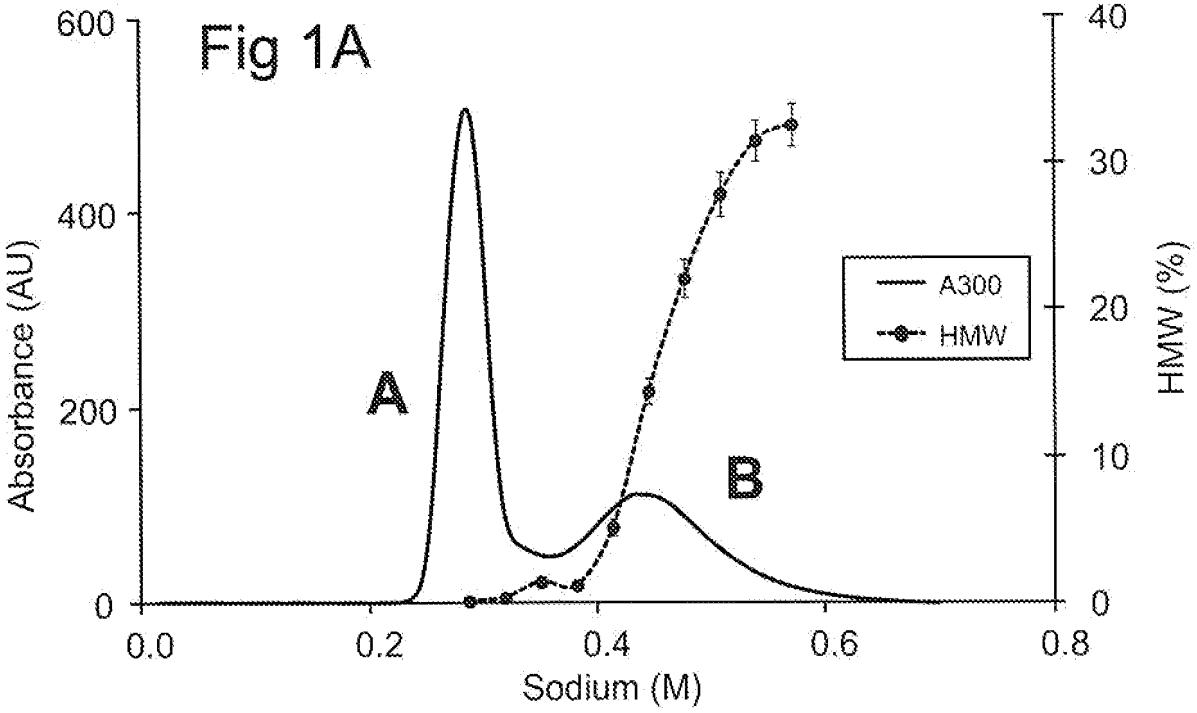
Fig 1A


600
400
200
0
Absorbance (AU)
40
30
20
10
0
HMW (%)
A
B
A300
HMW
0.0
0.2
0.4
0.6
0.8
Sodium (M)

