

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121718\
 Data File : VL033006.D
 Acq On : 17 Dec 2018 21:52
 Operator : SY/AP
 Sample : J6382-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 18 01:16:45 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

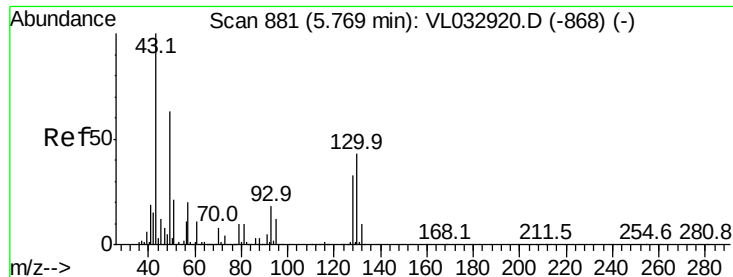
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1093329	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	2601196	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	2852835	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.59	95	2006296	9.52	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	90338	0.619	ppbv	99
3) Chlorodifluoromethane	2.99	51	1338065	16.160	ppbv #	57
4) Chloromethane	3.17	50	32694	0.678	ppbv	93
9) Propene	3.24	41	460168	14.055	ppbv	95
11) Trichlorofluoromethane	4.01	101	39298	0.286	ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.56	101	6919	0.059	ppbv	86
13) Ethanol	3.66	45	4583325	406.577	ppbv	96
15) Acetone	3.91	43	496153	5.287	ppbv	99
16) 1,3-Butadiene	3.35	39	5412	0.145	ppbv #	4
17) tert-Butyl alcohol	4.37	59	1841	0.077	ppbv #	1
19) Isopropyl Alcohol	4.04	45	493944	8.381	ppbv	99
20) Methylene Chloride	4.42	84	139678	3.045	ppbv	98
23) Vinyl Acetate	5.15	43	49913	0.314	ppbv #	1
25) Ethyl Acetate	5.78	43	238164	1.074	ppbv #	95
26) Hexane	5.79	57	180190	1.761	ppbv #	68
27) Carbon Disulfide	4.62	76	4432	0.035	ppbv #	1
29) Chloroform	5.85	83	14392	0.079	ppbv	89
31) cis-1,2-Dichloroethene	5.78	61	14453	0.154	ppbv #	32
34) 2-Butanone	5.34	43	46563	0.411	ppbv	95
36) Benzene	7.01	78	71706	0.375	ppbv	98
37) 1,2-Dichloroethane	6.43	62	4404	0.034	ppbv #	15
38) Trichloroethene	7.97	130	2972	0.037	ppbv #	61
39) 1,2-Dichloropropane	7.30	63	619677	8.540	ppbv #	21
53) Toluene	9.95	91	1495466	7.370	ppbv	100
59) m/p-Xylene	13.16	91	9464	0.034	ppbv #	100
60) o-Xylene	13.86	91	9300	0.033	ppbv #	32
74) 1,2,4-Trimethylbenzene	16.93	105	22094	0.064	ppbv #	63

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :
MSVOA_L
ClientSampleId :

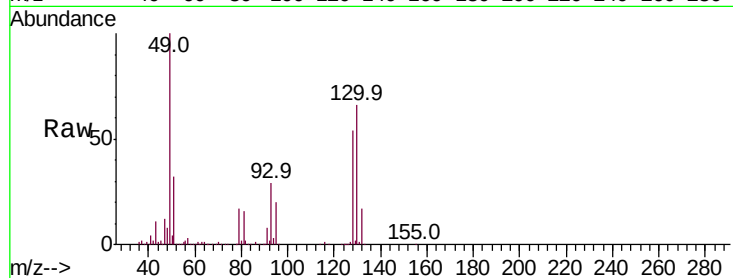
Tot Ion: 49 Resp: 1093329

Ion Ratio Lower Upper

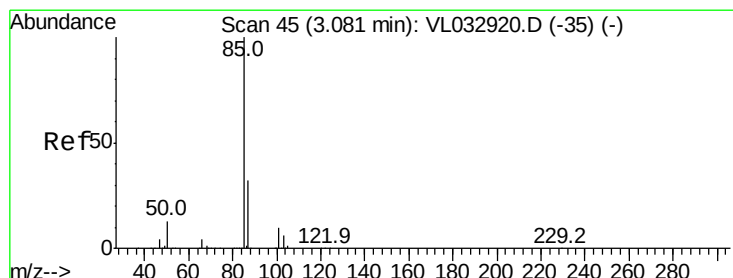
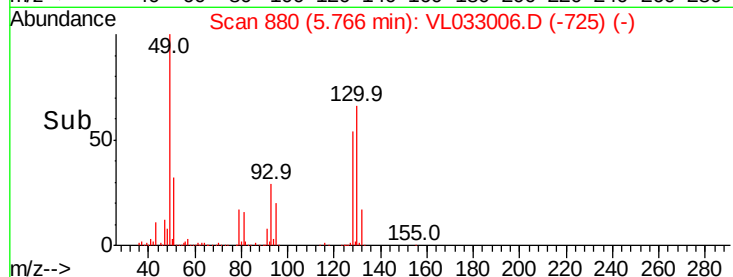
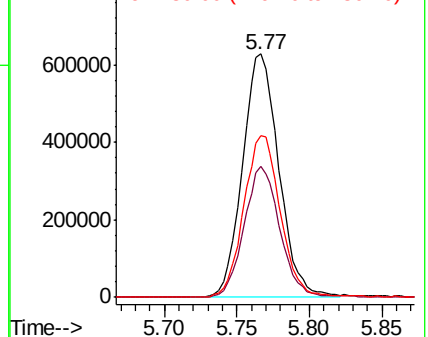
49 100

128 53.4 26.3 78.8

130 68.0 33.9 101.7



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: 0.619 ppbv

RT: 3.08 min Scan# 45

Delta R.T. 0.00 min

Lab File: VL033006.D

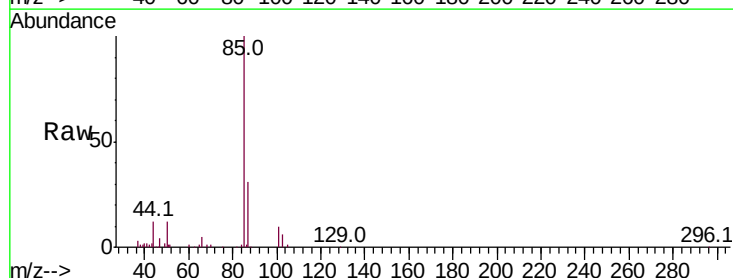
Acq: 17 Dec 2018 21:52

Tgt Ion: 85 Resp: 90338

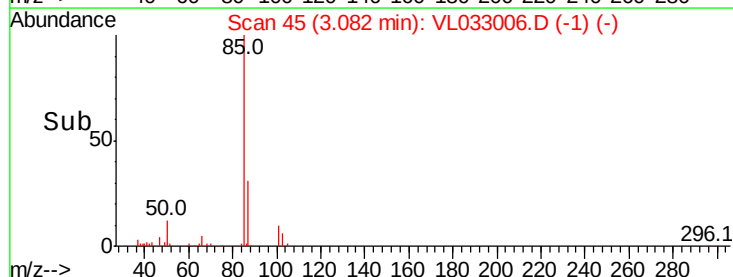
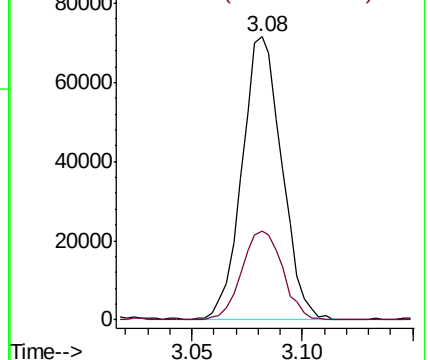
Ion Ratio Lower Upper

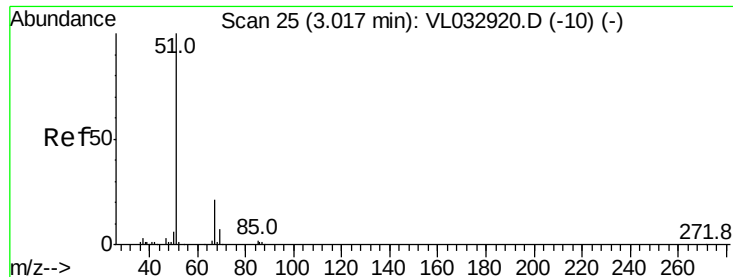
85 100

87 31.4 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 16.160 ppbv

RT: 2.99 min Scan# 18

Delta R.T. -0.02 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

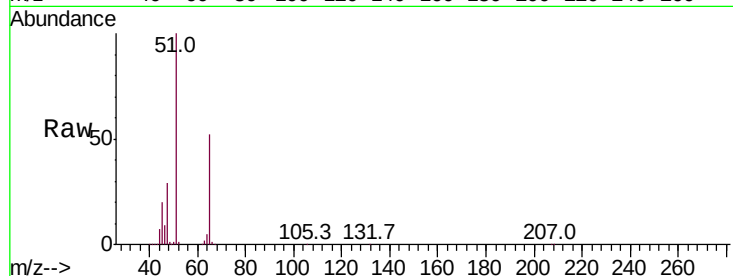
ClientSampleId :

Tot Ion: 51 Resp: 1338065

Ion Ratio Lower Upper

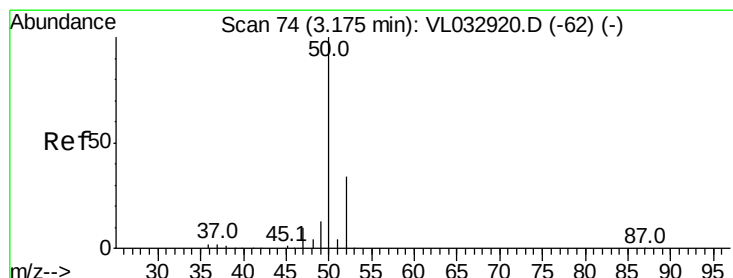
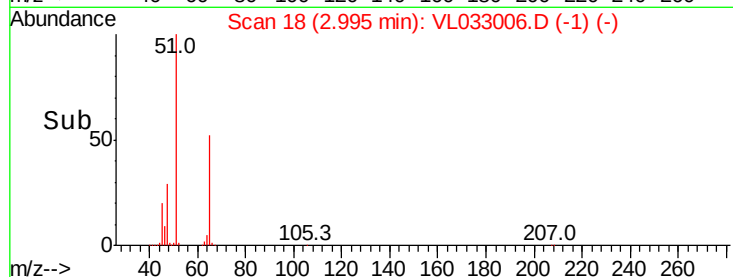
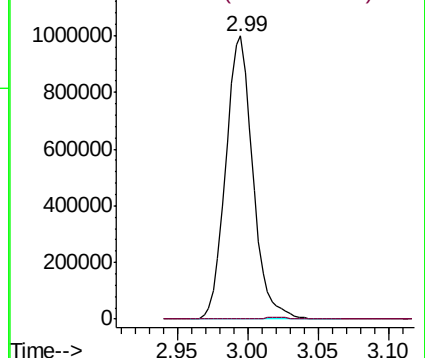
51 100

