

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060121\
 Data File : VL037094.D
 Acq On : 2 Jun 2021 6:52
 Operator : SY/AP
 Sample : M2548-08
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jun 02 07:25:05 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue May 18 12:00:15 2021
 QLast Update : Tue May 18 12:00:15 2021
 Response via : Initial Calibration

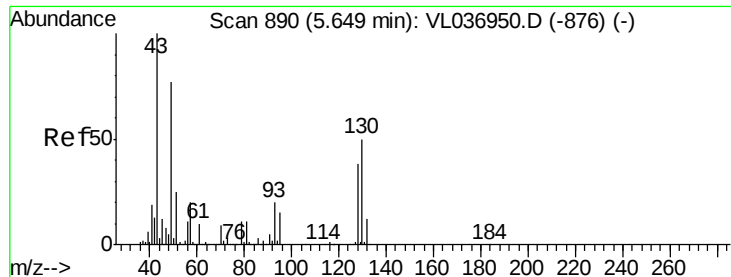
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1287075	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	3841016	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.06	117	3511300	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	2589961	9.82	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.03	85	48227	0.221	ppbv	95
3) Chlorodifluoromethane	2.95	51	578438	2.453	ppbv #	64
4) Chloromethane	3.12	50	55250	0.689	ppbv	90
9) Propene	3.19	41	697928	8.266	ppbv	99
10) Heptane	8.10	43	23715	0.113	ppbv #	75
12) 1,1,2-Trichlorotrifluoroet	4.47	101	5533	0.038	ppbv #	1
13) Ethanol	3.60	45	9526593	845.639	ppbv	96
15) Acetone	3.83	43	1193403	9.053	ppbv #	75
16) 1,3-Butadiene	3.29	39	10709	0.131	ppbv #	10
17) tert-Butyl alcohol	4.29	59	28068	0.232	ppbv #	72
19) Isopropyl Alcohol	3.96	45	1525368	21.525	ppbv #	36
20) Methylene Chloride	4.33	84	131990	1.868	ppbv	97
21) Allyl Chloride	4.29	41	18989	0.191	ppbv #	2
23) Vinyl Acetate	5.05	43	19275	0.092	ppbv #	80
25) Ethyl Acetate	5.67	43	478751	1.511	ppbv #	80
26) Hexane	5.67	57	678192	4.191	ppbv #	48
29) Chloroform	5.74	83	78599	0.344	ppbv	97
30) Cyclohexane	7.10	84	6158	0.045	ppbv #	1
34) 2-Butanone	5.23	43	159820	1.143	ppbv	98
36) Benzene	6.87	78	73452	0.222	ppbv	96
38) Trichloroethene	7.82	130	6259	0.044	ppbv #	75
39) 1,2-Dichloropropane	7.15	63	893026	7.007	ppbv #	26
41) Tetrahydrofuran	5.67	42	249641	3.134	ppbv #	50
44) 2,2,4-Trimethylpentane	7.85	57	32598	0.057	ppbv #	1
50) 4-Methyl-2-Pentanone	8.73	43	81476	0.353	ppbv	98
51) 2-Hexanone	10.40	43	180077	1.476	ppbv #	48
53) Toluene	9.78	91	2089702	5.308	ppbv	98
60) o-Xylene	13.66	91	33268	0.085	ppbv	98
61) Styrene	13.51	104	11783	0.054	ppbv #	1
69) p-Isopropyltoluene	17.63	119	203189	0.342	ppbv	96
74) 1,2,4-Trimethylbenzene	16.74	105	25526	0.057	ppbv #	71

(#) = 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: VL037094.D

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Instrument :

MSVOA_L

ClientSampleId :

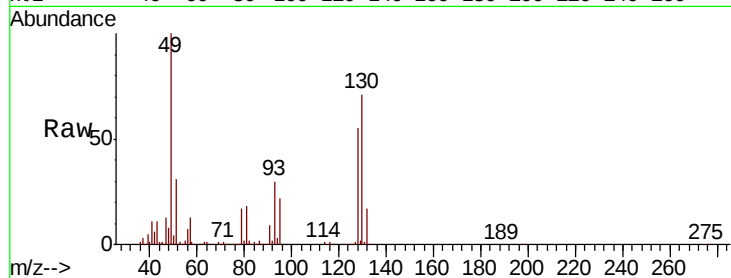
Tot Ion: 49 Resp: 1287075

Ion Ratio Lower Upper

49 100

128 56.8 26.9 80.7

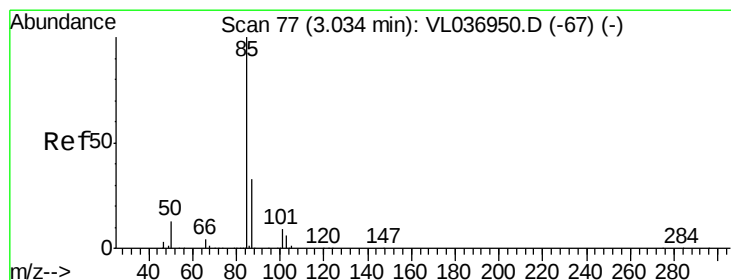
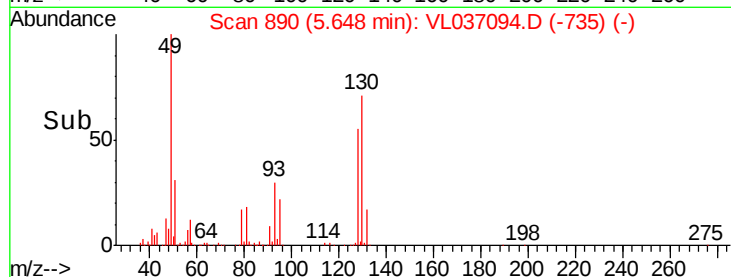
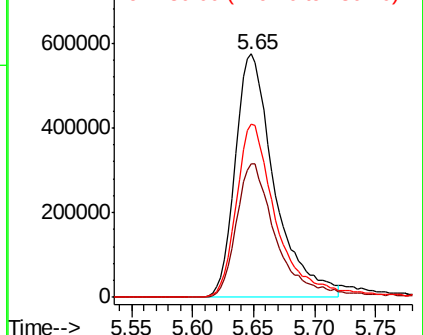
130 73.4 33.8 101.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.221 ppbv

RT: 3.03 min Scan# 77

Delta R.T. -0.00 min

Lab File: VL037094.D

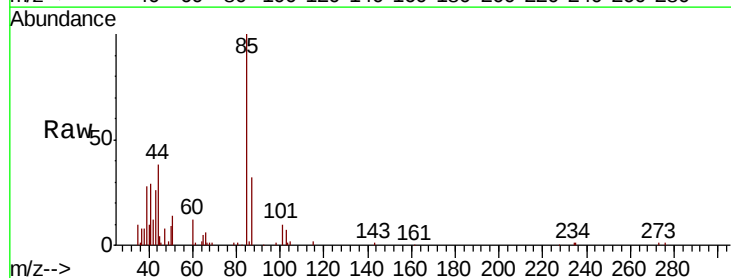
Acq: 2 Jun 2021 6:52

Tgt Ion: 85 Resp: 48227

Ion Ratio Lower Upper

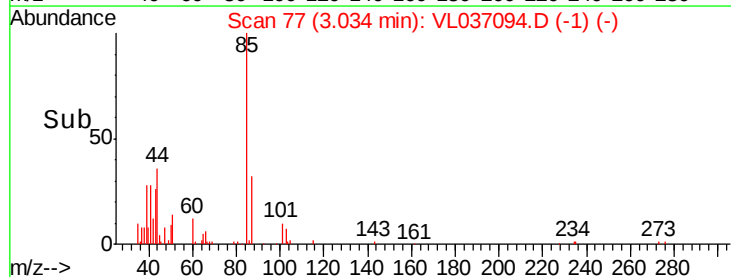
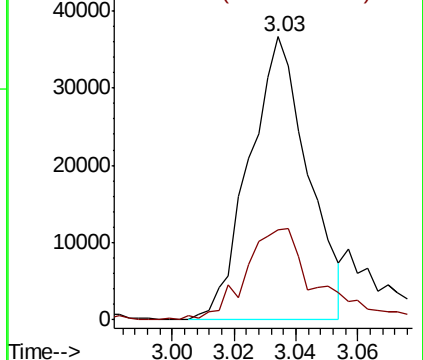
85 100

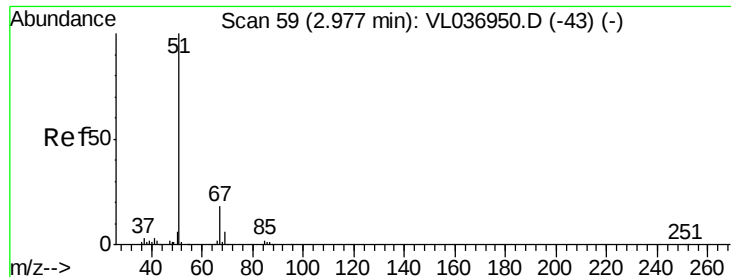
87 30.5 26.6 39.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

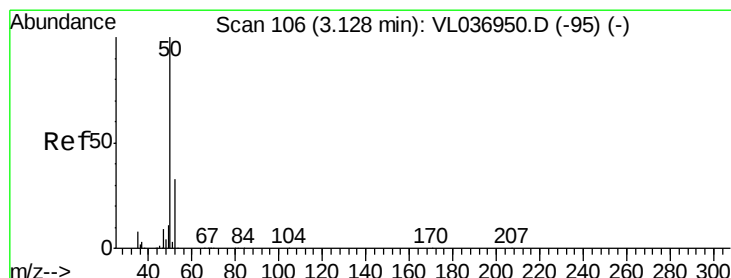
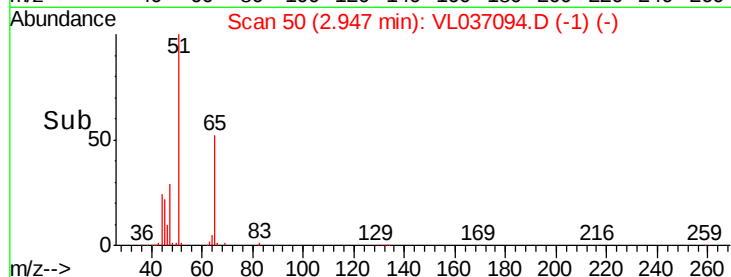
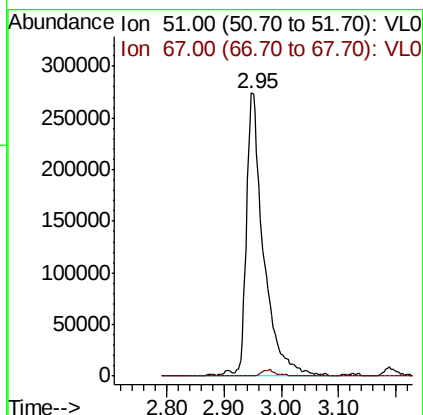
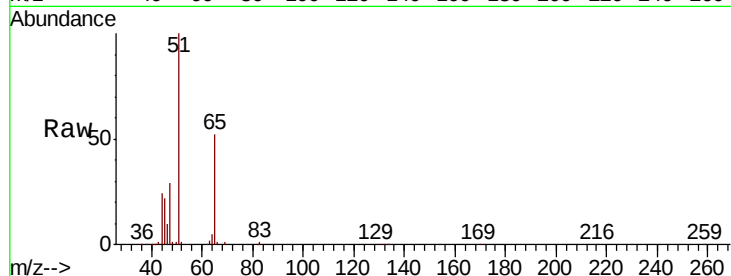




#3
 Chlorodifluoromethane
 Concen: 2.453 ppbv
 RT: 2.95 min Scan# 50
 Delta R.T. -0.03 min
 Lab File: VL037094.D
 Acq: 2 Jun 2021 6:52

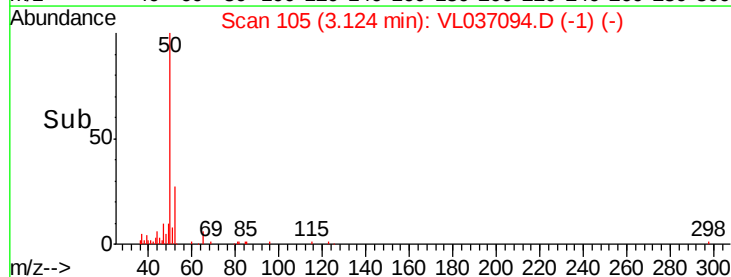
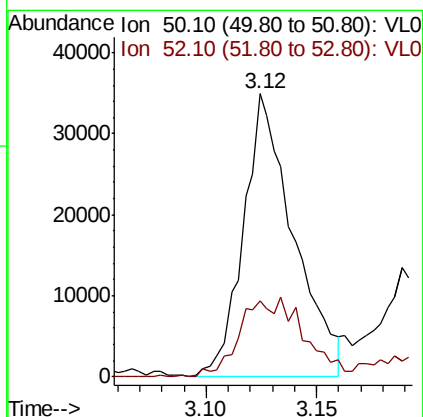
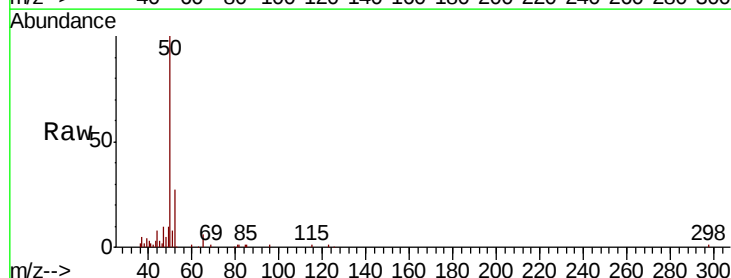
Instrument :
 MSVOA_L
 ClientSampleId :

