

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111220\
 Data File : VL035921.D
 Acq On : 12 Nov 2020 20:01
 Operator : SY/AP
 Sample : L4720-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-5

Quant Time: Nov 13 00:59:58 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	1140062	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	4062404	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	3730115	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2770671	10.45	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	62800	0.293	ppbv	94
3) Chlorodifluoromethane	2.98	51	84835	0.621	ppbv #	81
4) Chloromethane	3.13	50	33820	0.510	ppbv	93
9) Propene	3.01	41	49013	0.981	ppbv	85
10) Heptane	8.12	43	23089	0.167	ppbv	97
11) Trichlorofluoromethane	3.94	101	66516	0.247	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.48	101	14155	0.071	ppbv	89
13) Ethanol	3.60	45	390544	36.026	ppbv	100
15) Acetone	3.84	43	627472	5.148	ppbv	89
16) 1,3-Butadiene	3.30	39	10347	0.197	ppbv #	41
19) Isopropyl Alcohol	3.97	45	56712	0.757	ppbv #	43
20) Methylene Chloride	4.34	84	1166155	13.591	ppbv	98
21) Allyl Chloride	4.37	41	3468	0.053	ppbv #	1
23) Vinyl Acetate	5.05	43	37836	0.221	ppbv #	1
25) Ethyl Acetate	5.68	43	668844	2.786	ppbv #	73
26) Hexane	5.68	57	1117167	8.437	ppbv #	47
30) Cyclohexane	7.13	84	19925	0.138	ppbv #	12
34) 2-Butanone	5.24	43	44593	0.338	ppbv	99
35) Carbon Tetrachloride	7.02	117	14389	0.066	ppbv	93
36) Benzene	6.88	78	83845	0.278	ppbv #	91
39) 1,2-Dichloropropane	7.17	63	838419	8.246	ppbv #	30
41) Tetrahydrofuran	5.68	42	367541	4.907	ppbv #	38
44) 2,2,4-Trimethylpentane	7.87	57	157360	0.394	ppbv #	77
53) Toluene	9.80	91	1809679	4.966	ppbv	97
57) Chlorobenzene	12.15	112	12659	0.043	ppbv #	87
58) Ethyl Benzene	12.71	91	46449	0.102	ppbv	91
59) m/p-Xylene	12.99	91	42684	0.111	ppbv #	28
60) o-Xylene	13.69	91	48434	0.130	ppbv	97
74) 1,2,4-Trimethylbenzene	16.77	105	65350	0.147	ppbv #	70

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

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ALS Vial : 1 Sample Multiplier: 1



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

CVS-5

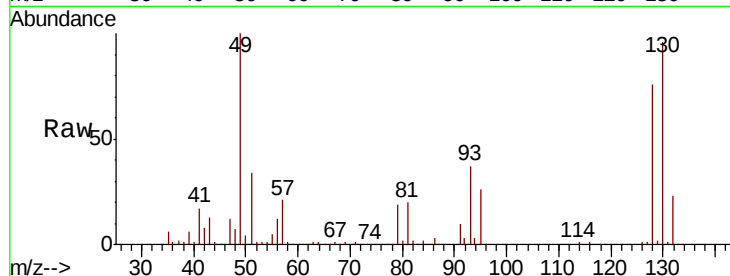
Tot Ion: 49 Resp: 1140062

Ion Ratio Lower Upper

49 100

128 78.3 41.5 124.6

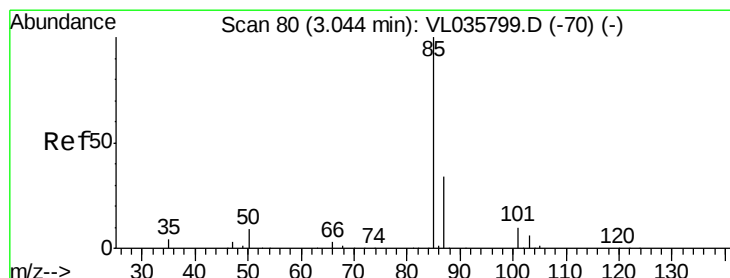
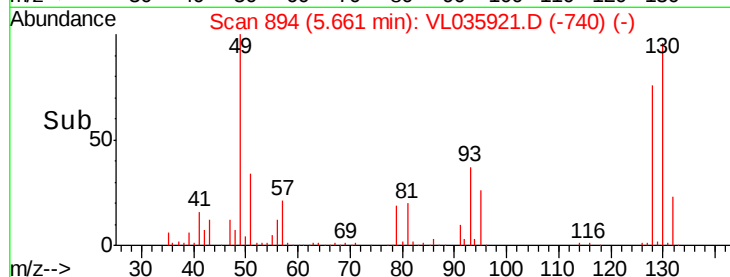
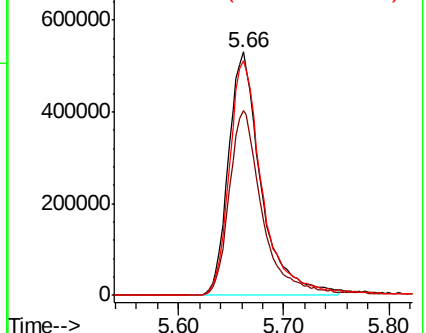
130 99.4 53.7 161.1



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.293 ppbv

RT: 3.04 min Scan# 78

Delta R.T. -0.01 min

Lab File: VL035921.D

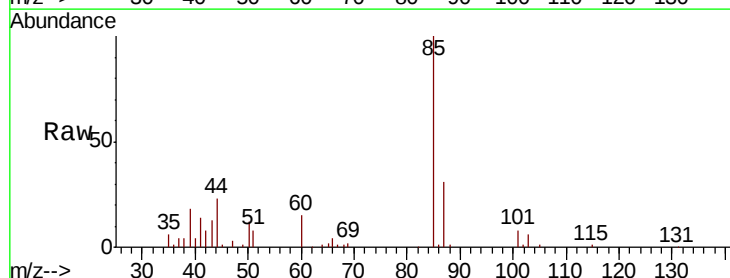
Acq: 12 Nov 2020 20:01

Tgt Ion: 85 Resp: 62800

Ion Ratio Lower Upper

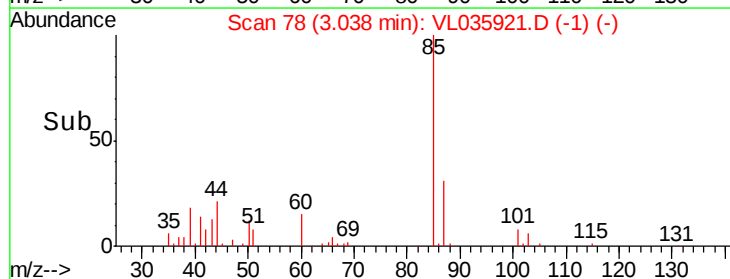
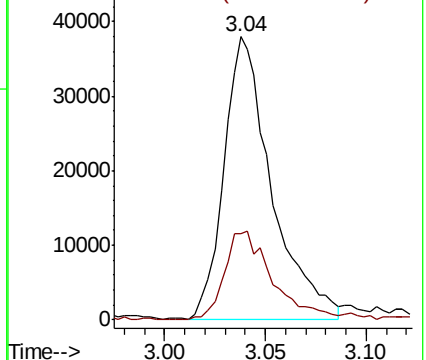
85 100

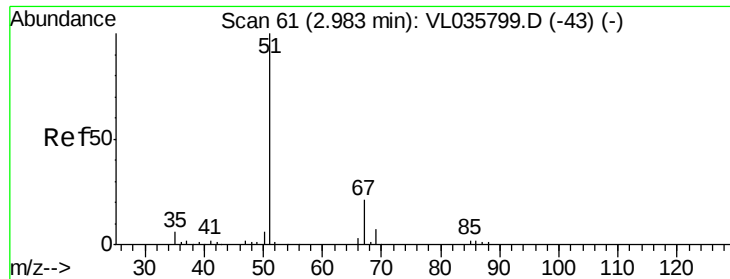
87 30.7 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.621 ppbv

RT: 2.98 min Scan# 59

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

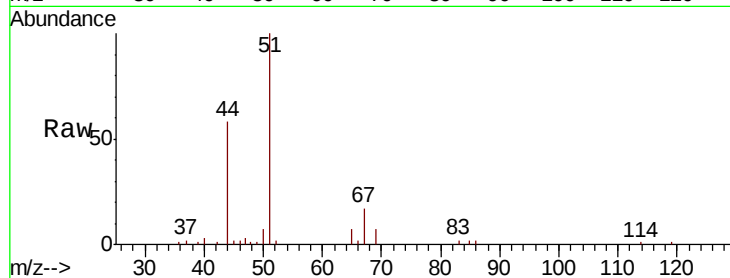
CVS-5

Tot Ion: 51 Resp: 84835

Ion Ratio Lower Upper

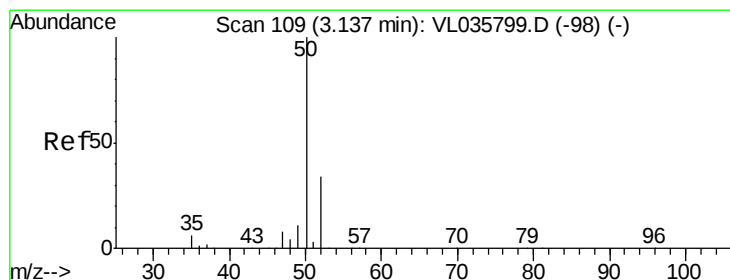
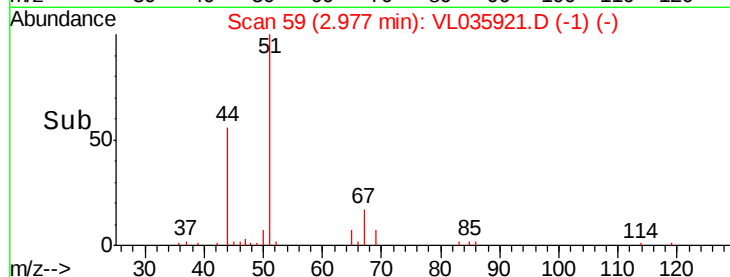
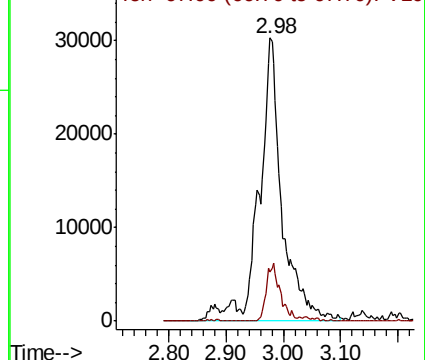
51 100

67 12.5 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: 0.510 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL035921.D

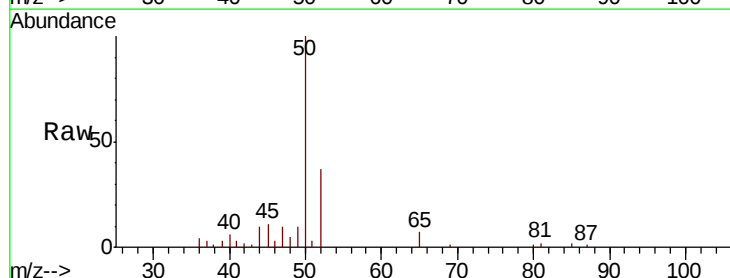
Acq: 12 Nov 2020 20:01

Tgt Ion: 50 Resp: 33820

Ion Ratio Lower Upper

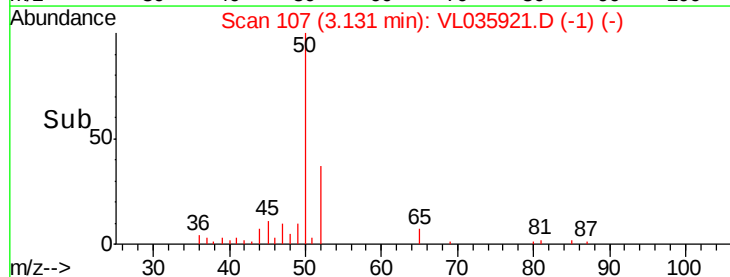
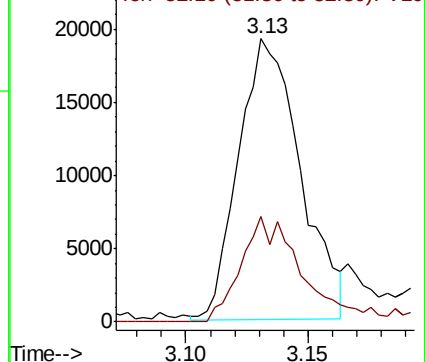
50 100

