

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL022621\
 Data File : VL036405.D
 Acq On : 26 Feb 2021 16:53
 Operator : SY/AP
 Sample : M1502-03DUP 2X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Feb 27 03:17:45 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL021021AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 10 16:04:02 2021
 QLast Update : Wed Feb 10 16:04:02 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.64	49	1538245	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.14	114	3315853	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.05	117	3017395	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.38	95	2356768	9.49	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.90%

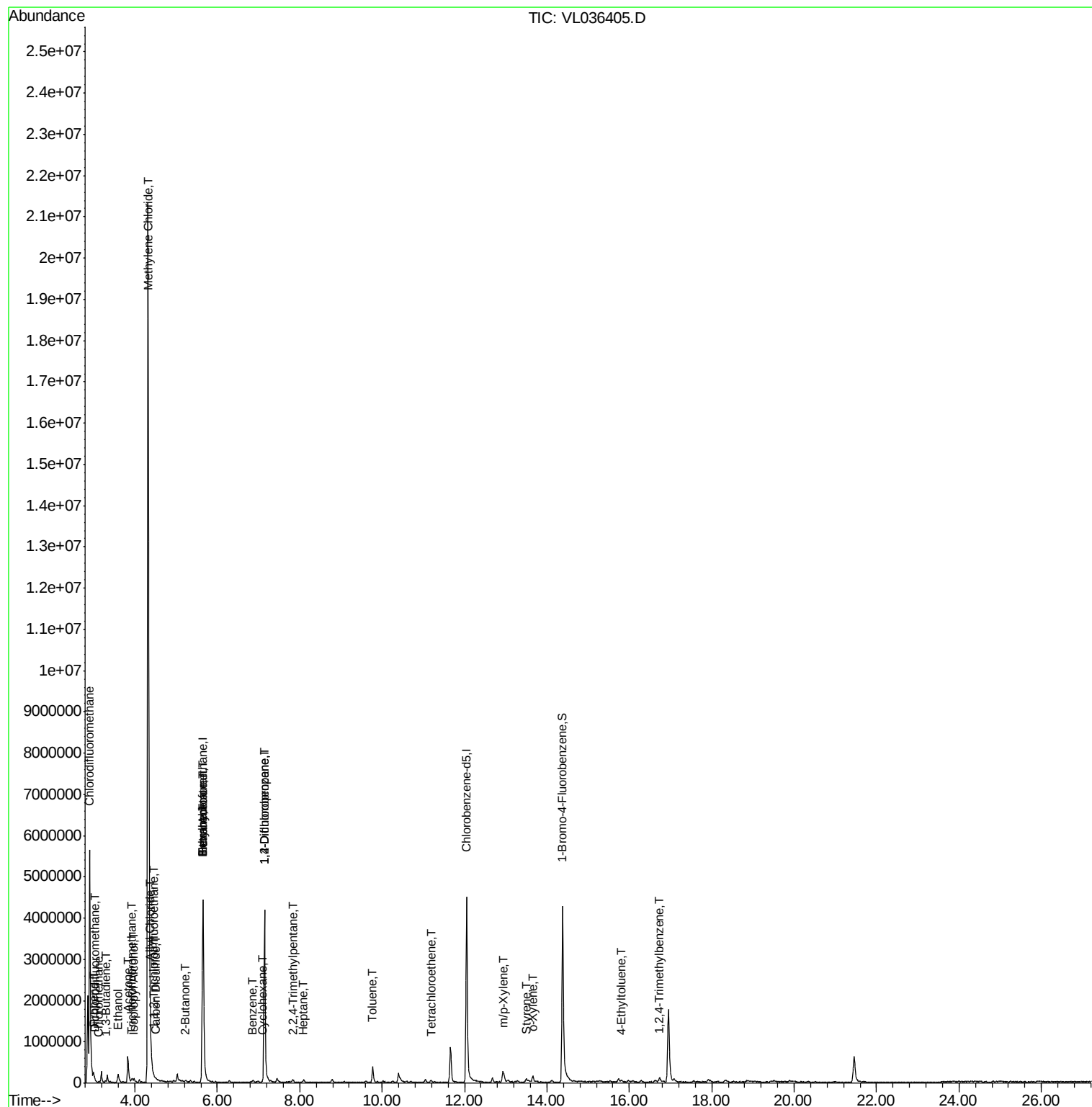
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.03	85	31422	0.137	ppbv	94
3) Chlorodifluoromethane	2.90	51	844938	4.421	ppbv #	60
4) Chloromethane	3.11	50	7570	0.082	ppbv #	82
9) Propene	3.00	41	60516	0.849	ppbv	85
10) Heptane	8.08	43	7175	0.034	ppbv #	28
11) Trichlorofluoromethane	3.92	101	61544	0.274	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.46	101	4540	0.033	ppbv #	76
13) Ethanol	3.59	45	285063	21.298	ppbv	93
15) Acetone	3.83	43	807459	4.294	ppbv	98
16) 1,3-Butadiene	3.30	39	5534	0.062	ppbv #	64
19) Isopropyl Alcohol	3.96	45	22727	0.218	ppbv #	8
20) Methylene Chloride	4.32	84	9725392	160.317	ppbv #	78
21) Allyl Chloride	4.38	41	7210	0.069	ppbv #	56
25) Ethyl Acetate	5.66	43	1061132	2.923	ppbv #	77
26) Hexane	5.66	57	1437039	9.635	ppbv #	37
27) Carbon Disulfide	4.52	76	12696	0.093	ppbv #	97
30) Cyclohexane	7.10	84	3888	0.031	ppbv #	1
34) 2-Butanone	5.22	43	46644	0.212	ppbv #	79
36) Benzene	6.85	78	14509	0.052	ppbv	97
39) 1,2-Dichloropropane	7.15	63	926688	8.099	ppbv #	23
41) Tetrahydrofuran	5.65	42	572452	4.656	ppbv #	52
44) 2,2,4-Trimethylpentane	7.83	57	15534	0.030	ppbv #	40
52) Tetrachloroethene	11.18	164	3704	0.036	ppbv #	40
53) Toluene	9.77	91	156336	0.512	ppbv #	29
59) m/p-Xylene	12.96	91	95071	0.262	ppbv #	33
60) o-Xylene	13.65	91	52462	0.151	ppbv #	32
61) Styrene	13.49	104	41361	0.192	ppbv	94
72) 4-Ethyltoluene	15.80	105	12923	0.033	ppbv #	16
74) 1,2,4-Trimethylbenzene	16.73	105	42317	0.111	ppbv #	68

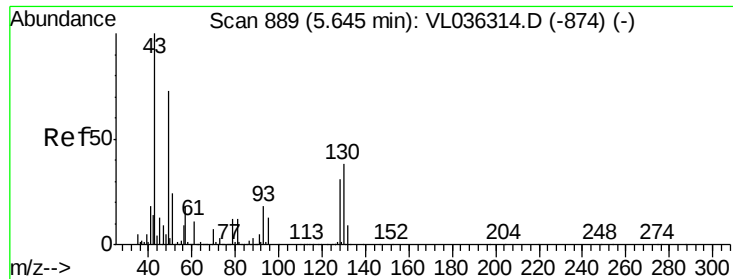
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Feb 10 16:04:02 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.64 min Scan# 887

Delta R.T. -0.01 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

Instrument :

MSVOA_L

ClientSampleId :

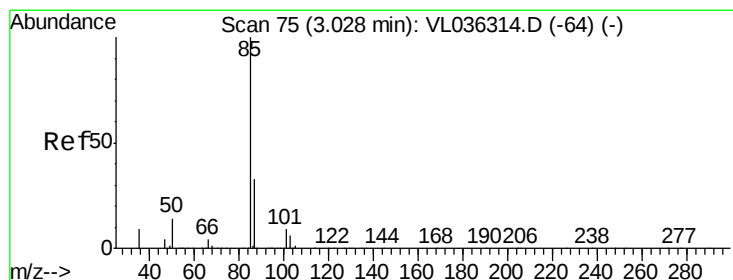
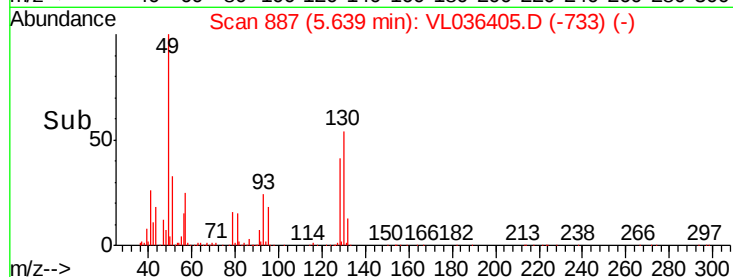
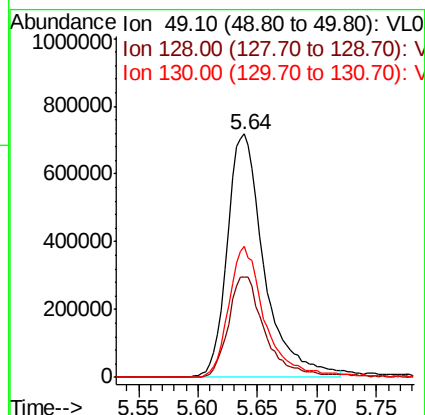
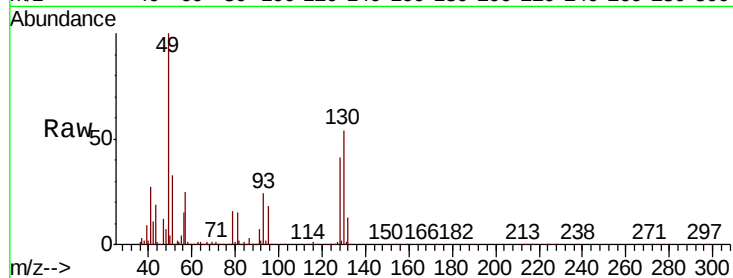
Tot Ion: 49 Resp: 1538245

Ion Ratio Lower Upper

49 100

128 41.9 20.8 62.5

130 54.1 26.7 80.1



#2

Dichlorodifluoromethane

Concen: 0.137 ppbv

RT: 3.03 min Scan# 75

Delta R.T. 0.00 min

Lab File: VL036405.D

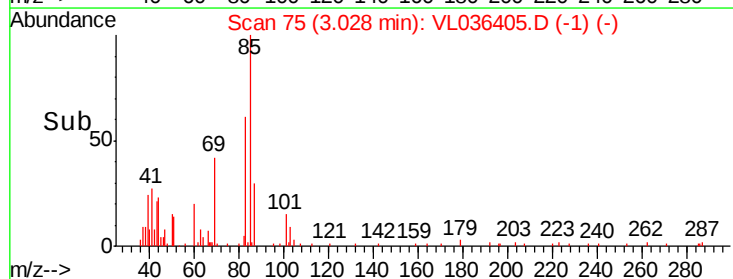
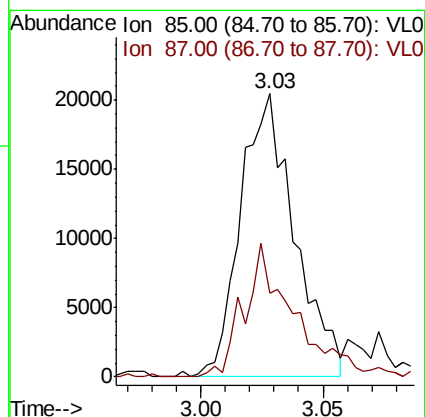
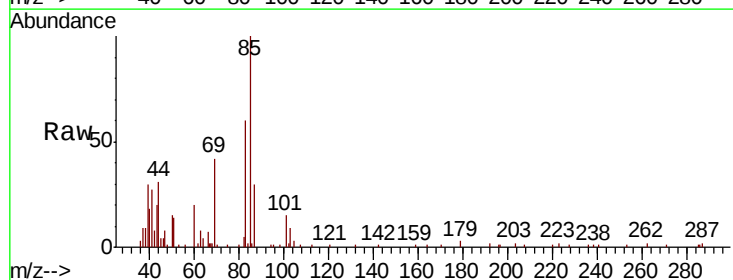
Acq: 26 Feb 2021 16:53

