

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL110823\
 Data File : VL040831.D
 Acq On : 9 Nov 2023 11:19
 Operator : SY/MD
 Sample : 05275-04
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 NT-OA-4

Quant Time: Nov 10 04:51:03 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL101123AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Nov 09 00:25:02 2023
 Response via : Initial Calibration

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

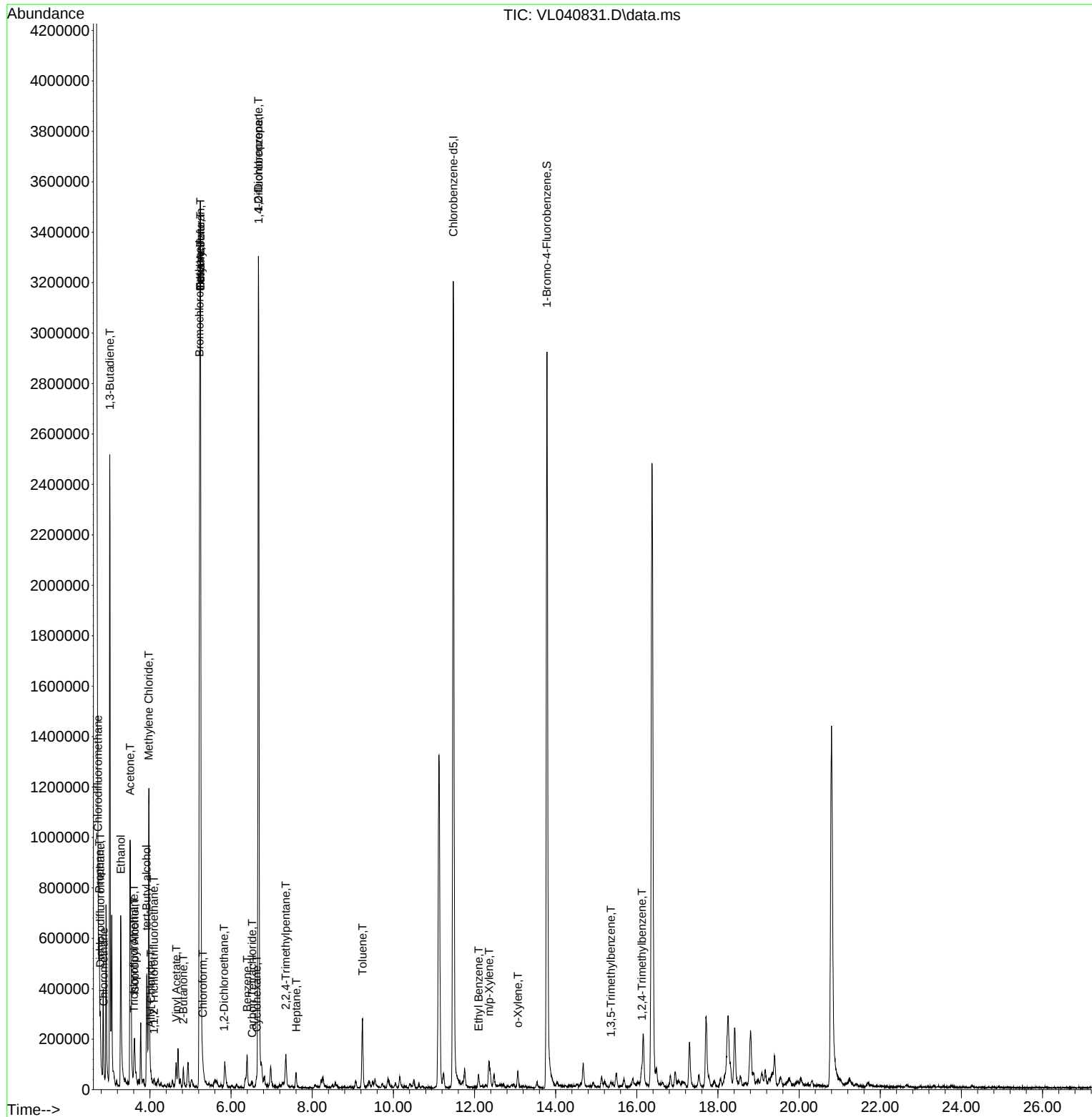
Internal Standards						
1) Bromochloromethane	5.224	49	993027	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	6.677	114	2429032	10.000	ppbv	0.01
55) Chlorobenzene-d5	11.478	117	2072140	10.000	ppbv	0.02
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.786	95	1513104	9.924	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.200%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.777	85	107535	0.615	ppbv	92
3) Chlorodifluoromethane	2.722	51	105302	0.722	ppbv #	85
4) Chloromethane	2.861	50	31122	0.540	ppbv	97
9) Propene	2.751	41	98340	1.814	ppbv #	83
10) Heptane	7.610	43	5482	0.040	ppbv #	27
11) Trichlorofluoromethane	3.603	101	37925	0.281	ppbv	90
12) 1,1,2-Trichlorotrifluo...	4.102	101	6565	0.068	ppbv #	13
13) Ethanol	3.282	45	679048	55.495	ppbv	99
15) Acetone	3.510	43	1050069	10.229	ppbv	94
16) 1,3-Butadiene	3.012	39	675766	12.548	ppbv #	15
17) tert-Butyl alcohol	3.922	59	339186	3.222	ppbv	97
19) Isopropyl Alcohol	3.623	45	154038	2.331	ppbv #	55
20) Methylene Chloride	3.970	84	363348	8.497	ppbv	95
21) Allyl Chloride	4.025	41	2159	0.032	ppbv #	21
23) Vinyl Acetate	4.652	43	19403	0.148	ppbv #	1
25) Ethyl Acetate	5.243	43	870153	3.869	ppbv #	77
26) Hexane	5.243	57	1219553	11.863	ppbv #	41
29) Chloroform	5.304	83	8234	0.055	ppbv #	79
30) Cyclohexane	6.632	84	6622	0.076	ppbv #	1
34) 2-Butanone	4.822	43	81095	0.738	ppbv	93
35) Carbon Tetrachloride	6.523	117	4980	0.037	ppbv #	88
36) Benzene	6.397	78	92973	0.498	ppbv	98
37) 1,2-Dichloroethane	5.828	62	3032	0.032	ppbv #	80
39) 1,2-Dichloropropane	6.674	63	616801	8.450	ppbv #	27
41) Tetrahydrofuran	5.243	42	455269	5.979	ppbv #	50
44) 2,2,4-Trimethylpentane	7.349	57	102305	0.324	ppbv #	80
53) Toluene	9.240	91	193088	0.868	ppbv	97
58) Ethyl Benzene	12.101	91	23943	0.092	ppbv	96
59) m/p-Xylene	12.359	91	76792	0.358	ppbv #	70
60) o-Xylene	13.072	91	13363	0.065	ppbv #	1
73) 1,3,5-Trimethylbenzene	15.362	105	7663	0.036	ppbv	87
74) 1,2,4-Trimethylbenzene	16.127	105	15232	0.066	ppbv #	66

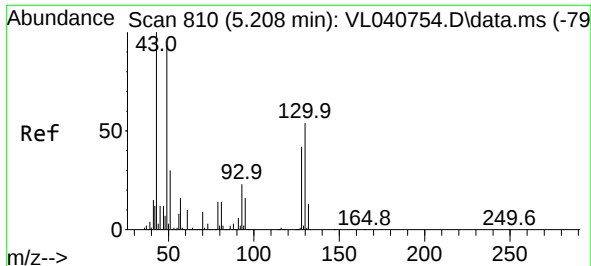
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
QLast Update : Thu Nov 09 00:25:02 2023
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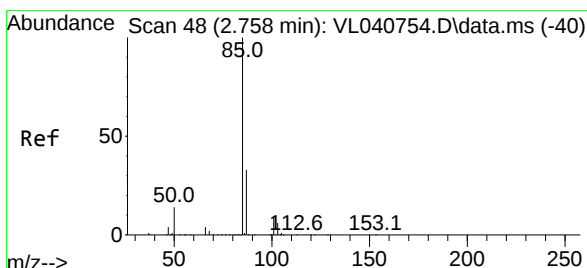
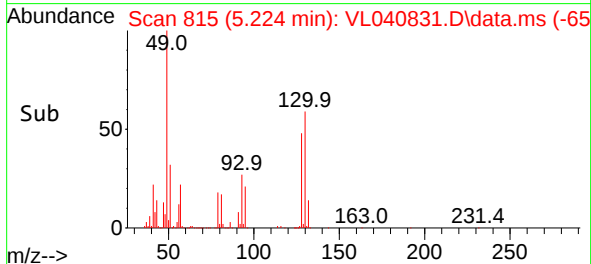
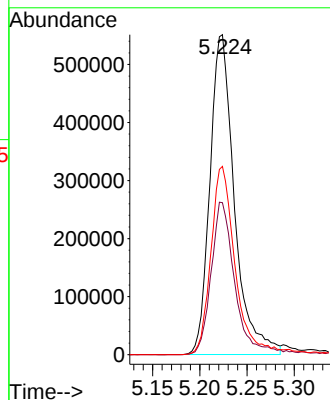
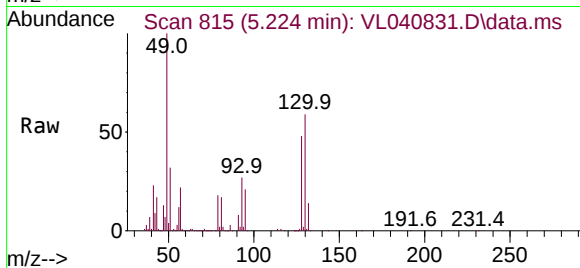




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.224 min Scan# 81
 Delta R.T. 0.016 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

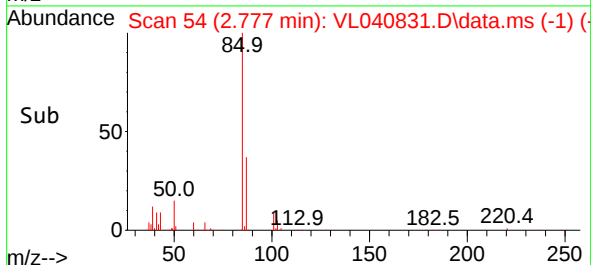
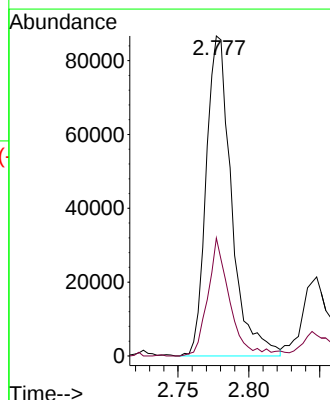
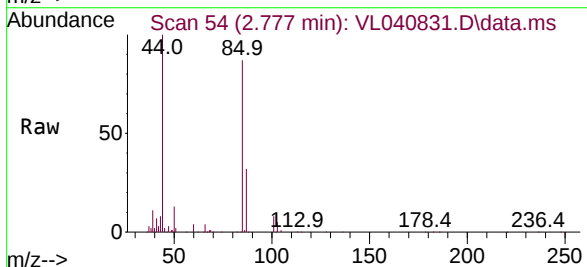
Instrument :
 MSVOA_L
 ClientSampleId :
 NT-OA-4

