

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110718\
 Data File : VL032735.D
 Acq On : 8 Nov 2018 3:00
 Operator : SY/AP
 Sample : J5823-06
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-02

Manual Integrations
 APPROVED

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 11/12/2018 12:30:23 PM

Quant Time: Nov 12 03:44:49 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL101818AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Oct 25 2018
 QLast Update : Thu Oct 25 05:15:43 2018
 Response via : Initial Calibration

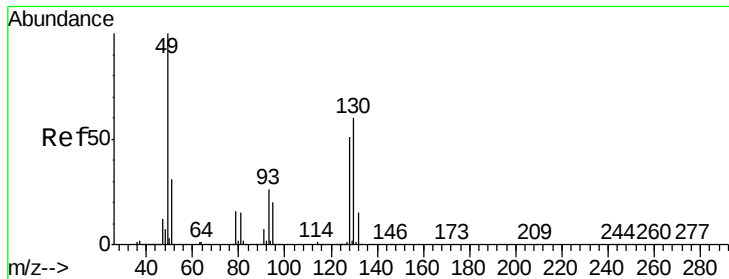
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1352826	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.31	114	3497561	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3321714	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.59	95	2545385	10.29	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	35470	0.257	ppbv	91
3) Chlorodifluoromethane	3.02	51	29046m	0.275	ppbv	
4) Chloromethane	3.18	50	52734	0.892	ppbv	97
9) Propene	3.04	41	175224	4.025	ppbv	90
10) Heptane	8.26	43	171924	1.025	ppbv	94
11) Trichlorofluoromethane	4.01	101	42455	0.236	ppbv	98
13) Ethanol	3.68	45	7033413	565.206	ppbv	98
15) Acetone	3.90	43	11587451	92.757	ppbv	96
17) tert-Butyl alcohol	4.39	59	119066m	3.241	ppbv	
19) Isopropyl Alcohol	4.05	45	717320	8.063	ppbv #	1
20) Methylene Chloride	4.42	84	175949	2.775	ppbv	95
26) Hexane	5.79	57	382044	2.808	ppbv #	62
30) Cyclohexane	7.26	84	69575	0.646	ppbv	89
34) 2-Butanone	5.34	43	206663	1.102	ppbv	99
35) Carbon Tetrachloride	7.15	117	21541	0.087	ppbv	93
36) Benzene	7.01	78	920920	3.242	ppbv	98
44) 2,2,4-Trimethylpentane	8.00	57	1258347	2.595	ppbv	93
52) Tetrachloroethene	11.39	164	19410m	0.196	ppbv	
53) Toluene	9.96	91	11403322	35.026	ppbv	97
58) Ethyl Benzene	12.87	91	739224	1.916	ppbv	98
59) m/p-Xylene	13.13	91	2404143	6.996	ppbv	100
60) o-Xylene	13.86	91	879989	2.655	ppbv	98
61) Styrene	13.70	104	52708m	0.237	ppbv	
64) n-propylbenzene	15.74	120	24673m	0.212	ppbv	
72) 4-Ethyltoluene	16.01	105	180358	0.511	ppbv #	96
73) 1,3,5-Trimethylbenzene	16.16	105	167242	0.486	ppbv	92
74) 1,2,4-Trimethylbenzene	16.94	105	684308	1.863	ppbv #	77

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 882

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampleId :

IA-02

Tot Ion: 49 Resp: 1352826

Ion Ratio Lower Upper

49 100

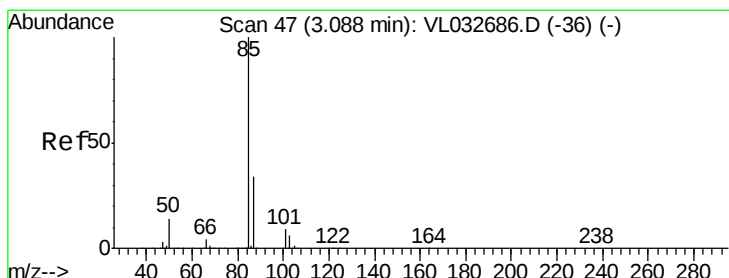
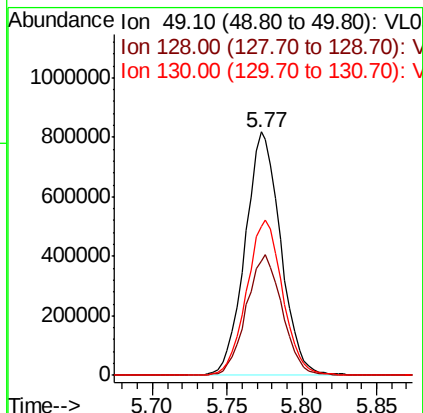
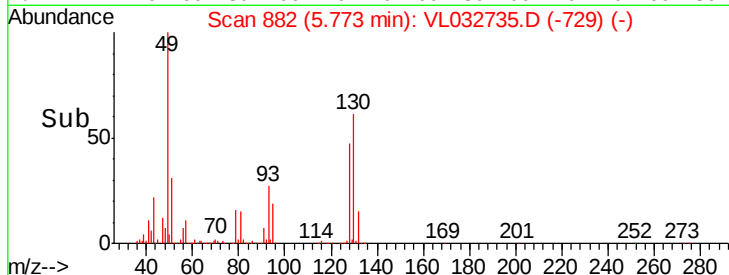
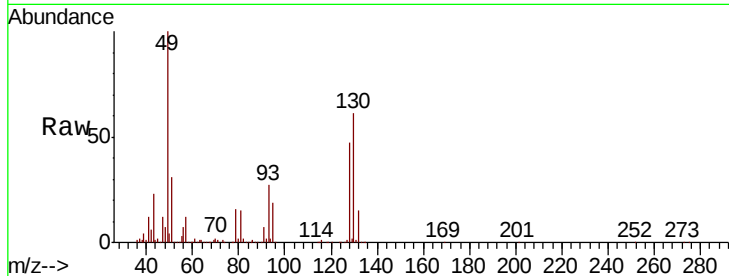
128 50.1 22.3 66.8

130 64.9 28.4 85.3

Manual Integrations
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#2

Dichlorodifluoromethane

Concen: 0.257 ppbv

RT: 3.08 min Scan# 45

Delta R.T. -0.00 min

Lab File: VL032735.D

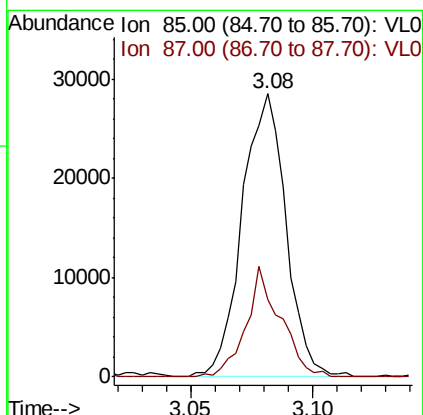
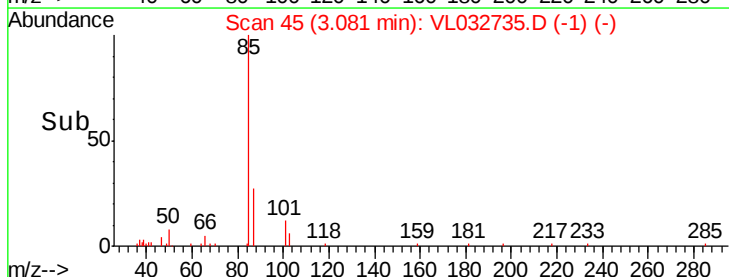
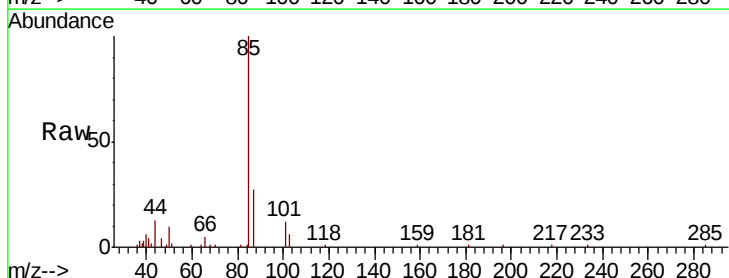
Acq: 8 Nov 2018 3:00

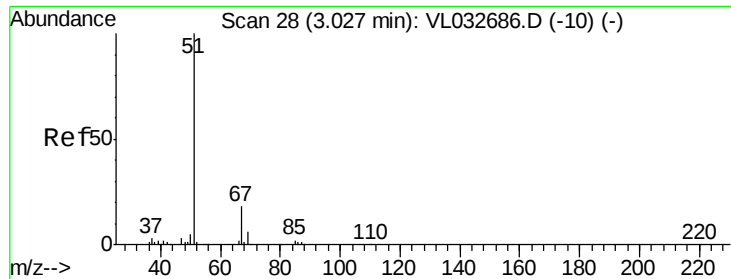
Tgt Ion: 85 Resp: 35470

Ion Ratio Lower Upper

85 100

87 27.5 26.2 39.2





#3

Chlorodifluoromethane

Concen: 0.275 ppbv

RT: 3.02 min Scan# 25

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampleId :

IA-02

Tot Ion: 51 Resp: 29046

Ion Ratio Lower Upper

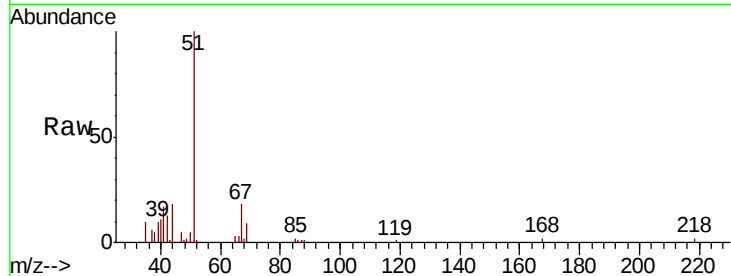
51 100

67 22.0 15.2 22.8

Manual Integrations
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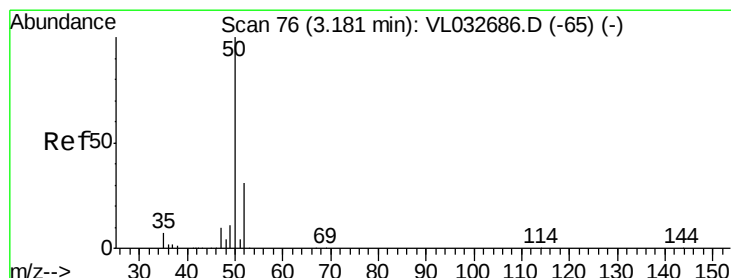
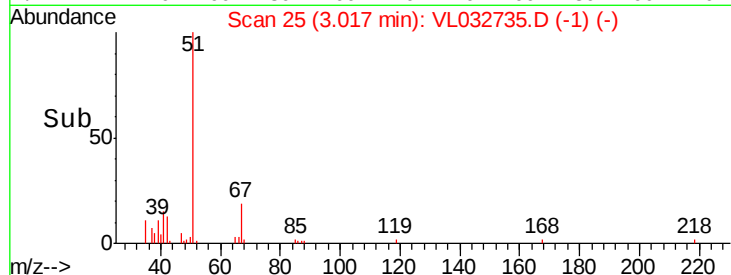
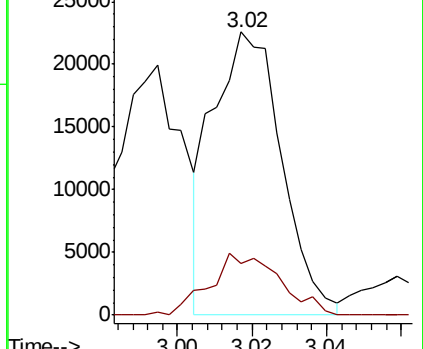
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.892 ppbv

