

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL042721\
 Data File : VL036861.D
 Acq On : 27 Apr 2021 17:13
 Operator : SY/AP
 Sample : M2172-04
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 28 05:25:08 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL042721AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Apr 27 16:56:35 2021
 QLast Update : Tue Apr 27 16:56:35 2021
 Response via : Initial Calibration

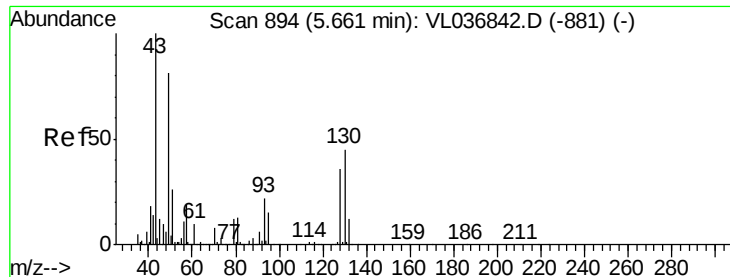
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1396984	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3226130	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2752015	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2213724	10.02	ppbv	0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.20%

Target Compounds					Ovalue
3) Chlorodifluoromethane	2.99	51	111631	0.439 ppbv #	84
4) Chloromethane	3.15	50	29405	0.352 ppbv #	85
5) Vinyl Chloride	3.26	62	14795	0.175 ppbv #	69
9) Propene	3.02	41	75394	0.972 ppbv	85
10) Heptane	8.13	43	6765	0.035 ppbv #	1
11) Trichlorofluoromethane	3.95	101	42745	0.218 ppbv	90
13) Ethanol	3.62	45	97654	9.875 ppbv	88
15) Acetone	3.86	43	696158	5.287 ppbv	98
16) 1,3-Butadiene	3.31	39	74304	0.883 ppbv #	20
18) 1,1-Dichloroethene	4.29	96	4048	0.071 ppbv #	39
19) Isopropyl Alcohol	4.00	45	70591	1.082 ppbv #	85
20) Methylene Chloride	4.35	84	1170383	18.588 ppbv	96
22) trans-1,2-Dichloroethene	4.89	96	12792	0.223 ppbv #	65
24) 1,1-Dichloroethane	5.01	63	23826	0.187 ppbv	97
25) Ethyl Acetate	5.69	43	830410	2.582 ppbv #	78
26) Hexane	5.69	57	1136827	7.555 ppbv #	44
29) Chloroform	5.76	83	104622	0.446 ppbv	94
31) cis-1,2-Dichloroethene	5.55	61	1158128	8.574 ppbv	97
34) 2-Butanone	5.26	43	116966	0.828 ppbv	96
35) Carbon Tetrachloride	7.02	117	9024	0.041 ppbv	92
36) Benzene	6.90	78	26635	0.098 ppbv #	91
38) Trichloroethene	7.84	130	4800	0.050 ppbv #	20
39) 1,2-Dichloropropane	7.24	63	11653	0.107 ppbv #	25
41) Tetrahydrofuran	6.07	42	5504	0.089 ppbv #	1
44) 2,2,4-Trimethylpentane	7.88	57	62722	0.135 ppbv #	63
53) Toluene	9.81	91	178499	0.628 ppbv	97
58) Ethyl Benzene	12.72	91	11519	0.033 ppbv	95
60) o-Xylene	13.70	91	18099	0.060 ppbv #	64

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 17:13

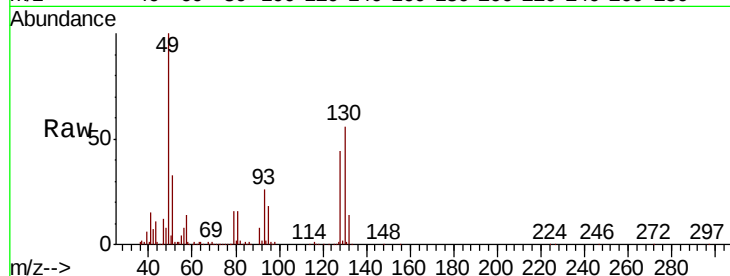
Tot Ion: 49 Resp: 1396984

Ion Ratio Lower Upper

49 100

128 45.3 24.4 73.2

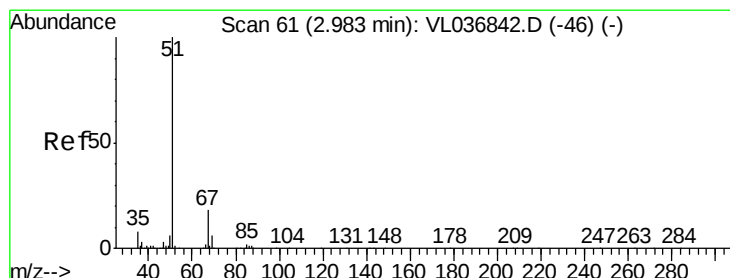
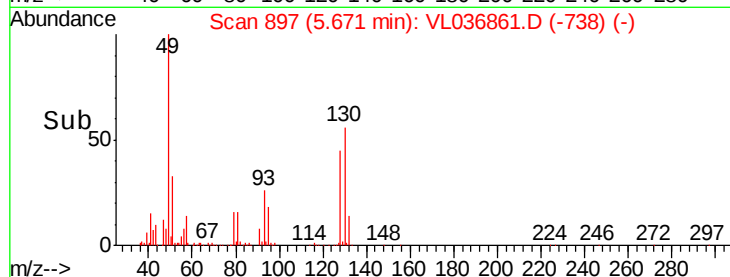
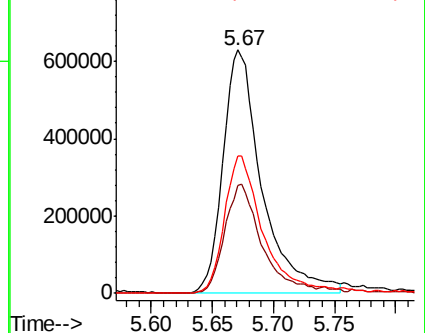
130 59.1 30.3 90.8



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



#3

Chlorodifluoromethane

Concen: 0.439 ppbv

RT: 2.99 min Scan# 63

Delta R.T. 0.01 min

Lab File: VL036861.D

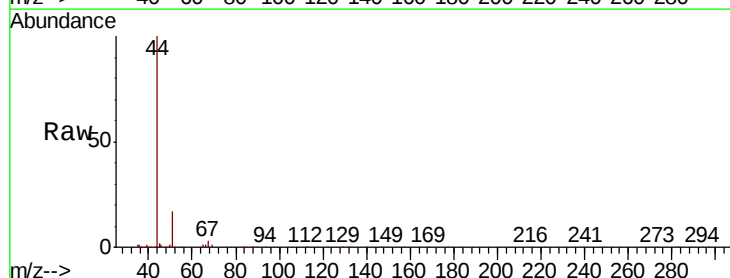
Acq: 27 Apr 2021 17:13

Tgt Ion: 51 Resp: 111631

Ion Ratio Lower Upper

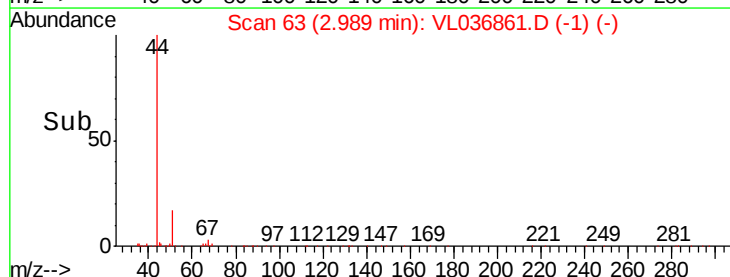
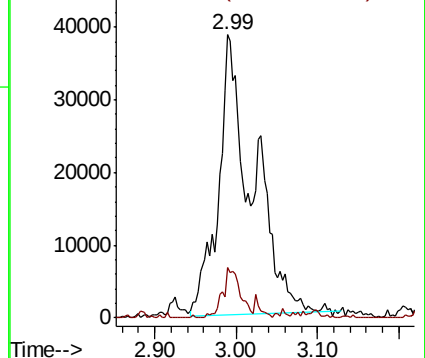
51 100

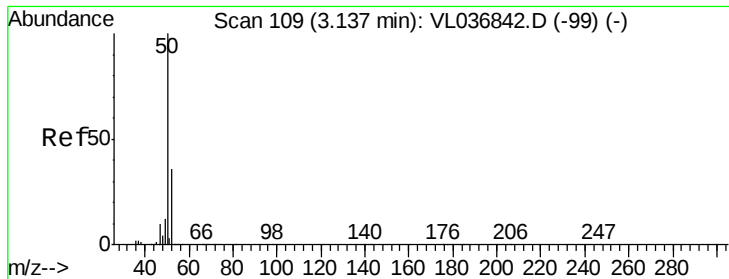
67 11.4 14.8 22.2#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.352 ppbv

RT: 3.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

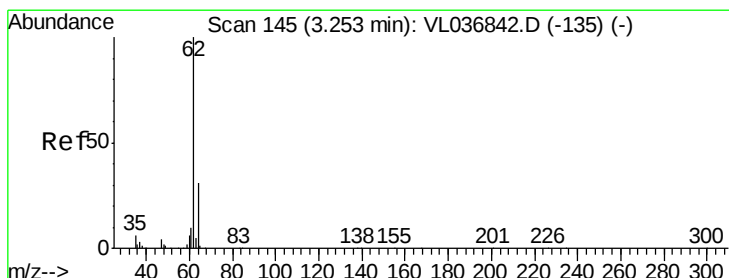
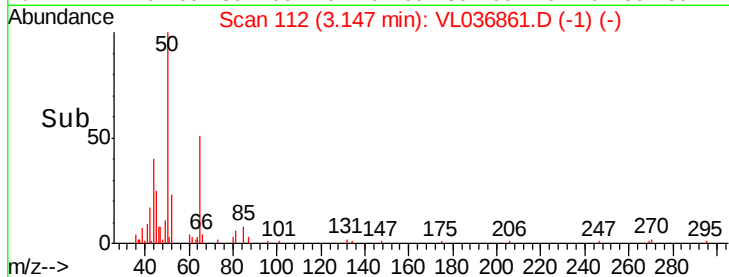
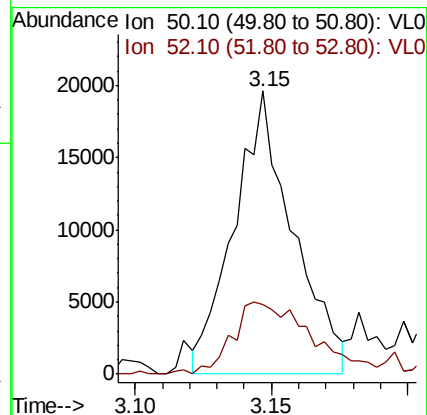
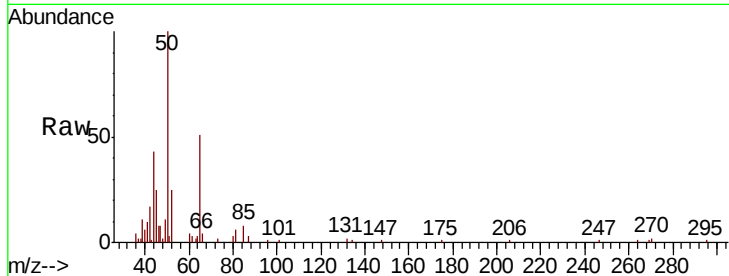
Acq: 27 Apr 2021 17:13

