

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL113018\
 Data File : VL032858.D
 Acq On : 30 Nov 2018 20:59
 Operator : SY/AP
 Sample : J6132-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 DSV-02

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Quant Time: Dec 03 14:53:44 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111418AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Nov 14 2018
 QLast Update : Wed Nov 14 07:00:23 2018
 Response via : Initial Calibration

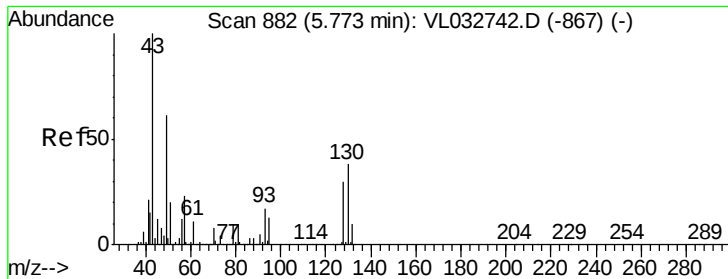
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1362628	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3519925	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3398727	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2599690	10.23	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	57548	0.294	ppbv	95
3) Chlorodifluoromethane	3.02	51	36732m	0.340	ppbv	
4) Chloromethane	3.17	50	20436	0.341	ppbv	90
9) Propene	3.04	41	3033832	70.176	ppbv	95
10) Heptane	8.26	43	57117	0.346	ppbv	98
11) Trichlorofluoromethane	4.01	101	58436	0.317	ppbv	93
13) Ethanol	3.66	45	879060	62.080	ppbv	99
15) Acetone	3.90	43	1893822	15.219	ppbv #	81
20) Methylene Chloride	4.42	84	136923	2.125	ppbv	95
26) Hexane	5.79	57	469749	3.638	ppbv #	45
27) Carbon Disulfide	4.63	76	567399	3.466	ppbv	99
30) Cyclohexane	7.26	84	223951	1.983	ppbv	85
34) 2-Butanone	5.34	43	1918245	10.507	ppbv	100
35) Carbon Tetrachloride	7.14	117	19984m	0.071	ppbv	
36) Benzene	7.01	78	766470	2.734	ppbv	100
44) 2,2,4-Trimethylpentane	8.00	57	674673	1.440	ppbv #	85
51) 2-Hexanone	10.28	43	149003	0.811	ppbv #	95
52) Tetrachloroethene	11.38	164	12328m	0.126	ppbv	
53) Toluene	9.96	91	853505	2.919	ppbv	100
58) Ethyl Benzene	12.87	91	336082	0.822	ppbv	99
59) m/p-Xylene	13.13	91	1227661	3.372	ppbv	99
60) o-Xylene	13.86	91	545866	1.491	ppbv	99
61) Styrene	13.70	104	45413m	0.191	ppbv	
64) n-propylbenzene	15.73	120	37111m	0.285	ppbv	
69) p-Isopropyltoluene	17.82	119	344140	0.677	ppbv #	92
70) n-Butylbenzene	18.73	91	68007	0.132	ppbv #	70
72) 4-Ethyltoluene	16.01	105	269298	0.671	ppbv	97
73) 1,3,5-Trimethylbenzene	16.17	105	200905m	0.512	ppbv	
74) 1,2,4-Trimethylbenzene	16.94	105	971543	2.314	ppbv #	70
79) Naphthalene	22.43	128	62145m	0.225	ppbv	

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 881

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampled :

DSV-02

Tot Ion: 49 Resp: 1362628

Ion Ratio Lower Upper

49 100

128 52.2 24.9 74.6

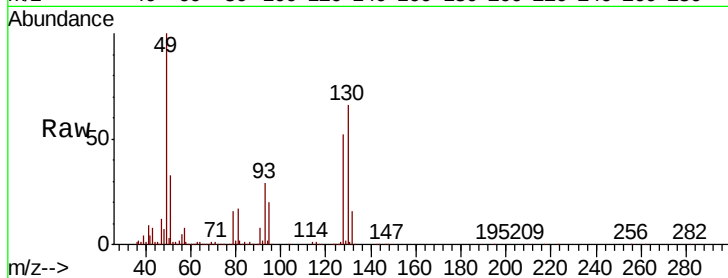
130 67.9 31.4 94.2

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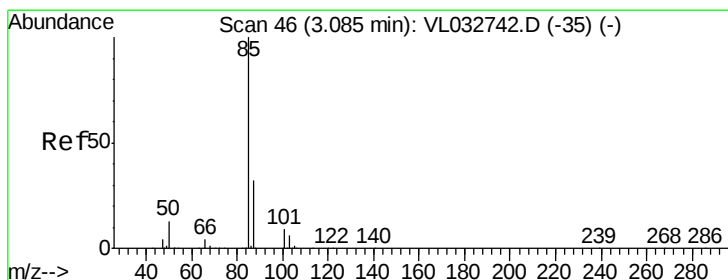
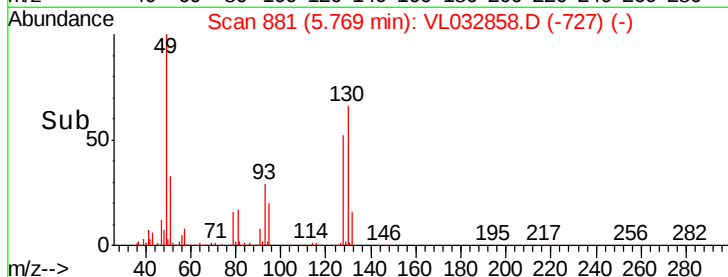
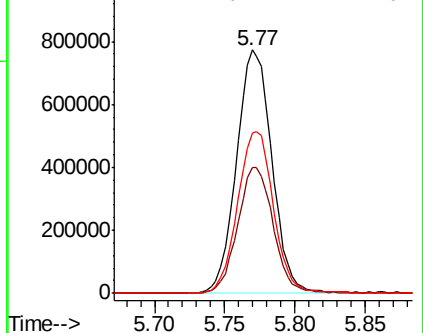
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Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.294 ppbv

RT: 3.08 min Scan# 45

Delta R.T. -0.00 min

Lab File: VL032858.D

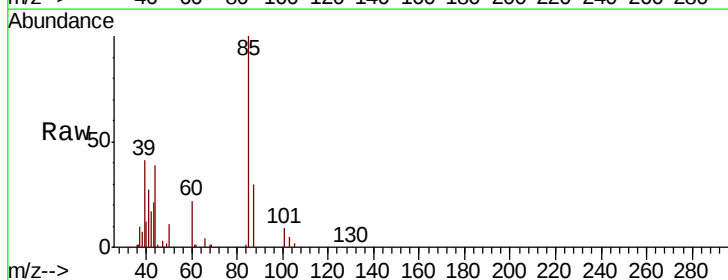
Acq: 30 Nov 2018 20:59

Tgt Ion: 85 Resp: 57548

Ion Ratio Lower Upper

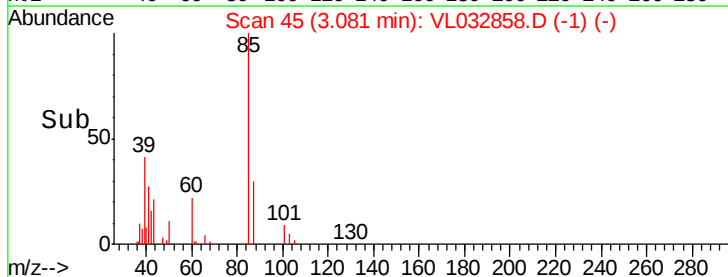
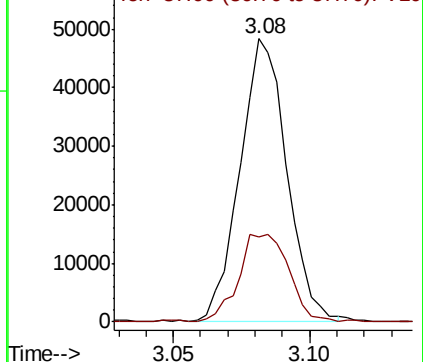
85 100

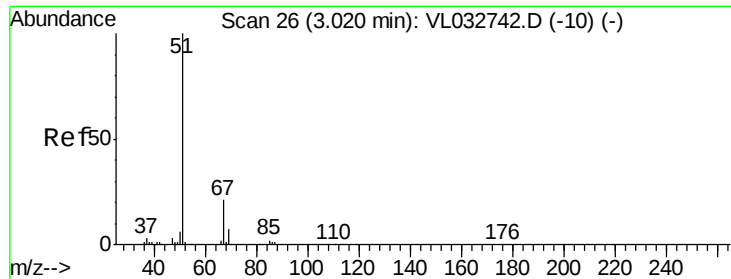
87 29.8 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.340 ppbv

RT: 3.02 min Scan# 26

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampleId :

DSV-02

Tot Ion: 51 Resp: 36732

Ion Ratio Lower Upper

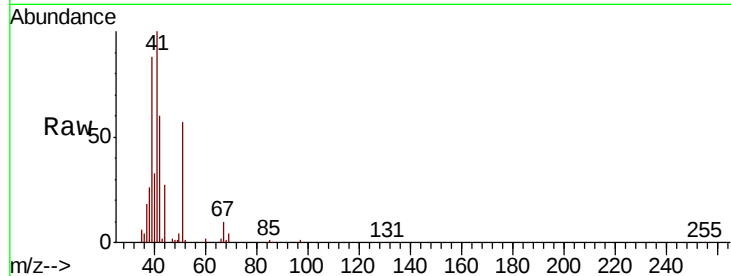
51 100

67 19.0 16.1 24.1

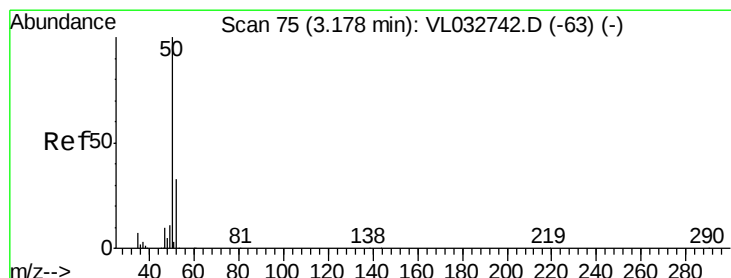
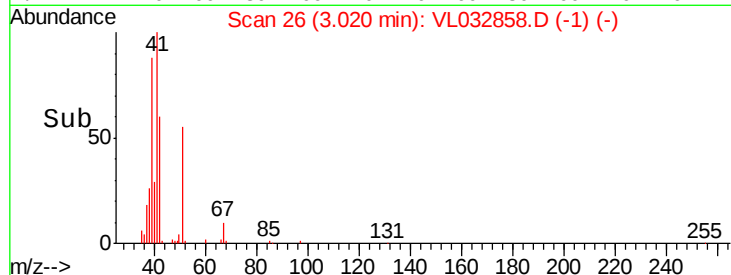
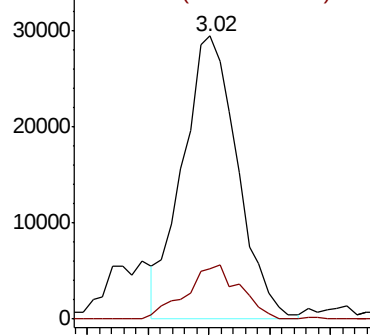
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Abundance Ion 51.00 (50.70 to 51.70): VL0
Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.341 ppbv