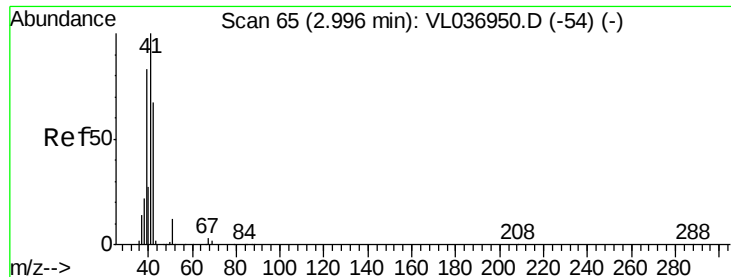
Tot Ion: 51 Resp: 578438
 Ion Ratio Lower Upper
 51 100
 67 2.1 14.6 21.8#



#4
 Chloromethane
 Concen: 0.689 ppbv
 RT: 3.12 min Scan# 105
 Delta R.T. -0.00 min
 Lab File: VL037094.D
 Acq: 2 Jun 2021 6:52

Tgt Ion: 50 Resp: 55250
 Ion Ratio Lower Upper
 50 100
 52 27.0 26.1 39.1





#9

Propene

Concen: 8.266 ppbv

RT: 3.19 min Scan# 125

Delta R.T. 0.19 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

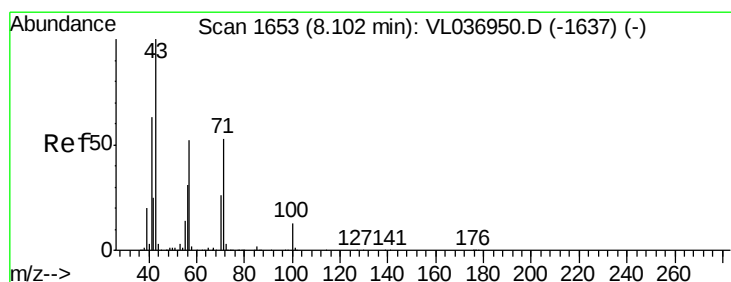
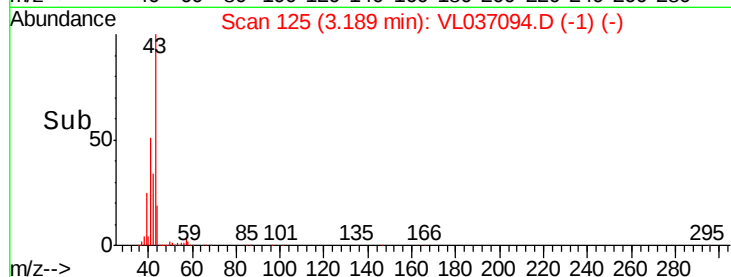
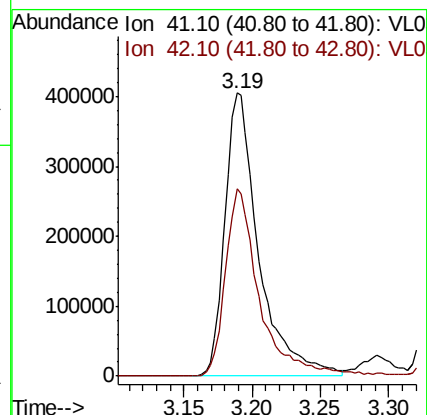
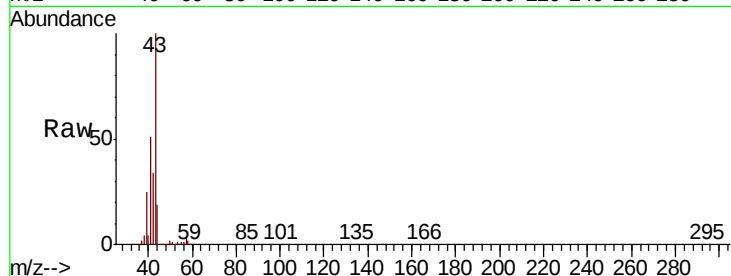
ClientSampleId :

Tot Ion: 41 Resp: 697928

Ion Ratio Lower Upper

41 100

42 66.8 53.9 80.9



#10

Heptane

Concen: 0.113 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.00 min

Lab File: VL037094.D

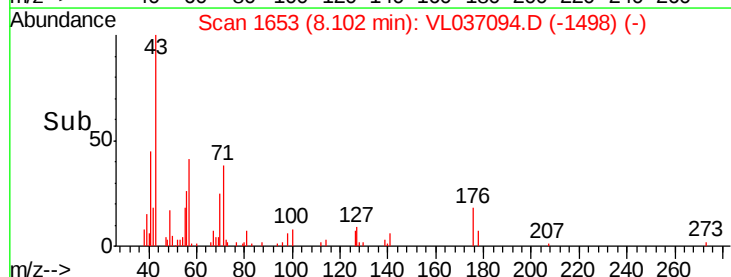
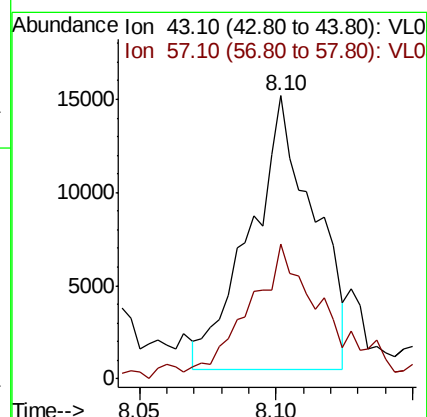
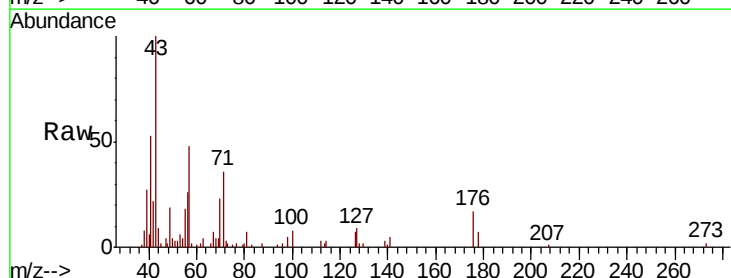
Acq: 2 Jun 2021 6:52

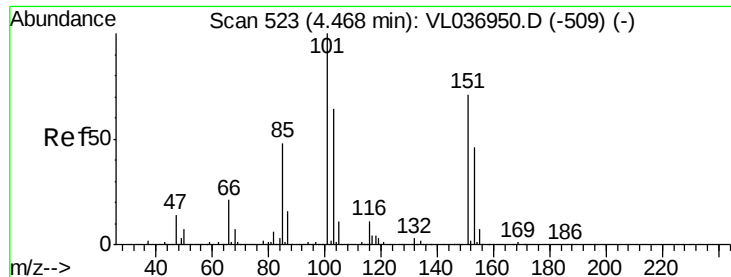
Tgt Ion: 43 Resp: 23715

Ion Ratio Lower Upper

43 100

57 68.6 41.0 61.6#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.038 ppbv

RT: 4.47 min Scan# 522

Delta R.T. -0.00 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

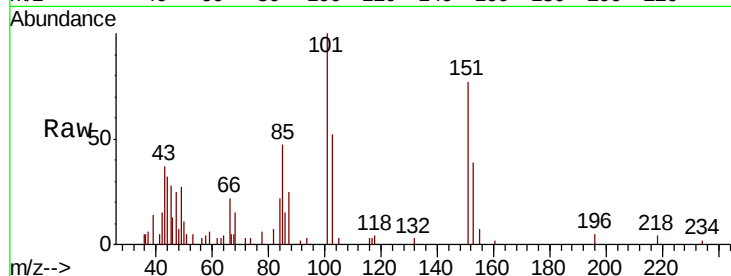
ClientSampleId :

Tot Ion:101 Resp: 5533

Ion Ratio Lower Upper

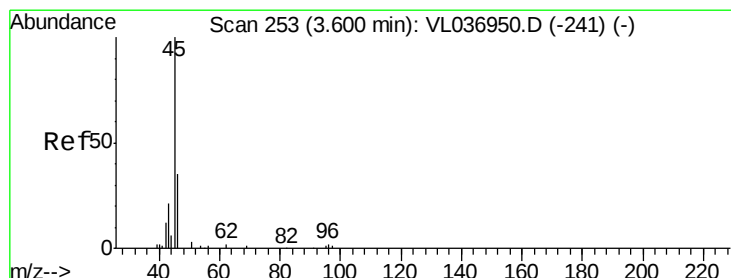
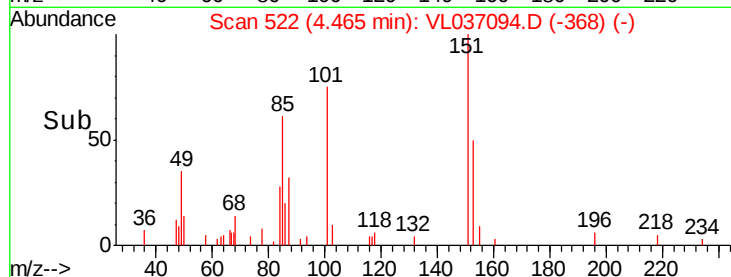
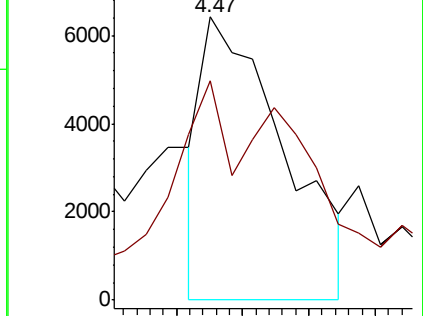
101 100

151 162.5 57.7 86.5#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 845.639 ppbv

RT: 3.60 min Scan# 252

Delta R.T. -0.00 min

Lab File: VL037094.D

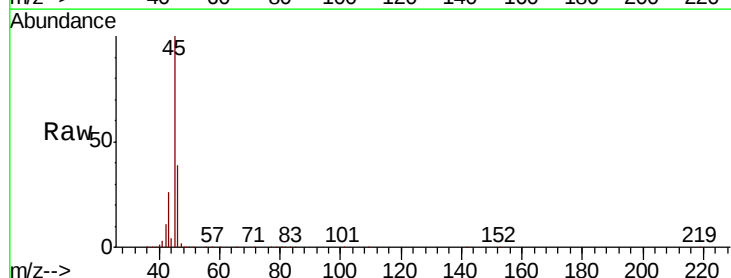
Acq: 2 Jun 2021 6:52

Tgt Ion: 45 Resp: 9526593

Ion Ratio Lower Upper

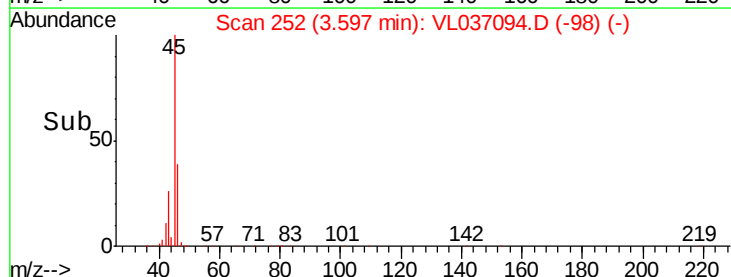
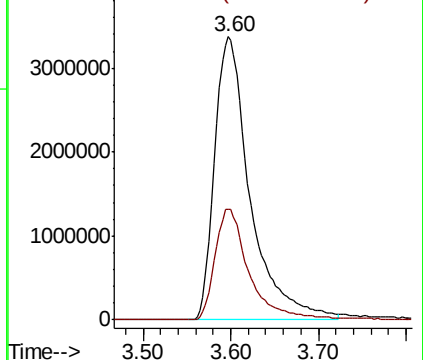
45 100