Tot Ion: 50 Resp: 29405

Ion Ratio Lower Upper

50 100

52 27.0 28.5 42.7#



#5

Vinyl Chloride

Concen: 0.175 ppbv

RT: 3.26 min Scan# 148

Delta R.T. 0.01 min

Lab File: VL036861.D

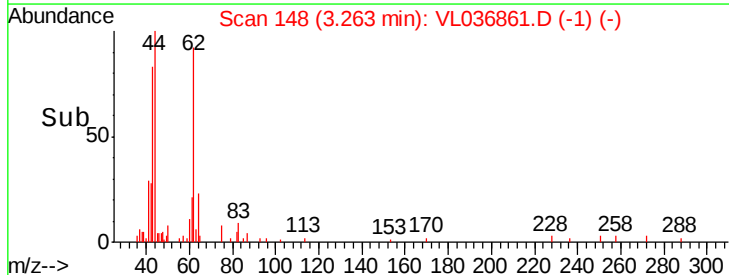
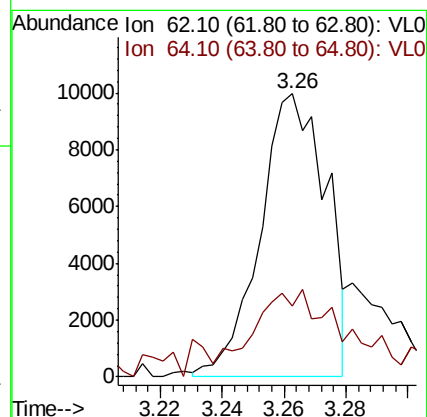
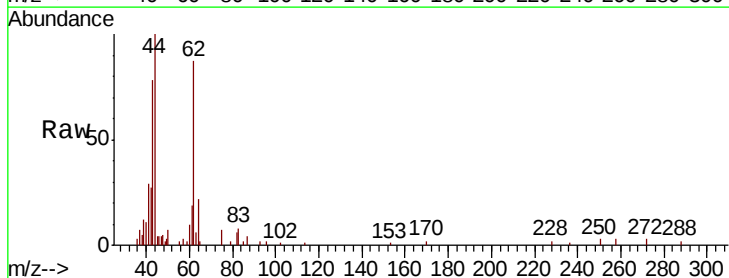
Acq: 27 Apr 2021 17:13

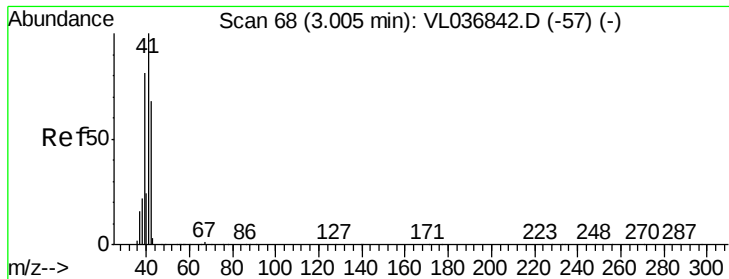
Tgt Ion: 62 Resp: 14795

Ion Ratio Lower Upper

62 100

64 14.3 25.0 37.4#





#9

Propene

Concen: 0.972 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

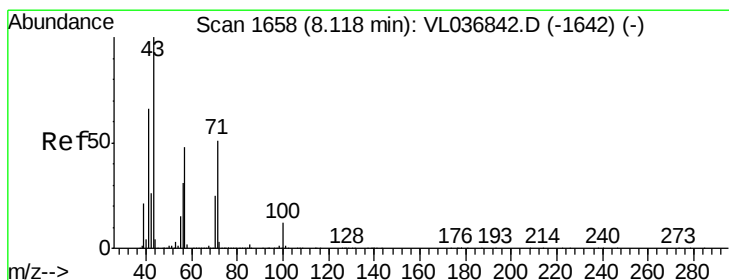
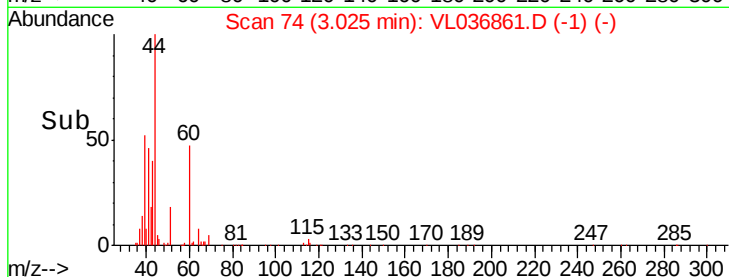
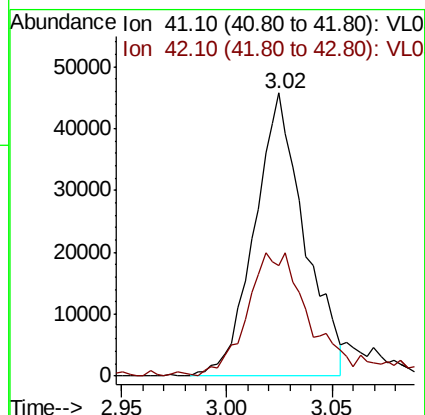
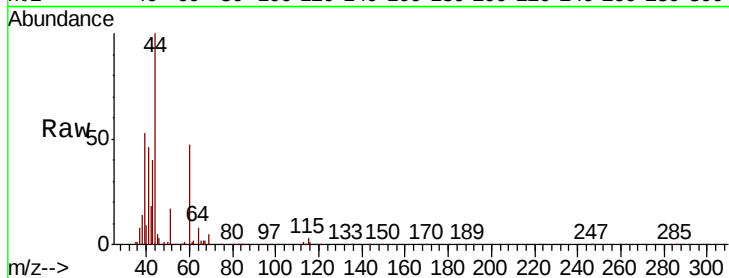
Acq: 27 Apr 2021 17:13

Tot Ion: 41 Resp: 75394

Ion Ratio Lower Upper

41 100

42 57.7 56.0 84.0



#10

Heptane

Concen: 0.035 ppbv

RT: 8.13 min Scan# 1661

Delta R.T. 0.01 min

Lab File: VL036861.D

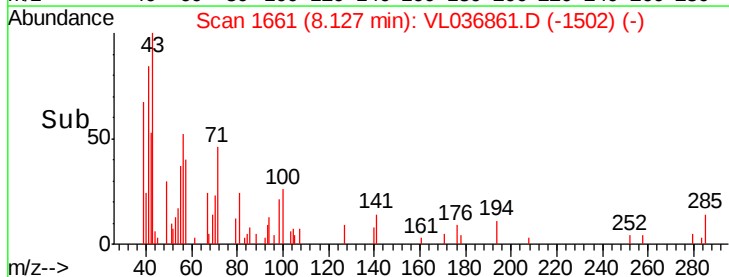
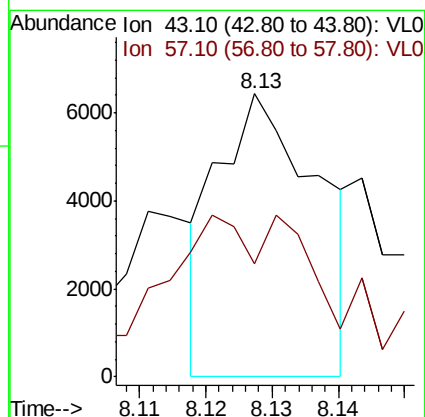
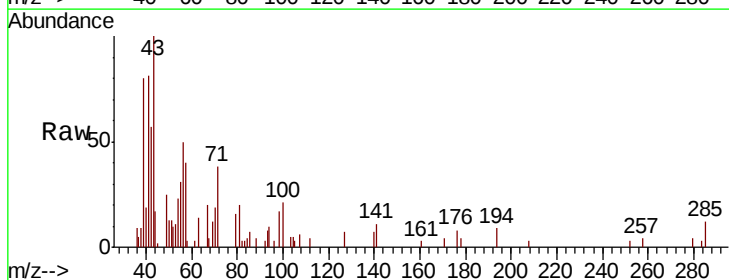
Acq: 27 Apr 2021 17:13

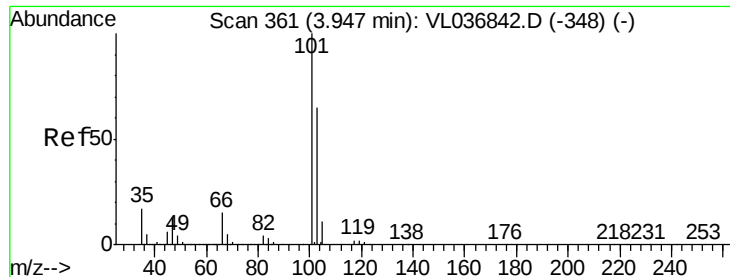
Tgt Ion: 43 Resp: 6765

Ion Ratio Lower Upper

43 100

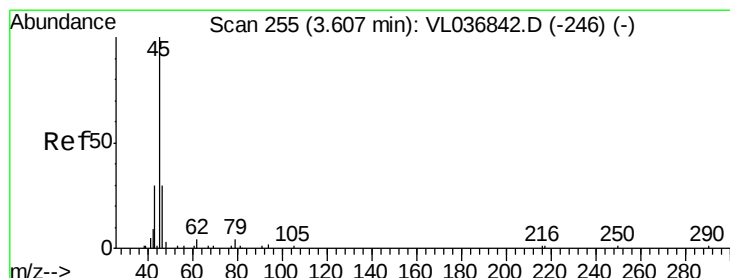
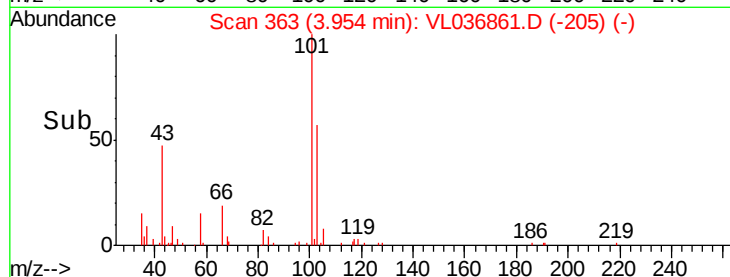
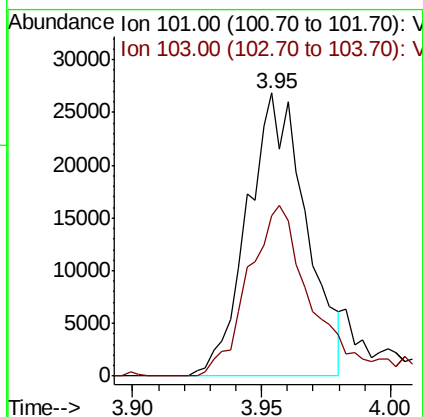
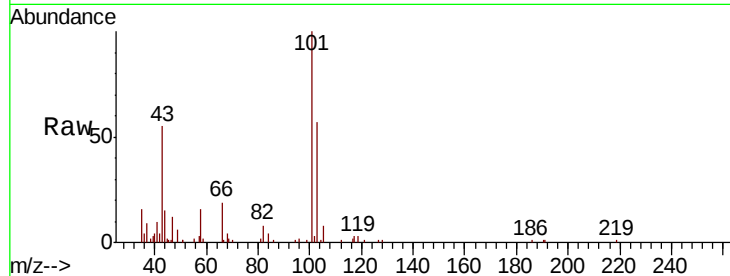
57 128.6 38.8 58.2#





