**Supporting Information**

**for**

# Design, Synthesis and Biological Evaluation of Novel Peptide MC2 Analogues as Potential Antidiabetic Agents

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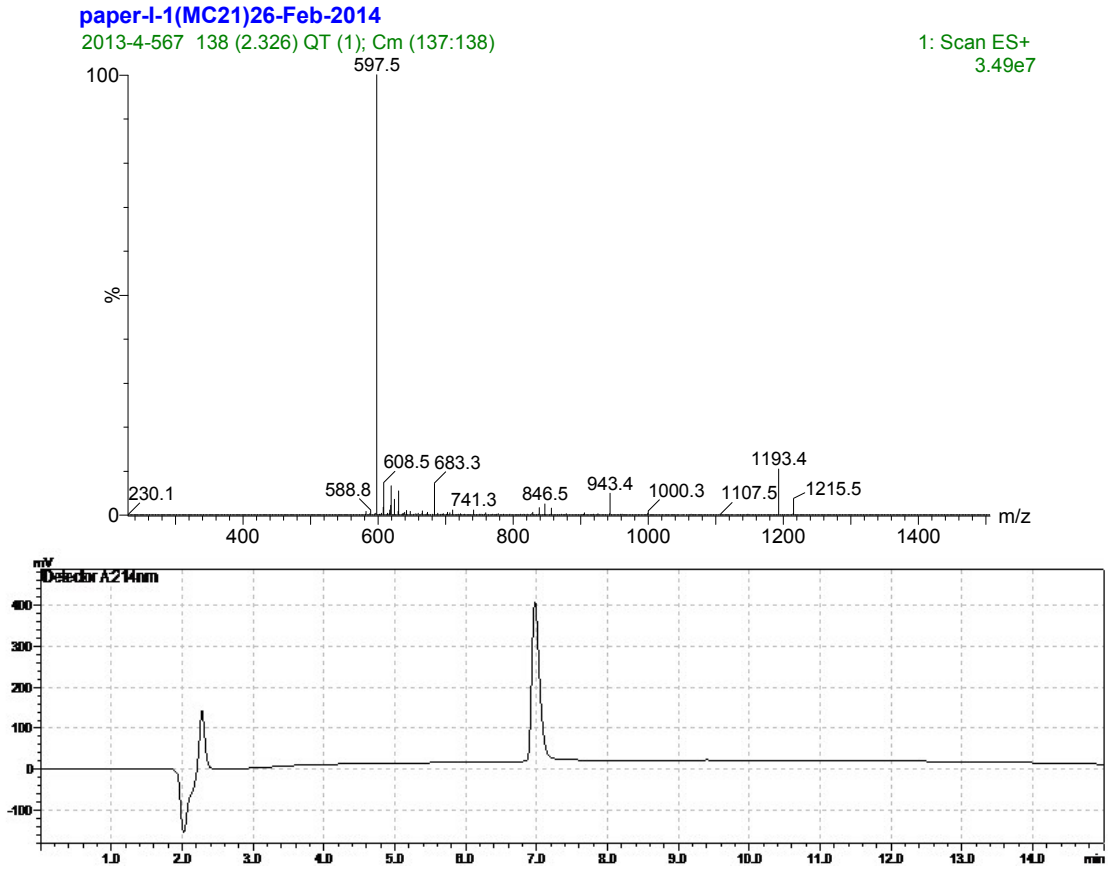
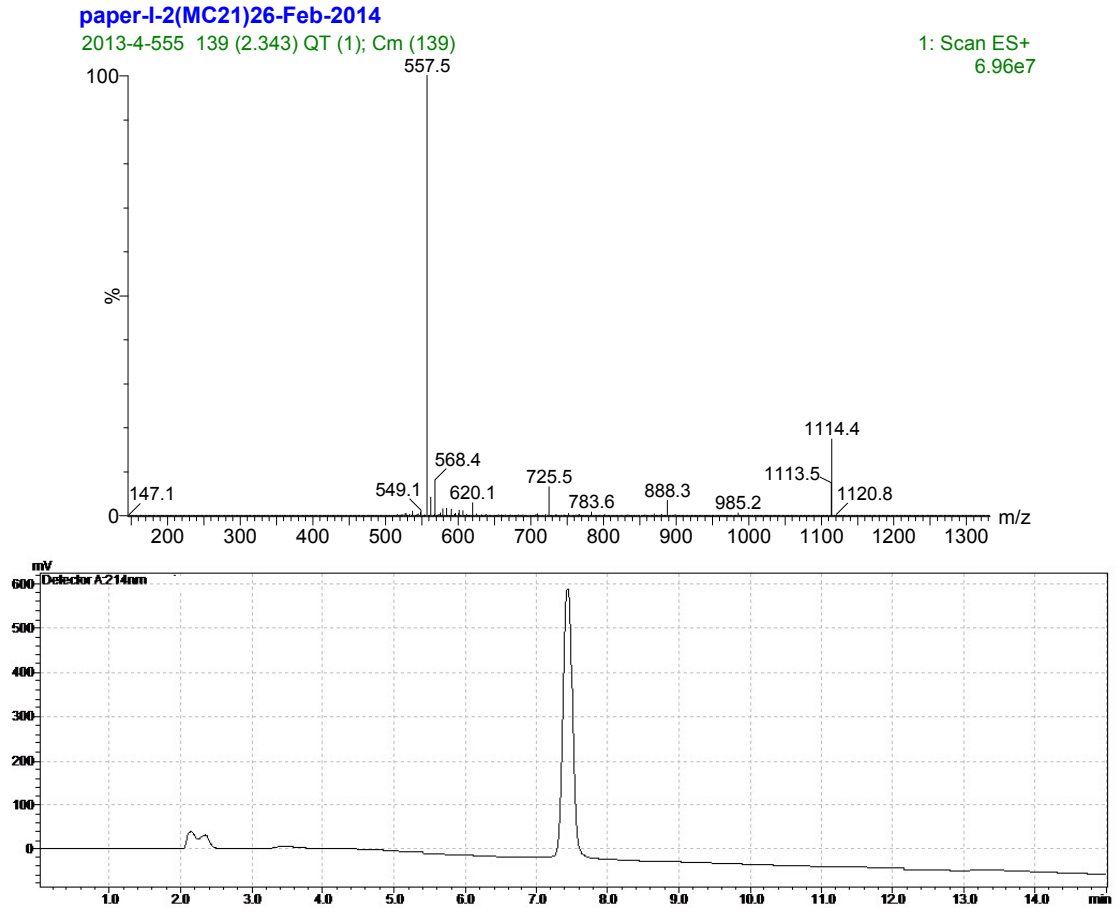
## Mass and HPLC spectrum for the compounds

