

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040921\
 Data File : VL036772.D
 Acq On : 9 Apr 2021 13:27
 Operator : SY/AP
 Sample : M1981-02DL 80X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-4DL

Quant Time: Apr 10 01:59:31 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	1378766	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	3328771	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.08	117	2878126	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	1912264	8.34	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	83.40%

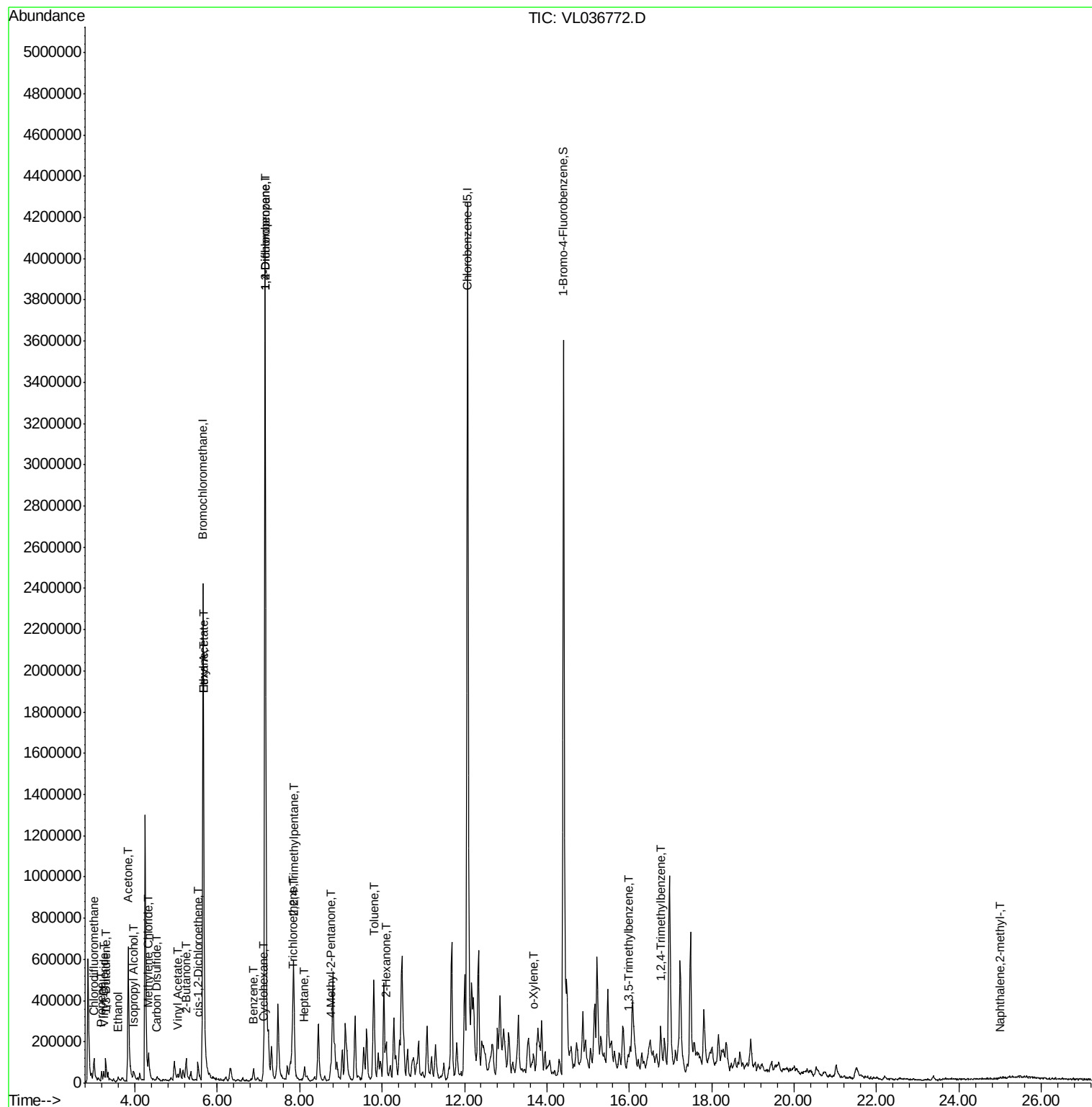
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.99	51	8758	0.034	ppbv #	80
5) Vinyl Chloride	3.25	62	36226	0.387	ppbv	96
9) Propene	3.19	41	3352	0.041	ppbv	83
10) Heptane	8.11	43	10112	0.048	ppbv #	28
13) Ethanol	3.59	45	8175	0.836	ppbv #	34
15) Acetone	3.84	43	868468	6.400	ppbv	98
16) 1,3-Butadiene	3.29	39	38168	0.404	ppbv #	21
19) Isopropyl Alcohol	3.96	45	16215	0.217	ppbv #	1
20) Methylene Chloride	4.33	84	35472	0.558	ppbv	90
23) Vinyl Acetate	5.05	43	6978	0.030	ppbv #	18
25) Ethyl Acetate	5.67	43	27734	0.086	ppbv #	88
26) Hexane	5.67	57	34706	0.232	ppbv #	44
27) Carbon Disulfide	4.54	76	21145	0.143	ppbv #	70
30) Cyclohexane	7.11	84	6753	0.056	ppbv #	1
31) cis-1,2-Dichloroethene	5.53	61	55227	0.381	ppbv	94
34) 2-Butanone	5.24	43	136308	0.839	ppbv #	88
36) Benzene	6.88	78	17183	0.056	ppbv	97
38) Trichloroethene	7.82	130	77744	0.651	ppbv	92
39) 1,2-Dichloropropane	7.16	63	884356	7.101	ppbv #	23
44) 2,2,4-Trimethylpentane	7.85	57	358979	0.664	ppbv #	72
50) 4-Methyl-2-Pentanone	8.75	43	15522	0.066	ppbv #	78
51) 2-Hexanone	10.10	43	45505	0.384	ppbv #	33
53) Toluene	9.80	91	37226	0.114	ppbv	85
60) o-Xylene	13.67	91	65045	0.184	ppbv	97
73) 1,3,5-Trimethylbenzene	15.99	105	14501	0.040	ppbv #	64
74) 1,2,4-Trimethylbenzene	16.75	105	23456	0.061	ppbv #	70
80) Naphthalene, 2-methyl-	25.02	142	1650	0.037	ppbv	98

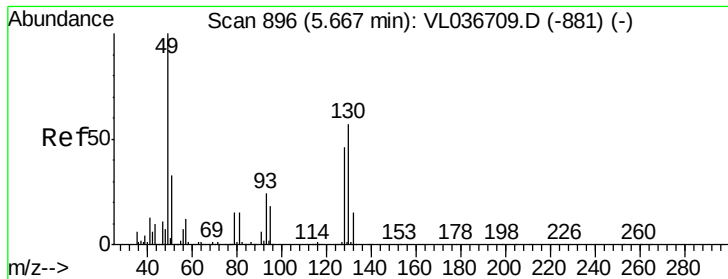
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 891

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

SG-4DL

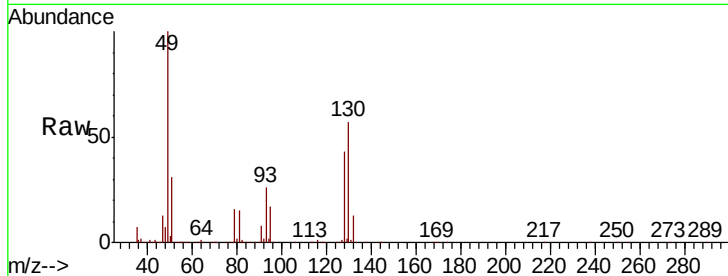
Tot Ion: 49 Resp: 1378766

Ion Ratio Lower Upper

49 100

128 46.1 23.5 70.6

130 60.2 29.1 87.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

800000

600000

400000

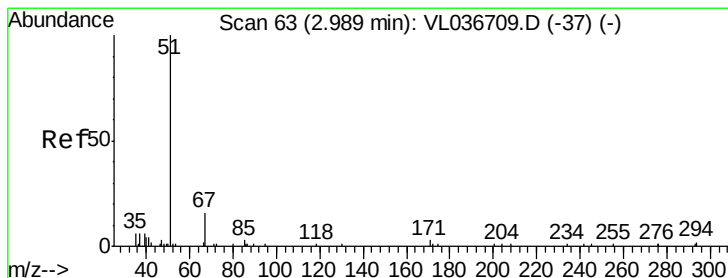
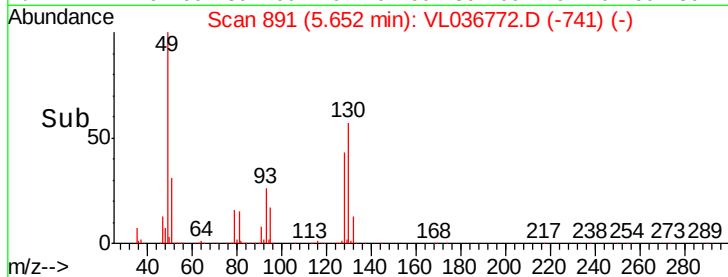
200000

