

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110520\
 Data File : VL035867.D
 Acq On : 5 Nov 2020 19:41
 Operator : SY/AP
 Sample : L4220-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA4

Quant Time: Nov 06 00:29:05 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	5.64	49	1012490	10.00	ppbv	-0.03
33) 1,4-Difluorobenzene	7.15	114	4127768	10.00	ppbv	-0.03
55) Chlorobenzene-d5	12.06	117	3701468	10.00	ppbv	-0.04

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	2640693	10.04	ppbv	-0.04
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	36158	0.190	ppbv	98
3) Chlorodifluoromethane	2.97	51	51759	0.427	ppbv #	89
4) Chloromethane	3.12	50	36467	0.619	ppbv	97
9) Propene	3.18	41	84905	1.913	ppbv	85
10) Heptane	8.09	43	7396	0.060	ppbv #	19
11) Trichlorofluoromethane	3.93	101	62126	0.260	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.47	101	6783	0.038	ppbv #	1
13) Ethanol	3.58	45	1700778	176.655	ppbv	97
15) Acetone	3.83	43	972326	8.983	ppbv	99
16) 1,3-Butadiene	3.29	39	32210	0.691	ppbv #	60
17) tert-Butyl alcohol	4.28	59	5244	0.037	ppbv #	72
19) Isopropyl Alcohol	3.95	45	585476	8.802	ppbv	98
20) Methylene Chloride	4.32	84	334130	4.385	ppbv	98
23) Vinyl Acetate	5.04	43	59054	0.389	ppbv #	72
25) Ethyl Acetate	5.66	43	189237	0.887	ppbv #	78
26) Hexane	5.66	57	293008	2.492	ppbv #	49
29) Chloroform	5.73	83	188989	0.818	ppbv	95
34) 2-Butanone	5.22	43	58899	0.440	ppbv	92
35) Carbon Tetrachloride	7.00	117	14341	0.065	ppbv	97
36) Benzene	6.86	78	108477	0.353	ppbv	94
39) 1,2-Dichloropropane	7.15	63	788365	7.631	ppbv #	30
44) 2,2,4-Trimethylpentane	7.84	57	59290	0.146	ppbv #	75
53) Toluene	9.78	91	322459	0.871	ppbv	97
58) Ethyl Benzene	12.68	91	28928	0.064	ppbv #	81
59) m/p-Xylene	12.95	91	84023	0.220	ppbv	98
60) o-Xylene	13.67	91	28114	0.076	ppbv	99

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

```
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL110520\  
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Sample    : L4220-04  
Misc      : 400ml/MSVOA L  
ALS Vial  : 1 Sample Multiplier: 1
```



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.64 min Scan# 888

Delta R.T. -0.03 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampleId :

IA4

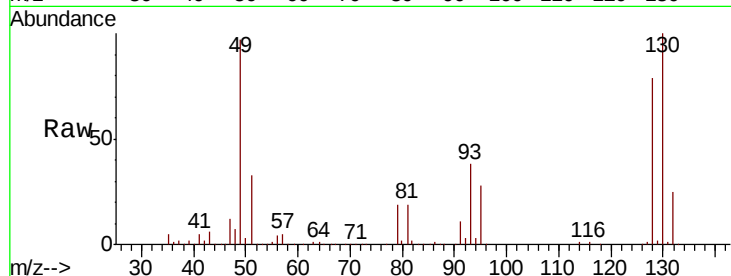
Tot Ion: 49 Resp: 1012490

Ion Ratio Lower Upper

49 100

128 86.7 41.5 124.6

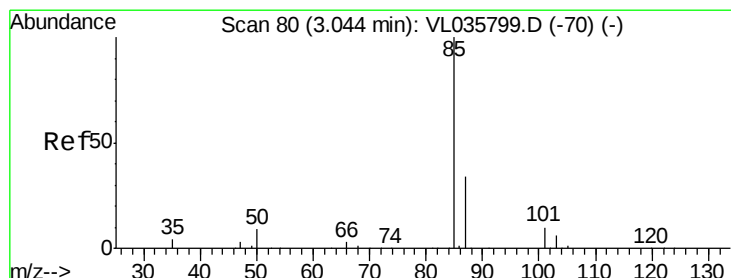
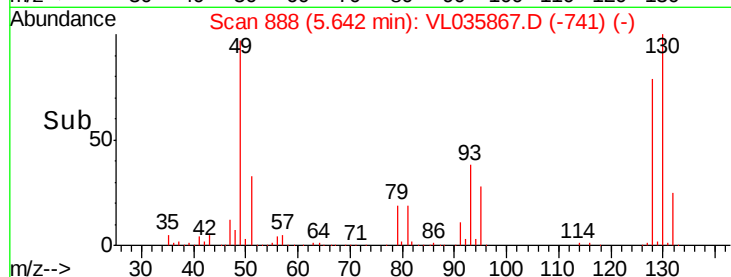
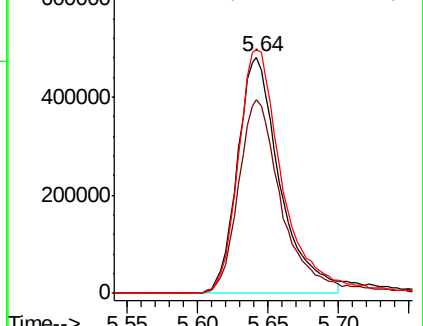
130 111.0 53.7 161.1



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.190 ppbv

RT: 3.02 min Scan# 74

Delta R.T. -0.02 min

Lab File: VL035867.D

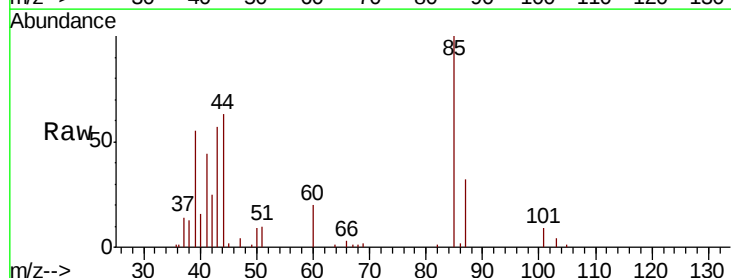
Acq: 5 Nov 2020 19:41

Tgt Ion: 85 Resp: 36158

Ion Ratio Lower Upper

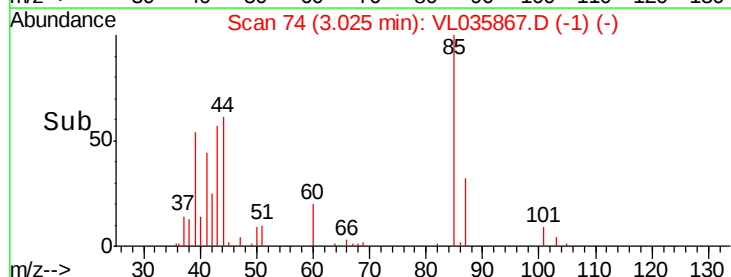
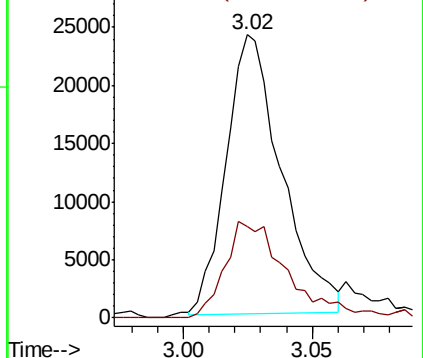
85 100

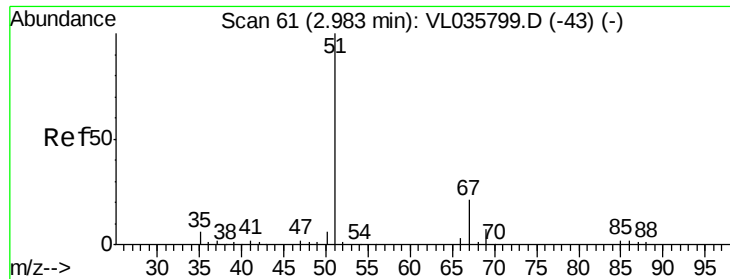
87 33.0 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.427 ppbv

RT: 2.97 min Scan# 56

Delta R.T. -0.02 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

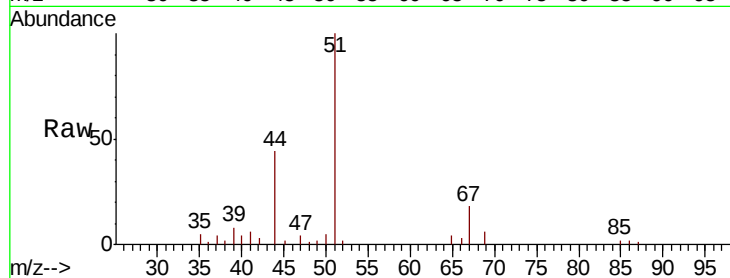
IA4

Tot Ion: 51 Resp: 51759

Ion Ratio Lower Upper

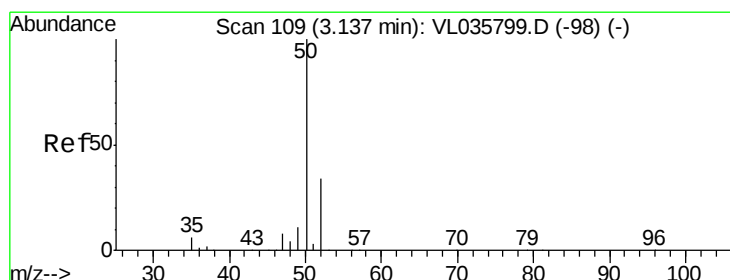
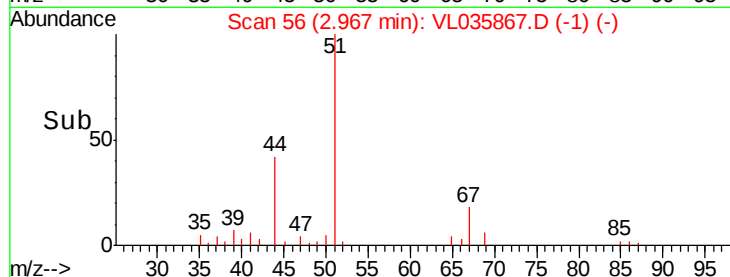
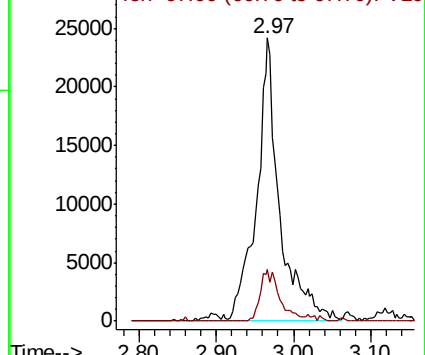
51 100