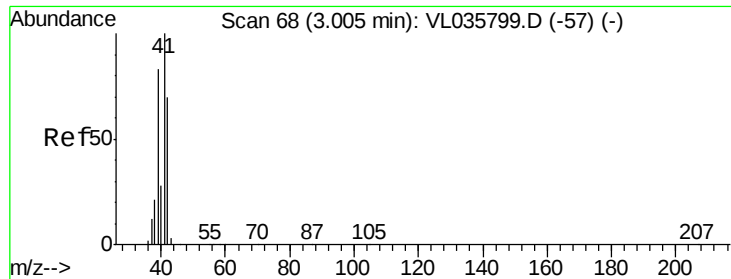
52 37.9 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

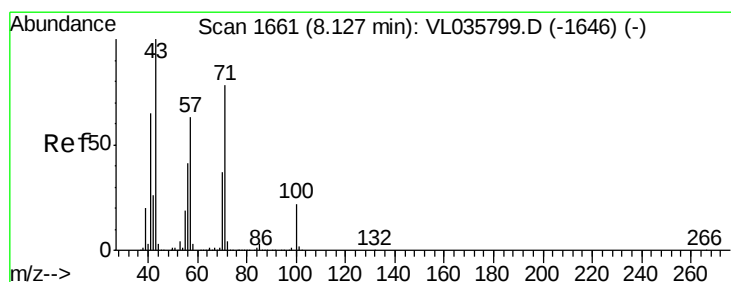
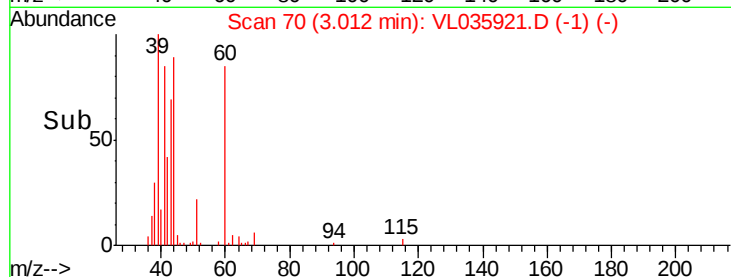
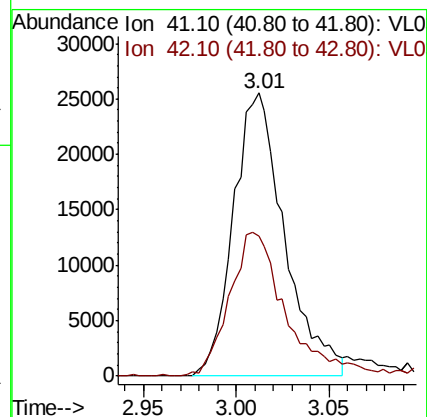
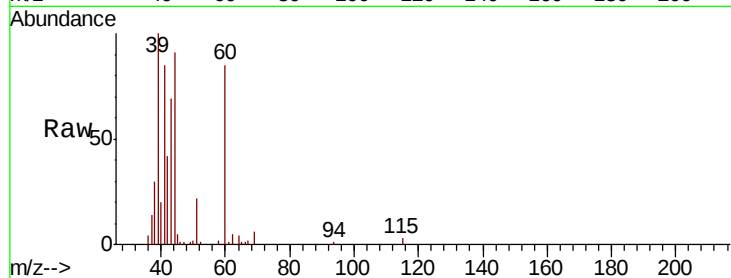




#9
 Propene
 Concen: 0.981 ppbv
 RT: 3.01 min Scan# 70
 Delta R.T. 0.01 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

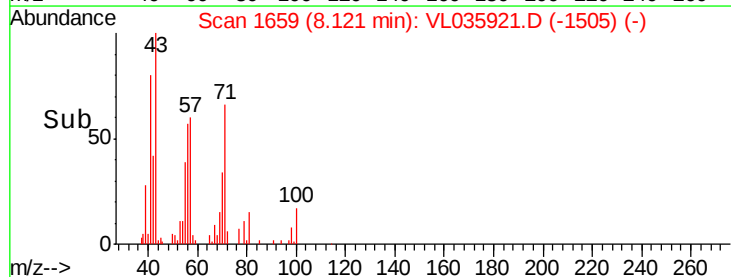
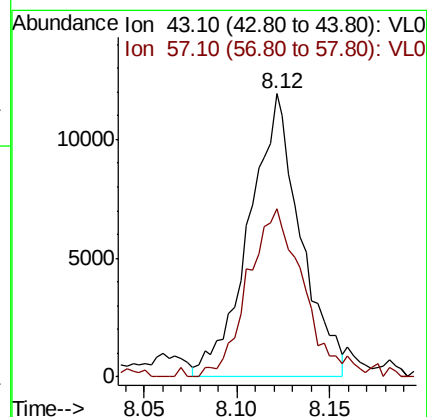
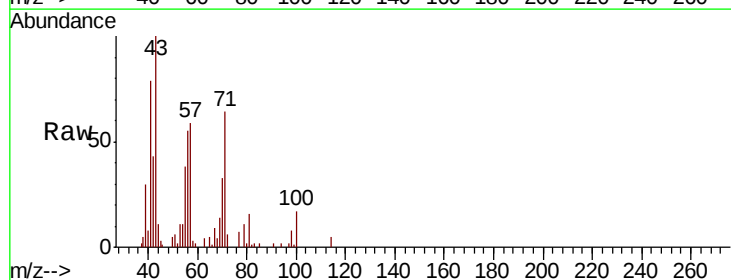
Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-5

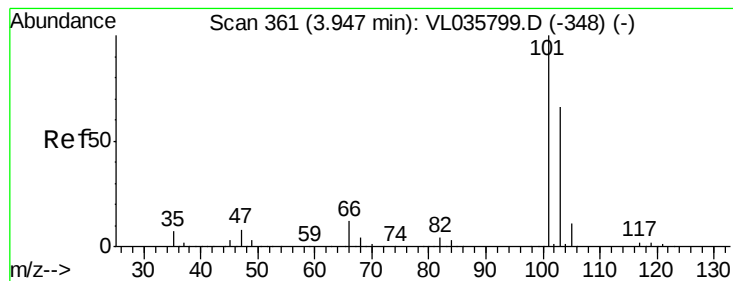
Tot Ion: 41 Resp: 49013
 Ion Ratio Lower Upper
 41 100
 42 57.8 56.2 84.4



#10
 Heptane
 Concen: 0.167 ppbv
 RT: 8.12 min Scan# 1659
 Delta R.T. -0.01 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

Tgt Ion: 43 Resp: 23089
 Ion Ratio Lower Upper
 43 100
 57 65.2 50.0 75.0





#11

Trichlorofluoromethane

Concen: 0.247 ppbv

RT: 3.94 min Scan# 359

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

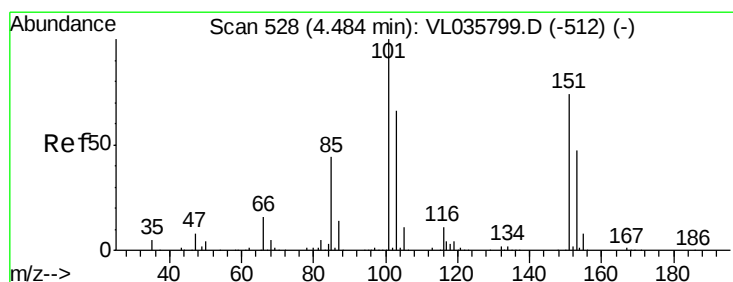
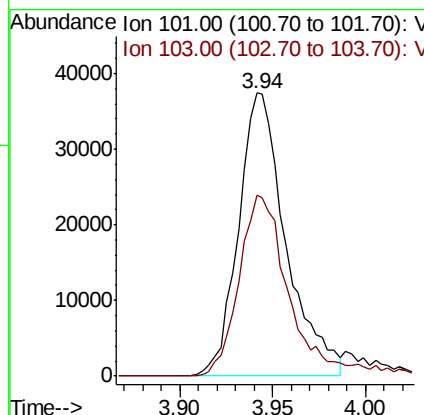
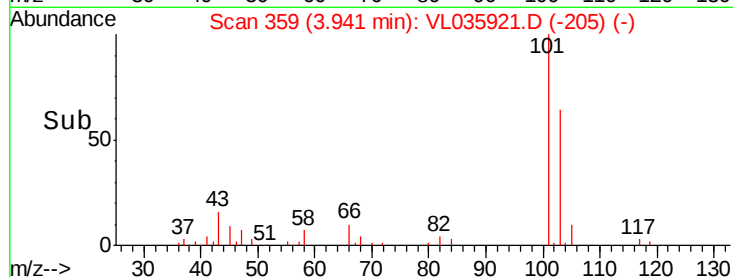
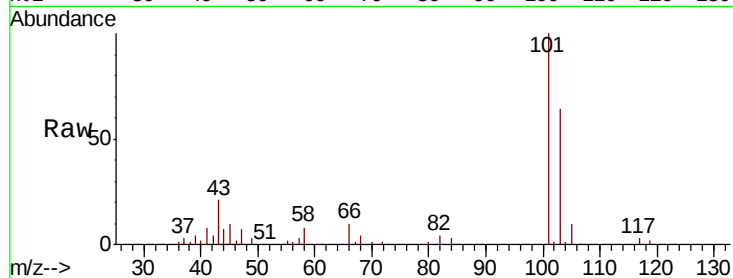
CVS-5

Tot Ion:101 Resp: 66516

Ion Ratio Lower Upper

101 100

103 63.8 53.0 79.4



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.071 ppbv

RT: 4.48 min Scan# 526

Delta R.T. -0.01 min

Lab File: VL035921.D

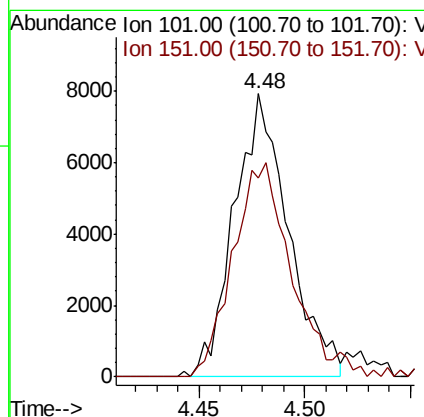
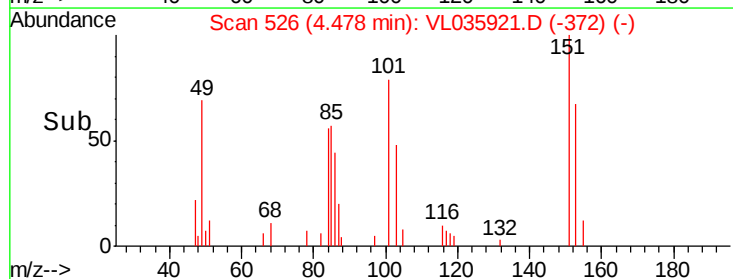
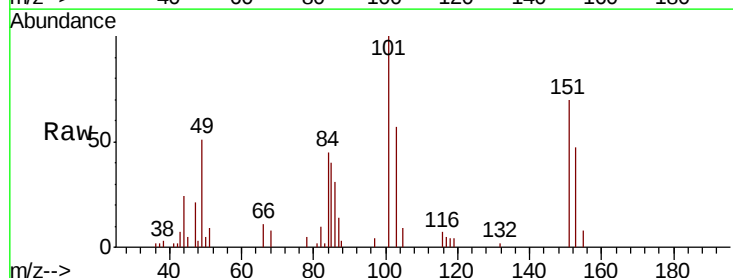
Acq: 12 Nov 2020 20:01

