

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL031720\
 Data File : VL034919.D
 Acq On : 17 Mar 2020 17:24
 Operator : SY/AP
 Sample : L1952-02
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

Quant Time: Mar 18 06:59:33 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL030920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 09 16:42:53 2020
 QLast Update : Mon Mar 09 16:42:53 2020
 Response via : Initial Calibration

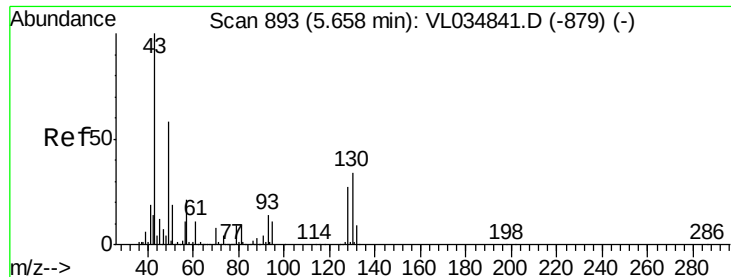
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	923915	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2006794	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.11	117	1926509	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	1673383	11.14	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	111.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.01	85	79544	0.629	ppbv	95
3) Chlorodifluoromethane	2.94	51	63869	0.619	ppbv #	83
4) Chloromethane	3.10	50	31758	0.544	ppbv	96
9) Propene	3.17	41	56837	1.153	ppbv	87
10) Heptane	8.13	43	14014	0.116	ppbv	91
11) Trichlorofluoromethane	3.92	101	32237	0.239	ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.46	101	3748	0.040	ppbv #	29
13) Ethanol	3.57	45	464738	31.022	ppbv	92
15) Acetone	3.82	43	1788117	14.932	ppbv	99
16) 1,3-Butadiene	3.27	39	2355	0.043	ppbv #	9
19) Isopropyl Alcohol	3.95	45	113461	1.500	ppbv #	1
20) Methylene Chloride	4.32	84	136818	3.614	ppbv	97
23) Vinyl Acetate	5.05	43	48609	0.275	ppbv #	64
25) Ethyl Acetate	5.67	43	204783	0.960	ppbv #	84
26) Hexane	5.67	57	252982	2.754	ppbv #	43
29) Chloroform	5.74	83	6141	0.044	ppbv #	59
30) Cyclohexane	7.12	84	3093	0.040	ppbv #	1
34) 2-Butanone	5.23	43	625827	4.693	ppbv	99
35) Carbon Tetrachloride	7.02	117	4333	0.035	ppbv #	78
36) Benzene	6.89	78	53997	0.302	ppbv	94
39) 1,2-Dichloropropane	7.18	63	563607	7.953	ppbv #	22
41) Tetrahydrofuran	6.04	42	275146	3.813	ppbv	98
53) Toluene	9.82	91	624889	3.025	ppbv	100
58) Ethyl Benzene	12.73	91	12756	0.049	ppbv	92
59) m/p-Xylene	13.02	91	14235	0.065	ppbv #	30
60) o-Xylene	13.72	91	15853	0.074	ppbv	68
74) 1,2,4-Trimethylbenzene	16.79	105	27865	0.115	ppbv #	62

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 892

Delta R.T. -0.00 min

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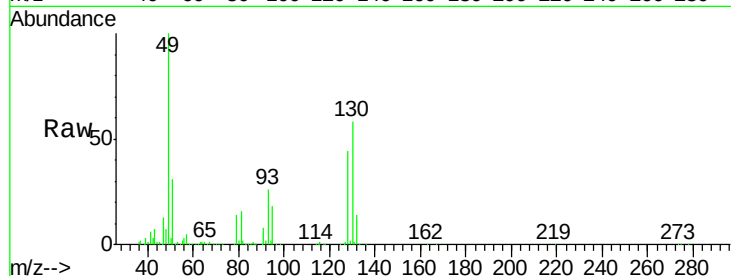
Tgt Ion: 49 Resp: 923915

Ion Ratio Lower Upper

49 100

128 46.1 23.4 70.3

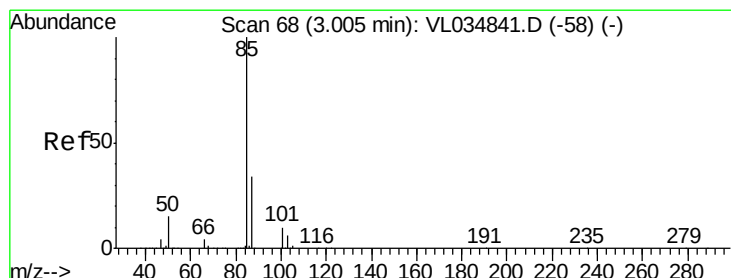
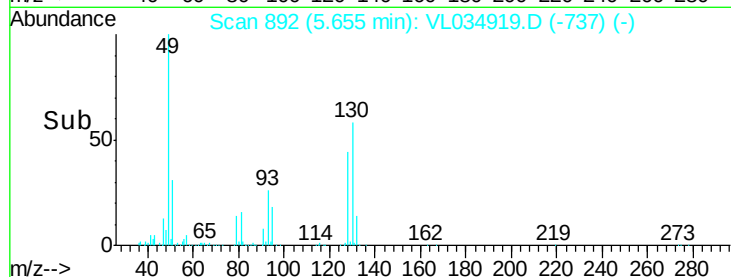
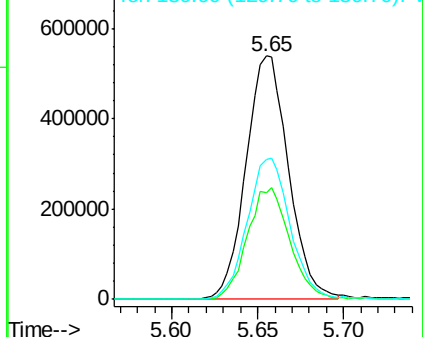
130 59.0 30.0 90.0



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



#2

Dichlorodifluoromethane

Concen: 0.629 ppbv

RT: 3.01 min Scan# 69

Delta R.T. 0.00 min

Lab File: VL034919.D

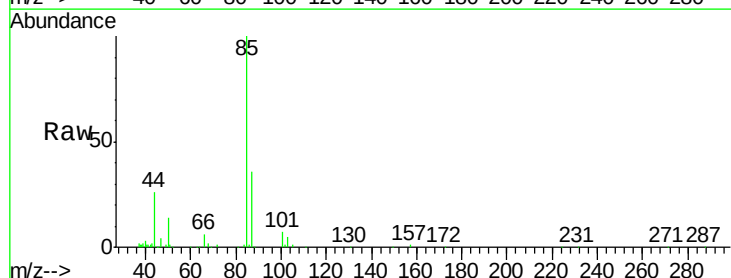
Acq: 17 Mar 2020 17:24

Tgt Ion: 85 Resp: 79544

Ion Ratio Lower Upper

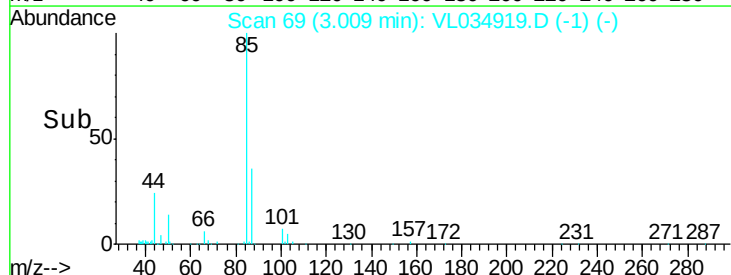
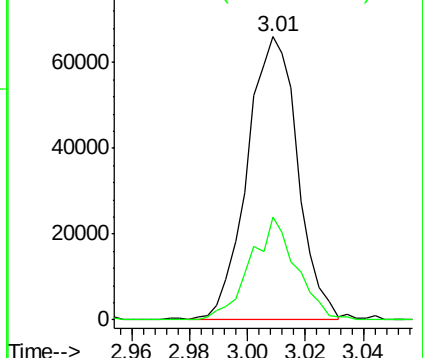
85 100

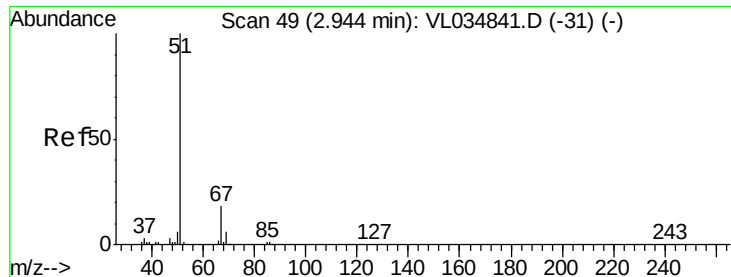
87 36.3 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

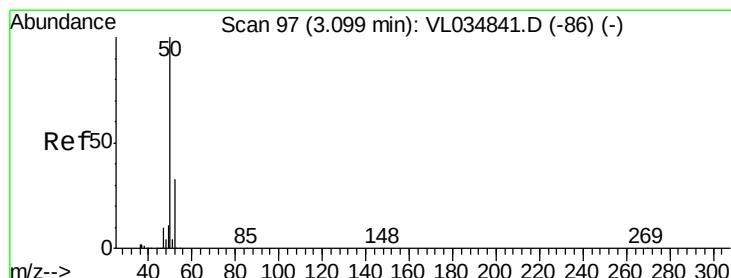
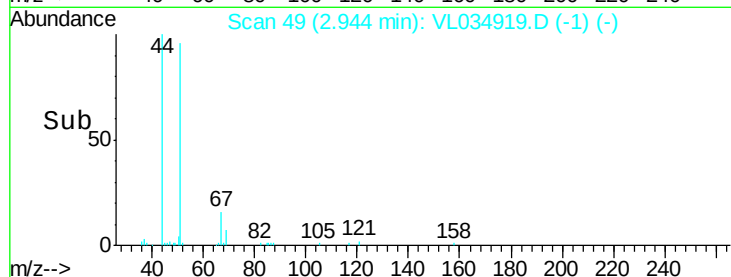
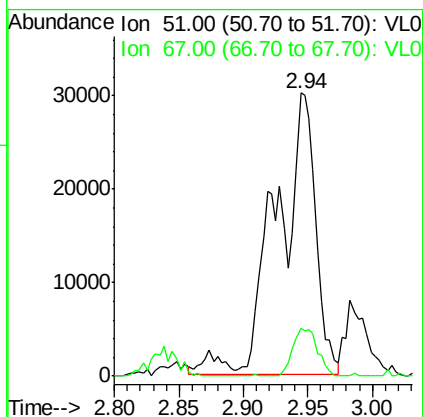
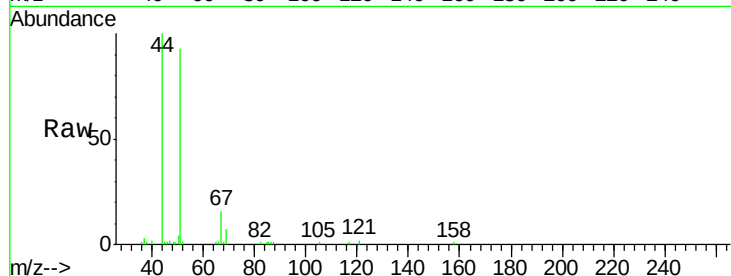




