

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL050219\
 Data File : VL033646.D
 Acq On : 3 May 2019 3:03
 Operator : SY/AP
 Sample : K2628-11
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 A-11

Quant Time: May 03 03:49:57 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL050119AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 02 06:29:02 2019
 QLast Update : Thu May 02 06:29:02 2019
 Response via : Initial Calibration

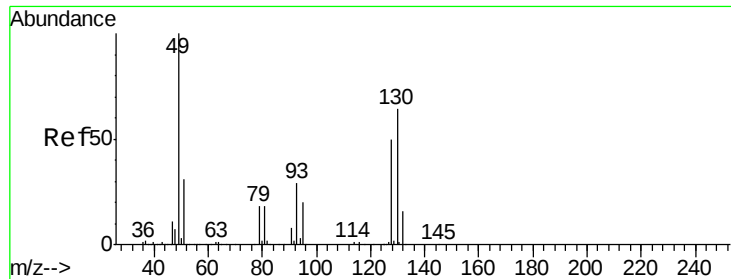
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	823868	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2021220	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1947590	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1642335	11.08	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	110.80%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.07	85	44225	0.356	ppbv	96
3) Chlorodifluoromethane	2.99	51	879806	8.932	ppbv #	61
4) Chloromethane	3.17	50	28796	0.537	ppbv	99
8) Dichlorotetrafluoroethane	3.22	85	2041	0.015	ppbv #	80
9) Propene	3.24	41	33001	1.170	ppbv	95
10) Heptane	8.24	43	5096	0.049	ppbv #	27
11) Trichlorofluoromethane	4.00	101	44249	0.300	ppbv	92
12) 1,1,2-Trichlorotrifluoroet	4.54	101	5666	0.056	ppbv #	12
13) Ethanol	3.65	45	625254	48.893	ppbv	99
15) Acetone	3.90	43	508565	5.070	ppbv	98
16) 1,3-Butadiene	3.35	39	1443	0.032	ppbv #	7
17) tert-Butyl alcohol	4.37	59	3149	0.036	ppbv #	72
19) Isopropyl Alcohol	4.03	45	149680	2.174	ppbv #	90
20) Methylene Chloride	4.41	84	63531	1.625	ppbv	95
23) Vinyl Acetate	5.14	43	8896	0.060	ppbv #	88
25) Ethyl Acetate	5.78	43	66650	0.350	ppbv #	87
26) Hexane	5.78	57	68345	0.853	ppbv #	44
29) Chloroform	5.84	83	1486	0.010	ppbv #	19
30) Cyclohexane	7.25	84	728	0.011	ppbv #	1
34) 2-Butanone	5.34	43	28470	0.229	ppbv	100
35) Carbon Tetrachloride	7.14	117	3613	0.023	ppbv	93
36) Benzene	7.00	78	9245	0.054	ppbv #	92
37) 1,2-Dichloroethane	6.40	62	1796	0.016	ppbv #	84
39) 1,2-Dichloropropane	7.28	63	531616	8.186	ppbv #	24
43) Methyl Methacrylate	8.14	69	809	0.012	ppbv #	1
53) Toluene	9.94	91	1164390	5.358	ppbv	99
58) Ethyl Benzene	12.86	91	5856	0.026	ppbv #	84
59) m/p-Xylene	13.13	91	7043	0.037	ppbv #	100
74) 1,2,4-Trimethylbenzene	16.93	105	12525	0.051	ppbv #	79

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. 0.00 min

Lab File: VL033646.D

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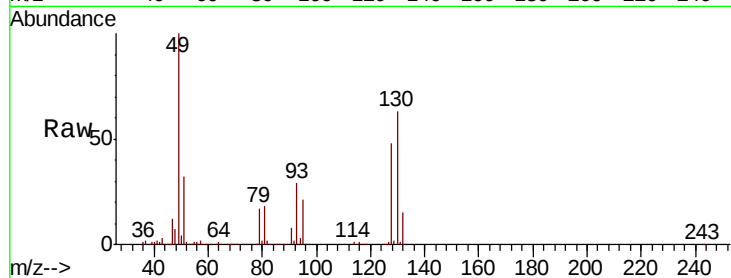
Tgt Ion: 49 Resp: 823868

Ion Ratio Lower Upper

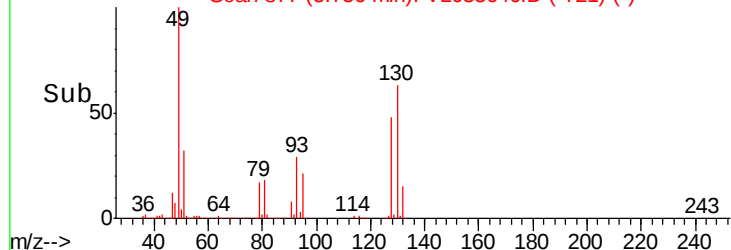
49 100

128 48.9 25.0 75.0

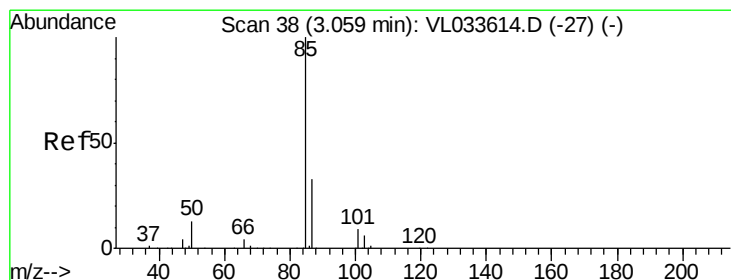
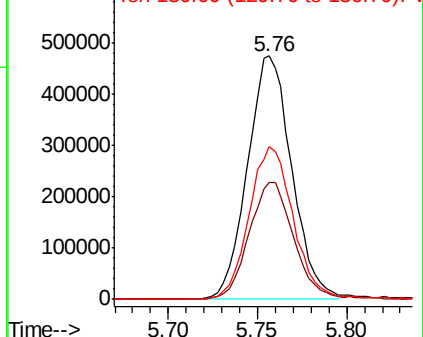
130 63.4 31.9 95.9



Scan 877 (5.756 min): VL033646.D (-721) (-)



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: 0.356 ppbv

RT: 3.07 min Scan# 43

Delta R.T. 0.02 min

Lab File: VL033646.D

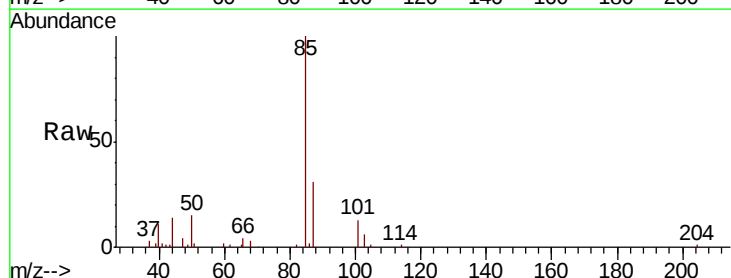
Acq: 3 May 2019 3:03

Tgt Ion: 85 Resp: 44225

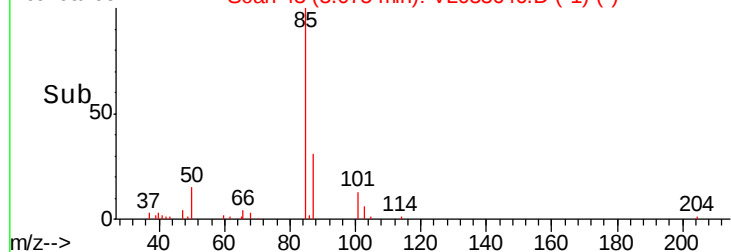
Ion Ratio Lower Upper

85 100

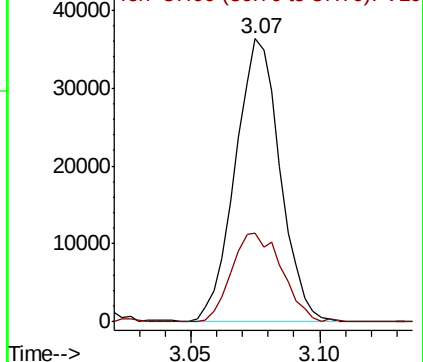
87 31.3 26.8 40.2

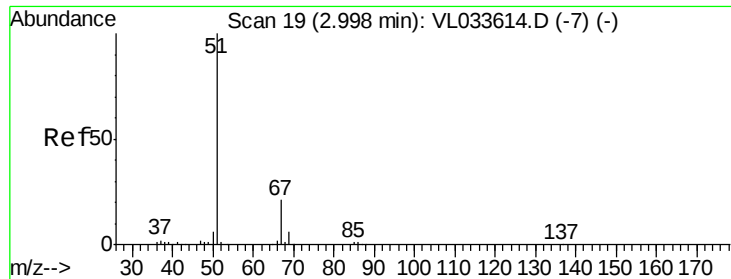


Scan 43 (3.075 min): VL033646.D (-1) (-)



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





#3

Chlorodifluoromethane

Concen: 8.932 ppbv

RT: 2.99 min Scan# 16

Delta R.T. -0.01 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampleId :

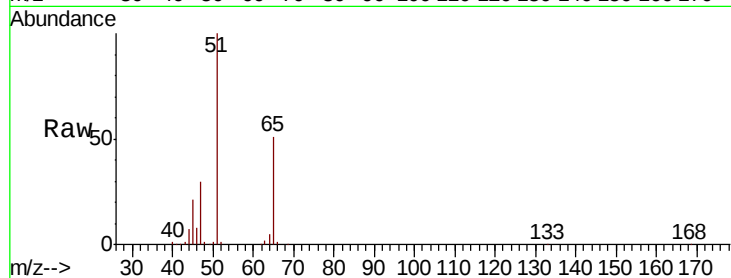
A-11

Tgt Ion: 51 Resp: 879806

Ion Ratio Lower Upper

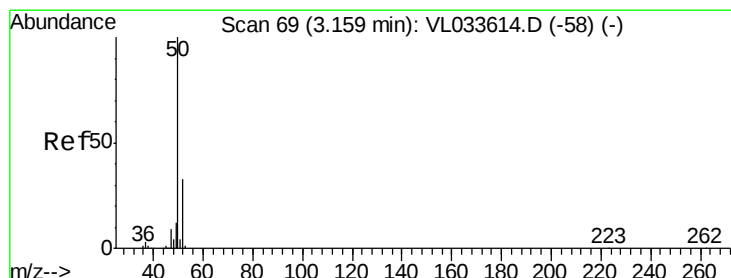
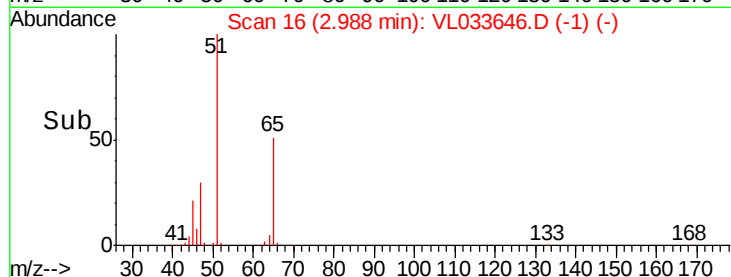
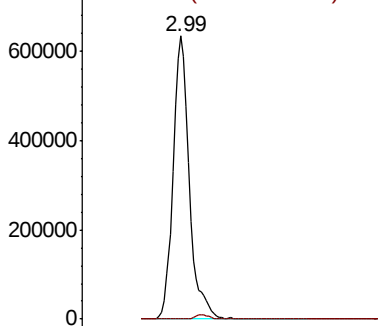
51 100

67 1.5 15.6 23.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.537 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.02 min