RT: 3.18 min Scan# 75

Delta R.T. -0.00 min

Lab File: VL032735.D

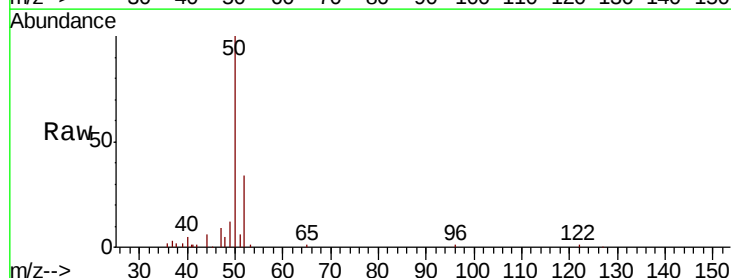
Acq: 8 Nov 2018 3:00

Tgt Ion: 50 Resp: 52734

Ion Ratio Lower Upper

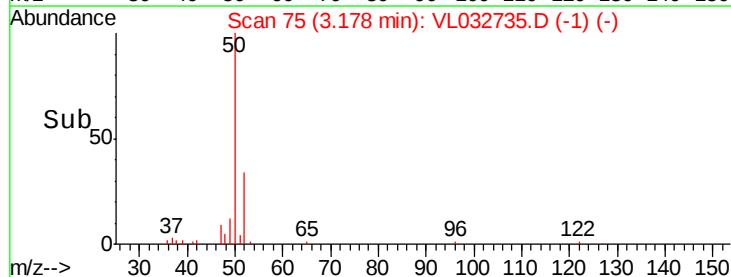
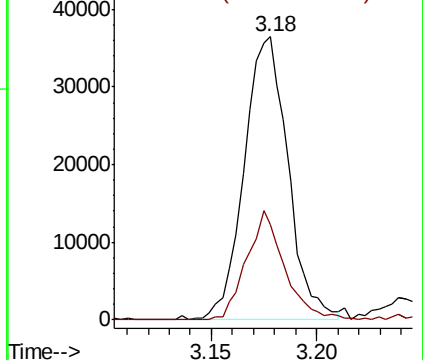
50 100

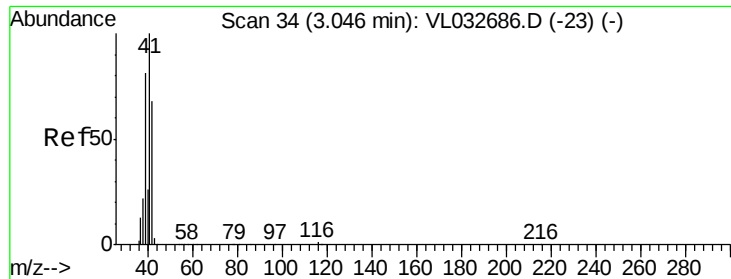
52 34.3 25.9 38.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 4.025 ppbv

RT: 3.04 min Scan# 33

Delta R.T. -0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampleId :

IA-02

Tot Ion: 41 Resp: 175224

Ion Ratio Lower Upper

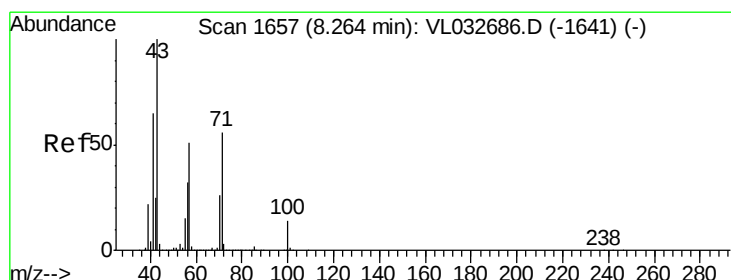
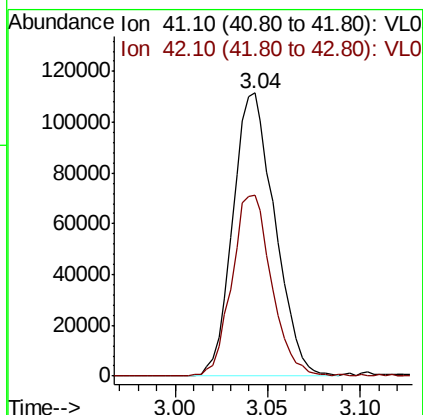
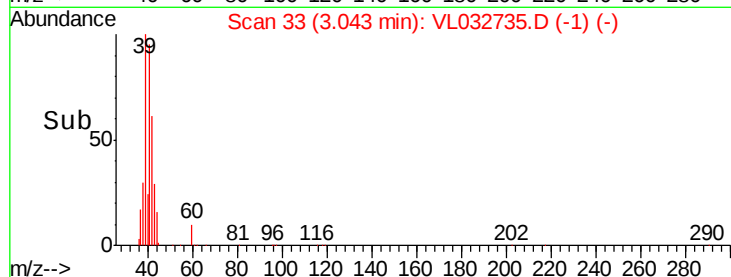
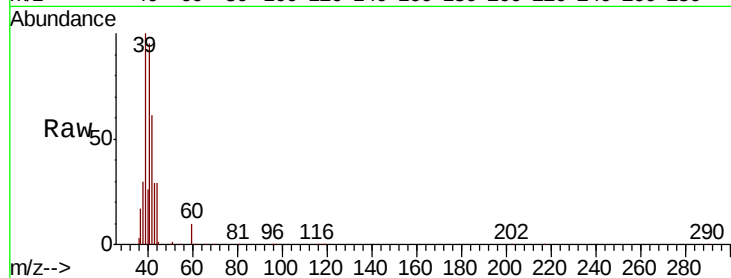
41 100

42 61.2 55.4 83.0

Manual Integrations
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#10

Heptane

Concen: 1.025 ppbv

RT: 8.26 min Scan# 1655

Delta R.T. -0.00 min

Lab File: VL032735.D

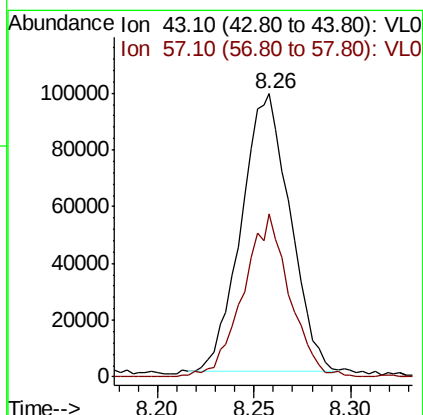
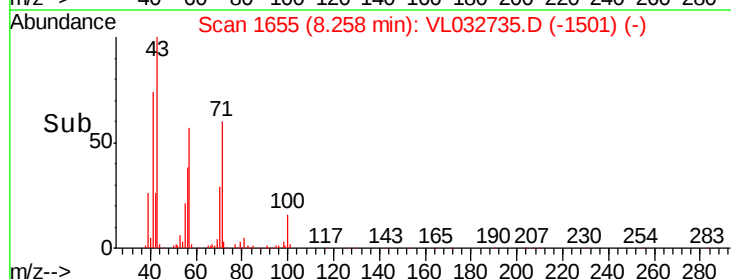
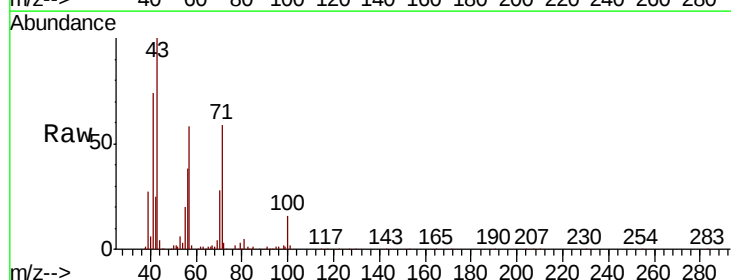
Acq: 8 Nov 2018 3:00

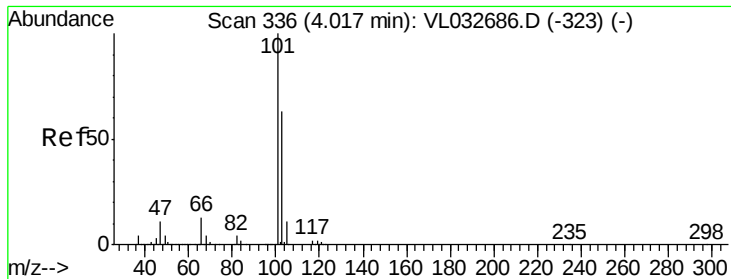
Tgt Ion: 43 Resp: 171924

Ion Ratio Lower Upper

43 100

57 56.1 41.5 62.3





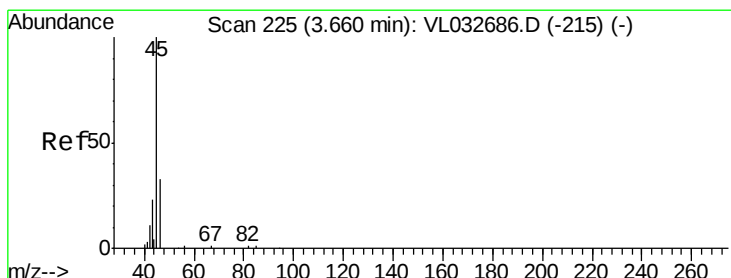
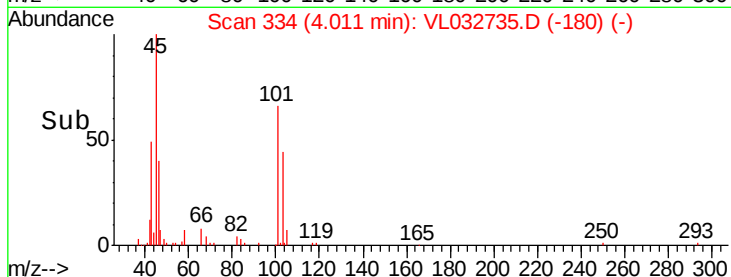
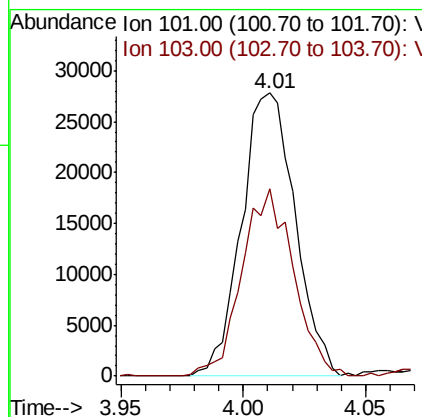
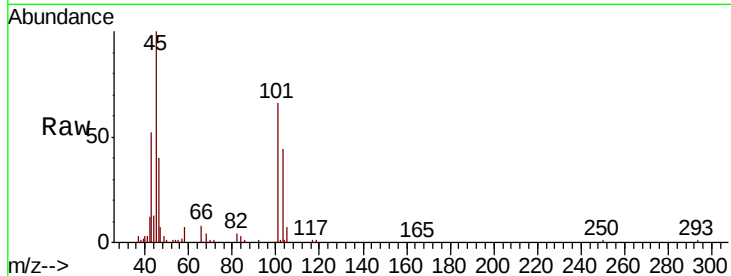
#11
Trichlorofluoromethane
Concen: 0.236 ppbv
RT: 4.01 min Scan# 334
Delta R.T. -0.00 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Instrument :
MSVOA_L
ClientSampleId :
IA-02