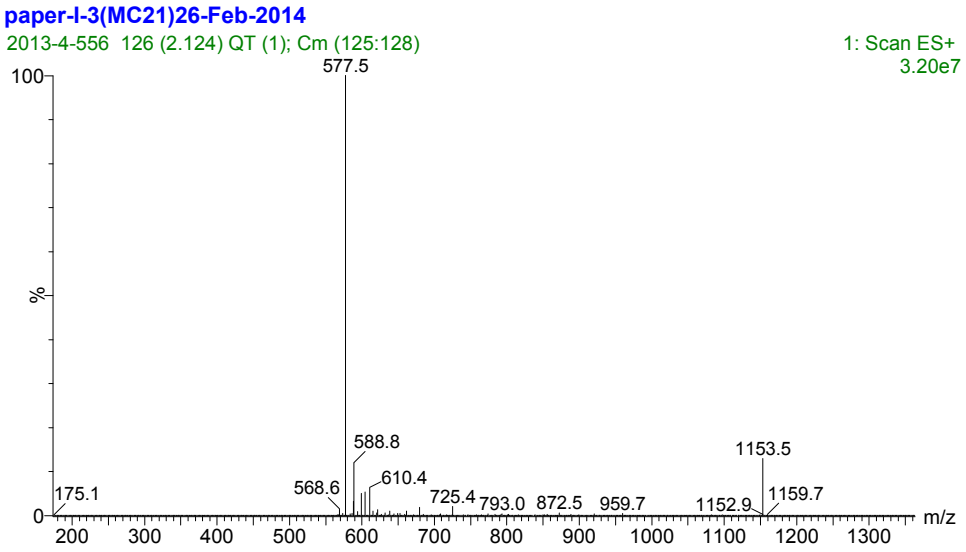
### I-1

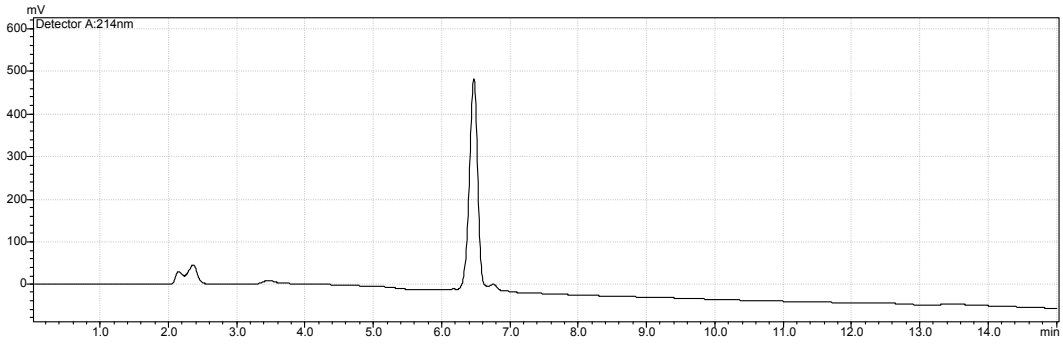


# I-2

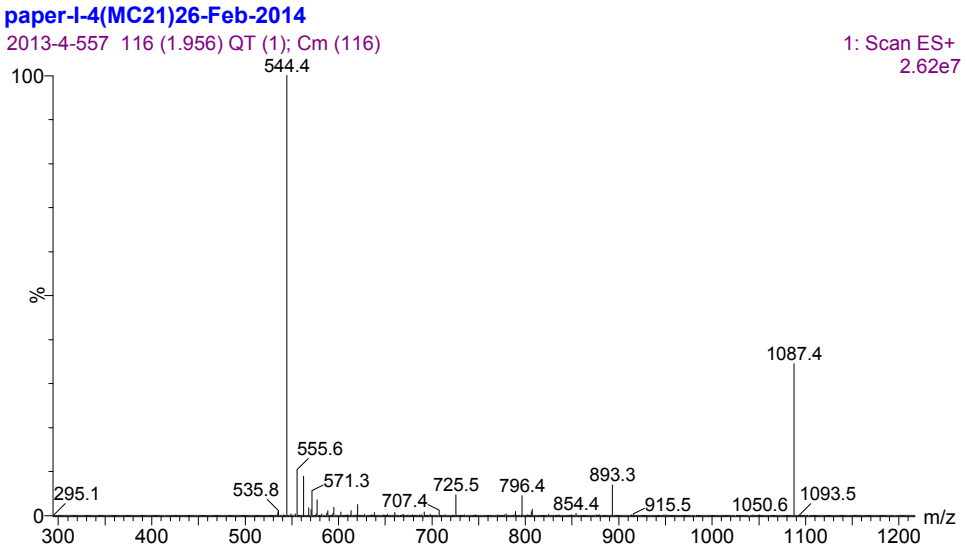

paper-I-2(MC21)26-Feb-2014
2013-4-555 139 (2.343) QT (1); Cm (139)
1: Scan ES+
6.96e7
100
%
0
557.5
568.4
549.1
620.1
725.5
783.6
888.3
985.2
1114.4
1113.5
1120.8
147.1
200 300 400 500 600 700 800 900 1000 1100 1200 1300
m/z
mV
Detector A:214nm
600
500
400
300
200
100
0
1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0
min

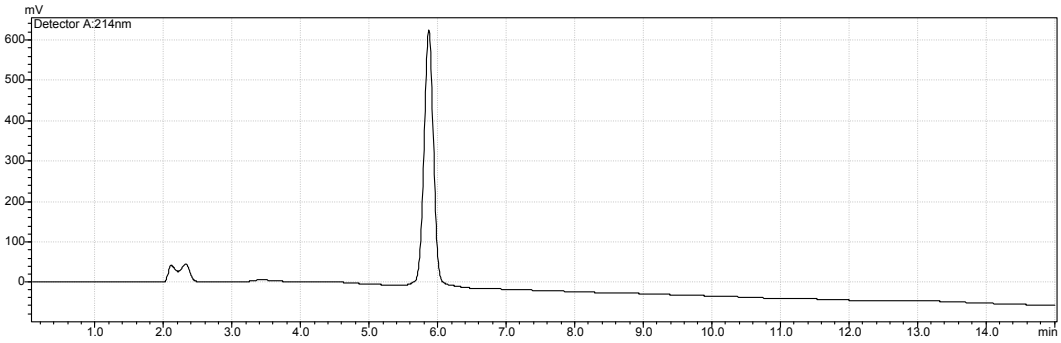
# I-3


paper-I-3(MC21)26-Feb-2014
2013-4-556 126 (2.124) QT (1); Cm (125:128)
1: Scan ES+
3.20e7
100
%
0
577.5
588.8
610.4
568.6
175.1
725.4
793.0
872.5
959.7
1152.9
1153.5
1159.7
200
300
400
500
600
700
800
900
1000
1100
1200
1300
m/z

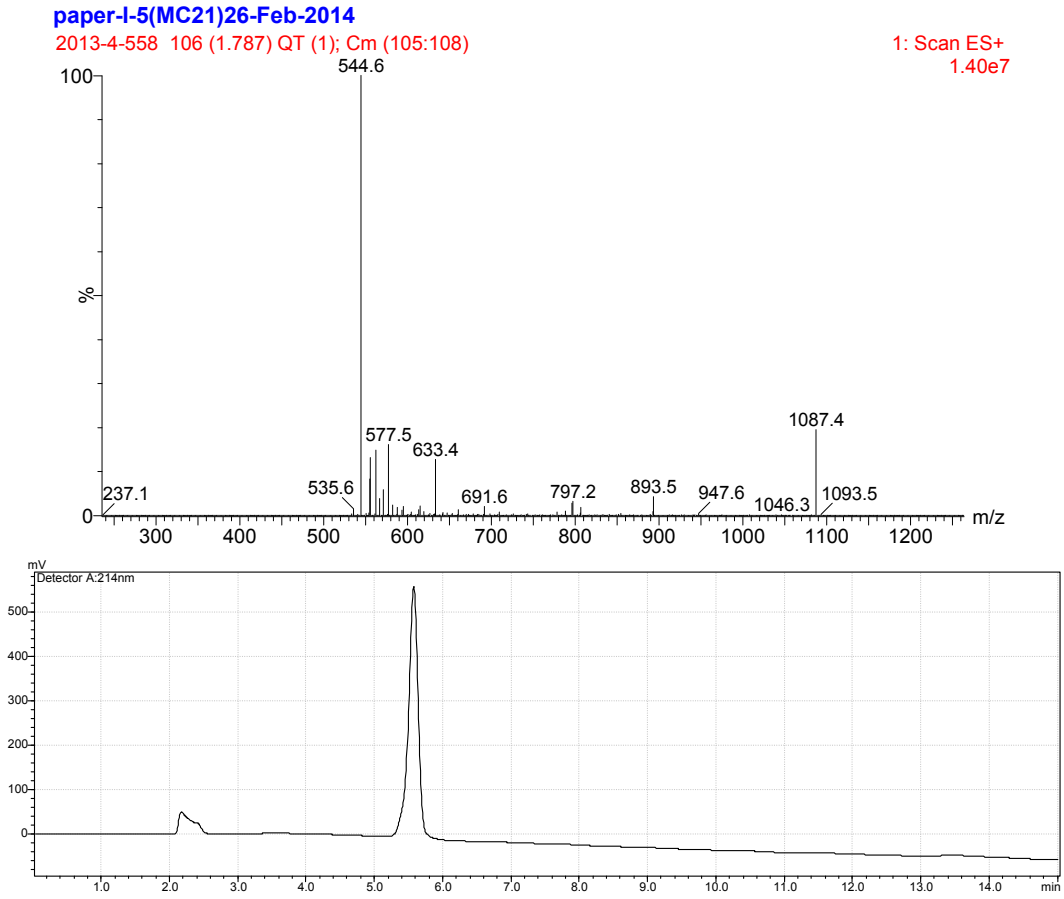

mV
Detector A:214nm
600
500
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# I-4