Lab File: VL033646.D

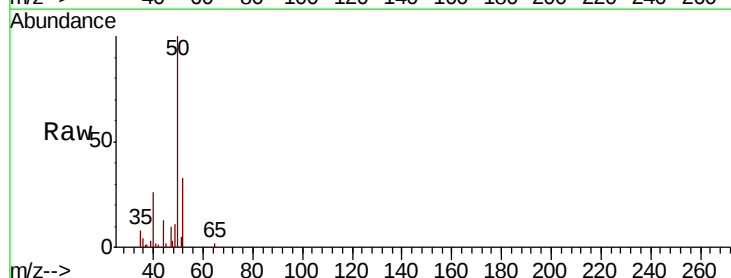
Acq: 3 May 2019 3:03

Tgt Ion: 50 Resp: 28796

Ion Ratio Lower Upper

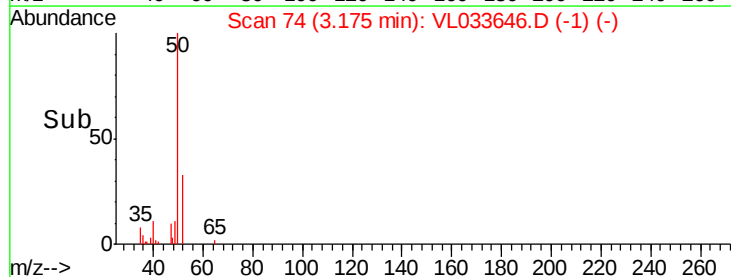
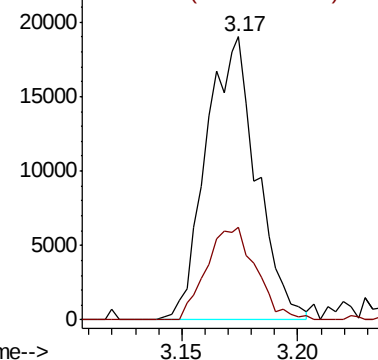
50 100

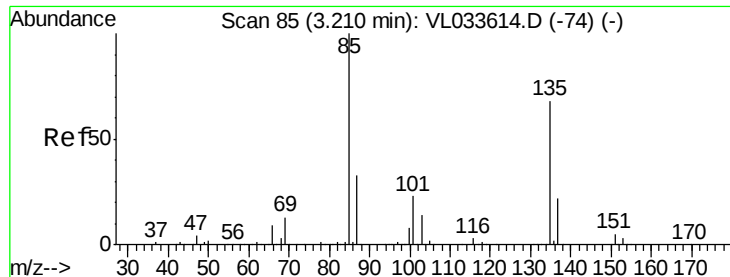
52 33.0 26.0 39.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 0.015 ppbv

RT: 3.22 min Scan# 87

Delta R.T. 0.01 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampleId :

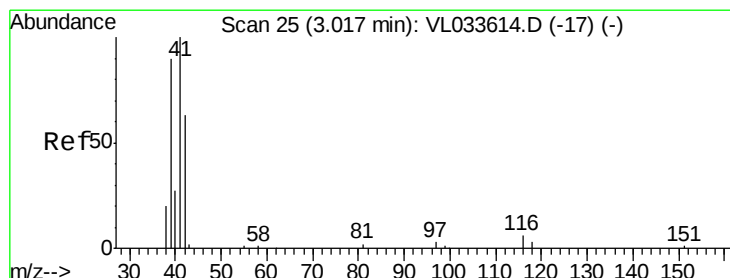
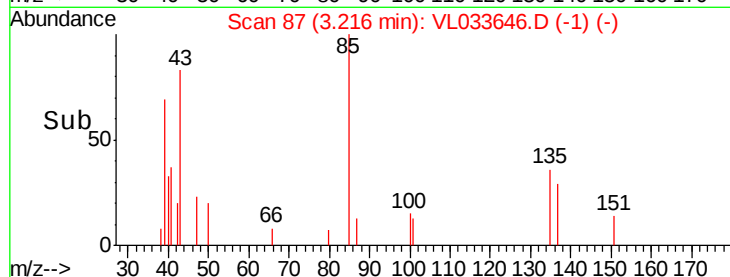
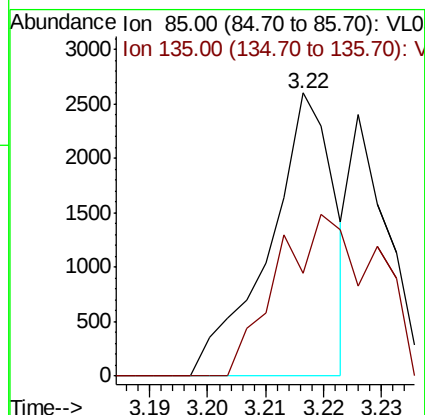
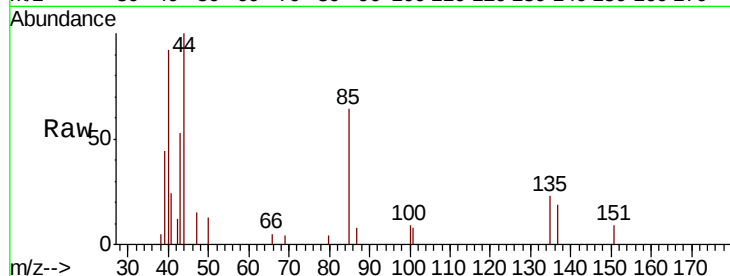
A-11

Tgt Ion: 85 Resp: 2041

Ion Ratio Lower Upper

85 100

135 85.3 55.0 82.6#



#9

Propene

Concen: 1.170 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.22 min

Lab File: VL033646.D

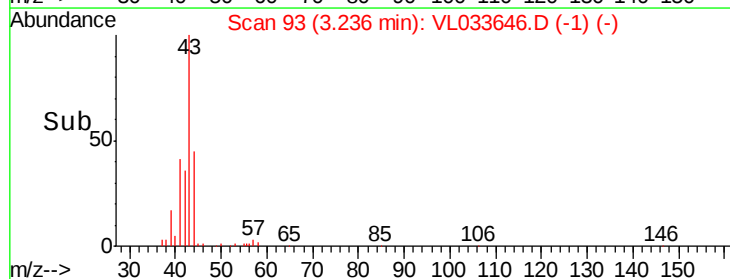
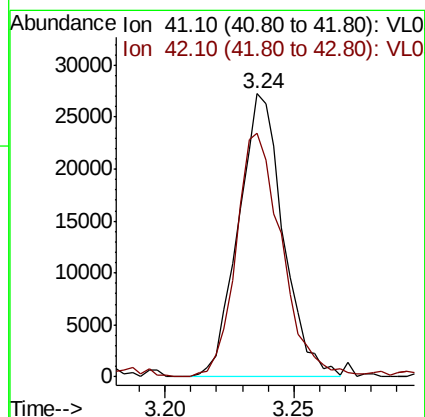
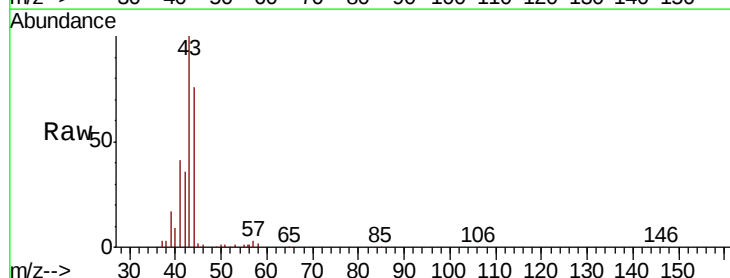
Acq: 3 May 2019 3:03

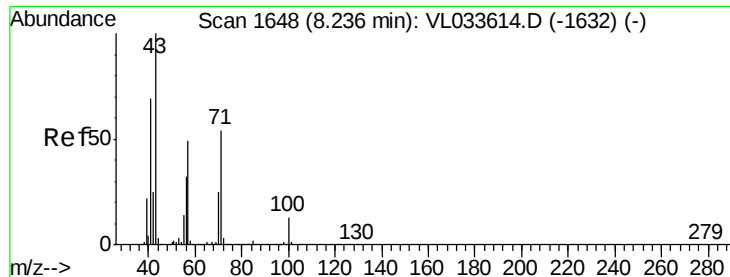
Tgt Ion: 41 Resp: 33001

Ion Ratio Lower Upper

41 100

42 87.2 66.0 99.0

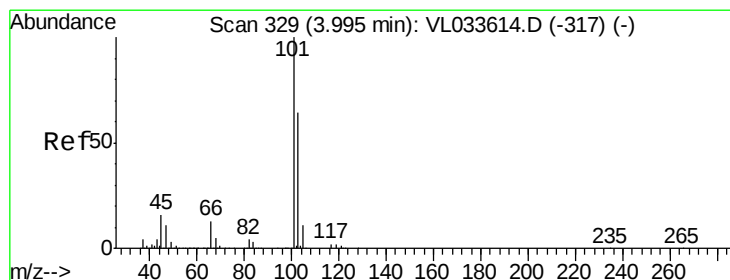
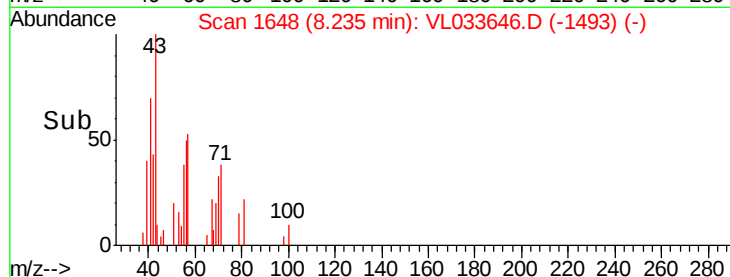
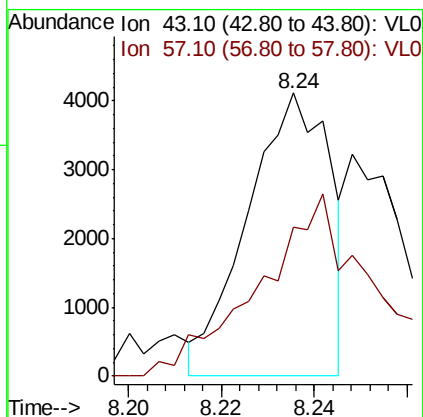
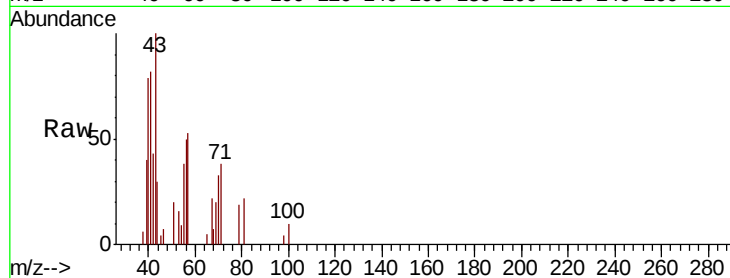




#10
 Heptane
 Concen: 0.049 ppbv
 RT: 8.24 min Scan# 1648
 Delta R.T. -0.00 min
 Lab File: VL033646.D
 Acq: 3 May 2019 3:03

