

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL083118\
 Data File : VL032448.D
 Acq On : 31 Aug 2018 19:48
 Operator : SY/AP
 Sample : J4717-03
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 VP-5

Manual Integrations
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 9/4/2018 8:26:52 AM

Quant Time: Sep 02 22:45:59 2018

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL083118AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 31

QLast Update : Fri Aug 31 21:33:46 2018

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.82	49	1520093	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.35	114	3365456	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.30	117	3219327	10.00	ppbv	0.00

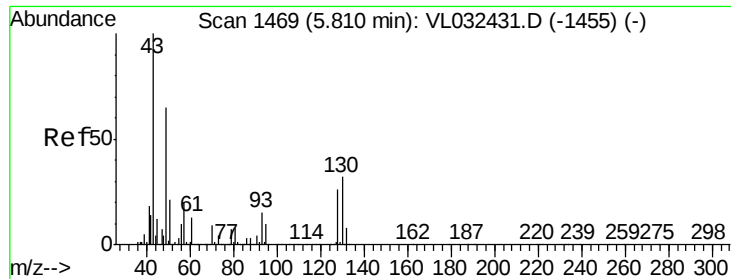
System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.63	95	2453644	10.27	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.70%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.10	85	26937	0.139	ppbv	98
3) Chlorodifluoromethane	3.04	51	53483	0.389	ppbv	98
4) Chloromethane	3.20	50	29425	0.353	ppbv	97
9) Propene	3.06	41	9262955	166.882	ppbv	99
10) Heptane	8.30	43	963323	4.838	ppbv	98
11) Trichlorofluoromethane	4.04	101	155928	0.889	ppbv	100
13) Ethanol	3.69	45	956325	55.273	ppbv	100
15) Acetone	3.94	43	18267958	133.452	ppbv #	73
16) 1,3-Butadiene	3.38	39	2982769m	46.306	ppbv	
17) tert-Butyl alcohol	4.40	59	1283759	60.941	ppbv #	100
20) Methylene Chloride	4.46	84	1335958	25.595	ppbv	96
26) Hexane	5.83	57	3374704	23.315	ppbv #	41
27) Carbon Disulfide	4.66	76	236186	1.768	ppbv	97
29) Chloroform	5.91	83	187268	0.849	ppbv	98
30) Cyclohexane	7.30	84	117117	1.105	ppbv #	67
34) 2-Butanone	5.37	43	4439192	19.858	ppbv	100
35) Carbon Tetrachloride	7.19	117	6915m	0.031	ppbv	
36) Benzene	7.06	78	1554034	5.426	ppbv	98
41) Tetrahydrofuran	6.21	42	113852m	0.936	ppbv	
50) 4-Methyl-2-Pentanone	8.93	43	487014	1.446	ppbv	97
51) 2-Hexanone	10.32	43	1250925	5.767	ppbv #	99
52) Tetrachloroethene	11.43	164	423985	4.774	ppbv	95
53) Toluene	10.00	91	4421307	14.769	ppbv	100
58) Ethyl Benzene	12.92	91	1557644	4.043	ppbv	97
59) m/p-Xylene	13.17	91	4257105	12.394	ppbv	98
60) o-Xylene	13.90	91	1319817	3.912	ppbv	95
62) Isopropylbenzene	14.89	105	108124	0.228	ppbv #	86
64) n-propylbenzene	15.78	120	157270	1.268	ppbv	77
72) 4-Ethyltoluene	16.06	105	877636	2.383	ppbv	98
73) 1,3,5-Trimethylbenzene	16.21	105	419021	1.135	ppbv	100
74) 1,2,4-Trimethylbenzene	17.00	105	1671539	4.143	ppbv #	69

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.82 min Scan# 1471

Delta R.T. 0.01 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

ClientSampled :

VP-5

Tgt Ion: 49 Resp: 1520093

Ion Ratio Lower Upper

49 100

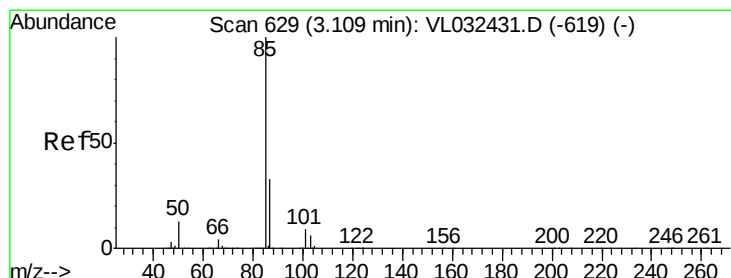
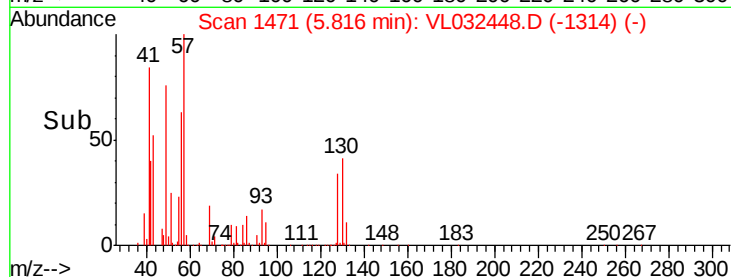
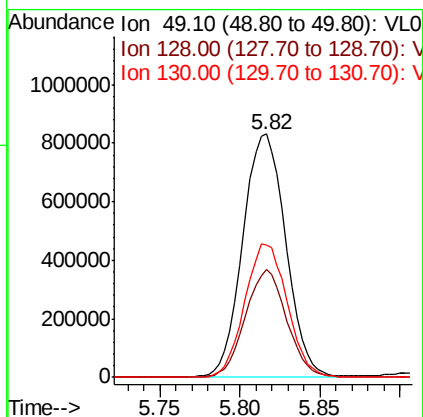
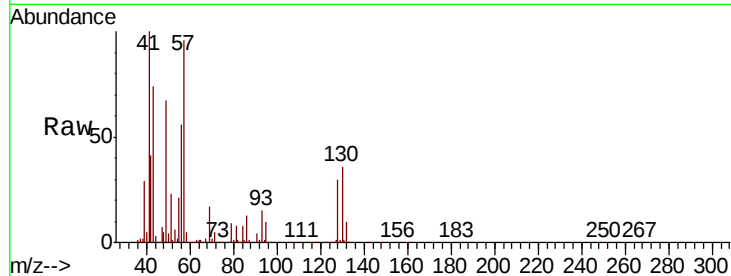
128 42.9 20.7 62.1

130 54.9 26.6 79.7

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#2

Dichlorodifluoromethane

Concen: 0.139 ppbv

RT: 3.10 min Scan# 627

Delta R.T. -0.01 min

Lab File: VL032448.D

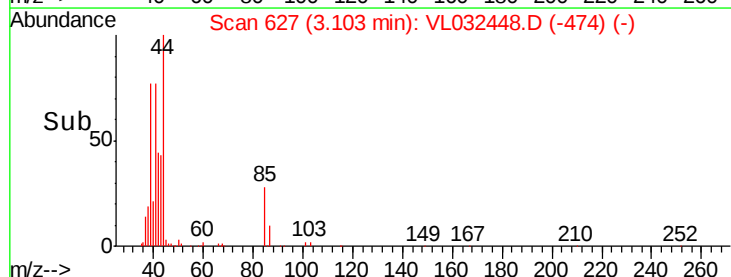
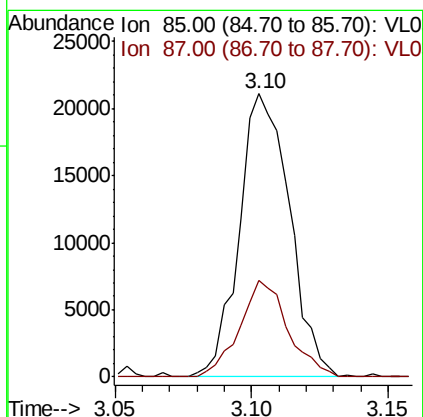
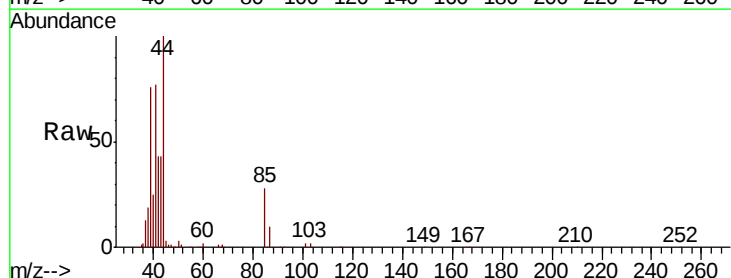
Acq: 31 Aug 2018 19:48

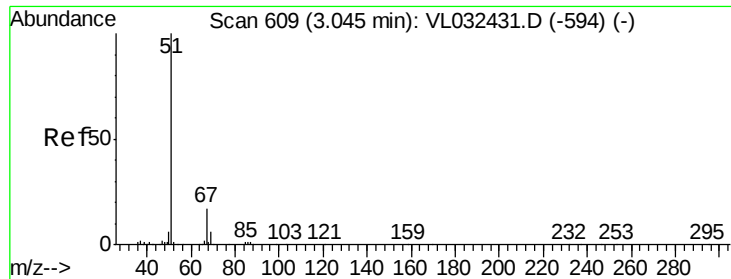
Tgt Ion: 85 Resp: 26937

Ion Ratio Lower Upper

85 100

87 34.0 26.2 39.4





#3

Chlorodifluoromethane

Concen: 0.389 ppbv

RT: 3.04 min Scan# 608

Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

ClientSampleId :

VP-5

Tgt Ion: 51 Resp: 53483

Ion Ratio Lower Upper

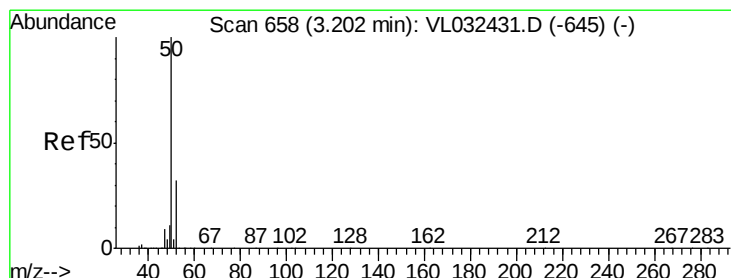
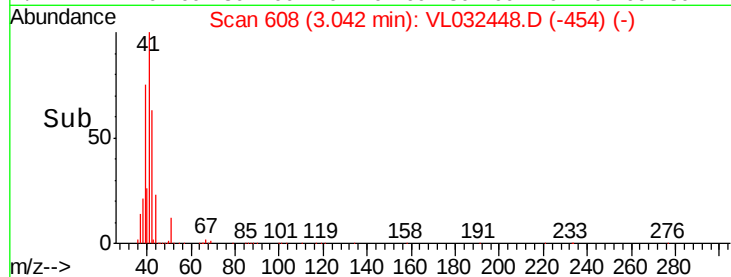
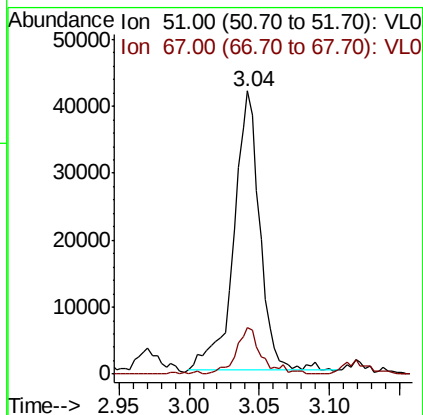
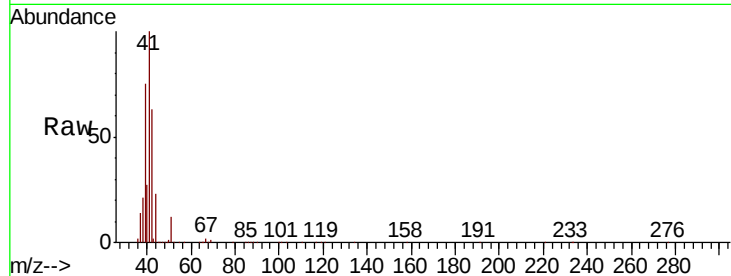
51 100

