

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL080421\
 Data File : VL037327.D
 Acq On : 5 Aug 2021 4:03
 Operator : SY/AP
 Sample : M3211-05
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Aug 05 04:53:55 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL080421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Aug 04 22:53:01 2021
 QLast Update : Wed Aug 04 22:53:01 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1068664	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3412577	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2901995	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2023182	10.21	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.10%

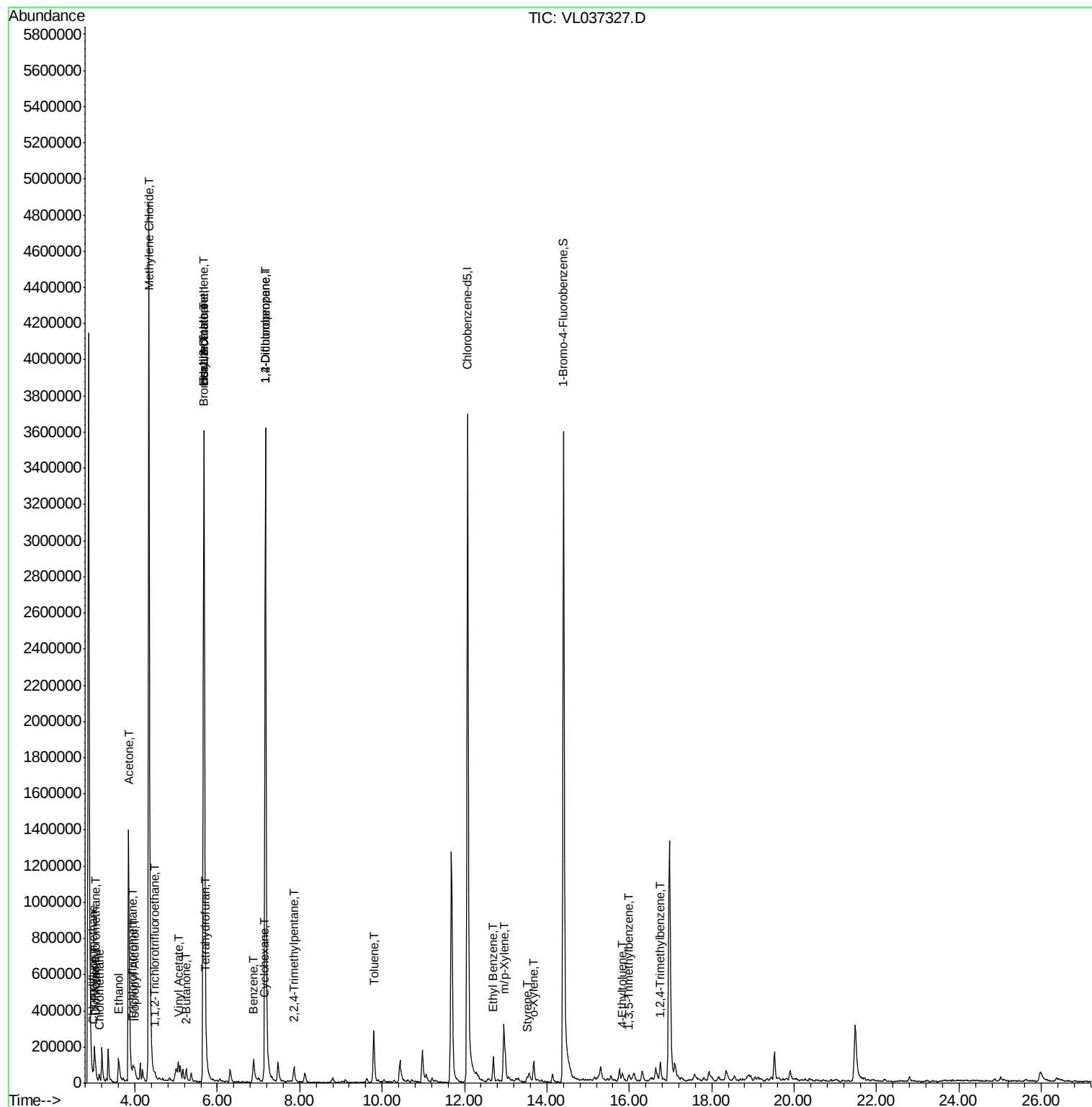
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	67389	0.311 ppbv	94
3) Chlorodifluoromethane	2.99	51	72949	0.336 ppbv #	92
4) Chloromethane	3.14	50	35513	0.456 ppbv	93
9) Propene	3.02	41	28677	0.365 ppbv	86
11) Trichlorofluoromethane	3.94	101	39351	0.197 ppbv	88
12) 1,1,2-Trichlorotrifluoroet	4.48	101	6080	0.042 ppbv #	57
13) Ethanol	3.61	45	210850	17.818 ppbv	94
15) Acetone	3.84	43	1878647	16.184 ppbv	96
19) Isopropyl Alcohol	3.99	45	12599	0.196 ppbv #	93
20) Methylene Chloride	4.34	84	2279240	23.716 ppbv	99
23) Vinyl Acetate	5.06	43	22201	0.127 ppbv #	49
25) Ethyl Acetate	5.68	43	1076583	3.566 ppbv #	82
26) Hexane	5.68	57	1299291	7.692 ppbv #	53
30) Cyclohexane	7.13	84	5591	0.043 ppbv #	1
31) cis-1,2-Dichloroethene	5.67	61	26557	0.202 ppbv #	23
34) 2-Butanone	5.24	43	80934	0.683 ppbv #	88
36) Benzene	6.88	78	76302	0.248 ppbv	97
39) 1,2-Dichloropropane	7.17	63	742346	6.491 ppbv #	28
41) Tetrahydrofuran	5.73	42	7058	0.107 ppbv #	34
44) 2,2,4-Trimethylpentane	7.86	57	38792	0.076 ppbv #	1
53) Toluene	9.79	91	218545	0.603 ppbv	99
58) Ethyl Benzene	12.70	91	129259	0.303 ppbv	98
59) m/p-Xylene	12.98	91	106315	0.296 ppbv #	29
60) o-Xylene	13.68	91	90244	0.277 ppbv	91
61) Styrene	13.51	104	5415	0.030 ppbv #	1
72) 4-Ethyltoluene	15.82	105	14874	0.038 ppbv #	54
73) 1,3,5-Trimethylbenzene	15.99	105	18622	0.053 ppbv	91
74) 1,2,4-Trimethylbenzene	16.75	105	37438	0.099 ppbv #	73

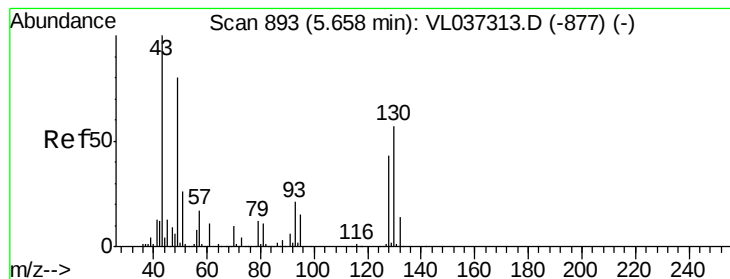
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Aug 04 22:53:01 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. 0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

Instrument :

MSVOA_L

ClientSampleId :

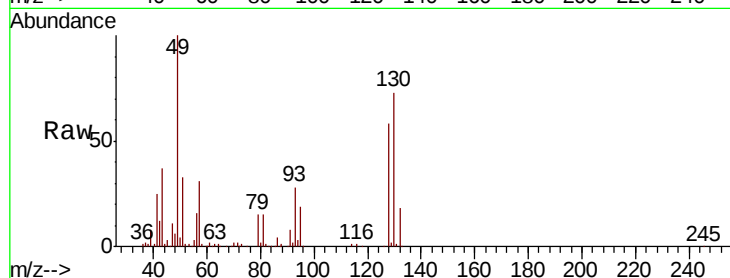
Tot Ion: 49 Resp: 1068664

Ion Ratio Lower Upper

49 100

128 58.4 29.8 89.5

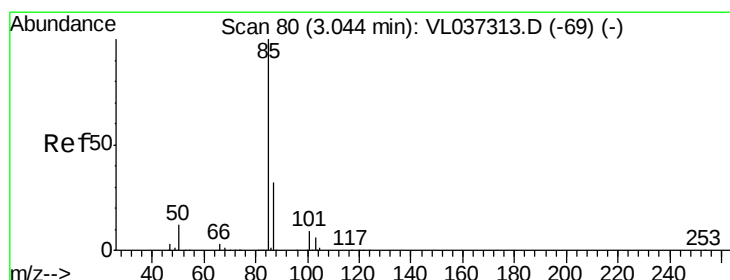
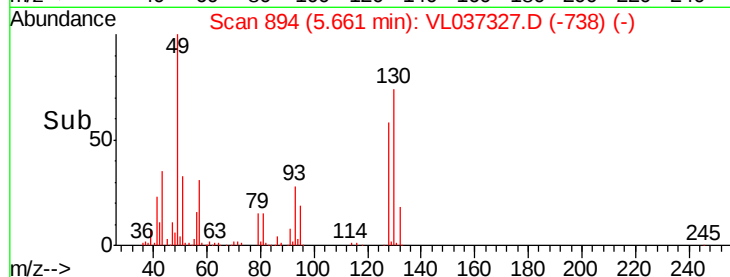
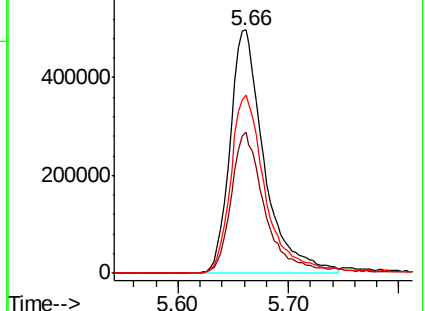
130 77.2 37.5 112.7



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: 0.311 ppbv

RT: 3.05 min Scan# 81

Delta R.T. 0.00 min

Lab File: VL037327.D

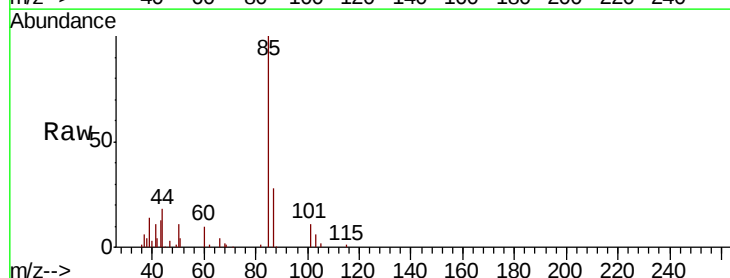
Acq: 5 Aug 2021 4:03

Tgt Ion: 85 Resp: 67389

Ion Ratio Lower Upper

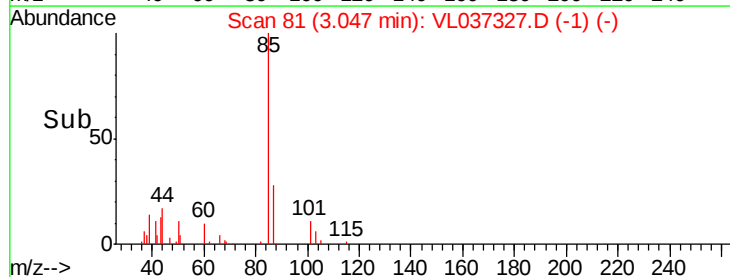
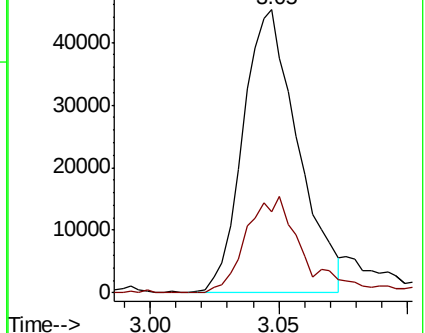
85 100

