

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032719\
 Data File : VL033489.D
 Acq On : 28 Mar 2019 4:54
 Operator : SY/AP
 Sample : K1991-07
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 VMP-4

Manual Integrations
 APPROVED

MMDadoda
 4/1/2019 1:26:07 AM

Quant Time: Mar 31 11:32:51 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Mar 2
 QLast Update : Tue Mar 26 16:00:50 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	749259	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.28	114	1910926	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1913837	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.57	95	1475027	9.83	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.30%

Target Compounds						Ovalue
2) Dichlorodifluoromethane	3.07	85	33561	0.307	ppbv	100
3) Chlorodifluoromethane	3.01	51	17784m	0.206	ppbv	
4) Chloromethane	3.17	50	12384	0.271	ppbv	98
9) Propene	3.04	41	41839	1.155	ppbv #	68
10) Heptane	8.24	43	592209	6.116	ppbv	99
11) Trichlorofluoromethane	4.00	101	55124	0.409	ppbv	97
13) Ethanol	3.64	45	155097	16.545	ppbv	67
15) Acetone	3.89	43	2176575	24.160	ppbv	98
20) Methylene Chloride	4.40	84	71763	1.877	ppbv	95
26) Hexane	5.78	57	517366	6.961	ppbv #	46
27) Carbon Disulfide	4.62	76	27192	0.308	ppbv #	70
30) Cyclohexane	7.24	84	353727	6.016	ppbv	98
34) 2-Butanone	5.32	43	511714	4.457	ppbv	100
35) Carbon Tetrachloride	7.12	117	8155m	0.060	ppbv	
36) Benzene	6.99	78	26269	0.164	ppbv	95
38) Trichloroethene	7.96	130	22642	0.375	ppbv	95
41) Tetrahydrofuran	6.15	42	24667	0.391	ppbv #	89
53) Toluene	9.94	91	1177012	6.317	ppbv	99
58) Ethyl Benzene	12.86	91	52589	0.206	ppbv	96
59) m/p-Xylene	13.11	91	129337m	0.567	ppbv	
60) o-Xylene	13.84	91	52202	0.236	ppbv	99
61) Styrene	13.68	104	26280m	0.173	ppbv	
74) 1,2,4-Trimethylbenzene	16.92	105	35513	0.140	ppbv #	71
76) 1,4-Dichlorobenzene	17.31	146	70253	0.458	ppbv	93

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

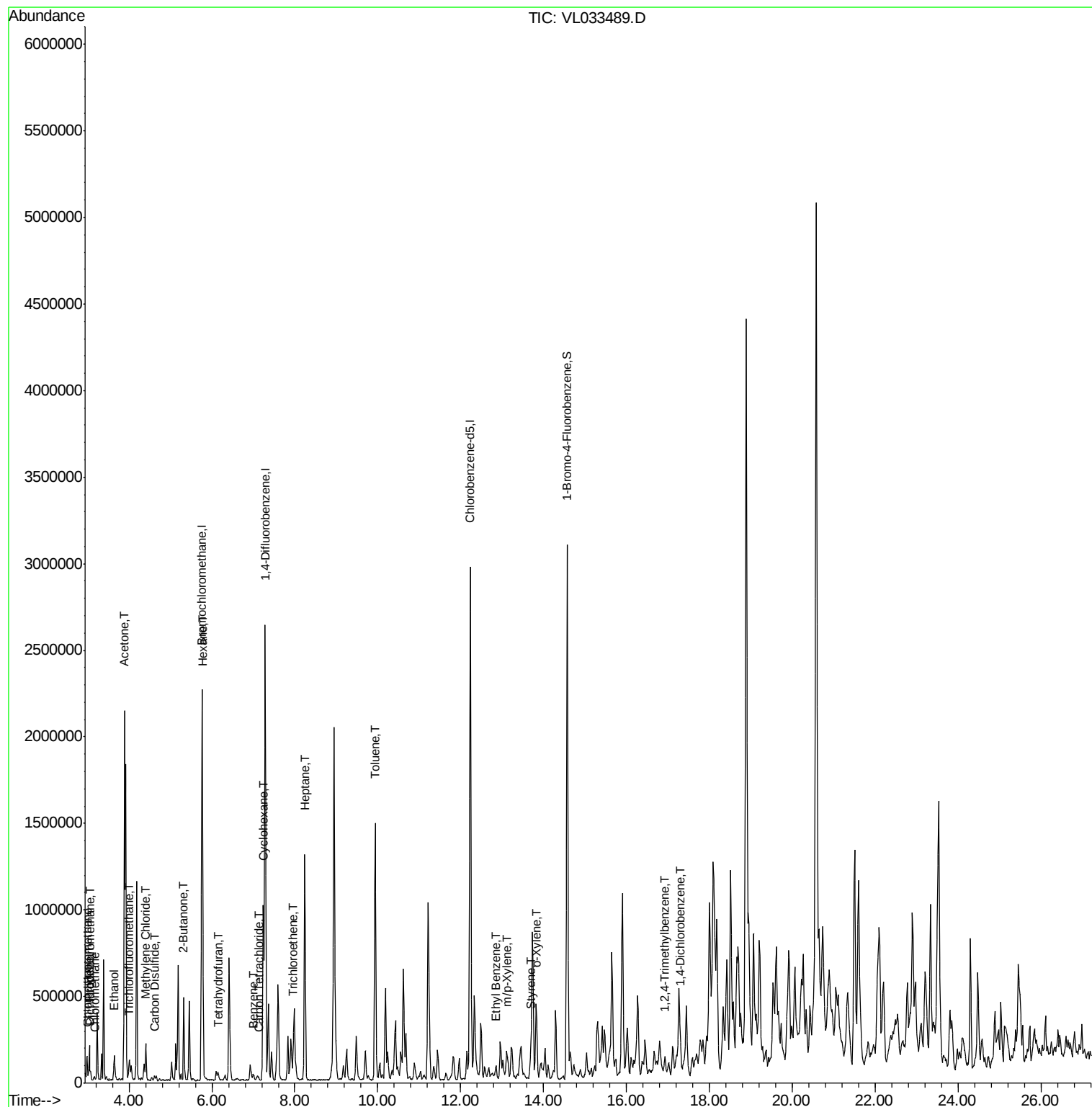
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL032719\
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Acq On : 28 Mar 2019 4:54
Operator : SY/AP
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Quant Time: Mar 31 11:32:51 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Mar
QLast Update : Tue Mar 26 16:00:50 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Instrument :

MSVOA_L

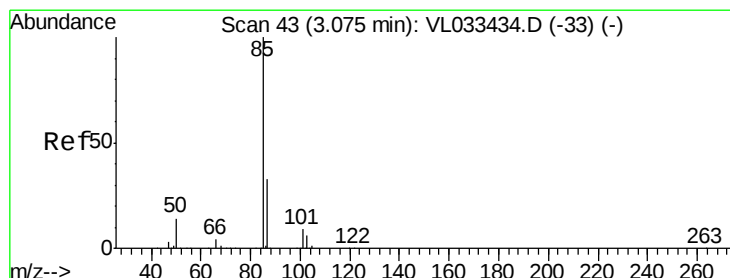
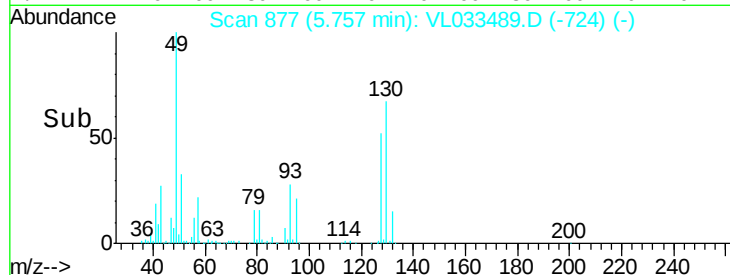
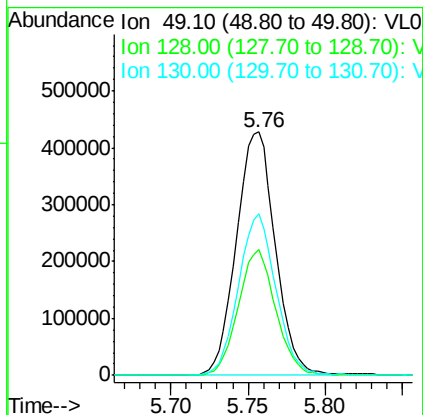
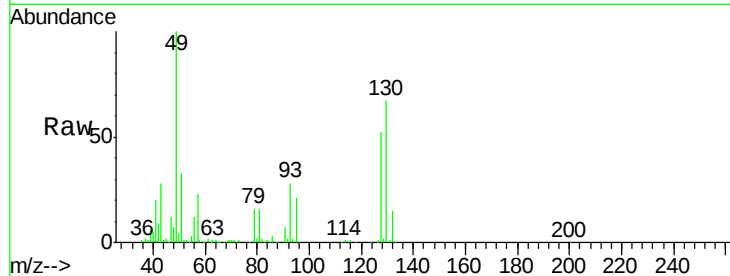
ClientSampleId :

VMP-4

Tot Ion	Ratio	Lower	Upper
49	100		
128	49.8	24.0	72.0
130	64.2	31.2	93.6

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#2

Dichlorodifluoromethane

Concen: 0.307 ppbv

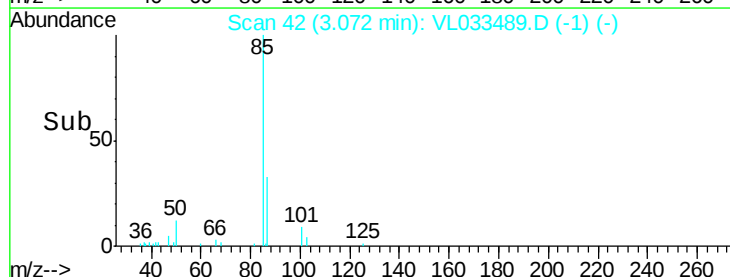
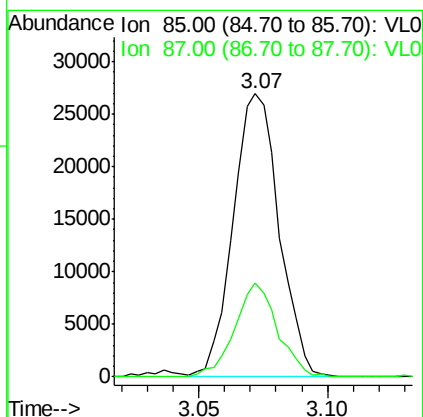
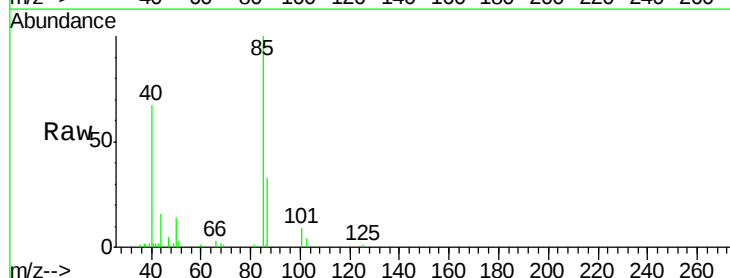
RT: 3.07 min Scan# 42

