

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062221\
 Data File : VL037235.D
 Acq On : 23 Jun 2021 6:10
 Operator : SY/AP
 Sample : M2797-02DL 40X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

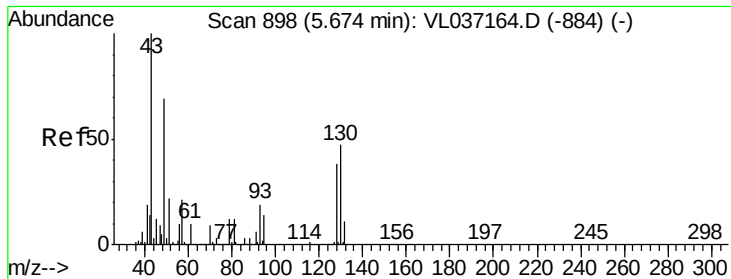
Quant Time: Jun 24 03:48:00 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL061621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jun 16 14:06:32 2021
 QLast Update : Wed Jun 16 14:06:32 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1657673	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.17	114	4776244	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.07	117	4209726	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	3112461	9.76	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.60%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	2.98	85	25472	0.088	ppbv 100
3) Chlorodifluoromethane	2.98	51	1668906	5.178	ppbv 100
4) Chloromethane	3.14	50	3982	0.037	ppbv # 85
9) Propene	3.01	41	529376	5.136	ppbv 97
10) Heptane	8.12	43	5482	0.022	ppbv # 1
13) Ethanol	3.61	45	76308	4.786	ppbv 96
15) Acetone	3.84	43	4280768	22.900	ppbv 94
16) 1,3-Butadiene	3.30	39	948511	8.583	ppbv # 18
17) tert-Butyl alcohol	4.30	59	71941	0.416	ppbv # 92
19) Isopropyl Alcohol	3.98	45	18511	0.163	ppbv # 91
20) Methylene Chloride	4.34	84	54856	0.490	ppbv 96
21) Allyl Chloride	4.31	41	26835	0.190	ppbv # 71
23) Vinyl Acetate	5.17	43	135838	0.507	ppbv # 15
25) Ethyl Acetate	5.23	43	7534055	18.617	ppbv # 75
26) Hexane	5.67	57	50783	0.248	ppbv # 1
27) Carbon Disulfide	4.55	76	4503	0.022	ppbv # 63
34) 2-Butanone	5.23	43	7534055	40.559	ppbv 100
36) Benzene	6.89	78	12858	0.033	ppbv # 85
39) 1,2-Dichloropropane	7.17	63	1156175	8.056	ppbv # 24
51) 2-Hexanone	10.13	43	649827	5.235	ppbv # 96
52) Tetrachloroethene	11.21	164	247734	1.380	ppbv 97
53) Toluene	9.79	91	174570	0.378	ppbv 95
58) Ethyl Benzene	12.70	91	19864	0.034	ppbv 94
59) m/p-Xylene	12.98	91	39304	0.080	ppbv # 30
60) o-Xylene	13.68	91	35054	0.075	ppbv # 60
61) Styrene	13.51	104	5440	0.023	ppbv # 1
72) 4-Ethyltoluene	15.82	105	26206	0.049	ppbv # 58
73) 1,3,5-Trimethylbenzene	15.99	105	18144	0.035	ppbv # 79
74) 1,2,4-Trimethylbenzene	16.75	105	42033	0.079	ppbv # 70

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.01 min

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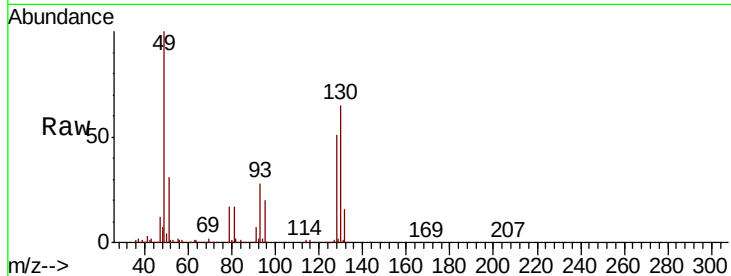
Tot Ion: 49 Resp: 1657673

Ion Ratio Lower Upper

49 100

128 53.2 29.3 88.0

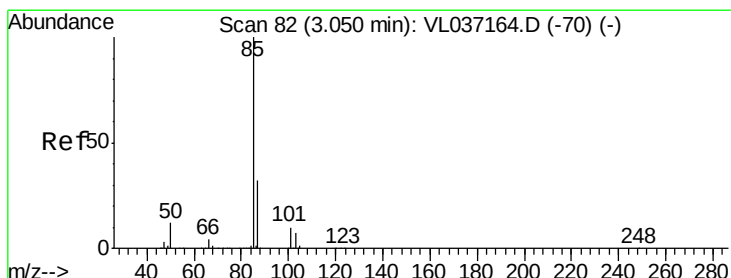
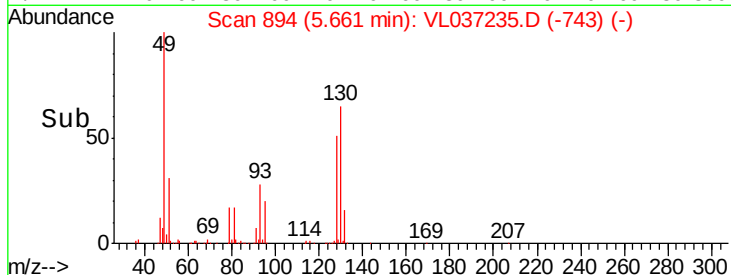
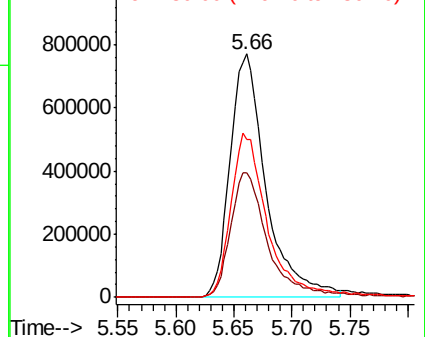
130 70.0 35.9 107.8



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: 0.088 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.07 min

Lab File: VL037235.D

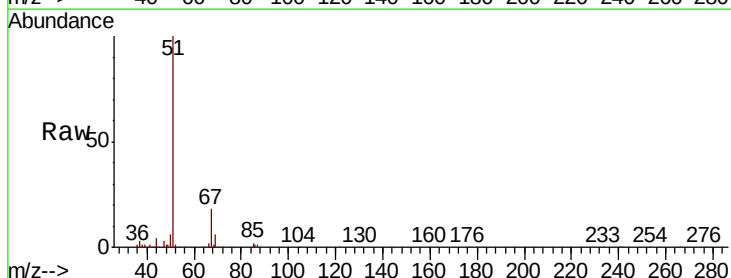
Acq: 23 Jun 2021 6:10

Tgt Ion: 85 Resp: 25472

Ion Ratio Lower Upper

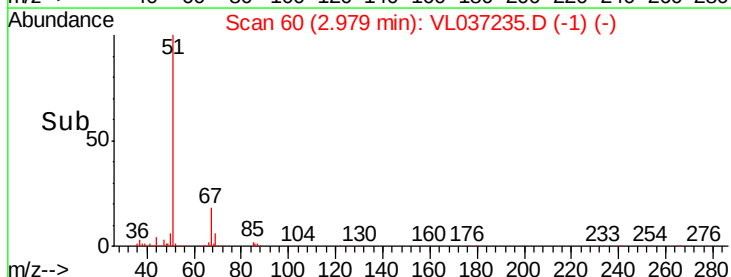
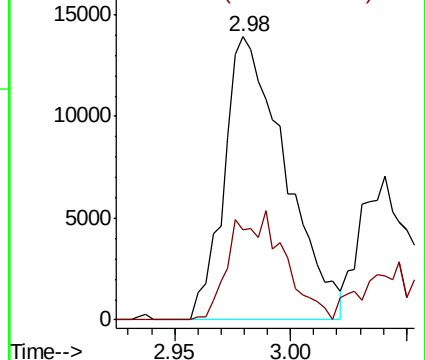
85 100

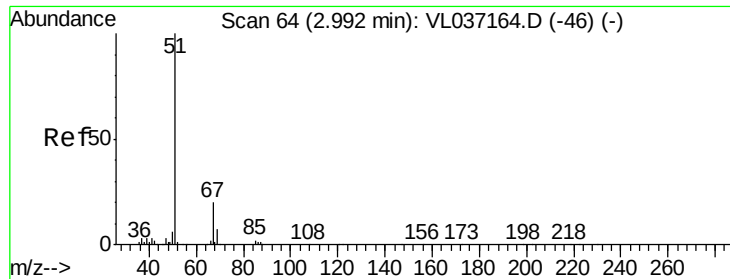
87 32.0 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 5.178 ppbv

RT: 2.98 min Scan# 61

Delta R.T. -0.01 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

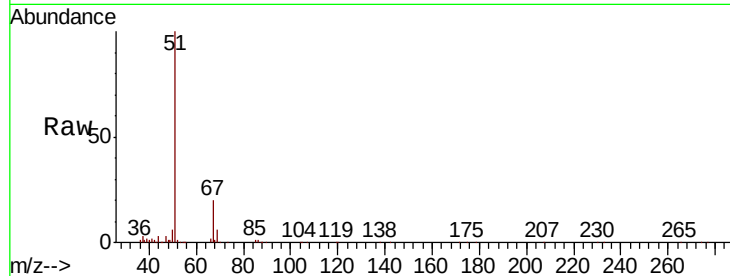
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 51 Resp: 1668906

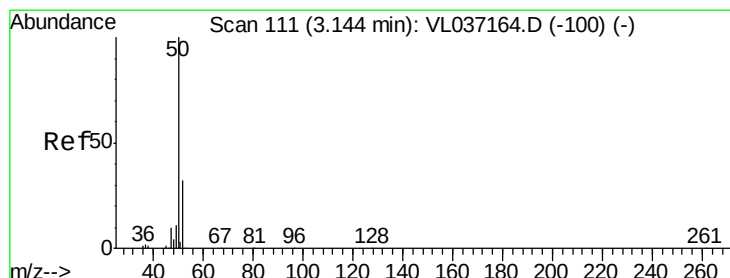
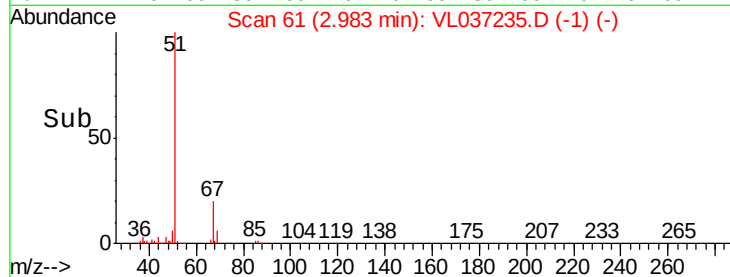
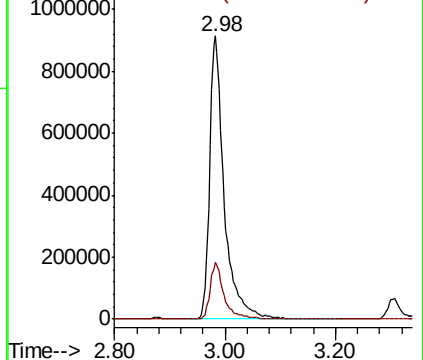
Ion Ratio Lower Upper

51 100

67 19.5 15.8 23.6



Abundance Ion 51.00 (50.70 to 51.70): VL0
Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.037 ppbv

