

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111220\
 Data File : VL035930.D
 Acq On : 13 Nov 2020 1:56
 Operator : SY/AP
 Sample : L4721-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 LA-4

Quant Time: Nov 13 03:41:23 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04 02:40:06 2020
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

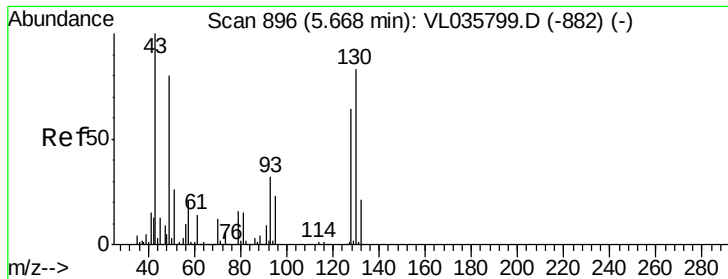
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1090055	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3902804	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	3538120	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2646222	10.53	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	45330	0.221	ppbv	99
3) Chlorodifluoromethane	2.98	51	99448	0.762	ppbv #	85
4) Chloromethane	3.13	50	33936	0.535	ppbv	94
9) Propene	3.01	41	60818	1.273	ppbv	86
10) Heptane	8.12	43	5232	0.040	ppbv #	1
11) Trichlorofluoromethane	3.94	101	65815	0.255	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.47	101	9818	0.051	ppbv #	48
13) Ethanol	3.59	45	595907	57.491	ppbv	94
15) Acetone	3.84	43	797754	6.846	ppbv	91
16) 1,3-Butadiene	3.30	39	12683	0.253	ppbv #	43
17) tert-Butyl alcohol	4.30	59	8193	0.053	ppbv #	72
19) Isopropyl Alcohol	3.97	45	385206	5.379	ppbv #	91
20) Methylene Chloride	4.34	84	418695	5.104	ppbv	97
21) Allyl Chloride	4.33	41	2309	0.037	ppbv #	9
23) Vinyl Acetate	5.05	43	32206	0.197	ppbv #	41
25) Ethyl Acetate	5.68	43	314683	1.371	ppbv #	76
26) Hexane	5.68	57	498182	3.935	ppbv #	47
29) Chloroform	5.74	83	7959	0.032	ppbv	84
30) Cyclohexane	7.12	84	7254	0.053	ppbv #	1
34) 2-Butanone	5.24	43	50110	0.396	ppbv	97
35) Carbon Tetrachloride	7.01	117	6413	0.031	ppbv #	83
36) Benzene	6.88	78	115275	0.397	ppbv	97
39) 1,2-Dichloropropane	7.17	63	810250	8.295	ppbv #	31
43) Methyl Methacrylate	8.01	69	4084	0.037	ppbv #	10
44) 2,2,4-Trimethylpentane	7.87	57	42719	0.111	ppbv #	1
53) Toluene	9.80	91	635139	1.814	ppbv	97
58) Ethyl Benzene	12.71	91	37499	0.087	ppbv	98
59) m/p-Xylene	12.97	91	114065	0.313	ppbv	98
60) o-Xylene	13.69	91	47524	0.134	ppbv	93
74) 1,2,4-Trimethylbenzene	16.77	105	50941	0.121	ppbv #	67

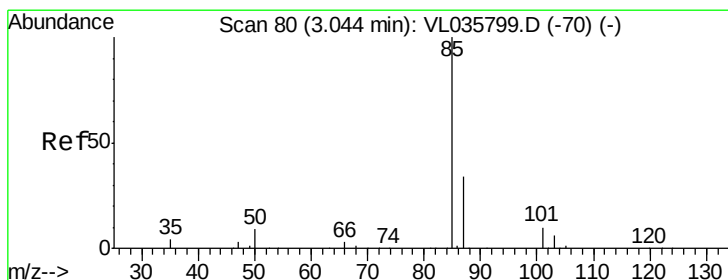
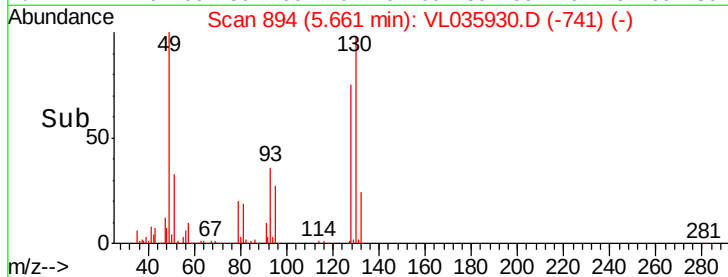
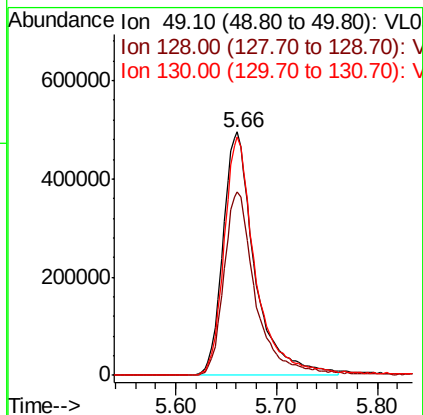
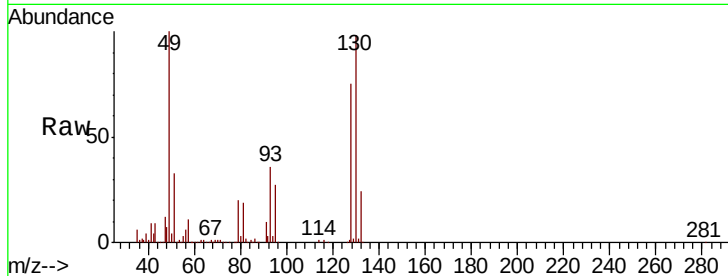
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.66 min Scan# 894
 Delta R.T. -0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

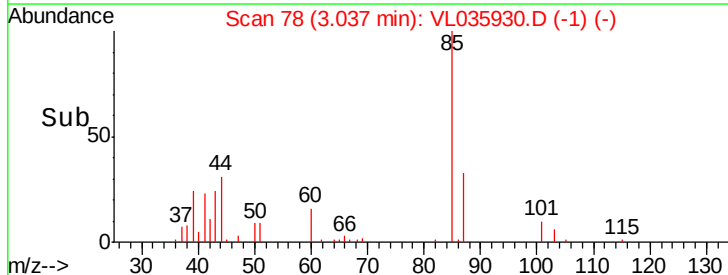
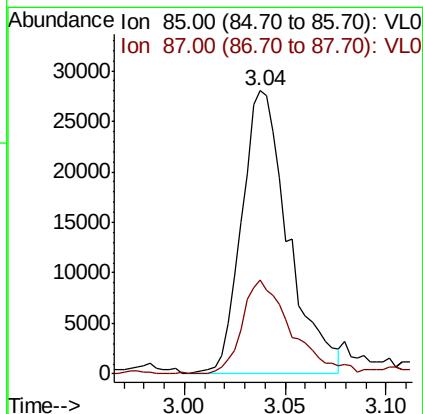
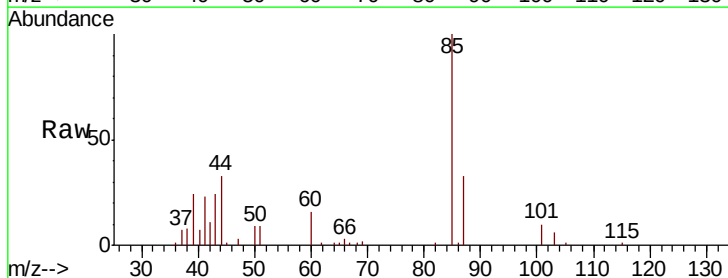
Instrument :
 MSVOA_L
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 LA-4

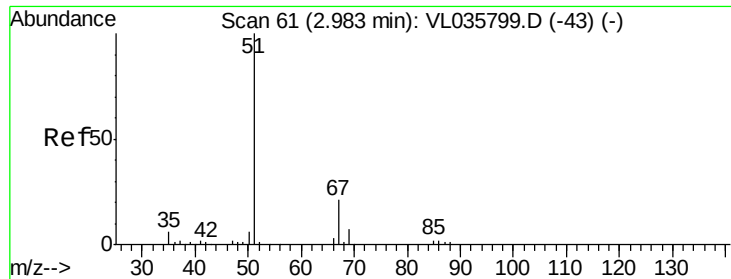
Tot Ion: 49 Resp: 1090055
 Ion Ratio Lower Upper
 49 100
 128 76.3 41.5 124.6
 130 99.3 53.7 161.1



#2
 Dichlorodifluoromethane
 Concen: 0.221 ppbv
 RT: 3.04 min Scan# 78
 Delta R.T. -0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

Tgt Ion: 85 Resp: 45330
 Ion Ratio Lower Upper
 85 100
 87 33.2 27.1 40.7





#3

Chlorodifluoromethane

Concen: 0.762 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.00 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampleId :

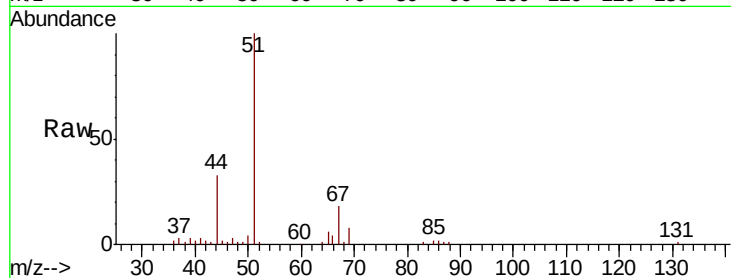
LA-4

Tot Ion: 51 Resp: 99448

Ion Ratio Lower Upper

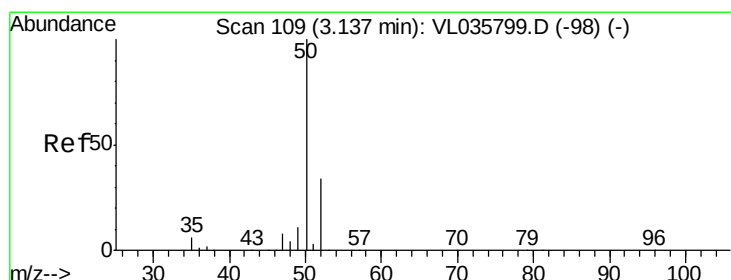
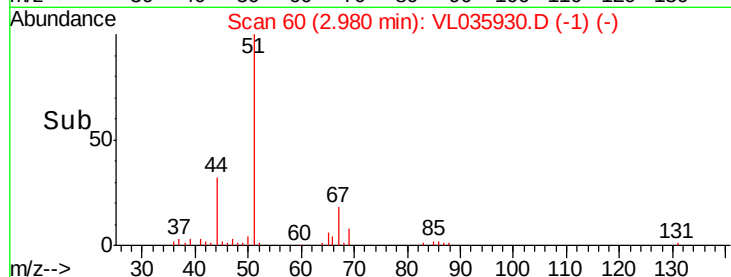
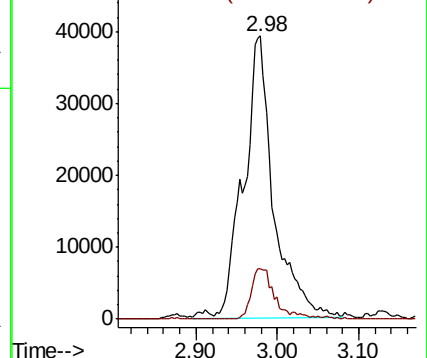
51 100

67 14.3 17.0 25.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.535 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL035930.D