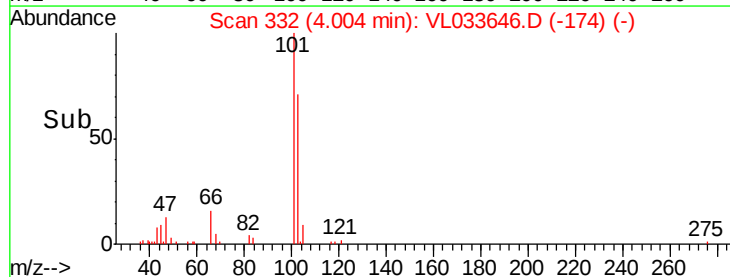
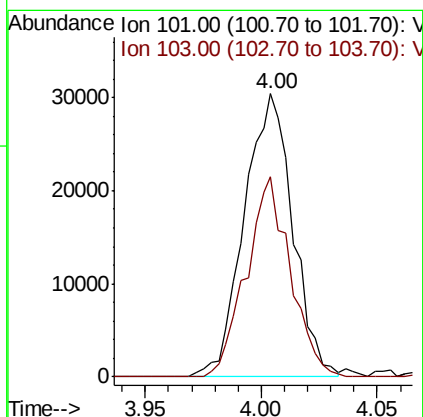
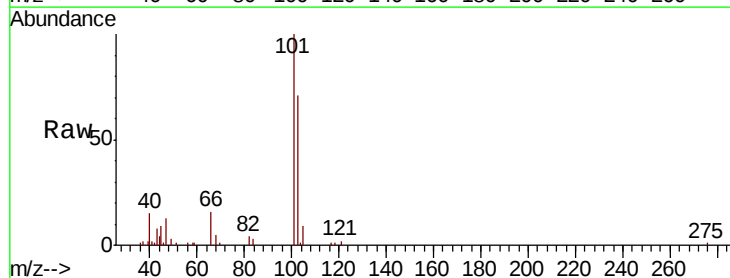
Instrument :
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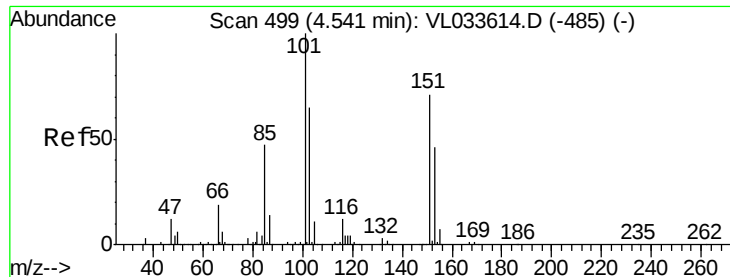
Tgt Ion: 43 Resp: 5096
 Ion Ratio Lower Upper
 43 100
 57 0.0 40.3 60.5#



#11
 Trichlorofluoromethane
 Concen: 0.300 ppbv
 RT: 4.00 min Scan# 332
 Delta R.T. 0.01 min
 Lab File: VL033646.D
 Acq: 3 May 2019 3:03

Tgt Ion: 101 Resp: 44249
 Ion Ratio Lower Upper
 101 100
 103 70.6 51.2 76.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.056 ppbv

RT: 4.54 min Scan# 500

Delta R.T. 0.00 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampleId :

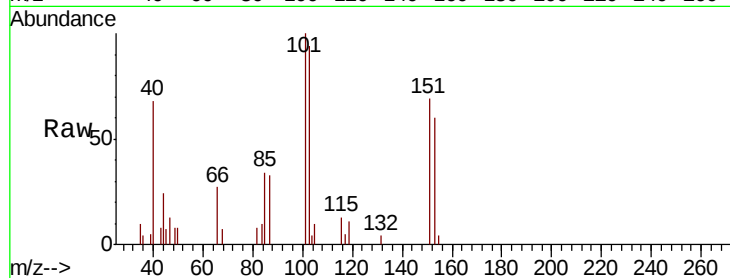
A-11

Tgt Ion: 101 Resp: 5666

Ion Ratio Lower Upper

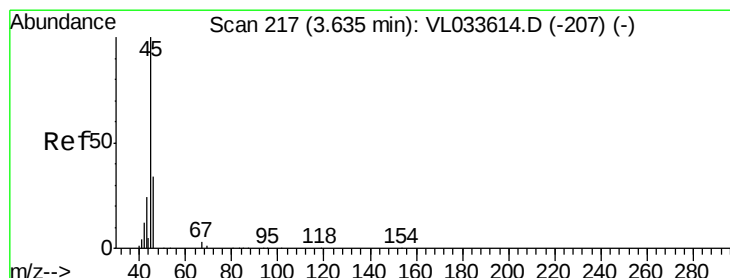
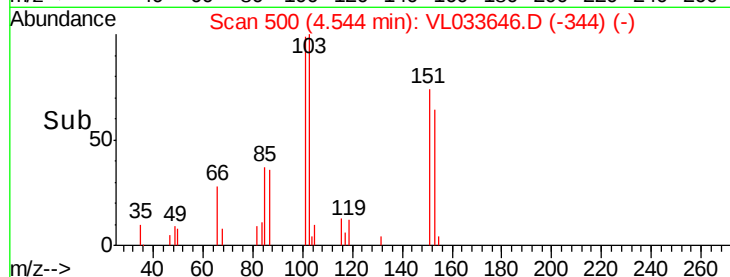
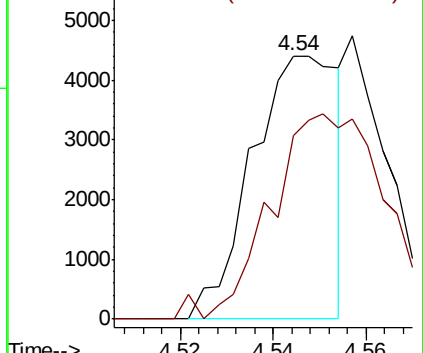
101 100

151 0.0 59.2 88.8#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 48.893 ppbv

RT: 3.65 min Scan# 222

Delta R.T. 0.02 min

Lab File: VL033646.D

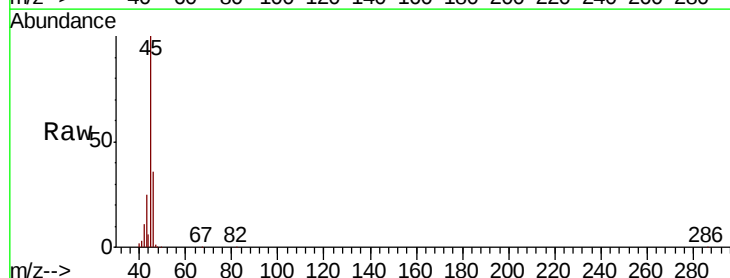
Acq: 3 May 2019 3:03

Tgt Ion: 45 Resp: 625254

Ion Ratio Lower Upper

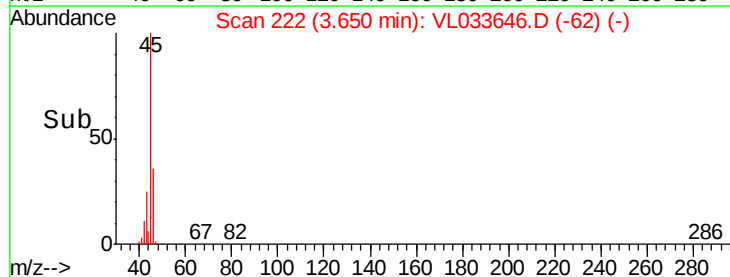
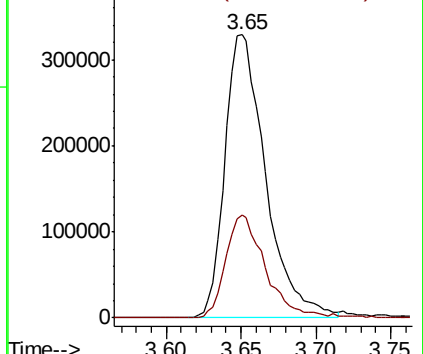
45 100

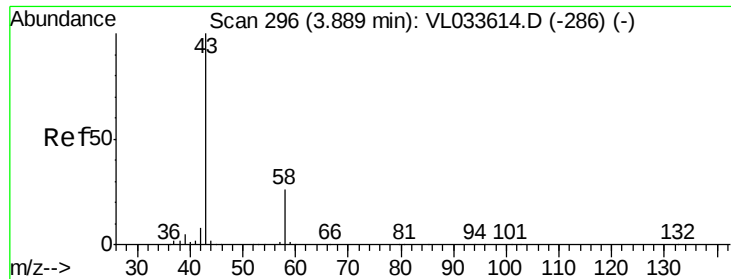
46 35.8 14.6 58.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 5.070 ppbv

RT: 3.90 min Scan# 300

Delta R.T. 0.01 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

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ClientSampleId :

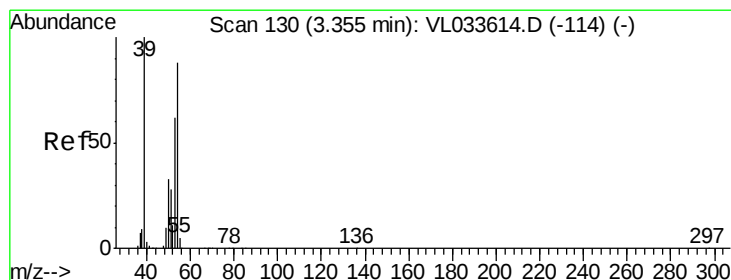
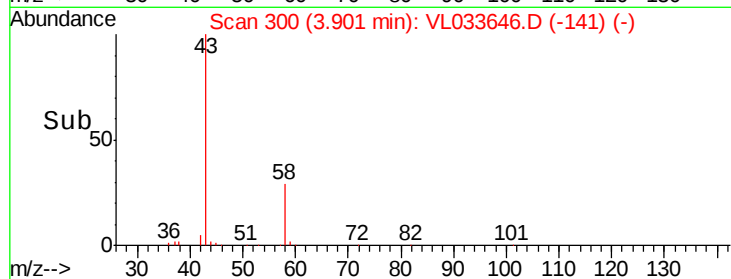
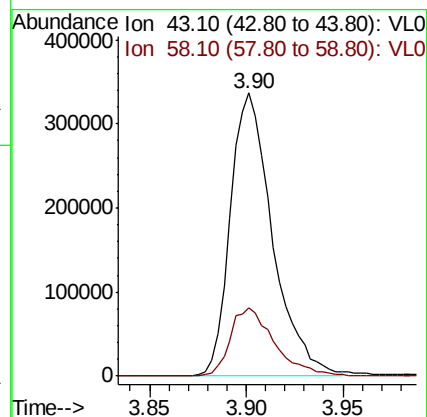
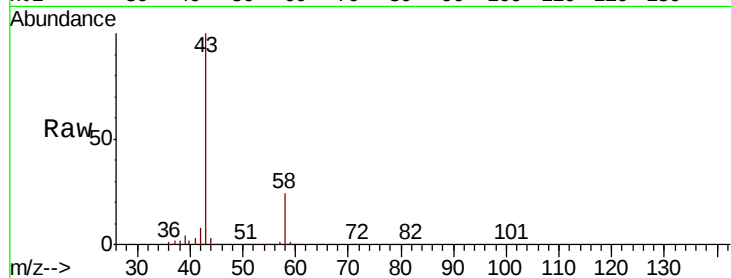
A-11

Tgt Ion: 43 Resp: 508565

Ion Ratio Lower Upper

43 100

58 25.6 21.2 31.8



#16

1,3-Butadiene

Concen: 0.032 ppbv

RT: 3.35 min Scan# 129

Delta R.T. -0.00 min

Lab File: VL033646.D

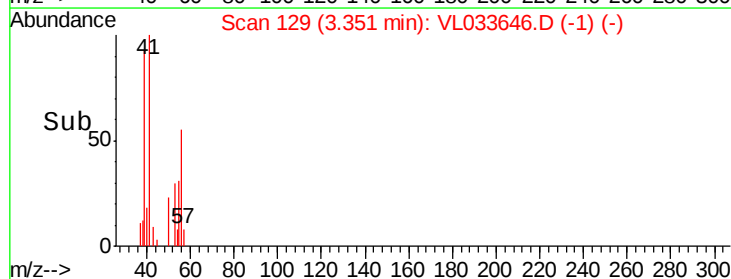
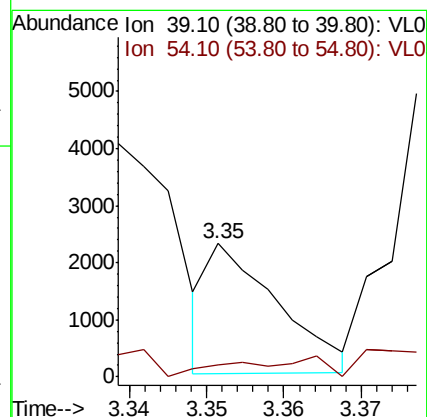
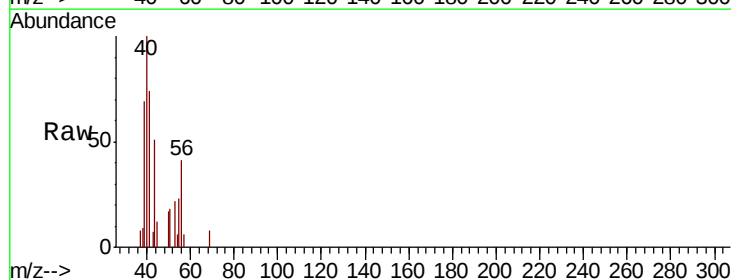
Acq: 3 May 2019 3:03