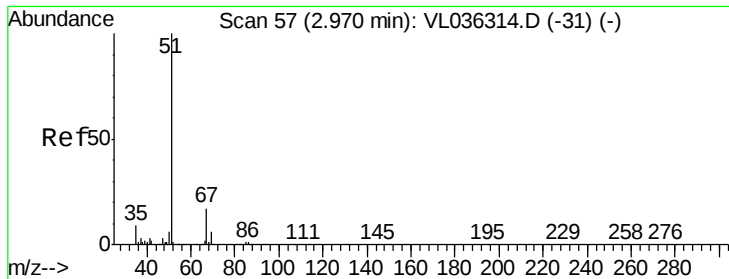
Tgt Ion: 85 Resp: 31422

Ion Ratio Lower Upper

85 100

87 29.6 26.5 39.7





#3

Chlorodifluoromethane

Concen: 4.421 ppbv

RT: 2.90 min Scan# 35

Delta R.T. -0.07 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

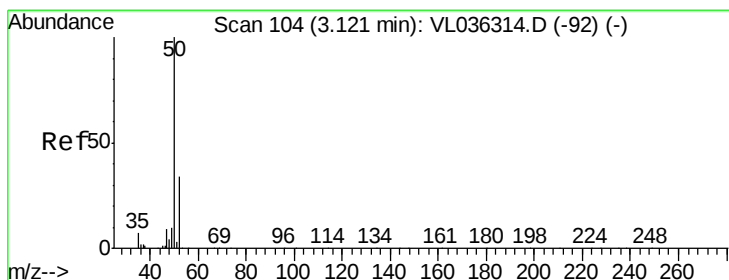
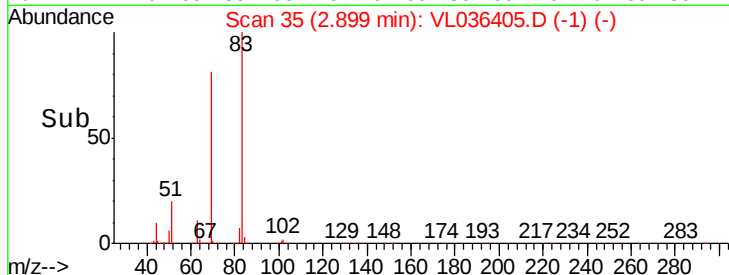
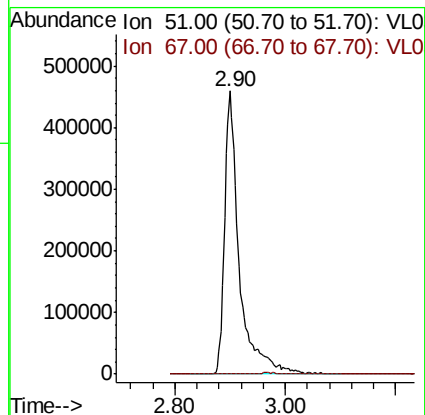
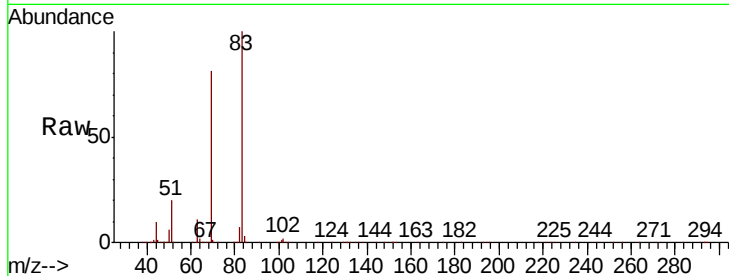
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 51 Resp: 844938

Ion Ratio Lower Upper

51 100

67 0.4 14.7 22.1#



#4

Chloromethane

Concen: 0.082 ppbv

RT: 3.11 min Scan# 102

Delta R.T. -0.01 min

Lab File: VL036405.D

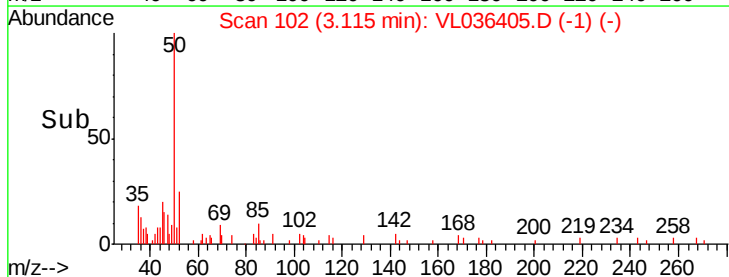
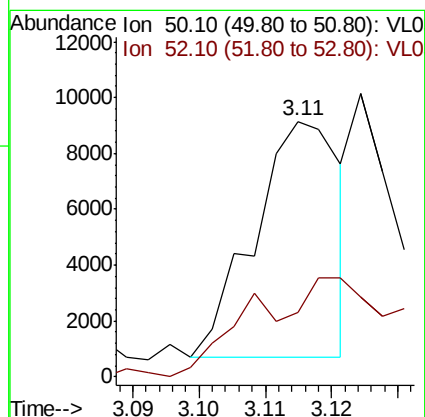
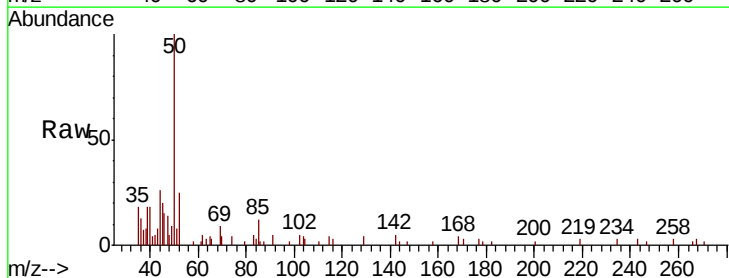
Acq: 26 Feb 2021 16:53

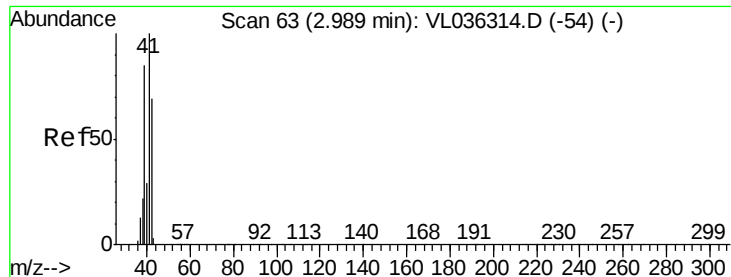
Tgt Ion: 50 Resp: 7570

Ion Ratio Lower Upper

50 100

52 23.6 27.0 40.4#





#9

Propene

Concen: 0.849 ppbv

RT: 3.00 min Scan# 65

Delta R.T. 0.01 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

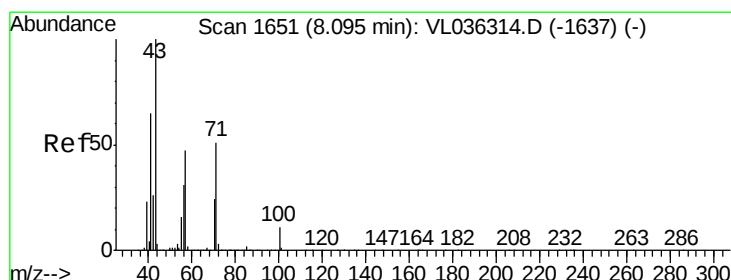
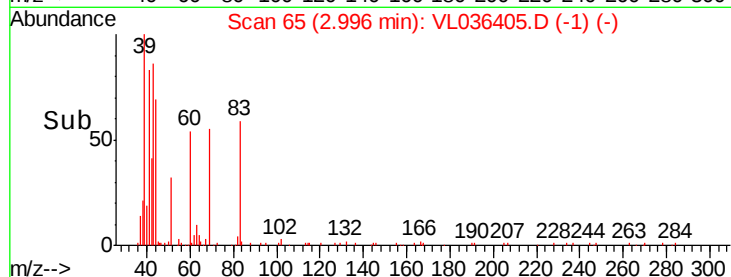
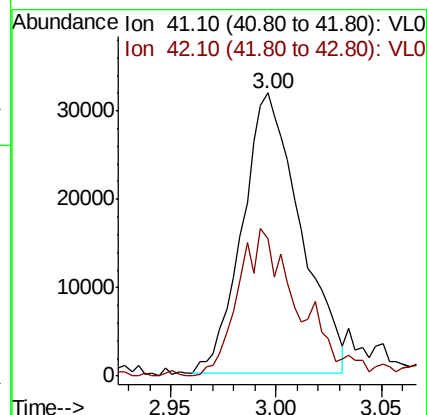
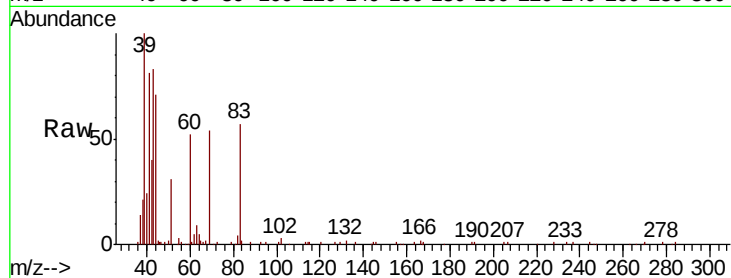
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 41 Resp: 60516

Ion Ratio Lower Upper

41 100

42 57.5 56.2 84.2



#10

Heptane

Concen: 0.034 ppbv

RT: 8.08 min Scan# 1647

Delta R.T. -0.01 min

Lab File: VL036405.D

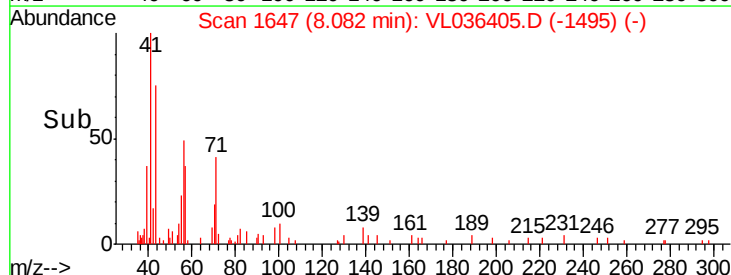
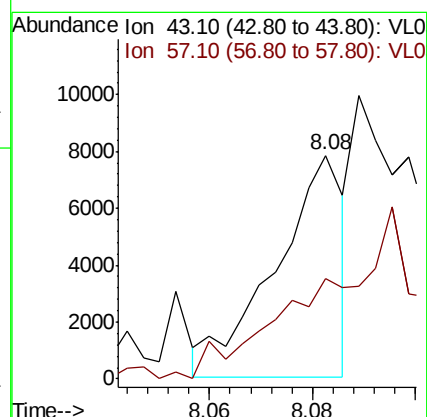
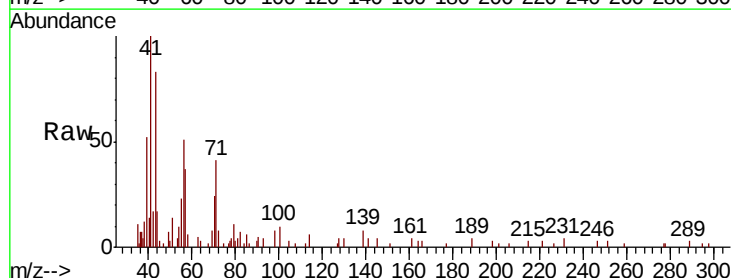
Acq: 26 Feb 2021 16:53

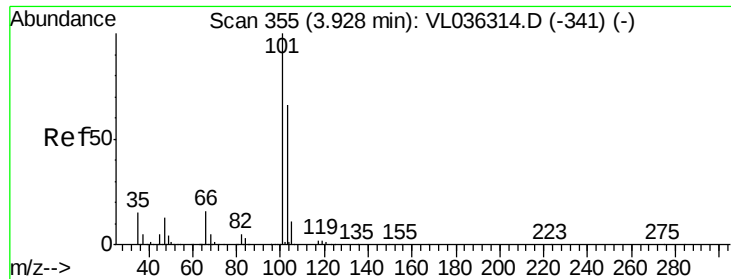
Tgt Ion: 43 Resp: 7175

Ion Ratio Lower Upper

43 100

57 0.0 39.4 59.2#





#11

Trichlorofluoromethane

Concen: 0.274 ppbv

RT: 3.92 min Scan# 353

Delta R.T. -0.01 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

Instrument :