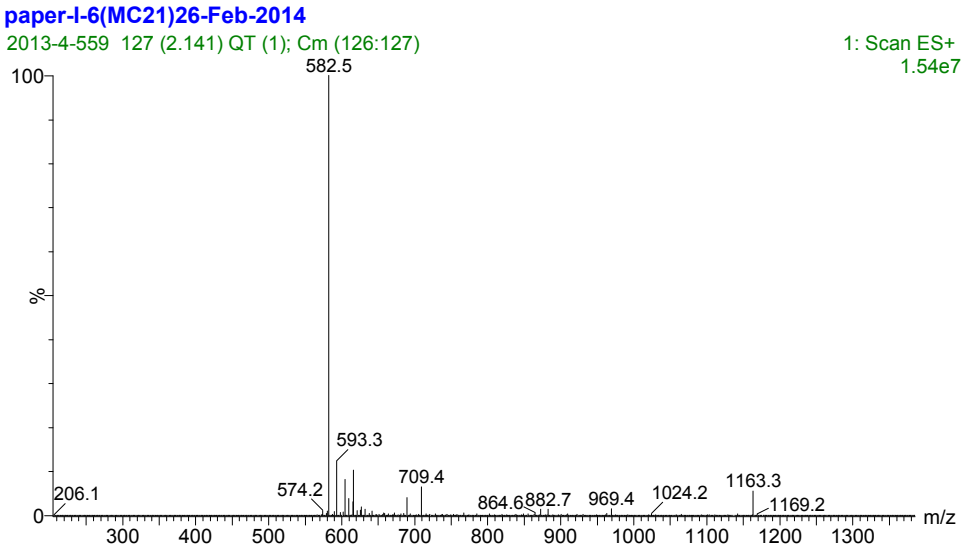

paper-I-4(MC21)26-Feb-2014
2013-4-557 116 (1.956) QT (1); Cm (116)
1: Scan ES+
2.62e7
100
%
0
544.4
1087.4
555.6
571.3
295.1
535.8
707.4
725.5
796.4
854.4
893.3
915.5
1050.6
1093.5
300
400
500
600
700
800
900
1000
1100
1200
m/z

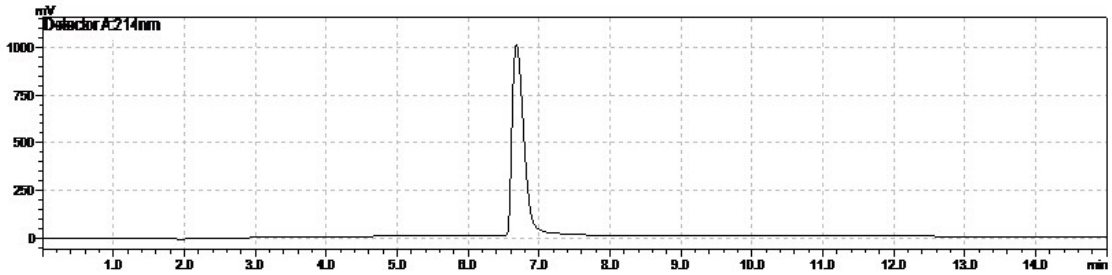

mV
Detector A:214nm
600
500
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# I-5

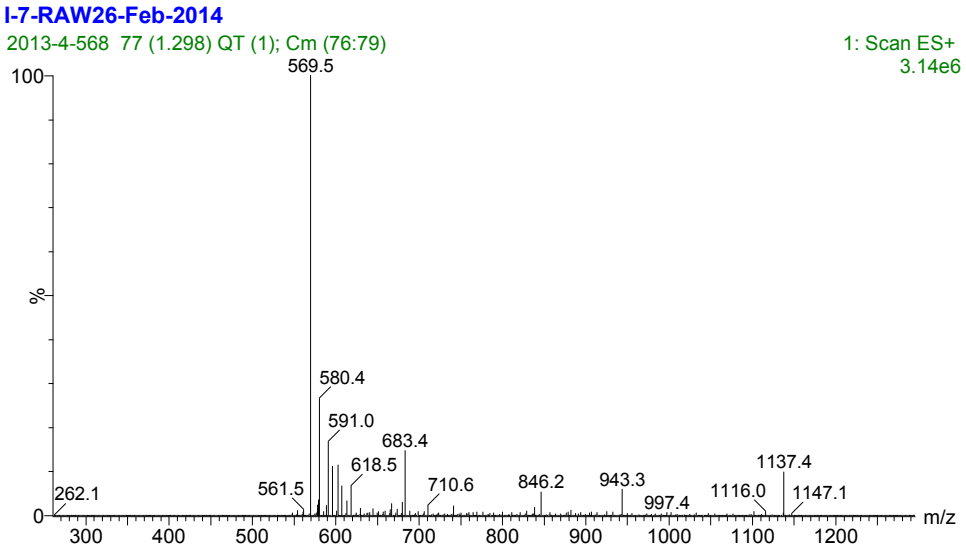

paper-I-5(MC21)26-Feb-2014
2013-4-558 106 (1.787) QT (1); Cm (105:108)
1: Scan ES+
1.40e7
100
%
0
544.6
577.5
633.4
1087.4
237.1
535.6
691.6
797.2
893.5
947.6
1046.3
1093.5
300
400
500
600
700
800
900
1000
1100
1200
m/z
mV
Detector A:214nm
500
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

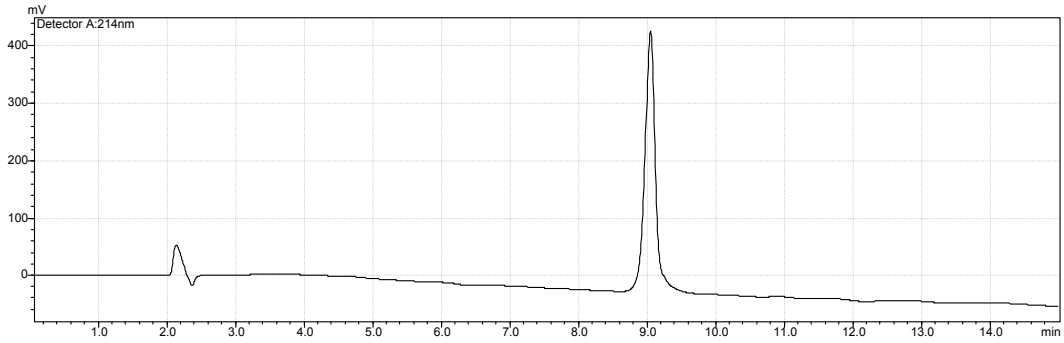
# I-6


paper-I-6(MC21)26-Feb-2014
2013-4-559 127 (2.141) QT (1); Cm (126:127)
1: Scan ES+
1.54e7
100
%
0
582.5
593.3
709.4
206.1
574.2
864.6
882.7
969.4
1024.2
1163.3
1169.2
300
400
500
600
700
800
900
1000
1100
1200
1300
m/z