67 16.1 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: 0.619 ppbv

RT: 3.12 min Scan# 103

Delta R.T. -0.02 min

Lab File: VL035867.D

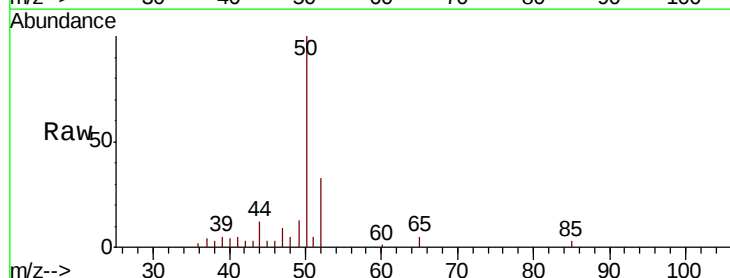
Acq: 5 Nov 2020 19:41

Tgt Ion: 50 Resp: 36467

Ion Ratio Lower Upper

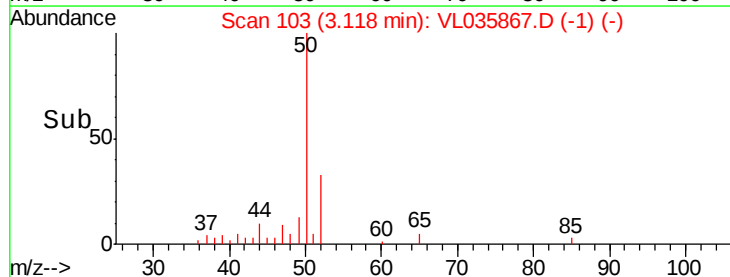
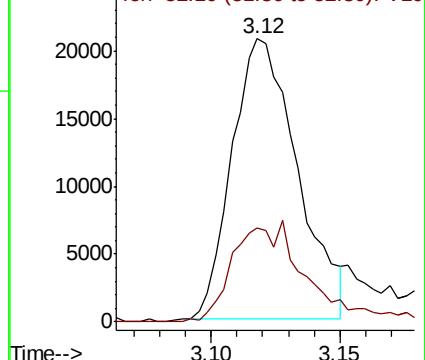
50 100

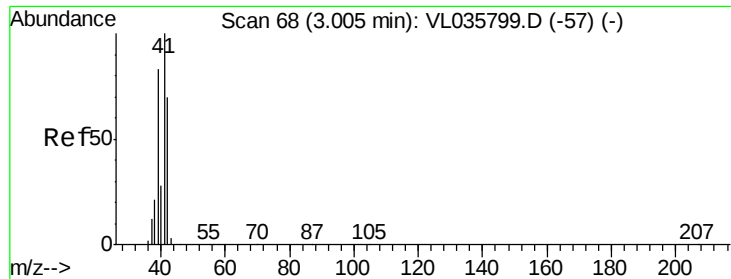
52 32.4 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.913 ppbv

RT: 3.18 min Scan# 123

Delta R.T. 0.18 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

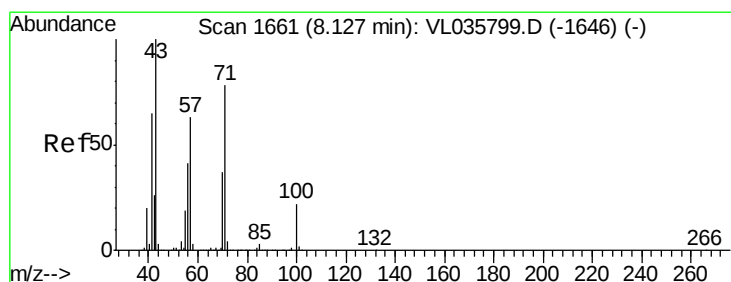
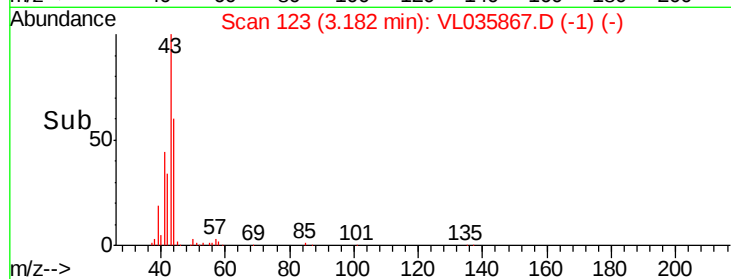
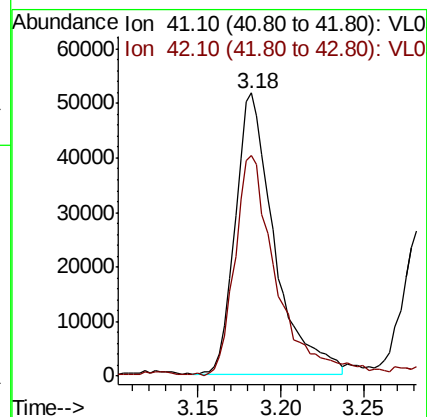
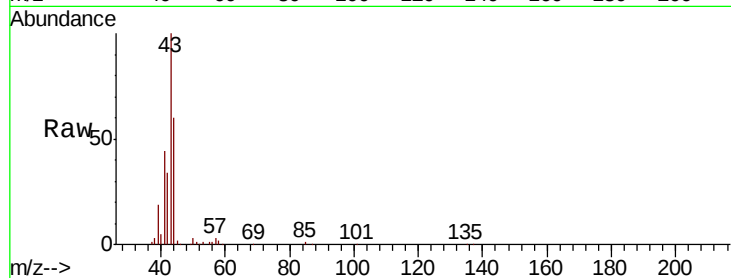
IA4

Tot Ion: 41 Resp: 84905

Ion Ratio Lower Upper

41 100

42 82.6 56.2 84.4



#10

Heptane

Concen: 0.060 ppbv

RT: 8.09 min Scan# 1650

Delta R.T. -0.04 min

Lab File: VL035867.D

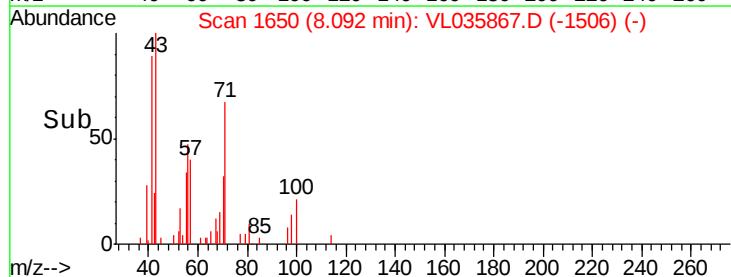
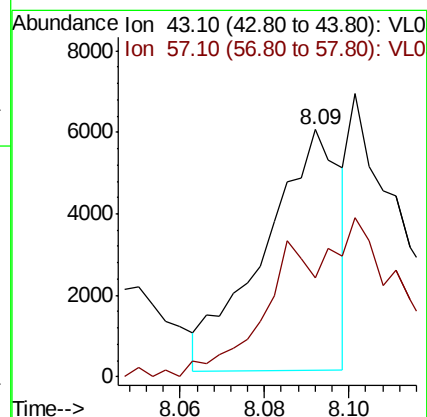
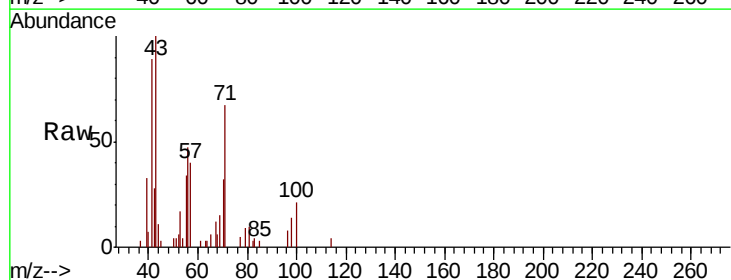
Acq: 5 Nov 2020 19:41

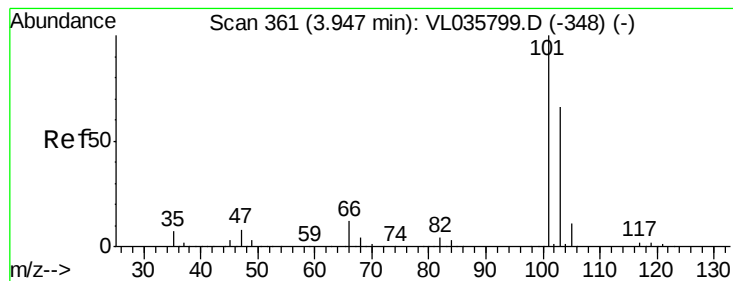
Tgt Ion: 43 Resp: 7396

Ion Ratio Lower Upper

43 100

57 0.0 50.0 75.0#





#11

Trichlorofluoromethane

Concen: 0.260 ppbv

RT: 3.93 min Scan# 355

Delta R.T. -0.02 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampleId :

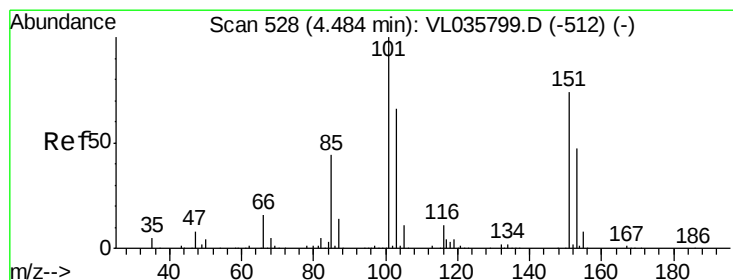
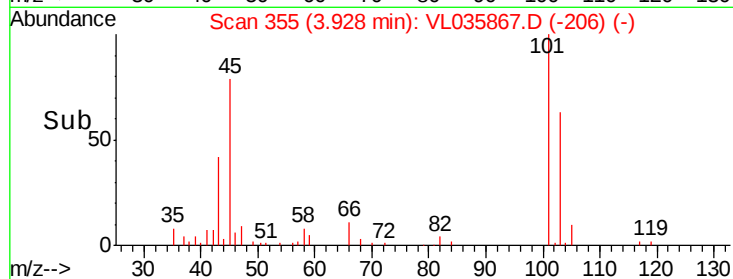
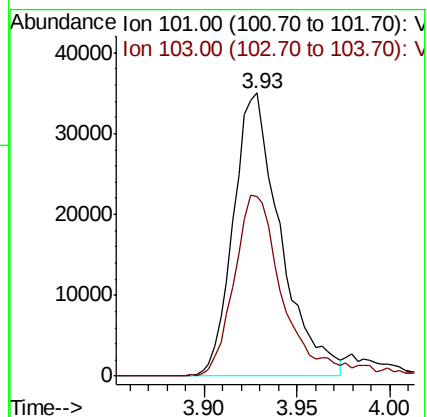
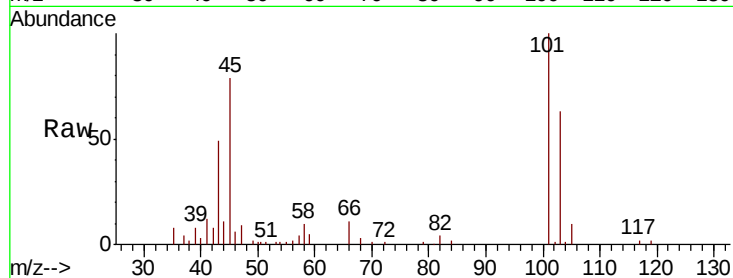
IA4

