

Data File : VL036143.D
Acq On : 11 Dec 2020 00:48
Operator : SY/AP
Sample : L4948-16 10X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
SS-4B

Quant Time: Dec 11 04:37:02 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL120720AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 07 16:56:49 2020
QLast Update : Mon Dec 07 16:56:49 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1347450	10.00	ppbv	-0.04
33) 1,4-Difluorobenzene	7.16	114	2651162	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.07	117	2392397	10.00	ppbv	-0.04

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.40 95 2039906 10.74 ppbv -0.05
Spiked Amount 10.000 Range 65 - 135 Recovery = 107.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	482927	3.075	ppbv	100
3) Chlorodifluoromethane	2.97	51	41350	0.269	ppbv	98
8) Dichlorotetrafluoroethane	3.03	85	482927	2.767	ppbv #	16
9) Propene	3.01	41	36136	0.469	ppbv	88
13) Ethanol	3.59	45	529294	49.855	ppbv	86
15) Acetone	3.84	43	706211	4.361	ppbv	99
18) 1,1-Dichloroethene	4.28	96	2980	0.054	ppbv #	23
19) Isopropyl Alcohol	3.96	45	206752	2.089	ppbv #	100
20) Methylene Chloride	4.33	84	37846	0.570	ppbv	93
24) 1,1-Dichloroethane	5.00	63	239184	1.577	ppbv	99
25) Ethyl Acetate	5.66	43	13302	0.041	ppbv #	84
26) Hexane	5.66	57	13267	0.091	ppbv #	1
29) Chloroform	5.74	83	22562	0.118	ppbv #	83
30) Cyclohexane	7.11	84	9155	0.086	ppbv #	1
31) cis-1,2-Dichloroethene	5.53	61	27380	0.207	ppbv #	87
32) 1,1,1-Trichloroethane	6.49	97	1946664	9.867	ppbv	96
34) 2-Butanone	5.23	43	23226	0.132	ppbv #	56
37) 1,2-Dichloroethane	6.49	62	165608	1.272	ppbv #	1
38) Trichloroethene	7.82	130	518429	6.173	ppbv	92
39) 1,2-Dichloropropane	7.21	63	13877	0.156	ppbv #	26
40) 1,4-Dioxane	7.83	88	54983	1.970	ppbv #	87
52) Tetrachloroethene	11.22	164	5293978	65.089	ppbv	96
53) Toluene	9.78	91	7768	0.031	ppbv #	21
58) Ethyl Benzene	12.99	91	54852	0.167	ppbv	93
59) m/p-Xylene	12.99	91	54852	0.199	ppbv #	34
60) o-Xylene	13.67	91	112194	0.431	ppbv	100

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

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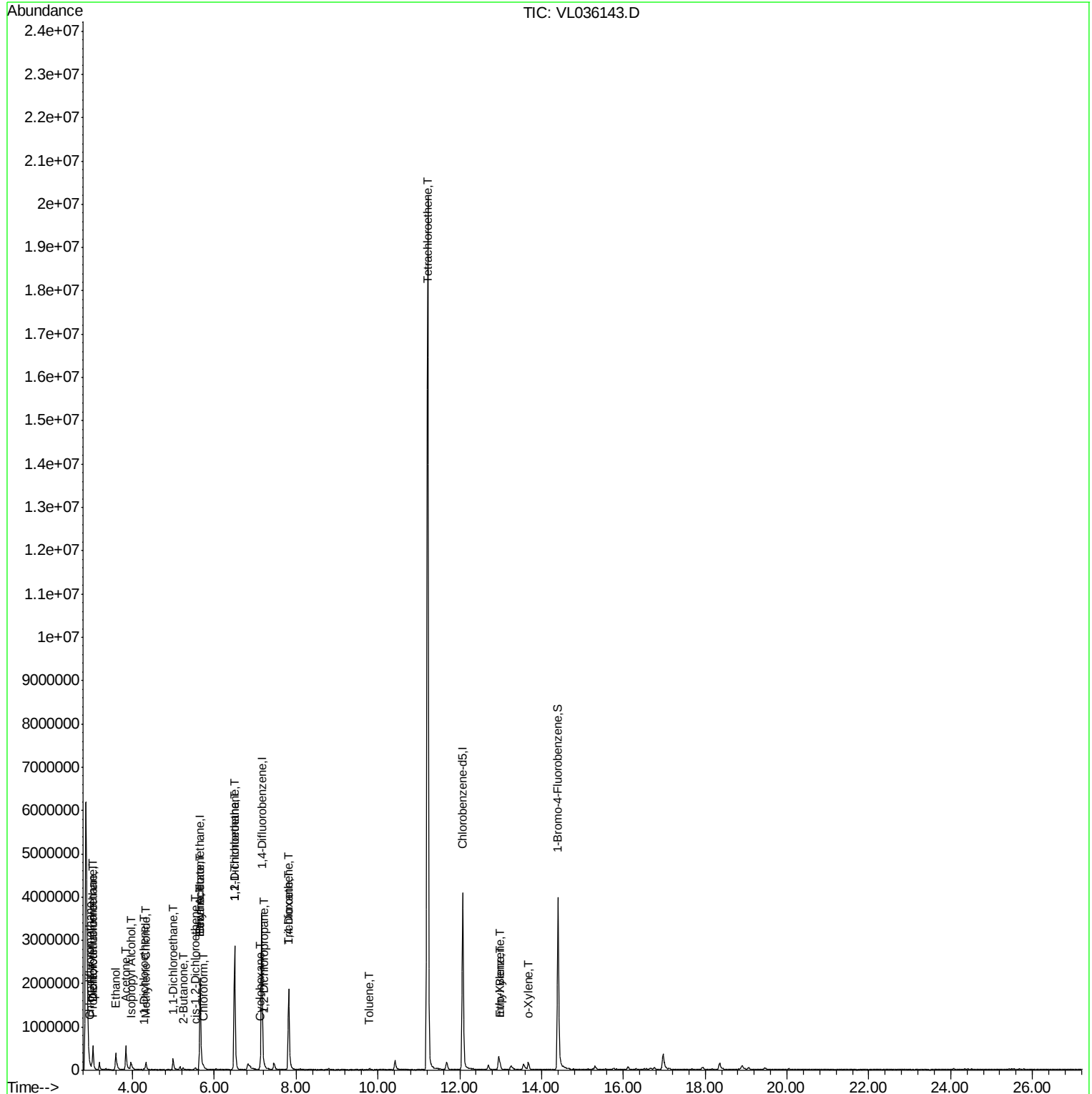
Quant Time: Dec 11 04:37:02 2020

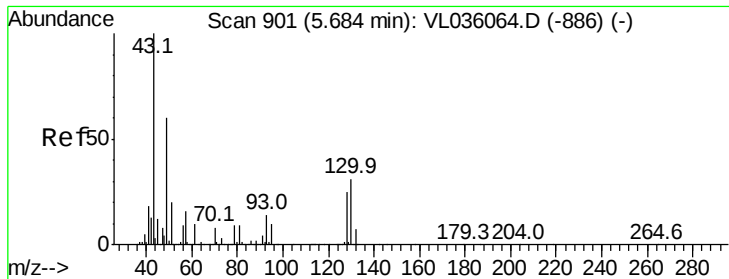
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL120720AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 07 16:56:49 2020

QLast Update : Mon Dec 07 16:56:49 2020

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.04 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

SS-4B

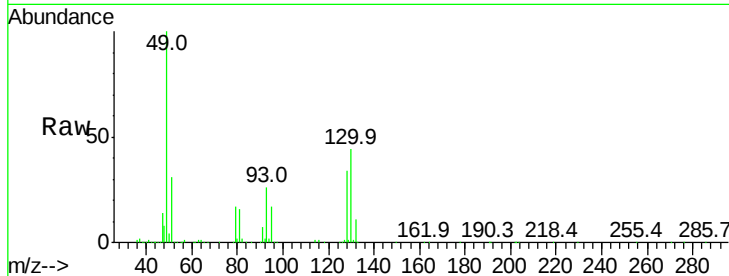
Tgt Ion: 49 Resp: 1347450

Ion Ratio Lower Upper

49 100

128 35.2 21.1 63.1

130 44.3 27.1 81.3



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

5.65

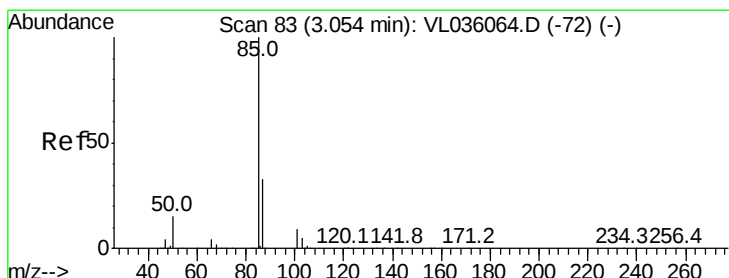
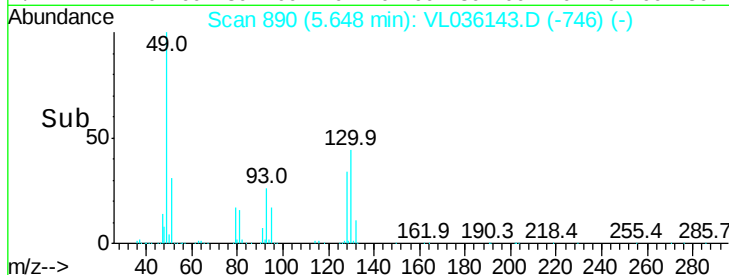
600000

400000

200000

0

Time--> 5.55 5.60 5.65 5.70 5.75



#2

Dichlorodifluoromethane

Concen: 3.075 ppbv

RT: 3.03 min Scan# 76

Delta R.T. -0.02 min

Lab File: VL036143.D

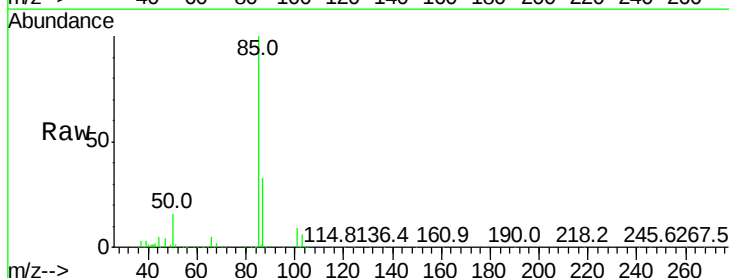
Acq: 11 Dec 2020 00:48

Tgt Ion: 85 Resp: 482927

Ion Ratio Lower Upper

85 100

87 33.2 26.5 39.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.03

300000

250000

200000

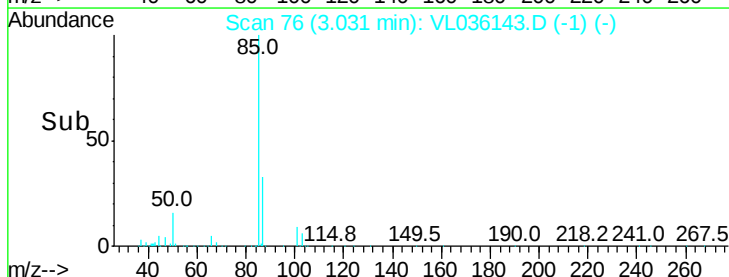
150000

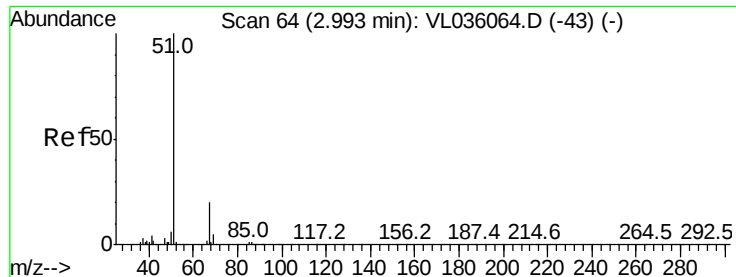
100000

50000

0

Time--> 3.00 3.05 3.10





#3

Chlorodifluoromethane

Concen: 0.269 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.02 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

