

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111220\
 Data File : VL035915.D
 Acq On : 12 Nov 2020 16:04
 Operator : SY/AP
 Sample : L4720-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-2

Quant Time: Nov 13 00:58:21 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	1193183	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	4212015	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	3897412	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2835436	10.24	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.40%

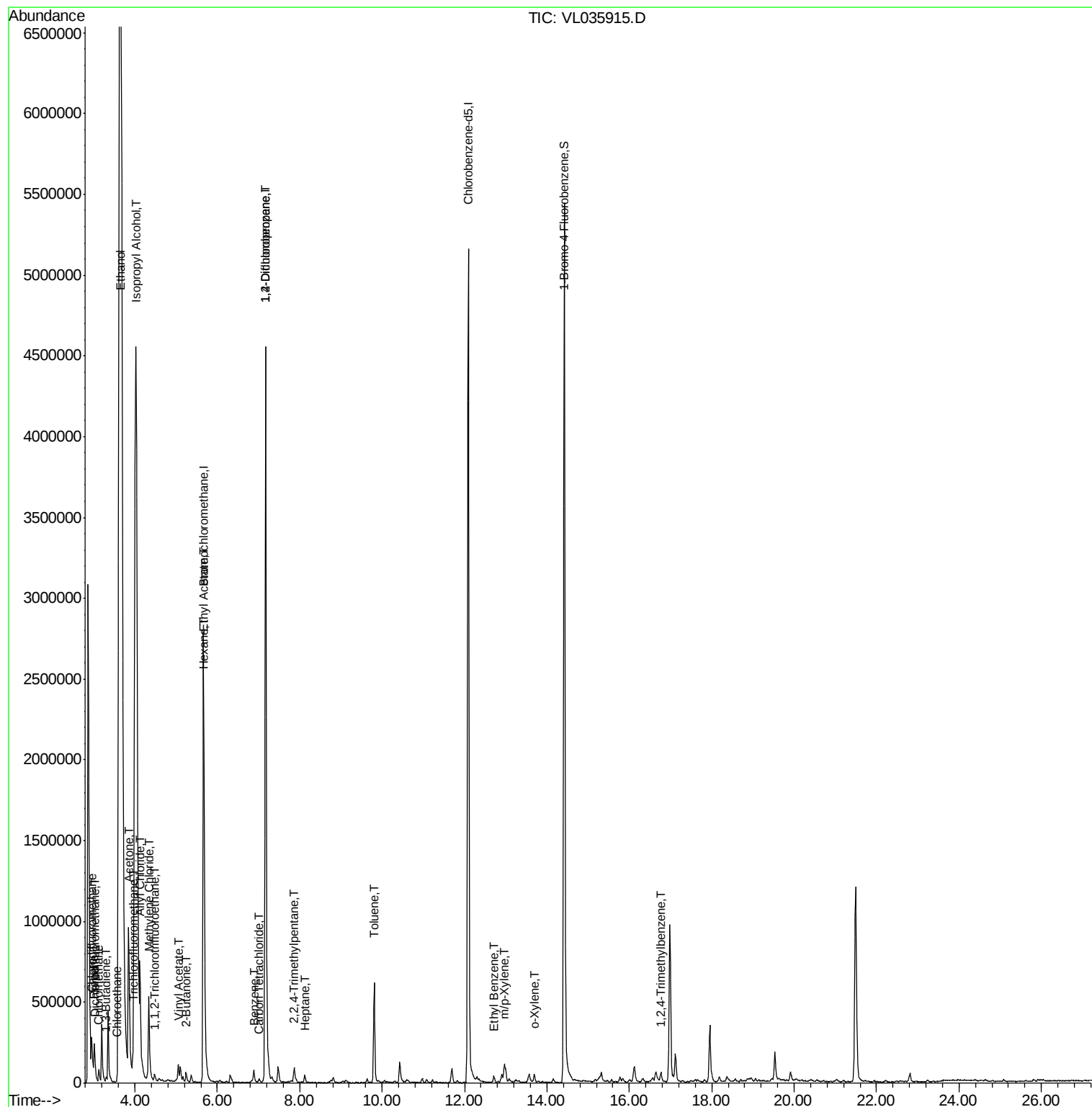
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	59371	0.264	ppbv	93
3) Chlorodifluoromethane	2.96	51	253462	1.774	ppbv #	65
4) Chloromethane	3.13	50	40206	0.579	ppbv	94
7) Chloroethane	3.55	64	3704	0.119	ppbv #	81
9) Propene	3.01	41	57748	1.104	ppbv	86
10) Heptane	8.11	43	6090	0.042	ppbv #	1
11) Trichlorofluoromethane	3.94	101	64484	0.229	ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.48	101	15031	0.072	ppbv	97
13) Ethanol	3.65	45	23739128	2092.314	ppbv	93
15) Acetone	3.84	43	1174606	9.208	ppbv	95
16) 1,3-Butadiene	3.30	39	8898	0.162	ppbv #	23
19) Isopropyl Alcohol	4.02	45	12621977	161.013	ppbv #	96
20) Methylene Chloride	4.34	84	274654	3.059	ppbv	97
21) Allyl Chloride	4.12	41	169775	2.461	ppbv #	63
23) Vinyl Acetate	5.06	43	34009	0.190	ppbv #	1
25) Ethyl Acetate	5.68	43	184519	0.734	ppbv #	85
26) Hexane	5.68	57	227623	1.642	ppbv #	54
34) 2-Butanone	5.24	43	65226	0.477	ppbv	98
35) Carbon Tetrachloride	7.01	117	11197	0.050	ppbv	99
36) Benzene	6.89	78	71133	0.227	ppbv	98
39) 1,2-Dichloropropane	7.17	63	872539	8.276	ppbv #	30
44) 2,2,4-Trimethylpentane	7.86	57	76209	0.184	ppbv #	71
53) Toluene	9.81	91	511743	1.354	ppbv	97
58) Ethyl Benzene	12.71	91	20827	0.044	ppbv #	75
59) m/p-Xylene	12.97	91	114278	0.285	ppbv	100
60) o-Xylene	13.69	91	26074	0.067	ppbv	70
74) 1,2,4-Trimethylbenzene	16.77	105	21451	0.046	ppbv #	71

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

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QLast Update : Wed Nov 04 02:40:06 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

CVS-2

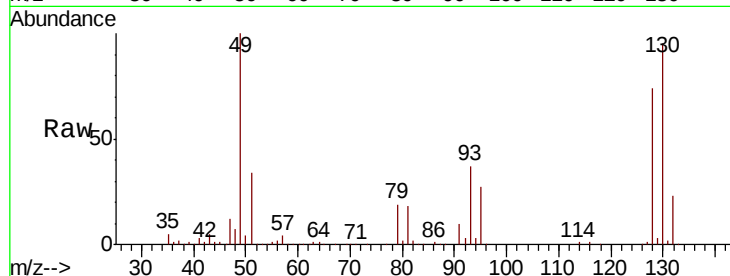
Tot Ion: 49 Resp: 1193183

Ion Ratio Lower Upper

49 100

128 77.8 41.5 124.6

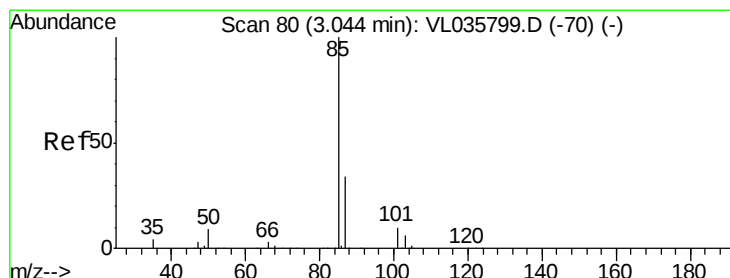
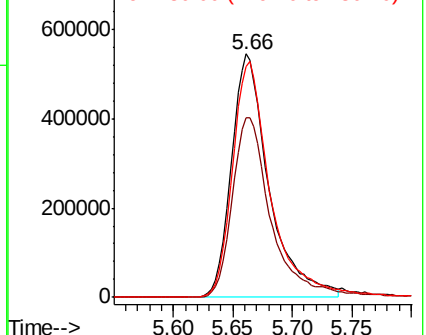
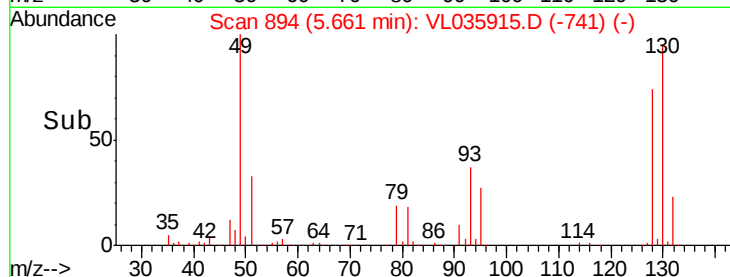
130 99.8 53.7 161.1



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: 0.264 ppbv

RT: 3.04 min Scan# 79

Delta R.T. -0.00 min

Lab File: VL035915.D

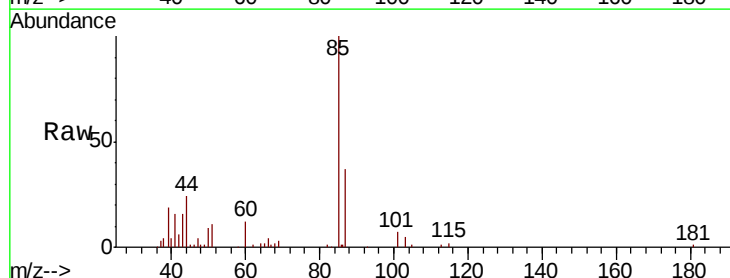
Acq: 12 Nov 2020 16:04

Tgt Ion: 85 Resp: 59371

Ion Ratio Lower Upper

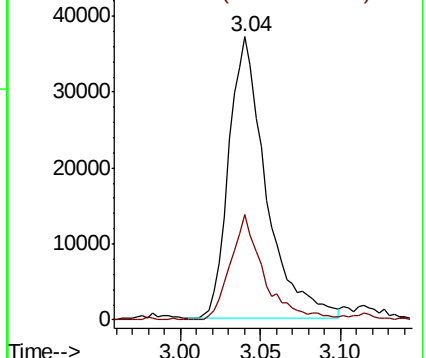
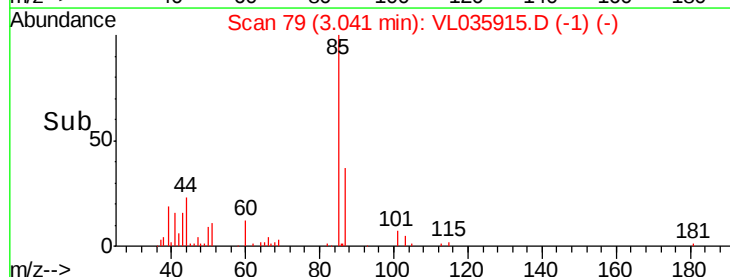
85 100