Tot Ion	Ion	Ratio	Lower	Upper
42455	101	100		
	103	65.6	51.4	77.2

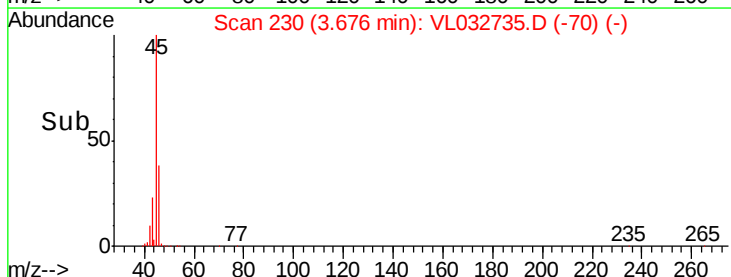
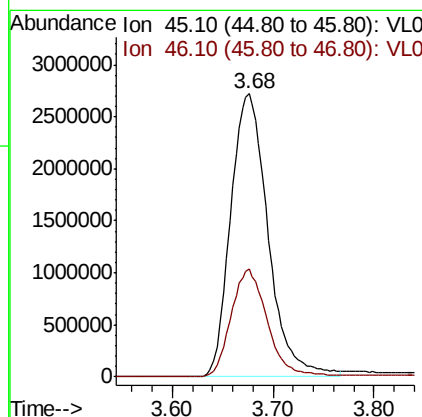
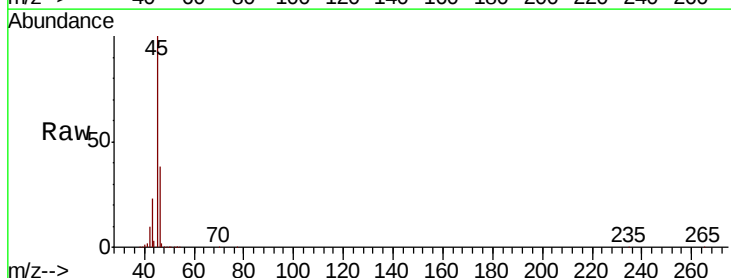
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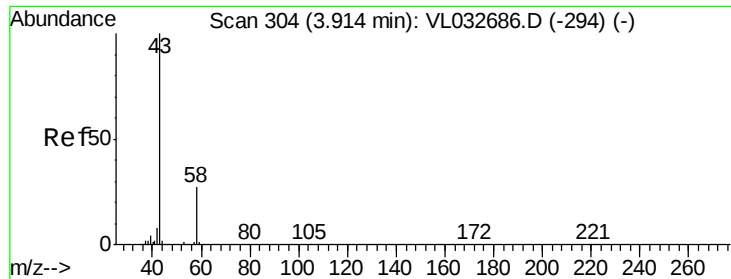
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#13
Ethanol
Concen: 565.206 ppbv
RT: 3.68 min Scan# 230
Delta R.T. 0.02 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Tgt Ion	Ion	Ratio	Lower	Upper
7033413	45	100		
	46	37.3	15.4	61.8





#15

Acetone

Concen: 92.757 ppbv

RT: 3.90 min Scan# 300

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampled :

IA-02

Tot Ion: 43 Resp: 11587451

Ion Ratio Lower Upper

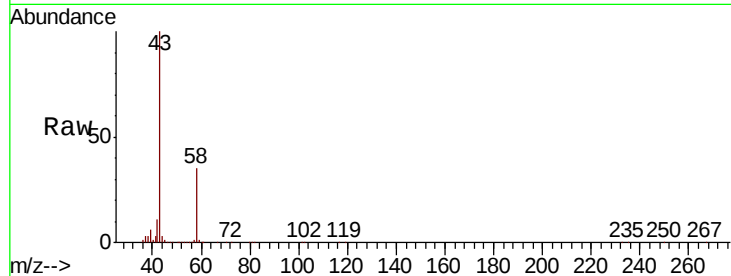
43 100

58 29.8 22.1 33.1

Manual Integrations
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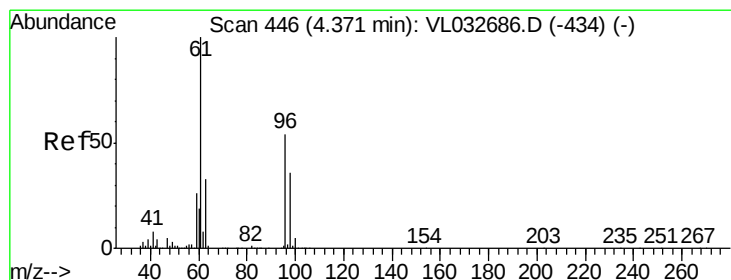
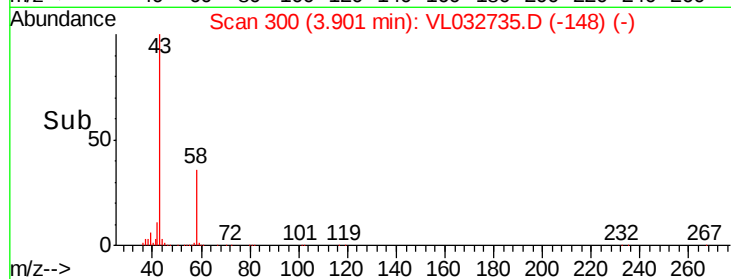
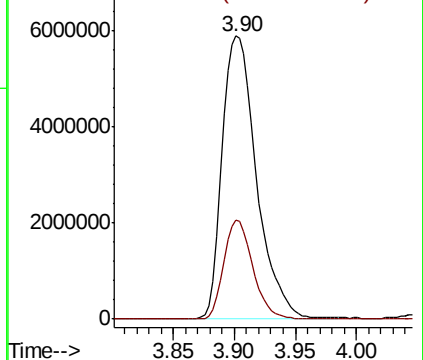
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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#17

tert-Butyl alcohol

Concen: 3.241 ppbv m

RT: 4.39 min Scan# 451

Delta R.T. 0.01 min

Lab File: VL032735.D

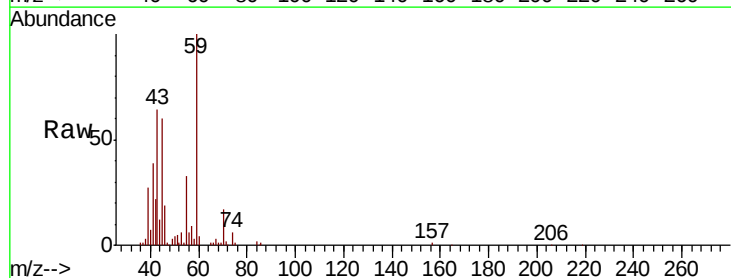
Acq: 8 Nov 2018 3:00

Tgt Ion: 59 Resp: 119066

Ion Ratio Lower Upper

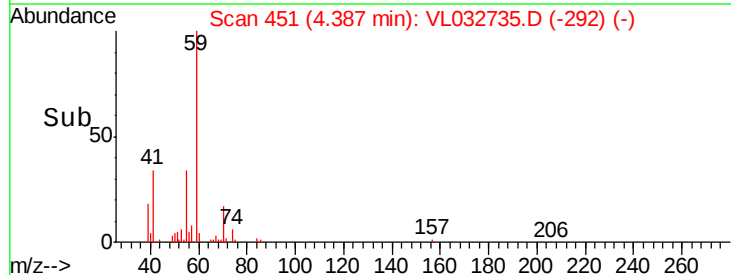
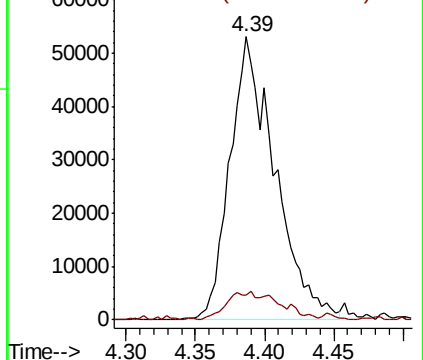
59 100

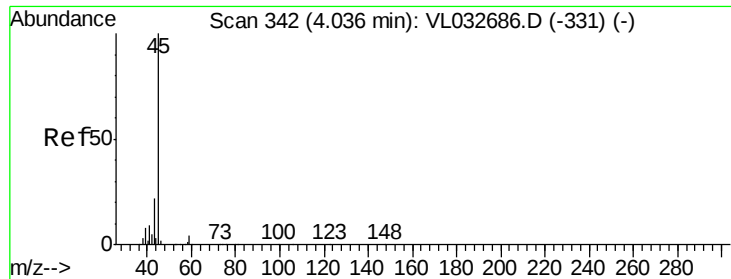
57 0.0 0.0 0.0



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#19

Isopropyl Alcohol

Concen: 8.063 ppbv

RT: 4.05 min Scan# 347

Delta R.T. 0.02 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampleId :

IA-02

Tot Ion: 45 Resp: 717320

Ion Ratio Lower Upper

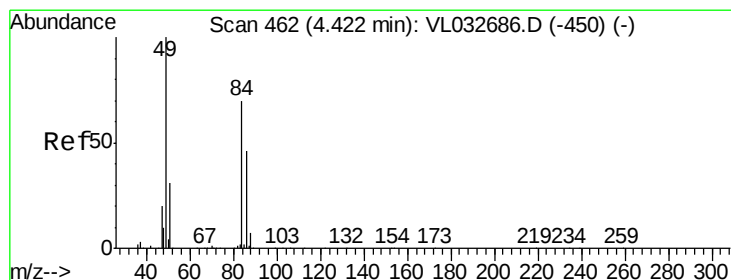
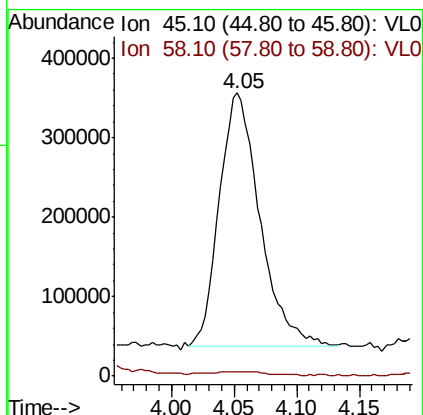
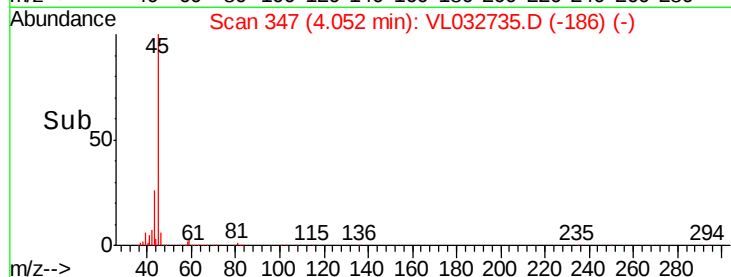
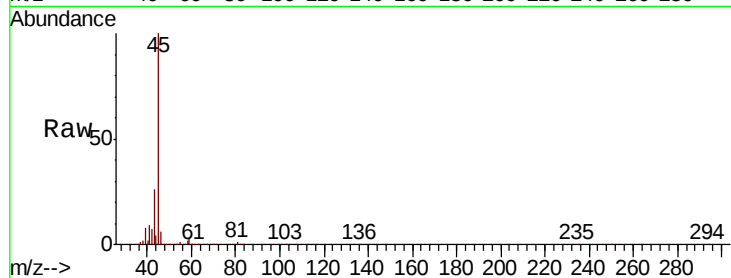
45 100

