Supplementary Material

Anabolic Peptide Enriched Stealth Nanoliposomes for Effective Anti-osteoporotic Therapy

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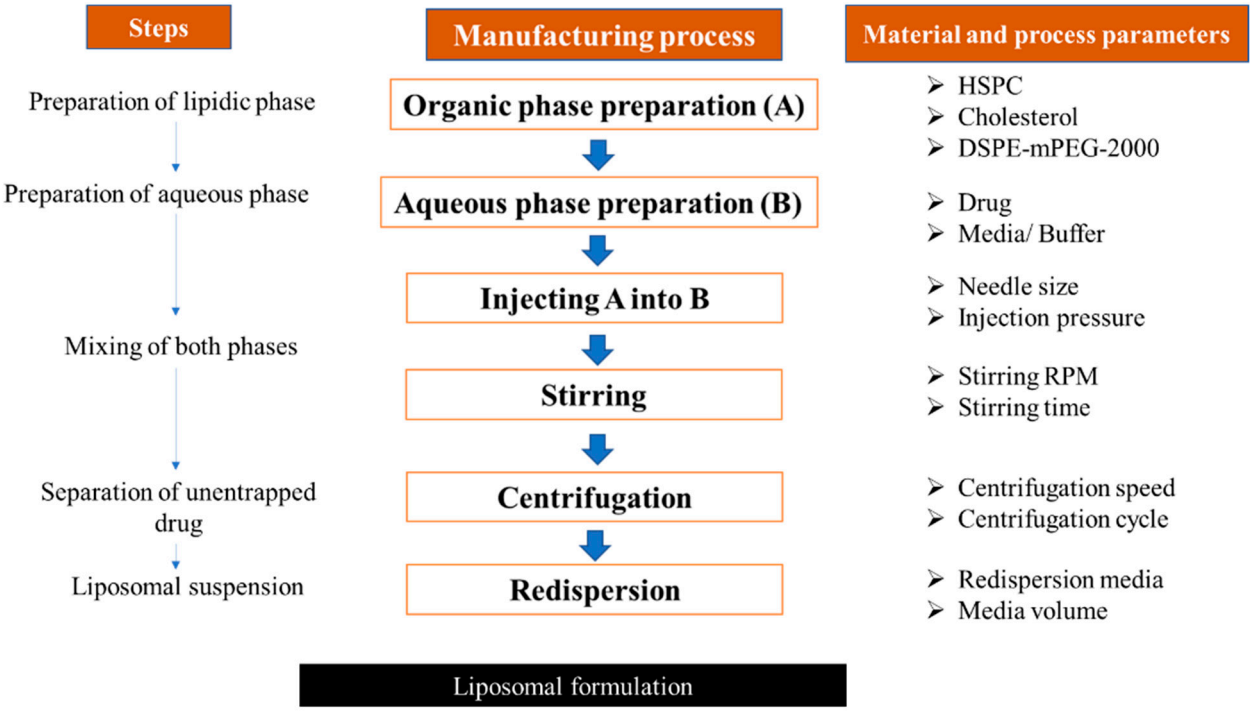


Figure S1. Process map for formulation development of liposomal product using ethanol injection method.