Tot Ion:101 Resp: 62126

Ion Ratio Lower Upper

101 100

103 62.8 53.0 79.4



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.038 ppbv

RT: 4.47 min Scan# 522

Delta R.T. -0.02 min

Lab File: VL035867.D

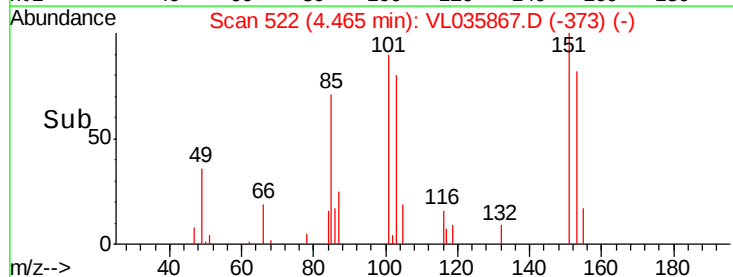
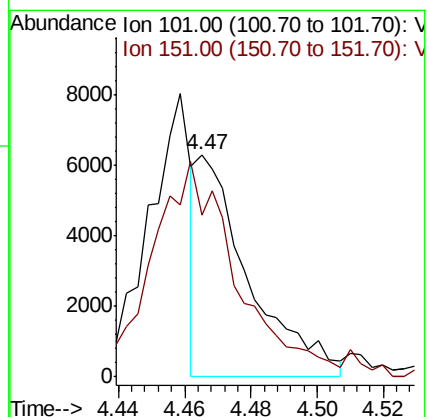
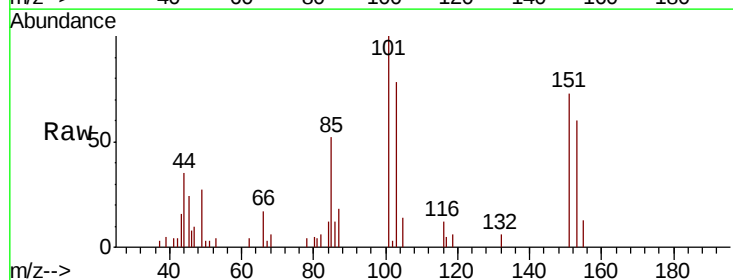
Acq: 5 Nov 2020 19:41

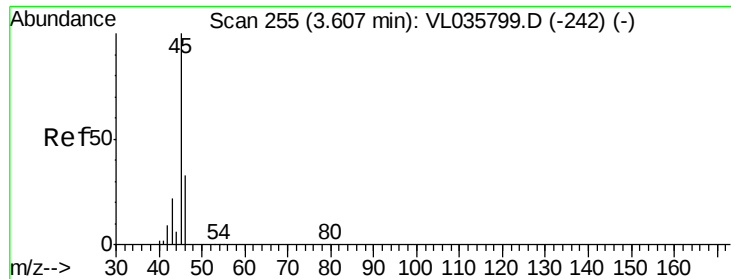
Tgt Ion:101 Resp: 6783

Ion Ratio Lower Upper

101 100

151 165.7 58.9 88.3#





#13

Ethanol

Concen: 176.655 ppbv

RT: 3.58 min Scan# 248

Delta R.T. -0.02 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampleId :

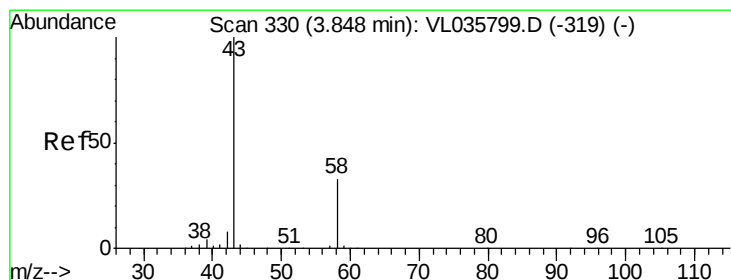
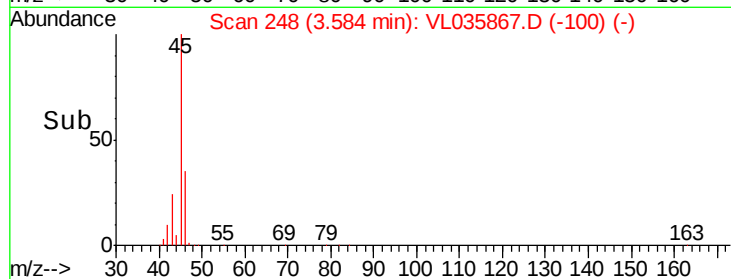
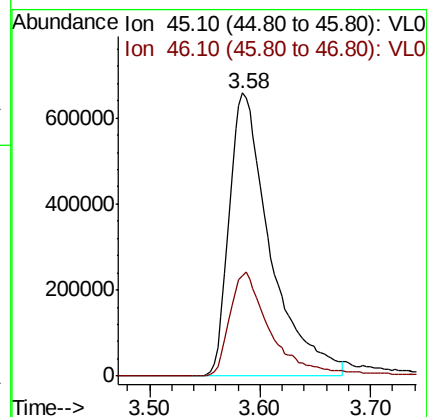
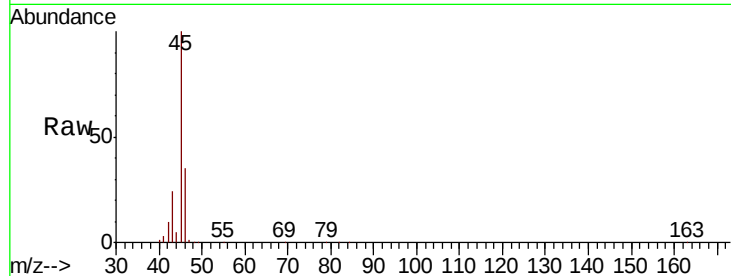
IA4

Tot Ion: 45 Resp: 1700778

Ion Ratio Lower Upper

45 100

46 38.4 16.1 64.5



#15

Acetone

Concen: 8.983 ppbv

RT: 3.83 min Scan# 323

Delta R.T. -0.02 min

Lab File: VL035867.D

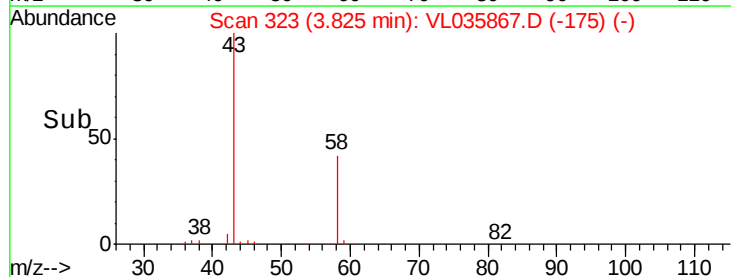
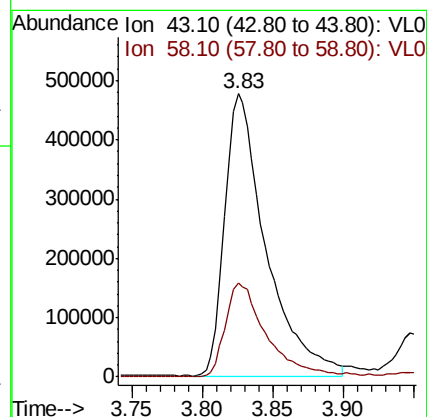
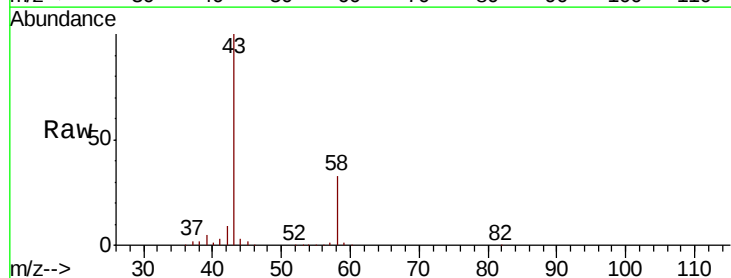
Acq: 5 Nov 2020 19:41

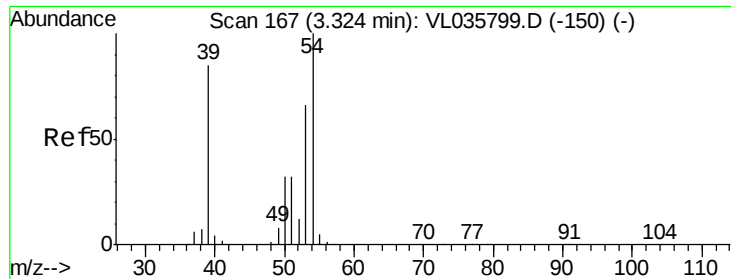
Tgt Ion: 43 Resp: 972326

Ion Ratio Lower Upper

43 100

58 33.7 27.5 41.3

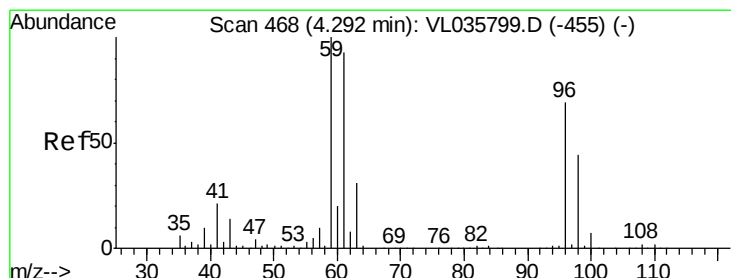
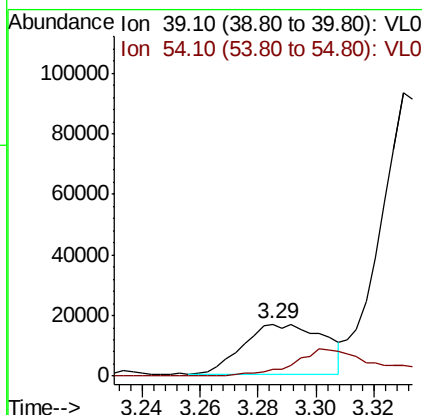
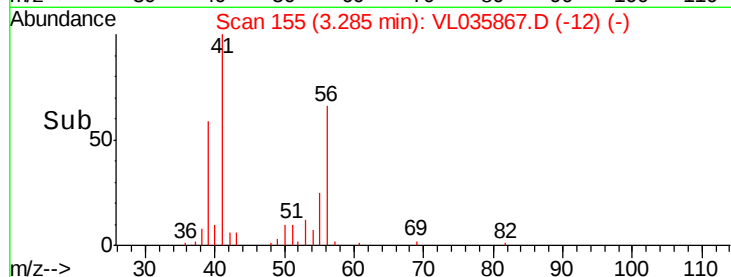
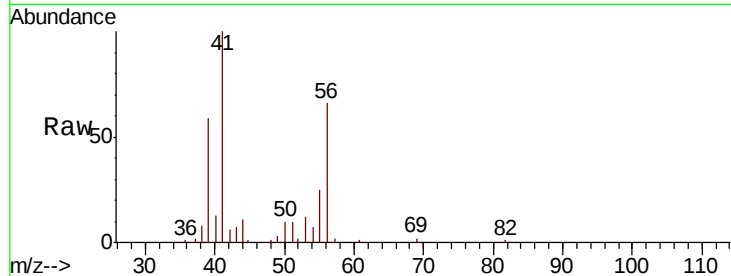




