

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN033119\
 Data File : VN054842.D
 Acq On : 31 Mar 2019 11:23
 Operator : JC/SP
 Sample : VN0331WBL01
 Misc : 5.00mL/MSVOA N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :

Quant Time: Apr 01 02:44:16 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_N\METHODS\82N032919W.M
 Quant Title : SW846 8260
 QLast Update : Sat Mar 30 00:48:18 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.66	168	533836	50.00	ug/l	0.00
34) 1,4-Difluorobenzene	8.59	114	868815	50.00	ug/l	0.00
63) Chlorobenzene-d5	11.41	117	730190	50.00	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.34	152	255427	50.00	ug/l	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4	8.03	65	355233	49.36	ug/l	0.00
Spiked Amount			Recovery	=	98.72%	
35) Dibromofluoromethane	7.59	113	279191	48.20	ug/l	0.00
Spiked Amount			Recovery	=	96.40%	
50) Toluene-d8	10.09	98	1039582	48.28	ug/l	0.00
Spiked Amount			Recovery	=	96.56%	
62) 4-Bromofluorobenzene	12.40	95	316138	44.14	ug/l	0.00
Spiked Amount			Recovery	=	88.28%	

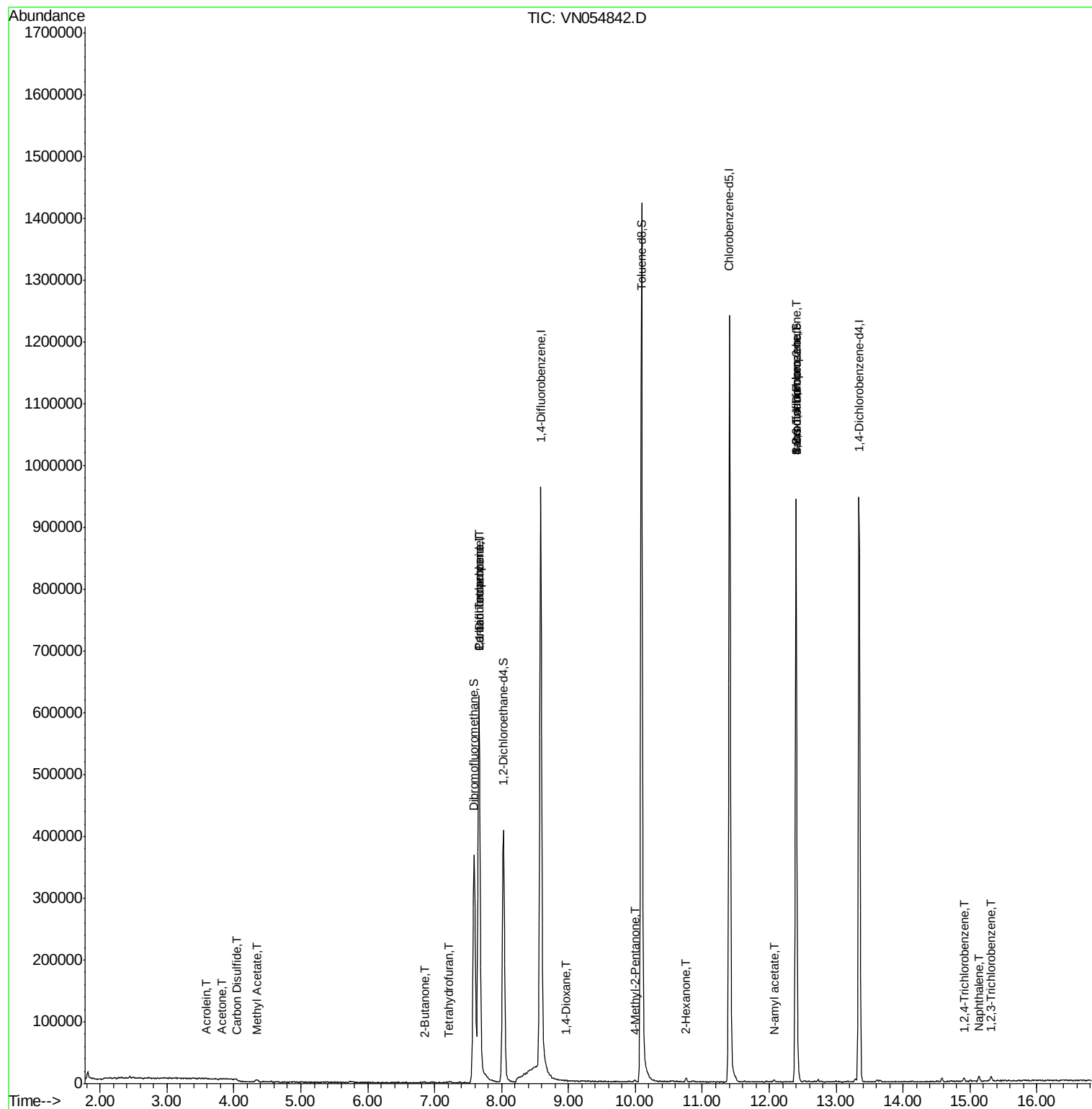
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
5) Bromomethane	2.58	94	461	Below Cal	#	61
13) Acrolein	3.60	56	181	0.540	ug/l #	1
16) Acetone	3.83	43	744	0.434	ug/l #	87
17) Carbon Disulfide	4.04	76	3216	0.236	ug/l #	74
18) Methyl Acetate	4.34	43	7729	0.825	ug/l #	86
25) 2-Butanone	6.85	43	580	0.229	ug/l #	46
29) Tetrahydrofuran	7.22	42	379	0.215	ug/l #	44
31) Cyclohexane	7.67	56	11344	Below Cal	#	11
36) 1,1-Dichloropropene	7.66	75	41553	5.133	ug/l #	47
38) Carbon Tetrachloride	7.67	117	50423	6.413	ug/l #	16
49) 1,4-Dioxane	8.96	88	95	1.831	ug/l #	1
51) 4-Methyl-2-Pentanone	9.99	43	2717	0.501	ug/l #	84
59) 2-Hexanone	10.76	43	3930	1.132	ug/l	100
71) Bromoform	12.40	173	1969	0.628	ug/l #	1
74) N-amyl acetate	12.07	43	2149	0.330	ug/l #	88
75) 1,1,2,2-Tetrachloroethane	12.51	83	304	Below Cal	#	65
76) 1,2,3-Trichloropropane	12.40	75	164783	37.135	ug/l #	100
81) trans-1,4-Dichloro-2-buten	12.40	75	164783	144.447	ug/l #	11
83) tert-Butylbenzene	12.99	119	949	Below Cal		86
93) 1,2,4-Trichlorobenzene	14.91	180	1740	0.424	ug/l	88
94) Hexachlorobutadiene	15.00	225	261	Below Cal		78
95) Naphthalene	15.13	128	6848	0.744	ug/l	99
96) 1,2,3-Trichlorobenzene	15.32	180	2348	0.566	ug/l	62

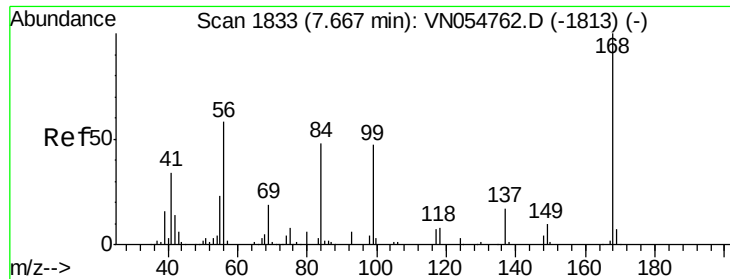
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA N\DATA\VN033119\
Data File : VN054842.D
Acq On : 31 Mar 2019 11:23
Operator : JC/SP
Sample : VN0331WBL01
Misc : 5.00mL/MSVOA N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :

Quant Time: Apr 01 02:44:16 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA_N\METHODS\82N032919W.M
Quant Title : SW846 8260
QLast Update : Sat Mar 30 00:48:18 2019
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.66 min Scan# 1832

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

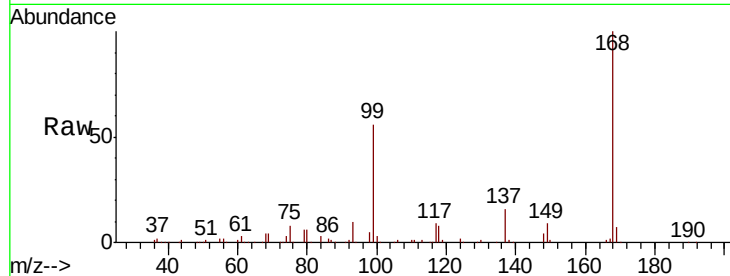
ClientSampleId :

Tot Ion:168 Resp: 533836

Ion Ratio Lower Upper

168 100

99 55.9 37.1 55.7#



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VNO

7.66

200000

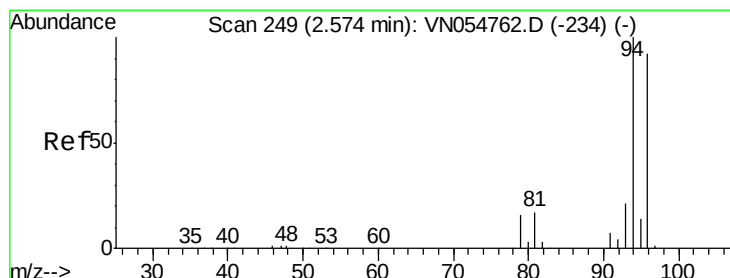
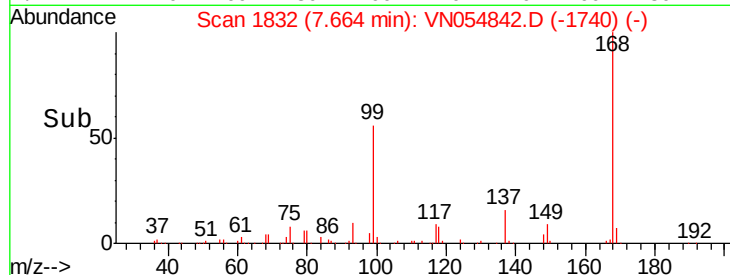
150000