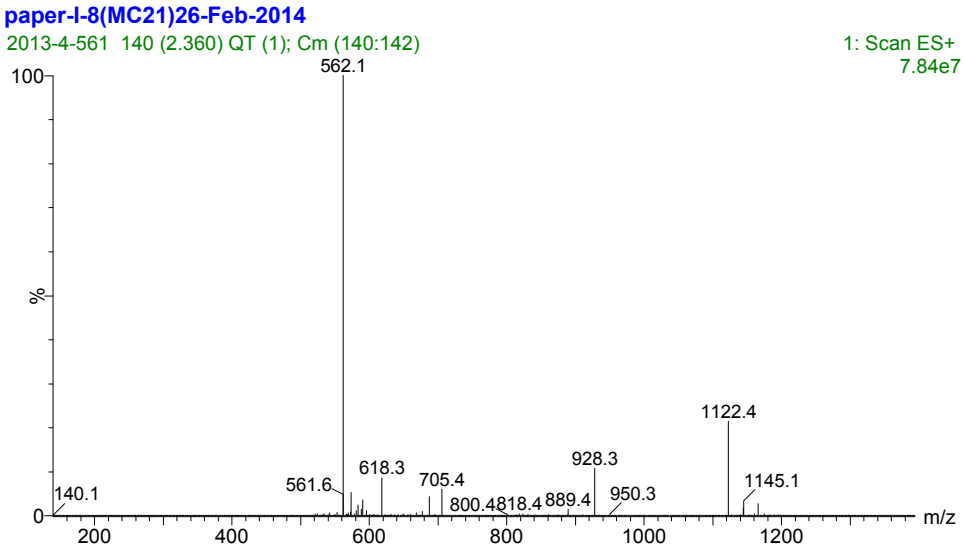

mV
Detector A 214nm
1000
750
500
250
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

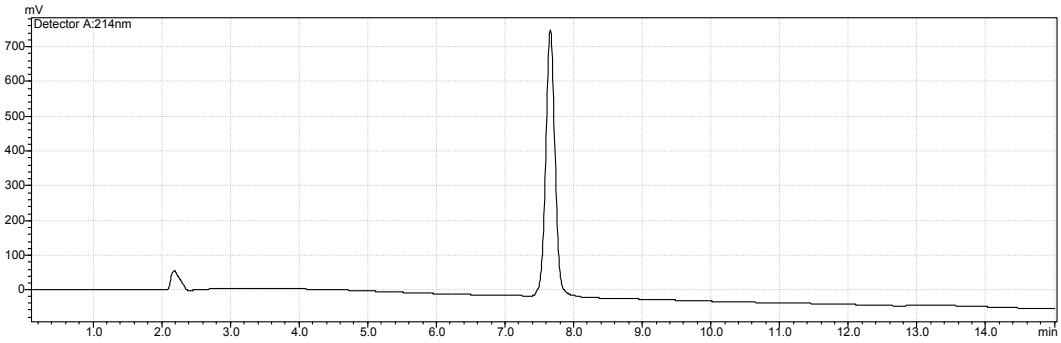
# I-7


I-7-RAW26-Feb-2014
2013-4-568 77 (1.298) QT (1); Cm (76:79)
1: Scan ES+
3.14e6
100
%
0
569.5
580.4
591.0
683.4
618.5
561.5
262.1
710.6
846.2
943.3
997.4
1116.0
1137.4
1147.1
300
400
500
600
700
800
900
1000
1100
1200
m/z