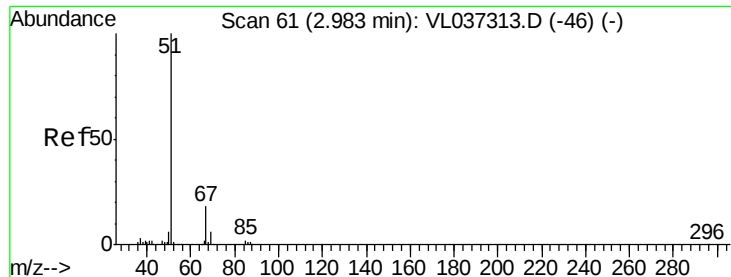
87 28.5 25.5 38.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.336 ppbv

RT: 2.99 min Scan# 62

Delta R.T. 0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

Instrument :

MSVOA_L

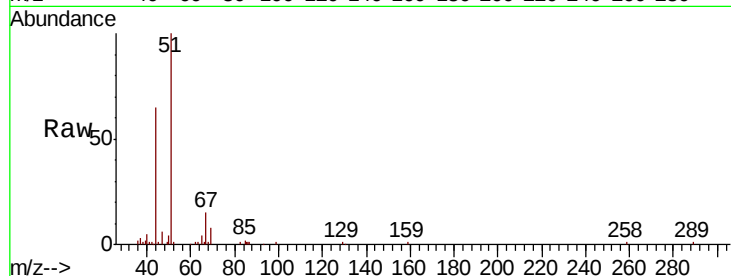
ClientSampleId :

Tot Ion: 51 Resp: 72949

Ion Ratio Lower Upper

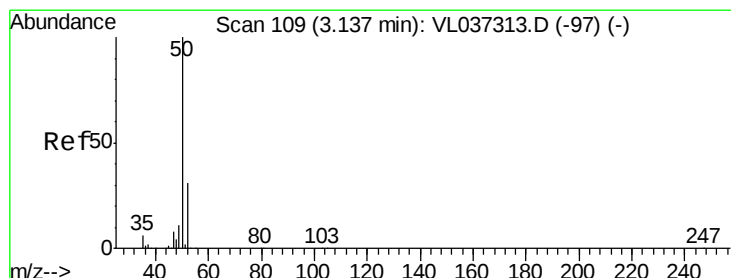
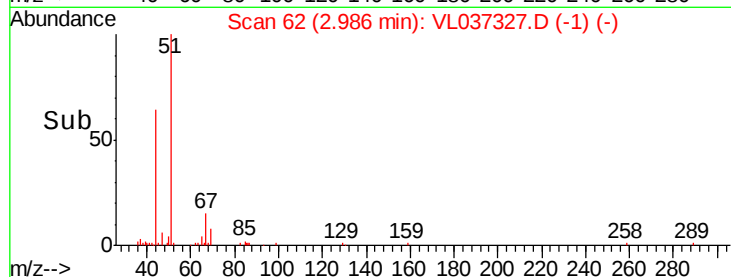
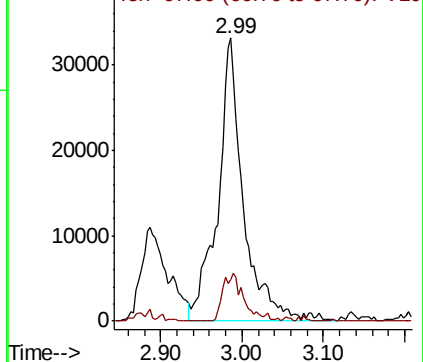
51 100

67 14.1 14.2 21.2#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.456 ppbv

RT: 3.14 min Scan# 109

Delta R.T. -0.00 min

Lab File: VL037327.D

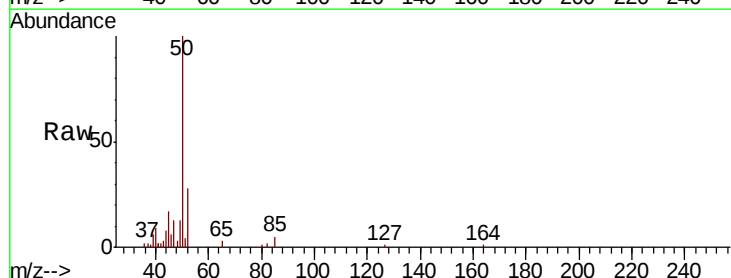
Acq: 5 Aug 2021 4:03

Tgt Ion: 50 Resp: 35513

Ion Ratio Lower Upper

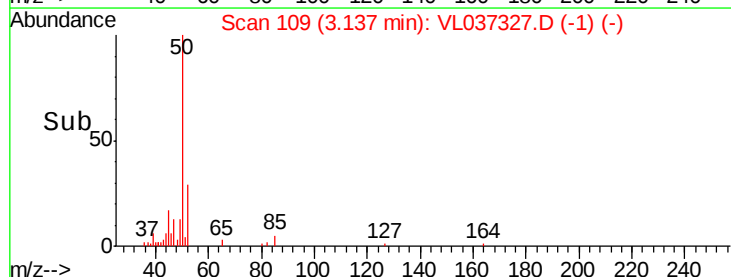
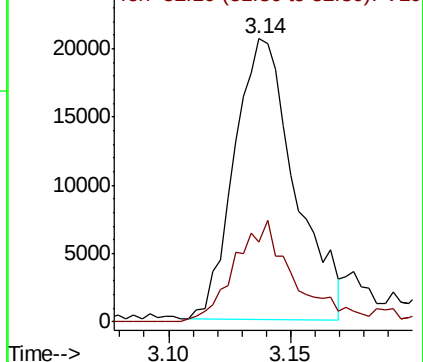
50 100

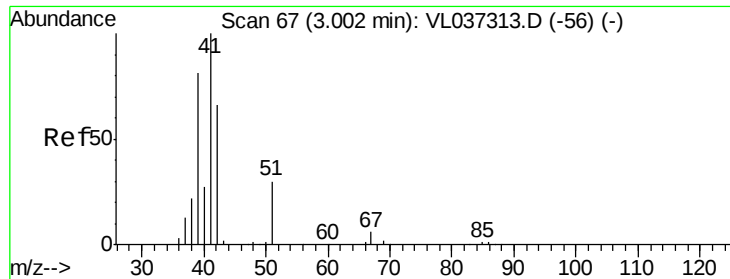
52 27.6 25.1 37.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.365 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

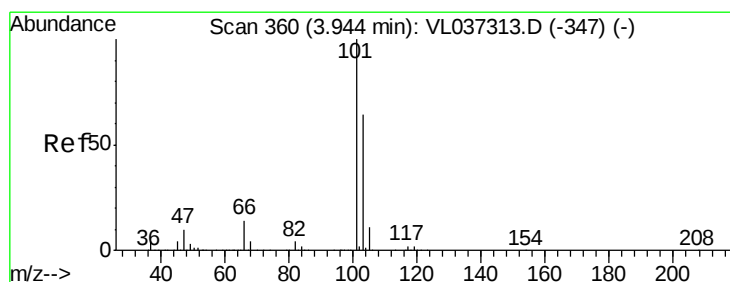
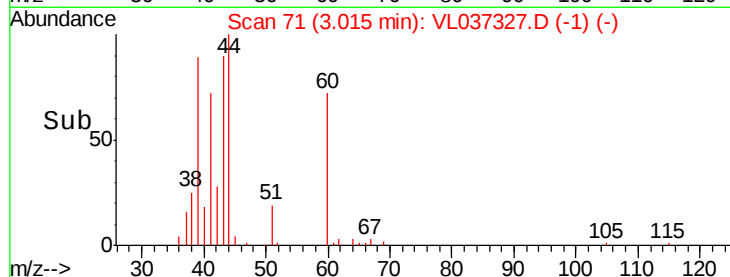
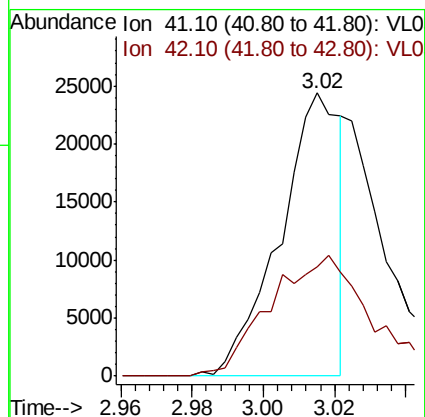
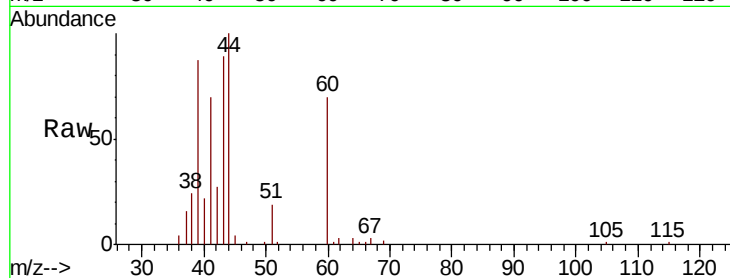
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 41 Resp: 28677

Ion Ratio Lower Upper

41 100

42 78.5 53.8 80.8



#11

Trichlorofluoromethane

Concen: 0.197 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.00 min

Lab File: VL037327.D

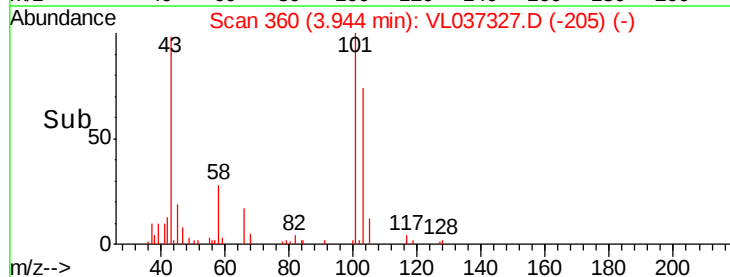
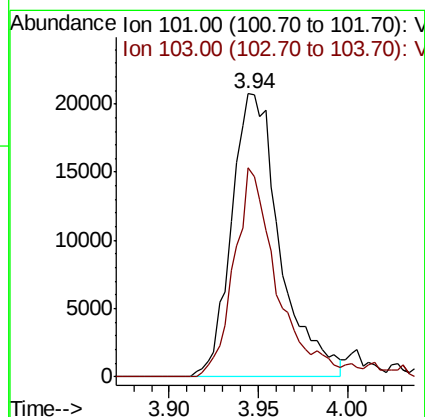
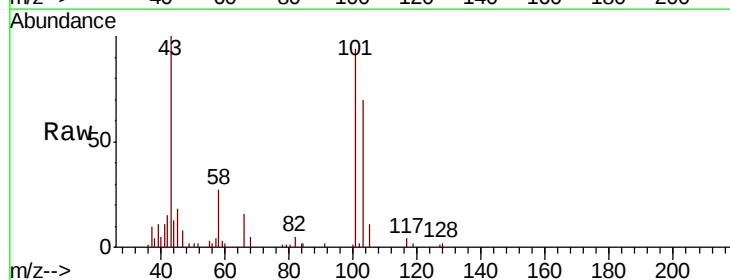
Acq: 5 Aug 2021 4:03

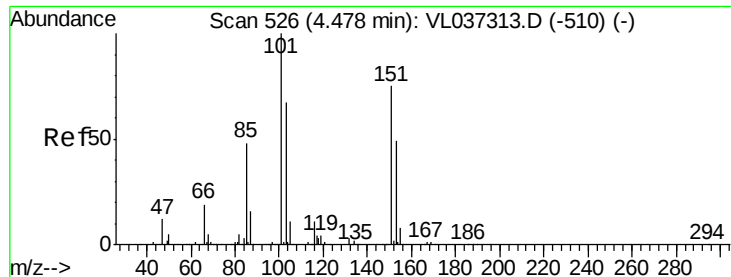
Tgt Ion: 101 Resp: 39351

Ion Ratio Lower Upper

101 100

103 73.7 51.6 77.4





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.042 ppbv

RT: 4.48 min Scan# 526

Delta R.T. -0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

Instrument :