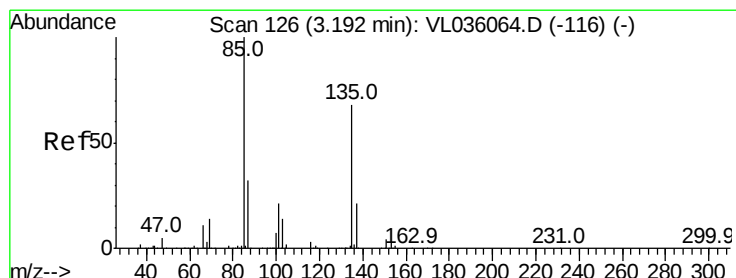
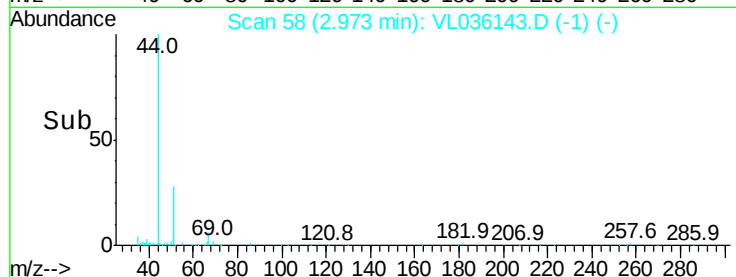
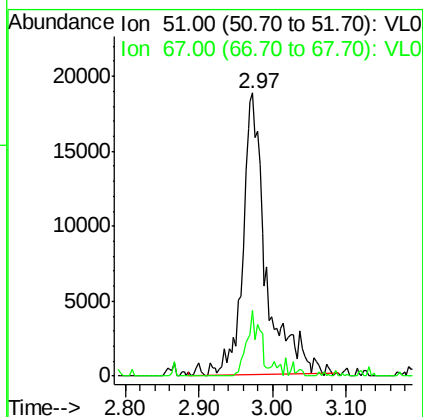
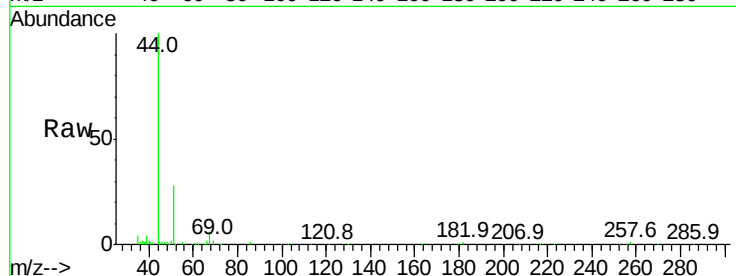
SS-4B

Tgt Ion: 51 Resp: 41350

Ion Ratio Lower Upper

51 100

67 16.8 14.3 21.5



#8

Dichlorotetrafluoroethane

Concen: 2.767 ppbv

RT: 3.03 min Scan# 76

Delta R.T. -0.16 min

Lab File: VL036143.D

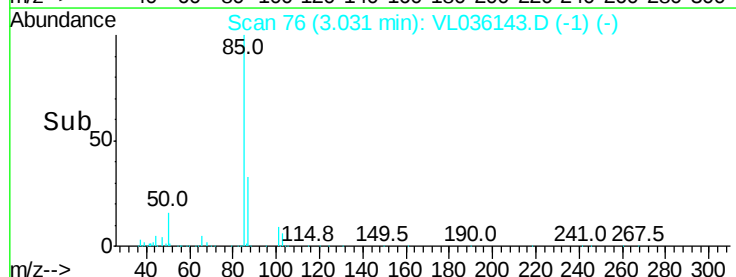
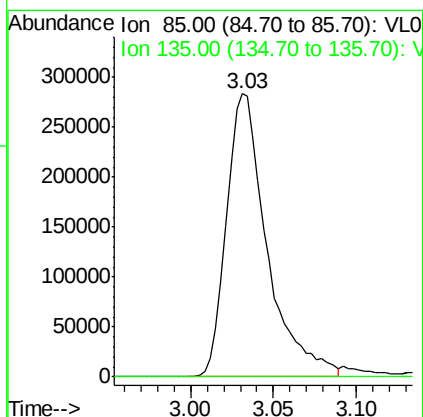
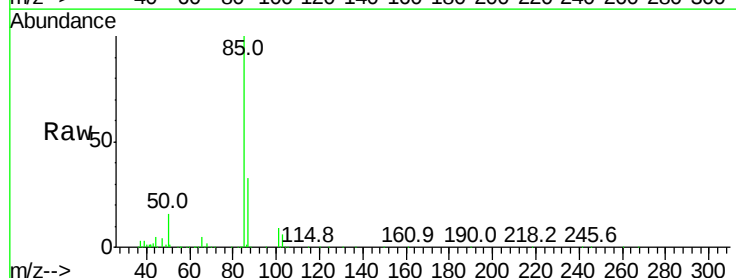
Acq: 11 Dec 2020 00:48

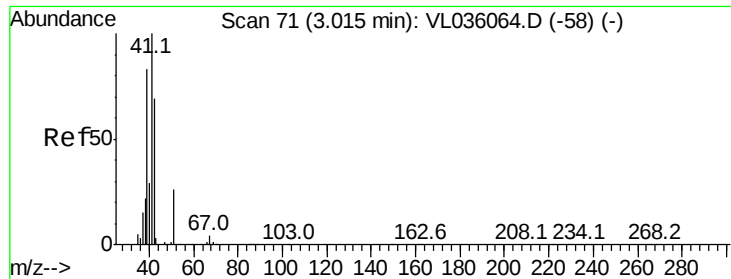
Tgt Ion: 85 Resp: 482927

Ion Ratio Lower Upper

85 100

135 0.0 53.8 80.8#





#9

Propene

Concen: 0.469 ppbv

RT: 3.01 min Scan# 68

Delta R.T. -0.01 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

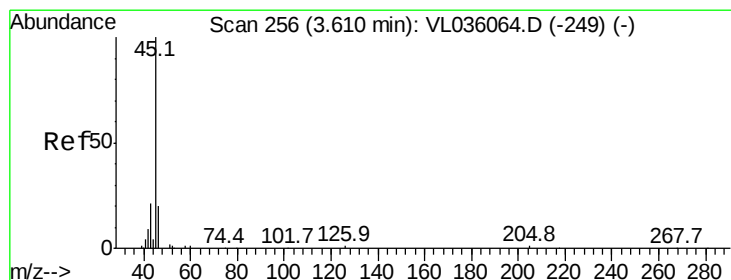
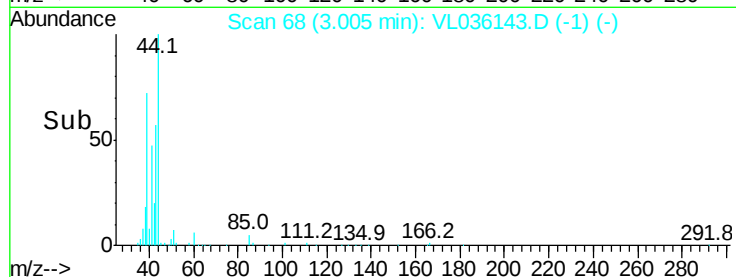
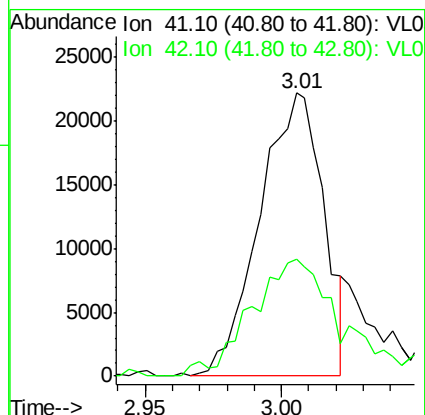
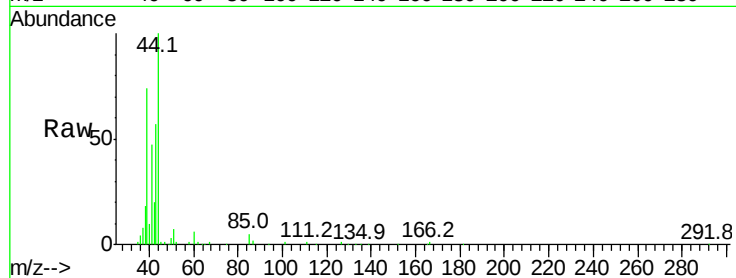
SS-4B

Tgt Ion: 41 Resp: 36136

Ion Ratio Lower Upper

41 100

42 61.4 57.0 85.6



#13

Ethanol

Concen: 49.855 ppbv

RT: 3.59 min Scan# 249

Delta R.T. -0.02 min

Lab File: VL036143.D

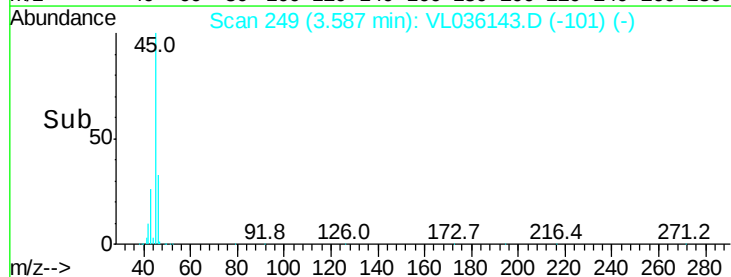
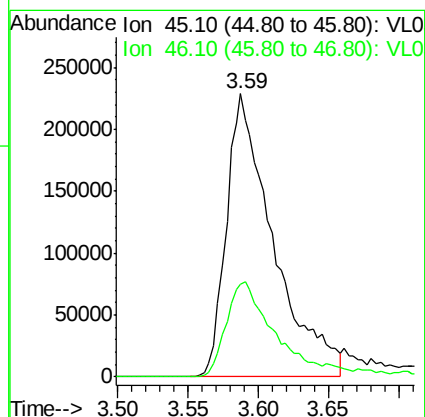
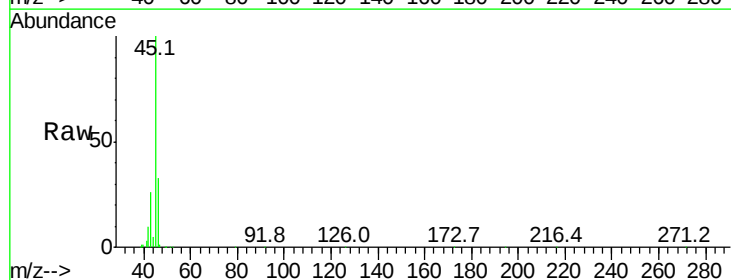
Acq: 11 Dec 2020 00:48

