

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX102320\
 Data File : VX019082.D
 Acq On : 23 Oct 2020 17:38
 Operator : JC/SP
 Sample : L4489-01
 Misc : 5.0mL/MSVOA X/WATER
 ALS Vial : 17 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 201021075-01-VOA

Quant Time: Oct 26 16:57:40 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X102320W.M
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
 QLast Update : Mon Oct 26 03:21:29 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	4.98	128	38305	30.00	ug/l	0.00
28) 1,4-Difluorobenzene	6.83	114	213249	30.00	ug/l	0.00
57) Chlorobenzene-d5	10.10	117	188001	30.00	ug/l	0.00

System Monitoring Compounds						
27) 1,2-Dichloroethane-d4	6.03	65	79569	31.19	ug/l	0.00
Spiked Amount	30.000	Range	91 - 110	Recovery	=	103.97%
60) 4-Bromofluorobenzene	11.12	95	84704	30.02	ug/l	0.00
Spiked Amount	30.000	Range	63 - 112	Recovery	=	100.07%
63) Toluene-d8	8.70	98	250253	30.15	ug/l	0.00
Spiked Amount	30.000	Range	91 - 112	Recovery	=	100.50%

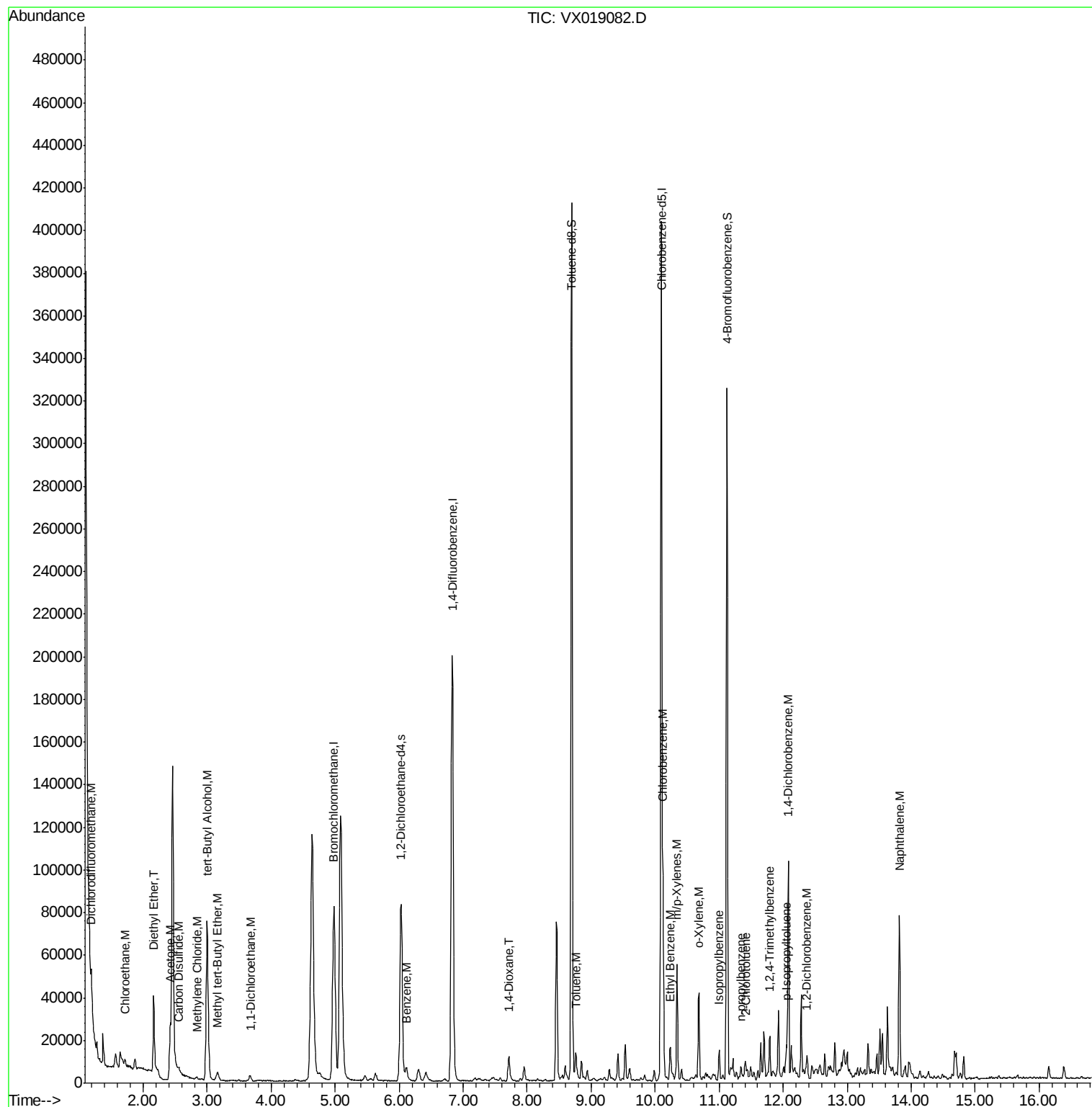
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	1.18	85	1380	0.717	ug/l	94
6) Chloroethane	1.72	64	1406	0.910	ug/l	95
8) Diethyl Ether	2.17	74	14074	9.459	ug/l	97
15) Acetone	2.42	58	2110	8.213	ug/l	95
16) Carbon Disulfide	2.56	76	1197	0.223	ug/l #	84
18) Methylene Chloride	2.83	84	476	0.216	ug/l #	83
21) 1,1-Dichloroethane	3.67	63	2653	0.741	ug/l #	85
23) tert-Butyl Alcohol	3.00	59	98964	227.624	ug/l #	100
24) Methyl tert-Butyl Ether	3.17	73	4009	0.658	ug/l #	83
34) Benzene	6.11	78	6999	0.791	ug/l #	92
45) 1,4-Dioxane	7.71	88	9210	208.124	ug/l	100
62) Toluene	8.77	91	5799	0.587	ug/l	93
64) Chlorobenzene	10.12	112	41199	6.708	ug/l	100
66) Ethyl Benzene	10.24	91	9083	0.838	ug/l	93
67) m/p-Xylenes	10.34	106	11111	2.690	ug/l	97
68) o-Xylene	10.68	106	9305	2.362	ug/l	98
70) Isopropylbenzene	11.00	105	7024	0.663	ug/l	99
74) n-propylbenzene	11.34	91	2559	0.213	ug/l	97
75) 2-Chlorotoluene	11.40	91	3880	0.572	ug/l	96
80) 1,2,4-Trimethylbenzene	11.79	105	8655	1.013	ug/l	99
82) p-Isopropyltoluene	12.05	119	2774	0.300	ug/l	91
84) 1,4-Dichlorobenzene	12.08	146	31967	6.804	ug/l	95
87) 1,2-Dichlorobenzene	12.38	146	2446	0.552	ug/l	99
91) Naphthalene	13.82	128	46858	4.490	ug/l	99

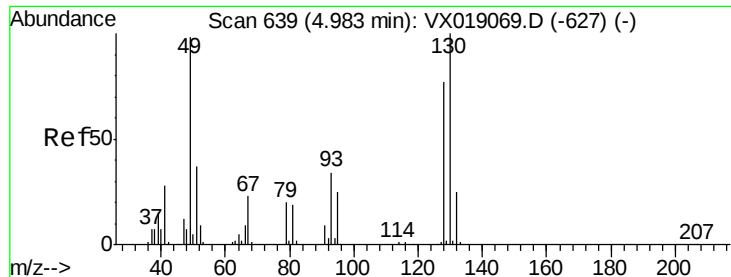
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA X\DATA\VX102320\
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Instrument :
MSVOA_X
ClientSampleId :
201021075-01-VOA

Quant Time: Oct 26 16:57:40 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA X\METHOD\624X102320W.M
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS
QLast Update : Mon Oct 26 03:21:29 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 30.000 ug/l

RT: 4.98 min Scan# 638

Delta R.T. -0.01 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

201021075-01-VOA

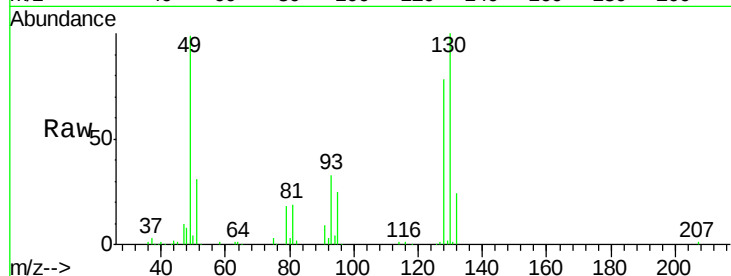
Tot Ion:128 Resp: 38305

Ion Ratio Lower Upper

128 100

49 129.9 0.0 318.8

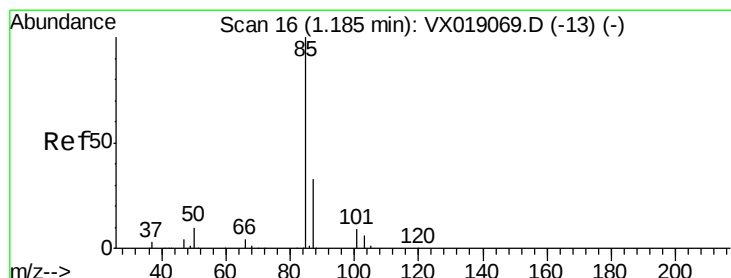
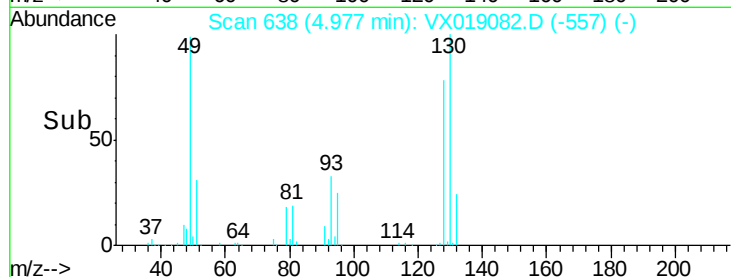
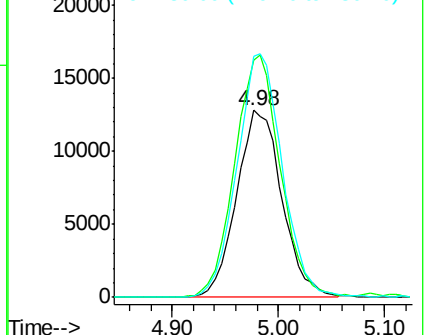
130 129.6 0.0 321.8



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 49.00 (48.70 to 49.70): VX0

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.717 ug/l

RT: 1.18 min Scan# 16

Delta R.T. 0.00 min

Lab File: VX019082.D

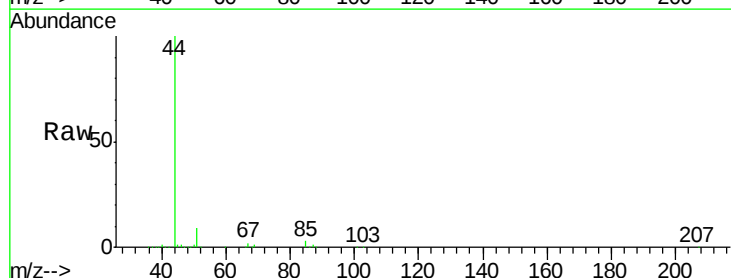
Acq: 23 Oct 2020 17:38

Tgt Ion: 85 Resp: 1380

Ion Ratio Lower Upper

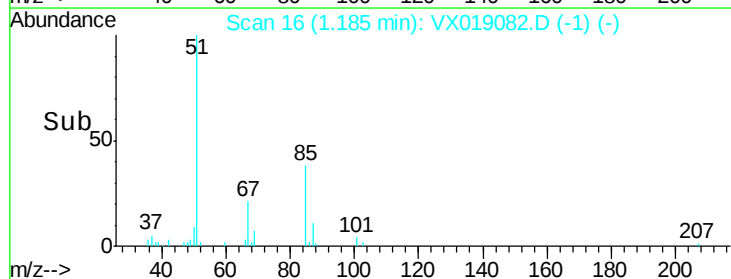
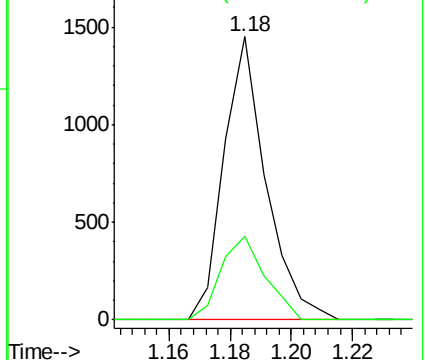
85 100