58 481.7 2.0 3.0#

Manual Integrations
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#20

Methylene Chloride

Concen: 2.775 ppbv

RT: 4.42 min Scan# 462

Delta R.T. 0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Tgt Ion: 84 Resp: 175949

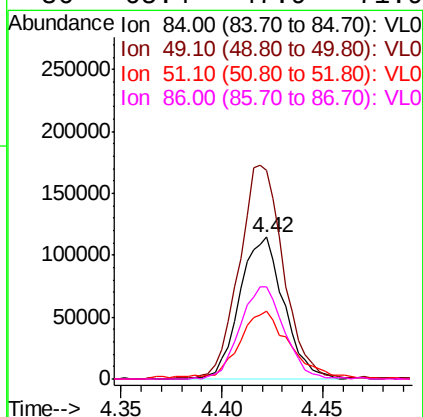
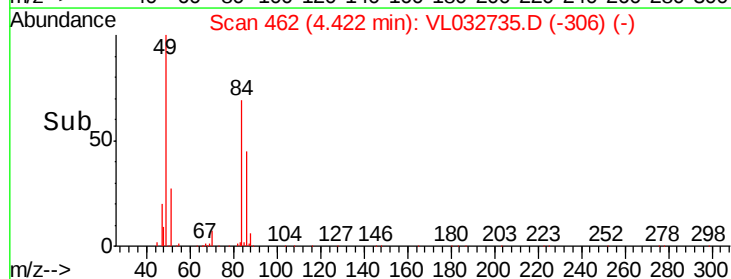
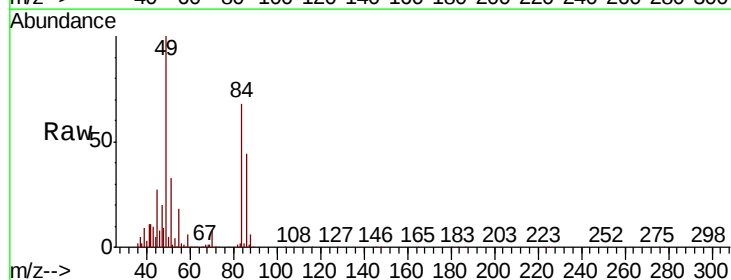
Ion Ratio Lower Upper

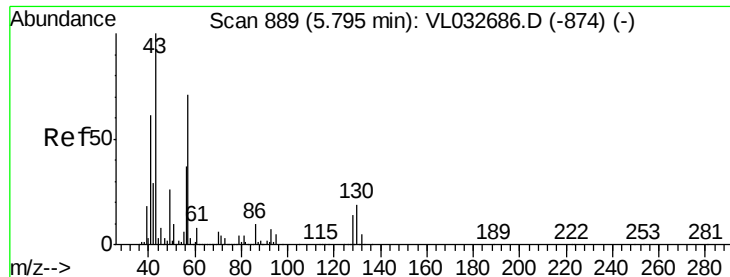
84 100

49 146.0 113.5 170.3

51 46.5 34.8 52.2

86 65.4 47.9 71.9





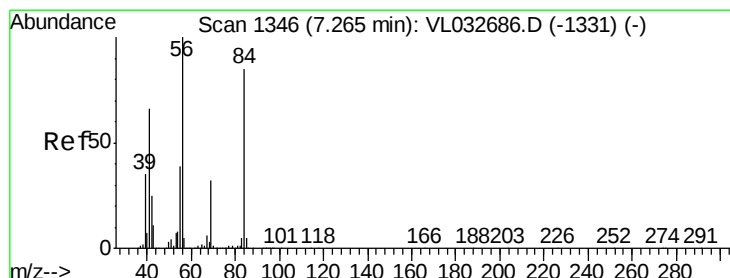
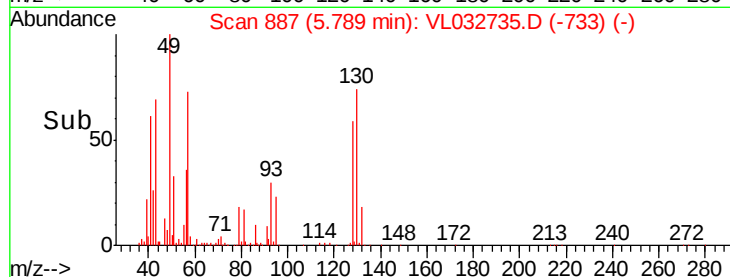
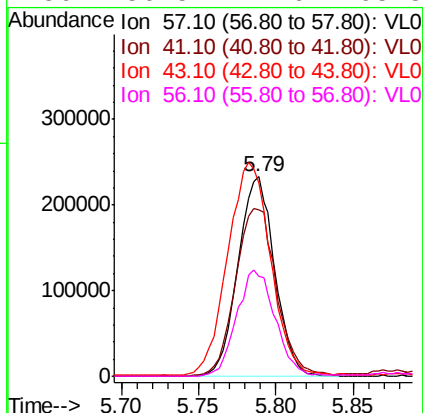
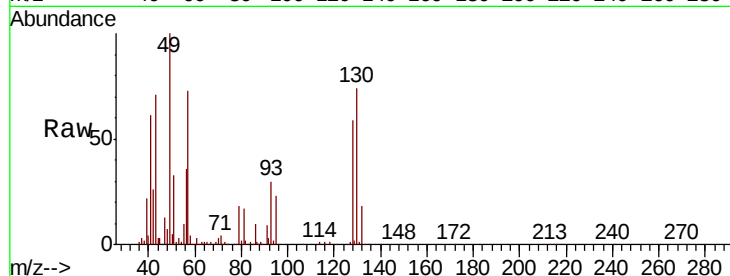
#26
Hexane
Concen: 2.808 ppbv
RT: 5.79 min Scan# 887
Delta R.T. -0.00 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Instrument :
MSVOA_L
ClientSampleId :
IA-02

Tot Ion	Ratio	Lower	Upper
57	100		
41	95.2	67.4	101.0
43	126.0	171.9	257.9#
56	56.5	42.6	63.8

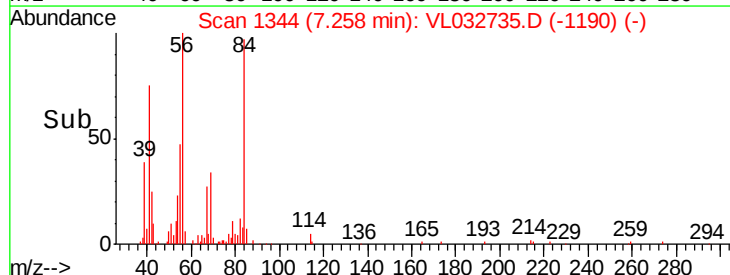
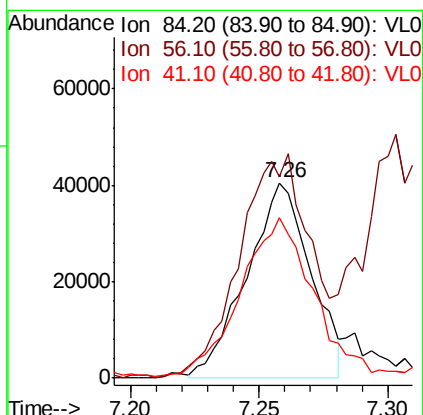
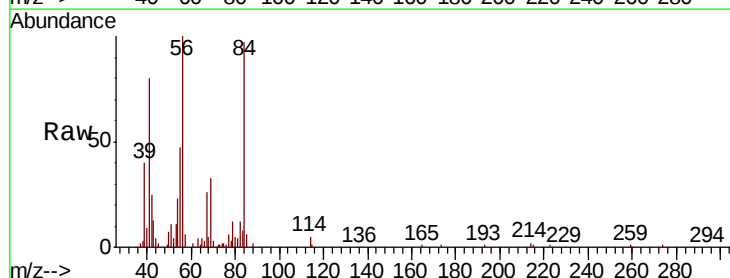
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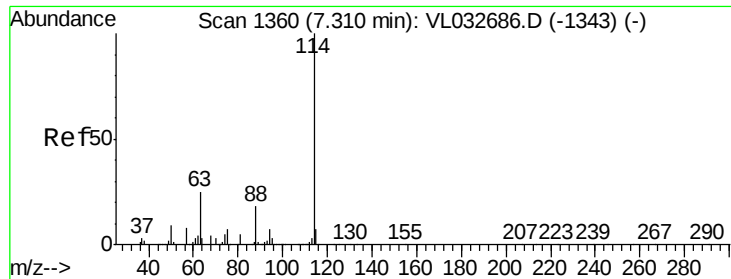
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#30
Cyclohexane
Concen: 0.646 ppbv
RT: 7.26 min Scan# 1344
Delta R.T. -0.00 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Tgt Ion	Ratio	Lower	Upper
84	100		
56	123.1	108.3	162.5
41	90.8	64.8	97.2





