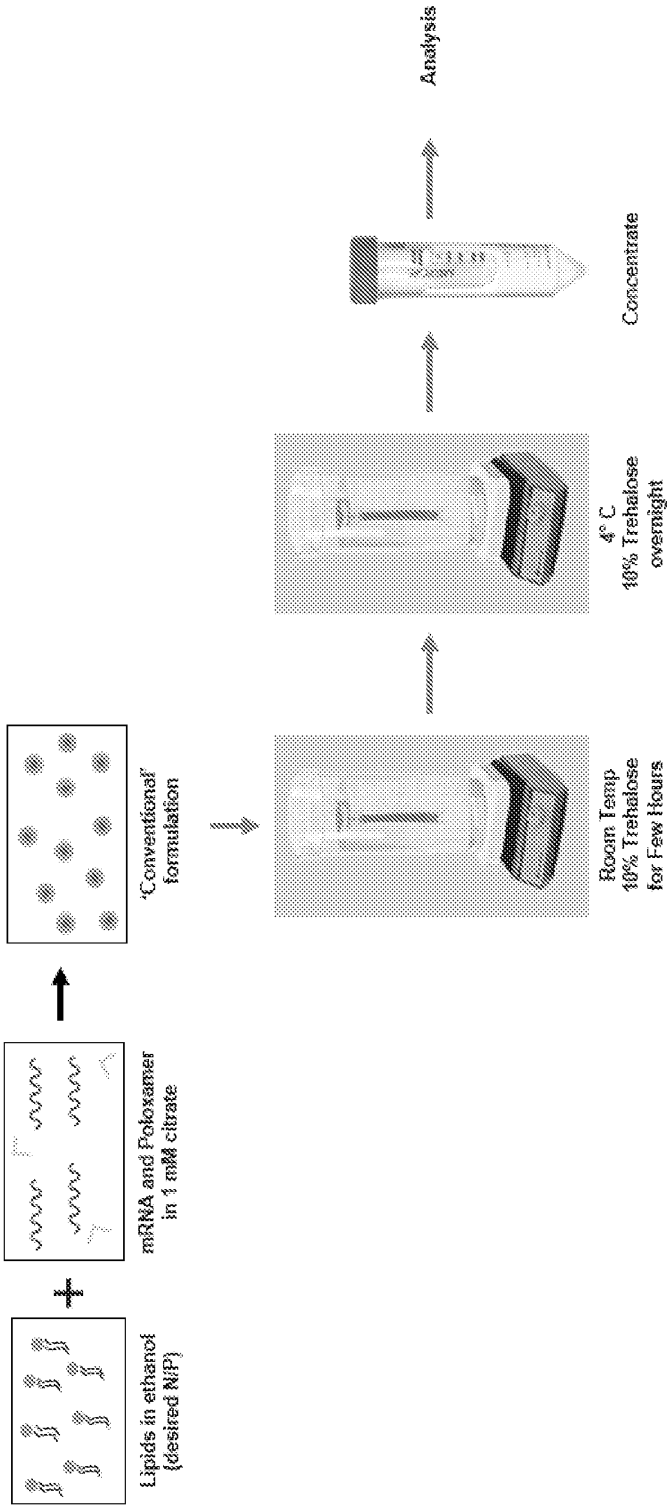

Lipids in ethanol
(desired N/P)
mRNA and Poloxamer
in 1 mM citrate
'Conventional'
formulation
Room Temp
10% Trehalose
for Few Hours
4° C
10% Trehalose
overnight
Concentrate
Analysis