RT: 3.14 min Scan# 109

Delta R.T. -0.01 min

Lab File: VL037235.D

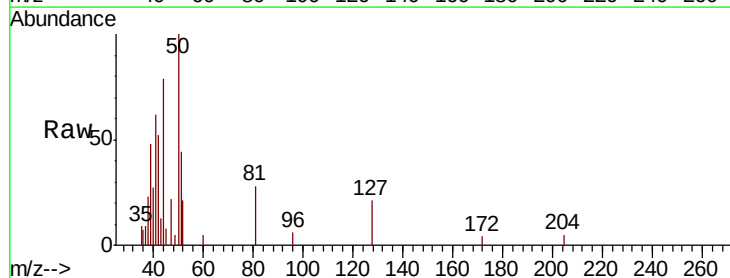
Acq: 23 Jun 2021 6:10

Tgt Ion: 50 Resp: 3982

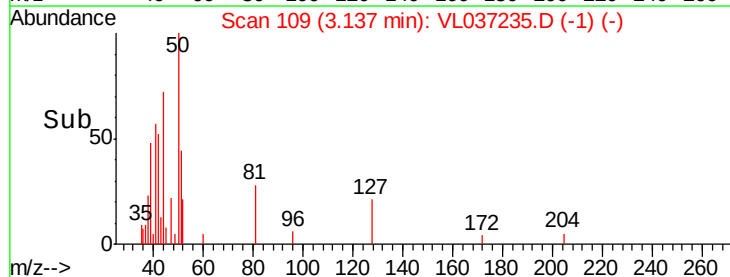
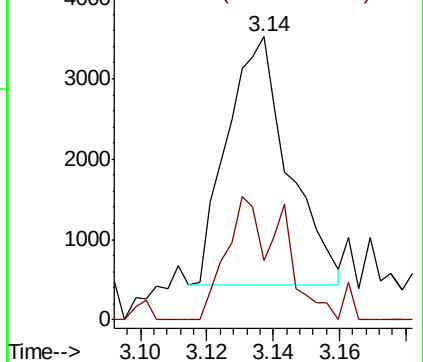
Ion Ratio Lower Upper

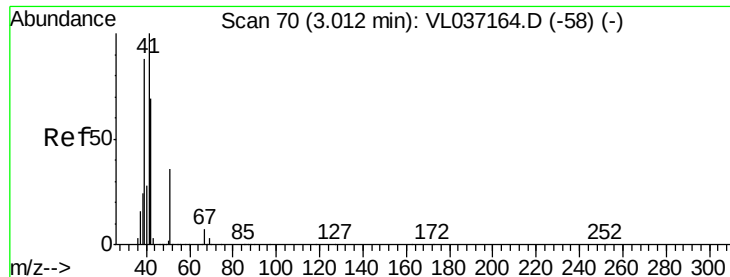
50 100

52 23.8 25.8 38.8#



Abundance Ion 50.10 (49.80 to 50.80): VL0
Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 5.136 ppbv

RT: 3.01 min Scan# 68

Delta R.T. -0.01 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

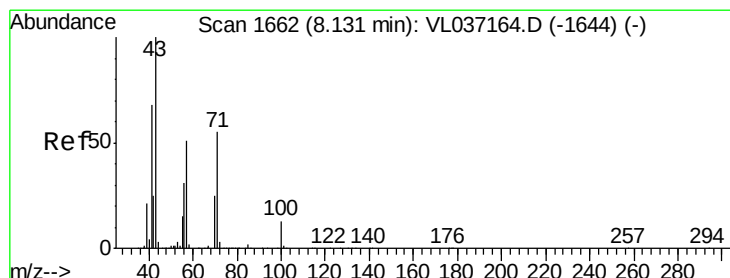
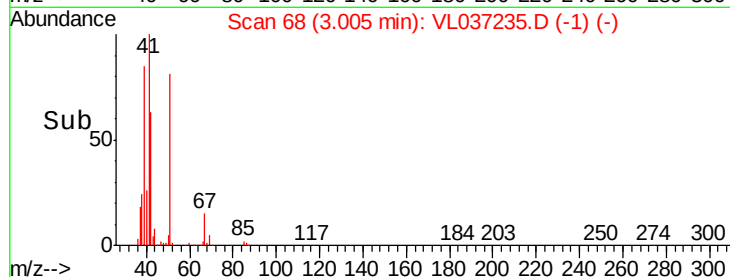
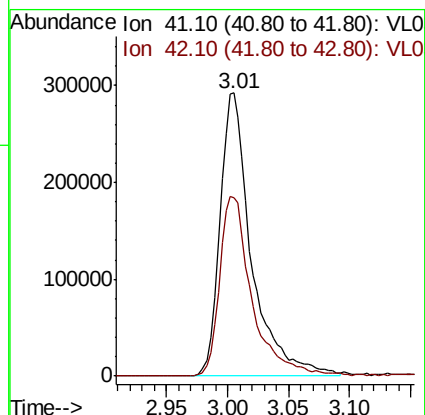
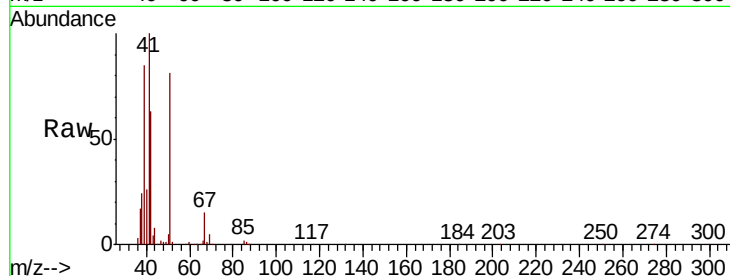
ClientSampleId :

Tot Ion: 41 Resp: 529376

Ion Ratio Lower Upper

41 100

42 65.9 54.5 81.7



#10

Heptane

Concen: 0.022 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.01 min

Lab File: VL037235.D

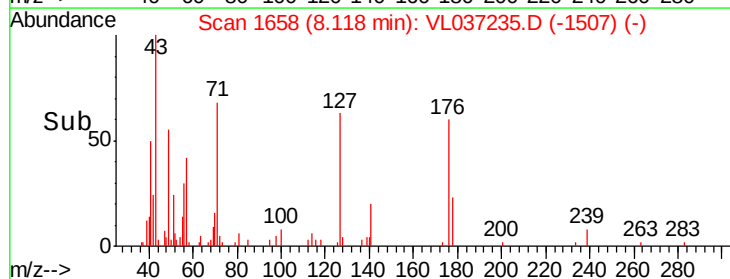
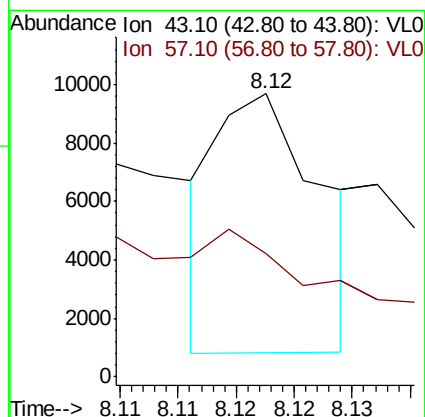
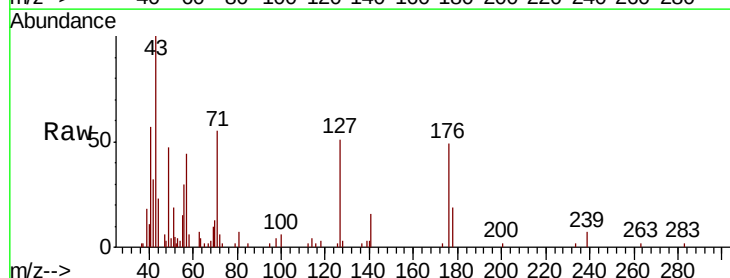
Acq: 23 Jun 2021 6:10

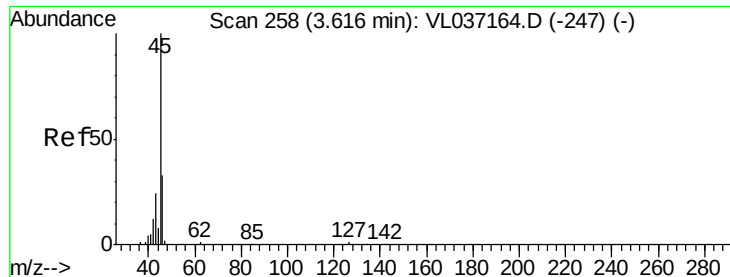
Tgt Ion: 43 Resp: 5482

Ion Ratio Lower Upper

43 100

57 193.8 40.6 61.0#

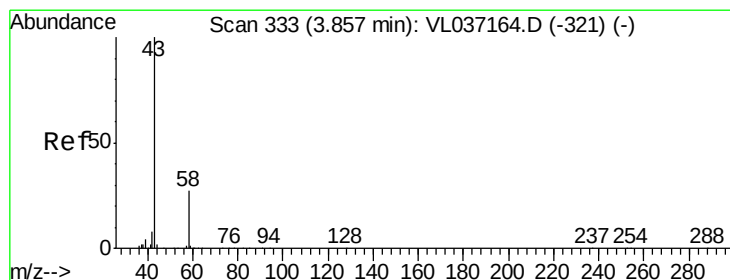
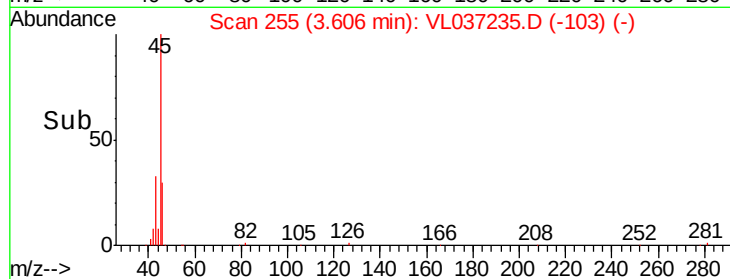
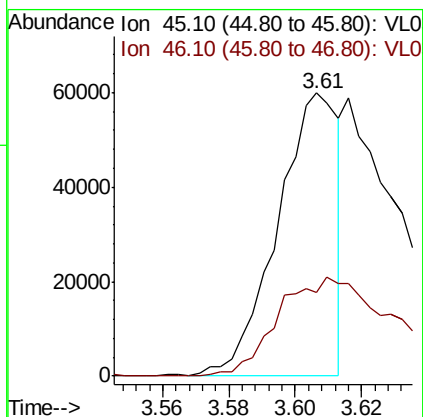
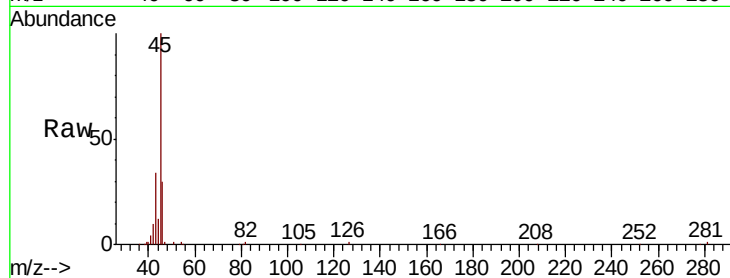




#13
Ethanol
Concen: 4.786 ppbv
RT: 3.61 min Scan# 255
Delta R.T. -0.01 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

