

Data File : VL034826.D
Acq On : 6 Mar 2020 22:29
Operator : SY/AP
Sample : L1698-04DL2 600X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
SS-4-4DL2

Quant Time: Mar 07 03:19:05 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL030420AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Mar 04 06:36:39 2020
QLast Update : Wed Mar 04 06:36:39 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	898438	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.19	114	2136803	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.12	117	2078584	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.46	95	1680181	9.69	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.90%

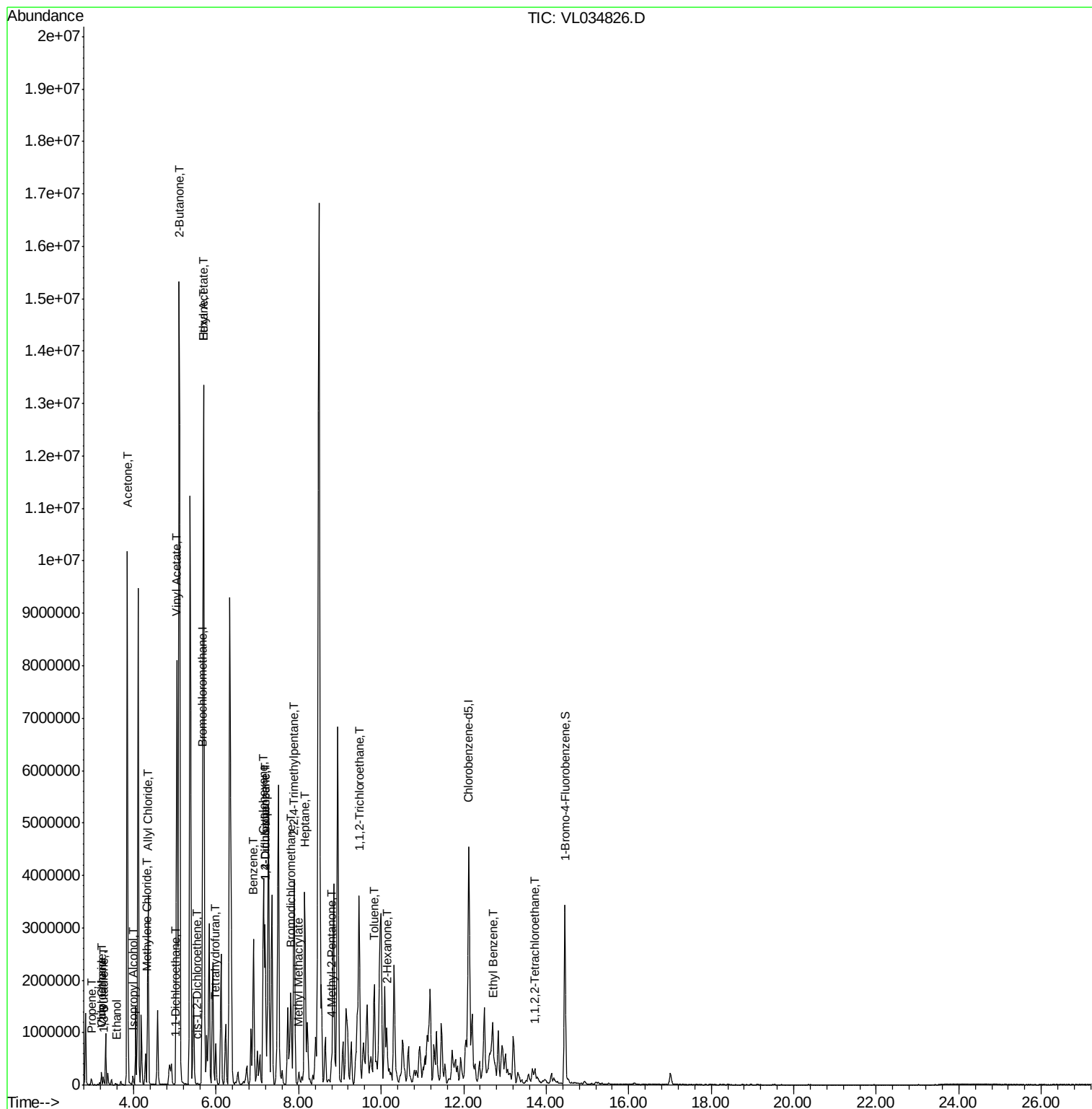
Target Compounds						Qvalue
5) Vinyl Chloride	3.22	62	185208	3.180	ppbv	99
7) Chloroethane	3.22	64	57190	2.840	ppbv #	44
9) Propene	2.97	41	47351	1.175	ppbv	90
10) Heptane	8.15	43	1752902	17.119	ppbv	98
13) Ethanol	3.58	45	879	0.064	ppbv #	38
15) Acetone	3.84	43	3577452	33.252	ppbv #	55
16) 1,3-Butadiene	3.27	39	37944	0.779	ppbv #	15
19) Isopropyl Alcohol	3.98	45	11874	0.184	ppbv #	93
20) Methylene Chloride	4.32	84	5592	0.146	ppbv #	50
21) Allyl Chloride	4.35	41	626306	9.193	ppbv #	60
23) Vinyl Acetate	5.05	43	3554745	24.640	ppbv #	1
24) 1,1-Dichloroethane	5.00	63	3737	0.033	ppbv #	88
25) Ethyl Acetate	5.69	43	4504719	24.230	ppbv #	76
26) Hexane	5.69	57	5976280	73.581	ppbv #	42
30) Cyclohexane	7.15	84	1386621	22.316	ppbv	98
31) cis-1,2-Dichloroethene	5.54	61	9382	0.113	ppbv #	82
34) 2-Butanone	5.11	43	8683952	62.468	ppbv #	59
36) Benzene	6.90	78	1971244	10.796	ppbv	98
39) 1,2-Dichloropropane	7.19	63	542757	7.366	ppbv #	22
41) Tetrahydrofuran	5.98	42	105635	1.489	ppbv #	36
42) Bromodichloromethane	7.82	83	313144	1.984	ppbv #	26
43) Methyl Methacrylate	8.00	69	106041	1.371	ppbv #	47
44) 2,2,4-Trimethylpentane	7.89	57	2654400	8.319	ppbv #	65
47) 1,1,2-Trichloroethane	9.46	97	148748	1.912	ppbv #	1
50) 4-Methyl-2-Pentanone	8.78	43	8335	0.042	ppbv #	39
51) 2-Hexanone	10.13	43	218700	1.400	ppbv #	29
53) Toluene	9.83	91	564937	2.923	ppbv	98
58) Ethyl Benzene	12.73	91	9929	0.039	ppbv	94
63) 1,1,2,2-Tetrachloroethane	13.72	83	33748	0.191	ppbv #	24

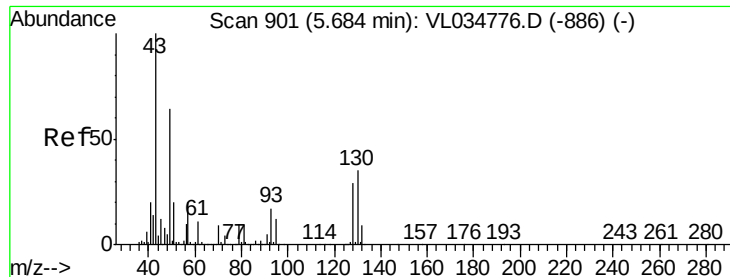
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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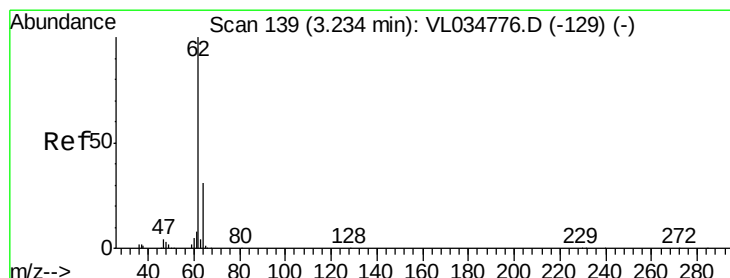
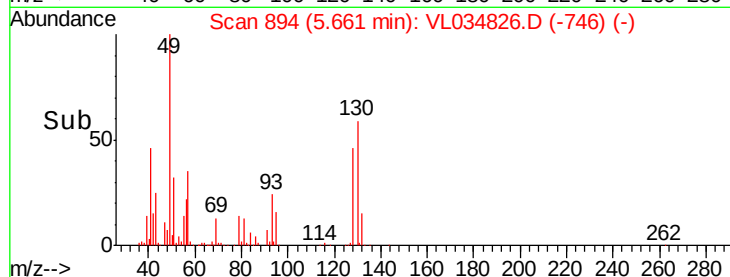
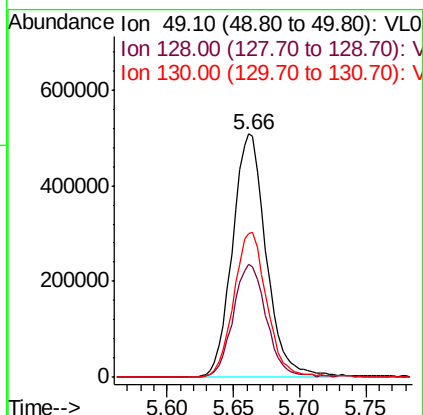
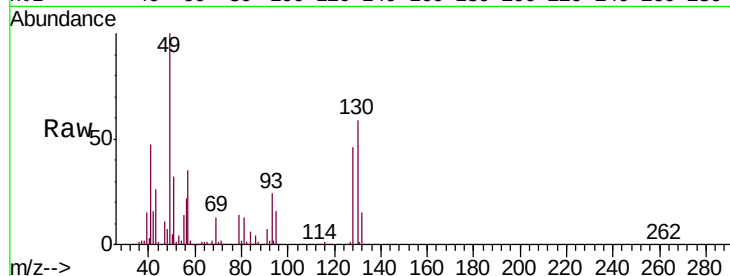




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.66 min Scan# 894
 Delta R.T. -0.02 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

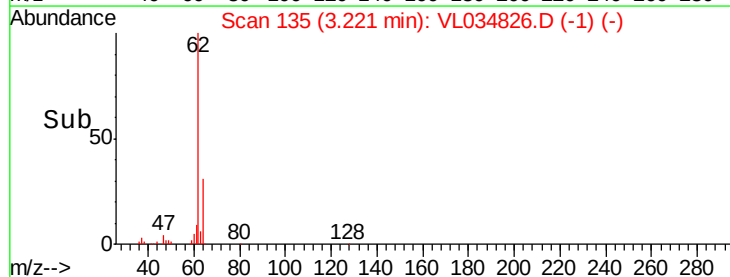
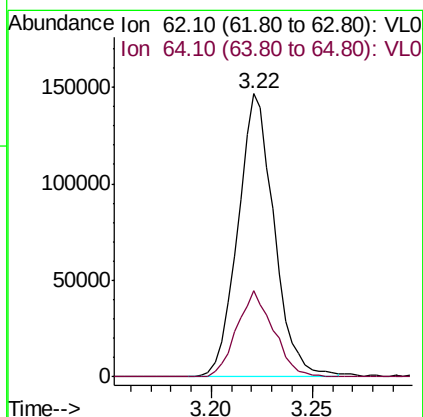
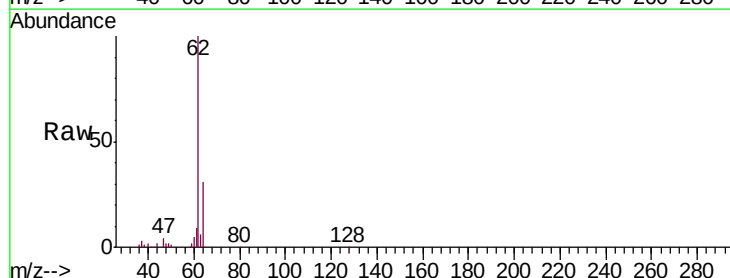
Instrument :
 MSVOA_L
 ClientSampleId :
 SS-4-4DL2

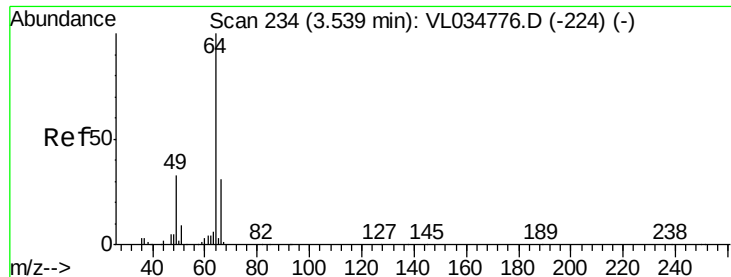
Tgt Ion: 49 Resp: 898438
 Ion Ratio Lower Upper
 49 100
 128 45.9 21.6 64.6
 130 58.9 27.4 82.2