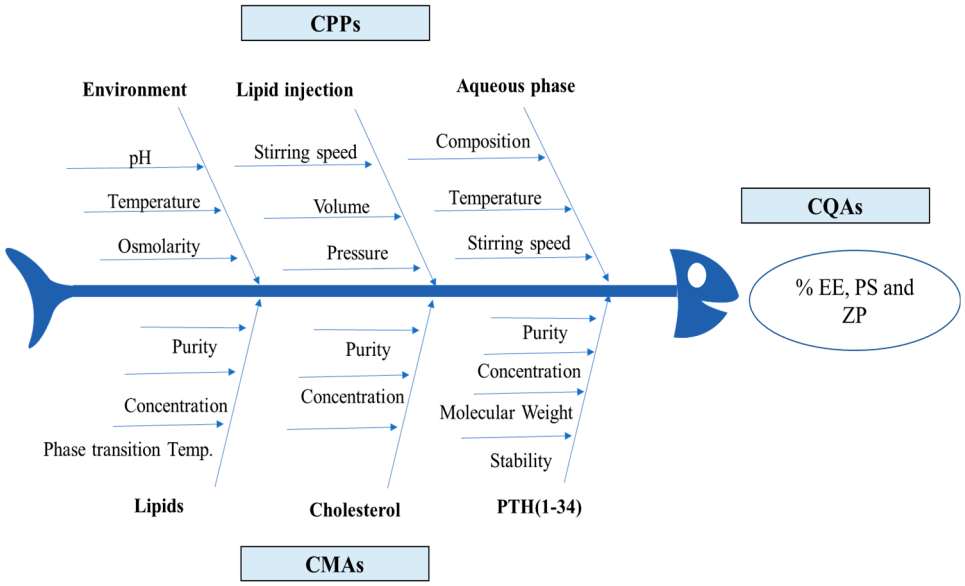


Figure S2. Ishikawa fishbone diagram.

Table S1. Layout of experimental design

Run no	lipid concentration (mM)	cholesterol concentration (mM)	stirring rate (rpm)	particle size (nm)	EE (%)
1	30	10	400	92.31	84.57
2	30	15	500	155.83	76.96
3	30	10	600	97.51	62.02
4	40	10	500	94.33	87.98
5	40	15	400	132.17	53.64
6	30	15	500	120.70	47.48
7	20	15	400	39.48	80.29
8	30	15	500	104.03	53.92
9	30	15	500	76.58	39.16
10	30	15	500	71.02	24.58
11	20	20	500	54.19	40.20
12	20	10	500	77.41	46.18
13	20	15	600	97.81	60.31
14	30	20	600	65.00	48.00
15	30	20	400	77.65	32.99
16	40	20	500	95.21	58.16

17	40	15	600	141.93	60.44

Table S2. Statistical data of model terms

Terms	Particle size (nm)	EE (%)	Inference
Model p-value	0.0142	0.0432	Significant
Model F value	5.86	4.88	
Lack of Fit	0.9486	0.7761	Non- significant
R^2	0.4556	0.2453	
Adjusted R^2	0.3778	0.1950	
Predicted R^2	0.2234	0.0395	
Adeq Precision	6.9909	4.5523	

