

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040921\
 Data File : VL036775.D
 Acq On : 9 Apr 2021 15:30
 Operator : SY/AP
 Sample : M1987-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-4(2021)DUP

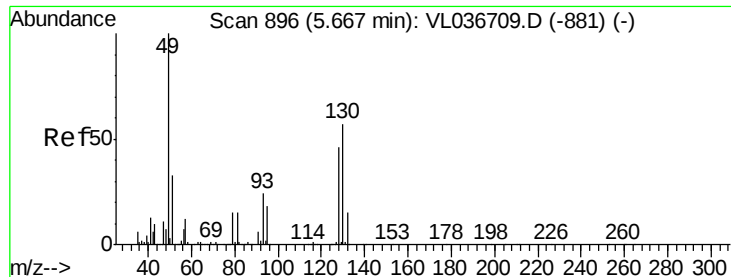
Quant Time: Apr 10 02:00:16 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1275890	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	3065007	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.07	117	2411383	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.41	95	1558561	8.11	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	81.10%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	44885	0.216 ppbv	91
3) Chlorodifluoromethane	2.98	51	87887	0.369 ppbv #	88
4) Chloromethane	3.13	50	43043	0.511 ppbv	99
9) Propene	3.20	41	188657	2.482 ppbv	99
10) Heptane	8.10	43	11917	0.062 ppbv #	28
11) Trichlorofluoromethane	3.94	101	39810	0.188 ppbv	84
12) 1,1,2-Trichlorotrifluoroet	4.47	101	4450	0.033 ppbv #	11
13) Ethanol	3.60	45	778275	85.999 ppbv	97
15) Acetone	3.86	43	894062	7.120 ppbv #	81
16) 1,3-Butadiene	3.30	39	21833	0.250 ppbv #	13
19) Isopropyl Alcohol	3.97	45	86166	1.247 ppbv #	90
20) Methylene Chloride	4.33	84	585458	9.957 ppbv	93
21) Allyl Chloride	4.33	41	15461	0.154 ppbv #	17
23) Vinyl Acetate	5.05	43	14866	0.069 ppbv #	1
25) Ethyl Acetate	5.67	43	416926	1.396 ppbv #	80
26) Hexane	5.67	57	541246	3.907 ppbv #	47
30) Cyclohexane	7.12	84	9471	0.084 ppbv #	1
34) 2-Butanone	5.24	43	67380	0.450 ppbv	93
35) Carbon Tetrachloride	7.01	117	8473	0.036 ppbv	92
36) Benzene	6.88	78	94003	0.333 ppbv	95
39) 1,2-Dichloropropane	7.16	63	796603	6.947 ppbv #	24
41) Tetrahydrofuran	6.31	42	2992	0.043 ppbv #	44
44) 2,2,4-Trimethylpentane	7.86	57	137983	0.277 ppbv #	66
53) Toluene	9.80	91	624144	2.073 ppbv	99
59) m/p-Xylene	12.98	91	28030	0.092 ppbv #	32
60) o-Xylene	13.68	91	26340	0.089 ppbv #	30
74) 1,2,4-Trimethylbenzene	16.75	105	13574	0.042 ppbv #	67

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.02 min

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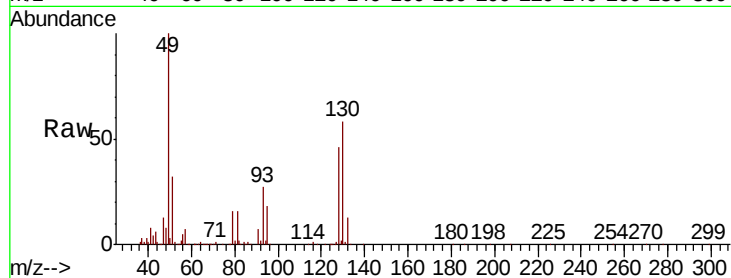
Tot Ion: 49 Resp: 1275890

Ion Ratio Lower Upper

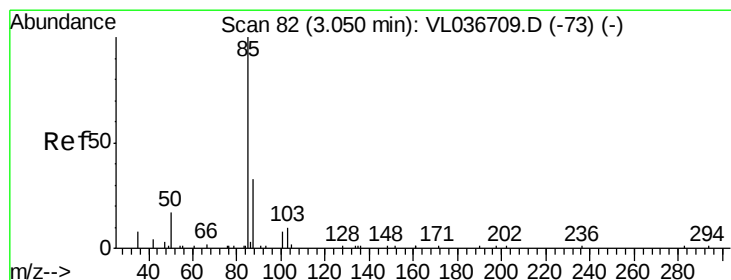
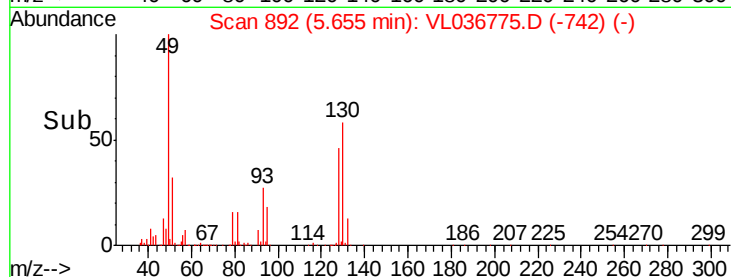
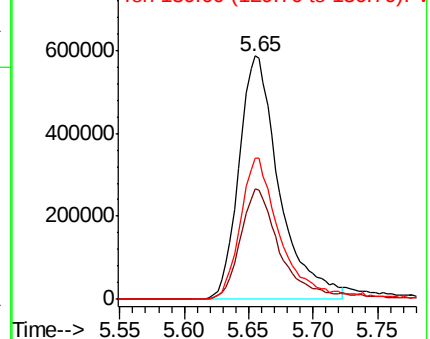
49 100

128 46.9 23.5 70.6

130 59.2 29.1 87.4



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.216 ppbv

RT: 3.04 min Scan# 78

Delta R.T. -0.01 min

Lab File: VL036775.D

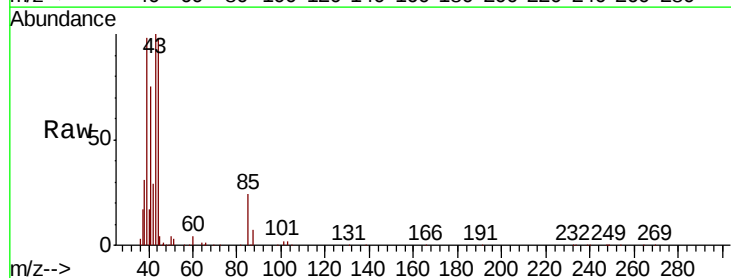
Acq: 9 Apr 2021 15:30

Tgt Ion: 85 Resp: 44885

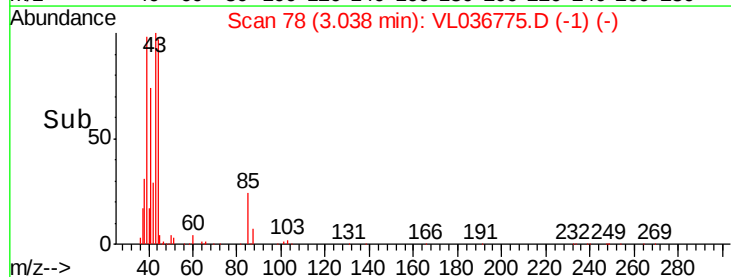
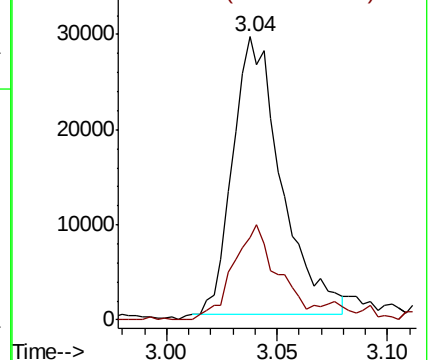
Ion Ratio Lower Upper

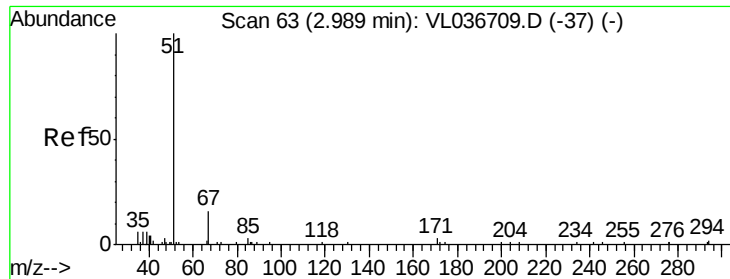
85 100

87 29.6 27.8 41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.369 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.01 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

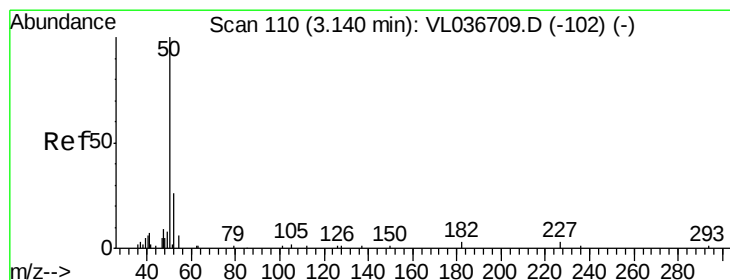
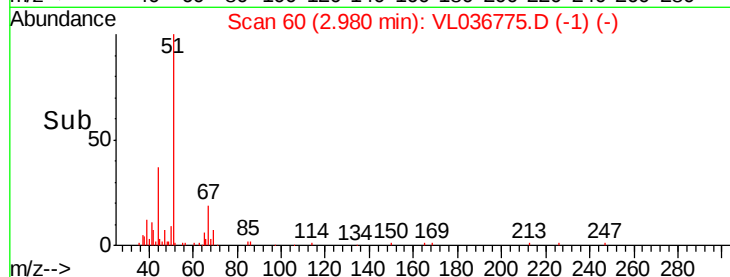
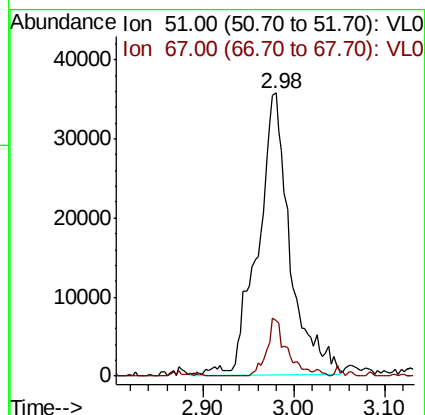
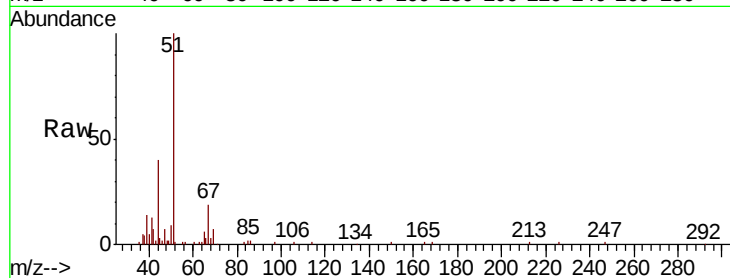
GOI-IA-4(2021)DUP