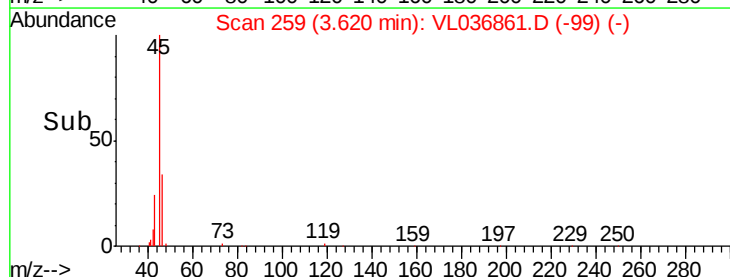
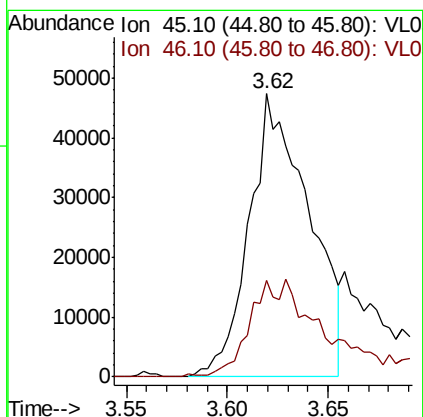
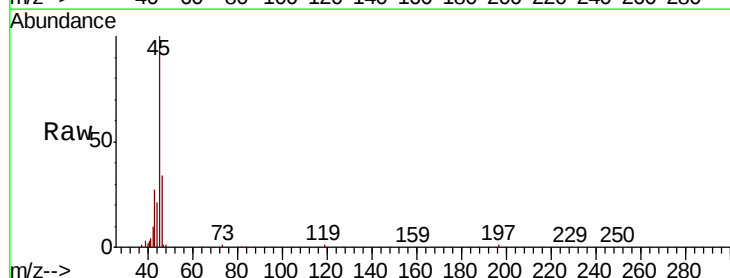
#11
 Trichlorofluoromethane
 Concen: 0.218 ppbv
 RT: 3.95 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 17:13

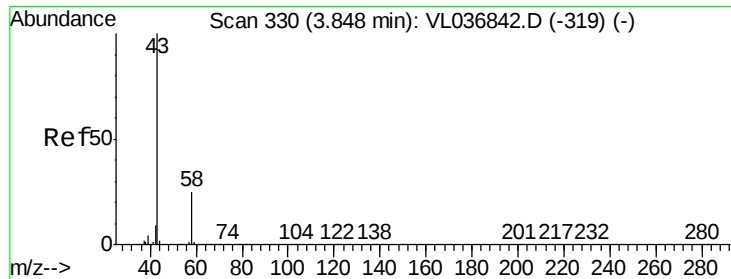
Tot Ion:101 Resp: 42745
 Ion Ratio Lower Upper
 101 100
 103 56.8 51.6 77.4



#13
 Ethanol
 Concen: 9.875 ppbv
 RT: 3.62 min Scan# 259
 Delta R.T. 0.01 min
 Lab File: VL036861.D
 Acq: 27 Apr 2021 17:13

Tgt Ion: 45 Resp: 97654
 Ion Ratio Lower Upper
 45 100
 46 50.0 16.8 67.4





#15

Acetone

Concen: 5.287 ppbv

RT: 3.86 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

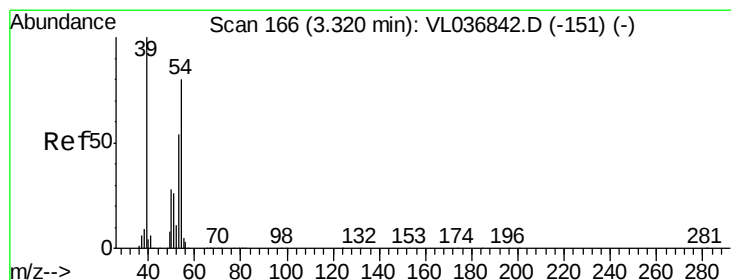
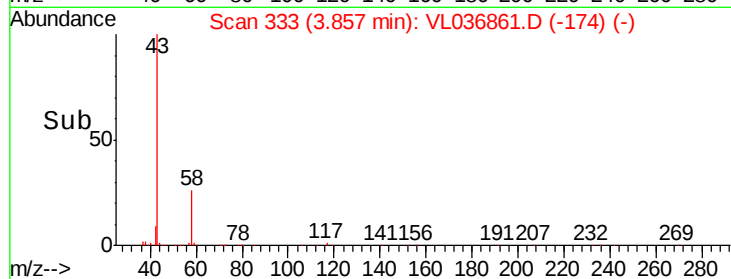
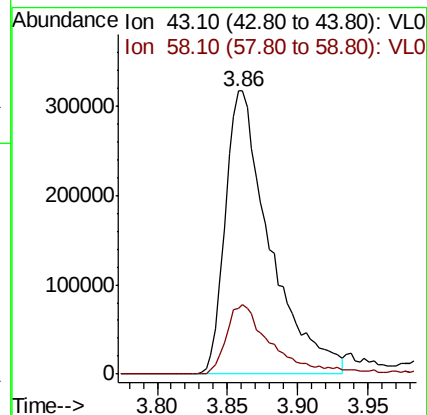
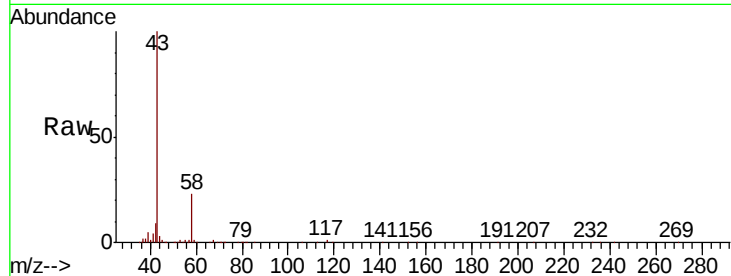
Acq: 27 Apr 2021 17:13

Tot Ion: 43 Resp: 696158

Ion Ratio Lower Upper

43 100

58 25.9 21.7 32.5



#16

1,3-Butadiene

Concen: 0.883 ppbv

RT: 3.31 min Scan# 162

Delta R.T. -0.01 min

Lab File: VL036861.D

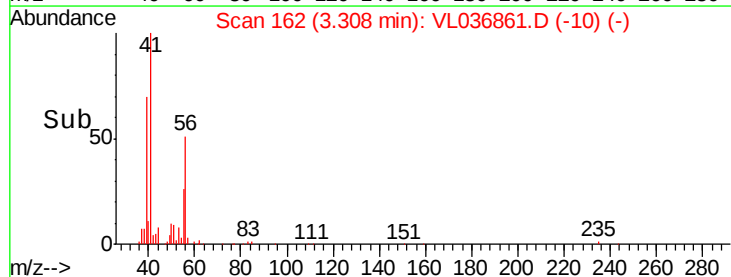
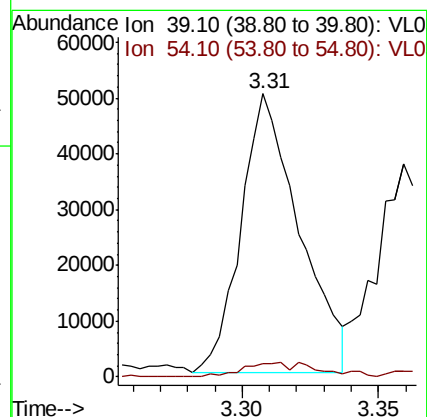
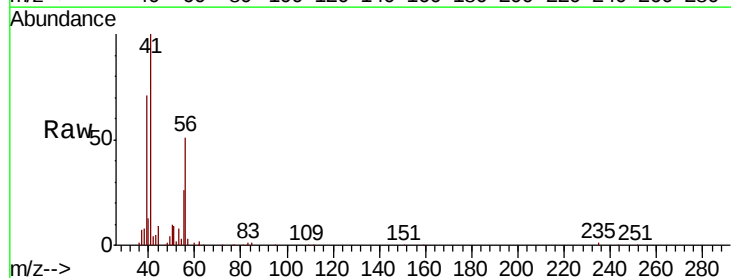
Acq: 27 Apr 2021 17:13

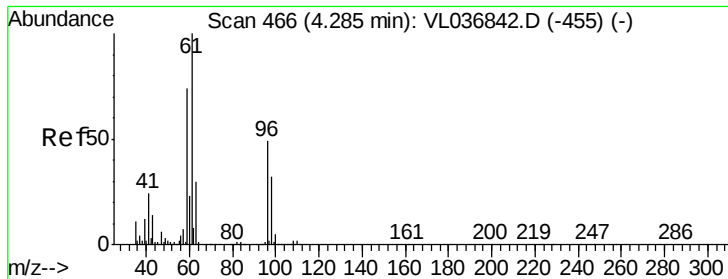
Tgt Ion: 39 Resp: 74304

Ion Ratio Lower Upper

39 100

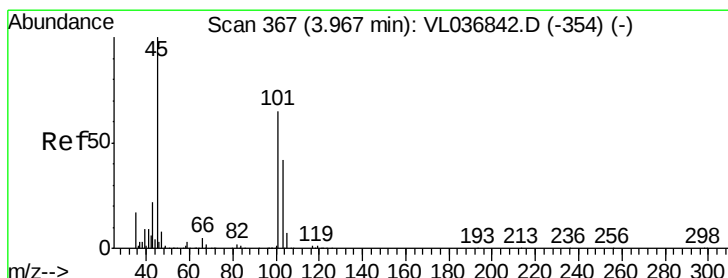
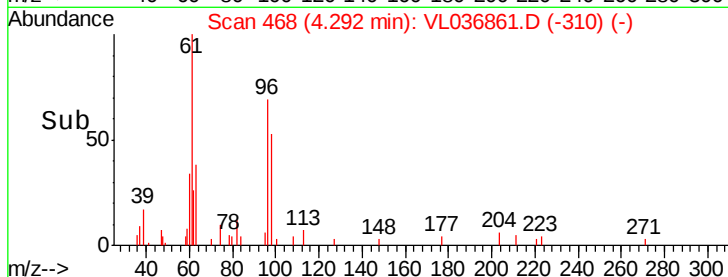
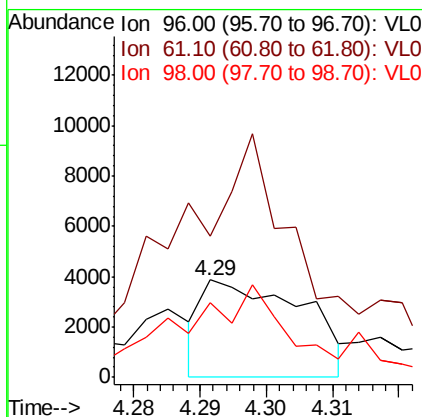
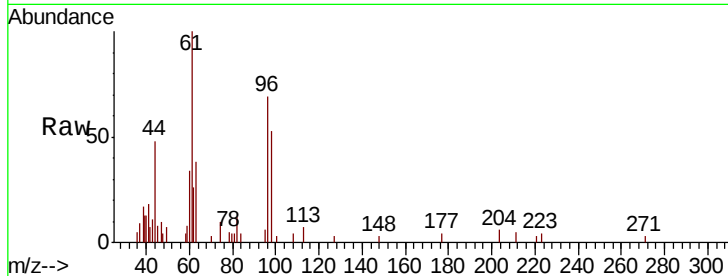
54 6.8 59.6 89.4#





