

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL091823\
 Data File : VL040714.D
 Acq On : 19 Sep 2023 1:05
 Operator : SY/MD
 Sample : 04471-03
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

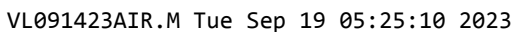
Quant Time: Sep 19 05:24:59 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL091423AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Tue Sep 19 05:12:43 2023
 Response via : Initial Calibration

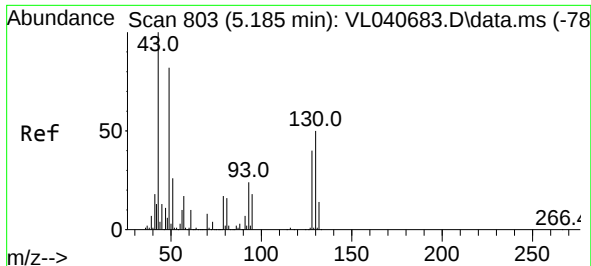
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	5.198	49	1379565	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	6.661	114	3725187	10.000	ppbv	0.00
55) Chlorobenzene-d5	11.475	117	3146210	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.783	95	2315642	9.526	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.300%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.739	85	121998	0.401	ppbv	94
3) Chlorodifluoromethane	2.681	51	59613	0.265	ppbv	94
4) Chloromethane	2.822	50	43115	0.501	ppbv	91
10) Heptane	7.584	43	34337	0.235	ppbv #	26
11) Trichlorofluoromethane	3.571	101	43258	0.162	ppbv	87
12) 1,1,2-Trichlorotrifluo...	4.076	101	7207	0.038	ppbv #	55
13) Ethanol	3.247	45	550662	28.734	ppbv	96
15) Acetone	3.475	43	1498072	8.233	ppbv	94
16) 1,3-Butadiene	2.970	39	4529	0.057	ppbv #	63
19) Isopropyl Alcohol	3.597	45	120947	1.103	ppbv #	1
20) Methylene Chloride	3.941	84	1369373	13.982	ppbv	95
21) Allyl Chloride	3.967	41	8659	0.078	ppbv #	1
23) Vinyl Acetate	4.613	43	115106	0.612	ppbv #	1
25) Ethyl Acetate	5.218	43	790775	2.694	ppbv #	77
26) Hexane	5.221	57	1161977	8.373	ppbv #	38
30) Cyclohexane	6.610	84	23126	0.221	ppbv #	86
34) 2-Butanone	4.800	43	93279	0.498	ppbv	100
36) Benzene	6.378	78	59946	0.217	ppbv	96
39) 1,2-Dichloropropane	6.661	63	880367	8.291	ppbv #	22
41) Tetrahydrofuran	5.825	42	25186	0.262	ppbv #	33
44) 2,2,4-Trimethylpentane	7.336	57	314531	0.716	ppbv #	86
51) 2-Hexanone	9.542	43	25840	0.148	ppbv #	39
53) Toluene	9.227	91	1617923	5.555	ppbv	99
58) Ethyl Benzene	12.095	91	2009484	5.602	ppbv	99
59) m/p-Xylene	12.349	91	4154445	12.334	ppbv	94
60) o-Xylene	13.063	91	1447736	4.507	ppbv	98
62) Isopropylbenzene	14.034	105	79496	0.164	ppbv #	64
64) n-propylbenzene	14.921	120	26530	0.219	ppbv #	1
65) tert-Butylbenzene	16.111	119	71314	0.164	ppbv #	78
71) 2-Chlorotoluene	14.921	91	223465	0.623	ppbv #	47
72) 4-Ethyltoluene	15.201	105	212772	0.591	ppbv #	95
73) 1,3,5-Trimethylbenzene	15.362	105	185660	0.572	ppbv	91
74) 1,2,4-Trimethylbenzene	16.114	105	613704	1.552	ppbv #	62

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

Quant Time: Sep 19 05:24:59 2023
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL091423AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Tue Sep 19 05:12:43 2023
Response via : Initial Calibration

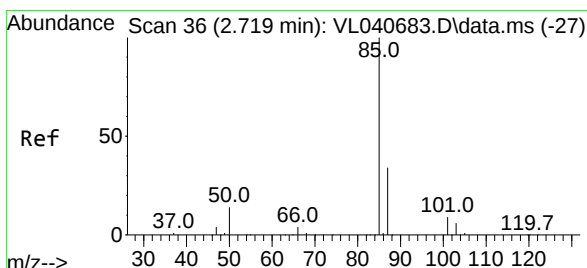
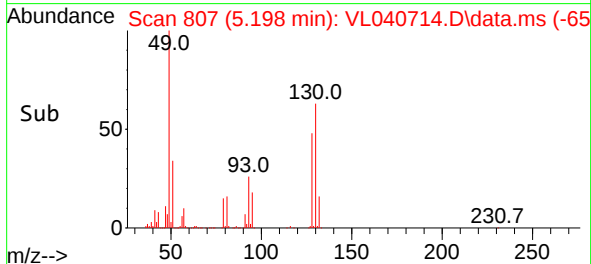
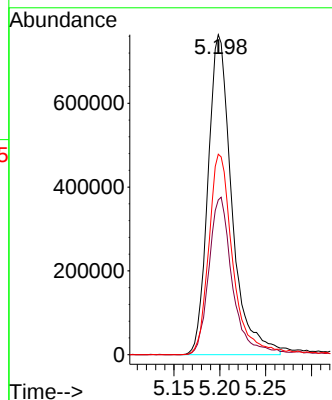
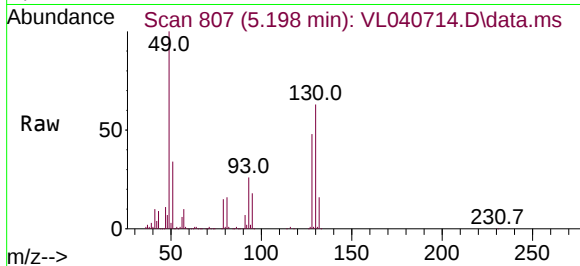




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.198 min Scan# 80
Delta R.T. 0.000 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

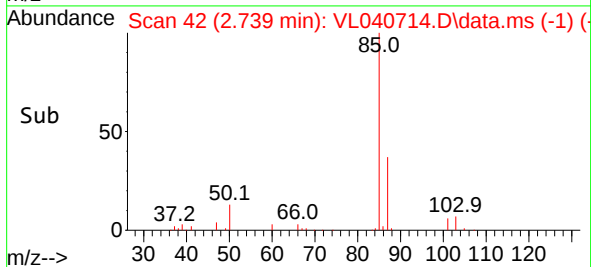
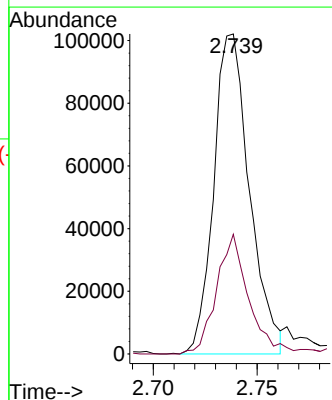
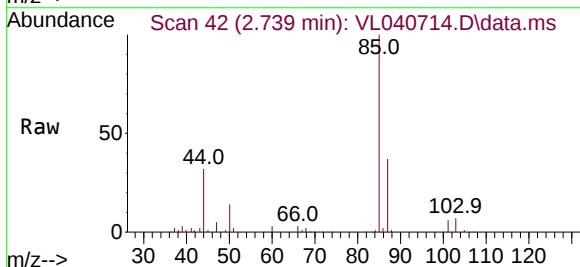
Instrument :
MSVOA_L
ClientSampleId :
OA1

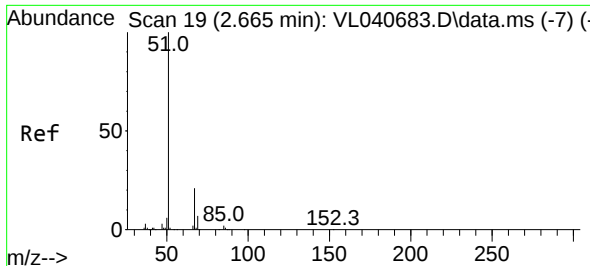
Tgt Ion: 49 Resp: 1379565
Ion Ratio Lower Upper
49 100
128 49.8 25.4 76.0
130 64.8 32.3 96.8



#2
Dichlorodifluoromethane
Concen: 0.401 ppbv
RT: 2.739 min Scan# 42
Delta R.T. 0.007 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 85 Resp: 121998
Ion Ratio Lower Upper
85 100
87 37.4 27.2 40.8

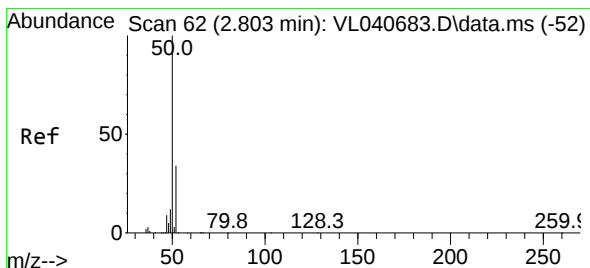
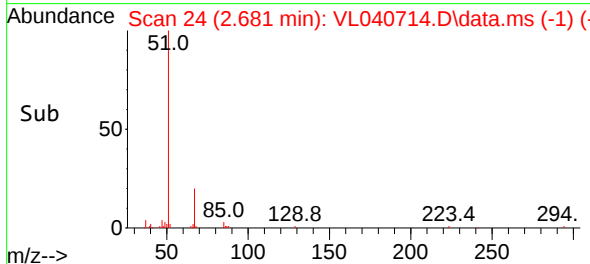
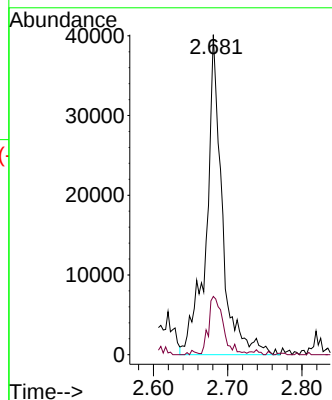
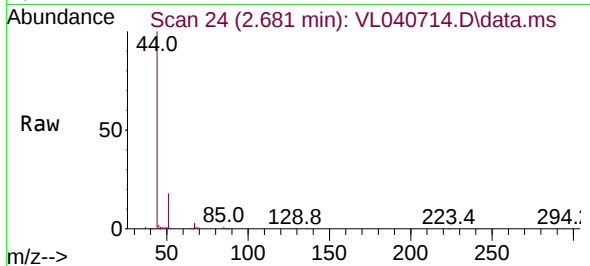




#3
Chlorodifluoromethane
Concen: 0.265 ppbv
RT: 2.681 min Scan# 24
Delta R.T. 0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