#3
Chlorodifluoromethane
Concen: 0.619 ppbv
RT: 2.94 min Scan# 49
Delta R.T. 0.00 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

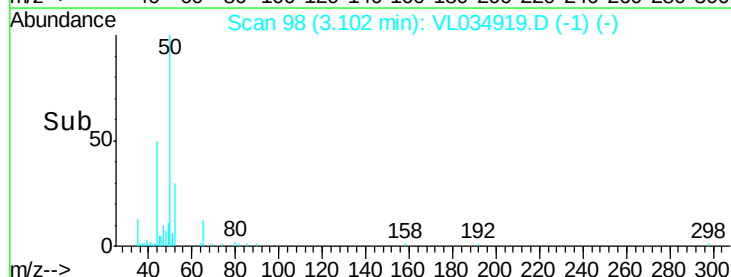
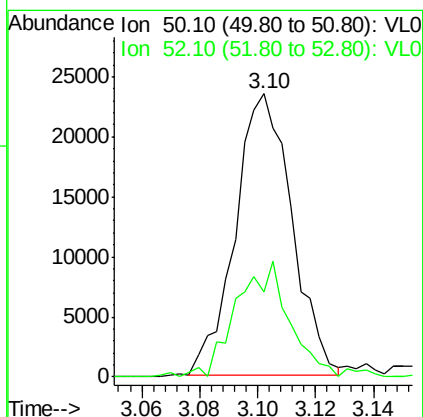
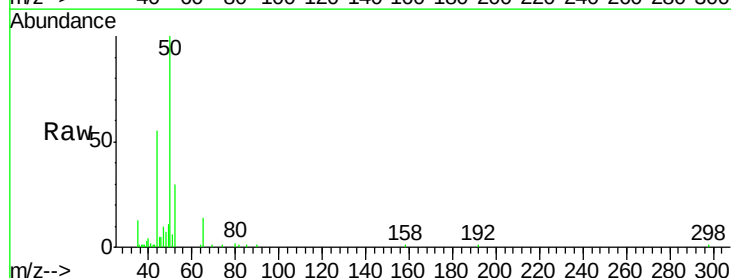
Instrument :
MSVOA_L
ClientSampleId :
IA-1

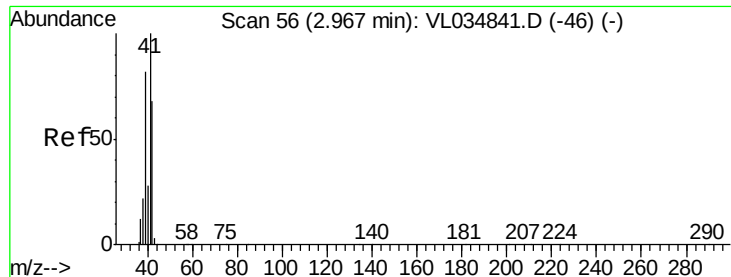
Tgt Ion: 51 Resp: 63869
Ion Ratio Lower Upper
51 100
67 10.6 14.3 21.5#



#4
Chloromethane
Concen: 0.544 ppbv
RT: 3.10 min Scan# 98
Delta R.T. 0.00 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

Tgt Ion: 50 Resp: 31758
Ion Ratio Lower Upper
50 100
52 31.3 26.8 40.2





#9

Propene

Concen: 1.153 ppbv

RT: 3.17 min Scan# 119

Delta R.T. 0.20 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampleId :

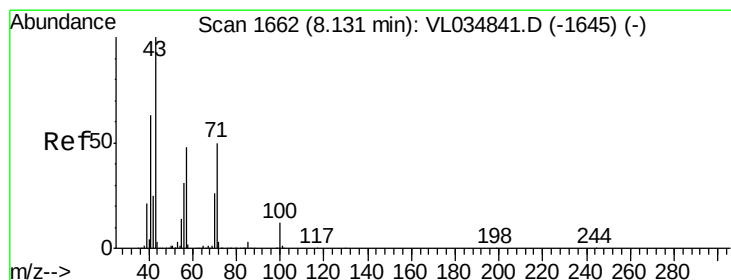
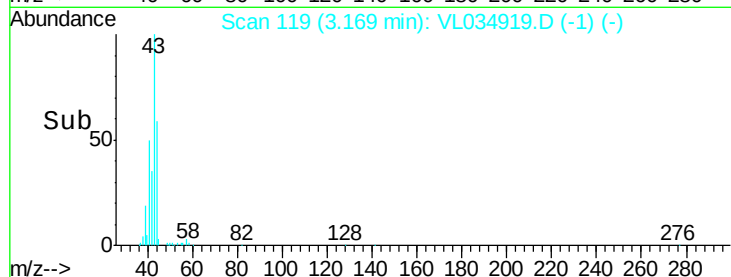
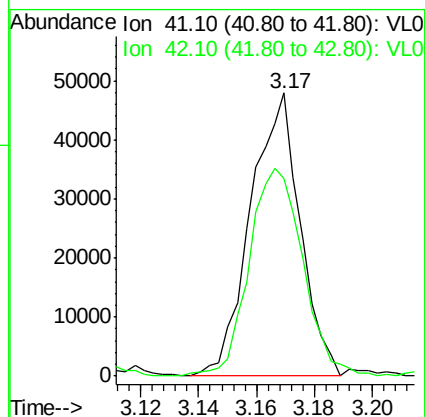
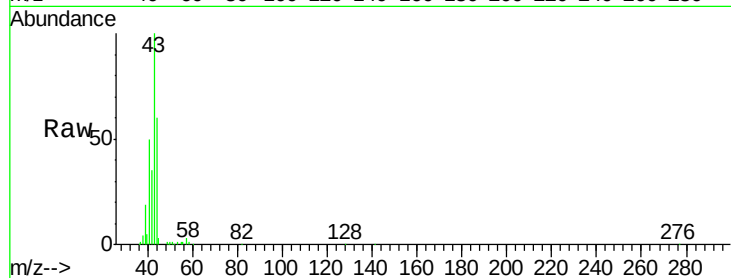
IA-1

Tgt Ion: 41 Resp: 56837

Ion Ratio Lower Upper

41 100

42 79.8 55.2 82.8



#10

Heptane

Concen: 0.116 ppbv

RT: 8.13 min Scan# 1661

Delta R.T. -0.00 min

Lab File: VL034919.D

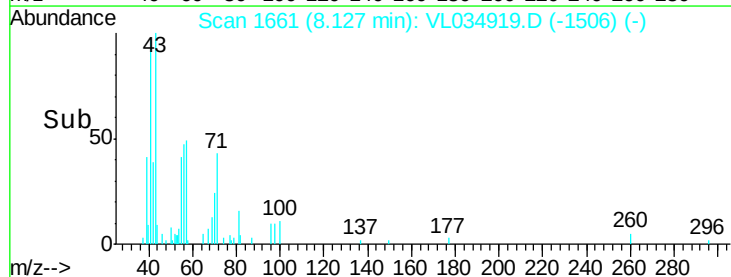
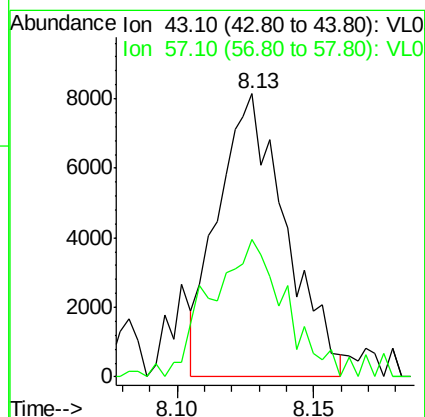
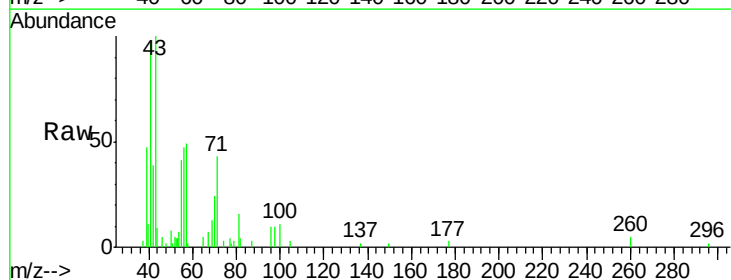
Acq: 17 Mar 2020 17:24

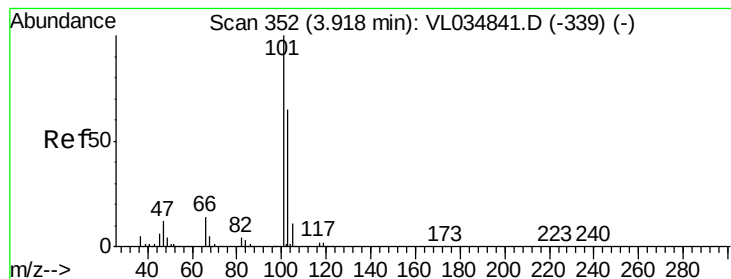
Tgt Ion: 43 Resp: 14014

Ion Ratio Lower Upper

43 100

57 55.9 39.7 59.5





#11

Trichlorofluoromethane

Concen: 0.239 ppbv

RT: 3.92 min Scan# 352

Delta R.T. 0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampleId :

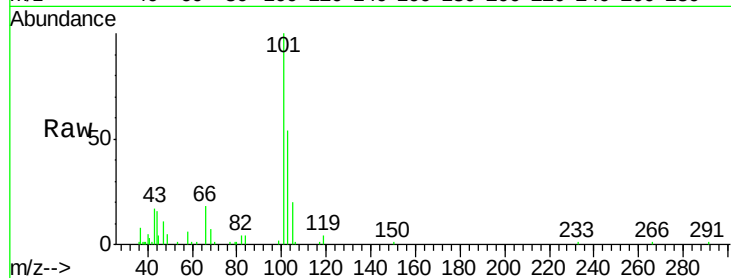
IA-1

Tgt Ion:101 Resp: 32237

Ion Ratio Lower Upper

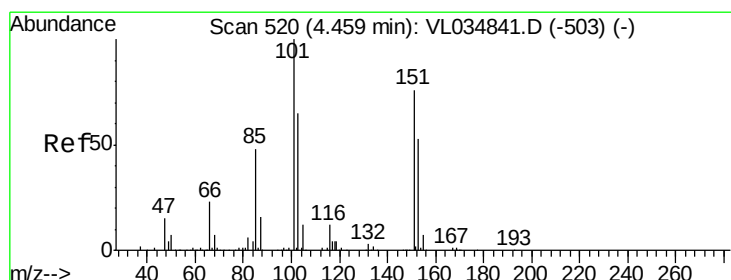
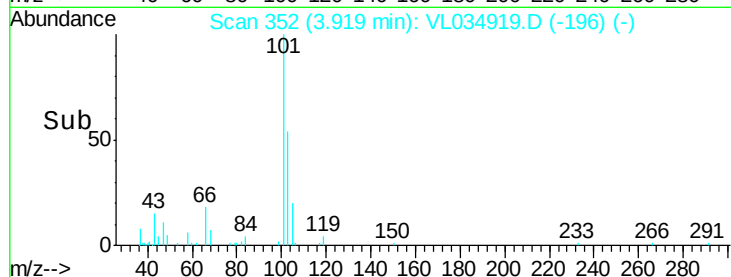
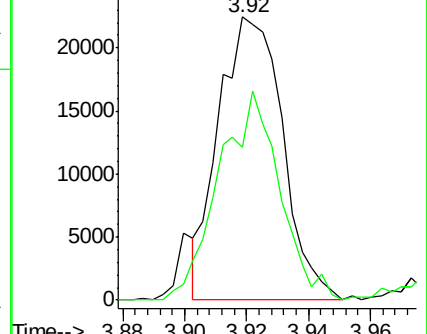
101 100