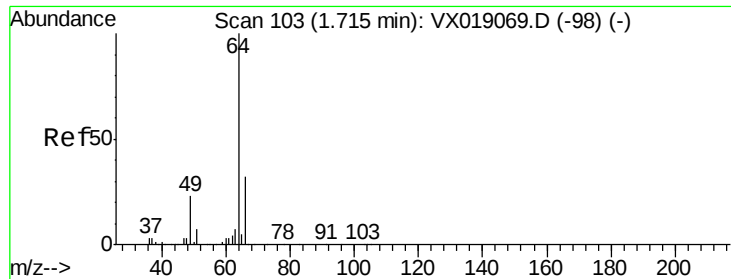
87 29.5 16.6 49.7



Abundance Ion 85.00 (84.70 to 85.70): VX0

Ion 87.00 (86.70 to 87.70): VX0





#6

Chloroethane

Concen: 0.910 ug/l

RT: 1.72 min Scan# 103

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

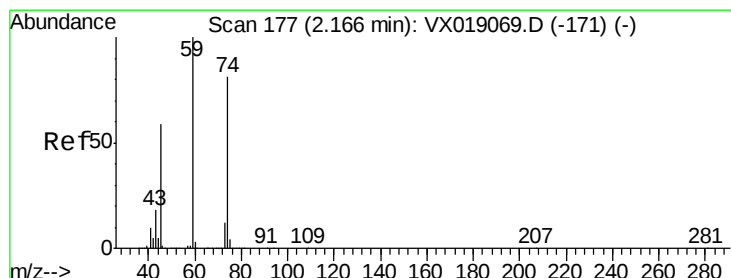
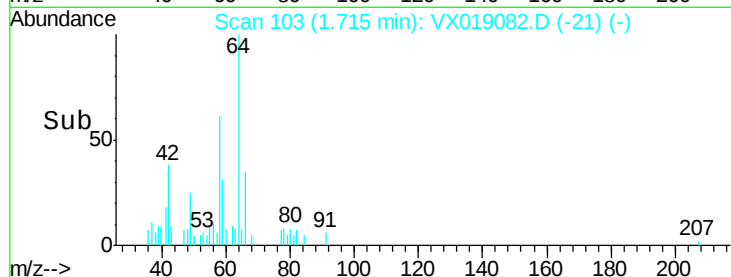
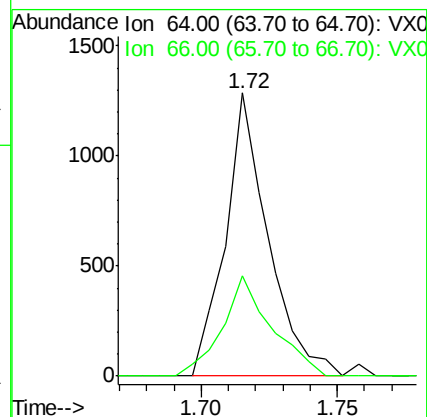
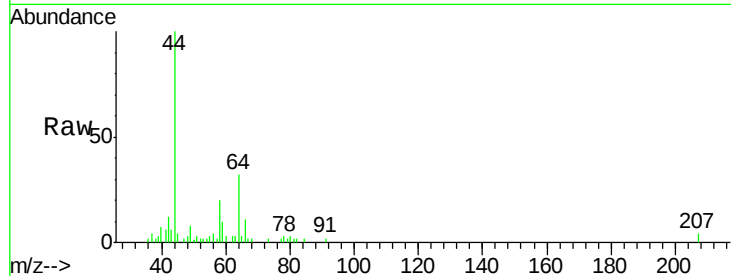
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Tot Ion: 64 Resp: 1406

Ion Ratio Lower Upper

64 100

66 35.4 25.9 38.9



#8

Diethyl Ether

Concen: 9.459 ug/l

RT: 2.17 min Scan# 177

Delta R.T. 0.00 min

Lab File: VX019082.D

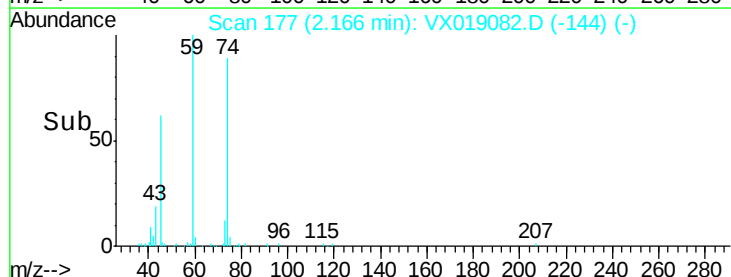
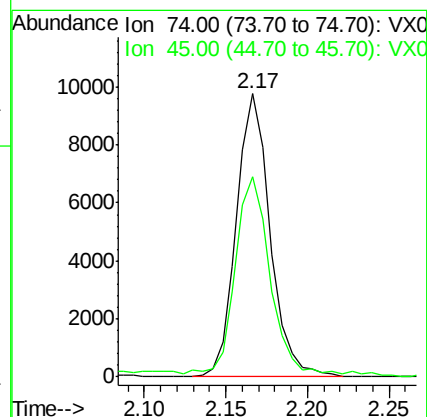
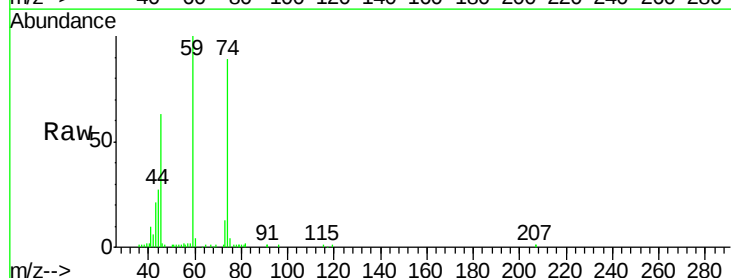
Acq: 23 Oct 2020 17:38

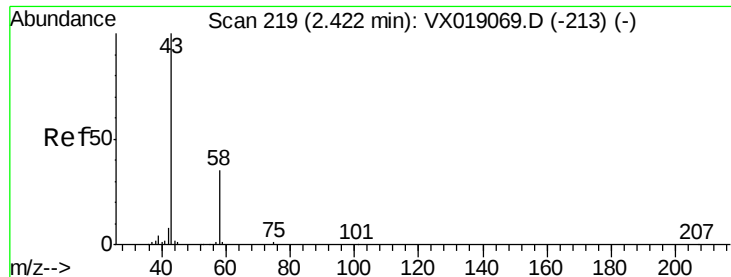
Tgt Ion: 74 Resp: 14074

Ion Ratio Lower Upper

74 100

45 69.8 14.5 130.7





#15

Acetone

Concen: 8.213 ug/l

RT: 2.42 min Scan# 218

Delta R.T. -0.01 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

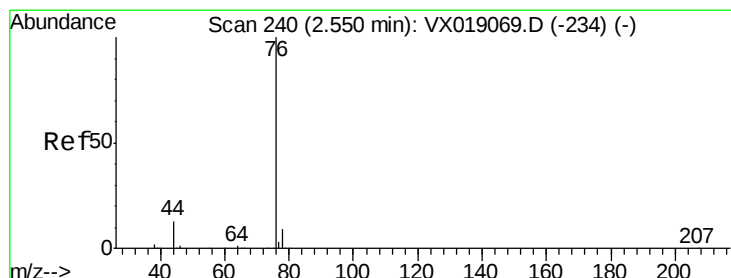
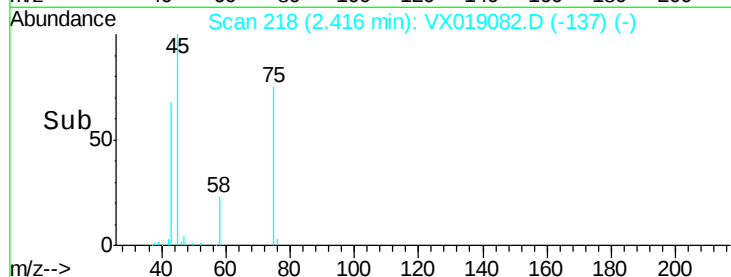
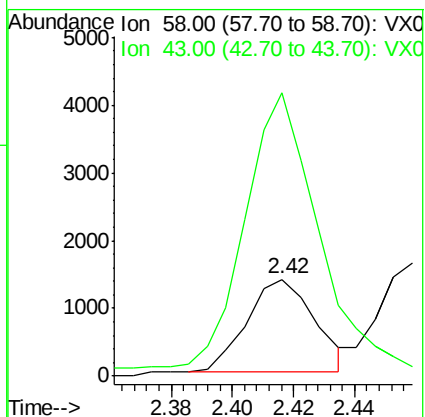
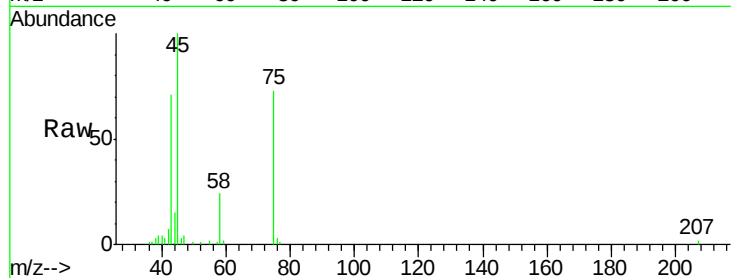
201021075-01-VOA

Tot Ion: 58 Resp: 2110

Ion Ratio Lower Upper

58 100

43 292.3 226.7 340.1



#16

Carbon Disulfide

Concen: 0.223 ug/l

RT: 2.56 min Scan# 241

Delta R.T. 0.01 min

Lab File: VX019082.D

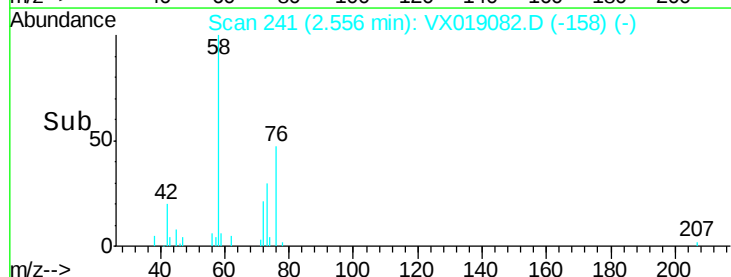
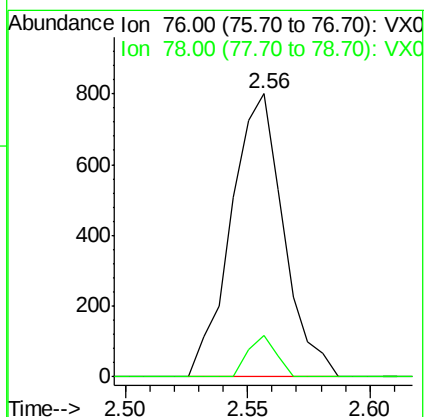
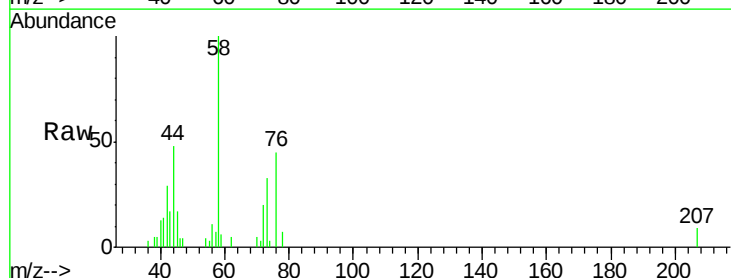
Acq: 23 Oct 2020 17:38