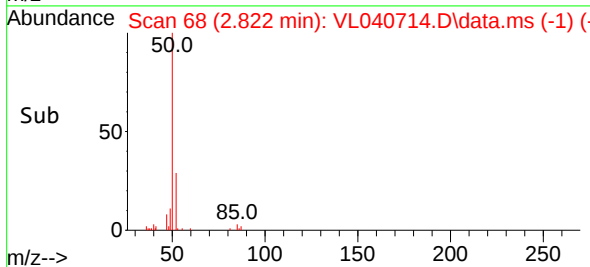
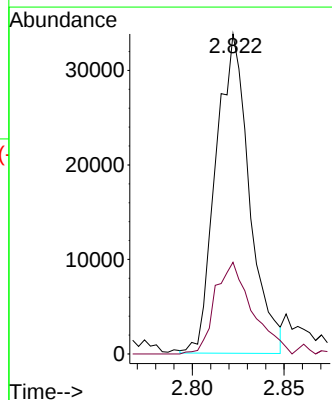
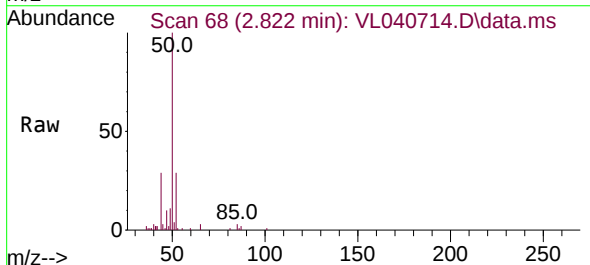
Instrument :
MSVOA_L
ClientSampleId :
OA1

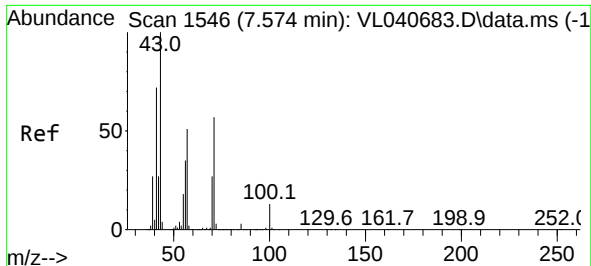
Tgt Ion: 51 Resp: 59613
Ion Ratio Lower Upper
51 100
67 18.1 16.7 25.1



#4
Chloromethane
Concen: 0.501 ppbv
RT: 2.822 min Scan# 68
Delta R.T. 0.007 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 50 Resp: 43115
Ion Ratio Lower Upper
50 100
52 29.0 27.1 40.7

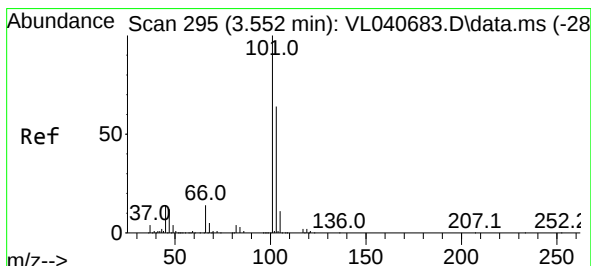
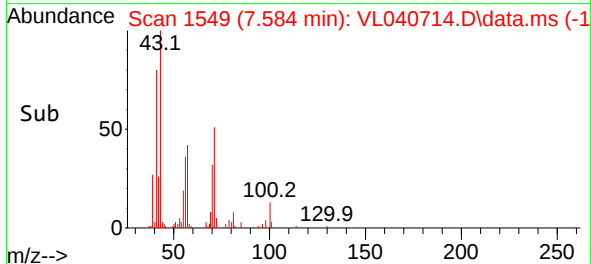
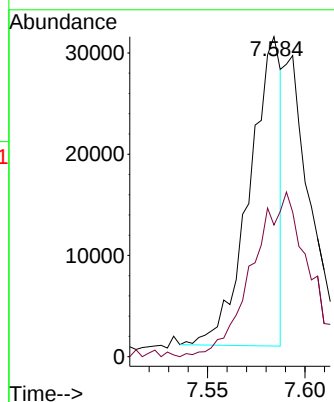
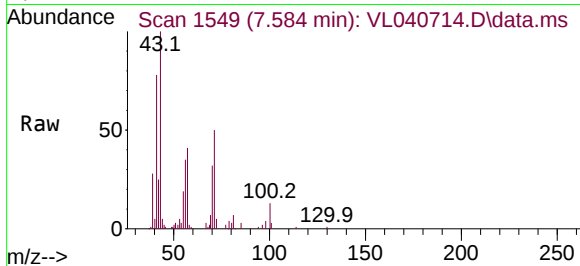




#10
Heptane
Concen: 0.235 ppbv
RT: 7.584 min Scan# 11
Delta R.T. -0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

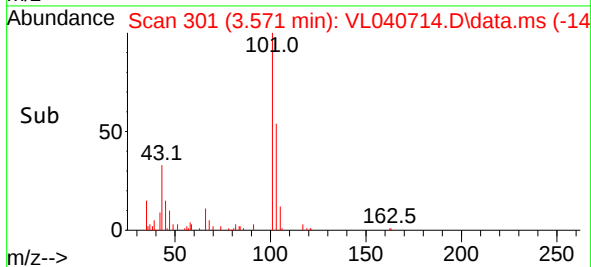
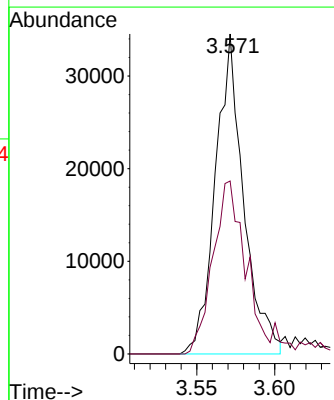
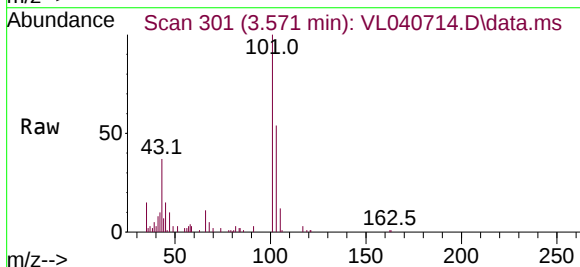
Instrument :
MSVOA_L
ClientSampleId :
OA1

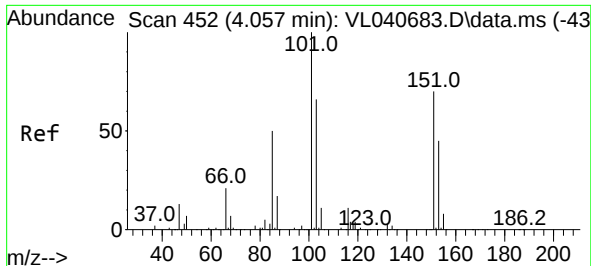
Tgt Ion: 43 Resp: 34337
Ion Ratio Lower Upper
43 100
57 0.0 41.8 62.6#



#11
Trichlorofluoromethane
Concen: 0.162 ppbv
RT: 3.571 min Scan# 301
Delta R.T. 0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion:101 Resp: 43258
Ion Ratio Lower Upper
101 100
103 54.0 51.3 76.9





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.038 ppbv

RT: 4.076 min Scan# 4

Delta R.T. 0.003 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_1

ClientSampleId :

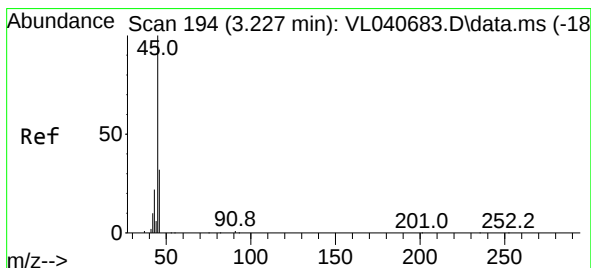
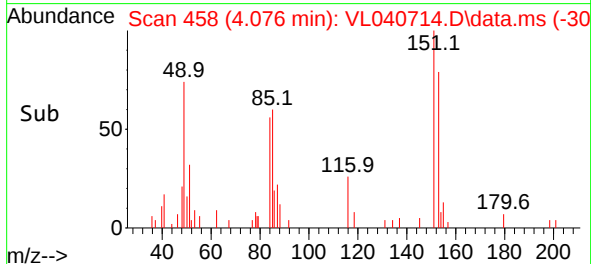
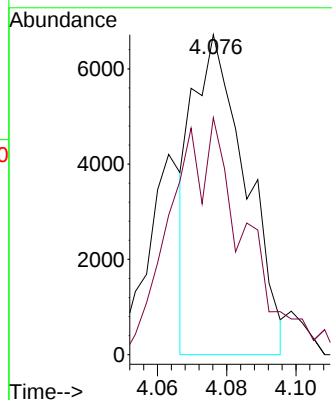
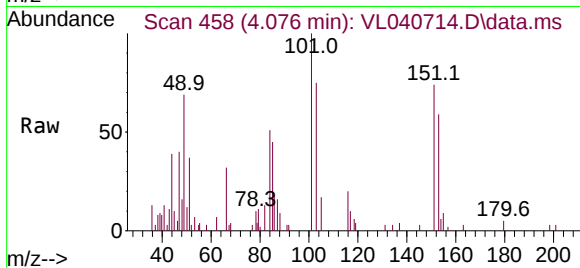
OA1

Tgt Ion:101 Resp: 7207

Ion Ratio Lower Upper

101 100

151 108.4 56.8 85.2#



#13

Ethanol

Concen: 28.734 ppbv

RT: 3.247 min Scan# 200

Delta R.T. 0.003 min

Lab File: VL040714.D

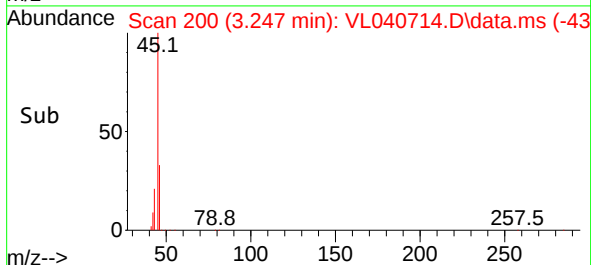
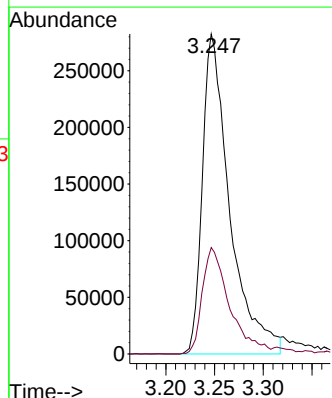
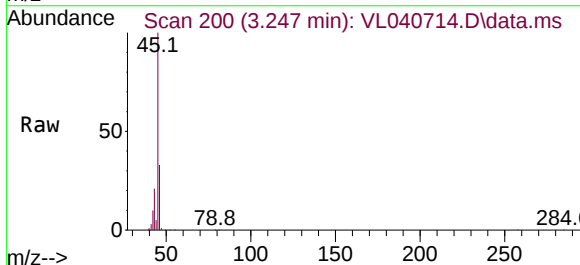
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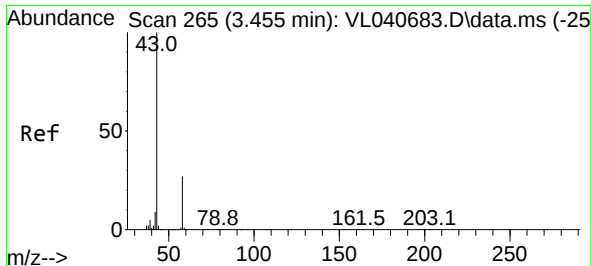
Tgt Ion: 45 Resp: 550662