67 0.7 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: 0.678 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.00 min

Lab File: VL033006.D

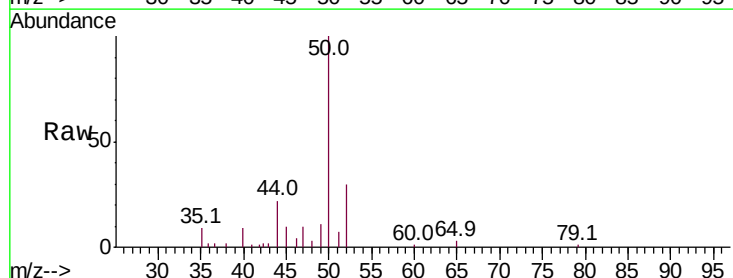
Acq: 17 Dec 2018 21:52

Tgt Ion: 50 Resp: 32694

Ion Ratio Lower Upper

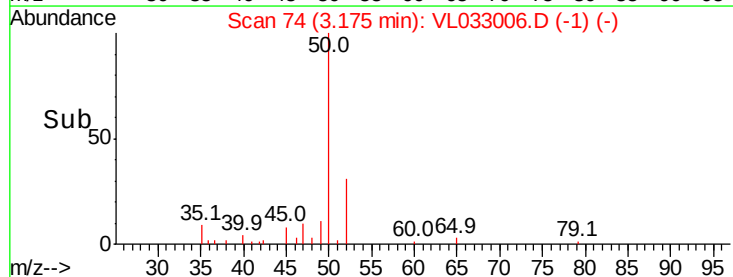
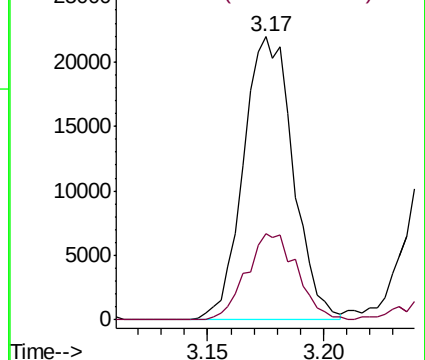
50 100

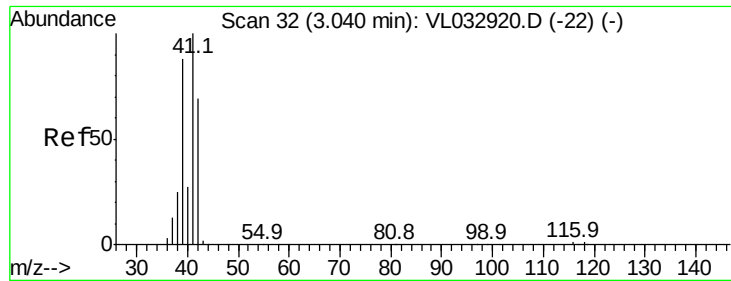
52 30.4 27.3 40.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 14.055 ppbv

RT: 3.24 min Scan# 95

Delta R.T. 0.20 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

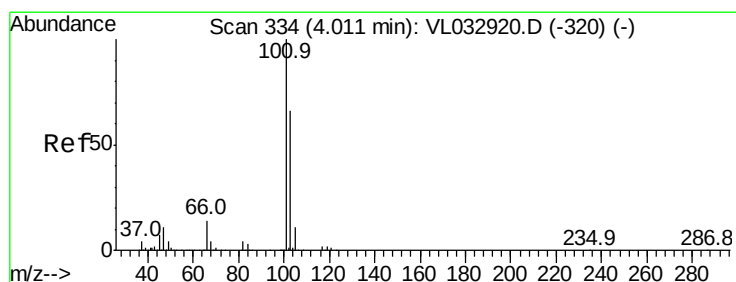
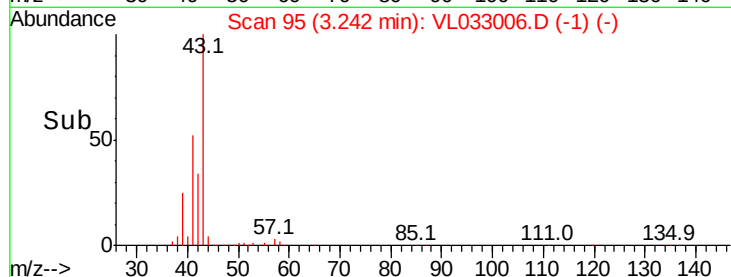
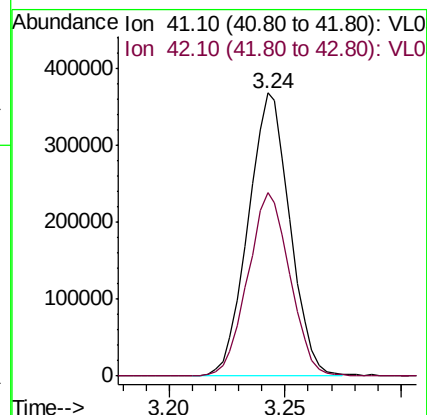
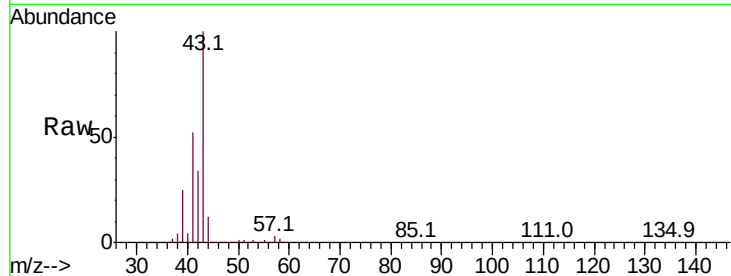
ClientSampleId :

Tot Ion: 41 Resp: 460168

Ion Ratio Lower Upper

41 100

42 65.8 56.2 84.2



#11

Trichlorofluoromethane

Concen: 0.286 ppbv

RT: 4.01 min Scan# 334

Delta R.T. 0.00 min

Lab File: VL033006.D

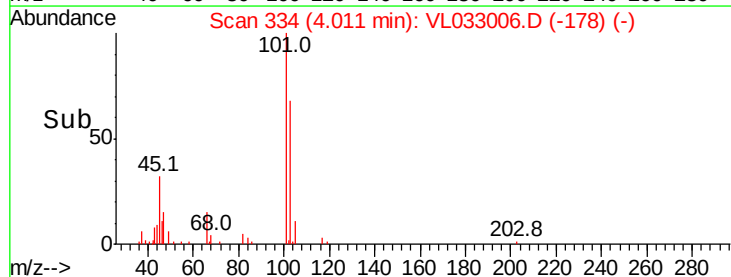
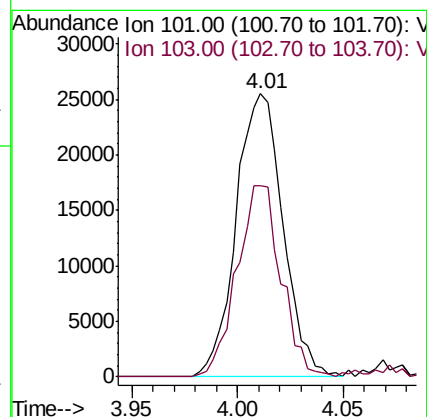
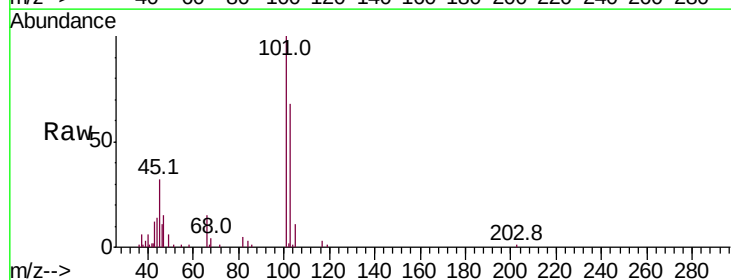
Acq: 17 Dec 2018 21:52

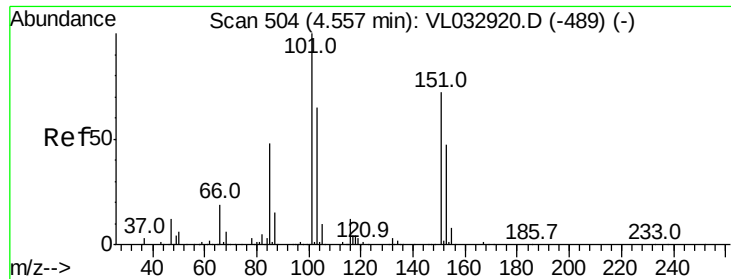
Tgt Ion: 101 Resp: 39298

Ion Ratio Lower Upper

101 100

103 67.7 52.7 79.1





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.059 ppbv

RT: 4.56 min Scan# 505

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

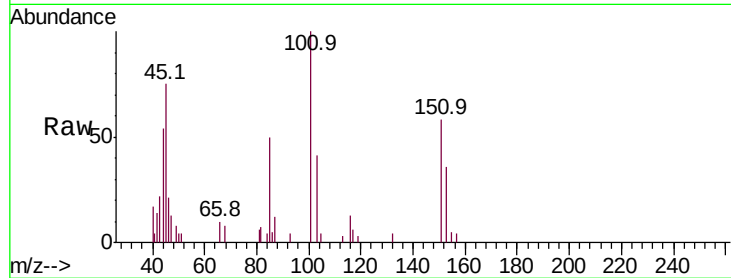
ClientSampleId :

Tot Ion:101 Resp: 6919

Ion Ratio Lower Upper

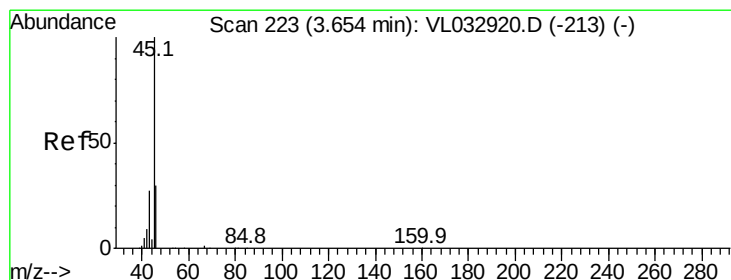
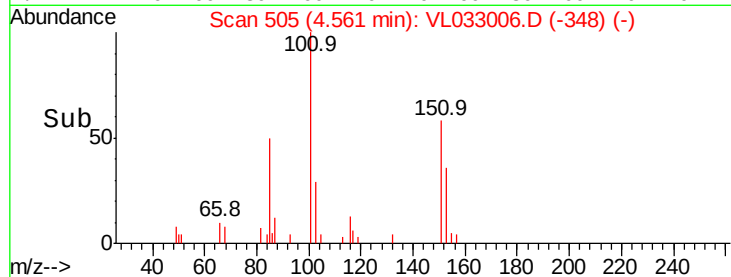
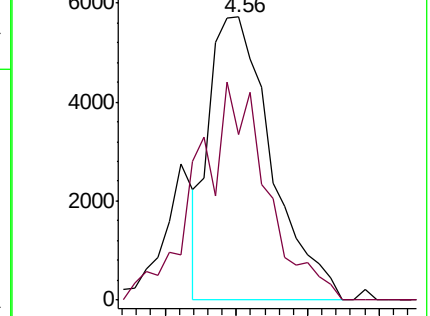
101 100