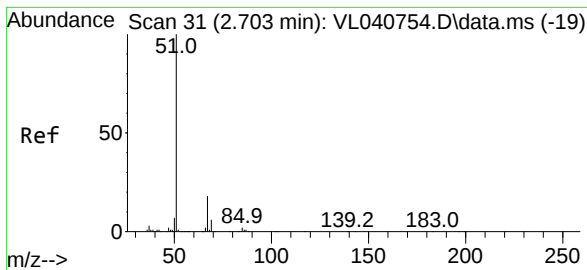
Tgt Ion: 49 Resp: 993027
 Ion Ratio Lower Upper
 49 100
 128 46.9 23.9 71.7
 130 60.8 30.7 92.1



#2
 Dichlorodifluoromethane
 Concen: 0.615 ppbv
 RT: 2.777 min Scan# 54
 Delta R.T. 0.007 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

Tgt Ion: 85 Resp: 107535
 Ion Ratio Lower Upper
 85 100
 87 36.8 26.0 39.0





#3

Chlorodifluoromethane

Concen: 0.722 ppbv

RT: 2.722 min Scan# 31

Delta R.T. 0.007 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

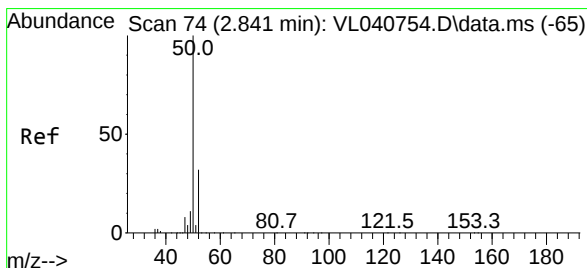
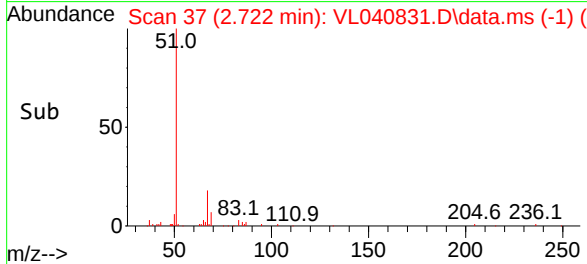
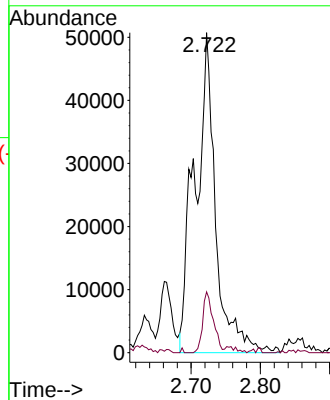
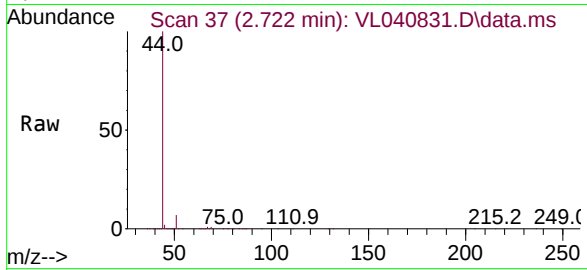
NT-OA-4

Tgt Ion: 51 Resp: 105302

Ion Ratio Lower Upper

51 100

67 10.8 13.8 20.6#



#4

Chloromethane

Concen: 0.540 ppbv

RT: 2.861 min Scan# 80

Delta R.T. 0.007 min

Lab File: VL040831.D

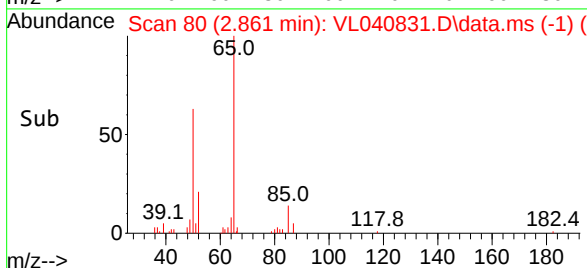
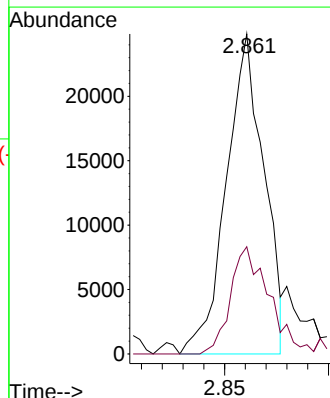
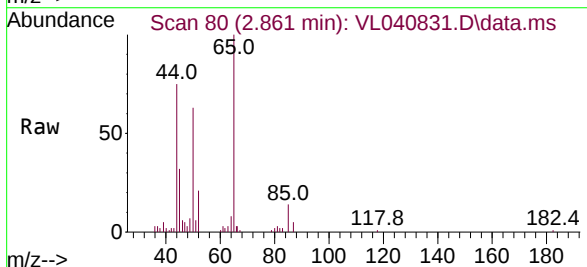
Acq: 9 Nov 2023 11:19

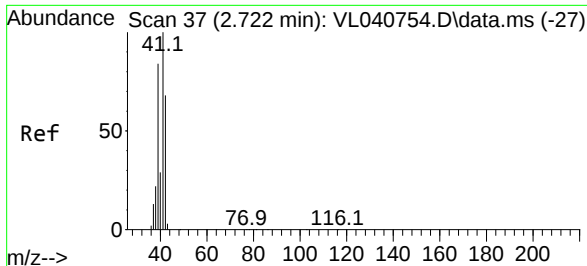
Tgt Ion: 50 Resp: 31122

Ion Ratio Lower Upper

50 100

52 33.5 25.3 37.9

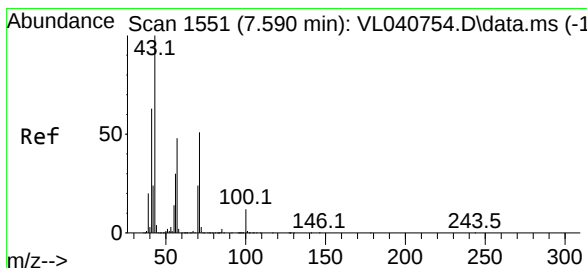
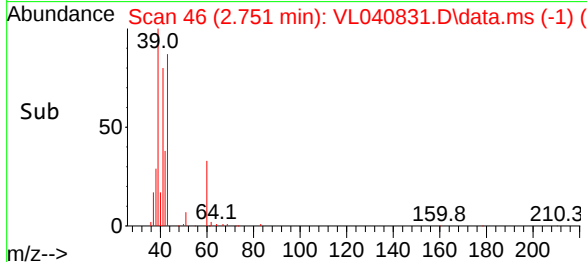
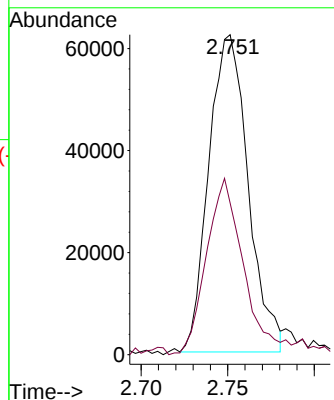
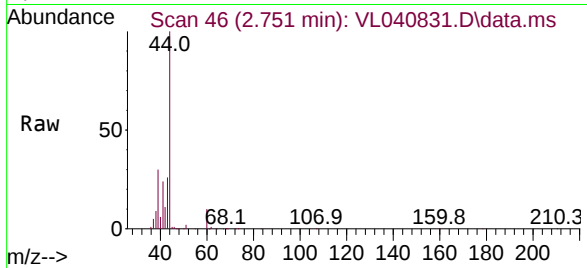




#9
 Propene
 Concen: 1.814 ppbv
 RT: 2.751 min Scan# 41
 Delta R.T. 0.016 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

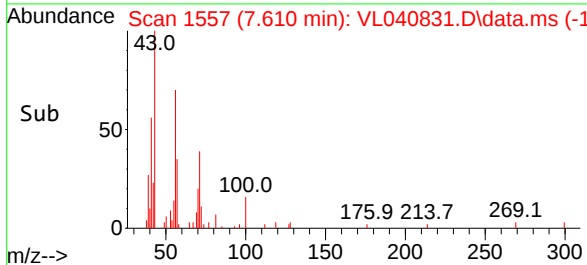
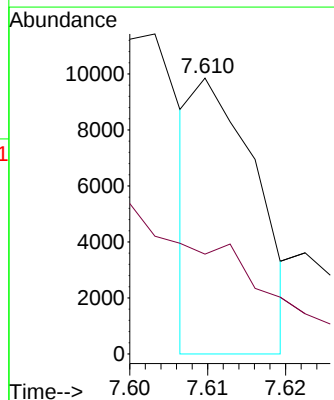
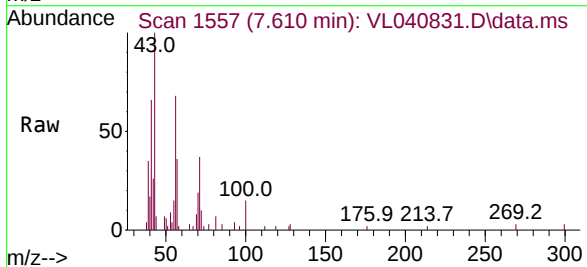
Instrument :
 MSVOA_L
 ClientSampleId :
 NT-OA-4

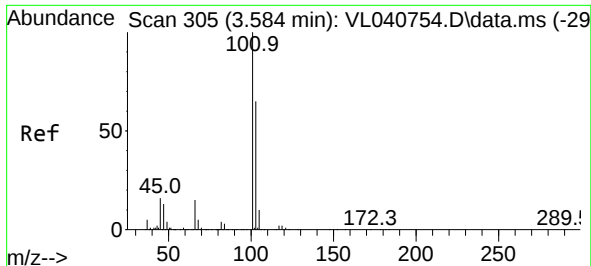
Tgt Ion: 41 Resp: 98340
 Ion Ratio Lower Upper
 41 100
 42 57.0 57.1 85.7#



#10
 Heptane
 Concen: 0.040 ppbv
 RT: 7.610 min Scan# 1557
 Delta R.T. 0.023 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

Tgt Ion: 43 Resp: 5482
 Ion Ratio Lower Upper
 43 100
 57 0.0 40.0 60.0#

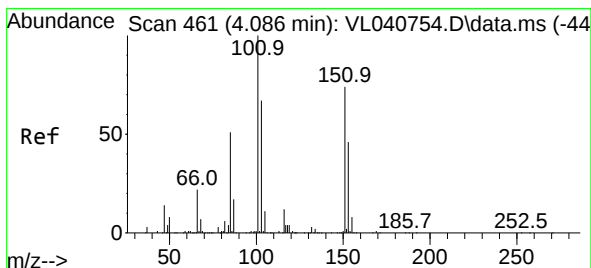
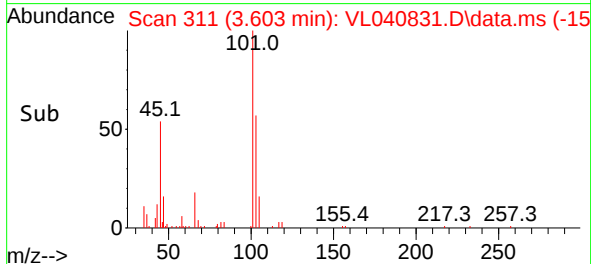
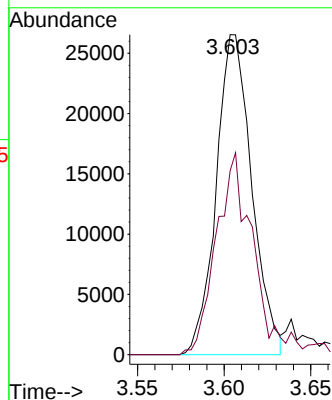
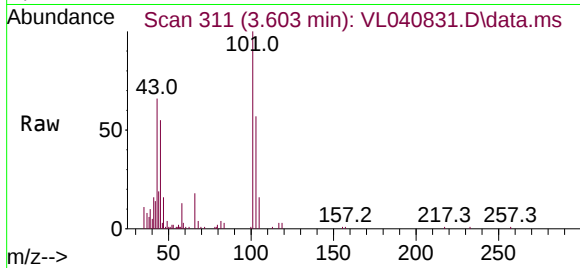