Ion Ratio Lower Upper

45 100

46 35.8 15.2 61.0





#15

Acetone

Concen: 8.233 ppbv

RT: 3.475 min Scan# 21

Delta R.T. 0.003 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

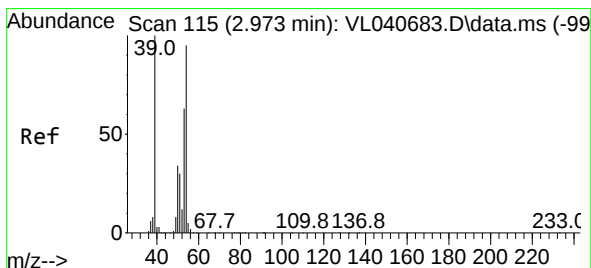
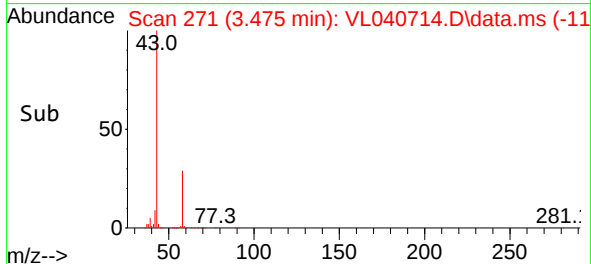
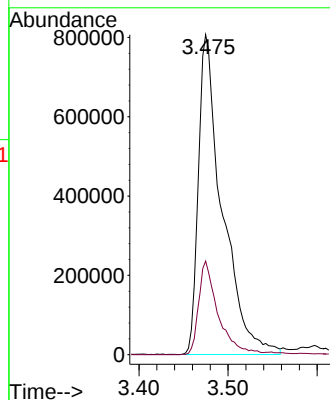
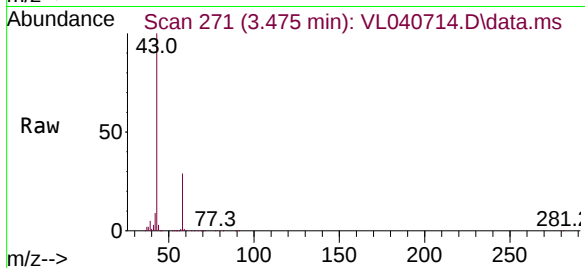
OA1

Tgt Ion: 43 Resp: 1498072

Ion Ratio Lower Upper

43 100

58 25.0 22.6 34.0



#16

1,3-Butadiene

Concen: 0.057 ppbv

RT: 2.970 min Scan# 114

Delta R.T. -0.019 min

Lab File: VL040714.D

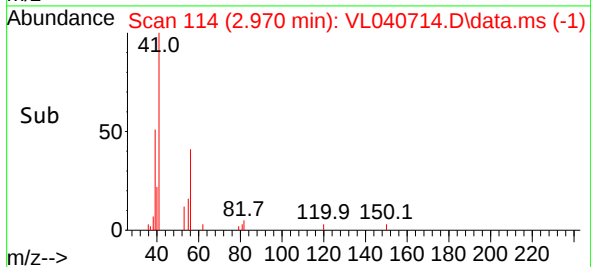
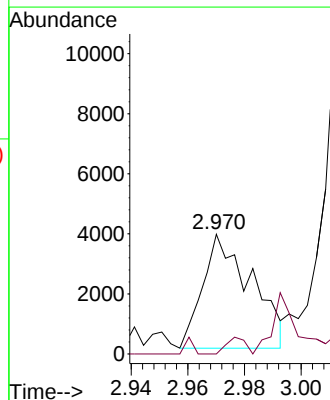
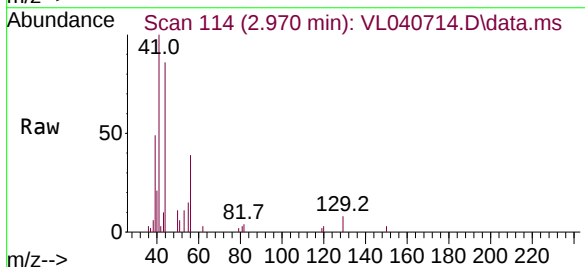
Acq: 19 Sep 2023 1:05

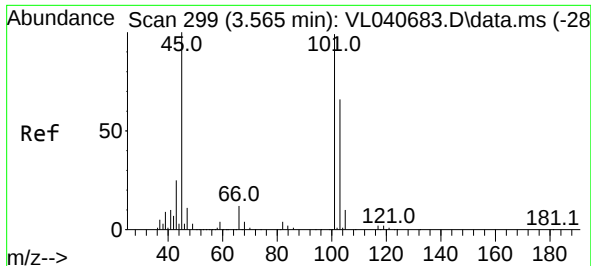
Tgt Ion: 39 Resp: 4529

Ion Ratio Lower Upper

39 100

54 48.2 64.8 97.2#





#19

Isopropyl Alcohol

Concen: 1.103 ppbv

RT: 3.597 min Scan# 309

Delta R.T. 0.019 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

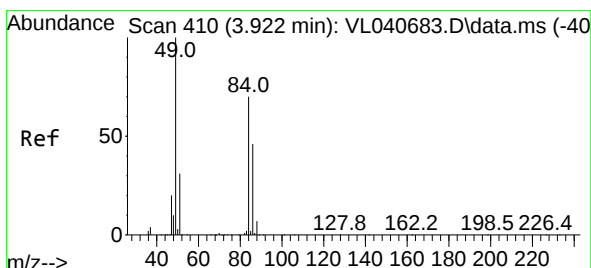
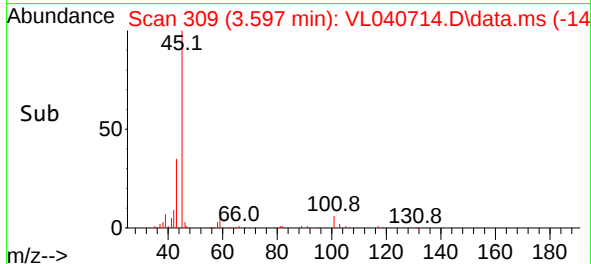
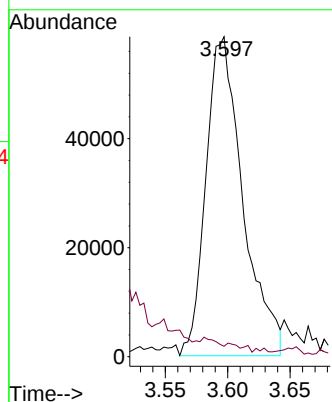
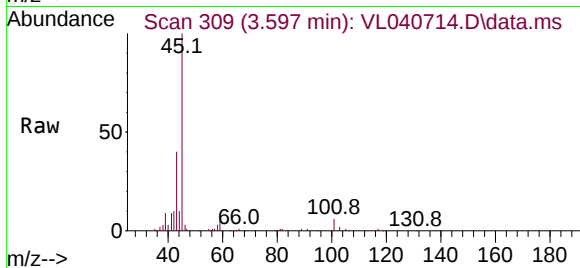
OA1

Tgt Ion: 45 Resp: 120947

Ion Ratio Lower Upper

45 100

58 309.6 1.9 2.9#



#20

Methylene Chloride

Concen: 13.982 ppbv

RT: 3.941 min Scan# 416

Delta R.T. 0.003 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Tgt Ion: 84 Resp: 1369373

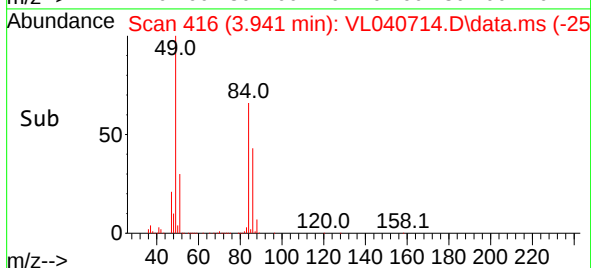
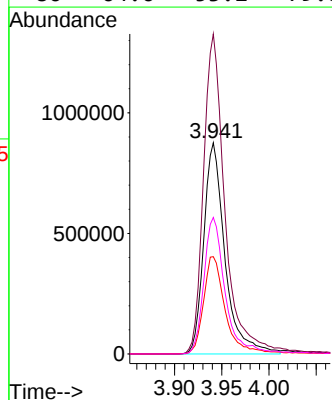
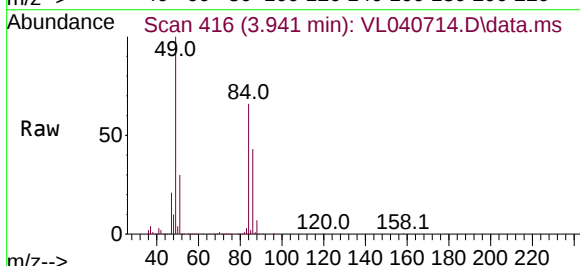
Ion Ratio Lower Upper

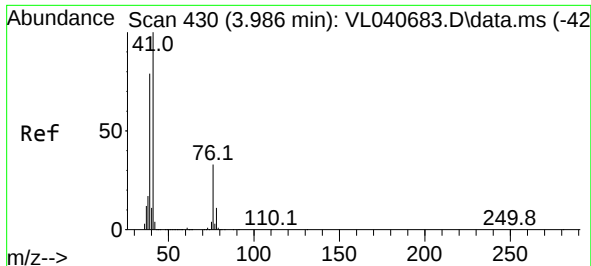
84 100

49 151.5 114.4 171.6

51 45.8 35.5 53.3

86 64.6 53.2 79.8





#21

Allyl Chloride

Concen: 0.078 ppbv

RT: 3.967 min Scan# 41

Delta R.T. -0.035 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

OA1

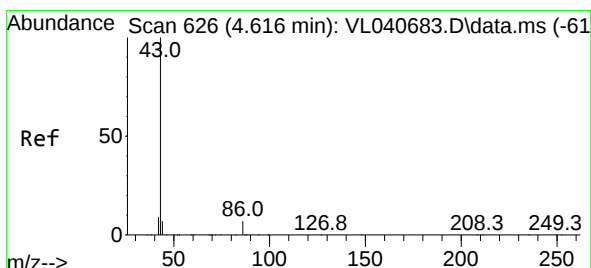
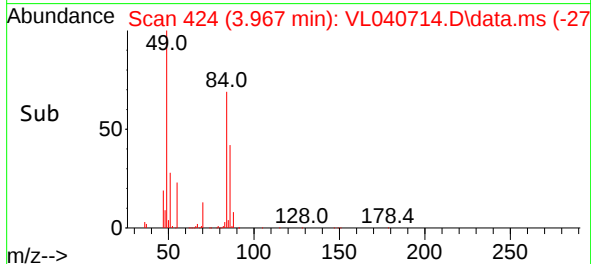
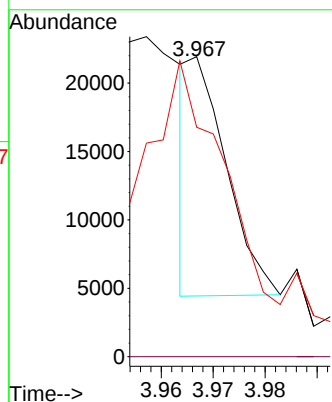
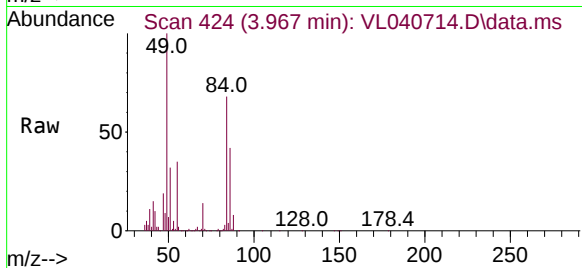
Tgt Ion: 41 Resp: 8659

