

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL110420\
 Data File : VL035834.D
 Acq On : 4 Nov 2020 15:32
 Operator : SY/AP
 Sample : L4610-02 2X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV2

Manual Integrations
 APPROVED

MMDadoda
 11/5/2020 2:16:44 PM

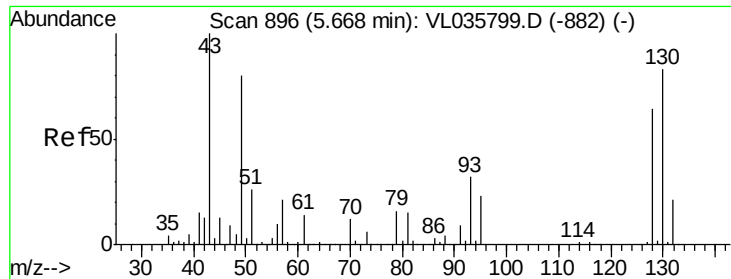
Quant Time: Nov 05 11:18:20 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 04
 QLast Update : Wed Nov 04 02:40:06 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.64	49	1124498	10.00	ppbv	-0.03
33) 1,4-Difluorobenzene	7.14	114	4938105	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.06	117	4524086	10.00	ppbv	-0.04

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.39	95	3245943	10.10	ppbv	-0.04	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.00%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	47608	0.225	ppbv	90
3) Chlorodifluoromethane	2.96	51	22903	0.170	ppbv	92
5) Vinyl Chloride	3.23	62	3591m	0.043	ppbv	
9) Propene	2.99	41	274959	5.579	ppbv	96
10) Heptane	8.10	43	17013m	0.125	ppbv	
11) Trichlorofluoromethane	3.92	101	27642	0.104	ppbv	94
13) Ethanol	3.59	45	80471	7.526	ppbv	97
15) Acetone	3.83	43	536096	4.459	ppbv	96
20) Methylene Chloride	4.32	84	265311	3.135	ppbv	96
26) Hexane	5.66	57	216676	1.659	ppbv #	45
27) Carbon Disulfide	4.53	76	24824	0.127	ppbv #	80
34) 2-Butanone	5.23	43	33860	0.211	ppbv #	80
36) Benzene	6.86	78	72597m	0.198	ppbv	
52) Tetrachloroethene	11.20	164	5380m	0.031	ppbv	
53) Toluene	9.77	91	417678	0.943	ppbv	97
58) Ethyl Benzene	12.68	91	139519m	0.253	ppbv	
59) m/p-Xylene	12.94	91	279659	0.600	ppbv	98
60) o-Xylene	13.65	91	171373	0.378	ppbv	75
70) n-Butylbenzene	18.54	91	168297	0.242	ppbv	95
74) 1,2,4-Trimethylbenzene	16.75	105	115012	0.213	ppbv #	69

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



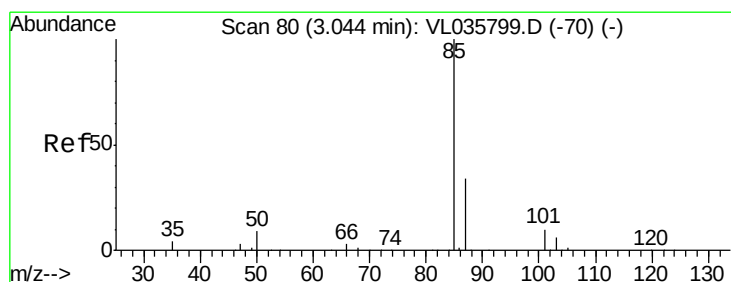
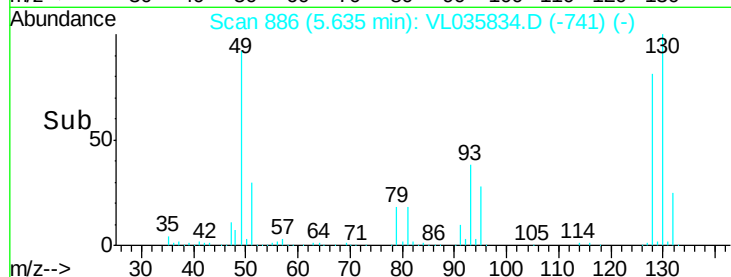
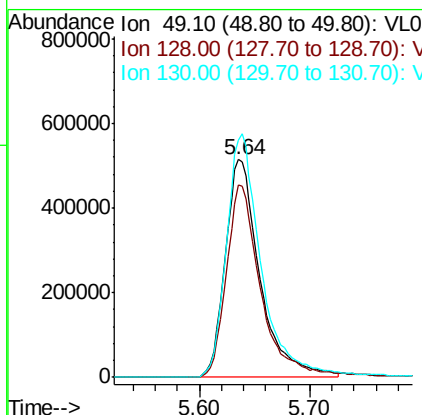
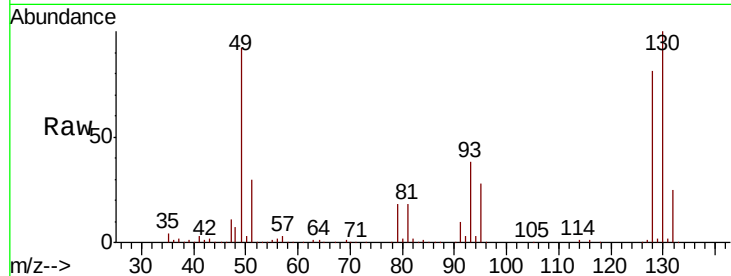
#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.64 min Scan# 886
Delta R.T. -0.03 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Instrument :
MSVOA_L
ClientSampled :
SV2

Tot Ion: 49 Resp: 1124498
Ion Ratio Lower Upper
49 100
128 89.9 41.5 124.6
130 114.5 53.7 161.1

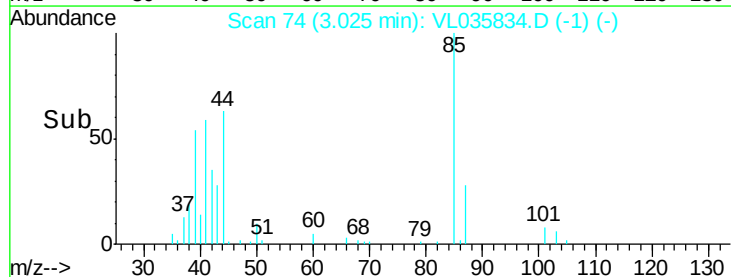
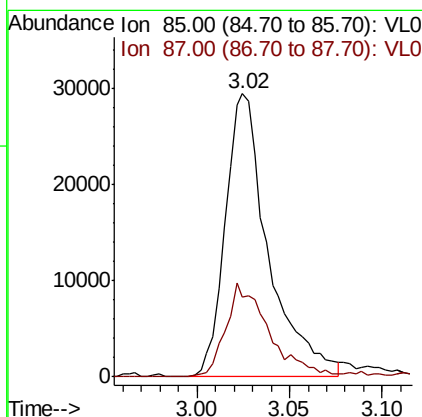
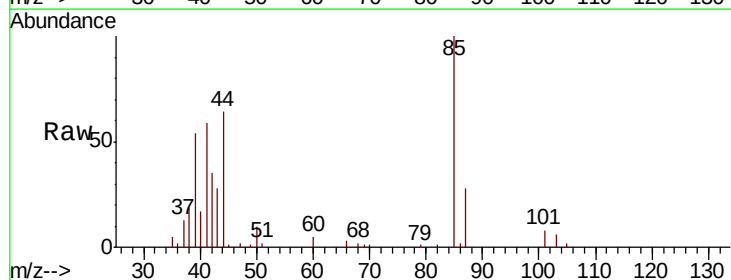
Manual Integrations
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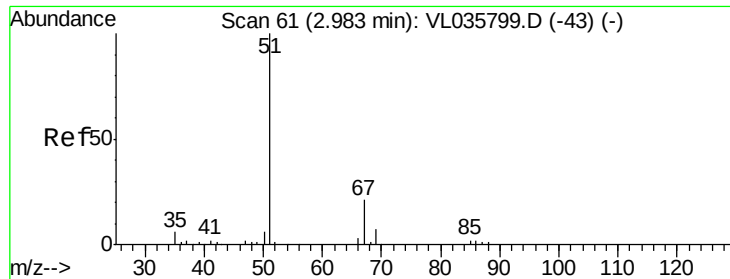
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#2
Dichlorodifluoromethane
Concen: 0.225 ppbv
RT: 3.02 min Scan# 74
Delta R.T. -0.02 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Tgt Ion: 85 Resp: 47608
Ion Ratio Lower Upper
85 100
87 28.3 27.1 40.7