#5
 Vinyl Chloride
 Concen: 3.180 ppbv
 RT: 3.22 min Scan# 135
 Delta R.T. -0.01 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

Tgt Ion: 62 Resp: 185208
 Ion Ratio Lower Upper
 62 100
 64 31.0 25.1 37.7





#7

Chloroethane

Concen: 2.840 ppbv

RT: 3.22 min Scan# 135

Delta R.T. -0.32 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

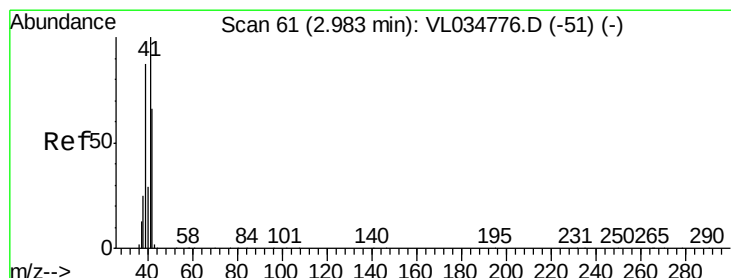
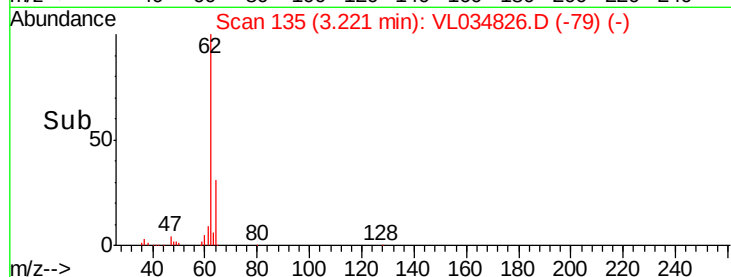
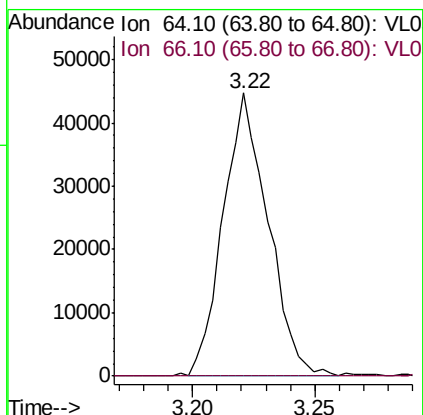
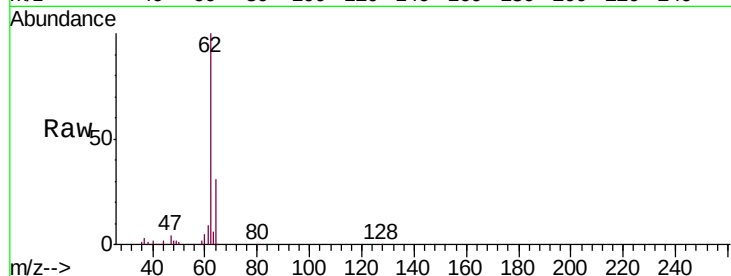
SS-4-4DL2

Tgt Ion: 64 Resp: 57190

Ion Ratio Lower Upper

64 100

66 0.0 24.8 37.2#



#9

Propene

Concen: 1.175 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.01 min

Lab File: VL034826.D

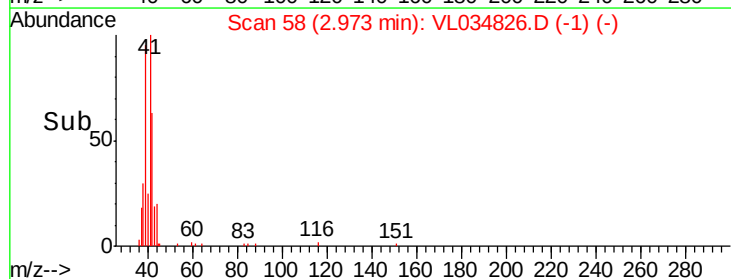
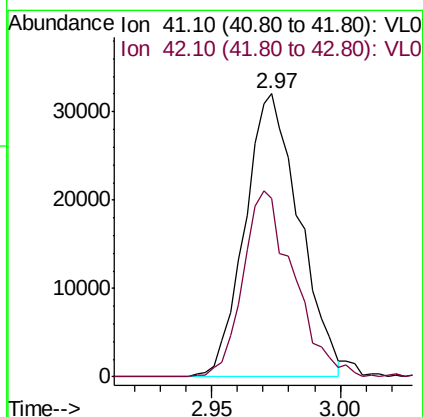
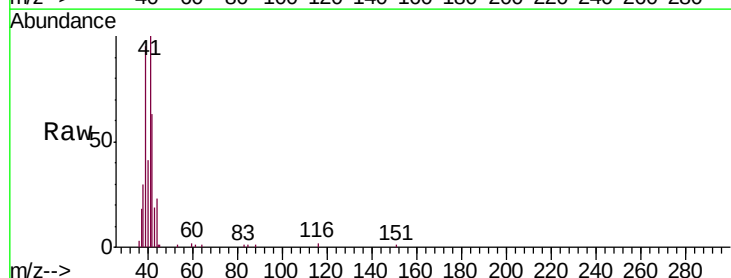
Acq: 6 Mar 2020 22:29

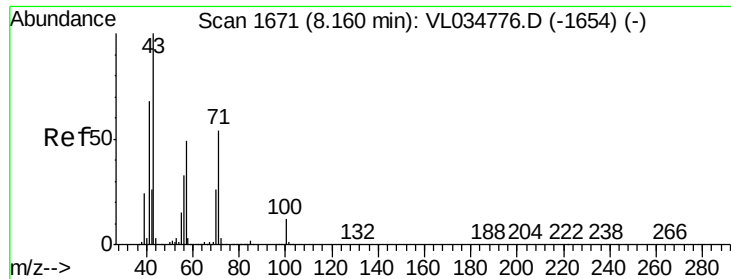
Tgt Ion: 41 Resp: 47351

Ion Ratio Lower Upper

41 100

42 61.7 55.6 83.4





#10

Heptane

Concen: 17.119 ppbv

RT: 8.15 min Scan# 1667

Delta R.T. -0.01 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

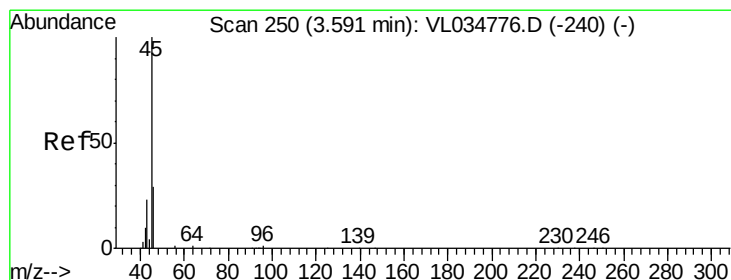
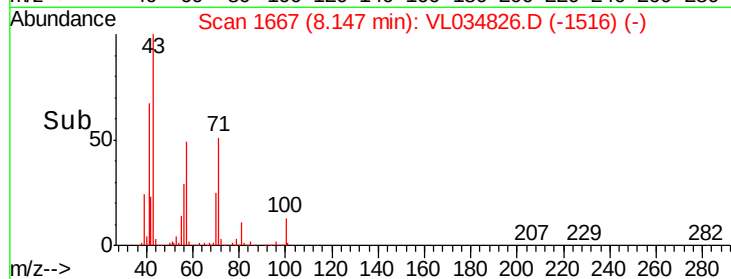
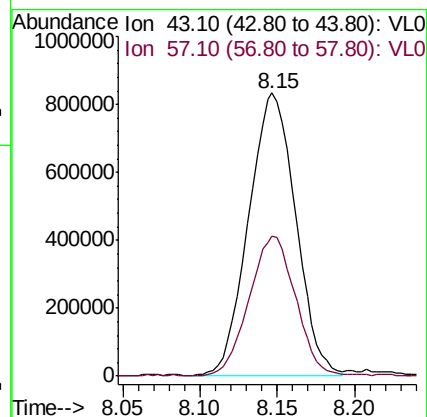
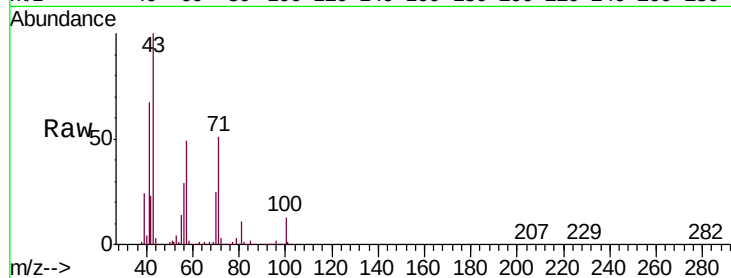
SS-4-4DL2

Tgt Ion: 43 Resp: 1752902

Ion Ratio Lower Upper

43 100

57 49.5 40.5 60.7



#13

Ethanol

Concen: 0.064 ppbv

RT: 3.58 min Scan# 248

Delta R.T. -0.01 min

Lab File: VL034826.D

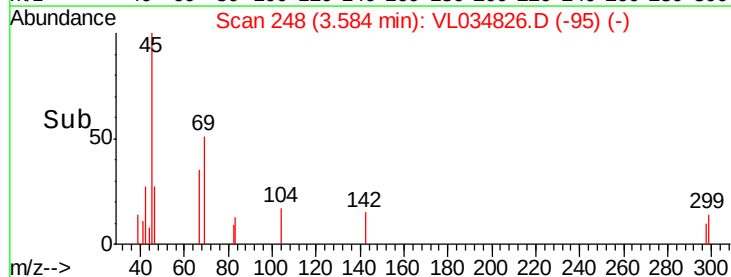
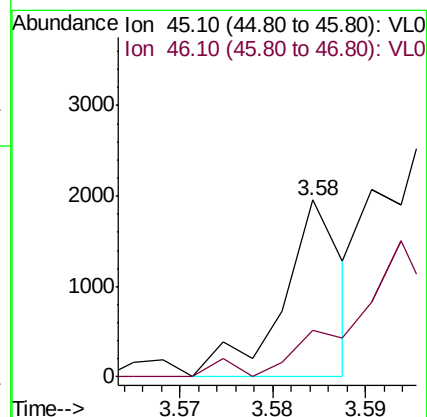
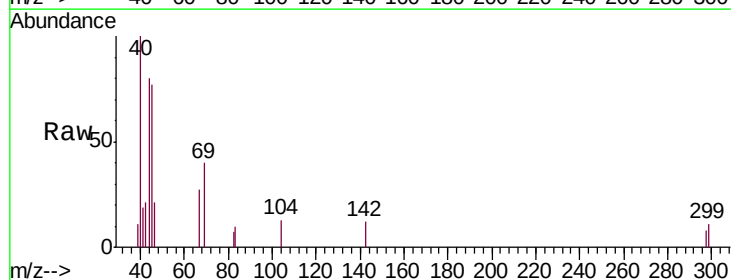
Acq: 6 Mar 2020 22:29

