

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL041321\
 Data File : VL036799.D
 Acq On : 13 Apr 2021 12:28
 Operator : SY/AP
 Sample : 0C041221 CAN 10492
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

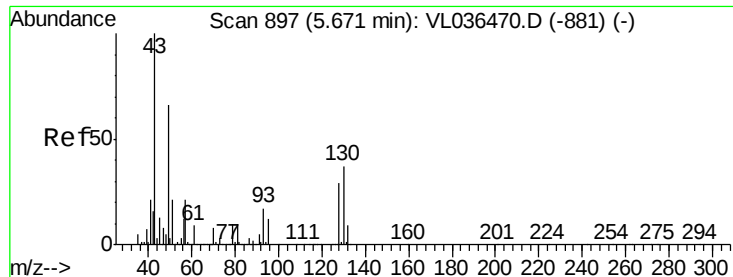
Quant Time: Apr 14 04:39:07 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1354871	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3547567	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	2661290	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	1835214	8.65	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	86.50%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.19	85	17943	0.081 ppbv	93
3) Chlorodifluoromethane	2.99	51	25211	0.100 ppbv	92
4) Chloromethane	3.14	50	7579	0.085 ppbv #	83
6) Bromomethane	3.47	94	1629	0.032 ppbv	89
7) Chloroethane	3.56	64	2034	0.064 ppbv #	79
8) Dichlorotetrafluoroethane	3.19	85	17943	0.085 ppbv	91
11) Trichlorofluoromethane	3.95	101	18867	0.084 ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.49	101	8392	0.058 ppbv #	46
15) Acetone	3.87	43	52885	0.397 ppbv #	1
16) 1,3-Butadiene	3.33	39	5844	0.063 ppbv #	77
20) Methylene Chloride	4.34	84	5145	0.082 ppbv	91
22) trans-1,2-Dichloroethene	4.88	96	2883	0.049 ppbv #	49
23) Vinyl Acetate	5.08	43	17628	0.077 ppbv #	96
26) Hexane	5.68	57	4610	0.031 ppbv #	1
29) Chloroform	5.74	83	19260	0.082 ppbv	96
31) cis-1,2-Dichloroethene	5.55	61	4551	0.032 ppbv	97
32) 1,1,1-Trichloroethane	6.51	97	9436	0.040 ppbv #	1
37) 1,2-Dichloroethane	6.30	62	9110	0.047 ppbv #	88
39) 1,2-Dichloropropane	7.22	63	24268	0.183 ppbv #	29
42) Bromodichloromethane	7.79	83	8348	0.032 ppbv #	83
47) 1,1,2-Trichloroethane	9.47	97	4107	0.031 ppbv #	35
52) Tetrachloroethene	11.22	164	8139	0.068 ppbv #	66
53) Toluene	9.80	91	12910	0.037 ppbv #	63
56) 1,1,1,2-Tetrachloroethane	12.13	131	5303	0.044 ppbv #	1
57) Chlorobenzene	12.14	112	19470	0.086 ppbv #	45
60) o-Xylene	13.69	91	16553	0.051 ppbv #	51
63) 1,1,2,2-Tetrachloroethane	13.68	83	13411	0.054 ppbv #	24
76) 1,4-Dichlorobenzene	17.14	146	7906	0.040 ppbv #	1
80) Naphthalene,2-methyl-	25.00	142	3202	0.078 ppbv #	27

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 Apr 2021 12:28

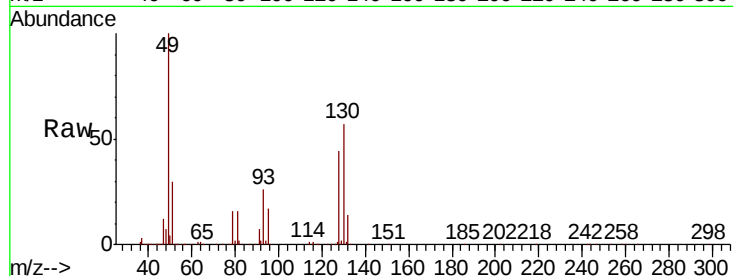
Tot Ion: 49 Resp: 1354871

Ion Ratio Lower Upper

49 100

128 48.9 23.5 70.6

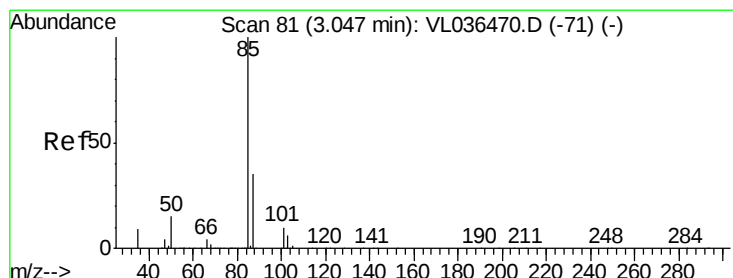
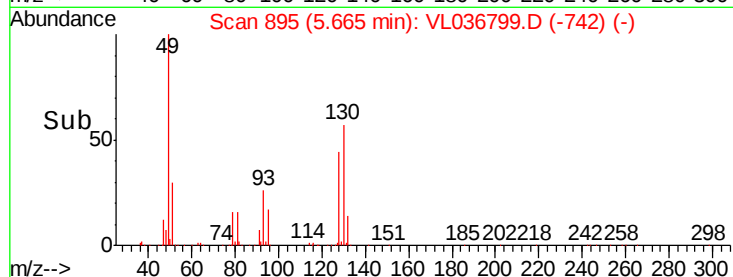
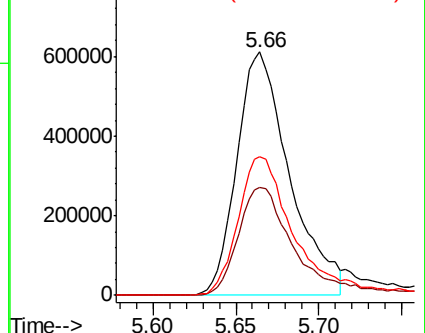
130 62.5 29.1 87.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.081 ppbv

RT: 3.19 min Scan# 124

Delta R.T. 0.14 min

Lab File: VL036799.D

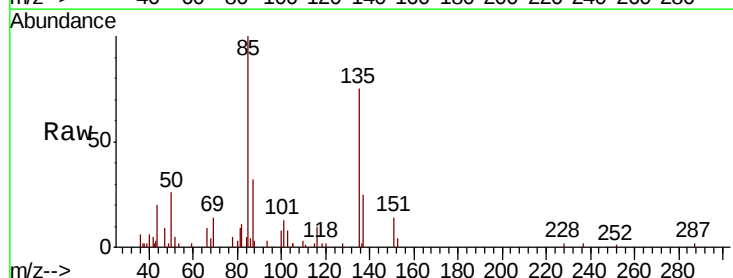
Acq: 13 Apr 2021 12:28

Tgt Ion: 85 Resp: 17943

Ion Ratio Lower Upper

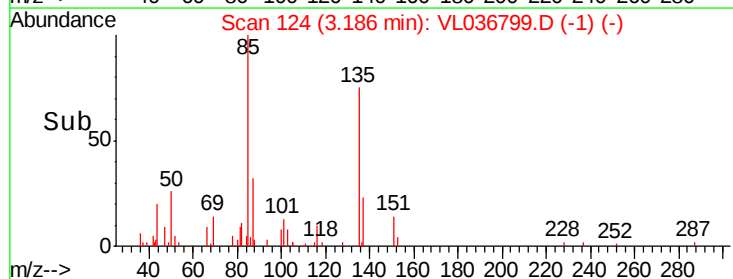
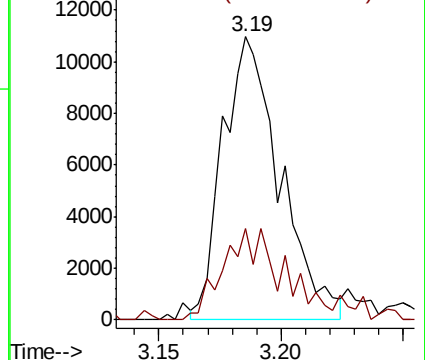
85 100

87 30.8 27.8 41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.100 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

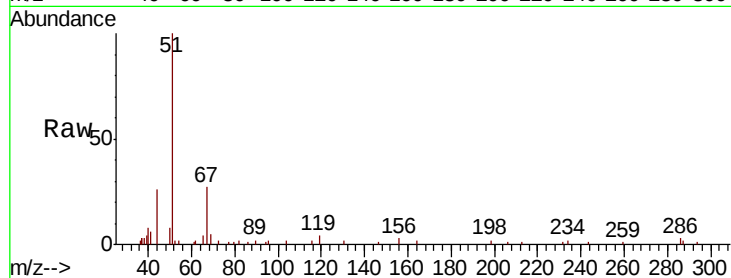
Acq: 13 Apr 2021 12:28

Tot Ion: 51 Resp: 25211

Ion Ratio Lower Upper

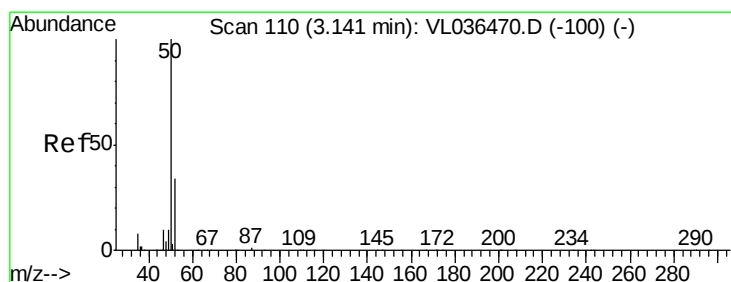
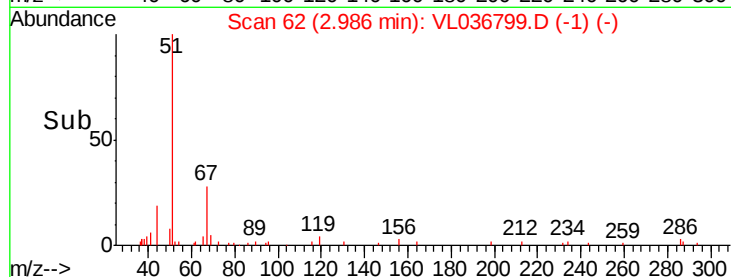
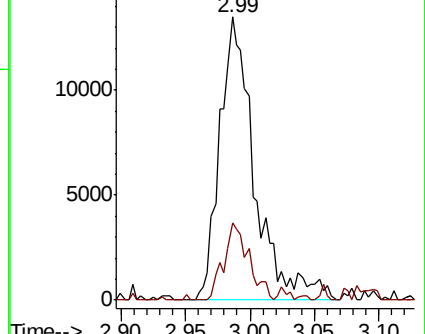
51 100