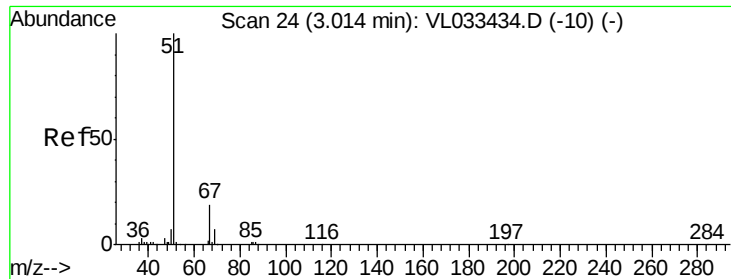
Delta R.T. -0.00 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
85	100		
87	33.2	26.7	40.1





#3

Chlorodifluoromethane

Concen: 0.206 ppbv

RT: 3.01 min Scan# 22

Delta R.T. -0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Instrument :

MSVOA_L

ClientSampleId :

VMP-4

Tot Ion: 51 Resp: 17784

Ion Ratio Lower Upper

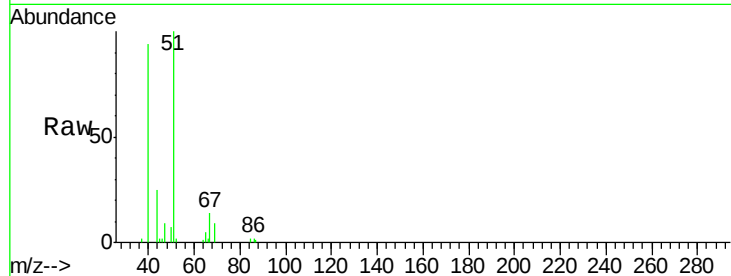
51 100

67 24.7 15.7 23.5#

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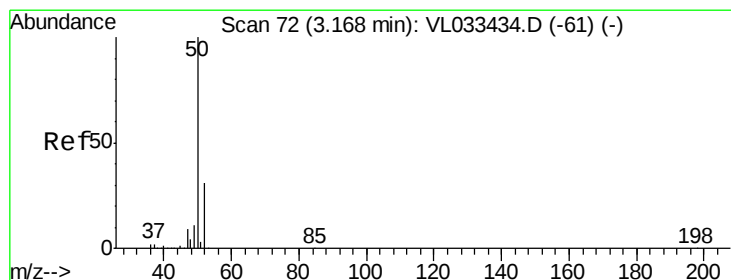
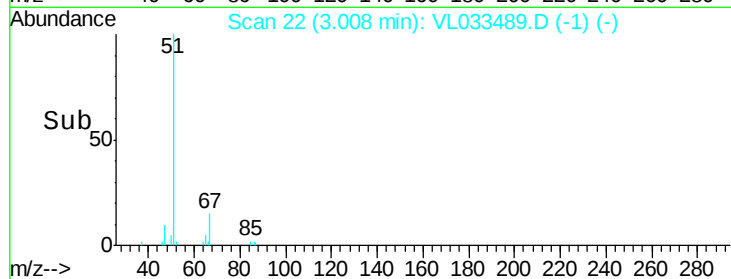
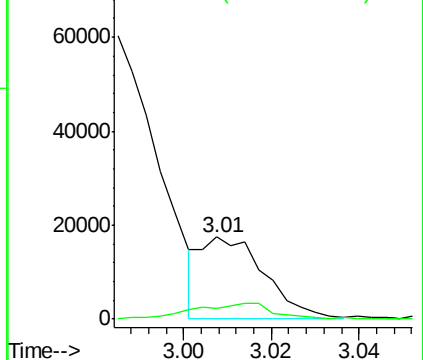
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.271 ppbv

RT: 3.17 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL033489.D

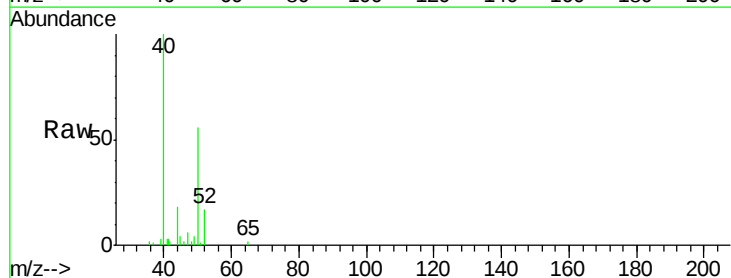
Acq: 28 Mar 2019 4:54

Tgt Ion: 50 Resp: 12384

Ion Ratio Lower Upper

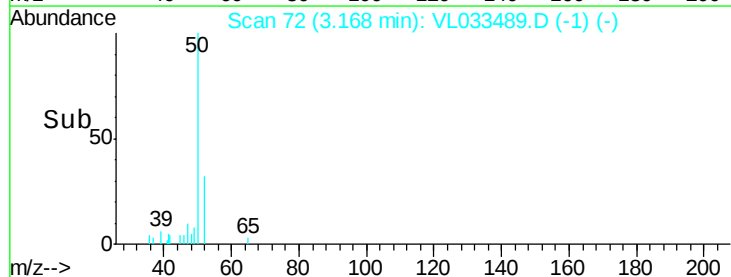
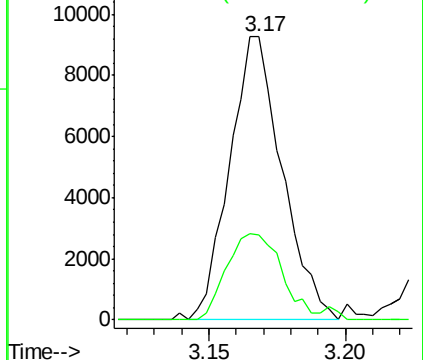
50 100

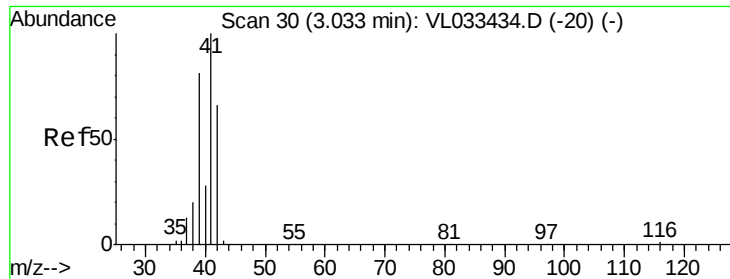
52 30.1 25.0 37.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.155 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Instrument :

MSVOA_L

ClientSampleId :

VMP-4

Tot Ion: 41 Resp: 41839

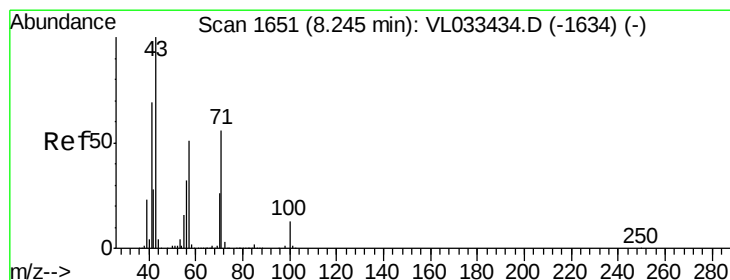
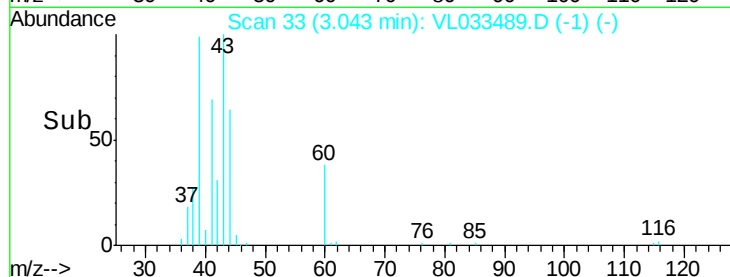
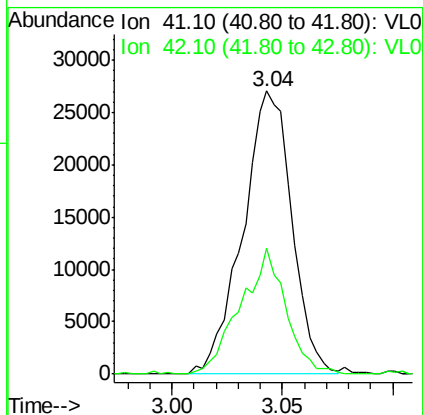
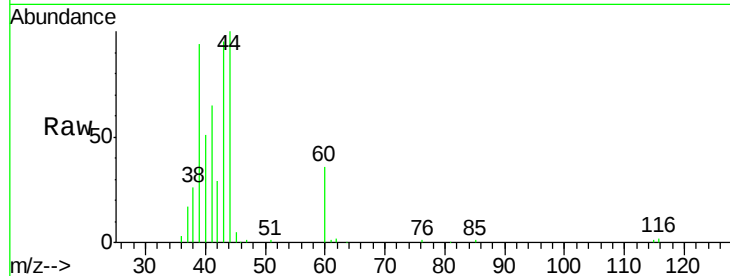
Ion Ratio Lower Upper