0

5.65

5.55 5.60 5.65 5.70 5.75

Time-->



#3

Chlorodifluoromethane

Concen: 0.034 ppbv

RT: 2.99 min Scan# 63

Delta R.T. 0.00 min

Lab File: VL036772.D

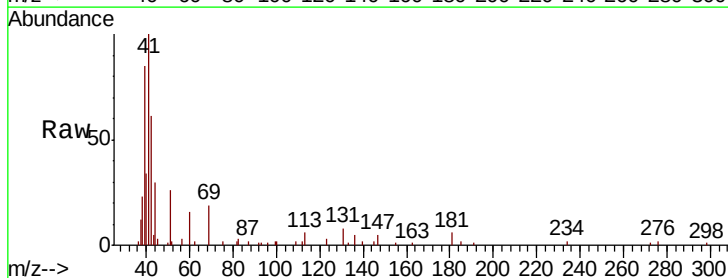
Acq: 9 Apr 2021 13:27

Tgt Ion: 51 Resp: 8758

Ion Ratio Lower Upper

51 100

67 9.7 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

4000

3000

2000

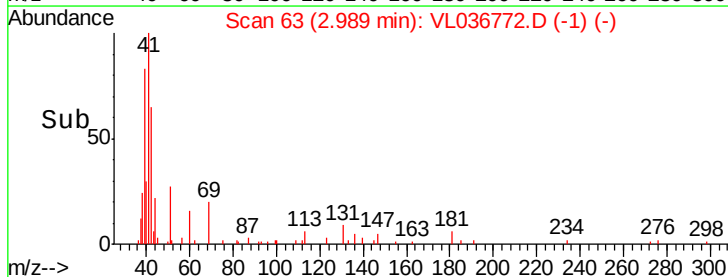
1000

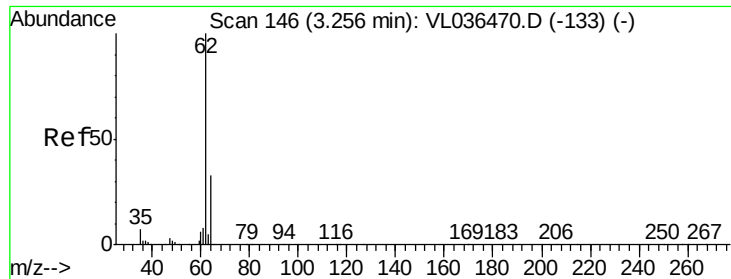
0

2.99

2.90 2.95 3.00

Time-->





#5

Vinyl Chloride

Concen: 0.387 ppbv

RT: 3.25 min Scan# 143

Delta R.T. -0.01 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

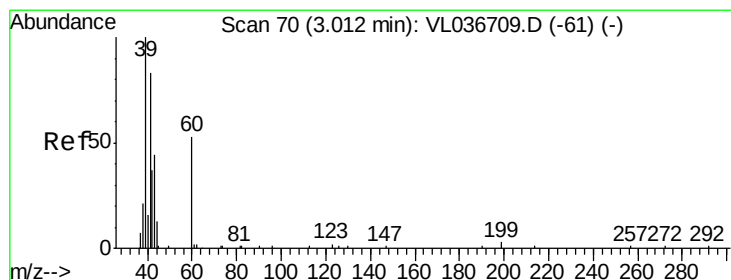
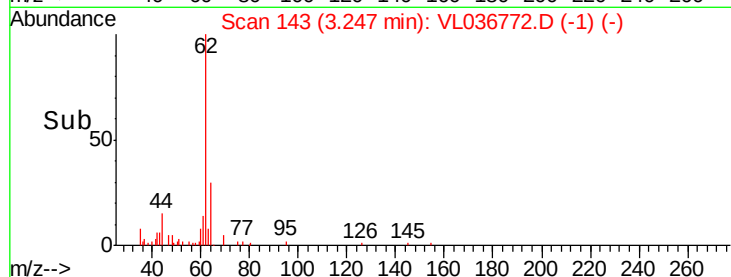
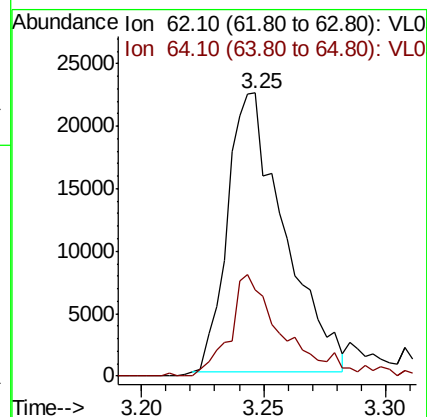
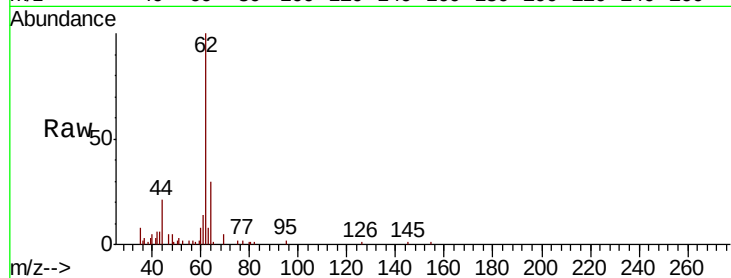
SG-4DL

Tot Ion: 62 Resp: 36226

Ion Ratio Lower Upper

62 100

64 30.8 26.4 39.6



#9

Propene

Concen: 0.041 ppbv

RT: 3.19 min Scan# 124

Delta R.T. 0.18 min

Lab File: VL036772.D

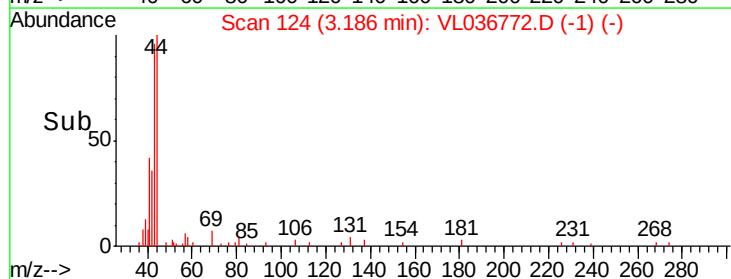
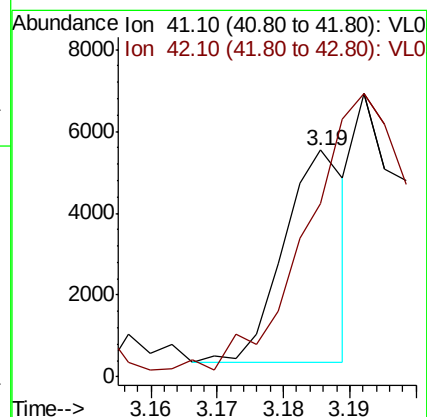
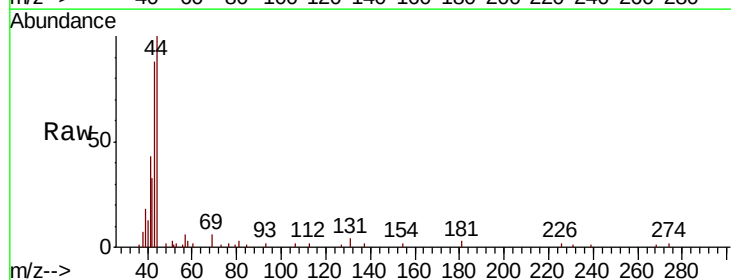
Acq: 9 Apr 2021 13:27

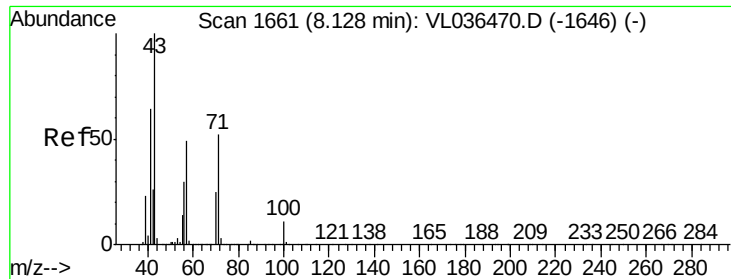
Tgt Ion: 41 Resp: 3352

Ion Ratio Lower Upper

41 100

42 57.2 57.0 85.4





#10

Heptane

Concen: 0.048 ppbv

RT: 8.11 min Scan# 1655

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

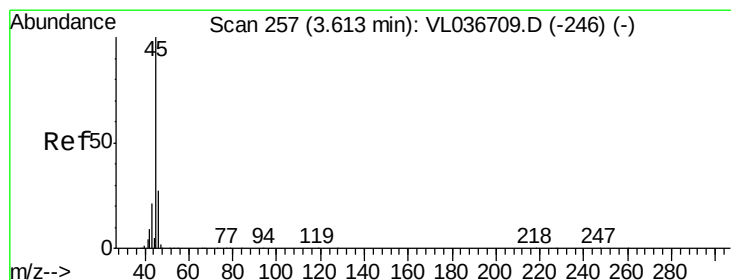
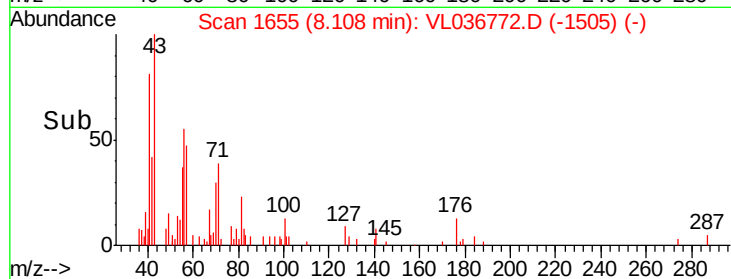
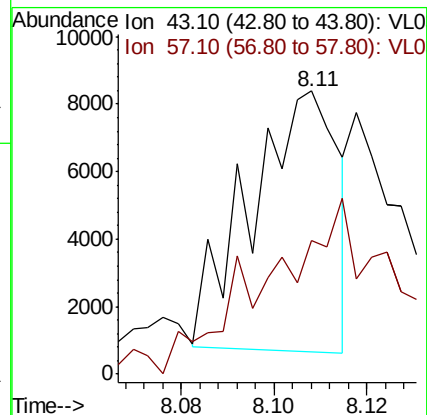
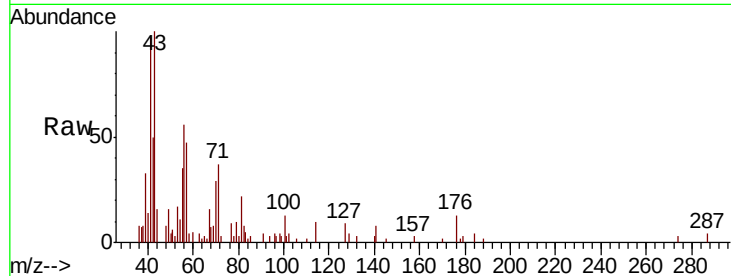
SG-4DL

Tot Ion: 43 Resp: 10112

Ion Ratio Lower Upper

43 100

57 0.0 39.0 58.6#



#13

Ethanol

Concen: 0.836 ppbv

RT: 3.59 min Scan# 251

Delta R.T. -0.01 min

Lab File: VL036772.D

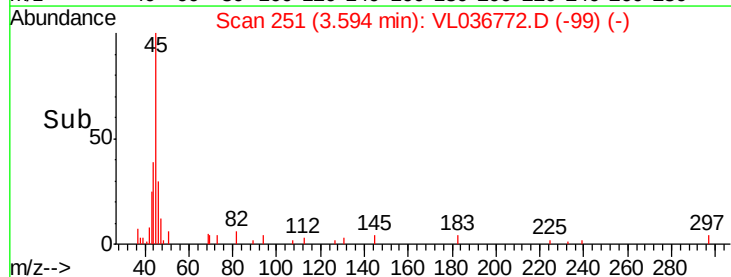
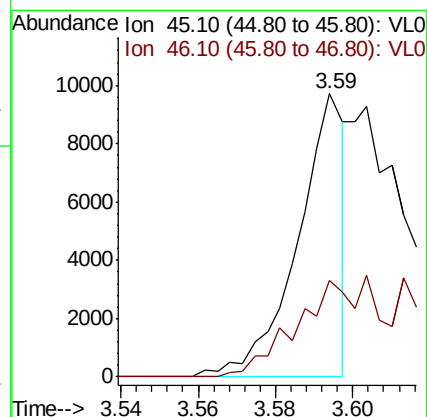
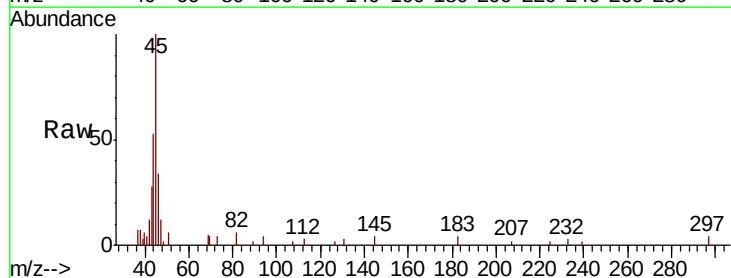
Acq: 9 Apr 2021 13:27

