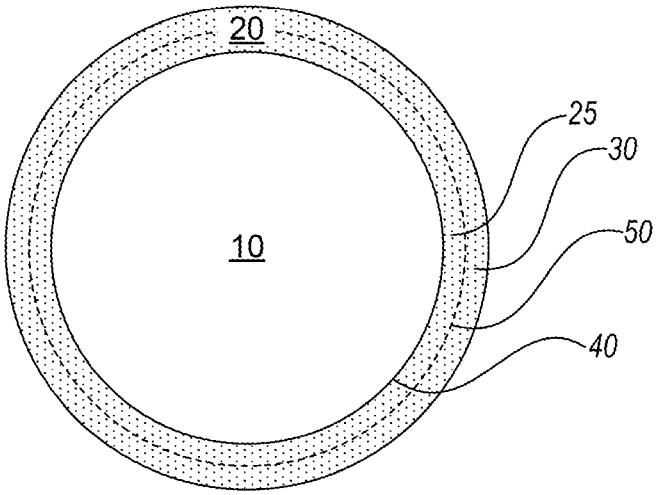

20
25
30
50
10
40

FIG. 1

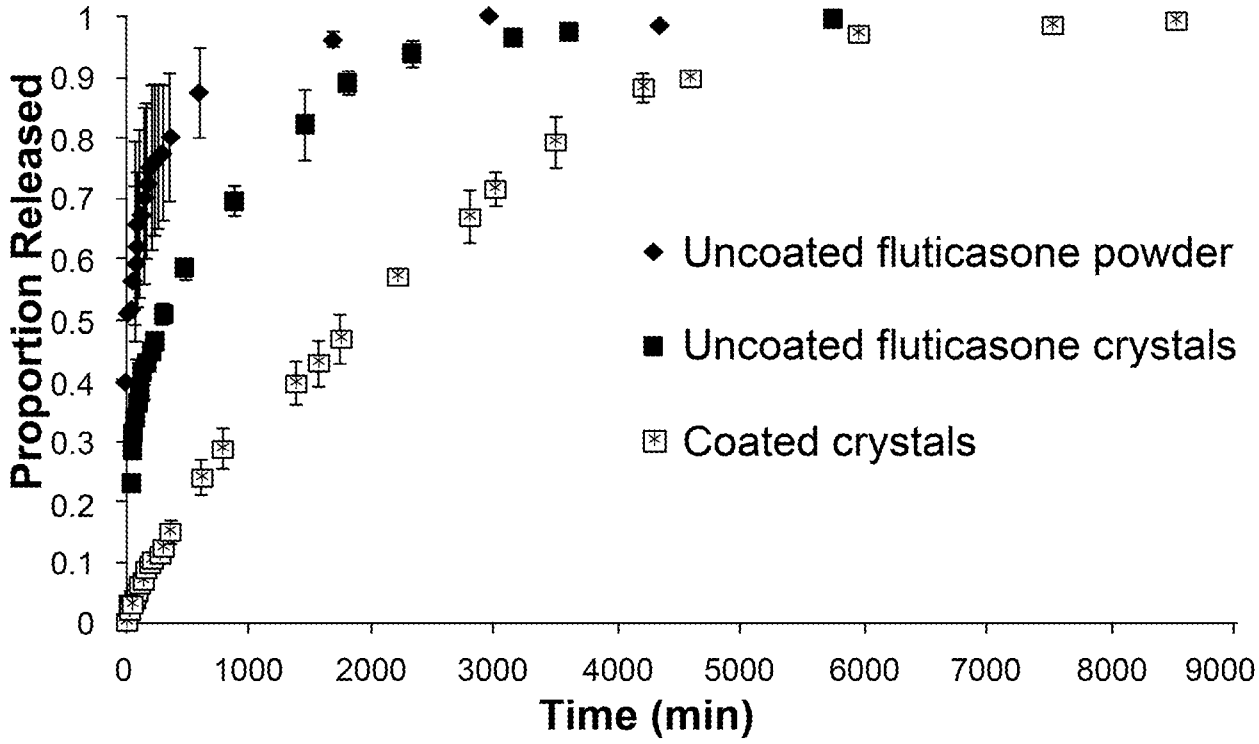

Proportion Released
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Time (min)
Uncoated fluticasone powder
Uncoated fluticasone crystals
Coated crystals