151 86.3 59.3 88.9



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 406.577 ppbv

RT: 3.66 min Scan# 226

Delta R.T. 0.01 min

Lab File: VL033006.D

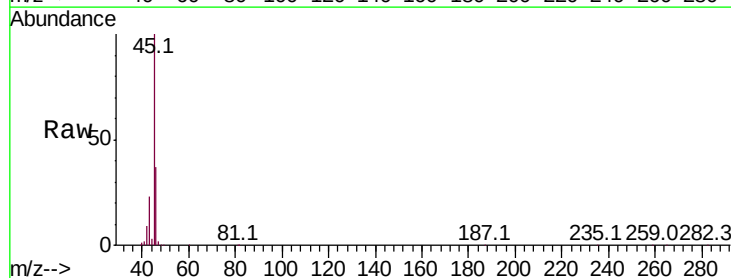
Acq: 17 Dec 2018 21:52

Tgt Ion: 45 Resp: 4583325

Ion Ratio Lower Upper

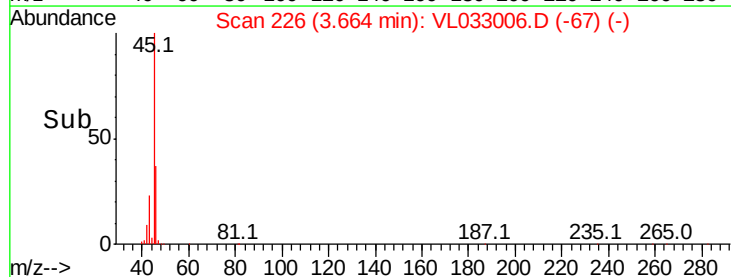
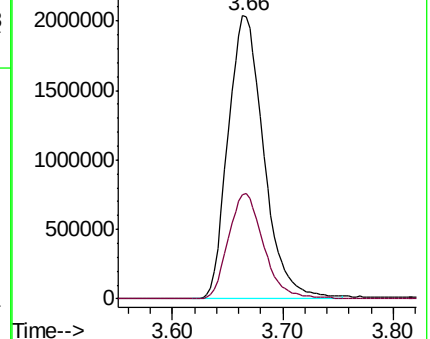
45 100

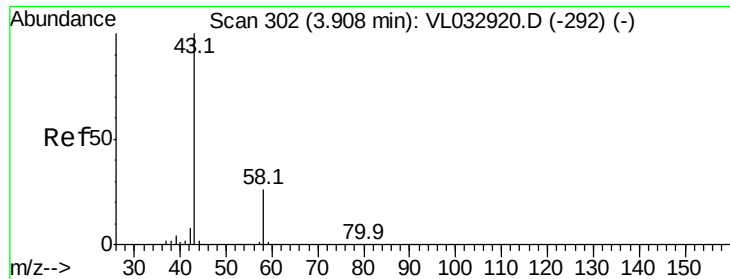
46 37.0 13.8 55.4



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 5.287 ppbv

RT: 3.91 min Scan# 302

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

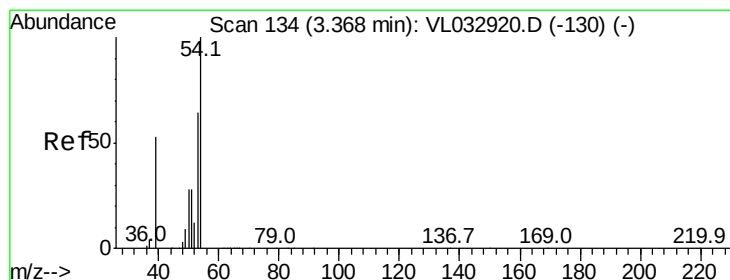
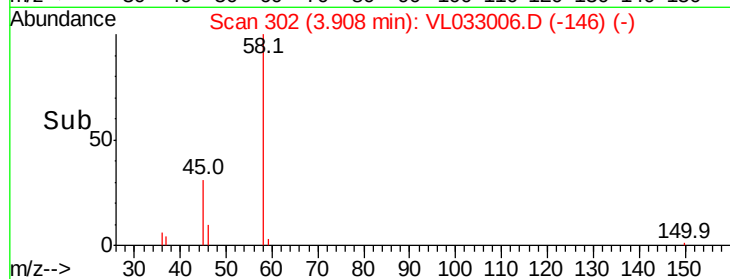
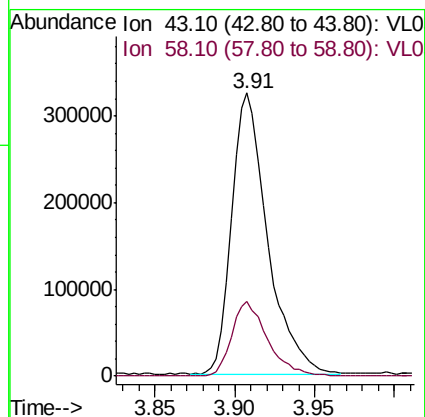
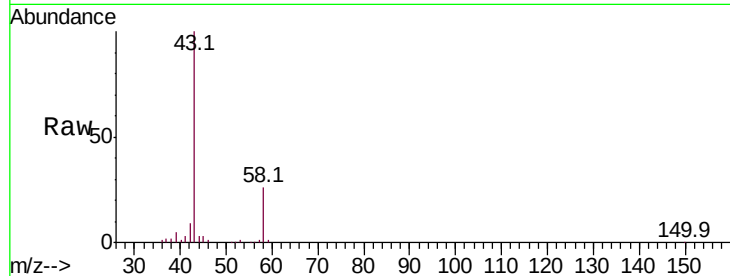
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 496153

Ion Ratio Lower Upper

43 100

58 26.5 20.6 30.8



#16

1,3-Butadiene

Concen: 0.145 ppbv

RT: 3.35 min Scan# 130

Delta R.T. -0.01 min

Lab File: VL033006.D

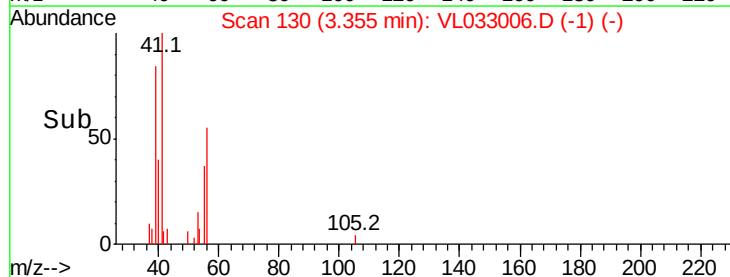
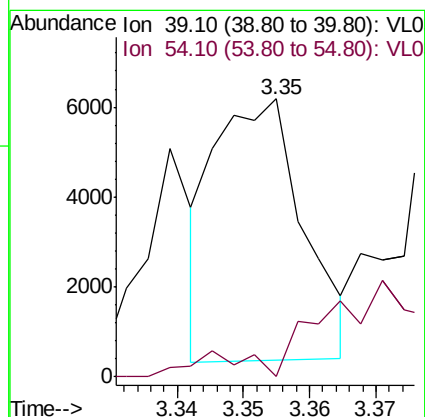
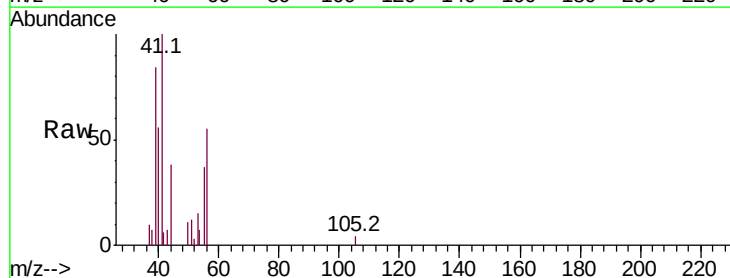
Acq: 17 Dec 2018 21:52

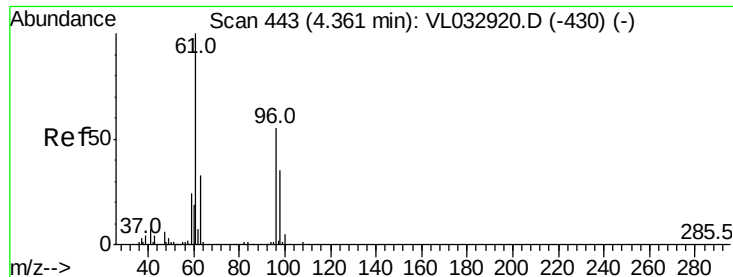
Tgt Ion: 39 Resp: 5412

Ion Ratio Lower Upper

39 100

54 0.0 72.7 109.1#



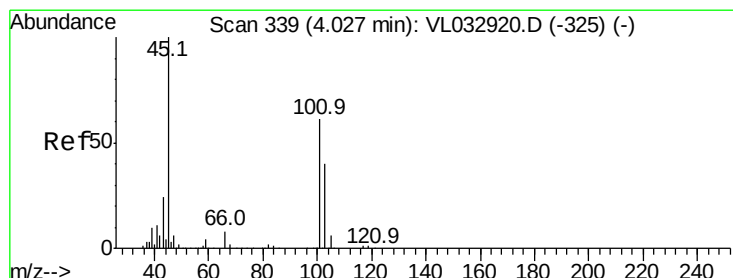
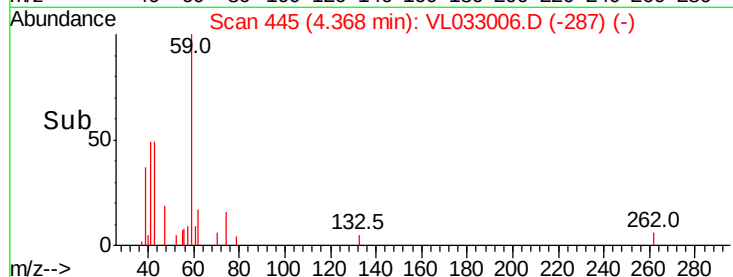
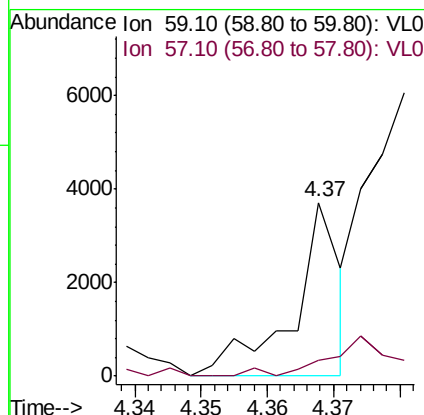
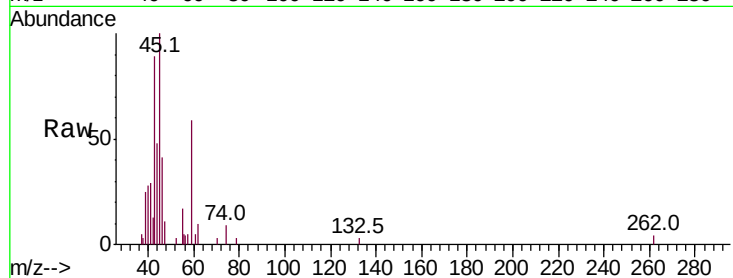