MSVOA_L

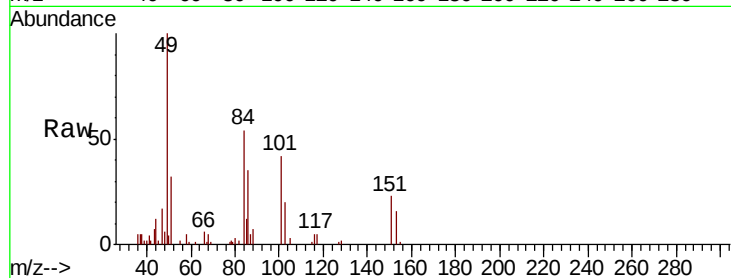
ClientSampleId :

Tot Ion:101 Resp: 6080

Ion Ratio Lower Upper

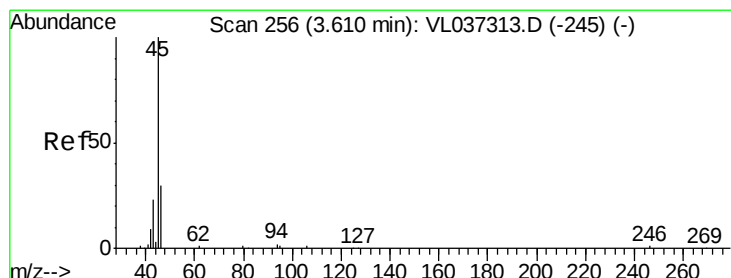
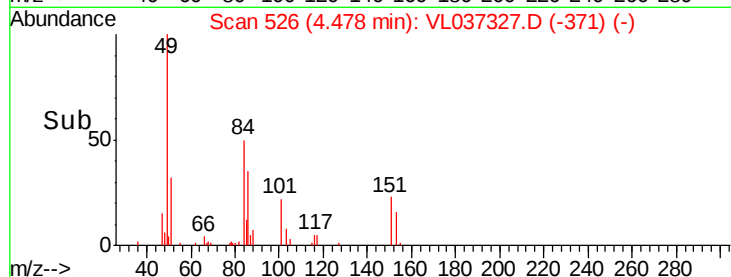
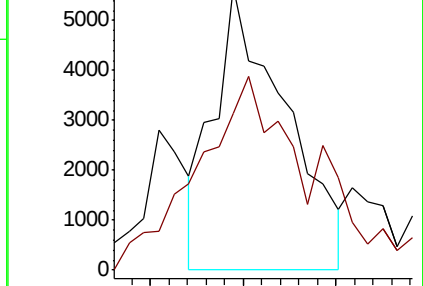
101 100

151 112.6 60.6 91.0#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 17.818 ppbv

RT: 3.61 min Scan# 256

Delta R.T. -0.00 min

Lab File: VL037327.D

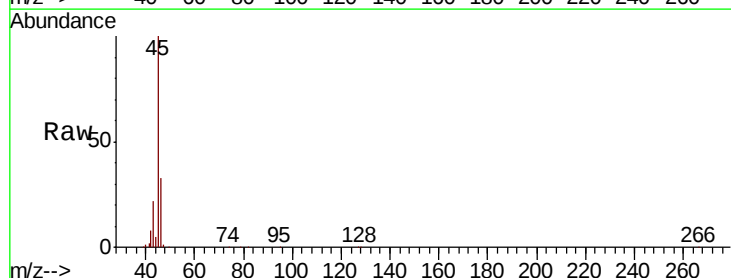
Acq: 5 Aug 2021 4:03

Tgt Ion: 45 Resp: 210850

Ion Ratio Lower Upper

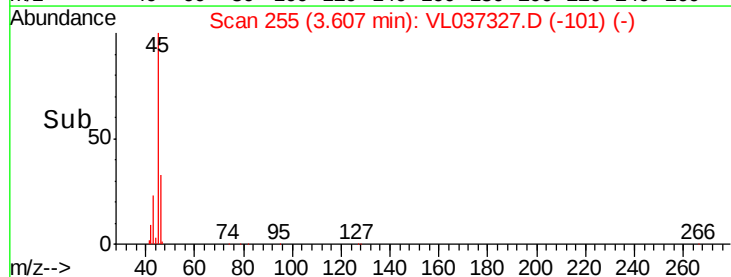
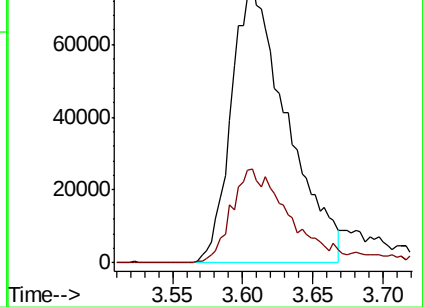
45 100

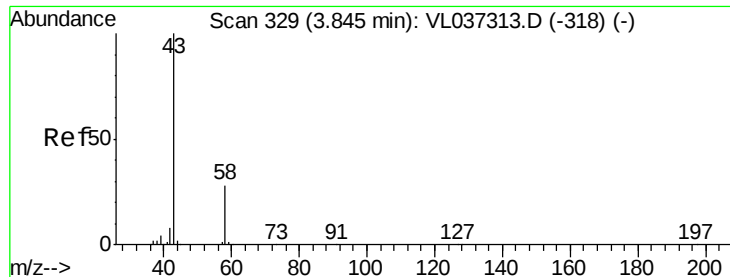
46 38.0 16.6 66.4



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 16.184 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

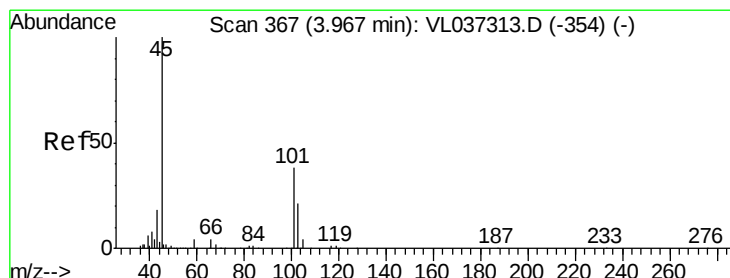
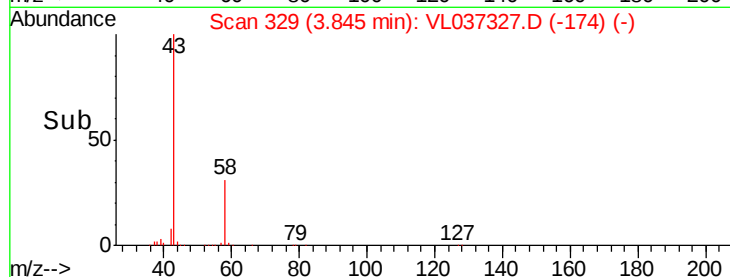
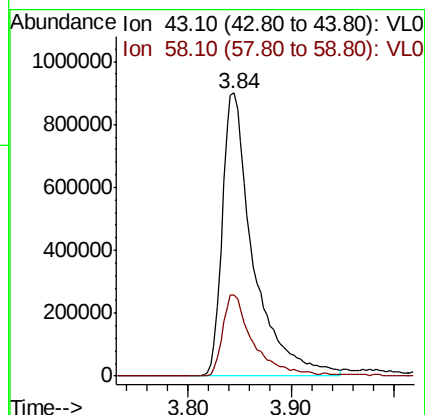
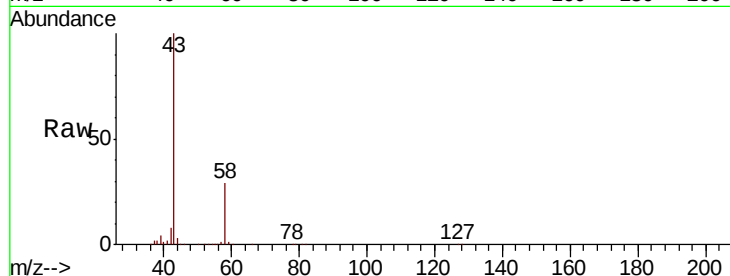
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 43 Resp: 1878647

Ion Ratio Lower Upper

43 100

58 29.6 25.3 37.9



#19

Isopropyl Alcohol

Concen: 0.196 ppbv

RT: 3.99 min Scan# 373

Delta R.T. 0.02 min

Lab File: VL037327.D

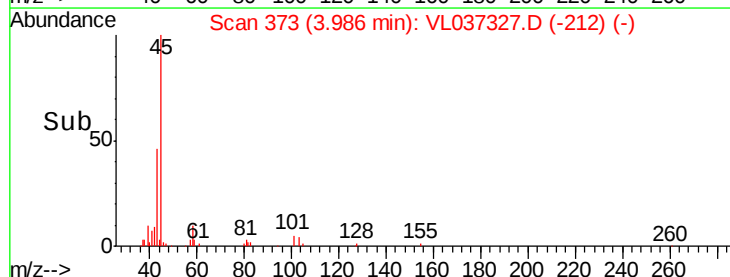
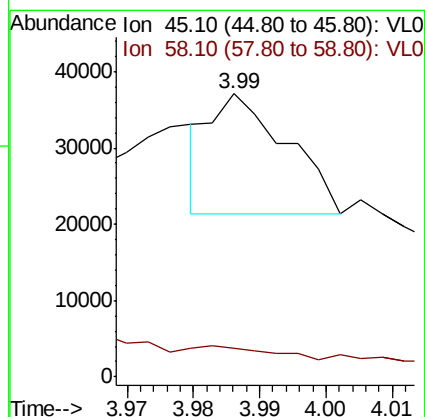
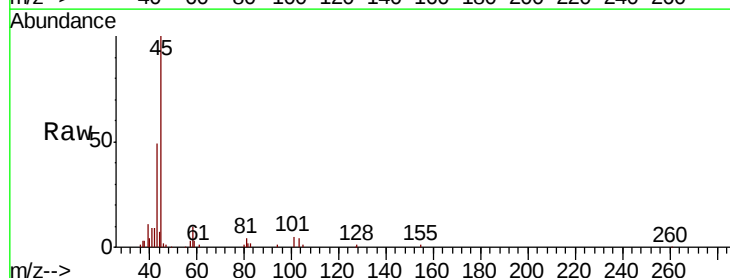
Acq: 5 Aug 2021 4:03

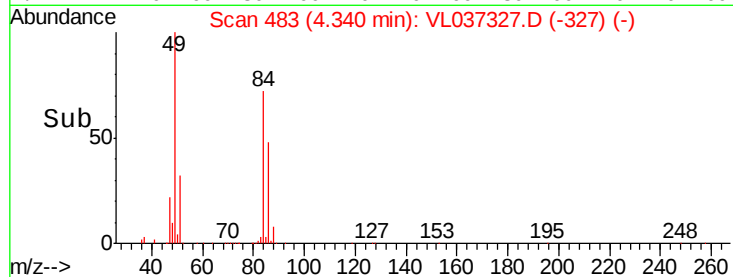
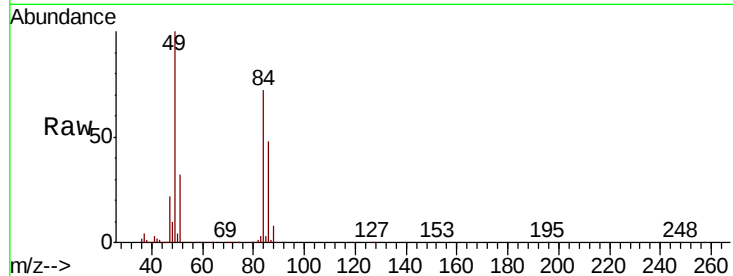
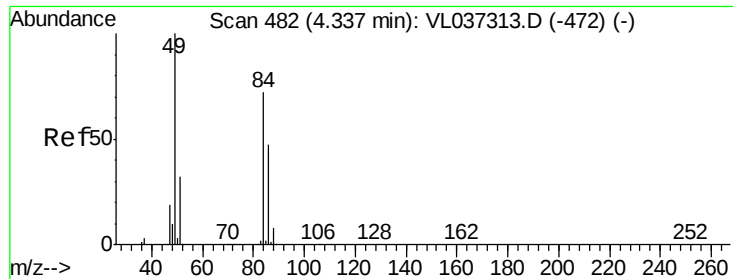
Tgt Ion: 45 Resp: 12599