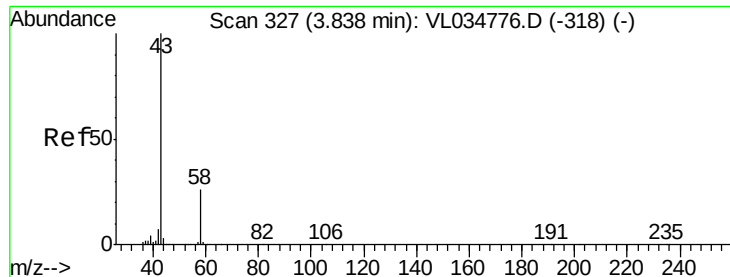
Tgt Ion: 45 Resp: 879

Ion Ratio Lower Upper

45 100

46 0.0 14.7 58.9#





#15

Acetone

Concen: 33.252 ppbv

RT: 3.84 min Scan# 329

Delta R.T. 0.01 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

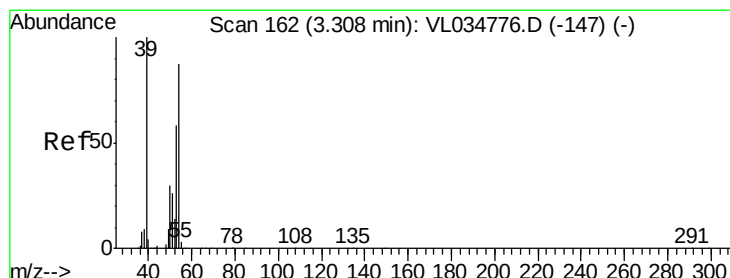
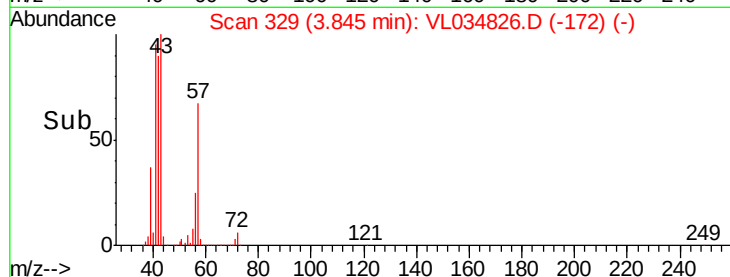
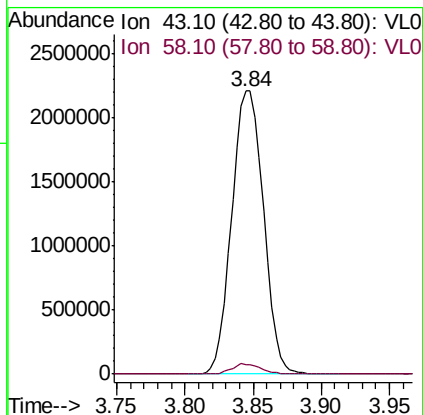
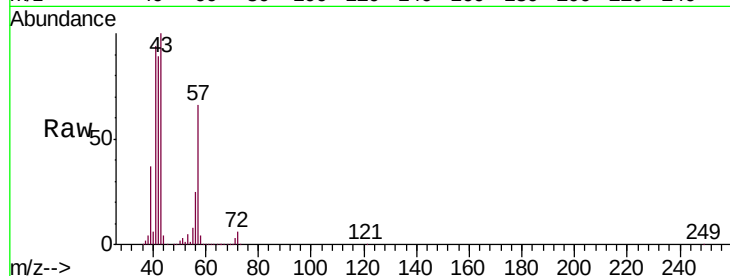
SS-4-4DL2

Tgt Ion: 43 Resp: 3577452

Ion Ratio Lower Upper

43 100

58 3.4 21.0 31.6#



#16

1,3-Butadiene

Concen: 0.779 ppbv

RT: 3.27 min Scan# 150

Delta R.T. -0.04 min

Lab File: VL034826.D

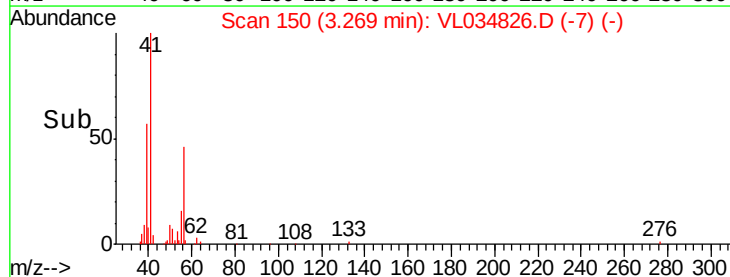
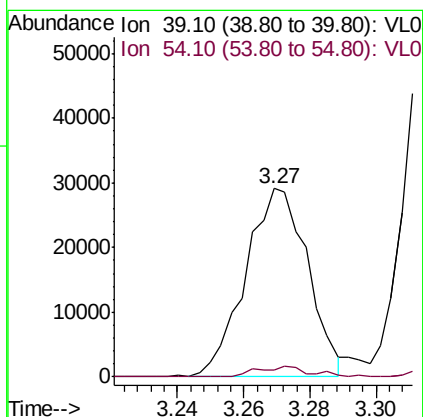
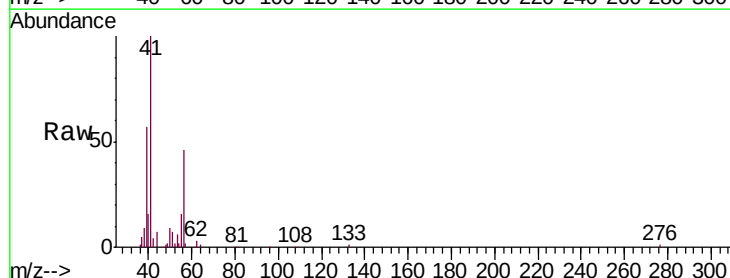
Acq: 6 Mar 2020 22:29

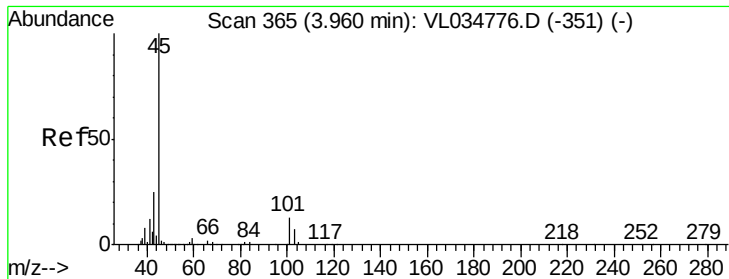
Tgt Ion: 39 Resp: 37944

Ion Ratio Lower Upper

39 100

54 4.8 64.2 96.2#





#19

Isopropyl Alcohol

Concen: 0.184 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

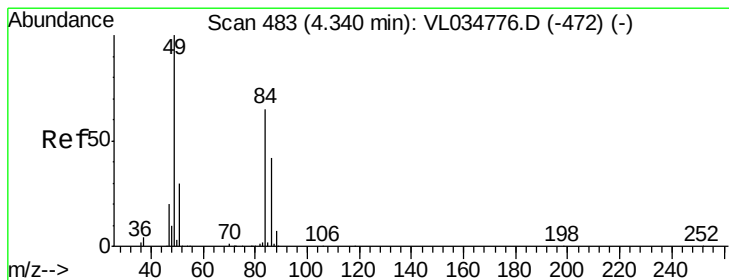
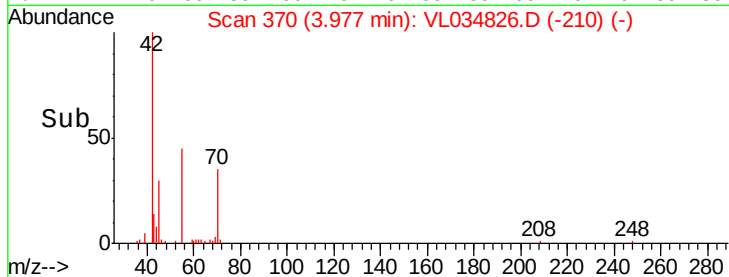
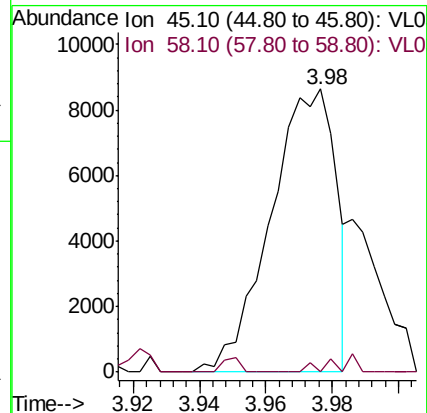
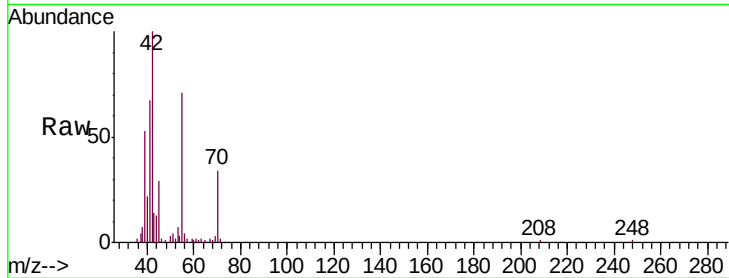
SS-4-4DL2

Tgt Ion: 45 Resp: 11874

Ion Ratio Lower Upper

45 100

58 0.0 1.8 2.8#



#20

Methylene Chloride

Concen: 0.146 ppbv

RT: 4.32 min Scan# 478

Delta R.T. -0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Tgt Ion: 84 Resp: 5592

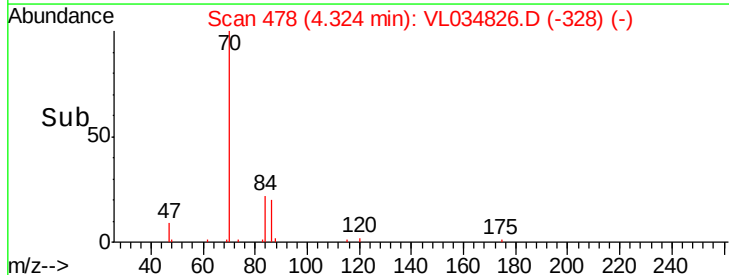
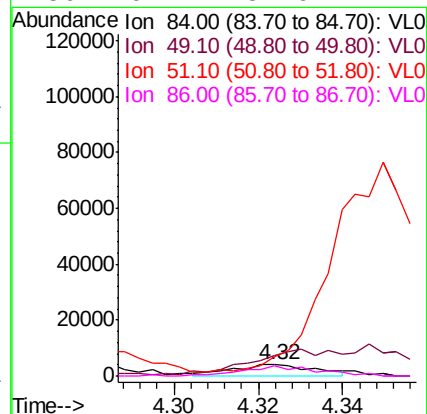
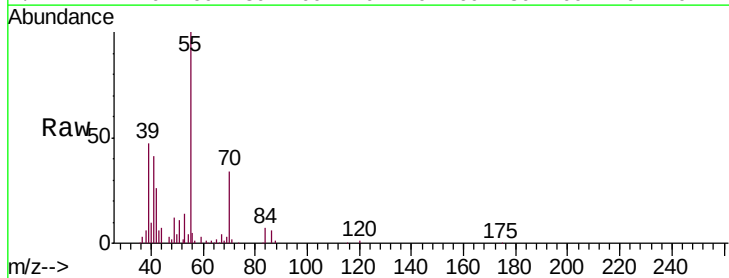
Ion Ratio Lower Upper

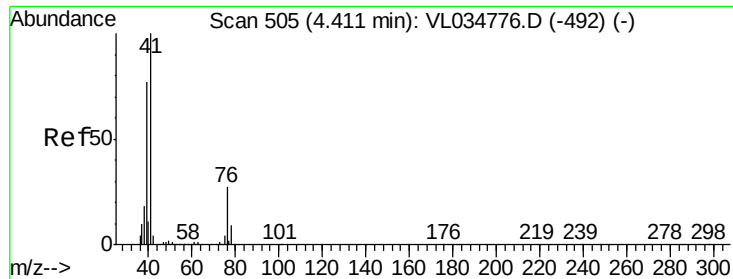
84 100

49 171.1 123.2 184.8

51 162.0 37.4 56.2#

86 102.4 51.6 77.4#

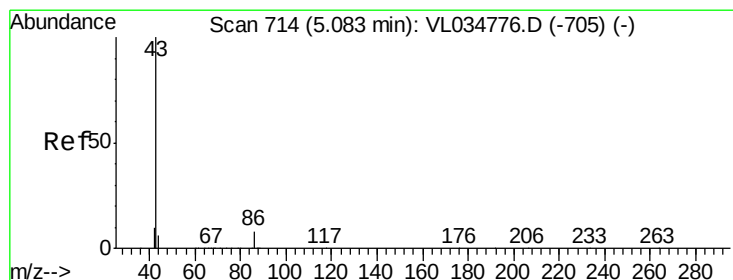
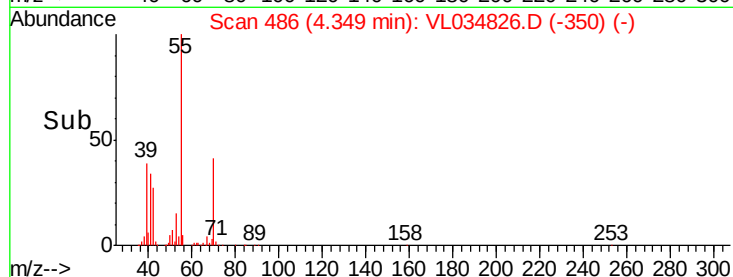
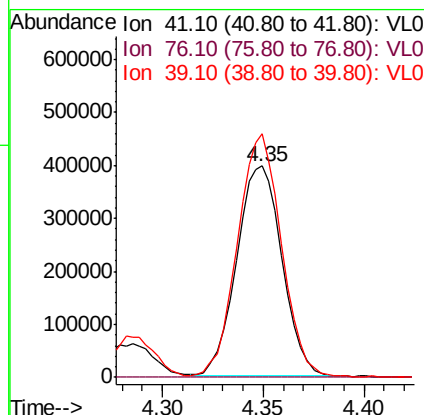
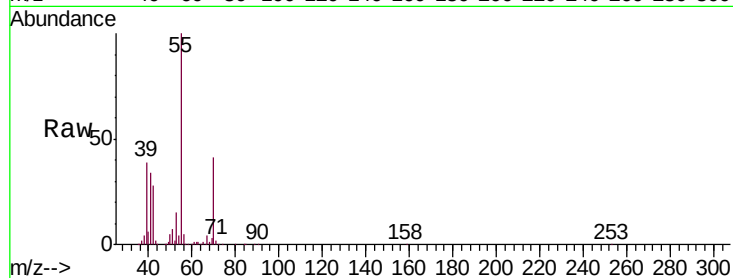