FIG. 2

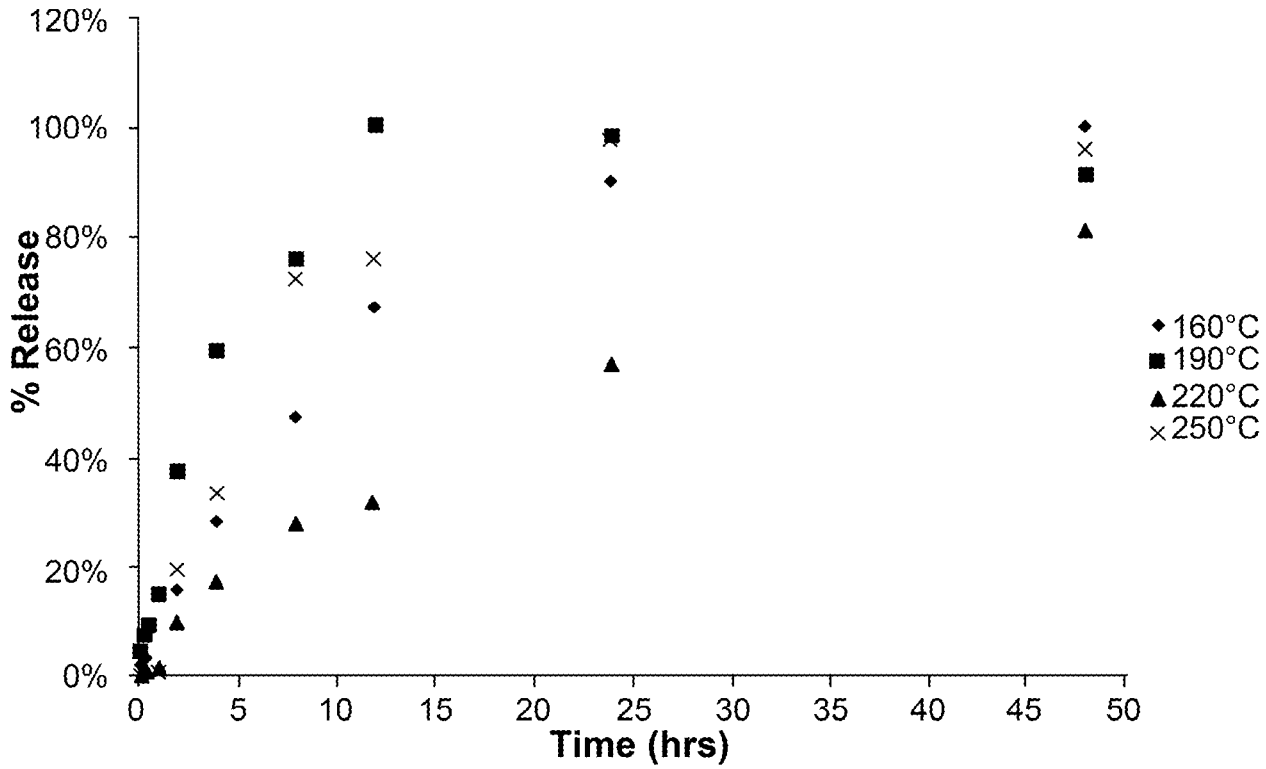

120%
100%
80%
60%
40%
20%
0%
% Release
0
5
10
15
20
25
30
35
40
45
50
Time (hrs)
160°C
190°C
220°C
250°C