Tot Ion: 51 Resp: 87887

Ion Ratio Lower Upper

51 100

67 13.0 14.7 22.1#



#4

Chloromethane

Concen: 0.511 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL036775.D

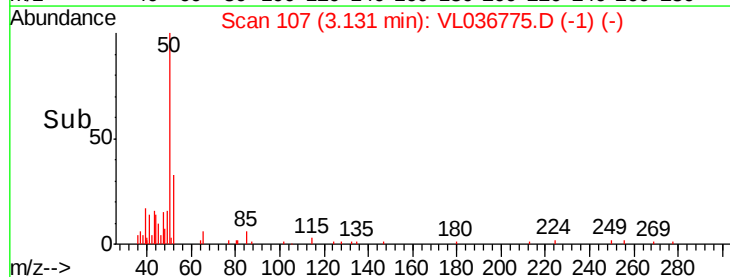
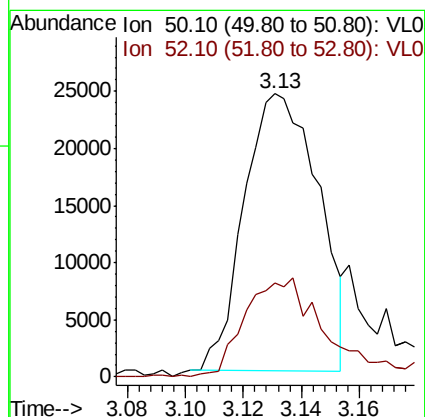
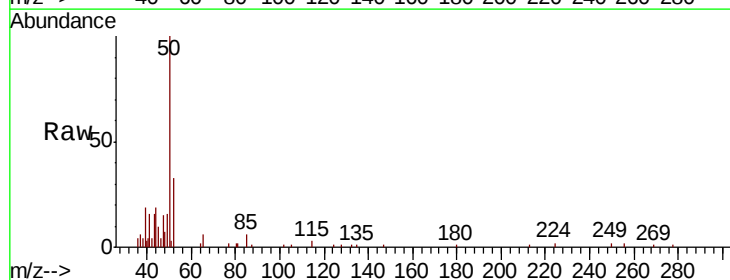
Acq: 9 Apr 2021 15:30

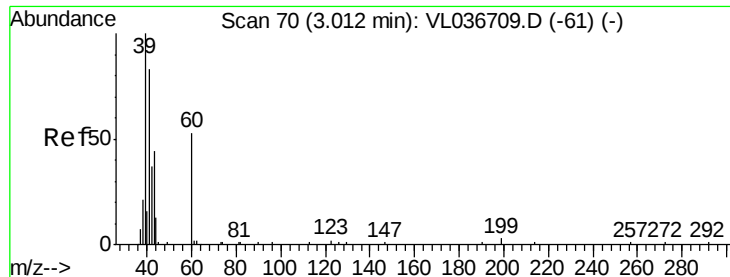
Tgt Ion: 50 Resp: 43043

Ion Ratio Lower Upper

50 100

52 34.6 27.0 40.6





#9

Propene

Concen: 2.482 ppbv

RT: 3.20 min Scan# 127

Delta R.T. 0.19 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

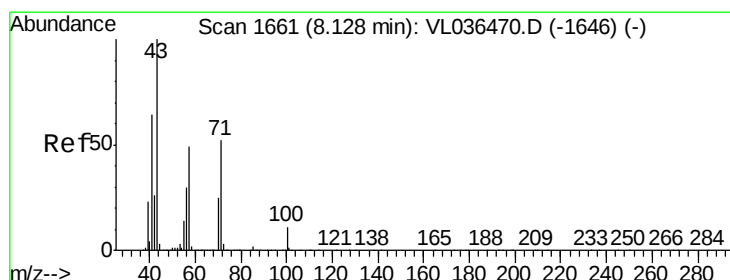
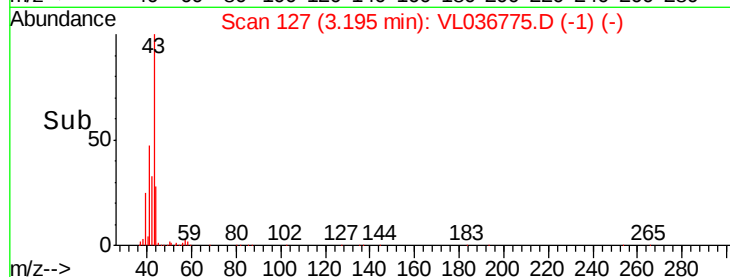
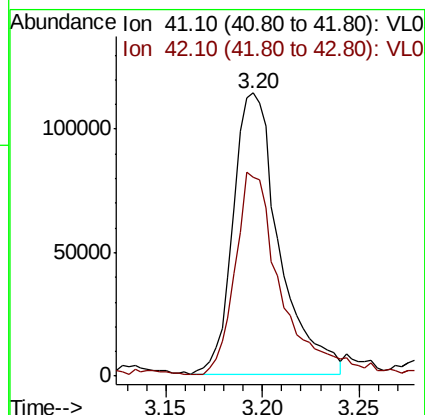
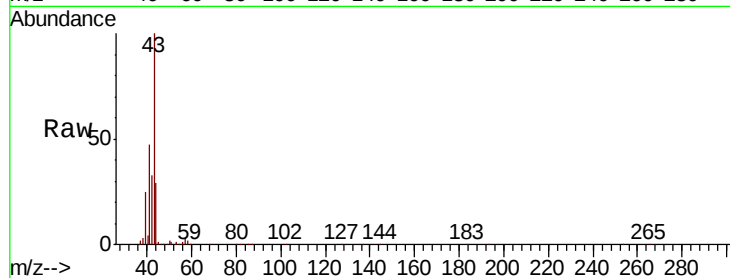
GOI-IA-4(2021)DUP

Tot Ion: 41 Resp: 188657

Ion Ratio Lower Upper

41 100

42 71.6 57.0 85.4



#10

Heptane

Concen: 0.062 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.03 min

Lab File: VL036775.D

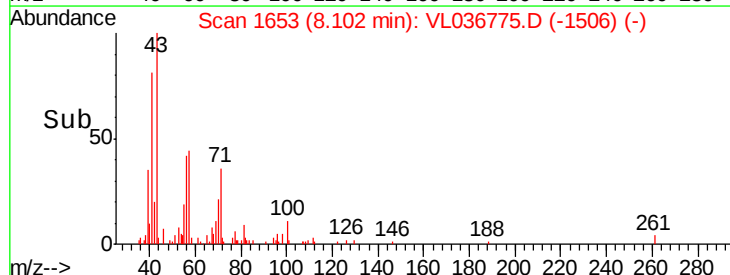
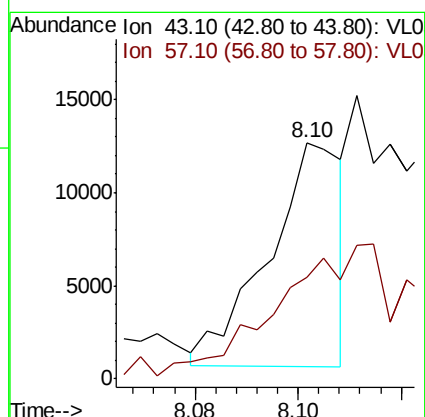
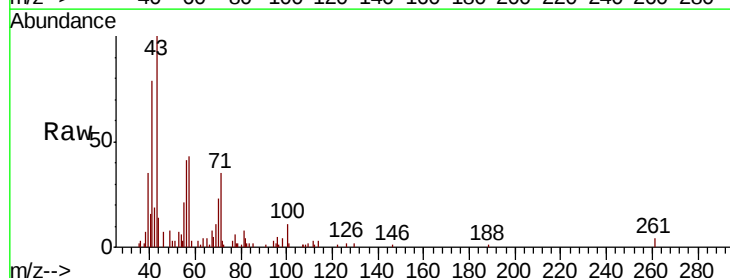
Acq: 9 Apr 2021 15:30

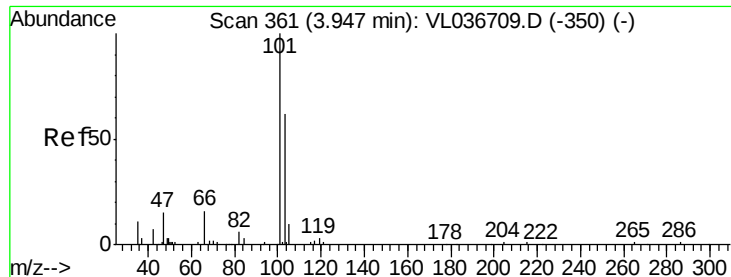
Tgt Ion: 43 Resp: 11917

Ion Ratio Lower Upper

43 100

57 0.0 39.0 58.6#





#11

Trichlorofluoromethane

Concen: 0.188 ppbv

RT: 3.94 min Scan# 358

Delta R.T. -0.01 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

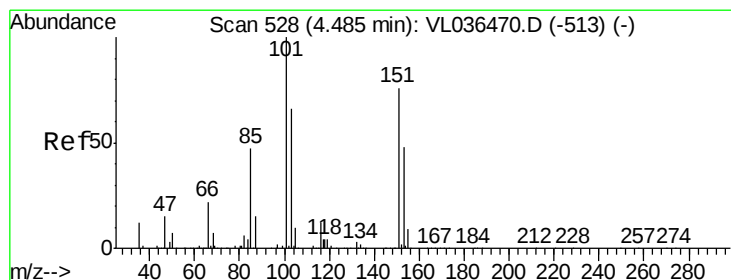
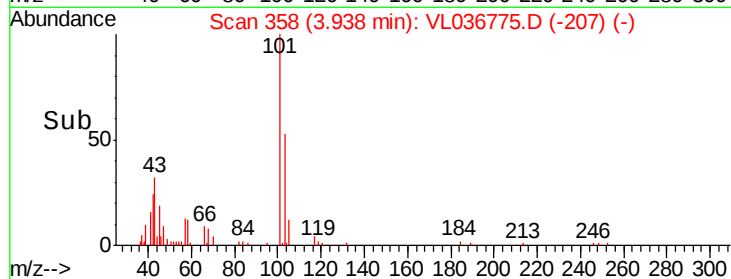
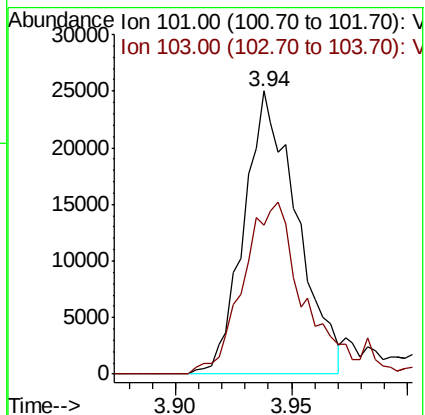
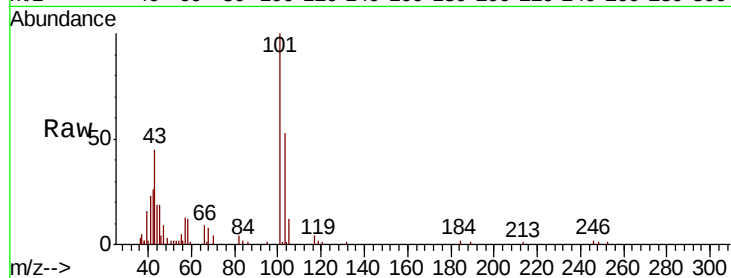
GOI-IA-4(2021)DUP

