

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN072419\
 Data File : VN056898.D
 Acq On : 24 Jul 2019 1:06
 Operator : JC/SP
 Sample : K3908-01
 Misc : 5.00mL/MSVOA N/WATER
 ALS Vial : 36 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 PWU-3

Quant Time: Jul 24 03:50:49 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N072419W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Wed Jul 24 03:39:51 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.19	128	54883	30.00	ug/l	0.00
28) 1,4-Difluorobenzene	8.59	114	283101	30.00	ug/l	0.00
57) Chlorobenzene-d5	11.41	117	220427	30.00	ug/l	0.00

System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	8.03	65	109147	30.39	ug/l	0.00
Spiked Amount	30.000	Range	50 - 169	Recovery	=	101.30%
60) 4-Bromofluorobenzene	12.40	95	71469	21.63	ug/l	0.00
Spiked Amount	30.000	Range	56 - 143	Recovery	=	72.10%
63) Toluene-d8	10.09	98	336172	32.29	ug/l	0.00
Spiked Amount	30.000	Range	66 - 137	Recovery	=	107.63%

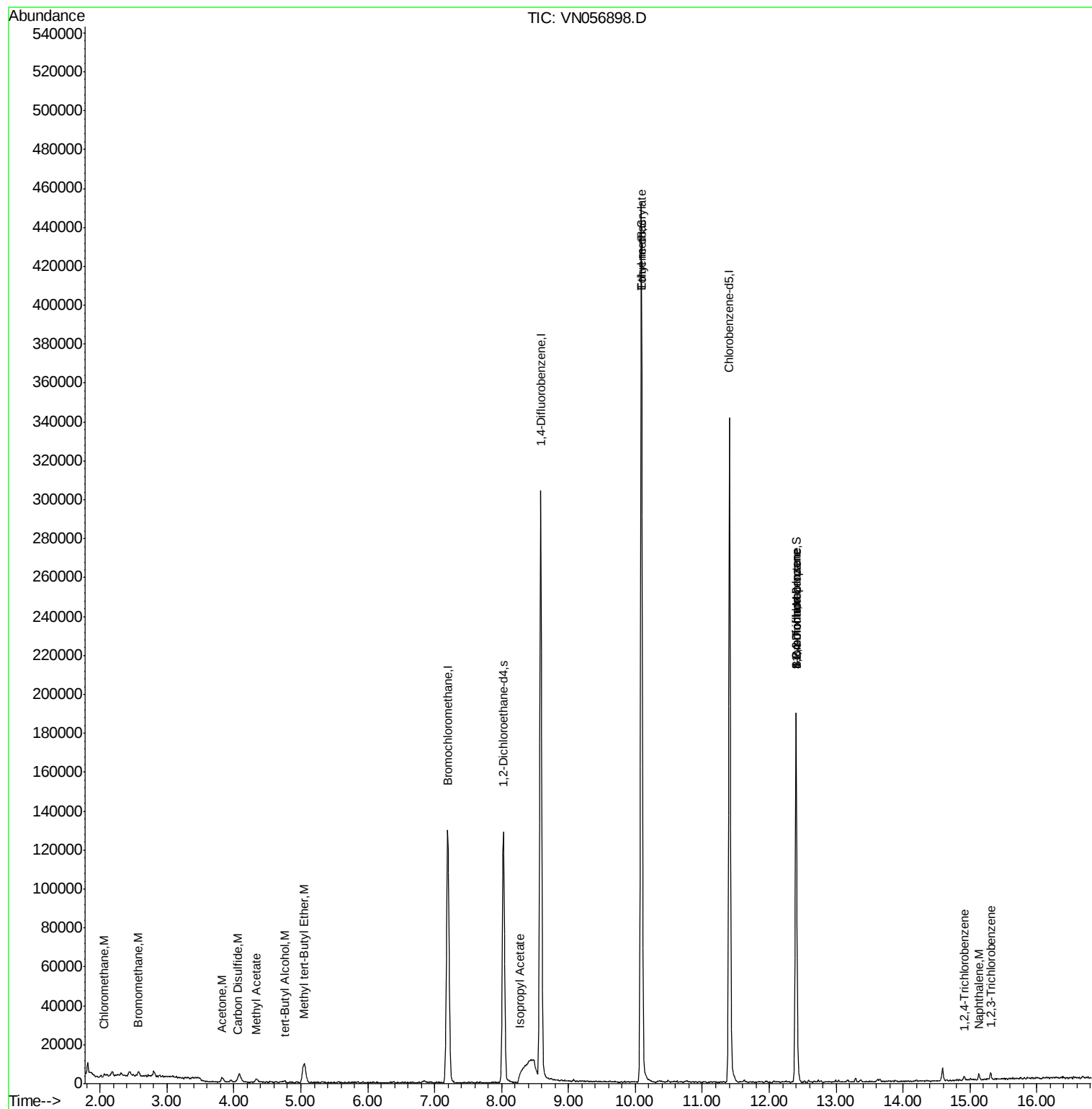
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chloromethane	2.06	50	1362	0.340	ug/l #	87
5) Bromomethane	2.57	94	1515	0.639	ug/l	87
12) Methyl Acetate	4.34	43	3941	1.099	ug/l	93
15) Acetone	3.82	58	787	2.201	ug/l #	48
16) Carbon Disulfide	4.04	76	1895	0.240	ug/l #	75
23) tert-Butyl Alcohol	4.76	59	218	0.472	ug/l #	100
24) Methyl tert-Butyl Ether	5.05	73	16756	1.892	ug/l #	75
44) Isopropyl Acetate	8.27	43	1601	0.290	ug/l #	46
51) Ethyl methacrylate	10.10	69	937	0.218	ug/l	94
56) Bromoform	12.40	173	470	0.220	ug/l #	1
72) 1,2,3-Trichloropropane	12.40	75	32519	10.820	ug/l	1
77) t-1,4-Dichloro-2-butene	12.40	75	32519	34.462	ug/l #	11
89) 1,2,4-Trichlorobenzene	14.91	180	1023	8.308	ug/l	92
91) Naphthalene	15.13	128	3195	8.058	ug/l #	91
92) 1,2,3-Trichlorobenzene	15.31	180	1536	0.590	ug/l	87

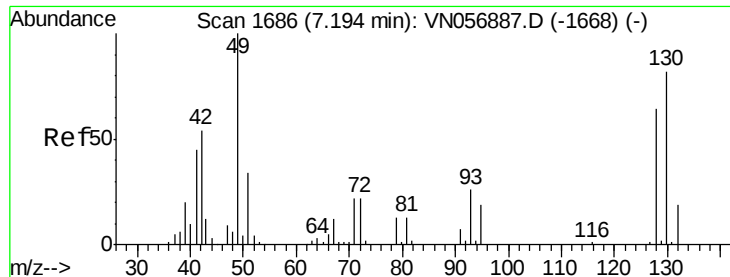
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Wed Jul 24 03:39:51 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 30.000 ug/l

RT: 7.19 min Scan# 1686

Delta R.T. -0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :
MSVOA_N
ClientSampleId :
PWU-3

