

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL122123\
 Data File : VL040945.D
 Acq On : 22 Dec 2023 00:49
 Operator : SY/MD
 Sample : 05848-03 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV4

Quant Time: Dec 22 03:41:40 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)

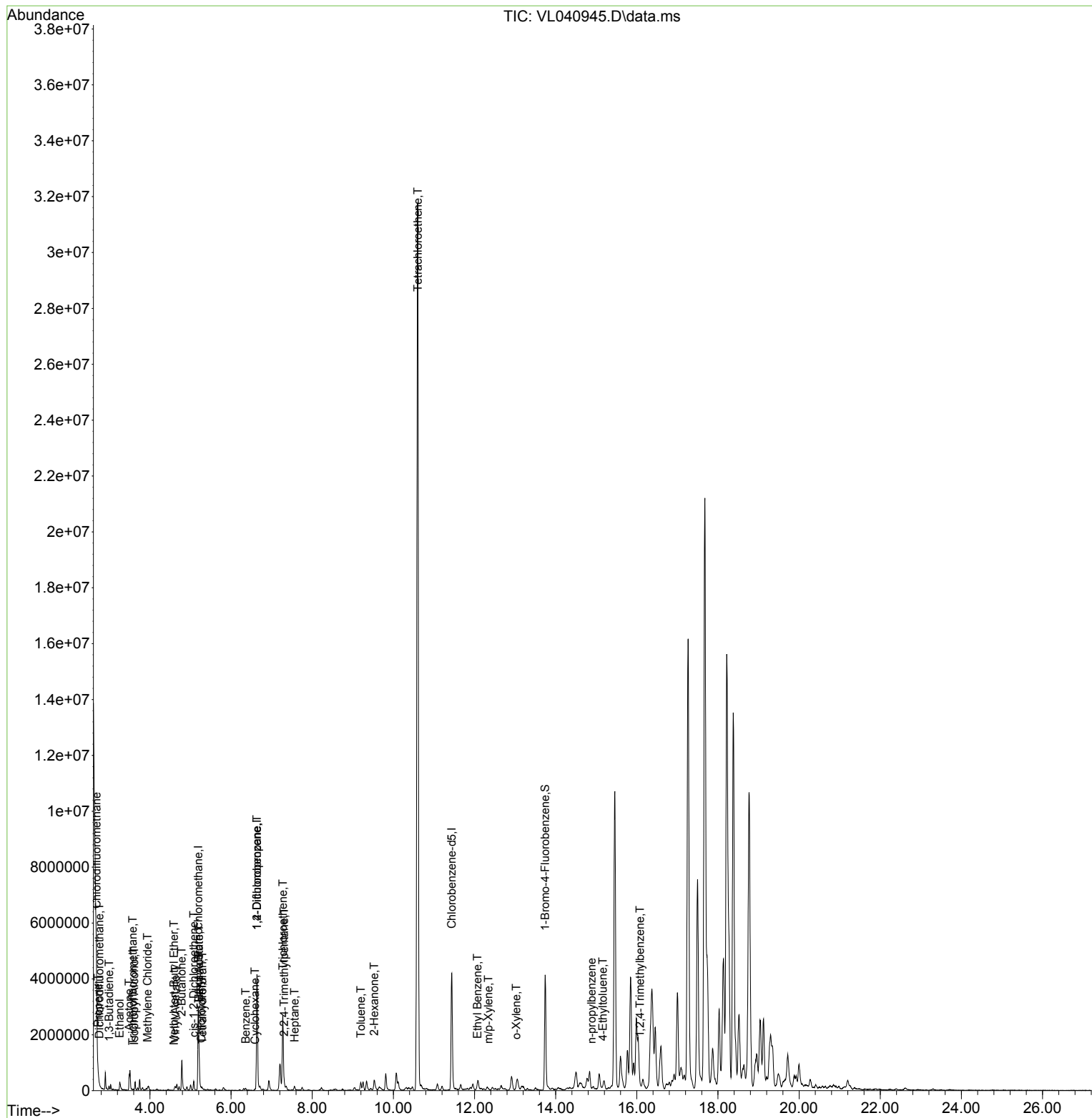
Internal Standards						
1) Bromochloromethane	5.192	49	1210173	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	6.639	114	3179762	10.000	ppbv	0.00
55) Chlorobenzene-d5	11.439	117	2839866	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.741	95	2122941	10.149	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.500%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.755	85	26418	0.115	ppbv	93
3) Chlorodifluoromethane	2.681	51	445626	2.447	ppbv #	60
9) Propene	2.726	41	21084	0.351	ppbv #	15
10) Heptane	7.565	43	29937	0.200	ppbv #	7
11) Trichlorofluoromethane	3.575	101	6515	0.036	ppbv	90
13) Ethanol	3.256	45	326677	21.550	ppbv	99
15) Acetone	3.491	43	609315	4.198	ppbv	96
16) 1,3-Butadiene	2.993	39	28585	0.457	ppbv #	27
19) Isopropyl Alcohol	3.613	45	3531	0.047	ppbv #	95
20) Methylene Chloride	3.944	84	36405	0.704	ppbv	82
23) Vinyl Acetate	4.629	43	155768	0.973	ppbv #	84
25) Ethyl Acetate	5.211	43	283868	1.129	ppbv #	86
26) Hexane	5.211	57	327991	2.943	ppbv #	41
28) Methyl tert-Butyl Ether	4.594	73	4876	0.047	ppbv #	53
29) Chloroform	5.269	83	21915	0.117	ppbv	86
30) Cyclohexane	6.594	84	12735	0.137	ppbv	92
31) cis-1,2-Dichloroethene	5.079	61	165860	1.449	ppbv	97
34) 2-Butanone	4.784	43	1275257	7.581	ppbv	100
36) Benzene	6.362	78	55048	0.221	ppbv #	92
38) Trichloroethene	7.275	130	799817	8.567	ppbv	98
39) 1,2-Dichloropropane	6.639	63	773399	7.918	ppbv #	24
41) Tetrahydrofuran	5.295	42	3529	0.034	ppbv #	51
44) 2,2,4-Trimethylpentane	7.311	57	129110	0.306	ppbv #	22
51) 2-Hexanone	9.529	43	345591	1.885	ppbv	96
52) Tetrachloroethene	10.600	164	8987368	107.331	ppbv	92
53) Toluene	9.195	91	191025	0.693	ppbv	100
58) Ethyl Benzene	12.069	91	13010	0.036	ppbv	99
59) m/p-Xylene	12.343	91	13851	0.045	ppbv #	100
60) o-Xylene	13.028	91	44091	0.151	ppbv	97
64) n-propylbenzene	14.886	120	3376	0.031	ppbv #	1
72) 4-Ethyltoluene	15.163	105	22084	0.069	ppbv #	81
74) 1,2,4-Trimethylbenzene	16.079	105	32132	0.104	ppbv #	66

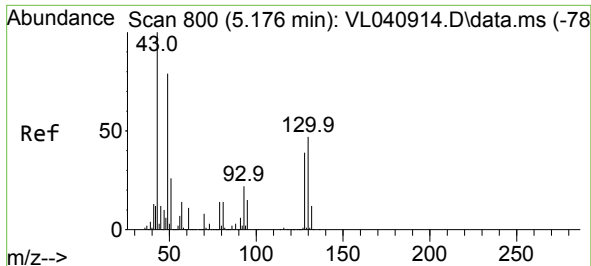
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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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 Dec 21 07:32:42 2023
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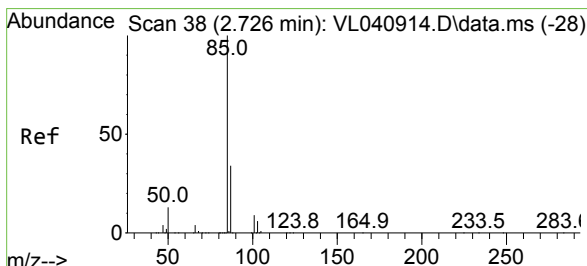
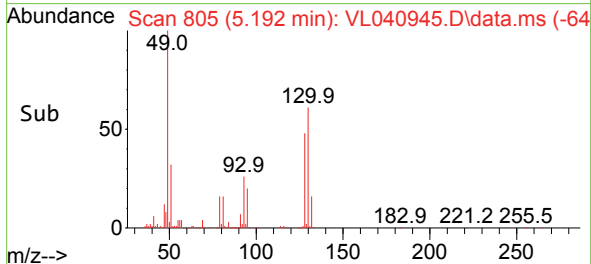
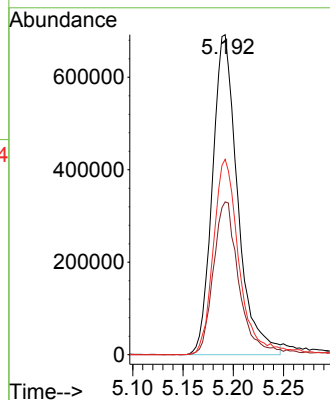
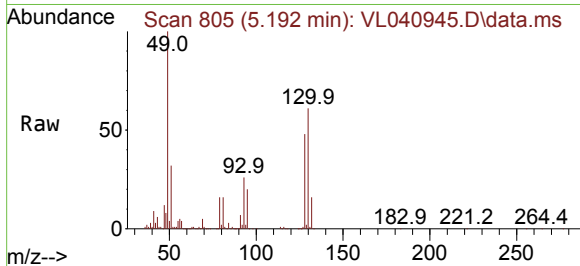




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.192 min Scan# 80
Delta R.T. 0.016 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

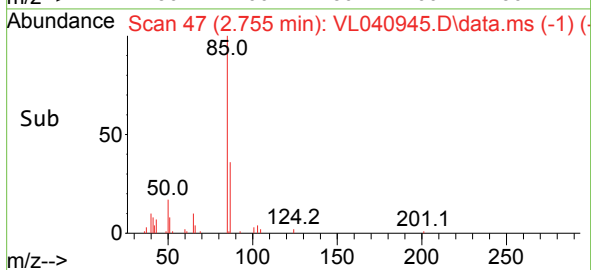
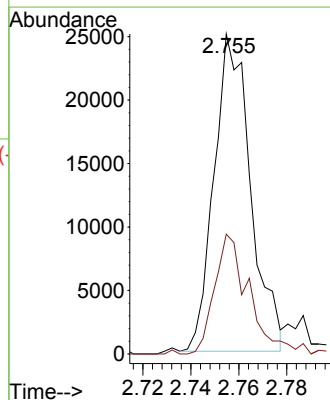
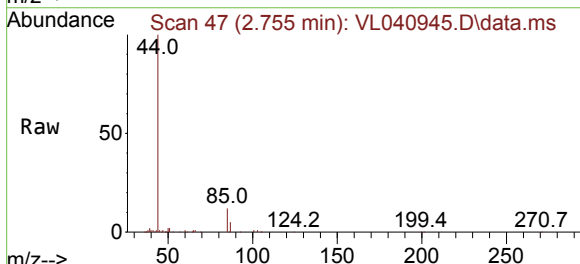
Instrument :
MSVOA_L
ClientSampleId :
SV4

