

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100819\
 Data File : VL034261.D
 Acq On : 8 Oct 2019 23:12
 Operator : SY/AP
 Sample : K5243-02
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Quant Time: Oct 09 05:21:35 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL091719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Sep 18 12:53:31 2019
 QLast Update : Wed Sep 18 12:53:31 2019
 Response via : Initial Calibration

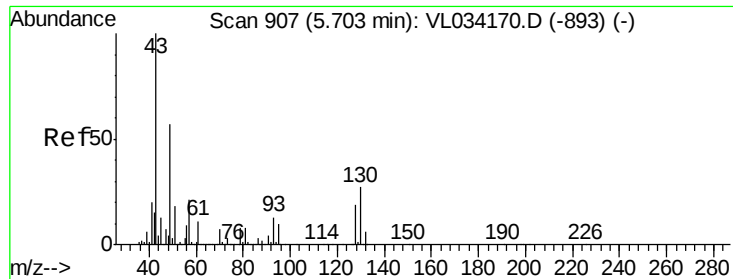
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	970022	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.21	114	1598080	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.15	117	1582269	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.49	95	1461630	10.63	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	347663	2.426	ppbv	97
3) Chlorodifluoromethane	2.94	51	115933	1.019	ppbv #	75
4) Chloromethane	3.12	50	20816	0.311	ppbv #	87
8) Dichlorotetrafluoroethane	3.02	85	347663	2.749	ppbv #	22
9) Propene	3.19	41	198918	3.545	ppbv	96
11) Trichlorofluoromethane	3.95	101	48398	0.371	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.49	101	4607	0.054	ppbv #	75
13) Ethanol	3.60	45	2412953	177.580	ppbv	98
15) Acetone	3.84	43	1796422	13.818	ppbv	99
16) 1,3-Butadiene	3.34	39	77494	1.366	ppbv #	15
17) tert-Butyl alcohol	3.97	59	210757	2.558	ppbv	97
19) Isopropyl Alcohol	3.97	45	5226827	65.379	ppbv	99
20) Methylene Chloride	4.34	84	234420	6.254	ppbv	95
21) Allyl Chloride	4.34	41	8465	0.115	ppbv #	1
23) Vinyl Acetate	5.08	43	19124	0.100	ppbv #	25
25) Ethyl Acetate	5.70	43	344914	1.403	ppbv #	90
26) Hexane	5.71	57	265718	2.598	ppbv #	60
29) Chloroform	5.77	83	89422	0.612	ppbv	95
30) Cyclohexane	7.17	84	9182	0.124	ppbv #	1
34) 2-Butanone	5.26	43	53469	0.328	ppbv	96
35) Carbon Tetrachloride	7.05	117	4794	0.036	ppbv #	66
36) Benzene	6.92	78	17779	0.101	ppbv #	92
38) Trichloroethene	7.88	130	10945	0.174	ppbv	91
39) 1,2-Dichloropropane	7.21	63	532502	6.715	ppbv #	19
41) Tetrahydrofuran	5.70	42	119183	1.297	ppbv #	54
52) Tetrachloroethene	11.29	164	4898	0.084	ppbv	87
53) Toluene	9.86	91	98465	0.510	ppbv	94
58) Ethyl Benzene	13.03	91	36334	0.142	ppbv	94
59) m/p-Xylene	13.07	91	9164	0.043	ppbv #	32
60) o-Xylene	13.75	91	14071	0.067	ppbv	76
74) 1,2,4-Trimethylbenzene	16.84	105	52163	0.213	ppbv #	64

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. -0.02 min

Lab File: VL034261.D

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ClientSampleId :

IA1

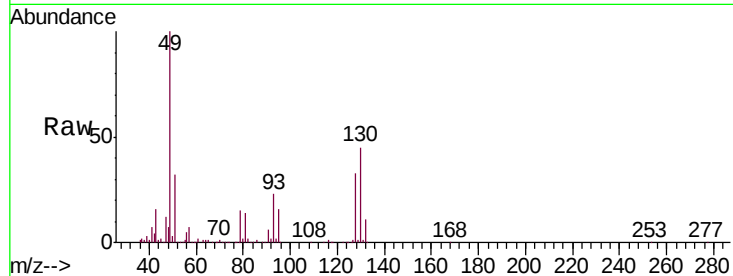
Tgt Ion: 49 Resp: 970022

Ion Ratio Lower Upper

49 100

128 34.2 17.6 52.9

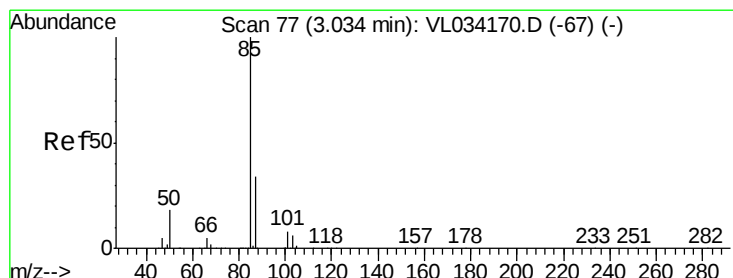
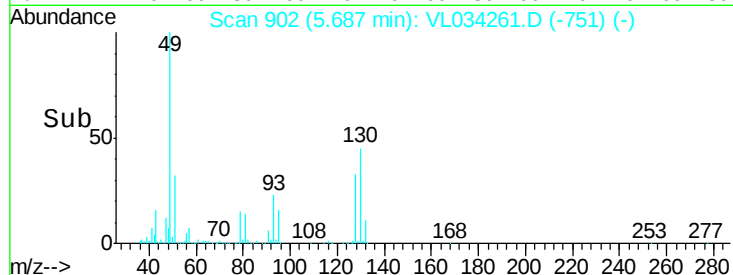
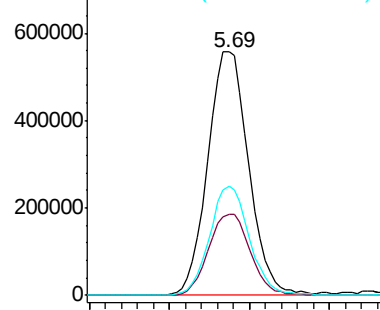
130 44.0 22.3 66.9



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



#2

Dichlorodifluoromethane

Concen: 2.426 ppbv

RT: 3.02 min Scan# 74

Delta R.T. -0.01 min

Lab File: VL034261.D

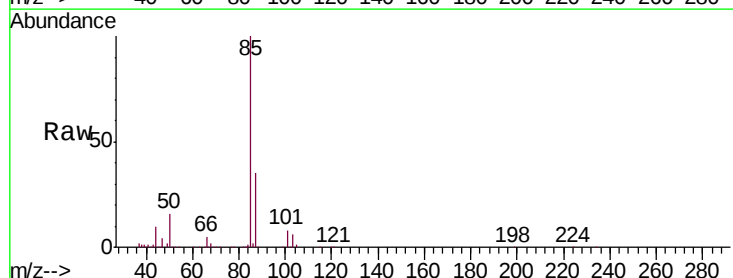
Acq: 8 Oct 2019 23:12

Tgt Ion: 85 Resp: 347663

Ion Ratio Lower Upper

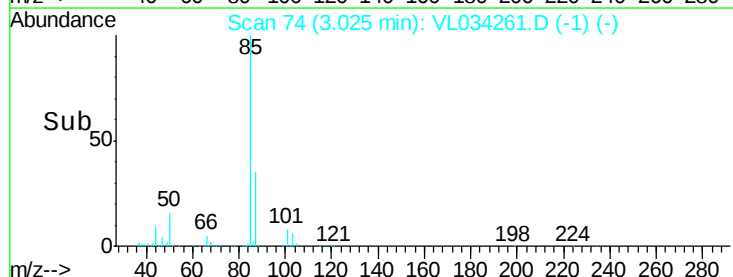
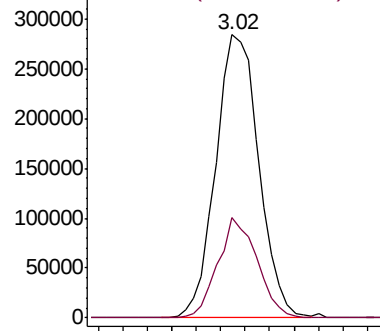
85 100

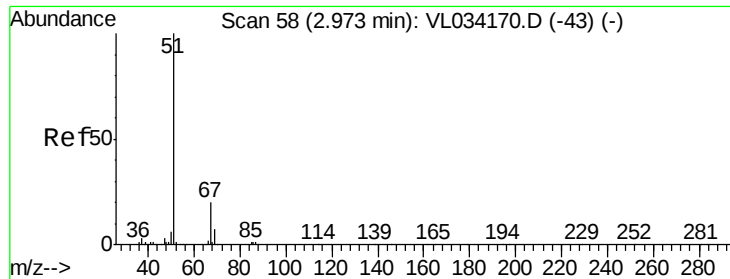
87 35.5 27.2 40.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.019 ppbv

RT: 2.94 min Scan# 48

Delta R.T. -0.03 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

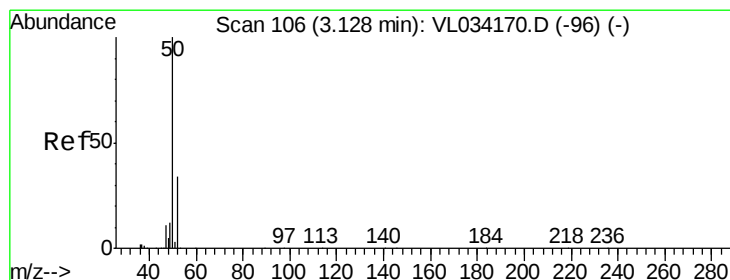
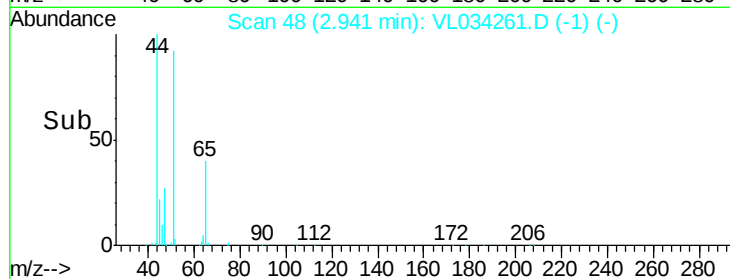
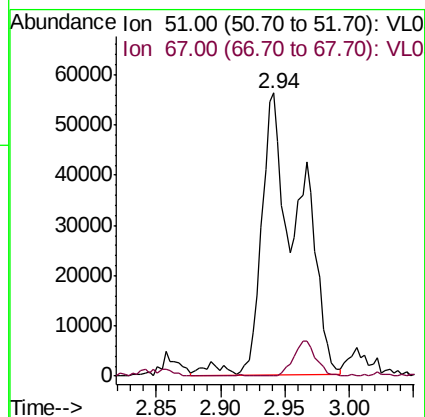
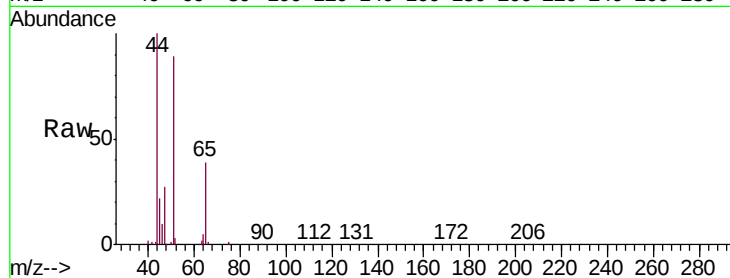
IA1