Ion Ratio Lower Upper

41 100

76 0.0 26.6 40.0#

39 363.0 65.0 97.4#



#23

Vinyl Acetate

Concen: 0.612 ppbv

RT: 4.613 min Scan# 625

Delta R.T. -0.019 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Tgt Ion: 43 Resp: 115106

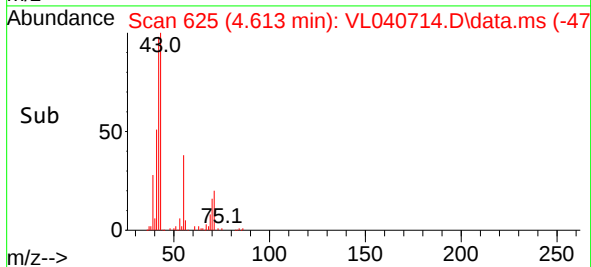
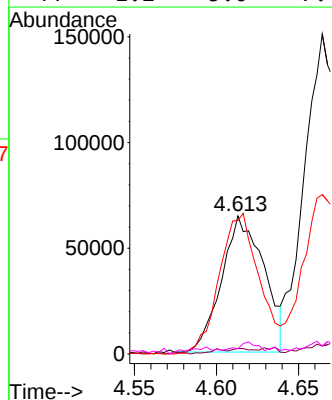
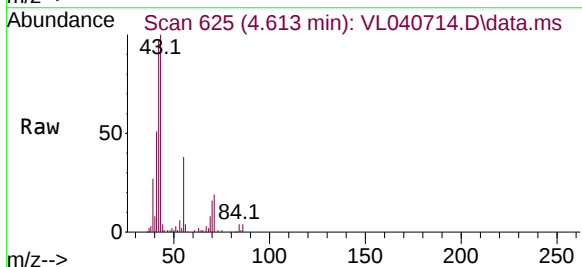
Ion Ratio Lower Upper

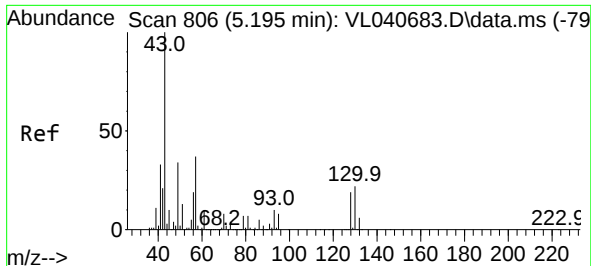
43 100

86 2.9 5.6 8.4#

42 97.4 7.6 11.4#

44 1.2 5.0 7.4#

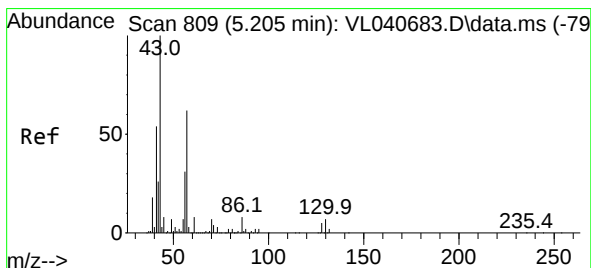
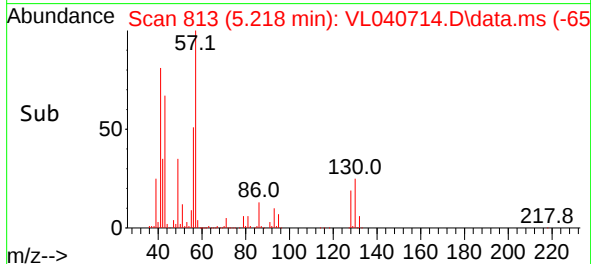
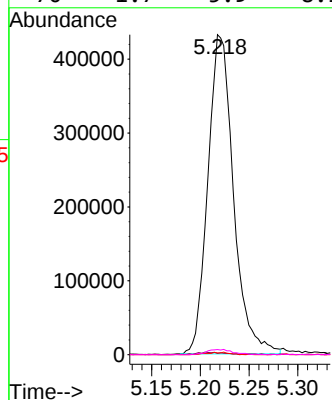
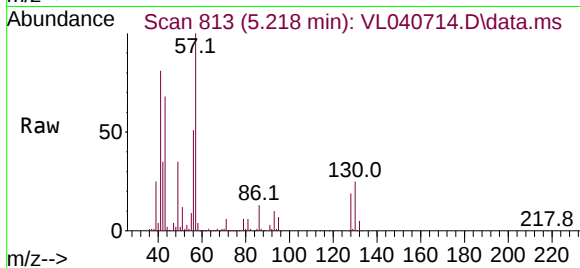




#25
Ethyl Acetate
Concen: 2.694 ppbv
RT: 5.218 min Scan# 813
Delta R.T. 0.007 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

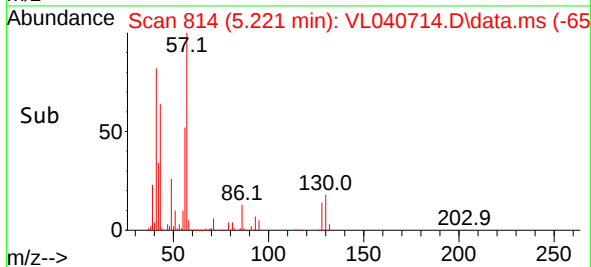
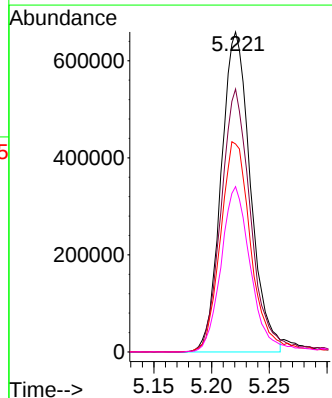
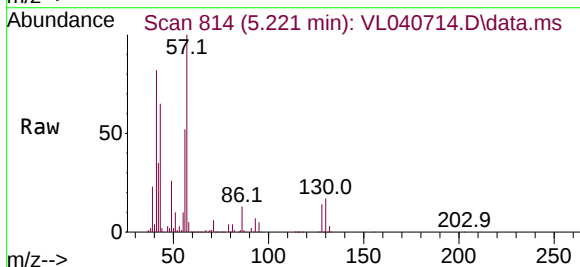
Instrument :
MSVOA_L
ClientSampleId :
OA1

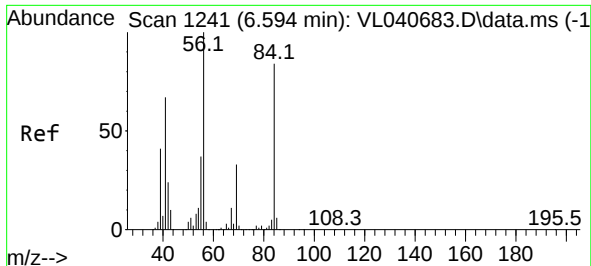
Tgt Ion: 43 Resp: 790775
Ion Ratio Lower Upper
43 100
45 0.8 8.2 12.4#
61 0.6 8.2 12.4#
70 1.7 5.9 8.9#



#26
Hexane
Concen: 8.373 ppbv
RT: 5.221 min Scan# 814
Delta R.T. 0.000 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 57 Resp: 1161977
Ion Ratio Lower Upper
57 100
41 85.2 75.2 112.8
43 69.5 185.6 278.4#
56 53.5 43.8 65.8

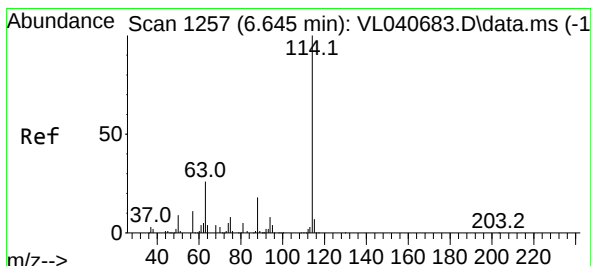
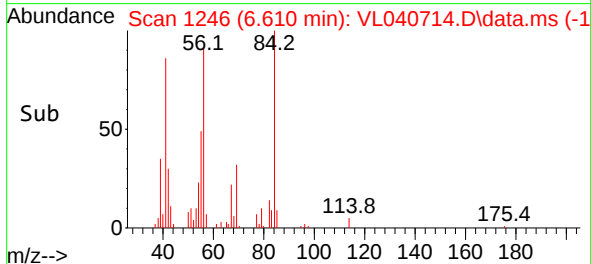
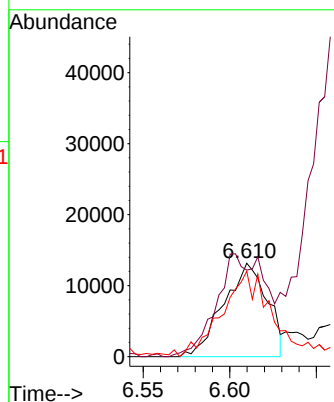
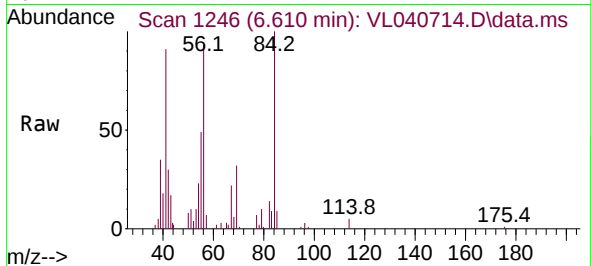




#30
Cyclohexane
Concen: 0.221 ppbv
RT: 6.610 min Scan# 1246
Delta R.T. 0.000 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

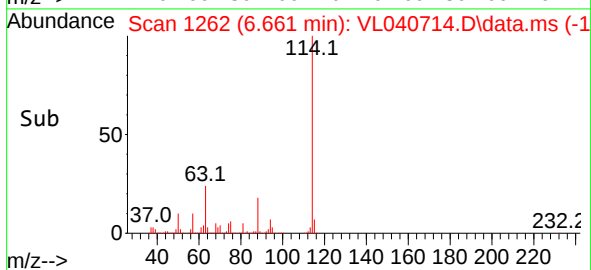
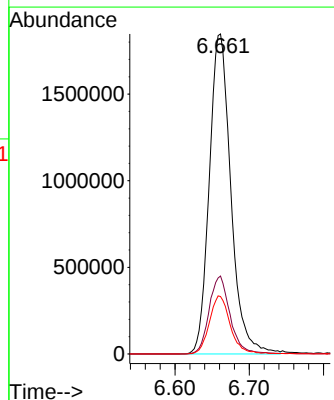
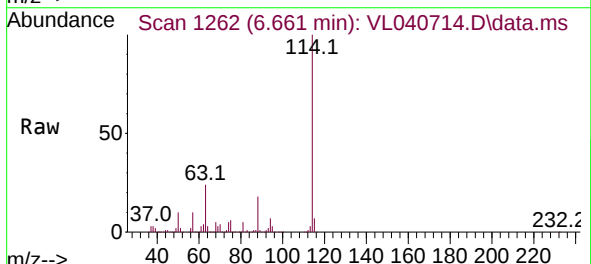
Instrument :
MSVOA_L
ClientSampleId :
OA1