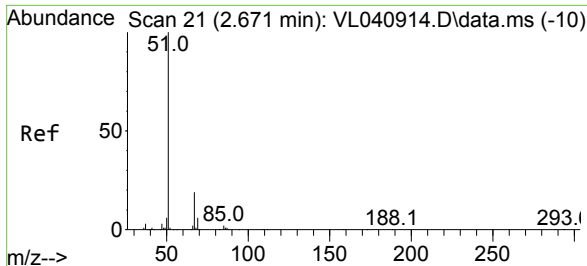
Tgt Ion: 49 Resp: 1210173
Ion Ratio Lower Upper
49 100
128 50.1 23.8 71.2
130 63.8 30.1 90.5



#2
Dichlorodifluoromethane
Concen: 0.115 ppbv
RT: 2.755 min Scan# 47
Delta R.T. 0.029 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 85 Resp: 26418
Ion Ratio Lower Upper
85 100
87 37.8 27.0 40.6

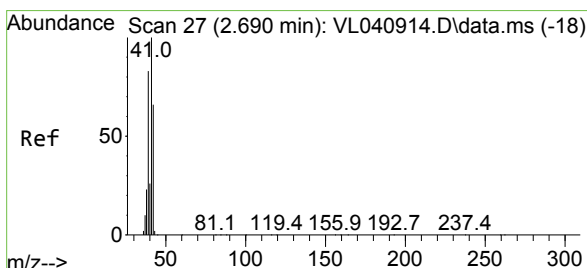
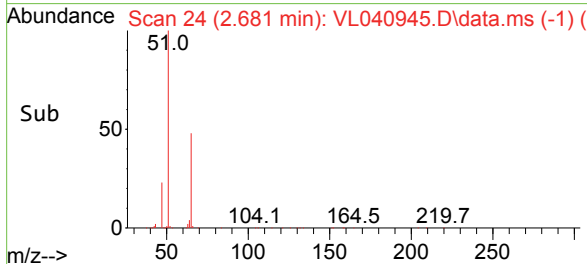
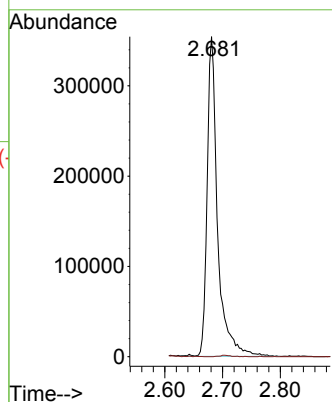
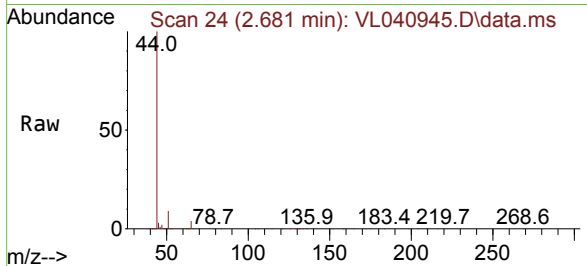




#3
Chlorodifluoromethane
Concen: 2.447 ppbv
RT: 2.681 min Scan# 24
Delta R.T. 0.010 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

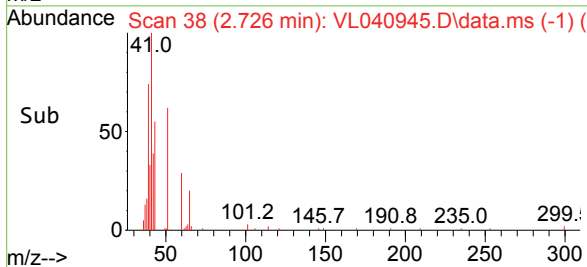
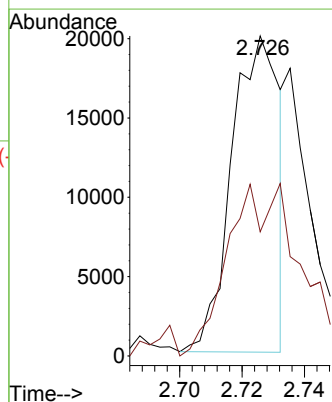
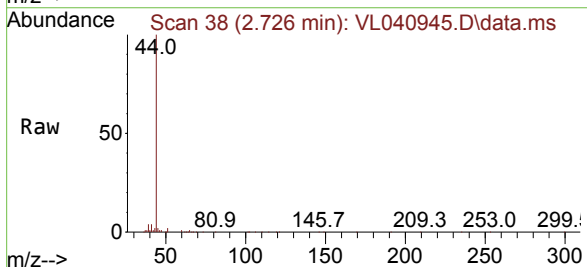
Instrument :
MSVOA_L
ClientSampleId :
SV4

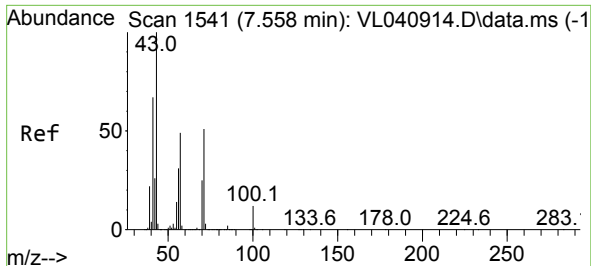
Tgt Ion: 51 Resp: 445626
Ion Ratio Lower Upper
51 100
67 0.5 14.7 22.1#



#9
Propene
Concen: 0.351 ppbv
RT: 2.726 min Scan# 38
Delta R.T. 0.036 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 41 Resp: 21084
Ion Ratio Lower Upper
41 100
42 0.0 55.8 83.6#

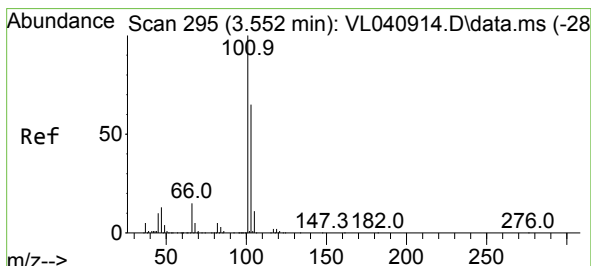
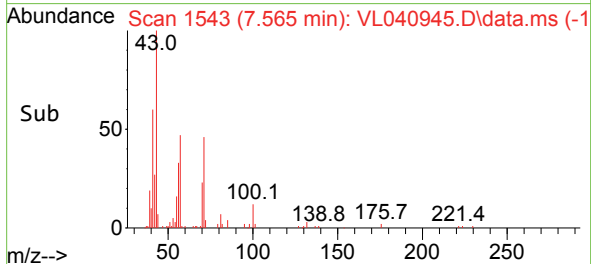
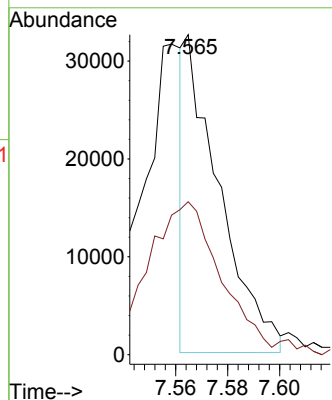
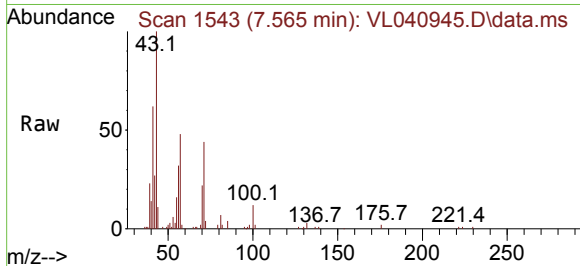




#10
Heptane
Concen: 0.200 ppbv
RT: 7.565 min Scan# 11
Delta R.T. 0.007 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

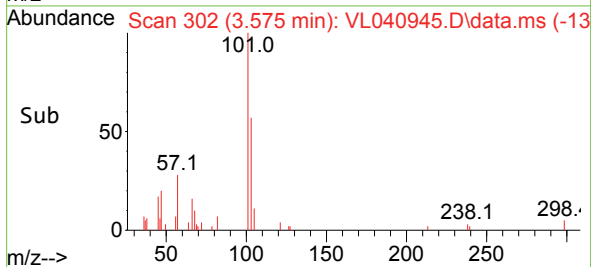
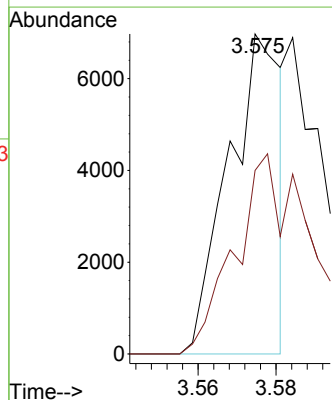
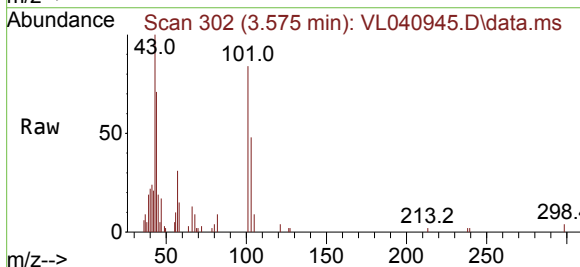
Instrument :
MSVOA_L
ClientSampleId :
SV4

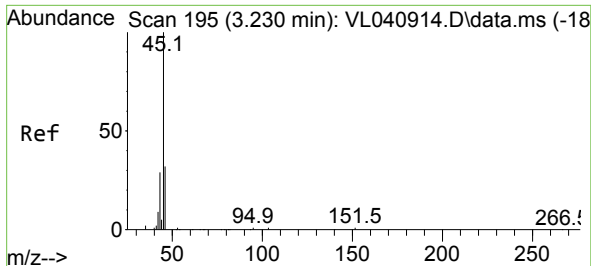
Tgt Ion: 43 Resp: 29937
Ion Ratio Lower Upper
43 100
57 112.4 39.3 58.9#



#11
Trichlorofluoromethane
Concen: 0.036 ppbv
RT: 3.575 min Scan# 302
Delta R.T. 0.023 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion:101 Resp: 6515
Ion Ratio Lower Upper
101 100
103 57.3 51.9 77.9

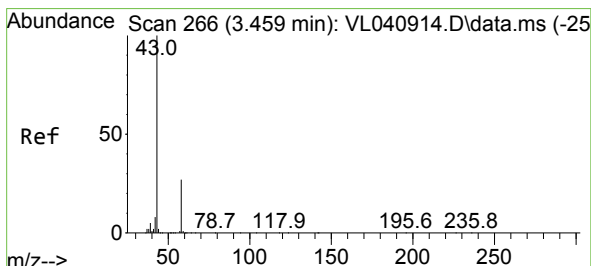
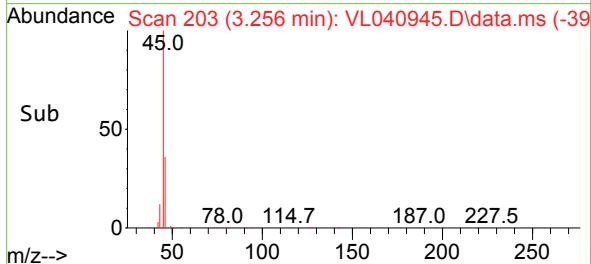
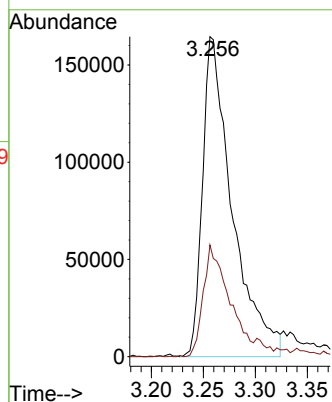
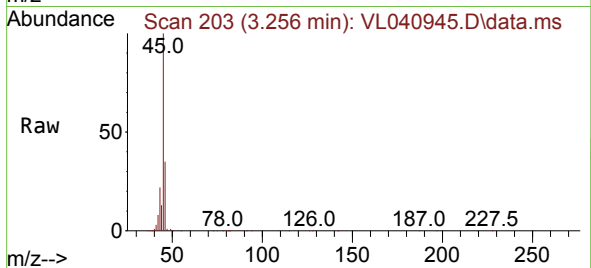