FIG. 3A

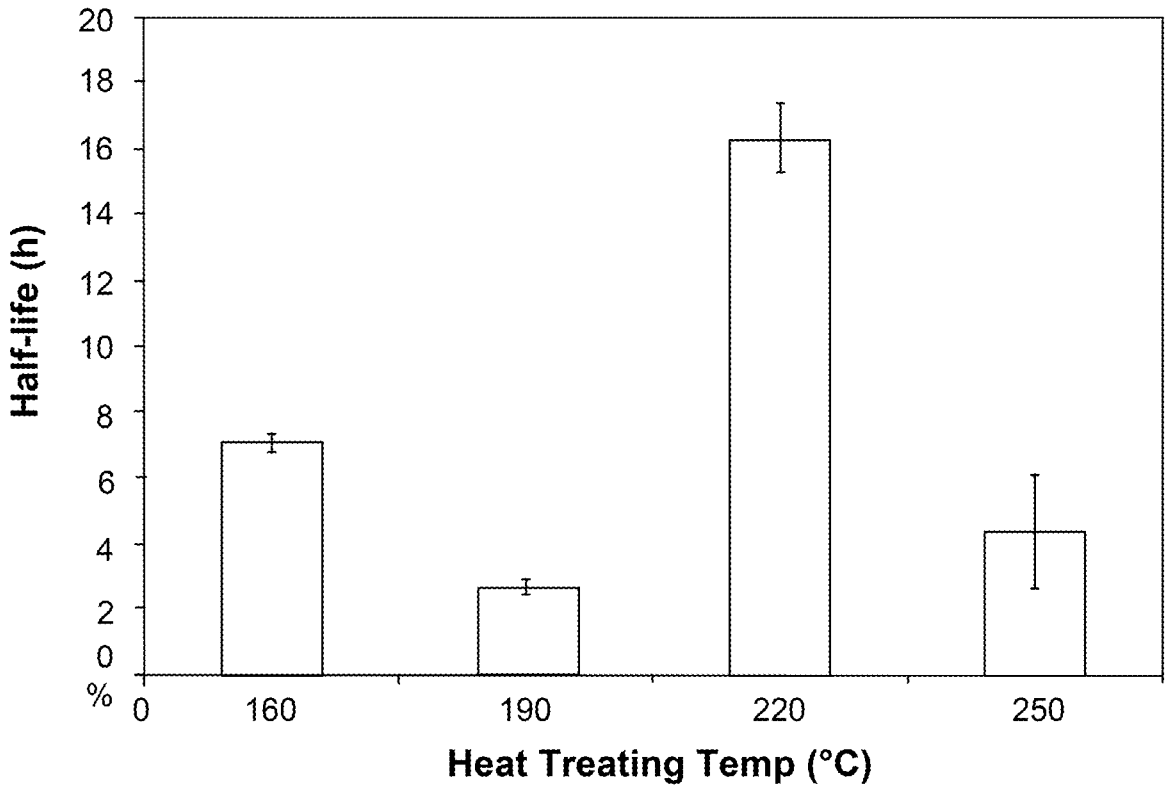

20
18
16
14
12
10
8
6
4
2
0
%
Half-life (h)
0
160
190
220
250
Heat Treating Temp (°C)

FIG. 3B

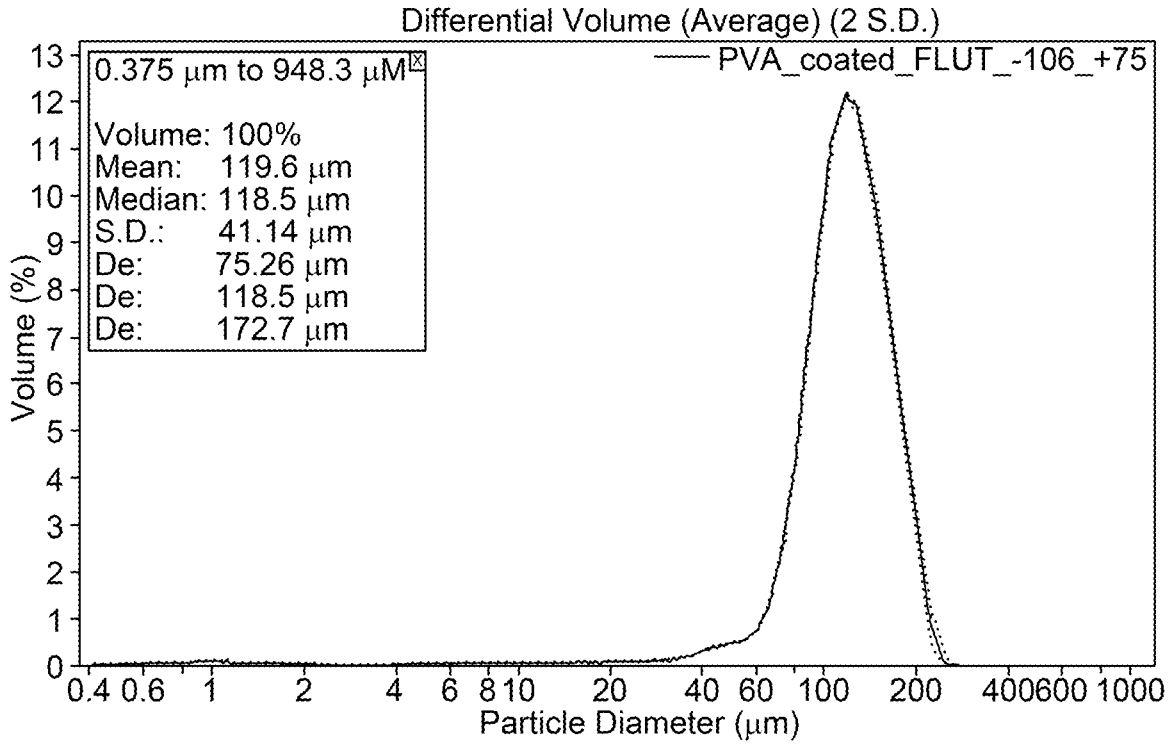

Differential Volume (Average) (2 S.D.)
PVA_coated_FLUT_-106_+75
0.375 µm to 948.3 µM
Volume: 100%
Mean: 119.6 µm
Median: 118.5 µm
S.D.: 41.14 µm
De: 75.26 µm
De: 118.5 µm
De: 172.7 µm
Volume (%)
Particle Diameter (µm)