Tgt Ion: 51 Resp: 115933

Ion Ratio Lower Upper

51 100

67 7.3 14.8 22.2#



#4

Chloromethane

Concen: 0.311 ppbv

RT: 3.12 min Scan# 103

Delta R.T. -0.01 min

Lab File: VL034261.D

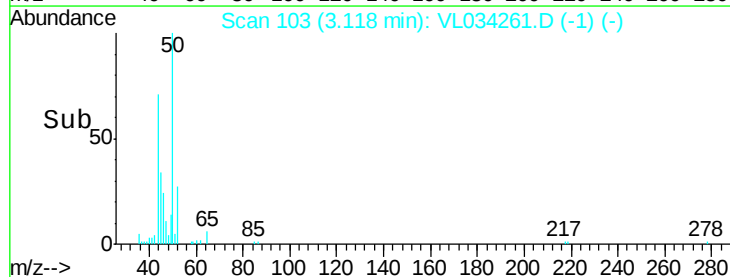
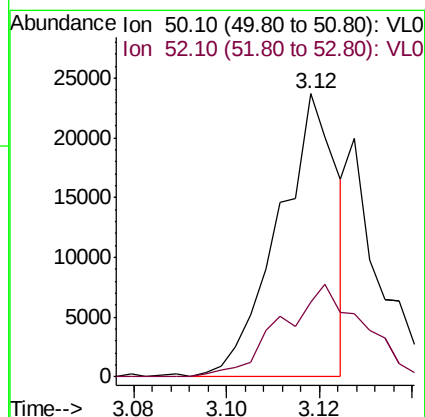
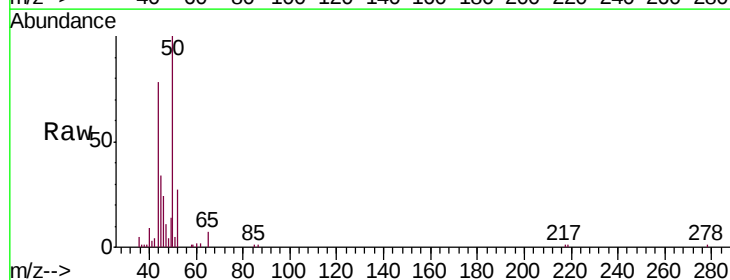
Acq: 8 Oct 2019 23:12

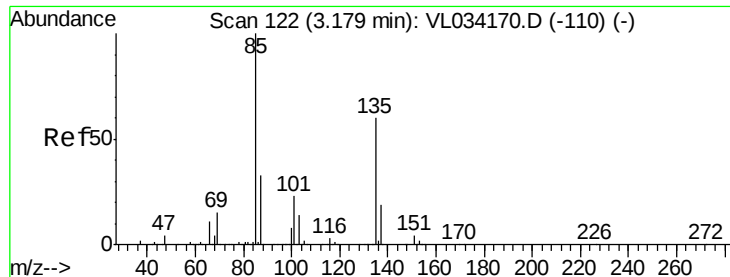
Tgt Ion: 50 Resp: 20816

Ion Ratio Lower Upper

50 100

52 26.6 27.1 40.7#





#8

Dichlorotetrafluoroethane

Concen: 2.749 ppbv

RT: 3.02 min Scan# 74

Delta R.T. -0.15 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

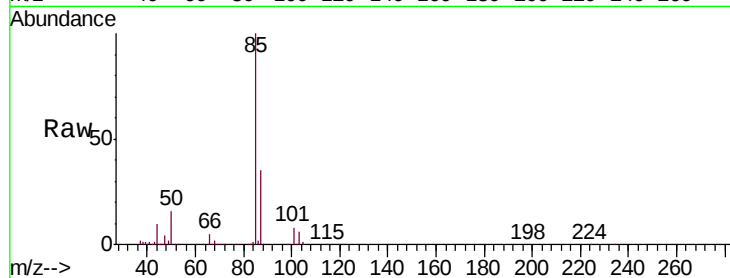
IA1

Tgt Ion: 85 Resp: 347663

Ion Ratio Lower Upper

85 100

135 0.3 47.3 70.9#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V

3.02

250000

200000

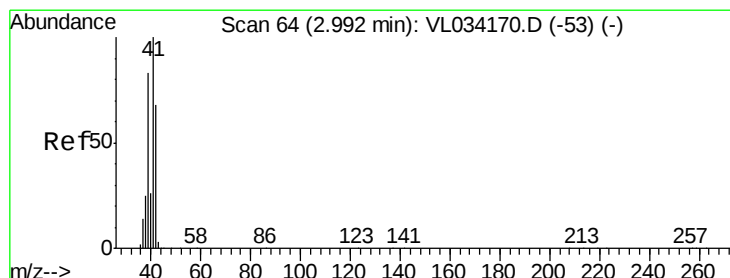
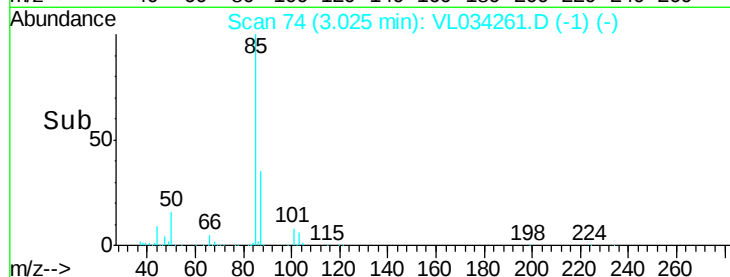
150000

100000

50000

0

Time-->



#9

Propene

Concen: 3.545 ppbv

RT: 3.19 min Scan# 124

Delta R.T. 0.19 min

Lab File: VL034261.D

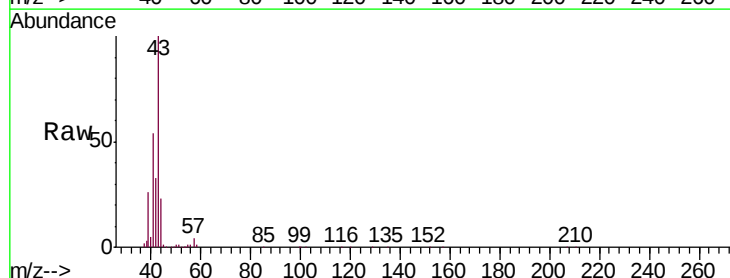
Acq: 8 Oct 2019 23:12

Tgt Ion: 41 Resp: 198918

Ion Ratio Lower Upper

41 100

42 66.1 55.8 83.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

3.19

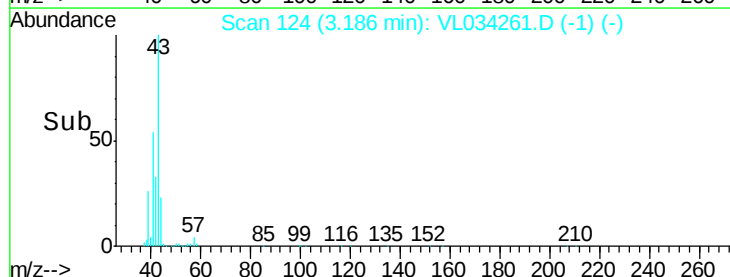
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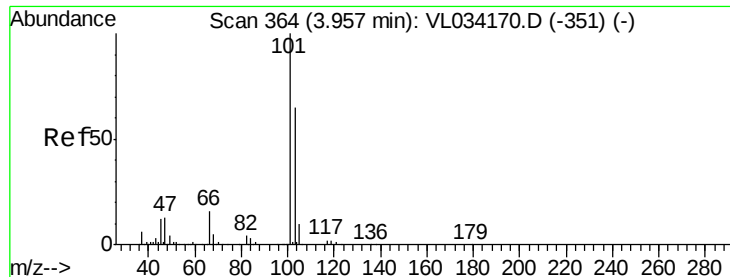
100000

50000

0

Time-->





#11

Trichlorofluoromethane

Concen: 0.371 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.01 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

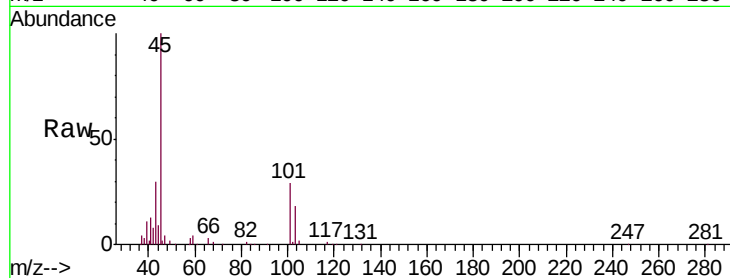
IA1

Tgt Ion:101 Resp: 48398

Ion Ratio Lower Upper

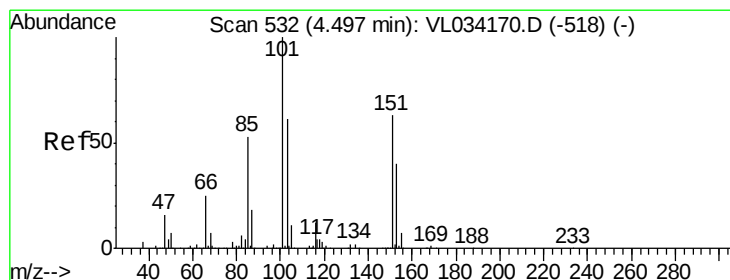
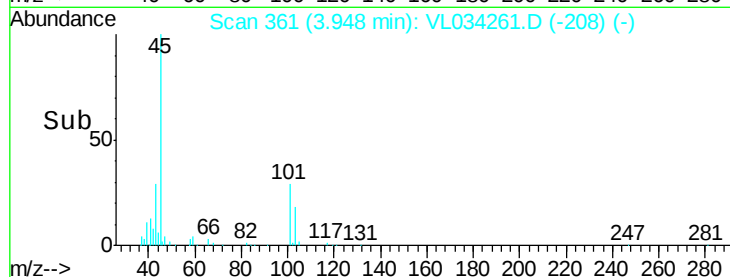
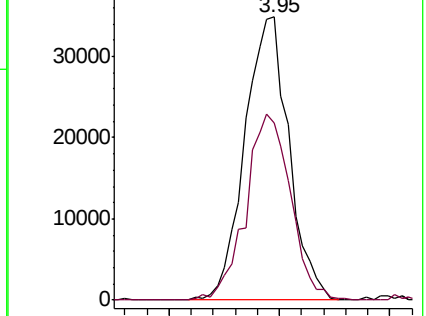
101 100

103 62.7 52.1 78.1



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.054 ppbv

RT: 4.49 min Scan# 529

Delta R.T. -0.01 min

Lab File: VL034261.D

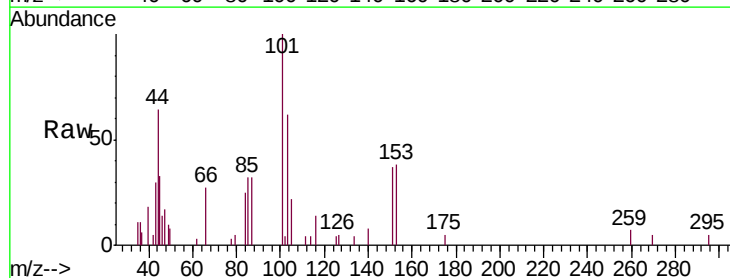
Acq: 8 Oct 2019 23:12

Tgt Ion:101 Resp: 4607

Ion Ratio Lower Upper

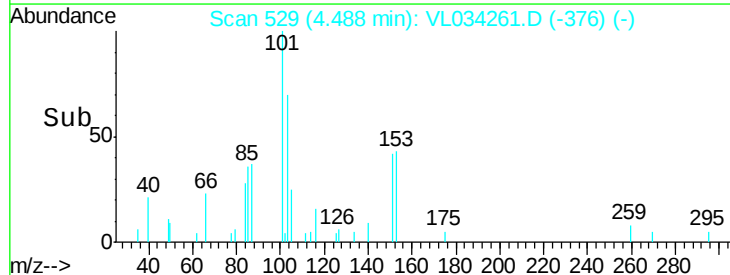
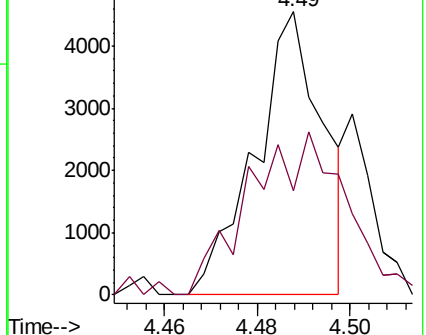
101 100

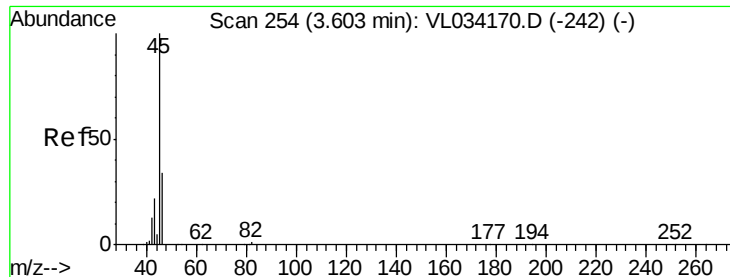
151 84.2 51.8 77.8#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