67 16.3 13.8 20.8

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#4

Chloromethane

Concen: 0.353 ppbv

RT: 3.20 min Scan# 657

Delta R.T. -0.00 min

Lab File: VL032448.D

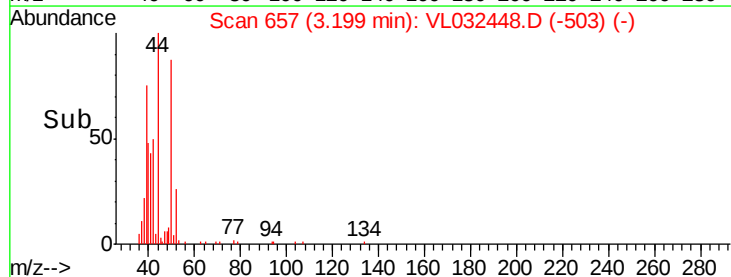
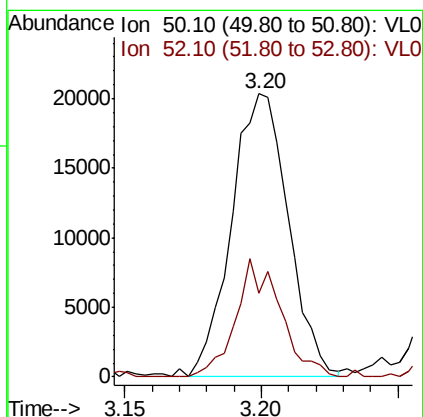
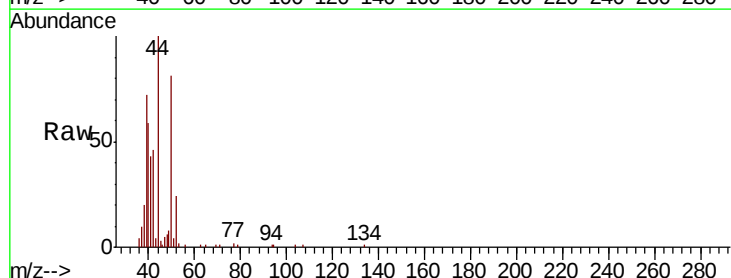
Acq: 31 Aug 2018 19:48

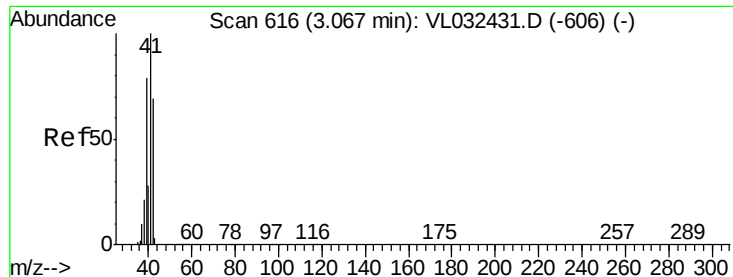
Tgt Ion: 50 Resp: 29425

Ion Ratio Lower Upper

50 100

52 30.1 25.6 38.4





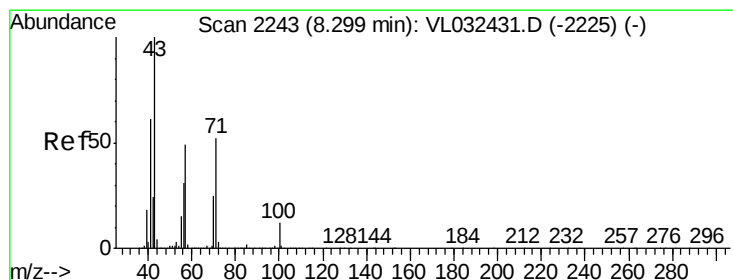
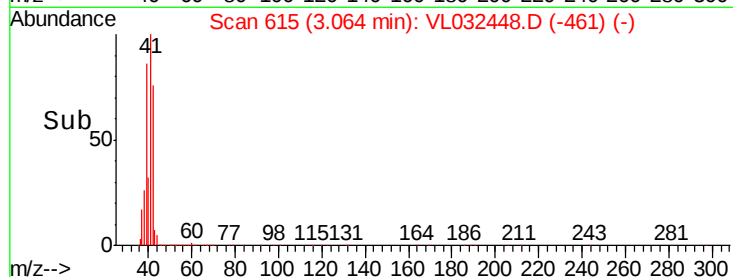
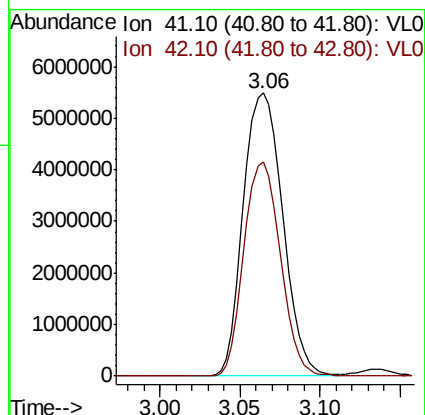
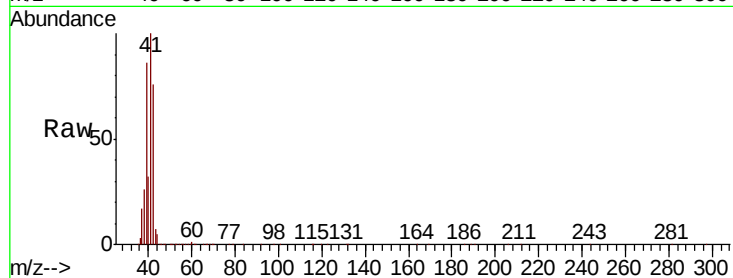
#9
 Propene
 Concen: 166.882 ppbv
 RT: 3.06 min Scan# 615
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Instrument :
 MSVOA_L
 ClientSampleId :
 VP-5

Tgt Ion: 41 Resp: 9262955
 Ion Ratio Lower Upper
 41 100
 42 70.3 56.6 84.8

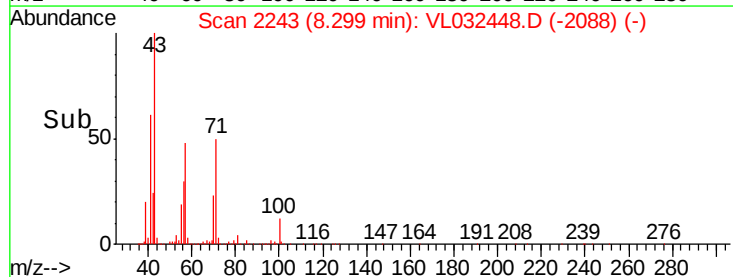
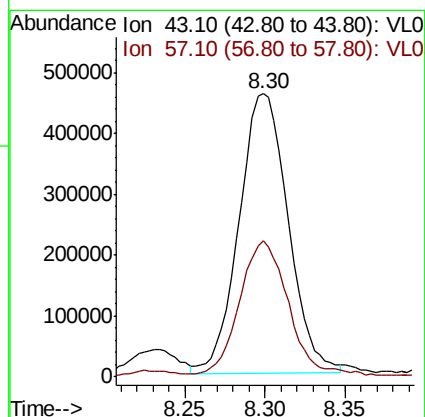
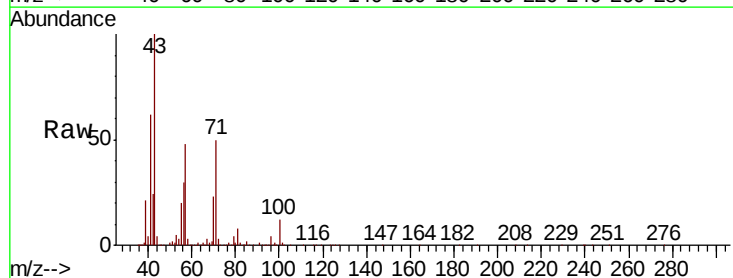
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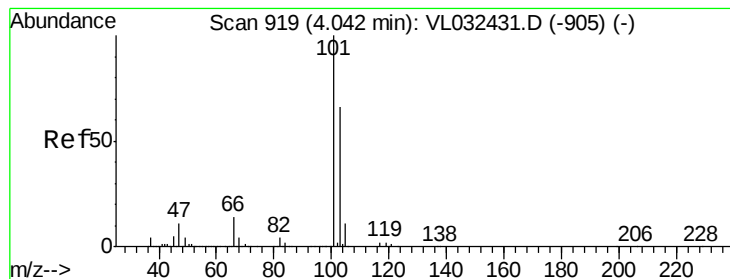
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#10
 Heptane
 Concen: 4.838 ppbv
 RT: 8.30 min Scan# 2243
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Tgt Ion: 43 Resp: 963323
 Ion Ratio Lower Upper
 43 100
 57 48.3 39.6 59.4





#11

Trichlorofluoromethane

Concen: 0.889 ppbv

RT: 4.04 min Scan# 919

Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

ClientSampleId :

VP-5

Tgt Ion: 101 Resp: 155928

Ion Ratio Lower Upper

101 100

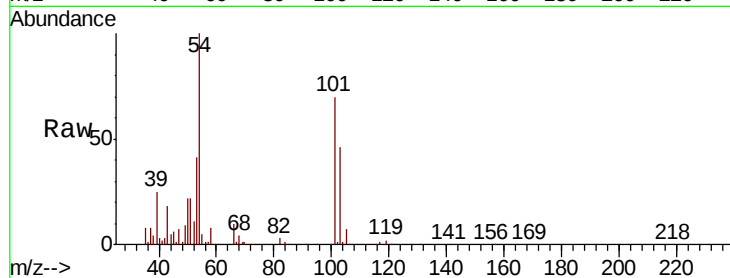
103 66.2 52.8 79.2

Manual Integrations

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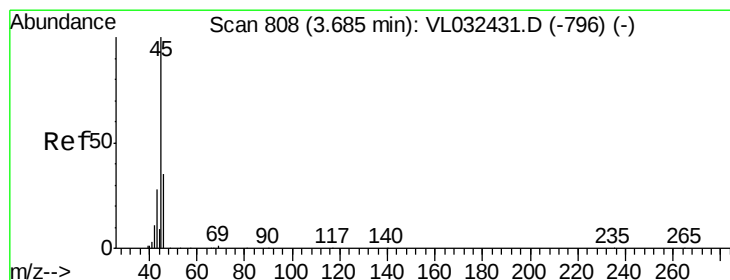
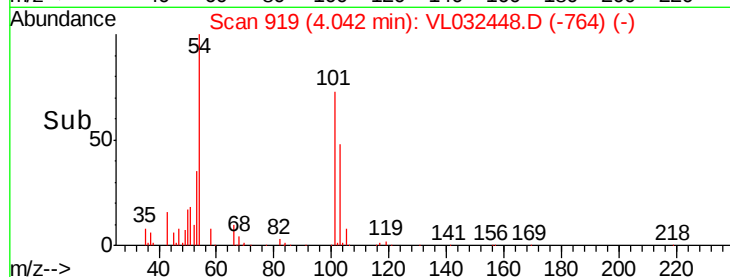
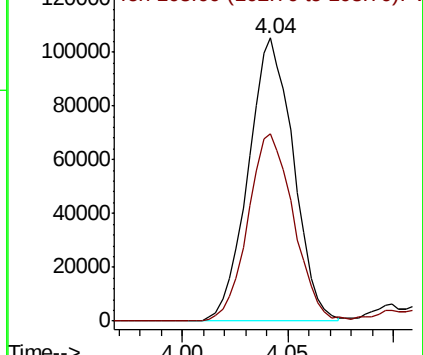
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Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#13

Ethanol

Concen: 55.273 ppbv

RT: 3.69 min Scan# 810

Delta R.T. 0.01 min

Lab File: VL032448.D

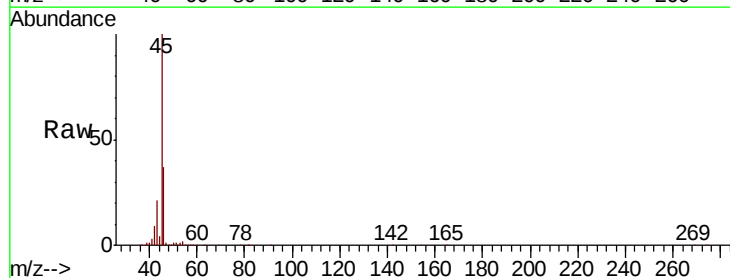
Acq: 31 Aug 2018 19:48

Tgt Ion: 45 Resp: 956325

Ion Ratio Lower Upper

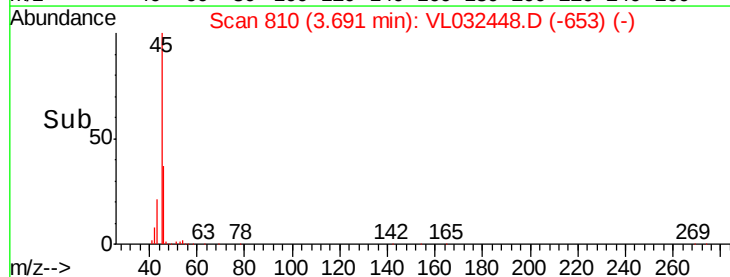
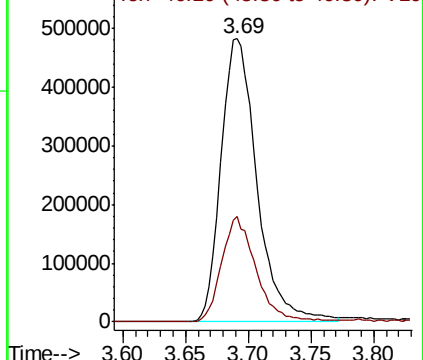
45 100

