

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL021021\
 Data File : VL036334.D
 Acq On : 11 Feb 2021 1:54
 Operator : SY/AP
 Sample : M1343-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Feb 11 06:13:16 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

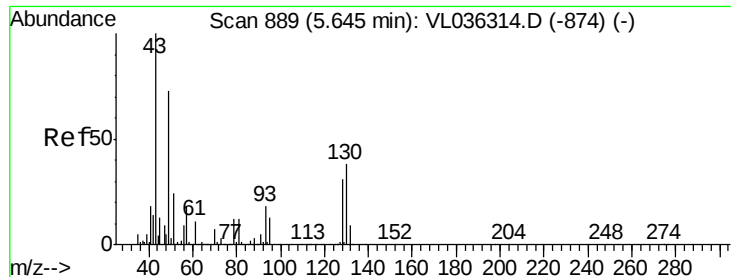
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1657103	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	3543187	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3161738	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2613398	10.05	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.03	85	69464	0.281	ppbv	91
3) Chlorodifluoromethane	2.97	51	1522045	7.392	ppbv	92
4) Chloromethane	3.12	50	57964	0.583	ppbv	89
9) Propene	3.00	41	151346	1.972	ppbv	85
10) Heptane	8.10	43	12599	0.056	ppbv #	45
11) Trichlorofluoromethane	3.93	101	51059	0.211	ppbv #	79
12) 1,1,2-Trichlorotrifluoroet	4.46	101	9006	0.060	ppbv	92
13) Ethanol	3.62	45	18317945	1270.417	ppbv	95
15) Acetone	3.83	43	1646868	8.130	ppbv	98
16) 1,3-Butadiene	3.31	39	10808	0.112	ppbv #	1
17) tert-Butyl alcohol	4.30	59	8191	0.052	ppbv #	71
19) Isopropyl Alcohol	4.00	45	12150212	108.268	ppbv #	97
20) Methylene Chloride	4.33	84	242816	3.716	ppbv	92
21) Allyl Chloride	4.11	41	2973712	26.368	ppbv #	51
23) Vinyl Acetate	5.05	43	108443	0.455	ppbv #	65
25) Ethyl Acetate	5.66	43	545807	1.396	ppbv	98
26) Hexane	5.67	57	256682	1.598	ppbv	87
27) Carbon Disulfide	4.53	76	9098	0.062	ppbv #	1
29) Chloroform	5.73	83	204339	0.789	ppbv	95
31) cis-1,2-Dichloroethene	5.66	61	43663	0.275	ppbv #	34
34) 2-Butanone	5.23	43	117053	0.497	ppbv	92
35) Carbon Tetrachloride	6.99	117	7186	0.030	ppbv	91
36) Benzene	6.87	78	653729	2.172	ppbv	98
39) 1,2-Dichloropropane	7.16	63	1029902	8.424	ppbv #	23
41) Tetrahydrofuran	6.02	42	3968	0.030	ppbv #	39
53) Toluene	9.79	91	322722	0.990	ppbv	99
58) Ethyl Benzene	12.69	91	18885	0.044	ppbv	92
59) m/p-Xylene	12.97	91	17563	0.046	ppbv #	33
60) o-Xylene	13.68	91	12221	0.034	ppbv #	32
69) p-Isopropyltoluene	17.64	119	17271	0.033	ppbv #	56

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. 0.00 min

Lab File: VL036334.D

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Instrument :

MSVOA_L

ClientSampleId :

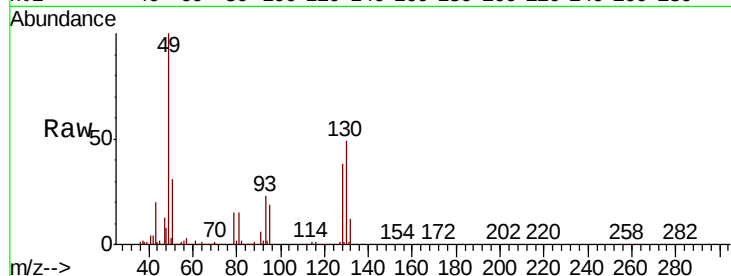
Tot Ion: 49 Resp: 1657103

Ion Ratio Lower Upper

49 100

128 41.6 20.8 62.5

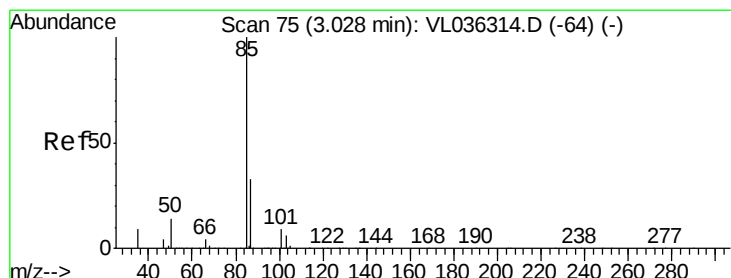
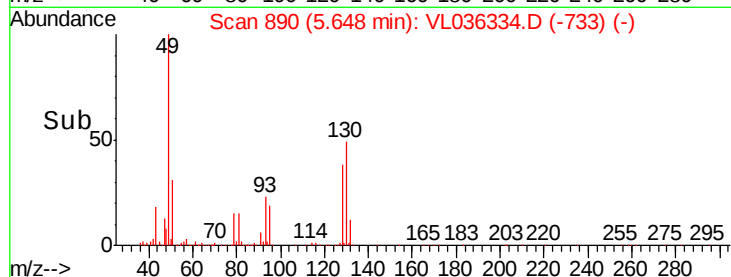
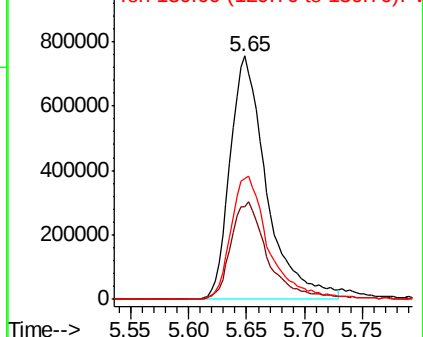
130 53.0 26.7 80.1



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



#2

Dichlorodifluoromethane

Concen: 0.281 ppbv

RT: 3.03 min Scan# 77

Delta R.T. 0.01 min

Lab File: VL036334.D

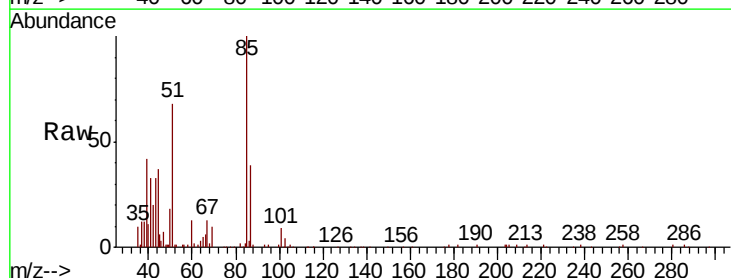
Acq: 11 Feb 2021 1:54

Tgt Ion: 85 Resp: 69464

Ion Ratio Lower Upper

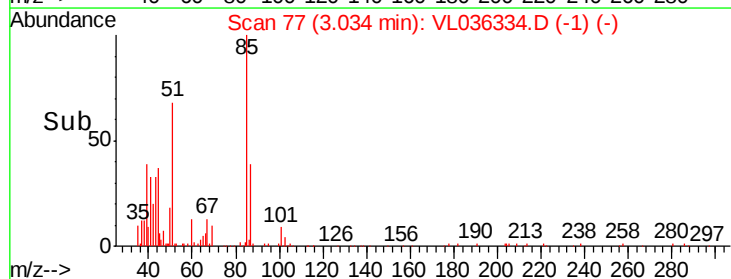
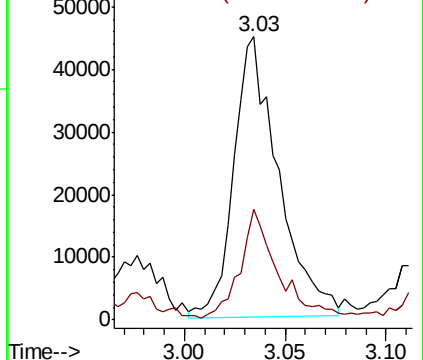
85 100

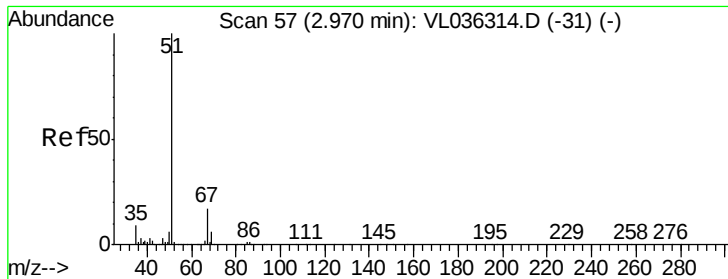
87 38.0 26.5 39.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 7.392 ppbv

RT: 2.97 min Scan# 58

Delta R.T. 0.00 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Instrument :

MSVOA_L

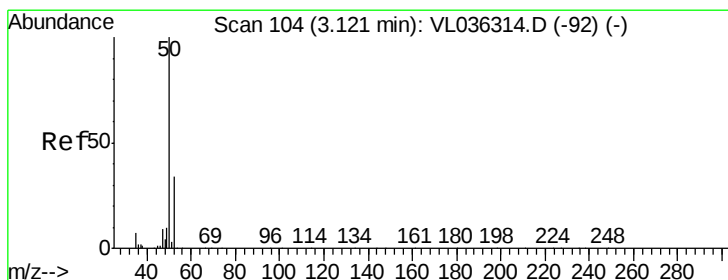
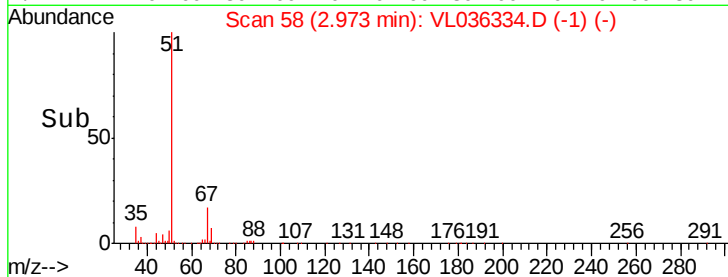
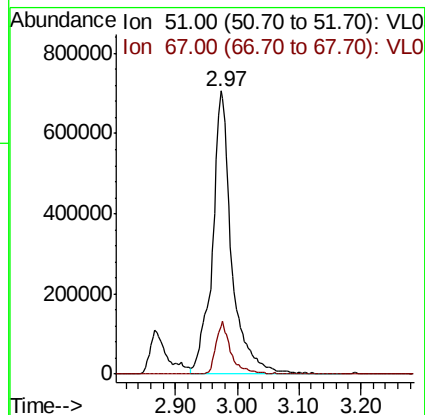
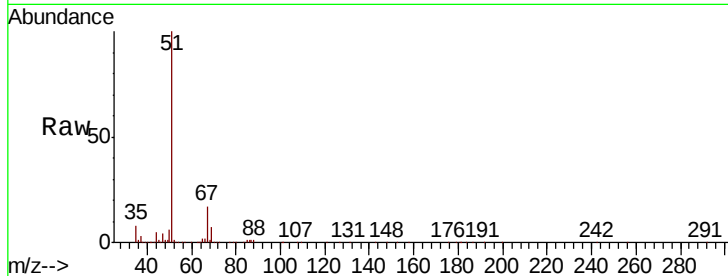
ClientSampleId :