#21
 Allyl Chloride
 Concen: 9.193 ppbv
 RT: 4.35 min Scan# 486
 Delta R.T. -0.06 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

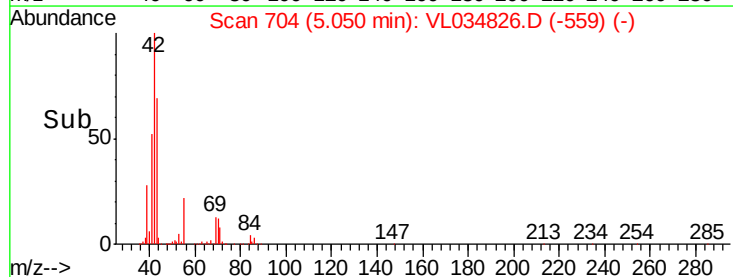
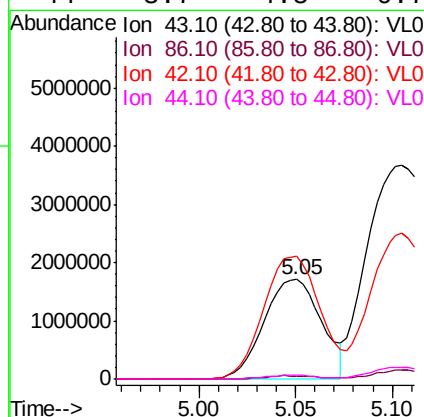
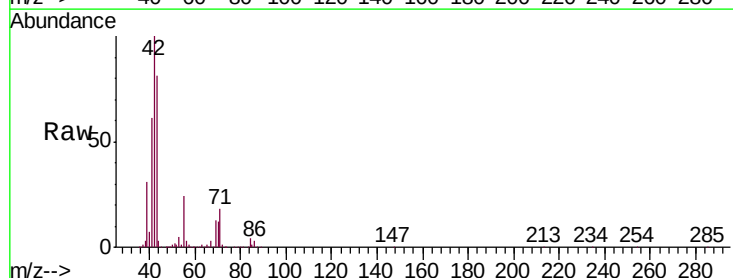
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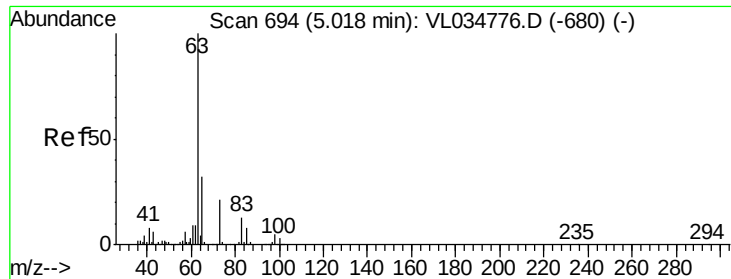
Tgt Ion: 41 Resp: 626306
 Ion Ratio Lower Upper
 41 100
 76 0.0 22.5 33.7#
 39 112.4 65.0 97.6#



#23
 Vinyl Acetate
 Concen: 24.640 ppbv
 RT: 5.05 min Scan# 704
 Delta R.T. -0.03 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

Tgt Ion: 43 Resp: 3554745
 Ion Ratio Lower Upper
 43 100
 86 3.2 5.9 8.9#
 42 122.9 8.2 12.2#
 44 3.7 4.5 6.7#





#24

1,1-Dichloroethane

Concen: 0.033 ppbv

RT: 5.00 min Scan# 688

Delta R.T. -0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

SS-4-DL2

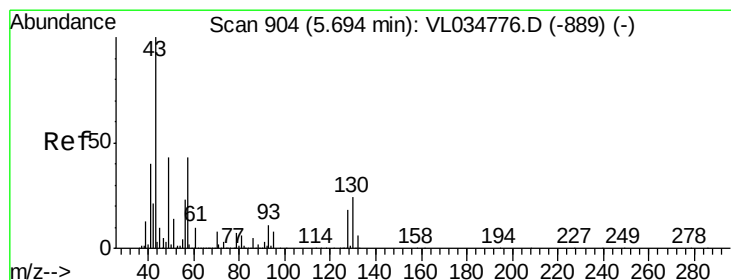
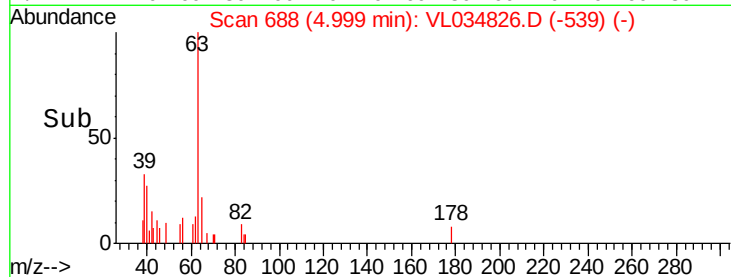
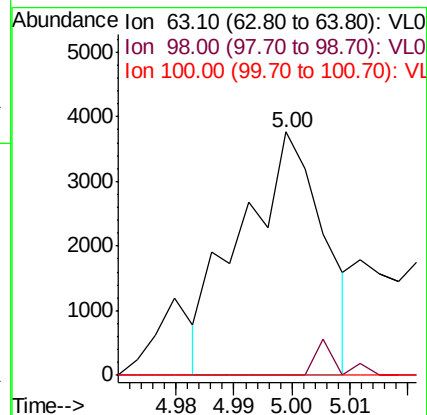
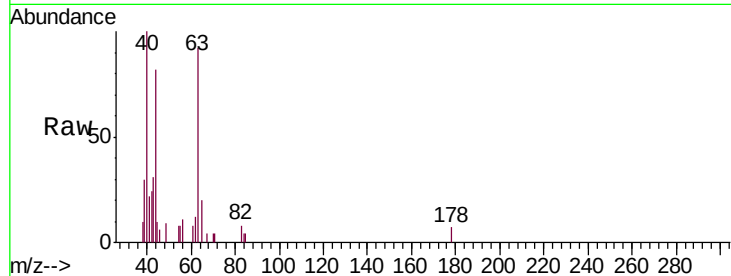
Tgt Ion: 63 Resp: 3737

Ion Ratio Lower Upper

63 100

98 0.0 2.3 6.8#

100 0.0 1.5 4.4#



#25

Ethyl Acetate

Concen: 24.230 ppbv

RT: 5.69 min Scan# 904

Delta R.T. -0.00 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Tgt Ion: 43 Resp: 4504719

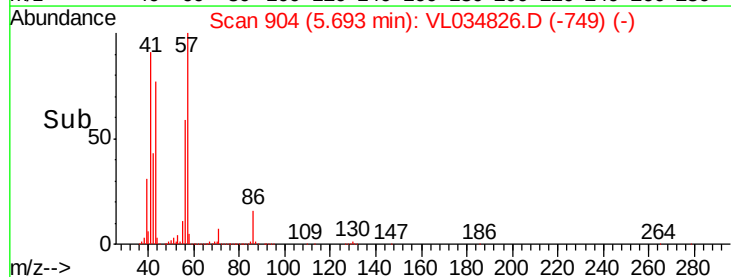
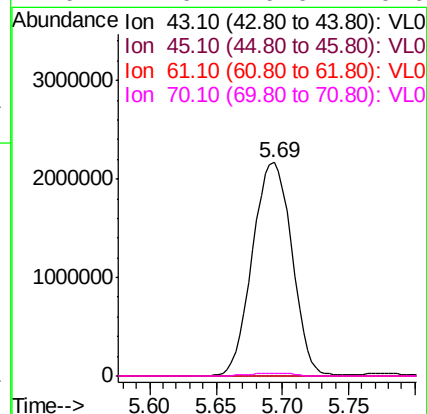
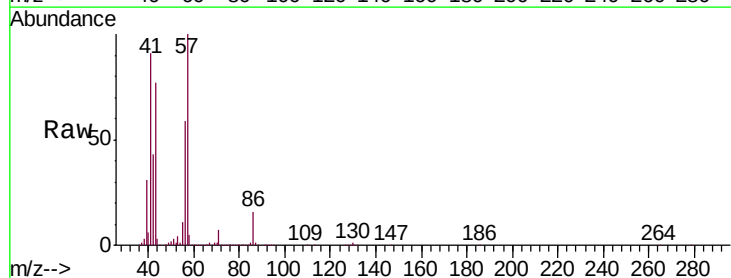
Ion Ratio Lower Upper

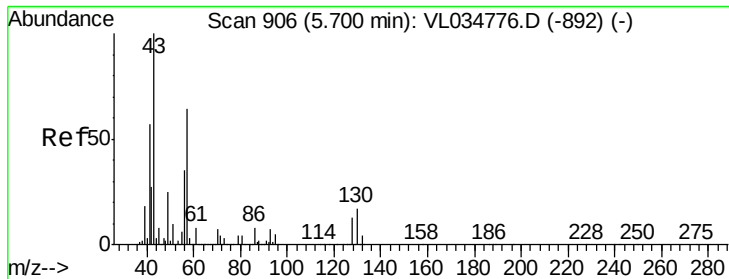
43 100

45 0.1 8.2 12.4#

61 0.1 7.5 11.3#

70 1.6 6.0 9.0#



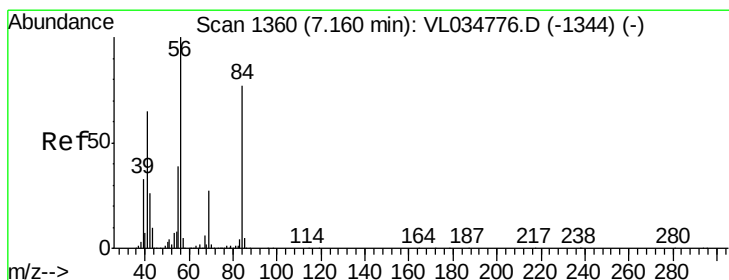
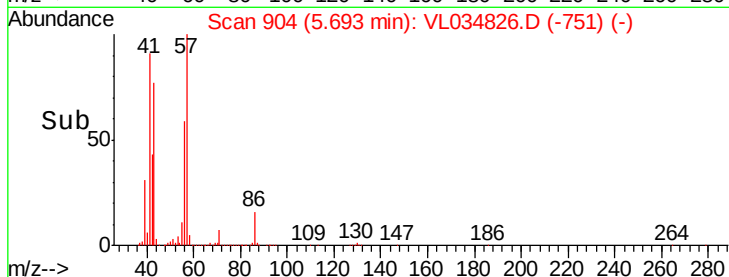
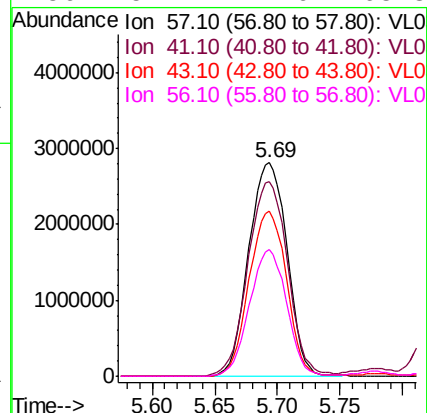
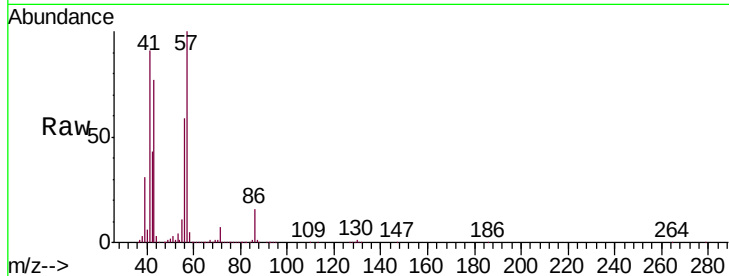


#26
Hexane
Concen: 73.581 ppbv
RT: 5.69 min Scan# 904
Delta R.T. -0.01 min
Lab File: VL034826.D
Acq: 6 Mar 2020 22:29

