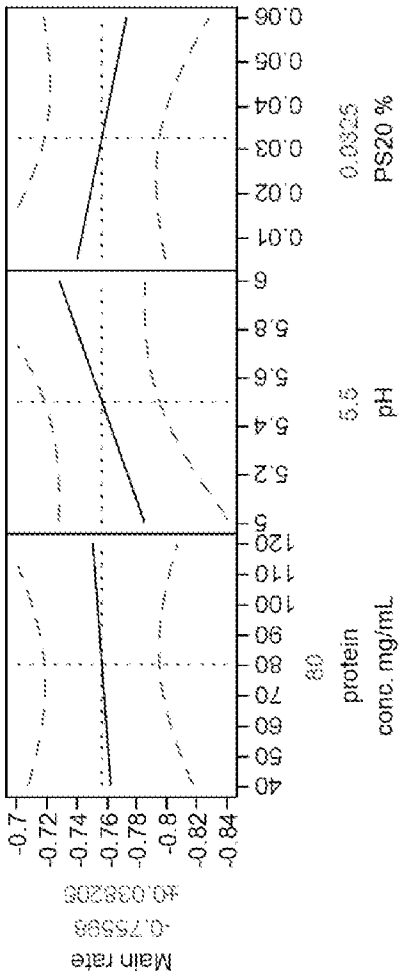

Main rate
-0.75596
±0.038208
protein
conc. mg/mL
80
pH
5.5
PS20 %
0.0325

FIG. 1A

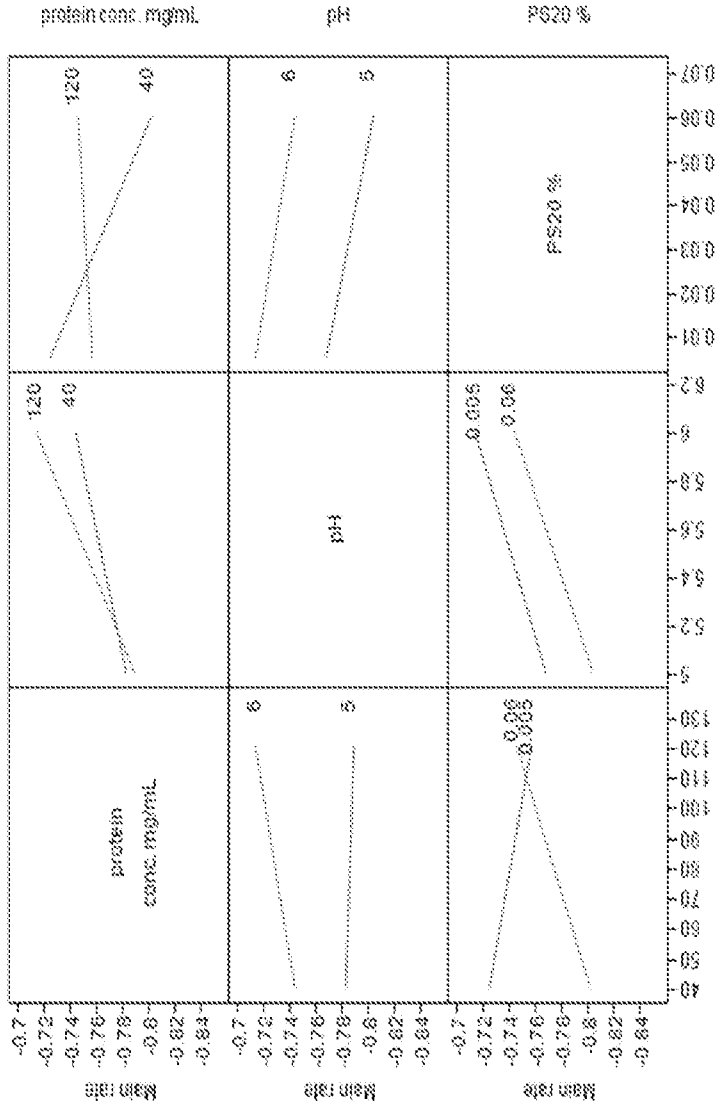

protein conc. mg/mL
pH
PS20 %
Main rate
120
40
6
5
0.005
0.06
0.035

FIG. 1B

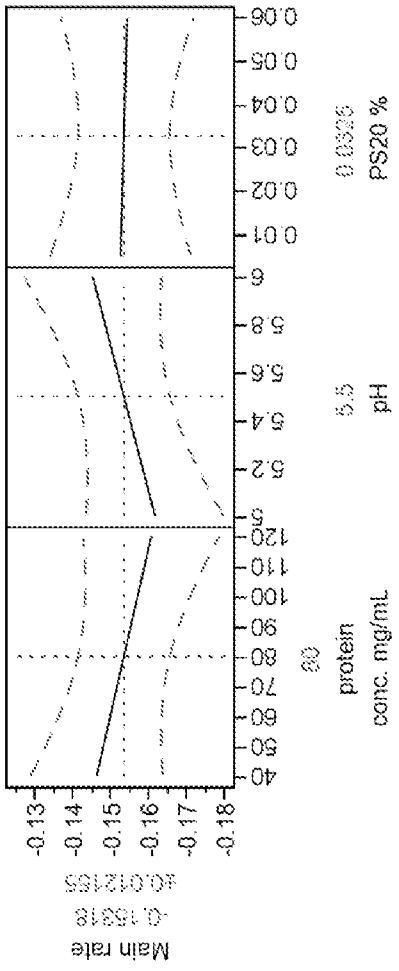

Main rate
-0.16218
-0.012155
-0.13
-0.14
-0.15
-0.16
-0.17
-0.18
40
50
60
70
80
90
100
110
120
protein
conc. mg/mL
5
5.2
5.4
5.6
5.8
6
pH
0.01
0.02
0.03
0.04
0.05
0.06
0.03525
PS20 %