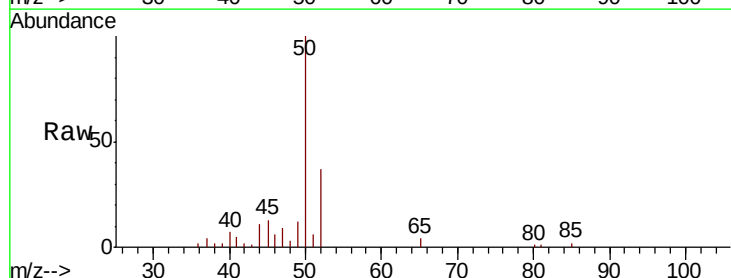
Acq: 13 Nov 2020 1:56

Tgt Ion: 50 Resp: 33936

Ion Ratio Lower Upper

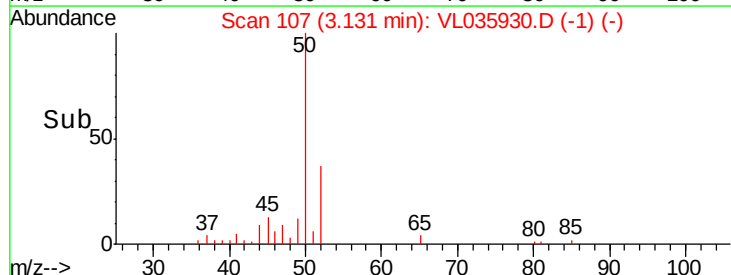
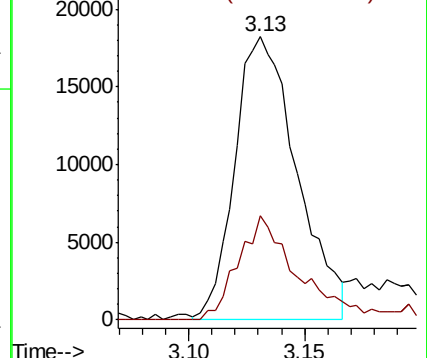
50 100

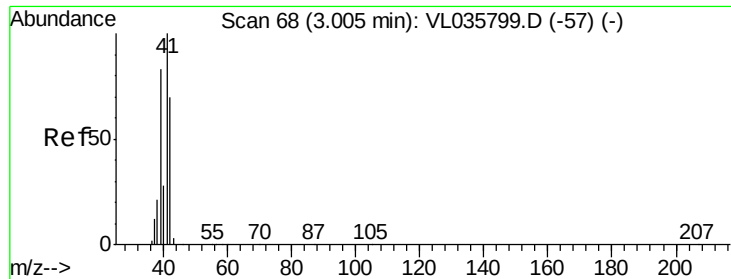
52 37.3 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.273 ppbv

RT: 3.01 min Scan# 69

Delta R.T. 0.00 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampleId :

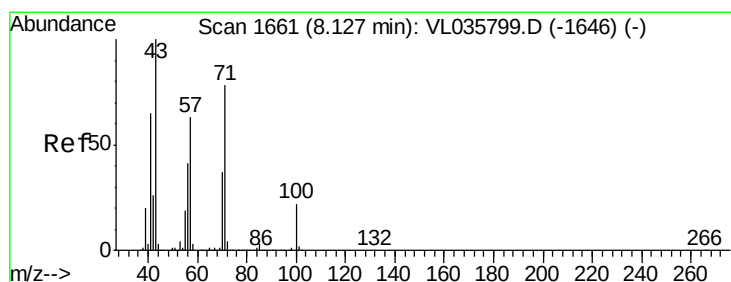
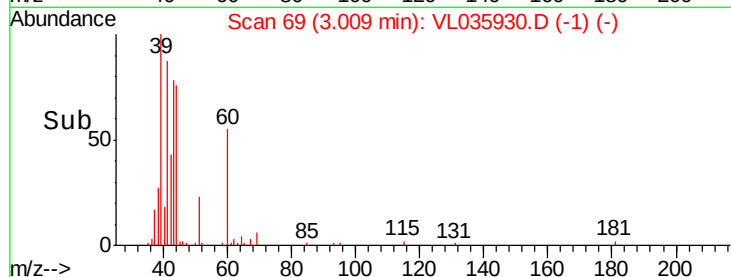
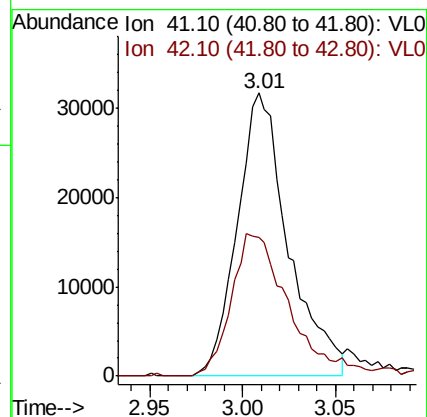
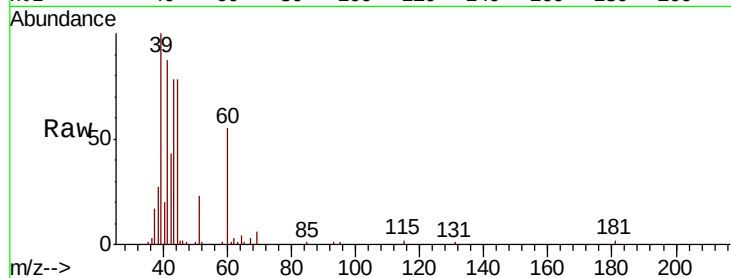
LA-4

Tot Ion: 41 Resp: 60818

Ion Ratio Lower Upper

41 100

42 59.0 56.2 84.4



#10

Heptane

Concen: 0.040 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. -0.01 min

Lab File: VL035930.D

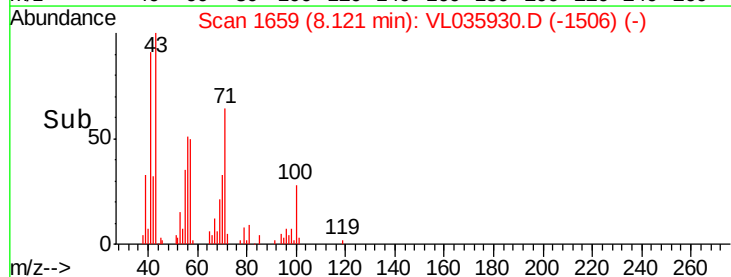
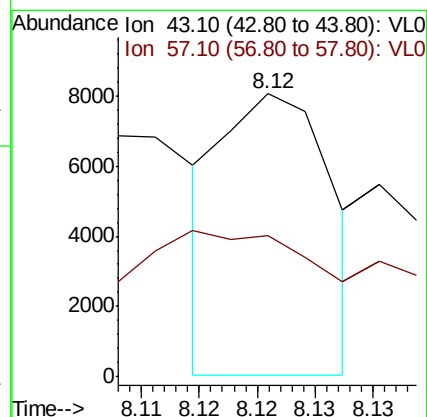
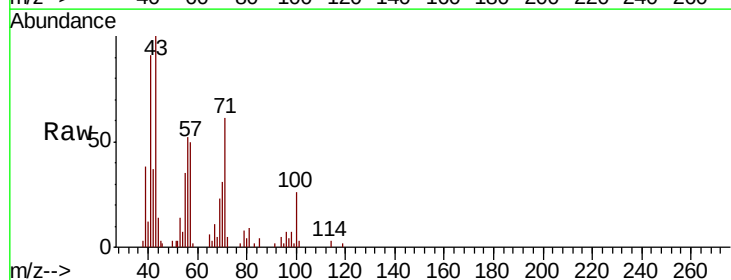
Acq: 13 Nov 2020 1:56

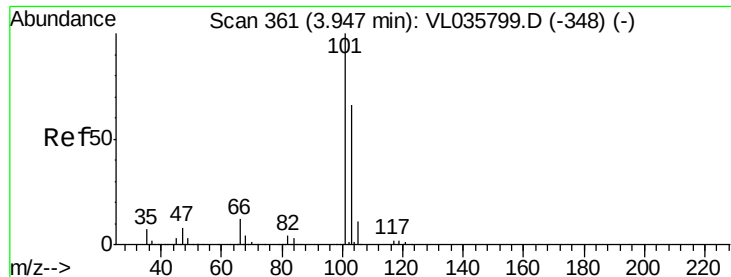
Tgt Ion: 43 Resp: 5232

Ion Ratio Lower Upper

43 100

57 192.0 50.0 75.0#

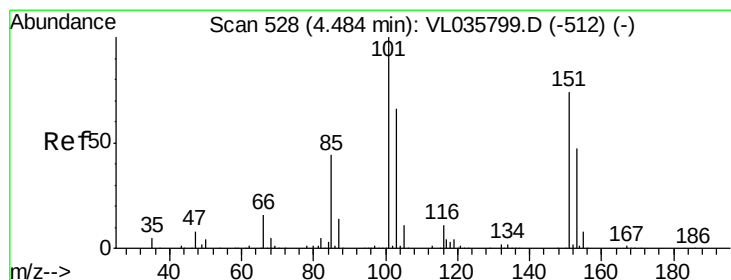
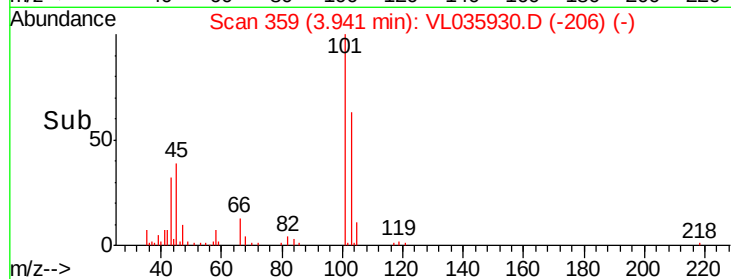
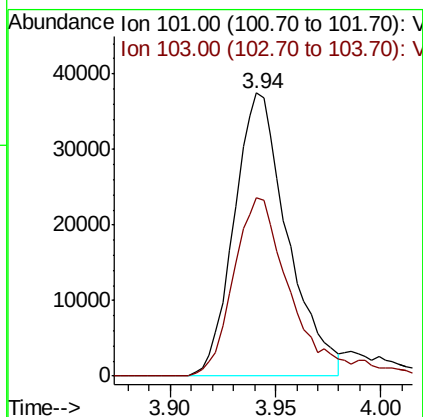
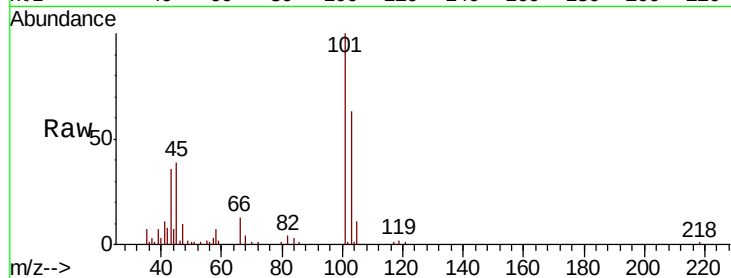




#11
 Trichlorofluoromethane
 Concen: 0.255 ppbv
 RT: 3.94 min Scan# 359
 Delta R.T. -0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

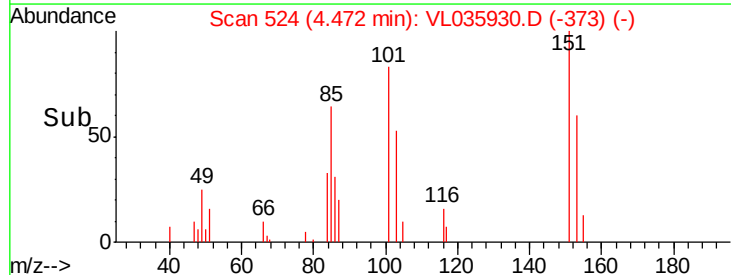
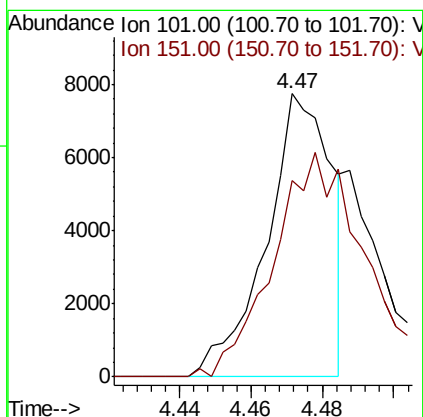
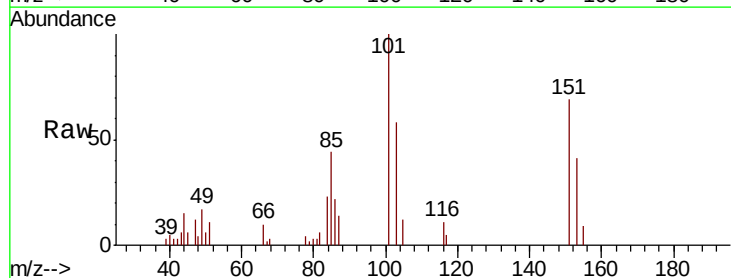
Instrument :
 MSVOA_L
 ClientSampleId :
 LA-4

