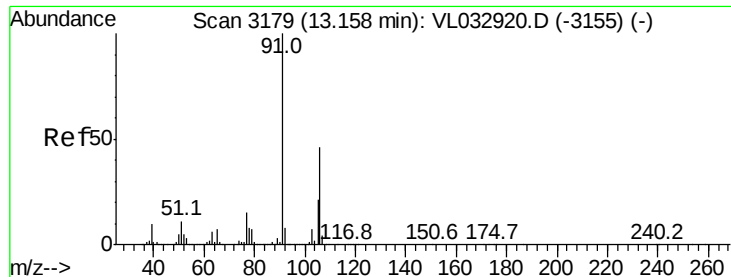
Tot Ion:117 Resp: 3427362
Ion Ratio Lower Upper
117 100
82 62.9 47.8 71.8
119 32.5 43.1 64.7#



#58
Ethyl Benzene
Concen: 0.065 ppbv
RT: 12.87 min Scan# 3089
Delta R.T. -0.01 min
Lab File: VL032961.D
Acq: 11 Dec 2018 19:20

Tgt Ion: 91 Resp: 23783
Ion Ratio Lower Upper
91 100
106 24.1 23.9 35.9





#59

m/p-Xylene

Concen: 0.172 ppbv

RT: 13.13 min Scan# 3170

Delta R.T. -0.03 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

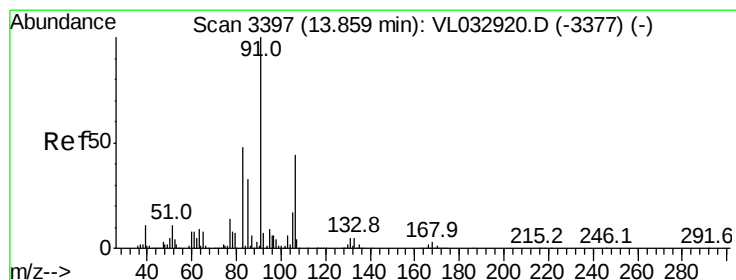
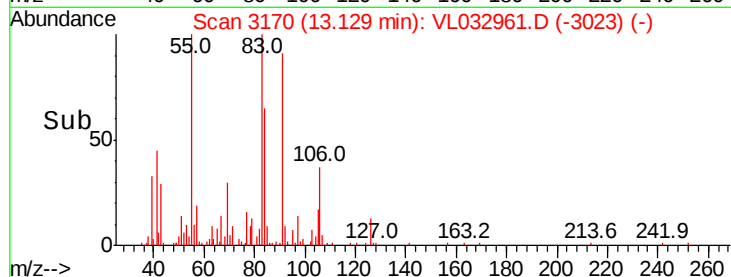
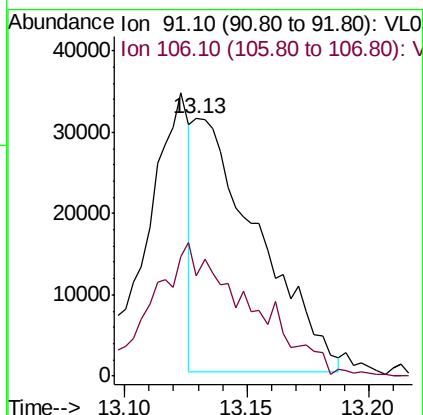
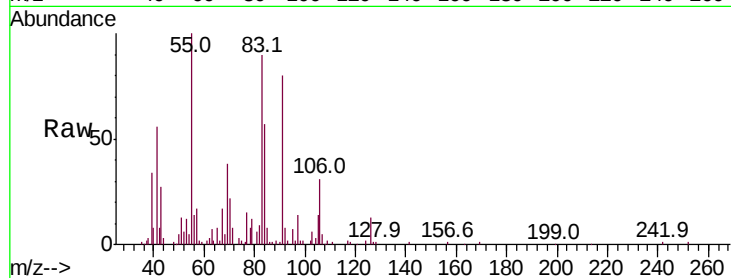
ClientSampleId :