Tot Ion: 51 Resp: 1522045

Ion Ratio Lower Upper

51 100

67 14.7 14.7 22.1



#4

Chloromethane

Concen: 0.583 ppbv

RT: 3.12 min Scan# 105

Delta R.T. 0.00 min

Lab File: VL036334.D

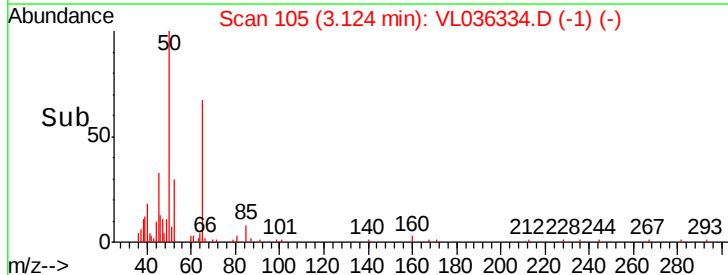
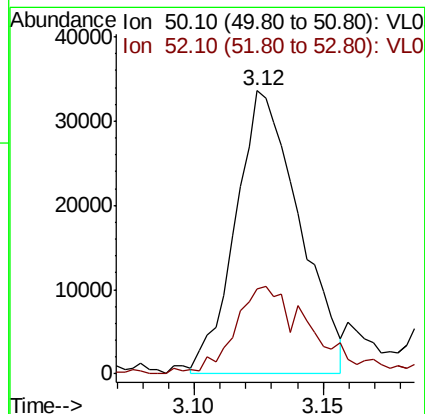
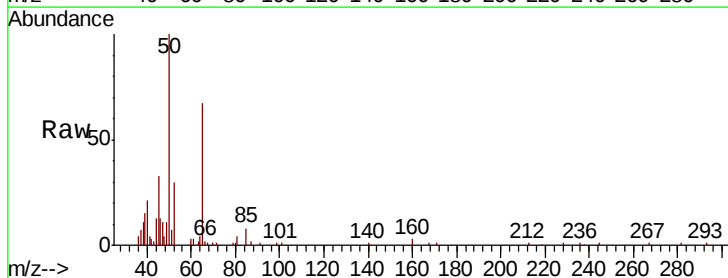
Acq: 11 Feb 2021 1:54

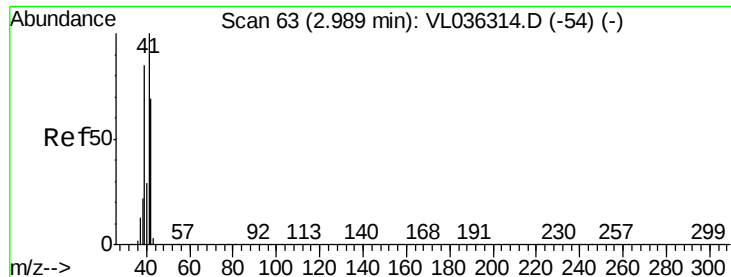
Tgt Ion: 50 Resp: 57964

Ion Ratio Lower Upper

50 100

52 27.6 27.0 40.4





#9

Propene

Concen: 1.972 ppbv

RT: 3.00 min Scan# 67

Delta R.T. 0.01 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Instrument :

MSVOA_L

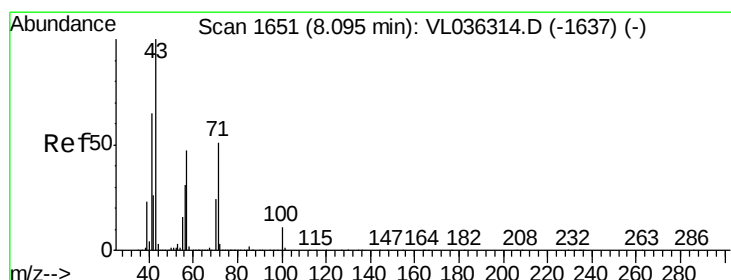
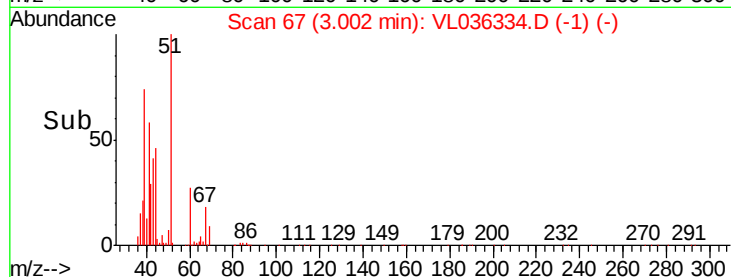
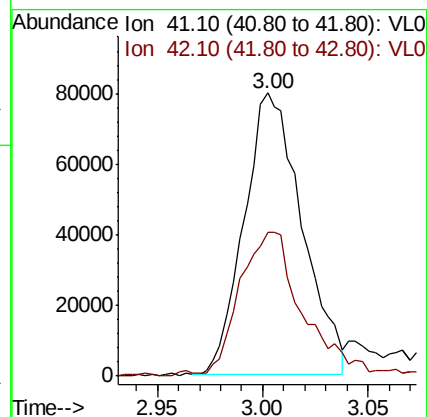
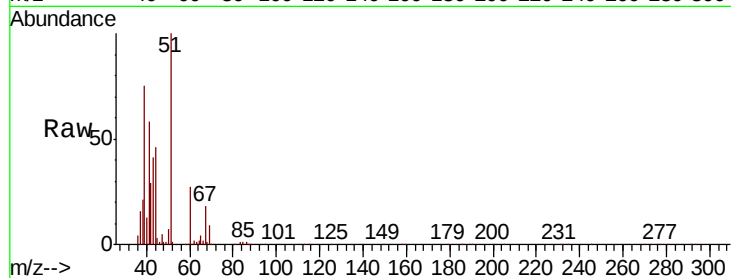
ClientSampleId :

Tot Ion: 41 Resp: 151346

Ion Ratio Lower Upper

41 100

42 57.5 56.2 84.2



#10

Heptane

Concen: 0.056 ppbv

RT: 8.10 min Scan# 1652

Delta R.T. 0.00 min

Lab File: VL036334.D

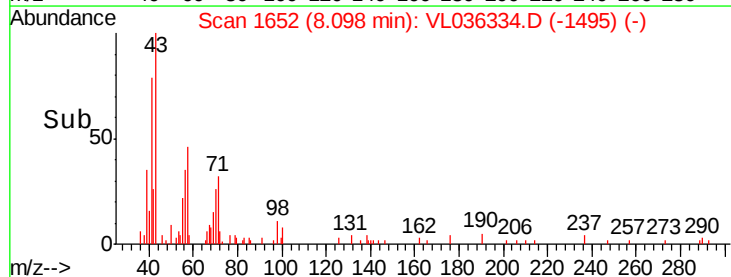
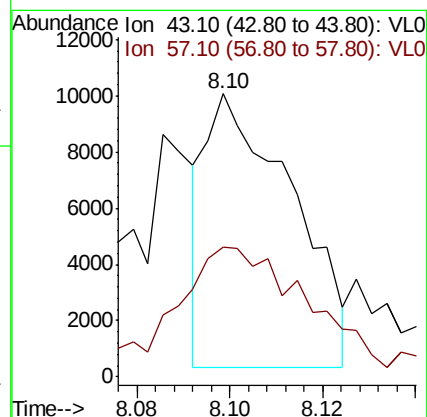
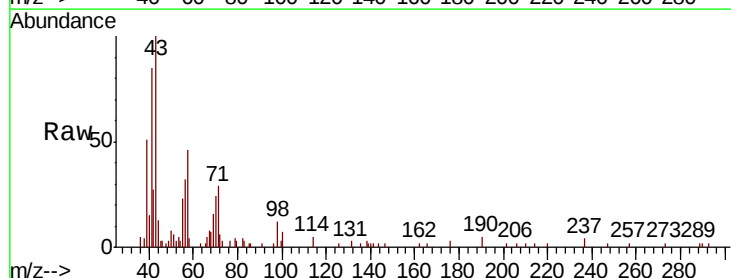
Acq: 11 Feb 2021 1:54

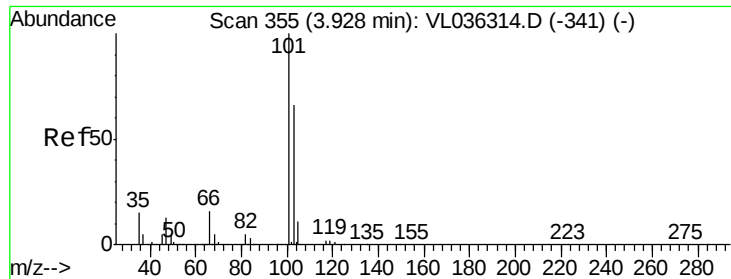
Tgt Ion: 43 Resp: 12599

Ion Ratio Lower Upper

43 100

57 86.9 39.4 59.2#

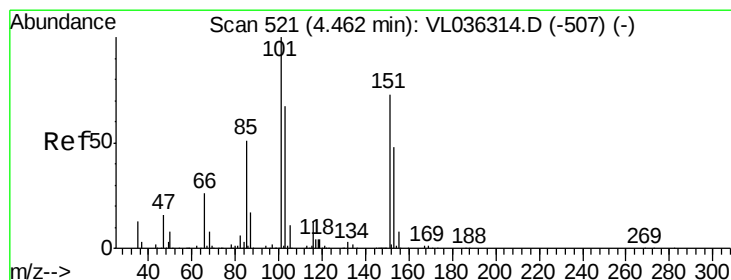
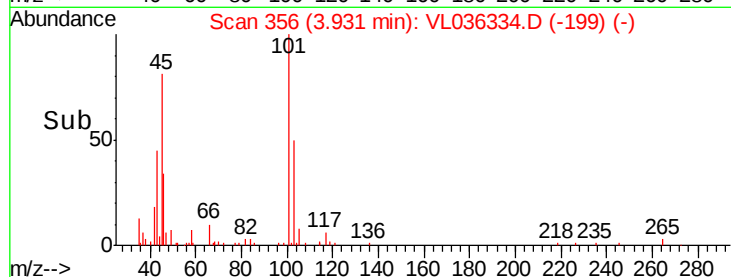
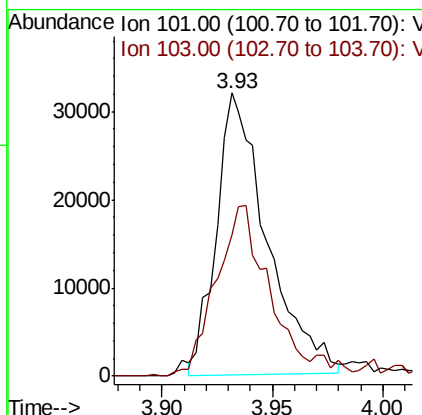
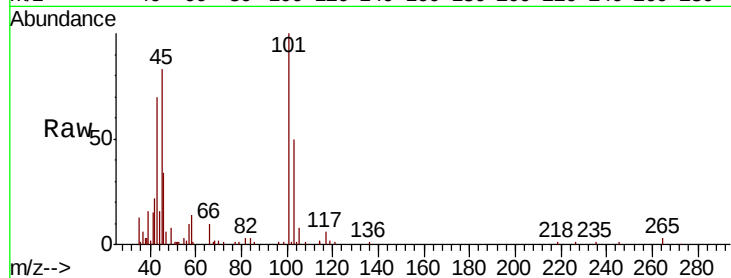




#11
 Trichlorofluoromethane
 Concen: 0.211 ppbv
 RT: 3.93 min Scan# 356
 Delta R.T. 0.00 min
 Lab File: VL036334.D
 Acq: 11 Feb 2021 1:54

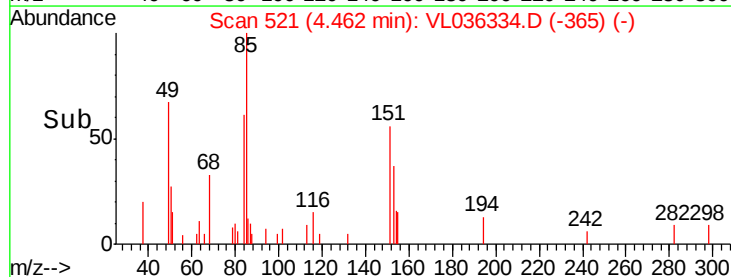
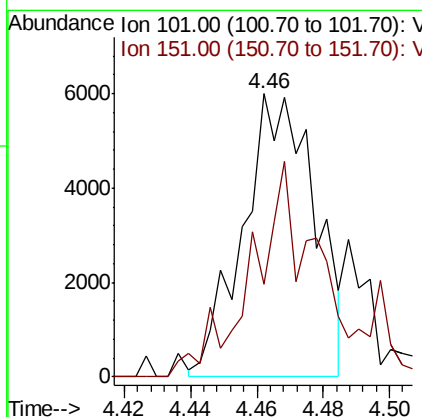
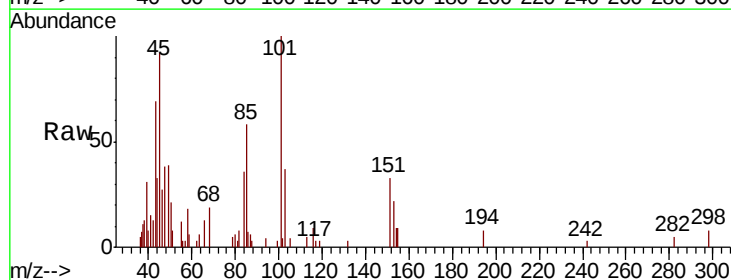
Instrument :
 MSVOA_L
 ClientSampleId :