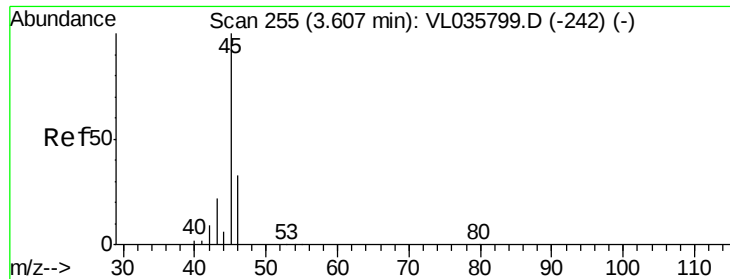
Tgt Ion:101 Resp: 14155

Ion Ratio Lower Upper

101 100

151 82.9 58.9 88.3





#13

Ethanol

Concen: 36.026 ppbv

RT: 3.60 min Scan# 252

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

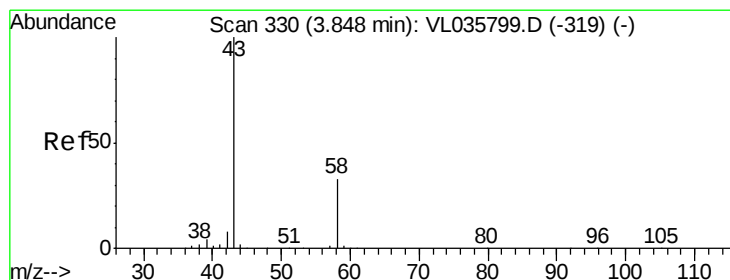
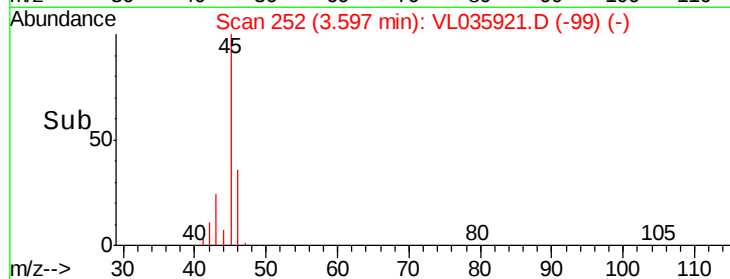
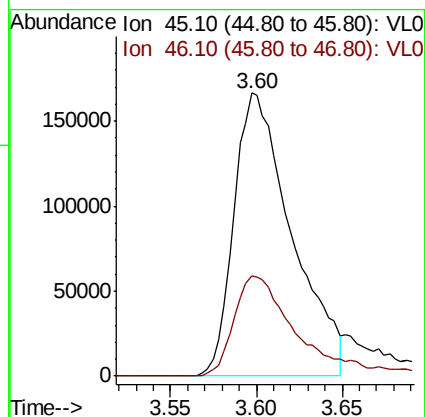
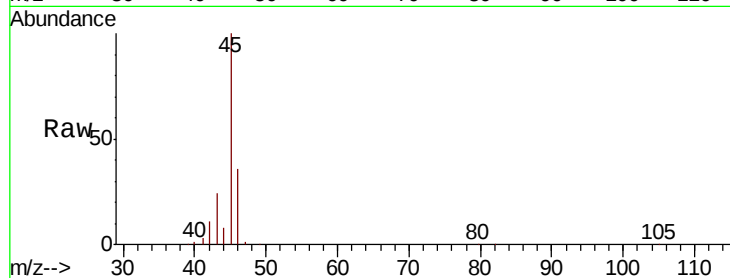
CVS-5

Tot Ion: 45 Resp: 390544

Ion Ratio Lower Upper

45 100

46 40.5 16.1 64.5



#15

Acetone

Concen: 5.148 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.00 min

Lab File: VL035921.D

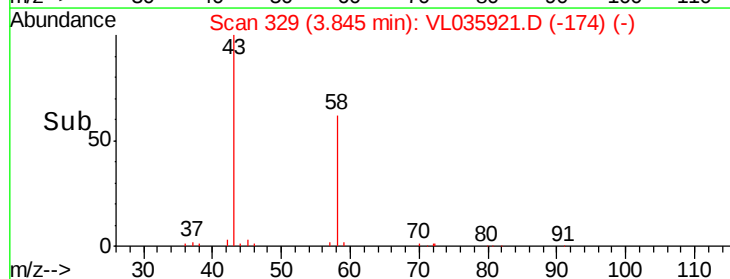
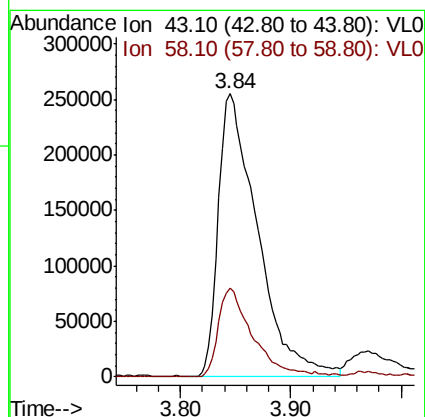
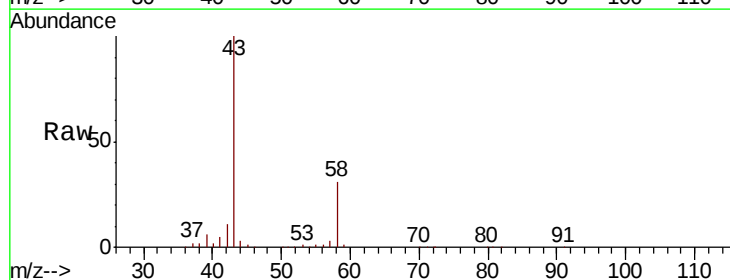
Acq: 12 Nov 2020 20:01

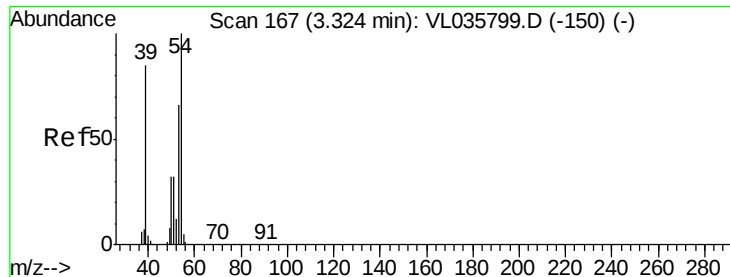
Tgt Ion: 43 Resp: 627472

Ion Ratio Lower Upper

43 100

58 28.1 27.5 41.3





#16

1,3-Butadiene

Concen: 0.197 ppbv

RT: 3.30 min Scan# 160

Delta R.T. -0.02 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

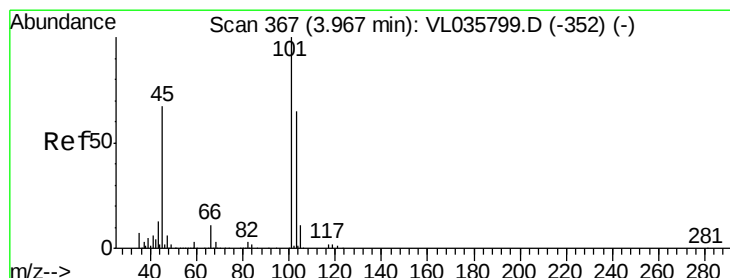
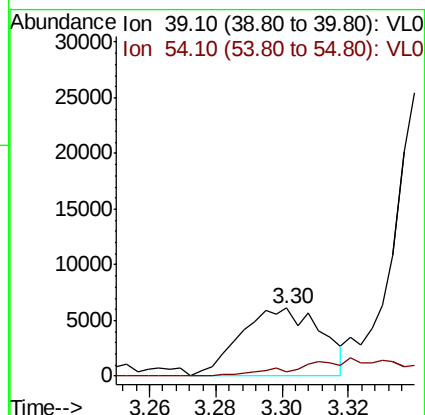
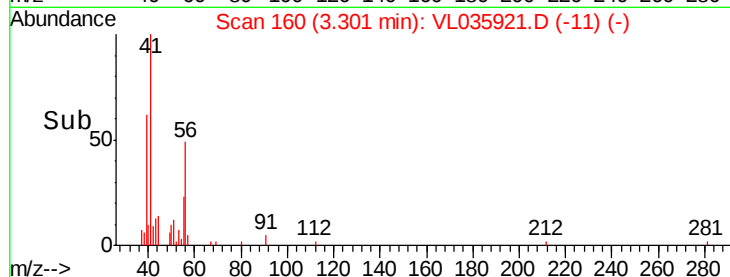
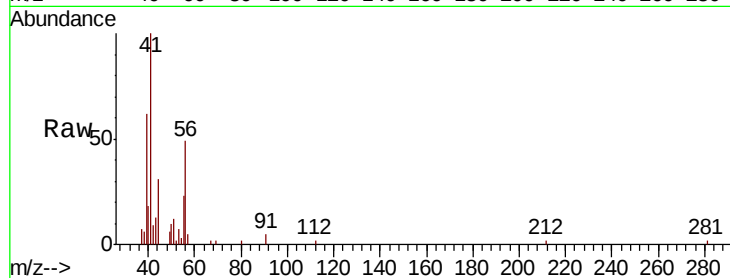
CVS-5

Tot Ion: 39 Resp: 10347

Ion Ratio Lower Upper

39 100

54 47.0 87.1 130.7#



#19

Isopropyl Alcohol

Concen: 0.757 ppbv

RT: 3.97 min Scan# 367

Delta R.T. 0.00 min

Lab File: VL035921.D

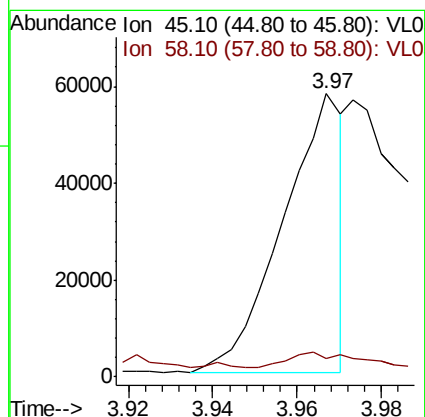
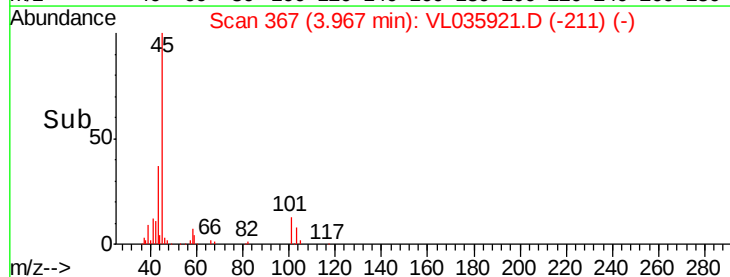
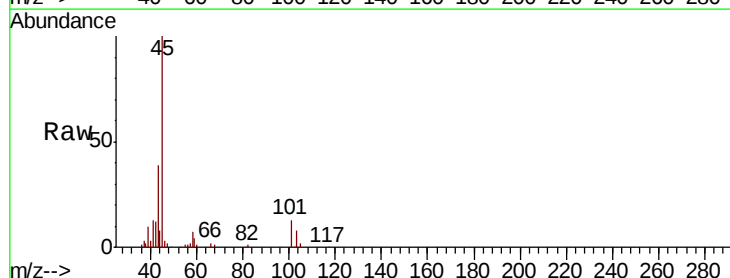
Acq: 12 Nov 2020 20:01