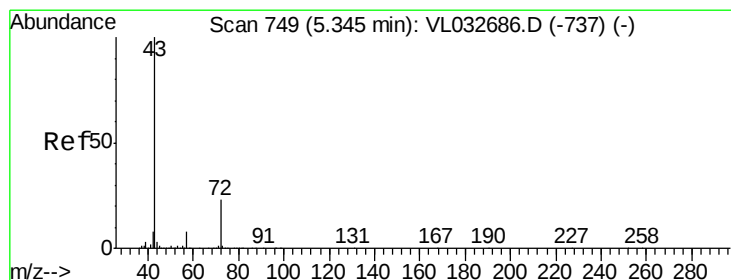
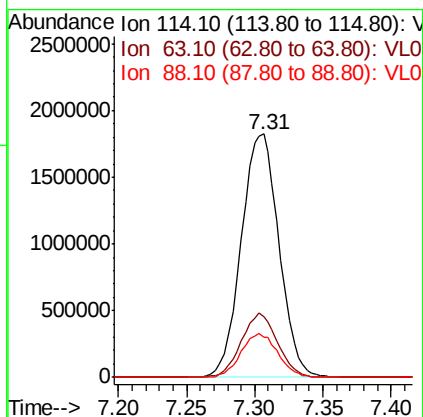
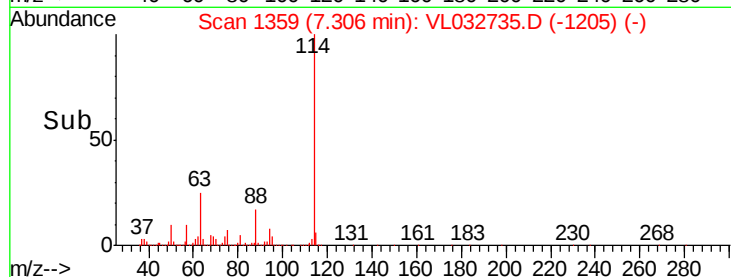
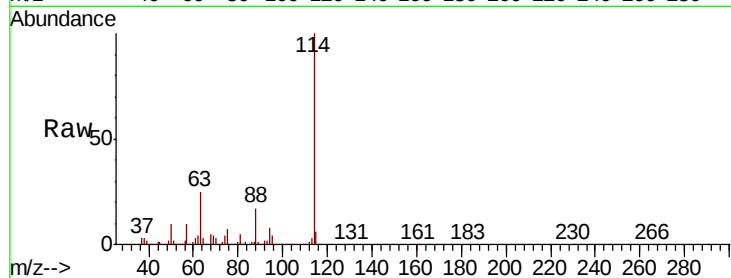
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.31 min Scan# 1359
 Delta R.T. -0.00 min
 Lab File: VL032735.D
 Acq: 8 Nov 2018 3:00

Instrument :
 MSVOA_L
 ClientSampled :
 IA-02

Tot Ion:114 Resp: 3497561
 Ion Ratio Lower Upper
 114 100
 63 25.4 21.7 32.5
 88 17.6 14.9 22.3

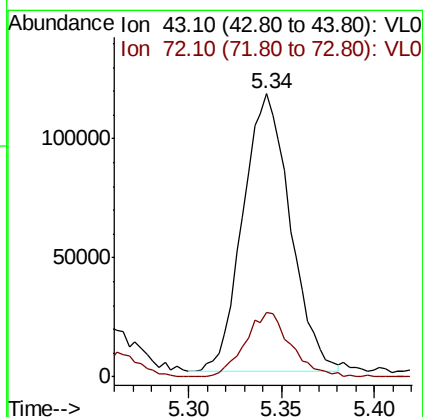
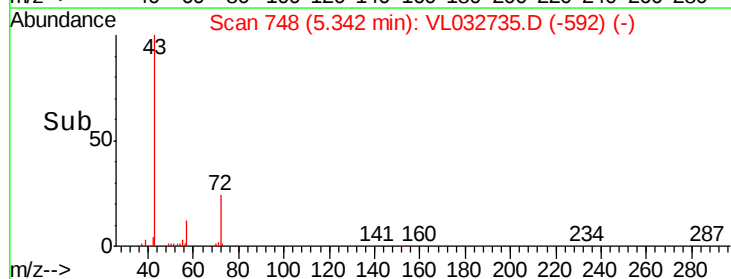
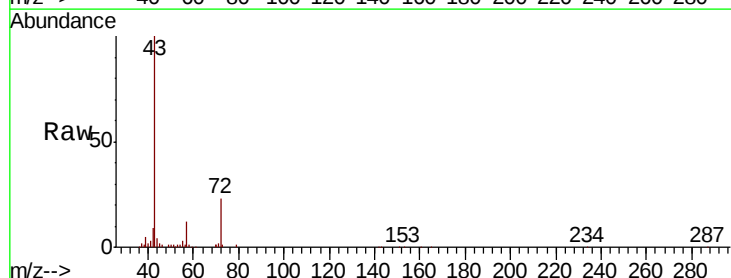
Manual Integrations
 APPROVED

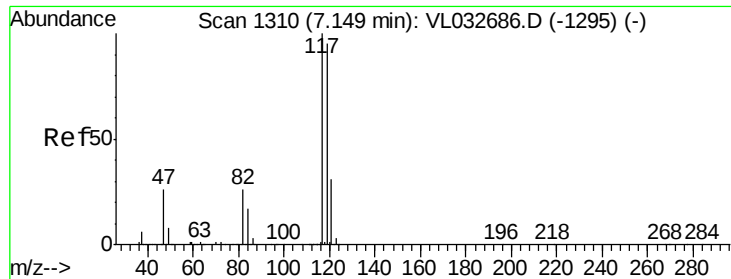
MMDadoda
 11/12/2018 12:30:23 PM



#34
 2-Butanone
 Concen: 1.102 ppbv
 RT: 5.34 min Scan# 748
 Delta R.T. 0.00 min
 Lab File: VL032735.D
 Acq: 8 Nov 2018 3:00

Tgt Ion: 43 Resp: 206663
 Ion Ratio Lower Upper
 43 100
 72 22.6 18.6 27.8





#35

Carbon Tetrachloride

Concen: 0.087 ppbv

RT: 7.15 min Scan# 1309

Delta R.T. -0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

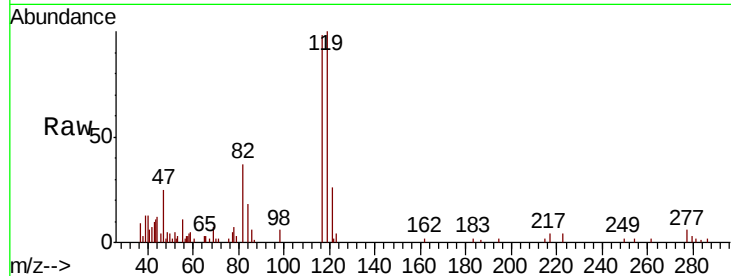
ClientSampled :

IA-02

Tot Ion	Ratio	Lower	Upper
117	100		
119	102.6	75.7	113.5
121	28.6	24.7	37.1

Manual Integrations
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MMDadoda
11/12/2018 12:30:23 PM

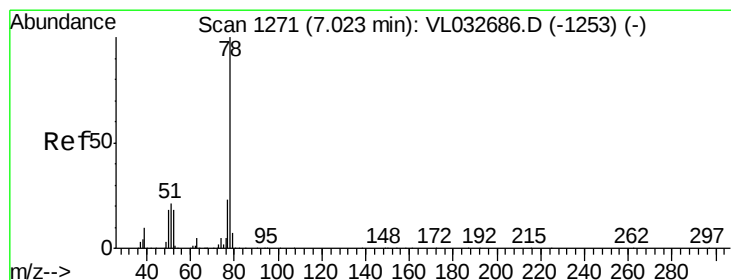
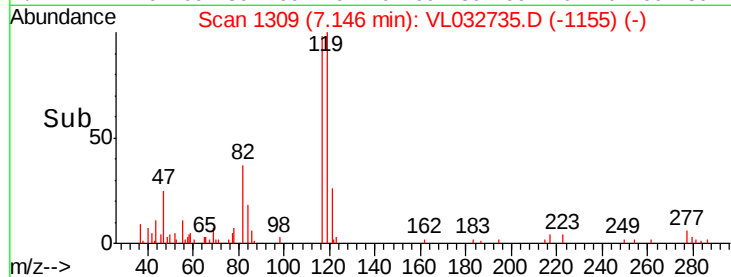
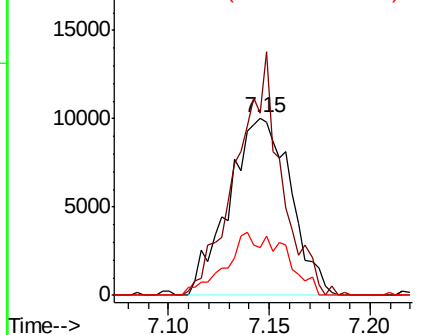


Abundance

Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 3.242 ppbv

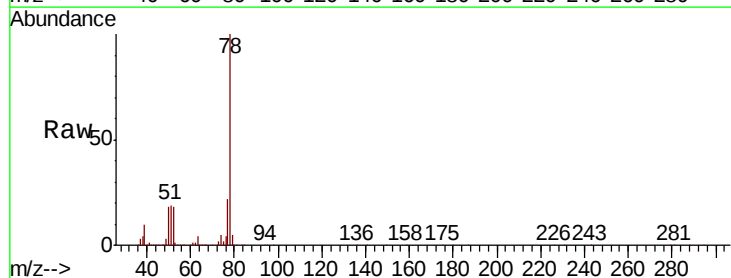
RT: 7.01 min Scan# 1268

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Tgt Ion	Ratio	Lower	Upper
78	100		
77	22.2	18.1	27.1
50	17.4	15.1	22.7

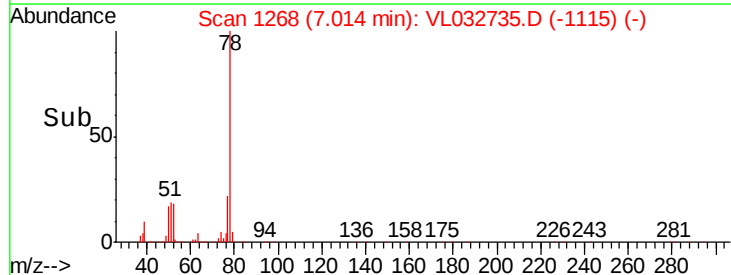
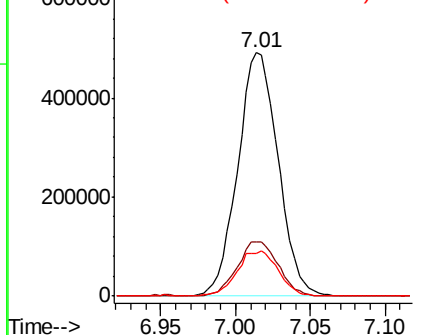


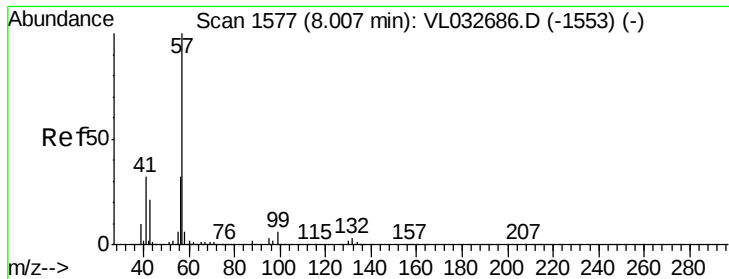
Abundance

Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 2.595 ppbv

RT: 8.00 min Scan# 1574

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampled :

IA-02

Tot Ion: 57 Resp: 1258347

Ion Ratio Lower Upper

57 100

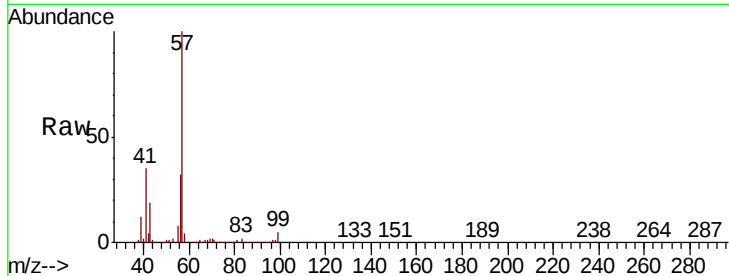
41 36.2 24.7 37.1

56 34.0 25.0 37.4

Manual Integrations
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Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