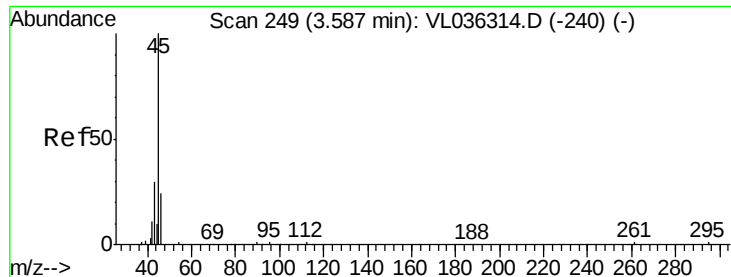
Tot Ion:101 Resp: 51059
 Ion Ratio Lower Upper
 101 100
 103 49.6 52.9 79.3#



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.060 ppbv
 RT: 4.46 min Scan# 521
 Delta R.T. 0.00 min
 Lab File: VL036334.D
 Acq: 11 Feb 2021 1:54

Tgt Ion:101 Resp: 9006
 Ion Ratio Lower Upper
 101 100
 151 79.6 58.2 87.4

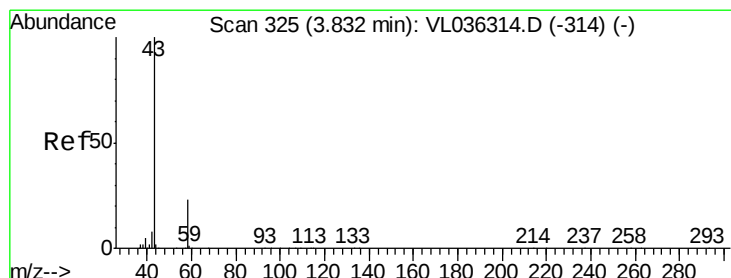
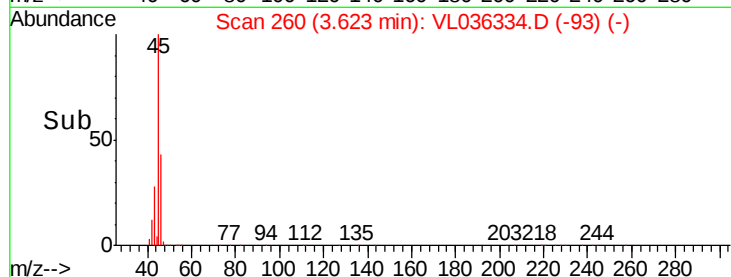
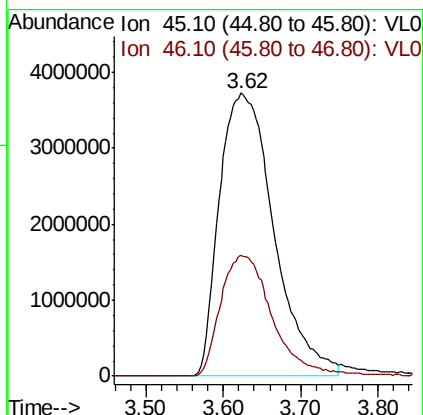
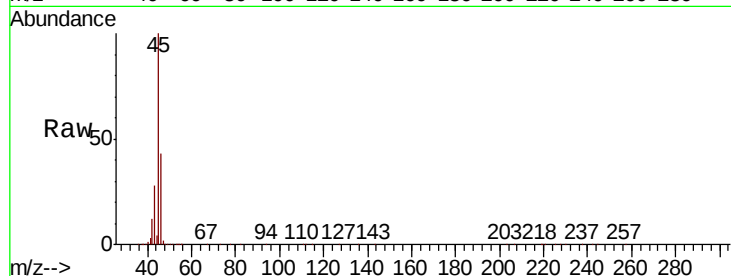




#13
Ethanol
Concen: 1270.417 ppbv
RT: 3.62 min Scan# 260
Delta R.T. 0.04 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

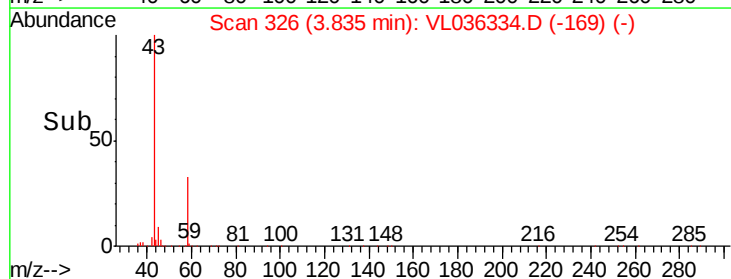
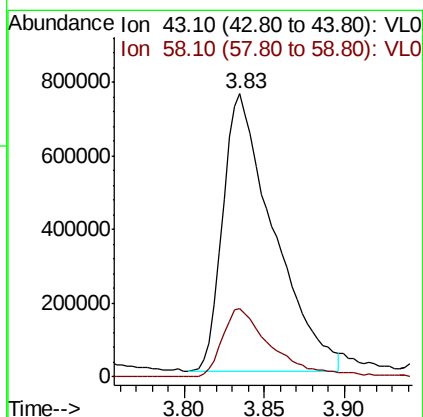
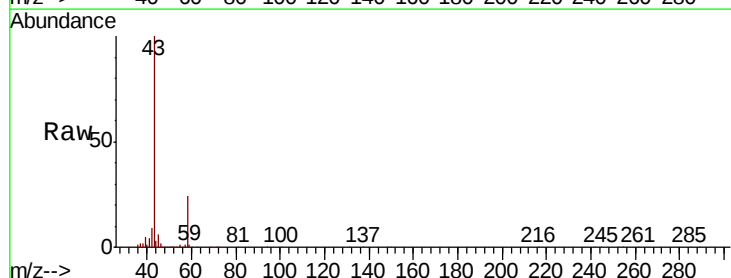
Instrument :
MSVOA_L
ClientSampleId :

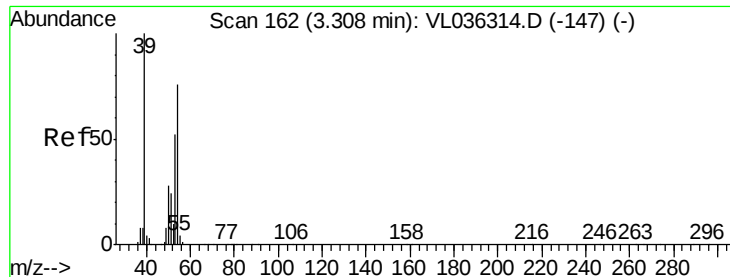
Tot Ion: 45 Resp:18317945
Ion Ratio Lower Upper
45 100
46 40.8 17.7 70.7



#15
Acetone
Concen: 8.130 ppbv
RT: 3.83 min Scan# 326
Delta R.T. 0.00 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion: 43 Resp: 1646868
Ion Ratio Lower Upper
43 100
58 24.3 20.3 30.5

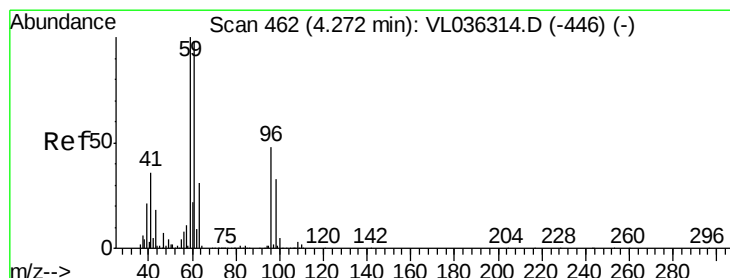
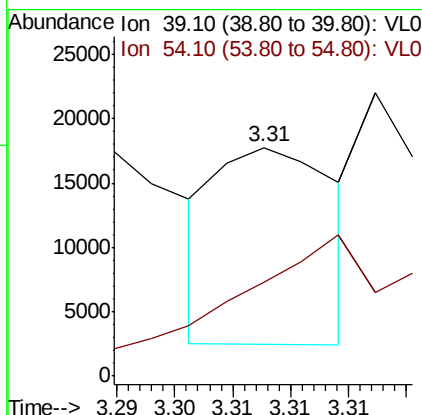
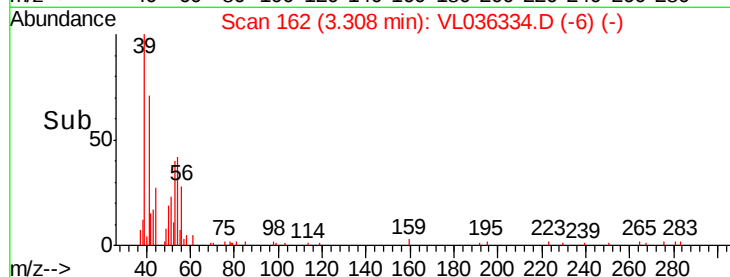
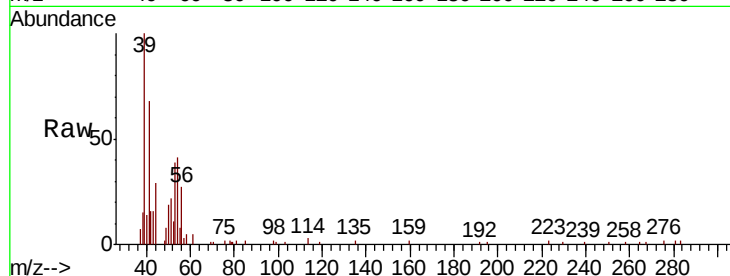




#16
1,3-Butadiene
Concen: 0.112 ppbv
RT: 3.31 min Scan# 162
Delta R.T. 0.00 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

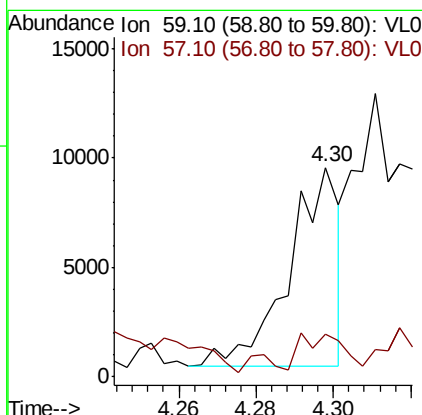
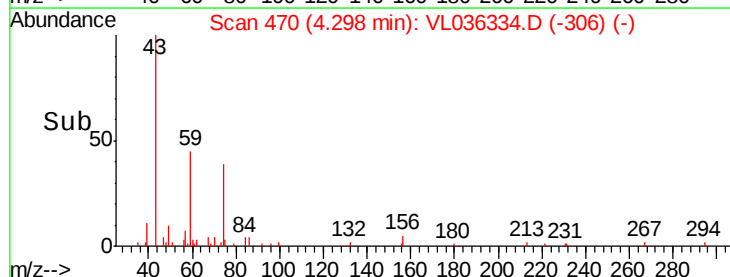
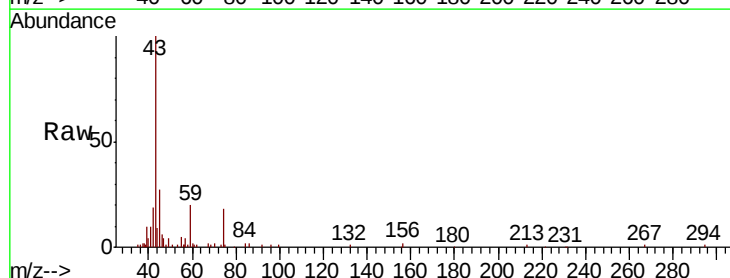
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MSVOA_L
ClientSampleId :

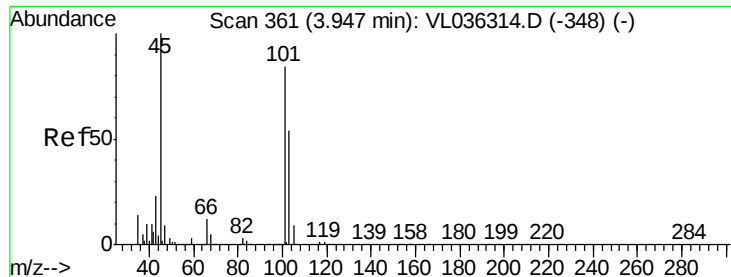
Tot Ion: 39 Resp: 10808
Ion Ratio Lower Upper
39 100
54 199.1 64.4 96.6#