Instrument :
MSVOA_L
ClientSampleId :
SS-4-DL2

Tgt Ion: 57 Resp: 5976280

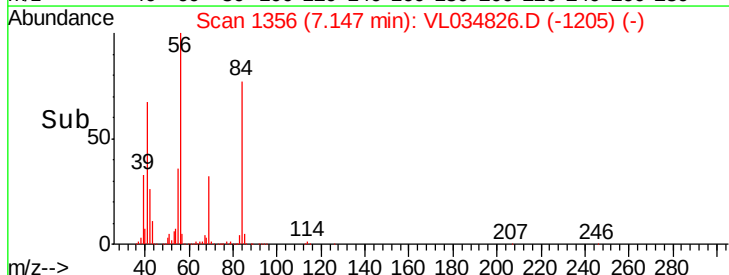
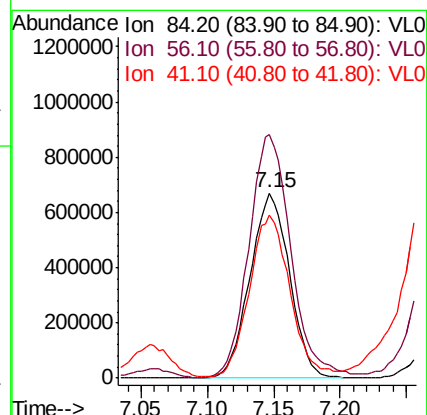
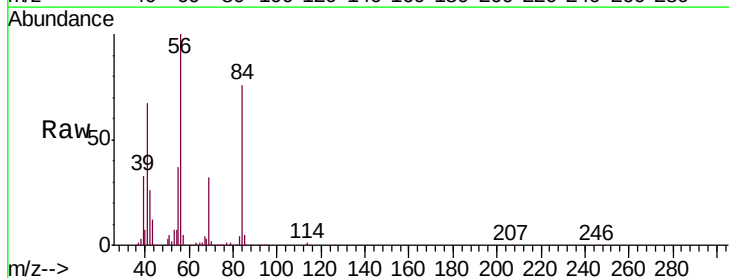
Ion	Ratio	Lower	Upper
57	100		
41	94.7	72.0	108.0
43	75.5	179.1	268.7#
56	57.7	42.6	63.8

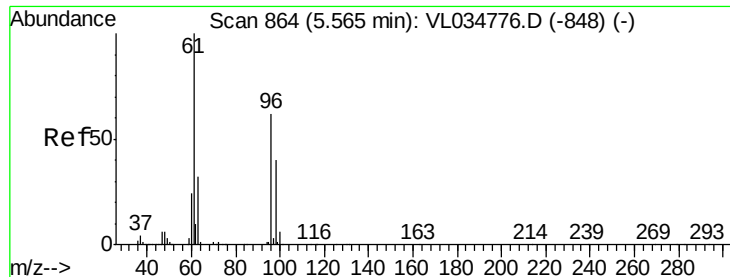


#30
Cyclohexane
Concen: 22.316 ppbv
RT: 7.15 min Scan# 1356
Delta R.T. -0.01 min
Lab File: VL034826.D
Acq: 6 Mar 2020 22:29

Tgt Ion: 84 Resp: 1386621

Ion	Ratio	Lower	Upper
84	100		
56	140.2	113.2	169.8
41	90.1	70.2	105.4





#31

cis-1,2-Dichloroethene

Concen: 0.113 ppbv

RT: 5.54 min Scan# 856

Delta R.T. -0.03 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

SS-4-4DL2

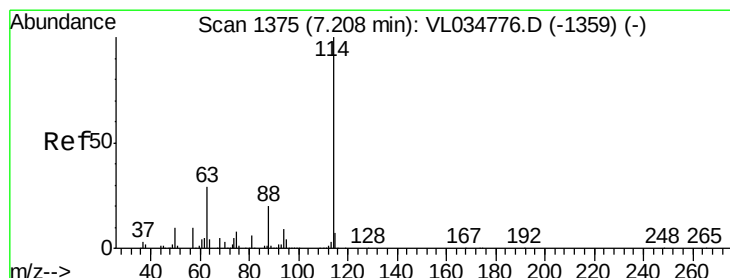
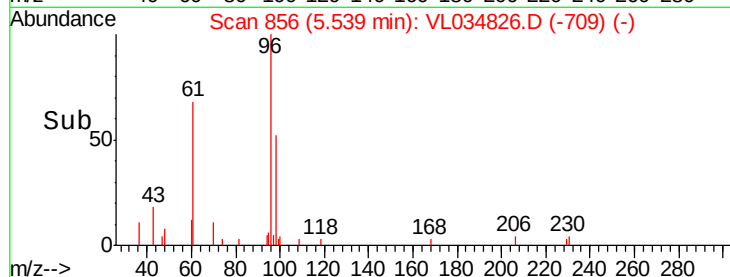
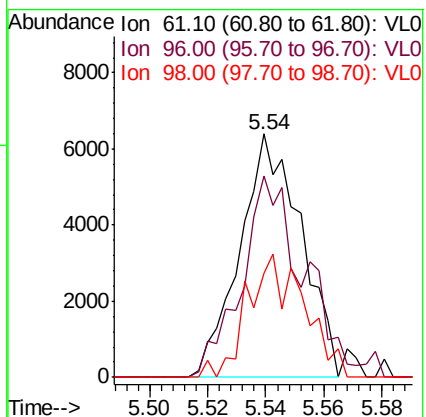
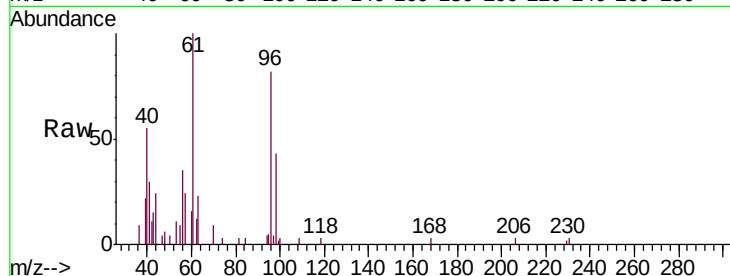
Tgt Ion: 61 Resp: 9382

Ion Ratio Lower Upper

61 100

96 82.5 49.7 74.5#

98 42.8 31.9 47.9



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1368

Delta R.T. -0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

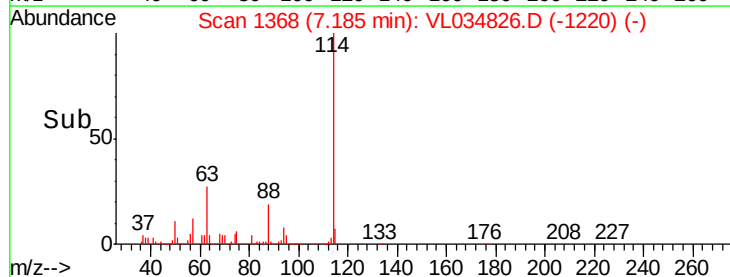
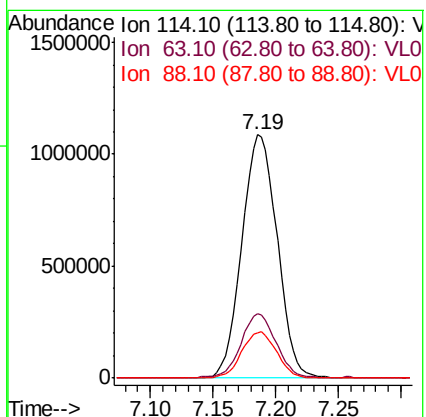
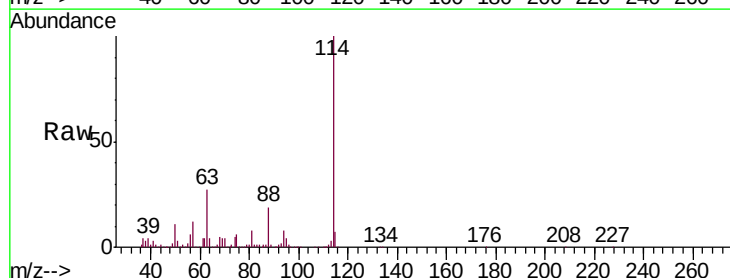
Tgt Ion: 114 Resp: 2136803

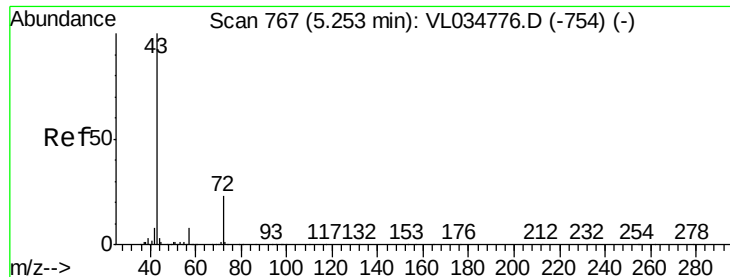
Ion Ratio Lower Upper

114 100

63 26.7 23.6 35.4

88 18.7 15.8 23.8

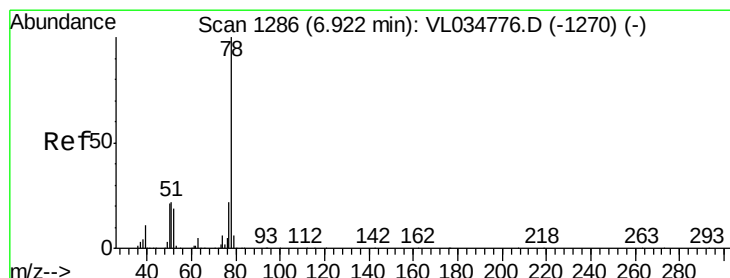
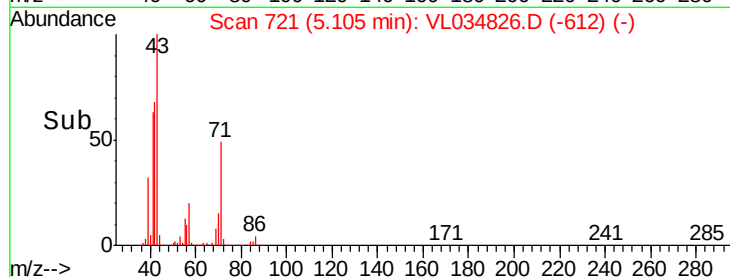
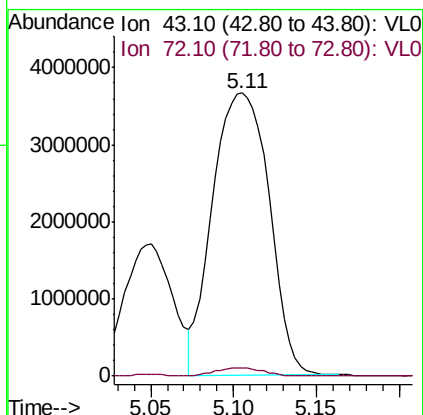
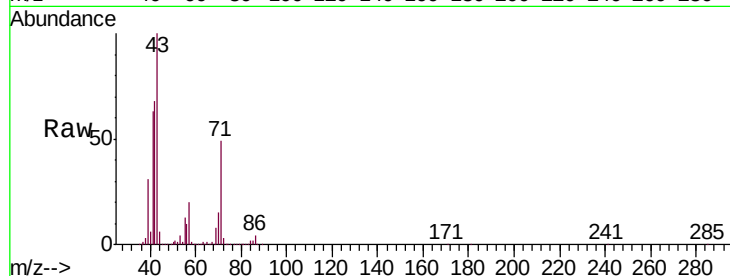




#34
2-Butanone
Concen: 62.468 ppbv
RT: 5.11 min Scan# 721
Delta R.T. -0.15 min
Lab File: VL034826.D
Acq: 6 Mar 2020 22:29

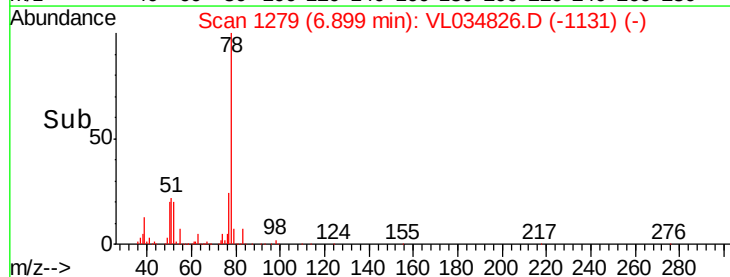
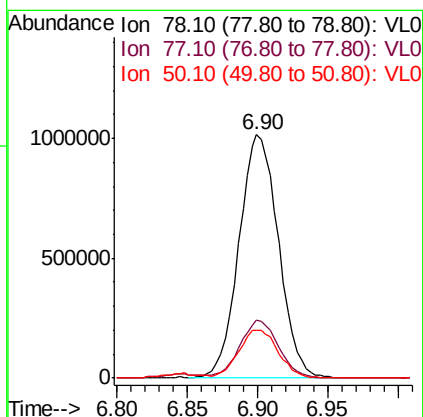
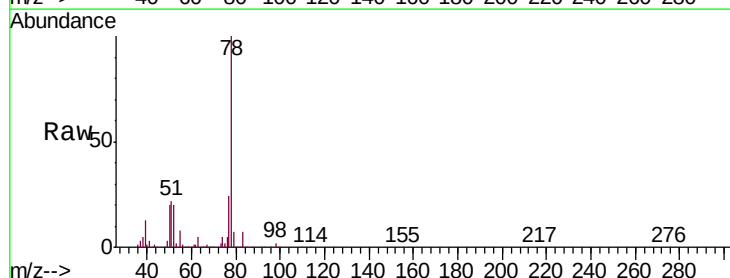
Instrument :
MSVOA_L
ClientSampleId :
SS-4-4DL2