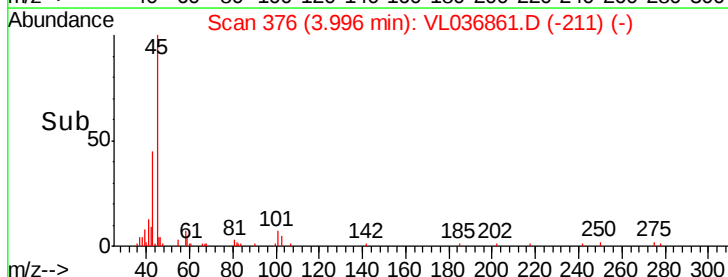
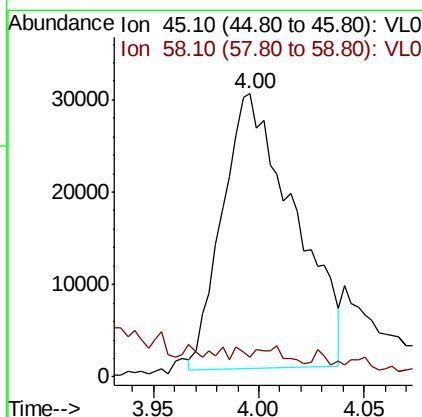
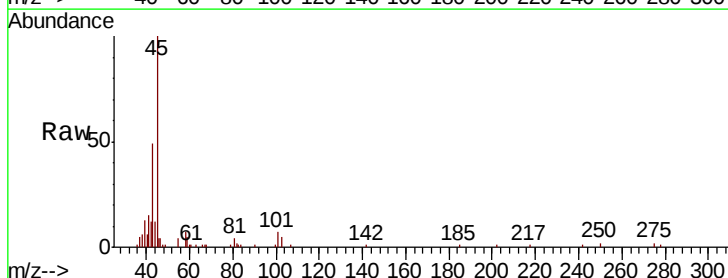
#18
 1,1-Dichloroethene
 Concen: 0.071 ppbv
 RT: 4.29 Instrument :
 Delta R.T. MSVOA.L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 17:13

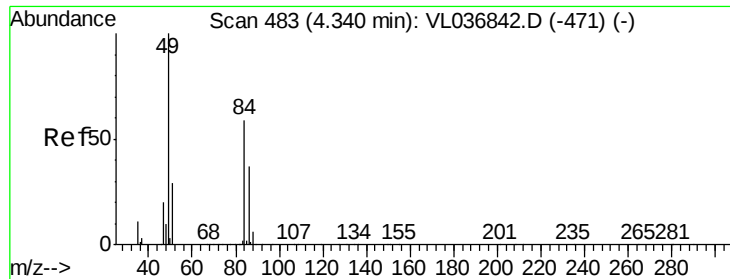
Tot Ion	96	Resp	4048
Ion Ratio	Lower	Upper	
96	100		
61	93.6	162.2	243.2#
98	86.8	51.8	77.6#



#19
 Isopropyl Alcohol
 Concen: 1.082 ppbv
 RT: 4.00 min Scan# 376
 Delta R.T. 0.03 min
 Lab File: VL036861.D
 Acq: 27 Apr 2021 17:13

Tgt Ion	45	Resp	70591
Ion Ratio	Lower	Upper	
45	100		
58	8.3	2.8	4.2#

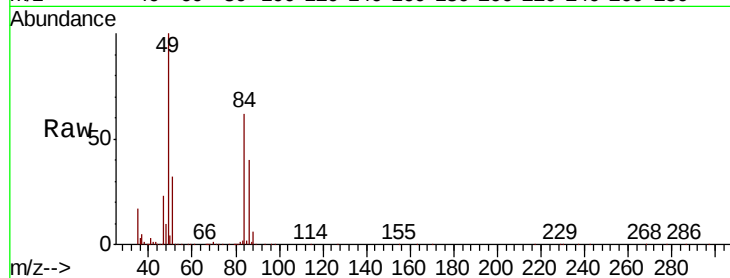




#20
Methvlene Chloride
Concen: 18.588 ppbv
RT: 4.35
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 27 Apr 2021 17:13

Tot Ion: 84 Resp: 1170383

Ion	Ratio	Lower	Upper
84	100		
49	162.3	135.4	203.0
51	51.4	39.3	58.9
86	65.0	50.2	75.2



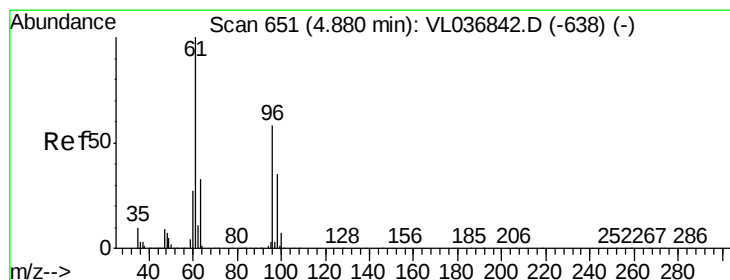
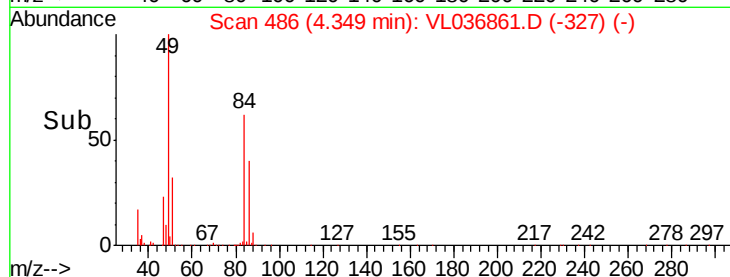
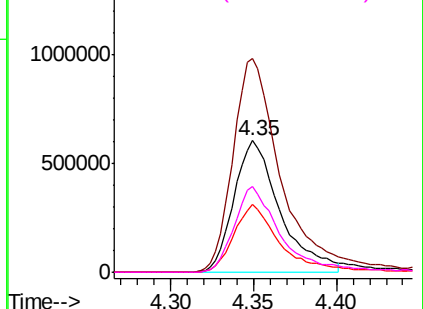
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

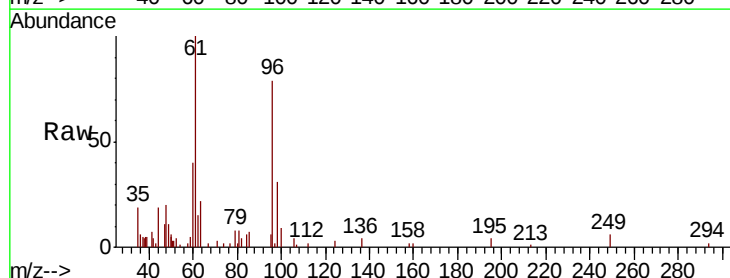
Ion 86.00 (85.70 to 86.70): VL0



#22
trans-1,2-Dichloroethene
Concen: 0.223 ppbv
RT: 4.89 min Scan# 655
Delta R.T. 0.01 min
Lab File: VL036861.D
Acq: 27 Apr 2021 17:13

Tgt Ion: 96 Resp: 12792

Ion	Ratio	Lower	Upper
96	100		
61	125.9	138.6	207.8#
98	32.4	48.1	72.1#

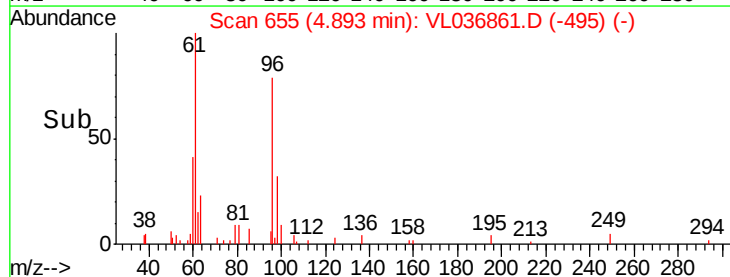
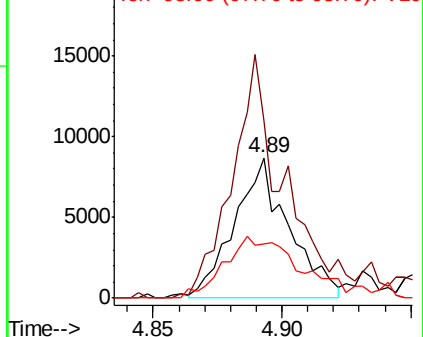


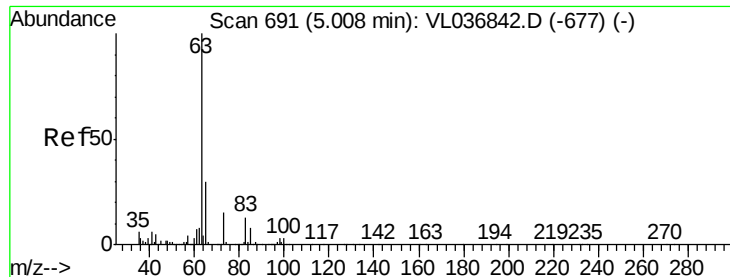
Abundance

Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0





#24

1,1-Dichloroethane

Concen: 0.187 ppbv

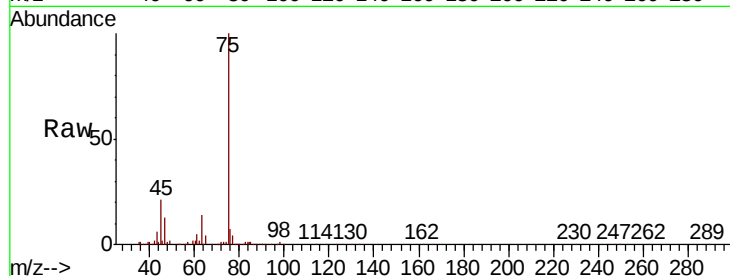
RT: 5.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 17:13

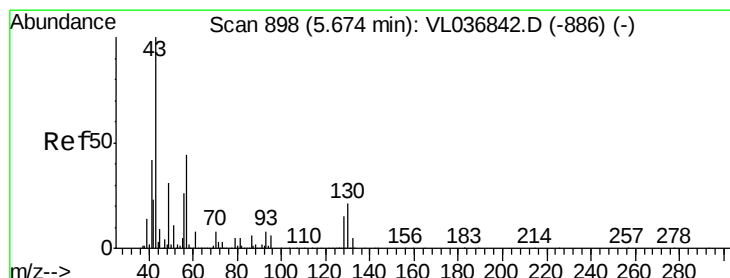
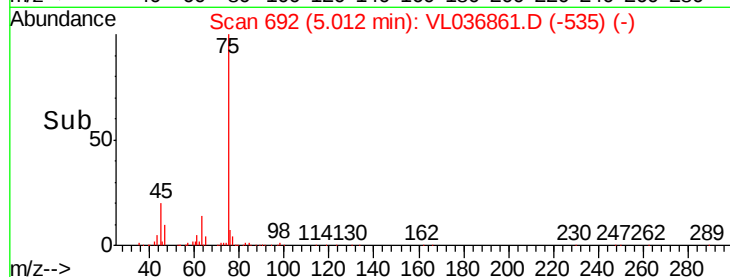
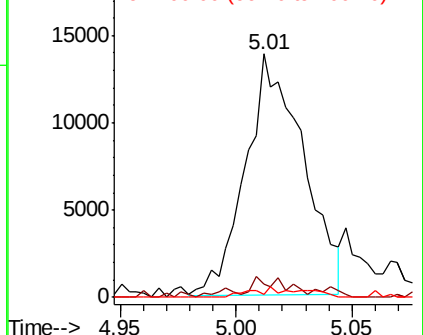
Tot Ion:	63	Resp:	23826
Ion	Ratio	Lower	Upper
63	100		
98	4.2	1.7	5.1
100	1.3	1.3	3.8