#17

tert-Butyl alcohol
Concen: 0.077 ppbv
RT: 4.37 min Scan# 445
Delta R.T. 0.01 min
Lab File: VL033006.D
Acq: 17 Dec 2018 21:52

Instrument :
MSVOA_L
ClientSampleId :

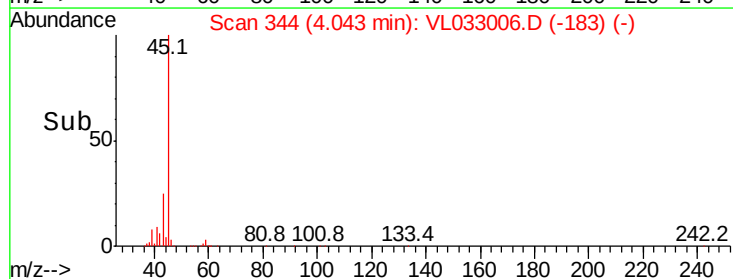
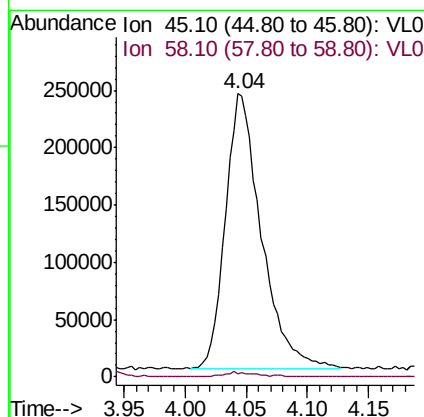
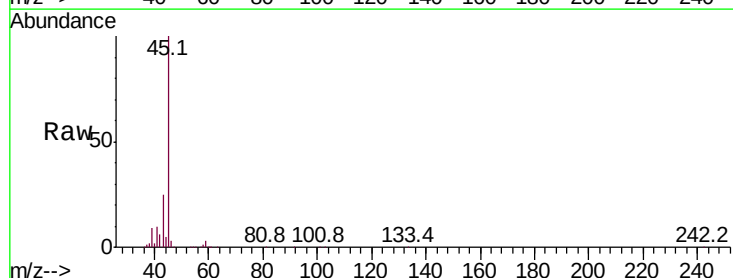
Tot Ion: 59 Resp: 1841
Ion Ratio Lower Upper
59 100
57 80.7 0.6 1.0#

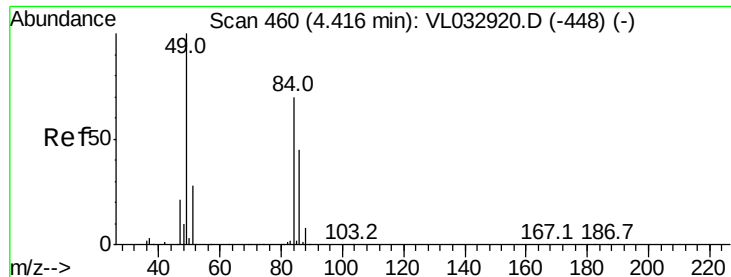


#19

Isopropyl Alcohol
Concen: 8.381 ppbv
RT: 4.04 min Scan# 344
Delta R.T. 0.02 min
Lab File: VL033006.D
Acq: 17 Dec 2018 21:52

Tgt Ion: 45 Resp: 493944
Ion Ratio Lower Upper
45 100
58 1.5 1.4 2.2





#20

Methylene Chloride

Concen: 3.045 ppbv

RT: 4.42 min Scan# 460

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 84 Resp: 139678

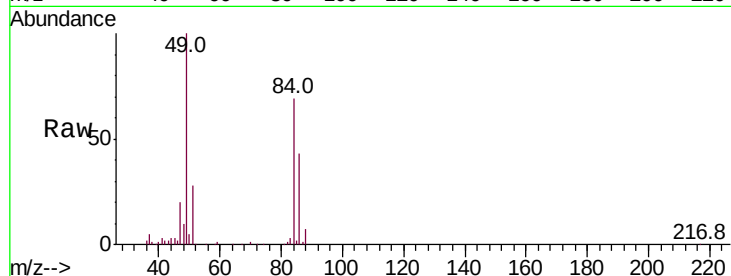
Ion Ratio Lower Upper

84 100

49 144.7 113.8 170.8

51 40.3 31.8 47.8

86 62.0 50.8 76.2

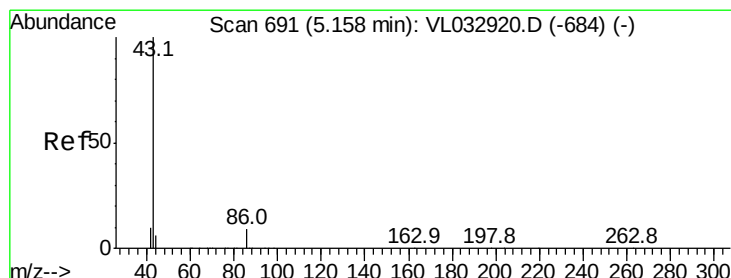
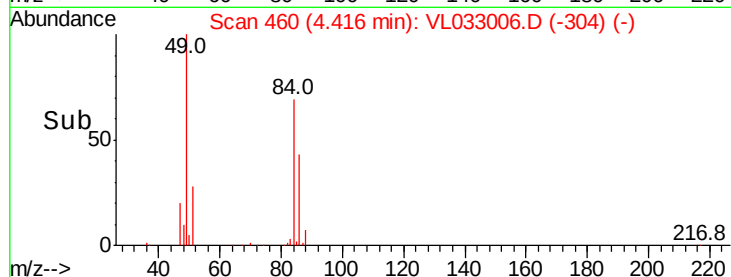
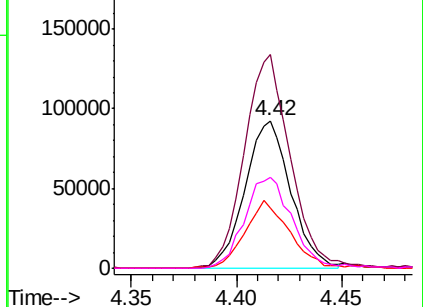


Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#23

Vinyl Acetate

Concen: 0.314 ppbv

RT: 5.15 min Scan# 688

Delta R.T. -0.01 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Tgt Ion: 43 Resp: 49913

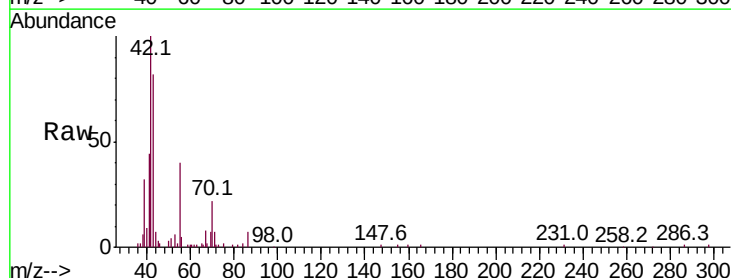
Ion Ratio Lower Upper

43 100

86 9.0 6.6 9.8

42 126.3 8.3 12.5#

44 2.1 4.2 6.4#

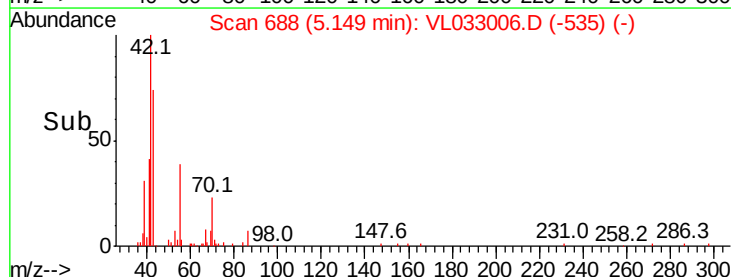
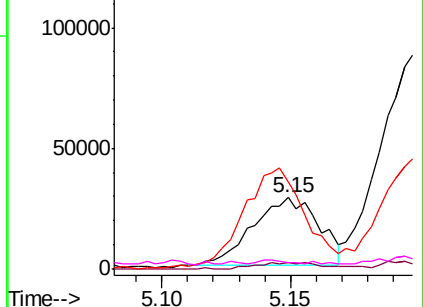


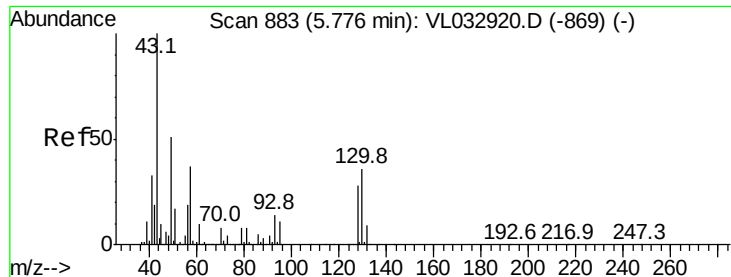
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0

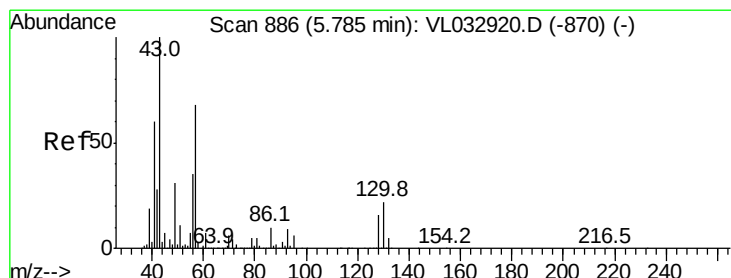
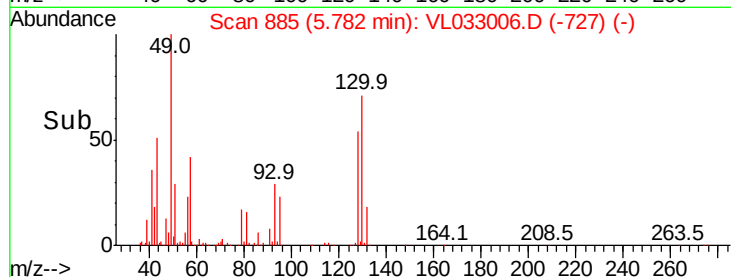
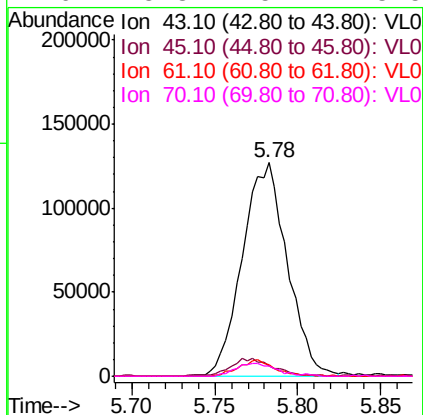
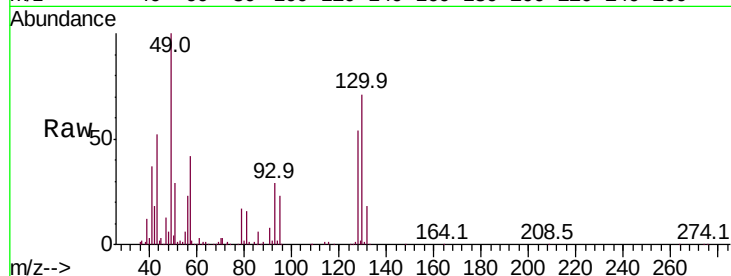