103 54.0 51.8 77.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.040 ppbv

RT: 4.46 min Scan# 519

Delta R.T. -0.00 min

Lab File: VL034919.D

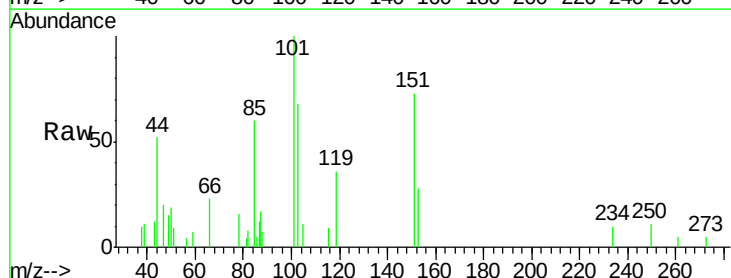
Acq: 17 Mar 2020 17:24

Tgt Ion:101 Resp: 3748

Ion Ratio Lower Upper

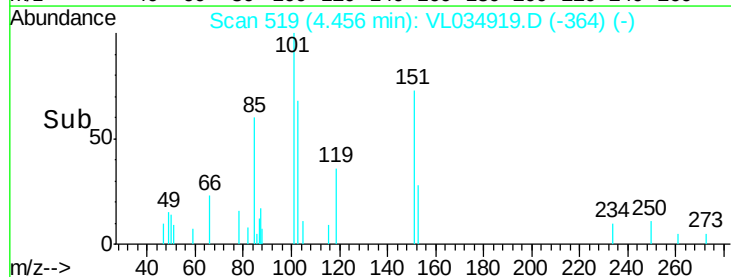
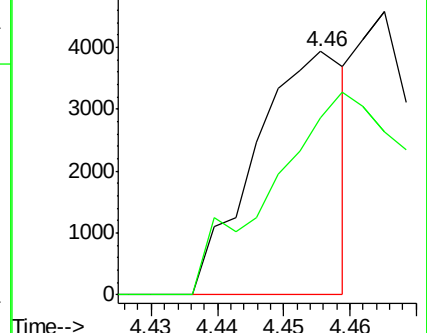
101 100

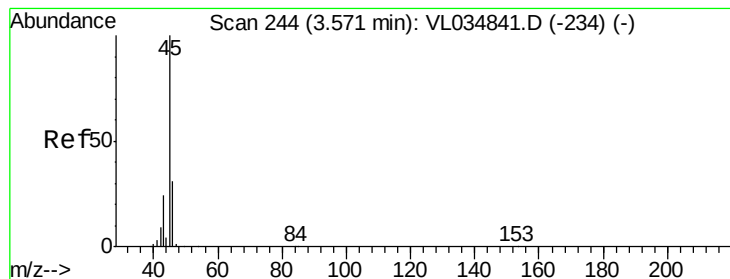
151 136.7 60.8 91.2#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 31.022 ppbv

RT: 3.57 min Scan# 245

Delta R.T. 0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampleId :

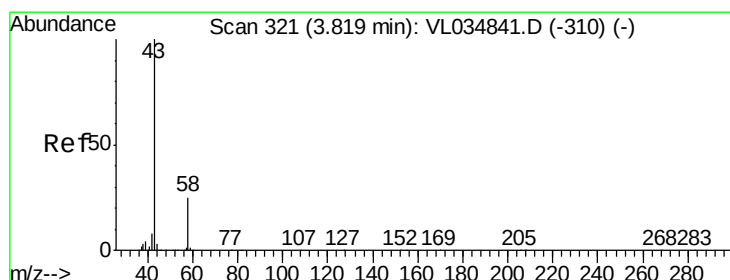
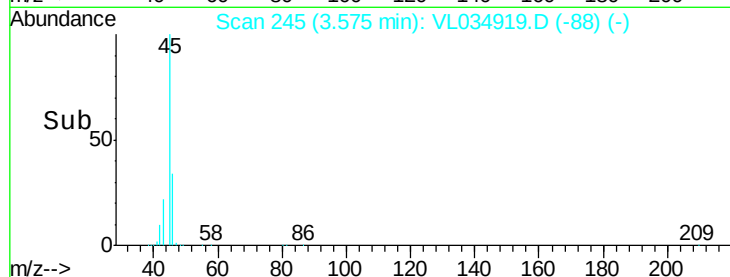
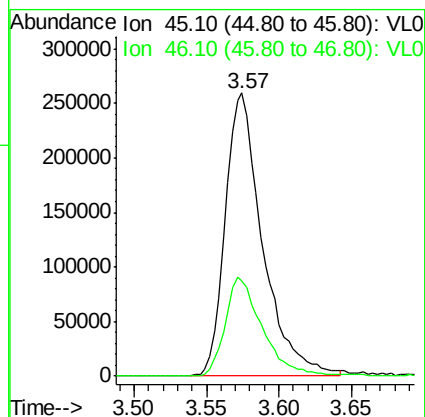
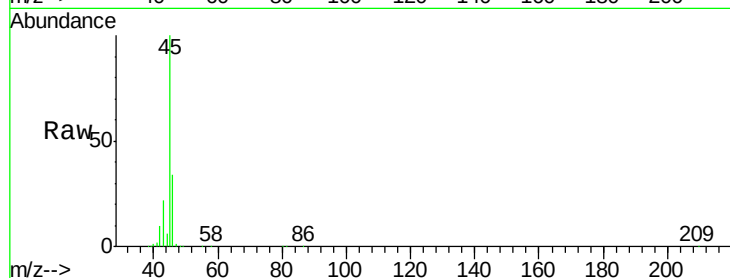
IA-1

Tgt Ion: 45 Resp: 464738

Ion Ratio Lower Upper

45 100

46 35.1 16.0 64.0



#15

Acetone

Concen: 14.932 ppbv

RT: 3.82 min Scan# 320

Delta R.T. -0.00 min

Lab File: VL034919.D

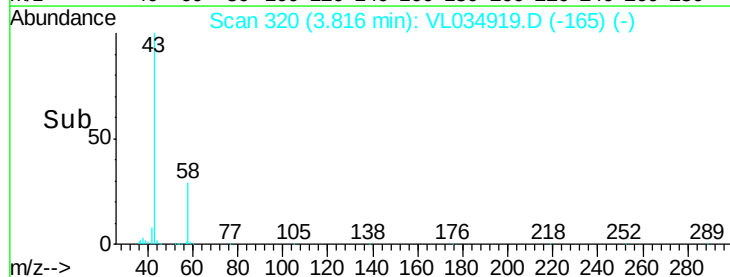
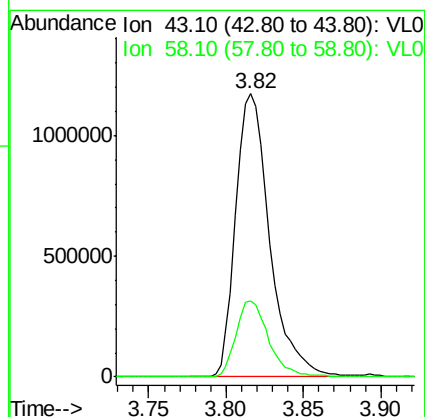
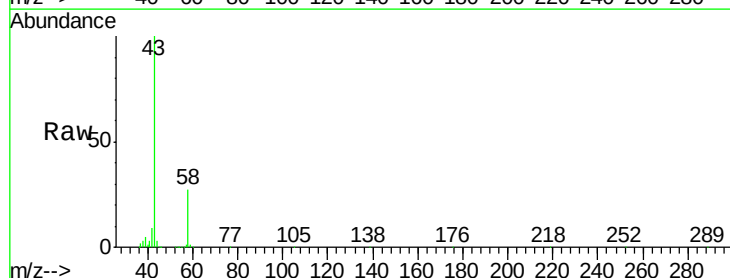
Acq: 17 Mar 2020 17:24

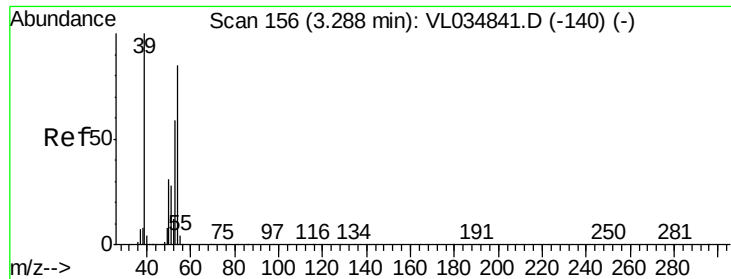
Tgt Ion: 43 Resp: 1788117

Ion Ratio Lower Upper

43 100

58 26.0 21.0 31.6

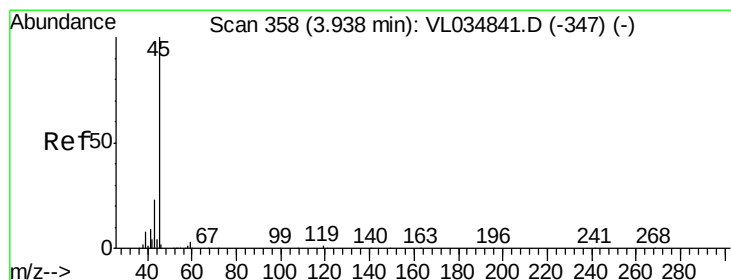
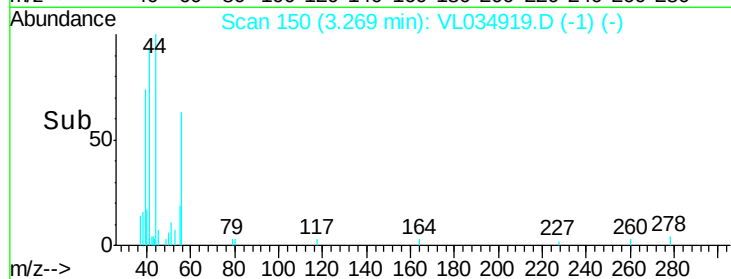
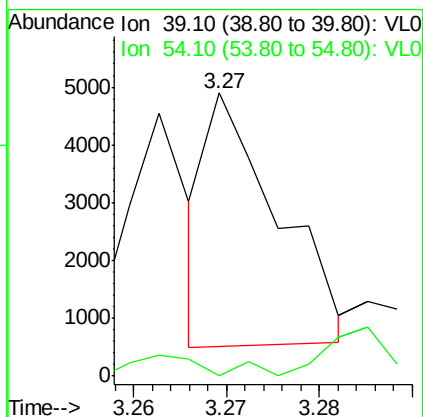
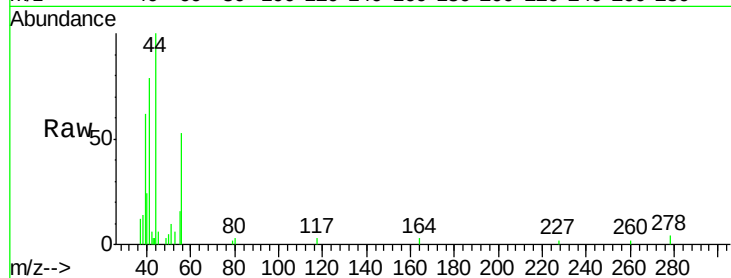




