

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL042721\
 Data File : VL036865.D
 Acq On : 27 Apr 2021 19:51
 Operator : SY/AP
 Sample : M2172-08
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 28 05:26:06 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL042721AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue 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	1420568	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3350315	10.00	ppbv	0.01
55) Chlorobenzene-d5	12.10	117	2947141	10.00	ppbv	0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	2456359	10.38	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.80%

Target Compounds

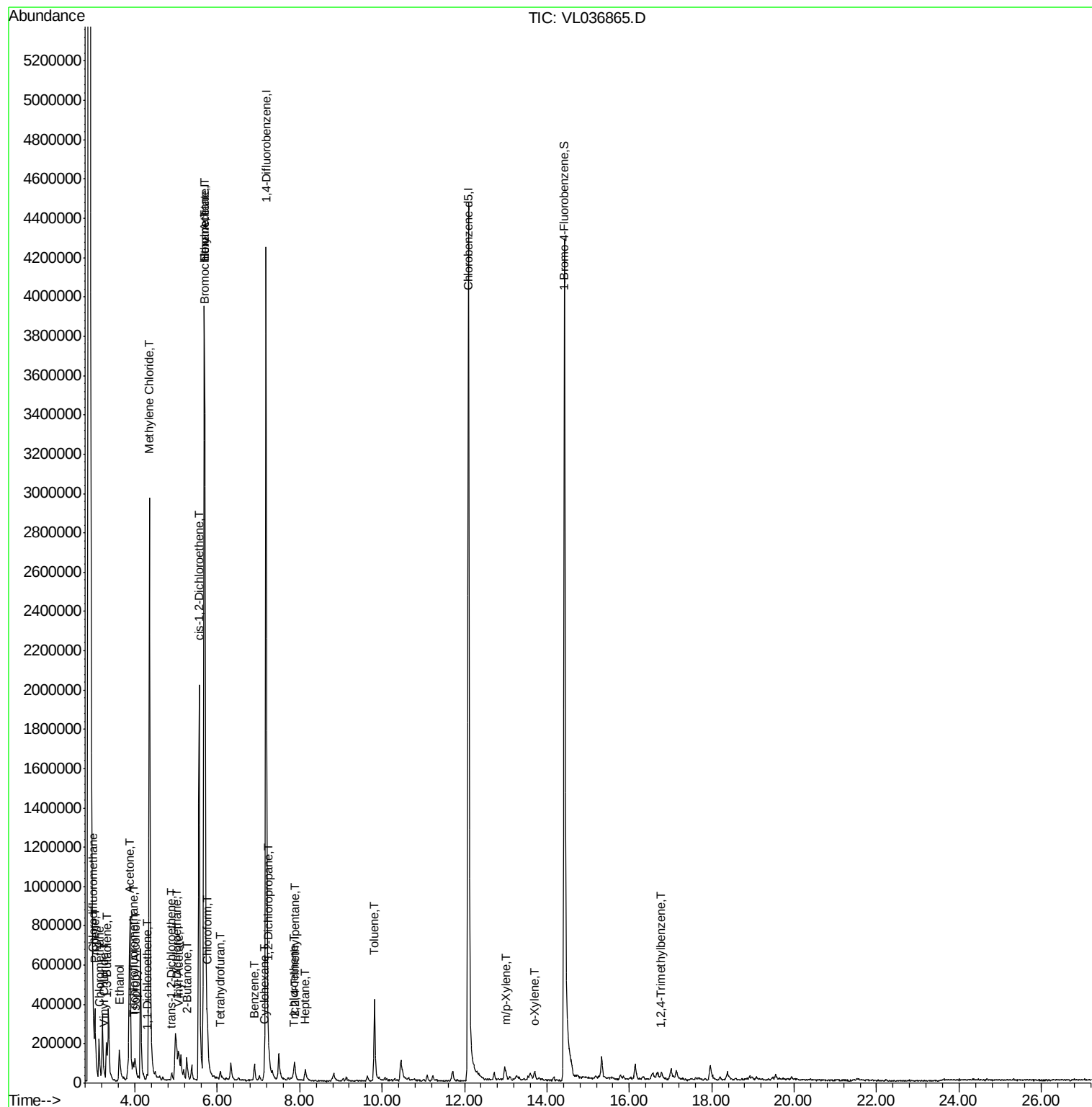
					Ovalue
3) Chlorodifluoromethane	2.99	51	102827	0.397 ppbv #	89
4) Chloromethane	3.15	50	34100	0.401 ppbv	97
5) Vinyl Chloride	3.26	62	4526	0.053 ppbv #	80
9) Propene	3.03	41	68500	0.869 ppbv	93
10) Heptane	8.12	43	6905	0.035 ppbv #	1
11) Trichlorofluoromethane	3.95	101	46263	0.232 ppbv	86
13) Ethanol	3.62	45	95300	9.477 ppbv #	26
15) Acetone	3.86	43	930070	6.946 ppbv #	89
16) 1,3-Butadiene	3.31	39	61721	0.721 ppbv #	20
18) 1,1-Dichloroethene	4.29	96	2877	0.050 ppbv #	42
19) Isopropyl Alcohol	3.99	45	79517	1.199 ppbv #	85
20) Methylene Chloride	4.35	84	1161481	18.140 ppbv	96
22) trans-1,2-Dichloroethene	4.90	96	10787	0.185 ppbv	85
23) Vinyl Acetate	5.07	43	23862	0.131 ppbv #	1
24) 1,1-Dichloroethane	5.02	63	17123	0.132 ppbv #	93
25) Ethyl Acetate	5.69	43	911414	2.787 ppbv #	80
26) Hexane	5.69	57	1151303	7.524 ppbv #	47
29) Chloroform	5.76	83	131496	0.551 ppbv	87
30) Cyclohexane	7.13	84	5063	0.042 ppbv #	1
31) cis-1,2-Dichloroethene	5.55	61	1308541	9.527 ppbv	98
34) 2-Butanone	5.26	43	144049	0.982 ppbv	97
36) Benzene	6.89	78	66920	0.237 ppbv #	91
38) Trichloroethene	7.84	130	3107	0.031 ppbv #	54
39) 1,2-Dichloropropane	7.23	63	8766	0.078 ppbv #	24
41) Tetrahydrofuran	6.07	42	12737	0.198 ppbv #	60
44) 2,2,4-Trimethylpentane	7.88	57	35597	0.074 ppbv #	1
53) Toluene	9.82	91	296968	1.005 ppbv	99
59) m/p-Xylene	13.01	91	14594	0.044 ppbv #	31
60) o-Xylene	13.71	91	11696	0.036 ppbv #	1
74) 1,2,4-Trimethylbenzene	16.78	105	14383	0.040 ppbv #	52

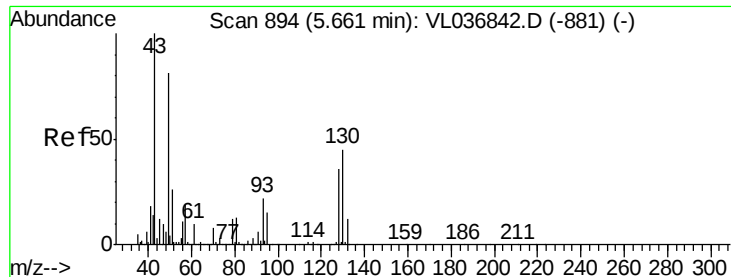
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Apr 27 16:56:35 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File:

Acq: 27 Apr 2021 19:51

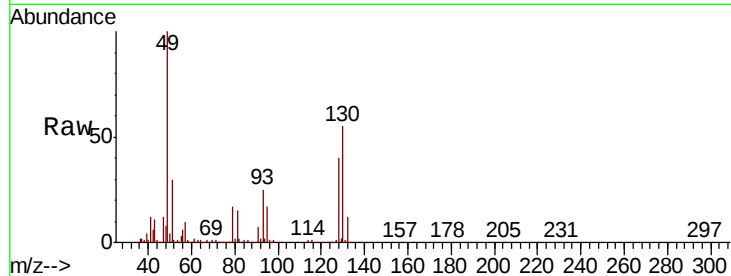
Tot Ion: 49 Resp: 1420568

Ion Ratio Lower Upper

49 100

128 47.3 24.4 73.2

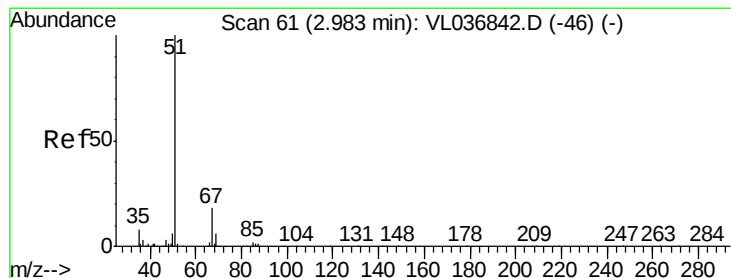
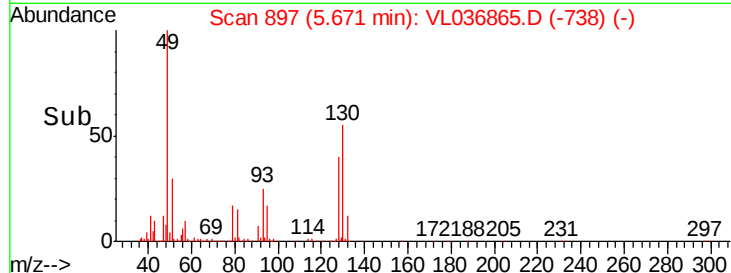
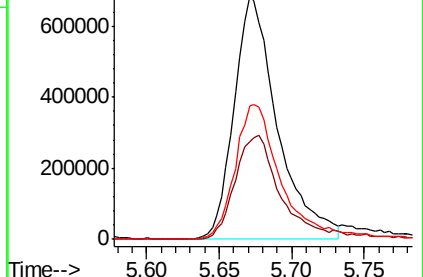
130 60.7 30.3 90.8



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#3

Chlorodifluoromethane

Concen: 0.397 ppbv

RT: 2.99 min Scan# 64

Delta R.T. 0.01 min

Lab File: VL036865.D

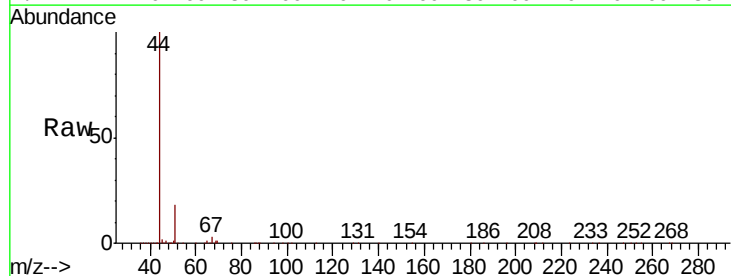
Acq: 27 Apr 2021 19:51

Tgt Ion: 51 Resp: 102827

Ion Ratio Lower Upper

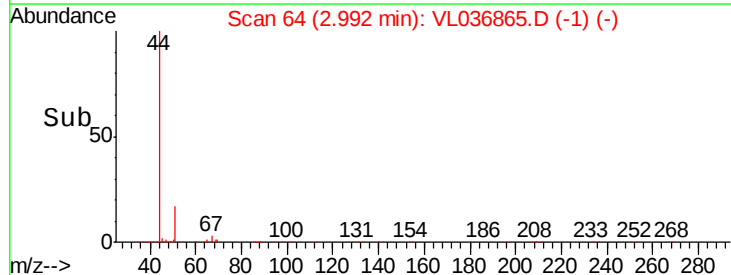
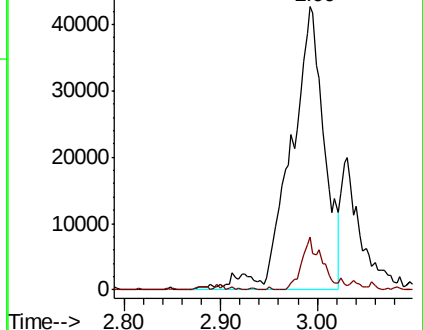
51 100

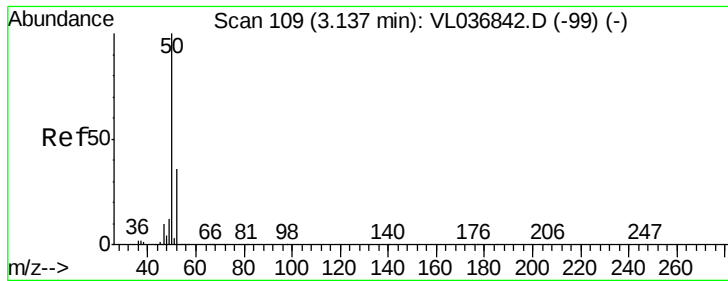
67 13.4 14.8 22.2#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.401 ppbv