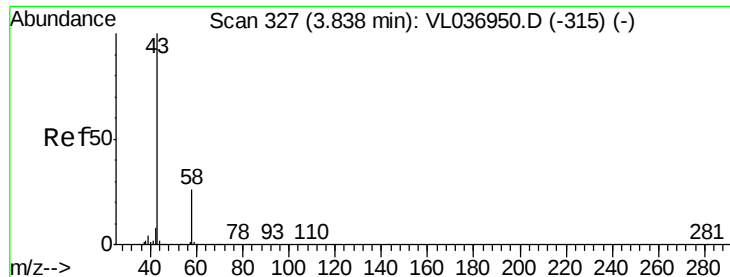
46 38.4 16.3 65.3



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 9.053 ppbv

RT: 3.83 min Scan# 326

Delta R.T. -0.00 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

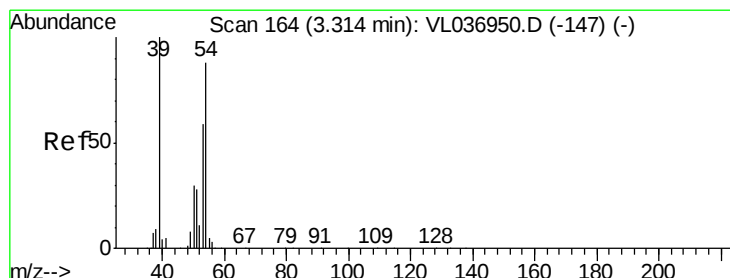
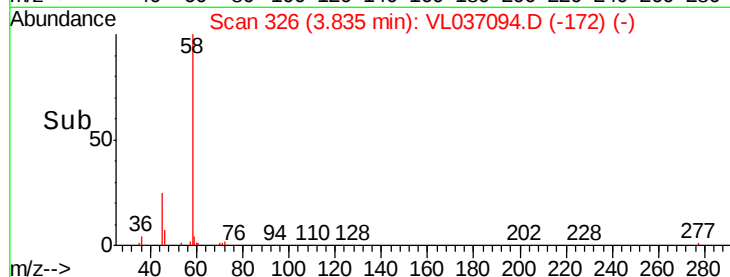
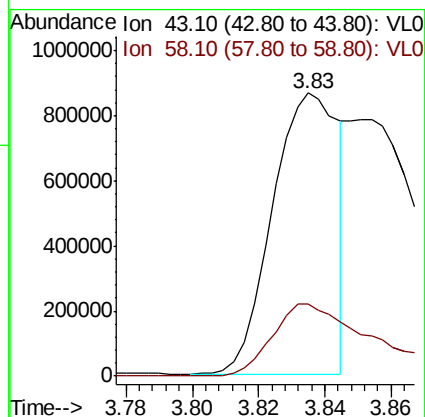
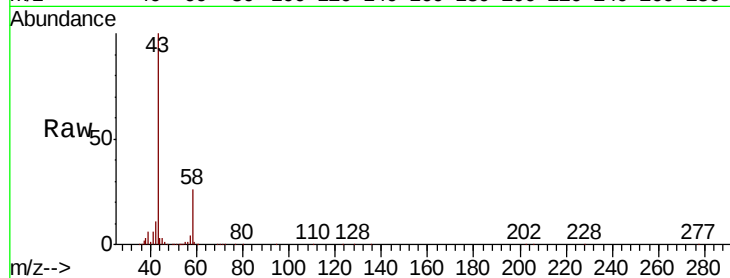
ClientSampleId :

Tot Ion: 43 Resp: 1193403

Ion Ratio Lower Upper

43 100

58 43.8 24.0 36.0#



#16

1,3-Butadiene

Concen: 0.131 ppbv

RT: 3.29 min Scan# 157

Delta R.T. -0.02 min

Lab File: VL037094.D

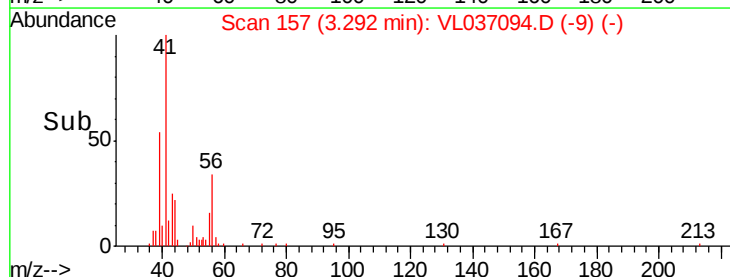
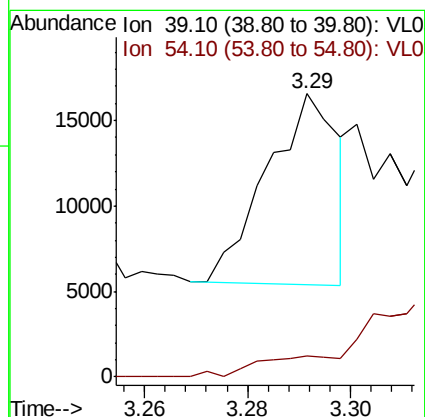
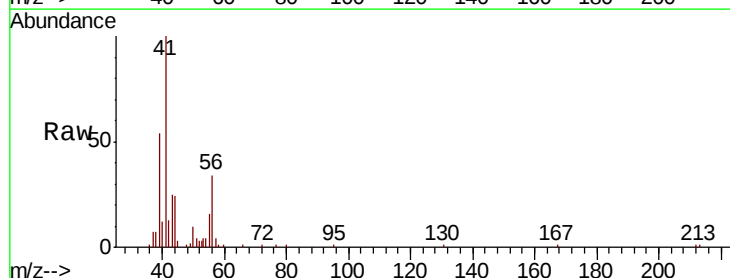
Acq: 2 Jun 2021 6:52

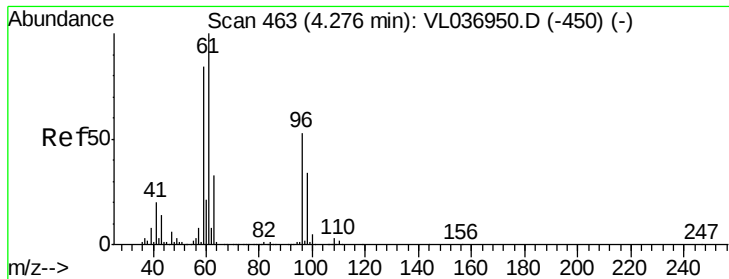
Tgt Ion: 39 Resp: 10709

Ion Ratio Lower Upper

39 100

54 0.0 63.2 94.8#



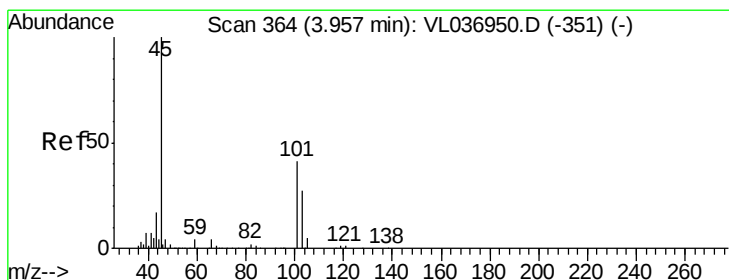
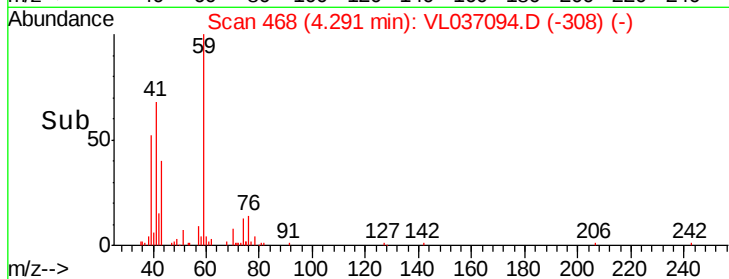
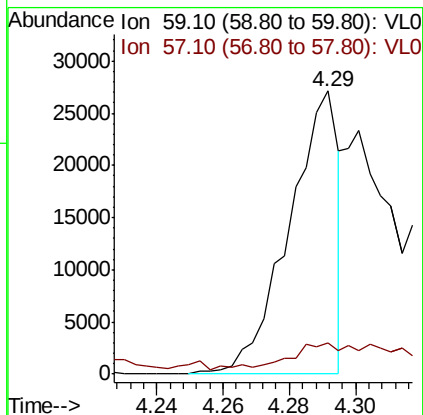
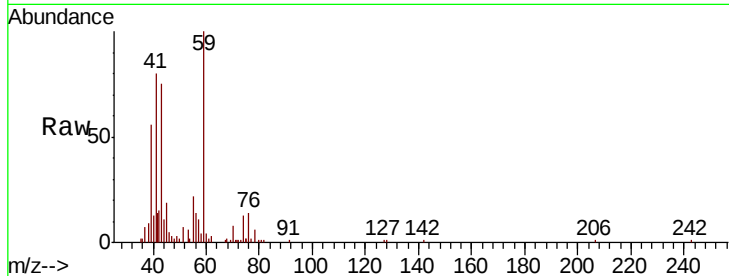


#17

tert-Butyl alcohol
Concen: 0.232 ppbv
RT: 4.29 min Scan# 468
Delta R.T. 0.02 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Instrument :
MSVOA_L
ClientSampled :

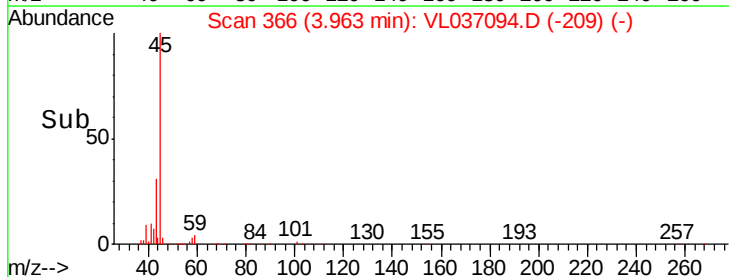
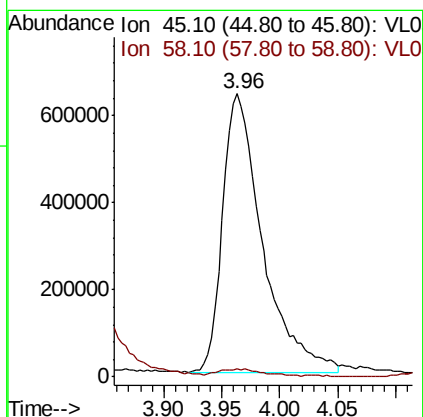
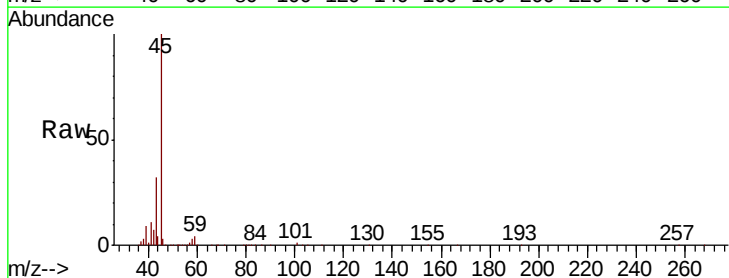
Tot Ion: 59 Resp: 28068
Ion Ratio Lower Upper
59 100
57 0.0 8.3 12.5#

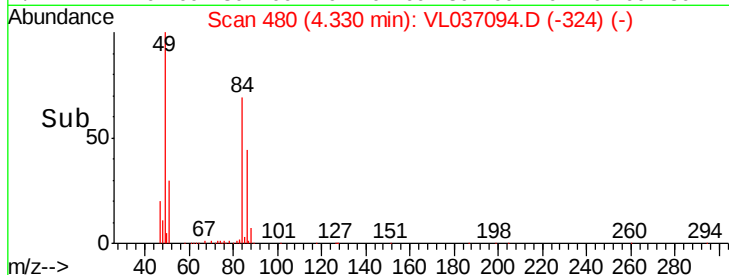
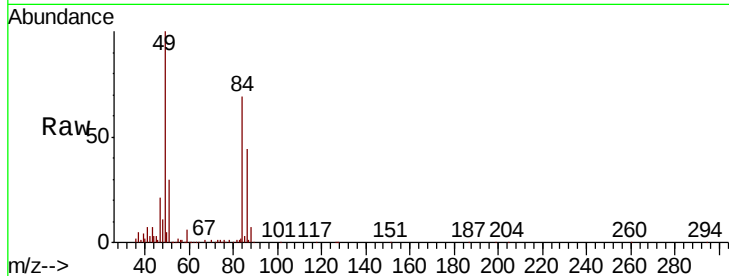
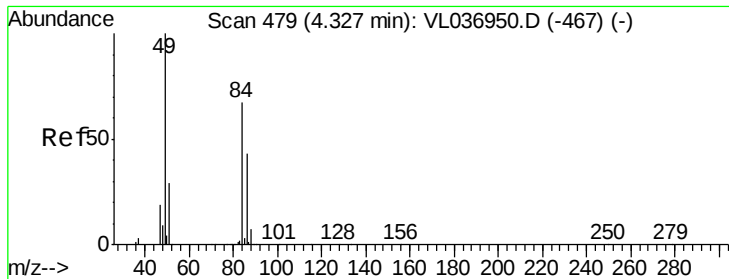