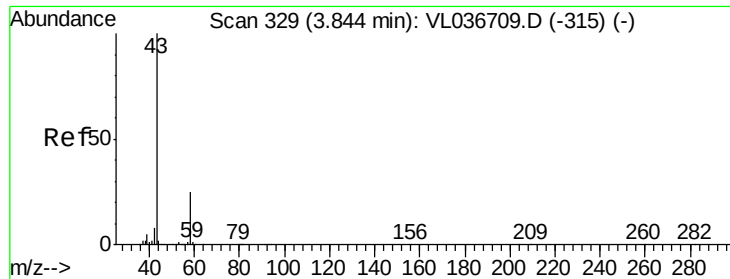
Tgt Ion: 45 Resp: 8175

Ion Ratio Lower Upper

45 100

46 0.0 16.6 66.2#

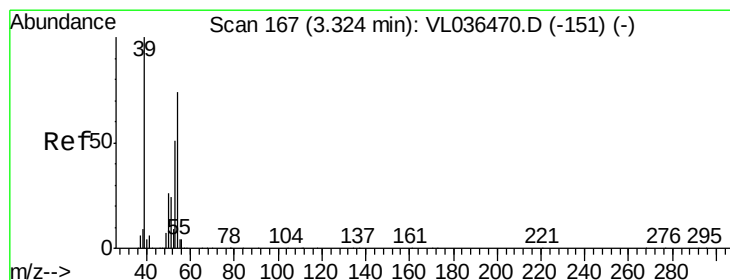
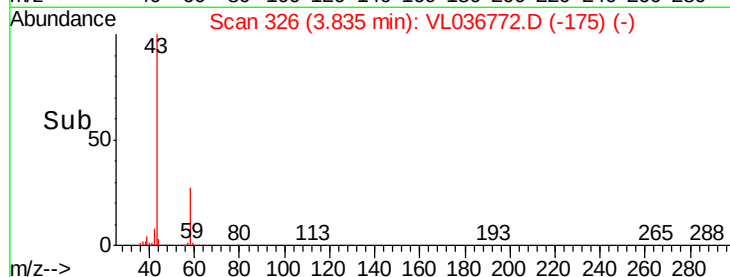
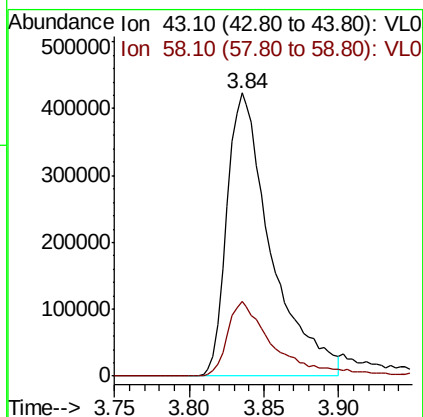
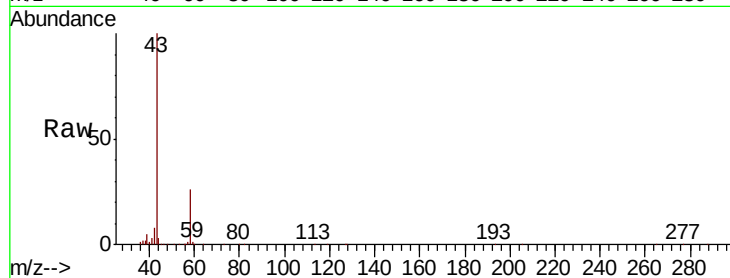




#15
Acetone
Concen: 6.400 ppbv
RT: 3.84 min Scan# 326
Delta R.T. -0.02 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

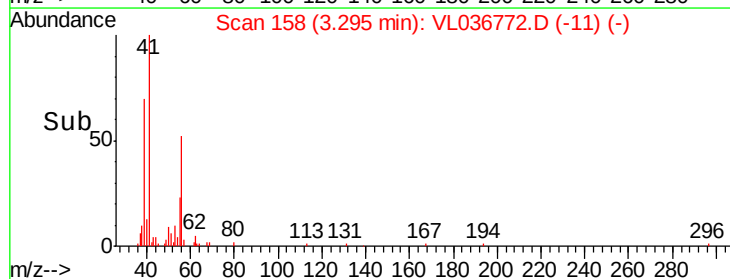
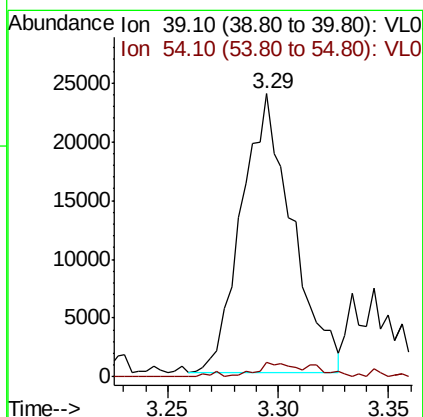
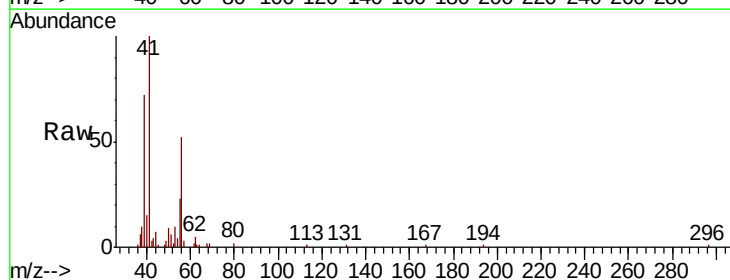
Instrument :
MSVOA_L
ClientSampleId :
SG-4DL

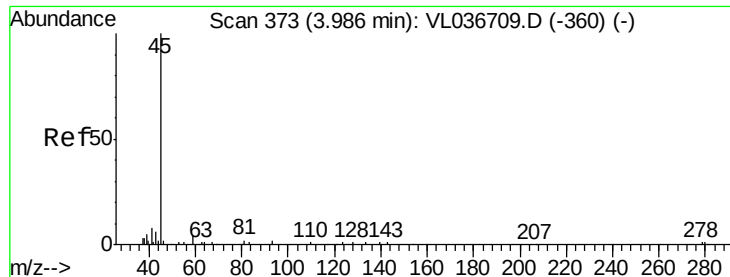
Tot Ion: 43 Resp: 868468
Ion Ratio Lower Upper
43 100
58 27.7 21.2 31.8



#16
1,3-Butadiene
Concen: 0.404 ppbv
RT: 3.29 min Scan# 158
Delta R.T. -0.03 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

Tgt Ion: 39 Resp: 38168
Ion Ratio Lower Upper
39 100
54 7.3 58.8 88.2#





#19

Isopropyl Alcohol

Concen: 0.217 ppbv

RT: 3.96 min Scan# 366

Delta R.T. -0.01 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

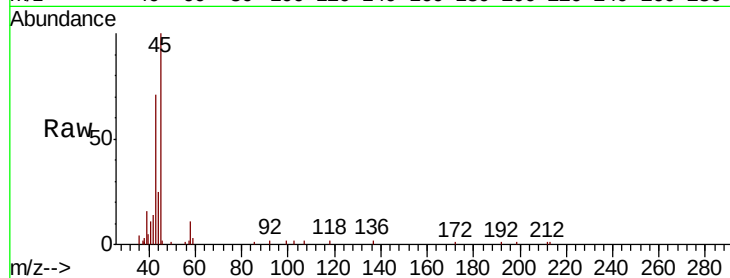
SG-4DL

Tot Ion: 45 Resp: 16215

Ion Ratio Lower Upper

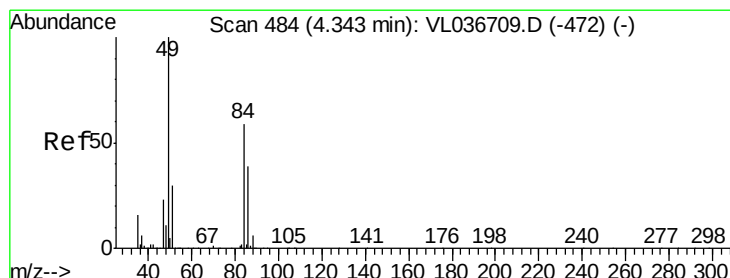
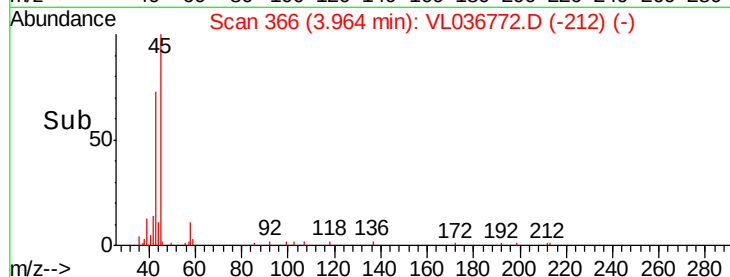
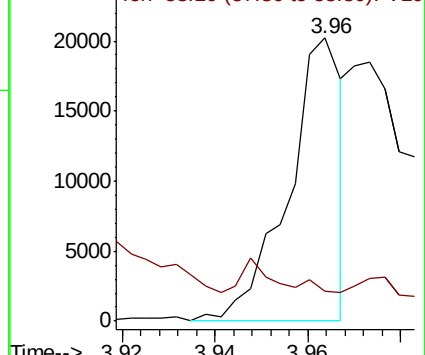
45 100

58 60.4 2.9 4.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 0.558 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Tgt Ion: 84 Resp: 35472

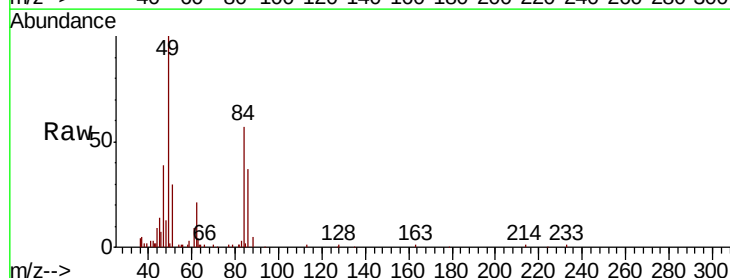
Ion Ratio Lower Upper

84 100

49 171.4 122.9 184.3

51 49.6 36.9 55.3

86 63.3 48.2 72.4

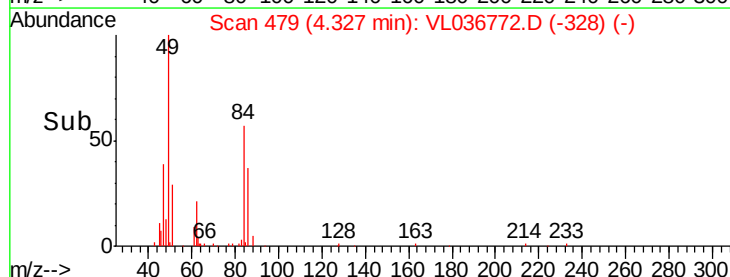
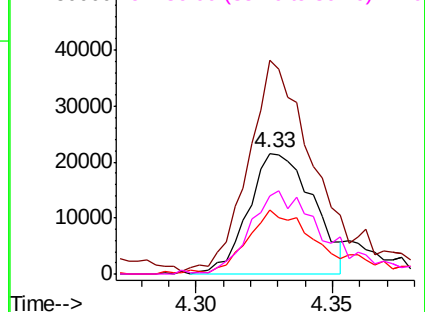


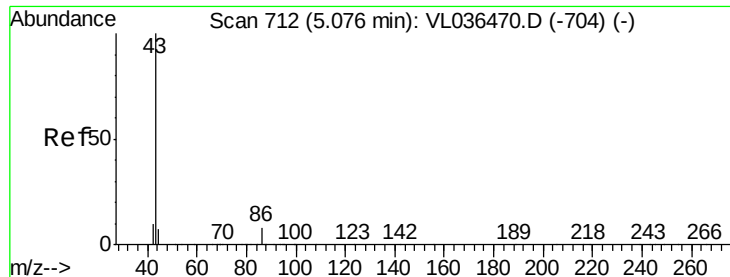
Abundance Ion 84.00 (83.70 to 84.70): VL0

