

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032521\
 Data File : VL036485.D
 Acq On : 25 Mar 2021 14:15
 Operator :
 Sample : M1801-02DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 26 03:50:08 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	1436552	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3353155	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	3260490	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2709737	10.43	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.30%

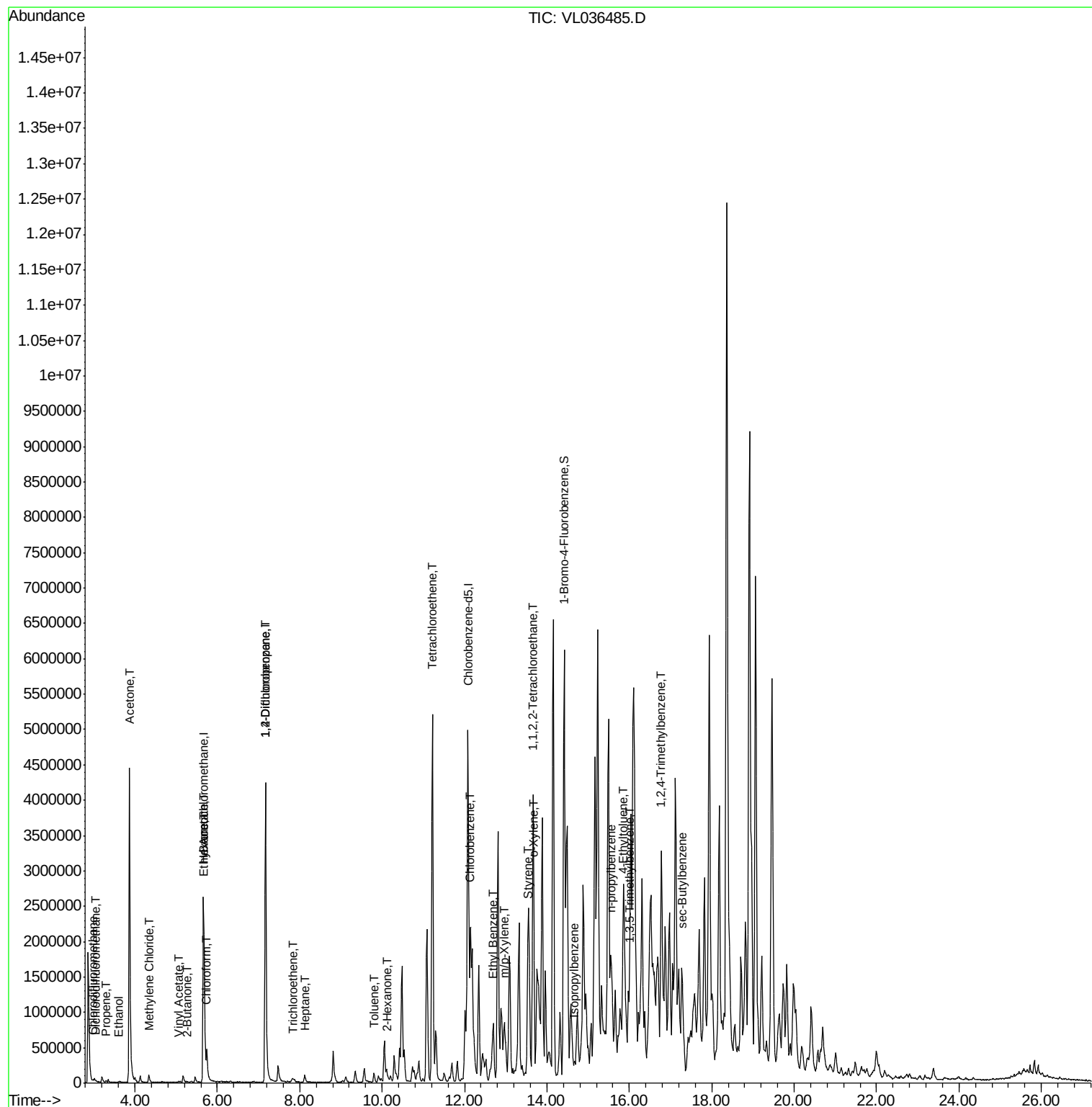
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	10113	0.043	ppbv #	75
3) Chlorodifluoromethane	2.98	51	39094	0.146	ppbv #	87
9) Propene	3.31	41	3753	0.044	ppbv	85
10) Heptane	8.11	43	21167	0.097	ppbv #	28
13) Ethanol	3.60	45	7061	0.693	ppbv #	34
15) Acetone	3.87	43	1863531	13.180	ppbv #	59
20) Methylene Chloride	4.33	84	41775	0.631	ppbv #	92
23) Vinyl Acetate	5.06	43	11543	0.048	ppbv #	78
25) Ethyl Acetate	5.68	43	251342	0.748	ppbv #	78
26) Hexane	5.68	57	341021	2.186	ppbv #	46
29) Chloroform	5.74	83	282072	1.131	ppbv	97
34) 2-Butanone	5.26	43	9922	0.061	ppbv #	16
38) Trichloroethene	7.83	130	4261	0.035	ppbv #	61
39) 1,2-Dichloropropane	7.17	63	937647	7.474	ppbv #	23
51) 2-Hexanone	10.14	43	10593	0.089	ppbv #	30
52) Tetrachloroethene	11.22	164	1253949	11.011	ppbv	96
53) Toluene	9.80	91	97254	0.295	ppbv	99
57) Chlorobenzene	12.14	112	36756	0.132	ppbv #	52
58) Ethyl Benzene	12.71	91	257266	0.542	ppbv	92
59) m/p-Xylene	12.96	91	370727	0.896	ppbv #	66
60) o-Xylene	13.69	91	229175	0.573	ppbv	95
61) Styrene	13.53	104	24052	0.120	ppbv #	1
62) Isopropylbenzene	14.65	105	18860	0.035	ppbv #	49
63) 1,1,2,2-Tetrachloroethane	13.67	83	94551	0.310	ppbv #	60
64) n-propylbenzene	15.56	120	23449	0.178	ppbv #	1
67) sec-Butylbenzene	17.29	105	74556	0.113	ppbv	96
72) 4-Ethyltoluene	15.84	105	62648	0.143	ppbv #	50
73) 1,3,5-Trimethylbenzene	16.00	105	43393	0.106	ppbv	95
74) 1,2,4-Trimethylbenzene	16.77	105	238216	0.544	ppbv #	70

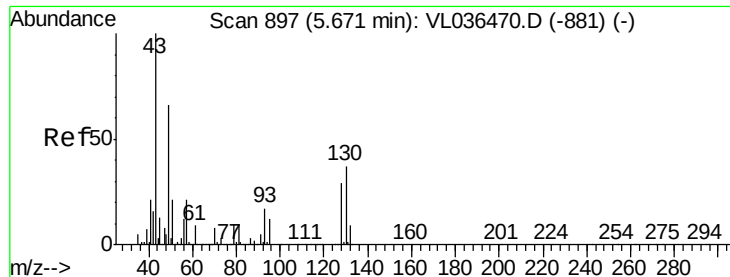
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Mar 25 09:42:40 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Mar 2021 14:15

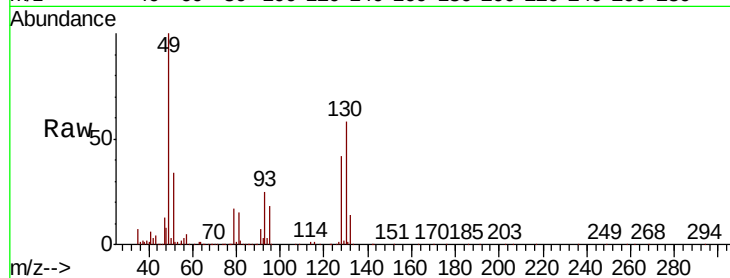
Tot Ion: 49 Resp: 1436552

Ion Ratio Lower Upper

49 100

128 46.1 23.5 70.6

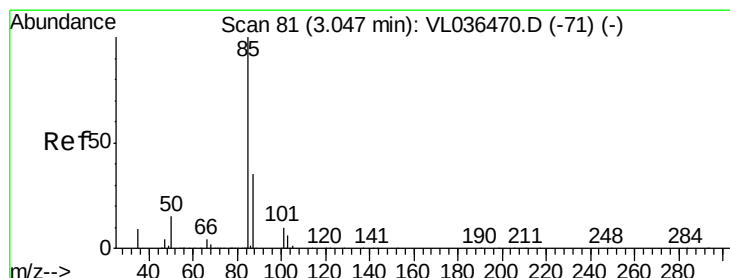
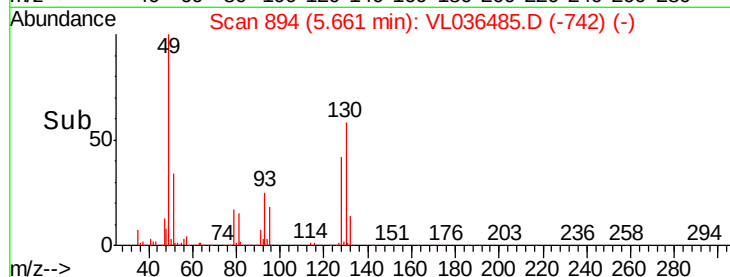
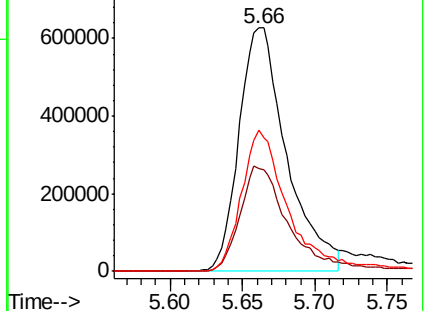
130 58.4 29.1 87.4



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: 0.043 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.00 min

Lab File: VL036485.D

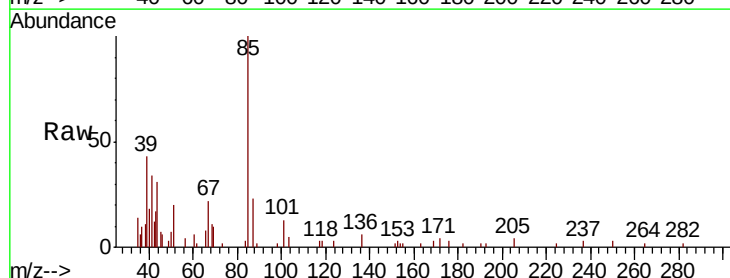
Acq: 25 Mar 2021 14:15

Tgt Ion: 85 Resp: 10113

Ion Ratio Lower Upper

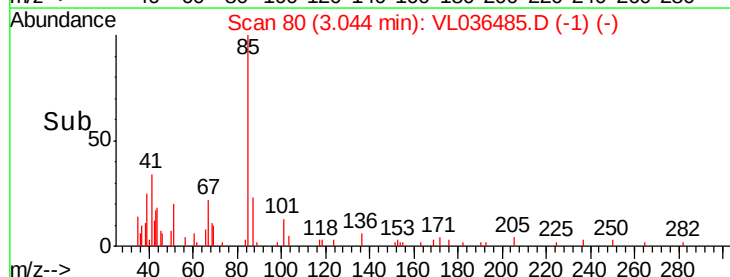
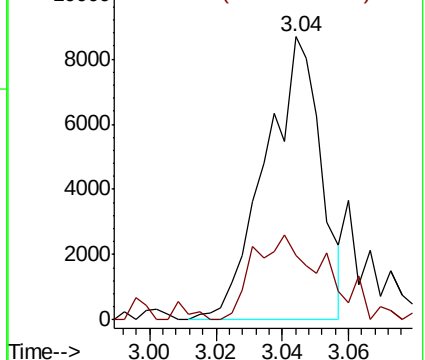
85 100

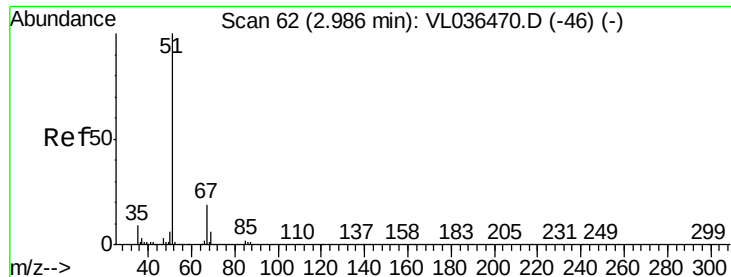
87 20.5 27.8 41.8#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.146 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