Tot Ion: 91 Resp: 56961

Ion Ratio Lower Upper

91 100

106 79.7 0.0 0.0#



#60

o-Xylene

Concen: 0.081 ppbv

RT: 13.86 min Scan# 3396

Delta R.T. -0.00 min

Lab File: VL032961.D

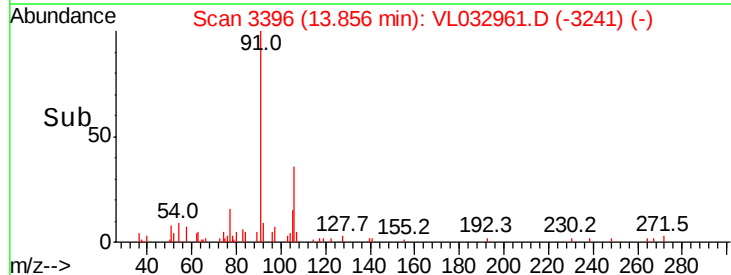
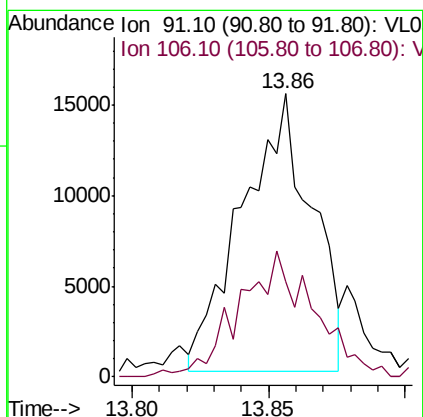
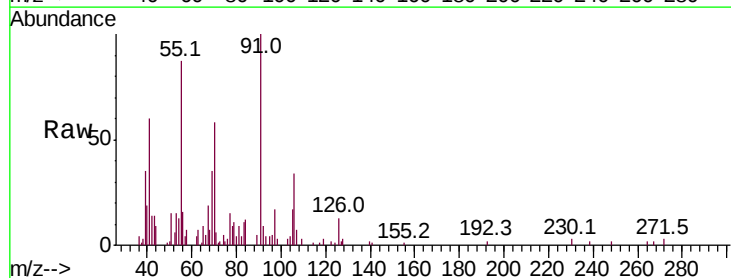
Acq: 11 Dec 2018 19:20

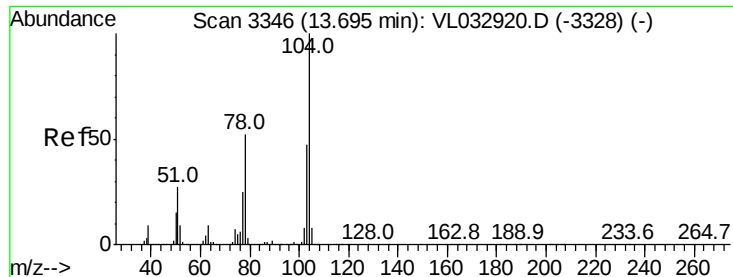
Tgt Ion: 91 Resp: 27121

Ion Ratio Lower Upper

91 100

106 49.0 21.9 65.8

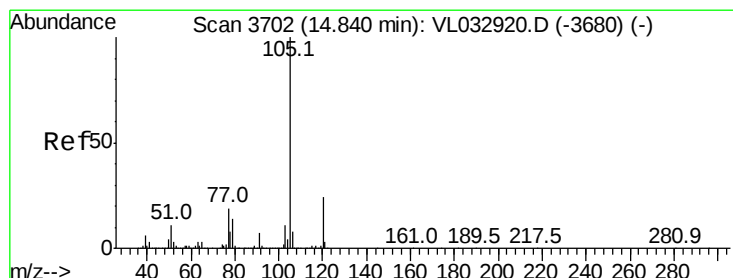
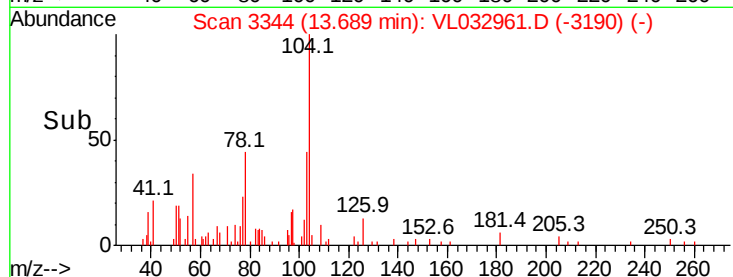
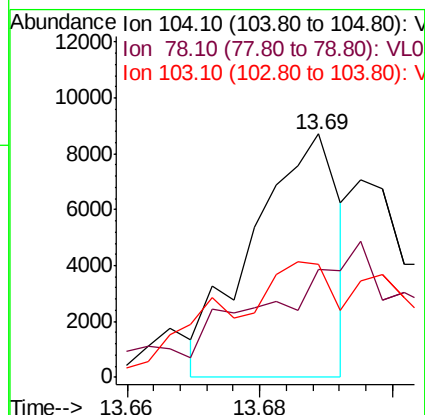
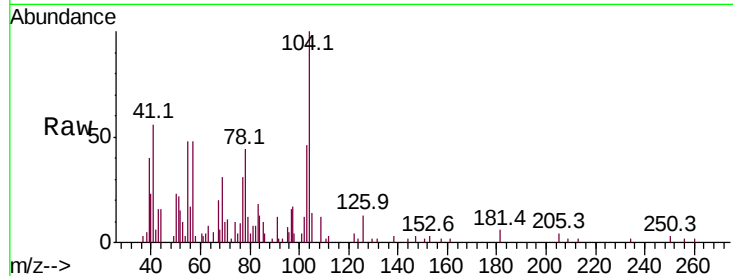