Ion Ratio Lower Upper

45 100

58 0.0 1.8 2.8#

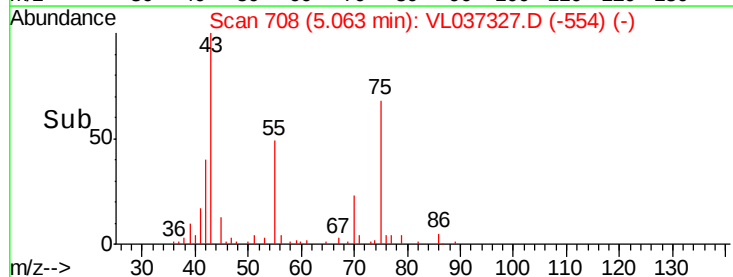
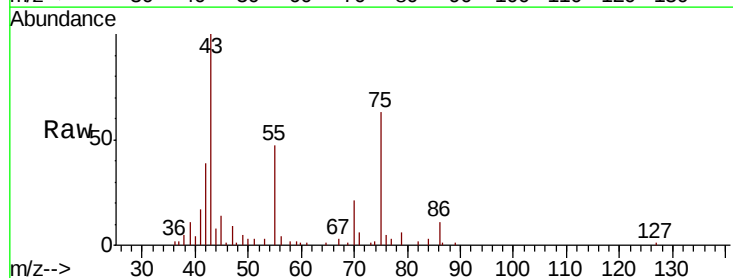
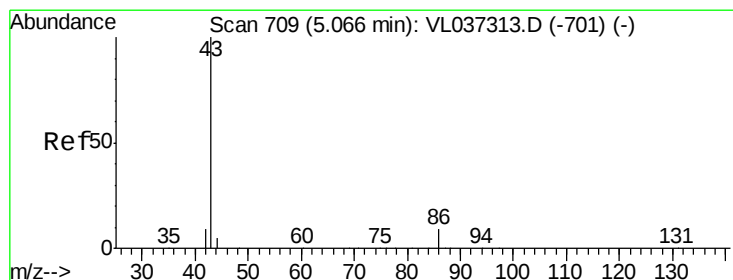
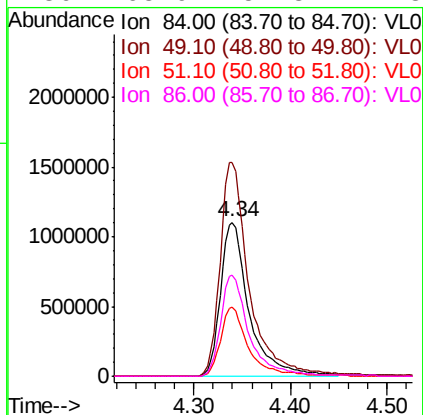




#20
Methvlene Chloride
Concen: 23.716 ppbv
RT: 4.34 min Scan# 483
Delta R.T. 0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tot Ion: 84 Resp: 2279240

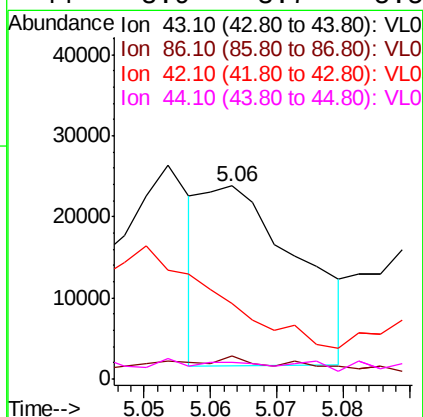
Ion	Ratio	Lower	Upper
84	100		
49	138.5	110.4	165.6
51	44.7	35.8	53.6
86	65.9	51.8	77.8

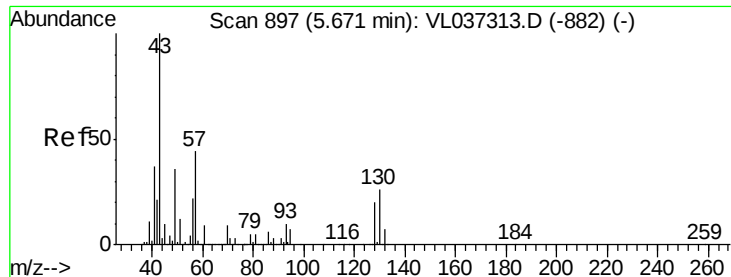


#23
Vinyl Acetate
Concen: 0.127 ppbv
RT: 5.06 min Scan# 708
Delta R.T. -0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tgt Ion: 43 Resp: 22201

Ion	Ratio	Lower	Upper
43	100		
86	9.8	6.2	9.2#
42	48.3	7.7	11.5#
44	8.9	3.7	5.5#

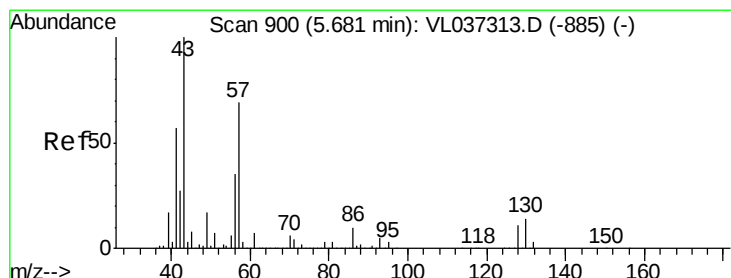
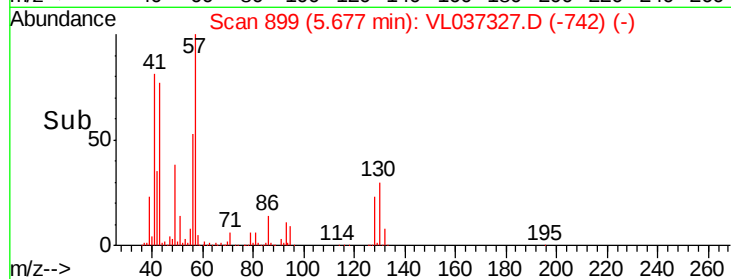
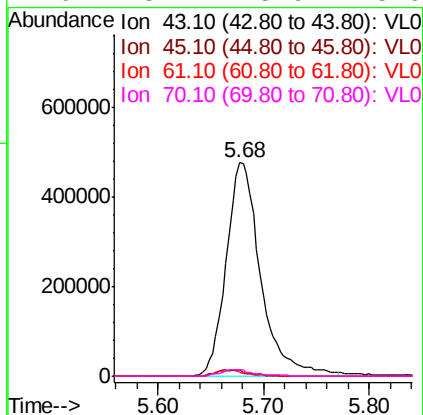
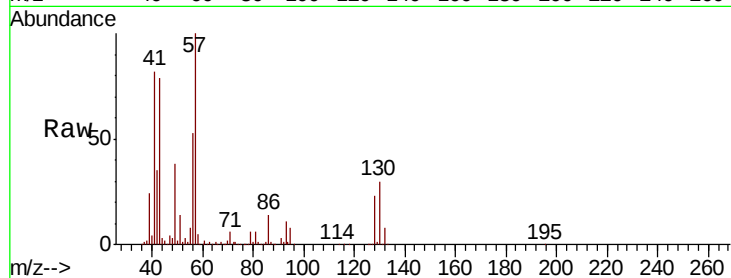




#25
Ethyl Acetate
Concen: 3.566 ppbv
RT: 5.68 min Scan# 899
Delta R.T. 0.01 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

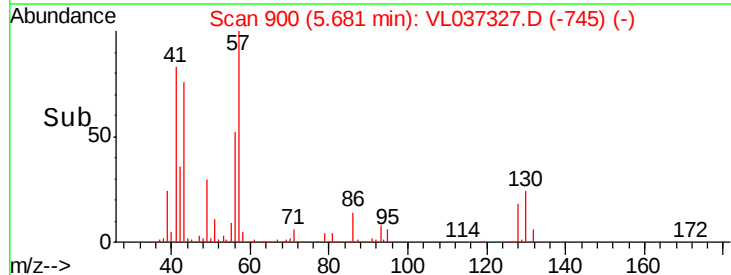
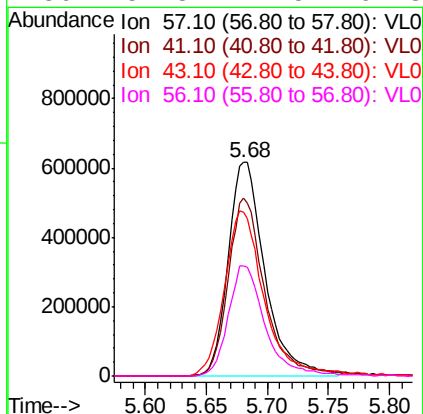
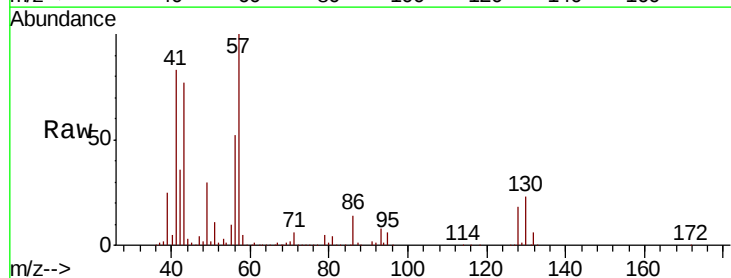
Instrument :
MSVOA_L
ClientSampleId :

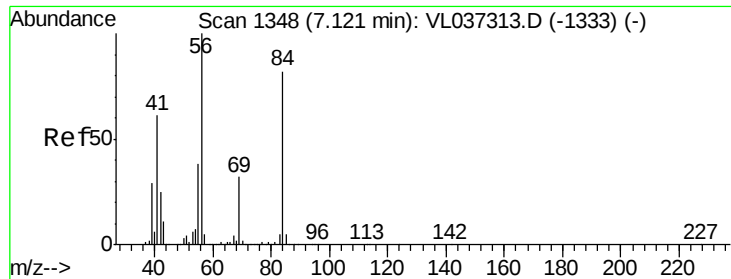
Tot Ion: 43 Resp: 1076583
Ion Ratio Lower Upper
43 100
45 3.3 7.8 11.8#
61 2.7 8.6 12.8#
70 3.2 5.9 8.9#



#26
Hexane
Concen: 7.692 ppbv
RT: 5.68 min Scan# 900
Delta R.T. -0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tgt Ion: 57 Resp: 1299291
Ion Ratio Lower Upper
57 100
41 83.7 67.5 101.3
43 84.3 163.0 244.4#
56 51.8 41.5 62.3

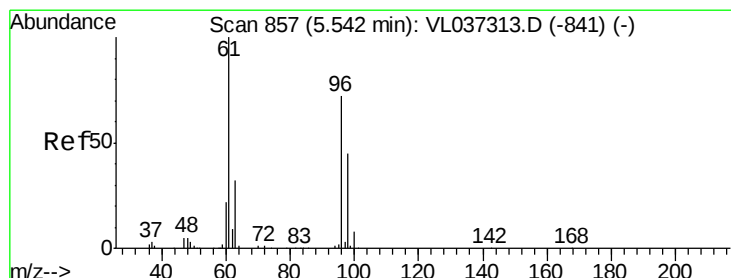
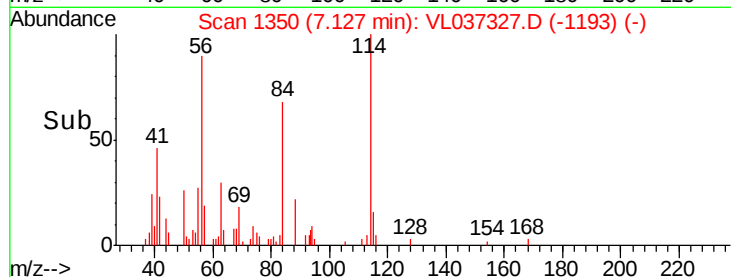
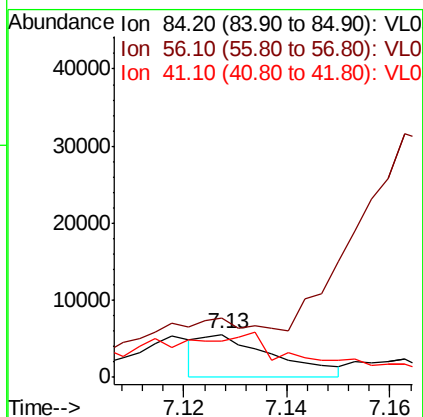
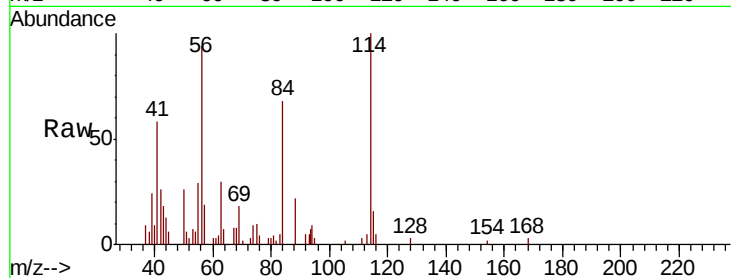