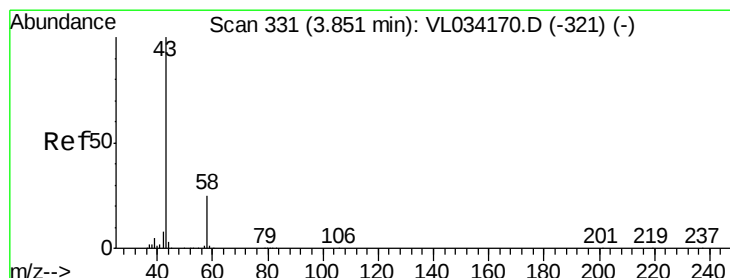
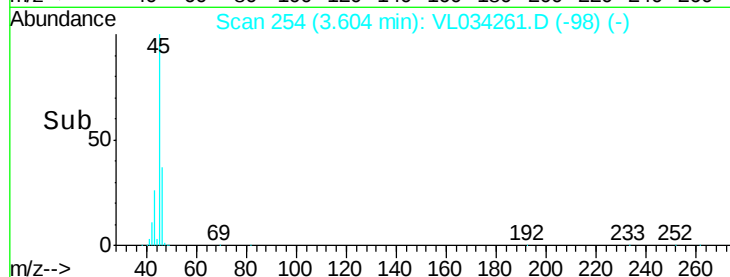
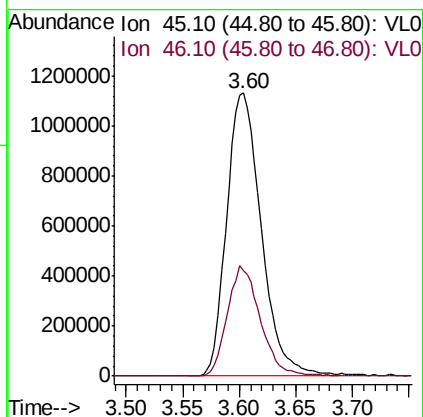
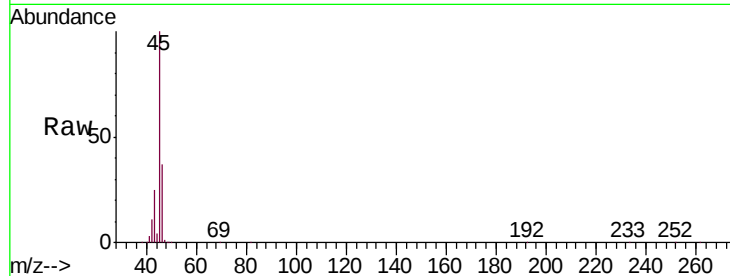




#13
Ethanol
Concen: 177.580 ppbv
RT: 3.60 min Scan# 254
Delta R.T. 0.00 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

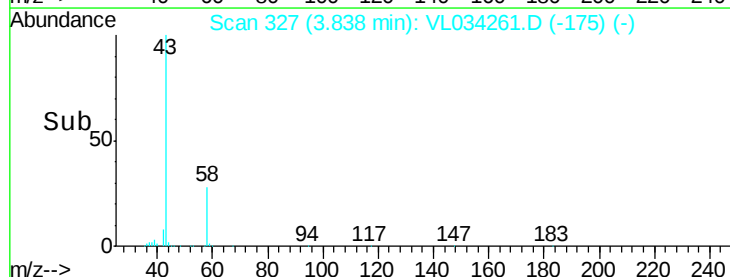
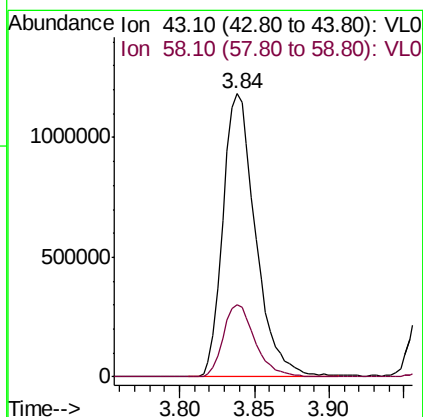
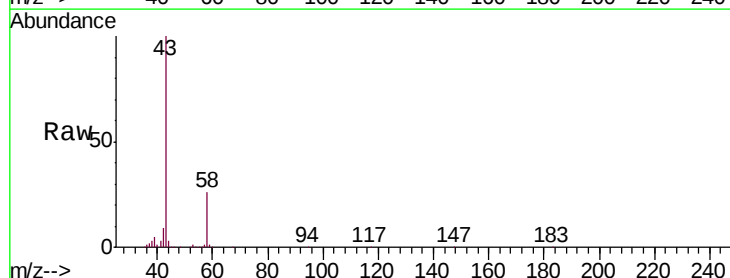
Instrument :
MSVOA_L
ClientSampleId :
IA1

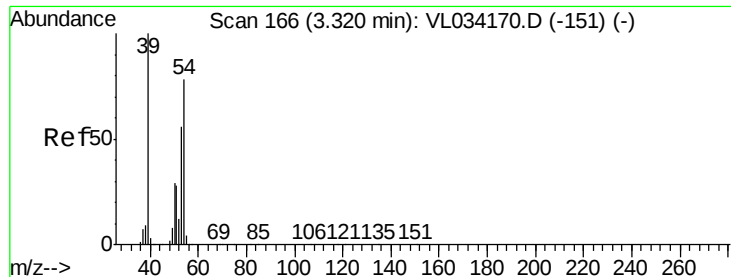
Tgt Ion: 45 Resp: 2412953
Ion Ratio Lower Upper
45 100
46 37.3 15.5 61.9



#15
Acetone
Concen: 13.818 ppbv
RT: 3.84 min Scan# 327
Delta R.T. -0.01 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

Tgt Ion: 43 Resp: 1796422
Ion Ratio Lower Upper
43 100
58 25.2 20.5 30.7

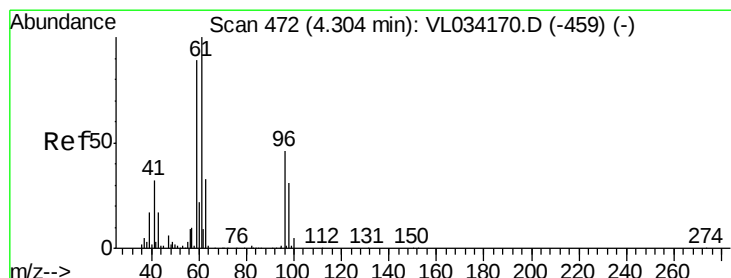
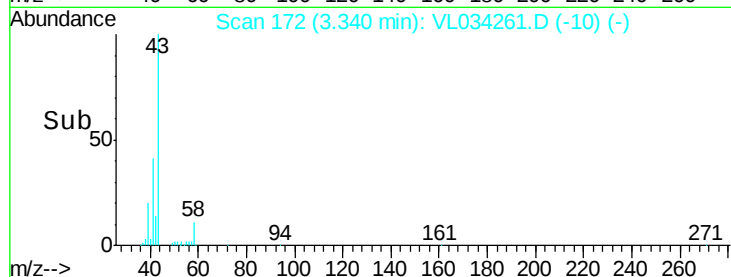
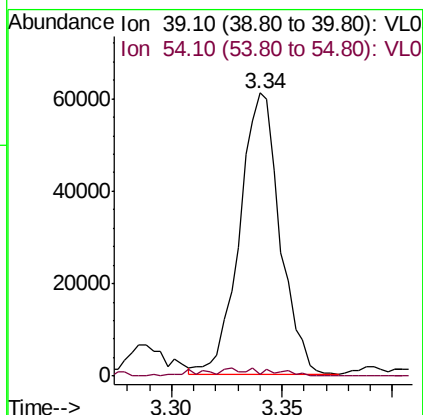
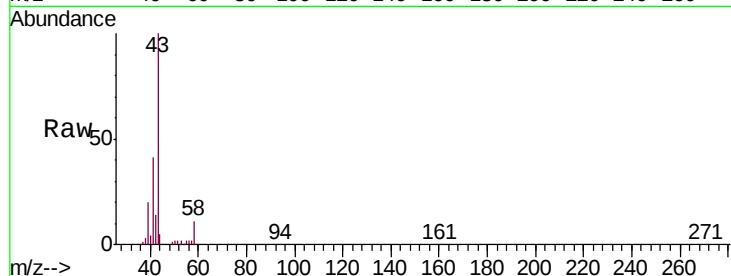




#16
 1,3-Butadiene
 Concen: 1.366 ppbv
 RT: 3.34 min Scan# 172
 Delta R.T. 0.02 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

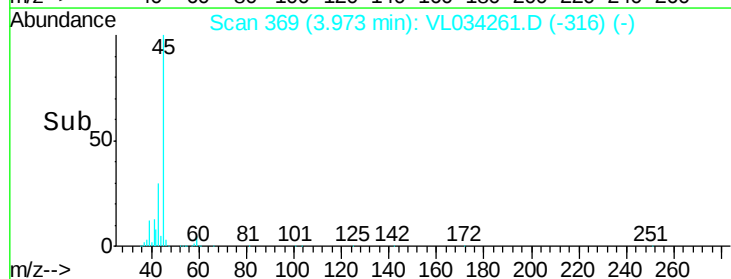
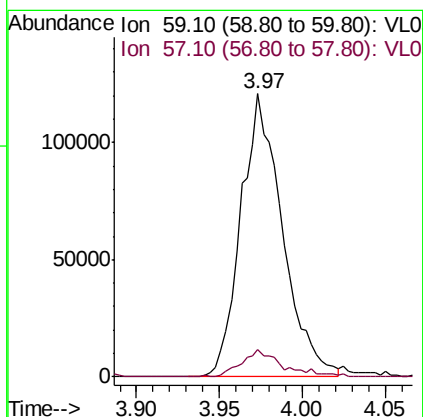
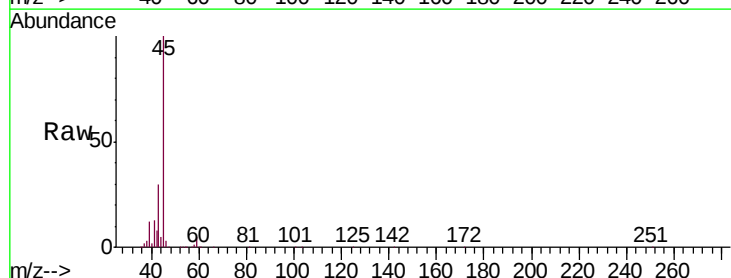
Instrument :
 MSVOA_L
 ClientSampled :
 IA1

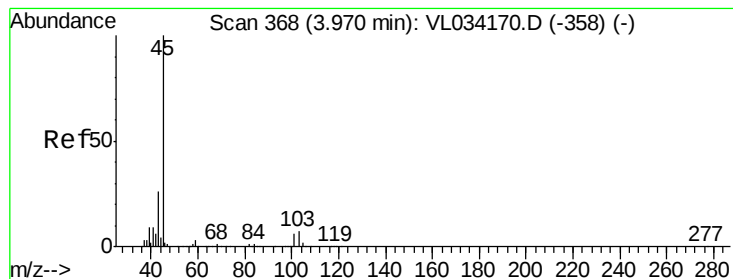
Tgt Ion: 39 Resp: 77494
 Ion Ratio Lower Upper
 39 100
 54 4.5 63.4 95.0#



#17
 tert-Butyl alcohol
 Concen: 2.558 ppbv
 RT: 3.97 min Scan# 369
 Delta R.T. -0.33 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