Figure 1

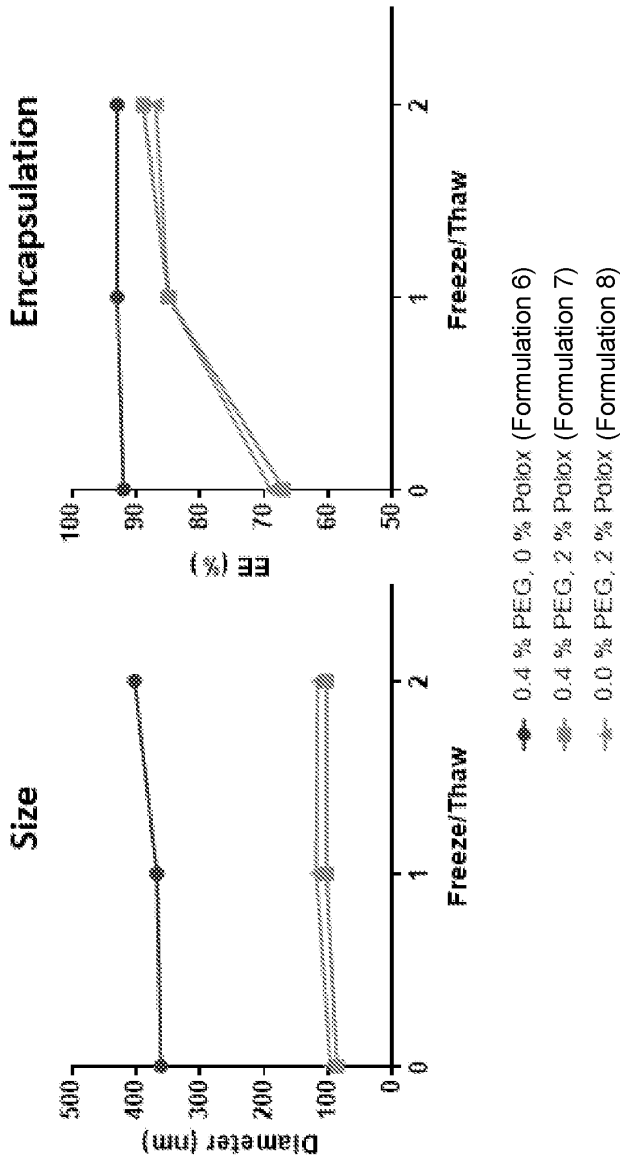

Size
Diameter (nm)
500
400
300
200
100
0
0
1
2
Freeze/Thaw
Encapsulation
EE (%)
100
90
80
70
60
50
0
1
2
Freeze/Thaw
0.4 % PEG, 0 % Poloxamer (Formulation 6)
0.4 % PEG, 2 % Poloxamer (Formulation 7)
0.0 % PEG, 2 % Poloxamer (Formulation 8)

Figure 2

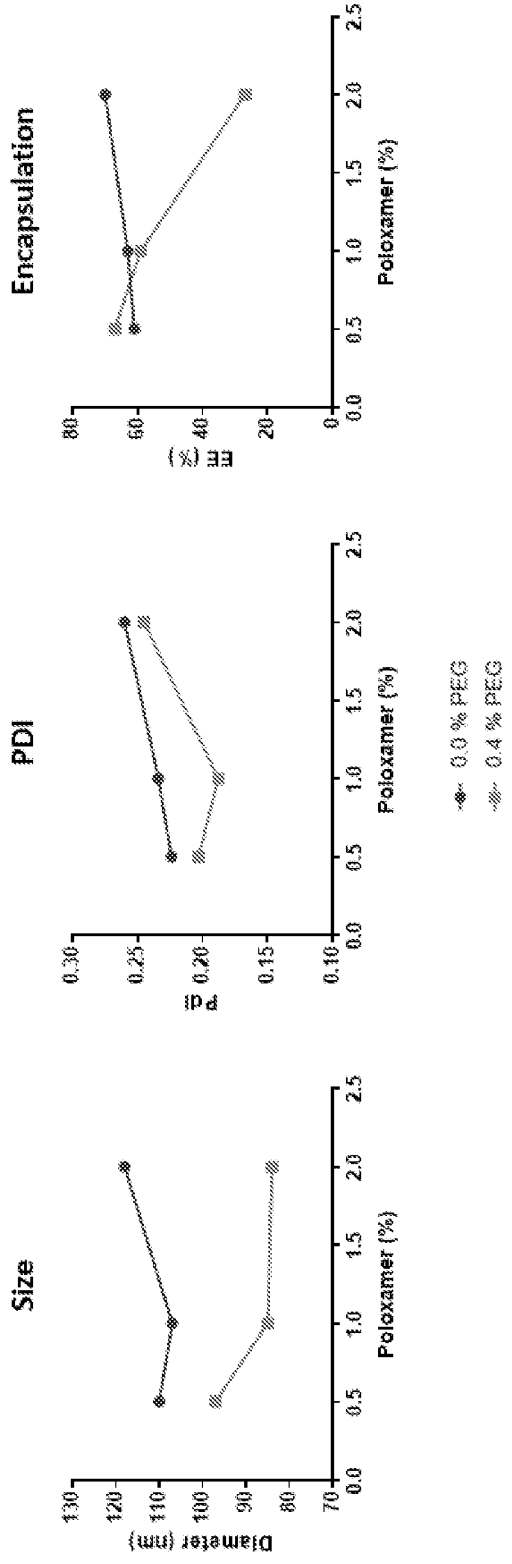

Size
Diameter (nm)
130
120
110
100
90
80
70
0.0
0.5
1.0
1.5
2.0
2.5
Poloxamer (%)
PDI
PDI
0.30
0.25
0.20
0.15
0.10
Poloxamer (%)
0.0 % PEG
0.4 % PEG
Encapsulation
EE (%)
80
60
40
20
0
Poloxamer (%)