#30
Cvclohexane
Concen: 0.043 ppbv
RT: 7.13 min Scan# 1350
Delta R.T. 0.01 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

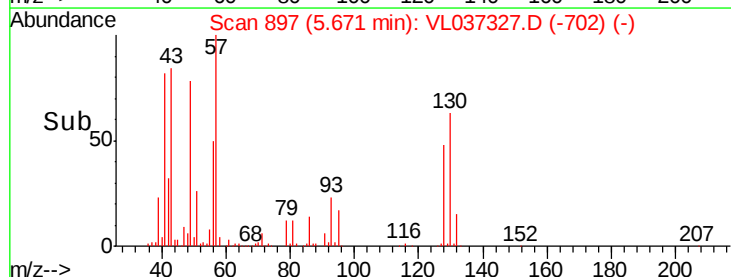
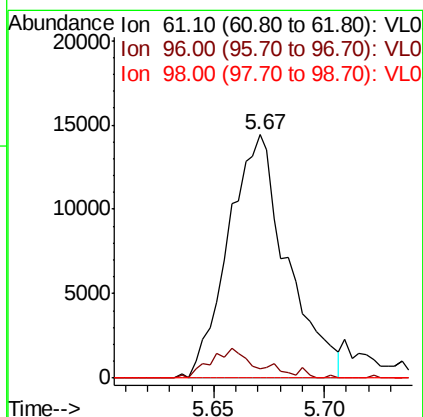
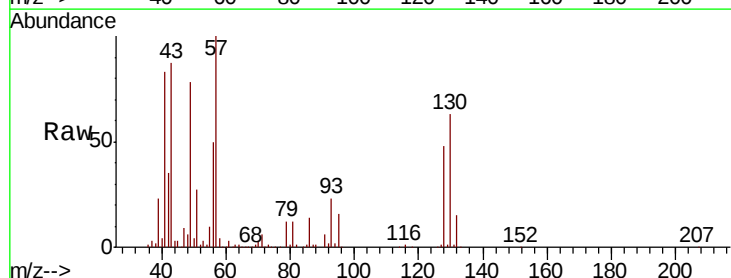
Instrument :
MSVOA_L
ClientSampleId :

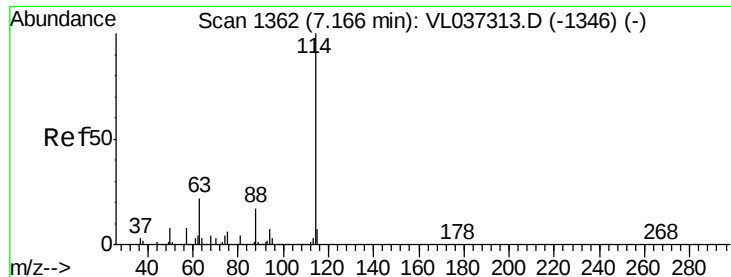
Tot Ion: 84 Resp: 5591
Ion Ratio Lower Upper
84 100
56 0.0 105.2 157.8#
41 261.5 61.3 91.9#



#31
cis-1,2-Dichloroethene
Concen: 0.202 ppbv
RT: 5.67 min Scan# 897
Delta R.T. 0.13 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tgt Ion: 61 Resp: 26557
Ion Ratio Lower Upper
61 100
96 4.0 57.4 86.0#
98 0.0 36.3 54.5#

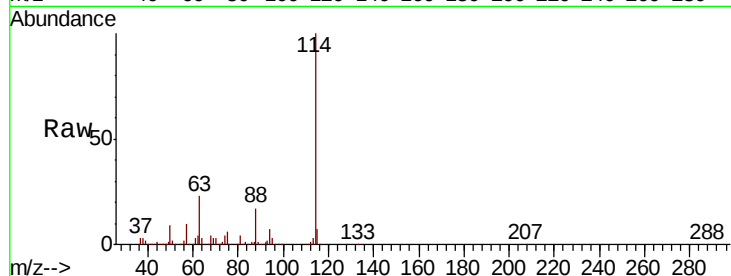




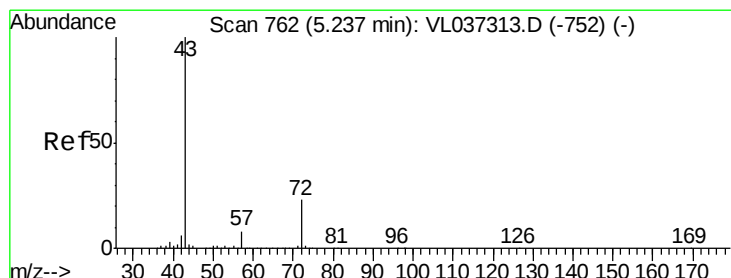
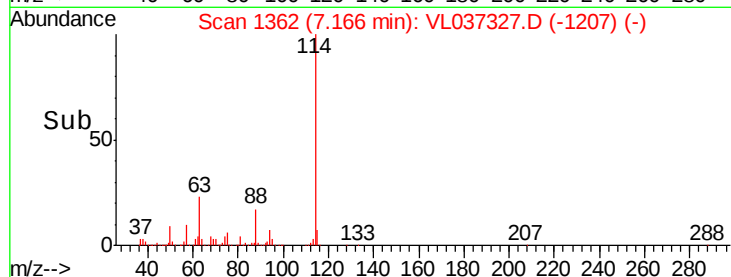
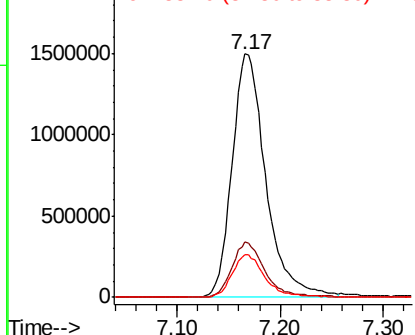
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.00 min
 Lab File: VL037327.D
 Acq: 5 Aug 2021 4:03

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:114 Resp: 3412577
 Ion Ratio Lower Upper
 114 100
 63 22.4 18.1 27.1
 88 17.4 13.8 20.8

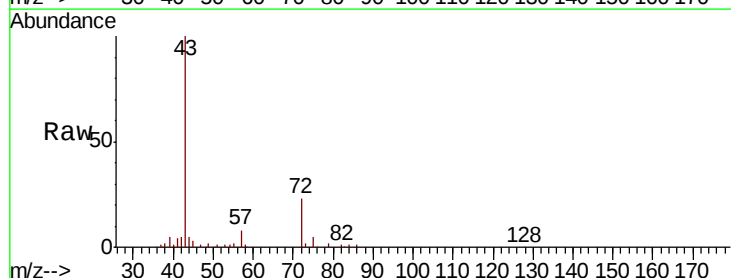


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

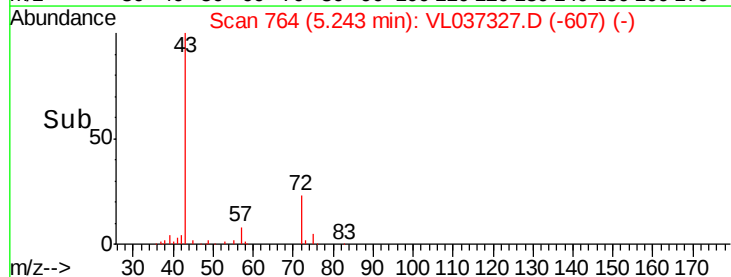
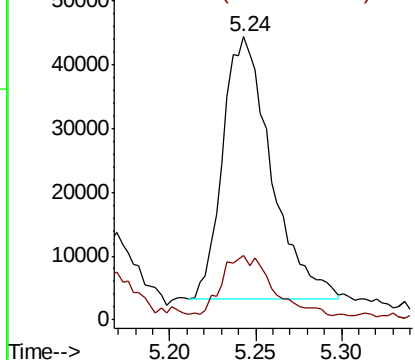


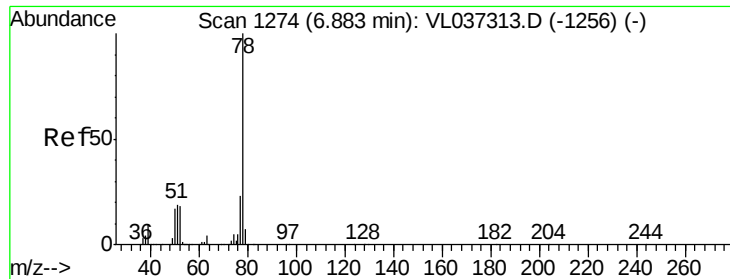
#34
 2-Butanone
 Concen: 0.683 ppbv
 RT: 5.24 min Scan# 764
 Delta R.T. 0.01 min
 Lab File: VL037327.D
 Acq: 5 Aug 2021 4:03

Tgt Ion: 43 Resp: 80934
 Ion Ratio Lower Upper
 43 100
 72 31.4 20.3 30.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0

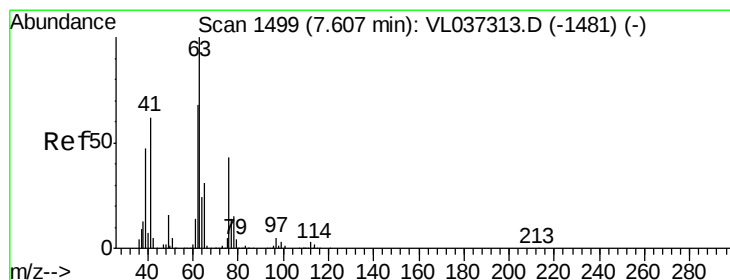
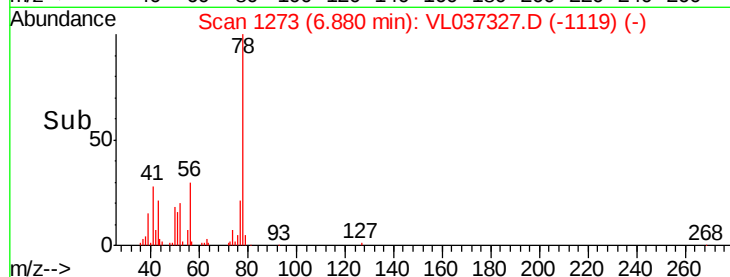
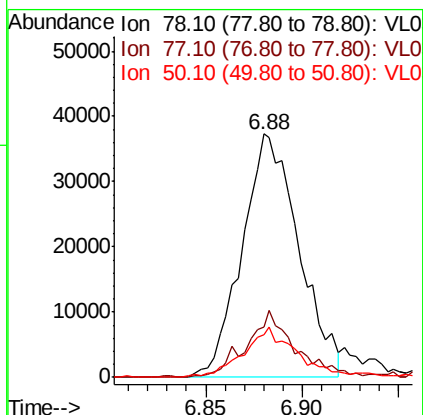
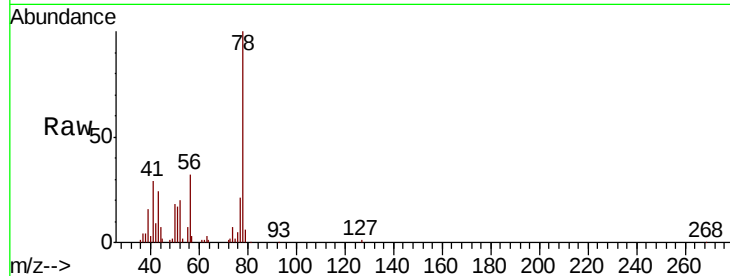




