

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL122123\
 Data File : VL040931.D
 Acq On : 21 Dec 2023 15:54
 Operator : SY/MD
 Sample : 05813-05
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 10323

Quant Time: Dec 22 00:08:02 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL122023AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Dec 21 07:32:42 2023
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

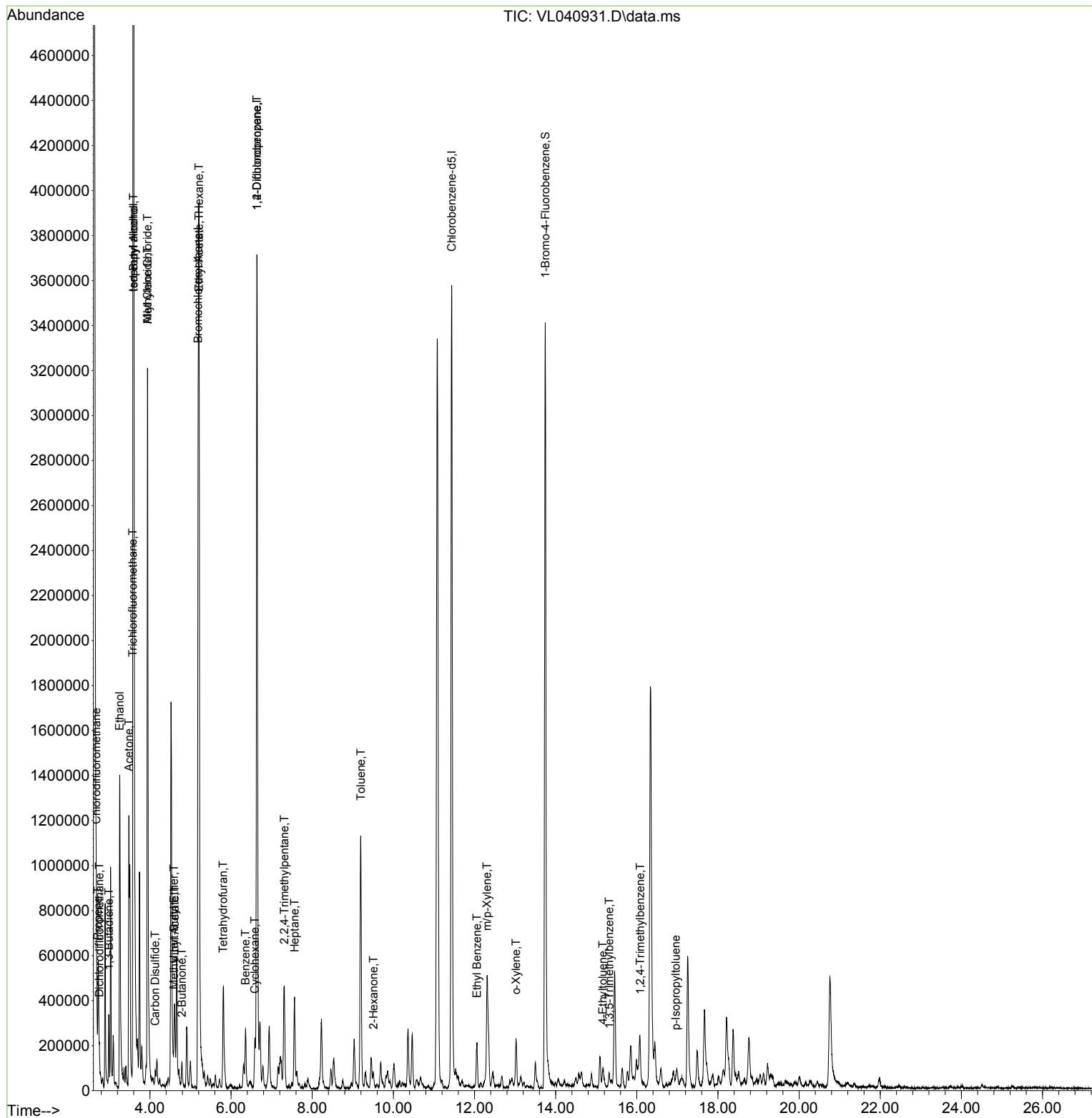
Internal Standards						
1) Bromochloromethane	5.189	49	1113275	10.000	ppbv	0.01
33) 1,4-Difluorobenzene	6.639	114	2782345	10.000	ppbv	0.00
55) Chlorobenzene-d5	11.439	117	2352271	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.745	95	1728380	9.975	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.800%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.755	85	73563	0.347	ppbv	97
3) Chlorodifluoromethane	2.677	51	197291	1.178	ppbv #	67
9) Propene	2.723	41	122857	2.223	ppbv #	82
10) Heptane	7.565	43	93167	0.678	ppbv #	31
11) Trichlorofluoromethane	3.575	101	36273	0.219	ppbv #	78
13) Ethanol	3.256	45	1486420	106.590	ppbv	95
15) Acetone	3.481	43	1386988	10.388	ppbv	94
16) 1,3-Butadiene	2.986	39	84633	1.472	ppbv #	22
17) tert-Butyl alcohol	3.594	59	358843	3.633	ppbv	99
19) Isopropyl Alcohol	3.594	45	8990729	129.046	ppbv #	98
20) Methylene Chloride	3.941	84	1048023	22.021	ppbv	96
21) Allyl Chloride	3.941	41	36401	0.461	ppbv #	85
23) Vinyl Acetate	4.613	43	125997	0.855	ppbv #	1
25) Ethyl Acetate	5.208	43	1081217	4.673	ppbv #	81
26) Hexane	5.211	57	1324600	12.919	ppbv #	44
27) Carbon Disulfide	4.131	76	63331	0.456	ppbv #	95
28) Methyl tert-Butyl Ether	4.594	73	28145	0.296	ppbv	94
30) Cyclohexane	6.587	84	71868	0.841	ppbv	93
34) 2-Butanone	4.787	43	115887	0.787	ppbv	99
36) Benzene	6.356	78	205574	0.945	ppbv	96
39) 1,2-Dichloropropane	6.639	63	711062	8.319	ppbv #	23
41) Tetrahydrofuran	5.803	42	29985	0.335	ppbv #	40
44) 2,2,4-Trimethylpentane	7.314	57	376485	1.019	ppbv #	81
51) 2-Hexanone	9.513	43	10097	0.063	ppbv #	60
53) Toluene	9.198	91	743088	3.081	ppbv	99
58) Ethyl Benzene	12.060	91	76114	0.252	ppbv	98
59) m/p-Xylene	12.311	91	522587	2.033	ppbv #	100
60) o-Xylene	13.024	91	174251	0.720	ppbv	99
69) p-Isopropyltoluene	16.963	119	11128	0.032	ppbv #	65
72) 4-Ethyltoluene	15.163	105	55110	0.207	ppbv #	94
73) 1,3,5-Trimethylbenzene	15.320	105	39291	0.171	ppbv	92
74) 1,2,4-Trimethylbenzene	16.082	105	56401	0.221	ppbv #	63

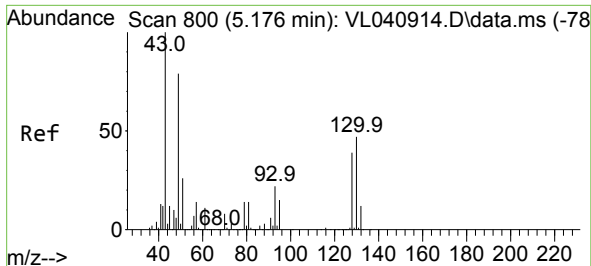
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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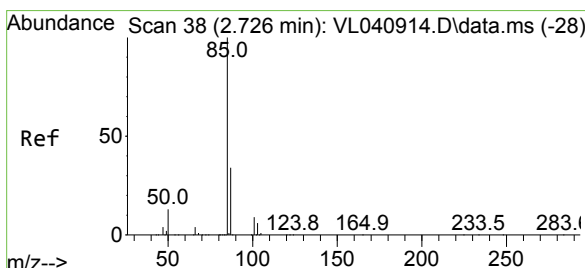
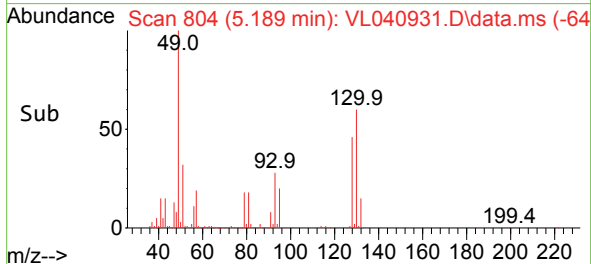
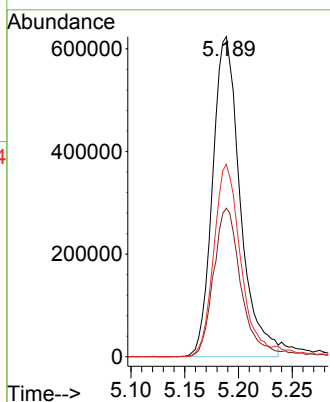
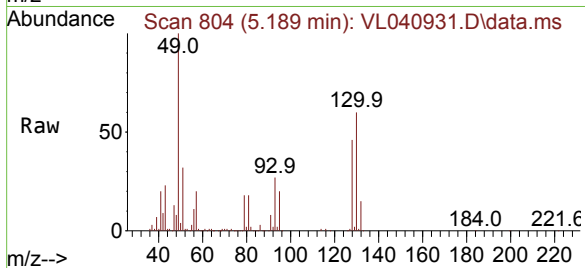




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.189 min Scan# 80
 Delta R.T. 0.013 min
 Lab File: VL040931.D
 Acq: 21 Dec 2023 15:54

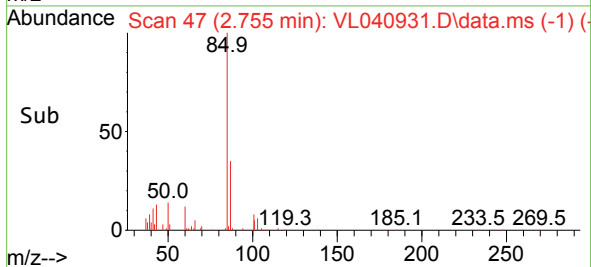
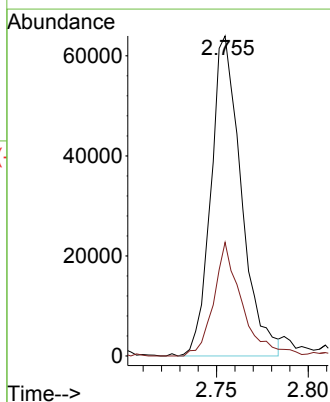
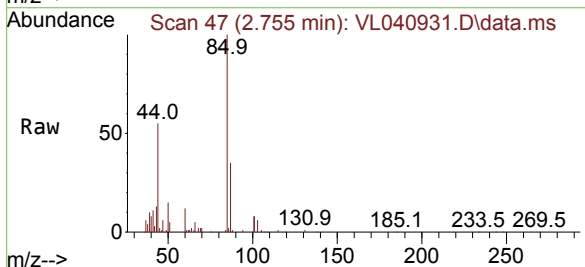
Instrument :
 MSVOA_L
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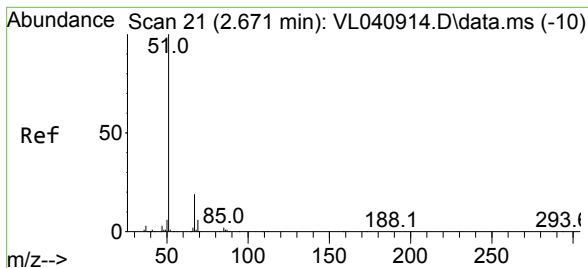
Tgt Ion: 49 Resp: 1113275
 Ion Ratio Lower Upper
 49 100
 128 48.3 23.8 71.2
 130 62.5 30.1 90.5