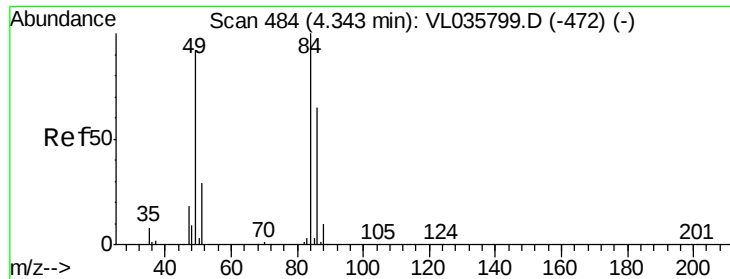
Tgt Ion: 45 Resp: 56712

Ion Ratio Lower Upper

45 100

58 22.0 2.6 3.8#



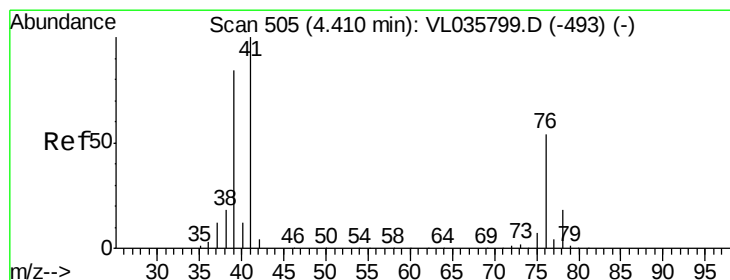
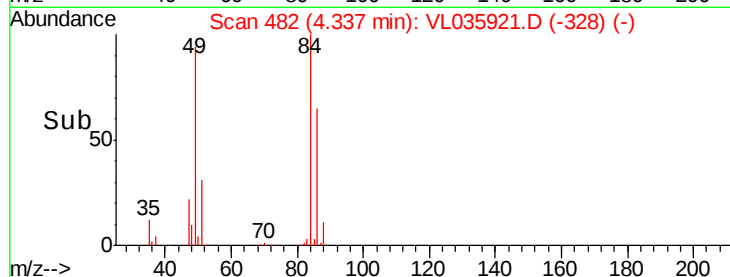
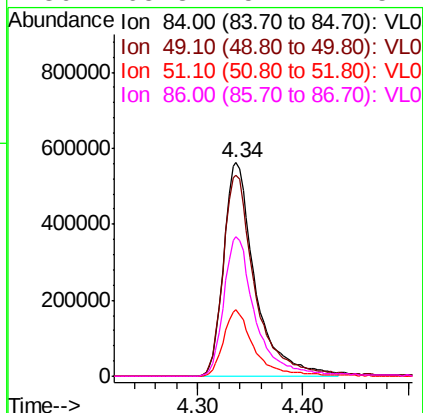
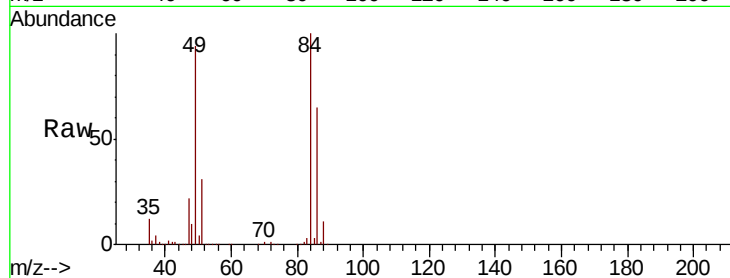


#20
Methvlene Chloride
Concen: 13.591 ppbv
RT: 4.34 min Scan# 482
Delta R.T. -0.01 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

Instrument :
MSVOA_L
ClientSampleId :
CVS-5

Tot Ion: 84 Resp: 1166155

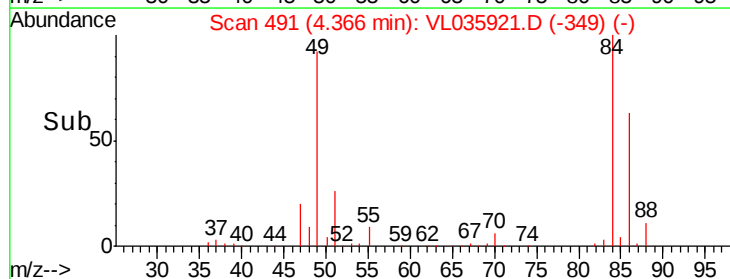
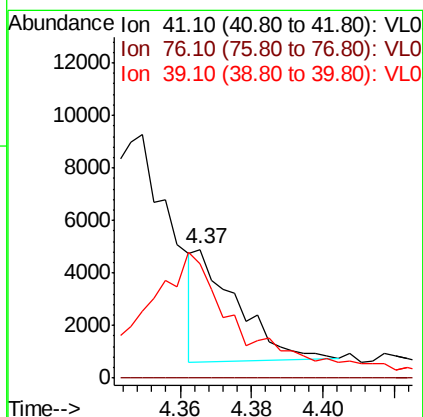
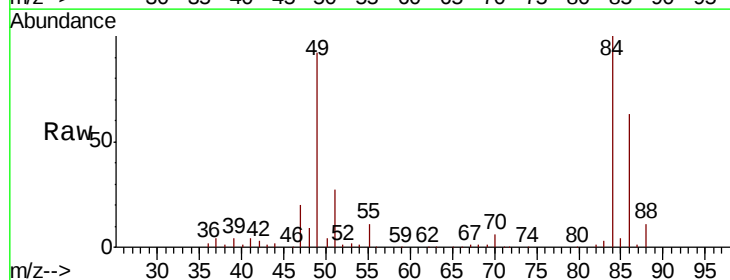
Ion	Ratio	Lower	Upper
84	100		
49	94.3	73.8	110.8
51	31.0	23.0	34.4
86	65.3	52.1	78.1

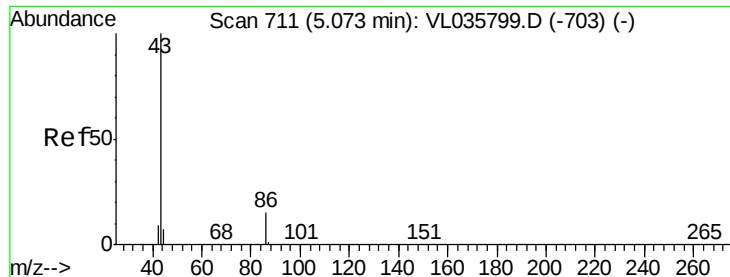


#21
Allyl Chloride
Concen: 0.053 ppbv
RT: 4.37 min Scan# 491
Delta R.T. -0.04 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

Tgt Ion: 41 Resp: 3468

Ion	Ratio	Lower	Upper
41	100		
76	0.0	42.6	63.8#
39	259.3	67.0	100.4#





#23

Vinyl Acetate

Concen: 0.221 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.02 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

CVS-5

Tot Ion: 43 Resp: 37836

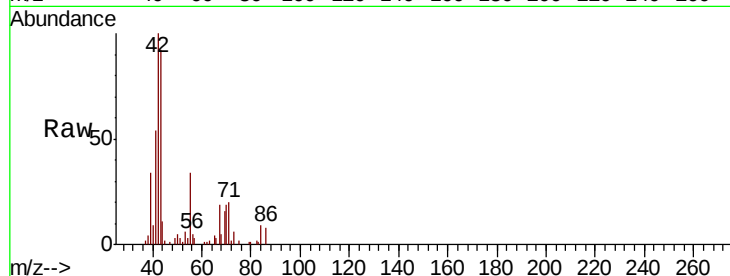
Ion Ratio Lower Upper

43 100

86 9.1 9.8 14.6#

42 108.6 8.1 12.1#

44 3.5 4.2 6.4#

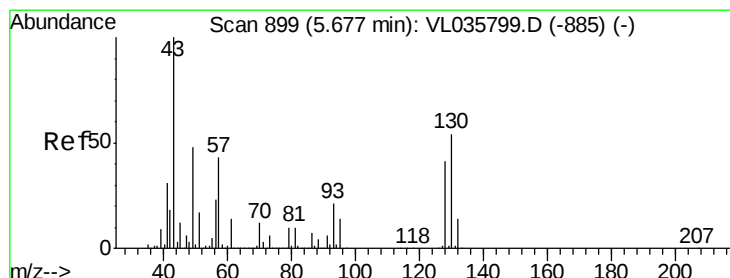
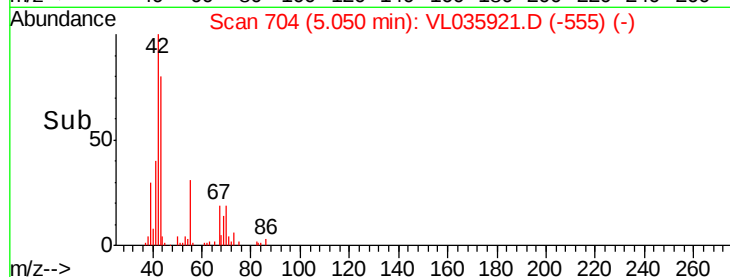
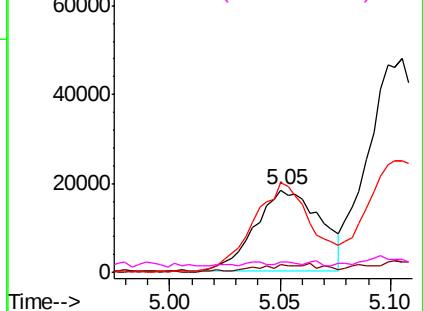


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 2.786 ppbv

RT: 5.68 min Scan# 901

Delta R.T. 0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Tgt Ion: 43 Resp: 668844

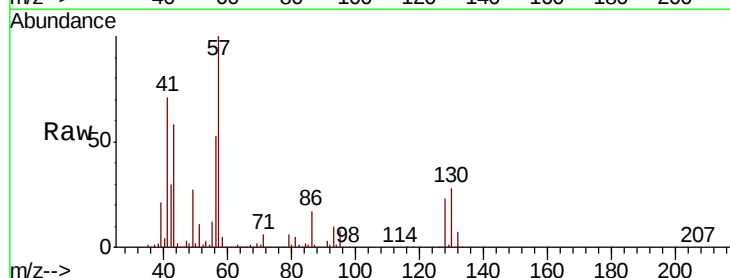
Ion Ratio Lower Upper

43 100

45 0.8 8.5 12.7#

61 0.7 10.7 16.1#

70 2.5 8.6 12.8#

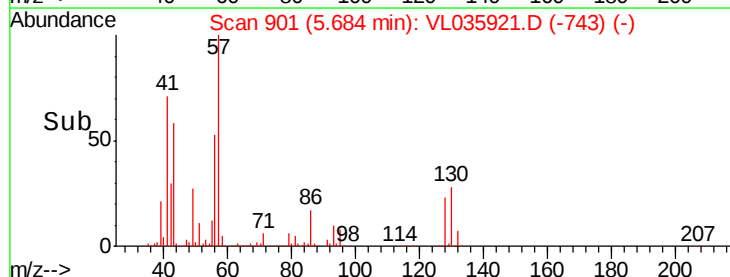
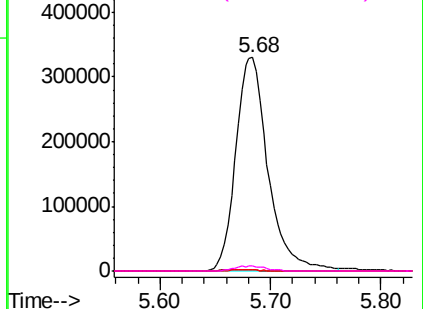