FIG. 2A

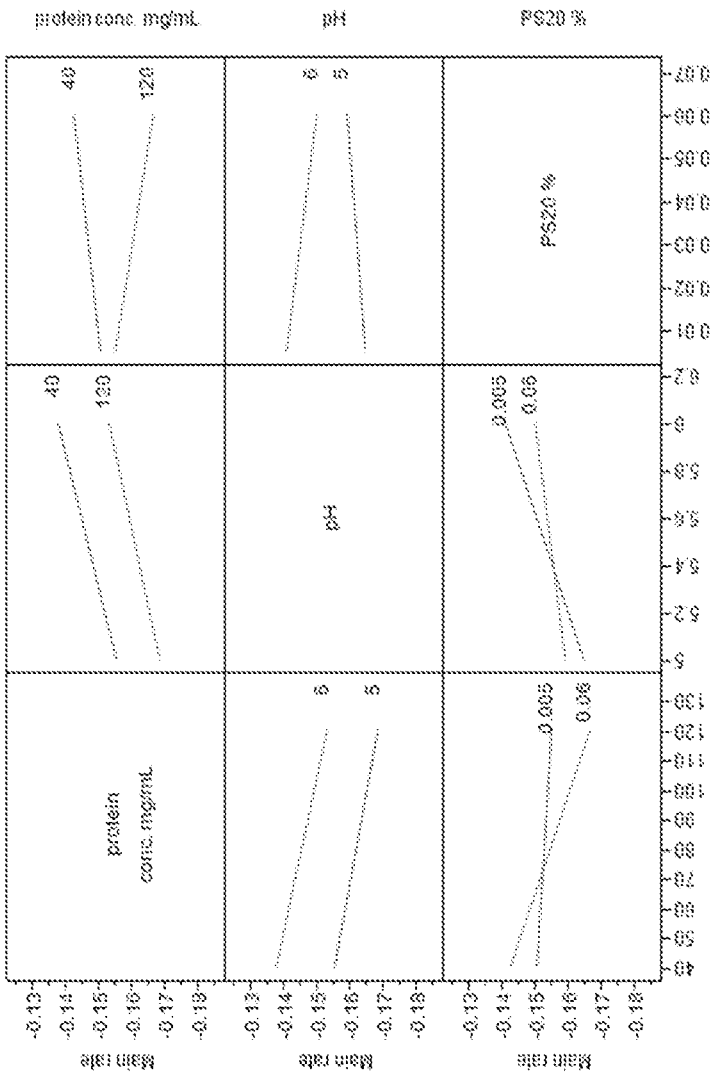

protein conc mg/mL
pH
PS20 %
Main rate
protein
conc. mg/mL
40
120
5
6
0.005
0.06

FIG. 2B

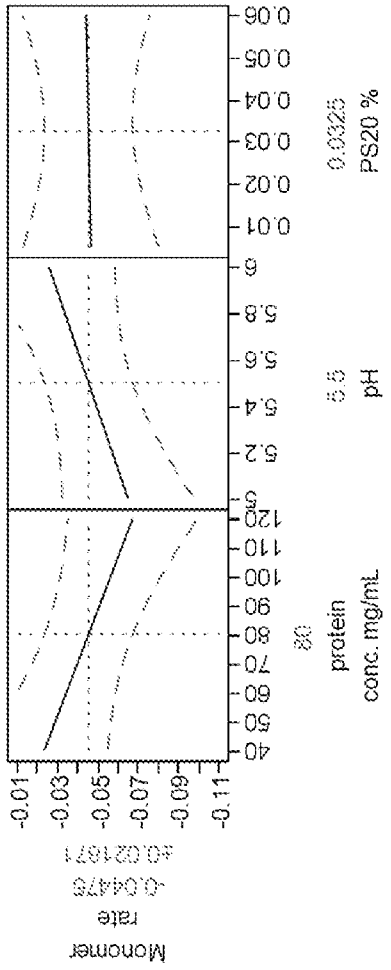

Monomer rate
-0.01
-0.03
-0.05
-0.07
-0.09
-0.11
40
50
60
70
80
90
100
110
120
protein conc. mg/mL
5
5.2
5.4
5.6
5.8
6
pH
0.01
0.02
0.03
0.04
0.05
0.06
PS20 %