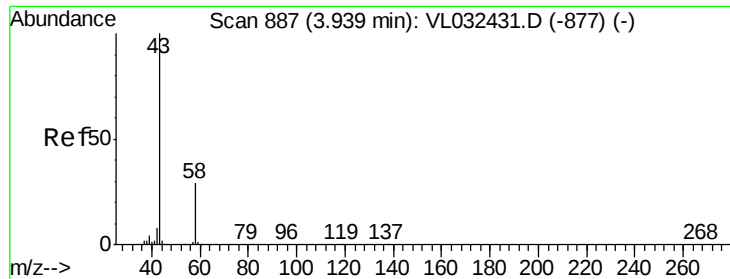
46 35.6 14.2 56.8



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





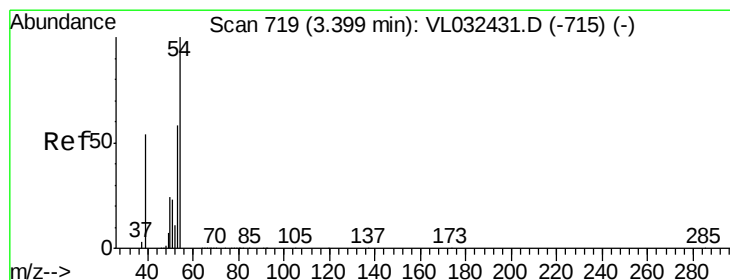
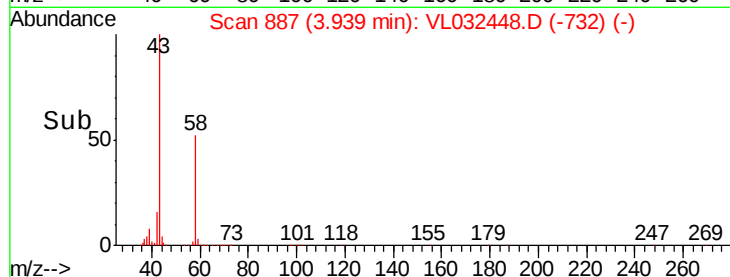
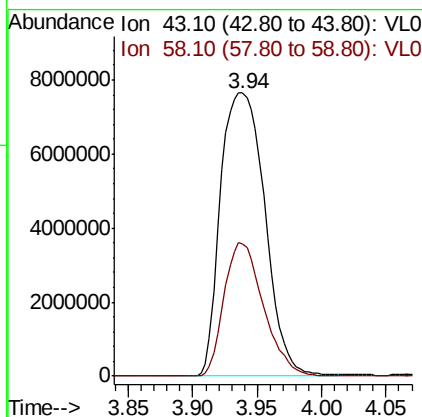
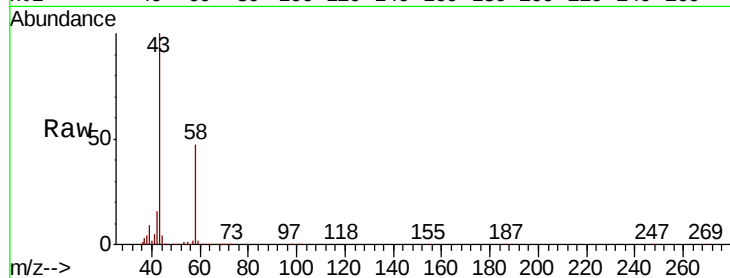
#15
Acetone
Concen: 133.452 ppbv
RT: 3.94 min Scan# 887
Delta R.T. -0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Instrument :
MSVOA_L
ClientSampled :
VP-5

Tgt Ion: 43 Resp:18267958
Ion Ratio Lower Upper
43 100
58 42.2 22.6 33.8#

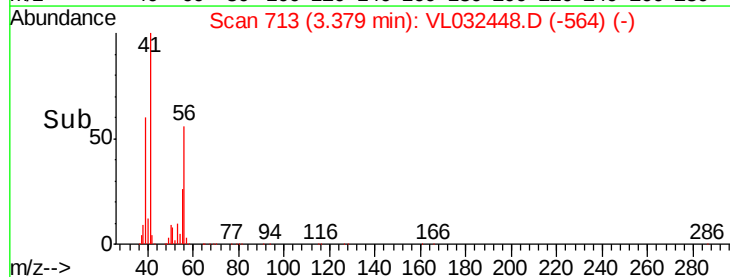
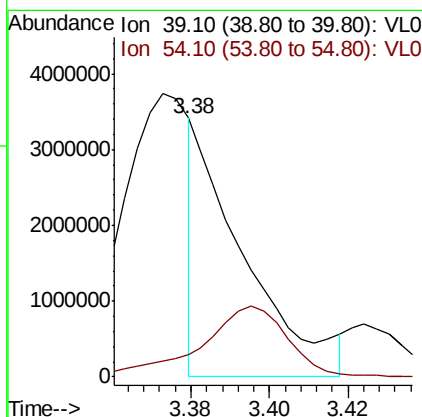
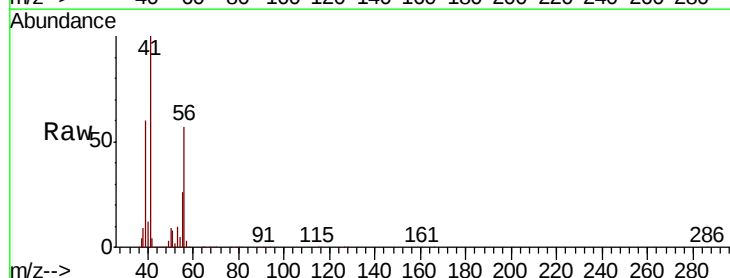
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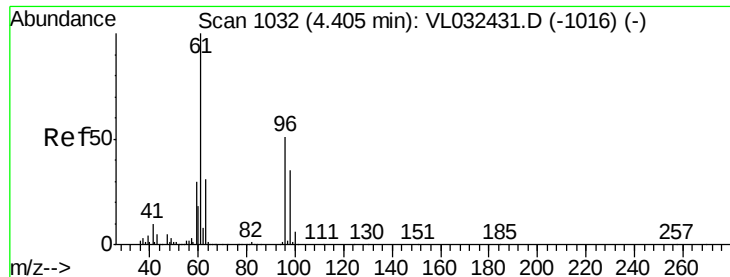
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#16
1,3-Butadiene
Concen: 46.306 ppbv m
RT: 3.38 min Scan# 713
Delta R.T. -0.02 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Tgt Ion: 39 Resp: 2982769
Ion Ratio Lower Upper
39 100
54 0.0 80.8 121.2#





#17

tert-Butyl alcohol

Concen: 60.941 ppbv

RT: 4.40 min Scan# 1030

Delta R.T. -0.01 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

ClientSampled :

VP-5

Tgt Ion: 59 Resp: 1283759

Ion Ratio Lower Upper

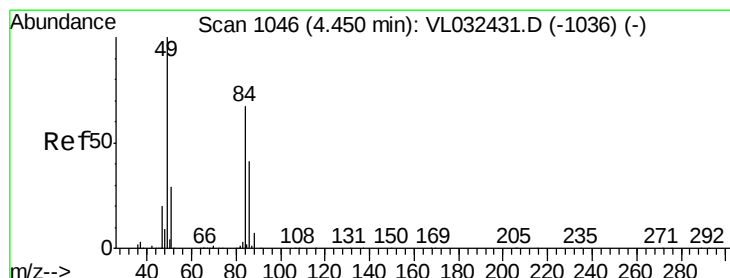
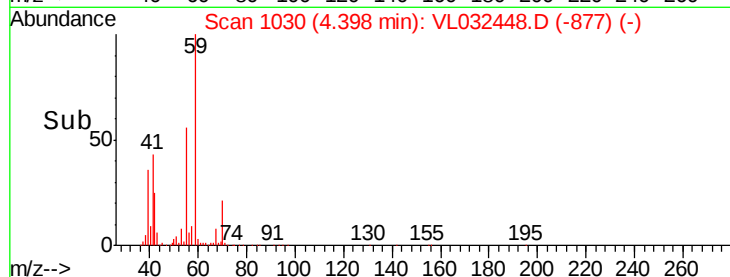
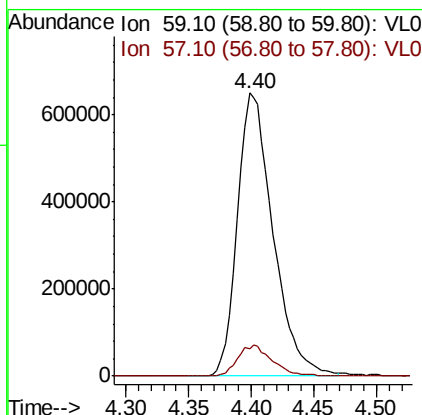
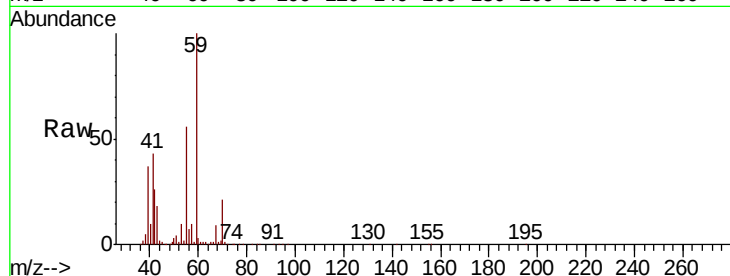
59 100

57 10.7 0.0 0.0#

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#20

Methylene Chloride

Concen: 25.595 ppbv

RT: 4.46 min Scan# 1048

Delta R.T. 0.01 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Tgt Ion: 84 Resp: 1335958

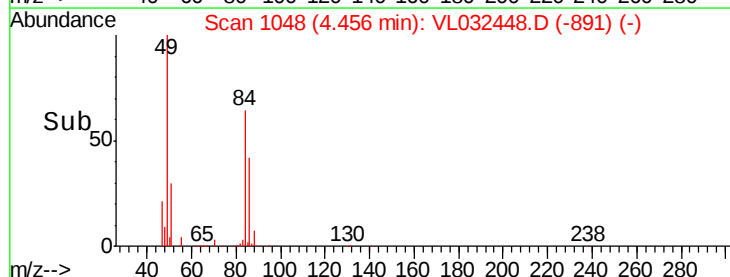
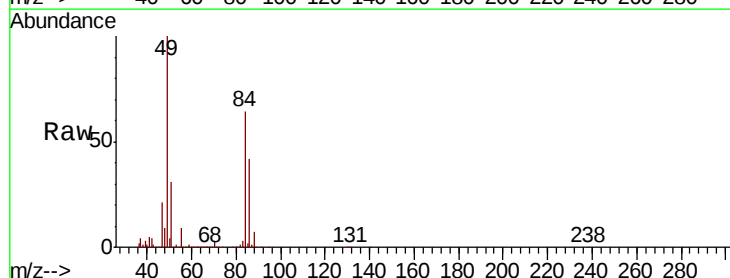
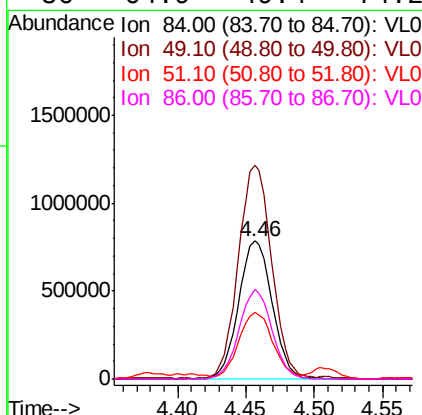
Ion Ratio Lower Upper

