

Data File : VL035804.D
Acq On : 3 Nov 2020 13:38
Operator : SY/AP
Sample : VSTDIC0.03
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.03

Quant Time: Nov 03 14:09:11 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL110320AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 03 11:09:05 2020
QLast Update : Tue Nov 03 11:09:05 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1404390	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	6021792	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	5543553	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.42 95 3981226 9.58 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 95.80%

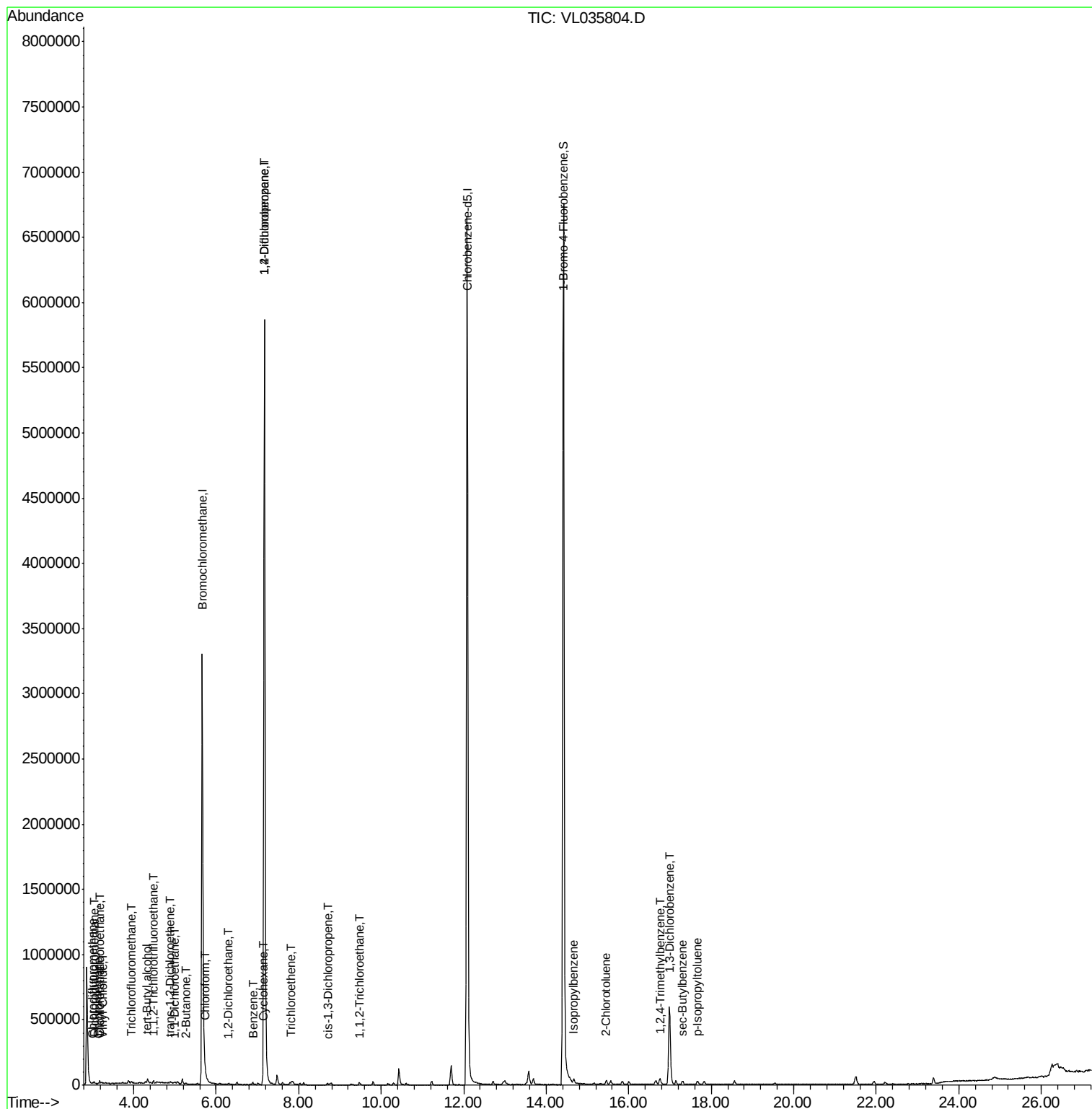
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.04	85	11964	0.052	ppbv	92
3) Chlorodifluoromethane	2.99	51	7151	0.047	ppbv	92
4) Chloromethane	3.13	50	2967	0.037	ppbv	88
5) Vinyl Chloride	3.26	62	3535	0.037	ppbv #	78
8) Dichlorotetrafluoroethane	3.18	85	11109	0.040	ppbv	94
11) Trichlorofluoromethane	3.94	101	11699	0.036	ppbv	89
12) 1,1,2-Trichlorotrifluoroet	4.47	101	8206	0.033	ppbv	94
17) tert-Butyl alcohol	4.32	59	8889	0.054	ppbv #	85
22) trans-1,2-Dichloroethene	4.88	96	4565	0.040	ppbv #	74
24) 1,1-Dichloroethane	5.00	63	7571	0.038	ppbv #	94
29) Chloroform	5.74	83	13029	0.043	ppbv	89
30) Cyclohexane	7.12	84	4482	0.030	ppbv #	11
34) 2-Butanone	5.26	43	9517	0.048	ppbv #	79
36) Benzene	6.89	78	13604	0.035	ppbv #	90
37) 1,2-Dichloroethane	6.30	62	7122	0.035	ppbv	99
38) Trichloroethene	7.83	130	7879	0.040	ppbv #	83
39) 1,2-Dichloropropane	7.17	63	1119966	7.875	ppbv #	30
46) cis-1,3-Dichloropropene	8.70	75	6811	0.035	ppbv #	84
47) 1,1,2-Trichloroethane	9.47	97	8148	0.040	ppbv #	82
62) Isopropylbenzene	14.67	105	23915	0.031	ppbv #	80
67) sec-Butylbenzene	17.30	105	28908	0.030	ppbv	93
69) p-Isopropyltoluene	17.66	119	24538	0.032	ppbv #	92
71) 2-Chlorotoluene	15.46	91	24463	0.044	ppbv	100
74) 1,2,4-Trimethylbenzene	16.77	105	19494	0.031	ppbv #	88
75) 1,3-Dichlorobenzene	17.01	146	18211	0.043	ppbv #	79

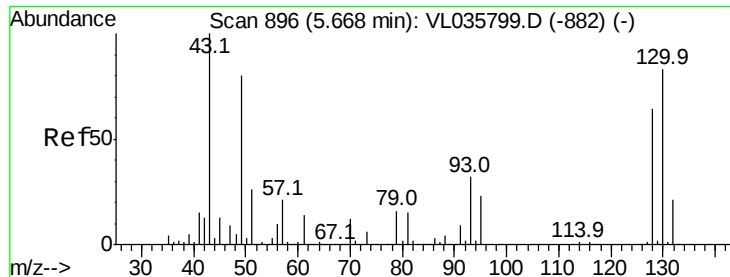
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

Lab File: VL035804.D

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Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

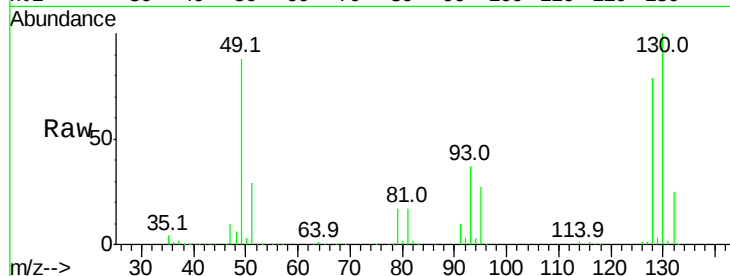
Tgt Ion: 49 Resp: 1404390

Ion Ratio Lower Upper

49 100

128 90.0 41.5 124.6

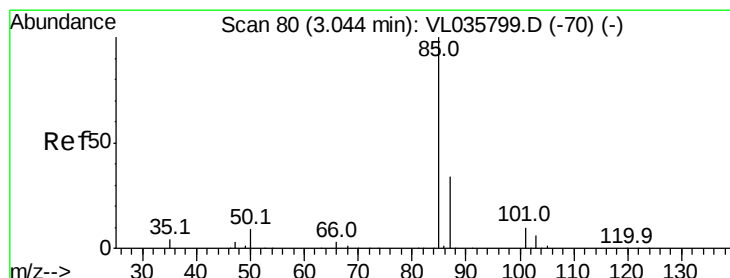
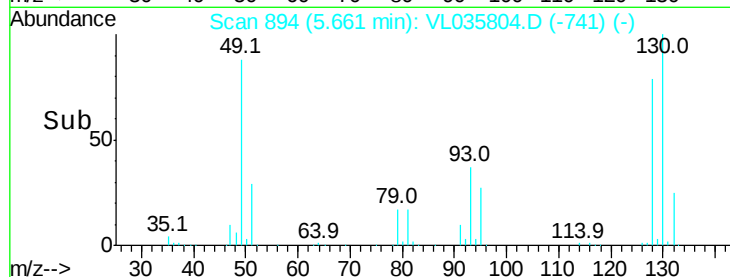
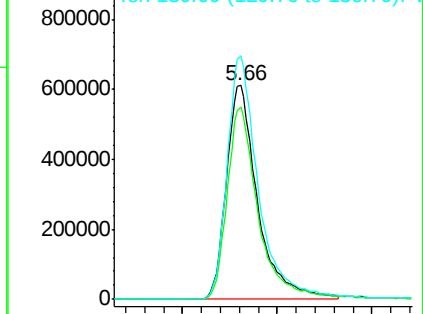
130 115.9 53.7 161.1



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: 0.052 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.00 min

Lab File: VL035804.D

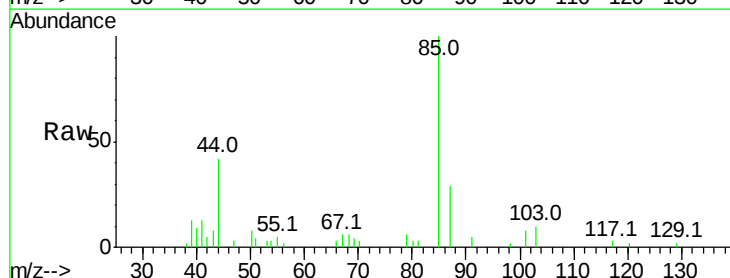
Acq: 3 Nov 2020 13:38

Tgt Ion: 85 Resp: 11964

Ion Ratio Lower Upper

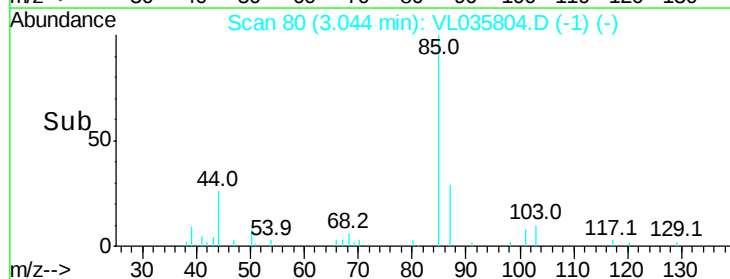
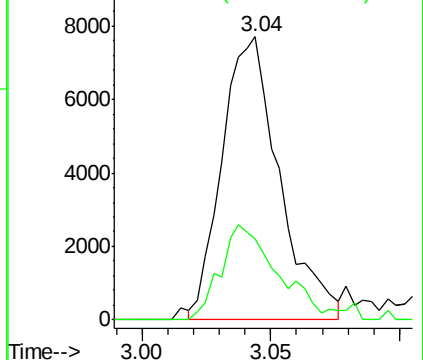
85 100