#11
 Trichlorofluoromethane
 Concen: 0.281 ppbv
 RT: 3.603 min Scan# 311
 Delta R.T. 0.010 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

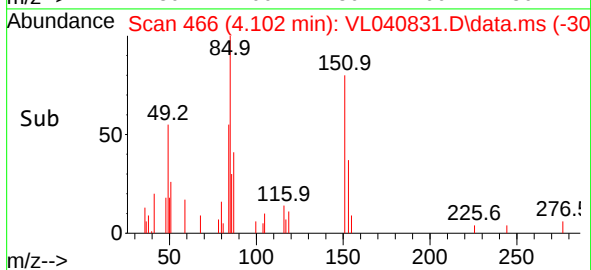
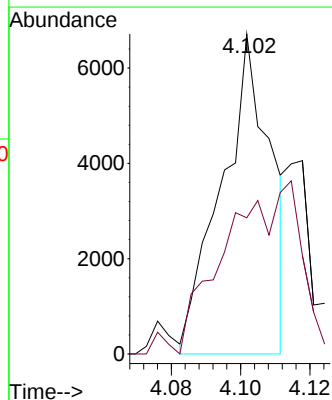
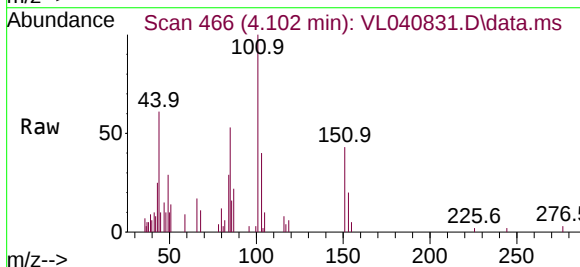
Instrument :
 MSVOA_L
 ClientSampleId :
 NT-OA-4

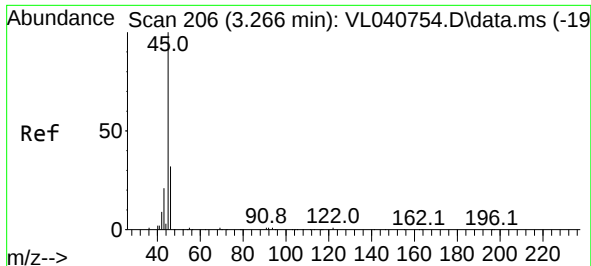
Tgt Ion:101 Resp: 37925
 Ion Ratio Lower Upper
 101 100
 103 57.5 52.2 78.2



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.068 ppbv
 RT: 4.102 min Scan# 466
 Delta R.T. 0.010 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

Tgt Ion:101 Resp: 6565
 Ion Ratio Lower Upper
 101 100
 151 0.0 58.1 87.1#

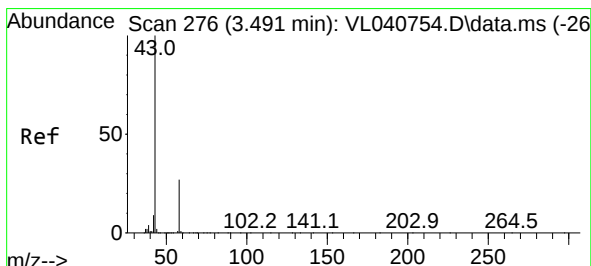
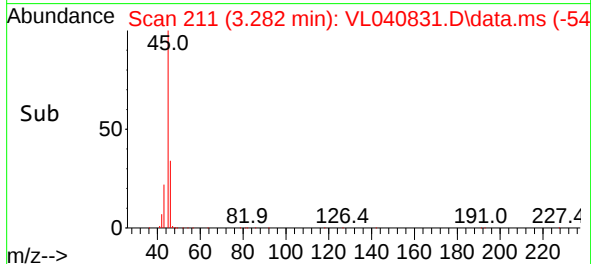
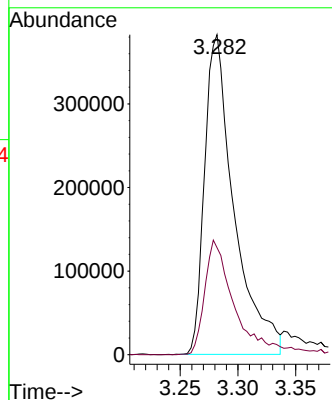
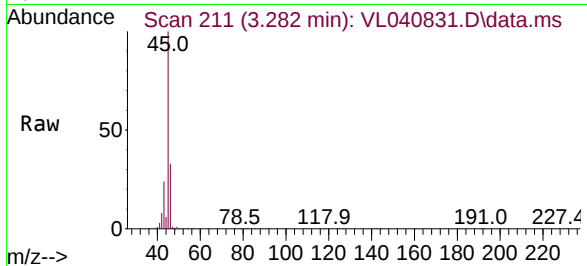




#13
Ethanol
Concen: 55.495 ppbv
RT: 3.282 min Scan# 211
Delta R.T. 0.003 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

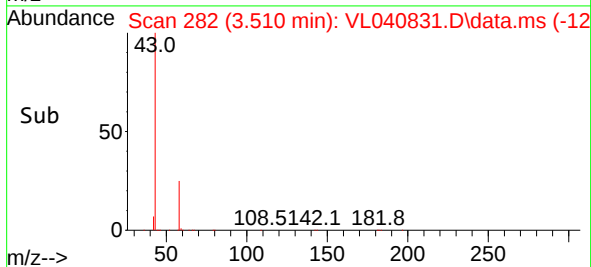
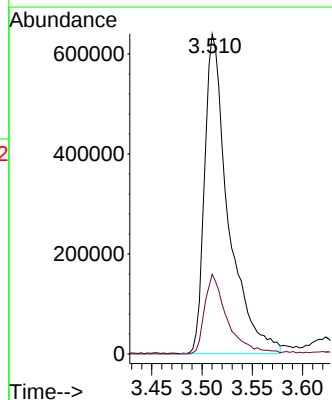
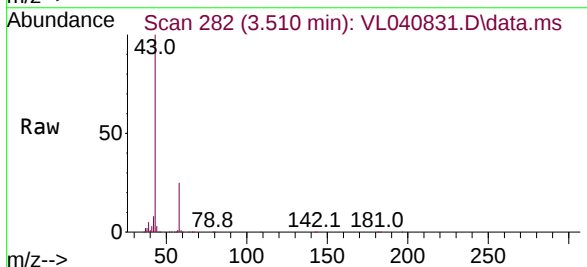
Instrument :
MSVOA_L
ClientSampleId :
NT-OA-4

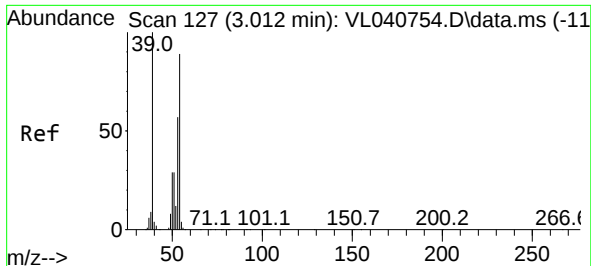
Tgt Ion: 45 Resp: 679048
Ion Ratio Lower Upper
45 100
46 37.2 14.6 58.2



#15
Acetone
Concen: 10.229 ppbv
RT: 3.510 min Scan# 282
Delta R.T. 0.010 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

Tgt Ion: 43 Resp: 1050069
Ion Ratio Lower Upper
43 100
58 24.0 21.6 32.4





#16

1,3-Butadiene

Concen: 12.548 ppbv

RT: 3.012 min Scan# 11

Delta R.T. -0.010 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

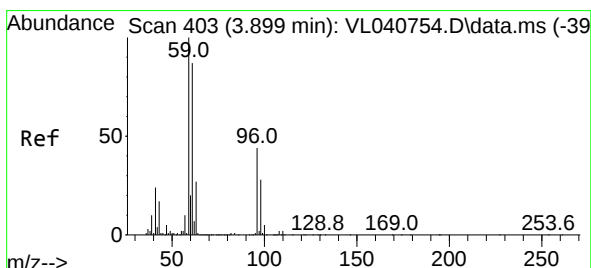
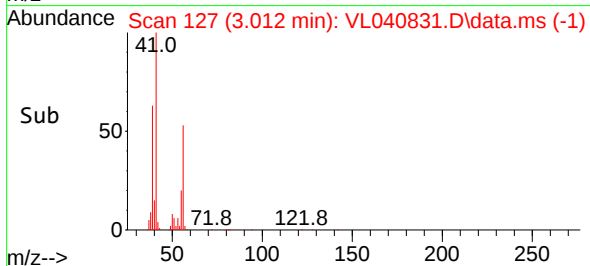
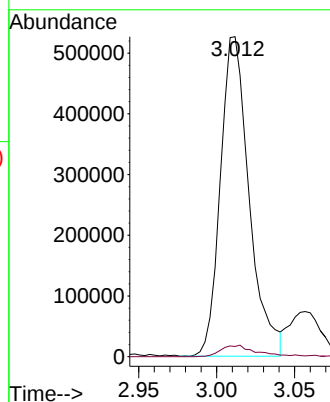
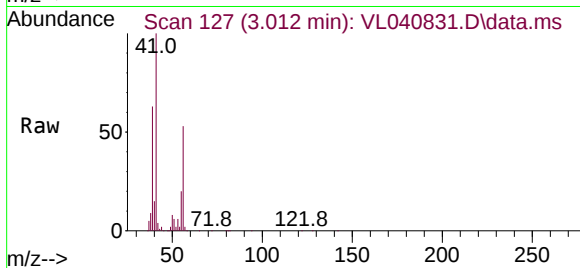
NT-OA-4