FIG. 3A

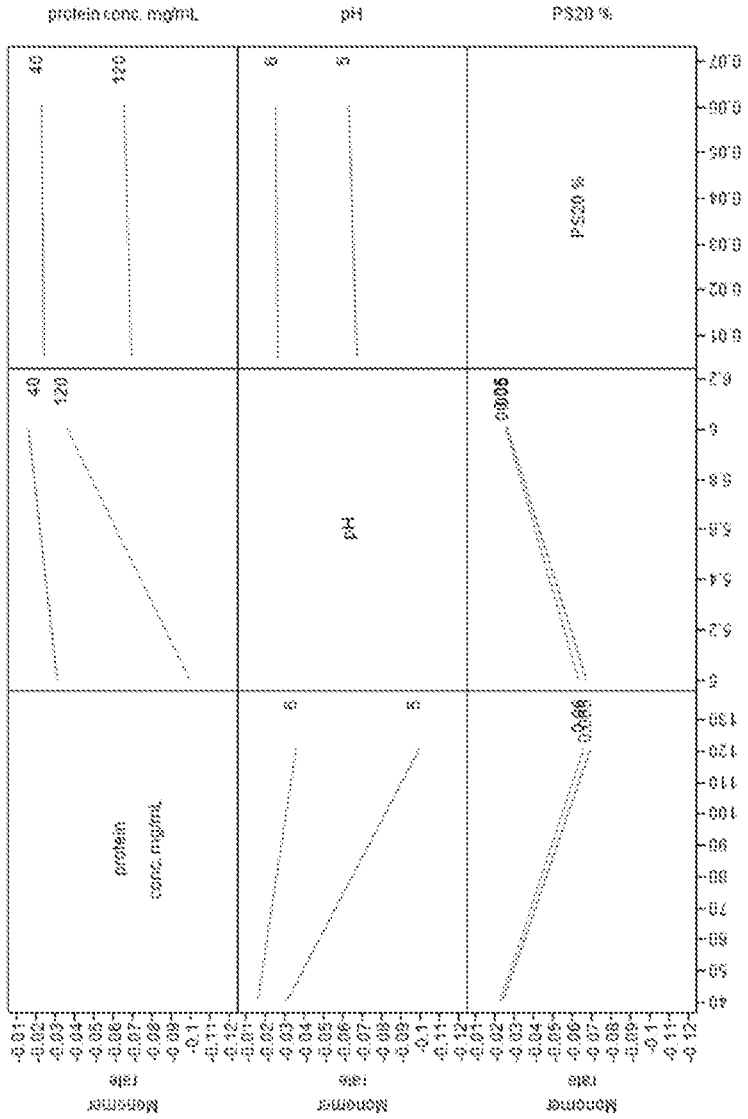

protein conc. mg/mL
pH
PS20 %
Monomer rate
40
120
5
6
0.01
0.07

FIG. 3B

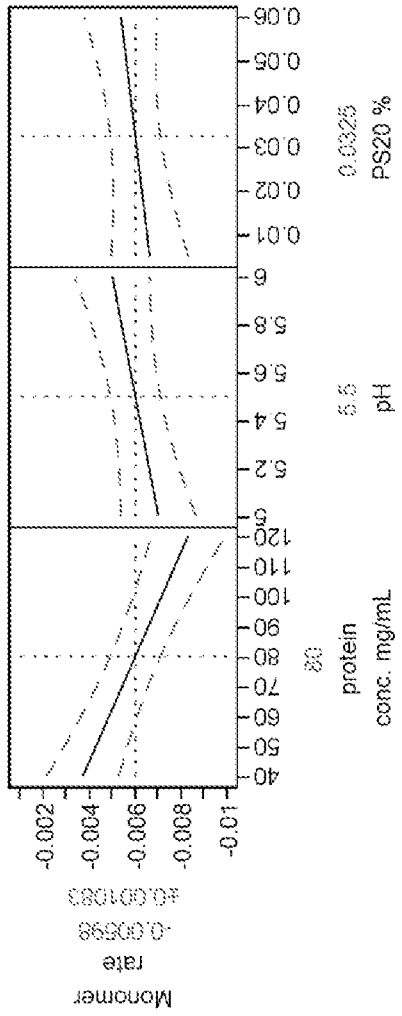

Monomer rate
-0.00598
±0.001083
protein conc. mg/mL
80
pH
5.5
PS20 %
0.0325

FIG. 4A

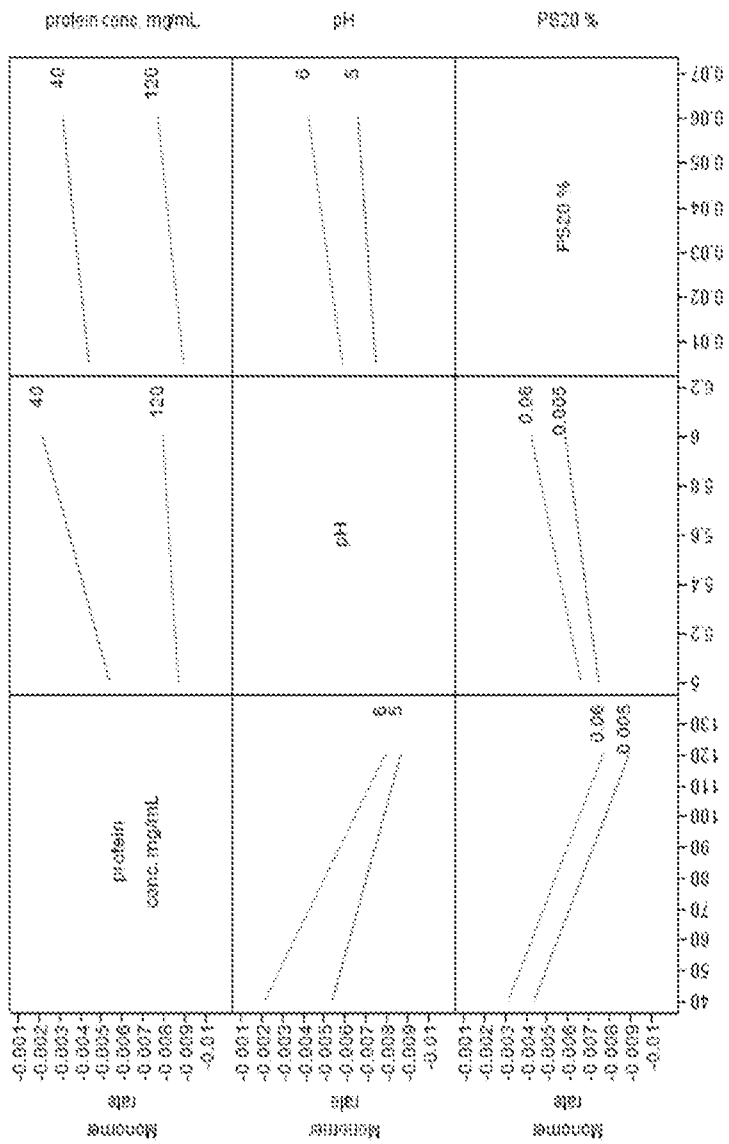

protein conc. mg/mL
pH
PS20 %
Monomer rate

FIG. 4B

FIG. 5

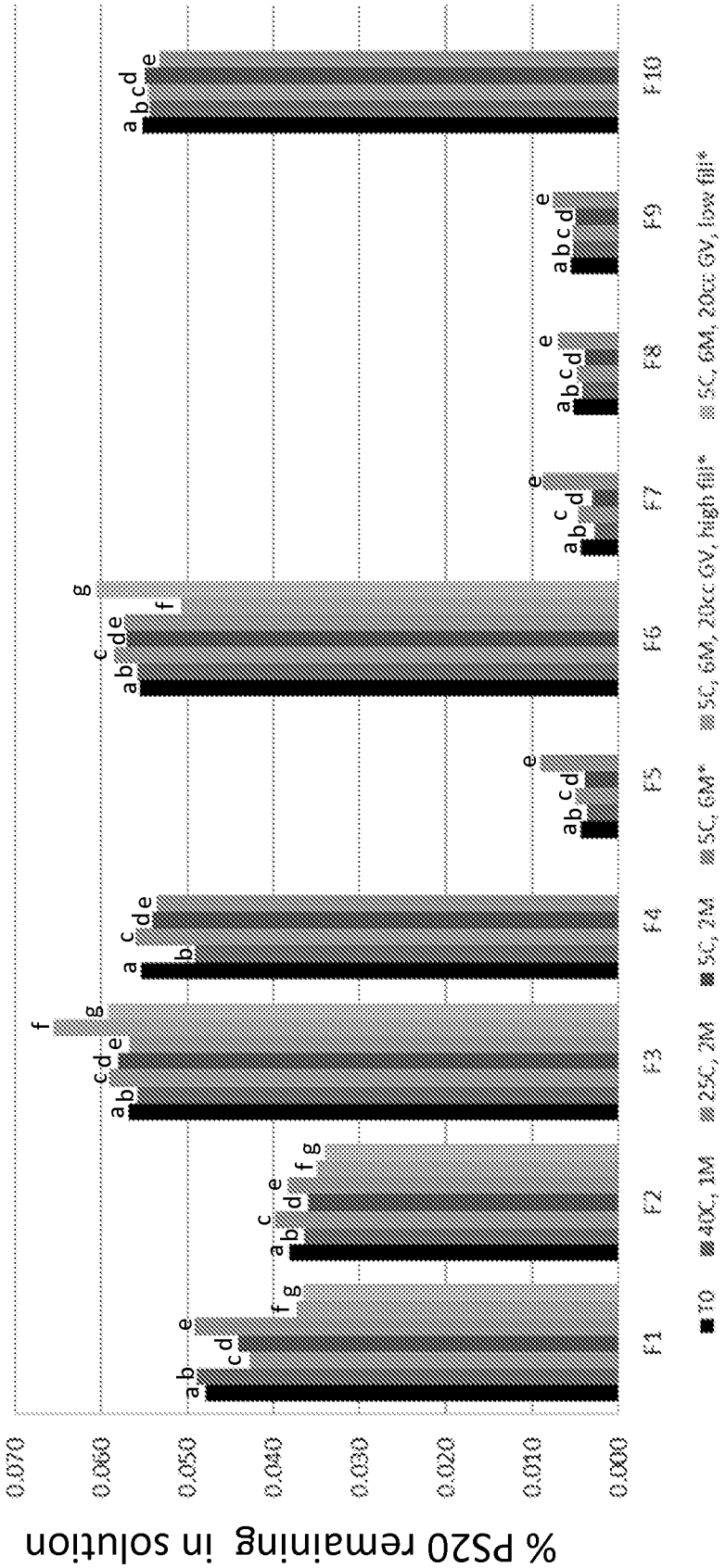

% PS20 remaining in solution