#16
 1,3-Butadiene
 Concen: 0.691 ppbv
 RT: 3.29 min Scan# 155
 Delta R.T. -0.04 min
 Lab File: VL035867.D
 Acq: 5 Nov 2020 19:41

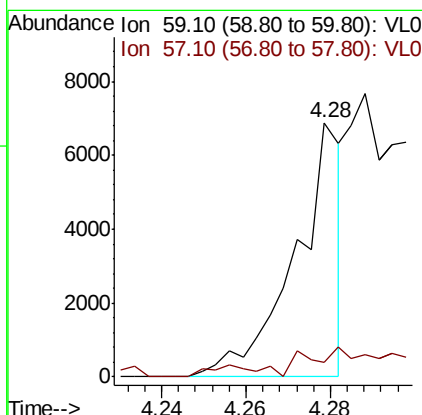
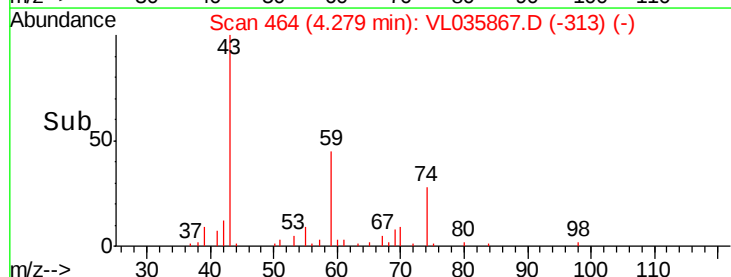
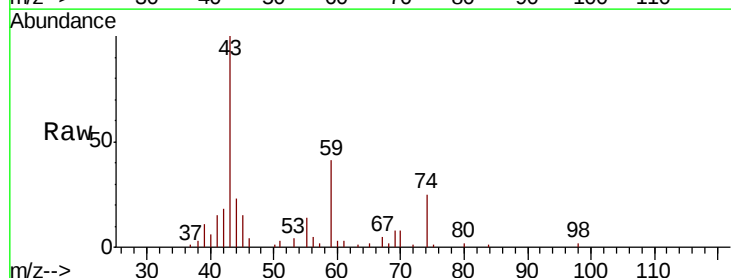
Instrument :
 MSVOA_L
 ClientSampled :
 IA4

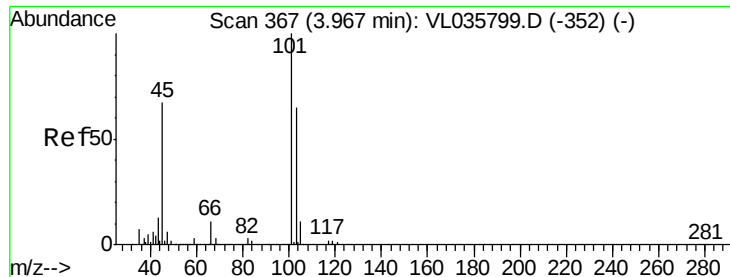
Tot Ion: 39 Resp: 32210
 Ion Ratio Lower Upper
 39 100
 54 67.0 87.1 130.7#



#17
 tert-Butyl alcohol
 Concen: 0.037 ppbv
 RT: 4.28 min Scan# 464
 Delta R.T. -0.01 min
 Lab File: VL035867.D
 Acq: 5 Nov 2020 19:41

Tgt Ion: 59 Resp: 5244
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.2 12.4#





#19

Isopropyl Alcohol

Concen: 8.802 ppbv

RT: 3.95 min Scan# 362

Delta R.T. -0.02 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

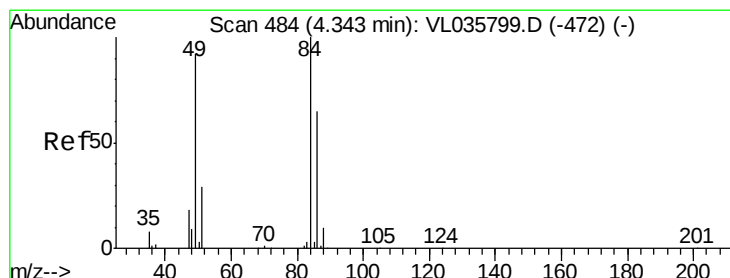
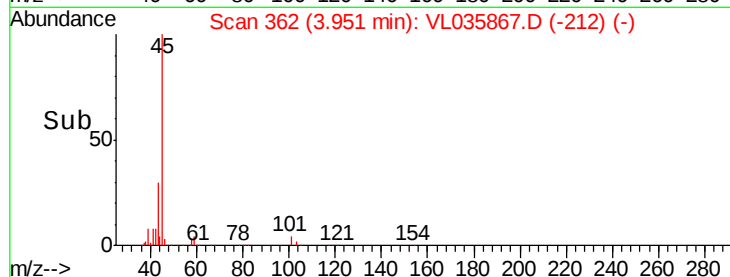
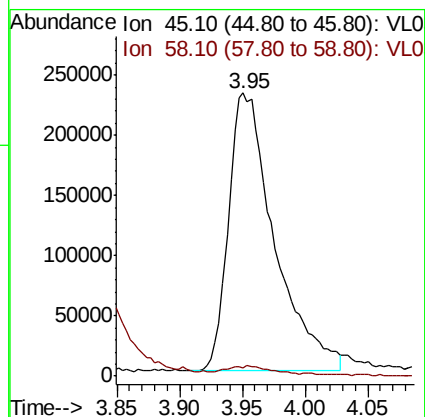
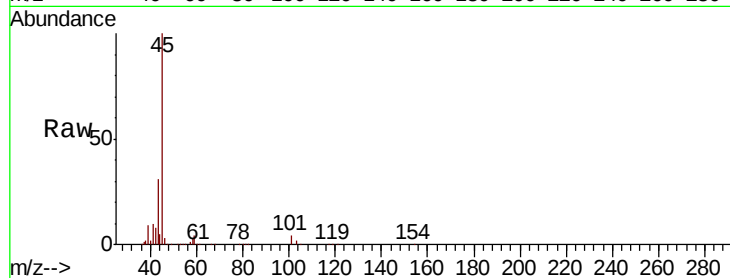
IA4

Tot Ion: 45 Resp: 585476

Ion Ratio Lower Upper

45 100

58 3.8 2.6 3.8



#20

Methylene Chloride

Concen: 4.385 ppbv

RT: 4.32 min Scan# 477

Delta R.T. -0.02 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Tgt Ion: 84 Resp: 334130

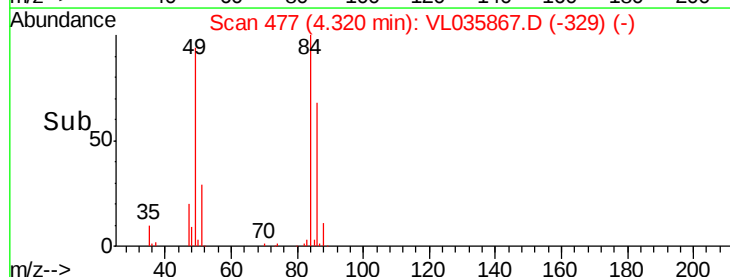
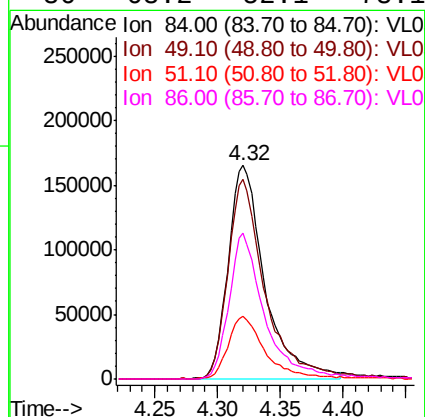
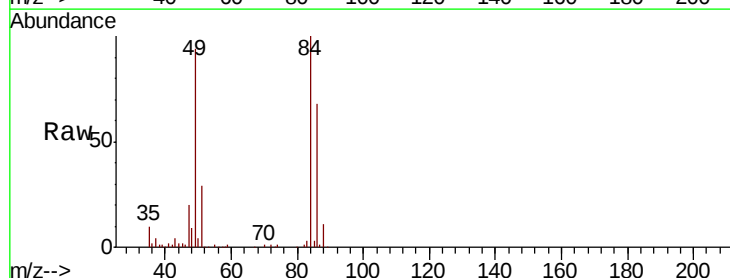
Ion Ratio Lower Upper