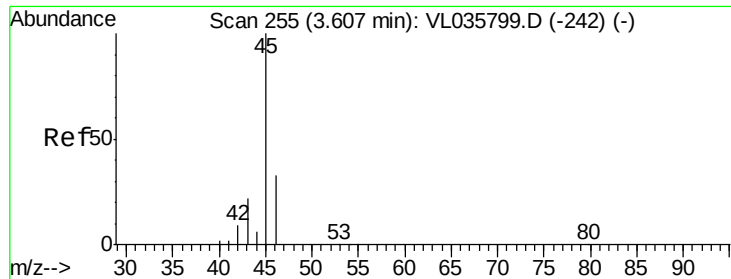
Tot Ion:101 Resp: 65815
 Ion Ratio Lower Upper
 101 100
 103 63.3 53.0 79.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.051 ppbv
 RT: 4.47 min Scan# 524
 Delta R.T. -0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

Tgt Ion:101 Resp: 9818
 Ion Ratio Lower Upper
 101 100
 151 117.4 58.9 88.3#





#13

Ethanol

Concen: 57.491 ppbv

RT: 3.59 min Scan# 251

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampled :

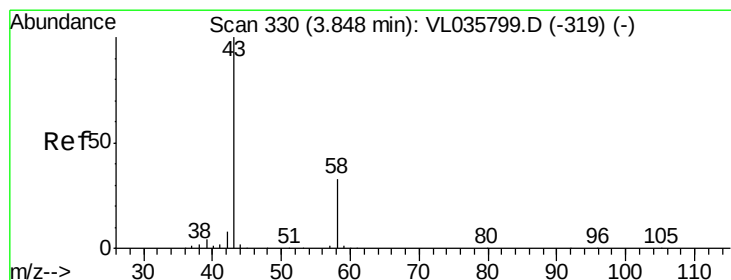
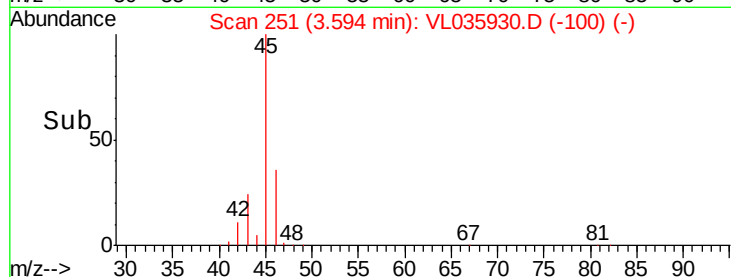
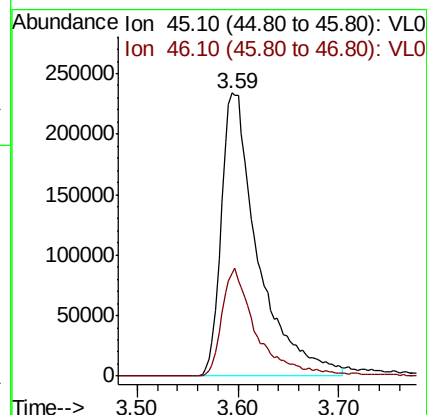
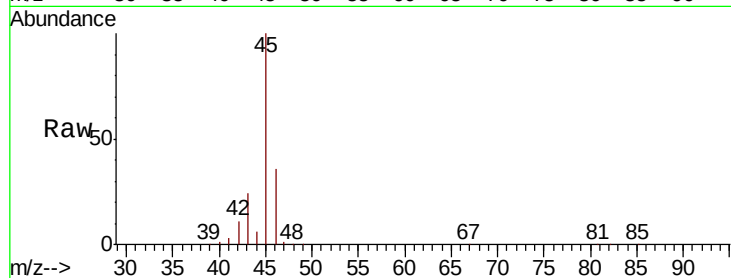
LA-4

Tot Ion: 45 Resp: 595907

Ion Ratio Lower Upper

45 100

46 36.7 16.1 64.5



#15

Acetone

Concen: 6.846 ppbv

RT: 3.84 min Scan# 328

Delta R.T. -0.01 min

Lab File: VL035930.D

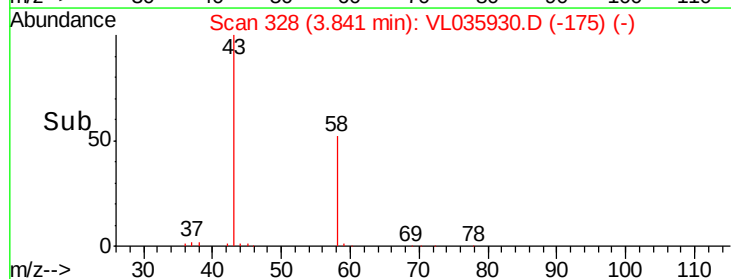
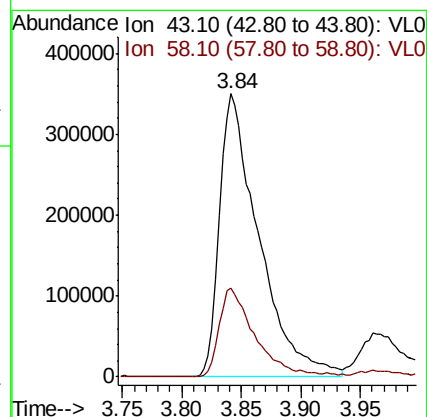
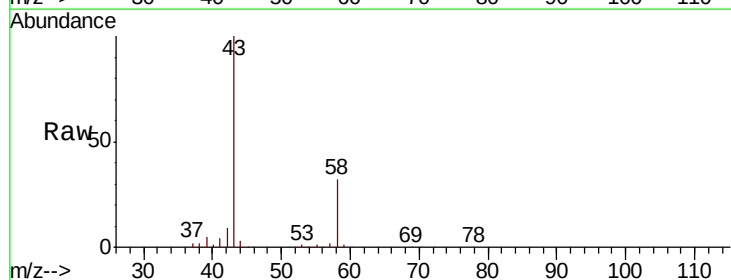
Acq: 13 Nov 2020 1:56

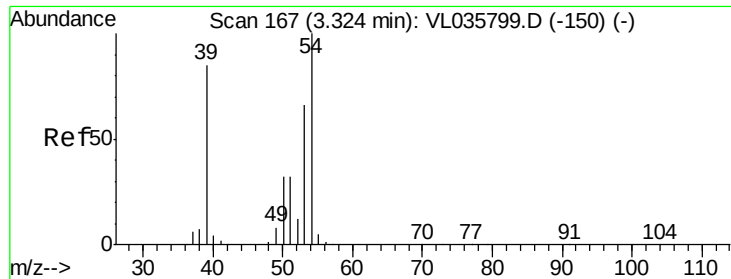
Tgt Ion: 43 Resp: 797754

Ion Ratio Lower Upper

43 100

58 29.4 27.5 41.3

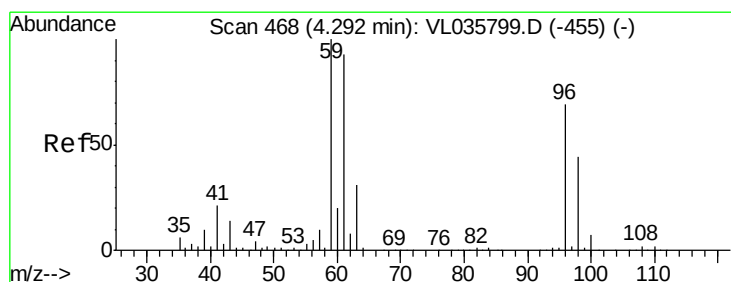
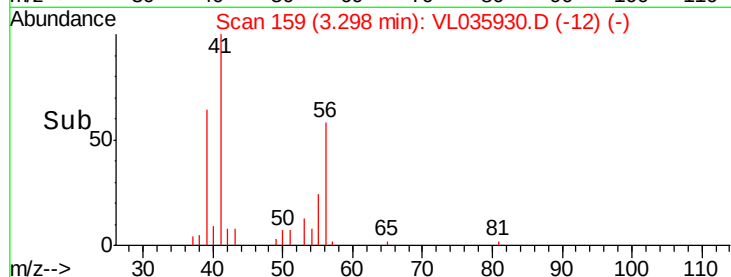
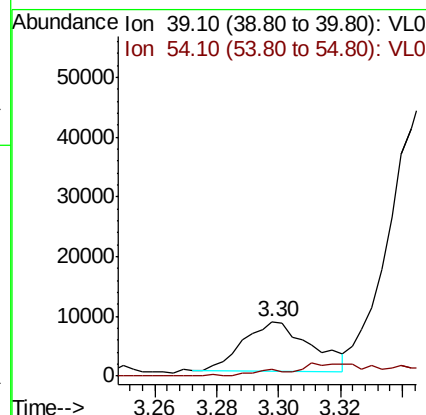
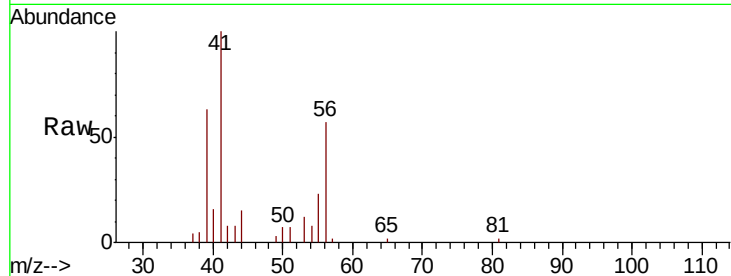




#16
 1,3-Butadiene
 Concen: 0.253 ppbv
 RT: 3.30 min Scan# 159
 Delta R.T. -0.03 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

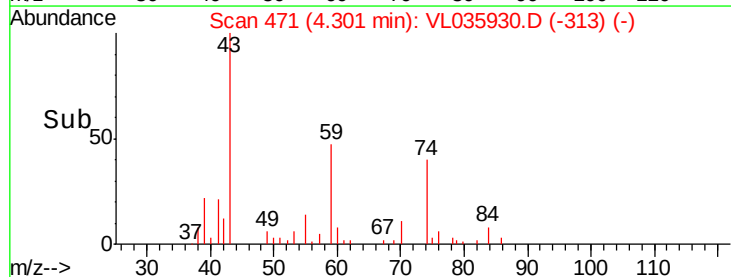
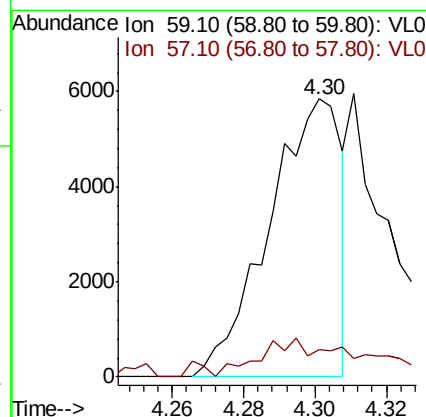
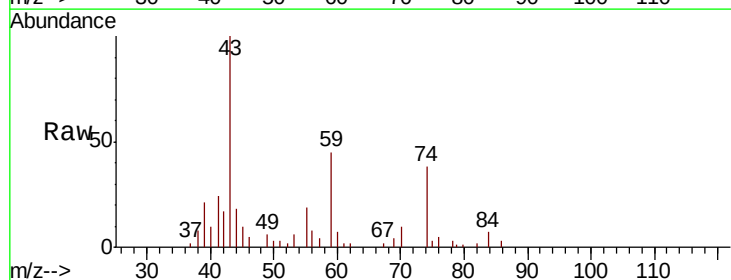
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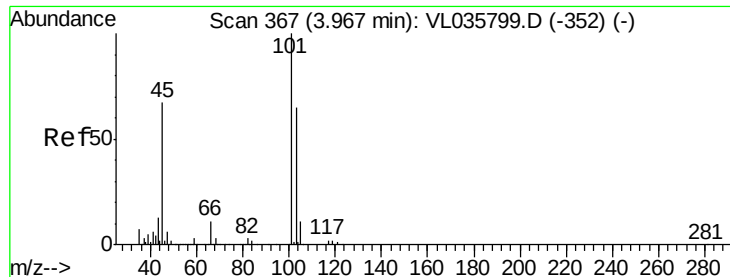
Tot Ion: 39 Resp: 12683
 Ion Ratio Lower Upper
 39 100
 54 48.7 87.1 130.7#