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



#25

Ethyl Acetate

Concen: 2.582 ppbv

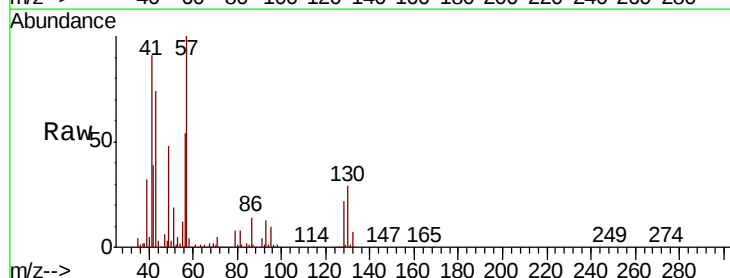
RT: 5.69 min Scan# 903

Delta R.T. 0.02 min

Lab File: VL036861.D

Acq: 27 Apr 2021 17:13

Tgt Ion:	43	Resp:	830410
Ion	Ratio	Lower	Upper
43	100		
45	1.0	7.8	11.8#
61	0.0	7.4	11.0#
70	1.6	5.4	8.0#

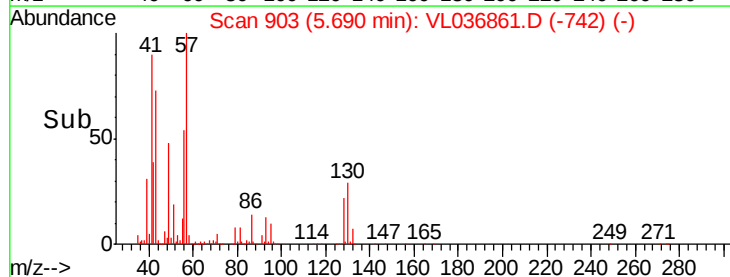
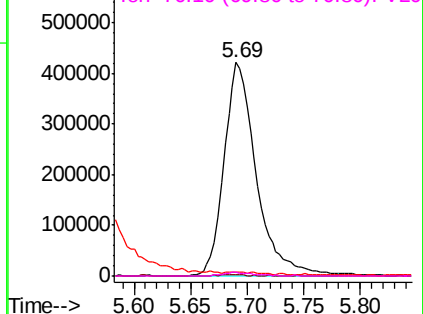


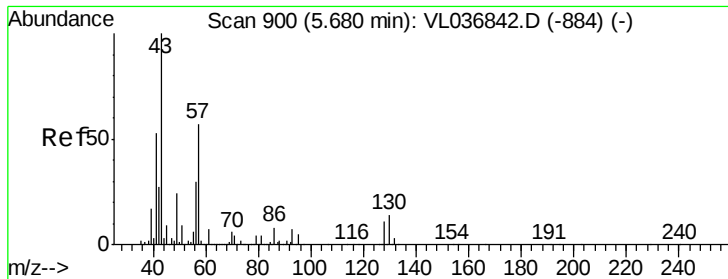
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

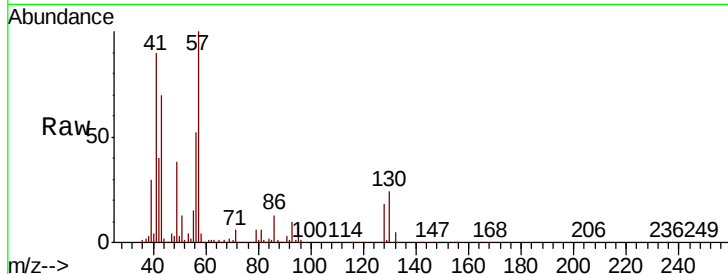




#26
Hexane
Concen: 7.555 ppbv
RT: 5.69
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Apr 2021 17:13

Tot Ion: 57 Resp: 1136827

Ion	Ratio	Lower	Upper
57	100		
41	95.9	77.7	116.5
43	73.9	180.5	270.7#
56	56.2	44.6	66.8



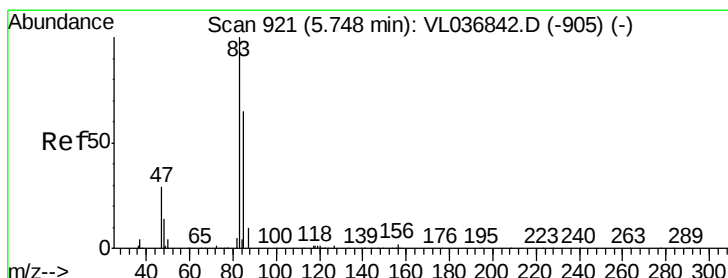
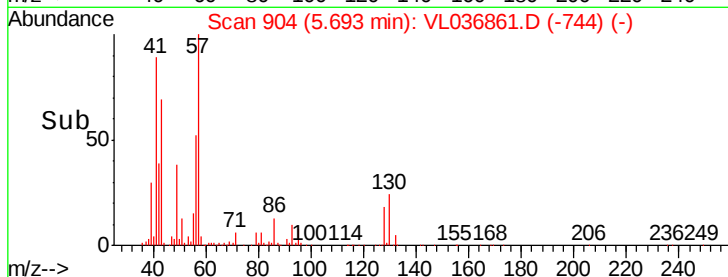
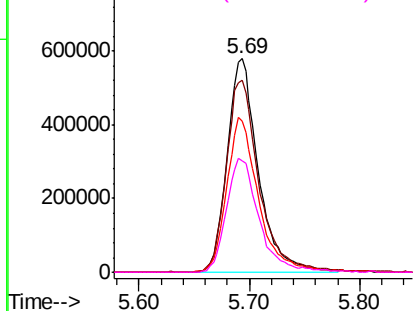
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

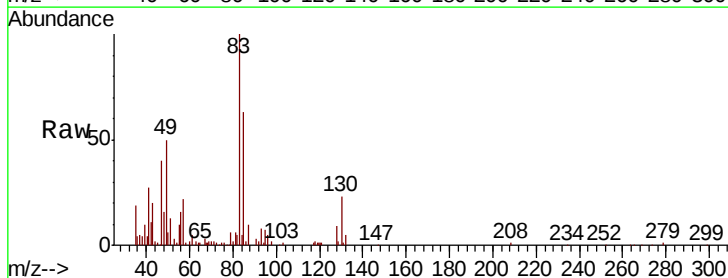
Ion 56.10 (55.80 to 56.80): VL0



#29
Chloroform
Concen: 0.446 ppbv
RT: 5.76 min Scan# 924
Delta R.T. 0.01 min
Lab File: VL036861.D
Acq: 27 Apr 2021 17:13

Tgt Ion: 83 Resp: 104622

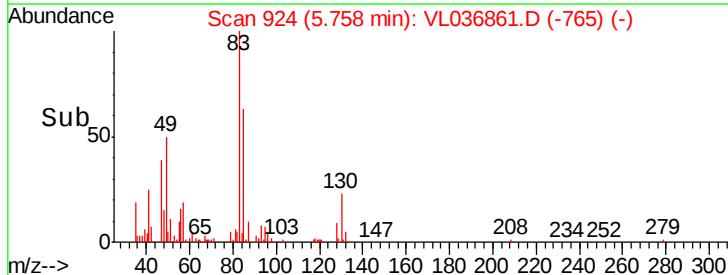
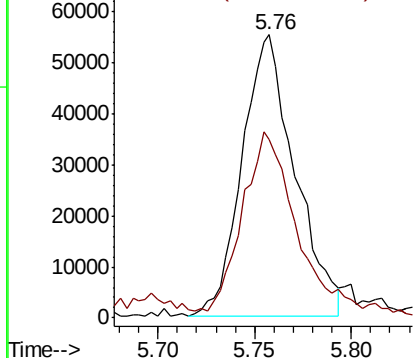
Ion	Ratio	Lower	Upper
83	100		
85	60.7	52.2	78.4

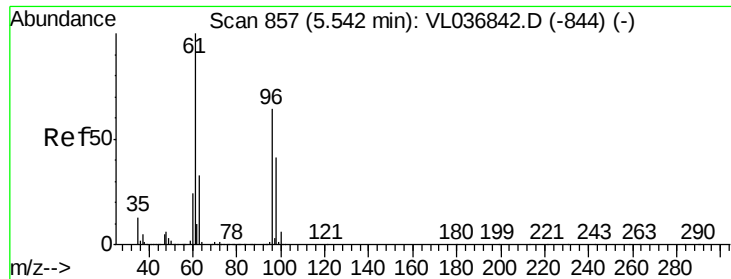


Abundance

Ion 83.00 (82.70 to 83.70): VL0

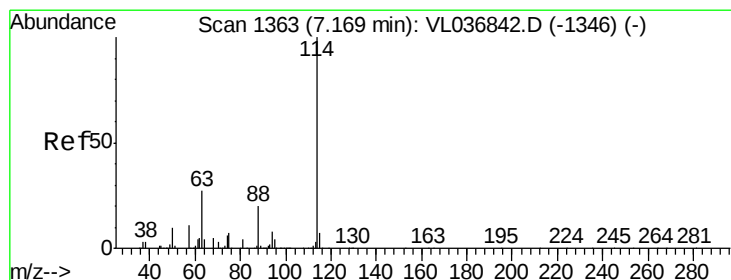
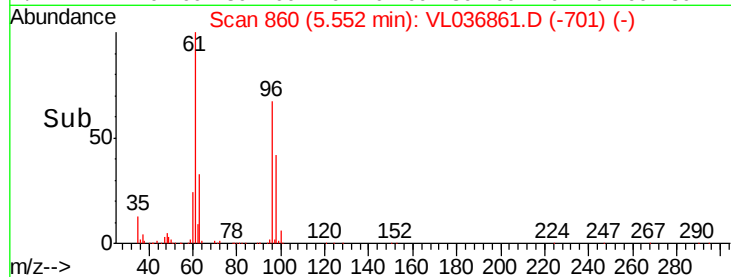
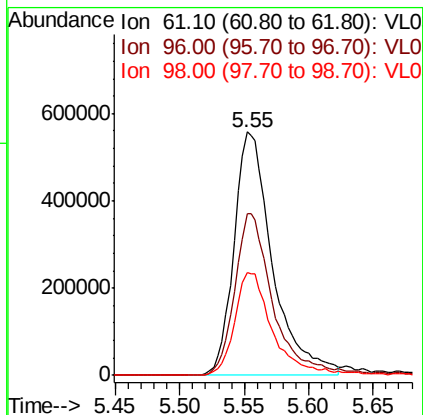
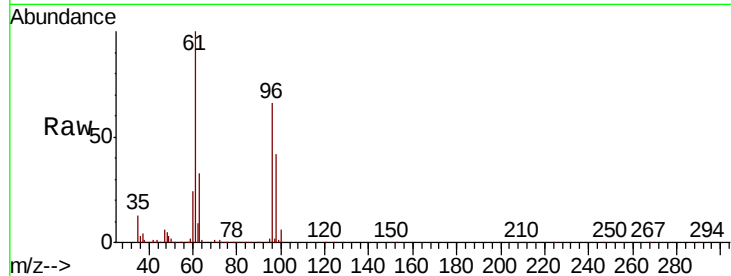
Ion 85.00 (84.70 to 85.70): VL0