#13
 Ethanol
 Concen: 21.550 ppbv
 RT: 3.256 min Scan# 203
 Delta R.T. 0.026 min
 Lab File: VL040945.D
 Acq: 22 Dec 2023 00:49

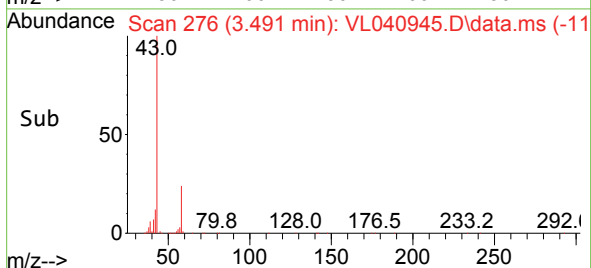
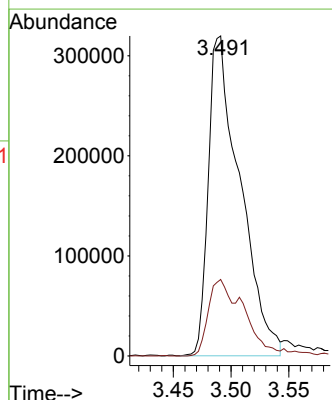
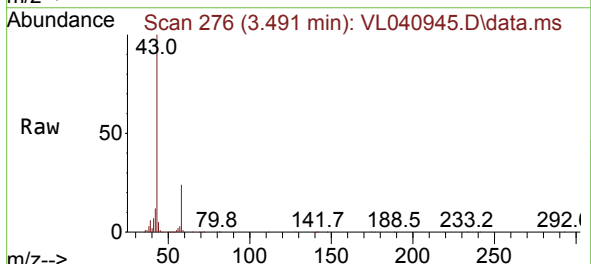
Instrument :
 MSVOA_L
 ClientSampleId :
 SV4

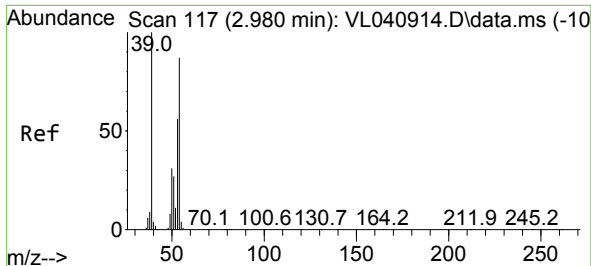
Tgt Ion: 45 Resp: 326677
 Ion Ratio Lower Upper
 45 100
 46 36.8 15.0 60.0



#15
 Acetone
 Concen: 4.198 ppbv
 RT: 3.491 min Scan# 276
 Delta R.T. 0.032 min
 Lab File: VL040945.D
 Acq: 22 Dec 2023 00:49

Tgt Ion: 43 Resp: 609315
 Ion Ratio Lower Upper
 43 100
 58 27.9 20.6 30.8

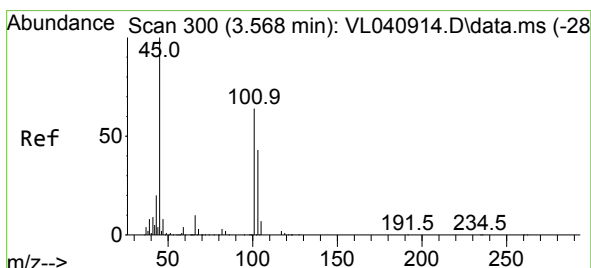
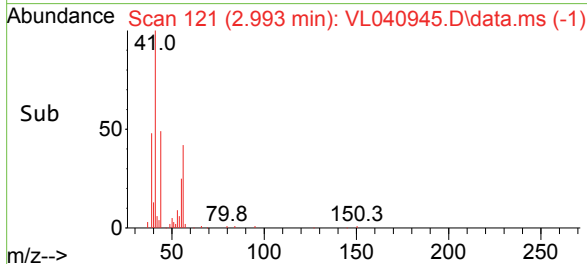
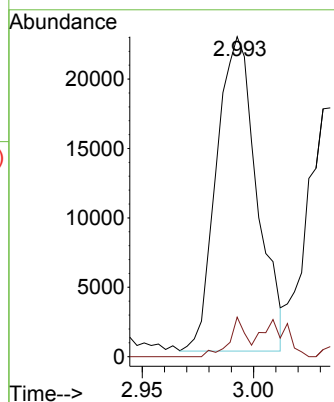
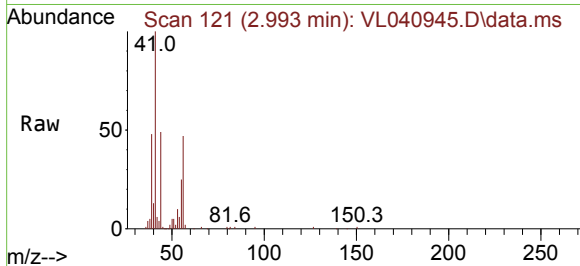




#16
1,3-Butadiene
Concen: 0.457 ppbv
RT: 2.993 min Scan# 117
Delta R.T. 0.013 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

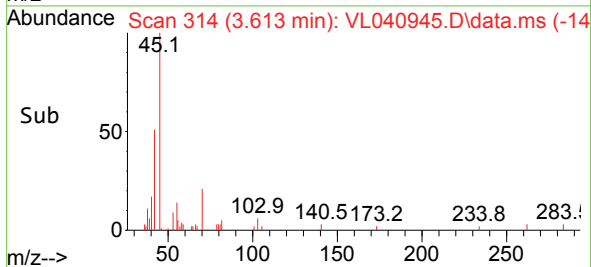
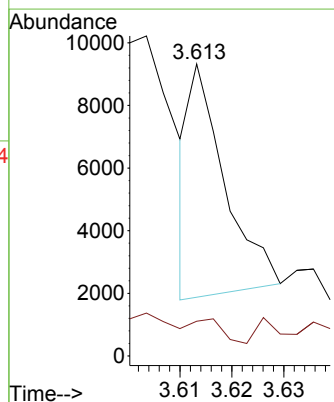
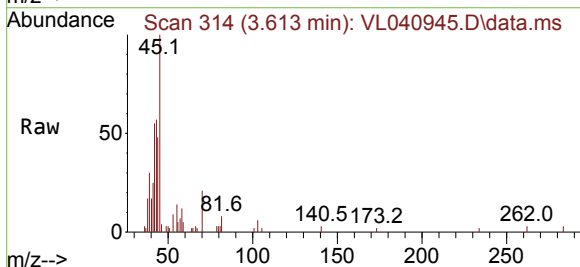
Instrument :
MSVOA_L
ClientSampleId :
SV4

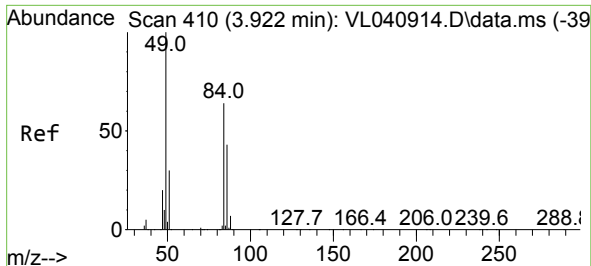
Tgt Ion: 39 Resp: 28585
Ion Ratio Lower Upper
39 100
54 15.3 63.8 95.6#



#19
Isopropyl Alcohol
Concen: 0.047 ppbv
RT: 3.613 min Scan# 314
Delta R.T. 0.045 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 45 Resp: 3531
Ion Ratio Lower Upper
45 100
58 0.0 1.5 2.3#



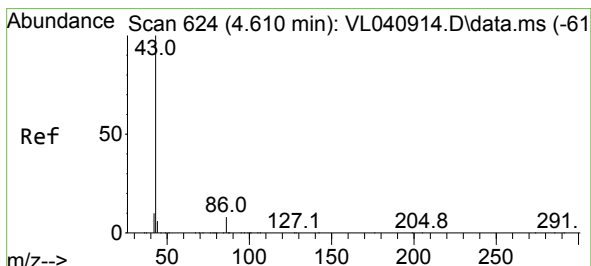
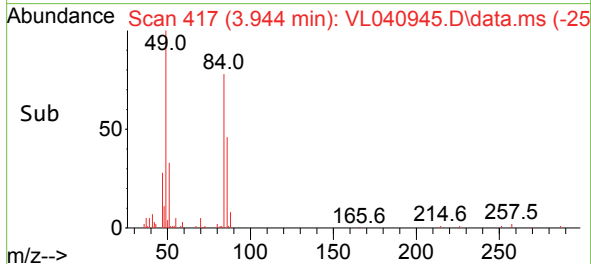
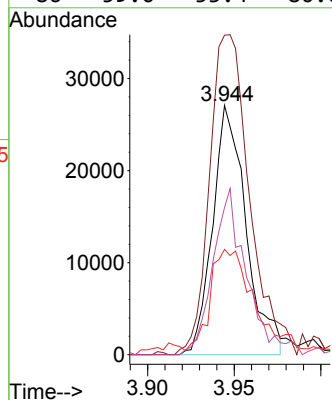
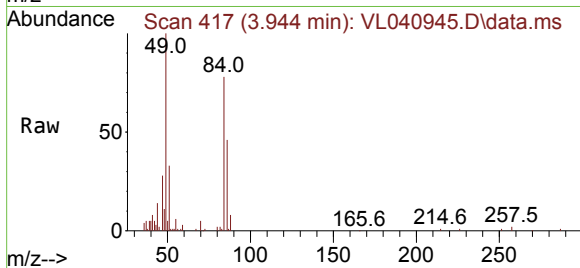


#20
Methylene Chloride
Concen: 0.704 ppbv
RT: 3.944 min Scan# 417
Delta R.T. 0.023 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Instrument :
MSVOA_L
ClientSampleId :
SV4

Tgt Ion: 84 Resp: 36405

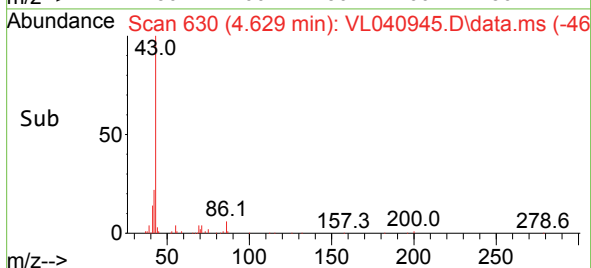
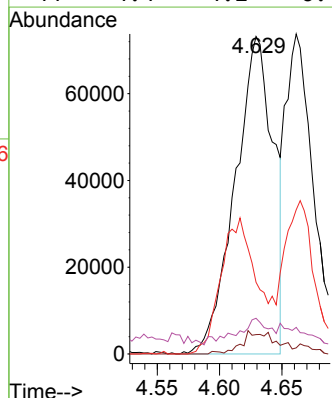
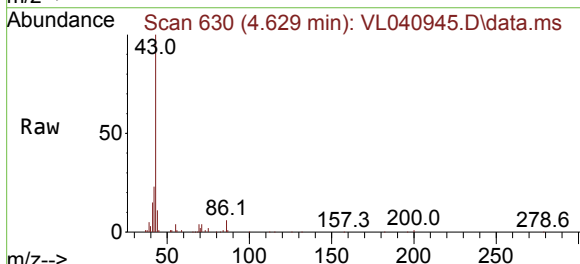
Ion	Ratio	Lower	Upper
84	100		
49	126.1	124.6	187.0
51	39.0	37.2	55.8
86	59.0	53.4	80.0