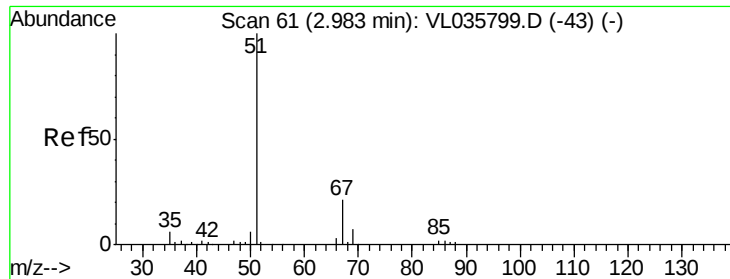
87 37.6 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.774 ppbv

RT: 2.96 min Scan# 53

Delta R.T. -0.03 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

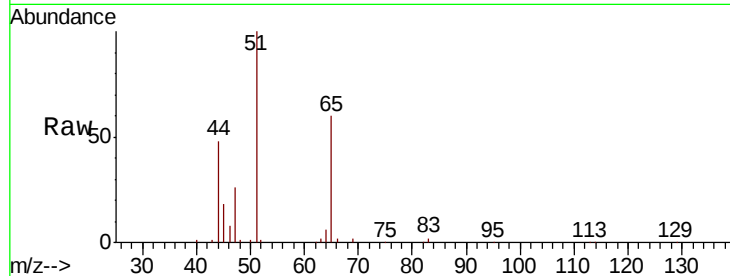
CVS-2

Tot Ion: 51 Resp: 253462

Ion Ratio Lower Upper

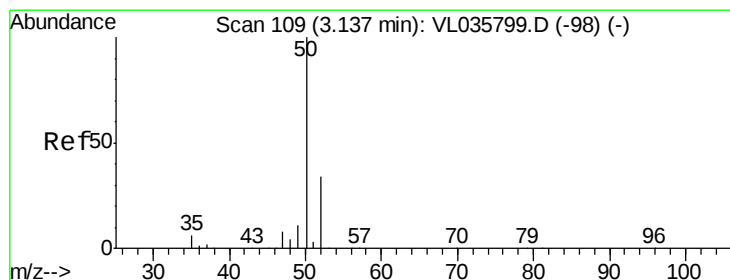
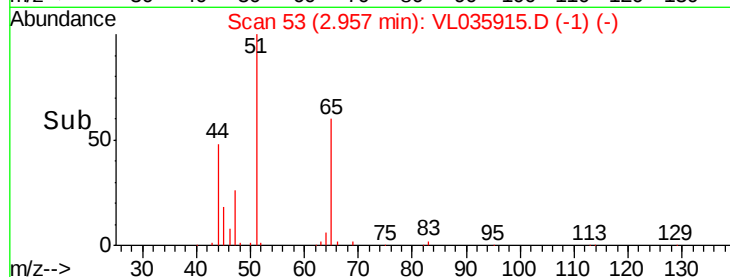
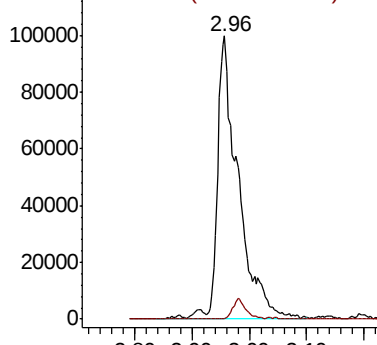
51 100

67 4.9 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: 0.579 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.00 min

Lab File: VL035915.D

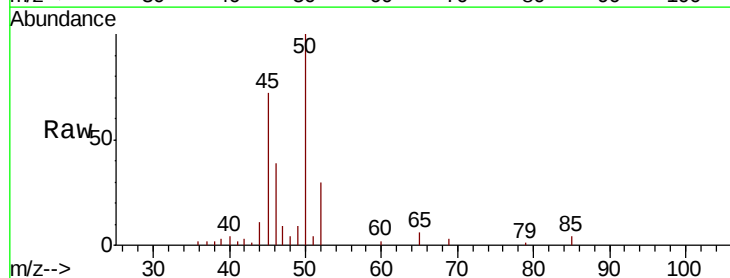
Acq: 12 Nov 2020 16:04

Tgt Ion: 50 Resp: 40206

Ion Ratio Lower Upper

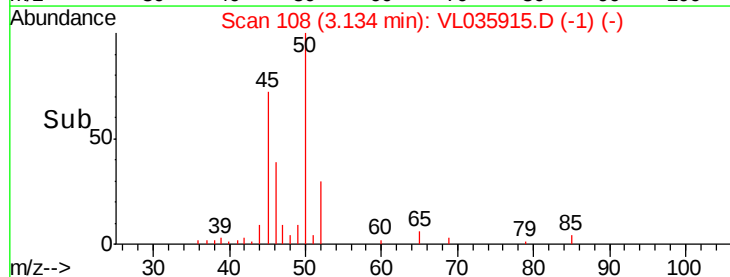
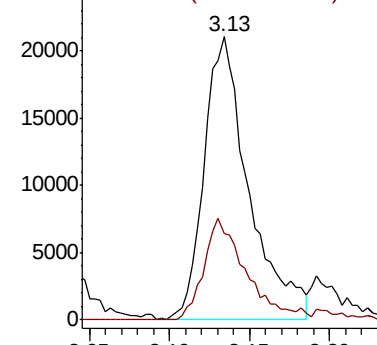
50 100

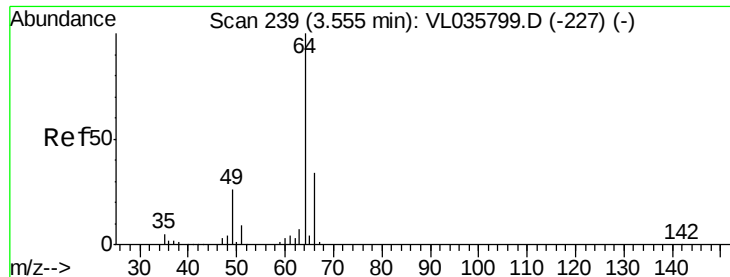
52 30.3 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#7

Chloroethane

Concen: 0.119 ppbv

RT: 3.55 min Scan# 238

Delta R.T. -0.00 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

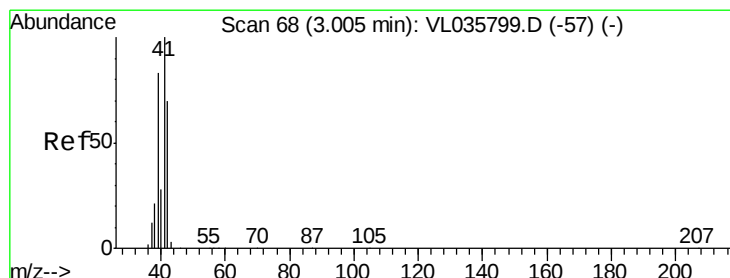
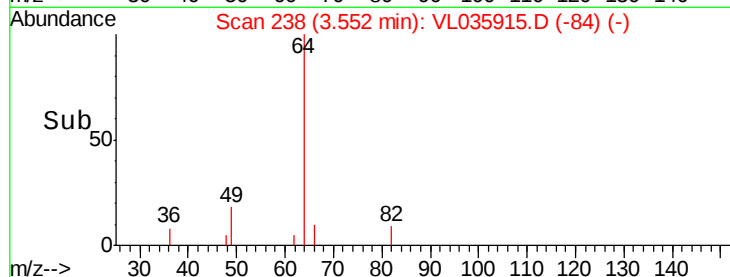
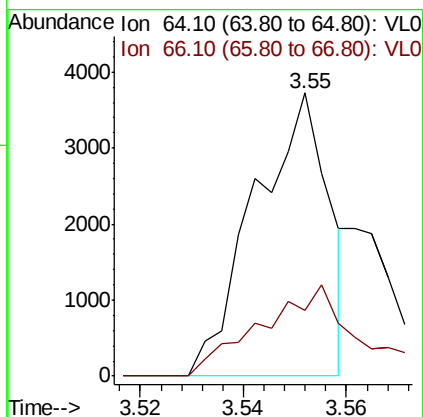
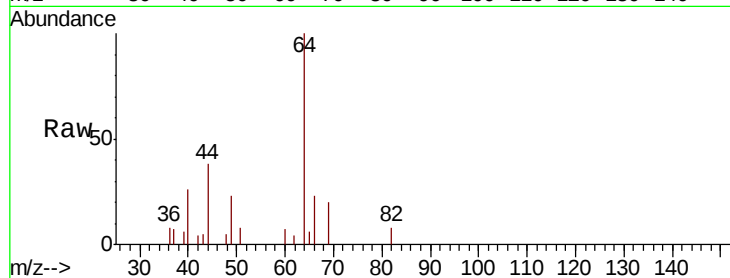
CVS-2

Tot Ion: 64 Resp: 3704

Ion Ratio Lower Upper

64 100

66 23.2 27.0 40.6#



#9

Propene

Concen: 1.104 ppbv

RT: 3.01 min Scan# 70

Delta R.T. 0.01 min

Lab File: VL035915.D

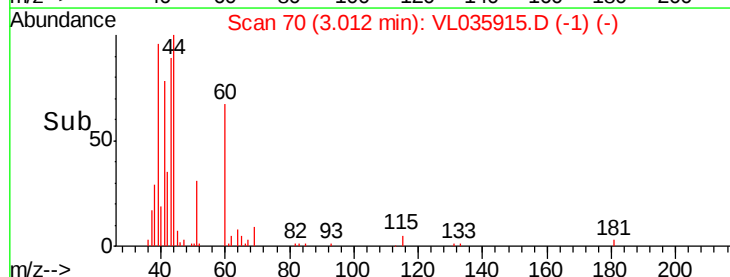
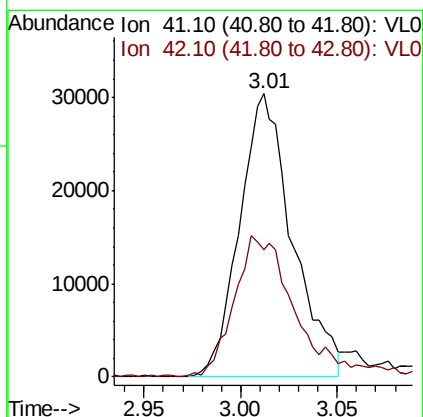
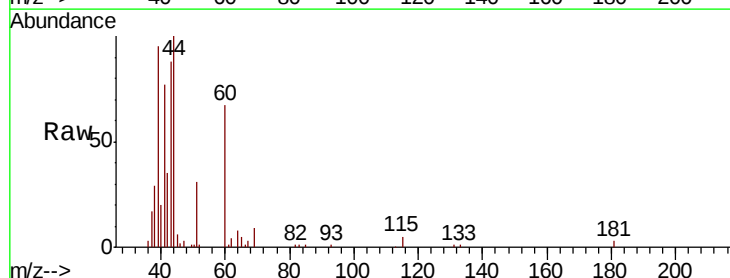
Acq: 12 Nov 2020 16:04