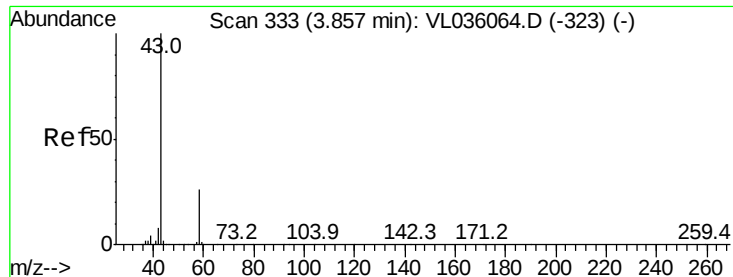
Tgt Ion: 45 Resp: 529294

Ion Ratio Lower Upper

45 100

46 37.7 19.0 75.8





#15

Acetone

Concen: 4.361 ppbv

RT: 3.84 min Scan# 327

Delta R.T. -0.02 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

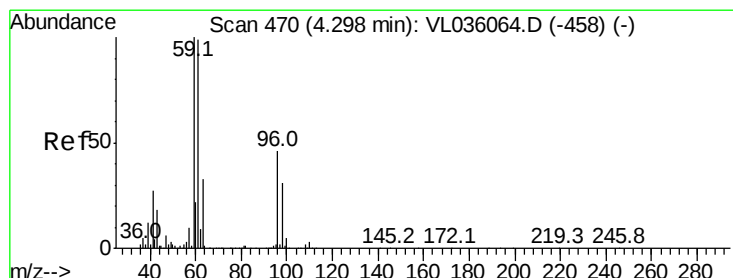
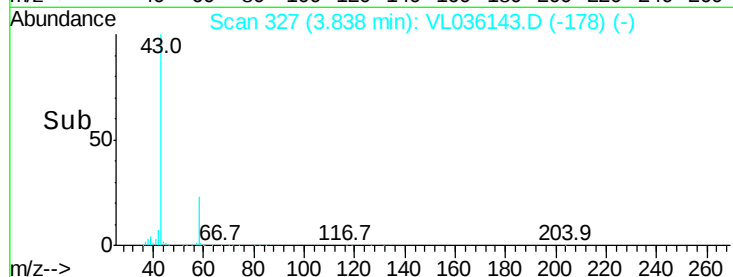
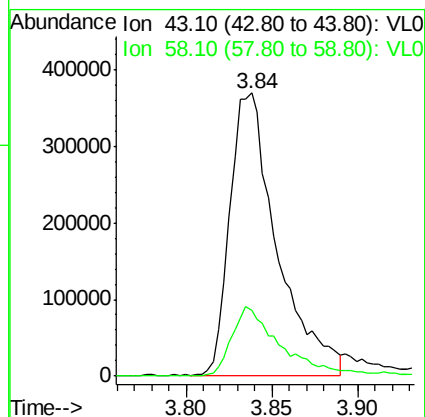
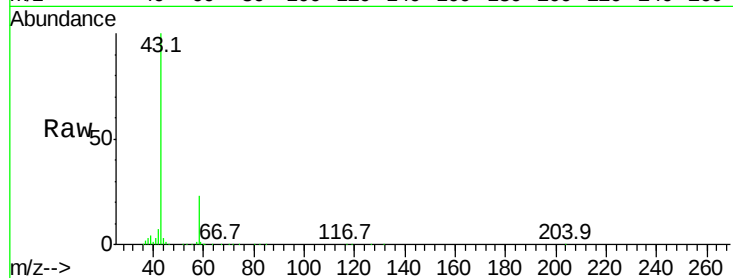
SS-4B

Tgt Ion: 43 Resp: 706211

Ion Ratio Lower Upper

43 100

58 26.4 20.9 31.3



#18

1,1-Dichloroethene

Concen: 0.054 ppbv

RT: 4.28 min Scan# 463

Delta R.T. -0.02 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

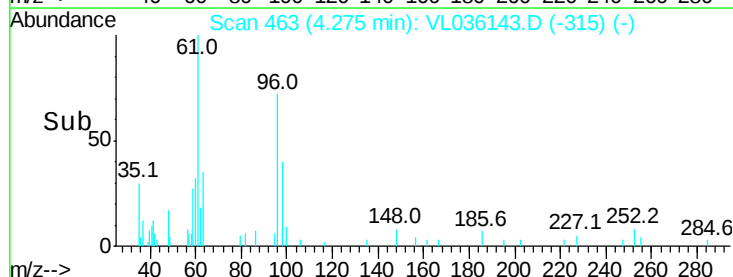
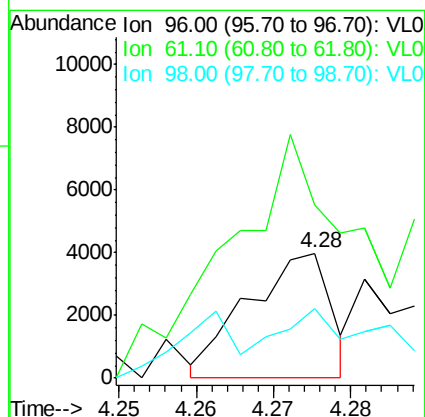
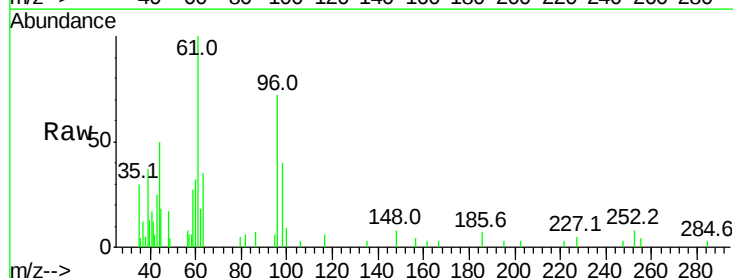
Tgt Ion: 96 Resp: 2980

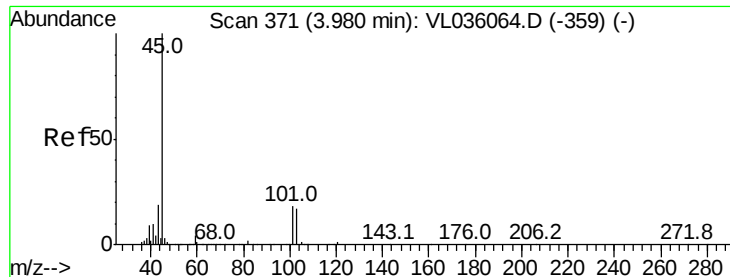
Ion Ratio Lower Upper

96 100

61 79.6 171.4 257.2#

98 27.3 54.2 81.2#





#19

Isopropyl Alcohol

Concen: 2.089 ppbv

RT: 3.96 min Scan# 364

Delta R.T. -0.02 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

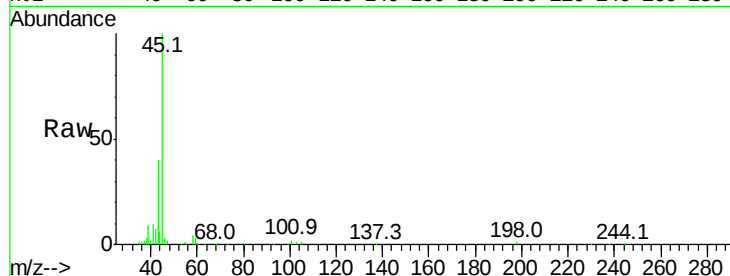
SS-4B

Tgt Ion: 45 Resp: 206752

Ion Ratio Lower Upper

45 100

58 4.0 0.0 0.0#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.96

100000

80000

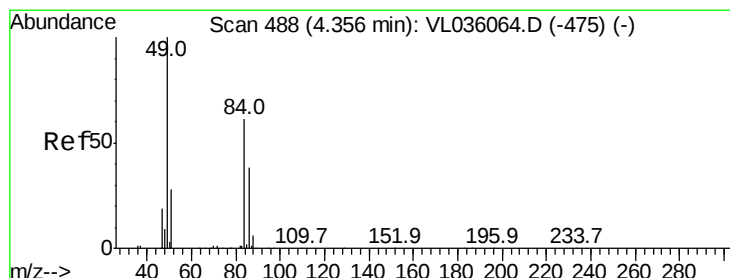
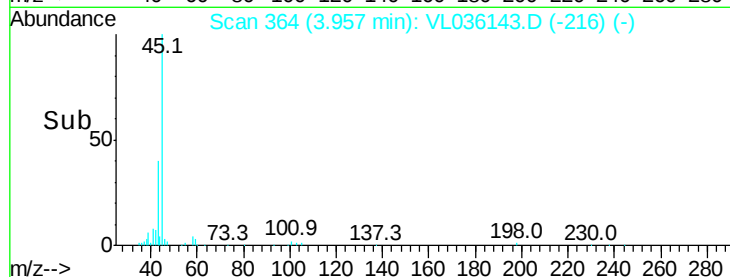
60000

40000

20000

0

Time--> 3.90 3.95 4.00



#20

Methylene Chloride

Concen: 0.570 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.03 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Tgt Ion: 84 Resp: 37846