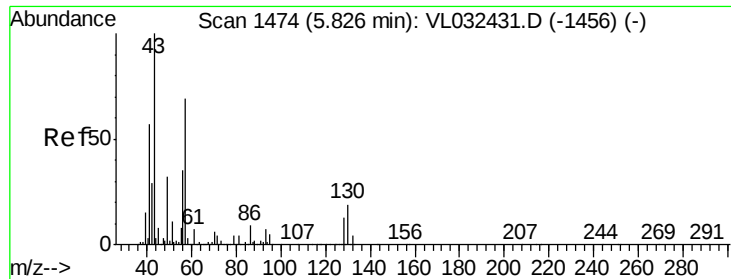
84 100

49 154.6 119.1 178.7

51 44.4 35.2 52.8

86 64.9 49.4 74.2





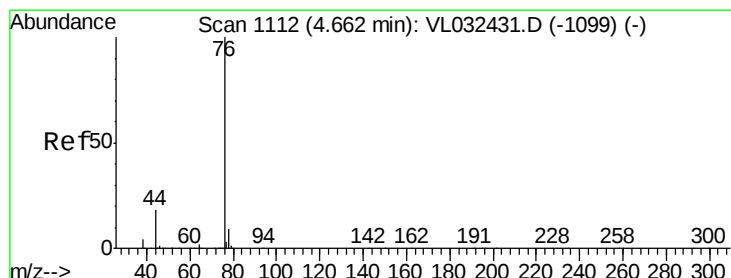
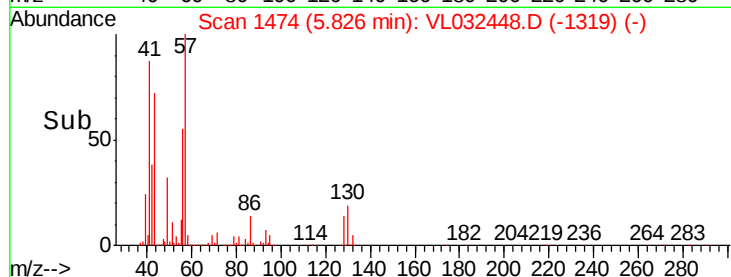
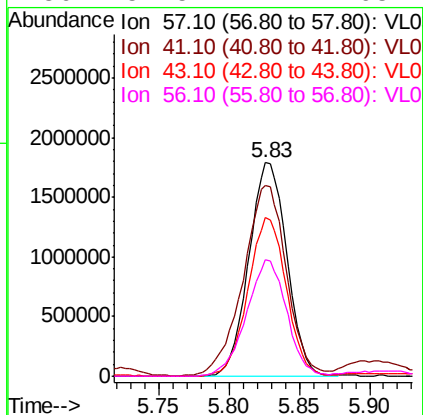
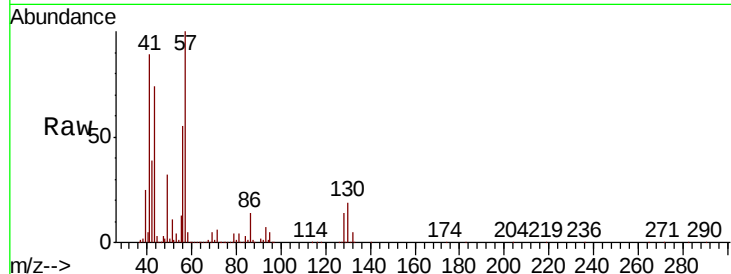
#26
Hexane
Concen: 23.315 ppbv
RT: 5.83 min Scan# 1474
Delta R.T. -0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Instrument :
MSVOA_L
ClientSampled :
VP-5

Tgt Ion	Ratio	Lower	Upper
57	100		
41	101.2	69.0	103.4
43	74.8	172.1	258.1#
56	57.5	42.2	63.2

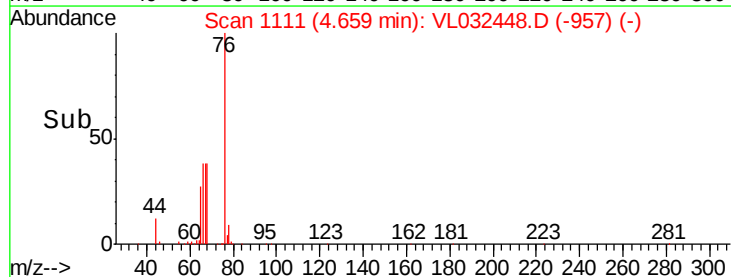
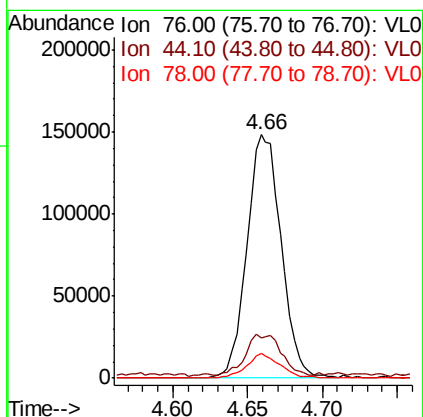
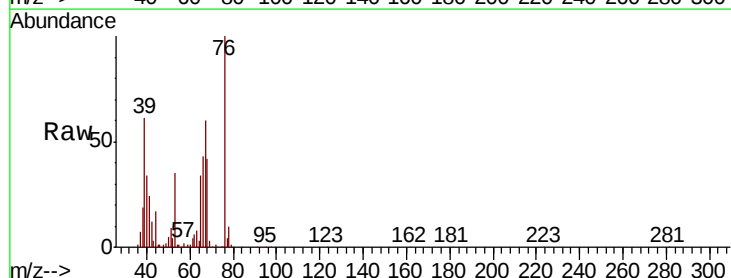
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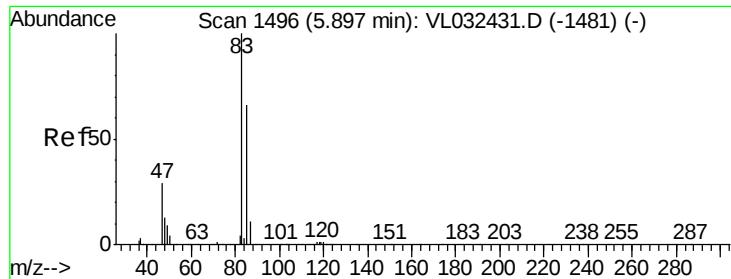
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#27
Carbon Disulfide
Concen: 1.768 ppbv
RT: 4.66 min Scan# 1111
Delta R.T. -0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Tgt Ion	Ratio	Lower	Upper
76	100		
44	19.1	14.0	21.0
78	9.8	7.5	11.3





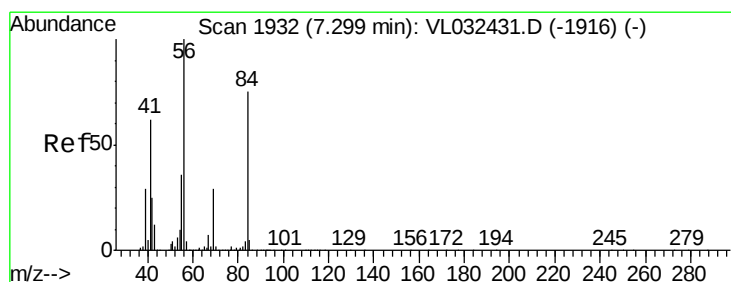
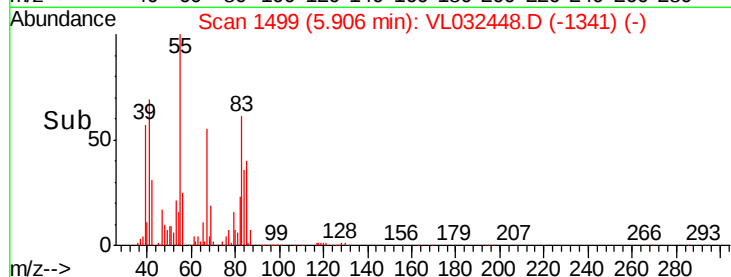
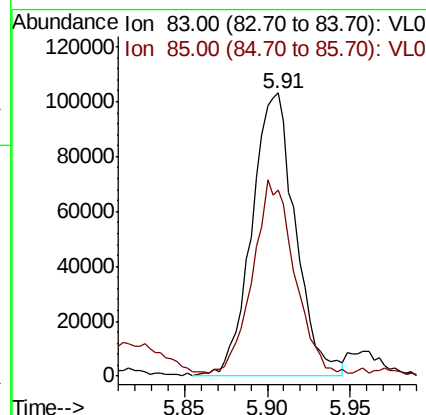
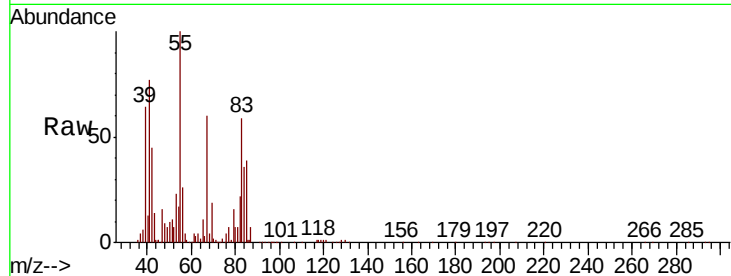
#29
Chloroform
Concen: 0.849 ppbv
RT: 5.91 min Scan# 1499
Delta R.T. 0.01 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Instrument :
MSVOA_L
ClientSampled :
VP-5

Tgt Ion: 83 Resp: 187268
Ion Ratio Lower Upper
83 100
85 64.1 52.5 78.7

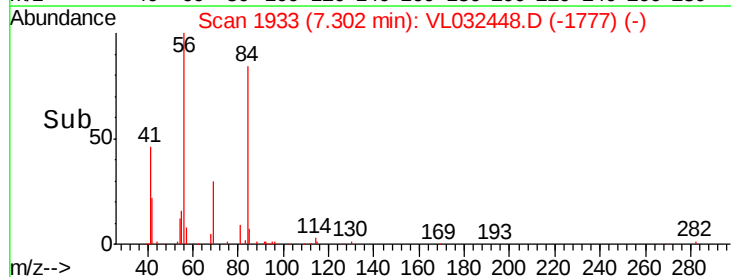
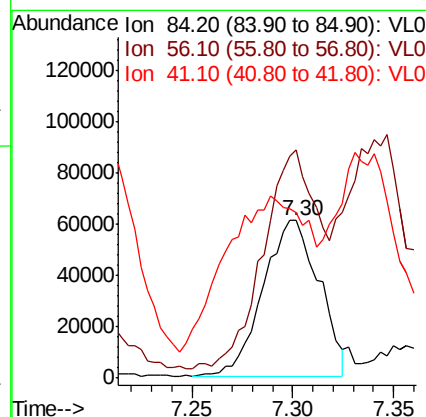
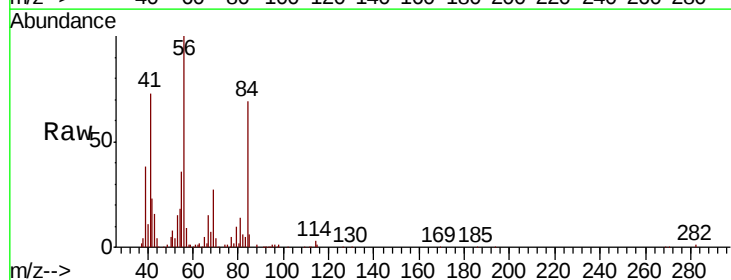
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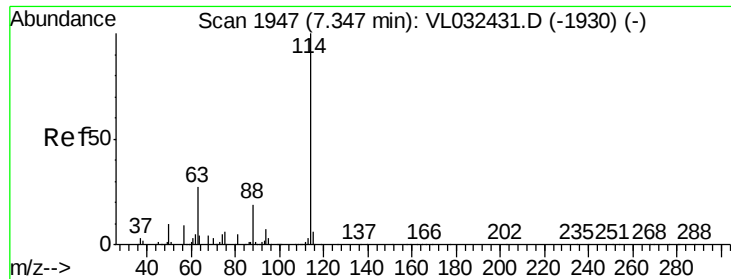
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#30
Cyclohexane
Concen: 1.105 ppbv
RT: 7.30 min Scan# 1933
Delta R.T. 0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Tgt Ion: 84 Resp: 117117
Ion Ratio Lower Upper
84 100
56 147.5 113.5 170.3
41 157.4 68.1 102.1#





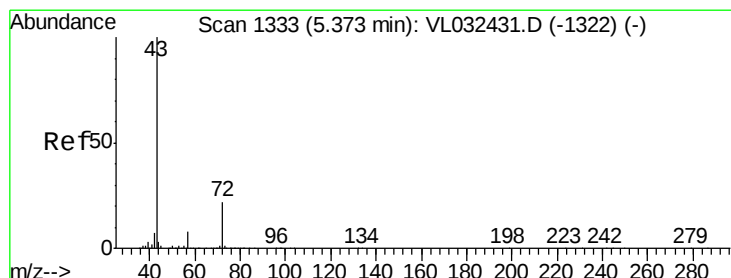
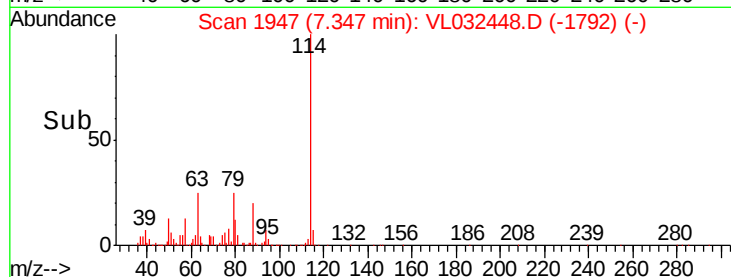
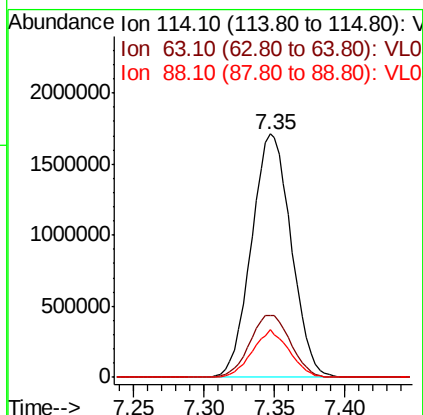
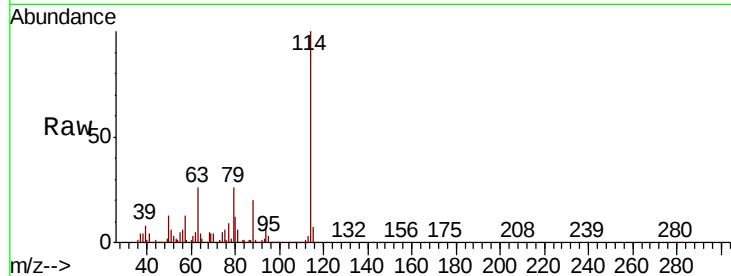
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.35 min Scan# 1947
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Instrument :
 MSVOA_L
 ClientSampleId :
 VP-5