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





#23

Vinyl Acetate

Concen: 0.030 ppbv

RT: 5.05 min Scan# 704

Delta R.T. -0.03 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

SG-4DL

Tot Ion: 43 Resp: 6978

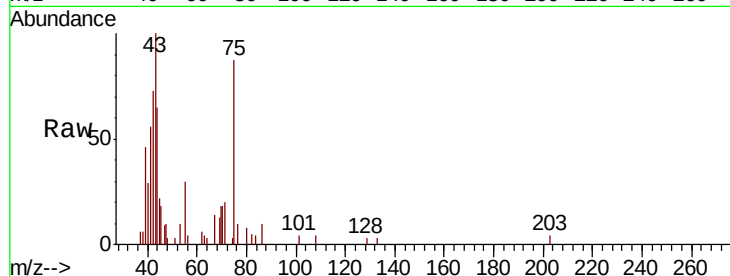
Ion Ratio Lower Upper

43 100

86 11.0 5.4 8.0#

42 62.3 8.5 12.7#

44 26.1 4.6 7.0#

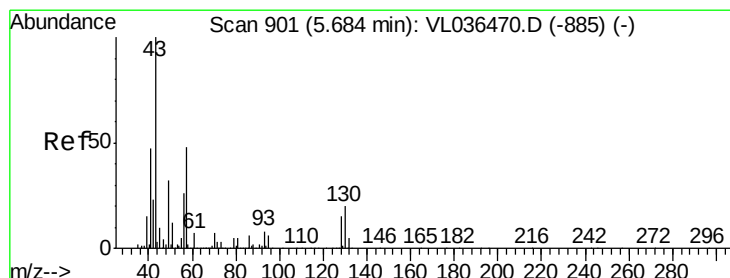
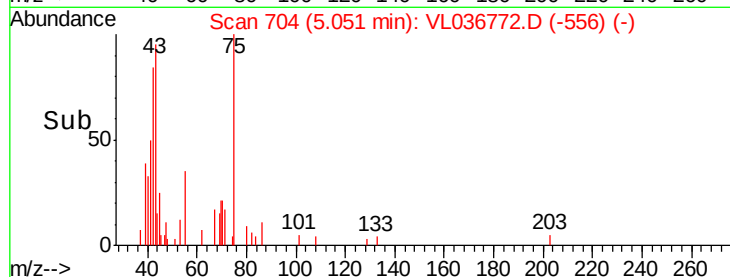
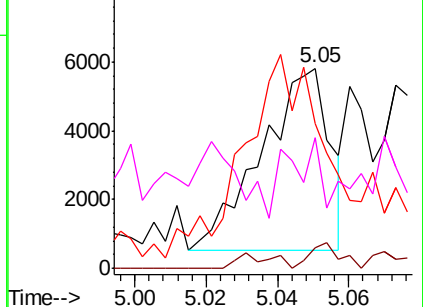


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.086 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Tgt Ion: 43 Resp: 27734

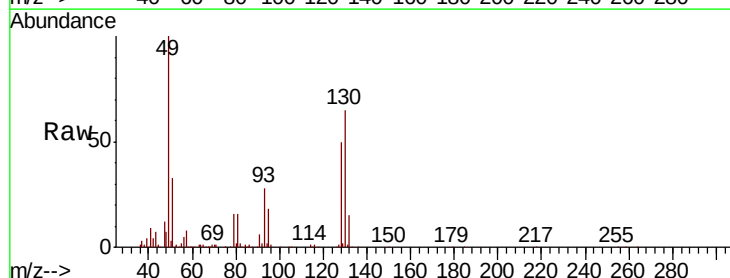
Ion Ratio Lower Upper

43 100

45 8.6 7.9 11.9

61 0.0 7.4 11.2#

70 4.5 5.1 7.7#

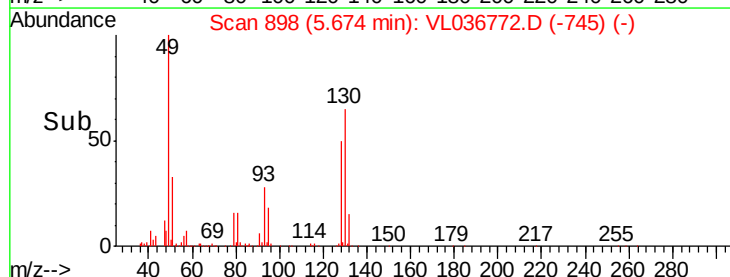
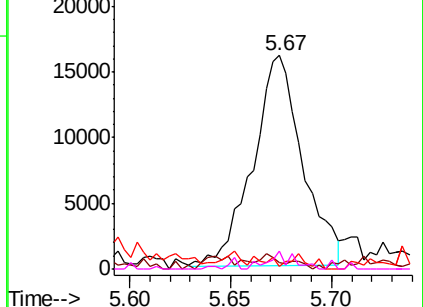


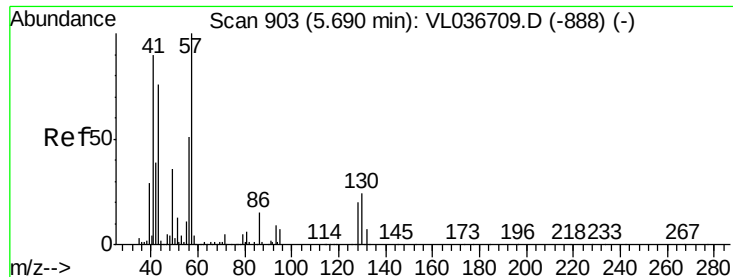
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

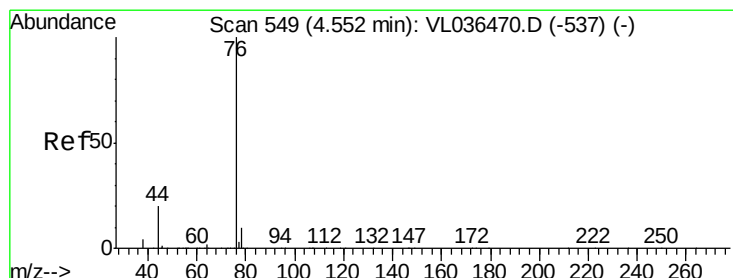
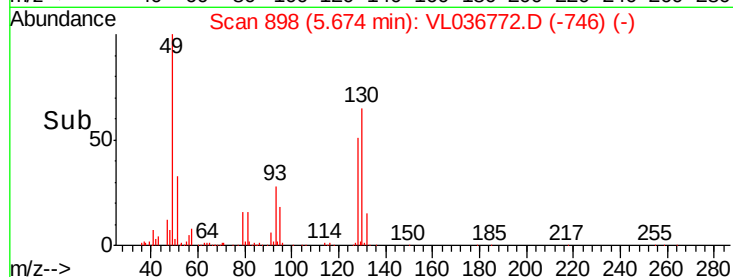
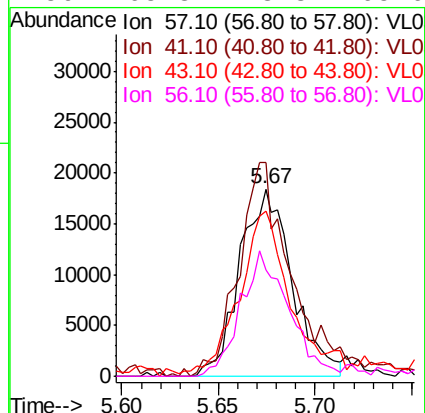
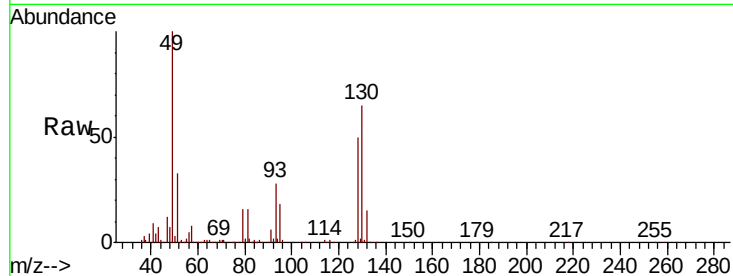




#26
Hexane
Concen: 0.232 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.01 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

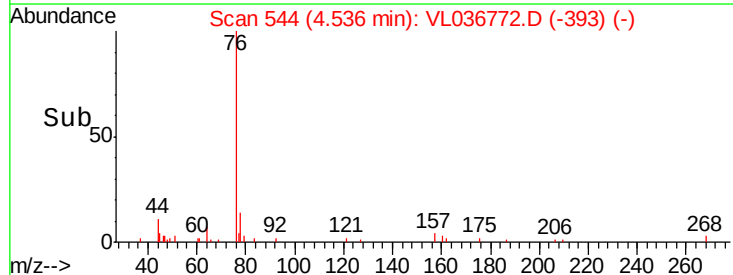
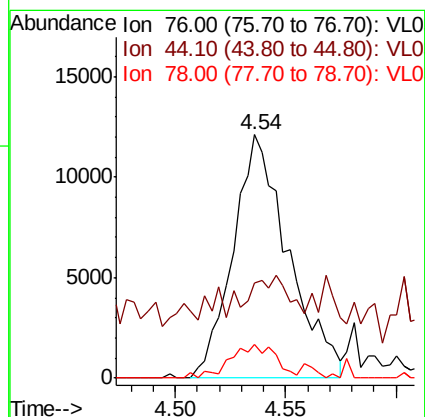
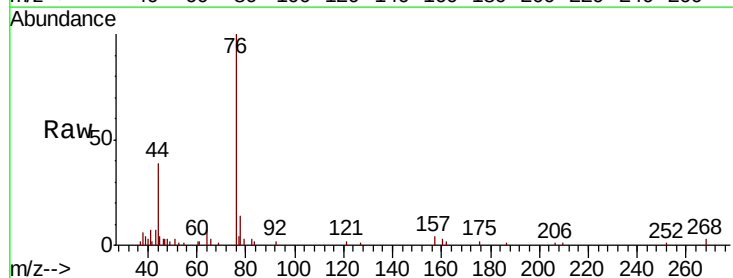
Instrument :
MSVOA_L
ClientSampleId :
SG-4DL

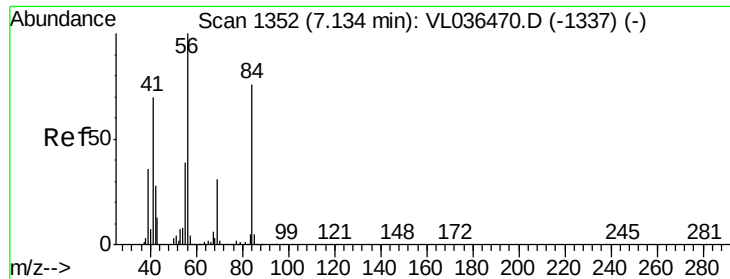
Tot Ion: 57 Resp: 34706
Ion Ratio Lower Upper
57 100
41 125.5 77.2 115.8#
43 93.4 173.8 260.6#
56 65.3 43.8 65.6



#27
Carbon Disulfide
Concen: 0.143 ppbv
RT: 4.54 min Scan# 544
Delta R.T. -0.02 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

Tgt Ion: 76 Resp: 21145
Ion Ratio Lower Upper
76 100
44 42.3 17.5 26.3#
78 12.7 8.6 13.0