#16
 1,3-Butadiene
 Concen: 0.043 ppbv
 RT: 3.27 min Scan# 150
 Delta R.T. -0.02 min
 Lab File: VL034919.D
 Acq: 17 Mar 2020 17:24

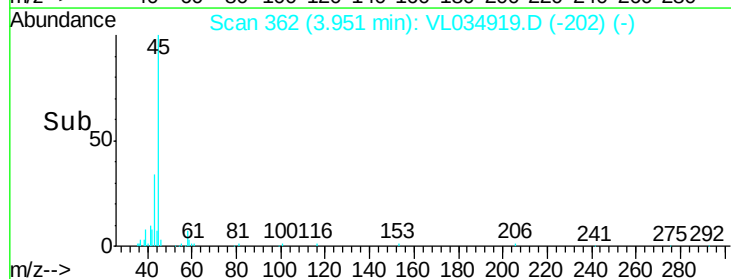
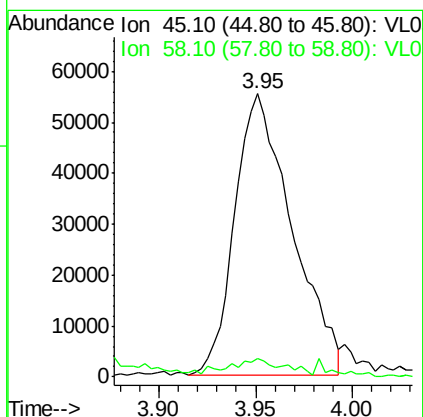
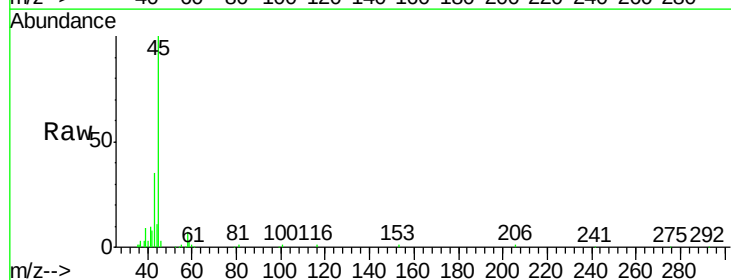
Instrument :
 MSVOA_L
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 IA-1

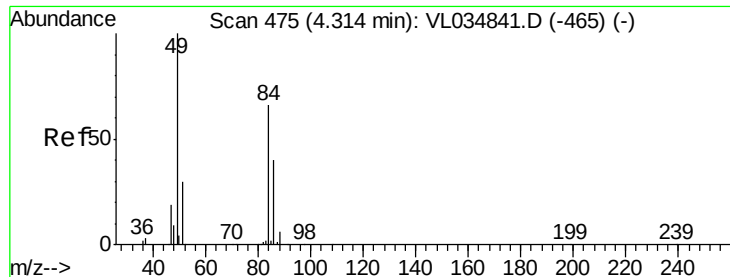
Tgt Ion: 39 Resp: 2355
 Ion Ratio Lower Upper
 39 100
 54 0.0 65.0 97.6#



#19
 Isopropyl Alcohol
 Concen: 1.500 ppbv
 RT: 3.95 min Scan# 362
 Delta R.T. 0.01 min
 Lab File: VL034919.D
 Acq: 17 Mar 2020 17:24

Tgt Ion: 45 Resp: 113461
 Ion Ratio Lower Upper
 45 100
 58 409.8 30.5 45.7#

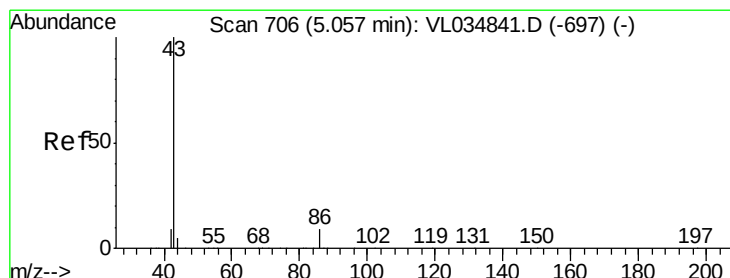
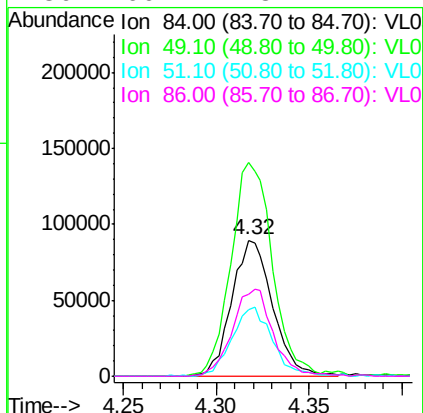
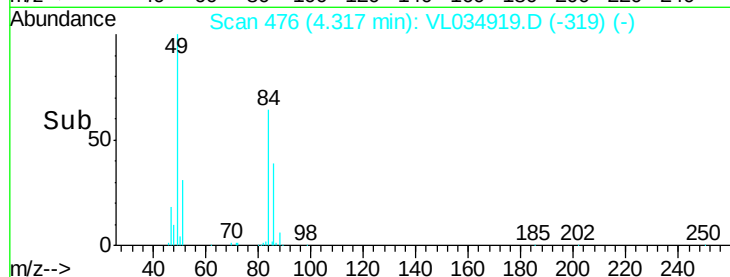
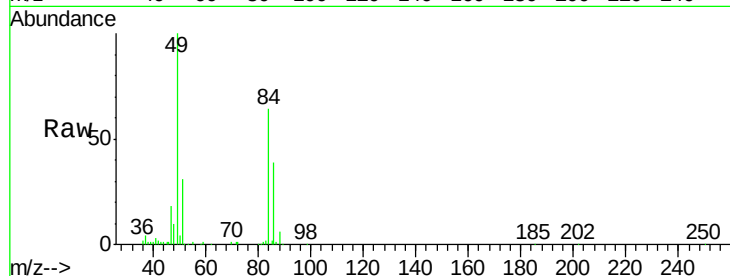




#20
Methylene Chloride
Concen: 3.614 ppbv
RT: 4.32 min Scan# 476
Delta R.T. 0.00 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

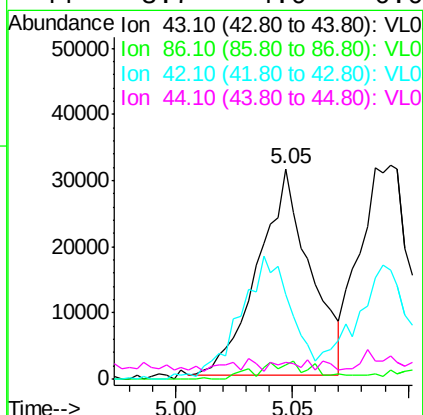
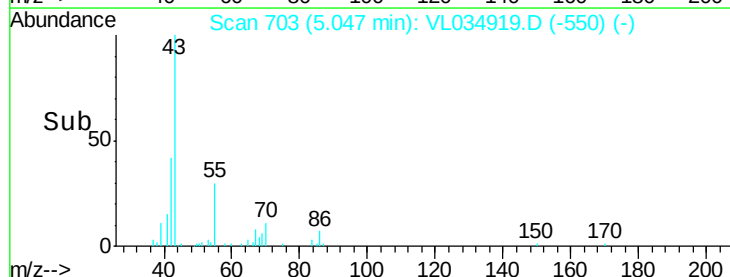
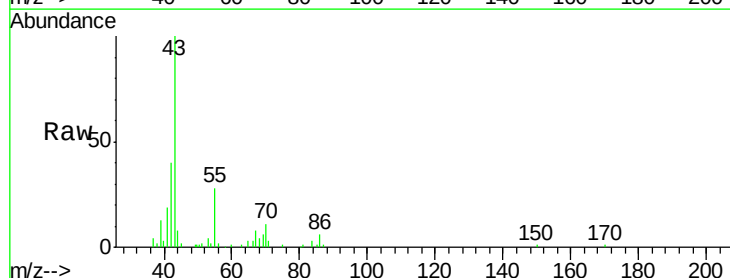
Instrument :
MSVOA_L
ClientSampled :
IA-1

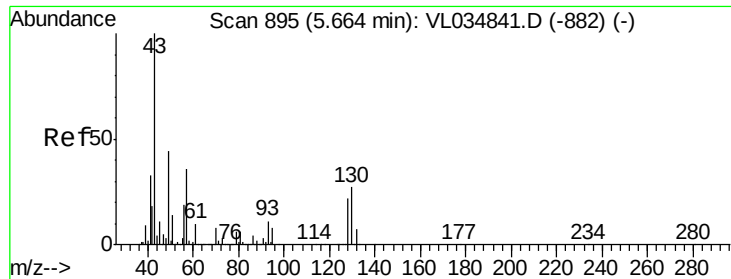
Tgt Ion: 84 Resp: 136818
Ion Ratio Lower Upper
84 100
49 156.4 121.5 182.3
51 49.0 36.6 55.0
86 60.7 48.2 72.2



#23
Vinyl Acetate
Concen: 0.275 ppbv
RT: 5.05 min Scan# 703
Delta R.T. -0.01 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

Tgt Ion: 43 Resp: 48609
Ion Ratio Lower Upper
43 100
86 6.6 6.3 9.5
42 38.4 7.8 11.8#
44 3.7 4.0 6.0#





#25

Ethyl Acetate

Concen: 0.960 ppbv

RT: 5.67 min Scan# 897

Delta R.T. 0.01 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampleId :

IA-1

Tgt Ion: 43 Resp: 204783

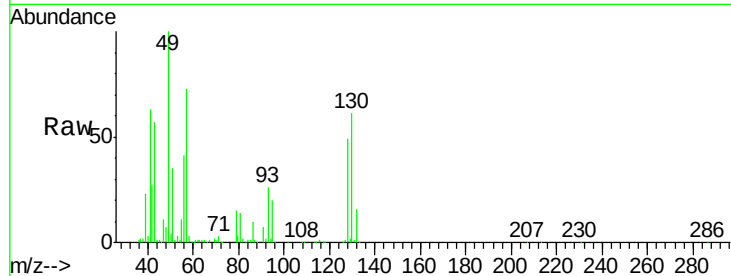
Ion Ratio Lower Upper

43 100

45 5.6 8.2 12.2#

61 1.8 7.8 11.6#

70 2.6 5.8 8.8#

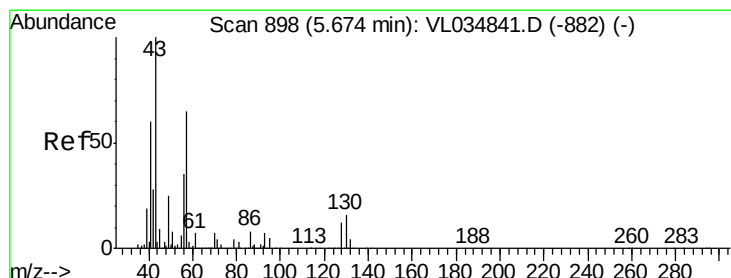
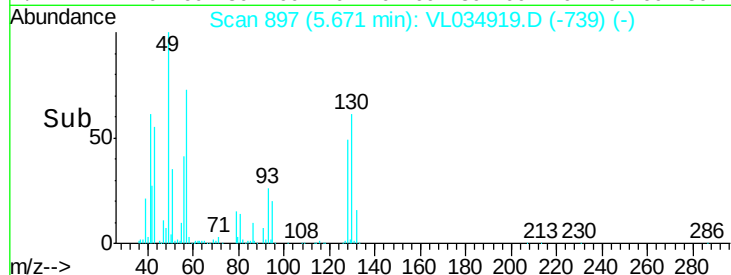
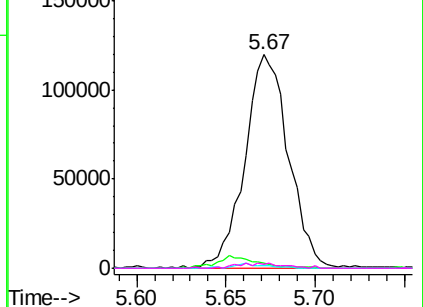