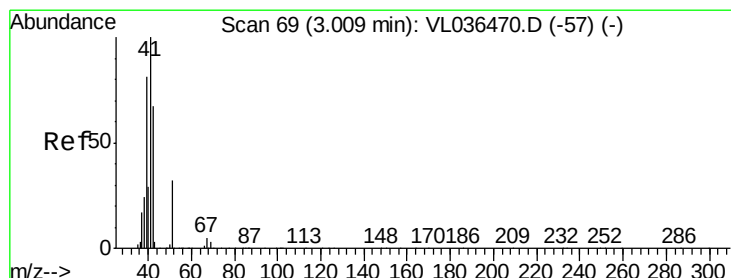
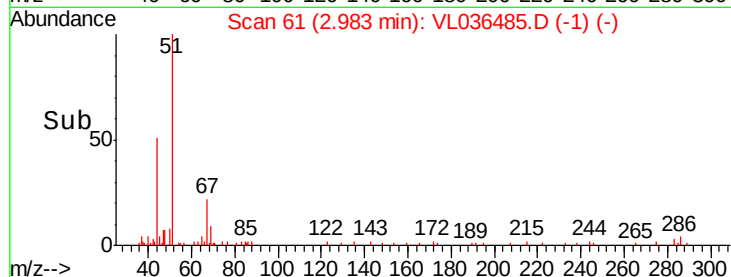
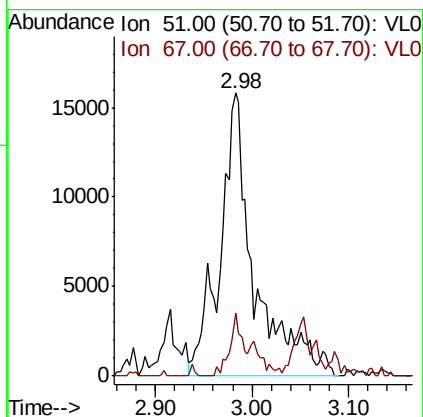
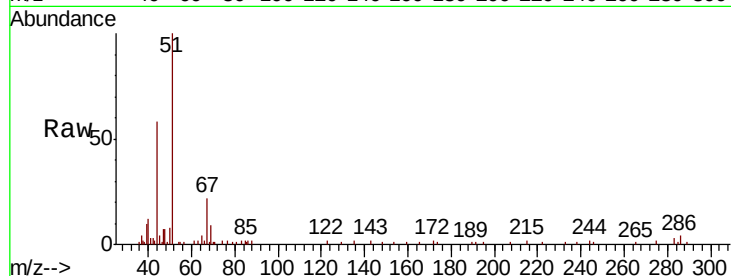
Acq: 25 Mar 2021 14:15

Tot Ion: 51 Resp: 39094

Ion Ratio Lower Upper

51 100

67 12.8 14.7 22.1#



#9

Propene

Concen: 0.044 ppbv

RT: 3.31 min Scan# 162

Delta R.T. 0.30 min

Lab File: VL036485.D

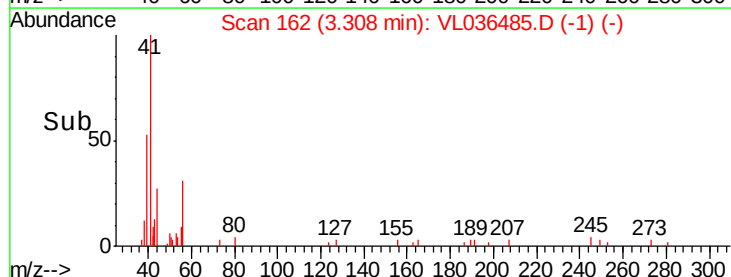
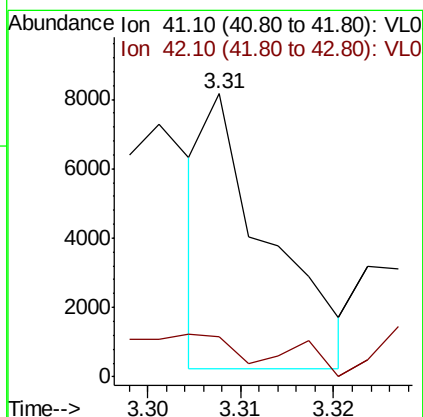
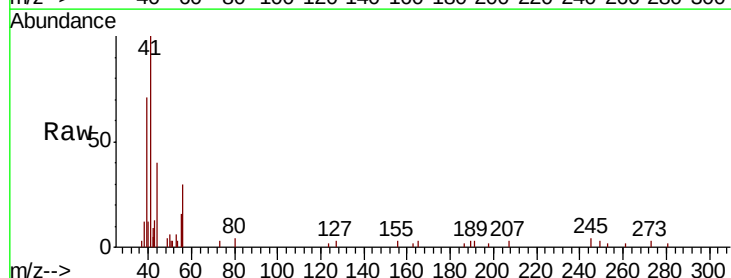
Acq: 25 Mar 2021 14:15

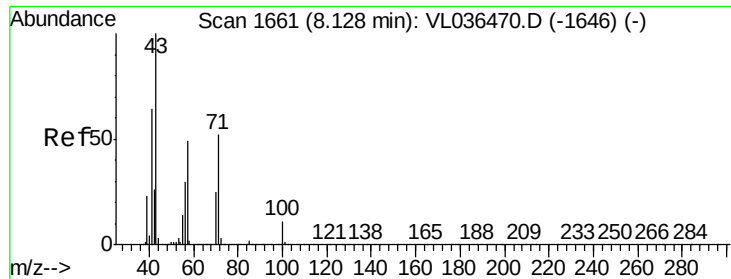
Tgt Ion: 41 Resp: 3753

Ion Ratio Lower Upper

41 100

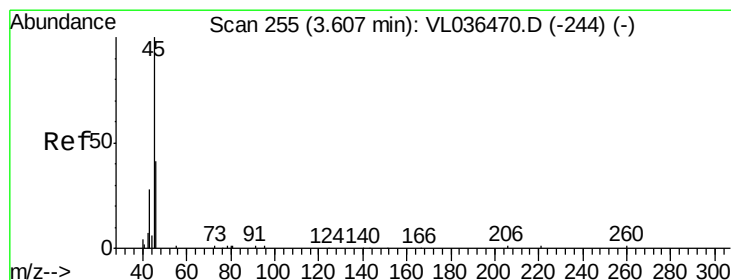
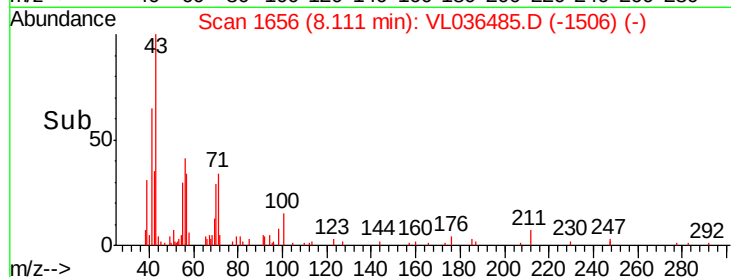
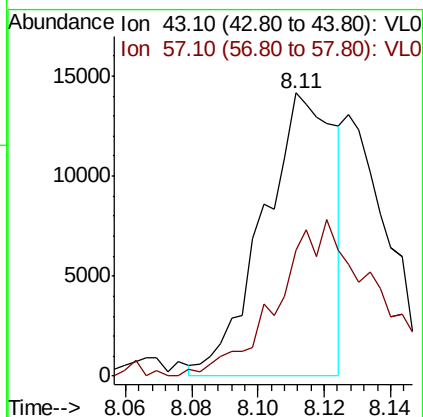
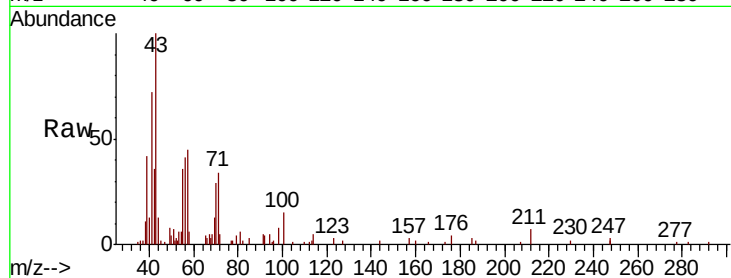
42 58.7 57.0 85.4





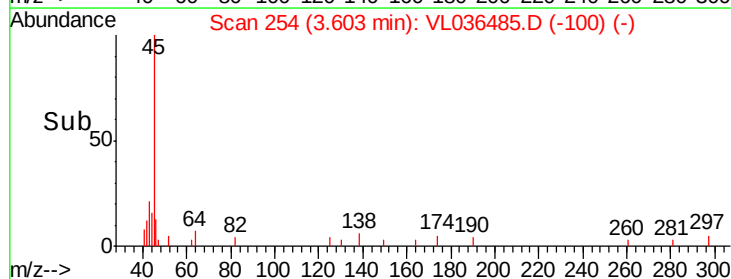
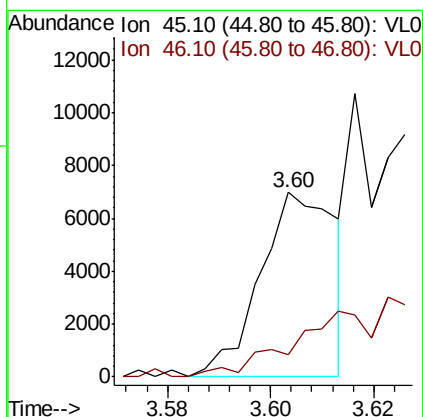
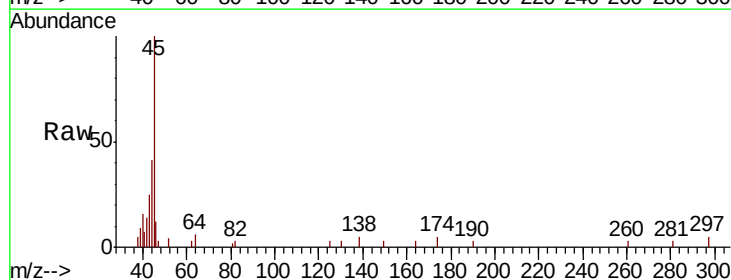
#10
 Heptane
 Concen: 0.097 ppbv
 RT: 8.11
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 25 Mar 2021 14:15

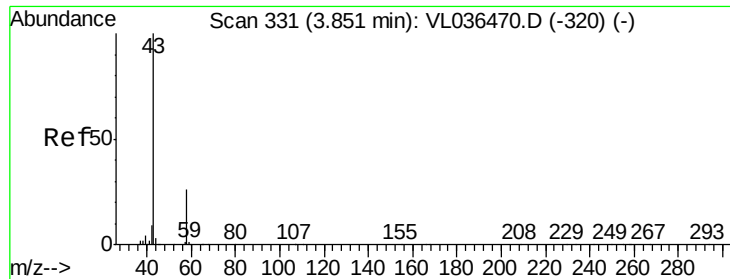
Tot Ion: 43 Resp: 21167
 Ion Ratio Lower Upper
 43 100
 57 0.0 39.0 58.6#



#13
 Ethanol
 Concen: 0.693 ppbv
 RT: 3.60 min Scan# 254
 Delta R.T.: -0.00 min
 Lab File: VL036485.D
 Acq: 25 Mar 2021 14:15