RT: 3.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

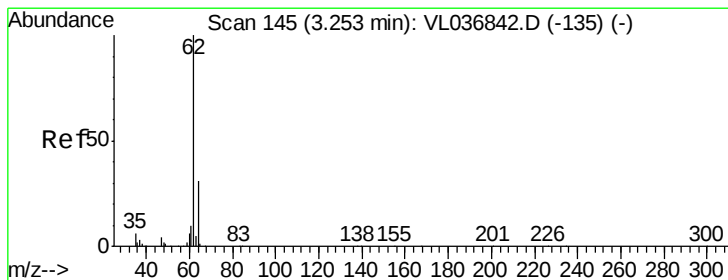
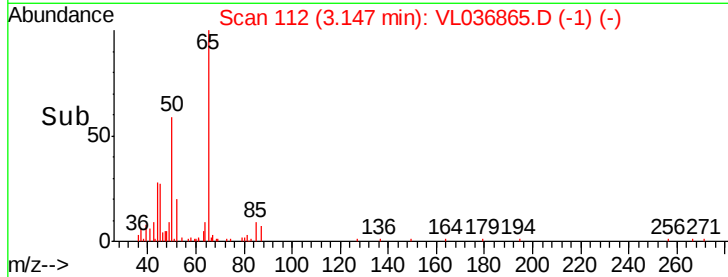
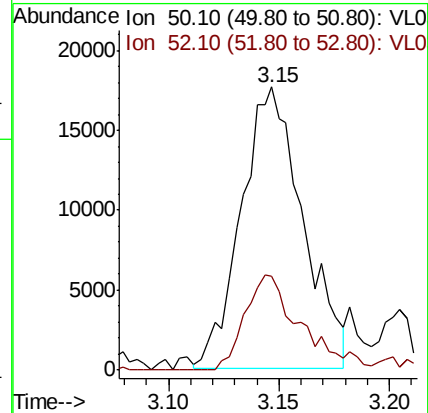
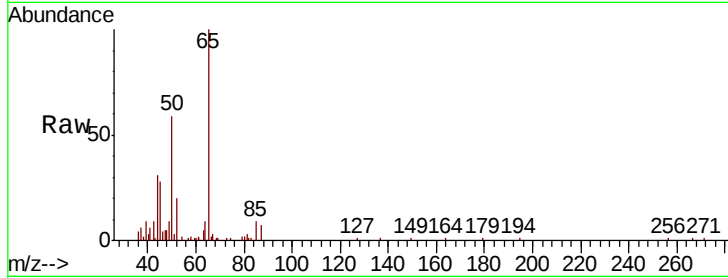
Acq: 27 Apr 2021 19:51

Tot Ion: 50 Resp: 34100

Ion Ratio Lower Upper

50 100

52 34.1 28.5 42.7



#5

Vinyl Chloride

Concen: 0.053 ppbv

RT: 3.26 min Scan# 146

Delta R.T. 0.00 min

Lab File: VL036865.D

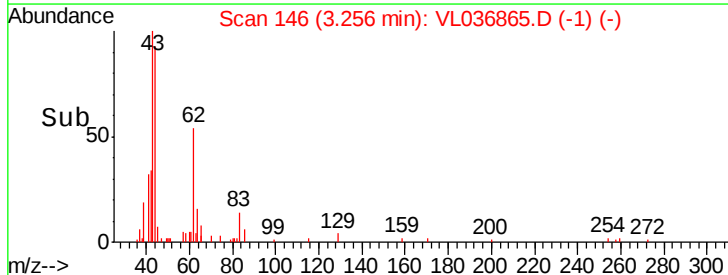
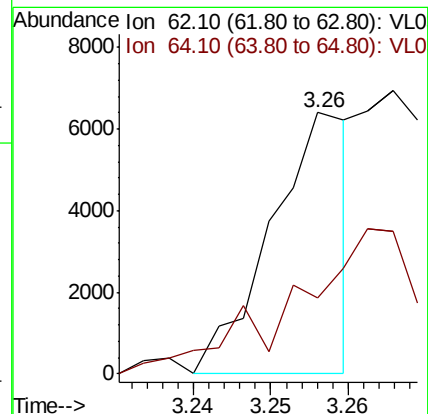
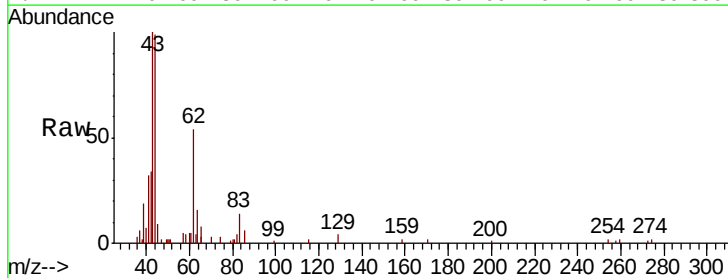
Acq: 27 Apr 2021 19:51

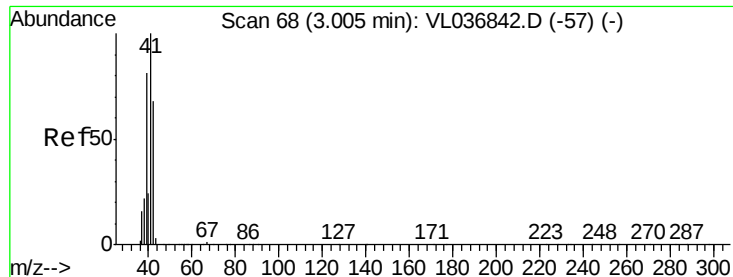
Tgt Ion: 62 Resp: 4526

Ion Ratio Lower Upper

62 100

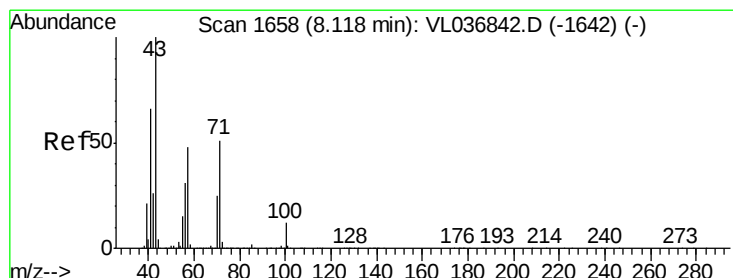
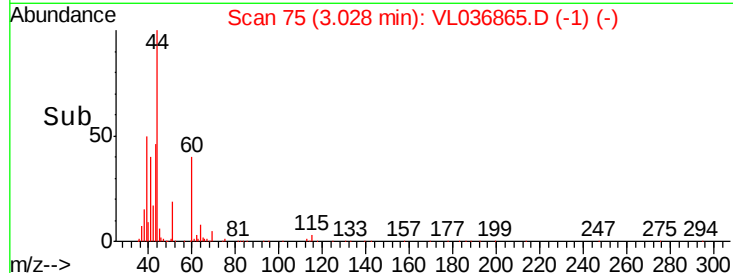
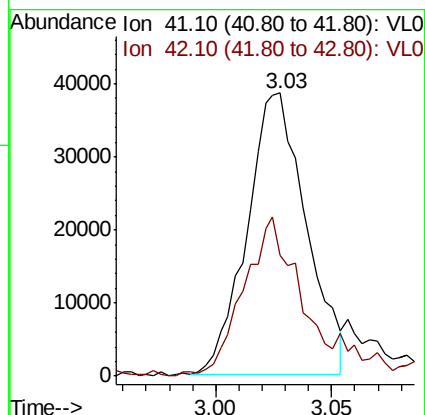
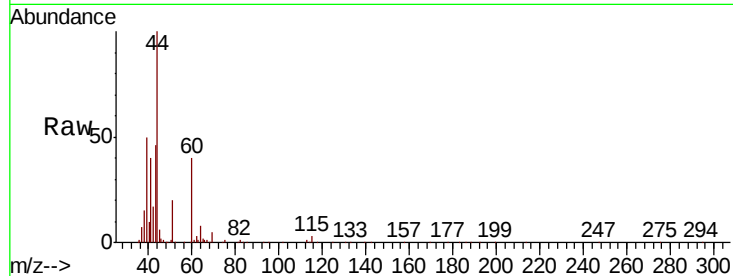
64 20.0 25.0 37.4#





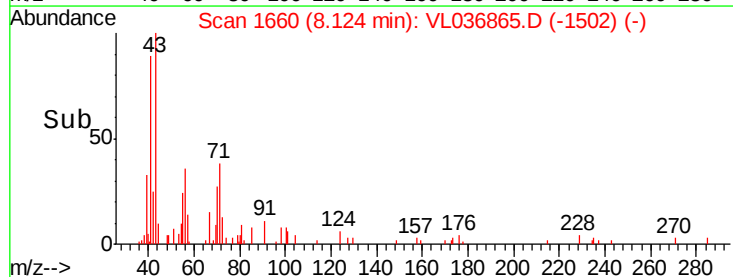
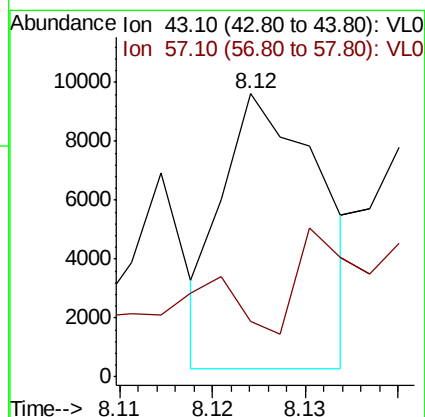
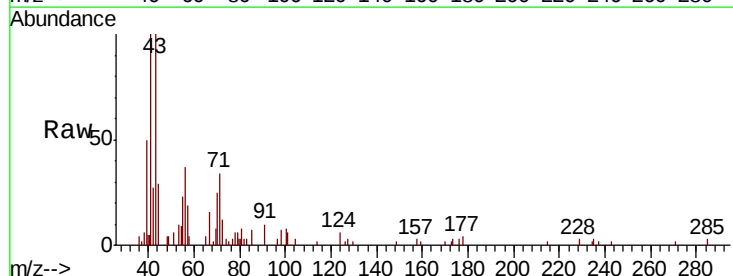
#9
 Propene
 Concen: 0.869 ppbv
 RT: 3.03
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 19:51

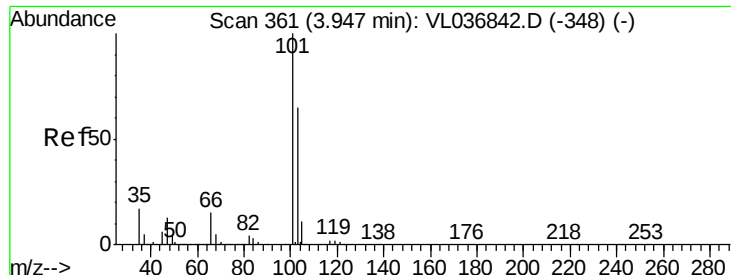
Tot Ion: 41 Resp: 68500
 Ion Ratio Lower Upper
 41 100
 42 64.6 56.0 84.0



#10
 Heptane
 Concen: 0.035 ppbv
 RT: 8.12 min Scan# 1660
 Delta R.T. 0.01 min
 Lab File: VL036865.D
 Acq: 27 Apr 2021 19:51

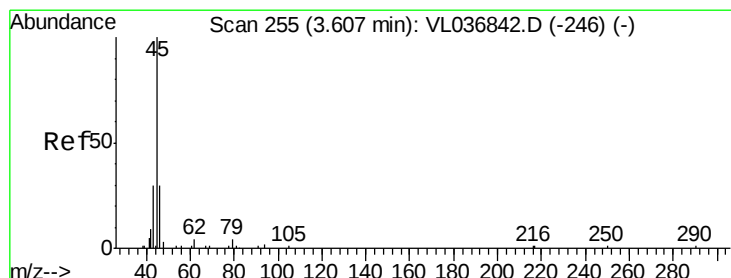
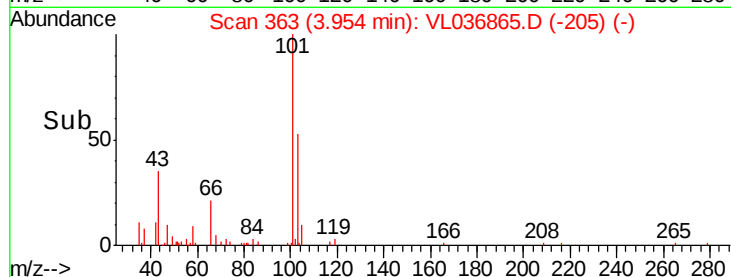
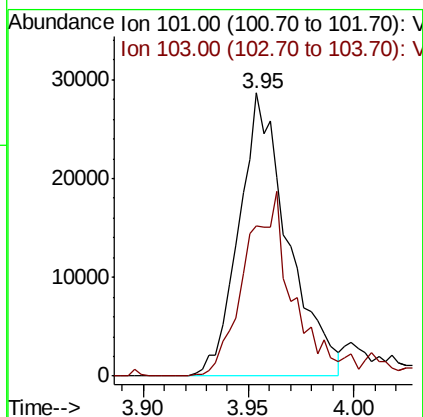
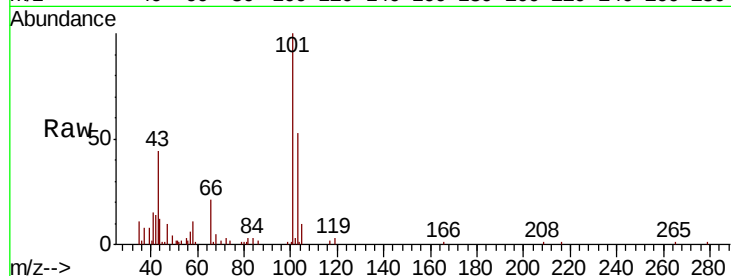
Tgt Ion: 43 Resp: 6905
 Ion Ratio Lower Upper
 43 100
 57 152.2 38.8 58.2#