#17
tert-Butyl alcohol
Concen: 0.052 ppbv
RT: 4.30 min Scan# 470
Delta R.T. 0.03 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion: 59 Resp: 8191
Ion Ratio Lower Upper
59 100
57 0.0 9.0 13.4#





#19

Isopropyl Alcohol

Concen: 108.268 ppbv

RT: 4.00 min Scan# 376

Delta R.T. 0.05 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Instrument :

MSVOA_L

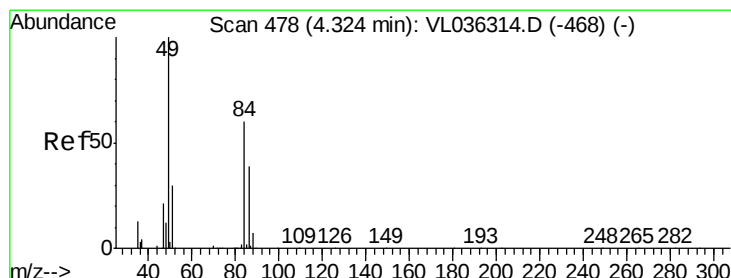
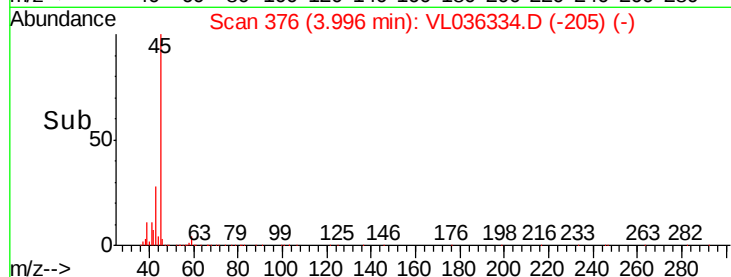
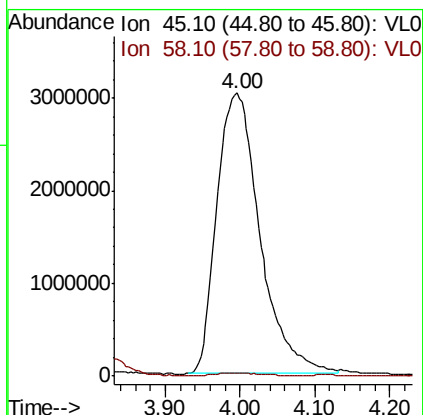
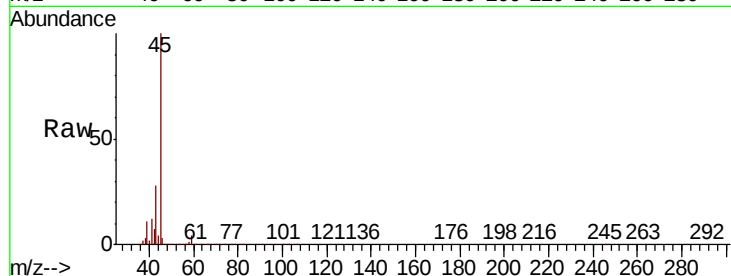
ClientSampleId :

Tot Ion: 45 Resp:12150212

Ion Ratio Lower Upper

45 100

58 1.2 1.9 2.9#



#20

Methylene Chloride

Concen: 3.716 ppbv

RT: 4.33 min Scan# 480

Delta R.T. 0.01 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Tgt Ion: 84 Resp: 242816

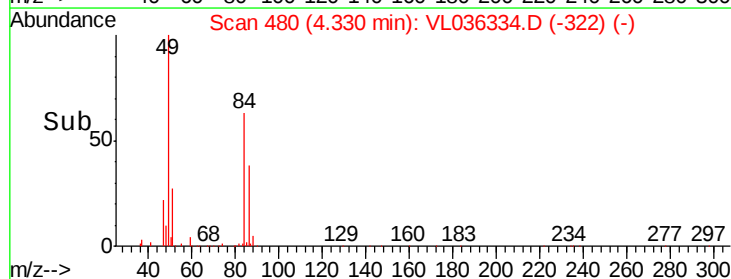
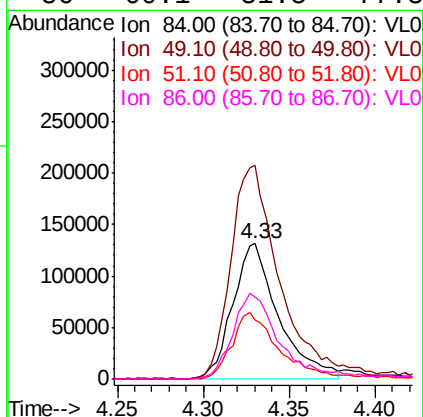
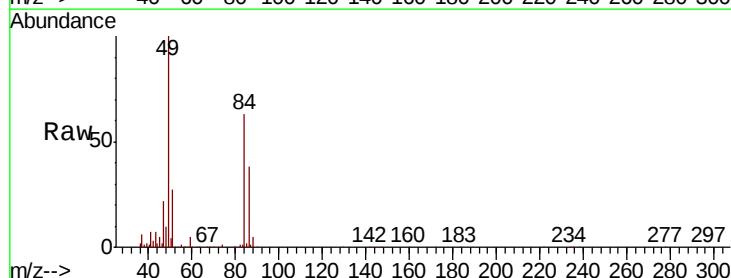
Ion Ratio Lower Upper

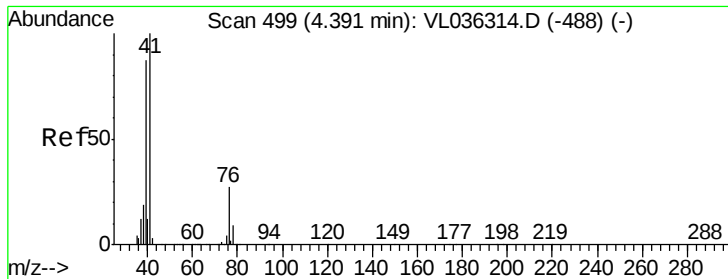
84 100

49 157.4 133.8 200.8

51 42.6 41.4 62.0

86 60.1 51.5 77.3

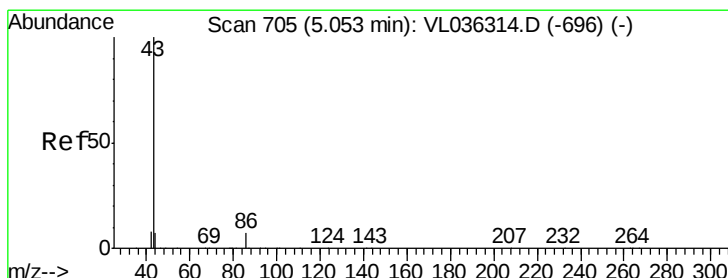
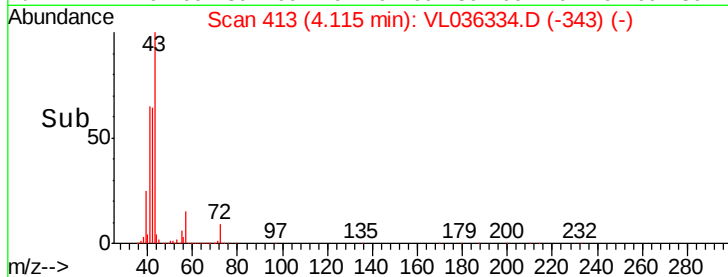
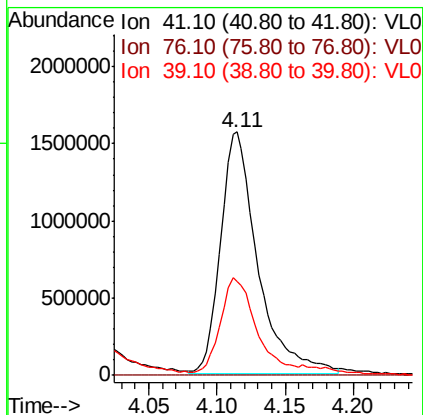
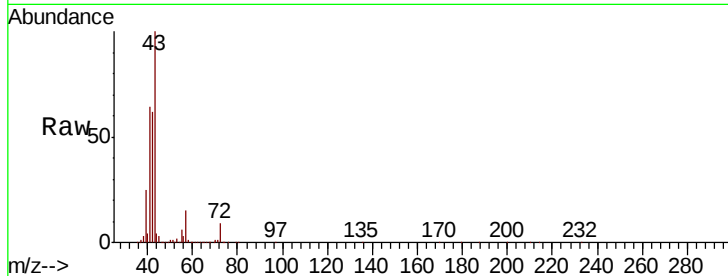




#21
Allvl Chloride
Concen: 26.368 ppbv
RT: 4.11 min Scan# 413
Delta R.T. -0.28 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

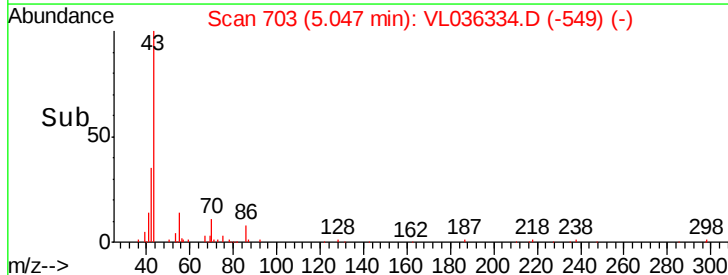
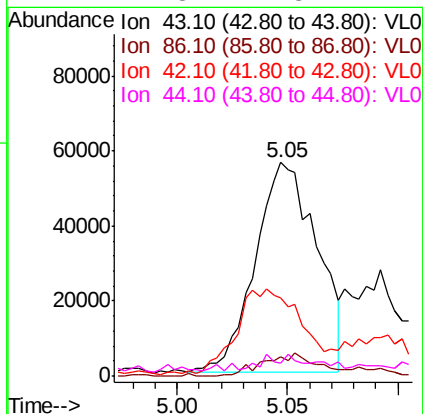
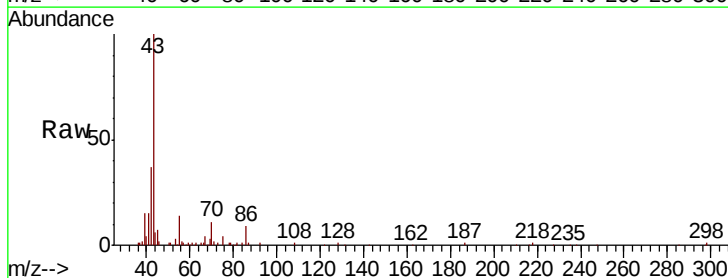
Instrument :
MSVOA_L
ClientSampleId :

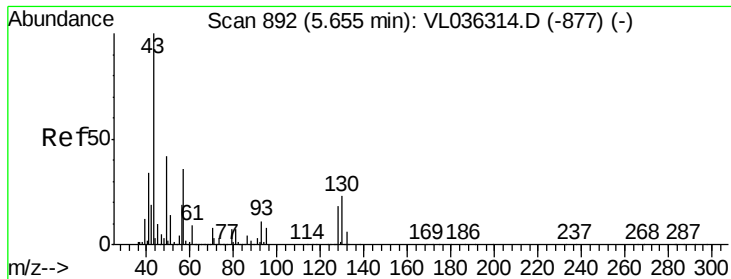
Tot Ion: 41 Resp: 2973712
Ion Ratio Lower Upper
41 100
76 0.0 22.0 33.0#
39 42.9 70.2 105.2#



#23
Vinyl Acetate
Concen: 0.455 ppbv
RT: 5.05 min Scan# 703
Delta R.T. -0.01 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion: 43 Resp: 108443
Ion Ratio Lower Upper
43 100
86 7.9 4.8 7.2#
42 35.1 7.4 11.0#
44 2.8 4.8 7.2#