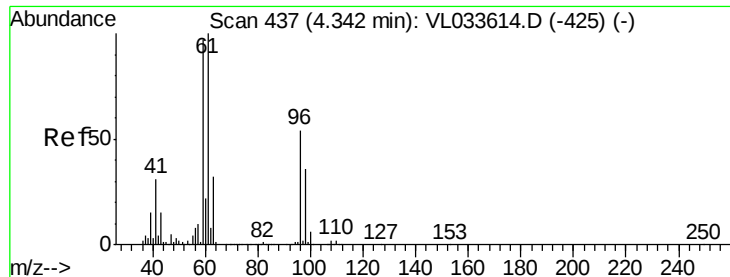
Tgt Ion: 39 Resp: 1443

Ion Ratio Lower Upper

39 100

54 0.0 68.4 102.6#





#17

tert-Butyl alcohol

Concen: 0.036 ppbv

RT: 4.37 min Scan# 446

Delta R.T. 0.03 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampleId :

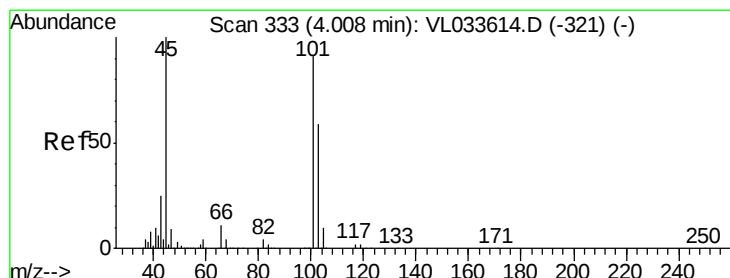
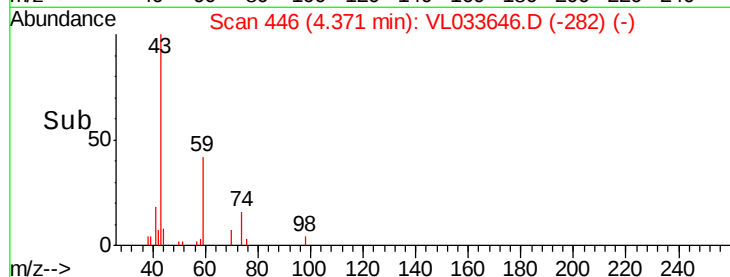
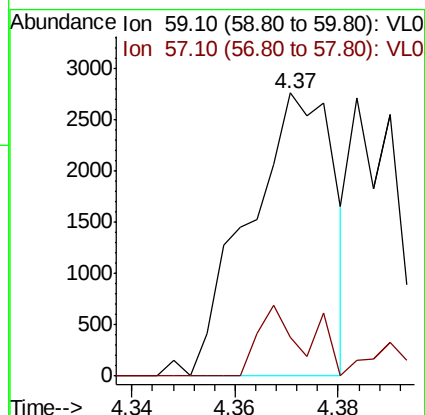
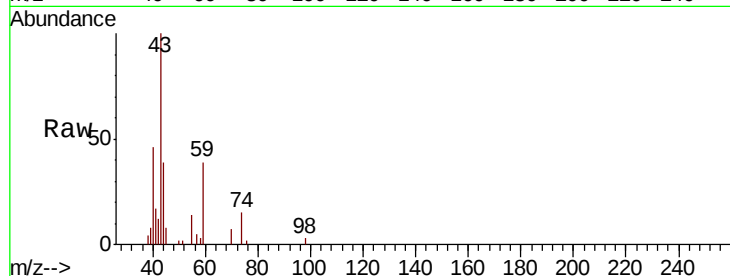
A-11

Tgt Ion: 59 Resp: 3149

Ion Ratio Lower Upper

59 100

57 0.0 8.4 12.6#



#19

Isopropyl Alcohol

Concen: 2.174 ppbv

RT: 4.03 min Scan# 340

Delta R.T. 0.02 min

Lab File: VL033646.D

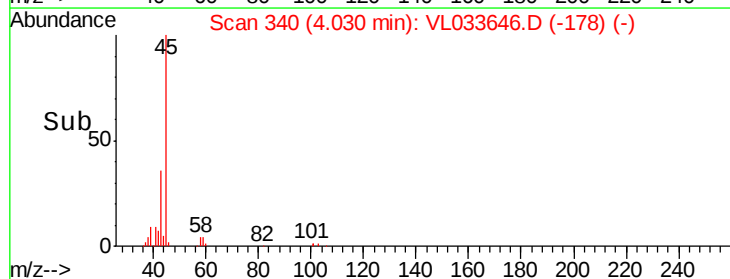
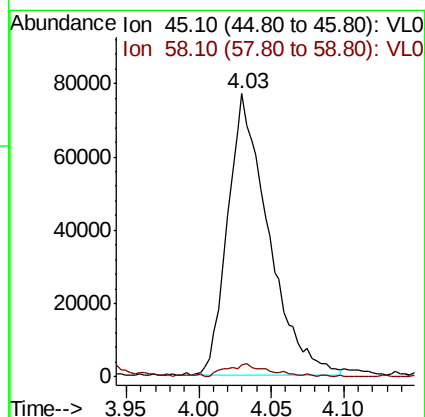
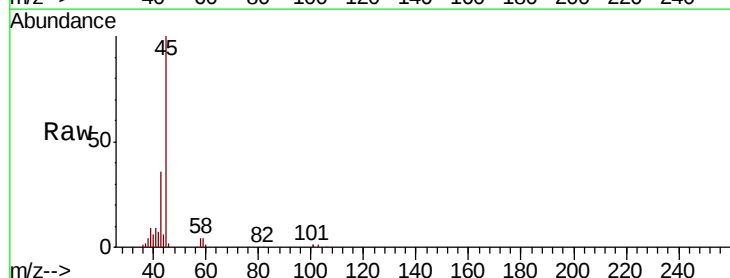
Acq: 3 May 2019 3:03

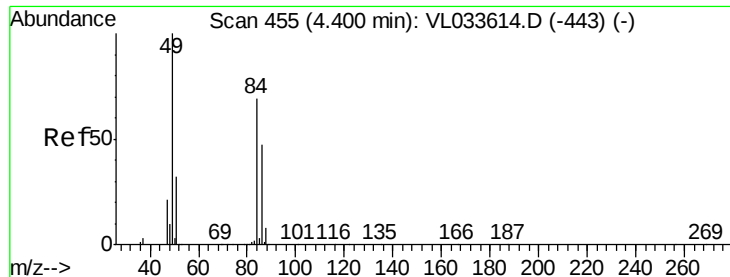
Tgt Ion: 45 Resp: 149680

Ion Ratio Lower Upper

45 100

58 5.7 1.8 2.6#

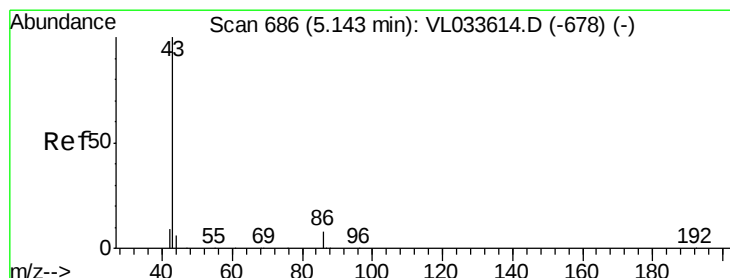
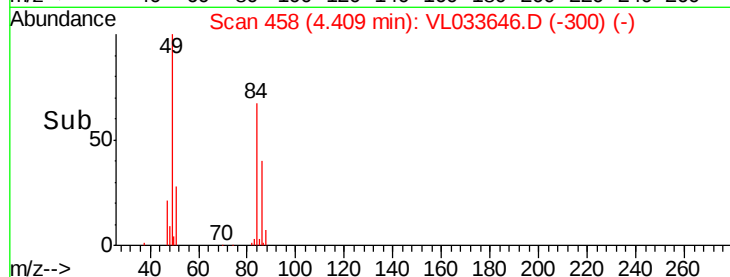
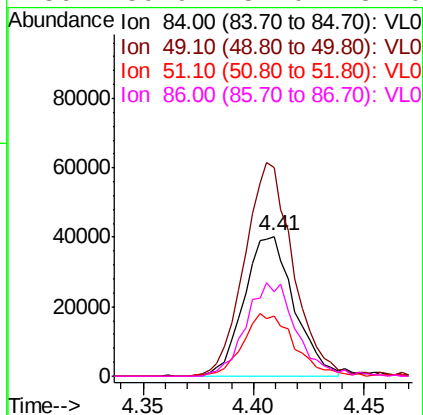
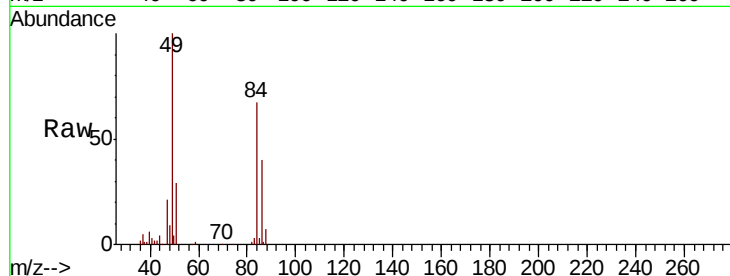




#20
Methylene Chloride
Concen: 1.625 ppbv
RT: 4.41 min Scan# 458
Delta R.T. 0.01 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

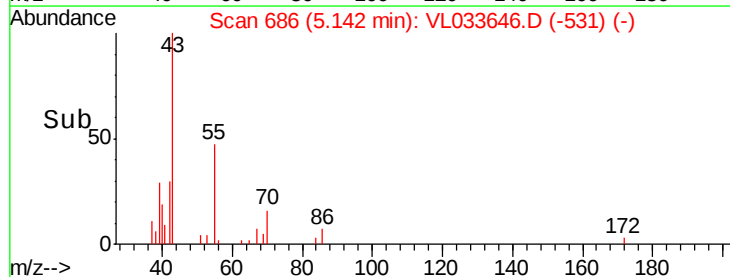
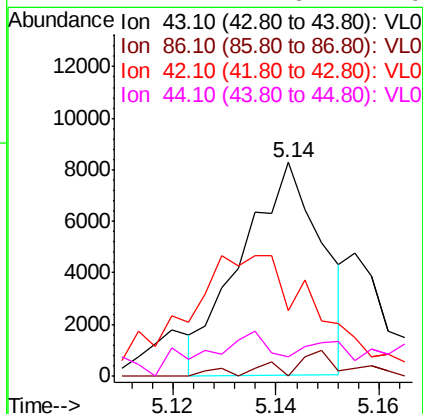
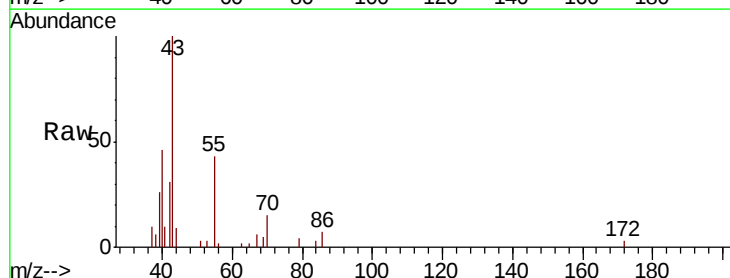
Instrument :
MSVOA_L
ClientSampleId :
A-11

