

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032921\
 Data File : VL036544.D
 Acq On : 29 Mar 2021 18:09
 Operator : SY/AP
 Sample : M1760-08
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

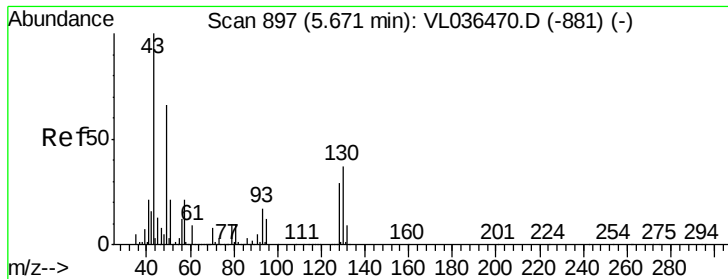
Quant Time: Mar 30 06:41:40 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1548393	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.17	114	3457062	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.07	117	3056315	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	2530365	10.39	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.90%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	69691	0.276 ppbv	97
3) Chlorodifluoromethane	2.98	51	96088	0.332 ppbv #	85
4) Chloromethane	3.13	50	48641	0.476 ppbv	98
9) Propene	3.01	41	69521	0.754 ppbv #	81
11) Trichlorofluoromethane	3.95	101	22612	0.088 ppbv	87
12) 1,1,2-Trichlorotrifluoroet	4.47	101	7331	0.045 ppbv #	61
13) Ethanol	3.60	45	189269	17.233 ppbv	98
15) Acetone	3.85	43	516168	3.387 ppbv	99
16) 1,3-Butadiene	3.31	39	2574	0.024 ppbv #	1
19) Isopropyl Alcohol	3.98	45	68127	0.813 ppbv #	75
20) Methylene Chloride	4.34	84	510706	7.157 ppbv	97
23) Vinyl Acetate	5.05	43	18803	0.072 ppbv #	32
25) Ethyl Acetate	5.68	43	510493	1.409 ppbv #	79
26) Hexane	5.68	57	678791	4.037 ppbv #	47
30) Cyclohexane	7.12	84	2936	0.022 ppbv #	1
34) 2-Butanone	5.25	43	45370	0.269 ppbv #	86
35) Carbon Tetrachloride	7.01	117	7644	0.029 ppbv	99
36) Benzene	6.88	78	47903	0.150 ppbv	95
39) 1,2-Dichloropropane	7.17	63	951120	7.354 ppbv #	24
41) Tetrahydrofuran	5.68	42	291990	3.753 ppbv #	52
44) 2,2,4-Trimethylpentane	7.86	57	11568	0.021 ppbv #	1
53) Toluene	9.80	91	243117	0.716 ppbv	99

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.02 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

ClientSampleId :

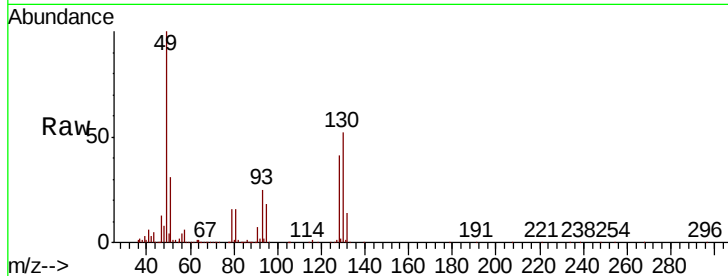
Tot Ion: 49 Resp: 1548393

Ion Ratio Lower Upper

49 100

128 43.9 23.5 70.6

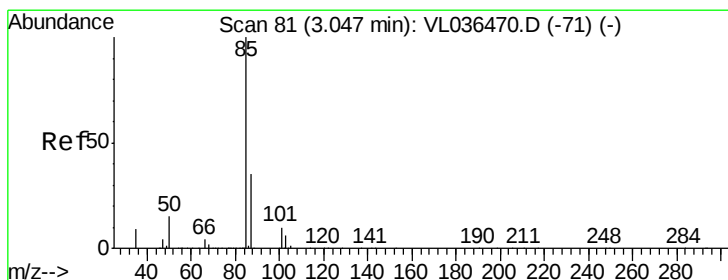
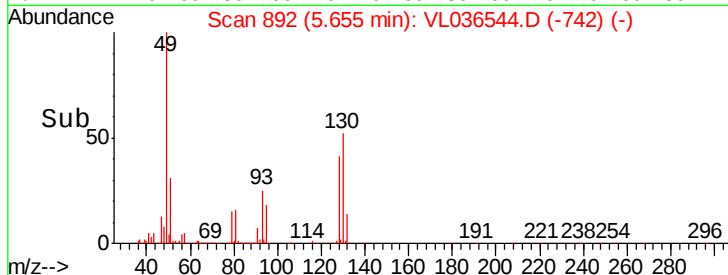
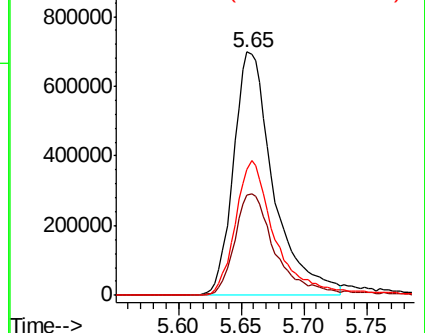
130 57.4 29.1 87.4



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: 0.276 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.00 min

Lab File: VL036544.D

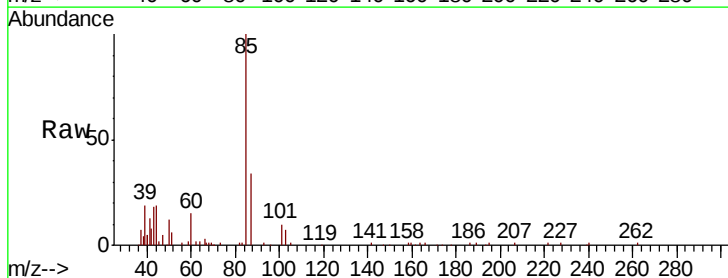
Acq: 29 Mar 2021 18:09

Tgt Ion: 85 Resp: 69691

Ion Ratio Lower Upper

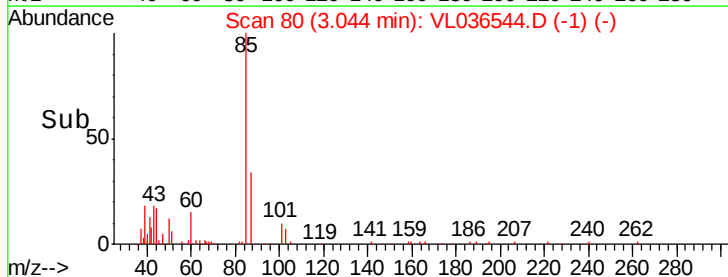
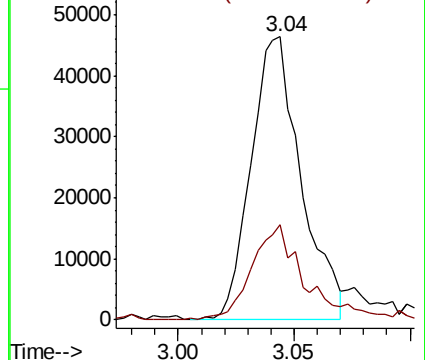
85 100

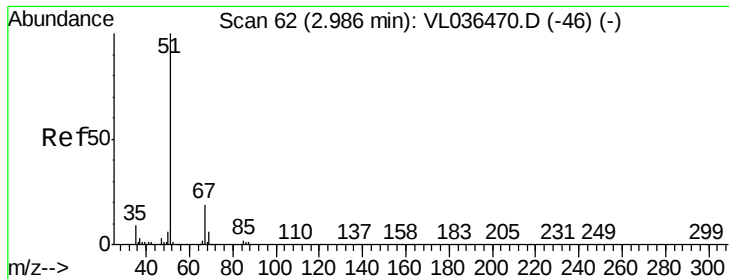
87 32.8 27.8 41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

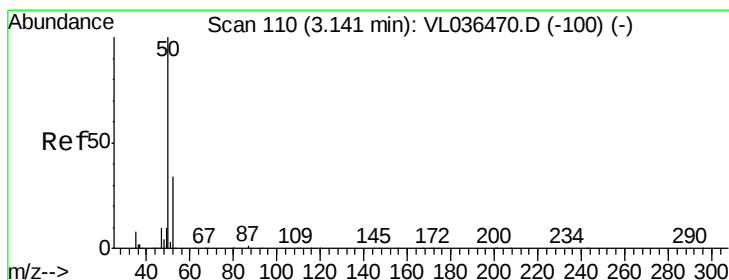
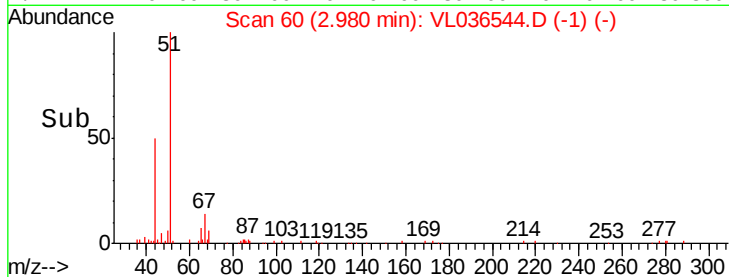
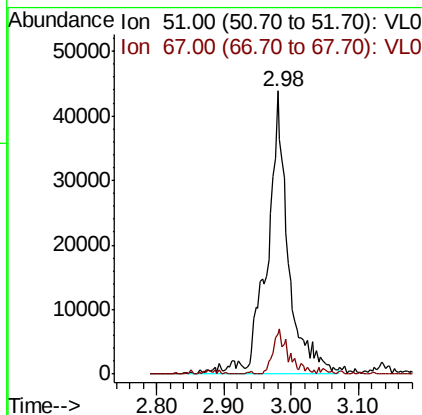
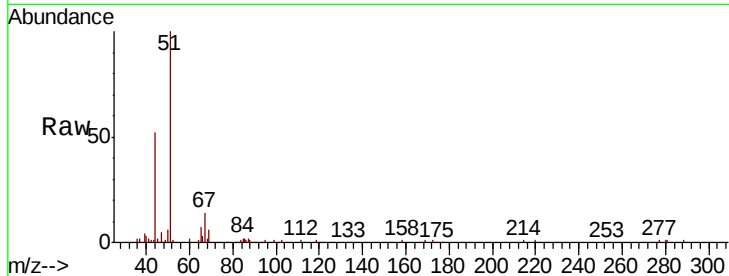