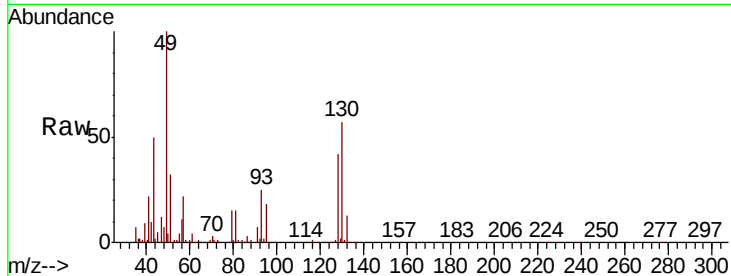




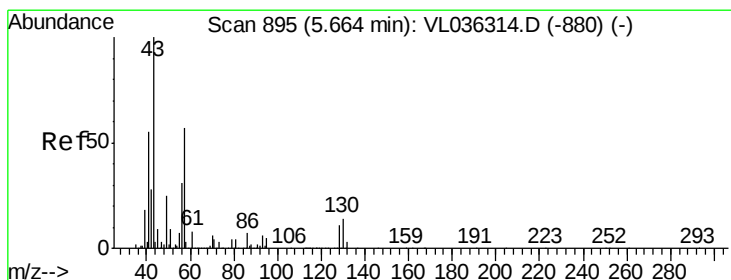
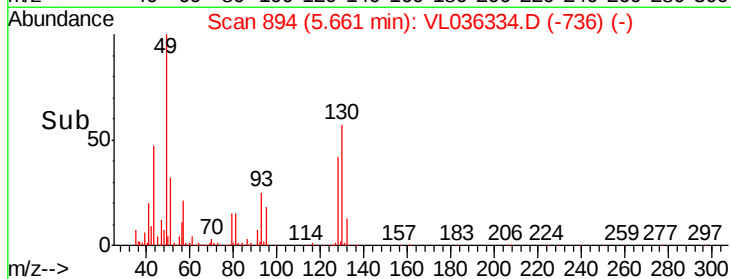
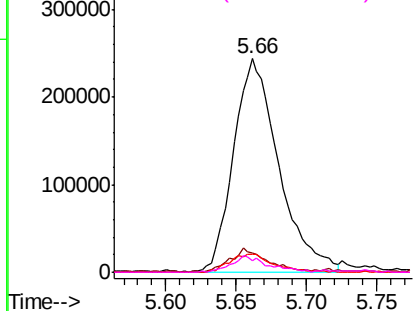
#25
Ethyl Acetate
Concen: 1.396 ppbv
RT: 5.66 min Scan# 894
Delta R.T. 0.01 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	43	Resp:	545807
Ion	Ratio	Lower	Upper
43	100		
45	9.9	8.3	12.5
61	8.3	7.3	10.9
70	7.3	5.4	8.0

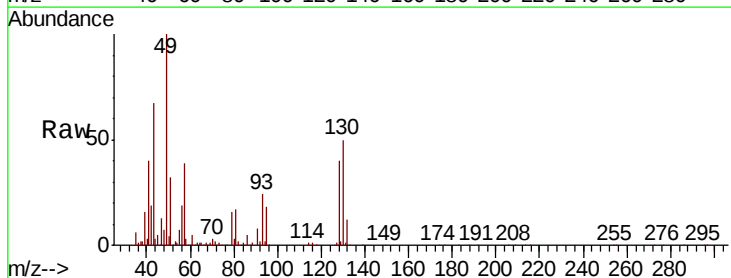


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

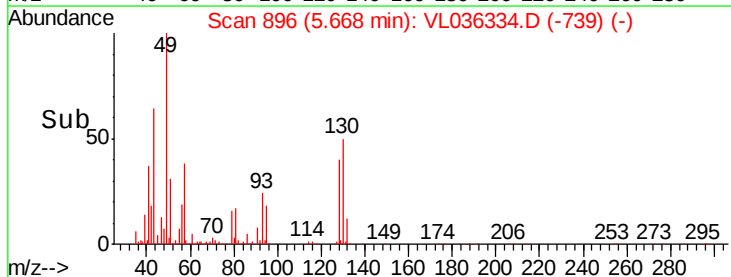
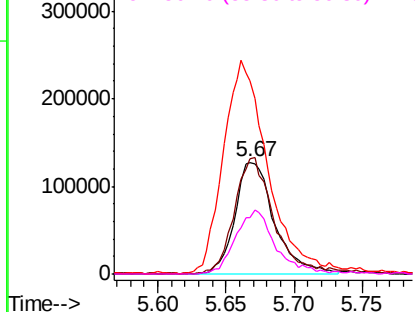


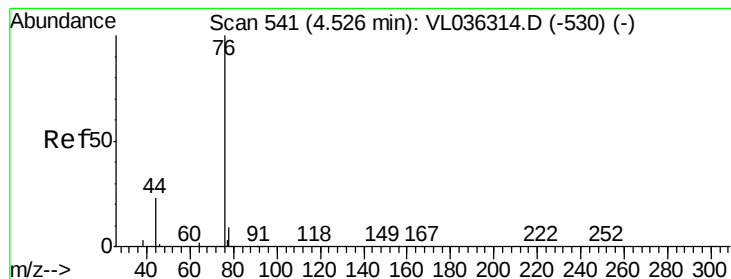
#26
Hexane
Concen: 1.598 ppbv
RT: 5.67 min Scan# 896
Delta R.T. 0.00 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion:	57	Resp:	256682
Ion	Ratio	Lower	Upper
57	100		
41	105.3	81.7	122.5
43	217.0	199.1	298.7
56	59.4	44.0	66.0



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





#27

Carbon Disulfide

Concen: 0.062 ppbv

RT: 4.53 min Scan# 542

Delta R.T. 0.00 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Instrument :

MSVOA_L

ClientSampleId :

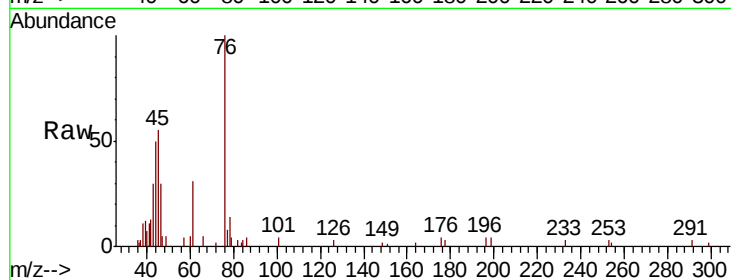
Tot Ion: 76 Resp: 9098

Ion Ratio Lower Upper

76 100

44 106.8 18.4 27.6#

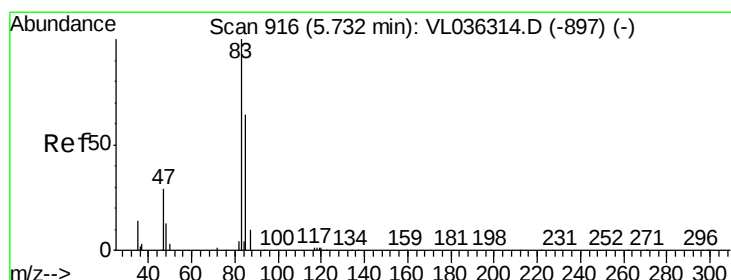
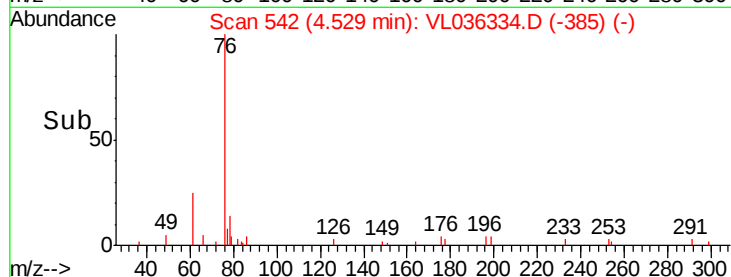
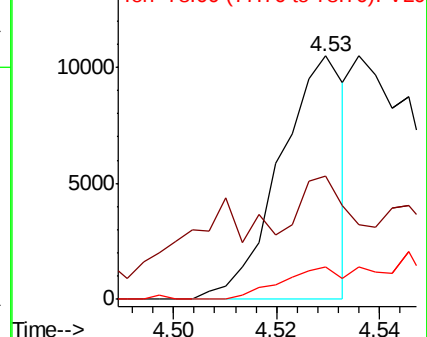
78 0.0 8.0 12.0#



Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



#29

Chloroform

Concen: 0.789 ppbv

RT: 5.73 min Scan# 916

Delta R.T. 0.00 min

Lab File: VL036334.D

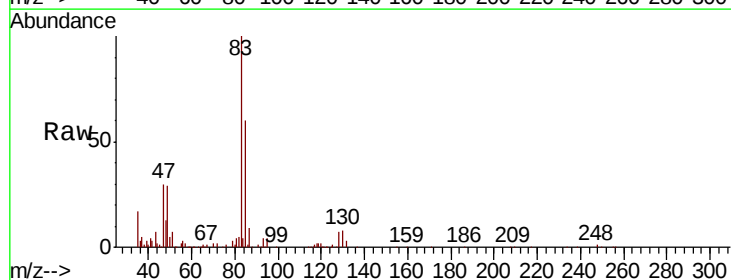
Acq: 11 Feb 2021 1:54

Tgt Ion: 83 Resp: 204339

Ion Ratio Lower Upper

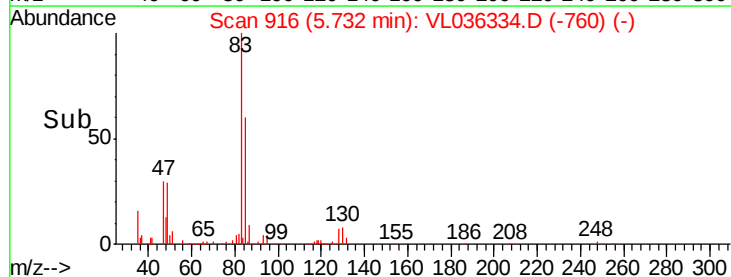
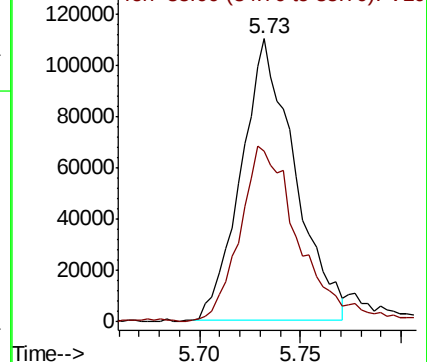
83 100

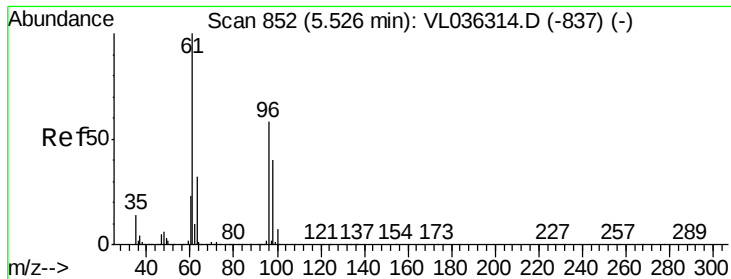
85 60.1 51.4 77.2



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



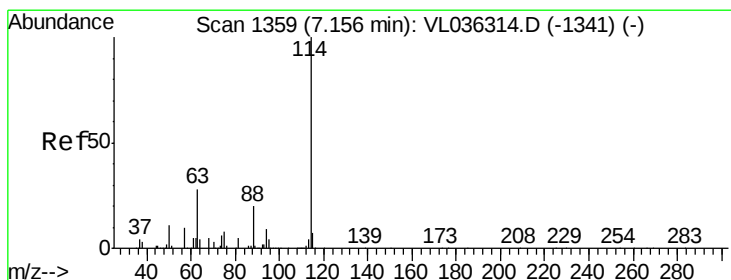
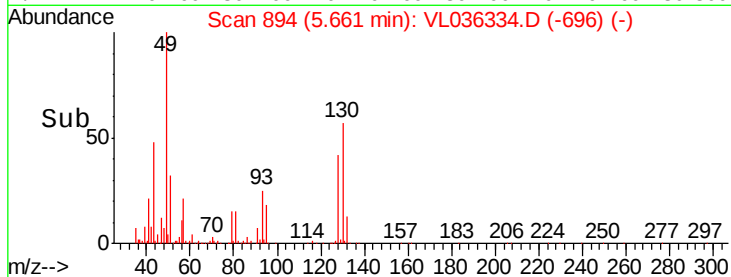
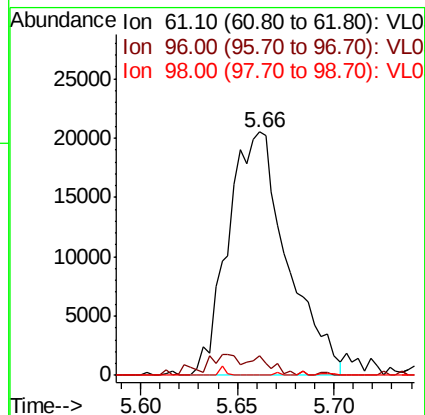
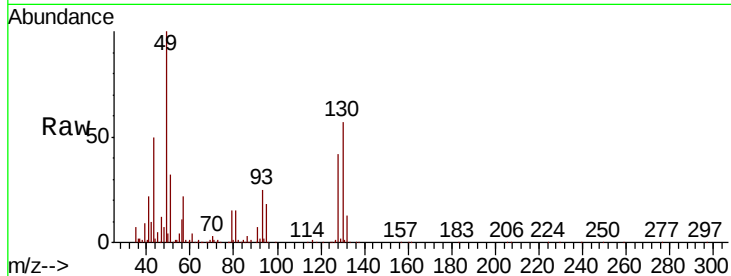