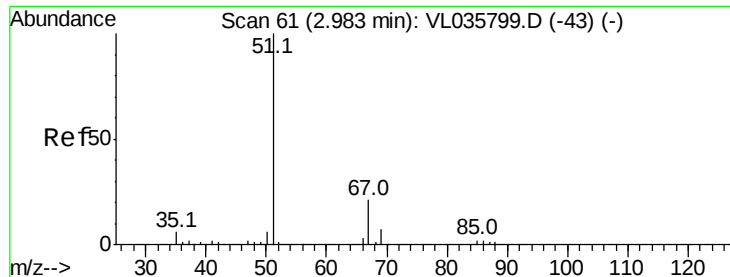
87 29.5 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.047 ppbv

RT: 2.99 min Scan# 62

Delta R.T. 0.00 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

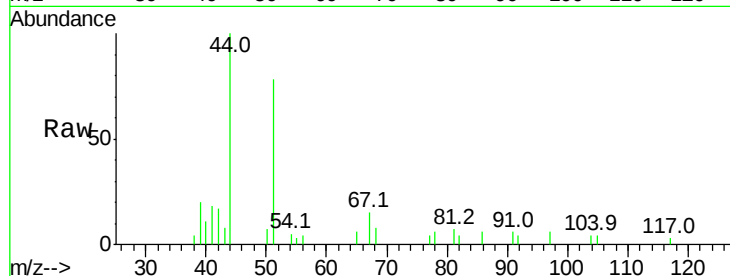
VSTDIC0.03

Tgt Ion: 51 Resp: 7151

Ion Ratio Lower Upper

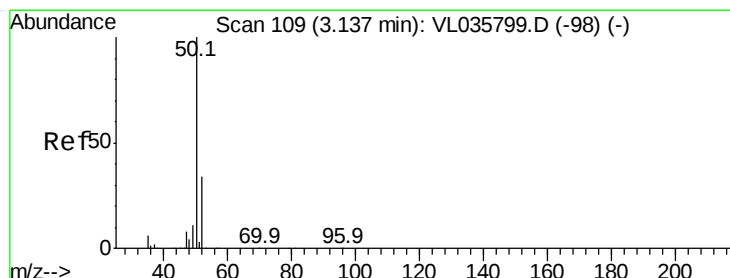
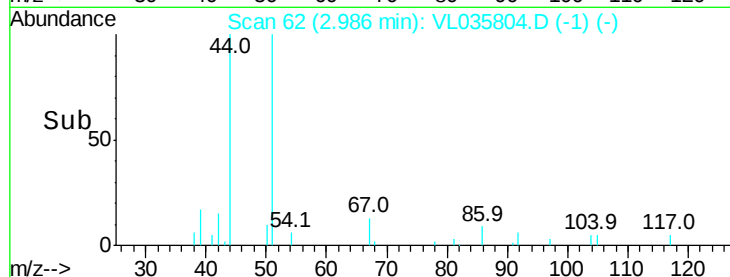
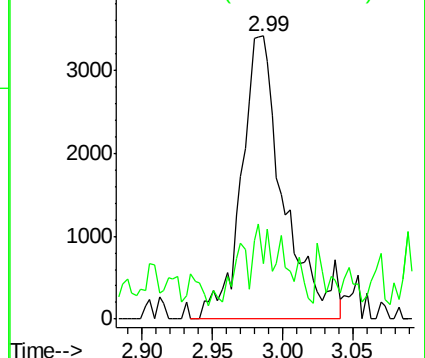
51 100

67 24.8 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: 0.037 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL035804.D

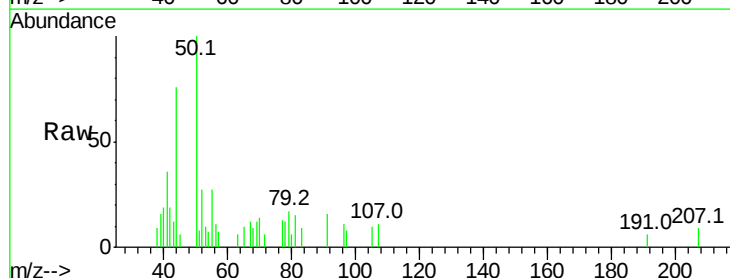
Acq: 3 Nov 2020 13:38

Tgt Ion: 50 Resp: 2967

Ion Ratio Lower Upper

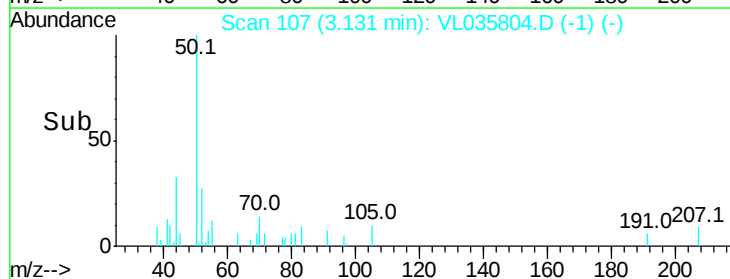
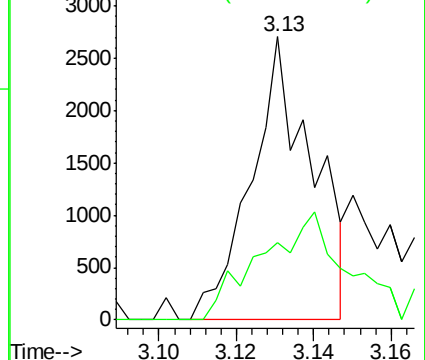
50 100

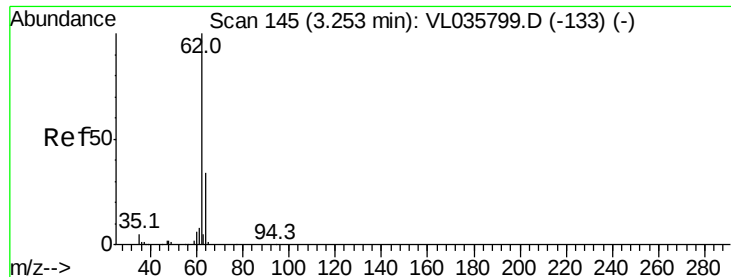
52 27.3 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.037 ppbv

RT: 3.26 min Scan# 147

Delta R.T. 0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

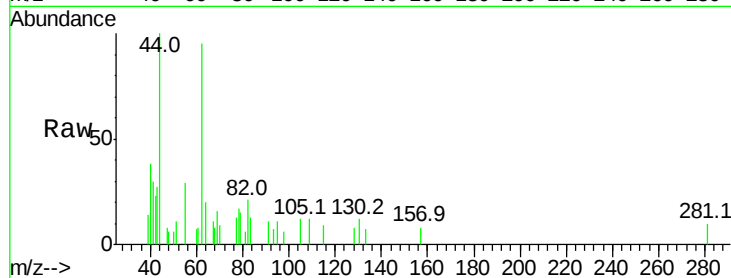
VSTDIC0.03

Tgt Ion: 62 Resp: 3535

Ion Ratio Lower Upper

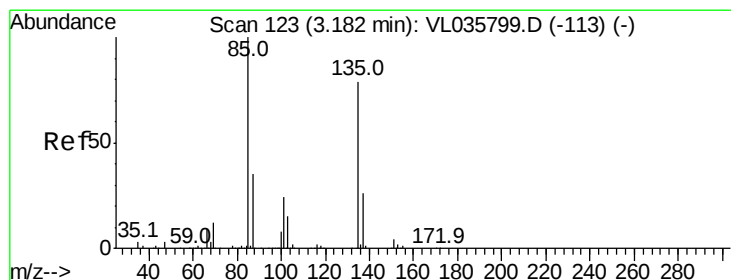
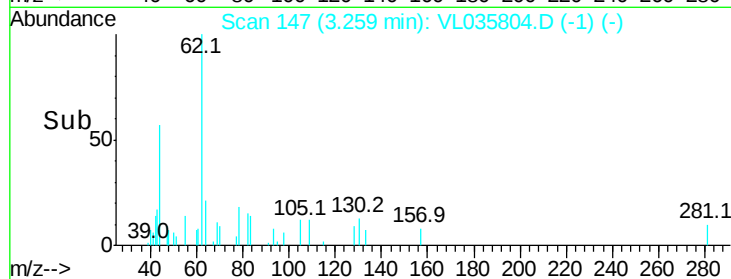
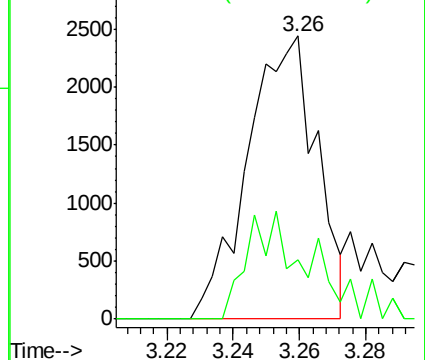
62 100

64 21.1 26.9 40.3#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#8

Dichlorotetrafluoroethane

Concen: 0.040 ppbv

RT: 3.18 min Scan# 121

Delta R.T. -0.01 min

Lab File: VL035804.D

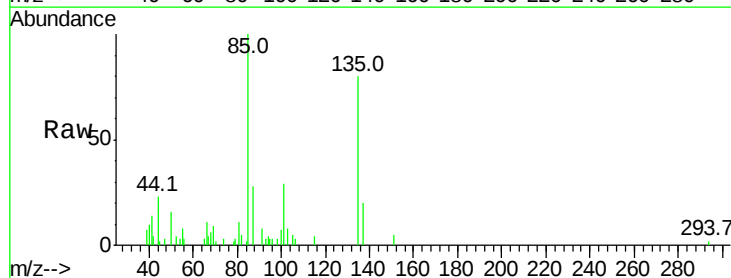
Acq: 3 Nov 2020 13:38

Tgt Ion: 85 Resp: 11109

Ion Ratio Lower Upper

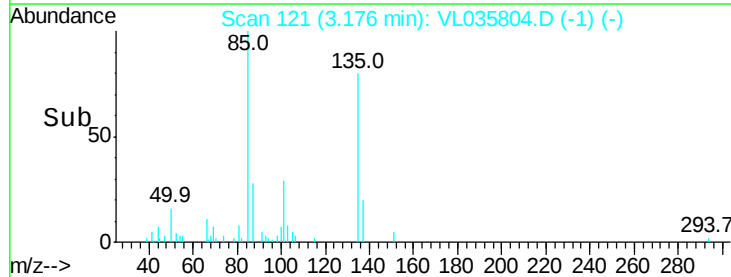
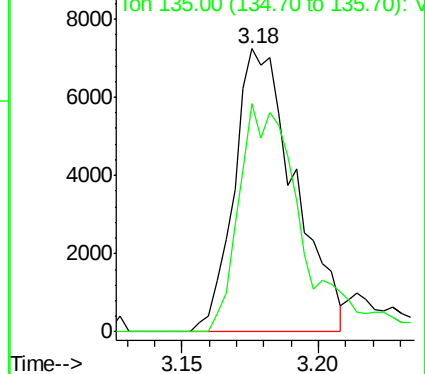
85 100