#3
 Chlorodifluoromethane
 Concen: 0.332 ppbv
 RT: 2.98 min Scan# 60
 Delta R.T. -0.01 min
 Lab File: VL036544.D
 Acq: 29 Mar 2021 18:09

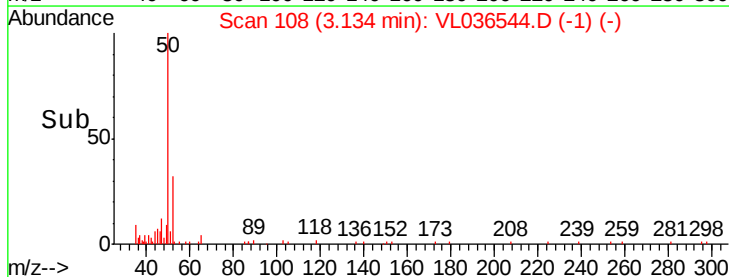
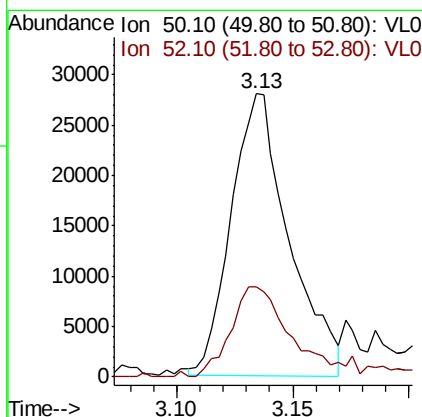
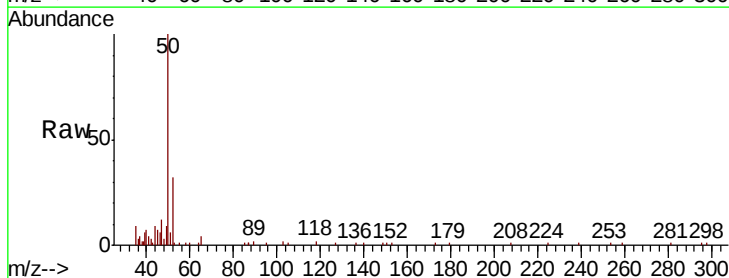
Instrument :
 MSVOA_L
 ClientSampleId :

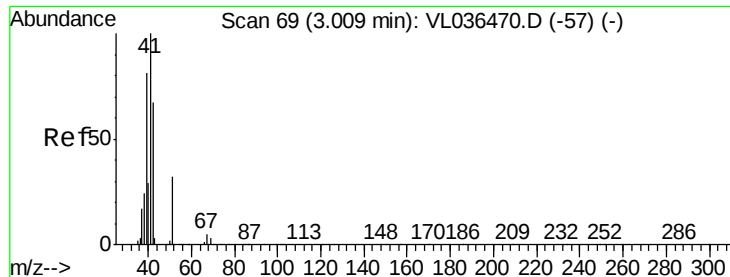
Tot Ion: 51 Resp: 96088
 Ion Ratio Lower Upper
 51 100
 67 11.9 14.7 22.1#



#4
 Chloromethane
 Concen: 0.476 ppbv
 RT: 3.13 min Scan# 108
 Delta R.T. -0.01 min
 Lab File: VL036544.D
 Acq: 29 Mar 2021 18:09

Tgt Ion: 50 Resp: 48641
 Ion Ratio Lower Upper
 50 100
 52 32.9 27.0 40.6





#9

Propene

Concen: 0.754 ppbv

RT: 3.01 min Scan# 69

Delta R.T. -0.00 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

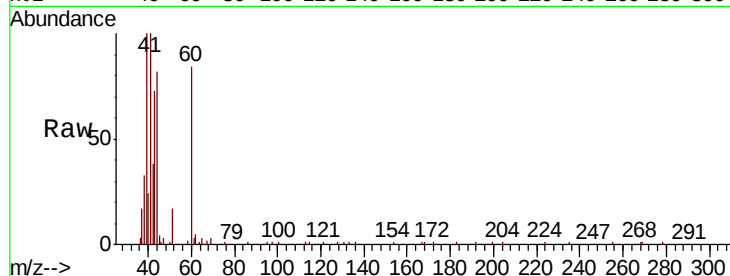
ClientSampleId :

Tot Ion: 41 Resp: 69521

Ion Ratio Lower Upper

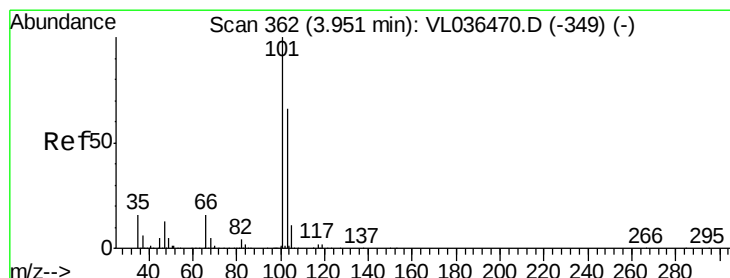
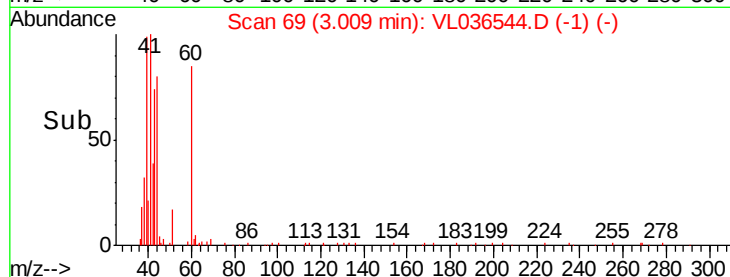
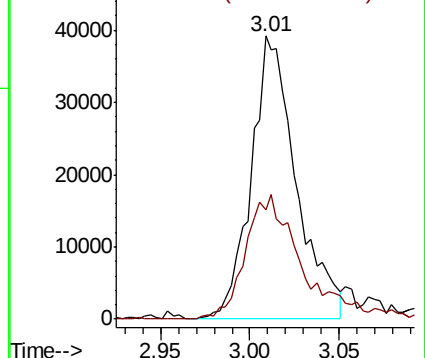
41 100

42 55.5 57.0 85.4#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#11

Trichlorofluoromethane

Concen: 0.088 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.00 min

Lab File: VL036544.D

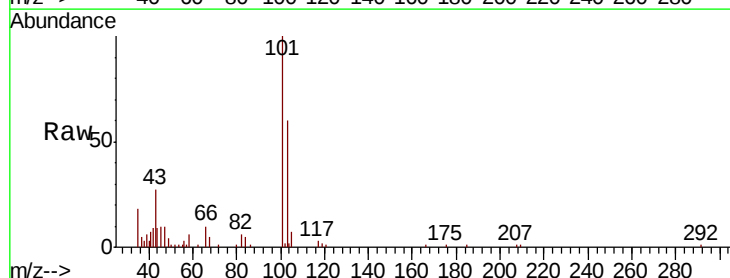
Acq: 29 Mar 2021 18:09

Tgt Ion: 101 Resp: 22612

Ion Ratio Lower Upper

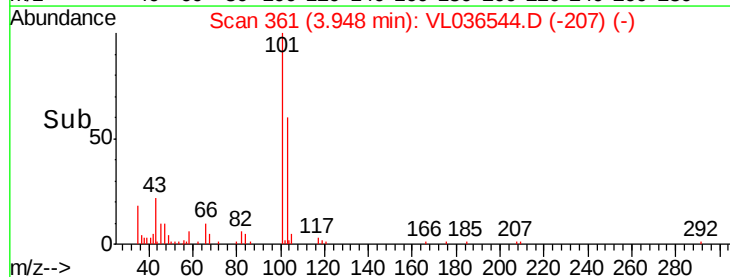
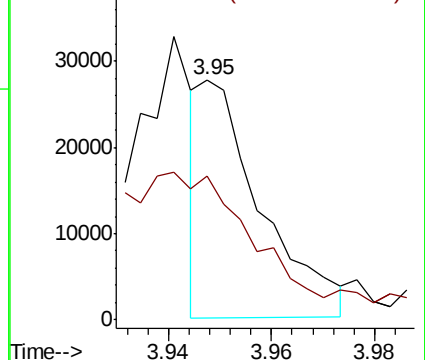
101 100