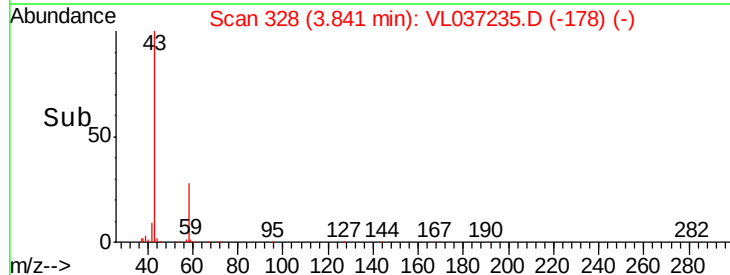
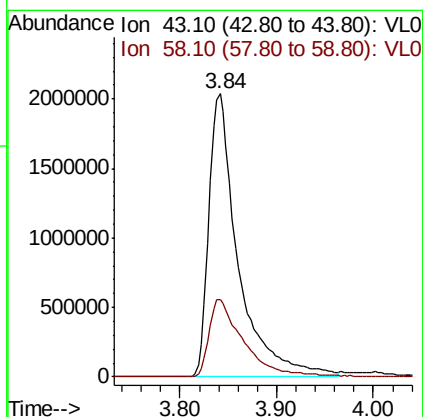
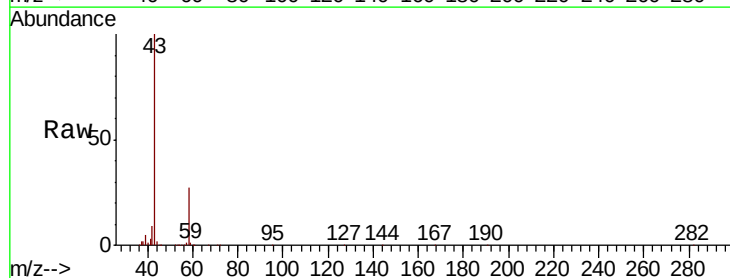
Instrument :
MSVOA_L
ClientSampleId :

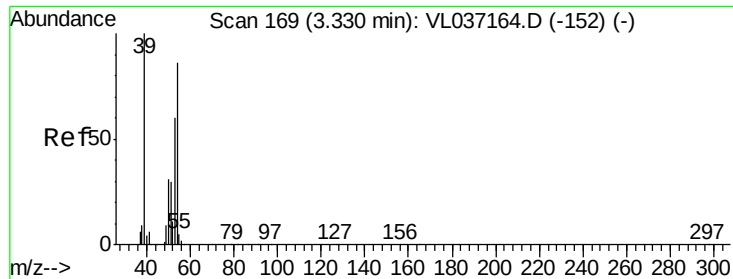
Tot Ion: 45 Resp: 76308
Ion Ratio Lower Upper
45 100
46 88.9 34.2 137.0



#15
Acetone
Concen: 22.900 ppbv
RT: 3.84 min Scan# 328
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 43 Resp: 4280768
Ion Ratio Lower Upper
43 100
58 32.7 23.7 35.5

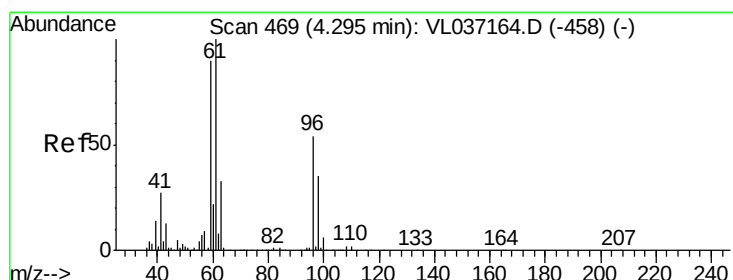
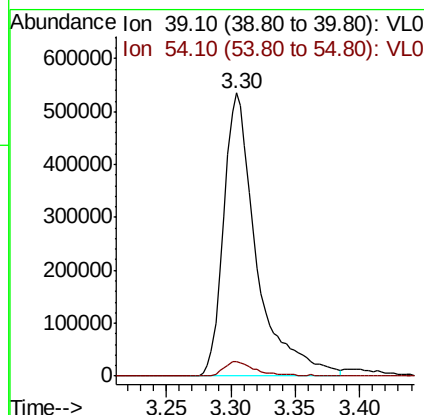
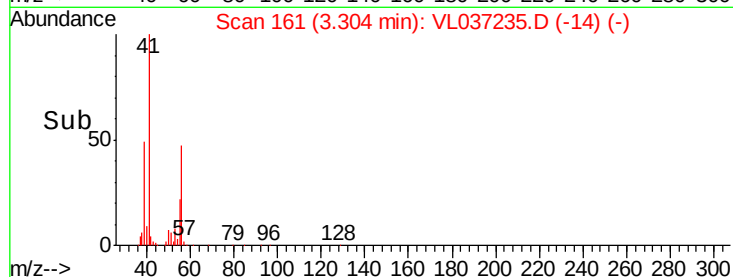
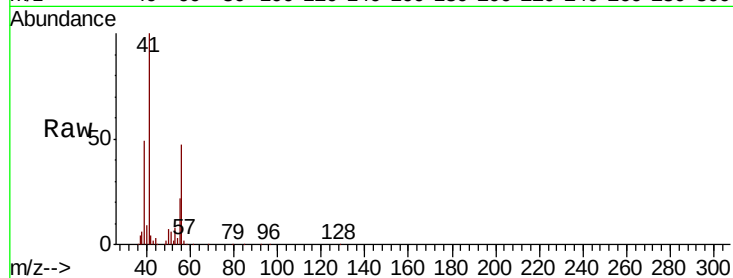




#16
1,3-Butadiene
Concen: 8.583 ppbv
RT: 3.30 min Scan# 161
Delta R.T. -0.03 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

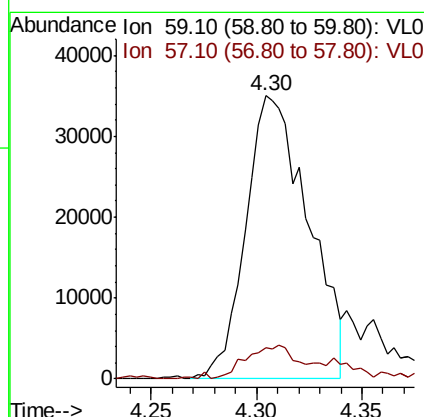
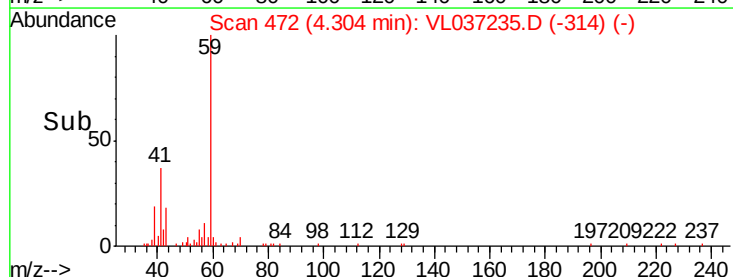
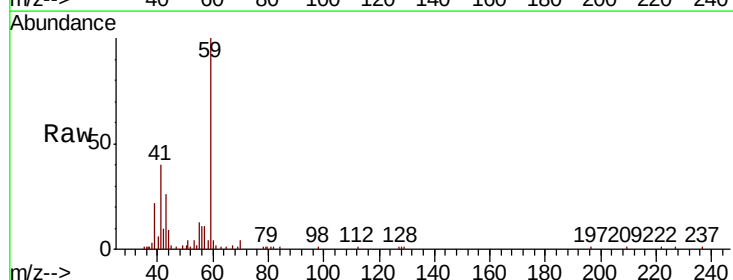
Instrument :
MSVOA_L
ClientSampleId :

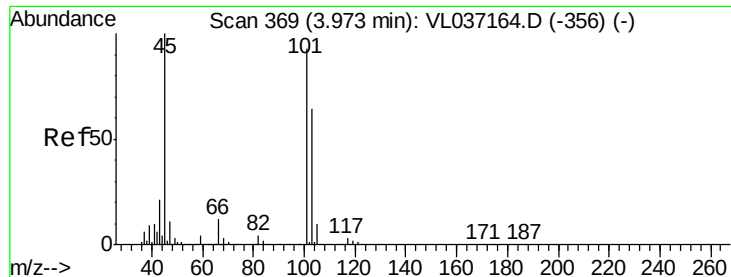
Tot Ion: 39 Resp: 948511
Ion Ratio Lower Upper
39 100
54 5.5 61.2 91.8#



#17
tert-Butyl alcohol
Concen: 0.416 ppbv
RT: 4.30 min Scan# 472
Delta R.T. 0.01 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 59 Resp: 71941
Ion Ratio Lower Upper
59 100
57 14.2 8.8 13.2#





#19

Isopropyl Alcohol

Concen: 0.163 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.00 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

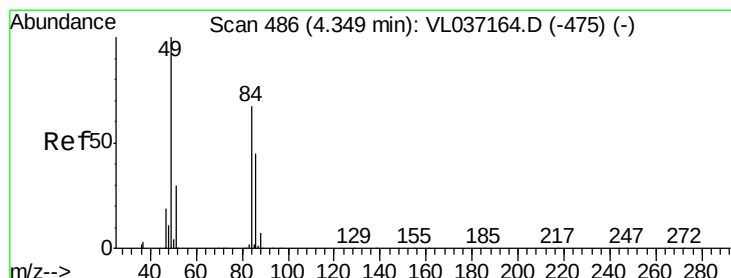
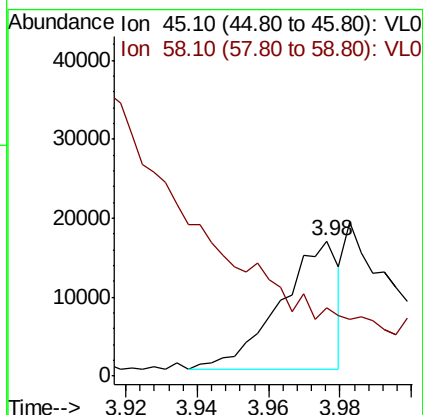
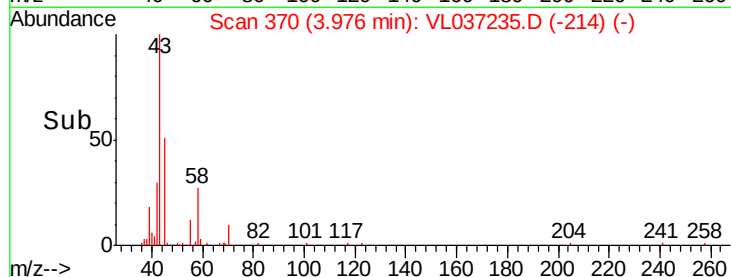
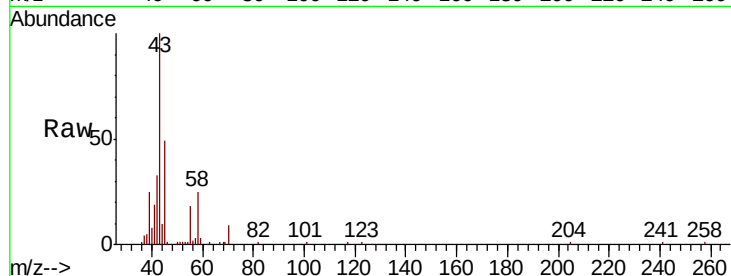
ClientSampleId :

Tot Ion: 45 Resp: 18511

Ion Ratio Lower Upper

45 100

58 0.0 2.4 3.6#



#20

Methylene Chloride

Concen: 0.490 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.01 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Tgt Ion: 84 Resp: 54856