FIG. 4A

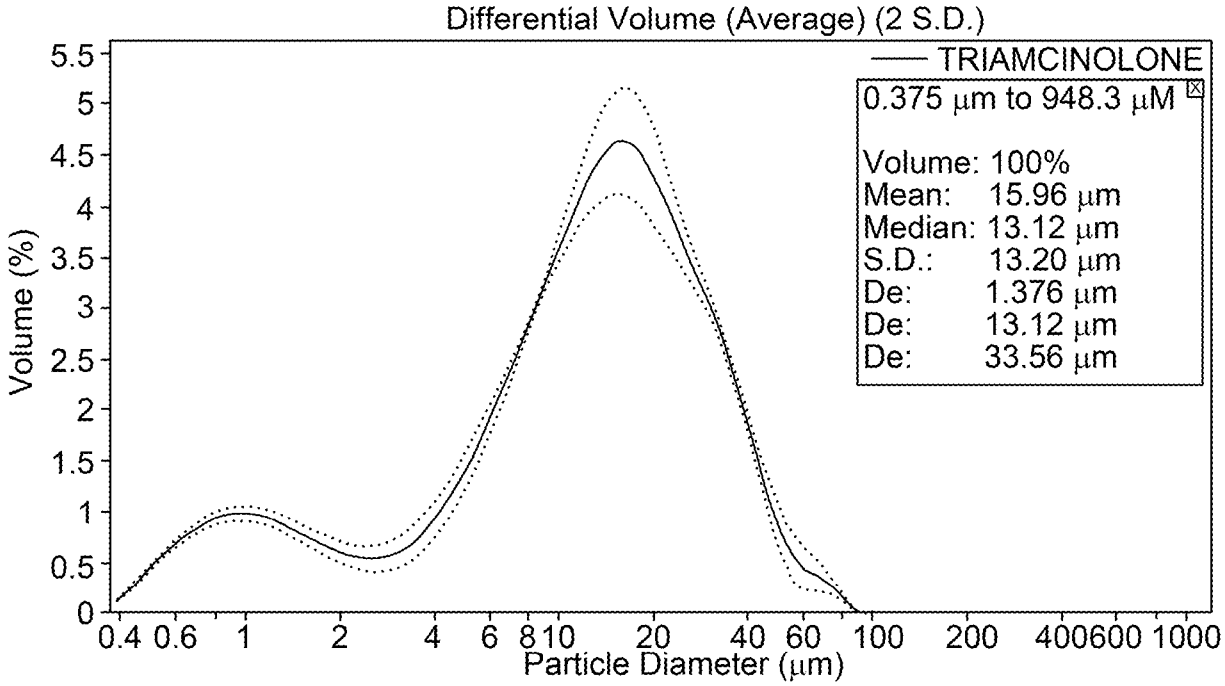

Differential Volume (Average) (2 S.D.)
TRIAMCINOLONE
0.375 µm to 948.3 µM
Volume: 100%
Mean: 15.96 µm
Median: 13.12 µm
S.D.: 13.20 µm
De: 1.376 µm
De: 13.12 µm
De: 33.56 µm
Volume (%)
Particle Diameter (µm)

FIG. 4B

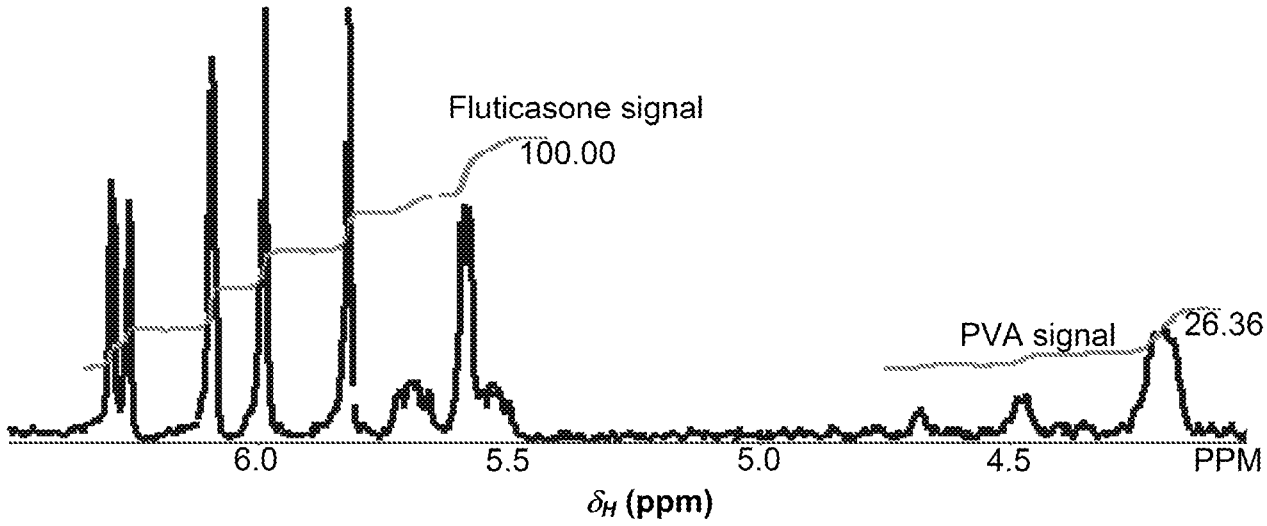

Fluticasone signal
100.00
PVA signal
26.36
6.0
5.5
5.0
4.5
PPM
δ_H (ppm)

