

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL092225\
 Data File : VL042964.D
 Acq On : 22 Sep 2025 19:14
 Operator : SY/MD
 Sample : Q3112-02 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

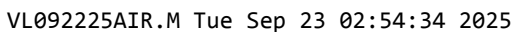
Quant Time: Sep 23 02:54:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL092225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Tue Sep 23 02:39:16 2025
 Response via : Initial Calibration

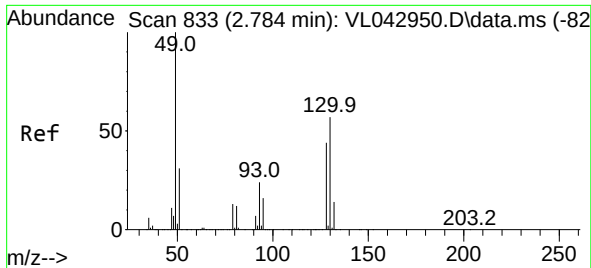
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.794	49	158850	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.965	114	479932	10.000	ppbv	0.01
55) Chlorobenzene-d5	8.888	117	425185	10.000	ppbv	0.01
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	320799	10.107	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.100%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.502	85	2520	0.118	ppbv	99
3) Chlorodifluoromethane	1.470	51	358590	13.466	ppbv #	61
4) Chloromethane	1.535	50	1092	0.113	ppbv	90
7) Chloroethane	1.470	64	18194	5.359	ppbv	99
9) Propene	1.891	41	1245	0.107	ppbv	91
11) Trichlorofluoromethane	1.881	101	11680	0.567	ppbv	95
13) Ethanol	1.725	45	5193	4.621	ppbv #	35
15) Acetone	1.839	43	117056	5.658	ppbv	96
16) 1,3-Butadiene	1.606	39	1991	0.204	ppbv #	11
17) tert-Butyl alcohol	2.052	59	866	0.038	ppbv #	1
19) Isopropyl Alcohol	1.891	45	8822	0.709	ppbv #	1
20) Methylene Chloride	2.065	84	281379	48.174	ppbv	98
23) Vinyl Acetate	2.480	43	3230	0.109	ppbv #	41
25) Ethyl Acetate	2.832	43	252975	4.838	ppbv #	77
26) Hexane	2.832	57	369938	15.520	ppbv #	40
34) 2-Butanone	2.567	43	3404	0.101	ppbv #	90
36) Benzene	3.664	78	1726	0.038	ppbv #	79
39) 1,2-Dichloropropane	3.962	63	119320	7.252	ppbv #	23
41) Tetrahydrofuran	2.832	42	134951	6.980	ppbv #	52
44) 2,2,4-Trimethylpentane	4.648	57	3298	0.042	ppbv #	43
53) Toluene	6.946	91	8319	0.156	ppbv	95
60) o-Xylene	9.966	91	1840	0.033	ppbv	99
74) 1,2,4-Trimethylbenzene	11.539	105	6358	0.103	ppbv #	65
79) Naphthalene	13.520	128	1731	0.032	ppbv #	83
80) Naphthalene,2-methyl-	14.465	142	2778	0.165	ppbv #	92

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

Quant Time: Sep 23 02:54:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL092225AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Tue Sep 23 02:39:16 2025
Response via : Initial Calibration

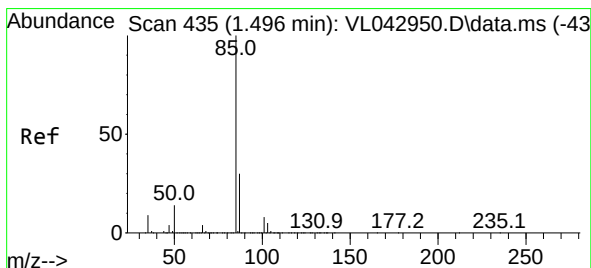
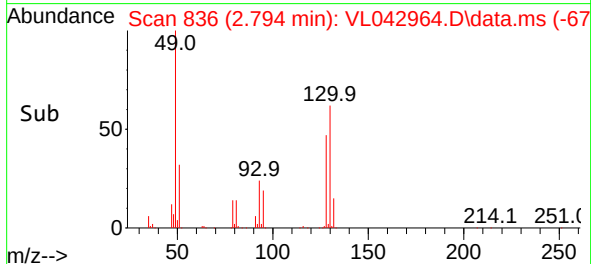
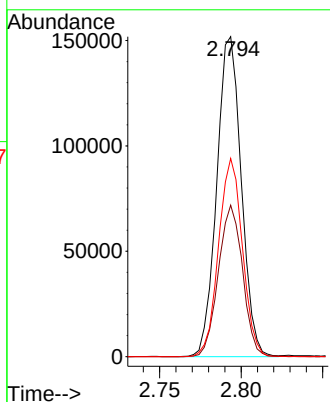
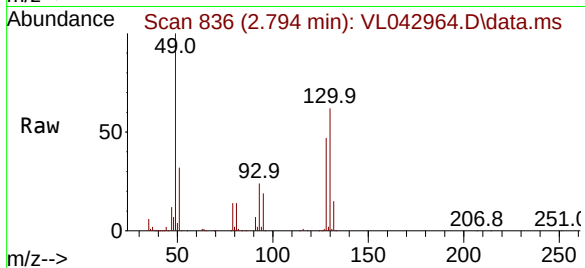




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.794 min Scan# 81
Delta R.T. 0.010 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

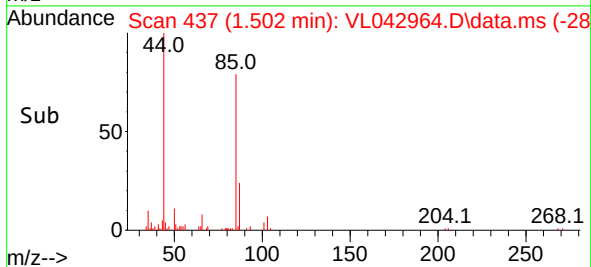
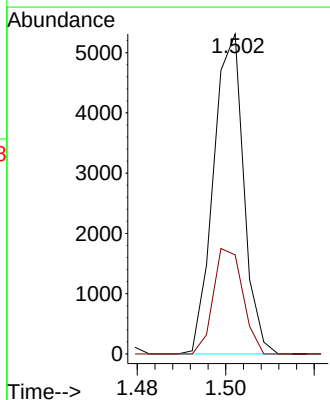
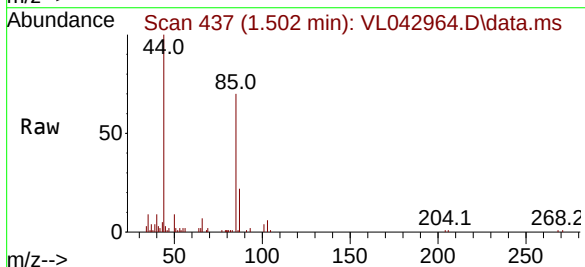
Instrument :
MSVOA_L
ClientSampleId :
SV2

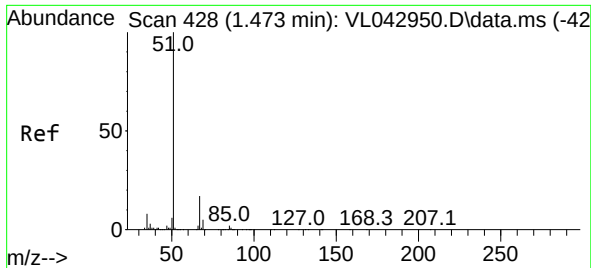
Tgt Ion: 49 Resp: 158850
Ion Ratio Lower Upper
49 100
128 46.6 22.9 68.8
130 60.2 29.1 87.3



#2
Dichlorodifluoromethane
Concen: 0.118 ppbv
RT: 1.502 min Scan# 437
Delta R.T. 0.006 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 85 Resp: 2520
Ion Ratio Lower Upper
85 100
87 31.0 24.3 36.5