#17
 tert-Butyl alcohol
 Concen: 0.053 ppbv
 RT: 4.30 min Scan# 471
 Delta R.T. 0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

Tgt Ion: 59 Resp: 8193
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.2 12.4#





#19

Isopropyl Alcohol

Concen: 5.379 ppbv

RT: 3.97 min Scan# 367

Delta R.T. -0.00 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampleId :

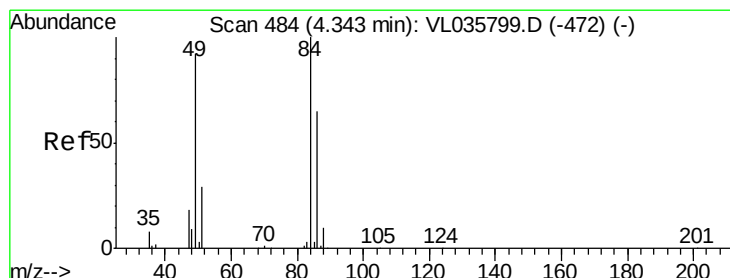
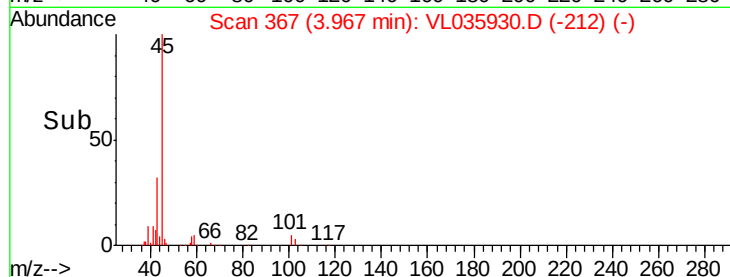
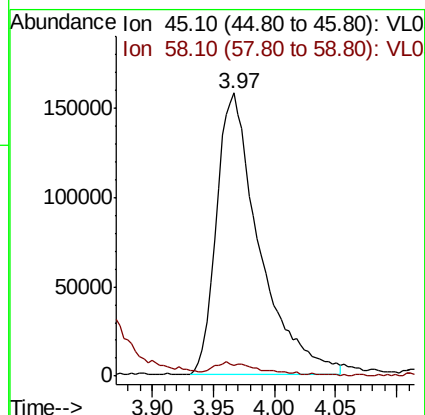
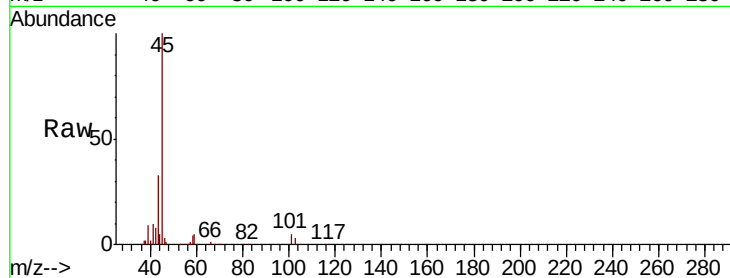
LA-4

Tot Ion: 45 Resp: 385206

Ion Ratio Lower Upper

45 100

58 6.1 2.6 3.8#



#20

Methylene Chloride

Concen: 5.104 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Tgt Ion: 84 Resp: 418695

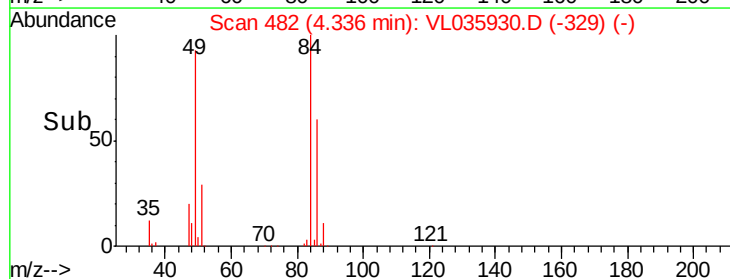
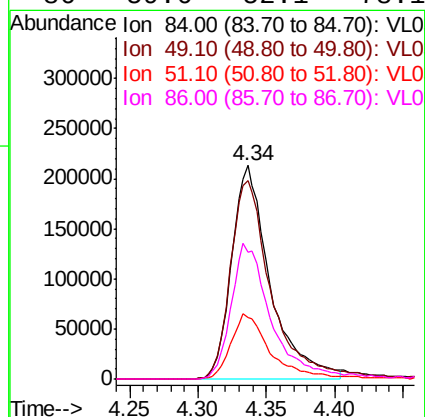
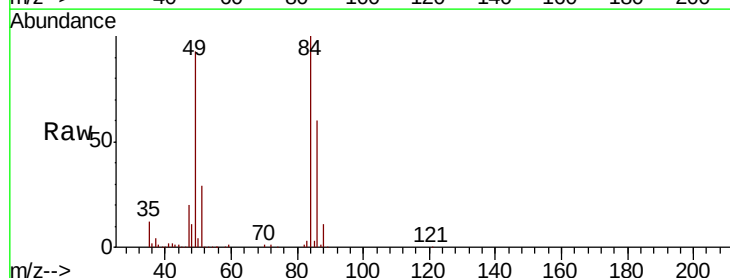
Ion Ratio Lower Upper

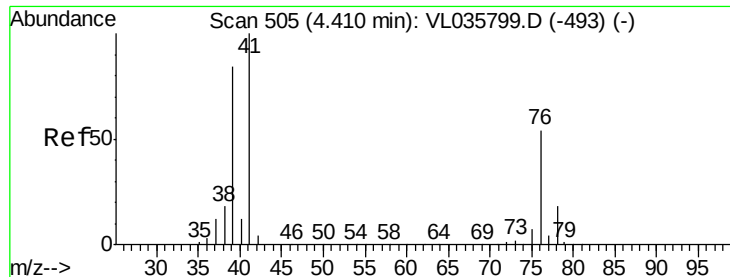
84 100

49 92.5 73.8 110.8

51 28.9 23.0 34.4

86 59.6 52.1 78.1





#21

Allvl Chloride

Concen: 0.037 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.08 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampled :

LA-4

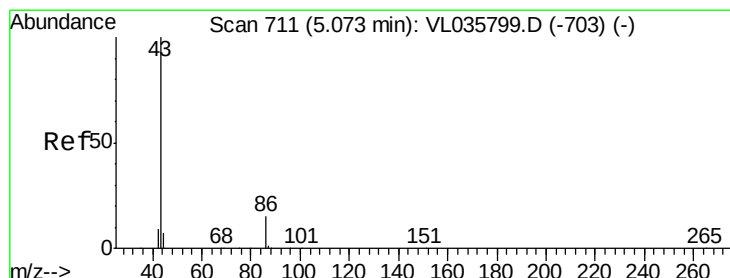
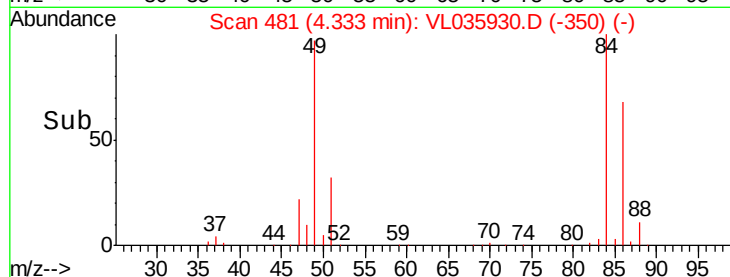
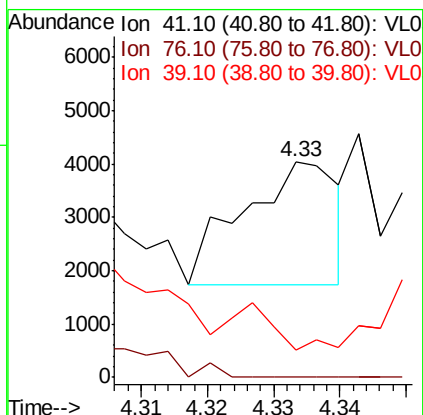
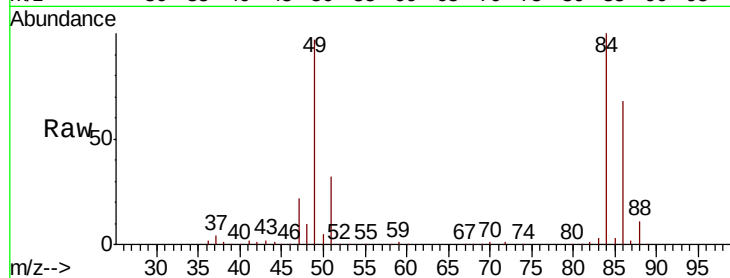
Tot Ion: 41 Resp: 2309

Ion Ratio Lower Upper

41 100

76 0.0 42.6 63.8#

39 175.7 67.0 100.4#



#23

Vinyl Acetate

Concen: 0.197 ppbv

RT: 5.05 min Scan# 705

Delta R.T. -0.02 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Tgt Ion: 43 Resp: 32206

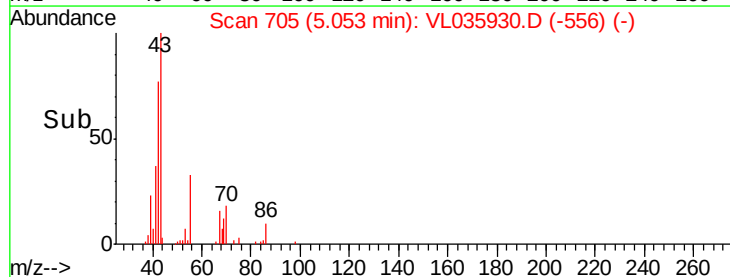
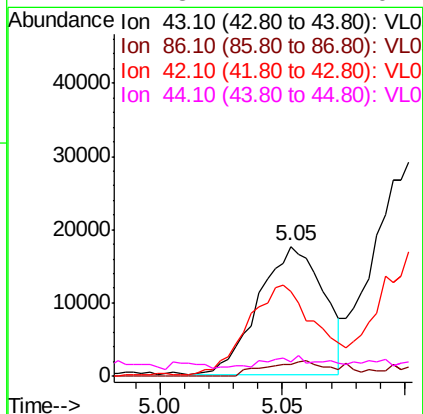
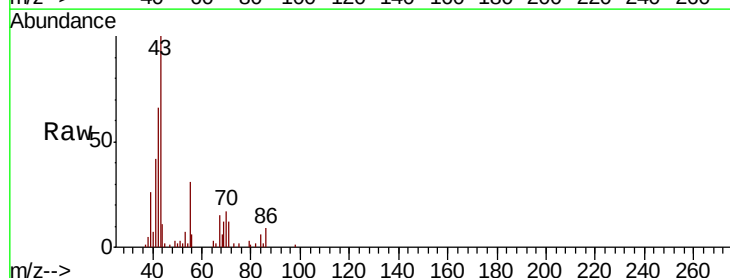
Ion Ratio Lower Upper