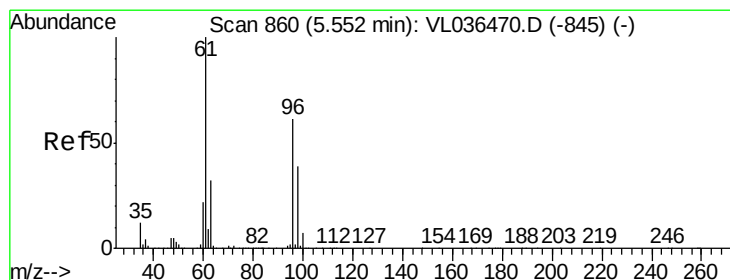
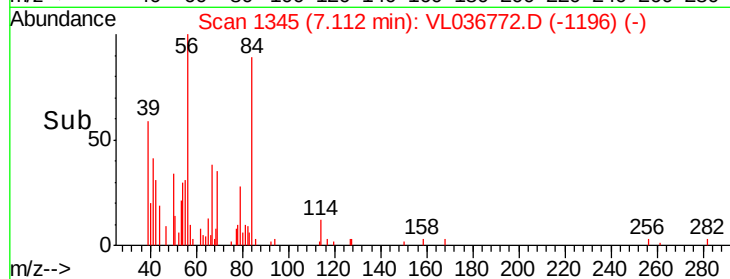
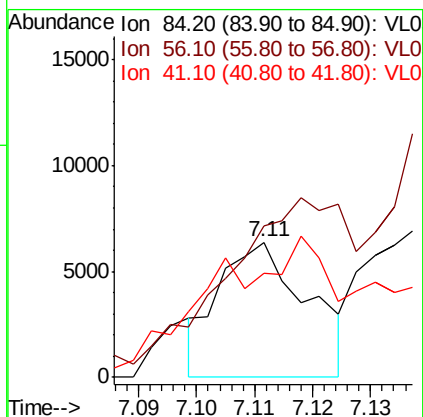
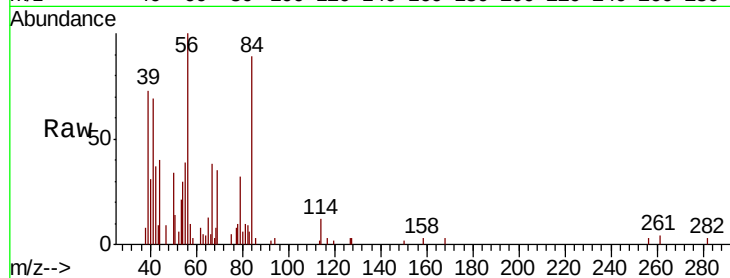




#30
Cvclohexane
Concen: 0.056 ppbv
RT: 7.11 min Scan# 1345
Delta R.T. -0.02 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

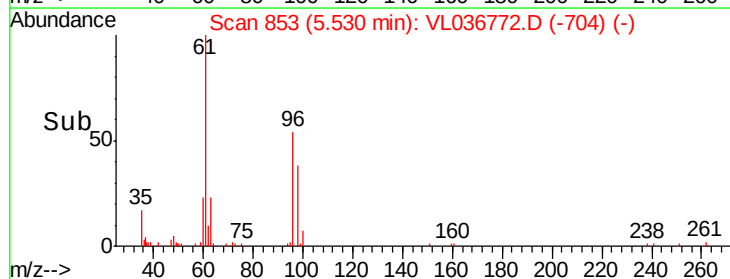
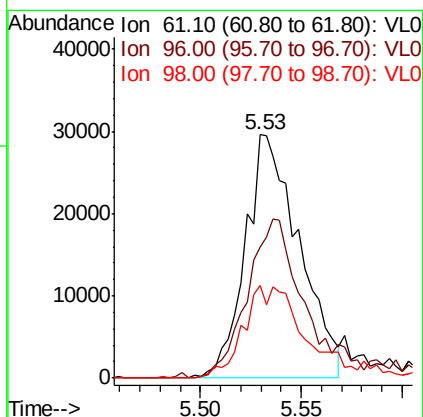
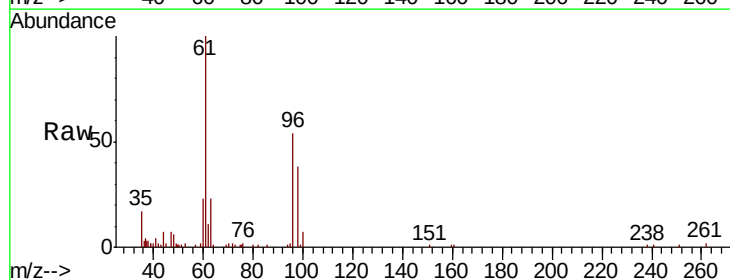
Instrument :
MSVOA_L
ClientSampleId :
SG-4DL

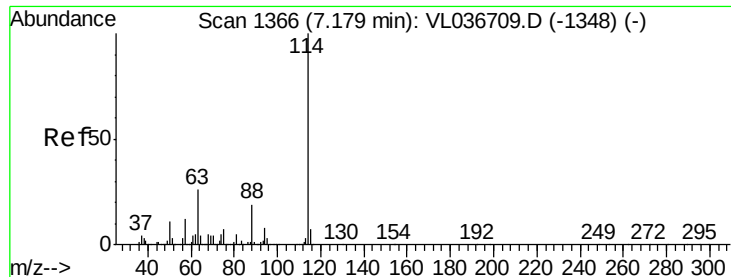
Tot Ion: 84 Resp: 6753
Ion Ratio Lower Upper
84 100
56 0.0 114.6 171.8#
41 245.3 75.3 112.9#



#31
cis-1,2-Dichloroethene
Concen: 0.381 ppbv
RT: 5.53 min Scan# 853
Delta R.T. -0.02 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

Tgt Ion: 61 Resp: 55227
Ion Ratio Lower Upper
61 100
96 53.7 48.7 73.1
98 38.1 31.4 47.0

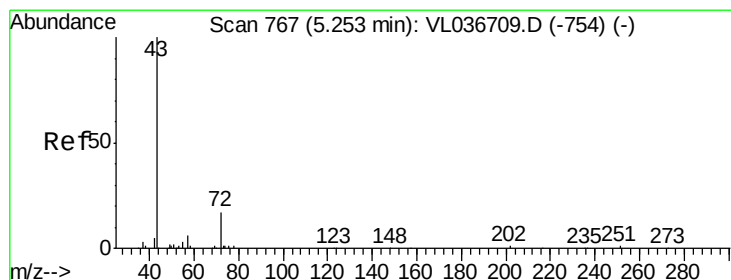
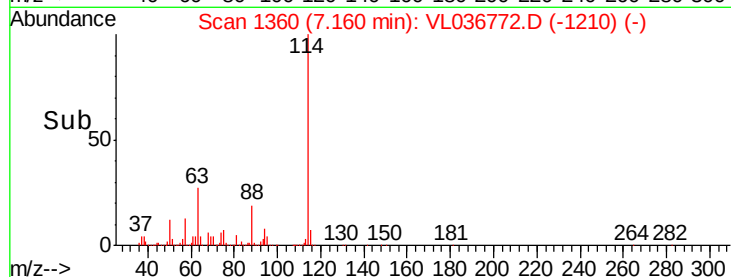
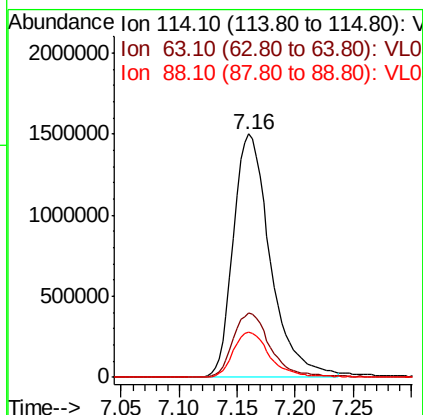
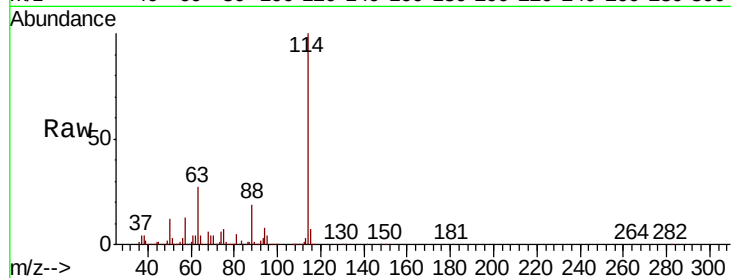




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1360
 Delta R.T. -0.02 min
 Lab File: VL036772.D
 Acq: 9 Apr 2021 13:27

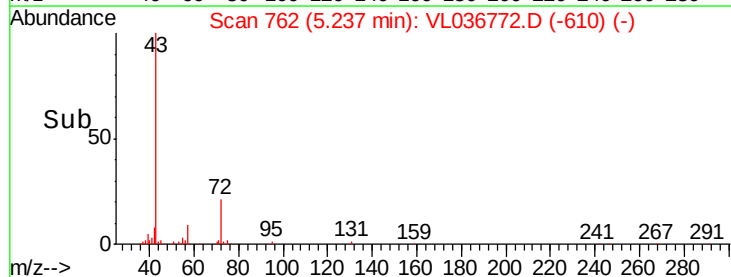
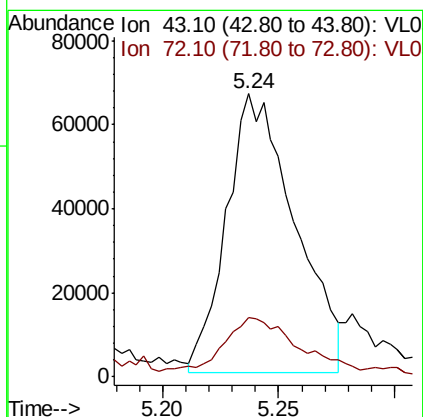
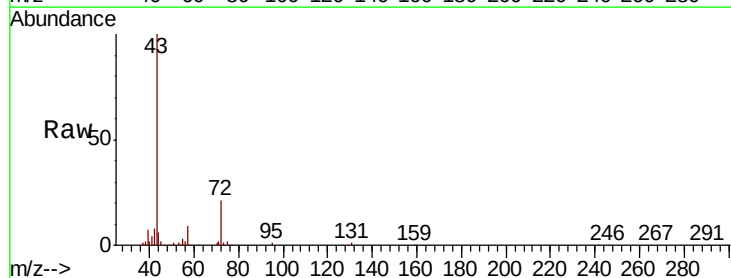
Instrument :
 MSVOA_L
 ClientSampleId :
 SG-4DL

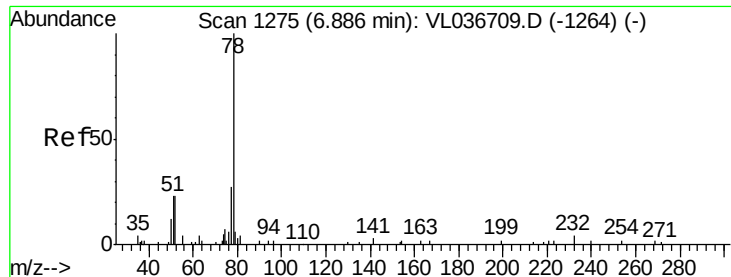
Tot Ion:114 Resp: 3328771
 Ion Ratio Lower Upper
 114 100
 63 27.3 22.4 33.6
 88 18.8 15.4 23.0



#34
 2-Butanone
 Concen: 0.839 ppbv
 RT: 5.24 min Scan# 762
 Delta R.T. -0.01 min
 Lab File: VL036772.D
 Acq: 9 Apr 2021 13:27