41 100

42 41.4 53.9 80.9#

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#10

Heptane

Concen: 6.116 ppbv

RT: 8.24 min Scan# 1649

Delta R.T. -0.01 min

Lab File: VL033489.D

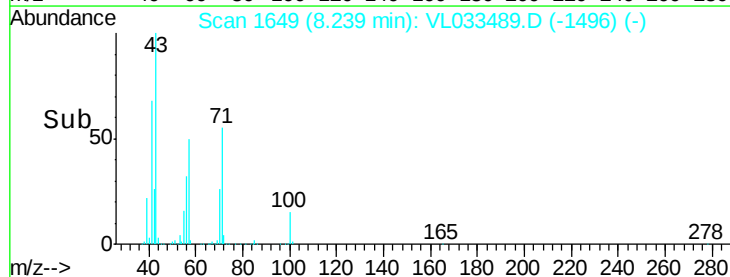
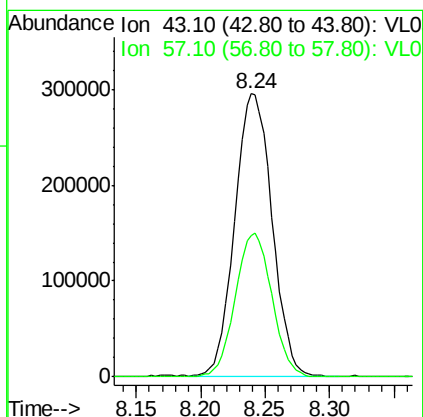
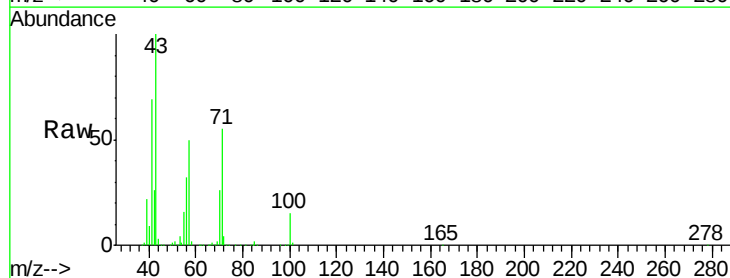
Acq: 28 Mar 2019 4:54

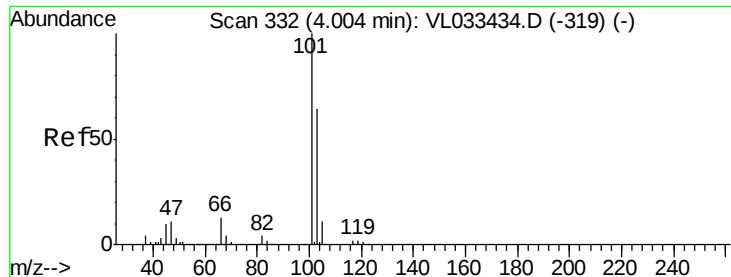
Tgt Ion: 43 Resp: 592209

Ion Ratio Lower Upper

43 100

57 50.0 40.6 60.8





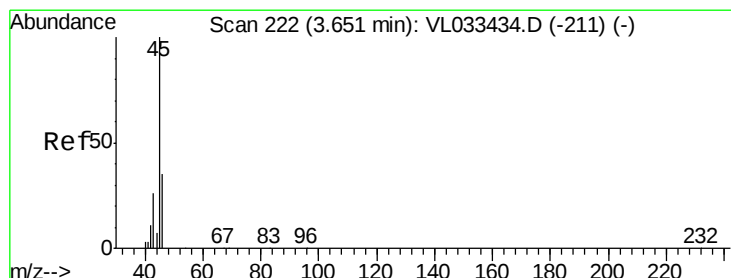
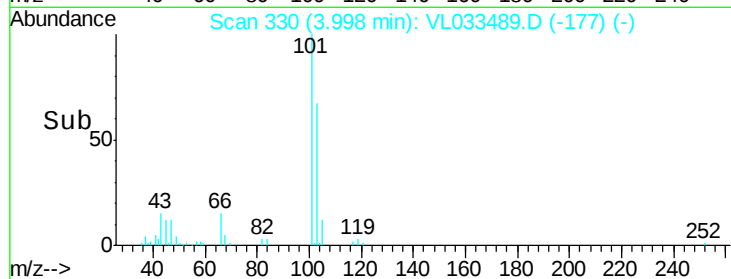
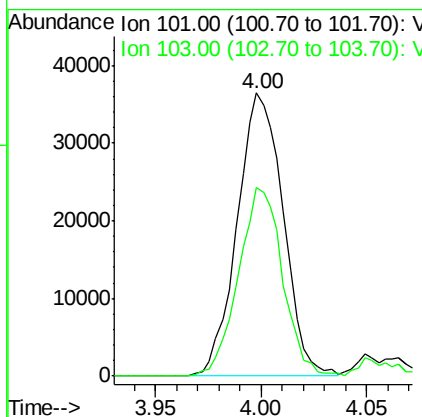
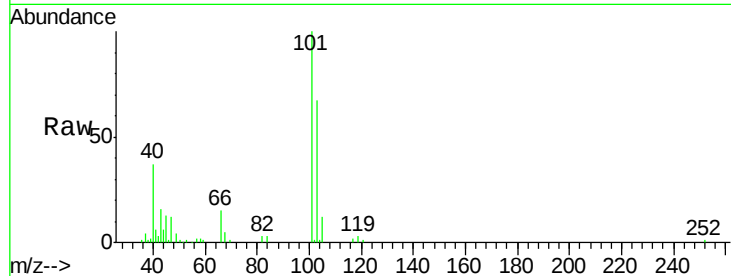
#11
 Trichlorofluoromethane
 Concen: 0.409 ppbv
 RT: 4.00 min Scan# 330
 Delta R.T. -0.01 min
 Lab File: VL033489.D
 Acq: 28 Mar 2019 4:54

Instrument :
 MSVOA_L
 ClientSampleId :
 VMP-4

Tot Ion	Ratio	Lower	Upper
101	100		
103	66.8	51.3	76.9

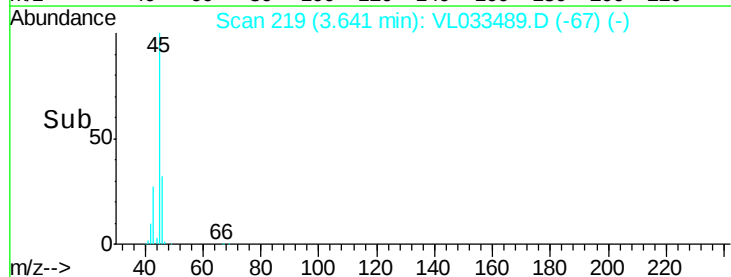
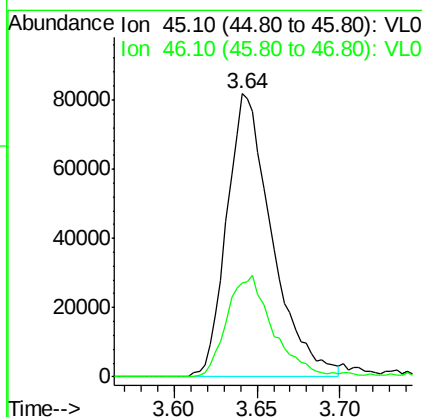
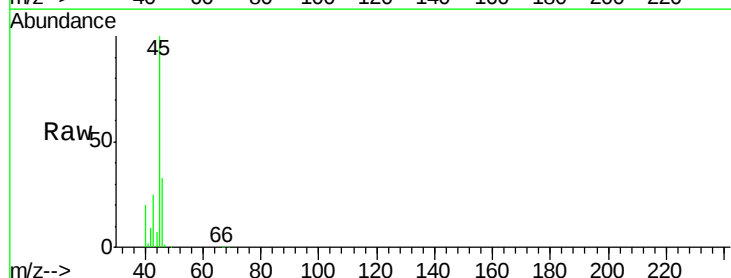
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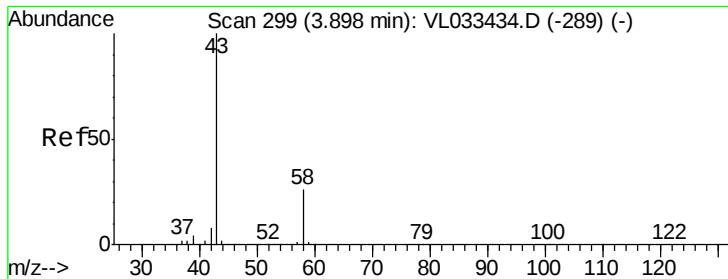
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#13
 Ethanol
 Concen: 16.545 ppbv
 RT: 3.64 min Scan# 219
 Delta R.T. -0.01 min
 Lab File: VL033489.D
 Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
45	100		
46	37.7	25.4	101.8





#15

Acetone

Concen: 24.160 ppbv

RT: 3.89 min Scan# 296

Delta R.T. -0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Instrument :

MSVOA_L

ClientSampleId :

VMP-4

Tot Ion: 43 Resp: 2176575

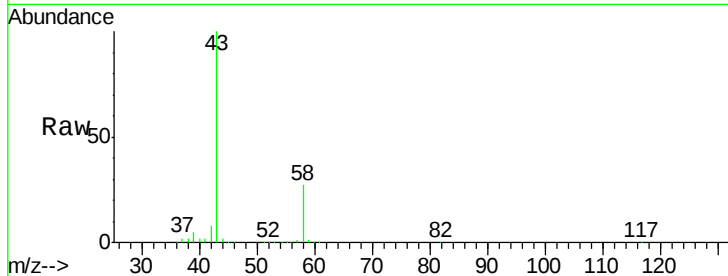
Ion Ratio Lower Upper

43 100

58 26.7 20.5 30.7

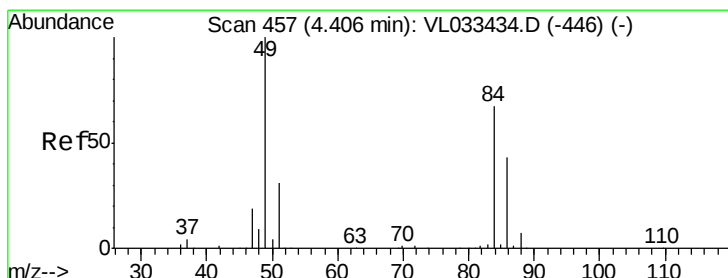
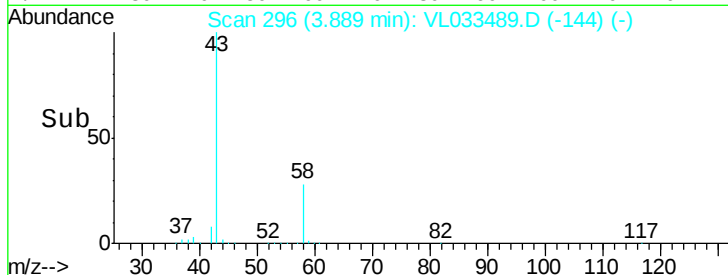
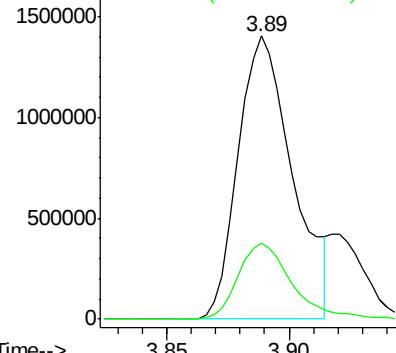
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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 1.877 ppbv