#25
Ethyl Acetate
Concen: 1.074 ppbv
RT: 5.78 min Scan# 885
Delta R.T. 0.01 min
Lab File: VL033006.D
Acq: 17 Dec 2018 21:52

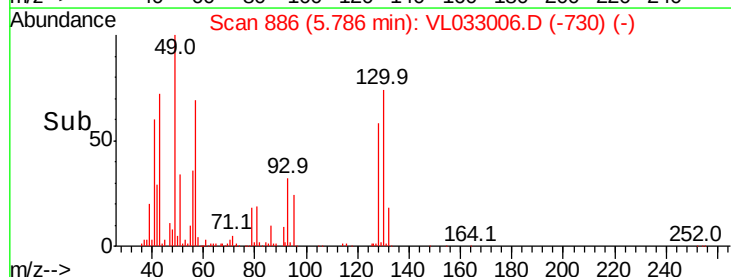
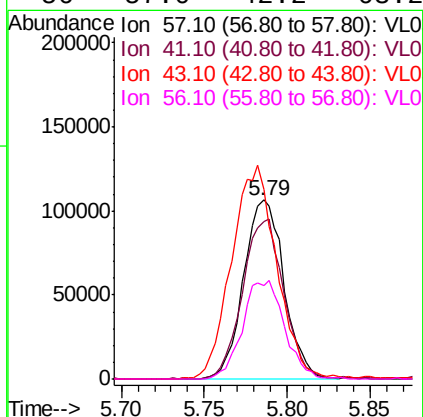
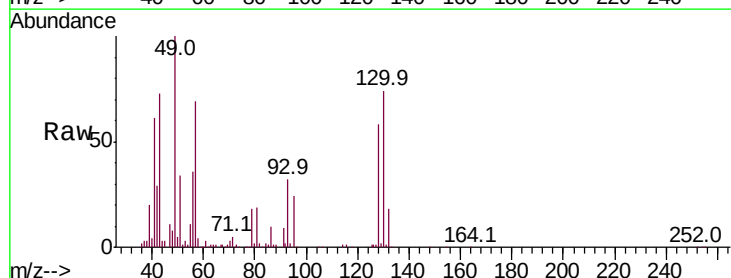
Instrument :
MSVOA_L
ClientSampleId :

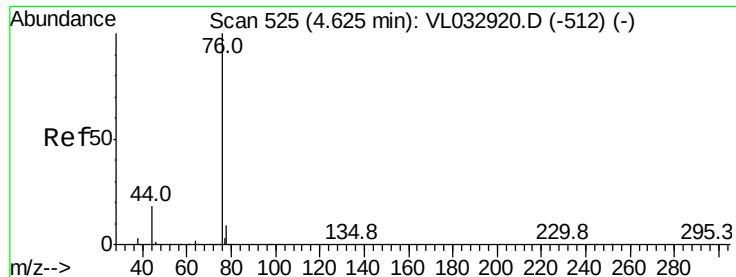
Tot Ion:	43	Resp:	238164
Ion	Ratio	Lower	Upper
43	100		
45	8.3	7.8	11.6
61	6.4	7.4	11.2#
70	5.8	5.7	8.5



#26
Hexane
Concen: 1.761 ppbv
RT: 5.79 min Scan# 886
Delta R.T. 0.00 min
Lab File: VL033006.D
Acq: 17 Dec 2018 21:52

Tgt Ion:	57	Resp:	180190
Ion	Ratio	Lower	Upper
57	100		
41	92.2	72.2	108.2
43	133.9	171.9	257.9#
56	57.0	42.2	63.2





#27

Carbon Disulfide

Concen: 0.035 ppbv

RT: 4.62 min Scan# 525

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

ClientSampleId :

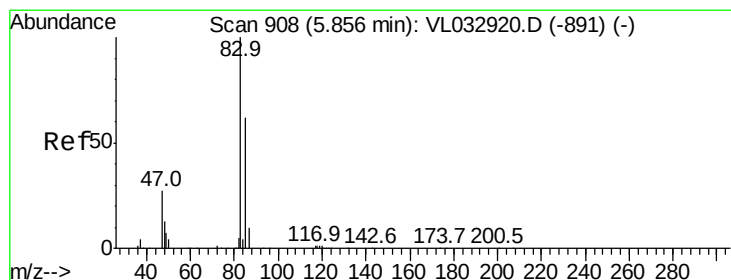
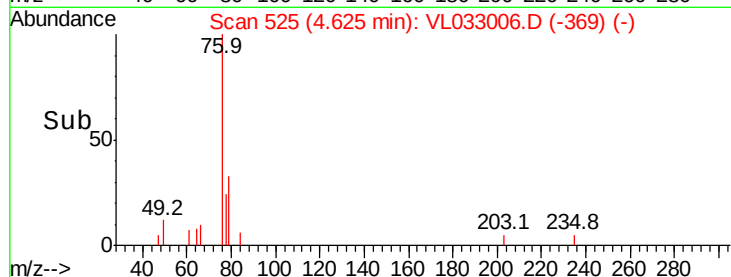
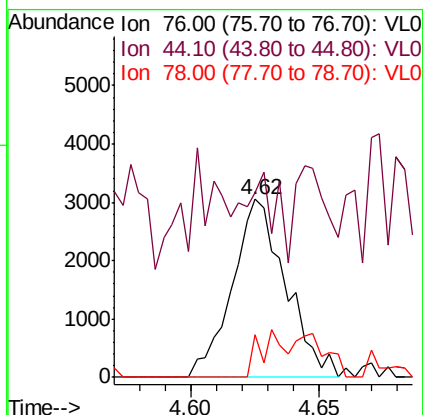
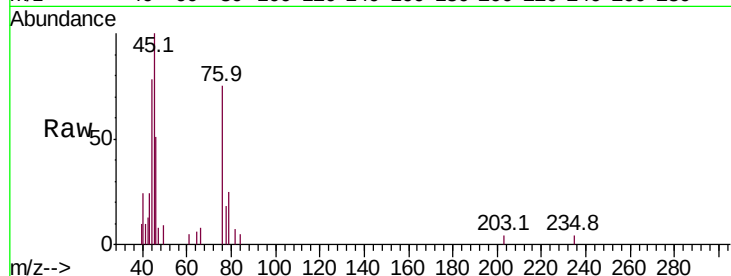
Tot Ion: 76 Resp: 4432

Ion Ratio Lower Upper

76 100

44 104.3 14.7 22.1#

78 31.1 7.4 11.2#



#29

Chloroform

Concen: 0.079 ppbv

RT: 5.85 min Scan# 906

Delta R.T. -0.01 min

Lab File: VL033006.D

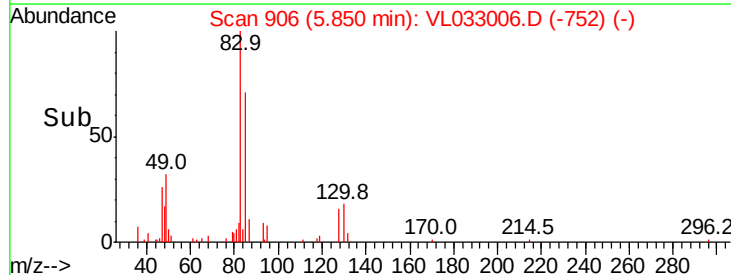
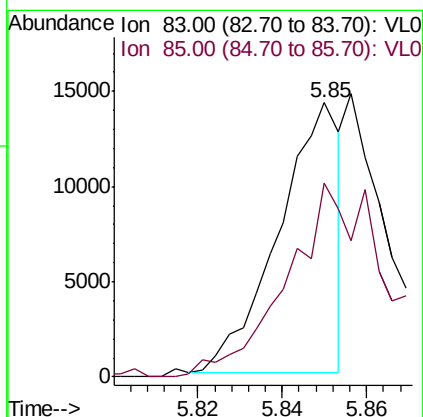
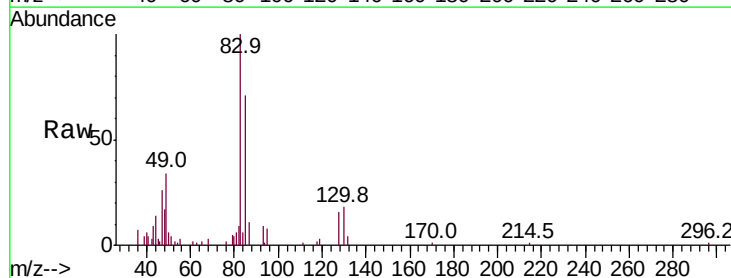
Acq: 17 Dec 2018 21:52

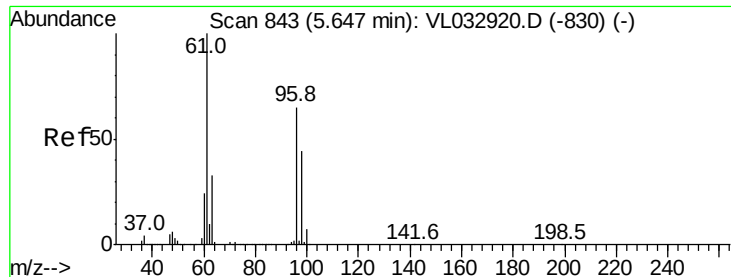
Tgt Ion: 83 Resp: 14392

Ion Ratio Lower Upper

83 100

85 70.5 49.8 74.8





#31

cis-1,2-Dichloroethene

Concen: 0.154 ppbv

RT: 5.78 min Scan# 883

Delta R.T. 0.13 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

ClientSampleId :

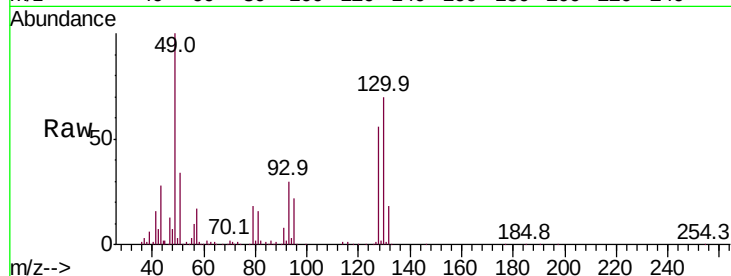
Tot Ion: 61 Resp: 14453

Ion Ratio Lower Upper

61 100

96 10.9 51.9 77.9#

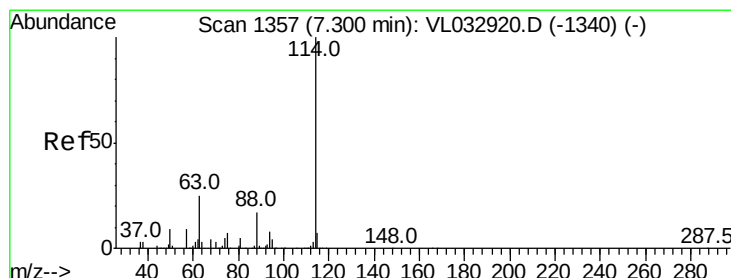
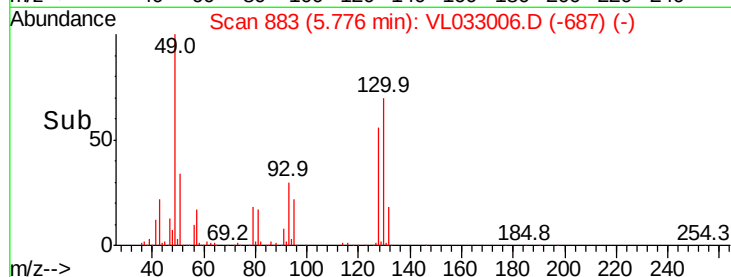
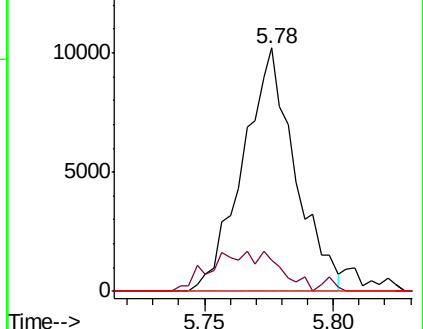
98 0.0 35.0 52.4#