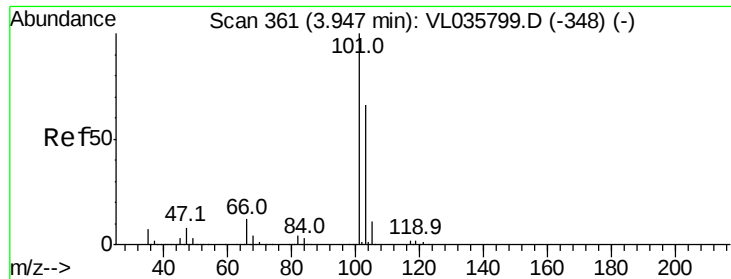
135 86.0 64.6 96.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V





#11

Trichlorofluoromethane

Concen: 0.036 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.00 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

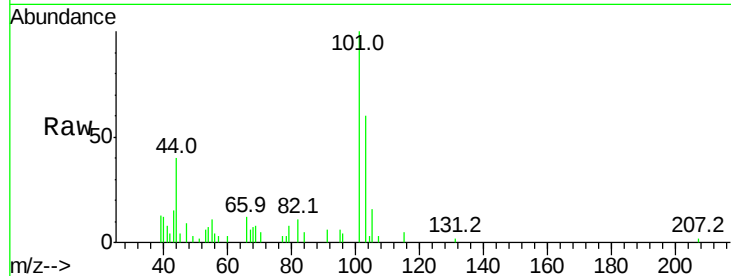
VSTDIC0.03

Tgt Ion:101 Resp: 11699

Ion Ratio Lower Upper

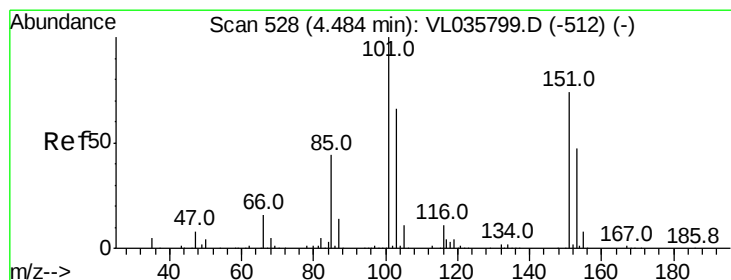
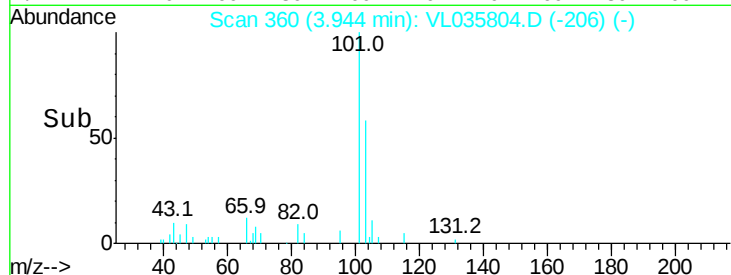
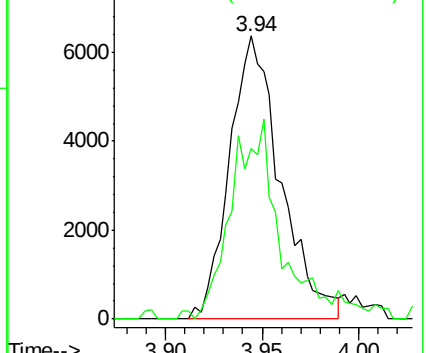
101 100

103 57.3 53.0 79.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.033 ppbv

RT: 4.47 min Scan# 525

Delta R.T. -0.01 min

Lab File: VL035804.D

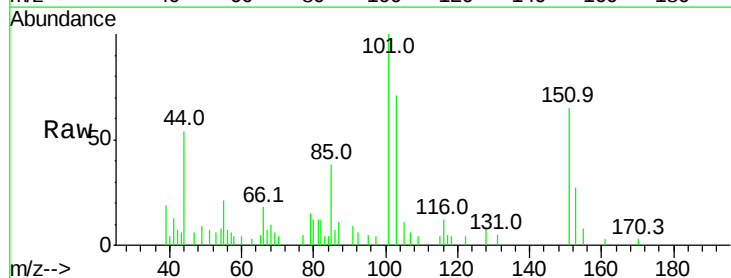
Acq: 3 Nov 2020 13:38

Tgt Ion:101 Resp: 8206

Ion Ratio Lower Upper

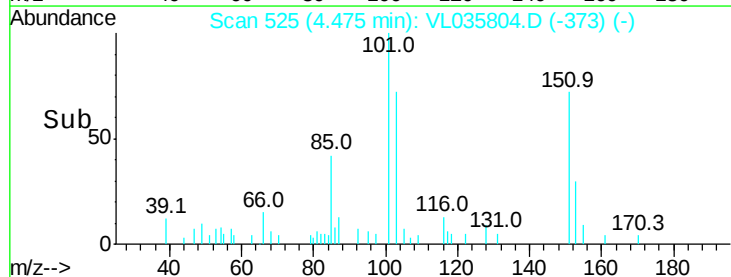
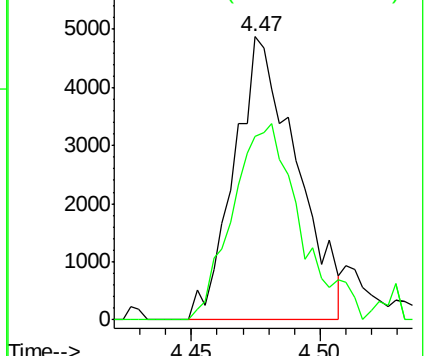
101 100

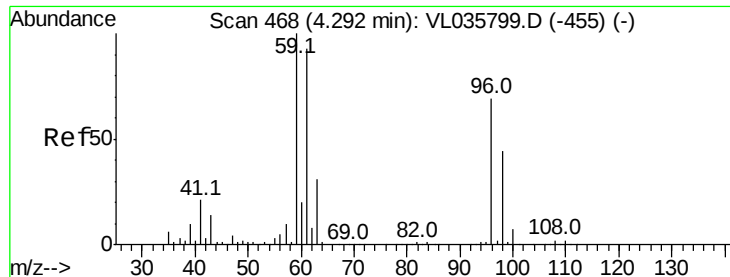
151 78.4 58.9 88.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#17

tert-Butyl alcohol

Concen: 0.054 ppbv

RT: 4.32 min Scan# 477

Delta R.T. 0.03 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

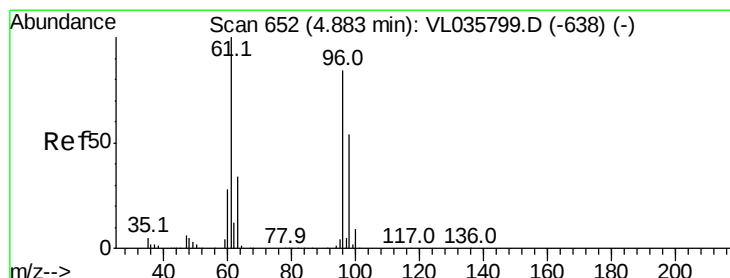
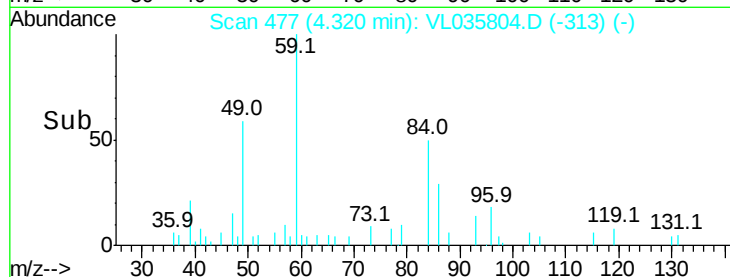
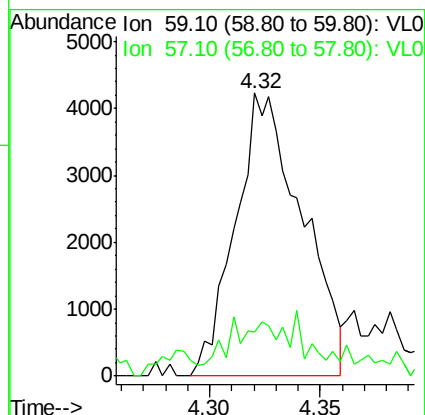
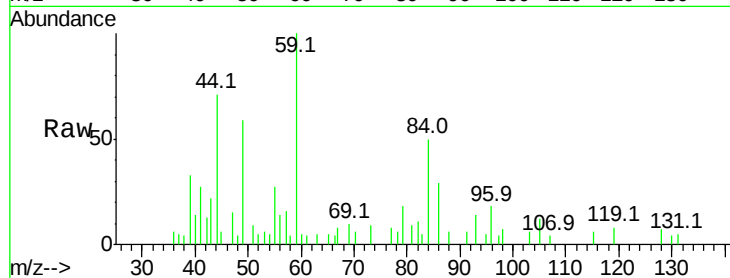
VSTDIC0.03

Tgt Ion: 59 Resp: 8889

Ion Ratio Lower Upper

59 100

57 16.0 8.2 12.4#



#22

trans-1,2-Dichloroethene

Concen: 0.040 ppbv

RT: 4.88 min Scan# 650

Delta R.T. -0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

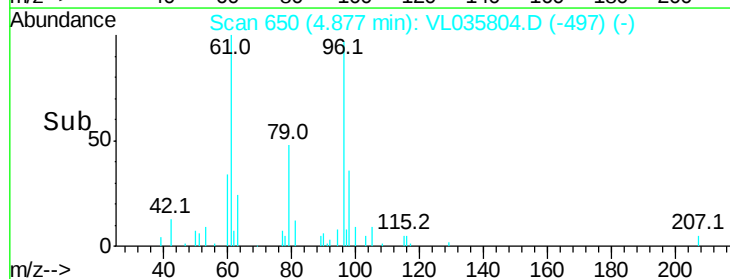
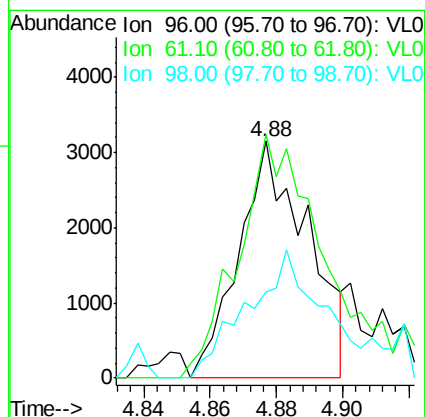
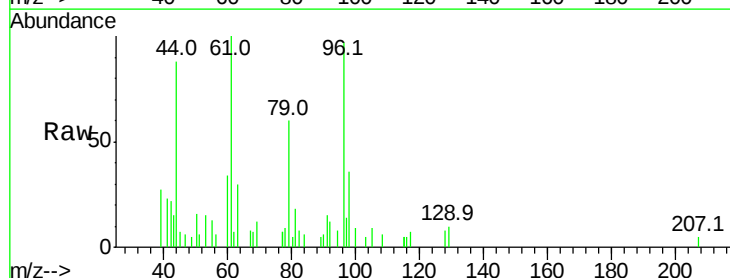
Tgt Ion: 96 Resp: 4565