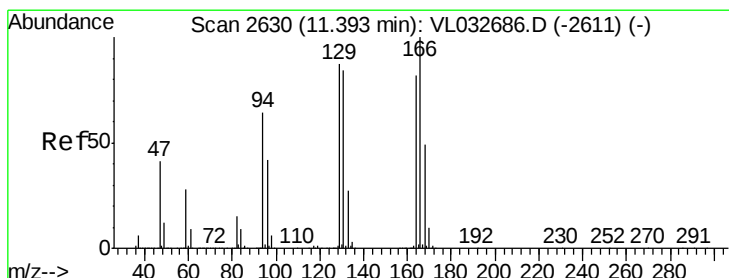
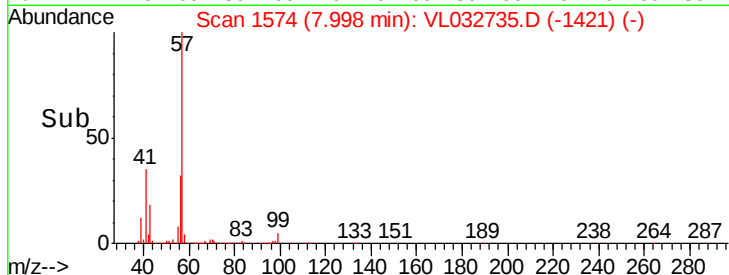
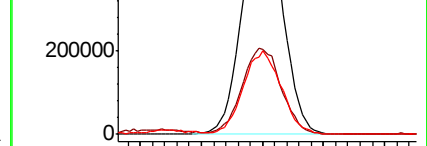
8.00

600000

400000

200000

0



#52

Tetrachloroethene

Concen: 0.196 ppbv m

RT: 11.39 min Scan# 2629

Delta R.T. -0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Tgt Ion:164 Resp: 19410

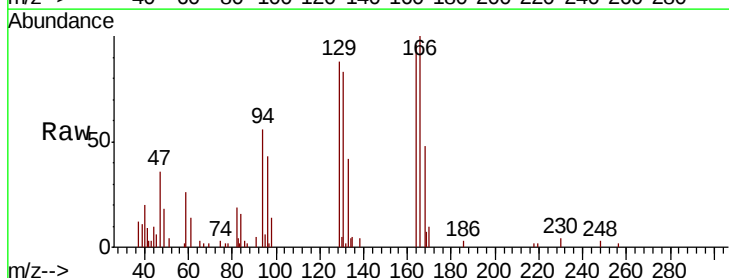
Ion Ratio Lower Upper

164 100

166 104.6 100.5 150.7

129 91.8 90.0 135.0

131 86.9 86.6 129.8



Abundance

Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

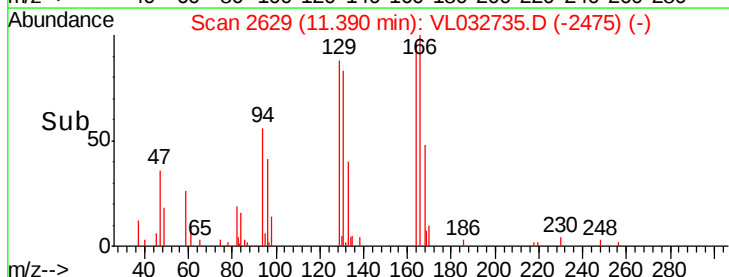
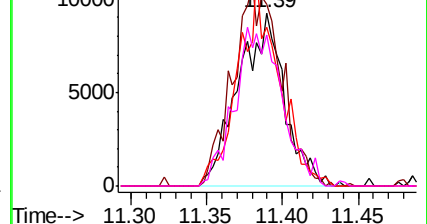
Ion 131.00 (130.70 to 131.70): V

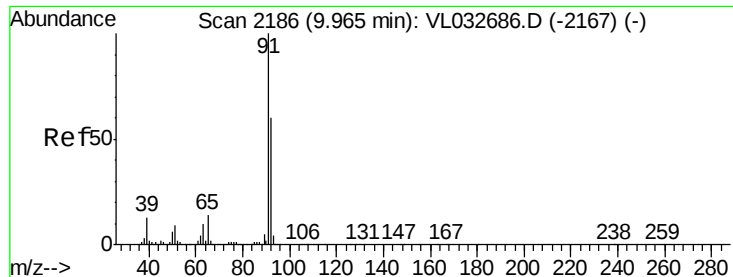
15000

10000

5000

0





#53

Toluene

Concen: 35.026 ppbv

RT: 9.96 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampled :

IA-02

Tot Ion: 91 Resp: 11403322

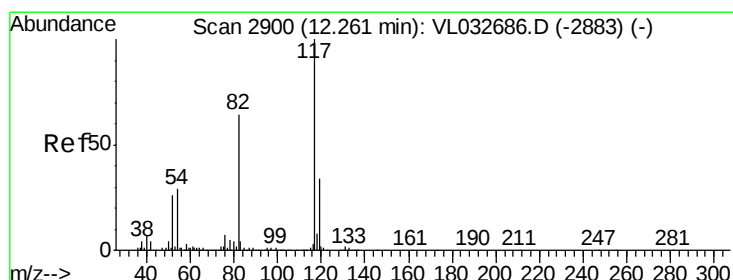
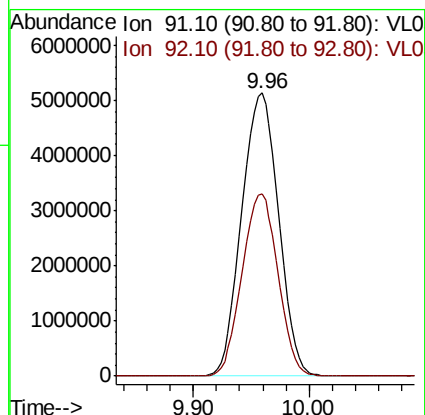
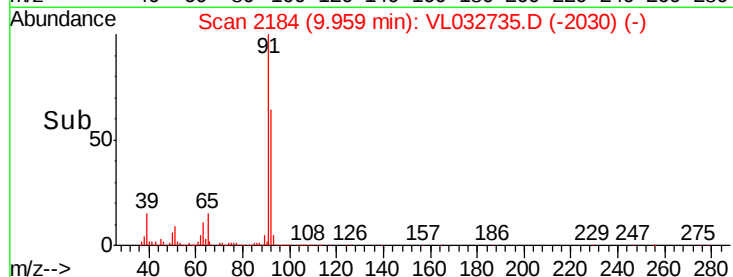
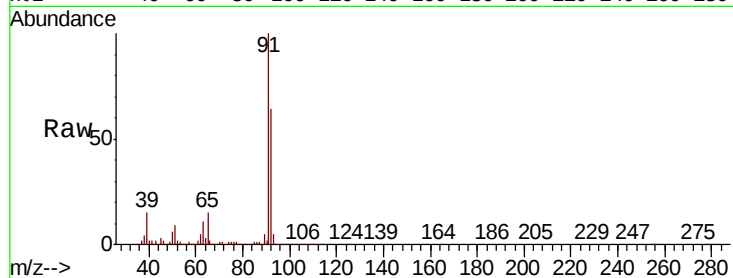
Ion Ratio Lower Upper

91 100

92 62.9 48.4 72.6

Manual Integrations
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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2897

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

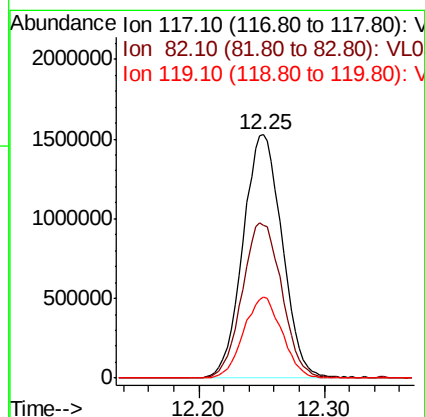
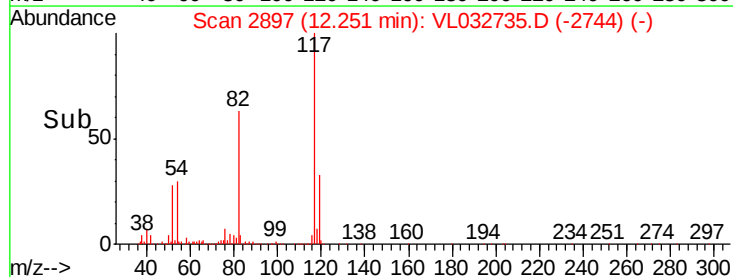
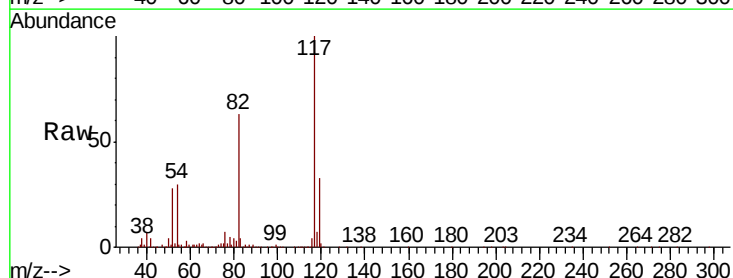
Tgt Ion: 117 Resp: 3321714

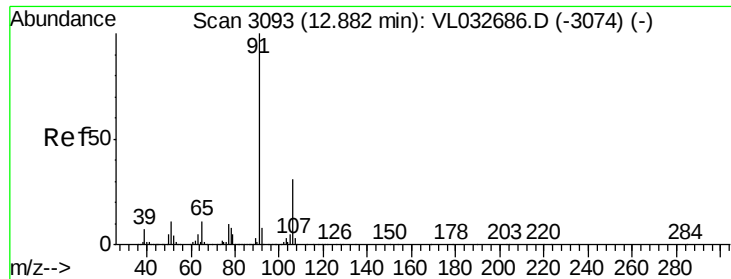
Ion Ratio Lower Upper

117 100

82 64.4 52.7 79.1

119 32.7 26.7 40.1





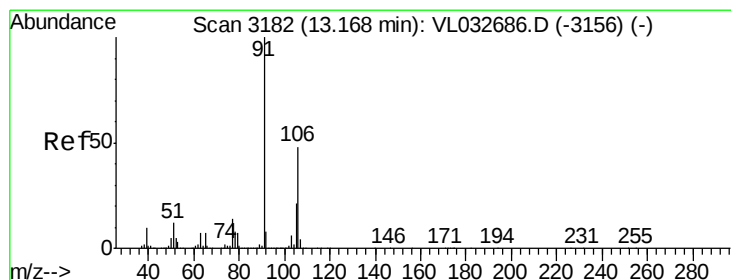
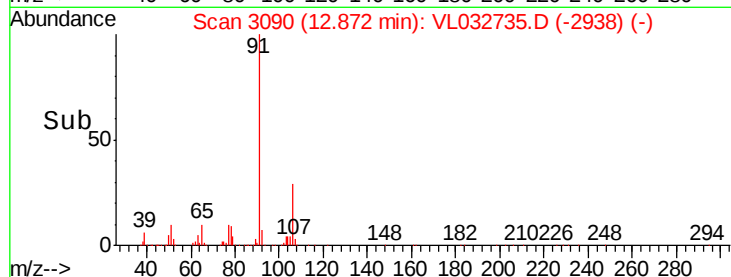
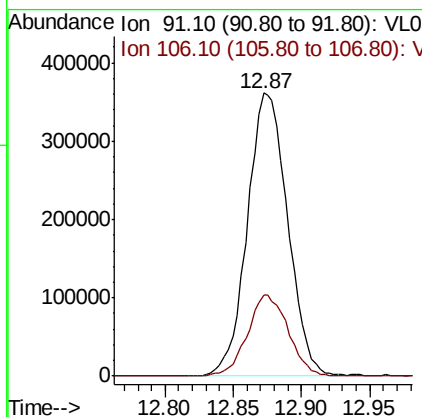
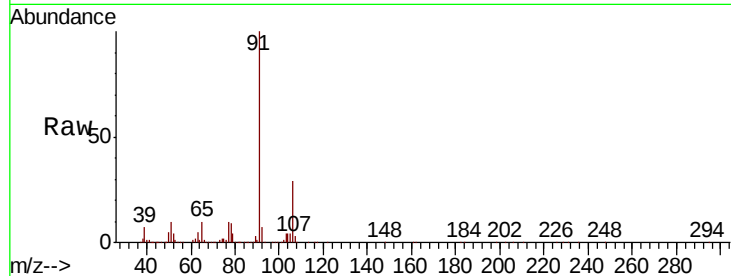
#58
Ethyl Benzene
Concen: 1.916 ppbv
RT: 12.87 min Scan# 3090
Delta R.T. -0.01 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Instrument :
MSVOA_L
ClientSampled :
IA-02