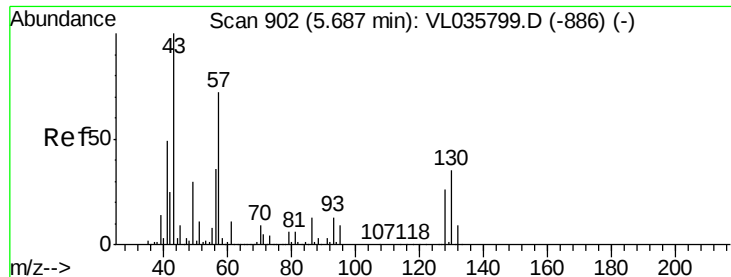
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

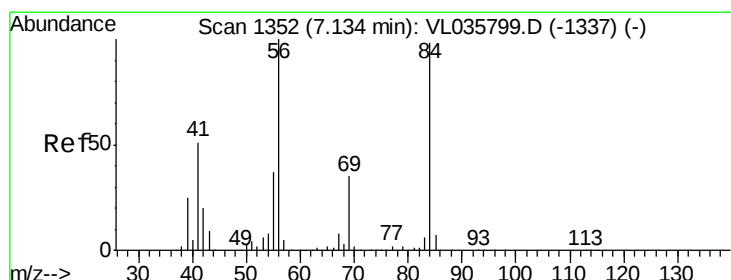
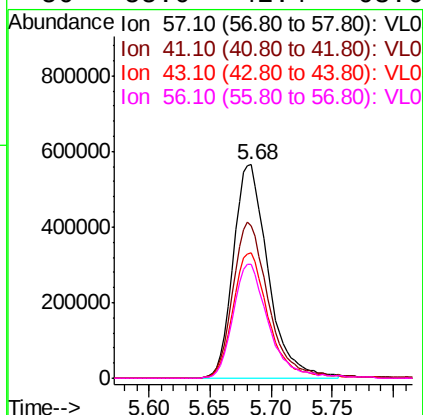
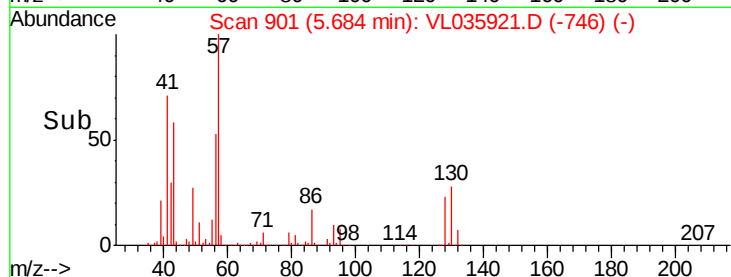
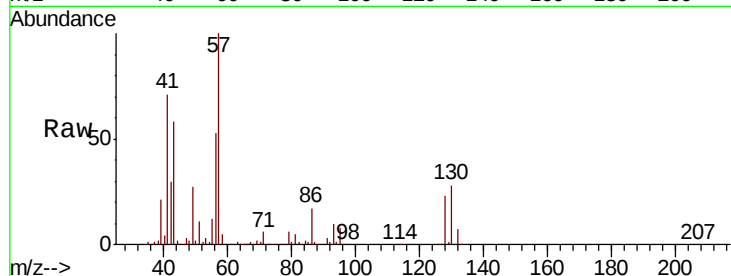




#26
Hexane
Concen: 8.437 ppbv
RT: 5.68 min Scan# 901
Delta R.T. -0.00 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

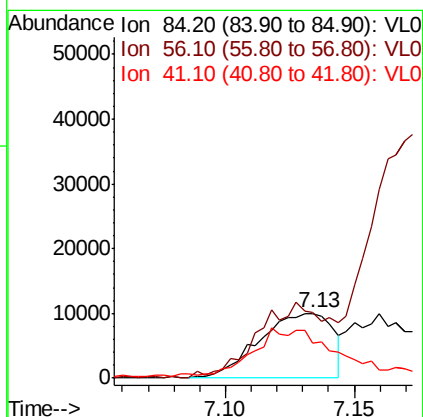
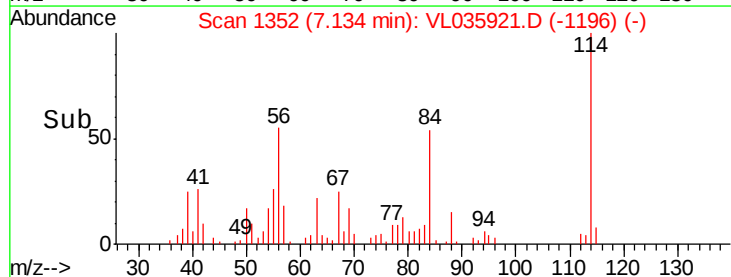
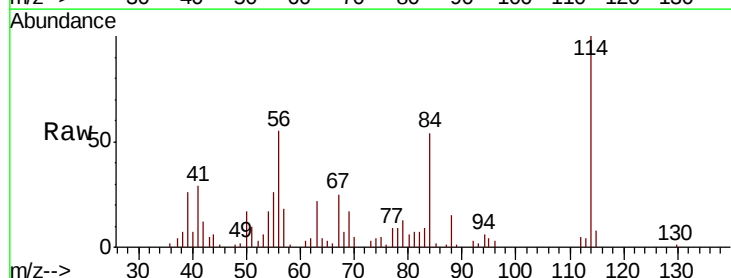
Instrument :
MSVOA_L
ClientSampleId :
CVS-5

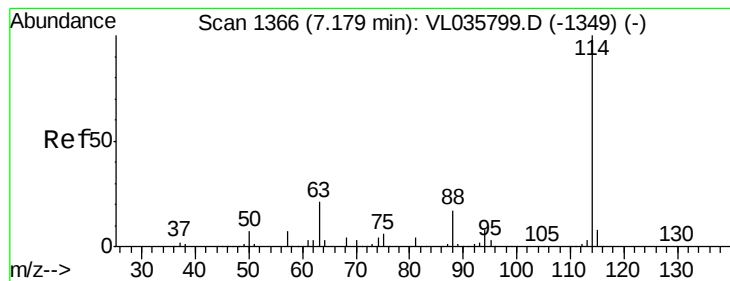
Tot Ion: 57 Resp: 1117167
Ion Ratio Lower Upper
57 100
41 75.6 58.9 88.3
43 60.7 150.2 225.2#
56 55.0 42.4 63.6



#30
Cyclohexane
Concen: 0.138 ppbv
RT: 7.13 min Scan# 1352
Delta R.T. 0.00 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

Tgt Ion: 84 Resp: 19925
Ion Ratio Lower Upper
84 100
56 0.0 86.4 129.6#
41 93.0 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: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

CVS-5

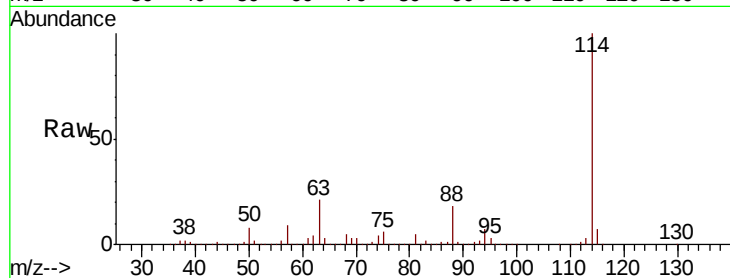
Tot Ion:114 Resp: 4062404

Ion Ratio Lower Upper

114 100

63 21.0 16.1 24.1

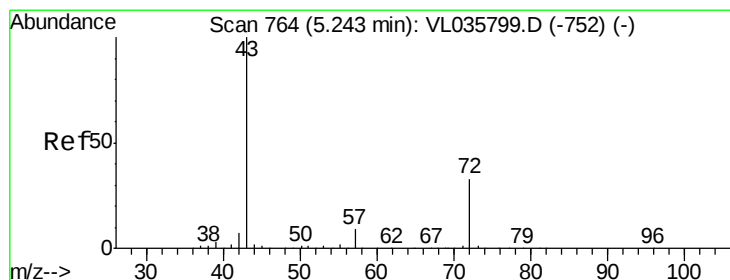
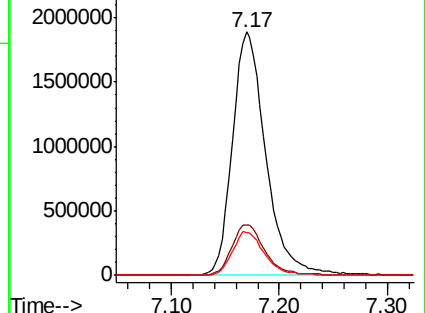
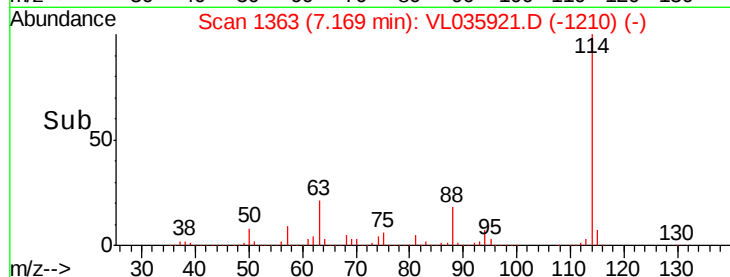
88 17.5 13.7 20.5



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.338 ppbv

RT: 5.24 min Scan# 764

Delta R.T. 0.00 min

Lab File: VL035921.D

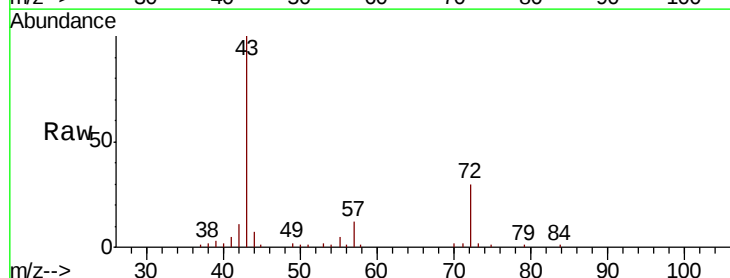
Acq: 12 Nov 2020 20:01

Tgt Ion: 43 Resp: 44593

Ion Ratio Lower Upper

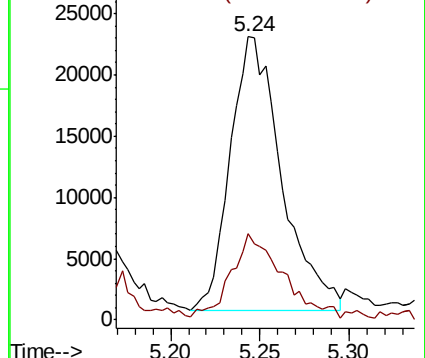
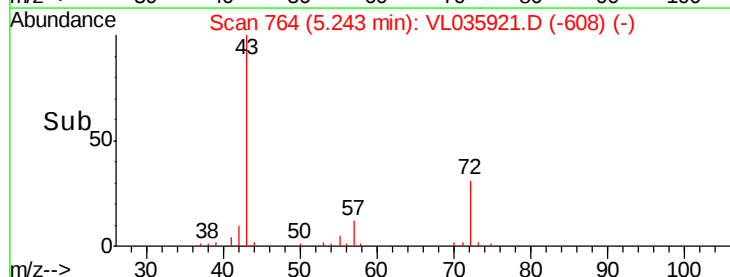
43 100