#3

Chlorodifluoromethane

Concen: 0.170 ppbv

RT: 2.96 min Scan# 55

Delta R.T. -0.02 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Instrument :

MSVOA_L

ClientSampled :

SV2

Tot Ion: 51 Resp: 22903

Ion Ratio Lower Upper

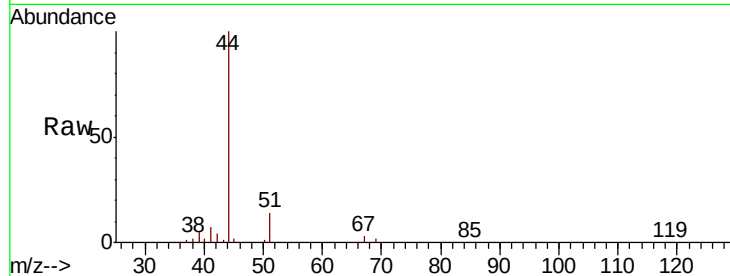
51 100

67 17.2 17.0 25.4

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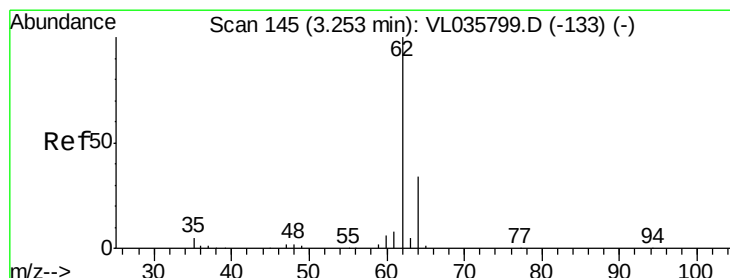
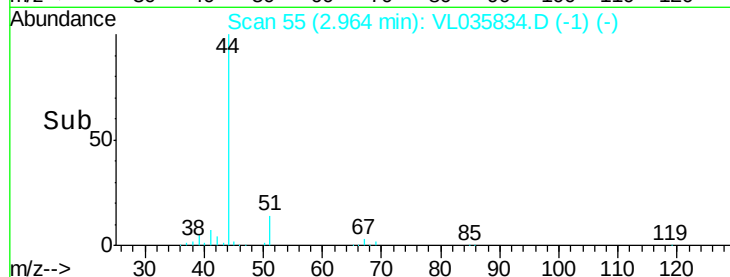
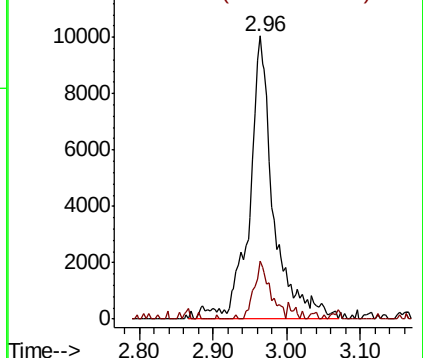
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#5

Vinyl Chloride

Concen: 0.043 ppbv m

RT: 3.23 min Scan# 138

Delta R.T. -0.02 min

Lab File: VL035834.D

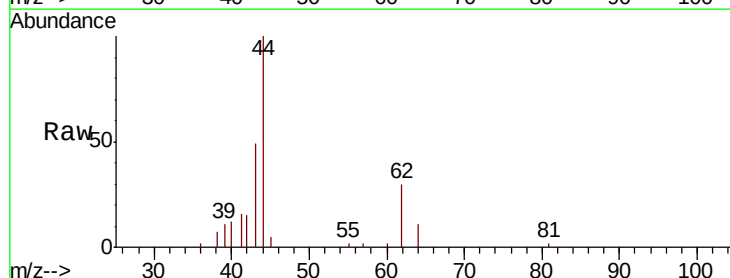
Acq: 4 Nov 2020 15:32

Tgt Ion: 62 Resp: 3591

Ion Ratio Lower Upper

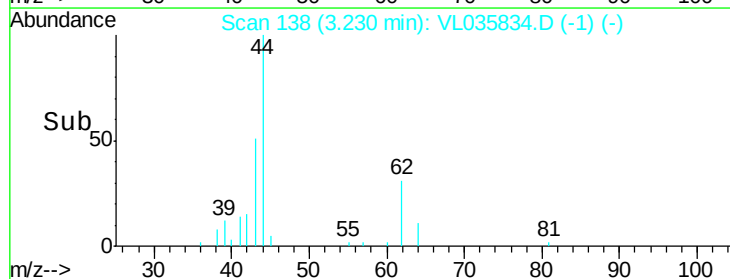
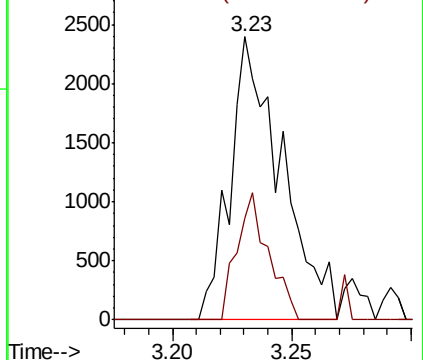
62 100

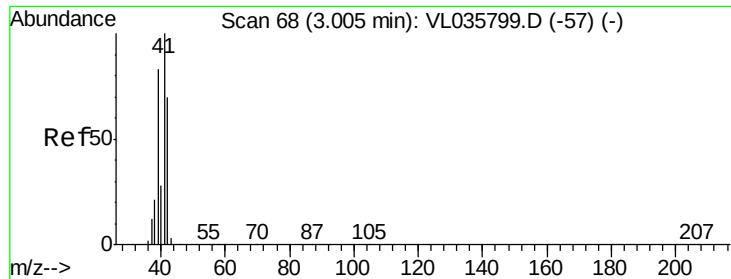
64 35.9 26.9 40.3



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0





#9

Propene

Concen: 5.579 ppbv

RT: 2.99 min Scan# 62

Delta R.T. -0.02 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Instrument :

MSVOA_L

ClientSampled :

SV2

Tot Ion: 41 Resp: 274959

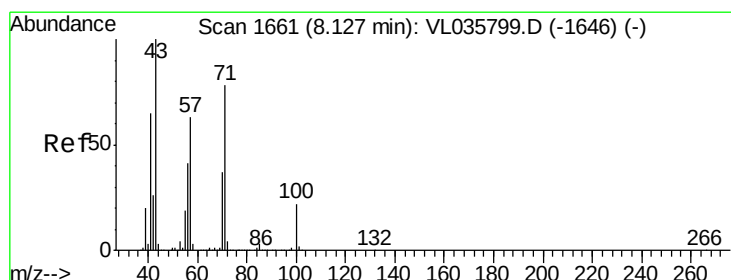
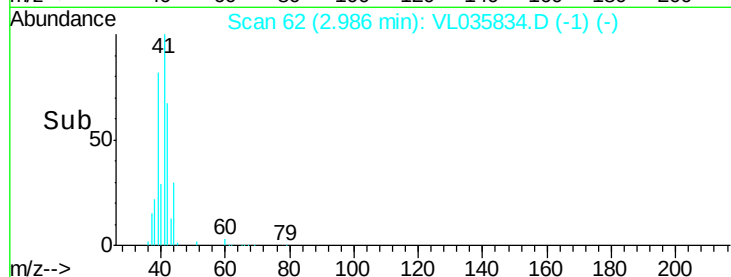
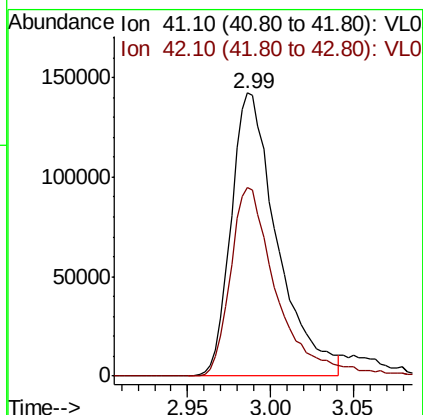
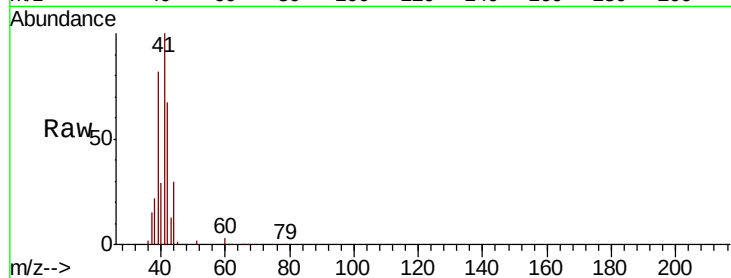
Ion Ratio Lower Upper