#19

Isopropyl Alcohol
Concen: 21.525 ppbv
RT: 3.96 min Scan# 366
Delta R.T. 0.01 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Tgt Ion: 45 Resp: 1525368
Ion Ratio Lower Upper
45 100
58 4.1 37.2 55.8#

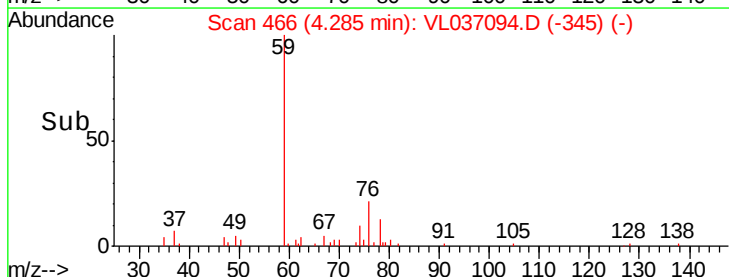
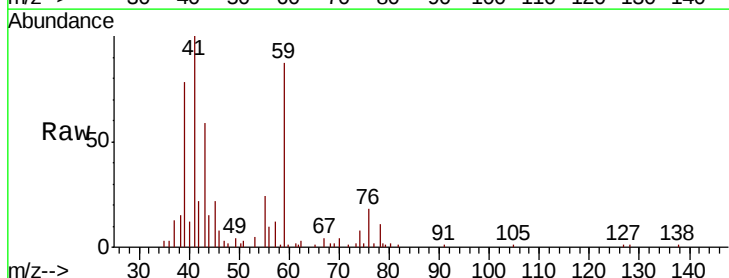
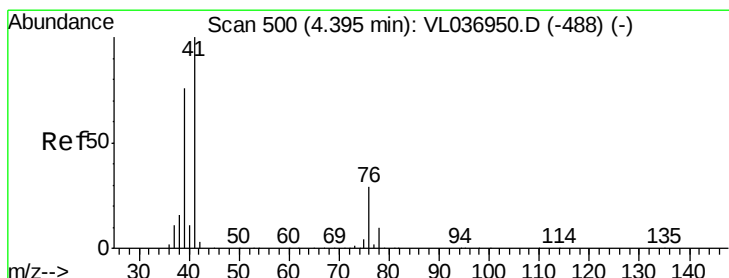
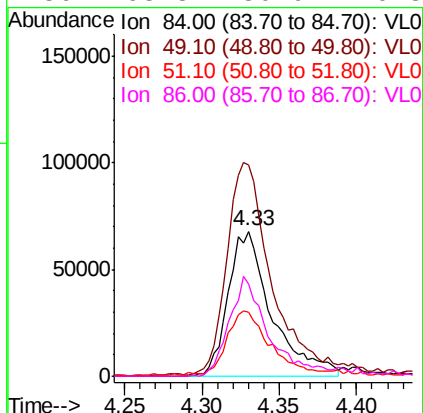




#20
Methylene Chloride
Concen: 1.868 ppbv
RT: 4.33 min Scan# 480
Delta R.T. 0.00 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

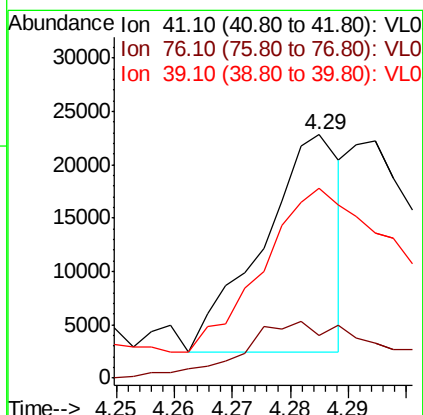
Instrument :
MSVOA_L
ClientSampleId :

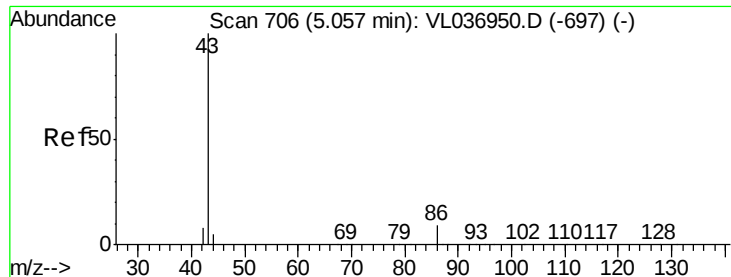
Tot Ion:	84	Resp:	131990
Ion	Ratio	Lower	Upper
84	100		
49	143.9	119.8	179.6
51	41.7	35.1	52.7
86	63.8	50.9	76.3



#21
Allyl Chloride
Concen: 0.191 ppbv
RT: 4.29 min Scan# 466
Delta R.T. -0.11 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Tgt Ion:	41	Resp:	18989
Ion	Ratio	Lower	Upper
41	100		
76	57.9	24.9	37.3#
39	182.4	63.7	95.5#





#23

Vinyl Acetate

Concen: 0.092 ppbv

RT: 5.05 min Scan# 705

Delta R.T. -0.00 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 19275

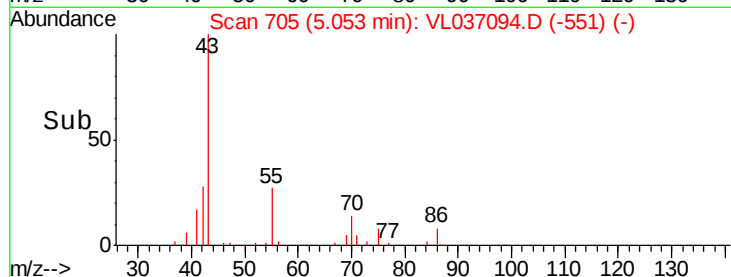
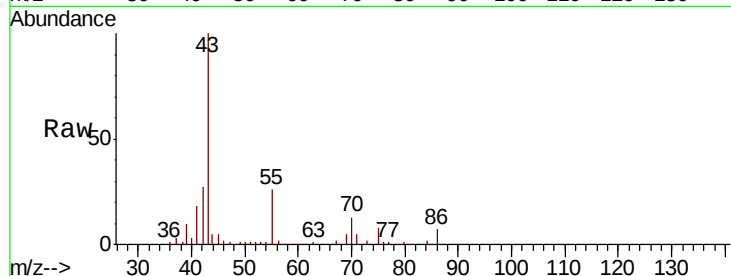
Ion Ratio Lower Upper

43 100

86 1.6 5.8 8.8#

42 18.5 7.4 11.2#

44 0.0 3.3 4.9#

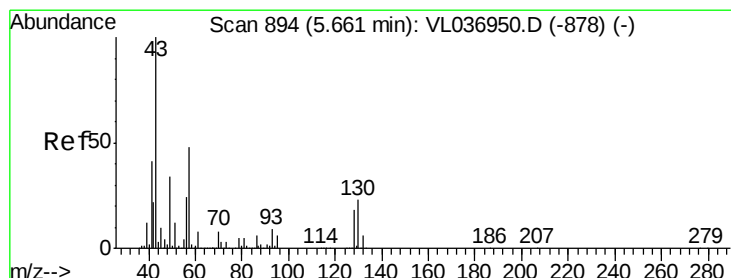
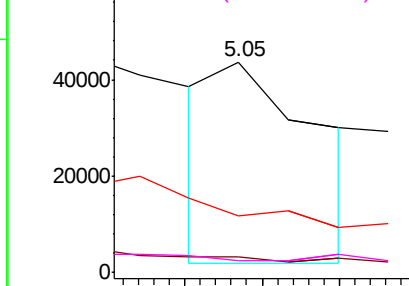


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 1.511 ppbv

RT: 5.67 min Scan# 896

Delta R.T. 0.01 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Tgt Ion: 43 Resp: 478751

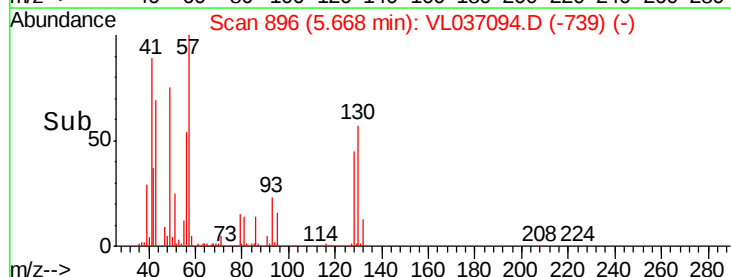
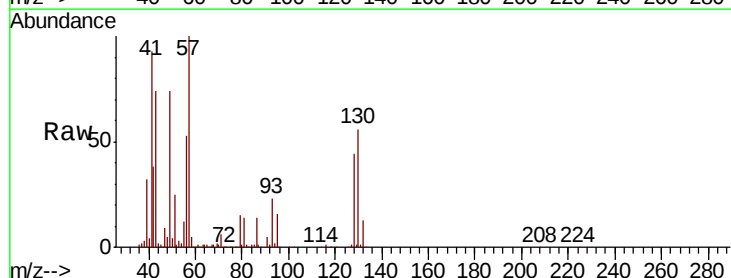
Ion Ratio Lower Upper

43 100

45 2.1 7.8 11.8#

61 1.3 7.8 11.8#

70 2.5 5.6 8.4#

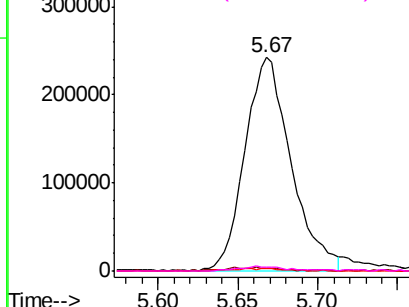


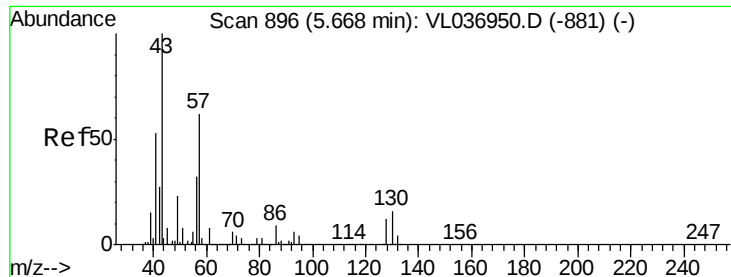
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 4.191 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.00 min

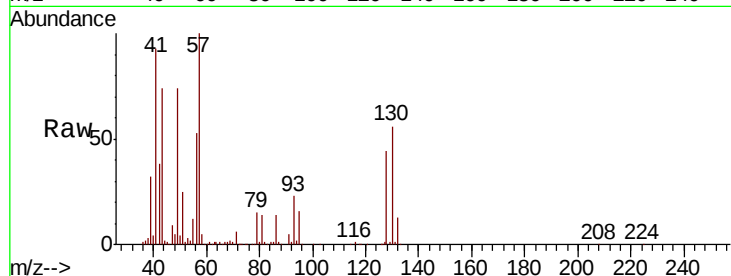
Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

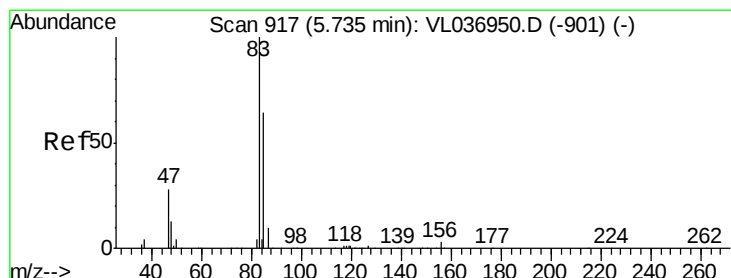
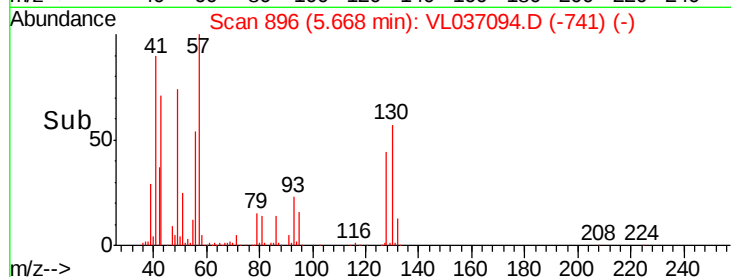
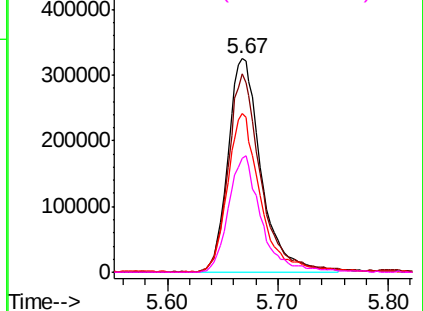
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 678192