#36
Benzene
Concen: 0.248 ppbv
RT: 6.88 min Scan# 1273
Delta R.T. -0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

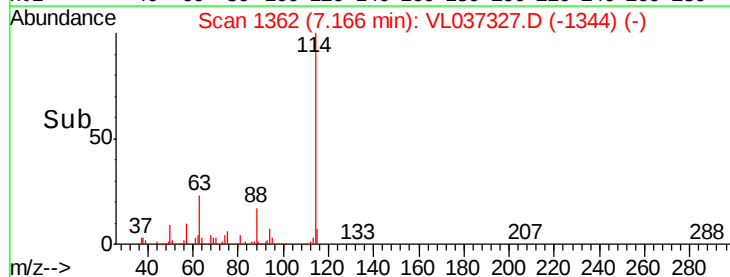
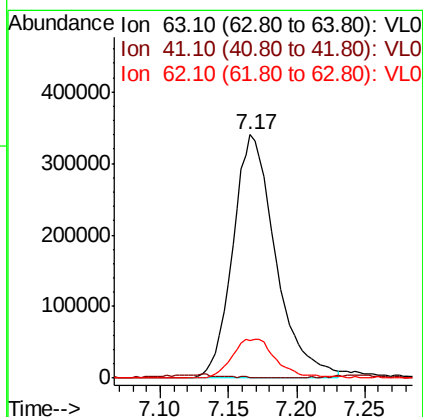
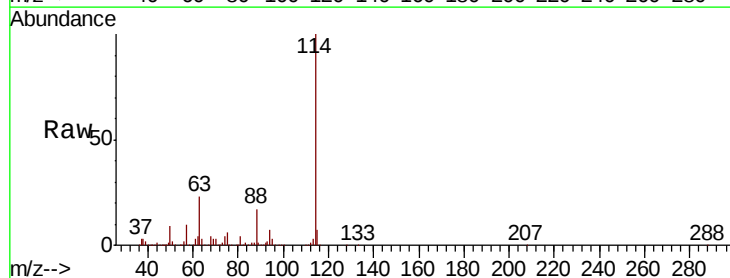
Instrument :
MSVOA_L
ClientSampleId :

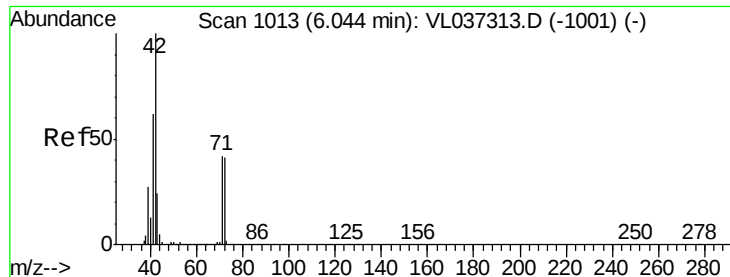
Tot Ion: 78 Resp: 76302
Ion Ratio Lower Upper
78 100
77 20.6 18.7 28.1
50 17.0 13.7 20.5



#39
1,2-Dichloropropane
Concen: 6.491 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.44 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tgt Ion: 63 Resp: 742346
Ion Ratio Lower Upper
63 100
41 0.0 49.2 73.8#
62 15.3 54.2 81.4#

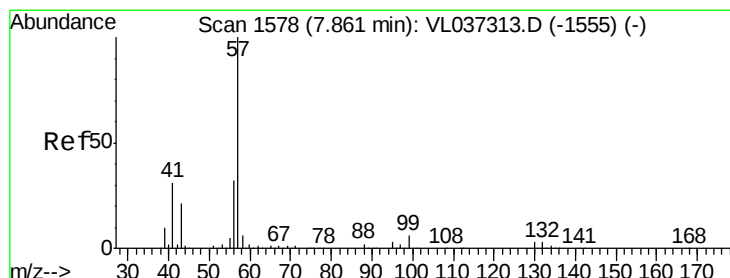
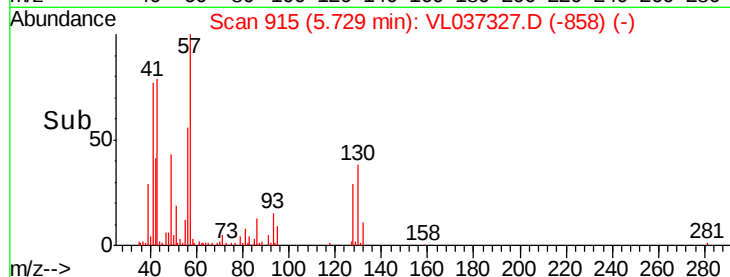
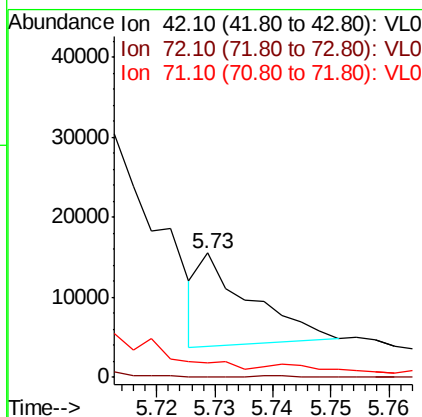
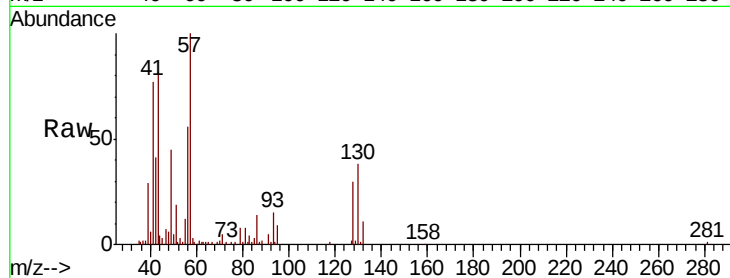




#41
Tetrahydrofuran
Concen: 0.107 ppbv
RT: 5.73 min Scan# 915
Delta R.T. -0.32 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

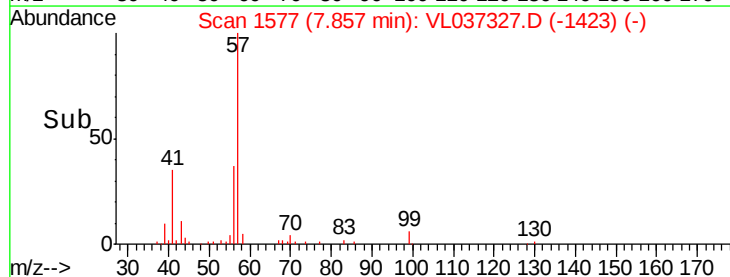
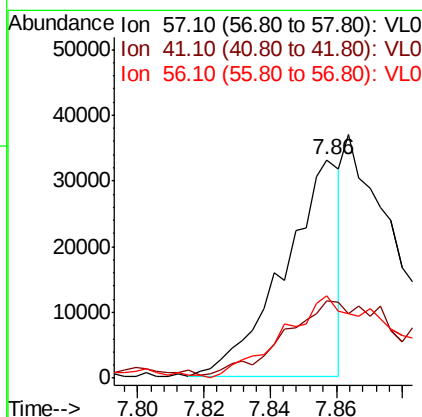
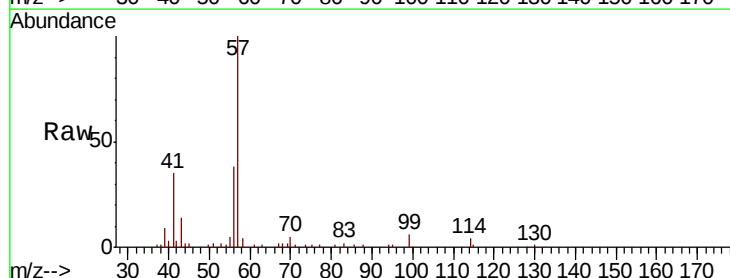
Instrument :
MSVOA_L
ClientSampleId :

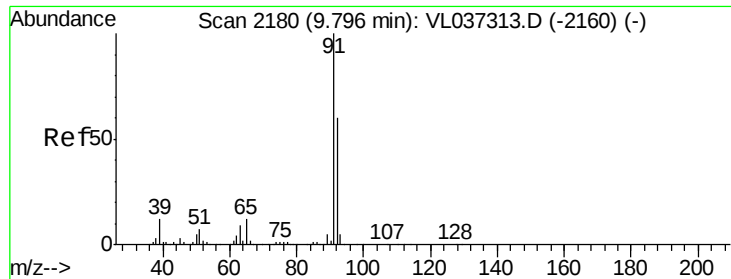
Tot Ion: 42 Resp: 7058
Ion Ratio Lower Upper
42 100
72 0.0 33.6 50.4#
71 0.0 33.0 49.4#



#44
2,2,4-Trimethylpentane
Concen: 0.076 ppbv
RT: 7.86 min Scan# 1577
Delta R.T. -0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tgt Ion: 57 Resp: 38792
Ion Ratio Lower Upper
57 100
41 92.9 24.3 36.5#
56 84.7 25.0 37.6#





#53

Toluene

Concen: 0.603 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

Instrument :

MSVOA_L

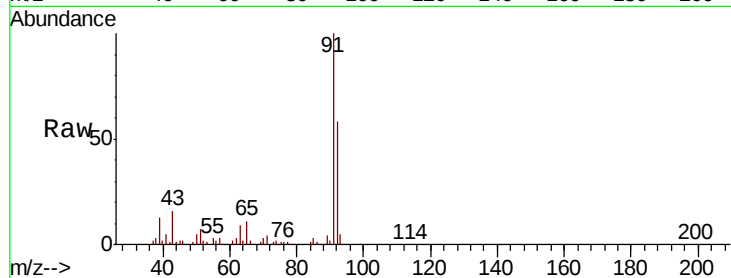
ClientSampled :

Tot Ion: 91 Resp: 218545

Ion Ratio Lower Upper

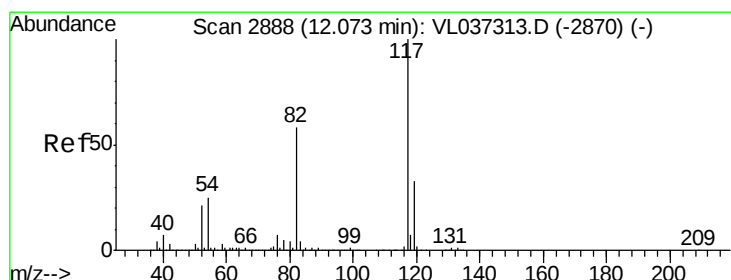
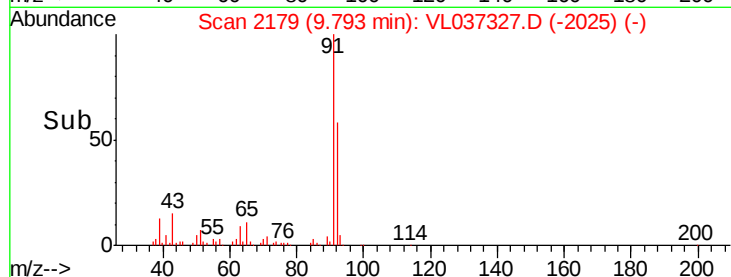
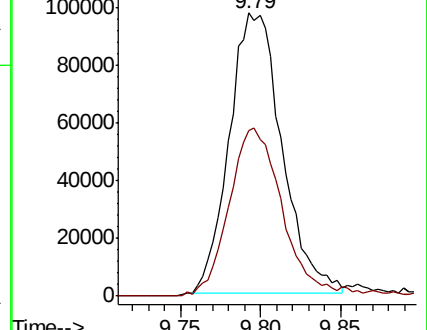
91 100