Tgt Ion: 45 Resp: 7061
 Ion Ratio Lower Upper
 45 100
 46 0.0 16.6 66.2#





#15

Acetone

Concen: 13.180 ppbv

RT: 3.87 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

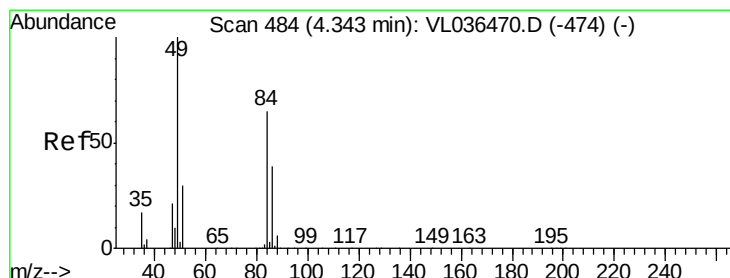
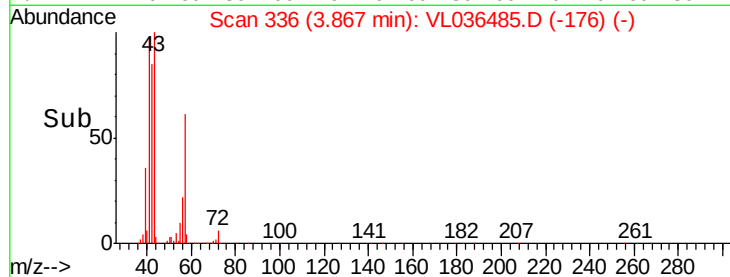
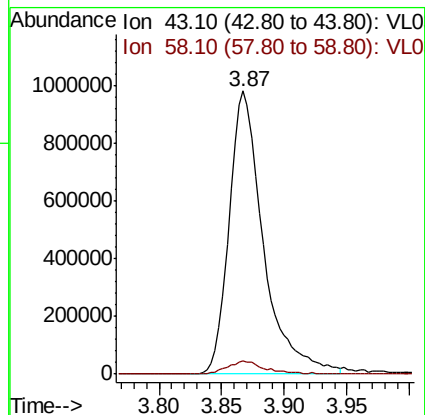
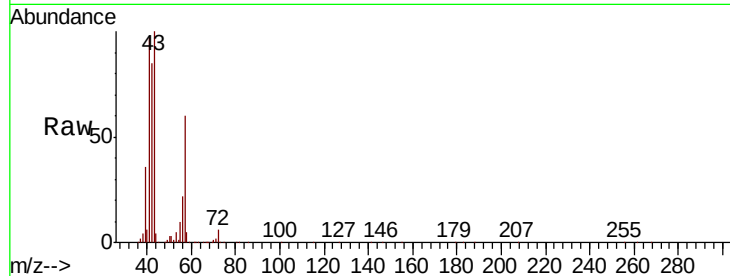
Acq: 25 Mar 2021 14:15

Tot Ion: 43 Resp: 1863531

Ion Ratio Lower Upper

43 100

58 5.5 21.2 31.8#



#20

Methylene Chloride

Concen: 0.631 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.01 min

Lab File: VL036485.D

Acq: 25 Mar 2021 14:15

Tgt Ion: 84 Resp: 41775

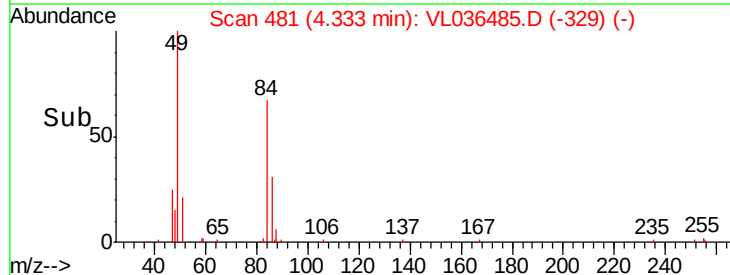
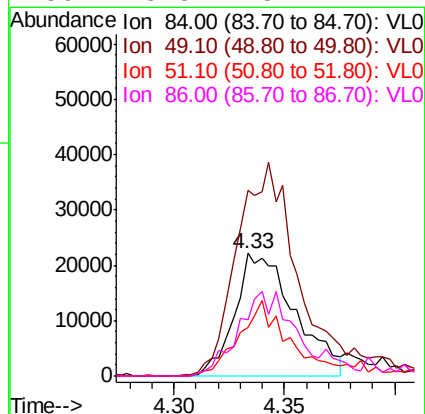
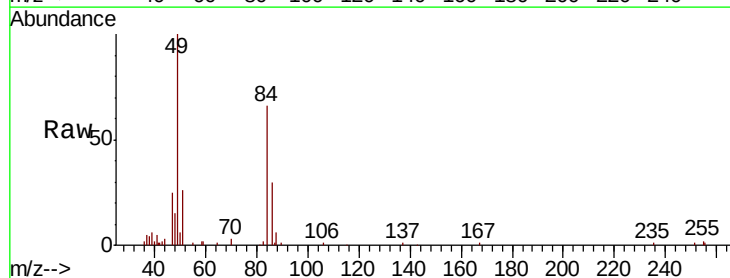
Ion Ratio Lower Upper

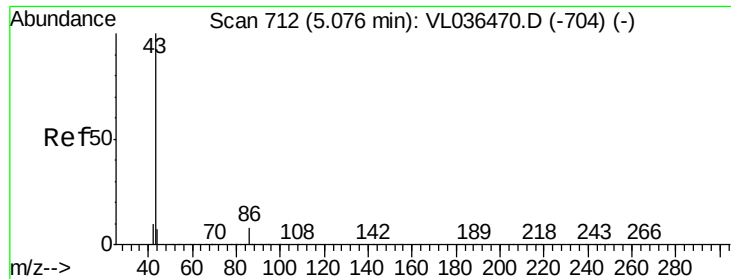
84 100

49 149.8 122.9 184.3

51 39.2 36.9 55.3

86 45.8 48.2 72.4#





#23

Vinyl Acetate

Concen: 0.048 ppbv

RT: 5.06 Instrument:

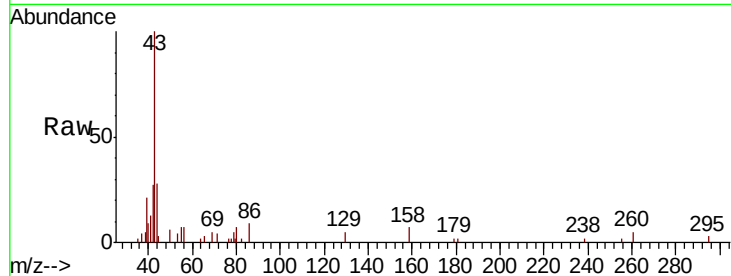
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Mar 2021 14:15

Tot Ion: 43 Resp: 11543

Ion	Ratio	Lower	Upper
43	100		
86	9.1	5.4	8.0#
42	26.6	8.5	12.7#
44	6.9	4.6	7.0

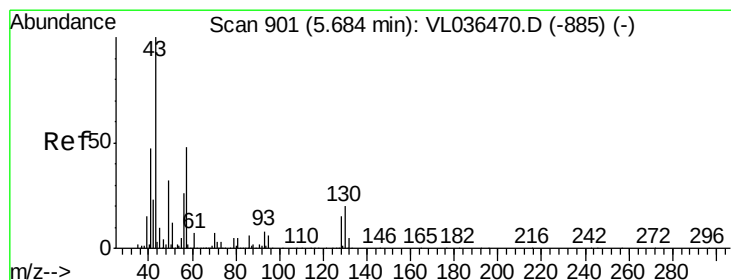
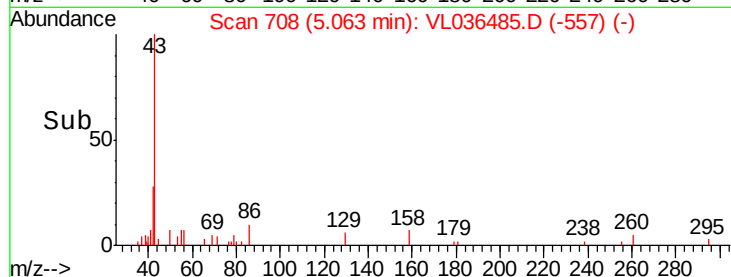
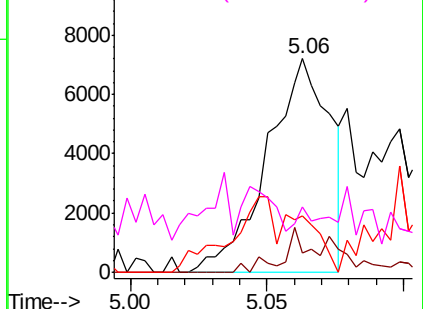


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.748 ppbv

RT: 5.68 min Scan# 901

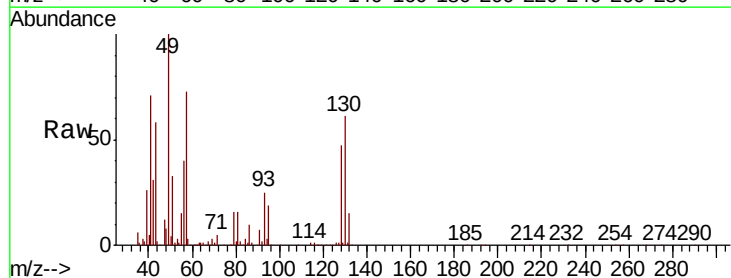
Delta R.T. -0.00 min

Lab File: VL036485.D

Acq: 25 Mar 2021 14:15

Tgt Ion: 43 Resp: 251342

Ion	Ratio	Lower	Upper
43	100		
45	0.8	7.9	11.9#
61	0.2	7.4	11.2#
70	2.0	5.1	7.7#

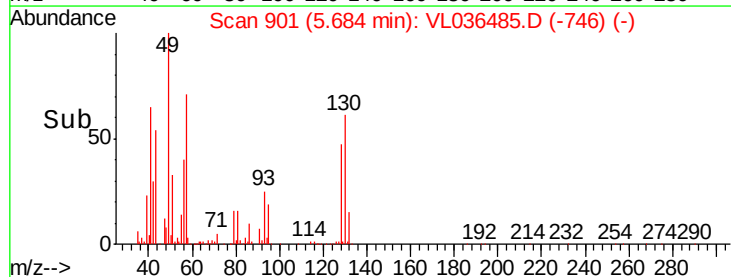
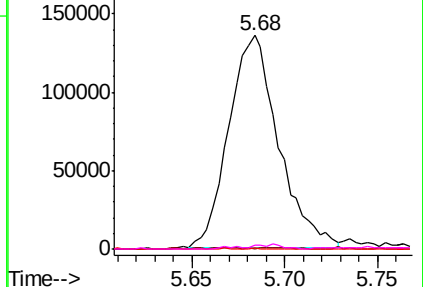


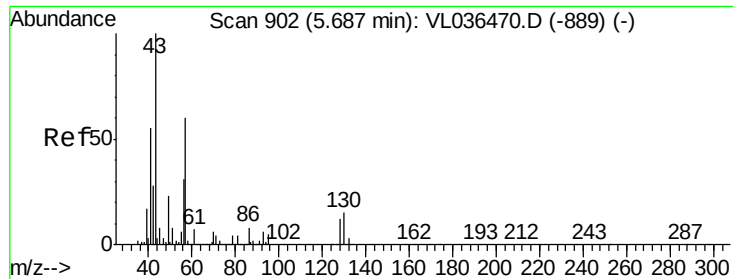
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

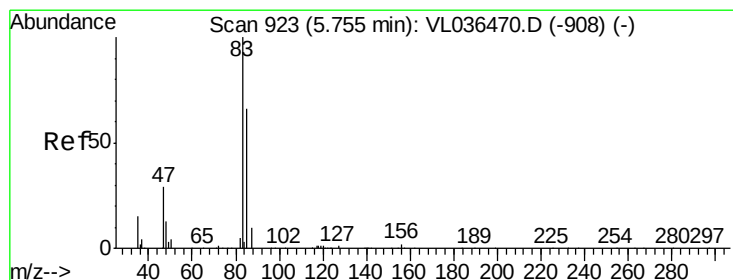
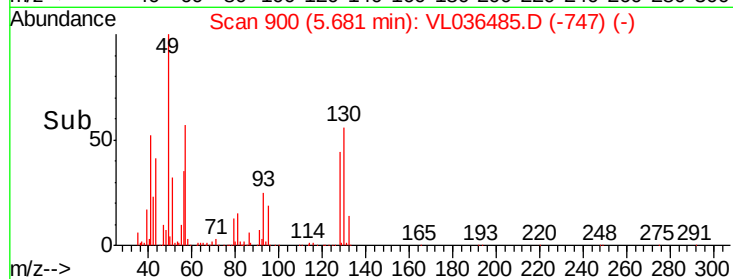
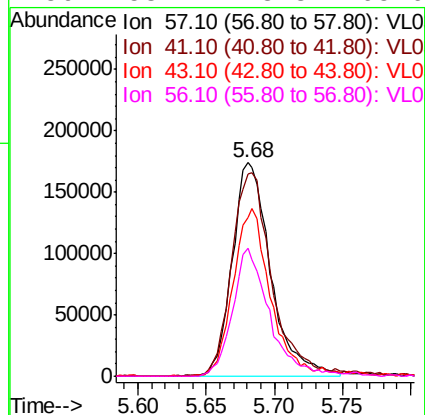
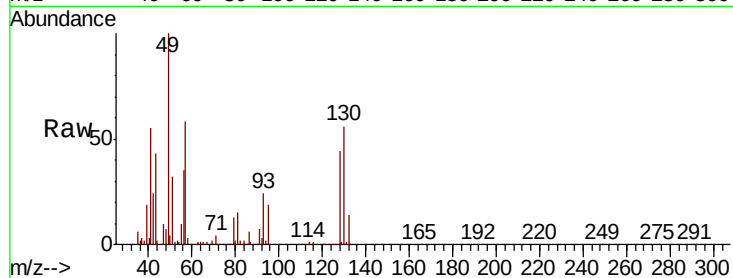
Ion 70.10 (69.80 to 70.80): VL0