Tgt Ion: 43 Resp: 136308
 Ion Ratio Lower Upper
 43 100
 72 26.8 17.0 25.6#





#36

Benzene

Concen: 0.056 ppbv

RT: 6.88 min Scan# 1274

Delta R.T. -0.01 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

SG-4DL

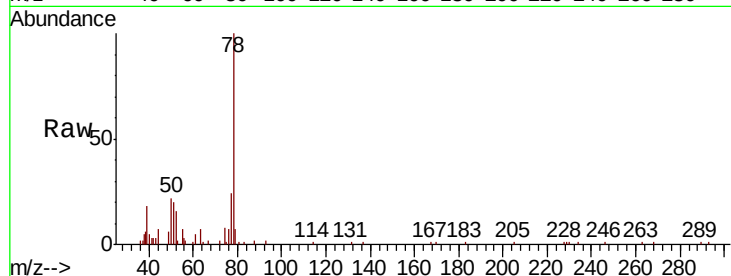
Tot Ion: 78 Resp: 17183

Ion Ratio Lower Upper

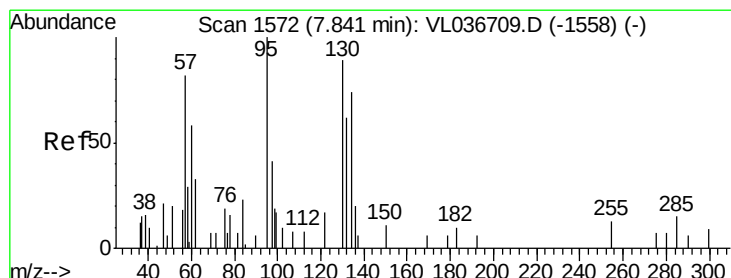
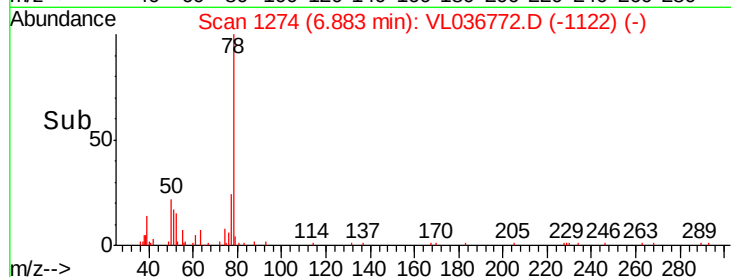
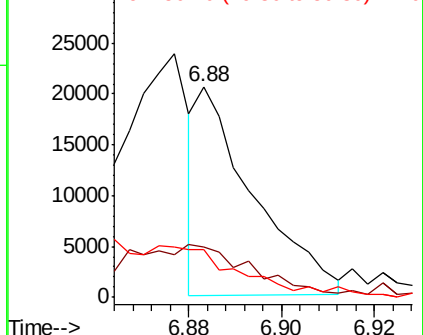
78 100

77 24.0 18.0 27.0

50 19.0 16.5 24.7



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#38

Trichloroethene

Concen: 0.651 ppbv

RT: 7.82 min Scan# 1565

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Tgt Ion: 130 Resp: 77744

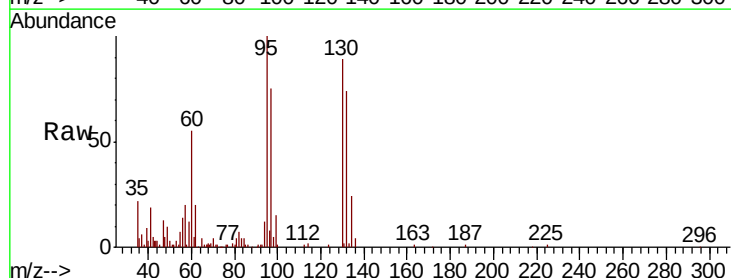
Ion Ratio Lower Upper

130 100

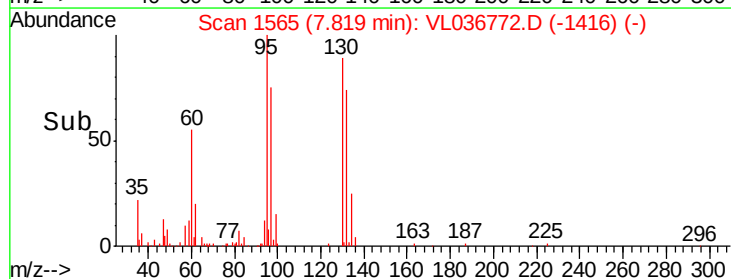
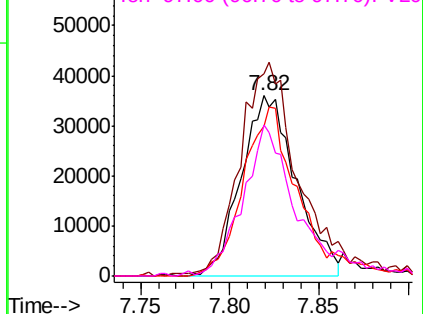
95 110.9 95.7 143.5

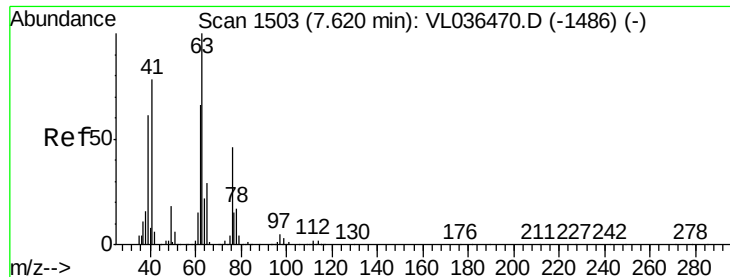
132 82.9 76.2 114.4

97 80.8 61.8 92.6



Abundance Ion 130.00 (129.70 to 130.70): V
Ion 95.00 (94.70 to 95.70): VL0
Ion 132.00 (131.70 to 132.70): V
Ion 97.00 (96.70 to 97.70): VL0





#39

1,2-Dichloropropane

Concen: 7.101 ppbv

RT: 7.16 min Scan# 1360

Delta R.T. -0.46 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

SG-4DL

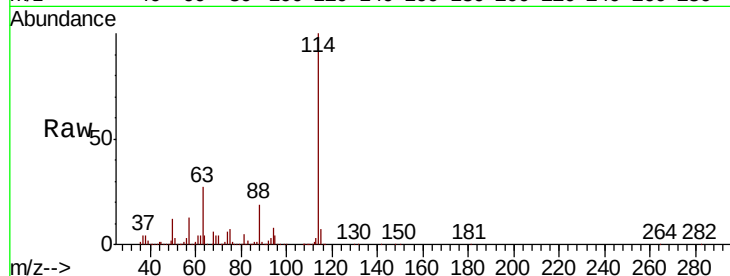
Tot Ion: 63 Resp: 884356

Ion Ratio Lower Upper

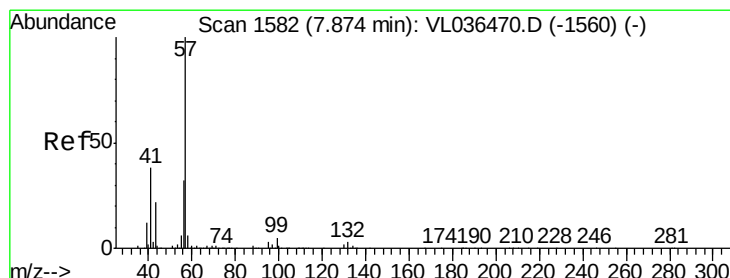
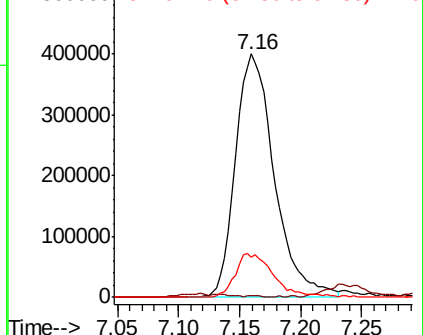
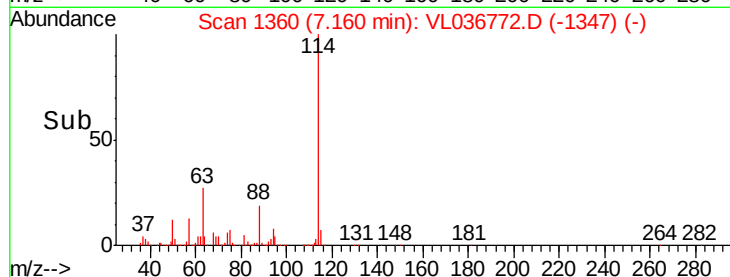
63 100

41 0.0 62.4 93.6#

62 16.3 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



#44

2,2,4-Trimethylpentane

Concen: 0.664 ppbv

RT: 7.85 min Scan# 1576

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

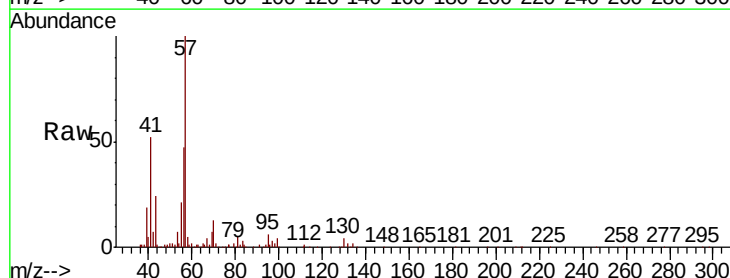
Tgt Ion: 57 Resp: 358979

Ion Ratio Lower Upper

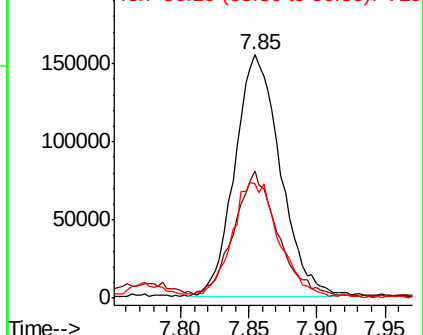
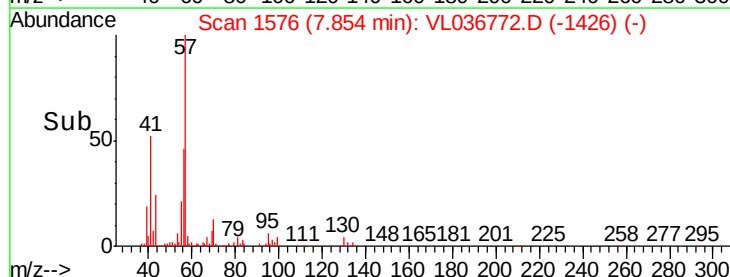
57 100