100000

50000

0

Time-->



#5

Bromomethane

Concen: Below Cal

RT: 2.58 min Scan# 251

Delta R.T. 0.01 min

Lab File: VN054842.D

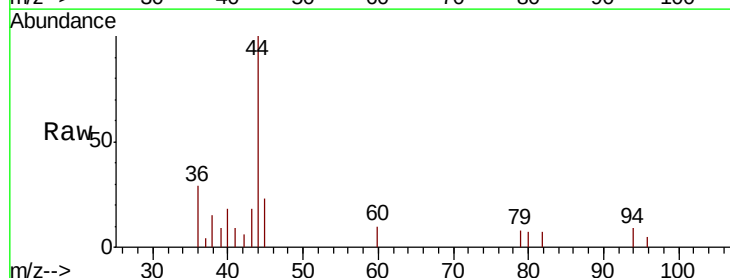
Acq: 31 Mar 2019 11:23

Tgt Ion: 94 Resp: 461

Ion Ratio Lower Upper

94 100

96 58.1 77.0 115.4#



Abundance Ion 93.90 (93.60 to 94.60): VNO

Ion 95.90 (95.60 to 96.60): VNO

2.58

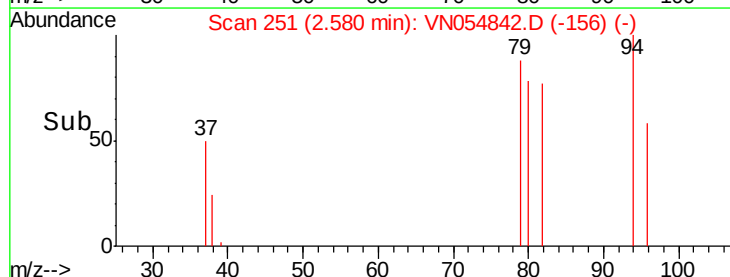
300

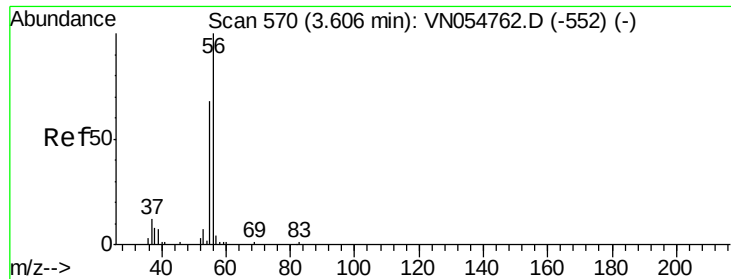
200

100

0

Time-->





#13

Acrolein

Concen: 0.540 ug/l

RT: 3.60 min Scan# 567

Delta R.T. -0.01 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

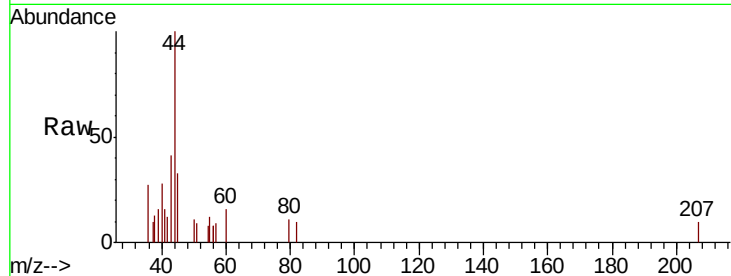
ClientSampleId :

Tot Ion: 56 Resp: 181

Ion Ratio Lower Upper

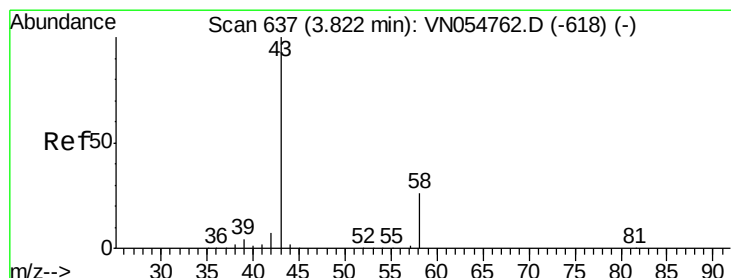
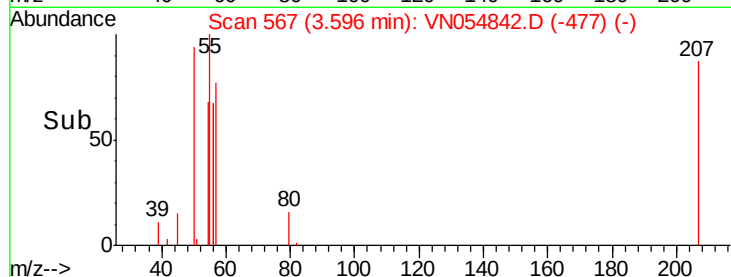
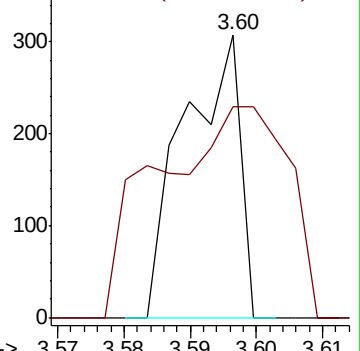
56 100

55 173.5 56.7 85.1#



Abundance Ion 56.00 (55.70 to 56.70): VN0

Ion 55.00 (54.70 to 55.70): VN0



#16

Acetone

Concen: 0.434 ug/l

RT: 3.83 min Scan# 639

Delta R.T. 0.01 min

Lab File: VN054842.D

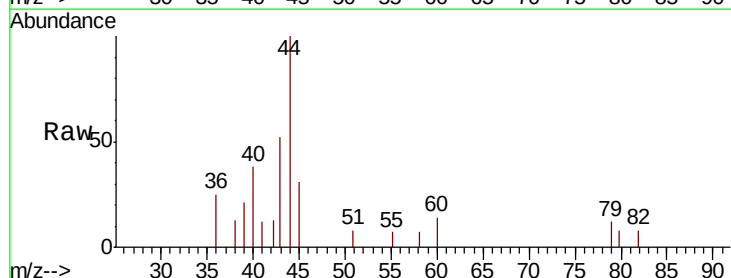
Acq: 31 Mar 2019 11:23

Tgt Ion: 43 Resp: 744

Ion Ratio Lower Upper

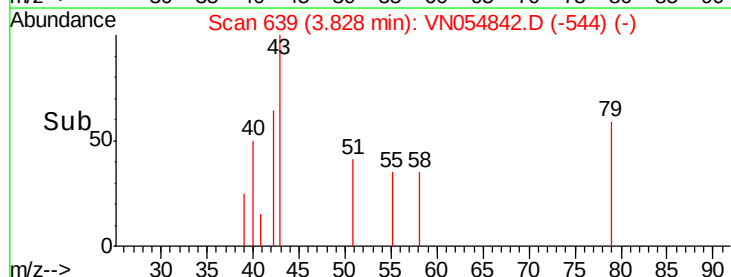
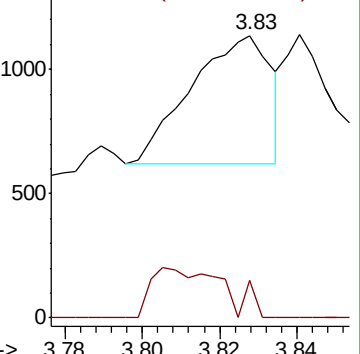
43 100

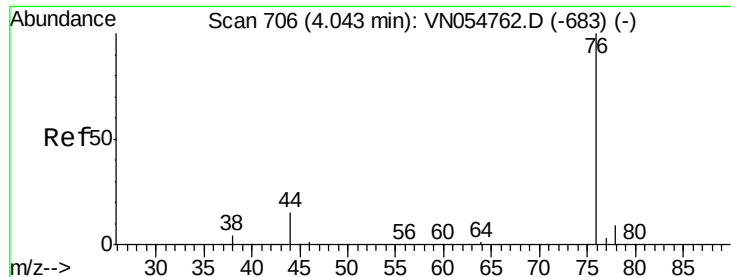
58 29.4 29.9 44.9#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 58.00 (57.70 to 58.70): VN0





#17

Carbon Disulfide

Concen: 0.236 ug/l

RT: 4.04 min Scan# 706

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

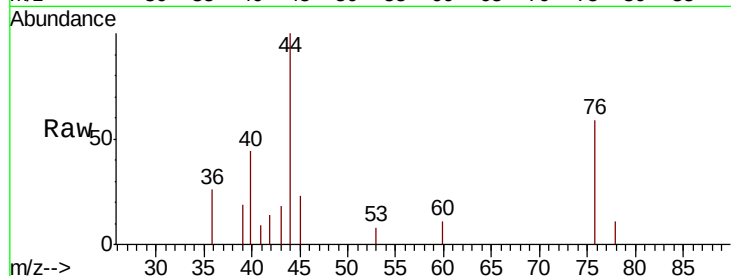
ClientSampled :

Tot Ion: 76 Resp: 3216

Ion Ratio Lower Upper

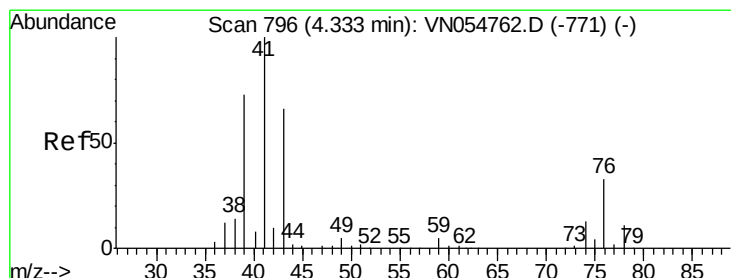
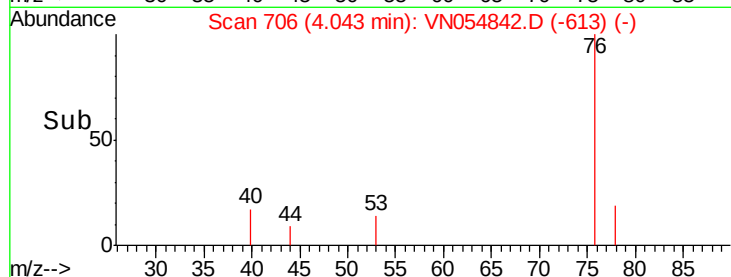
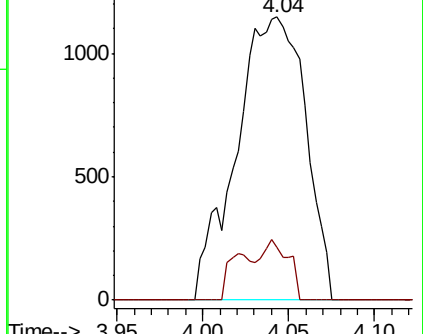
76 100

78 18.7 7.5 11.3#



Abundance Ion 75.90 (75.60 to 76.60): VN0

Ion 77.90 (77.60 to 78.60): VN0



#18

Methyl Acetate

Concen: 0.825 ug/l

RT: 4.34 min Scan# 798

Delta R.T. 0.01 min

Lab File: VN054842.D

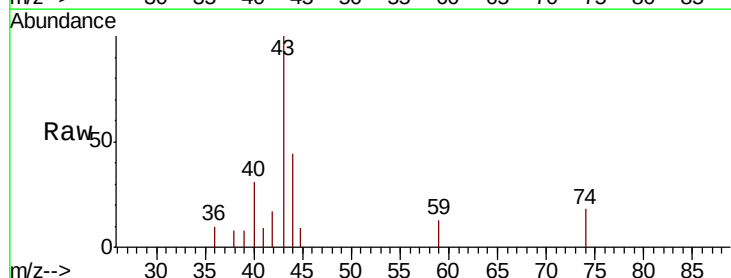
Acq: 31 Mar 2019 11:23

Tgt Ion: 43 Resp: 7729

Ion Ratio Lower Upper

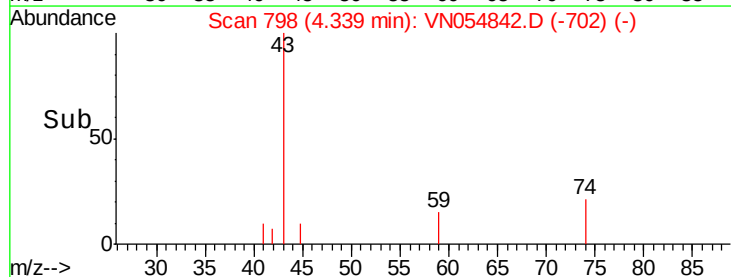
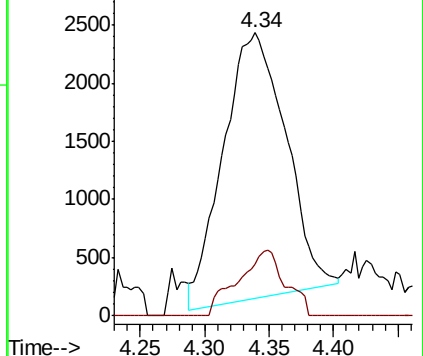
43 100