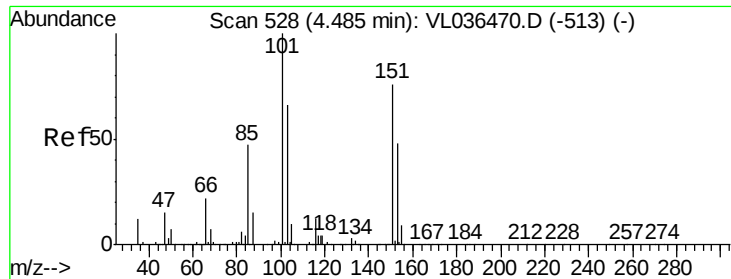
103 55.0 52.5 78.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.045 ppbv

RT: 4.47 min Scan# 525

Delta R.T. -0.01 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

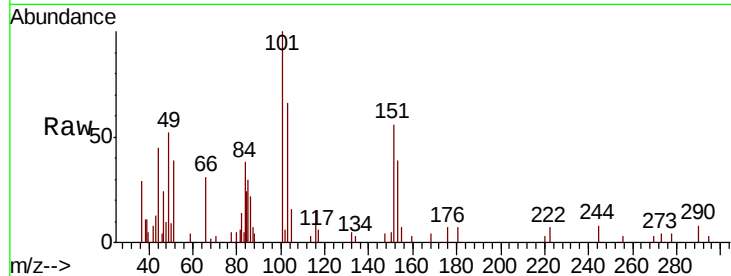
ClientSampleId :

Tot Ion:101 Resp: 7331

Ion Ratio Lower Upper

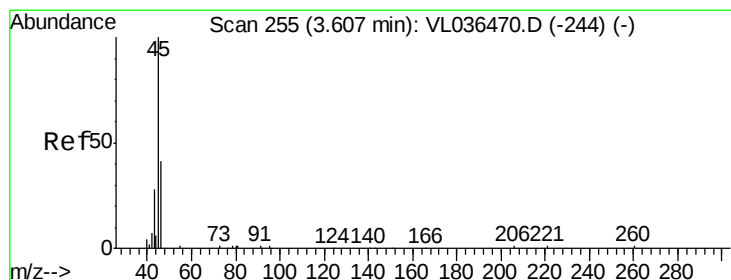
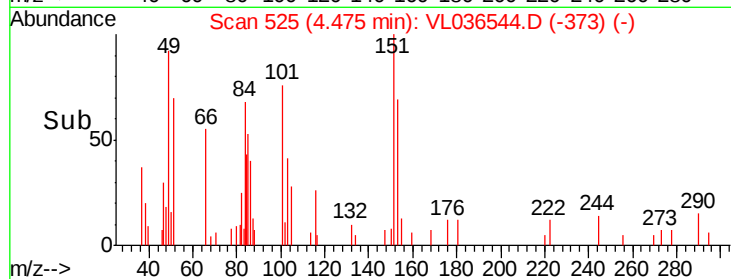
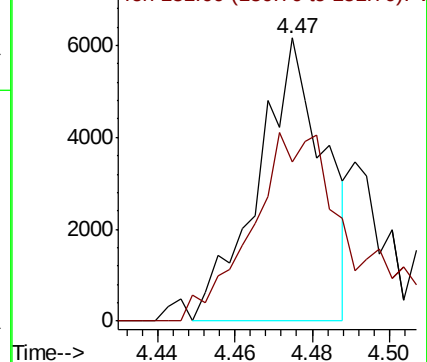
101 100

151 109.7 60.9 91.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 17.233 ppbv

RT: 3.60 min Scan# 254

Delta R.T. -0.00 min

Lab File: VL036544.D

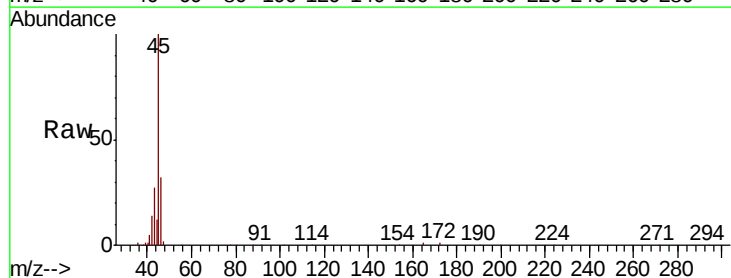
Acq: 29 Mar 2021 18:09

Tgt Ion: 45 Resp: 189269

Ion Ratio Lower Upper

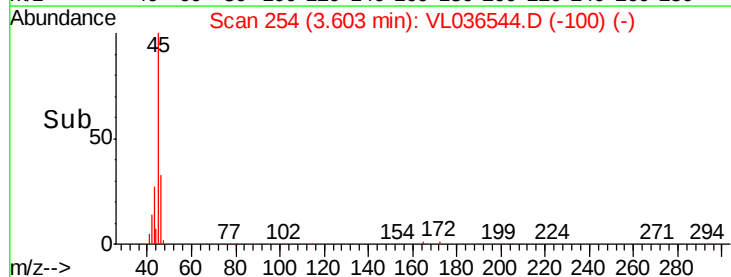
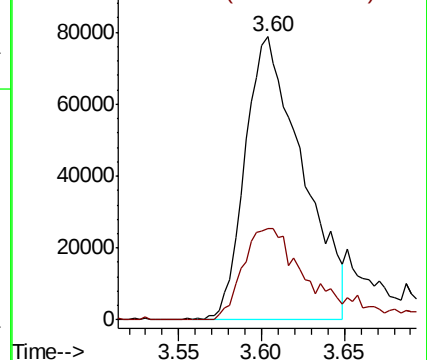
45 100

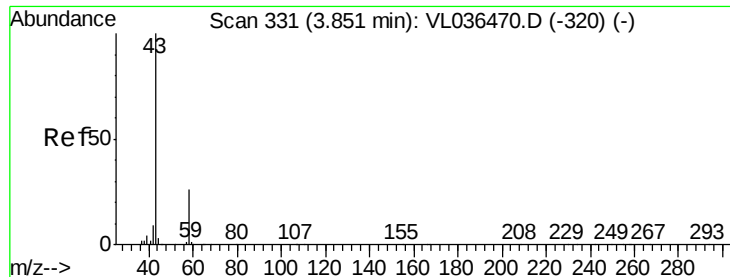
46 40.3 16.6 66.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 3.387 ppbv

RT: 3.85 min Scan# 330

Delta R.T. -0.00 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

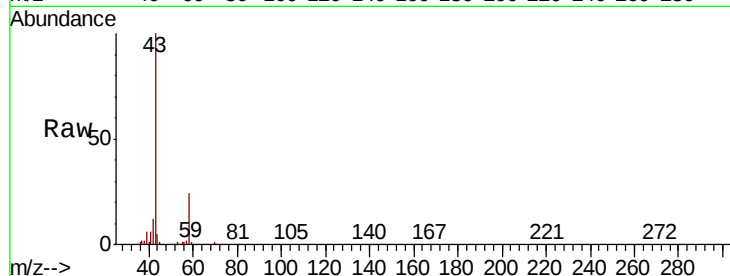
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 516168

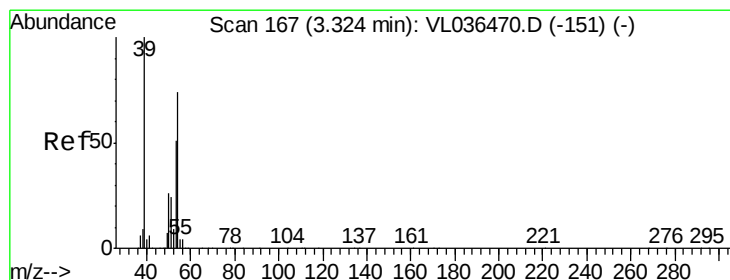
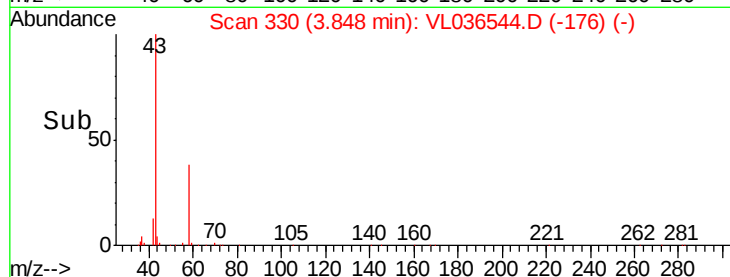
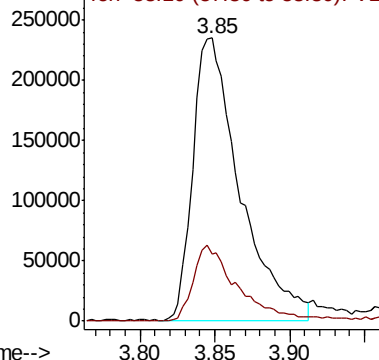
Ion Ratio Lower Upper

43 100

58 25.7 21.2 31.8



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.024 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.01 min