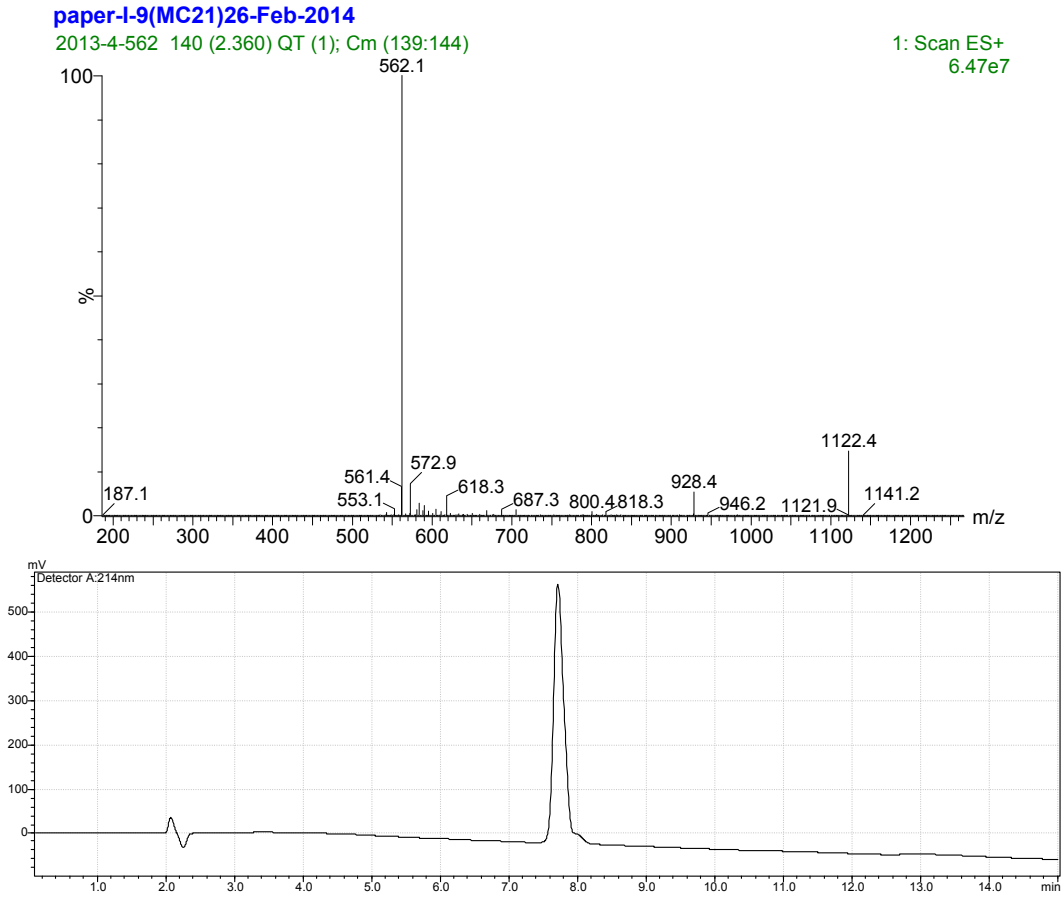

mV
Detector A:214nm
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# I-8

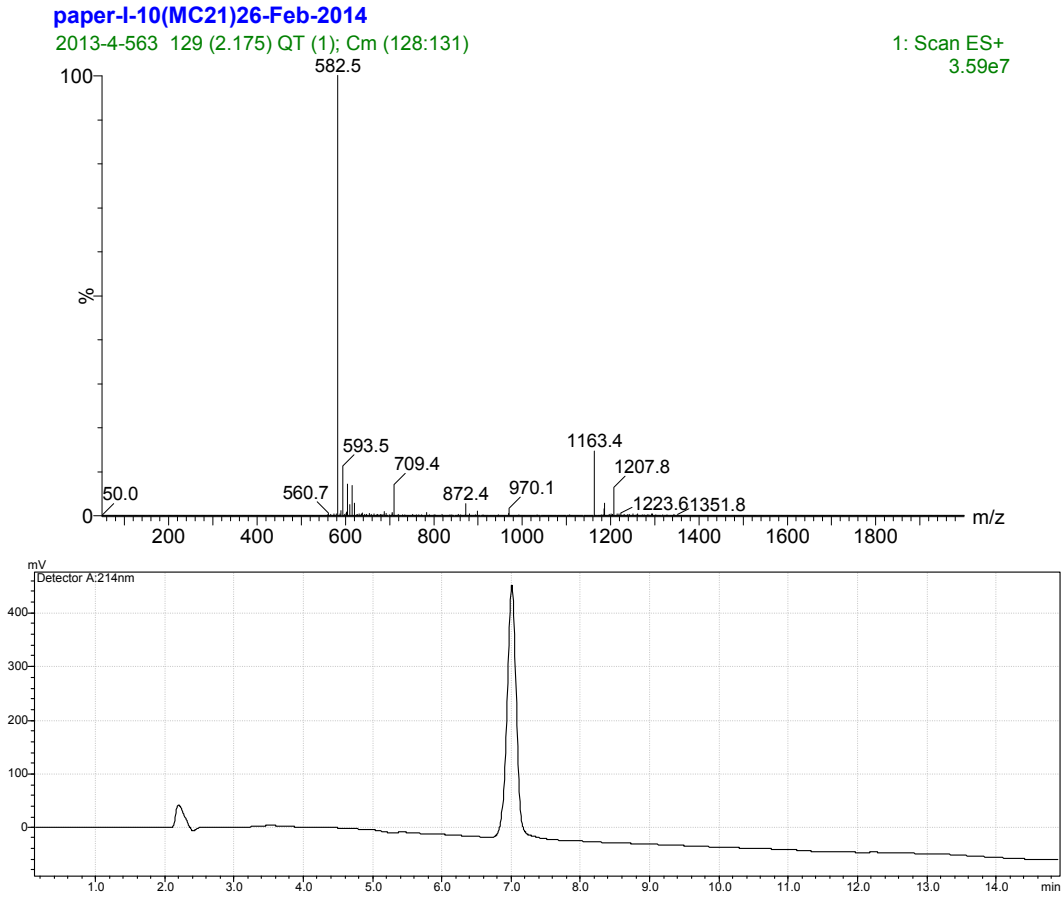

paper-I-8(MC21)26-Feb-2014
2013-4-561 140 (2.360) QT (1); Cm (140:142)
1: Scan ES+
7.84e7
100
%
0
562.1
1122.4
928.3
618.3
705.4
561.6
1145.1
140.1
800.4
818.4
889.4
950.3
200
400
600
800
1000
1200
m/z


mV
Detector A:214nm
700
600
500
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

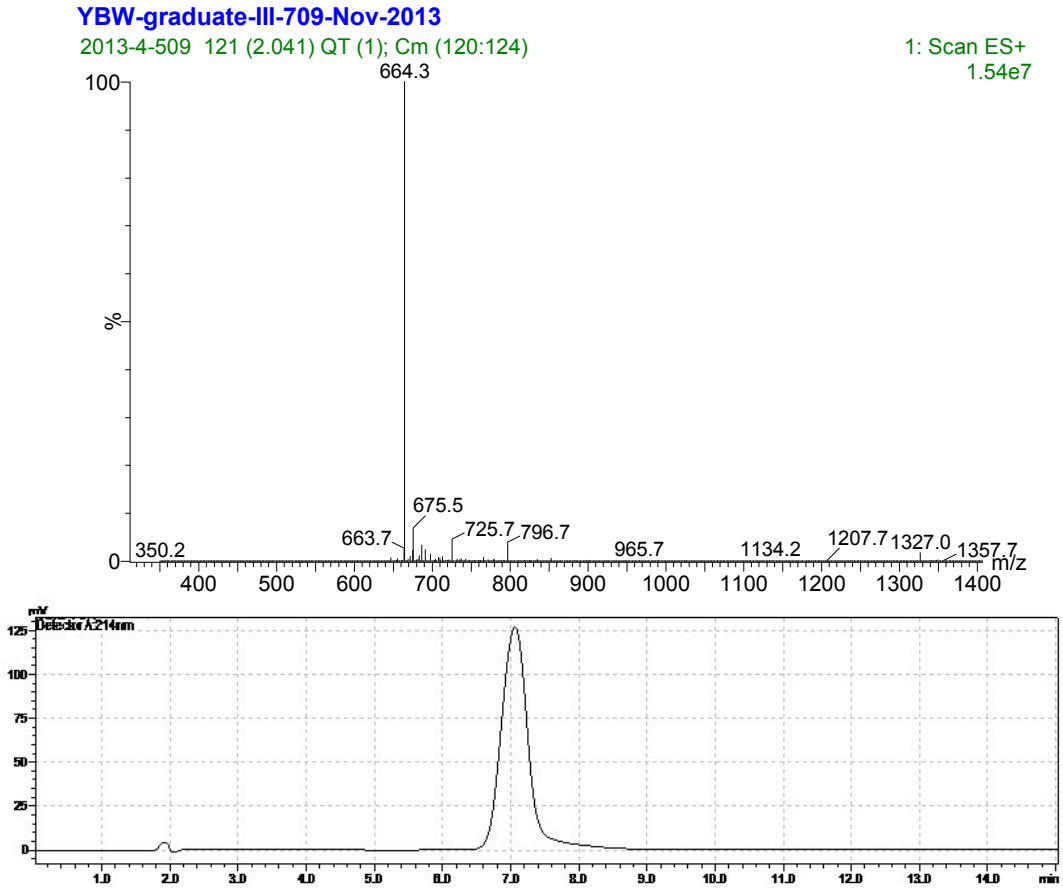
# I-9


paper-I-9(MC21)26-Feb-2014
2013-4-562 140 (2.360) QT (1); Cm (139:144)
1: Scan ES+
6.47e7
100
%
0
562.1
1122.4
572.9
561.4
618.3
928.4
187.1
553.1
687.3
800.4
818.3
946.2
1121.9
1141.2
200
300
400
500
600
700
800
900
1000
1100
1200
m/z
mV
Detector A:214nm
500
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# I-10


paper-I-10(MC21)26-Feb-2014
2013-4-563 129 (2.175) QT (1); Cm (128:131)
1: Scan ES+
3.59e7
100
%
0
582.5
593.5
709.4
1163.4
1207.8
50.0
560.7
872.4
970.1
1223.6
1351.8
200
400
600
800
1000
1200
1400
1600
1800
m/z
mV
Detector A:214nm
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# II-1

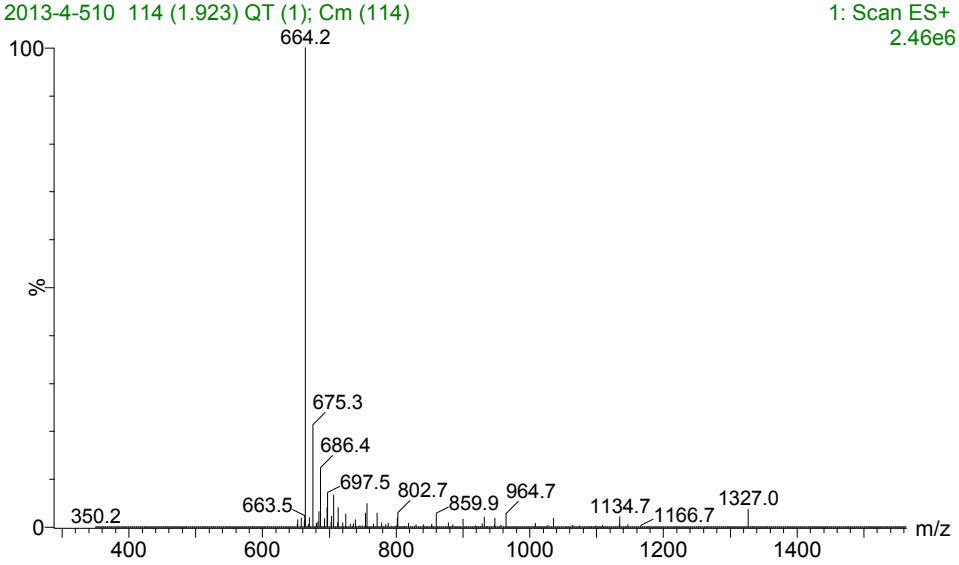

YBW-graduate-III-709-Nov-2013
2013-4-509 121 (2.041) QT (1); Cm (120:124)
1: Scan ES+
1.54e7
664.3
675.5
663.7
725.7
796.7
350.2
965.7
1134.2
1207.7
1327.0
1357.7
m/z
%
mV
min