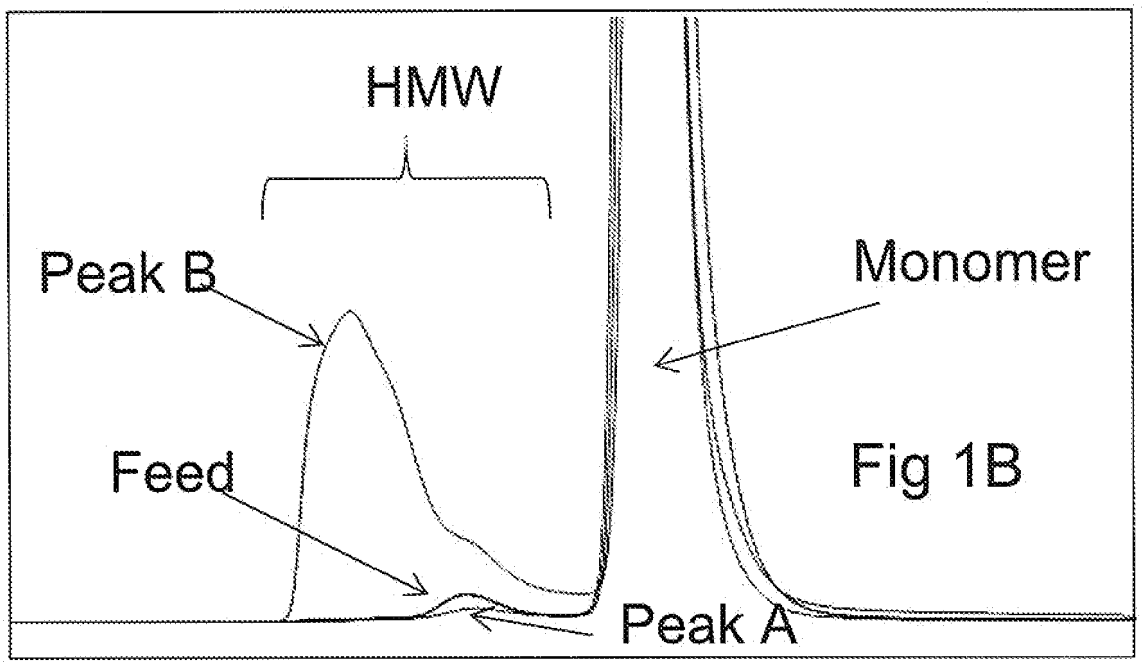

HMW
Peak B
Monomer
Feed
Peak A

Fig 1B

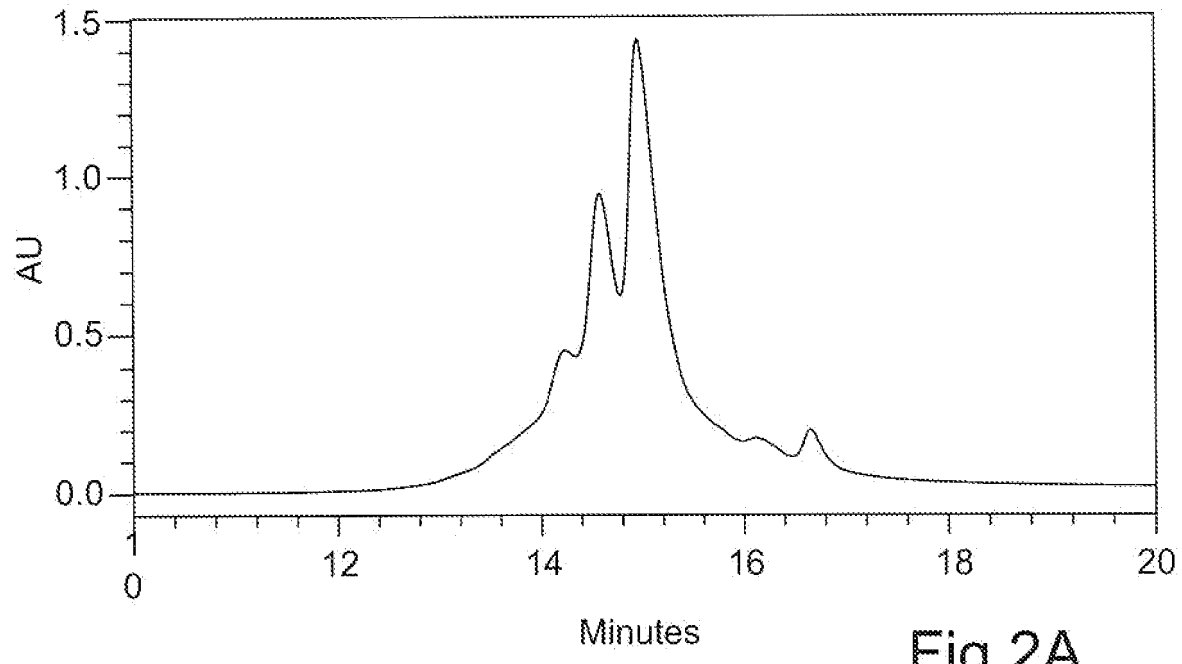

1.5
1.0
0.5
0.0
AU
0
12
14
16
18
20
Minutes

Fig 2A

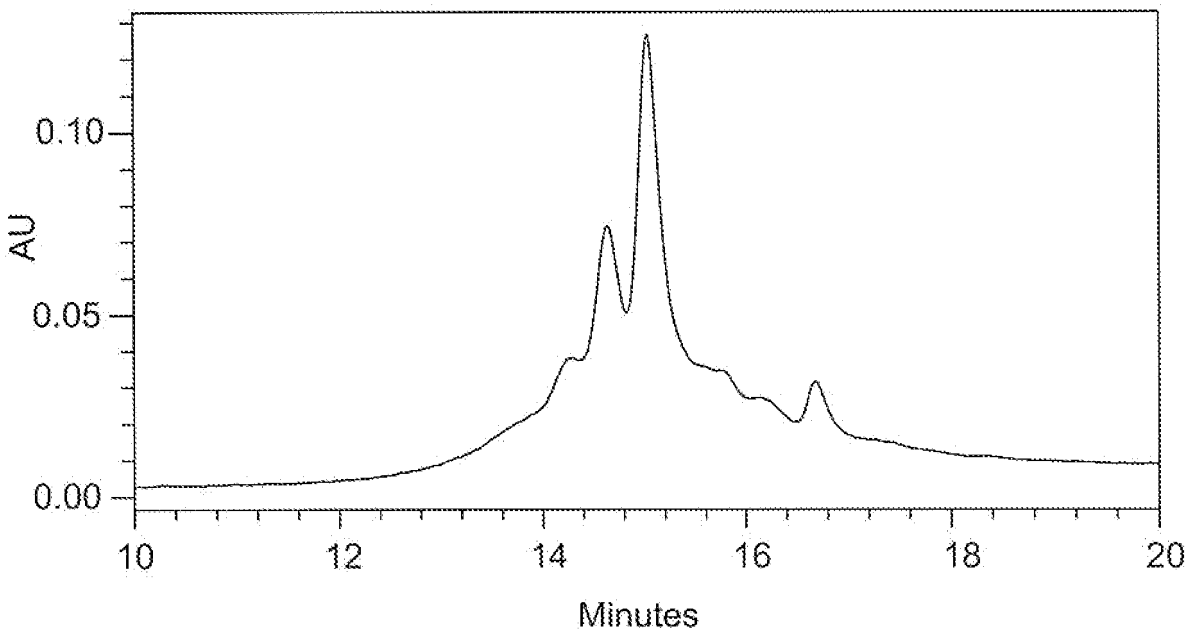

0.10
0.05
0.00
AU
10
12
14
16
18
20
Minutes

Fig 2B

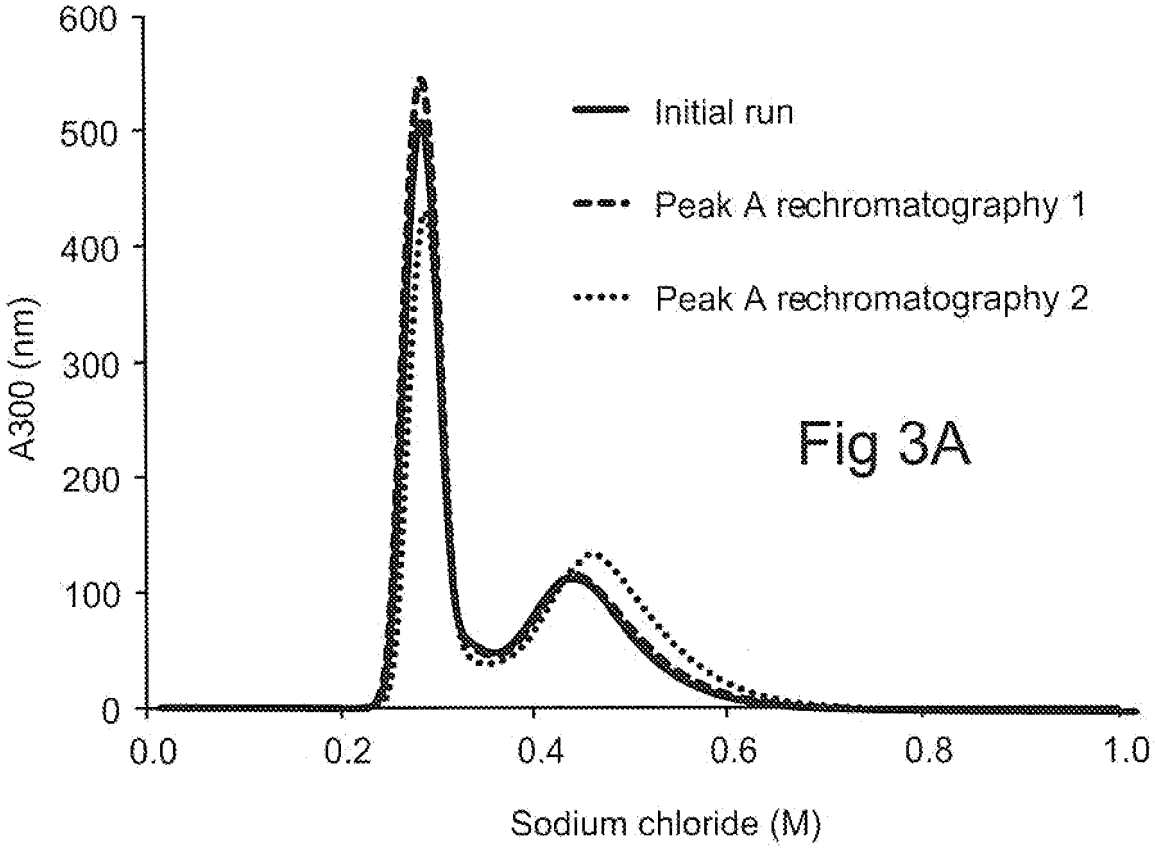

600
500
400
300
200
100
0
A300 (nm)
0.0
0.2
0.4
0.6
0.8
1.0
Sodium chloride (M)
Initial run
Peak A rechromatography 1
Peak A rechromatography 2

Fig 3A

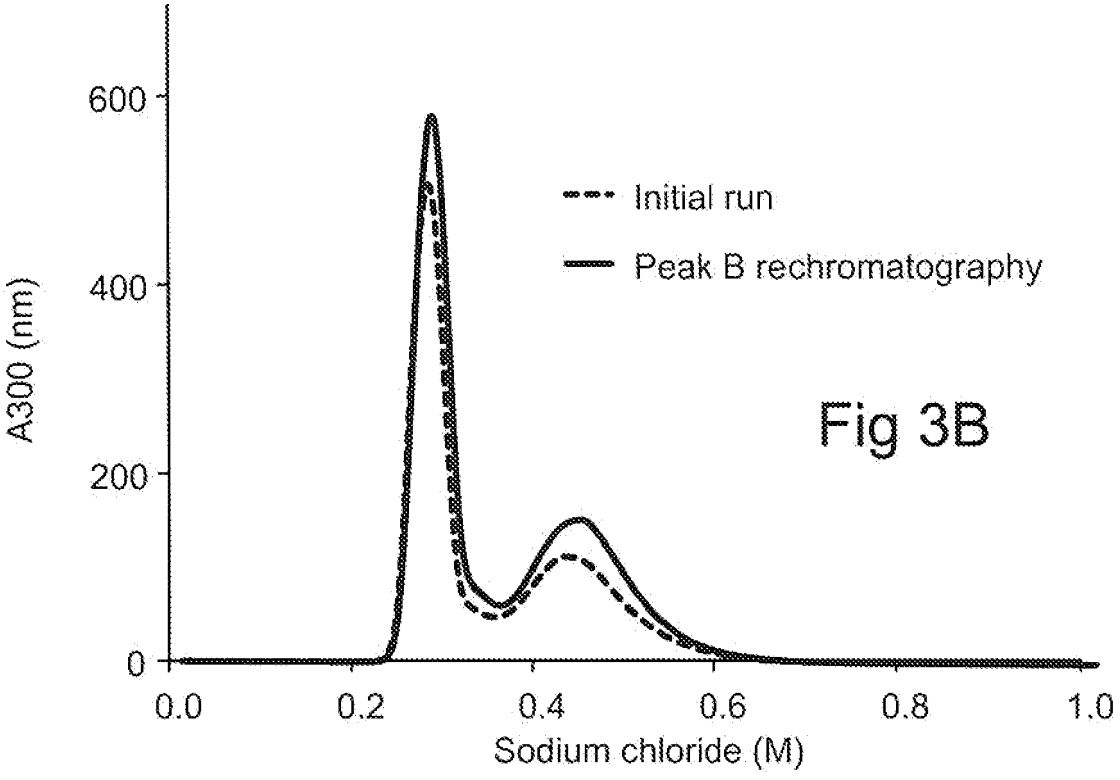

600
400
200
0
A300 (nm)
0.0
0.2
0.4
0.6
0.8
1.0
Sodium chloride (M)
Initial run
Peak B rechromatography