0.070
0.060
0.050
0.040
0.030
0.020
0.010
0.000
F1
F2
F3
F4
F5
F6
F7
F8
F9
F10
T0
40C, 1M
25C, 2M
5C, 1M
5C, 6M*
5C, 6M, 20cc GV, high fill*
5C, 6M, 20cc GV, low fill*

FIG. 6A

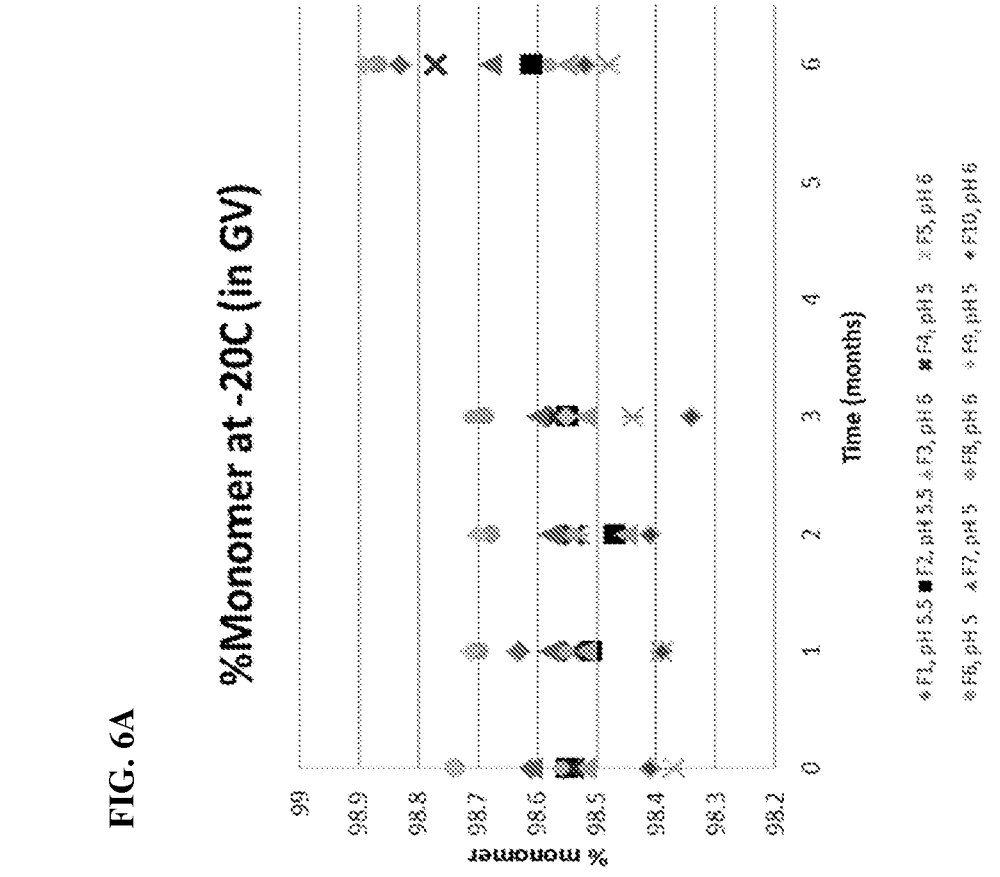

%Monomer at -20C (in GV)
% monomer
99
98.9
98.8
98.7
98.6
98.5
98.4
98.3
98.2
0
1
2
3
4
5
6
Time (months)
F1, pH 5.5
F2, pH 5.5
F3, pH 6
F4, pH 5
F5, pH 6
F6, pH 5
F7, pH 5
F8, pH 6
F9, pH 5
F10, pH 6