Lab File: VL036544.D

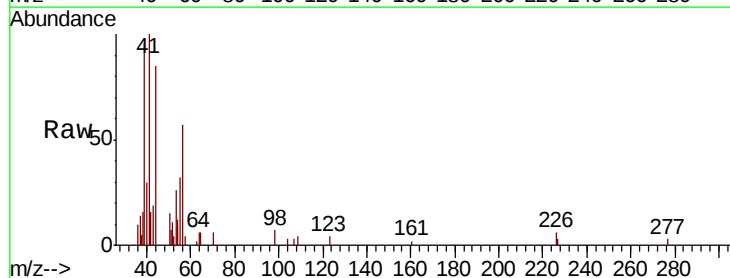
Acq: 29 Mar 2021 18:09

Tgt Ion: 39 Resp: 2574

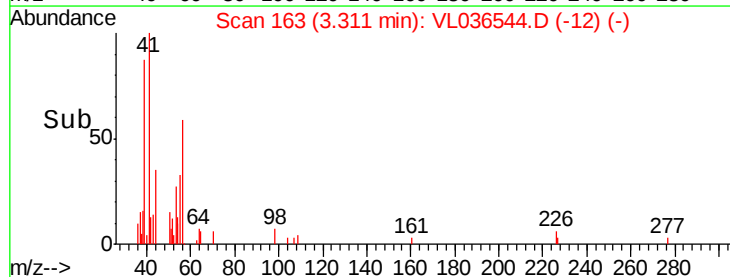
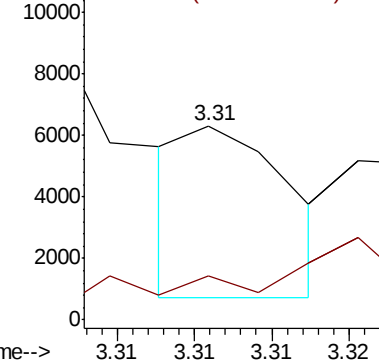
Ion Ratio Lower Upper

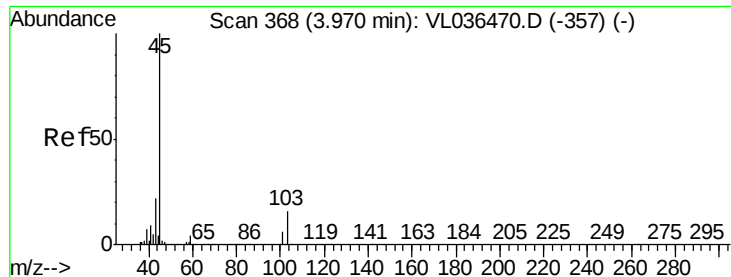
39 100

54 214.1 58.8 88.2#



Abundance Ion 39.10 (38.80 to 39.80): VL0
Ion 54.10 (53.80 to 54.80): VL0





#19

Isopropyl Alcohol

Concen: 0.813 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.01 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

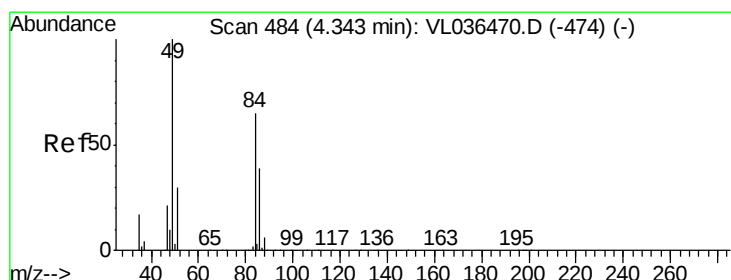
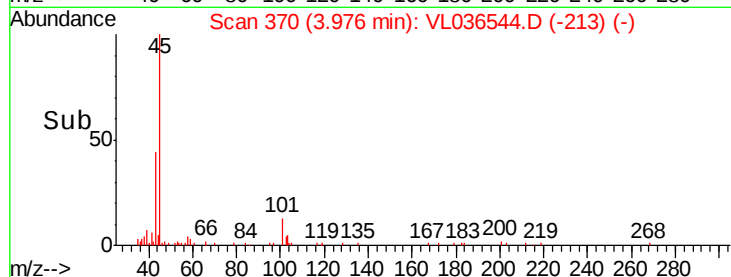
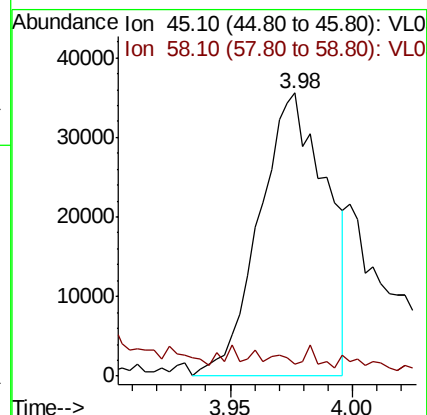
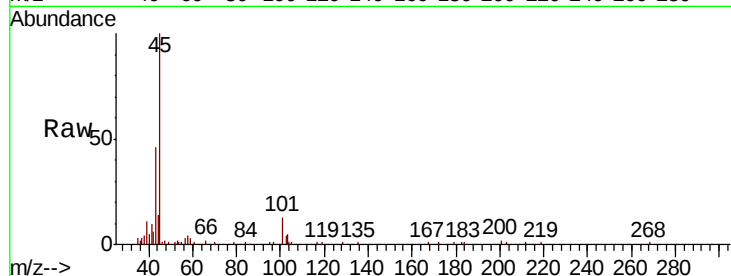
ClientSampleId :

Tot Ion: 45 Resp: 68127

Ion Ratio Lower Upper

45 100

58 11.9 2.9 4.3#



#20

Methylene Chloride

Concen: 7.157 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.01 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Tgt Ion: 84 Resp: 510706

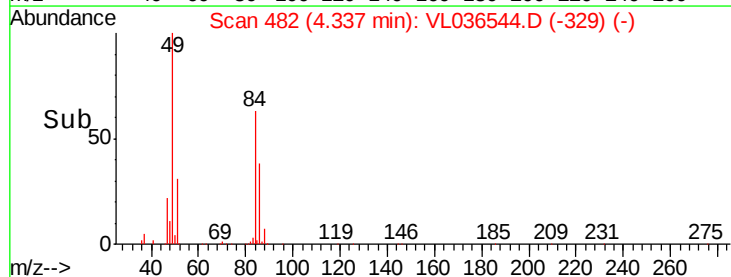
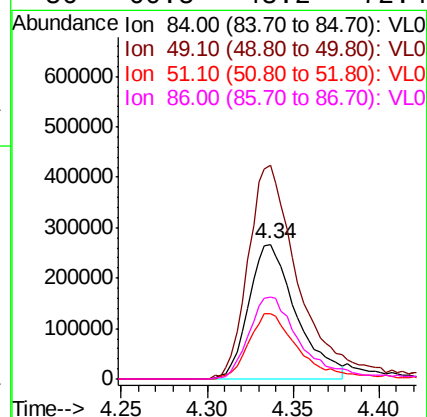
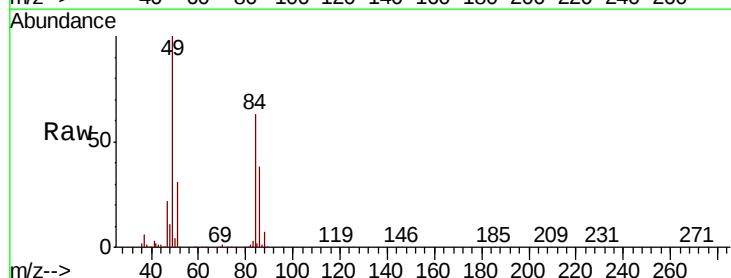
Ion Ratio Lower Upper

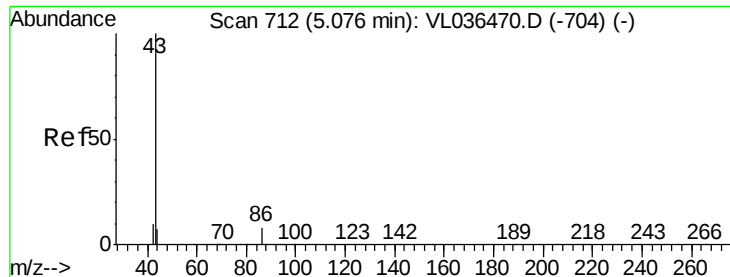
84 100

49 158.4 122.9 184.3

51 48.2 36.9 55.3

86 60.5 48.2 72.4





#23

Vinyl Acetate

Concen: 0.072 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.03 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 18803