RT: 3.17 min Scan# 74

Delta R.T. -0.00 min

Lab File: VL032858.D

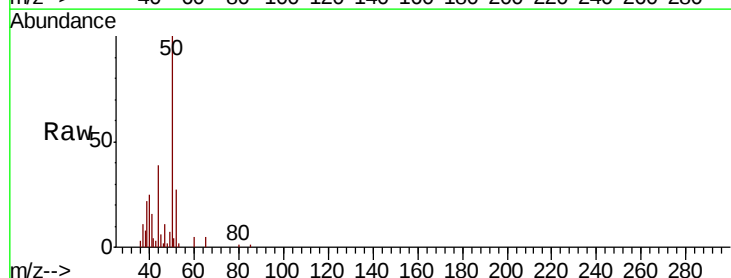
Acq: 30 Nov 2018 20:59

Tgt Ion: 50 Resp: 20436

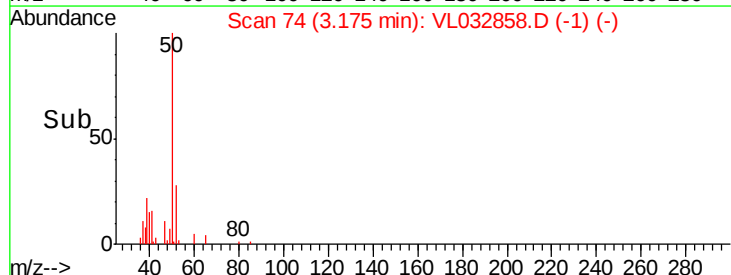
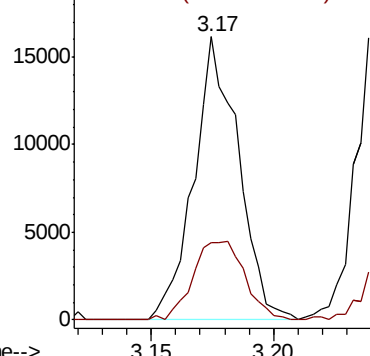
Ion Ratio Lower Upper

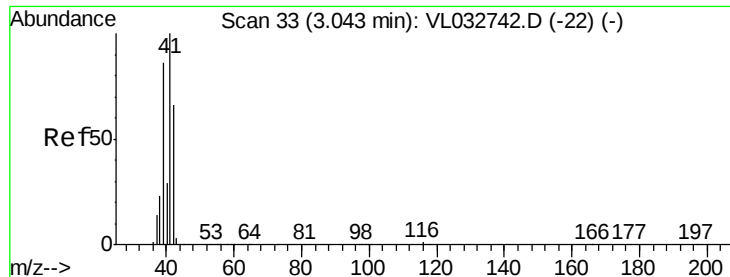
50 100

52 27.4 26.6 40.0



Abundance Ion 50.10 (49.80 to 50.80): VL0
Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 70.176 ppbv

RT: 3.04 min Scan# 33

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampleId :

DSV-02

Tot Ion: 41 Resp: 3033832

Ion Ratio Lower Upper

41 100

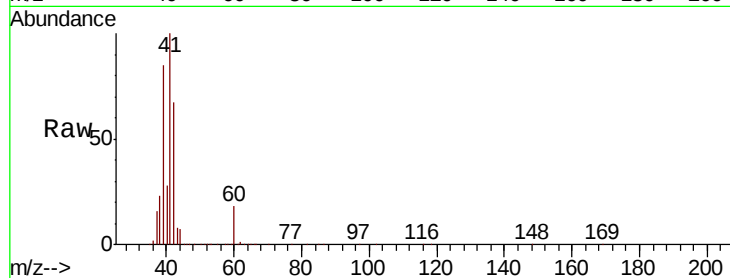
42 64.6 55.0 82.6

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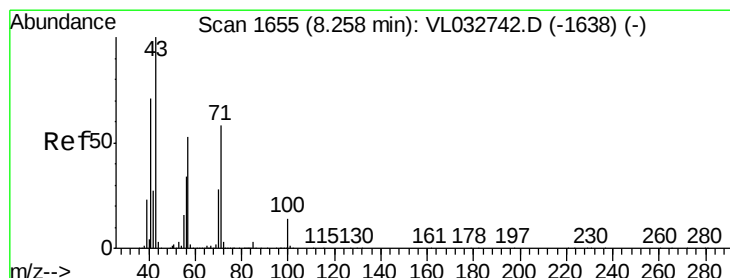
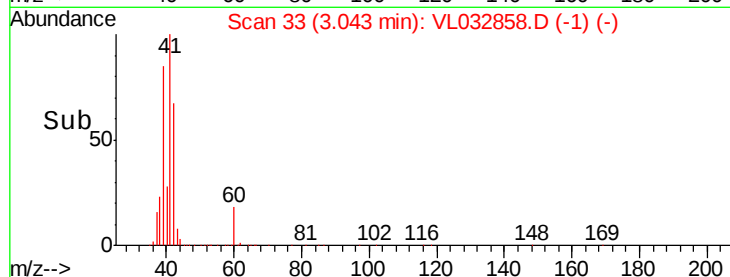
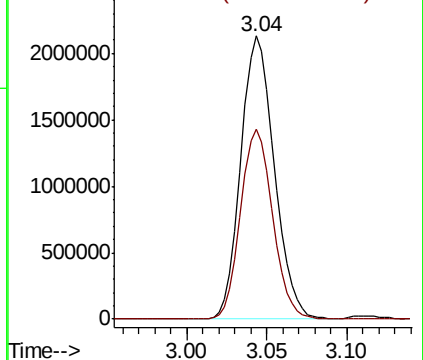
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Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.346 ppbv

RT: 8.26 min Scan# 1655

Delta R.T. -0.00 min

Lab File: VL032858.D

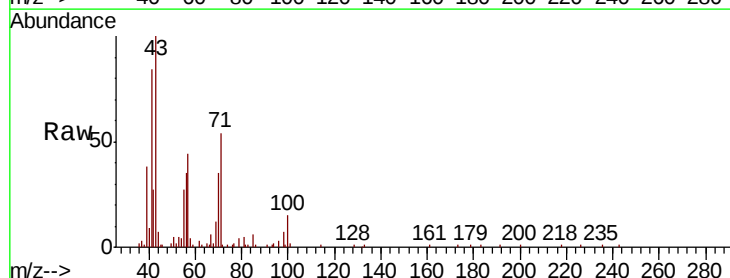
Acq: 30 Nov 2018 20:59

Tgt Ion: 43 Resp: 57117

Ion Ratio Lower Upper

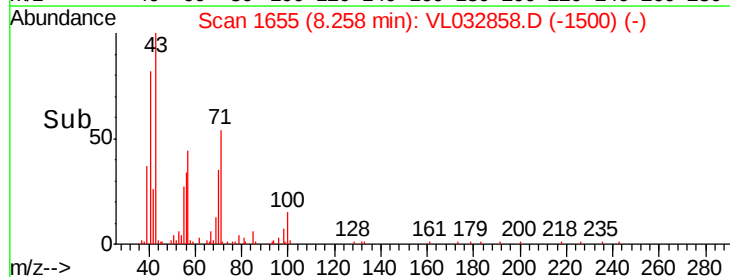
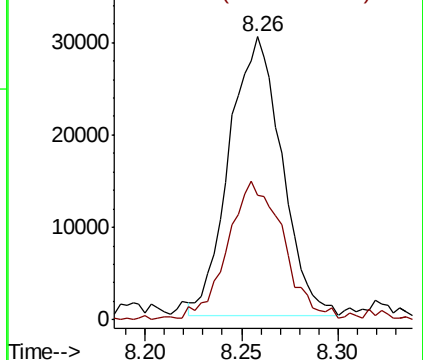
43 100

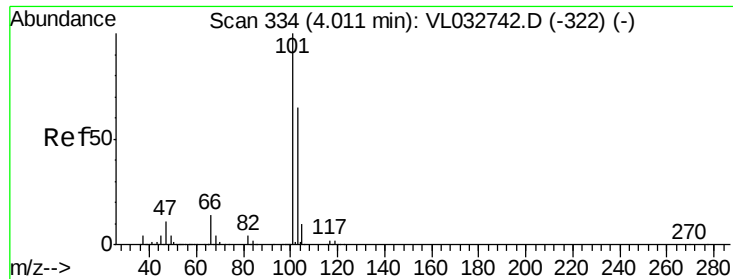
57 53.6 41.8 62.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





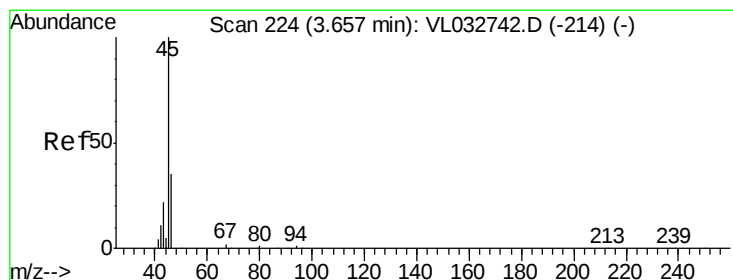
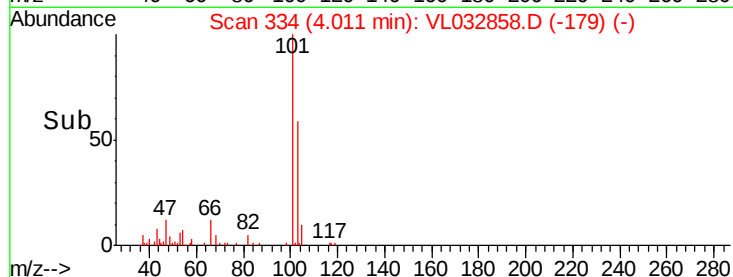
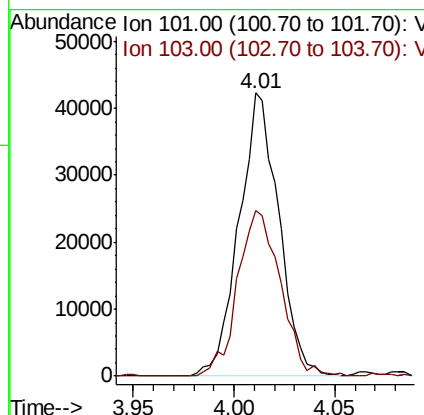
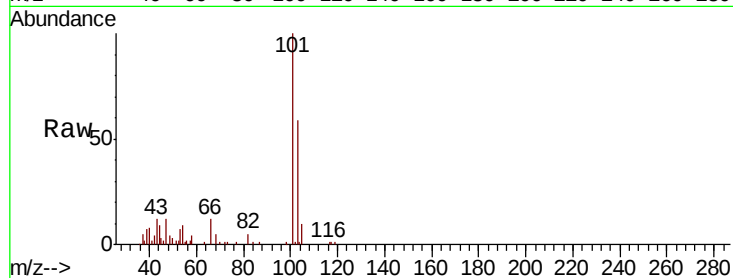
#11
 Trichlorofluoromethane
 Concen: 0.317 ppbv
 RT: 4.01 min Scan# 334
 Delta R.T. -0.00 min
 Lab File: VL032858.D
 Acq: 30 Nov 2018 20:59

Instrument :
 MSVOA_L
 ClientSampleID :
 DSV-02

Tot Ion	Ratio	Lower	Upper
101	100		
103	58.6	51.6	77.4

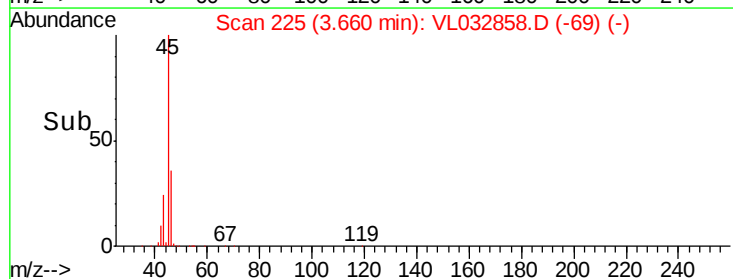
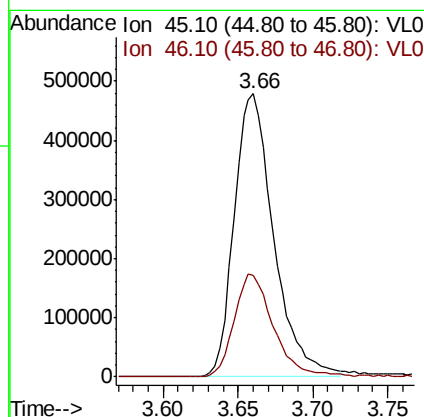
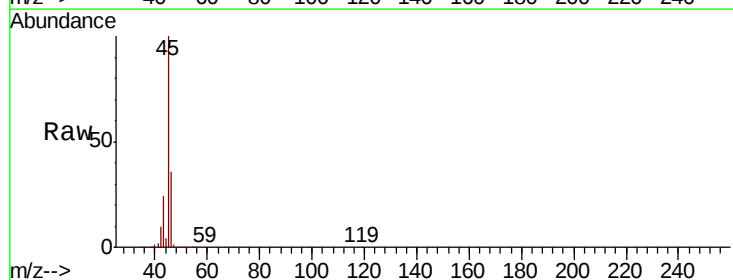
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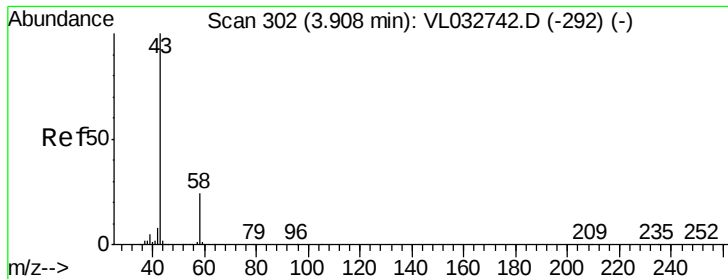
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#13
 Ethanol
 Concen: 62.080 ppbv
 RT: 3.66 min Scan# 225
 Delta R.T. 0.00 min
 Lab File: VL032858.D
 Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
45	100		
46	36.9	14.5	57.9