Tot Ion:101 Resp: 39810

Ion Ratio Lower Upper

101 100

103 52.8 52.5 78.7



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.033 ppbv

RT: 4.47 min Scan# 524

Delta R.T. -0.01 min

Lab File: VL036775.D

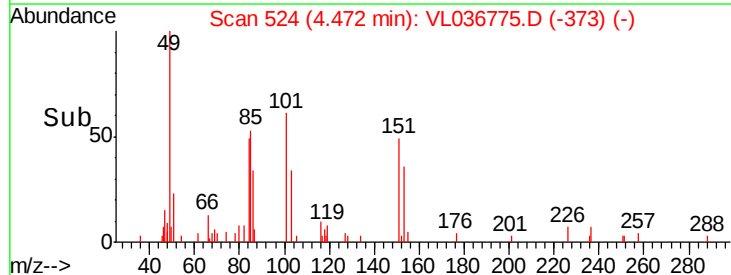
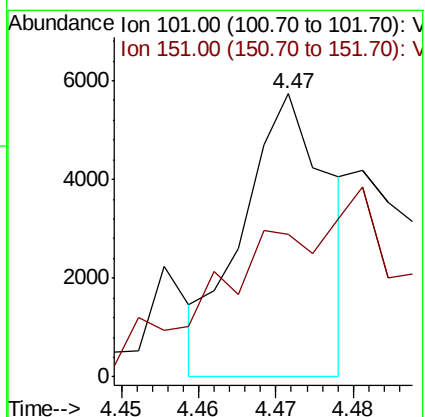
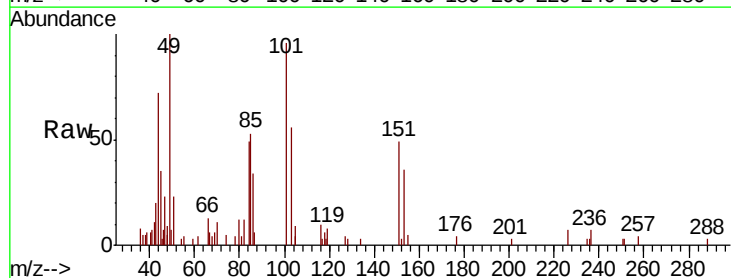
Acq: 9 Apr 2021 15:30

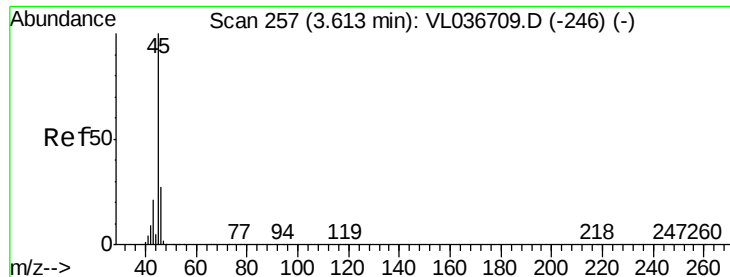
Tgt Ion:101 Resp: 4450

Ion Ratio Lower Upper

101 100

151 0.0 60.9 91.3#





#13

Ethanol

Concen: 85.999 ppbv

RT: 3.60 min Scan# 253

Delta R.T. -0.01 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

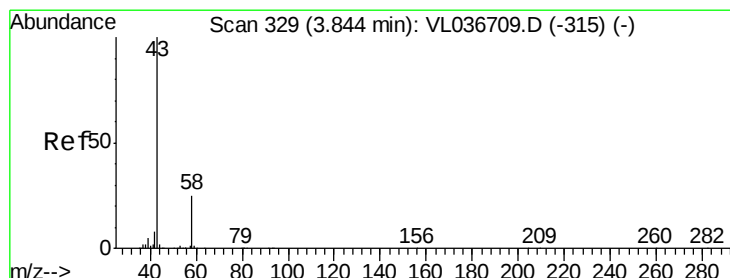
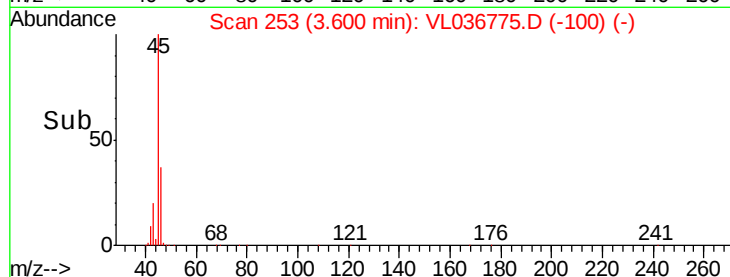
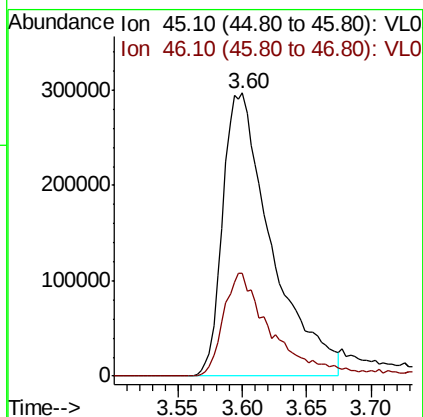
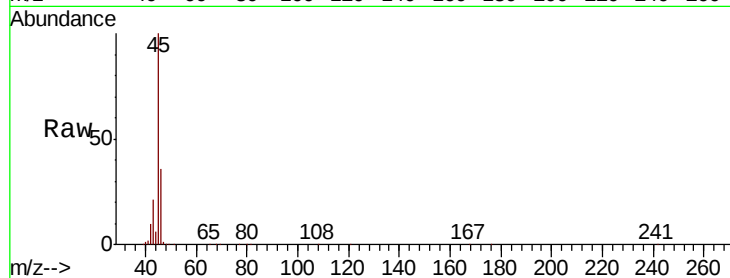
GOI-IA-4(2021)DUP

Tot Ion: 45 Resp: 778275

Ion Ratio Lower Upper

45 100

46 39.3 16.6 66.2



#15

Acetone

Concen: 7.120 ppbv

RT: 3.86 min Scan# 334

Delta R.T. 0.01 min

Lab File: VL036775.D

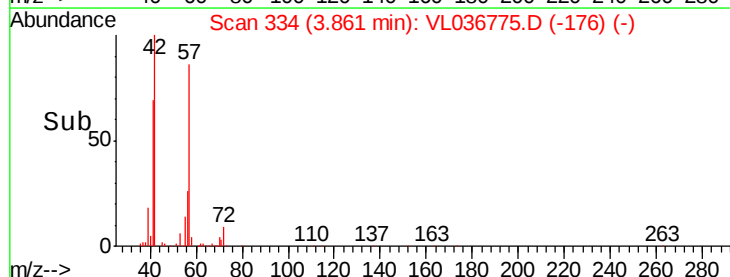
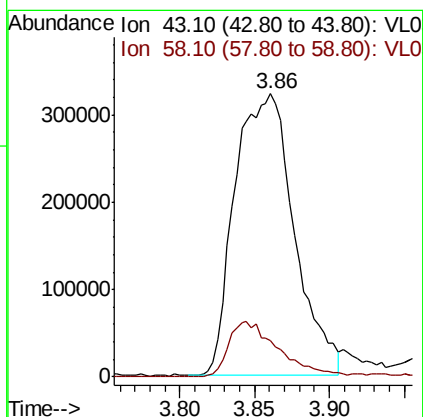
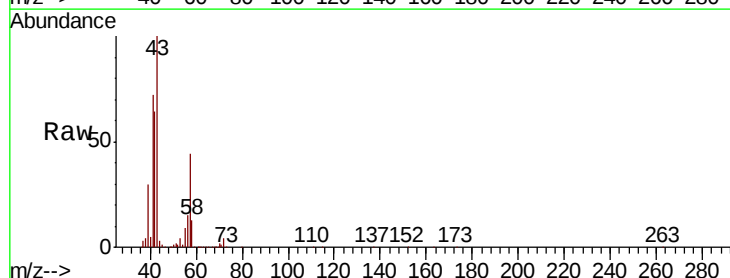
Acq: 9 Apr 2021 15:30

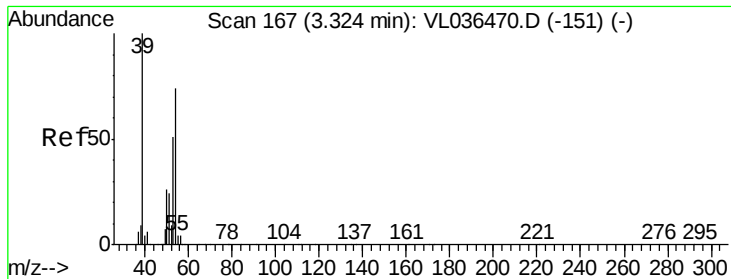
Tgt Ion: 43 Resp: 894062

Ion Ratio Lower Upper

43 100

58 16.5 21.2 31.8#

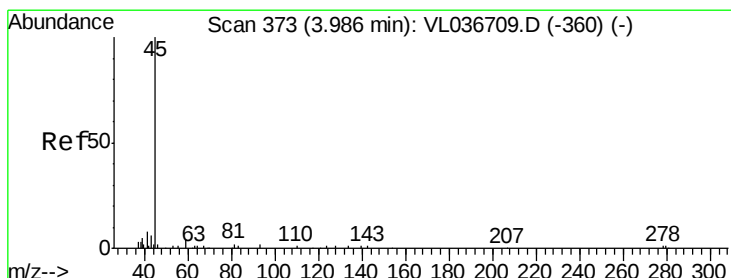
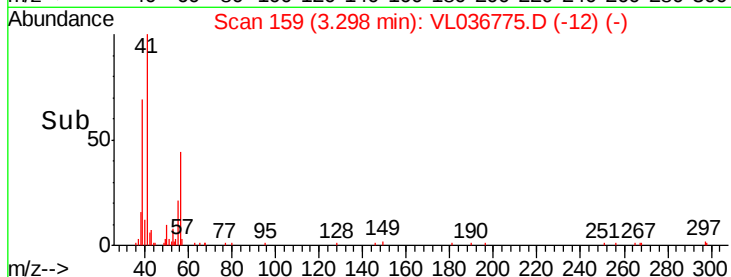
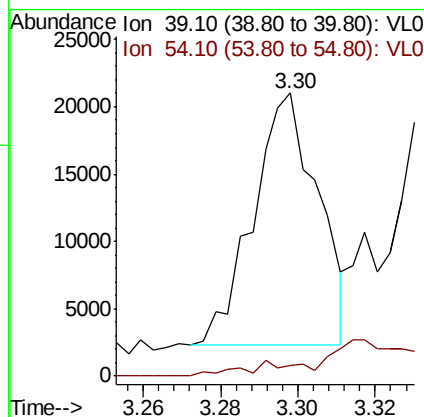
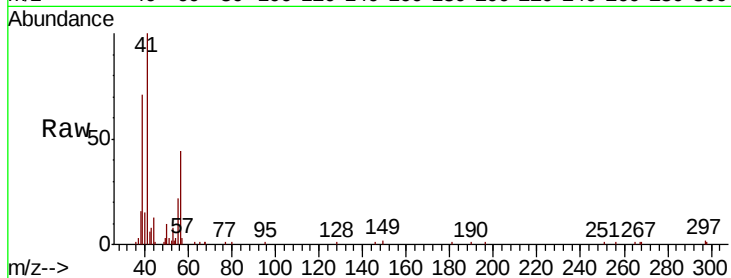




