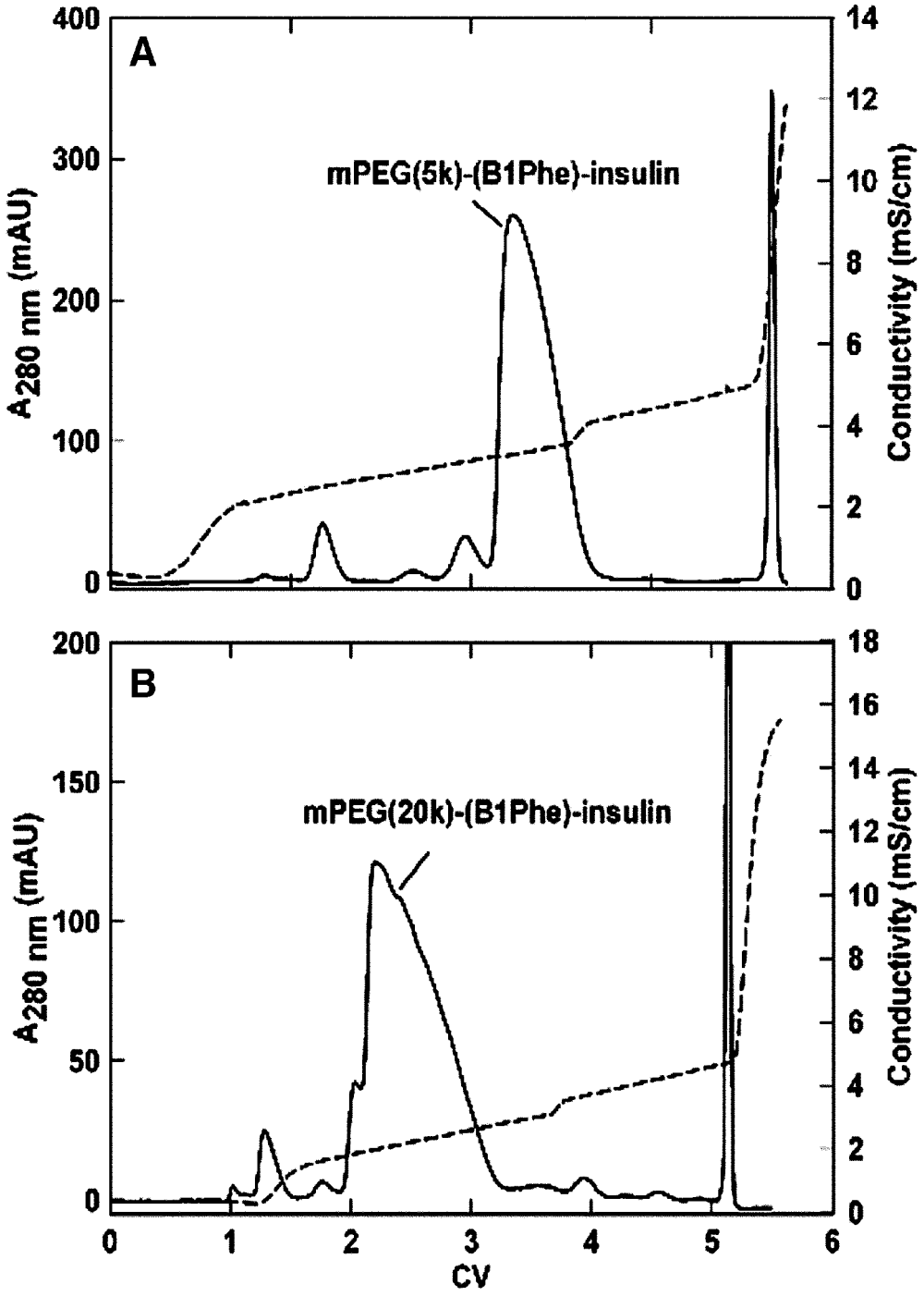
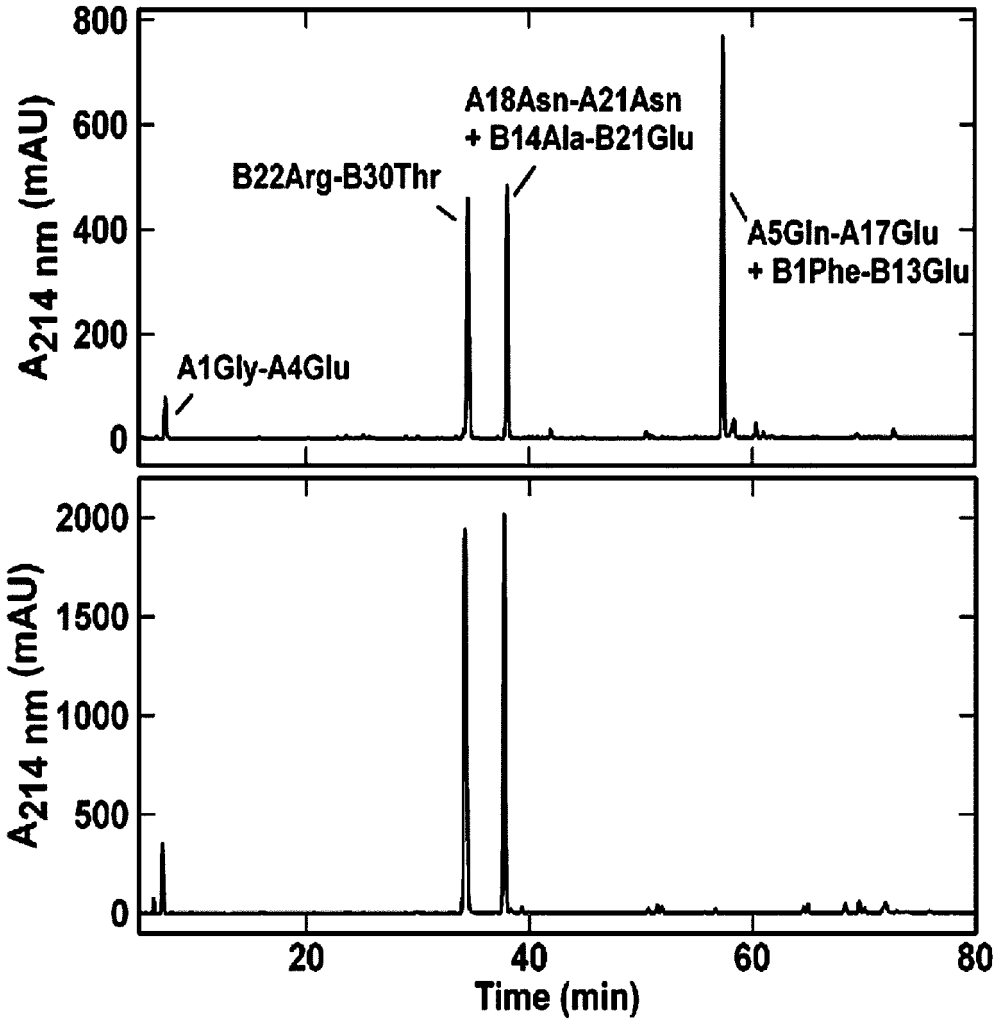