MSVOA_L

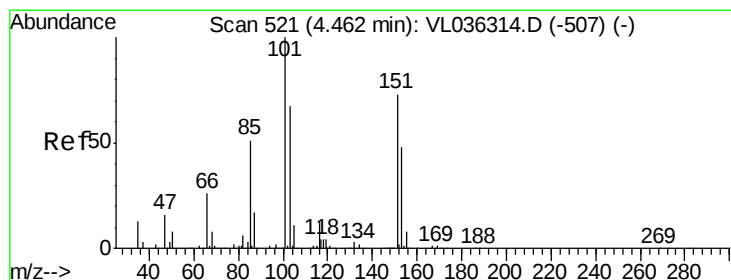
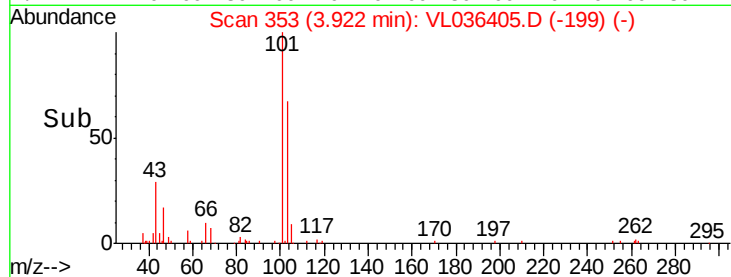
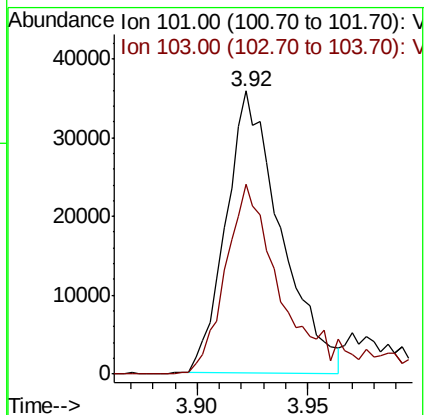
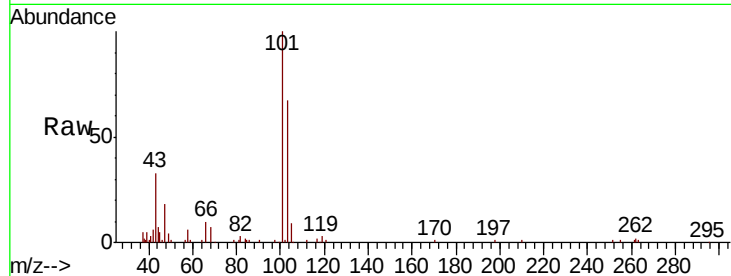
ClientSampleId :

Tot Ion:101 Resp: 61544

Ion Ratio Lower Upper

101 100

103 67.0 52.9 79.3



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.033 ppbv

RT: 4.46 min Scan# 520

Delta R.T. -0.00 min

Lab File: VL036405.D

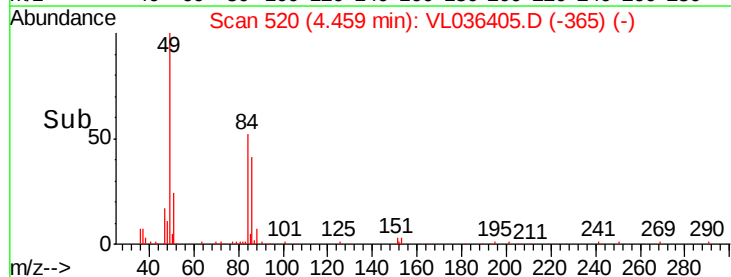
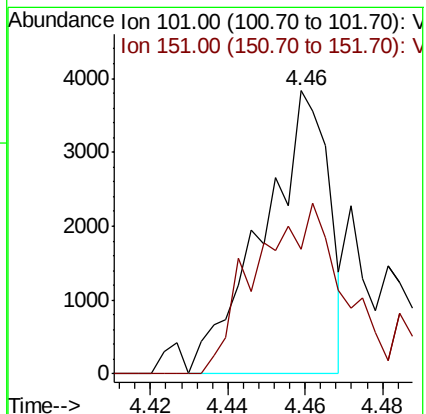
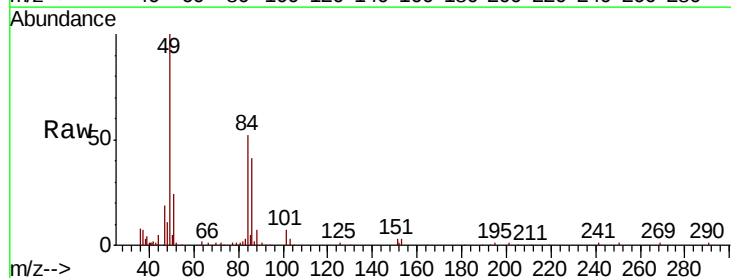
Acq: 26 Feb 2021 16:53

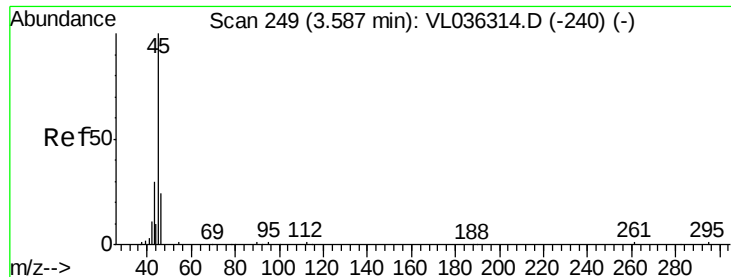
Tgt Ion:101 Resp: 4540

Ion Ratio Lower Upper

101 100

151 93.0 58.2 87.4#

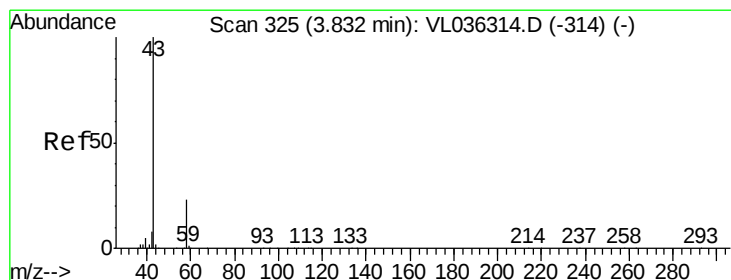
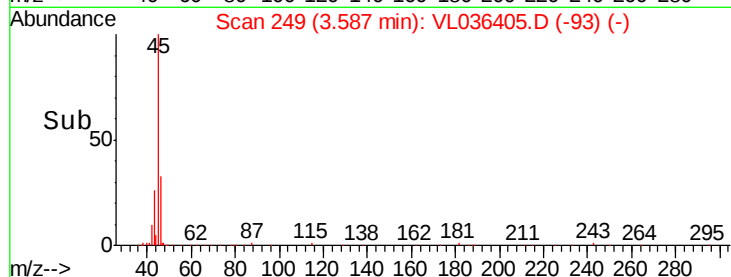
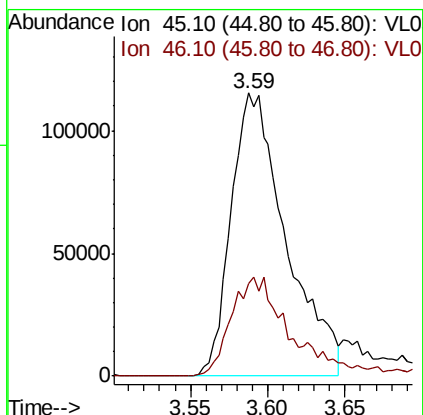
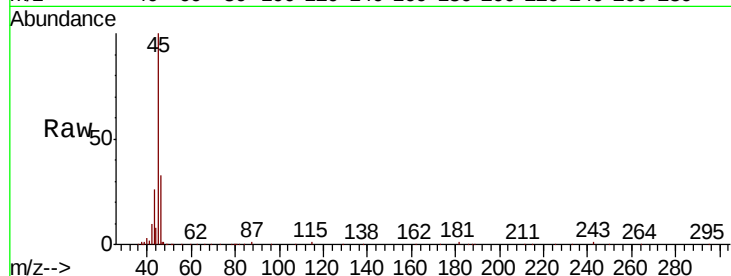




#13
Ethanol
Concen: 21.298 ppbv
RT: 3.59 min Scan# 249
Delta R.T. 0.00 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

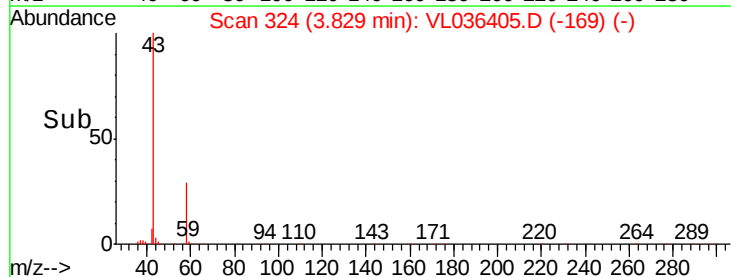
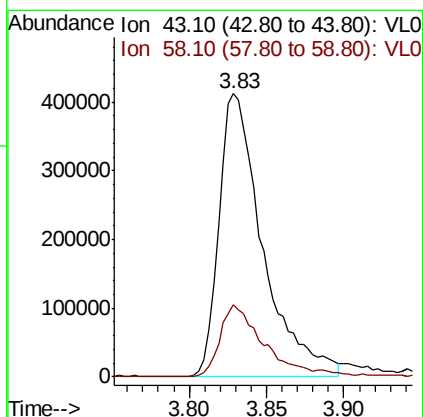
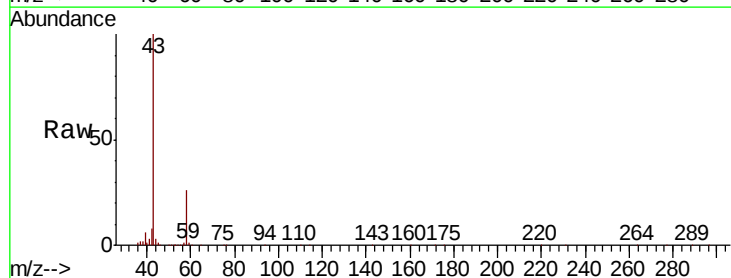
Instrument :
MSVOA_L
ClientSampleId :

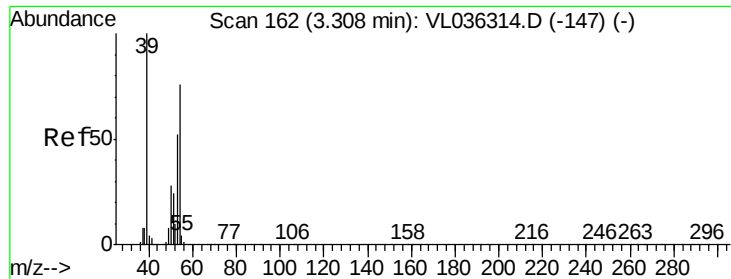
Tot Ion: 45 Resp: 285063
Ion Ratio Lower Upper
45 100
46 39.7 17.7 70.7



#15
Acetone
Concen: 4.294 ppbv
RT: 3.83 min Scan# 324
Delta R.T. -0.00 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Tgt Ion: 43 Resp: 807459
Ion Ratio Lower Upper
43 100
58 26.2 20.3 30.5

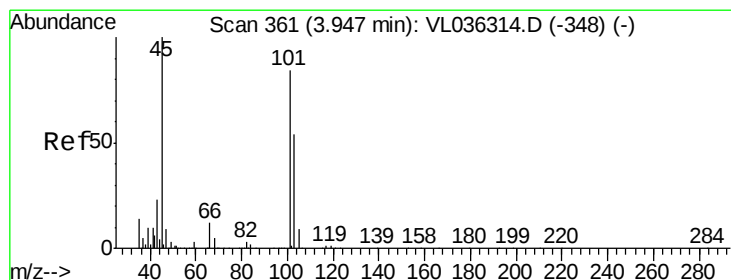
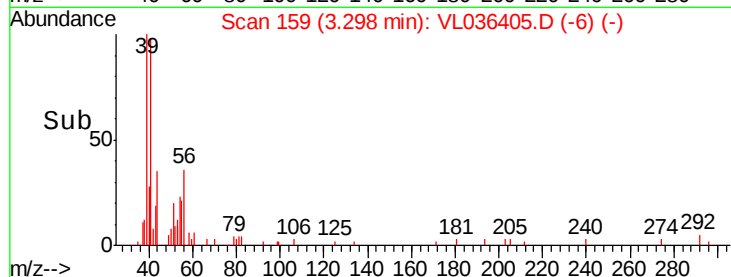
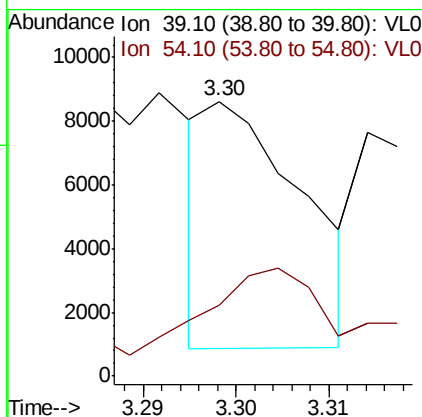
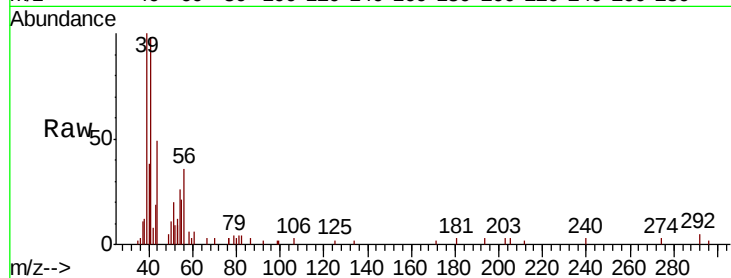