Ion	Ratio	Lower	Upper
57	100		
41	91.9	70.5	105.7
43	74.3	165.8	248.8#
56	54.2	42.2	63.4



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: 0.344 ppbv

RT: 5.74 min Scan# 917

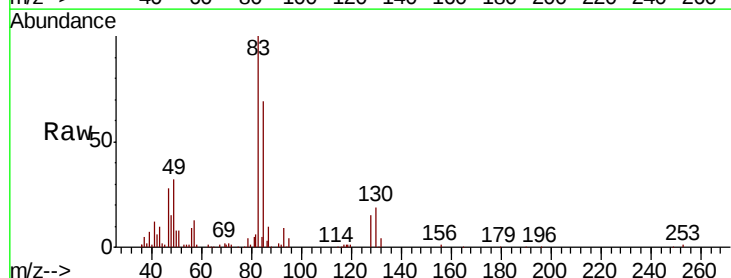
Delta R.T. -0.00 min

Lab File: VL037094.D

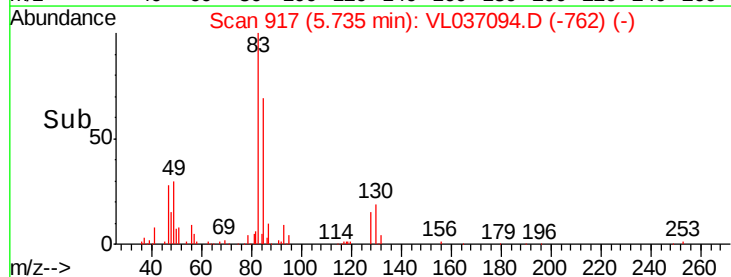
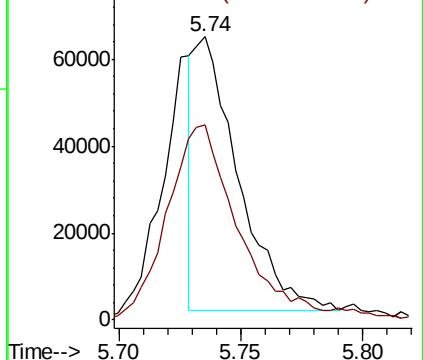
Acq: 2 Jun 2021 6:52

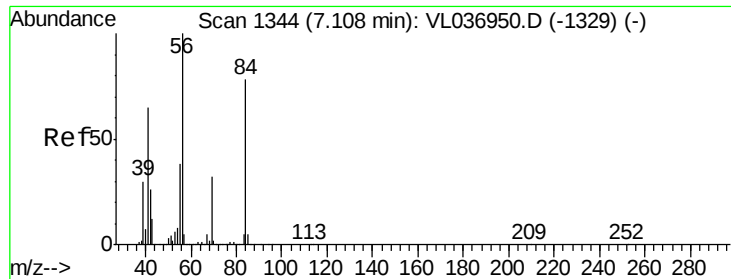
Tgt Ion: 83 Resp: 78599

Ion	Ratio	Lower	Upper
83	100		
85	66.5	51.1	76.7



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0

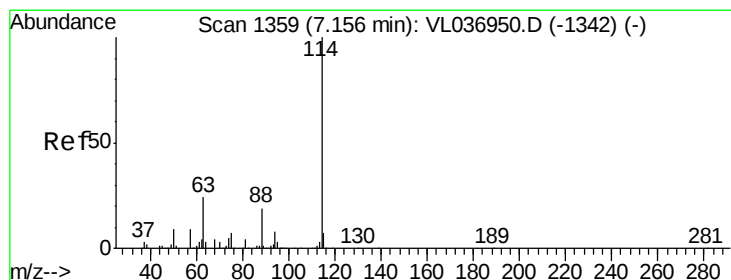
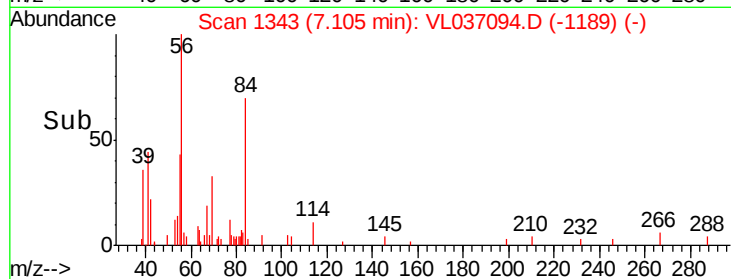
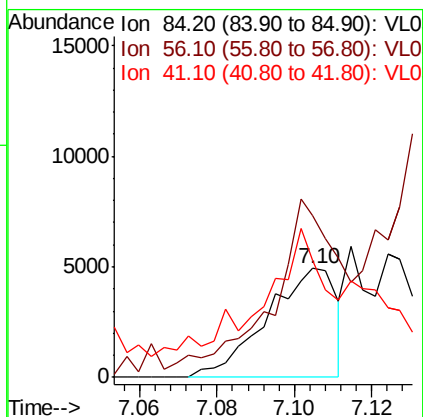
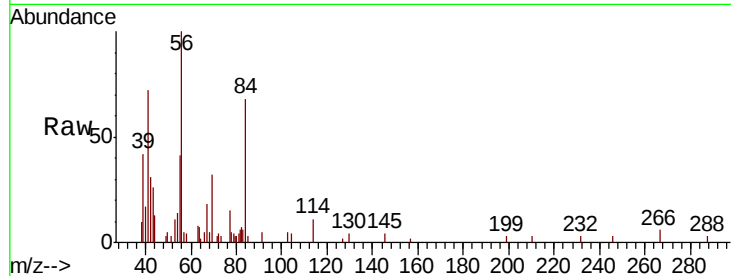




#30
Cyclohexane
Concen: 0.045 ppbv
RT: 7.10 min Scan# 1343
Delta R.T. -0.00 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

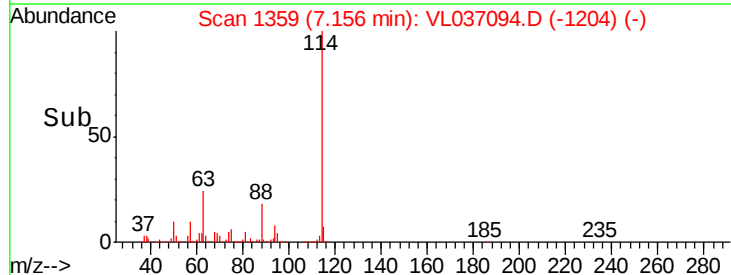
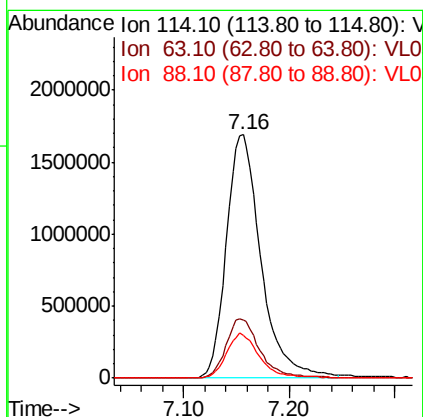
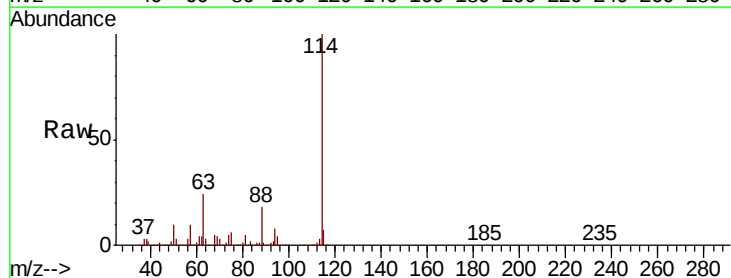
Instrument :
MSVOA_L
ClientSampled :

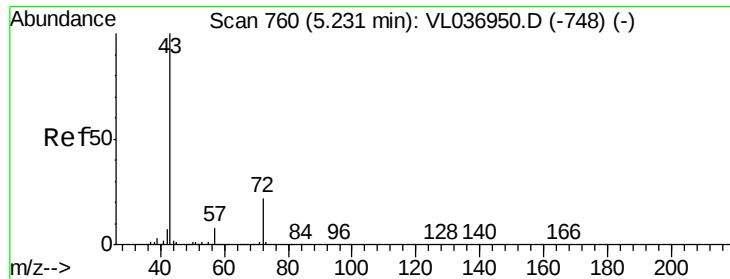
Tot Ion: 84 Resp: 6158
Ion Ratio Lower Upper
84 100
56 0.0 107.9 161.9#
41 208.6 65.5 98.3#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.16 min Scan# 1359
Delta R.T. -0.00 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Tgt Ion: 114 Resp: 3841016
Ion Ratio Lower Upper
114 100
63 24.0 19.6 29.4
88 17.8 14.6 21.8

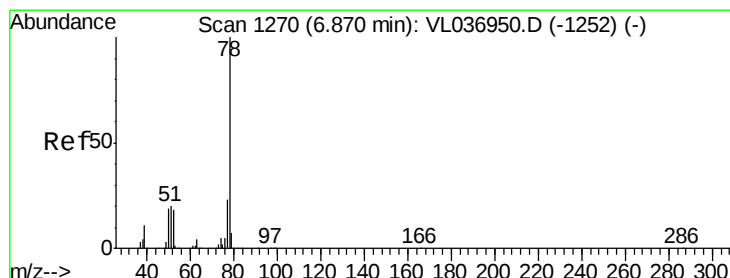
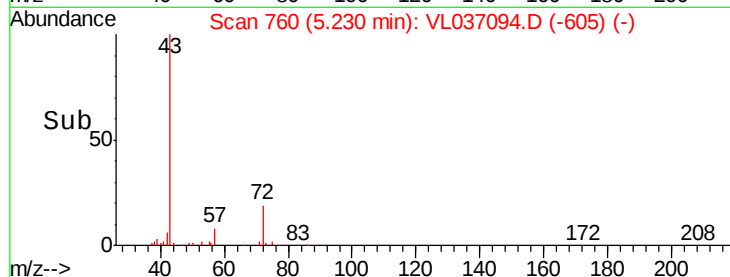
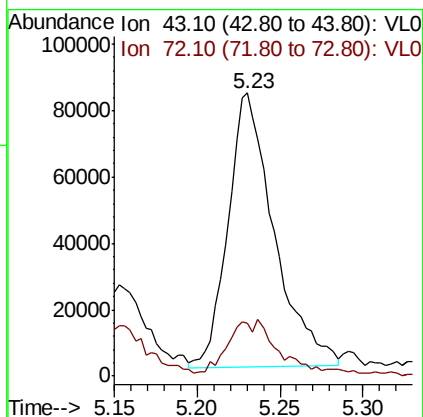
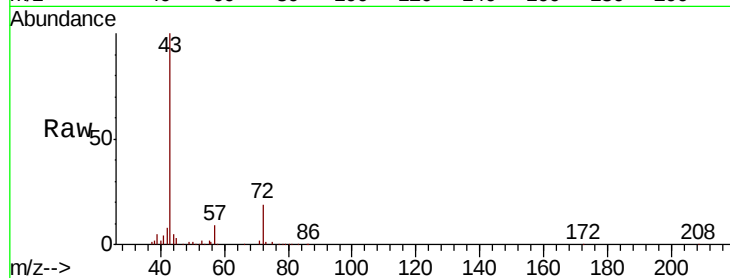




#34
2-Butanone
Concen: 1.143 ppbv
RT: 5.23 min Scan# 760
Delta R.T. -0.00 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

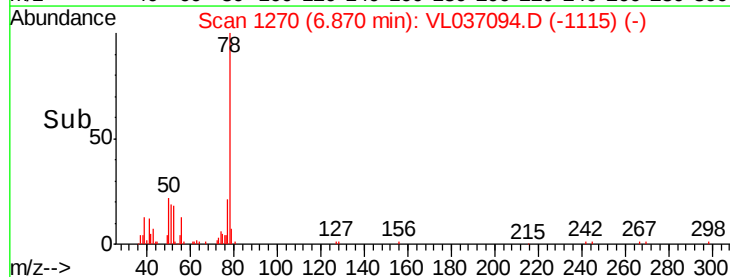
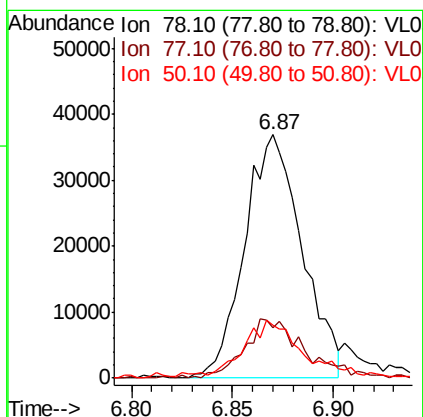
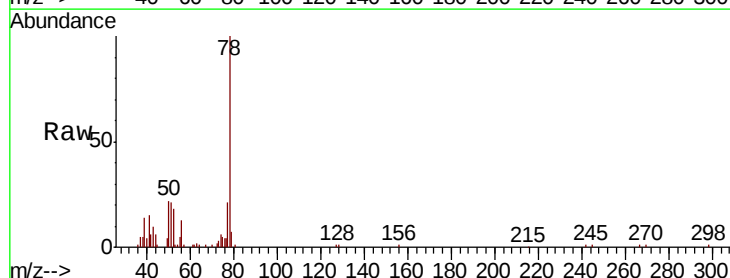
Instrument :
MSVOA_L
ClientSampled :