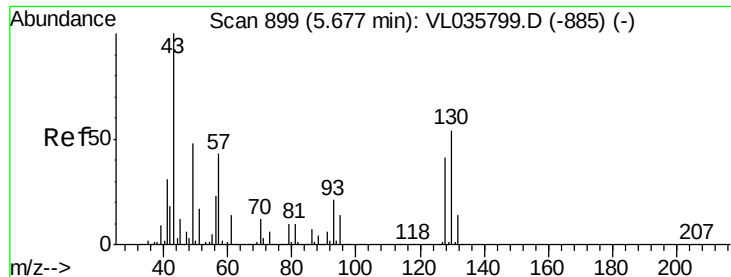
43 100

86 9.5 9.8 14.6#

42 65.0 8.1 12.1#

44 1.3 4.2 6.4#

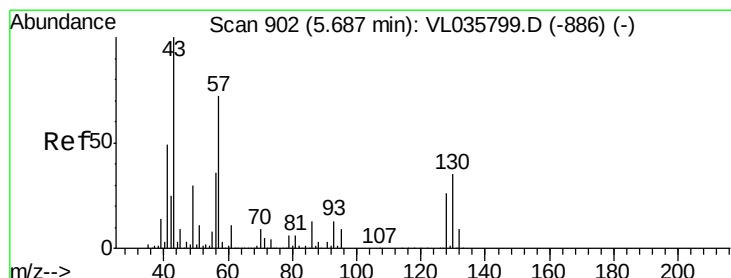
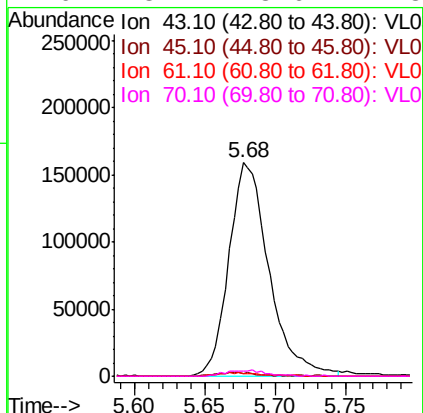
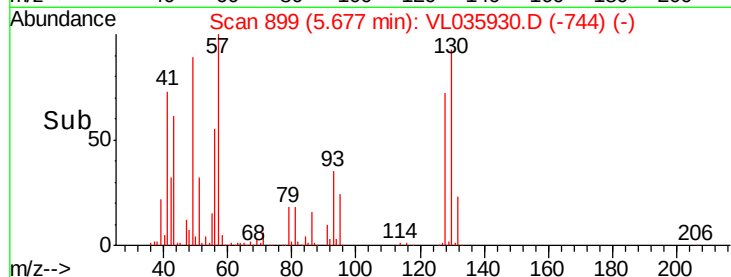
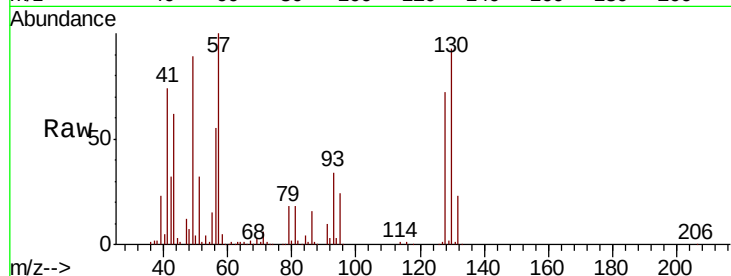




#25
Ethyl Acetate
Concen: 1.371 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.00 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

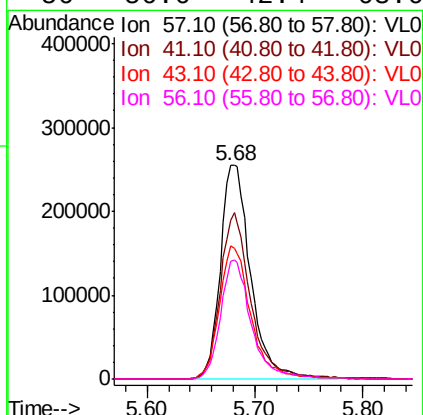
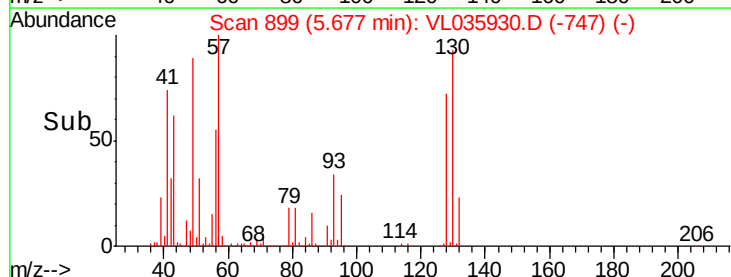
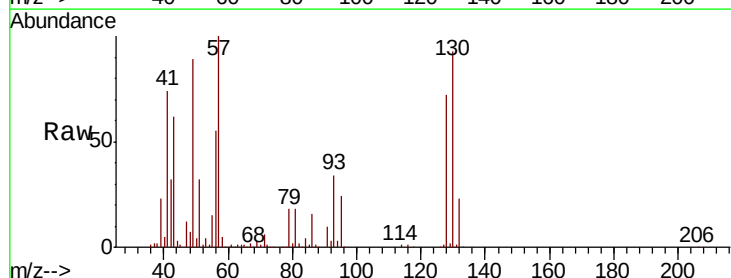
Instrument :
MSVOA_L
ClientSampleId :
LA-4

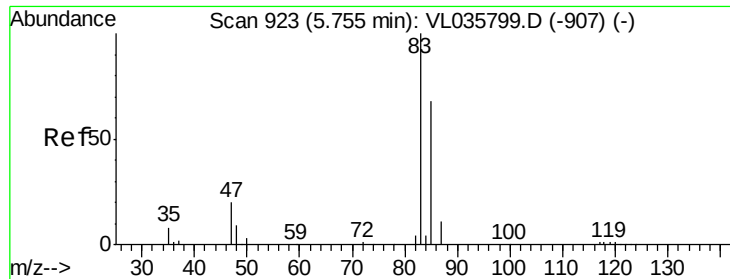
Tot Ion:	43	Resp:	314683
Ion	Ratio	Lower	Upper
43	100		
45	2.2	8.5	12.7#
61	1.8	10.7	16.1#
70	3.2	8.6	12.8#



#26
Hexane
Concen: 3.935 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.01 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

Tgt Ion:	57	Resp:	498182
Ion	Ratio	Lower	Upper
57	100		
41	79.3	58.9	88.3
43	64.4	150.2	225.2#
56	56.6	42.4	63.6

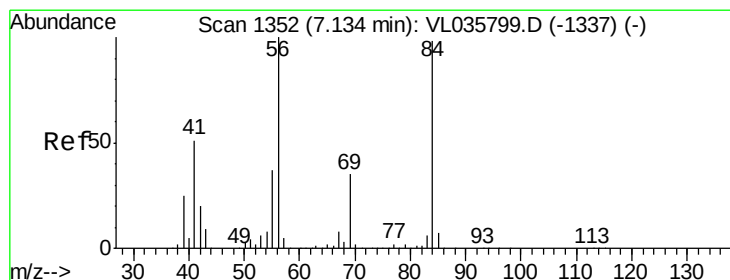
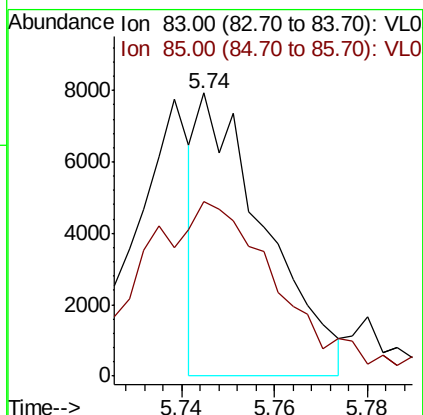
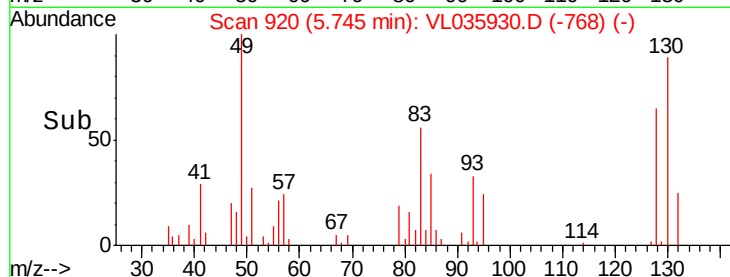
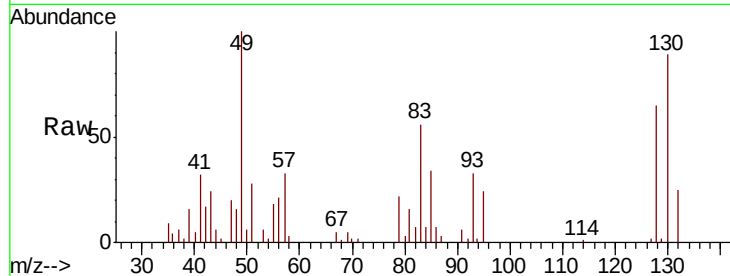




#29
Chloroform
Concen: 0.032 ppbv
RT: 5.74 min Scan# 920
Delta R.T. -0.01 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

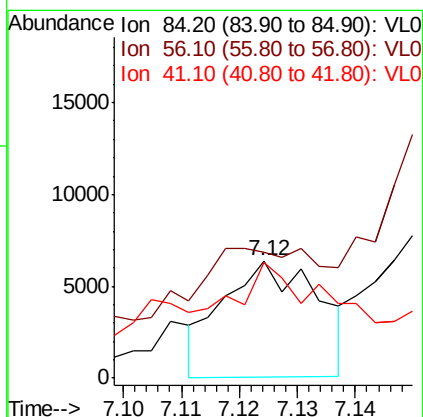
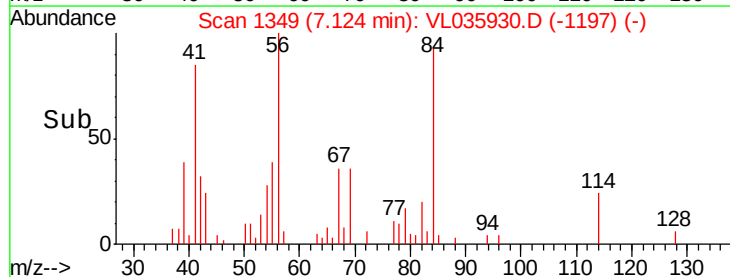
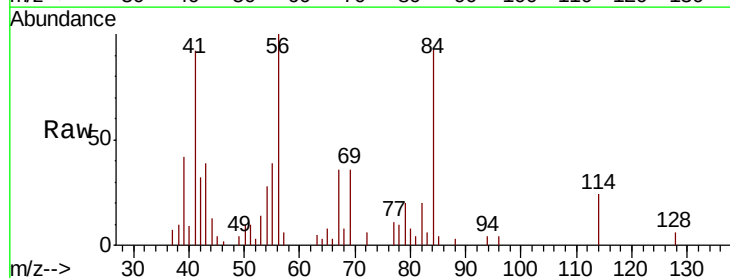
Instrument :
MSVOA_L
ClientSampled :
LA-4

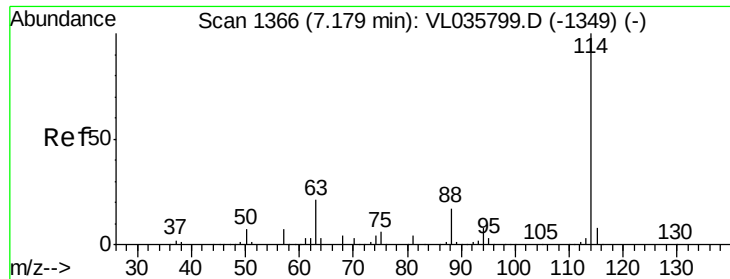
Tot Ion: 83 Resp: 7959
Ion Ratio Lower Upper
83 100
85 55.6 54.6 81.8



#30
Cyclohexane
Concen: 0.053 ppbv
RT: 7.12 min Scan# 1349
Delta R.T. -0.01 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

Tgt Ion: 84 Resp: 7254
Ion Ratio Lower Upper
84 100
56 0.0 86.4 129.6#
41 253.2 42.1 63.1#