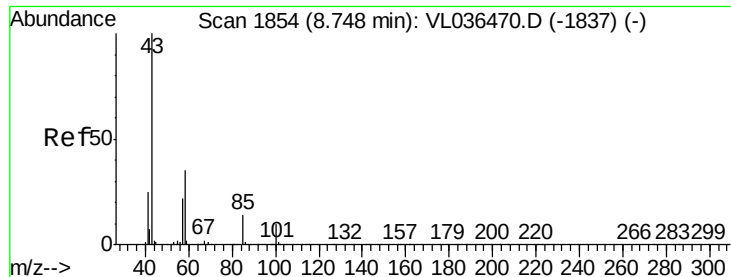
41 51.1 28.8 43.2#

56 50.0 26.1 39.1#



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

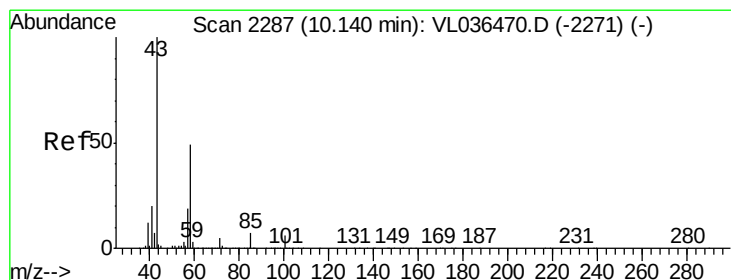
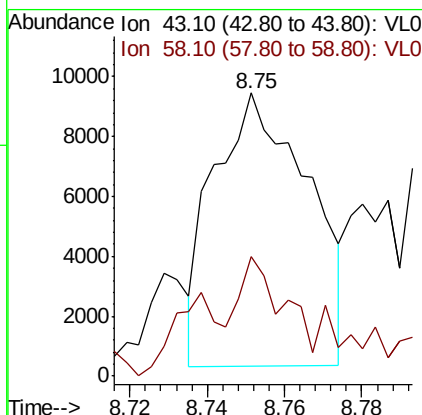
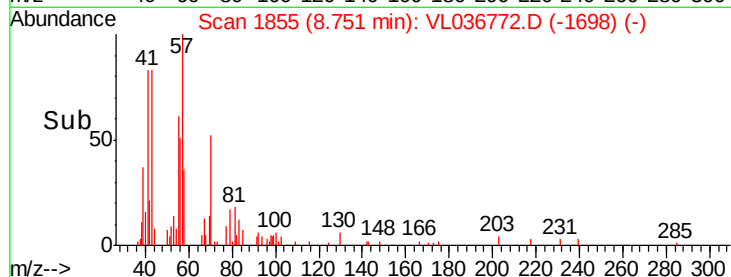
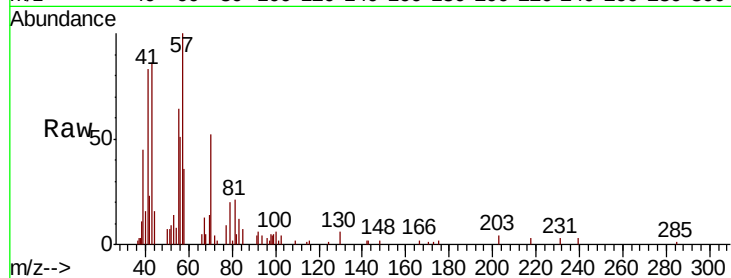




#50
4-Methyl-2-Pentanone
Concen: 0.066 ppbv
RT: 8.75 min Scan# 1855
Delta R.T. 0.00 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

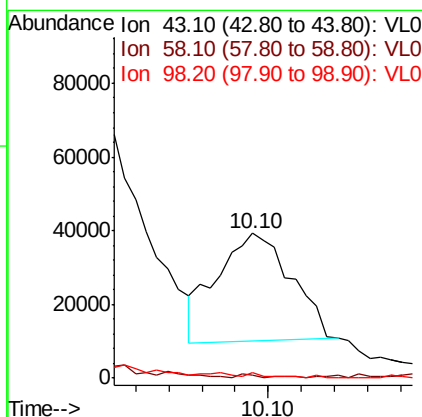
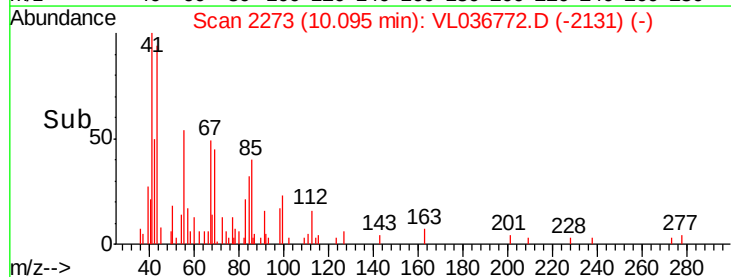
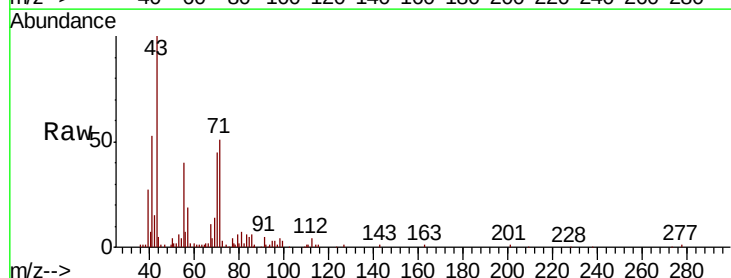
Instrument :
MSVOA_L
ClientSampleId :
SG-4DL

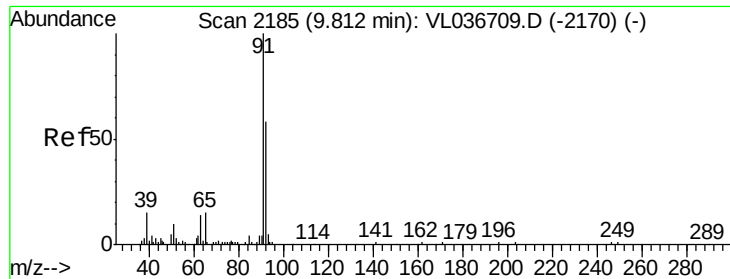
Tot Ion: 43 Resp: 15522
Ion Ratio Lower Upper
43 100
58 47.9 28.2 42.2#



#51
2-Hexanone
Concen: 0.384 ppbv
RT: 10.10 min Scan# 2273
Delta R.T. -0.04 min
Lab File: VL036772.D
Acq: 9 Apr 2021 13:27

Tgt Ion: 43 Resp: 45505
Ion Ratio Lower Upper
43 100
58 2.3 37.7 56.5#
98 0.0 0.2 0.2#





#53

Toluene

Concen: 0.114 ppbv

RT: 9.80 min Scan# 2181

Delta R.T. -0.01 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

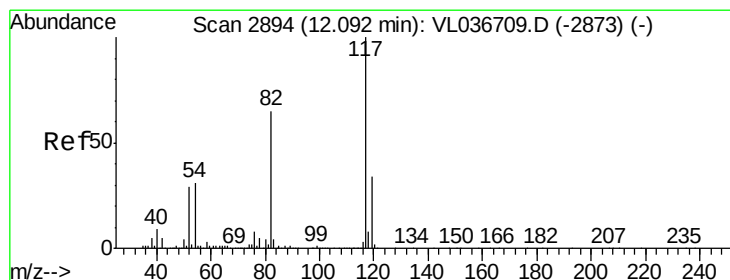
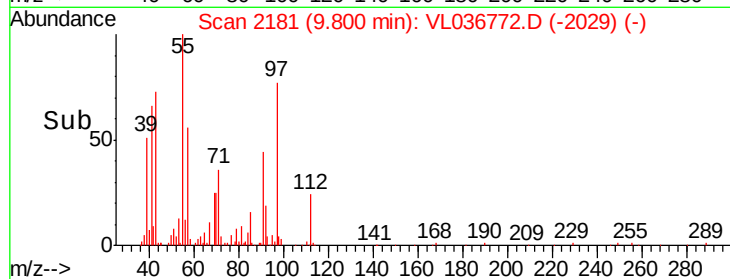
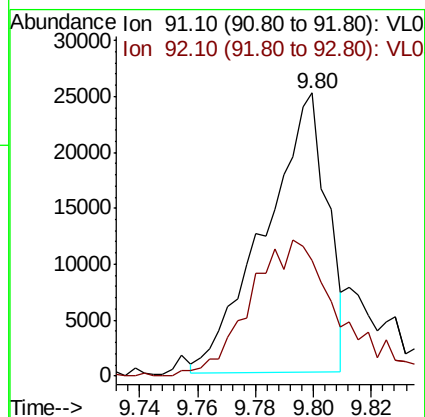
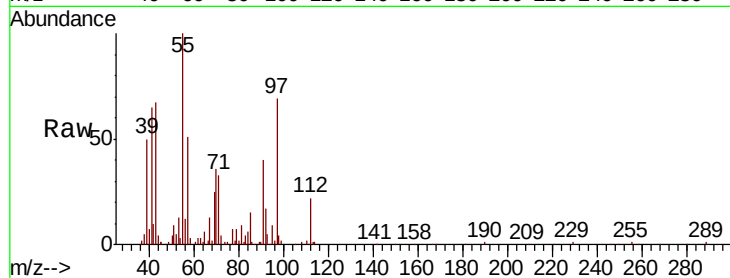
SG-4DL

Tot Ion: 91 Resp: 37226

Ion Ratio Lower Upper

91 100

92 72.3 48.8 73.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

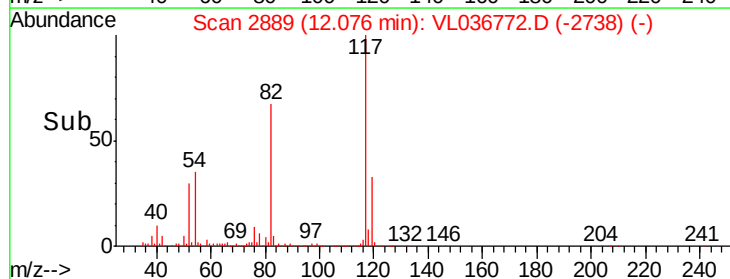
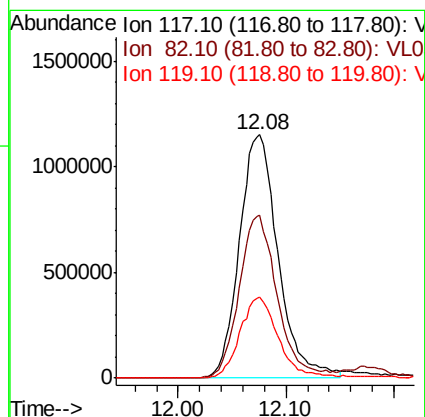
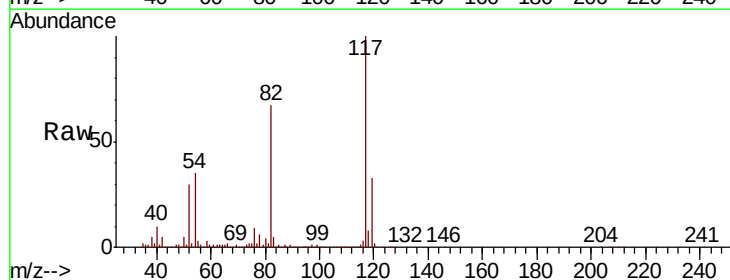
Tgt Ion: 117 Resp: 2878126