FIG. 6B

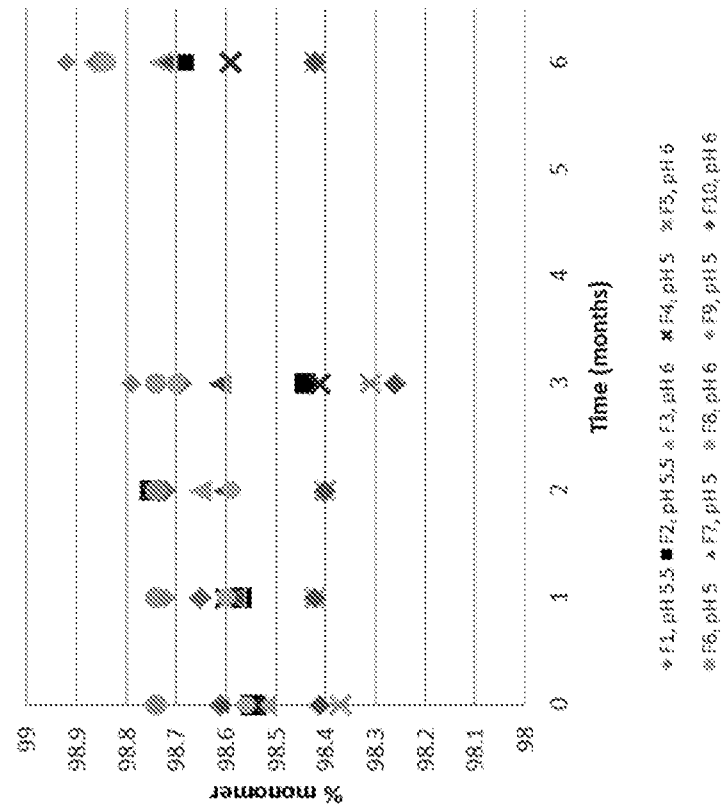

% Monomer at 5C
% monomer
99
98.9
98.8
98.7
98.6
98.5
98.4
98.3
98.2
98.1
98
0
1
2
3
4
5
6
Time (months)
F1, pH 5.5
F2, pH 5.5
F3, pH 6
F4, pH 5
F5, pH 6
F6, pH 5
F7, pH 5
F8, pH 6
F9, pH 5
F10, pH 6

FIG. 6C

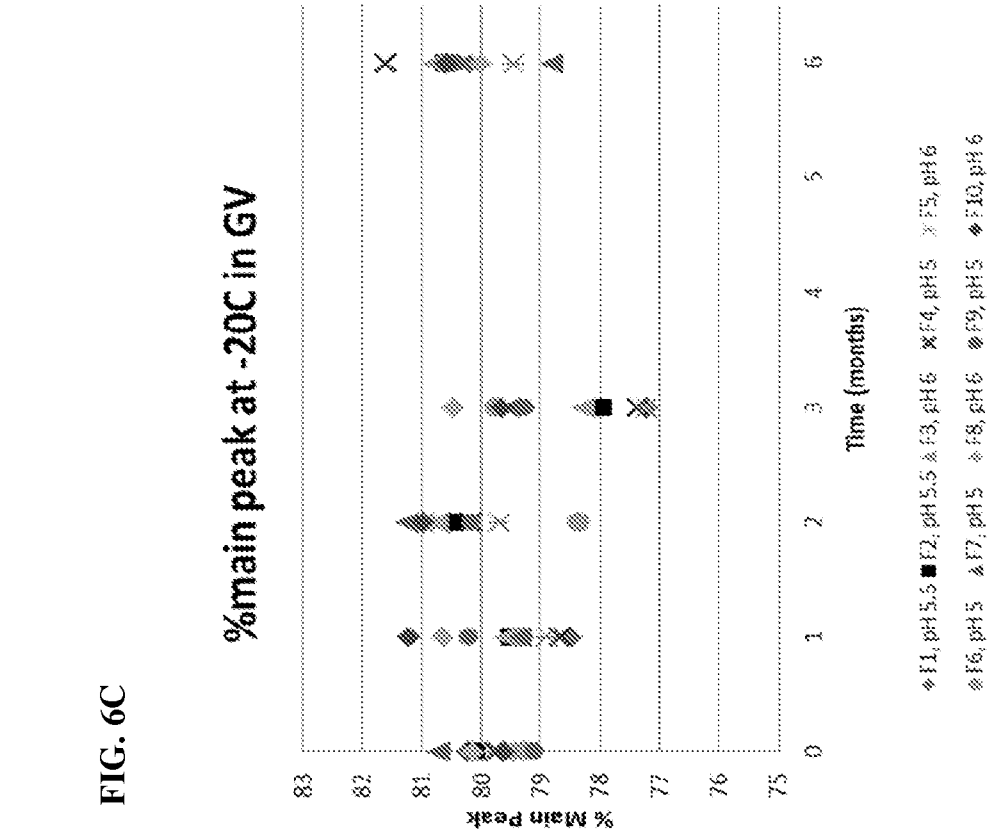

%main peak at -20C in GV
% Main Peak
Time (months)
F1, pH 5.5
F2, pH 5.5
F3, pH 6
F4, pH 5
F5, pH 6
F6, pH 5
F7, pH 5
F8, pH 6
F9, pH 5
F10, pH 6

FIG. 6D

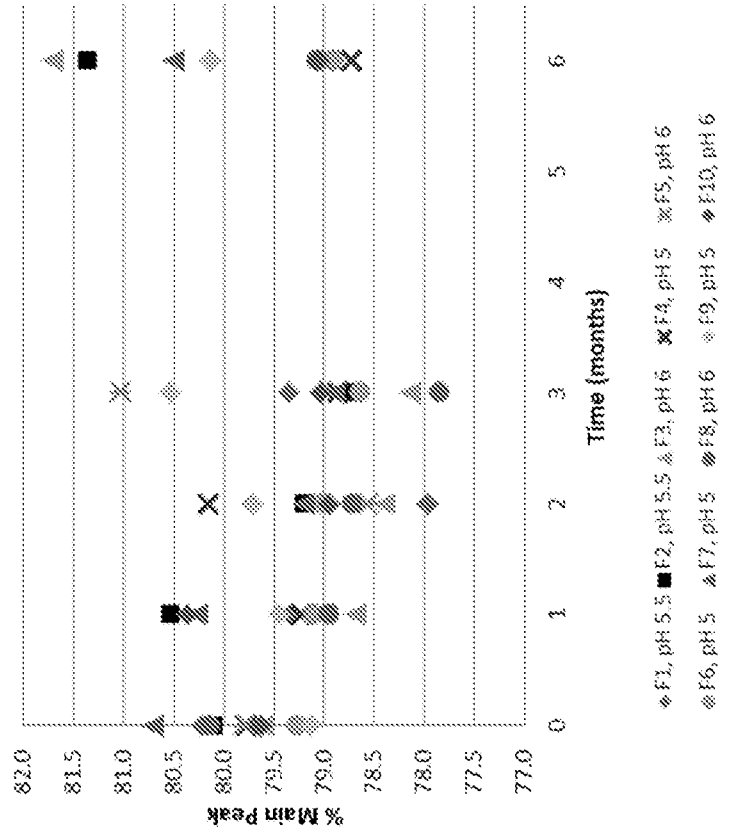

% main peak at 5C
% Main Peak
Time (months)
F1, pH 5.5
F2, pH 5.5
F3, pH 6
F4, pH 5
F5, pH 6
F6, pH 5
F7, pH 5
F8, pH 6
F9, pH 5
F10, pH 6