Tgt Ion: 39 Resp: 675766

Ion Ratio Lower Upper

39 100

54 4.7 63.0 94.6#



#17

tert-Butyl alcohol

Concen: 3.222 ppbv

RT: 3.922 min Scan# 410

Delta R.T. 0.016 min

Lab File: VL040831.D

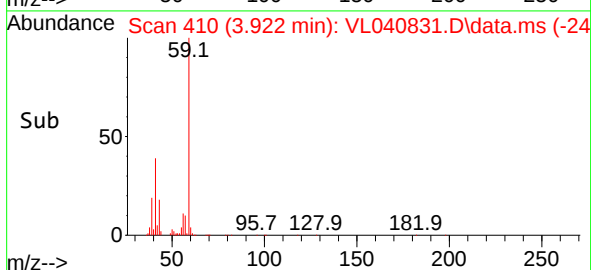
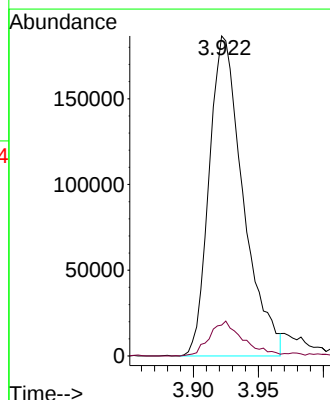
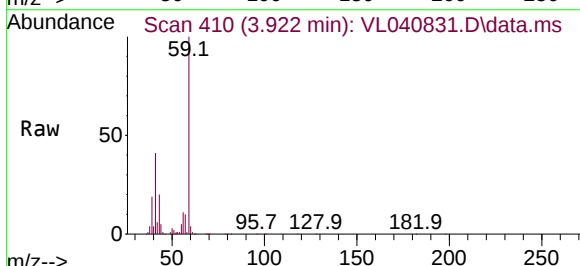
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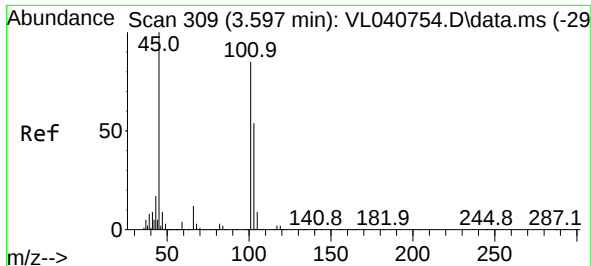
Tgt Ion: 59 Resp: 339186

Ion Ratio Lower Upper

59 100

57 11.9 8.6 13.0





#19

Isopropyl Alcohol

Concen: 2.331 ppbv

RT: 3.623 min Scan# 317

Delta R.T. 0.016 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

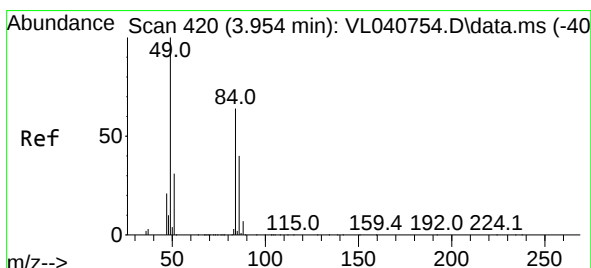
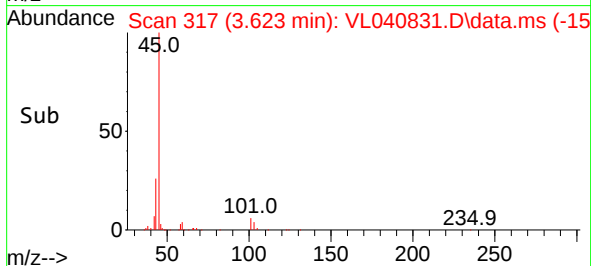
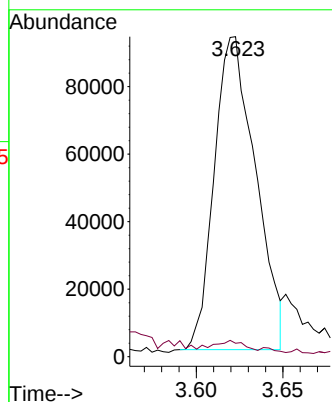
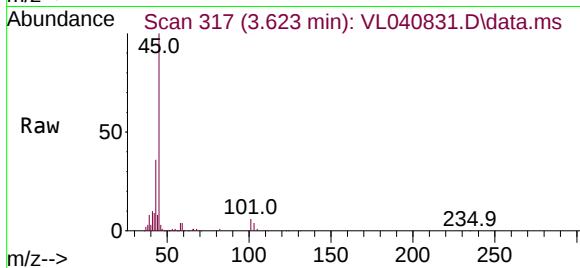
NT-OA-4

Tgt Ion: 45 Resp: 154038

Ion Ratio Lower Upper

45 100

58 10.7 30.3 45.5#



#20

Methylene Chloride

Concen: 8.497 ppbv

RT: 3.970 min Scan# 425

Delta R.T. 0.010 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Tgt Ion: 84 Resp: 363348

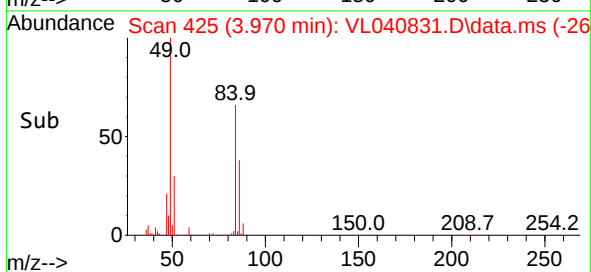
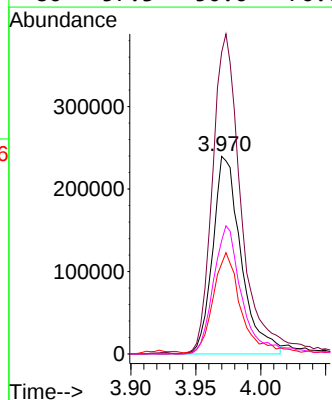
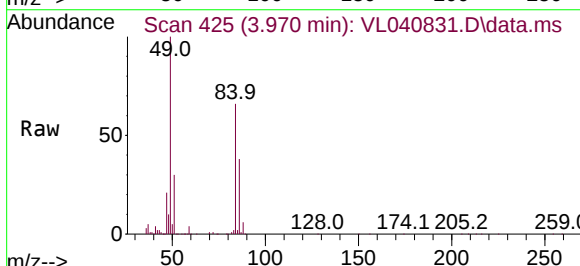
Ion Ratio Lower Upper

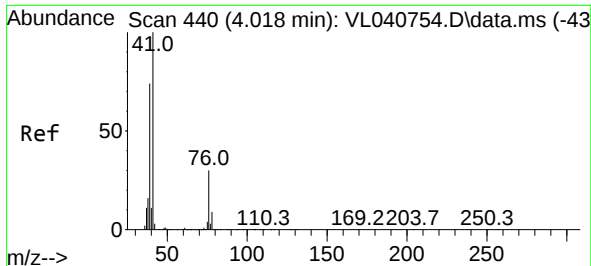
84 100

49 152.3 125.6 188.4

51 44.7 38.9 58.3

86 57.3 50.6 76.0

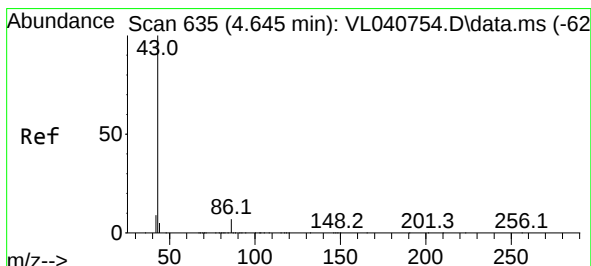
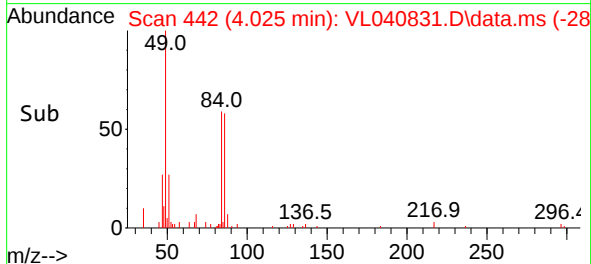
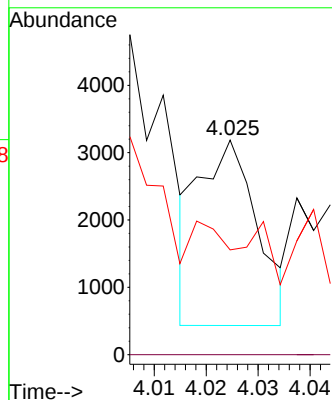
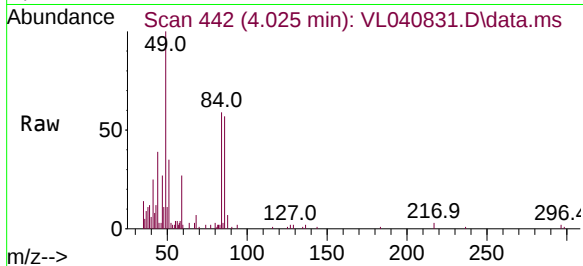




#21
 Allyl Chloride
 Concen: 0.032 ppbv
 RT: 4.025 min Scan# 41
 Delta R.T. 0.003 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

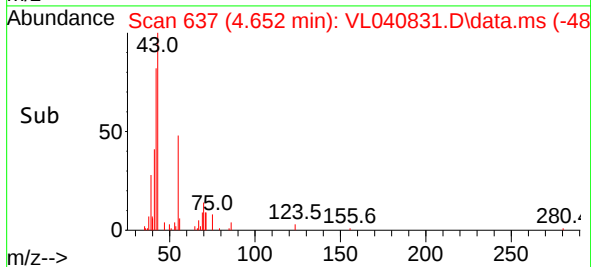
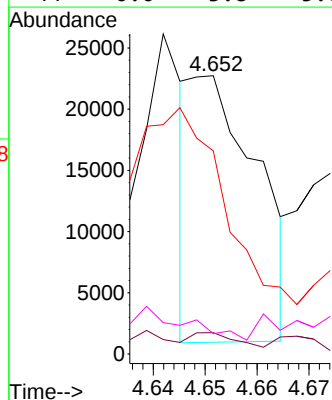
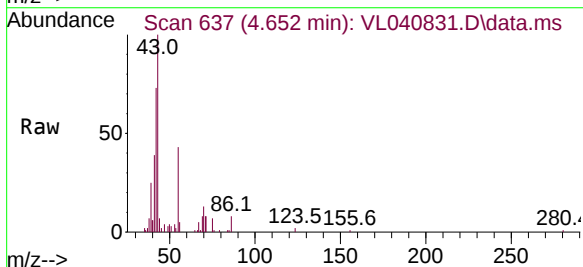
Instrument :
 MSVOA_L
 ClientSampleId :
 NT-OA-4

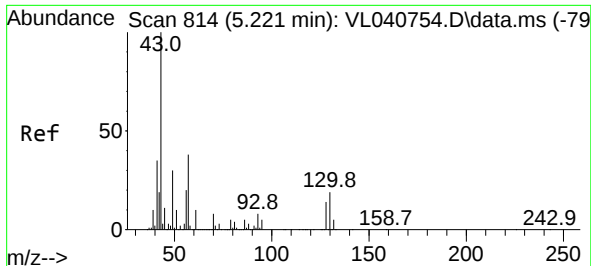
Tgt Ion: 41 Resp: 2159
 Ion Ratio Lower Upper
 41 100
 76 4.7 24.1 36.1#
 39 0.0 63.8 95.6#



#23
 Vinyl Acetate
 Concen: 0.148 ppbv
 RT: 4.652 min Scan# 637
 Delta R.T. 0.003 min
 Lab File: VL040831.D
 Acq: 9 Nov 2023 11:19

Tgt Ion: 43 Resp: 19403
 Ion Ratio Lower Upper
 43 100
 86 8.3 4.9 7.3#
 42 116.1 7.8 11.6#
 44 0.0 3.8 5.6#