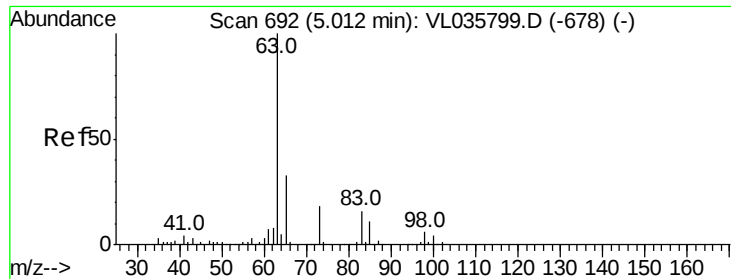
Ion Ratio Lower Upper

96 100

61 96.7 95.4 143.0

98 36.5 51.8 77.6#





#24

1,1-Dichloroethane

Concen: 0.038 ppbv

RT: 5.00 min Scan# 689

Delta R.T. -0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

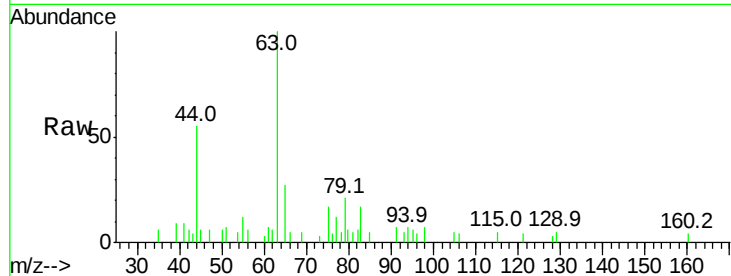
Tgt Ion: 63 Resp: 7571

Ion Ratio Lower Upper

63 100

98 7.2 3.0 9.2

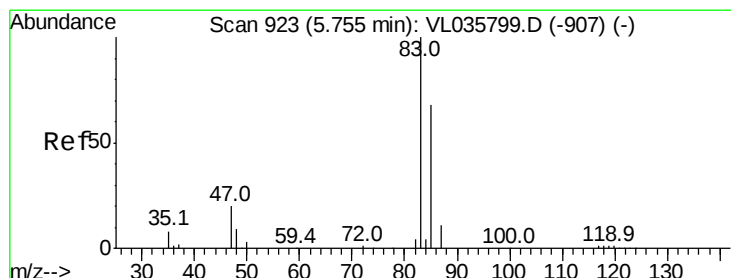
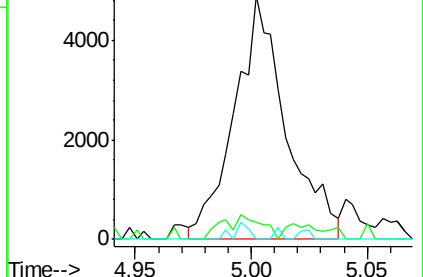
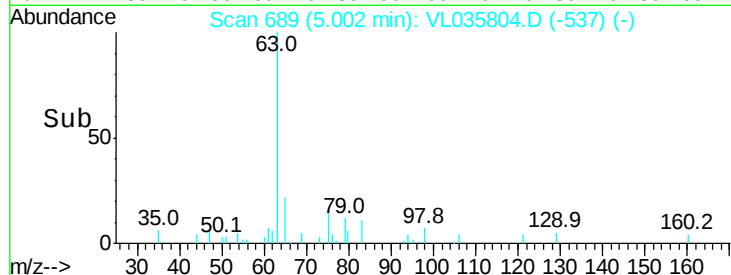
100 0.0 1.8 5.4#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0



#29

Chloroform

Concen: 0.043 ppbv

RT: 5.74 min Scan# 918

Delta R.T. -0.02 min

Lab File: VL035804.D

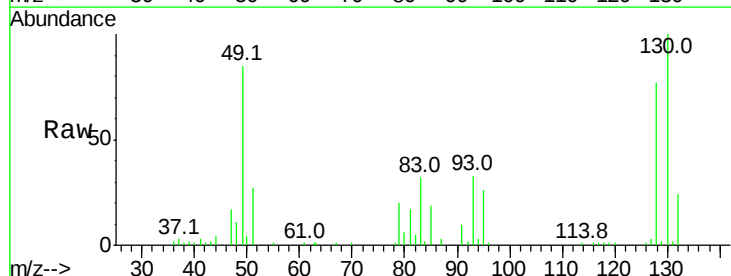
Acq: 3 Nov 2020 13:38

Tgt Ion: 83 Resp: 13029

Ion Ratio Lower Upper

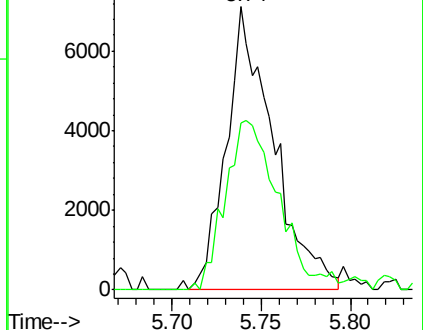
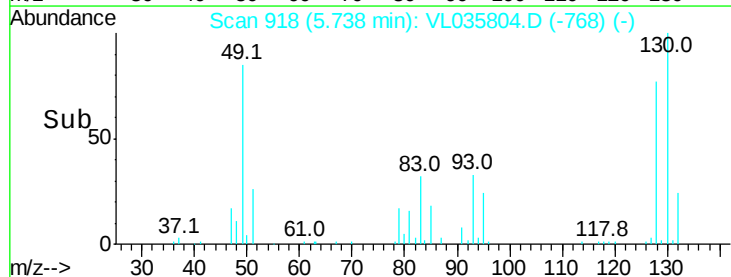
83 100

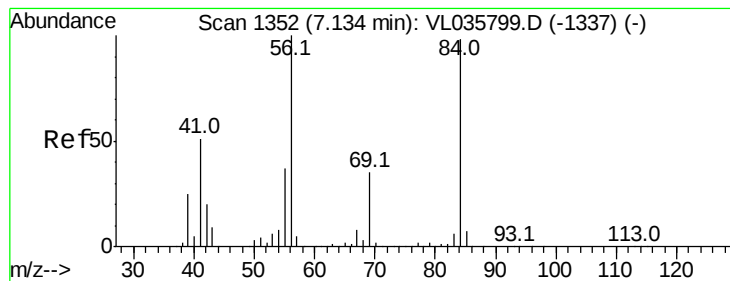
85 59.2 54.6 81.8



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





#30

Cyclohexane

Concen: 0.030 ppbv

RT: 7.12 min Scan# 1349

Delta R.T. -0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

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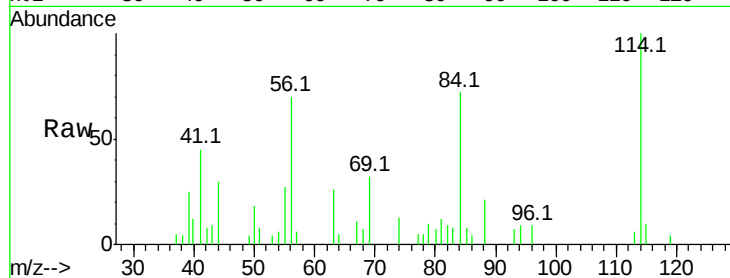
Tgt Ion: 84 Resp: 4482

Ion Ratio Lower Upper

84 100

56 0.0 86.4 129.6#

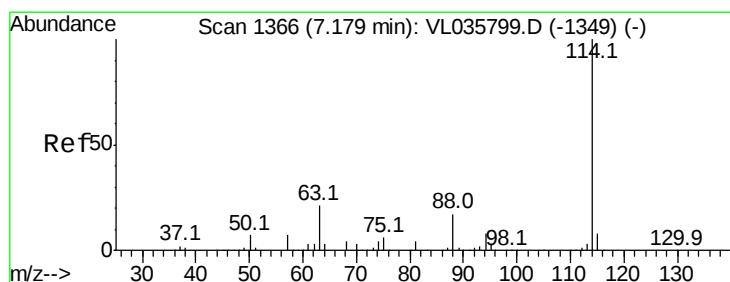
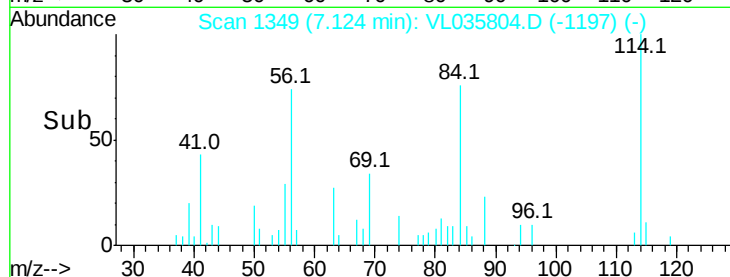
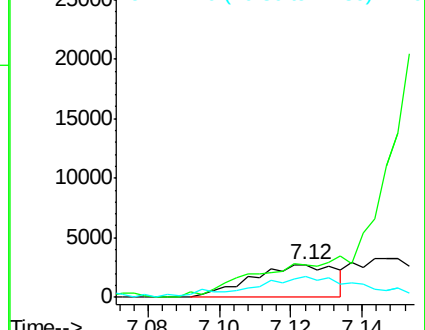
41 95.2 42.1 63.1#



Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. -0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

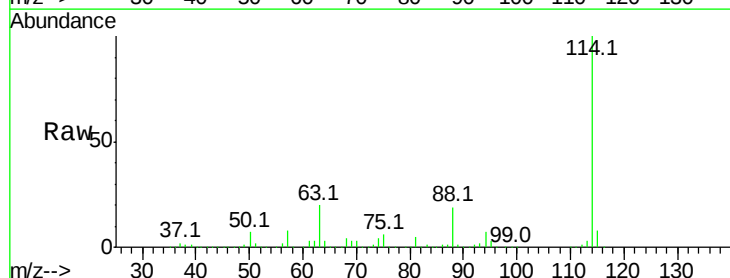
Tgt Ion: 114 Resp: 6021792

Ion Ratio Lower Upper

114 100

63 18.8 16.1 24.1

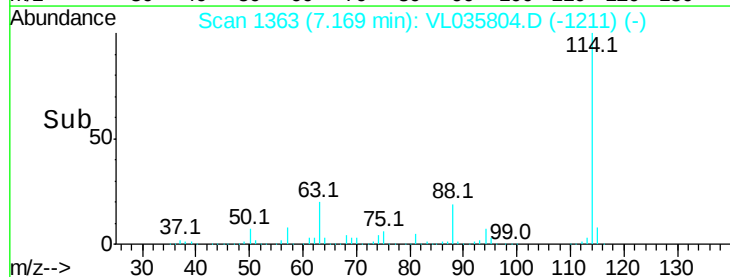
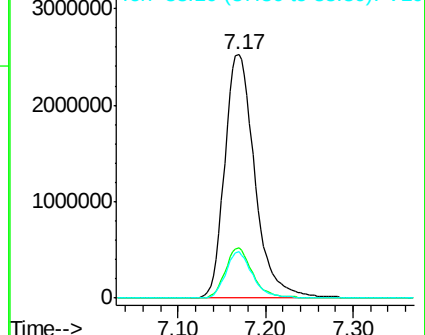
88 17.3 13.7 20.5