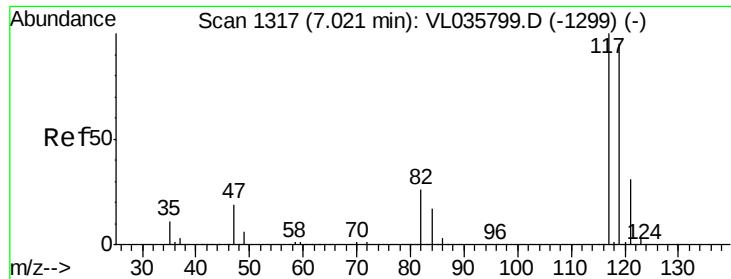
72 32.5 26.5 39.7



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.066 ppbv

RT: 7.02 min Scan# 1315

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

CVS-5

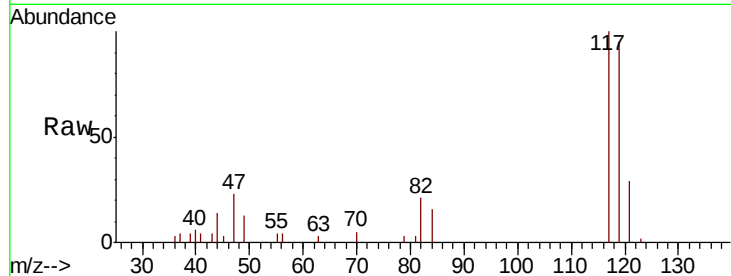
Tot Ion:117 Resp: 14389

Ion Ratio Lower Upper

117 100

119 88.0 75.6 113.4

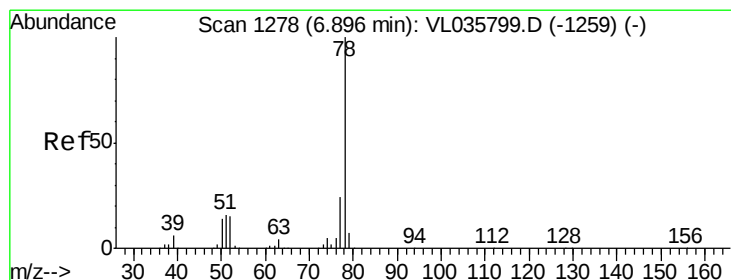
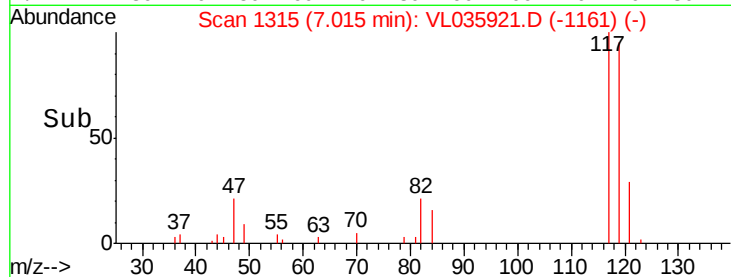
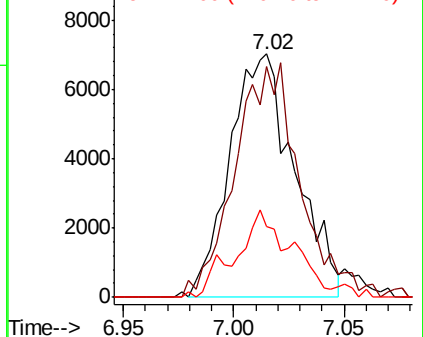
121 26.7 25.1 37.7



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: 0.278 ppbv

RT: 6.88 min Scan# 1274

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

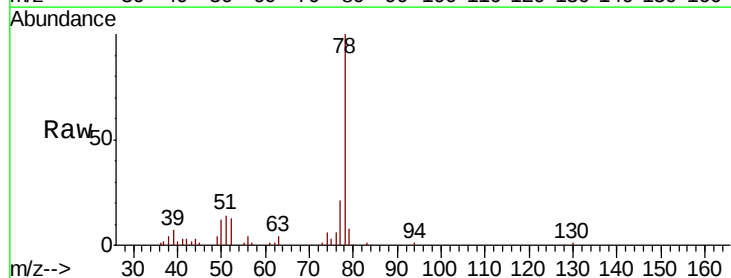
Tgt Ion: 78 Resp: 83845

Ion Ratio Lower Upper

78 100

77 18.9 19.3 28.9#

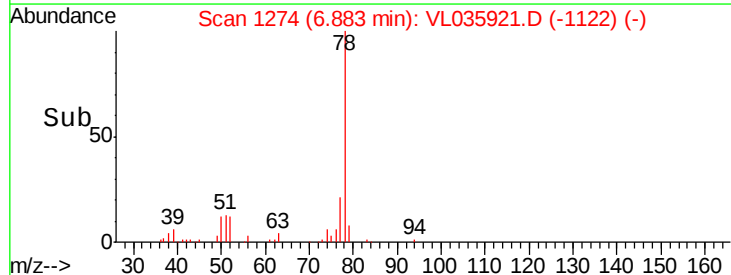
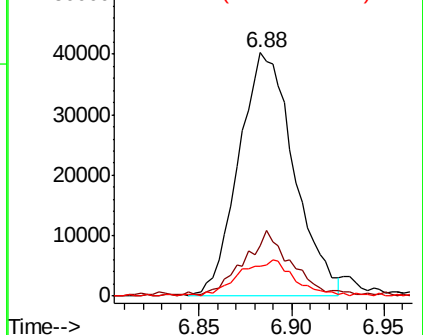
50 11.9 11.4 17.2

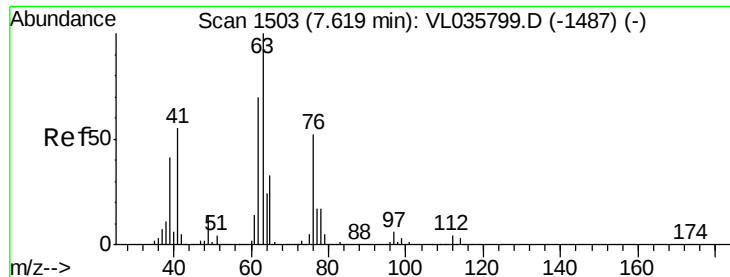


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

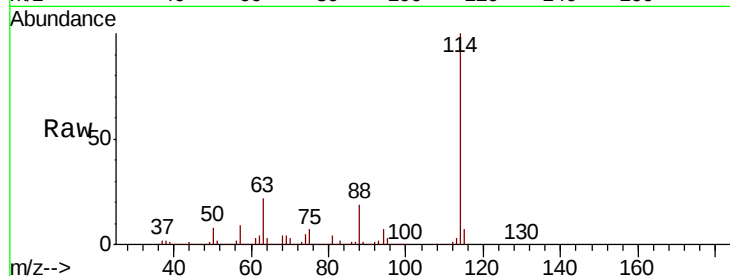




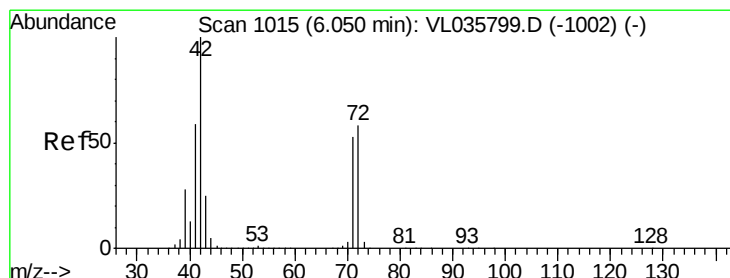
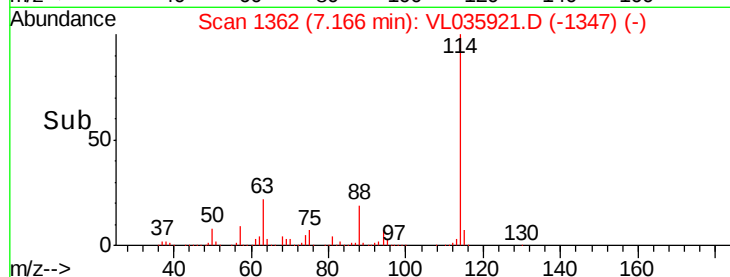
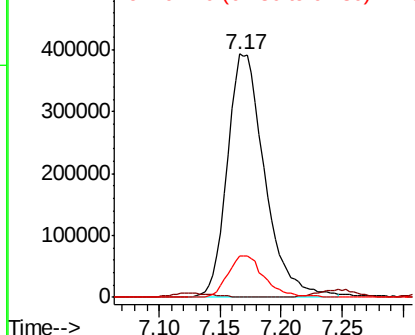
#39
 1,2-Dichloropropane
 Concen: 8.246 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.45 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

Instrument :
 MSVOA_L
 ClientSampled :
 CVS-5

Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	43.8	65.6#
62	16.9	56.2	84.2#

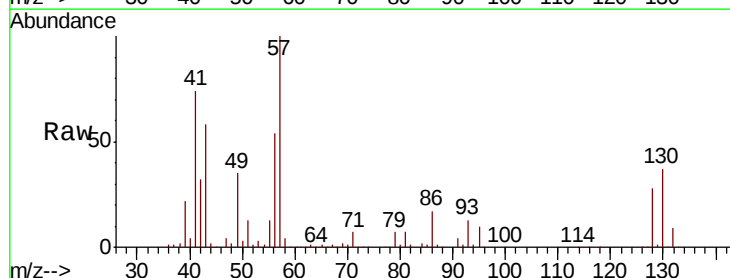


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

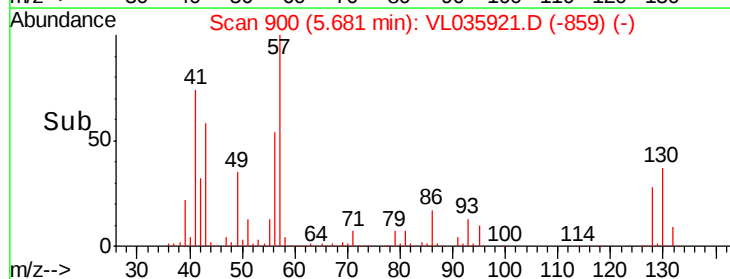
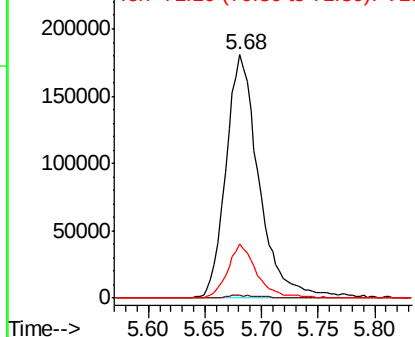


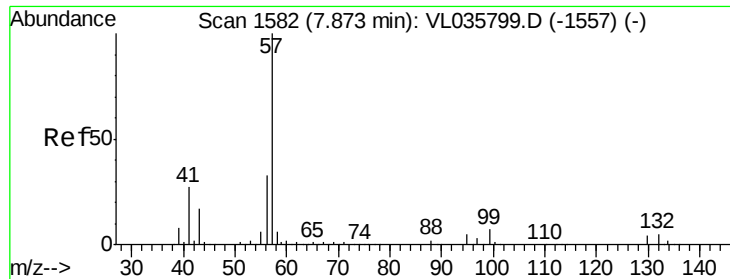
#41
 Tetrahydrofuran
 Concen: 4.907 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T. -0.37 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