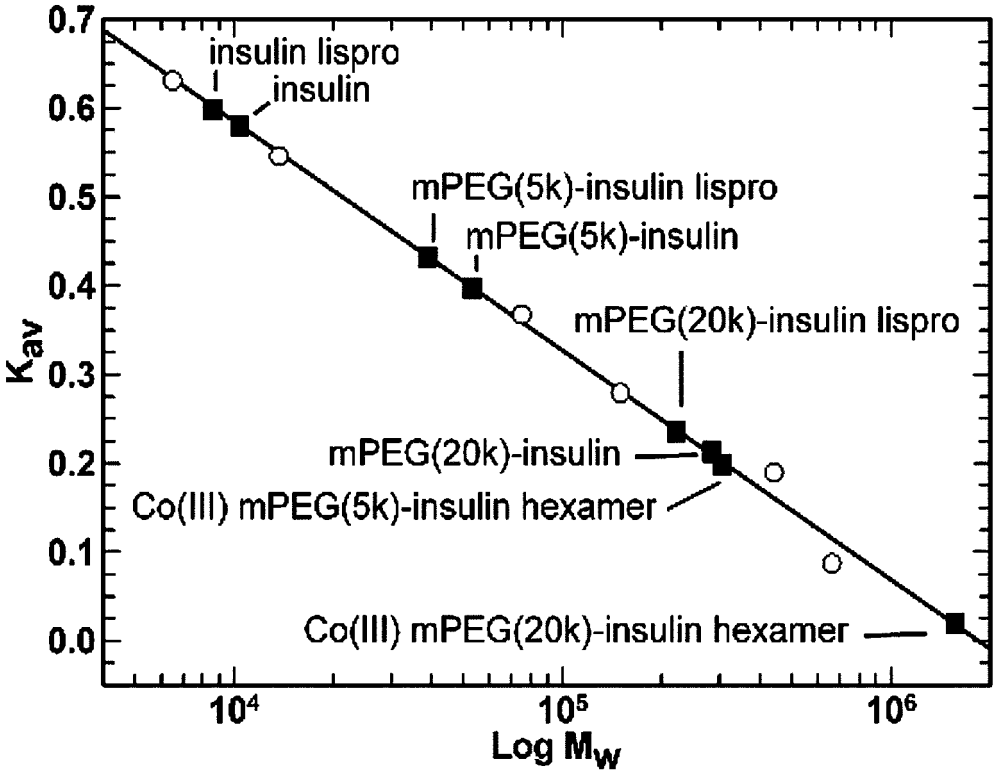
[Fig. 1]