FIG. 7A

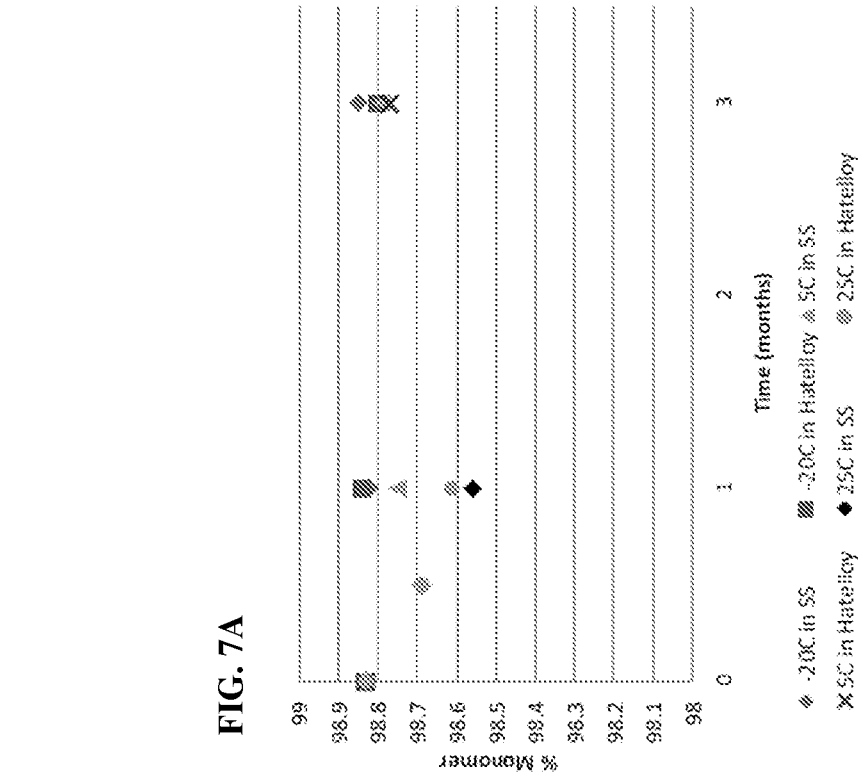

% Monomer
99
98.9
98.8
98.7
98.6
98.5
98.4
98.3
98.2
98.1
98
0
1
2
3
Time (months)
-20C in SS
-20C in Hatelloy
5C in SS
5C in Hatelloy
25C in SS
25C in Hatelloy

FIG. 7B

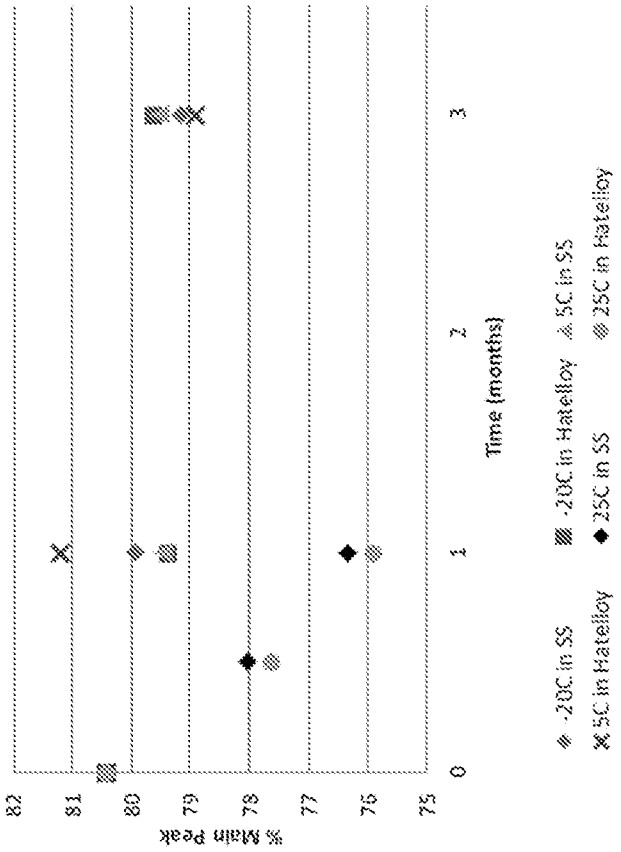

% Main Peak
82
81
80
79
78
77
76
75
0
1
2
3
Time (months)
-20C in SS
-20C in Hatelloy
5C in SS
5C in Hatelloy
25C in SS
25C in Hatelloy