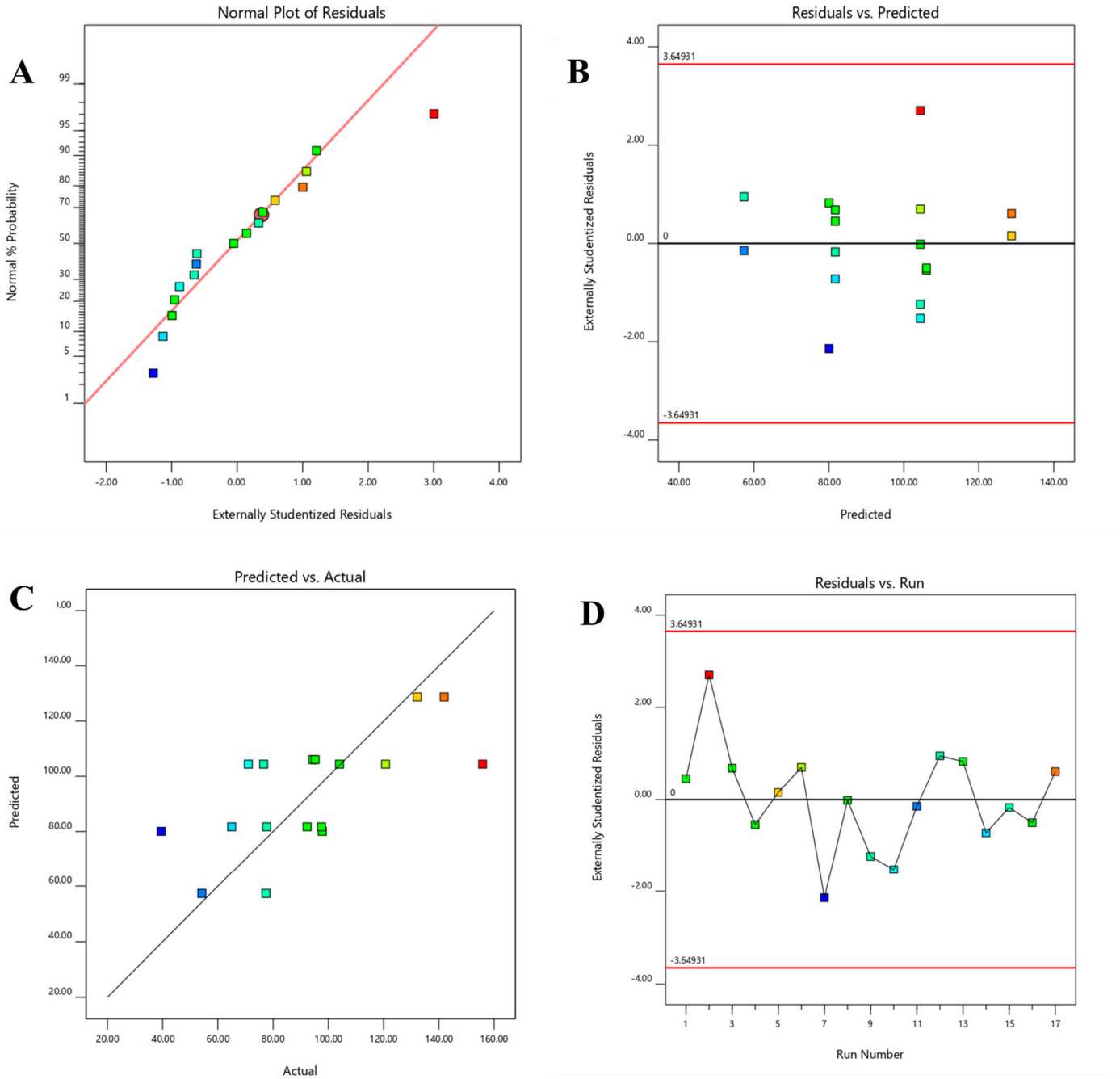


Figure S3. Residual analysis for particle size. (A) Normal plot of residuals, (B) Residual versus Predicted plot, (C) Predicted versus actual plot, (D) Residual versus run plot.