Tot Ion	Ratio	Lower	Upper
91	100		
106	28.9	24.2	36.2

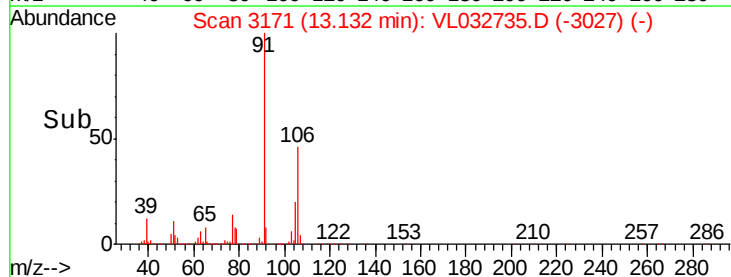
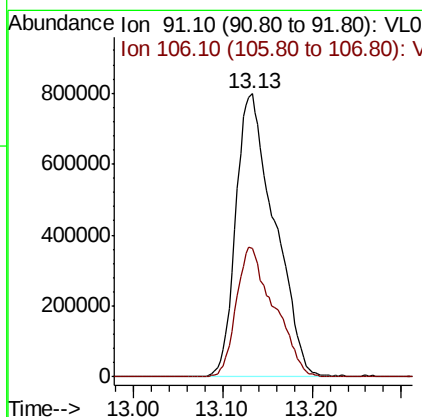
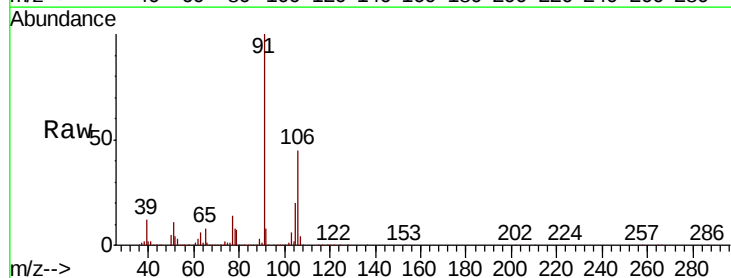
Manual Integrations
APPROVED

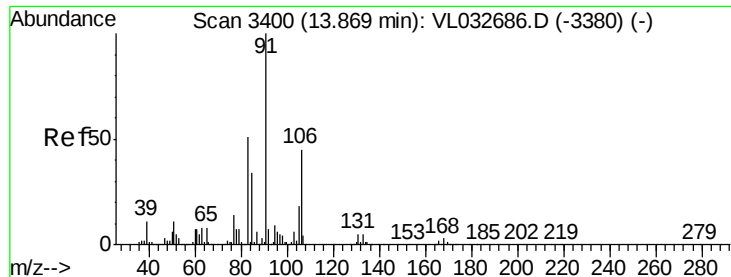
MMDadoda
11/12/2018 12:30:23 PM



#59
m/p-Xylene
Concen: 6.996 ppbv
RT: 13.13 min Scan# 3171
Delta R.T. -0.04 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Tgt Ion	Ratio	Lower	Upper
91	100		
106	44.8	35.9	53.9





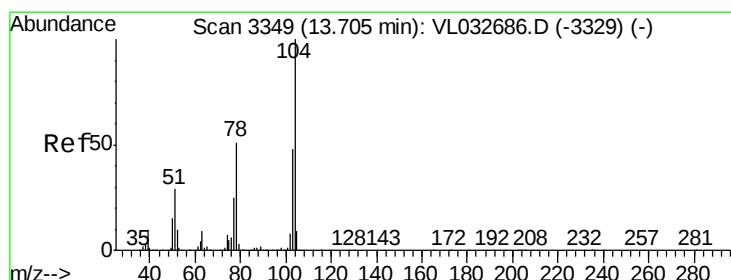
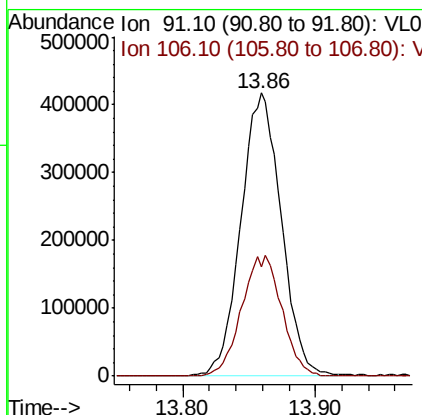
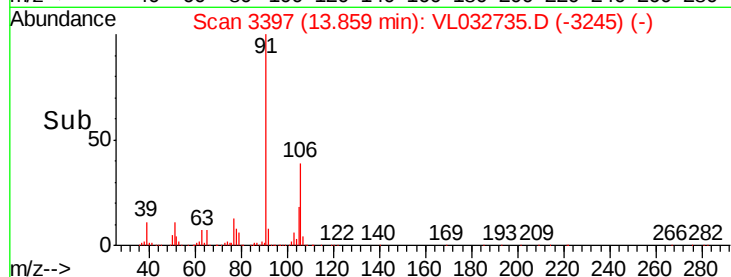
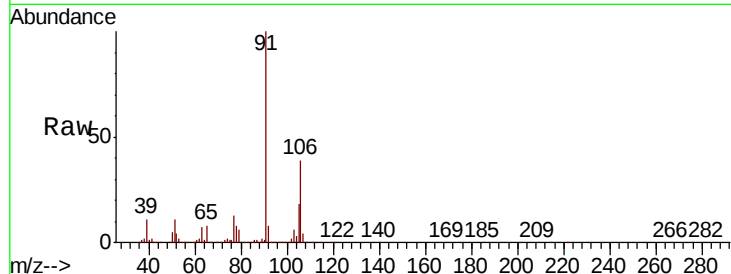
#60
o-Xylene
Concen: 2.655 ppbv
RT: 13.86 min Scan# 3397
Delta R.T. -0.01 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Instrument :
MSVOA_L
ClientSampled :
IA-02

Tot Ion	Ratio	Lower	Upper
91	100		
106	42.7	22.1	66.1

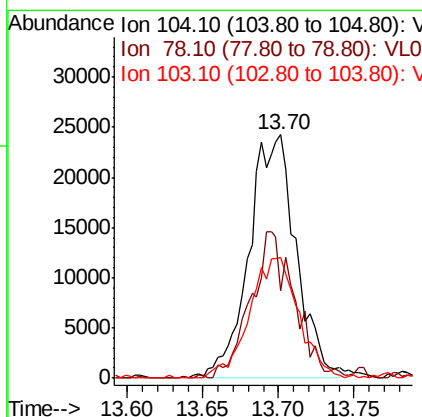
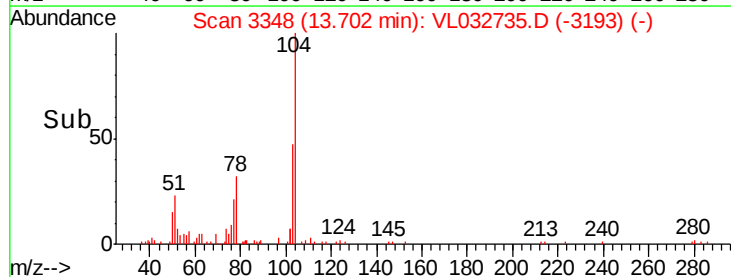
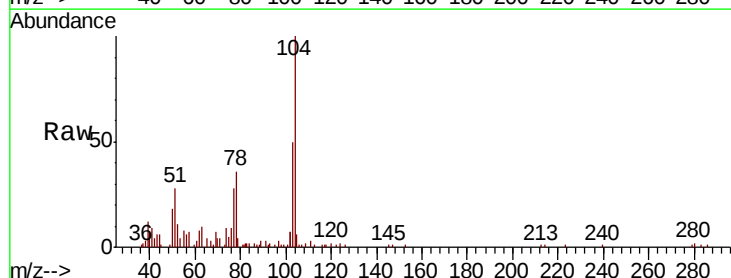
Manual Integrations
APPROVED

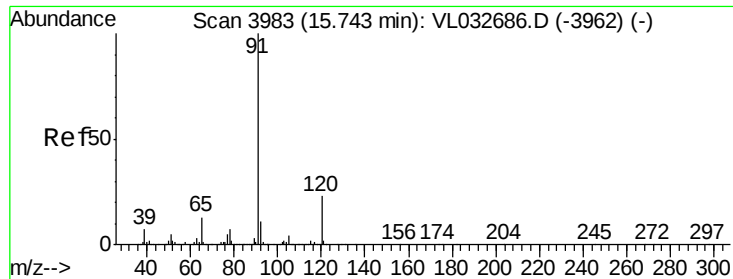
MMDadoda
11/12/2018 12:30:23 PM



#61
Styrene
Concen: 0.237 ppbv m
RT: 13.70 min Scan# 3348
Delta R.T. -0.00 min
Lab File: VL032735.D
Acq: 8 Nov 2018 3:00

Tgt Ion	Ratio	Lower	Upper
104	100		
78	55.8	42.8	64.2
103	51.7	37.4	56.0





#64

n-propylbenzene

Concen: 0.212 ppbv m

RT: 15.74 min Scan# 3981

Delta R.T. -0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

ClientSampled :