#16
 1,3-Butadiene
 Concen: 0.062 ppbv
 RT: 3.30 min Scan# 159
 Delta R.T. -0.01 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

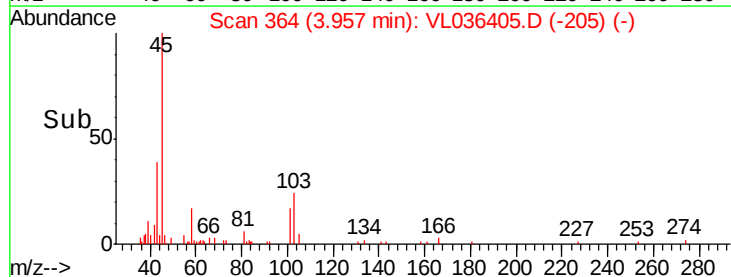
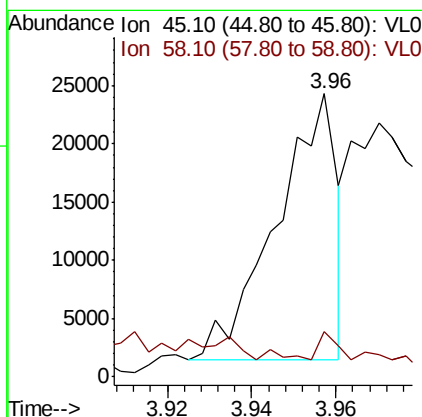
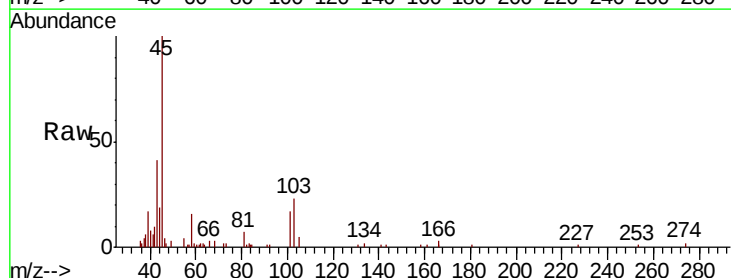
Instrument :
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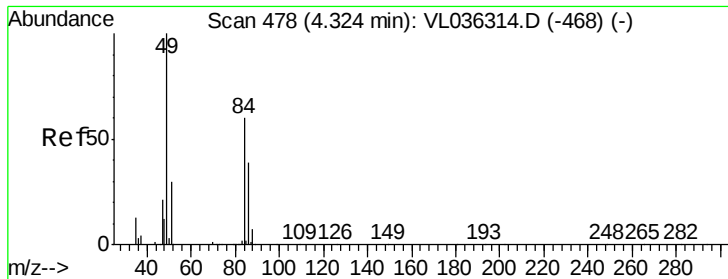
Tot Ion: 39 Resp: 5534
 Ion Ratio Lower Upper
 39 100
 54 112.1 64.4 96.6#



#19
 Isopropyl Alcohol
 Concen: 0.218 ppbv
 RT: 3.96 min Scan# 364
 Delta R.T. 0.01 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

Tgt Ion: 45 Resp: 22727
 Ion Ratio Lower Upper
 45 100
 58 34.0 1.9 2.9#

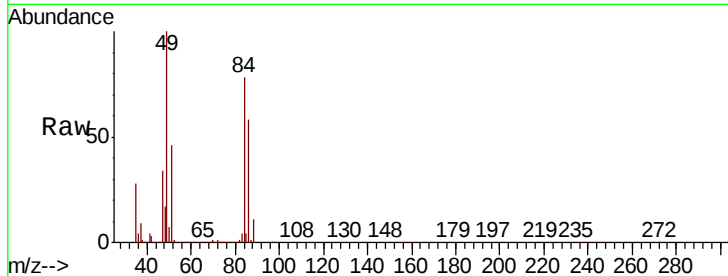




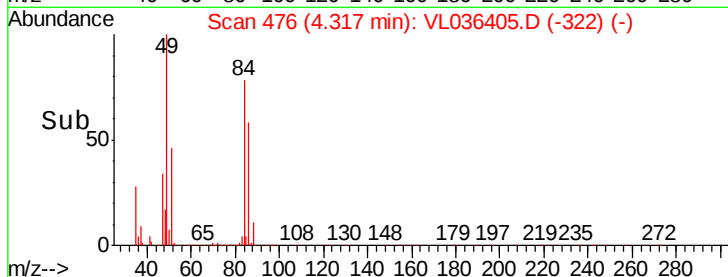
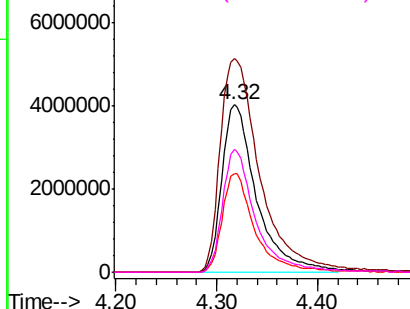
#20
Methylene Chloride
Concen: 160.317 ppbv
RT: 4.32 min Scan# 476
Delta R.T. -0.01 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 84 Resp: 9725392
Ion Ratio Lower Upper
84 100
49 127.6 133.8 200.8#
51 59.2 41.4 62.0
86 73.5 51.5 77.3

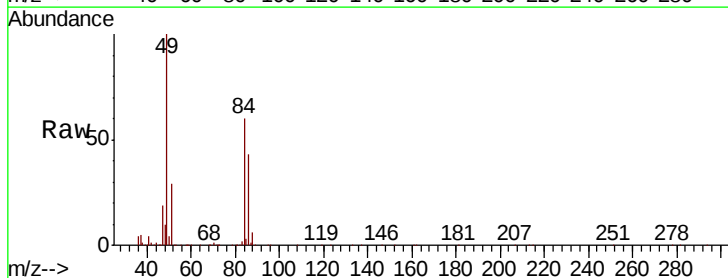
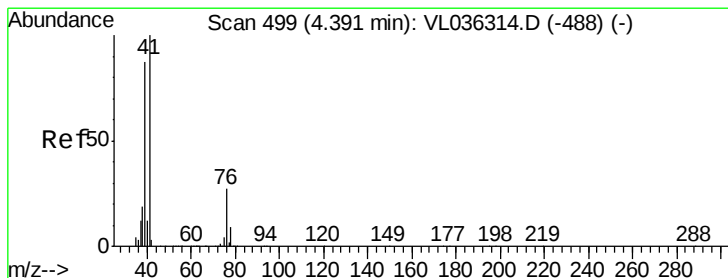


Abundance Ion 84.00 (83.70 to 84.70): VL0
8000000 Ion 49.10 (48.80 to 49.80): VL0
6000000 Ion 51.10 (50.80 to 51.80): VL0
4000000 Ion 86.00 (85.70 to 86.70): VL0
2000000
0

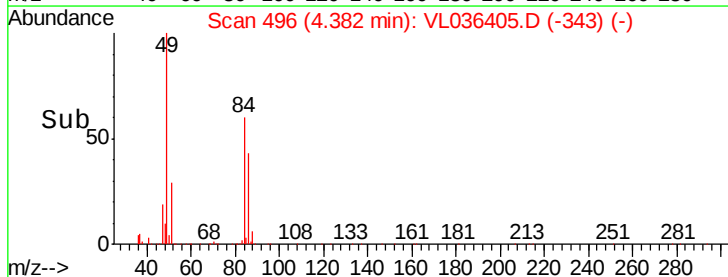
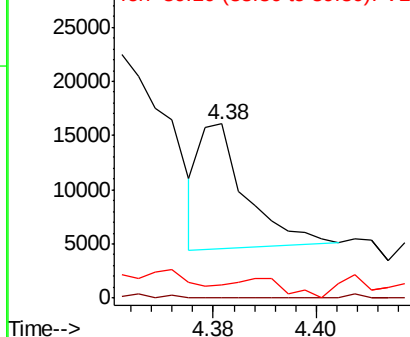


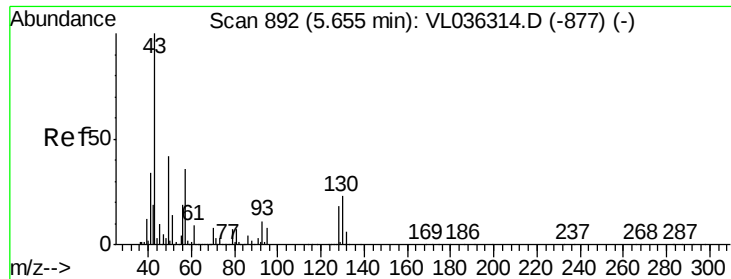
#21
Allyl Chloride
Concen: 0.069 ppbv
RT: 4.38 min Scan# 496
Delta R.T. -0.01 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Tgt Ion: 41 Resp: 7210
Ion Ratio Lower Upper
41 100
76 0.0 22.0 33.0#
39 49.3 70.2 105.2#



Abundance Ion 41.10 (40.80 to 41.80): VL0
30000 Ion 76.10 (75.80 to 76.80): VL0
25000 Ion 39.10 (38.80 to 39.80): VL0
20000
15000
10000
5000
0

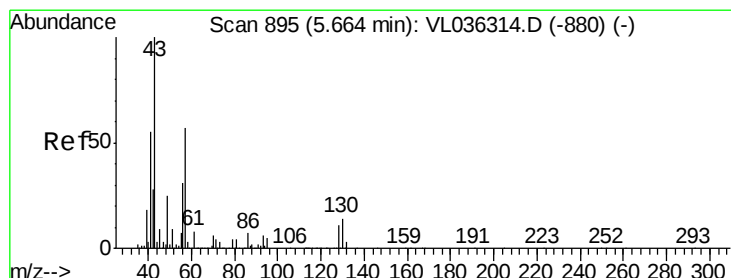
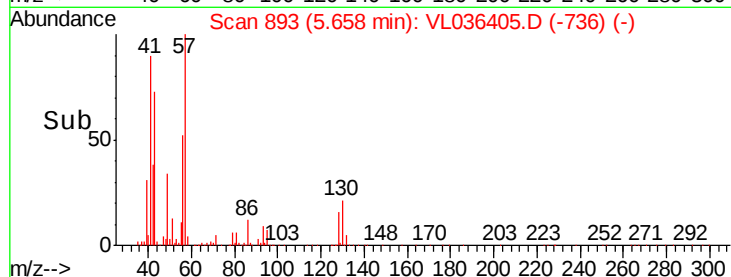
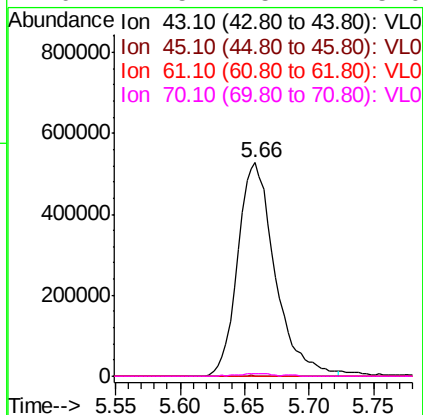
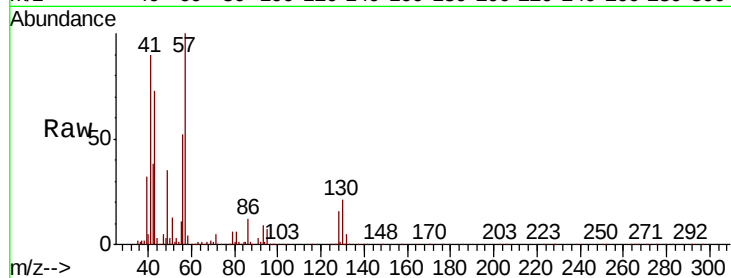