RT: 4.40 min Scan# 456

Delta R.T. -0.00 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Tgt Ion: 84 Resp: 71763

Ion Ratio Lower Upper

84 100

49 143.3 120.0 180.0

51 41.1 36.7 55.1

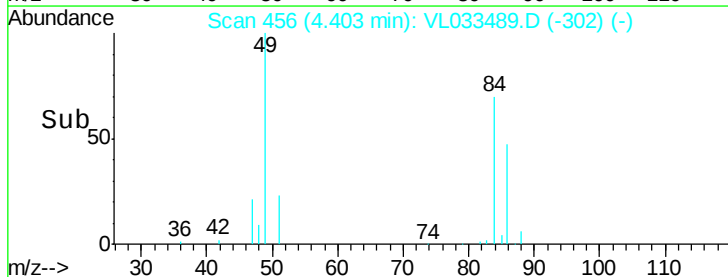
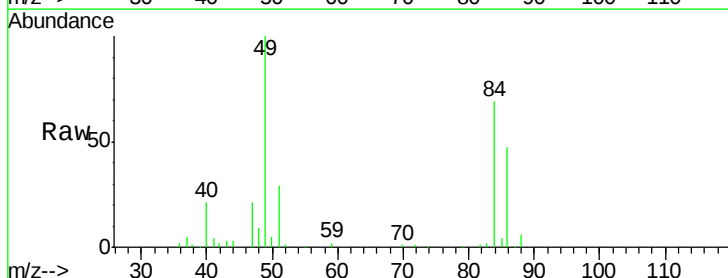
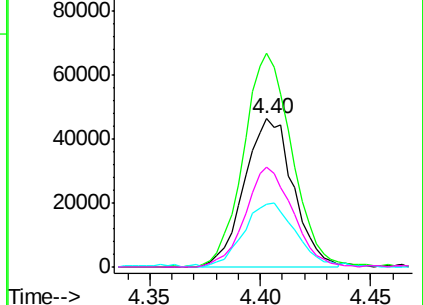
86 67.6 51.9 77.9

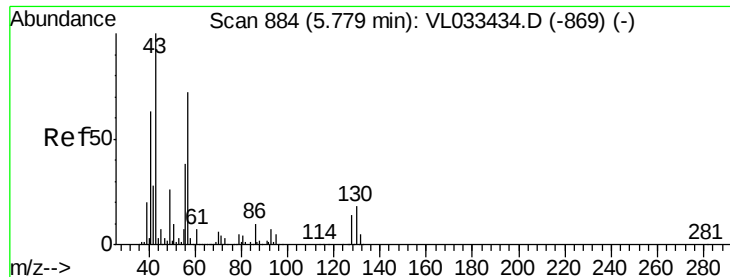
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0





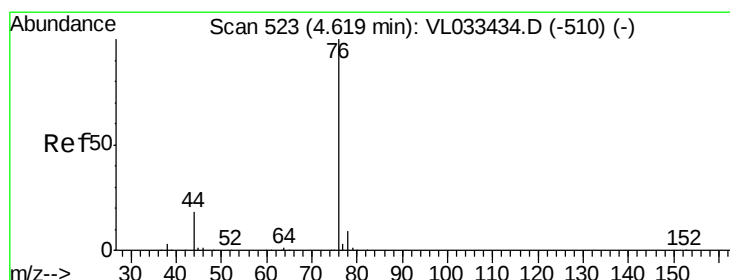
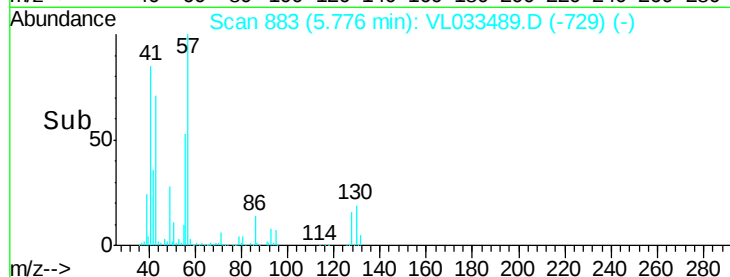
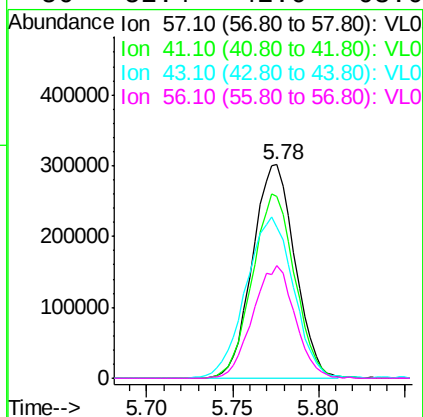
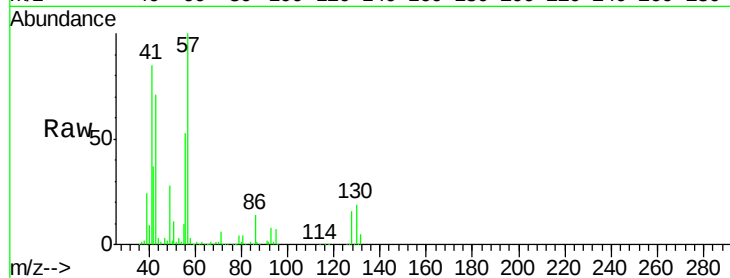
#26
Hexane
Concen: 6.961 ppbv
RT: 5.78 min Scan# 883
Delta R.T. -0.00 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Instrument :
MSVOA_L
ClientSampleId :
VMP-4

Tot Ion	Ratio	Lower	Upper
57	100		
41	86.6	70.7	106.1
43	85.2	182.6	274.0#
56	52.4	42.0	63.0

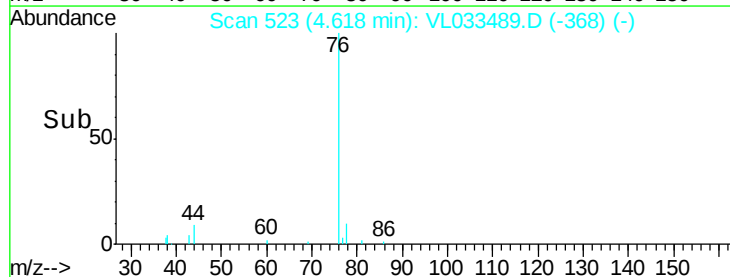
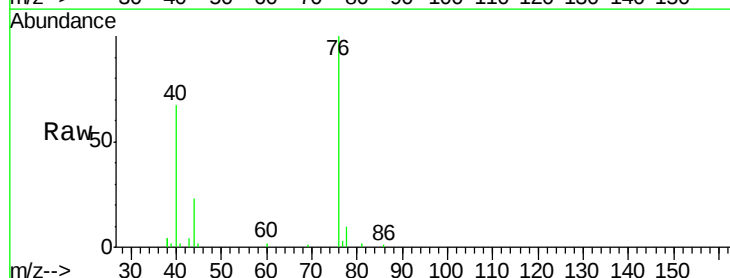
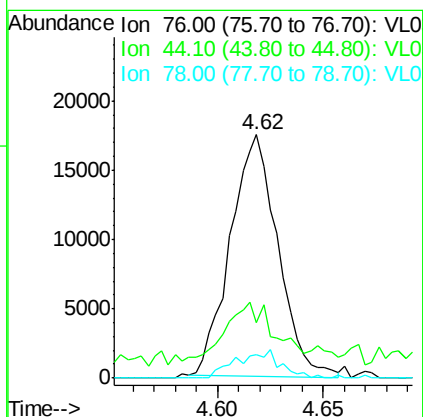
Manual Integrations
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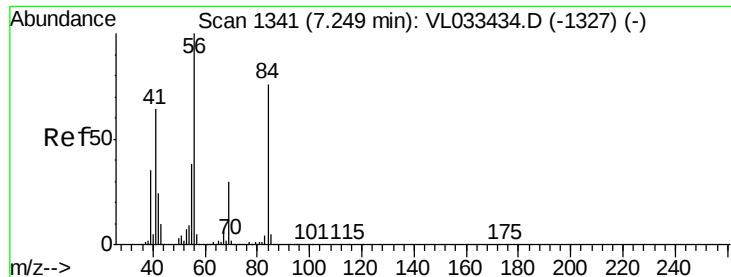
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#27
Carbon Disulfide
Concen: 0.308 ppbv
RT: 4.62 min Scan# 523
Delta R.T. -0.00 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
76	100		
44	38.1	14.8	22.2#
78	10.8	7.6	11.4