Tgt Ion	Ratio	Lower	Upper
114	100		
63	26.2	22.2	33.4
88	18.3	15.0	22.4

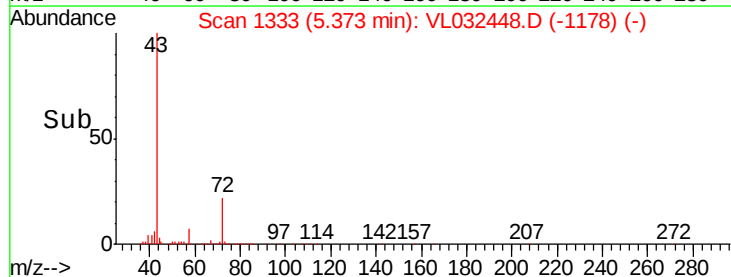
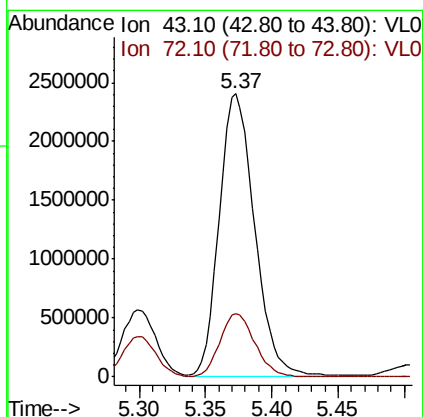
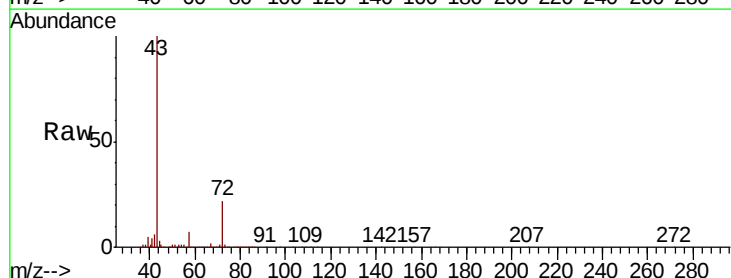
Manual Integrations
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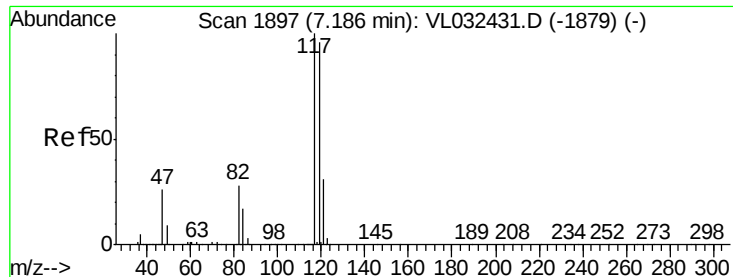
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#34
 2-Butanone
 Concen: 19.858 ppbv
 RT: 5.37 min Scan# 1333
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Tgt Ion	Ratio	Lower	Upper
43	100		
72	22.4	17.8	26.6





#35

Carbon Tetrachloride

Concen: 0.031 ppbv m

RT: 7.19 min Scan# 1897

Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

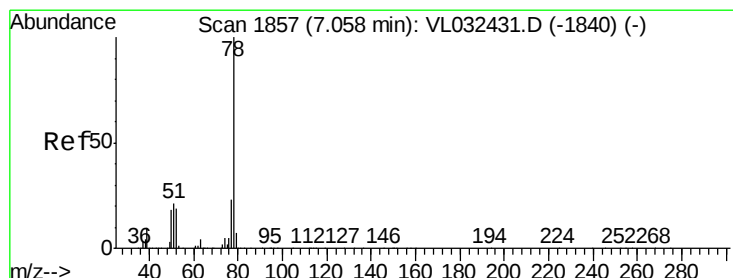
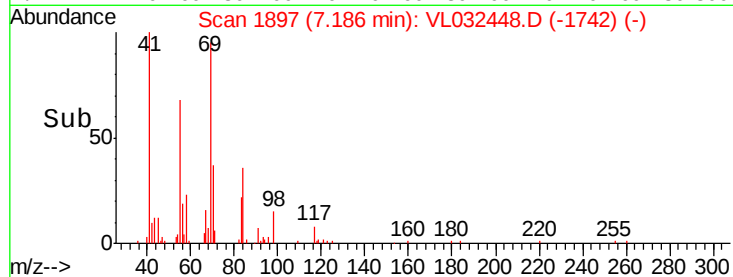
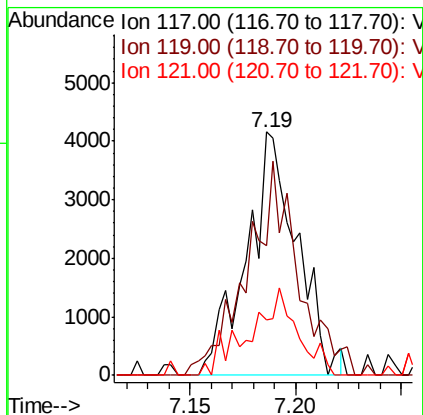
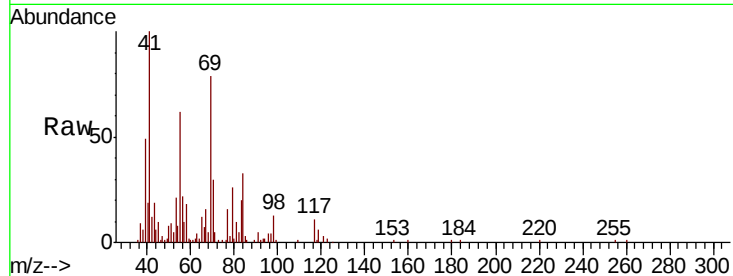
ClientSampled :

VP-5

Tgt Ion:	117	Resp:	6915
Ion Ratio	Lower	Upper	
117	100		
119	53.4	76.6	115.0#
121	22.6	24.6	36.8#

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#36

Benzene

Concen: 5.426 ppbv

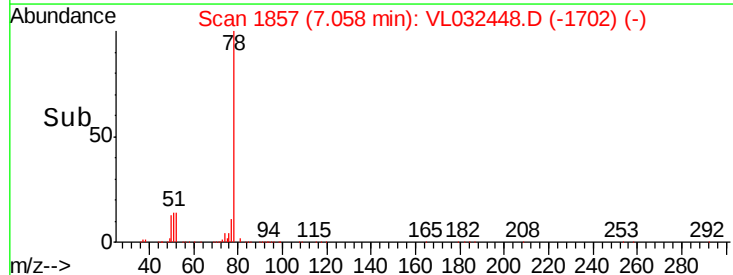
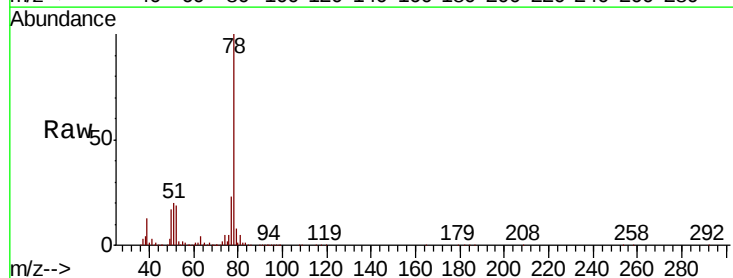
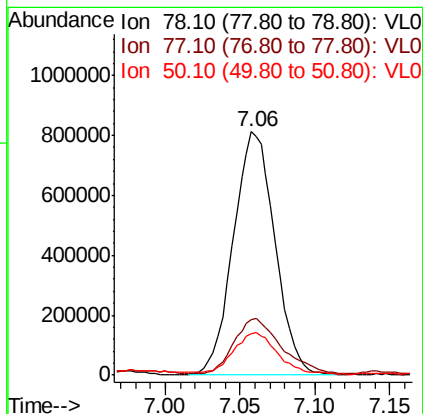
RT: 7.06 min Scan# 1857

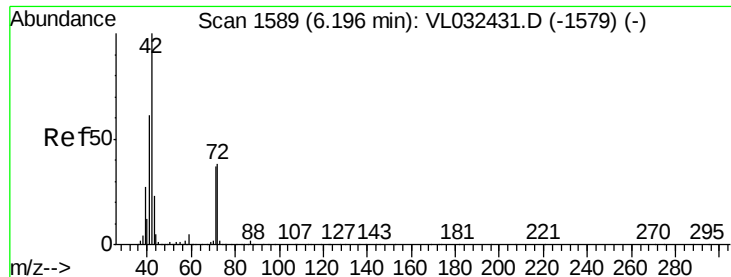
Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Tgt Ion:	78	Resp:	1554034
Ion Ratio	Lower	Upper	
78	100		
77	22.3	18.4	27.6
50	16.8	14.4	21.6





#41

Tetrahydrofuran

Concen: 0.936 ppbv m

RT: 6.21 min Scan# 1592

Delta R.T. 0.01 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

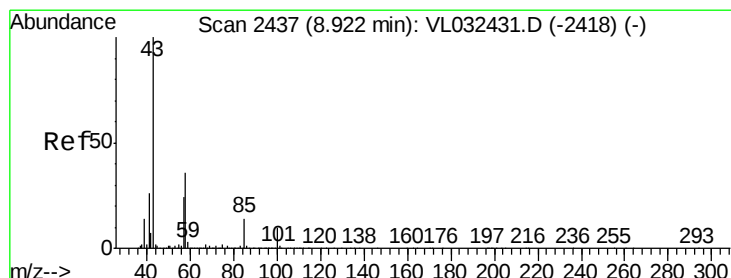
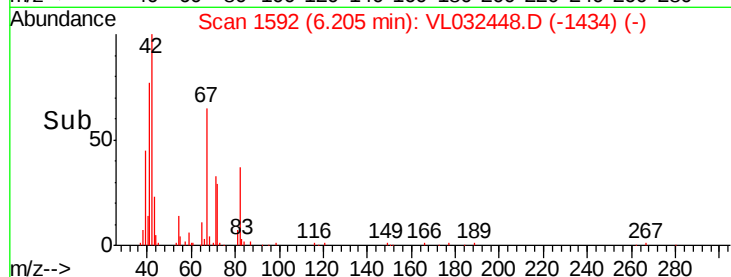
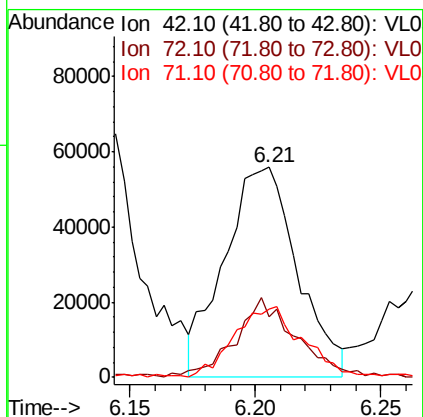
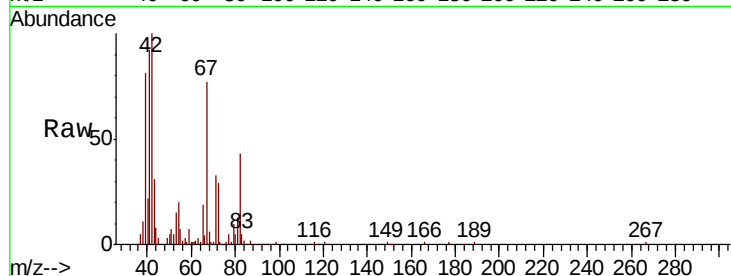
ClientSampleId :