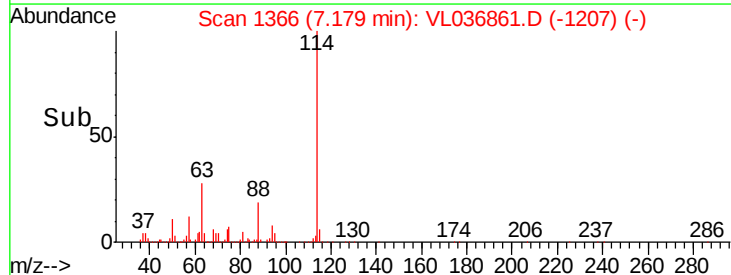
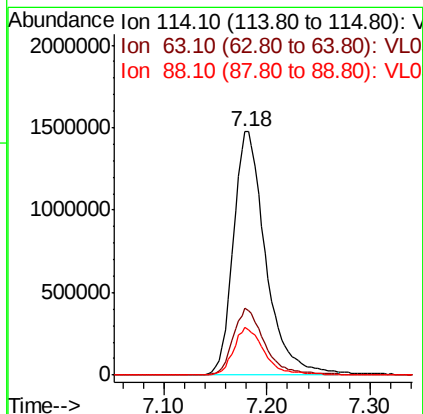
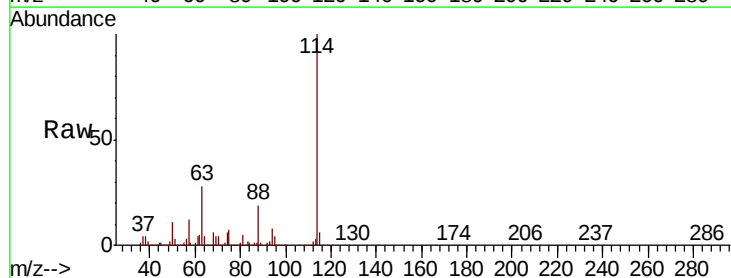
#31
 cis-1,2-Dichloroethene
 Concen: 8.574 ppbv
 RT: 5.55 Instrument :
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 17:13

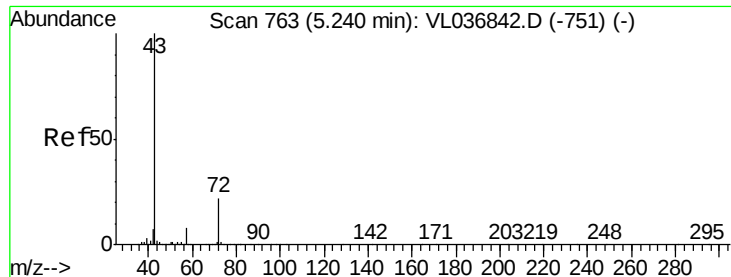
Tot Ion	61	Resp	1158128
Ion	Ratio	Lower	Upper
61	100		
96	66.4	51.0	76.6
98	42.1	32.7	49.1



#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.18 min Scan# 1366
 Delta R.T. 0.01 min
 Lab File: VL036861.D
 Acq: 27 Apr 2021 17:13

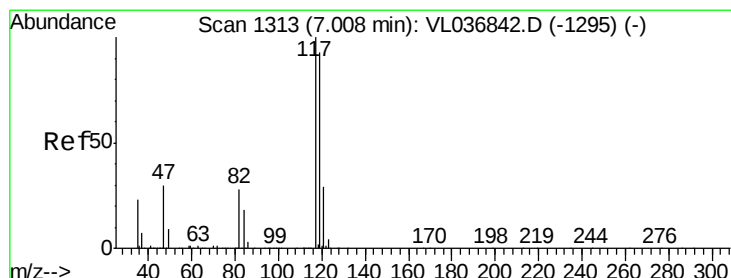
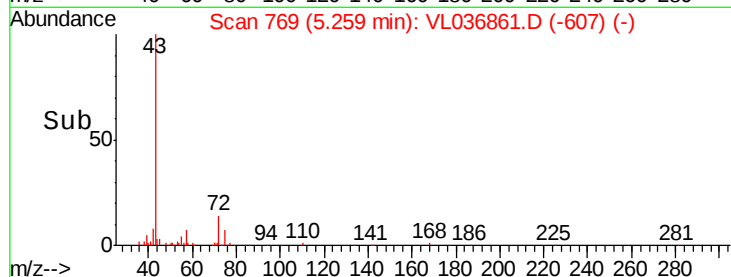
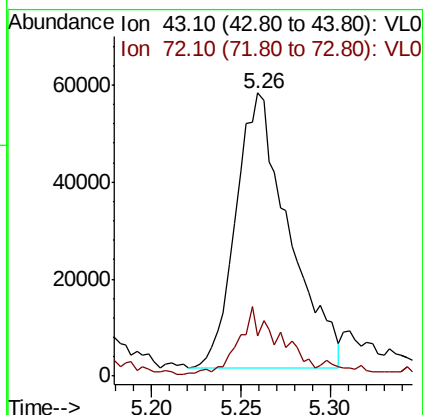
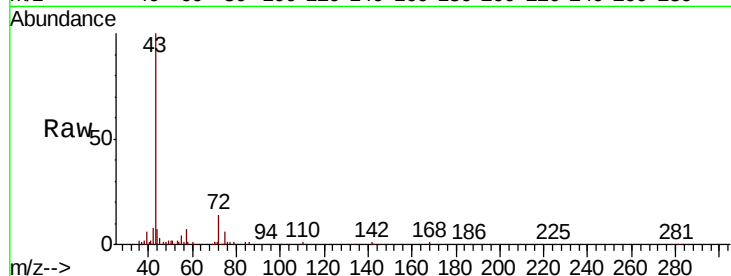
Tgt Ion	114	Resp	3226130
Ion	Ratio	Lower	Upper
114	100		
63	27.2	21.9	32.9
88	18.7	15.1	22.7





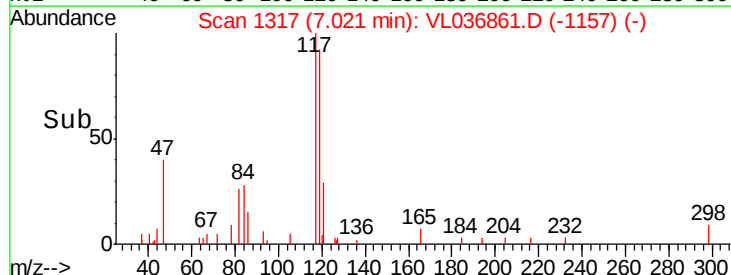
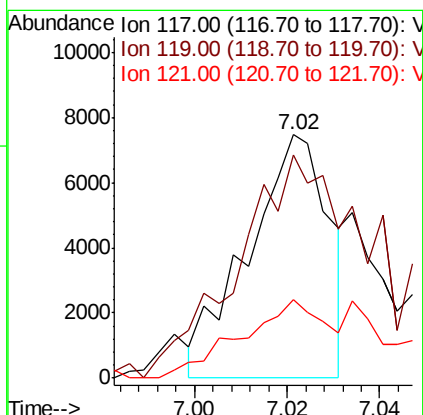
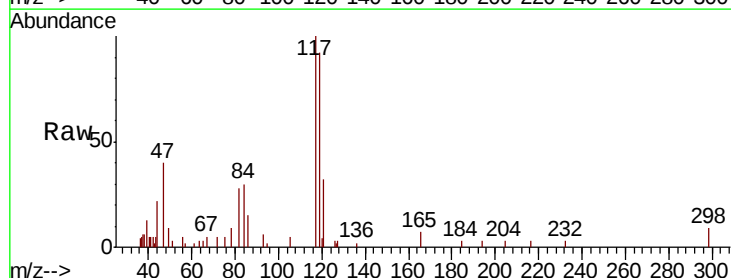
#34
2-Butanone
Concen: 0.828 ppbv
RT: 5.26 Instrument :
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 27 Apr 2021 17:13

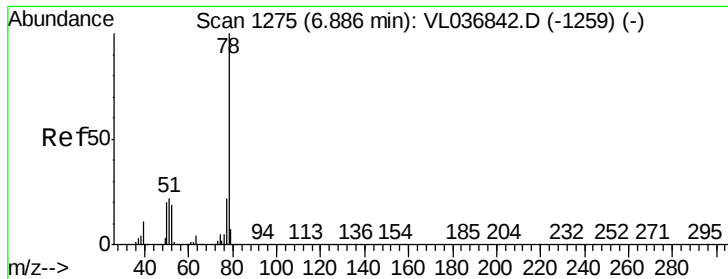
Tot Ion: 43 Resp: 116966
Ion Ratio Lower Upper
43 100
72 23.8 17.6 26.4



#35
Carbon Tetrachloride
Concen: 0.041 ppbv
RT: 7.02 min Scan# 1317
Delta R.T. 0.01 min
Lab File: VL036861.D
Acq: 27 Apr 2021 17:13

Tgt Ion: 117 Resp: 9024
Ion Ratio Lower Upper
117 100
119 82.9 74.6 111.8
121 29.1 23.3 34.9





#36

Benzene

Concen: 0.098 ppbv

RT: 6.90 Instrument:

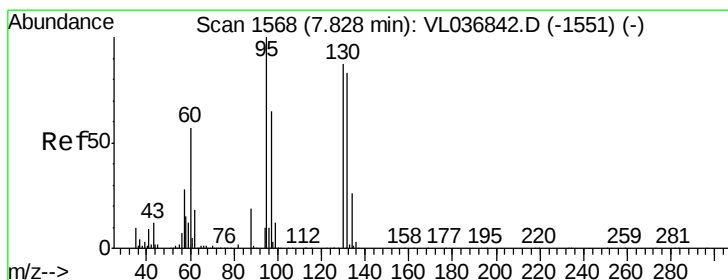
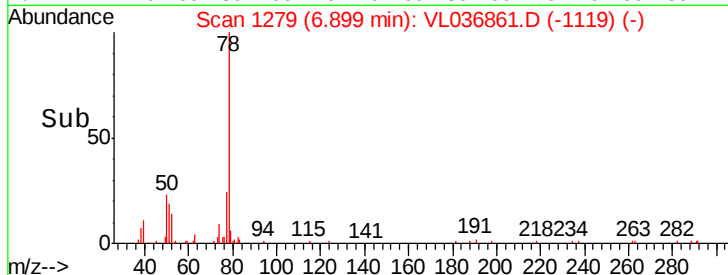
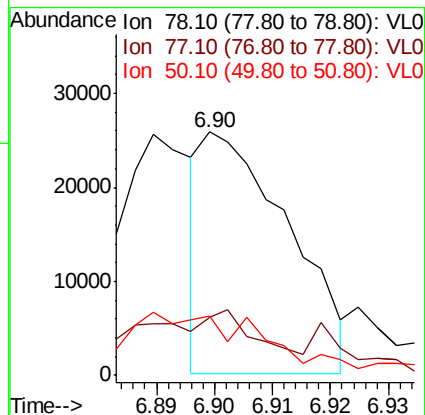
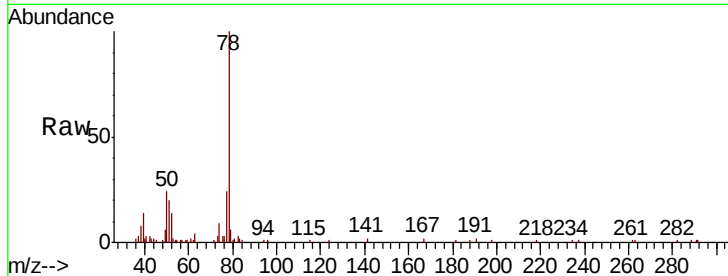
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 17:13