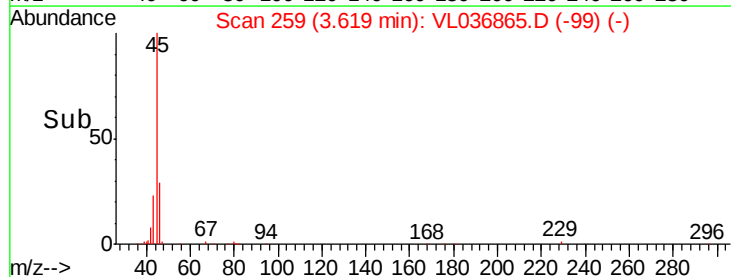
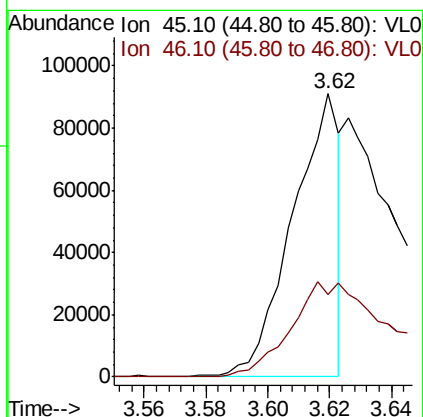
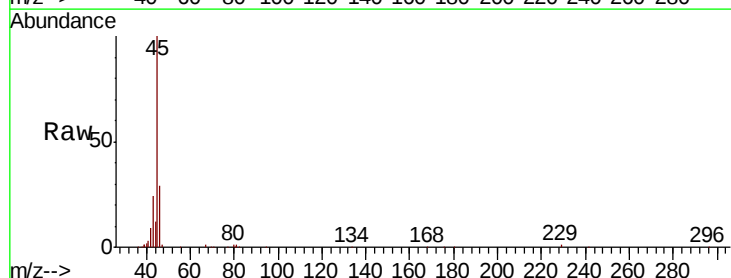
#11
 Trichlorofluoromethane
 Concen: 0.232 ppbv
 RT: 3.95 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Apr 2021 19:51

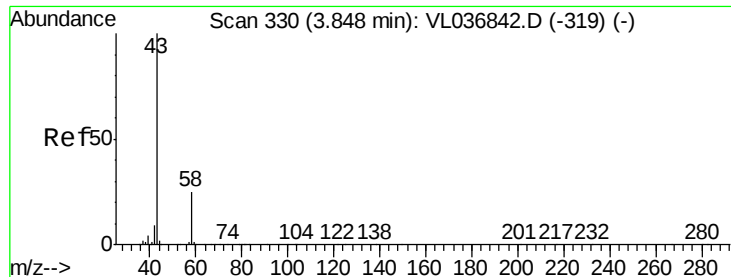
Tot Ion:101 Resp: 46263
 Ion Ratio Lower Upper
 101 100
 103 53.2 51.6 77.4



#13
 Ethanol
 Concen: 9.477 ppbv
 RT: 3.62 min Scan# 259
 Delta R.T. 0.01 min
 Lab File: VL036865.D
 Acq: 27 Apr 2021 19:51

Tgt Ion: 45 Resp: 95300
 Ion Ratio Lower Upper
 45 100
 46 88.7 16.8 67.4#





#15

Acetone

Concen: 6.946 ppbv

RT: 3.86 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

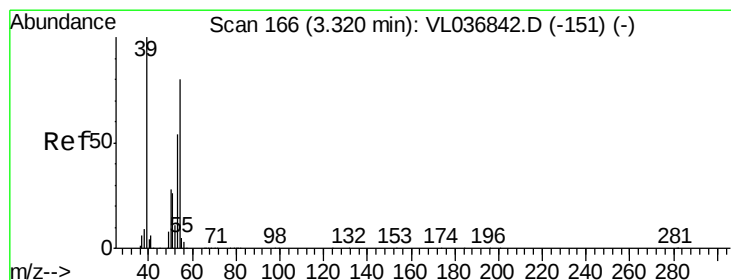
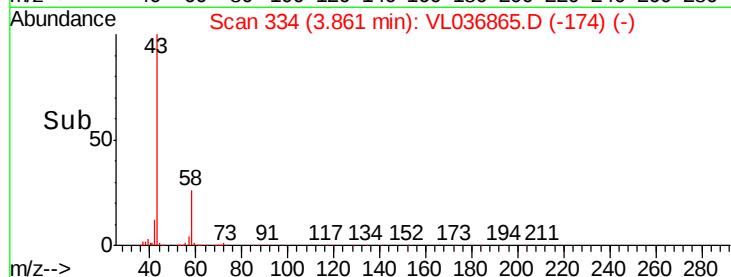
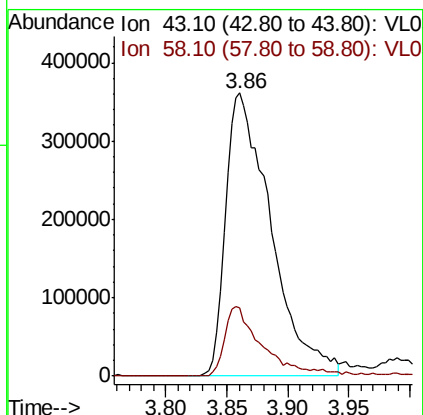
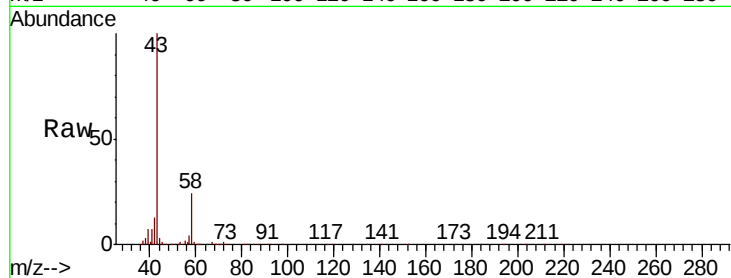
Acq: 27 Apr 2021 19:51

Tot Ion: 43 Resp: 930070

Ion Ratio Lower Upper

43 100

58 21.4 21.7 32.5#



#16

1,3-Butadiene

Concen: 0.721 ppbv

RT: 3.31 min Scan# 162

Delta R.T. -0.01 min

Lab File: VL036865.D

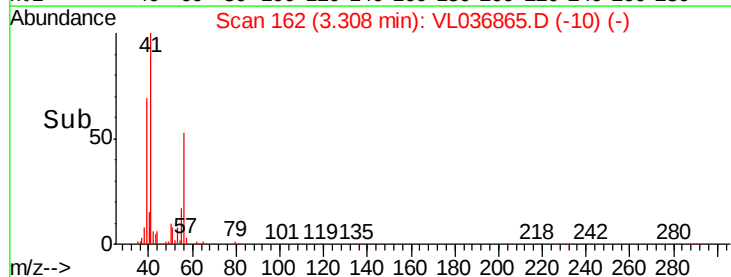
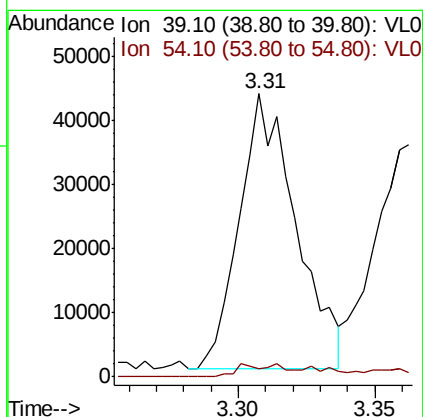
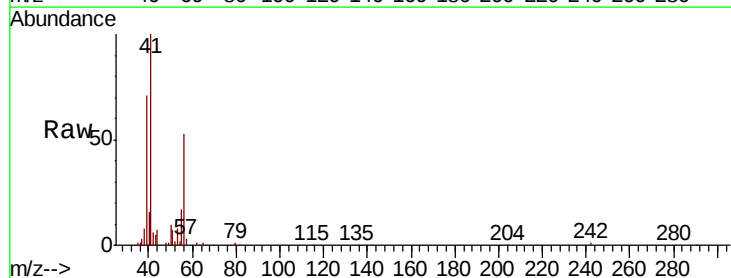
Acq: 27 Apr 2021 19:51

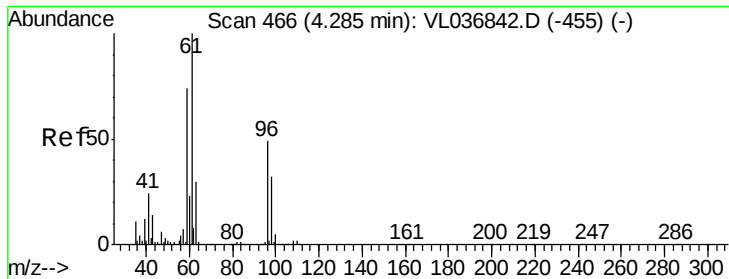
Tgt Ion: 39 Resp: 61721

Ion Ratio Lower Upper

39 100

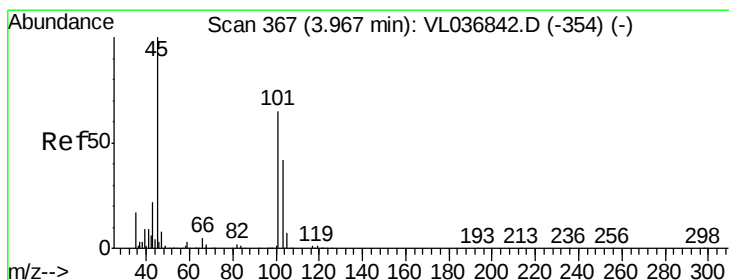
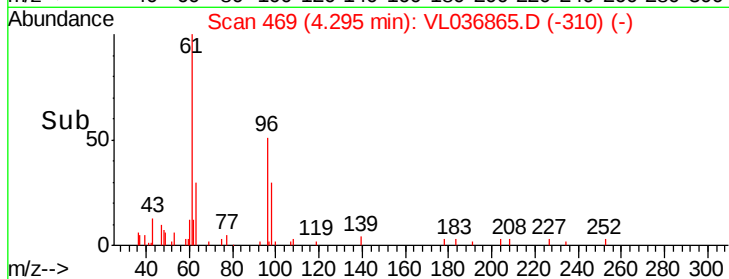
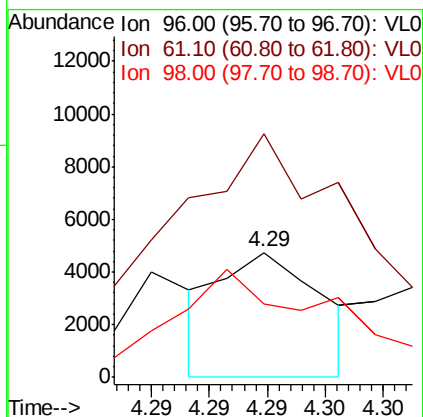
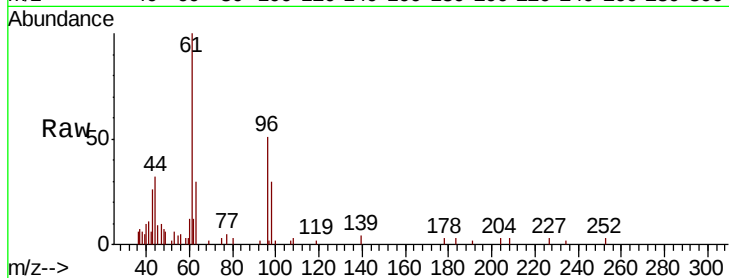
54 6.3 59.6 89.4#