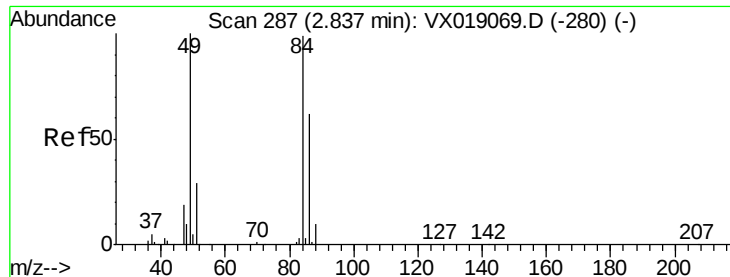
Tgt Ion: 76 Resp: 1197

Ion Ratio Lower Upper

76 100

78 14.6 7.2 10.8#

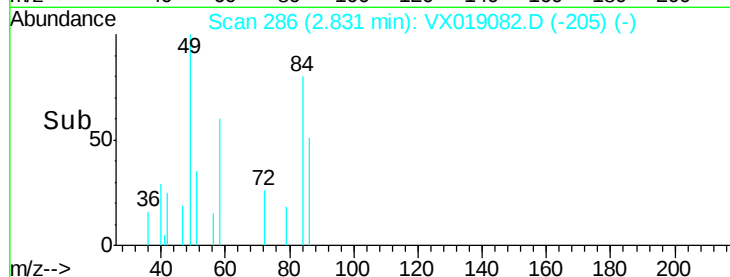
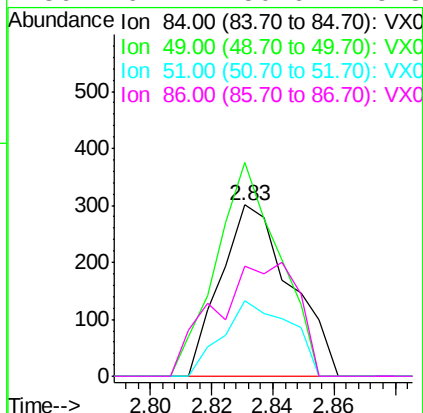
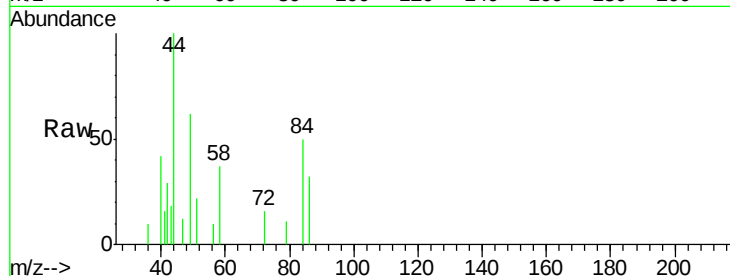




#18
Methvlene Chloride
Concen: 0.216 ug/l
RT: 2.83 min Scan# 286
Delta R.T. -0.01 min
Lab File: VX019082.D
Acq: 23 Oct 2020 17:38

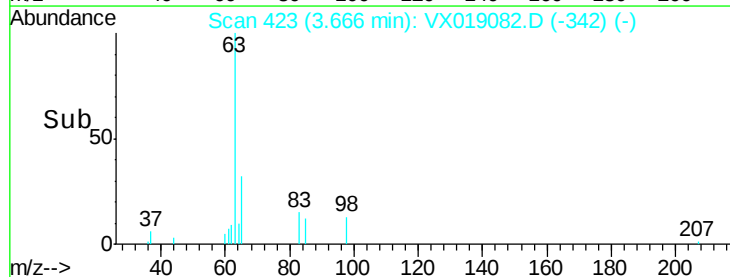
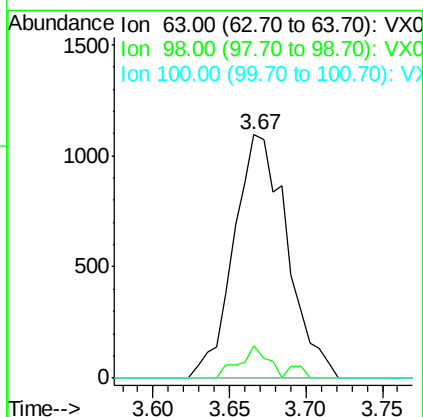
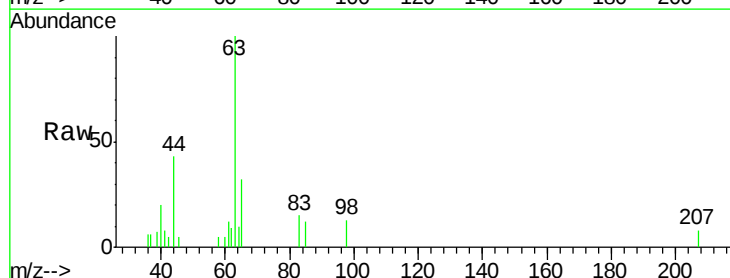
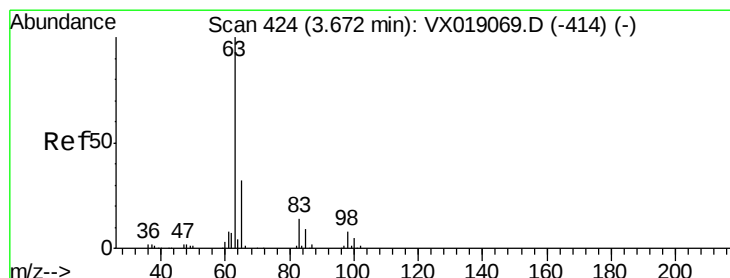
Instrument :
MSVOA_X
ClientSampleId :
201021075-01-VOA

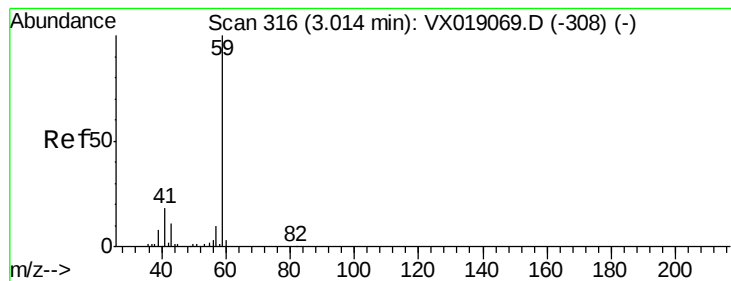
Tot Ion: 84 Resp: 476
Ion Ratio Lower Upper
84 100
49 124.6 80.9 121.3#
51 44.2 23.8 35.6#
86 64.1 50.6 75.8



#21
1,1-Dichloroethane
Concen: 0.741 ug/l
RT: 3.67 min Scan# 423
Delta R.T. -0.01 min
Lab File: VX019082.D
Acq: 23 Oct 2020 17:38

Tgt Ion: 63 Resp: 2653
Ion Ratio Lower Upper
63 100
98 13.1 3.9 11.7#
100 0.0 2.4 7.2#





#23

tert-Butyl Alcohol

Concen: 227.624 ug/l

RT: 3.00 min Scan# 314

Delta R.T. -0.01 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

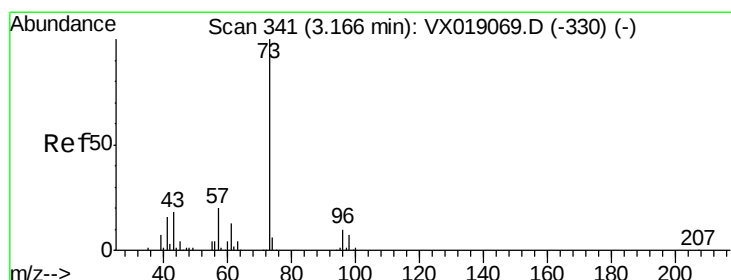
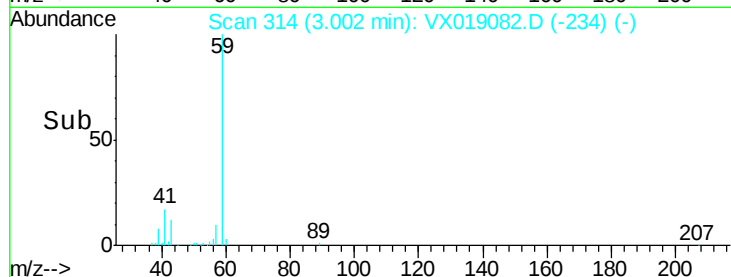
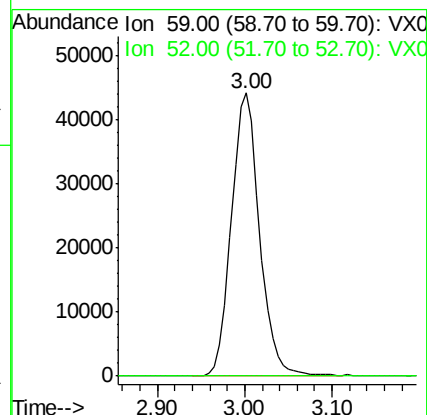
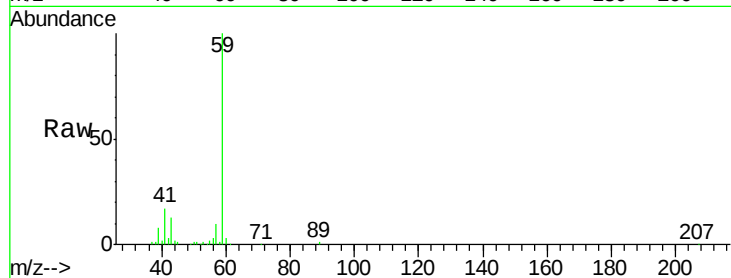
201021075-01-VOA

Tot Ion: 59 Resp: 98964

Ion Ratio Lower Upper

59 100

52 0.1 0.2 0.4#



#24

Methyl tert-Butyl Ether

Concen: 0.658 ug/l

RT: 3.17 min Scan# 341

Delta R.T. 0.00 min

Lab File: VX019082.D

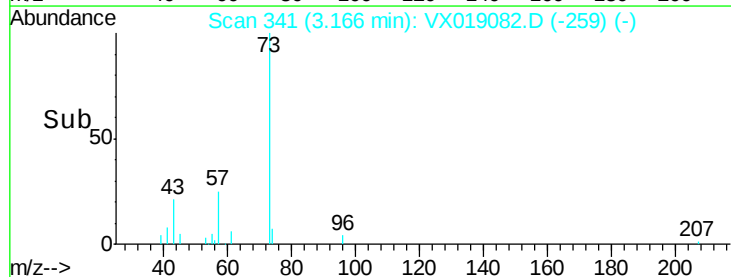
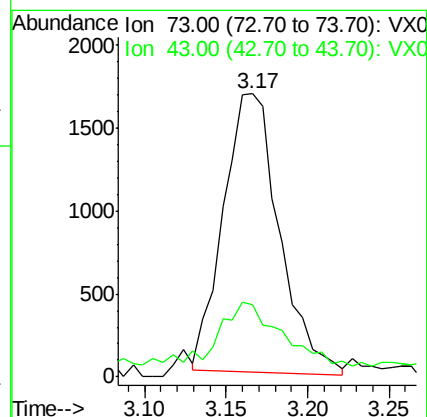
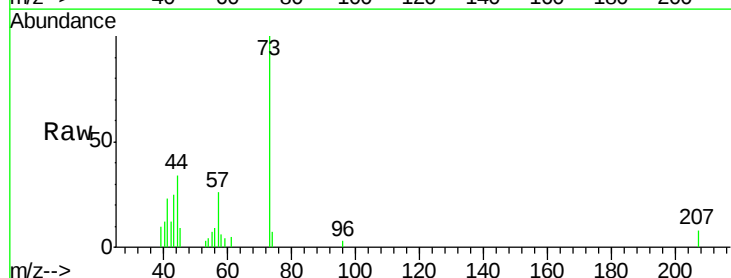
Acq: 23 Oct 2020 17:38