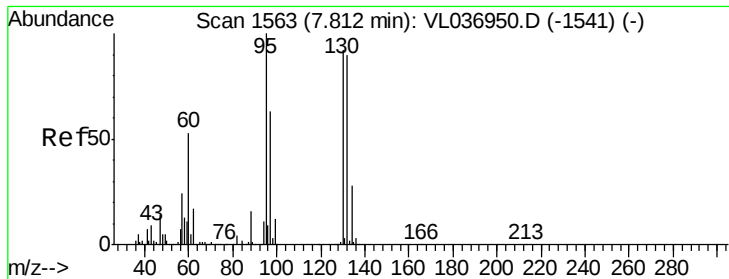
Tot Ion: 43 Resp: 159820
Ion Ratio Lower Upper
43 100
72 24.7 19.0 28.4



#36
Benzene
Concen: 0.222 ppbv
RT: 6.87 min Scan# 1270
Delta R.T. -0.00 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Tgt Ion: 78 Resp: 73452
Ion Ratio Lower Upper
78 100
77 20.9 18.6 28.0
50 20.4 15.0 22.4

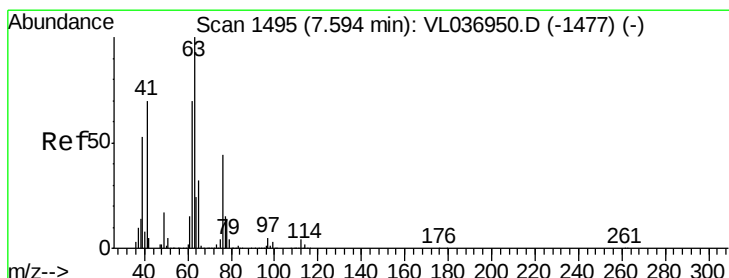
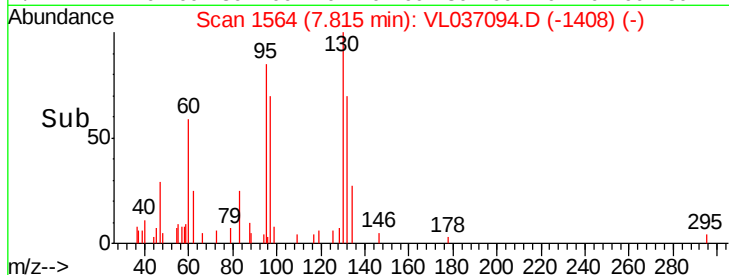
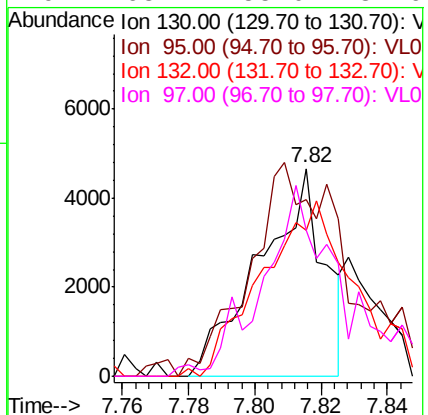
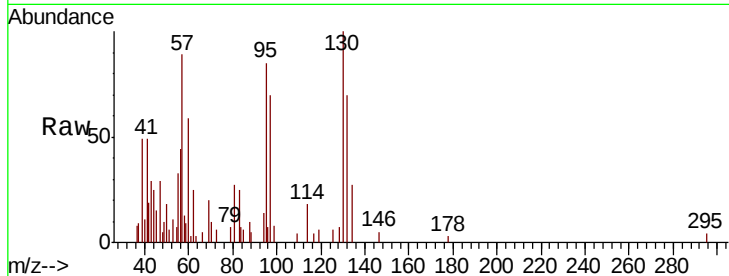




#38
 Trichloroethene
 Concen: 0.044 ppbv
 RT: 7.82 min Scan# 1564
 Delta R.T. 0.00 min
 Lab File: VL037094.D
 Acq: 2 Jun 2021 6:52

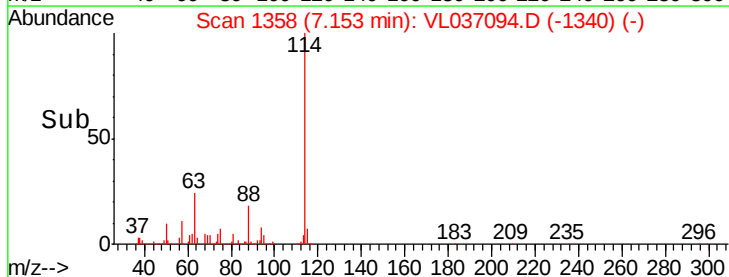
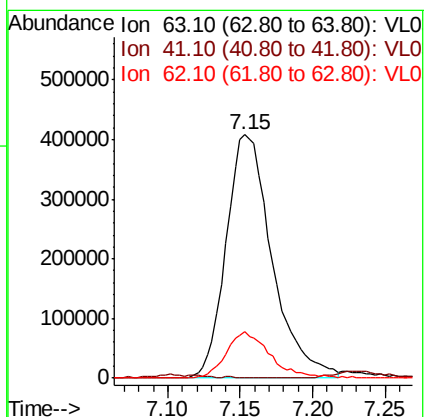
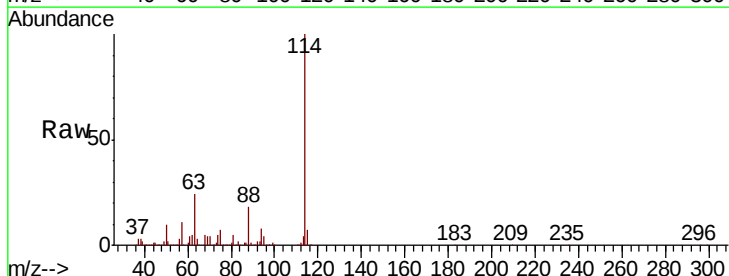
Instrument :
 MSVOA_L
 ClientSampleId :

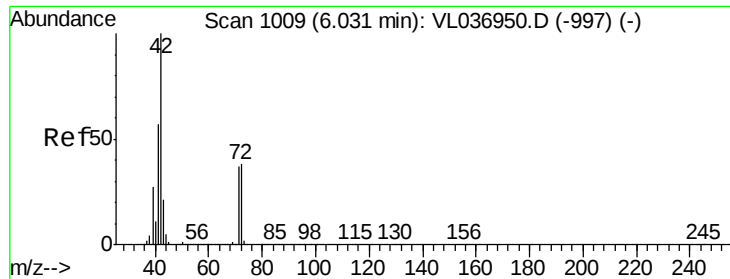
Tot Ion:130 Resp: 6259
 Ion Ratio Lower Upper
 130 100
 95 76.5 86.9 130.3#
 132 66.6 78.4 117.6#
 97 65.2 55.0 82.6



#39
 1,2-Dichloropropane
 Concen: 7.007 ppbv
 RT: 7.15 min Scan# 1358
 Delta R.T. -0.44 min
 Lab File: VL037094.D
 Acq: 2 Jun 2021 6:52

Tgt Ion: 63 Resp: 893026
 Ion Ratio Lower Upper
 63 100
 41 0.0 55.7 83.5#
 62 19.2 56.2 84.4#

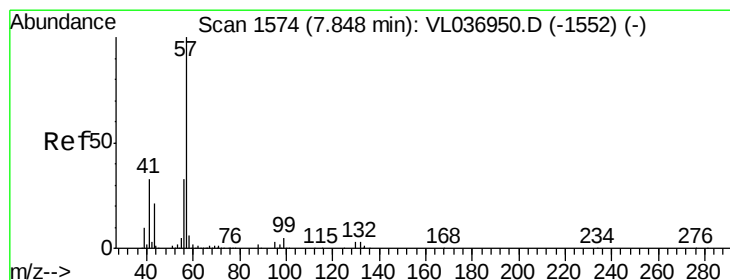
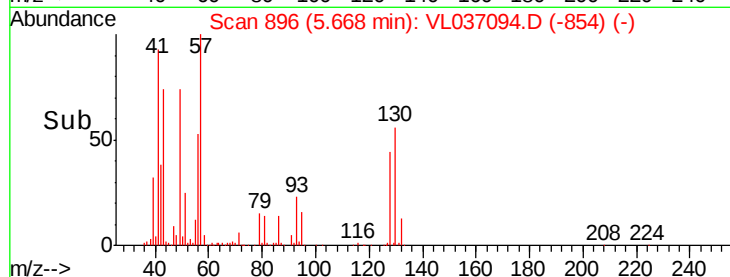
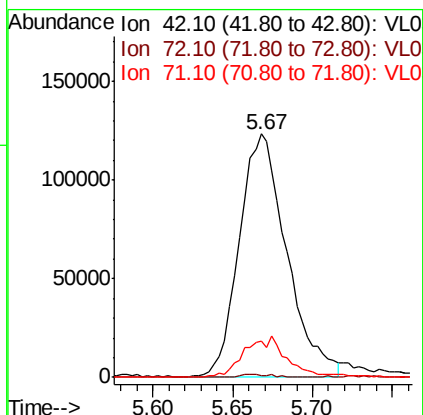
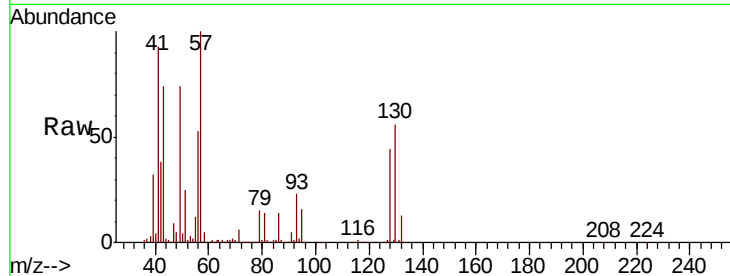




#41
Tetrahydrofuran
Concen: 3.134 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.36 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

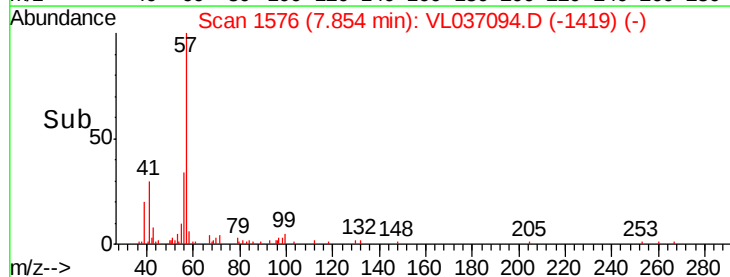
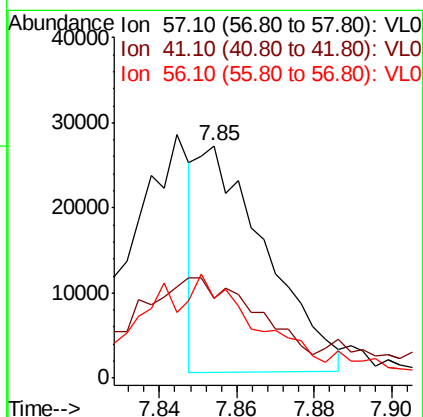
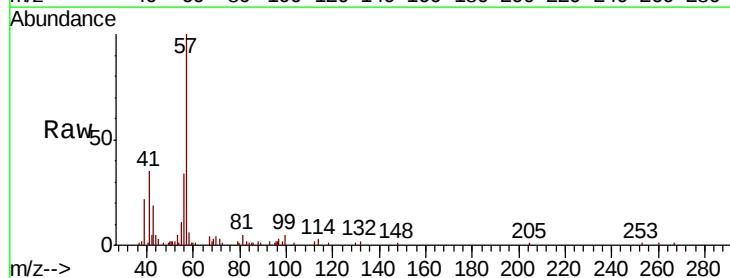
Instrument :
MSVOA_L
ClientSampleId :