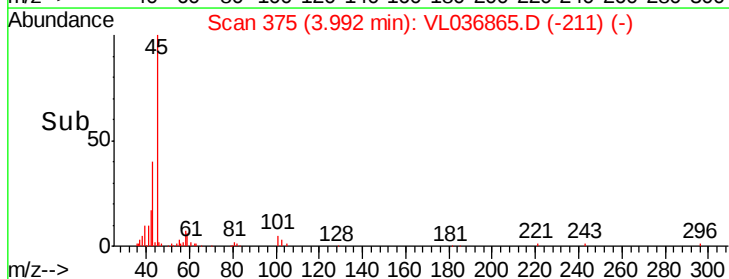
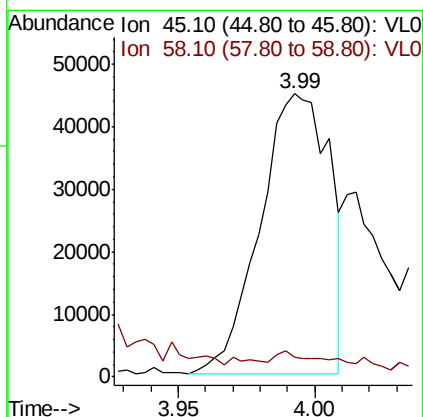
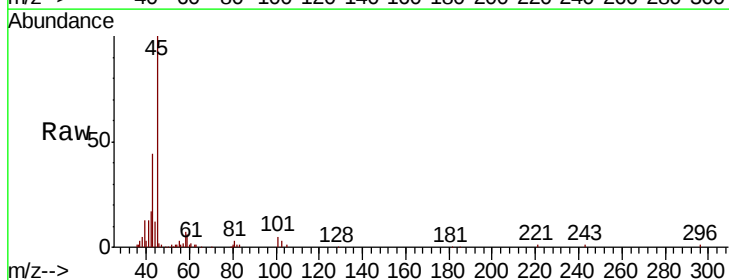
#18
 1,1-Dichloroethene
 Concen: 0.050 ppbv
 RT: 4.29 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 27 Apr 2021 19:51

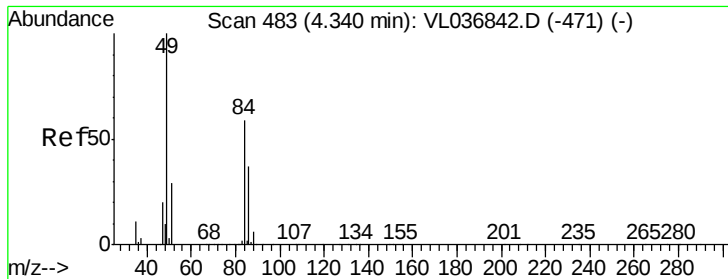
Tot Ion: 96 Resp: 2877
 Ion Ratio Lower Upper
 96 100
 61 121.9 162.2 243.2#
 98 7.8 51.8 77.6#



#19
 Isopropyl Alcohol
 Concen: 1.199 ppbv
 RT: 3.99 min Scan# 375
 Delta R.T. 0.03 min
 Lab File: VL036865.D
 Acq: 27 Apr 2021 19:51

Tgt Ion: 45 Resp: 79517
 Ion Ratio Lower Upper
 45 100
 58 8.3 2.8 4.2#

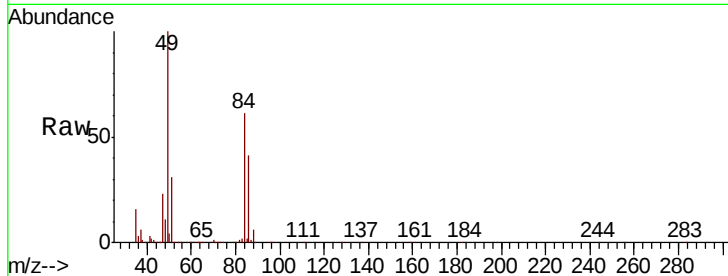




#20
Methvlene Chloride
Concen: 18.140 ppbv
RT: 4.35 Instrument :
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 27 Apr 2021 19:51

Tot Ion: 84 Resp: 1161481

Ion	Ratio	Lower	Upper
84	100		
49	165.1	135.4	203.0
51	51.8	39.3	58.9
86	67.6	50.2	75.2



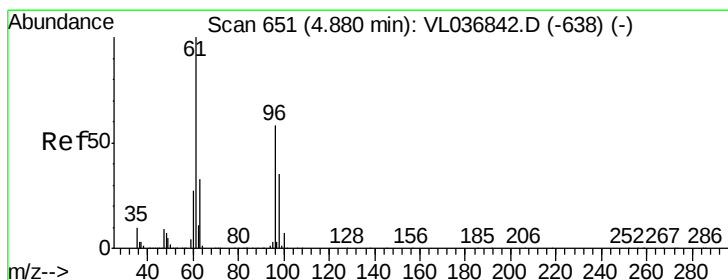
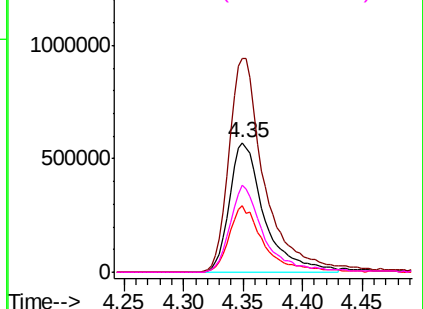
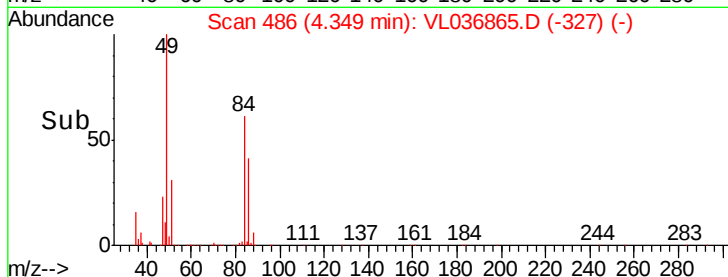
Abundance

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

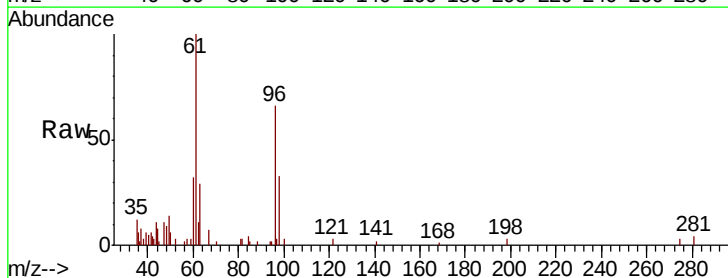
Ion 86.00 (85.70 to 86.70): VL0



#22
trans-1,2-Dichloroethene
Concen: 0.185 ppbv
RT: 4.90 min Scan# 656
Delta R.T. 0.02 min
Lab File: VL036865.D
Acq: 27 Apr 2021 19:51

Tgt Ion: 96 Resp: 10787

Ion	Ratio	Lower	Upper
96	100		
61	151.2	138.6	207.8
98	49.4	48.1	72.1

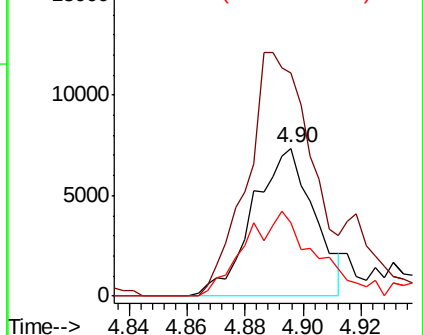
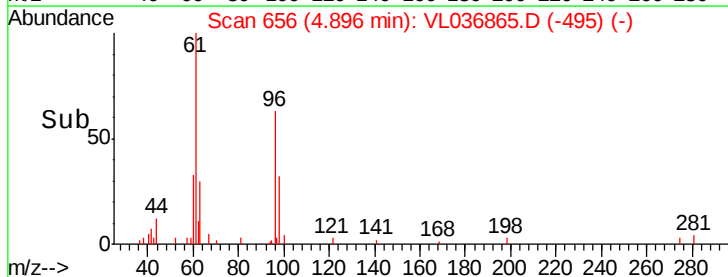


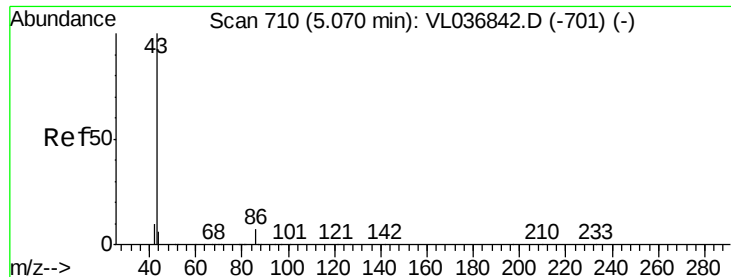
Abundance

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





#23

Vinyl Acetate

Concen: 0.131 ppbv

RT: 5.07 Instrument:

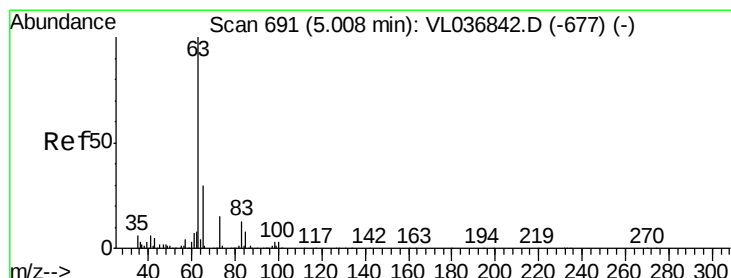
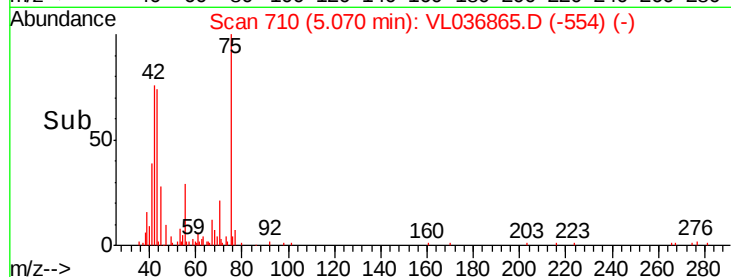
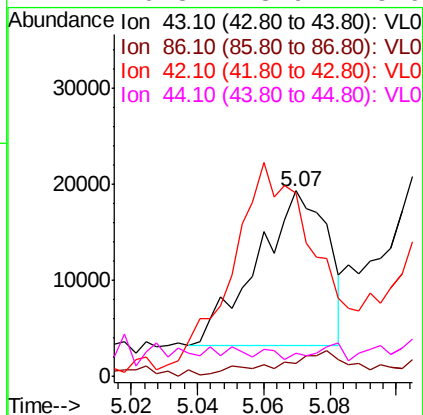
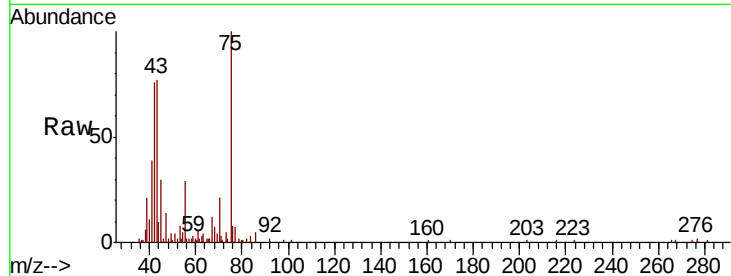
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 19:51