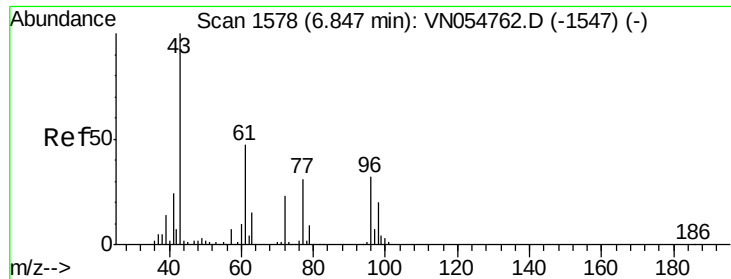
74 18.7 20.8 31.2#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 74.00 (73.70 to 74.70): VN0





#25

2-Butanone

Concen: 0.229 ug/l

RT: 6.85 min Scan# 1579

Delta R.T. 0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

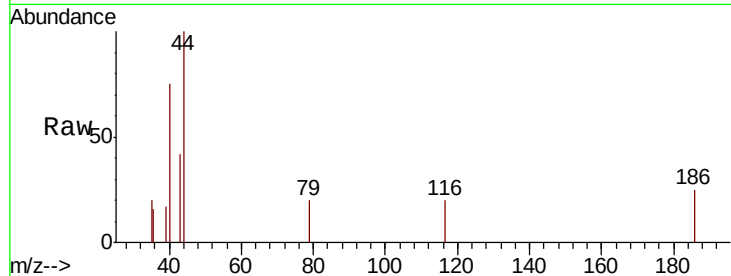
Instrument :
MSVOA_N
ClientSampled :

Tot Ion: 43 Resp: 580

Ion Ratio Lower Upper

43 100

72 0.0 23.0 34.6#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 72.00 (71.70 to 72.70): VN0

6.85

400

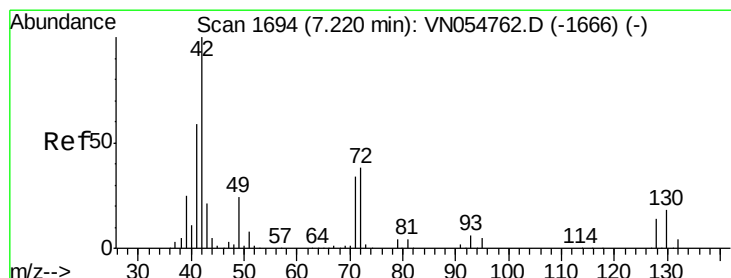
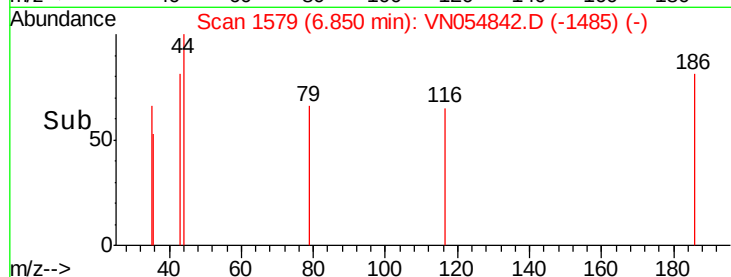
300

200

100

0

Time-->



#29

Tetrahydrofuran

Concen: 0.215 ug/l

RT: 7.22 min Scan# 1693

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

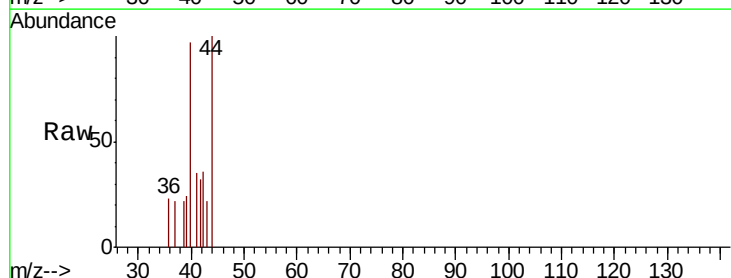
Tgt Ion: 42 Resp: 379

Ion Ratio Lower Upper

42 100

72 0.0 37.8 56.6#

71 17.9 36.2 54.2#



Abundance Ion 42.00 (41.70 to 42.70): VN0

Ion 72.00 (71.70 to 72.70): VN0

Ion 71.00 (70.70 to 71.70): VN0

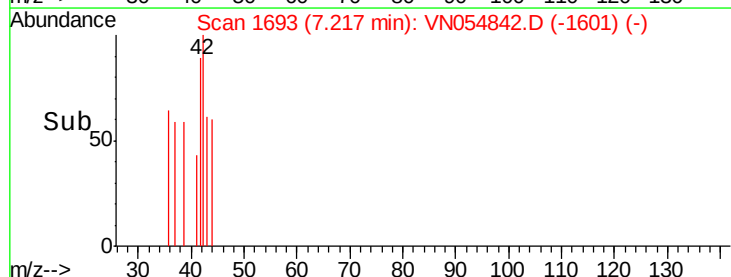
600

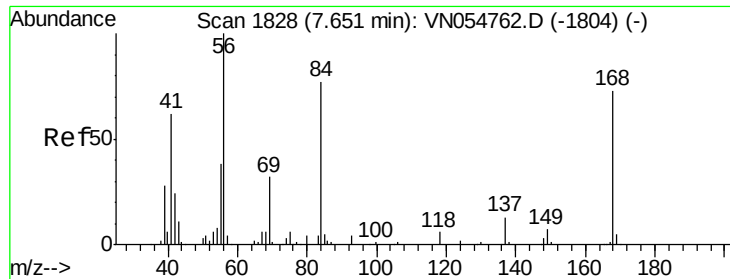
400

200

0

Time-->

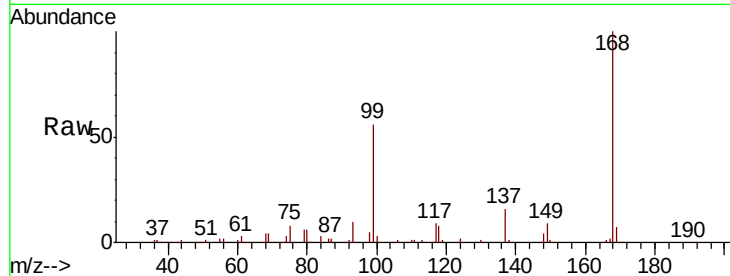




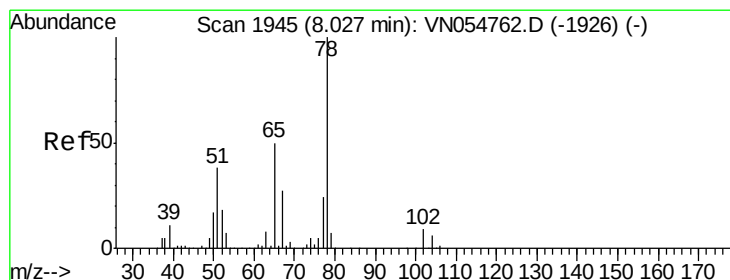
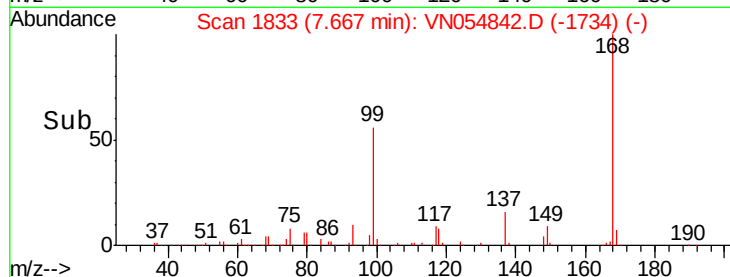
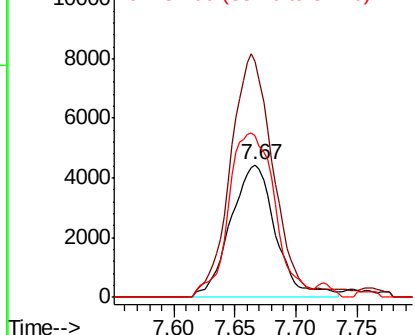
#31
Cyclohexane
Concen: Below Cal
RT: 7.67 min Scan# 1833
Delta R.T. 0.02 min
Lab File: VN054842.D
Acq: 31 Mar 2019 11:23

Instrument :
MSVOA_N
ClientSampled :

Tot Ion: 56 Resp: 11344
Ion Ratio Lower Upper
56 100
69 178.3 27.8 41.6#
84 122.3 74.6 111.8#

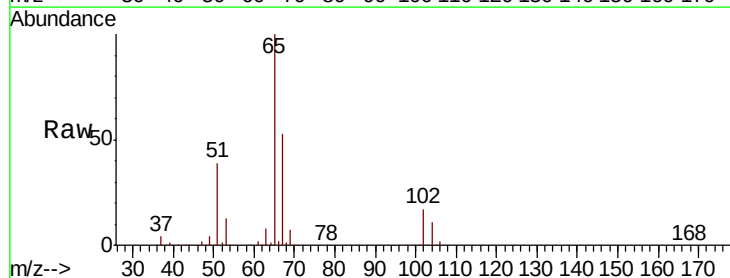


Abundance Ion 56.00 (55.70 to 56.70): VN0
Ion 69.00 (68.70 to 69.70): VN0
Ion 84.00 (83.70 to 84.70): VN0

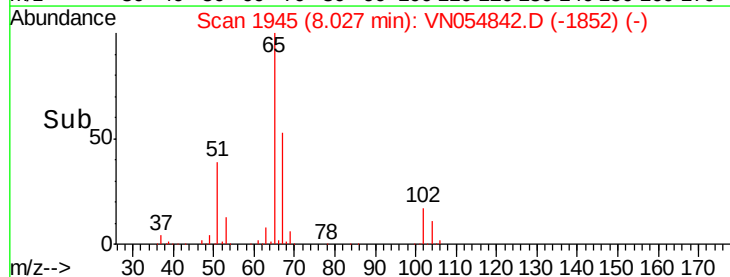
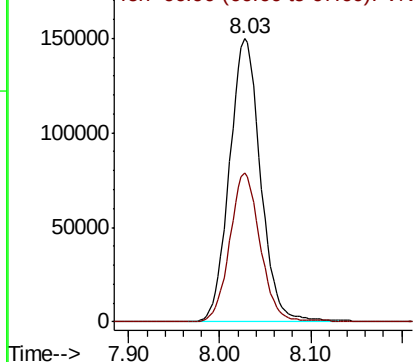


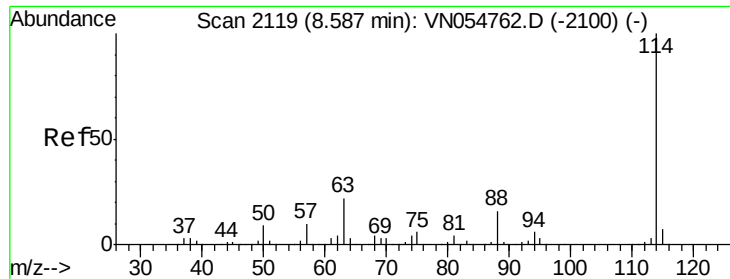
#33
1,2-Dichloroethane-d4
Concen: 49.364 ug/l
RT: 8.03 min Scan# 1945
Delta R.T. -0.00 min
Lab File: VN054842.D
Acq: 31 Mar 2019 11:23