Fig 3B

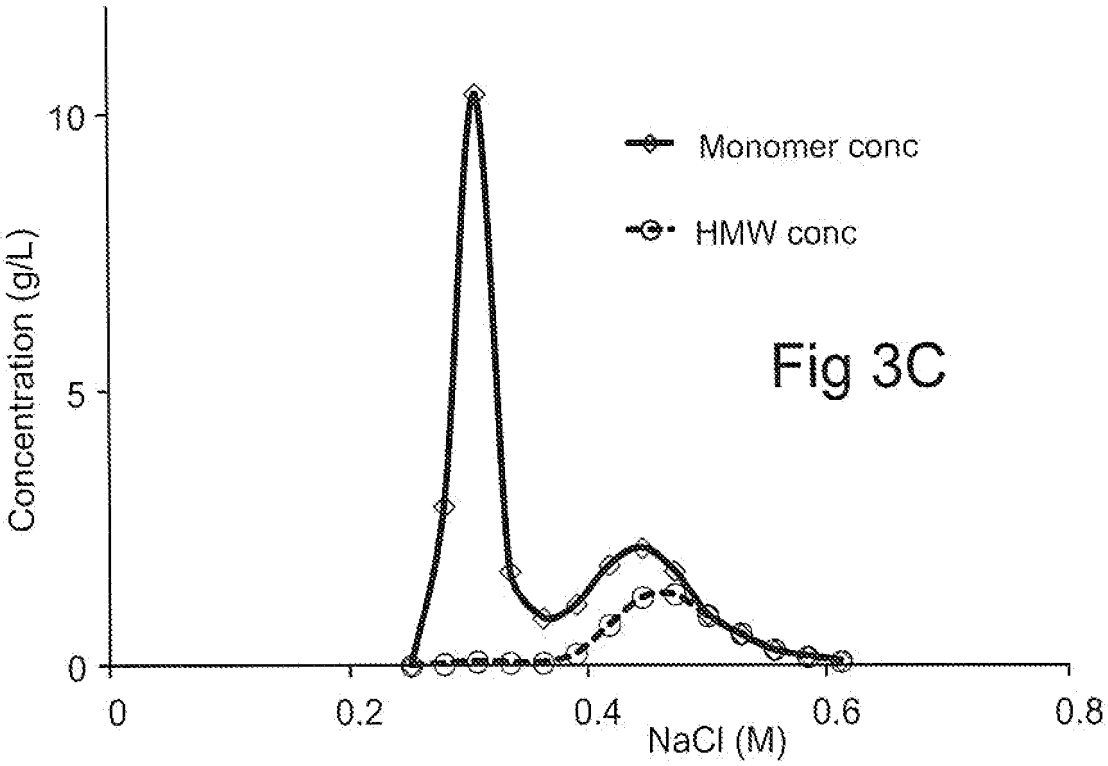

Concentration (g/L)
10
5
0
0
0.2
0.4
0.6
0.8
NaCl (M)
Monomer conc
HMW conc

Fig 3C

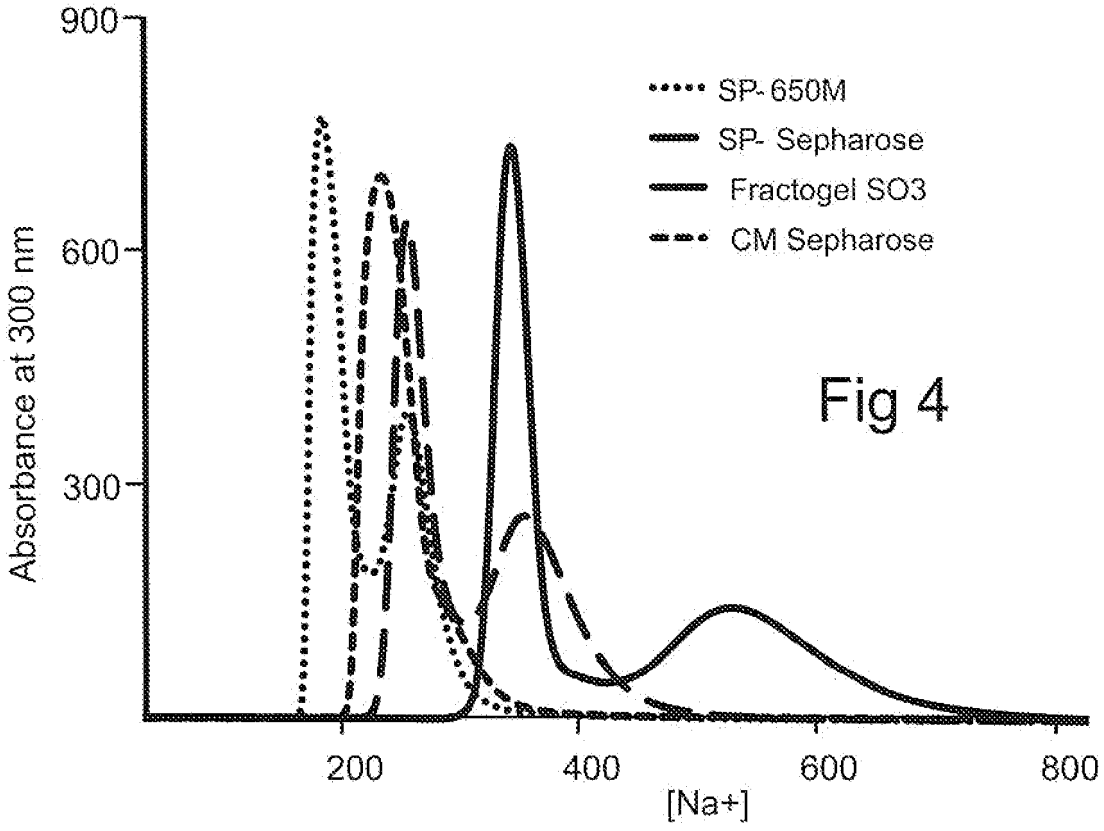

Absorbance at 300 nm
900
600
300
200
400
600
800
[Na+]
SP-650M
SP- Sepharose
Fractogel SO3
CM Sepharose

Fig 4

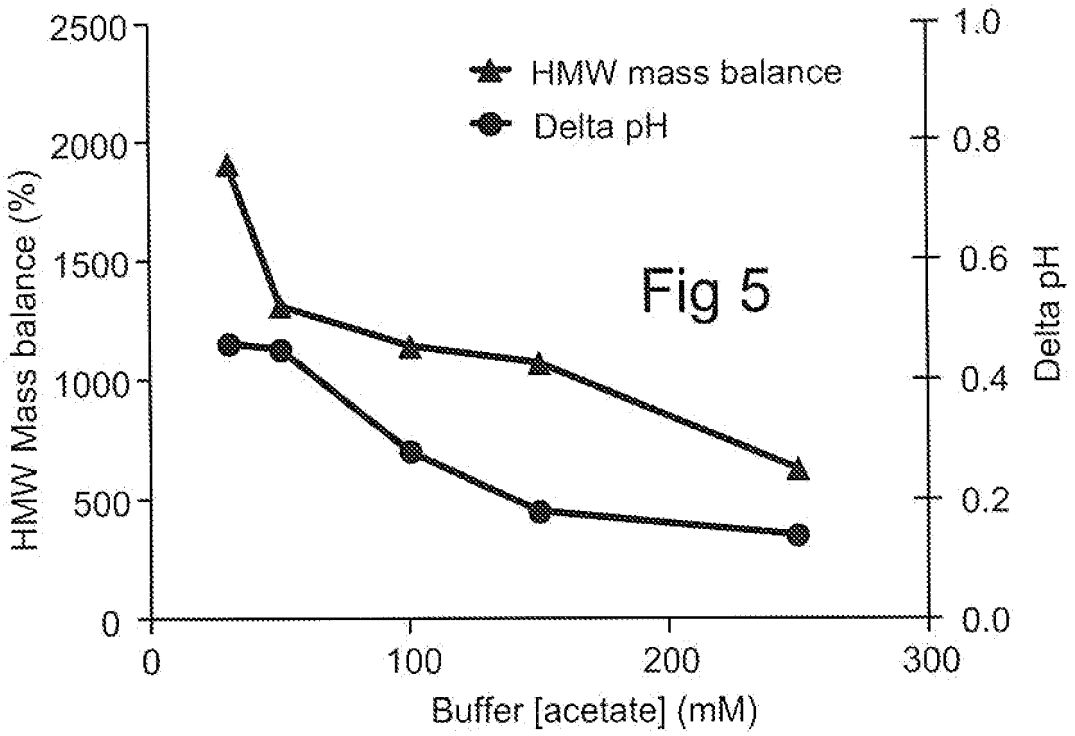

HMW mass balance
Delta pH
HMW Mass balance (%)
Delta pH
Buffer [acetate] (mM)
2500
2000
1500
1000
500
0
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300

Fig 5

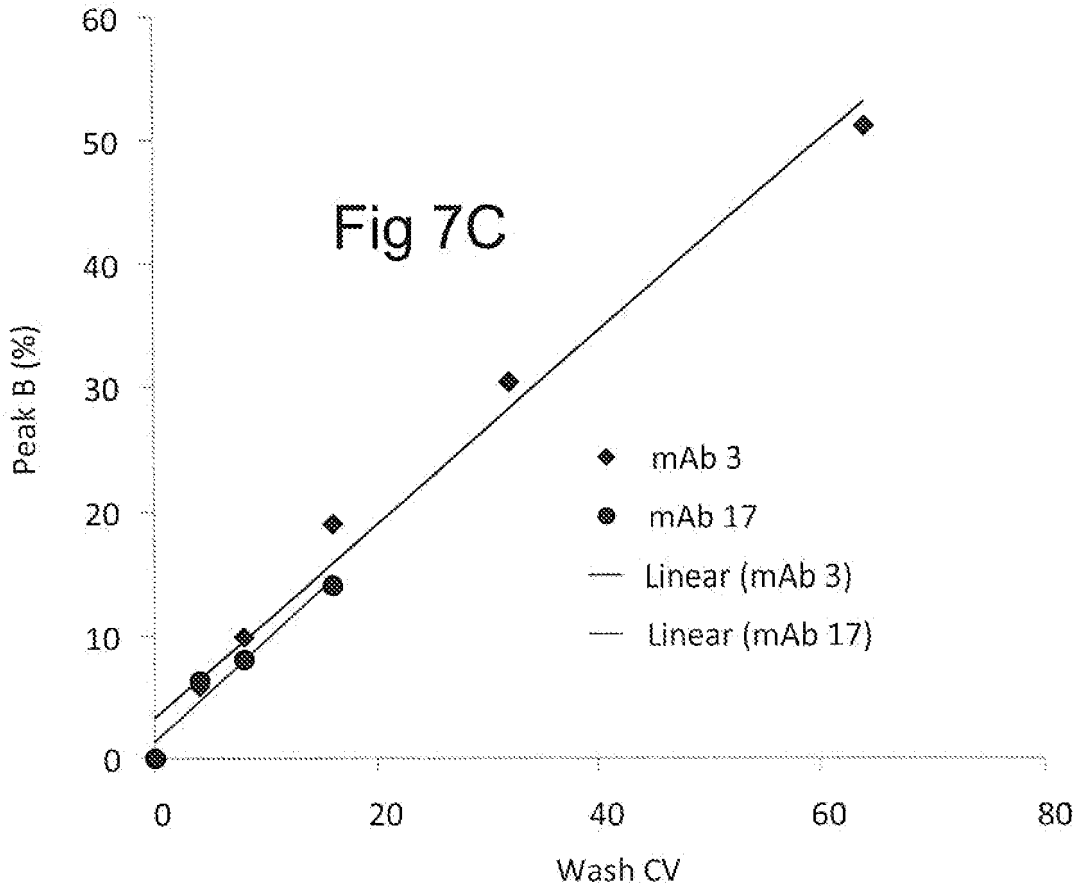

Peak B (%)
Wash CV
mAb 3
mAb 17
Linear (mAb 3)
Linear (mAb 17)
60
50
40
30
20
10
0
0
20
40
60
80