Tot Ion: 43 Resp: 23862

Ion	Ratio	Lower	Upper
43	100		
86	4.1	5.3	7.9#
42	95.6	8.7	13.1#
44	0.3	3.9	5.9#



#24

1,1-Dichloroethane

Concen: 0.132 ppbv

RT: 5.02 min Scan# 694

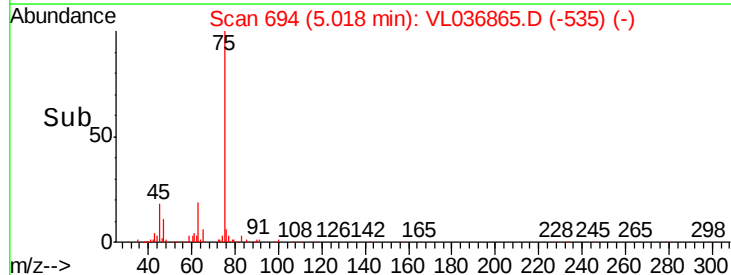
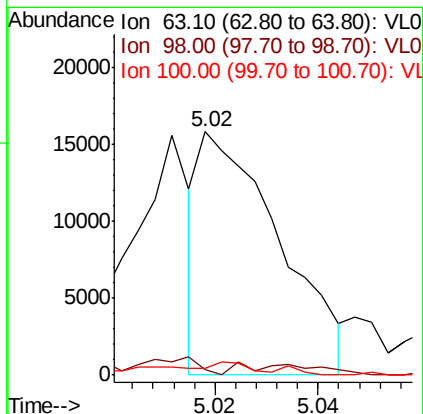
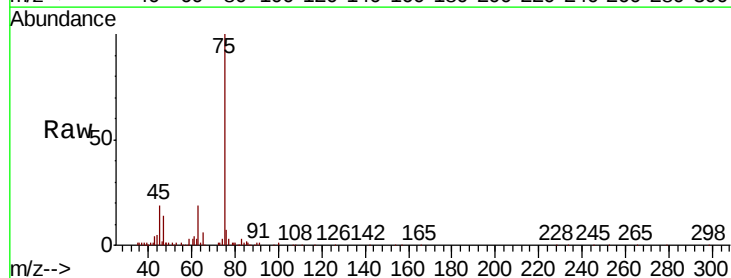
Delta R.T. 0.01 min

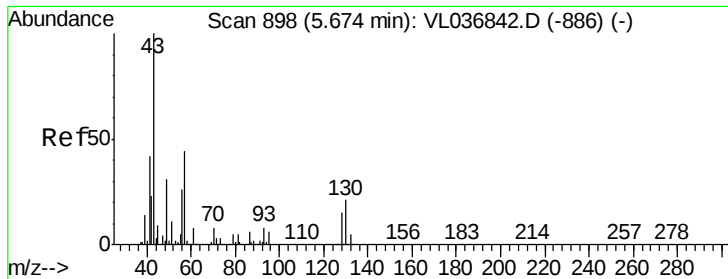
Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

Tgt Ion: 63 Resp: 17123

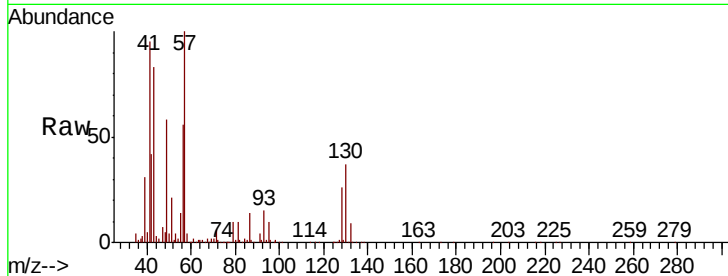
Ion	Ratio	Lower	Upper
63	100		
98	0.3	1.7	5.1#
100	3.5	1.3	3.8



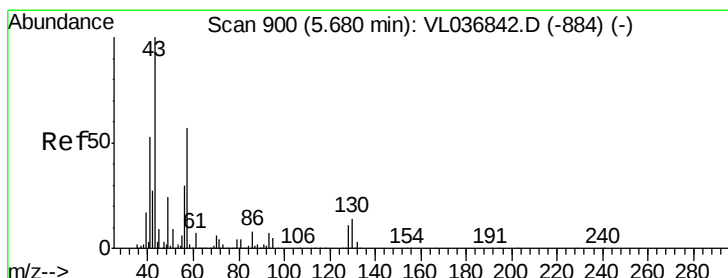
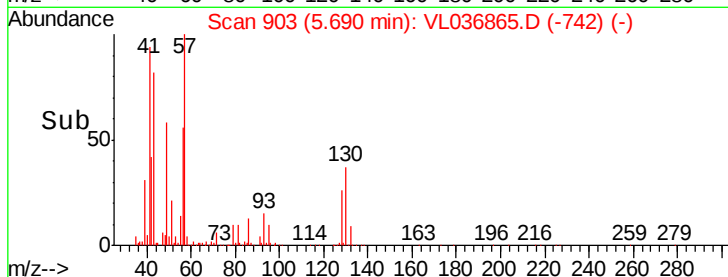
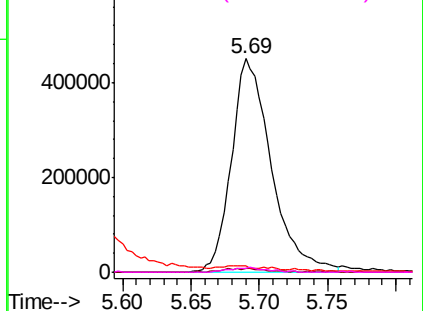


#25
Ethyl Acetate
Concen: 2.787 ppbv
RT: 5.69 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 27 Apr 2021 19:51

Tot Ion:	43	Resp:	911414
Ion	Ratio	Lower	Upper
43	100		
45	2.0	7.8	11.8#
61	0.0	7.4	11.0#
70	2.6	5.4	8.0#

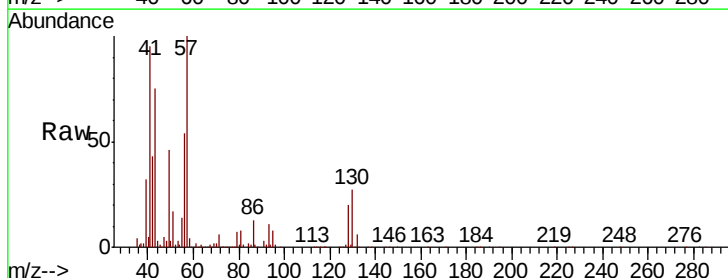


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

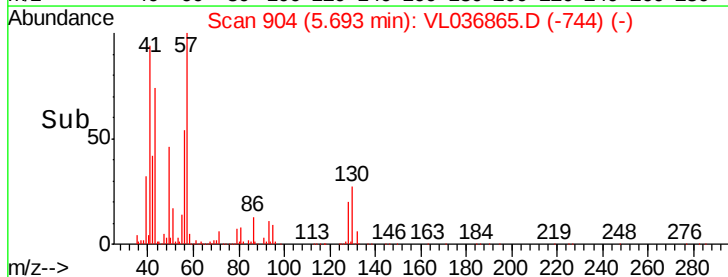
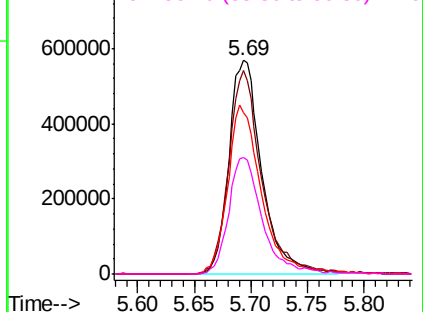


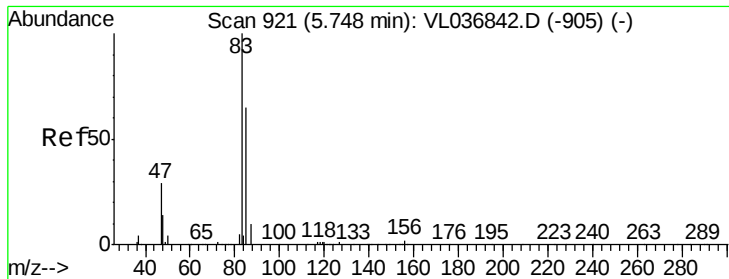
#26
Hexane
Concen: 7.524 ppbv
RT: 5.69 min Scan# 904
Delta R.T.: 0.01 min
Lab File: VL036865.D
Acq: 27 Apr 2021 19:51

Tgt Ion:	57	Resp:	1151303
Ion	Ratio	Lower	Upper
57	100		
41	96.9	77.7	116.5
43	80.8	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: 0.551 ppbv

RT: 5.76 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

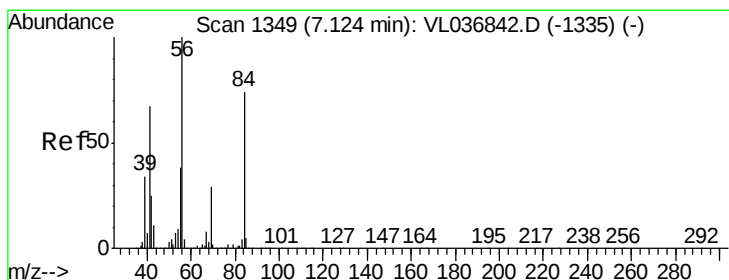
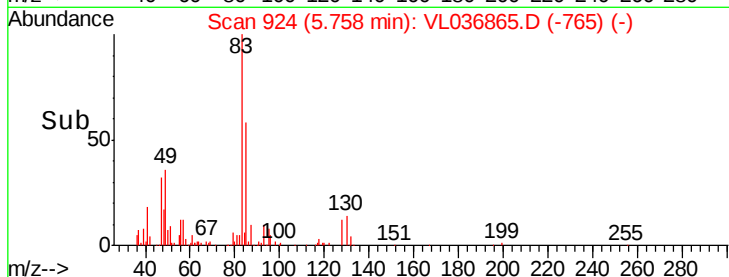
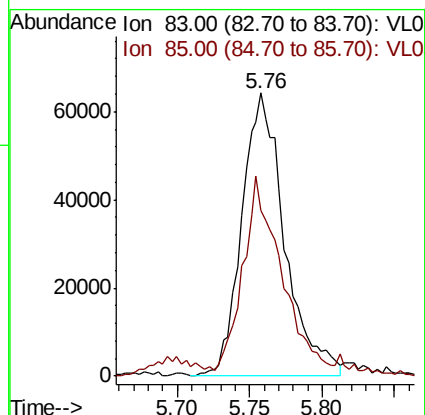
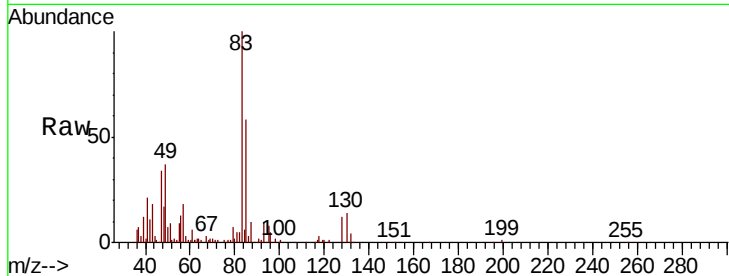
Acq: 27 Apr 2021 19:51

Tot Ion: 83 Resp: 131496

Ion Ratio Lower Upper

83 100

85 55.0 52.2 78.4



#30

Cyclohexane

Concen: 0.042 ppbv

RT: 7.13 min Scan# 1352

Delta R.T. 0.01 min

Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

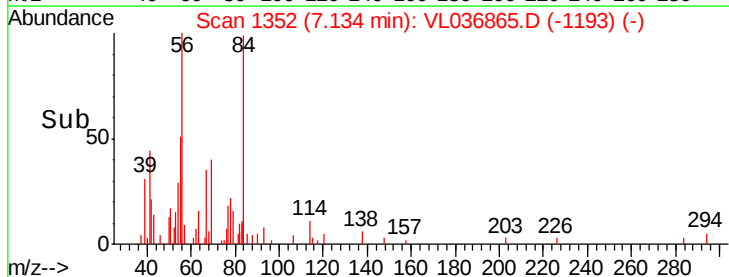
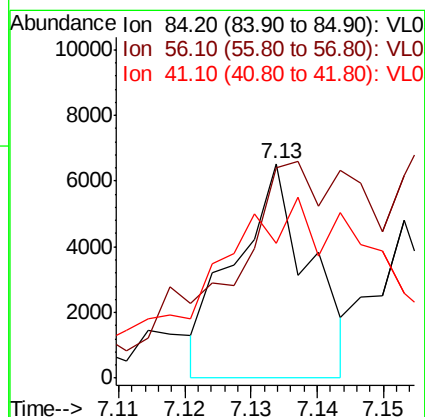
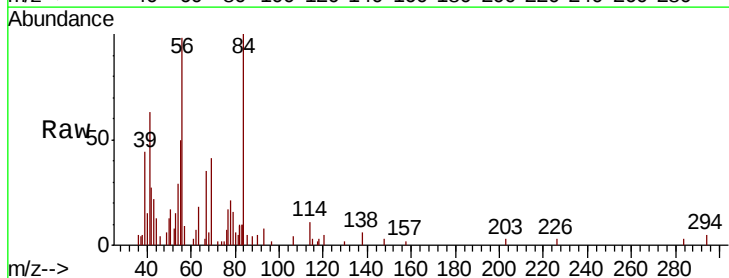
Tgt Ion: 84 Resp: 5063