67 22.0 14.7 22.1



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.085 ppbv

RT: 3.14 min Scan# 111

Delta R.T. 0.00 min

Lab File: VL036799.D

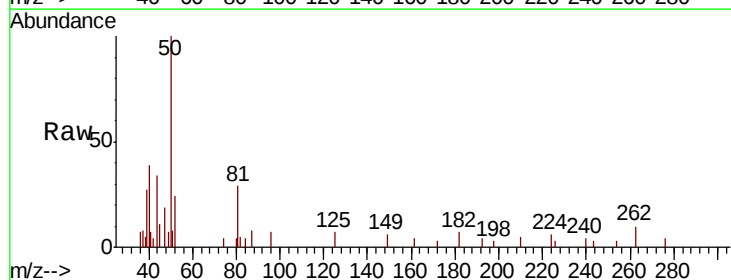
Acq: 13 Apr 2021 12:28

Tgt Ion: 50 Resp: 7579

Ion Ratio Lower Upper

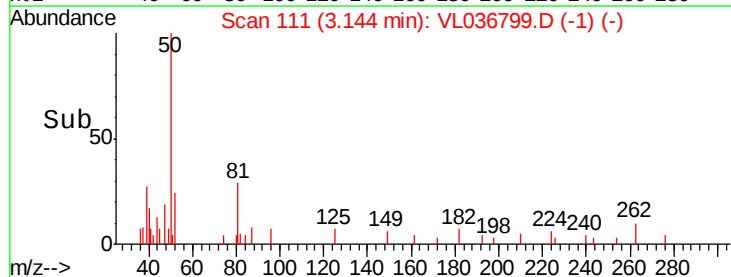
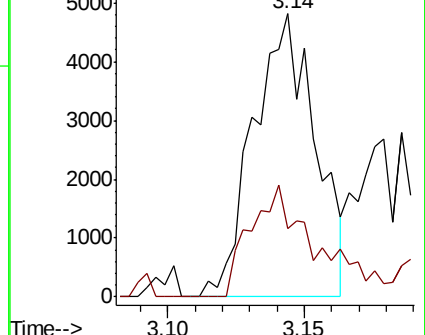
50 100

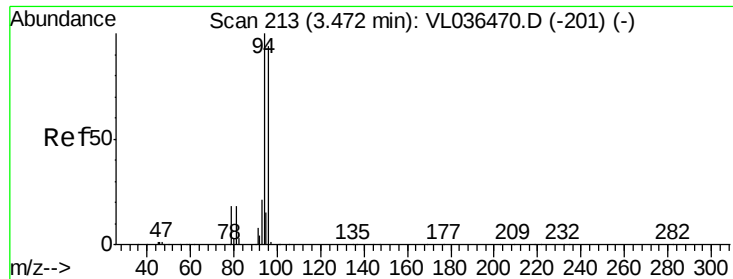
52 24.1 27.0 40.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#6

Bromomethane

Concen: 0.032 ppbv

RT: 3.47 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

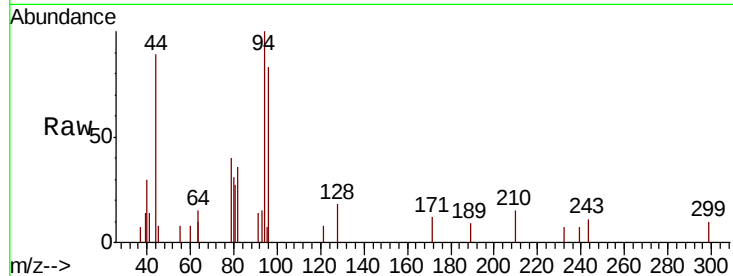
Acq: 13 Apr 2021 12:28

Tot Ion: 94 Resp: 1629

Ion Ratio Lower Upper

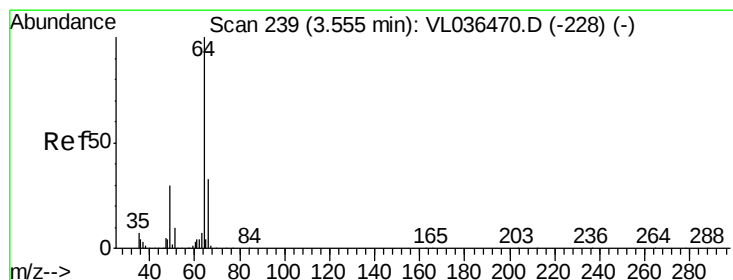
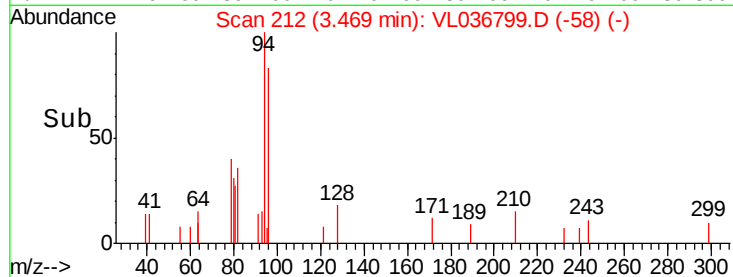
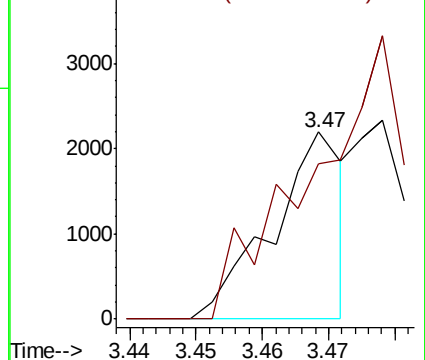
94 100

96 82.8 74.9 112.3



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0



#7

Chloroethane

Concen: 0.064 ppbv

RT: 3.56 min Scan# 239

Delta R.T. -0.00 min

Lab File: VL036799.D

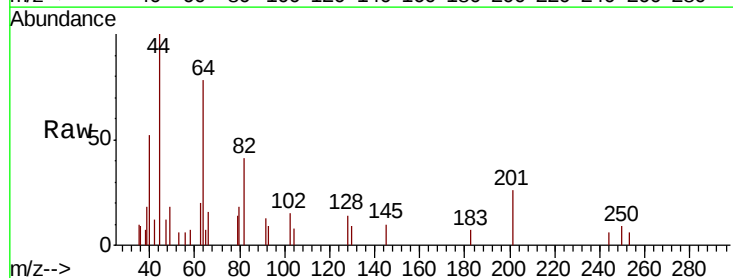
Acq: 13 Apr 2021 12:28

Tgt Ion: 64 Resp: 2034

Ion Ratio Lower Upper

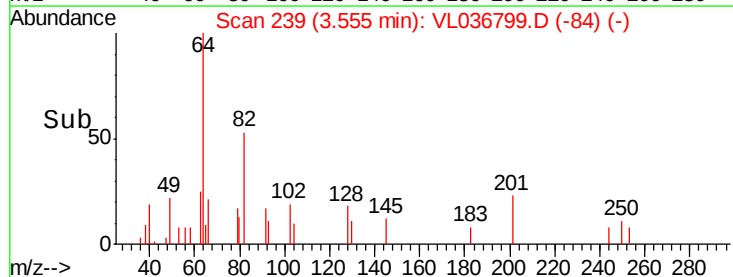
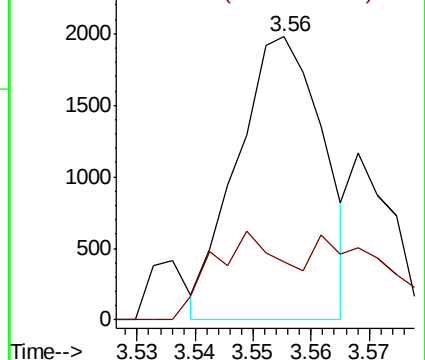
64 100

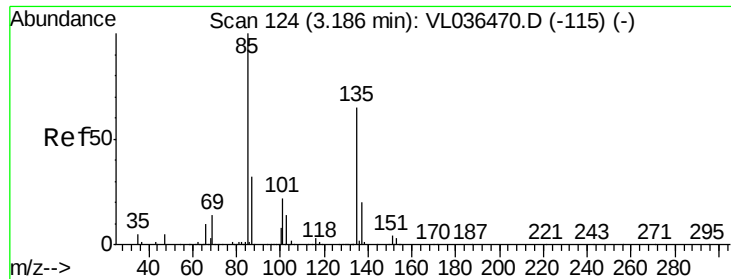
66 20.7 26.2 39.2#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 0.085 ppbv

RT: 3.19 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

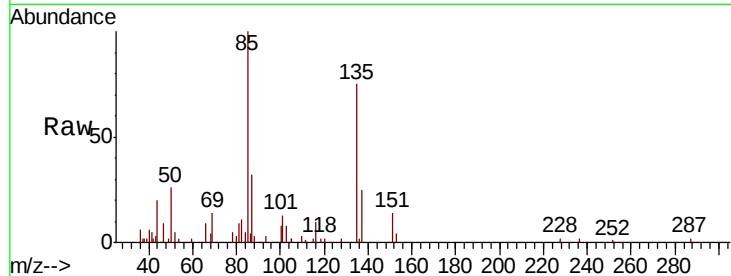
Acq: 13 Apr 2021 12:28

Tot Ion: 85 Resp: 17943

Ion Ratio Lower Upper

85 100

135 75.3 54.3 81.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V

12000

10000

8000

6000

4000

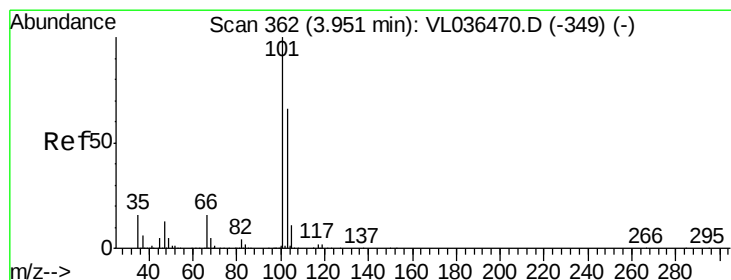
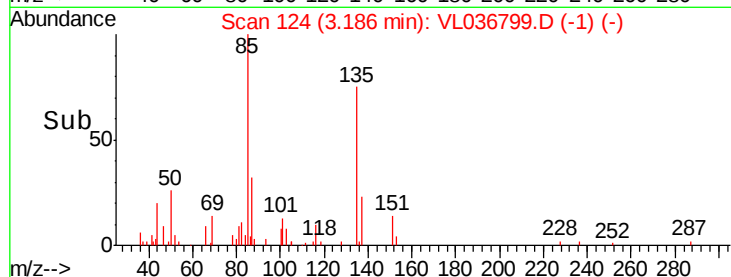
2000