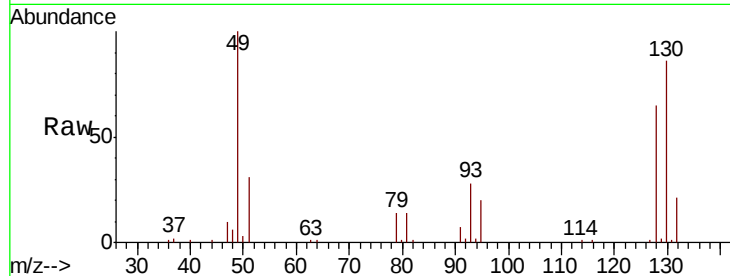
Tot Ion:128 Resp: 54883

Ion Ratio Lower Upper

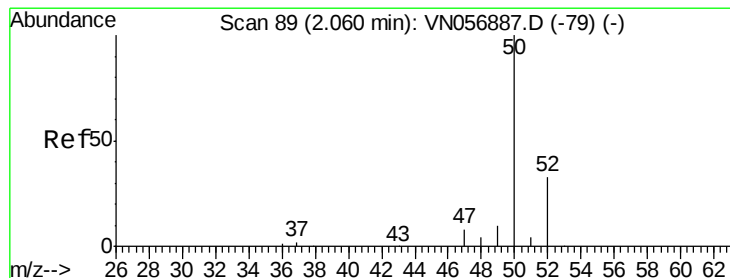
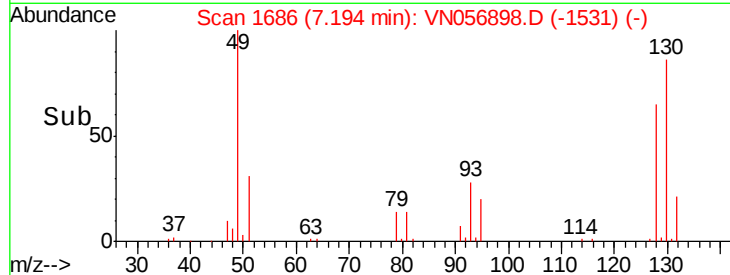
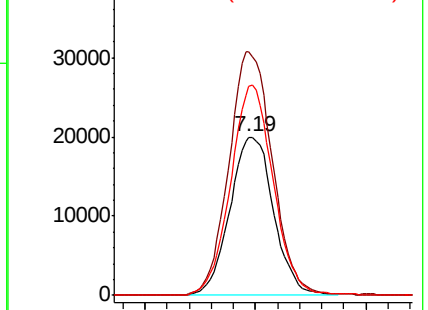
128 100

49 153.1 0.0 385.8

130 129.4 0.0 322.5



Abundance Ion 128.00 (127.70 to 128.70): V
Ion 49.00 (48.70 to 49.70): VN
Ion 130.00 (129.70 to 130.70): V



#3

Chloromethane

Concen: 0.340 ug/l

RT: 2.06 min Scan# 89

Delta R.T. -0.00 min

Lab File: VN056898.D

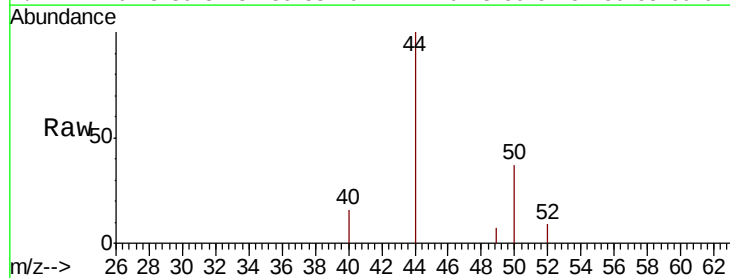
Acq: 24 Jul 2019 1:06

Tgt Ion: 50 Resp: 1362

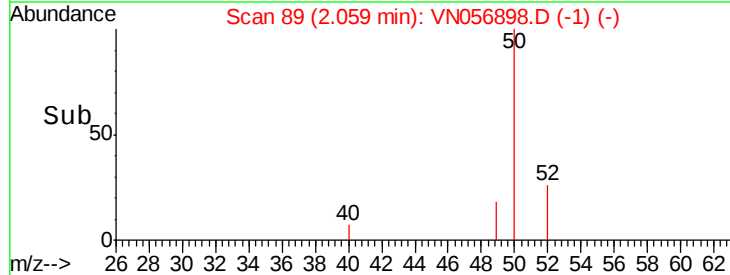
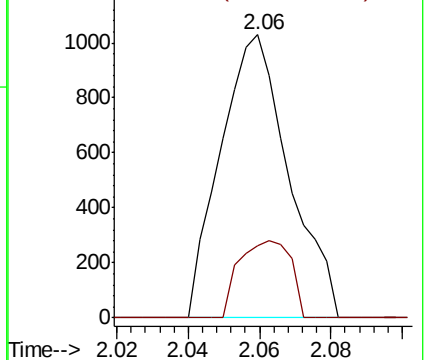
Ion Ratio Lower Upper

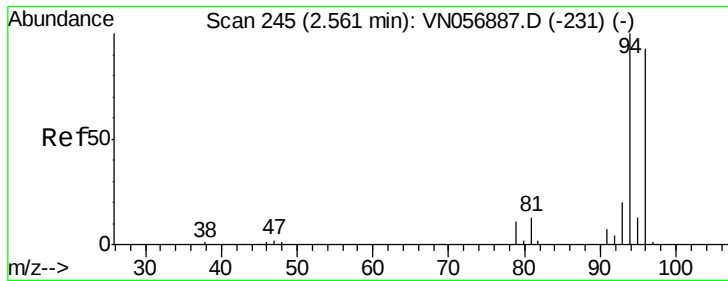
50 100

52 25.7 26.2 39.2#



Abundance Ion 50.00 (49.70 to 50.70): VN
Ion 52.00 (51.70 to 52.70): VN





#5

Bromomethane

Concen: 0.639 ug/l

RT: 2.57 min Scan# 249

Delta R.T. 0.01 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

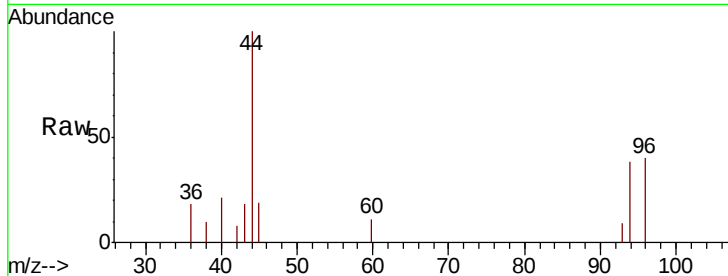
PWU-3

Tot Ion: 94 Resp: 1515

Ion Ratio Lower Upper

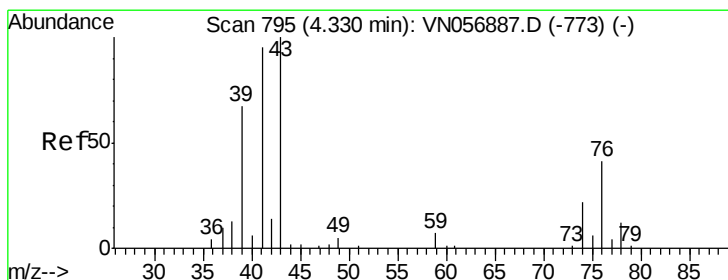
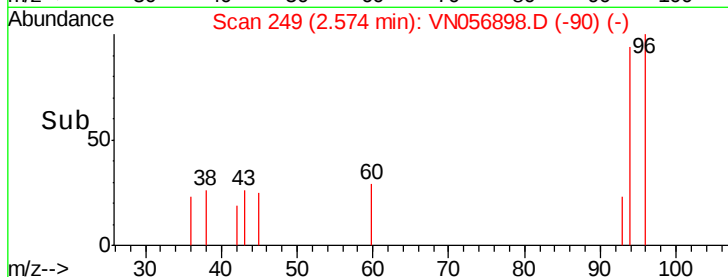
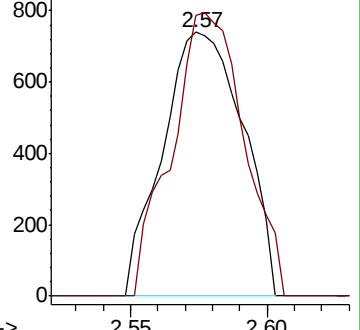
94 100