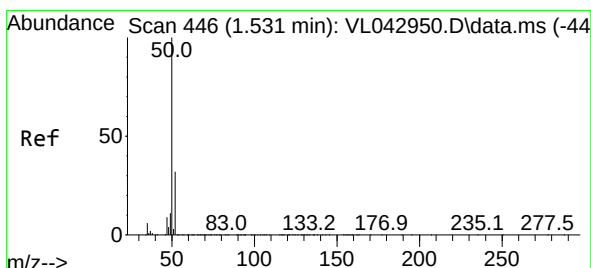
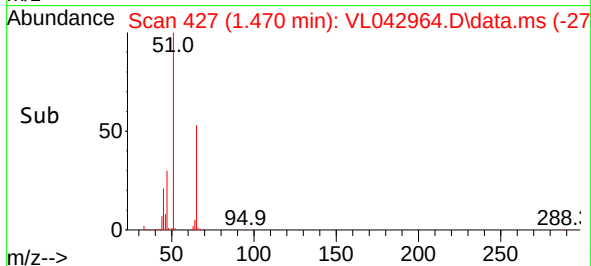
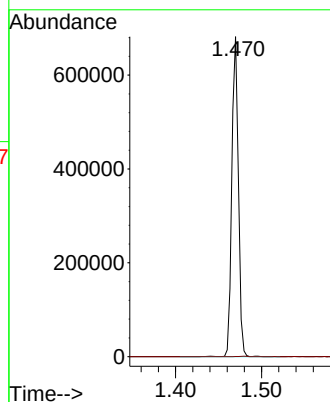
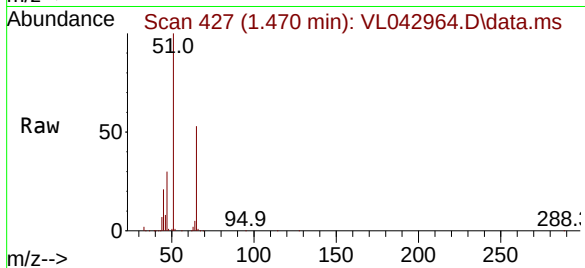




#3
Chlorodifluoromethane
Concen: 13.466 ppbv
RT: 1.470 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

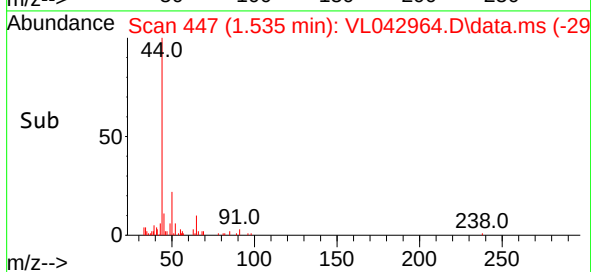
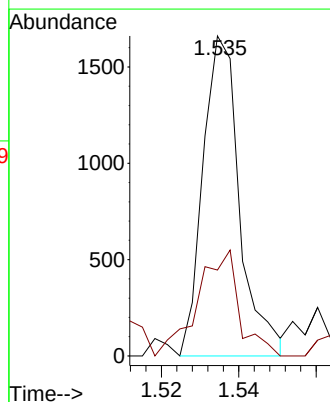
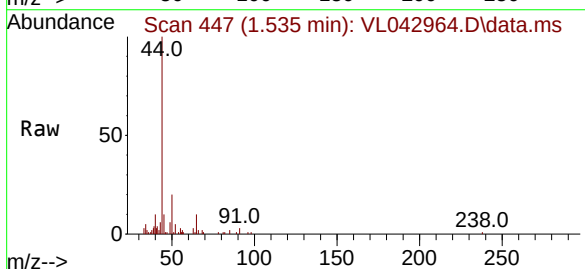
Instrument :
MSVOA_L
ClientSampleId :
SV2

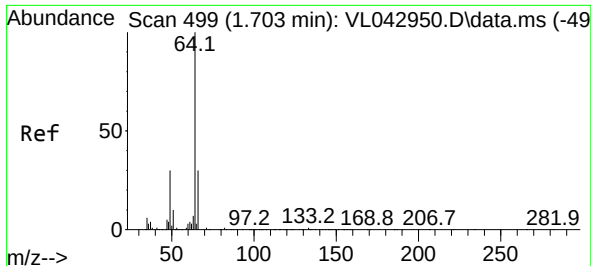
Tgt Ion: 51 Resp: 358590
Ion Ratio Lower Upper
51 100
67 0.2 13.8 20.8#



#4
Chloromethane
Concen: 0.113 ppbv
RT: 1.535 min Scan# 447
Delta R.T. 0.003 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 50 Resp: 1092
Ion Ratio Lower Upper
50 100
52 26.9 25.9 38.9

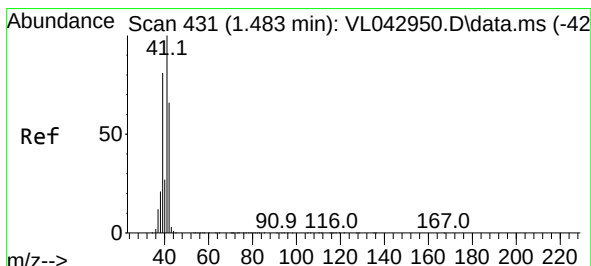
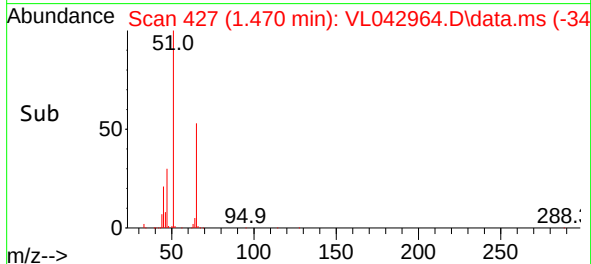
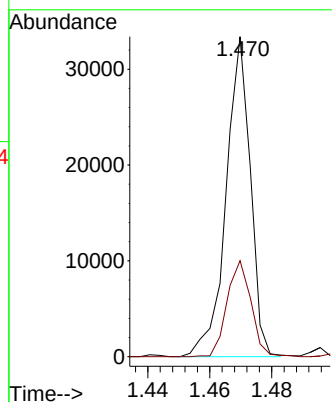
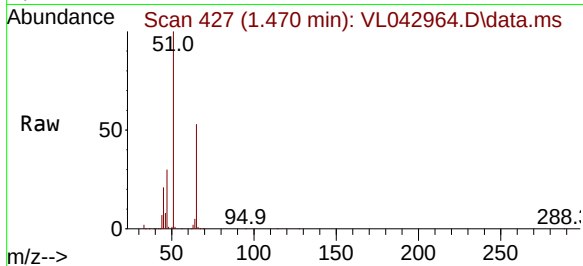




#7
Chloroethane
Concen: 5.359 ppbv
RT: 1.470 min Scan# 41
Delta R.T. -0.233 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

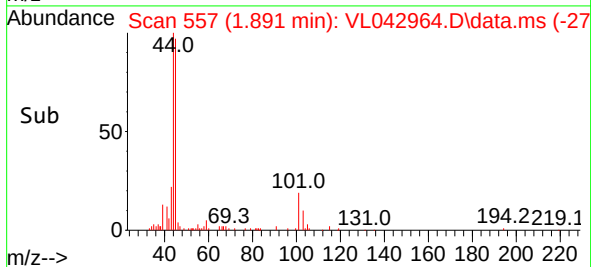
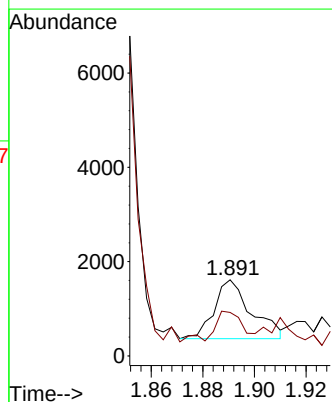
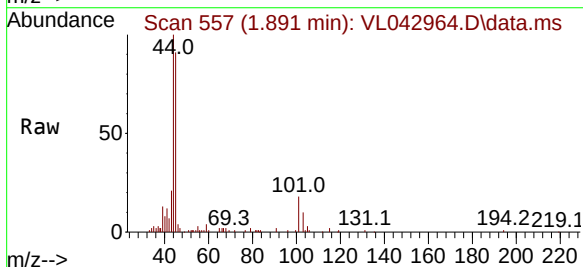
Instrument :
MSVOA_L
ClientSampleId :
SV2

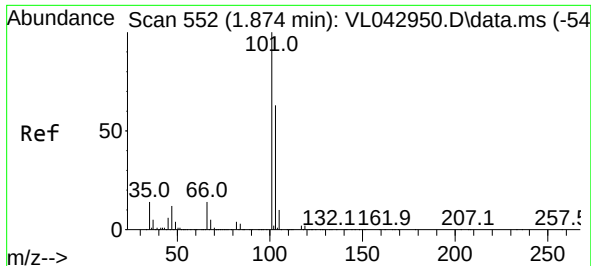
Tgt Ion: 64 Resp: 18194
Ion Ratio Lower Upper
64 100
66 30.0 24.6 36.8



#9
Propene
Concen: 0.107 ppbv
RT: 1.891 min Scan# 557
Delta R.T. 0.408 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 41 Resp: 1245
Ion Ratio Lower Upper
41 100
42 64.6 57.4 86.2