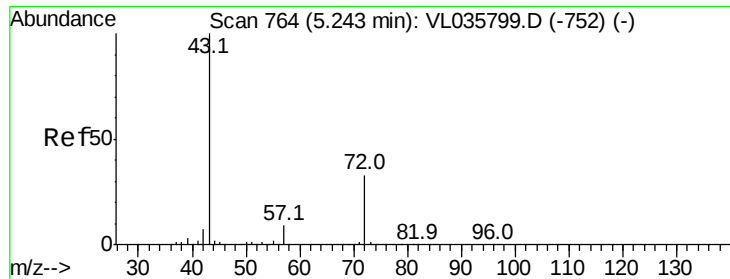


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

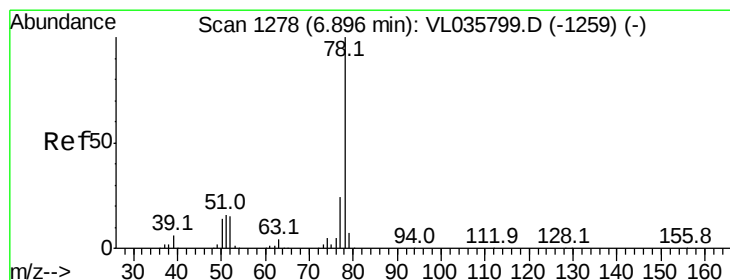
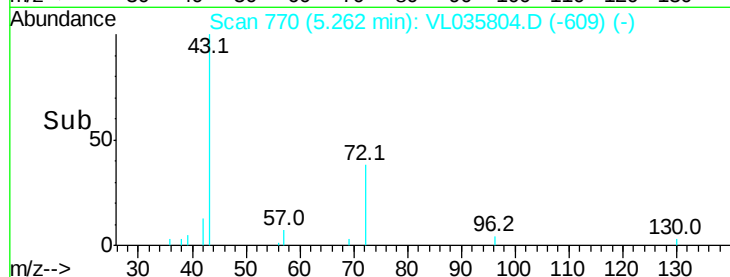
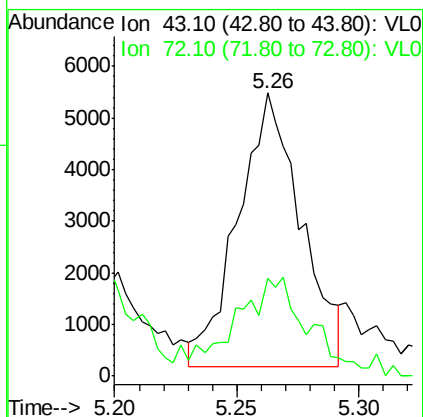
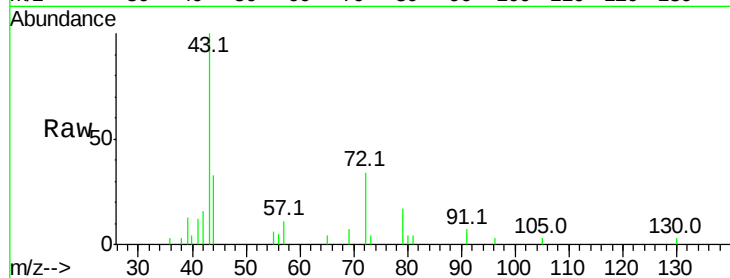




#34
2-Butanone
Concen: 0.048 ppbv
RT: 5.26 min Scan# 770
Delta R.T. 0.02 min
Lab File: VL035804.D
Acq: 3 Nov 2020 13:38

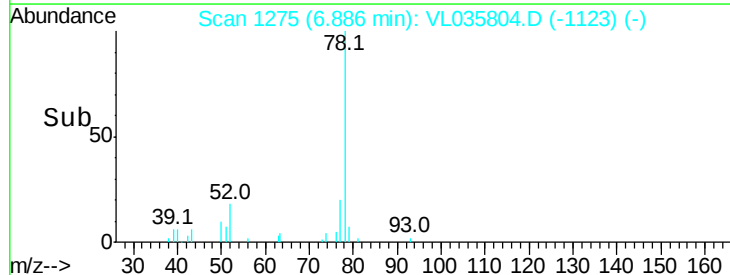
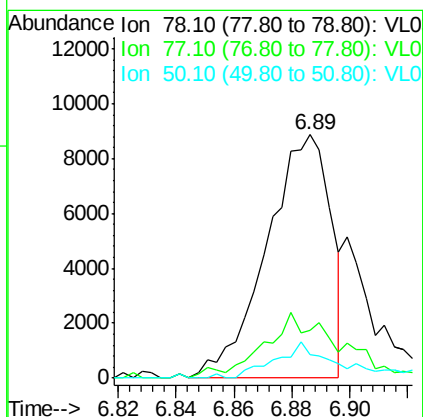
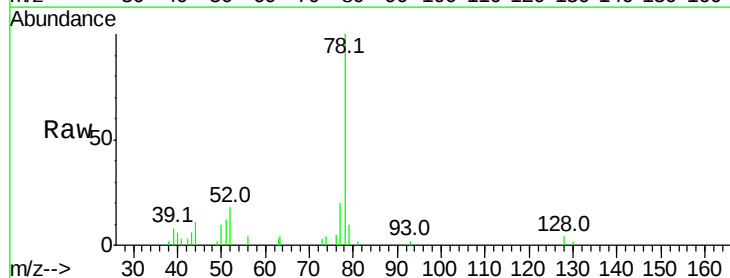
Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.03

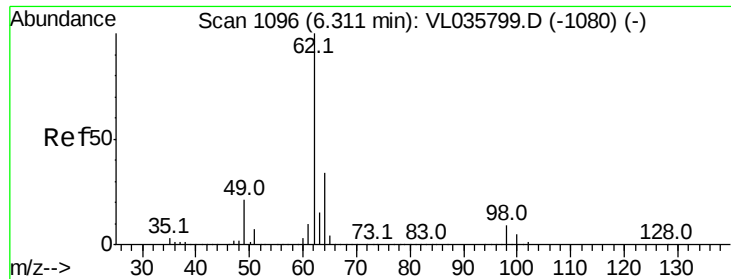
Tgt Ion: 43 Resp: 9517
Ion Ratio Lower Upper
43 100
72 45.1 26.5 39.7#



#36
Benzene
Concen: 0.035 ppbv
RT: 6.89 min Scan# 1275
Delta R.T. -0.01 min
Lab File: VL035804.D
Acq: 3 Nov 2020 13:38

Tgt Ion: 78 Resp: 13604
Ion Ratio Lower Upper
78 100
77 19.6 19.3 28.9
50 9.9 11.4 17.2#

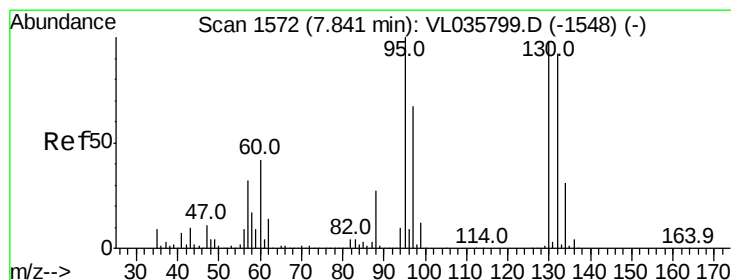
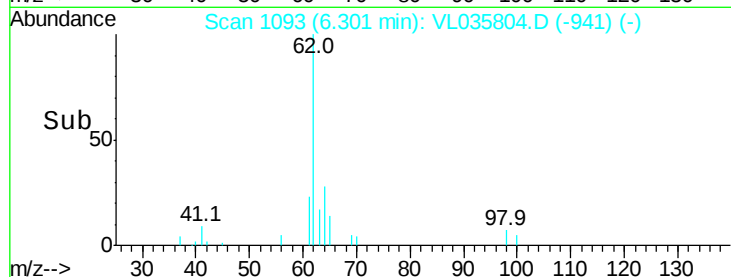
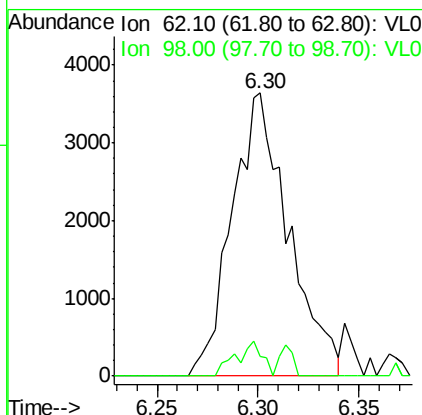
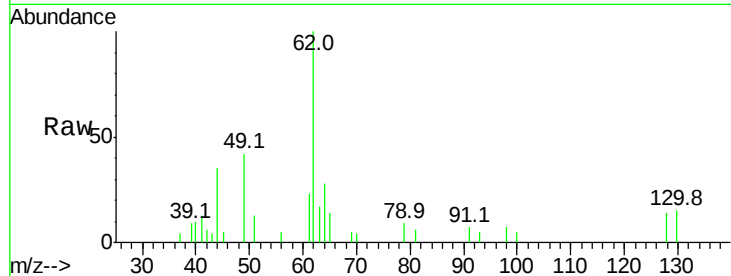




#37
 1,2-Dichloroethane
 Concen: 0.035 ppbv
 RT: 6.30 min Scan# 1093
 Delta R.T. -0.01 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