0

3.15

3.20

Time-->



#11

Trichlorofluoromethane

Concen: 0.084 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.00 min

Lab File: VL036799.D

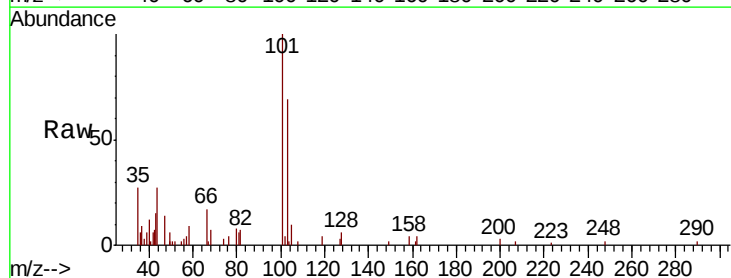
Acq: 13 Apr 2021 12:28

Tgt Ion:101 Resp: 18867

Ion Ratio Lower Upper

101 100

103 68.8 52.5 78.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

12000

10000

8000

6000

4000

2000

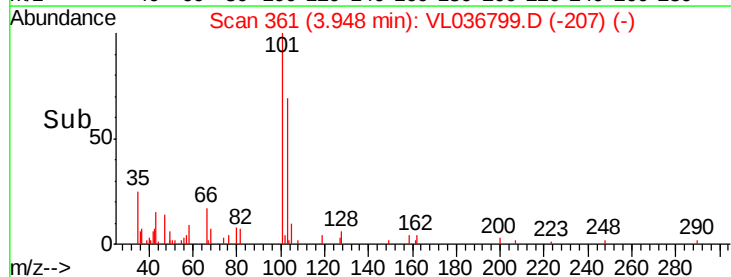
0

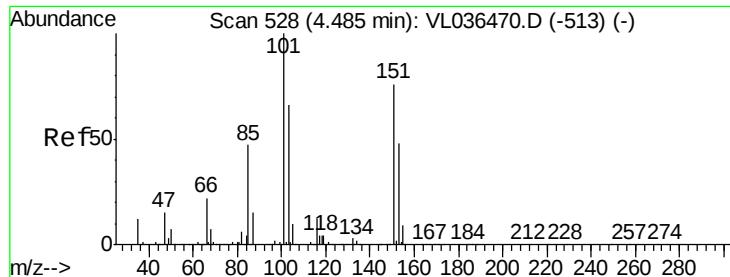
3.90

3.95

4.00

Time-->





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.058 ppbv

RT: 4.49 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

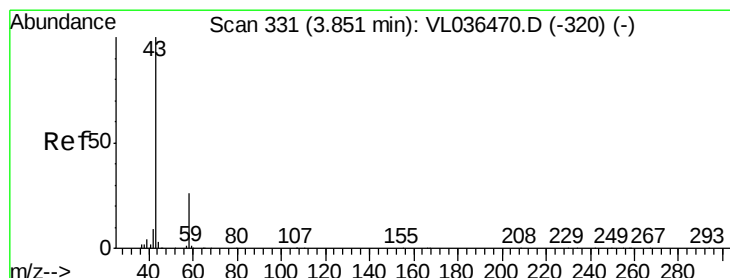
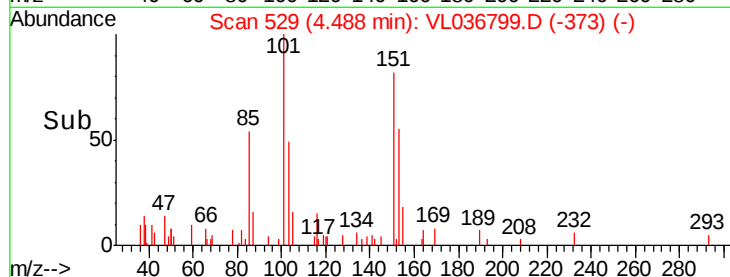
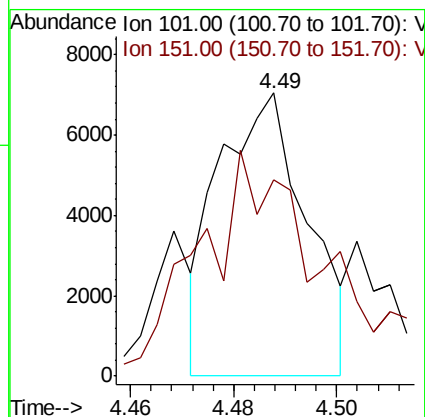
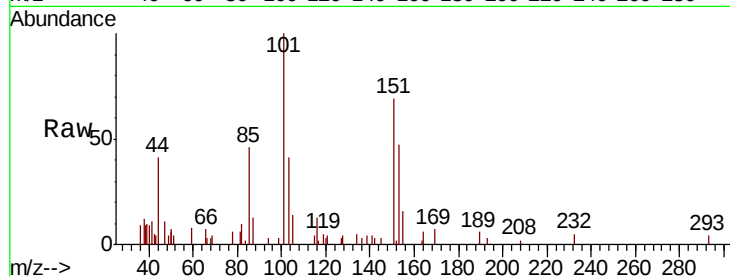
Acq: 13 Apr 2021 12:28

Tot Ion:101 Resp: 8392

Ion Ratio Lower Upper

101 100

151 122.6 60.9 91.3#



#15

Acetone

Concen: 0.397 ppbv

RT: 3.87 min Scan# 338

Delta R.T. 0.02 min

Lab File: VL036799.D

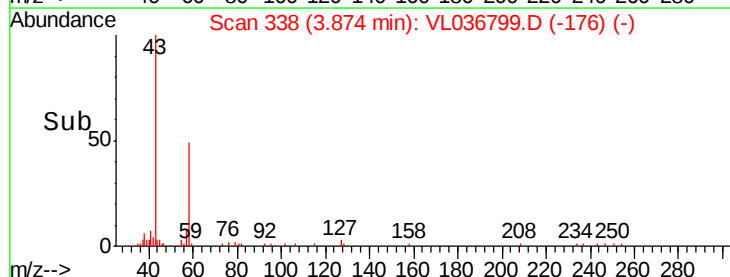
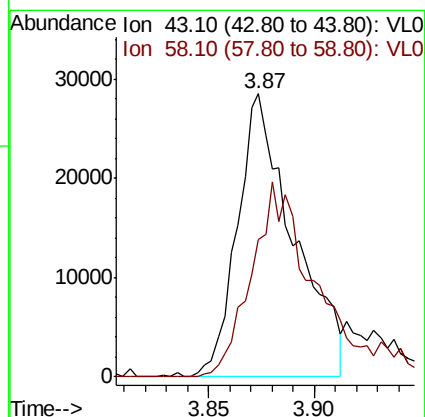
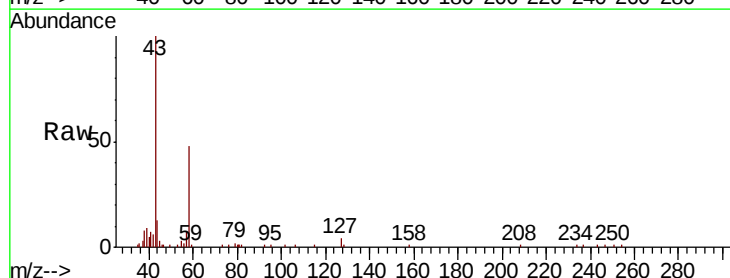
Acq: 13 Apr 2021 12:28

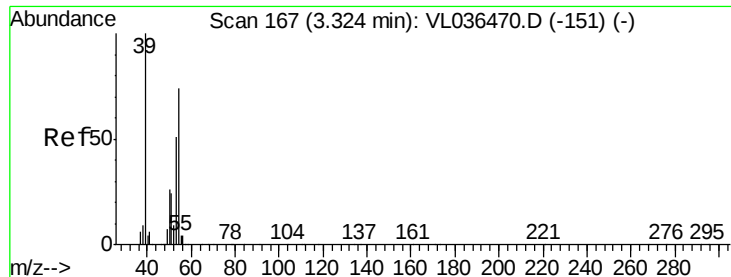
Tgt Ion: 43 Resp: 52885

Ion Ratio Lower Upper

43 100

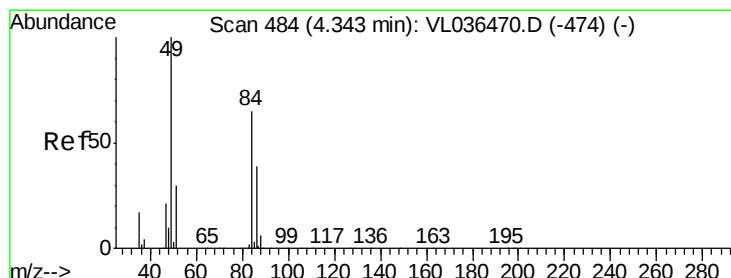
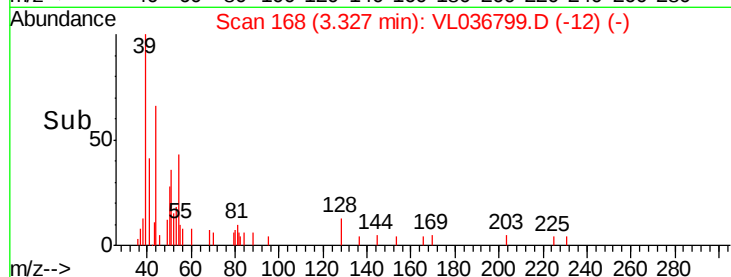
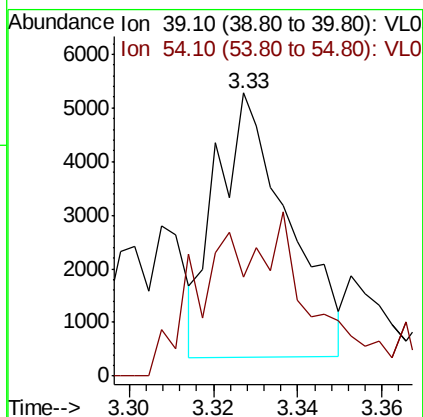
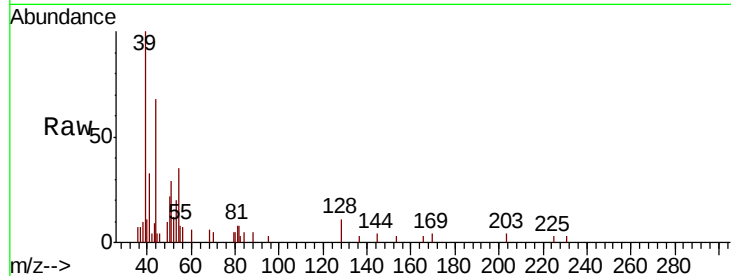
58 84.4 21.2 31.8#





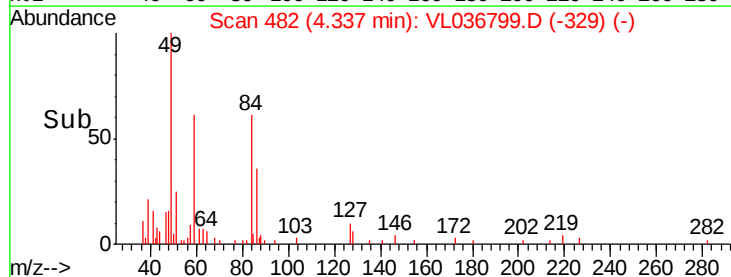
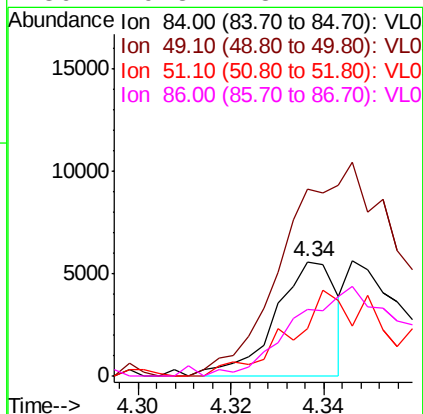
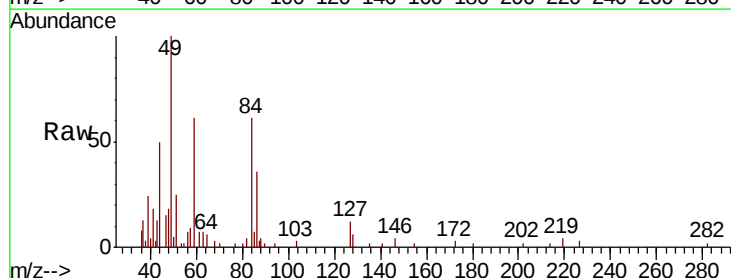
#16
 1,3-Butadiene
 Concen: 0.063 ppbv
 RT: 3.33 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 Apr 2021 12:28

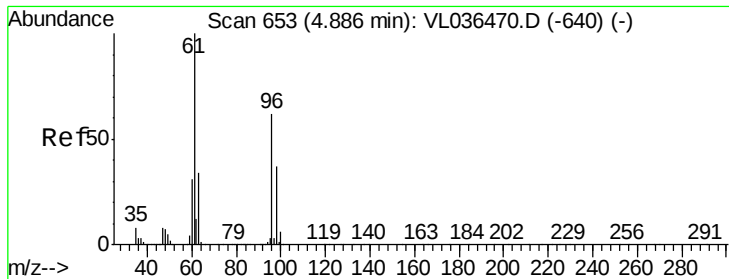
Tot Ion: 39 Resp: 5844
 Ion Ratio Lower Upper
 39 100
 54 93.3 58.8 88.2#



#20
 Methylene Chloride
 Concen: 0.082 ppbv
 RT: 4.34 min Scan# 482
 Delta R.T. -0.01 min
 Lab File: VL036799.D
 Acq: 13 Apr 2021 12:28