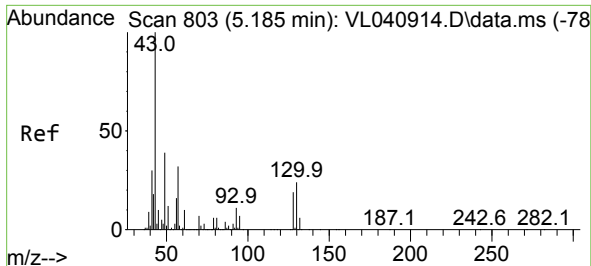


#23
Vinyl Acetate
Concen: 0.973 ppbv
RT: 4.629 min Scan# 630
Delta R.T. 0.019 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 43 Resp: 155768

Ion	Ratio	Lower	Upper
43	100		
86	7.0	5.5	8.3
42	22.6	8.4	12.6
44	4.4	4.2	6.4





#25

Ethyl Acetate

Concen: 1.129 ppbv

RT: 5.211 min Scan# 811

Delta R.T. 0.026 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

SV4

Tgt Ion: 43 Resp: 283868

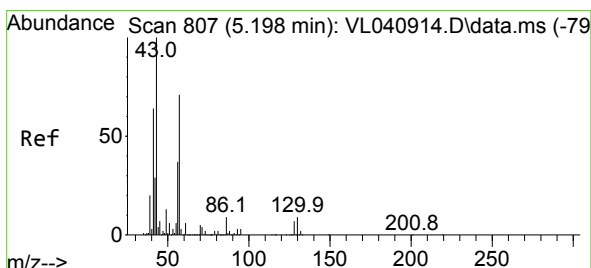
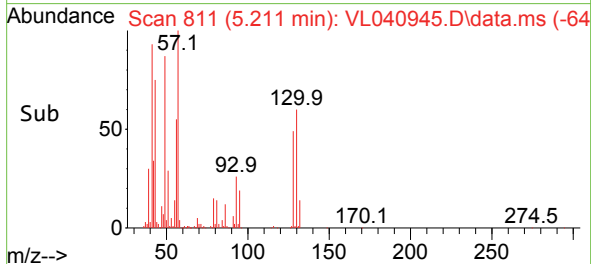
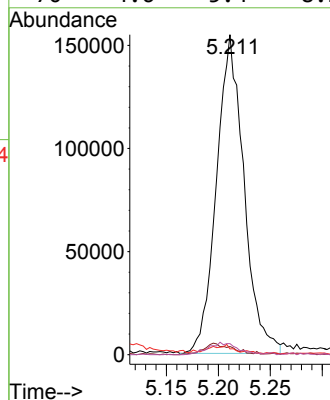
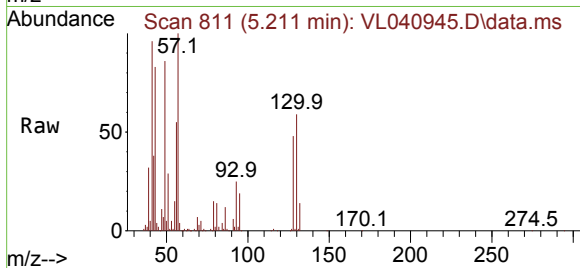
Ion Ratio Lower Upper

43 100

45 4.0 8.2 12.2#

61 3.0 7.6 11.4#

70 4.6 5.4 8.2#



#26

Hexane

Concen: 2.943 ppbv

RT: 5.211 min Scan# 811

Delta R.T. 0.013 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Tgt Ion: 57 Resp: 327991

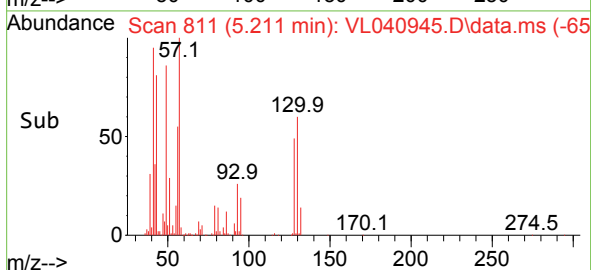
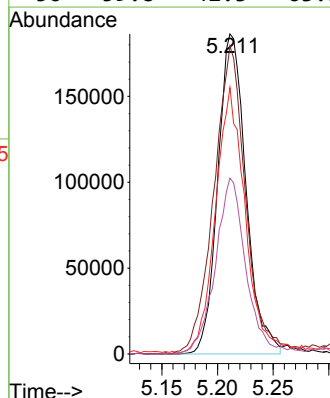
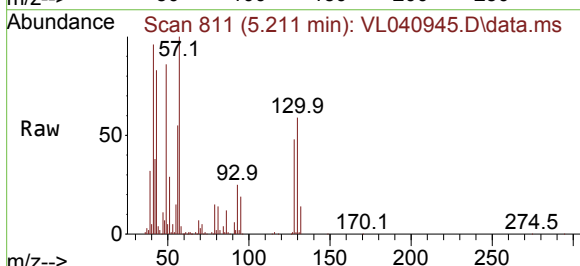
Ion Ratio Lower Upper

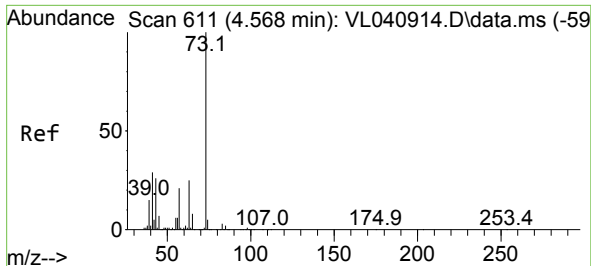
57 100

41 110.6 75.2 112.8

43 88.9 188.0 282.0#

56 59.8 42.3 63.5





#28

Methyl tert-Butyl Ether

Concen: 0.047 ppbv

RT: 4.594 min Scan# 611

Delta R.T. 0.026 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

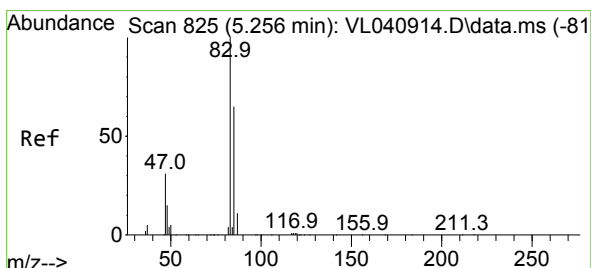
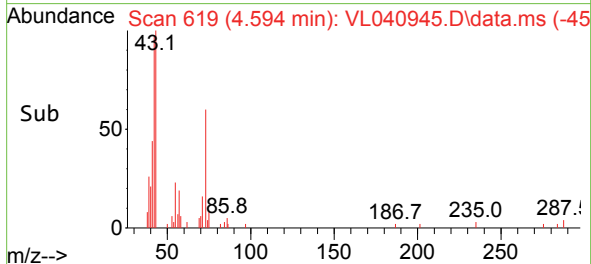
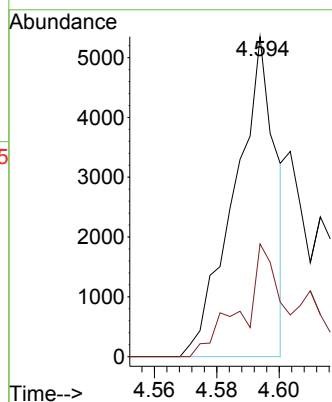
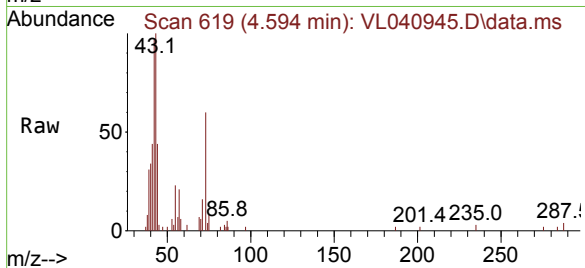
SV4

Tgt Ion: 73 Resp: 4876

Ion Ratio Lower Upper

73 100

57 0.0 18.0 27.0#



#29

Chloroform

Concen: 0.117 ppbv

RT: 5.269 min Scan# 829

Delta R.T. 0.013 min

Lab File: VL040945.D

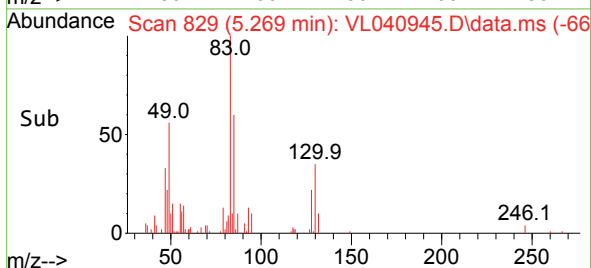
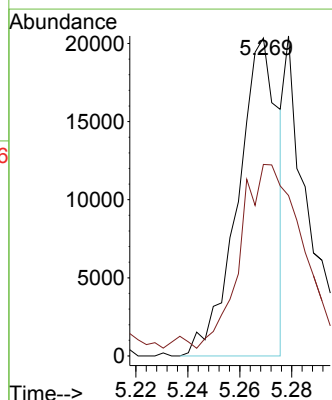
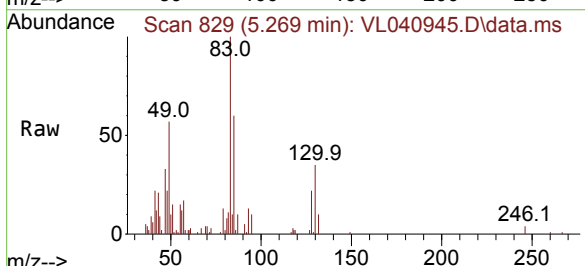
Acq: 22 Dec 2023 00:49