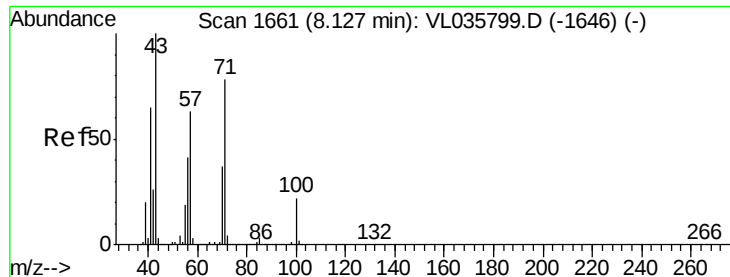
Tgt Ion: 41 Resp: 57748

Ion Ratio Lower Upper

41 100

42 58.8 56.2 84.4





#10

Heptane

Concen: 0.042 ppbv

RT: 8.11 min Scan# 1657

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

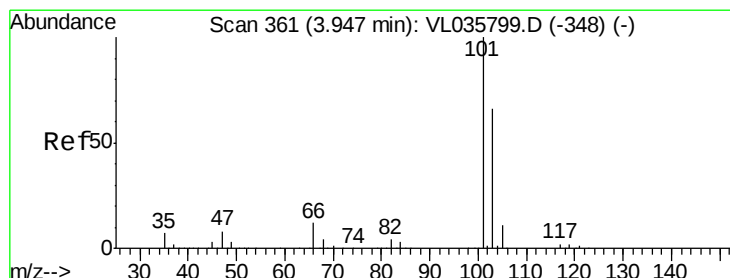
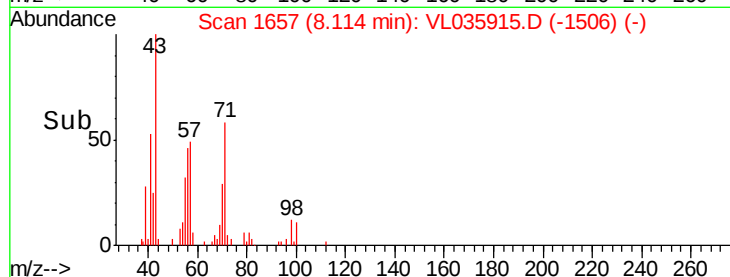
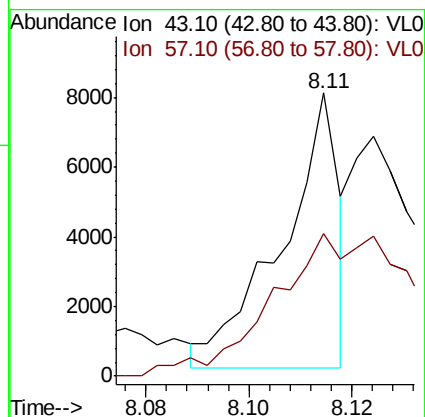
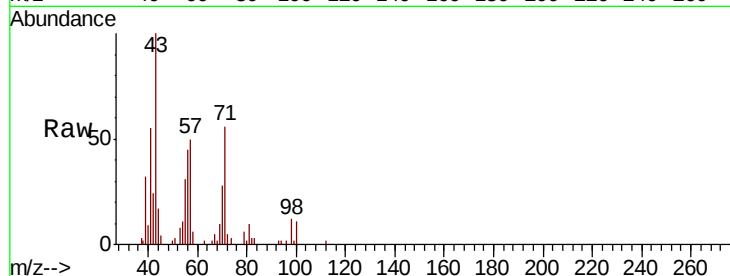
CVS-2

Tot Ion: 43 Resp: 6090

Ion Ratio Lower Upper

43 100

57 144.3 50.0 75.0#



#11

Trichlorofluoromethane

Concen: 0.229 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.00 min

Lab File: VL035915.D

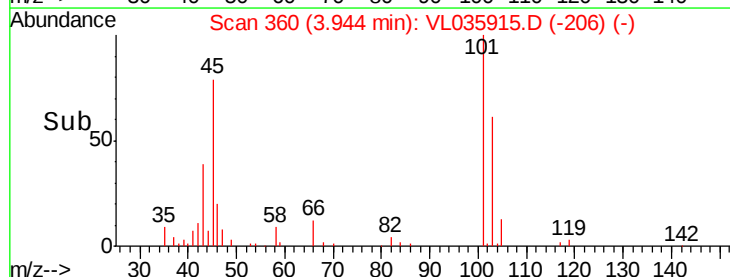
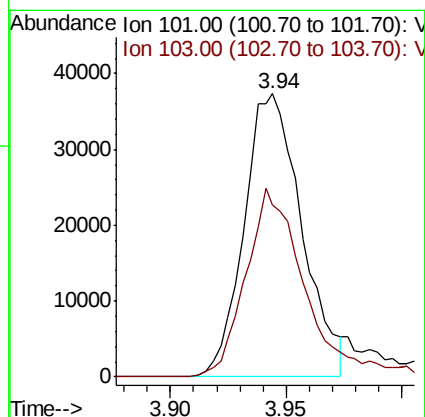
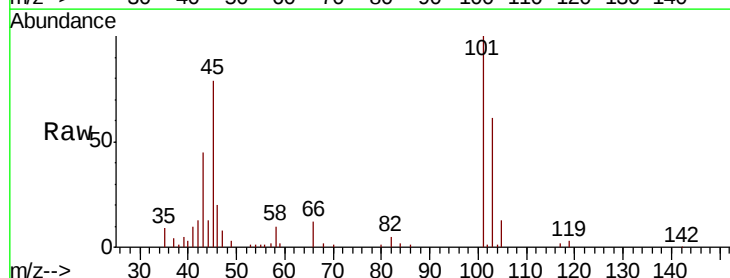
Acq: 12 Nov 2020 16:04

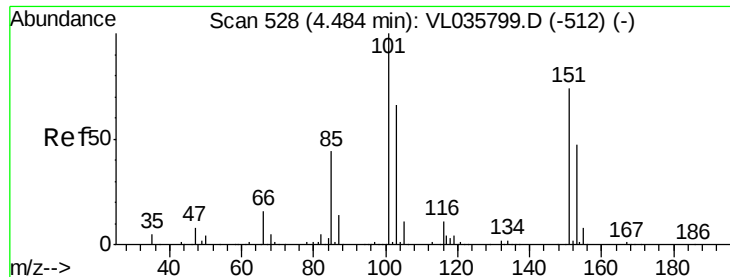
Tgt Ion: 101 Resp: 64484

Ion Ratio Lower Upper

101 100

103 61.0 53.0 79.4





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.072 ppbv

RT: 4.48 min Scan# 526

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

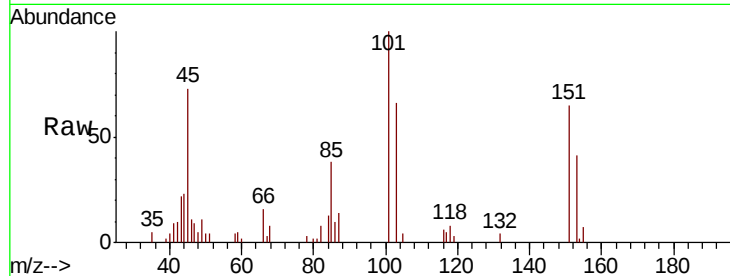
CVS-2

Tot Ion:101 Resp: 15031

Ion Ratio Lower Upper

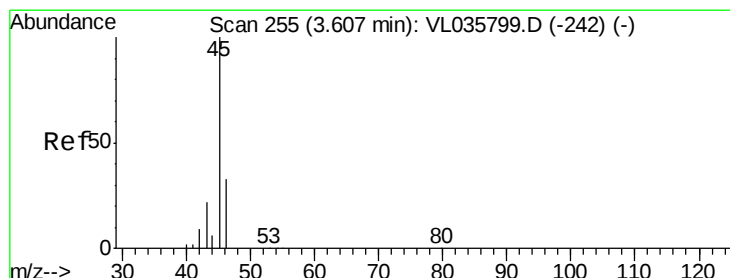
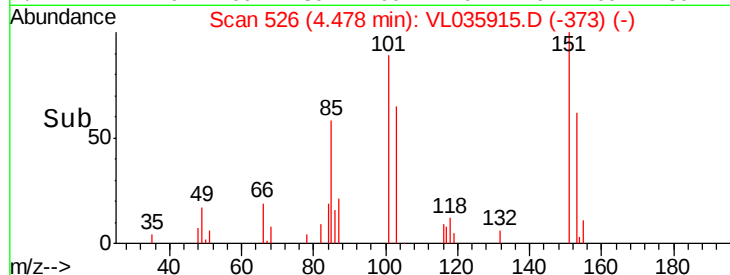
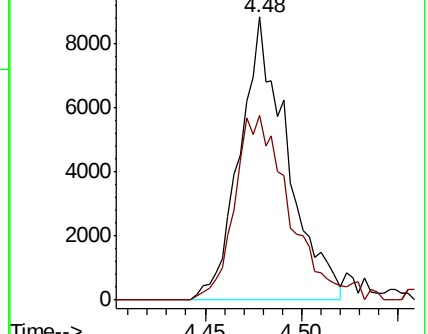
101 100

151 76.4 58.9 88.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 2092.314 ppbv

RT: 3.65 min Scan# 268

Delta R.T. 0.04 min

Lab File: VL035915.D

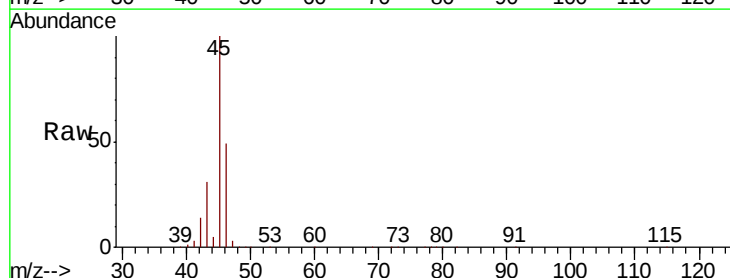
Acq: 12 Nov 2020 16:04

Tgt Ion: 45 Resp:23739128

Ion Ratio Lower Upper

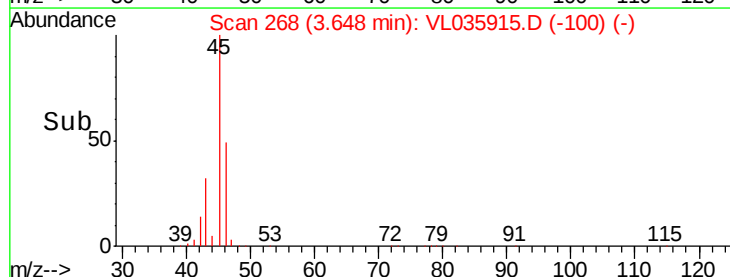
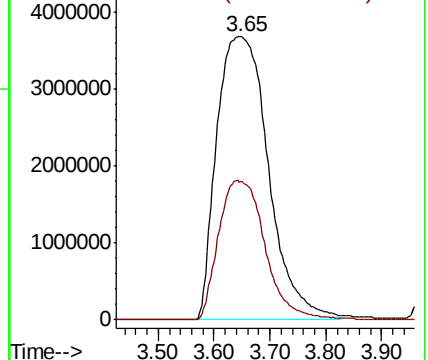
45 100

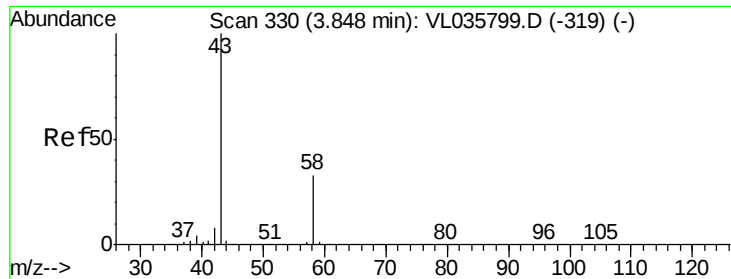
46 44.5 16.1 64.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 9.208 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.00 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