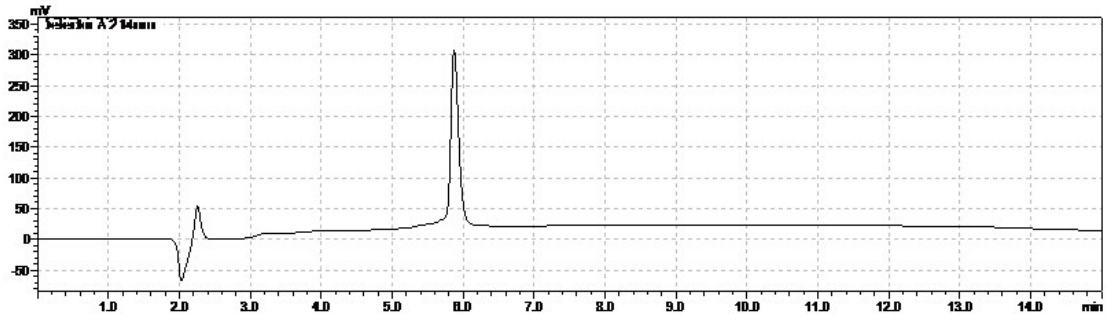
# II-2

**YBW-graduate-III-809-Nov-2013**

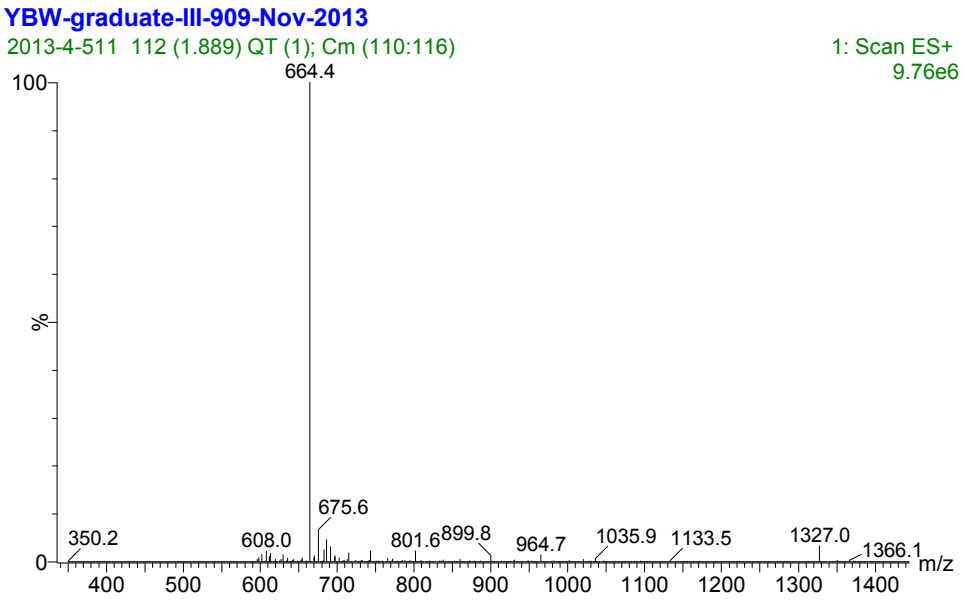
2013-4-510 114 (1.923) QT (1); Cm (114)

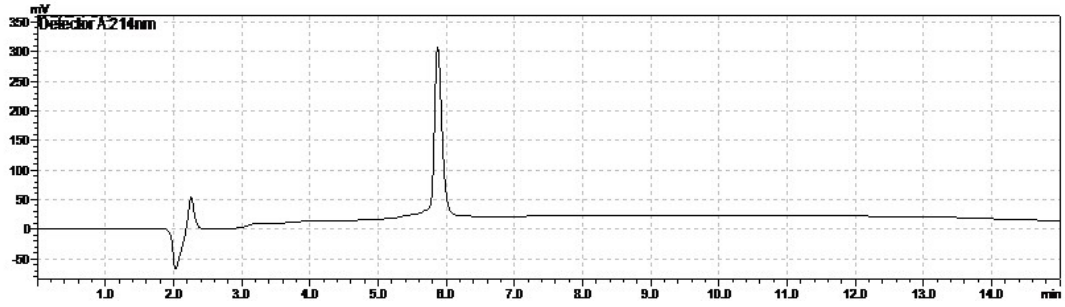
1: Scan ES+
2.46e6



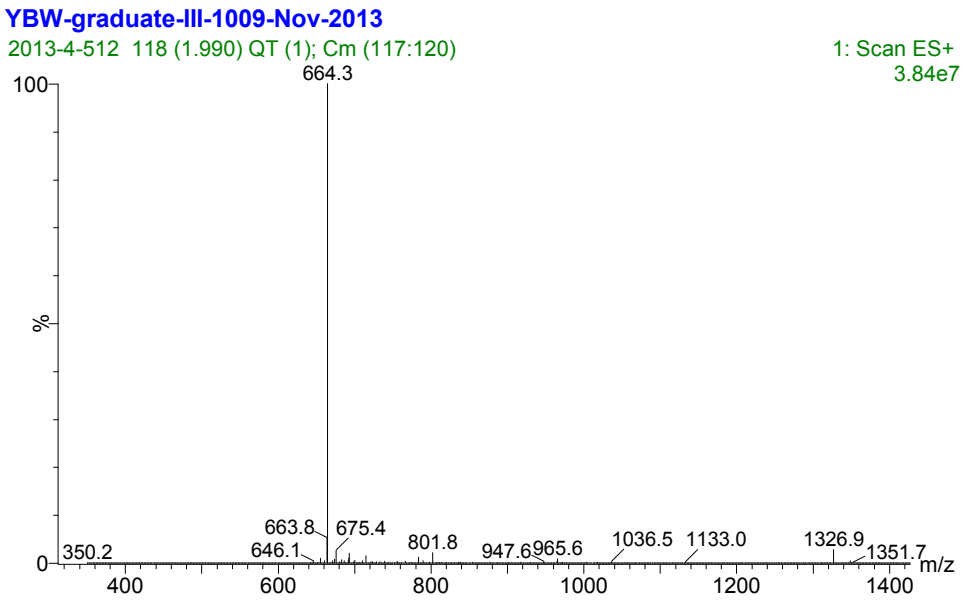



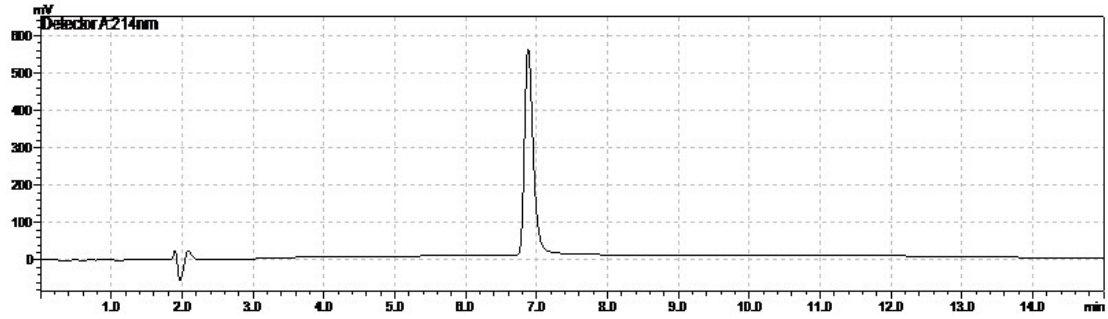
# II-3


YBW-graduate-III-909-Nov-2013
2013-4-511 112 (1.889) QT (1); Cm (110:116)
1: Scan ES+
9.76e6
664.4
100
%
0
675.6
350.2
608.0
801.6
899.8
964.7
1035.9
1133.5
1327.0
1366.1
m/z
400
500
600
700
800
900
1000
1100
1200
1300
1400