#15

Acetone

Concen: 15.219 ppbv

RT: 3.90 min Scan# 301

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampled :

DSV-02

Tot Ion: 43 Resp: 1893822

Ion Ratio Lower Upper

43 100

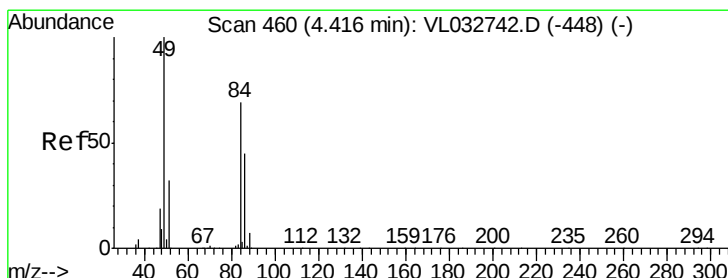
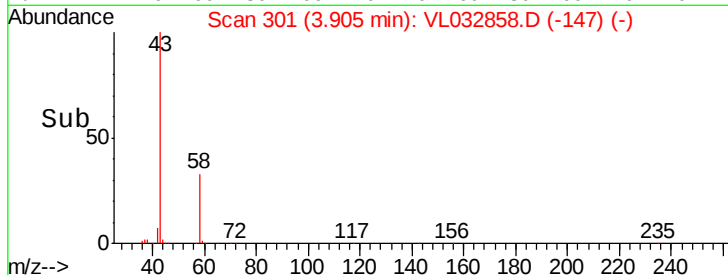
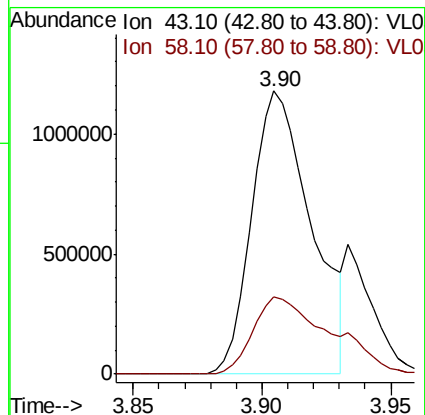
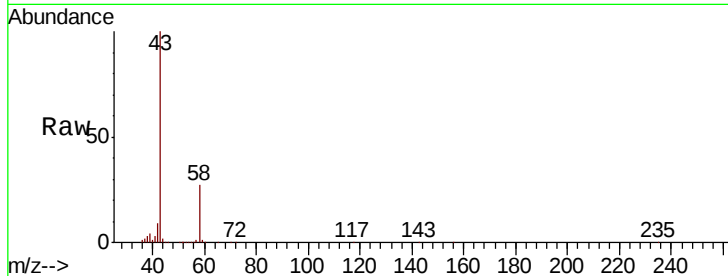
58 36.1 21.1 31.7#

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#20

Methylene Chloride

Concen: 2.125 ppbv

RT: 4.42 min Scan# 460

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Tgt Ion: 84 Resp: 136923

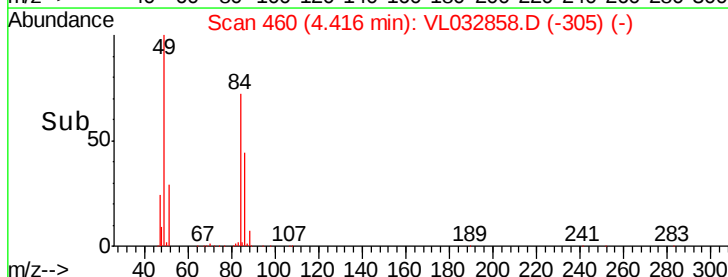
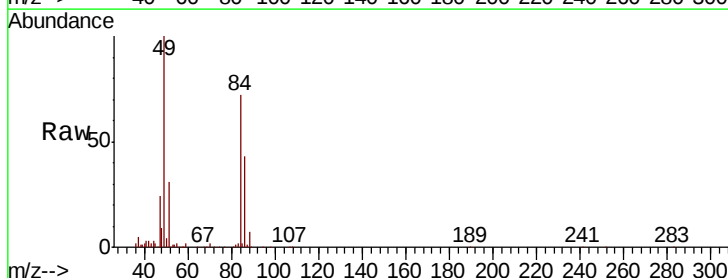
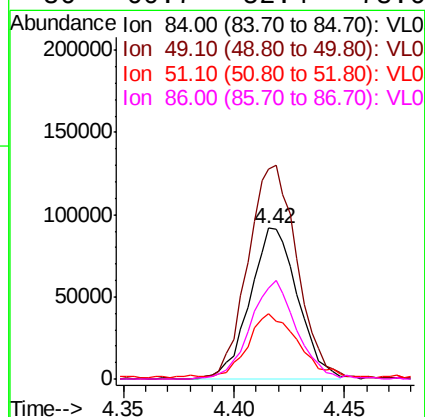
Ion Ratio Lower Upper

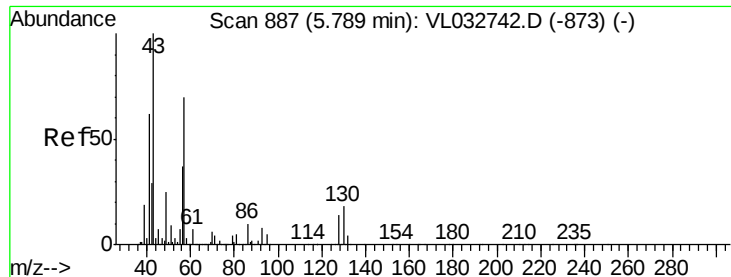
84 100

49 139.5 115.8 173.6

51 40.4 36.9 55.3

86 60.7 52.4 78.6





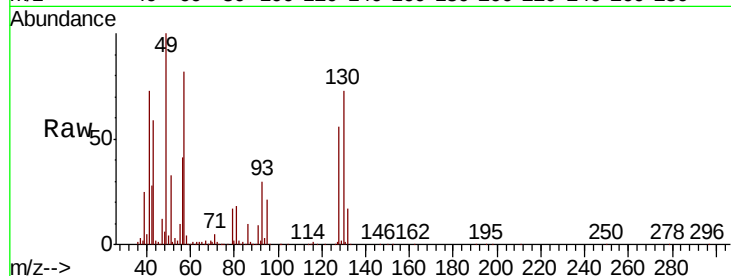
#26
Hexane
Concen: 3.638 ppbv
RT: 5.79 min Scan# 886
Delta R.T. -0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Instrument :
MSVOA_L
ClientSampleId :
DSV-02

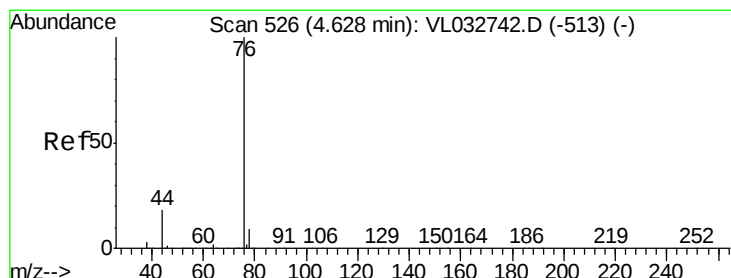
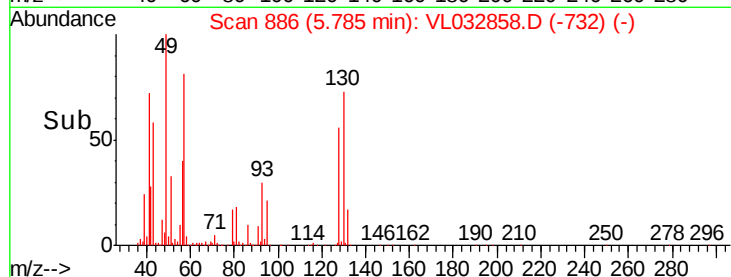
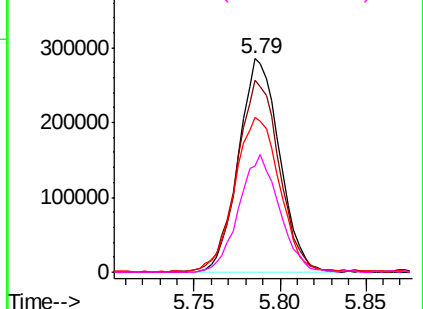
Tot Ion	Ratio	Lower	Upper
57	100		
41	94.3	70.3	105.5
43	79.3	174.0	261.0#
56	54.7	42.3	63.5

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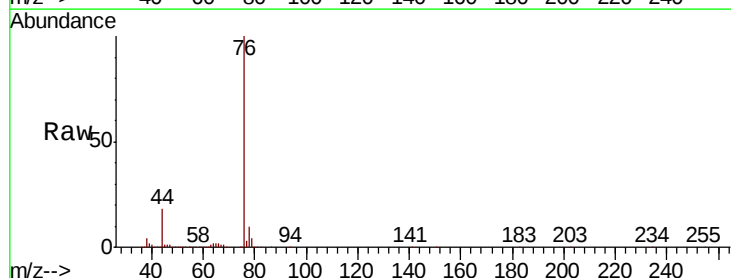


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

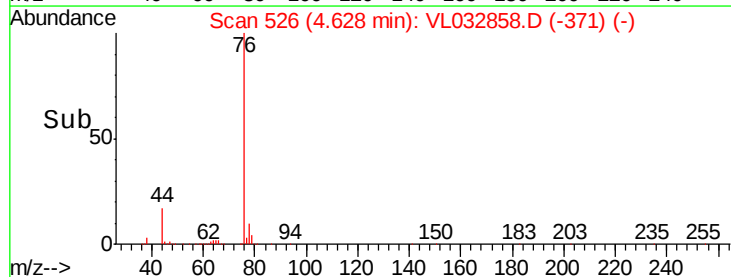
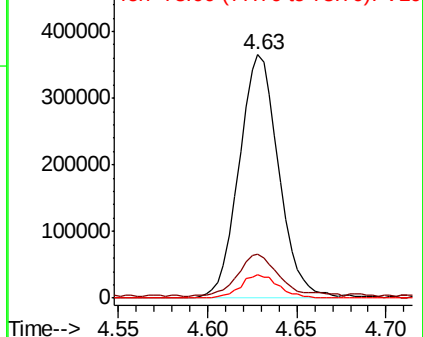


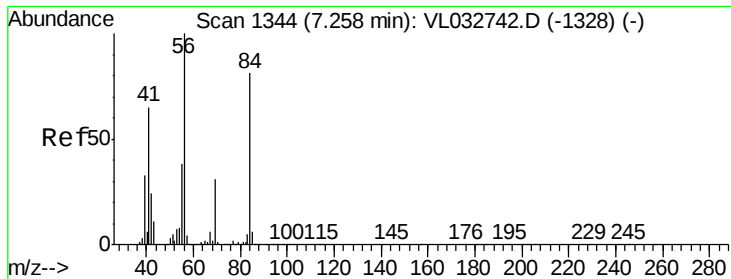
#27
Carbon Disulfide
Concen: 3.466 ppbv
RT: 4.63 min Scan# 526
Delta R.T. -0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
76	100		
44	18.6	14.4	21.6
78	9.6	7.7	11.5