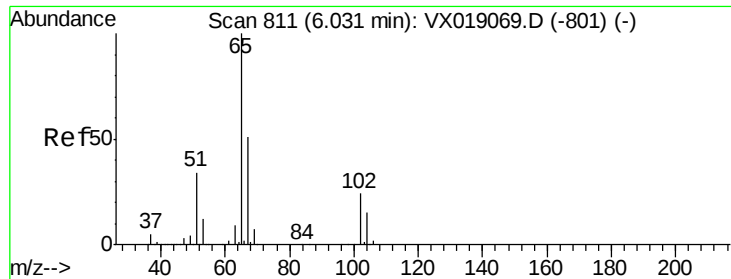
Tgt Ion: 73 Resp: 4009

Ion Ratio Lower Upper

73 100

43 24.8 13.9 20.9#

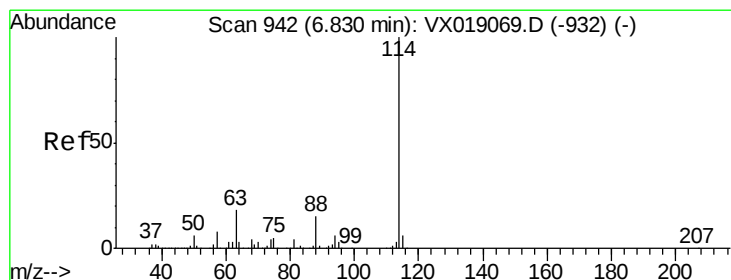
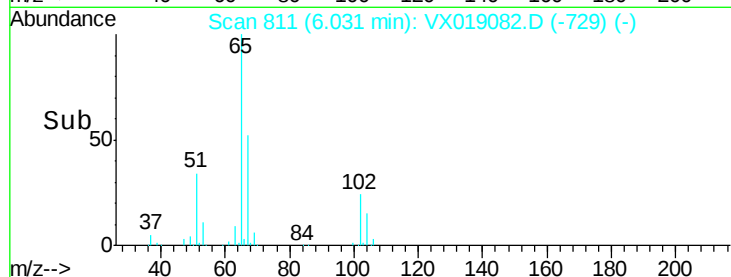
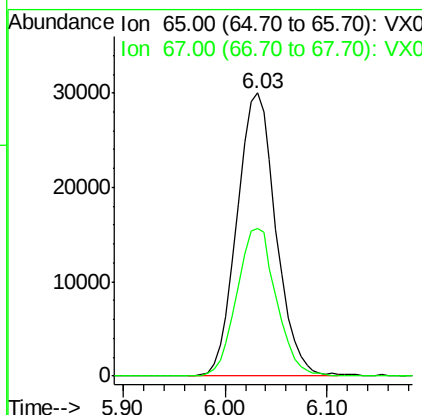
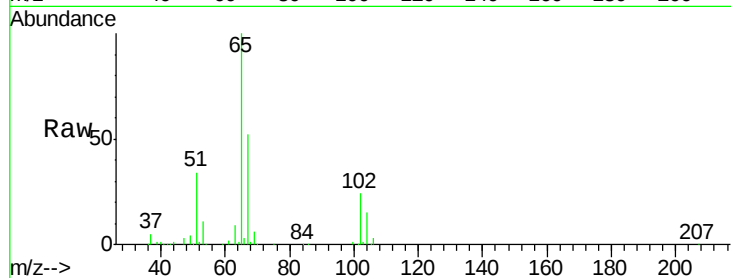




#27
 1,2-Dichloroethane-d4
 Concen: 31.187 ug/l
 RT: 6.03 min Scan# 811
 Delta R.T. 0.00 min
 Lab File: VX019082.D
 Acq: 23 Oct 2020 17:38

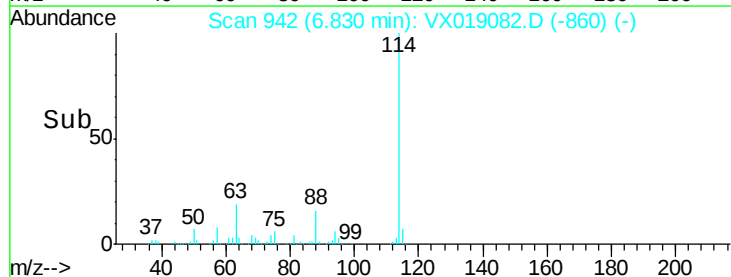
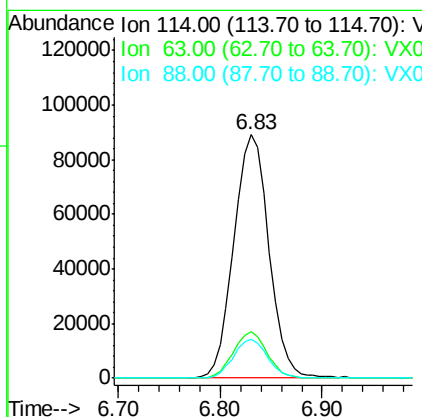
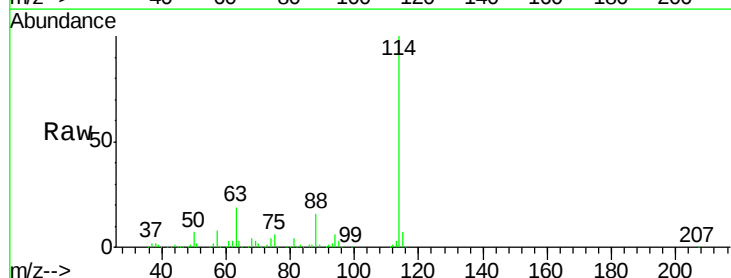
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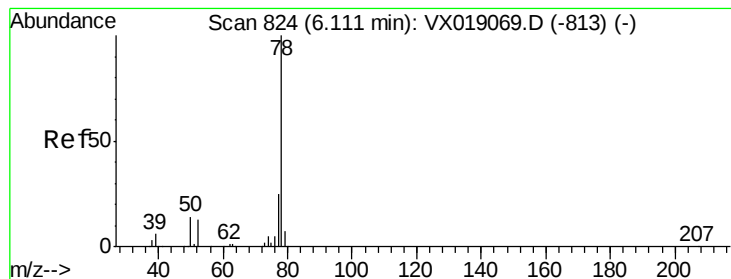
Tot Ion: 65 Resp: 79569
 Ion Ratio Lower Upper
 65 100
 67 52.9 42.0 63.0



#28
 1,4-Difluorobenzene
 Concen: 30.000 ug/l
 RT: 6.83 min Scan# 942
 Delta R.T. 0.00 min
 Lab File: VX019082.D
 Acq: 23 Oct 2020 17:38

Tgt Ion: 114 Resp: 213249
 Ion Ratio Lower Upper
 114 100
 63 18.3 14.6 21.8
 88 15.4 12.2 18.2





#34

Benzene

Concen: 0.791 ug/l

RT: 6.11 min Scan# 824

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

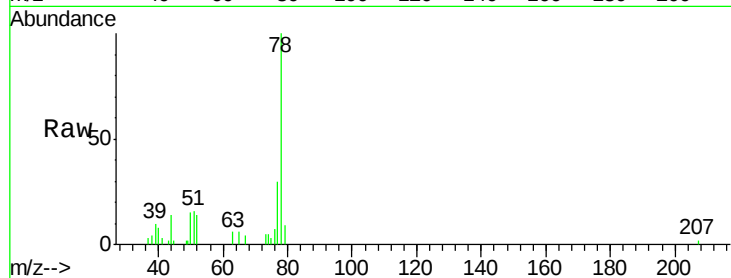
MSVOA_X

ClientSampleId :

201021075-01-VOA

Tot Ion: 78 Resp: 6999

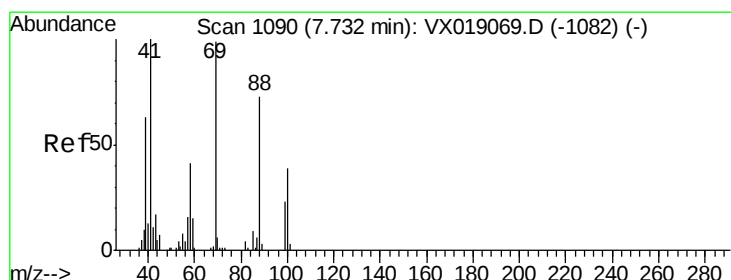
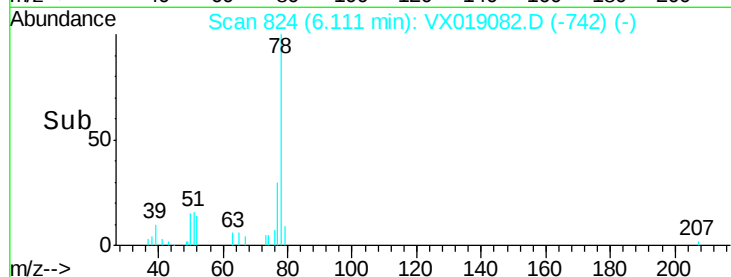
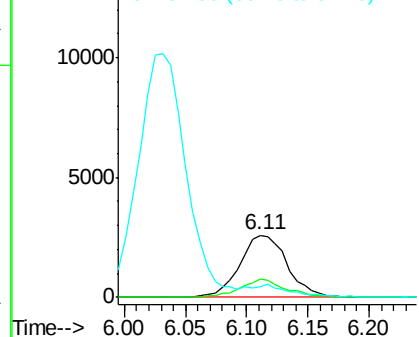
Ion	Ratio	Lower	Upper
78	100		
77	29.8	20.1	30.1
51	16.5	11.0	16.4#



Abundance Ion 78.10 (77.80 to 78.80): VX0

Ion 77.00 (76.70 to 77.70): VX0

Ion 51.00 (50.70 to 51.70): VX0



#45

1,4-Dioxane

Concen: 208.124 ug/l

RT: 7.71 min Scan# 1087

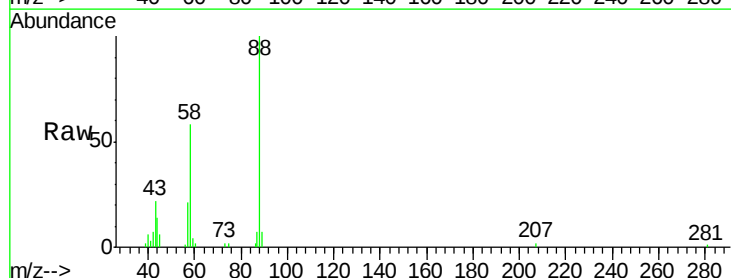
Delta R.T. -0.02 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Tgt Ion: 88 Resp: 9210