Tot Ion: 78 Resp: 26635

Ion	Ratio	Lower	Upper
78	100		
77	16.7	17.6	26.4#
50	23.2	16.3	24.5



#38

Trichloroethene

Concen: 0.050 ppbv

RT: 7.84 min Scan# 1571

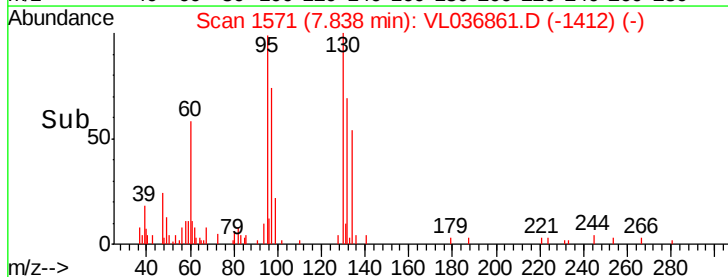
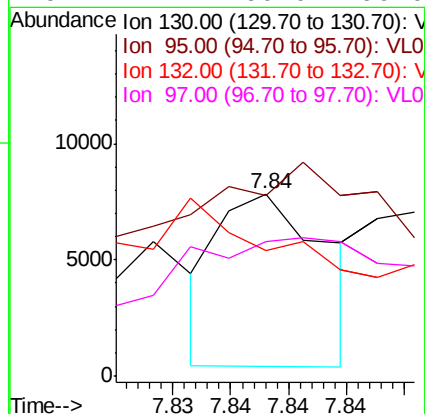
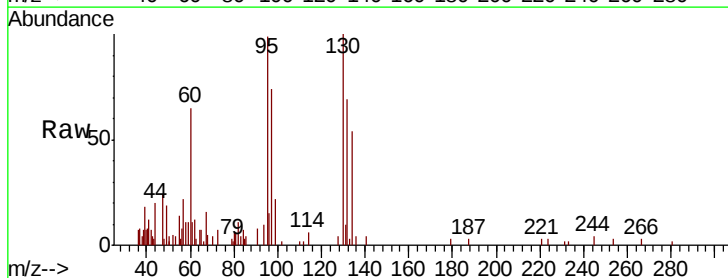
Delta R.T. 0.01 min

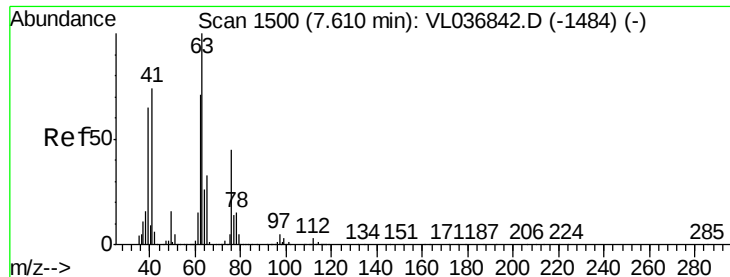
Lab File: VL036861.D

Acq: 27 Apr 2021 17:13

Tgt Ion: 130 Resp: 4800

Ion	Ratio	Lower	Upper
130	100		
95	22.9	92.3	138.5#
132	24.4	76.8	115.2#
97	7.2	60.0	90.0#





#39

1,2-Dichloropropane

Concen: 0.107 ppbv

RT: 7.24 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 17:13

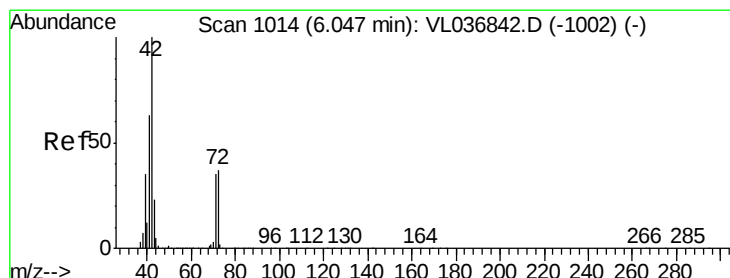
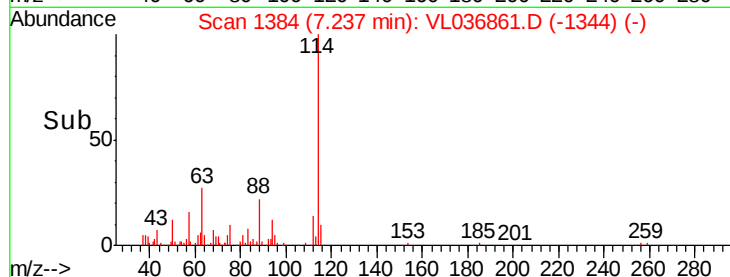
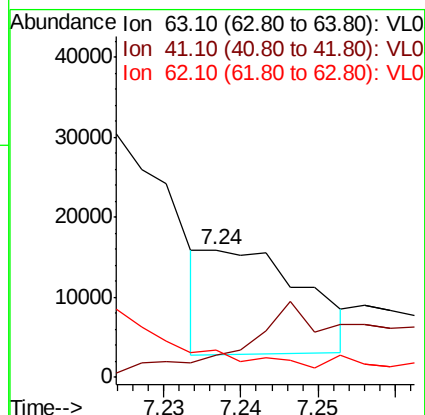
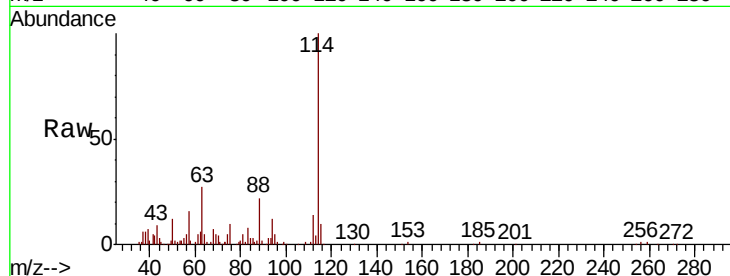
Tot Ion: 63 Resp: 11653

Ion Ratio Lower Upper

63 100

41 11.9 59.1 88.7#

62 7.6 56.9 85.3#



#41

Tetrahydrofuran

Concen: 0.089 ppbv

RT: 6.07 min Scan# 1022

Delta R.T. 0.03 min

Lab File: VL036861.D

Acq: 27 Apr 2021 17:13

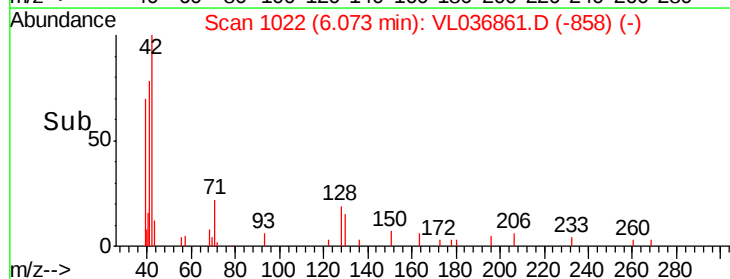
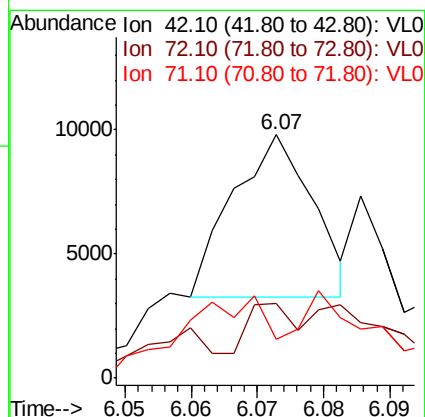
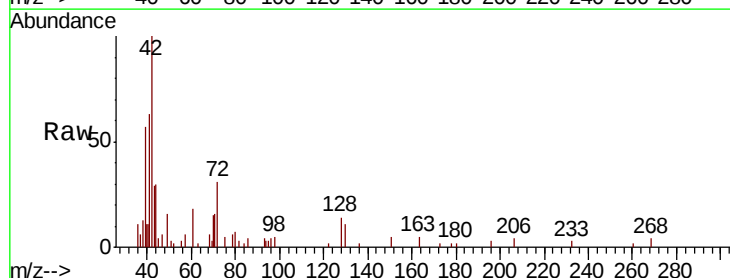
Tgt Ion: 42 Resp: 5504

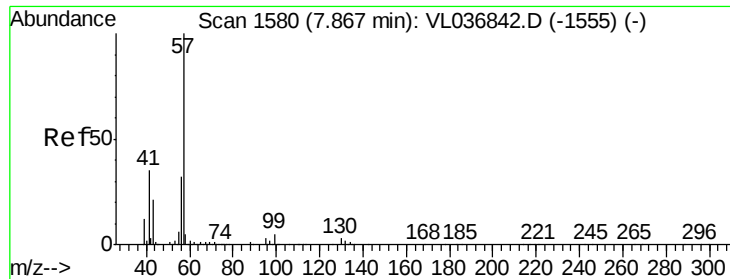
Ion Ratio Lower Upper

42 100

72 145.5 29.7 44.5#

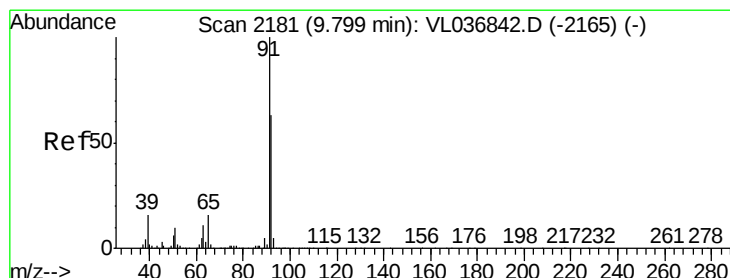
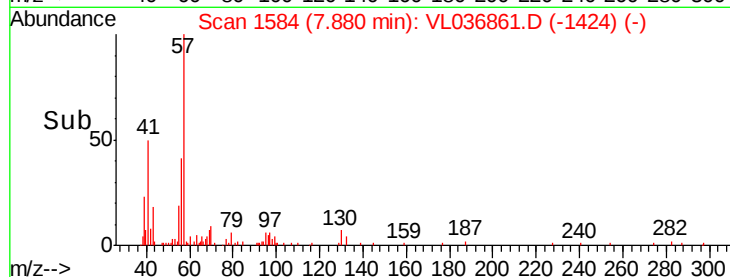
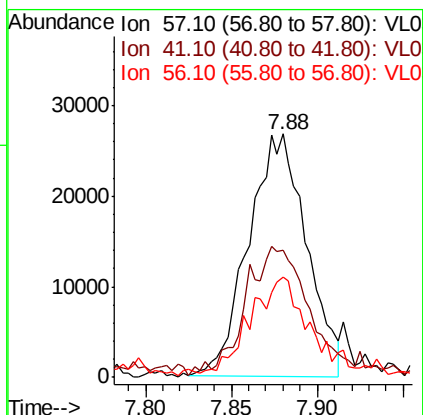
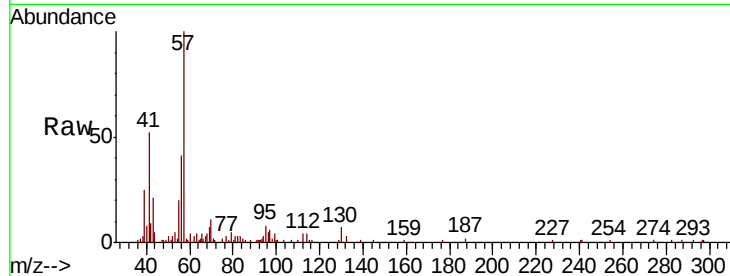
71 138.6 29.0 43.6#