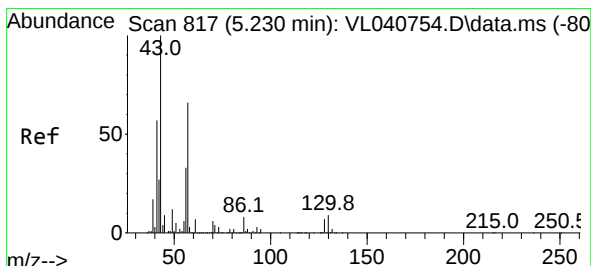
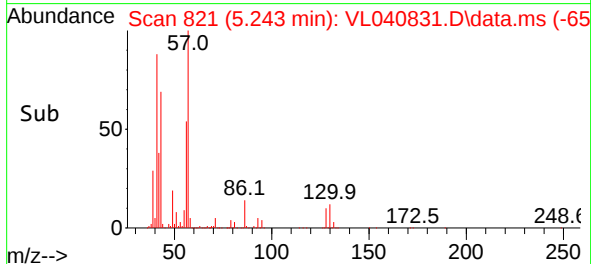
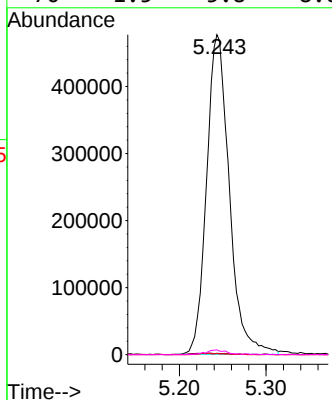
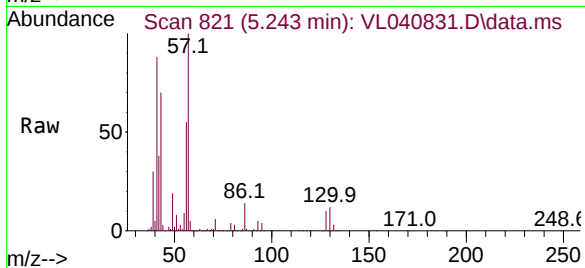




#25
Ethyl Acetate
Concen: 3.869 ppbv
RT: 5.243 min Scan# 814
Delta R.T. 0.023 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

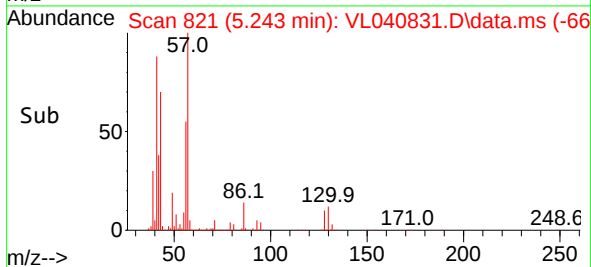
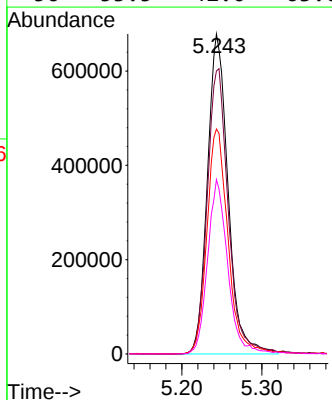
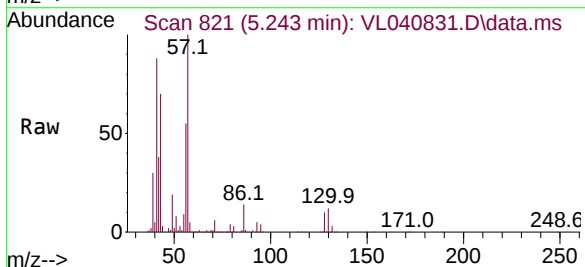
Instrument :
MSVOA_L
ClientSampleId :
NT-OA-4

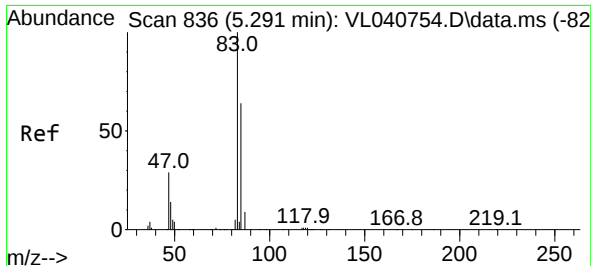
Tgt Ion: 43 Resp: 870153
Ion Ratio Lower Upper
43 100
45 0.9 8.2 12.4#
61 0.4 8.2 12.2#
70 1.5 5.8 8.6#



#26
Hexane
Concen: 11.863 ppbv
RT: 5.243 min Scan# 821
Delta R.T. 0.016 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

Tgt Ion: 57 Resp: 1219553
Ion Ratio Lower Upper
57 100
41 91.5 71.4 107.2
43 72.4 182.3 273.5#
56 53.5 42.0 63.0





#29

Chloroform

Concen: 0.055 ppbv

RT: 5.304 min Scan# 84

Delta R.T. 0.013 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

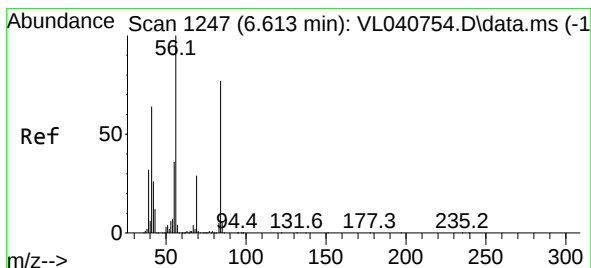
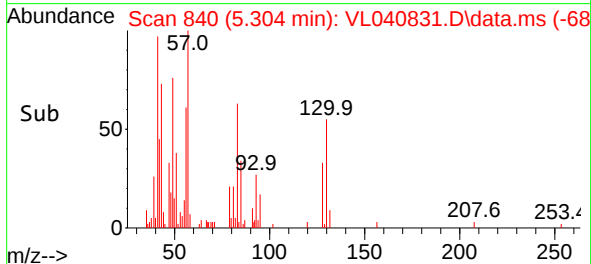
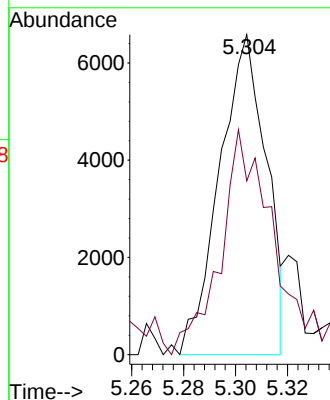
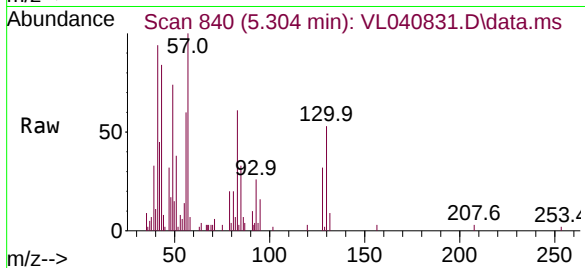
NT-OA-4

Tgt Ion: 83 Resp: 8234

Ion Ratio Lower Upper

83 100

85 47.4 51.3 76.9#



#30

Cyclohexane

Concen: 0.076 ppbv

RT: 6.632 min Scan# 1253

Delta R.T. 0.023 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

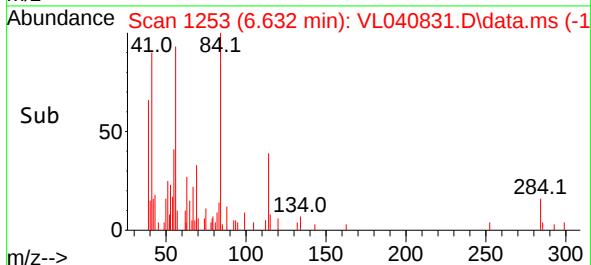
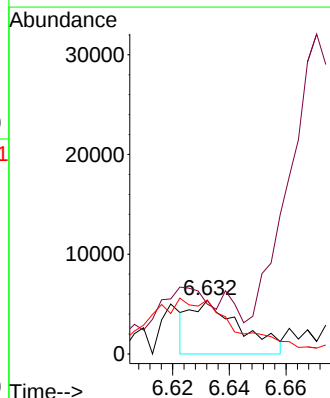
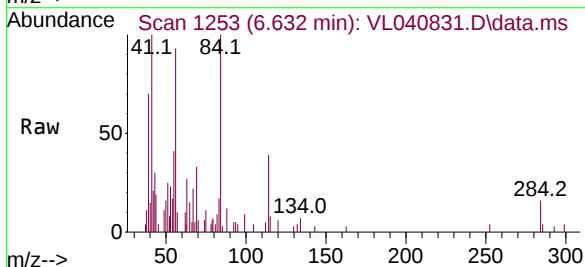
Tgt Ion: 84 Resp: 6622

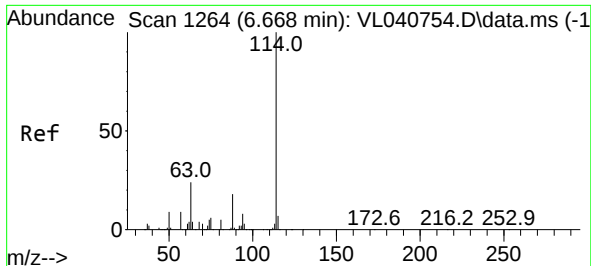
Ion Ratio Lower Upper

84 100

56 0.0 110.3 165.5#

41 0.0 67.4 101.2#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.677 min Scan# 1

Delta R.T. 0.013 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

NT-OA-4

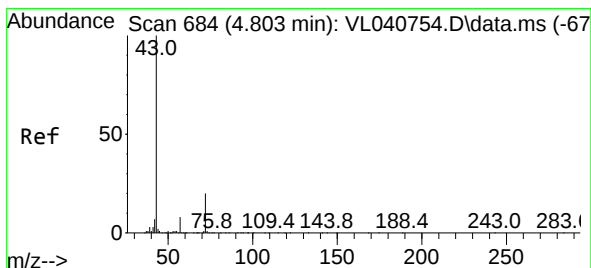
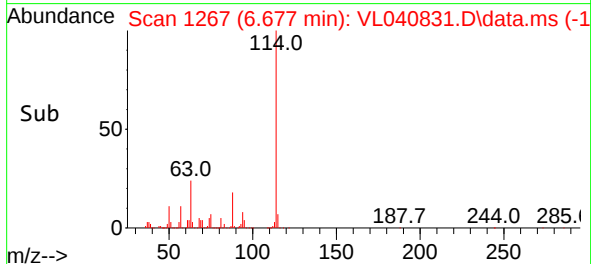
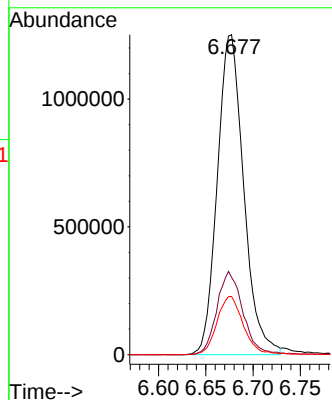
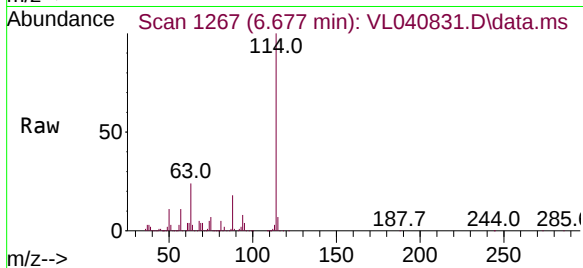
Tgt Ion:114 Resp: 2429032