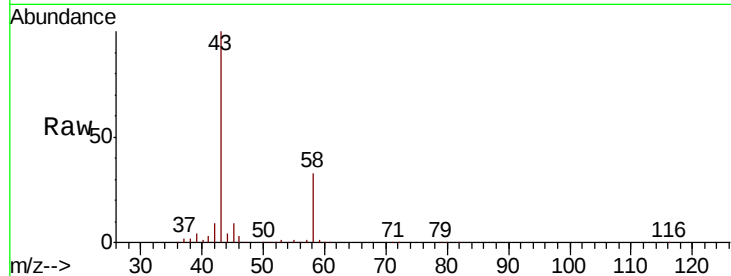
CVS-2

Tot Ion: 43 Resp: 1174606

Ion Ratio Lower Upper

43 100

58 31.7 27.5 41.3



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

600000

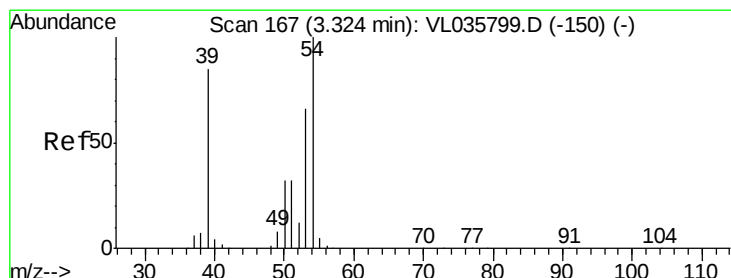
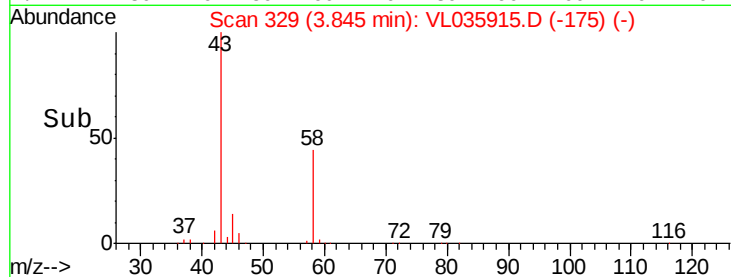
400000

200000

0

3.75 3.80 3.85 3.90 3.95

Time-->



#16

1,3-Butadiene

Concen: 0.162 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.03 min

Lab File: VL035915.D

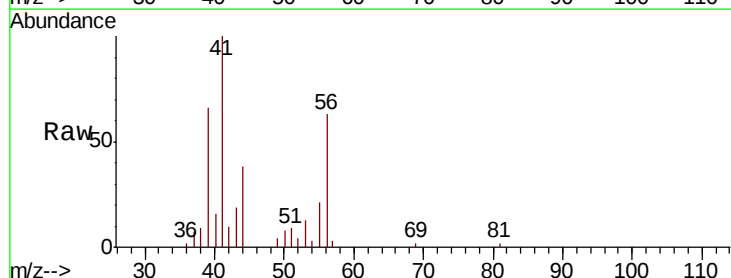
Acq: 12 Nov 2020 16:04

Tgt Ion: 39 Resp: 8898

Ion Ratio Lower Upper

39 100

54 28.4 87.1 130.7#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

30000

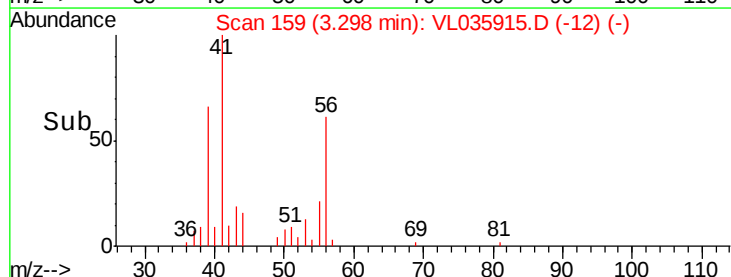
20000

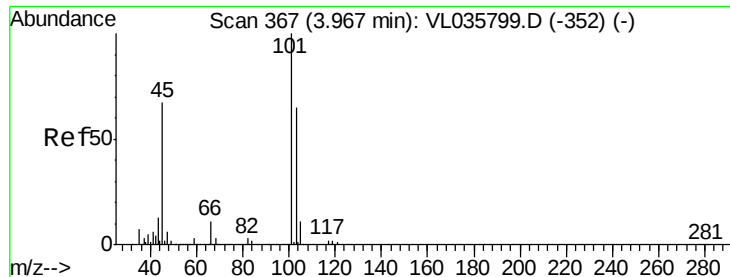
10000

0

3.26 3.28 3.30 3.32

Time-->



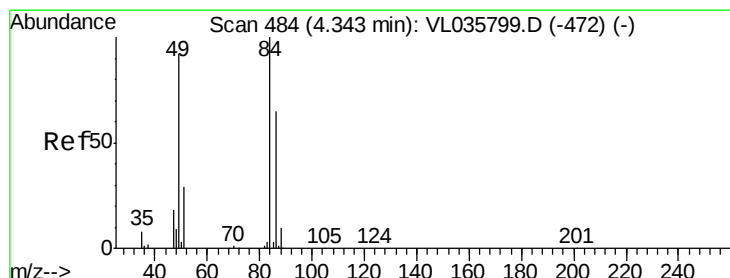
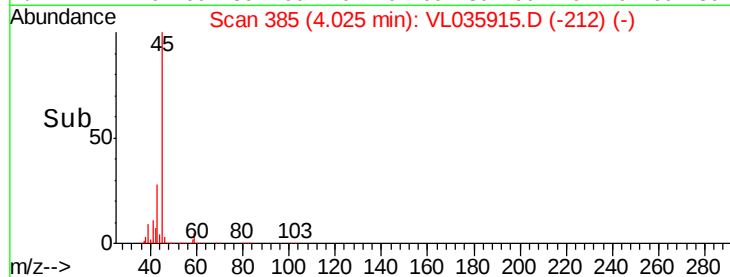
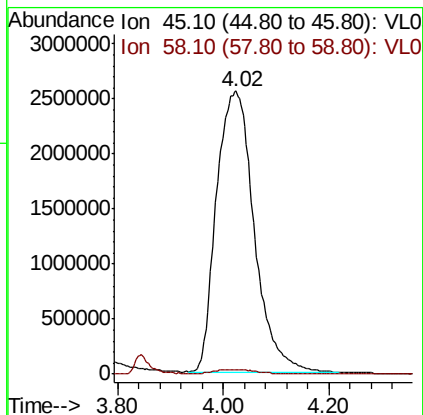
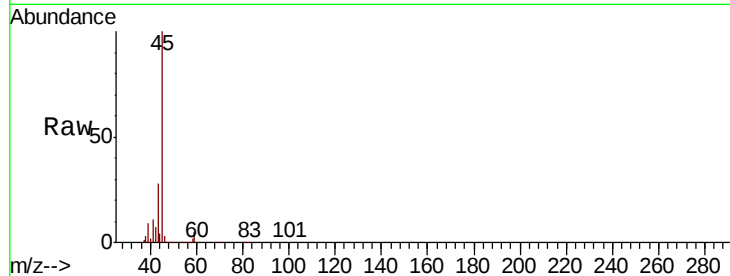


#19

Isopropyl Alcohol
 Concen: 161.013 ppbv
 RT: 4.02 min Scan# 385
 Delta R.T. 0.06 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

Instrument :
 MSVOA_L
 ClientSampled :
 CVS-2

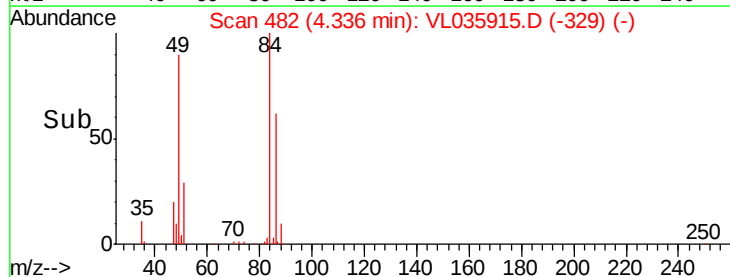
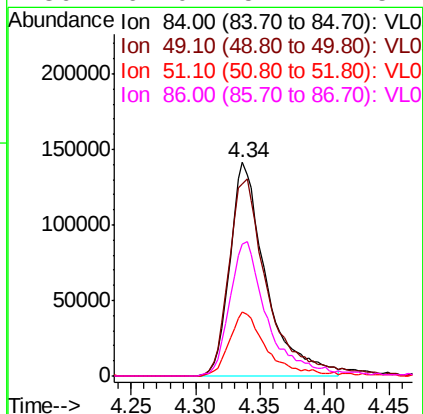
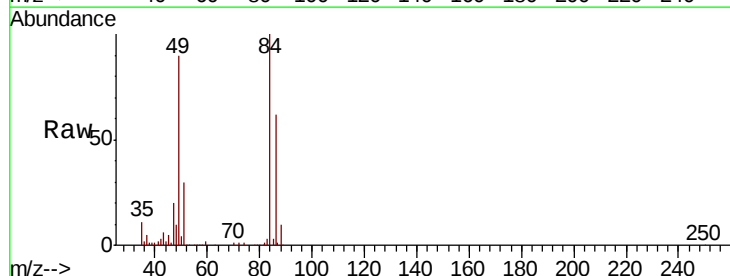
Tot Ion: 45 Resp:12621977
 Ion Ratio Lower Upper
 45 100
 58 2.0 2.6 3.8#

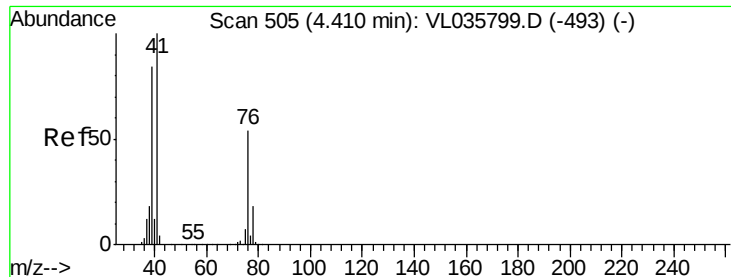


#20

Methylene Chloride
 Concen: 3.059 ppbv
 RT: 4.34 min Scan# 482
 Delta R.T. -0.01 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

Tgt Ion: 84 Resp: 274654
 Ion Ratio Lower Upper
 84 100
 49 89.9 73.8 110.8
 51 29.7 23.0 34.4
 86 62.0 52.1 78.1