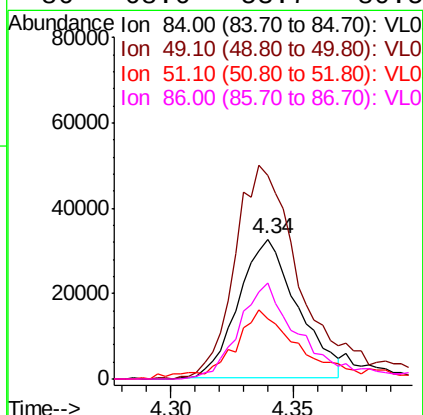
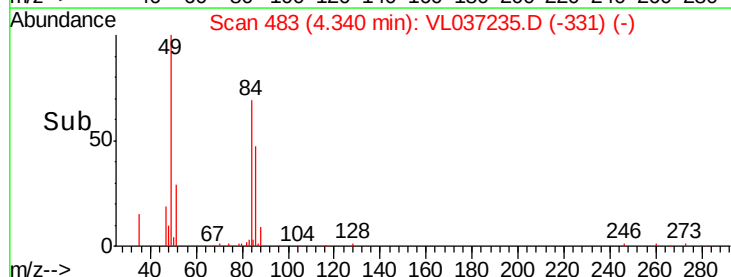
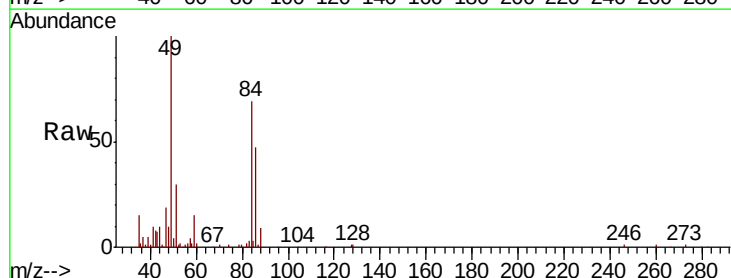
Ion Ratio Lower Upper

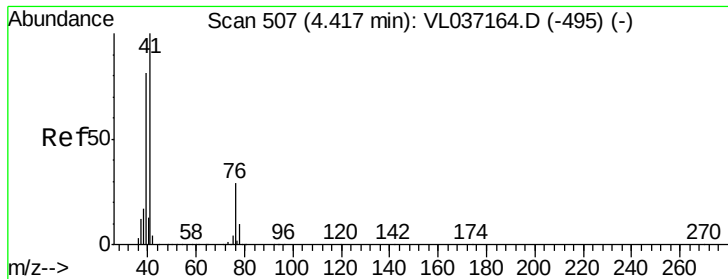
84 100

49 144.8 119.7 179.5

51 38.8 36.1 54.1

86 68.6 53.7 80.5

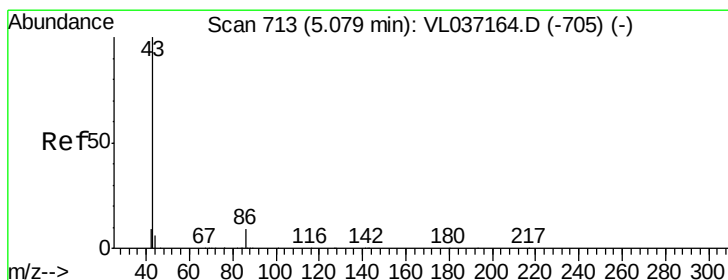
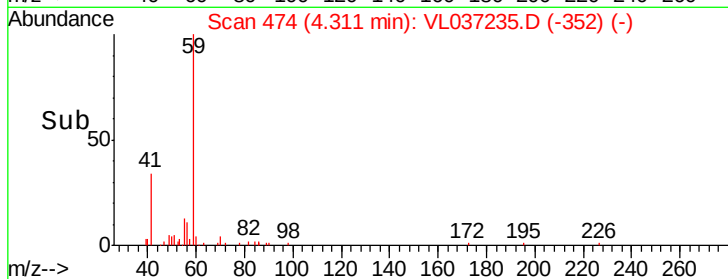
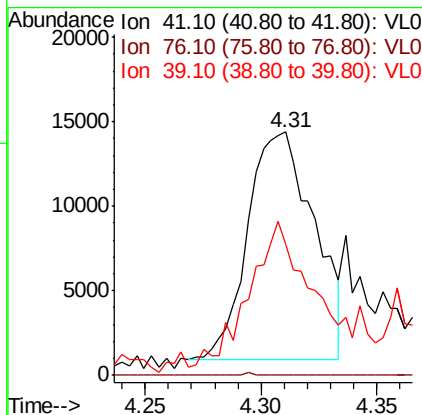
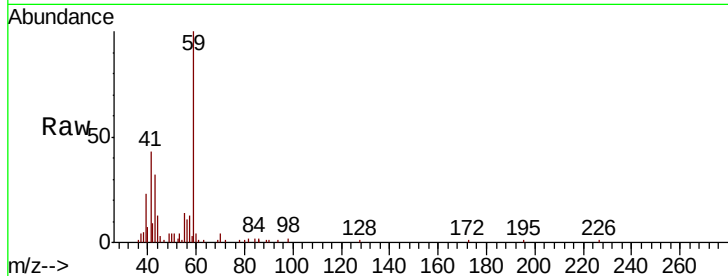




#21
Allvl Chloride
Concen: 0.190 ppbv
RT: 4.31 min Scan# 474
Delta R.T. -0.11 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

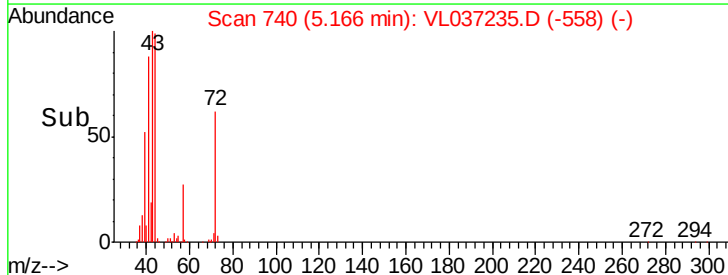
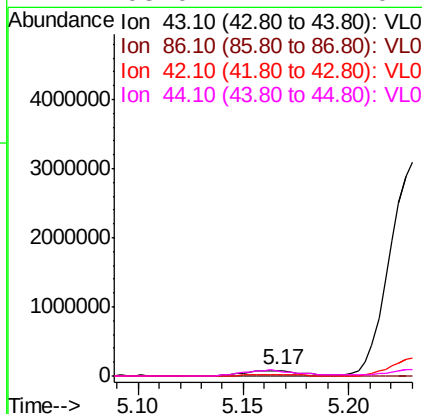
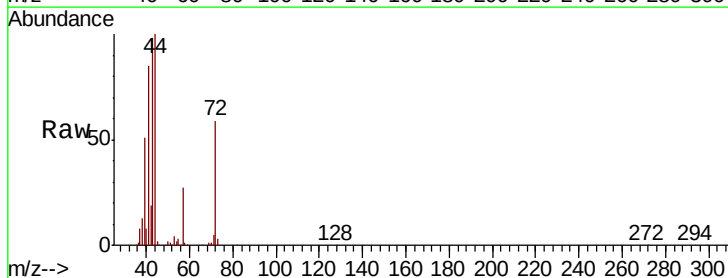
Instrument :
MSVOA_L
ClientSampleId :

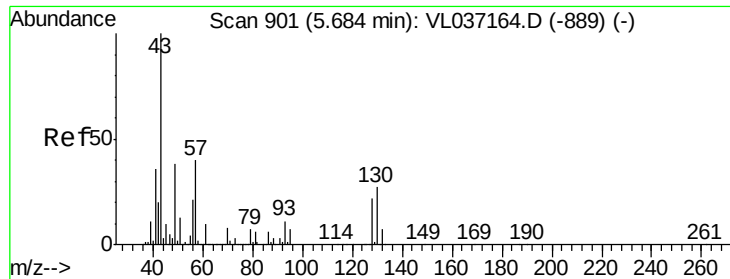
Tot Ion: 41 Resp: 26835
Ion Ratio Lower Upper
41 100
76 0.0 24.6 37.0#
39 98.5 65.4 98.0#



#23
Vinyl Acetate
Concen: 0.507 ppbv
RT: 5.17 min Scan# 740
Delta R.T. 0.09 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 43 Resp: 135838
Ion Ratio Lower Upper
43 100
86 0.0 5.8 8.8#
42 18.5 8.2 12.2#
44 103.0 4.2 6.4#



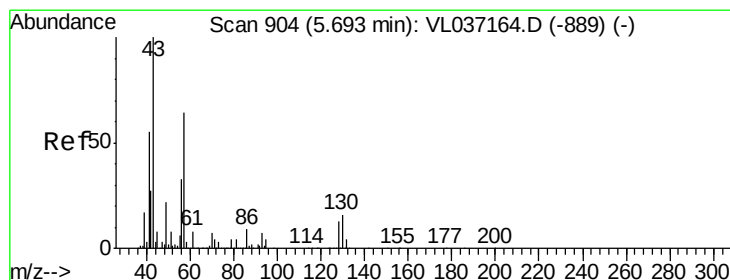
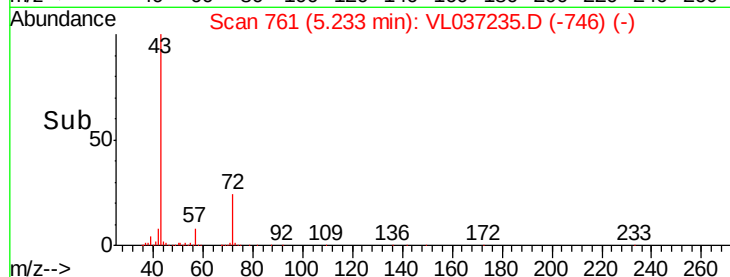
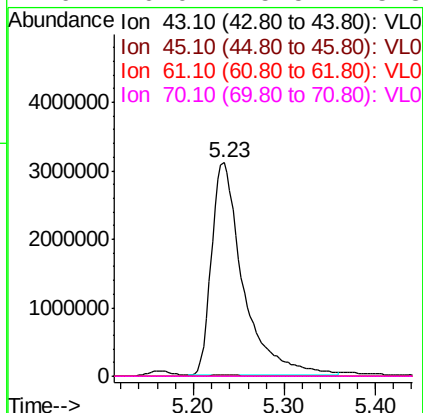
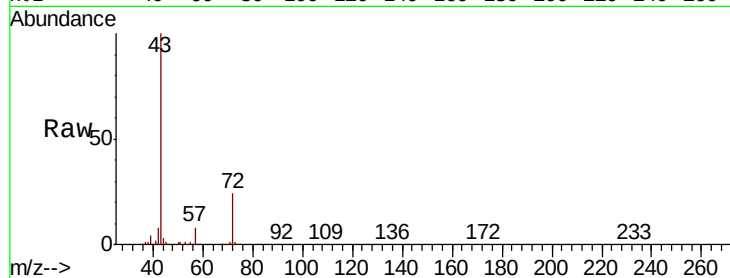


#25
Ethyl Acetate
Concen: 18.617 ppbv
RT: 5.23 min Scan# 761
Delta R.T. -0.45 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 7534055

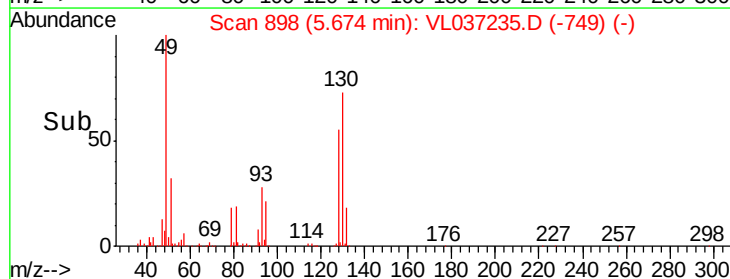
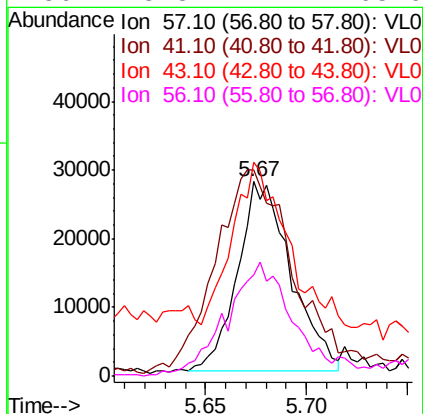
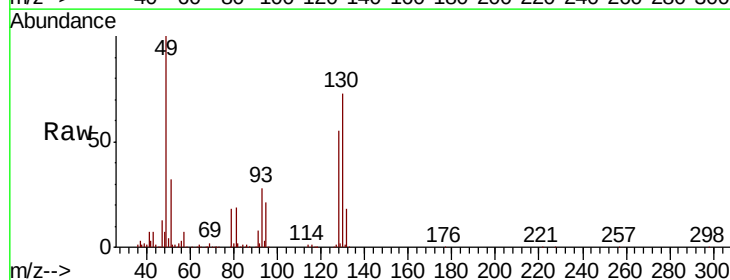
Ion	Ratio	Lower	Upper
43	100		
45	0.6	8.0	12.0#
61	0.0	8.1	12.1#
70	0.0	5.5	8.3#