41 100

42 67.3 56.2 84.4

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#10

Heptane

Concen: 0.125 ppbv m

RT: 8.10 min Scan# 1651

Delta R.T. -0.03 min

Lab File: VL035834.D

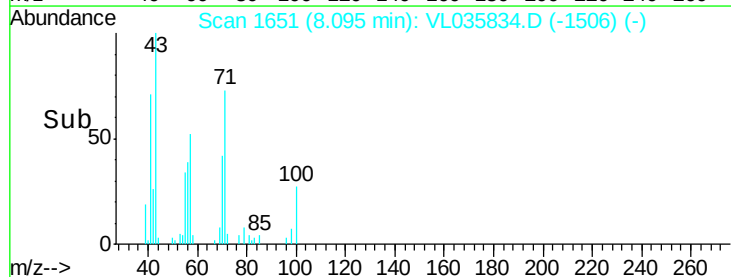
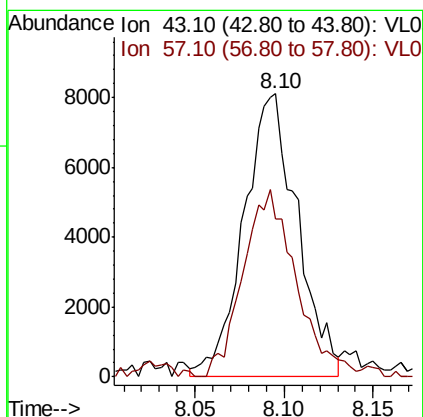
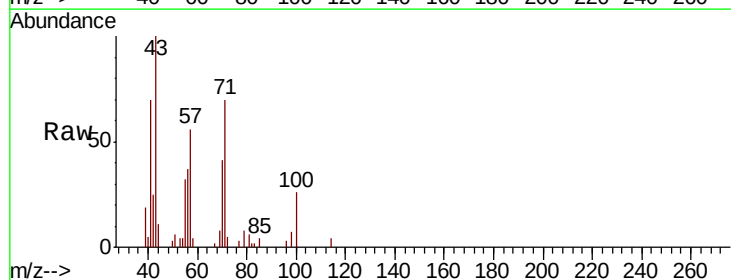
Acq: 4 Nov 2020 15:32

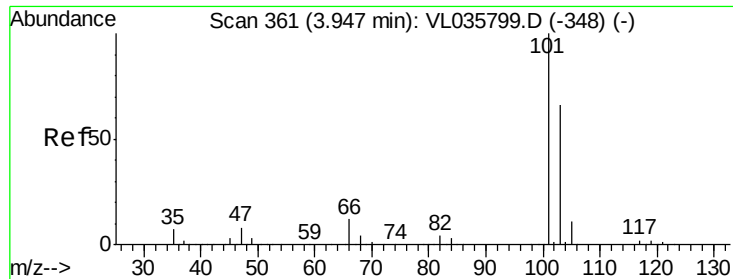
Tgt Ion: 43 Resp: 17013

Ion Ratio Lower Upper

43 100

57 66.6 50.0 75.0





#11

Trichlorofluoromethane

Concen: 0.104 ppbv

RT: 3.92 min Scan# 354

Delta R.T. -0.02 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Instrument :

MSVOA_L

ClientSampled :

SV2

Tot Ion:101 Resp: 27642

Ion Ratio Lower Upper

101 100

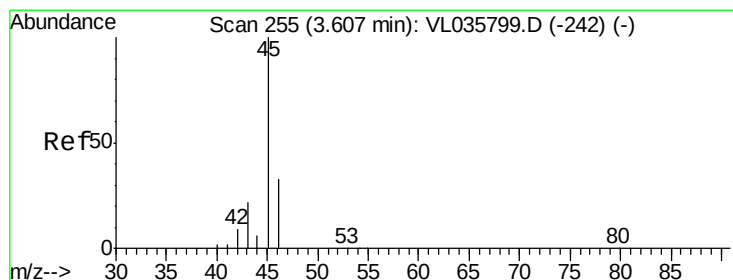
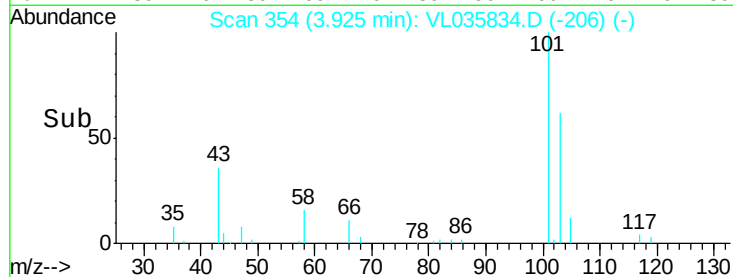
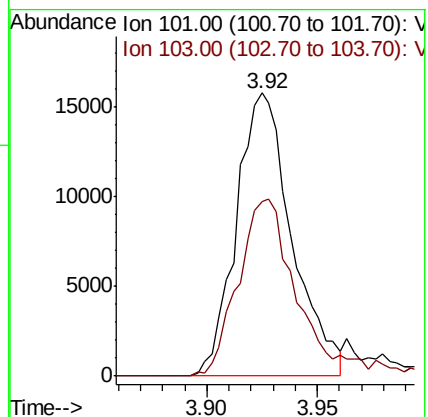
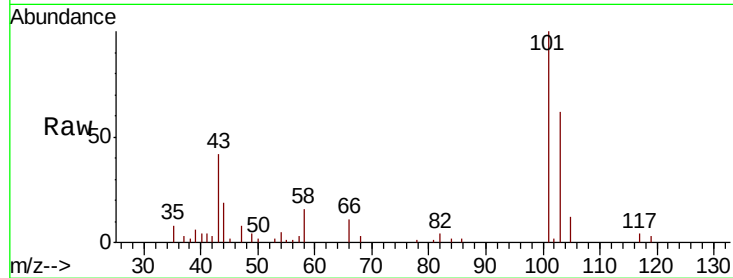
103 61.6 53.0 79.4

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#13

Ethanol

Concen: 7.526 ppbv

RT: 3.59 min Scan# 249

Delta R.T. -0.02 min

Lab File: VL035834.D

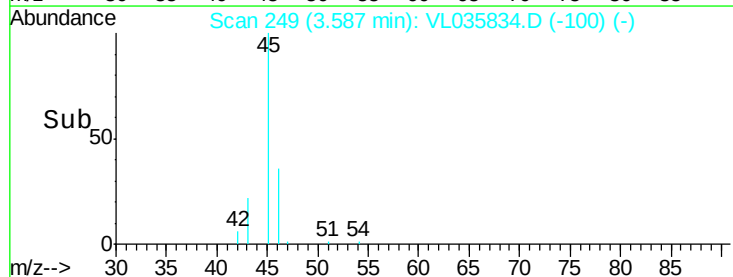
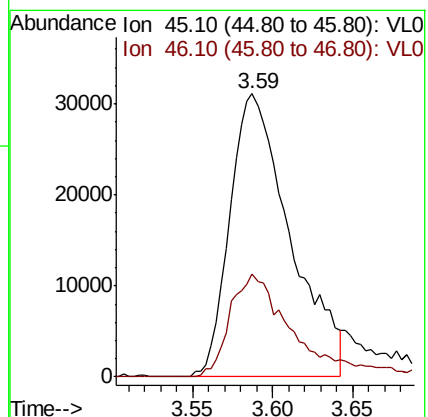
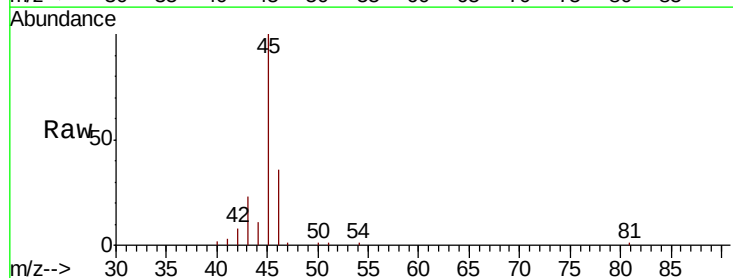
Acq: 4 Nov 2020 15:32

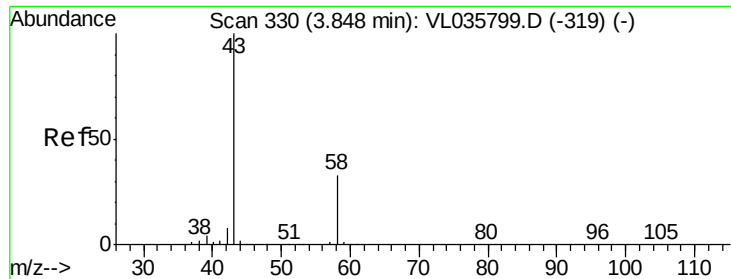
Tgt Ion: 45 Resp: 80471

Ion Ratio Lower Upper

45 100

46 38.7 16.1 64.5





#15

Acetone

Concen: 4.459 ppbv

RT: 3.83 min Scan# 323

Delta R.T. -0.02 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Instrument :