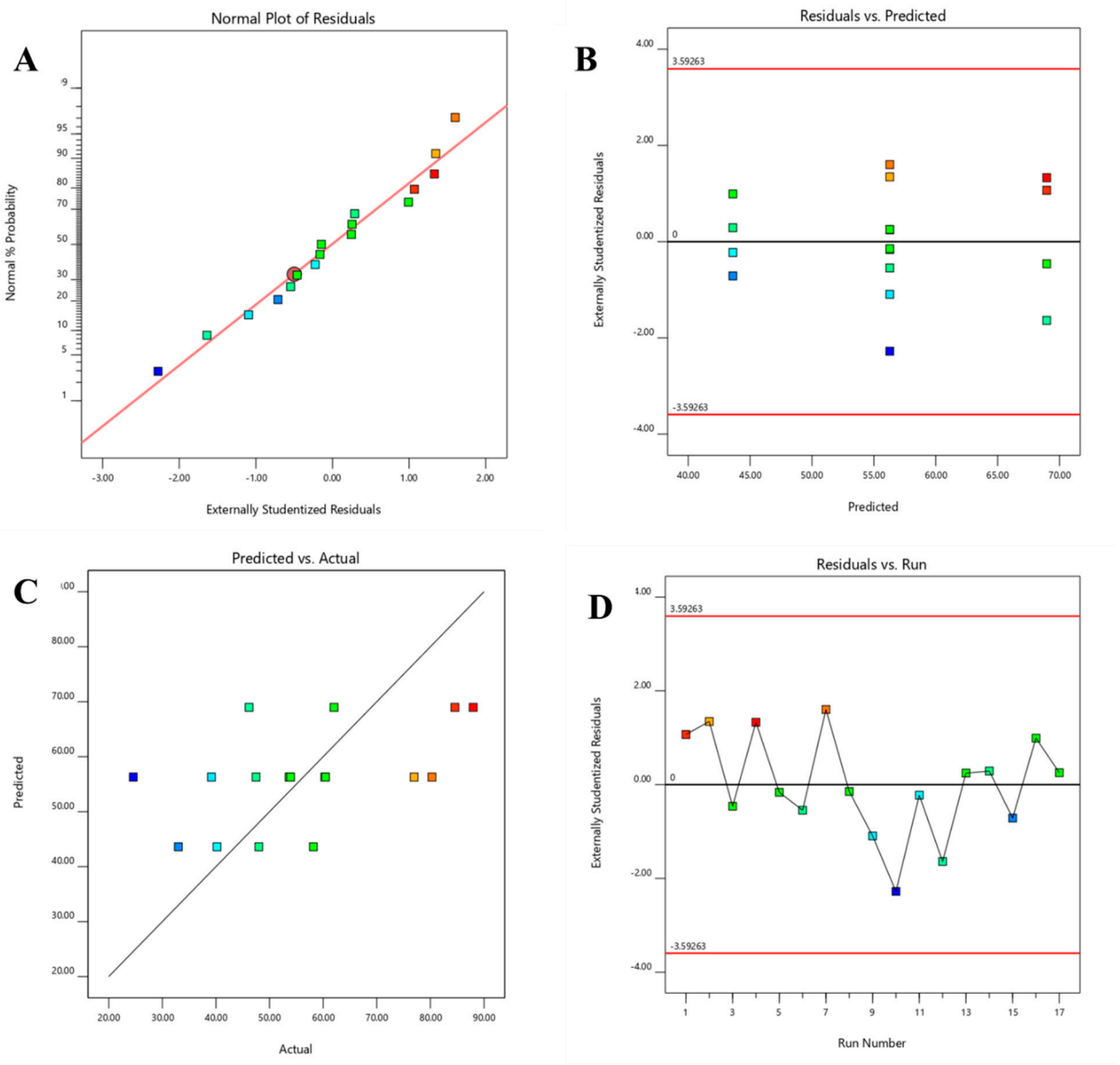


Figure S4. Residual analysis for %EE. (A) Normal plot of residuals, (B) Residual versus Predicted plot, (C) Predicted versus actual plot, (D) Residual versus run plot.