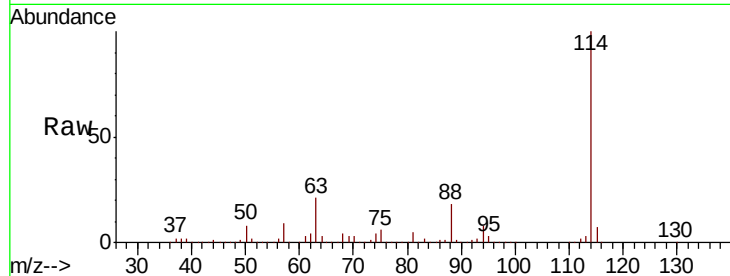




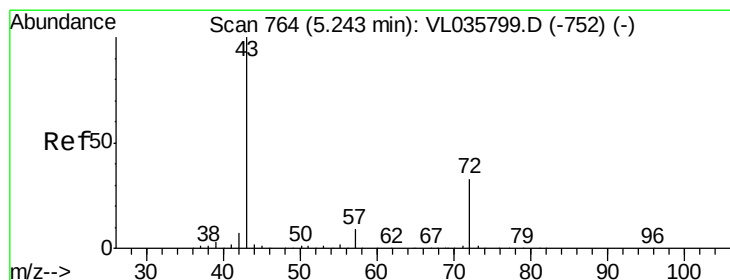
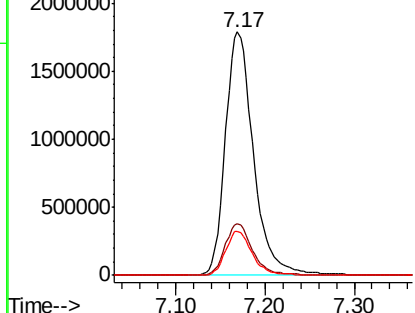
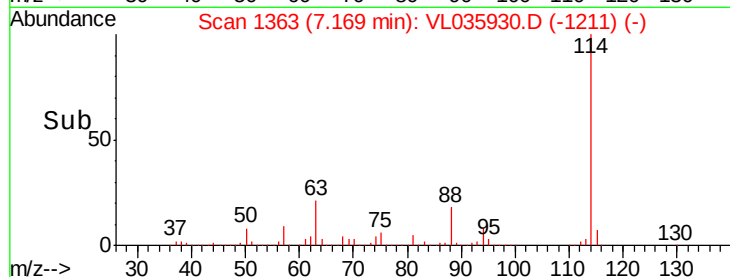
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

Instrument :
 MSVOA_L
 ClientSampleId :
 LA-4

Tot Ion:114 Resp: 3902804
 Ion Ratio Lower Upper
 114 100
 63 20.9 16.1 24.1
 88 17.5 13.7 20.5

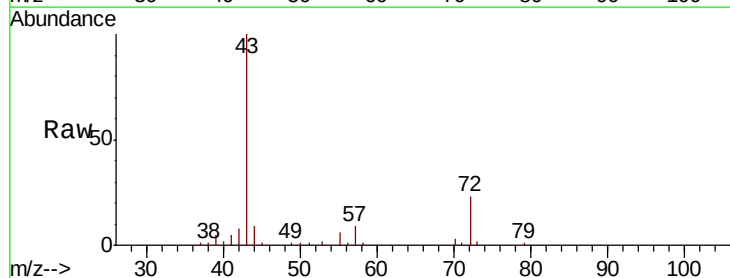


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

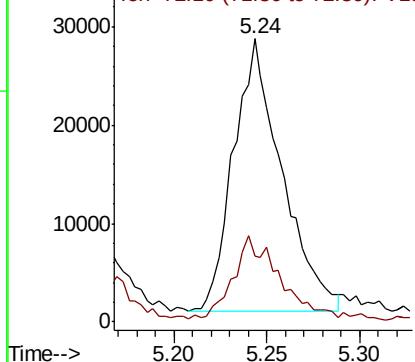
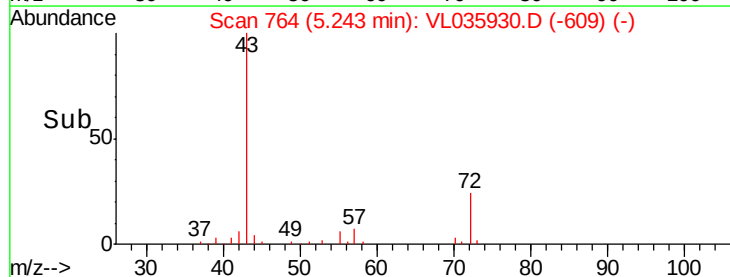


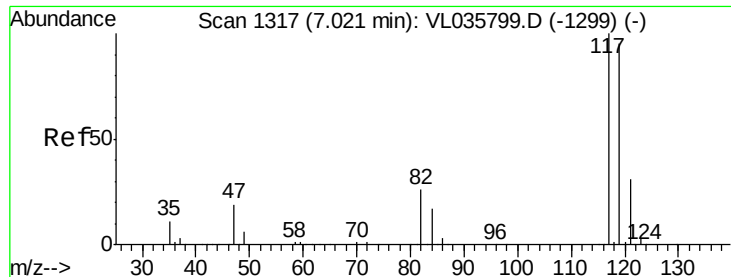
#34
 2-Butanone
 Concen: 0.396 ppbv
 RT: 5.24 min Scan# 764
 Delta R.T. -0.00 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

Tgt Ion: 43 Resp: 50110
 Ion Ratio Lower Upper
 43 100
 72 34.8 26.5 39.7



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





#35

Carbon Tetrachloride

Concen: 0.031 ppbv

RT: 7.01 min Scan# 1314

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampled :

LA-4

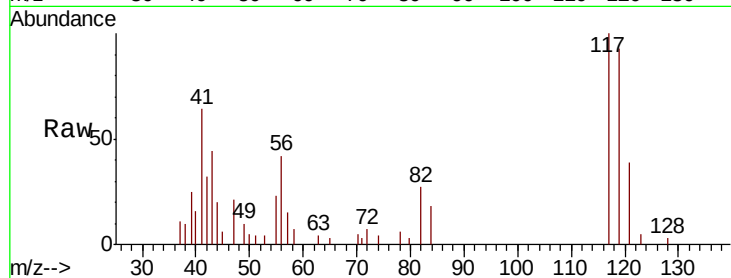
Tot Ion:117 Resp: 6413

Ion Ratio Lower Upper

117 100

119 79.0 75.6 113.4

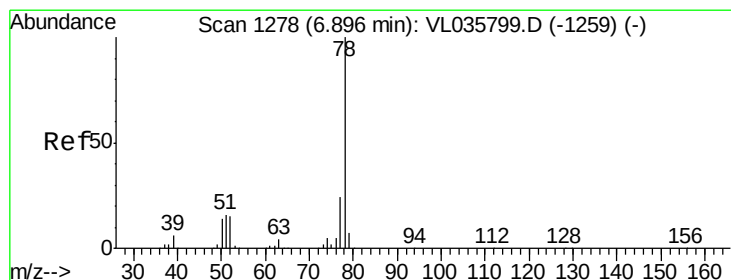
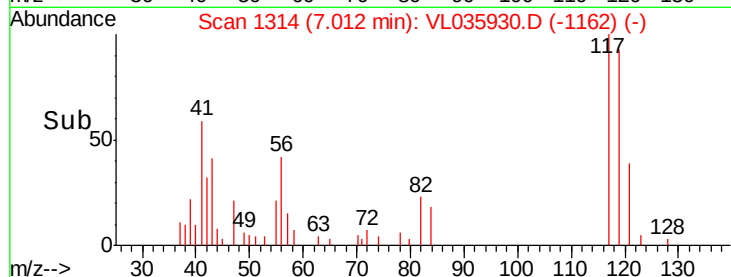
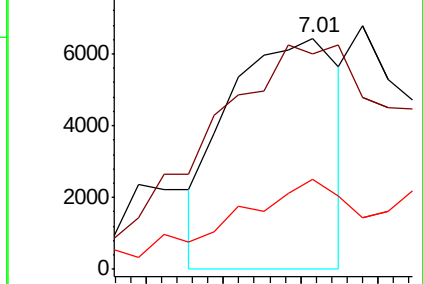
121 41.5 25.1 37.7#



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: 0.397 ppbv

RT: 6.88 min Scan# 1274

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

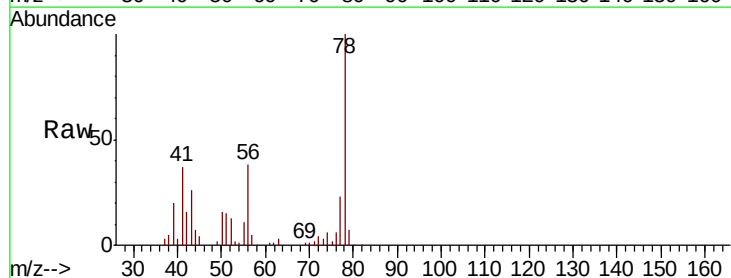
Tgt Ion: 78 Resp: 115275

Ion Ratio Lower Upper

78 100

77 22.8 19.3 28.9

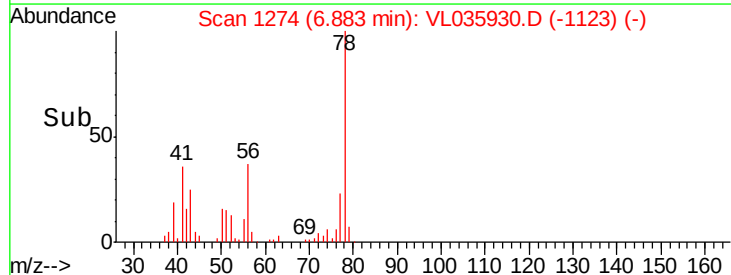
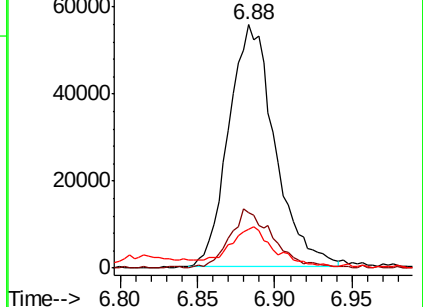
50 15.5 11.4 17.2

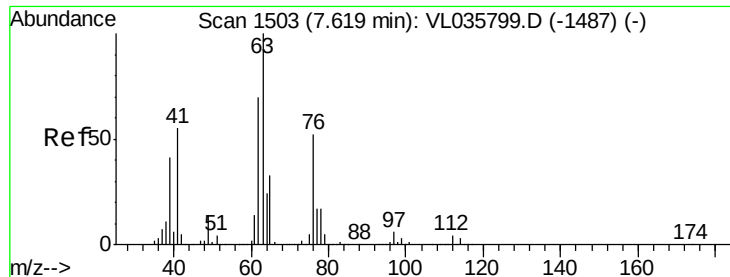


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 8.295 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. -0.45 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampleId :

LA-4

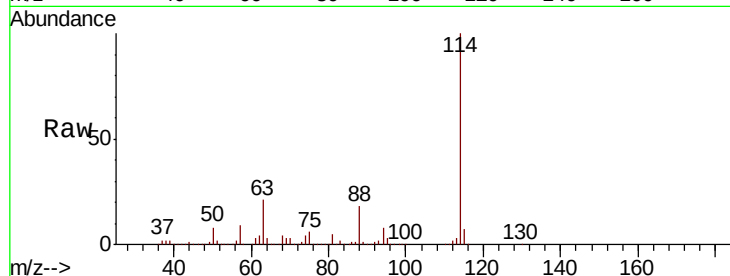
Tot Ion: 63 Resp: 810250

Ion Ratio Lower Upper

63 100

41 0.0 43.8 65.6#

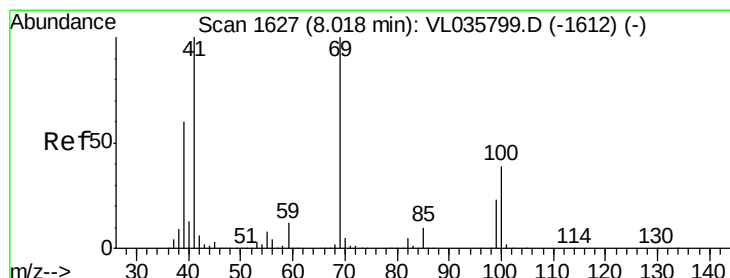
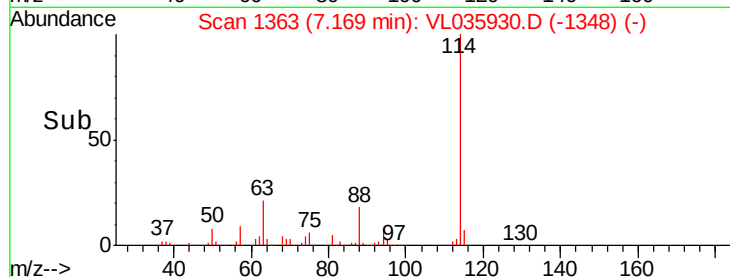
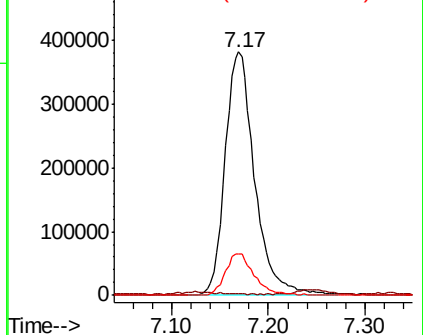
62 17.3 56.2 84.2#