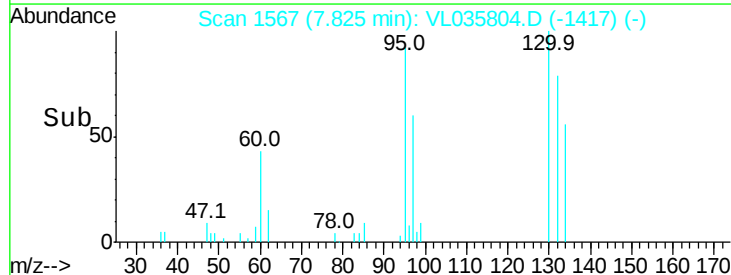
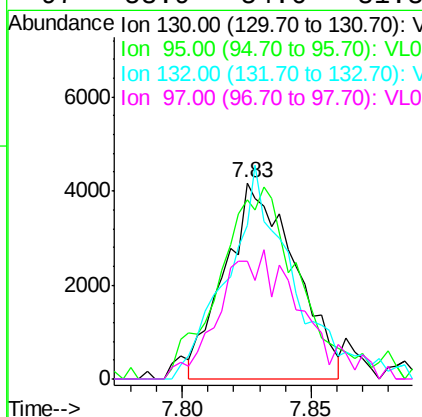
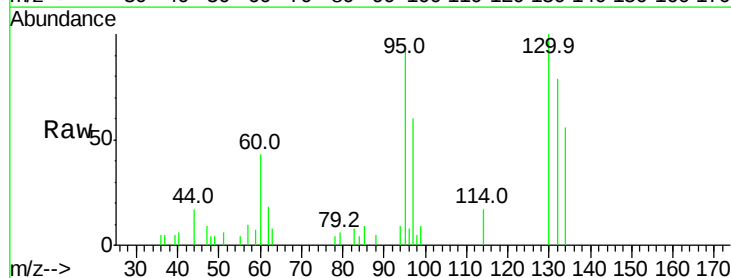
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.03

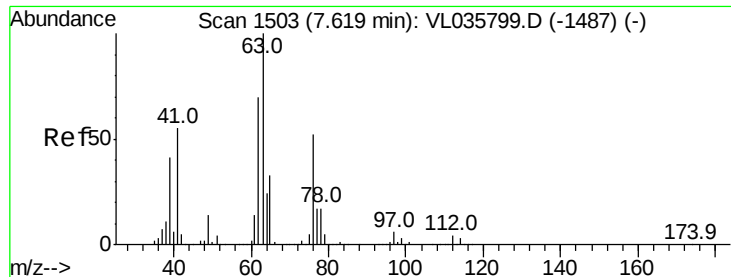
Tgt Ion: 62 Resp: 7122
 Ion Ratio Lower Upper
 62 100
 98 8.4 6.9 10.3



#38
 Trichloroethene
 Concen: 0.040 ppbv
 RT: 7.83 min Scan# 1567
 Delta R.T. -0.02 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

Tgt Ion: 130 Resp: 7879
 Ion Ratio Lower Upper
 130 100
 95 84.2 81.6 122.4
 132 74.5 75.1 112.7#
 97 58.9 54.6 81.8

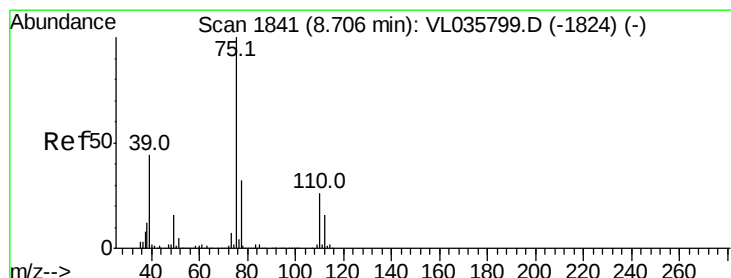
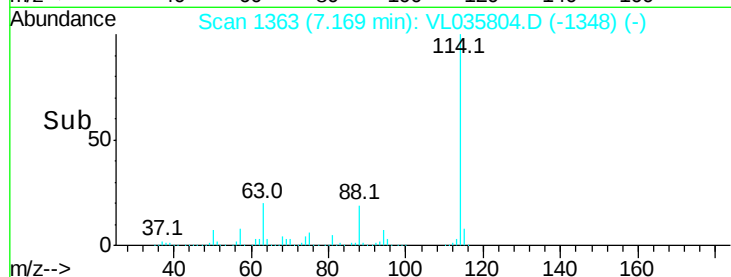
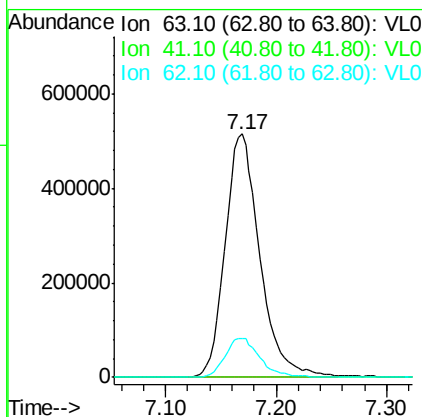
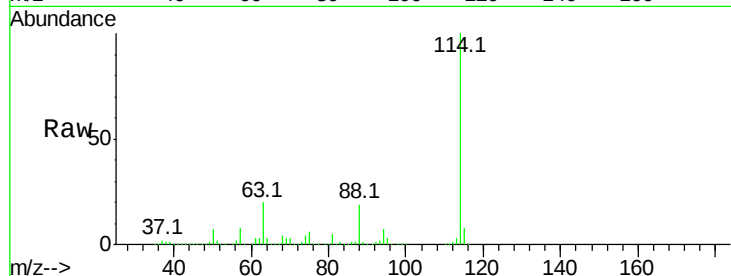




#39
 1,2-Dichloropropane
 Concen: 7.875 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.45 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

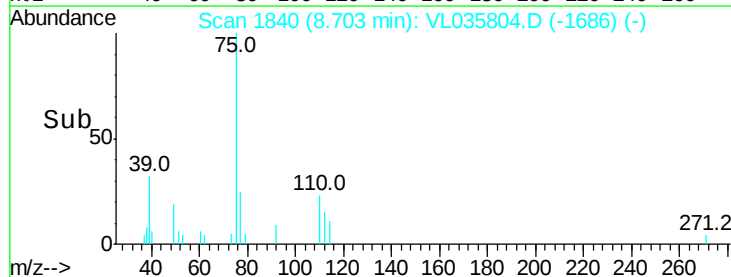
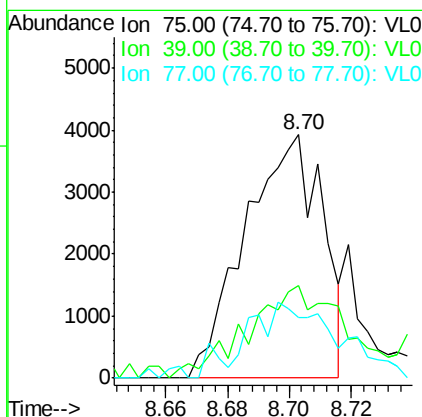
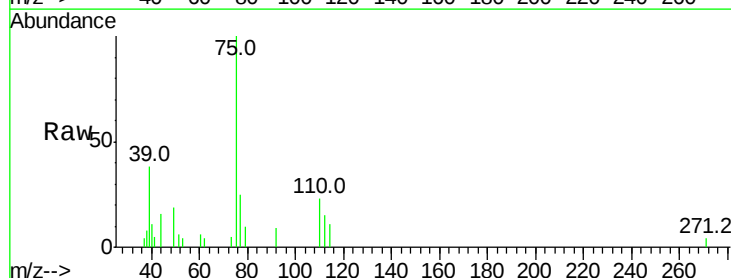
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.03

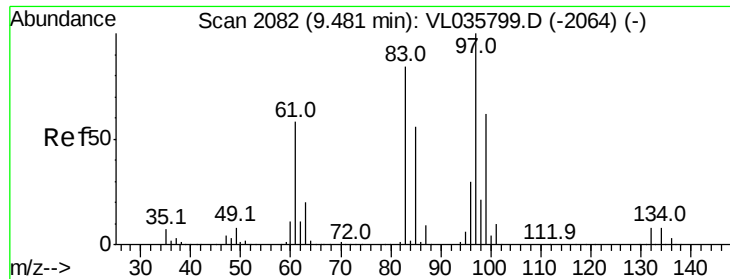
Tgt Ion: 63 Resp: 1119966
 Ion Ratio Lower Upper
 63 100
 41 0.0 43.8 65.6#
 62 16.1 56.2 84.2#



#46
 cis-1,3-Dichloropropene
 Concen: 0.035 ppbv
 RT: 8.70 min Scan# 1840
 Delta R.T. -0.00 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

Tgt Ion: 75 Resp: 6811
 Ion Ratio Lower Upper
 75 100
 39 32.0 35.1 52.7#
 77 24.7 25.7 38.5#

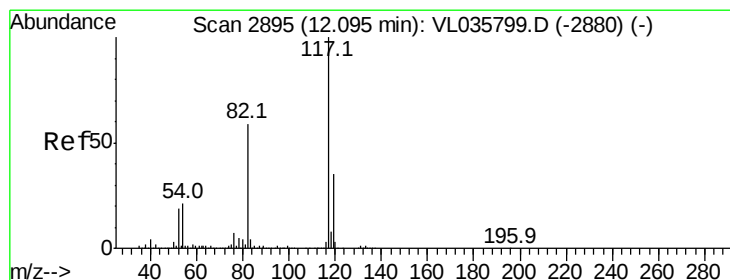
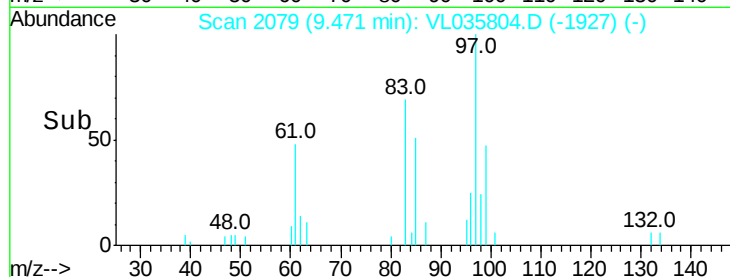
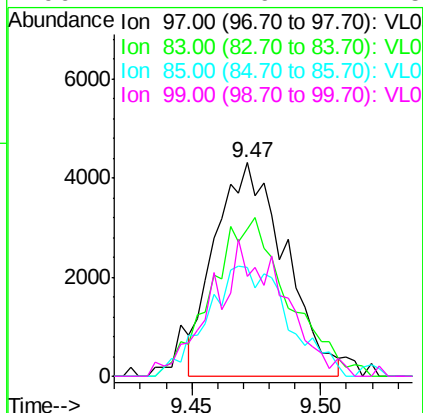
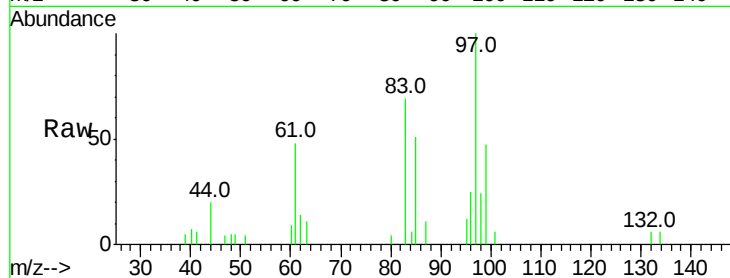




#47
 1,1,2-Trichloroethane
 Concen: 0.040 ppbv
 RT: 9.47 min Scan# 2079
 Delta R.T. -0.01 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