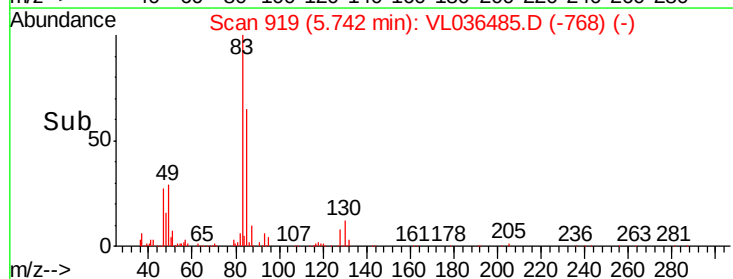
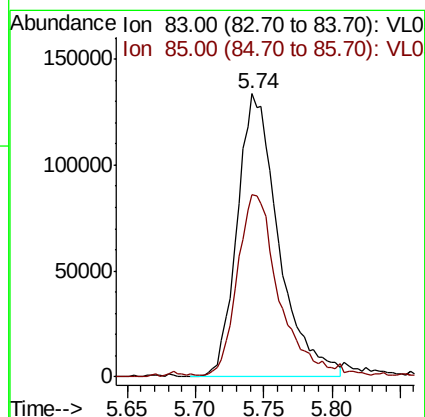
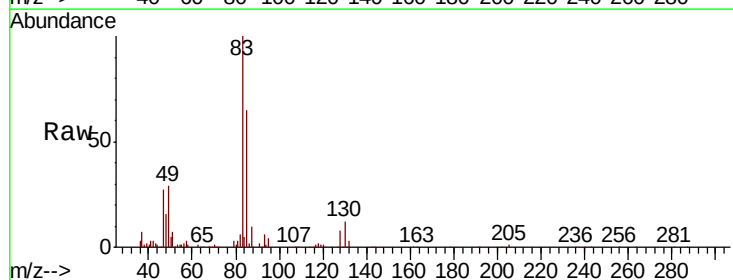
#26
Hexane
Concen: 2.186 ppbv
RT: 5.68
Instrument: MSVOA_L
Delta R.T.:
Lab File: ClientSampleId:
Acq: 25 Mar 2021 14:15

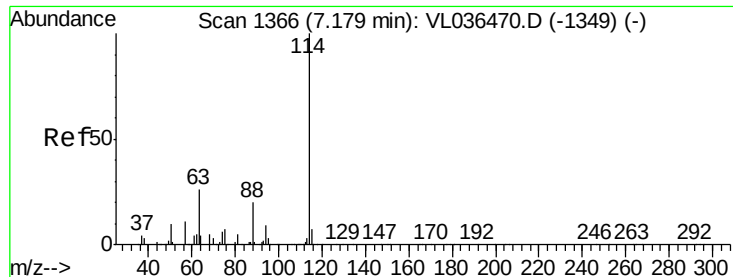
Tot Ion:	57	Resp:	341021
Ion	Ratio	Lower	Upper
57	100		
41	102.6	77.2	115.8
43	78.5	173.8	260.6#
56	58.4	43.8	65.6



#29
Chloroform
Concen: 1.131 ppbv
RT: 5.74 min Scan# 919
Delta R.T. -0.01 min
Lab File: VL036485.D
Acq: 25 Mar 2021 14:15

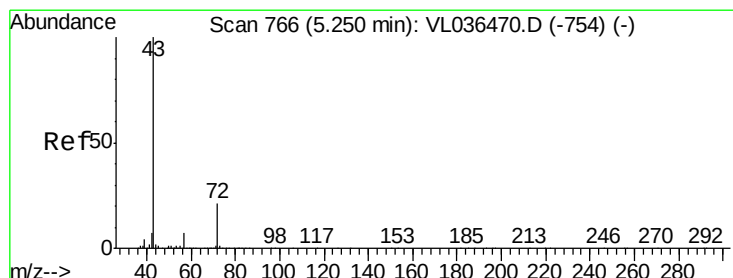
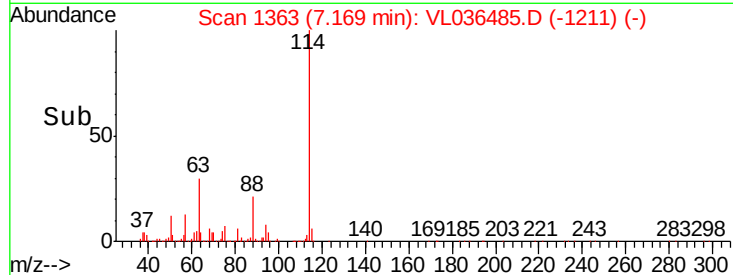
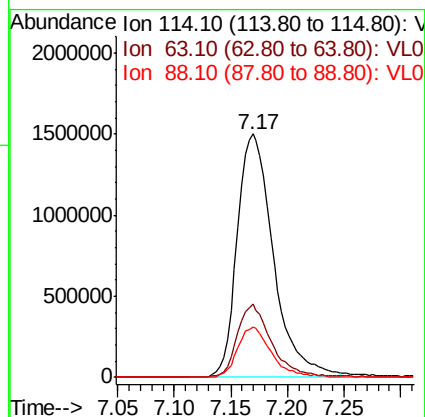
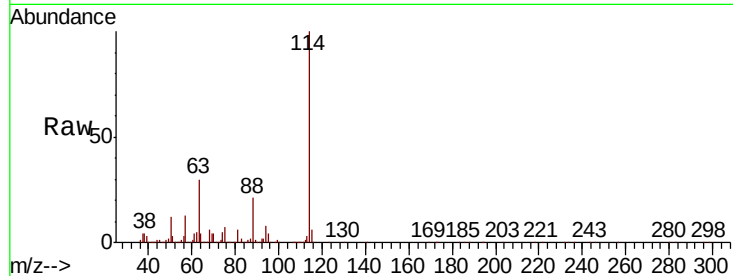
Tgt Ion:	83	Resp:	282072
Ion	Ratio	Lower	Upper
83	100		
85	63.6	52.6	78.8





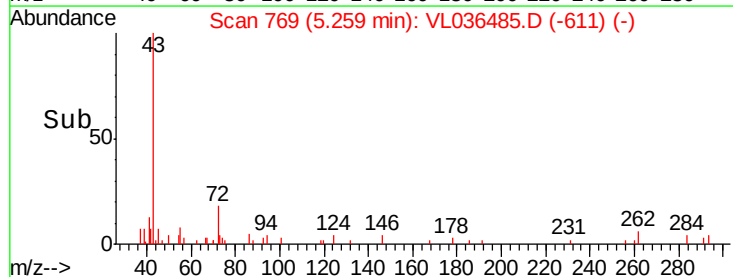
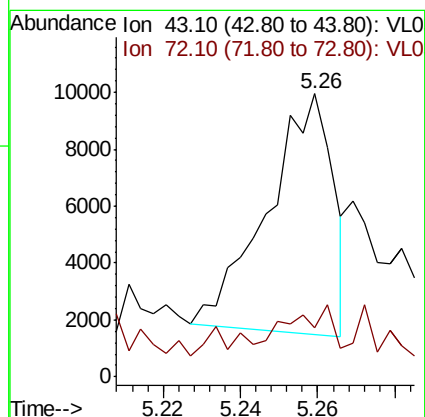
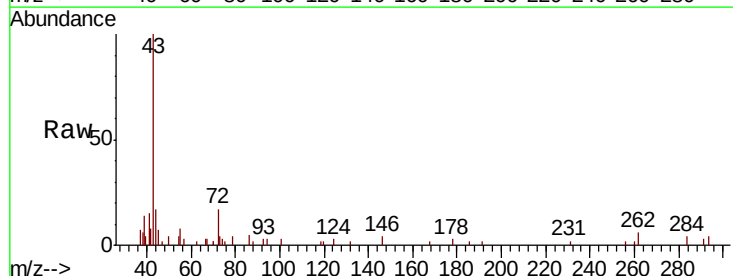
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 25 Mar 2021 14:15

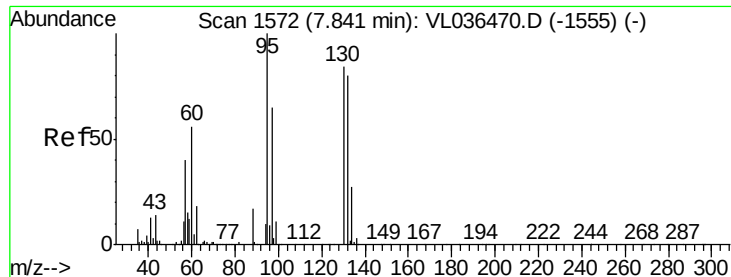
Tot Ion:	114	Resp:	3353155
Ion	Ratio	Lower	Upper
114	100		
63	28.9	22.4	33.6
88	19.7	15.4	23.0



#34
 2-Butanone
 Concen: 0.061 ppbv
 RT: 5.26 min Scan# 769
 Delta R.T. 0.01 min
 Lab File: VL036485.D
 Acq: 25 Mar 2021 14:15

Tgt Ion:	43	Resp:	9922
Ion	Ratio	Lower	Upper
43	100		
72	60.9	17.0	25.6#





#38

Trichloroethene

Concen: 0.035 ppbv

RT: 7.83 Instrument:

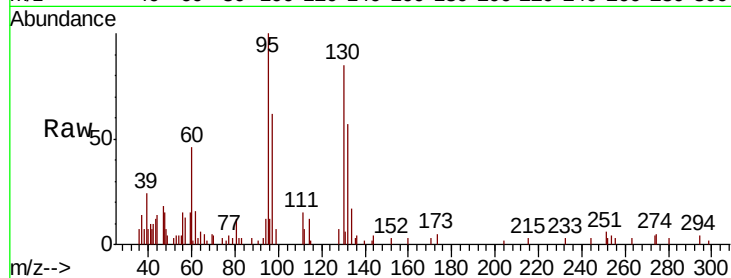
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Mar 2021 14:15

Tot Ion:130 Resp: 4261

Ion	Ratio	Lower	Upper
130	100		
95	89.8	95.7	143.5#
132	17.4	76.2	114.4#
97	81.9	61.8	92.6

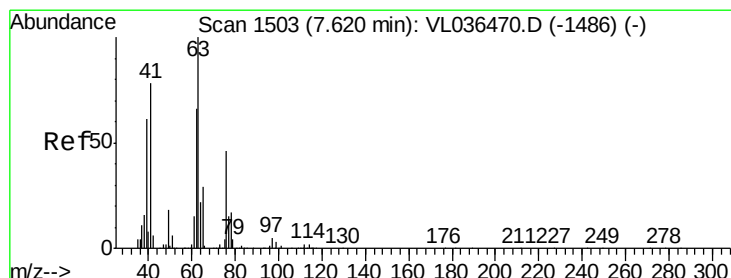
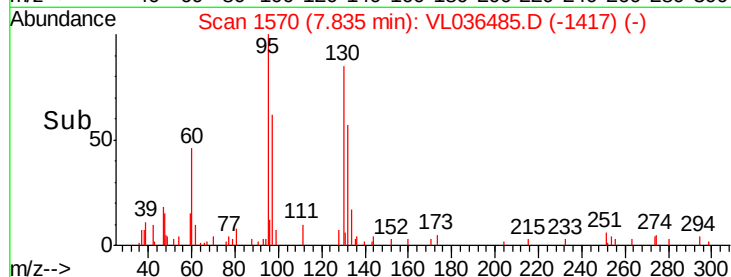
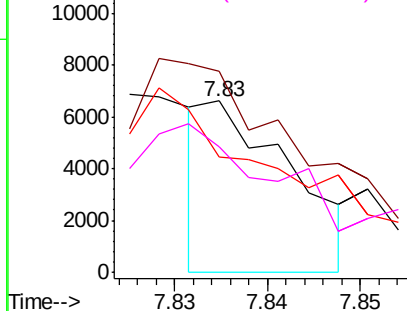