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 2.754 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Tgt Ion: 57 Resp: 252982

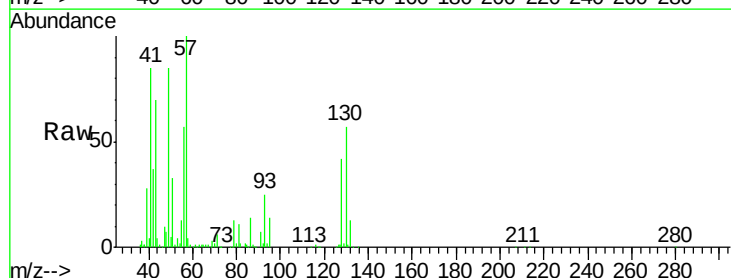
Ion Ratio Lower Upper

57 100

41 94.1 72.6 109.0

43 82.5 183.8 275.6#

56 56.5 41.9 62.9

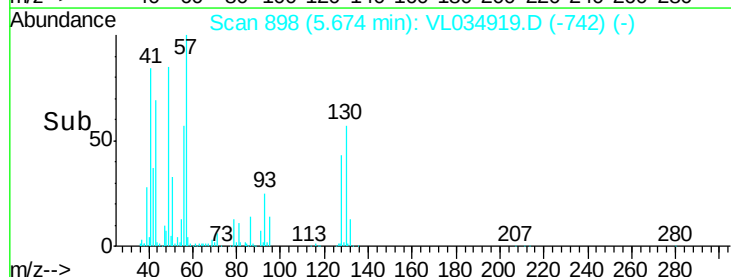
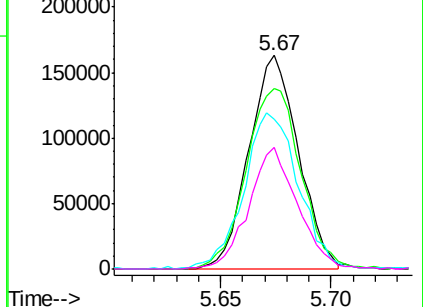


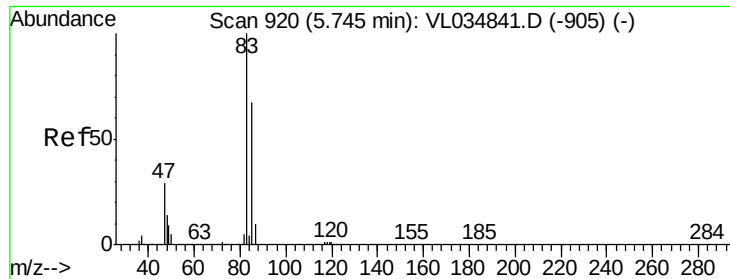
Abundance Ion 57.10 (56.80 to 57.80): VL0

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

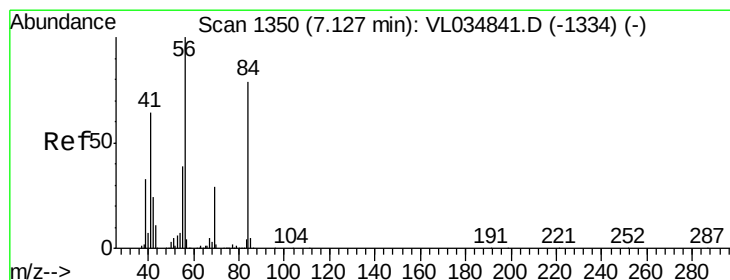
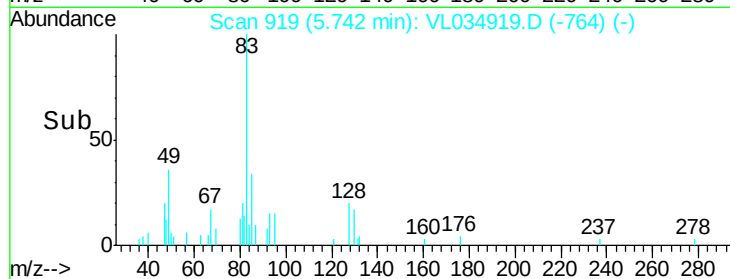
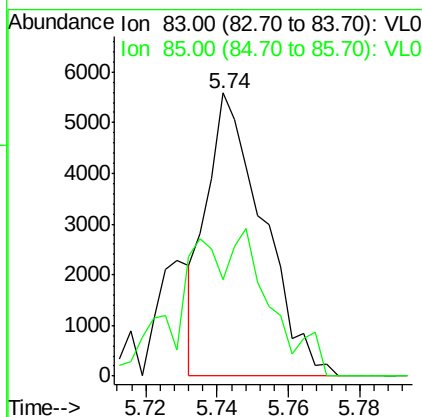
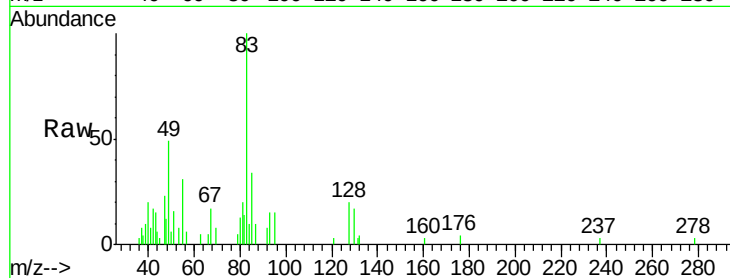




#29
Chloroform
Concen: 0.044 ppbv
RT: 5.74 min Scan# 919
Delta R.T. -0.00 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

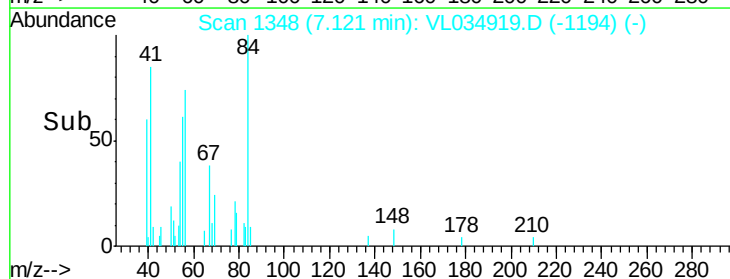
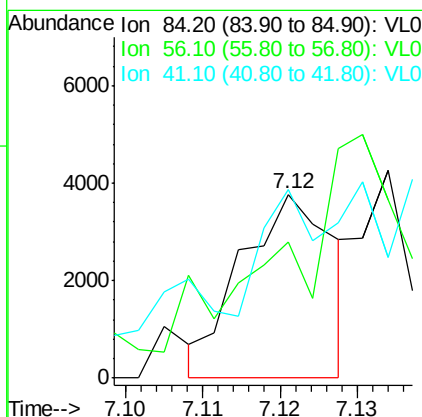
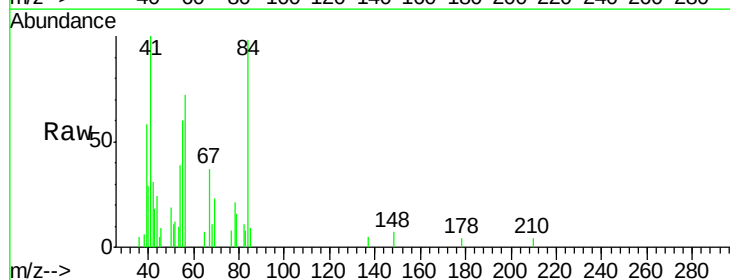
Instrument :
MSVOA_L
ClientSampleId :
IA-1

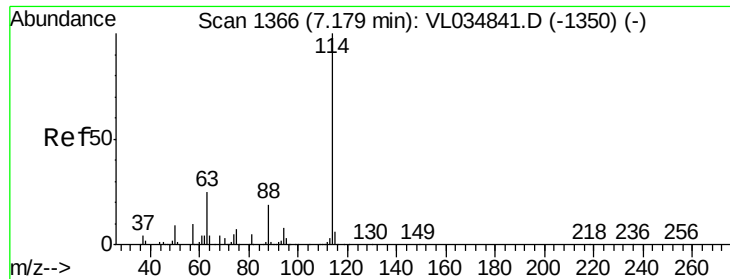
Tgt Ion: 83 Resp: 6141
Ion Ratio Lower Upper
83 100
85 34.3 53.8 80.6#



#30
Cyclohexane
Concen: 0.040 ppbv
RT: 7.12 min Scan# 1348
Delta R.T. -0.01 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

Tgt Ion: 84 Resp: 3093
Ion Ratio Lower Upper
84 100
56 0.0 110.5 165.7#
41 0.0 68.2 102.4#

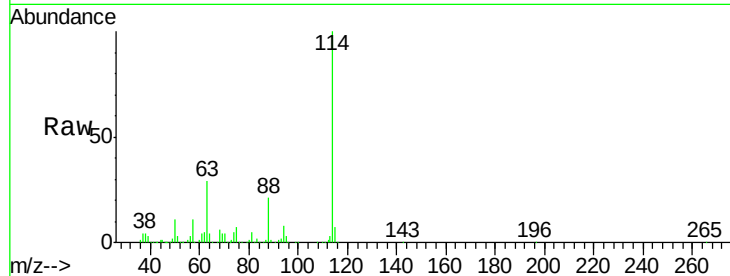




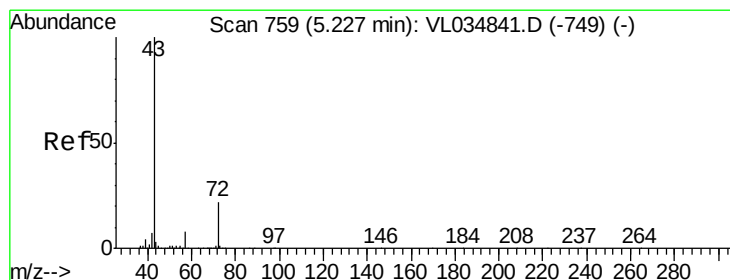
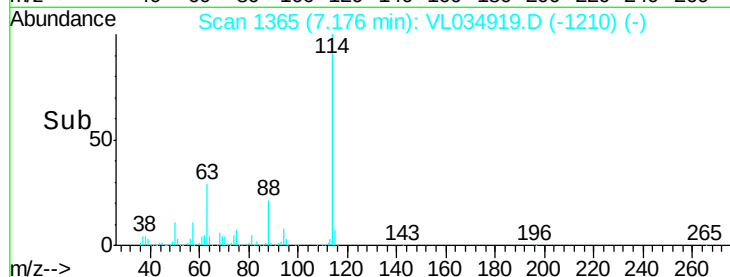
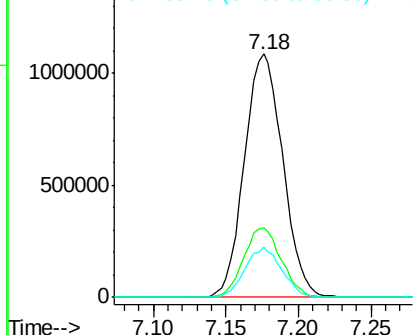
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.18 min Scan# 1365
 Delta R.T. -0.00 min
 Lab File: VL034919.D
 Acq: 17 Mar 2020 17:24