FIG. 5

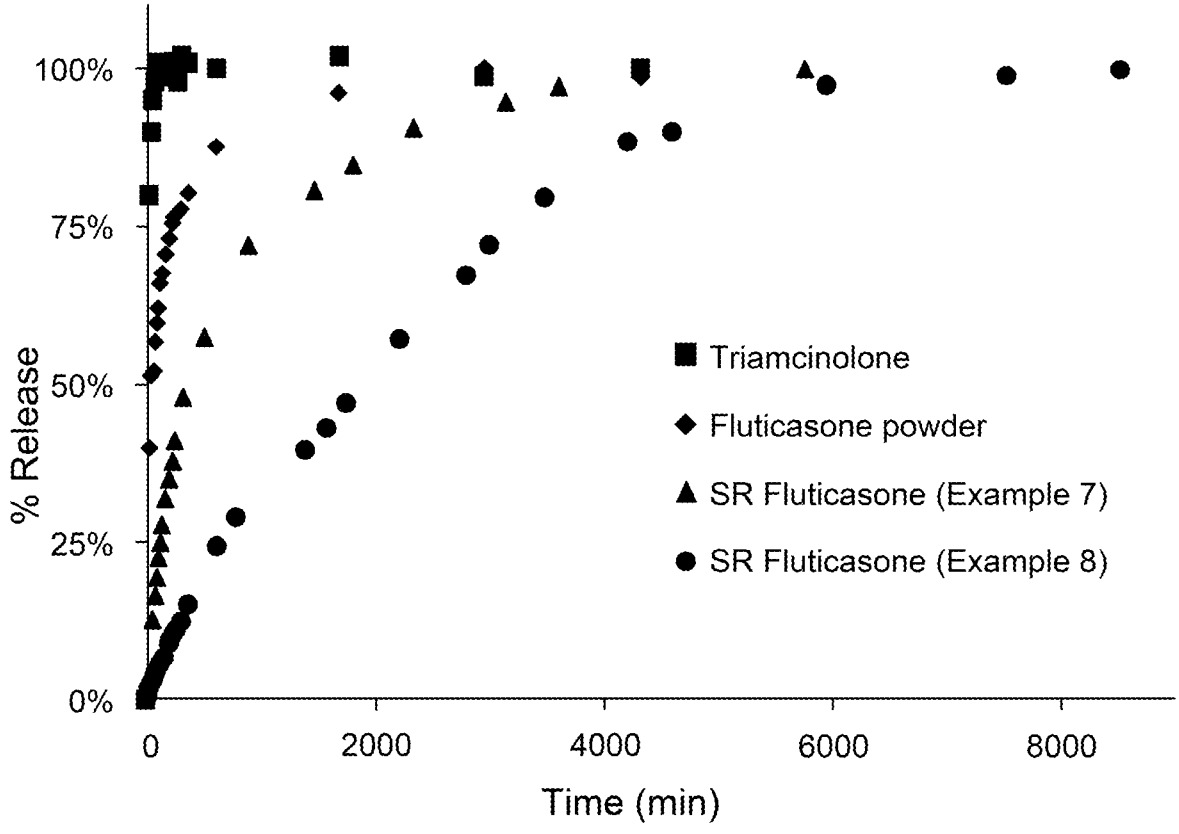

100%
75%
50%
25%
0%
% Release
0
2000
4000
6000
8000
Time (min)
Triamcinolone
Fluticasone powder
SR Fluticasone (Example 7)
SR Fluticasone (Example 8)