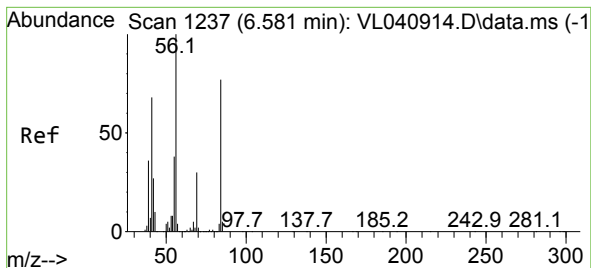
Tgt Ion: 83 Resp: 21915

Ion Ratio Lower Upper

83 100

85 54.0 52.3 78.5





#30

Cyclohexane

Concen: 0.137 ppbv

RT: 6.594 min Scan# 11

Delta R.T. 0.013 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

SV4

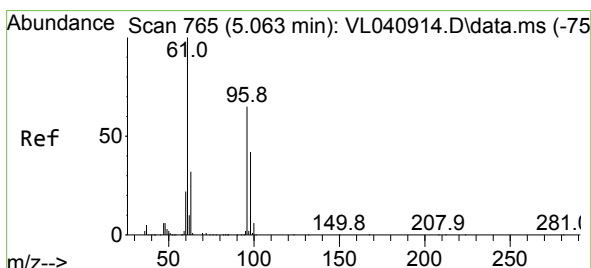
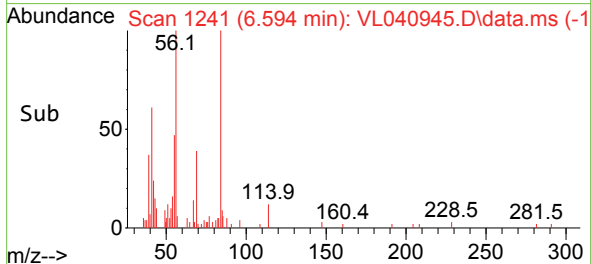
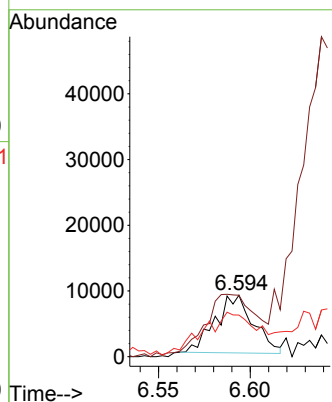
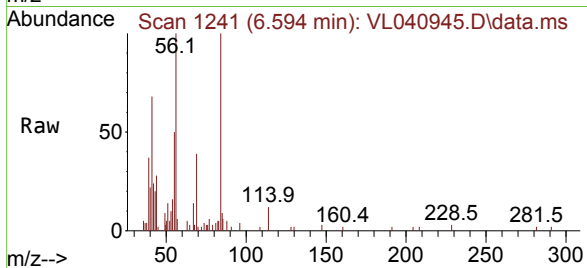
Tgt Ion: 84 Resp: 12735

Ion Ratio Lower Upper

84 100

56 137.5 111.4 167.2

41 103.8 70.0 105.0



#31

cis-1,2-Dichloroethene

Concen: 1.449 ppbv

RT: 5.079 min Scan# 770

Delta R.T. 0.016 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

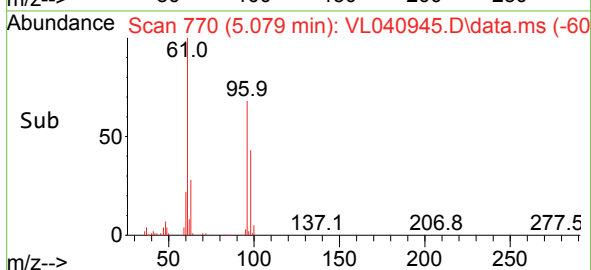
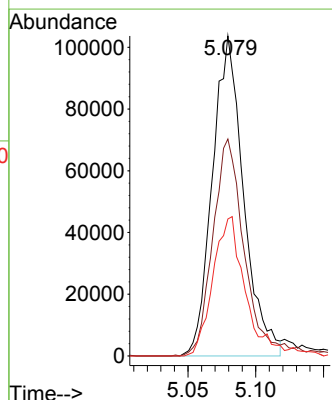
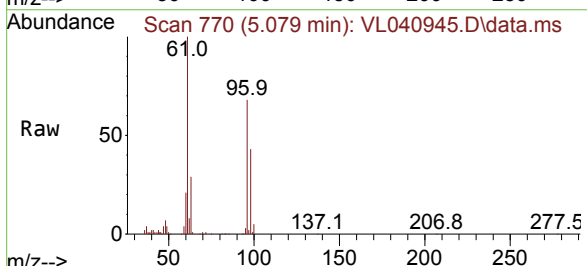
Tgt Ion: 61 Resp: 165860

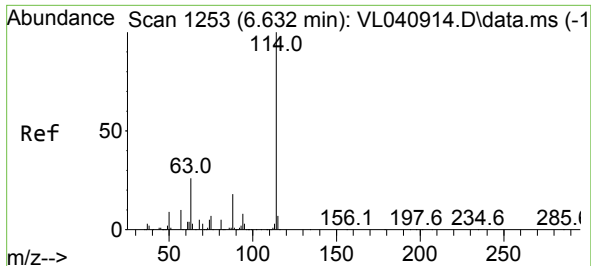
Ion Ratio Lower Upper

61 100

96 67.8 51.7 77.5

98 42.8 33.2 49.8





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.639 min Scan# 11

Delta R.T. 0.007 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

SV4

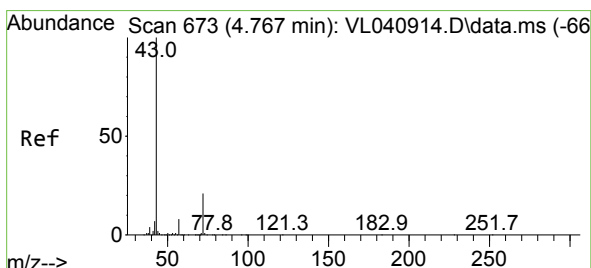
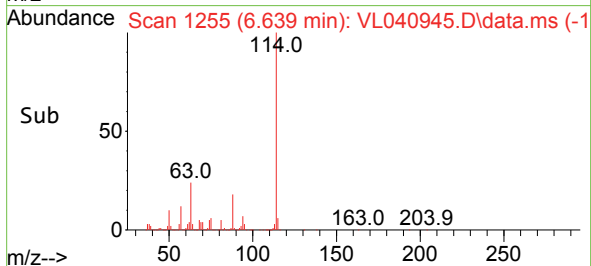
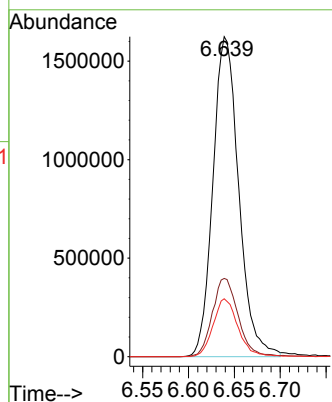
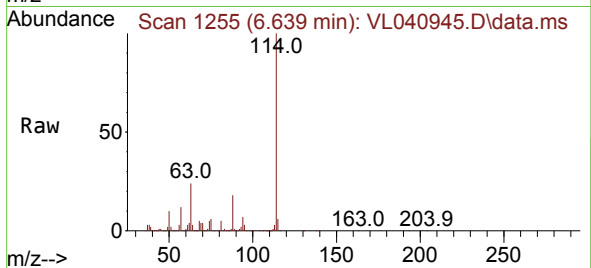
Tgt Ion:114 Resp: 3179762

Ion Ratio Lower Upper

114 100

63 24.7 21.0 31.6

88 17.6 14.3 21.5



#34

2-Butanone

Concen: 7.581 ppbv

RT: 4.784 min Scan# 678

Delta R.T. 0.016 min

Lab File: VL040945.D

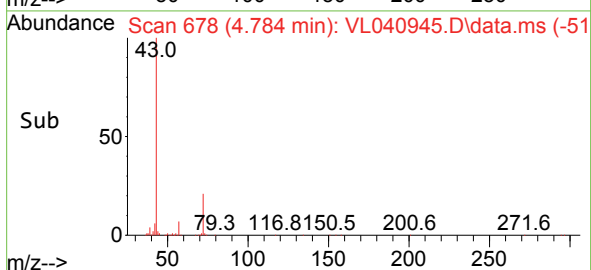
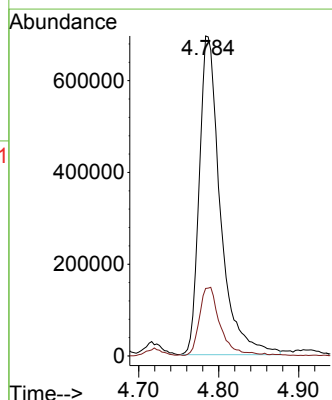
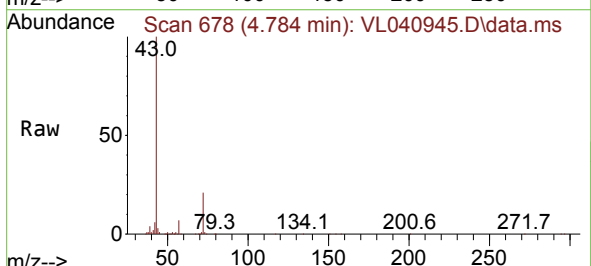
Acq: 22 Dec 2023 00:49

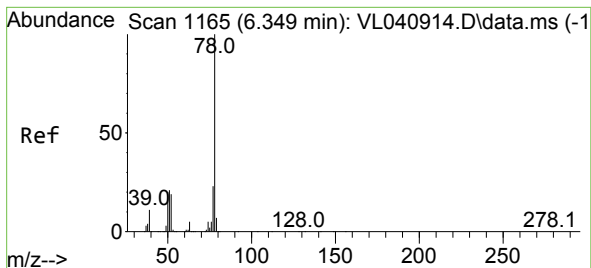
Tgt Ion: 43 Resp: 1275257

Ion Ratio Lower Upper

43 100

72 21.5 17.2 25.8





#36

Benzene

Concen: 0.221 ppbv

RT: 6.362 min Scan# 1169

Delta R.T. 0.013 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

SV4

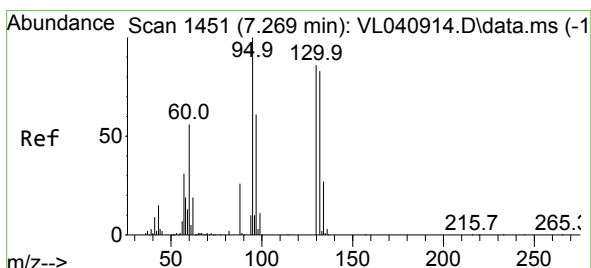
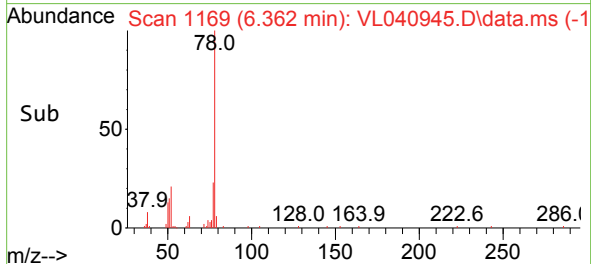
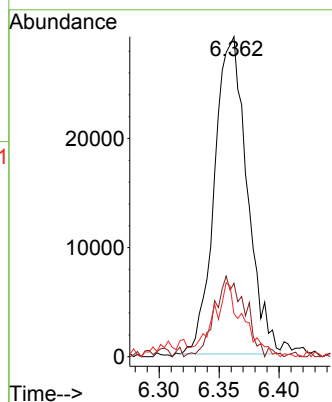
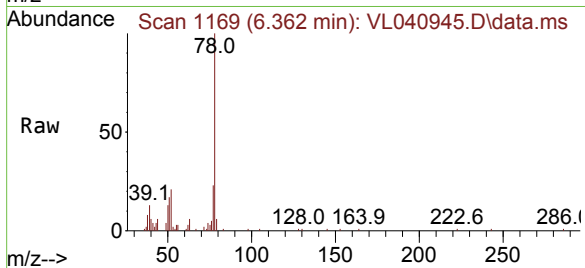
Tgt Ion: 78 Resp: 55048