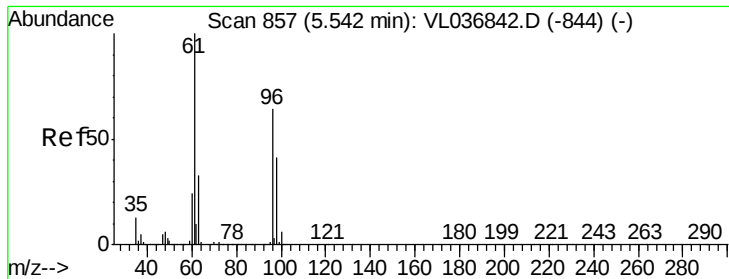
Ion Ratio Lower Upper

84 100

56 0.0 115.8 173.6#

41 317.6 74.6 111.8#





#31

cis-1,2-Dichloroethene

Concen: 9.527 ppbv

RT: 5.55 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 19:51

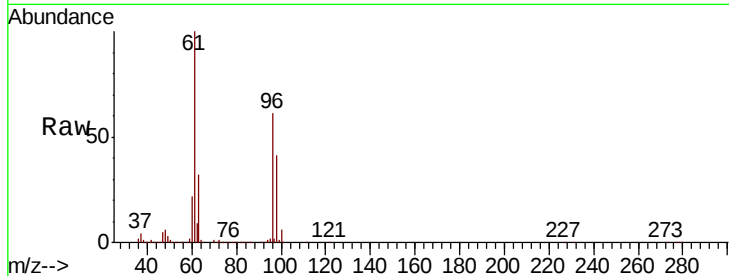
Tot Ion: 61 Resp: 1308541

Ion Ratio Lower Upper

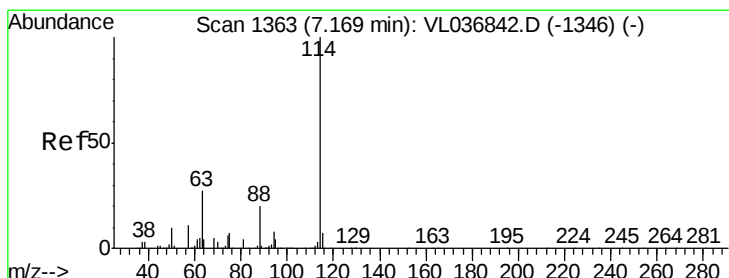
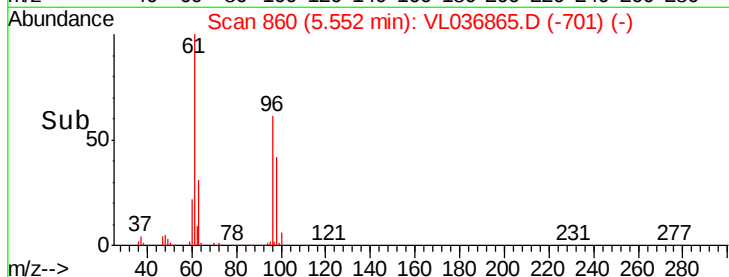
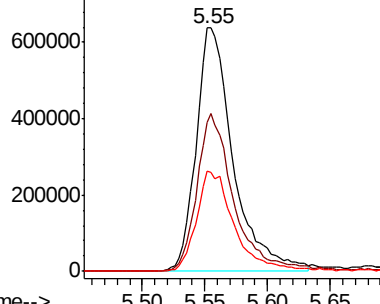
61 100

96 61.1 51.0 76.6

98 41.4 32.7 49.1



Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1367

Delta R.T. 0.01 min

Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

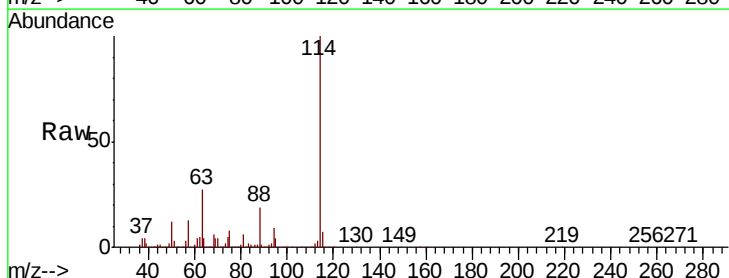
Tgt Ion: 114 Resp: 3350315

Ion Ratio Lower Upper

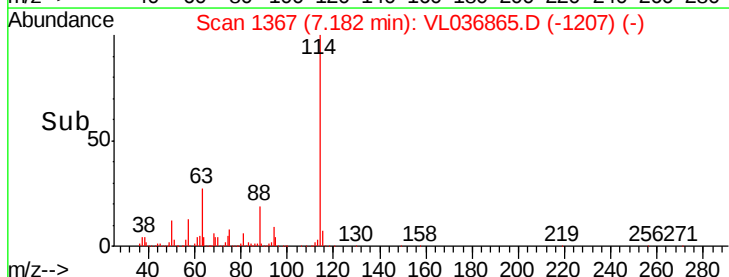
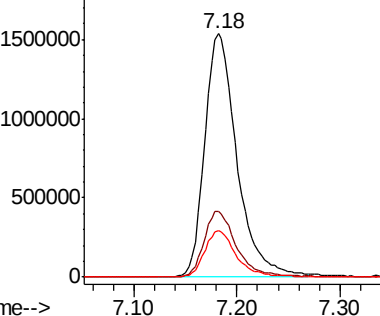
114 100

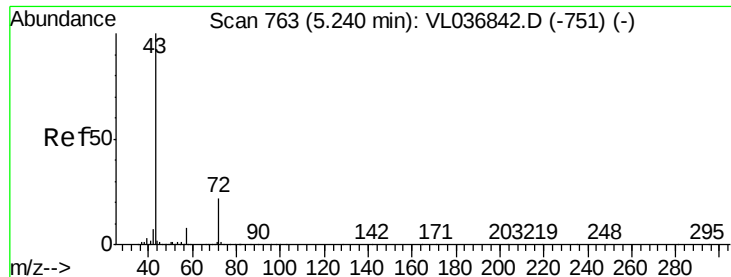
63 27.3 21.9 32.9

88 18.9 15.1 22.7



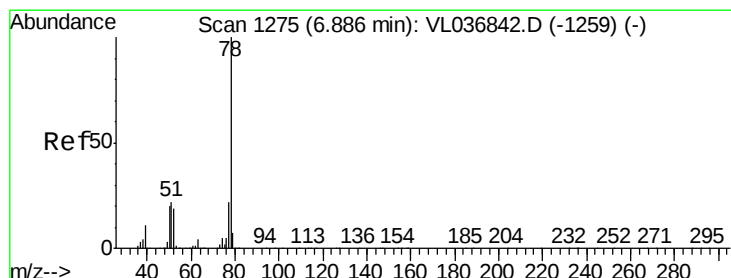
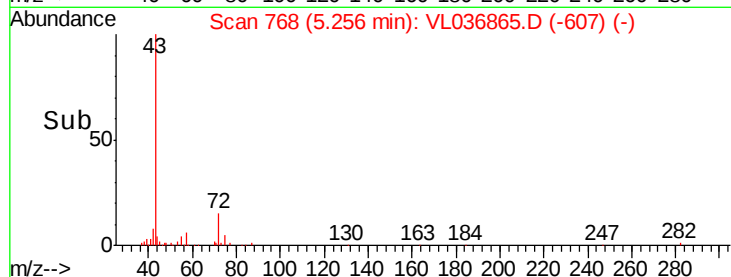
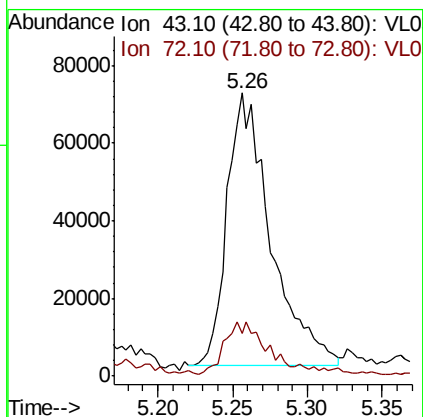
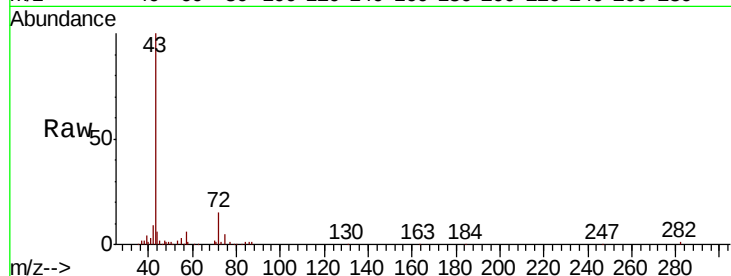
Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





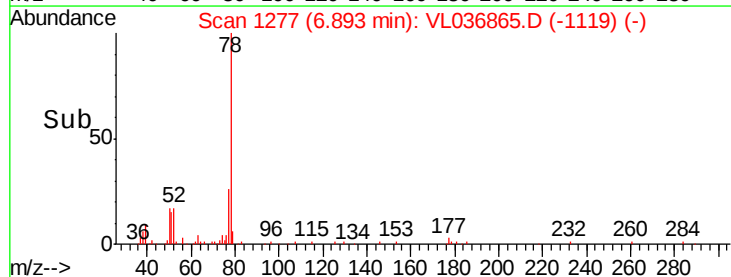
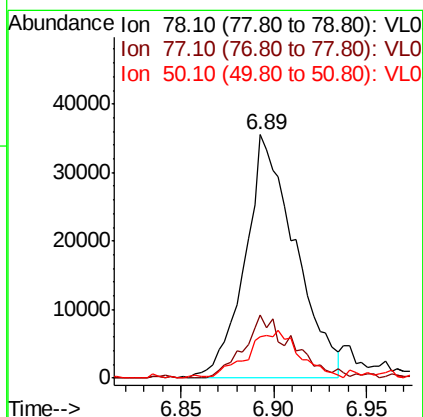
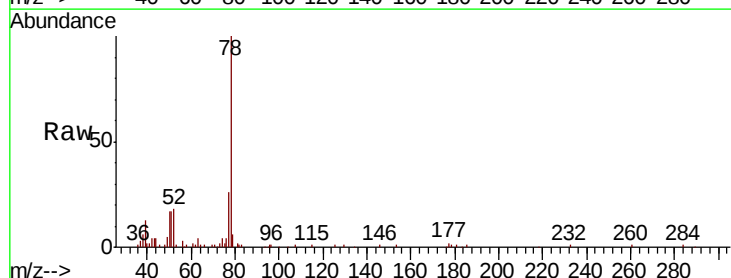
#34
 2-Butanone
 Concen: 0.982 ppbv
 RT: 5.26
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 27 Apr 2021 19:51

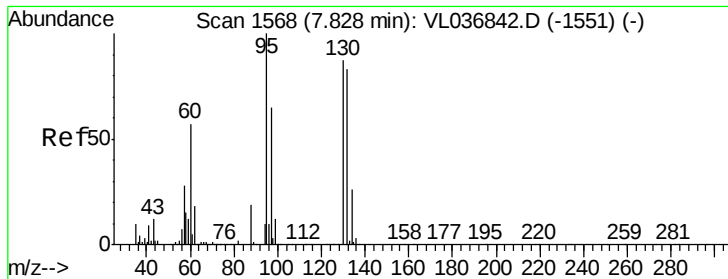
Tot Ion: 43 Resp: 144049
 Ion Ratio Lower Upper
 43 100
 72 23.3 17.6 26.4



#36
 Benzene
 Concen: 0.237 ppbv
 RT: 6.89 min Scan# 1277
 Delta R.T.: 0.01 min
 Lab File: VL036865.D
 Acq: 27 Apr 2021 19:51

Tgt Ion: 78 Resp: 66920
 Ion Ratio Lower Upper
 78 100
 77 25.9 17.6 26.4
 50 16.1 16.3 24.5#





#38

Trichloroethene

Concen: 0.031 ppbv

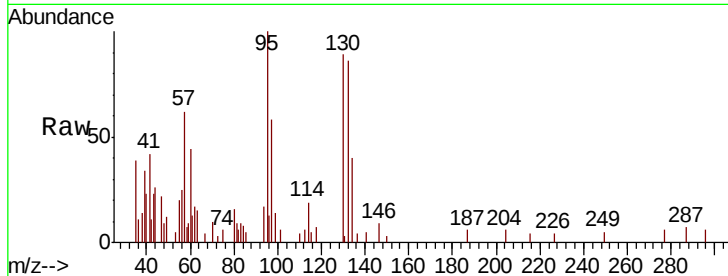
RT: 7.84 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 19:51

Tot Ion:	130	Resp:	3107
Ion	Ratio	Lower	Upper
130	100		
95	56.3	92.3	138.5#
132	77.2	76.8	115.2
97	16.9	60.0	90.0#