#2
 Dichlorodifluoromethane
 Concen: 0.347 ppbv
 RT: 2.755 min Scan# 47
 Delta R.T. 0.029 min
 Lab File: VL040931.D
 Acq: 21 Dec 2023 15:54

Tgt Ion: 85 Resp: 73563
 Ion Ratio Lower Upper
 85 100
 87 35.5 27.0 40.6

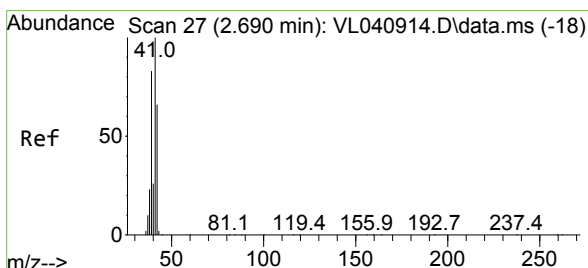
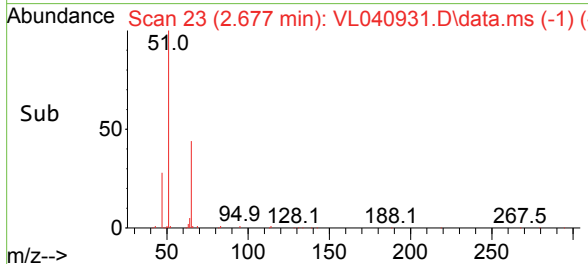
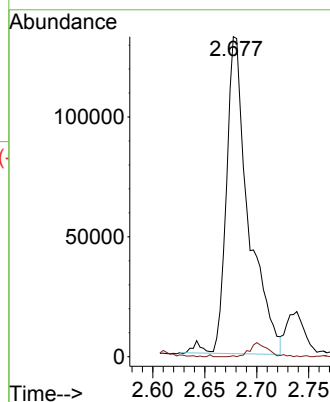
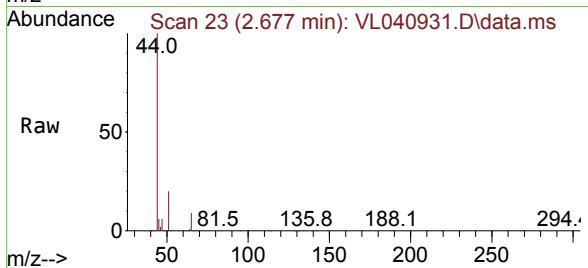




#3
Chlorodifluoromethane
Concen: 1.178 ppbv
RT: 2.677 min Scan# 21
Delta R.T. 0.007 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

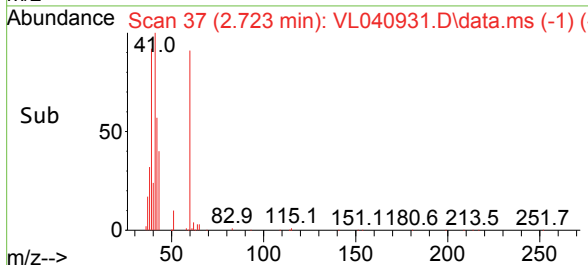
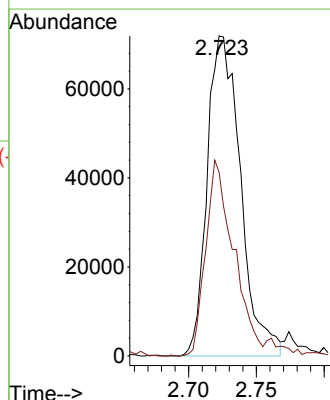
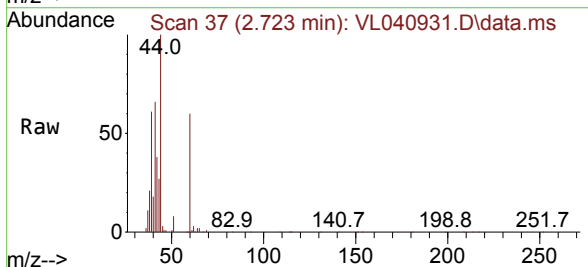
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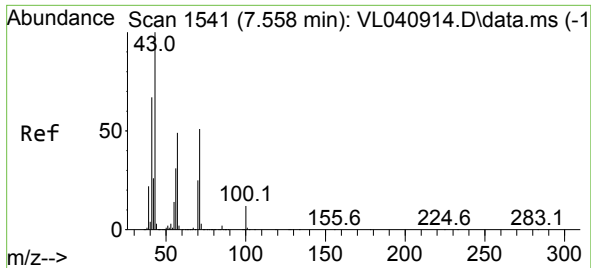
Tgt Ion: 51 Resp: 197291
Ion Ratio Lower Upper
51 100
67 3.7 14.7 22.1#



#9
Propene
Concen: 2.223 ppbv
RT: 2.723 min Scan# 37
Delta R.T. 0.032 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 41 Resp: 122857
Ion Ratio Lower Upper
41 100
42 54.9 55.8 83.6#





#10

Heptane

Concen: 0.678 ppbv

RT: 7.565 min Scan# 11

Delta R.T. 0.007 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

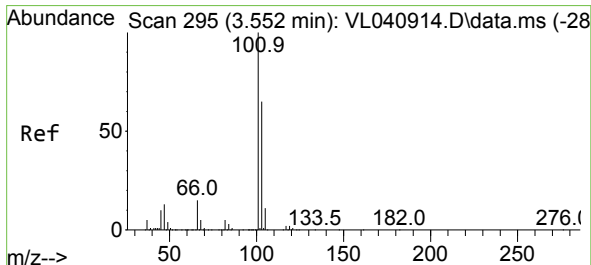
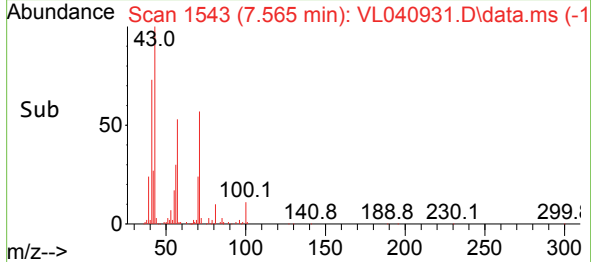
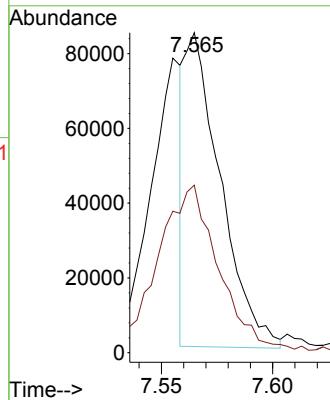
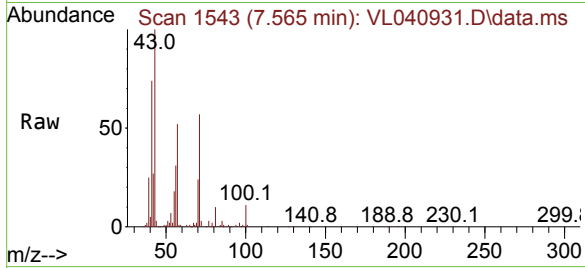
10323

Tgt Ion: 43 Resp: 93167

Ion Ratio Lower Upper

43 100

57 96.3 39.3 58.9#



#11

Trichlorofluoromethane

Concen: 0.219 ppbv

RT: 3.575 min Scan# 302

Delta R.T. 0.023 min

Lab File: VL040931.D

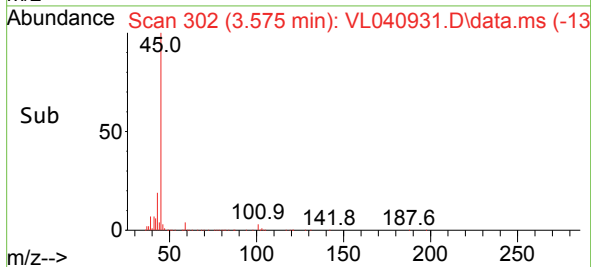
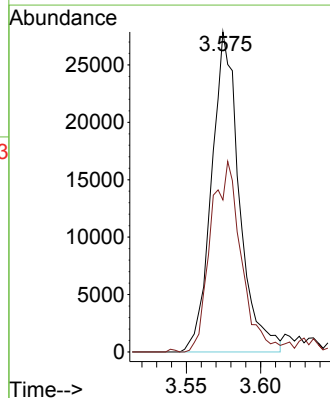
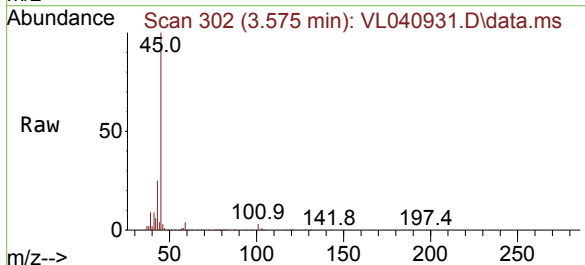
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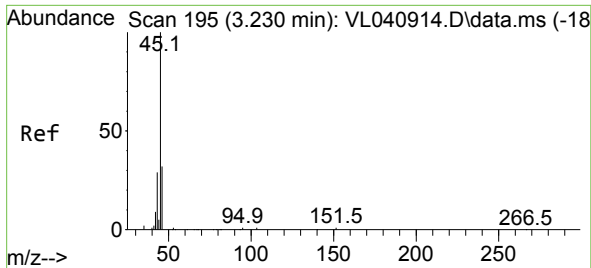
Tgt Ion: 101 Resp: 36273

Ion Ratio Lower Upper

101 100

103 47.5 51.9 77.9#

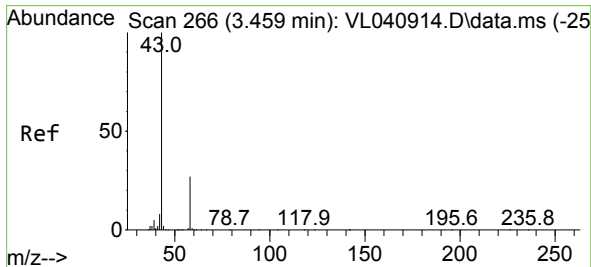
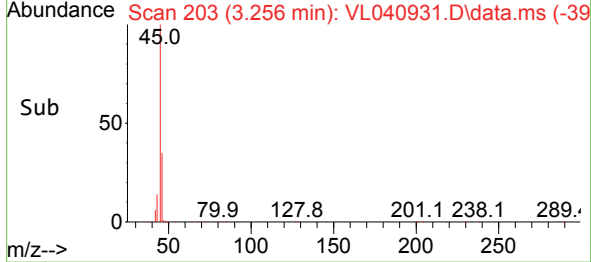
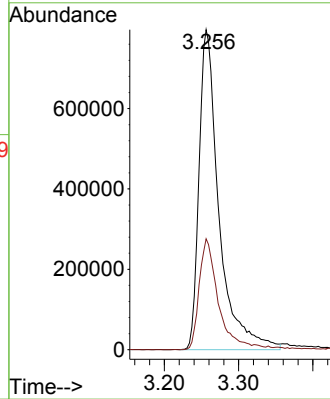
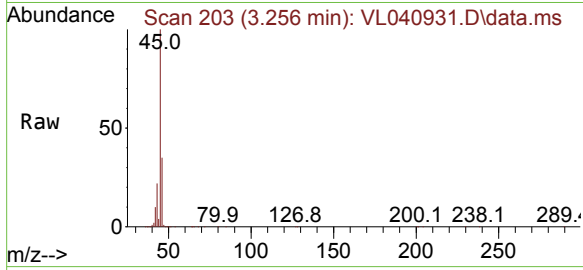