Ion Ratio Lower Upper

114 100

63 26.0 19.8 29.6

88 18.4 14.2 21.2



#34

2-Butanone

Concen: 0.738 ppbv

RT: 4.822 min Scan# 690

Delta R.T. 0.016 min

Lab File: VL040831.D

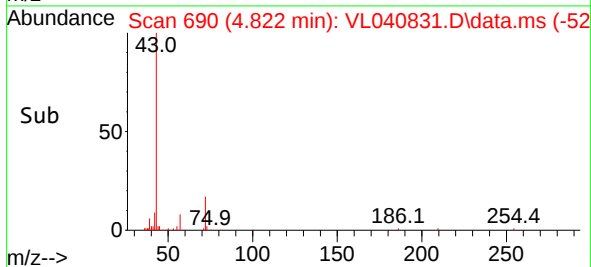
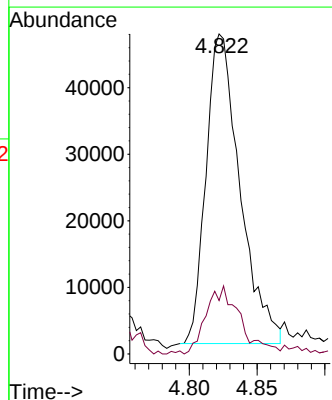
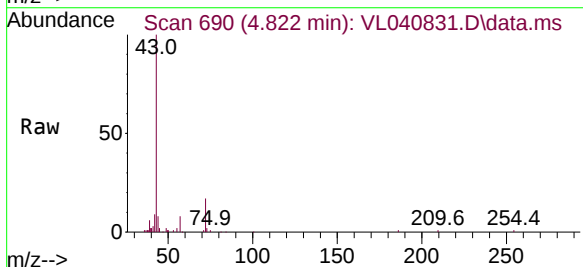
Acq: 9 Nov 2023 11:19

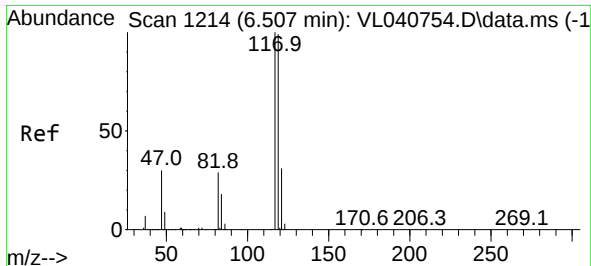
Tgt Ion: 43 Resp: 81095

Ion Ratio Lower Upper

43 100

72 24.4 16.8 25.2

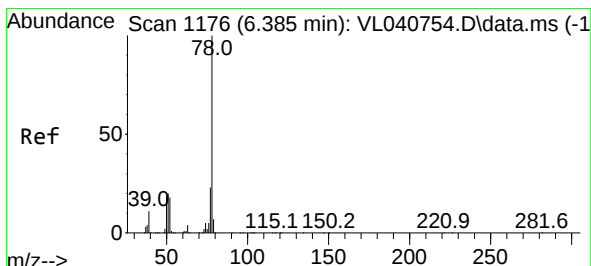
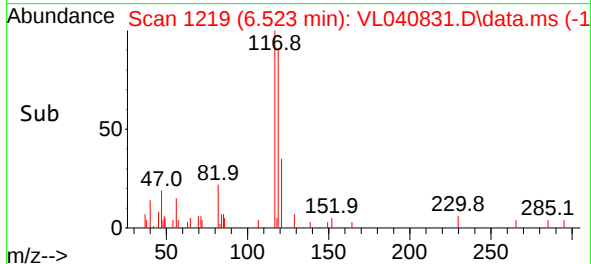
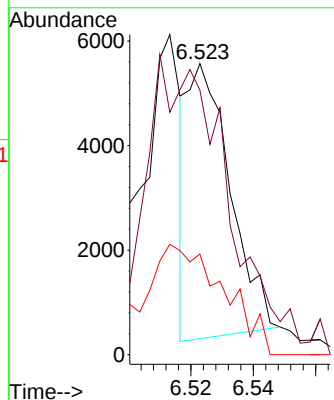
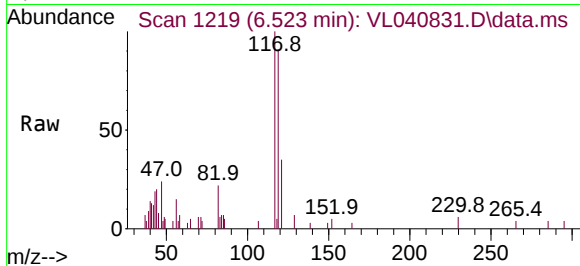




#35
Carbon Tetrachloride
Concen: 0.037 ppbv
RT: 6.523 min Scan# 117
Delta R.T. 0.016 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

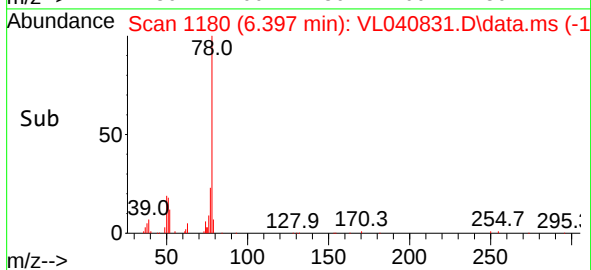
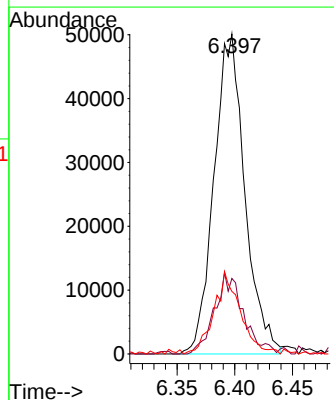
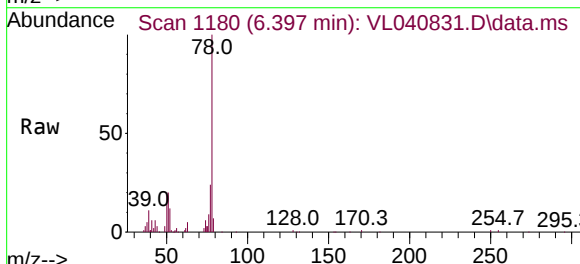
Instrument :
MSVOA_L
ClientSampleId :
NT-OA-4

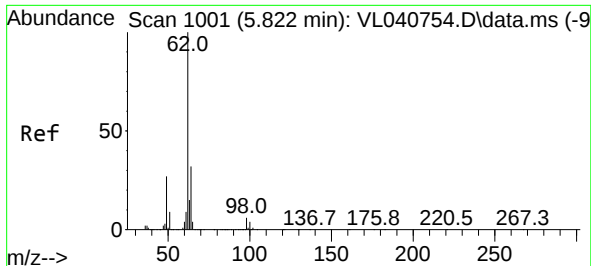
Tgt Ion:117 Resp: 4980
Ion Ratio Lower Upper
117 100
119 88.0 79.4 119.0
121 38.2 25.0 37.4#



#36
Benzene
Concen: 0.498 ppbv
RT: 6.397 min Scan# 1180
Delta R.T. 0.016 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

Tgt Ion: 78 Resp: 92973
Ion Ratio Lower Upper
78 100
77 23.6 18.4 27.6
50 19.5 15.0 22.4





#37

1,2-Dichloroethane

Concen: 0.032 ppbv

RT: 5.828 min Scan# 1

Delta R.T. 0.007 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

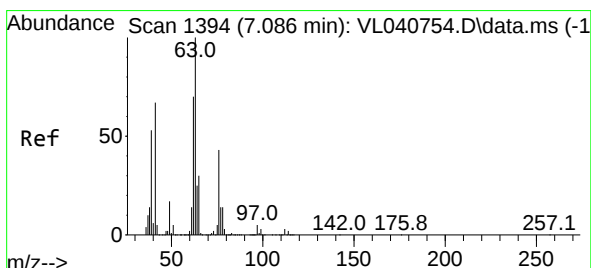
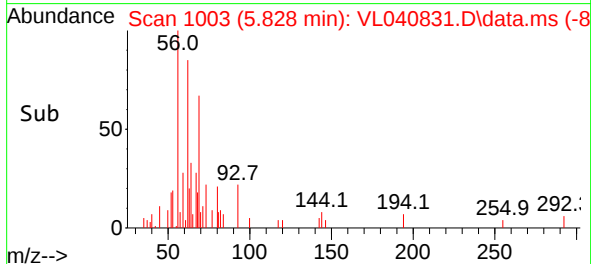
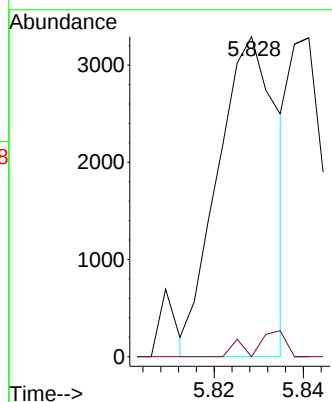
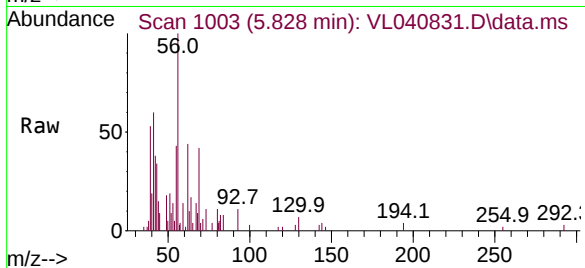
NT-OA-4

Tgt Ion: 62 Resp: 3032

Ion Ratio Lower Upper

62 100

98 0.0 5.4 8.0#



#39

1,2-Dichloropropane

Concen: 8.450 ppbv

RT: 6.674 min Scan# 1266

Delta R.T. -0.408 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

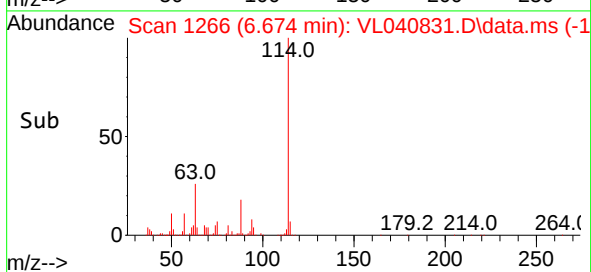
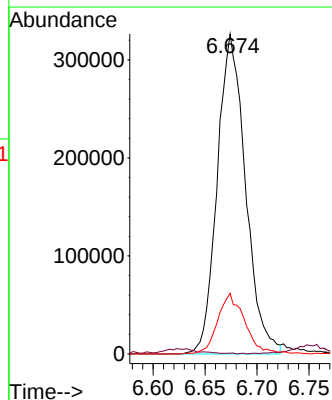
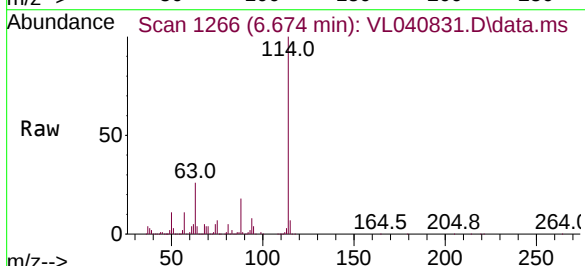
Tgt Ion: 63 Resp: 616801