MSVOA_L

ClientSampled :

SV2

Tot Ion: 43 Resp: 536096

Ion Ratio Lower Upper

43 100

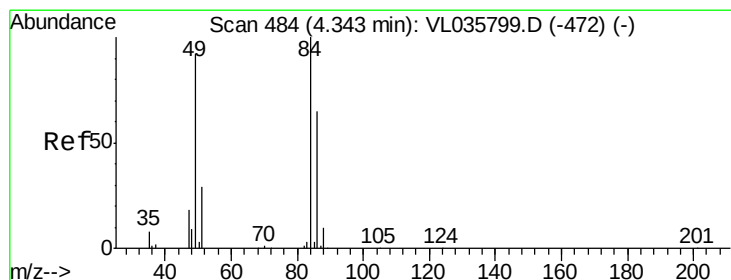
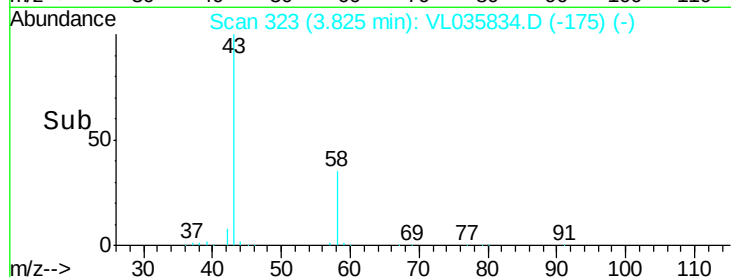
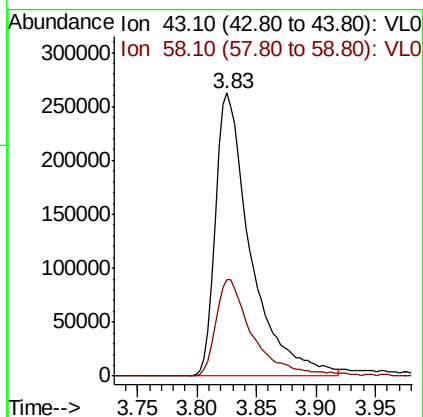
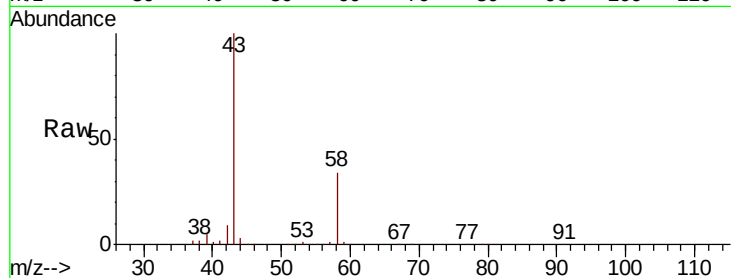
58 36.7 27.5 41.3

Manual Integrations

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#20

Methylene Chloride

Concen: 3.135 ppbv

RT: 4.32 min Scan# 476

Delta R.T. -0.03 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Tgt Ion: 84 Resp: 265311

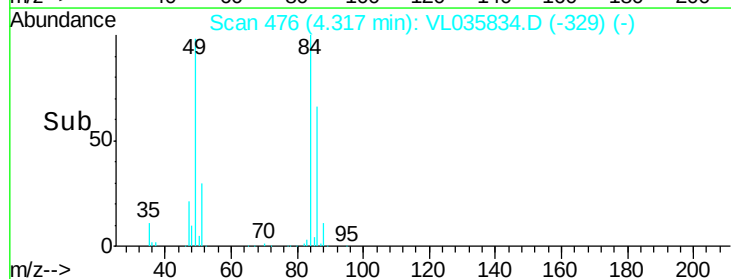
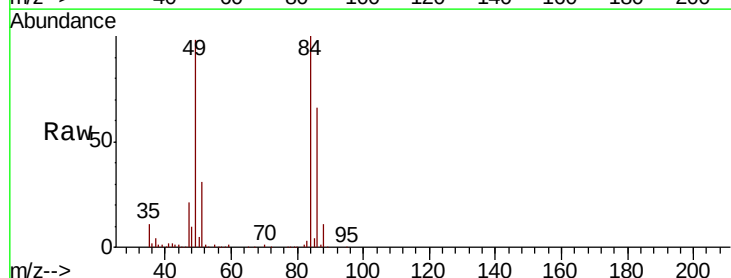
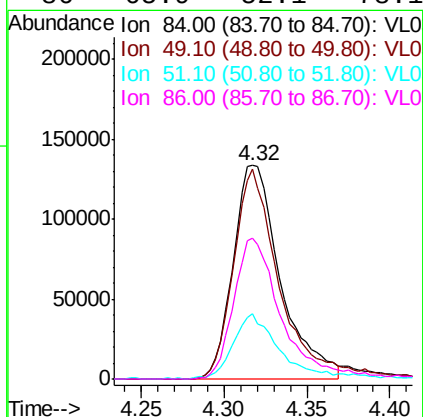
Ion Ratio Lower Upper

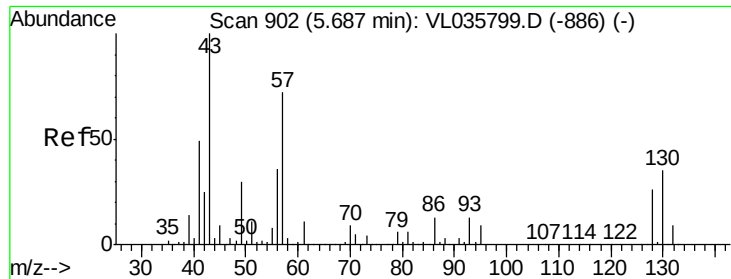
84 100

49 98.3 73.8 110.8

51 30.3 23.0 34.4

86 65.9 52.1 78.1





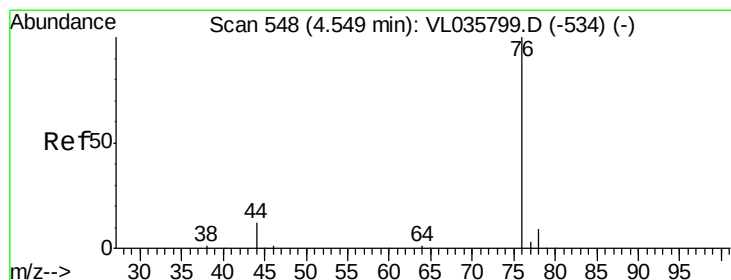
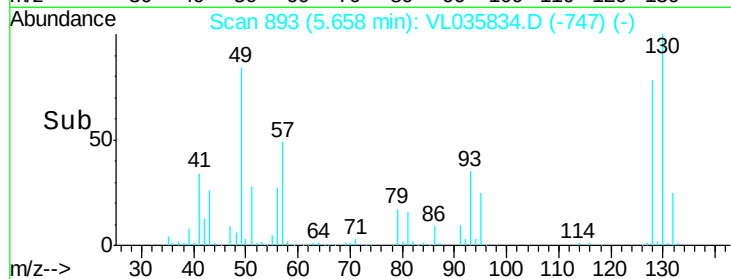
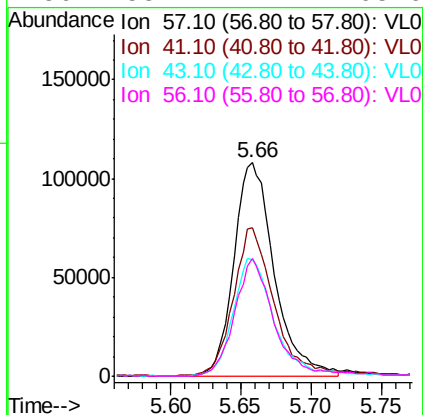
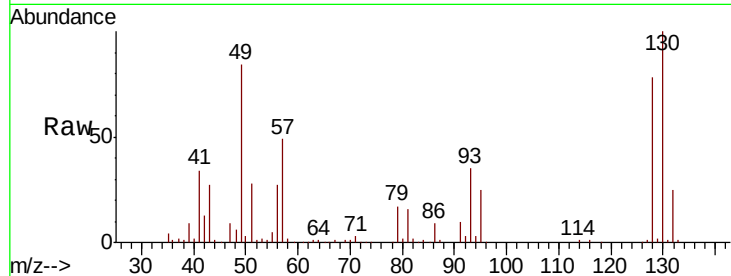
#26
Hexane
Concen: 1.659 ppbv
RT: 5.66 min Scan# 893
Delta R.T. -0.03 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Instrument :
MSVOA_L
ClientSampled :
SV2