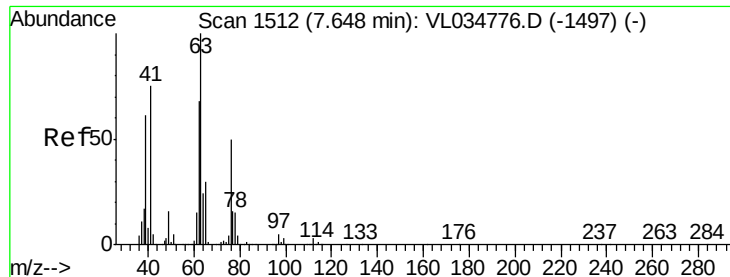
Tgt Ion: 43 Resp: 8683952
Ion Ratio Lower Upper
43 100
72 2.6 17.5 26.3#



#36
Benzene
Concen: 10.796 ppbv
RT: 6.90 min Scan# 1279
Delta R.T. -0.02 min
Lab File: VL034826.D
Acq: 6 Mar 2020 22:29

Tgt Ion: 78 Resp: 1971244
Ion Ratio Lower Upper
78 100
77 23.5 18.0 27.0
50 19.8 16.9 25.3





#39

1,2-Dichloropropane

Concen: 7.366 ppbv

RT: 7.19 min Scan# 1368

Delta R.T. -0.46 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

SS-4-4DL2

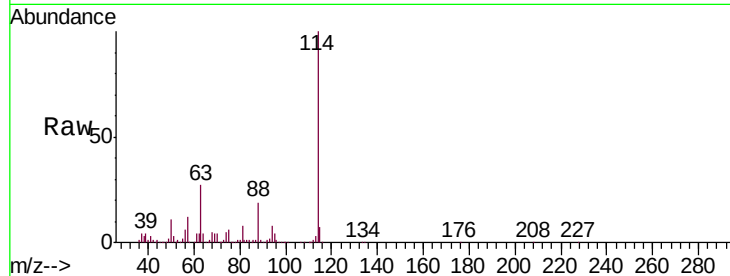
Tgt Ion: 63 Resp: 542757

Ion Ratio Lower Upper

63 100

41 0.0 60.3 90.5#

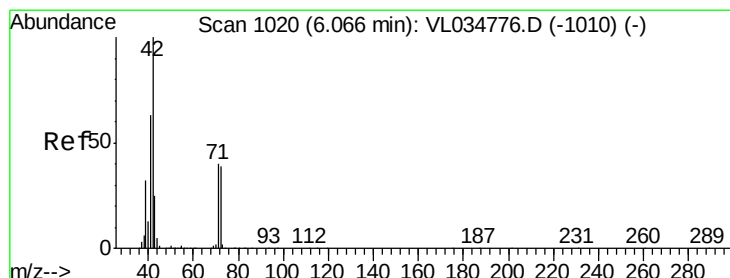
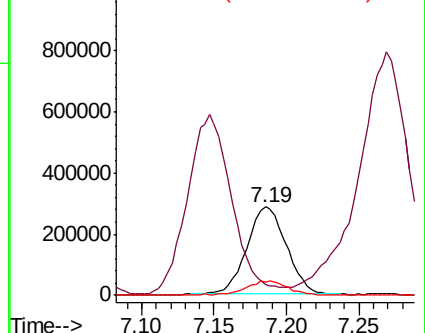
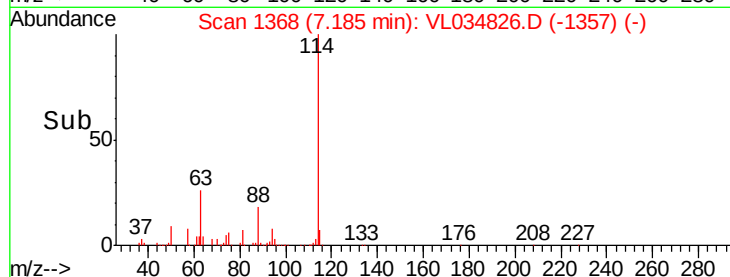
62 14.1 54.5 81.7#



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: 1.489 ppbv

RT: 5.98 min Scan# 994

Delta R.T. -0.08 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

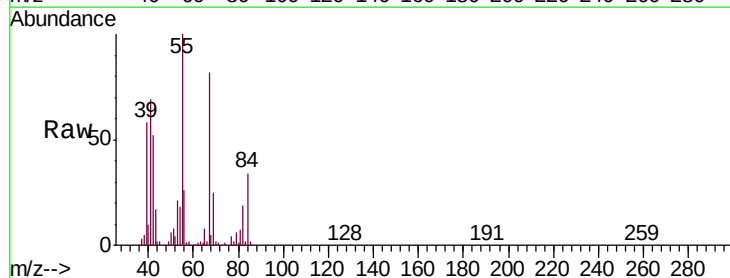
Tgt Ion: 42 Resp: 105635

Ion Ratio Lower Upper

42 100

72 0.0 32.0 48.0#

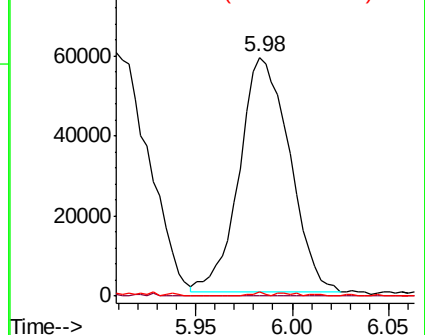
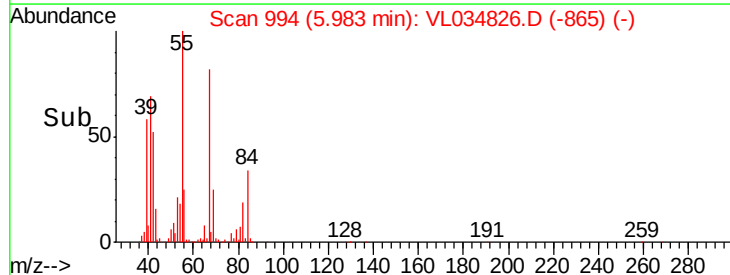
71 0.0 31.3 46.9#

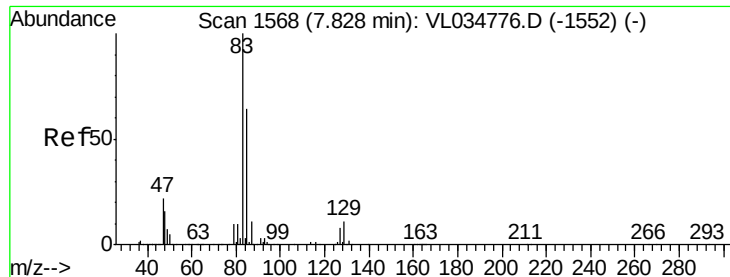


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0





#42

Bromodichloromethane

Concen: 1.984 ppbv

RT: 7.82 min Scan# 1564

Delta R.T. -0.01 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

SS-4-DL2

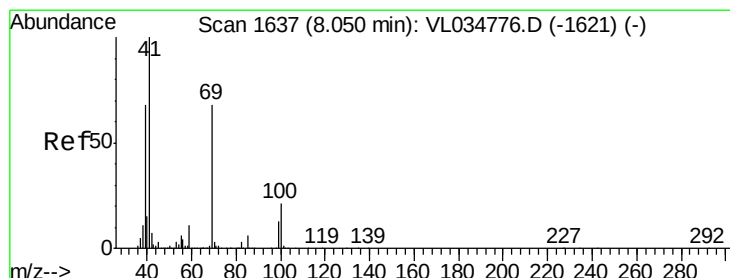
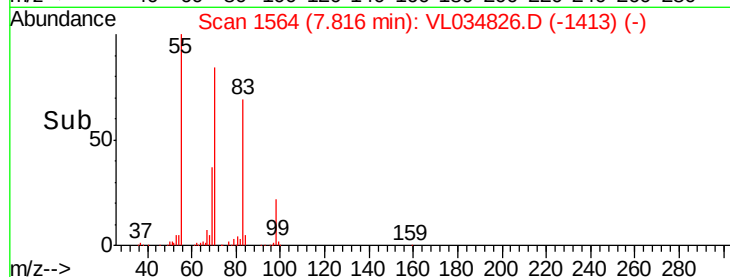
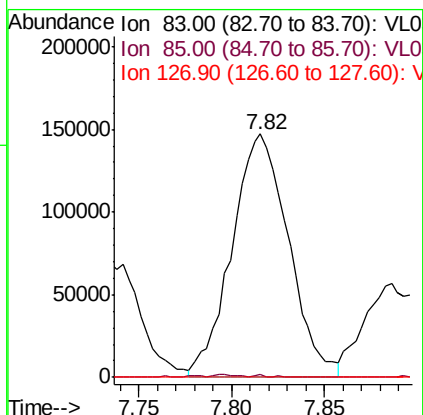
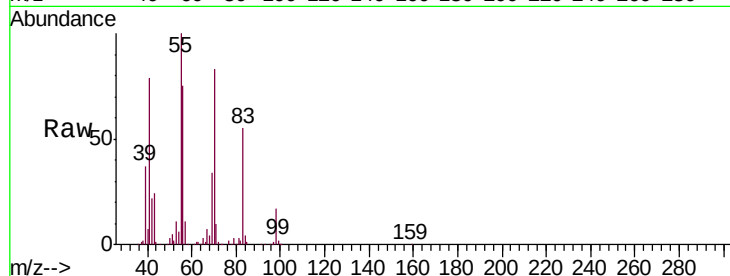
Tgt Ion: 83 Resp: 313144

Ion Ratio Lower Upper

83 100

85 0.9 50.8 76.2#

127 0.0 6.5 9.7#



#43

Methyl Methacrylate

Concen: 1.371 ppbv

RT: 8.00 min Scan# 1622

Delta R.T. -0.05 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

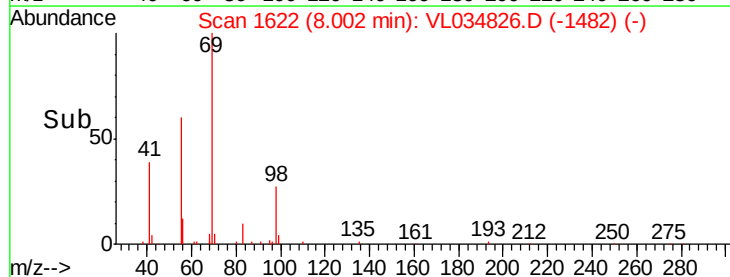
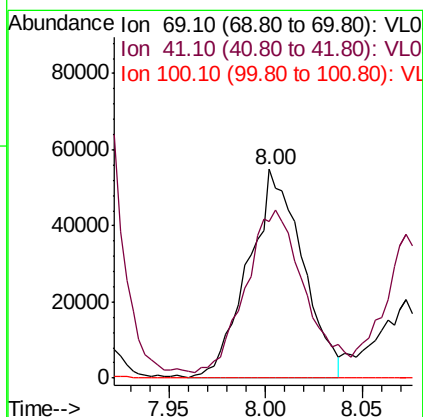
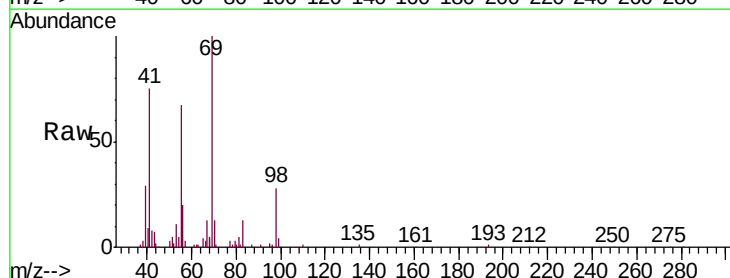
Tgt Ion: 69 Resp: 106041