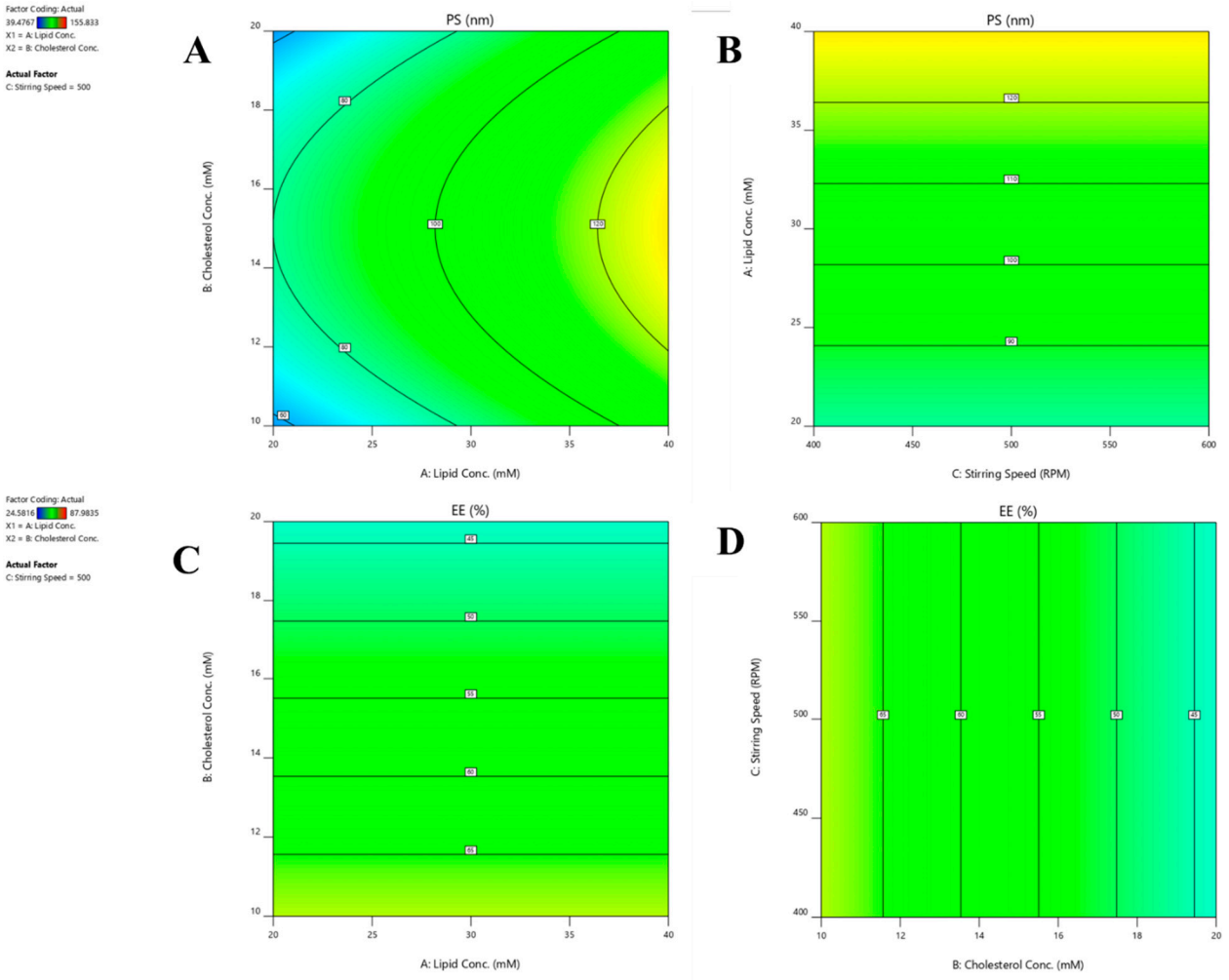


Figure S5. Counter plot. (A-B) for the particle size, (C-D) for %EE.

Factor Coding: Actual
X1 = C: Stirring Speed
X2 = A: Lipid Conc.
X3 = B: Cholesterol Conc.