Tot Ion	Ratio	Lower	Upper
57	100		
41	71.4	58.9	88.3
43	56.2	150.2	225.2#
56	55.4	42.4	63.6

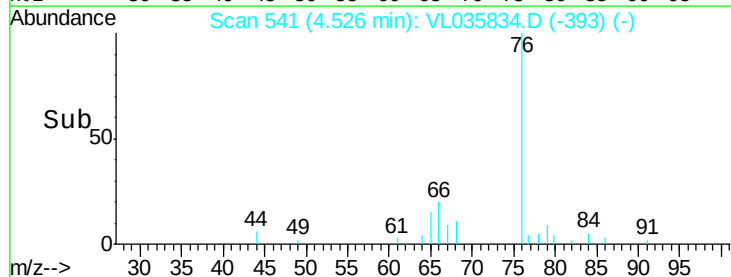
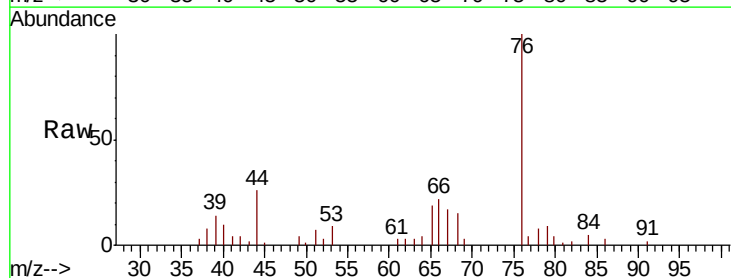
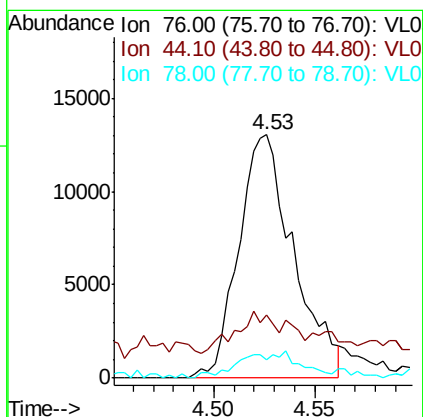
Manual Integrations
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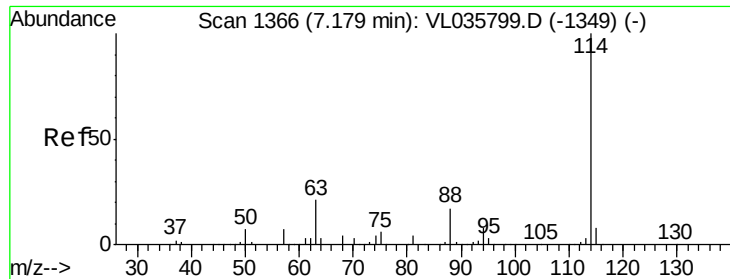
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#27
Carbon Disulfide
Concen: 0.127 ppbv
RT: 4.53 min Scan# 541
Delta R.T. -0.02 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Tgt Ion	Ratio	Lower	Upper
76	100		
44	22.5	9.9	14.9#
78	14.6	8.1	12.1#





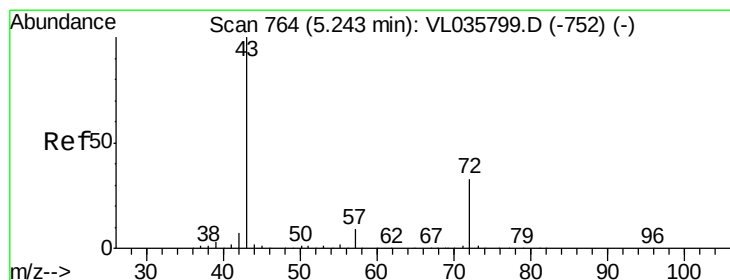
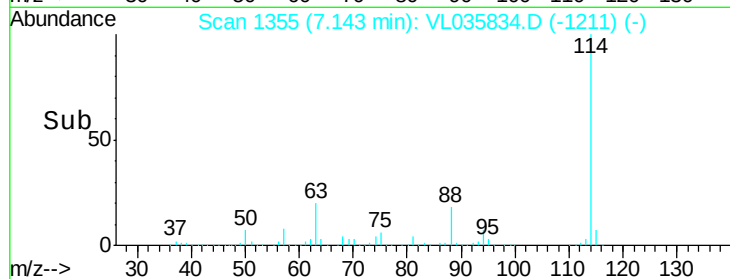
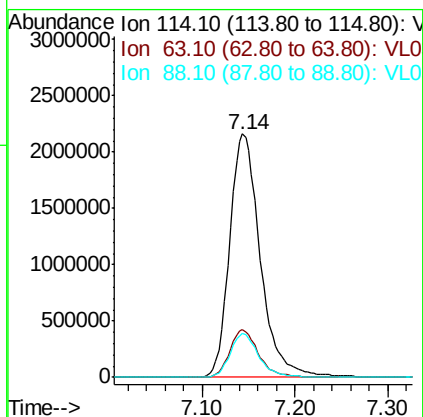
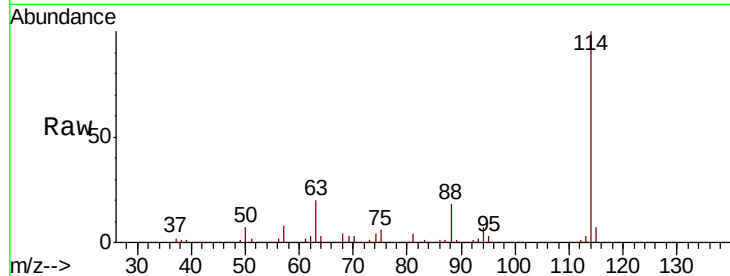
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.14 min Scan# 1355
 Delta R.T. -0.04 min
 Lab File: VL035834.D
 Acq: 4 Nov 2020 15:32

Instrument :
 MSVOA_L
 ClientSampled :
 SV2

Tot Ion:114 Resp: 4938105
 Ion Ratio Lower Upper
 114 100
 63 18.7 16.1 24.1
 88 17.0 13.7 20.5

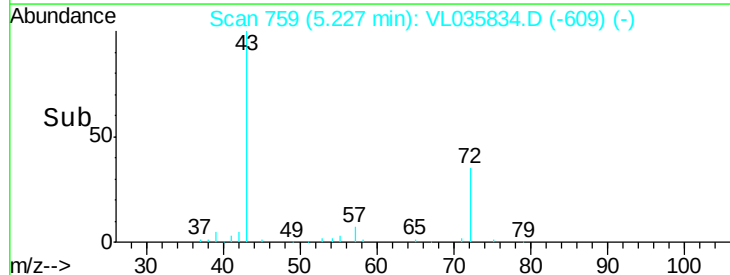
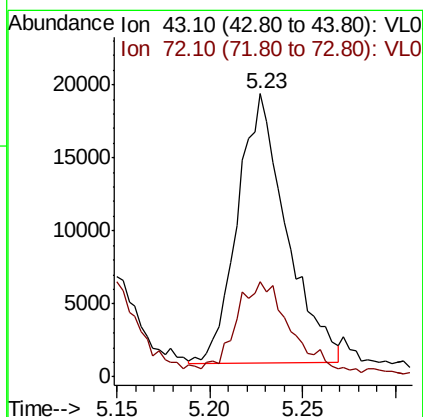
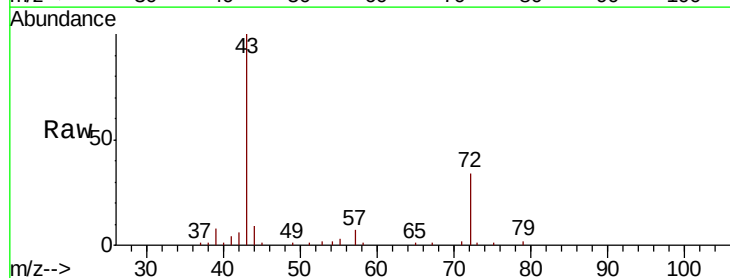
Manual Integrations
 APPROVED

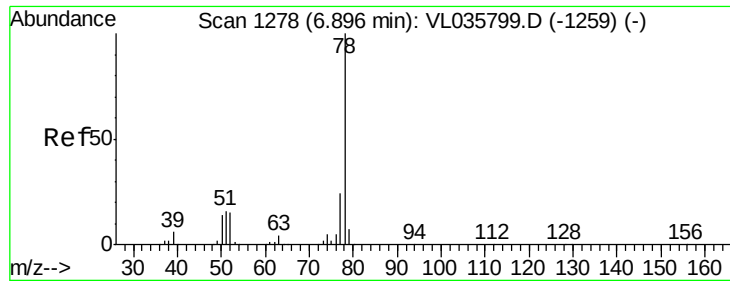
MMDadoda
 11/5/2020 2:16:44 PM



#34
 2-Butanone
 Concen: 0.211 ppbv
 RT: 5.23 min Scan# 759
 Delta R.T. -0.02 min
 Lab File: VL035834.D
 Acq: 4 Nov 2020 15:32