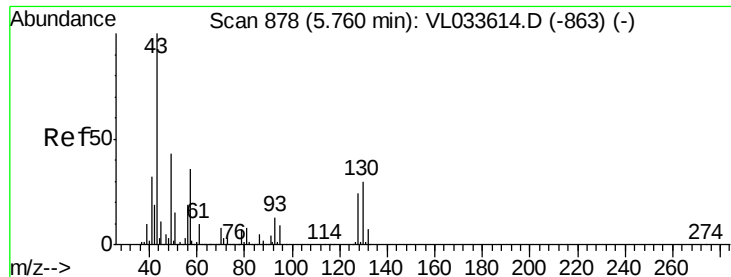
Tgt Ion:	84	Resp:	63531
Ion	Ratio	Lower	Upper
84	100		
49	148.9	116.2	174.2
51	42.3	37.0	55.6
86	59.9	54.0	81.0



#23
Vinyl Acetate
Concen: 0.060 ppbv
RT: 5.14 min Scan# 686
Delta R.T. -0.00 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

Tgt Ion:	43	Resp:	8896
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.8	8.8#
42	7.7	7.8	11.8#
44	1.7	4.6	7.0#





#25

Ethyl Acetate

Concen: 0.350 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.02 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampled :

A-11

Tgt Ion: 43 Resp: 66650

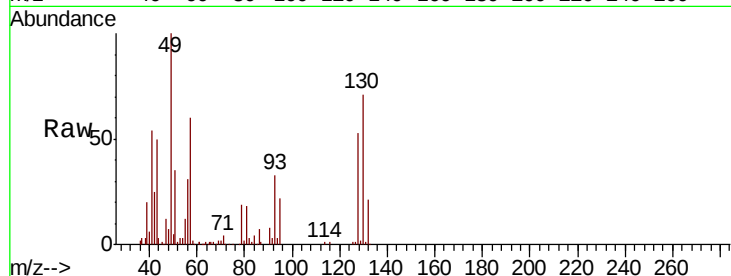
Ion Ratio Lower Upper

43 100

45 5.7 8.1 12.1#

61 4.0 7.5 11.3#

70 3.3 5.8 8.6#



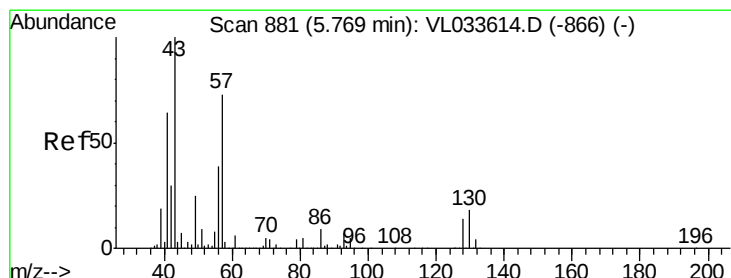
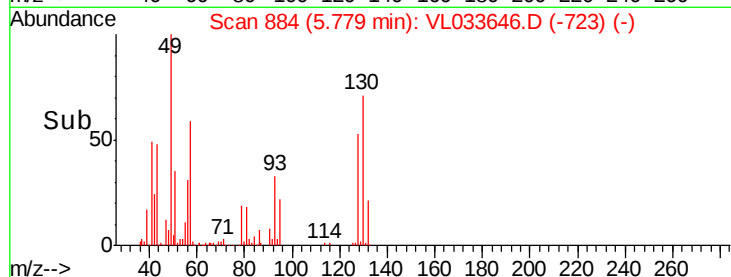
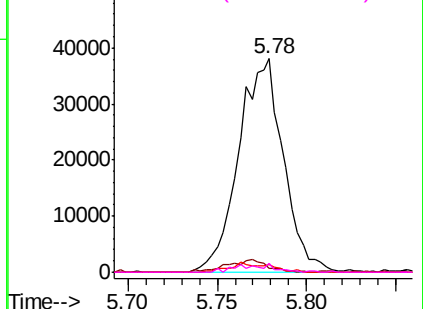
Abundance

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: 0.853 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.01 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Tgt Ion: 57 Resp: 68345

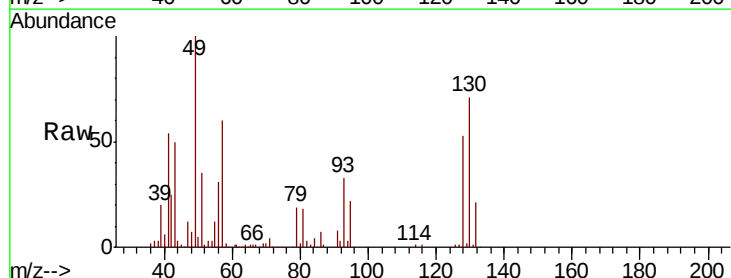
Ion Ratio Lower Upper

57 100

41 104.6 70.6 106.0

43 97.9 186.0 279.0#

56 60.9 42.7 64.1



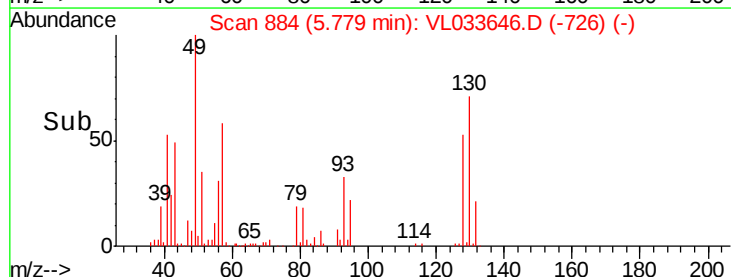
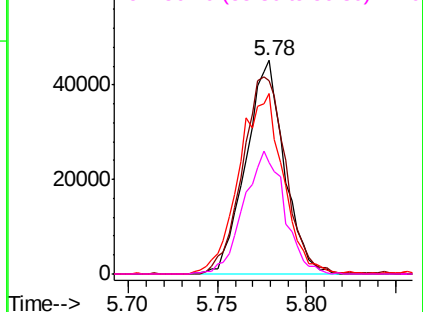
Abundance

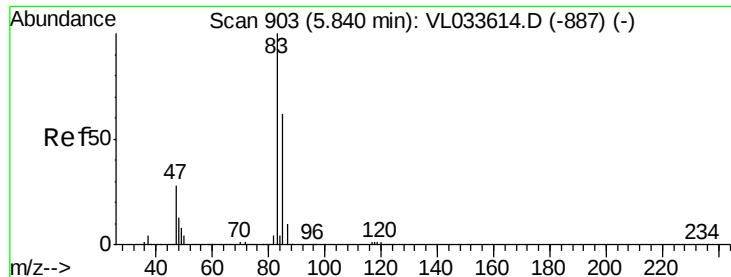
Ion 57.10 (56.80 to 57.80): VL0

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

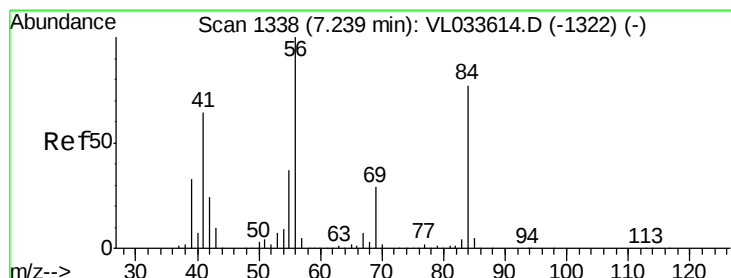
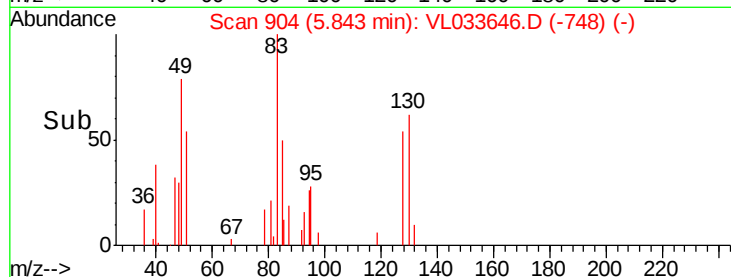
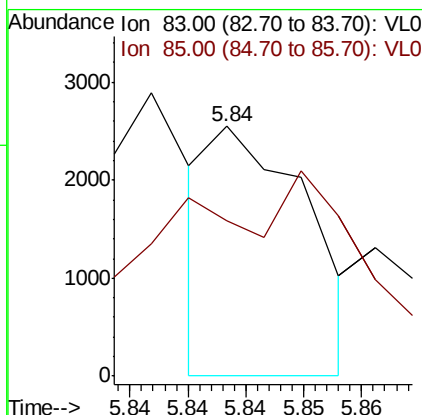
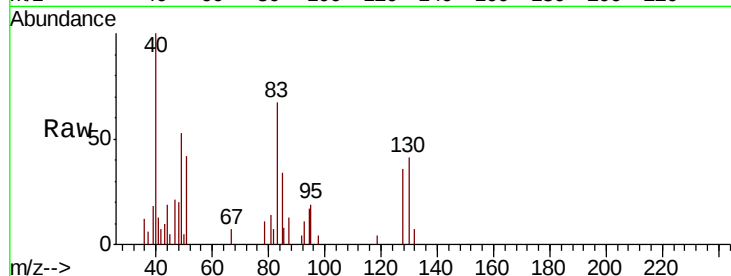




#29
Chloroform
Concen: 0.010 ppbv
RT: 5.84 min Scan# 904
Delta R.T. 0.00 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

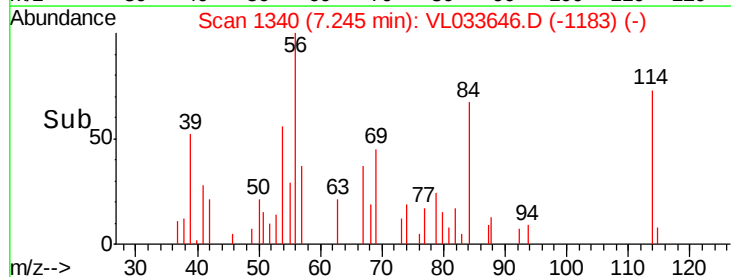
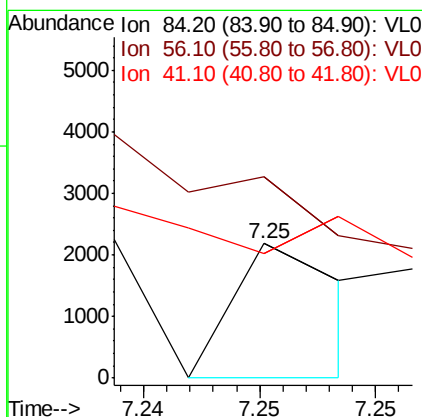
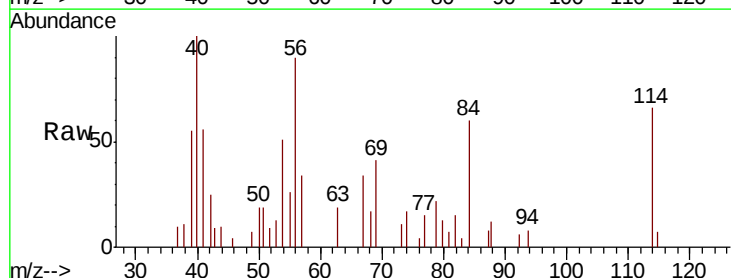
Instrument :
MSVOA_L
ClientSampleId :
A-11