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0





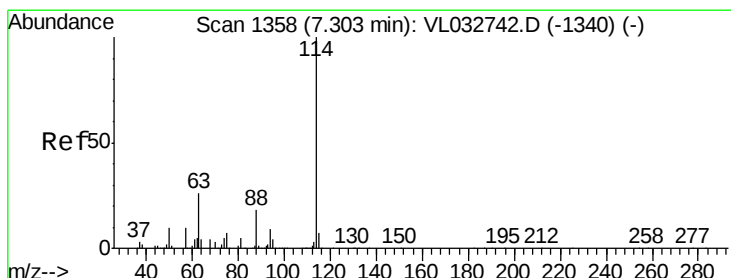
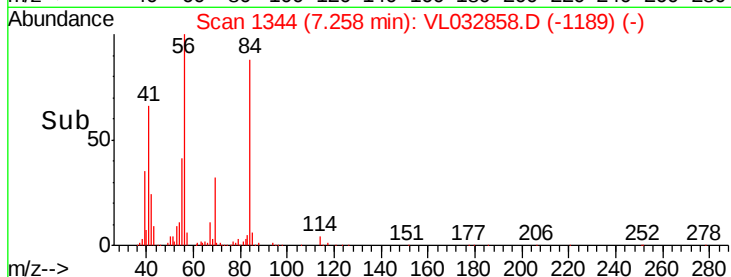
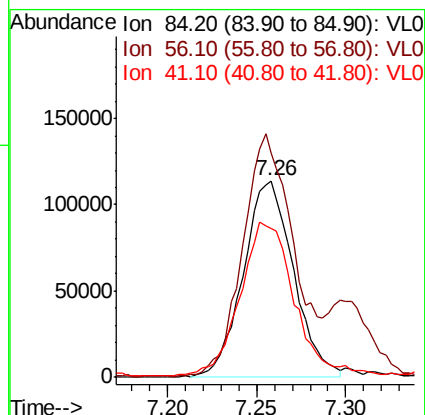
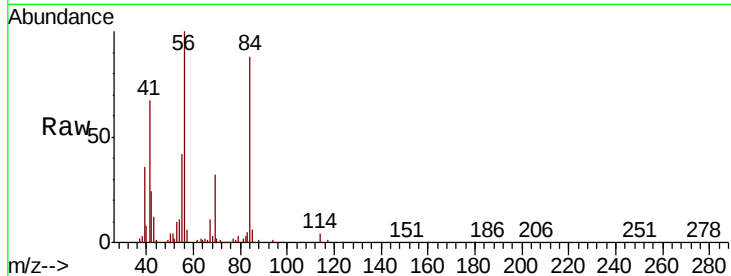
#30
Cvclohexane
Concen: 1.983 ppbv
RT: 7.26 min Scan# 1344
Delta R.T. -0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Instrument :
MSVOA_L
ClientSampled :
DSV-02

Tot Ion	Ratio	Lower	Upper
84	100		
56	156.9	105.0	157.4
41	85.0	65.3	97.9

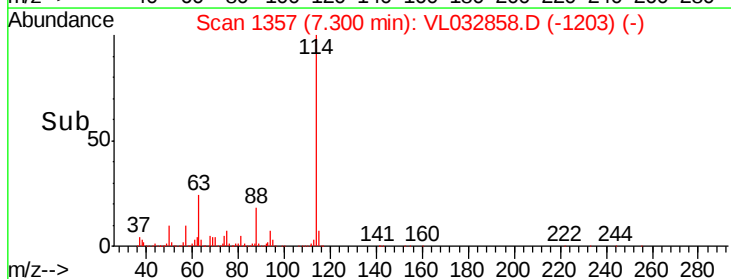
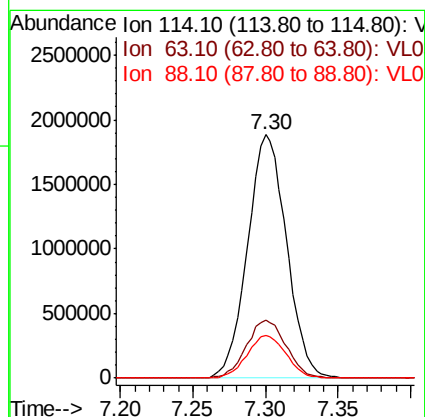
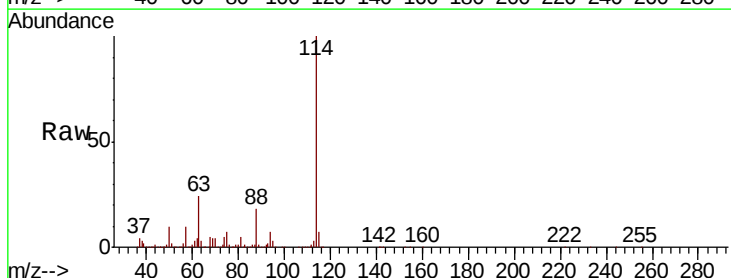
Manual Integrations
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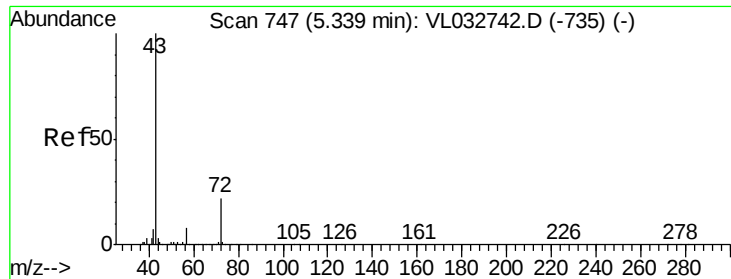
apatel
12/4/2018 4:11:18 PM



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.30 min Scan# 1357
Delta R.T. -0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
114	100		
63	24.5	20.9	31.3
88	17.6	14.4	21.6





#34

2-Butanone

Concen: 10.507 ppbv

RT: 5.34 min Scan# 746

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampleId :

DSV-02

Tot Ion: 43 Resp: 1918245

Ion Ratio Lower Upper

43 100

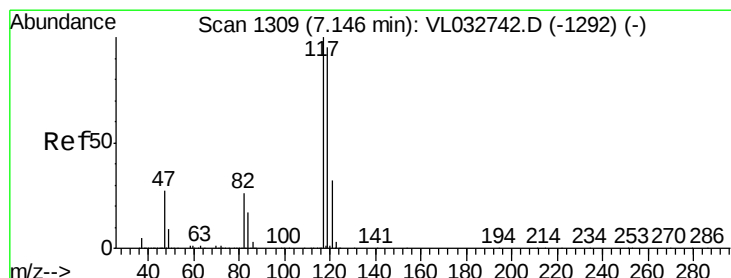
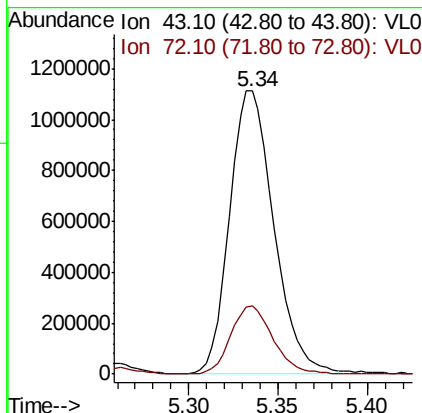
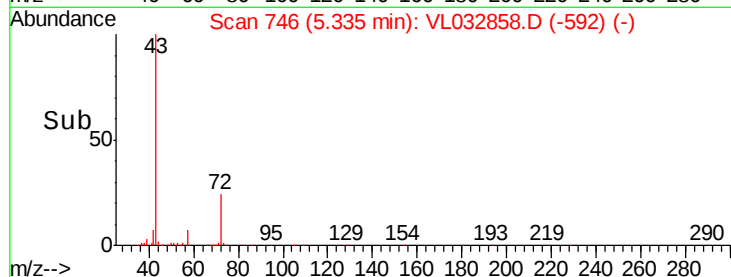
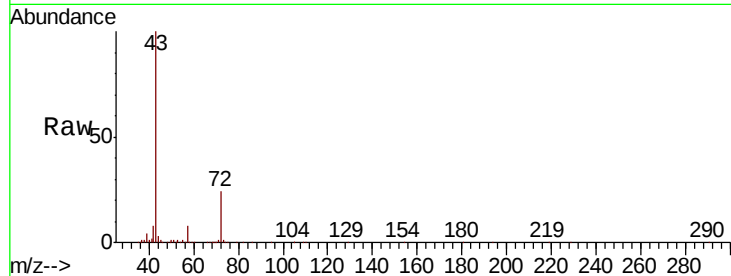
72 23.2 18.4 27.6

Manual Integrations

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#35

Carbon Tetrachloride

Concen: 0.071 ppbv m

RT: 7.14 min Scan# 1307

Delta R.T. -0.01 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

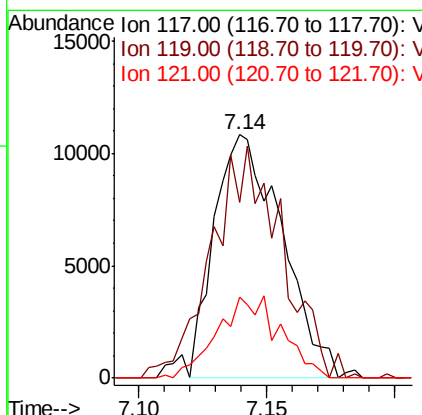
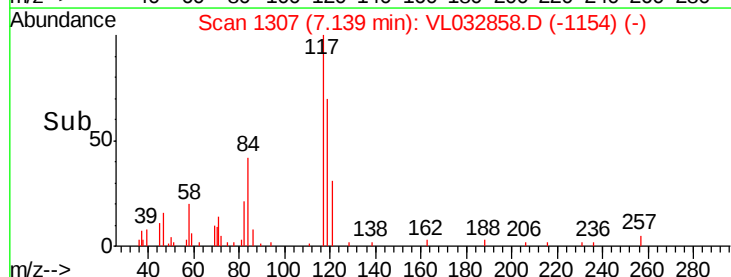
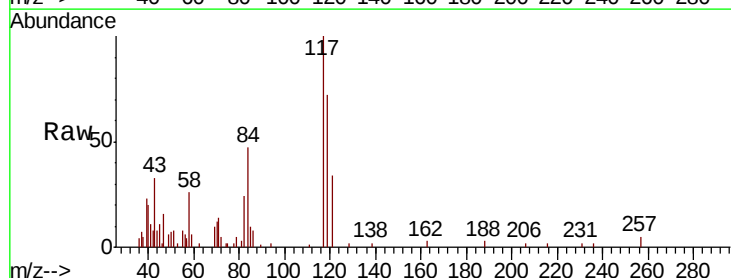
Tgt Ion: 117 Resp: 19984