Figure 3

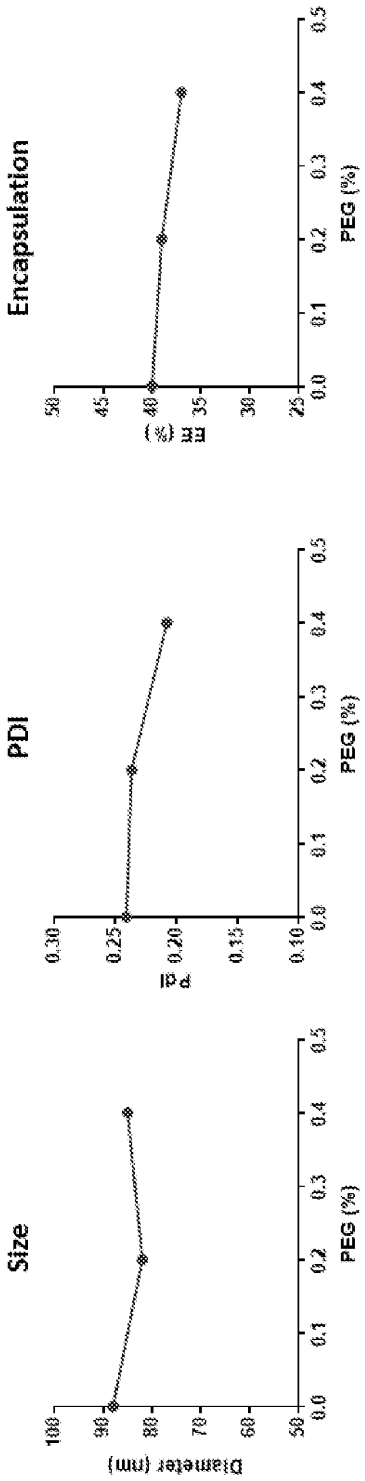

Size
Diameter (nm)
100
90
80
70
60
50
0.0
0.1
0.2
0.3
0.4
0.5
PEG (%)
PDI
PDI
0.30
0.25
0.20
0.15
0.10
Encapsulation
EE (%)
50
45
40
35
30
25