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

Tgt Ion:114 Resp: 2006794
 Ion Ratio Lower Upper
 114 100
 63 28.3 20.6 31.0
 88 19.8 15.0 22.6

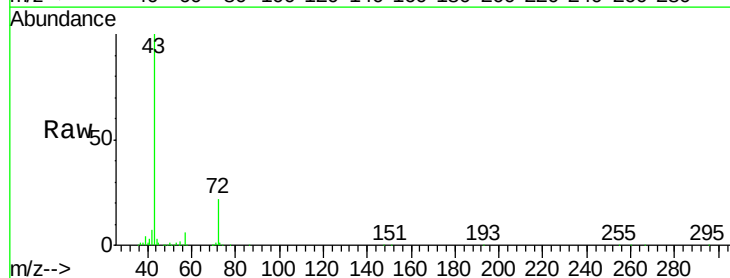


Abundance Ion 114.10 (113.80 to 114.80): V
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

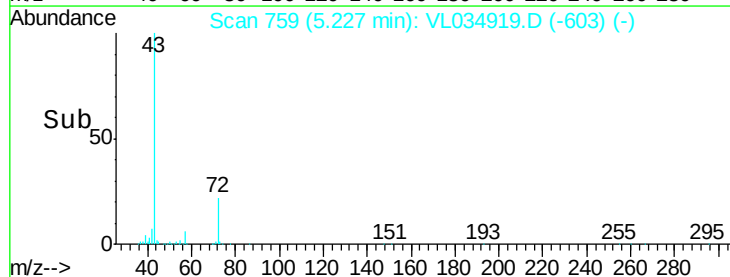
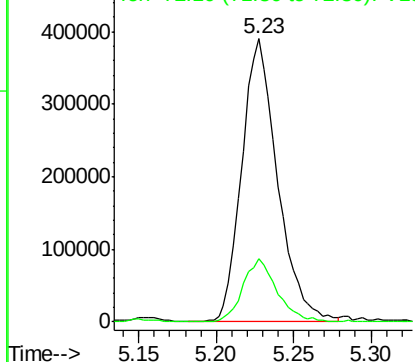


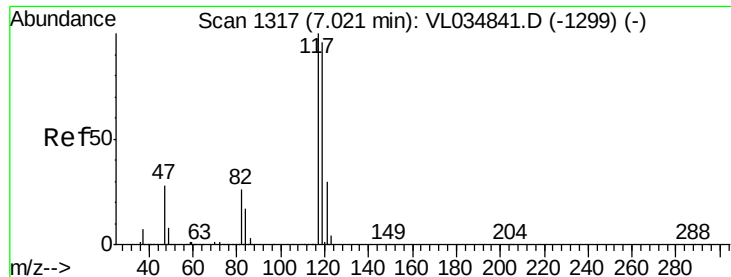
#34
 2-Butanone
 Concen: 4.693 ppbv
 RT: 5.23 min Scan# 759
 Delta R.T. 0.00 min
 Lab File: VL034919.D
 Acq: 17 Mar 2020 17:24

Tgt Ion: 43 Resp: 625827
 Ion Ratio Lower Upper
 43 100
 72 21.5 17.6 26.4



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





#35

Carbon Tetrachloride

Concen: 0.035 ppbv

RT: 7.02 min Scan# 1318

Delta R.T. 0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampleId :

IA-1

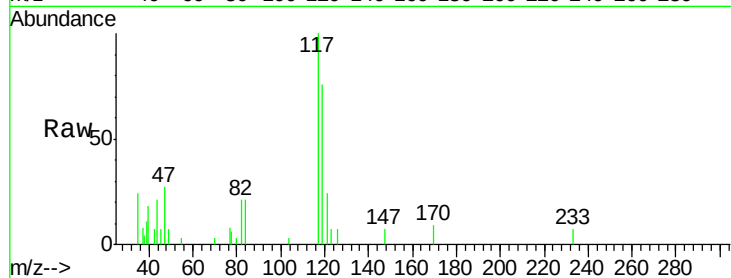
Tgt Ion:117 Resp: 4333

Ion Ratio Lower Upper

117 100

119 78.6 77.0 115.4

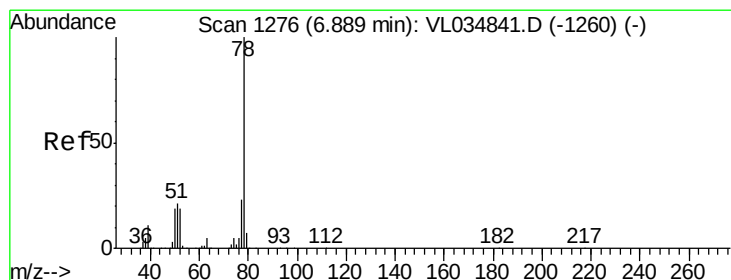
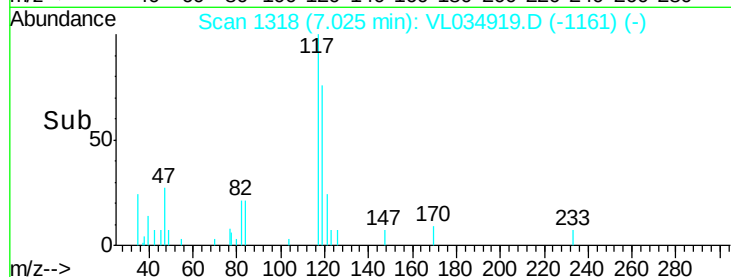
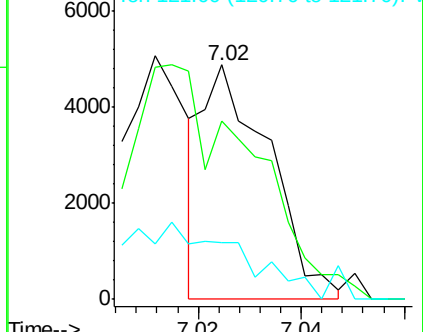
121 12.1 24.0 36.0#



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.302 ppbv

RT: 6.89 min Scan# 1276

Delta R.T. 0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

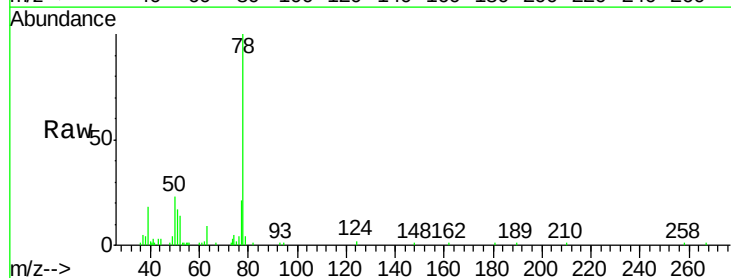
Tgt Ion: 78 Resp: 53997

Ion Ratio Lower Upper

78 100

77 20.1 18.2 27.2

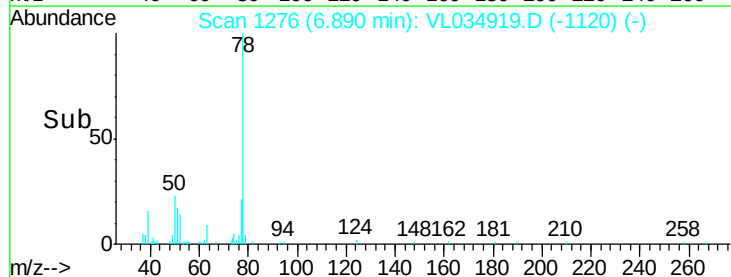
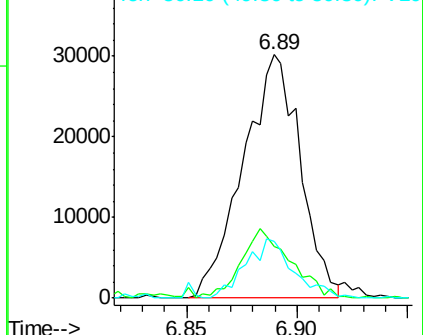
50 22.5 15.2 22.8

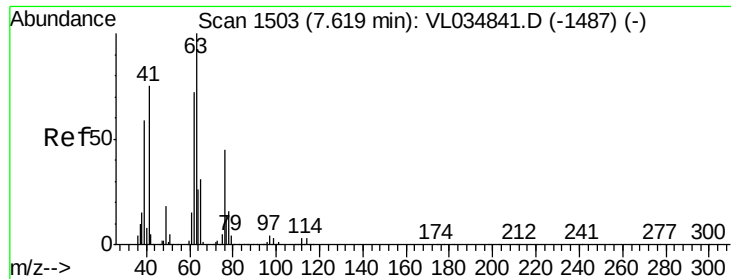


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 7.953 ppbv

RT: 7.18 min Scan# 1365

Delta R.T. -0.44 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampleId :

IA-1

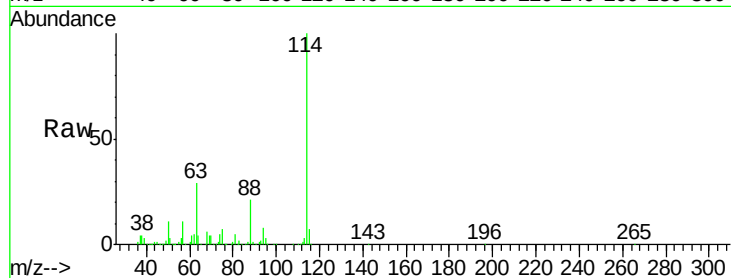
Tgt Ion: 63 Resp: 563607

Ion Ratio Lower Upper

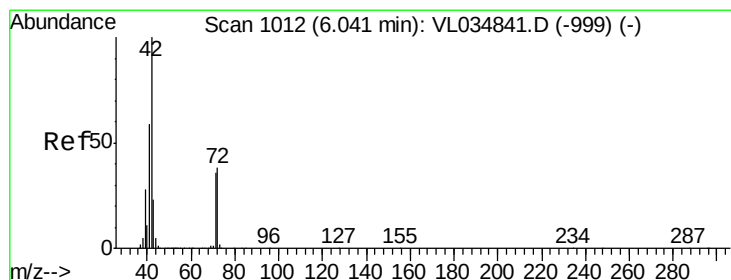
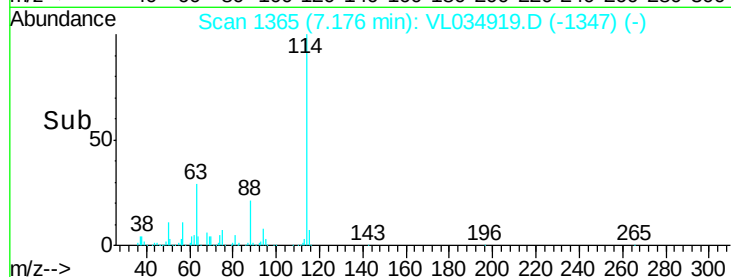
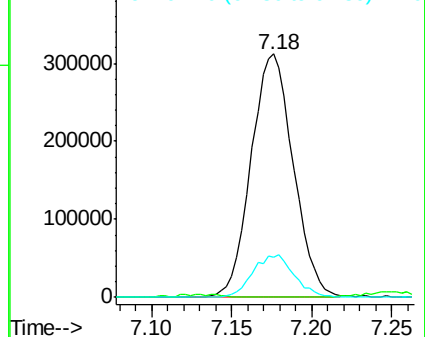
63 100