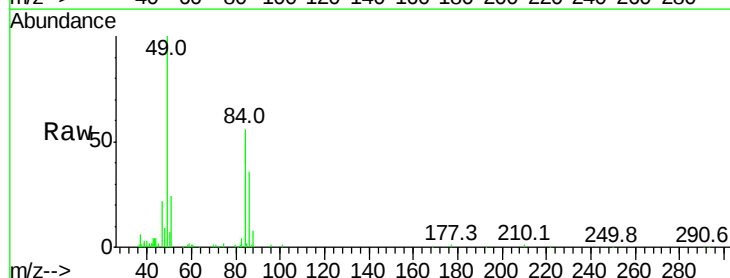
Ion Ratio Lower Upper

84 100

49 176.6 133.0 199.4

51 42.3 38.9 58.3

86 63.4 48.8 73.2



Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

80000

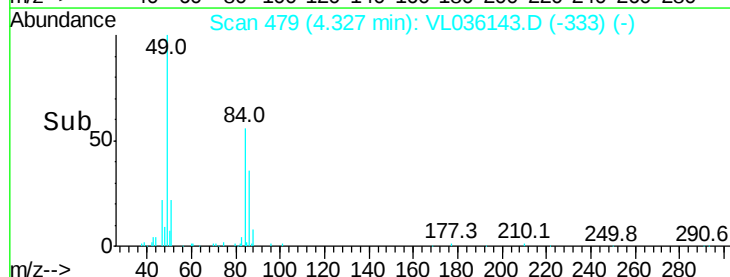
60000

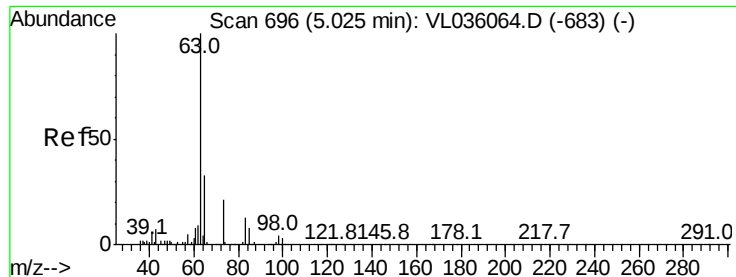
40000

20000

0

Time--> 4.28 4.30 4.32 4.34





#24

1,1-Dichloroethane

Concen: 1.577 ppbv

RT: 5.00 min Scan# 687

Delta R.T. -0.03 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

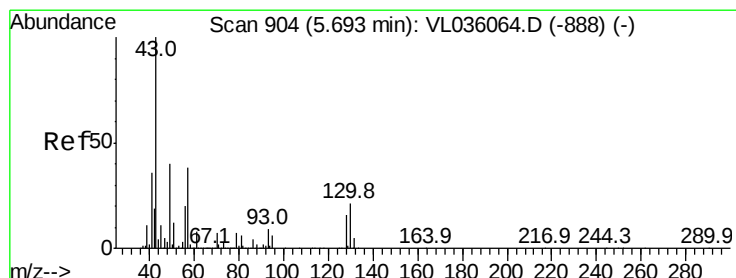
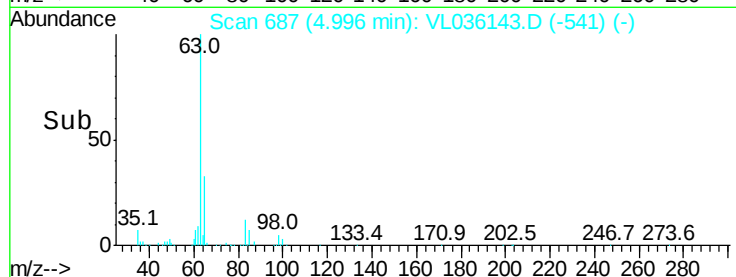
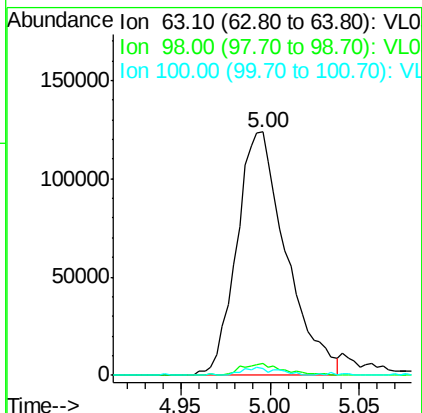
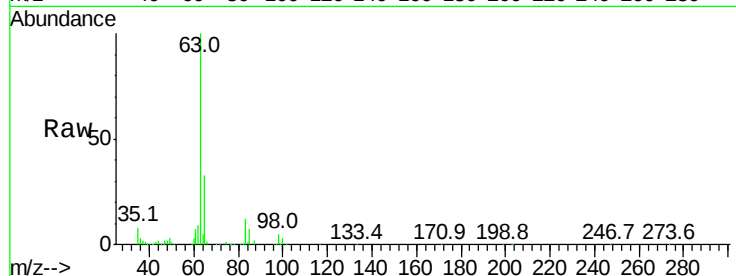
Instrument :

MSVOA_L

ClientSampleId :

SS-4B

Tgt Ion:	63	Resp:	239184
Ion	Ratio	Lower	Upper
63	100		
98	4.8	2.2	6.6
100	2.6	1.5	4.4



#25

Ethyl Acetate

Concen: 0.041 ppbv

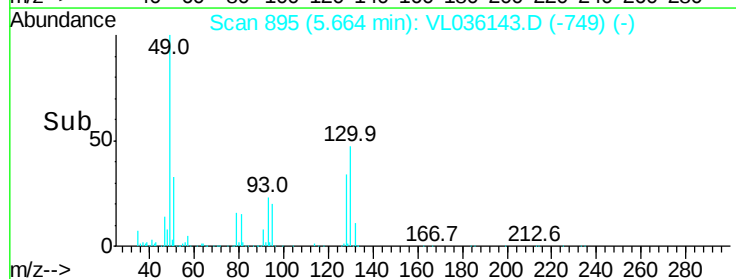
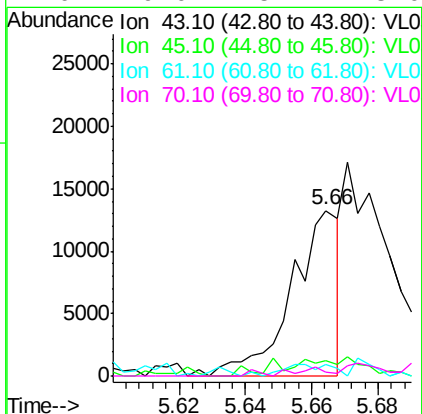
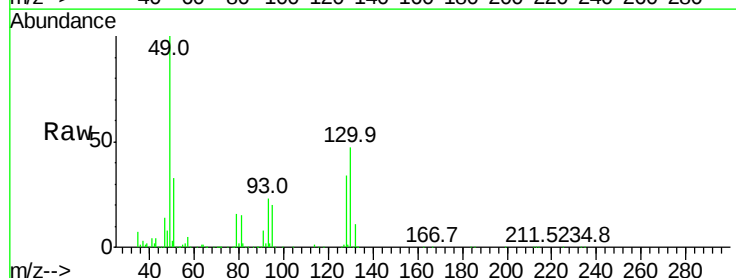
RT: 5.66 min Scan# 895

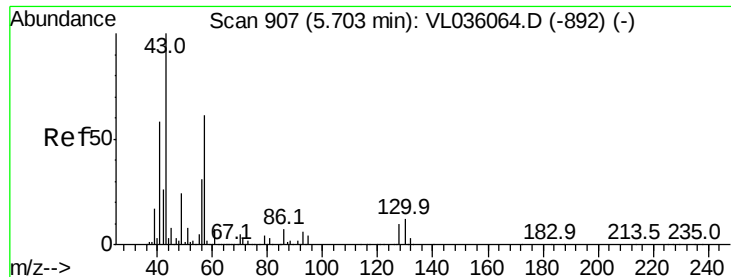
Delta R.T. -0.03 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Tgt Ion:	43	Resp:	13302
Ion	Ratio	Lower	Upper
43	100		
45	0.0	8.2	12.4#
61	9.0	7.4	11.2
70	0.0	5.4	8.0#





#26

Hexane

Concen: 0.091 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.04 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

SS-4B

Tgt Ion: 57 Resp: 13267

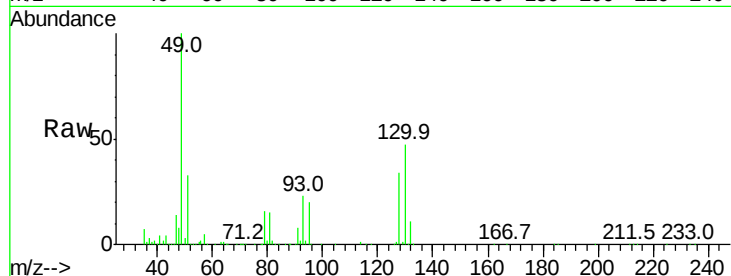
Ion Ratio Lower Upper

57 100

41 0.0 82.9 124.3#

43 0.0 199.9 299.9#

56 138.2 43.1 64.7#

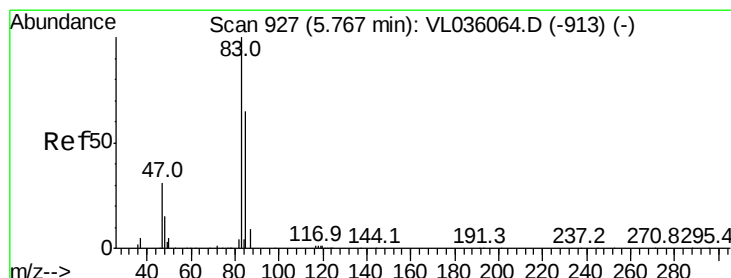
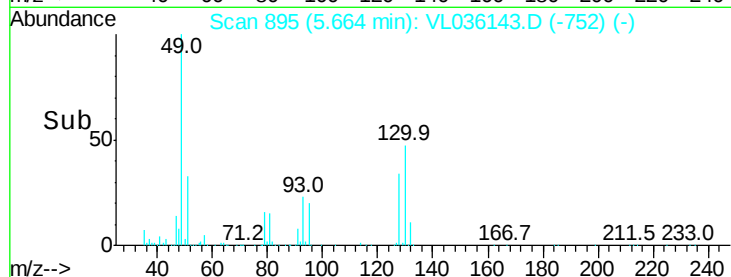
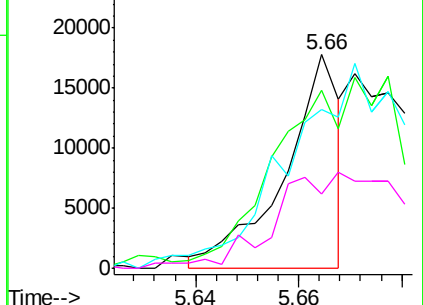


Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 0.118 ppbv

RT: 5.74 min Scan# 917

Delta R.T. -0.03 min

Lab File: VL036143.D

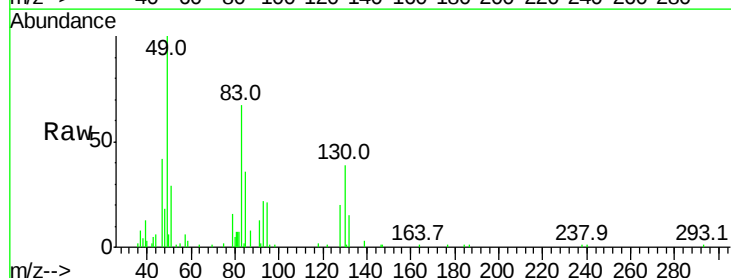
Acq: 11 Dec 2020 00:48

Tgt Ion: 83 Resp: 22562

Ion Ratio Lower Upper

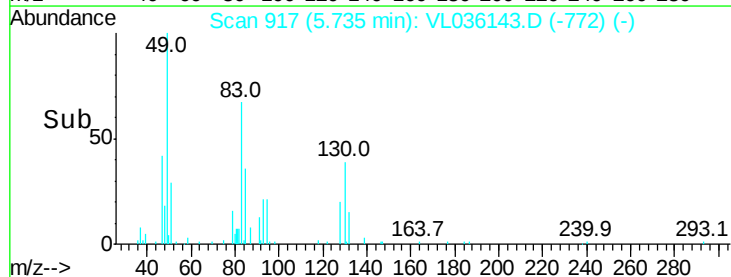
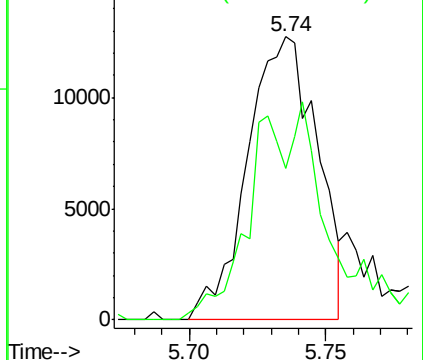
83 100