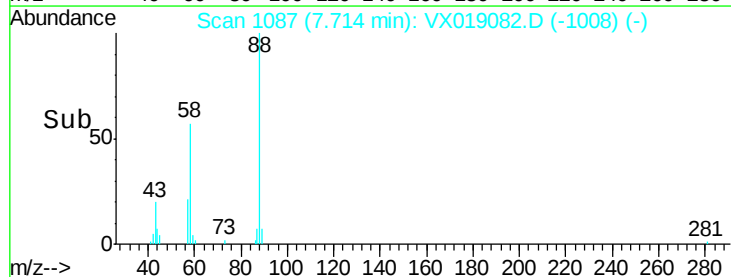
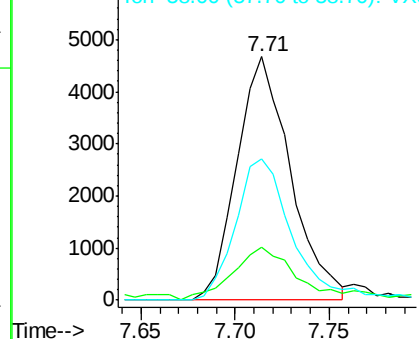
Ion	Ratio	Lower	Upper
88	100		
43	25.2	20.5	30.7
58	59.3	47.4	71.2

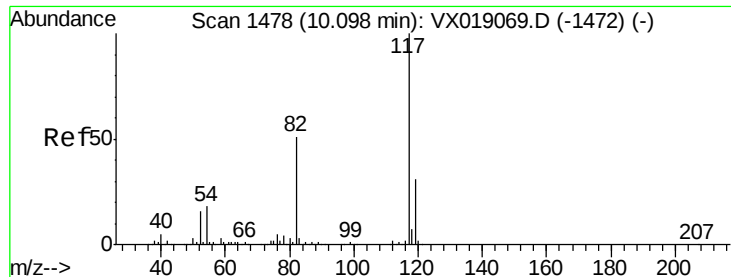


Abundance Ion 88.00 (87.70 to 88.70): VX0

Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0

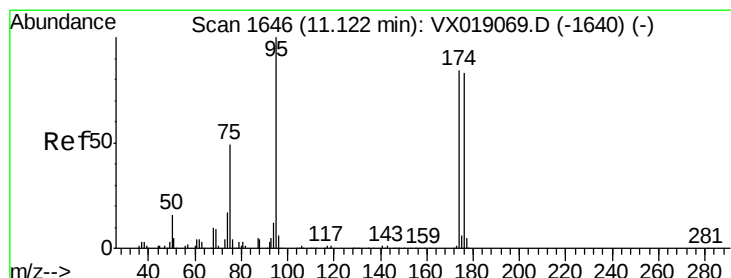
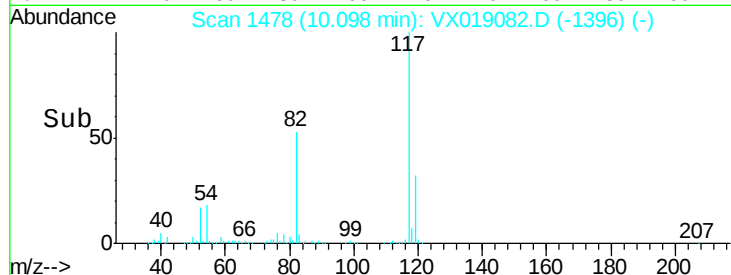
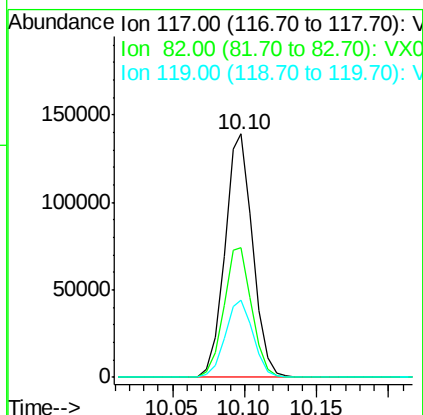
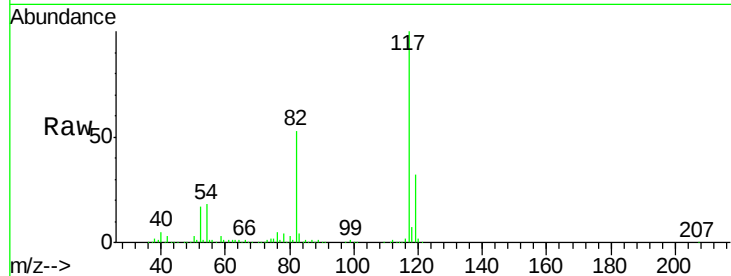




#57
Chlorobenzene-d5
Concen: 30.000 ug/l
RT: 10.10 min Scan# 1478
Delta R.T. 0.00 min
Lab File: VX019082.D
Acq: 23 Oct 2020 17:38

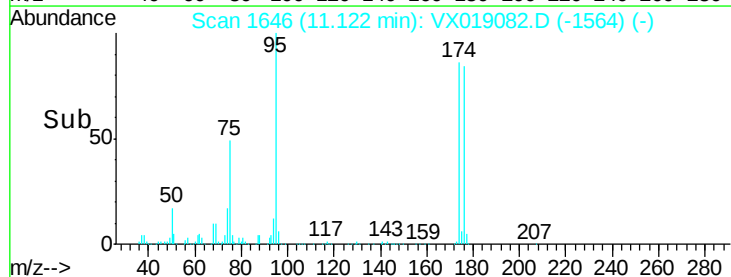
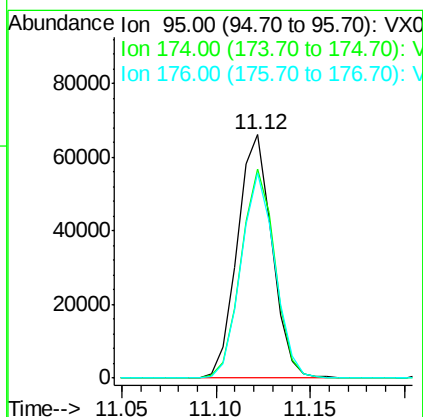
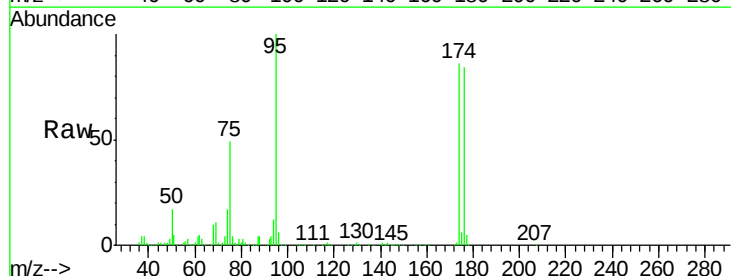
Instrument :
MSVOA_X
ClientSampleId :
201021075-01-VOA

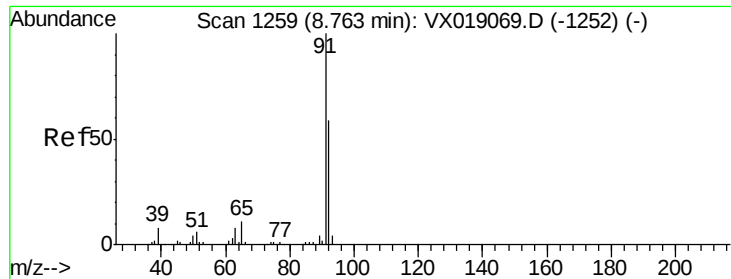
Tot Ion:117 Resp: 188001
Ion Ratio Lower Upper
117 100
82 53.9 42.5 63.7
119 31.9 25.6 38.4



#60
4-Bromofluorobenzene
Concen: 30.018 ug/l
RT: 11.12 min Scan# 1646
Delta R.T. 0.00 min
Lab File: VX019082.D
Acq: 23 Oct 2020 17:38

Tgt Ion: 95 Resp: 84704
Ion Ratio Lower Upper
95 100
174 84.1 66.3 99.5
176 82.4 65.5 98.3





#62

Toluene

Concen: 0.587 ug/l

RT: 8.77 min Scan# 1260

Delta R.T. 0.01 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

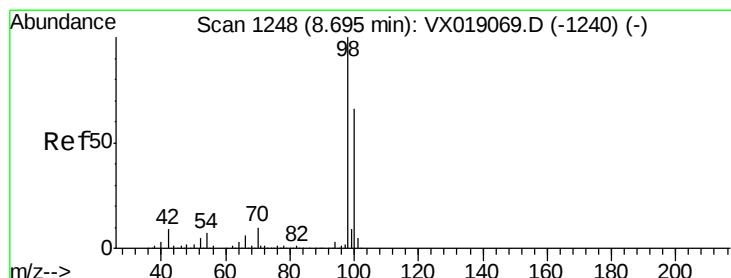
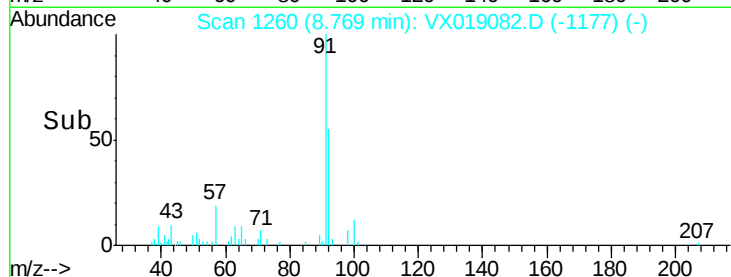
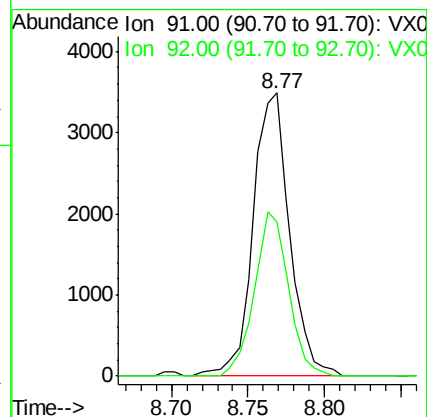
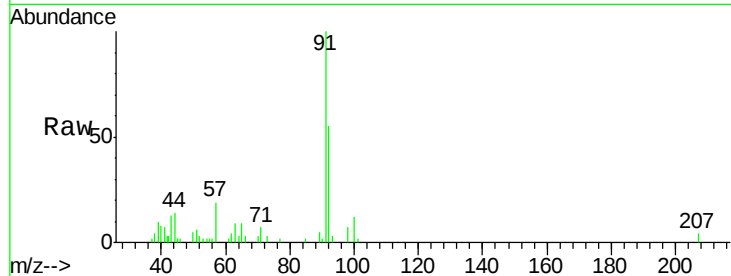
201021075-01-VOA