#21

Allvl Chloride

Concen: 2.461 ppbv

RT: 4.12 min Scan# 415

Delta R.T. -0.29 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

CVS-2

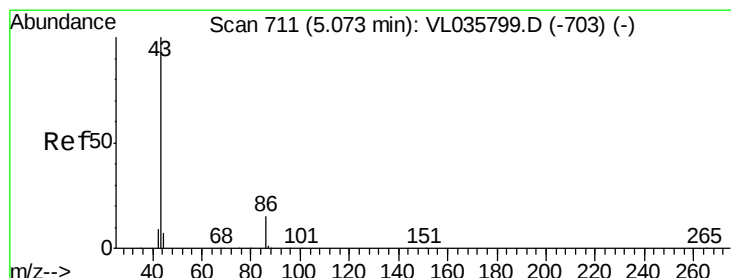
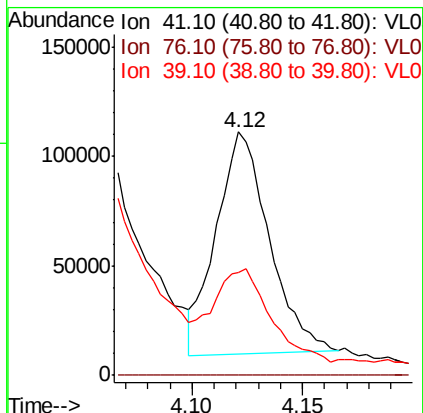
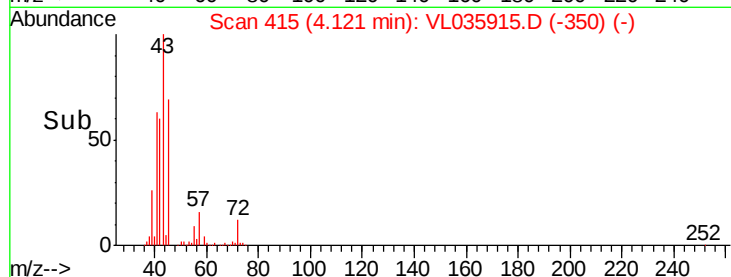
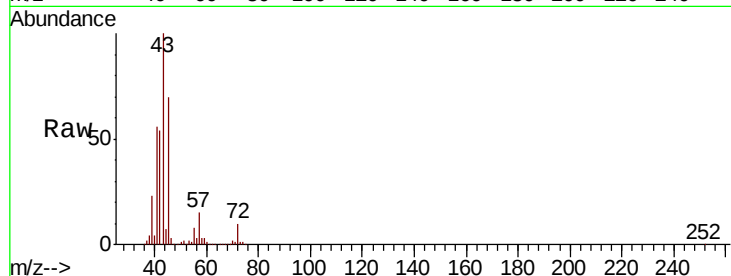
Tot Ion: 41 Resp: 169775

Ion Ratio Lower Upper

41 100

76 0.2 42.6 63.8#

39 71.2 67.0 100.4



#23

Vinyl Acetate

Concen: 0.190 ppbv

RT: 5.06 min Scan# 706

Delta R.T. -0.02 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Tgt Ion: 43 Resp: 34009

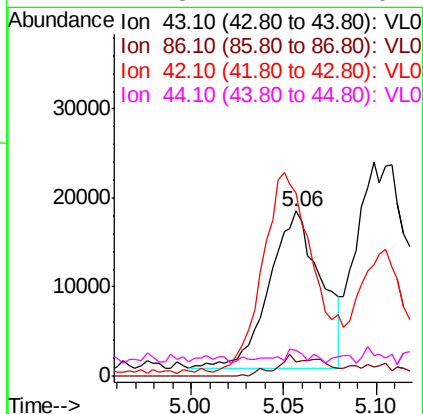
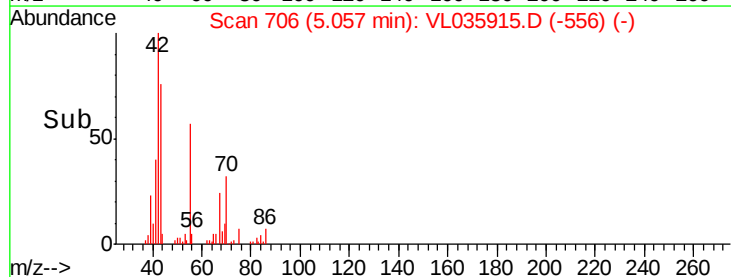
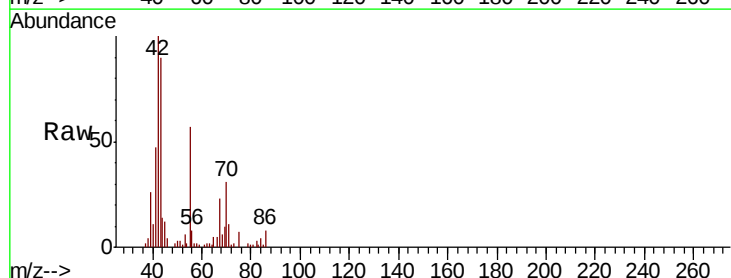
Ion Ratio Lower Upper

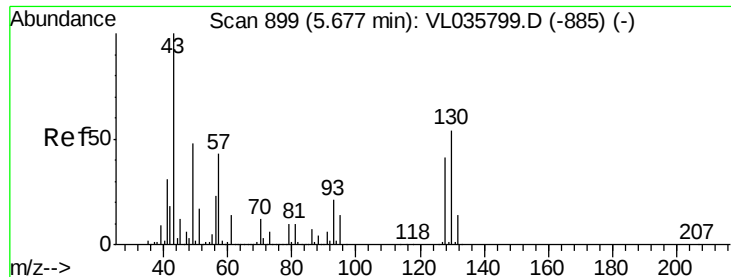
43 100

86 9.1 9.8 14.6#

42 113.6 8.1 12.1#

44 7.3 4.2 6.4#





#25

Ethyl Acetate

Concen: 0.734 ppbv

RT: 5.68 min Scan# 900

Delta R.T. 0.00 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

CVS-2

Tot Ion: 43 Resp: 184519

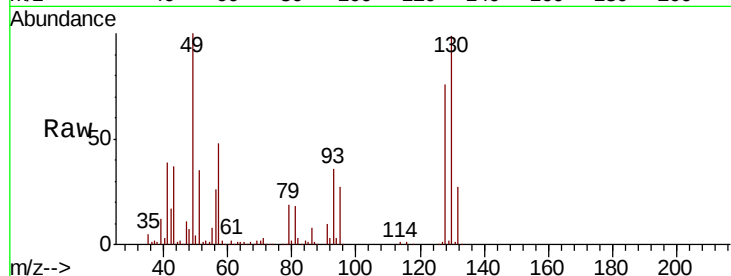
Ion Ratio Lower Upper

43 100

45 7.0 8.5 12.7#

61 5.2 10.7 16.1#

70 5.8 8.6 12.8#

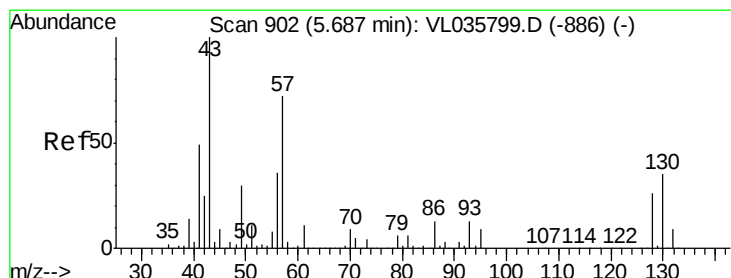
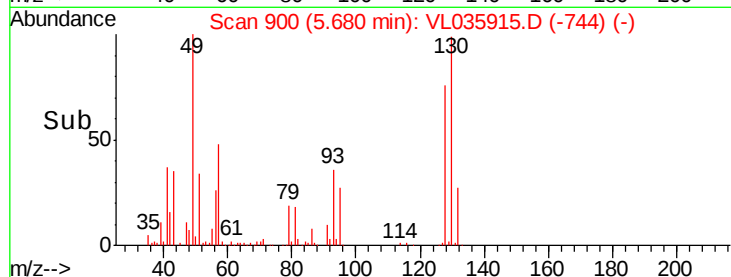
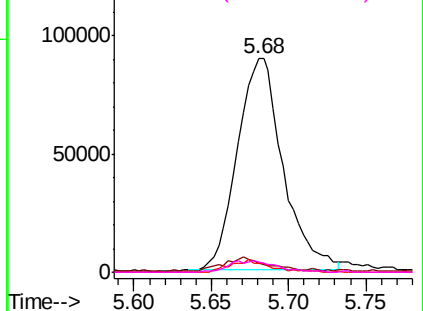


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.642 ppbv

RT: 5.68 min Scan# 901

Delta R.T. -0.00 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Tgt Ion: 57 Resp: 227623

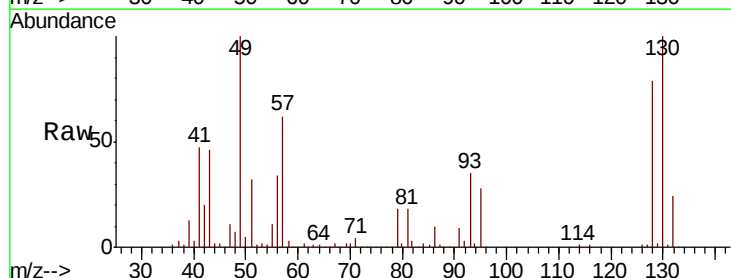
Ion Ratio Lower Upper

57 100

41 81.0 58.9 88.3

43 84.9 150.2 225.2#

56 58.4 42.4 63.6

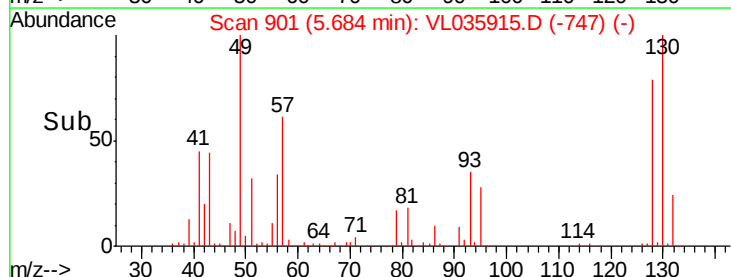
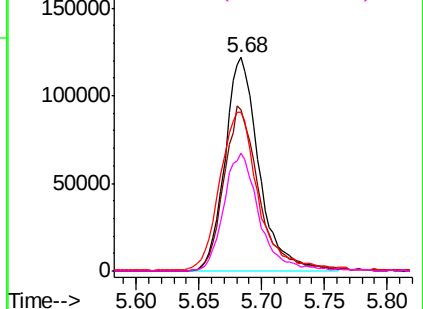


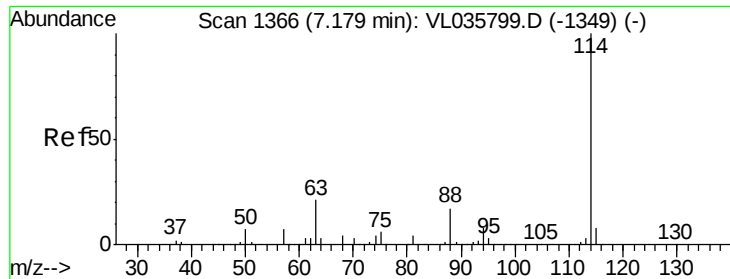
Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