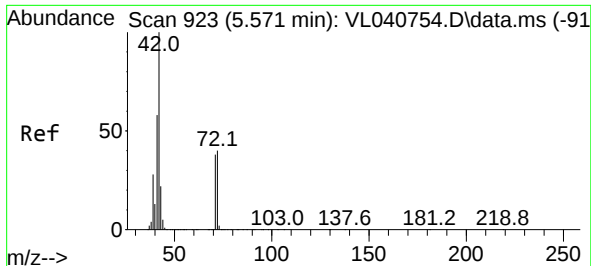
Ion Ratio Lower Upper

63 100

41 0.0 53.7 80.5#

62 18.9 55.7 83.5#

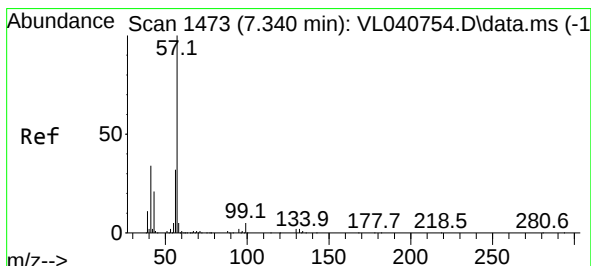
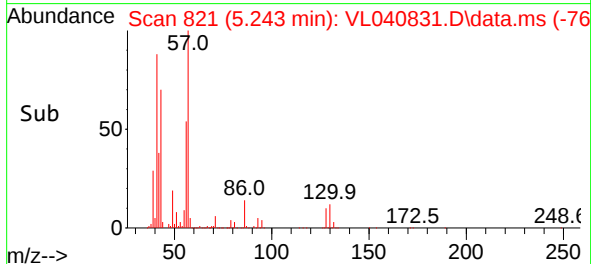
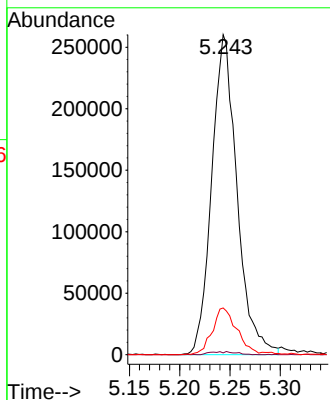
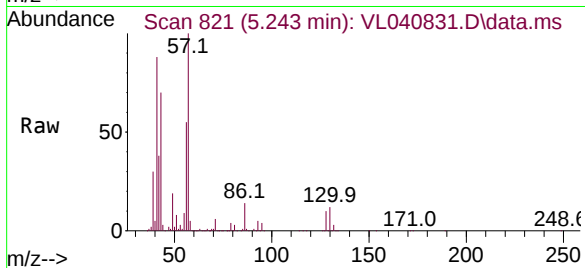




#41
Tetrahydrofuran
Concen: 5.979 ppbv
RT: 5.243 min Scan# 81
Delta R.T. -0.328 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

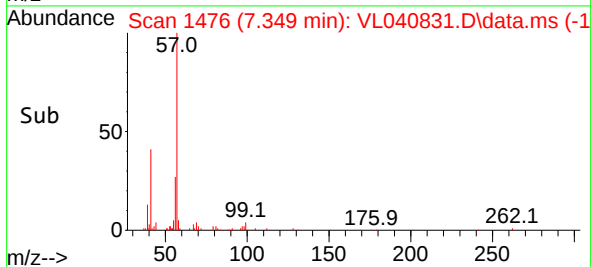
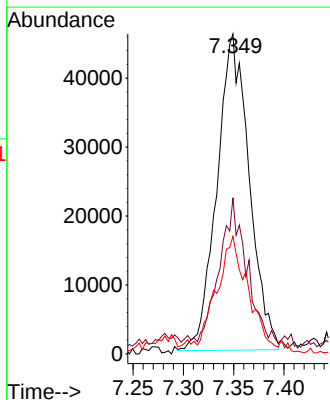
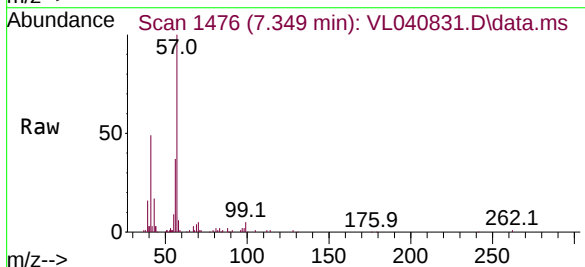
Instrument :
MSVOA_L
ClientSampleId :
NT-OA-4

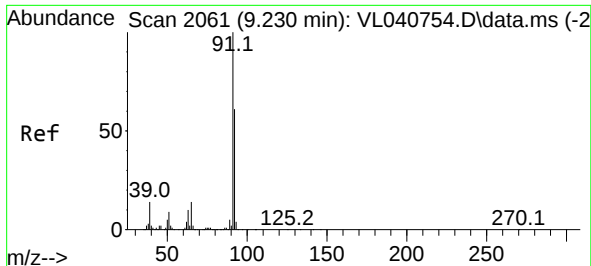
Tgt Ion: 42 Resp: 455269
Ion Ratio Lower Upper
42 100
72 1.0 31.1 46.7#
71 14.8 29.7 44.5#



#44
2,2,4-Trimethylpentane
Concen: 0.324 ppbv
RT: 7.349 min Scan# 1476
Delta R.T. 0.016 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

Tgt Ion: 57 Resp: 102305
Ion Ratio Lower Upper
57 100
41 48.3 27.4 41.0#
56 39.3 25.0 37.6#

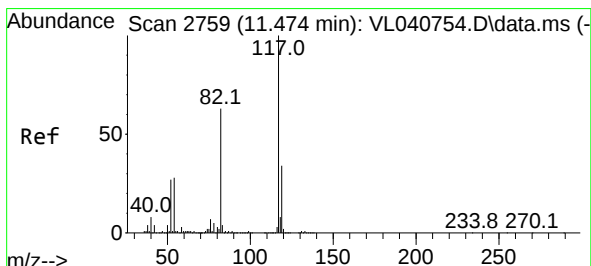
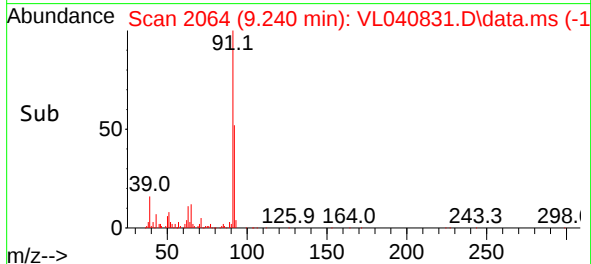
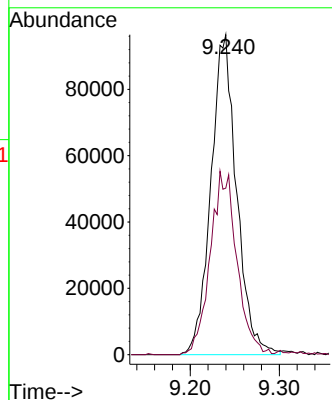
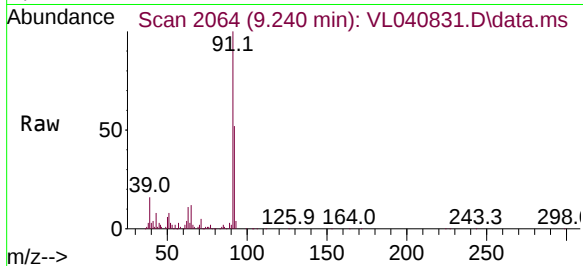




#53
Toluene
Concen: 0.868 ppbv
RT: 9.240 min Scan# 2061
Delta R.T. 0.019 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

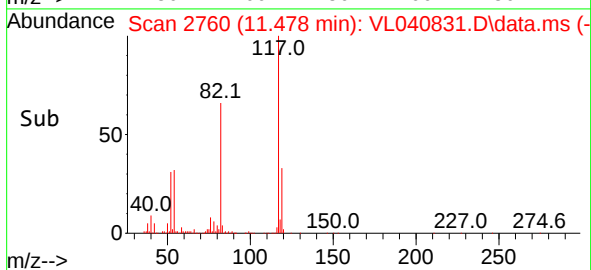
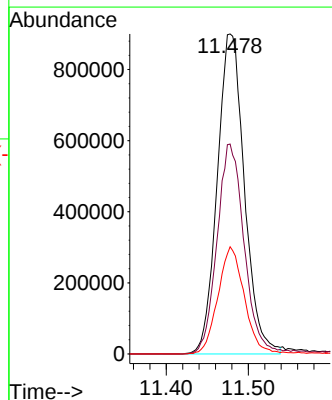
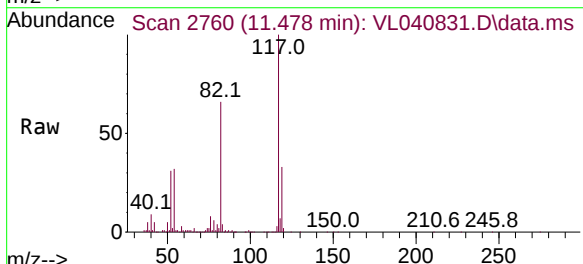
Instrument :
MSVOA_1
ClientSampleId :
NT-OA-4

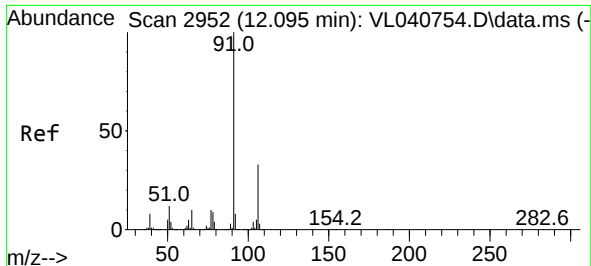
Tgt Ion: 91 Resp: 193088
Ion Ratio Lower Upper
91 100
92 60.3 50.2 75.2



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.478 min Scan# 2760
Delta R.T. 0.016 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

Tgt Ion: 117 Resp: 2072140
Ion Ratio Lower Upper
117 100
82 67.0 46.6 70.0
119 33.2 26.0 39.0