Fig 7C

Fig 6A

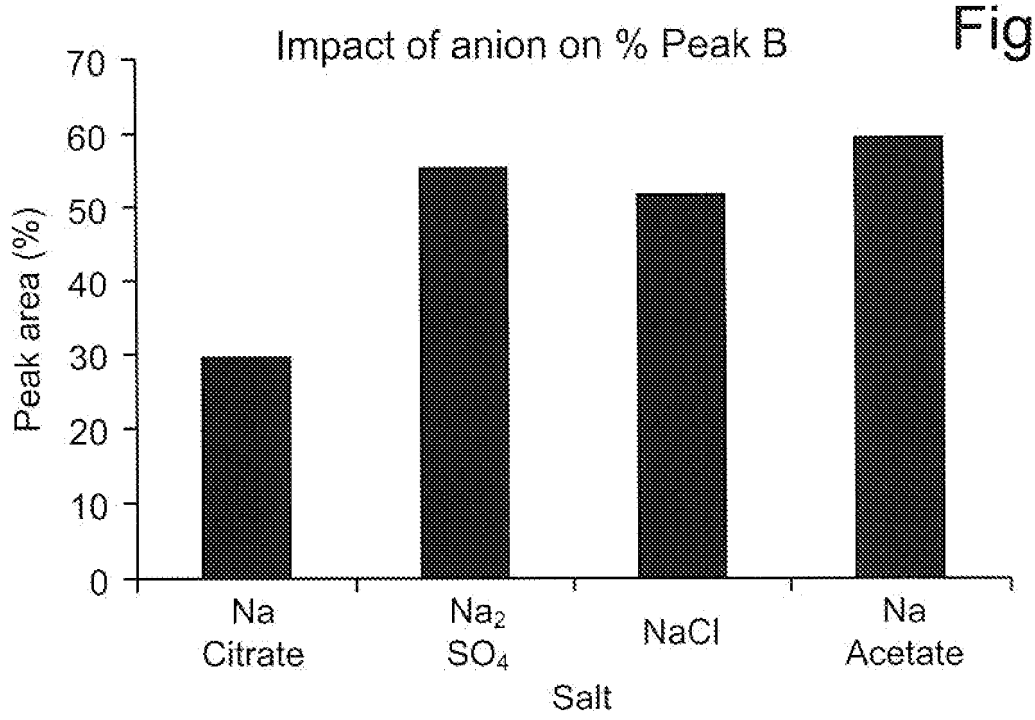

Impact of anion on % Peak B
Peak area (%)
70
60
50
40
30
20
10
0
Na Citrate
Na2 SO4
NaCl
Na Acetate
Salt

Fig 6B

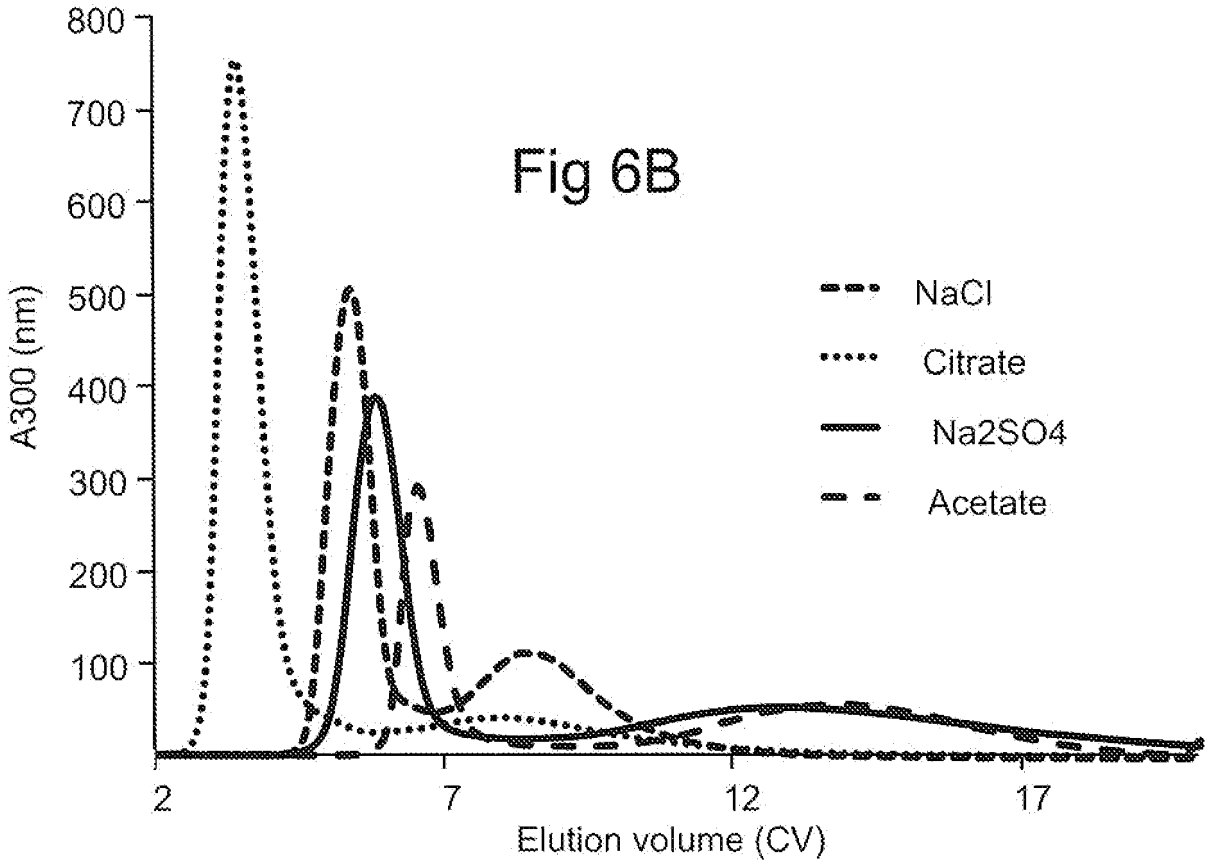

A300 (nm)
800
700
600
500
400
300
200
100
2
7
12
17
Elution volume (CV)
NaCl
Citrate
Na2SO4
Acetate

Fig 7A

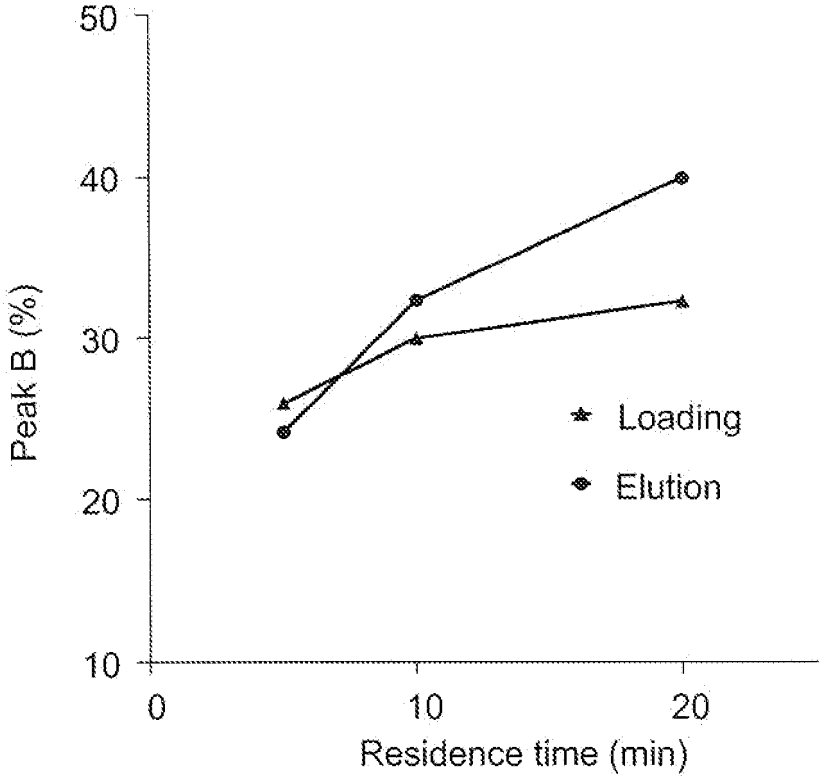
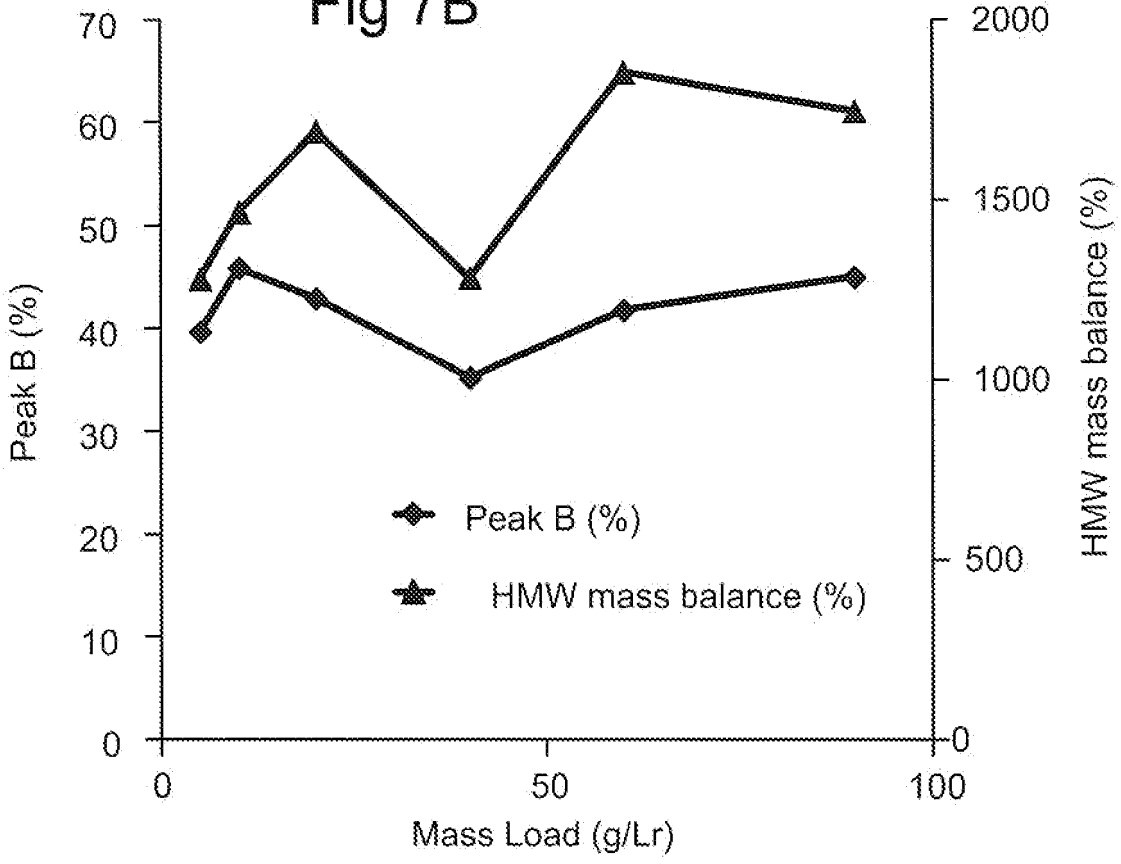