#25
Ethyl Acetate
Concen: 2.923 ppbv
RT: 5.66 min Scan# 893
Delta R.T. 0.00 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

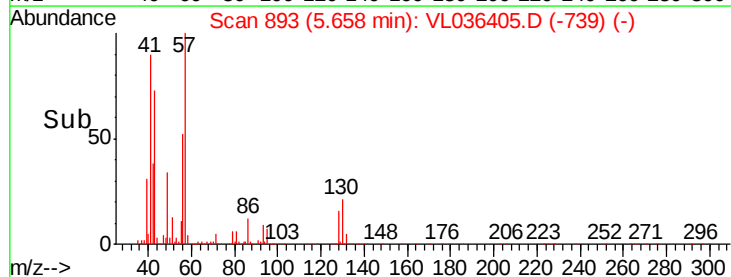
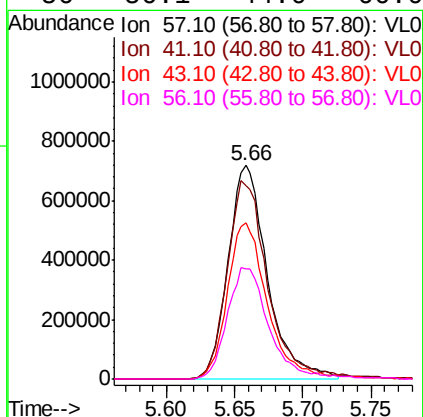
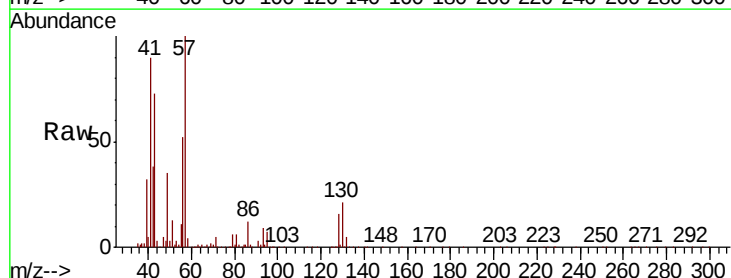
Instrument :
MSVOA_L
ClientSampleId :

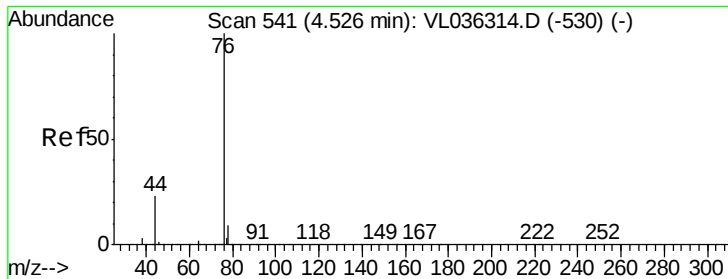
Tot Ion:	43	Resp:	1061132
Ion	Ratio	Lower	Upper
43	100		
45	0.3	8.3	12.5#
61	0.3	7.3	10.9#
70	1.5	5.4	8.0#



#26
Hexane
Concen: 9.635 ppbv
RT: 5.66 min Scan# 893
Delta R.T. -0.01 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Tgt Ion:	57	Resp:	1437039
Ion	Ratio	Lower	Upper
57	100		
41	96.8	81.7	122.5
43	75.7	199.1	298.7#
56	56.1	44.0	66.0





#27

Carbon Disulfide

Concen: 0.093 ppbv

RT: 4.52 min Scan# 540

Delta R.T. -0.00 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

Instrument :

MSVOA_L

ClientSampled :

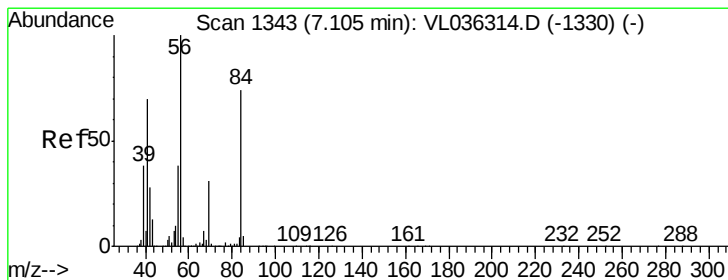
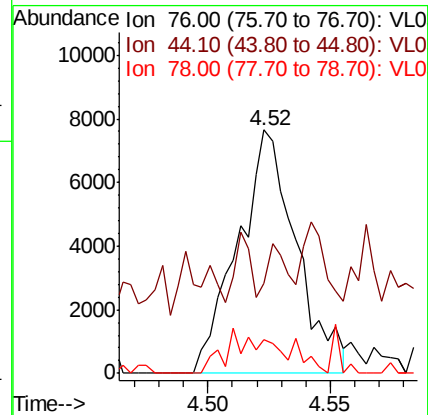
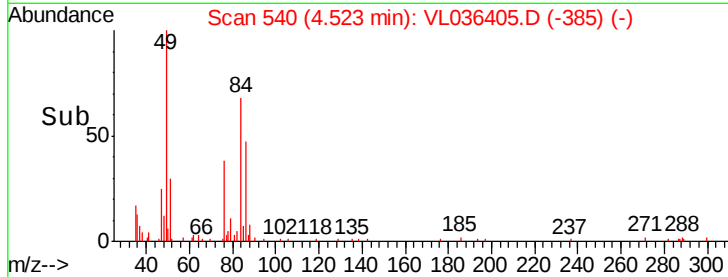
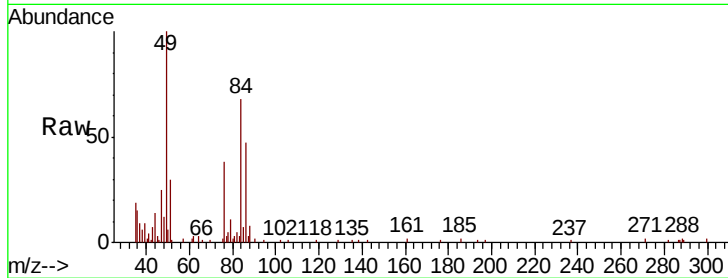
Tot Ion: 76 Resp: 12696

Ion Ratio Lower Upper

76 100

44 23.1 18.4 27.6

78 12.9 8.0 12.0#



#30

Cyclohexane

Concen: 0.031 ppbv

RT: 7.10 min Scan# 1340

Delta R.T. -0.01 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

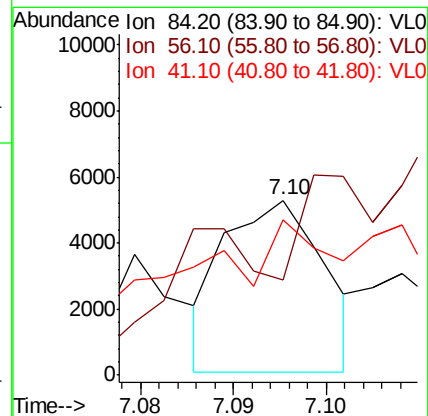
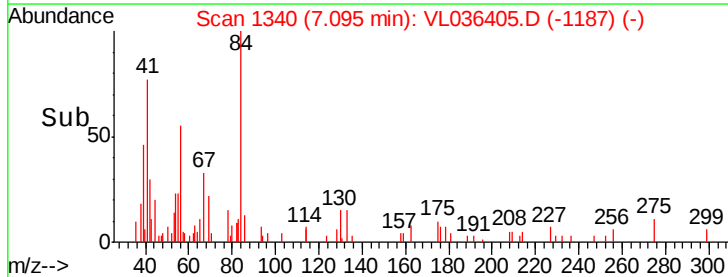
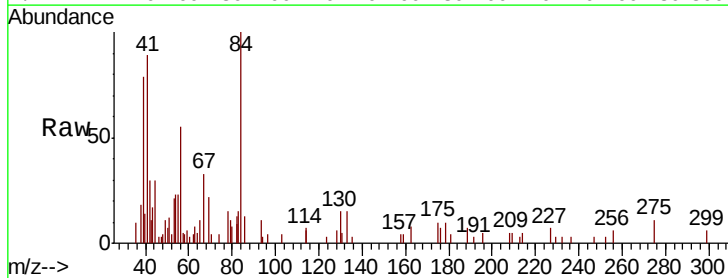
Tgt Ion: 84 Resp: 3888

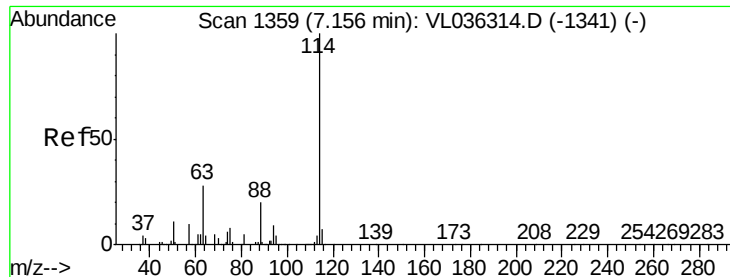
Ion Ratio Lower Upper

84 100

56 0.0 120.2 180.4#

41 371.5 79.7 119.5#

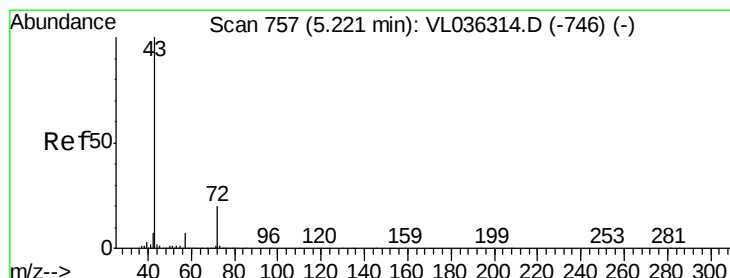
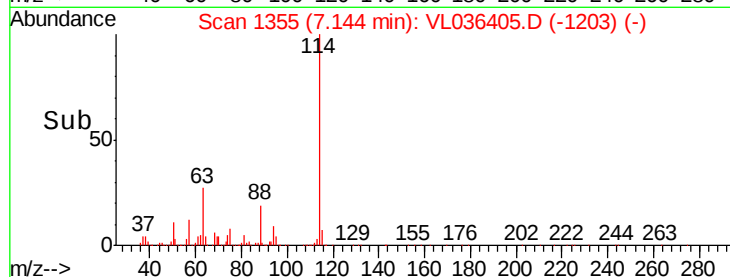
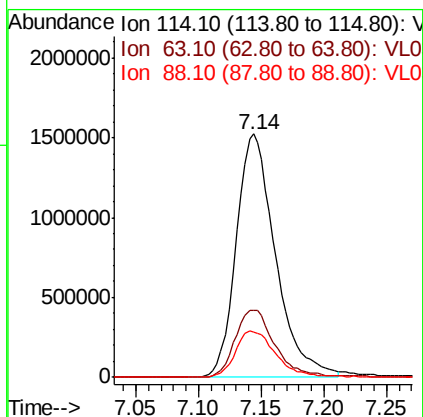
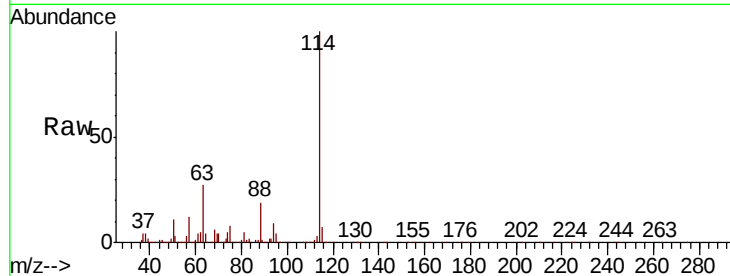




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.14 min Scan# 1355
 Delta R.T. -0.01 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