FIG. 6

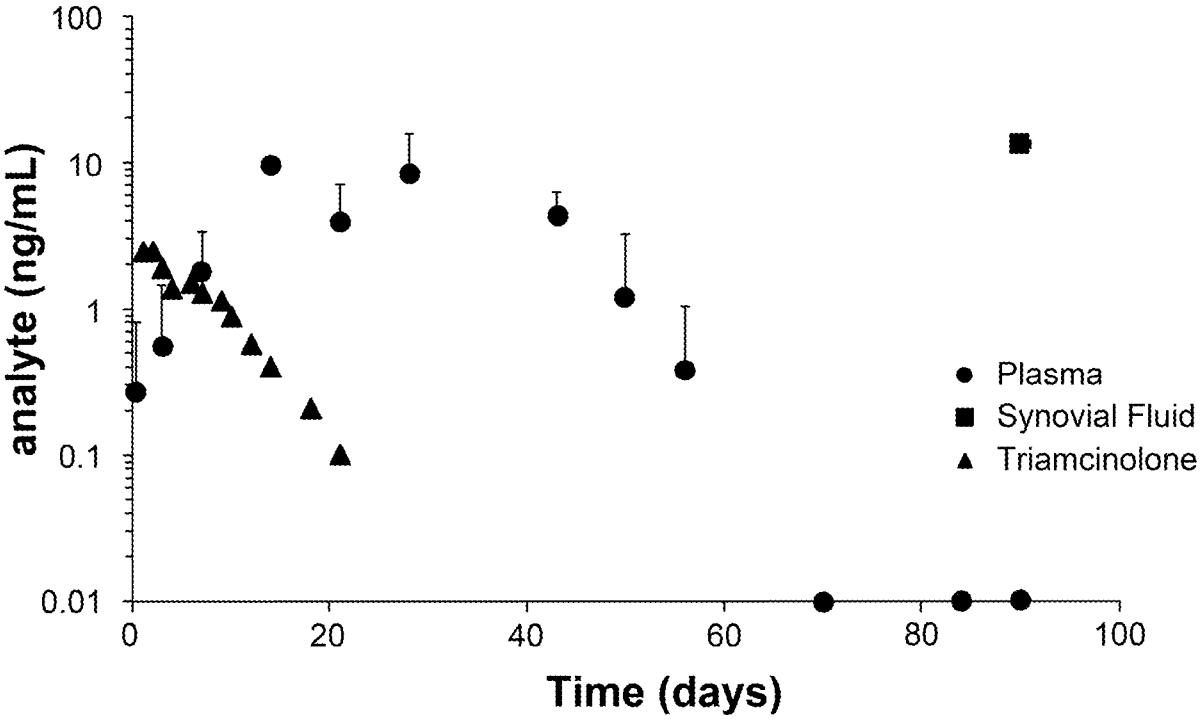

100
10
1
0.1
0.01
analyte (ng/mL)
0
20
40
60
80
100
Time (days)
Plasma
Synovial Fluid
Triamcinolone