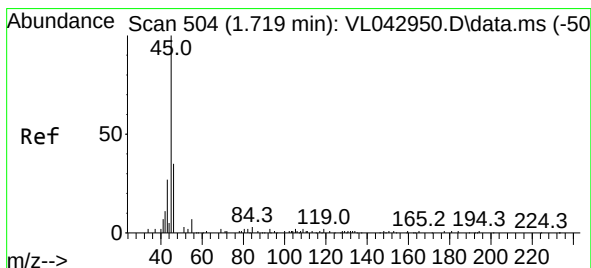
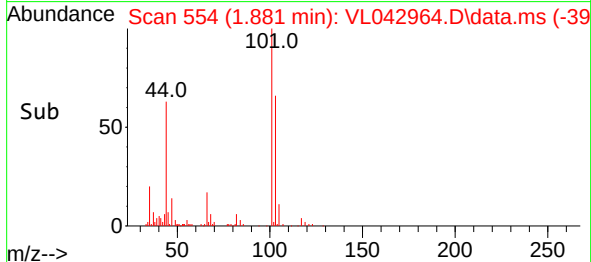
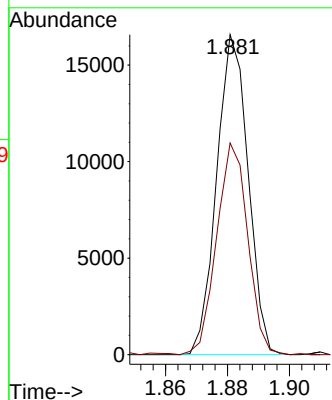
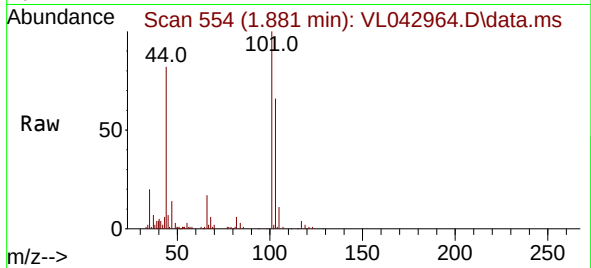




#11
Trichlorofluoromethane
Concen: 0.567 ppbv
RT: 1.881 min Scan# 511
Delta R.T. 0.006 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

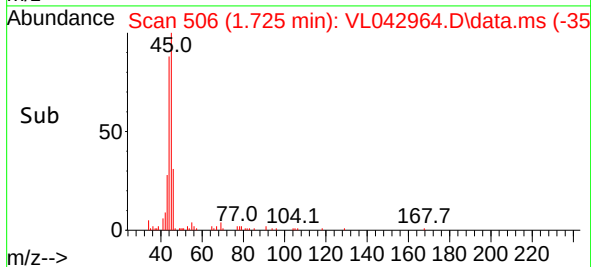
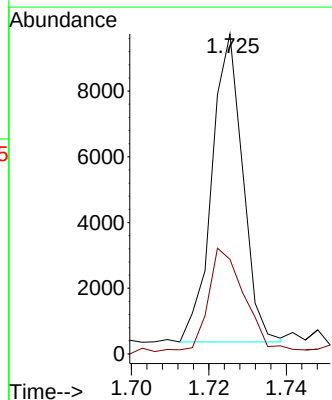
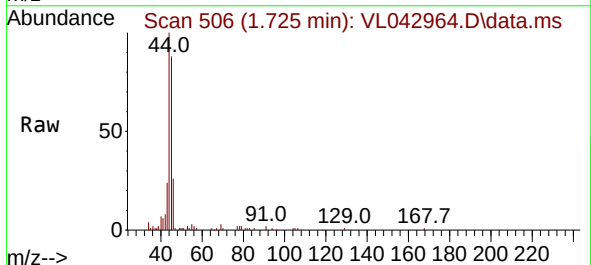
Instrument :
MSVOA_L
ClientSampleId :
SV2

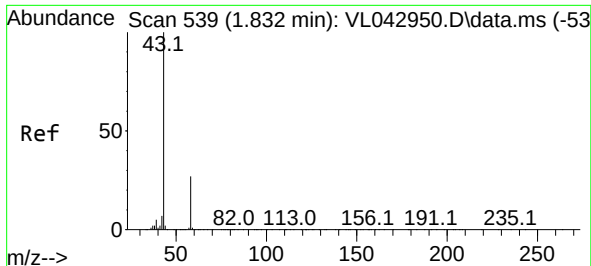
Tgt Ion:101 Resp: 11680
Ion Ratio Lower Upper
101 100
103 66.1 50.1 75.1



#13
Ethanol
Concen: 4.621 ppbv
RT: 1.725 min Scan# 506
Delta R.T. 0.006 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 45 Resp: 5193
Ion Ratio Lower Upper
45 100
46 0.0 16.2 64.6#





#15

Acetone

Concen: 5.658 ppbv

RT: 1.839 min Scan# 541

Delta R.T. 0.006 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

Instrument :

MSVOA_L

ClientSampleId :

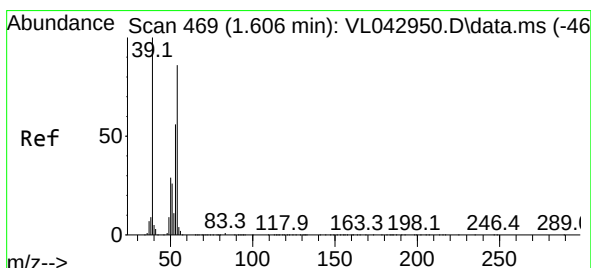
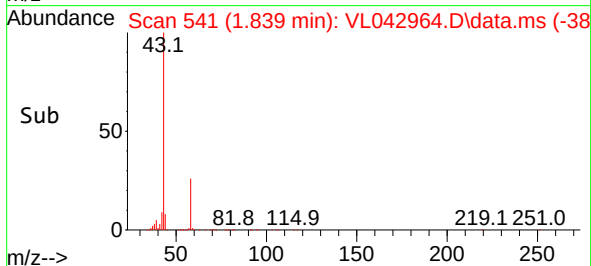
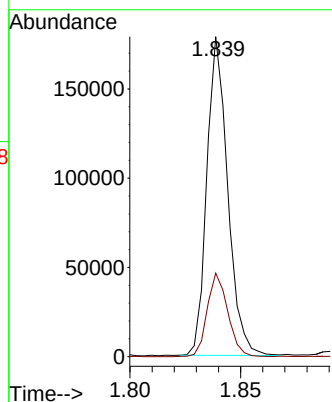
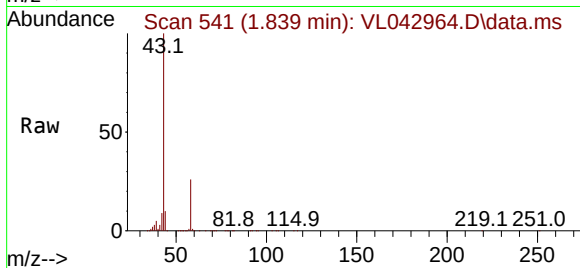
SV2

Tgt Ion: 43 Resp: 117056

Ion Ratio Lower Upper

43 100

58 25.9 22.3 33.5



#16

1,3-Butadiene

Concen: 0.204 ppbv

RT: 1.606 min Scan# 469

Delta R.T. 0.000 min

Lab File: VL042964.D

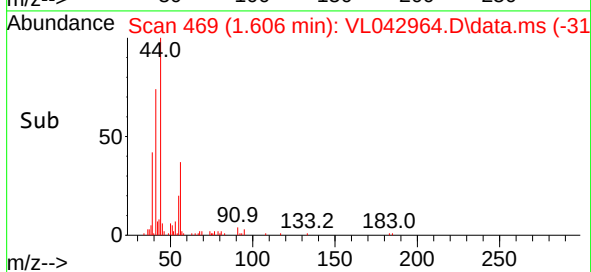
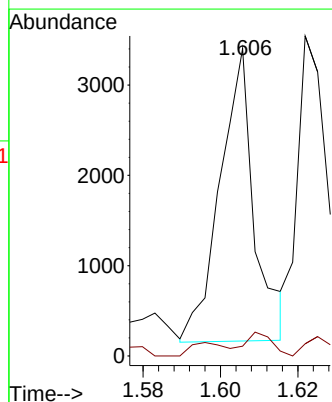
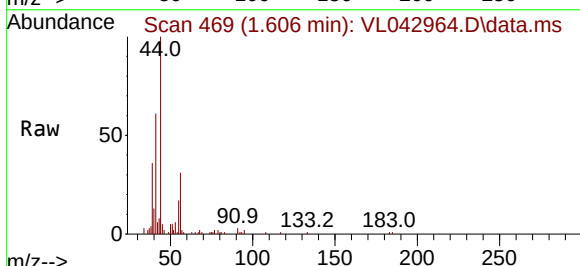
Acq: 22 Sep 2025 19:14