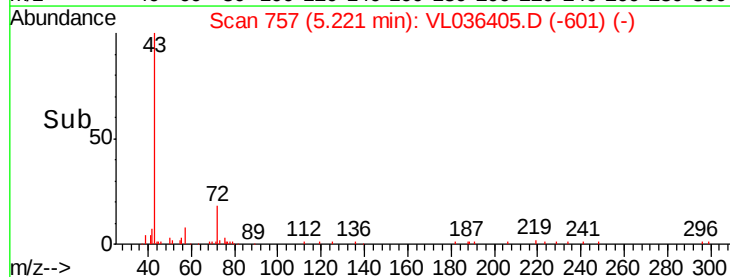
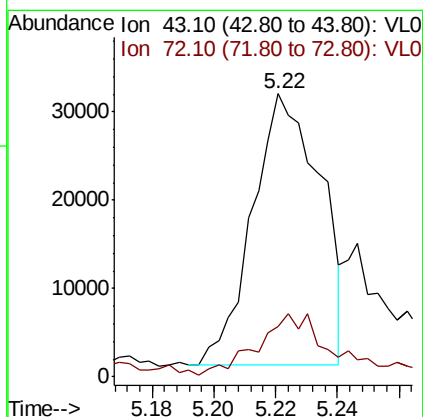
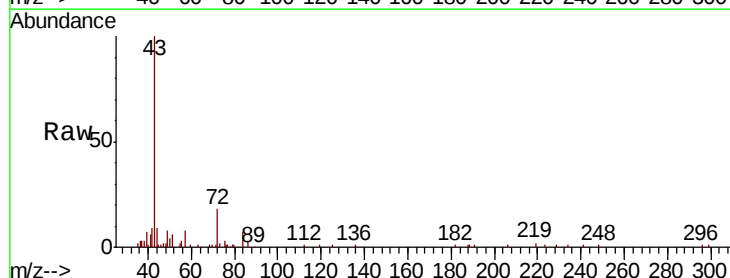
Instrument :
 MSVOA_L
 ClientSampleId :

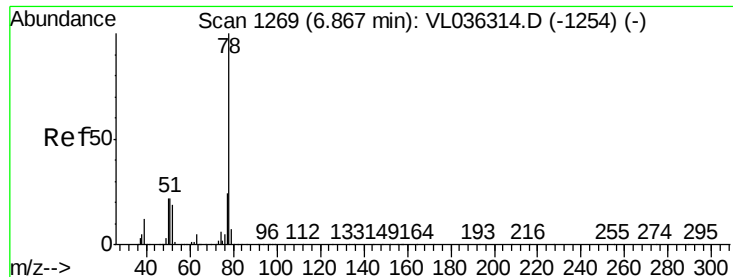
Tot Ion:114 Resp: 3315853
 Ion Ratio Lower Upper
 114 100
 63 29.1 24.1 36.1
 88 20.0 16.0 24.0



#34
 2-Butanone
 Concen: 0.212 ppbv
 RT: 5.22 min Scan# 757
 Delta R.T. 0.00 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

Tgt Ion: 43 Resp: 46644
 Ion Ratio Lower Upper
 43 100
 72 30.8 16.7 25.1#





#36

Benzene

Concen: 0.052 ppbv

RT: 6.85 min Scan# 1264

Delta R.T. -0.02 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

Instrument :

MSVOA_L

ClientSampleId :

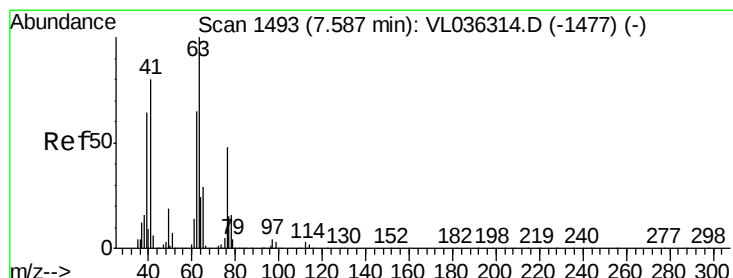
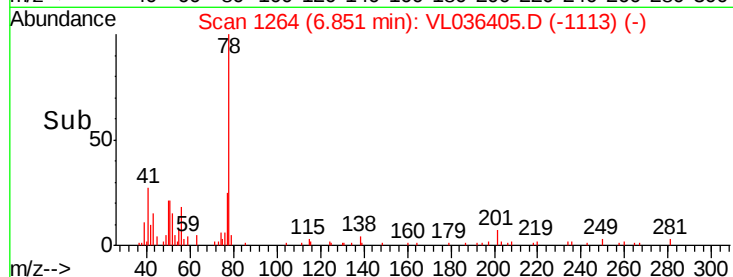
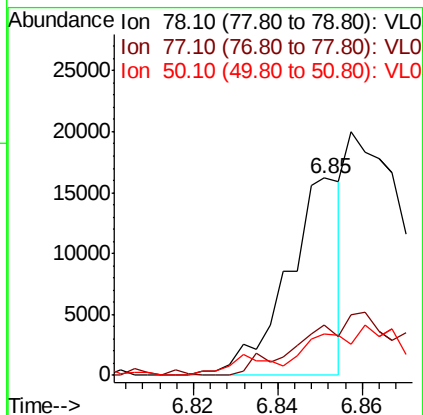
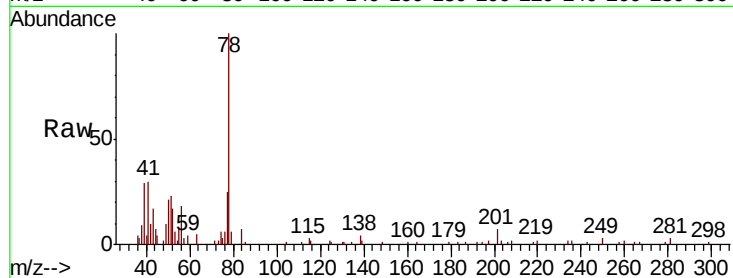
Tot Ion: 78 Resp: 14509

Ion Ratio Lower Upper

78 100

77 24.2 18.9 28.3

50 19.5 17.3 25.9



#39

1,2-Dichloropropane

Concen: 8.099 ppbv

RT: 7.15 min Scan# 1356

Delta R.T. -0.44 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

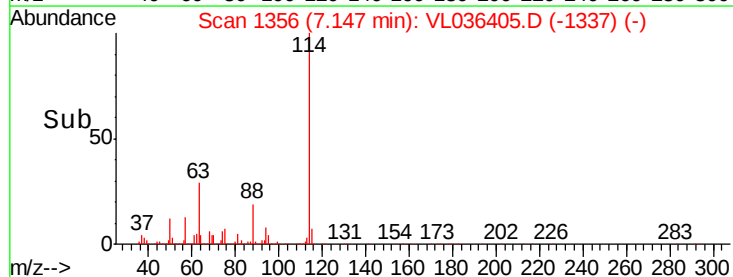
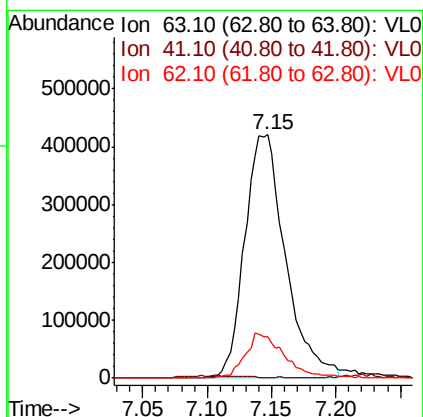
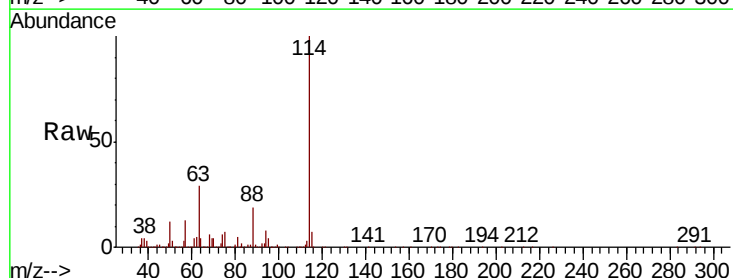
Tgt Ion: 63 Resp: 926688

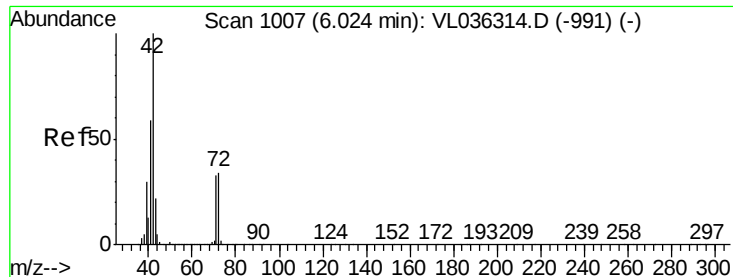
Ion Ratio Lower Upper

63 100

41 0.0 63.8 95.6#

62 16.8 52.3 78.5#

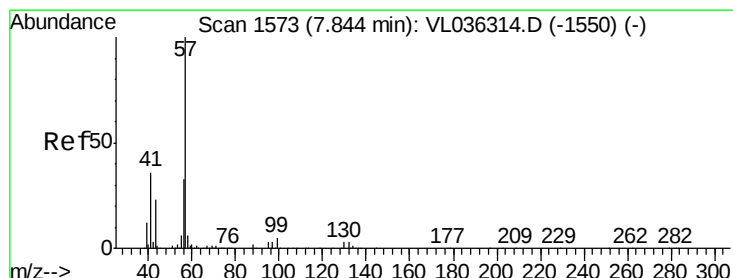
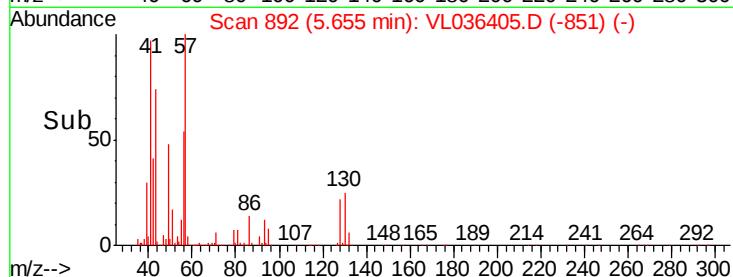
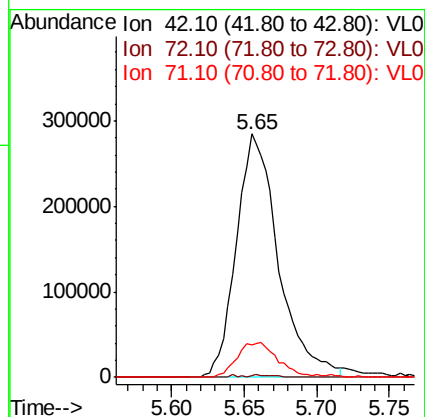
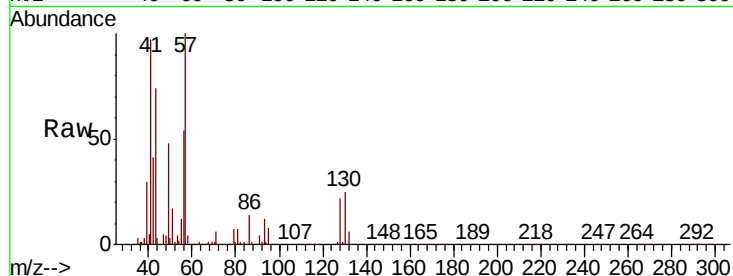




#41
Tetrahydrofuran
Concen: 4.656 ppbv
RT: 5.65 min Scan# 892
Delta R.T. -0.37 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

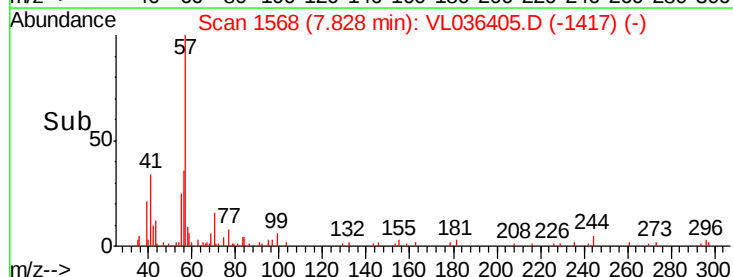
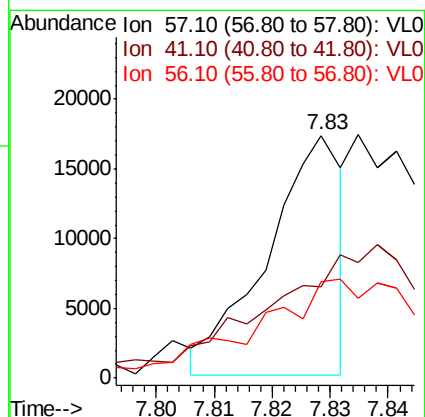
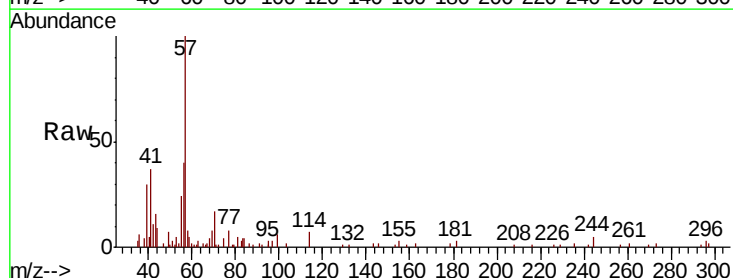
Instrument :
MSVOA_L
ClientSampleId :