50
40
30
20
10
Peak B (%)
0
10
20
Residence time (min)
Loading
Elution

Fig 7B


70
60
50
40
30
20
10
0
Peak B (%)
2000
1500
1000
500
0
HMW mass balance (%)
0
50
100
Mass Load (g/Lr)
Peak B (%)
HMW mass balance (%)

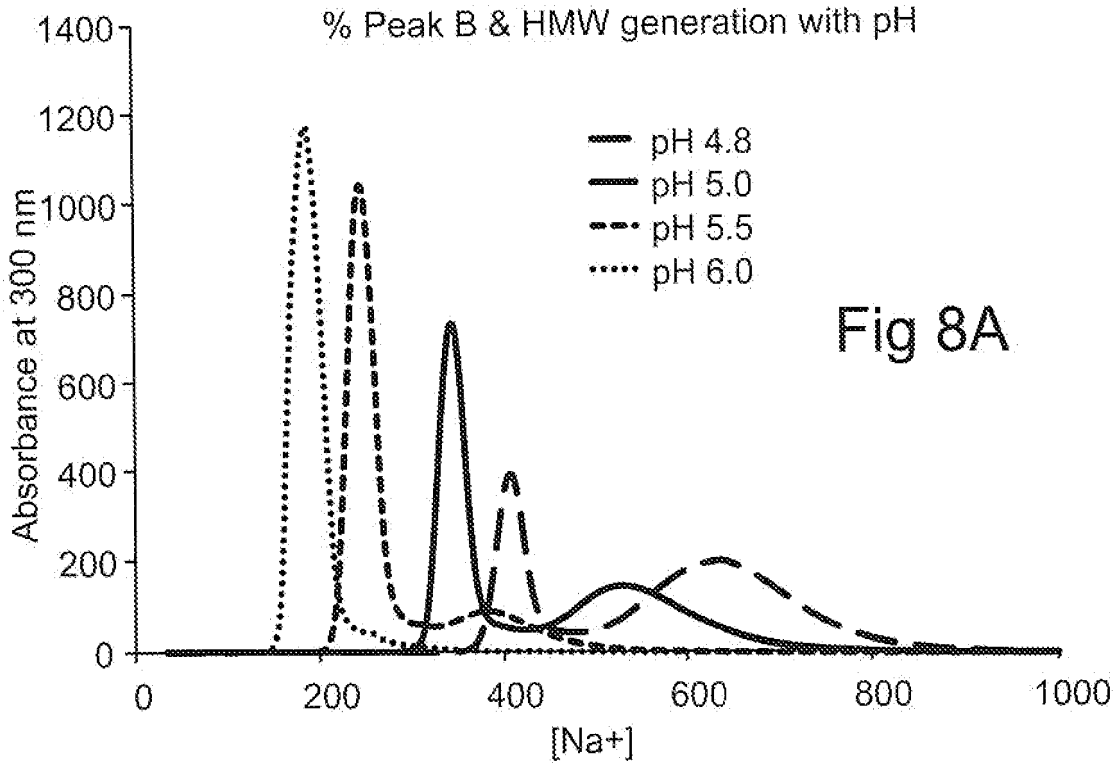

% Peak B & HMW generation with pH
Absorbance at 300 nm
1400
1200
1000
800
600
400
200
0
0
200
400
600
800
1000
[Na+]
pH 4.8
pH 5.0
pH 5.5
pH 6.0