#16
 1,3-Butadiene
 Concen: 0.250 ppbv
 RT: 3.30 min Scan# 159
 Delta R.T. -0.03 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

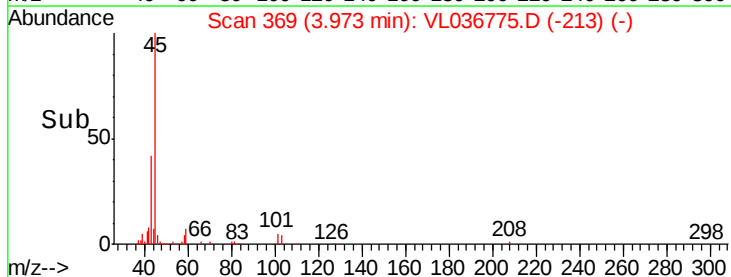
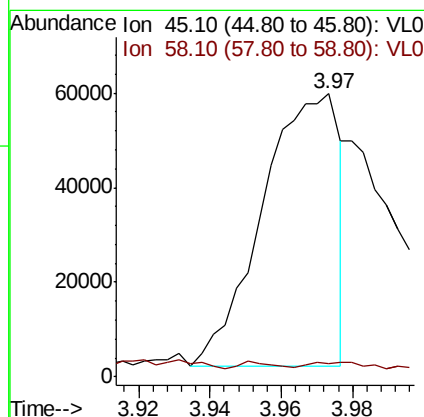
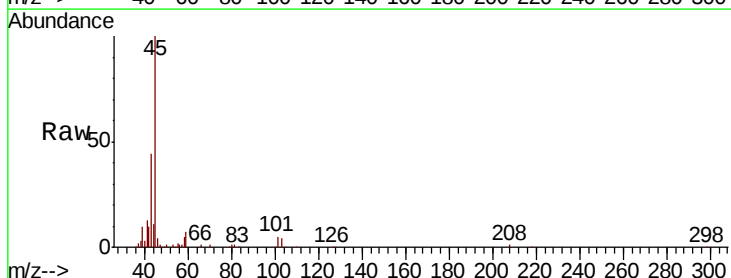
Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-4(2021)DUP

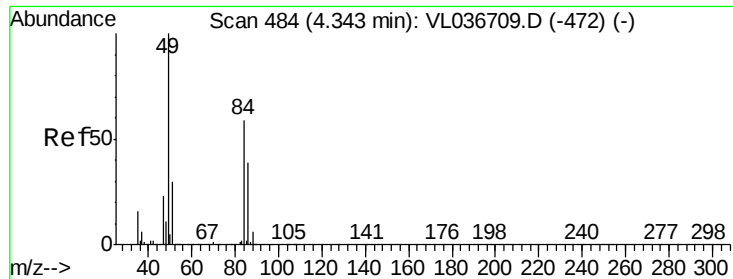
Tot Ion: 39 Resp: 21833
 Ion Ratio Lower Upper
 39 100
 54 0.0 58.8 88.2#



#19
 Isopropyl Alcohol
 Concen: 1.247 ppbv
 RT: 3.97 min Scan# 369
 Delta R.T. 0.00 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

Tgt Ion: 45 Resp: 86166
 Ion Ratio Lower Upper
 45 100
 58 6.8 2.9 4.3#

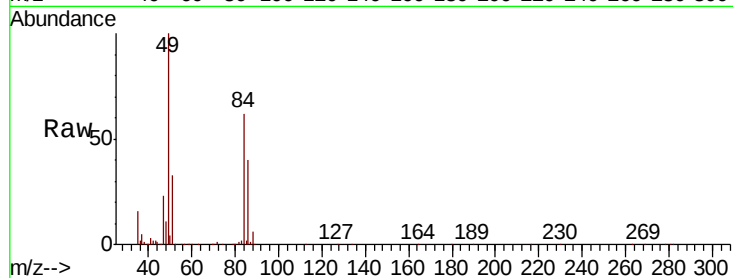




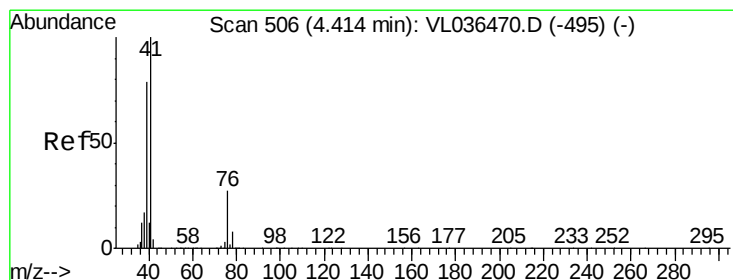
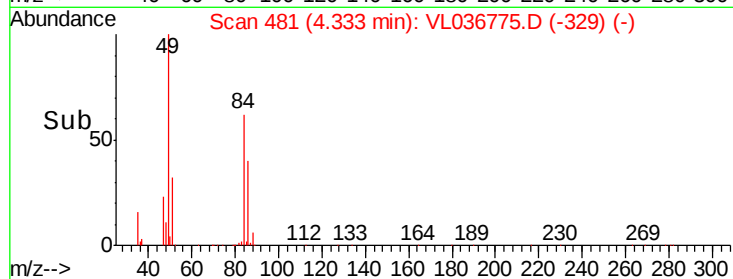
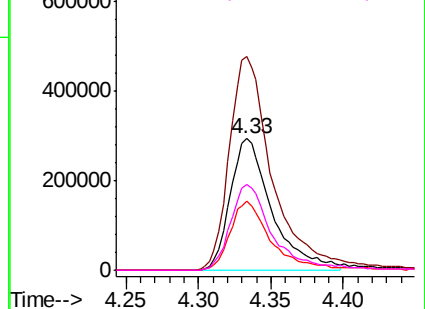
#20
Methylene Chloride
Concen: 9.957 ppbv
RT: 4.33 min Scan# 481
Delta R.T. -0.01 min
Lab File: VL036775.D
Acq: 9 Apr 2021 15:30

Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-4(2021)DUP

Tot Ion:	84	Resp:	585458
Ion	Ratio	Lower	Upper
84	100		
49	162.3	122.9	184.3
51	52.7	36.9	55.3
86	65.2	48.2	72.4

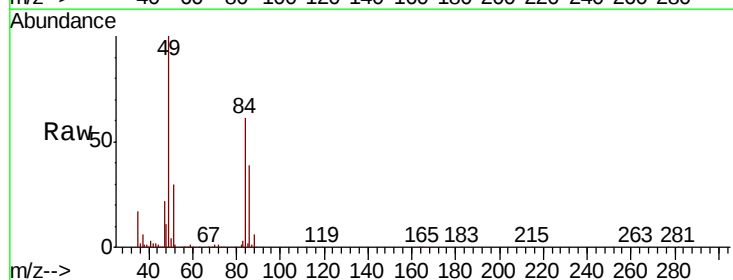


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

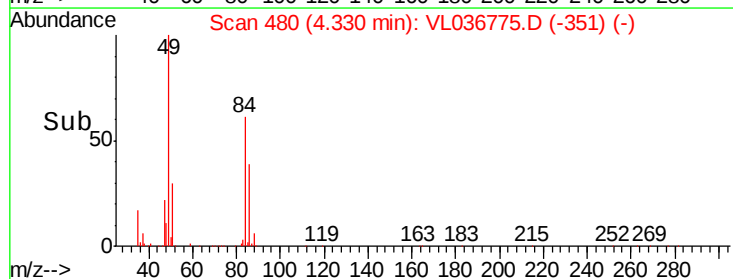
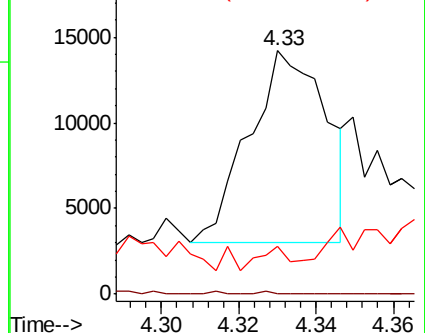


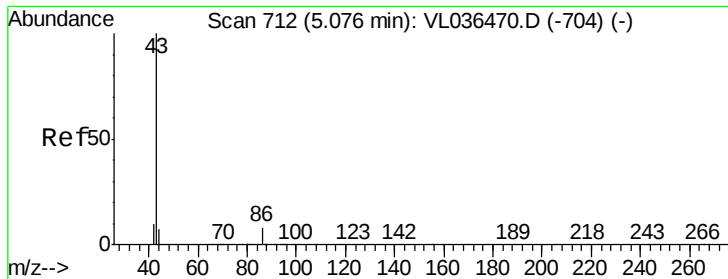
#21
Allyl Chloride
Concen: 0.154 ppbv
RT: 4.33 min Scan# 480
Delta R.T. -0.08 min
Lab File: VL036775.D
Acq: 9 Apr 2021 15:30

Tgt Ion:	41	Resp:	15461
Ion	Ratio	Lower	Upper
41	100		
76	0.2	22.9	34.3#
39	0.0	67.3	100.9#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0





#23

Vinyl Acetate

Concen: 0.069 ppbv

RT: 5.05 min Scan# 705

Delta R.T. -0.02 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

GOI-IA-4(2021)DUP

Tot Ion: 43 Resp: 14866

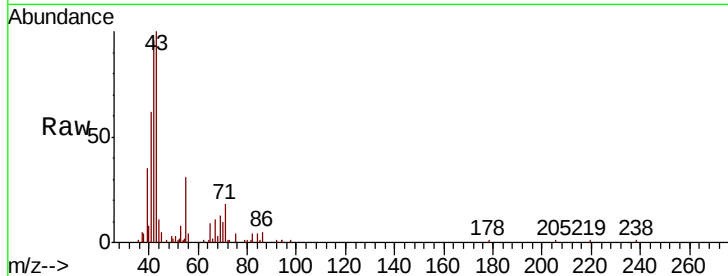
Ion Ratio Lower Upper

43 100

86 1.7 5.4 8.0#

42 106.2 8.5 12.7#

44 0.0 4.6 7.0#

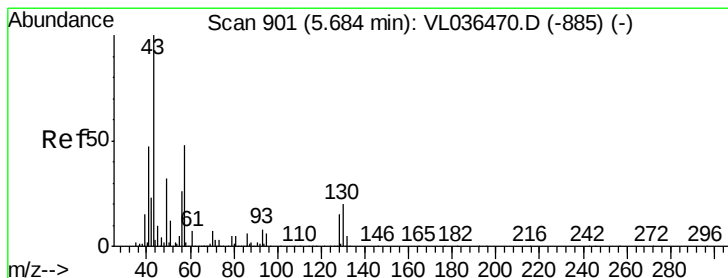
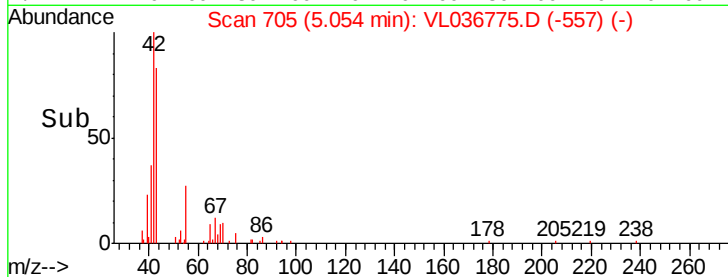
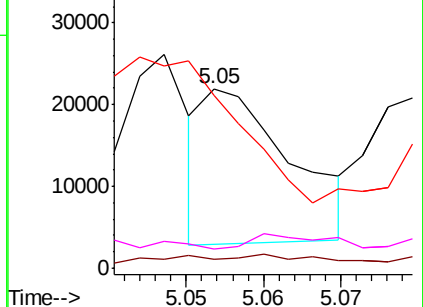