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



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

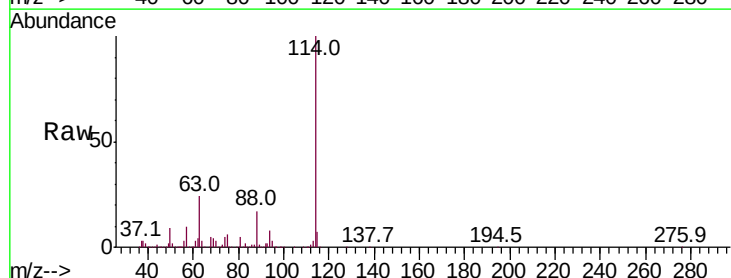
Tgt Ion: 114 Resp: 2601196

Ion Ratio Lower Upper

114 100

63 24.0 20.1 30.1

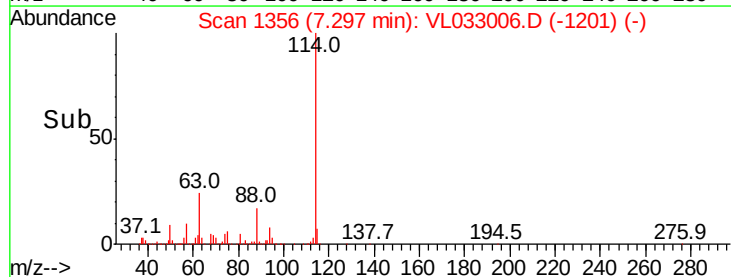
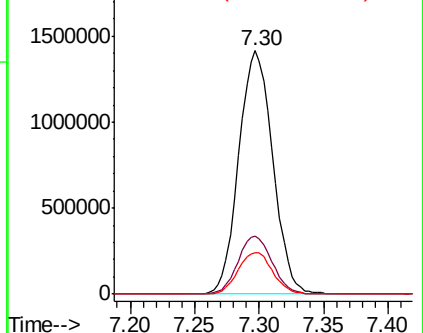
88 17.4 14.2 21.4

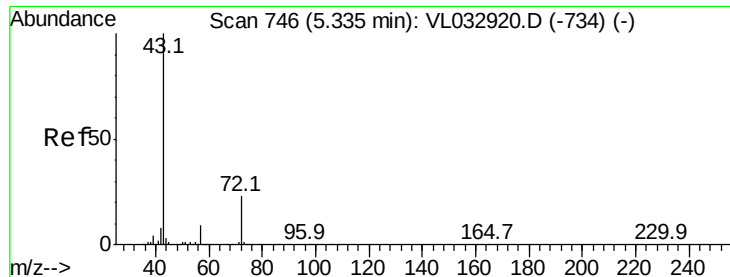


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 0.411 ppbv

RT: 5.34 min Scan# 746

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

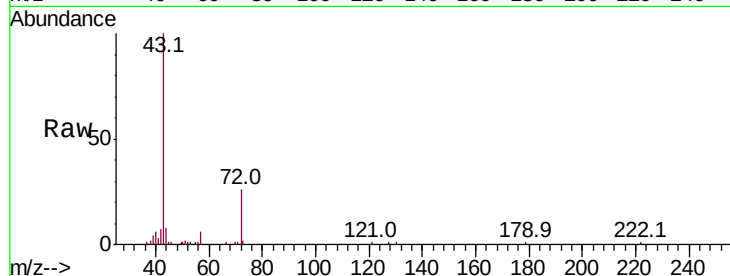
ClientSampleId :

Tot Ion: 43 Resp: 46563

Ion Ratio Lower Upper

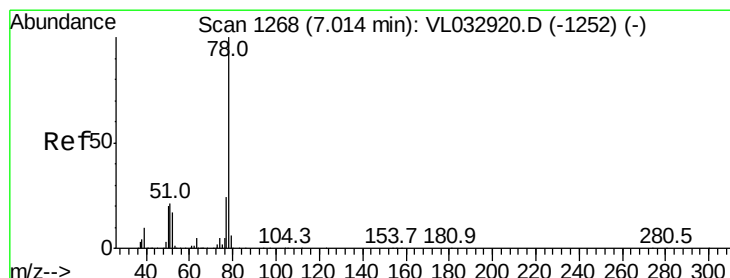
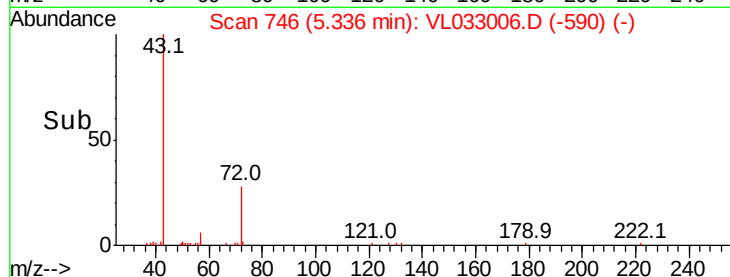
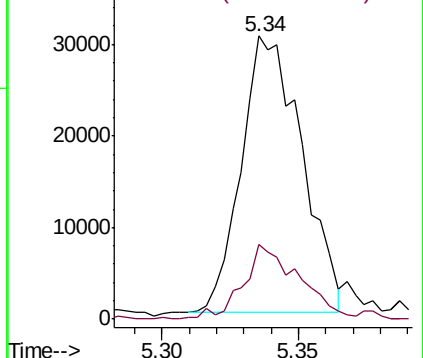
43 100

72 25.9 18.8 28.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#36

Benzene

Concen: 0.375 ppbv

RT: 7.01 min Scan# 1266

Delta R.T. -0.01 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

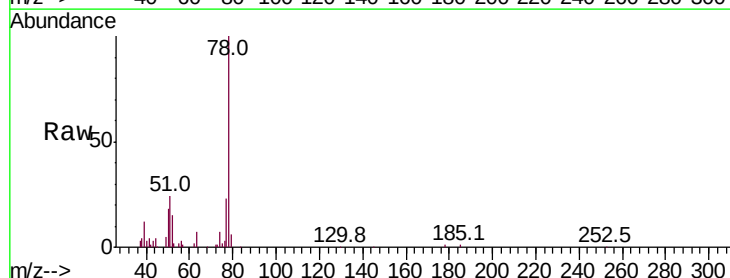
Tgt Ion: 78 Resp: 71706

Ion Ratio Lower Upper

78 100

77 23.3 18.9 28.3

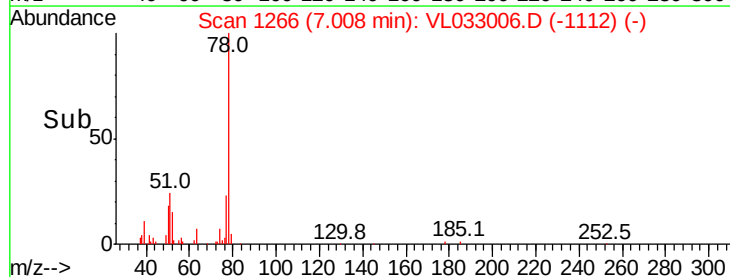
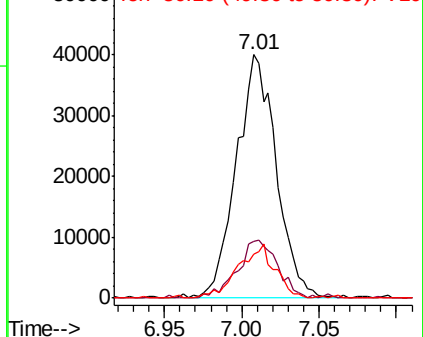
50 18.3 16.1 24.1

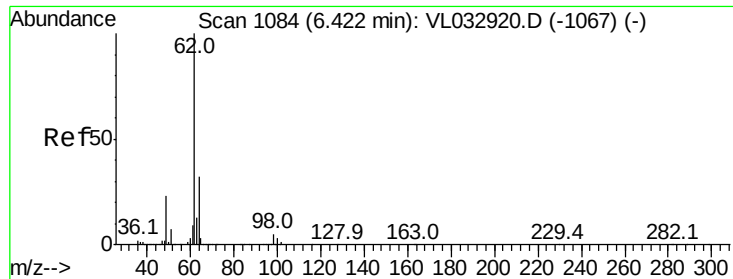


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#37

1,2-Dichloroethane

Concen: 0.034 ppbv

RT: 6.43 min Scan# 1085

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

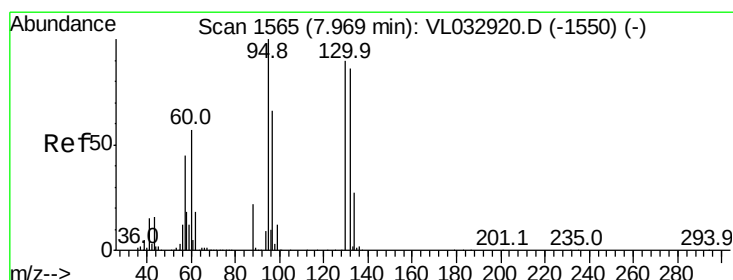
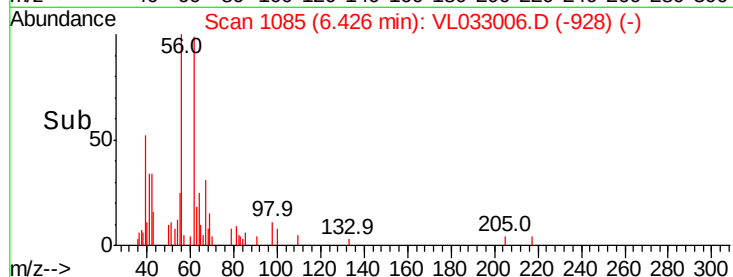
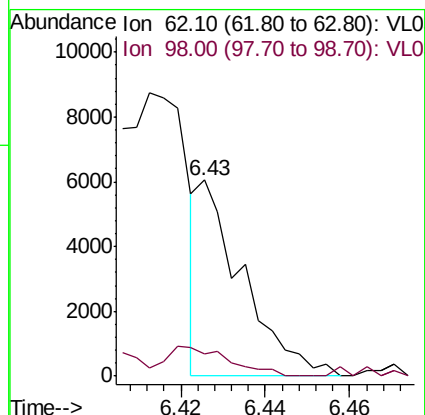
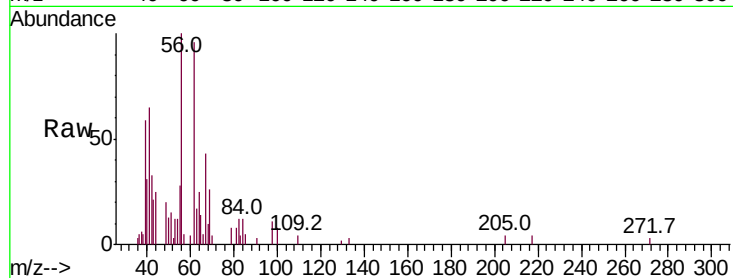
ClientSampleId :