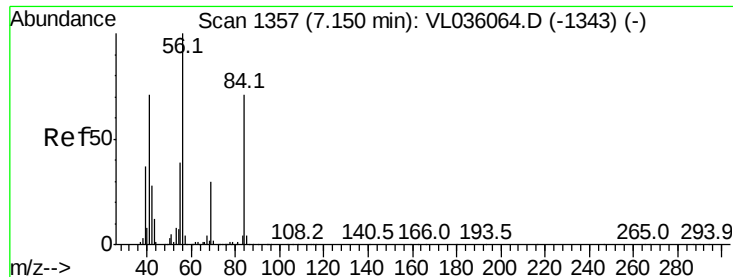
85 51.2 51.8 77.6#



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

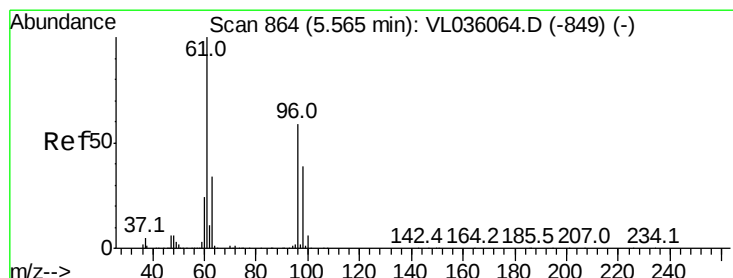
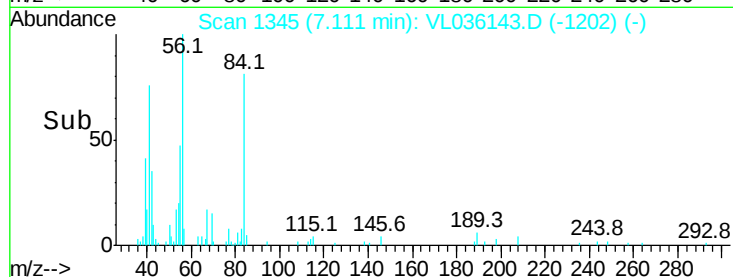
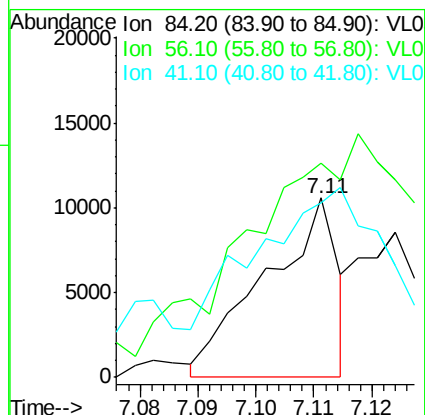
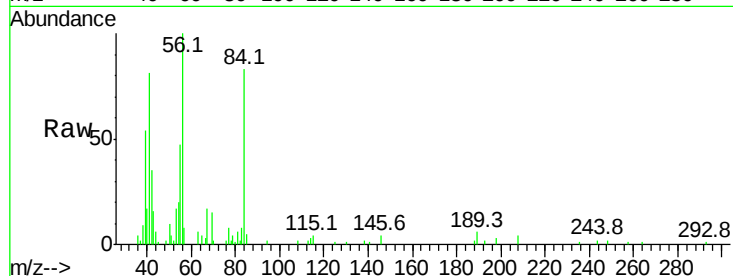




#30
Cyclohexane
Concen: 0.086 ppbv
RT: 7.11 min Scan# 1345
Delta R.T. -0.04 min
Lab File: VL036143.D
Acq: 11 Dec 2020 00:48

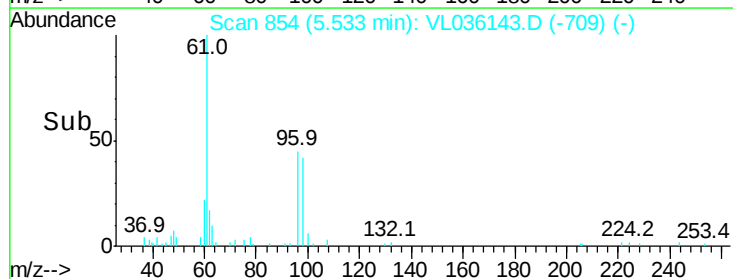
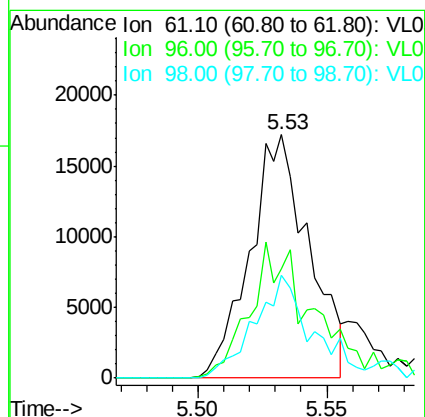
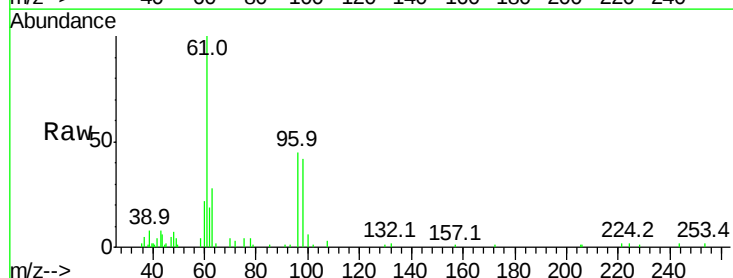
Instrument :
MSVOA_L
ClientSampleId :
SS-4B

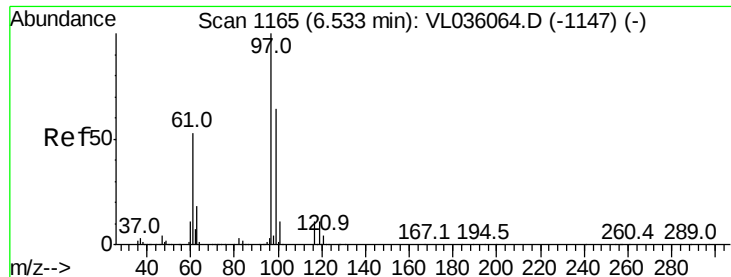
Tgt Ion: 84 Resp: 9155
Ion Ratio Lower Upper
84 100
56 0.0 128.0 192.0#
41 224.9 81.3 121.9#



#31
cis-1,2-Dichloroethene
Concen: 0.207 ppbv
RT: 5.53 min Scan# 854
Delta R.T. -0.03 min
Lab File: VL036143.D
Acq: 11 Dec 2020 00:48

Tgt Ion: 61 Resp: 27380
Ion Ratio Lower Upper
61 100
96 45.0 47.3 70.9#
98 42.3 31.4 47.0





#32

1,1,1-Trichloroethane

Concen: 9.867 ppbv

RT: 6.49 min Scan# 1153

Delta R.T. -0.04 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

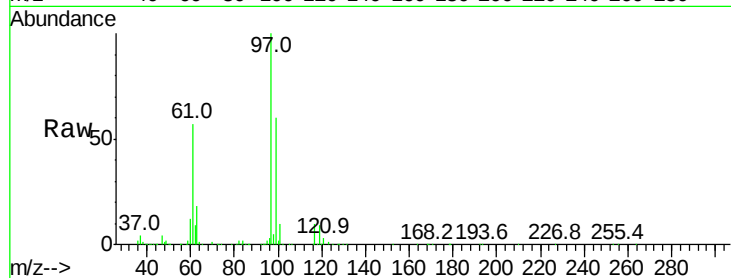
MSVOA_L

ClientSampleId :

SS-4B

Tgt Ion: 97 Resp: 1946664

Ion	Ratio	Lower	Upper
97	100		
99	64.4	52.4	78.6
61	59.8	43.4	65.0

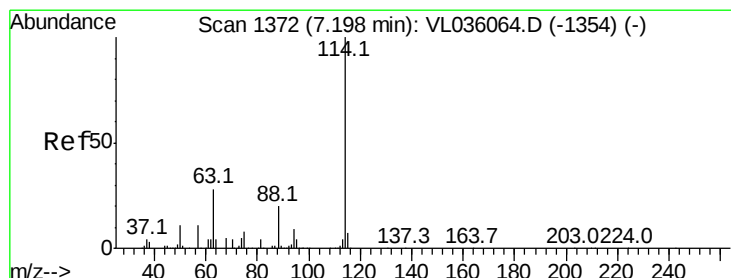
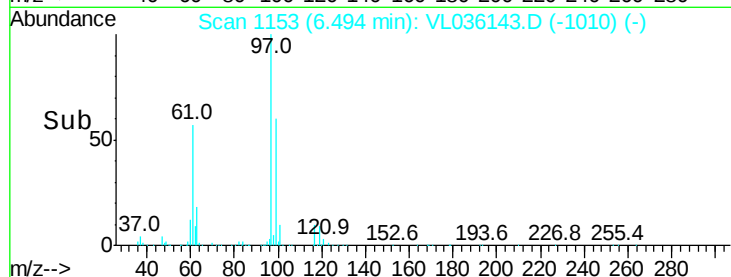
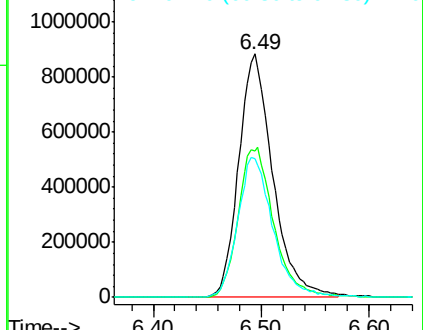


Abundance

Ion 97.00 (96.70 to 97.70): VL0

Ion 99.00 (98.70 to 99.70): VL0

Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1360

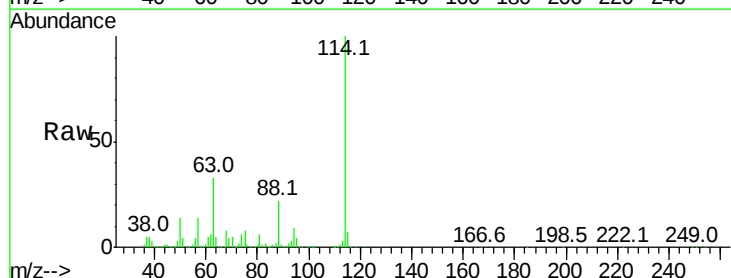
Delta R.T. -0.04 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Tgt Ion: 114 Resp: 2651162