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 1.396 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Tgt Ion: 43 Resp: 416926

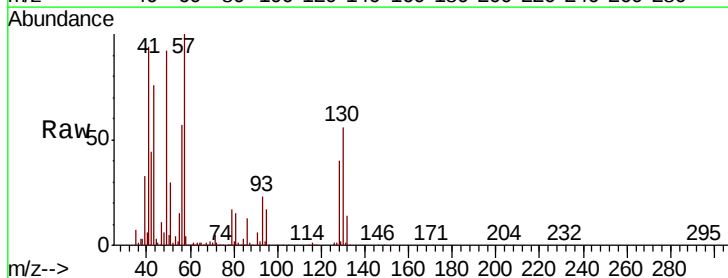
Ion Ratio Lower Upper

43 100

45 1.7 7.9 11.9#

61 1.2 7.4 11.2#

70 1.9 5.1 7.7#

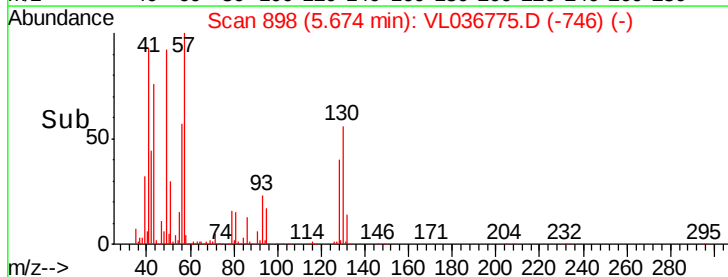
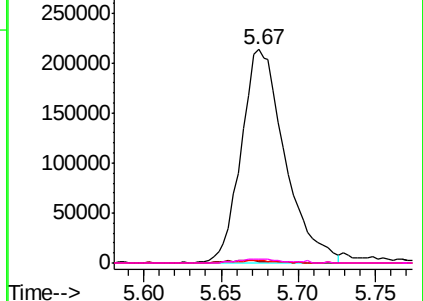


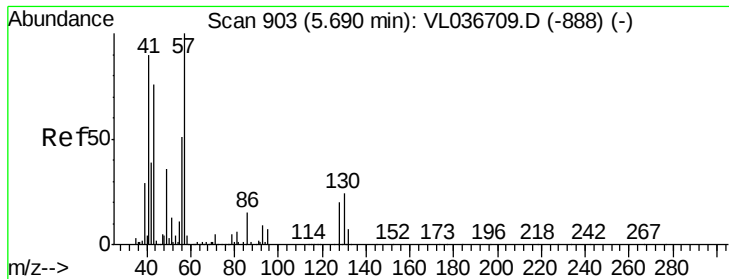
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 3.907 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

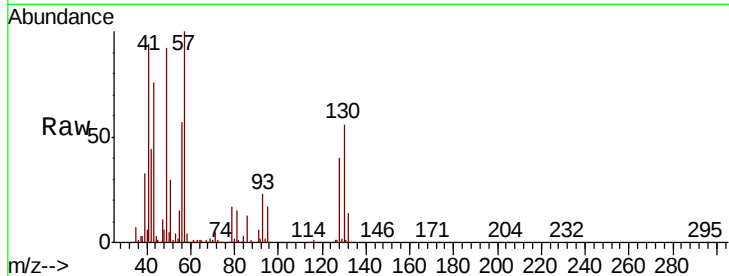
Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

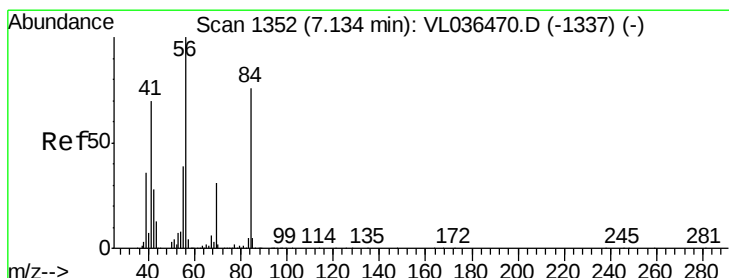
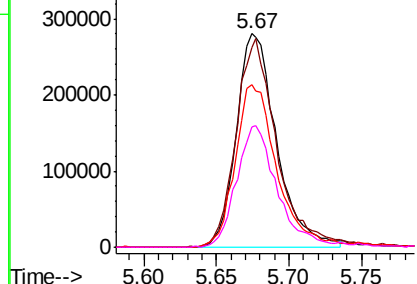
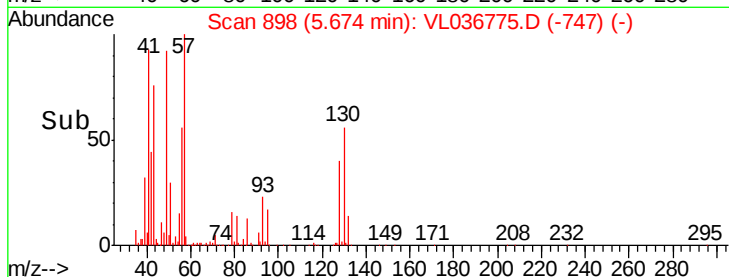
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-4(2021)DUP

Tot Ion: 57 Resp: 541246

Ion	Ratio	Lower	Upper
57	100		
41	100.6	77.2	115.8
43	80.6	173.8	260.6#
56	59.2	43.8	65.6



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0



#30

Cyclohexane

Concen: 0.084 ppbv

RT: 7.12 min Scan# 1347

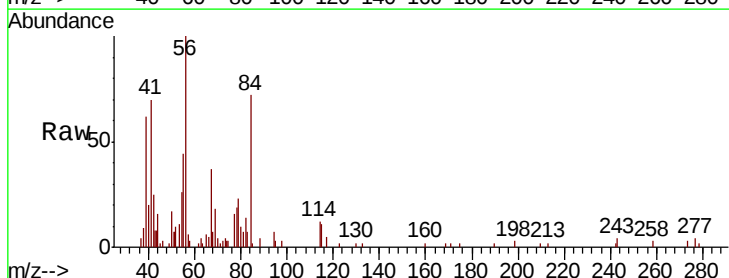
Delta R.T. -0.02 min

Lab File: VL036775.D

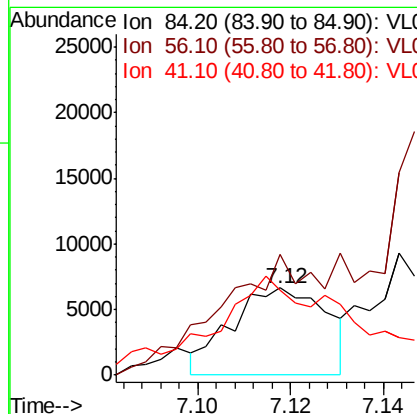
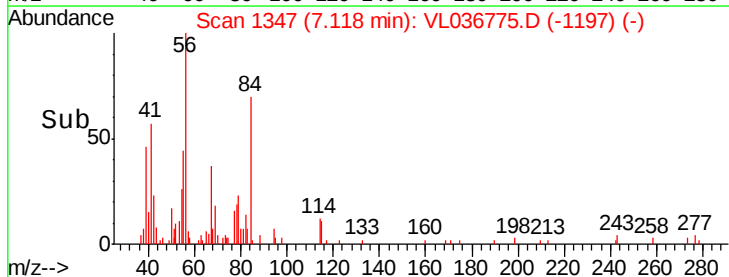
Acq: 9 Apr 2021 15:30

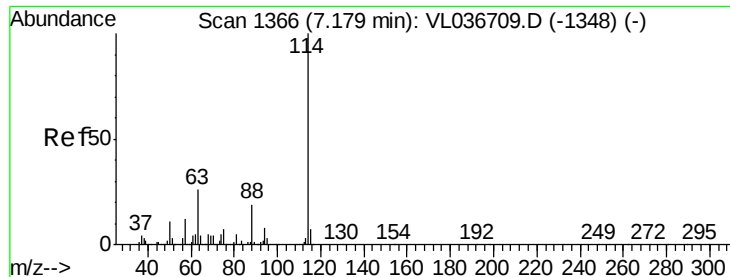
Tgt Ion: 84 Resp: 9471

Ion	Ratio	Lower	Upper
84	100		
56	0.0	114.6	171.8#
41	168.2	75.3	112.9#



Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

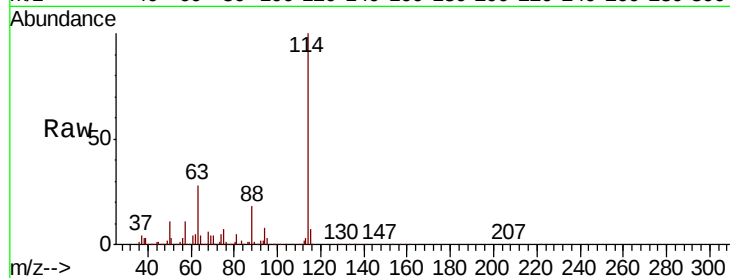




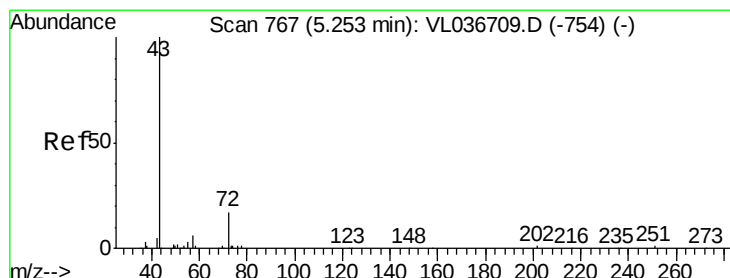
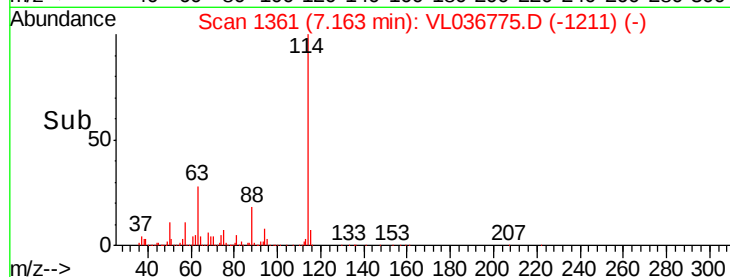
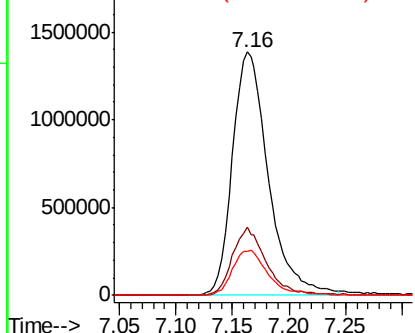
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1361
 Delta R.T. -0.02 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-4(2021)DUP