#31

cis-1,2-Dichloroethene
 Concen: 0.275 ppbv
 RT: 5.66 min Scan# 894
 Delta R.T. 0.14 min
 Lab File: VL036334.D
 Acq: 11 Feb 2021 1:54

Instrument :
 MSVOA_L
 ClientSampled :

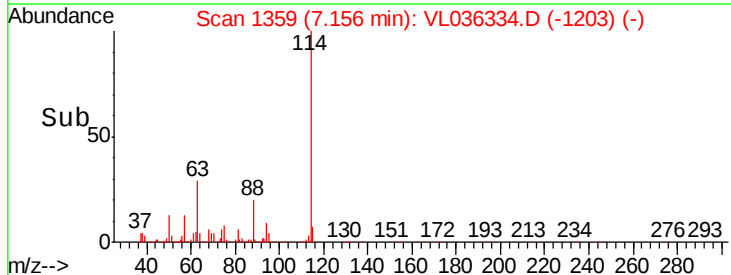
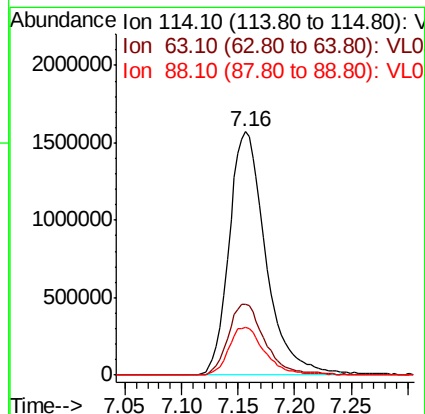
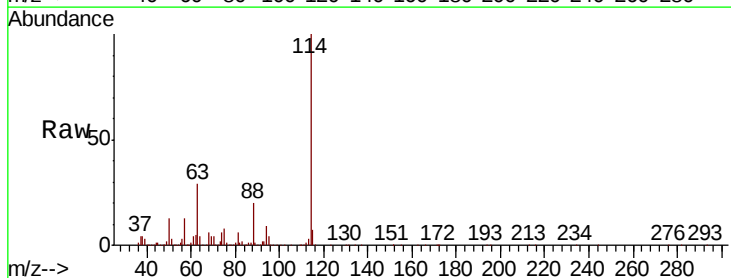
Tot Ion	Ratio	Lower	Upper
61	100		
96	8.2	46.0	69.0#
98	0.0	31.9	47.9#

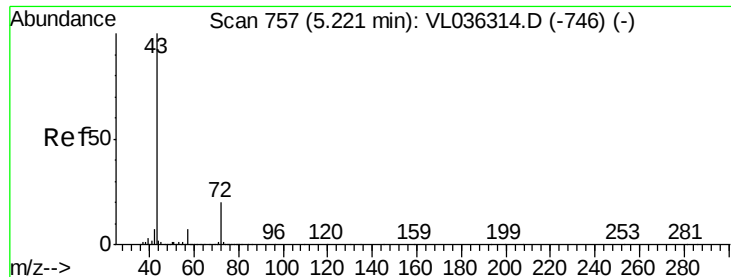


#33

1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1359
 Delta R.T. 0.00 min
 Lab File: VL036334.D
 Acq: 11 Feb 2021 1:54

Tgt Ion	Ratio	Lower	Upper
114	100		
63	29.6	24.1	36.1
88	19.7	16.0	24.0

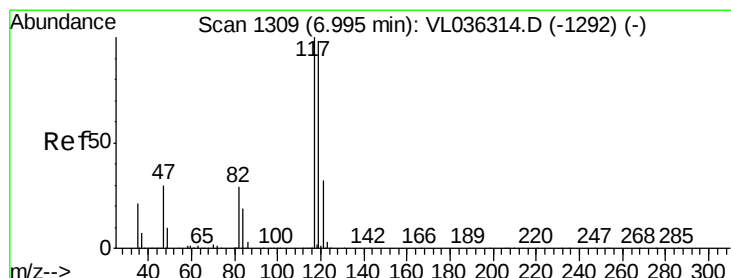
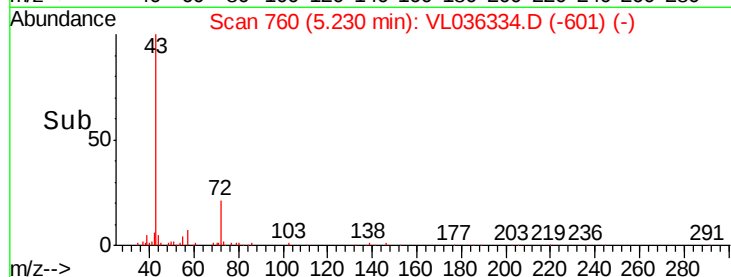
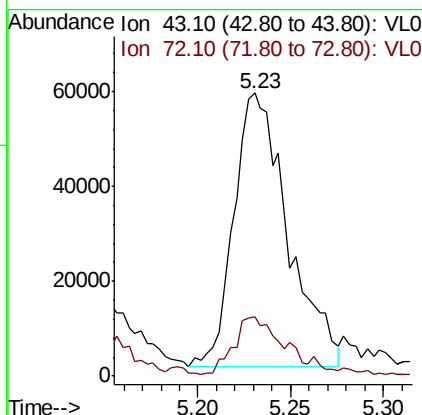
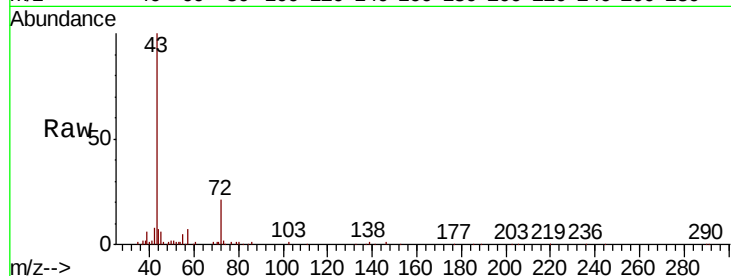




#34
2-Butanone
Concen: 0.497 ppbv
RT: 5.23 min Scan# 760
Delta R.T. 0.01 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

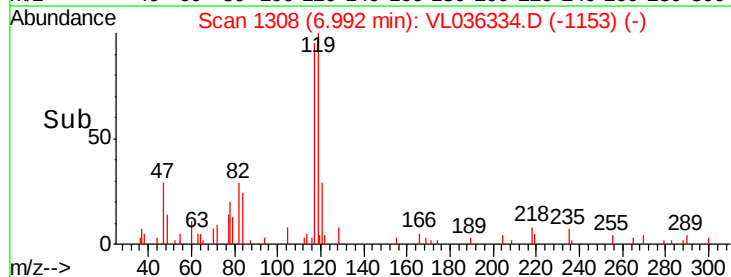
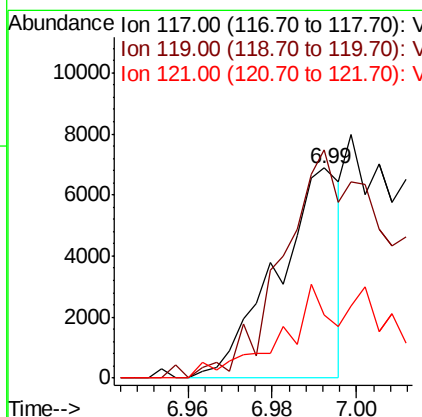
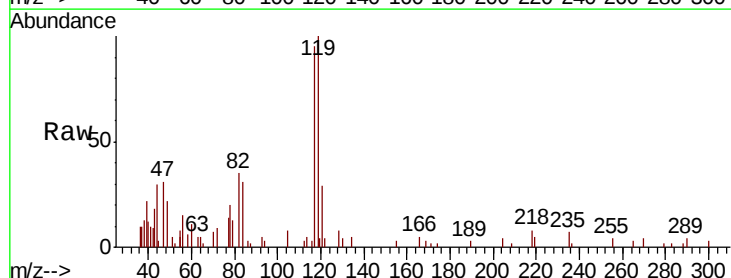
Instrument :
MSVOA_L
ClientSampleId :

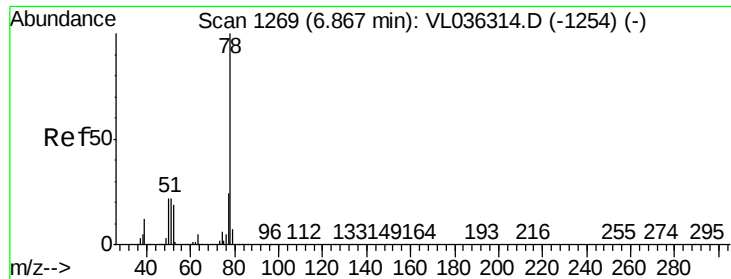
Tot Ion: 43 Resp: 117053
Ion Ratio Lower Upper
43 100
72 24.4 16.7 25.1



#35
Carbon Tetrachloride
Concen: 0.030 ppbv
RT: 6.99 min Scan# 1308
Delta R.T. -0.00 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion: 117 Resp: 7186
Ion Ratio Lower Upper
117 100
119 108.7 78.1 117.1
121 30.1 25.8 38.8

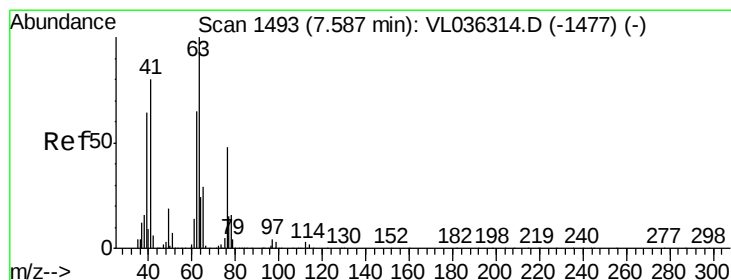
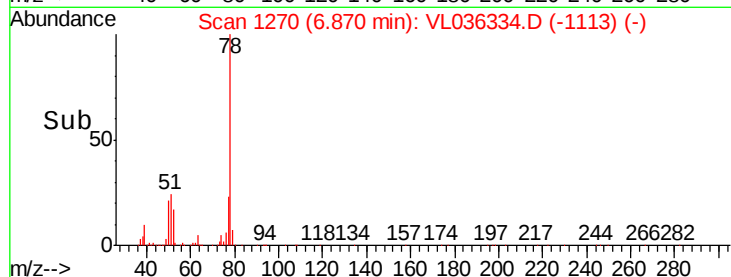
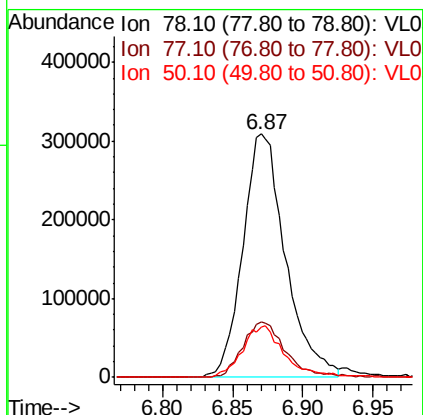
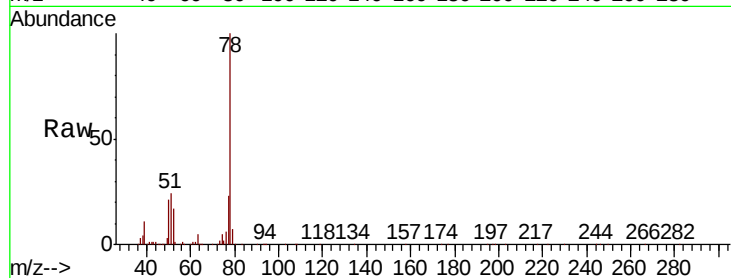




#36
Benzene
Concen: 2.172 ppbv
RT: 6.87 min Scan# 1270
Delta R.T. 0.00 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