FIG. 7

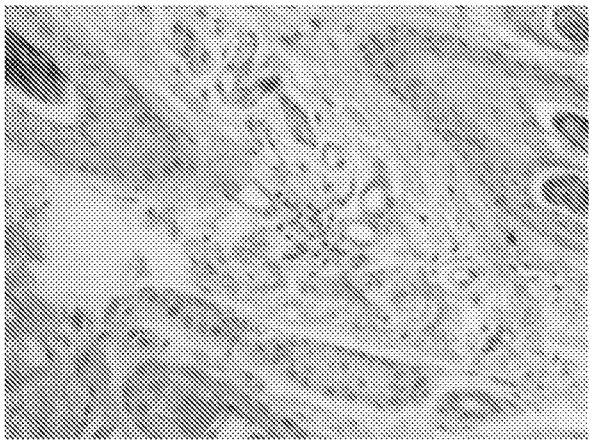


FIG. 8A



FIG. 8B

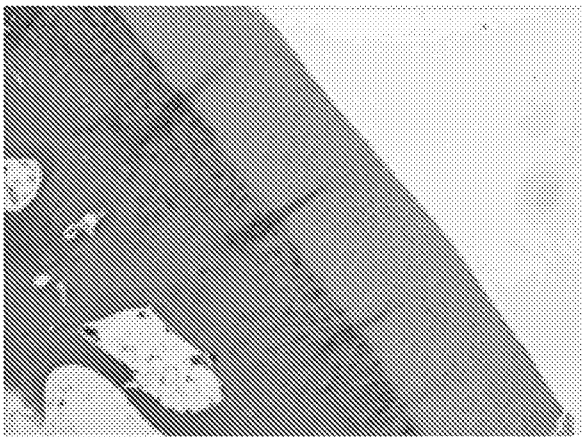


FIG. 8C

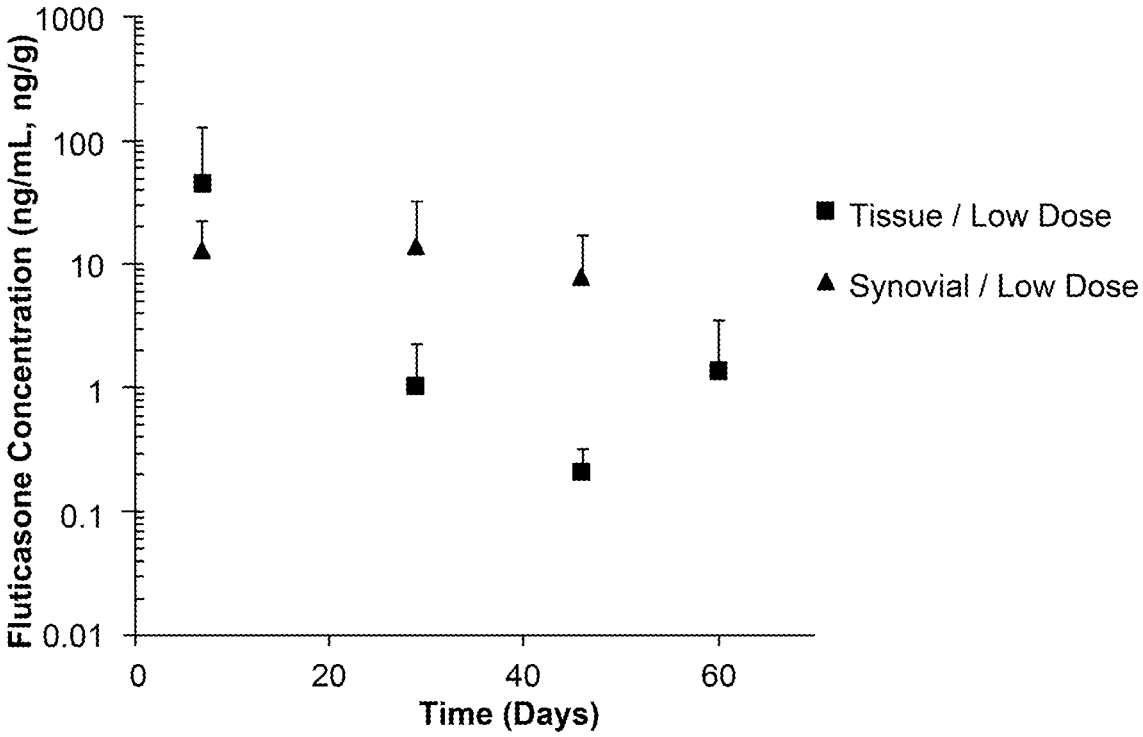

Fluticasone Concentration (ng/mL, ng/g)
1000
100
10
1
0.1
0.01
0
20
40
60
Time (Days)
Tissue / Low Dose
Synovial / Low Dose

FIG. 9

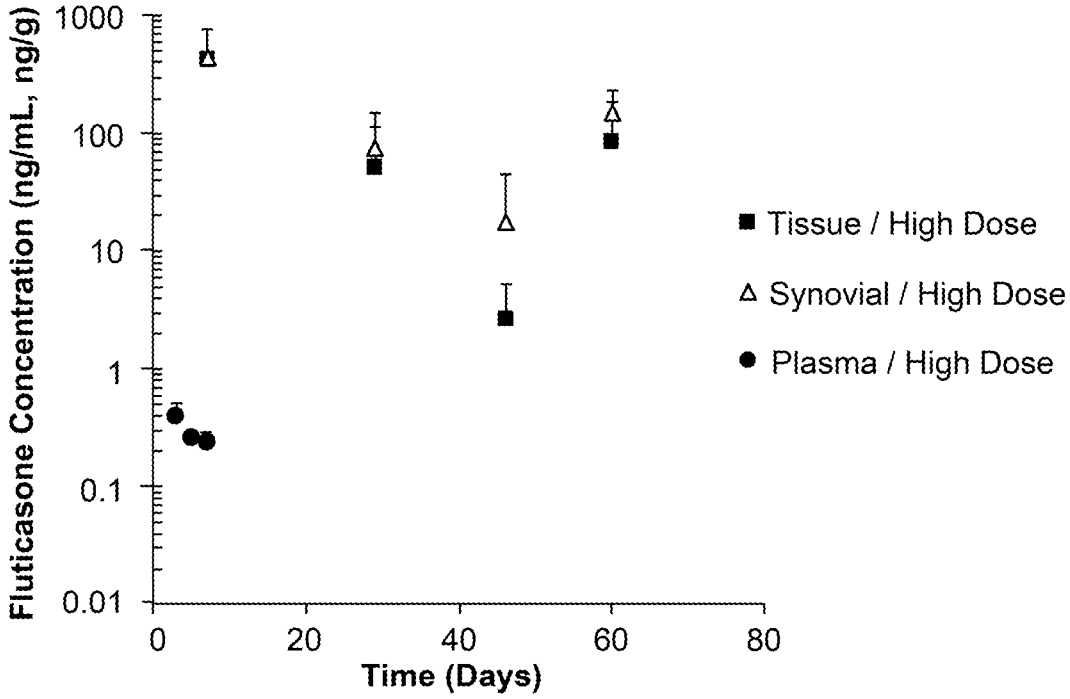

Fluticasone Concentration (ng/mL, ng/g)
1000
100
10
1
0.1
0.01
0
20
40
60
80
Time (Days)
Tissue / High Dose
Synovial / High Dose
Plasma / High Dose