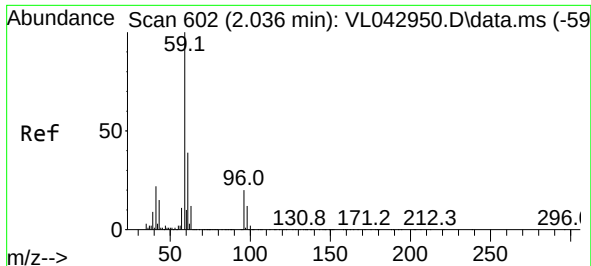
Tgt Ion: 39 Resp: 1991

Ion Ratio Lower Upper

39 100

54 0.0 60.8 91.2#





#17

tert-Butyl alcohol

Concen: 0.038 ppbv

RT: 2.052 min Scan# 602

Delta R.T. 0.016 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

Instrument :

MSVOA_L

ClientSampleId :

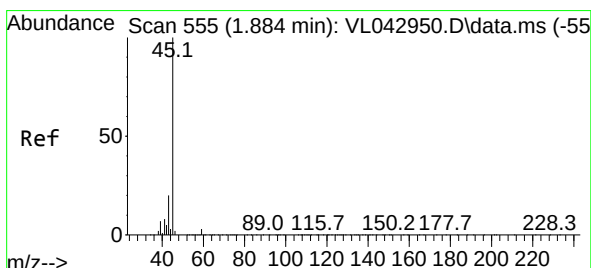
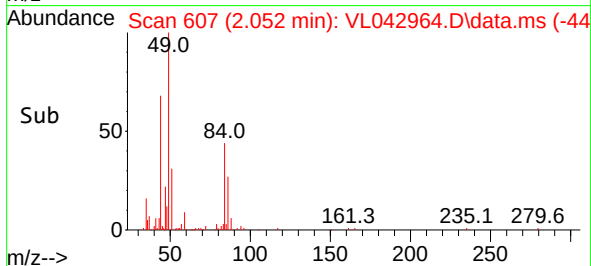
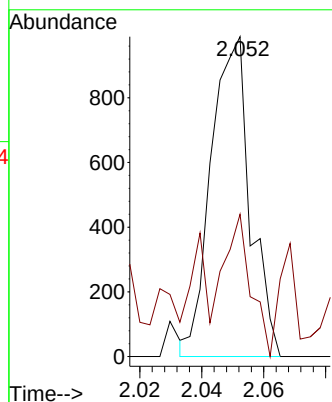
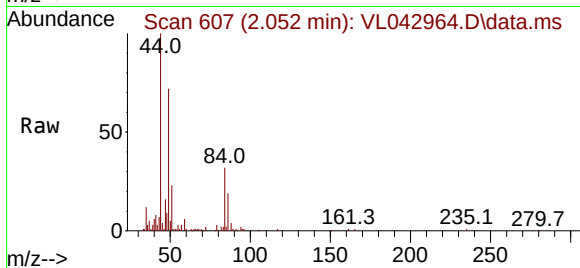
SV2

Tgt Ion: 59 Resp: 866

Ion Ratio Lower Upper

59 100

57 82.0 8.6 12.8#



#19

Isopropyl Alcohol

Concen: 0.709 ppbv

RT: 1.891 min Scan# 557

Delta R.T. 0.006 min

Lab File: VL042964.D

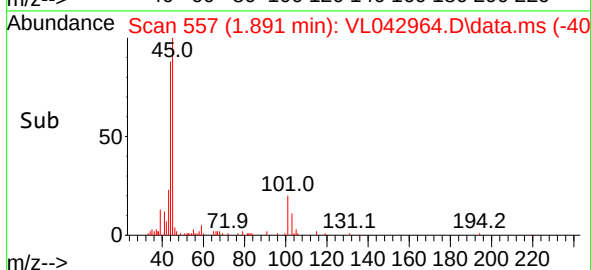
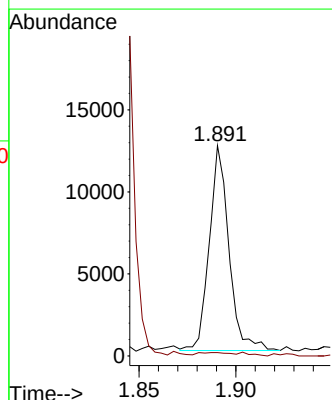
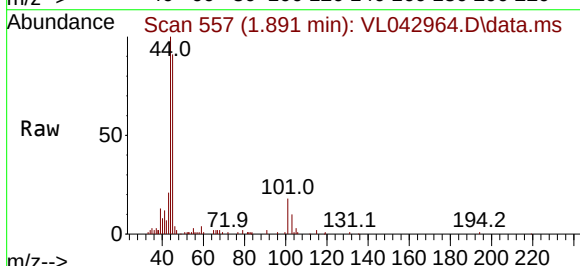
Acq: 22 Sep 2025 19:14

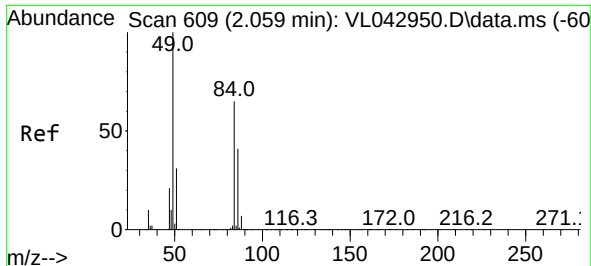
Tgt Ion: 45 Resp: 8822

Ion Ratio Lower Upper

45 100

58 343.3 31.0 46.6#



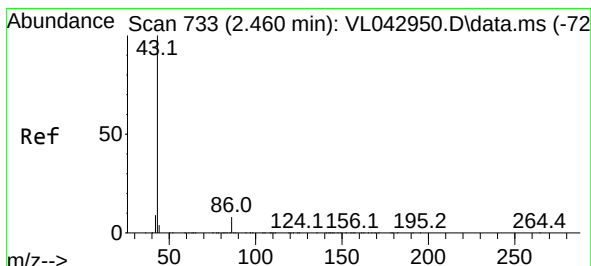
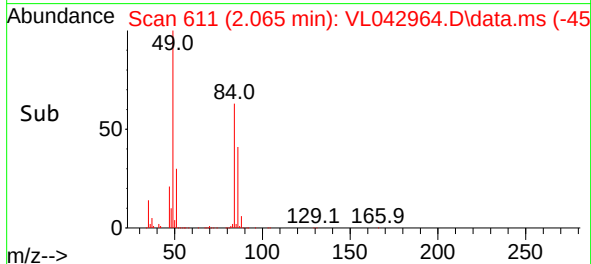
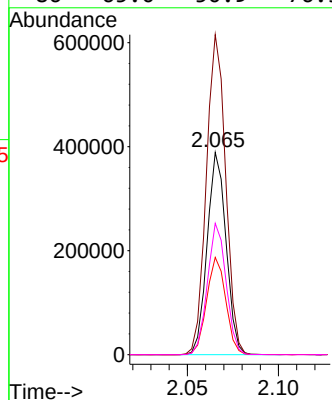
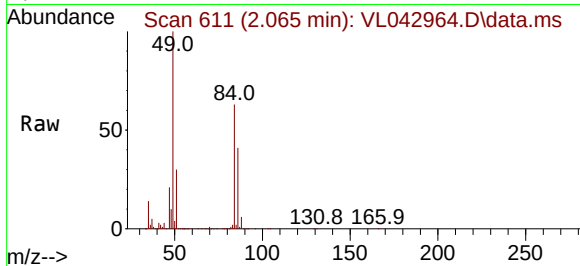


#20
Methylene Chloride
Concen: 48.174 ppbv
RT: 2.065 min Scan# 611
Delta R.T. 0.006 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Instrument :
MSVOA_L
ClientSampleId :
SV2

Tgt Ion: 84 Resp: 281379

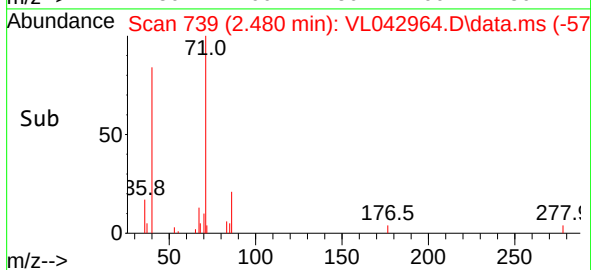
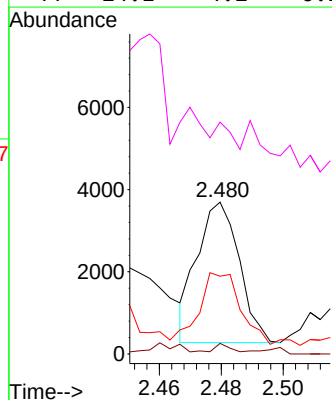
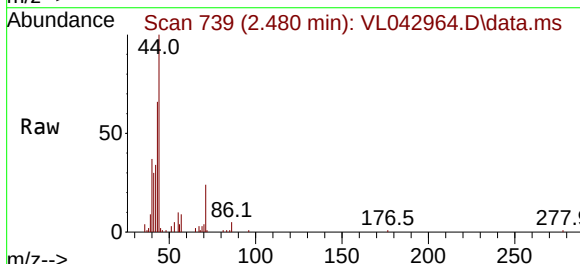
Ion	Ratio	Lower	Upper
84	100		
49	158.2	124.1	186.1
51	48.0	39.8	59.8
86	65.0	50.9	76.3