Tgt Ion: 84 Resp: 5145
 Ion Ratio Lower Upper
 84 100
 49 164.1 122.9 184.3
 51 41.2 36.9 55.3
 86 49.3 48.2 72.4





#22

trans-1,2-Dichloroethene

Concen: 0.049 ppbv

RT: 4.88 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 Apr 2021 12:28

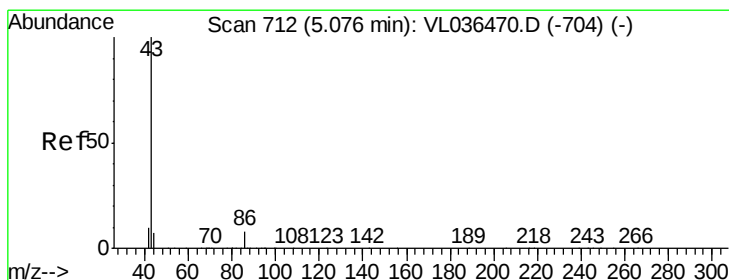
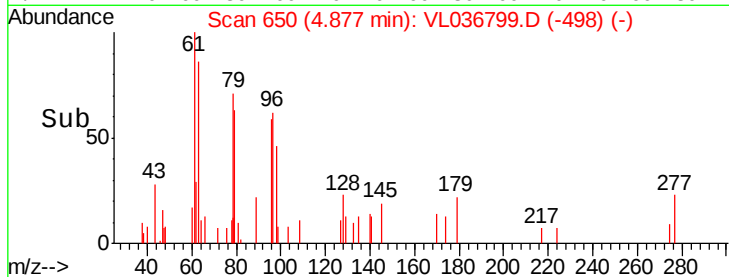
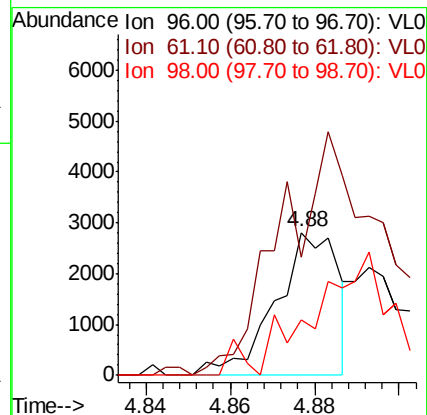
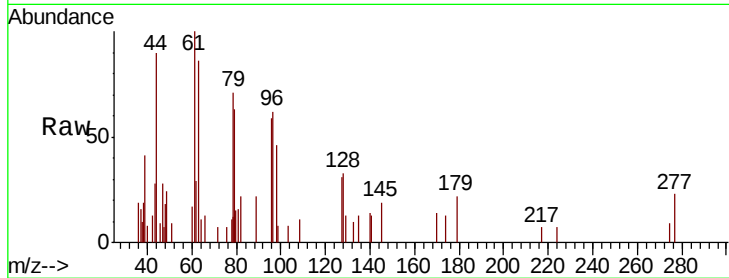
Tot Ion: 96 Resp: 2883

Ion Ratio Lower Upper

96 100

61 83.1 129.4 194.0#

98 38.5 48.2 72.4#



#23

Vinyl Acetate

Concen: 0.077 ppbv

RT: 5.08 min Scan# 712

Delta R.T. -0.00 min

Lab File: VL036799.D

Acq: 13 Apr 2021 12:28

Tgt Ion: 43 Resp: 17628

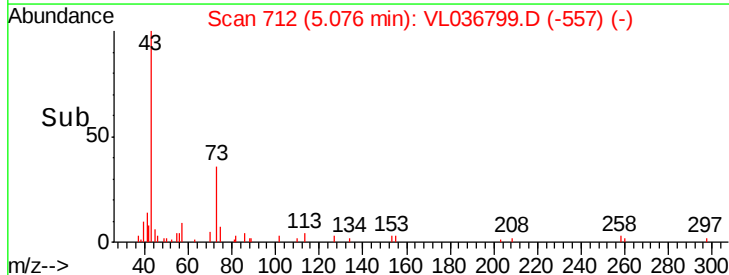
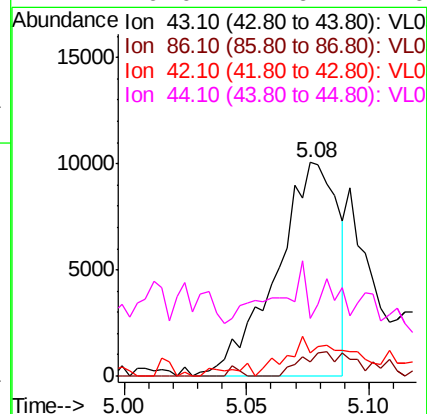
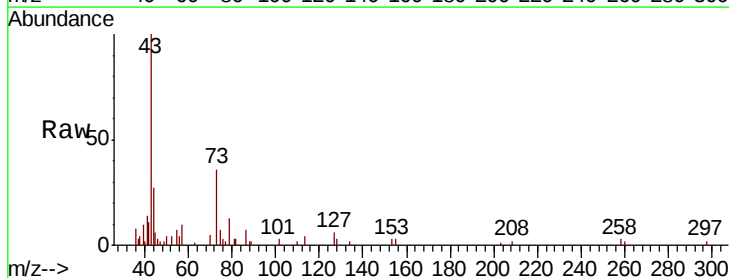
Ion Ratio Lower Upper

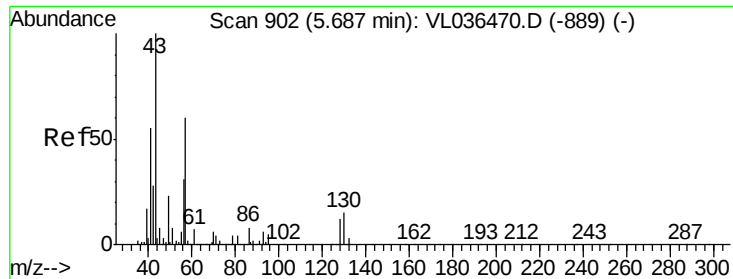
43 100

86 6.6 5.4 8.0

42 10.6 8.5 12.7

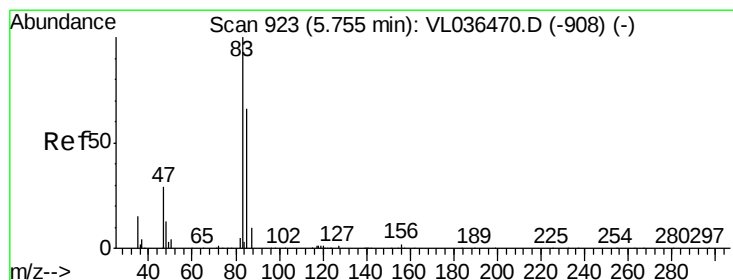
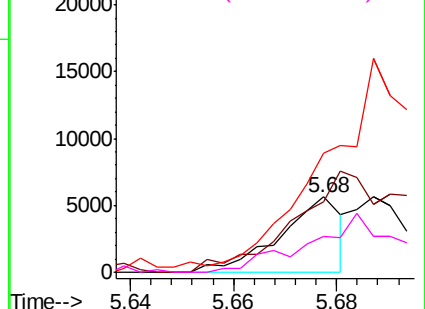
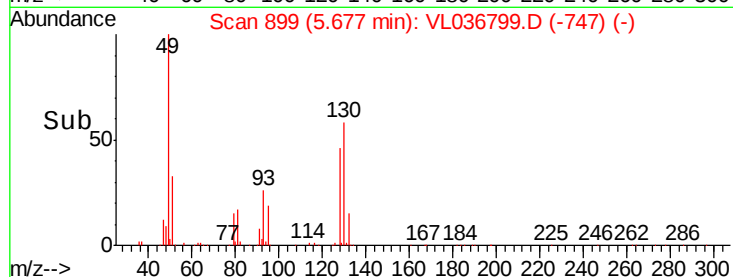
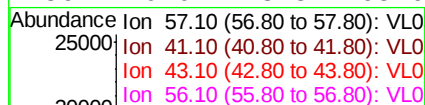
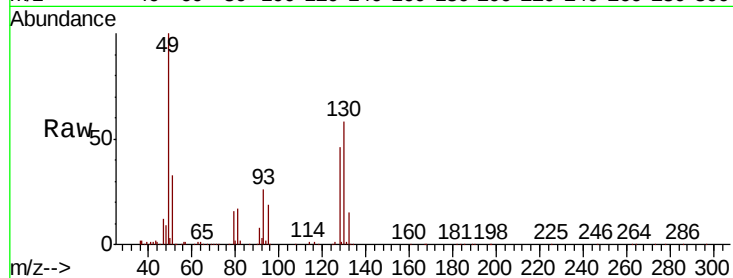
44 0.0 4.6 7.0#





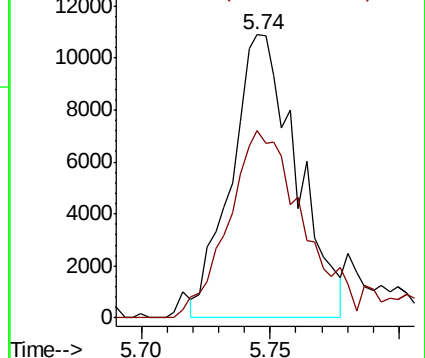
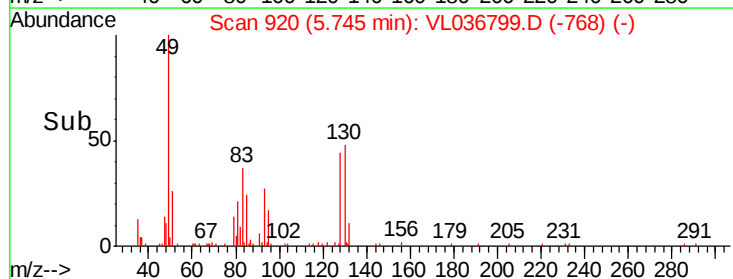
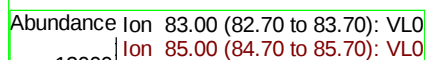
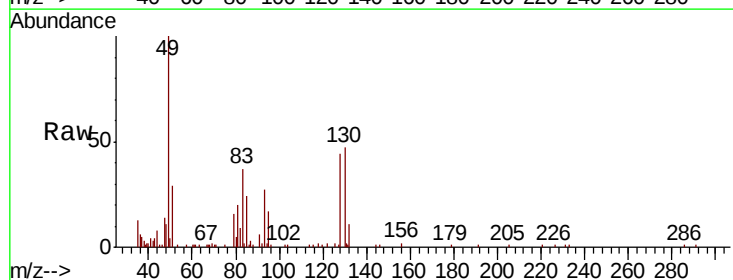
#26
Hexane
Concen: 0.031 ppbv
RT: 5.68
Instrument: MSVOA_L
Delta R.T.:
Lab File: ClientSampleId:
Acq: 13 Apr 2021 12:28

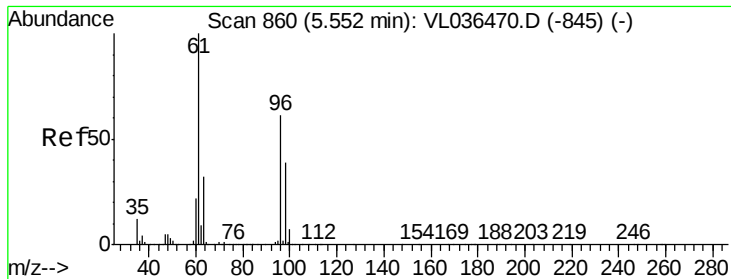
Tot Ion:	57	Resp:	4610
Ion	Ratio	Lower	Upper
57	100		
41	0.0	77.2	115.8#
43	0.0	173.8	260.6#
56	0.0	43.8	65.6#