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



#43

Methyl Methacrylate

Concen: 0.037 ppbv

RT: 8.01 min Scan# 1624

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

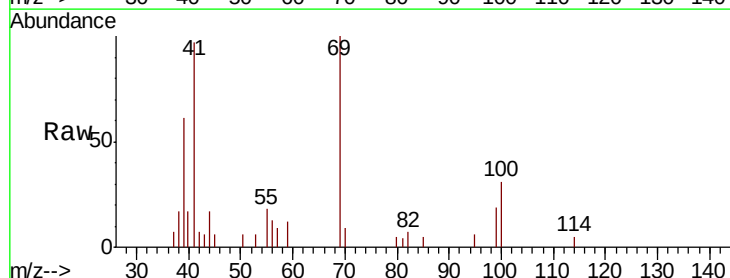
Tgt Ion: 69 Resp: 4084

Ion Ratio Lower Upper

69 100

41 0.0 81.1 121.7#

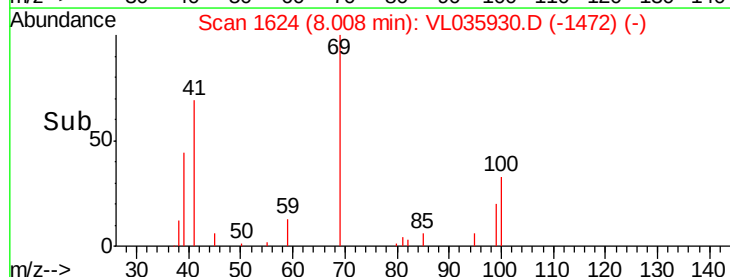
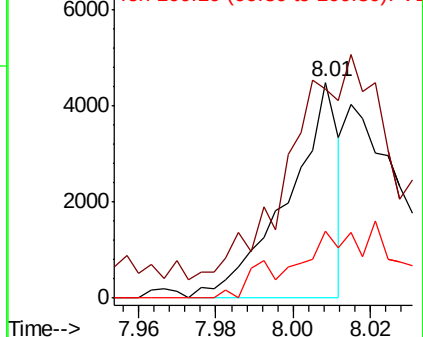
100 0.0 31.0 46.4#

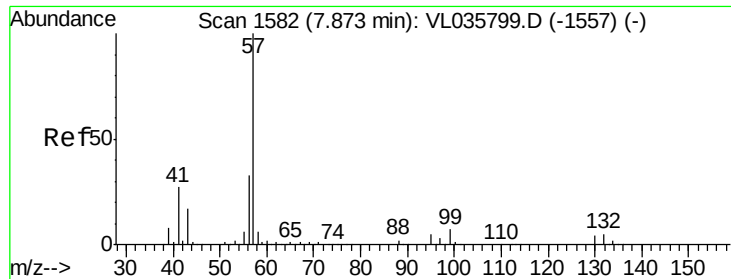


Abundance Ion 69.10 (68.80 to 69.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 100.10 (99.80 to 100.80): VL0

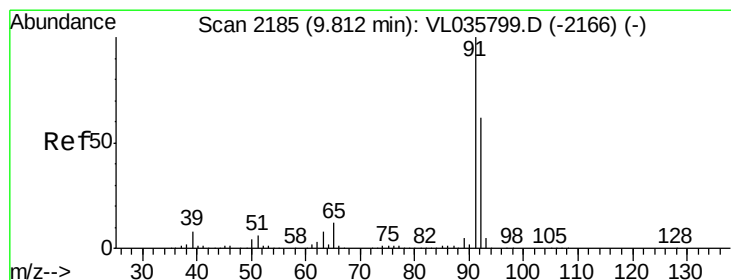
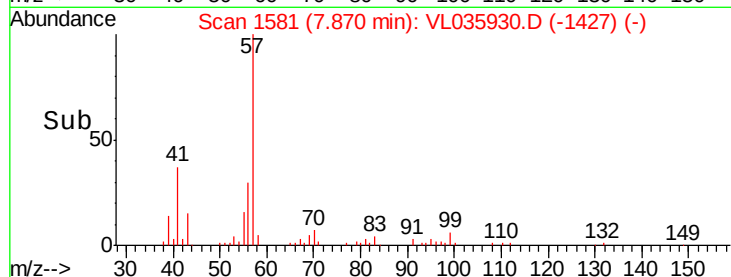
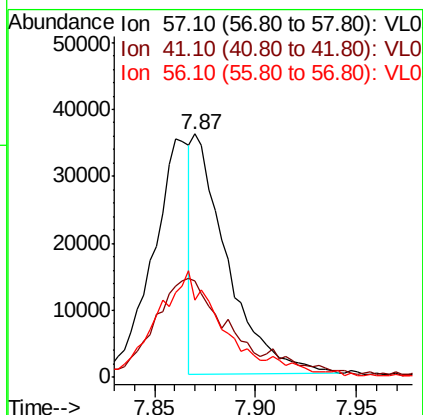
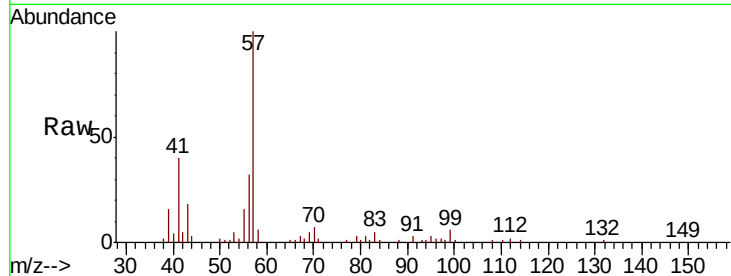




#44
 2,2,4-Trimethylpentane
 Concen: 0.111 ppbv
 RT: 7.87 min Scan# 1581
 Delta R.T. -0.00 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

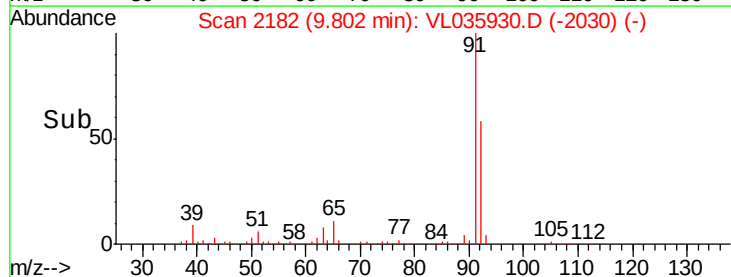
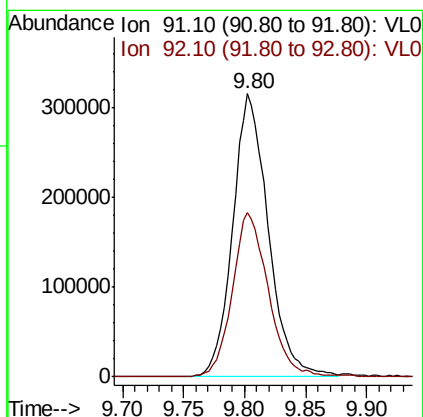
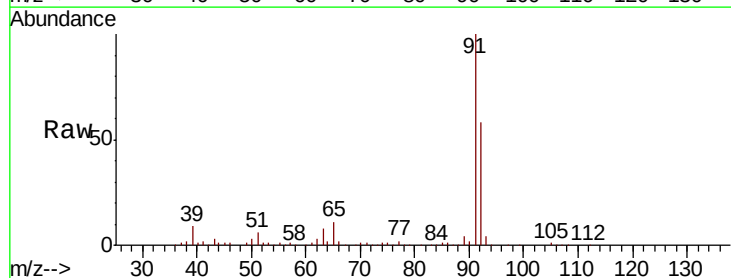
Instrument :
 MSVOA_L
 ClientSampled :
 LA-4

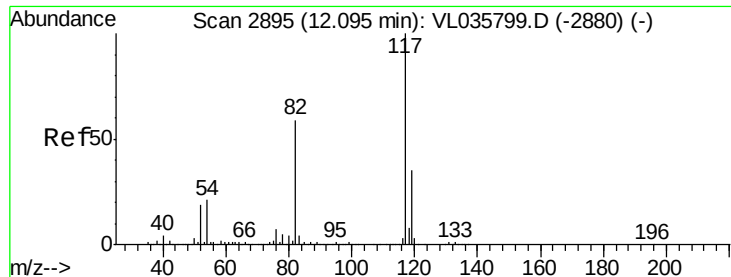
Tot Ion: 57 Resp: 42719
 Ion Ratio Lower Upper
 57 100
 41 90.1 21.0 31.4#
 56 92.7 25.4 38.0#



#53
 Toluene
 Concen: 1.814 ppbv
 RT: 9.80 min Scan# 2182
 Delta R.T. -0.01 min
 Lab File: VL035930.D
 Acq: 13 Nov 2020 1:56

Tgt Ion: 91 Resp: 635139
 Ion Ratio Lower Upper
 91 100
 92 59.5 49.8 74.6

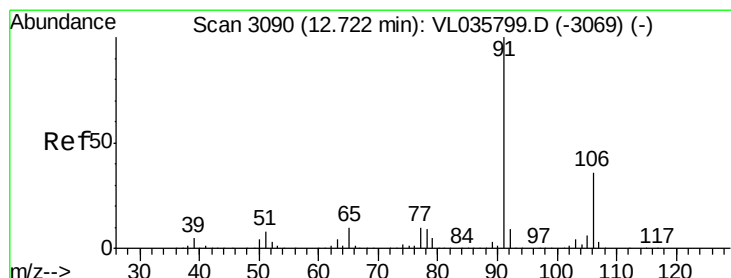
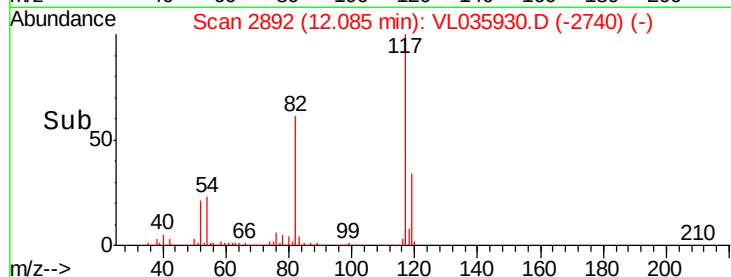
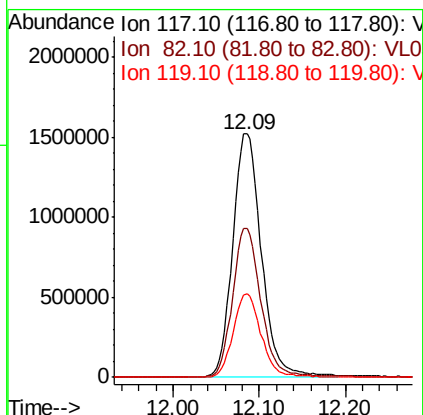
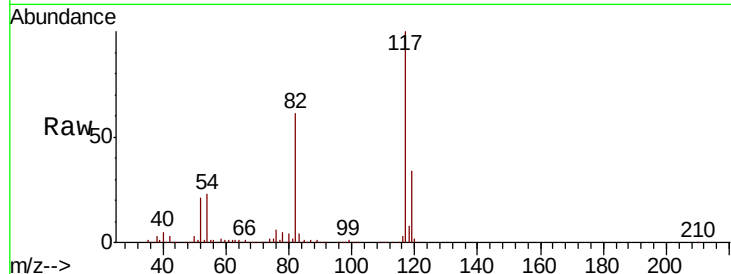