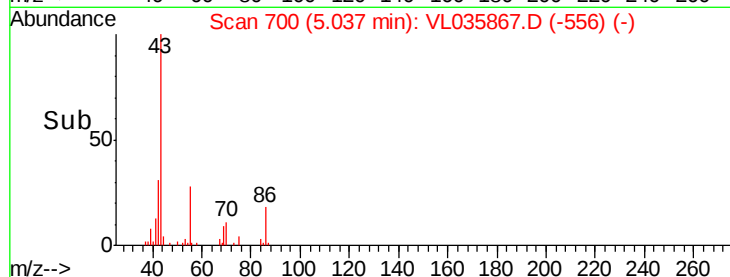
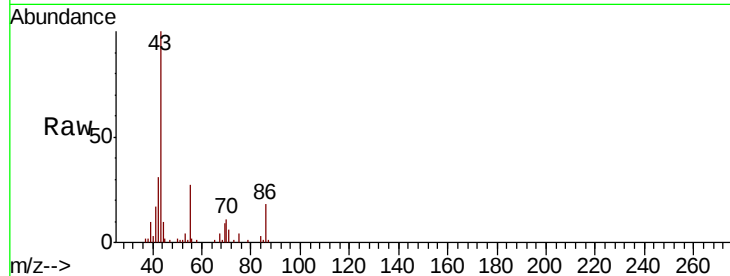
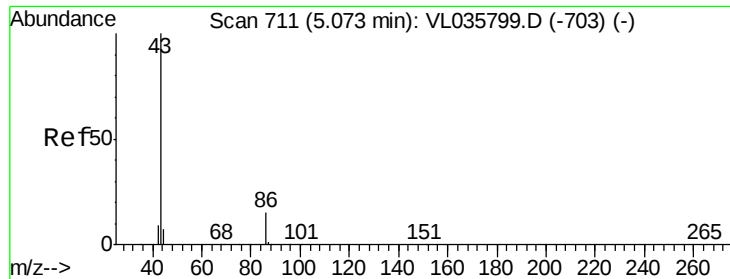
84 100

49 93.8 73.8 110.8

51 29.0 23.0 34.4

86 68.2 52.1 78.1





#23

Vinyl Acetate

Concen: 0.389 ppbv

RT: 5.04 min Scan# 700

Delta R.T. -0.04 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

IA4

Tot Ion: 43 Resp: 59054

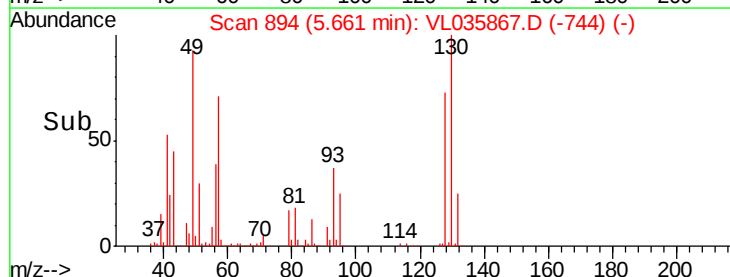
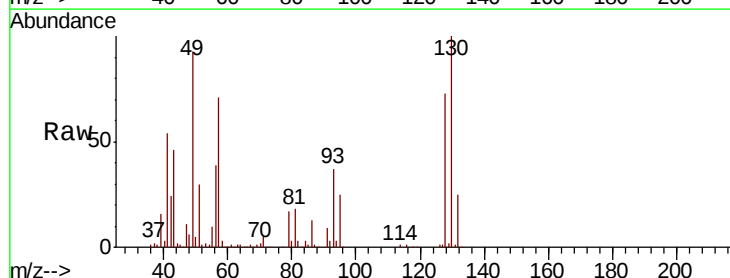
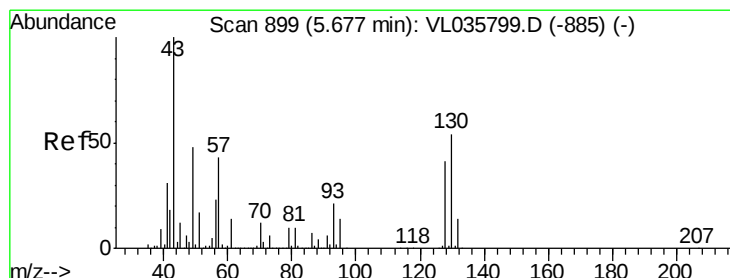
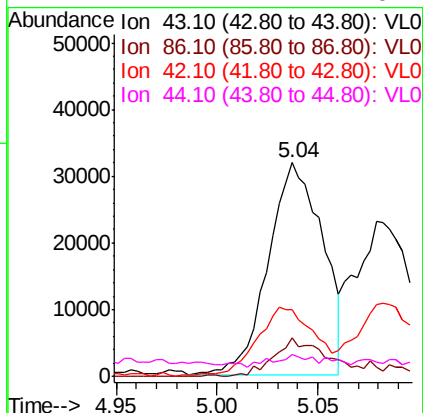
Ion Ratio Lower Upper

43 100

86 18.2 9.8 14.6#

42 30.6 8.1 12.1#

44 4.1 4.2 6.4#



#25

Ethyl Acetate

Concen: 0.887 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.02 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Tgt Ion: 43 Resp: 189237

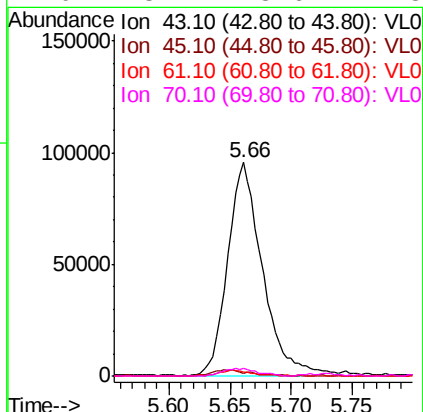
Ion Ratio Lower Upper

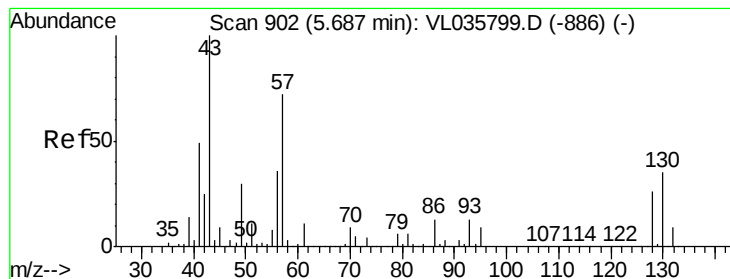
43 100

45 3.5 8.5 12.7#

61 2.7 10.7 16.1#

70 3.7 8.6 12.8#





#26

Hexane

Concen: 2.492 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.03 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :
MSVOA_L
ClientSampled :
IA4

Tot Ion: 57 Resp: 293008

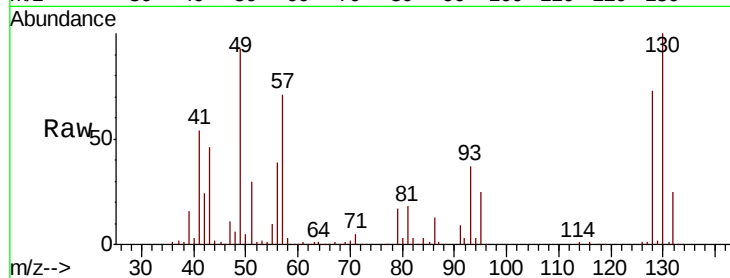
Ion Ratio Lower Upper

57 100

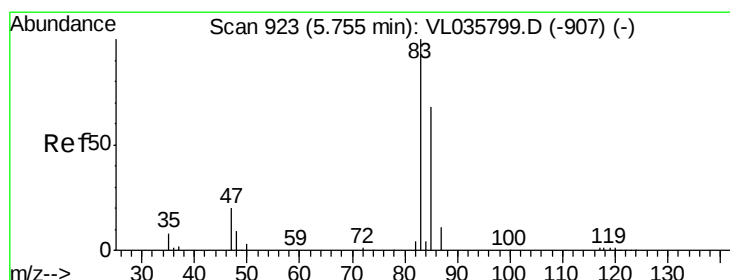
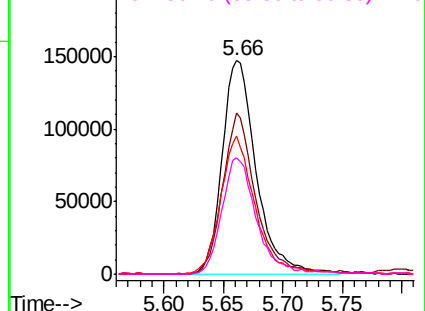
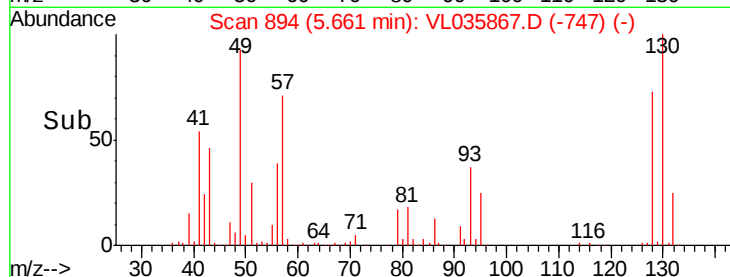
41 73.4 58.9 88.3

43 65.6 150.2 225.2#

56 56.3 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



#29

Chloroform

Concen: 0.818 ppbv

RT: 5.73 min Scan# 915

Delta R.T. -0.03 min

Lab File: VL035867.D

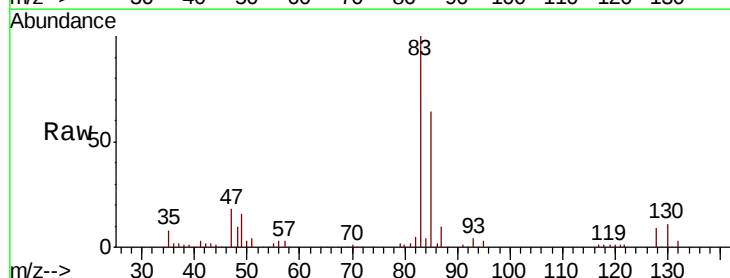
Acq: 5 Nov 2020 19:41

Tgt Ion: 83 Resp: 188989

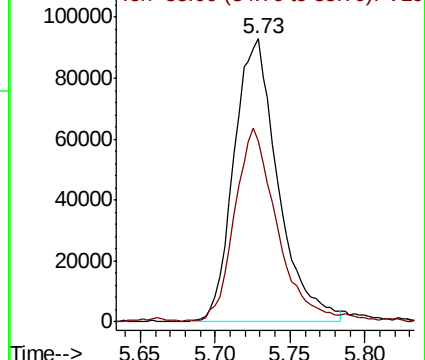
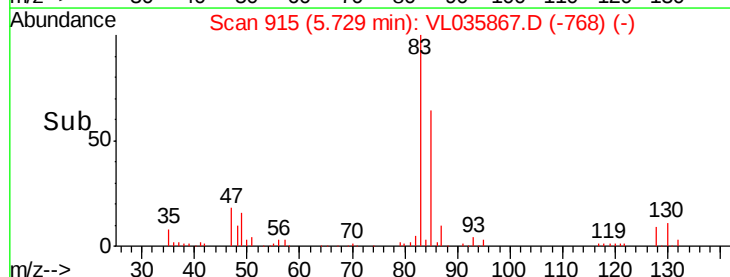
Ion Ratio Lower Upper