#13
Ethanol
Concen: 106.590 ppbv
RT: 3.256 min Scan# 20
Delta R.T. 0.026 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

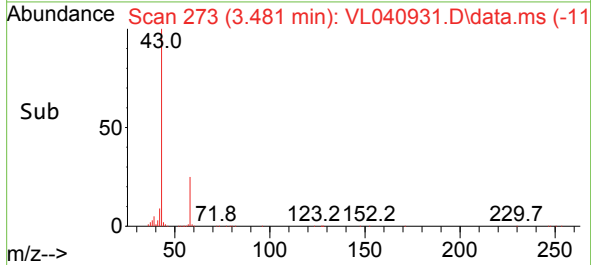
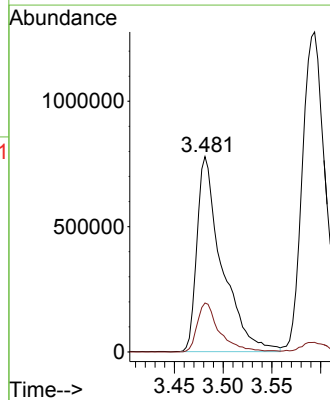
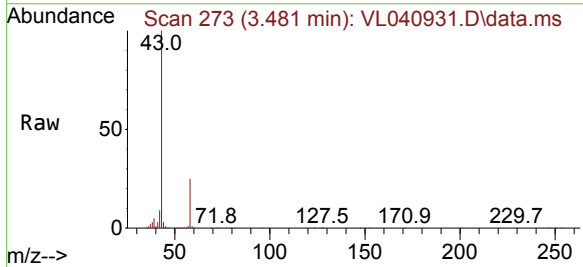
Instrument :
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ClientSampleId :
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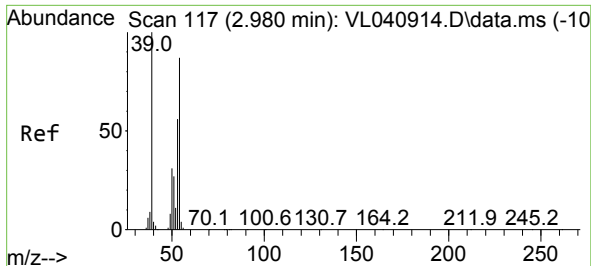
Tgt Ion: 45 Resp: 1486420
Ion Ratio Lower Upper
45 100
46 34.6 15.0 60.0



#15
Acetone
Concen: 10.388 ppbv
RT: 3.481 min Scan# 273
Delta R.T. 0.023 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 43 Resp: 1386988
Ion Ratio Lower Upper
43 100
58 22.6 20.6 30.8

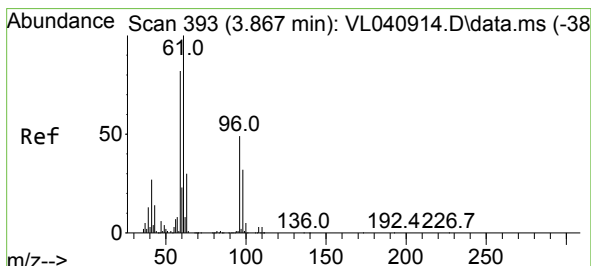
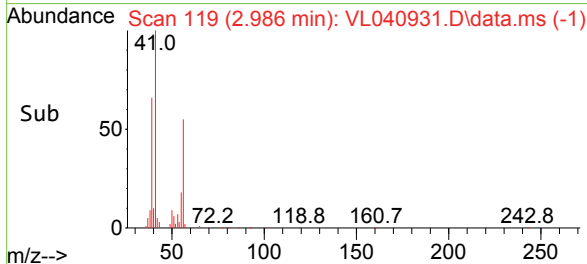
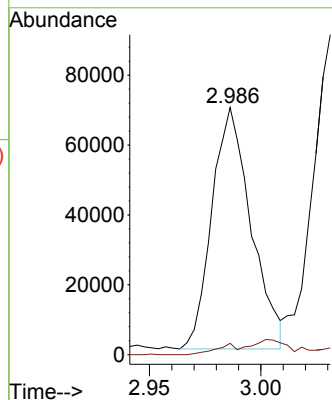
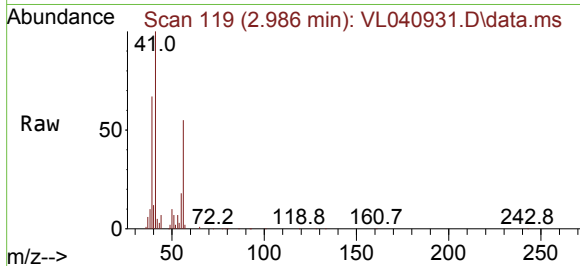




#16
1,3-Butadiene
Concen: 1.472 ppbv
RT: 2.986 min Scan# 117
Delta R.T. 0.007 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

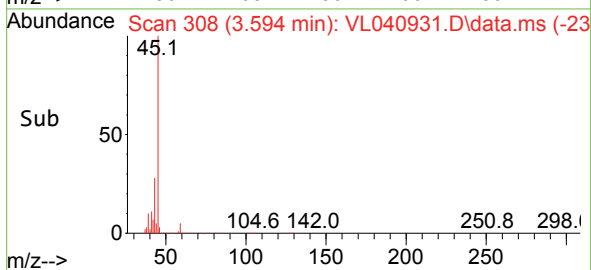
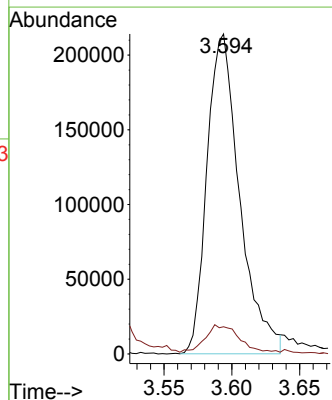
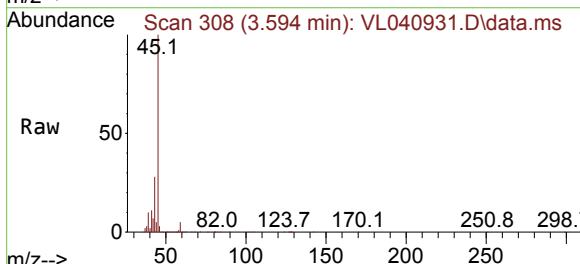
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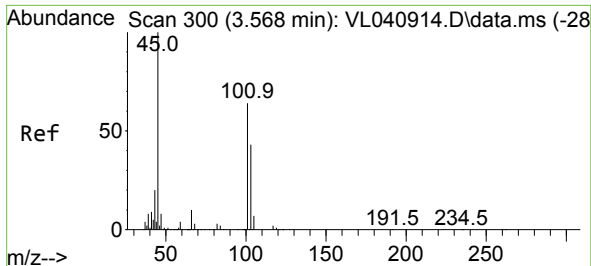
Tgt Ion: 39 Resp: 84633
Ion Ratio Lower Upper
39 100
54 11.0 63.8 95.6#



#17
tert-Butyl alcohol
Concen: 3.633 ppbv
RT: 3.594 min Scan# 308
Delta R.T. -0.273 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 59 Resp: 358843
Ion Ratio Lower Upper
59 100
57 10.1 8.3 12.5





#19

Isopropyl Alcohol

Concen: 129.046 ppbv

RT: 3.594 min Scan# 300

Delta R.T. 0.026 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

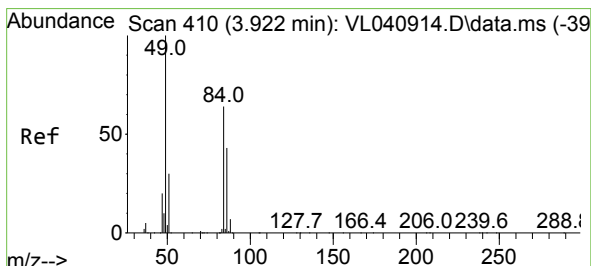
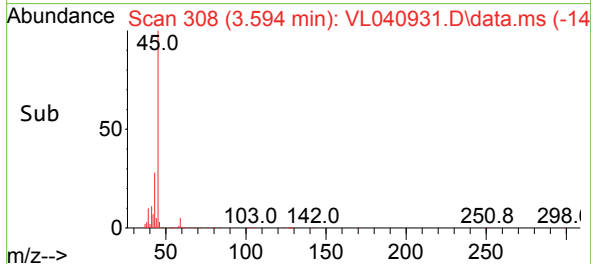
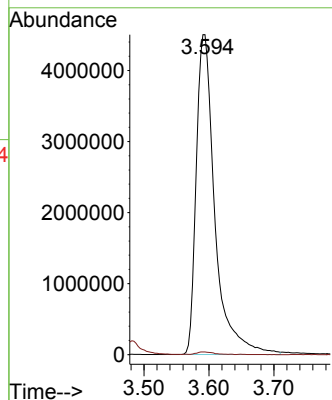
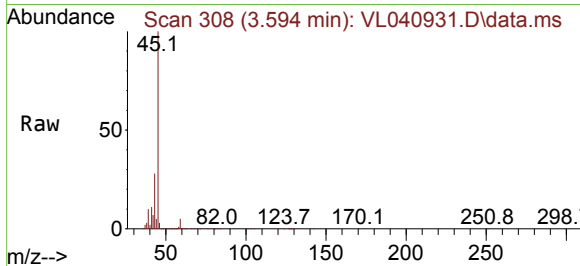
10323

Tgt Ion: 45 Resp: 8990729

Ion Ratio Lower Upper

45 100

58 1.0 1.5 2.3#



#20

Methylene Chloride

Concen: 22.021 ppbv

RT: 3.941 min Scan# 416

Delta R.T. 0.019 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Tgt Ion: 84 Resp: 1048023

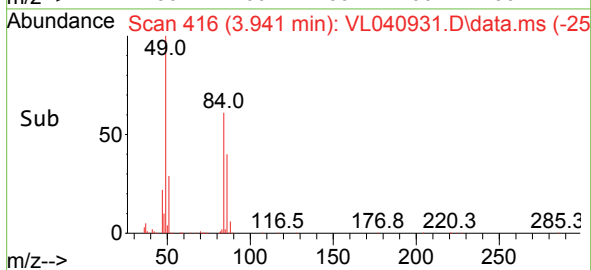
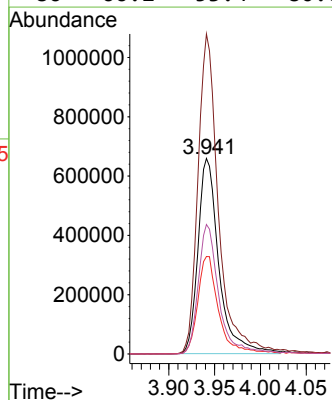
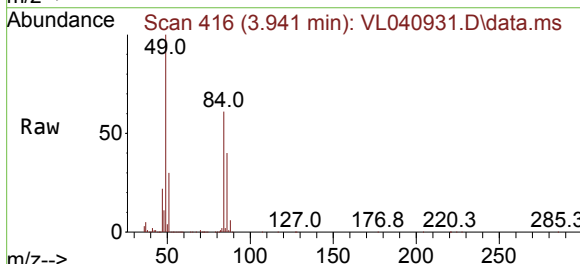
Ion Ratio Lower Upper