Tgt Ion: 59 Resp: 210757
 Ion Ratio Lower Upper
 59 100
 57 9.6 8.7 13.1



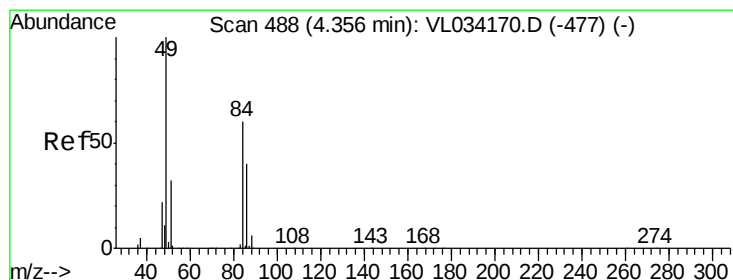
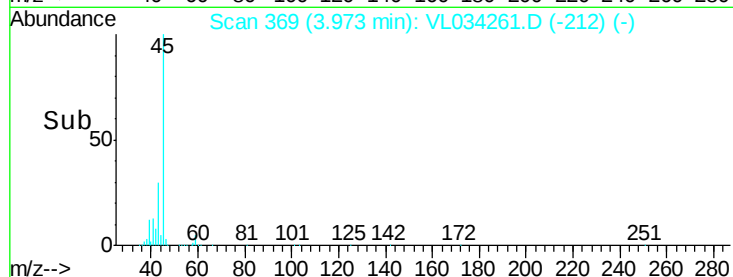
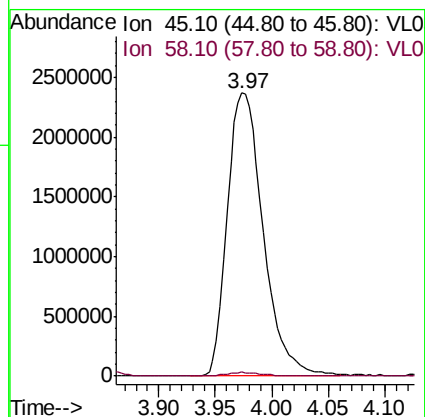
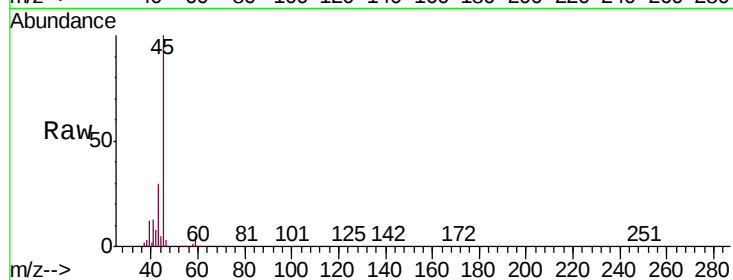


#19

Isopropyl Alcohol
 Concen: 65.379 ppbv
 RT: 3.97 min Scan# 369
 Delta R.T. 0.00 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

Instrument :
 MSVOA_L
 ClientSampled :
 IA1

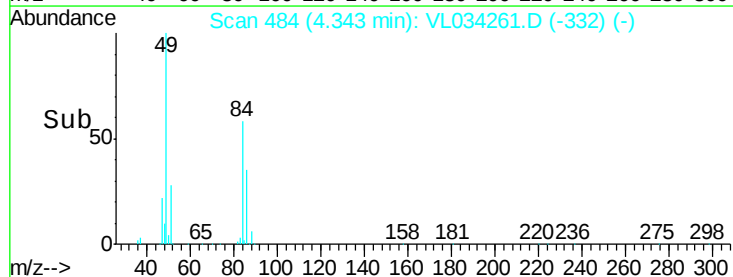
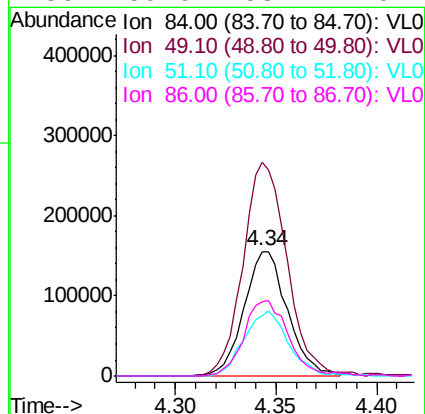
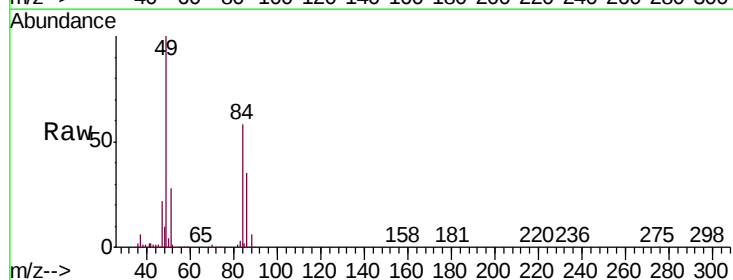
Tgt Ion: 45 Resp: 5226827
 Ion Ratio Lower Upper
 45 100
 58 1.4 1.4 2.0

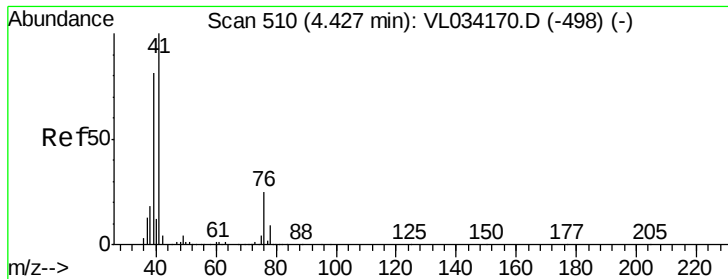


#20

Methylene Chloride
 Concen: 6.254 ppbv
 RT: 4.34 min Scan# 484
 Delta R.T. -0.01 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

Tgt Ion: 84 Resp: 234420
 Ion Ratio Lower Upper
 84 100
 49 170.8 133.8 200.8
 51 48.1 43.6 65.4
 86 59.6 53.1 79.7

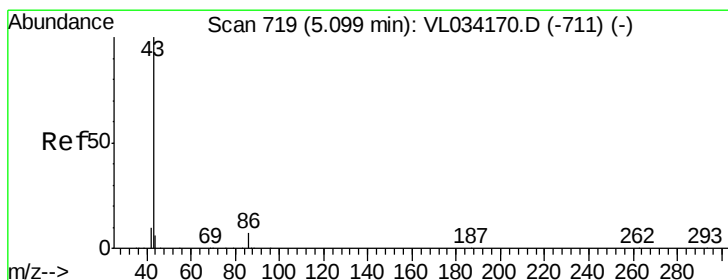
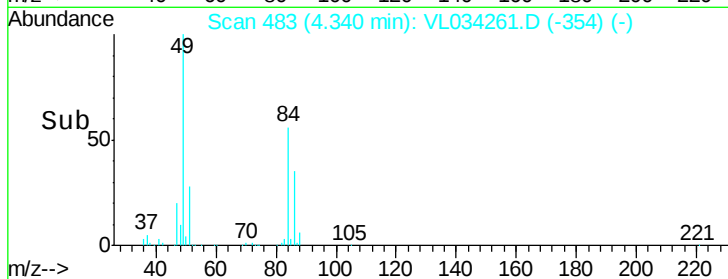
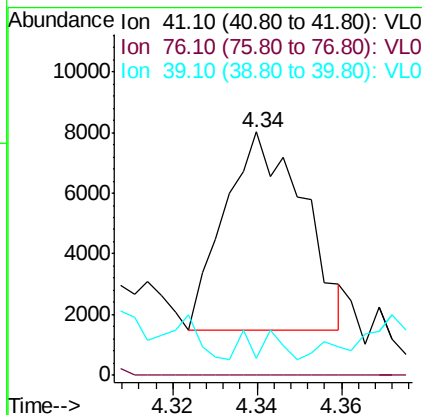
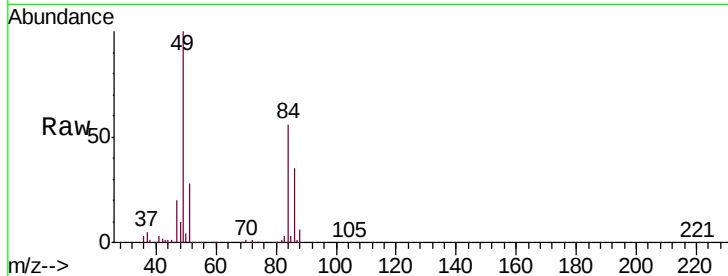




#21
 Allyl Chloride
 Concen: 0.115 ppbv
 RT: 4.34 min Scan# 483
 Delta R.T. -0.09 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

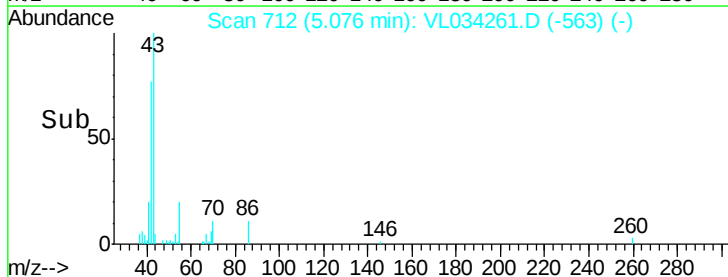
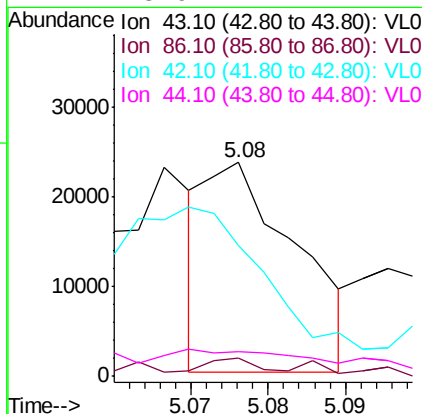
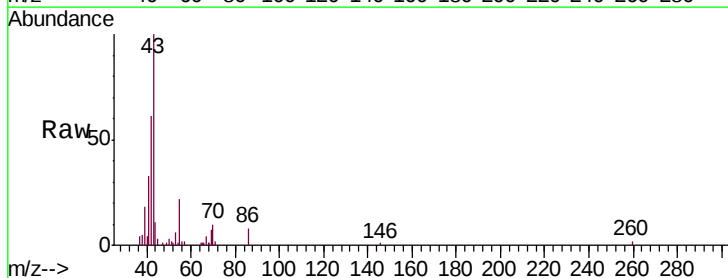
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

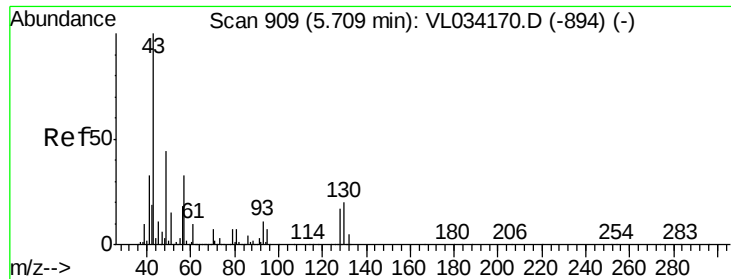
Tgt Ion: 41 Resp: 8465
 Ion Ratio Lower Upper
 41 100
 76 1.8 21.8 32.6#
 39 256.7 64.8 97.2#



#23
 Vinyl Acetate
 Concen: 0.100 ppbv
 RT: 5.08 min Scan# 712
 Delta R.T. -0.02 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

Tgt Ion: 43 Resp: 19124
 Ion Ratio Lower Upper
 43 100
 86 11.4 5.1 7.7#
 42 68.3 8.6 12.8#
 44 5.9 4.7 7.1





#25

Ethyl Acetate

Concen: 1.403 ppbv

RT: 5.70 min Scan# 906

Delta R.T. -0.01 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampled :

IA1

Tgt Ion: 43 Resp: 344914

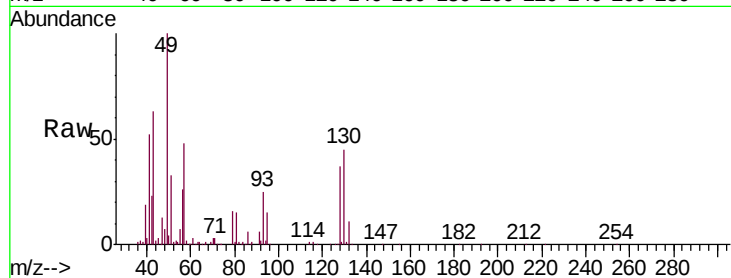
Ion Ratio Lower Upper

43 100

45 6.8 8.4 12.6#

61 5.1 7.2 10.8#

70 3.8 5.3 7.9#

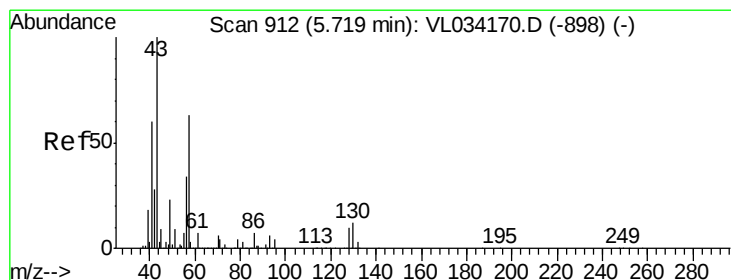
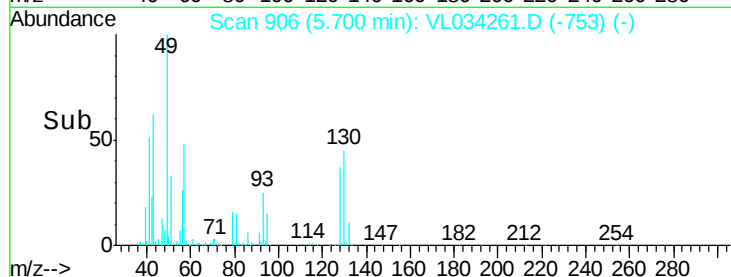
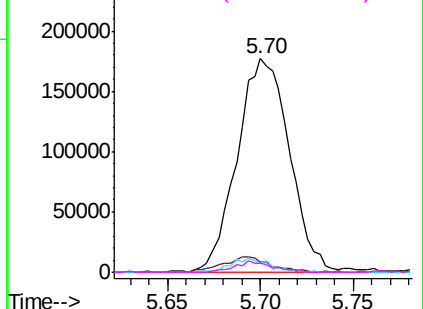