Tot Ion:114 Resp: 3065007
 Ion Ratio Lower Upper
 114 100
 63 26.7 22.4 33.6
 88 18.8 15.4 23.0

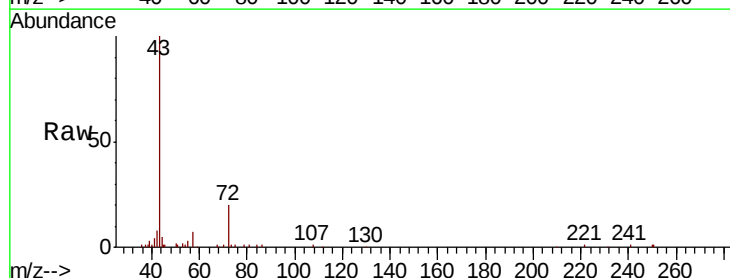


Abundance Ion 114.10 (113.80 to 114.80): V
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

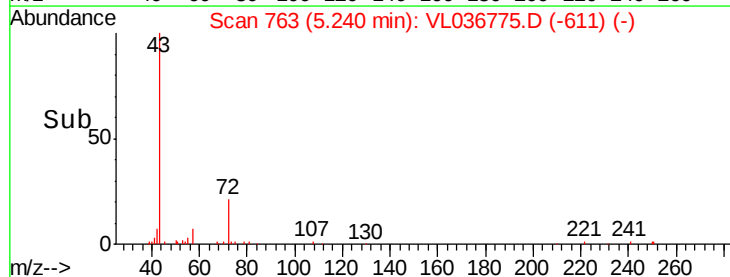
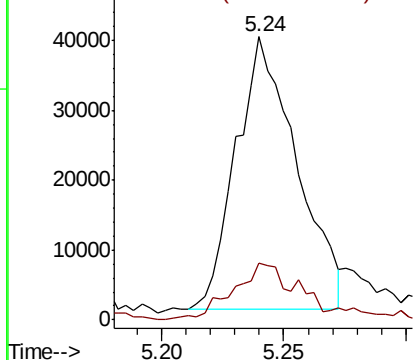


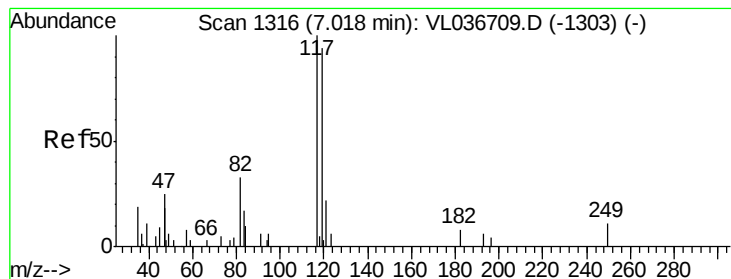
#34
 2-Butanone
 Concen: 0.450 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. -0.01 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

Tgt Ion: 43 Resp: 67380
 Ion Ratio Lower Upper
 43 100
 72 24.8 17.0 25.6



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.036 ppbv

RT: 7.01 min Scan# 1312

Delta R.T. -0.02 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

GOI-IA-4(2021)DUP

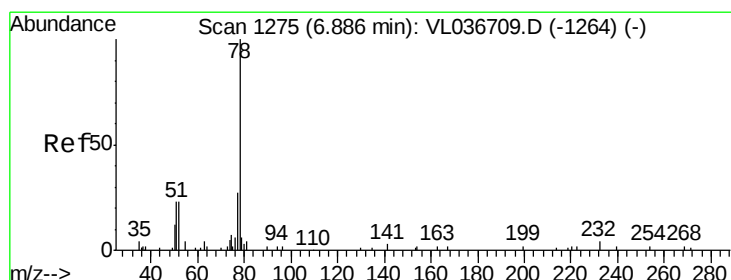
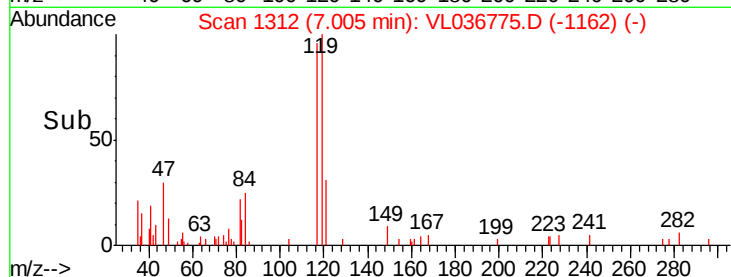
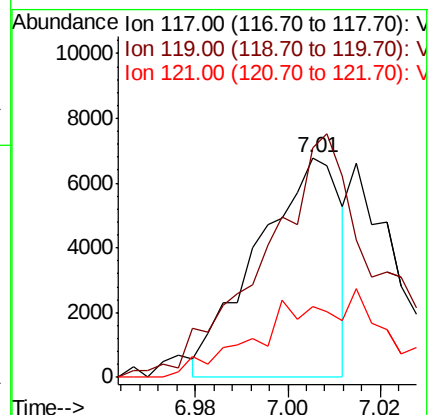
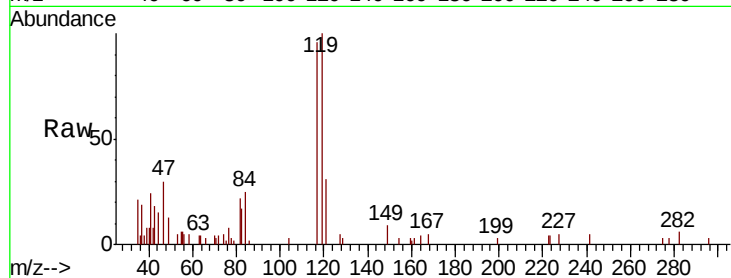
Tot Ion:117 Resp: 8473

Ion Ratio Lower Upper

117 100

119 90.0 78.2 117.2

121 25.1 24.5 36.7



#36

Benzene

Concen: 0.333 ppbv

RT: 6.88 min Scan# 1272

Delta R.T. -0.02 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

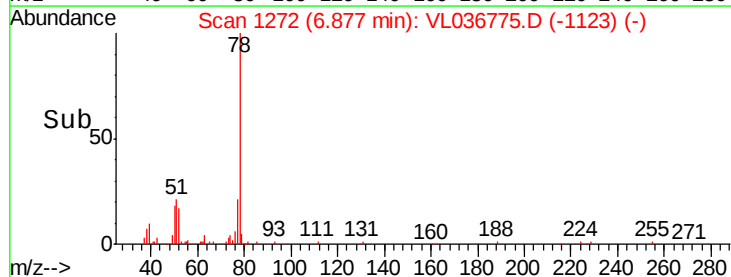
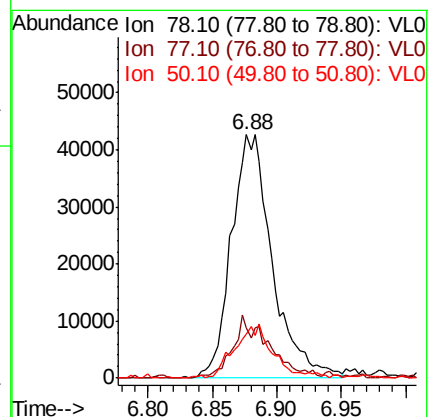
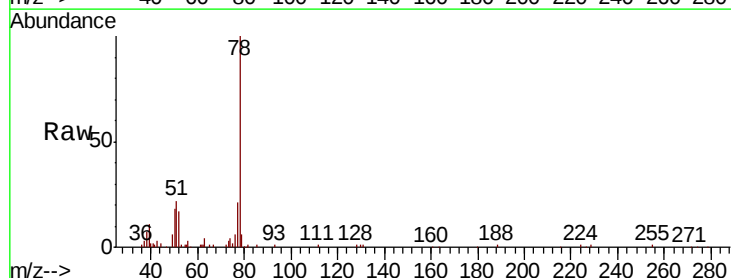
Tgt Ion: 78 Resp: 94003

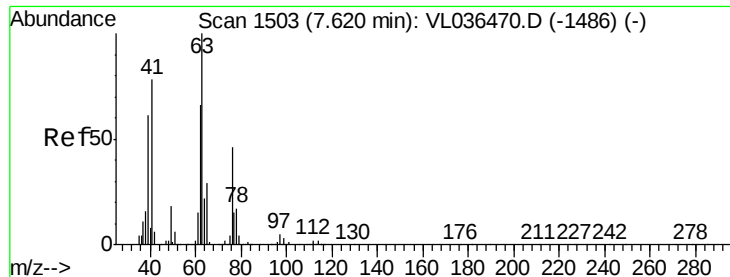
Ion Ratio Lower Upper

78 100

77 20.8 18.0 27.0

50 18.0 16.5 24.7





#39

1,2-Dichloropropane

Concen: 6.947 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.46 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

Instrument :

MSVOA_L

ClientSampleId :