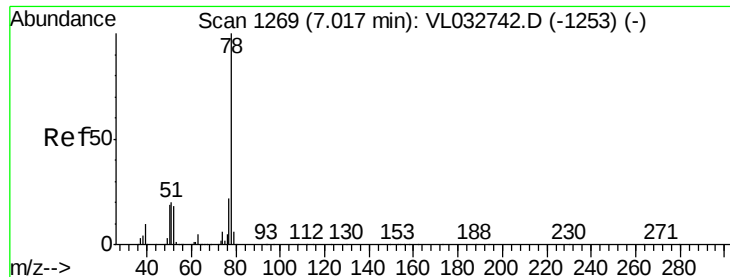
Ion Ratio Lower Upper

117 100

119 72.2 76.1 114.1#

121 33.5 25.4 38.0





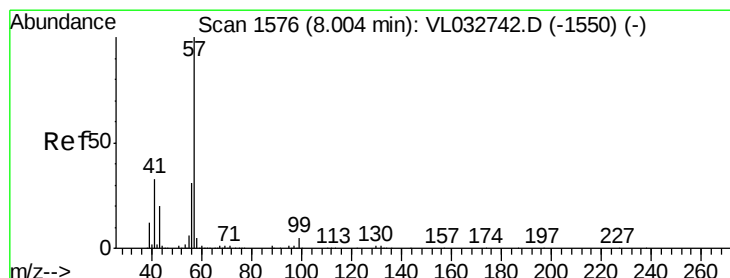
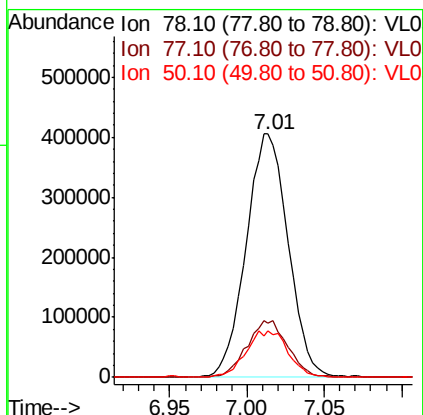
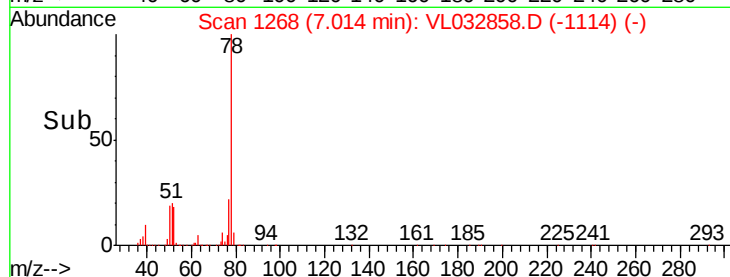
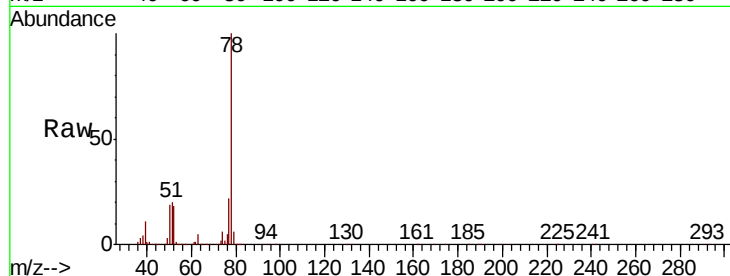
#36
Benzene
Concen: 2.734 ppbv
RT: 7.01 min Scan# 1268
Delta R.T. -0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Instrument :
MSVOA_L
ClientSampled :
DSV-02

Tot Ion	Ratio	Lower	Upper
78	100		
77	22.3	17.8	26.8
50	19.0	15.4	23.0

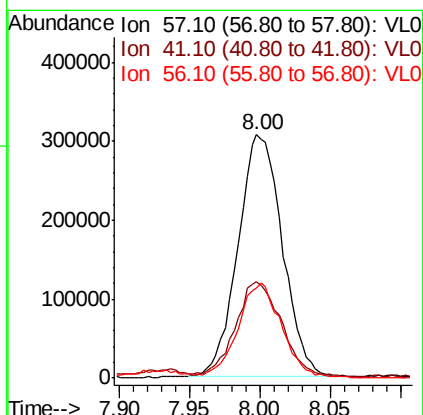
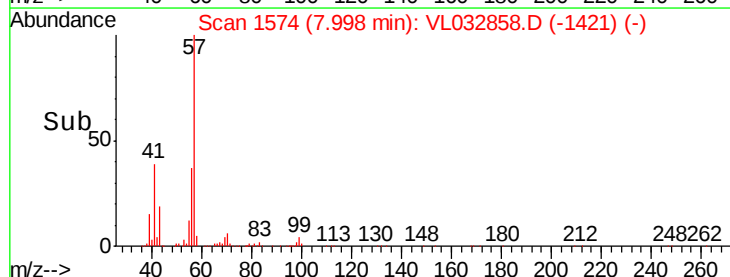
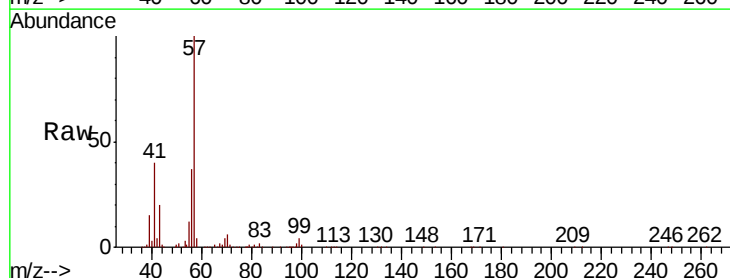
Manual Integrations
APPROVED

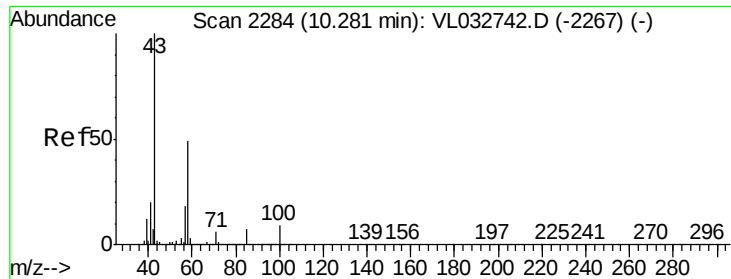
apatel
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#44
2,2,4-Trimethylpentane
Concen: 1.440 ppbv
RT: 8.00 min Scan# 1574
Delta R.T. -0.01 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
57	100		
41	41.8	26.6	39.8#
56	39.1	24.8	37.2#





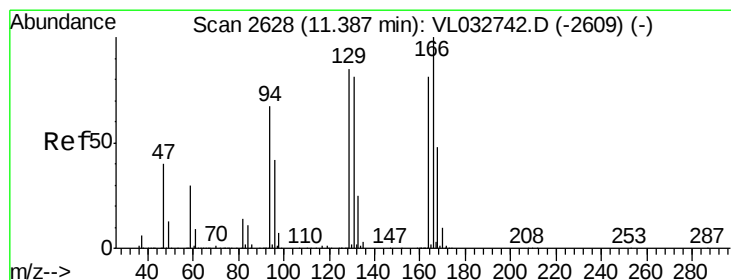
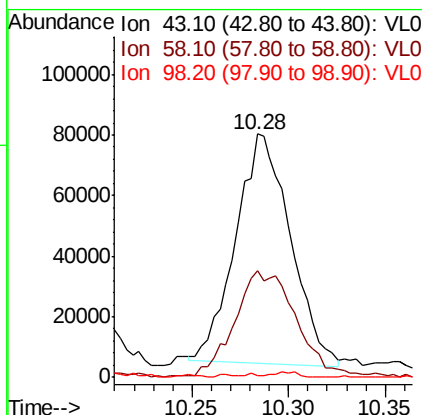
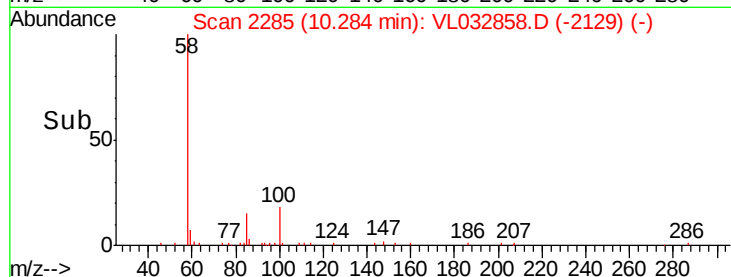
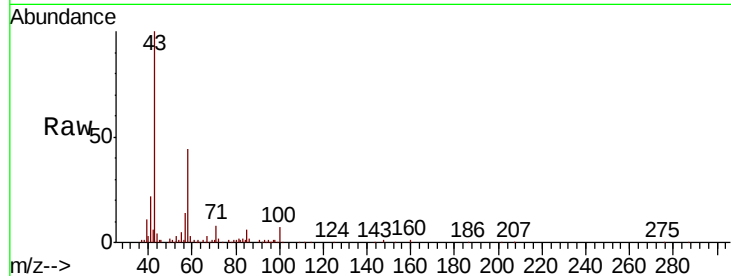
#51
2-Hexanone
Concen: 0.811 ppbv
RT: 10.28 min Scan# 2285
Delta R.T. 0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Instrument :
MSVOA_L
ClientSampled :
DSV-02

Tot Ion	Ratio	Lower	Upper
43	100		
58	52.1	38.9	58.3
98	1.7	0.2	0.4

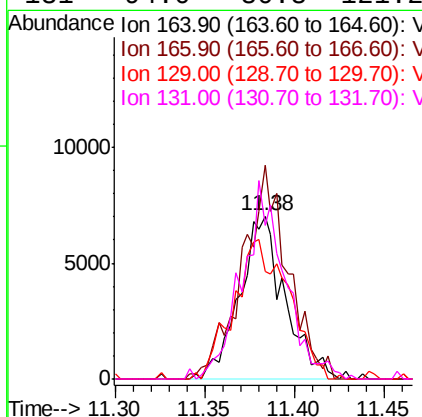
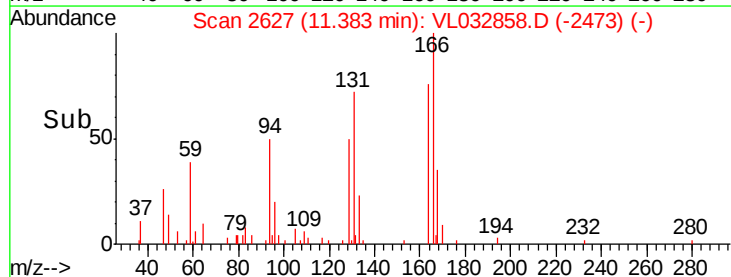
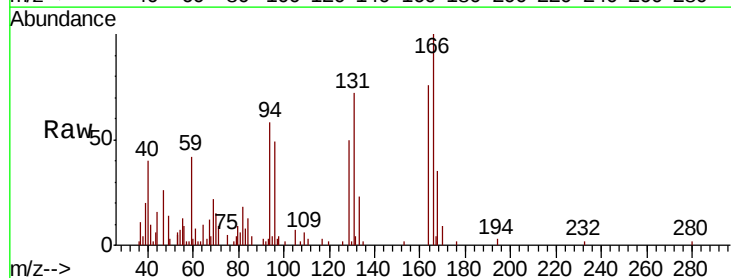
Manual Integrations
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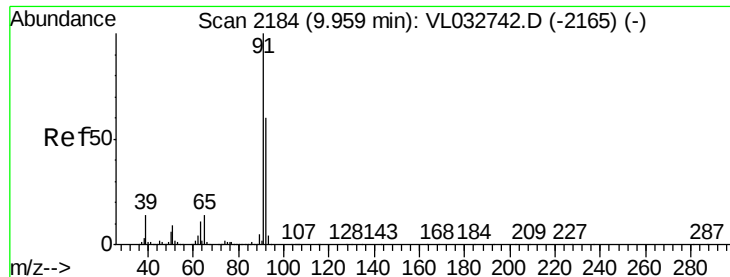
apatel
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#52
Tetrachloroethene
Concen: 0.126 ppbv m
RT: 11.38 min Scan# 2627
Delta R.T. -0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
164	100		
166	131.0	99.3	148.9
129	66.0	83.9	125.9
131	94.0	80.8	121.2





#53

Toluene

Concen: 2.919 ppbv

RT: 9.96 min Scan# 2183

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampleId :

DSV-02

Tot Ion: 91 Resp: 853505

Ion Ratio Lower Upper

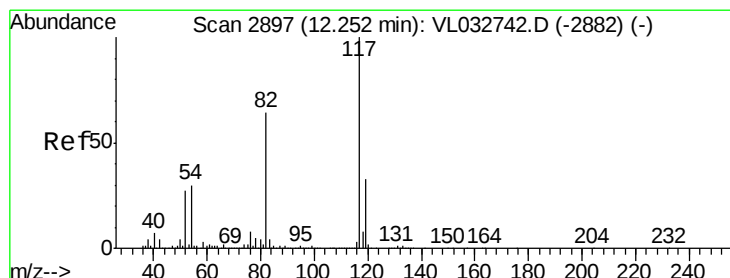
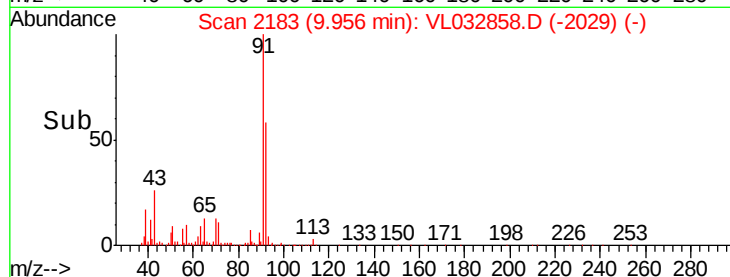
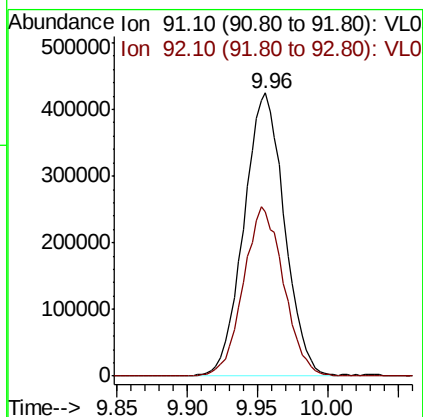
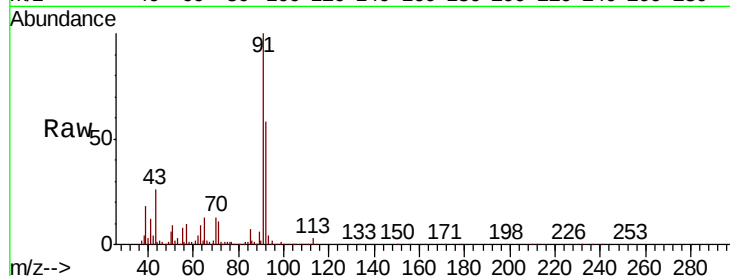
91 100

92 59.9 47.9 71.9

Manual Integrations
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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2896

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

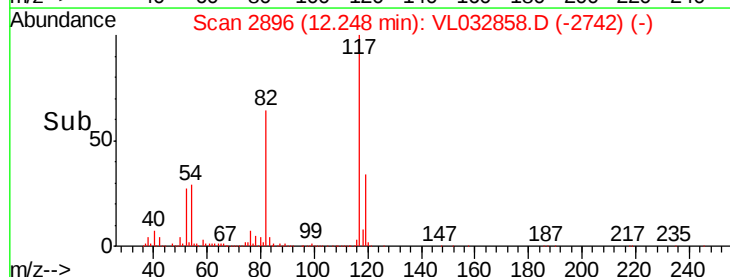
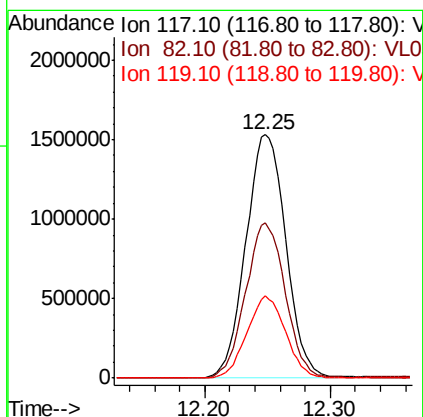
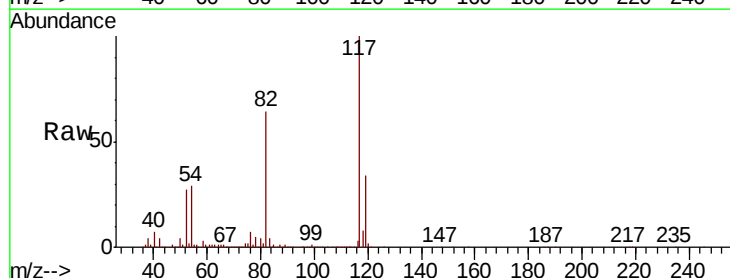
Tgt Ion: 117 Resp: 3398727

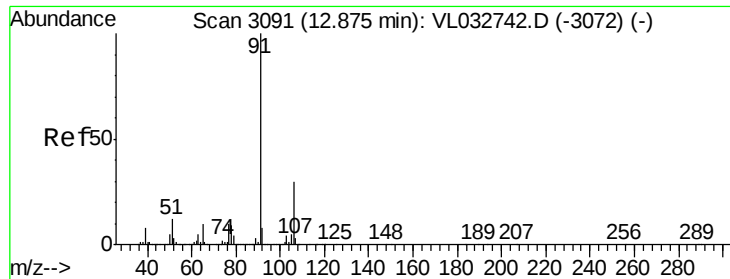
Ion Ratio Lower Upper

117 100

82 63.3 51.0 76.6

119 32.7 28.0 42.0





#58

Ethyl Benzene

Concen: 0.822 ppbv

RT: 12.87 min Scan# 3090

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampled :

DSV-02

Tot Ion: 91 Resp: 336082

Ion Ratio Lower Upper

91 100

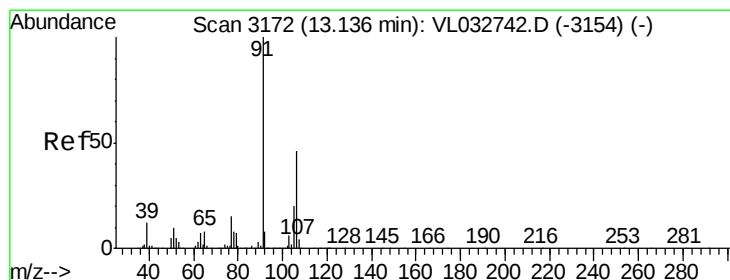
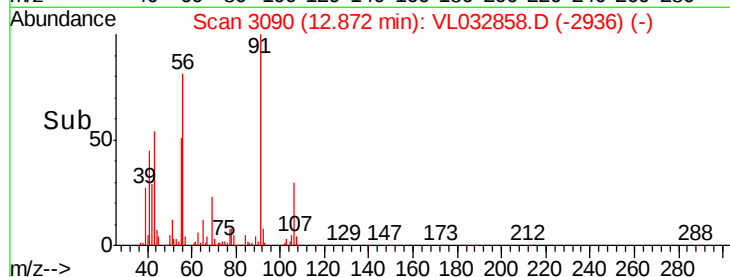
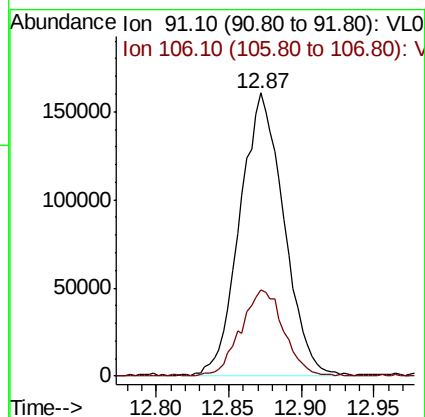
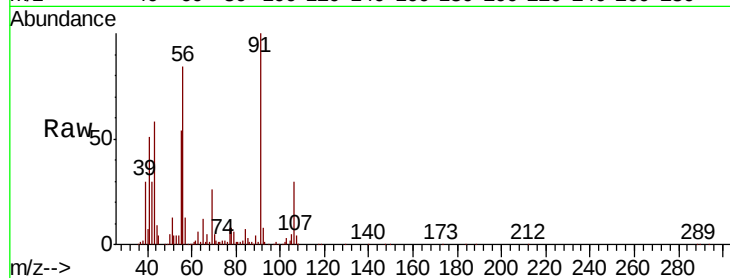
106 30.1 23.6 35.4

Manual Integrations

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#59

m/p-Xylene

Concen: 3.372 ppbv

RT: 13.13 min Scan# 3170

Delta R.T. -0.01 min

Lab File: VL032858.D

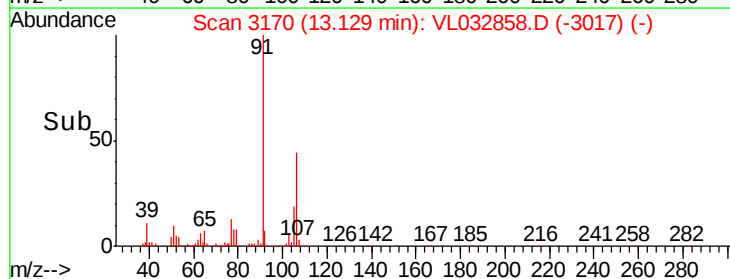
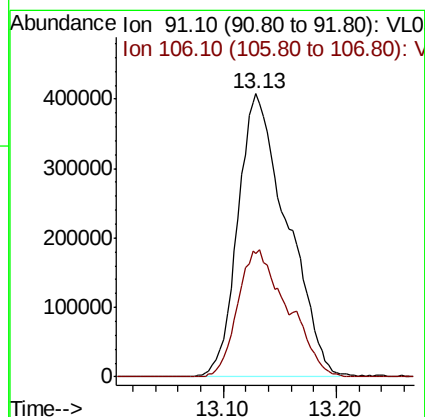
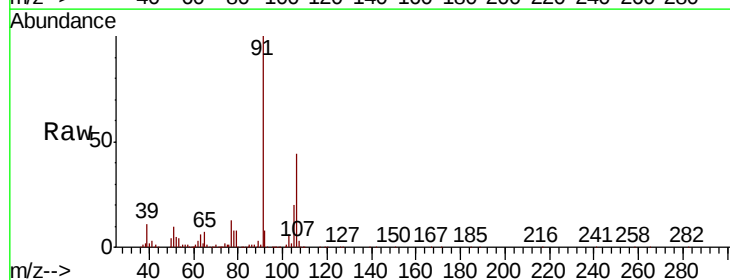
Acq: 30 Nov 2018 20:59

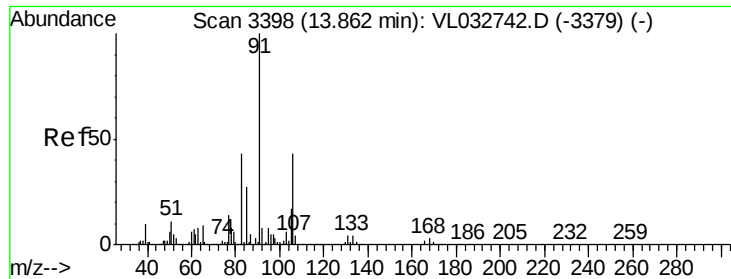
Tgt Ion: 91 Resp: 1227661

Ion Ratio Lower Upper

91 100

106 46.0 36.1 54.1





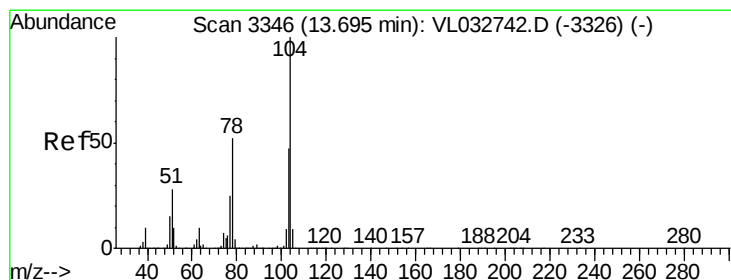
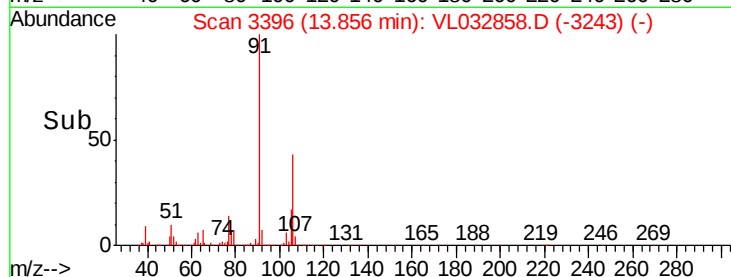
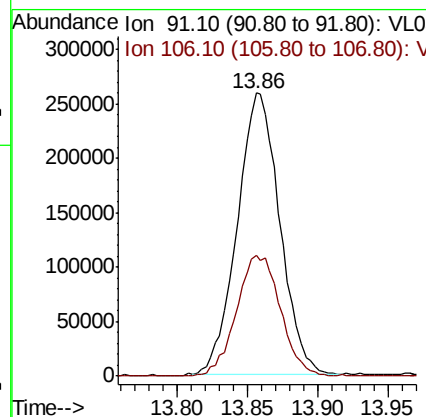
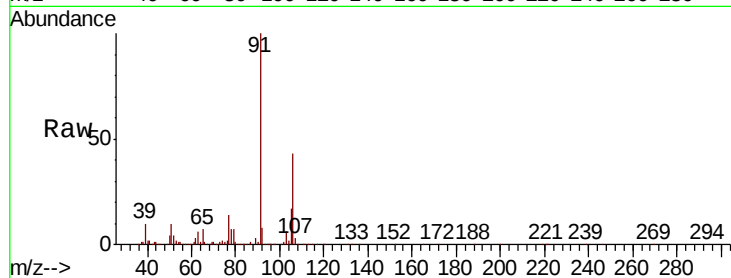
#60
o-Xylene
Concen: 1.491 ppbv
RT: 13.86 min Scan# 3396
Delta R.T. -0.01 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Instrument :
MSVOA_L
ClientSampled :
DSV-02