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 2.598 ppbv

RT: 5.71 min Scan# 908

Delta R.T. -0.01 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Tgt Ion: 57 Resp: 265718

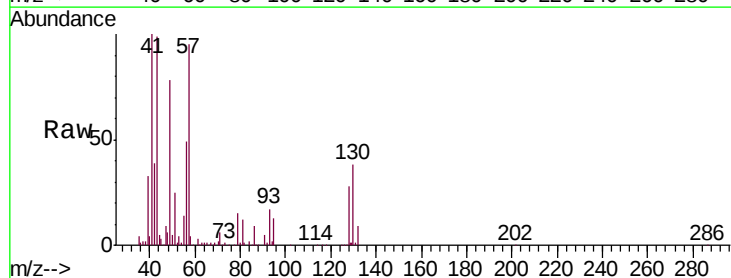
Ion Ratio Lower Upper

57 100

41 104.8 78.5 117.7

43 132.7 189.5 284.3#

56 57.4 43.2 64.8

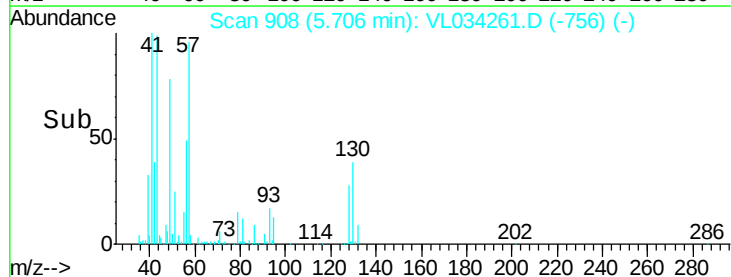
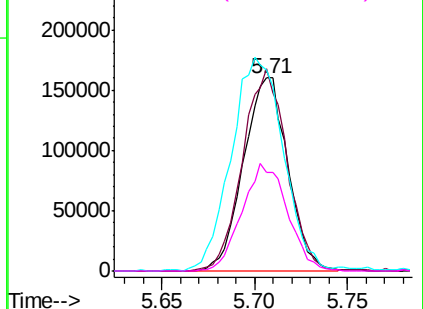


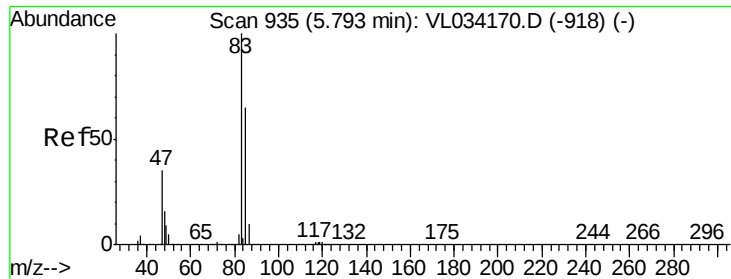
Abundance Ion 57.10 (56.80 to 57.80): VL0

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

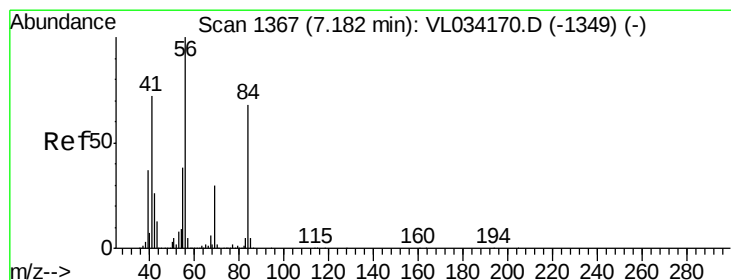
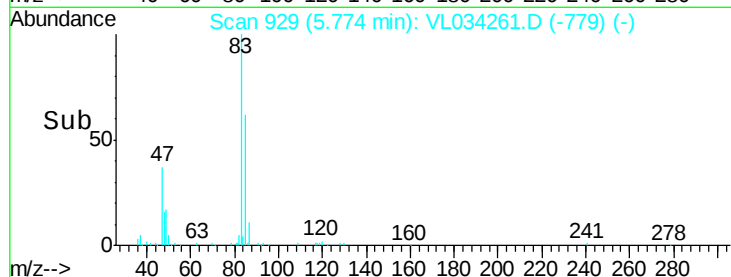
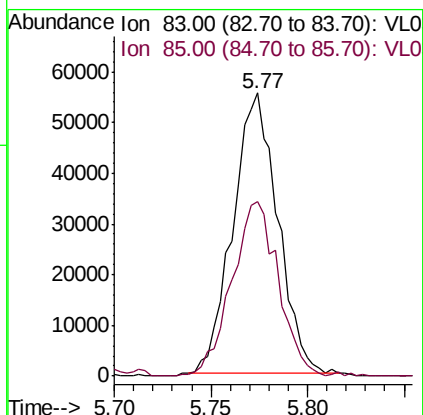
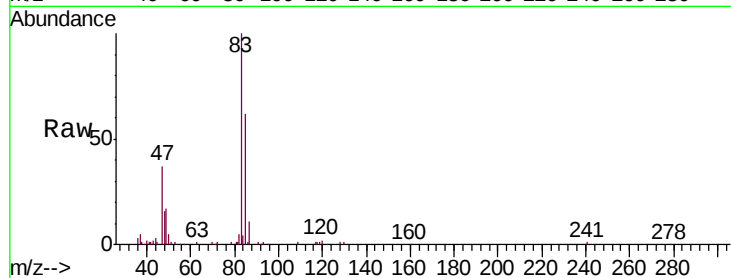




#29
Chloroform
Concen: 0.612 ppbv
RT: 5.77 min Scan# 929
Delta R.T. -0.02 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

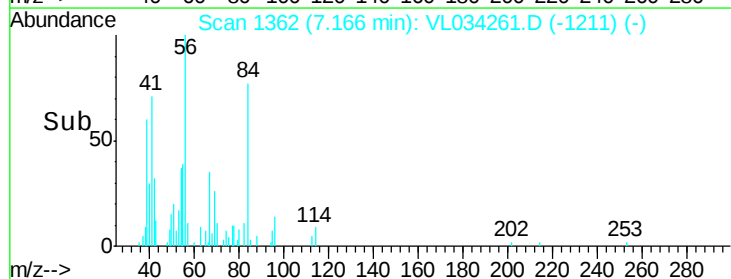
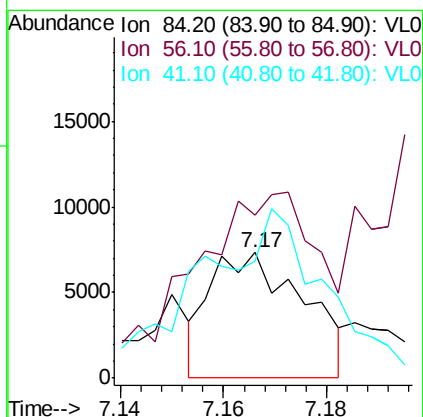
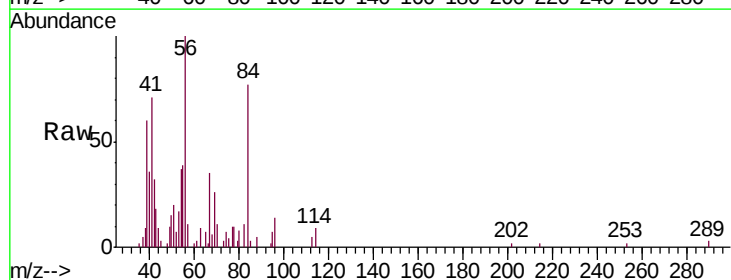
Instrument :
MSVOA_L
ClientSampleId :
IA1

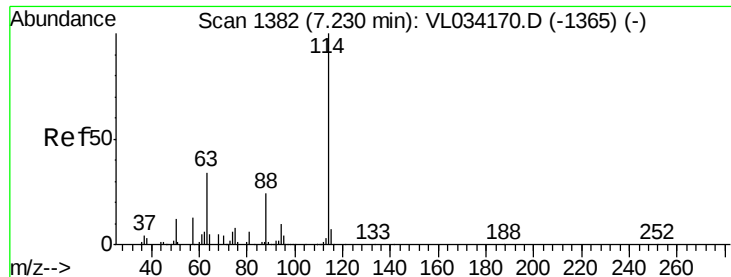
Tgt Ion: 83 Resp: 89422
Ion Ratio Lower Upper
83 100
85 61.7 52.3 78.5



#30
Cyclohexane
Concen: 0.124 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.02 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

Tgt Ion: 84 Resp: 9182
Ion Ratio Lower Upper
84 100
56 0.0 126.2 189.2#
41 197.4 85.8 128.8#

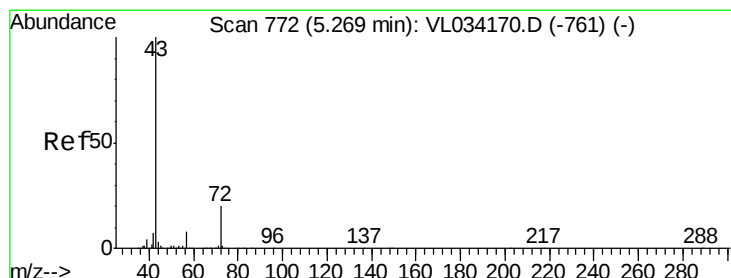
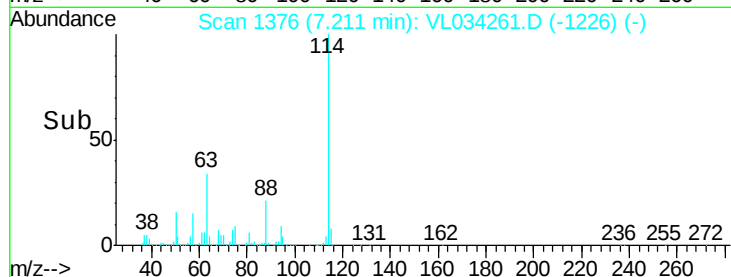
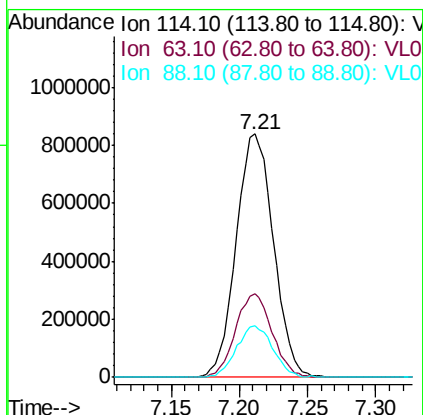
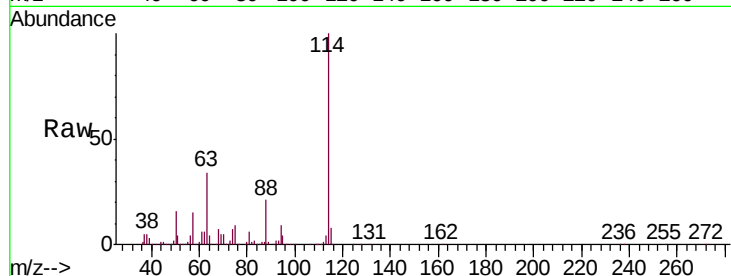




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. -0.02 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