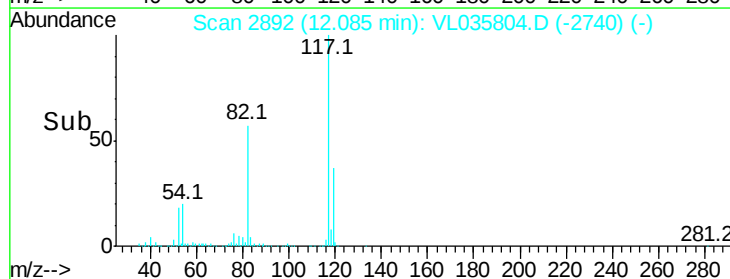
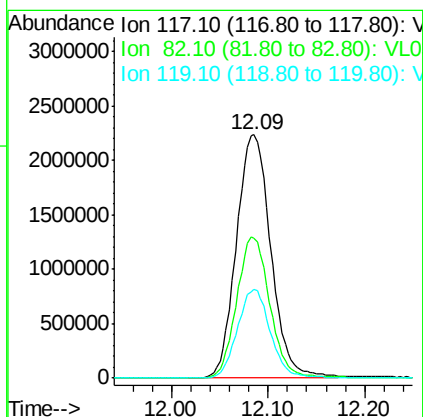
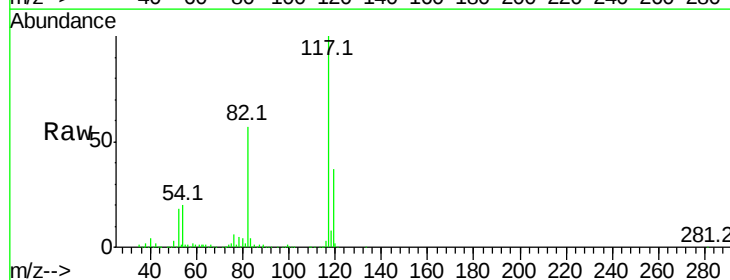
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.03

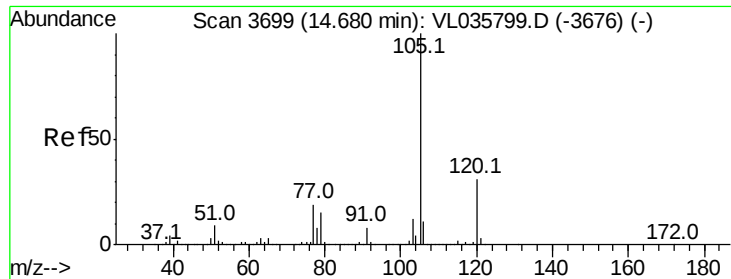
Tgt Ion: 97 Resp: 8148
 Ion Ratio Lower Upper
 97 100
 83 66.4 67.1 100.7#
 85 50.8 44.7 67.1
 99 42.1 49.7 74.5#



#55
 Chlorobenzene-d5
 Concen: 10.000 ppbv
 RT: 12.09 min Scan# 2892
 Delta R.T. -0.01 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

Tgt Ion: 117 Resp: 5543553
 Ion Ratio Lower Upper
 117 100
 82 56.4 50.6 76.0
 119 35.3 52.6 78.8#





#62

Isopropylbenzene

Concen: 0.031 ppbv

RT: 14.67 min Scan# 3696

Delta R.T. -0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

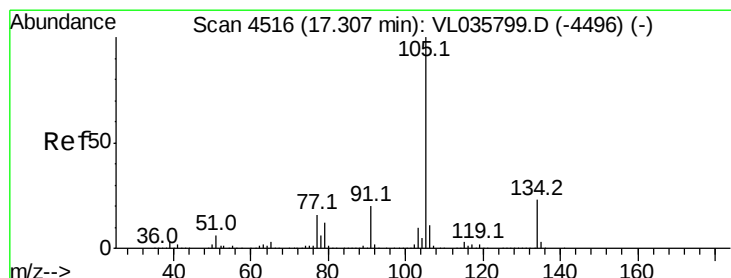
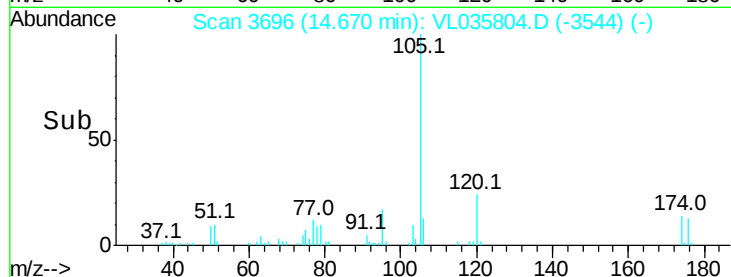
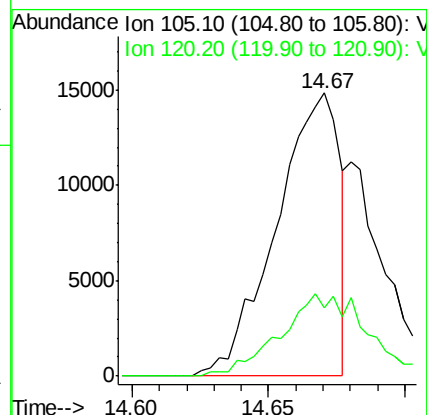
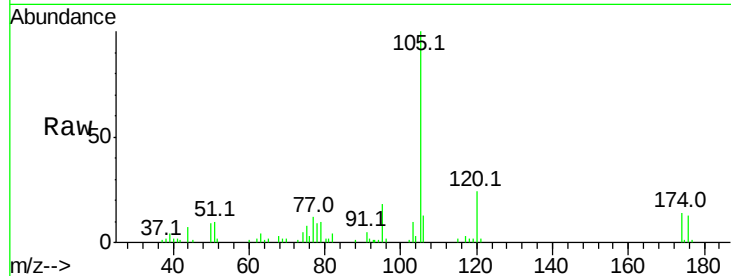
VSTDIC0.03

Tgt Ion:105 Resp: 23915

Ion Ratio Lower Upper

105 100

120 39.9 23.5 35.3#



#67

sec-Butylbenzene

Concen: 0.030 ppbv

RT: 17.30 min Scan# 4514

Delta R.T. -0.01 min

Lab File: VL035804.D

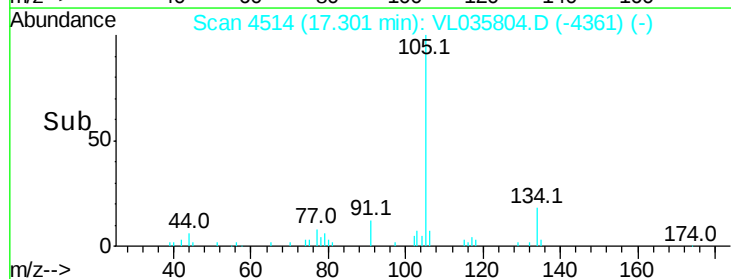
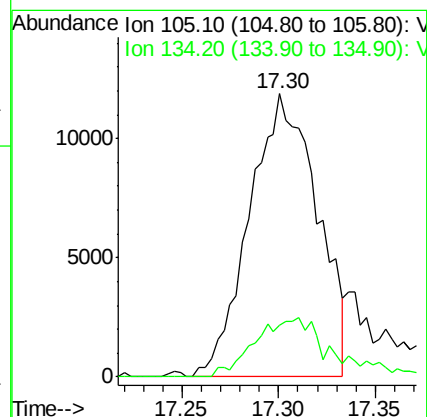
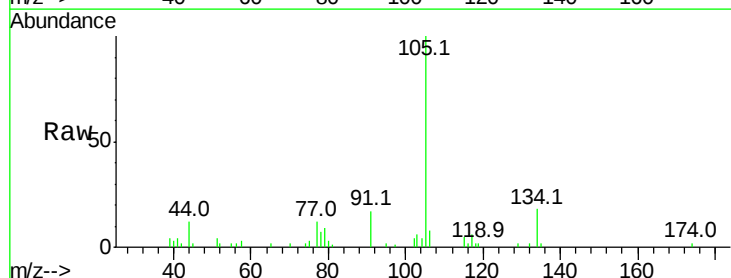
Acq: 3 Nov 2020 13:38

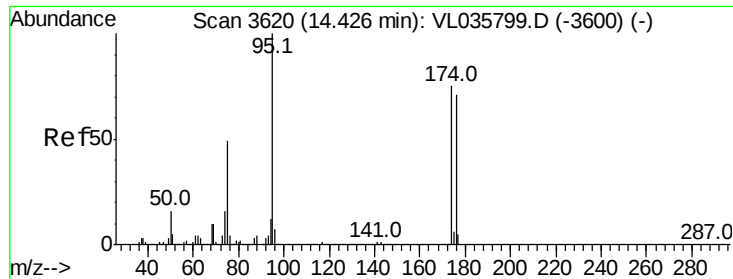
Tgt Ion:105 Resp: 28908

Ion Ratio Lower Upper

105 100

134 24.4 17.0 25.6

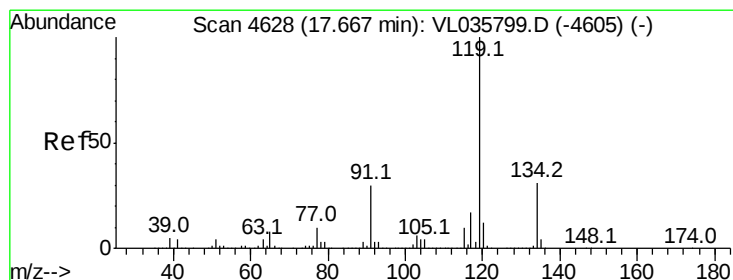
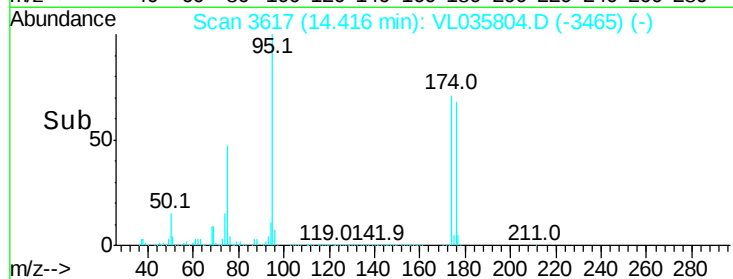
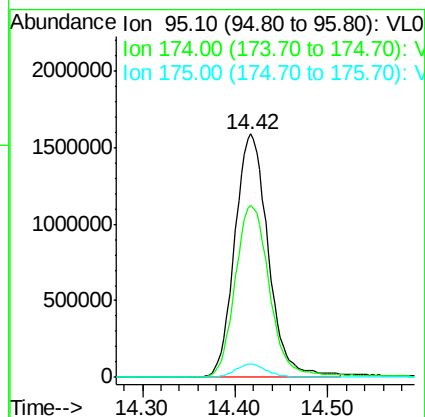
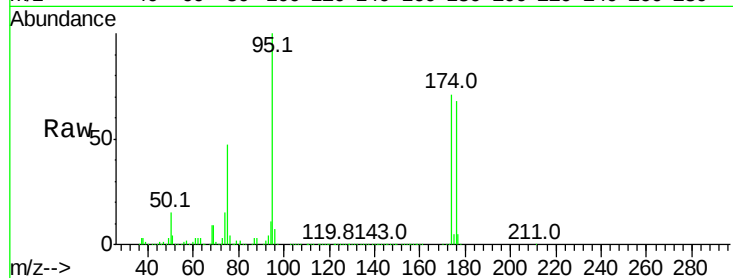