Tot Ion	Ratio	Lower	Upper
91	100		
106	44.7	21.9	65.7

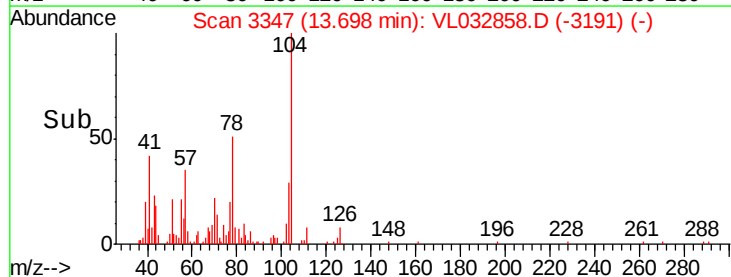
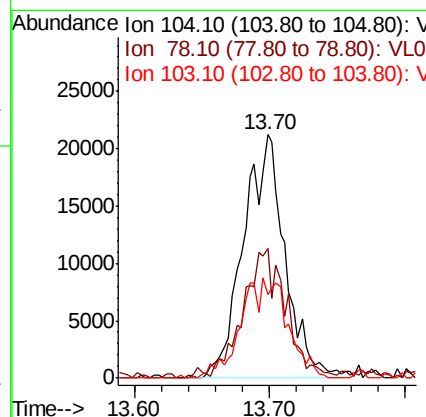
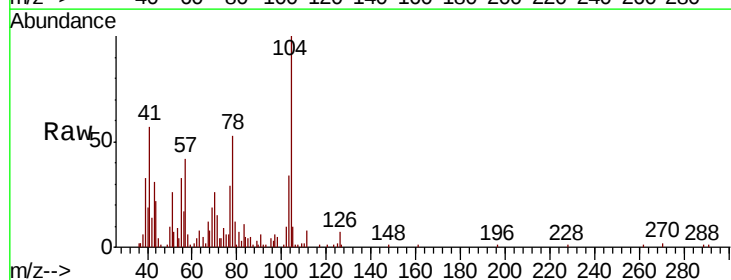
Manual Integrations
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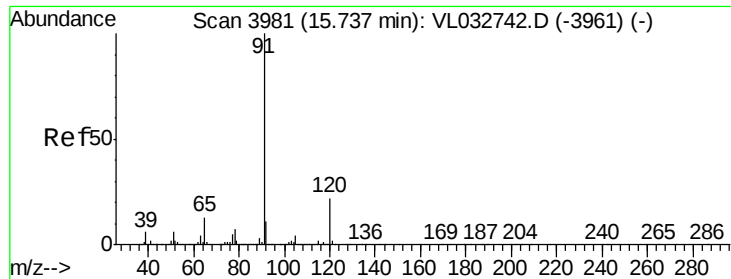
apatel
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#61
Styrene
Concen: 0.191 ppbv m
RT: 13.70 min Scan# 3347
Delta R.T. 0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
104	100		
78	0.0	42.2	63.4#
103	0.0	38.2	57.2#





#64

n-propylbenzene

Concen: 0.285 ppbv m

RT: 15.73 min Scan# 3980

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

ClientSampleId :

DSV-02

Tot Ion:120 Resp: 37111

Ion Ratio Lower Upper

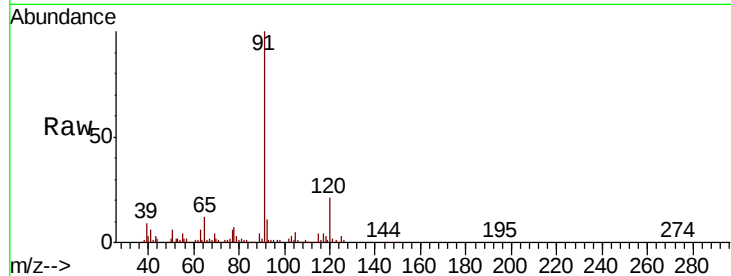
120 100

91 508.6 381.7 572.5

Manual Integrations
APPROVED

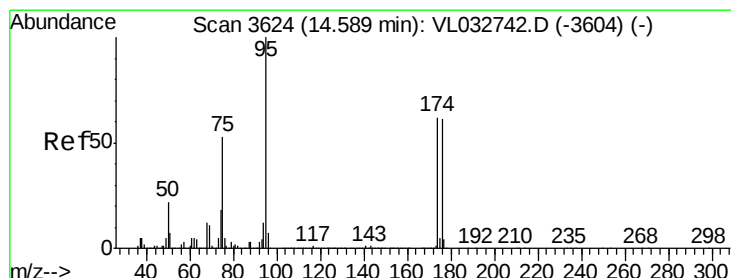
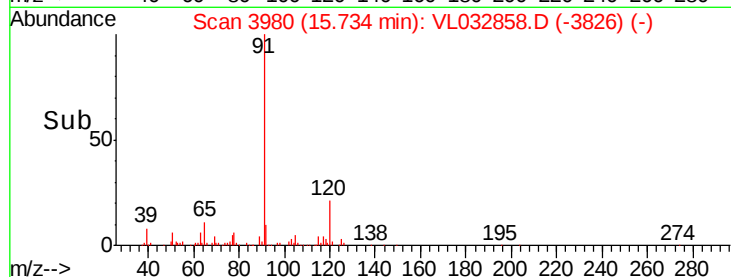
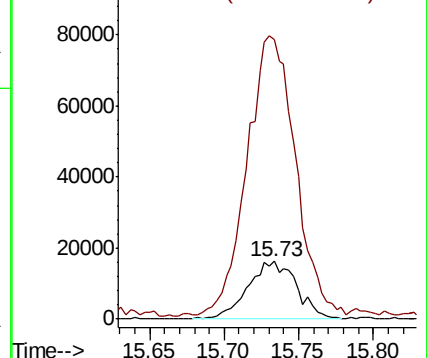
apatel

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Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#68

1-Bromo-4-Fluorobenzene

Concen: 10.227 ppbv

RT: 14.58 min Scan# 3622

Delta R.T. -0.01 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

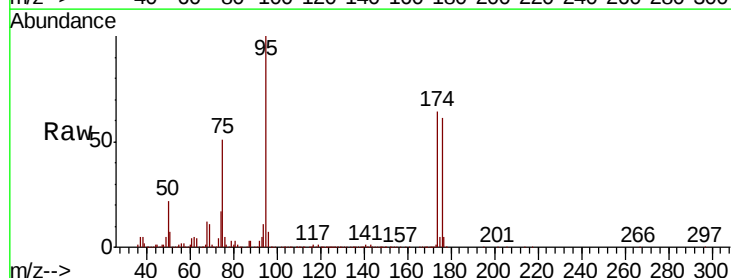
Tgt Ion: 95 Resp: 2599690

Ion Ratio Lower Upper

95 100

174 66.1 50.7 76.1

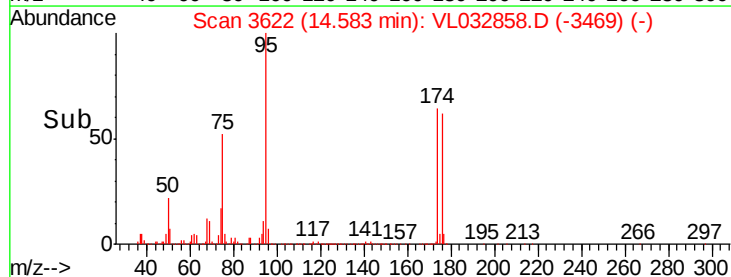
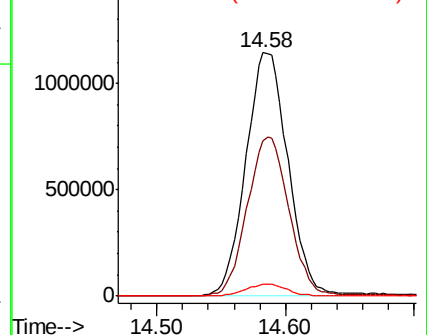
175 4.8 3.8 5.6

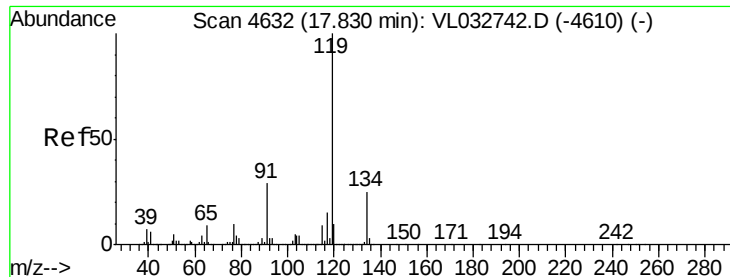


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





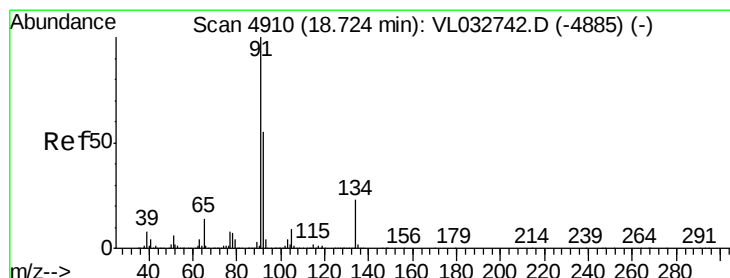
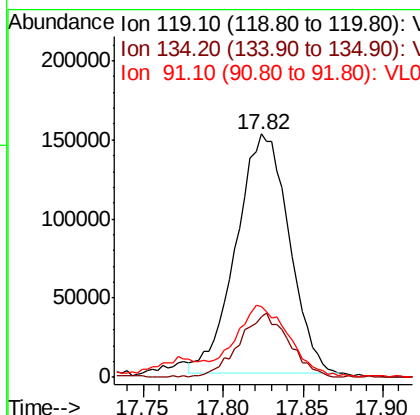
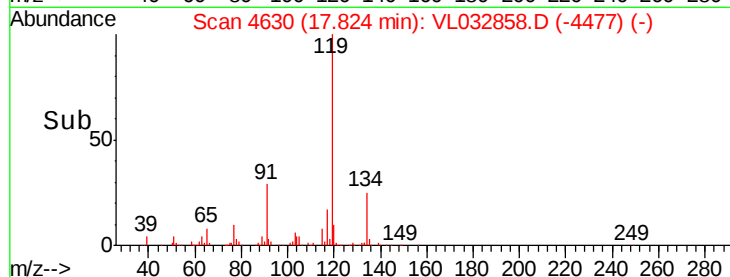
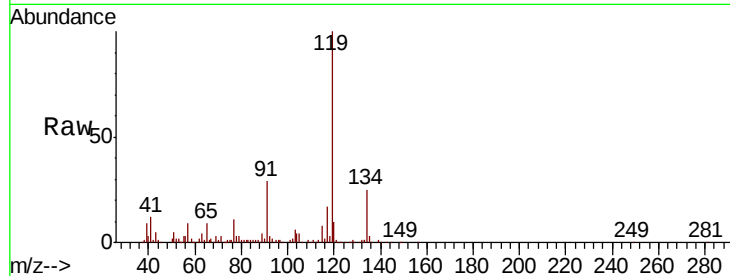
#69
p-Isopropyltoluene
Concen: 0.677 ppbv
RT: 17.82 min Scan# 4630
Delta R.T. -0.01 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Instrument :
MSVOA_L
ClientSampleId :
DSV-02

Tot Ion	Ratio	Resp	Lower	Upper
119	100	344140		
134	25.3	20.2	30.4	
91	37.3	23.5	35.3#	