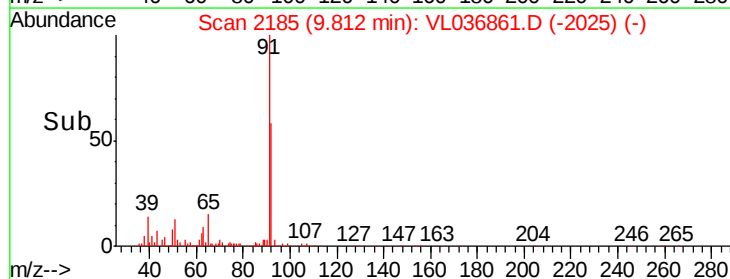
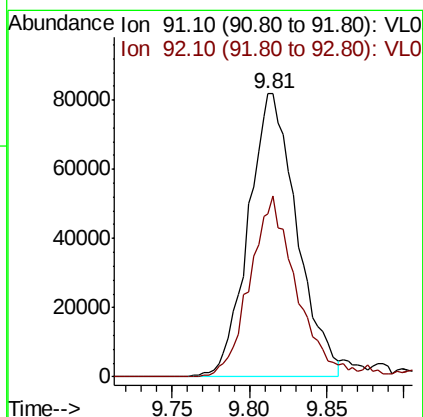
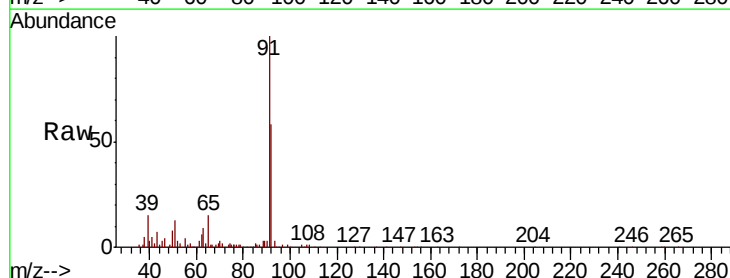
#44
 2,2,4-Trimethylpentane
 Concen: 0.135 ppbv
 RT: 7.88
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 27 Apr 2021 17:13

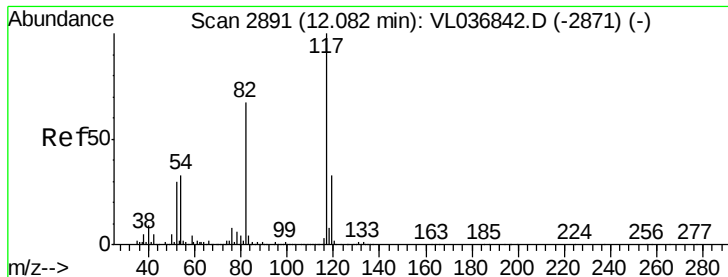
Tot Ion	57	Resp	62722
Ion	Ratio	Lower	Upper
57	100		
41	61.5	28.2	42.4#
56	48.1	25.9	38.9#



#53
 Toluene
 Concen: 0.628 ppbv
 RT: 9.81 min Scan# 2185
 Delta R.T.: 0.01 min
 Lab File: VL036861.D
 Acq: 27 Apr 2021 17:13

Tgt Ion	91	Resp	178499
Ion	Ratio	Lower	Upper
91	100		
92	63.2	49.0	73.4

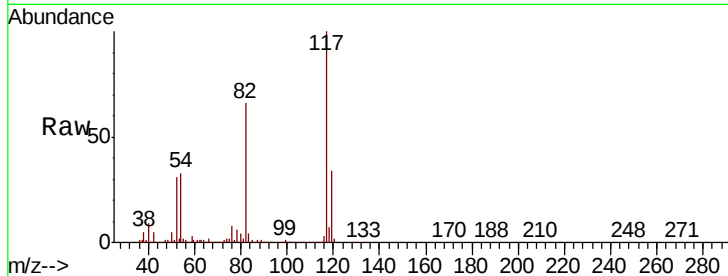




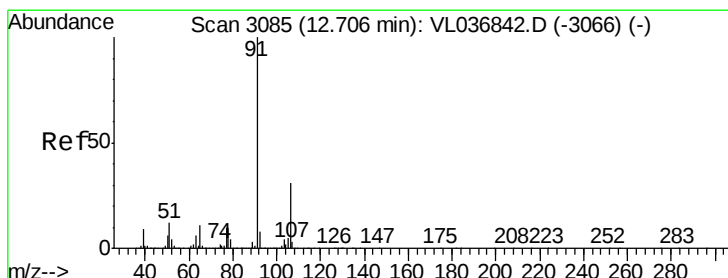
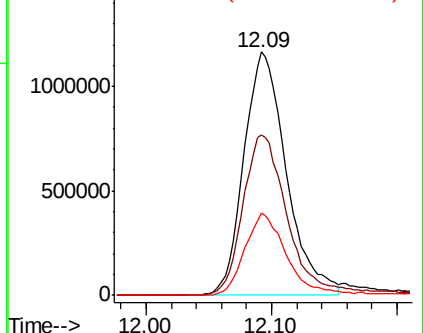
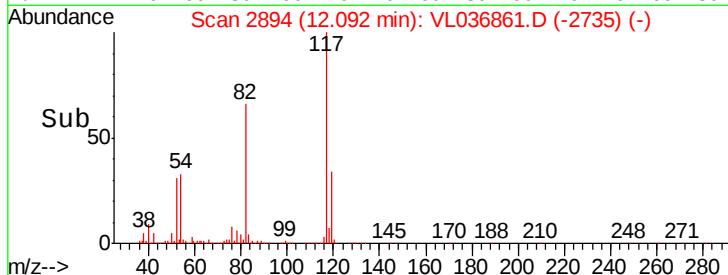
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_L
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Apr 2021 17:13

Tot Ion: 117 Resp: 2752015

Ion	Ratio	Lower	Upper
117	100		
82	71.3	53.5	80.3
119	34.4	25.6	38.4



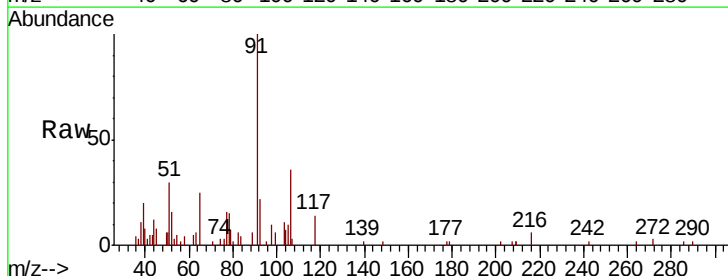
Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V



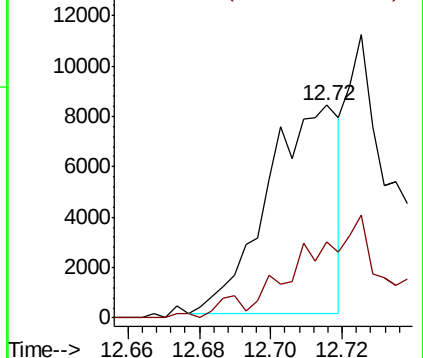
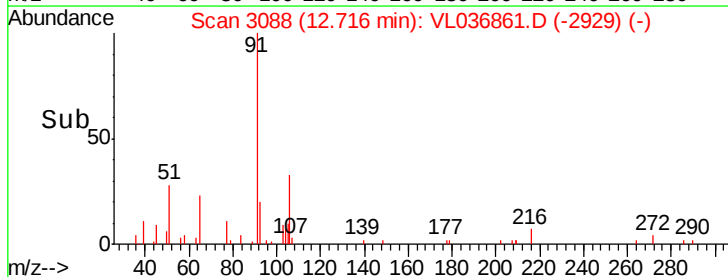
#58
Ethyl Benzene
Concen: 0.033 ppbv
RT: 12.72 min Scan# 3088
Delta R.T.: 0.01 min
Lab File: VL036861.D
Acq: 27 Apr 2021 17:13

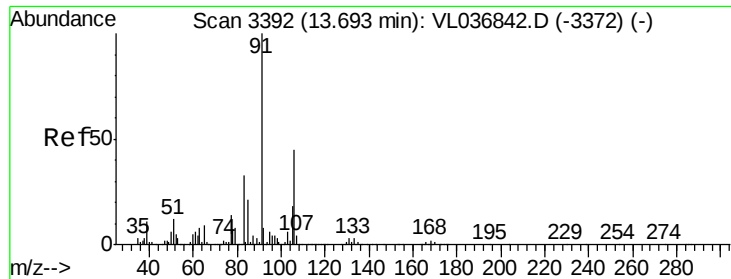
Tgt Ion: 91 Resp: 11519

Ion	Ratio	Lower	Upper
91	100		
106	34.3	25.1	37.7



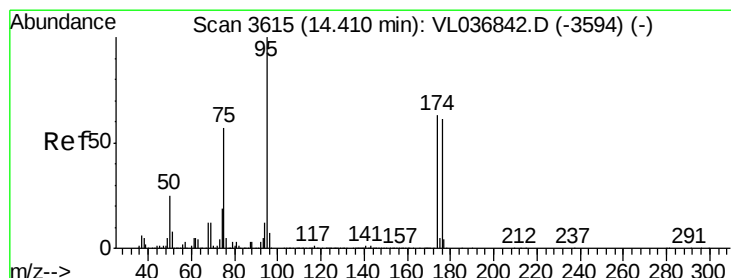
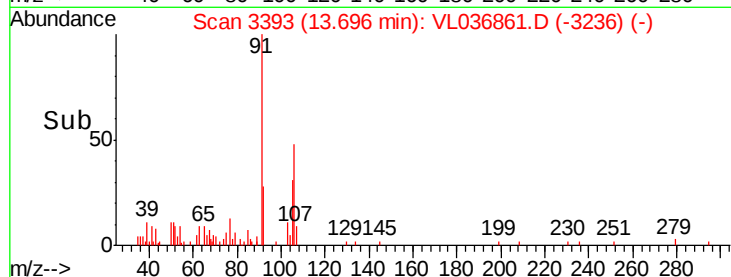
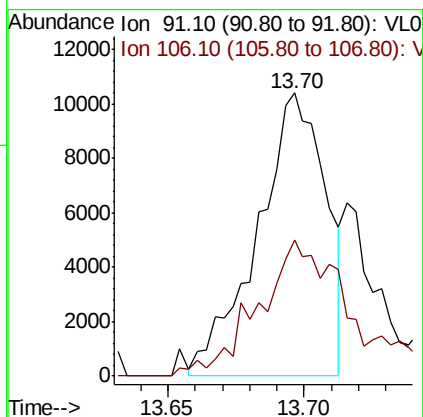
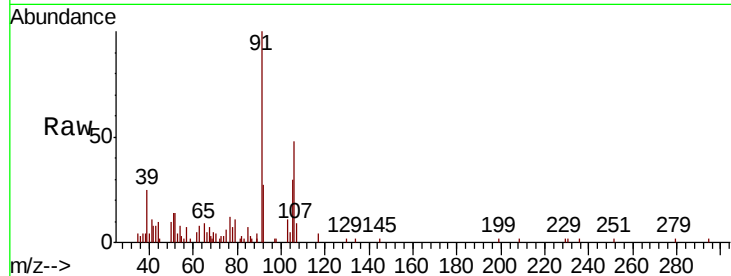
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





#60
o-Xylene
Concen: 0.060 ppbv
RT: 13.70 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 27 Apr 2021 17:13

Tot Ion: 91 Resp: 18099
Ion Ratio Lower Upper
91 100
106 69.0 22.6 67.7#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.021 ppbv
RT: 14.42 min Scan# 3619
Delta R.T. 0.01 min
Lab File: VL036861.D
Acq: 27 Apr 2021 17:13

Tgt Ion: 95 Resp: 2213724
Ion Ratio Lower Upper
95 100
174 67.0 52.2 78.2
175 4.6 4.0 6.0