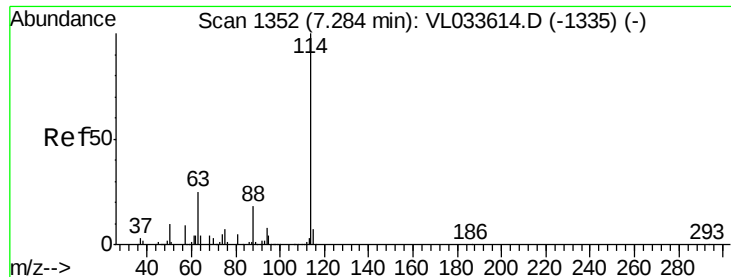
Tgt Ion: 83 Resp: 1486
Ion Ratio Lower Upper
83 100
85 0.0 49.9 74.9#



#30
Cyclohexane
Concen: 0.011 ppbv
RT: 7.25 min Scan# 1340
Delta R.T. 0.01 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

Tgt Ion: 84 Resp: 728
Ion Ratio Lower Upper
84 100
56 0.0 108.4 162.6#
41 0.0 67.0 100.4#

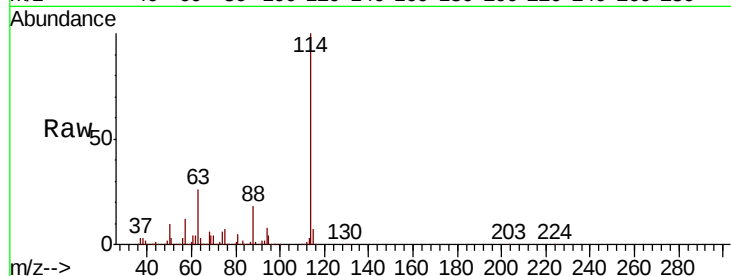




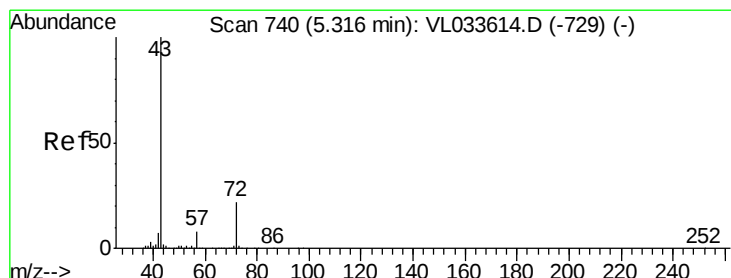
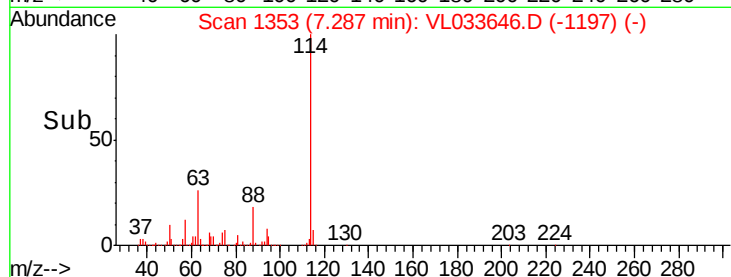
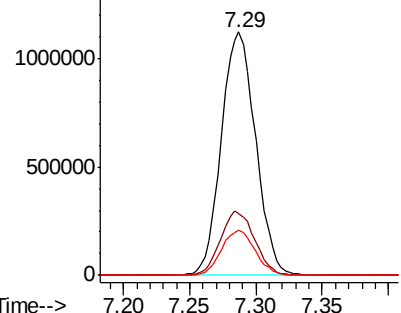
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.29 min Scan# 1353
 Delta R.T. 0.00 min
 Lab File: VL033646.D
 Acq: 3 May 2019 3:03

Instrument :
 MSVOA_L
 ClientSampleId :
 A-11

Tgt Ion:114 Resp: 2021220
 Ion Ratio Lower Upper
 114 100
 63 26.5 21.1 31.7
 88 18.3 14.2 21.4

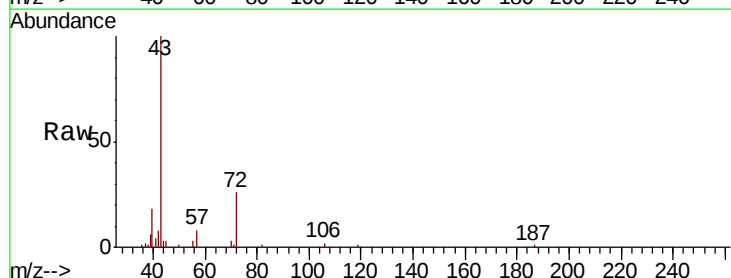


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

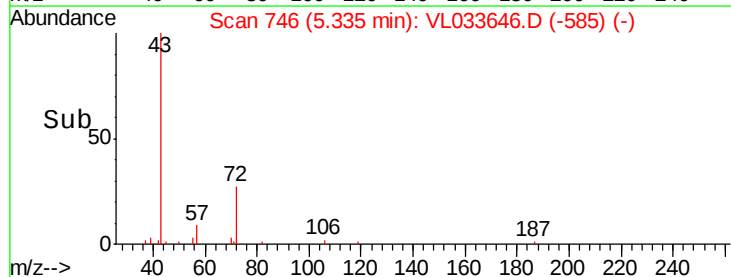
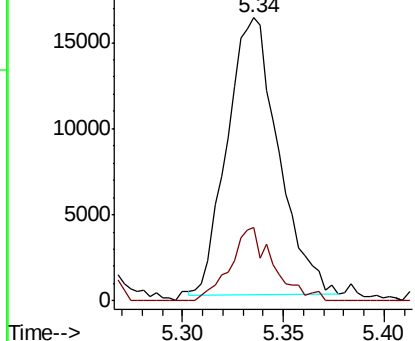


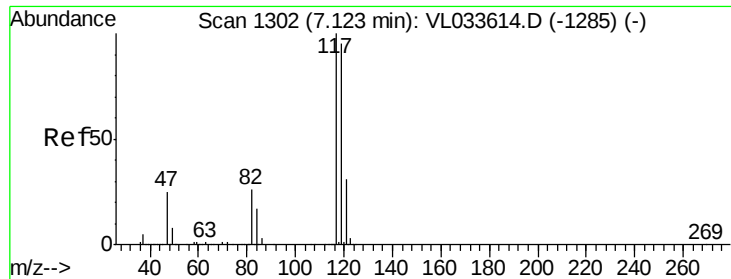
#34
 2-Butanone
 Concen: 0.229 ppbv
 RT: 5.34 min Scan# 746
 Delta R.T. 0.02 min
 Lab File: VL033646.D
 Acq: 3 May 2019 3:03

Tgt Ion: 43 Resp: 28470
 Ion Ratio Lower Upper
 43 100
 72 22.4 17.8 26.8



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.023 ppbv

RT: 7.14 min Scan# 1306

Delta R.T. 0.01 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampleId :

A-11

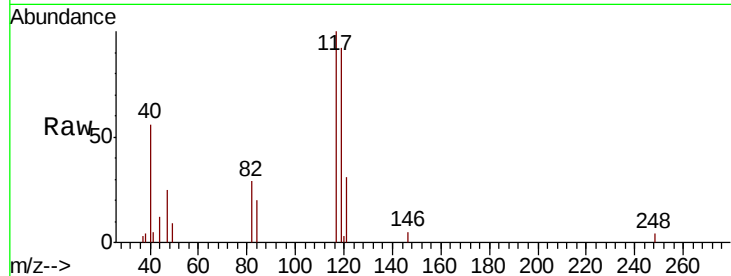
Tgt Ion:117 Resp: 3613

Ion Ratio Lower Upper

117 100

119 86.6 76.2 114.4

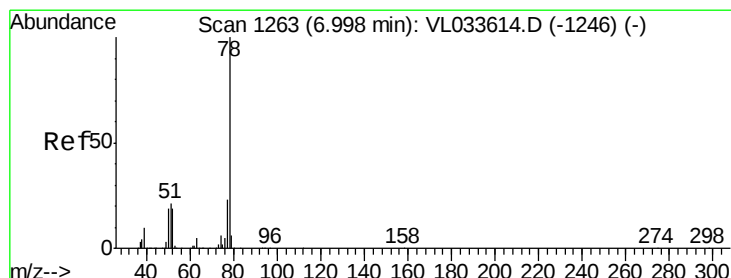
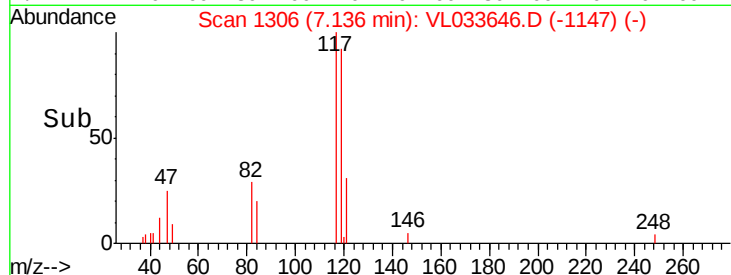
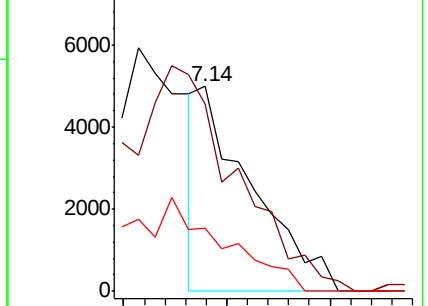
121 31.0 24.9 37.3



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.054 ppbv

RT: 7.00 min Scan# 1263

Delta R.T. -0.00 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

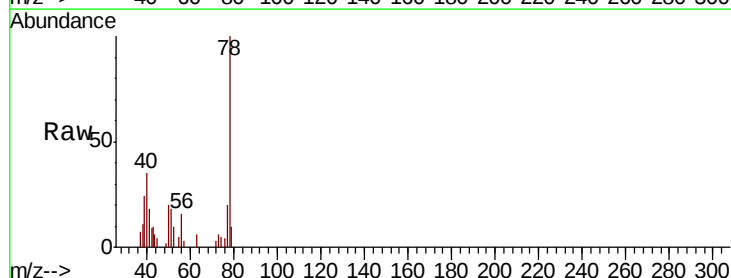
Tgt Ion: 78 Resp: 9245

Ion Ratio Lower Upper

78 100

77 21.3 18.1 27.1

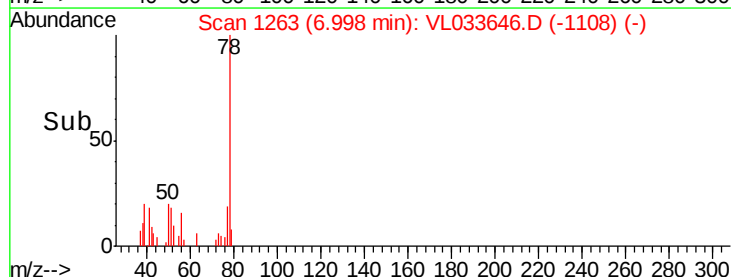
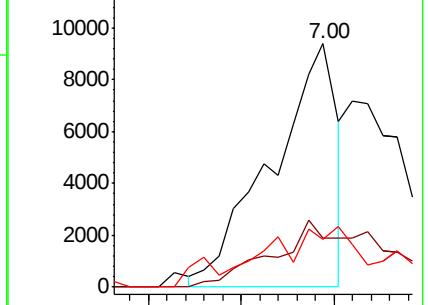
50 12.3 15.1 22.7#

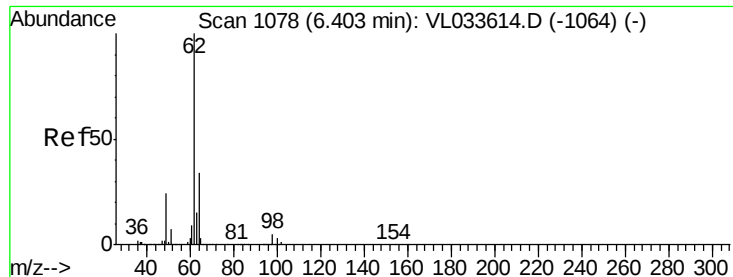


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#37

1,2-Dichloroethane

Concen: 0.016 ppbv

RT: 6.40 min Scan# 1077

Delta R.T. -0.00 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

Instrument :