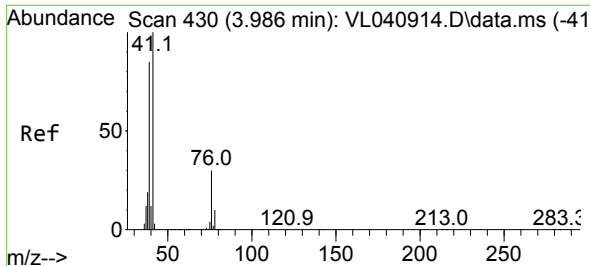
84 100

49 163.4 124.6 187.0

51 49.5 37.2 55.8

86 66.2 53.4 80.0

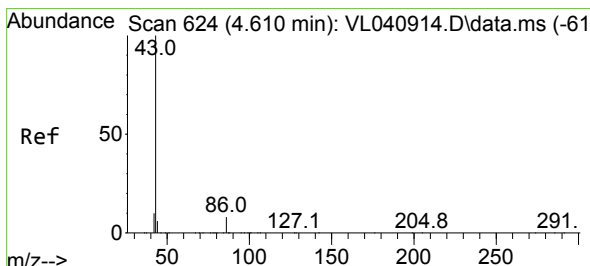
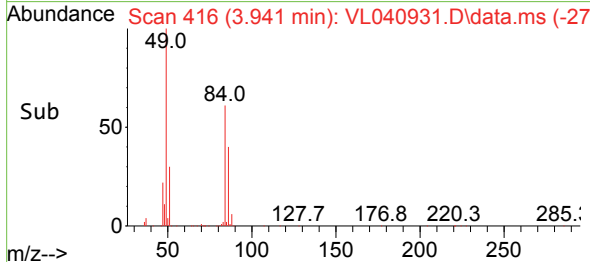
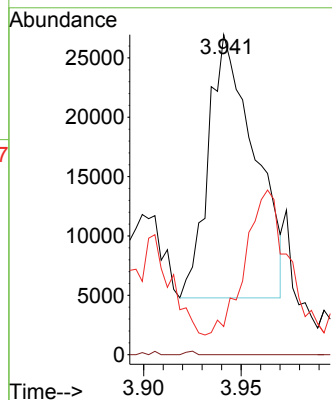
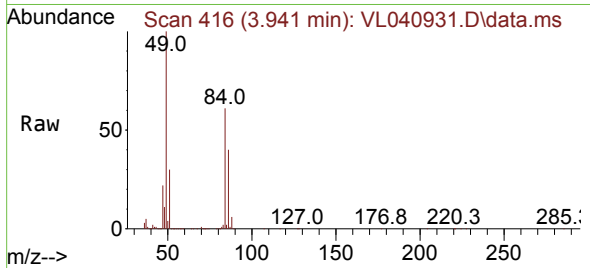




#21
 Allyl Chloride
 Concen: 0.461 ppbv
 RT: 3.941 min Scan# 41
 Delta R.T. -0.045 min
 Lab File: VL040931.D
 Acq: 21 Dec 2023 15:54

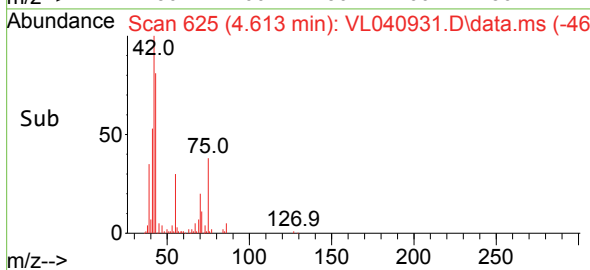
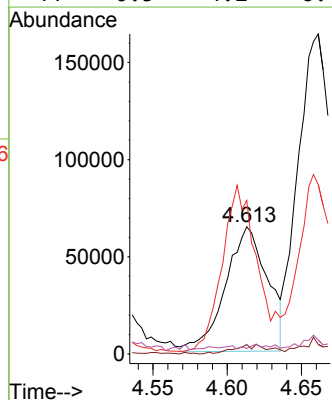
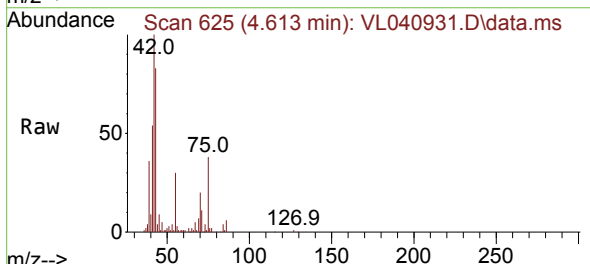
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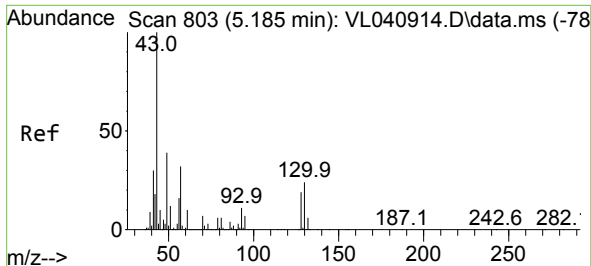
Tgt Ion: 41 Resp: 36401
 Ion Ratio Lower Upper
 41 100
 76 0.0 23.9 35.9#
 39 84.0 66.5 99.7



#23
 Vinyl Acetate
 Concen: 0.855 ppbv
 RT: 4.613 min Scan# 625
 Delta R.T. 0.003 min
 Lab File: VL040931.D
 Acq: 21 Dec 2023 15:54

Tgt Ion: 43 Resp: 125997
 Ion Ratio Lower Upper
 43 100
 86 7.9 5.5 8.3
 42 126.0 8.4 12.6#
 44 0.5 4.2 6.4#



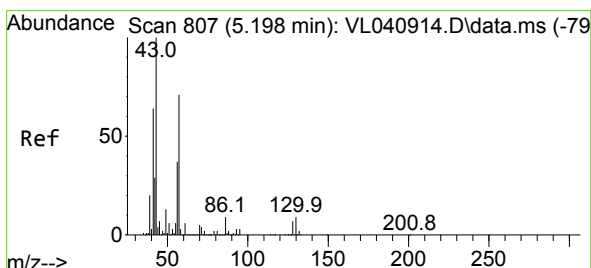
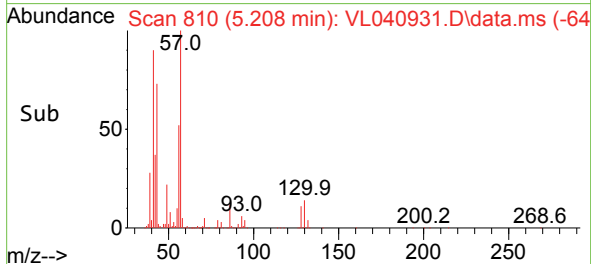
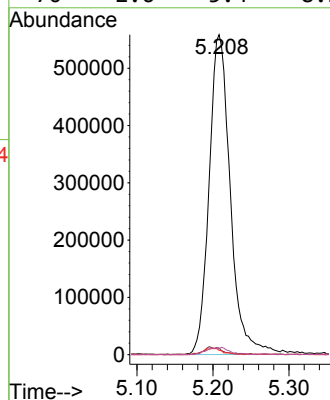
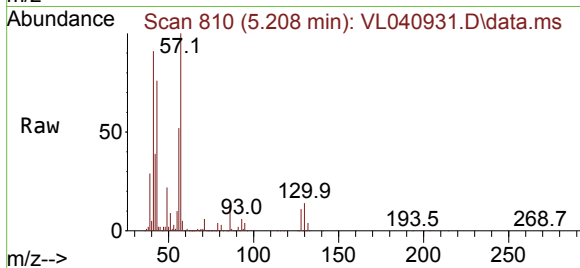


#25
Ethyl Acetate
Concen: 4.673 ppbv
RT: 5.208 min Scan# 810
Delta R.T. 0.023 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Instrument :
MSVOA_L
ClientSampleId :
10323

Tgt Ion: 43 Resp: 1081217

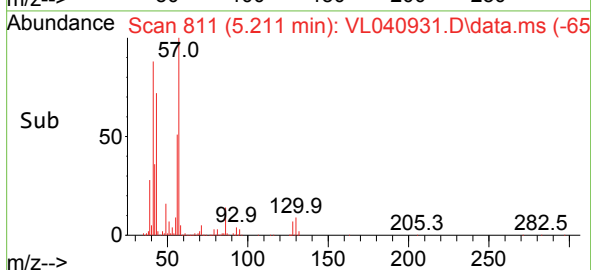
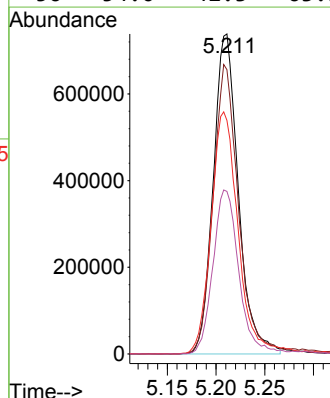
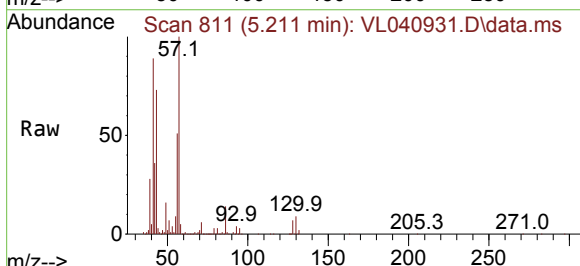
Ion	Ratio	Lower	Upper
43	100		
45	2.4	8.2	12.2#
61	2.0	7.6	11.4#
70	2.6	5.4	8.2#

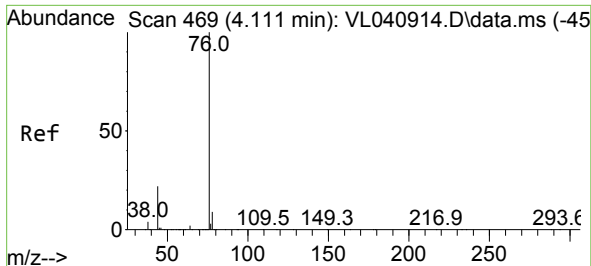


#26
Hexane
Concen: 12.919 ppbv
RT: 5.211 min Scan# 811
Delta R.T. 0.013 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 57 Resp: 1324600

Ion	Ratio	Lower	Upper
57	100		
41	92.8	75.2	112.8
43	83.1	188.0	282.0#
56	54.0	42.3	63.5