GOI-IA-4(2021)DUP

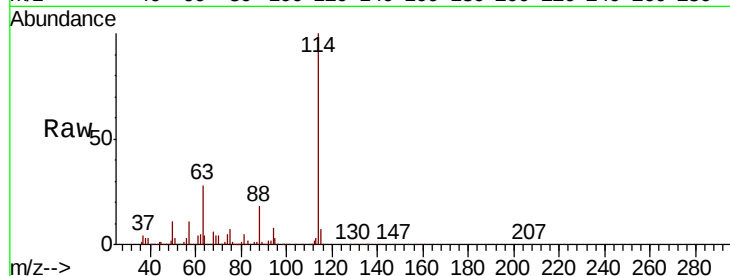
Tot Ion: 63 Resp: 796603

Ion Ratio Lower Upper

63 100

41 0.0 62.4 93.6#

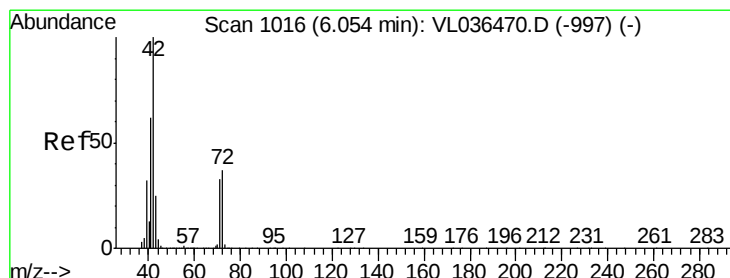
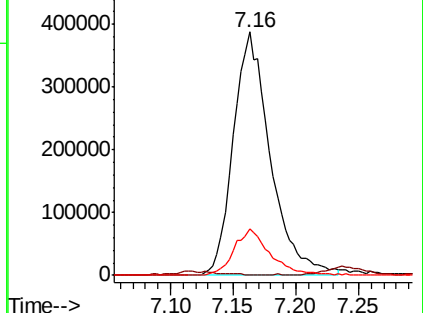
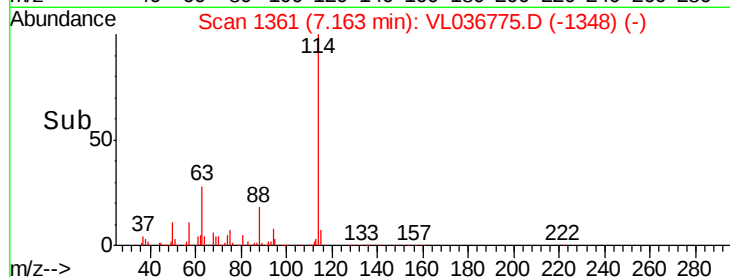
62 18.9 52.8 79.2#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.043 ppbv

RT: 6.31 min Scan# 1097

Delta R.T. 0.26 min

Lab File: VL036775.D

Acq: 9 Apr 2021 15:30

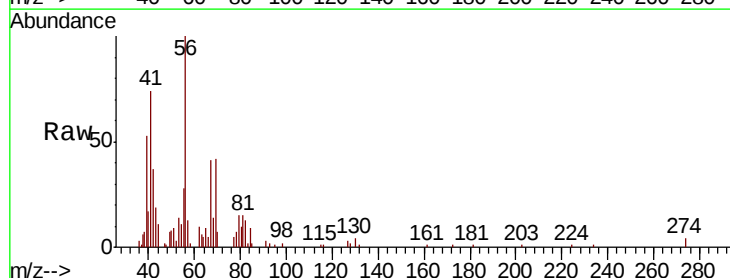
Tgt Ion: 42 Resp: 2992

Ion Ratio Lower Upper

42 100

72 3.7 27.6 41.4#

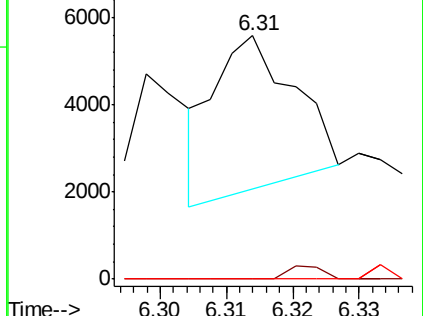
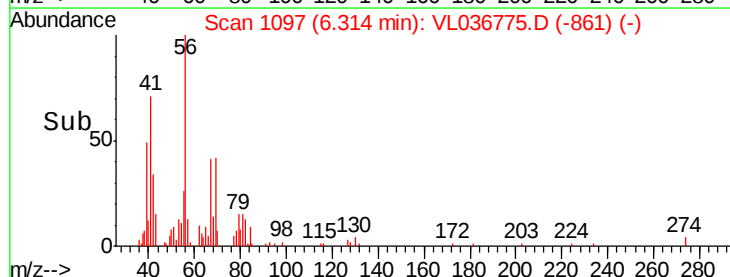
71 0.0 27.0 40.4#

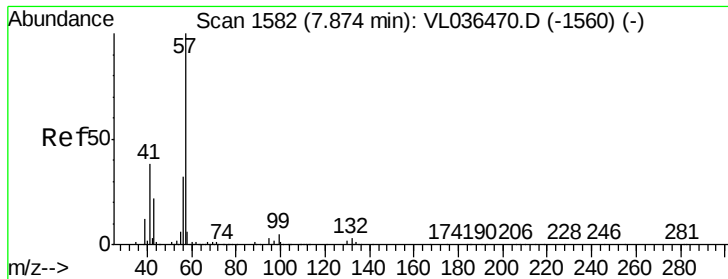


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0

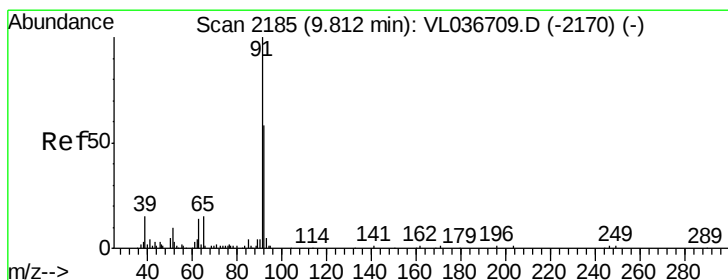
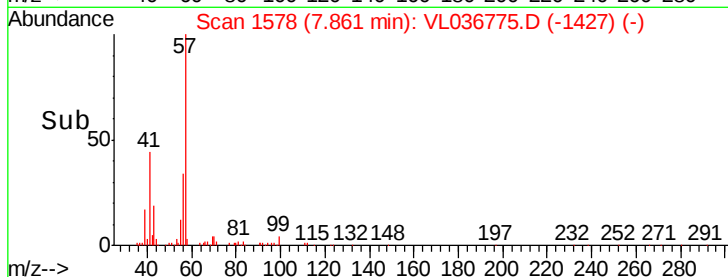
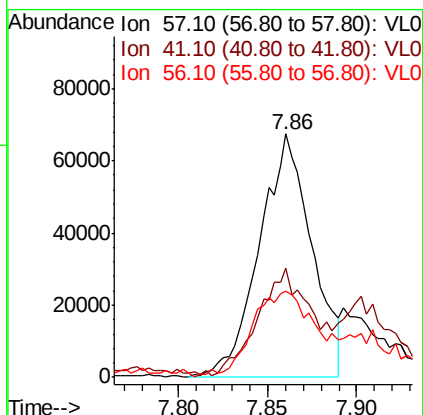
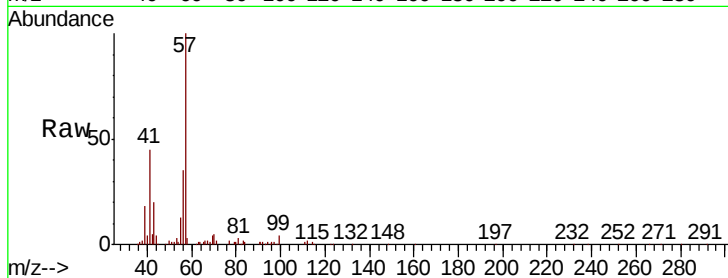




#44
 2,2,4-Trimethylpentane
 Concen: 0.277 ppbv
 RT: 7.86 min Scan# 1578
 Delta R.T. -0.01 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

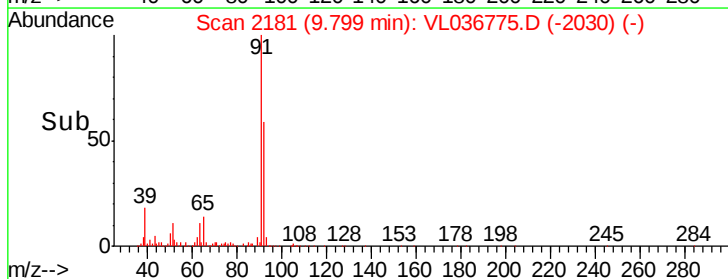
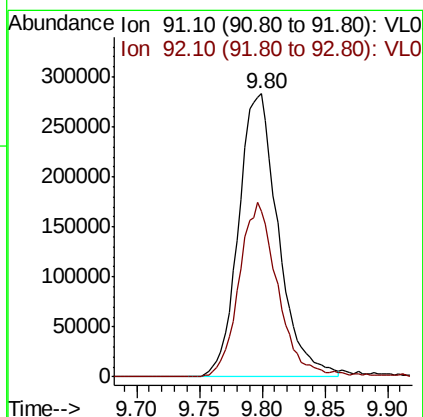
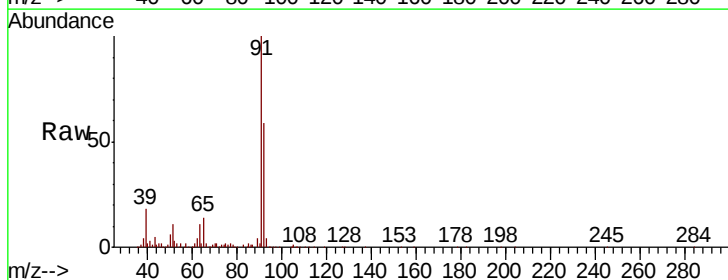
Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-4(2021)DUP

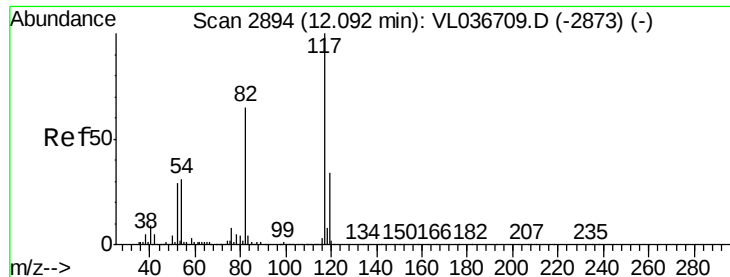
Tot Ion	57	Resp	137983
Ion	Ratio	Lower	Upper
57	100		
41	45.6	28.8	43.2#
56	63.1	26.1	39.1#



#53
 Toluene
 Concen: 2.073 ppbv
 RT: 9.80 min Scan# 2181
 Delta R.T. -0.01 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

Tgt Ion	91	Resp	624144
Ion	Ratio	Lower	Upper
91	100		
92	60.4	48.8	73.2

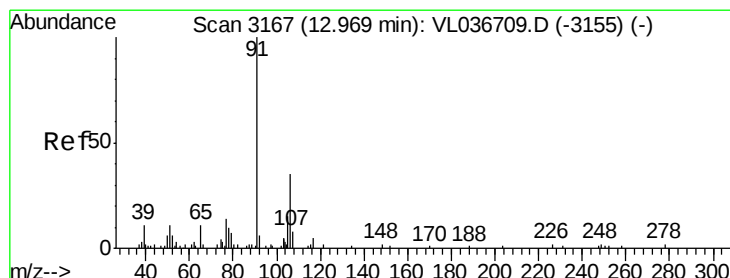
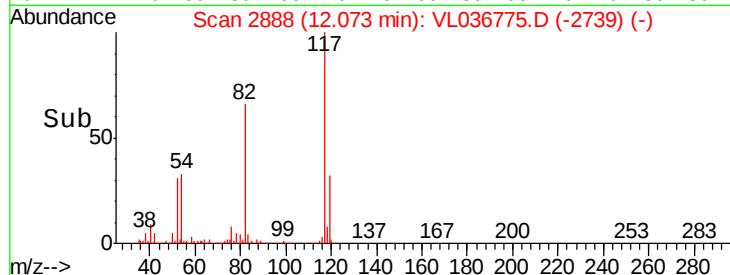
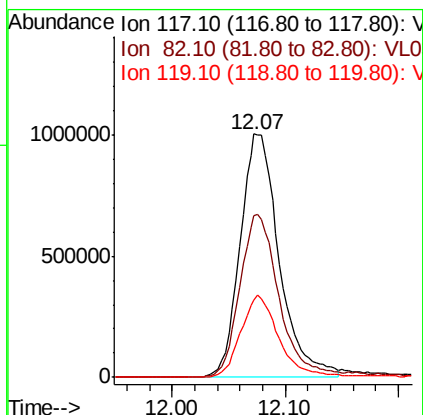
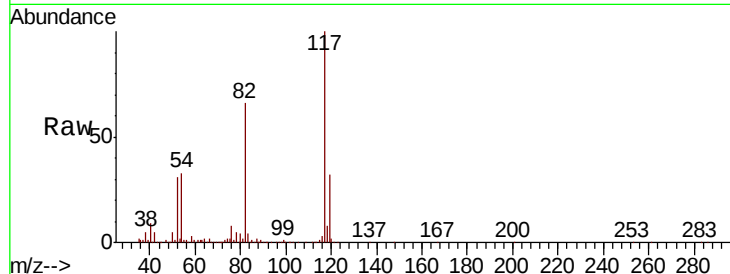