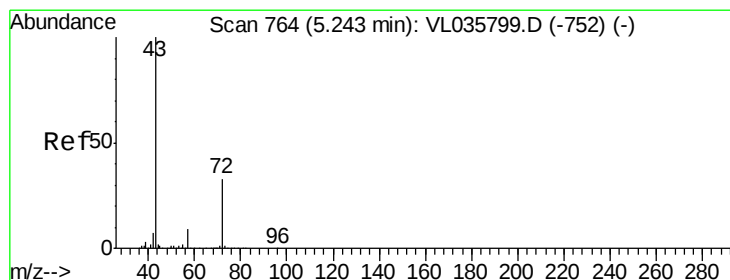
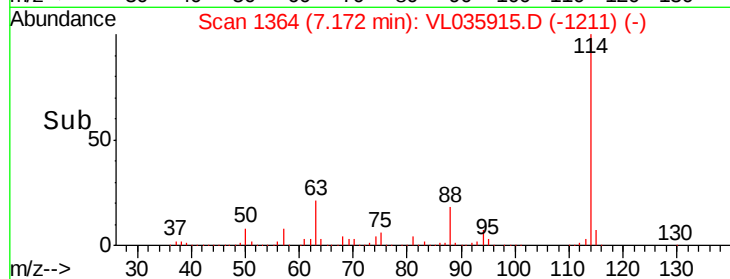
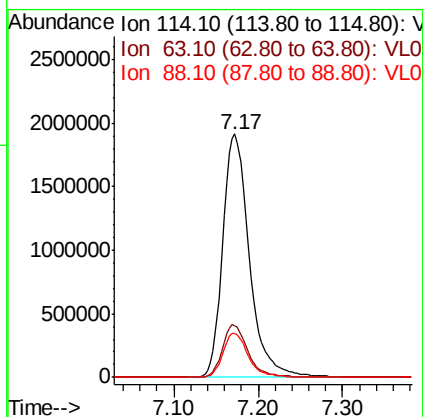
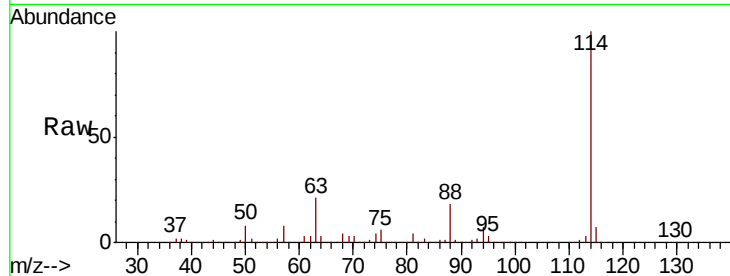




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1364
 Delta R.T. -0.01 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

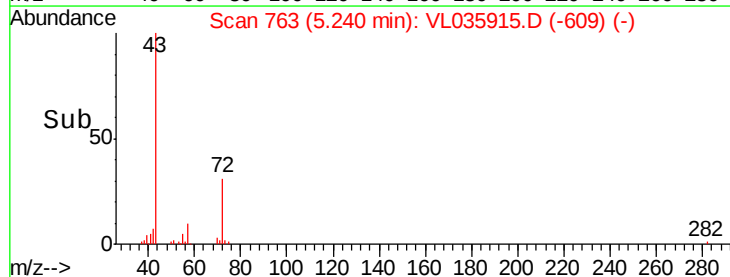
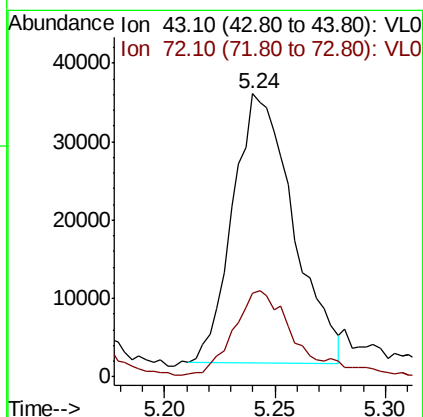
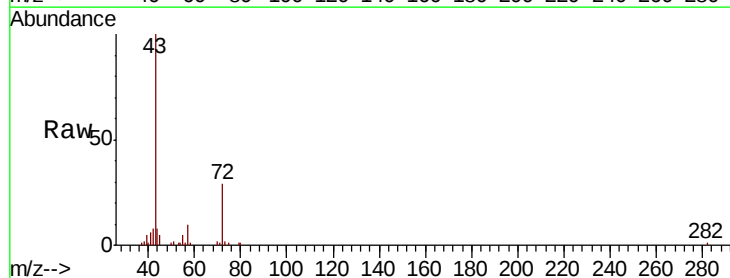
Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-2

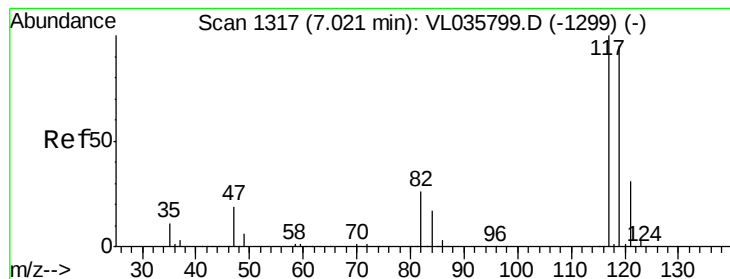
Tot Ion:114 Resp: 4212015
 Ion Ratio Lower Upper
 114 100
 63 20.9 16.1 24.1
 88 17.5 13.7 20.5



#34
 2-Butanone
 Concen: 0.477 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. -0.00 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

Tgt Ion: 43 Resp: 65226
 Ion Ratio Lower Upper
 43 100
 72 34.3 26.5 39.7





#35

Carbon Tetrachloride

Concen: 0.050 ppbv

RT: 7.01 min Scan# 1315

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

CVS-2

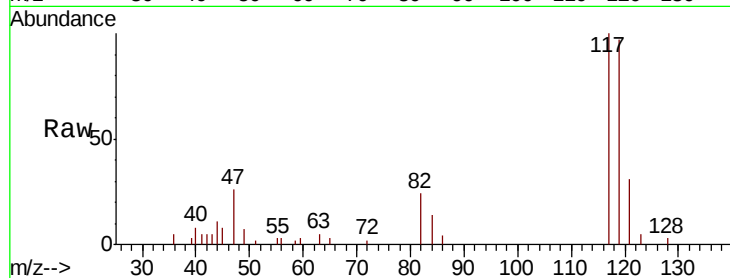
Tot Ion:117 Resp: 11197

Ion Ratio Lower Upper

117 100

119 94.9 75.6 113.4

121 32.0 25.1 37.7

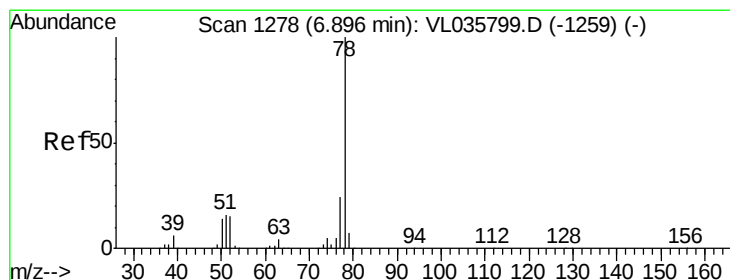
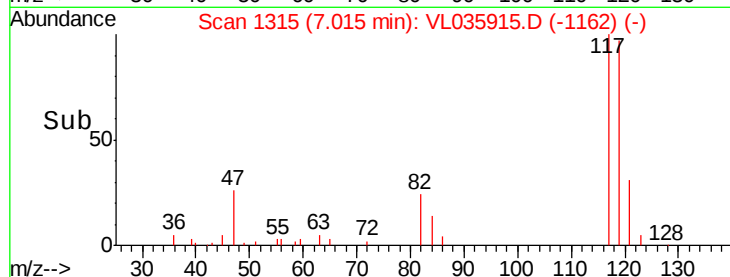
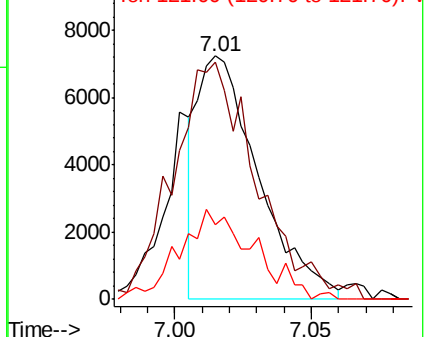


Abundance

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: 0.227 ppbv

RT: 6.89 min Scan# 1275

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

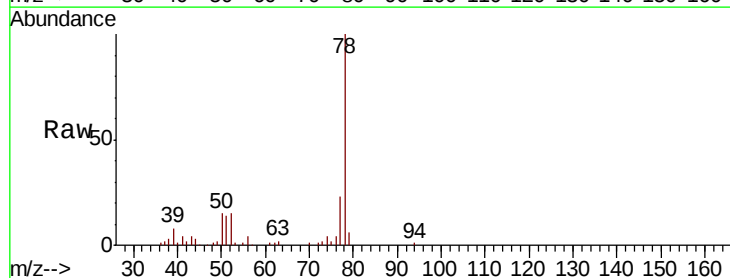
Tgt Ion: 78 Resp: 71133

Ion Ratio Lower Upper

78 100

77 22.8 19.3 28.9

50 14.0 11.4 17.2

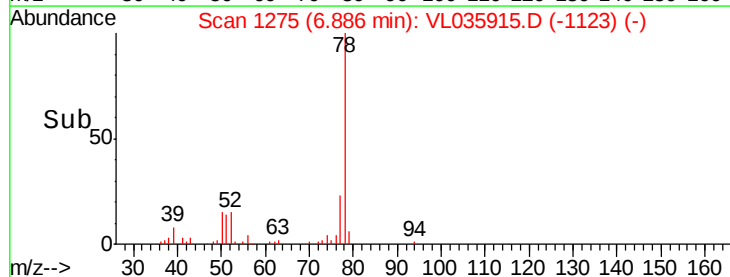
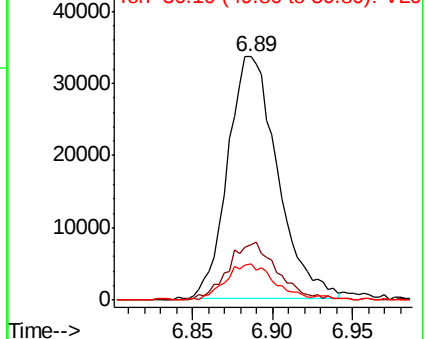