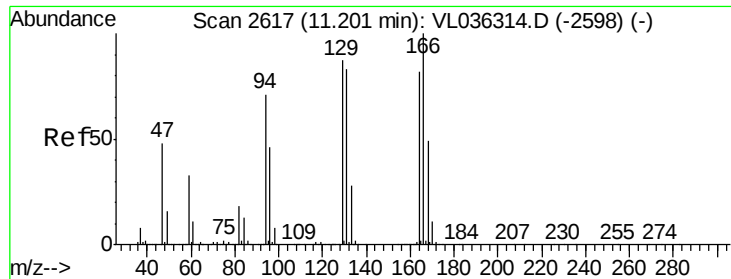
Tot Ion	Ratio	Lower	Upper
42	100		
72	1.0	29.3	43.9#
71	14.7	27.8	41.8#



#44
2,2,4-Trimethylpentane
Concen: 0.030 ppbv
RT: 7.83 min Scan# 1568
Delta R.T. -0.02 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Tgt Ion	Ratio	Lower	Upper
57	100		
41	0.0	28.8	43.2#
56	0.0	25.8	38.6#





#52

Tetrachloroethene

Concen: 0.036 ppbv

RT: 11.18 min Scan# 2609

Delta R.T. -0.03 min

Lab File: VL036405.D

Acq: 26 Feb 2021 16:53

Instrument :

MSVOA_L

ClientSampled :

Tot Ion:164 Resp: 3704

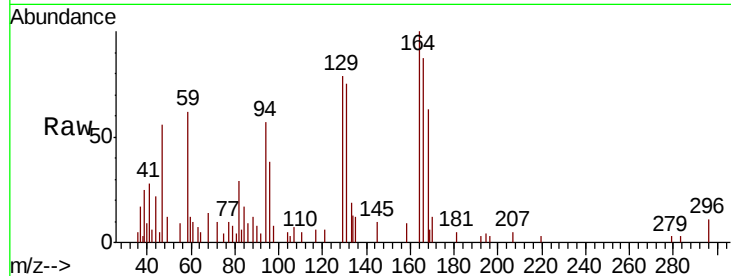
Ion Ratio Lower Upper

164 100

166 48.6 97.8 146.8#

129 39.7 84.9 127.3#

131 52.0 81.4 122.2#



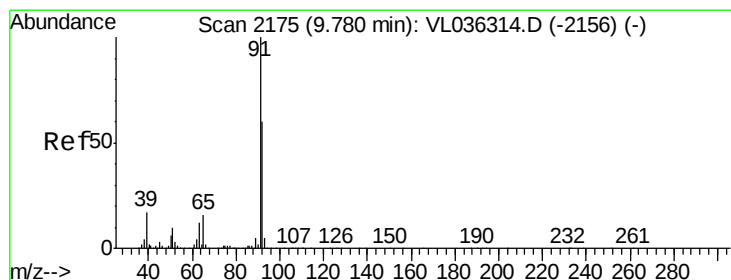
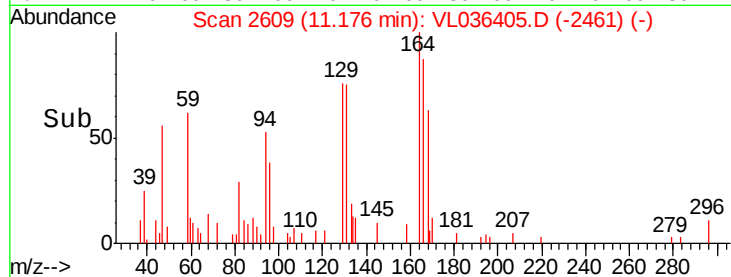
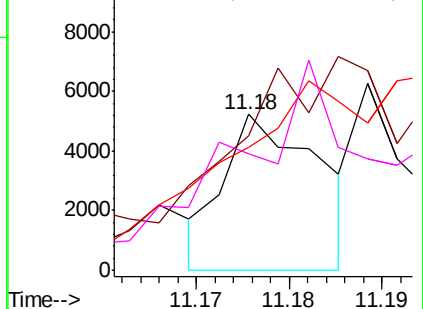
Abundance

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: 0.512 ppbv

RT: 9.77 min Scan# 2172

Delta R.T. -0.01 min

Lab File: VL036405.D

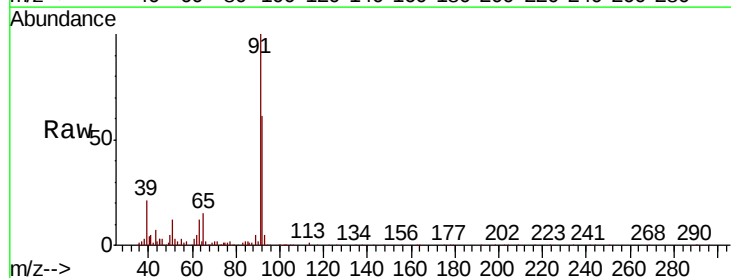
Acq: 26 Feb 2021 16:53

Tgt Ion: 91 Resp: 156336

Ion Ratio Lower Upper

91 100

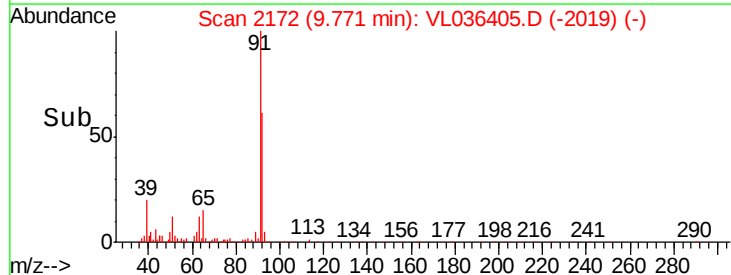
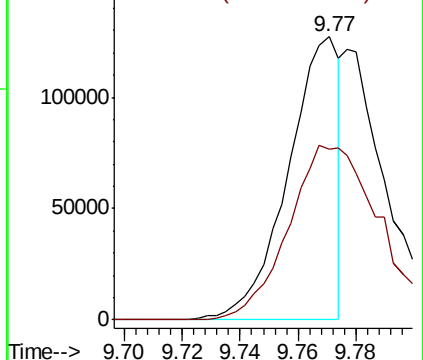
92 114.7 48.6 72.8#

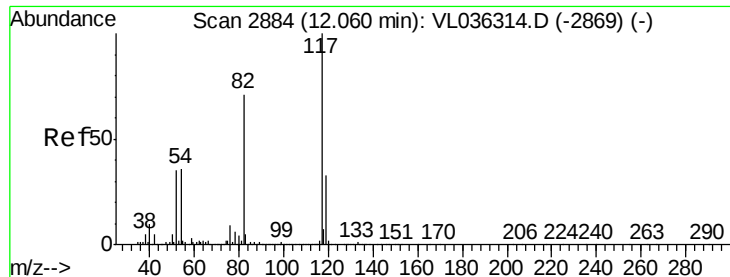


Abundance

Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

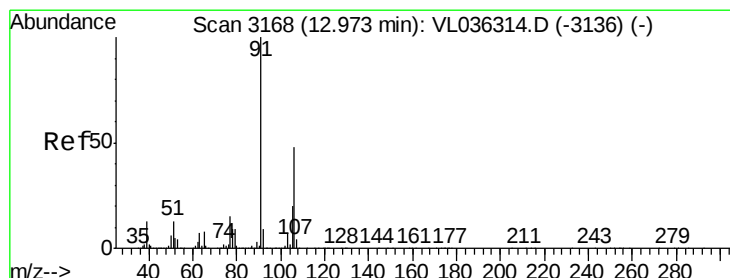
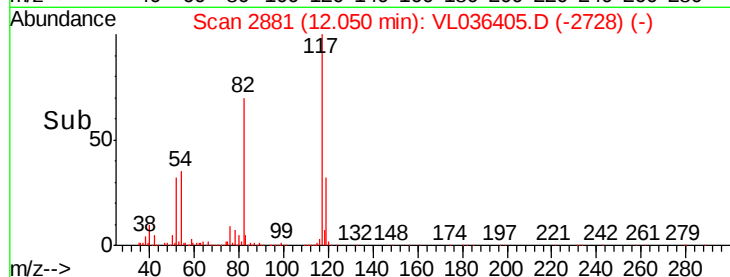
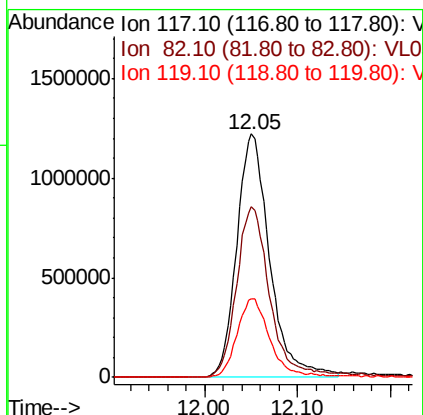
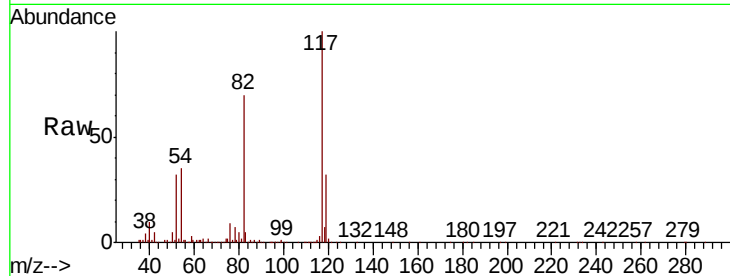




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.05 min Scan# 2881
Delta R.T. -0.01 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

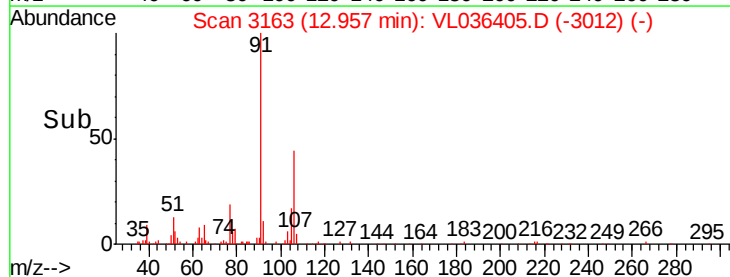
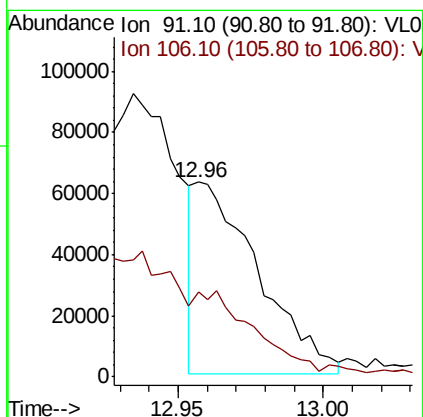
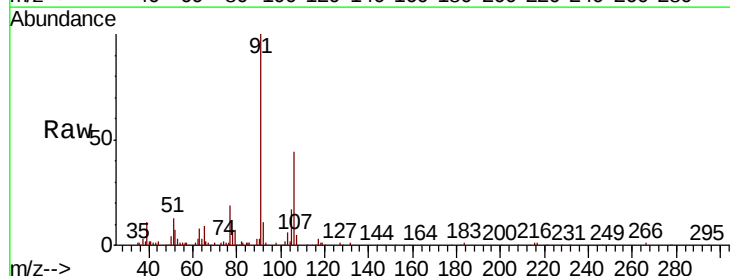
Instrument :
MSVOA_L
ClientSampleId :

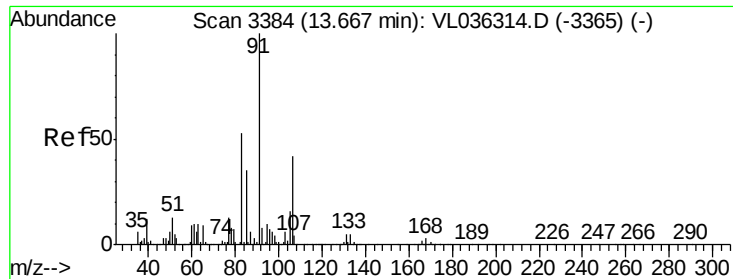
Tot Ion:117 Resp: 3017395
Ion Ratio Lower Upper
117 100
82 72.2 59.1 88.7
119 32.5 46.3 69.5#