Tot Ion: 91 Resp: 5799

Ion Ratio Lower Upper

91 100

92 54.0 47.3 70.9



#63

Toluene-d8

Concen: 30.149 ug/l

RT: 8.70 min Scan# 1248

Delta R.T. 0.00 min

Lab File: VX019082.D

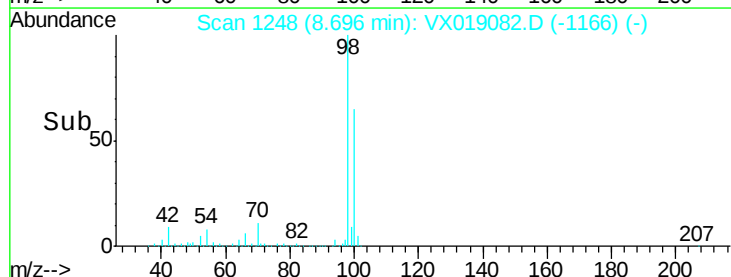
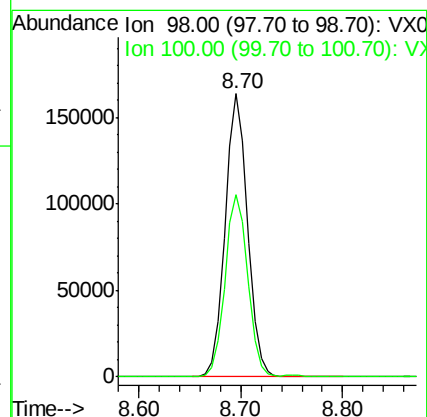
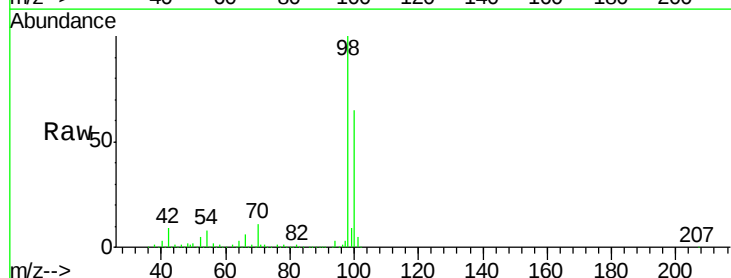
Acq: 23 Oct 2020 17:38

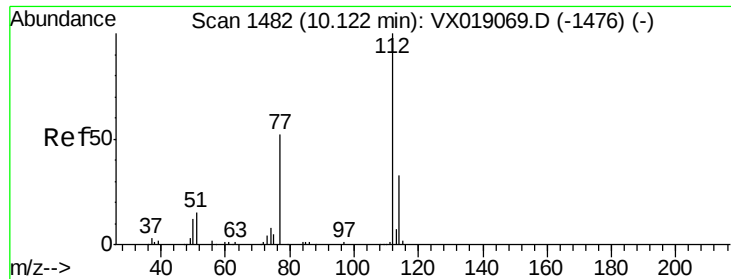
Tgt Ion: 98 Resp: 250253

Ion Ratio Lower Upper

98 100

100 65.2 52.2 78.4





#64

Chlorobenzene

Concen: 6.708 ug/l

RT: 10.12 min Scan# 1482

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

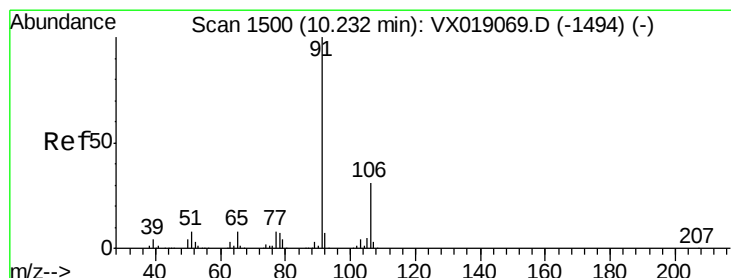
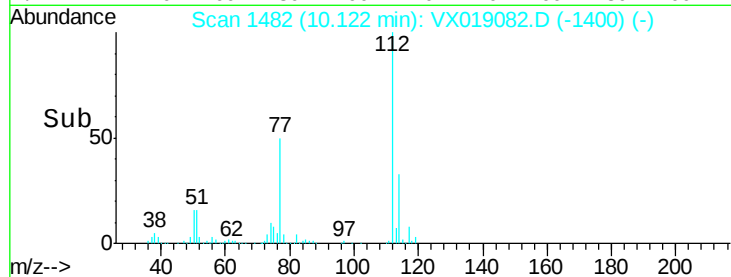
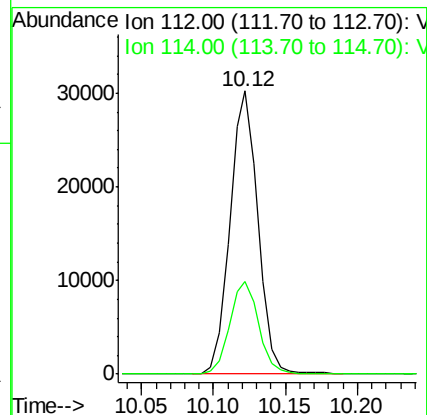
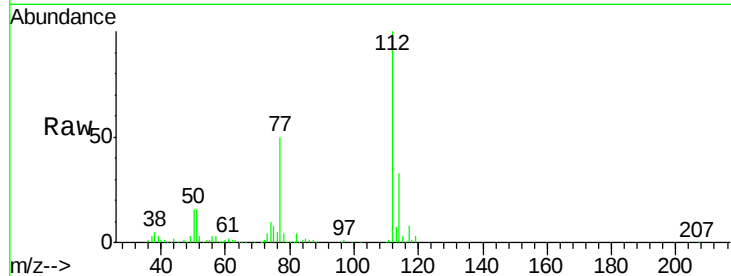
201021075-01-VOA

Tot Ion:112 Resp: 41199

Ion Ratio Lower Upper

112 100

114 32.9 26.2 39.2



#66

Ethyl Benzene

Concen: 0.838 ug/l

RT: 10.24 min Scan# 1501

Delta R.T. 0.01 min

Lab File: VX019082.D

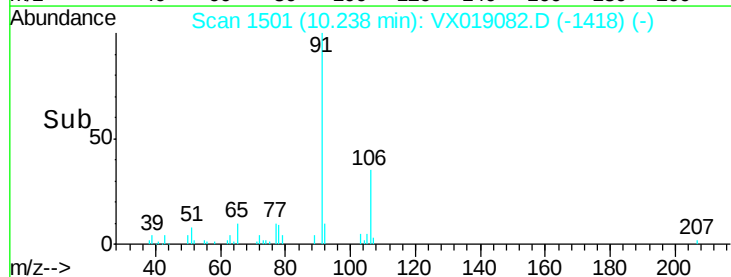
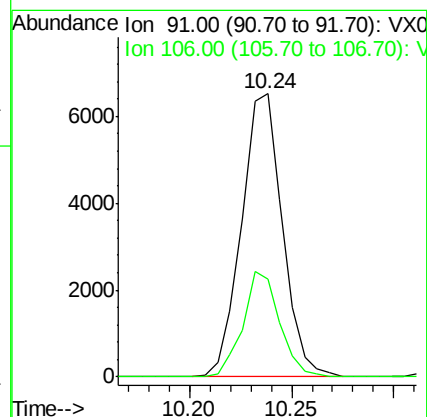
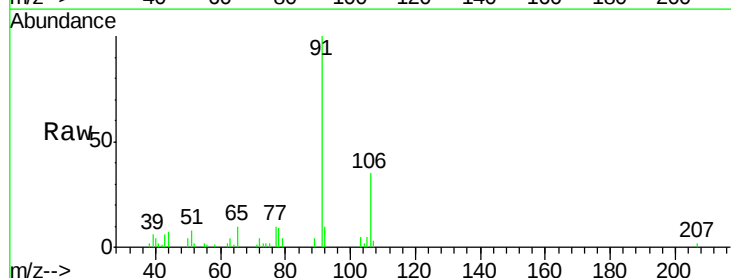
Acq: 23 Oct 2020 17:38

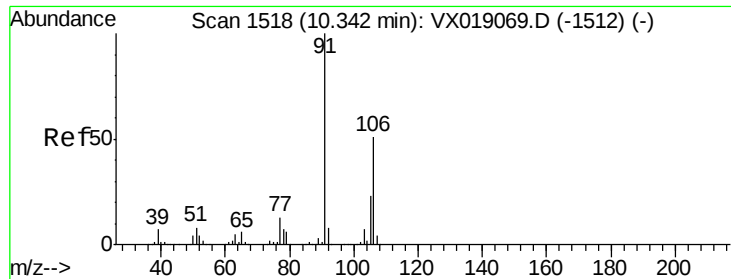
Tgt Ion: 91 Resp: 9083

Ion Ratio Lower Upper

91 100

106 34.7 24.7 37.1





#67

m/p-Xylenes

Concen: 2.690 ug/l

RT: 10.34 min Scan# 1518

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

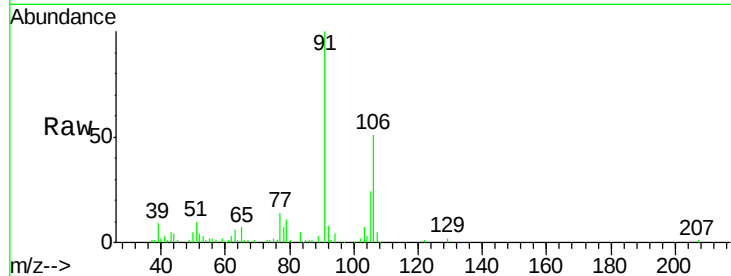
201021075-01-VOA

Tot Ion:106 Resp: 11111

Ion Ratio Lower Upper

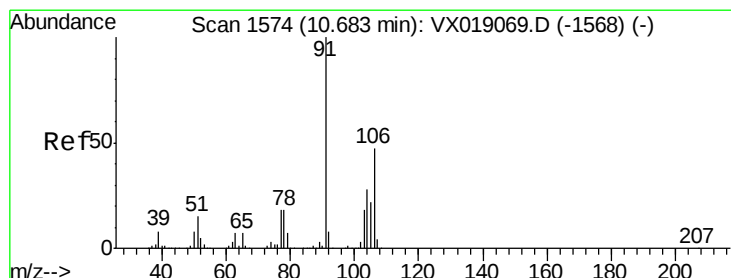
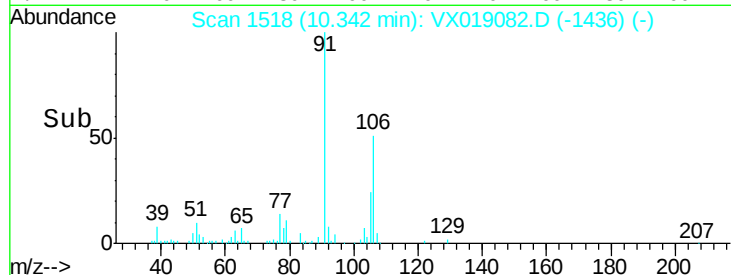
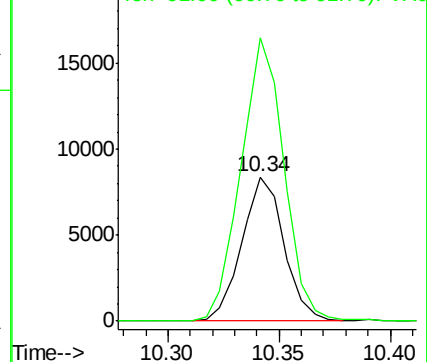
106 100

91 200.9 157.5 236.3



Abundance Ion 106.00 (105.70 to 106.70): V

Ion 91.00 (90.70 to 91.70): VX0



#68

o-Xylene

Concen: 2.362 ug/l

RT: 10.68 min Scan# 1574

Delta R.T. 0.00 min

Lab File: VX019082.D

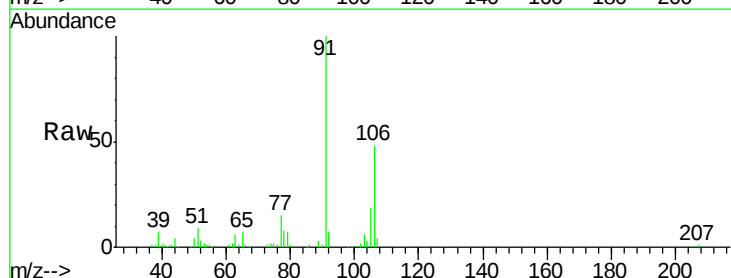
Acq: 23 Oct 2020 17:38

Tgt Ion:106 Resp: 9305

Ion Ratio Lower Upper

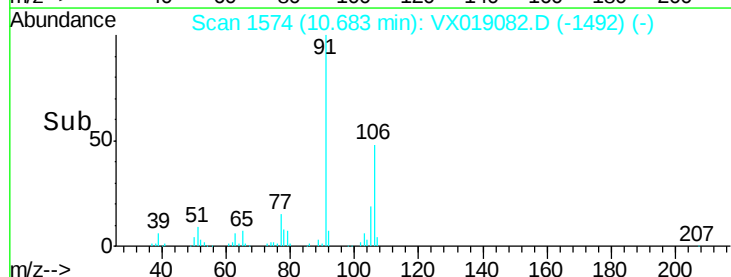
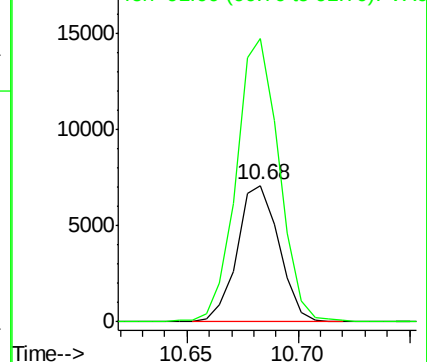
106 100