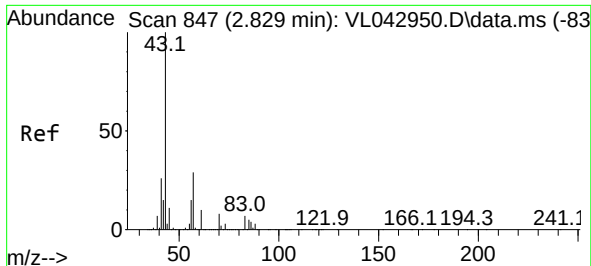


#23
Vinyl Acetate
Concen: 0.109 ppbv
RT: 2.480 min Scan# 739
Delta R.T. 0.019 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 43 Resp: 3230

Ion	Ratio	Lower	Upper
43	100		
86	2.9	6.2	9.2#
42	45.2	7.4	11.0#
44	24.1	4.2	6.2#

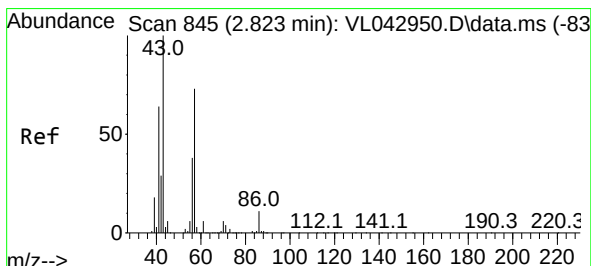
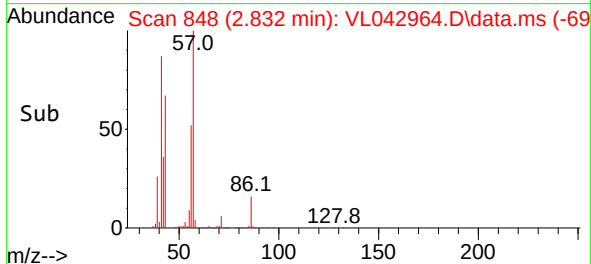
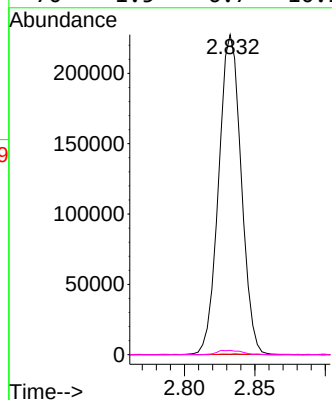
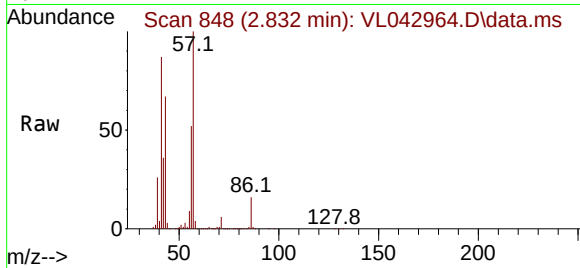




#25
Ethyl Acetate
Concen: 4.838 ppbv
RT: 2.832 min Scan# 848
Delta R.T. 0.003 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

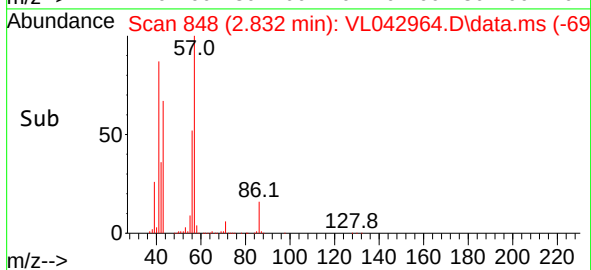
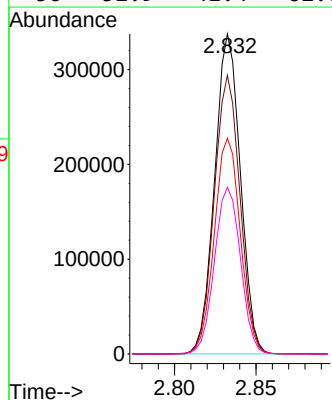
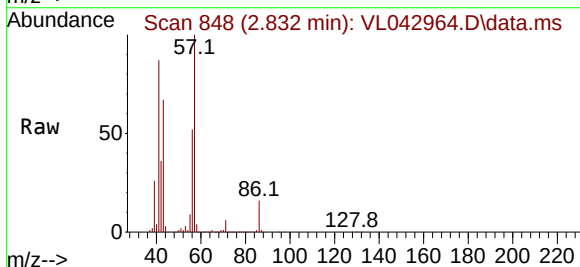
Instrument :
MSVOA_L
ClientSampleId :
SV2

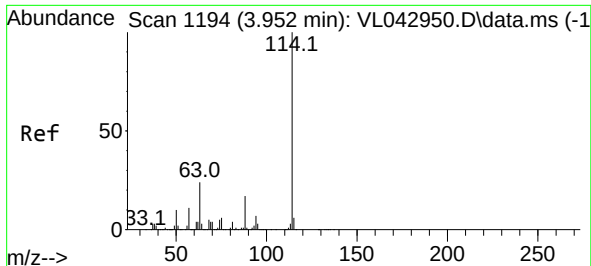
Tgt Ion: 43 Resp: 252975
Ion Ratio Lower Upper
43 100
45 0.3 7.7 11.5#
61 0.2 7.1 10.7#
70 1.5 6.7 10.1#



#26
Hexane
Concen: 15.520 ppbv
RT: 2.832 min Scan# 848
Delta R.T. 0.010 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 57 Resp: 369938
Ion Ratio Lower Upper
57 100
41 87.6 71.7 107.5
43 68.7 180.8 271.2#
56 52.9 41.4 62.0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.965 min Scan# 1194

Delta R.T. 0.013 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

Instrument :

MSVOA_L

ClientSampleId :

SV2

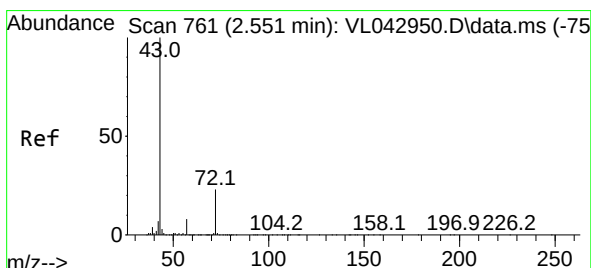
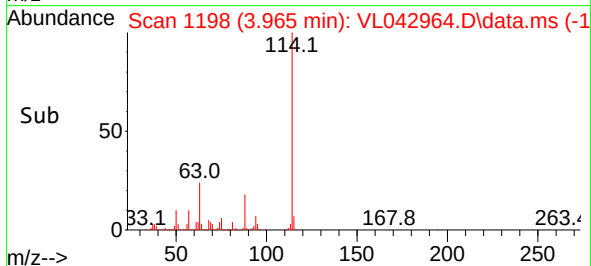
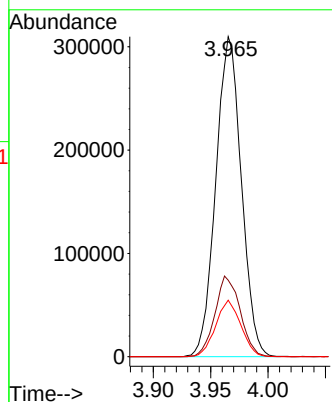
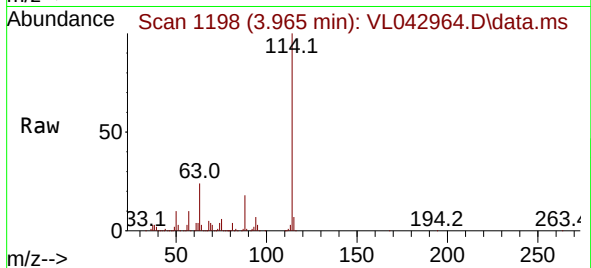
Tgt Ion:114 Resp: 479932