96 106.4 74.7 112.1



Abundance Ion 94.00 (93.70 to 94.70): VN0

Ion 96.00 (95.70 to 96.70): VN0



#12

Methyl Acetate

Concen: 1.099 ug/l

RT: 4.34 min Scan# 798

Delta R.T. 0.01 min

Lab File: VN056898.D

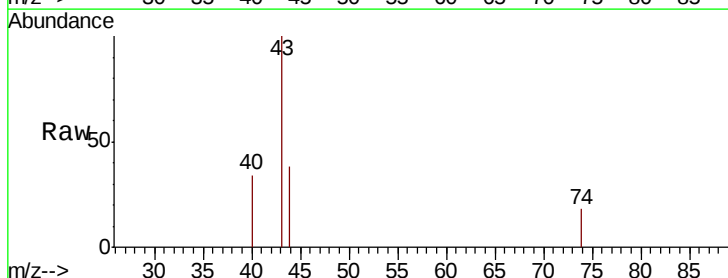
Acq: 24 Jul 2019 1:06

Tgt Ion: 43 Resp: 3941

Ion Ratio Lower Upper

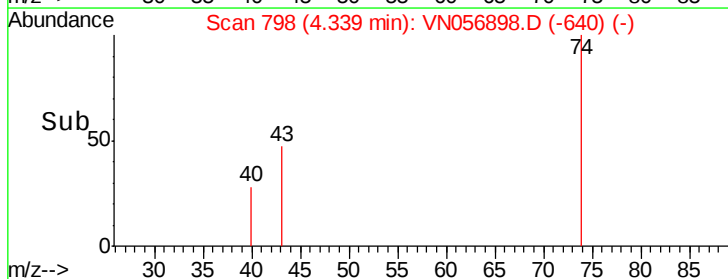
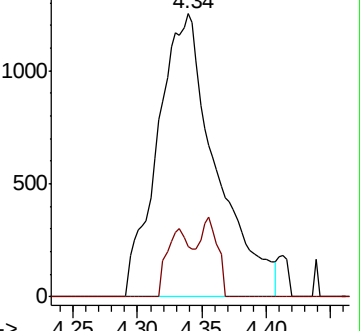
43 100

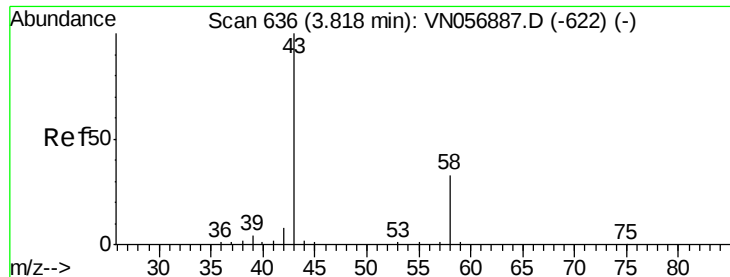
74 19.2 18.1 27.1



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 74.00 (73.70 to 74.70): VN0





#15

Acetone

Concen: 2.201 ug/l

RT: 3.82 min Scan# 637

Delta R.T. 0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

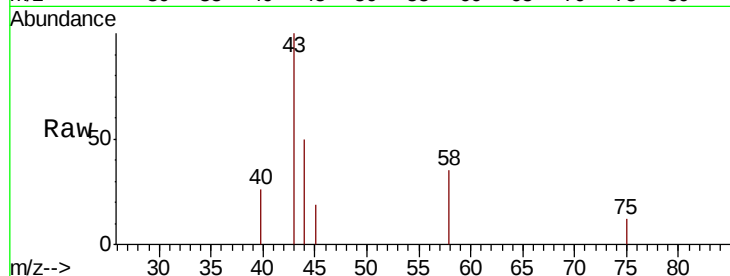
PWU-3

Tot Ion: 58 Resp: 787

Ion Ratio Lower Upper

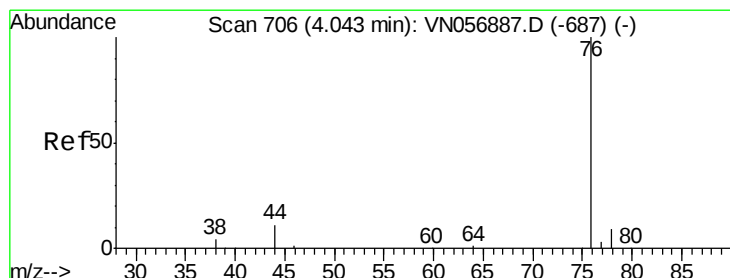
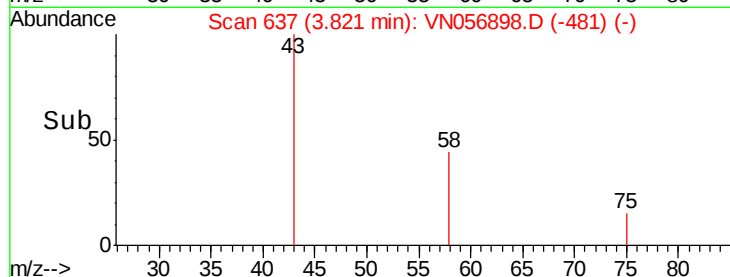
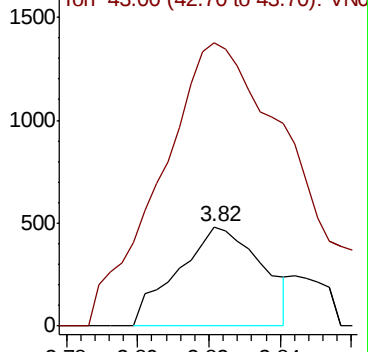
58 100

43 200.6 242.4 363.6#



Abundance Ion 58.00 (57.70 to 58.70): VN0

Ion 43.00 (42.70 to 43.70): VN0



#16

Carbon Disulfide

Concen: 0.240 ug/l

RT: 4.04 min Scan# 706

Delta R.T. -0.00 min

Lab File: VN056898.D

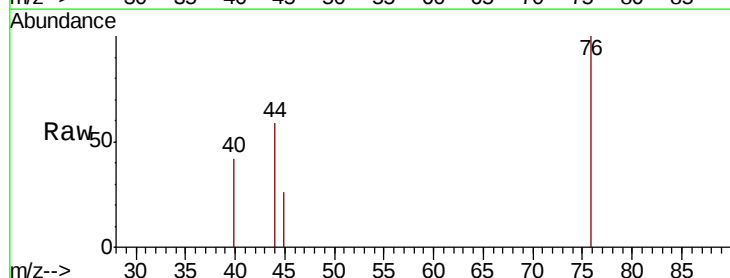
Acq: 24 Jul 2019 1:06

Tgt Ion: 76 Resp: 1895

Ion Ratio Lower Upper

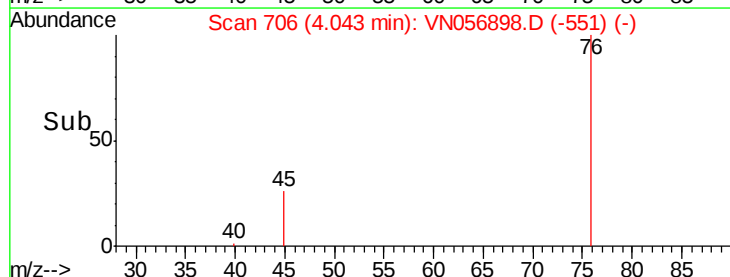
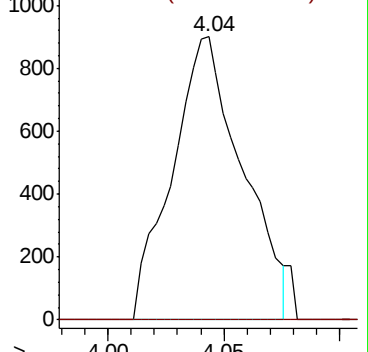
76 100