41 0.0 59.8 89.8#

62 16.3 57.6 86.4#



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: 3.813 ppbv

RT: 6.04 min Scan# 1012

Delta R.T. 0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

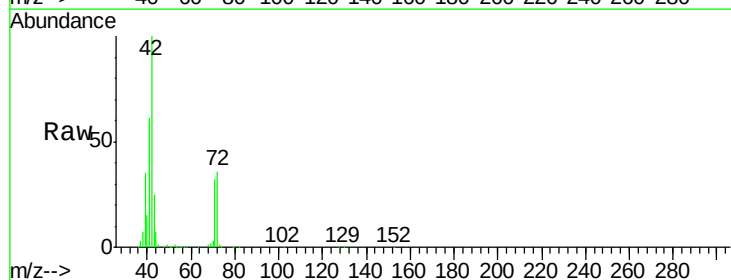
Tgt Ion: 42 Resp: 275146

Ion Ratio Lower Upper

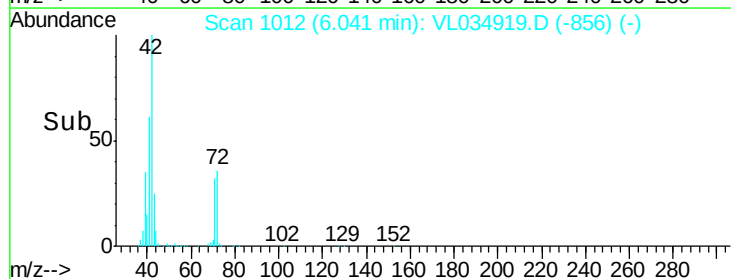
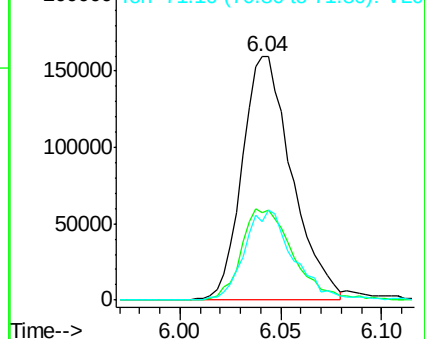
42 100

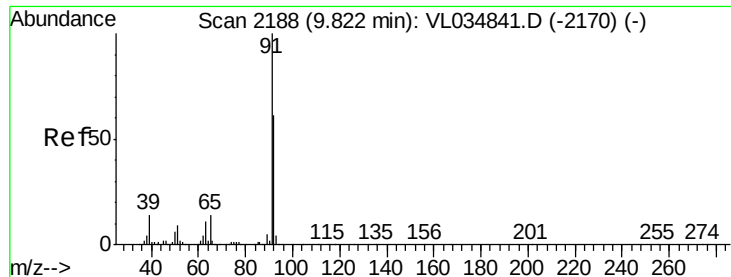
72 39.6 30.8 46.2

71 36.7 30.1 45.1



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

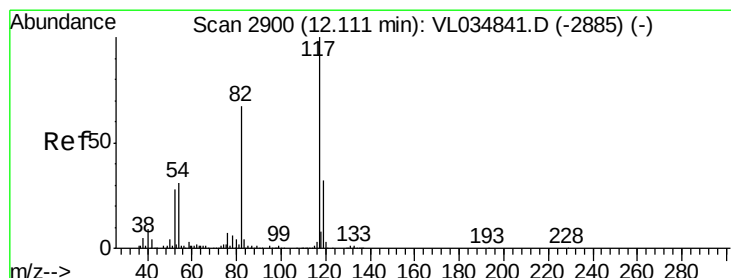
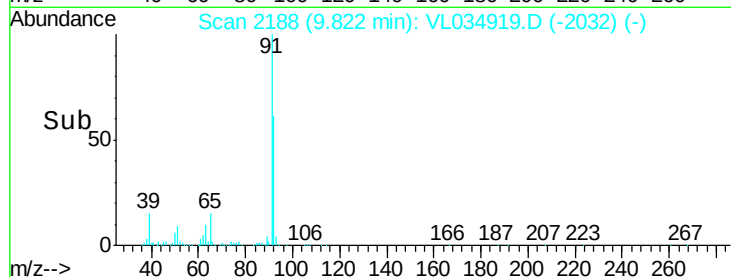
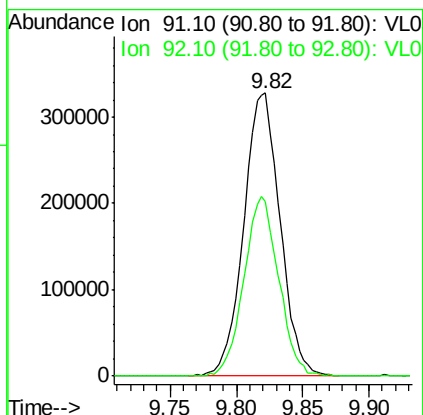
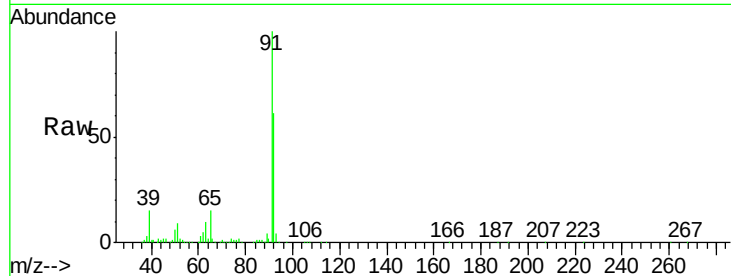




#53
Toluene
Concen: 3.025 ppbv
RT: 9.82 min Scan# 2188
Delta R.T. 0.00 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

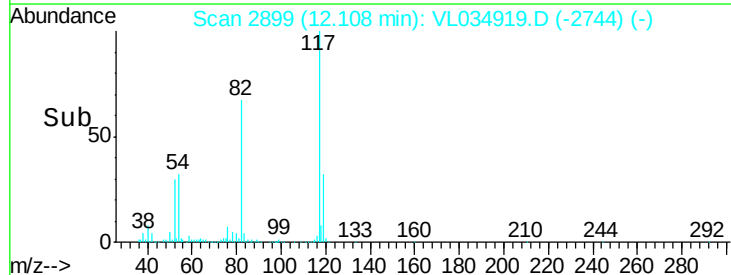
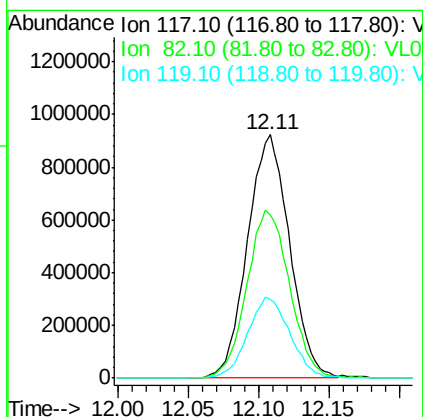
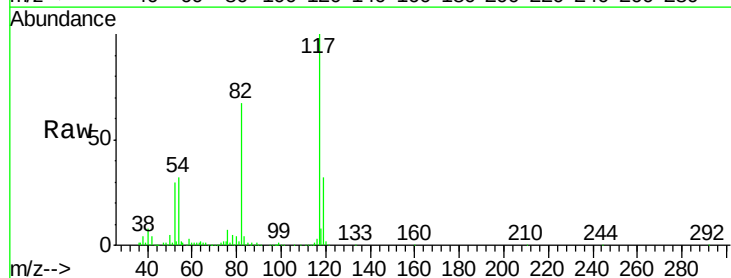
Instrument :
MSVOA_L
ClientSampleId :
IA-1

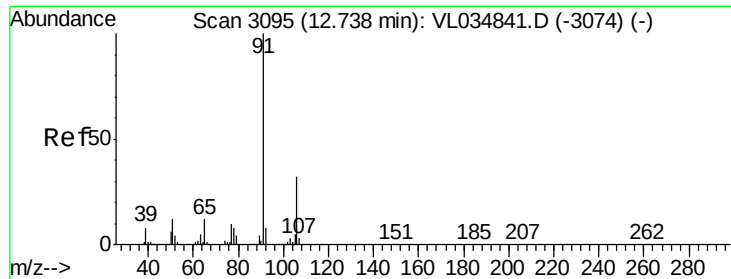
Tgt Ion: 91 Resp: 624889
Ion Ratio Lower Upper
91 100
92 60.7 48.6 72.8



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.11 min Scan# 2899
Delta R.T. -0.00 min
Lab File: VL034919.D
Acq: 17 Mar 2020 17:24

Tgt Ion: 117 Resp: 1926509
Ion Ratio Lower Upper
117 100
82 70.4 51.1 76.7
119 33.6 27.3 40.9





#58

Ethyl Benzene

Concen: 0.049 ppbv

RT: 12.73 min Scan# 3092

Delta R.T. -0.01 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampled :

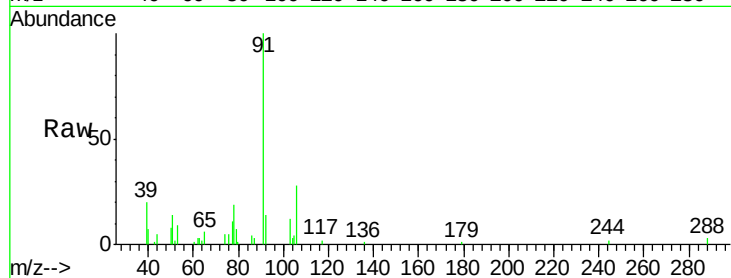
IA-1

Tgt Ion: 91 Resp: 12756

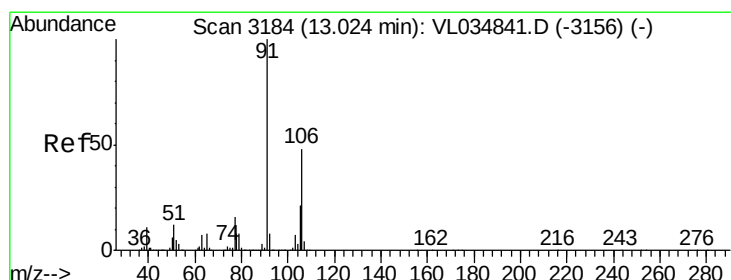
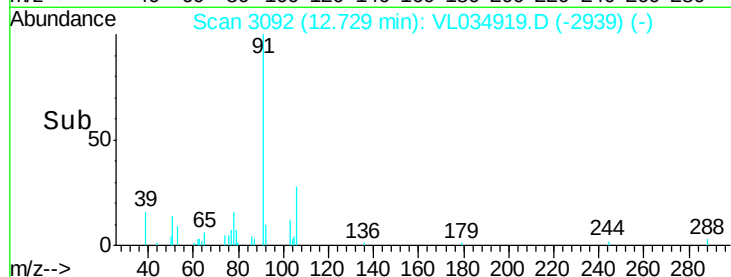
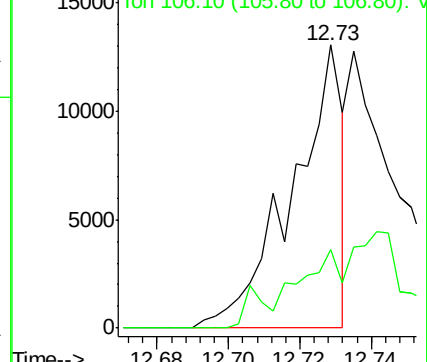
Ion Ratio Lower Upper