Abundance Ion 130.00 (129.70 to 130.70): V

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: 7.474 ppbv

RT: 7.17 min Scan# 1363

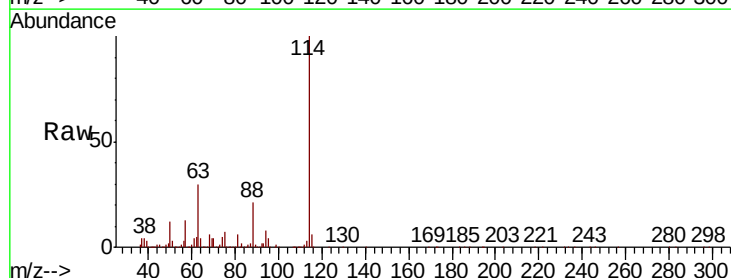
Delta R.T. -0.45 min

Lab File: VL036485.D

Acq: 25 Mar 2021 14:15

Tgt Ion: 63 Resp: 937647

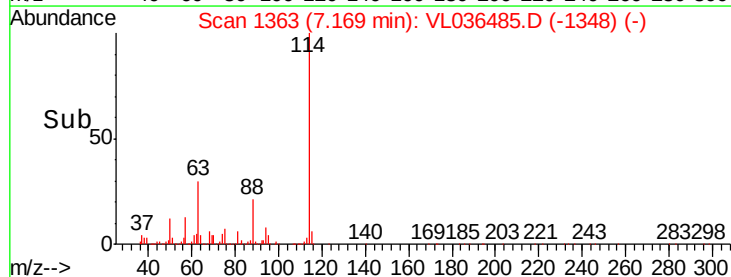
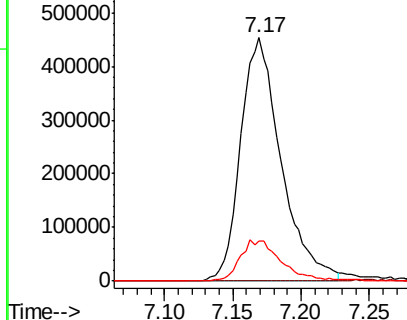
Ion	Ratio	Lower	Upper
63	100		
41	0.0	62.4	93.6#
62	16.6	52.8	79.2#

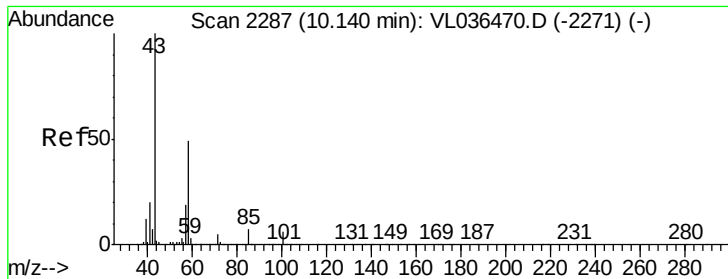


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

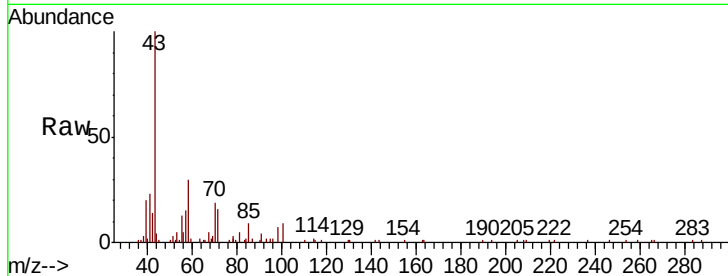
Ion 62.10 (61.80 to 62.80): VL0





#51
2-Hexanone
Concen: 0.089 ppbv
RT: 10.14 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 25 Mar 2021 14:15

Tot Ion	Ratio	Lower	Upper
43	100		
58	0.0	37.7	56.5#
98	0.0	0.2	0.2#

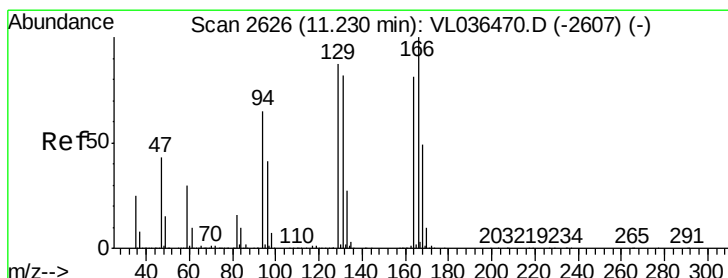
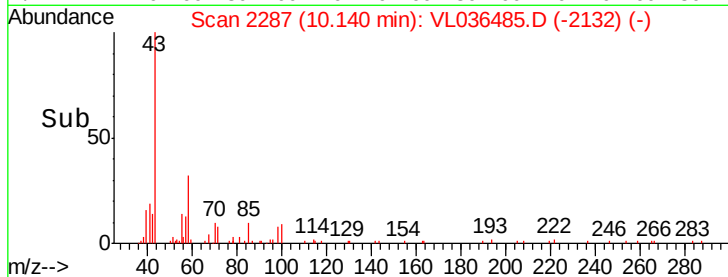
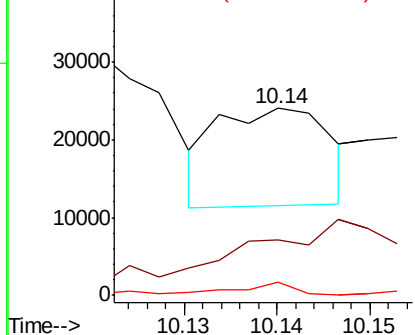


Abundance

Ion 43.10 (42.80 to 43.80): VL0

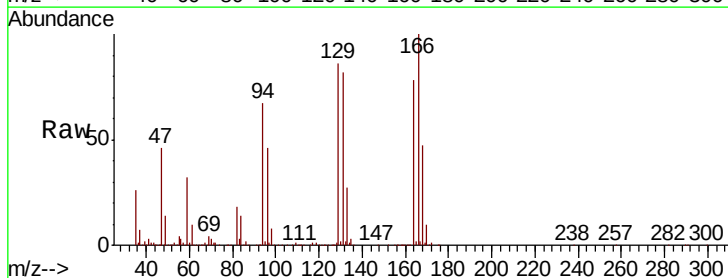
Ion 58.10 (57.80 to 58.80): VL0

Ion 98.20 (97.90 to 98.90): VL0



#52
Tetrachloroethene
Concen: 11.011 ppbv
RT: 11.22 min Scan# 2623
Delta R.T. -0.01 min
Lab File: VL036485.D
Acq: 25 Mar 2021 14:15

Tgt Ion	Ratio	Lower	Upper
164	100		
166	128.6	98.3	147.5
129	110.5	85.8	128.8
131	105.4	80.9	121.3



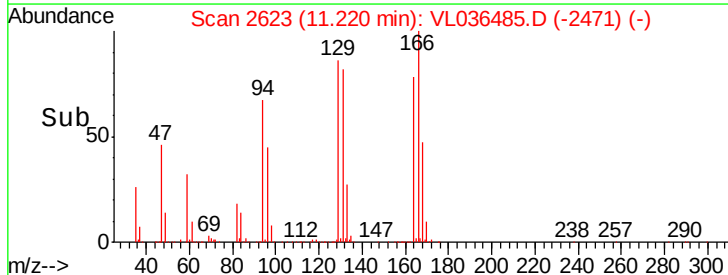
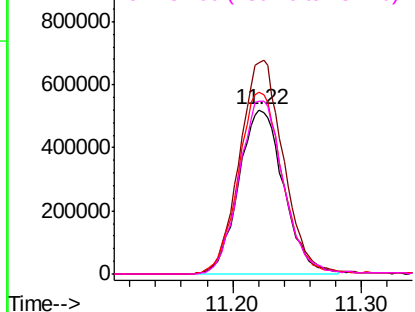
Abundance

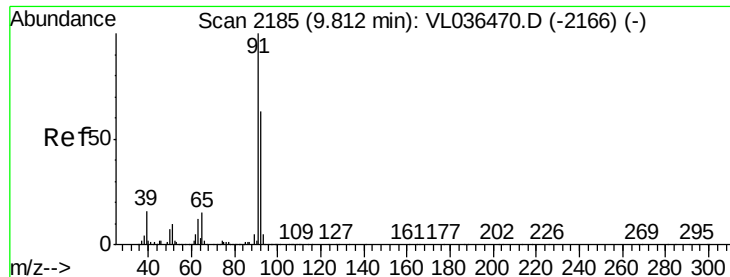
Ion 163.90 (163.60 to 164.60): V

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: 0.295 ppbv

RT: 9.80 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

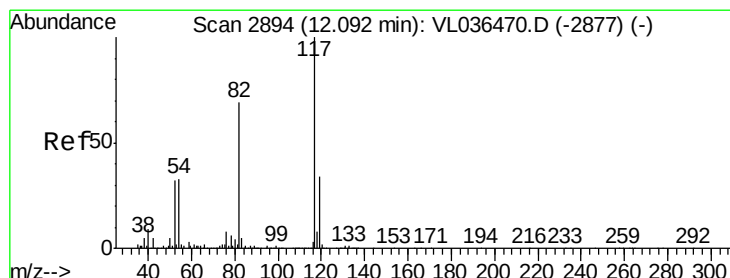
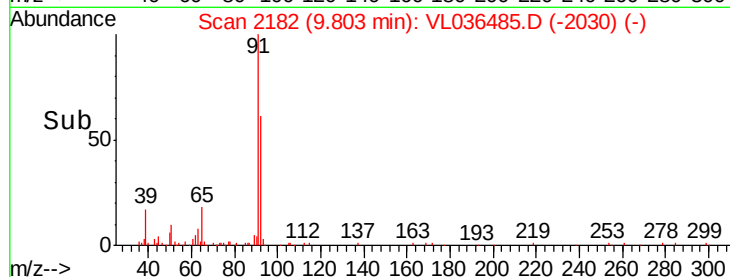
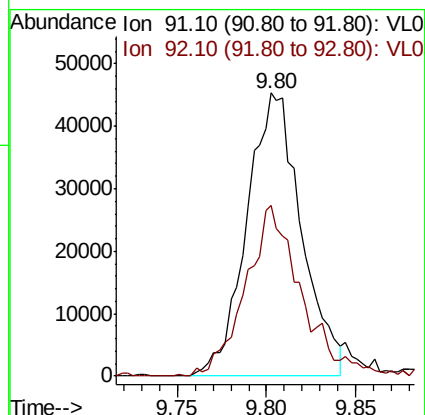
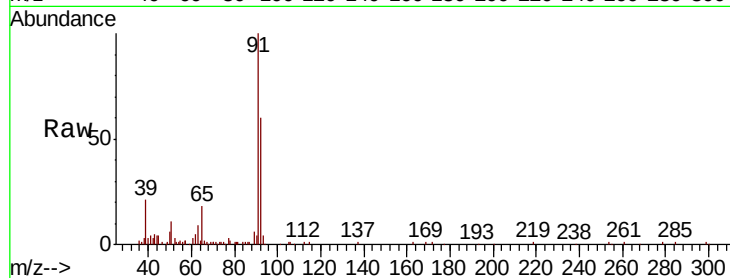
Acq: 25 Mar 2021 14:15