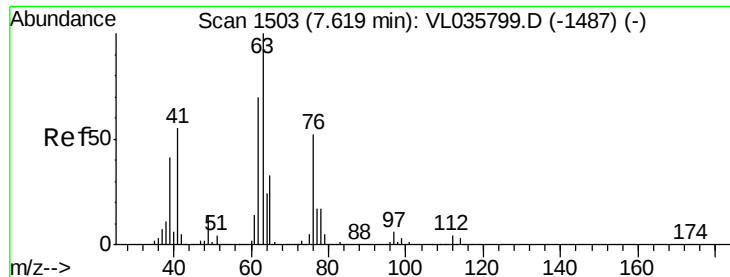
Abundance

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

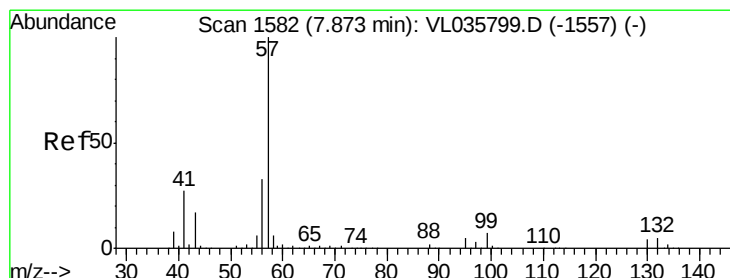
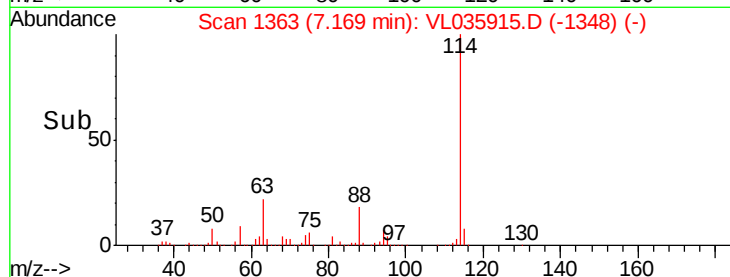
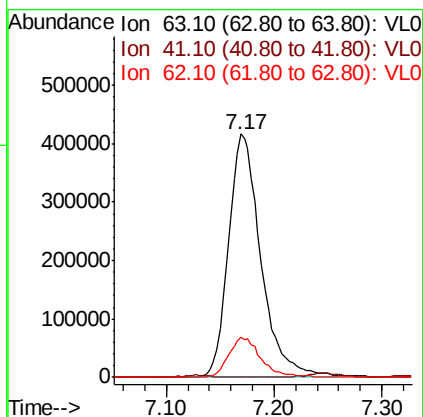
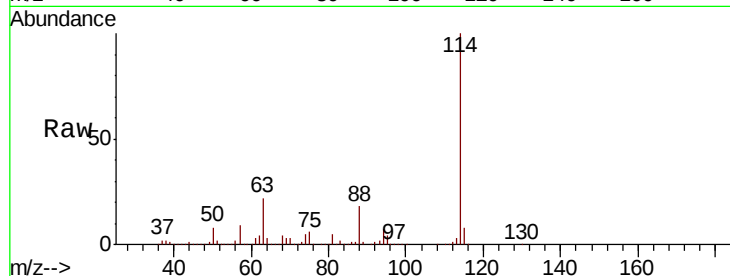




#39
 1,2-Dichloropropane
 Concen: 8.276 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.45 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

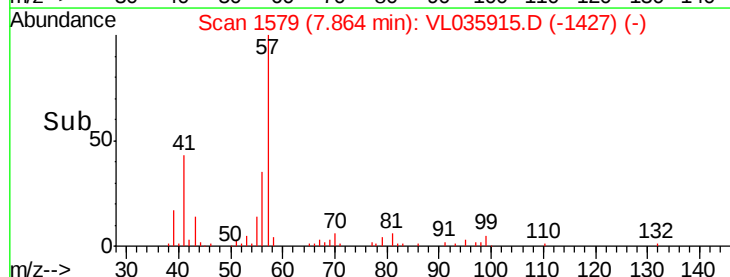
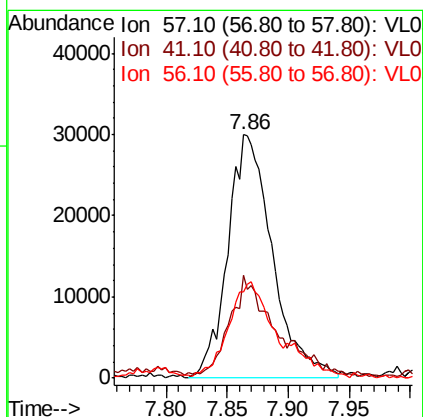
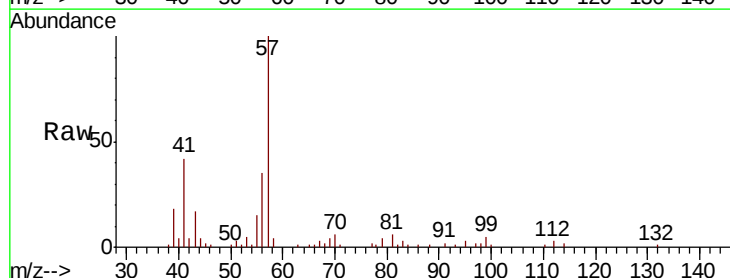
Instrument :
 MSVOA_L
 ClientSampled :
 CVS-2

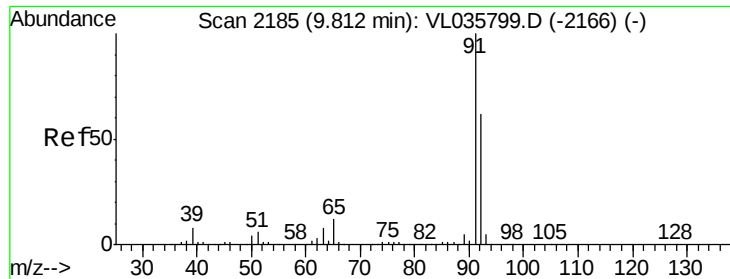
Tot Ion: 63 Resp: 872539
 Ion Ratio Lower Upper
 63 100
 41 0.0 43.8 65.6#
 62 16.7 56.2 84.2#



#44
 2,2,4-Trimethylpentane
 Concen: 0.184 ppbv
 RT: 7.86 min Scan# 1579
 Delta R.T. -0.01 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

Tgt Ion: 57 Resp: 76209
 Ion Ratio Lower Upper
 57 100
 41 44.4 21.0 31.4#
 56 44.7 25.4 38.0#





#53

Toluene

Concen: 1.354 ppbv

RT: 9.81 min Scan# 2183

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

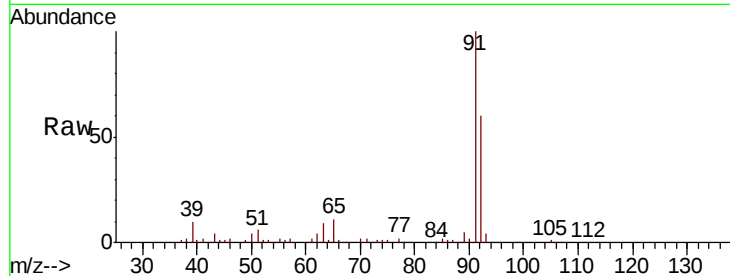
CVS-2

Tot Ion: 91 Resp: 511743

Ion Ratio Lower Upper

91 100

92 59.7 49.8 74.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.81

250000

200000

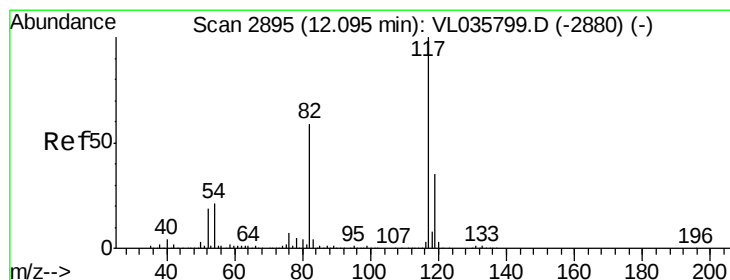
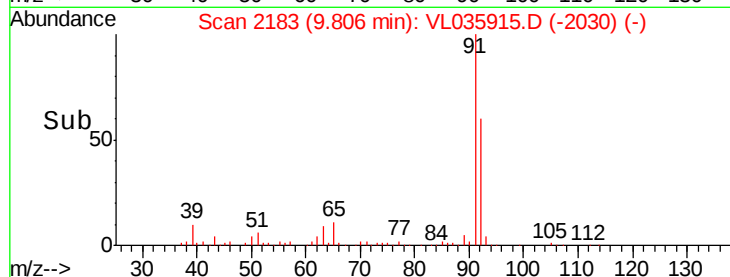
150000

100000

50000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2893

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

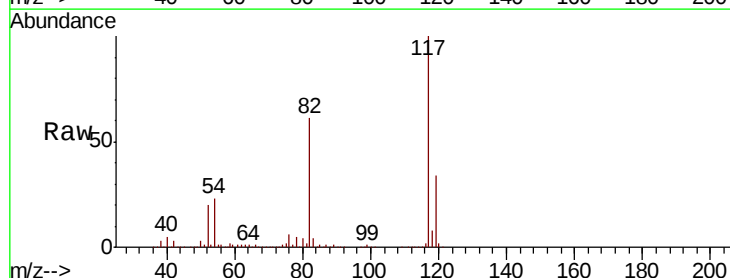
Tgt Ion: 117 Resp: 3897412

Ion Ratio Lower Upper

117 100

82 60.5 50.6 76.0

119 33.9 52.6 78.8#



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V

12.09

2000000

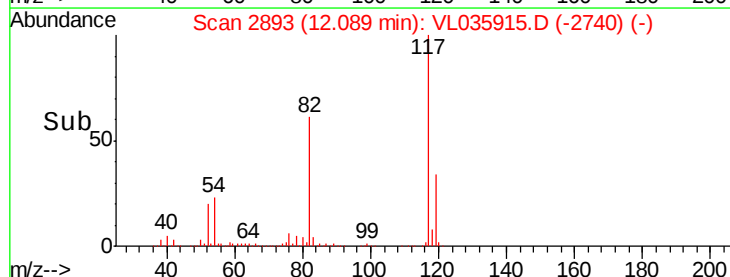
1500000

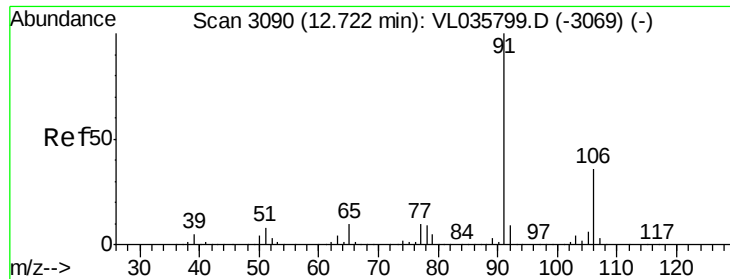
1000000

500000

0

Time-->





#58

Ethyl Benzene

Concen: 0.044 ppbv

RT: 12.71 min Scan# 3087

Delta R.T. -0.01 min

Lab File: VL035915.D

Acq: 12 Nov 2020 16:04

Instrument :

MSVOA_L

ClientSampleId :