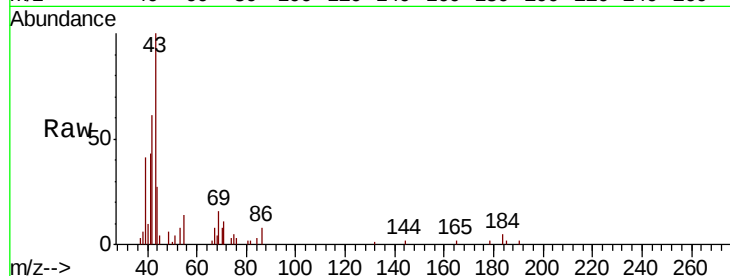
Ion Ratio Lower Upper

43 100

86 8.1 5.4 8.0#

42 59.5 8.5 12.7#

44 15.5 4.6 7.0#

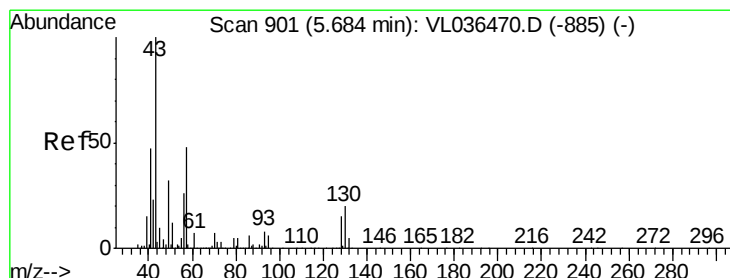
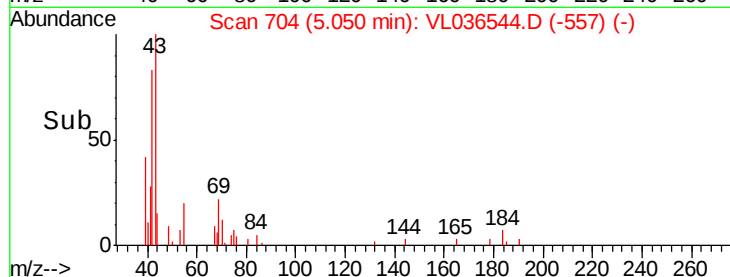
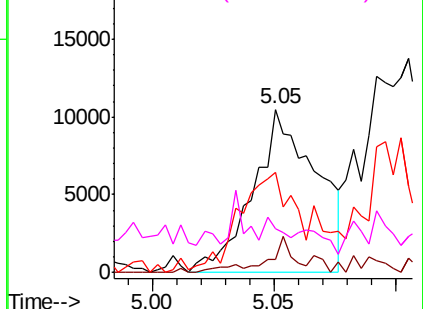


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 1.409 ppbv

RT: 5.68 min Scan# 899

Delta R.T. -0.01 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Tgt Ion: 43 Resp: 510493

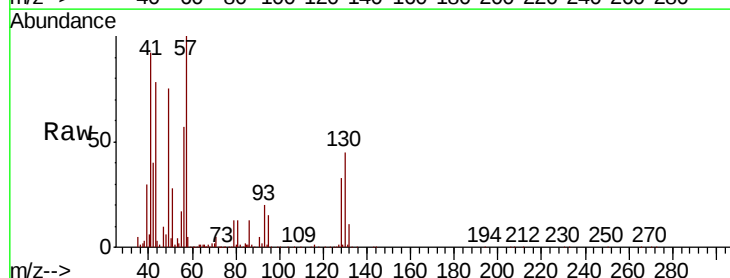
Ion Ratio Lower Upper

43 100

45 1.3 7.9 11.9#

61 0.7 7.4 11.2#

70 1.9 5.1 7.7#

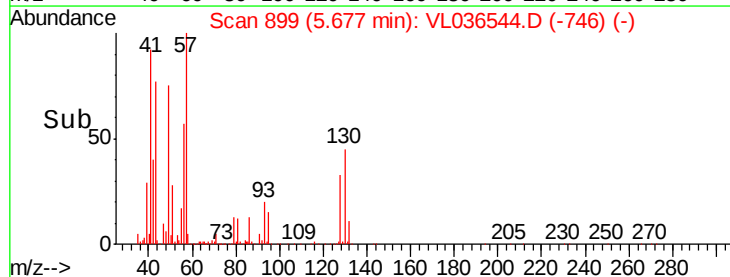
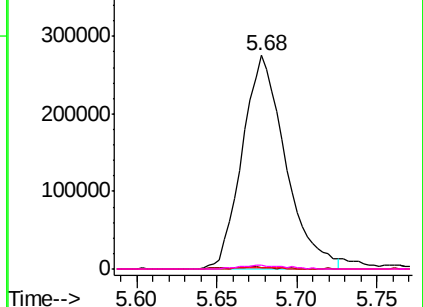


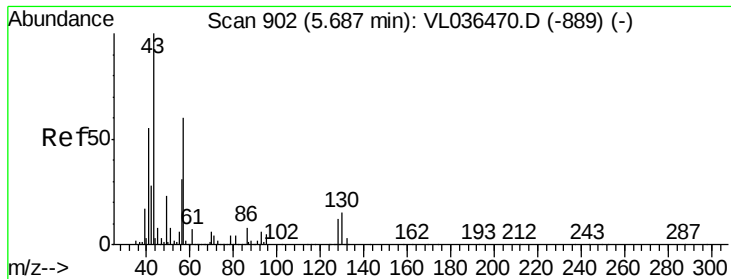
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

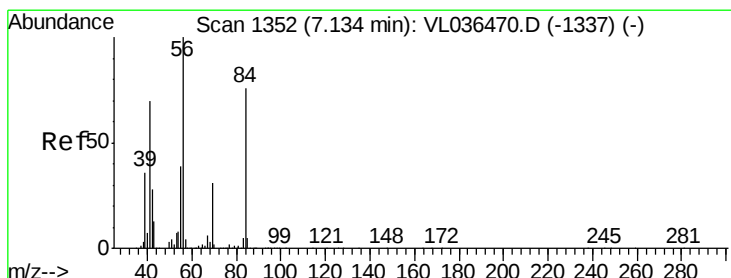
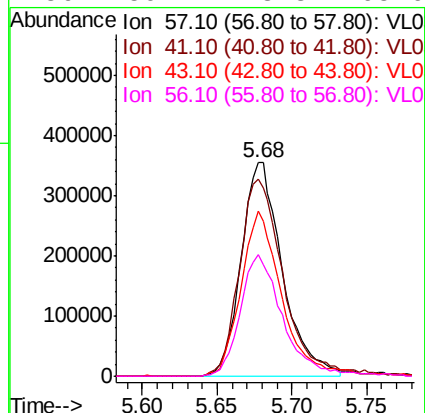
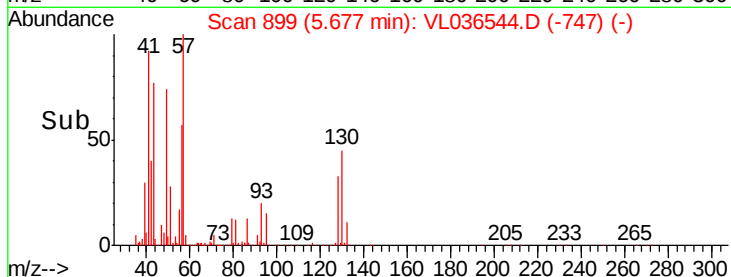
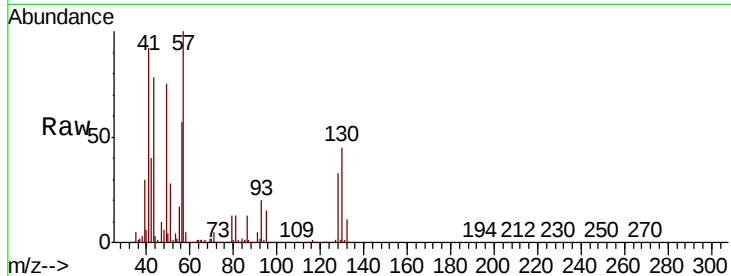




#26
Hexane
Concen: 4.037 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.01 min
Lab File: VL036544.D
Acq: 29 Mar 2021 18:09

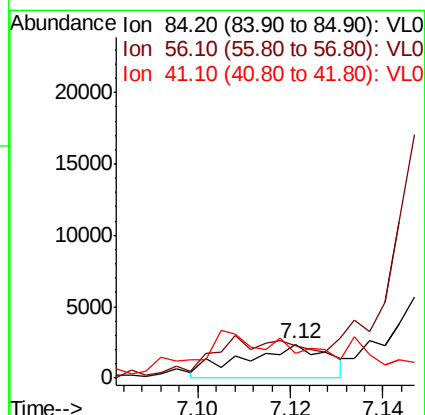
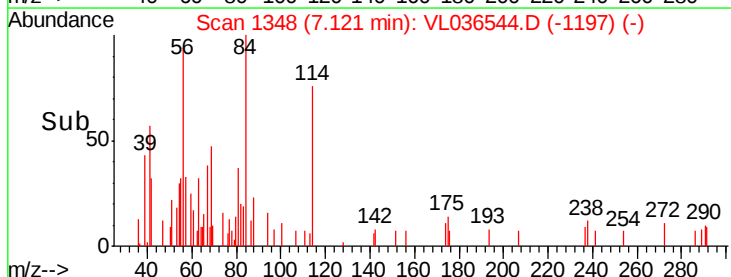
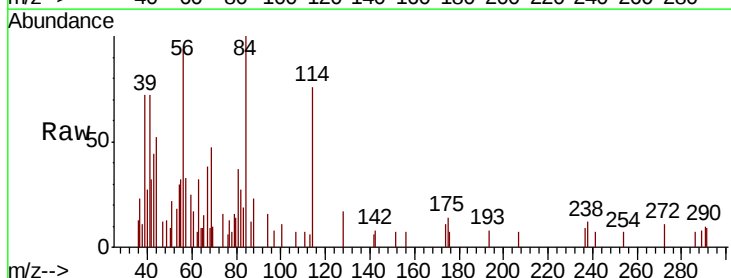
Instrument :
MSVOA_L
ClientSampleId :