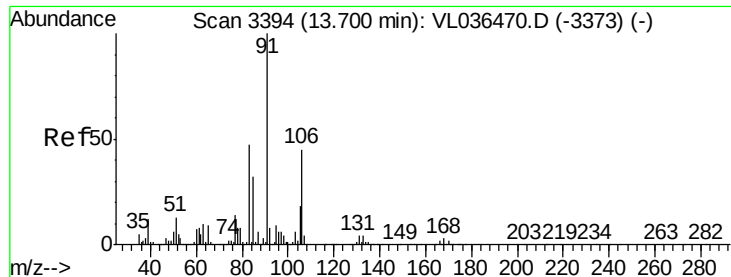
Ion Ratio Lower Upper

117 100

82 65.8 57.4 86.0

119 33.7 47.4 71.0#





#60

o-Xylene

Concen: 0.184 ppbv

RT: 13.67 min Scan# 3386

Delta R.T. -0.03 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

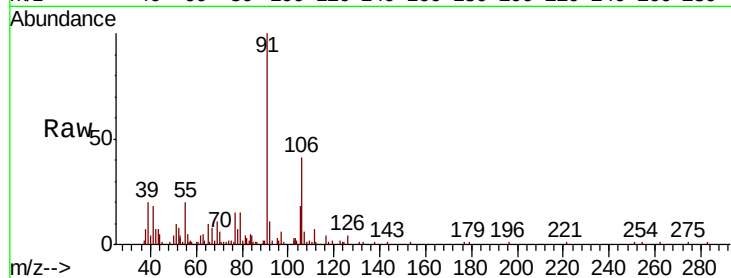
SG-4DL

Tot Ion: 91 Resp: 65045

Ion Ratio Lower Upper

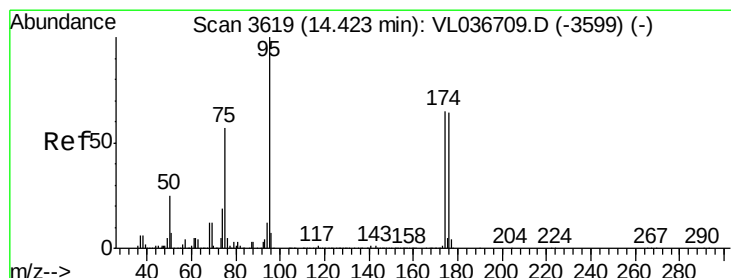
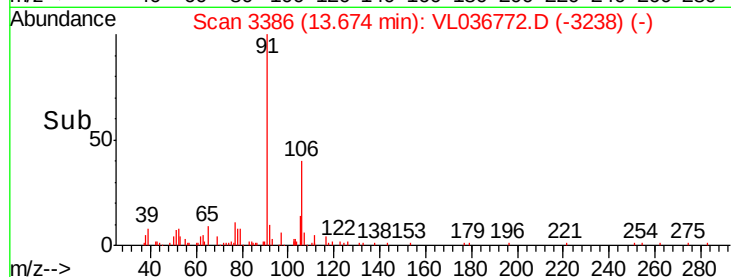
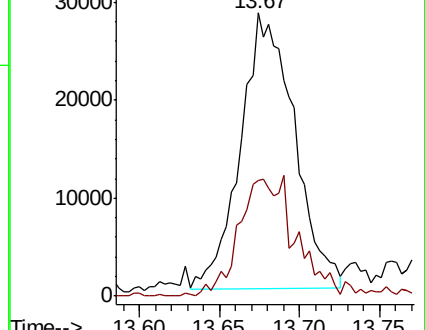
91 100

106 46.6 22.3 66.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 8.336 ppbv

RT: 14.40 min Scan# 3613

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

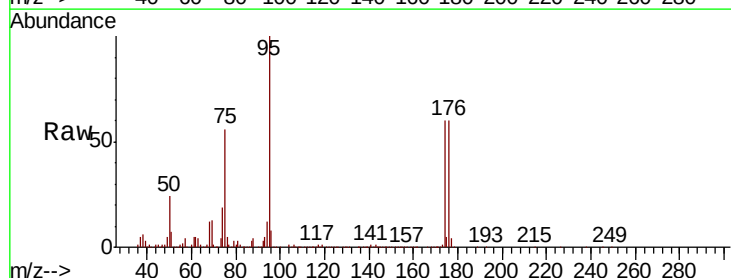
Tgt Ion: 95 Resp: 1912264

Ion Ratio Lower Upper

95 100

174 65.3 51.0 76.6

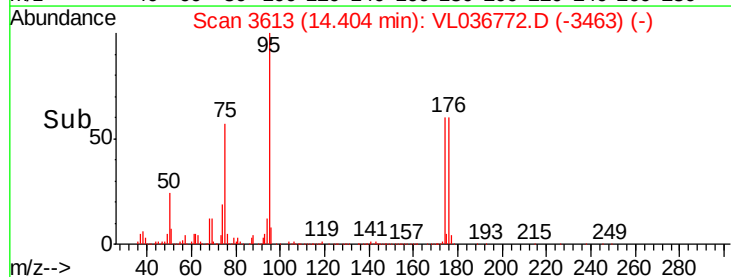
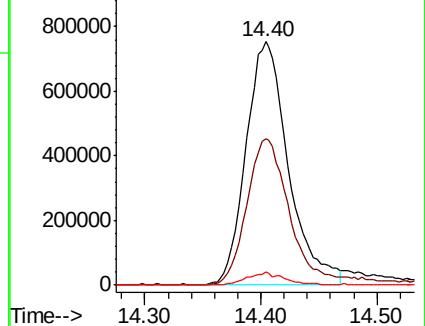
175 4.9 3.9 5.9

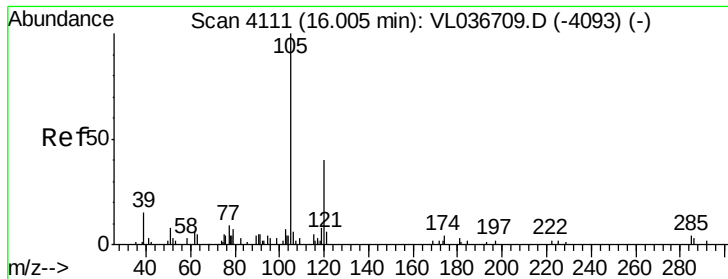


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#73

1,3,5-Trimethylbenzene

Concen: 0.040 ppbv

RT: 15.99 min Scan# 4105

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

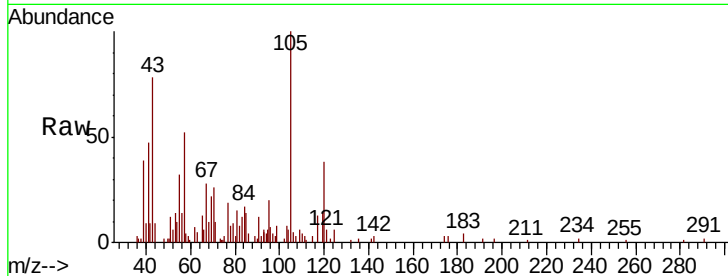
SG-4DL

Tot Ion:105 Resp: 14501

Ion Ratio Lower Upper

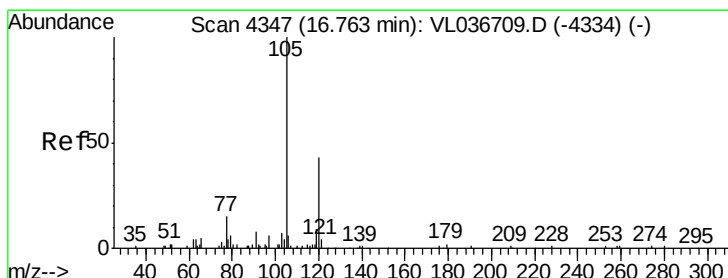
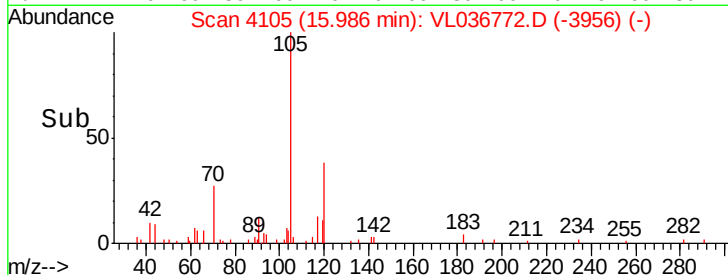
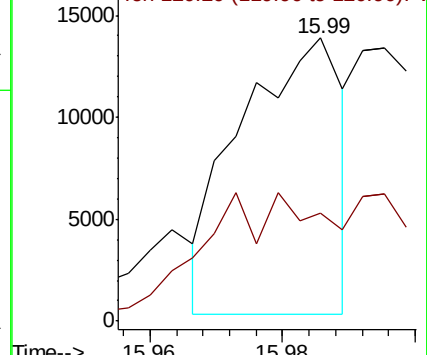
105 100

120 21.7 36.6 54.8#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.061 ppbv

RT: 16.75 min Scan# 4343

Delta R.T. -0.02 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Tgt Ion:105 Resp: 23456

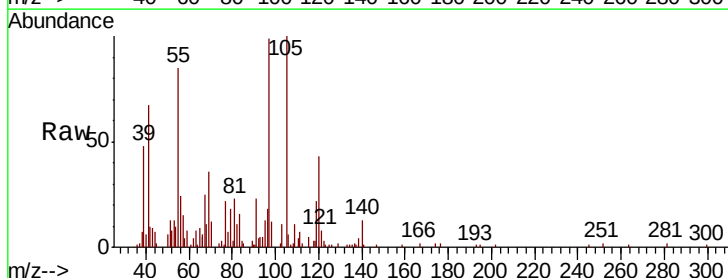
Ion Ratio Lower Upper

105 100

120 35.2 39.2 58.8#

91 17.9 42.6 64.0#

77 19.8 18.6 28.0

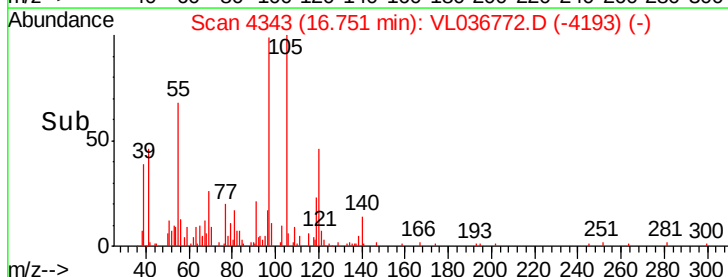
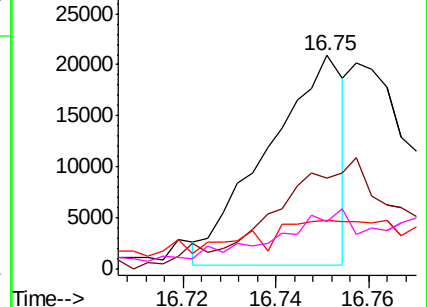


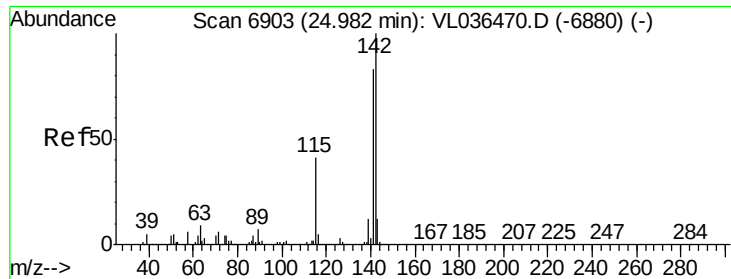
Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0





#80

Naphthalene, 2-methyl-

Concen: 0.037 ppbv

RT: 25.02 min Scan# 6915

Delta R.T. 0.04 min

Lab File: VL036772.D

Acq: 9 Apr 2021 13:27

Instrument :

MSVOA_L

ClientSampleId :

SG-4DL

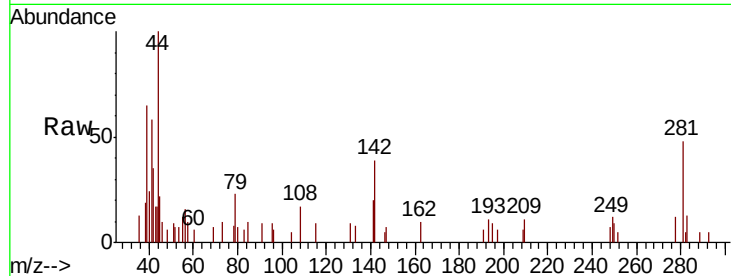
Tot Ion:142 Resp: 1650

Ion Ratio Lower Upper

142 100

141 84.2 67.8 101.8

115 45.0 34.0 51.0



Abundance Ion 142.00 (141.70 to 142.70): V
Ion 141.00 (140.70 to 141.70): V
Ion 115.00 (114.70 to 115.70): V