Fig 8A

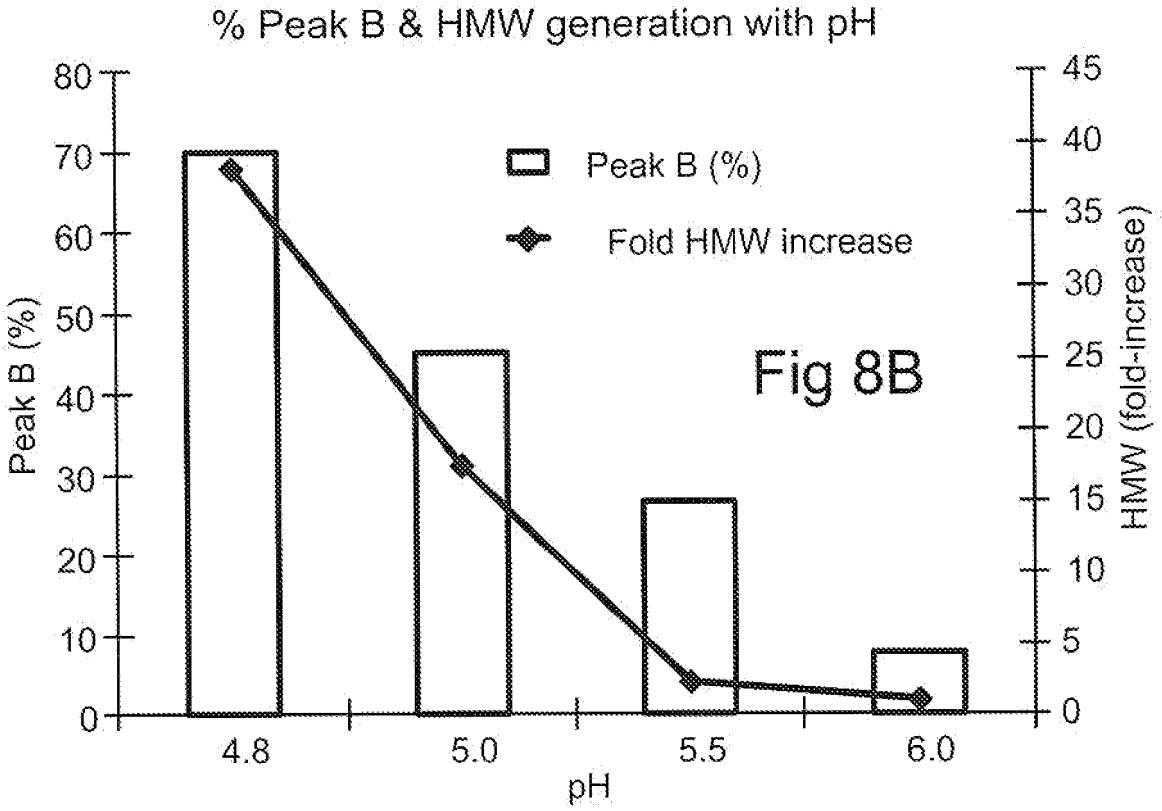
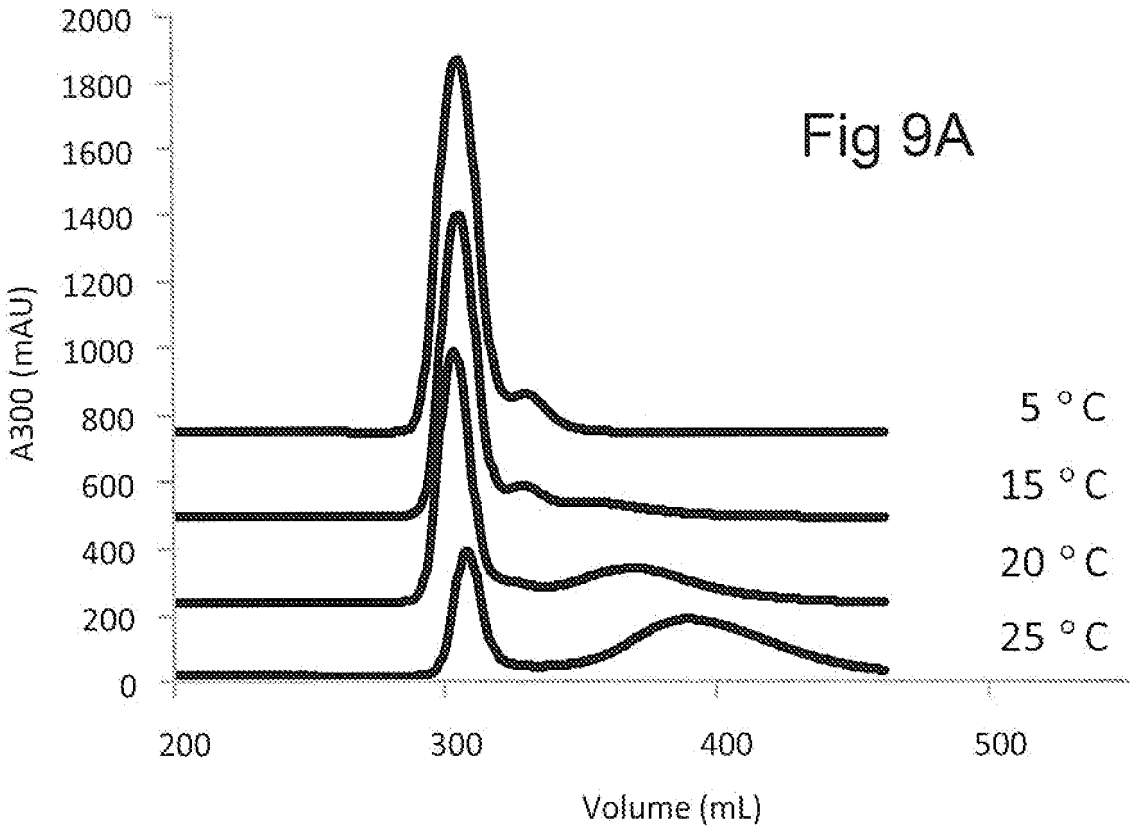
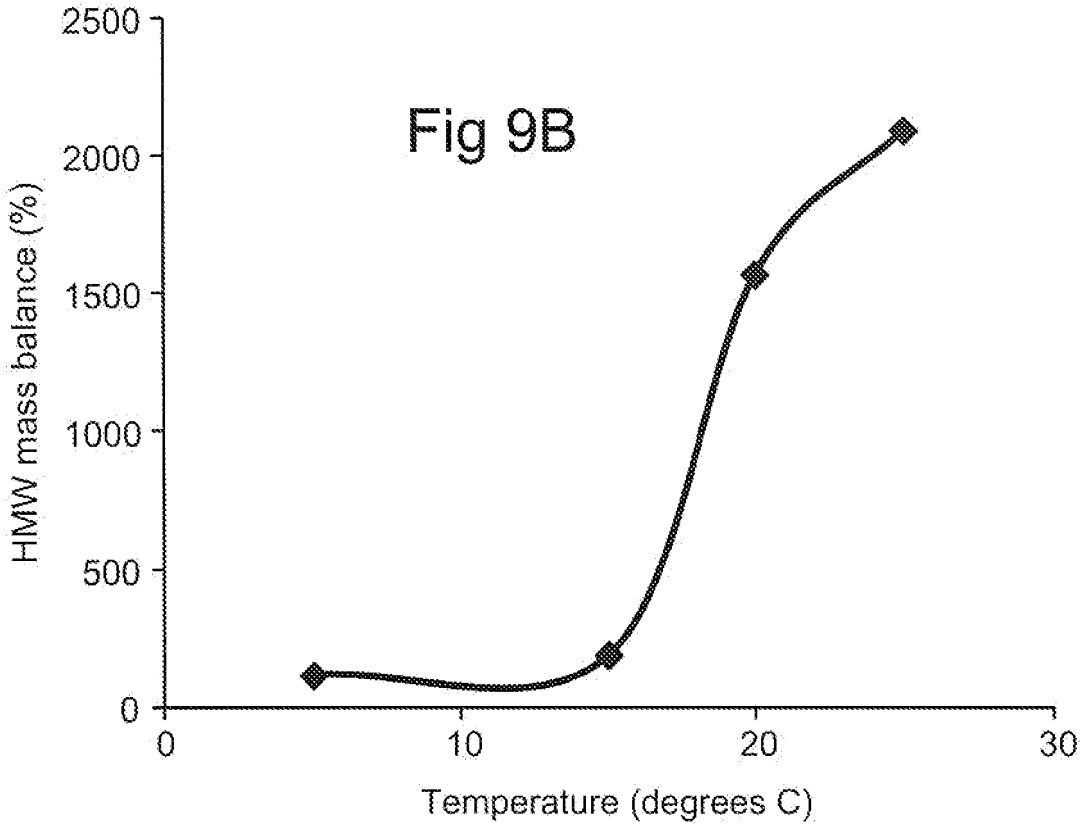

% Peak B & HMW generation with pH
Peak B (%)
80
70
60
50
40
30
20
10
0
Peak B (%)
Fold HMW increase
45
40
35
30
25
20
15
10
5
0
HMW (fold-increase)
4.8
5.0
5.5
6.0
pH

Fig 8B


Fig 9A
2000
1800
1600
1400
1200
1000
800
600
400
200
0
A300 (mAU)
5 °C
15 °C
20 °C
25 °C
200
300
400
500
Volume (mL)


Fig 9B
2500
2000
1500
1000
500
0
HMW mass balance (%)
0
10
20
30
Temperature (degrees C)