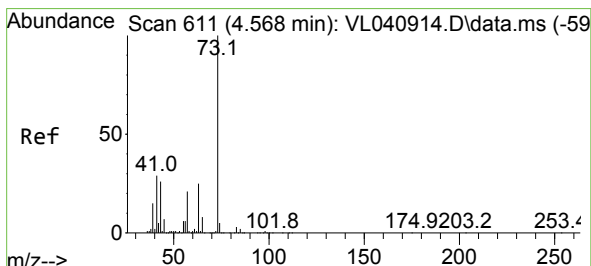
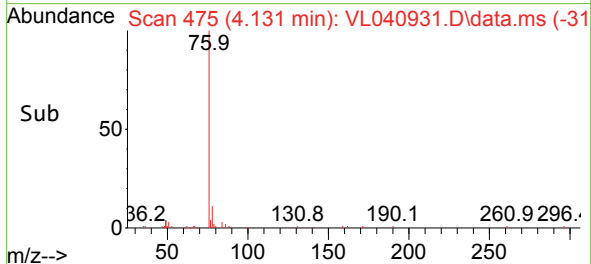
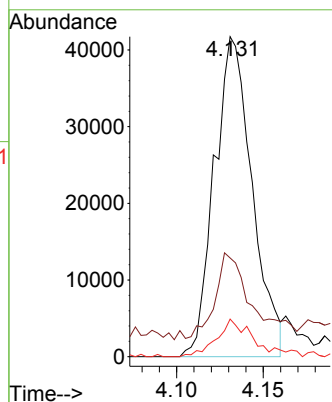
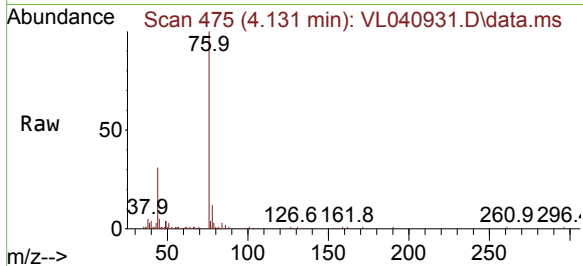




#27
Carbon Disulfide
Concen: 0.456 ppbv
RT: 4.131 min Scan# 41
Delta R.T. 0.019 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

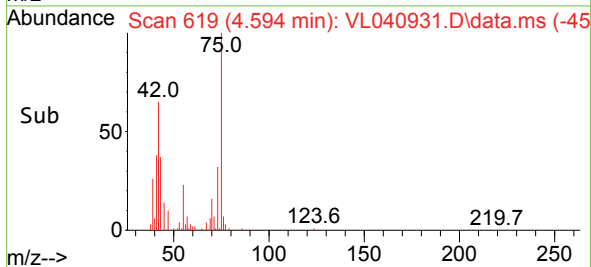
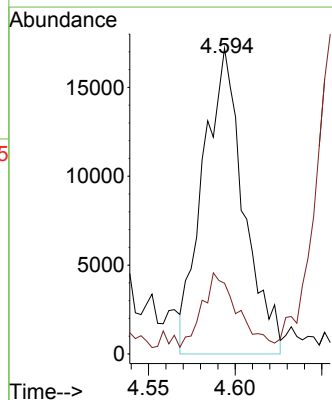
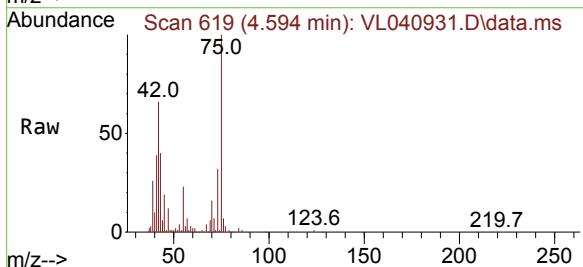
Instrument :
MSVOA_L
ClientSampleId :
10323

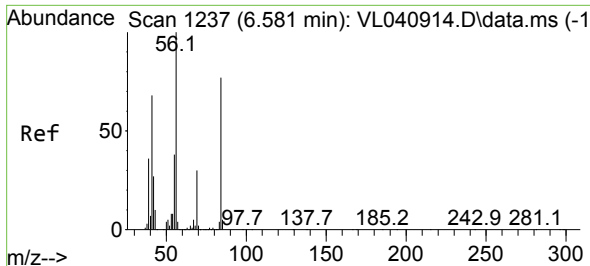
Tgt Ion: 76 Resp: 63331
Ion Ratio Lower Upper
76 100
44 24.7 18.4 27.6
78 12.6 7.9 11.9#



#28
Methyl tert-Butyl Ether
Concen: 0.296 ppbv
RT: 4.594 min Scan# 619
Delta R.T. 0.026 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 73 Resp: 28145
Ion Ratio Lower Upper
73 100
57 25.4 18.0 27.0

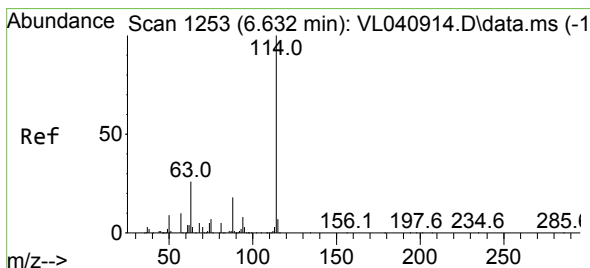
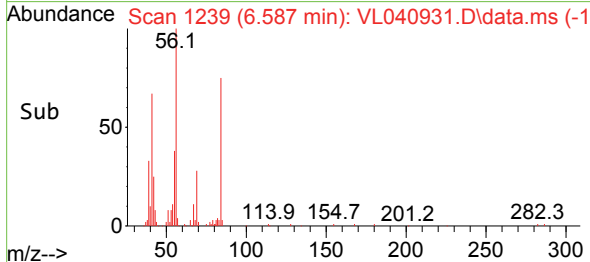
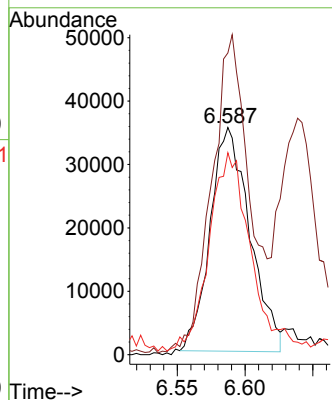
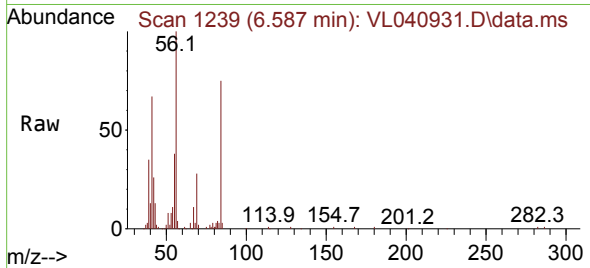




#30
Cyclohexane
Concen: 0.841 ppbv
RT: 6.587 min Scan# 11
Delta R.T. 0.007 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

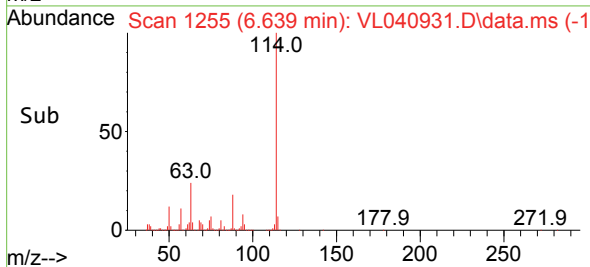
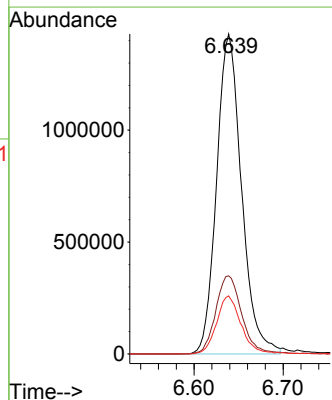
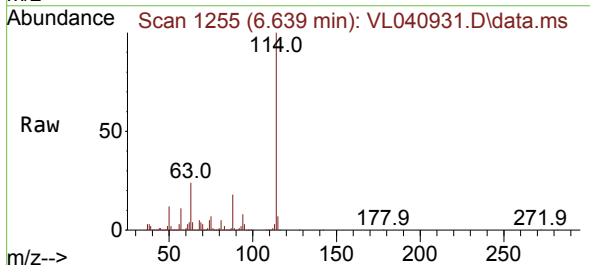
Instrument :
MSVOA_L
ClientSampleId :
10323

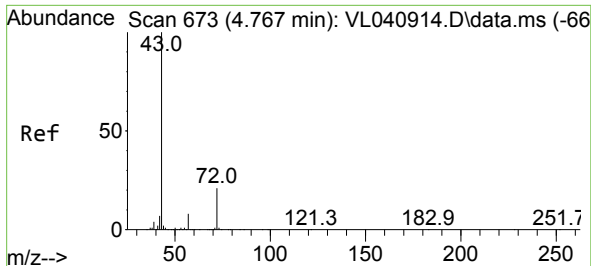
Tgt Ion: 84 Resp: 71868
Ion Ratio Lower Upper
84 100
56 133.9 111.4 167.2
41 97.3 70.0 105.0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 6.639 min Scan# 1255
Delta R.T. 0.007 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 114 Resp: 2782345
Ion Ratio Lower Upper
114 100
63 25.8 21.0 31.6
88 18.1 14.3 21.5

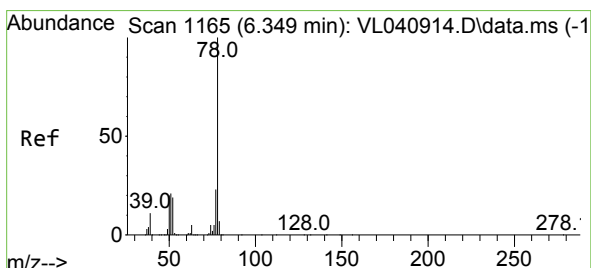
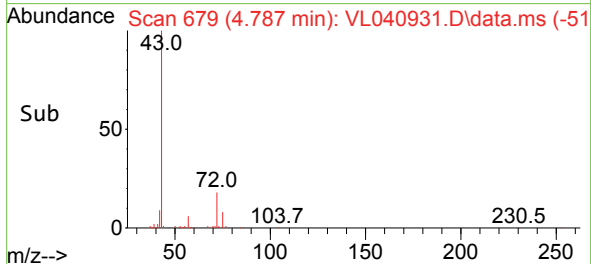
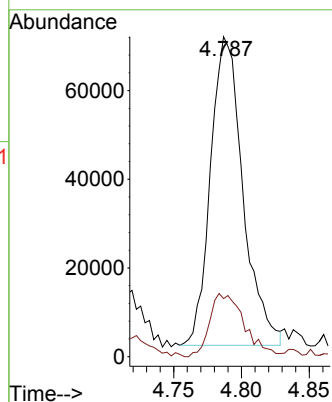
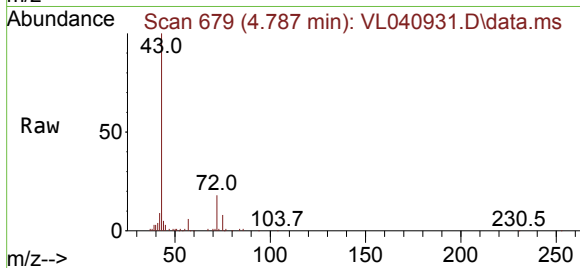




#34
2-Butanone
Concen: 0.787 ppbv
RT: 4.787 min Scan# 61
Delta R.T. 0.019 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