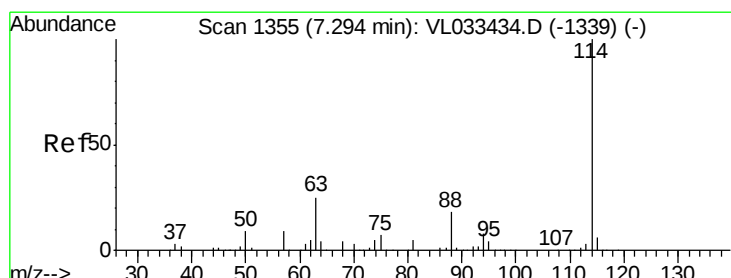
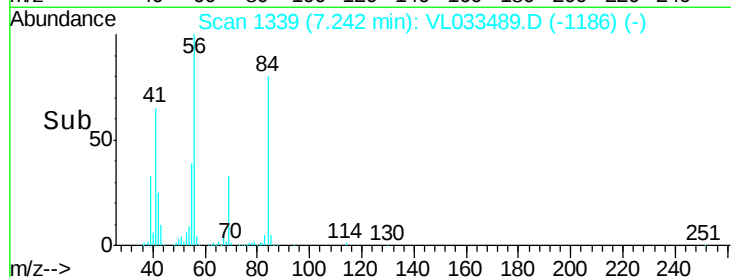
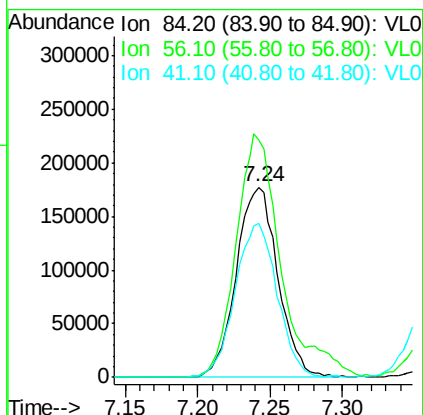
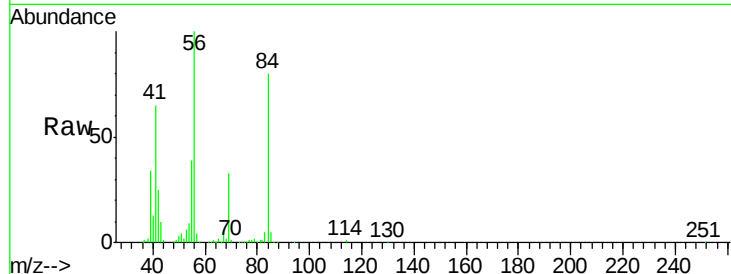
#30
Cvclohexane
Concen: 6.016 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Instrument :
MSVOA_L
ClientSampleId :
VMP-4

Tot Ion	Ratio	Lower	Upper
84	100		
56	138.9	109.7	164.5
41	81.8	68.2	102.2

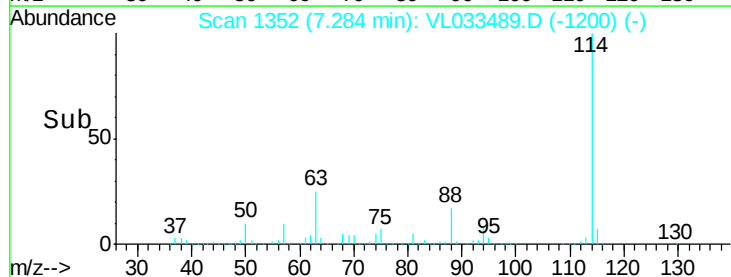
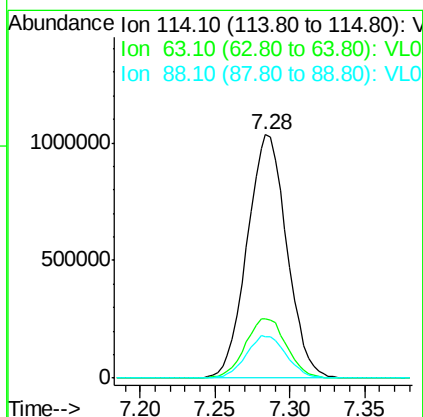
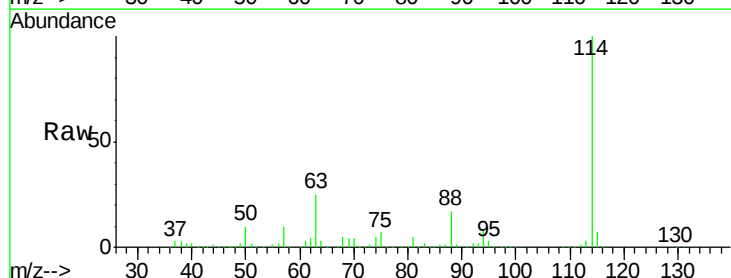
Manual Integrations
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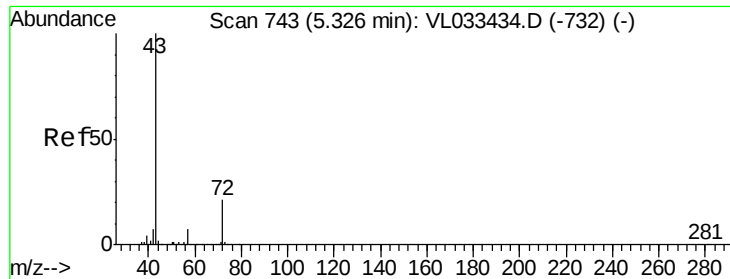
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#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.28 min Scan# 1352
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
114	100		
63	25.5	21.5	32.3
88	17.5	14.5	21.7





#34

2-Butanone

Concen: 4.457 ppbv

RT: 5.32 min Scan# 741

Delta R.T. -0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Instrument :

MSVOA_L

ClientSampleId :

VMP-4

Tot Ion: 43 Resp: 511714

Ion Ratio Lower Upper

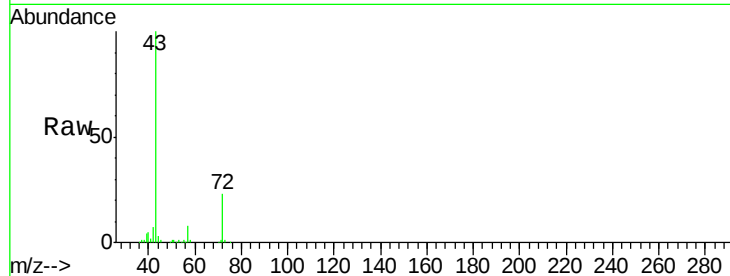
43 100

72 22.0 17.4 26.2

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

5.32

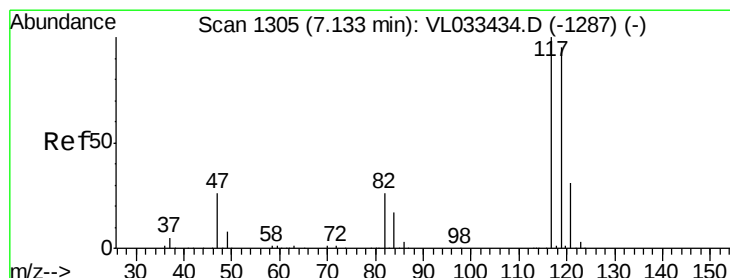
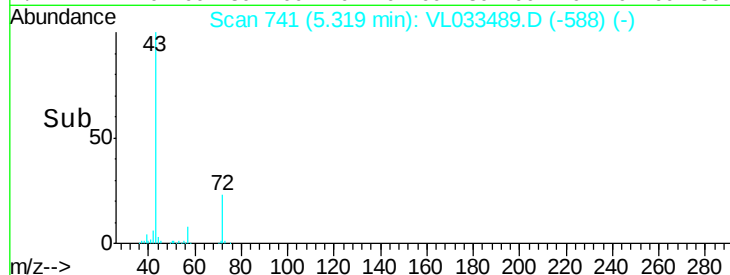
300000