Ion Ratio Lower Upper

78 100

77 22.0 18.4 27.6

50 13.5 16.0 24.0#



#38

Trichloroethene

Concen: 8.567 ppbv

RT: 7.275 min Scan# 1453

Delta R.T. 0.007 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Tgt Ion: 130 Resp: 799817

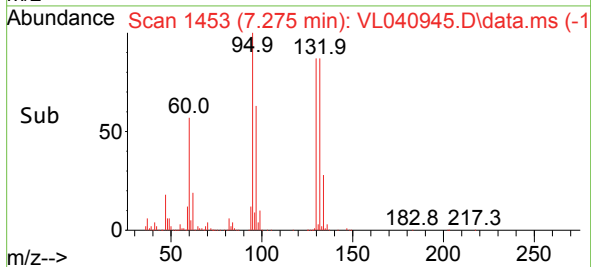
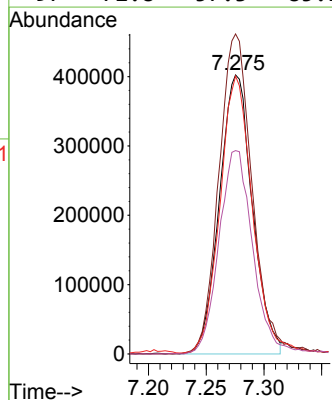
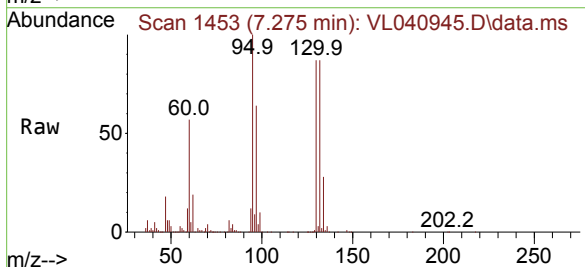
Ion Ratio Lower Upper

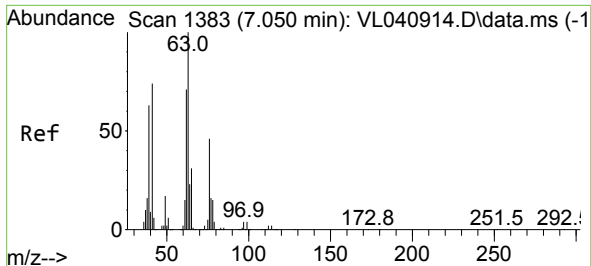
130 100

95 114.6 93.5 140.3

132 99.3 77.4 116.2

97 72.8 57.3 85.9





#39

1,2-Dichloropropane

Concen: 7.918 ppbv

RT: 6.639 min Scan# 1

Delta R.T. -0.411 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

SV4

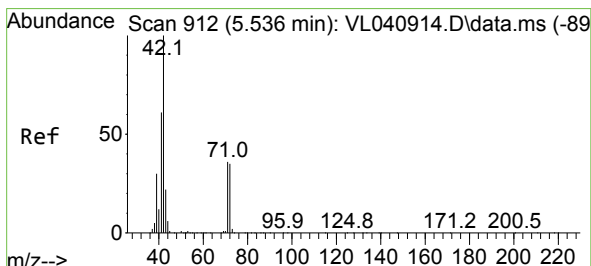
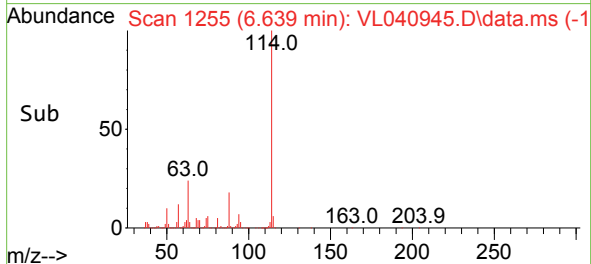
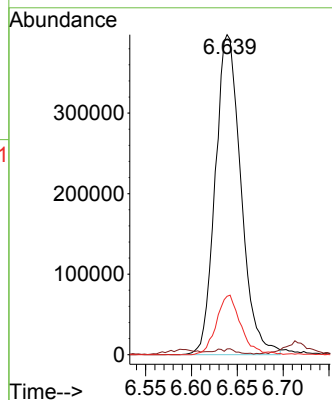
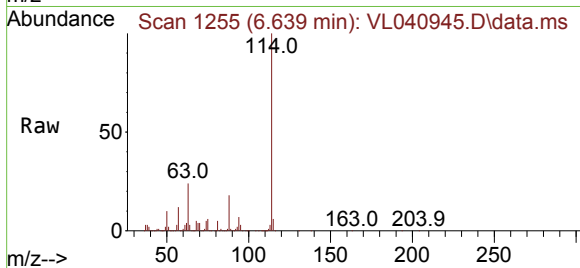
Tgt Ion: 63 Resp: 773399

Ion Ratio Lower Upper

63 100

41 0.3 59.0 88.6#

62 18.2 56.6 85.0#



#41

Tetrahydrofuran

Concen: 0.034 ppbv

RT: 5.295 min Scan# 837

Delta R.T. -0.241 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

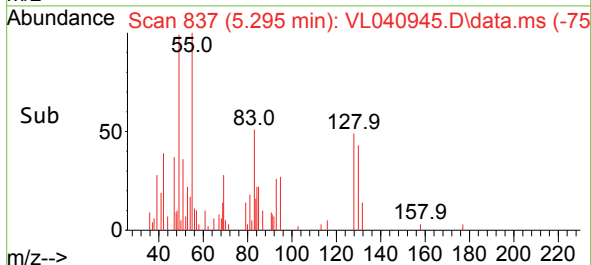
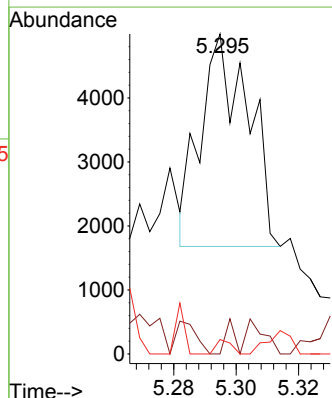
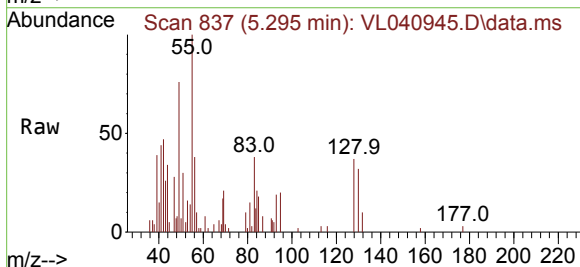
Tgt Ion: 42 Resp: 3529

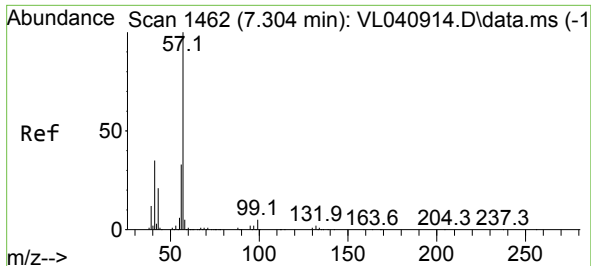
Ion Ratio Lower Upper

42 100

72 15.0 29.6 44.4#

71 0.0 29.1 43.7#

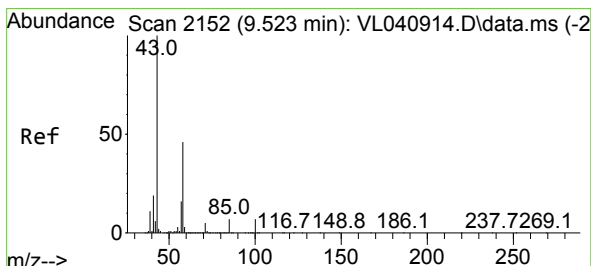
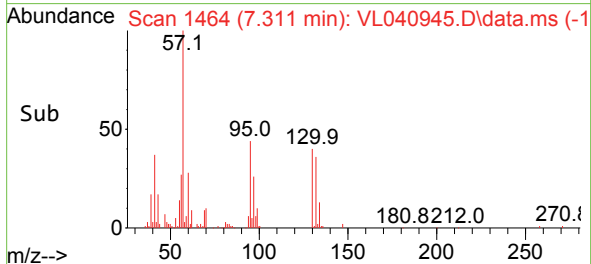
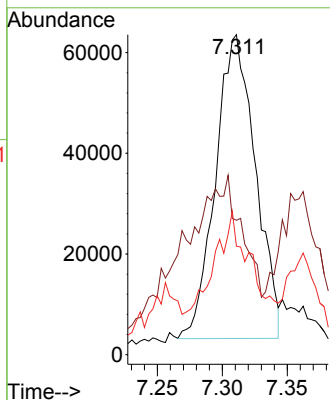
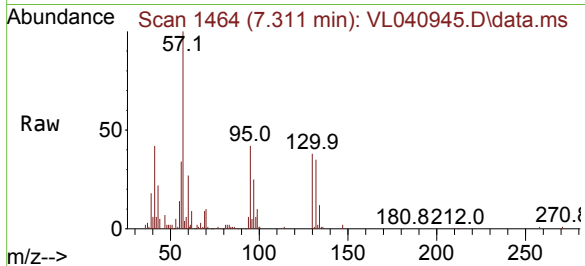




#44
2,2,4-Trimethylpentane
Concen: 0.306 ppbv
RT: 7.311 min Scan# 1464
Delta R.T. 0.007 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

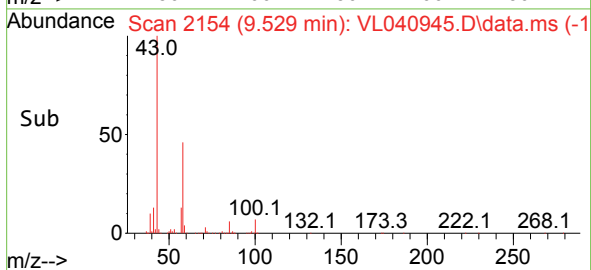
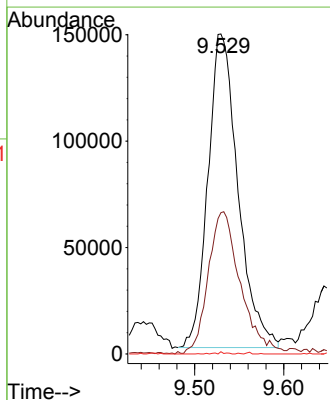
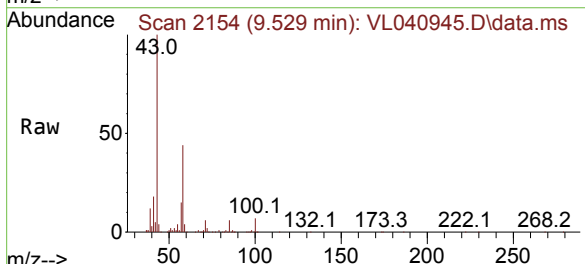
Instrument :
MSVOA_L
ClientSampleId :
SV4