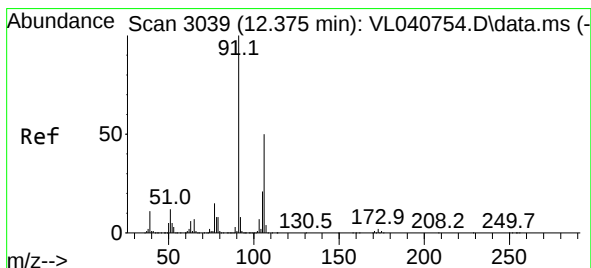
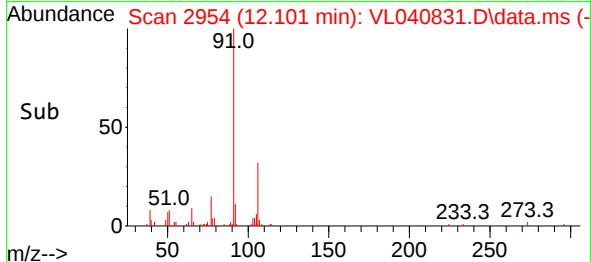
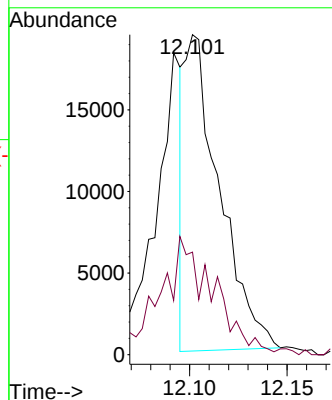
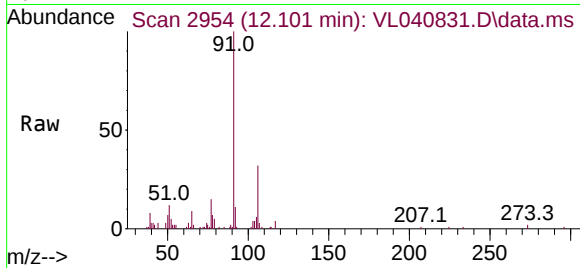




#58
Ethyl Benzene
Concen: 0.092 ppbv
RT: 12.101 min Scan# 2954
Delta R.T. 0.019 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

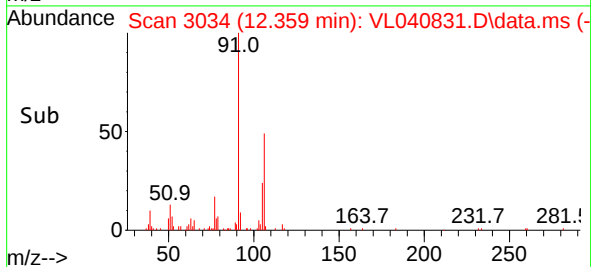
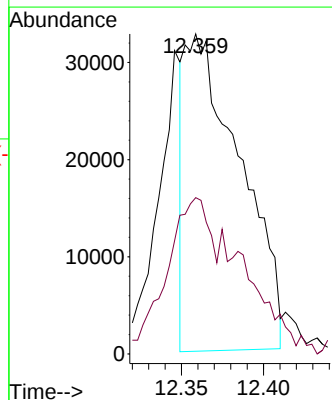
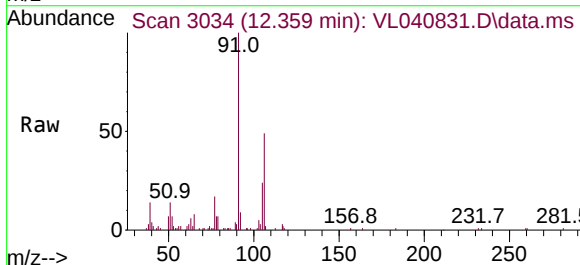
Instrument :
MSVOA_L
ClientSampleId :
NT-OA-4

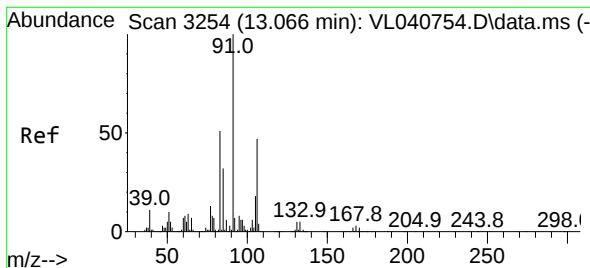
Tgt Ion: 91 Resp: 23943
Ion Ratio Lower Upper
91 100
106 30.9 26.7 40.1



#59
m/p-Xylene
Concen: 0.358 ppbv
RT: 12.359 min Scan# 3034
Delta R.T. -0.010 min
Lab File: VL040831.D
Acq: 9 Nov 2023 11:19

Tgt Ion: 91 Resp: 76792
Ion Ratio Lower Upper
91 100
106 67.4 37.7 56.5#





#60

o-Xylene

Concen: 0.065 ppbv

RT: 13.072 min Scan# 31

Delta R.T. 0.019 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

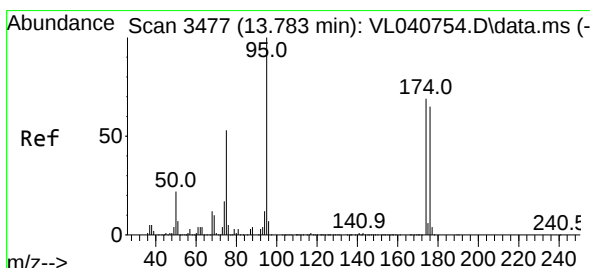
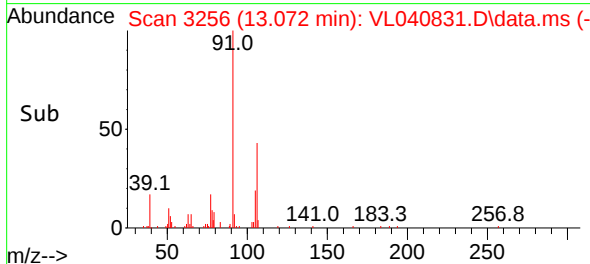
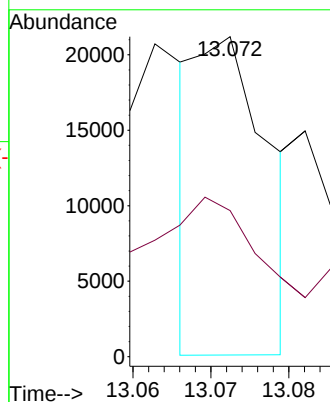
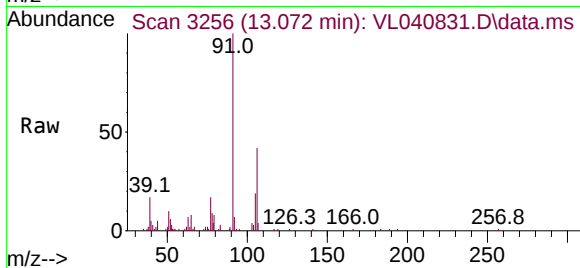
NT-OA-4

Tgt Ion: 91 Resp: 13363

Ion Ratio Lower Upper

91 100

106 154.3 23.5 70.5#



#68

1-Bromo-4-Fluorobenzene

Concen: 9.924 ppbv

RT: 13.786 min Scan# 3478

Delta R.T. 0.016 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

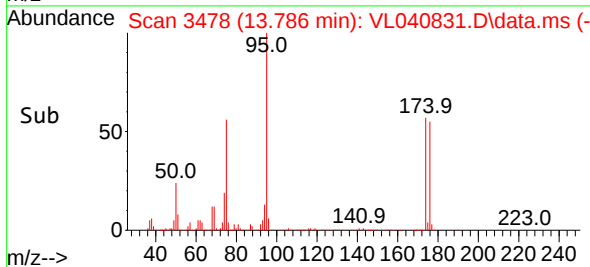
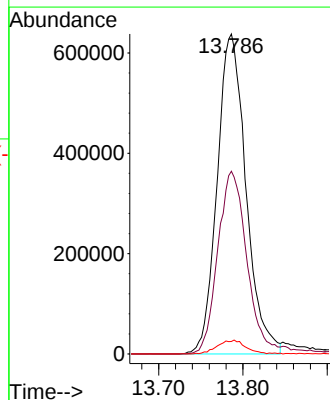
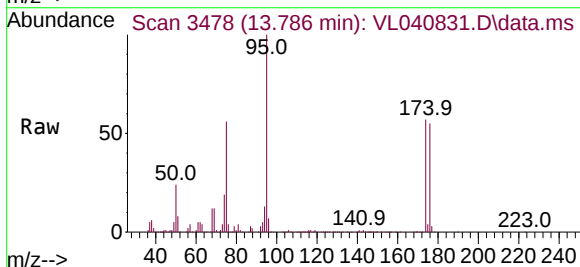
Tgt Ion: 95 Resp: 1513104

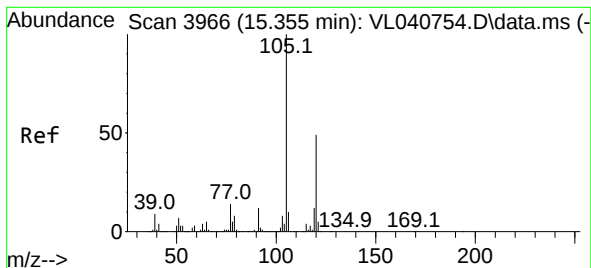
Ion Ratio Lower Upper

95 100

174 59.8 54.7 82.1

175 4.3 4.2 6.4





#73

1,3,5-Trimethylbenzene

Concen: 0.036 ppbv

RT: 15.362 min Scan# 3966

Delta R.T. 0.019 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Instrument :

MSVOA_L

ClientSampleId :

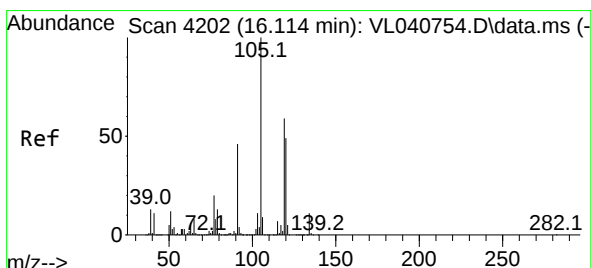
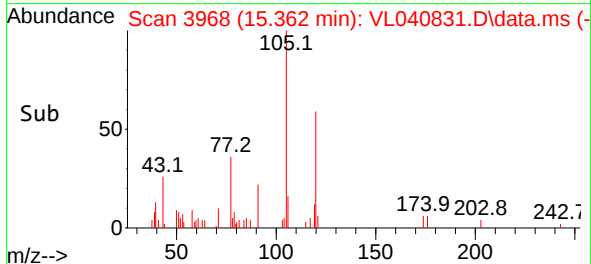
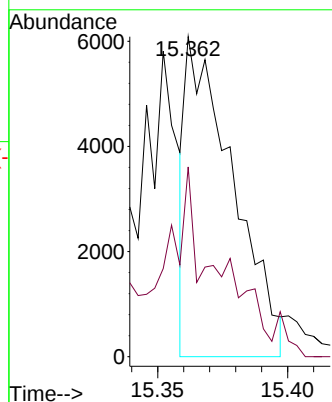
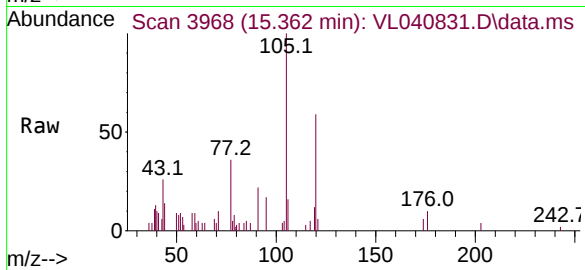
NT-OA-4

Tgt Ion:105 Resp: 7663

Ion Ratio Lower Upper

105 100

120 58.1 39.4 59.2



#74

1,2,4-Trimethylbenzene

Concen: 0.066 ppbv

RT: 16.127 min Scan# 4206

Delta R.T. 0.026 min

Lab File: VL040831.D

Acq: 9 Nov 2023 11:19

Tgt Ion:105 Resp: 15232

Ion Ratio Lower Upper

105 100

120 34.6 39.4 59.2#

91 8.9 38.6 58.0#

77 16.8 16.6 25.0