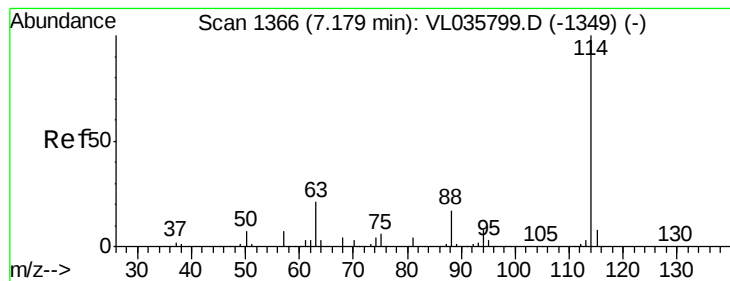
83 100

85 63.8 54.6 81.8



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.15 min Scan# 1357

Delta R.T. -0.03 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

IA4

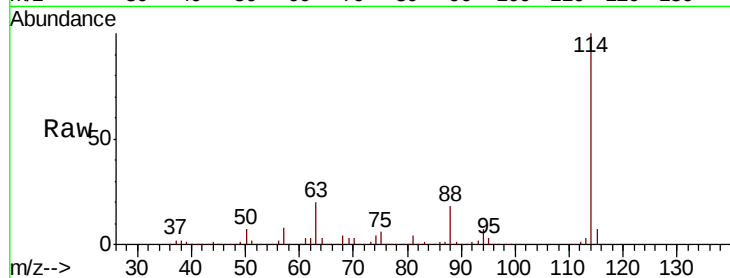
Tot Ion:114 Resp: 4127768

Ion Ratio Lower Upper

114 100

63 19.6 16.1 24.1

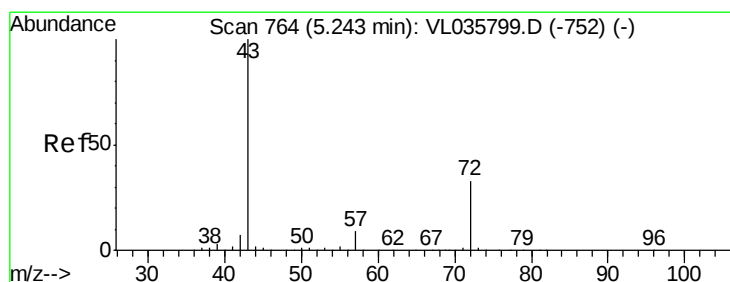
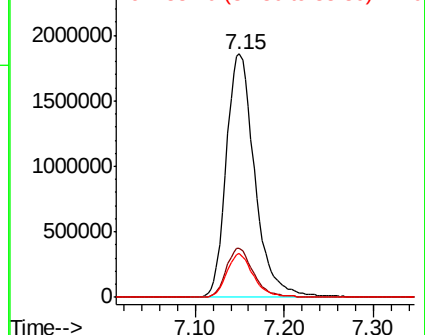
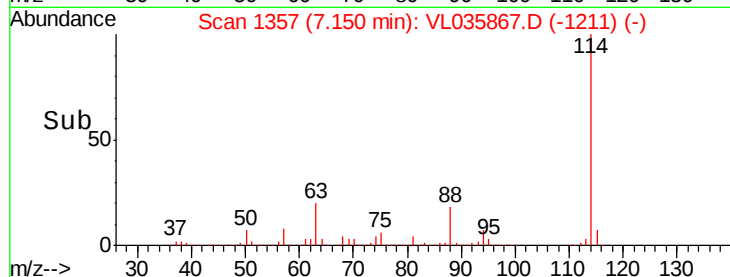
88 17.1 13.7 20.5



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: 0.440 ppbv

RT: 5.22 min Scan# 758

Delta R.T. -0.02 min

Lab File: VL035867.D

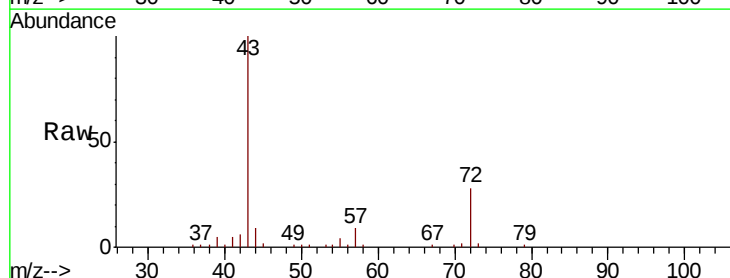
Acq: 5 Nov 2020 19:41

Tgt Ion: 43 Resp: 58899

Ion Ratio Lower Upper

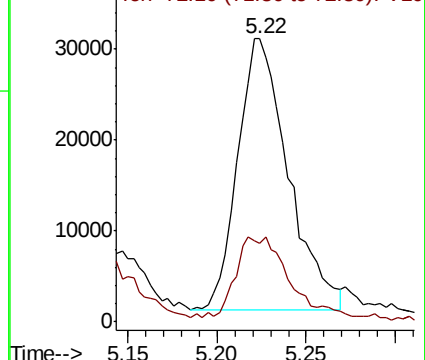
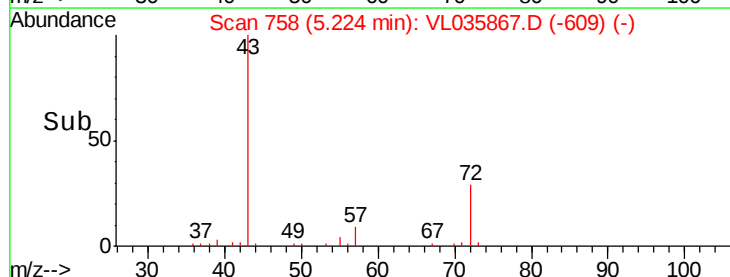
43 100

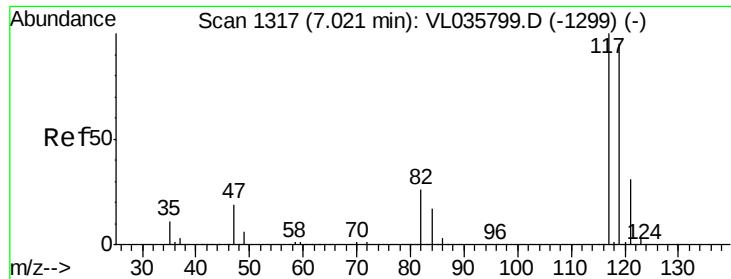
72 37.9 26.5 39.7



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.065 ppbv

RT: 7.00 min Scan# 1309

Delta R.T. -0.03 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampleId :

IA4

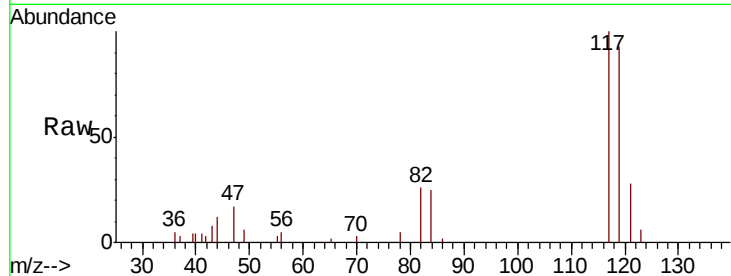
Tot Ion:117 Resp: 14341

Ion Ratio Lower Upper

117 100

119 93.0 75.6 113.4

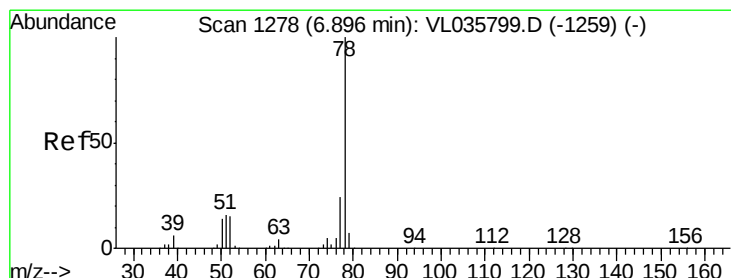
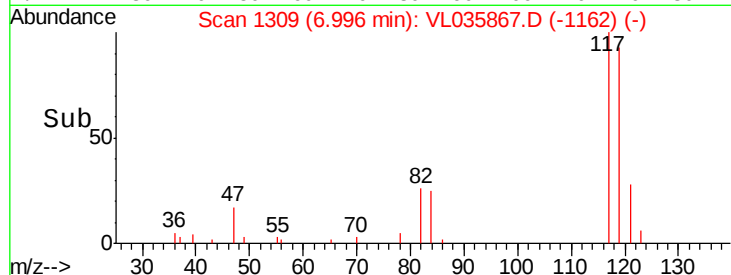
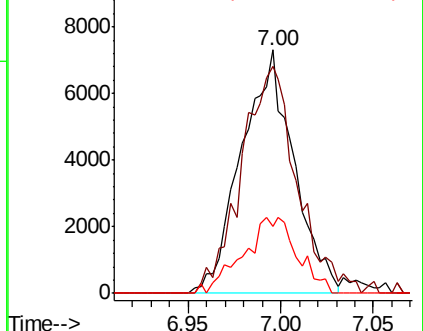
121 27.7 25.1 37.7



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: 0.353 ppbv

RT: 6.86 min Scan# 1268

Delta R.T. -0.03 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

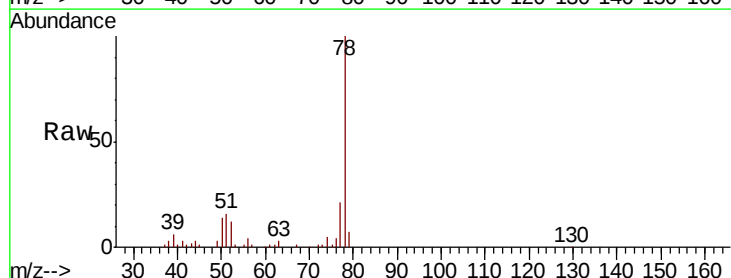
Tgt Ion: 78 Resp: 108477

Ion Ratio Lower Upper

78 100

77 20.2 19.3 28.9

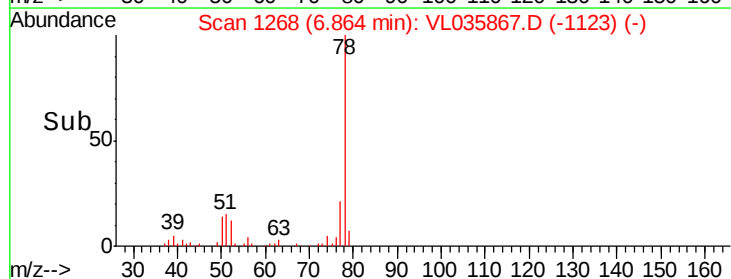
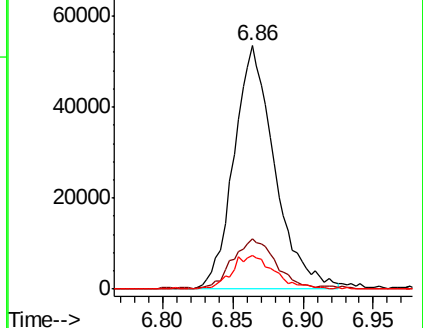
50 13.4 11.4 17.2