Ion Ratio Lower Upper

114 100

63 24.9 19.4 29.2

88 17.4 14.2 21.2



#34

2-Butanone

Concen: 0.101 ppbv

RT: 2.567 min Scan# 766

Delta R.T. 0.016 min

Lab File: VL042964.D

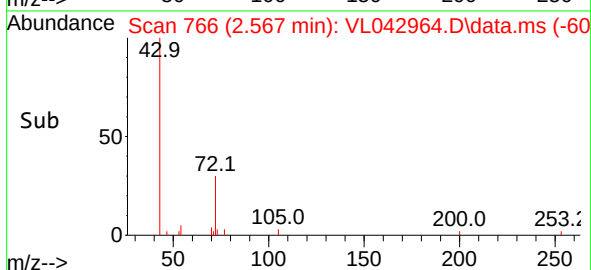
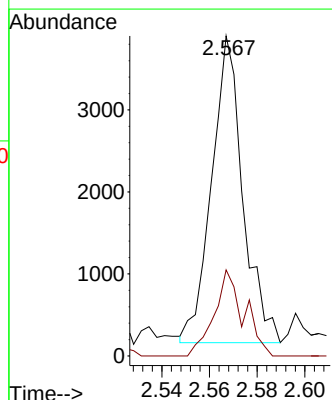
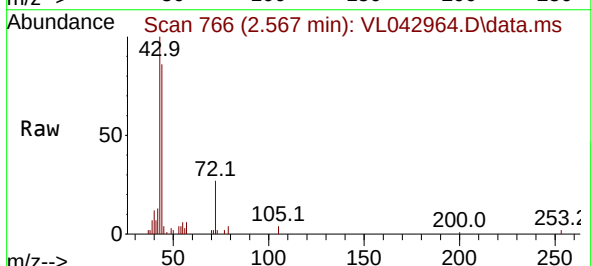
Acq: 22 Sep 2025 19:14

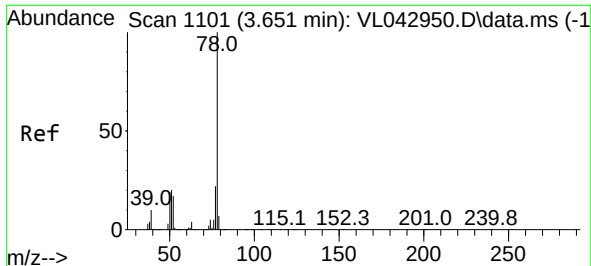
Tgt Ion: 43 Resp: 3404

Ion Ratio Lower Upper

43 100

72 26.6 17.7 26.5#





#36

Benzene

Concen: 0.038 ppbv

RT: 3.664 min Scan# 1105

Delta R.T. 0.013 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

Instrument :

MSVOA_L

ClientSampleId :

SV2

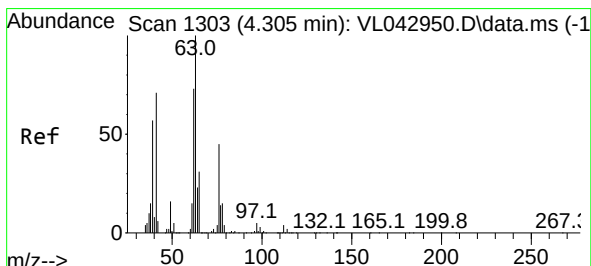
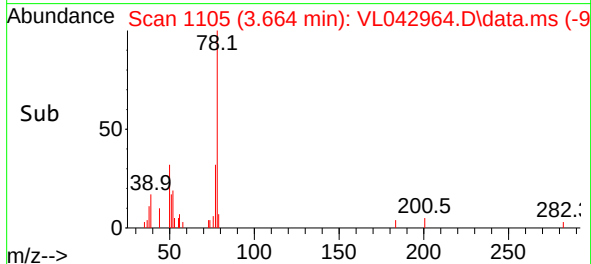
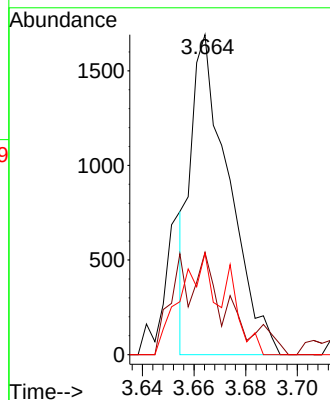
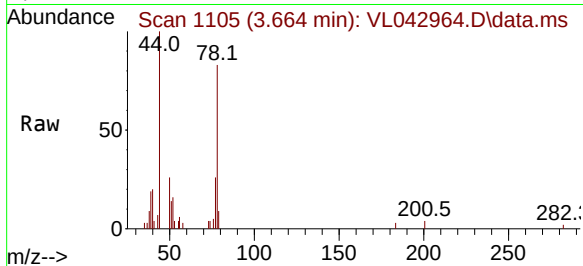
Tgt Ion: 78 Resp: 1726

Ion Ratio Lower Upper

78 100

77 28.7 17.8 26.6#

50 31.7 15.0 22.4#



#39

1,2-Dichloropropane

Concen: 7.252 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. -0.343 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

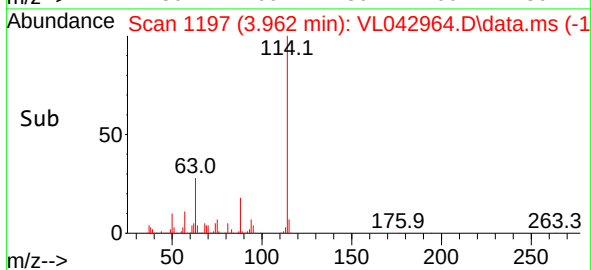
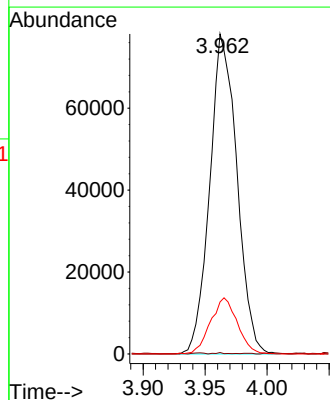
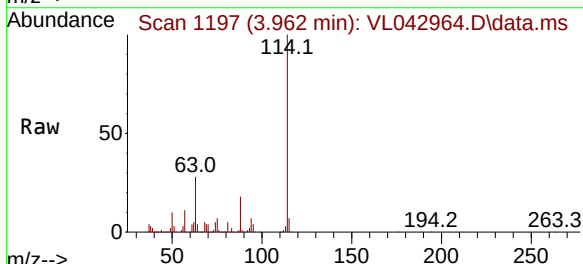
Tgt Ion: 63 Resp: 119320

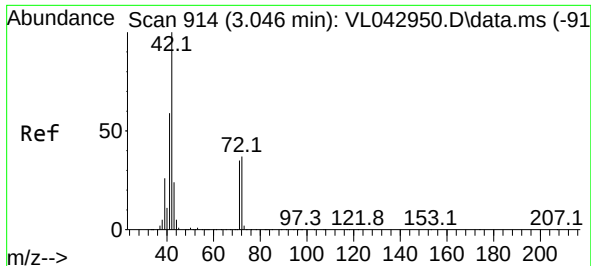
Ion Ratio Lower Upper

63 100

41 0.3 57.5 86.3#

62 16.2 58.5 87.7#

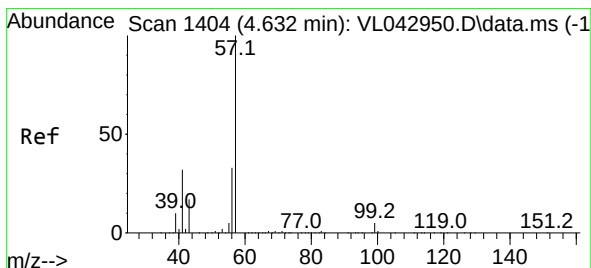
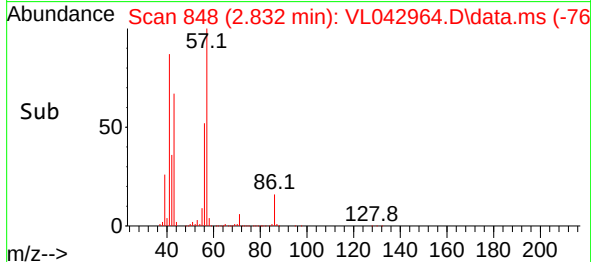
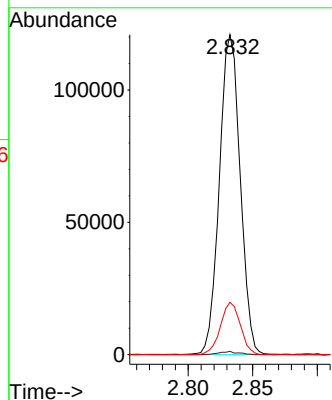
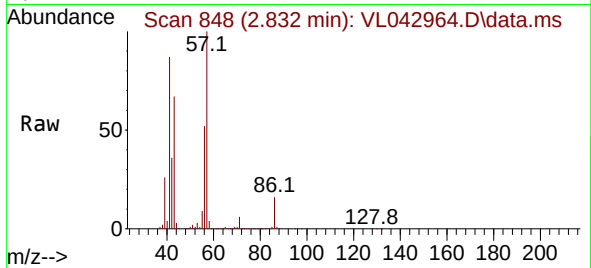