Tot Ion: 91 Resp: 97254

Ion Ratio Lower Upper

91 100

92 61.5 48.8 73.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2890

Delta R.T. -0.01 min

Lab File: VL036485.D

Acq: 25 Mar 2021 14:15

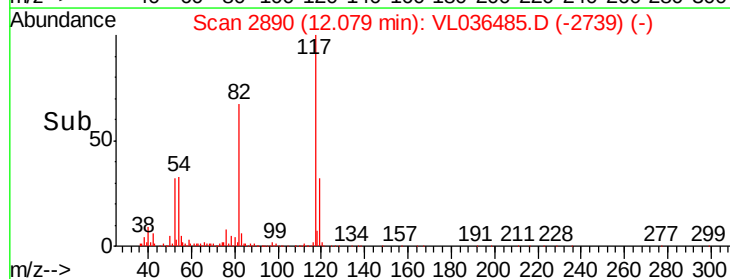
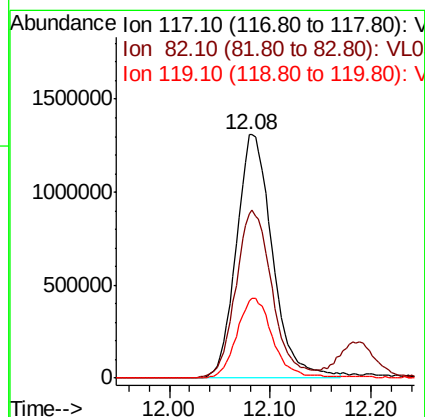
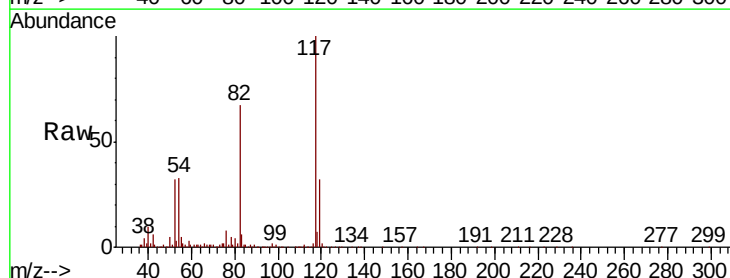
Tgt Ion: 117 Resp: 3260490

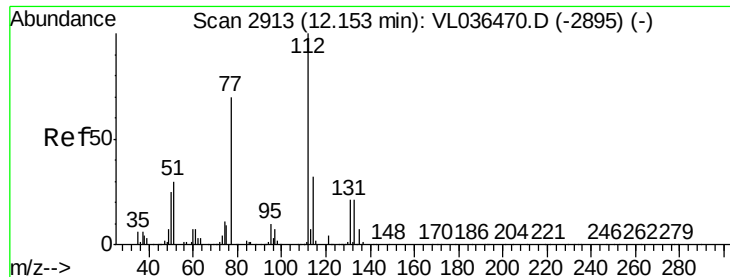
Ion Ratio Lower Upper

117 100

82 69.6 57.4 86.0

119 33.3 47.4 71.0#





#57

Chlorobenzene

Concen: 0.132 ppbv

RT: 12.14 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Mar 2021 14:15

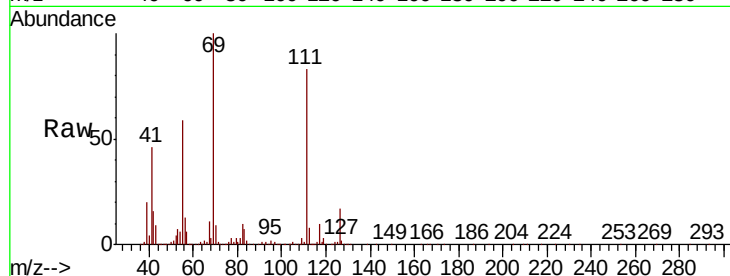
Tot Ion: 112 Resp: 36756

Ion Ratio Lower Upper

112 100

77 29.5 56.0 84.0#

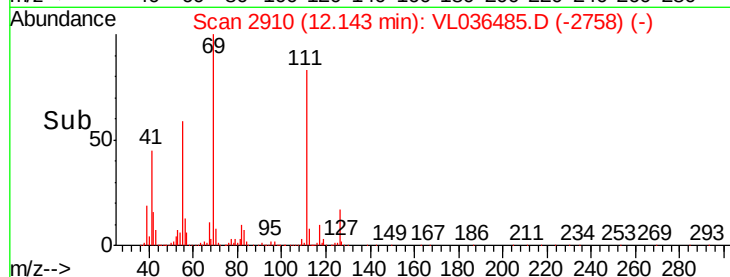
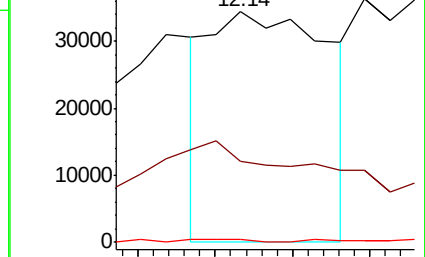
114 7.0 29.0 35.4#



Abundance Ion 112.10 (111.80 to 112.80): V

Ion 77.10 (76.80 to 77.80): VL0

Ion 114.10 (113.80 to 114.80): V



#58

Ethyl Benzene

Concen: 0.542 ppbv

RT: 12.71 min Scan# 3085

Delta R.T. -0.01 min

Lab File: VL036485.D

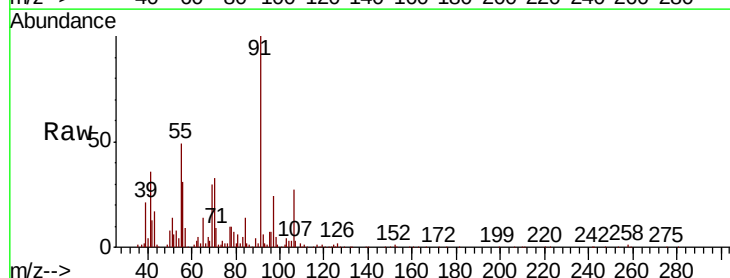
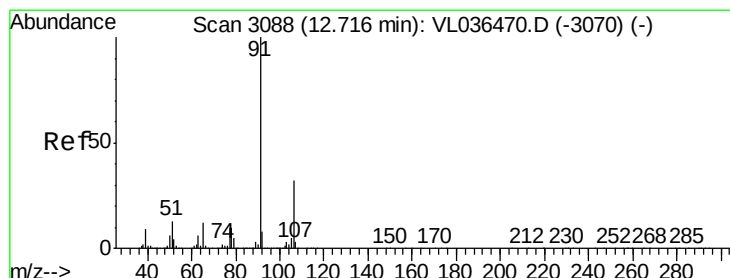
Acq: 25 Mar 2021 14:15

Tgt Ion: 91 Resp: 257266

Ion Ratio Lower Upper

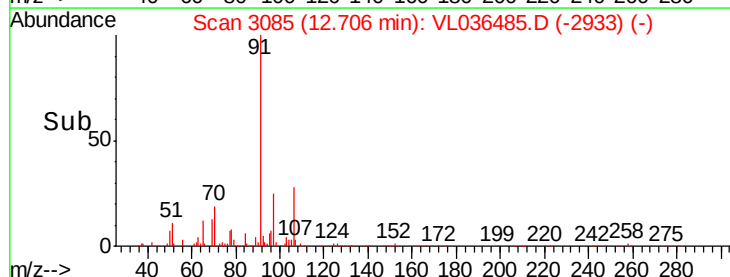
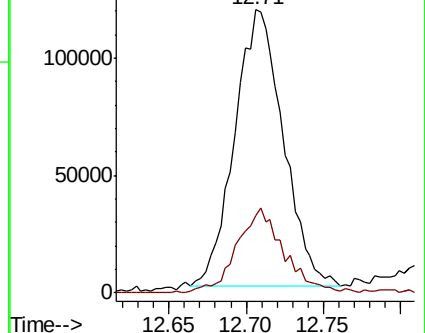
91 100

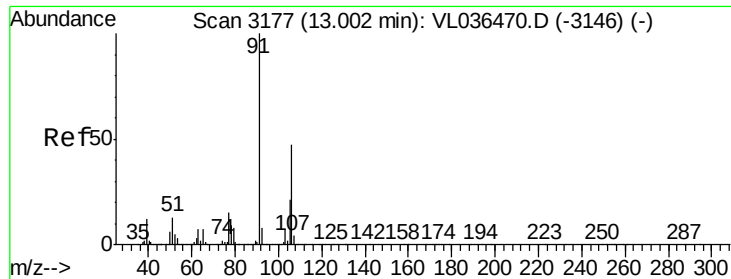
106 27.4 25.3 37.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

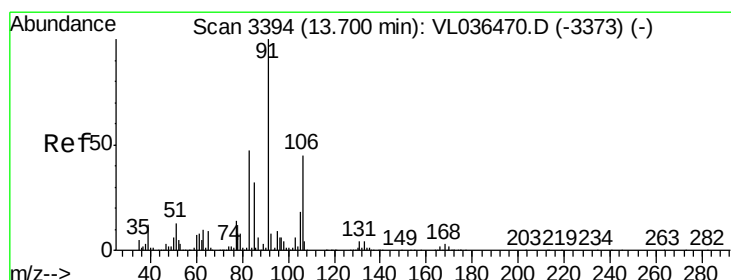
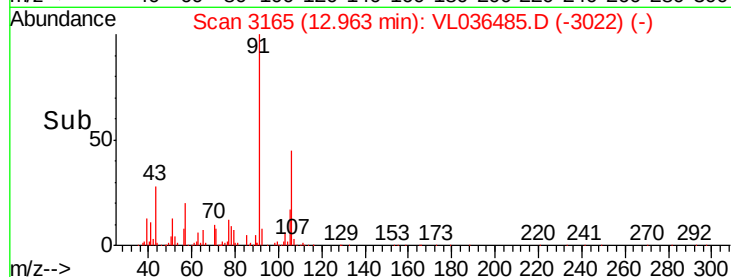
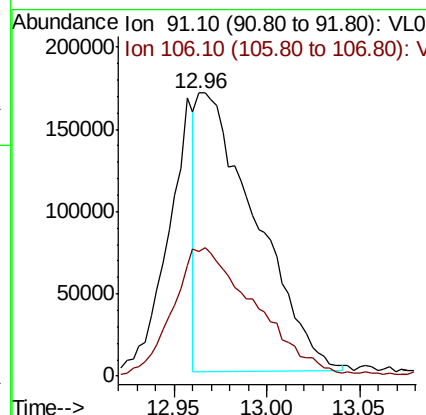
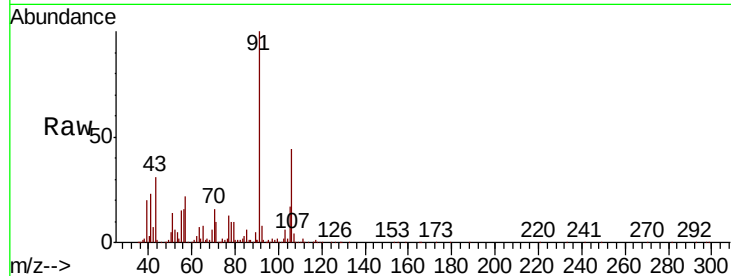
Ion 106.10 (105.80 to 106.80): V





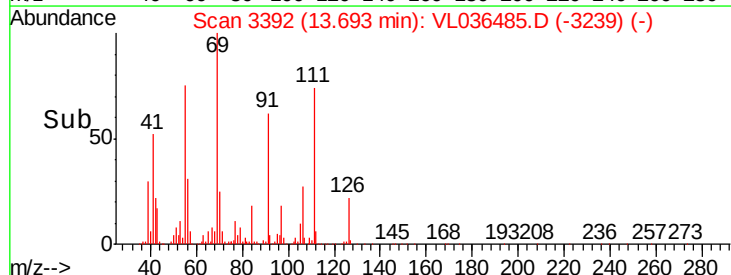
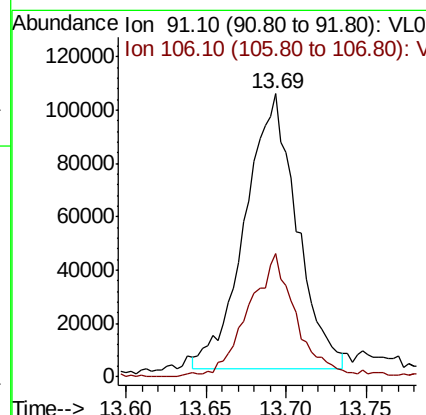
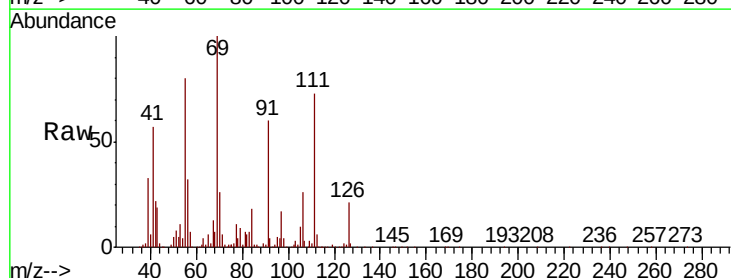
#59
m/p-Xylene
Concen: 0.896 ppbv
RT: 12.96 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 25 Mar 2021 14:15