92 61.9 48.8 73.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

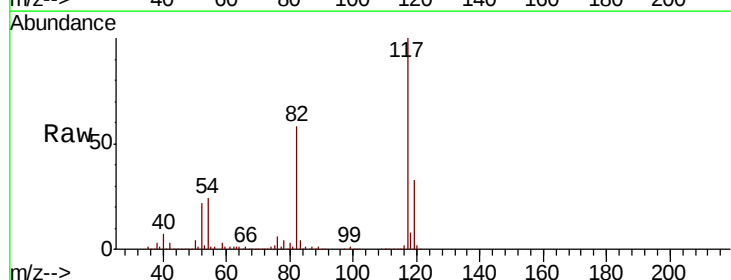
Tgt Ion: 117 Resp: 2901995

Ion Ratio Lower Upper

117 100

82 63.3 50.3 75.5

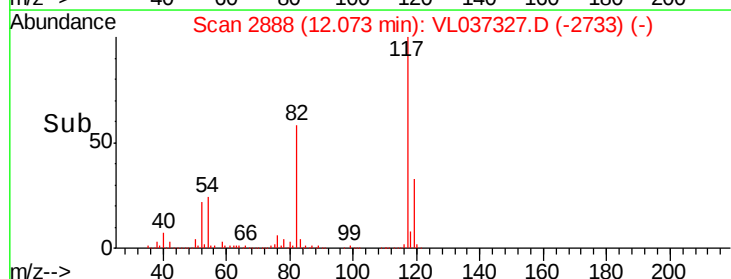
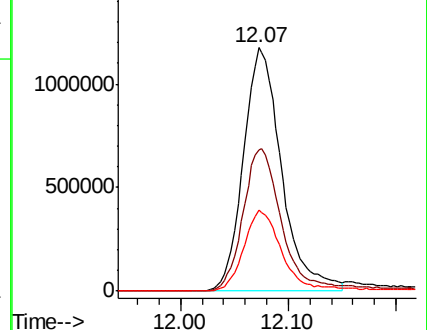
119 34.7 48.2 72.2#

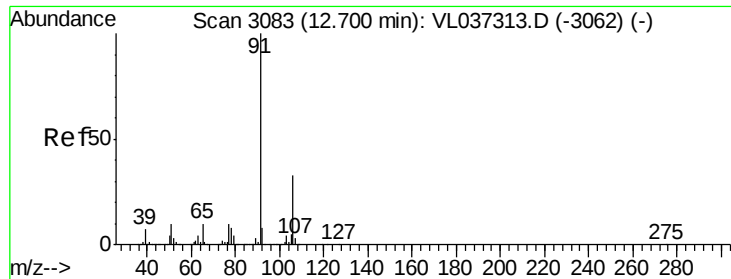


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.303 ppbv

RT: 12.70 min Scan# 3082

Delta R.T. -0.00 min

Lab File: VL037327.D

Acq: 5 Aug 2021 4:03

Instrument :

MSVOA_L

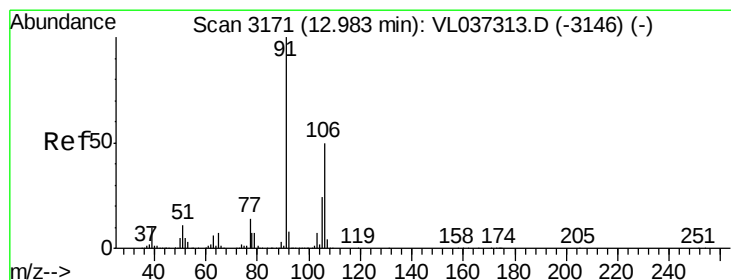
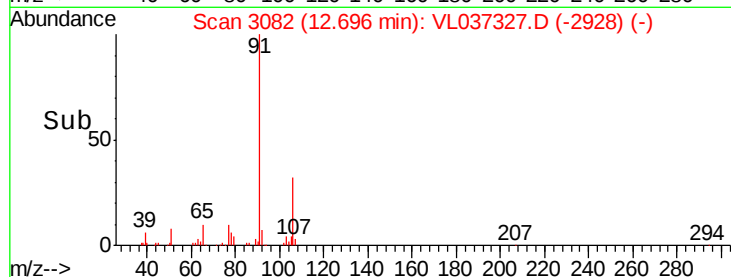
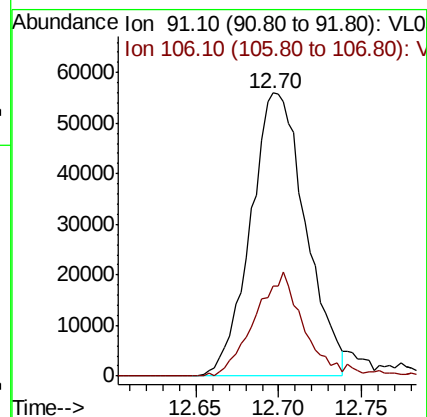
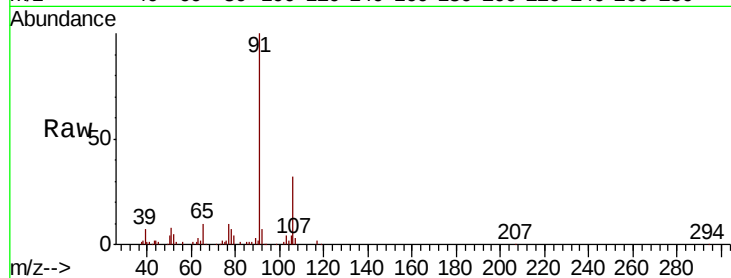
ClientSampleId :

Tot Ion: 91 Resp: 129259

Ion Ratio Lower Upper

91 100

106 31.8 26.2 39.2



#59

m/p-Xylene

Concen: 0.296 ppbv

RT: 12.98 min Scan# 3170

Delta R.T. -0.00 min

Lab File: VL037327.D

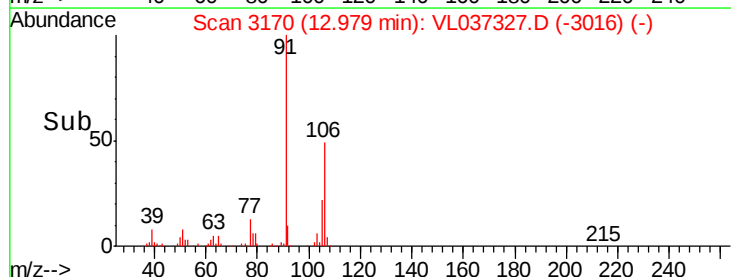
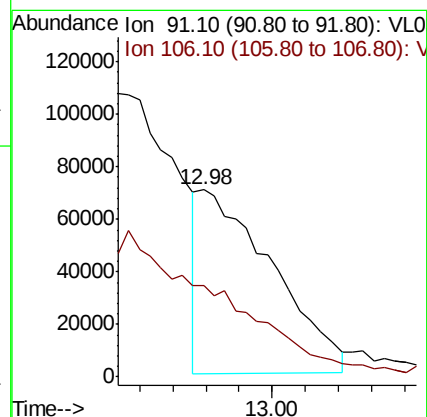
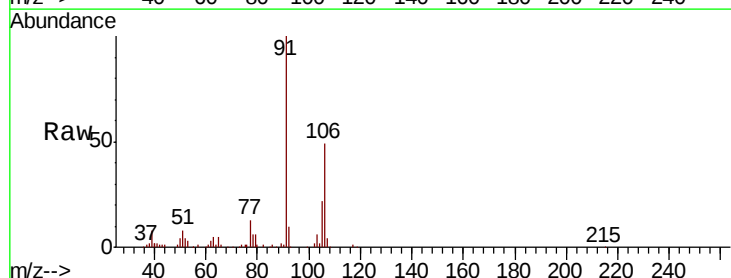
Acq: 5 Aug 2021 4:03

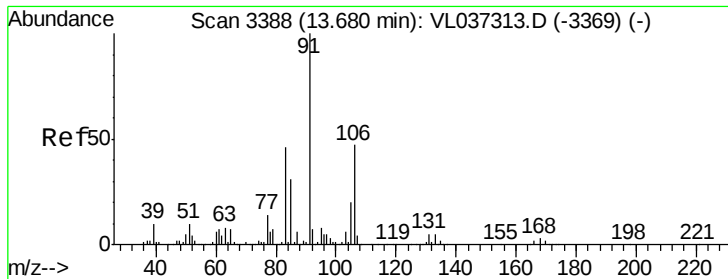
Tgt Ion: 91 Resp: 106315

Ion Ratio Lower Upper

91 100

106 0.0 37.8 56.8#

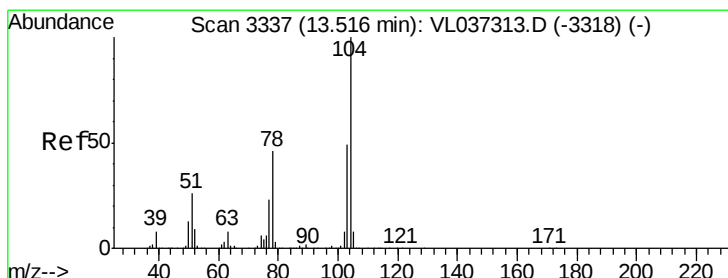
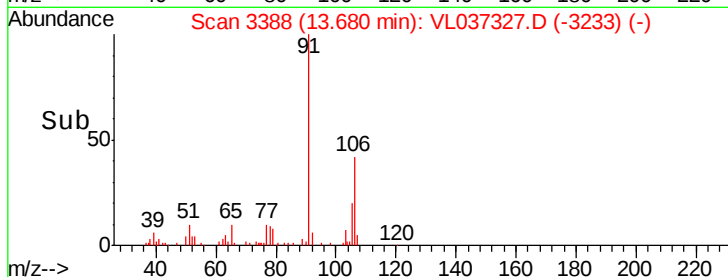
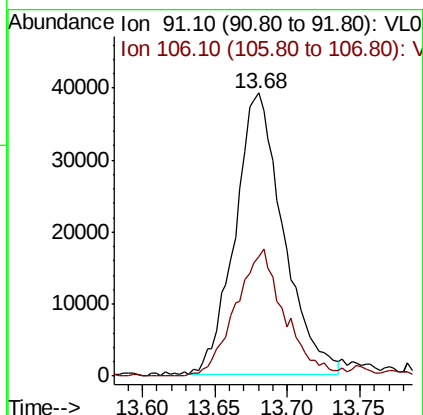
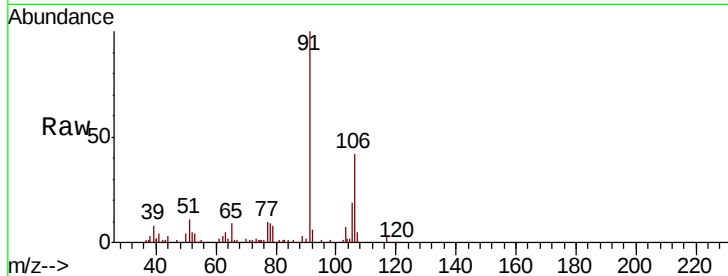




#60
o-Xylene
Concen: 0.277 ppbv
RT: 13.68 min Scan# 3388
Delta R.T. -0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