#29
Chloroform
Concen: 0.082 ppbv
RT: 5.74 min Scan# 920
Delta R.T. -0.01 min
Lab File: VL036799.D
Acq: 13 Apr 2021 12:28

Tgt Ion:	83	Resp:	19260
Ion	Ratio	Lower	Upper
83	100		
85	62.7	52.6	78.8





#31

cis-1,2-Dichloroethene

Concen: 0.032 ppbv

RT: 5.55 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 13 Apr 2021 12:28

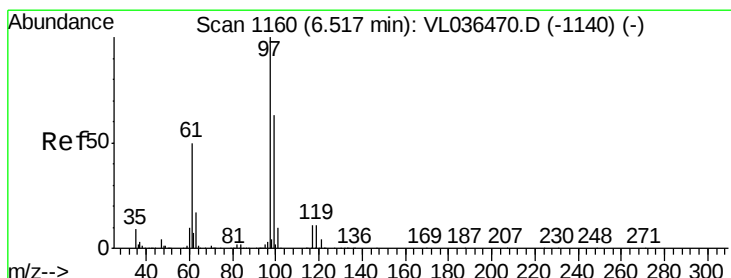
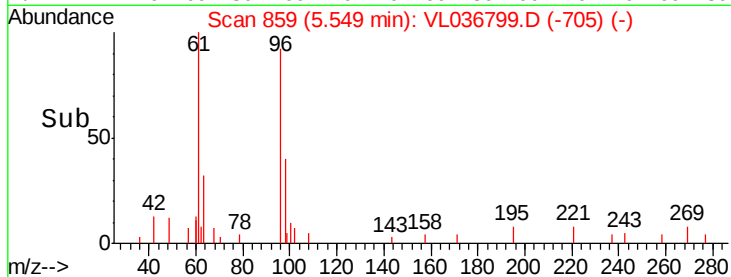
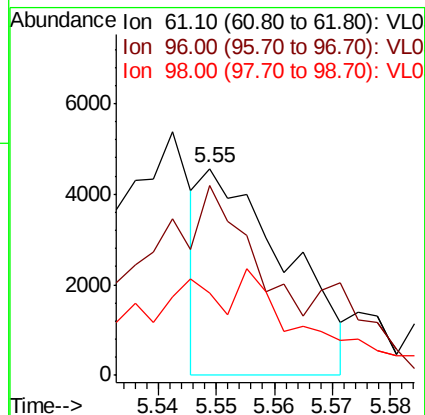
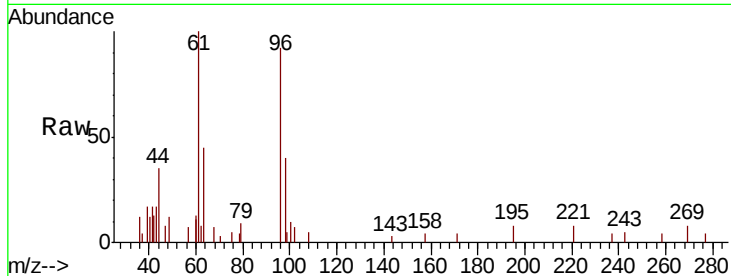
Tot Ion: 61 Resp: 4551

Ion Ratio Lower Upper

61 100

96 62.7 48.7 73.1

98 36.6 31.4 47.0



#32

1,1,1-Trichloroethane

Concen: 0.040 ppbv

RT: 6.51 min Scan# 1157

Delta R.T. -0.01 min

Lab File: VL036799.D

Acq: 13 Apr 2021 12:28

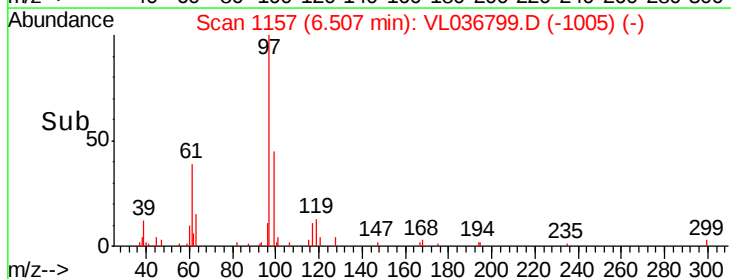
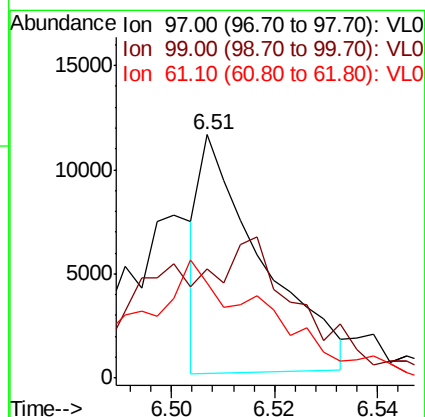
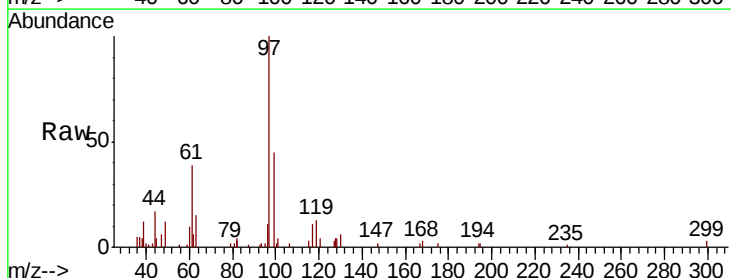
Tgt Ion: 97 Resp: 9436

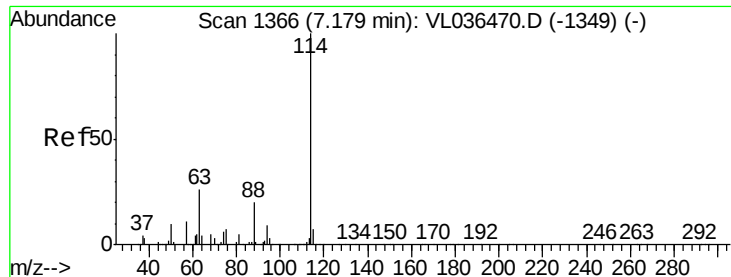
Ion Ratio Lower Upper

97 100

99 152.4 51.4 77.0#

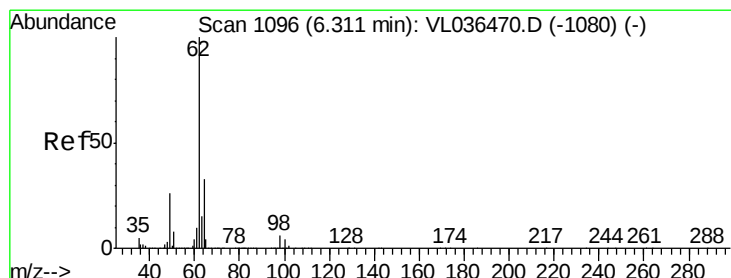
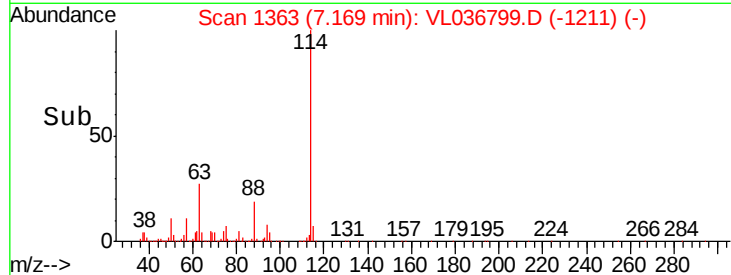
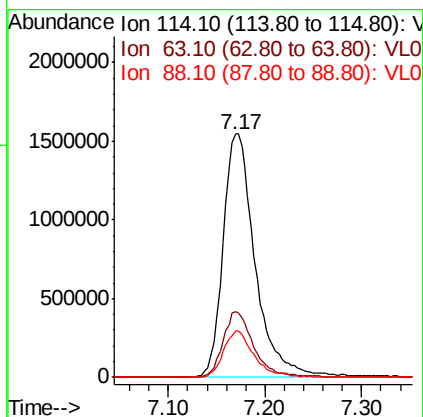
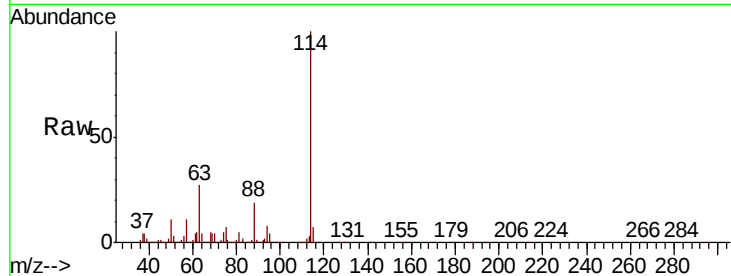
61 112.1 40.6 60.8#





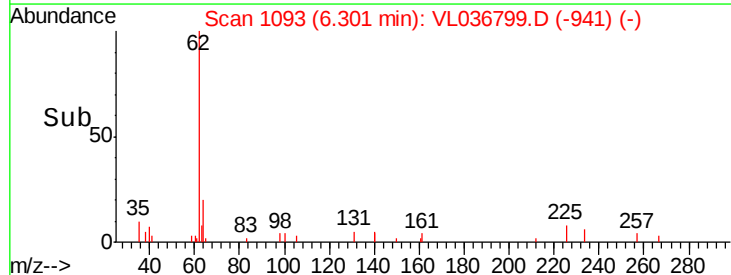
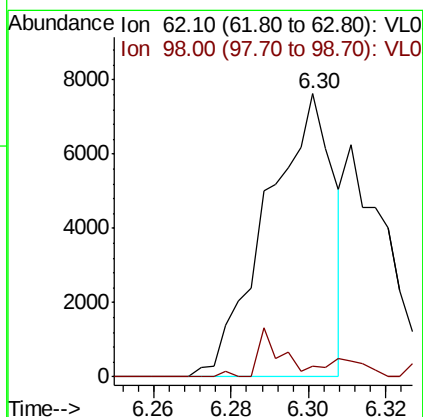
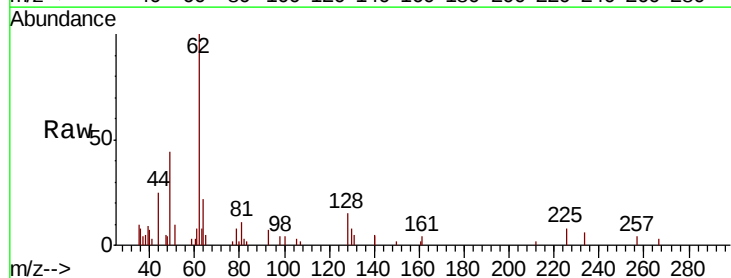
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 Apr 2021 12:28

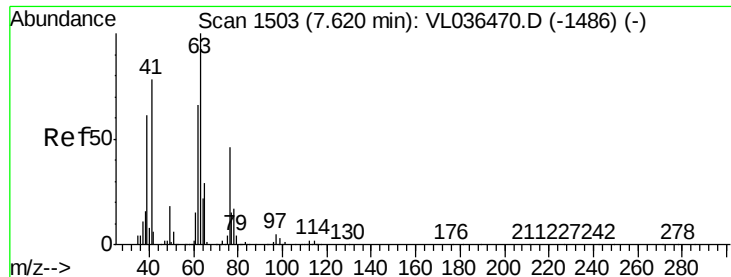
Tot Ion:114 Resp: 3547567
 Ion Ratio Lower Upper
 114 100
 63 26.6 22.4 33.6
 88 18.6 15.4 23.0



#37
 1,2-Dichloroethane
 Concen: 0.047 ppbv
 RT: 6.30 min Scan# 1093
 Delta R.T. -0.01 min
 Lab File: VL036799.D
 Acq: 13 Apr 2021 12:28