Tgt Ion	Ratio	Lower	Upper
42	100		
72	1.2	45.4	68.0#
71	19.7	43.4	65.2#



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

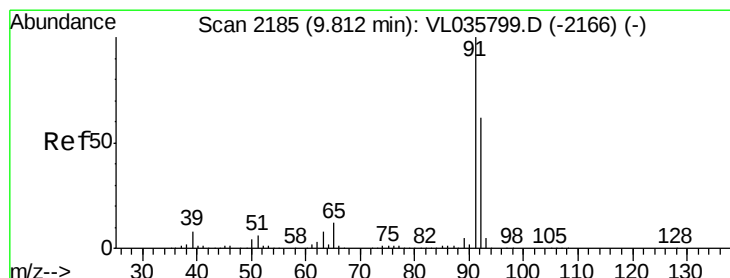
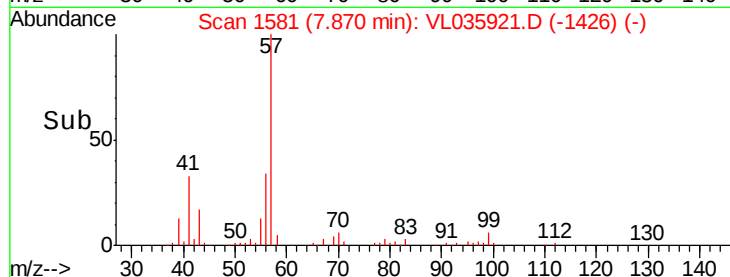
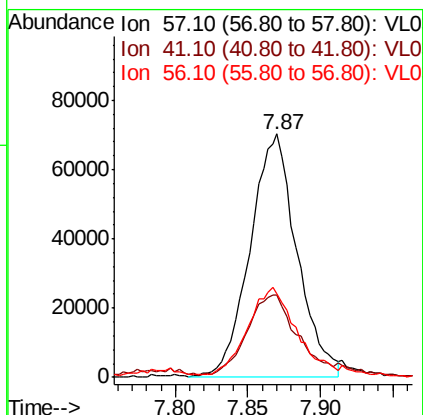
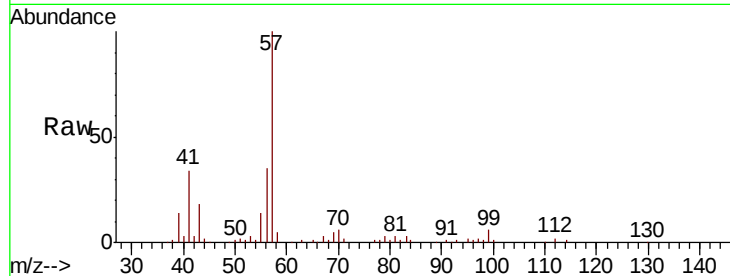




#44
 2,2,4-Trimethylpentane
 Concen: 0.394 ppbv
 RT: 7.87 min Scan# 1581
 Delta R.T. -0.00 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

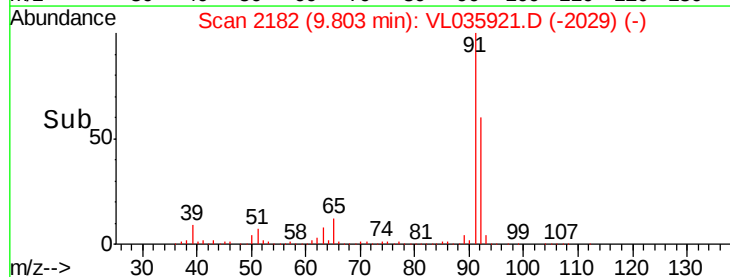
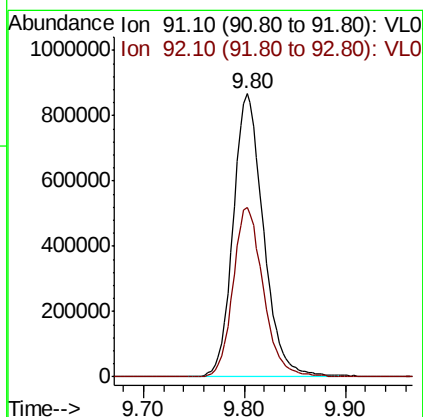
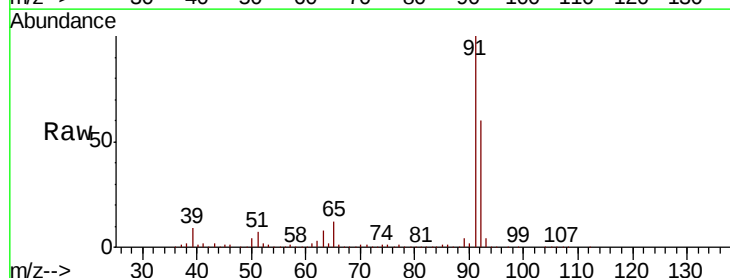
Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-5

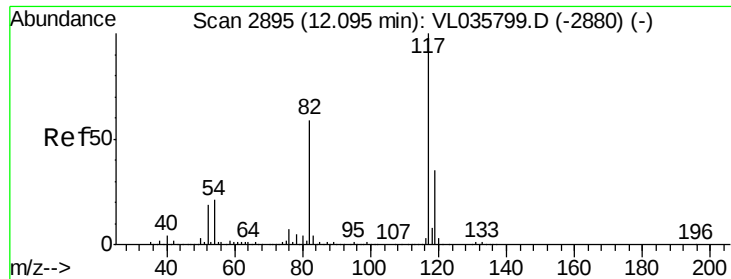
Tot Ion: 57 Resp: 157360
 Ion Ratio Lower Upper
 57 100
 41 41.5 21.0 31.4#
 56 41.7 25.4 38.0#



#53
 Toluene
 Concen: 4.966 ppbv
 RT: 9.80 min Scan# 2182
 Delta R.T. -0.01 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

Tgt Ion: 91 Resp: 1809679
 Ion Ratio Lower Upper
 91 100
 92 60.1 49.8 74.6

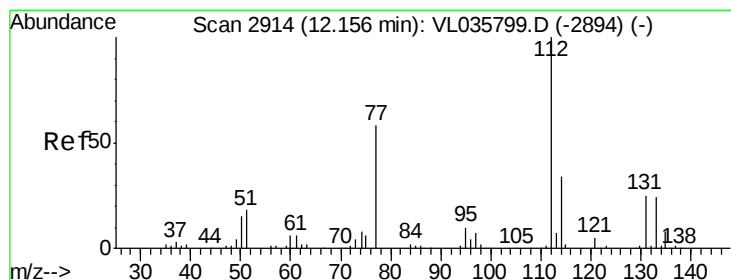
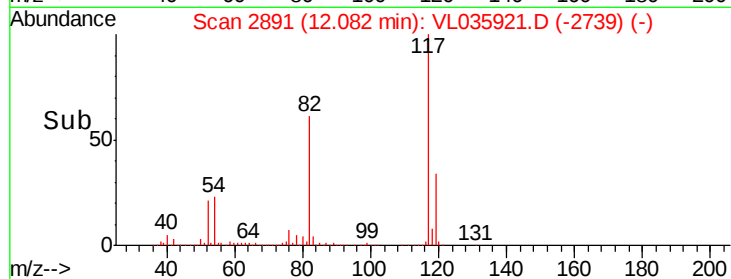
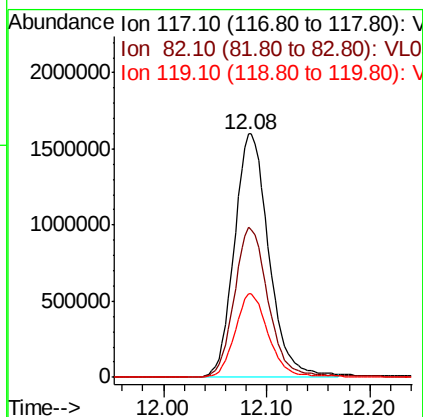
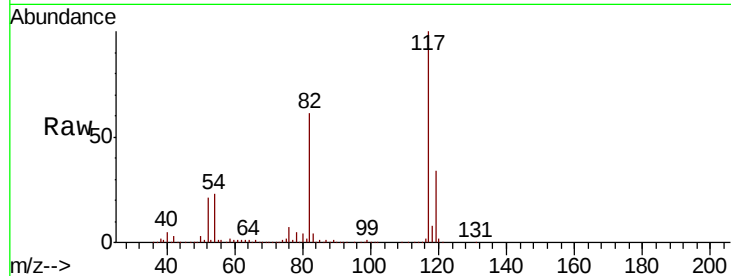




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min Scan# 2891
Delta R.T. -0.01 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

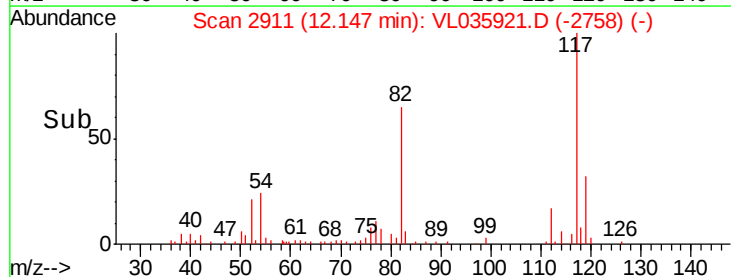
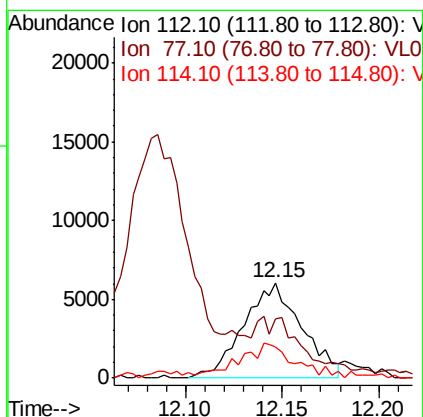
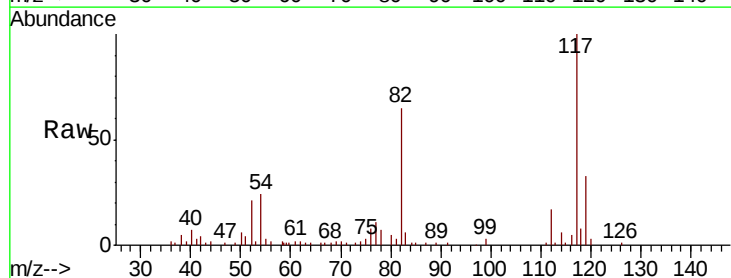
Instrument :
MSVOA_L
ClientSampleId :
CVS-5

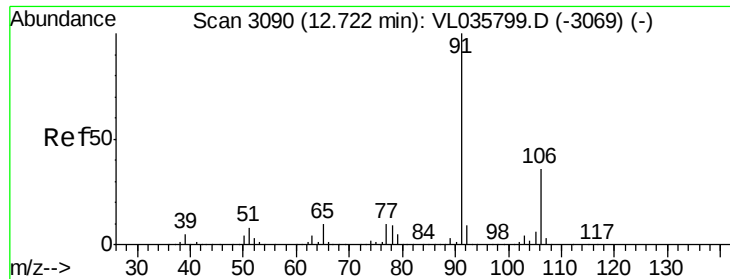
Tot Ion:117 Resp: 3730115
Ion Ratio Lower Upper
117 100
82 62.0 50.6 76.0
119 33.9 52.6 78.8#



#57
Chlorobenzene
Concen: 0.043 ppbv
RT: 12.15 min Scan# 2911
Delta R.T. -0.01 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

Tgt Ion:112 Resp: 12659
Ion Ratio Lower Upper
112 100
77 47.1 47.5 71.3#
114 30.1 30.3 37.1#





#58

Ethyl Benzene

Concen: 0.102 ppbv

RT: 12.71 min Scan# 3087

Delta R.T. -0.01 min

Lab File: VL035921.D

Acq: 12 Nov 2020 20:01

Instrument :

MSVOA_L

ClientSampleId :