200000

100000

0

Time-->



#35

Carbon Tetrachloride

Concen: 0.060 ppbv m

RT: 7.12 min Scan# 1302

Delta R.T. -0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

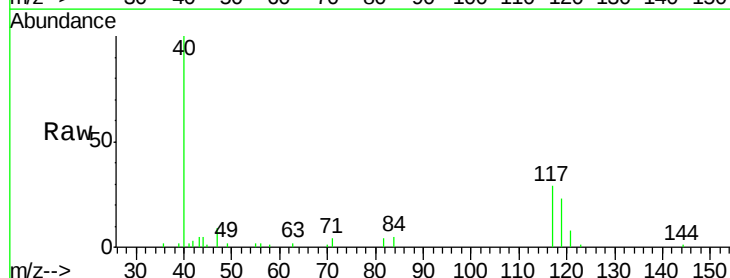
Tgt Ion: 117 Resp: 8155

Ion Ratio Lower Upper

117 100

119 79.7 75.8 113.8

121 28.3 24.7 37.1



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

7.12

6000

5000

4000

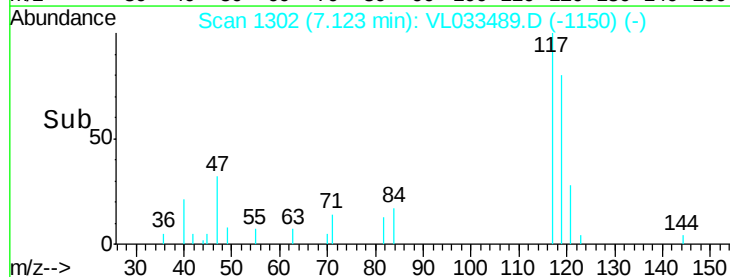
3000

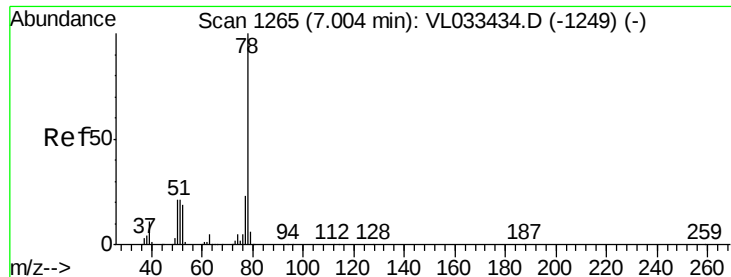
2000

1000

0

Time-->





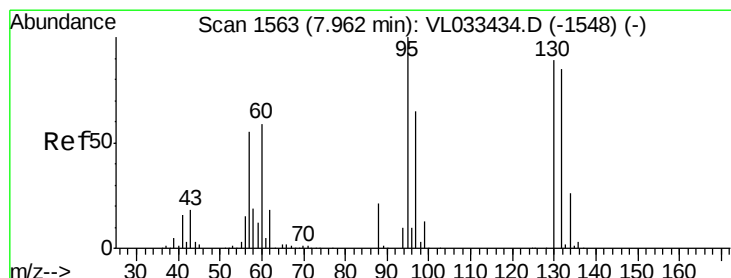
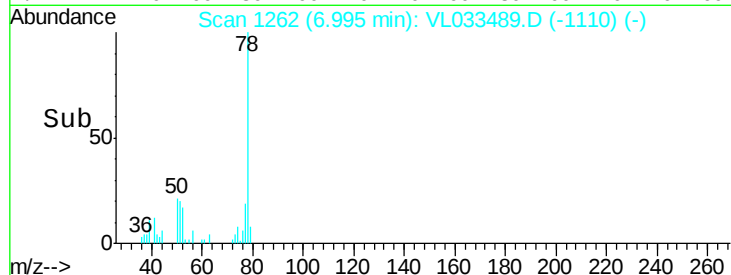
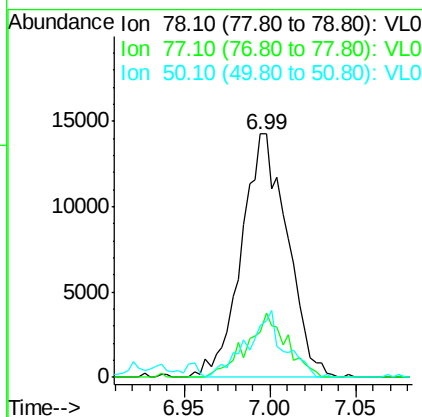
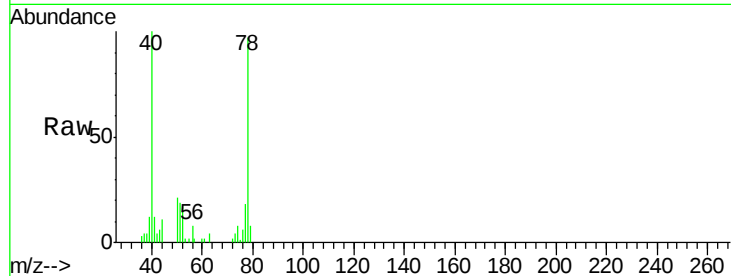
#36
Benzene
Concen: 0.164 ppbv
RT: 6.99 min Scan# 1262
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Instrument :
MSVOA_L
ClientSampled :
VMP-4

Tot Ion	Ratio	Lower	Upper
78	100		
77	18.8	18.1	27.1
50	21.4	16.7	25.1

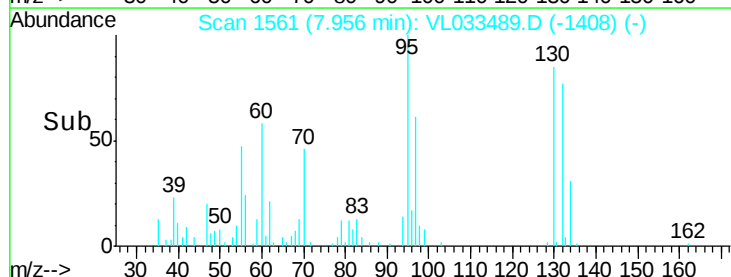
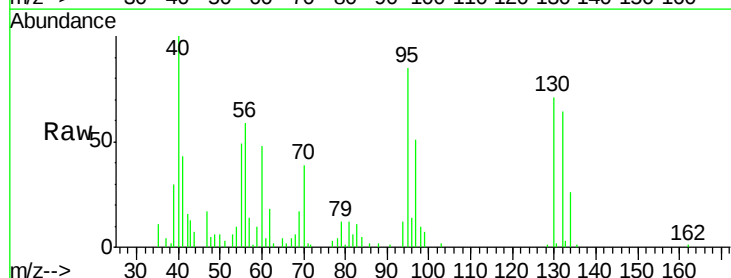
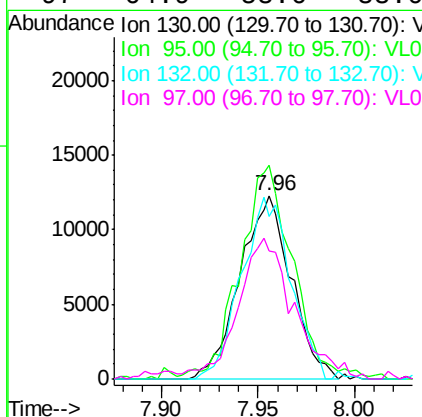
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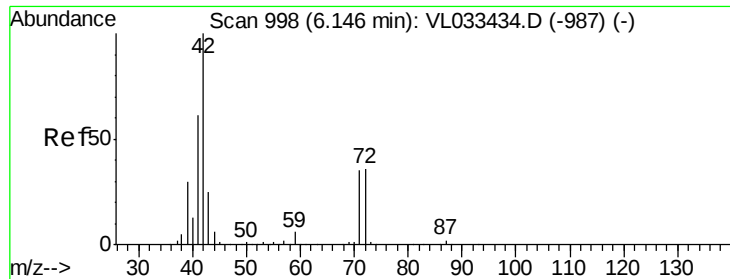
MMDadoda
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#38
Trichloroethene
Concen: 0.375 ppbv
RT: 7.96 min Scan# 1561
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
130	100		
95	112.5	89.8	134.8
132	88.6	76.6	115.0
97	64.9	58.6	88.0





#41

Tetrahydrofuran

Concen: 0.391 ppbv

RT: 6.15 min Scan# 999

Delta R.T. 0.00 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Instrument :

MSVOA_L

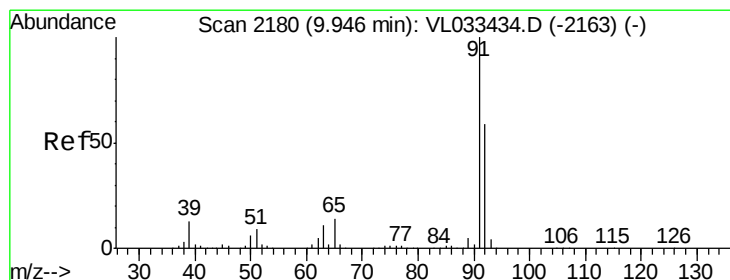
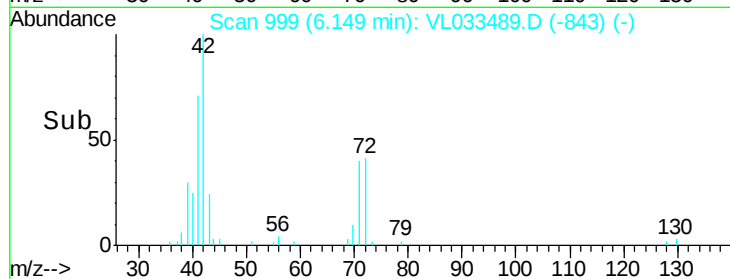
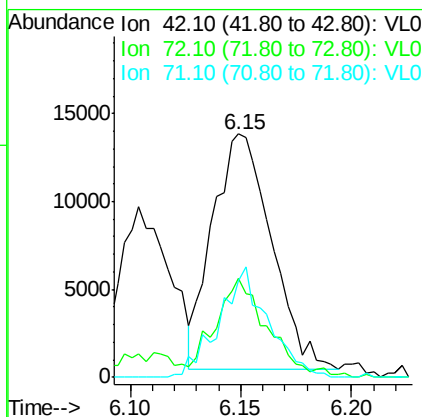
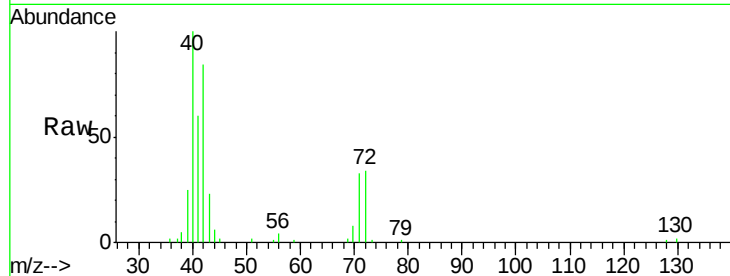
ClientSampleId :

VMP-4

Tot Ion	Ratio	Lower	Upper
42	100		
72	48.3	30.2	45.2#
71	39.0	29.4	44.2

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#53

Toluene

Concen: 6.317 ppbv

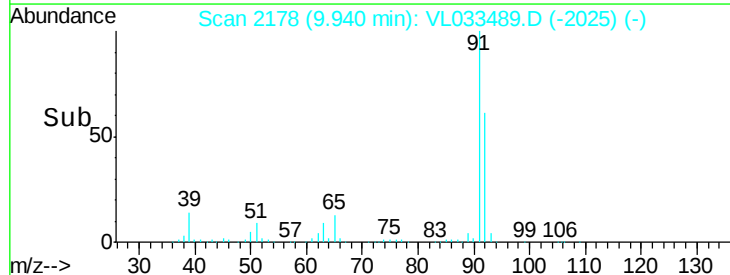
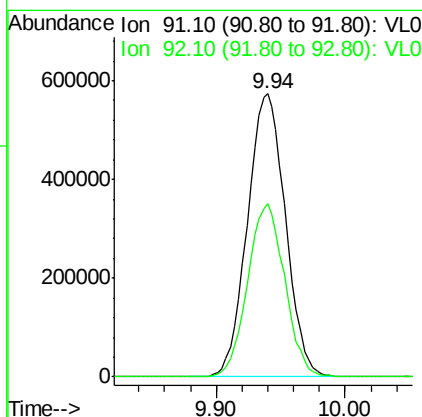
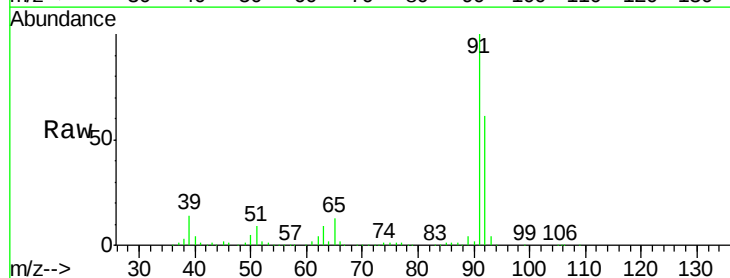
RT: 9.94 min Scan# 2178