VP-5

Tgt Ion:	42	Resp:	113852
Ion	Ratio	Lower	Upper
42	100		
72	32.8	29.5	44.3
71	30.9	28.3	42.5

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#50

4-Methyl-2-Pentanone

Concen: 1.446 ppbv

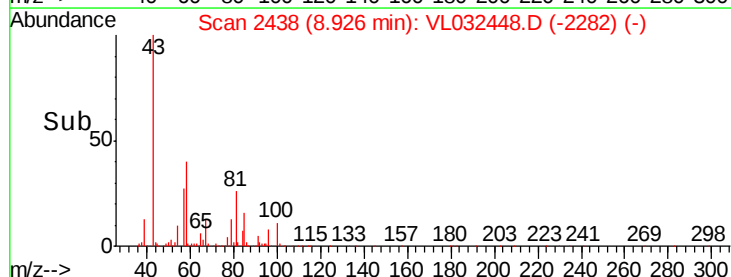
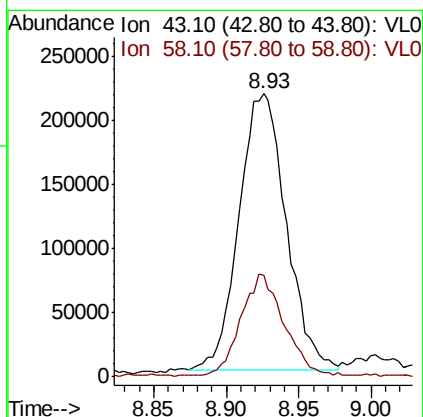
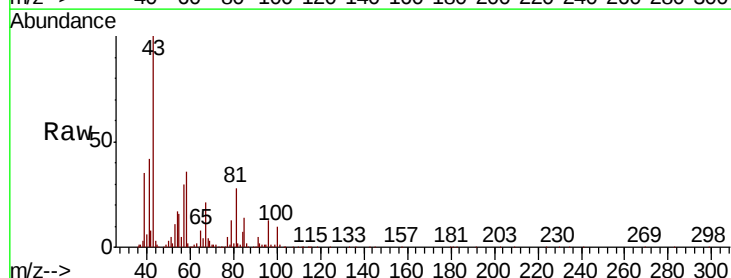
RT: 8.93 min Scan# 2438

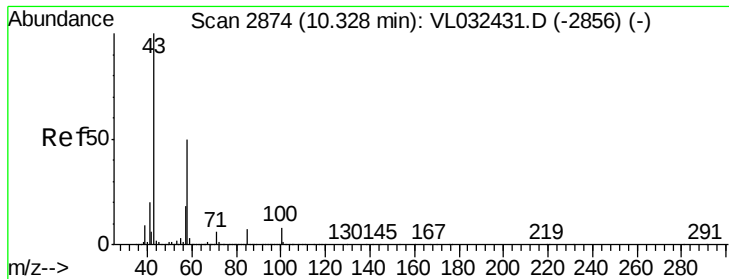
Delta R.T. 0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Tgt Ion:	43	Resp:	487014
Ion	Ratio	Lower	Upper
43	100		
58	34.5	29.0	43.4





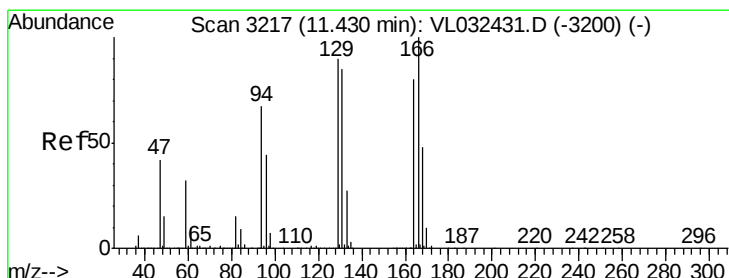
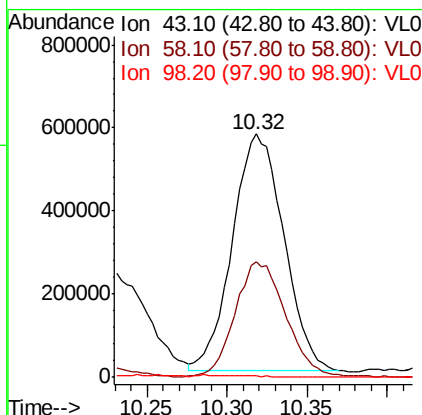
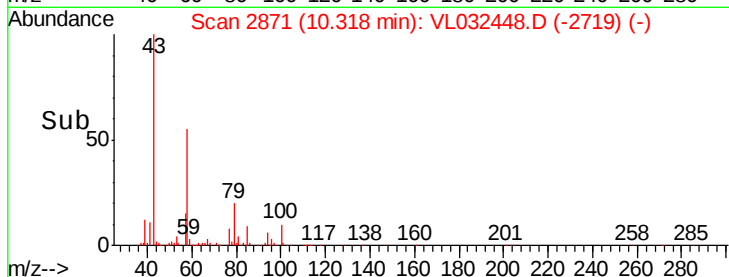
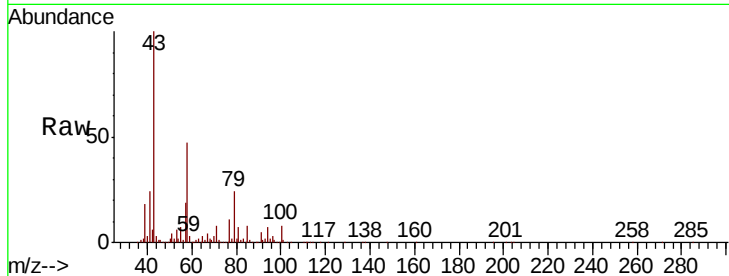
#51
 2-Hexanone
 Concen: 5.767 ppbv
 RT: 10.32 min Scan# 2871
 Delta R.T. -0.01 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Instrument :
 MSVOA_L
 ClientSampled :
 VP-5

Tgt Ion: 43 Resp: 1250925
 Ion Ratio Lower Upper
 43 100
 58 48.3 39.2 58.8
 98 0.0 0.4 0.6#

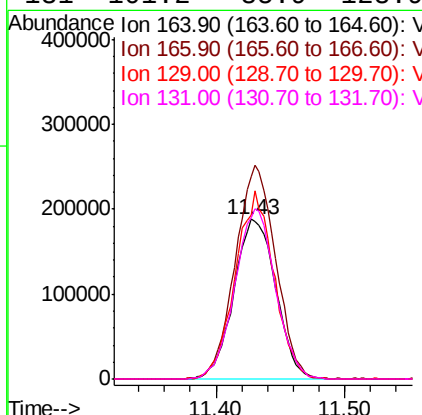
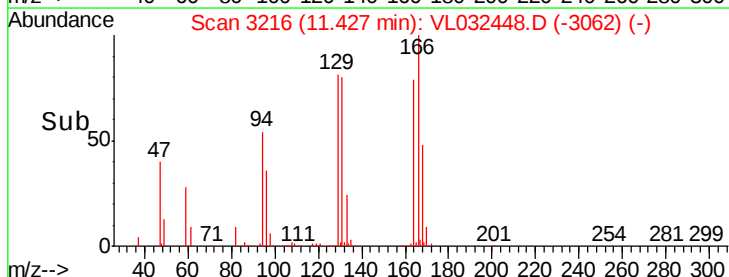
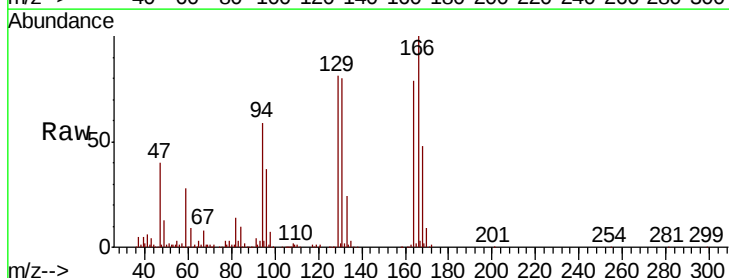
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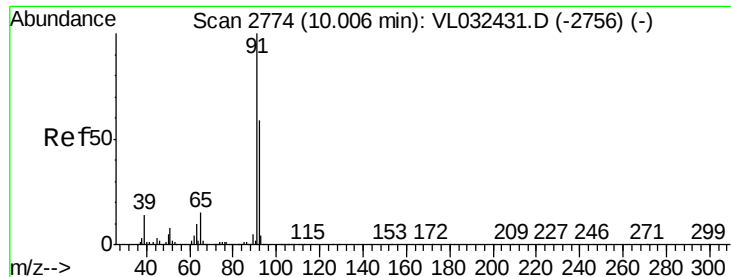
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#52
 Tetrachloroethene
 Concen: 4.774 ppbv
 RT: 11.43 min Scan# 3216
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Tgt Ion: 164 Resp: 423985
 Ion Ratio Lower Upper
 164 100
 166 126.3 100.6 150.8
 129 102.6 89.9 134.9
 131 101.2 85.9 128.9





#53

Toluene

Concen: 14.769 ppbv

RT: 10.00 min Scan# 2773

Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

ClientSampleId :

VP-5

Tgt Ion: 91 Resp: 4421307

Ion Ratio Lower Upper

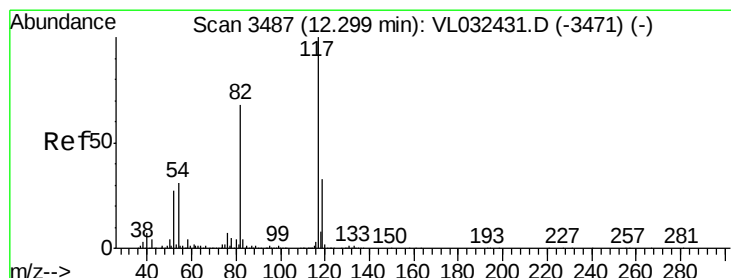
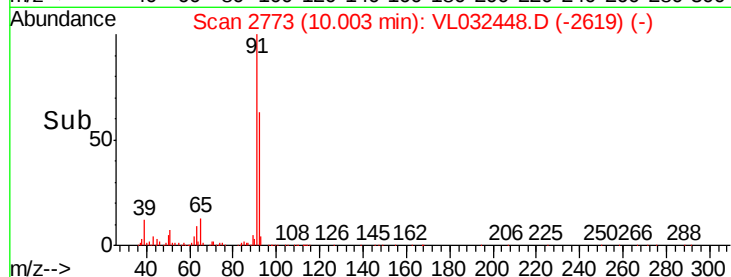
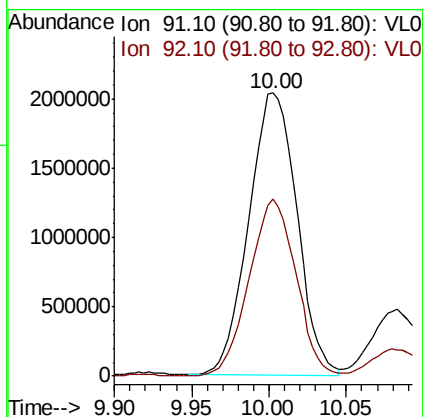
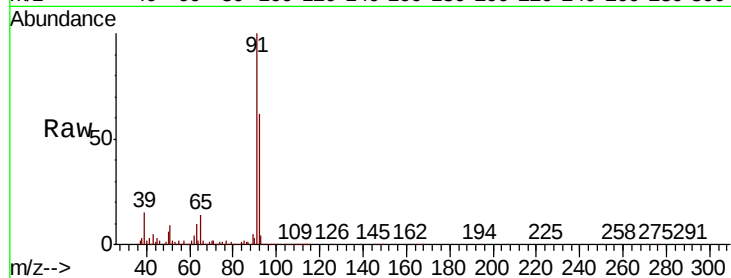
91 100

92 60.4 48.1 72.1

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.30 min Scan# 3486

Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

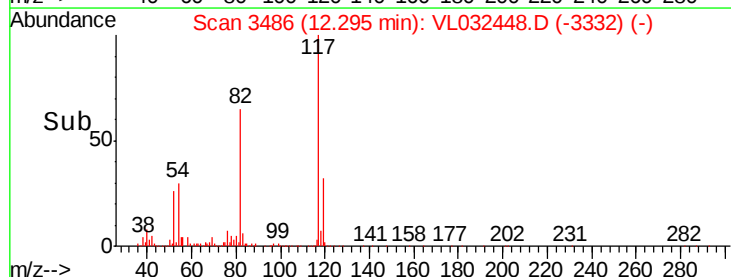
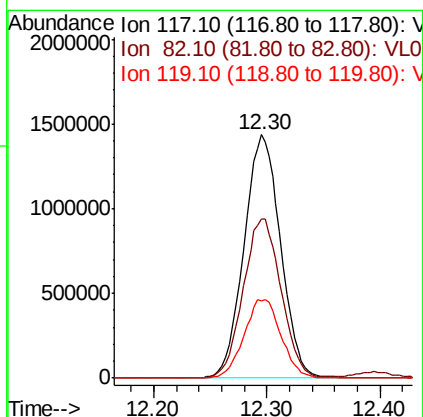
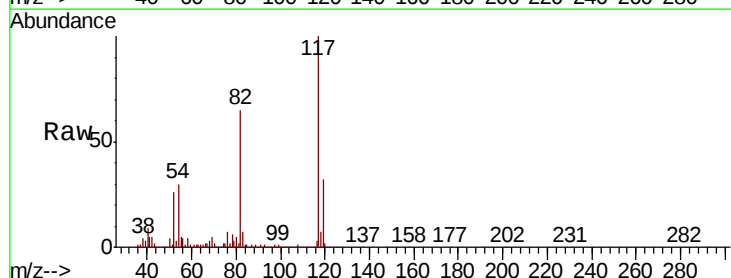
Tgt Ion: 117 Resp: 3219327