91 100

106 27.9 25.8 38.6



Abundance Ion 91.10 (90.80 to 91.80): VL0



#59

m/p-Xylene

Concen: 0.065 ppbv

RT: 13.02 min Scan# 3183

Delta R.T. -0.00 min

Lab File: VL034919.D

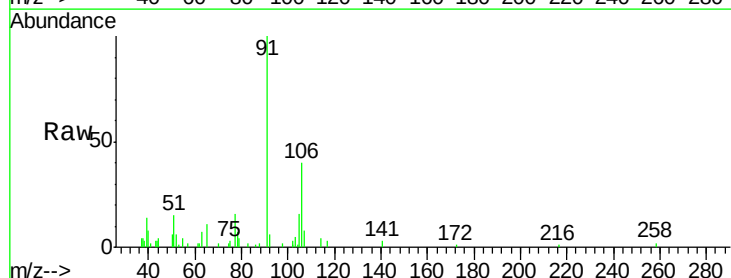
Acq: 17 Mar 2020 17:24

Tgt Ion: 91 Resp: 14235

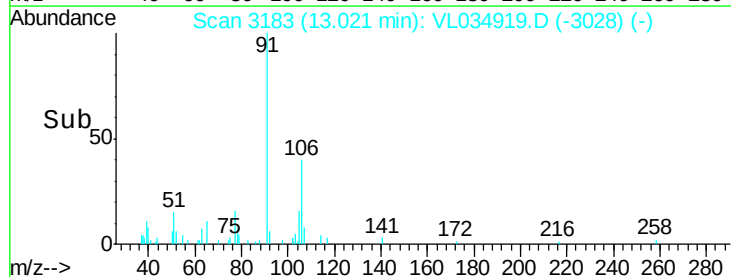
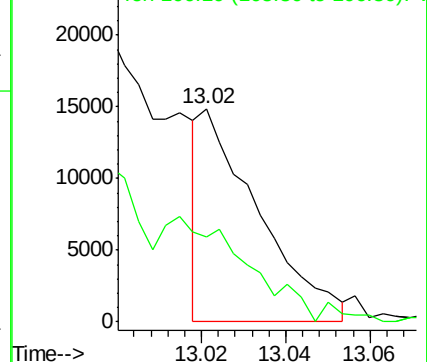
Ion Ratio Lower Upper

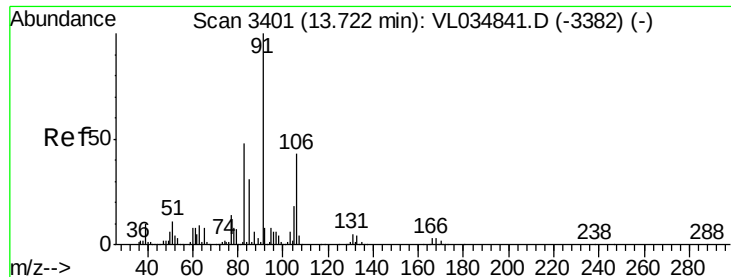
91 100

106 0.0 37.1 55.7#



Abundance Ion 91.10 (90.80 to 91.80): VL0





#60

o-Xylene

Concen: 0.074 ppbv

RT: 13.72 min Scan# 3399

Delta R.T. -0.01 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

Instrument :

MSVOA_L

ClientSampled :

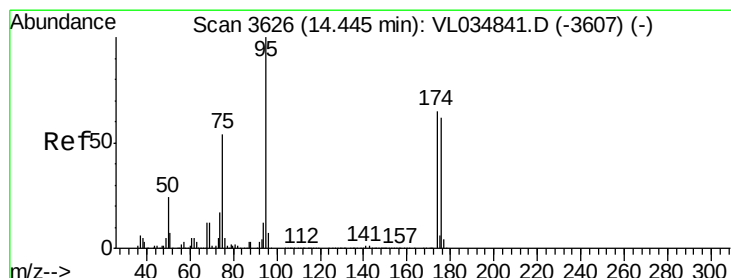
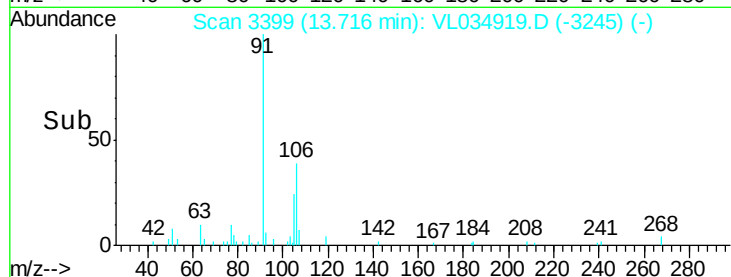
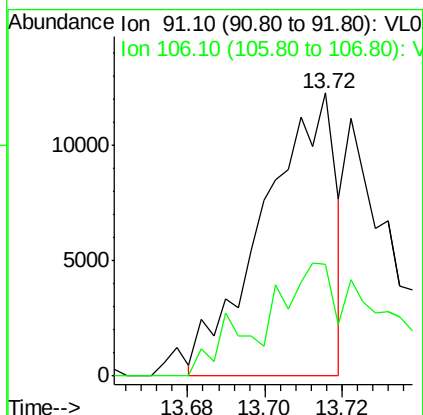
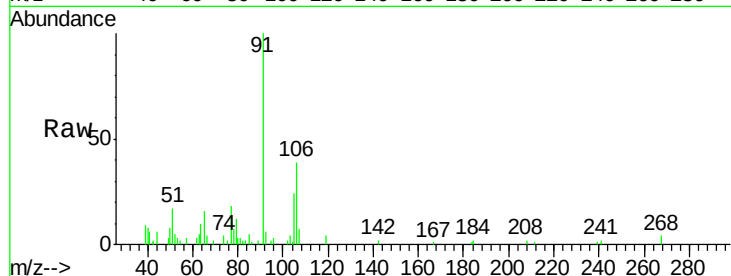
IA-1

Tgt Ion: 91 Resp: 15853

Ion Ratio Lower Upper

91 100

106 65.6 22.5 67.5



#68

1-Bromo-4-Fluorobenzene

Concen: 11.138 ppbv

RT: 14.44 min Scan# 3625

Delta R.T. -0.00 min

Lab File: VL034919.D

Acq: 17 Mar 2020 17:24

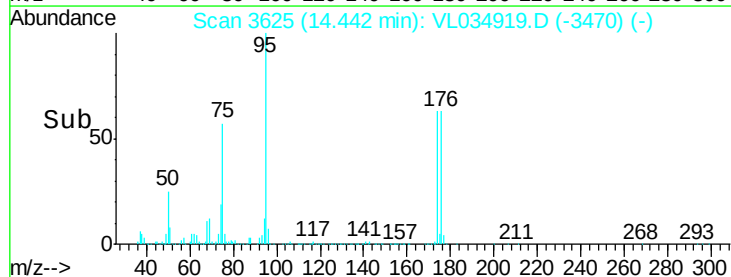
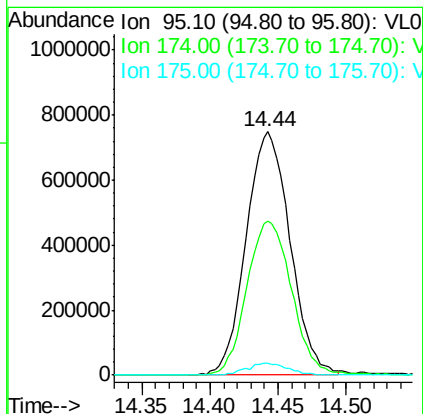
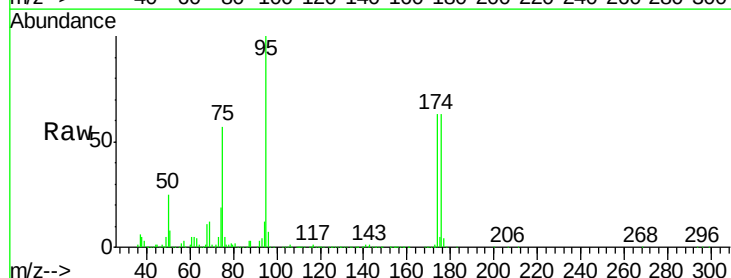
Tgt Ion: 95 Resp: 1673383

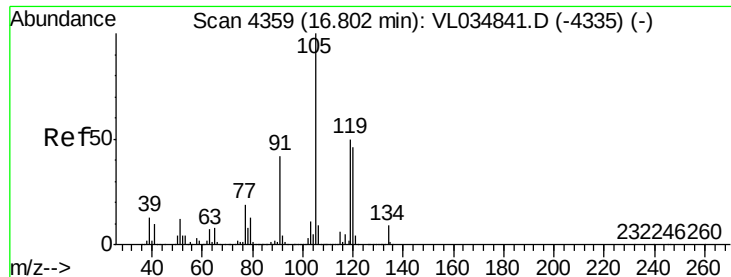
Ion Ratio Lower Upper

95 100

174 64.6 55.2 82.8

175 4.7 4.3 6.5

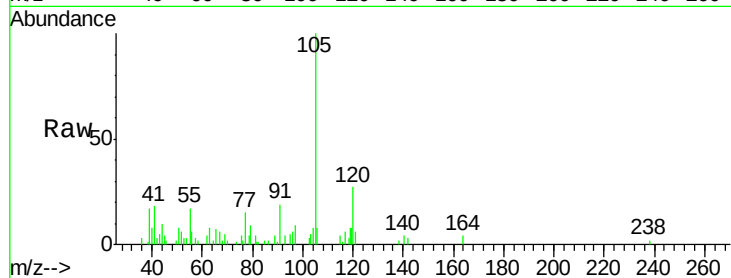




#74
 1,2,4-Trimethylbenzene
 Concen: 0.115 ppbv
 RT: 16.79 min Scan# 4356
 Delta R.T. -0.01 min
 Lab File: VL034919.D
 Acq: 17 Mar 2020 17:24

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

Tgt Ion:	105	Resp:	27865
Ion Ratio	Lower	Upper	
105	100		
120	14.0	37.0	55.4#
91	17.3	33.8	50.6#
77	14.7	15.4	23.0#



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