#61
Stvrene
Concen: 0.035 ppbv
RT: 13.69 min Scan# 3344
Delta R.T. -0.01 min
Lab File: VL032961.D
Acq: 11 Dec 2018 19:20

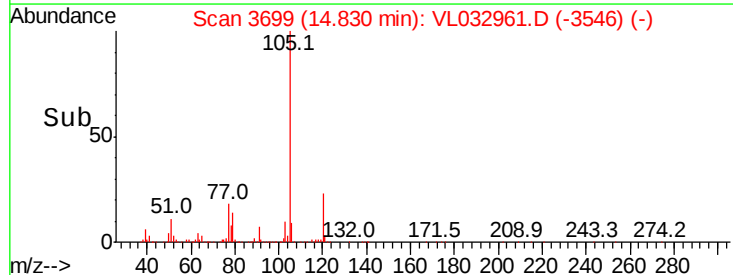
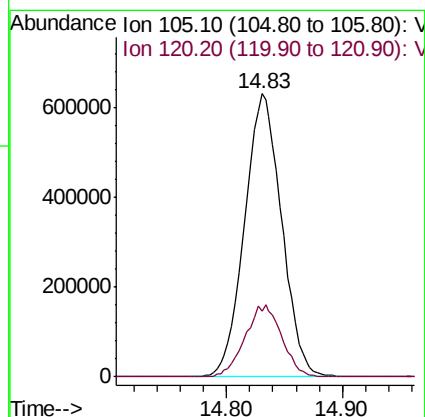
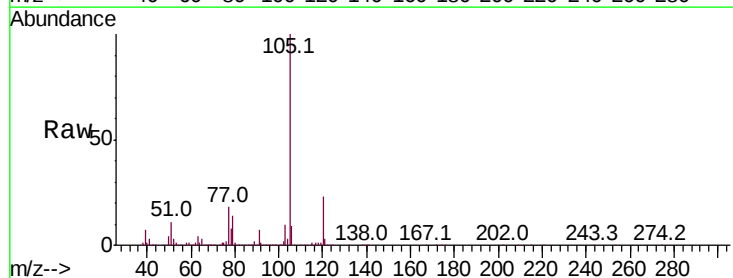
Instrument :
MSVOA_L
ClientSampled :

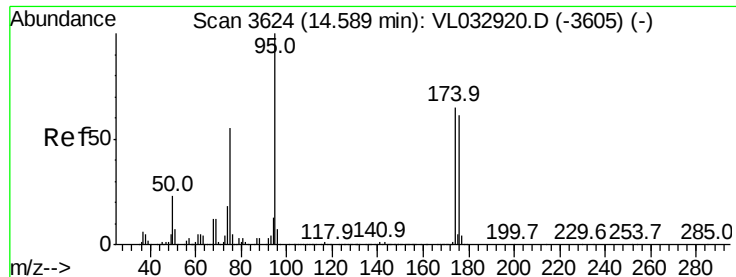
Tot Ion:104 Resp: 7866
Ion Ratio Lower Upper
104 100
78 0.0 42.0 63.0#
103 114.6 38.3 57.5#



#62
Isopropylbenzene
Concen: 2.997 ppbv
RT: 14.83 min Scan# 3699
Delta R.T. -0.01 min
Lab File: VL032961.D
Acq: 11 Dec 2018 19:20

Tgt Ion:105 Resp: 1399955
Ion Ratio Lower Upper
105 100
120 25.2 20.3 30.5





#68

1-Bromo-4-Fluorobenzene

Concen: 10.817 ppbv

RT: 14.58 min Scan# 3622

Delta R.T. -0.01 min

Lab File: VL032961.D

Acq: 11 Dec 2018 19:20

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 95 Resp: 2738950

Ion Ratio Lower Upper

95 100

174 64.8 51.4 77.0

175 4.8 3.8 5.6