#41
Tetrahydrofuran
Concen: 6.980 ppbv
RT: 2.832 min Scan# 84
Delta R.T. -0.214 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

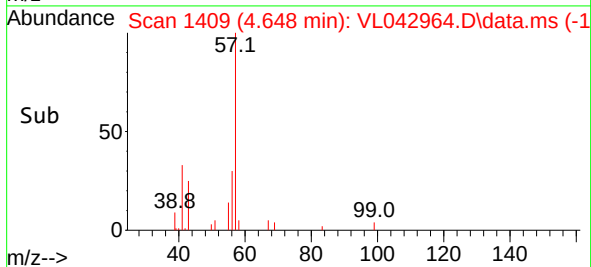
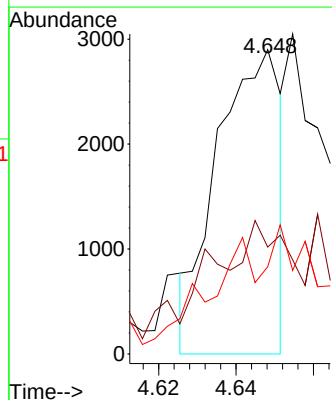
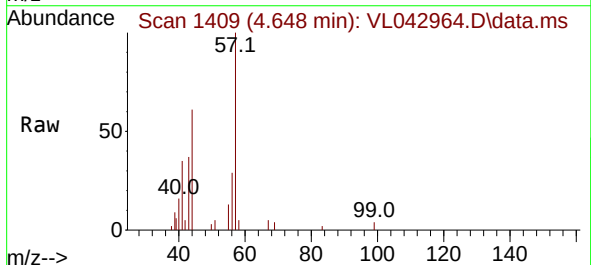
Instrument :
MSVOA_L
ClientSampleId :
SV2

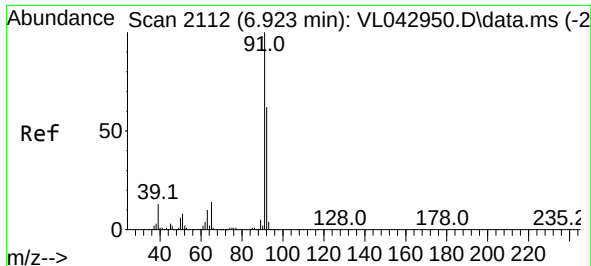
Tgt Ion: 42 Resp: 134951
Ion Ratio Lower Upper
42 100
72 0.9 30.0 45.0#
71 15.8 28.8 43.2#



#44
2,2,4-Trimethylpentane
Concen: 0.042 ppbv
RT: 4.648 min Scan# 1409
Delta R.T. 0.016 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 57 Resp: 3298
Ion Ratio Lower Upper
57 100
41 0.0 25.5 38.3#
56 0.0 25.8 38.8#

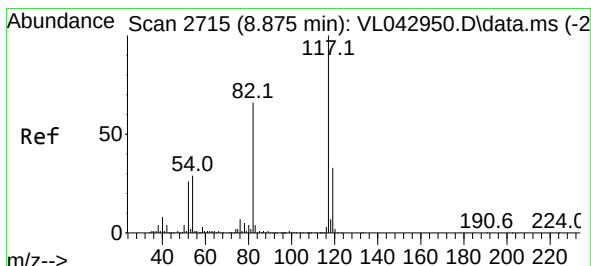
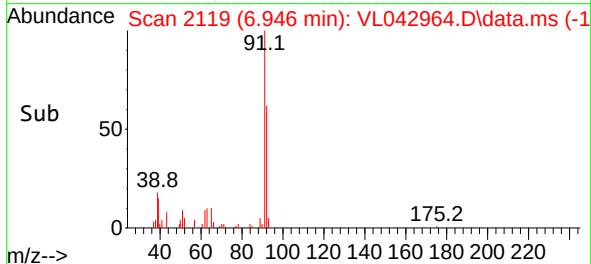
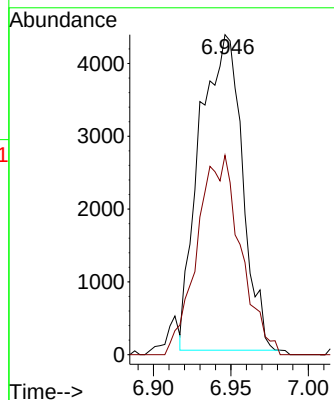
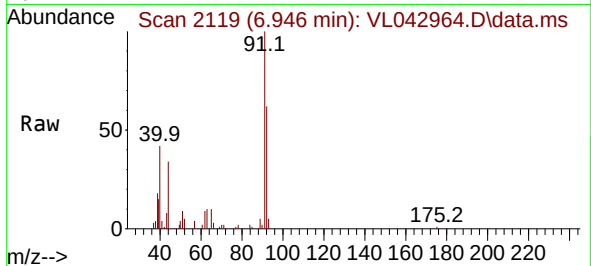




#53
Toluene
Concen: 0.156 ppbv
RT: 6.946 min Scan# 2112
Delta R.T. 0.023 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

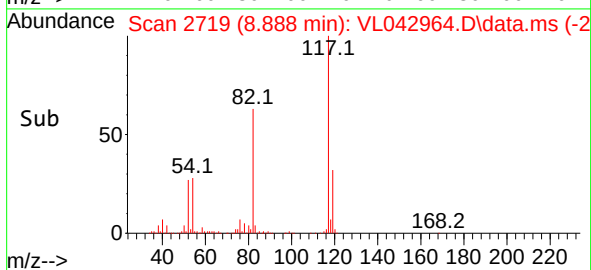
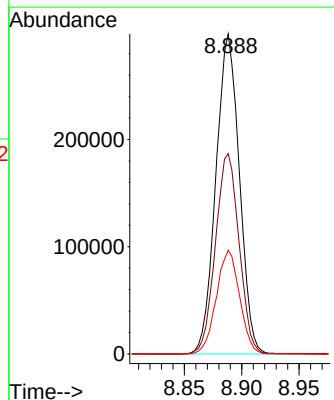
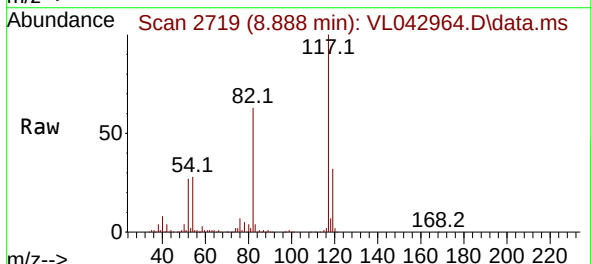
Instrument :
MSVOA_L
ClientSampleId :
SV2

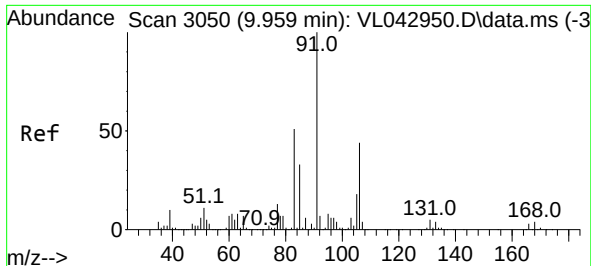
Tgt Ion: 91 Resp: 8319
Ion Ratio Lower Upper
91 100
92 64.0 48.2 72.2



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.888 min Scan# 2719
Delta R.T. 0.013 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 117 Resp: 425185
Ion Ratio Lower Upper
117 100
82 63.0 52.8 79.2
119 32.2 26.5 39.7

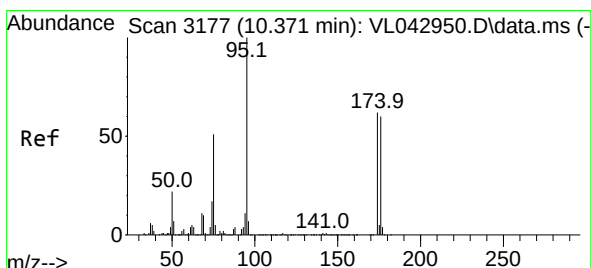
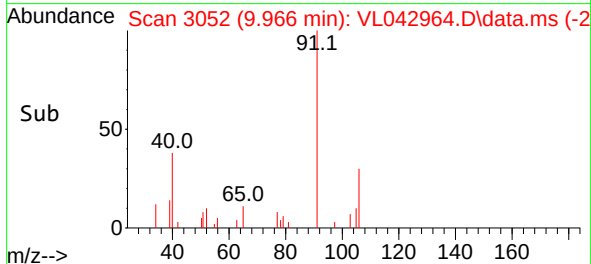
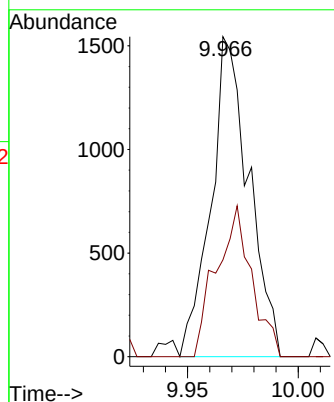
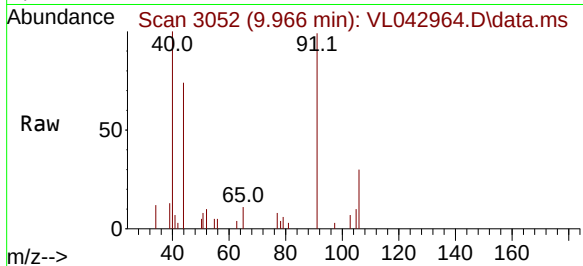