Ion	Ratio	Lower	Upper
114	100		
63	32.7	23.6	35.4
88	21.2	15.8	23.6

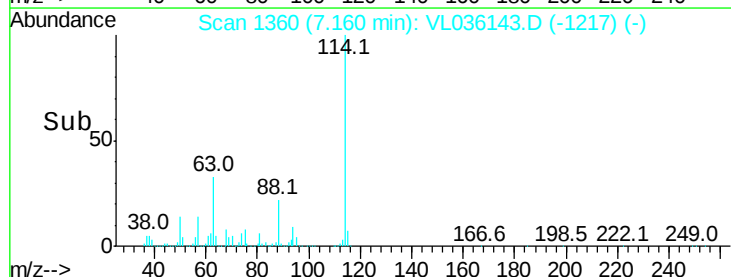
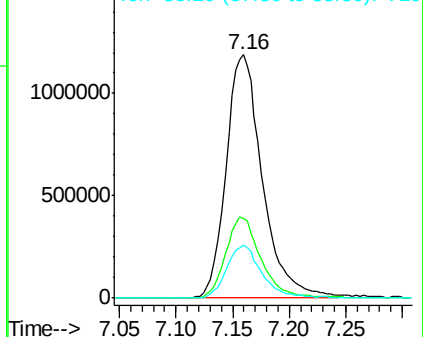


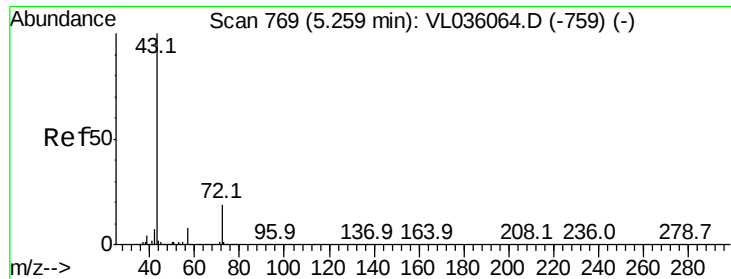
Abundance

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

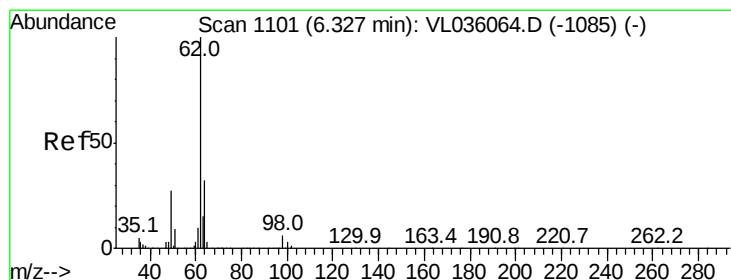
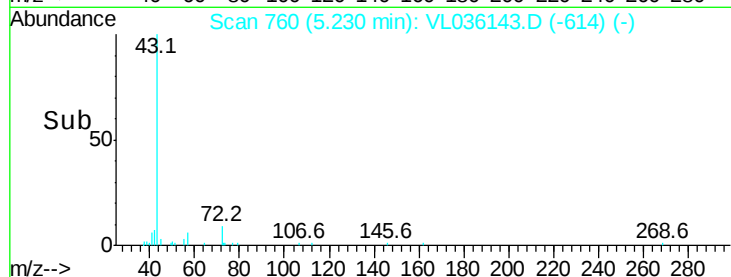
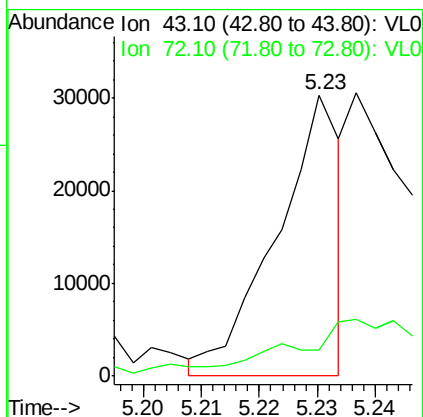
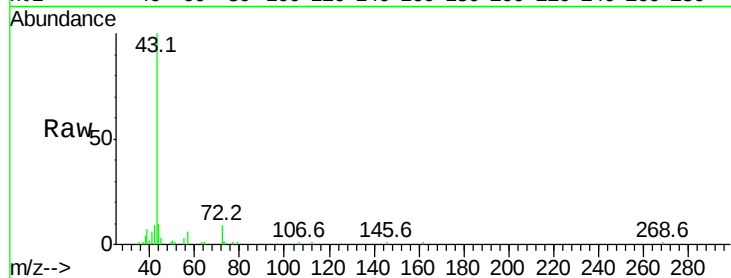




#34
 2-Butanone
 Concen: 0.132 ppbv
 RT: 5.23 min Scan# 760
 Delta R.T. -0.03 min
 Lab File: VL036143.D
 Acq: 11 Dec 2020 00:48

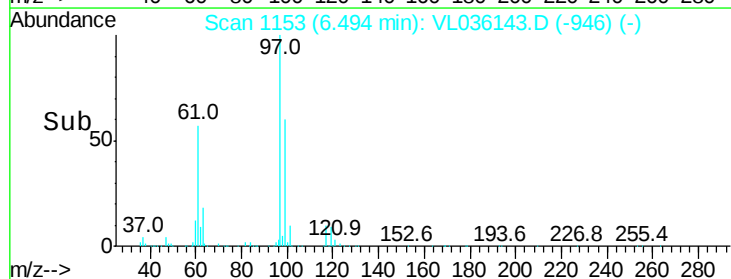
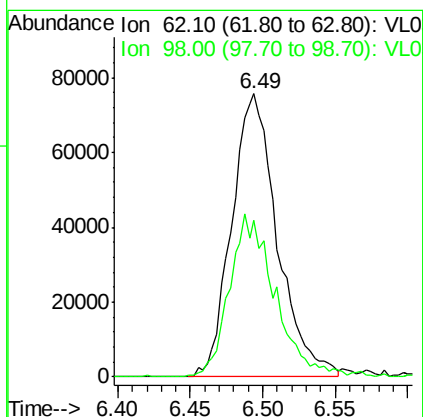
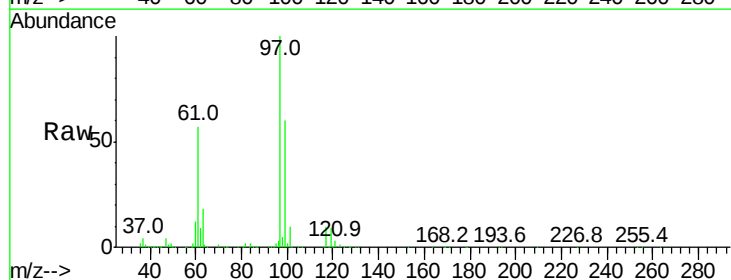
Instrument :
 MSVOA_L
 ClientSampleId :
 SS-4B

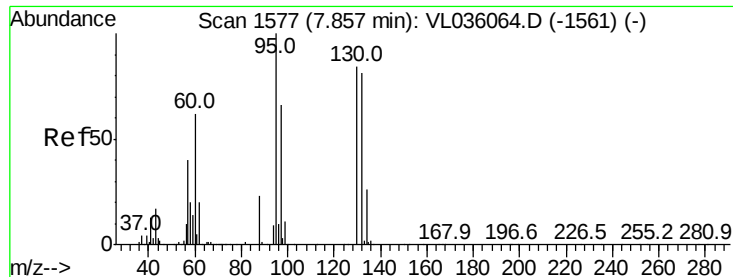
Tgt Ion: 43 Resp: 23226
 Ion Ratio Lower Upper
 43 100
 72 0.0 16.5 24.7#



#37
 1,2-Dichloroethane
 Concen: 1.272 ppbv
 RT: 6.49 min Scan# 1153
 Delta R.T. 0.17 min
 Lab File: VL036143.D
 Acq: 11 Dec 2020 00:48

Tgt Ion: 62 Resp: 165608
 Ion Ratio Lower Upper
 62 100
 98 57.8 4.6 7.0#





#38

Trichloroethene

Concen: 6.173 ppbv

RT: 7.82 min Scan# 1565

Delta R.T. -0.04 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

SS-4B

Tgt Ion: 130 Resp: 518429

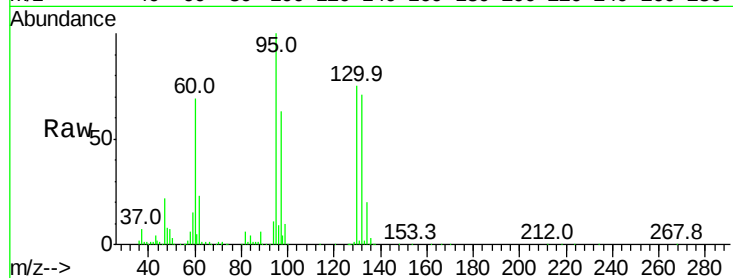
Ion Ratio Lower Upper

130 100

95 133.4 95.2 142.8

132 94.3 76.9 115.3

97 83.9 62.3 93.5

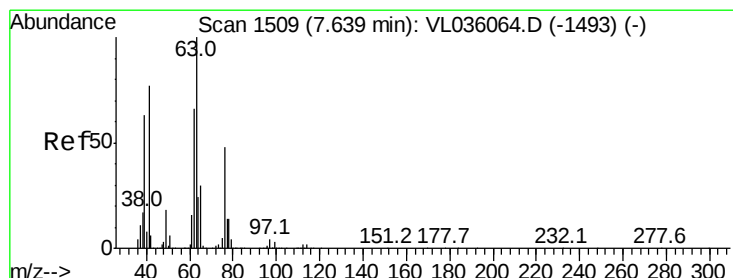
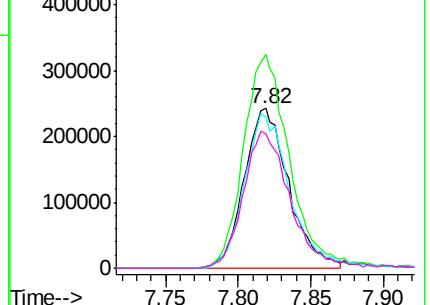
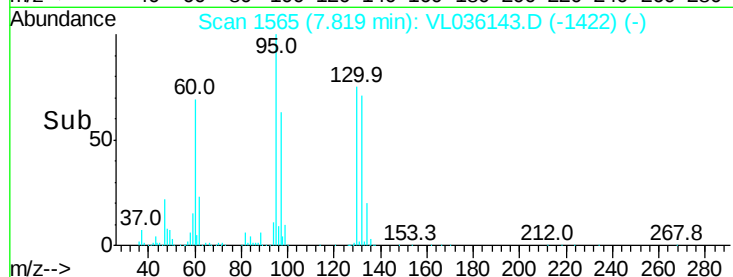


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 0.156 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. -0.43 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