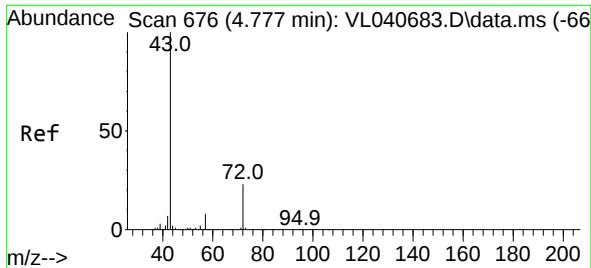
Tgt Ion: 84 Resp: 23126
Ion Ratio Lower Upper
84 100
56 136.1 103.2 154.8
41 104.9 65.5 98.3#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 6.661 min Scan# 1262
Delta R.T. 0.000 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 114 Resp: 3725187
Ion Ratio Lower Upper
114 100
63 23.9 21.1 31.7
88 17.7 14.5 21.7

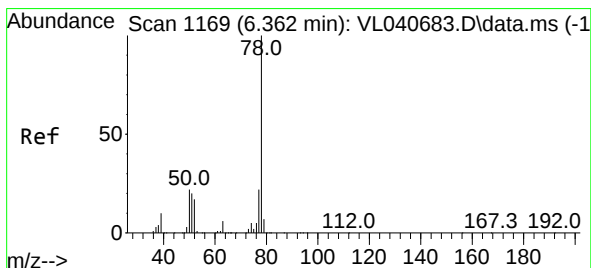
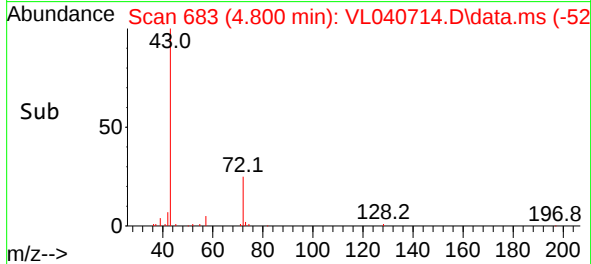
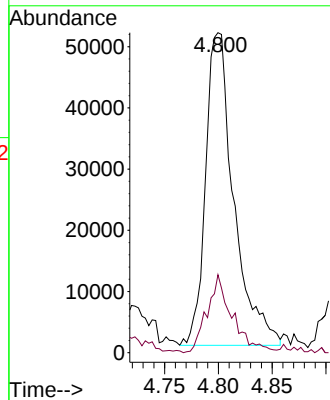
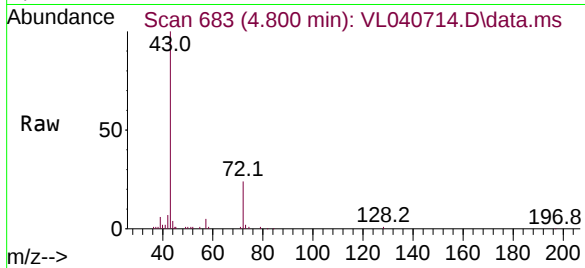




#34
2-Butanone
Concen: 0.498 ppbv
RT: 4.800 min Scan# 61
Delta R.T. 0.010 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

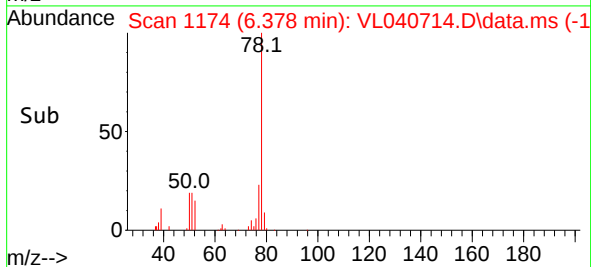
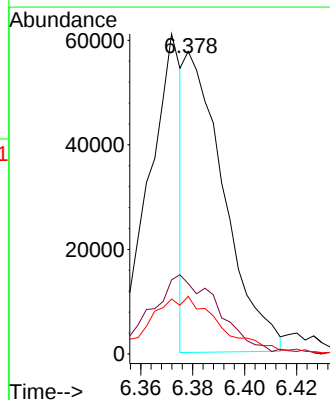
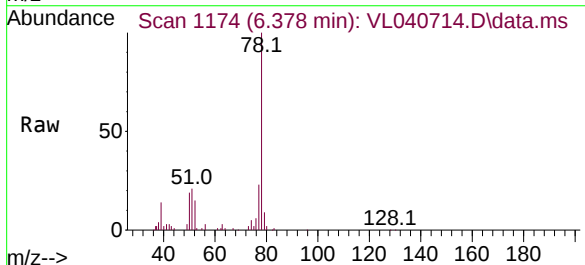
Instrument :
MSVOA_L
ClientSampleId :
OA1

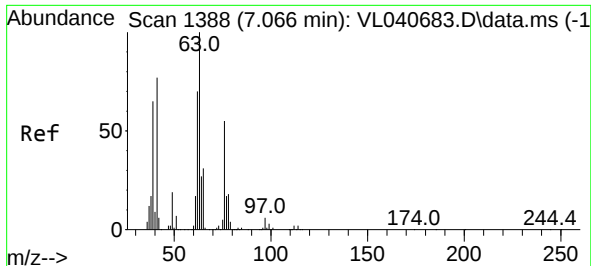
Tgt Ion: 43 Resp: 93279
Ion Ratio Lower Upper
43 100
72 23.2 18.6 27.8



#36
Benzene
Concen: 0.217 ppbv
RT: 6.378 min Scan# 1174
Delta R.T. -0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 78 Resp: 59946
Ion Ratio Lower Upper
78 100
77 23.0 17.9 26.9
50 18.3 17.3 25.9





#39

1,2-Dichloropropane

Concen: 8.291 ppbv

RT: 6.661 min Scan# 11

Delta R.T. -0.421 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

OA1

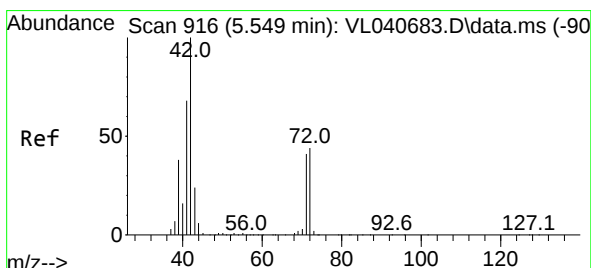
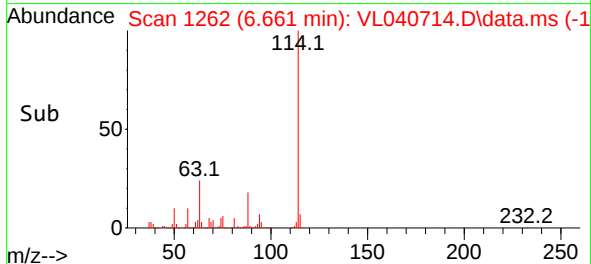
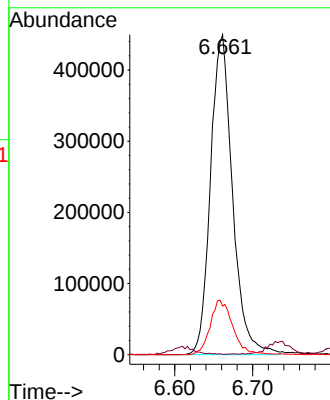
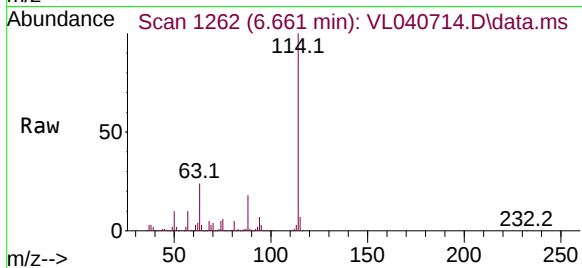
Tgt Ion: 63 Resp: 880367

Ion Ratio Lower Upper

63 100

41 0.0 61.6 92.4#

62 15.2 55.8 83.8#



#41

Tetrahydrofuran

Concen: 0.262 ppbv

RT: 5.825 min Scan# 1002

Delta R.T. 0.264 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

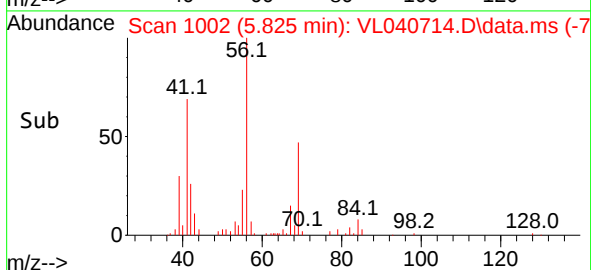
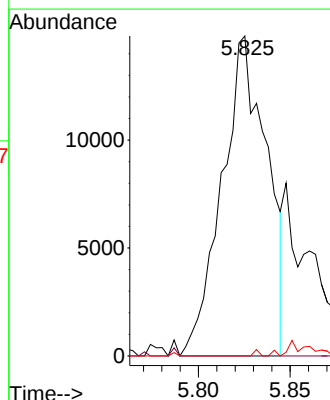
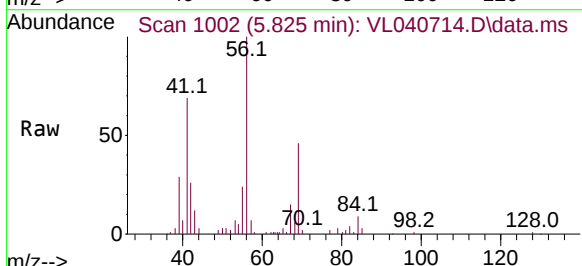
Tgt Ion: 42 Resp: 25186