Tot Ion: 62 Resp: 4404

Ion Ratio Lower Upper

62 100

98 33.7 4.3 6.5#



#38

Trichloroethene

Concen: 0.037 ppbv

RT: 7.97 min Scan# 1564

Delta R.T. -0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Tgt Ion: 130 Resp: 2972

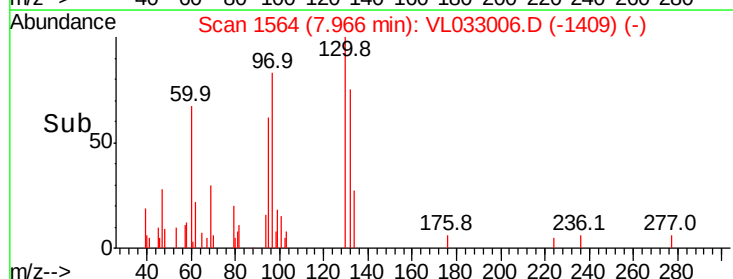
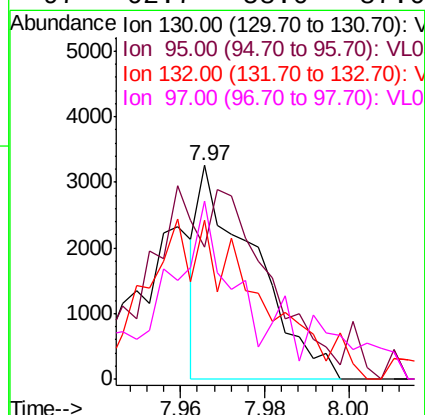
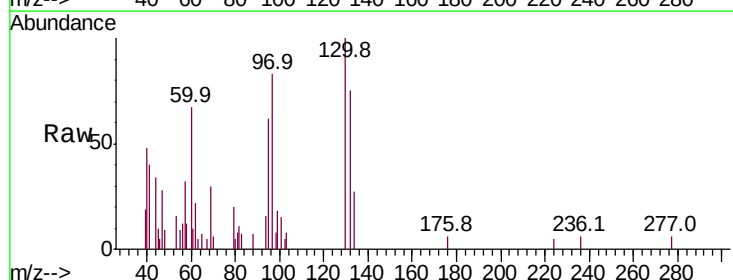
Ion Ratio Lower Upper

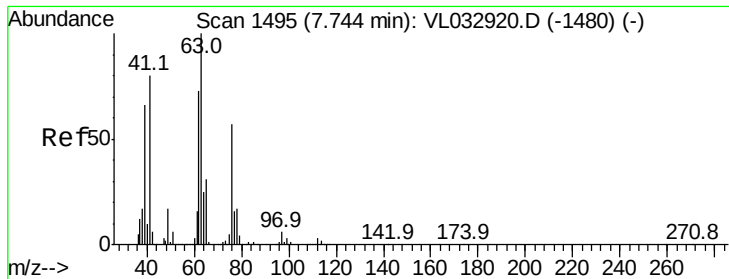
130 100

95 55.1 88.6 132.8#

132 52.9 76.1 114.1#

97 62.7 58.0 87.0

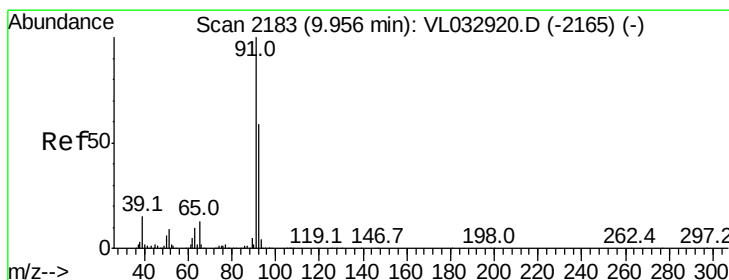
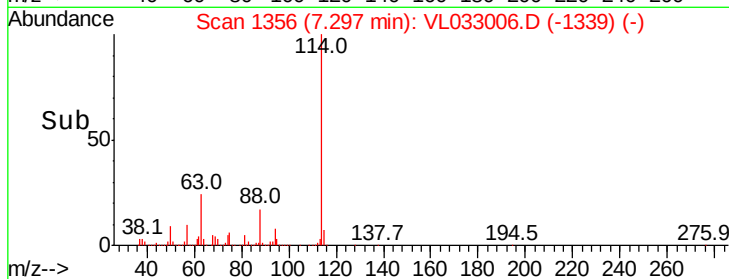
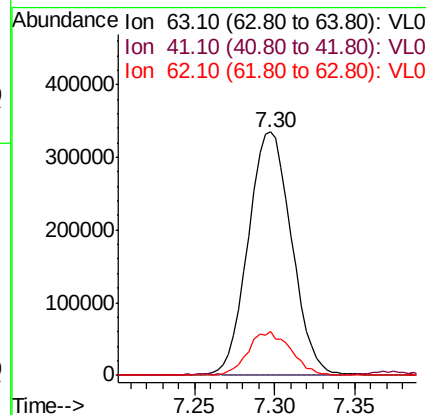
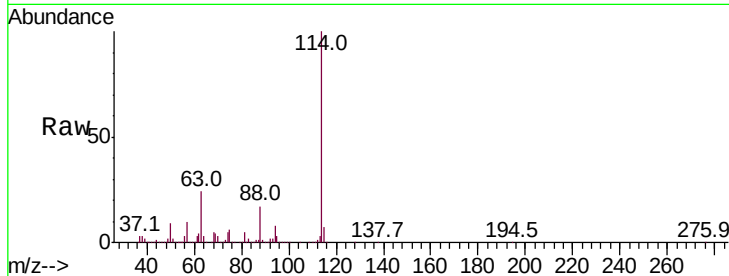




#39
 1,2-Dichloropropane
 Concen: 8.540 ppbv
 RT: 7.30 min Scan# 1356
 Delta R.T. -0.45 min
 Lab File: VL033006.D
 Acq: 17 Dec 2018 21:52

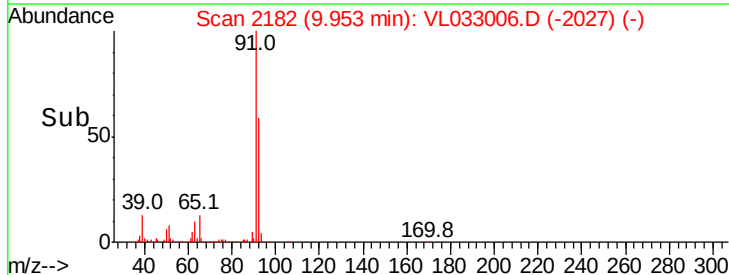
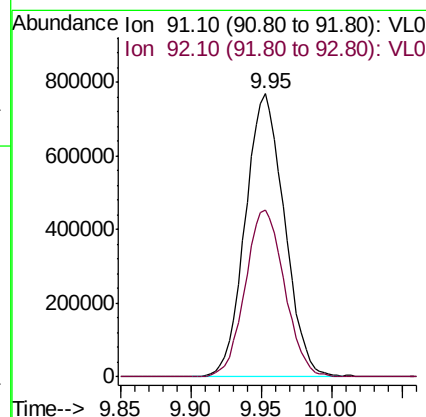
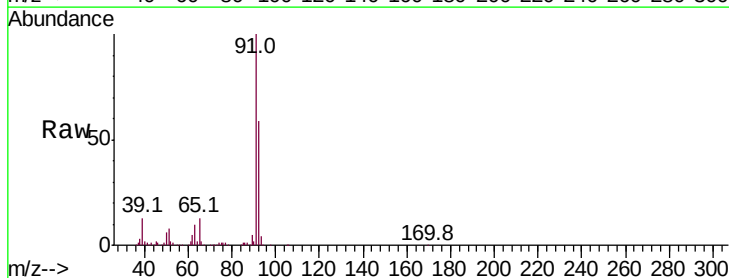
Instrument :
 MSVOA_L
 ClientSampleId :

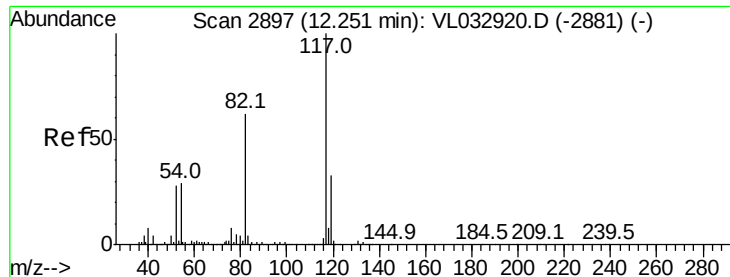
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.1	63.9	95.9#
62	18.2	58.8	88.2#



#53
 Toluene
 Concen: 7.370 ppbv
 RT: 9.95 min Scan# 2182
 Delta R.T. -0.00 min
 Lab File: VL033006.D
 Acq: 17 Dec 2018 21:52

Tgt Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.4	71.0

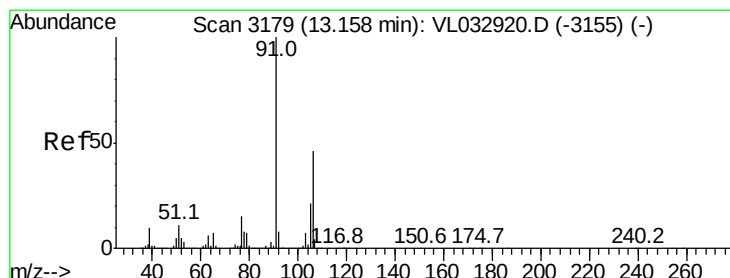
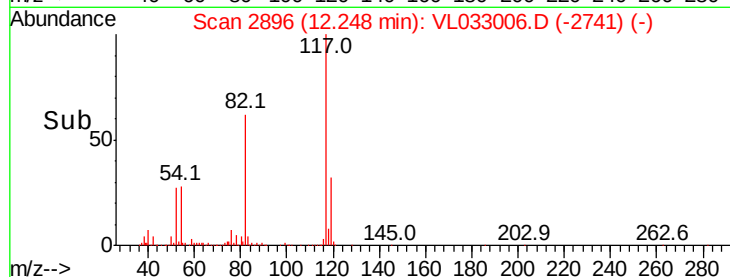
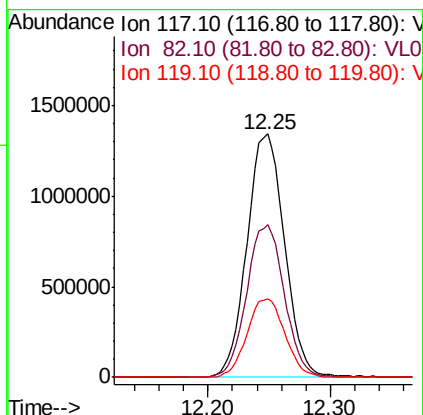
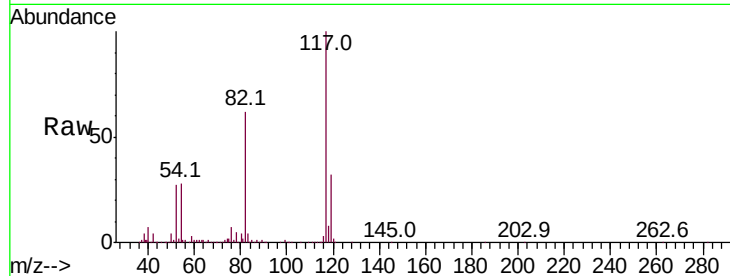