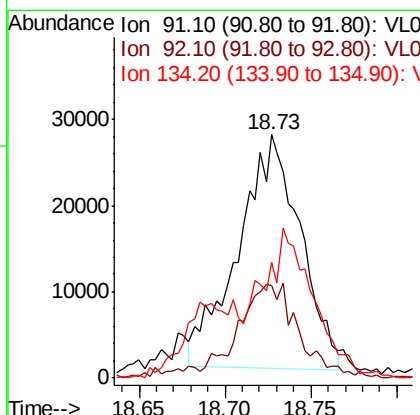
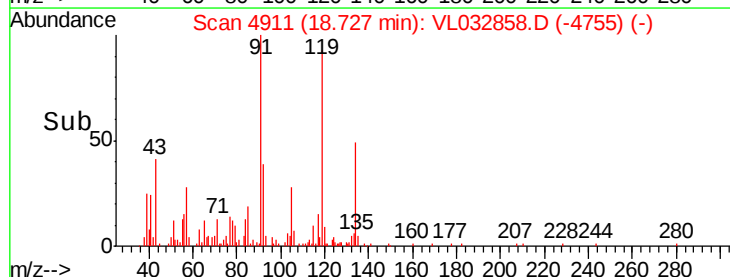
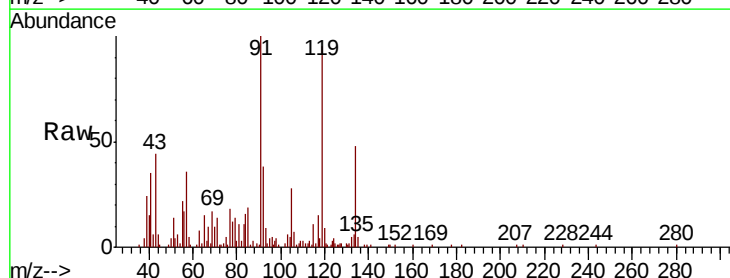
Manual Integrations
APPROVED

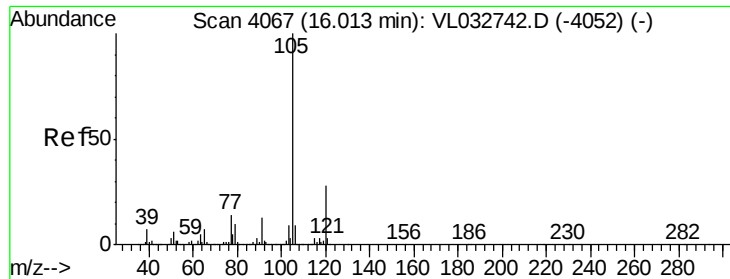
apatel
12/4/2018 4:11:18 PM



#70
n-Butylbenzene
Concen: 0.132 ppbv
RT: 18.73 min Scan# 4911
Delta R.T. 0.00 min
Lab File: VL032858.D
Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Resp	Lower	Upper
91	100	68007		
92	42.3	42.9	64.3#	
134	53.4	17.8	26.8#	





#72

4-Ethyltoluene

Concen: 0.671 ppbv

RT: 16.01 min Scan# 4067

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

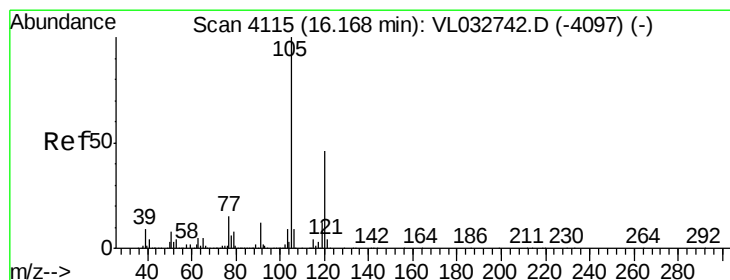
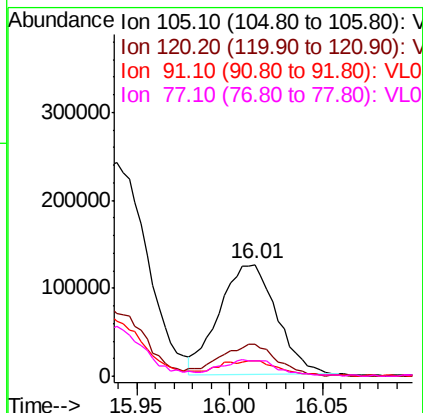
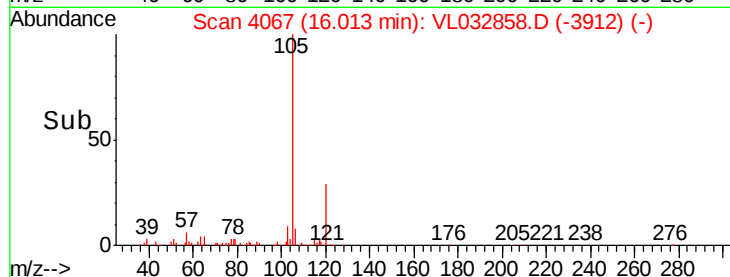
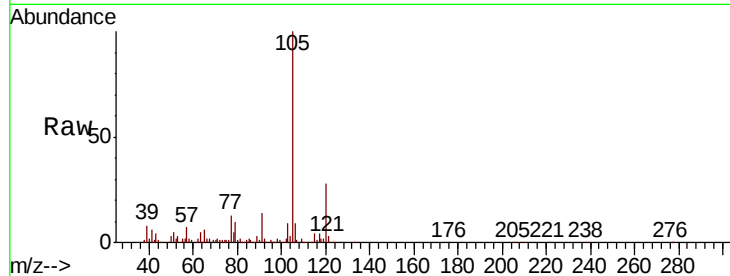
ClientSampled :

DSV-02

Tot Ion	Ratio	Resp	Lower	Upper
105	100	269298		
120	30.5	22.9	34.3	
91	14.4	10.6	15.8	
77	14.2	11.4	17.2	

Manual Integrations
APPROVED

apatel
12/4/2018 4:11:18 PM



#73

1,3,5-Trimethylbenzene

Concen: 0.512 ppbv m

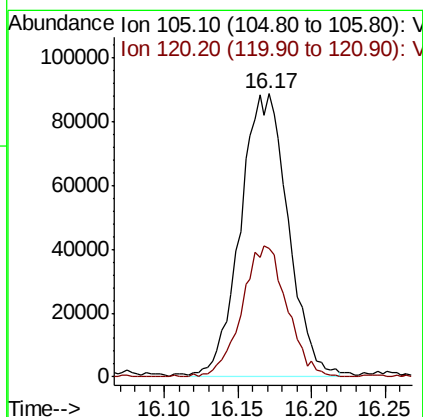
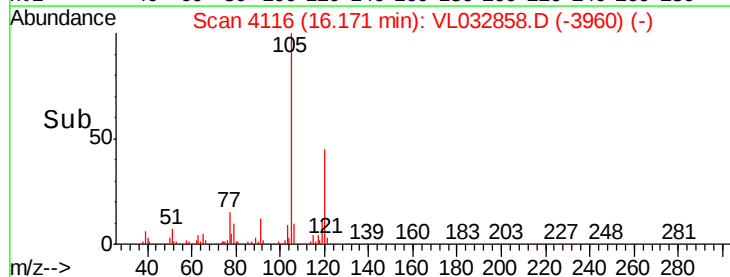
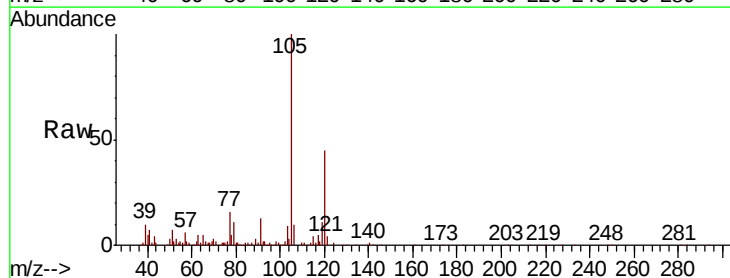
RT: 16.17 min Scan# 4116

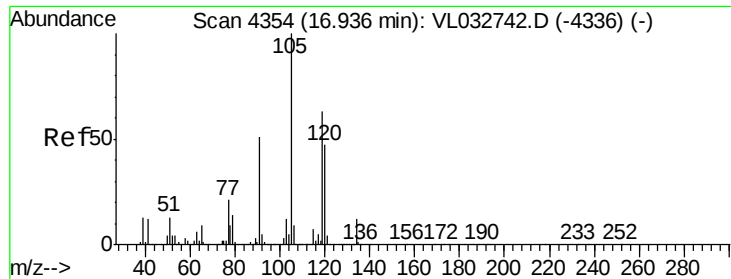
Delta R.T. 0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	200905		
120	45.2	36.6	55.0	





#74

1,2,4-Trimethylbenzene

Concen: 2.314 ppbv

RT: 16.94 min Scan# 4354

Delta R.T. -0.00 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Instrument :

MSVOA_L

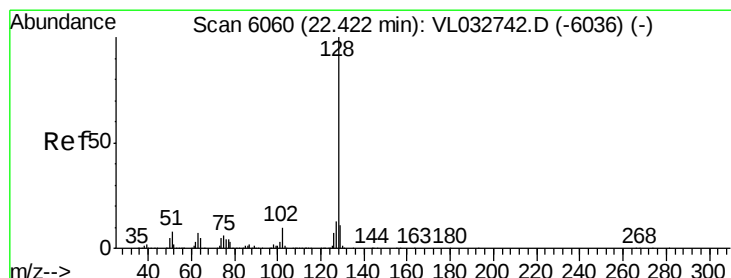
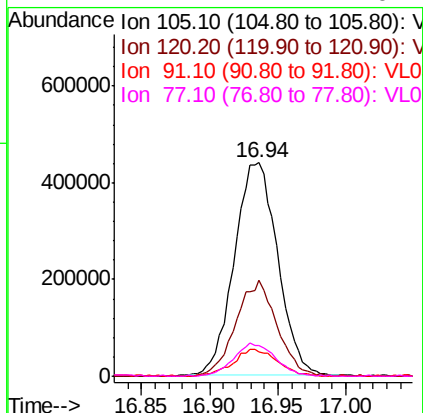
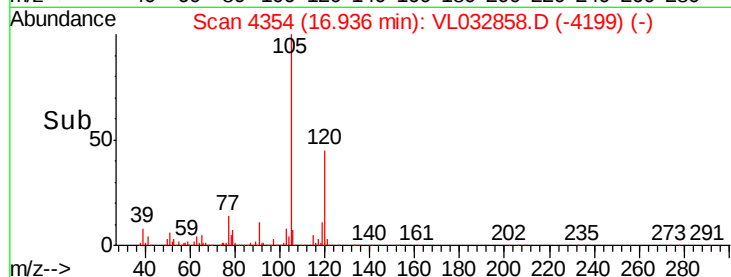
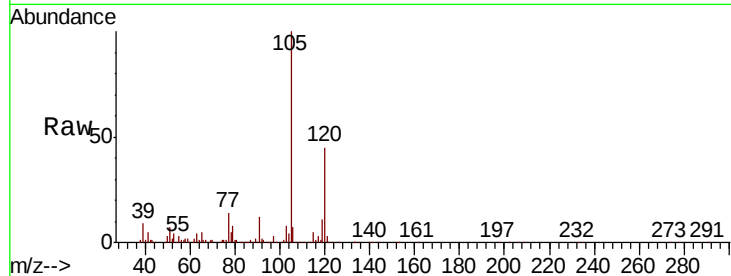
ClientSampled :

DSV-02

Tot Ion	Ratio	Lower	Upper
105	100		
120	44.7	37.6	56.4
91	11.4	42.5	63.7#
77	14.2	17.4	26.2#

Manual Integrations
APPROVED

apatel
12/4/2018 4:11:18 PM



#79

Naphthalene

Concen: 0.225 ppbv m

RT: 22.43 min Scan# 6062

Delta R.T. 0.01 min

Lab File: VL032858.D

Acq: 30 Nov 2018 20:59

Tgt Ion	Ratio	Lower	Upper
128	100		
127	8.8	10.1	15.1#
129	16.9	8.9	13.3#