#60
o-Xylene
Concen: 0.033 ppbv
RT: 9.966 min Scan# 3050
Delta R.T. 0.006 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

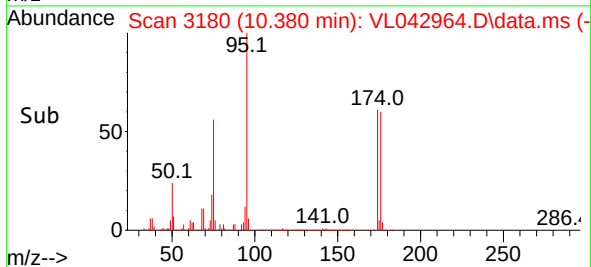
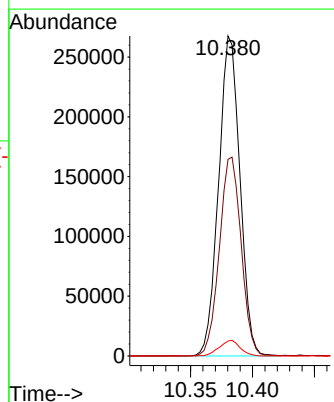
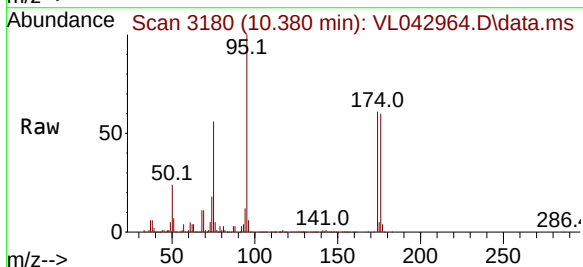
Instrument :
MSVOA_L
ClientSampleId :
SV2

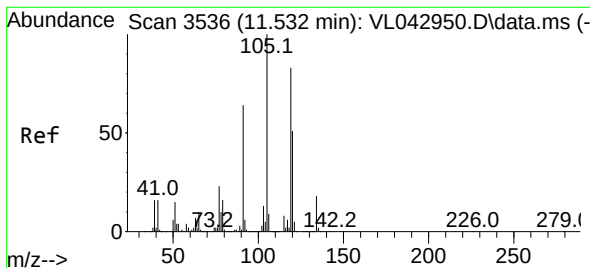
Tgt Ion: 91 Resp: 1840
Ion Ratio Lower Upper
91 100
106 43.8 22.4 67.0



#68
1-Bromo-4-Fluorobenzene
Concen: 10.107 ppbv
RT: 10.380 min Scan# 3180
Delta R.T. 0.010 min
Lab File: VL042964.D
Acq: 22 Sep 2025 19:14

Tgt Ion: 95 Resp: 320799
Ion Ratio Lower Upper
95 100
174 63.8 51.4 77.2
175 4.8 4.0 6.0





#74

1,2,4-Trimethylbenzene

Concen: 0.103 ppbv

RT: 11.539 min Scan# 31

Delta R.T. 0.006 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

Instrument :

MSVOA_L

ClientSampleId :

SV2

Tgt Ion:105 Resp: 6358

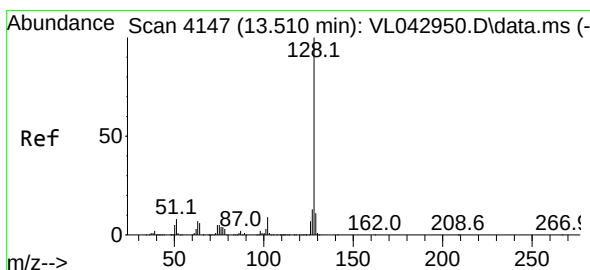
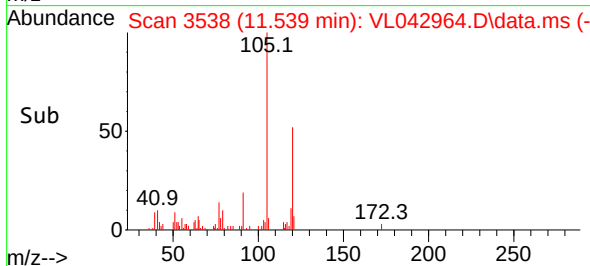
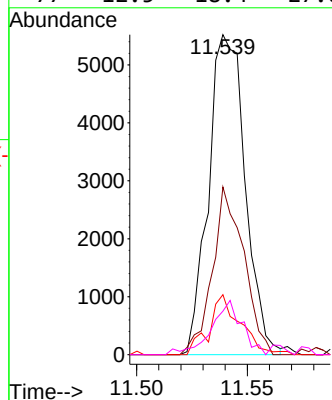
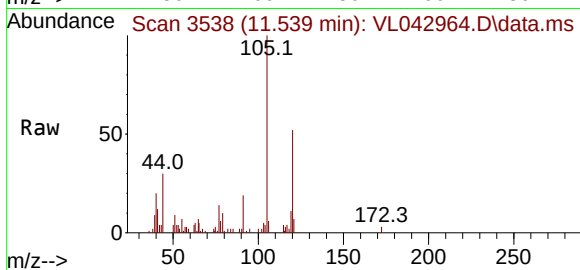
Ion Ratio Lower Upper

105 100

120 59.7 40.9 61.3

91 18.7 51.2 76.8#

77 12.5 18.4 27.6#



#79

Naphthalene

Concen: 0.032 ppbv

RT: 13.520 min Scan# 4150

Delta R.T. 0.010 min

Lab File: VL042964.D

Acq: 22 Sep 2025 19:14

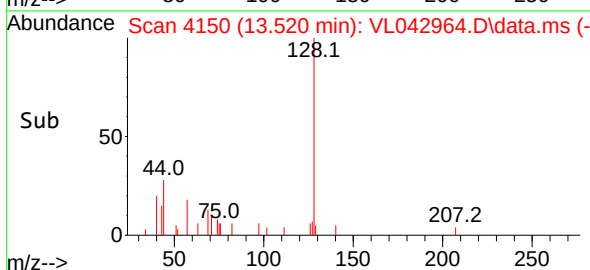
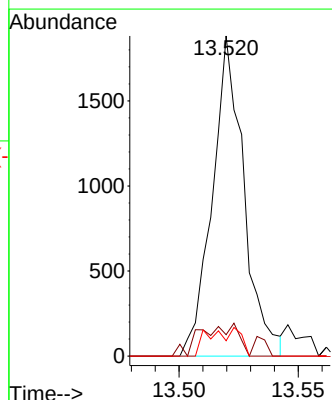
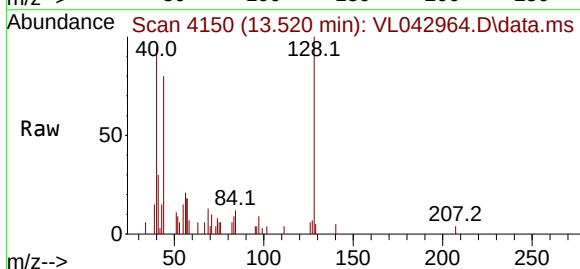
Tgt Ion:128 Resp: 1731

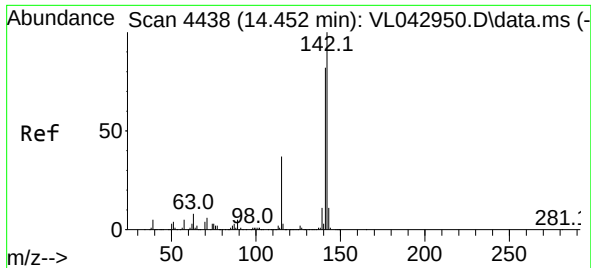
Ion Ratio Lower Upper

128 100

127 6.7 10.6 15.8#

129 4.8 9.0 13.6#





#80
 Naphthalene, 2-methyl-
 Concen: 0.165 ppbv
 RT: 14.465 min Scan# 44
 Delta R.T. 0.013 min
 Lab File: VL042964.D
 Acq: 22 Sep 2025 19:14

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

Tgt Ion:	142	Resp:	2778
Ion	Ratio	Lower	Upper
142	100		
141	83.7	65.1	97.7
115	48.4	28.9	43.3#