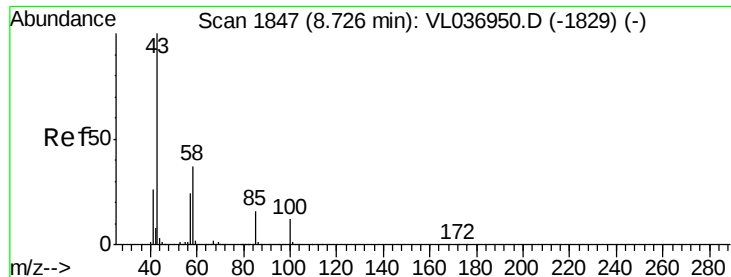
Tot Ion: 42 Resp: 249641
Ion Ratio Lower Upper
42 100
72 1.0 31.4 47.2#
71 15.9 30.4 45.6#



#44
2,2,4-Trimethylpentane
Concen: 0.057 ppbv
RT: 7.85 min Scan# 1576
Delta R.T. 0.01 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Tgt Ion: 57 Resp: 32598
Ion Ratio Lower Upper
57 100
41 121.1 27.0 40.4#
56 99.6 25.4 38.2#





#50

4-Methyl-2-Pentanone

Concen: 0.353 ppbv

RT: 8.73 min Scan# 1849

Delta R.T. 0.01 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

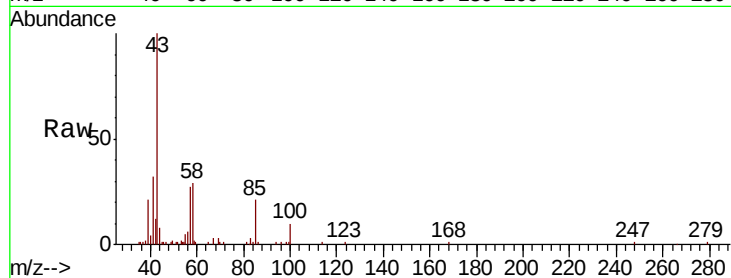
ClientSampleId :

Tot Ion: 43 Resp: 81476

Ion Ratio Lower Upper

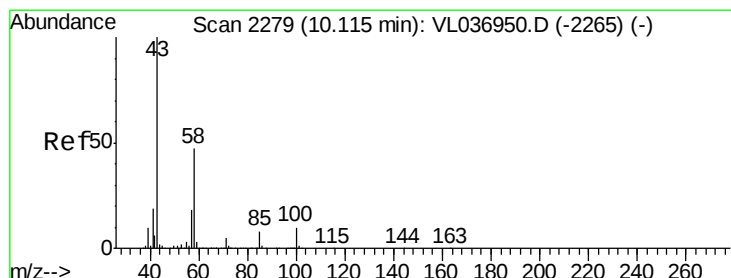
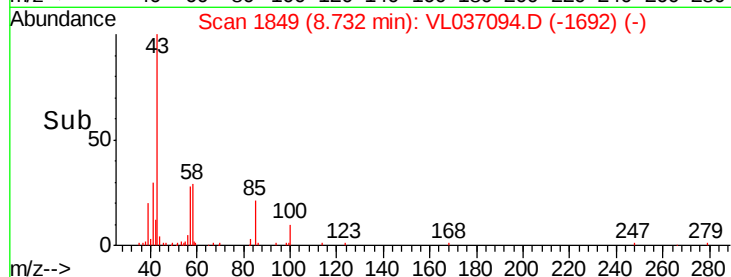
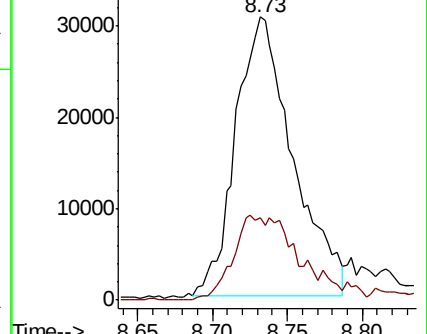
43 100

58 35.5 29.4 44.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#51

2-Hexanone

Concen: 1.476 ppbv

RT: 10.40 min Scan# 2369

Delta R.T. 0.29 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

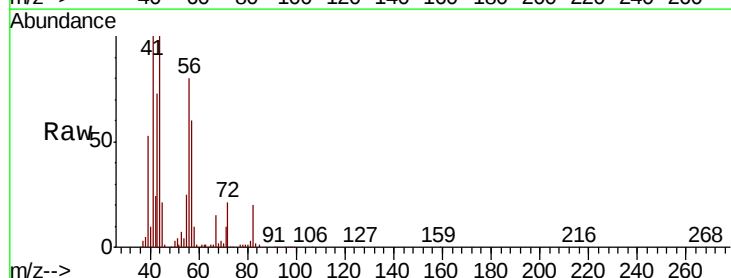
Tgt Ion: 43 Resp: 180077

Ion Ratio Lower Upper

43 100

58 14.8 41.1 61.7#

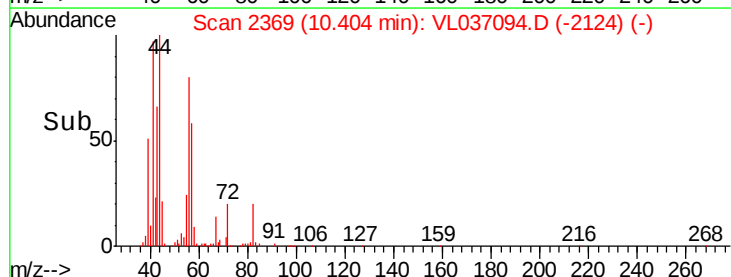
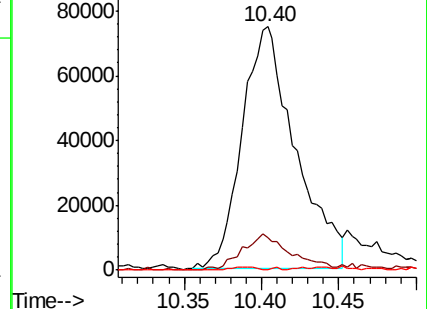
98 0.7 0.1 0.1#

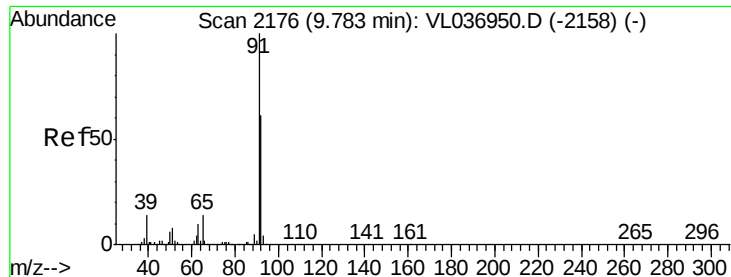


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 98.20 (97.90 to 98.90): VL0





#53

Toluene

Concen: 5.308 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.00 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

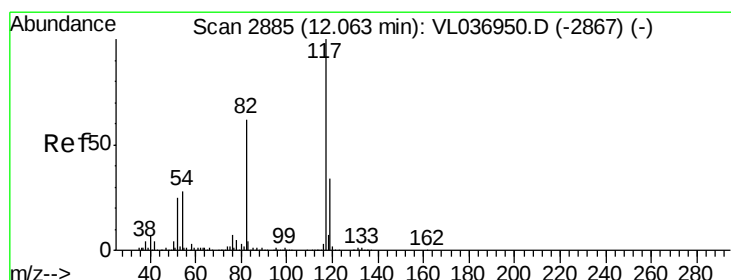
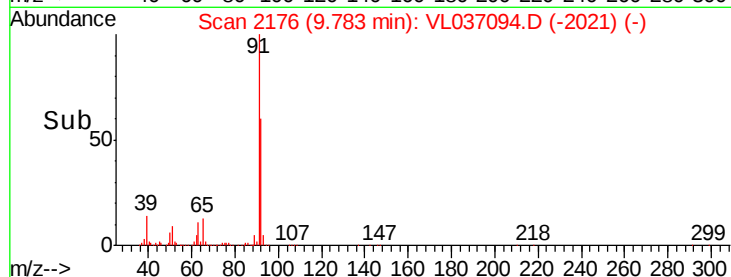
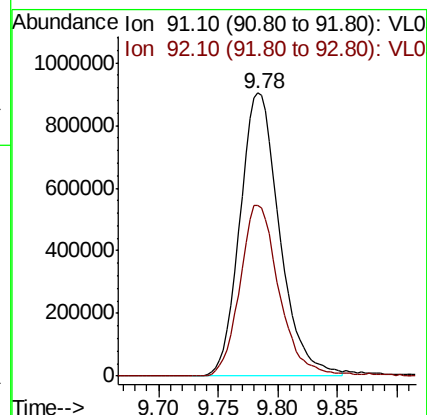
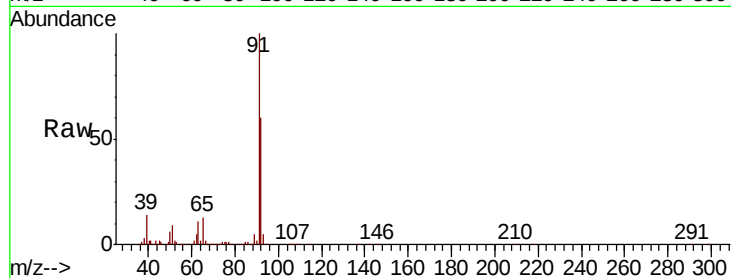
ClientSampled :

Tot Ion: 91 Resp: 2089702

Ion Ratio Lower Upper

91 100

92 60.6 49.5 74.3



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2885

Delta R.T. -0.00 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

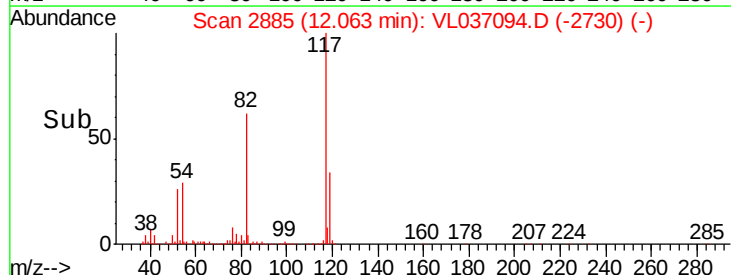
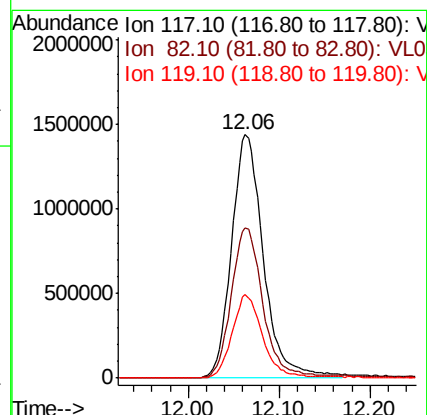
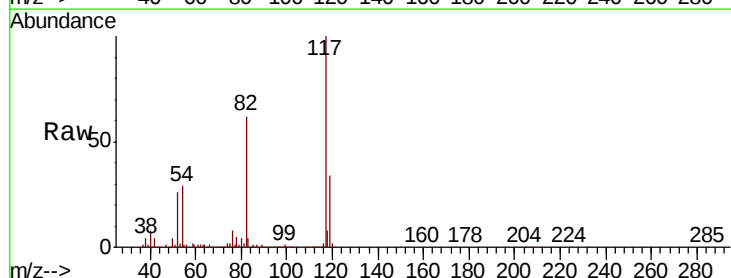
Tgt Ion: 117 Resp: 3511300