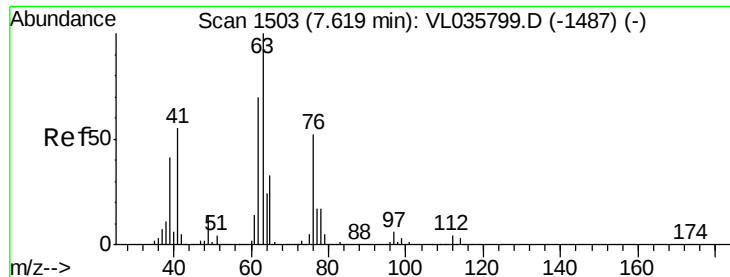


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

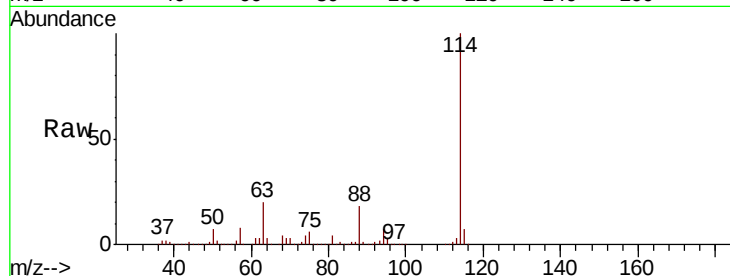




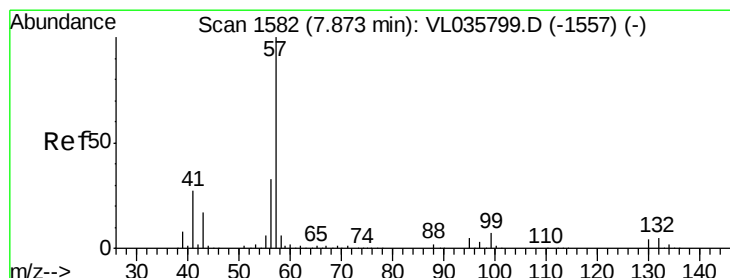
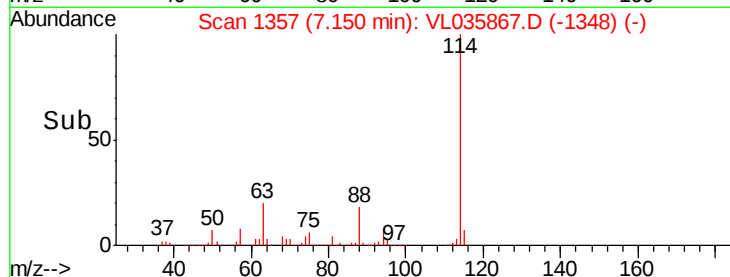
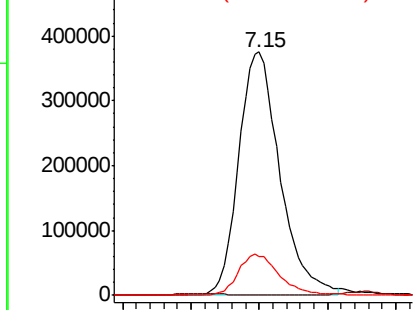
#39
 1,2-Dichloropropane
 Concen: 7.631 ppbv
 RT: 7.15 min Scan# 1357
 Delta R.T. -0.47 min
 Lab File: VL035867.D
 Acq: 5 Nov 2020 19:41

Instrument :
 MSVOA_L
 ClientSampled :
 IA4

Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	43.8	65.6#
62	16.1	56.2	84.2#

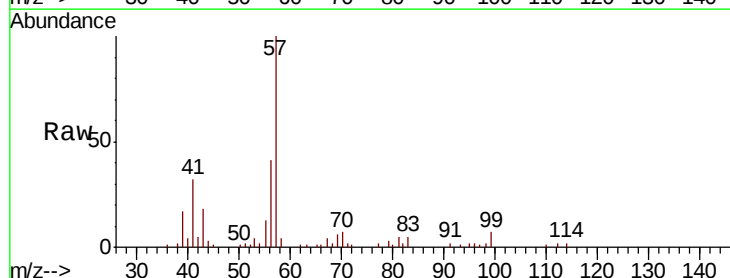


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

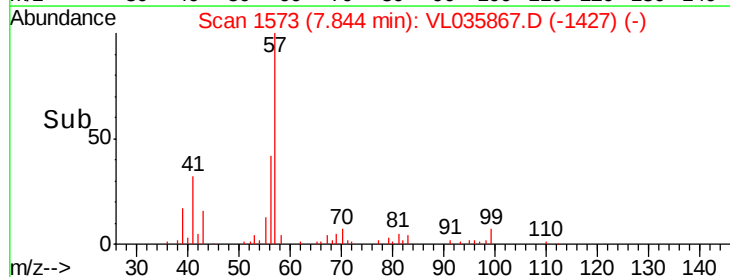
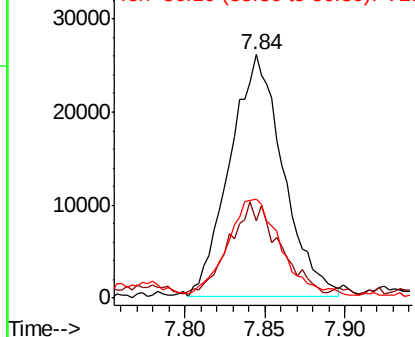


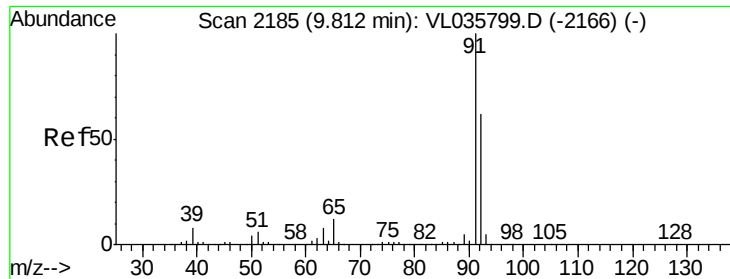
#44
 2,2,4-Trimethylpentane
 Concen: 0.146 ppbv
 RT: 7.84 min Scan# 1573
 Delta R.T. -0.03 min
 Lab File: VL035867.D
 Acq: 5 Nov 2020 19:41

Tgt Ion	Ratio	Lower	Upper
57	100		
41	40.1	21.0	31.4#
56	44.8	25.4	38.0#



Abundance Ion 57.10 (56.80 to 57.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 56.10 (55.80 to 56.80): VL0





#53

Toluene

Concen: 0.871 ppbv

RT: 9.78 min Scan# 2175

Delta R.T. -0.03 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

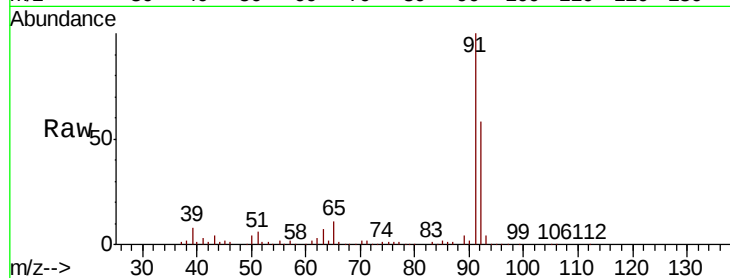
IA4

Tot Ion: 91 Resp: 322459

Ion Ratio Lower Upper

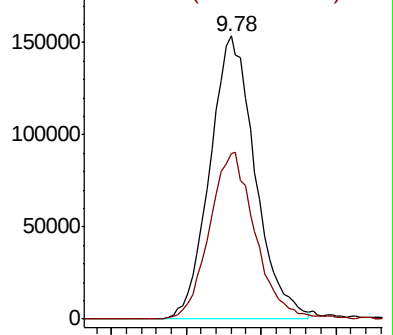
91 100

92 59.9 49.8 74.6

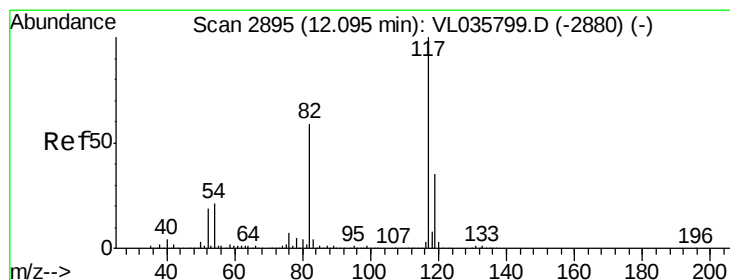
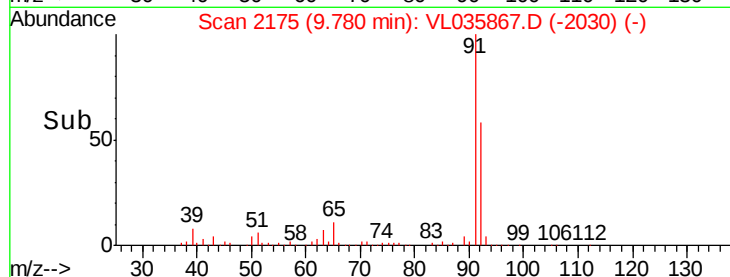


Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2884

Delta R.T. -0.04 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

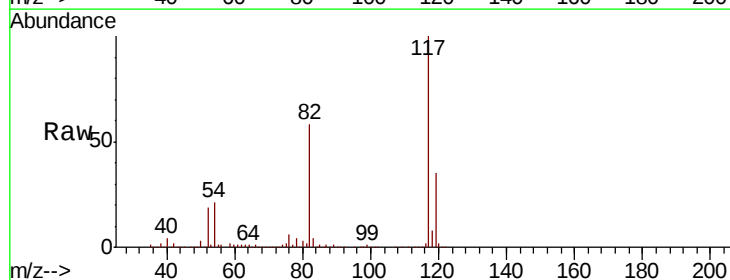
Tgt Ion: 117 Resp: 3701468

Ion Ratio Lower Upper

117 100

82 58.8 50.6 76.0

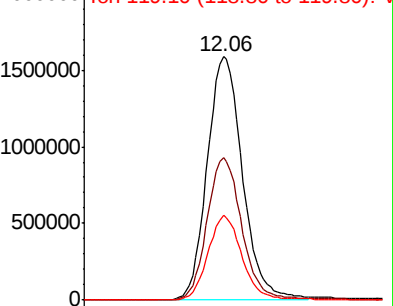
119 34.1 52.6 78.8#



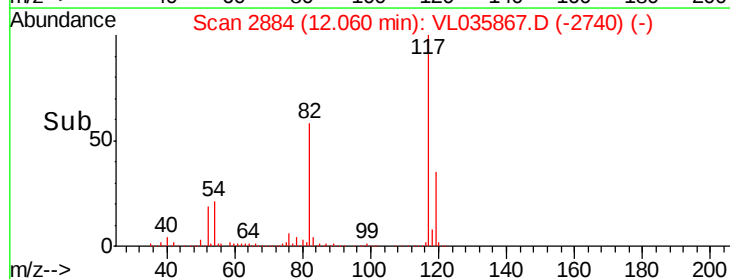
Abundance Ion 117.10 (116.80 to 117.80): V