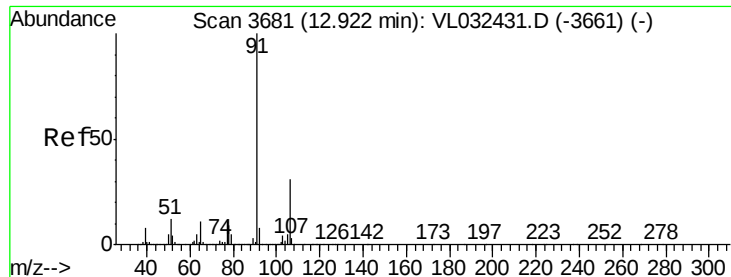
Ion Ratio Lower Upper

117 100

82 67.9 53.0 79.6

119 32.9 45.9 68.9#





#58

Ethyl Benzene

Concen: 4.043 ppbv

RT: 12.92 min Scan# 3681

Delta R.T. -0.00 min

Lab File: VL032448.D

Acq: 31 Aug 2018 19:48

Instrument :

MSVOA_L

ClientSampled :

VP-5

Tgt Ion: 91 Resp: 1557644

Ion Ratio Lower Upper

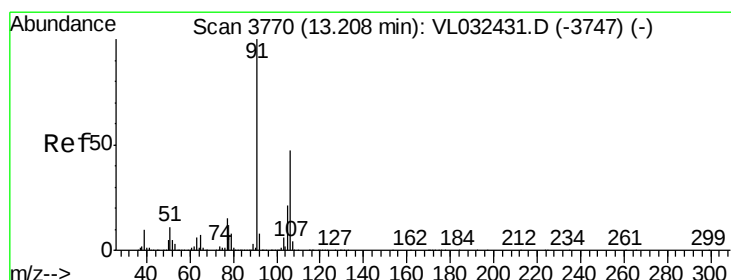
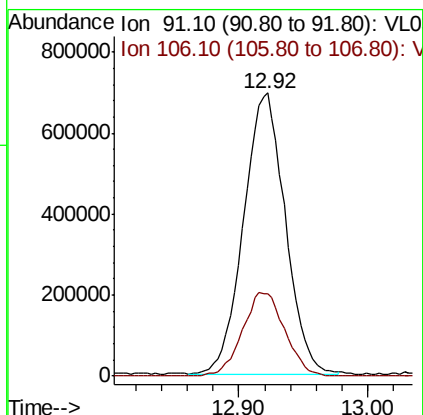
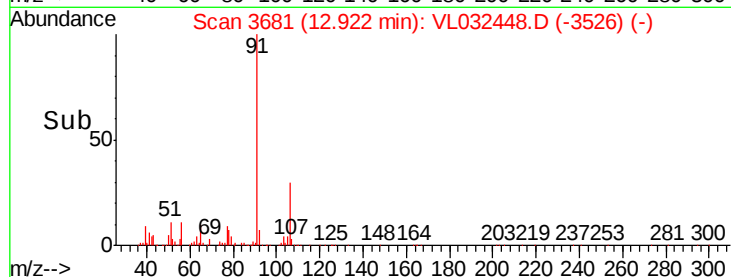
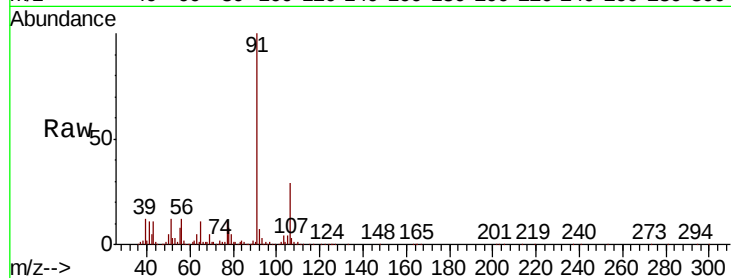
91 100

106 29.2 24.8 37.2

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#59

m/p-Xylene

Concen: 12.394 ppbv

RT: 13.17 min Scan# 3759

Delta R.T. -0.04 min

Lab File: VL032448.D

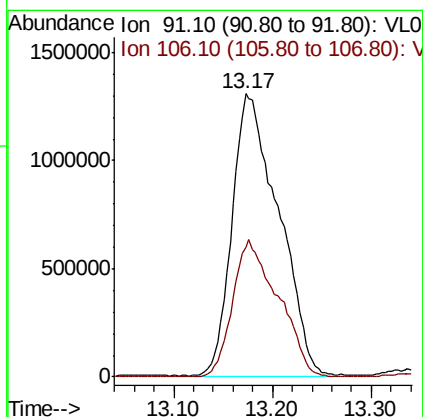
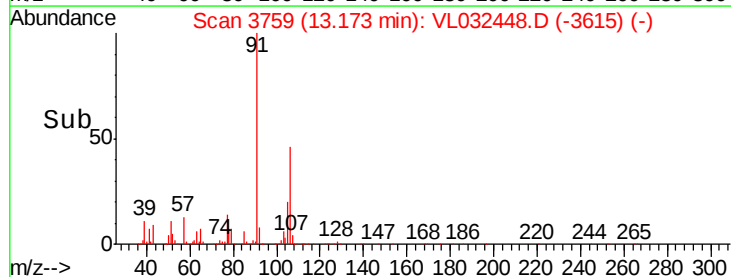
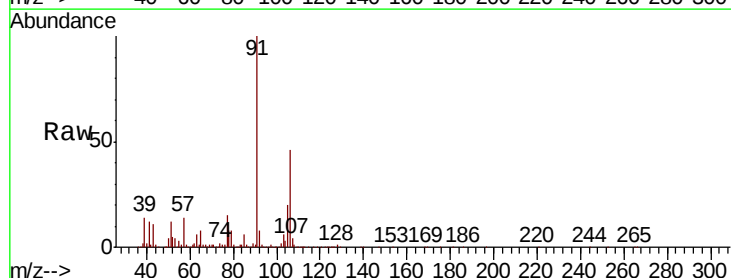
Acq: 31 Aug 2018 19:48

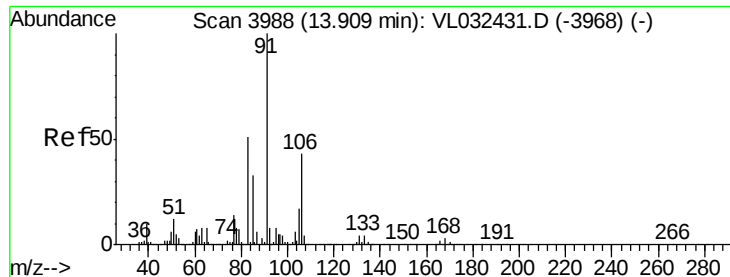
Tgt Ion: 91 Resp: 4257105

Ion Ratio Lower Upper

91 100

106 47.4 36.6 55.0





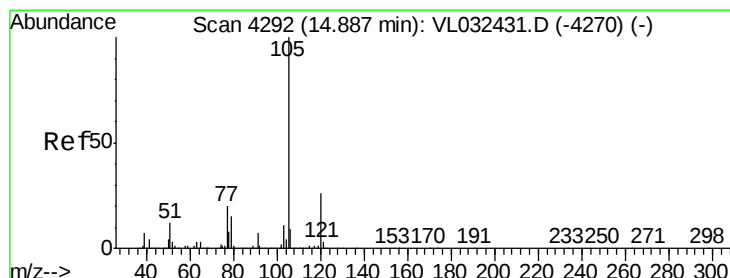
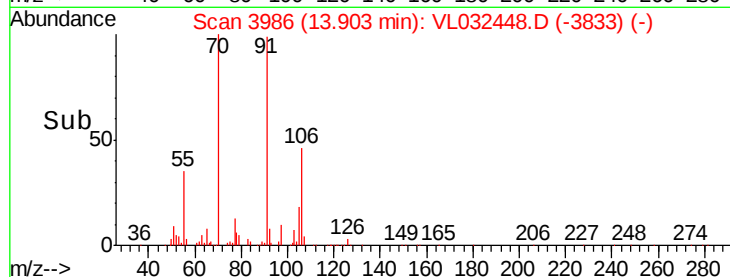
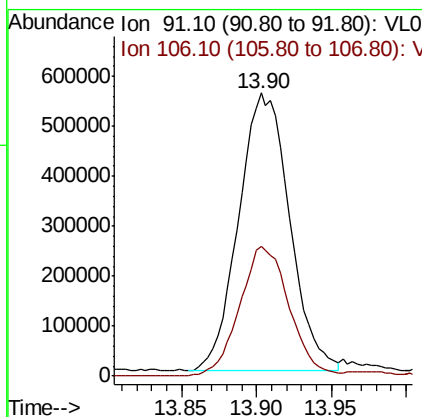
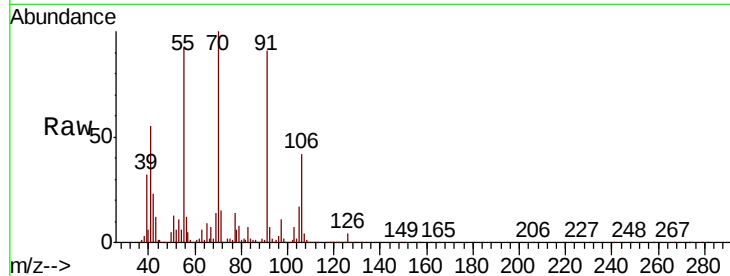
#60
o-Xylene
Concen: 3.912 ppbv
RT: 13.90 min Scan# 3986
Delta R.T. -0.01 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Instrument :
MSVOA_L
ClientSampled :
VP-5

Tgt Ion: 91 Resp: 1319817
Ion Ratio Lower Upper
91 100
106 46.9 21.9 65.7

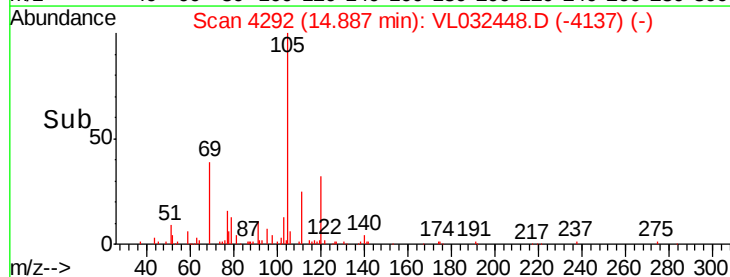
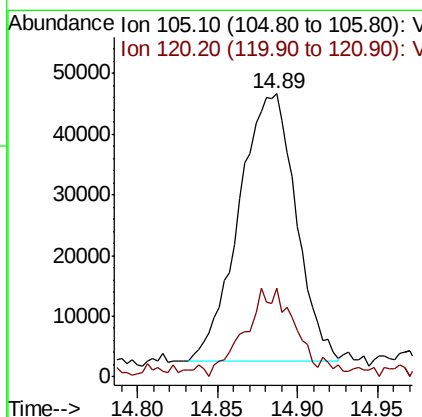
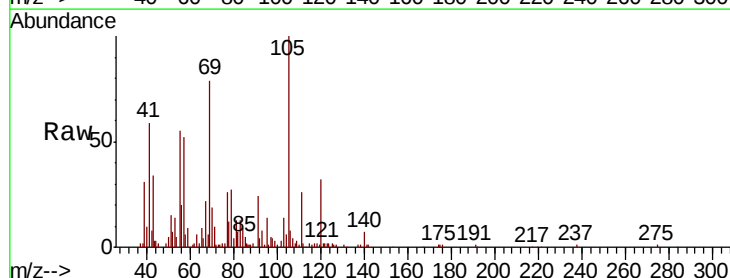
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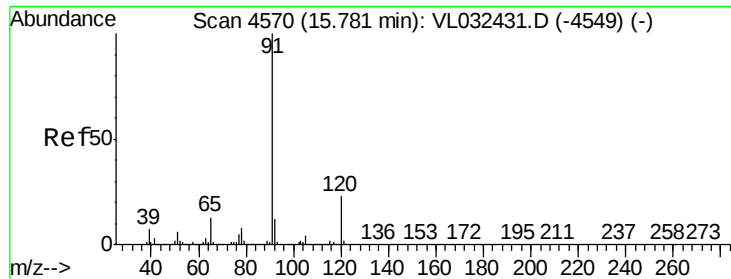
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#62
Isopropylbenzene
Concen: 0.228 ppbv
RT: 14.89 min Scan# 4292
Delta R.T. -0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Tgt Ion: 105 Resp: 108124
Ion Ratio Lower Upper
105 100
120 32.7 20.6 31.0#