Tgt Ion: 65 Resp: 355233
Ion Ratio Lower Upper
65 100
67 51.3 0.0 104.6



Abundance Ion 64.90 (64.60 to 65.60): VN0
Ion 66.90 (66.60 to 67.60): VN0

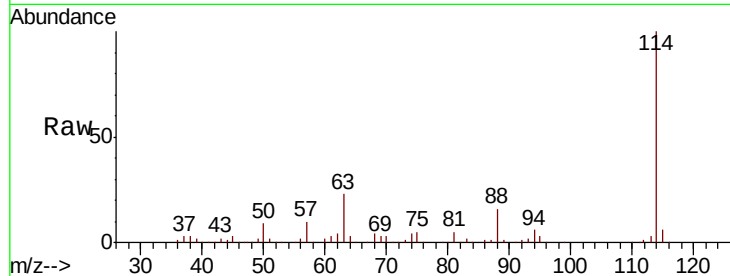




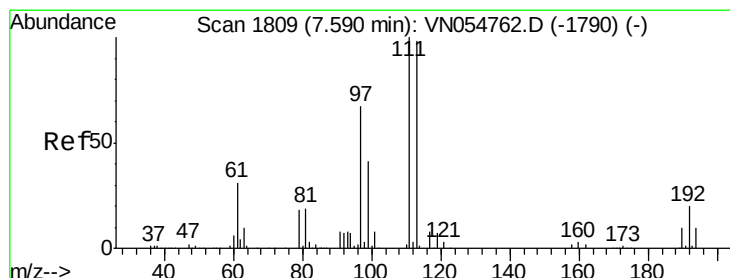
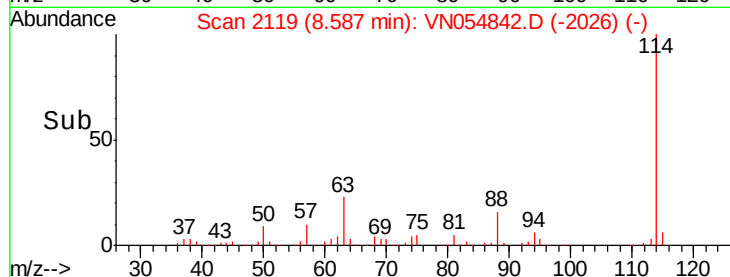
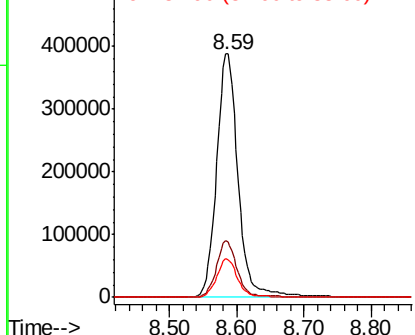
#34
 1,4-Difluorobenzene
 Concen: 50.000 ug/l
 RT: 8.59 min Scan# 2119
 Delta R.T. -0.00 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

Instrument :
 MSVOA_N
 ClientSampled :

Tot Ion	Ratio	Lower	Upper
114	100		
63	22.9	0.0	35.2
88	15.6	0.0	30.2

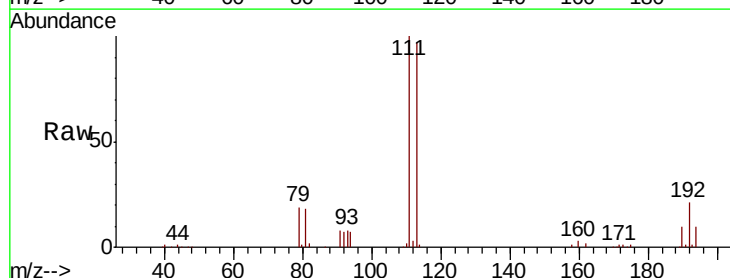


Abundance Ion 113.90 (113.60 to 114.60): V
 Ion 63.00 (62.70 to 63.70): V
 Ion 87.90 (87.60 to 88.60): V

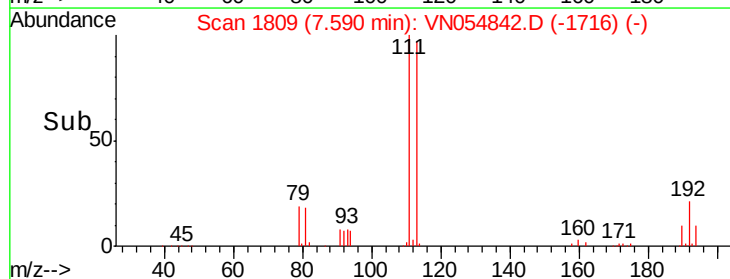
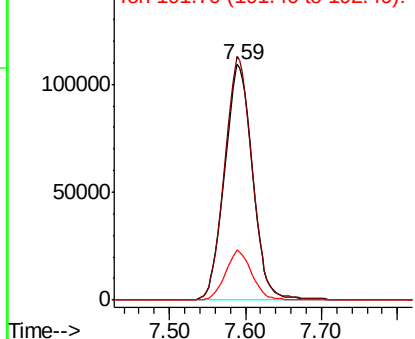


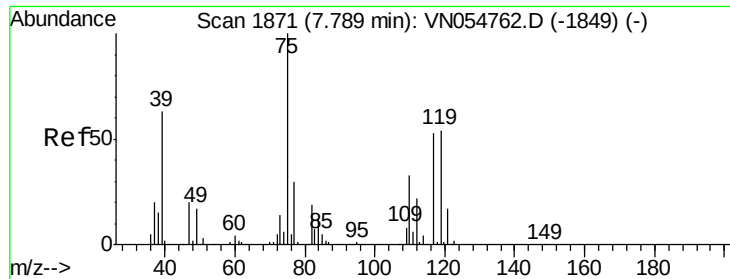
#35
 Dibromofluoromethane
 Concen: 48.200 ug/l
 RT: 7.59 min Scan# 1809
 Delta R.T. -0.00 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

Tgt Ion	Ratio	Lower	Upper
113	100		
111	102.3	82.2	123.4
192	19.9	19.2	28.8



Abundance Ion 112.80 (112.50 to 113.50): V
 Ion 110.80 (110.50 to 111.50): V
 Ion 191.70 (191.40 to 192.40): V

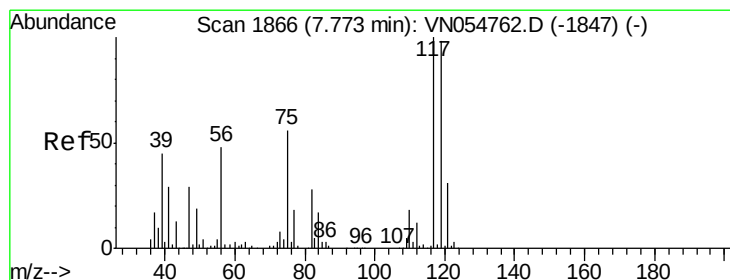
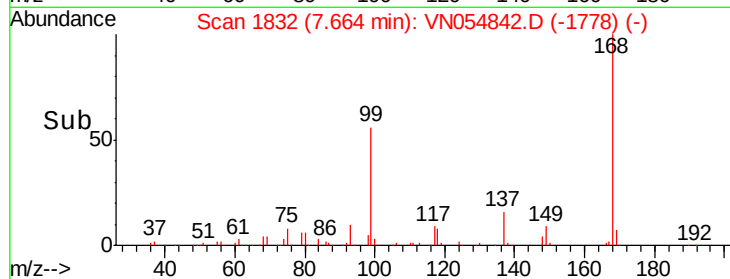
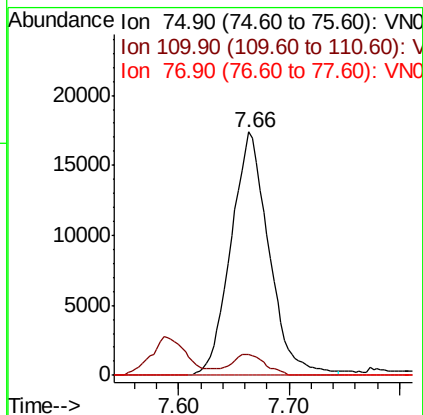
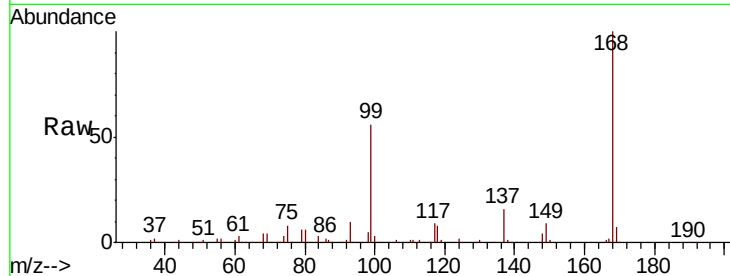




#36
 1,1-Dichloropropene
 Concen: 5.133 ug/l
 RT: 7.66 min Scan# 1832
 Delta R.T. -0.13 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

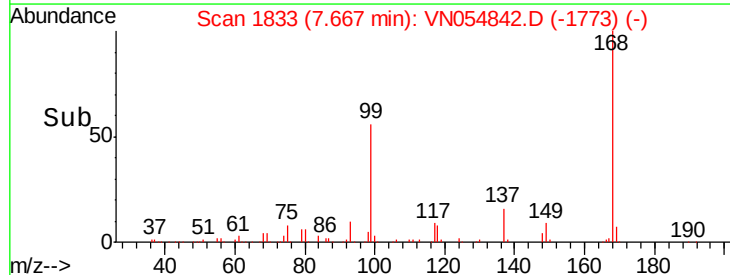
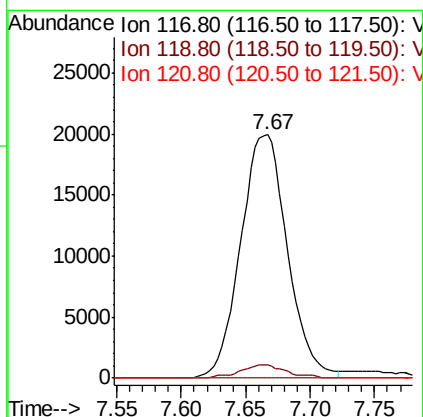
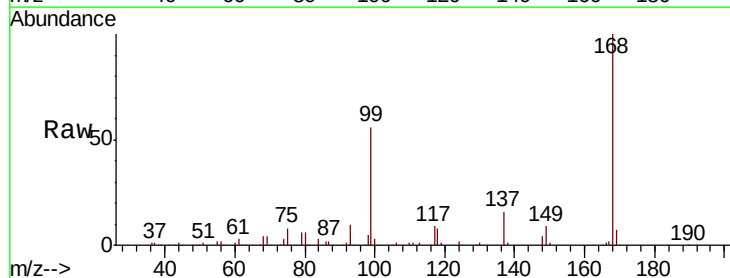
Instrument :
 MSVOA_N
 ClientSampleId :

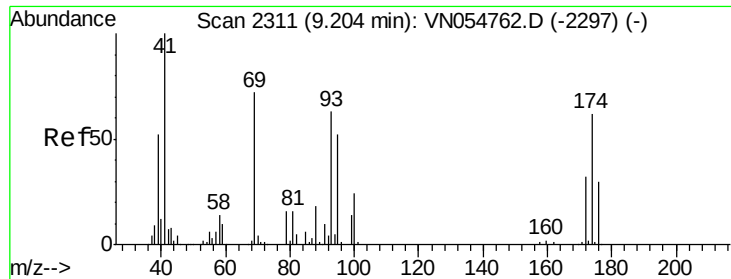
Tot Ion: 75 Resp: 41553
 Ion Ratio Lower Upper
 75 100
 110 7.5 19.1 57.5#
 77 0.0 25.0 37.4#



#38
 Carbon Tetrachloride
 Concen: 6.413 ug/l
 RT: 7.67 min Scan# 1833
 Delta R.T. -0.11 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

Tgt Ion: 117 Resp: 50423
 Ion Ratio Lower Upper
 117 100
 119 5.3 76.3 114.5#
 121 0.0 24.6 36.8#