A
mPEG(5k)-(B1Phe)-insulin
A280 nm (mAU)
Conductivity (mS/cm)
400
300
200
100
0
14
12
10
8
6
4
2
0
B
mPEG(20k)-(B1Phe)-insulin
A280 nm (mAU)
Conductivity (mS/cm)
200
150
100
50
0
18
16
14
12
10
8
6
4
2
0
0
1
2
3
4
5
6
CV

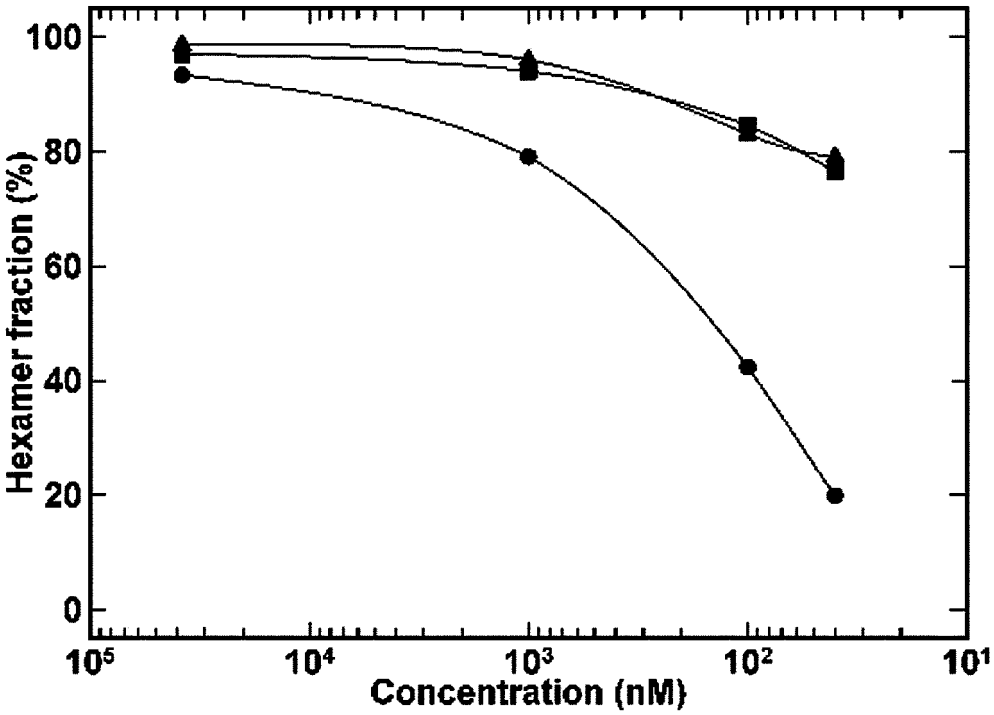
[Fig. 2]


A18Asn-A21Asn
+ B14Ala-B21Glu
B22Arg-B30Thr
A5Gln-A17Glu
+ B1Phe-B13Glu
A1Gly-A4Glu
A214 nm (mAU)
800
600
400
200
0
2000
1500
1000
500
0
20
40
60
80
Time (min)

[Fig. 3]


insulin lispro
insulin
mPEG(5k)-insulin lispro
mPEG(5k)-insulin
mPEG(20k)-insulin lispro
mPEG(20k)-insulin
Co(III) mPEG(5k)-insulin hexamer
Co(III) mPEG(20k)-insulin hexamer
Kav
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
10^4
10^5
10^6
Log Mw

[Fig. 4]


100
80
60
40
20
0
Hexamer fraction (%)
10^5
10^4
10^3
10^2
10^1
Concentration (nM)