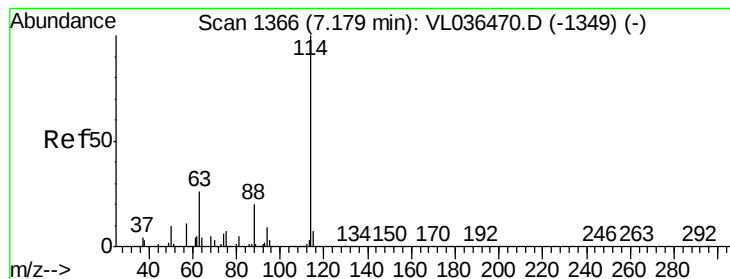
Tot Ion: 57 Resp: 678791
Ion Ratio Lower Upper
57 100
41 100.1 77.2 115.8
43 78.9 173.8 260.6#
56 59.1 43.8 65.6



#30
Cyclohexane
Concen: 0.022 ppbv
RT: 7.12 min Scan# 1348
Delta R.T. -0.01 min
Lab File: VL036544.D
Acq: 29 Mar 2021 18:09

Tgt Ion: 84 Resp: 2936
Ion Ratio Lower Upper
84 100
56 0.0 114.6 171.8#
41 0.0 75.3 112.9#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1362

Delta R.T. -0.01 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

ClientSampleId :

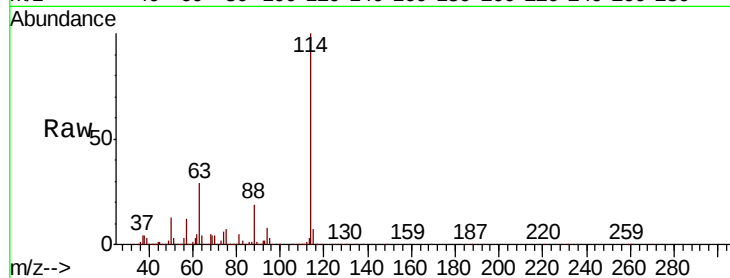
Tot Ion:114 Resp: 3457062

Ion Ratio Lower Upper

114 100

63 28.8 22.4 33.6

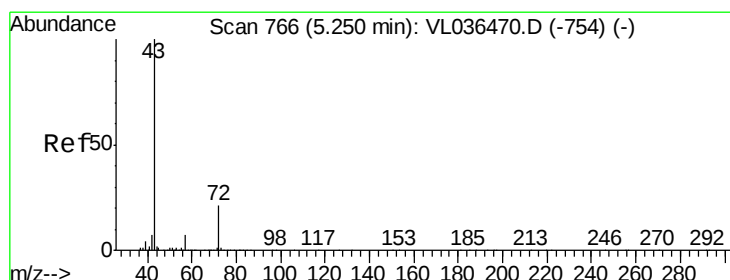
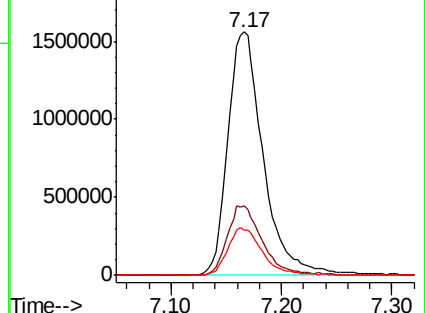
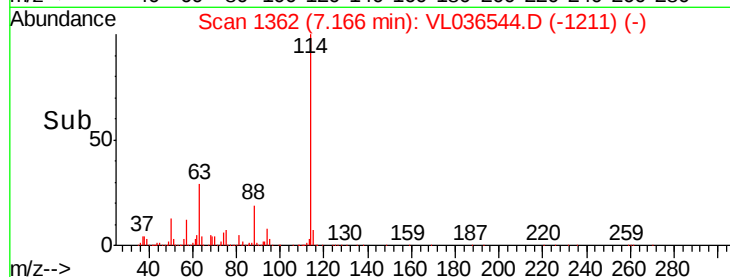
88 19.4 15.4 23.0



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.269 ppbv

RT: 5.25 min Scan# 765

Delta R.T. -0.00 min

Lab File: VL036544.D

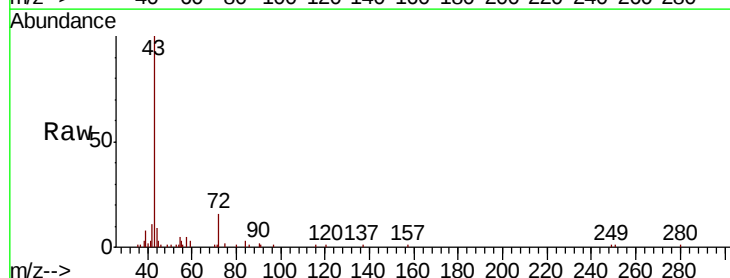
Acq: 29 Mar 2021 18:09

Tgt Ion: 43 Resp: 45370

Ion Ratio Lower Upper

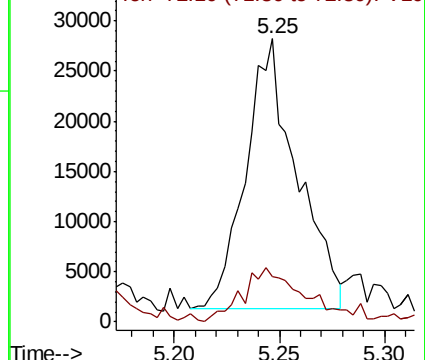
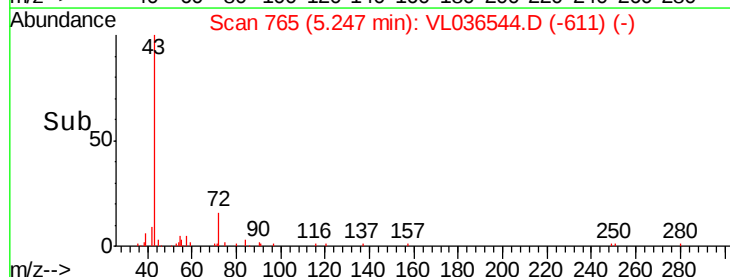
43 100

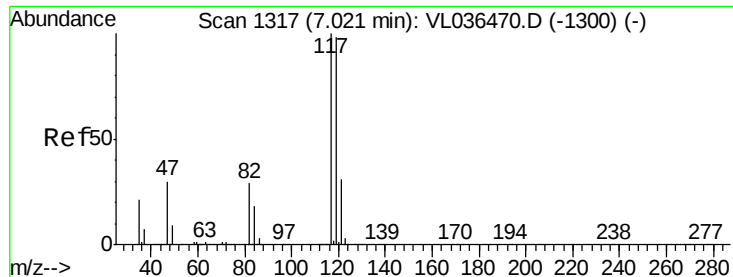
72 28.0 17.0 25.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.029 ppbv

RT: 7.01 min Scan# 1313

Delta R.T. -0.01 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

ClientSampleId :

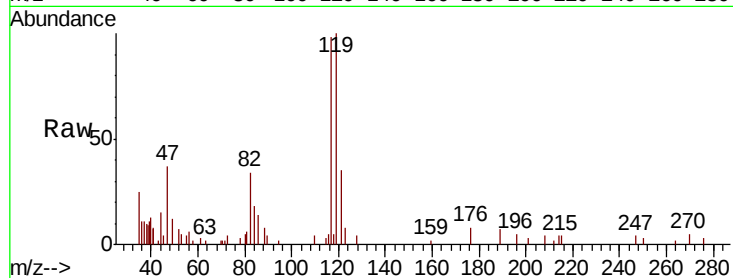
Tot Ion:117 Resp: 7644

Ion Ratio Lower Upper

117 100

119 99.0 78.2 117.2

121 30.9 24.5 36.7

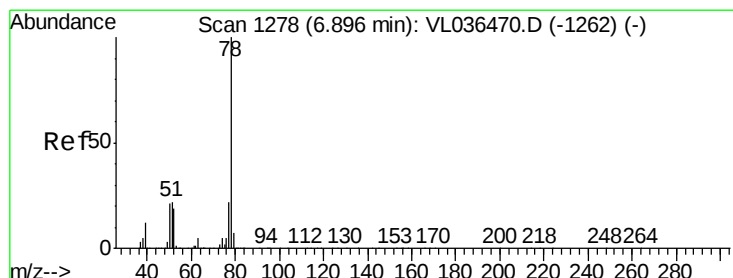
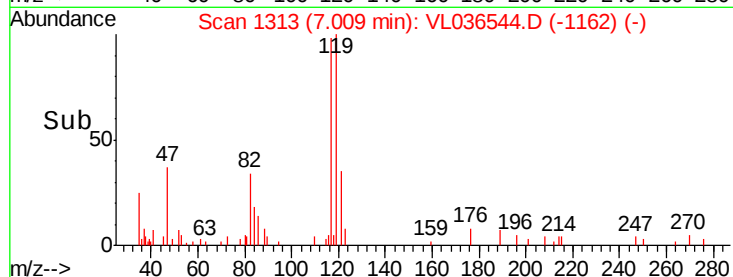
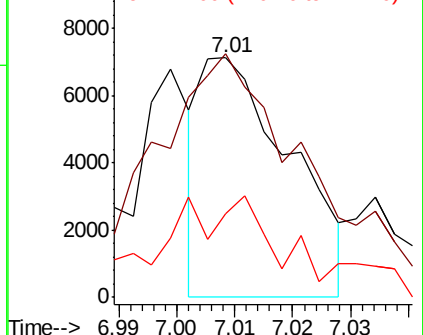