Tgt Ion: 43 Resp: 33860
 Ion Ratio Lower Upper
 43 100
 72 44.5 26.5 39.7#





#36

Benzene

Concen: 0.198 ppbv m

RT: 6.86 min Scan# 1266

Delta R.T. -0.04 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Instrument :

MSVOA_L

ClientSampled :

SV2

Tot Ion: 78 Resp: 72597

Ion Ratio Lower Upper

78 100

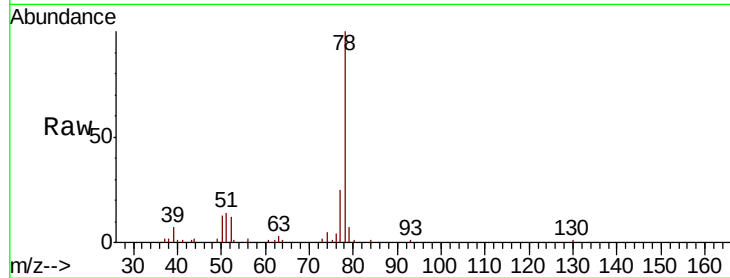
77 24.8 19.3 28.9

50 13.5 11.4 17.2

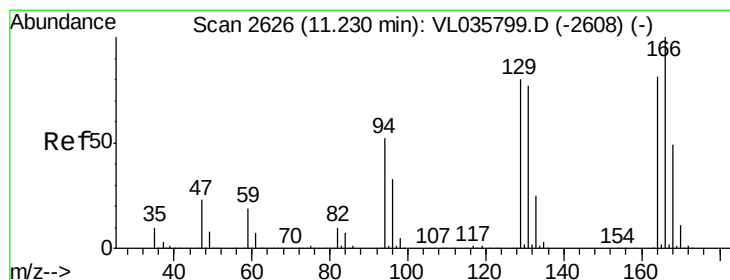
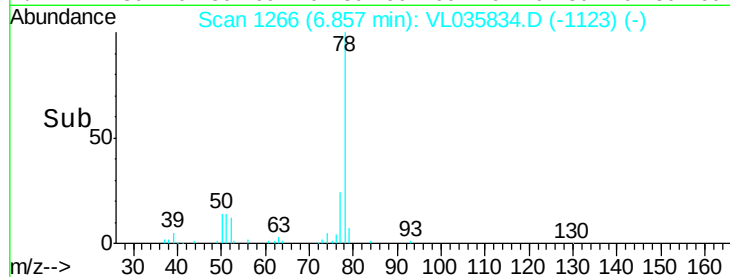
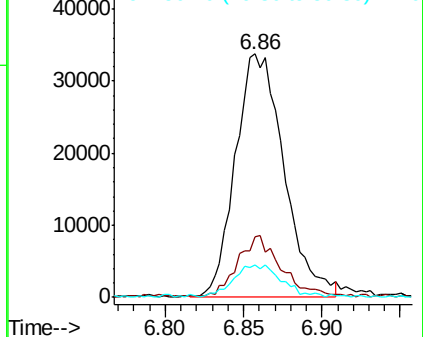
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Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#52

Tetrachloroethene

Concen: 0.031 ppbv m

RT: 11.20 min Scan# 2616

Delta R.T. -0.03 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Tgt Ion: 164 Resp: 5380

Ion Ratio Lower Upper

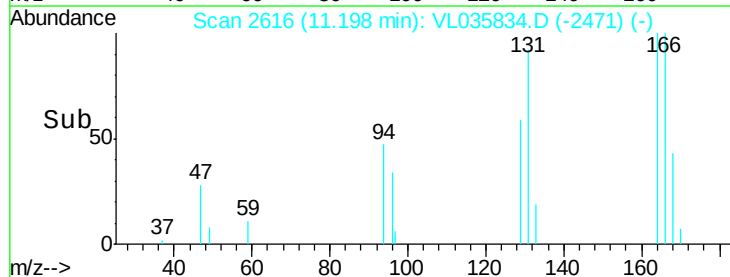
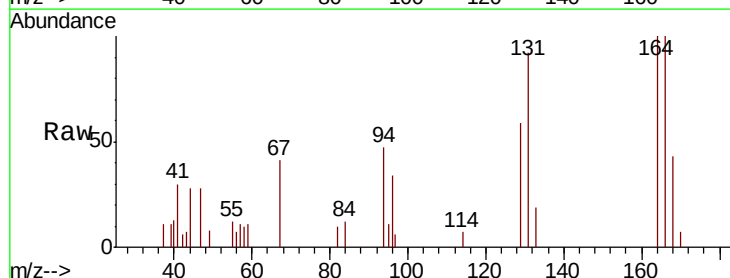
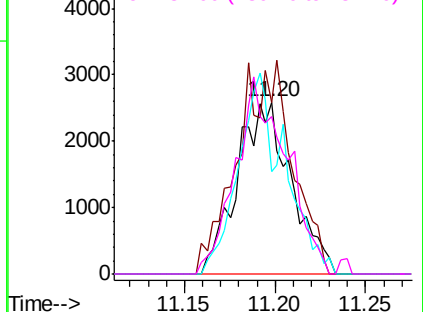
164 100

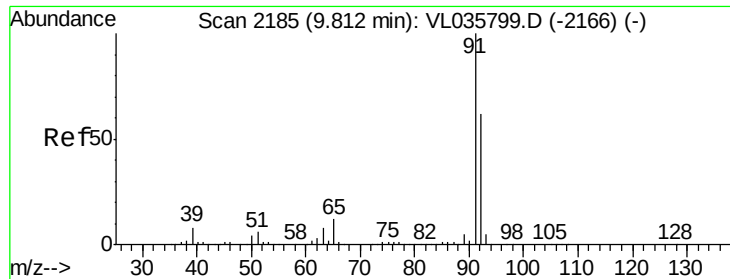
166 99.8 99.3 148.9

129 59.4 79.3 118.9#

131 91.6 76.5 114.7

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





#53

Toluene

Concen: 0.943 ppbv

RT: 9.77 min Scan# 2173

Delta R.T. -0.04 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

Instrument :

MSVOA_L

ClientSampleId :

SV2

Tot Ion: 91 Resp: 417678

Ion Ratio Lower Upper

91 100

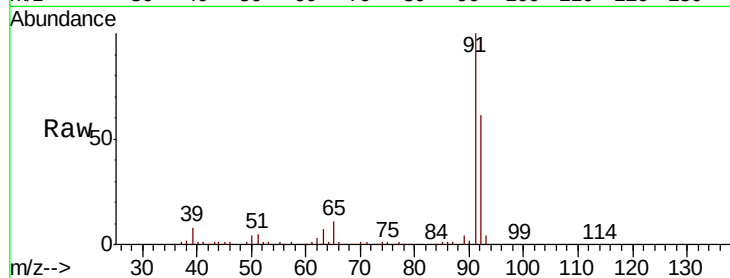
92 60.0 49.8 74.6

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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.77

200000

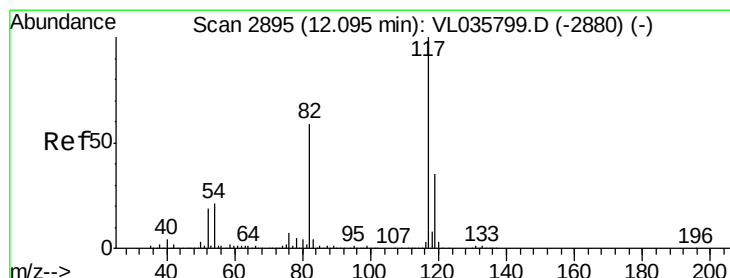
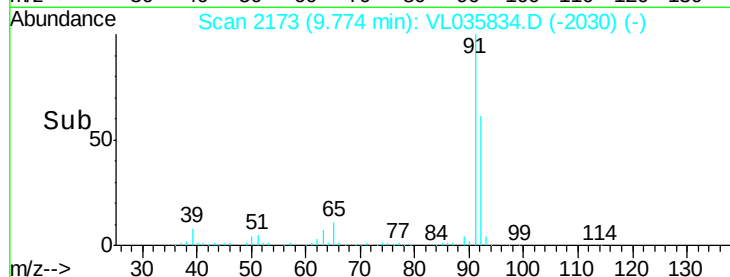
150000