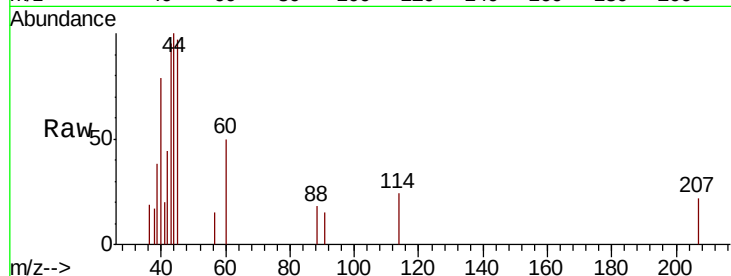




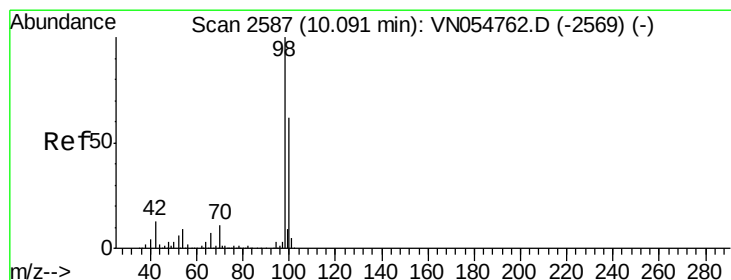
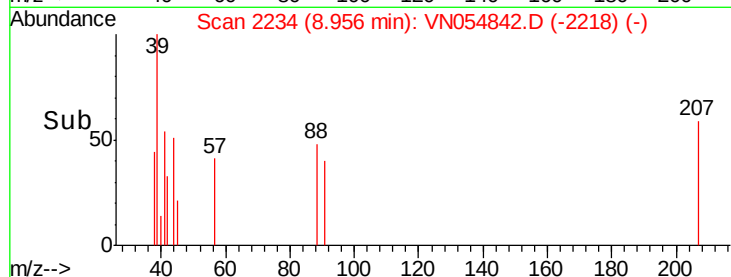
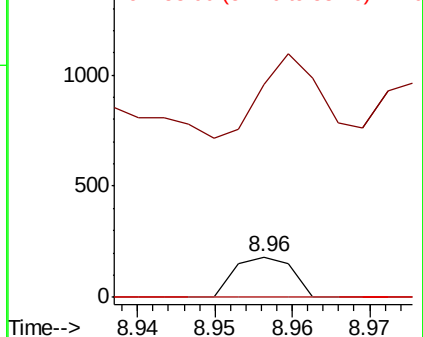
#49
1,4-Dioxane
Concen: 1.831 ug/l
RT: 8.96 min Scan# 2234
Delta R.T. -0.25 min
Lab File: VN054842.D
Acq: 31 Mar 2019 11:23

Instrument :
MSVOA_N
ClientSampleId :

Tot Ion: 88 Resp: 95
Ion Ratio Lower Upper
88 100
43 213.7 24.1 36.1#
58 0.0 50.8 76.2#

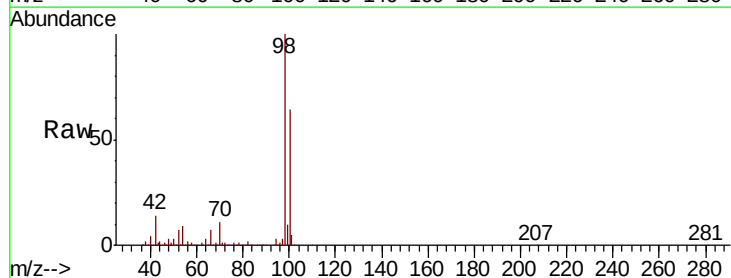


Abundance Ion 88.00 (87.70 to 88.70): VN0
Ion 43.00 (42.70 to 43.70): VN0
Ion 58.00 (57.70 to 58.70): VN0

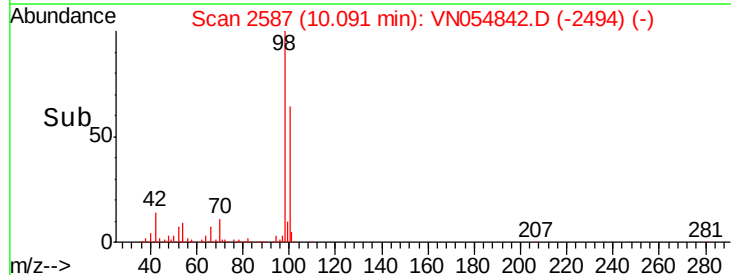
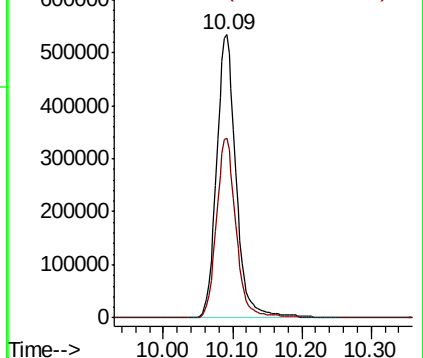


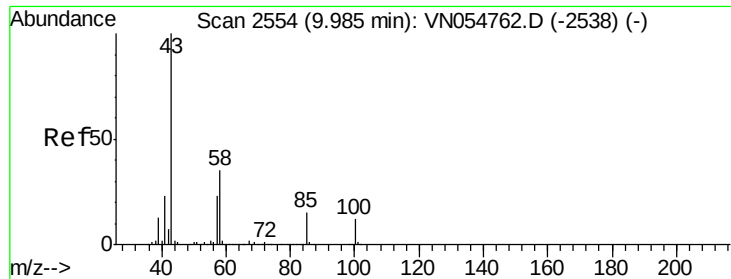
#50
Toluene-d8
Concen: 48.275 ug/l
RT: 10.09 min Scan# 2587
Delta R.T. -0.00 min
Lab File: VN054842.D
Acq: 31 Mar 2019 11:23

Tgt Ion: 98 Resp: 1039582
Ion Ratio Lower Upper
98 100
100 63.6 51.2 76.8



Abundance Ion 98.00 (97.70 to 98.70): VN0
Ion 100.00 (99.70 to 100.70): VN0





#51

4-Methyl-2-Pentanone

Concen: 0.501 ug/l

RT: 9.99 min Scan# 2556

Delta R.T. 0.01 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

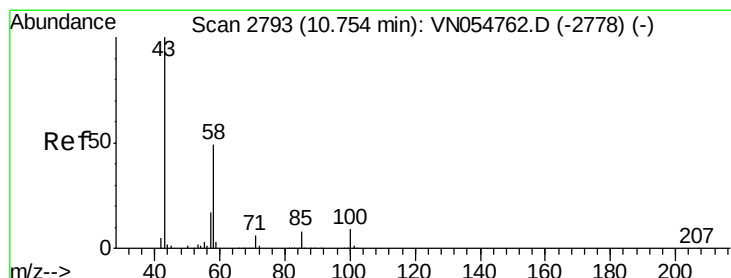
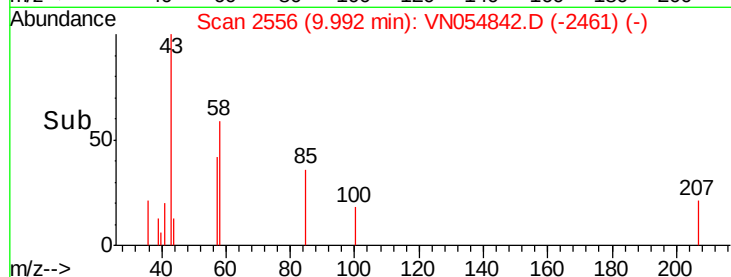
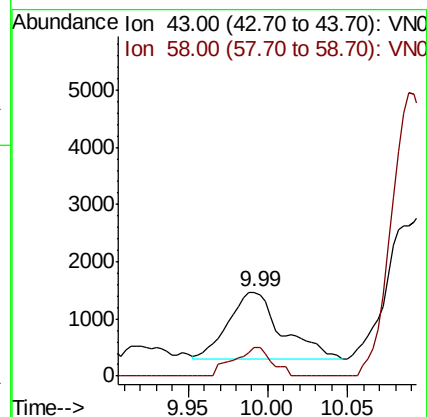
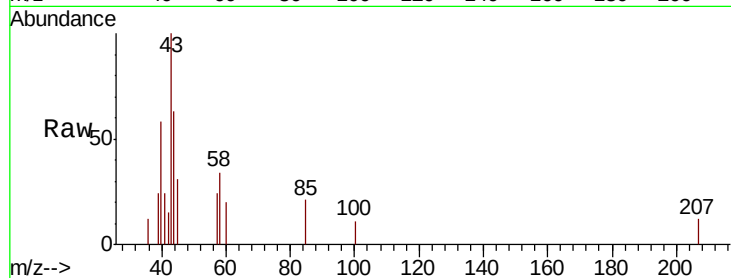
ClientSampled :

Tot Ion: 43 Resp: 2717

Ion Ratio Lower Upper

43 100

58 30.0 31.8 47.6#



#59

2-Hexanone

Concen: 1.132 ug/l

RT: 10.76 min Scan# 2795

Delta R.T. 0.01 min

Lab File: VN054842.D

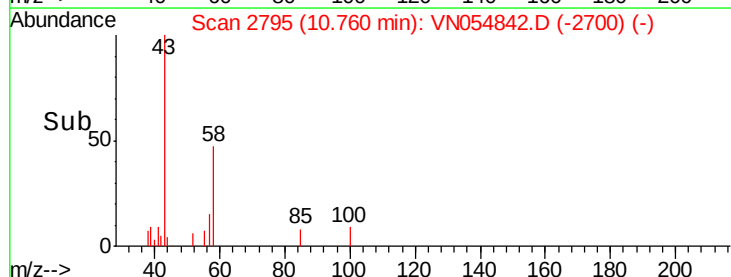
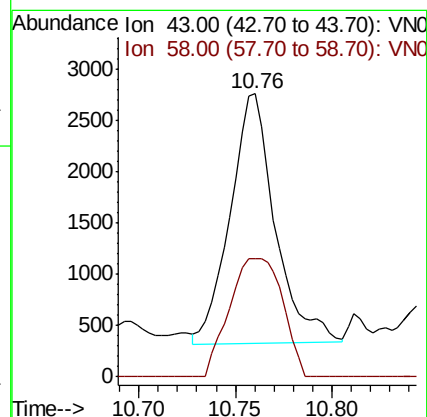
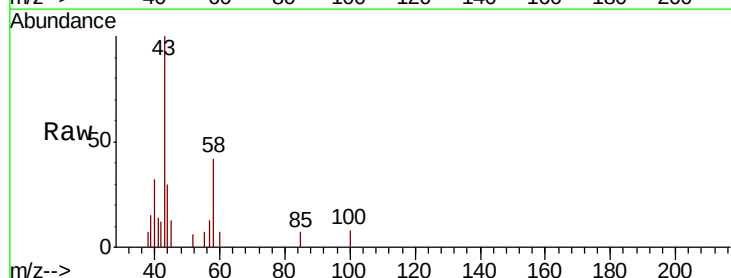
Acq: 31 Mar 2019 11:23

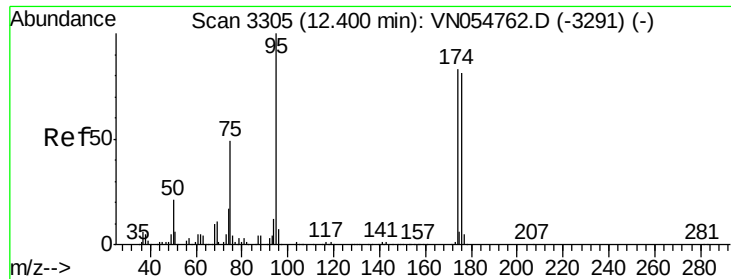
Tgt Ion: 43 Resp: 3930

Ion Ratio Lower Upper

43 100

58 56.0 28.0 83.9





#62

4-Bromofluorobenzene

Concen: 44.142 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

ClientSampled :