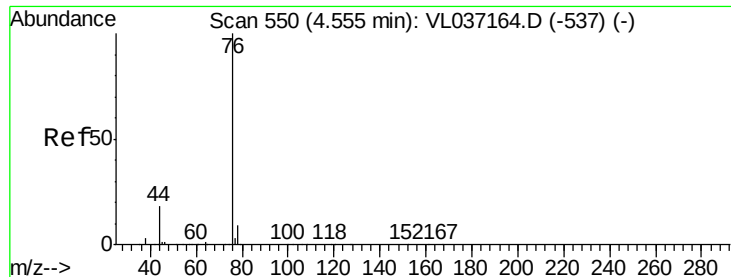


#26
Hexane
Concen: 0.248 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 57 Resp: 50783

Ion	Ratio	Lower	Upper
57	100		
41	159.2	73.5	110.3#
43	0.0	170.7	256.1#
56	75.3	42.4	63.6#





#27

Carbon Disulfide

Concen: 0.022 ppbv

RT: 4.55 min Scan# 549

Delta R.T. -0.00 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

ClientSampleId :

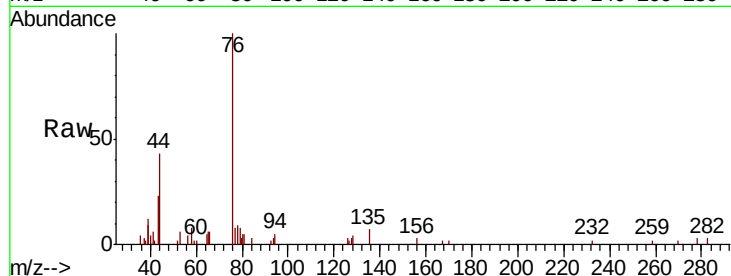
Tot Ion: 76 Resp: 4503

Ion Ratio Lower Upper

76 100

44 0.0 15.4 23.2#

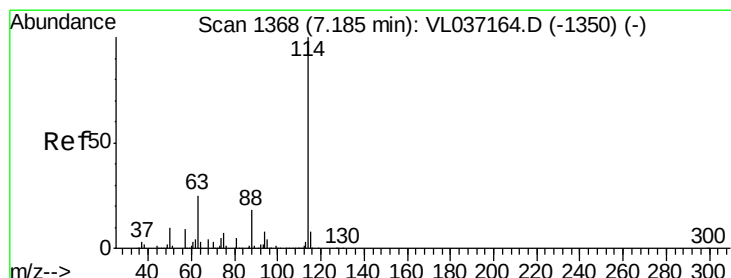
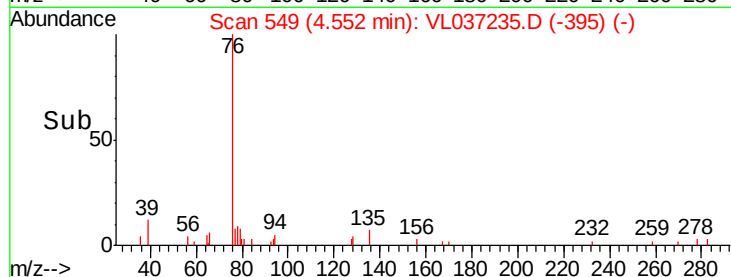
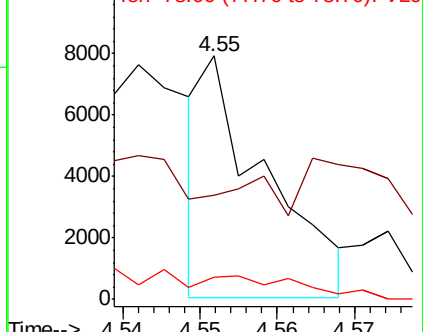
78 0.0 8.0 12.0#



Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 min Scan# 1362

Delta R.T. -0.02 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

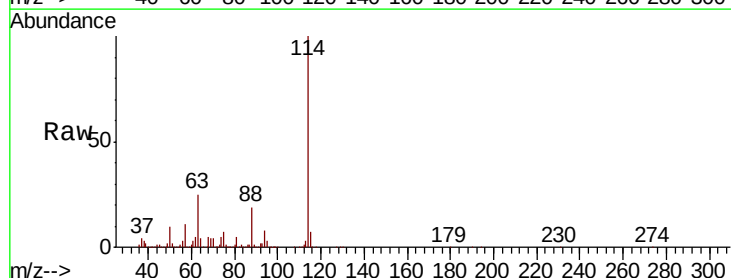
Tgt Ion: 114 Resp: 4776244

Ion Ratio Lower Upper

114 100

63 24.5 19.6 29.4

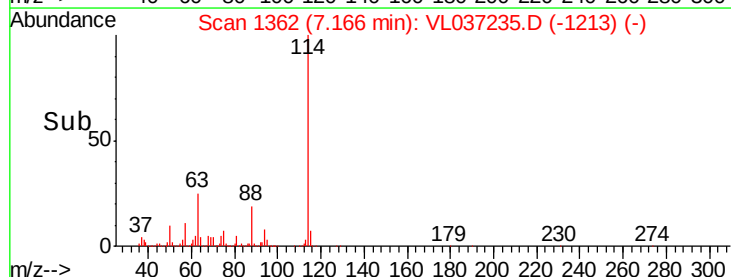
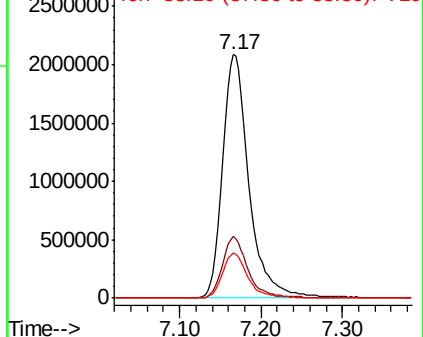
88 18.1 14.2 21.2

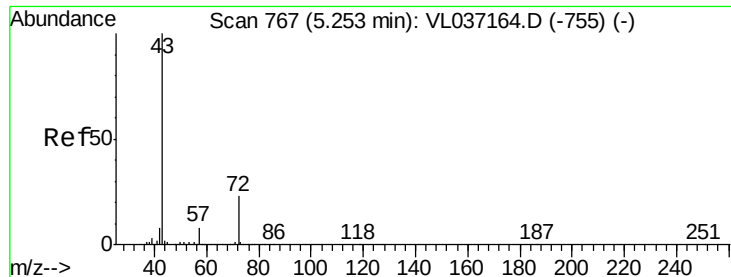


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

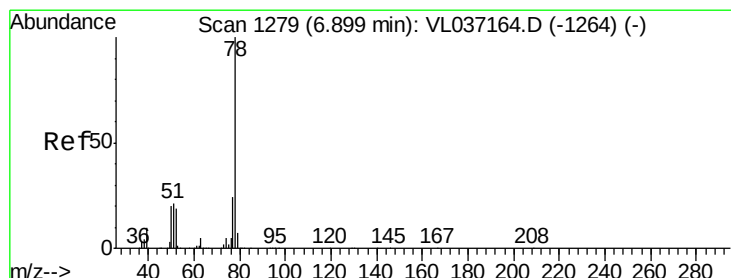
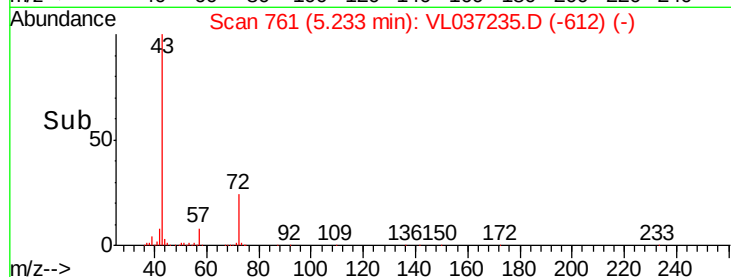
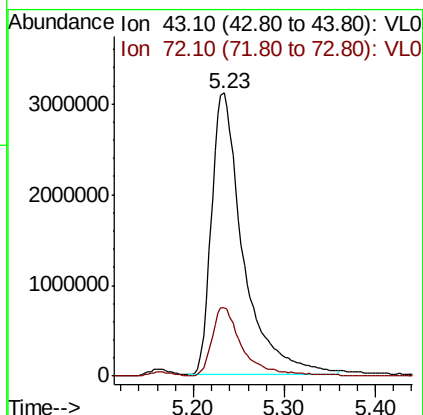
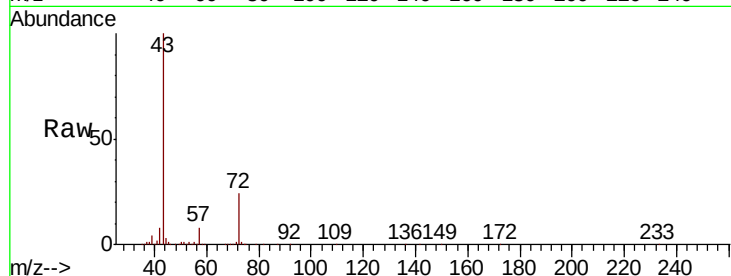




#34
2-Butanone
Concen: 40.559 ppbv
RT: 5.23 min Scan# 761
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

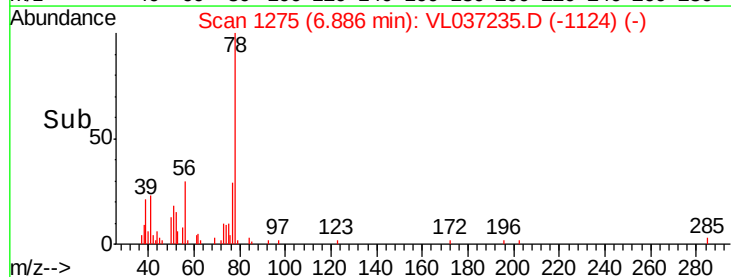
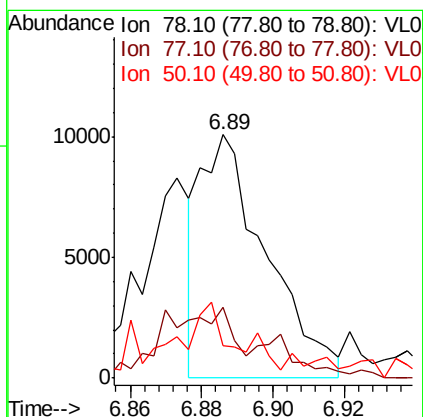
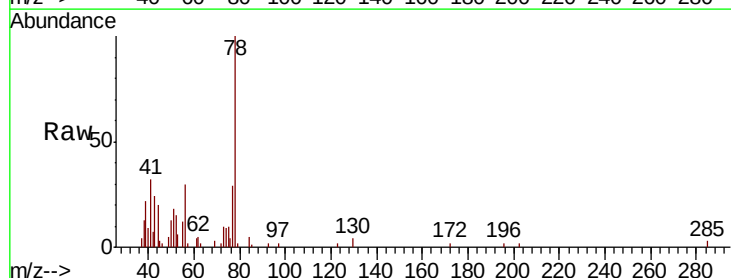
Instrument :
MSVOA_L
ClientSampleId :