Tgt Ion: 62 Resp: 9110
 Ion Ratio Lower Upper
 62 100
 98 10.1 4.9 7.3#





#39

1,2-Dichloropropane

Concen: 0.183 ppbv

RT: 7.22 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 Apr 2021 12:28

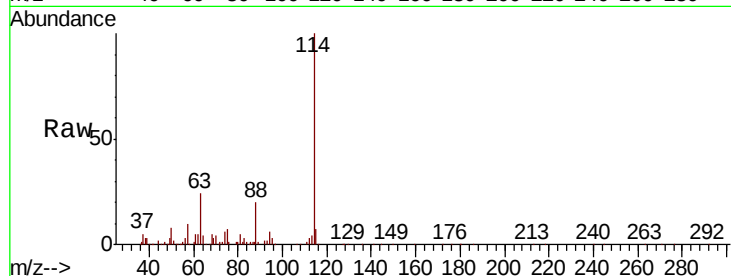
Tot Ion: 63 Resp: 24268

Ion Ratio Lower Upper

63 100

41 3.2 62.4 93.6#

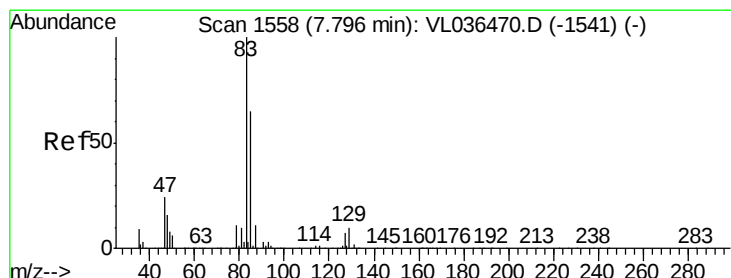
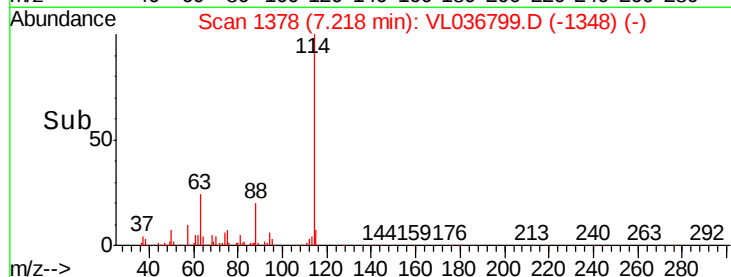
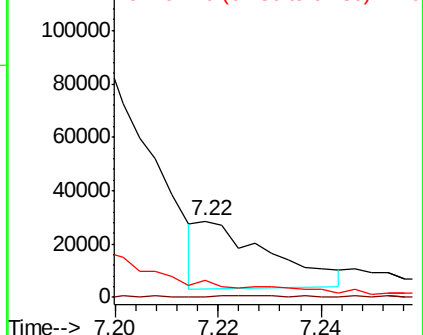
62 24.4 52.8 79.2#



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



#42

Bromodichloromethane

Concen: 0.032 ppbv

RT: 7.79 min Scan# 1556

Delta R.T. -0.01 min

Lab File: VL036799.D

Acq: 13 Apr 2021 12:28

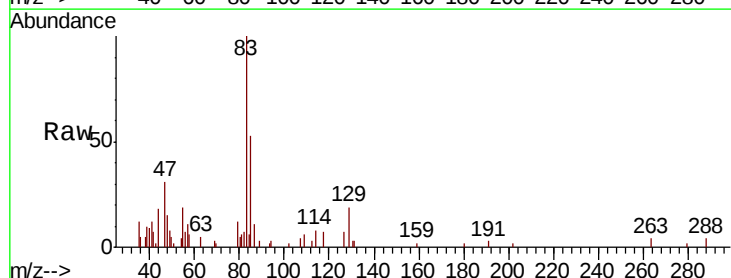
Tgt Ion: 83 Resp: 8348

Ion Ratio Lower Upper

83 100

85 50.0 51.8 77.6#

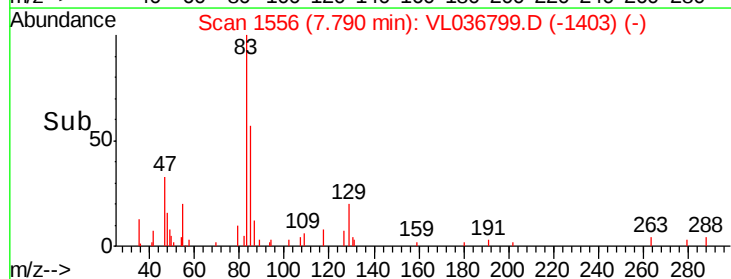
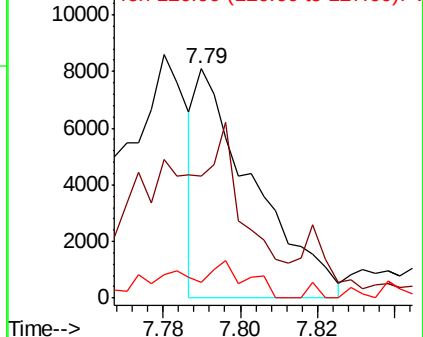
127 7.1 5.8 8.8

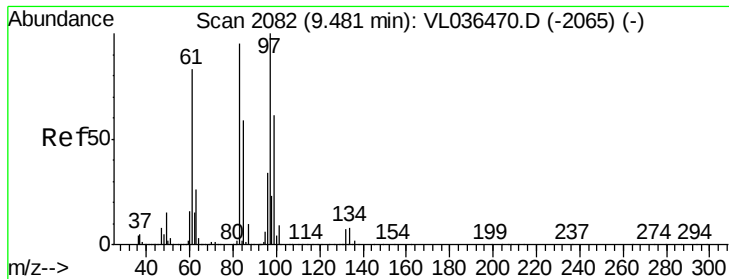


Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

Ion 126.90 (126.60 to 127.60): V





#47

1,1,2-Trichloroethane

Concen: 0.031 ppbv

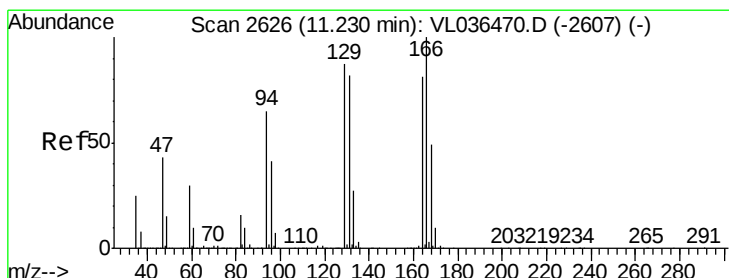
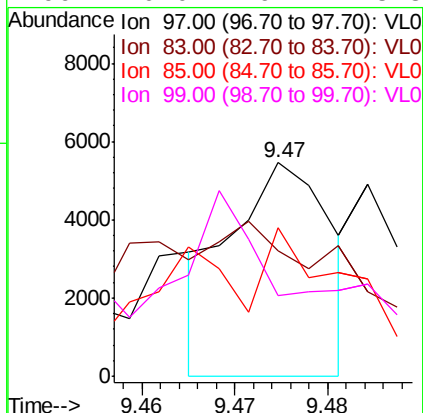
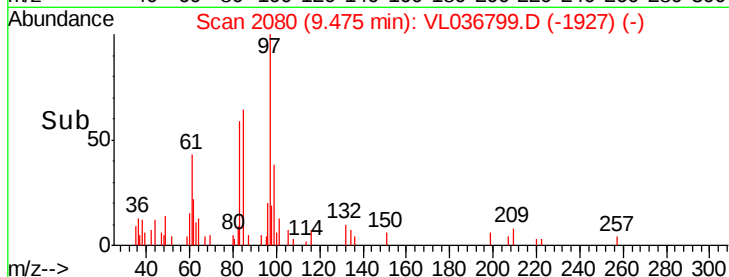
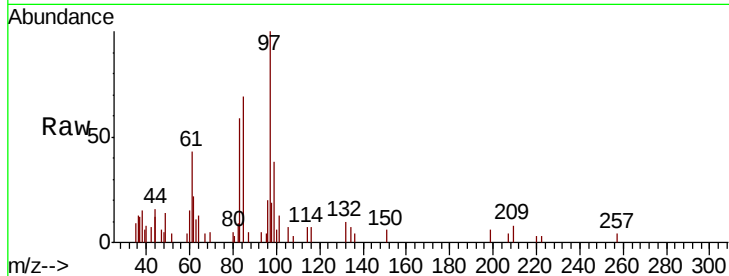
RT: 9.47 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 Apr 2021 12:28

Tot Ion:	97	Resp:	4107
Ion	Ratio	Lower	Upper
97	100		
83	10.6	75.8	113.8#
85	49.6	47.1	70.7
99	0.0	49.2	73.8#



#52

Tetrachloroethene

Concen: 0.068 ppbv

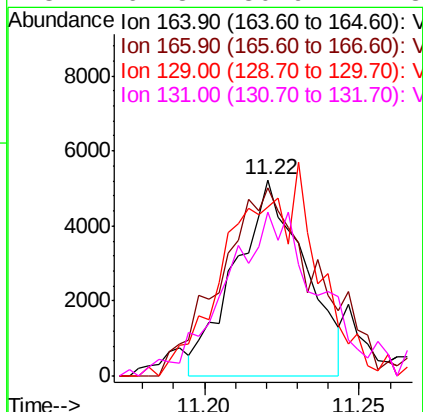
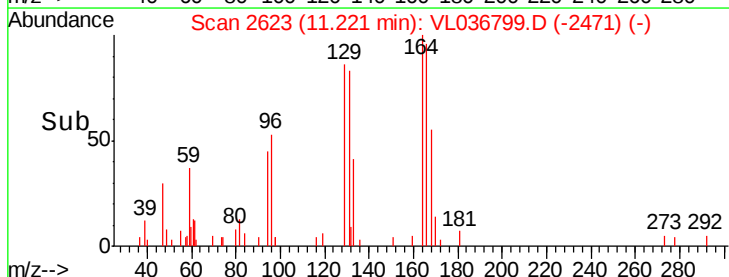
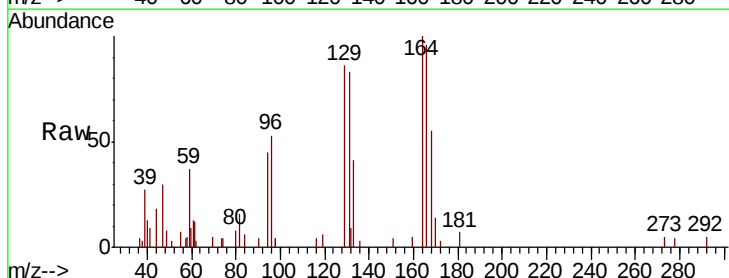
RT: 11.22 min Scan# 2623

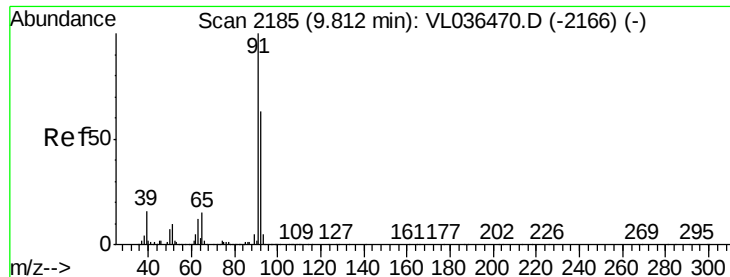
Delta R.T. -0.01 min

Lab File: VL036799.D

Acq: 13 Apr 2021 12:28

Tgt Ion:	164	Resp:	8139
Ion	Ratio	Lower	Upper
164	100		
166	86.8	98.3	147.5#
129	69.0	85.8	128.8#
131	67.8	80.9	121.3#