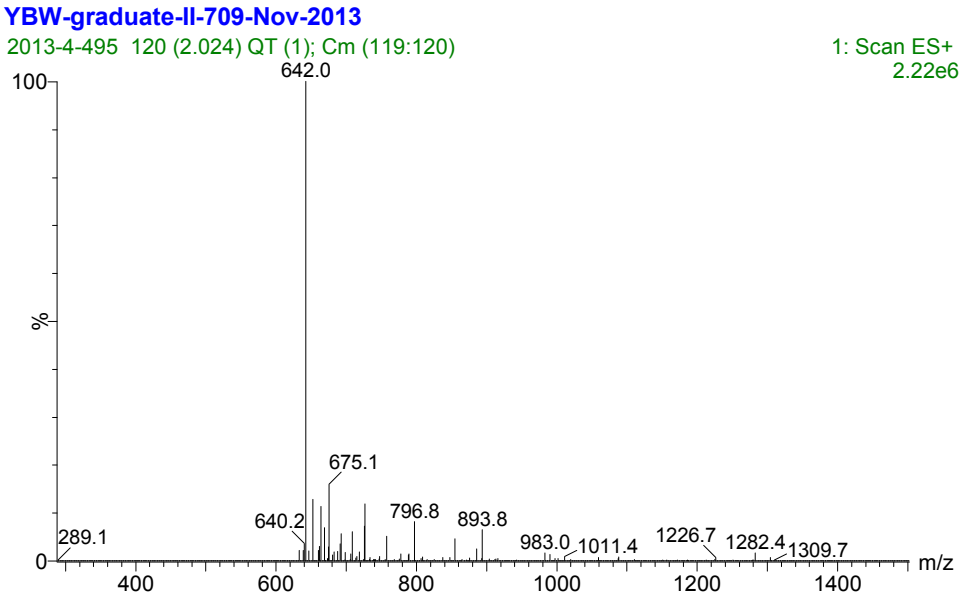

mV
Detector A:214nm
350
300
250
200
150
100
50
0
-50
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

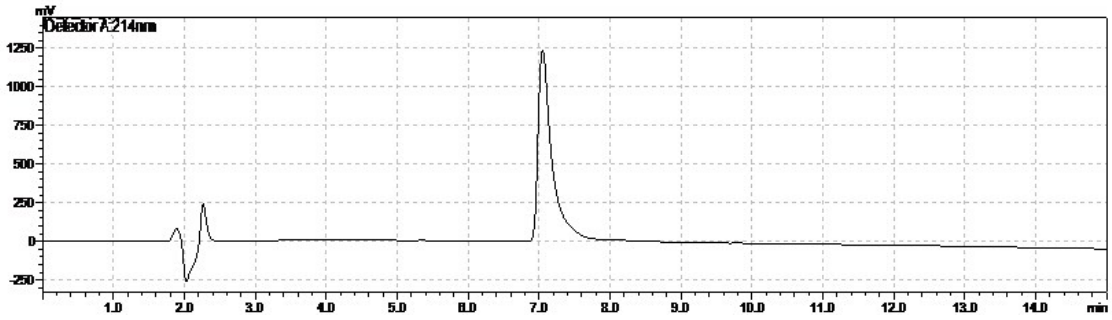
# II-4


YBW-graduate-III-1009-Nov-2013
2013-4-512 118 (1.990) QT (1); Cm (117:120)
1: Scan ES+
3.84e7
100
%
0
664.3
663.8
675.4
646.1
350.2
801.8
947.6
965.6
1036.5
1133.0
1326.9
1351.7
m/z
400
600
800
1000
1200
1400

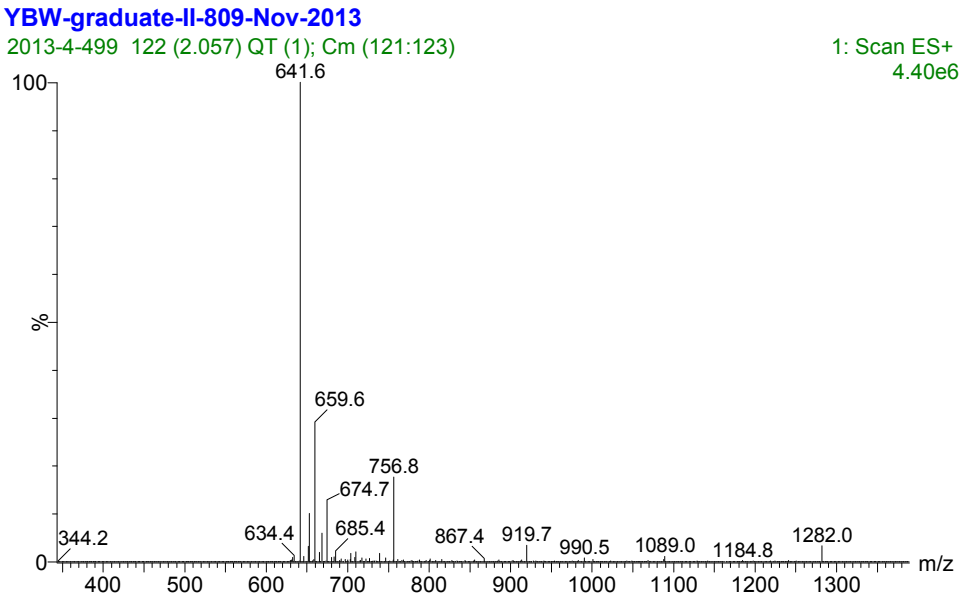

mV
Detector A 214nm
600
500
400
300
200
100
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

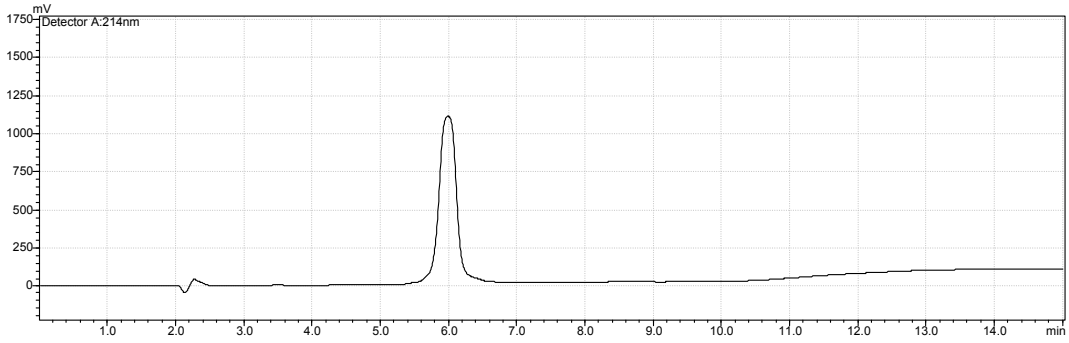
# III-1


YBW-graduate-ll-709-Nov-2013
2013-4-495 120 (2.024) QT (1); Cm (119:120)
1: Scan ES+
2.22e6
100
%
0
642.0
675.1
640.2
796.8
893.8
289.1
983.0
1011.4
1226.7
1282.4
1309.7
m/z
400
600
800
1000
1200
1400