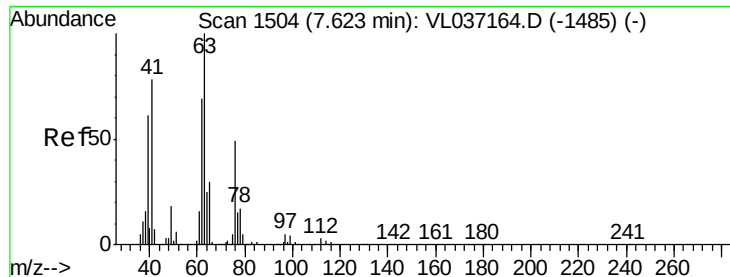
Tot Ion: 43 Resp: 7534055
Ion Ratio Lower Upper
43 100
72 23.8 18.9 28.3



#36
Benzene
Concen: 0.033 ppbv
RT: 6.89 min Scan# 1275
Delta R.T. -0.01 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 78 Resp: 12858
Ion Ratio Lower Upper
78 100
77 29.0 19.0 28.6#
50 10.6 15.7 23.5#

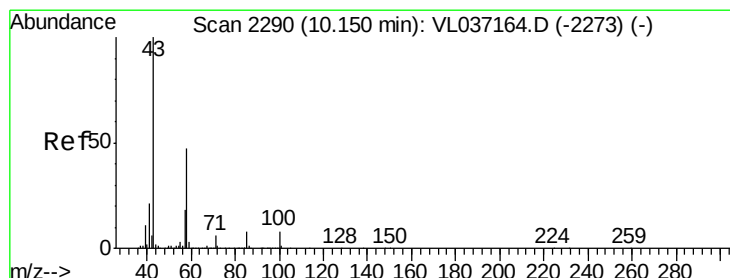
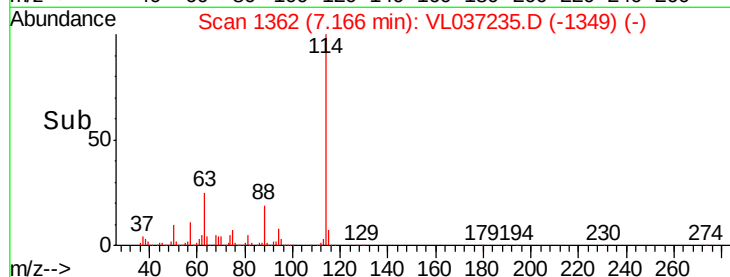
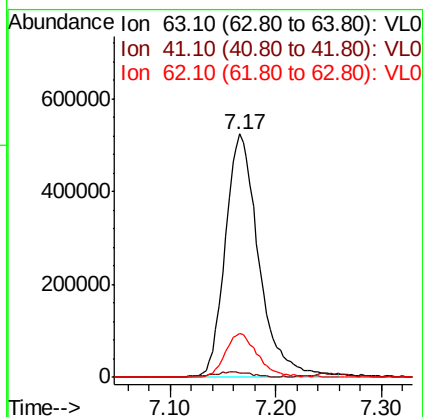
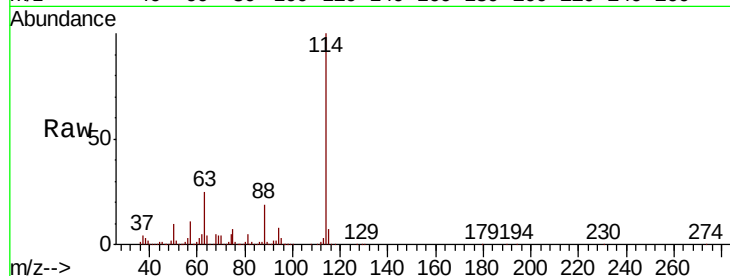




#39
 1,2-Dichloropropane
 Concen: 8.056 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.46 min
 Lab File: VL037235.D
 Acq: 23 Jun 2021 6:10

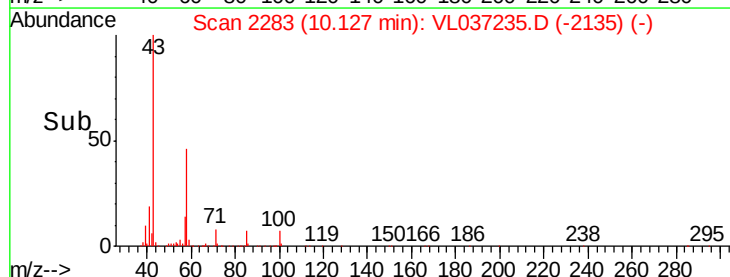
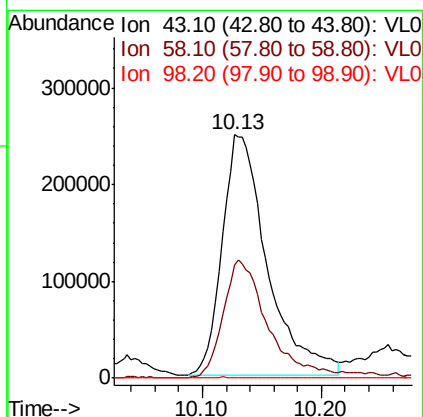
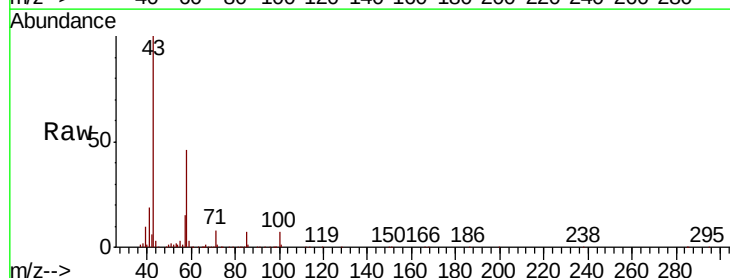
Instrument :
 MSVOA_L
 ClientSampleId :

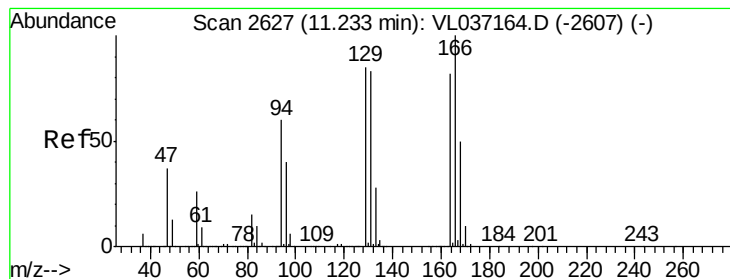
Tot Ion: 63 Resp: 1156175
 Ion Ratio Lower Upper
 63 100
 41 1.2 62.0 93.0#
 62 18.3 54.9 82.3#



#51
 2-Hexanone
 Concen: 5.235 ppbv
 RT: 10.13 min Scan# 2283
 Delta R.T. -0.02 min
 Lab File: VL037235.D
 Acq: 23 Jun 2021 6:10

Tgt Ion: 43 Resp: 649827
 Ion Ratio Lower Upper
 43 100
 58 50.9 38.4 57.6
 98 0.3 0.3 0.5#





#52

Tetrachloroethene

Concen: 1.380 ppbv

RT: 11.21 min Scan# 2620

Delta R.T. -0.02 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 247734

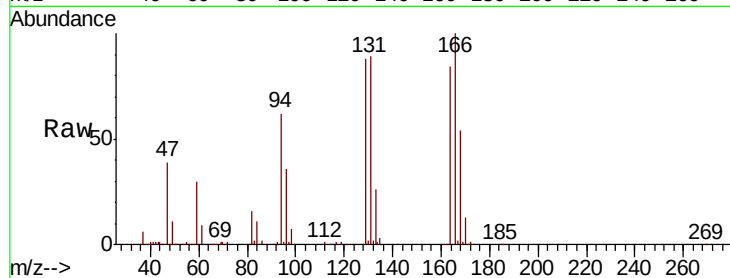
Ion Ratio Lower Upper

164 100

166 119.6 97.6 146.4

129 105.4 82.9 124.3

131 106.9 80.6 120.8

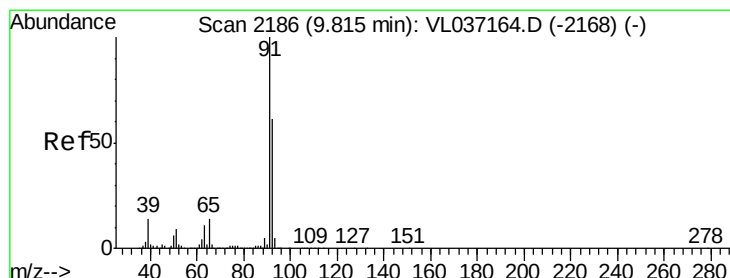
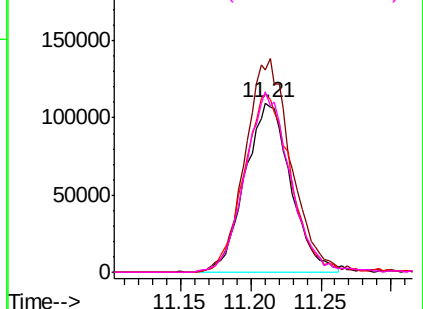
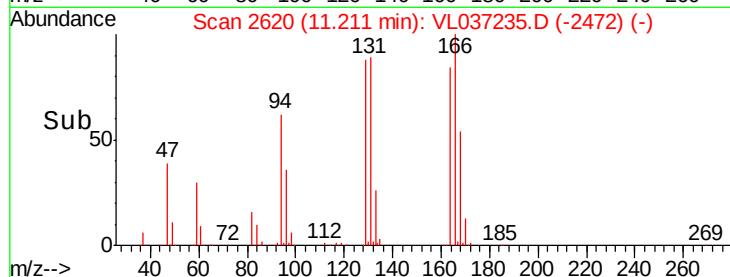


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.378 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.02 min

Lab File: VL037235.D

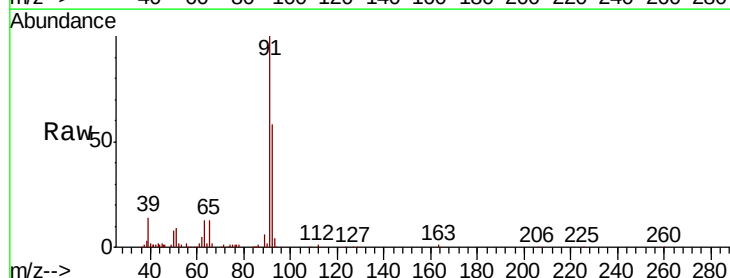
Acq: 23 Jun 2021 6:10

Tgt Ion: 91 Resp: 174570

Ion Ratio Lower Upper

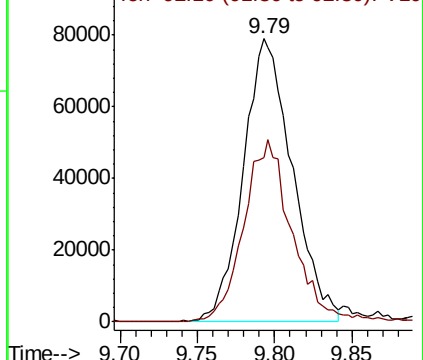
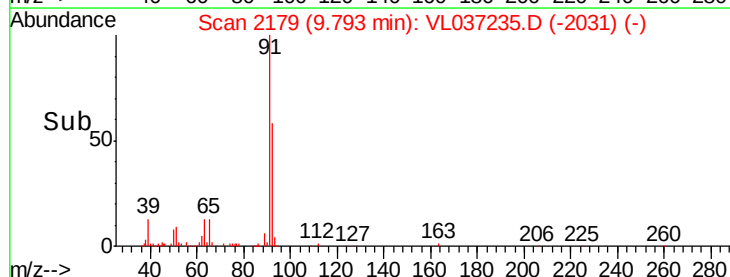
91 100