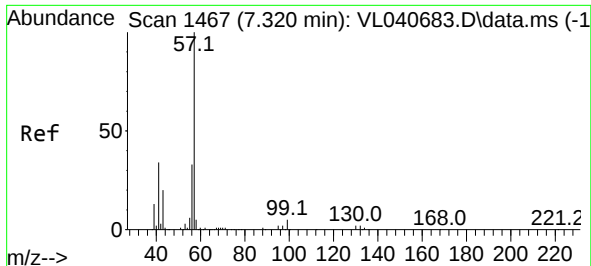
Ion Ratio Lower Upper

42 100

72 0.0 34.9 52.3#

71 0.0 33.8 50.8#





#44

2,2,4-Trimethylpentane

Concen: 0.716 ppbv

RT: 7.336 min Scan# 1467

Delta R.T. 0.000 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

OA1

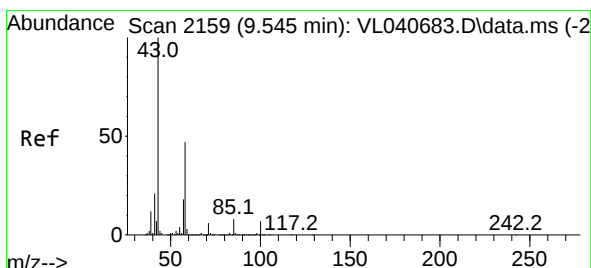
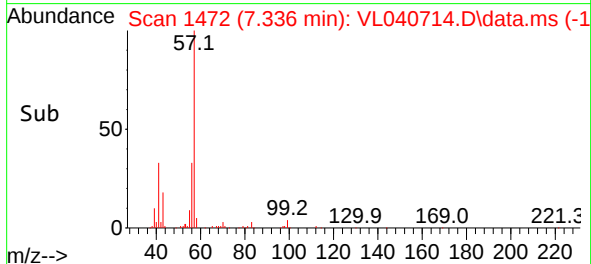
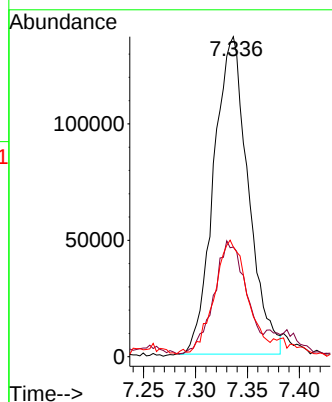
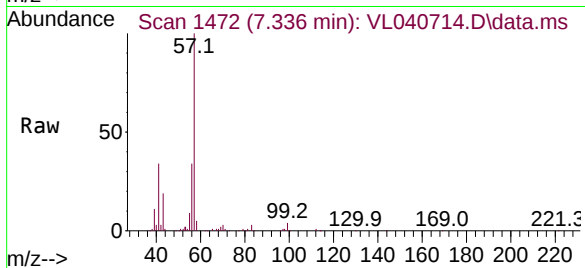
Tgt Ion: 57 Resp: 314531

Ion Ratio Lower Upper

57 100

41 43.2 28.5 42.7#

56 40.2 25.4 38.2#



#51

2-Hexanone

Concen: 0.148 ppbv

RT: 9.542 min Scan# 2158

Delta R.T. -0.013 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

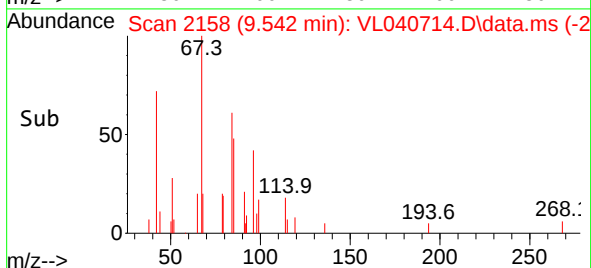
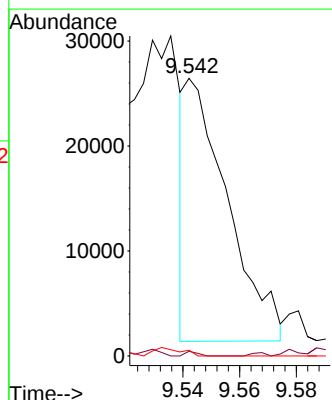
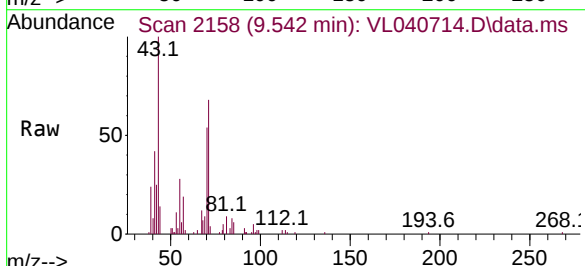
Tgt Ion: 43 Resp: 25840

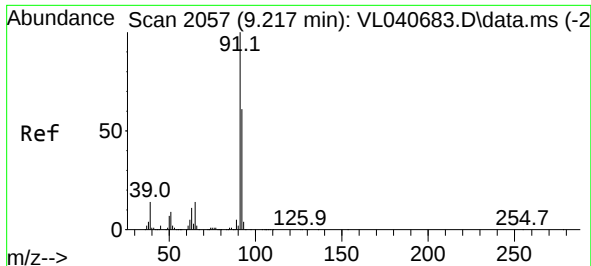
Ion Ratio Lower Upper

43 100

58 5.5 37.6 56.4#

98 0.0 0.6 1.0#

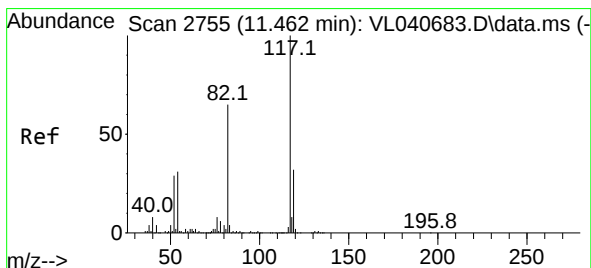
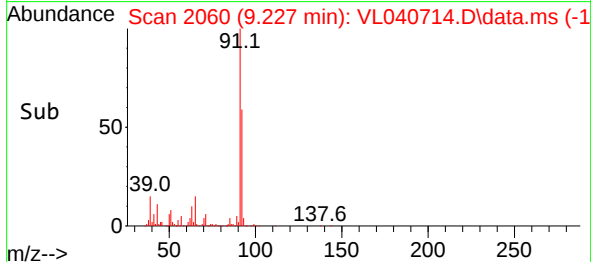
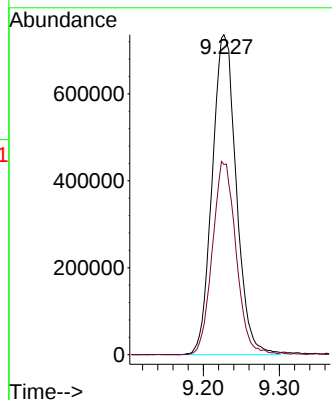
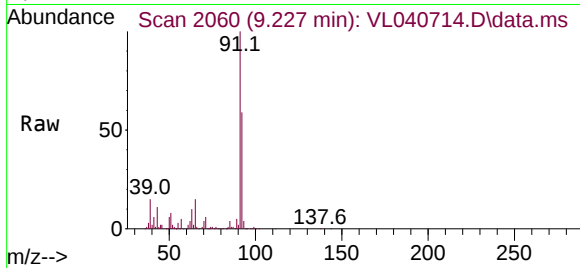




#53
Toluene
Concen: 5.555 ppbv
RT: 9.227 min Scan# 2057
Delta R.T. -0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

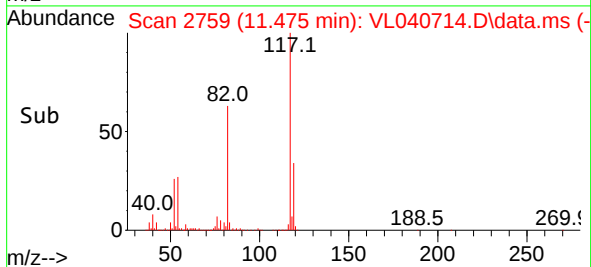
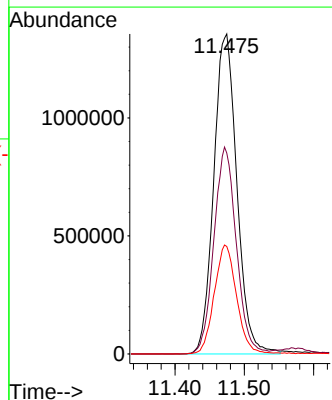
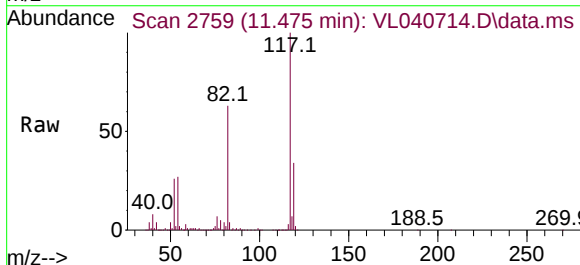
Instrument :
MSVOA_L
ClientSampleId :
OA1

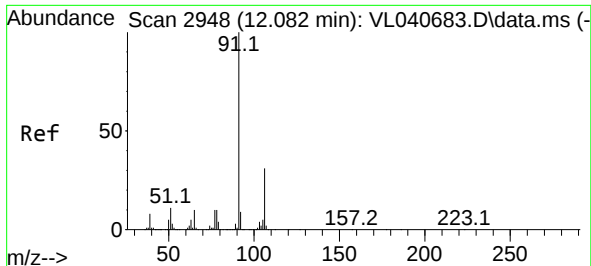
Tgt Ion: 91 Resp: 1617923
Ion Ratio Lower Upper
91 100
92 59.6 48.5 72.7



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.475 min Scan# 2759
Delta R.T. -0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 117 Resp: 3146210
Ion Ratio Lower Upper
117 100
82 62.9 51.4 77.0
119 33.1 24.7 37.1





#58

Ethyl Benzene

Concen: 5.602 ppbv

RT: 12.095 min Scan# 2948

Delta R.T. -0.006 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

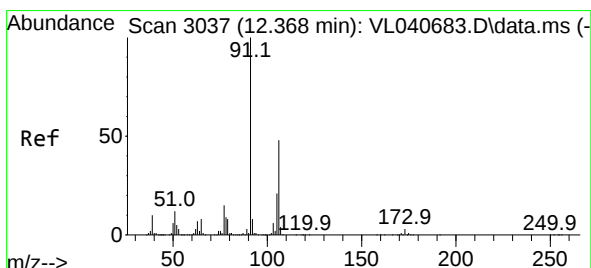
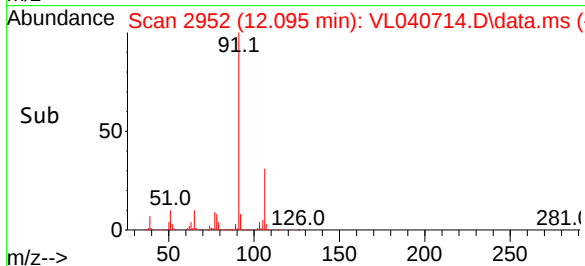
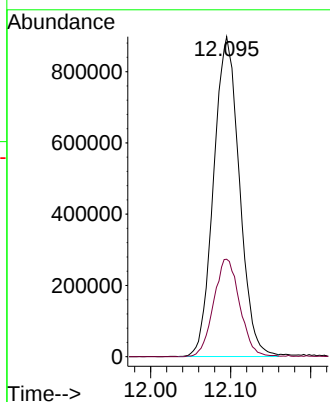
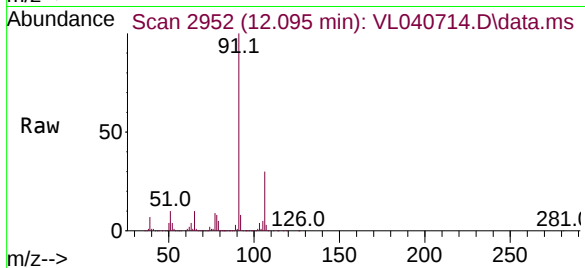
OA1