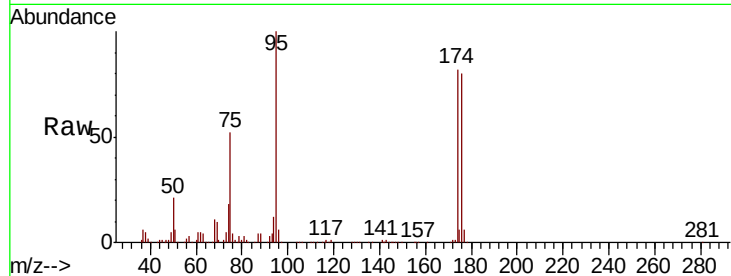
Tot Ion: 95 Resp: 316138

Ion Ratio Lower Upper

95 100

174 83.2 0.0 191.0

176 81.0 0.0 187.4

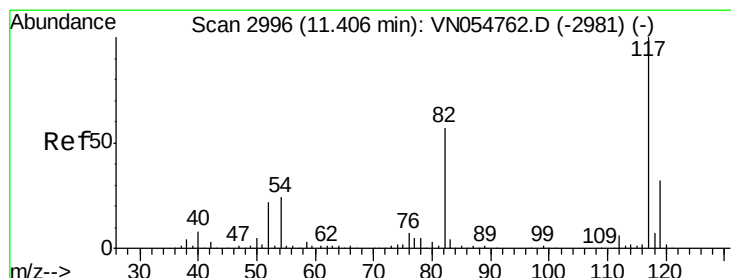
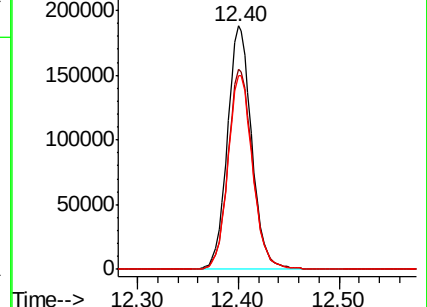
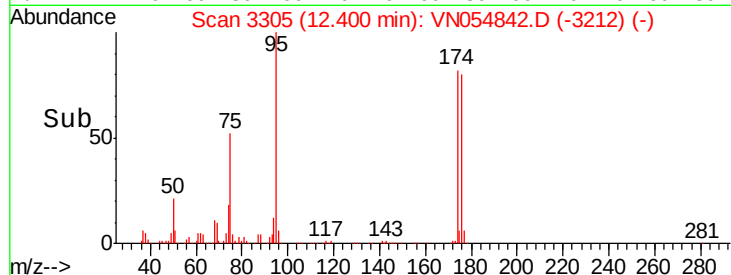


Abundance Ion 94.90 (94.60 to 95.60): VN054842.D (-2903) (-)

Ion 173.80 (173.50 to 174.50): VN054842.D (-2903) (-)

Ion 175.80 (175.50 to 176.50): VN054842.D (-2903) (-)

Time-->



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.41 min Scan# 2996

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

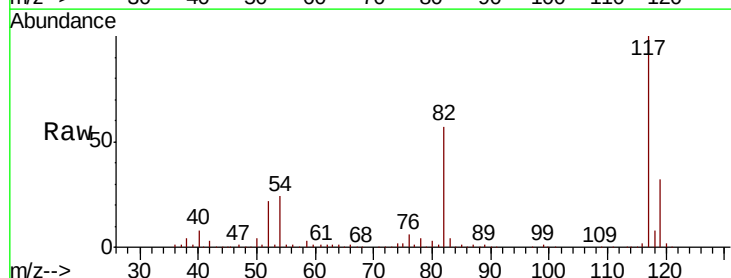
Tgt Ion: 117 Resp: 730190

Ion Ratio Lower Upper

117 100

82 56.8 40.0 60.0

119 31.7 25.8 38.6

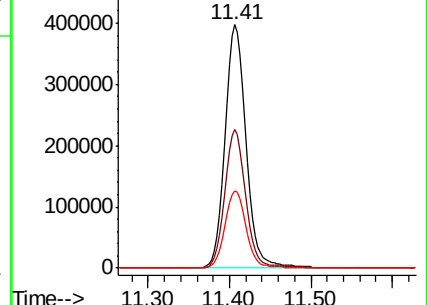
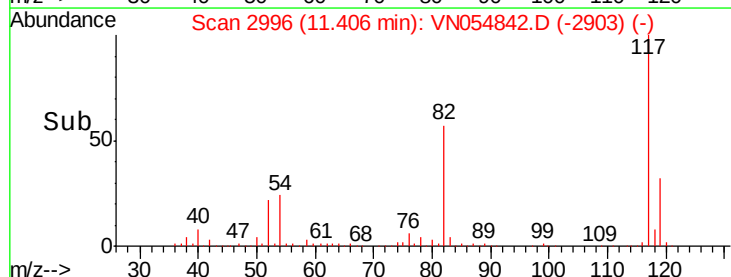


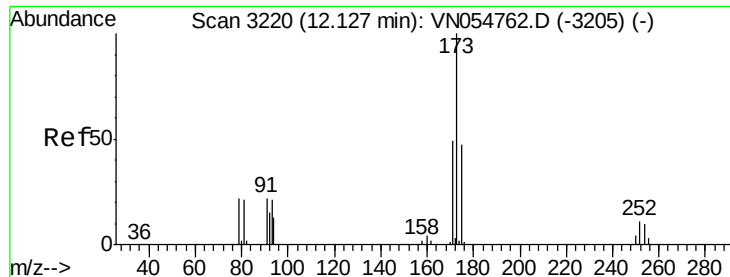
Abundance Ion 116.90 (116.60 to 117.60): VN054842.D (-2903) (-)

Ion 82.00 (81.70 to 82.70): VN054842.D (-2903) (-)

Ion 118.90 (118.60 to 119.60): VN054842.D (-2903) (-)

Time-->





#71

Bromoform

Concen: 0.628 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.27 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

ClientSampleId :

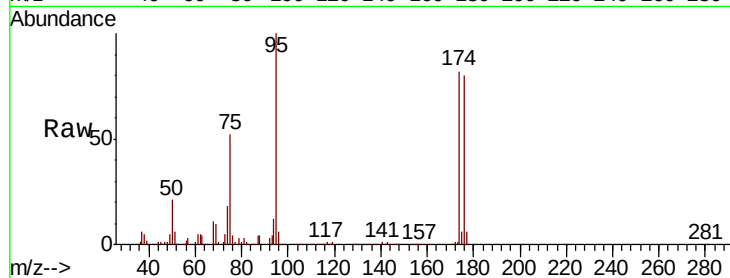
Tot Ion:173 Resp: 1969

Ion Ratio Lower Upper

173 100

175 912.7 24.4 73.2#

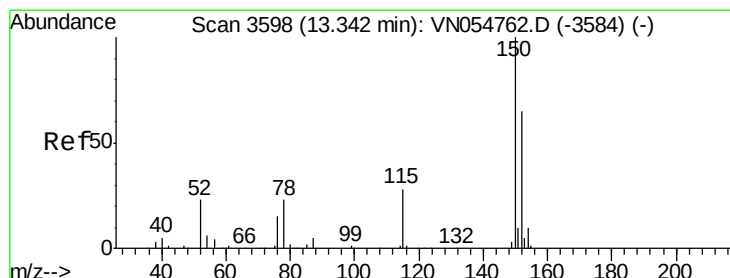
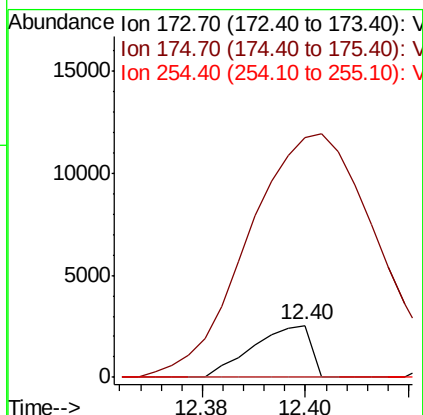
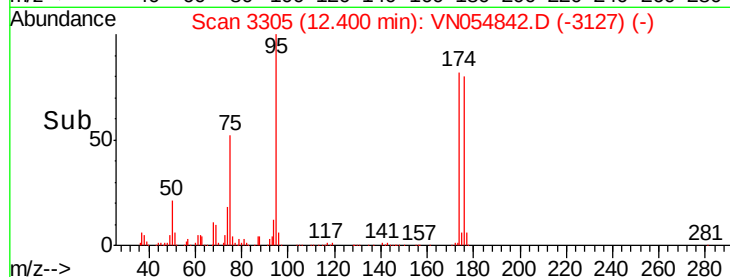
254 0.0 0.1 0.1#



Abundance Ion 172.70 (172.40 to 173.40): V

Ion 174.70 (174.40 to 175.40): V

Ion 254.40 (254.10 to 255.10): V



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.34 min Scan# 3598

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

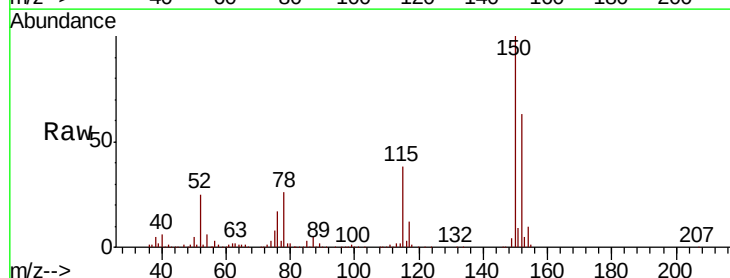
Tgt Ion:152 Resp: 255427

Ion Ratio Lower Upper

152 100

115 58.7 27.2 81.6

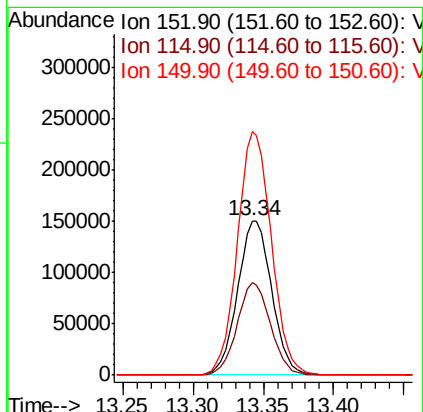
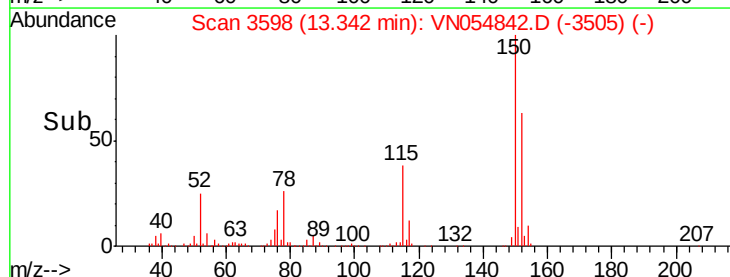
150 156.8 0.0 349.2

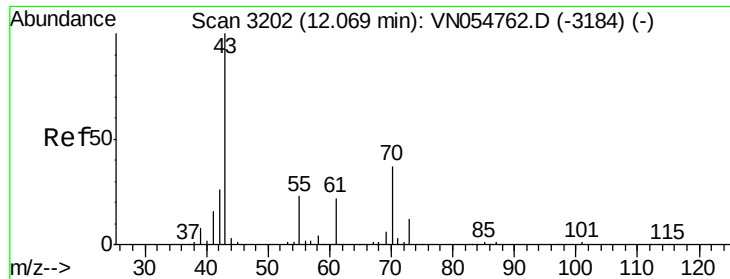


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V





#74

N-amvl acetate

Concen: 0.330 ug/l

RT: 12.07 min Scan# 3201

Delta R.T. -0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

ClientSampleId :