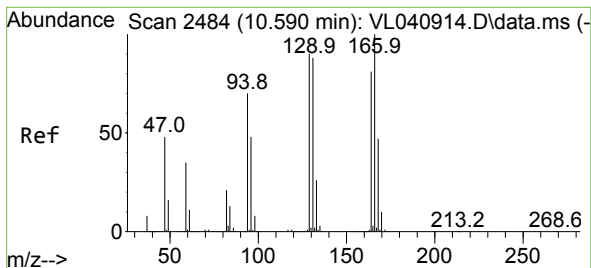
Tgt Ion: 57 Resp: 129110
Ion Ratio Lower Upper
57 100
41 102.6 28.2 42.4#
56 51.5 25.3 37.9#



#51
2-Hexanone
Concen: 1.885 ppbv
RT: 9.529 min Scan# 2154
Delta R.T. 0.007 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 43 Resp: 345591
Ion Ratio Lower Upper
43 100
58 49.2 37.3 55.9
98 0.2 0.2 0.2





#52

Tetrachloroethene

Concen: 107.331 ppbv

RT: 10.600 min Scan# 2484

Delta R.T. 0.010 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

SV4

Tgt Ion:164 Resp: 8987368

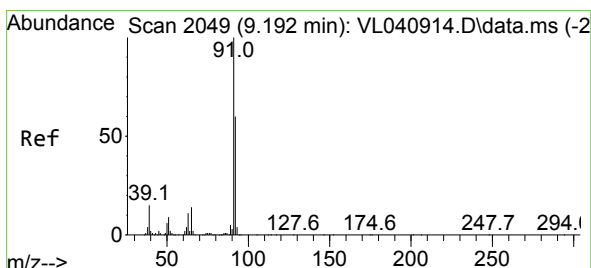
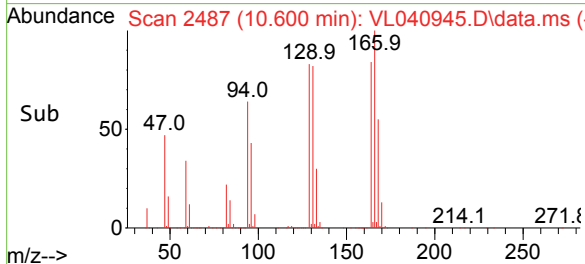
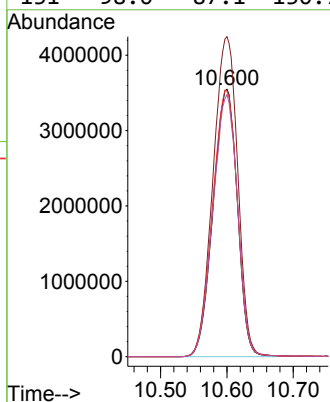
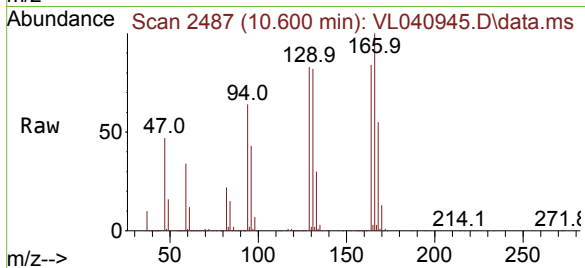
Ion Ratio Lower Upper

164 100

166 119.7 98.9 148.3

129 99.4 88.7 133.1

131 98.0 87.1 130.7



#53

Toluene

Concen: 0.693 ppbv

RT: 9.195 min Scan# 2050

Delta R.T. 0.003 min

Lab File: VL040945.D

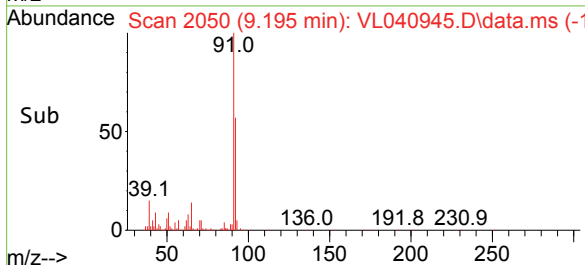
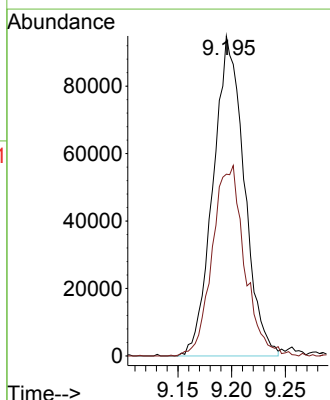
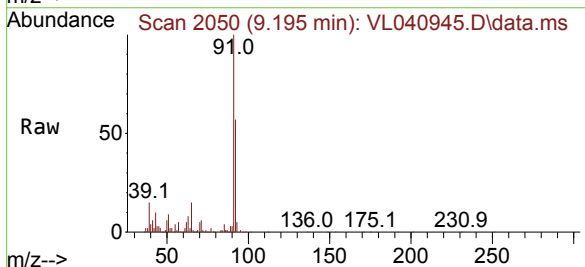
Acq: 22 Dec 2023 00:49

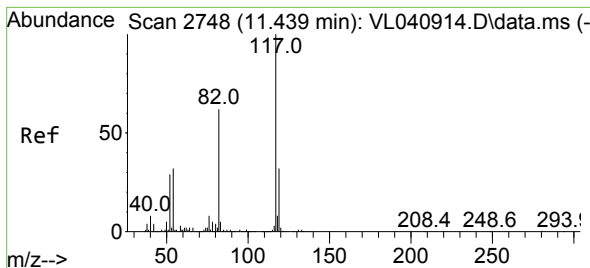
Tgt Ion: 91 Resp: 191025

Ion Ratio Lower Upper

91 100

92 61.6 49.2 73.8

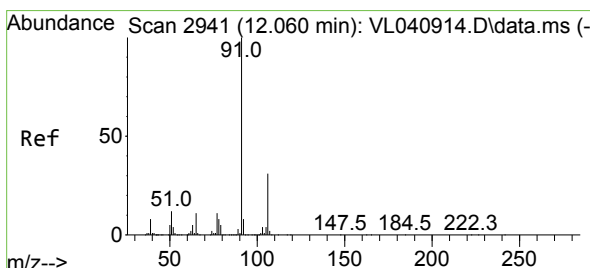
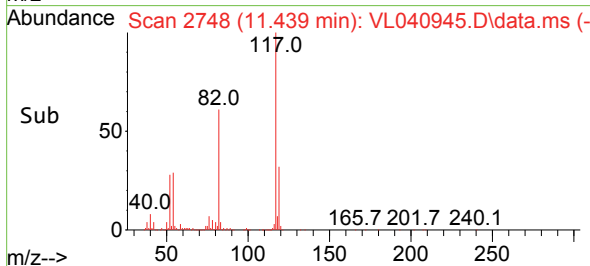
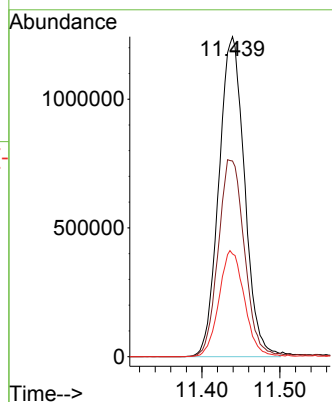
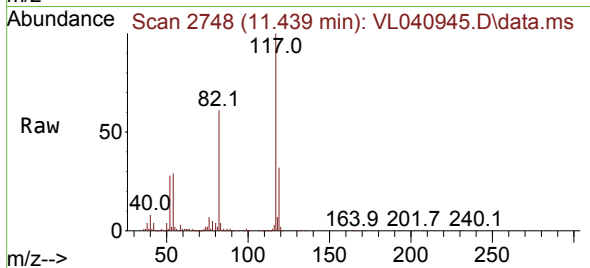




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.439 min Scan# 21
Delta R.T. 0.000 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

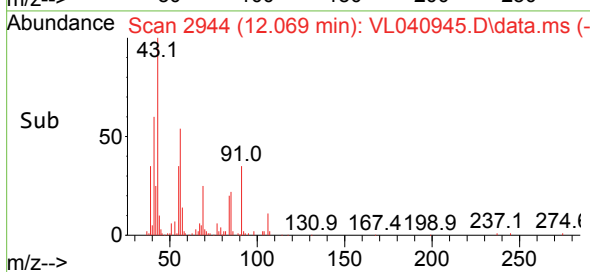
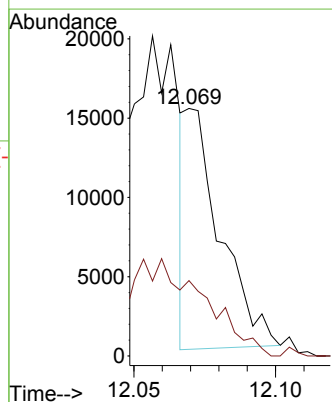
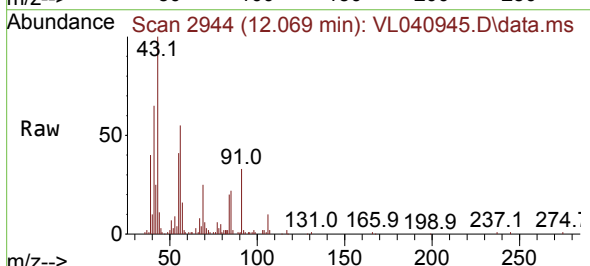
Instrument :
MSVOA_L
ClientSampleId :
SV4

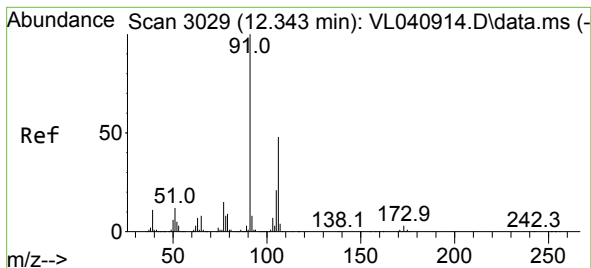
Tgt Ion:117 Resp: 2839866
Ion Ratio Lower Upper
117 100
82 64.2 49.6 74.4
119 33.0 23.4 35.0



#58
Ethyl Benzene
Concen: 0.036 ppbv
RT: 12.069 min Scan# 2944
Delta R.T. 0.010 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 91 Resp: 13010
Ion Ratio Lower Upper
91 100
106 31.8 24.9 37.3