IA-02

Tot Ion:120 Resp: 24673

Ion Ratio Lower Upper

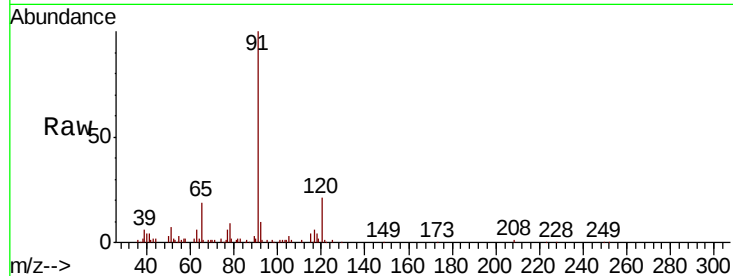
120 100

91 0.0 390.2 585.2#

Manual Integrations
APPROVED

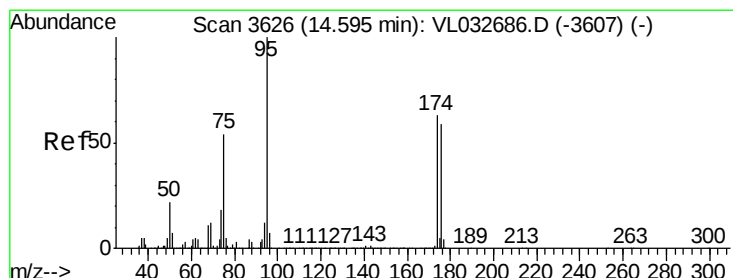
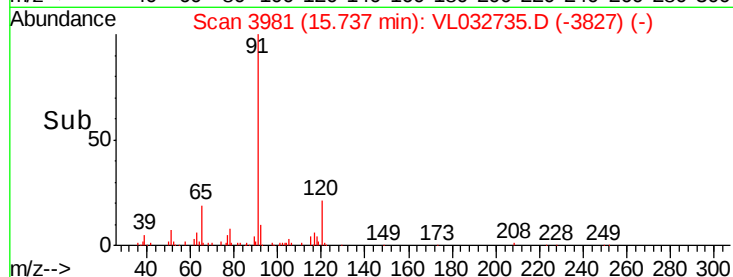
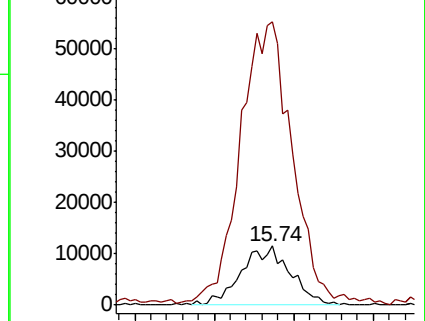
MMDadoda

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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: 10.291 ppbv

RT: 14.59 min Scan# 3624

Delta R.T. -0.00 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

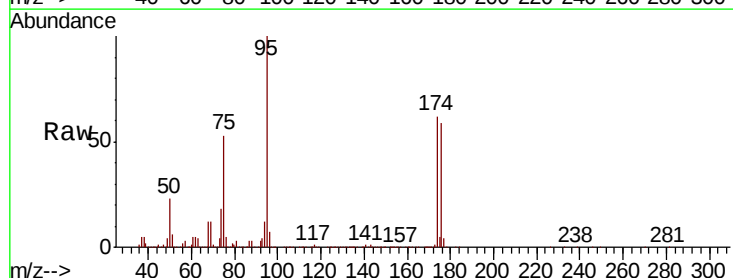
Tgt Ion: 95 Resp: 2545385

Ion Ratio Lower Upper

95 100

174 64.7 46.0 69.0

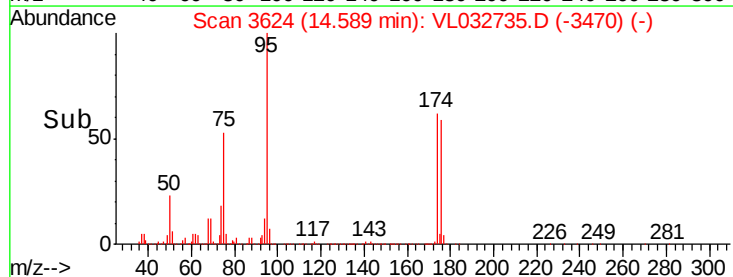
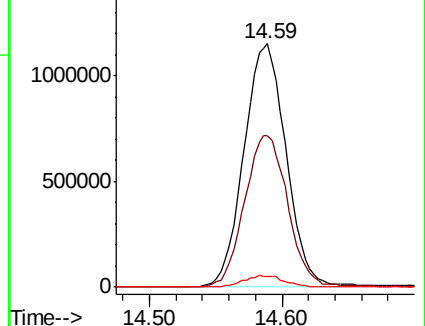
175 4.6 3.4 5.0

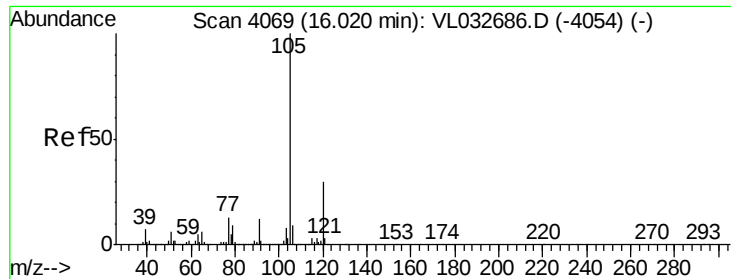


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.511 ppbv

RT: 16.01 min Scan# 4066

Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Instrument :

MSVOA_L

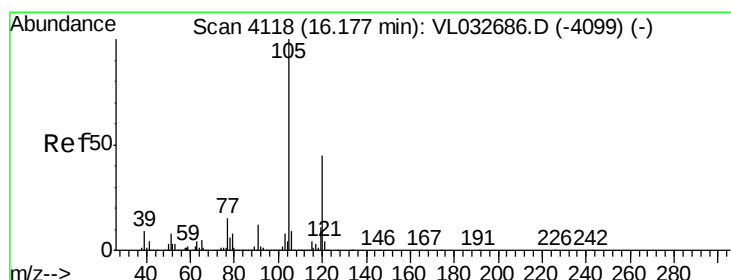
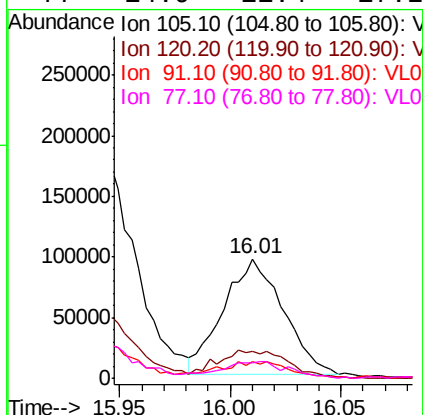
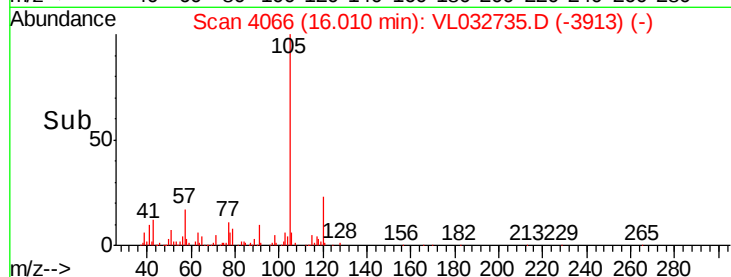
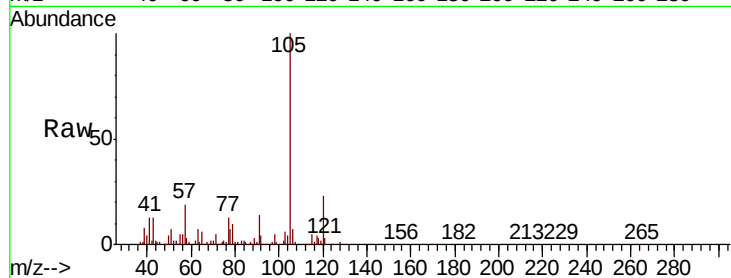
ClientSampleId :

IA-02

Tot Ion	Ratio	Resp	Lower	Upper
105	100	180358		
120	28.9	23.7	35.5	
91	18.2	10.4	15.6	
77	14.9	11.4	17.2	

Manual Integrations
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#73

1,3,5-Trimethylbenzene

Concen: 0.486 ppbv

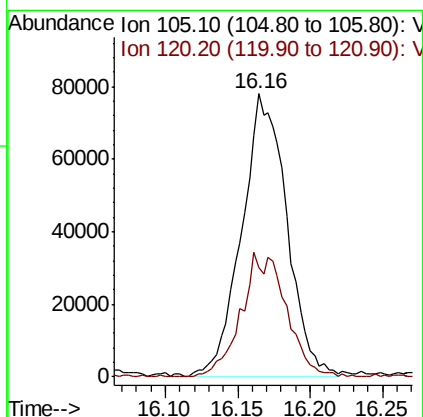
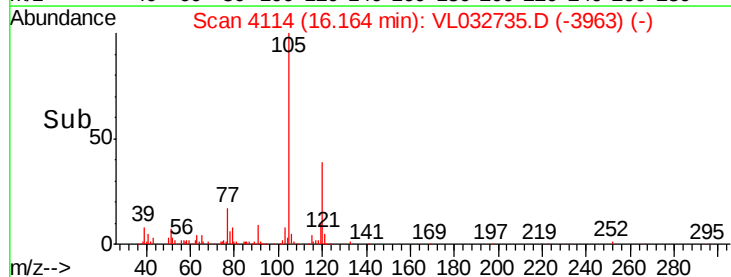
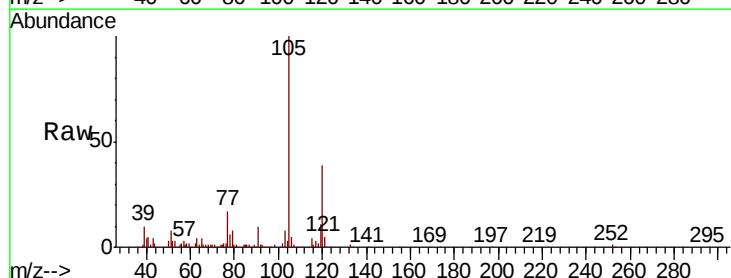
RT: 16.16 min Scan# 4114

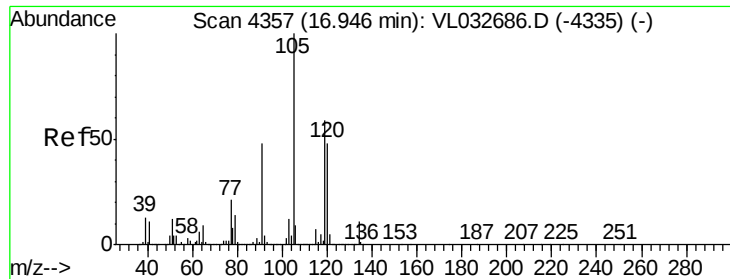
Delta R.T. -0.01 min

Lab File: VL032735.D

Acq: 8 Nov 2018 3:00

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	167242		
120	39.0	35.4	53.2	





#74
 1,2,4-Trimethylbenzene
 Concen: 1.863 ppbv
 RT: 16.94 min Scan# 4354
 Delta R.T. -0.01 min
 Lab File: VL032735.D
 Acq: 8 Nov 2018 3:00

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-02

Tot Ion	Ratio	Resp Lower	Upper
105	100		
120	39.9	35.8	53.8
91	12.5	33.2	49.8#
77	14.5	16.2	24.4#

Manual Integrations
 APPROVED

MMDadoda
 11/12/2018 12:30:23 PM