FIG. 10

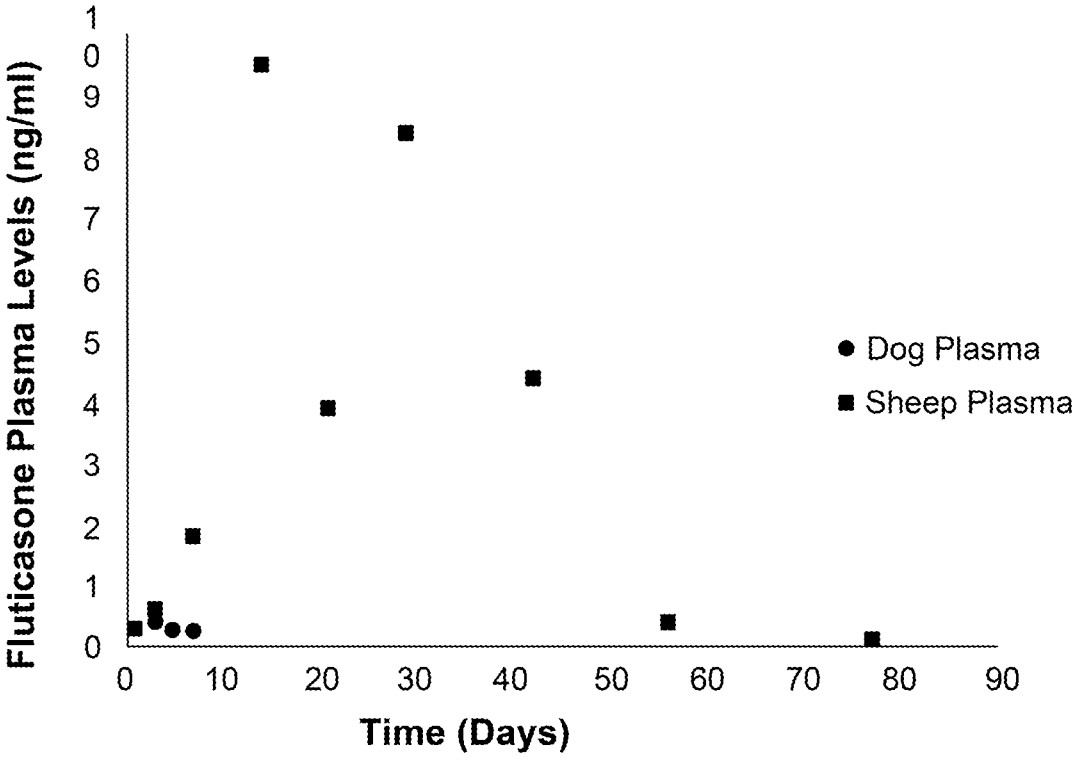

Fluticasone Plasma Levels (ng/ml)
1
0
9
8
7
6
5
4
3
2
1
0
0
10
20
30
40
50
60
70
80
90
Time (Days)
Dog Plasma
Sheep Plasma

FIG. 11

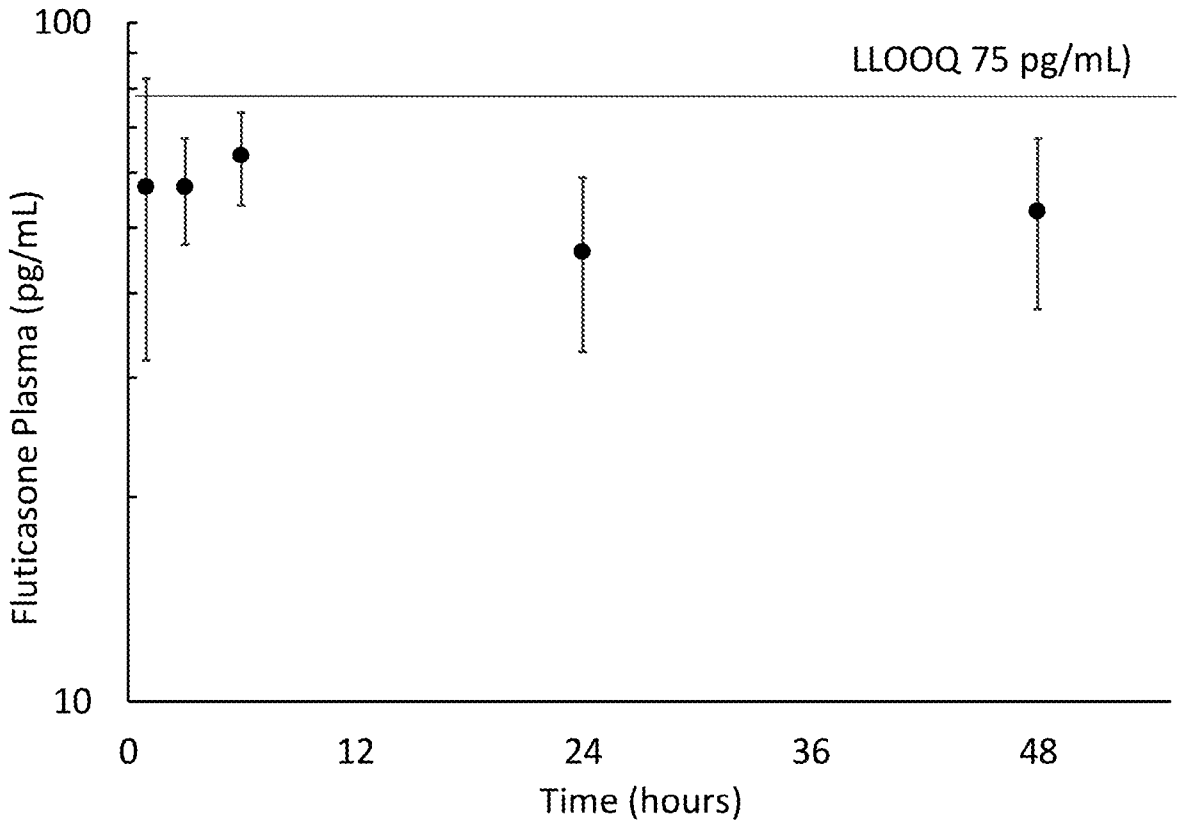

100
10
LLOOQ 75 pg/mL)
Fluticasone Plasma (pg/mL)
0
12
24
36
48
Time (hours)

FIG. 12