FIG. 8A

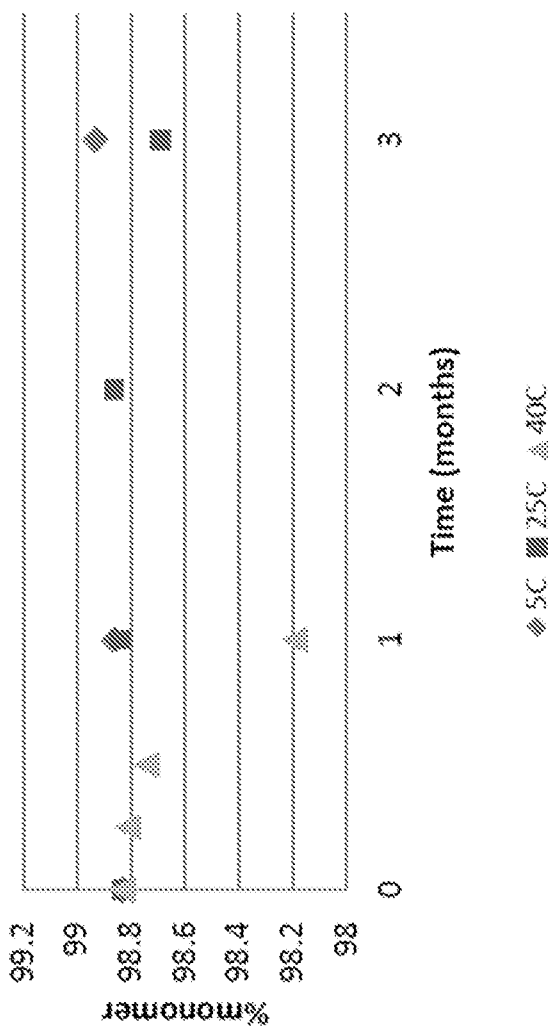
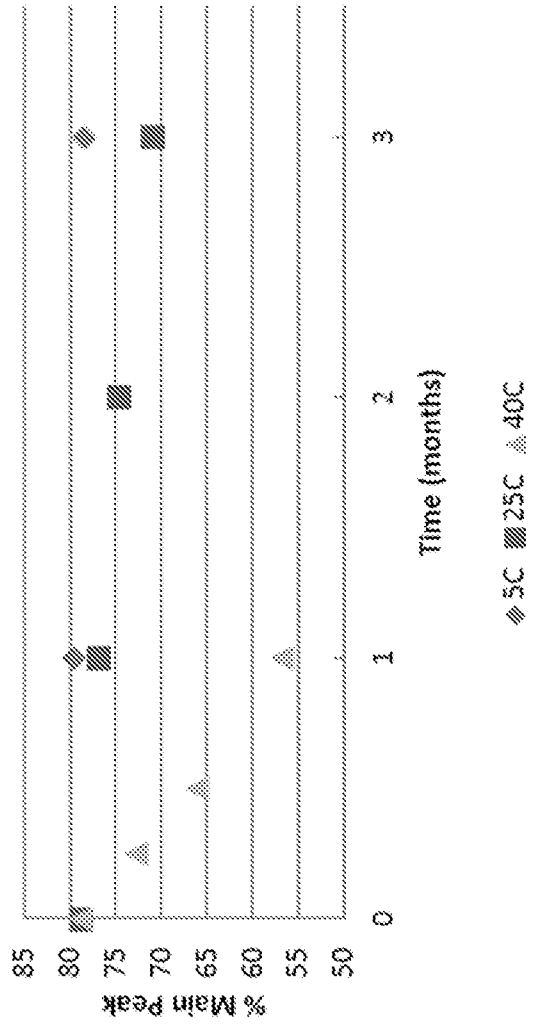

99.2
99
98.8
98.6
98.4
98.2
98
%monomer
0
1
2
3
Time (months)
5C
25C
40C

FIG. 8B


85
80
75
70
65
60
55
50
% Main Peak
0
1
2
3
Time (months)
5C
25C
40C

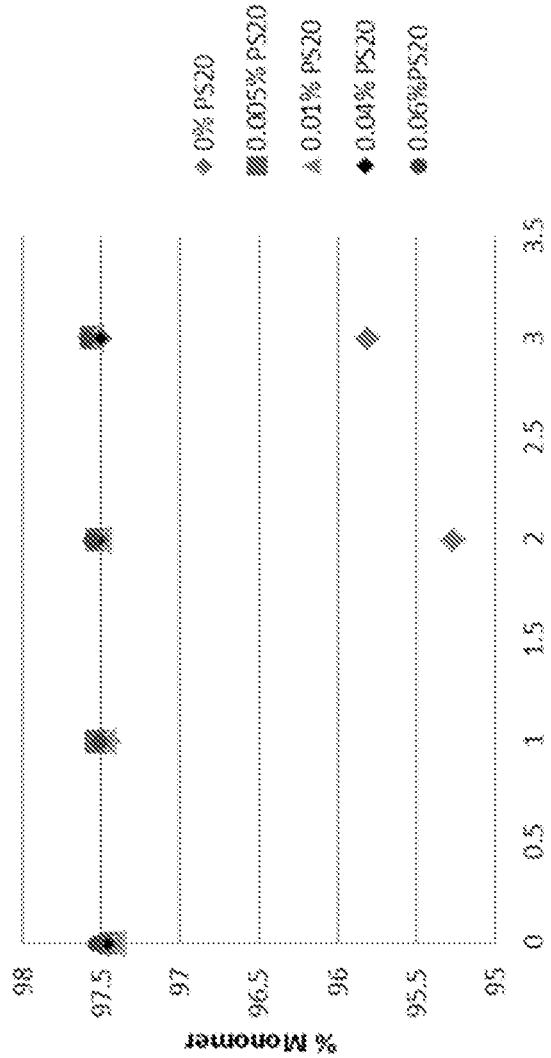

0% PS20
0.005% PS20
0.01% PS20
0.04% PS20
0.06%PS20
% Monomer
98
97.5
97
96.5
96
95.5
95
0
0.5
1
1.5
2
2.5
3
3.5
Time (days)

FIG. 9A

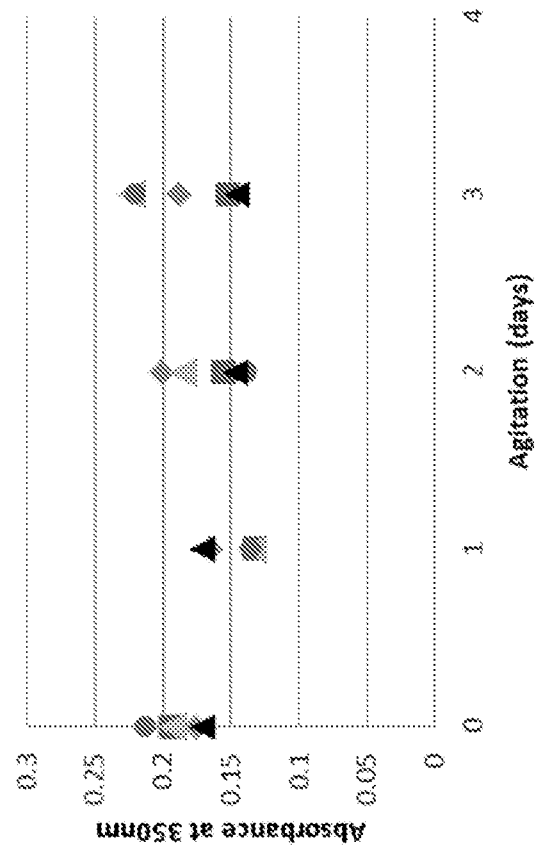

0%
0.005%
0.01%
0.04%
0.06%
Absorbance at 350nm
0.3
0.25
0.2
0.15
0.1
0.05
0
0
1
2
3
4
Agitation (days)