100000

50000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2883

Delta R.T. -0.04 min

Lab File: VL035834.D

Acq: 4 Nov 2020 15:32

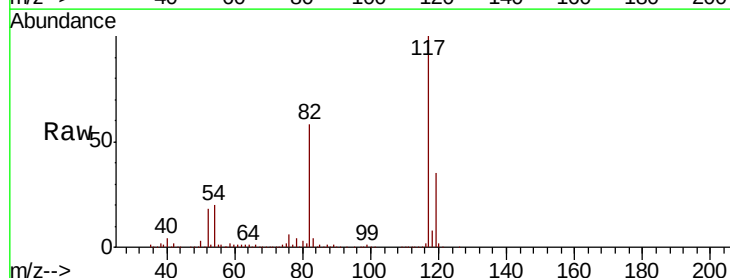
Tgt Ion: 117 Resp: 4524086

Ion Ratio Lower Upper

117 100

82 57.3 50.6 76.0

119 34.7 52.6 78.8#



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V

2500000

2000000

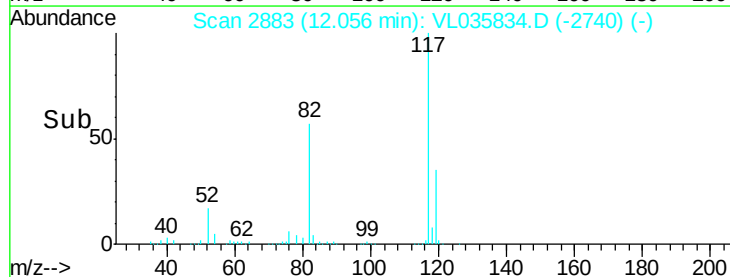
1500000

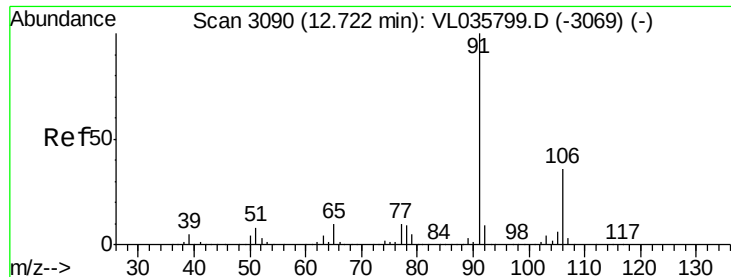
1000000

500000

0

Time-->





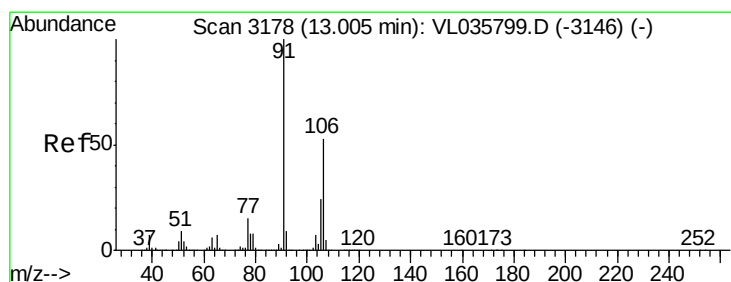
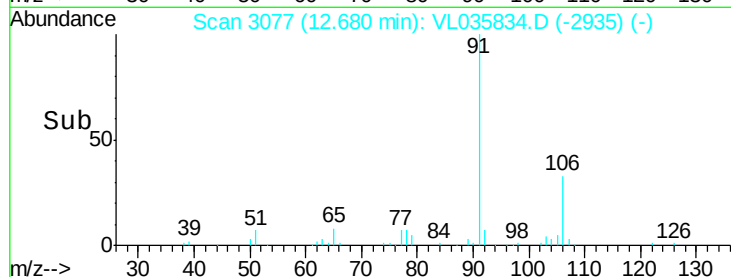
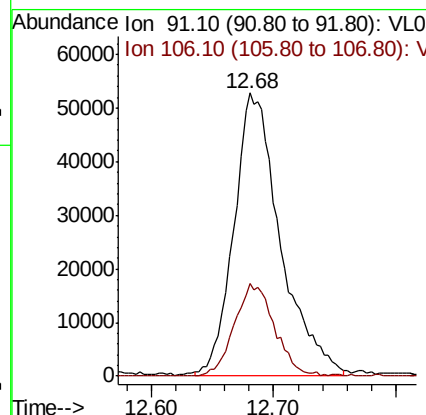
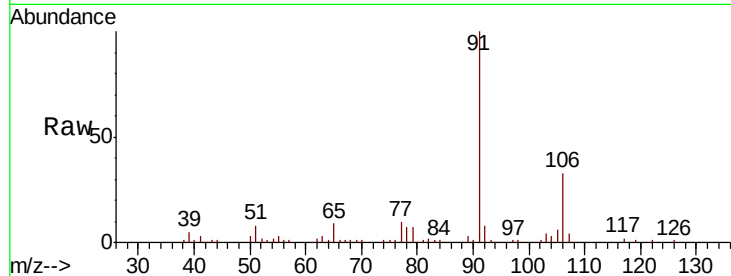
#58
Ethyl Benzene
Concen: 0.253 ppbv m
RT: 12.68 min Scan# 3077
Delta R.T. -0.04 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Instrument :
MSVOA_L
ClientSampled :
SV2

Tot Ion: 91 Resp: 139519
Ion Ratio Lower Upper
91 100
106 32.6 28.6 43.0

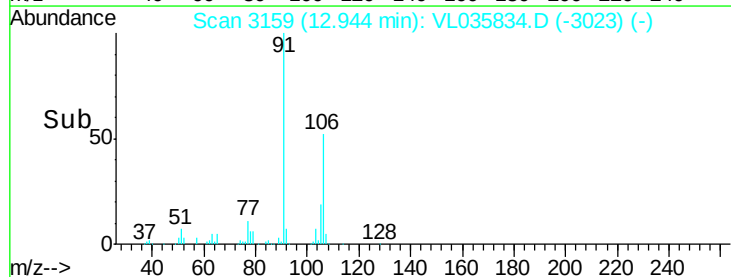
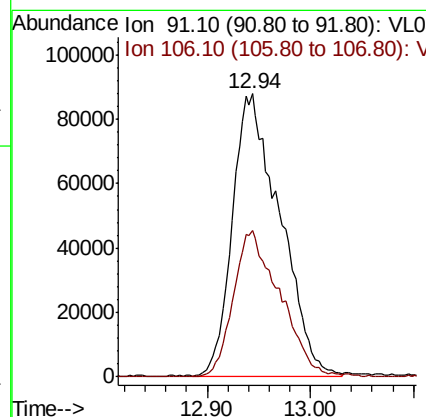
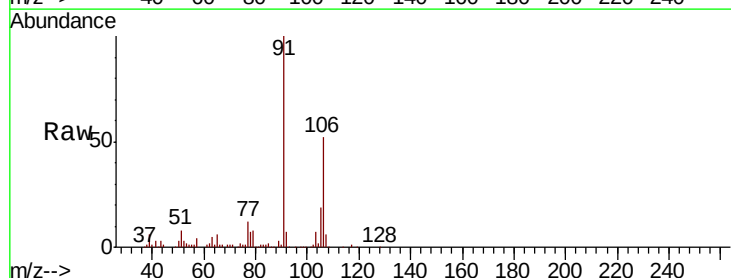
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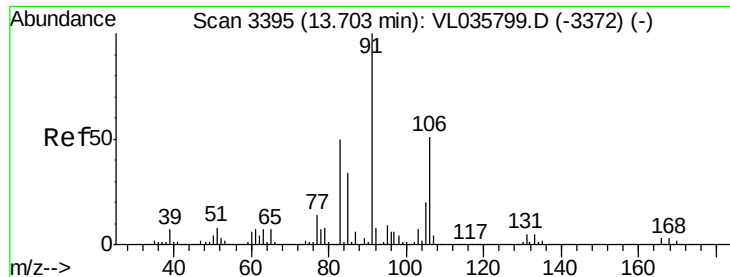
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#59
m/p-Xylene
Concen: 0.600 ppbv
RT: 12.94 min Scan# 3159
Delta R.T. -0.06 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Tgt Ion: 91 Resp: 279659
Ion Ratio Lower Upper
91 100
106 51.1 39.5 59.3