Tot Ion: 43 Resp: 2149

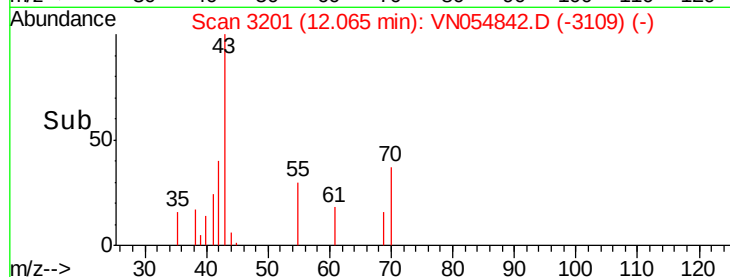
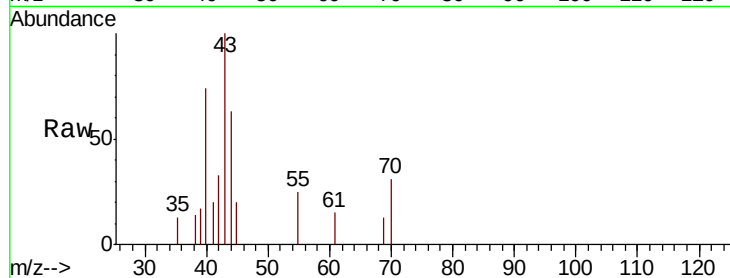
Ion Ratio Lower Upper

43 100

70 44.5 35.4 53.0

55 23.8 19.8 29.6

61 3.5 19.8 29.6#

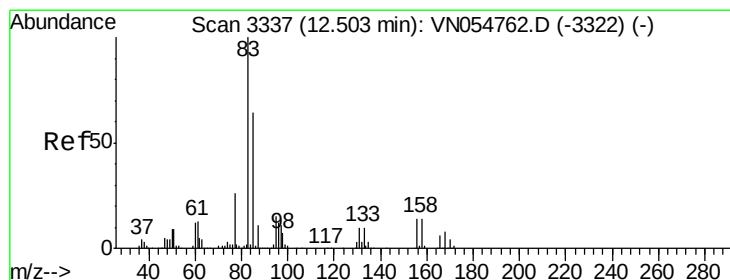
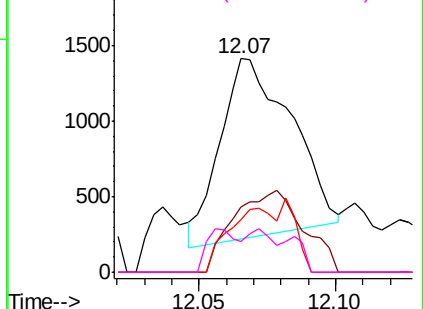


Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 70.00 (69.70 to 70.70): VN0

Ion 55.00 (54.70 to 55.70): VN0

Ion 61.00 (60.70 to 61.70): VN0



#75

1,1,2,2-Tetrachloroethane

Concen: Below Cal

RT: 12.51 min Scan# 3338

Delta R.T. 0.00 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

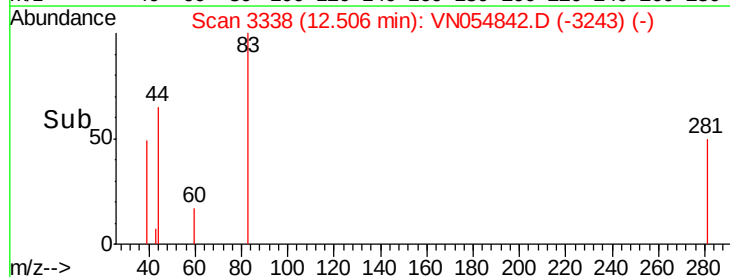
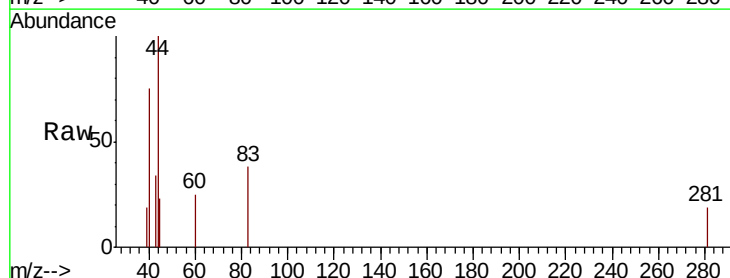
Tgt Ion: 83 Resp: 304

Ion Ratio Lower Upper

83 100

131 0.0 5.8 17.4#

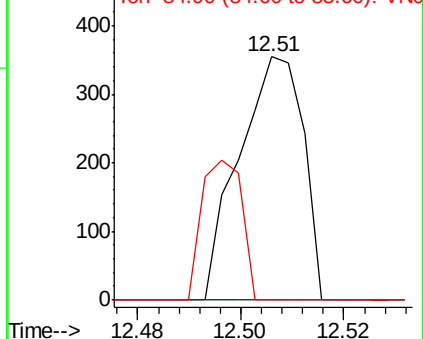
85 35.9 32.2 96.6

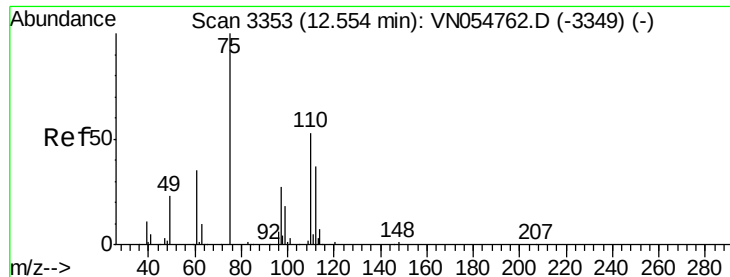


Abundance Ion 82.90 (82.60 to 83.60): VN0

Ion 130.80 (130.50 to 131.50): V

Ion 84.90 (84.60 to 85.60): VN0





#76

1,2,3-Trichloropropane

Concen: 37.135 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.15 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

Instrument :

MSVOA_N

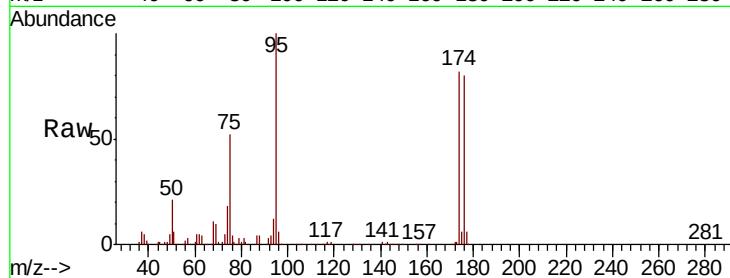
ClientSampled :

Tot Ion: 75 Resp: 164783

Ion Ratio Lower Upper

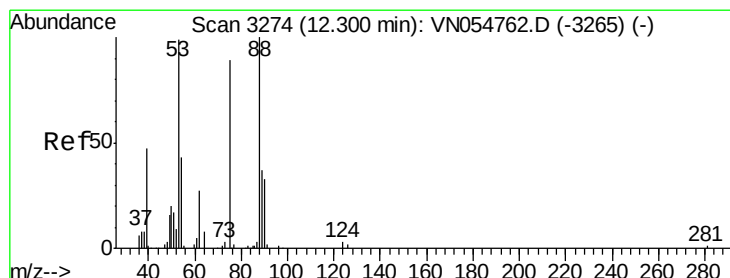
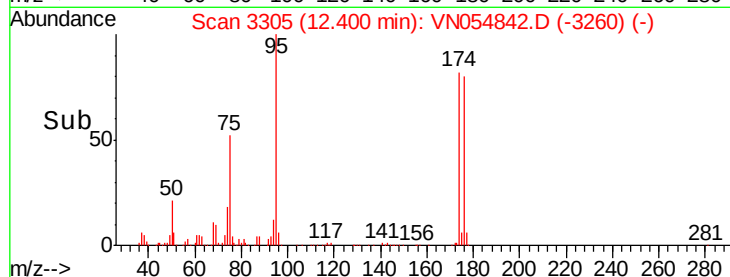
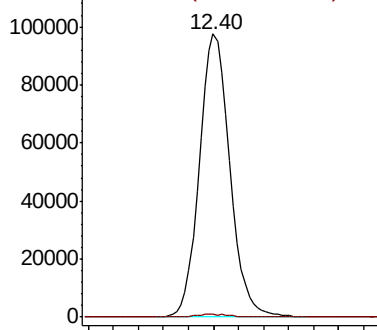
75 100

77 1.1 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 77.00 (76.70 to 77.70): VN0



#81

trans-1,4-Dichloro-2-butene

Concen: 144.447 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN054842.D

Acq: 31 Mar 2019 11:23

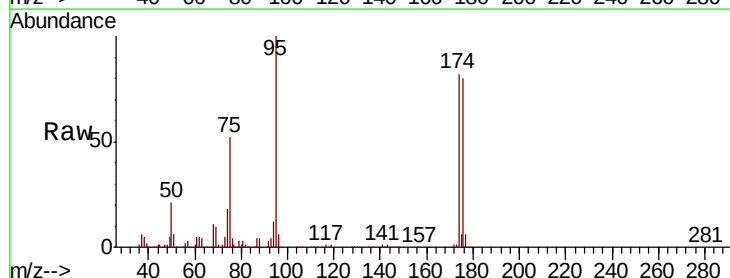
Tgt Ion: 75 Resp: 164783

Ion Ratio Lower Upper

75 100

53 0.0 76.2 114.2#

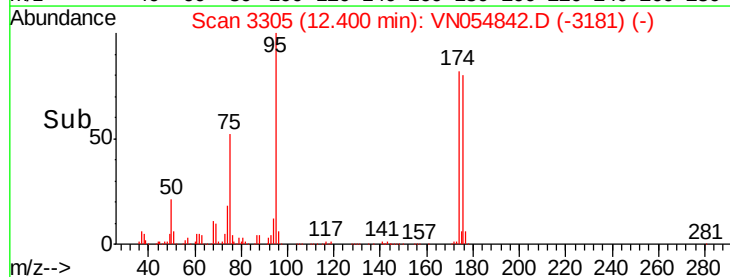
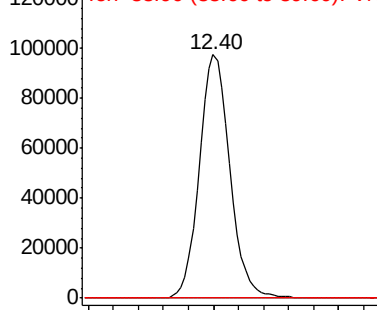
89 0.0 39.2 58.8#