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.25 min Scan# 2896
Delta R.T. -0.00 min
Lab File: VL033006.D
Acq: 17 Dec 2018 21:52

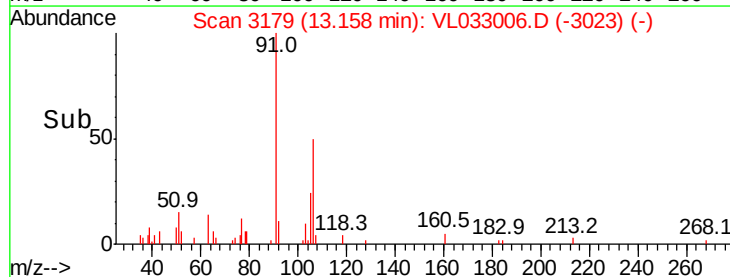
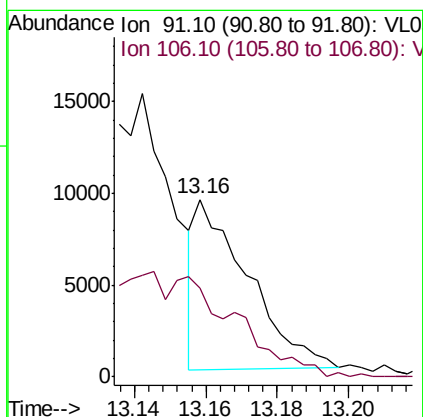
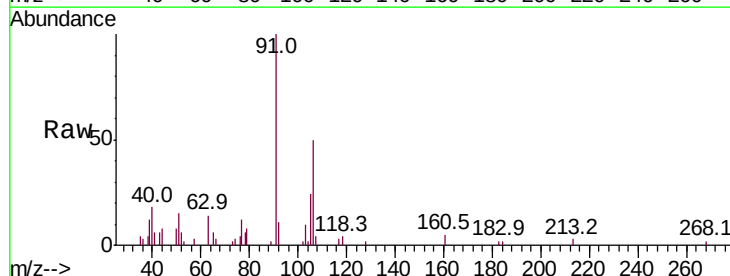
Instrument :
MSVOA_L
ClientSampleId :

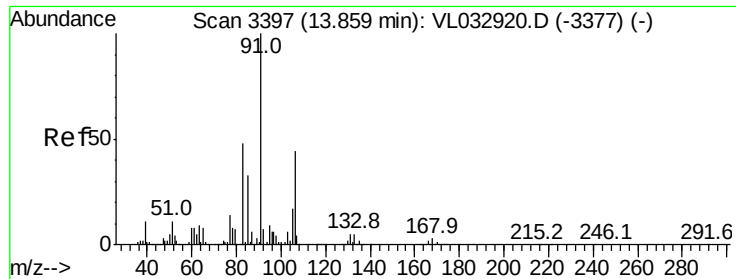
Tot Ion:117 Resp: 2852835
Ion Ratio Lower Upper
117 100
82 63.4 47.8 71.8
119 32.9 43.1 64.7#



#59
m/p-Xylene
Concen: 0.034 ppbv
RT: 13.16 min Scan# 3179
Delta R.T. 0.00 min
Lab File: VL033006.D
Acq: 17 Dec 2018 21:52

Tgt Ion: 91 Resp: 9464
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0





#60

o-Xylene

Concen: 0.033 ppbv

RT: 13.86 min Scan# 3397

Delta R.T. 0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

Instrument :

MSVOA_L

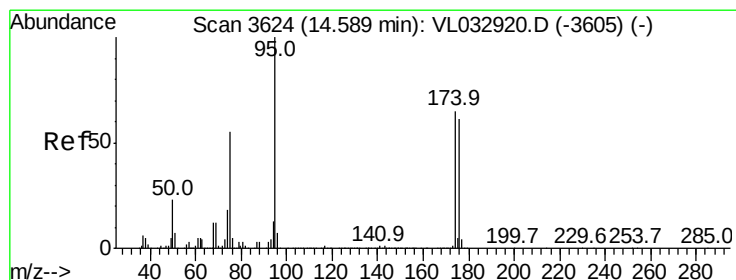
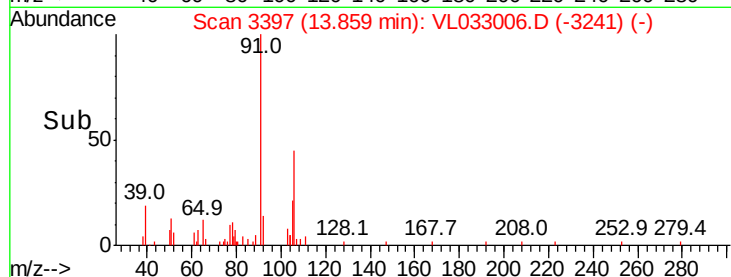
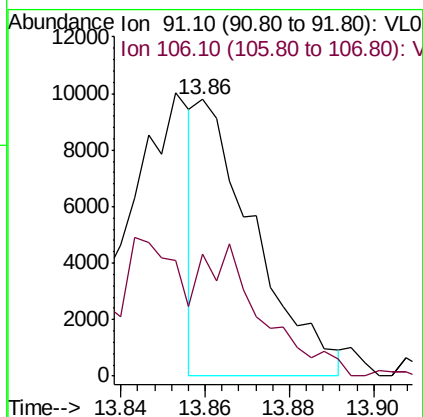
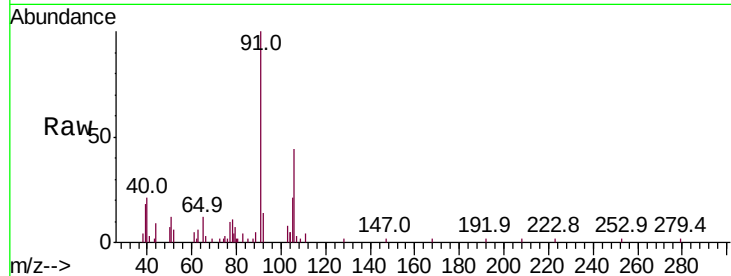
ClientSampled :

Tot Ion: 91 Resp: 9300

Ion Ratio Lower Upper

91 100

106 0.0 21.9 65.8#



#68

1-Bromo-4-Fluorobenzene

Concen: 9.519 ppbv

RT: 14.59 min Scan# 3623

Delta R.T. -0.00 min

Lab File: VL033006.D

Acq: 17 Dec 2018 21:52

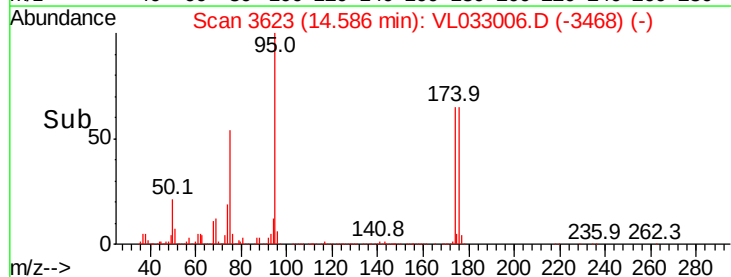
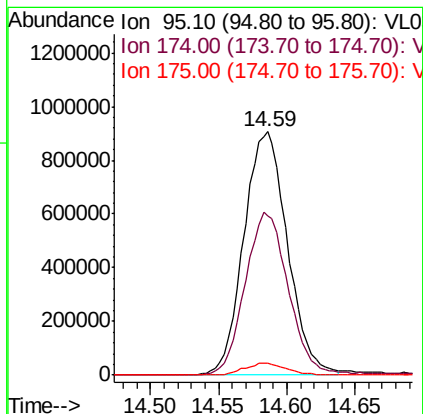
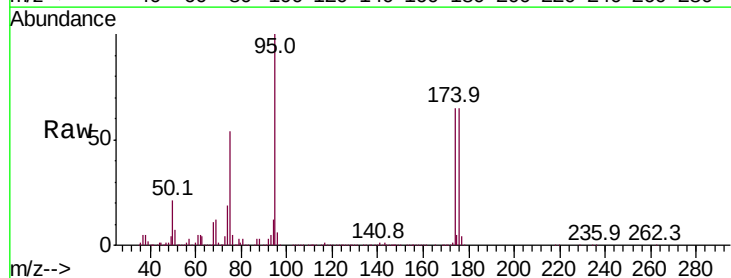
Tgt Ion: 95 Resp: 2006296

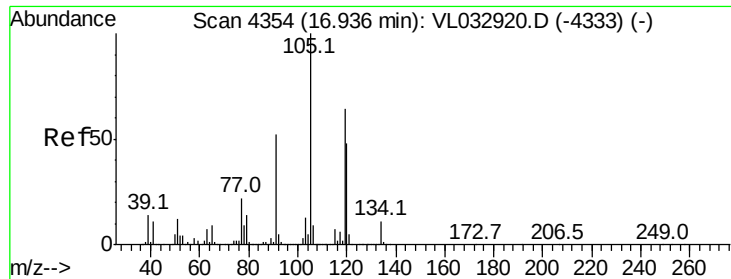
Ion Ratio Lower Upper

95 100

174 67.7 51.4 77.0

175 4.9 3.8 5.6

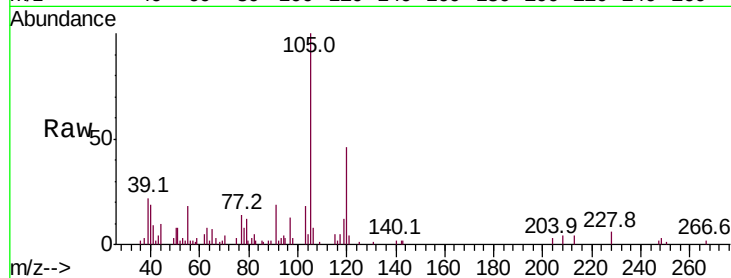




#74
 1,2,4-Trimethylbenzene
 Concen: 0.064 ppbv
 RT: 16.93 min Scan# 4353
 Delta R.T. -0.00 min
 Lab File: VL033006.D
 Acq: 17 Dec 2018 21:52

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion	Ratio	Lower	Upper
105	100		
120	33.6	38.6	58.0#
91	12.3	41.7	62.5#
77	10.5	17.4	26.2#



Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