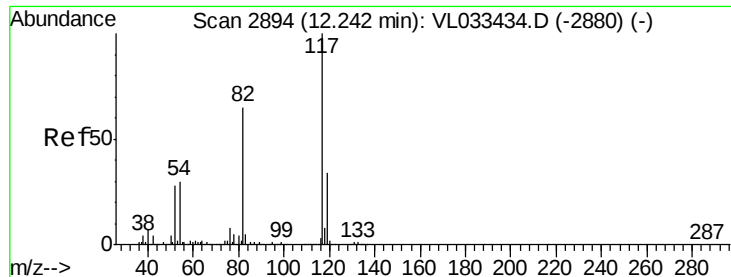
Delta R.T. -0.01 min

Lab File: VL033489.D

Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.4	71.0





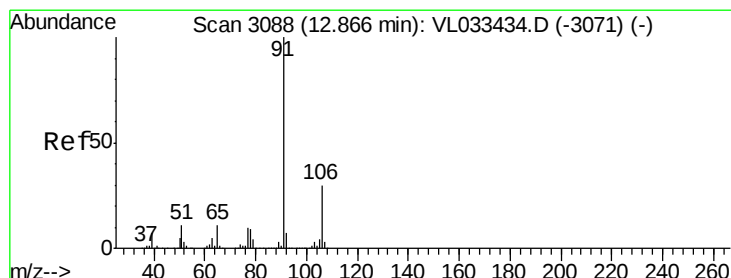
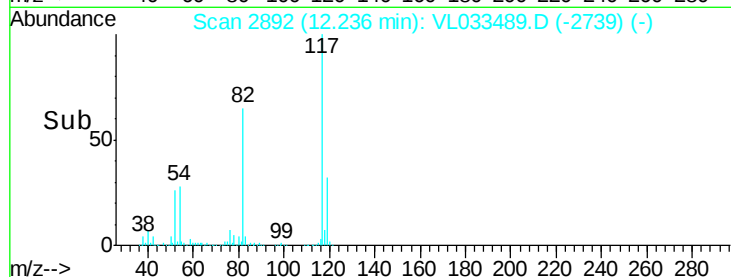
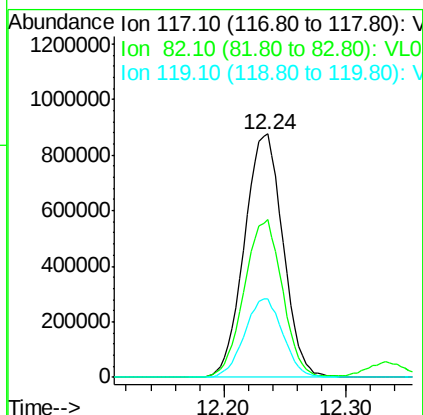
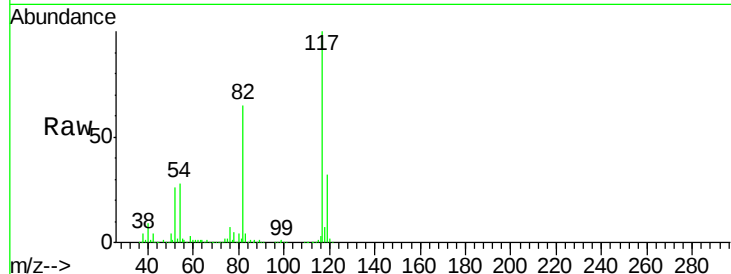
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2892
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Instrument :
MSVOA_L
ClientSampled :
VMP-4

Tot Ion	Ratio	Lower	Upper
117	100		
82	64.1	51.5	77.3
119	32.1	25.5	38.3

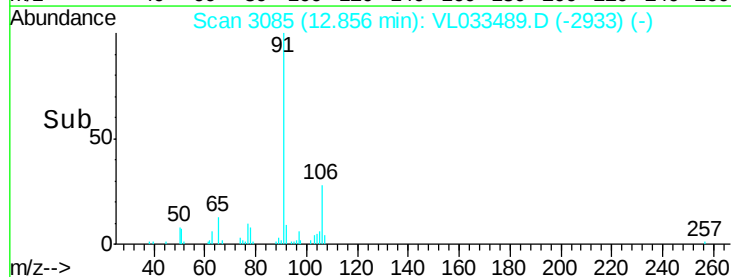
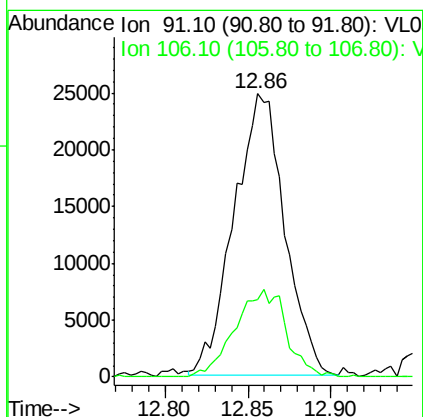
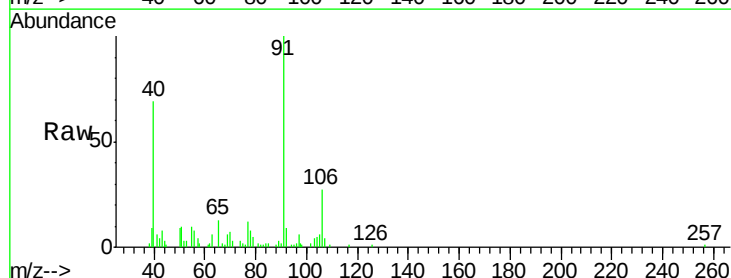
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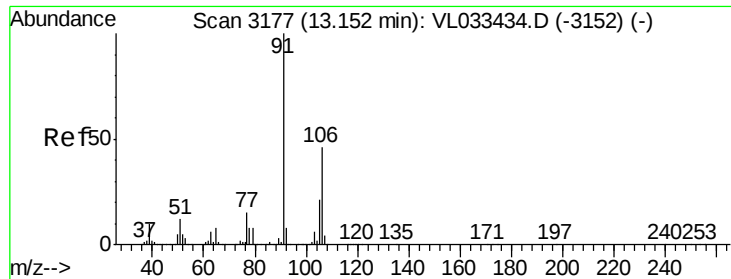
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#58
Ethyl Benzene
Concen: 0.206 ppbv
RT: 12.86 min Scan# 3085
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
91	100		
106	27.6	23.8	35.6





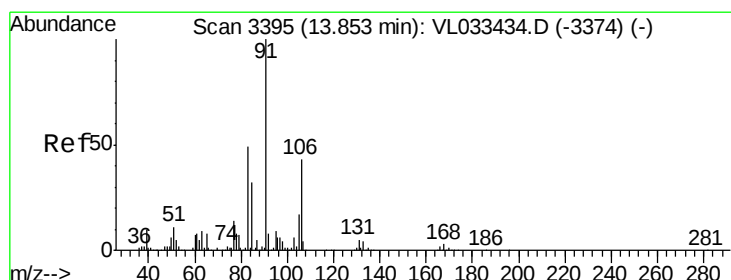
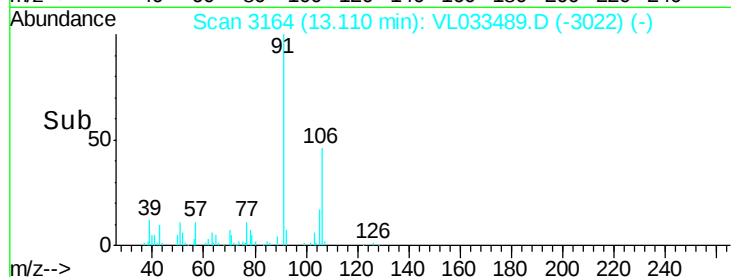
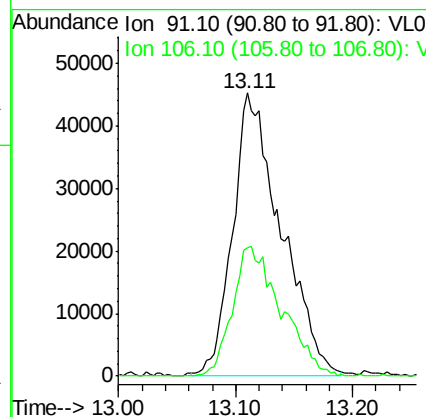
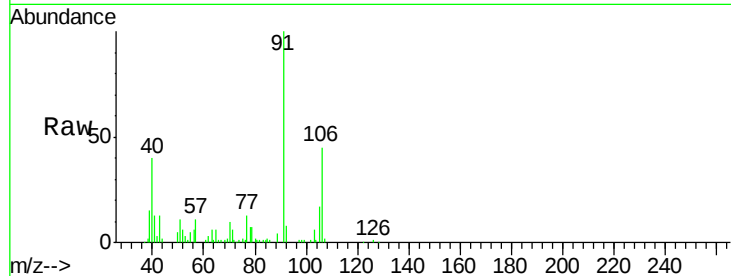
#59
m/p-Xylene
Concen: 0.567 ppbv m
RT: 13.11 min Scan# 3164
Delta R.T. -0.04 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Instrument :
MSVOA_L
ClientSampled :
VMP-4

Tot Ion	Ratio	Lower	Upper
91	100		
106	0.0	0.0	0.0

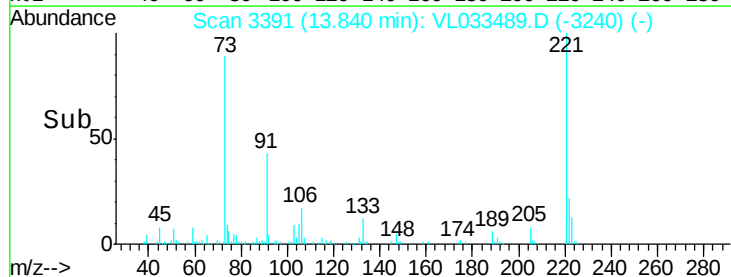
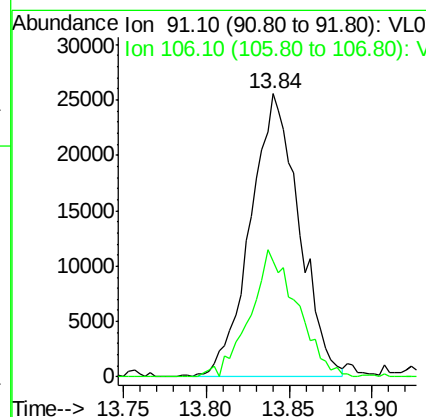
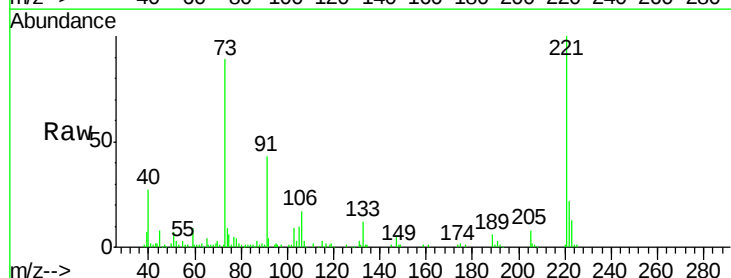
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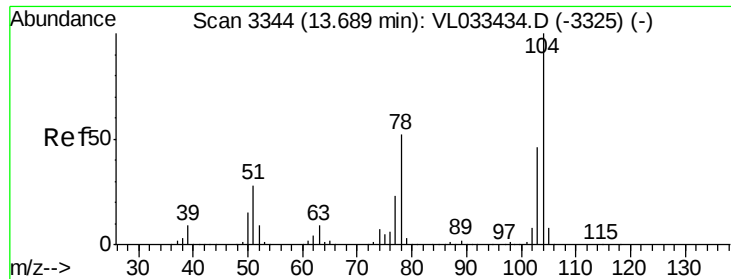
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#60
o-Xylene
Concen: 0.236 ppbv
RT: 13.84 min Scan# 3391
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
91	100		
106	43.6	21.4	64.3