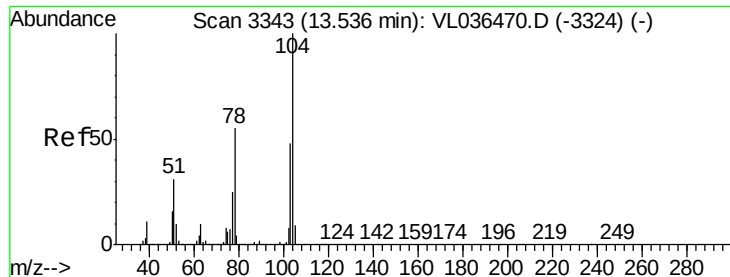
Tot Ion: 91 Resp: 370727
Ion Ratio Lower Upper
91 100
106 66.0 35.3 52.9#



#60
o-Xylene
Concen: 0.573 ppbv
RT: 13.69 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL036485.D
Acq: 25 Mar 2021 14:15

Tgt Ion: 91 Resp: 229175
Ion Ratio Lower Upper
91 100
106 41.1 22.3 66.9





#61

Stvrene

Concen: 0.120 ppbv

RT: 13.53

Delta R.T. MSVOA_L

Lab File:

Acq: 25 Mar 2021 14:15

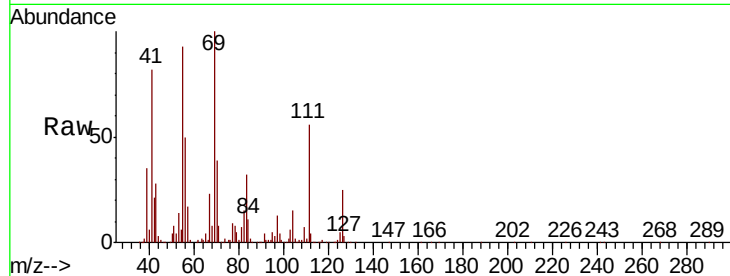
Tot Ion:104 Resp: 24052

Ion Ratio Lower Upper

104 100

78 158.0 43.8 65.8#

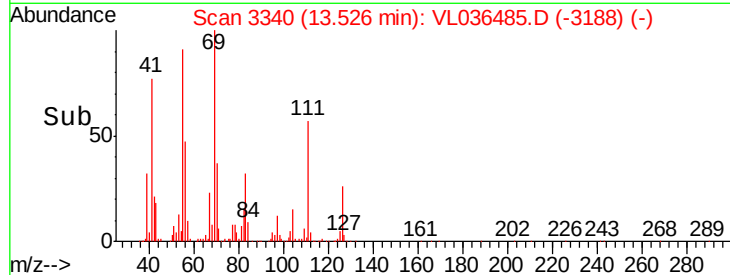
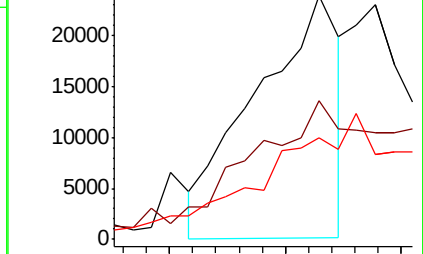
103 0.0 38.3 57.5#



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): V

Ion 103.10 (102.80 to 103.80): V



#62

Isopropylbenzene

Concen: 0.035 ppbv

RT: 14.65 min Scan# 3691

Delta R.T. -0.02 min

Lab File: VL036485.D

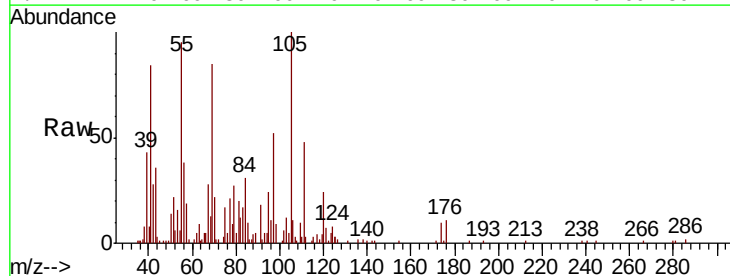
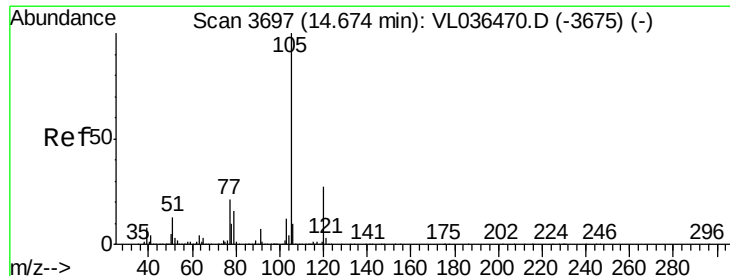
Acq: 25 Mar 2021 14:15

Tgt Ion:105 Resp: 18860

Ion Ratio Lower Upper

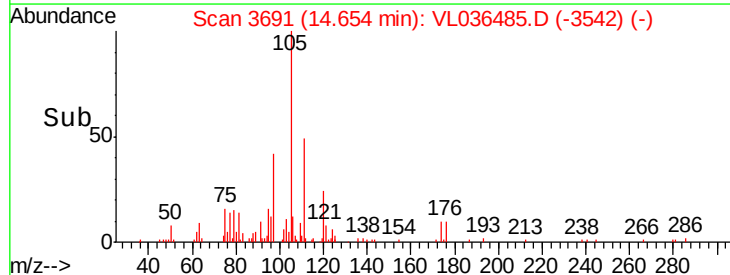
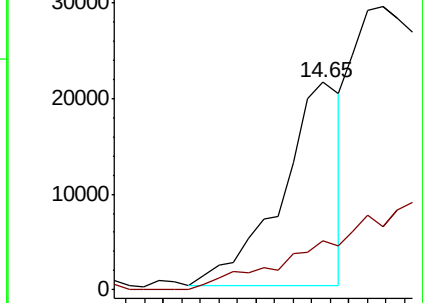
105 100

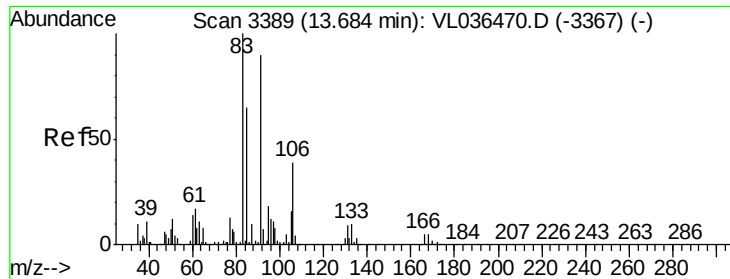
120 0.0 20.6 31.0#



Abundance Ion 105.10 (104.80 to 105.80): V

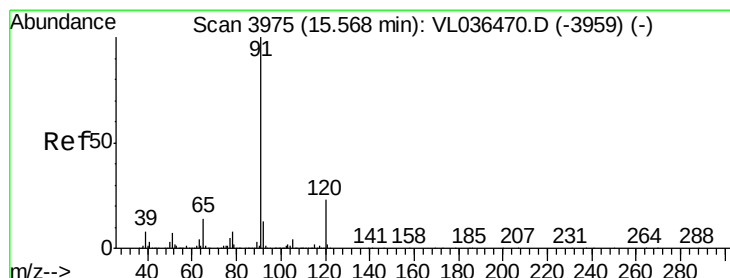
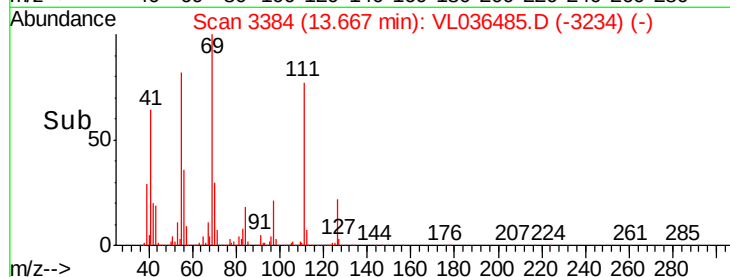
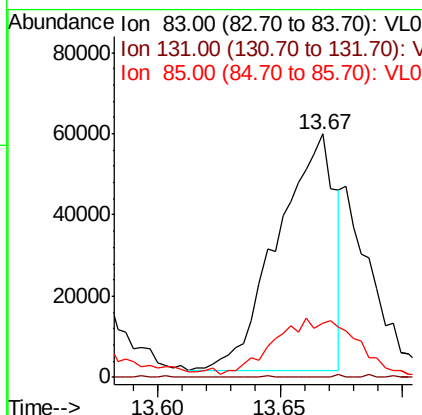
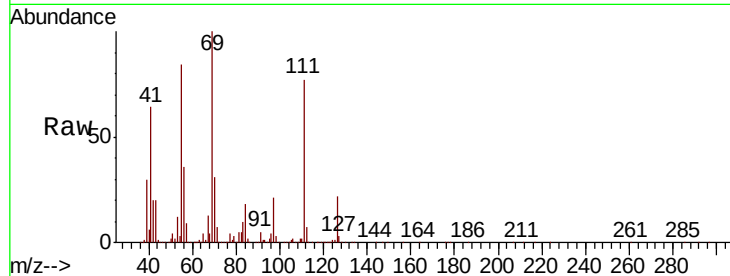
Ion 120.20 (119.90 to 120.90): V





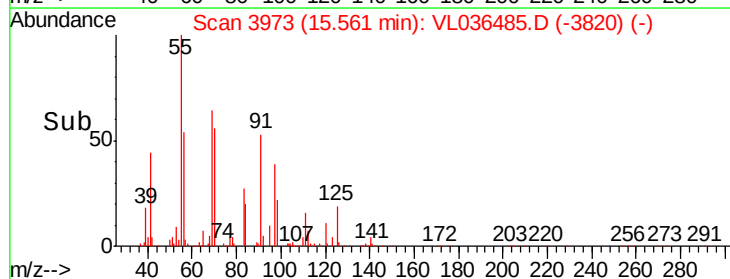
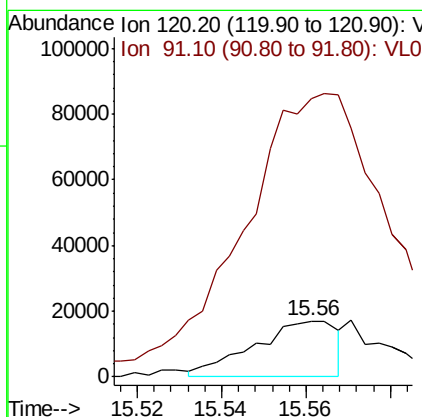
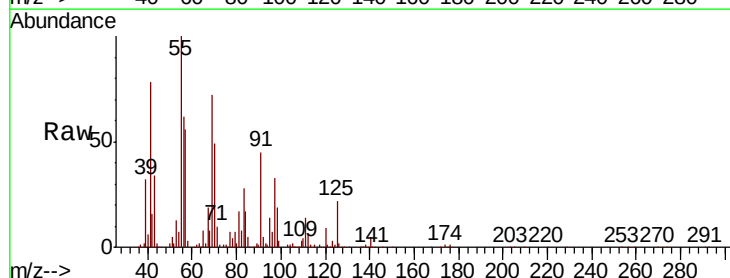
#63
 1,1,2,2-Tetrachloroethane
 Concen: 0.310 ppbv
 RT: 13.67
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 25 Mar 2021 14:15