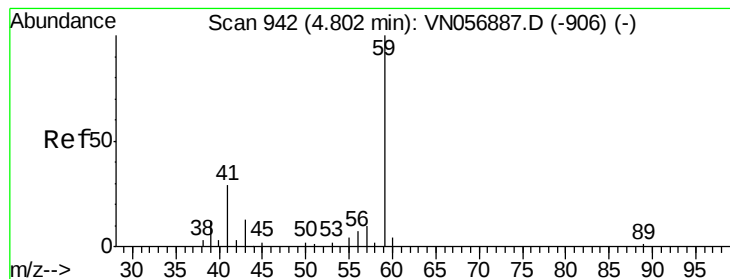
78 0.0 7.1 10.7#



Abundance Ion 76.00 (75.70 to 76.70): VN0

Ion 78.00 (77.70 to 78.70): VN0





#23

tert-Butyl Alcohol

Concen: 0.472 ug/l

RT: 4.76 min Scan# 928

Delta R.T. -0.05 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

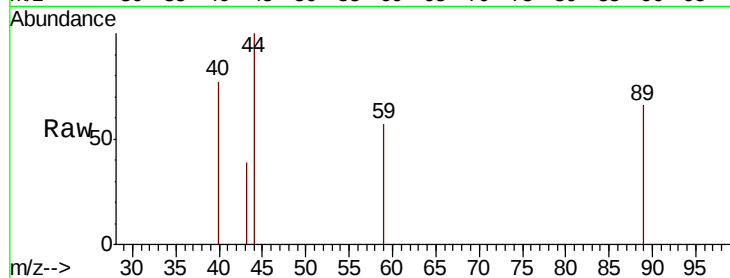
PWU-3

Tot Ion: 59 Resp: 218

Ion Ratio Lower Upper

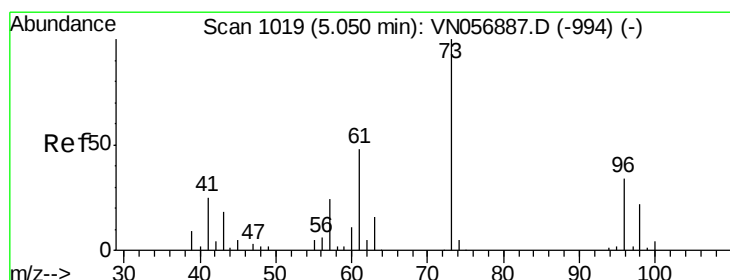
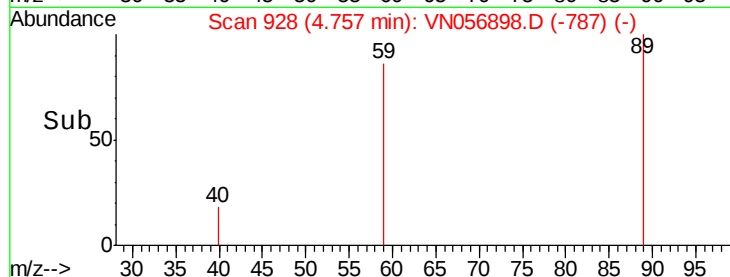
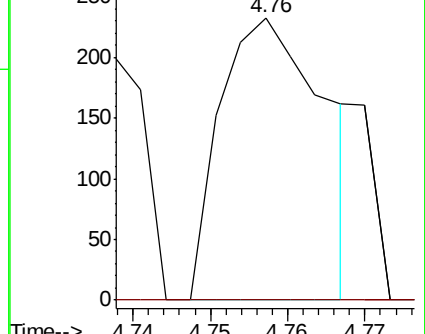
59 100

52 0.0 0.0 0.0



Abundance Ion 59.00 (58.70 to 59.70): VN0

Ion 52.00 (51.70 to 52.70): VN0



#24

Methyl tert-Butyl Ether

Concen: 1.892 ug/l

RT: 5.05 min Scan# 1019

Delta R.T. -0.00 min

Lab File: VN056898.D

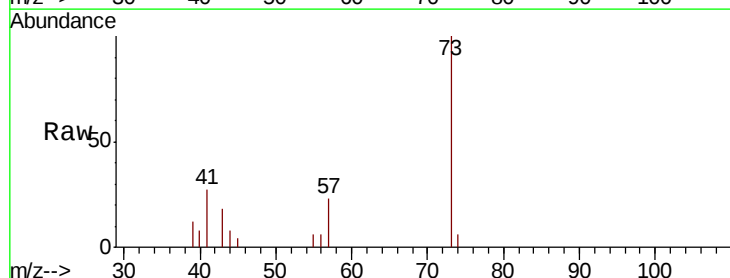
Acq: 24 Jul 2019 1:06

Tgt Ion: 73 Resp: 16756

Ion Ratio Lower Upper

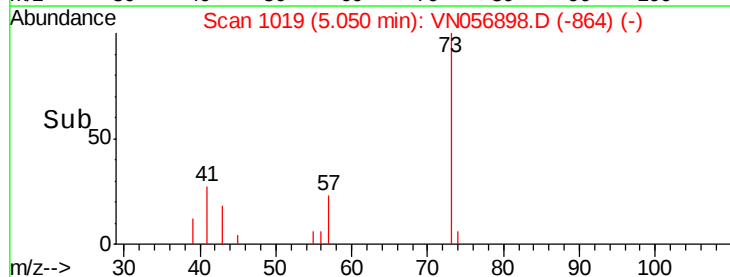
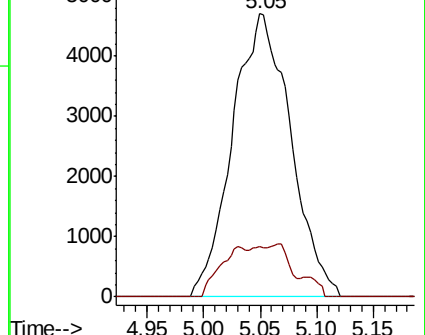
73 100

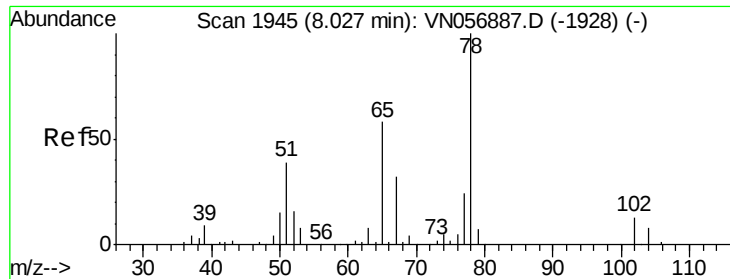
43 7.9 15.4 23.0#



Abundance Ion 73.00 (72.70 to 73.70): VN0

Ion 43.00 (42.70 to 43.70): VN0





#27

1,2-Dichloroethane-d4

Concen: 30.388 ug/l

RT: 8.03 min Scan# 1945

Delta R.T. -0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

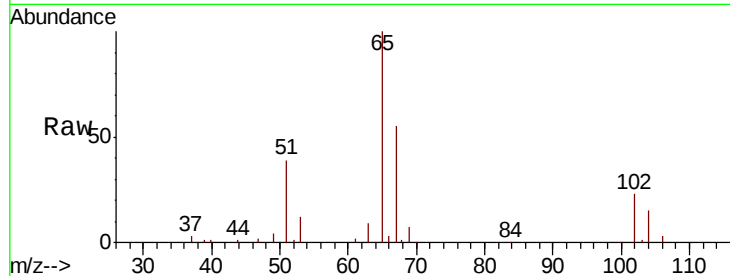
PWU-3

Tot Ion: 65 Resp: 109147

Ion Ratio Lower Upper

65 100

67 56.1 44.6 66.8



Abundance Ion 65.00 (64.70 to 65.70): VN056887.D (-1928) (-)

Ion 67.00 (66.70 to 67.70): VN056887.D (-1928) (-)

8.03

50000

40000

30000

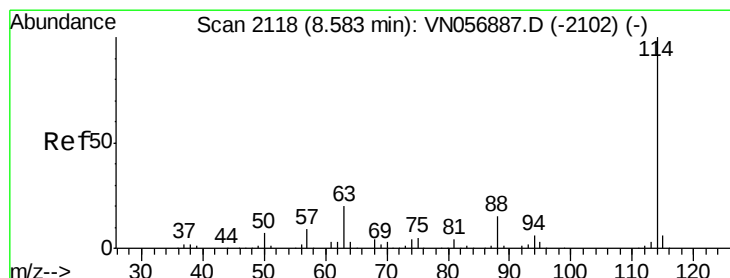
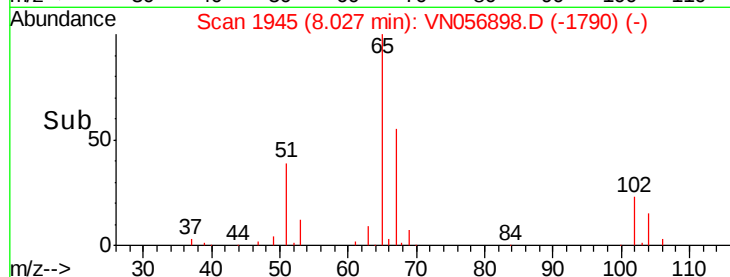
20000