#59
m/p-Xylene
Concen: 0.262 ppbv
RT: 12.96 min Scan# 3163
Delta R.T. -0.02 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Tgt Ion: 91 Resp: 95071
Ion Ratio Lower Upper
91 100
106 0.0 34.2 51.2#

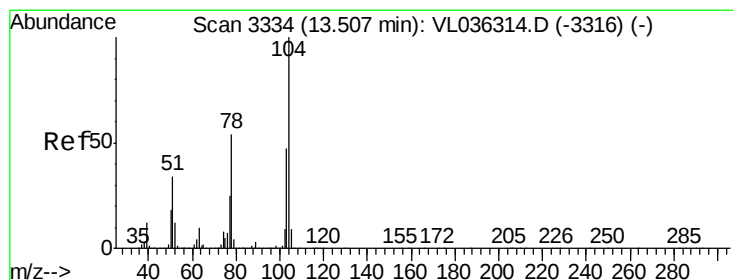
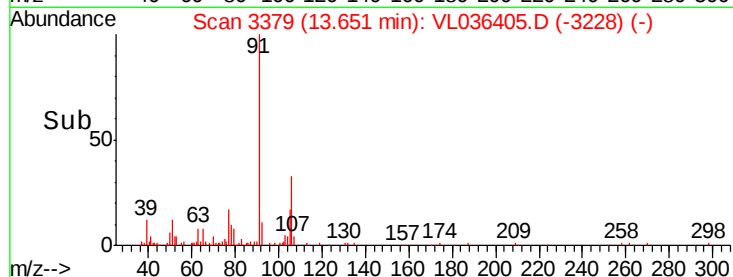
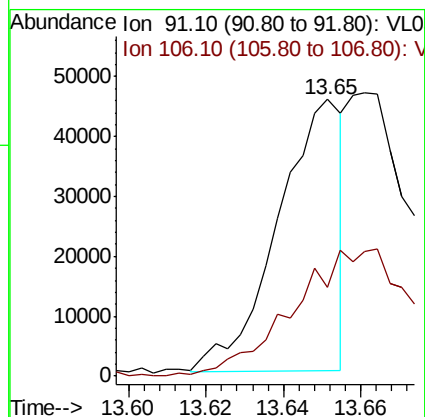
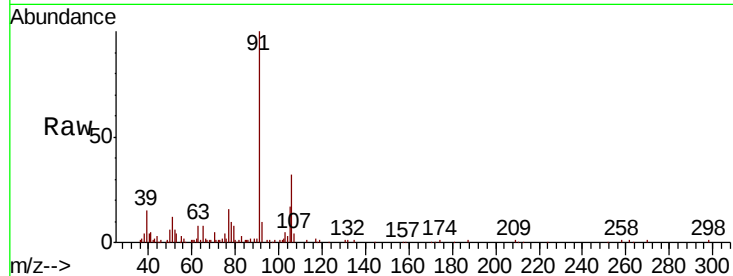




#60
o-Xylene
Concen: 0.151 ppbv
RT: 13.65 min Scan# 3379
Delta R.T. -0.02 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

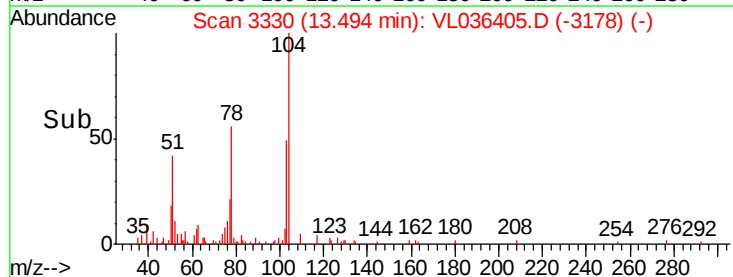
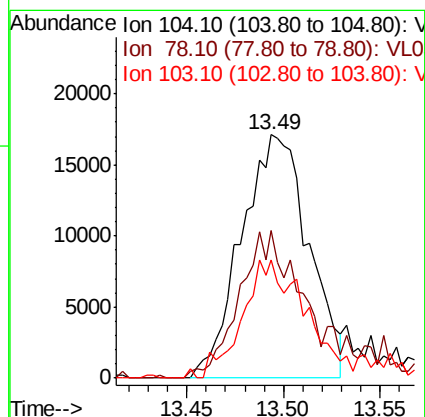
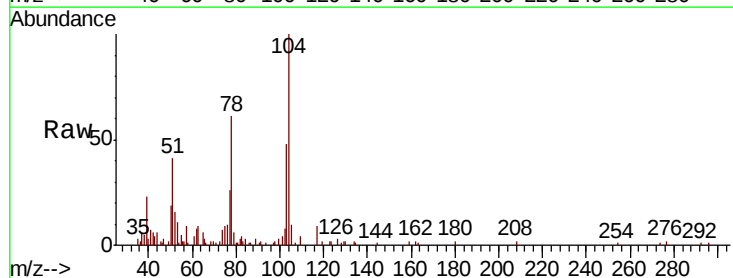
Instrument :
MSVOA_L
ClientSampled :

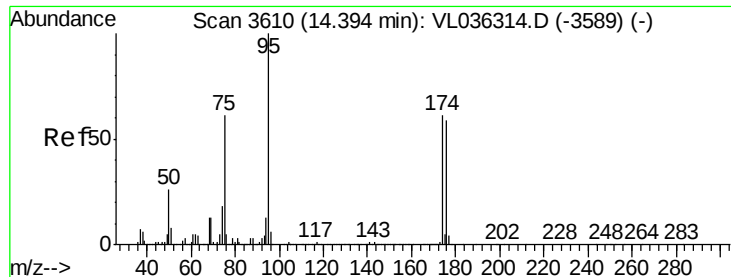
Tot Ion: 91 Resp: 52462
Ion Ratio Lower Upper
91 100
106 0.0 22.0 66.0#



#61
Styrene
Concen: 0.192 ppbv
RT: 13.49 min Scan# 3330
Delta R.T. -0.01 min
Lab File: VL036405.D
Acq: 26 Feb 2021 16:53

Tgt Ion:104 Resp: 41361
Ion Ratio Lower Upper
104 100
78 64.8 46.2 69.2
103 47.4 38.3 57.5

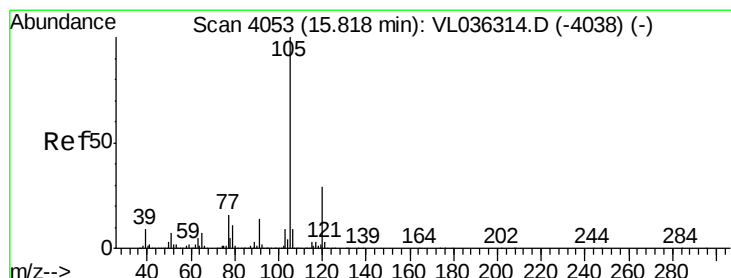
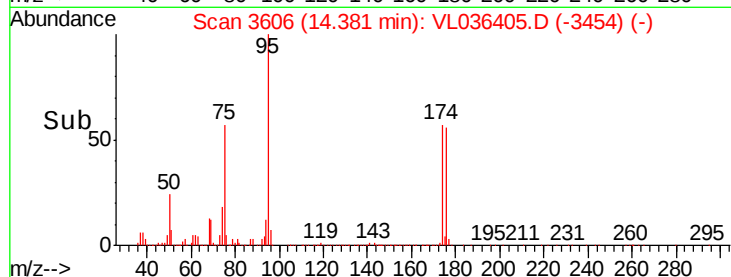
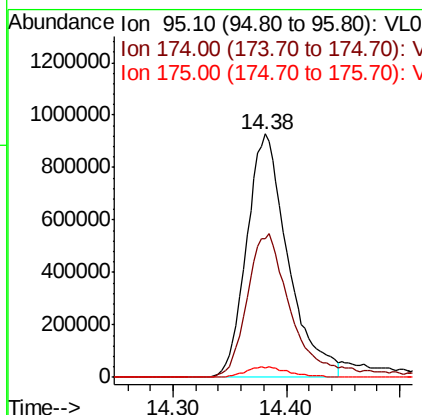
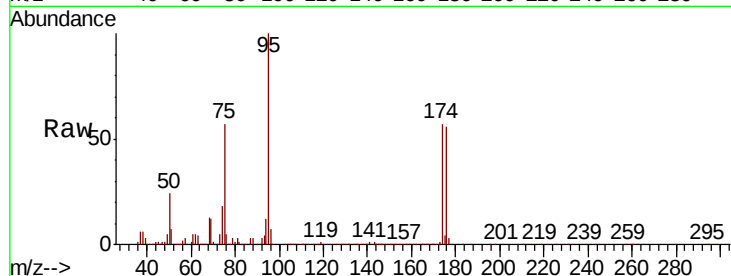




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.493 ppbv
 RT: 14.38 min Scan# 3606
 Delta R.T. -0.01 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

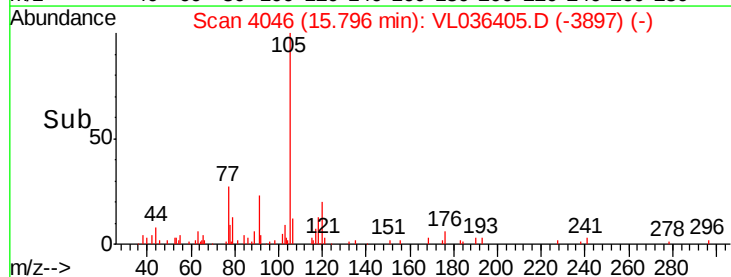
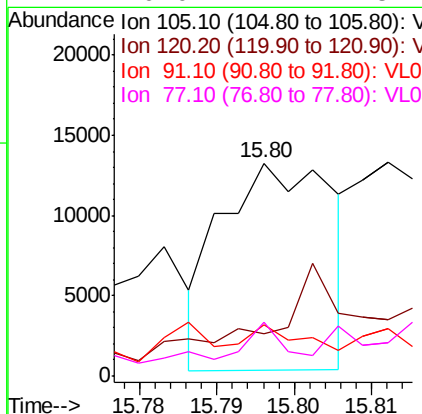
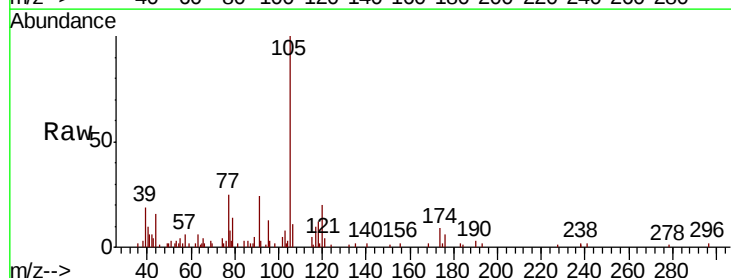
Instrument :
 MSVOA_L
 ClientSampleID :

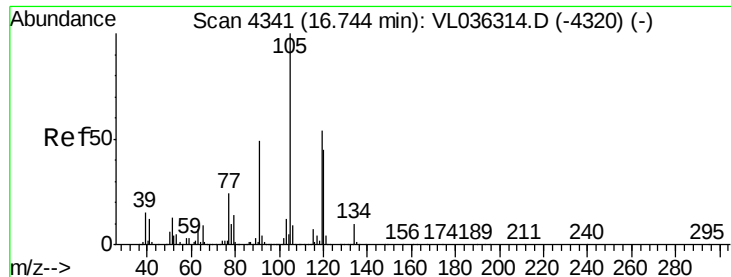
Tot Ion: 95 Resp: 2356768
 Ion Ratio Lower Upper
 95 100
 174 66.3 49.8 74.6
 175 5.0 3.7 5.5



#72
 4-Ethyltoluene
 Concen: 0.033 ppbv
 RT: 15.80 min Scan# 4046
 Delta R.T. -0.02 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

Tgt Ion: 105 Resp: 12923
 Ion Ratio Lower Upper
 105 100
 120 99.6 23.2 34.8#
 91 0.0 11.0 16.4#
 77 0.0 12.2 18.4#





#74
 1,2,4-Trimethylbenzene
 Concen: 0.111 ppbv
 RT: 16.73 min Scan# 4336
 Delta R.T. -0.02 min
 Lab File: VL036405.D
 Acq: 26 Feb 2021 16:53

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:105	Resp:	42317
Ion Ratio	Lower	Upper
105	100	
120	38.9	35.8 53.6
91	9.2	39.8 59.6#
77	14.2	19.1 28.7#