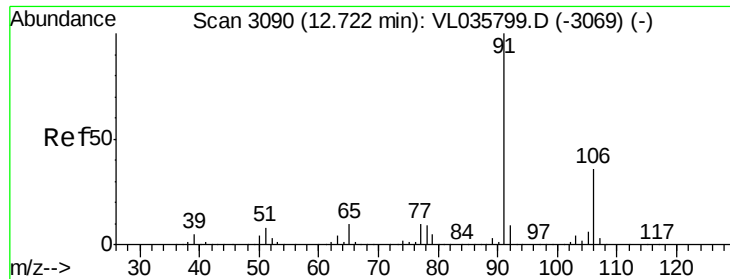
Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



Time-->





#58

Ethyl Benzene

Concen: 0.064 ppbv

RT: 12.68 min Scan# 3078

Delta R.T. -0.04 min

Lab File: VL035867.D

Acq: 5 Nov 2020 19:41

Instrument :

MSVOA_L

ClientSampled :

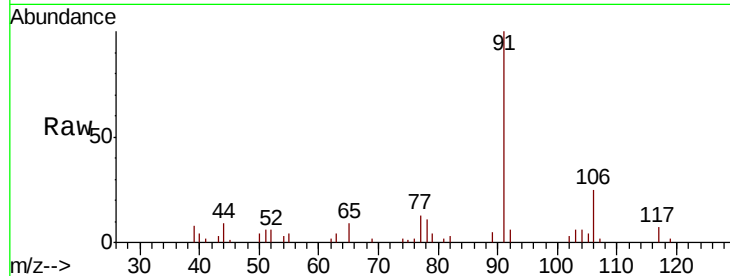
IA4

Tot Ion: 91 Resp: 28928

Ion Ratio Lower Upper

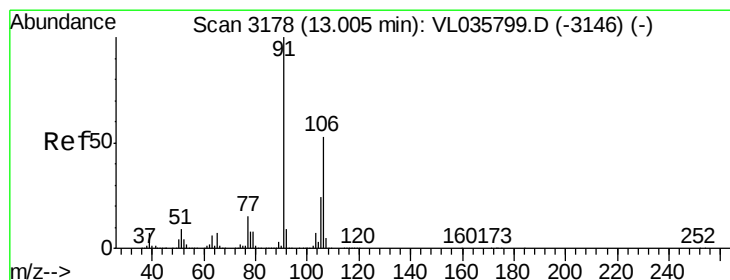
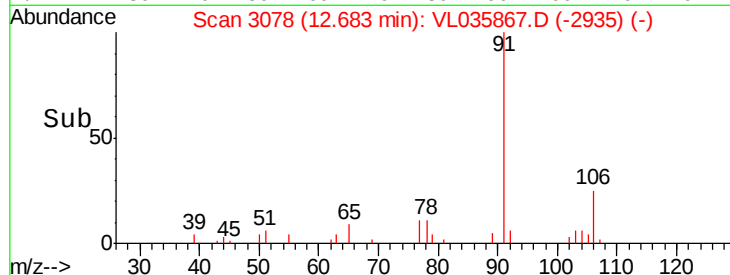
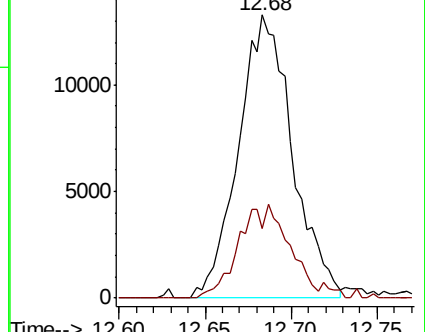
91 100

106 24.5 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: 0.220 ppbv

RT: 12.95 min Scan# 3160

Delta R.T. -0.06 min

Lab File: VL035867.D

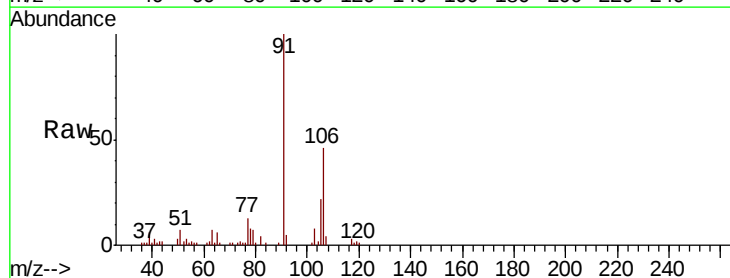
Acq: 5 Nov 2020 19:41

Tgt Ion: 91 Resp: 84023

Ion Ratio Lower Upper

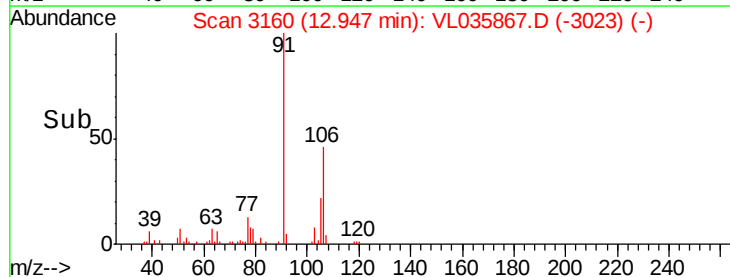
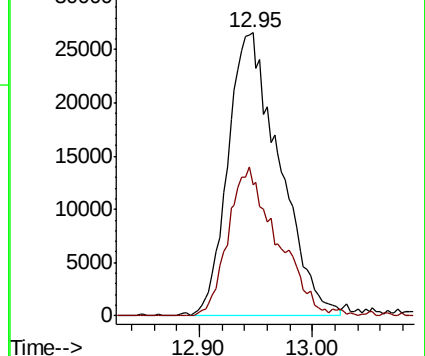
91 100

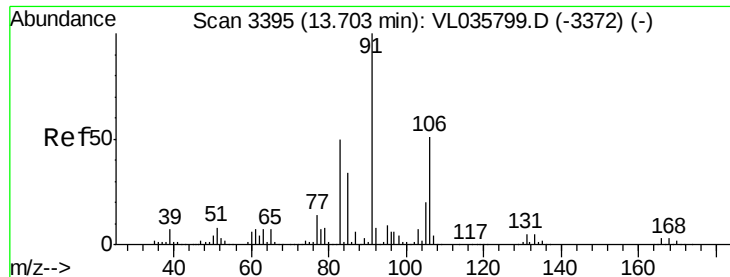
106 50.8 39.5 59.3



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

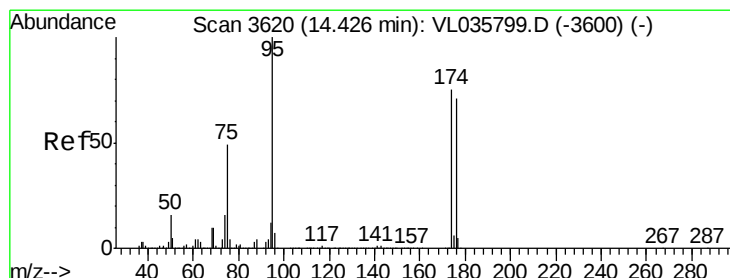
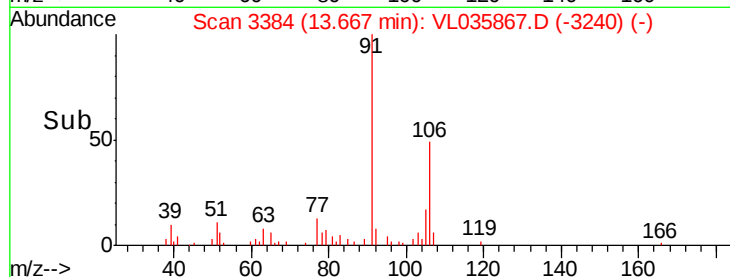
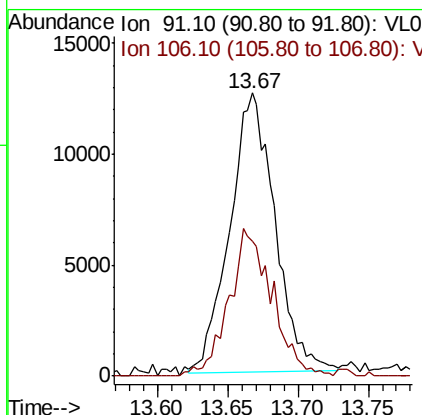
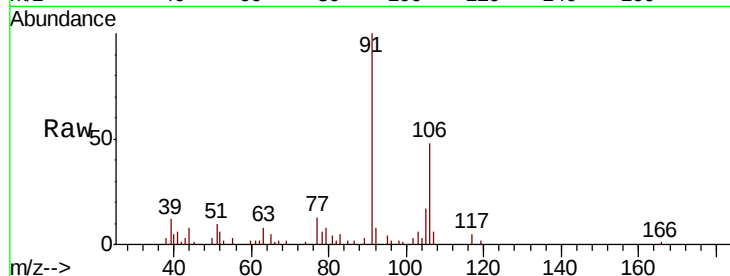




#60
o-Xylene
Concen: 0.076 ppbv
RT: 13.67 min Scan# 3384
Delta R.T. -0.04 min
Lab File: VL035867.D
Acq: 5 Nov 2020 19:41

Instrument :
MSVOA_L
ClientSampleID :
IA4

Tot Ion: 91 Resp: 28114
Ion Ratio Lower Upper
91 100
106 50.5 24.8 74.4



#68
1-Bromo-4-Fluorobenzene
Concen: 10.041 ppbv
RT: 14.39 min Scan# 3609
Delta R.T. -0.04 min
Lab File: VL035867.D
Acq: 5 Nov 2020 19:41

Tgt Ion: 95 Resp: 2640693
Ion Ratio Lower Upper
95 100
174 76.3 59.8 89.6
175 5.4 4.3 6.5