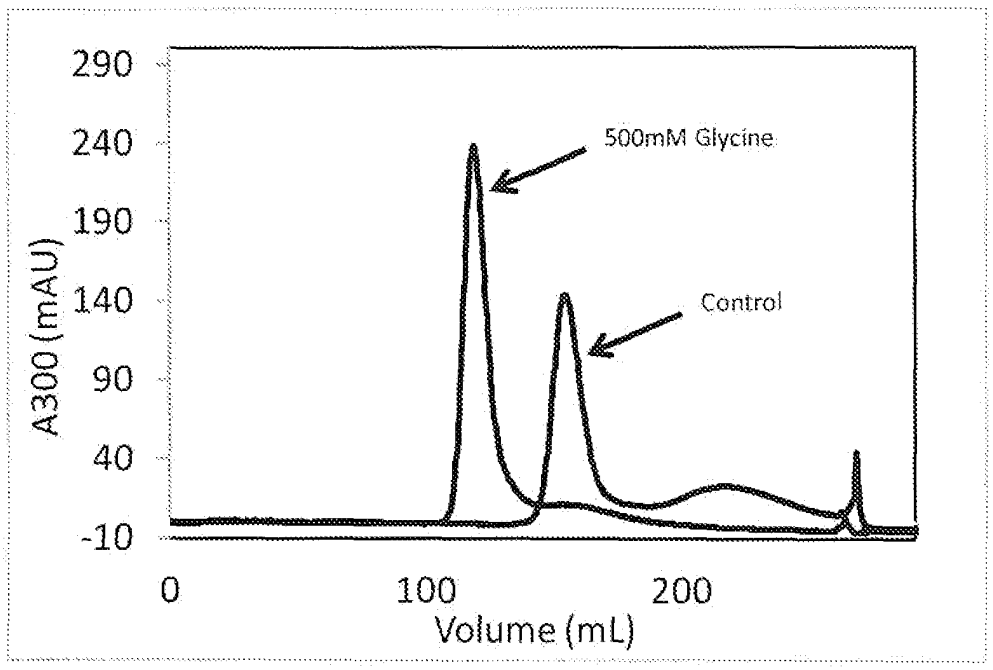


Fig 10A

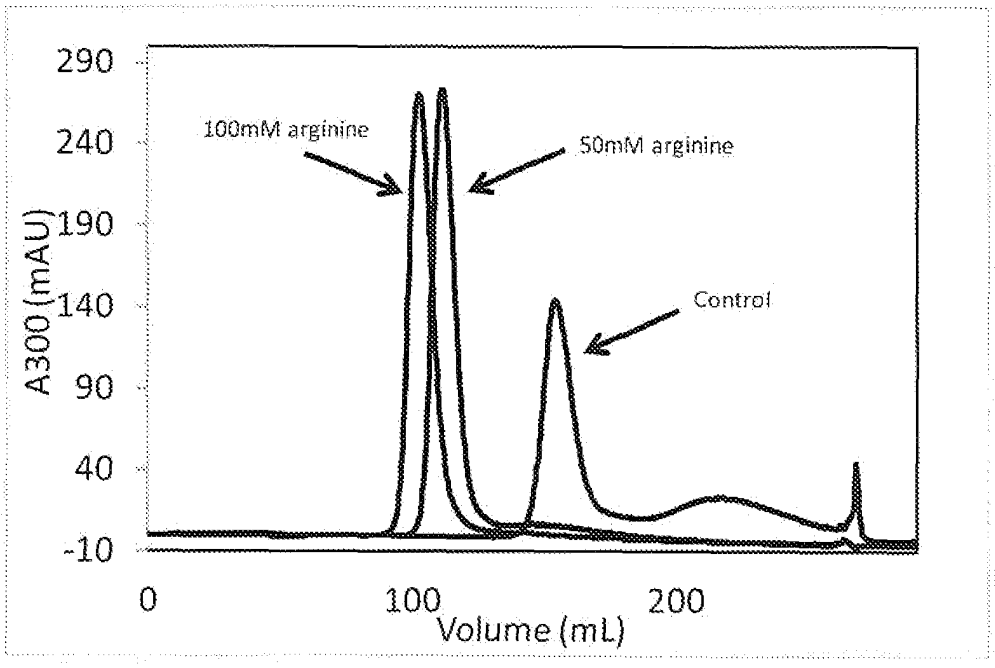


Fig 10B

Fig 11A

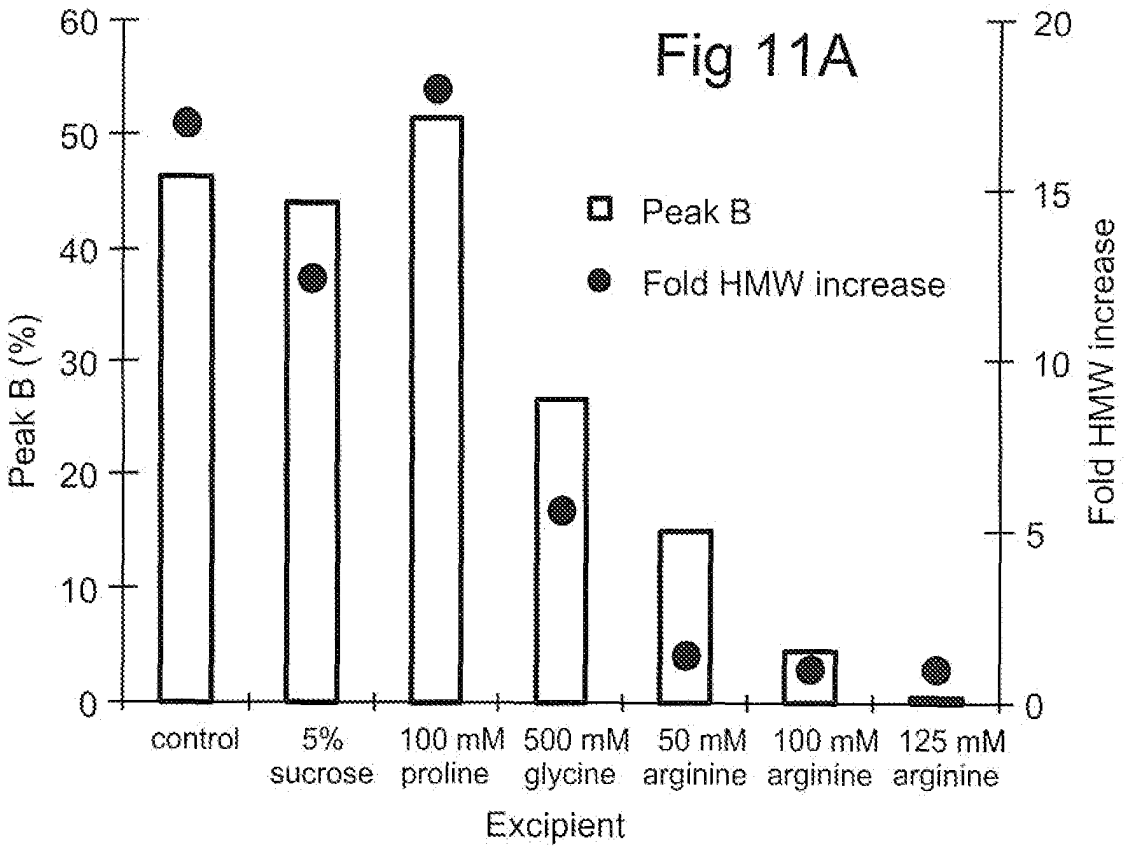
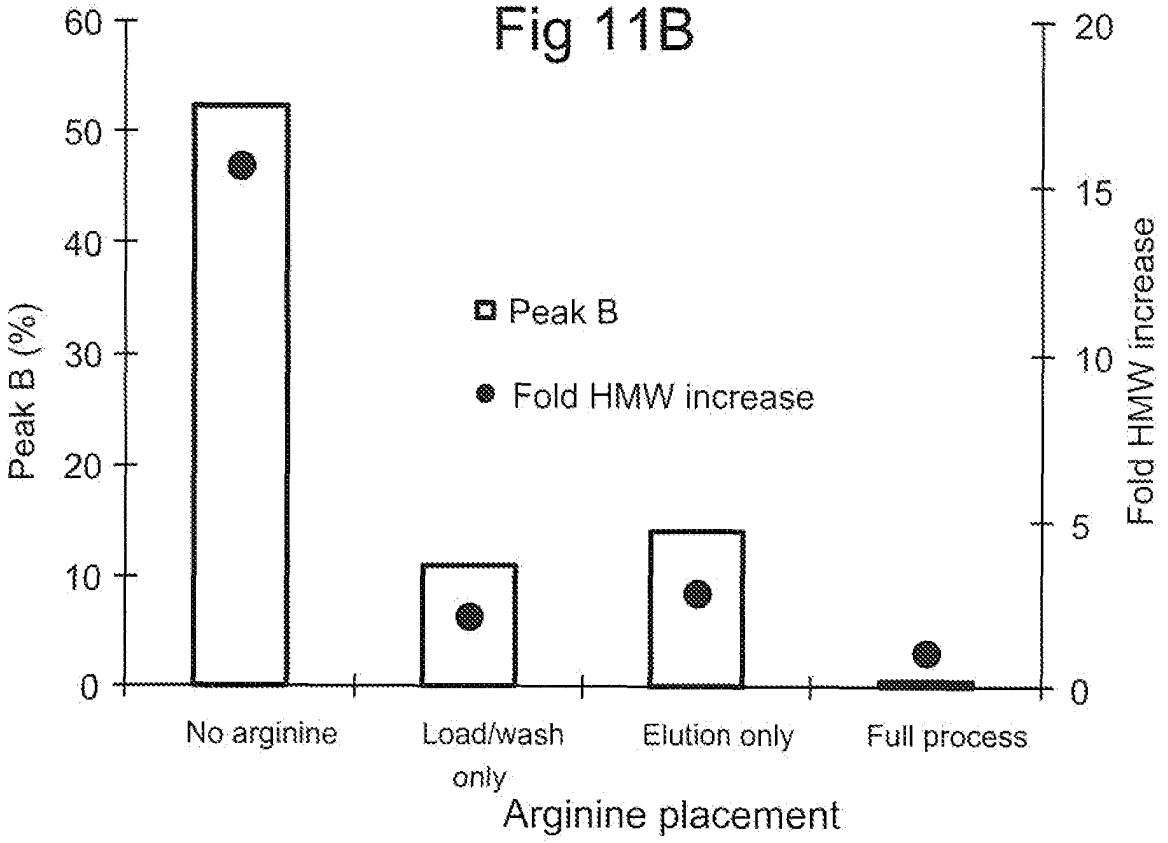