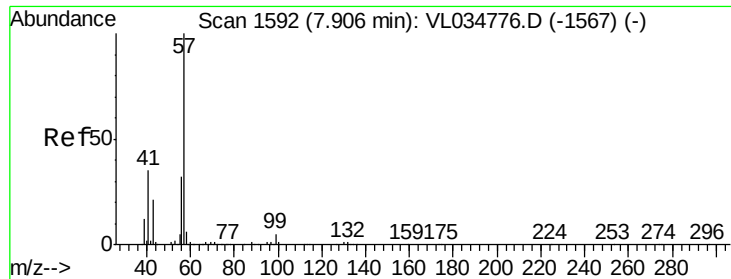
Ion Ratio Lower Upper

69 100

41 84.2 121.6 182.4#

100 0.0 23.8 35.8#

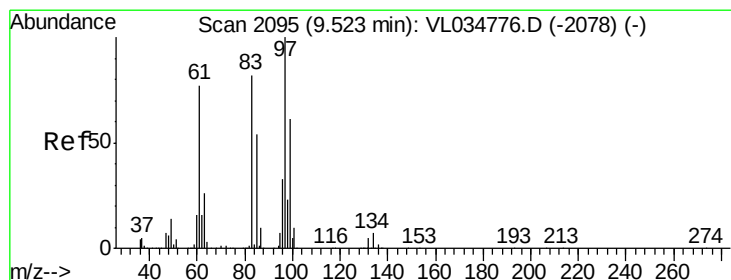
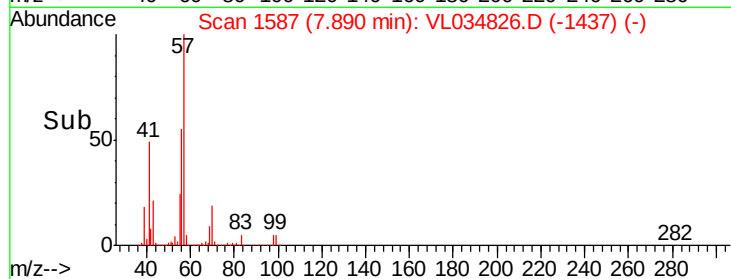
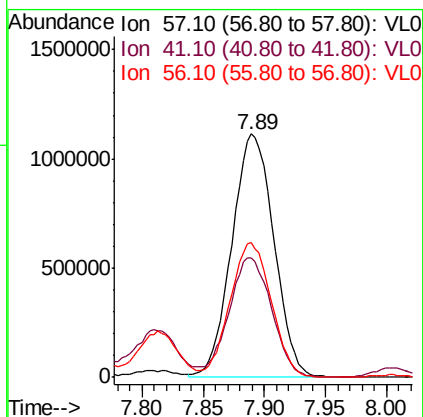
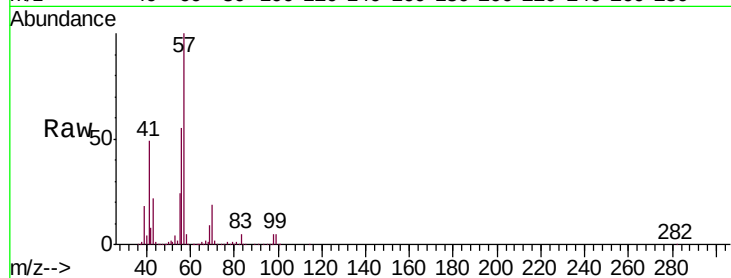




#44
 2,2,4-Trimethylpentane
 Concen: 8.319 ppbv
 RT: 7.89 min Scan# 1587
 Delta R.T. -0.02 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

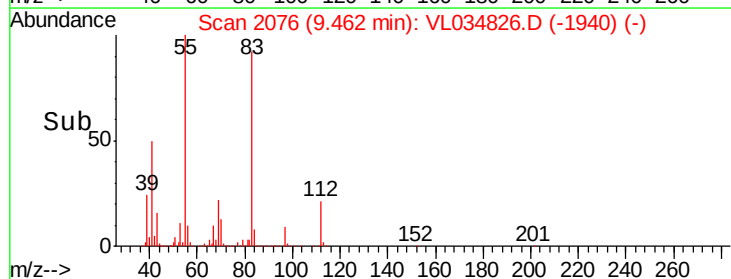
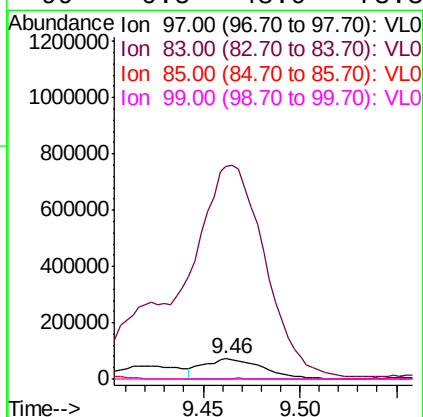
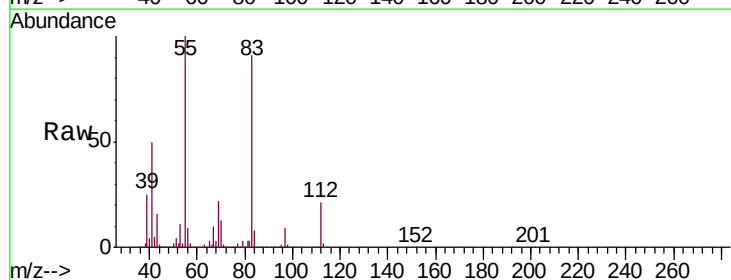
Instrument :
 MSVOA_L
 ClientSampleId :
 SS-4-4DL2

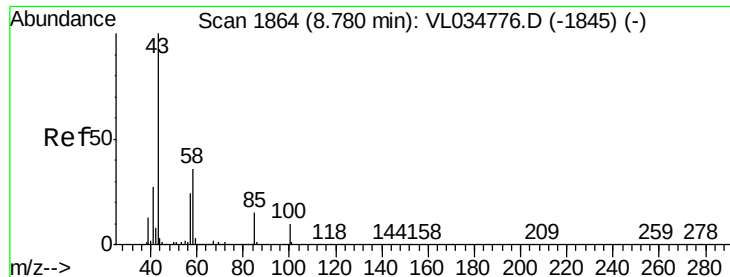
Tgt Ion: 57 Resp: 2654400
 Ion Ratio Lower Upper
 57 100
 41 50.0 27.4 41.0#
 56 54.7 25.0 37.6#



#47
 1,1,2-Trichloroethane
 Concen: 1.912 ppbv
 RT: 9.46 min Scan# 2076
 Delta R.T. -0.06 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

Tgt Ion: 97 Resp: 148748
 Ion Ratio Lower Upper
 97 100
 83 1046.4 65.2 97.8#
 85 0.4 43.6 65.4#
 99 0.5 48.9 73.3#

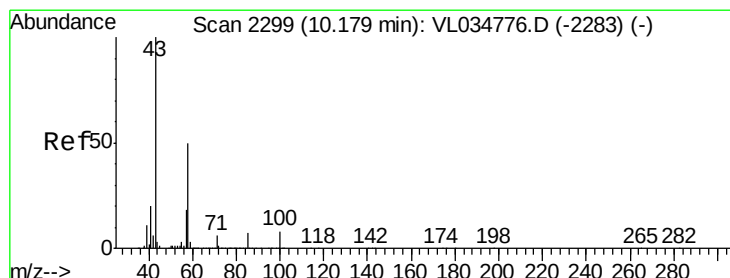
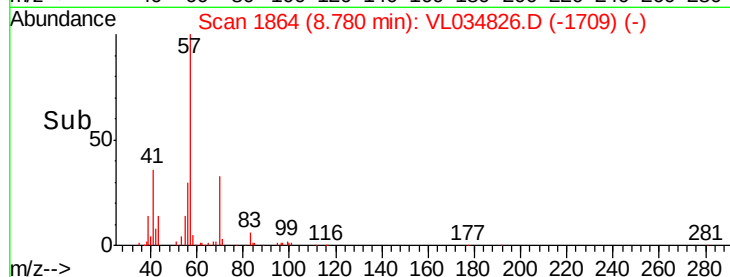
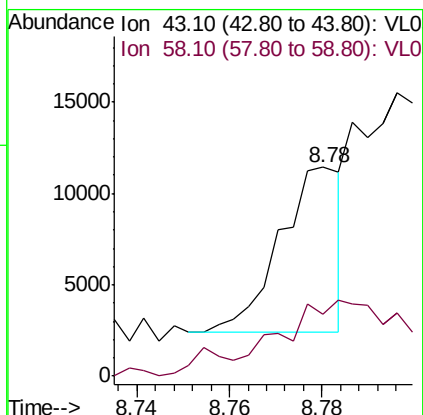
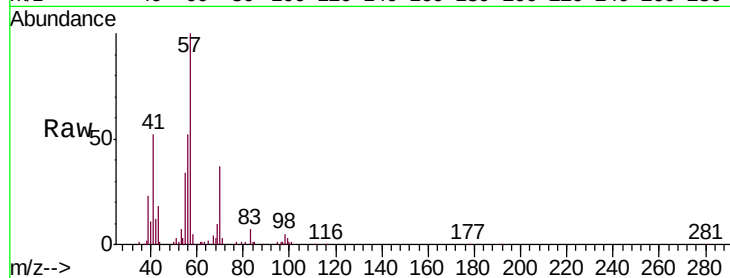




#50
 4-Methyl-2-Pentanone
 Concen: 0.042 ppbv
 RT: 8.78 min Scan# 1864
 Delta R.T. -0.00 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

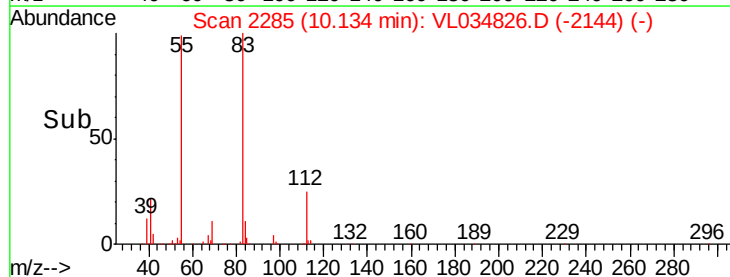
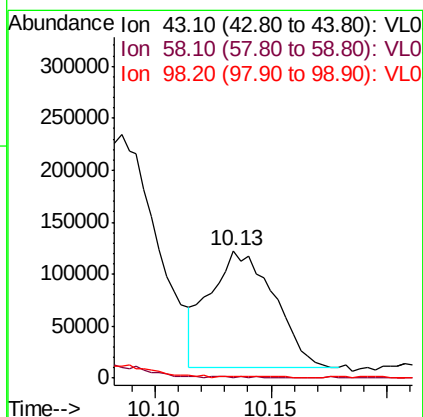
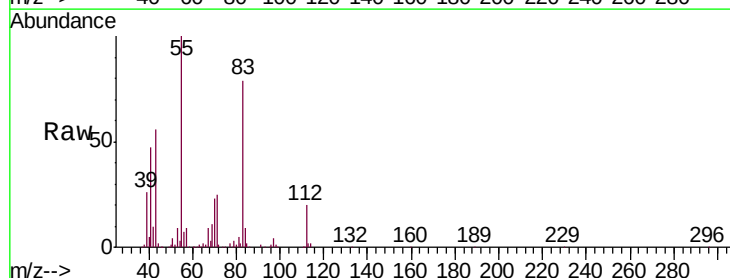
Instrument :
 MSVOA_L
 ClientSampleId :
 SS-4-4DL2

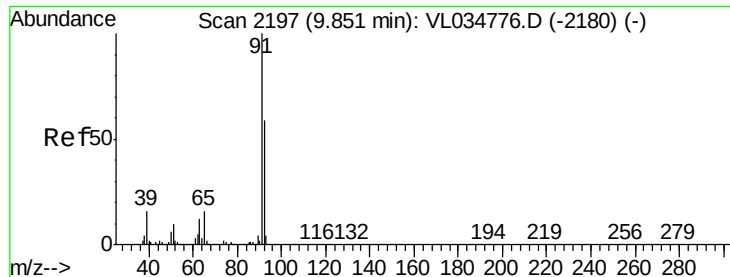
Tgt Ion: 43 Resp: 8335
 Ion Ratio Lower Upper
 43 100
 58 0.0 28.7 43.1#



#51
 2-Hexanone
 Concen: 1.400 ppbv
 RT: 10.13 min Scan# 2285
 Delta R.T. -0.05 min
 Lab File: VL034826.D
 Acq: 6 Mar 2020 22:29

Tgt Ion: 43 Resp: 218700
 Ion Ratio Lower Upper
 43 100
 58 0.0 38.6 58.0#
 98 0.0 0.2 0.4#