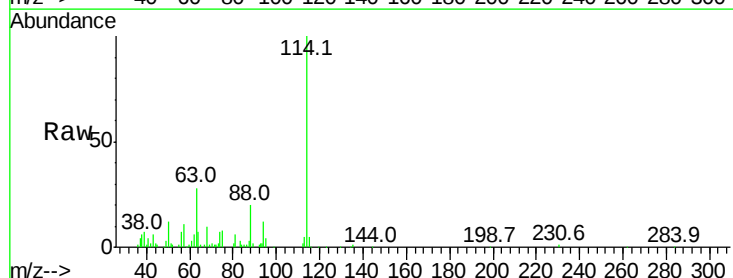
Tgt Ion: 63 Resp: 13877

Ion Ratio Lower Upper

63 100

41 0.0 61.9 92.9#

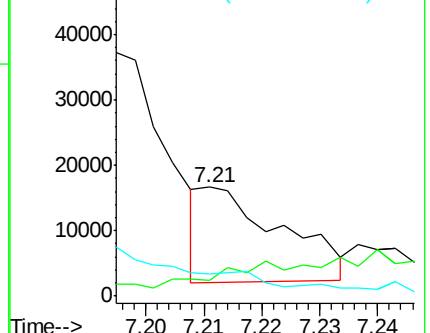
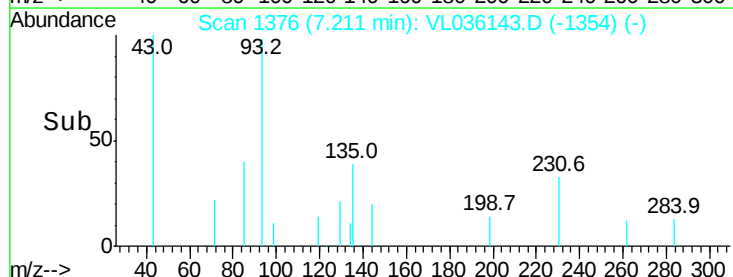
62 20.6 52.5 78.7#

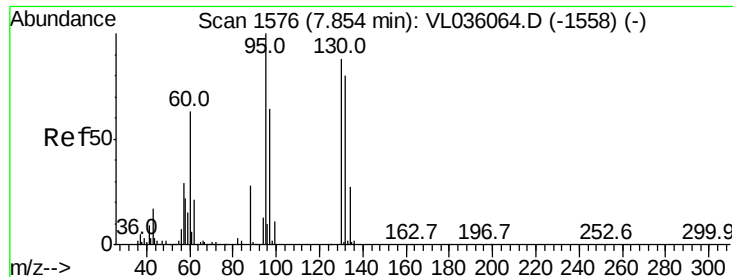


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#40

1,4-Dioxane

Concen: 1.970 ppbv

RT: 7.83 min Scan# 1567

Delta R.T. -0.03 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

SS-4B

Tgt Ion: 88 Resp: 54983

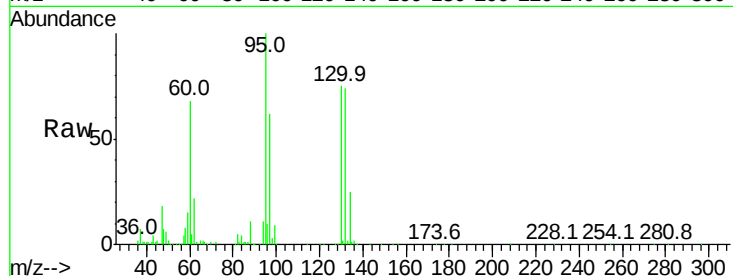
Ion Ratio Lower Upper

88 100

58 136.1 122.6 184.0

43 79.8 0.0 0.0#

57 73.0 0.0 0.0#



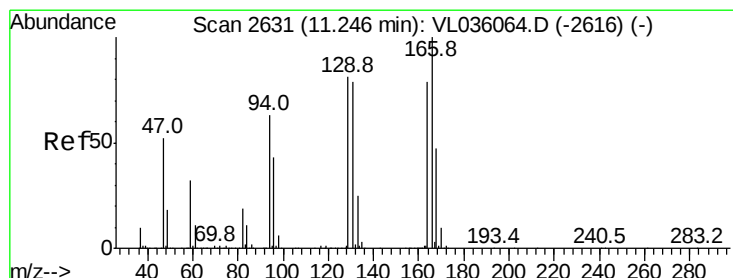
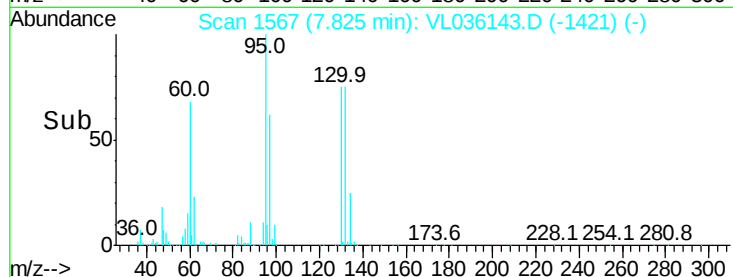
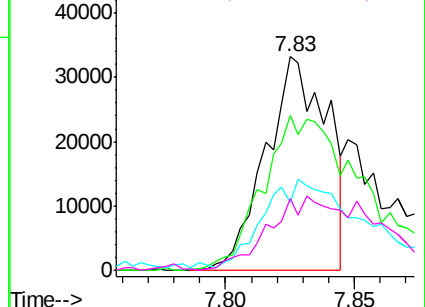
Abundance

Ion 88.10 (87.80 to 88.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#52

Tetrachloroethene

Concen: 65.089 ppbv

RT: 11.22 min Scan# 2622

Delta R.T. -0.03 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Tgt Ion: 164 Resp: 5293978

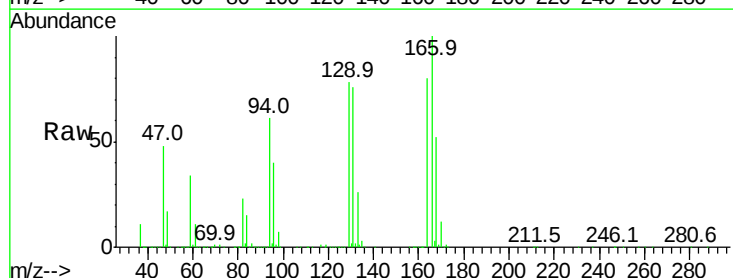
Ion Ratio Lower Upper

164 100

166 124.9 101.9 152.9

129 97.2 82.1 123.1

131 95.4 80.8 121.2



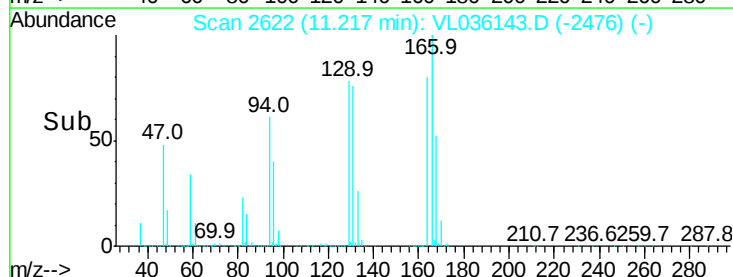
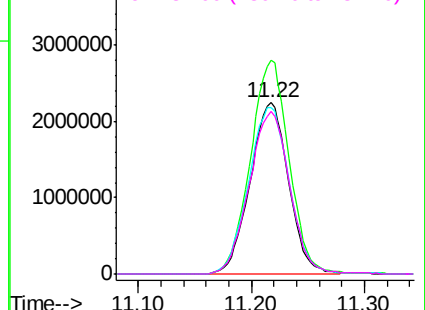
Abundance

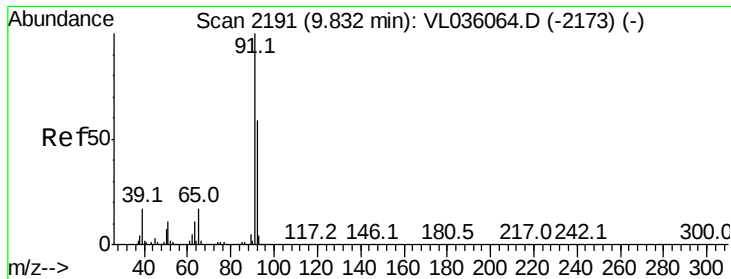
Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V





#53

Toluene

Concen: 0.031 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.05 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampled :

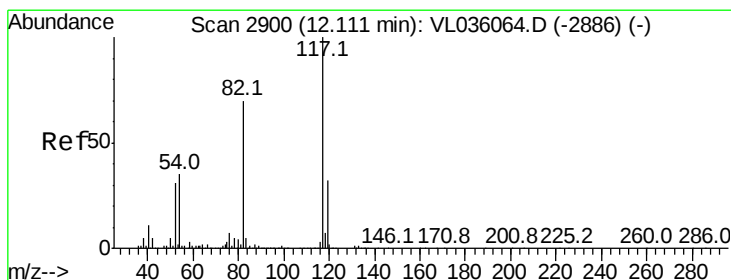
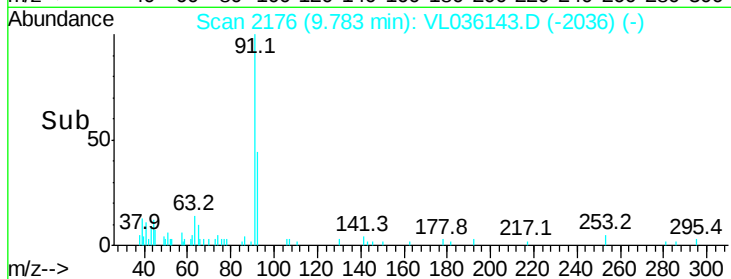
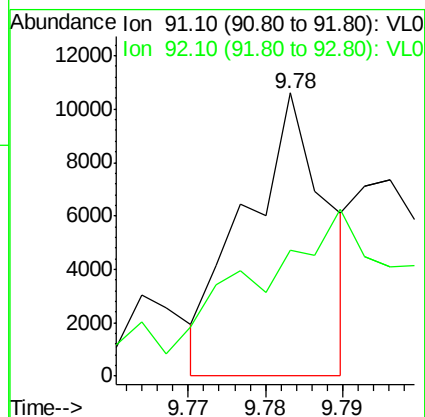
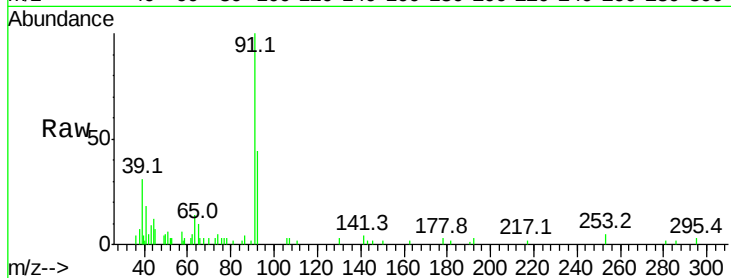
SS-4B

Tgt Ion: 91 Resp: 7768

Ion Ratio Lower Upper

91 100

92 0.0 48.2 72.2#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.04 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