#53

Toluene

Concen: 0.037 ppbv

RT: 9.80 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

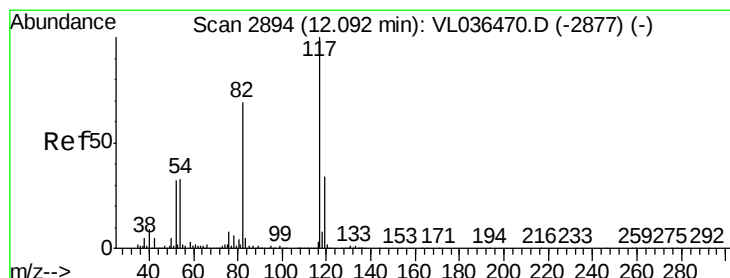
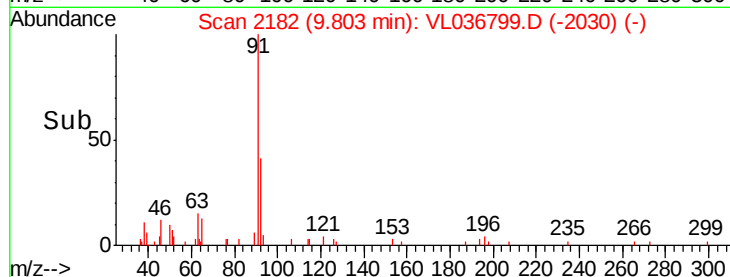
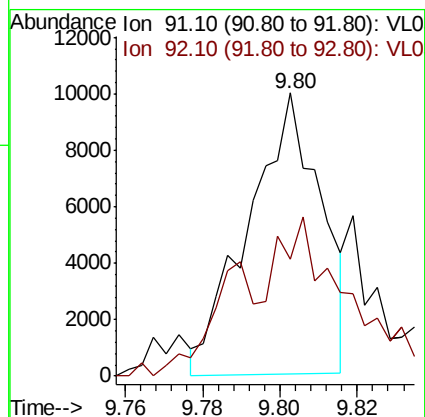
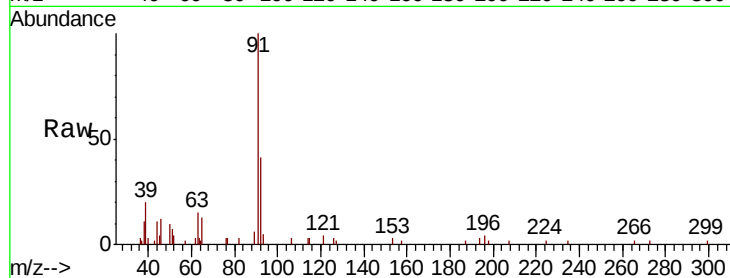
Acq: 13 Apr 2021 12:28

Tot Ion: 91 Resp: 12910

Ion Ratio Lower Upper

91 100

92 89.1 48.8 73.2#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2891

Delta R.T. -0.01 min

Lab File: VL036799.D

Acq: 13 Apr 2021 12:28

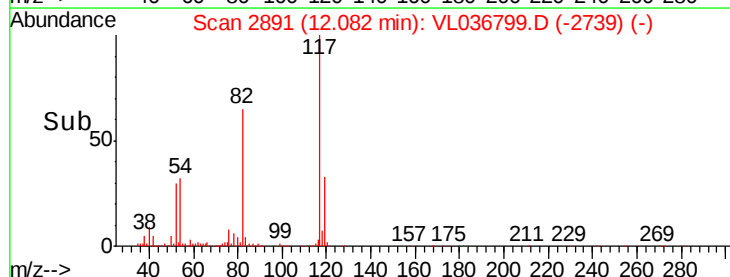
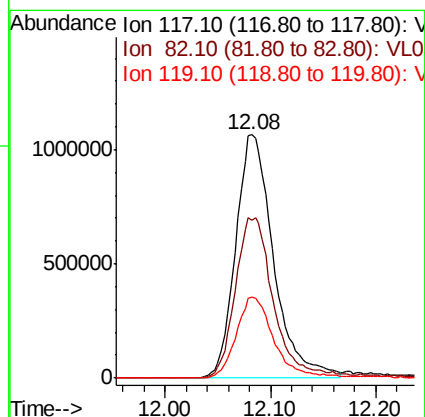
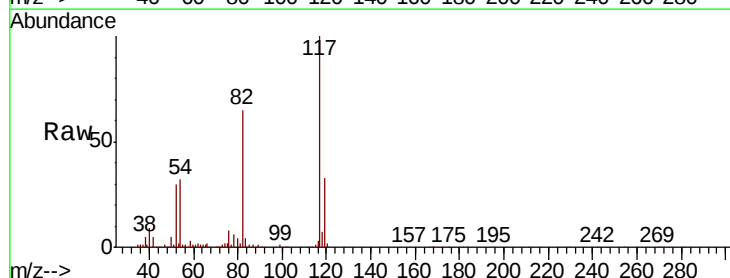
Tgt Ion: 117 Resp: 2661290

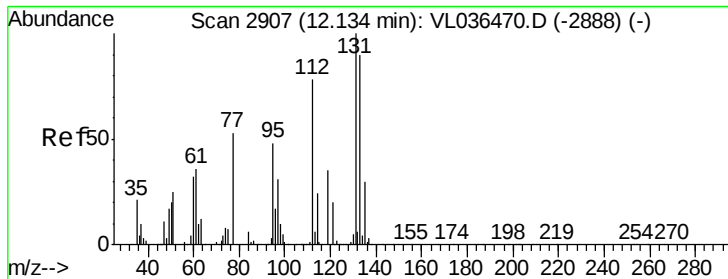
Ion Ratio Lower Upper

117 100

82 68.2 57.4 86.0

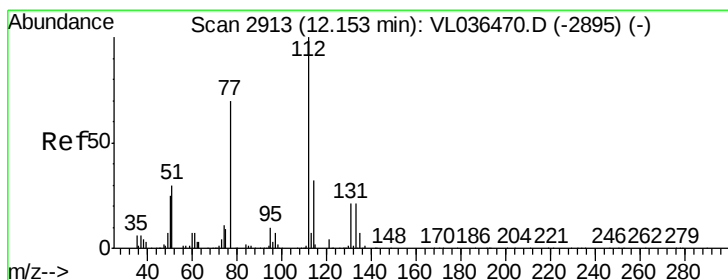
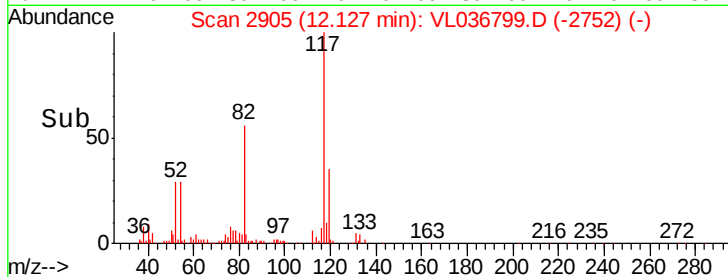
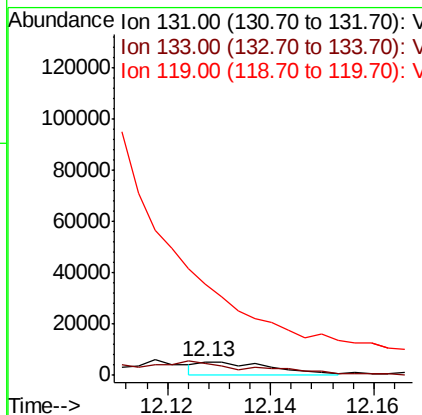
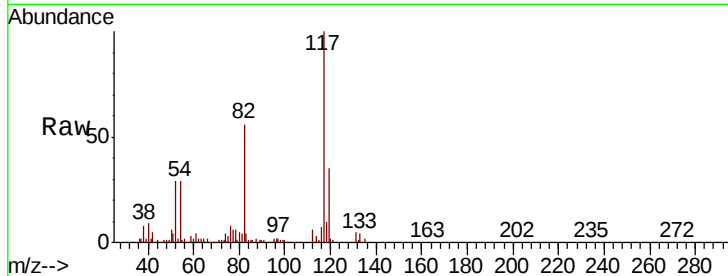
119 34.0 47.4 71.0#





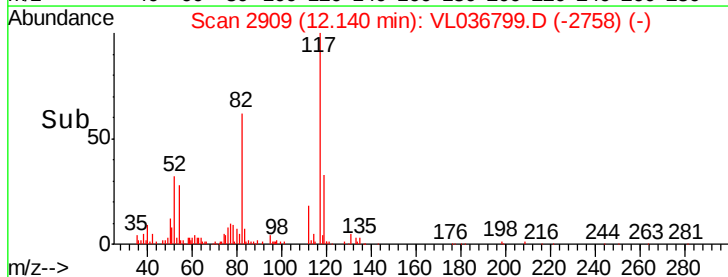
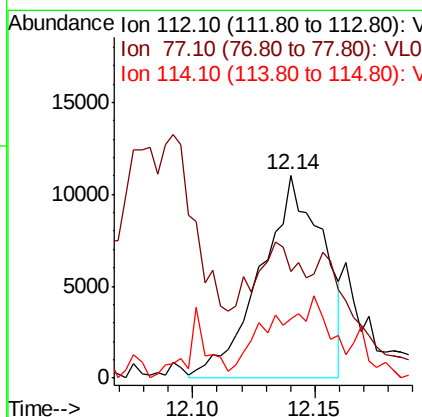
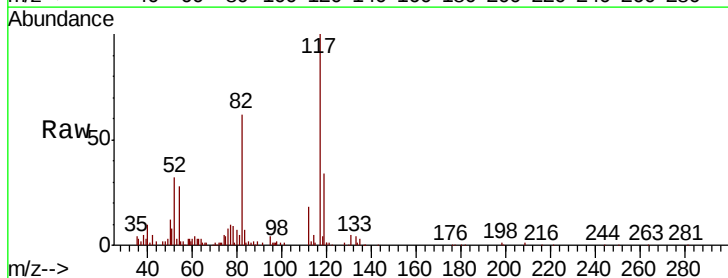
#56
 1,1,1,2-Tetrachloroethane
 Concen: 0.044 ppbv
 RT: 12.13 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 Apr 2021 12:28

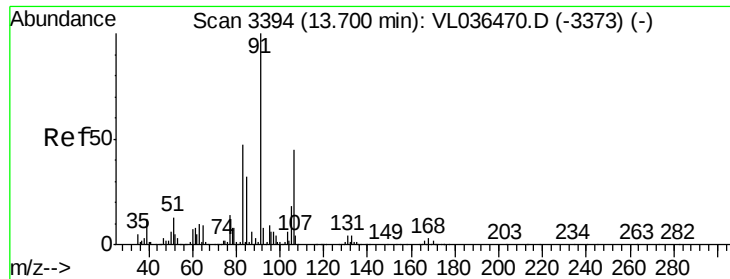
Tot Ion:131 Resp: 5303
 Ion Ratio Lower Upper
 131 100
 133 225.9 75.8 113.6#
 119 0.0 48.7 73.1#



#57
 Chlorobenzene
 Concen: 0.086 ppbv
 RT: 12.14 min Scan# 2909
 Delta R.T. -0.01 min
 Lab File: VL036799.D
 Acq: 13 Apr 2021 12:28