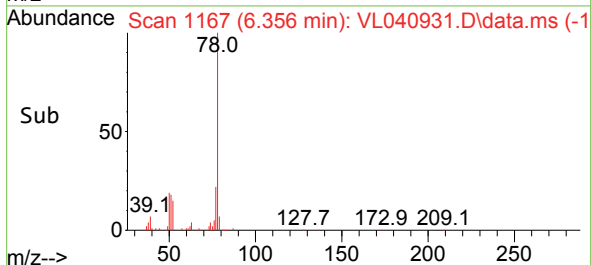
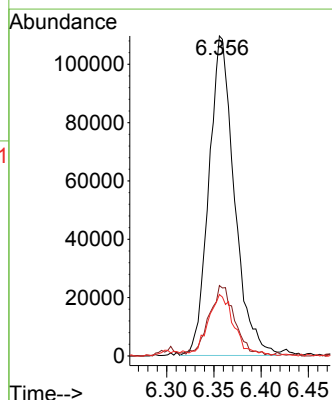
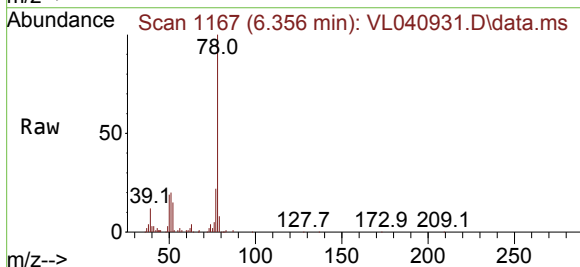
Instrument :
MSVOA_L
ClientSampleId :
10323

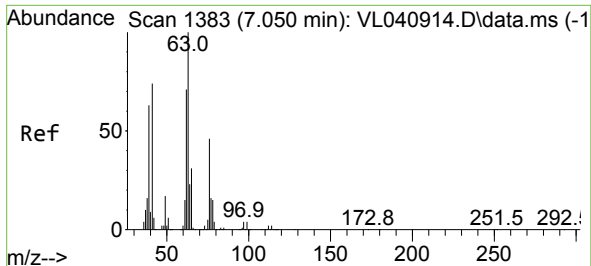
Tgt Ion: 43 Resp: 115887
Ion Ratio Lower Upper
43 100
72 21.9 17.2 25.8



#36
Benzene
Concen: 0.945 ppbv
RT: 6.356 min Scan# 1167
Delta R.T. 0.007 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 78 Resp: 205574
Ion Ratio Lower Upper
78 100
77 21.4 18.4 27.6
50 18.2 16.0 24.0





#39

1,2-Dichloropropane

Concen: 8.319 ppbv

RT: 6.639 min Scan# 11062

Delta R.T. -0.411 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

10323

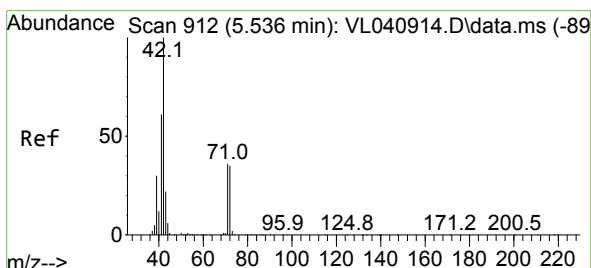
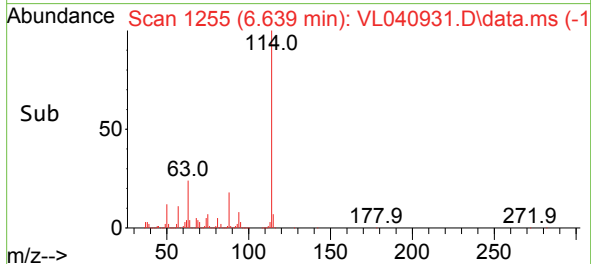
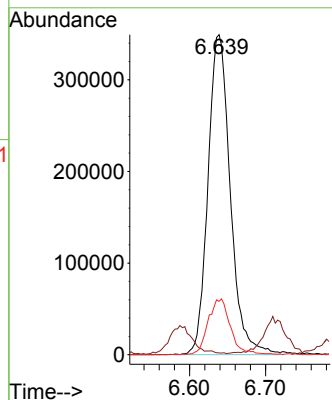
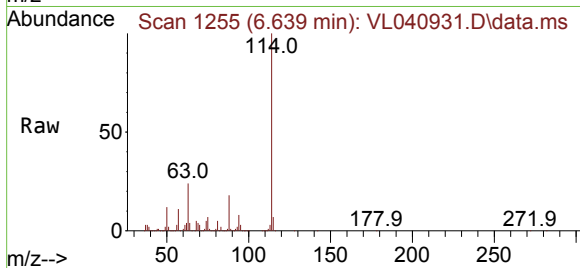
Tgt Ion: 63 Resp: 711062

Ion Ratio Lower Upper

63 100

41 0.0 59.0 88.6#

62 16.6 56.6 85.0#



#41

Tetrahydrofuran

Concen: 0.335 ppbv

RT: 5.803 min Scan# 995

Delta R.T. 0.267 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

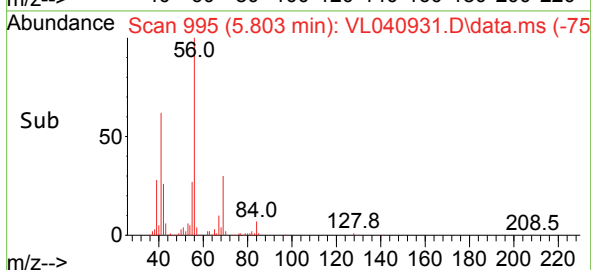
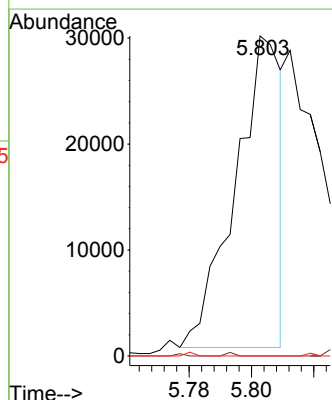
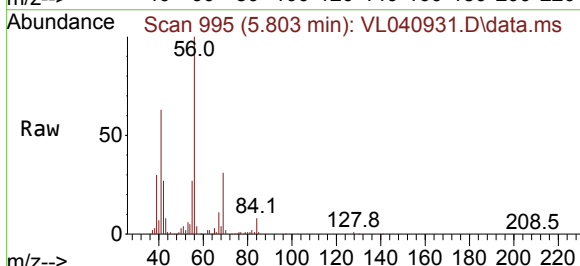
Tgt Ion: 42 Resp: 29985

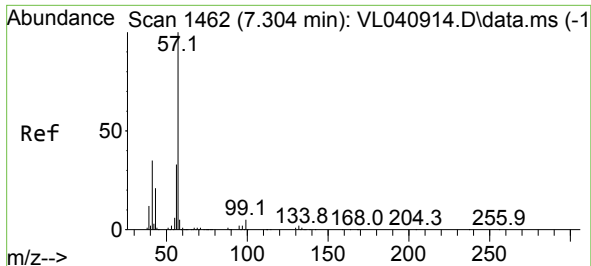
Ion Ratio Lower Upper

42 100

72 2.4 29.6 44.4#

71 0.0 29.1 43.7#

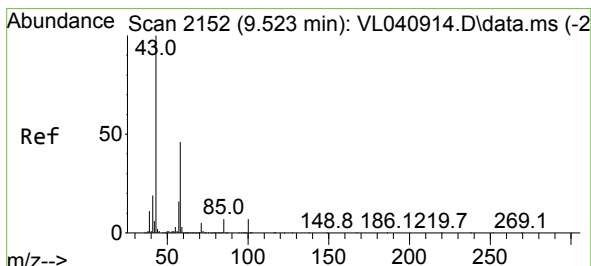
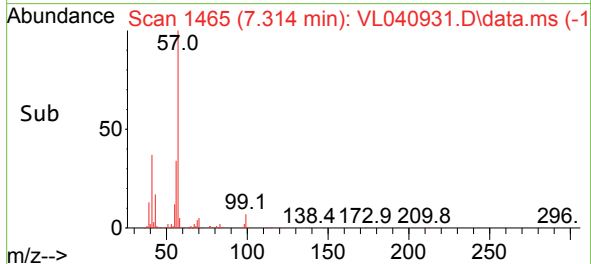
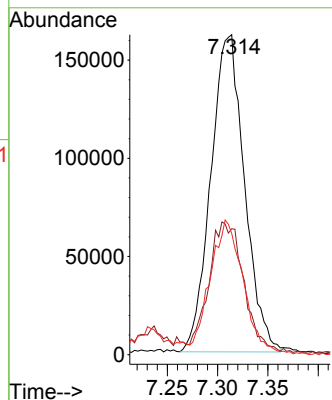
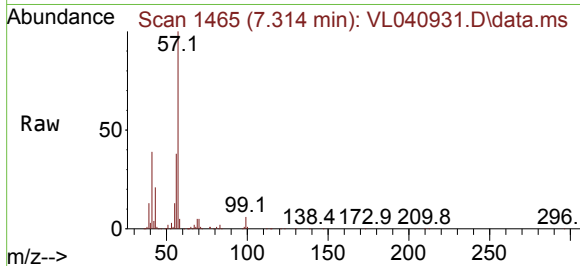




#44
 2,2,4-Trimethylpentane
 Concen: 1.019 ppbv
 RT: 7.314 min Scan# 1465
 Delta R.T. 0.010 min
 Lab File: VL040931.D
 Acq: 21 Dec 2023 15:54

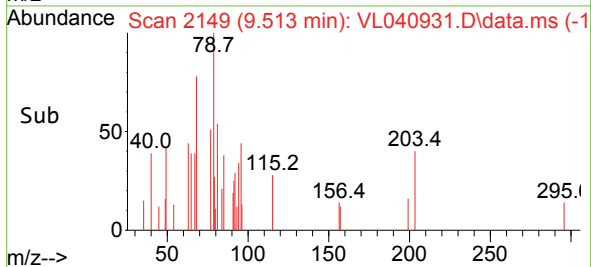
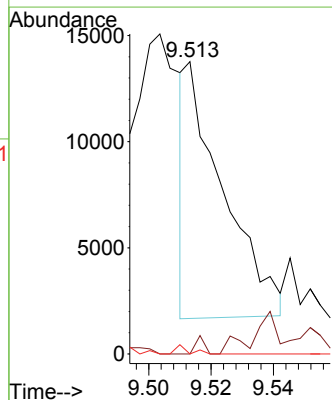
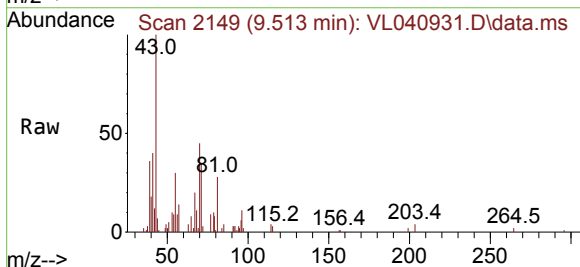
Instrument :
 MSVOA_L
 ClientSampleId :
 10323