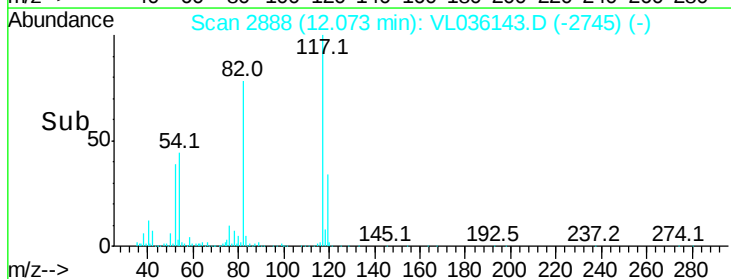
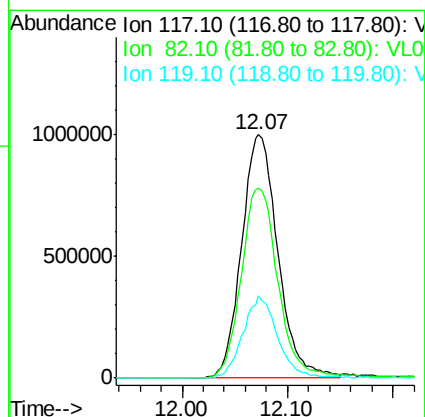
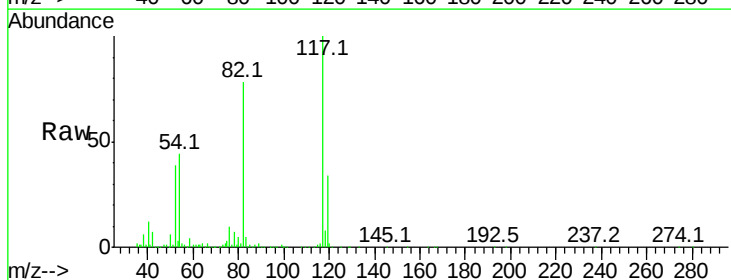
Tgt Ion: 117 Resp: 2392397

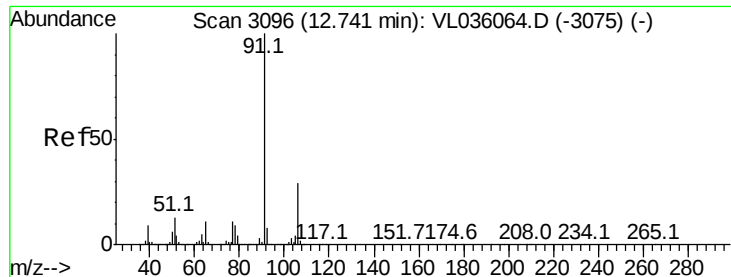
Ion Ratio Lower Upper

117 100

82 80.4 0.0 0.0#

119 32.6 0.0 0.0#





#58

Ethyl Benzene

Concen: 0.167 ppbv

RT: 12.99 min Scan# 3173

Delta R.T. 0.25 min

Lab File: VL036143.D

Acq: 11 Dec 2020 00:48

Instrument :

MSVOA_L

ClientSampleId :

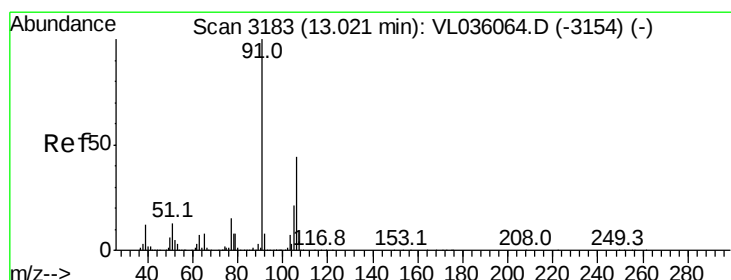
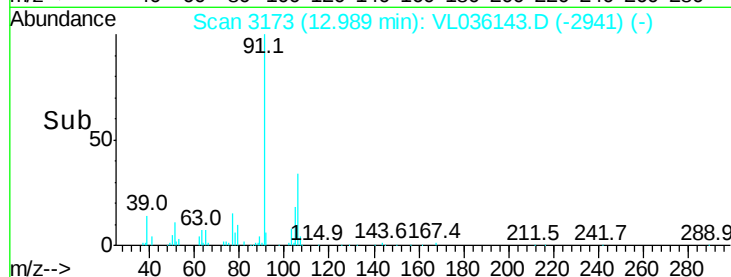
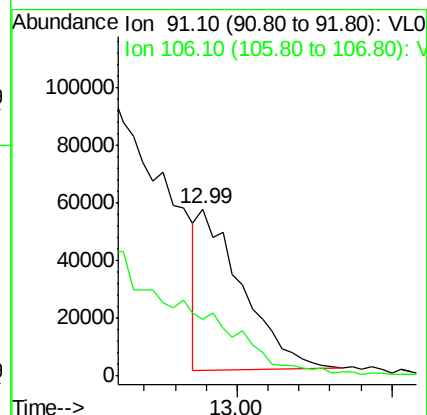
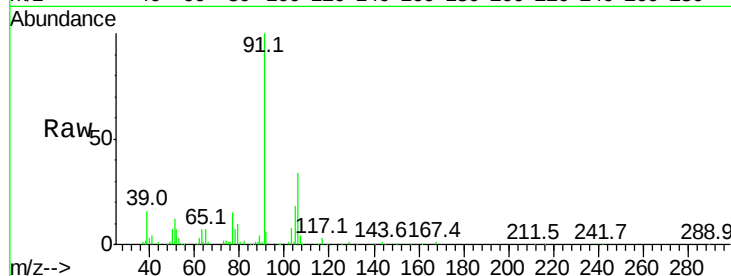
SS-4B

Tgt Ion: 91 Resp: 54852

Ion Ratio Lower Upper

91 100

106 32.5 23.0 34.4



#59

m/p-Xylene

Concen: 0.199 ppbv

RT: 12.99 min Scan# 3173

Delta R.T. -0.03 min

Lab File: VL036143.D

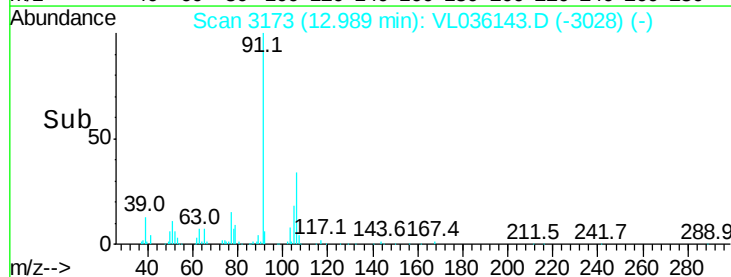
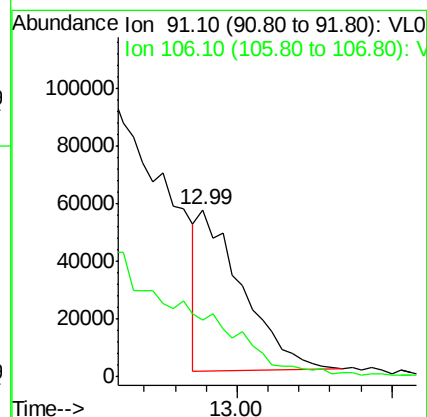
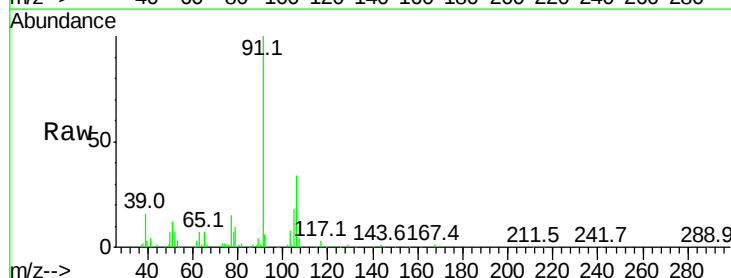
Acq: 11 Dec 2020 00:48

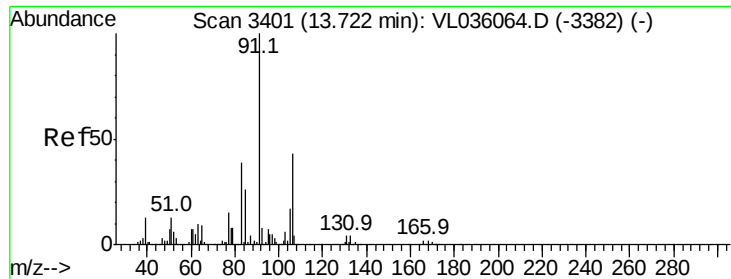
Tgt Ion: 91 Resp: 54852

Ion Ratio Lower Upper

91 100

106 0.0 33.6 50.4#

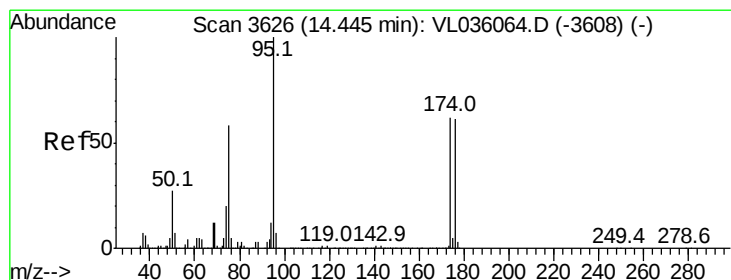
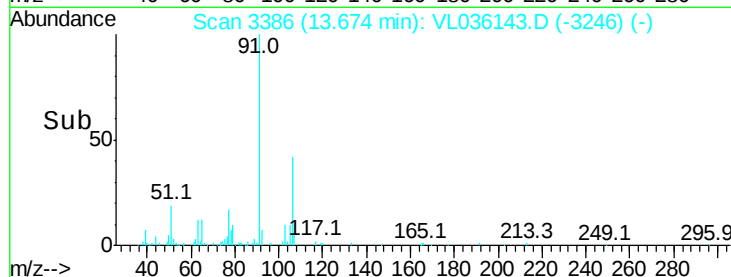
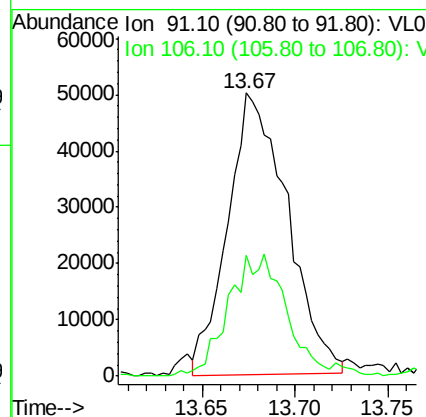
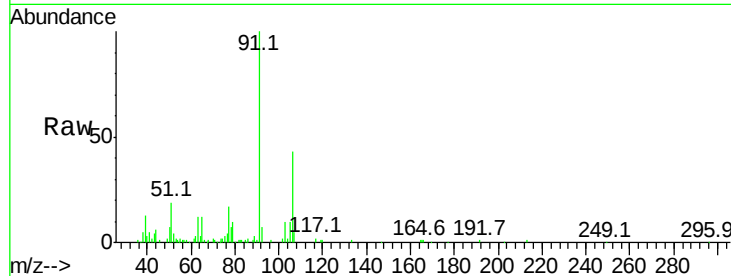




#60
o-Xylene
Concen: 0.431 ppbv
RT: 13.67 min Scan# 3386
Delta R.T. -0.05 min
Lab File: VL036143.D
Acq: 11 Dec 2020 00:48

Instrument :
MSVOA_L
ClientSampleId :
SS-4B

Tgt Ion: 91 Resp: 112194
Ion Ratio Lower Upper
91 100
106 42.9 21.6 64.6



#68
1-Bromo-4-Fluorobenzene
Concen: 10.738 ppbv
RT: 14.40 min Scan# 3612
Delta R.T. -0.05 min
Lab File: VL036143.D
Acq: 11 Dec 2020 00:48

Tgt Ion: 95 Resp: 2039906
Ion Ratio Lower Upper
95 100
174 55.5 50.7 76.1
175 3.9 4.0 6.0#