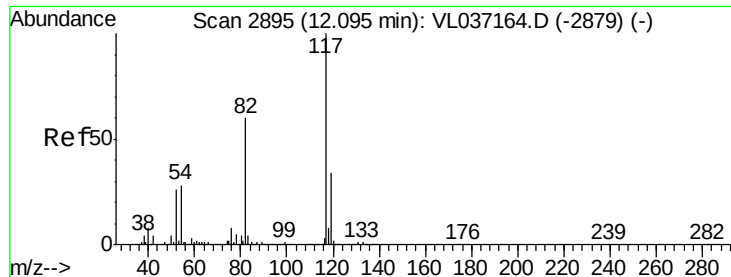
92 64.2 48.3 72.5



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

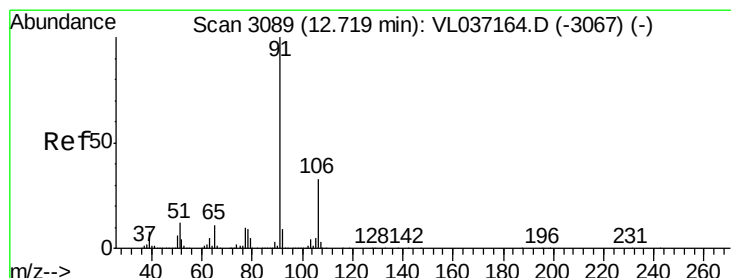
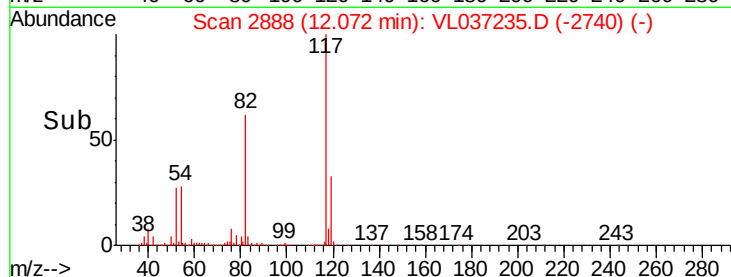
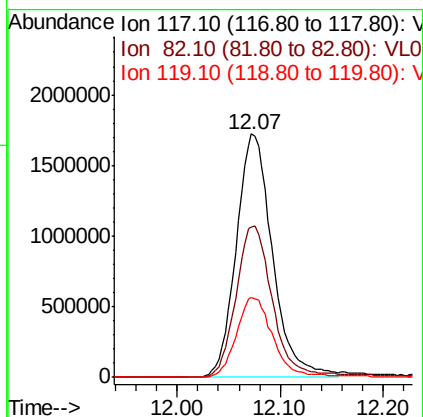
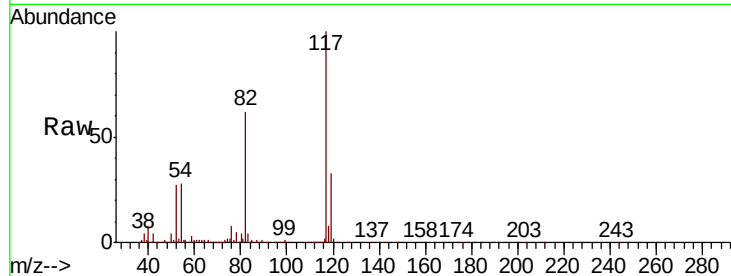




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min Scan# 2888
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

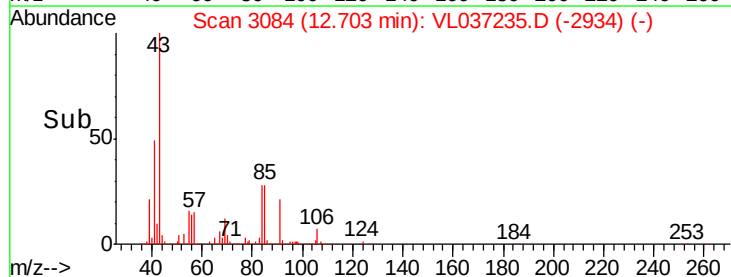
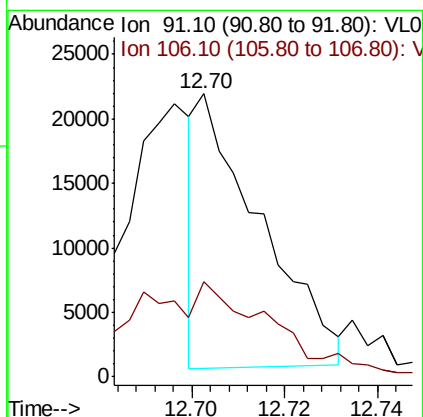
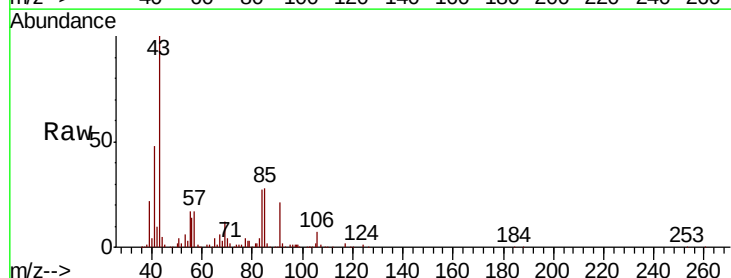
Instrument :
MSVOA_L
ClientSampleId :

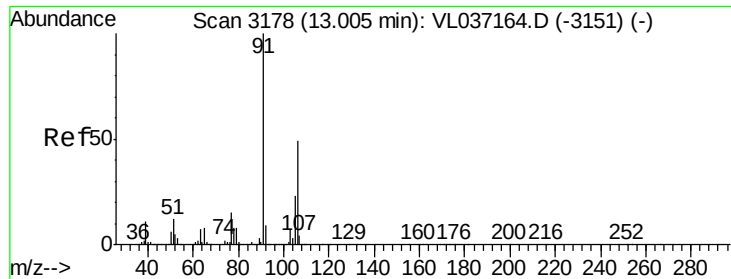
Tot Ion:117 Resp: 4209726
Ion Ratio Lower Upper
117 100
82 64.2 51.7 77.5
119 33.8 47.6 71.4#



#58
Ethyl Benzene
Concen: 0.034 ppbv
RT: 12.70 min Scan# 3084
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 91 Resp: 19864
Ion Ratio Lower Upper
91 100
106 29.8 26.3 39.5

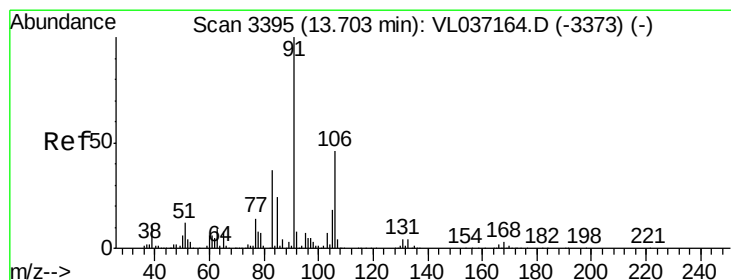
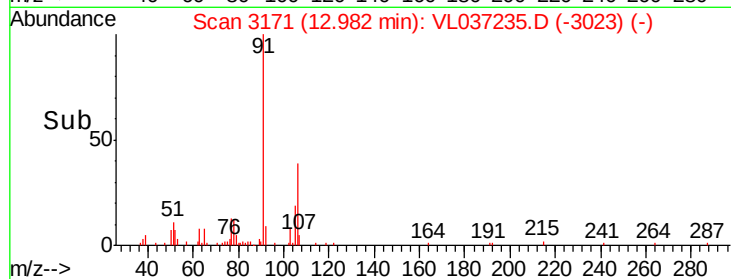
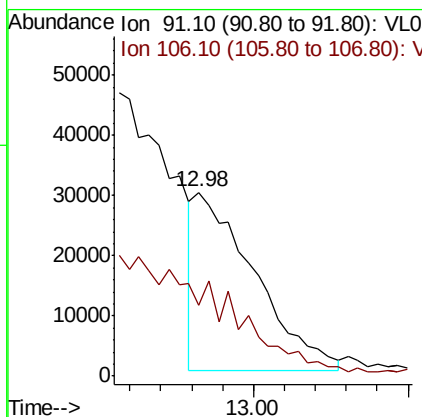
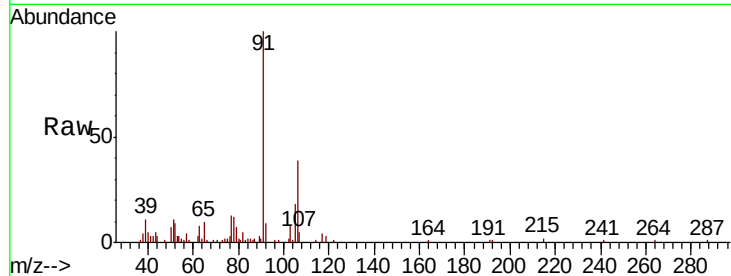




#59
m/p-Xylene
Concen: 0.080 ppbv
RT: 12.98 min Scan# 3171
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

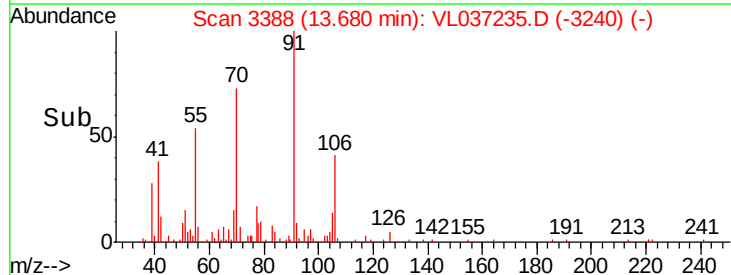
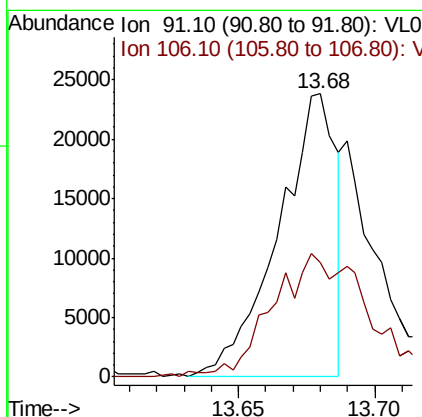
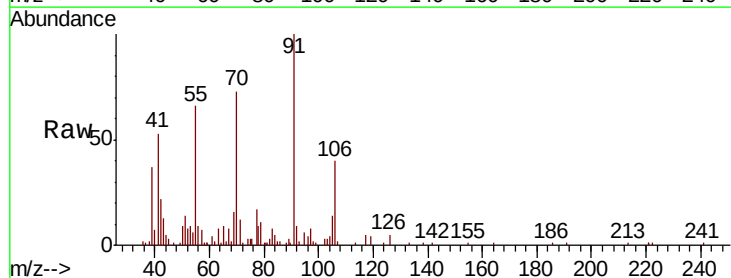
Instrument :
MSVOA_L
ClientSampled :

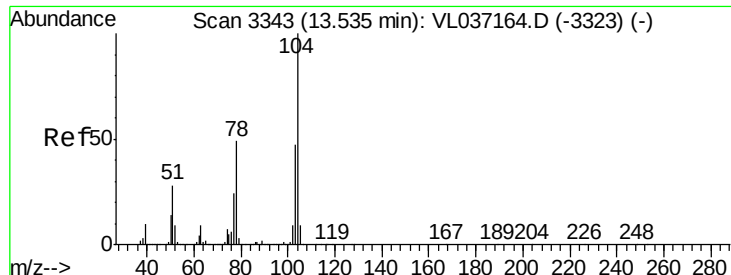
Tot Ion: 91 Resp: 39304
Ion Ratio Lower Upper
91 100
106 0.0 37.0 55.4#