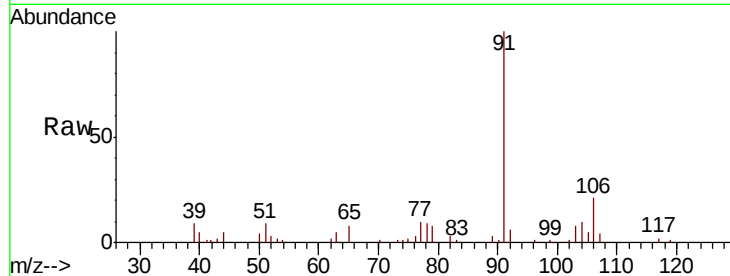
CVS-2

Tot Ion: 91 Resp: 20827

Ion Ratio Lower Upper

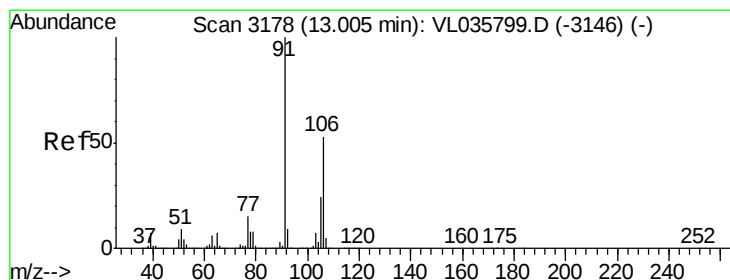
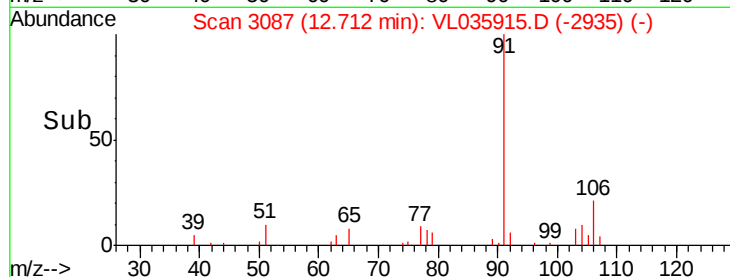
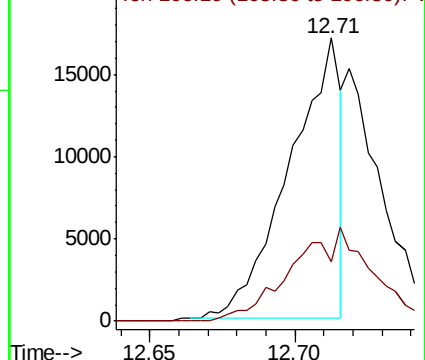
91 100

106 21.4 28.6 43.0#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.285 ppbv

RT: 12.97 min Scan# 3168

Delta R.T. -0.03 min

Lab File: VL035915.D

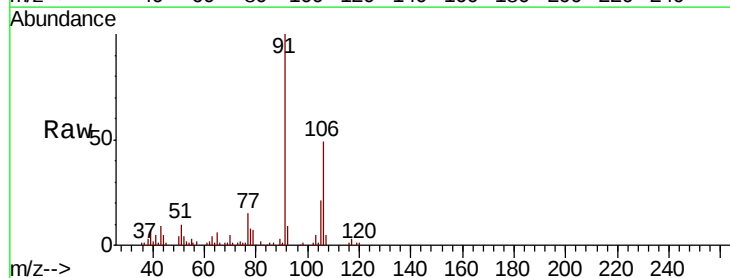
Acq: 12 Nov 2020 16:04

Tgt Ion: 91 Resp: 114278

Ion Ratio Lower Upper

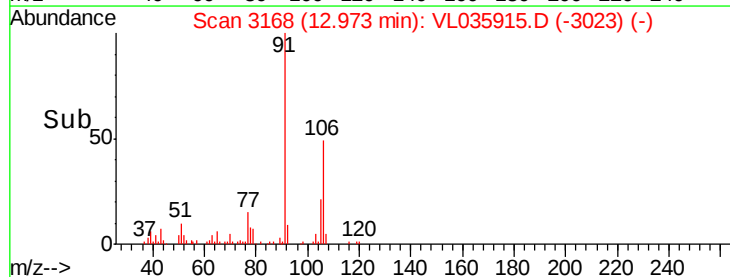
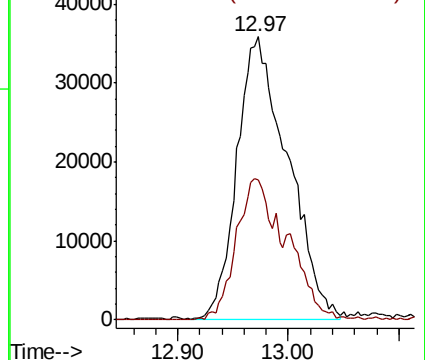
91 100

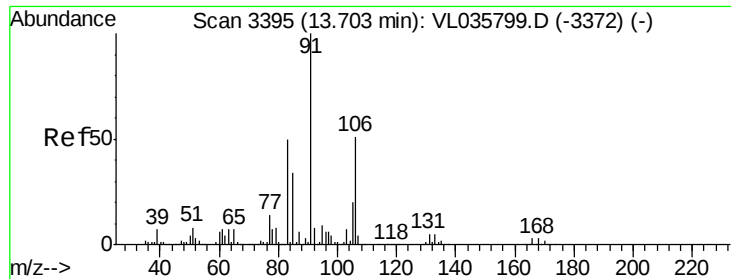
106 49.5 39.5 59.3



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

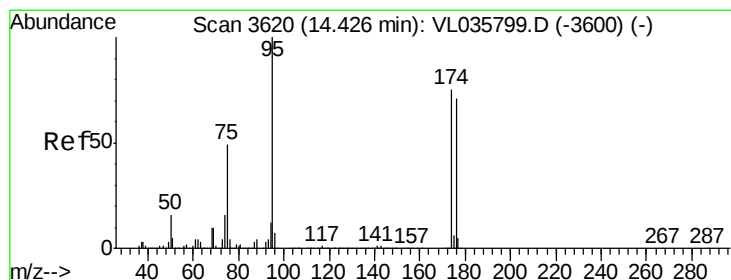
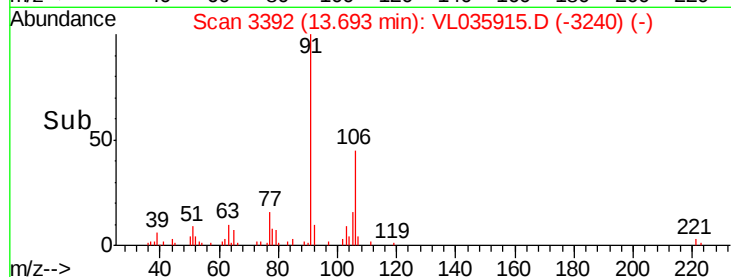
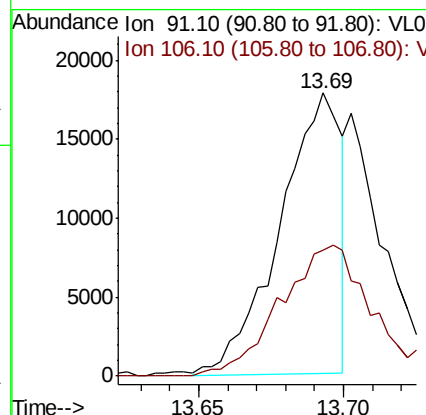
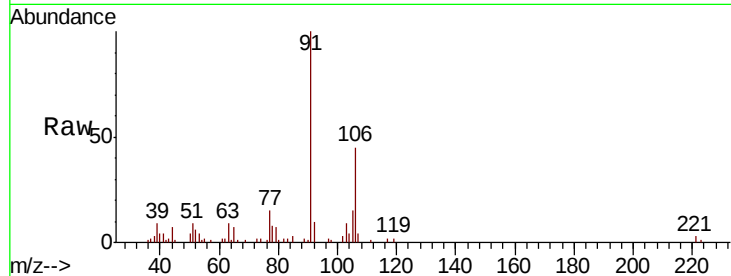




#60
o-Xylene
Concen: 0.067 ppbv
RT: 13.69 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL035915.D
Acq: 12 Nov 2020 16:04

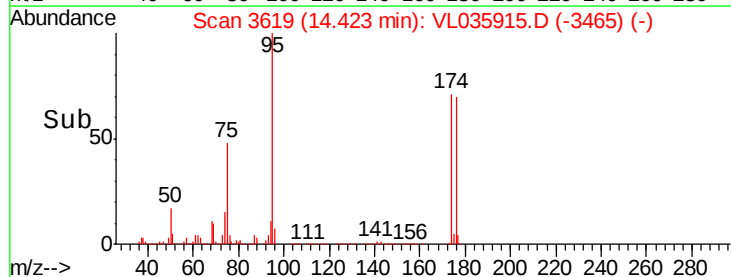
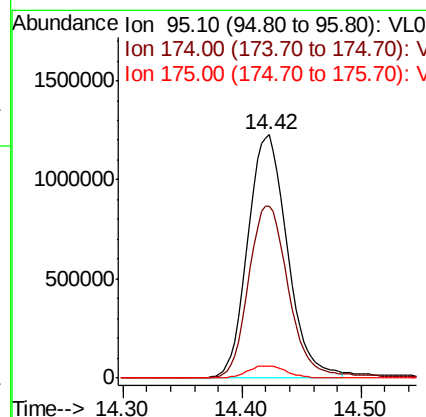
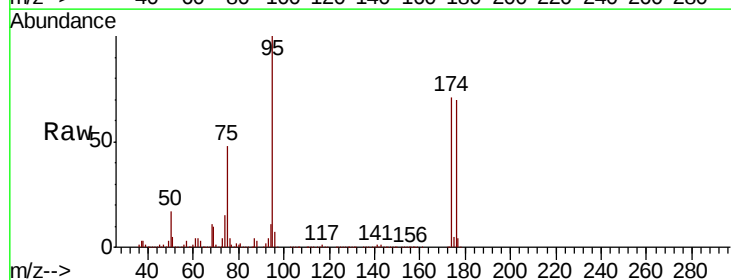
Instrument :
MSVOA_L
ClientSampleId :
CVS-2

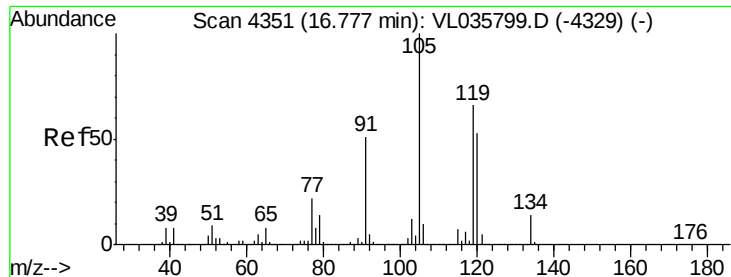
Tot Ion: 91 Resp: 26074
Ion Ratio Lower Upper
91 100
106 70.4 24.8 74.4



#68
1-Bromo-4-Fluorobenzene
Concen: 10.240 ppbv
RT: 14.42 min Scan# 3619
Delta R.T. -0.00 min
Lab File: VL035915.D
Acq: 12 Nov 2020 16:04

Tgt Ion: 95 Resp: 2835436
Ion Ratio Lower Upper
95 100
174 73.5 59.8 89.6
175 5.1 4.3 6.5





#74
 1,2,4-Trimethylbenzene
 Concen: 0.046 ppbv
 RT: 16.77 min Scan# 4348
 Delta R.T. -0.01 min
 Lab File: VL035915.D
 Acq: 12 Nov 2020 16:04

Instrument :
 MSVOA_L
 ClientSampleId :
 CVS-2

Tot Ion	Ratio	Lower	Upper
105	100		
120	44.7	42.0	63.0
91	14.0	41.0	61.6#
77	14.5	17.3	25.9#