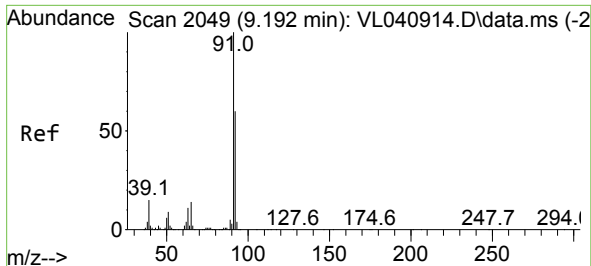
Tgt Ion: 57 Resp: 376485
 Ion Ratio Lower Upper
 57 100
 41 45.3 28.2 42.4#
 56 43.7 25.3 37.9#



#51
 2-Hexanone
 Concen: 0.063 ppbv
 RT: 9.513 min Scan# 2149
 Delta R.T. -0.009 min
 Lab File: VL040931.D
 Acq: 21 Dec 2023 15:54

Tgt Ion: 43 Resp: 10097
 Ion Ratio Lower Upper
 43 100
 58 19.7 37.3 55.9#
 98 0.0 0.2 0.2#

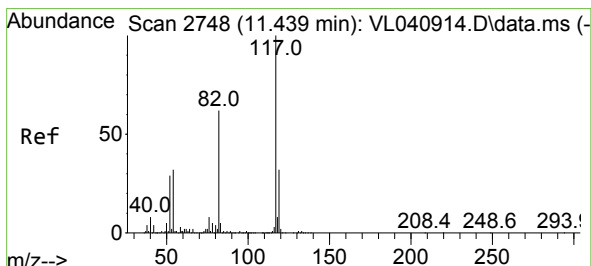
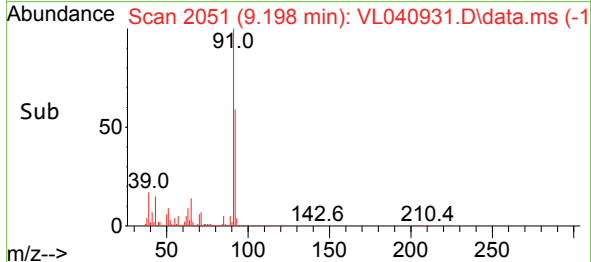
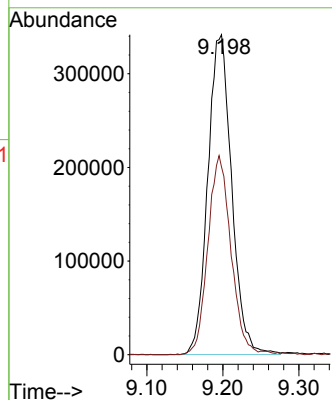
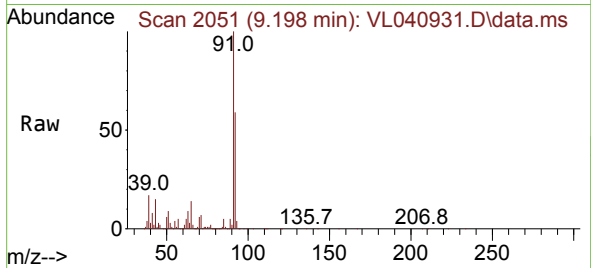




#53
Toluene
Concen: 3.081 ppbv
RT: 9.198 min Scan# 2049
Delta R.T. 0.007 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

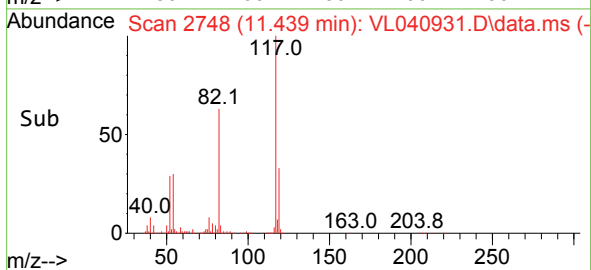
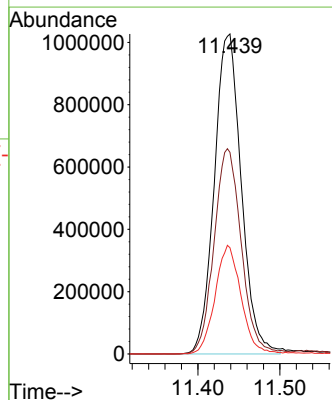
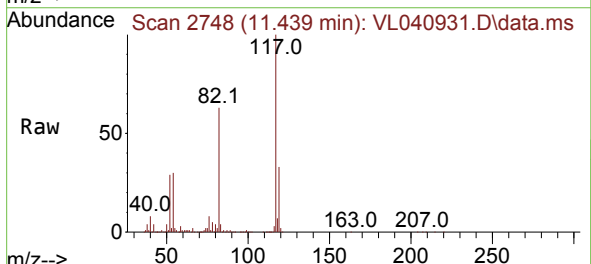
Instrument :
MSVOA_L
ClientSampleId :
10323

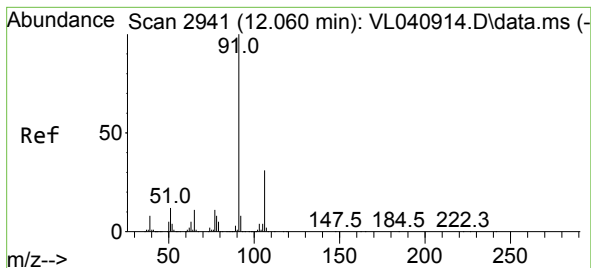
Tgt Ion: 91 Resp: 743088
Ion Ratio Lower Upper
91 100
92 60.8 49.2 73.8



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.439 min Scan# 2748
Delta R.T. 0.000 min
Lab File: VL040931.D
Acq: 21 Dec 2023 15:54

Tgt Ion: 117 Resp: 2352271
Ion Ratio Lower Upper
117 100
82 64.7 49.6 74.4
119 32.8 23.4 35.0





#58

Ethyl Benzene

Concen: 0.252 ppbv

RT: 12.060 min Scan# 2941

Delta R.T. 0.000 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

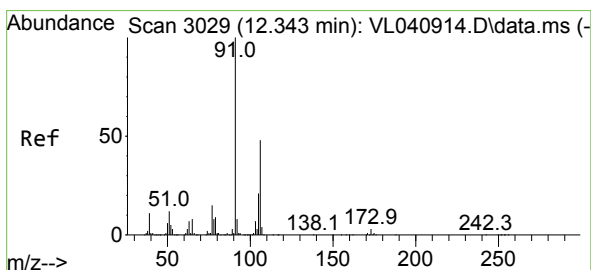
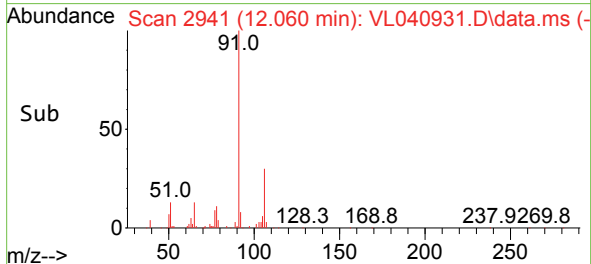
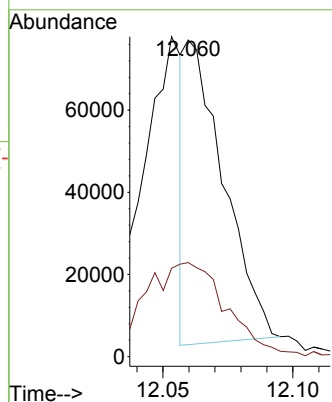
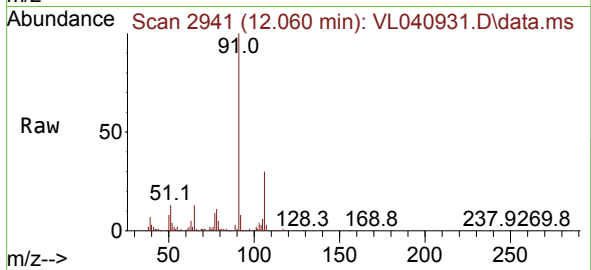
10323

Tgt Ion: 91 Resp: 76114

Ion Ratio Lower Upper

91 100

106 29.9 24.9 37.3



#59

m/p-Xylene

Concen: 2.033 ppbv

RT: 12.311 min Scan# 3019

Delta R.T. -0.032 min

Lab File: VL040931.D

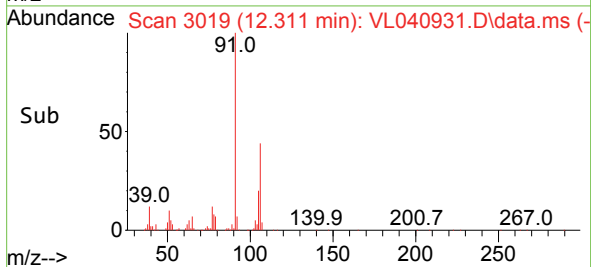
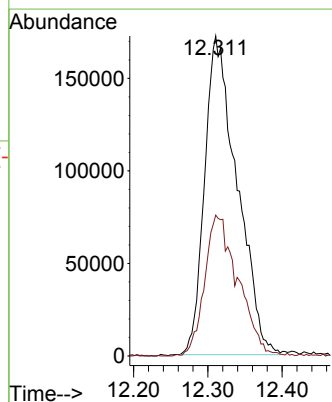
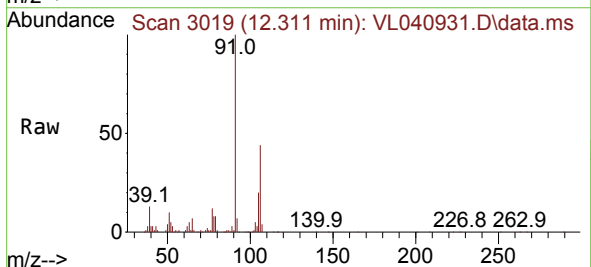
Acq: 21 Dec 2023 15:54

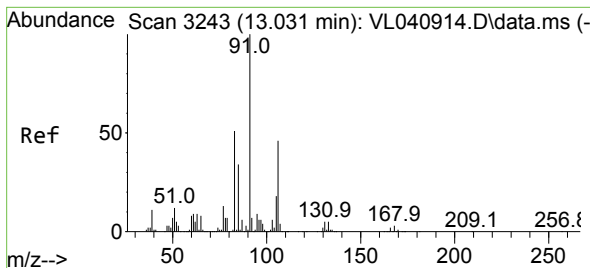
Tgt Ion: 91 Resp: 522587

Ion Ratio Lower Upper

91 100

106 45.5 0.0 0.0#





#60

o-Xylene

Concen: 0.720 ppbv

RT: 13.024 min Scan# 31

Delta R.T. -0.006 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

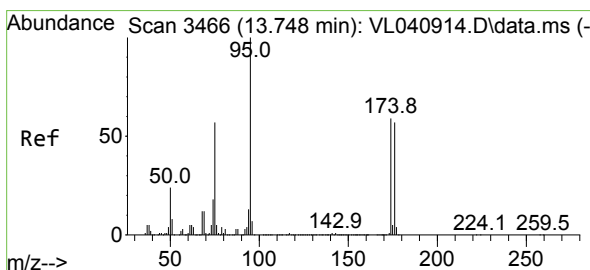
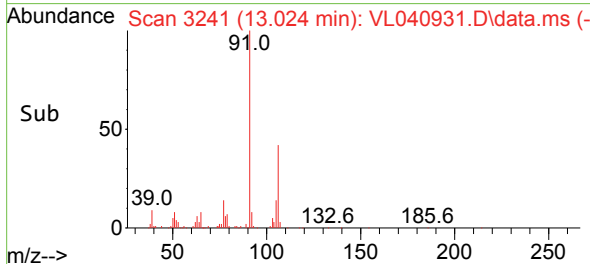
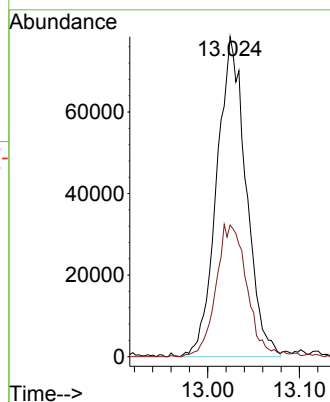
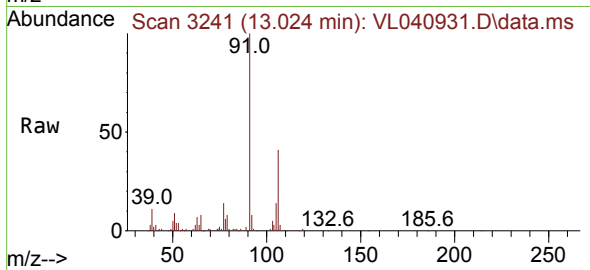
10323