MSVOA_L

ClientSampleId :

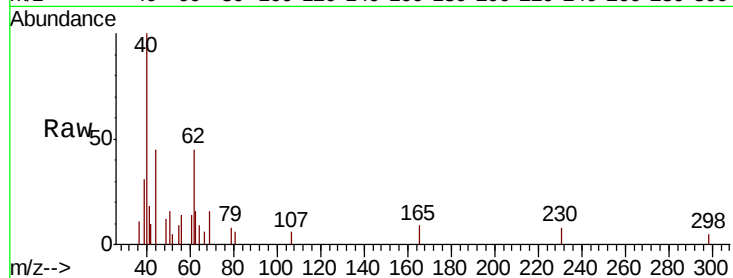
A-11

Tgt Ion: 62 Resp: 1796

Ion Ratio Lower Upper

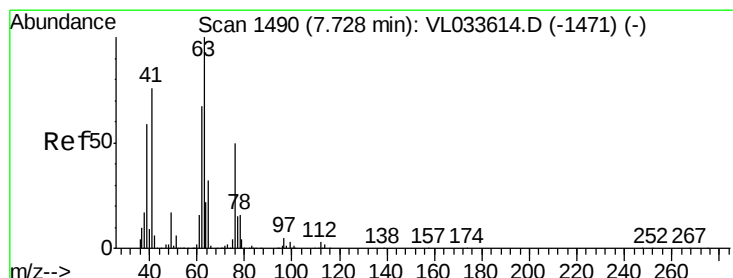
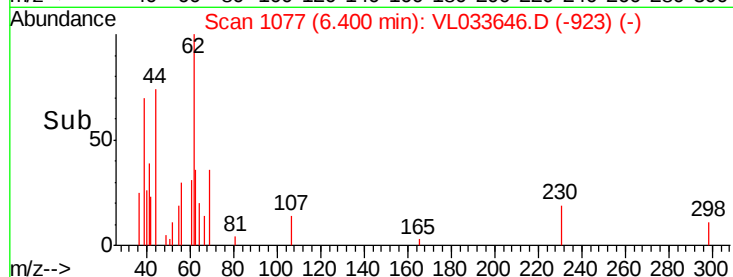
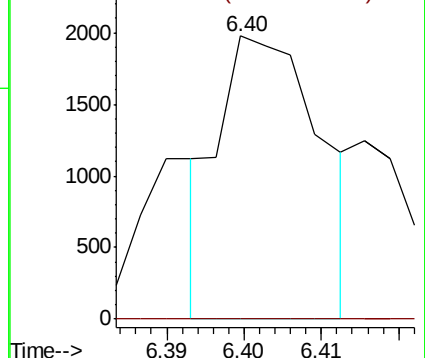
62 100

98 0.0 4.4 6.6#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0



#39

1,2-Dichloropropane

Concen: 8.186 ppbv

RT: 7.28 min Scan# 1352

Delta R.T. -0.44 min

Lab File: VL033646.D

Acq: 3 May 2019 3:03

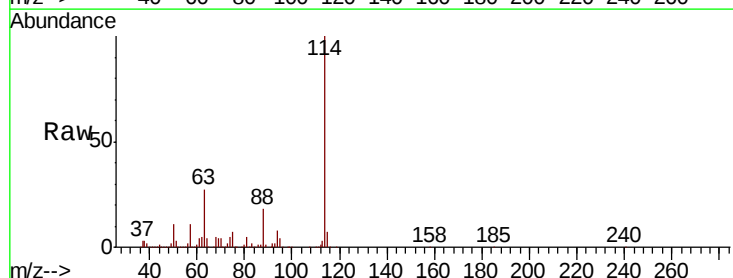
Tgt Ion: 63 Resp: 531616

Ion Ratio Lower Upper

63 100

41 0.0 60.9 91.3#

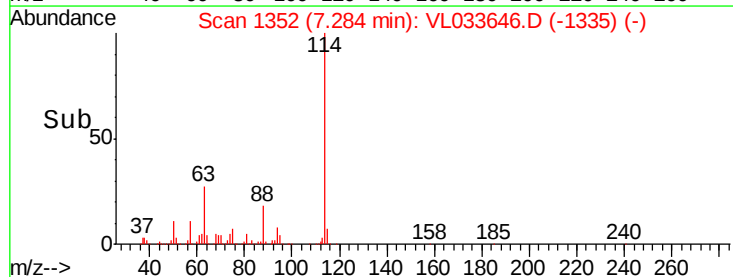
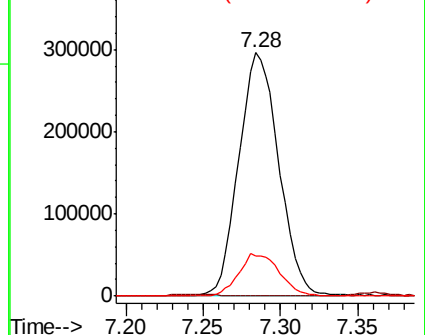
62 16.6 53.3 79.9#

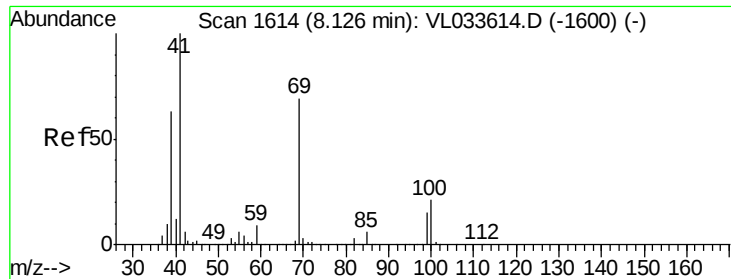


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

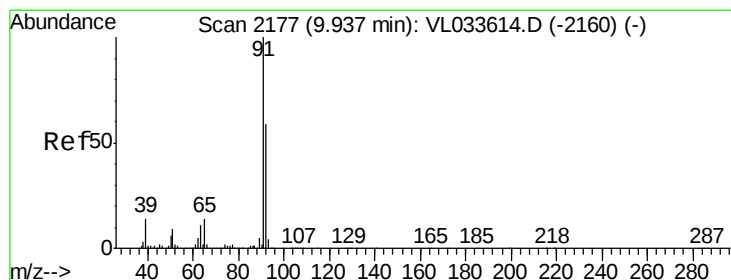
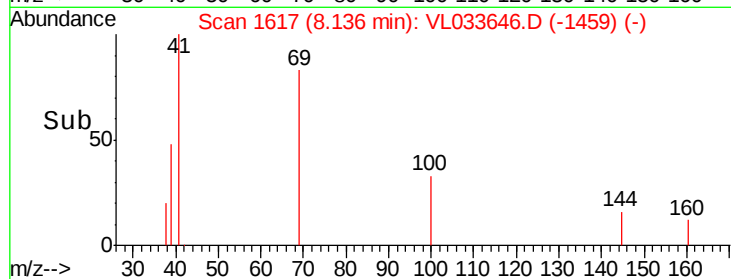
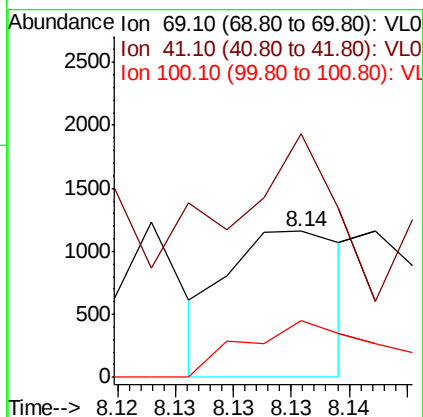
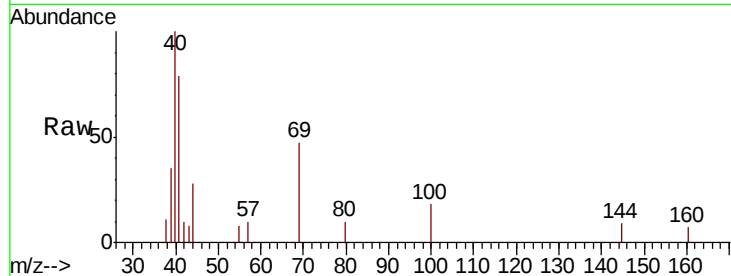




#43
Methyl Methacrylate
Concen: 0.012 ppbv
RT: 8.14 min Scan# 1617
Delta R.T. 0.01 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

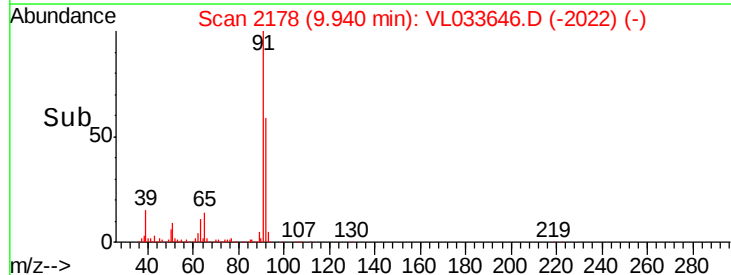
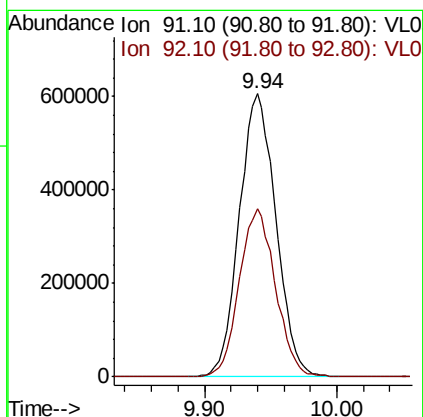
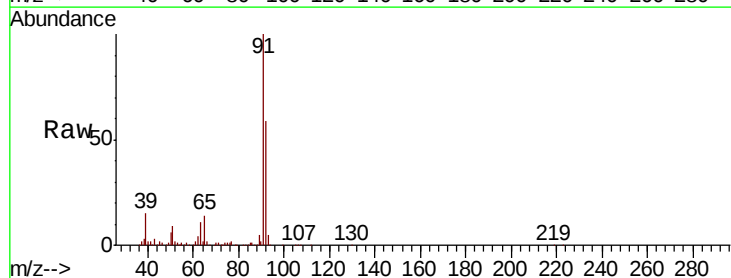
Instrument :
MSVOA_L
ClientSampled :
A-11

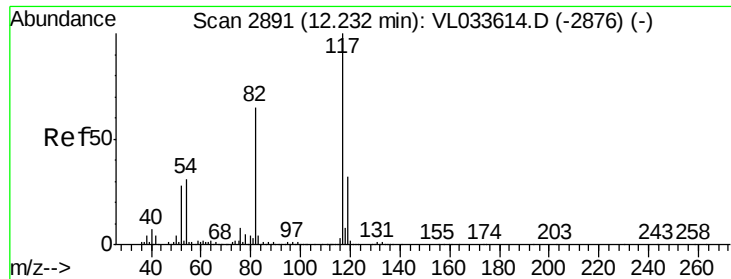
Tgt Ion: 69 Resp: 809
Ion Ratio Lower Upper
69 100
41 473.5 115.0 172.4#
100 53.3 24.7 37.1#



#53
Toluene
Concen: 5.358 ppbv
RT: 9.94 min Scan# 2178
Delta R.T. 0.00 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