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

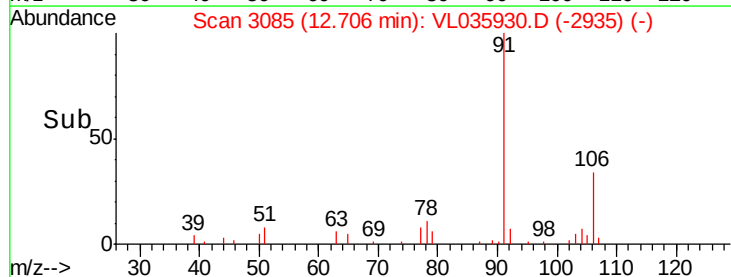
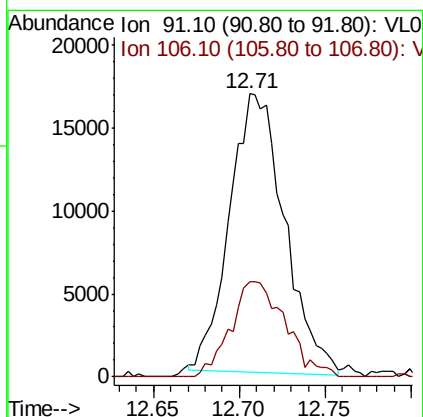
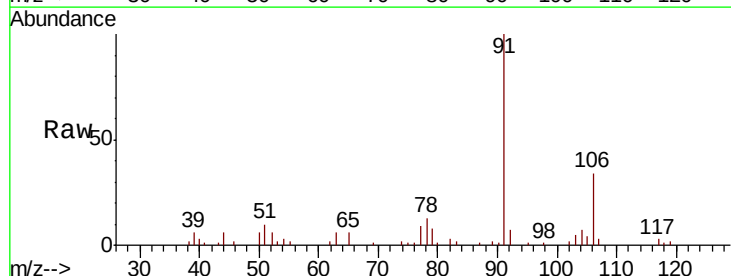
Instrument :
MSVOA_L
ClientSampleId :
LA-4

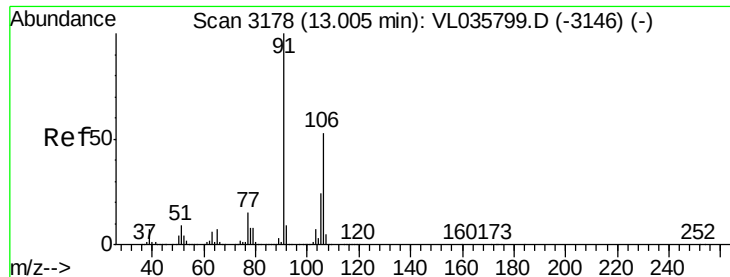
Tot Ion:117 Resp: 3538120
Ion Ratio Lower Upper
117 100
82 61.5 50.6 76.0
119 33.6 52.6 78.8#



#58
Ethyl Benzene
Concen: 0.087 ppbv
RT: 12.71 min Scan# 3085
Delta R.T. -0.02 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

Tgt Ion: 91 Resp: 37499
Ion Ratio Lower Upper
91 100
106 34.7 28.6 43.0

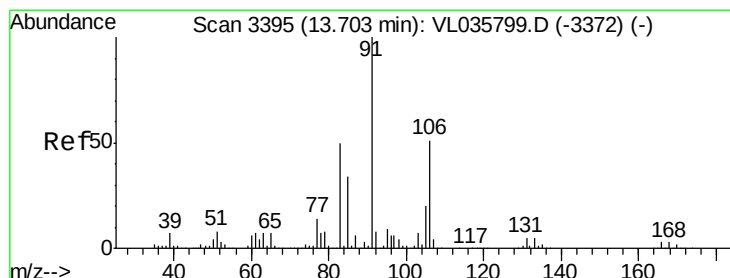
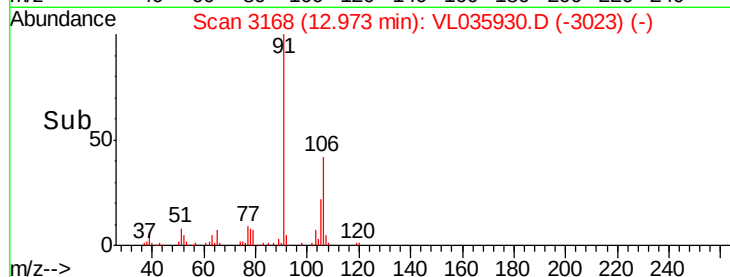
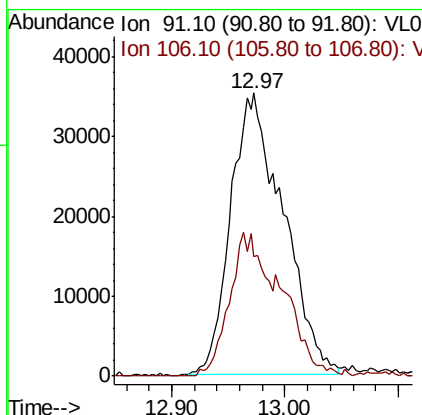
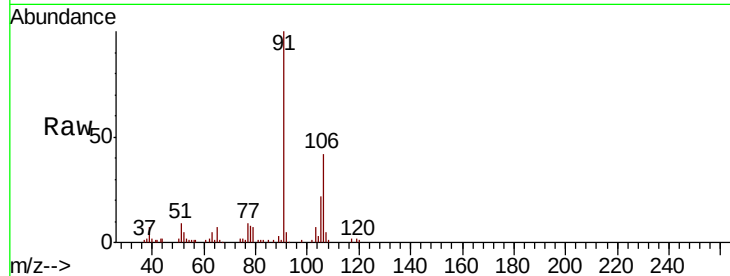




#59
m/p-Xylene
Concen: 0.313 ppbv
RT: 12.97 min Scan# 3168
Delta R.T. -0.03 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

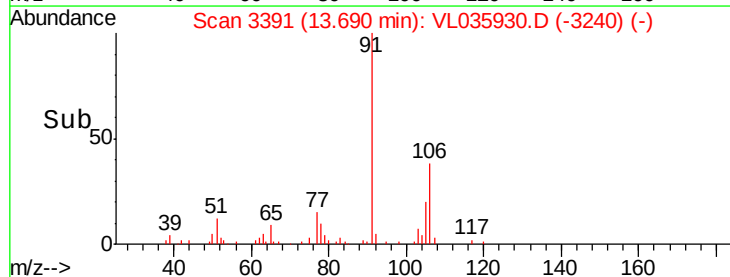
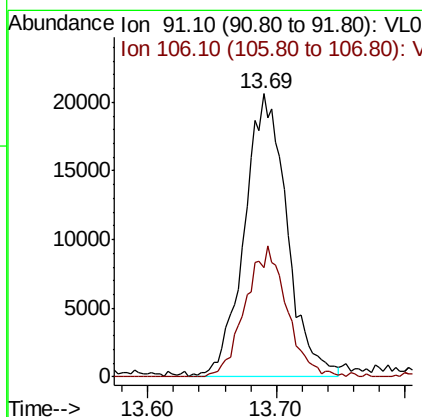
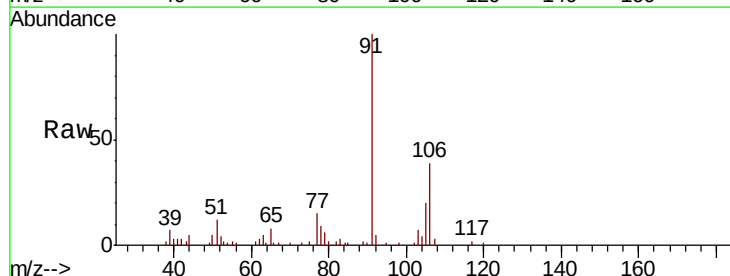
Instrument :
MSVOA_L
ClientSampled :
LA-4

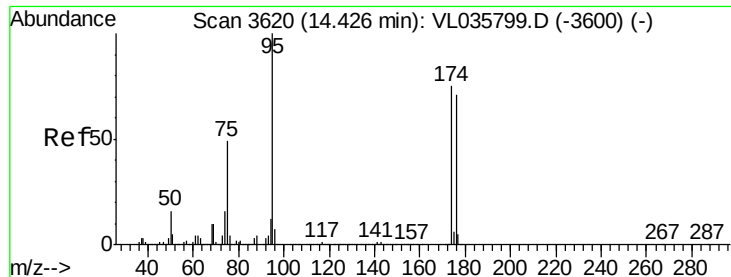
Tot Ion: 91 Resp: 114065
Ion Ratio Lower Upper
91 100
106 50.6 39.5 59.3



#60
o-Xylene
Concen: 0.134 ppbv
RT: 13.69 min Scan# 3391
Delta R.T. -0.01 min
Lab File: VL035930.D
Acq: 13 Nov 2020 1:56

Tgt Ion: 91 Resp: 47524
Ion Ratio Lower Upper
91 100
106 45.0 24.8 74.4





#68

1-Bromo-4-Fluorobenzene

Concen: 10.527 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Instrument :

MSVOA_L

ClientSampleId :

LA-4

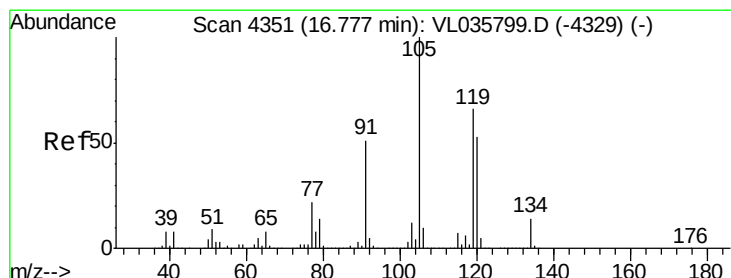
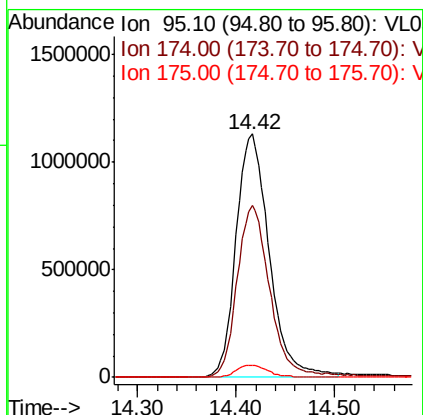
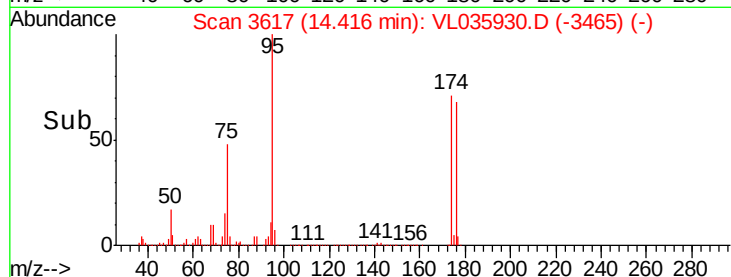
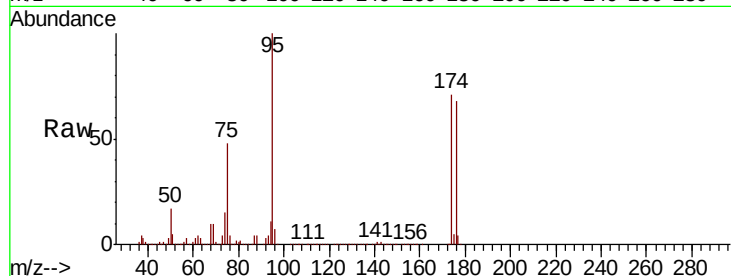
Tot Ion: 95 Resp: 2646222

Ion Ratio Lower Upper

95 100

174 71.3 59.8 89.6

175 5.0 4.3 6.5



#74

1,2,4-Trimethylbenzene

Concen: 0.121 ppbv

RT: 16.77 min Scan# 4348

Delta R.T. -0.01 min

Lab File: VL035930.D

Acq: 13 Nov 2020 1:56

Tgt Ion: 105 Resp: 50941

Ion Ratio Lower Upper

105 100

120 42.6 42.0 63.0

91 10.3 41.0 61.6#

77 14.1 17.3 25.9#