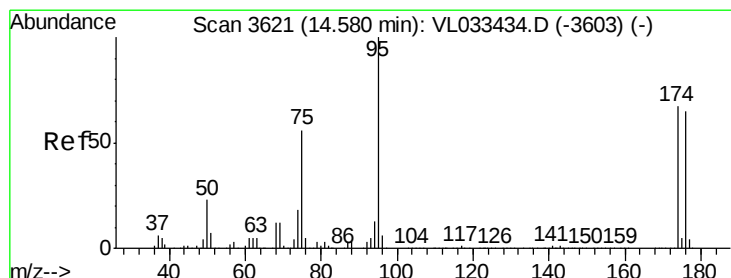
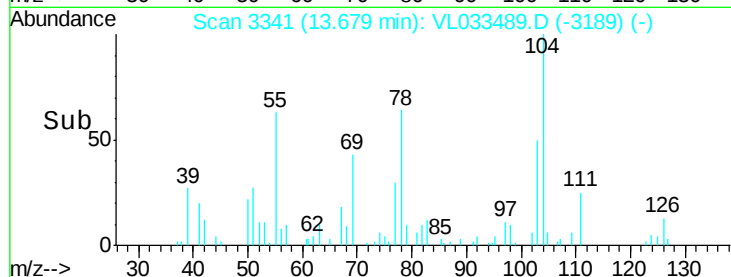
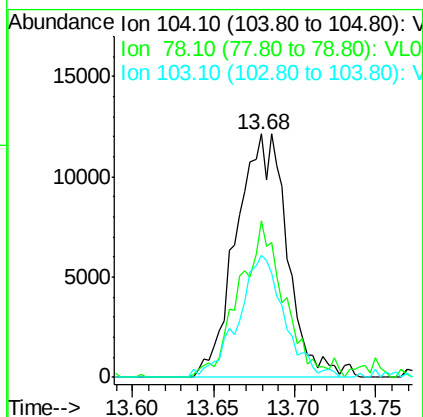
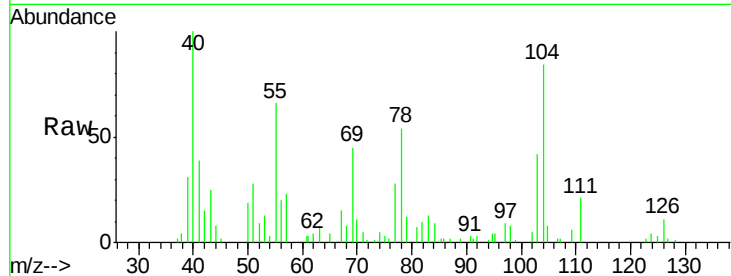
#61
Stvrene
Concen: 0.173 ppbv m
RT: 13.68 min Scan# 3341
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Instrument :
MSVOA_L
ClientSampleId :
VMP-4

Tot Ion	Ratio	Lower	Upper
104	100		
78	57.6	43.2	64.8
103	45.4	37.8	56.8

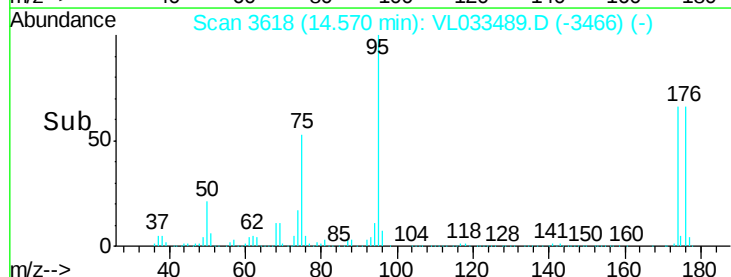
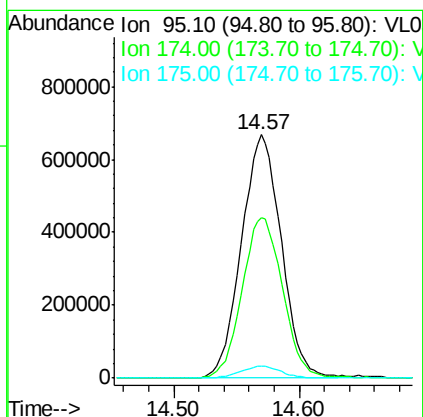
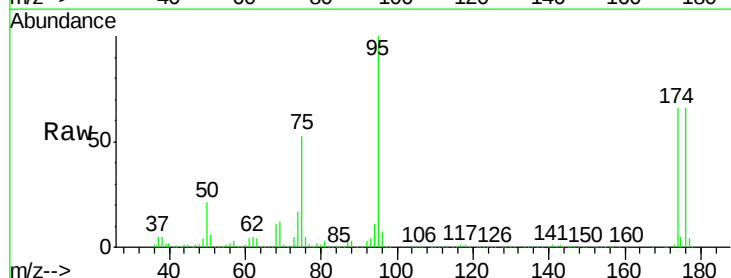
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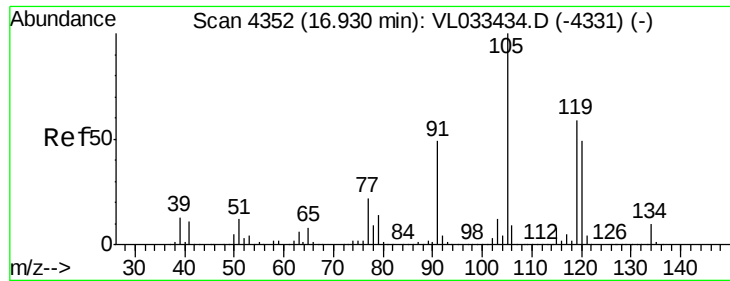
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#68
1-Bromo-4-Fluorobenzene
Concen: 9.831 ppbv
RT: 14.57 min Scan# 3618
Delta R.T. -0.01 min
Lab File: VL033489.D
Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
95	100		
174	67.6	52.9	79.3
175	5.1	3.8	5.6





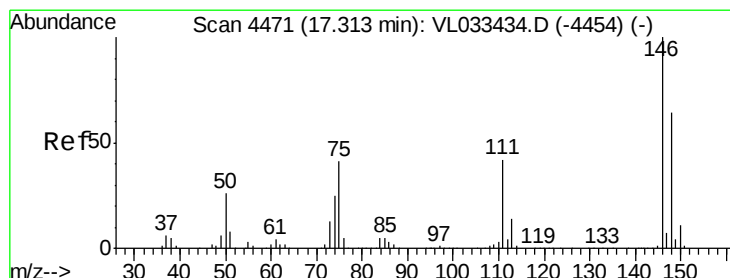
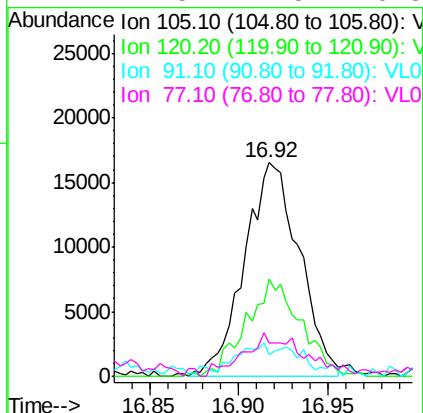
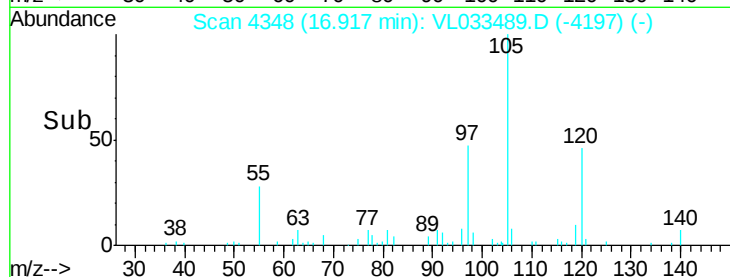
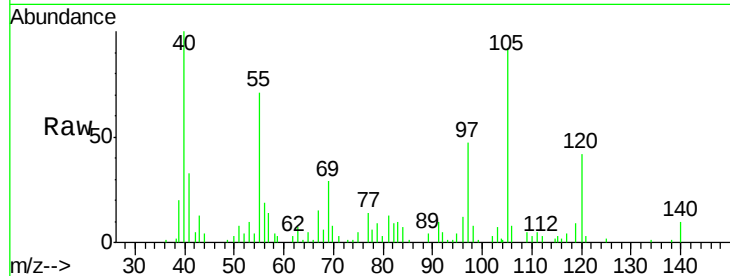
#74
 1,2,4-Trimethylbenzene
 Concen: 0.140 ppbv
 RT: 16.92 min Scan# 4348
 Delta R.T. -0.01 min
 Lab File: VL033489.D
 Acq: 28 Mar 2019 4:54

Instrument :
 MSVOA_L
 ClientSampled :
 VMP-4

Tot Ion	Ratio	Lower	Upper
105	100		
120	47.7	39.0	58.6
91	9.5	40.0	60.0#
77	12.5	17.5	26.3#

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#76
 1,4-Dichlorobenzene
 Concen: 0.458 ppbv
 RT: 17.31 min Scan# 4469
 Delta R.T. -0.01 min
 Lab File: VL033489.D
 Acq: 28 Mar 2019 4:54

Tgt Ion	Ratio	Lower	Upper
146	100		
111	53.9	21.7	65.1
148	65.0	32.0	96.2