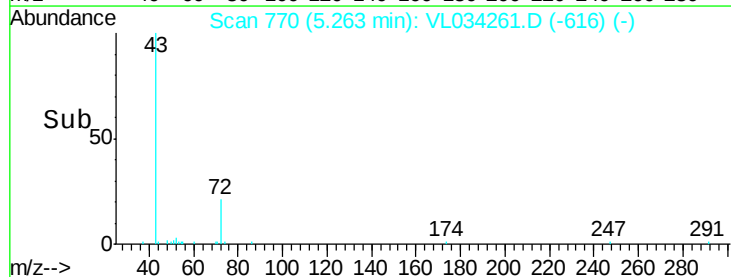
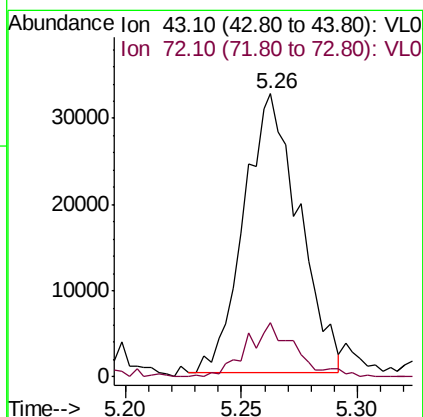
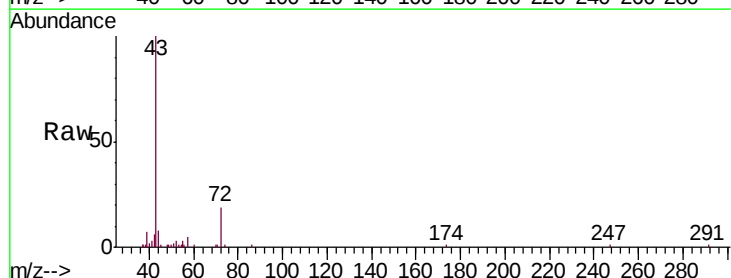
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

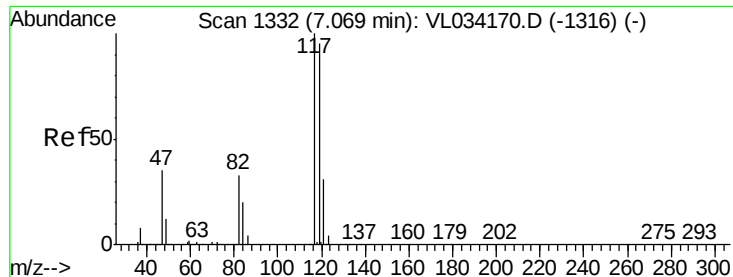
Tgt Ion:114 Resp: 1598080
 Ion Ratio Lower Upper
 114 100
 63 33.9 27.8 41.6
 88 20.7 17.1 25.7



#34
 2-Butanone
 Concen: 0.328 ppbv
 RT: 5.26 min Scan# 770
 Delta R.T. -0.01 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

Tgt Ion: 43 Resp: 53469
 Ion Ratio Lower Upper
 43 100
 72 17.2 15.0 22.6





#35

Carbon Tetrachloride

Concen: 0.036 ppbv

RT: 7.05 min Scan# 1326

Delta R.T. -0.02 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

IA1

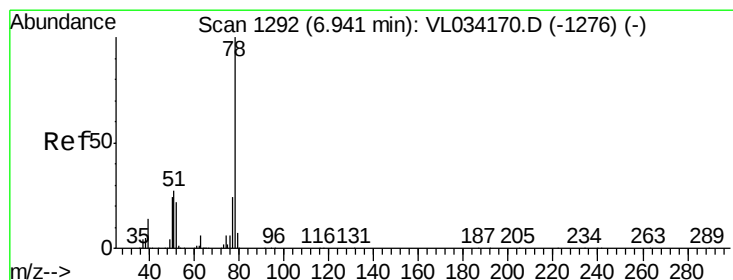
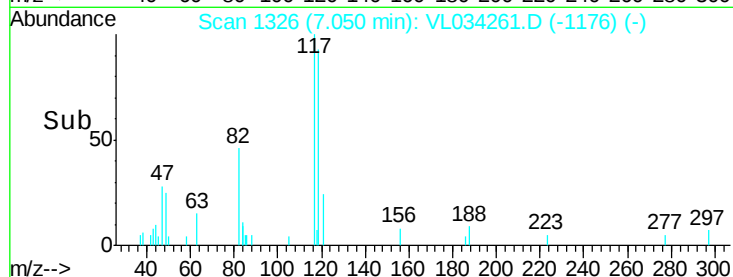
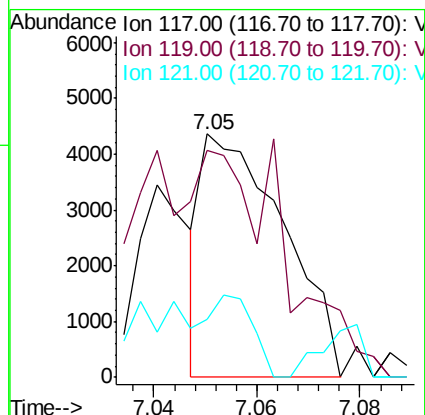
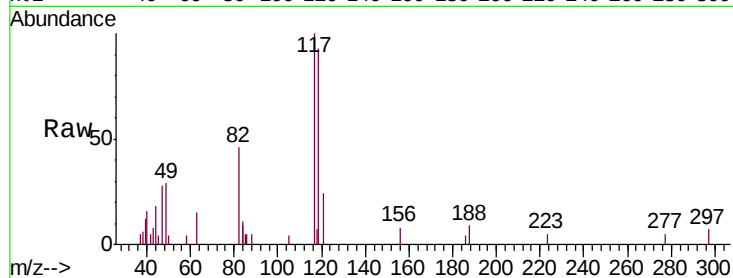
Tgt Ion:117 Resp: 4794

Ion Ratio Lower Upper

117 100

119 65.7 75.8 113.6#

121 4.7 25.0 37.6#



#36

Benzene

Concen: 0.101 ppbv

RT: 6.92 min Scan# 1286

Delta R.T. -0.02 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

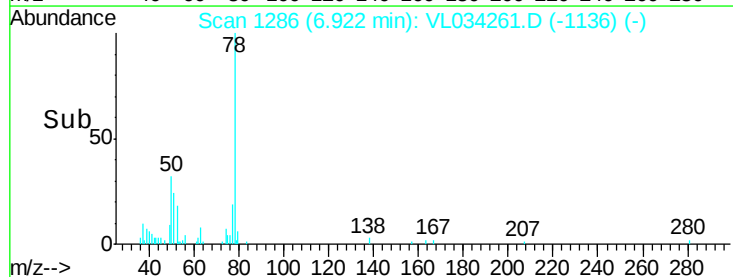
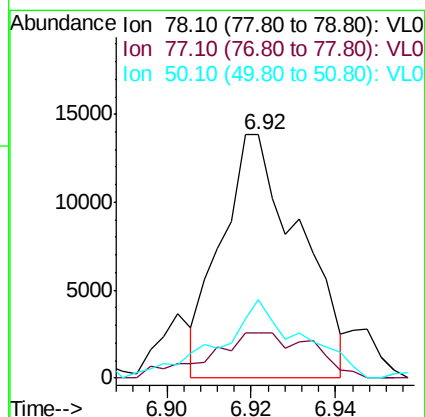
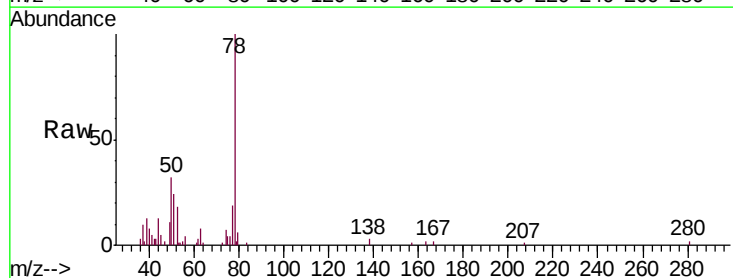
Tgt Ion: 78 Resp: 17779

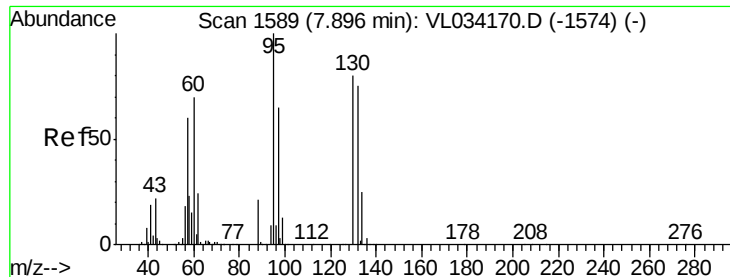
Ion Ratio Lower Upper

78 100

77 18.2 19.0 28.4#

50 26.2 18.9 28.3





#38

Trichloroethene

Concen: 0.174 ppbv

RT: 7.88 min Scan# 1583

Delta R.T. -0.02 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

IA1

Tgt Ion:130 Resp: 10945

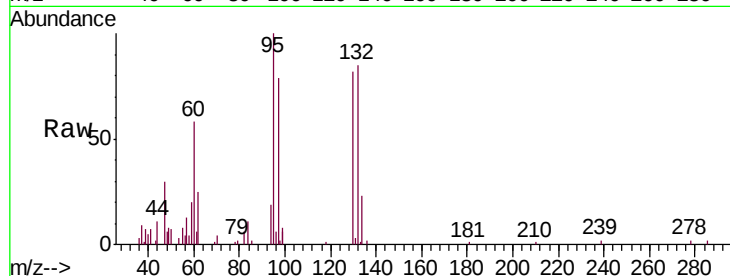
Ion Ratio Lower Upper

130 100

95 121.4 99.8 149.6

132 107.2 75.2 112.8

97 92.0 65.0 97.4

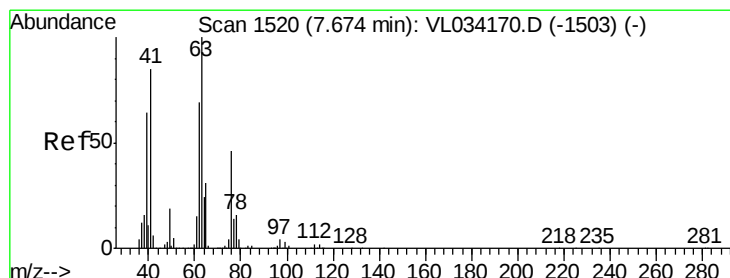
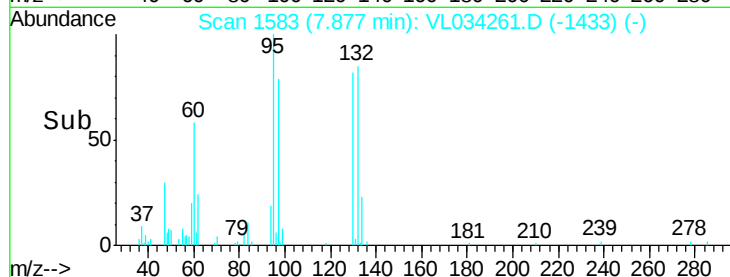
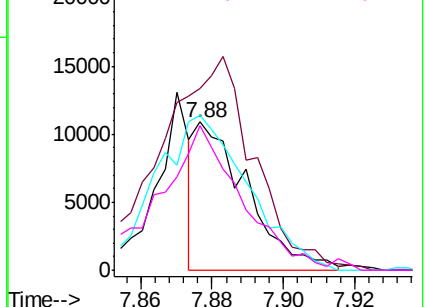


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 6.715 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. -0.46 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

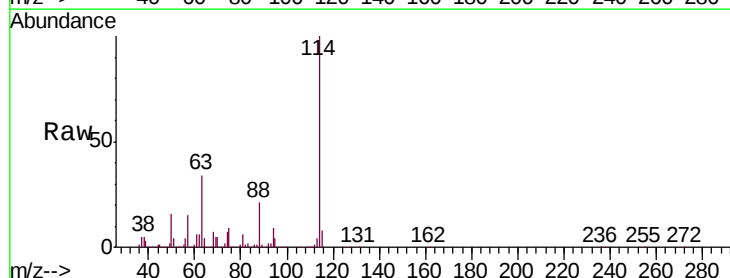
Tgt Ion: 63 Resp: 532502

Ion Ratio Lower Upper

63 100

41 0.0 68.4 102.6#

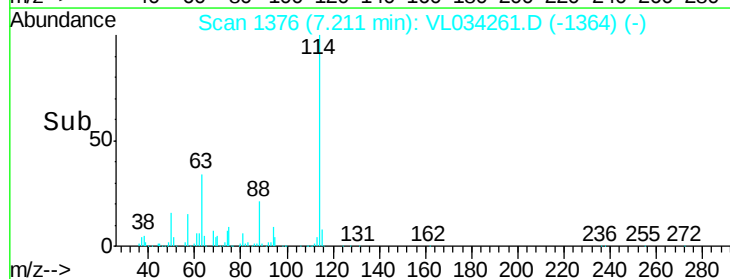
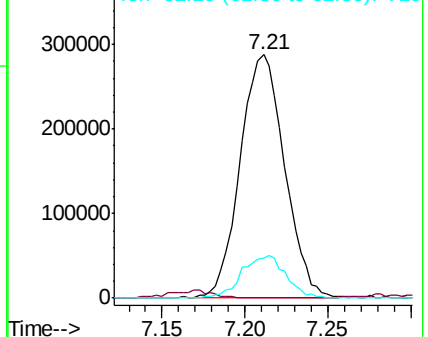
62 16.5 55.4 83.2#