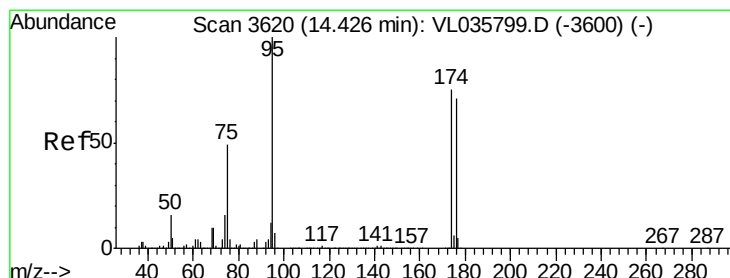
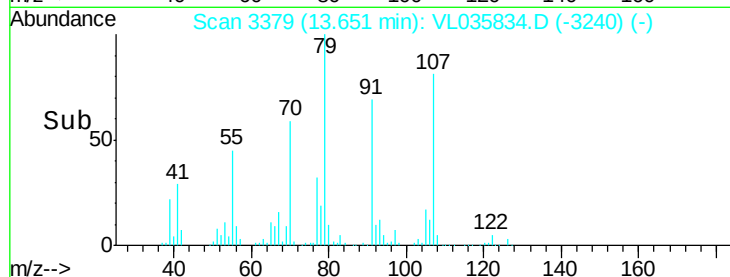
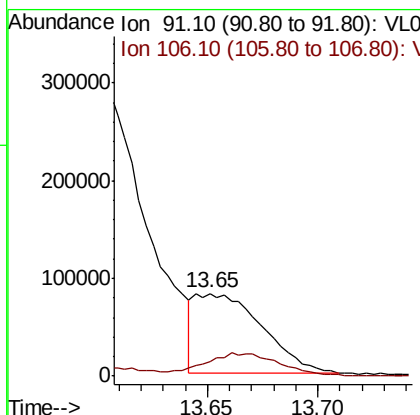
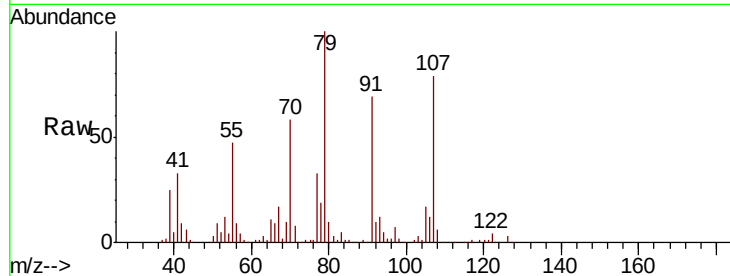
#60
o-Xylene
Concen: 0.378 ppbv
RT: 13.65 min Scan# 3379
Delta R.T. -0.05 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Instrument :
MSVOA_L
ClientSampleId :
SV2

Tot Ion: 91 Resp: 171373
Ion Ratio Lower Upper
91 100
106 32.6 24.8 74.4

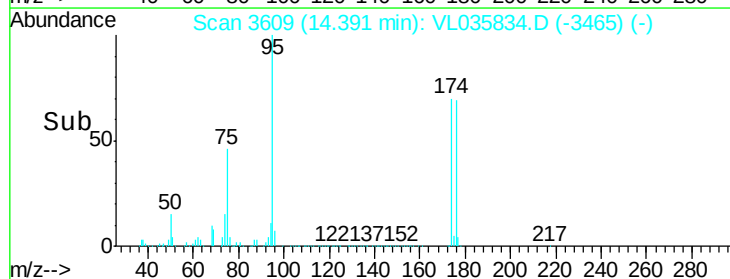
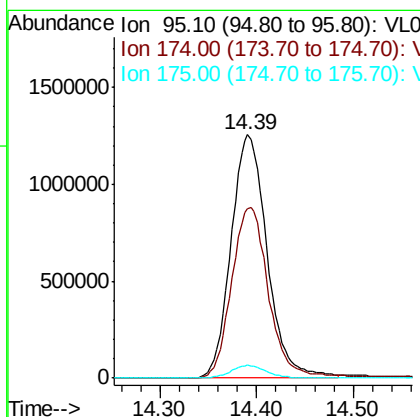
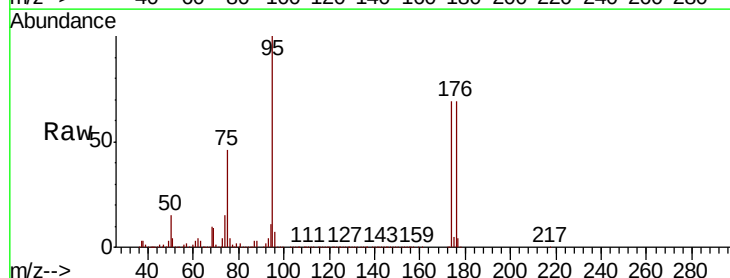
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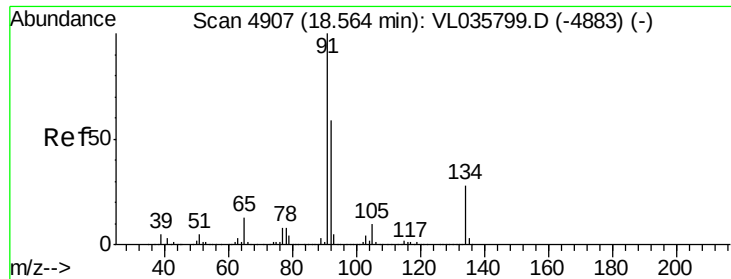
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#68
1-Bromo-4-Fluorobenzene
Concen: 10.099 ppbv
RT: 14.39 min Scan# 3609
Delta R.T. -0.04 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Tgt Ion: 95 Resp: 3245943
Ion Ratio Lower Upper
95 100
174 73.4 59.8 89.6
175 5.2 4.3 6.5





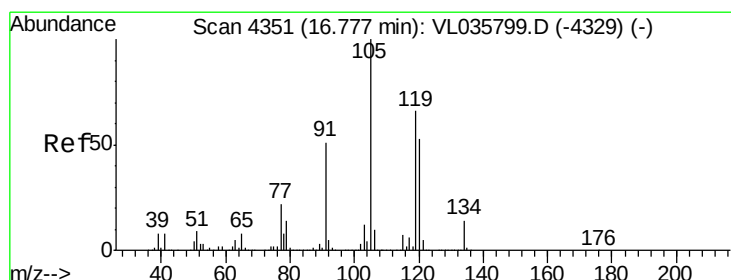
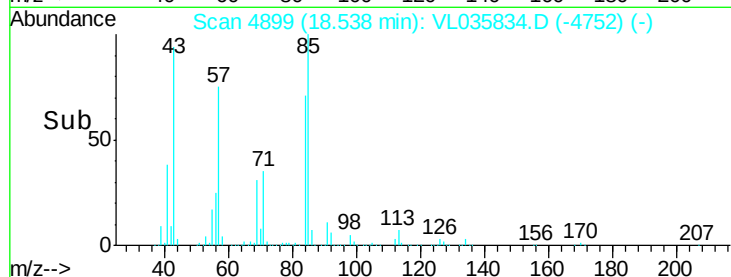
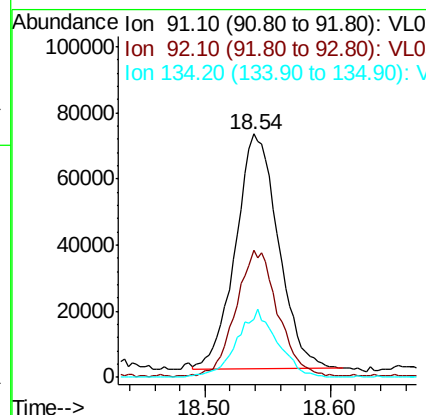
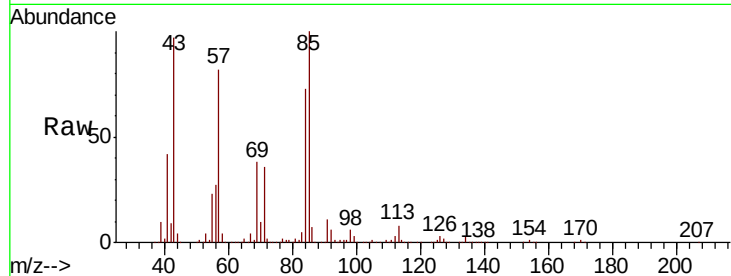
#70
n-Butylbenzene
Concen: 0.242 ppbv
RT: 18.54 min Scan# 4899
Delta R.T. -0.03 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Instrument :
MSVOA_L
ClientSampled :
SV2

Tot Ion	Ratio	Resp	Lower	Upper
91	100	168297		
92	52.5	45.7	68.5	
134	27.6	21.0	31.4	

Manual Integrations
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#74
1,2,4-Trimethylbenzene
Concen: 0.213 ppbv
RT: 16.75 min Scan# 4342
Delta R.T. -0.03 min
Lab File: VL035834.D
Acq: 4 Nov 2020 15:32

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	115012		
120	45.9	42.0	63.0	
91	10.8	41.0	61.6	
77	11.1	17.3	25.9	