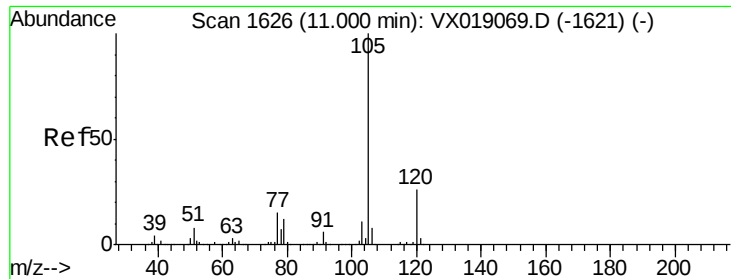
91 211.4 103.8 311.4



Abundance Ion 106.00 (105.70 to 106.70): V

Ion 91.00 (90.70 to 91.70): VX0





#70

Isopropylbenzene

Concen: 0.663 ug/l

RT: 11.00 min Scan# 1626

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

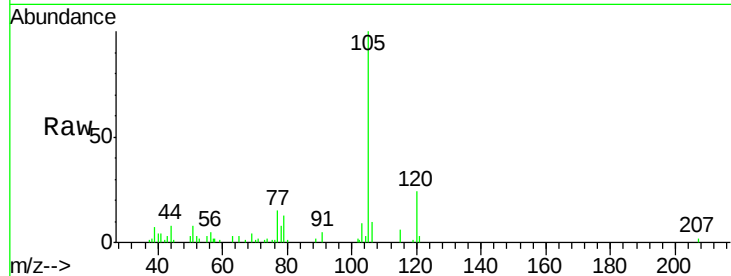
201021075-01-VOA

Tot Ion: 105 Resp: 7024

Ion Ratio Lower Upper

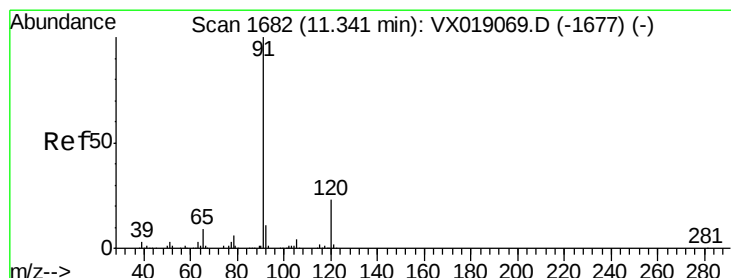
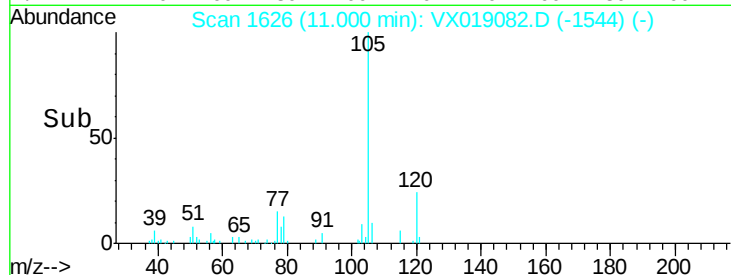
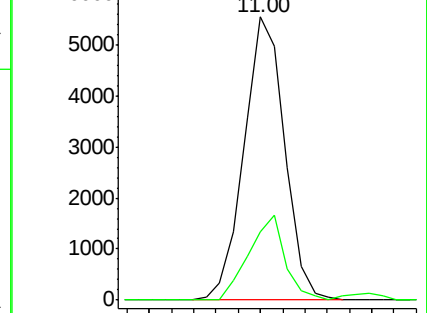
105 100

120 26.6 19.0 35.4



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V



#74

n-propylbenzene

Concen: 0.213 ug/l

RT: 11.34 min Scan# 1682

Delta R.T. 0.00 min

Lab File: VX019082.D

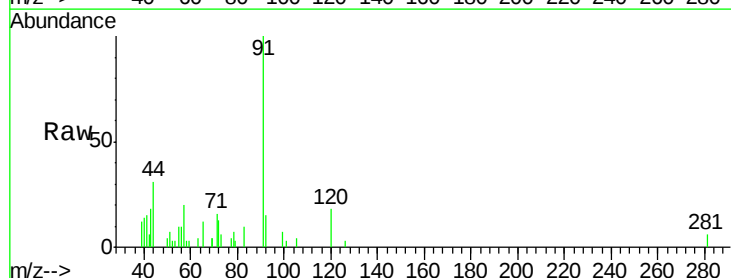
Acq: 23 Oct 2020 17:38

Tgt Ion: 91 Resp: 2559

Ion Ratio Lower Upper

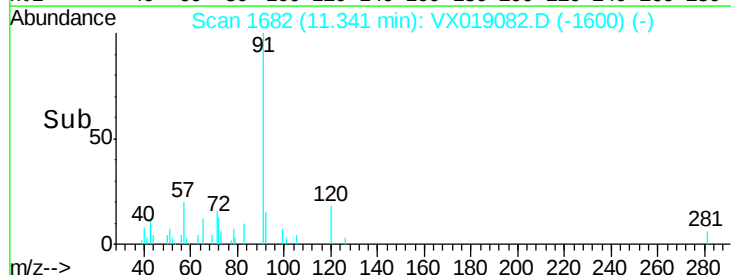
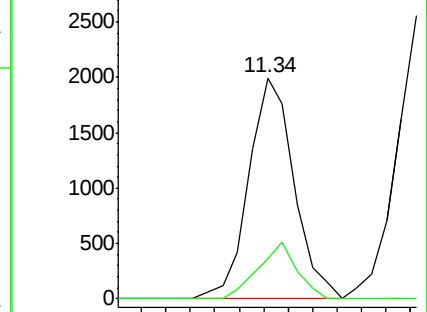
91 100

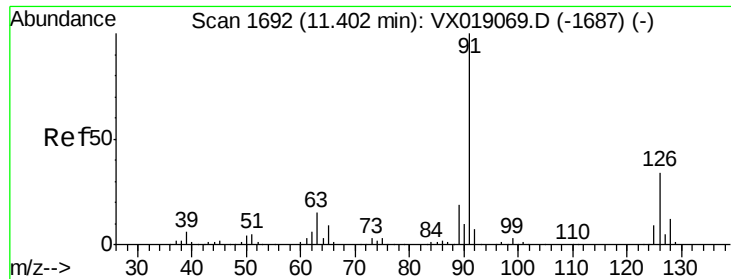
120 21.9 0.0 46.6



Abundance Ion 91.00 (90.70 to 91.70): VX0

Ion 120.00 (119.70 to 120.70): V





#75

2-Chlorotoluene

Concen: 0.572 ug/l

RT: 11.40 min Scan# 1692

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

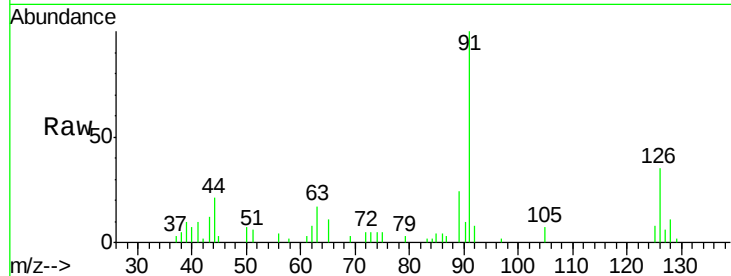
201021075-01-VOA

Tot Ion: 91 Resp: 3880

Ion Ratio Lower Upper

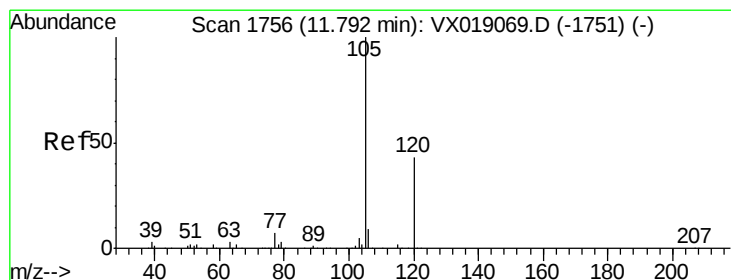
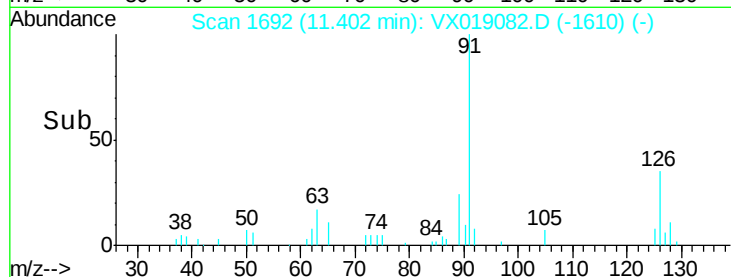
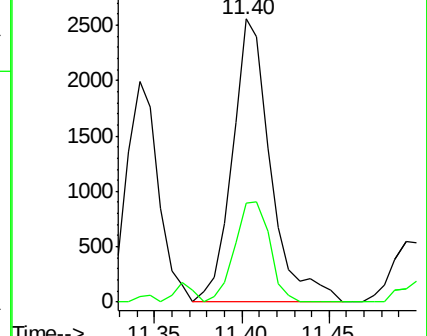
91 100

126 32.5 0.0 69.0



Abundance Ion 91.00 (90.70 to 91.70): VX019069.D (-1687) (-)

Ion 126.00 (125.70 to 126.70): VX019069.D (-1687) (-)



#80

1,2,4-Trimethylbenzene

Concen: 1.013 ug/l

RT: 11.79 min Scan# 1756

Delta R.T. 0.00 min

Lab File: VX019082.D

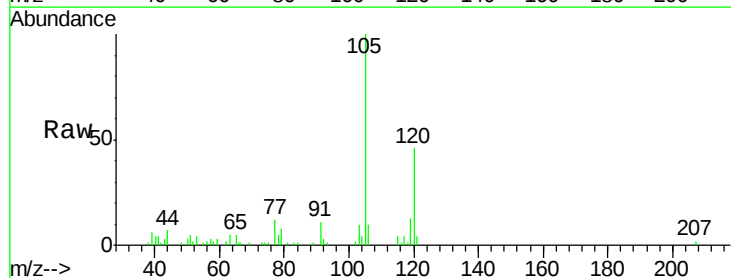
Acq: 23 Oct 2020 17:38

Tgt Ion: 105 Resp: 8655

Ion Ratio Lower Upper

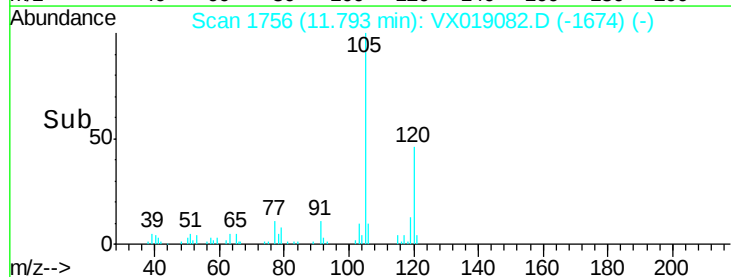
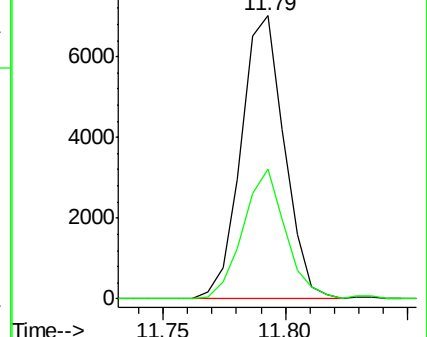
105 100