10000

0

7.95 8.00 8.05 8.10 8.15

Time-->



#28

1,4-Difluorobenzene

Concen: 30.000 ug/l

RT: 8.59 min Scan# 2119

Delta R.T. 0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

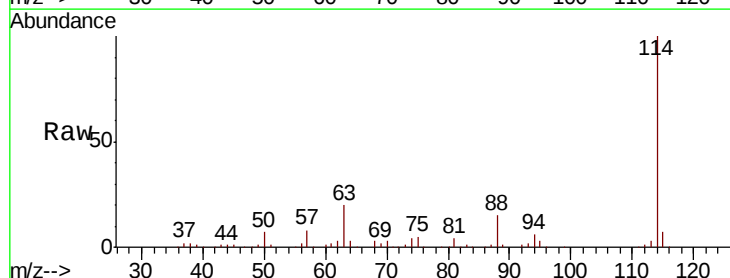
Tgt Ion: 114 Resp: 283101

Ion Ratio Lower Upper

114 100

63 19.8 15.8 23.6

88 15.7 12.5 18.7



Abundance Ion 114.00 (113.70 to 114.70): VN056887.D (-2102) (-)

Ion 63.00 (62.70 to 63.70): VN056887.D (-2102) (-)

Ion 88.00 (87.70 to 88.70): VN056887.D (-2102) (-)

8.59

150000

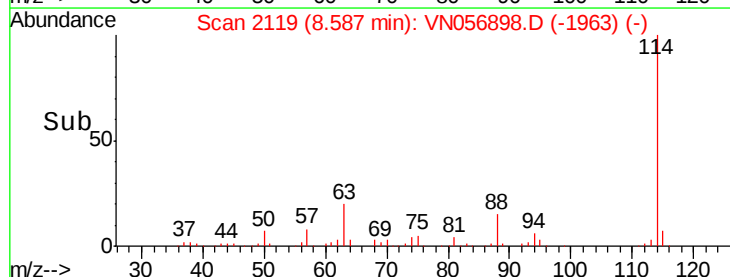
100000

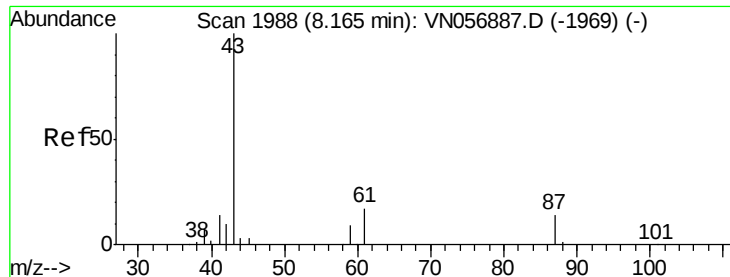
50000

0

8.50 8.55 8.60 8.65

Time-->





#44

Isopropyl Acetate

Concen: 0.290 ug/l

RT: 8.27 min Scan# 2020

Delta R.T. 0.10 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampleId :

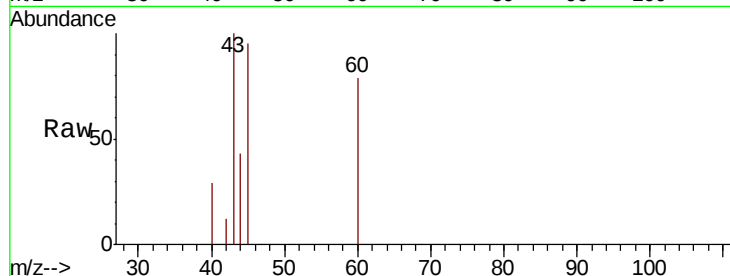
PWU-3

Tot Ion: 43 Resp: 1601

Ion Ratio Lower Upper

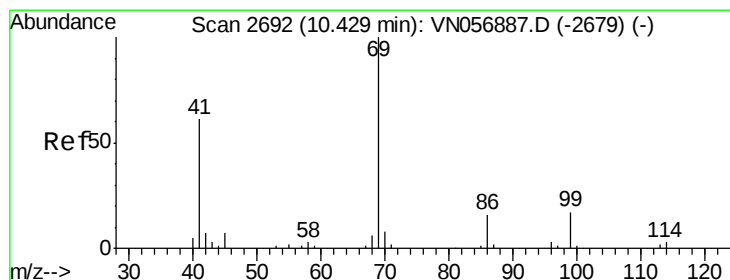
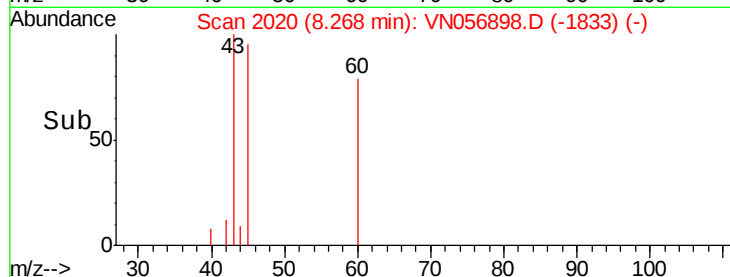
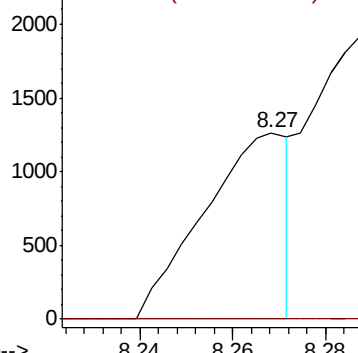
43 100

61 0.0 23.0 34.4#



Abundance Ion 43.00 (42.70 to 43.70): VN0

Ion 61.00 (60.70 to 61.70): VN0



#51

Ethyl methacrylate

Concen: 0.218 ug/l

RT: 10.10 min Scan# 2589

Delta R.T. -0.33 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

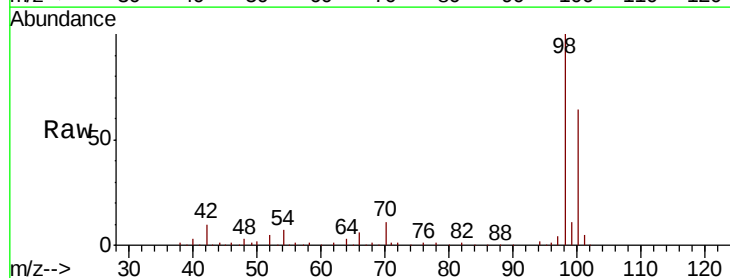
Tgt Ion: 69 Resp: 937

Ion Ratio Lower Upper

69 100

41 54.6 30.4 91.3

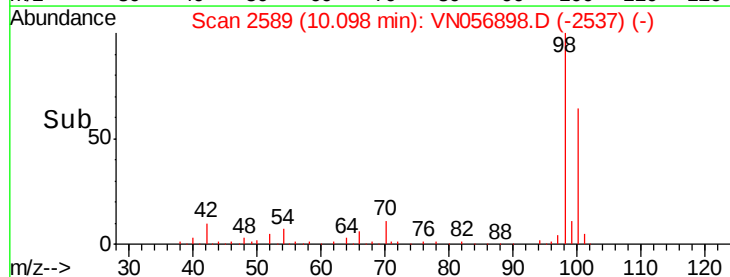
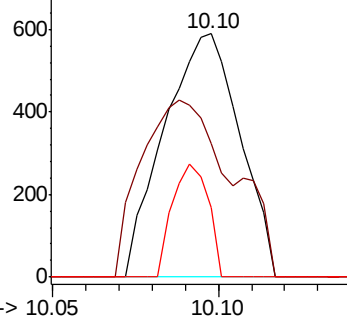
39 28.5 14.2 42.6

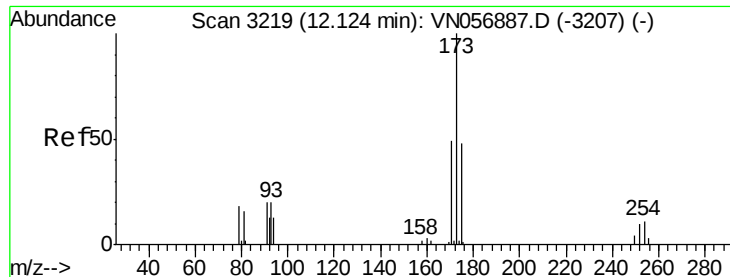


Abundance Ion 69.00 (68.70 to 69.70): VN0

Ion 41.00 (40.70 to 41.70): VN0

Ion 39.00 (38.70 to 39.70): VN0





#56

Bromoform

Concen: 0.220 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.28 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampleId :

PWU-3

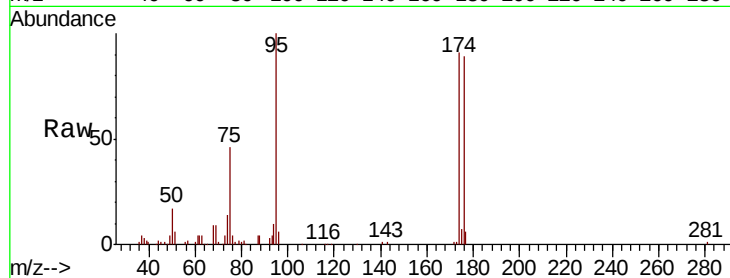
Tot Ion:173 Resp: 470

Ion Ratio Lower Upper

173 100

175 1013.6 38.8 58.2#

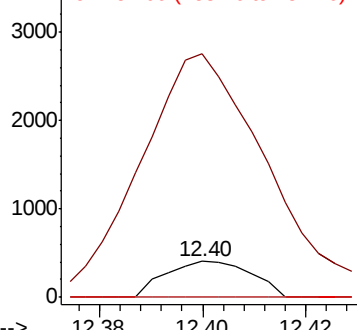
254 0.0 8.1 12.1#



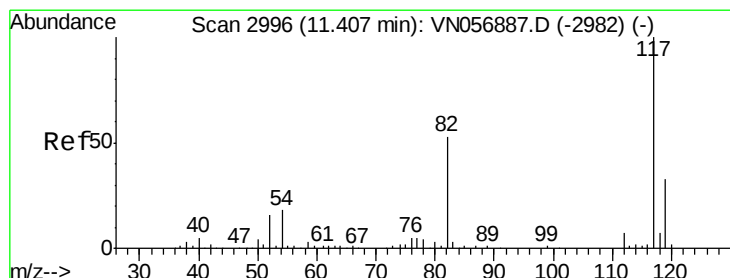
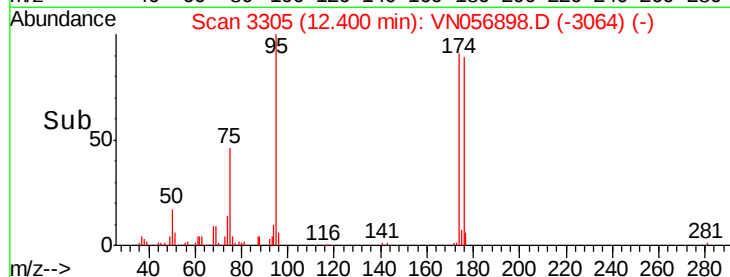
Abundance Ion 173.00 (172.70 to 173.70): V

Ion 175.00 (174.70 to 175.70): V

Ion 254.00 (253.70 to 254.70): V



Time-->



#57

Chlorobenzene-d5

Concen: 30.000 ug/l

RT: 11.41 min Scan# 2996

Delta R.T. -0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

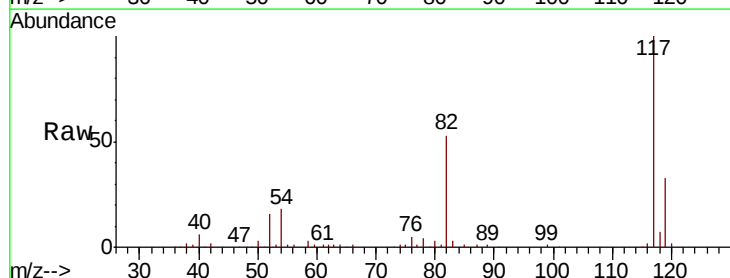
Tgt Ion:117 Resp: 220427

Ion Ratio Lower Upper

117 100

82 53.4 43.0 64.4

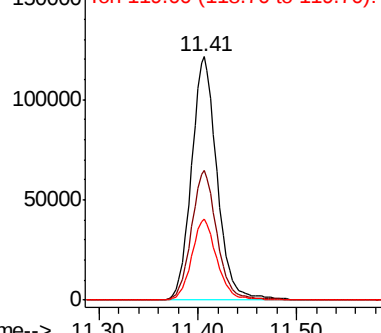
119 33.0 26.2 39.2



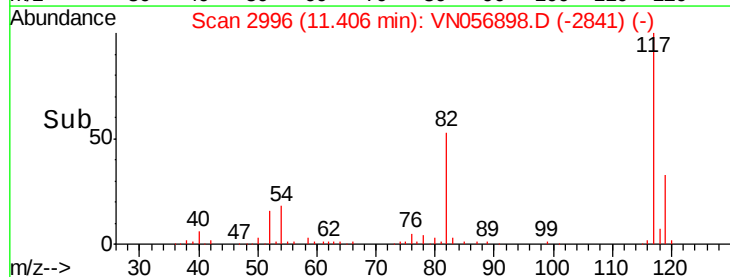
Abundance Ion 117.00 (116.70 to 117.70): V

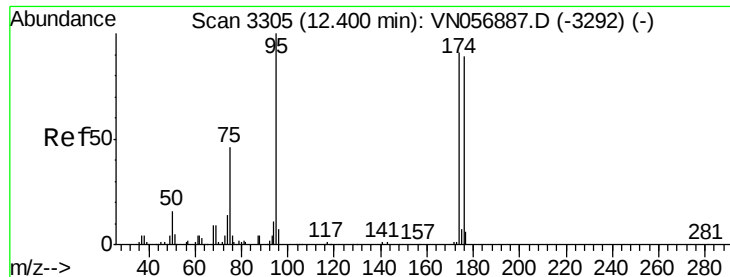
Ion 82.00 (81.70 to 82.70): V

Ion 119.00 (118.70 to 119.70): V



Time-->





#60

4-Bromofluorobenzene

Concen: 21.633 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

PWU-3

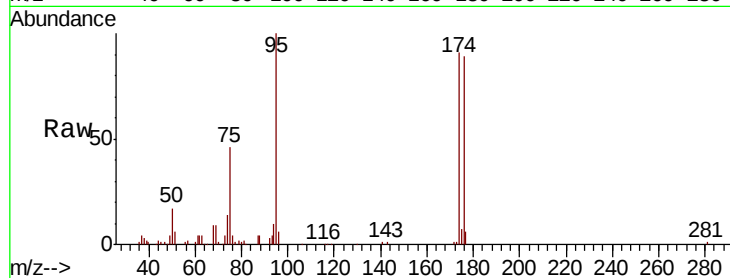
Tot Ion: 95 Resp: 71469

Ion Ratio Lower Upper

95 100

174 92.5 71.9 107.9

176 90.2 69.8 104.8

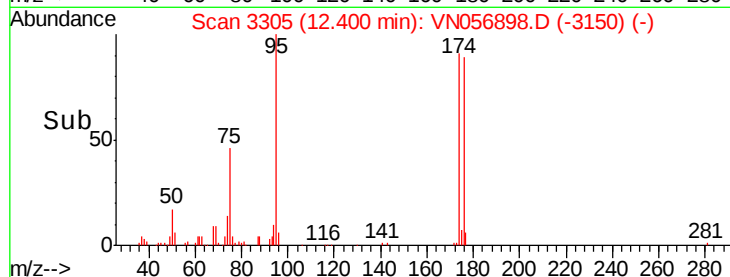


Abundance Ion 95.00 (94.70 to 95.70): VN056887.D (-3292) (-)

Ion 174.00 (173.70 to 174.70): VN056887.D (-3292) (-)

Ion 176.00 (175.70 to 176.70): VN056887.D (-3292) (-)