Tgt Ion: 91 Resp: 2009484

Ion Ratio Lower Upper

91 100

106 30.5 24.7 37.1



#59

m/p-Xylene

Concen: 12.334 ppbv

RT: 12.349 min Scan# 3031

Delta R.T. -0.032 min

Lab File: VL040714.D

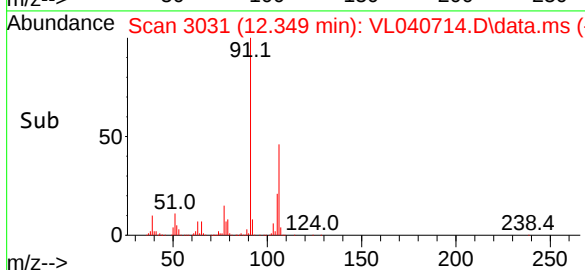
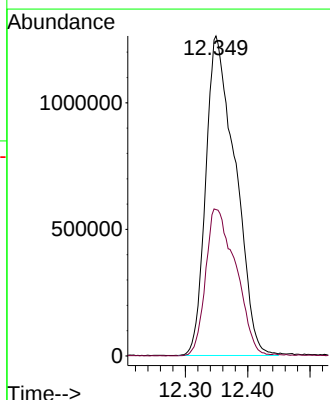
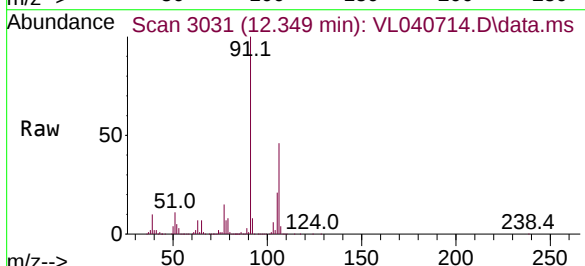
Acq: 19 Sep 2023 1:05

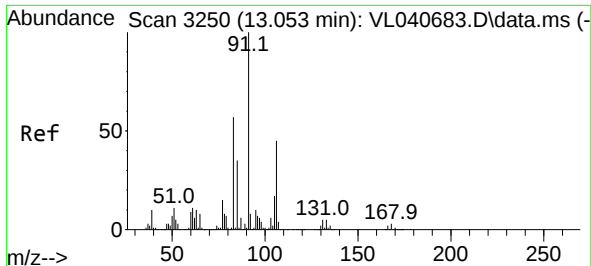
Tgt Ion: 91 Resp: 4154445

Ion Ratio Lower Upper

91 100

106 47.4 34.8 52.2

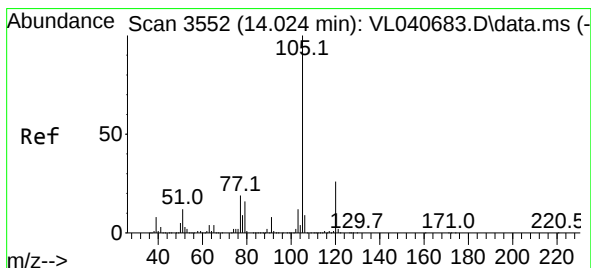
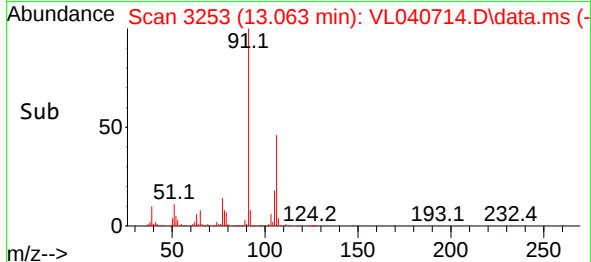
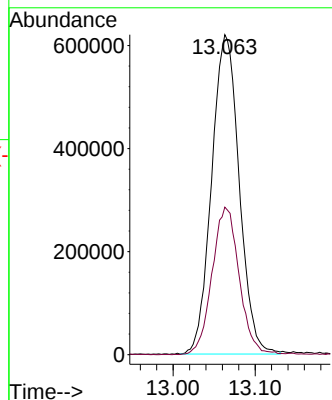
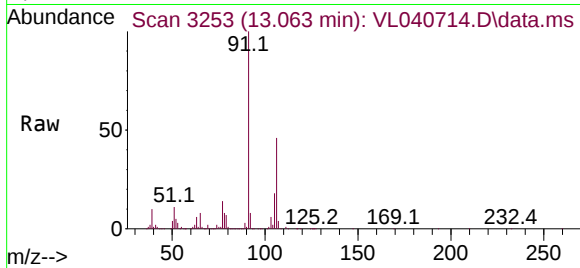




#60
o-Xylene
Concen: 4.507 ppbv
RT: 13.063 min Scan# 31
Delta R.T. -0.006 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

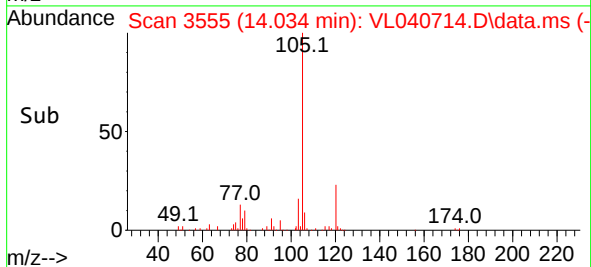
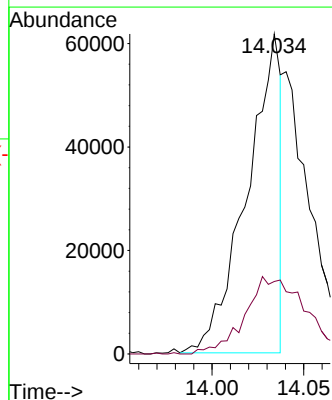
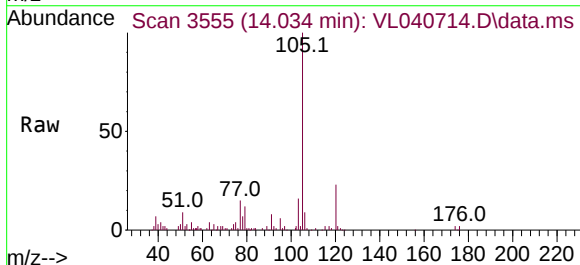
Instrument :
MSVOA_L
ClientSampleId :
OA1

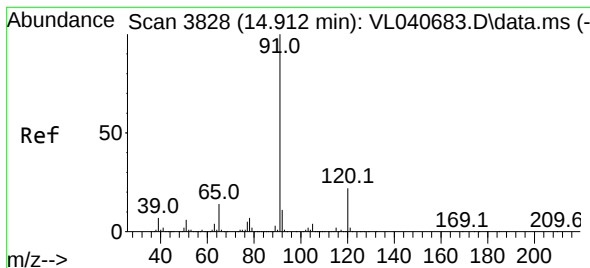
Tgt Ion: 91 Resp: 1447736
Ion Ratio Lower Upper
91 100
106 45.8 22.3 66.9



#62
Isopropylbenzene
Concen: 0.164 ppbv
RT: 14.034 min Scan# 3555
Delta R.T. -0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 105 Resp: 79496
Ion Ratio Lower Upper
105 100
120 43.6 20.2 30.4#





#64

n-propylbenzene

Concen: 0.219 ppbv

RT: 14.921 min Scan# 3828

Delta R.T. -0.003 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

Instrument :

MSVOA_L

ClientSampleId :

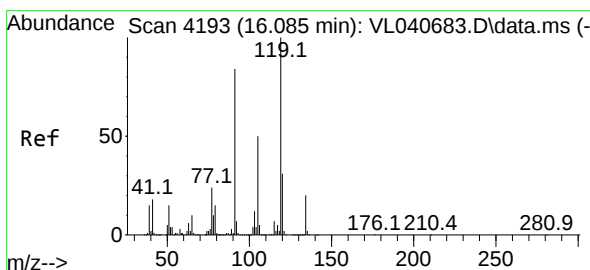
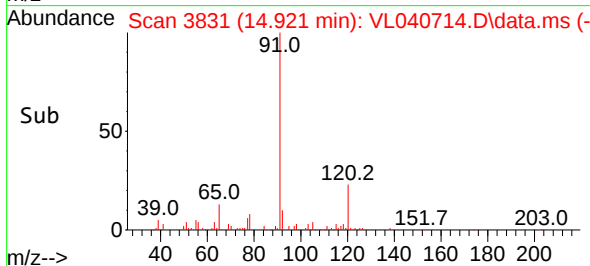
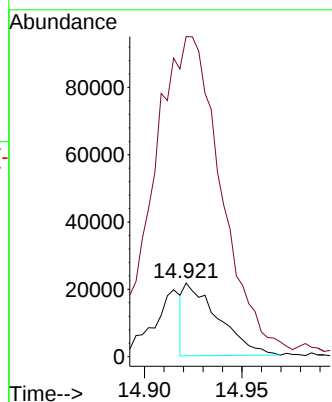
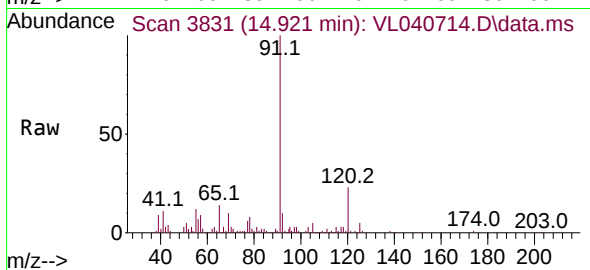
OA1

Tgt Ion:120 Resp: 26530

Ion Ratio Lower Upper

120 100

91 882.7 386.9 580.3#



#65

tert-Butylbenzene

Concen: 0.164 ppbv

RT: 16.111 min Scan# 4201

Delta R.T. 0.013 min

Lab File: VL040714.D

Acq: 19 Sep 2023 1:05

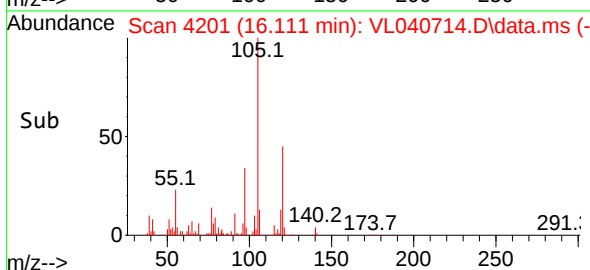
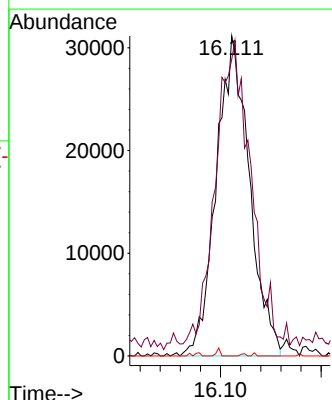
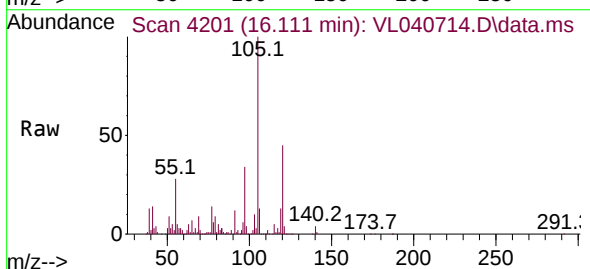
Tgt Ion:119 Resp: 71314