FIG. 9B

FIG. 10

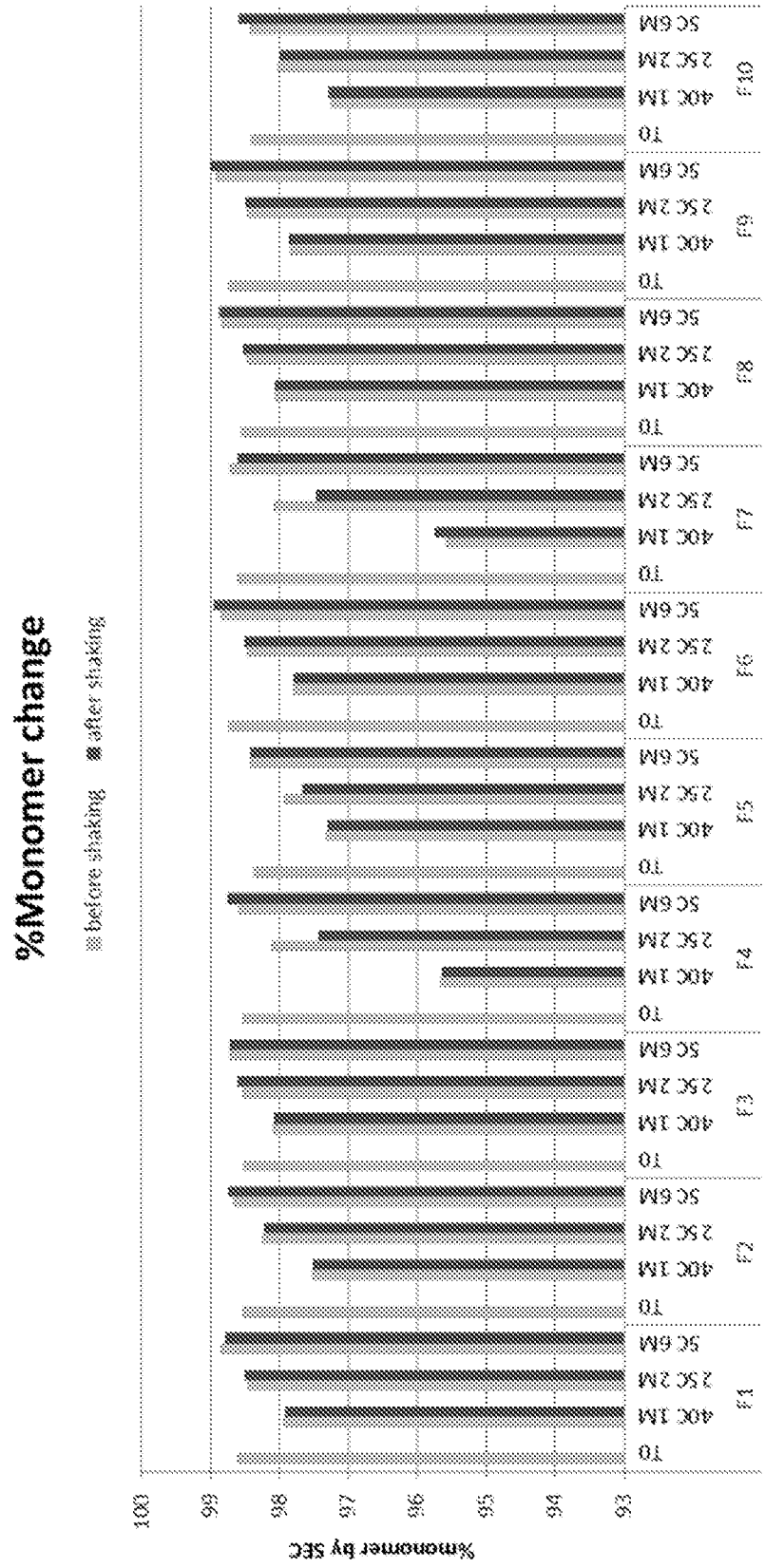

%Monomer change
before shaking
after shaking
%monomer by SEC
100
99
98
97
96
95
94
93
T0
40C 1M
2 SC 2M
SC 6M
E1
E2
E3
E4
E5
E6
E7
E8
E9
E10

FIG. 11A

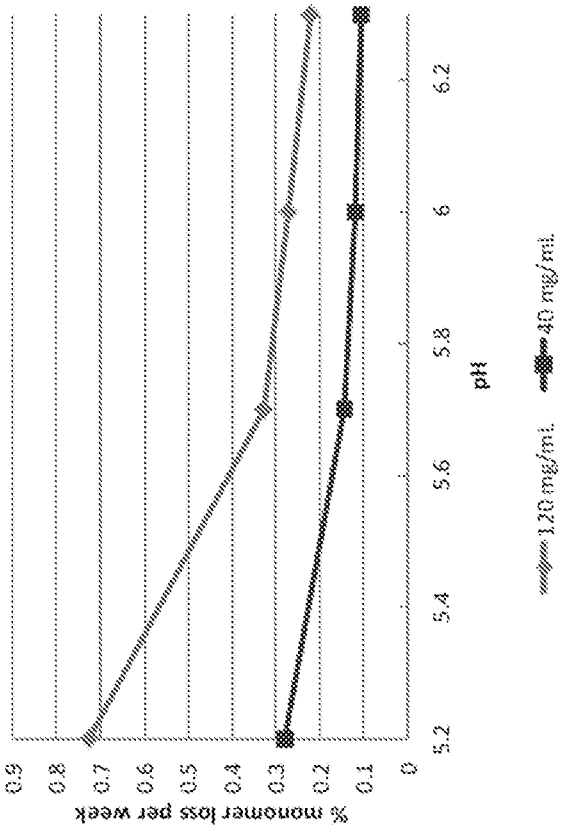


FIG. 11B