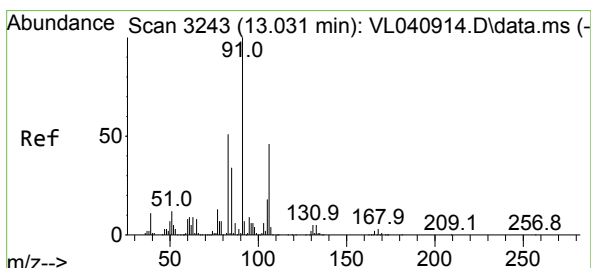
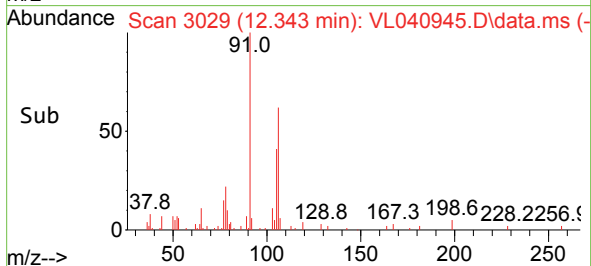
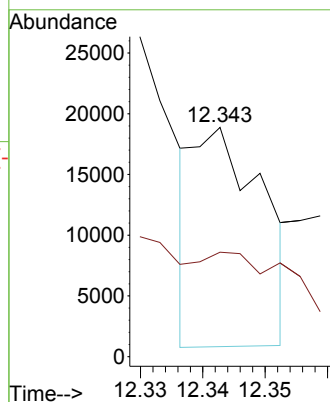
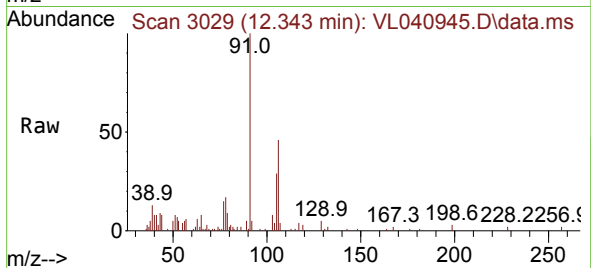




#59
m/p-Xylene
Concen: 0.045 ppbv
RT: 12.343 min Scan# 3029
Delta R.T. 0.000 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

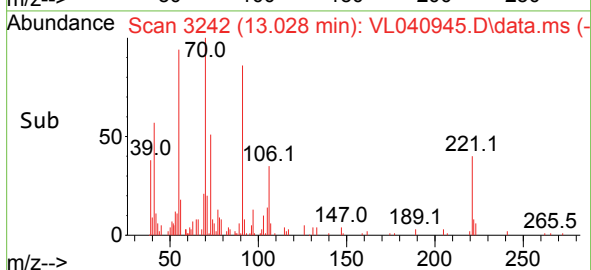
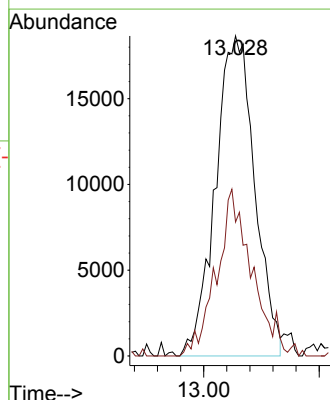
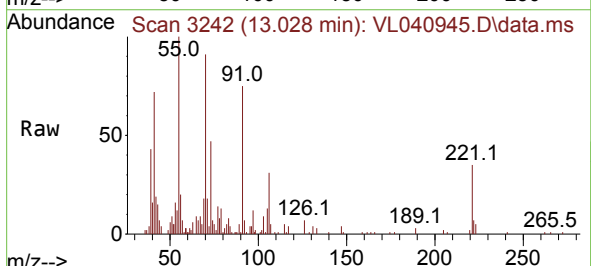
Instrument :
MSVOA_L
ClientSampleId :
SV4

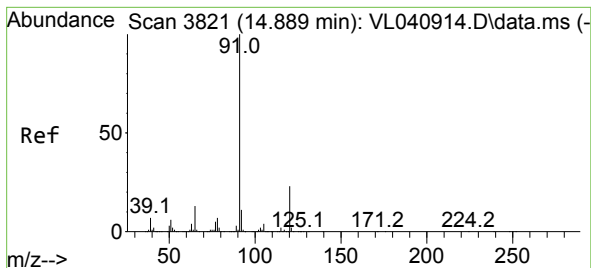
Tgt Ion: 91 Resp: 13851
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#60
o-Xylene
Concen: 0.151 ppbv
RT: 13.028 min Scan# 3242
Delta R.T. -0.003 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion: 91 Resp: 44091
Ion Ratio Lower Upper
91 100
106 47.2 22.6 67.7





#64

n-propylbenzene

Concen: 0.031 ppbv

RT: 14.886 min Scan# 3821

Delta R.T. -0.003 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

Instrument :

MSVOA_L

ClientSampleId :

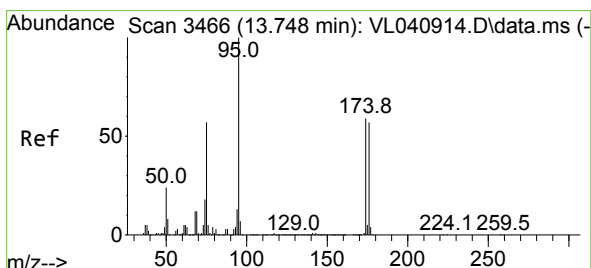
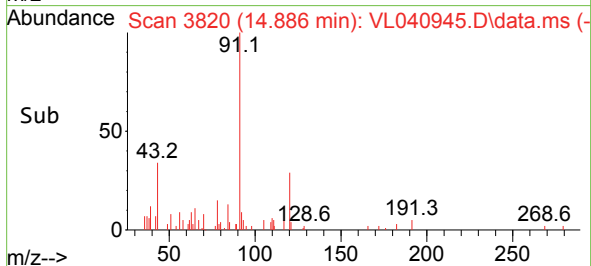
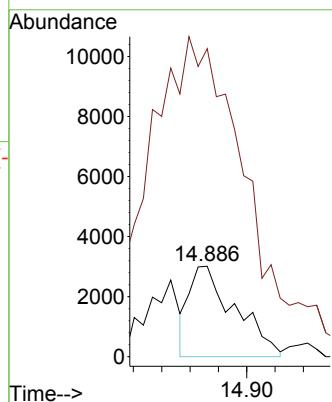
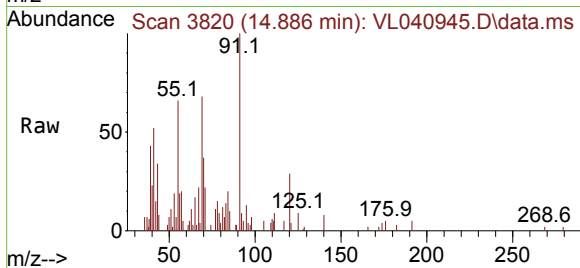
SV4

Tgt Ion:120 Resp: 3376

Ion Ratio Lower Upper

120 100

91 837.6 381.9 572.9#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.149 ppbv

RT: 13.741 min Scan# 3464

Delta R.T. -0.006 min

Lab File: VL040945.D

Acq: 22 Dec 2023 00:49

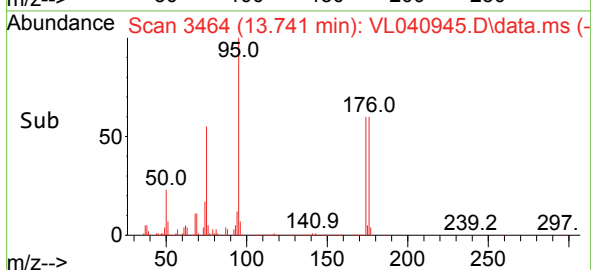
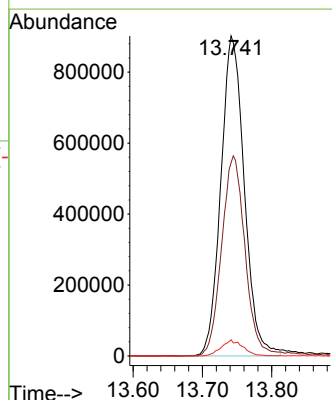
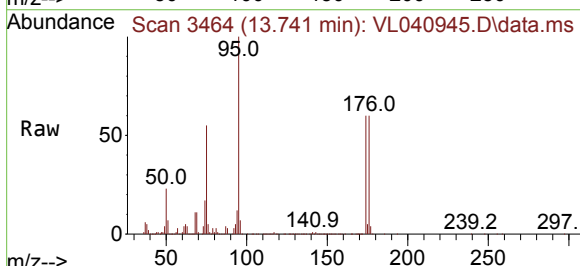
Tgt Ion: 95 Resp: 2122941

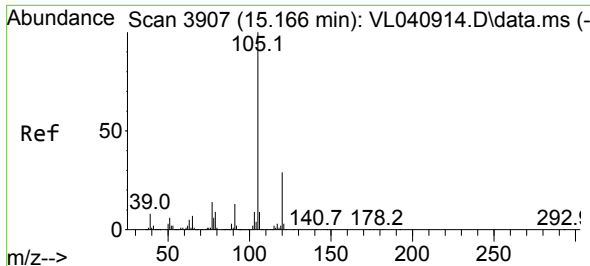
Ion Ratio Lower Upper

95 100

174 63.9 48.0 72.0

175 4.7 3.7 5.5

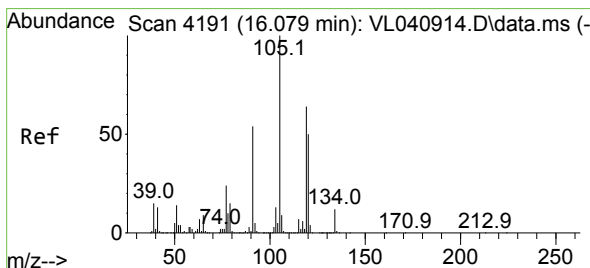
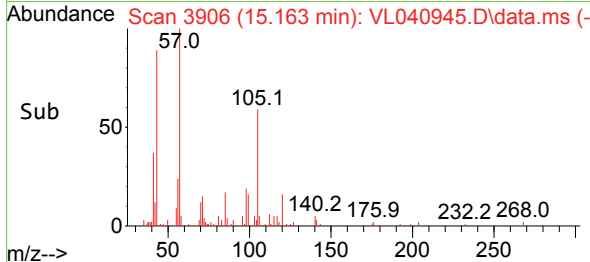
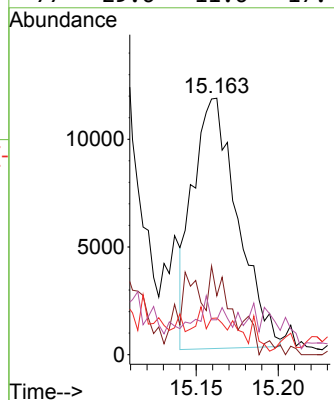
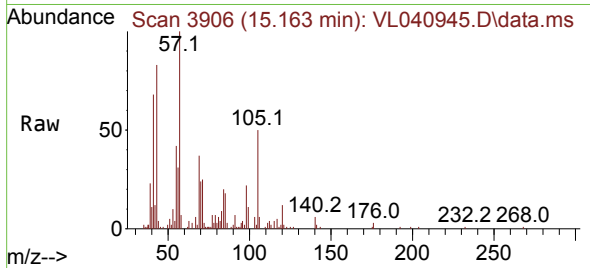




#72
4-Ethyltoluene
Concen: 0.069 ppbv
RT: 15.163 min Scan# 3906
Delta R.T. -0.003 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Instrument :
MSVOA_L
ClientSampleId :
SV4

Tgt Ion:105	Resp:	22084
Ion Ratio	Lower	Upper
105	100	
120	37.6	23.8 35.8#
91	18.4	10.9 16.3#
77	29.6	11.6 17.4#



#74
1,2,4-Trimethylbenzene
Concen: 0.104 ppbv
RT: 16.079 min Scan# 4191
Delta R.T. 0.000 min
Lab File: VL040945.D
Acq: 22 Dec 2023 00:49

Tgt Ion:105	Resp:	32132
Ion Ratio	Lower	Upper
105	100	
120	39.4	40.2 60.4#
91	12.9	43.0 64.6#
77	15.1	18.9 28.3#