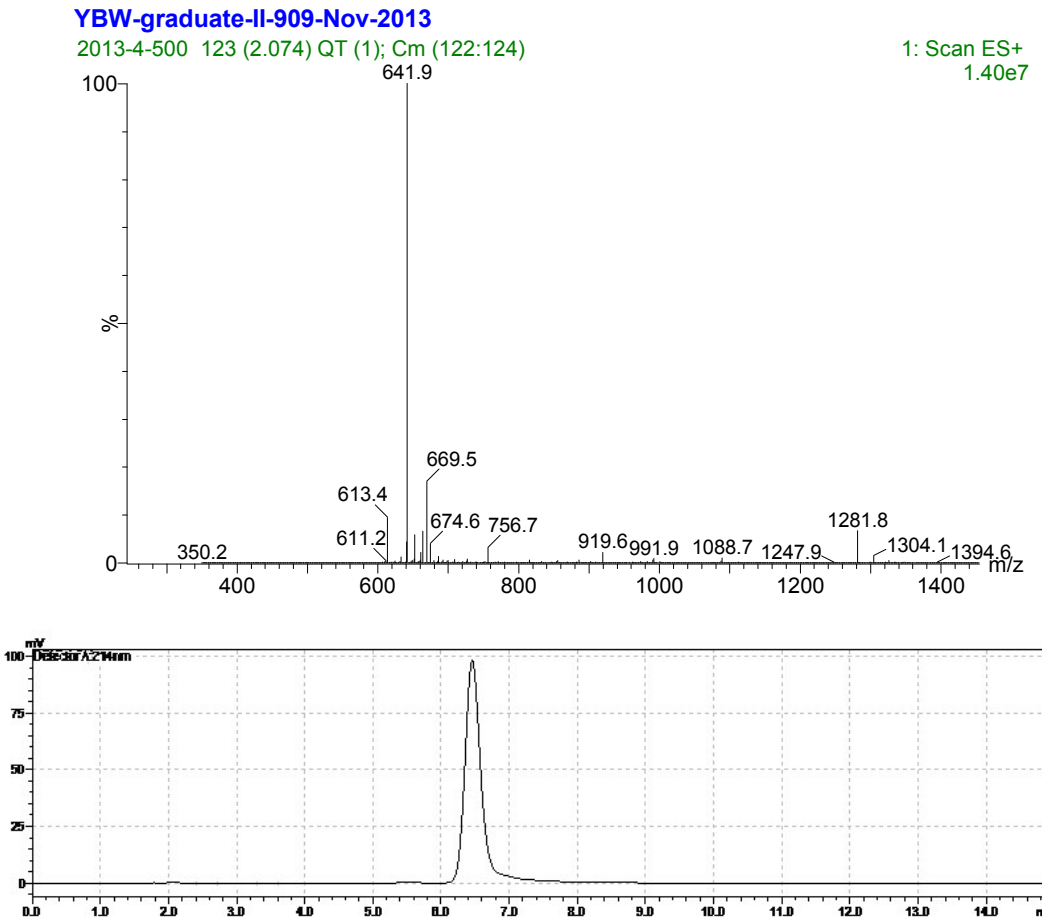

mV
Detector A 214nm
1250
1000
750
500
250
0
-250
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# III-2

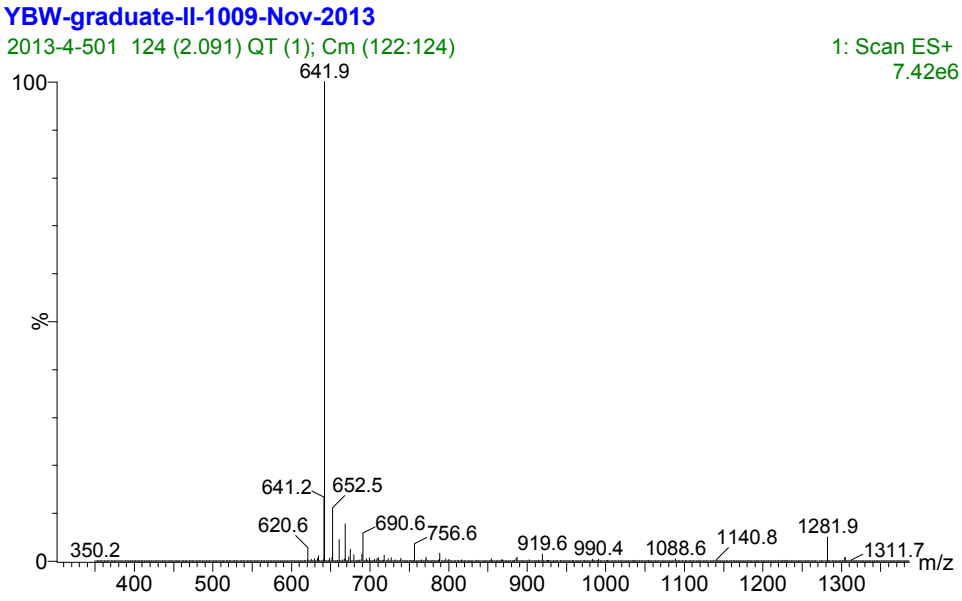

YBW-graduate-II-809-Nov-2013
2013-4-499 122 (2.057) QT (1); Cm (121:123)
1: Scan ES+
4.40e6
100
%
0
641.6
659.6
756.8
674.7
685.4
344.2
634.4
867.4
919.7
990.5
1089.0
1184.8
1282.0
400
500
600
700
800
900
1000
1100
1200
1300
m/z

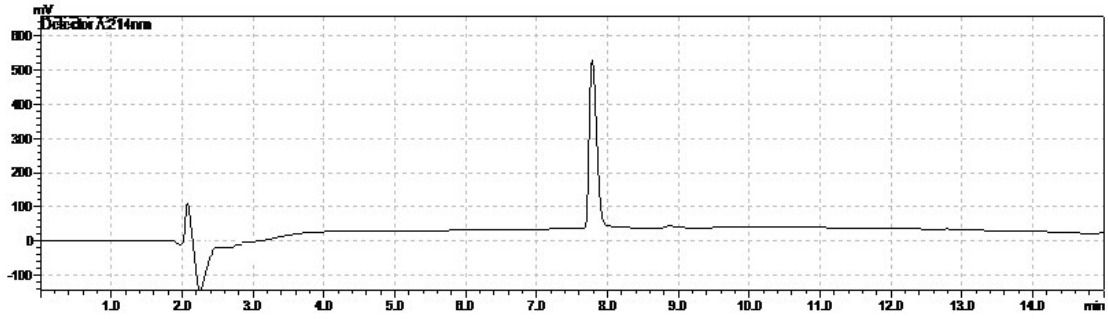

mV
Detector A:214nm
1750
1500
1250
1000
750
500
250
0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# III-3


YBW-graduate-II-909-Nov-2013
2013-4-500 123 (2.074) QT (1); Cm (122:124)
1: Scan ES+
1.40e7
100
%
0
641.9
669.5
613.4
674.6
756.7
611.2
350.2
919.6
991.9
1088.7
1247.9
1281.8
1304.1
1394.6
m/z
400
600
800
1000
1200
1400
mV
100
75
50
25
0
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min

# III-4


YBW-graduate-II-1009-Nov-2013
2013-4-501 124 (2.091) QT (1); Cm (122:124)
1: Scan ES+
7.42e6
641.9
100
%
0
641.2
652.5
620.6
690.6
756.6
919.6
990.4
1088.6
1140.8
1281.9
350.2
1311.7
m/z
400
500
600
700
800
900
1000
1100
1200
1300


mV
Detector A 214nm
800
500
400
300
200
100
0
-100
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
min