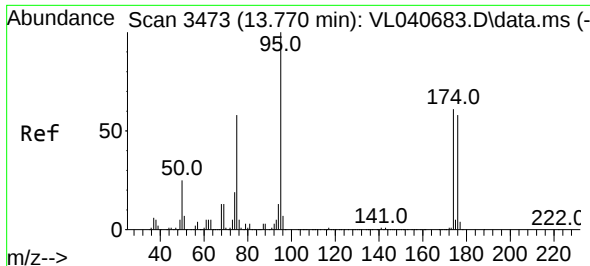
Ion Ratio Lower Upper

119 100

91 103.2 69.8 104.8

134 0.5 15.4 23.2#

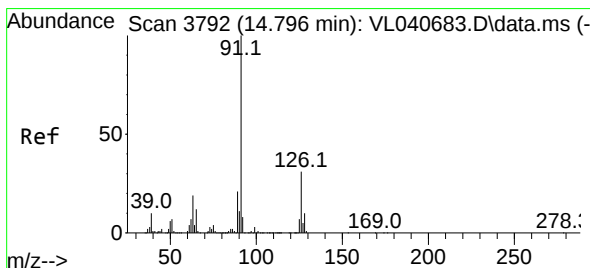
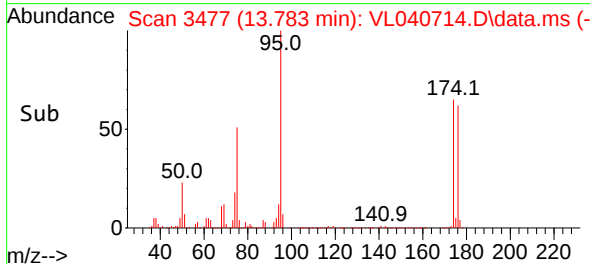
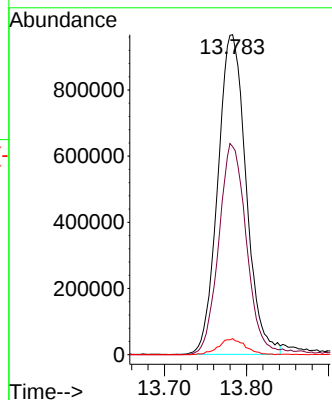
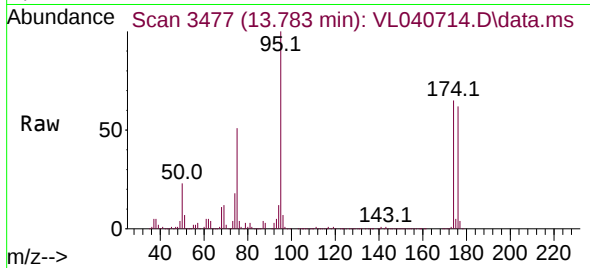




#68
1-Bromo-4-Fluorobenzene
Concen: 9.526 ppbv
RT: 13.783 min Scan# 3477
Delta R.T. -0.003 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

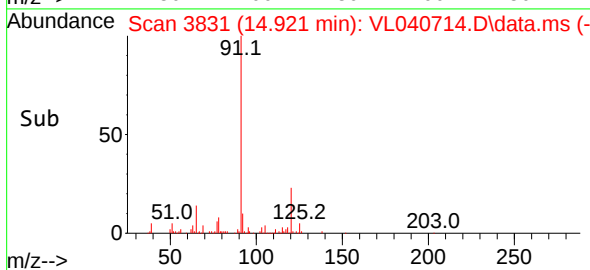
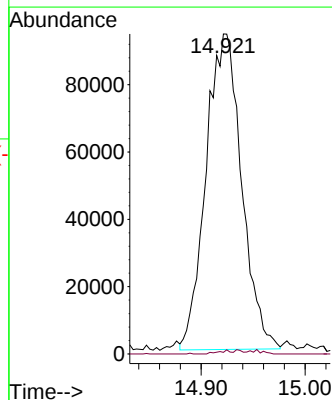
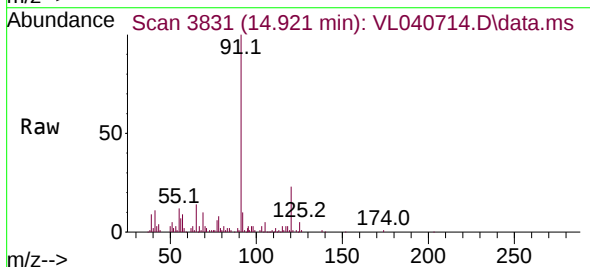
Instrument :
MSVOA_L
ClientSampleId :
OA1

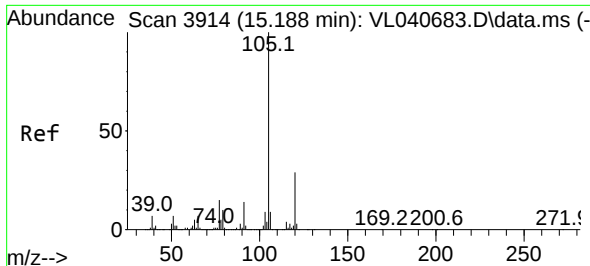
Tgt Ion: 95 Resp: 2315642
Ion Ratio Lower Upper
95 100
174 65.8 48.9 73.3
175 4.8 3.5 5.3



#71
2-Chlorotoluene
Concen: 0.623 ppbv
RT: 14.921 min Scan# 3831
Delta R.T. 0.113 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

Tgt Ion: 91 Resp: 223465
Ion Ratio Lower Upper
91 100
126 1.1 12.0 47.8#

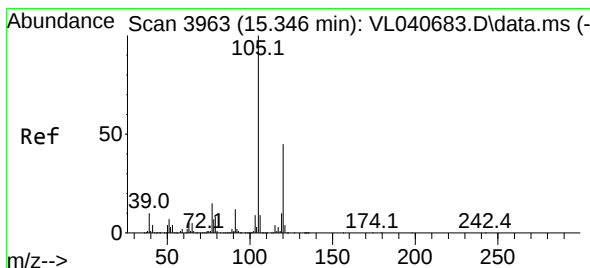
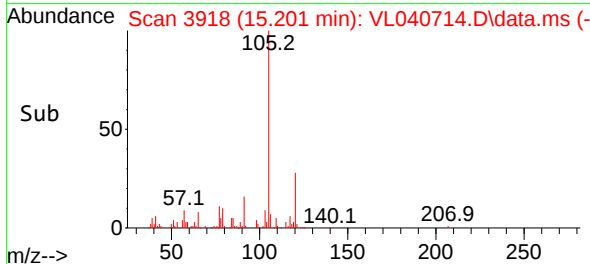
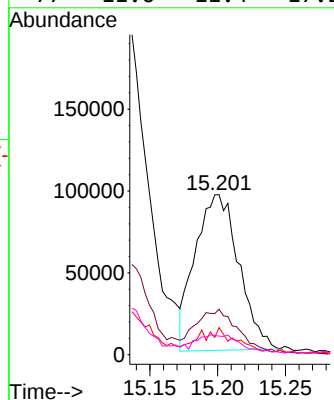
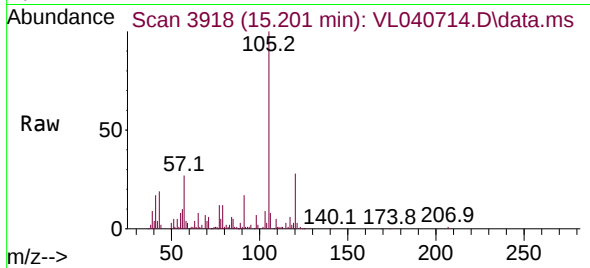




#72
4-Ethyltoluene
Concen: 0.591 ppbv
RT: 15.201 min Scan# 3918
Delta R.T. 0.000 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

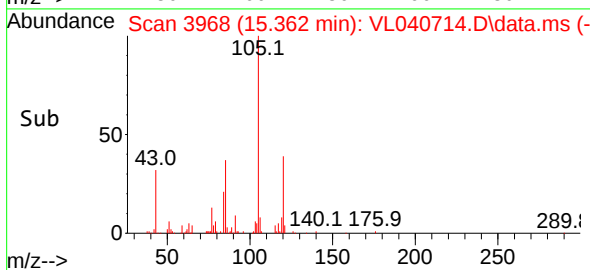
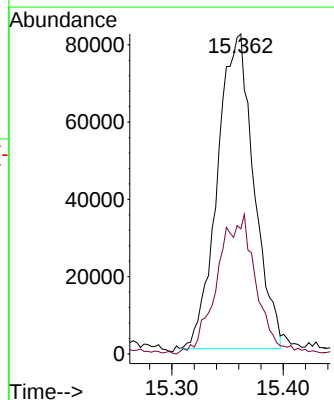
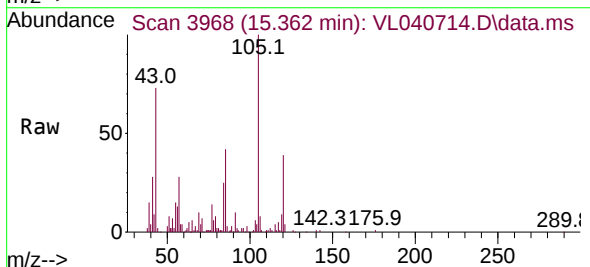
Instrument :
MSVOA_L
ClientSampleId :
OA1

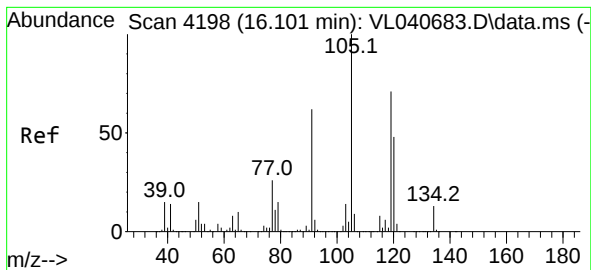
Tgt Ion:105 Resp: 212772
Ion Ratio Lower Upper
105 100
120 31.6 23.9 35.9
91 16.5 11.0 16.4#
77 11.6 11.4 17.2



#73
1,3,5-Trimethylbenzene
Concen: 0.572 ppbv
RT: 15.362 min Scan# 3968
Delta R.T. 0.000 min
Lab File: VL040714.D
Acq: 19 Sep 2023 1:05

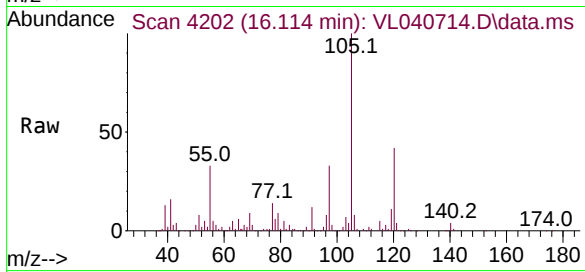
Tgt Ion:105 Resp: 185660
Ion Ratio Lower Upper
105 100
120 39.0 36.1 54.1





#74
 1,2,4-Trimethylbenzene
 Concen: 1.552 ppbv
 RT: 16.114 min Scan# 4198
 Delta R.T. -0.003 min
 Lab File: VL040714.D
 Acq: 19 Sep 2023 1:05

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1



Tgt Ion:	105	Resp:	613704
Ion	Ratio	Lower	Upper
105	100		
120	42.2	38.6	57.8
91	11.3	50.0	75.0#
77	13.5	20.6	31.0#