Fig 11B



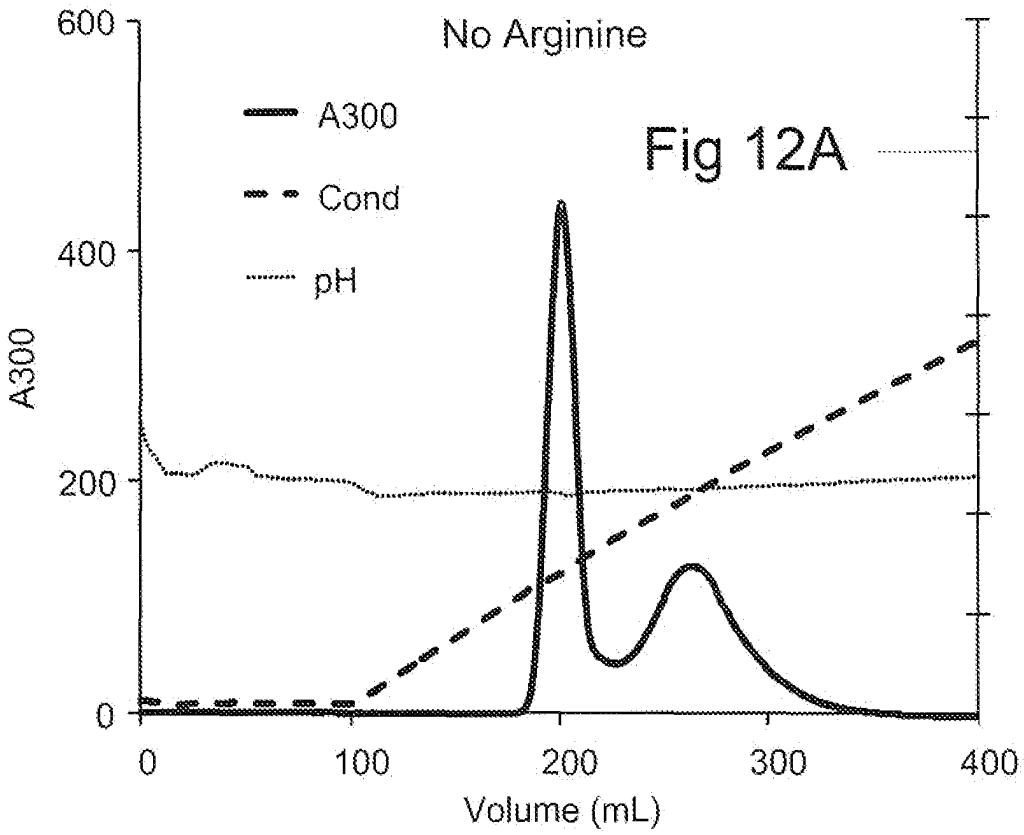


Fig 12A

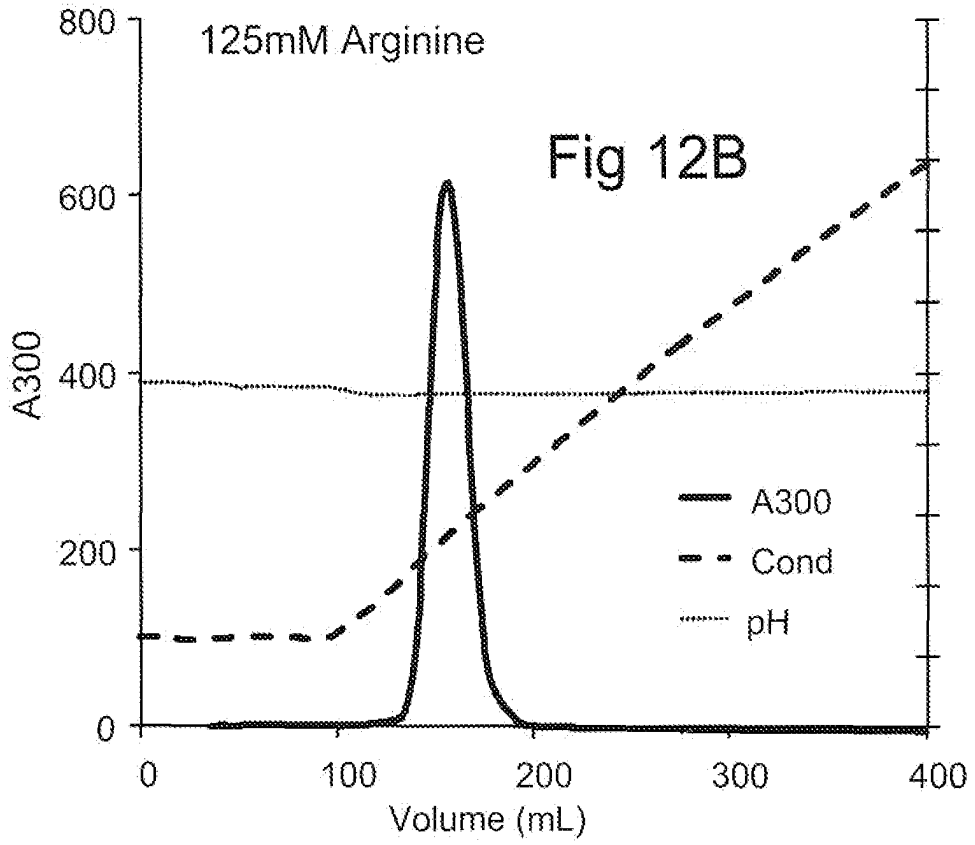


Fig 12B

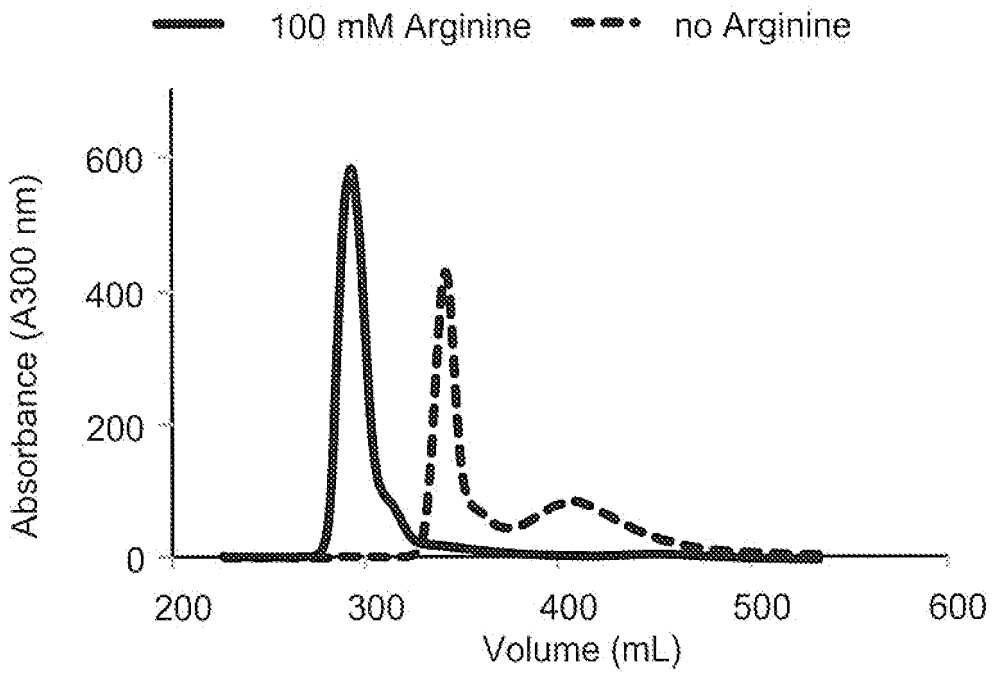
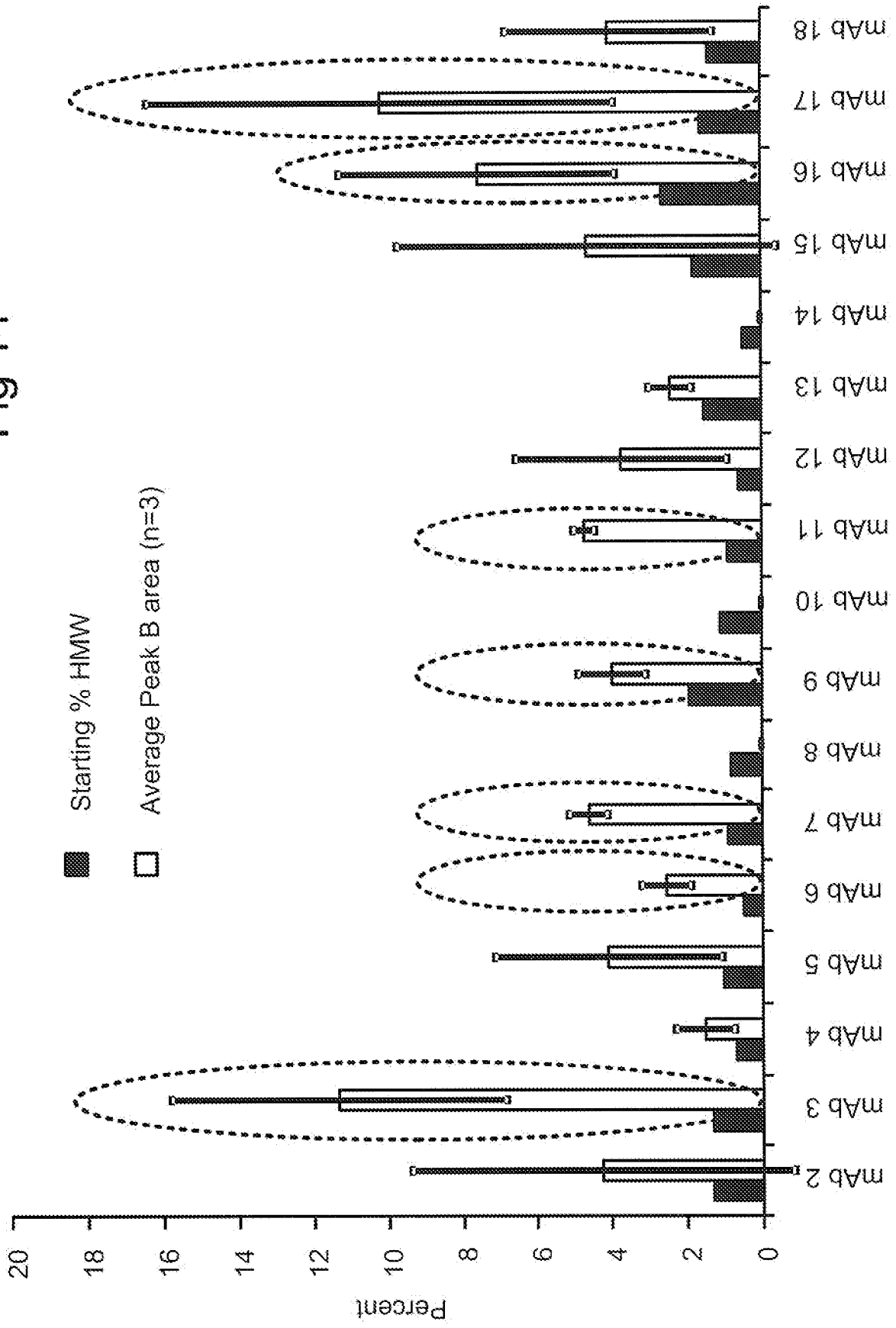

100 mM Arginine
no Arginine
Absorbance (A300 nm)
600
400
200
0
200
300
400
500
600
Volume (mL)

Fig. 13

Fig 14


Starting % HMW
Average Peak B area (n=3)
Percent
0
2
4
6
8
9
10
12
14
16
18
20
mAb 2
mAb 3
mAb 4
mAb 5
mAb 6
mAb 7
mAb 8
mAb 9
mAb 10
mAb 11
mAb 12
mAb 13
mAb 14
mAb 15
mAb 16
mAb 17
mAb 18