Tgt Ion: 91 Resp: 1164390
Ion Ratio Lower Upper
91 100
92 58.7 47.8 71.6

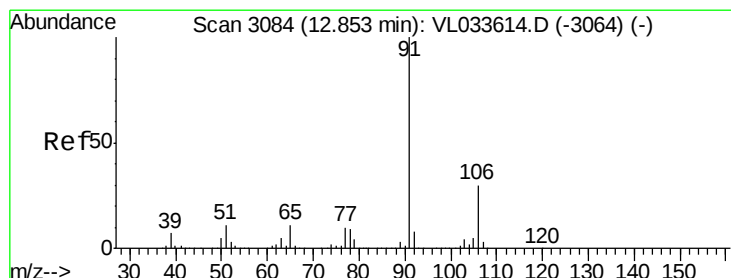
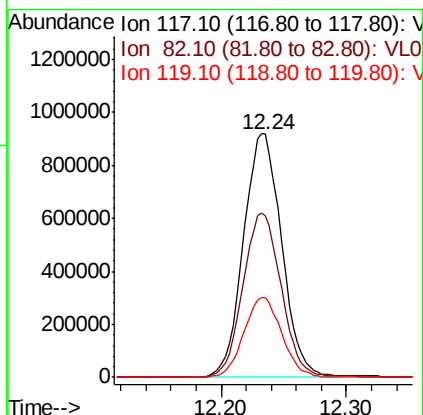
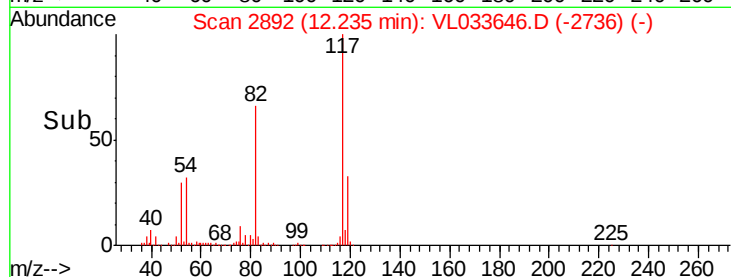
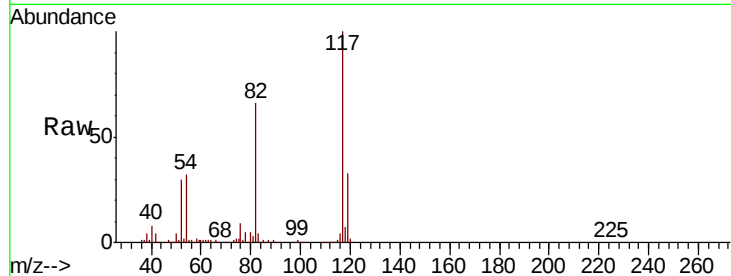




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2892
Delta R.T. 0.00 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

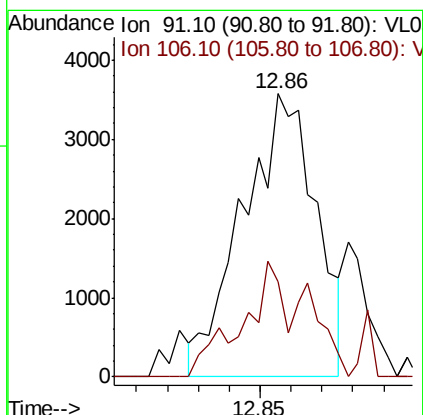
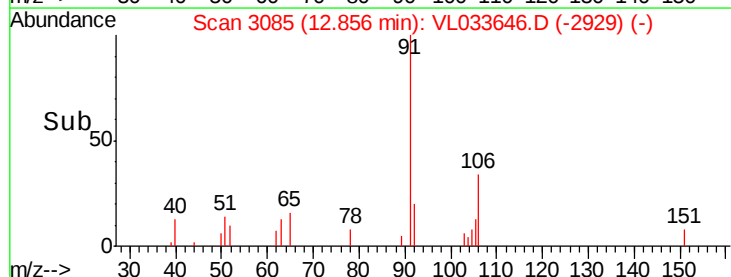
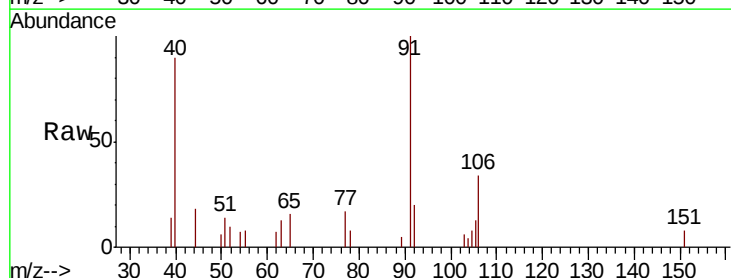
Instrument :
MSVOA_L
ClientSampleId :
A-11

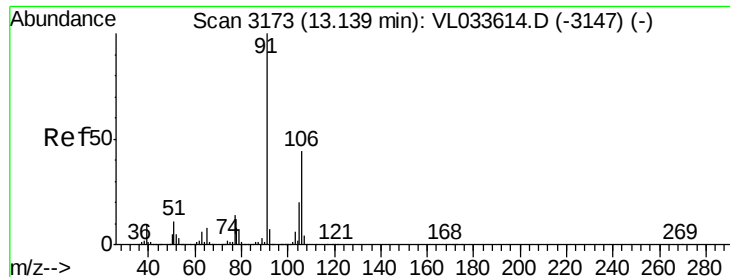
Tgt Ion: 117 Resp: 1947590
Ion Ratio Lower Upper
117 100
82 67.9 52.6 78.8
119 32.9 28.3 42.5



#58
Ethyl Benzene
Concen: 0.026 ppbv
RT: 12.86 min Scan# 3085
Delta R.T. 0.00 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

Tgt Ion: 91 Resp: 5856
Ion Ratio Lower Upper
91 100
106 38.3 23.6 35.4#

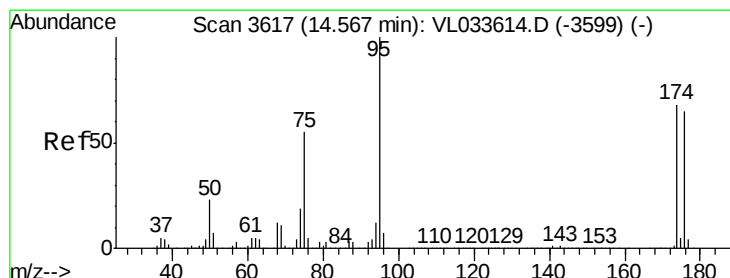
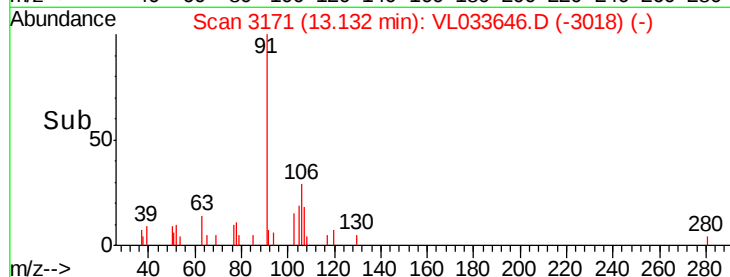
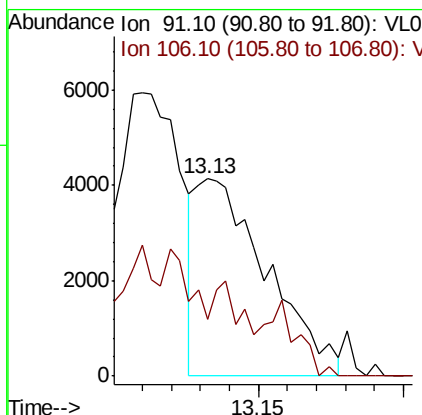
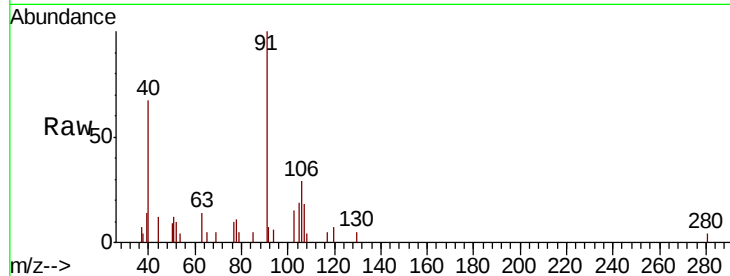




#59
m/p-Xylene
Concen: 0.037 ppbv
RT: 13.13 min Scan# 3171
Delta R.T. -0.01 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

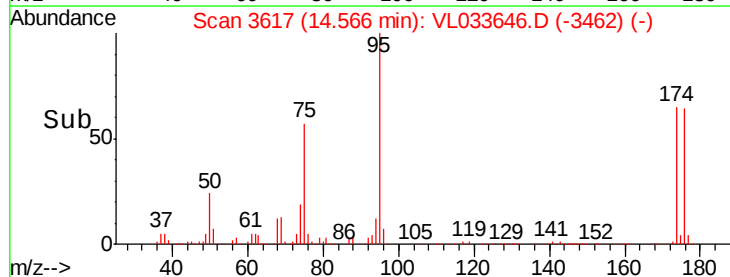
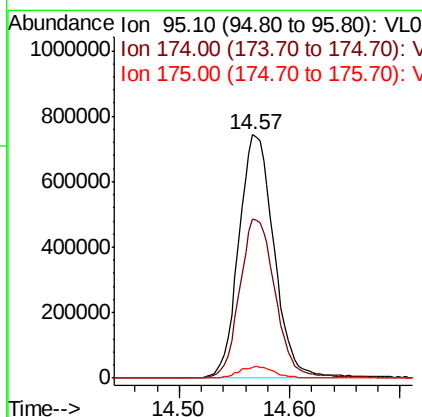
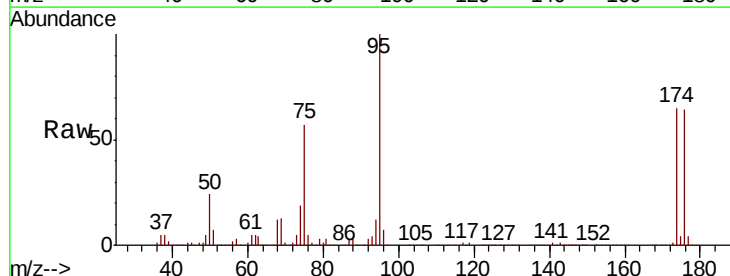
Instrument :
MSVOA_L
ClientSampled :
A-11

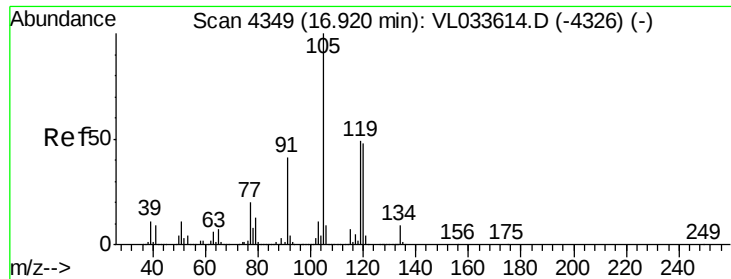
Tgt Ion: 91 Resp: 7043
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#68
1-Bromo-4-Fluorobenzene
Concen: 11.077 ppbv
RT: 14.57 min Scan# 3617
Delta R.T. -0.00 min
Lab File: VL033646.D
Acq: 3 May 2019 3:03

Tgt Ion: 95 Resp: 1642335
Ion Ratio Lower Upper
95 100
174 66.6 53.9 80.9
175 4.8 4.0 6.0





#74
 1,2,4-Trimethylbenzene
 Concen: 0.051 ppbv
 RT: 16.93 min Scan# 4351
 Delta R.T. 0.01 min
 Lab File: VL033646.D
 Acq: 3 May 2019 3:03

Instrument :
 MSVOA_L
 ClientSampleId :
 A-11

Tgt Ion:	105	Resp:	12525
Ion Ratio	Lower	Upper	
105	100		
120	35.5	38.4	57.6#
91	21.5	33.0	49.4#
77	18.5	16.2	24.2