Predicted values shown

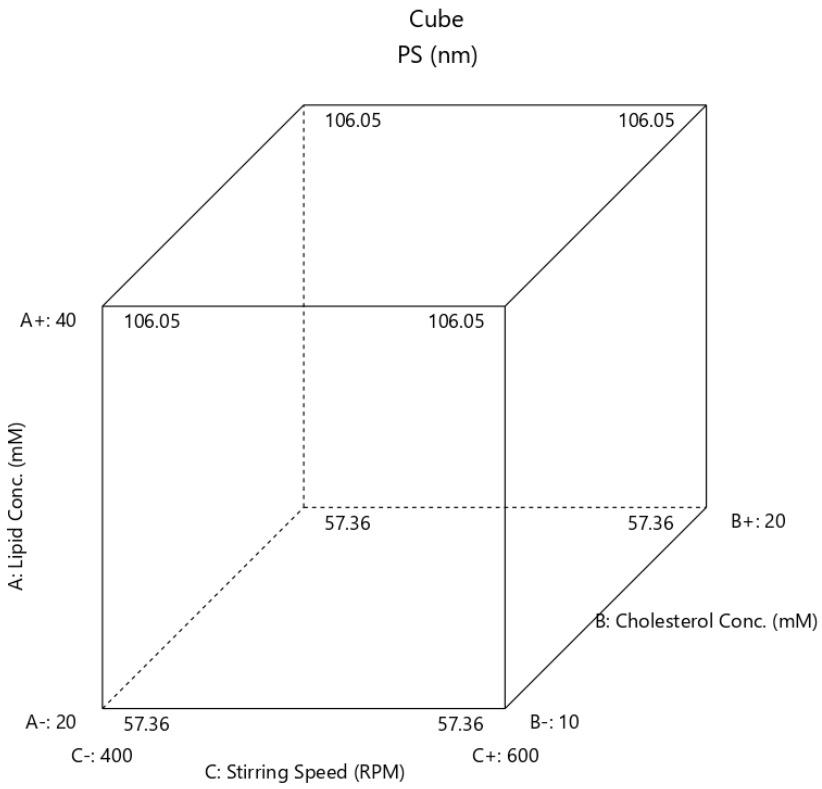


Figure S6. Box plot for particle size.

Factor Coding: Actual
X1 = B: Cholesterol Conc.
X2 = C: Stirring Speed
X3 = A: Lipid Conc.

Predicted values shown

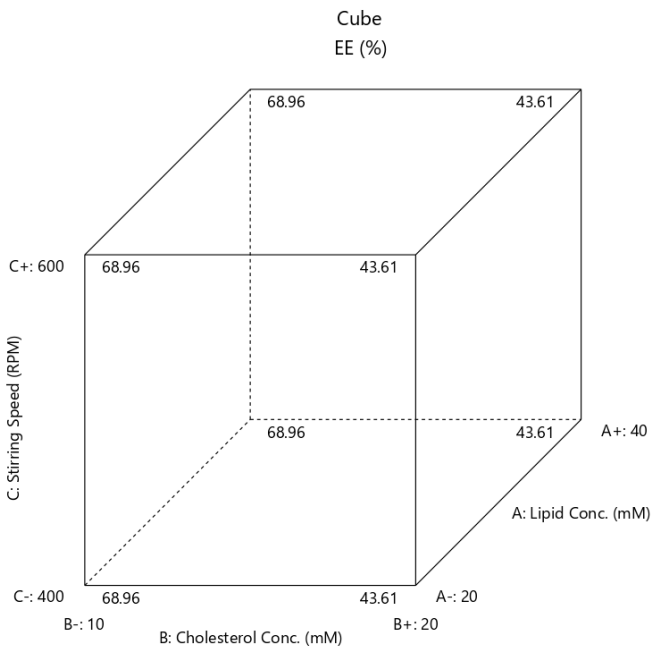


Figure S7. Box plot for %EE.

Factor Coding: Actual
PS
EE
X1 = A: Lipid Conc.
X2 = B: Cholesterol Conc.

Actual Factor
C: Stirring Speed = 500

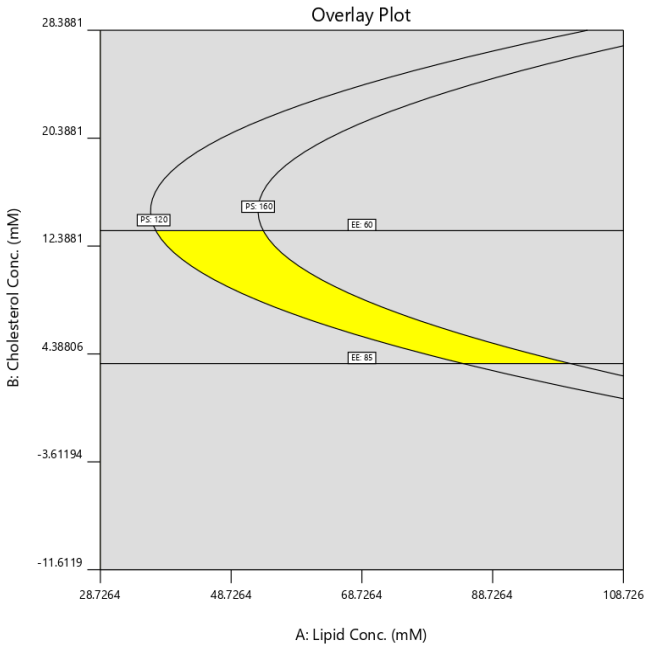


Figure S8. Design space for PTH-LPs