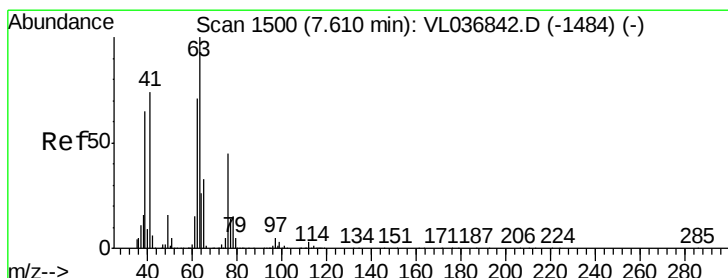
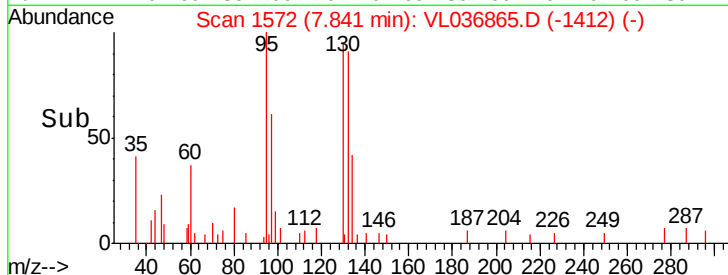
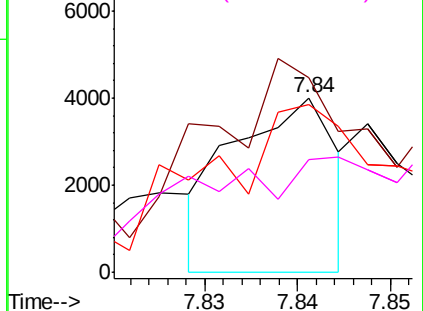


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 0.078 ppbv

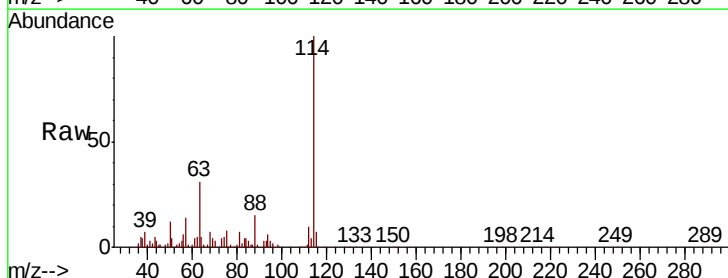
RT: 7.23 min Scan# 1383

Delta R.T. -0.38 min

Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

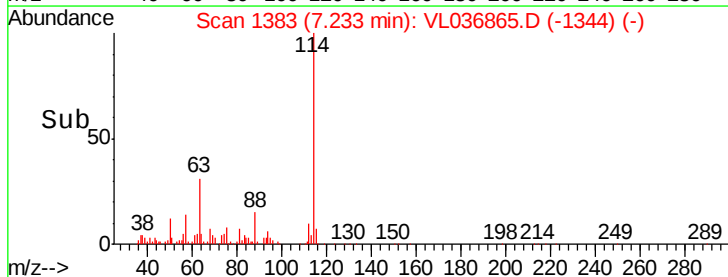
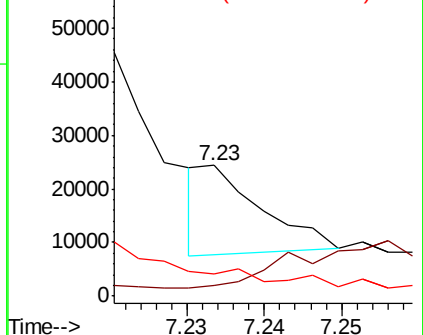
Tgt Ion:	63	Resp:	8766
Ion	Ratio	Lower	Upper
63	100		
41	2.5	59.1	88.7#
62	16.1	56.9	85.3#

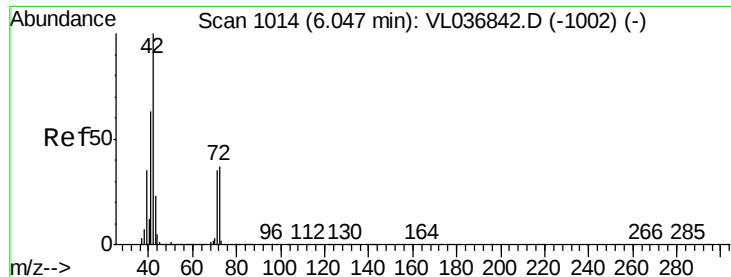


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 0.198 ppbv

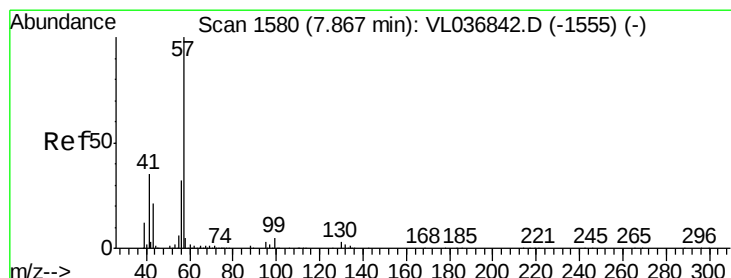
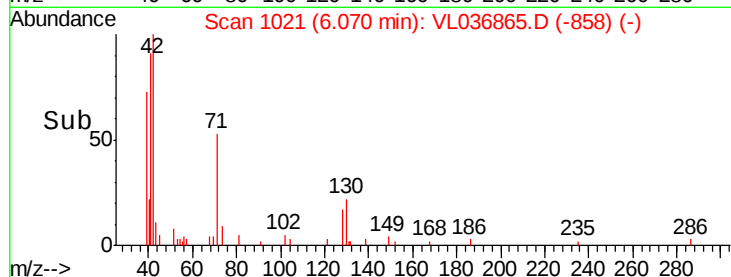
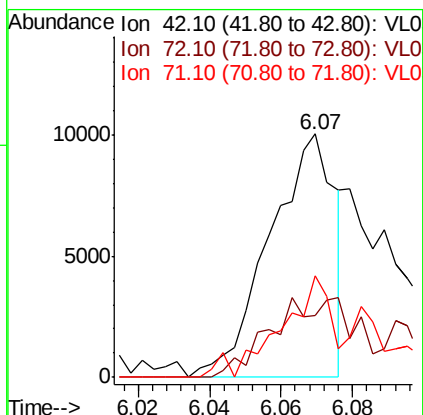
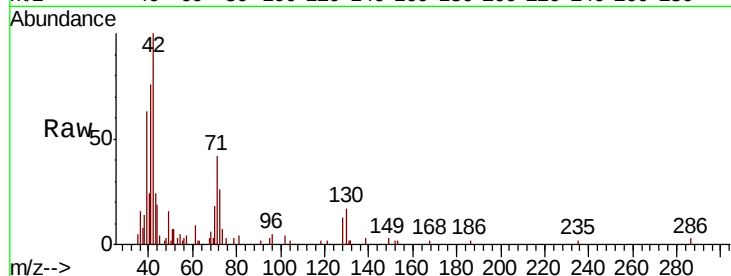
RT: 6.07 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 27 Apr 2021 19:51

Tot Ion:	42	Resp:	12737
Ion	Ratio	Lower	Upper
42	100		
72	57.6	29.7	44.5#
71	62.8	29.0	43.6#



#44

2,2,4-Trimethylpentane

Concen: 0.074 ppbv

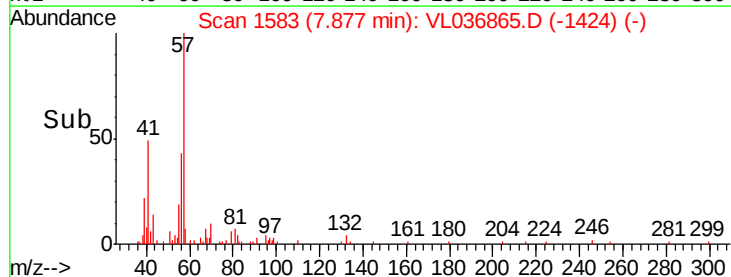
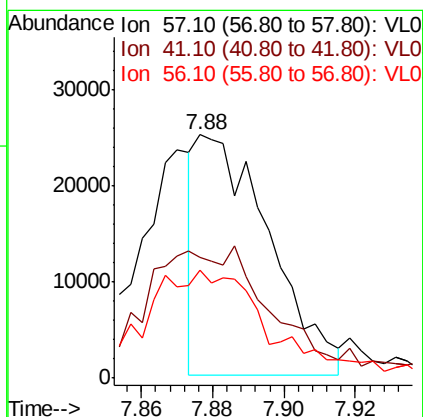
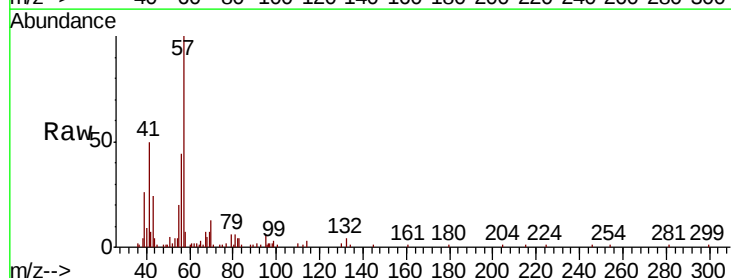
RT: 7.88 min Scan# 1583

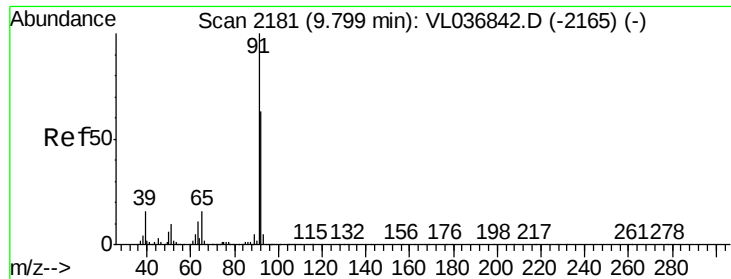
Delta R.T. 0.01 min

Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

Tgt Ion:	57	Resp:	35597
Ion	Ratio	Lower	Upper
57	100		
41	100.5	28.2	42.4#
56	85.0	25.9	38.9#





#53

Toluene

Concen: 1.005 ppbv

RT: 9.82 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

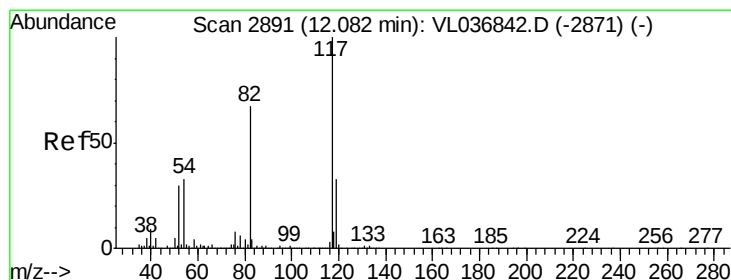
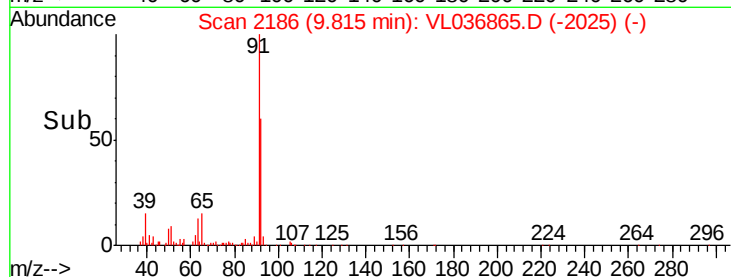
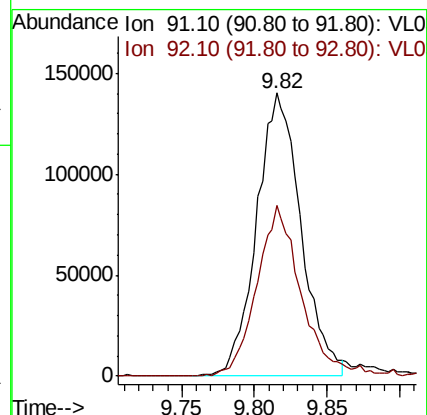
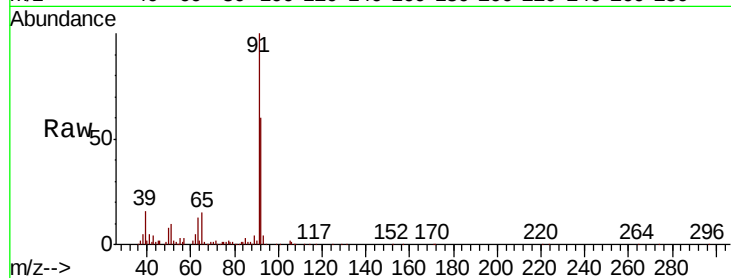
Acq: 27 Apr 2021 19:51