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.584 ppbv
 RT: 14.42 min Scan# 3617
 Delta R.T. -0.01 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

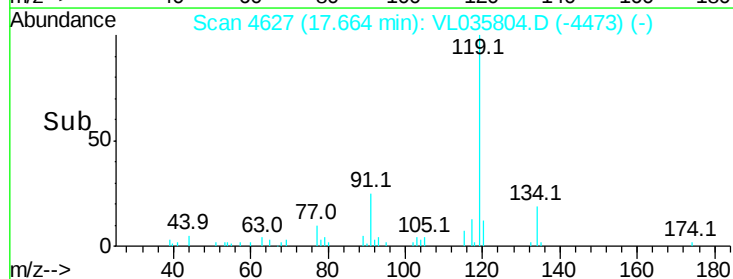
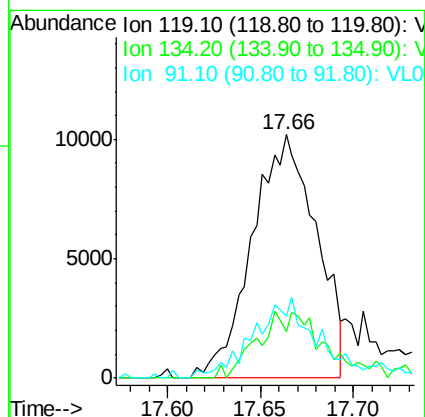
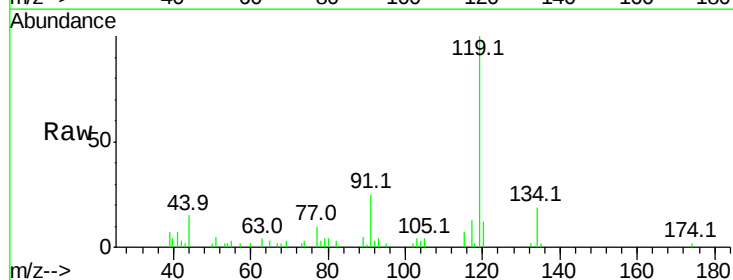
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.03

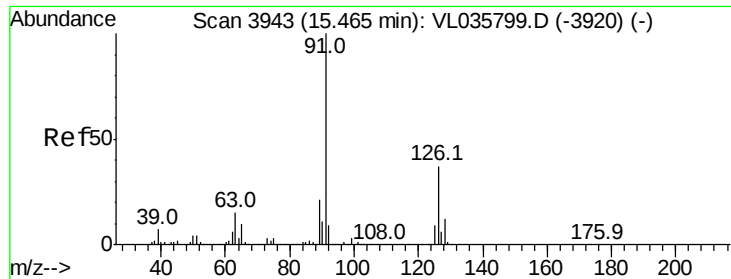
Tgt Ion: 95 Resp: 3981226
 Ion Ratio Lower Upper
 95 100
 174 74.1 59.8 89.6
 175 5.2 4.3 6.5



#69
 p-Isopropyltoluene
 Concen: 0.032 ppbv
 RT: 17.66 min Scan# 4627
 Delta R.T. -0.00 min
 Lab File: VL035804.D
 Acq: 3 Nov 2020 13:38

Tgt Ion: 119 Resp: 24538
 Ion Ratio Lower Upper
 119 100
 134 30.7 23.0 34.6
 91 35.6 22.8 34.2#





#71

2-Chlorotoluene

Concen: 0.044 ppbv

RT: 15.46 min Scan# 3940

Delta R.T. -0.01 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

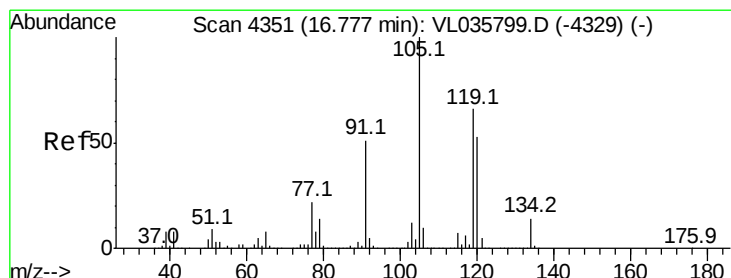
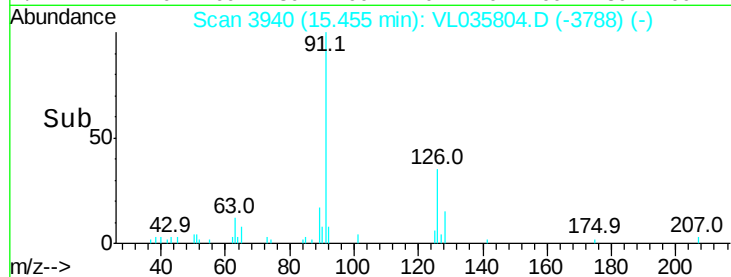
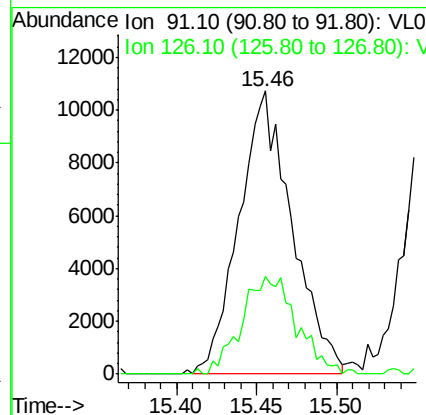
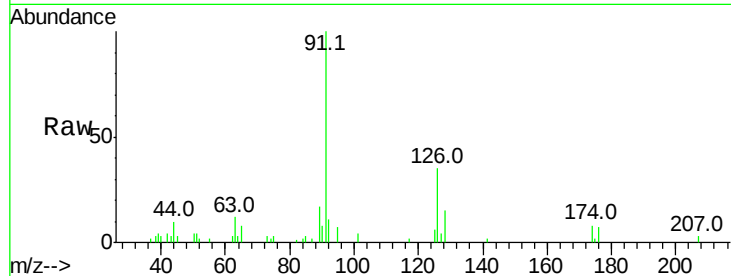
VSTDIC0.03

Tgt Ion: 91 Resp: 24463

Ion Ratio Lower Upper

91 100

126 36.0 14.3 57.1



#74

1,2,4-Trimethylbenzene

Concen: 0.031 ppbv

RT: 16.77 min Scan# 4350

Delta R.T. -0.00 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Tgt Ion: 105 Resp: 19494

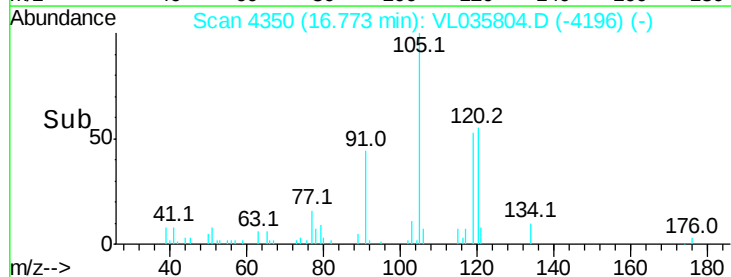
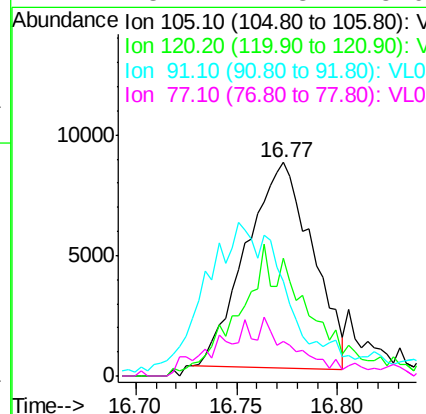
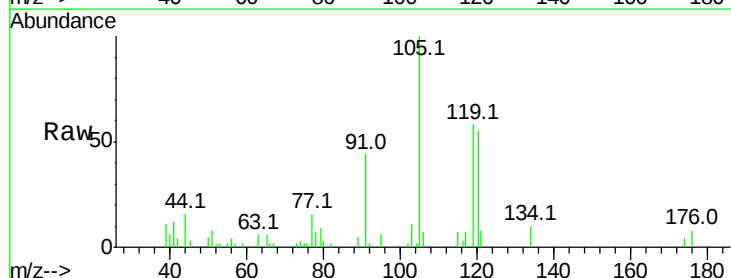
Ion Ratio Lower Upper

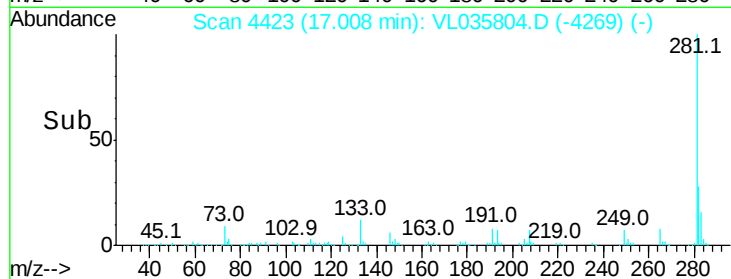
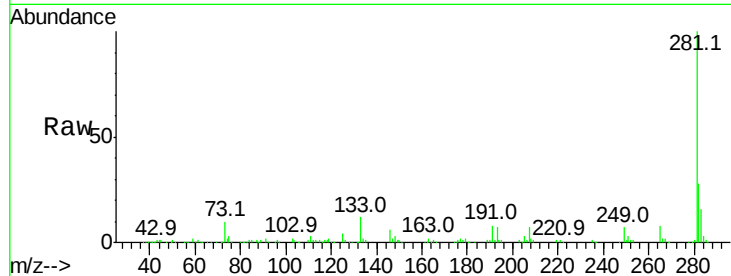
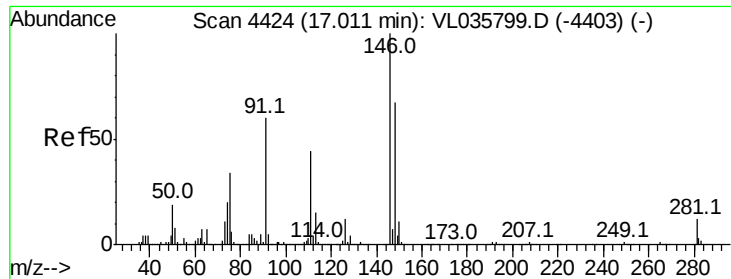
105 100

120 51.8 42.0 63.0

91 37.2 41.0 61.6#

77 13.7 17.3 25.9#





#75

1,3-Dichlorobenzene

Concen: 0.043 ppbv

RT: 17.01 min Scan# 4423

Delta R.T. -0.00 min

Lab File: VL035804.D

Acq: 3 Nov 2020 13:38

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.03

Tgt Ion:146 Resp: 18211

Ion Ratio Lower Upper

146 100

111 68.7 21.8 65.4#

148 72.7 32.5 97.5