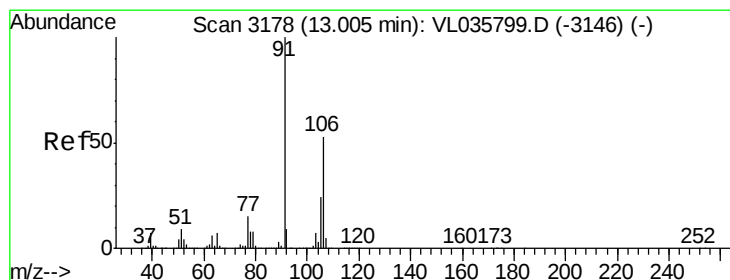
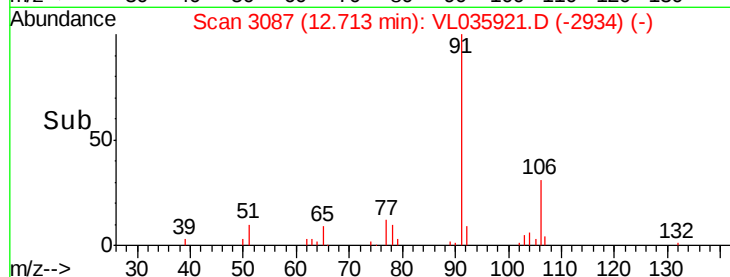
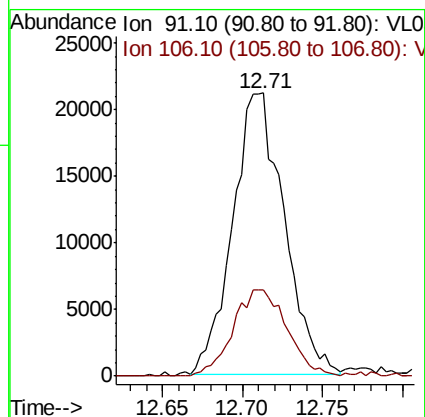
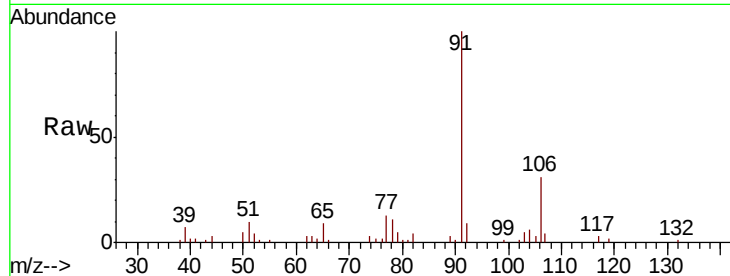
CVS-5

Tot Ion: 91 Resp: 46449

Ion Ratio Lower Upper

91 100

106 30.8 28.6 43.0



#59

m/p-Xylene

Concen: 0.111 ppbv

RT: 12.99 min Scan# 3173

Delta R.T. -0.02 min

Lab File: VL035921.D

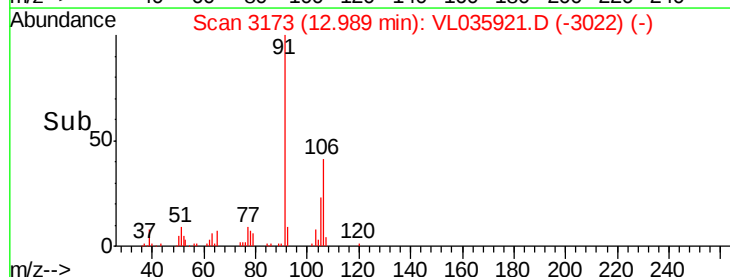
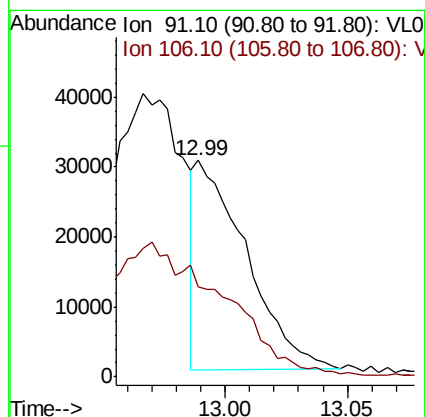
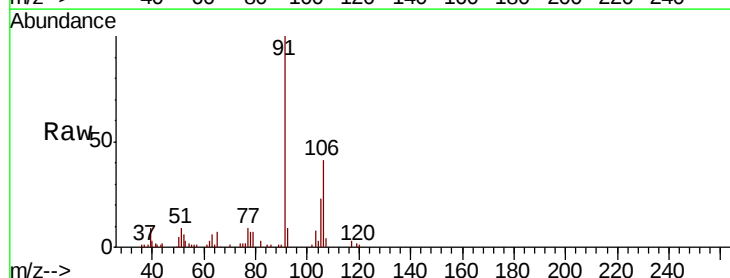
Acq: 12 Nov 2020 20:01

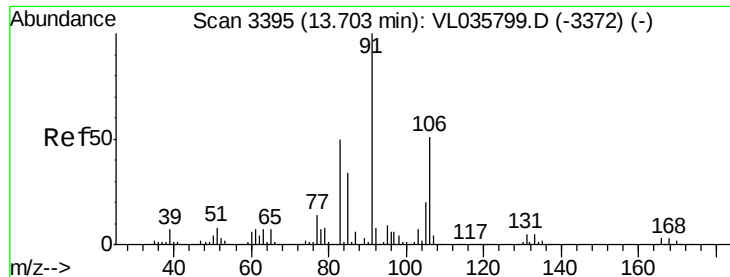
Tgt Ion: 91 Resp: 42684

Ion Ratio Lower Upper

91 100

106 0.0 39.5 59.3#

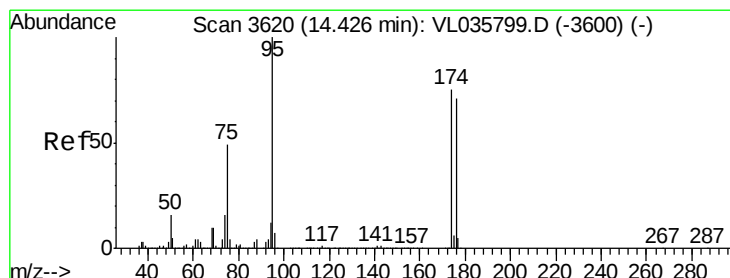
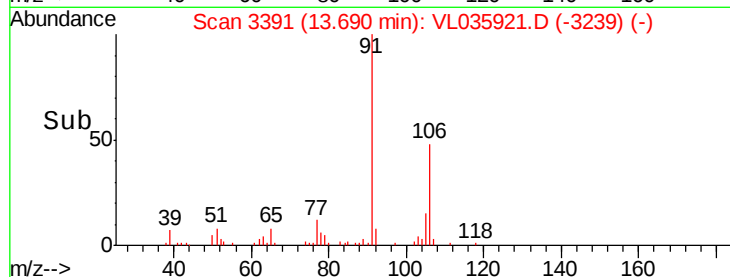
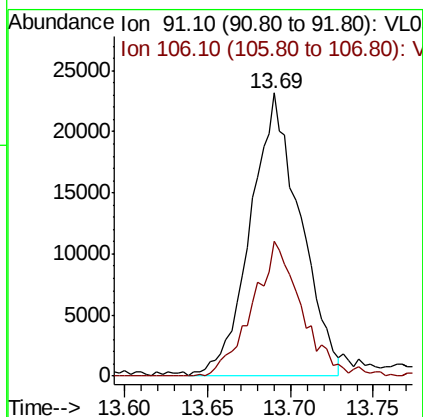
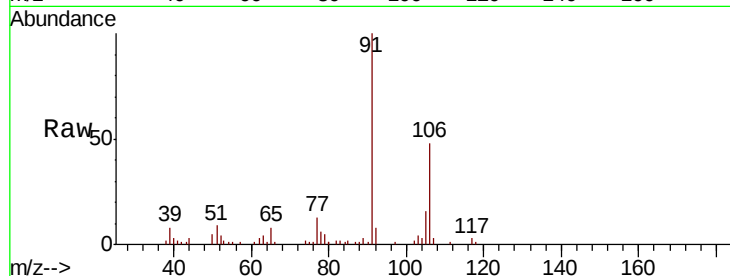




#60
o-Xylene
Concen: 0.130 ppbv
RT: 13.69 min Scan# 3391
Delta R.T. -0.01 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

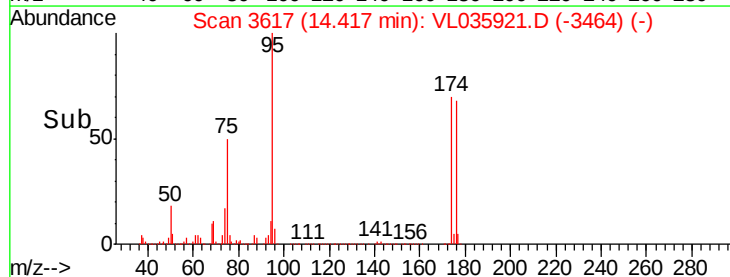
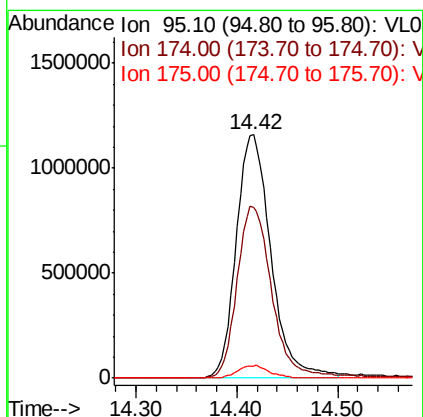
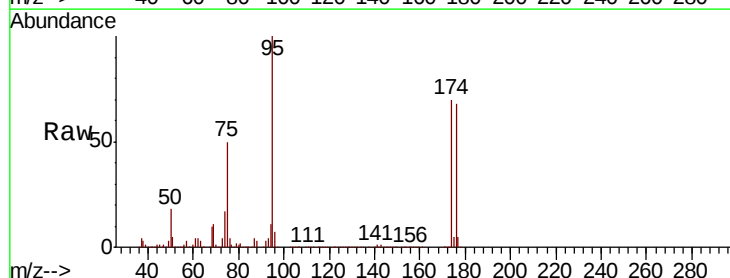
Instrument :
MSVOA_L
ClientSampled :
CVS-5

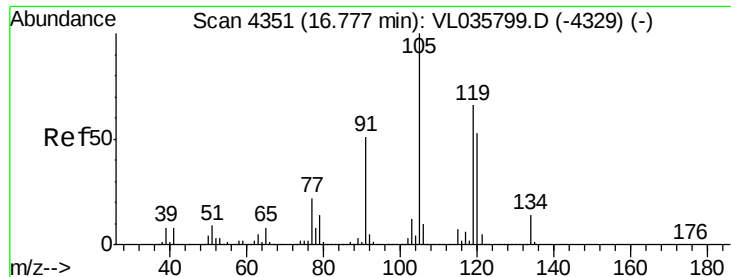
Tot Ion: 91 Resp: 48434
Ion Ratio Lower Upper
91 100
106 47.3 24.8 74.4



#68
1-Bromo-4-Fluorobenzene
Concen: 10.455 ppbv
RT: 14.42 min Scan# 3617
Delta R.T. -0.01 min
Lab File: VL035921.D
Acq: 12 Nov 2020 20:01

Tgt Ion: 95 Resp: 2770671
Ion Ratio Lower Upper
95 100
174 72.4 59.8 89.6
175 4.9 4.3 6.5





#74
 1,2,4-Trimethylbenzene
 Concen: 0.147 ppbv
 RT: 16.77 min Scan# 4349
 Delta R.T. -0.01 min
 Lab File: VL035921.D
 Acq: 12 Nov 2020 20:01

Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-5

Tot Ion:	105	Resp:	65350
Ion	Ratio	Lower	Upper
105	100		
120	44.8	42.0	63.0
91	11.8	41.0	61.6#
77	14.4	17.3	25.9#