#60
o-Xylene
Concen: 0.075 ppbv
RT: 13.68 min Scan# 3388
Delta R.T. -0.02 min
Lab File: VL037235.D
Acq: 23 Jun 2021 6:10

Tgt Ion: 91 Resp: 35054
Ion Ratio Lower Upper
91 100
106 72.3 23.0 69.0#





#61

Stvrene

Concen: 0.023 ppbv

RT: 13.51 min Scan# 3336

Delta R.T. -0.02 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

ClientSampleId :

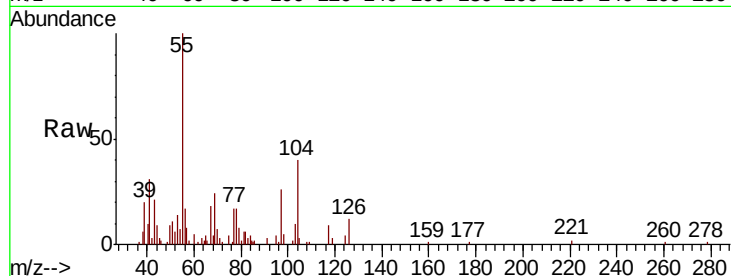
Tot Ion:104 Resp: 5440

Ion Ratio Lower Upper

104 100

78 142.4 39.7 59.5#

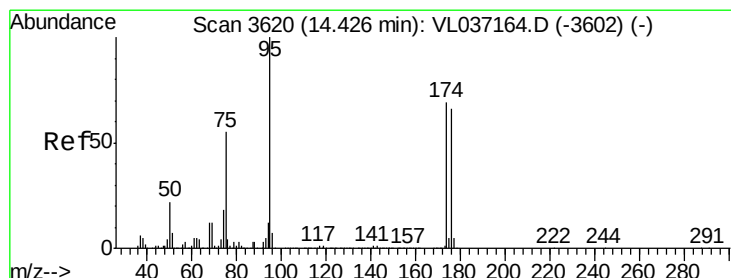
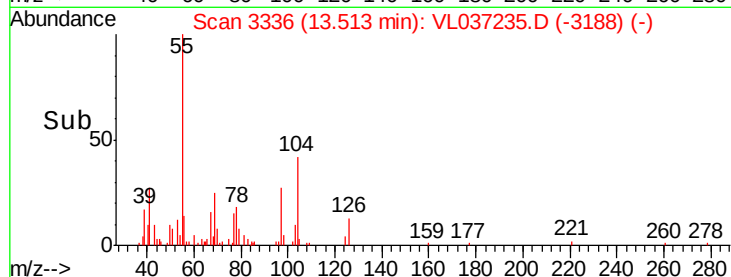
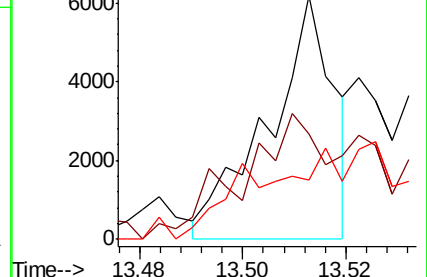
103 0.0 37.6 56.4#



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.757 ppbv

RT: 14.40 min Scan# 3613

Delta R.T. -0.02 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

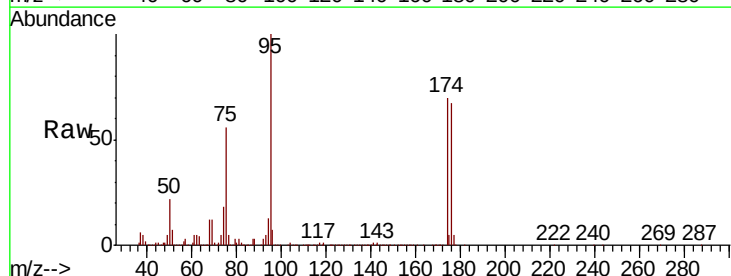
Tgt Ion: 95 Resp: 3112461

Ion Ratio Lower Upper

95 100

174 74.8 57.0 85.4

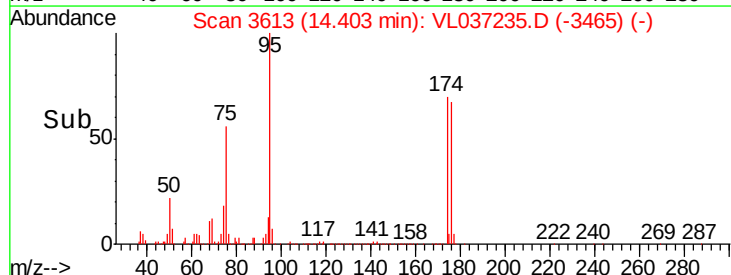
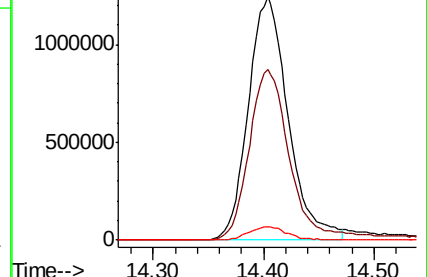
175 5.5 4.4 6.6

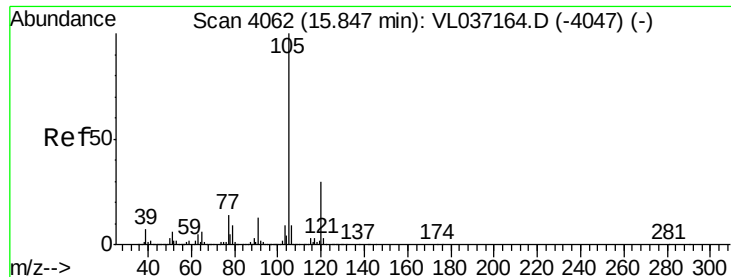


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.049 ppbv

RT: 15.82 min Scan# 4055

Delta R.T. -0.02 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 26206

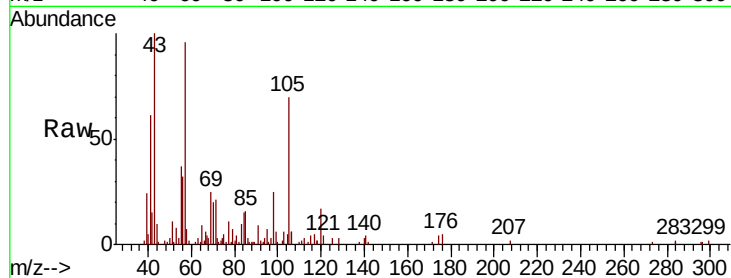
Ion Ratio Lower Upper

105 100

120 0.0 24.7 37.1#

91 23.1 10.2 15.4#

77 23.5 11.0 16.6#

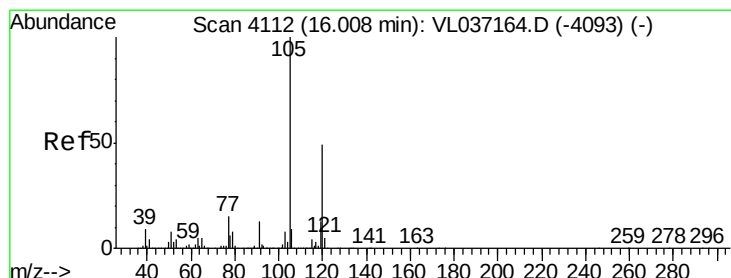
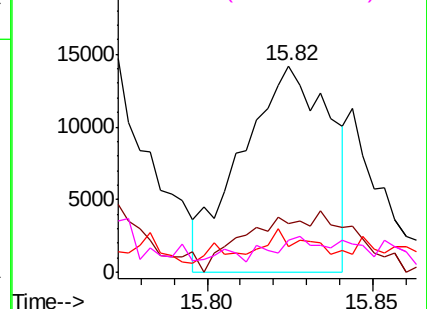
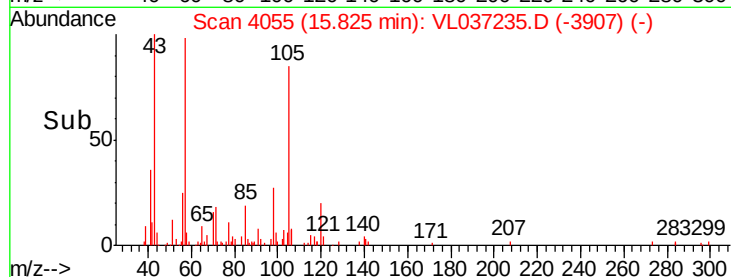


Abundance Ion 105.10 (104.80 to 105.80): V

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



#73

1,3,5-Trimethylbenzene

Concen: 0.035 ppbv

RT: 15.99 min Scan# 4106

Delta R.T. -0.02 min

Lab File: VL037235.D

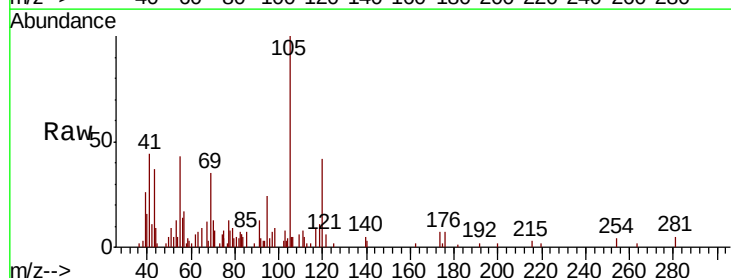
Acq: 23 Jun 2021 6:10

Tgt Ion:105 Resp: 18144

Ion Ratio Lower Upper

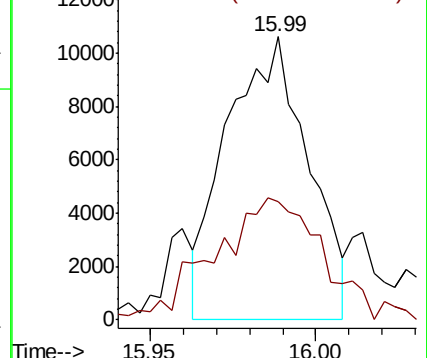
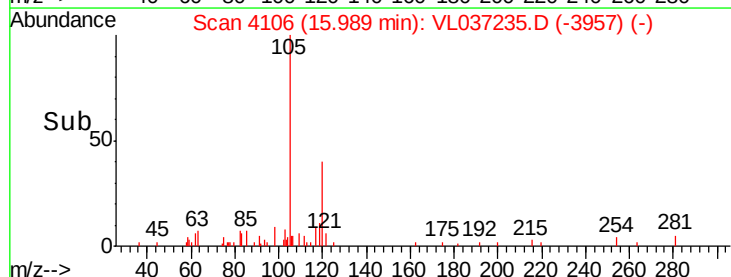
105 100

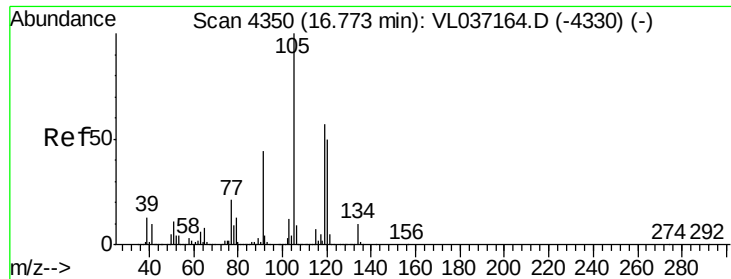
120 34.8 39.4 59.2#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74

1,2,4-Trimethylbenzene

Concen: 0.079 ppbv

RT: 16.75 min Scan# 4342

Delta R.T. -0.03 min

Lab File: VL037235.D

Acq: 23 Jun 2021 6:10

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 42033

Ion Ratio Lower Upper

105 100

120 42.1 39.8 59.8

91 11.7 37.0 55.4#

77 9.6 17.0 25.4#