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min Scan# 2888
Delta R.T. -0.02 min
Lab File: VL036775.D
Acq: 9 Apr 2021 15:30

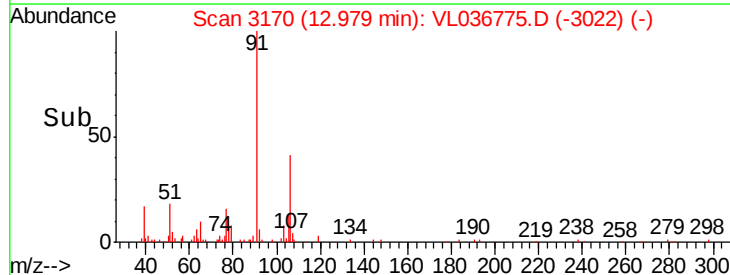
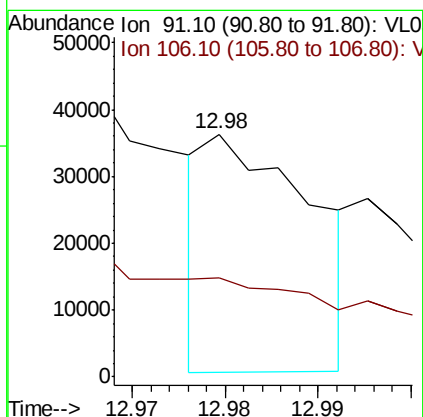
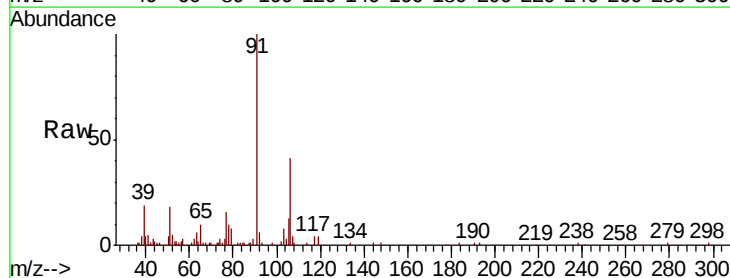
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-4(2021)DUP

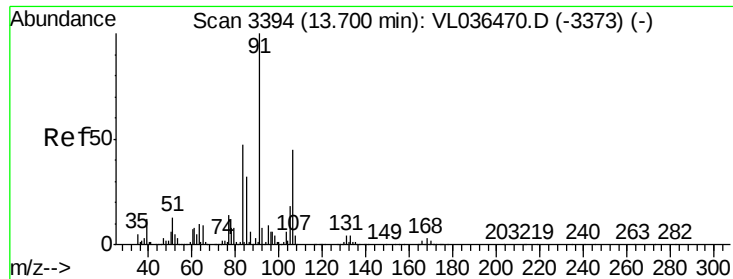
Tot Ion:117 Resp: 2411383
Ion Ratio Lower Upper
117 100
82 69.7 57.4 86.0
119 33.6 47.4 71.0#



#59
m/p-Xylene
Concen: 0.092 ppbv
RT: 12.98 min Scan# 3170
Delta R.T. -0.02 min
Lab File: VL036775.D
Acq: 9 Apr 2021 15:30

Tgt Ion: 91 Resp: 28030
Ion Ratio Lower Upper
91 100
106 0.0 35.3 52.9#

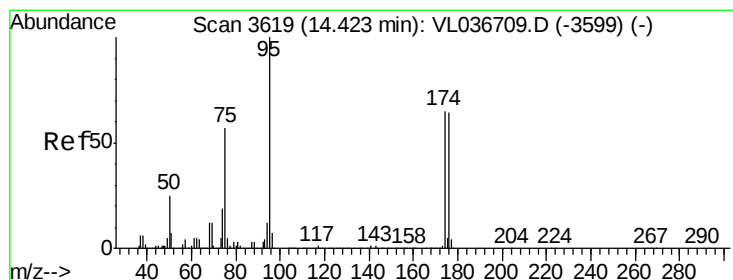
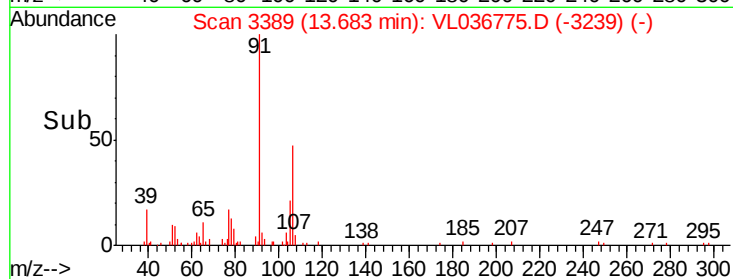
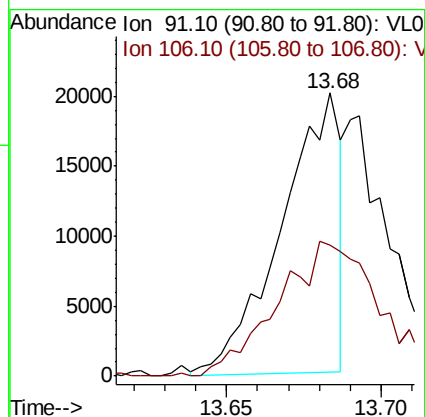
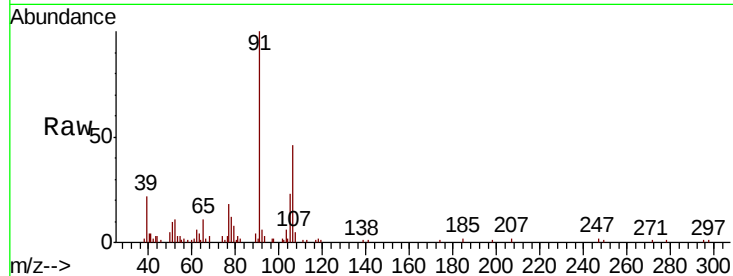




#60
o-Xylene
Concen: 0.089 ppbv
RT: 13.68 min Scan# 3389
Delta R.T. -0.02 min
Lab File: VL036775.D
Acq: 9 Apr 2021 15:30

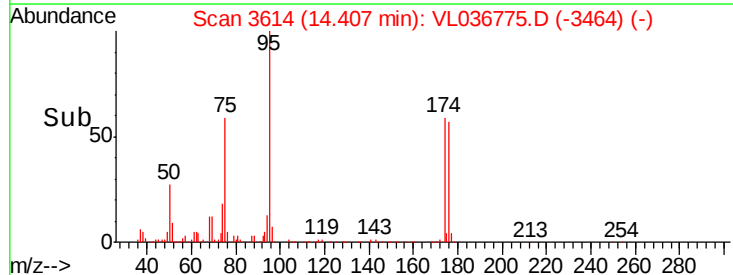
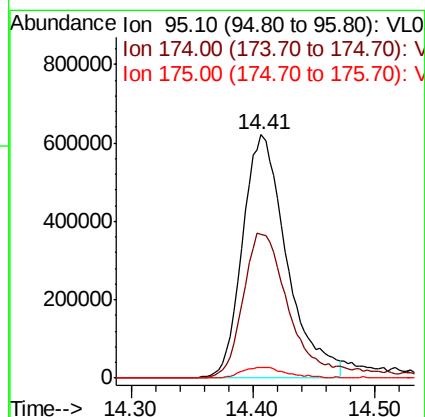
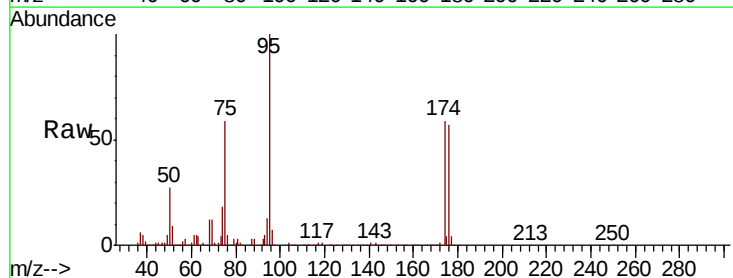
Instrument :
MSVOA_L
ClientSampleId :
GOI-IA-4(2021)DUP

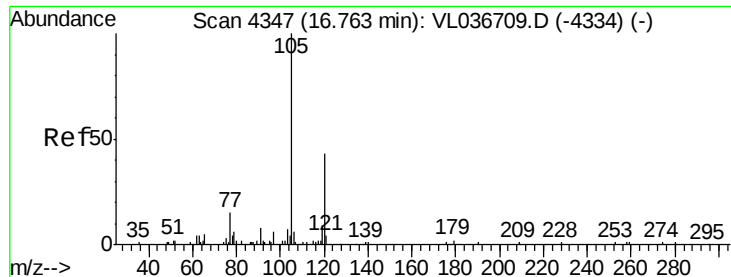
Tot Ion: 91 Resp: 26340
Ion Ratio Lower Upper
91 100
106 90.3 22.3 66.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 8.110 ppbv
RT: 14.41 min Scan# 3614
Delta R.T. -0.02 min
Lab File: VL036775.D
Acq: 9 Apr 2021 15:30

Tgt Ion: 95 Resp: 1558561
Ion Ratio Lower Upper
95 100
174 66.9 51.0 76.6
175 4.6 3.9 5.9





#74
 1,2,4-Trimethylbenzene
 Concen: 0.042 ppbv
 RT: 16.75 min Scan# 4344
 Delta R.T. -0.02 min
 Lab File: VL036775.D
 Acq: 9 Apr 2021 15:30

Instrument :
 MSVOA_L
 ClientSampleId :
 GOI-IA-4(2021)DUP

Tot Ion:105	Resp:	13574
Ion Ratio	Lower	Upper
105	100	
120	38.9	39.2 58.8#
91	12.9	42.6 64.0#
77	14.2	18.6 28.0#