#53

Toluene

Concen: 2.923 ppbv

RT: 9.83 min Scan# 2192

Delta R.T. -0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

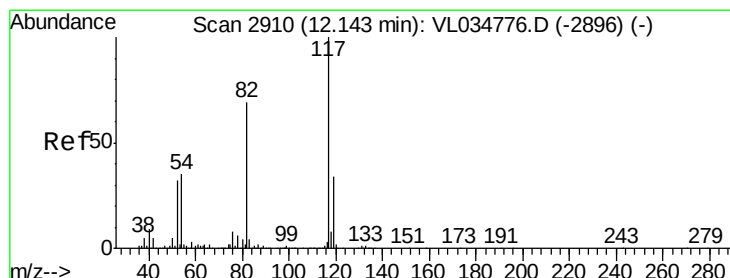
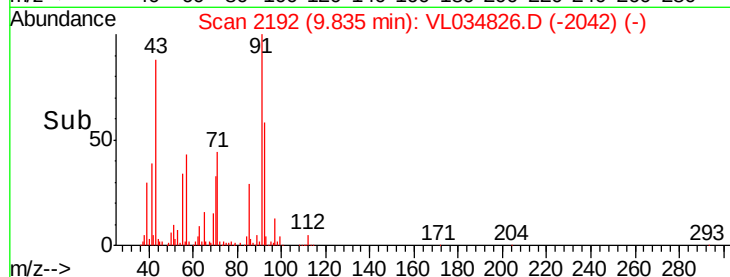
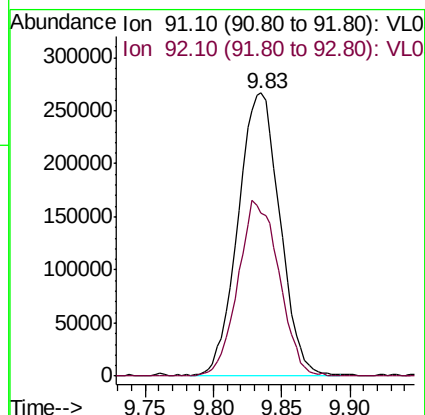
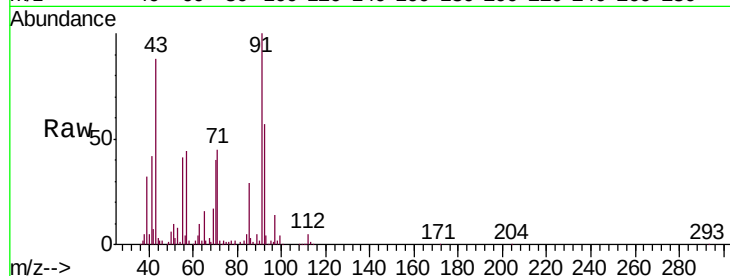
SS-4-4DL2

Tgt Ion: 91 Resp: 564937

Ion Ratio Lower Upper

91 100

92 61.6 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.12 min Scan# 2903

Delta R.T. -0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

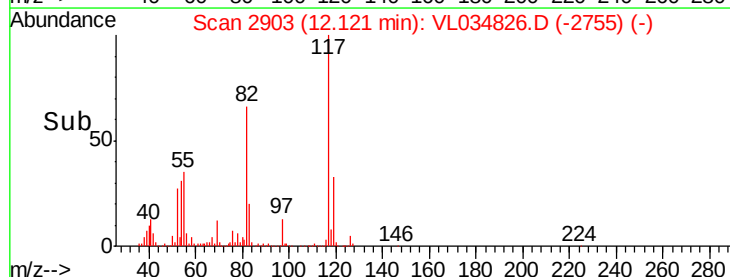
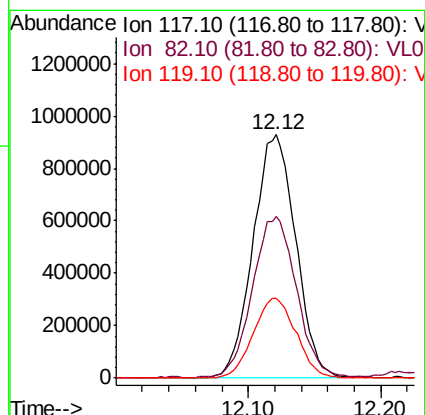
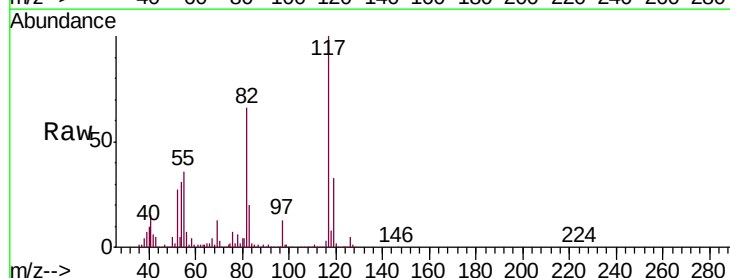
Tgt Ion: 117 Resp: 2078584

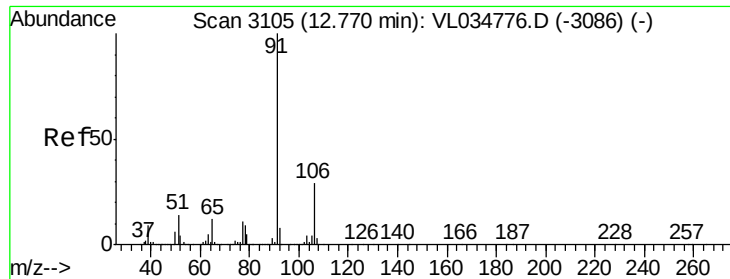
Ion Ratio Lower Upper

117 100

82 69.0 53.9 80.9

119 32.9 25.0 37.4





#58

Ethyl Benzene

Concen: 0.039 ppbv

RT: 12.73 min Scan# 3092

Delta R.T. -0.04 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

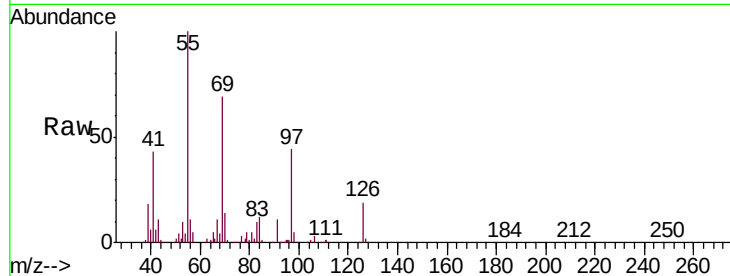
SS-4-4DL2

Tgt Ion: 91 Resp: 9929

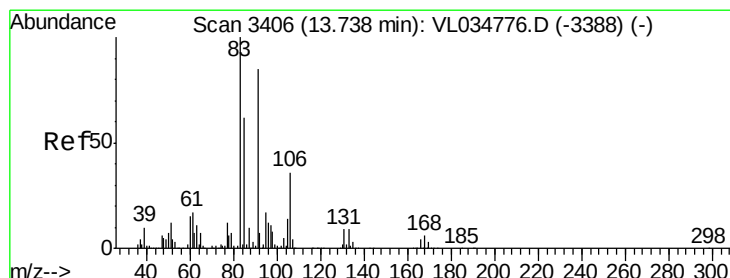
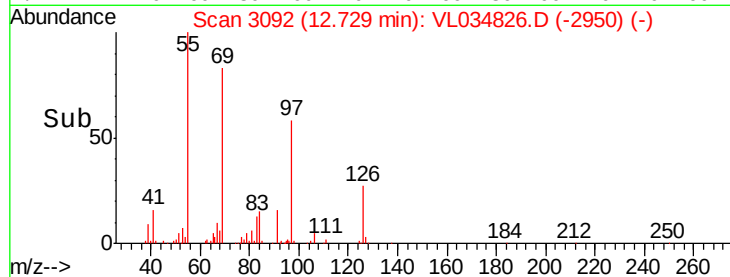
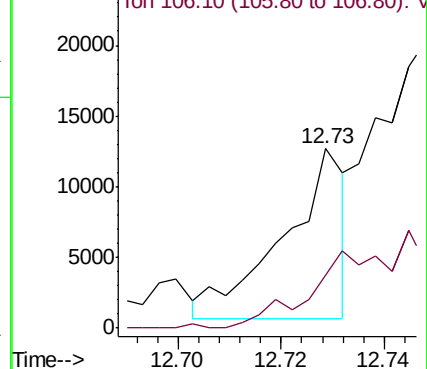
Ion Ratio Lower Upper

91 100

106 31.7 22.8 34.2



Abundance Ion 91.10 (90.80 to 91.80): VL0



#63

1,1,2,2-Tetrachloroethane

Concen: 0.191 ppbv

RT: 13.72 min Scan# 3400

Delta R.T. -0.02 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

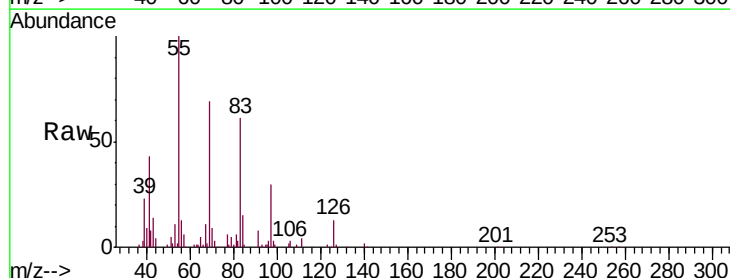
Tgt Ion: 83 Resp: 33748

Ion Ratio Lower Upper

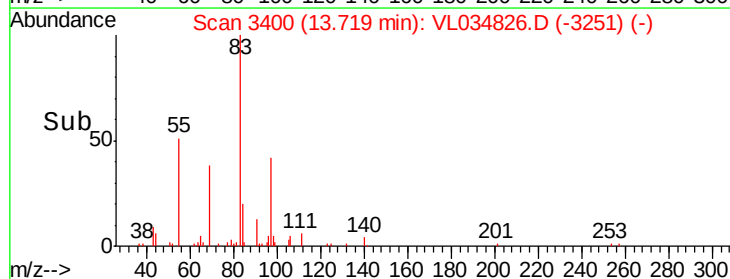
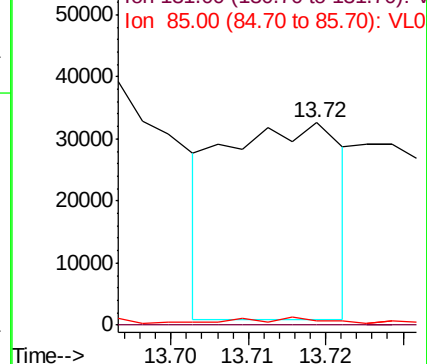
83 100

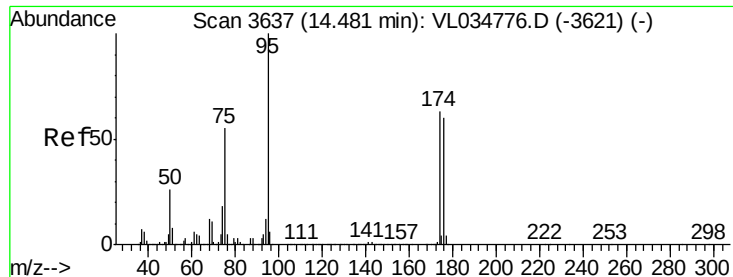
131 0.0 4.7 14.0#

85 0.0 32.9 98.7#



Abundance Ion 83.00 (82.70 to 83.70): VL0





#68

1-Bromo-4-Fluorobenzene

Concen: 9.694 ppbv

RT: 14.46 min Scan# 3629

Delta R.T. -0.03 min

Lab File: VL034826.D

Acq: 6 Mar 2020 22:29

Instrument :

MSVOA_L

ClientSampleId :

SS-4-4DL2

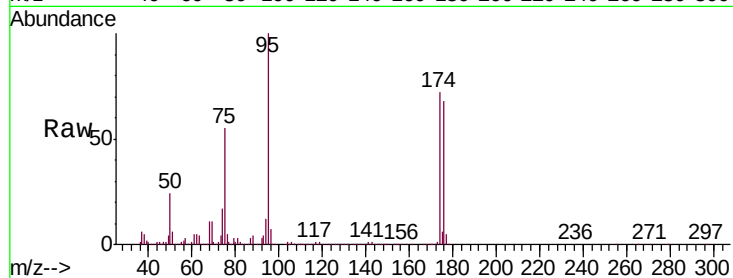
Tgt Ion: 95 Resp: 1680181

Ion Ratio Lower Upper

95 100

174 70.6 50.6 76.0

175 5.6 3.8 5.6



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