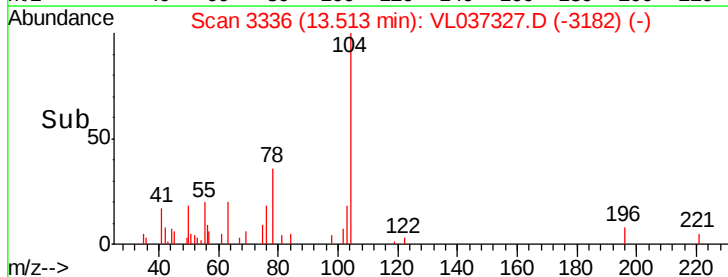
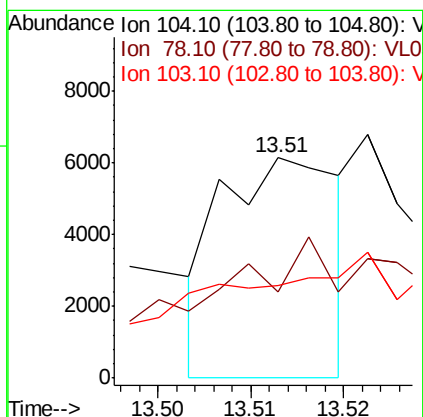
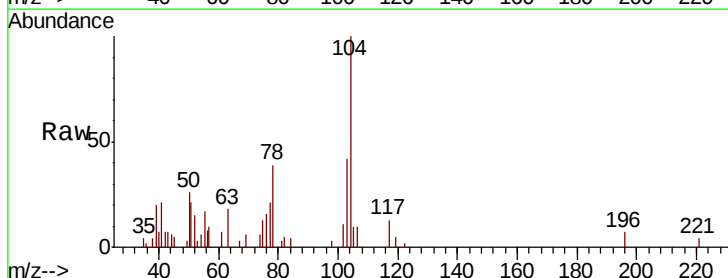
Instrument :
MSVOA_L
ClientSampled :

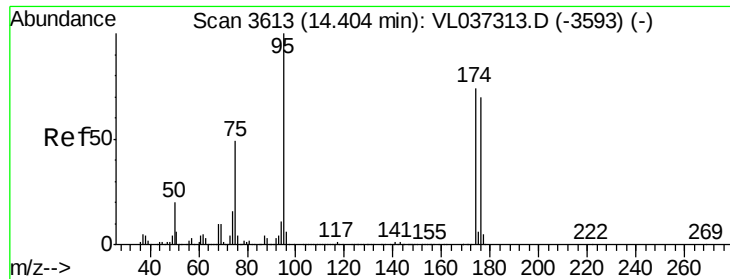
Tot Ion: 91 Resp: 90244
Ion Ratio Lower Upper
91 100
106 45.9 26.3 78.8



#61
Styrene
Concen: 0.030 ppbv
RT: 13.51 min Scan# 3336
Delta R.T. -0.00 min
Lab File: VL037327.D
Acq: 5 Aug 2021 4:03

Tgt Ion: 104 Resp: 5415
Ion Ratio Lower Upper
104 100
78 168.8 39.3 58.9#
103 0.0 40.6 60.8#

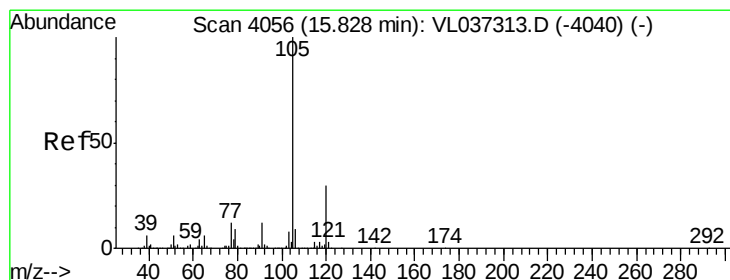
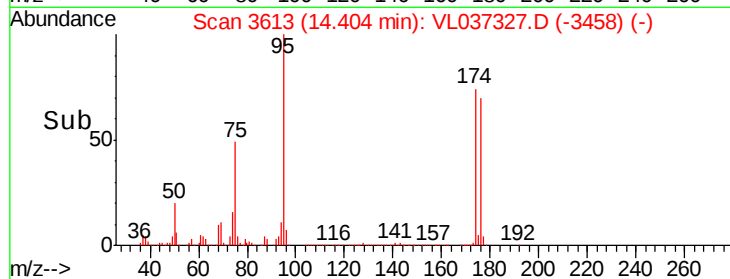
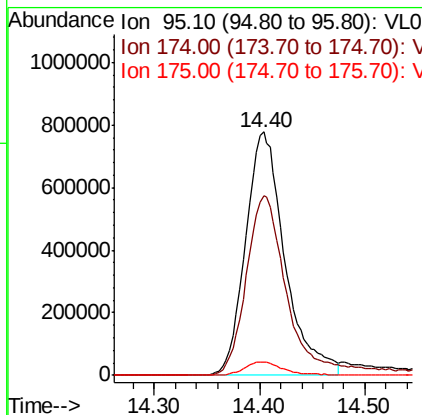
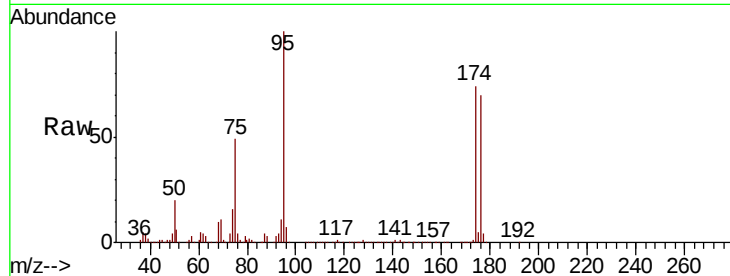




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.206 ppbv
 RT: 14.40 min Scan# 3613
 Delta R.T. -0.00 min
 Lab File: VL037327.D
 Acq: 5 Aug 2021 4:03

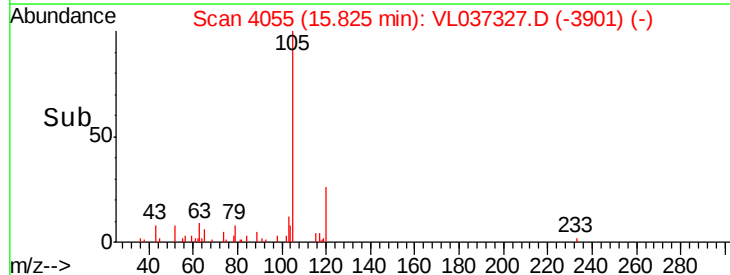
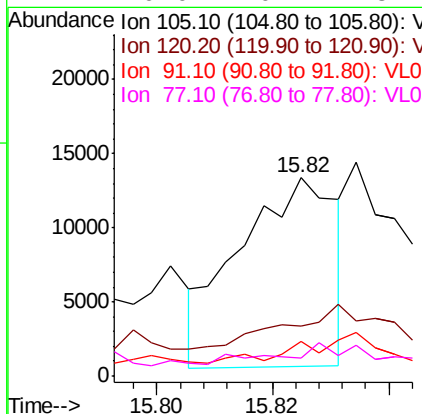
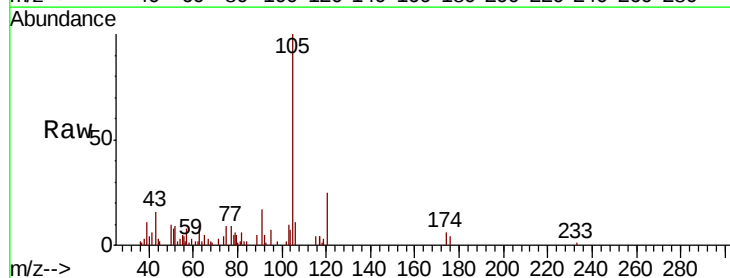
Instrument :
 MSVOA_L
 ClientSampleId :

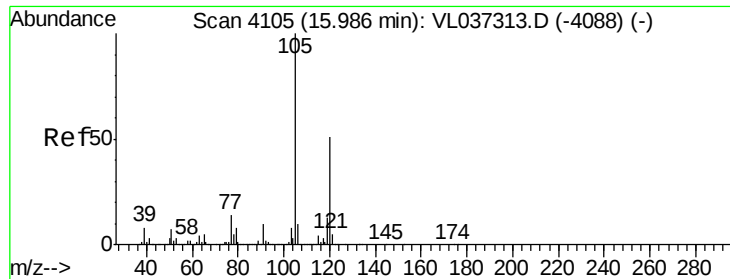
Tot Ion: 95 Resp: 2023182
 Ion Ratio Lower Upper
 95 100
 174 80.1 66.9 100.3
 175 5.8 5.1 7.7



#72
 4-Ethyltoluene
 Concen: 0.038 ppbv
 RT: 15.82 min Scan# 4056
 Delta R.T. -0.00 min
 Lab File: VL037327.D
 Acq: 5 Aug 2021 4:03

Tgt Ion: 105 Resp: 14874
 Ion Ratio Lower Upper
 105 100
 120 0.0 25.6 38.4#
 91 0.0 9.4 14.2#
 77 0.0 10.2 15.4#

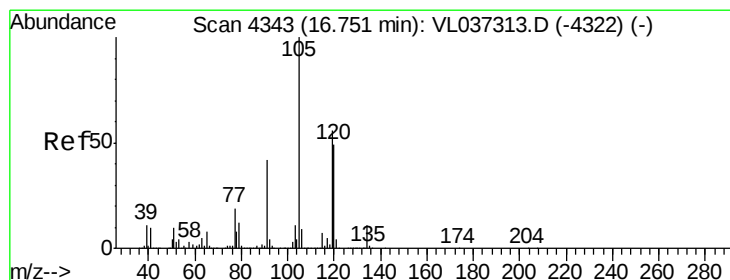
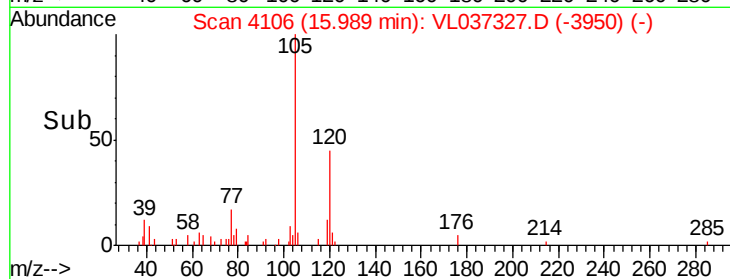
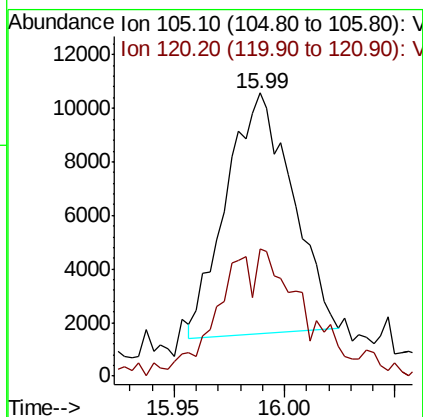
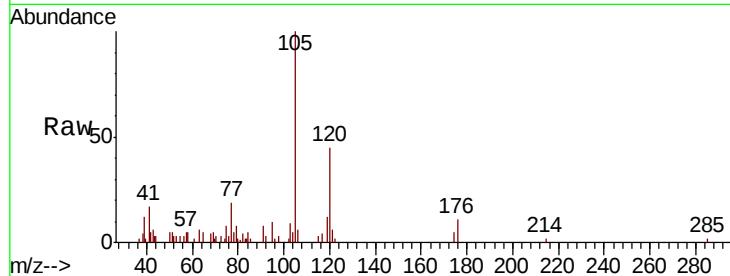




#73
 1,3,5-Trimethylbenzene
 Concen: 0.053 ppbv
 RT: 15.99 min Scan# 4106
 Delta R.T. 0.00 min
 Lab File: VL037327.D
 Acq: 5 Aug 2021 4:03

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion:105 Resp: 18622
 Ion Ratio Lower Upper
 105 100
 120 43.9 40.4 60.6



#74
 1,2,4-Trimethylbenzene
 Concen: 0.099 ppbv
 RT: 16.75 min Scan# 4342
 Delta R.T. -0.00 min
 Lab File: VL037327.D
 Acq: 5 Aug 2021 4:03

Tgt Ion:105 Resp: 37438
 Ion Ratio Lower Upper
 105 100
 120 41.1 39.6 59.4
 91 11.3 34.5 51.7#
 77 13.8 15.3 22.9#