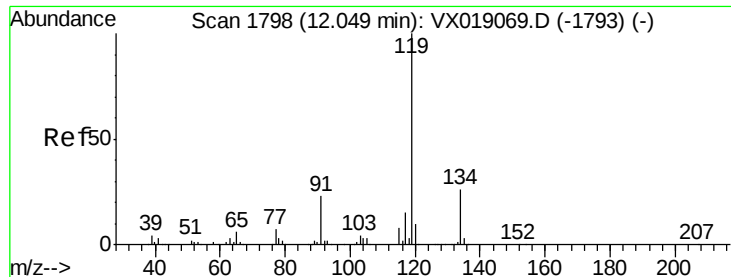
120 45.2 0.0 92.0



Abundance Ion 105.00 (104.70 to 105.70): VX019069.D (-1751) (-)

Ion 120.00 (119.70 to 120.70): VX019069.D (-1751) (-)

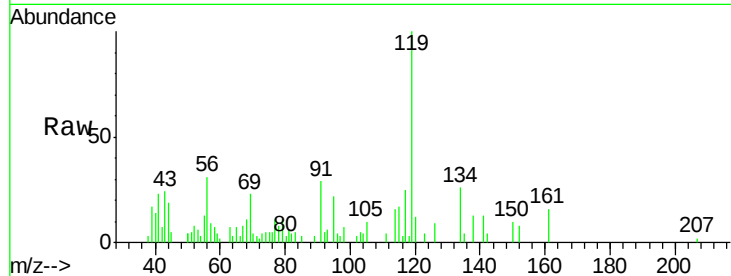




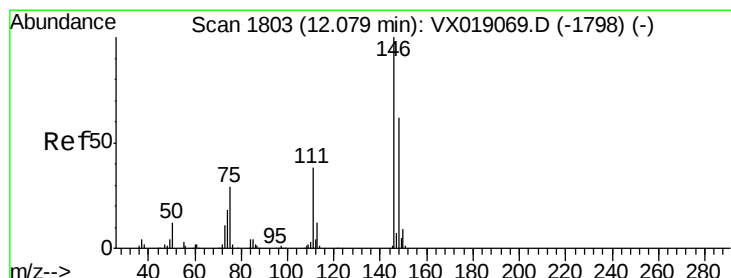
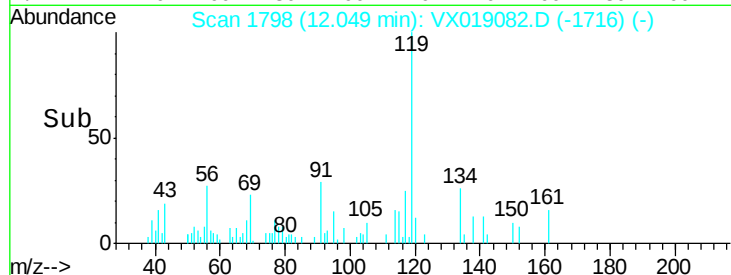
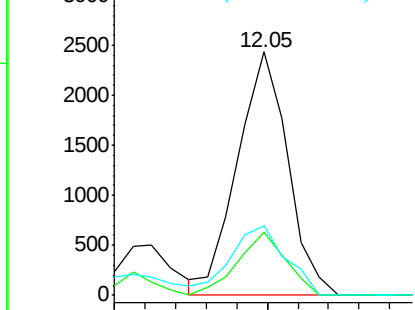
#82
p-Isopropyltoluene
Concen: 0.300 ug/l
RT: 12.05 min Scan# 1798
Delta R.T. 0.00 min
Lab File: VX019082.D
Acq: 23 Oct 2020 17:38

Instrument :
MSVOA_X
ClientSampleId :
201021075-01-VOA

Tot Ion:119 Resp: 2774
Ion Ratio Lower Upper
119 100
134 24.8 0.0 52.0
91 31.3 0.0 45.6

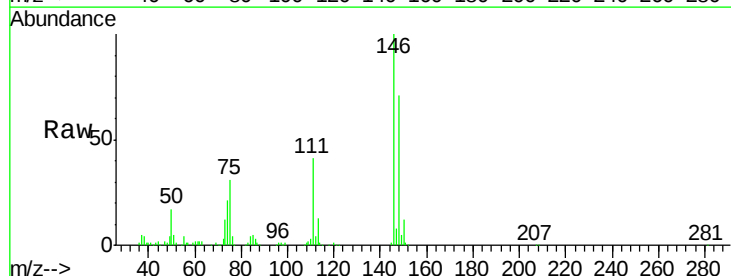


Abundance Ion 119.00 (118.70 to 119.70): V
Ion 134.00 (133.70 to 134.70): V
Ion 91.00 (90.70 to 91.70): V

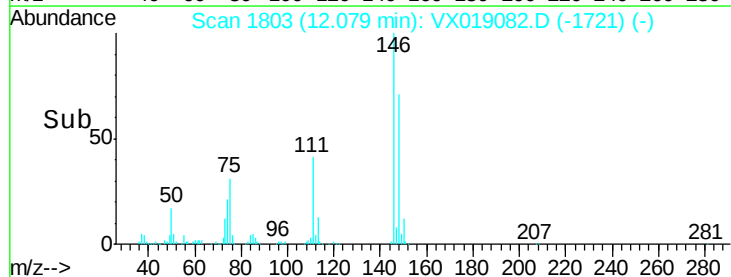
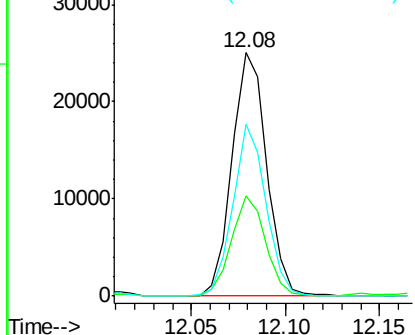


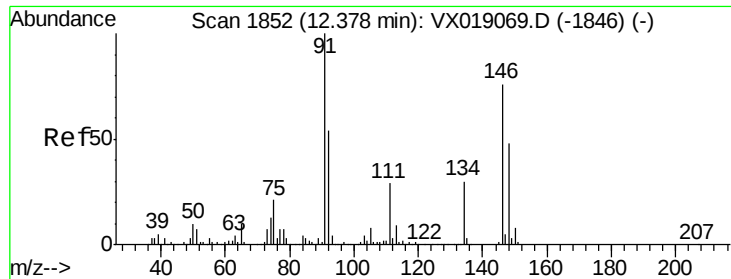
#84
1,4-Dichlorobenzene
Concen: 6.804 ug/l
RT: 12.08 min Scan# 1803
Delta R.T. 0.00 min
Lab File: VX019082.D
Acq: 23 Oct 2020 17:38

Tgt Ion:146 Resp: 31967
Ion Ratio Lower Upper
146 100
111 40.6 18.9 56.7
148 67.1 31.6 95.0



Abundance Ion 146.00 (145.70 to 146.70): V
Ion 111.00 (110.70 to 111.70): V
Ion 148.00 (147.70 to 148.70): V





#87

1,2-Dichlorobenzene

Concen: 0.552 ug/l

RT: 12.38 min Scan# 1852

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

Instrument :

MSVOA_X

ClientSampleId :

201021075-01-VOA

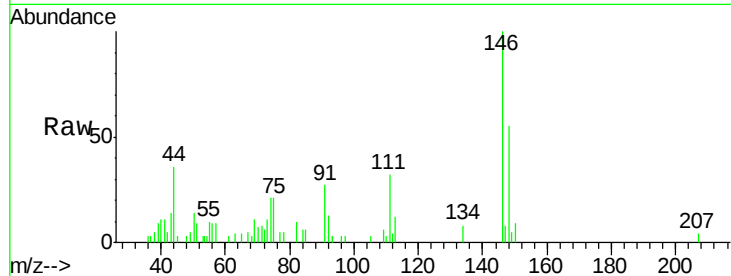
Tot Ion:146 Resp: 2446

Ion Ratio Lower Upper

146 100

111 40.1 20.3 61.0

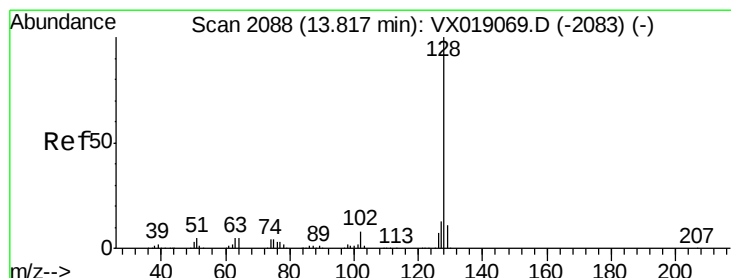
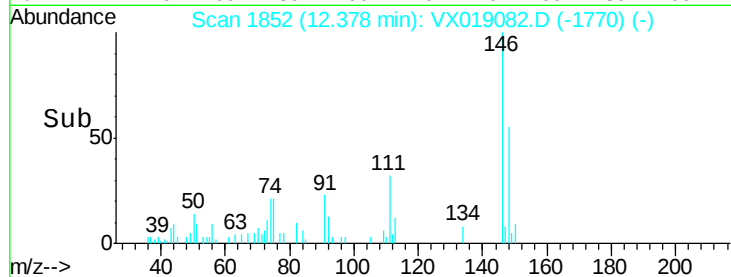
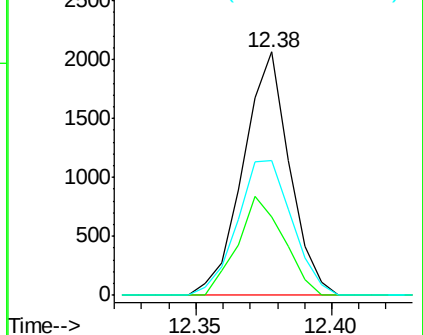
148 65.2 32.1 96.5



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V



#91

Naphthalene

Concen: 4.490 ug/l

RT: 13.82 min Scan# 2088

Delta R.T. 0.00 min

Lab File: VX019082.D

Acq: 23 Oct 2020 17:38

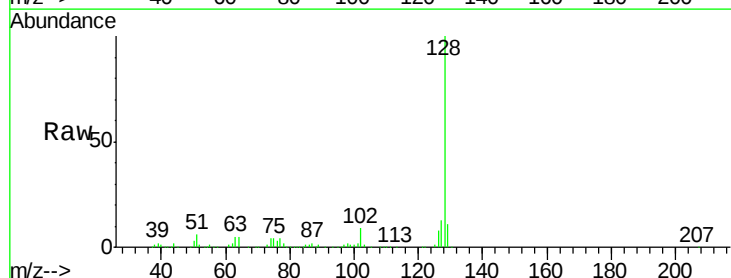
Tgt Ion:128 Resp: 46858

Ion Ratio Lower Upper

128 100

127 12.9 10.6 16.0

129 10.9 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