Abundance

Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.150 ppbv

RT: 6.88 min Scan# 1272

Delta R.T. -0.02 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

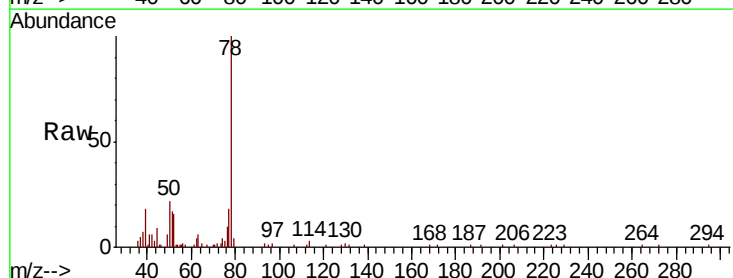
Tgt Ion: 78 Resp: 47903

Ion Ratio Lower Upper

78 100

77 18.3 18.0 27.0

50 20.9 16.5 24.7

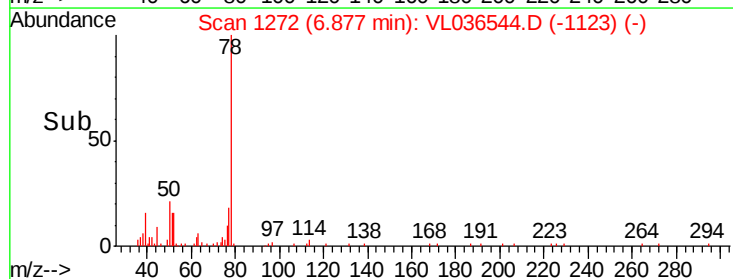
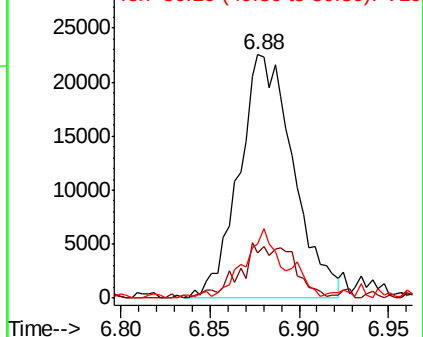


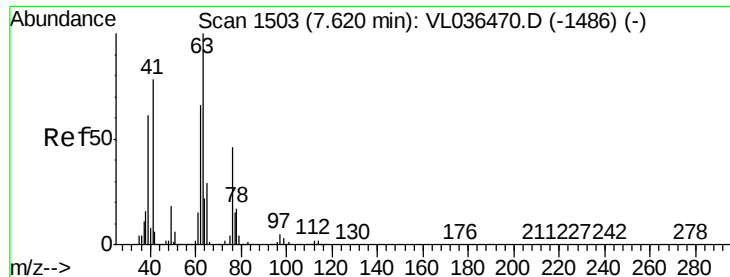
Abundance

Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

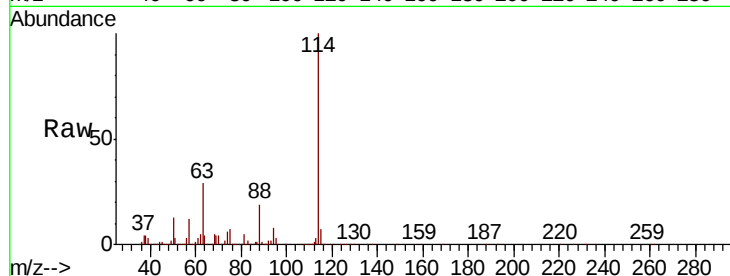




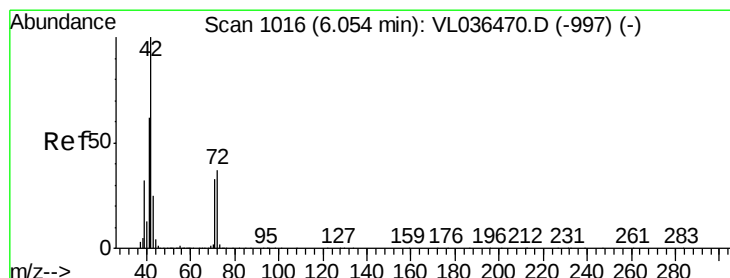
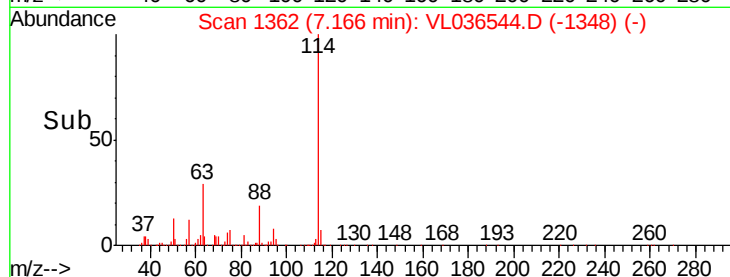
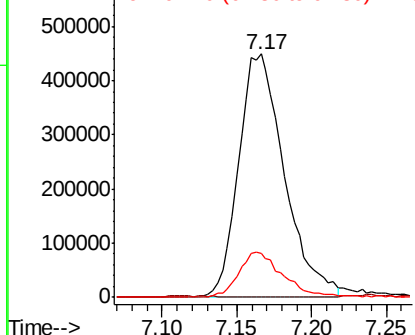
#39
 1,2-Dichloropropane
 Concen: 7.354 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.45 min
 Lab File: VL036544.D
 Acq: 29 Mar 2021 18:09

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion: 63 Resp: 951120
 Ion Ratio Lower Upper
 63 100
 41 0.0 62.4 93.6#
 62 17.9 52.8 79.2#

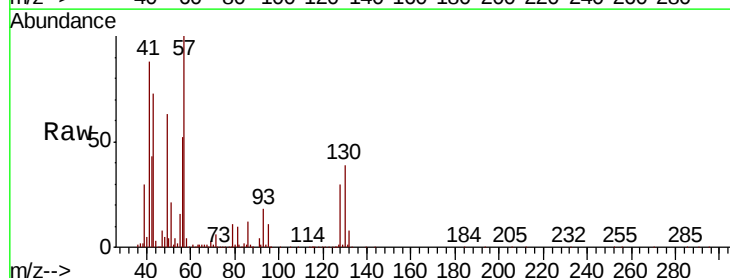


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

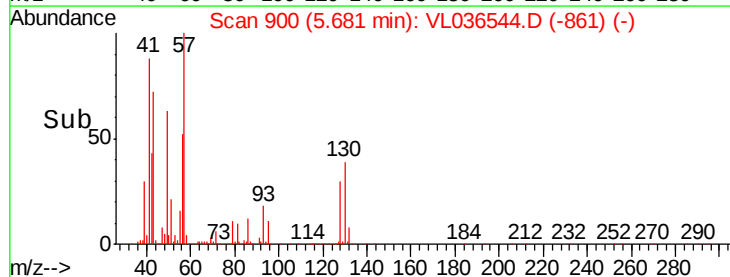
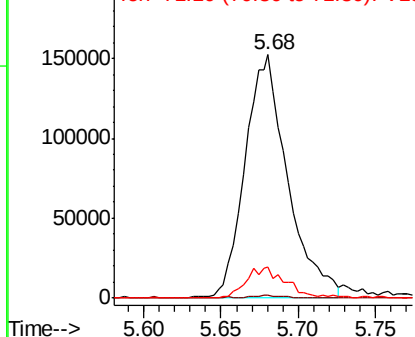


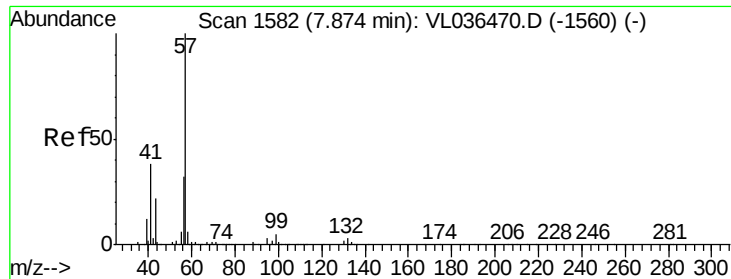
#41
 Tetrahydrofuran
 Concen: 3.753 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T. -0.37 min
 Lab File: VL036544.D
 Acq: 29 Mar 2021 18:09

Tgt Ion: 42 Resp: 291990
 Ion Ratio Lower Upper
 42 100
 72 1.1 27.6 41.4#
 71 12.6 27.0 40.4#



Abundance Ion 42.10 (41.80 to 42.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0
 Ion 71.10 (70.80 to 71.80): VL0