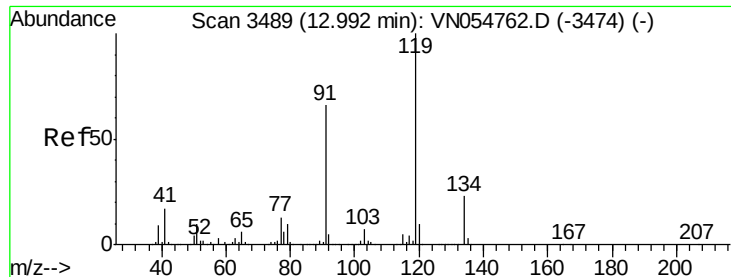


Abundance Ion 74.90 (74.60 to 75.60): VN0

Ion 53.00 (52.70 to 53.70): VN0

Ion 88.90 (88.60 to 89.60): VN0

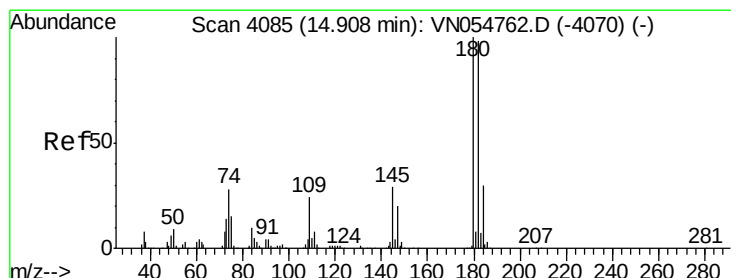
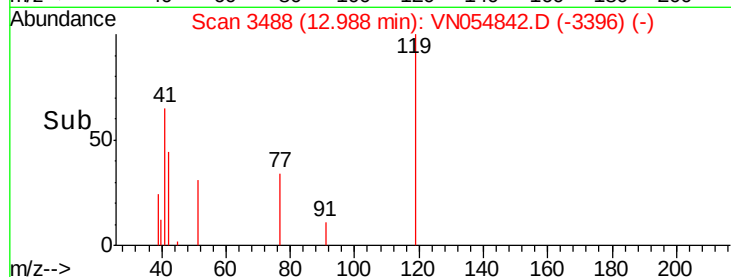
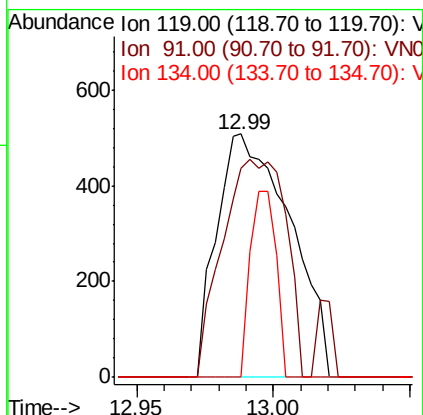
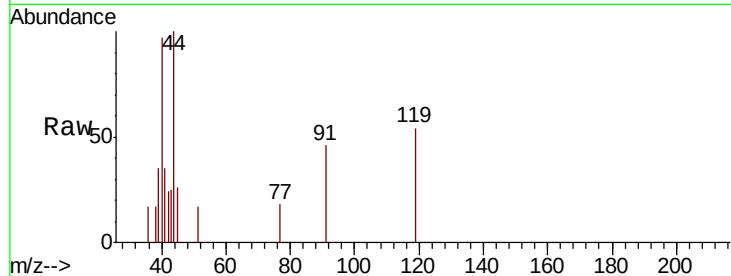




#83
 tert-Butylbenzene
 Concen: Below Cal
 RT: 12.99 min Scan# 3488
 Delta R.T. -0.00 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

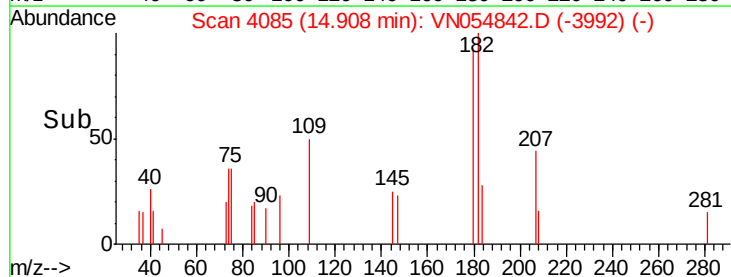
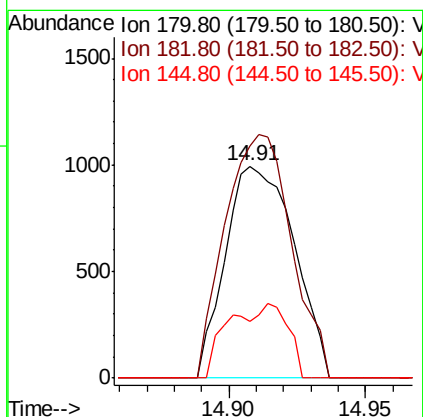
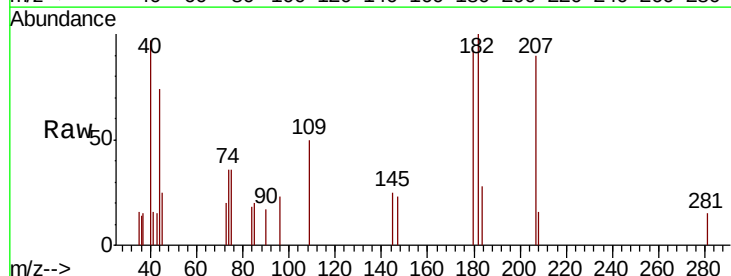
Instrument :
 MSVOA_N
 ClientSampleId :

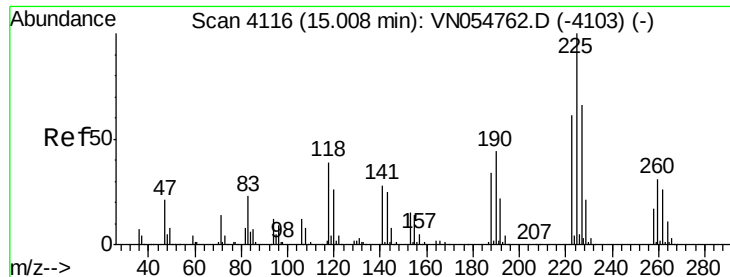
Tot Ion:119 Resp: 949
 Ion Ratio Lower Upper
 119 100
 91 77.1 30.9 92.8
 134 26.3 13.2 39.6



#93
 1,2,4-Trichlorobenzene
 Concen: 0.424 ug/l
 RT: 14.91 min Scan# 4085
 Delta R.T. -0.00 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

Tgt Ion:180 Resp: 1740
 Ion Ratio Lower Upper
 180 100
 182 110.6 48.0 144.2
 145 30.5 14.2 42.8





#94

Hexachlorobutadiene

Concen: Below Cal

RT: 15.00 min Scan# 4114

Delta R.T. -0.01 min

Lab File: VN054842.D

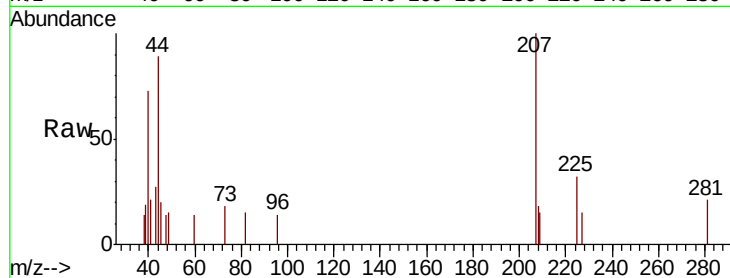
Acq: 31 Mar 2019 11:23

Instrument :

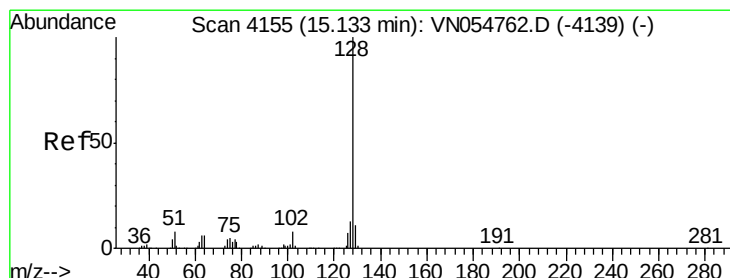
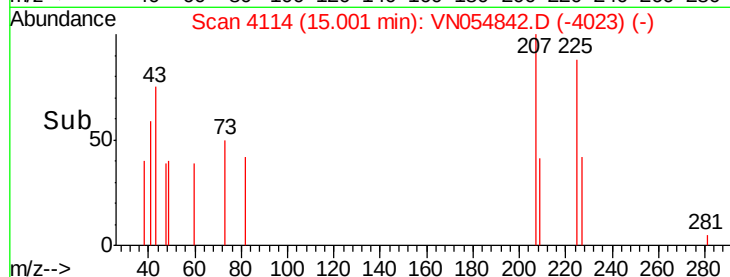
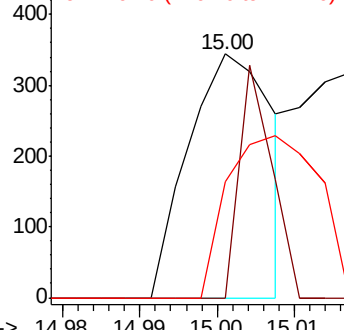
MSVOA_N

ClientSampleId :

Tot Ion:	225	Resp:	261
Ion	Ratio	Lower	Upper
225	100		
223	36.8	31.1	93.5
227	72.0	31.9	95.9



Abundance Ion 224.70 (224.40 to 225.40): V
Ion 222.70 (222.40 to 223.40): V
Ion 226.70 (226.40 to 227.40): V



#95

Naphthalene

Concen: 0.744 ug/l

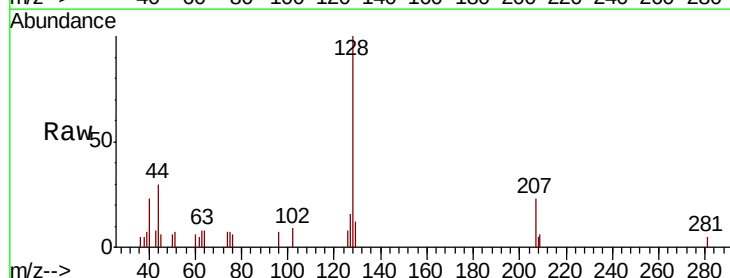
RT: 15.13 min Scan# 4155

Delta R.T. -0.00 min

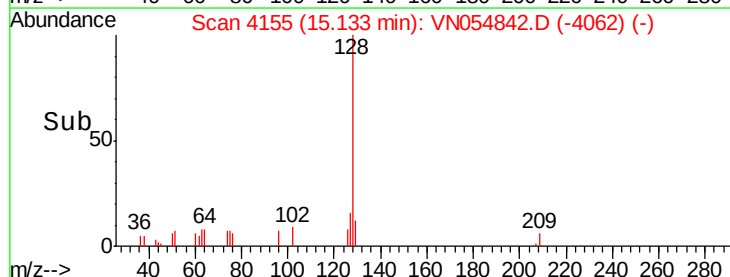
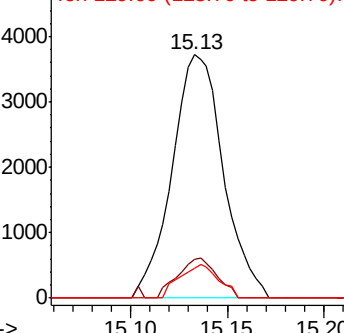
Lab File: VN054842.D

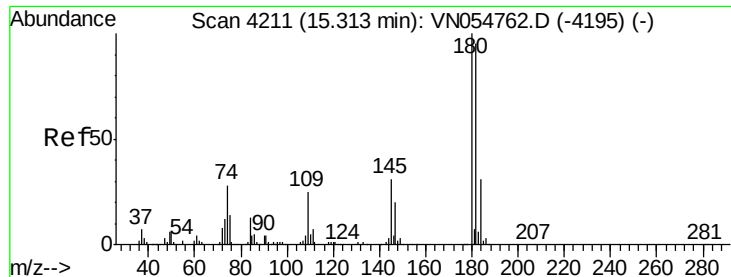
Acq: 31 Mar 2019 11:23

Tgt Ion:	128	Resp:	6848
Ion	Ratio	Lower	Upper
128	100		
127	12.6	10.1	15.1
129	10.4	8.7	13.1



Abundance Ion 128.00 (127.70 to 128.70): V
Ion 127.00 (126.70 to 127.70): V
Ion 129.00 (128.70 to 129.70): V





#96
 1,2,3-Trichlorobenzene
 Concen: 0.566 ug/l
 RT: 15.32 min Scan# 4212
 Delta R.T. 0.00 min
 Lab File: VN054842.D
 Acq: 31 Mar 2019 11:23

Instrument :
 MSVOA_N
 ClientSampleId :

Tot Ion	Ratio	Lower	Upper
180	100		
182	48.2	47.5	142.6
145	27.8	14.8	44.3