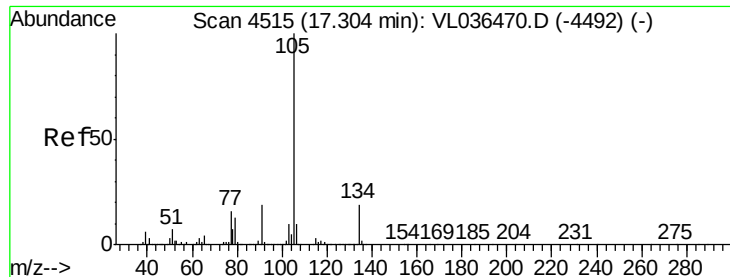
Tot Ion: 83 Resp: 94551
 Ion Ratio Lower Upper
 83 100
 131 0.0 4.7 14.0#
 85 32.5 33.1 99.3#



#64
 n-propylbenzene
 Concen: 0.178 ppbv
 RT: 15.56 min Scan# 3973
 Delta R.T. -0.01 min
 Lab File: VL036485.D
 Acq: 25 Mar 2021 14:15

Tgt Ion: 120 Resp: 23449
 Ion Ratio Lower Upper
 120 100
 91 875.5 377.4 566.2#





#67

sec-Butylbenzene

Concen: 0.113 ppbv

RT: 17.29

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

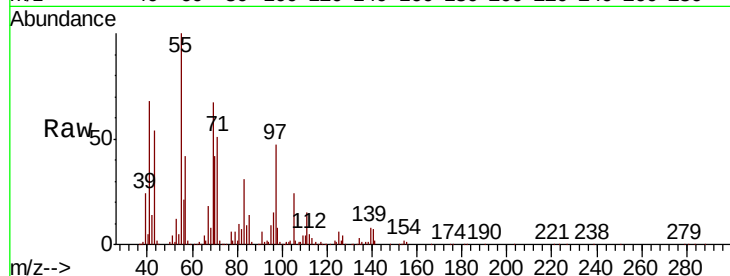
Acq: 25 Mar 2021 14:15

Tot Ion: 105 Resp: 74556

Ion Ratio Lower Upper

105 100

134 20.0 14.7 22.1



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V

17.29

40000

30000

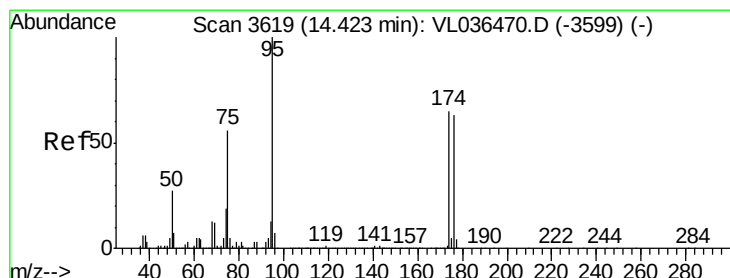
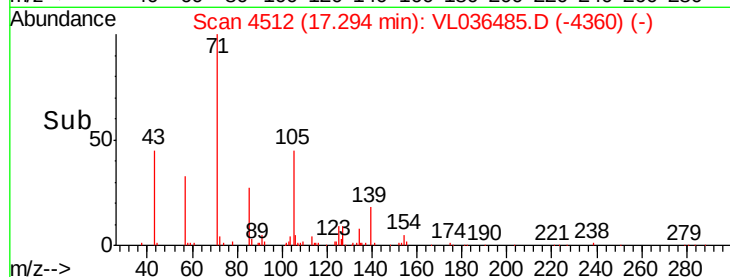
20000

10000

0

17.25 17.30 17.35

Time-->



#68

1-Bromo-4-Fluorobenzene

Concen: 10.428 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. -0.01 min

Lab File: VL036485.D

Acq: 25 Mar 2021 14:15

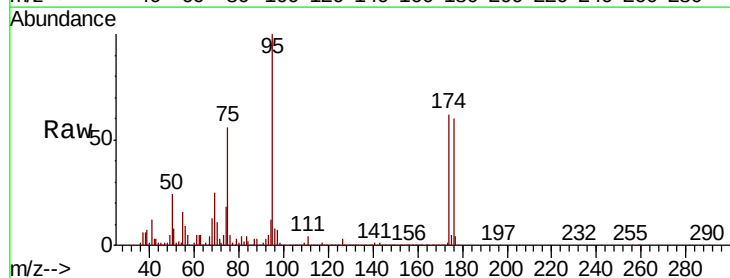
Tgt Ion: 95 Resp: 2709737

Ion Ratio Lower Upper

95 100

174 63.6 51.0 76.6

175 4.7 3.9 5.9



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

14.42

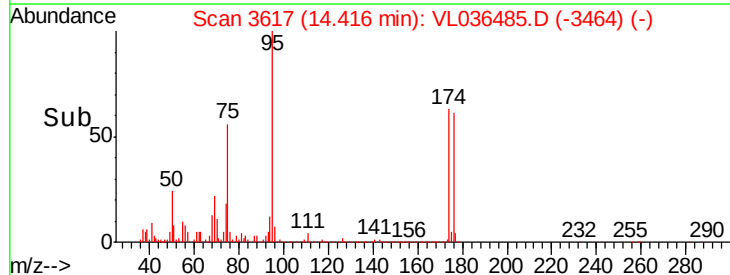
1000000

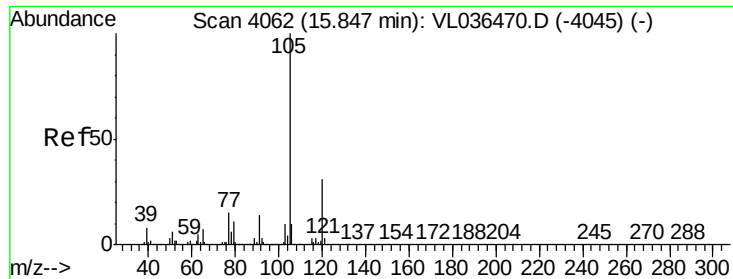
500000

0

14.30 14.40 14.50

Time-->





#72

4-Ethyltoluene

Concen: 0.143 ppbv

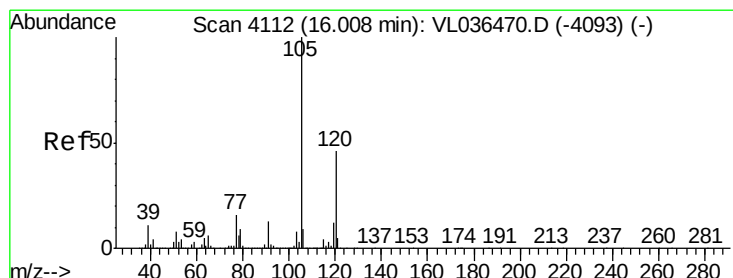
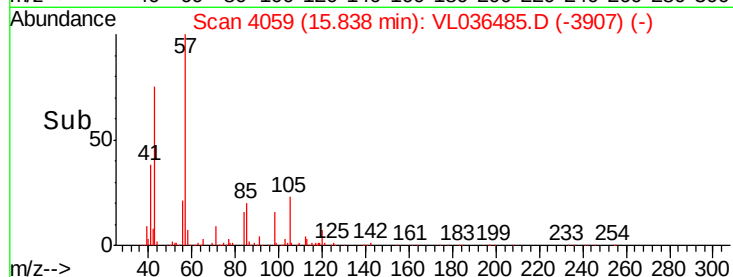
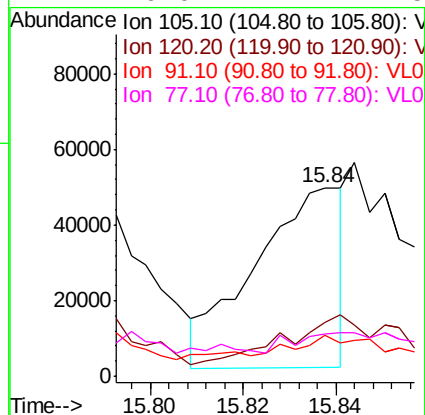
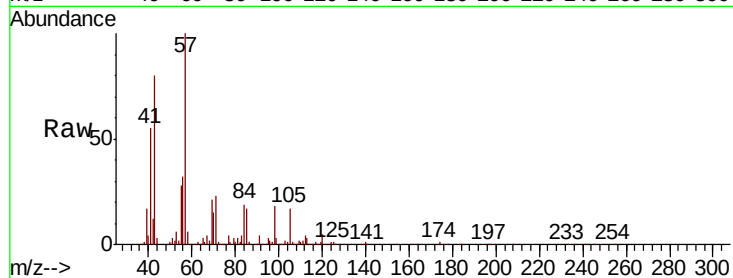
RT: 15.84

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 25 Mar 2021 14:15

Tot Ion:	105	Resp:	62648
Ion Ratio	Lower	Upper	
105	100		
120	0.0	24.0	36.0#
91	35.9	11.0	16.4#
77	0.0	11.7	17.5#



#73

1,3,5-Trimethylbenzene

Concen: 0.106 ppbv

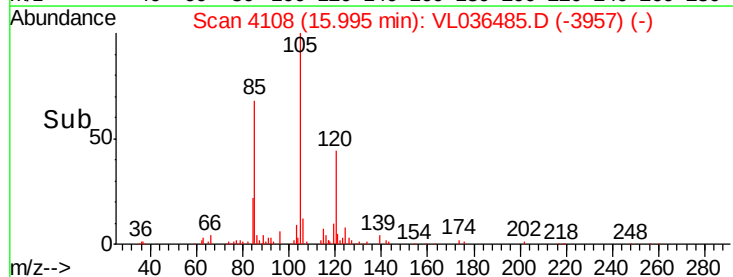
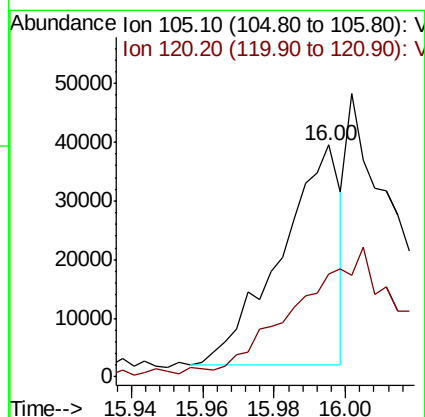
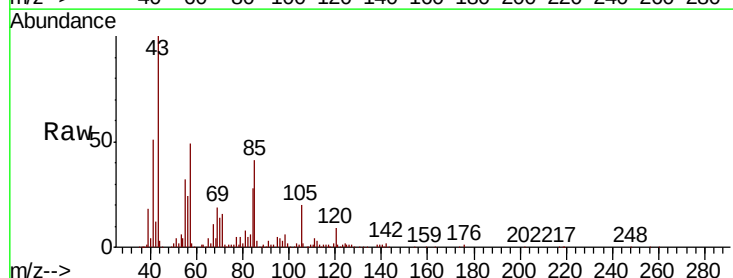
RT: 16.00 min Scan# 4108

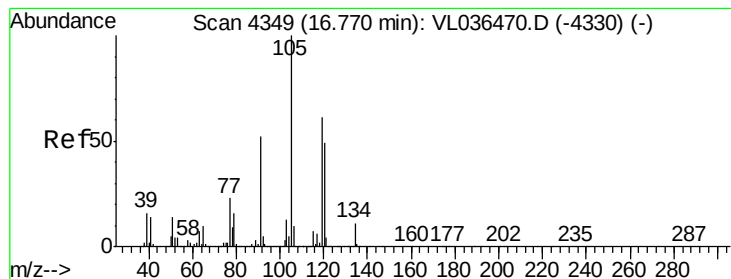
Delta R.T. -0.01 min

Lab File: VL036485.D

Acq: 25 Mar 2021 14:15

Tgt Ion:	105	Resp:	43393
Ion Ratio	Lower	Upper	
105	100		
120	42.3	36.6	54.8





#74

1,2,4-Trimethylbenzene

Concen: 0.544 ppbv

RT: 16.77 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 25 Mar 2021 14:15

Tot Ion:	105	Resp:	238216
Ion Ratio	Lower	Upper	
105	100		
120	41.6	39.2	58.8
91	12.6	42.6	64.0#
77	18.4	18.6	28.0#