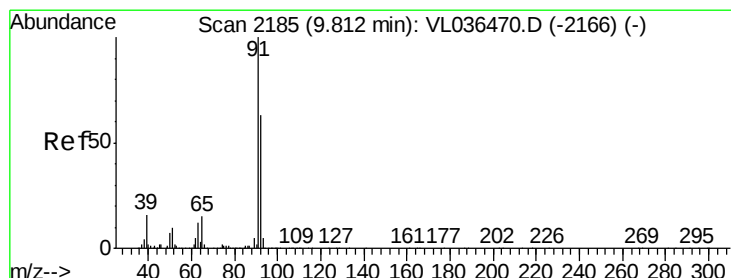
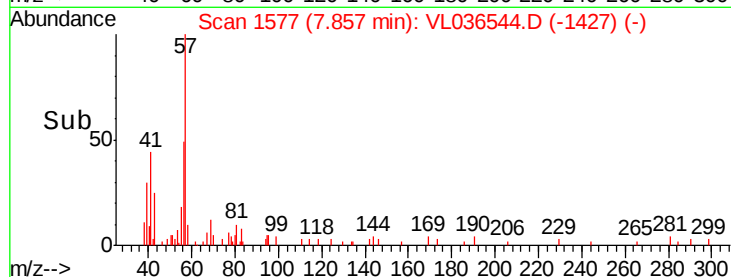
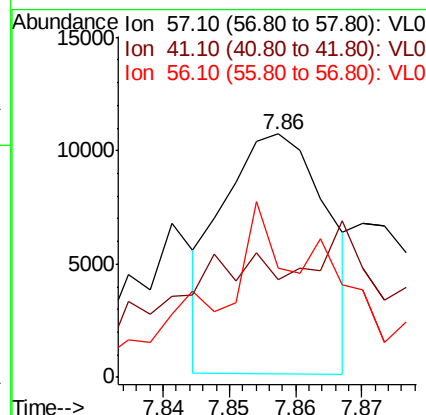
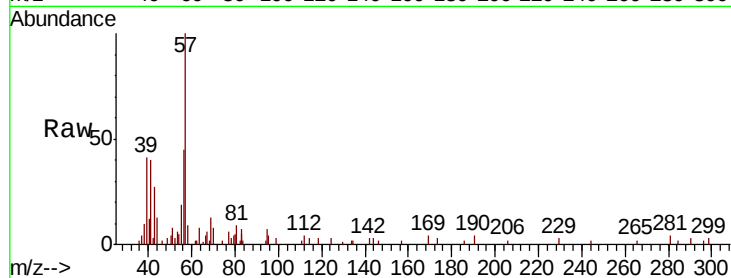




#44
 2,2,4-Trimethylpentane
 Concen: 0.021 ppbv
 RT: 7.86 min Scan# 1577
 Delta R.T. -0.02 min
 Lab File: VL036544.D
 Acq: 29 Mar 2021 18:09

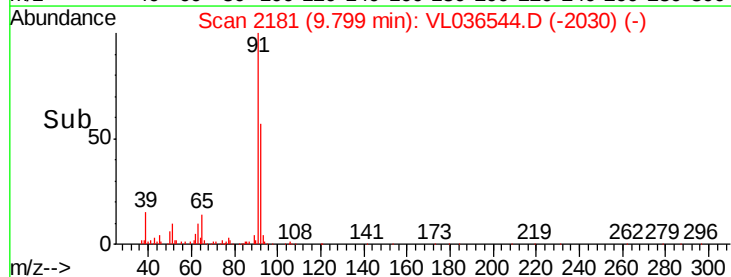
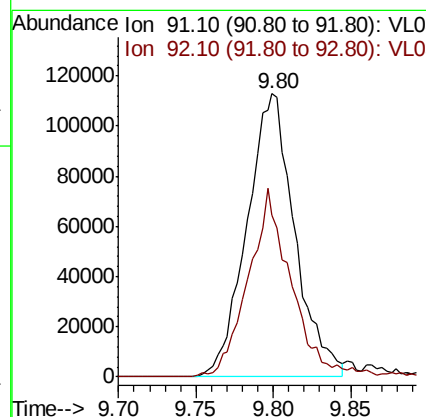
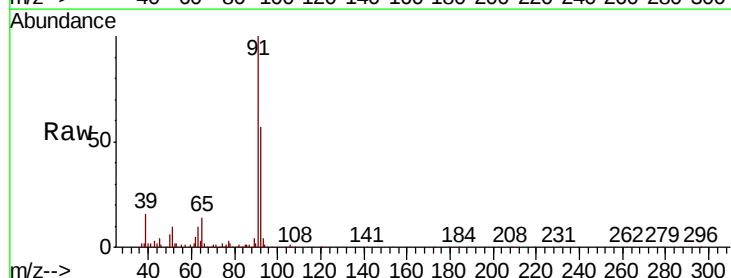
Instrument :
 MSVOA_L
 ClientSampleId :

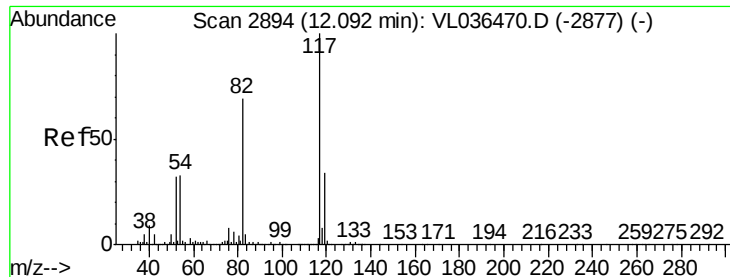
Tot Ion: 57 Resp: 11568
 Ion Ratio Lower Upper
 57 100
 41 0.0 28.8 43.2#
 56 115.4 26.1 39.1#



#53
 Toluene
 Concen: 0.716 ppbv
 RT: 9.80 min Scan# 2181
 Delta R.T. -0.01 min
 Lab File: VL036544.D
 Acq: 29 Mar 2021 18:09

Tgt Ion: 91 Resp: 243117
 Ion Ratio Lower Upper
 91 100
 92 60.4 48.8 73.2





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.02 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

Instrument :

MSVOA_L

ClientSampleId :

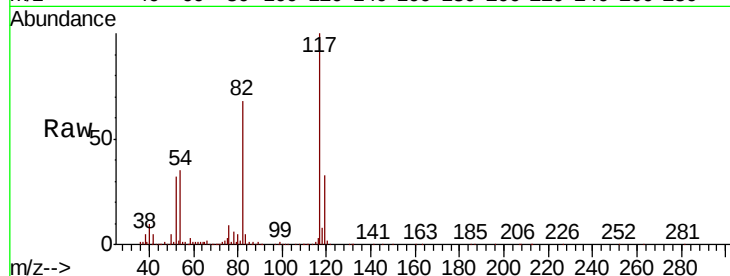
Tot Ion:117 Resp: 3056315

Ion Ratio Lower Upper

117 100

82 73.1 57.4 86.0

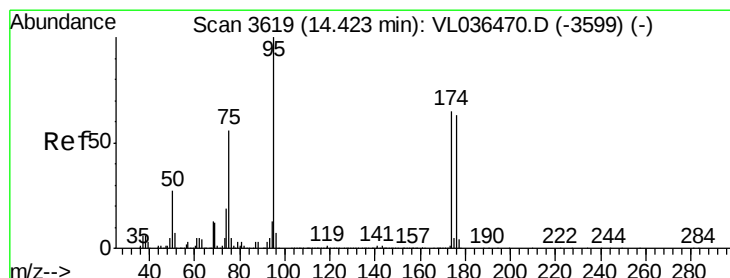
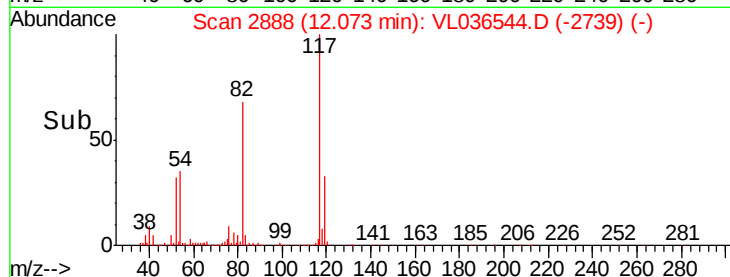
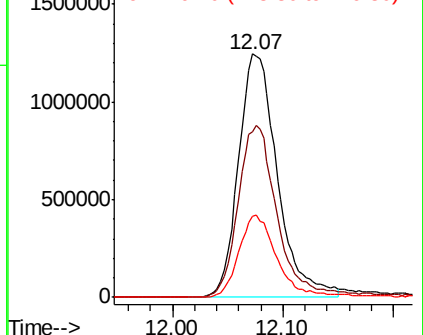
119 33.5 47.4 71.0#



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.388 ppbv

RT: 14.41 min Scan# 3614

Delta R.T. -0.02 min

Lab File: VL036544.D

Acq: 29 Mar 2021 18:09

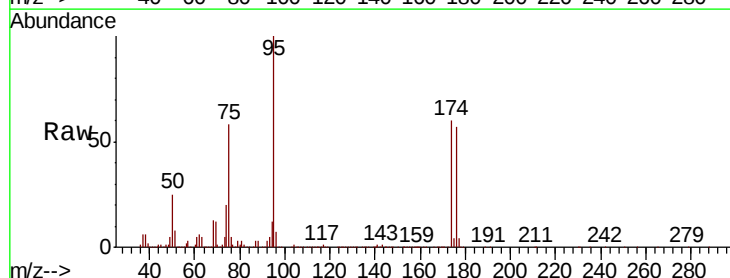
Tgt Ion: 95 Resp: 2530365

Ion Ratio Lower Upper

95 100

174 63.3 51.0 76.6

175 4.3 3.9 5.9



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