Tgt Ion: 91 Resp: 174251

Ion Ratio Lower Upper

91 100

106 44.3 22.6 67.7



#68

1-Bromo-4-Fluorobenzene

Concen: 9.975 ppbv

RT: 13.745 min Scan# 3465

Delta R.T. -0.003 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

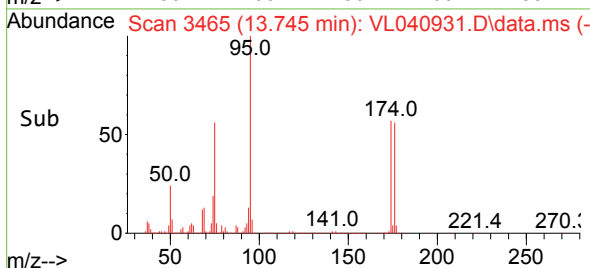
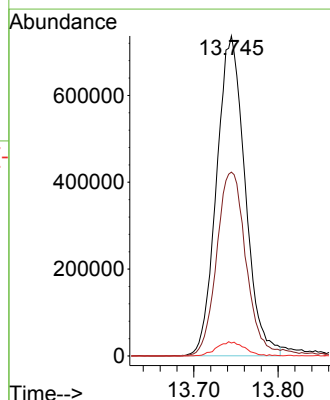
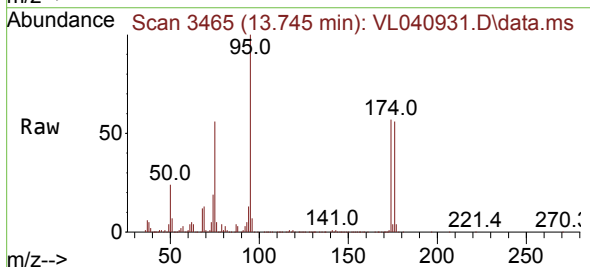
Tgt Ion: 95 Resp: 1728380

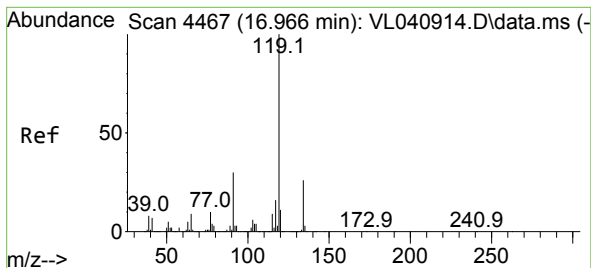
Ion Ratio Lower Upper

95 100

174 61.6 48.0 72.0

175 4.5 3.7 5.5





#69

p-Isopropyltoluene

Concen: 0.032 ppbv

RT: 16.963 min Scan# 4466

Delta R.T. -0.003 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

10323

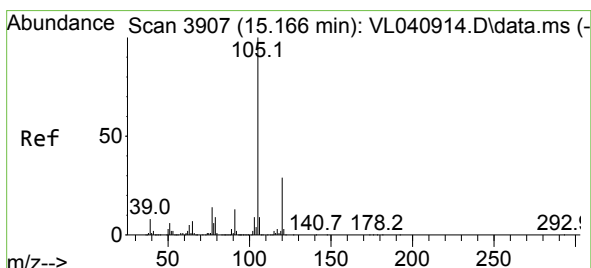
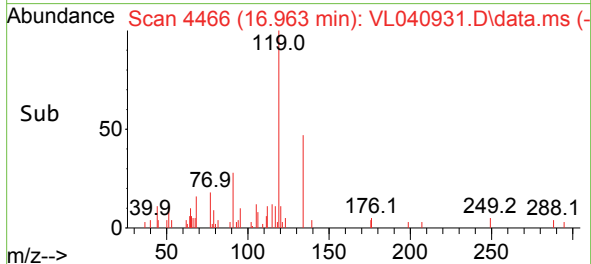
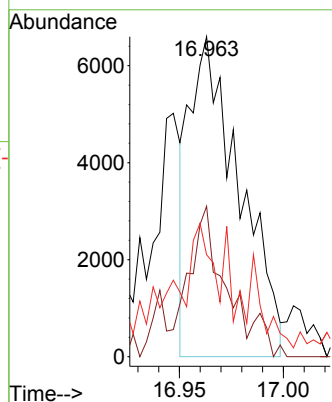
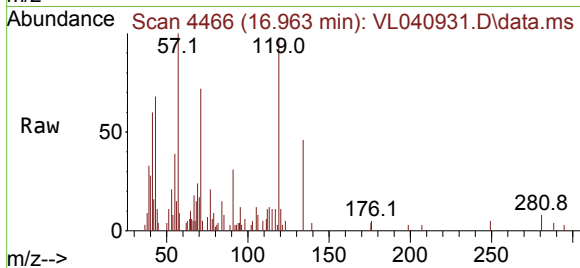
Tgt Ion:119 Resp: 11128

Ion Ratio Lower Upper

119 100

134 42.1 20.3 30.5#

91 49.7 24.1 36.1#



#72

4-Ethyltoluene

Concen: 0.207 ppbv

RT: 15.163 min Scan# 3906

Delta R.T. -0.003 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Tgt Ion:105 Resp: 55110

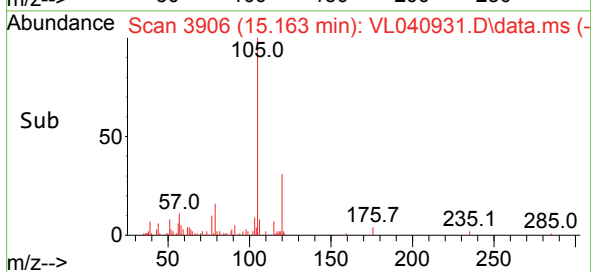
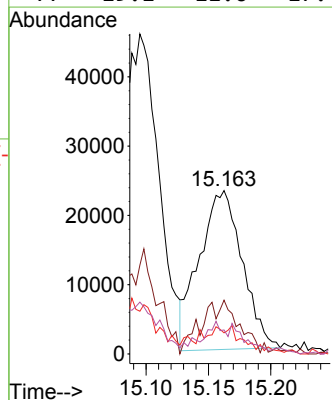
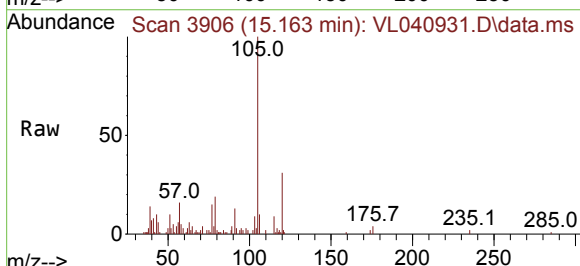
Ion Ratio Lower Upper

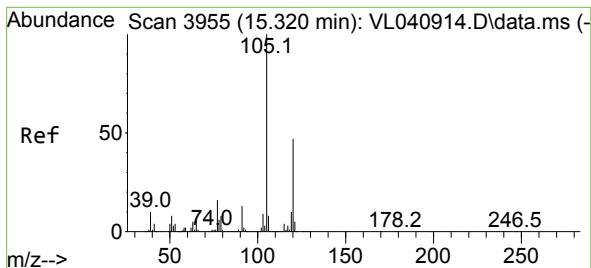
105 100

120 31.3 23.8 35.8

91 16.3 10.9 16.3

77 19.1 11.6 17.4#





#73

1,3,5-Trimethylbenzene

Concen: 0.171 ppbv

RT: 15.320 min Scan# 3955

Delta R.T. 0.000 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Instrument :

MSVOA_L

ClientSampleId :

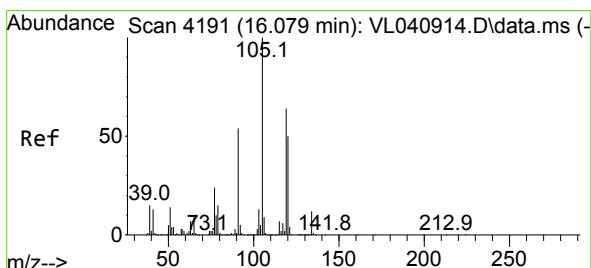
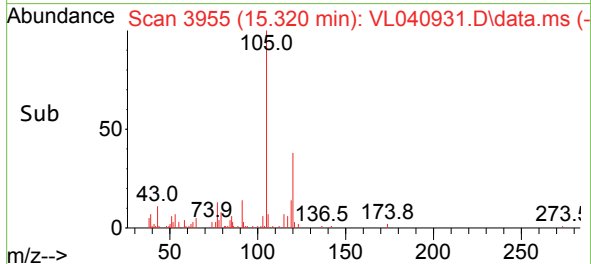
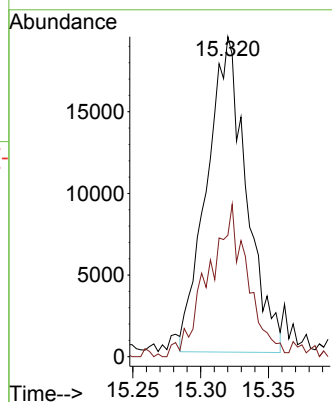
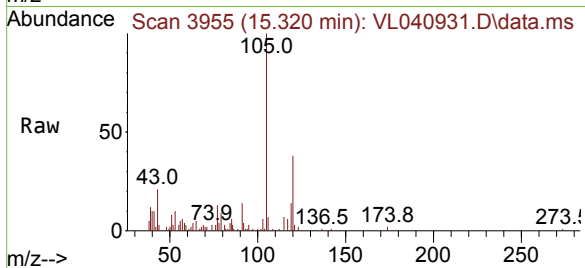
10323

Tgt Ion:105 Resp: 39291

Ion Ratio Lower Upper

105 100

120 41.6 37.8 56.8



#74

1,2,4-Trimethylbenzene

Concen: 0.221 ppbv

RT: 16.082 min Scan# 4192

Delta R.T. 0.003 min

Lab File: VL040931.D

Acq: 21 Dec 2023 15:54

Tgt Ion:105 Resp: 56401

Ion Ratio Lower Upper

105 100

120 38.2 40.2 60.4#

91 8.4 43.0 64.6#

77 14.6 18.9 28.3#