Figure 4

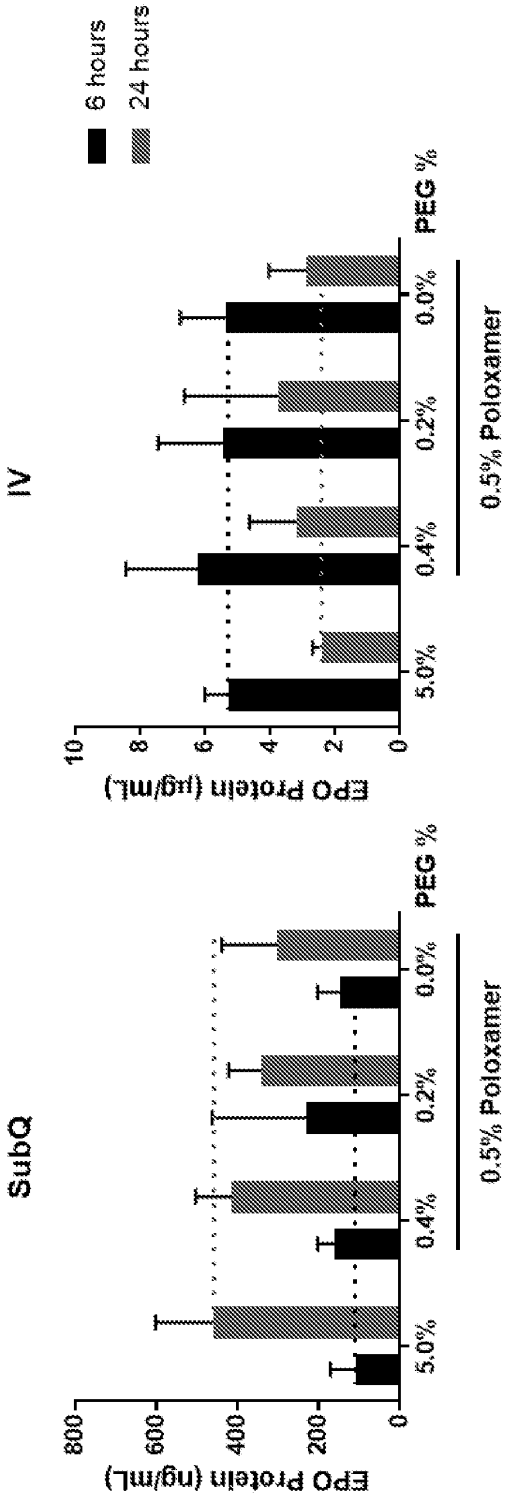

6 hours
24 hours
IV
EPO Protein (µg/mL)
0
2
4
6
8
10
5.0%
0.4%
0.2%
0.0%
PEG %
0.5% Poloxamer
SubQ
EPO Protein (ng/mL)
0
200
400
600
800
5.0%
0.4%
0.2%
0.0%
PEG %
0.5% Poloxamer

Figure 5

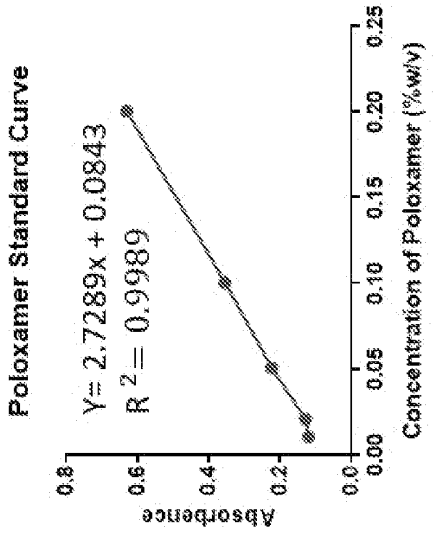


Figure 6B

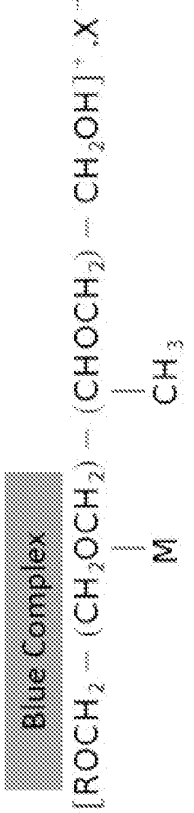


Figure 6A

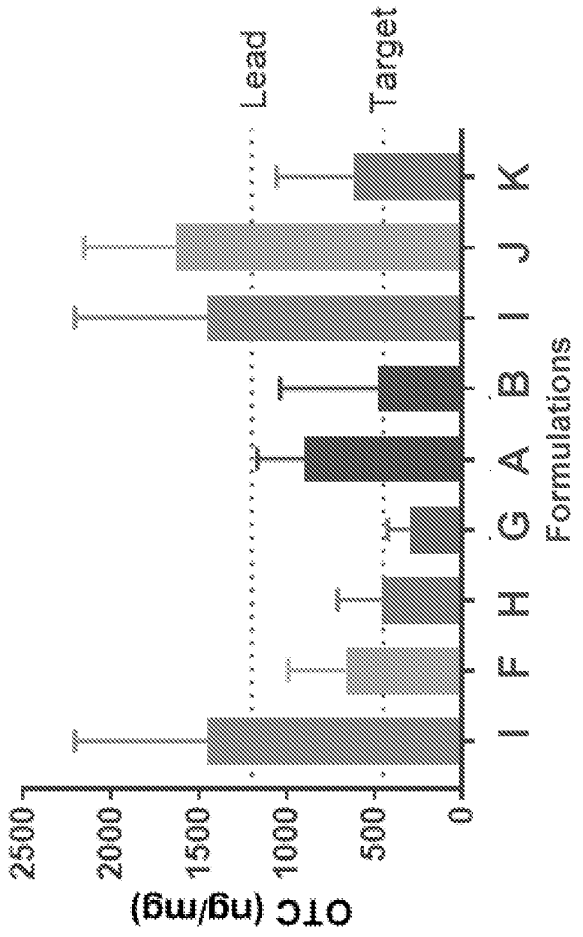

OTC (ng/mg)
2500
2000
1500
1000
500
0
Lead
Target
I
F
H
G
A
B
I
J
K
Formulations

Figure 7