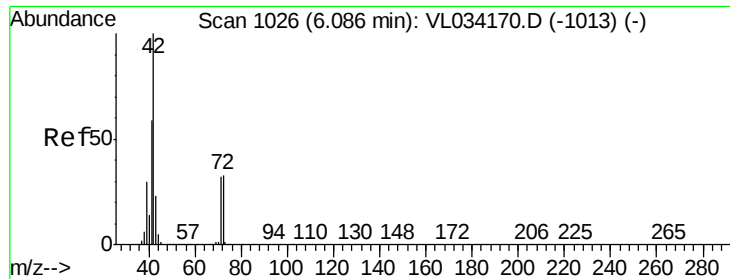


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

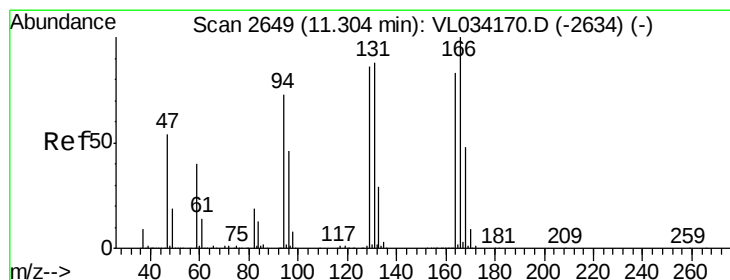
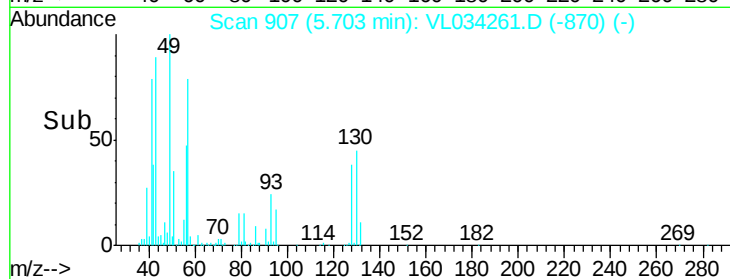
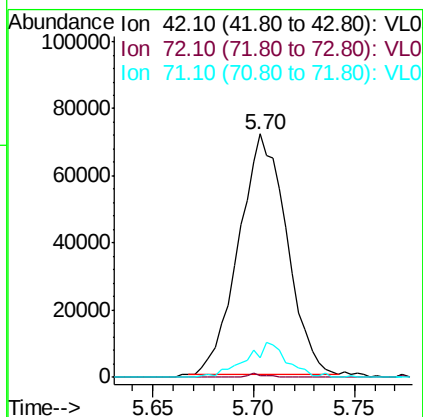
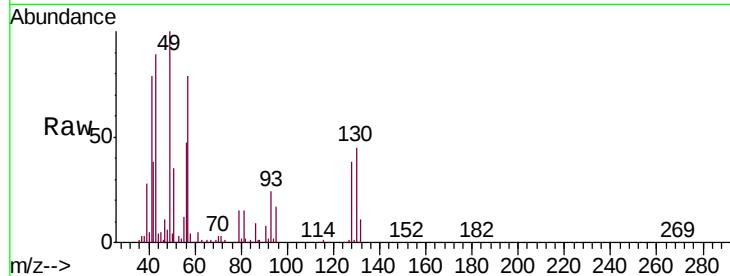




#41
Tetrahydrofuran
Concen: 1.297 ppbv
RT: 5.70 min Scan# 907
Delta R.T. -0.38 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

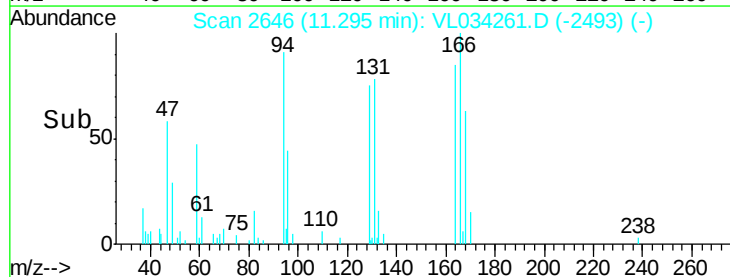
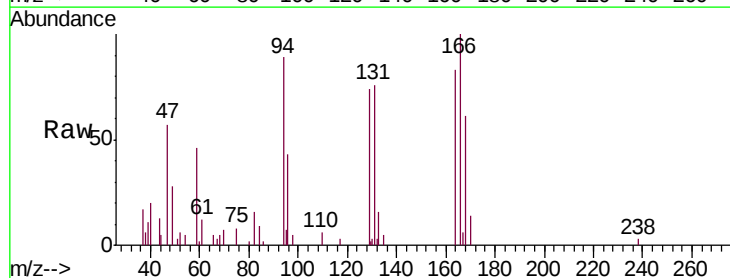
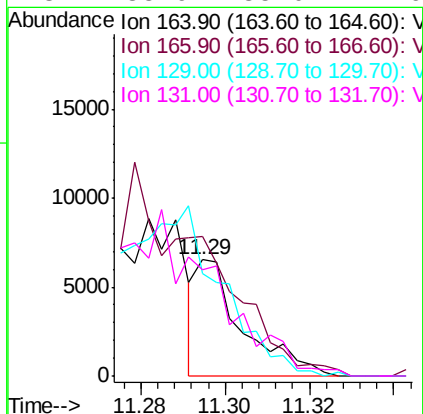
Instrument :
MSVOA_L
ClientSampleId :
IA1

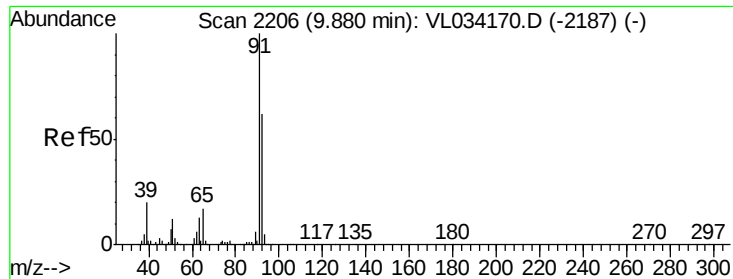
Tgt Ion: 42 Resp: 119183
Ion Ratio Lower Upper
42 100
72 0.6 26.6 40.0#
71 12.7 25.1 37.7#



#52
Tetrachloroethene
Concen: 0.084 ppbv
RT: 11.29 min Scan# 2646
Delta R.T. -0.01 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

Tgt Ion: 164 Resp: 4898
Ion Ratio Lower Upper
164 100
166 114.9 96.7 145.1
129 87.9 82.8 124.2
131 85.9 85.0 127.6





#53

Toluene

Concen: 0.510 ppbv

RT: 9.86 min Scan# 2201

Delta R.T. -0.02 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

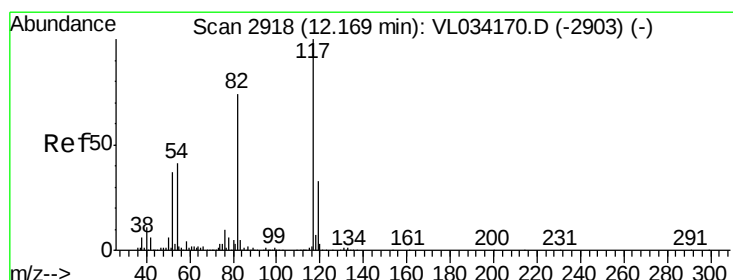
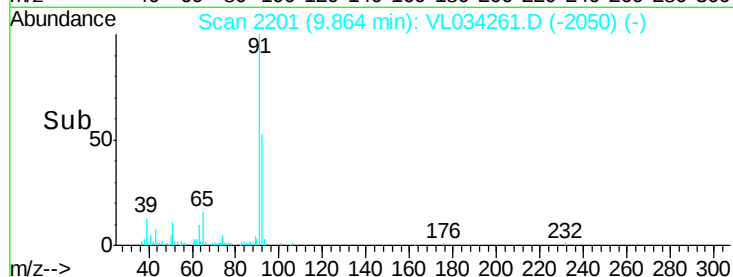
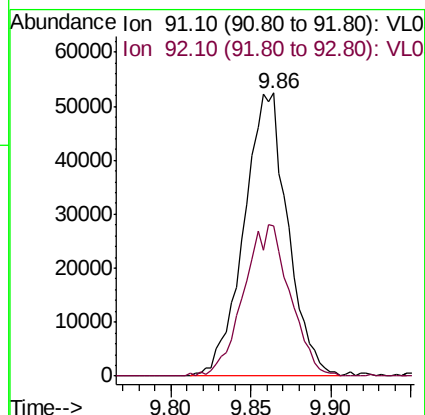
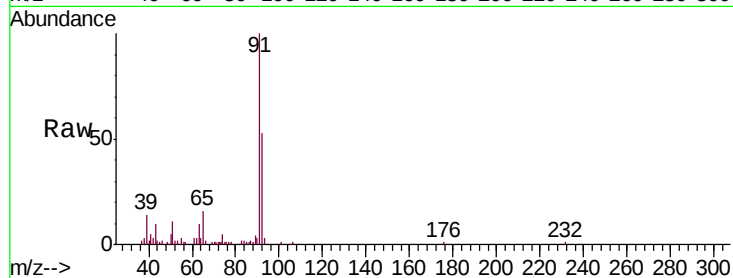
IA1

Tgt Ion: 91 Resp: 98465

Ion Ratio Lower Upper

91 100

92 56.6 49.0 73.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2912

Delta R.T. -0.02 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

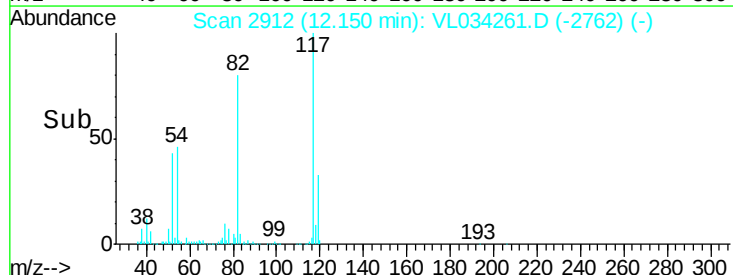
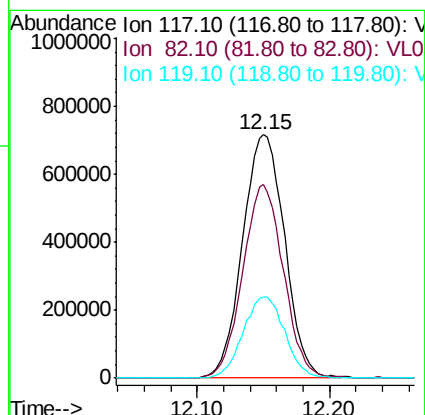
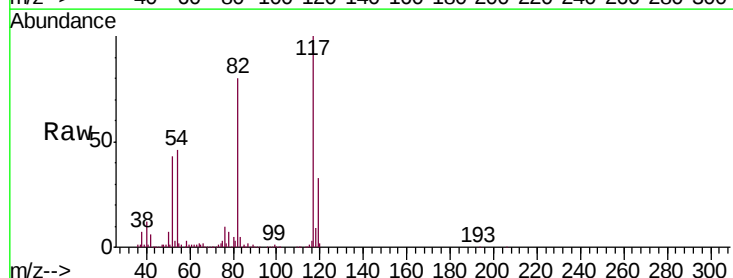
Tgt Ion: 117 Resp: 1582269

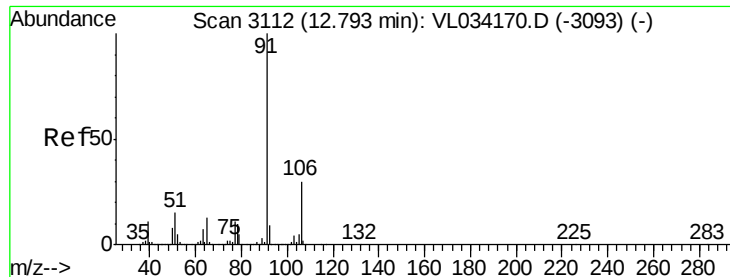
Ion Ratio Lower Upper

117 100

82 76.9 58.2 87.4

119 33.2 23.7 35.5





#58

Ethyl Benzene

Concen: 0.142 ppbv

RT: 13.03 min Scan# 3187

Delta R.T. 0.24 min

Lab File: VL034261.D

Acq: 8 Oct 2019 23:12

Instrument :