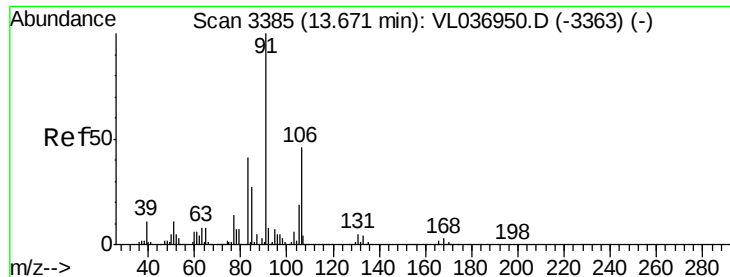
Ion Ratio Lower Upper

117 100

82 62.6 52.6 79.0

119 33.8 46.6 70.0#

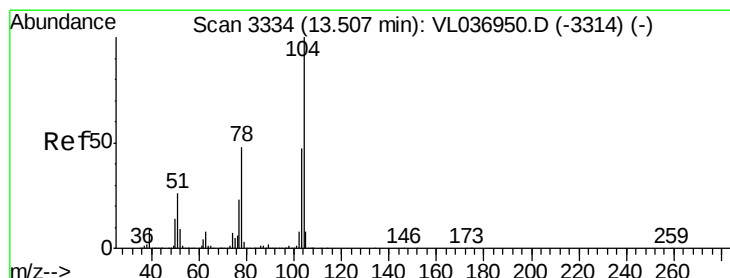
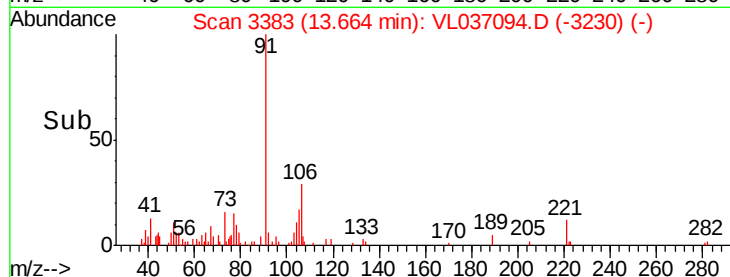
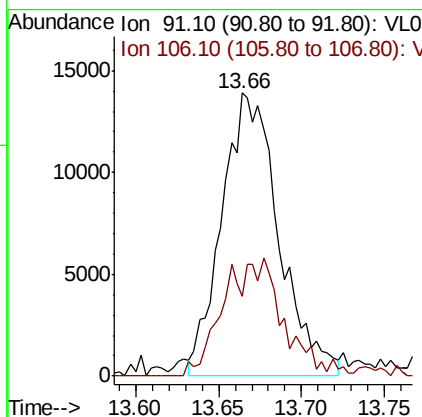
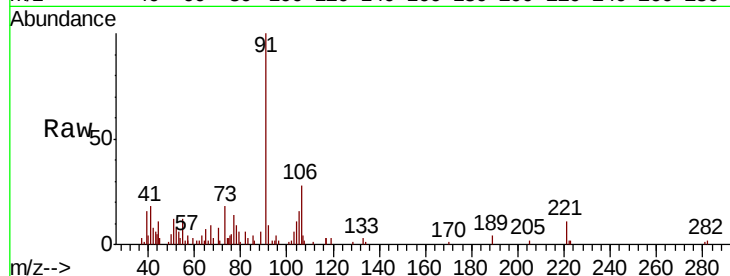




#60
o-Xylene
Concen: 0.085 ppbv
RT: 13.66 min Scan# 3383
Delta R.T. -0.01 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

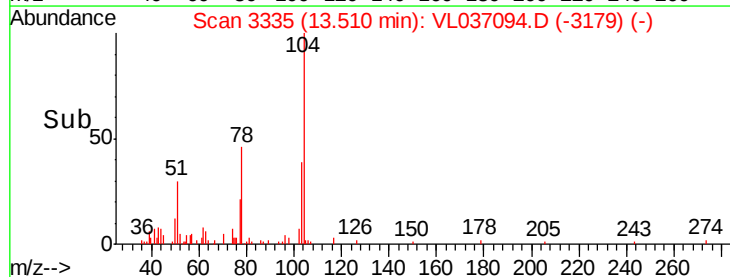
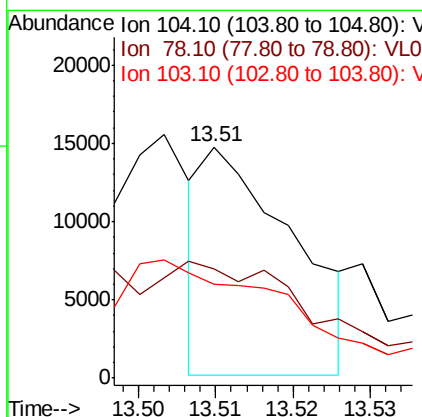
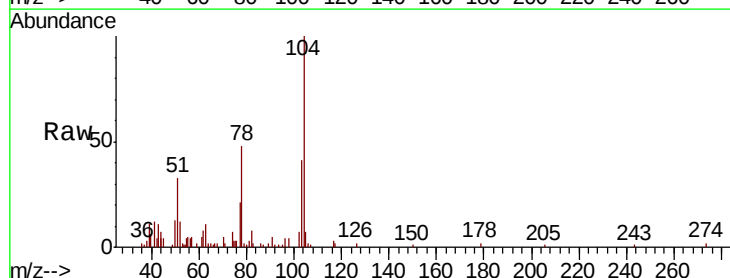
Instrument :
MSVOA_L
ClientSampleId :

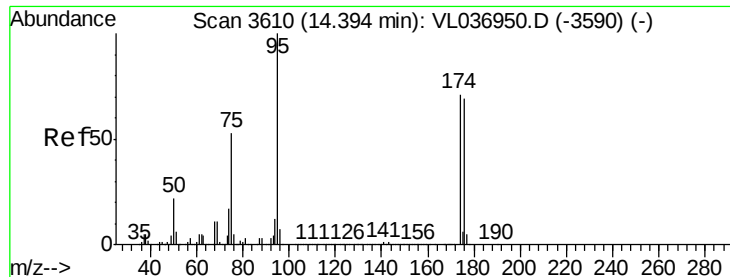
Tot Ion: 91 Resp: 33268
Ion Ratio Lower Upper
91 100
106 45.6 23.4 70.3



#61
Styrene
Concen: 0.054 ppbv
RT: 13.51 min Scan# 3335
Delta R.T. 0.00 min
Lab File: VL037094.D
Acq: 2 Jun 2021 6:52

Tgt Ion:104 Resp: 11783
Ion Ratio Lower Upper
104 100
78 167.5 39.0 58.6#
103 0.0 38.0 57.0#



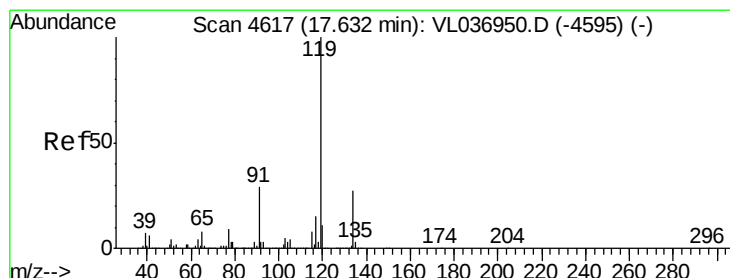
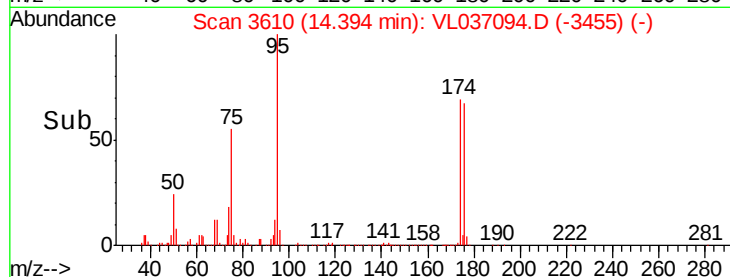
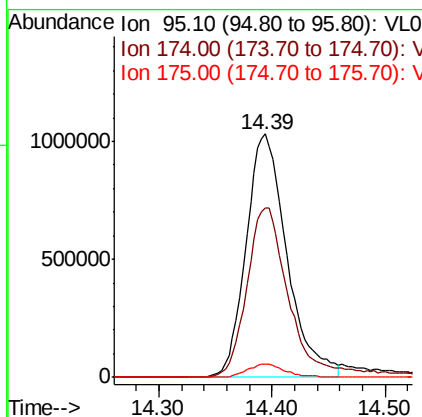
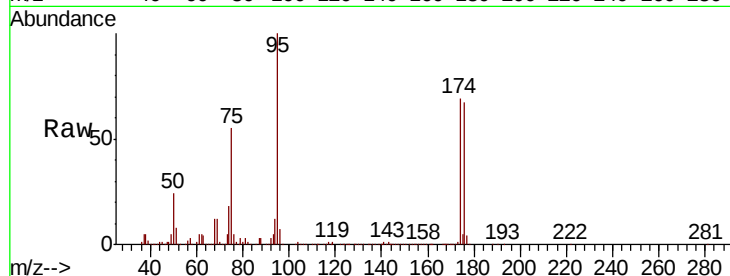


#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.819 ppbv
 RT: 14.39 min Scan# 3610
 Delta R.T. -0.00 min
 Lab File: VL037094.D
 Acq: 2 Jun 2021 6:52

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion: 95 Resp: 2589961

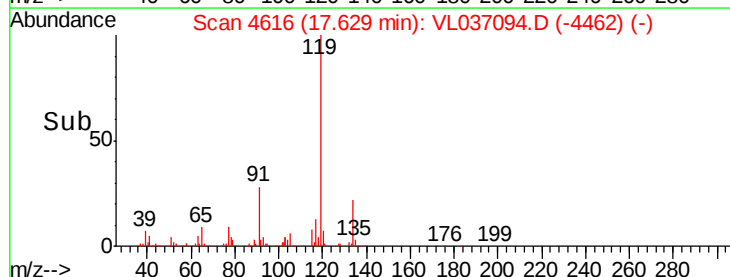
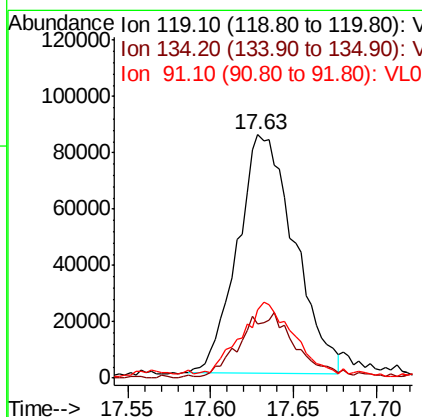
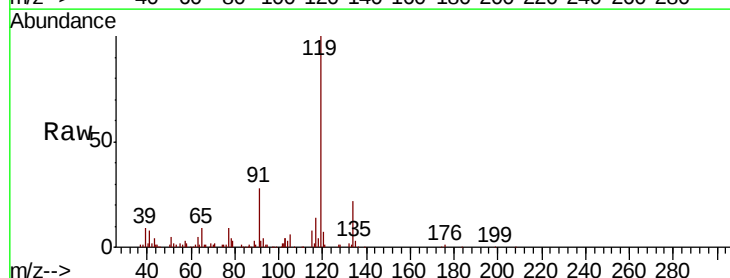
Ion	Ratio	Lower	Upper
95	100		
174	74.9	58.4	87.6
175	5.4	4.4	6.6

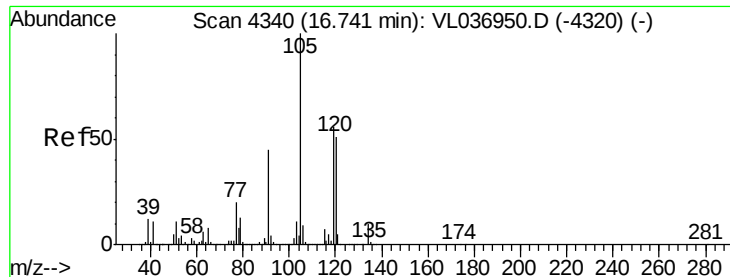


#69
 p-Isopropyltoluene
 Concen: 0.342 ppbv
 RT: 17.63 min Scan# 4616
 Delta R.T. -0.00 min
 Lab File: VL037094.D
 Acq: 2 Jun 2021 6:52

Tgt Ion: 119 Resp: 203189

Ion	Ratio	Lower	Upper
119	100		
134	27.7	21.2	31.8
91	30.6	22.2	33.4





#74

1,2,4-Trimethylbenzene

Concen: 0.057 ppbv

RT: 16.74 min Scan# 4340

Delta R.T. -0.00 min

Lab File: VL037094.D

Acq: 2 Jun 2021 6:52

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 25526

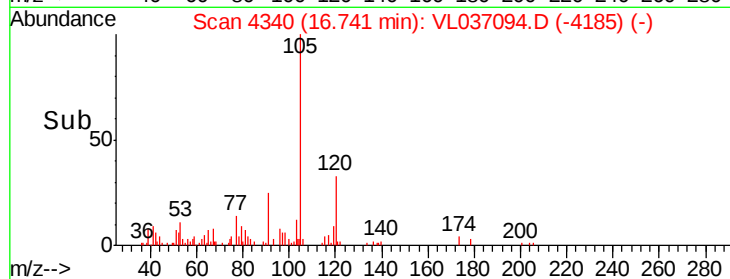
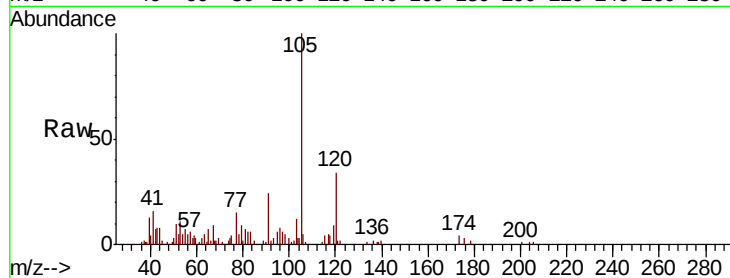
Ion Ratio Lower Upper

105 100

120 33.5 40.6 61.0#

91 21.1 37.4 56.0#

77 11.9 16.2 24.4#



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