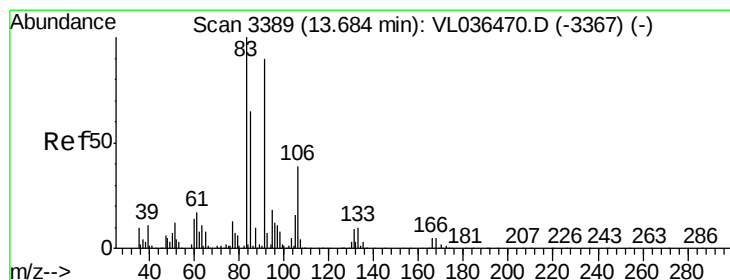
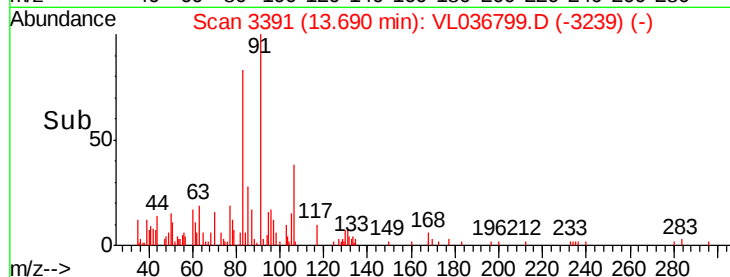
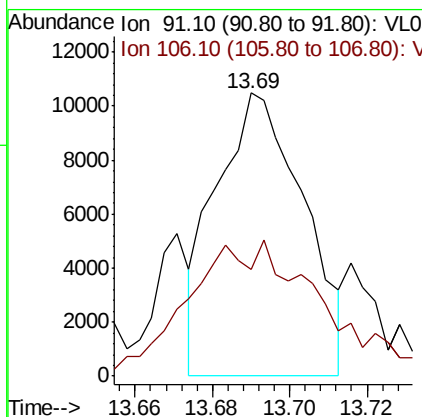
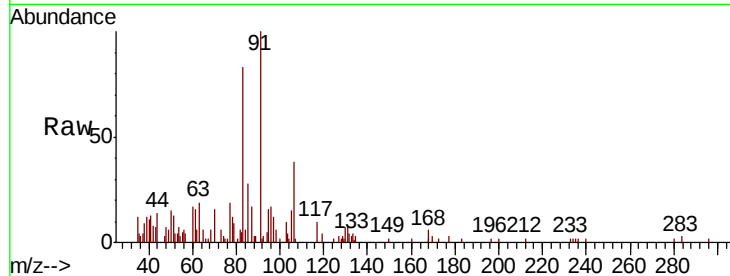
Tgt Ion:112 Resp: 19470
 Ion Ratio Lower Upper
 112 100
 77 9.1 56.0 84.0#
 114 25.0 29.0 35.4#





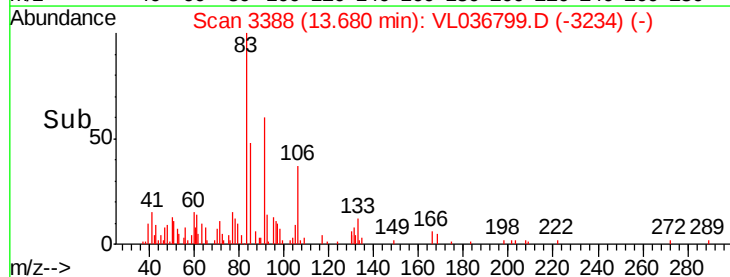
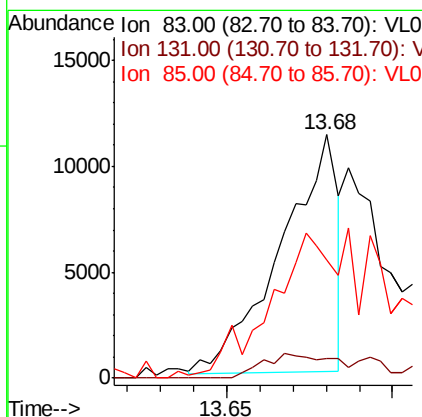
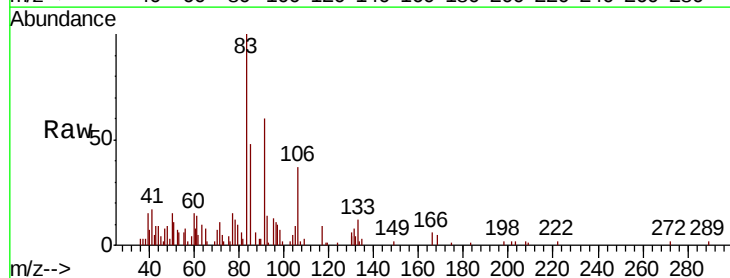
#60
o-Xylene
Concen: 0.051 ppbv
RT: 13.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 13 Apr 2021 12:28

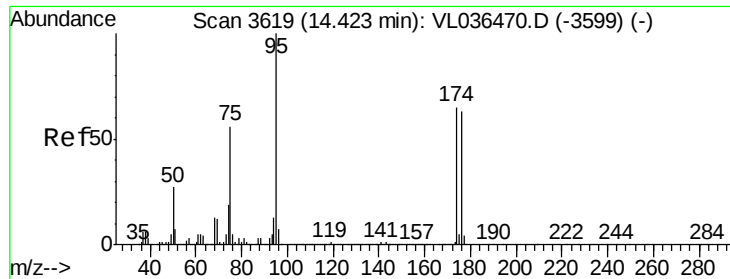
Tot Ion: 91 Resp: 16553
Ion Ratio Lower Upper
91 100
106 76.5 22.3 66.9#



#63
1,1,2,2-Tetrachloroethane
Concen: 0.054 ppbv
RT: 13.68 min Scan# 3388
Delta R.T. -0.00 min
Lab File: VL036799.D
Acq: 13 Apr 2021 12:28

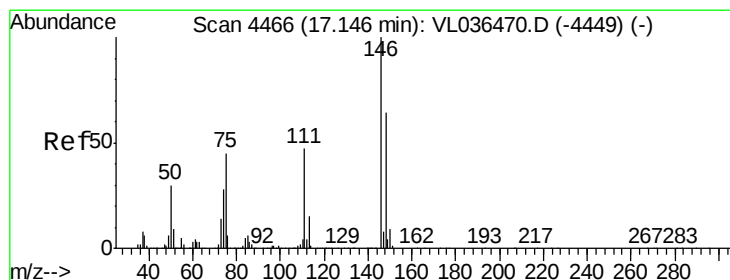
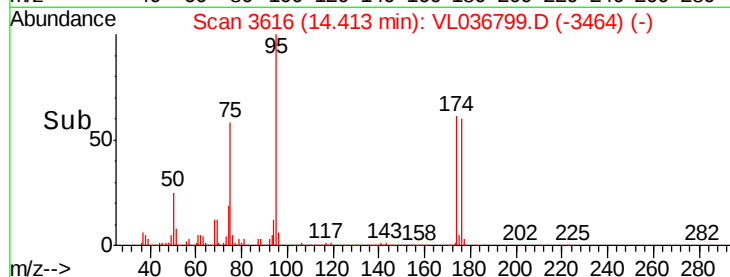
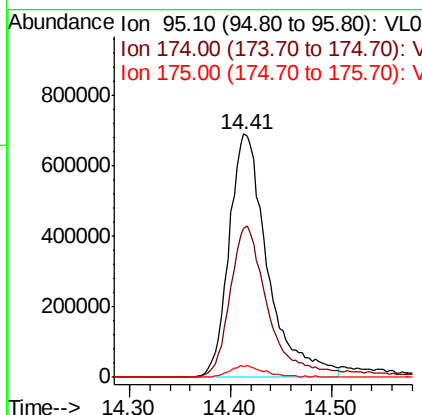
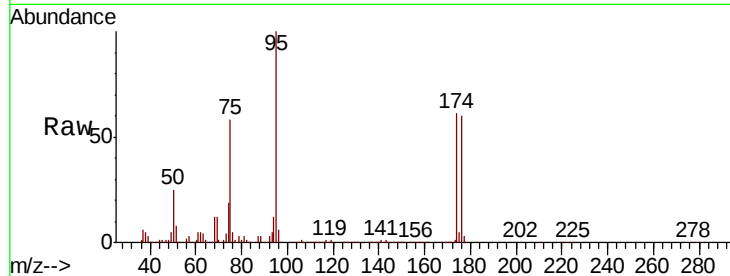
Tgt Ion: 83 Resp: 13411
Ion Ratio Lower Upper
83 100
131 19.8 4.7 14.0#
85 0.0 33.1 99.3#





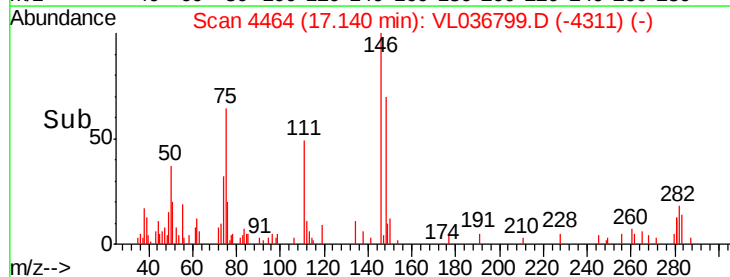
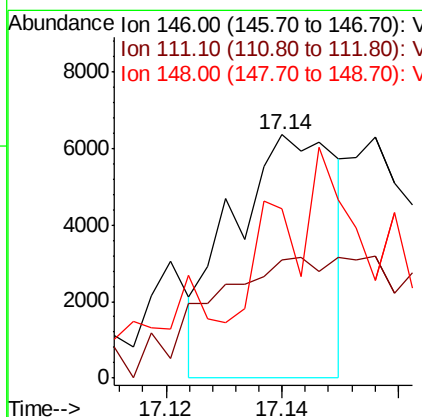
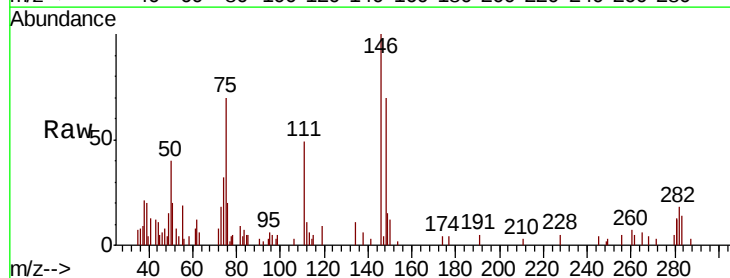
#68
 1-Bromo-4-Fluorobenzene
 Concen: 8.652 ppbv
 RT: 14.41 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 Apr 2021 12:28

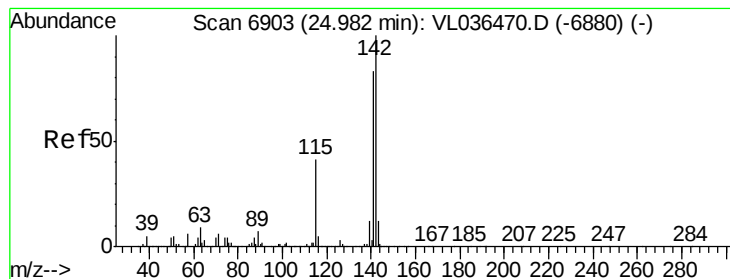
Tot Ion: 95 Resp: 1835214
 Ion Ratio Lower Upper
 95 100
 174 65.2 51.0 76.6
 175 4.9 3.9 5.9



#76
 1,4-Dichlorobenzene
 Concen: 0.040 ppbv
 RT: 17.14 min Scan# 4464
 Delta R.T. -0.01 min
 Lab File: VL036799.D
 Acq: 13 Apr 2021 12:28

Tgt Ion: 146 Resp: 7906
 Ion Ratio Lower Upper
 146 100
 111 0.0 24.3 72.8#
 148 185.0 33.0 98.9#





#80

Naphthalene, 2-methyl-

Concen: 0.078 ppbv

RT: 25.00 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 13 Apr 2021 12:28

Tot Ion: 142 Resp: 3202

Ion Ratio Lower Upper

142 100

141 0.0 67.8 101.8#

115 62.9 34.0 51.0#