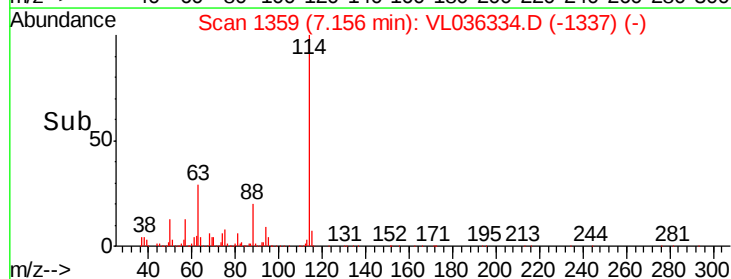
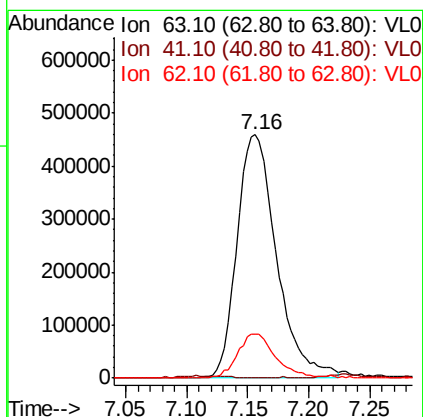
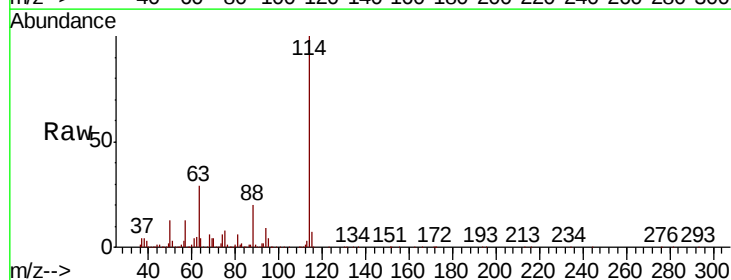
Instrument :
MSVOA_L
ClientSampleId :

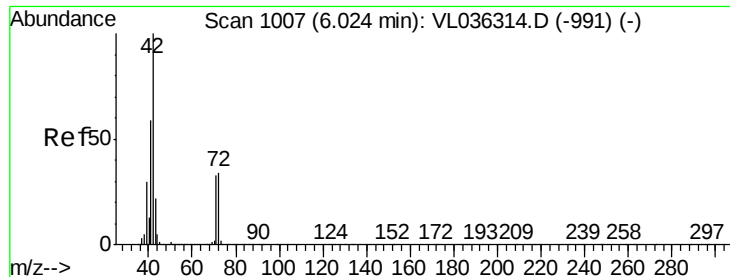
Tot Ion: 78 Resp: 653729
Ion Ratio Lower Upper
78 100
77 22.6 18.9 28.3
50 20.7 17.3 25.9



#39
1,2-Dichloropropane
Concen: 8.424 ppbv
RT: 7.16 min Scan# 1359
Delta R.T. -0.43 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion: 63 Resp: 1029902
Ion Ratio Lower Upper
63 100
41 0.0 63.8 95.6#
62 18.0 52.3 78.5#





#41

Tetrahydrofuran

Concen: 0.030 ppbv

RT: 6.02 min Scan# 1007

Delta R.T. 0.00 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Instrument :

MSVOA_L

ClientSampleId :

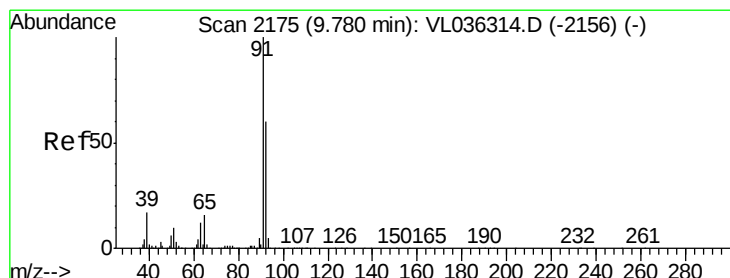
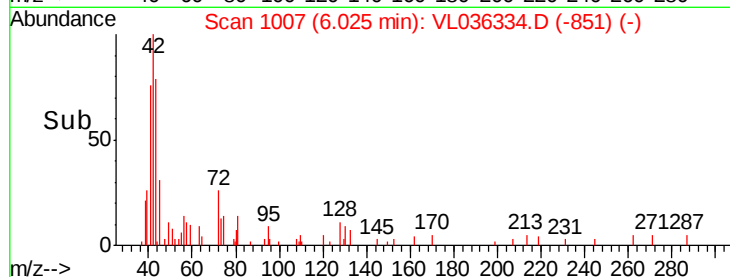
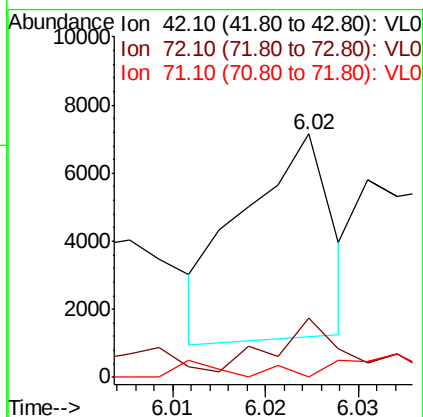
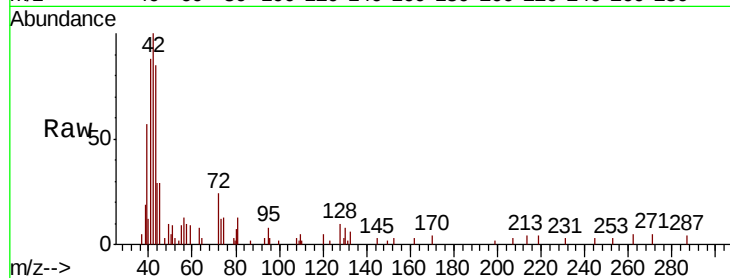
Tot Ion: 42 Resp: 3968

Ion Ratio Lower Upper

42 100

72 0.0 29.3 43.9#

71 0.0 27.8 41.8#



#53

Toluene

Concen: 0.990 ppbv

RT: 9.79 min Scan# 2177

Delta R.T. 0.01 min

Lab File: VL036334.D

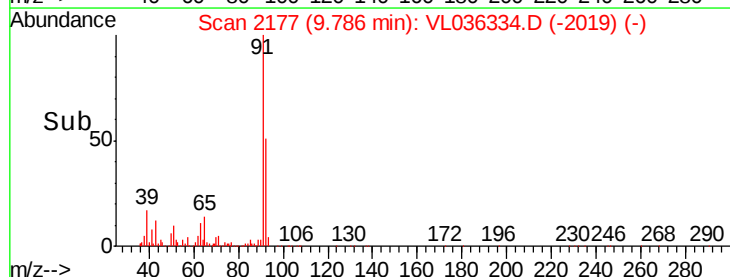
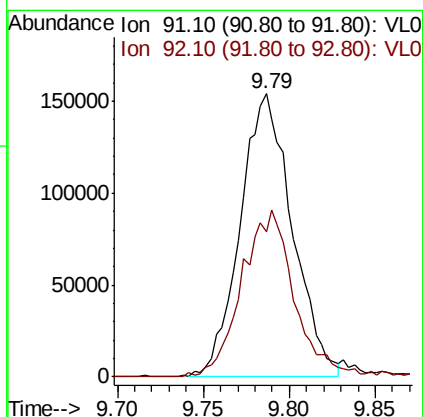
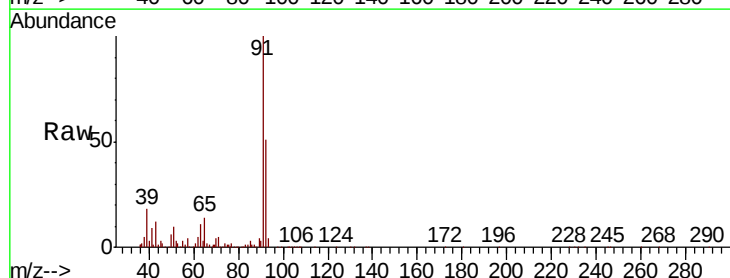
Acq: 11 Feb 2021 1:54

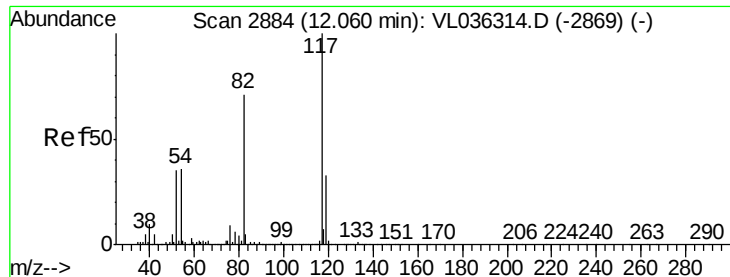
Tgt Ion: 91 Resp: 322722

Ion Ratio Lower Upper

91 100

92 61.2 48.6 72.8

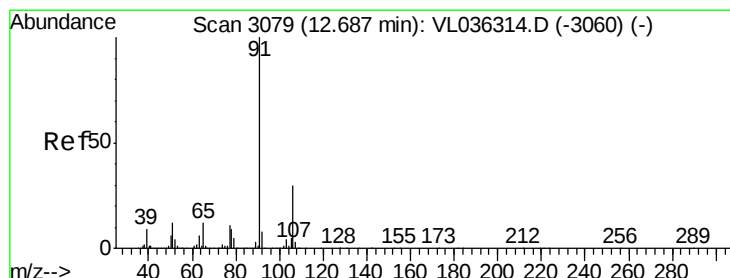
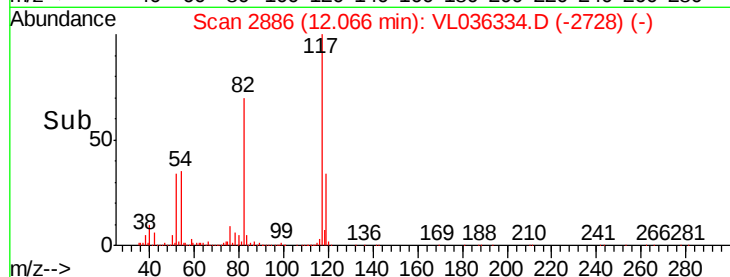
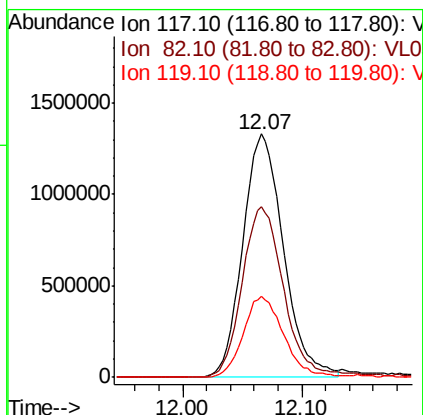
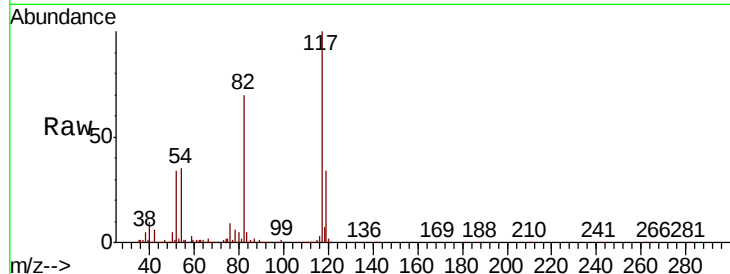




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min Scan# 2886
Delta R.T. 0.01 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