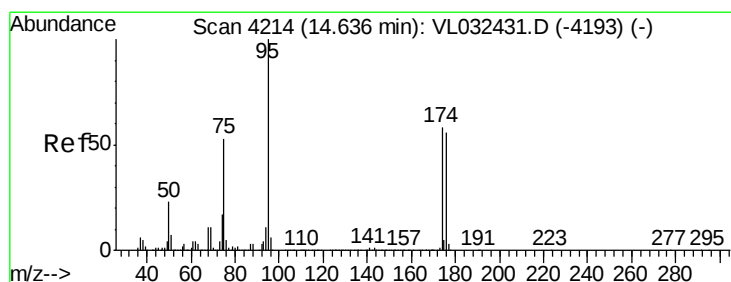
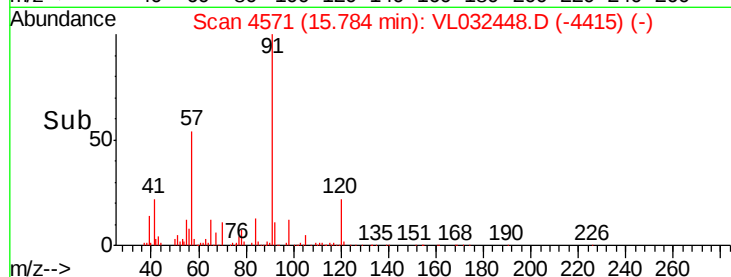
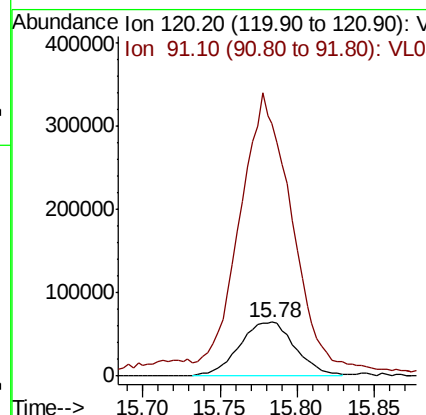
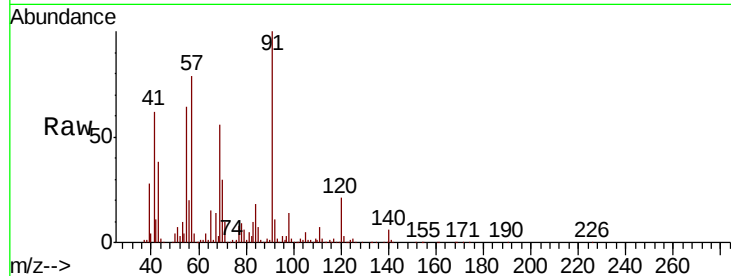
#64
n-propylbenzene
Concen: 1.268 ppbv
RT: 15.78 min Scan# 4571
Delta R.T. 0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Instrument :
MSVOA_L
ClientSampled :
VP-5

Tgt Ion: 120 Resp: 157270
Ion Ratio Lower Upper
120 100
91 539.8 381.8 572.6

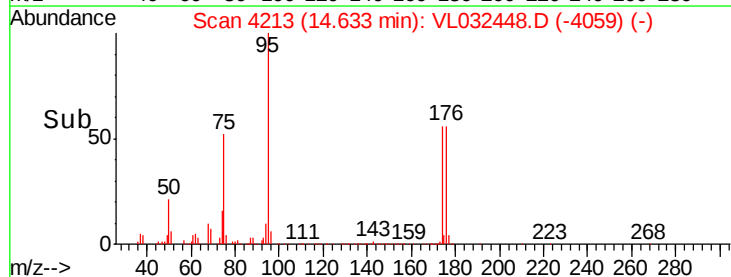
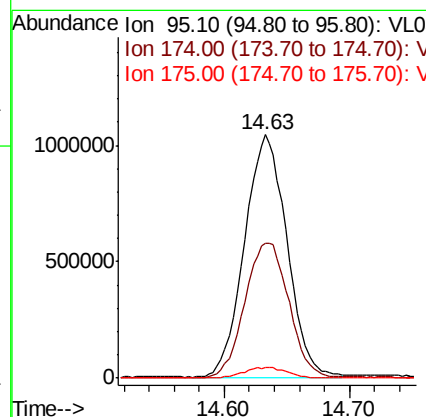
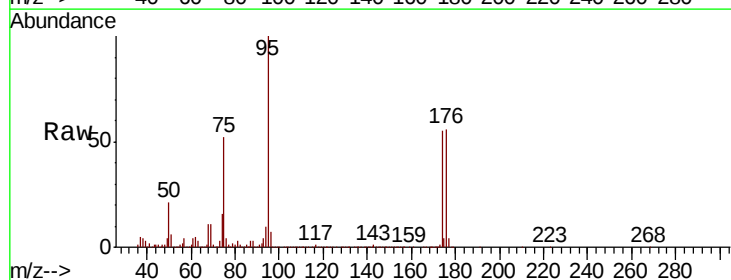
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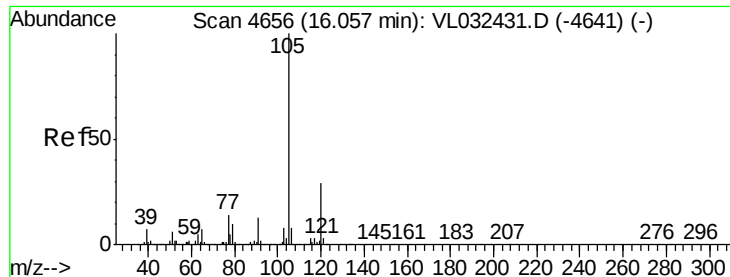
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#68
1-Bromo-4-Fluorobenzene
Concen: 10.266 ppbv
RT: 14.63 min Scan# 4213
Delta R.T. -0.00 min
Lab File: VL032448.D
Acq: 31 Aug 2018 19:48

Tgt Ion: 95 Resp: 2453644
Ion Ratio Lower Upper
95 100
174 58.7 46.3 69.5
175 4.6 3.4 5.0





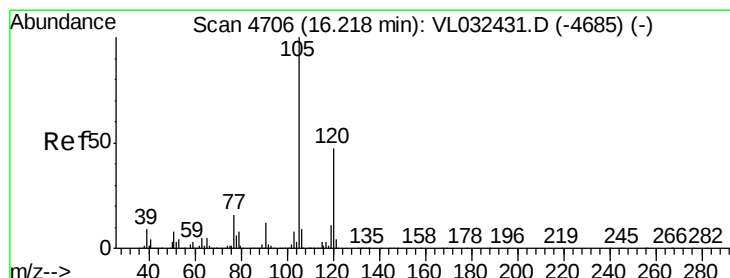
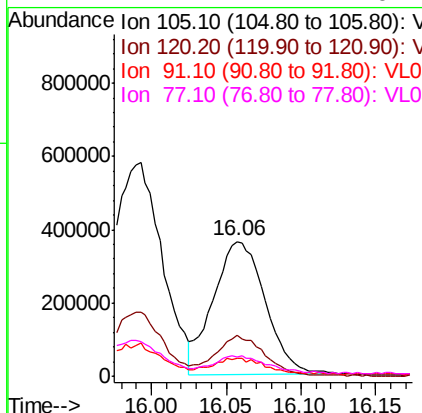
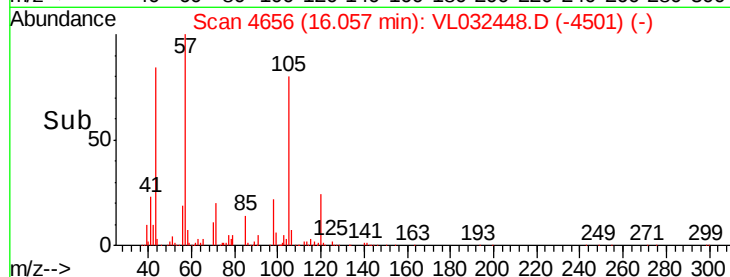
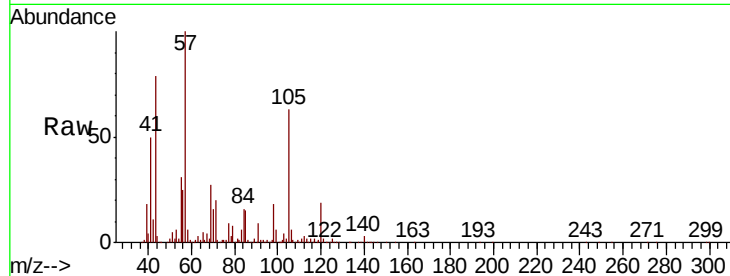
#72
 4-Ethyltoluene
 Concen: 2.383 ppbv
 RT: 16.06 min Scan# 4656
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Instrument :
 MSVOA_L
 ClientSampled :
 VP-5

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	877636		
120	30.0	23.5	35.3	
91	14.3	10.2	15.2	
77	14.7	11.1	16.7	

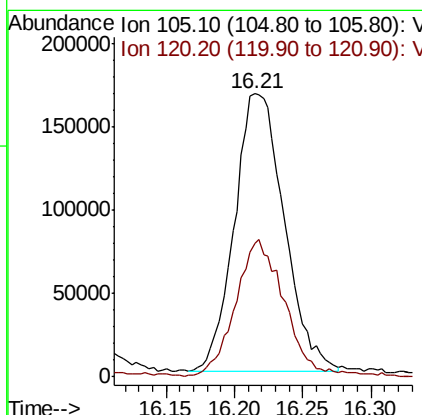
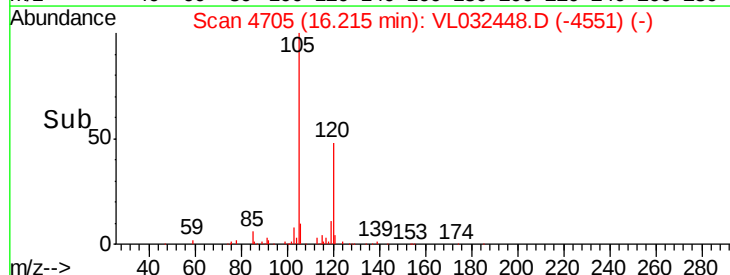
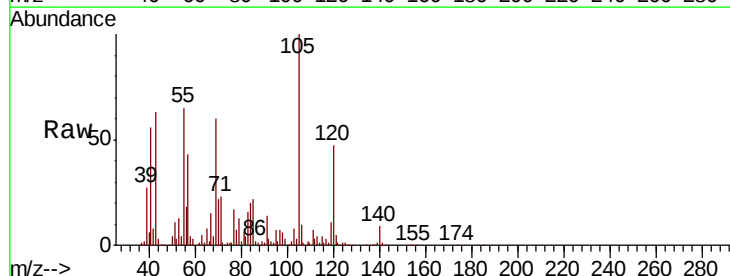
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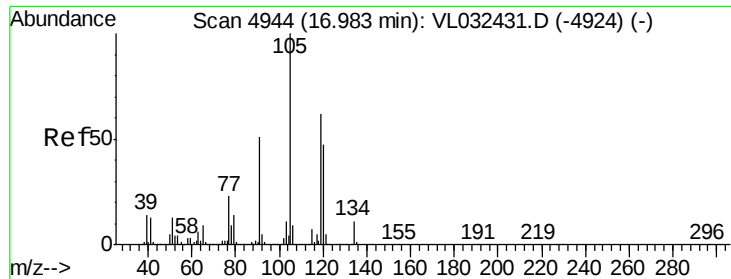
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#73
 1,3,5-Trimethylbenzene
 Concen: 1.135 ppbv
 RT: 16.21 min Scan# 4705
 Delta R.T. -0.00 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	419021		
120	47.6	37.9	56.9	





#74
 1,2,4-Trimethylbenzene
 Concen: 4.143 ppbv
 RT: 17.00 min Scan# 4948
 Delta R.T. 0.01 min
 Lab File: VL032448.D
 Acq: 31 Aug 2018 19:48

Instrument :
 MSVOA_L
 ClientSampleId :
 VP-5

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	1671539		
120	43.3		37.8	56.8
91	10.7		41.4	62.0#
77	14.1		18.6	28.0#

Manual Integrations
 APPROVED

apatel
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