MSVOA_L

ClientSampleId :

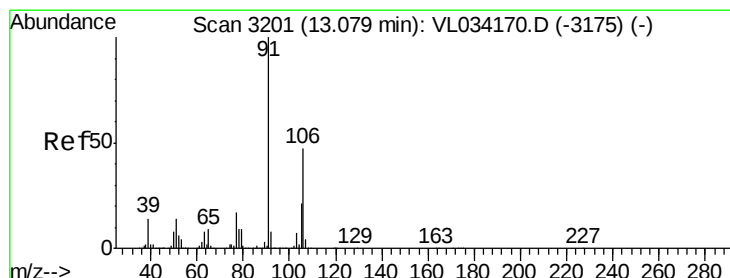
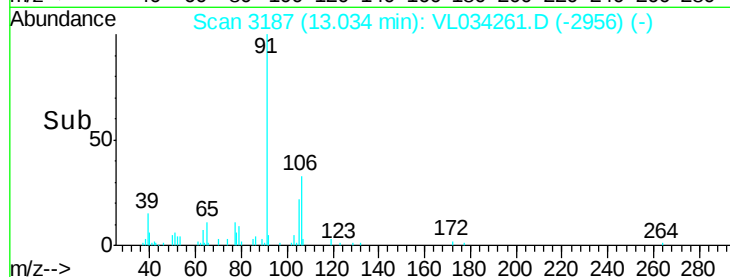
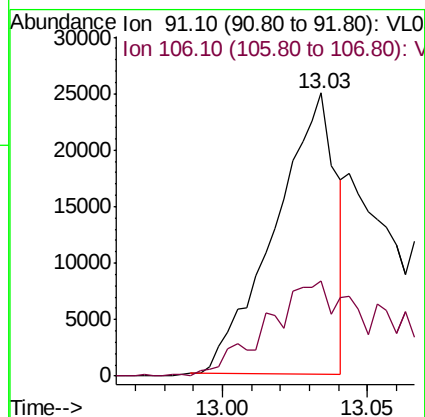
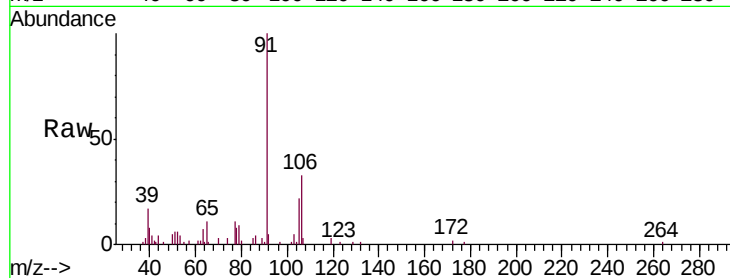
IA1

Tgt Ion: 91 Resp: 36334

Ion Ratio Lower Upper

91 100

106 33.8 24.2 36.4



#59

m/p-Xylene

Concen: 0.043 ppbv

RT: 13.07 min Scan# 3197

Delta R.T. -0.01 min

Lab File: VL034261.D

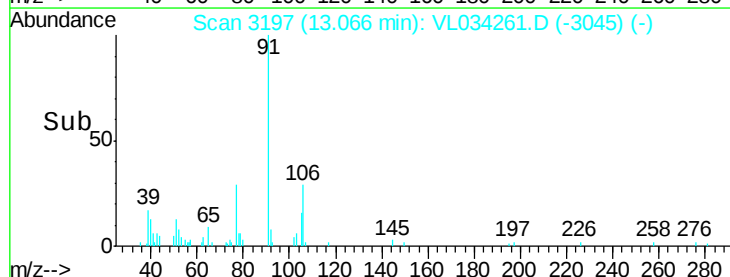
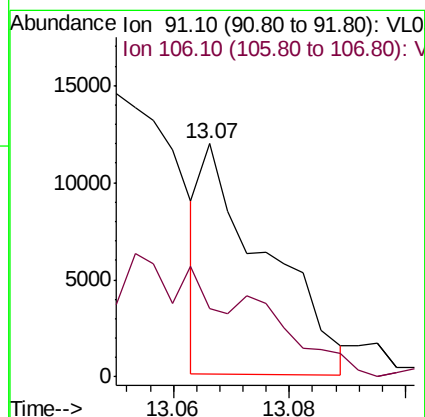
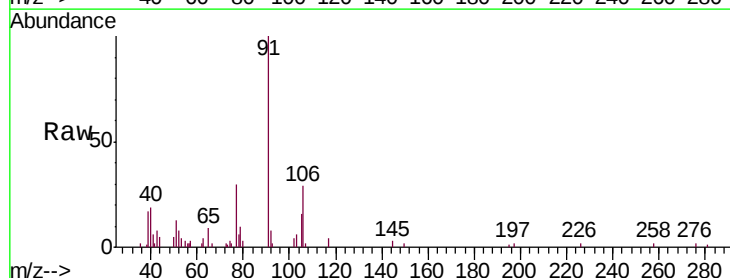
Acq: 8 Oct 2019 23:12

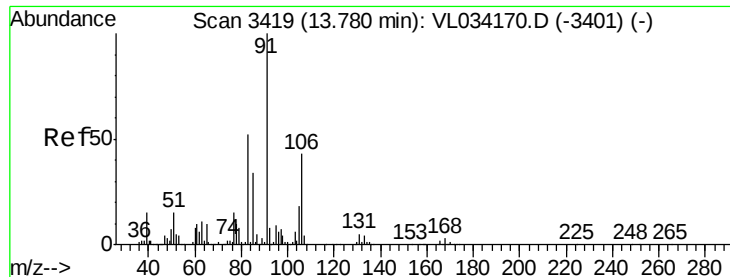
Tgt Ion: 91 Resp: 9164

Ion Ratio Lower Upper

91 100

106 0.0 35.5 53.3#

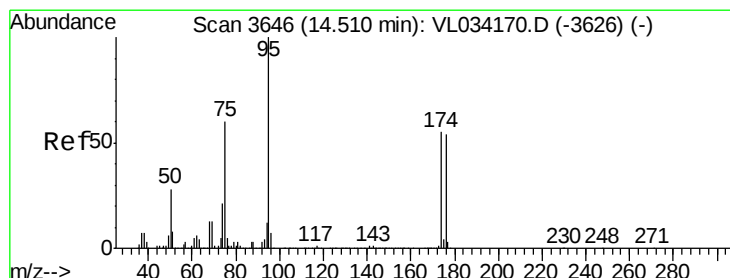
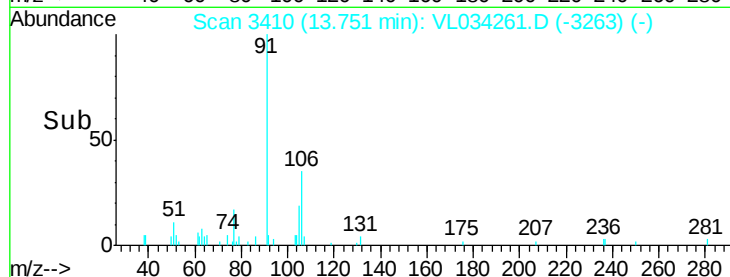
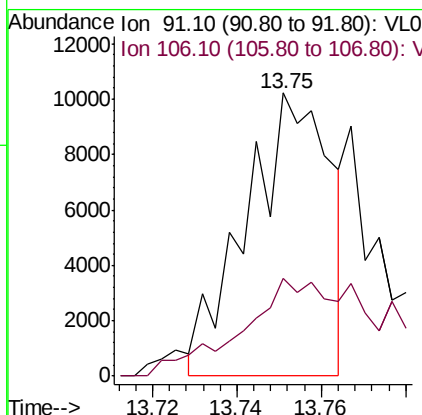
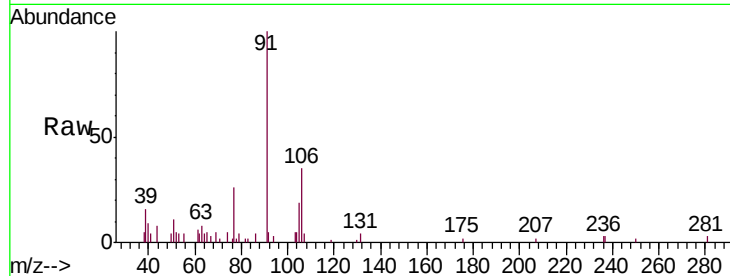




#60
o-Xylene
Concen: 0.067 ppbv
RT: 13.75 min Scan# 3410
Delta R.T. -0.03 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

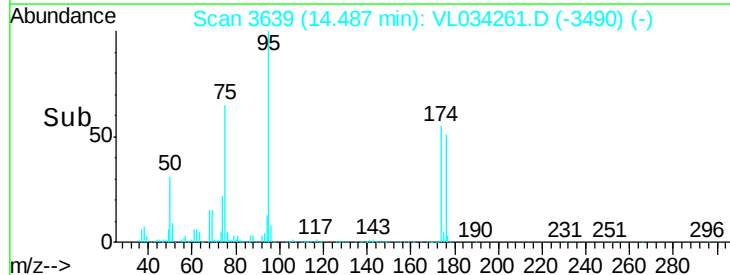
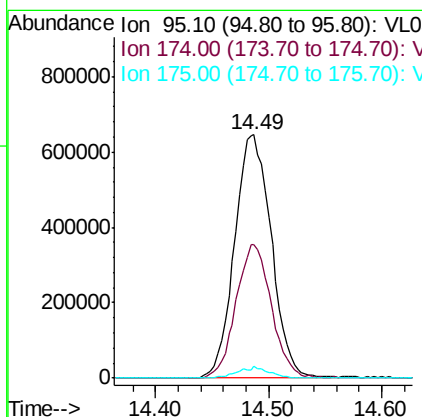
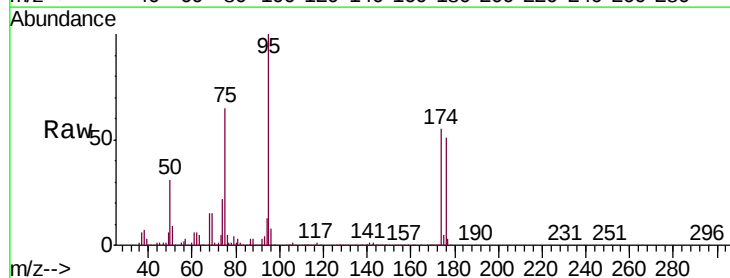
Instrument :
MSVOA_L
ClientSampled :
IA1

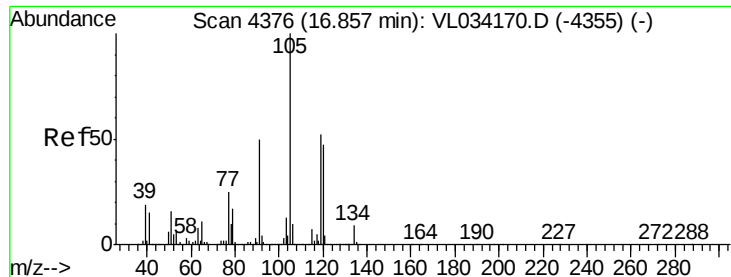
Tgt Ion: 91 Resp: 14071
Ion Ratio Lower Upper
91 100
106 57.5 21.2 63.6



#68
1-Bromo-4-Fluorobenzene
Concen: 10.631 ppbv
RT: 14.49 min Scan# 3639
Delta R.T. -0.02 min
Lab File: VL034261.D
Acq: 8 Oct 2019 23:12

Tgt Ion: 95 Resp: 1461630
Ion Ratio Lower Upper
95 100
174 53.0 45.1 67.7
175 3.9 3.3 4.9





#74
 1,2,4-Trimethylbenzene
 Concen: 0.213 ppbv
 RT: 16.84 min Scan# 4370
 Delta R.T. -0.02 min
 Lab File: VL034261.D
 Acq: 8 Oct 2019 23:12

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Tgt Ion:	105	Resp:	52163
Ion Ratio	Lower	Upper	
105	100		
120	36.4	37.5	56.3#
91	9.0	41.1	61.7#
77	13.8	19.9	29.9#