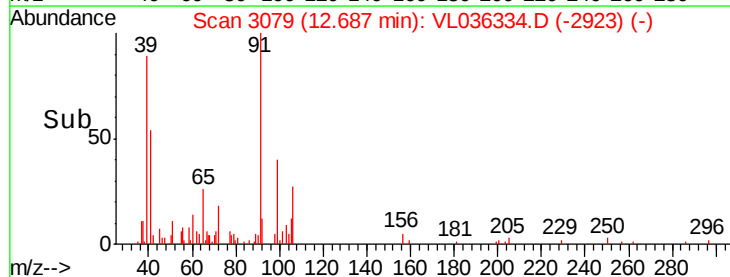
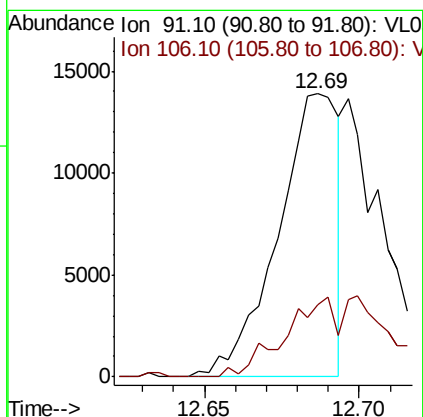
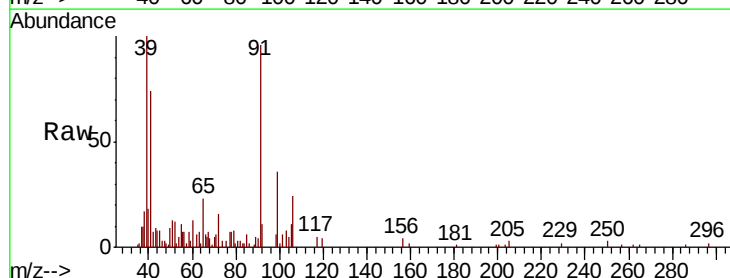
Instrument :
MSVOA_L
ClientSampleId :

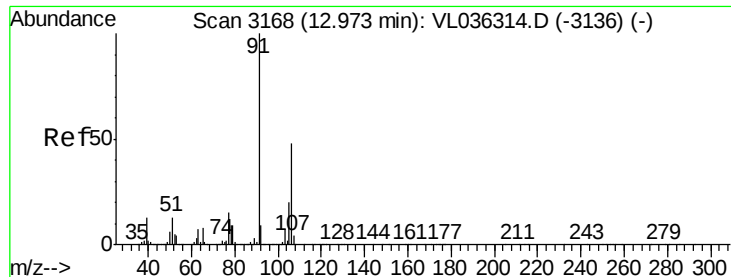
Tot Ion:117 Resp: 3161738
Ion Ratio Lower Upper
117 100
82 73.4 59.1 88.7
119 33.6 46.3 69.5#



#58
Ethyl Benzene
Concen: 0.044 ppbv
RT: 12.69 min Scan# 3079
Delta R.T. 0.00 min
Lab File: VL036334.D
Acq: 11 Feb 2021 1:54

Tgt Ion: 91 Resp: 18885
Ion Ratio Lower Upper
91 100
106 25.6 23.8 35.6





#59

m/p-Xylene

Concen: 0.046 ppbv

RT: 12.97 min Scan# 3167

Delta R.T. -0.00 min

Lab File: VL036334.D

Acq: 11 Feb 2021 1:54

Instrument :

MSVOA_L

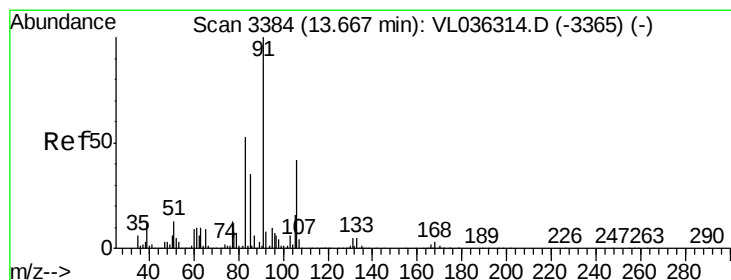
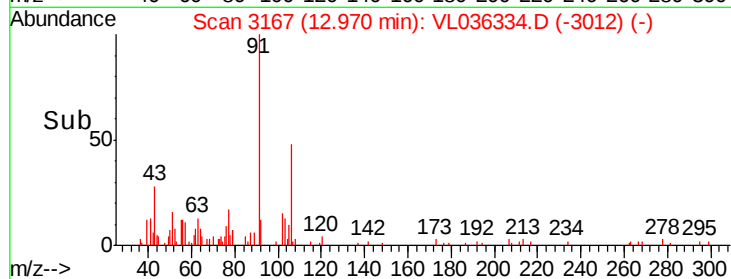
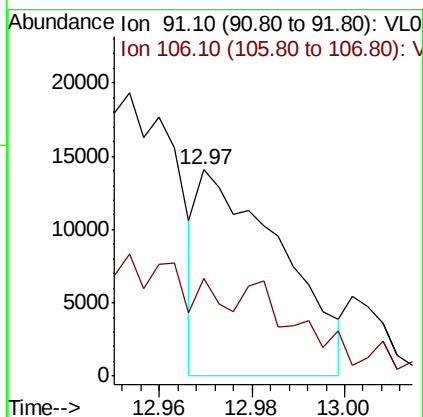
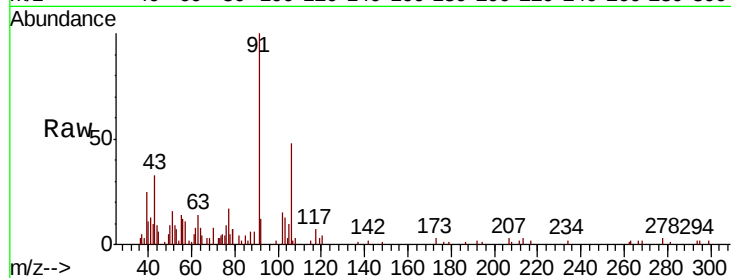
ClientSampled :

Tot Ion: 91 Resp: 17563

Ion Ratio Lower Upper

91 100

106 0.0 34.2 51.2#



#60

o-Xylene

Concen: 0.034 ppbv

RT: 13.68 min Scan# 3388

Delta R.T. 0.01 min

Lab File: VL036334.D

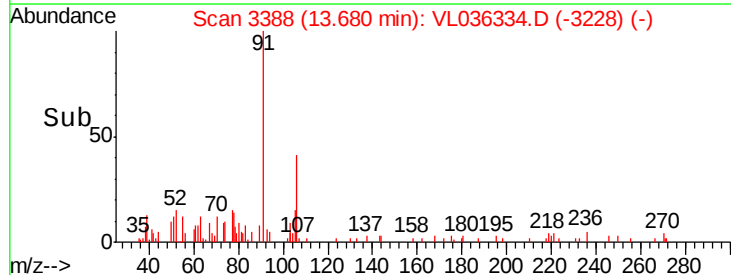
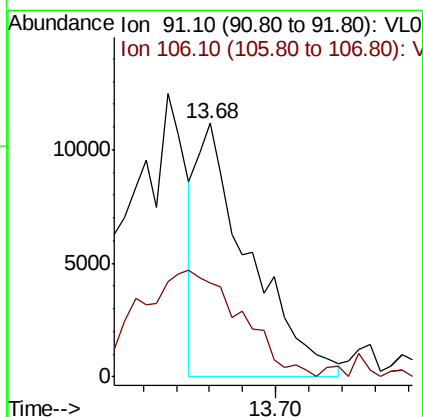
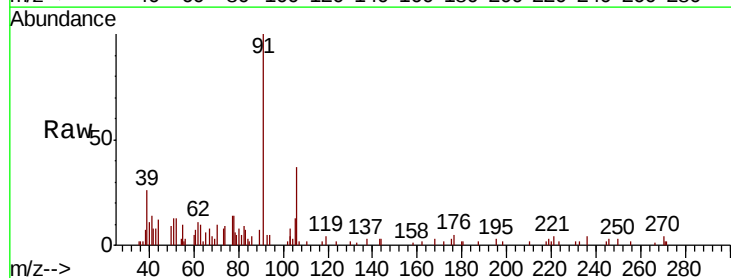
Acq: 11 Feb 2021 1:54

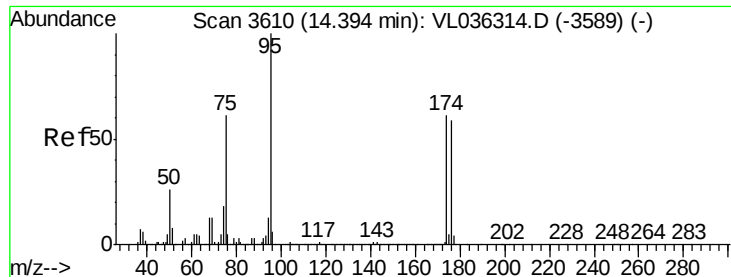
Tgt Ion: 91 Resp: 12221

Ion Ratio Lower Upper

91 100

106 88.0 22.0 66.0#

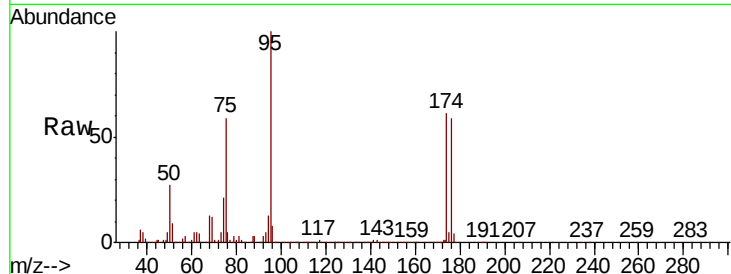




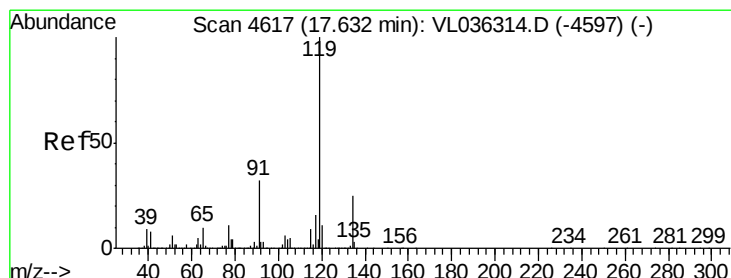
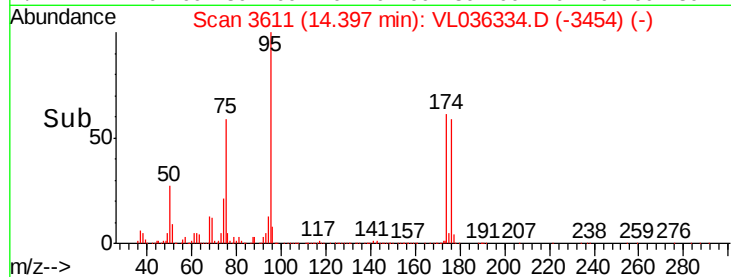
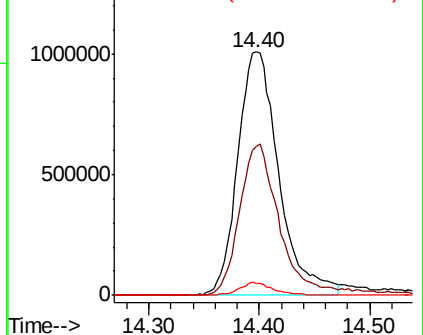
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.046 ppbv
 RT: 14.40 min Scan# 3611
 Delta R.T. 0.00 min
 Lab File: VL036334.D
 Acq: 11 Feb 2021 1:54

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion: 95 Resp: 2613398
 Ion Ratio Lower Upper
 95 100
 174 63.0 49.8 74.6
 175 4.7 3.7 5.5

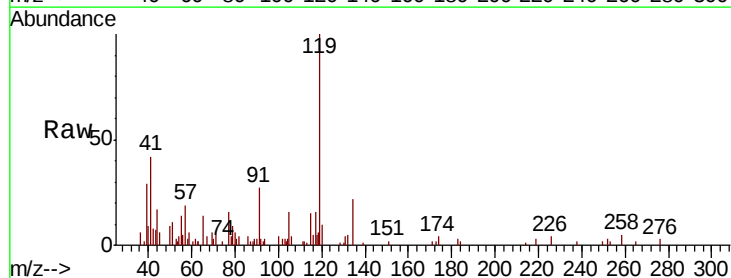


Abundance Ion 95.10 (94.80 to 95.80): VL0
 Ion 174.00 (173.70 to 174.70): V
 Ion 175.00 (174.70 to 175.70): V



#69
 p-Isopropyltoluene
 Concen: 0.033 ppbv
 RT: 17.64 min Scan# 4620
 Delta R.T. 0.01 min
 Lab File: VL036334.D
 Acq: 11 Feb 2021 1:54

Tgt Ion: 119 Resp: 17271
 Ion Ratio Lower Upper
 119 100
 134 38.2 20.1 30.1#
 91 0.0 25.8 38.6#



Abundance Ion 119.10 (118.80 to 119.80): V
 Ion 134.20 (133.90 to 134.90): V
 Ion 91.10 (90.80 to 91.80): VL0