Time-->

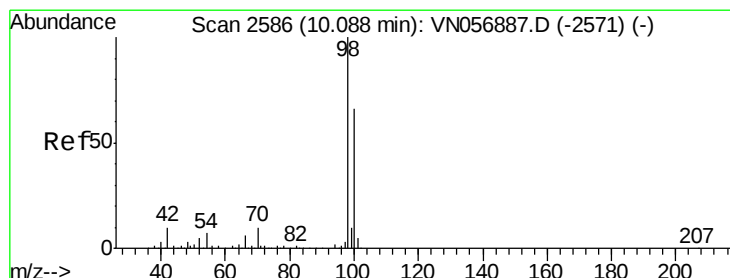


Abundance Ion 95.00 (94.70 to 95.70): VN056898.D (-3150) (-)

Ion 174.00 (173.70 to 174.70): VN056898.D (-3150) (-)

Ion 176.00 (175.70 to 176.70): VN056898.D (-3150) (-)

Time-->



#63

Toluene-d8

Concen: 32.286 ug/l

RT: 10.09 min Scan# 2586

Delta R.T. -0.00 min

Lab File: VN056898.D

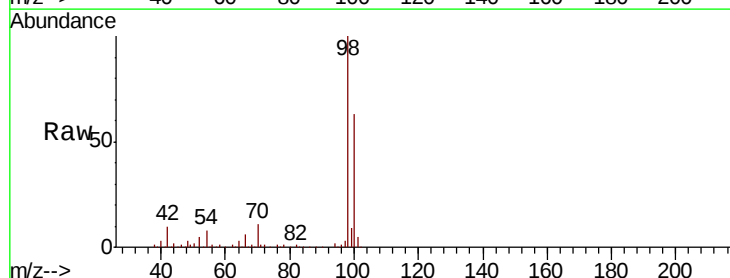
Acq: 24 Jul 2019 1:06

Tgt Ion: 98 Resp: 336172

Ion Ratio Lower Upper

98 100

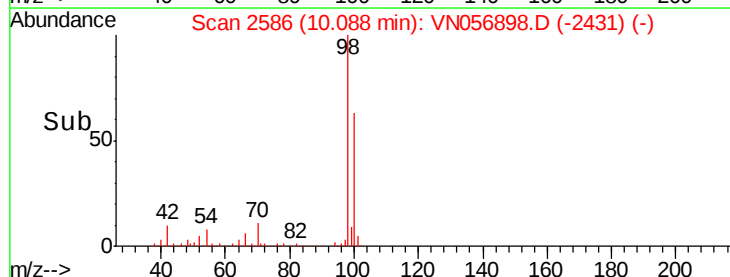
100 63.7 51.4 77.2



Abundance Ion 98.00 (97.70 to 98.70): VN056887.D (-2571) (-)

Ion 100.00 (99.70 to 100.70): VN056887.D (-2571) (-)

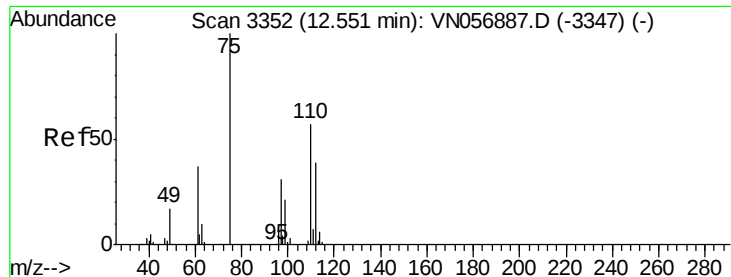
Time-->



Abundance Ion 98.00 (97.70 to 98.70): VN056898.D (-2431) (-)

Ion 100.00 (99.70 to 100.70): VN056898.D (-2431) (-)

Time-->



#72

1,2,3-Trichloropropane

Concen: 10.820 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. -0.15 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

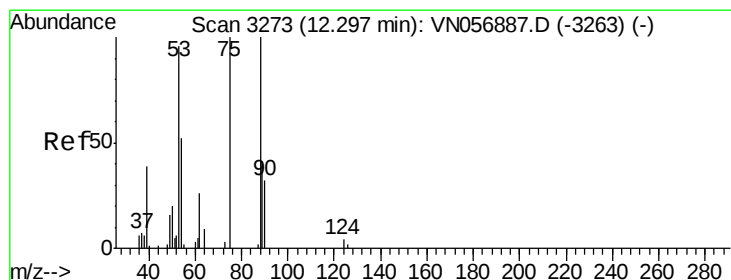
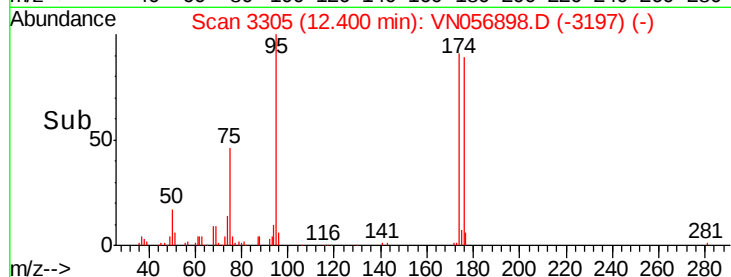
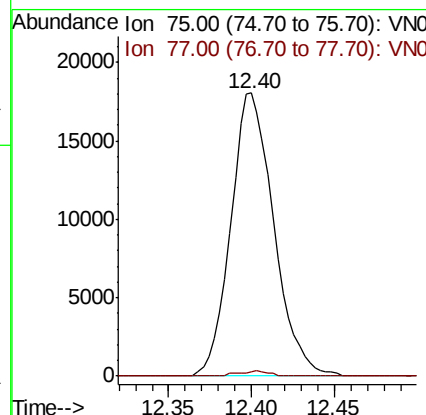
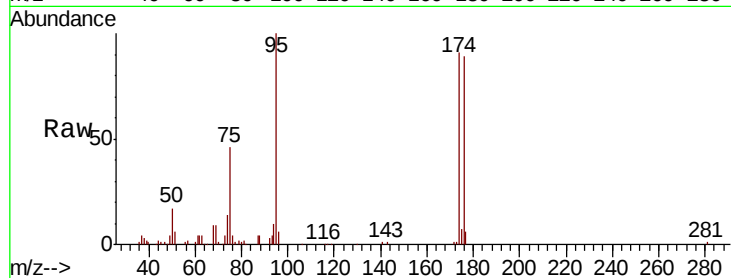
PWU-3

Tot Ion: 75 Resp: 32519

Ion Ratio Lower Upper

75 100

77 0.9 0.0 378.6



#77

t-1,4-Dichloro-2-butene

Concen: 34.462 ug/l

RT: 12.40 min Scan# 3305

Delta R.T. 0.10 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

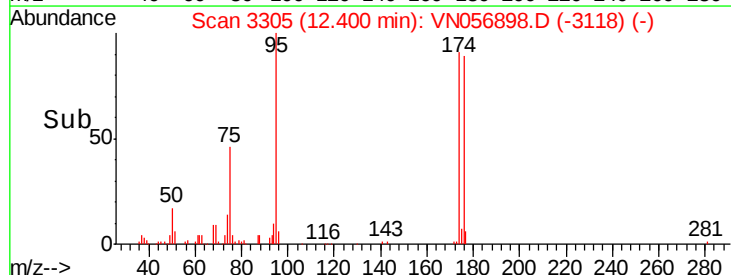
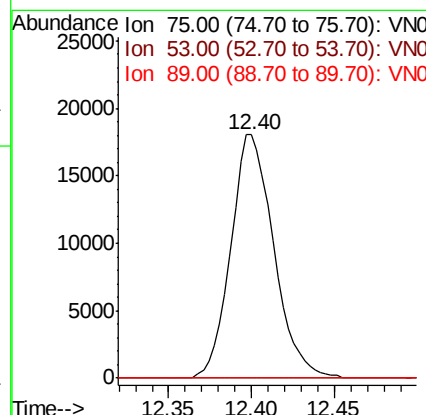
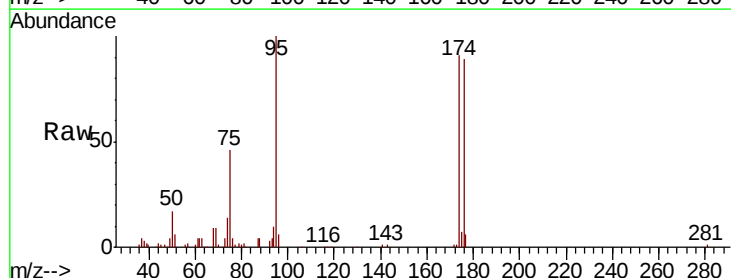
Tgt Ion: 75 Resp: 32519