Tot Ion: 91 Resp: 296968

Ion Ratio Lower Upper

91 100

92 61.7 49.0 73.4



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2895

Delta R.T. 0.01 min

Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

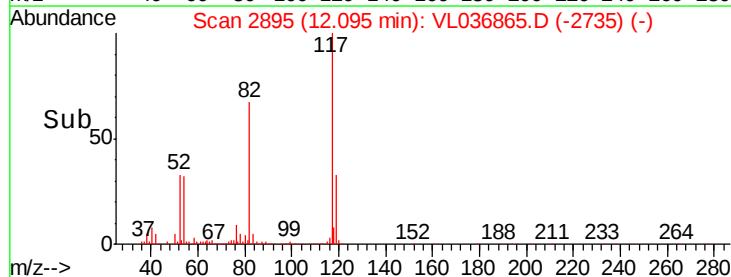
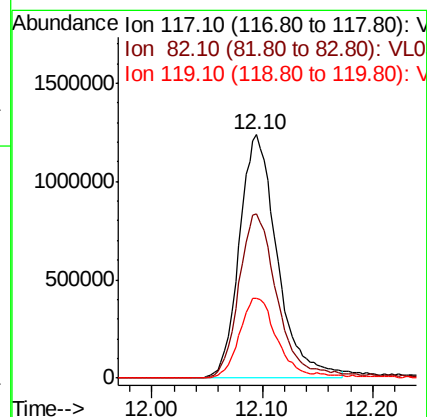
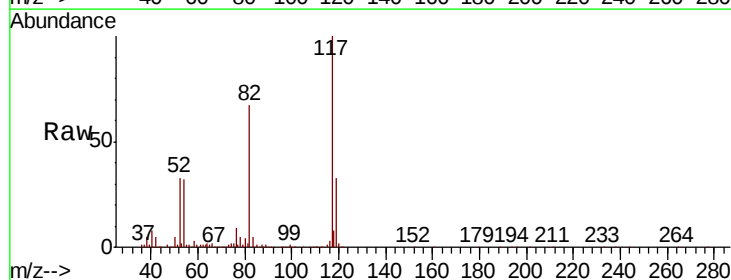
Tgt Ion: 117 Resp: 2947141

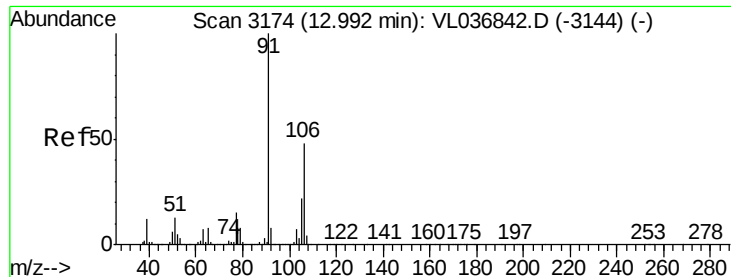
Ion Ratio Lower Upper

117 100

82 70.5 53.5 80.3

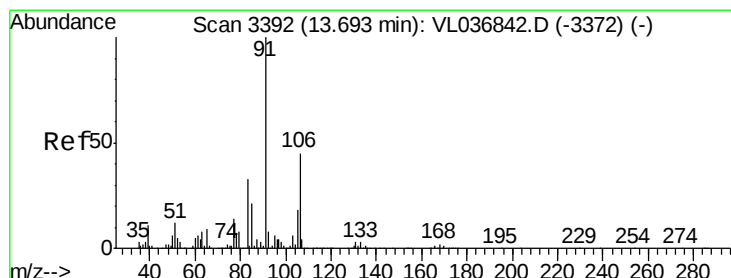
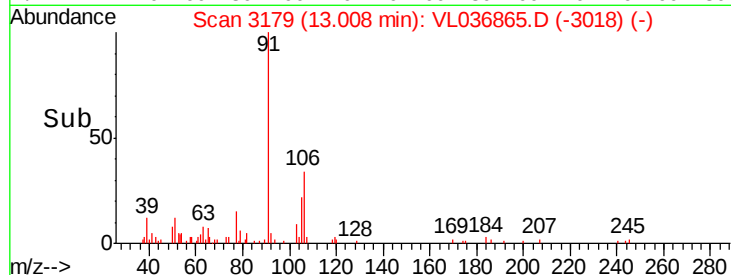
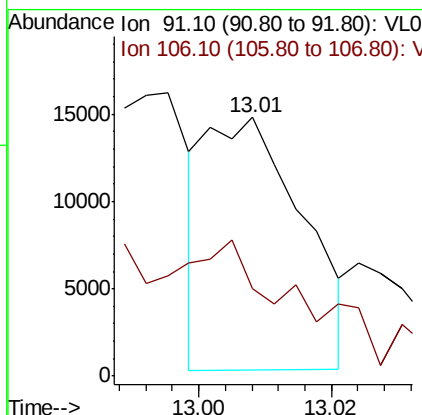
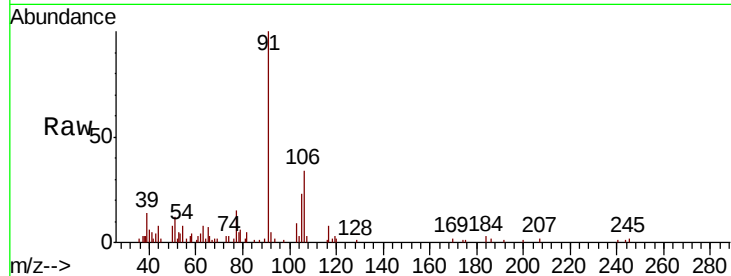
119 34.5 25.6 38.4





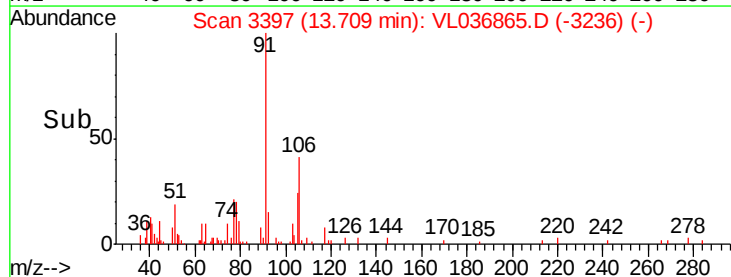
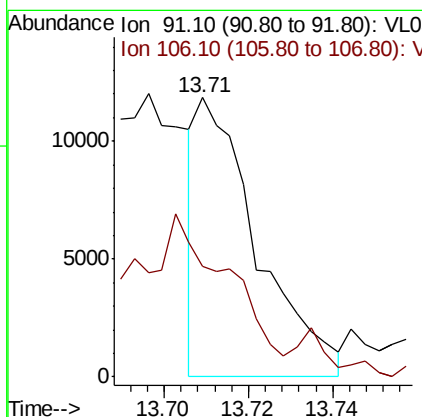
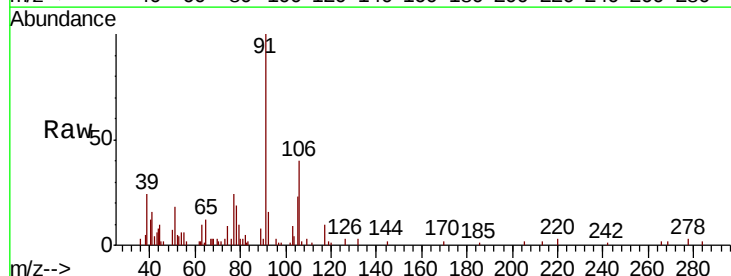
#59
m/p-Xylene
Concen: 0.044 ppbv
RT: 13.01 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 27 Apr 2021 19:51

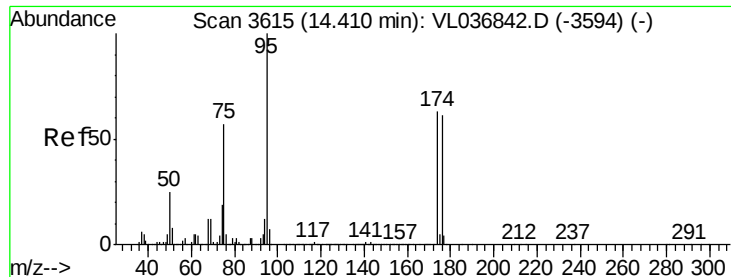
Tot Ion: 91 Resp: 14594
Ion Ratio Lower Upper
91 100
106 0.0 35.8 53.6#



#60
o-Xylene
Concen: 0.036 ppbv
RT: 13.71 min Scan# 3397
Delta R.T. 0.02 min
Lab File: VL036865.D
Acq: 27 Apr 2021 19:51

Tgt Ion: 91 Resp: 11696
Ion Ratio Lower Upper
91 100
106 124.8 22.6 67.7#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.383 ppbv

RT: 14.43 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 27 Apr 2021 19:51

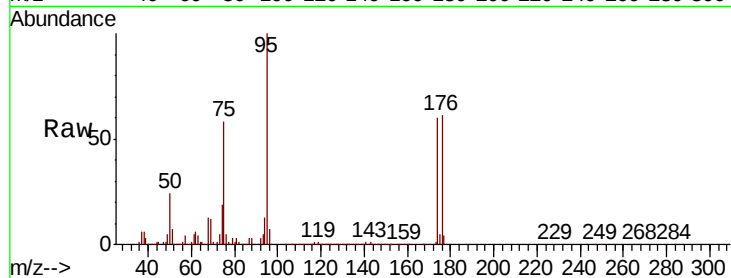
Tot Ion: 95 Resp: 2456359

Ion Ratio Lower Upper

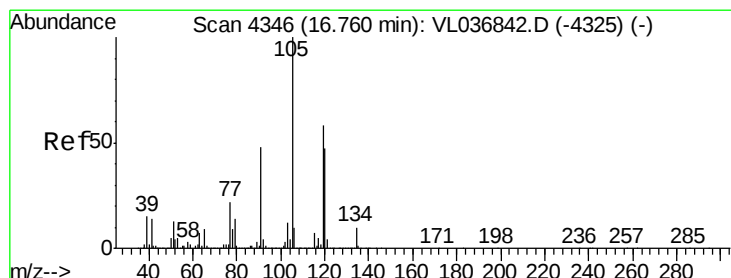
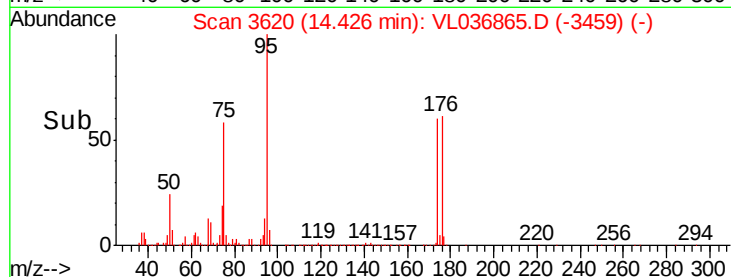
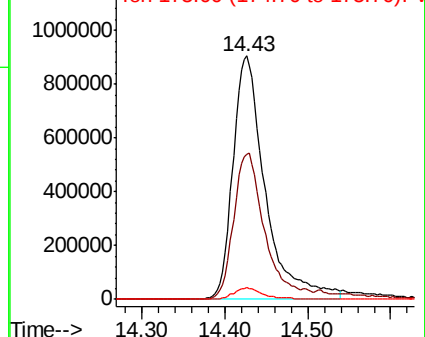
95 100

174 62.7 52.2 78.2

175 4.5 4.0 6.0



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



#74

1,2,4-Trimethylbenzene

Concen: 0.040 ppbv

RT: 16.78 min Scan# 4353

Delta R.T. 0.02 min

Lab File: VL036865.D

Acq: 27 Apr 2021 19:51

Tgt Ion:105 Resp: 14383

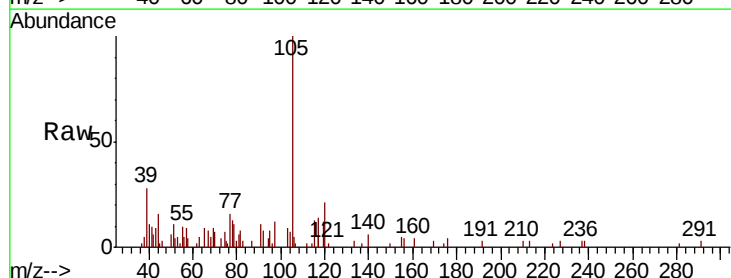
Ion Ratio Lower Upper

105 100

120 24.8 37.6 56.4#

91 1.7 39.0 58.4#

77 6.8 17.4 26.0#



Abundance Ion 105.10 (104.80 to 105.80): V
Ion 120.20 (119.90 to 120.90): V
Ion 91.10 (90.80 to 91.80): VL0
Ion 77.10 (76.80 to 77.80): VL0