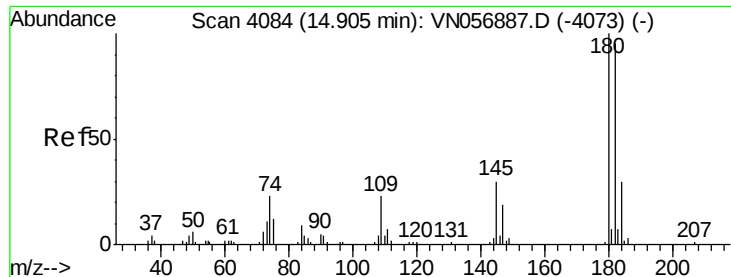
Ion Ratio Lower Upper

75 100

53 0.0 48.0 144.0#

89 0.0 21.4 64.3#





#89

1,2,4-Trichlorobenzene

Concen: 8.308 ug/l

RT: 14.91 min Scan# 4086

Delta R.T. 0.01 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

Instrument :

MSVOA_N

ClientSampled :

PWU-3

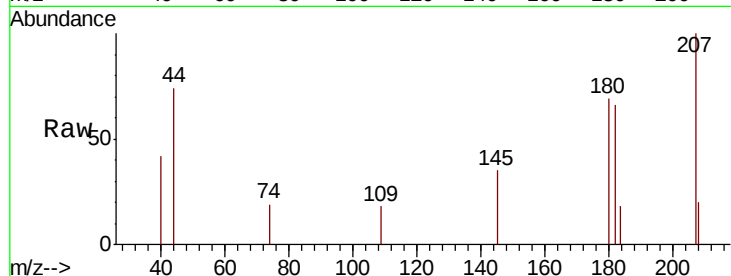
Tot Ion:180 Resp: 1023

Ion Ratio Lower Upper

180 100

182 86.7 77.0 115.4

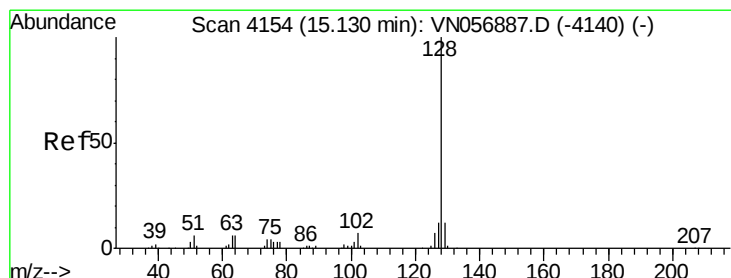
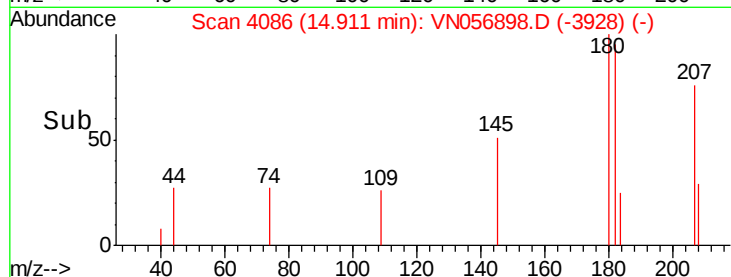
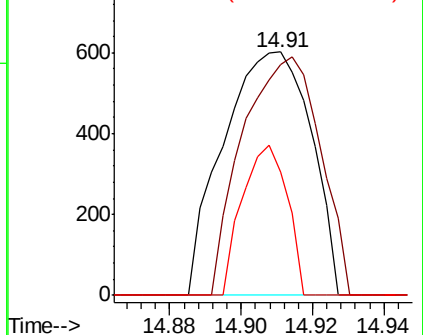
145 31.7 23.5 35.3



Abundance Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 145.00 (144.70 to 145.70): V



#91

Naphthalene

Concen: 8.058 ug/l

RT: 15.13 min Scan# 4155

Delta R.T. 0.00 min

Lab File: VN056898.D

Acq: 24 Jul 2019 1:06

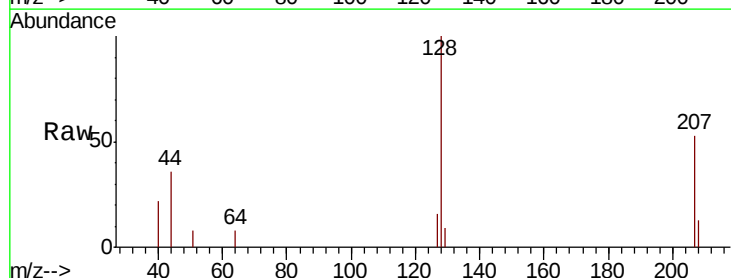
Tgt Ion:128 Resp: 3195

Ion Ratio Lower Upper

128 100

127 12.1 10.0 15.0

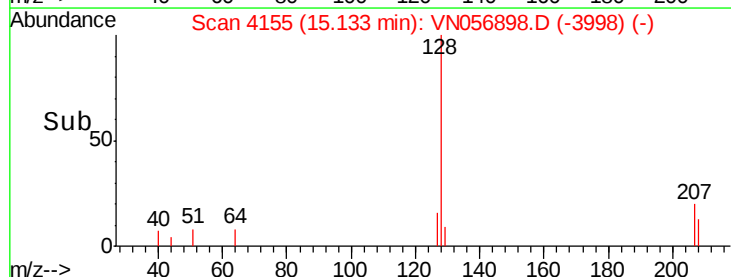
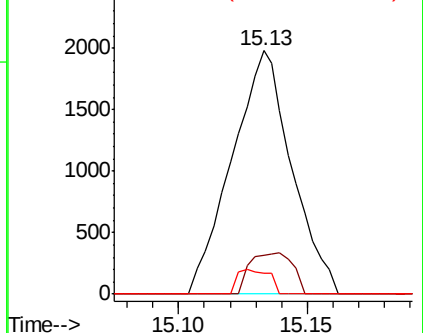
129 4.4 8.9 13.3#

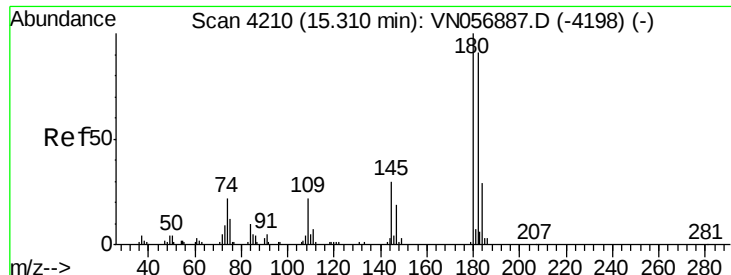


Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V

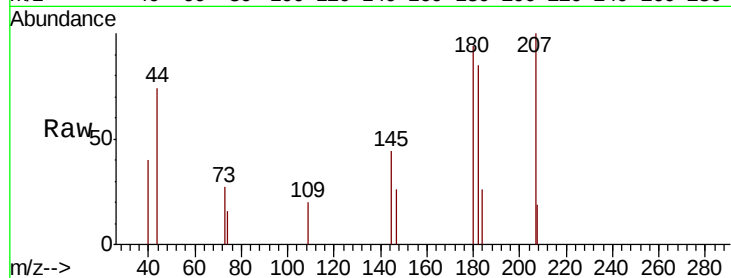




#92
 1,2,3-Trichlorobenzene
 Concen: 0.590 ug/l
 RT: 15.31 min Scan# 4209
 Delta R.T. -0.00 min
 Lab File: VN056898.D
 Acq: 24 Jul 2019 1:06

Instrument :
 MSVOA_N
 ClientSampleId :
 PWU-3

Tot Ion:180 Resp: 1536
 Ion Ratio Lower Upper
 180 100
 182 109.4 0.0 188.0
 145 32.9 0.0 61.0



Abundance Ion 180.00 (179.70 to 180.70): V
 Ion 182.00 (181.70 to 182.70): V
 Ion 145.00 (144.70 to 145.70): V

