Supplementary file

Formulation optimization of Docetaxel loaded self-emulsifying drug delivery system to enhance bioavailability and anti-tumor activity

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Table S1: Mathematical equation of responses according to D- Optimal Mixture design.

Response	Model	R^2	P value	F value	Reduced regression equation for the response
Solubility	Linear	0.7330	0.0005	11.50	Solubility= 34.62 cap + 6.29 TPGS + 13.84 Gel + 98.51 Trans
Droplet size	Linear	0.7486	0.0088	6.46	Droplet size=521.98 cap+ 128.54 TPGS - 55.91 Gel+ 334.27 Trans- 48.44 cap*TPGS-2910.49 cap*TPGS*Gel

Table S2: Robustness of droplet size after different dilutions. Values are presented as mean± standard deviation (n=3).

Dilutions (fold)	Mean droplet size (nm) ± SD		
	F-1	F-2	F-3
200	167.30±2.30	178.20±1.90	162.60±5.60
400	159.90±1.80	172.30±3.20	160.30±3.20
600	154.20±1.60	170.40±4.30	159.30±4.10
800	146.20±0.34	167.40±1.40	154.20±1.30

Table S3: Measurement of droplet size and drug content after 3 consecutive freeze thaw cycles. Values are presented as mean±standard deviation (n=3).

Cycles	Droplet size (nm)			Drug content (%)		
	F-1	F-2	F-3	F-1	F-2	F-3
Initial	167.30±5.42	177.10±2.18	204.60±3.71	100.00	100.00	100.00
1st	178.10±4.80	338.00±7.21	245.30±10.70	96.66±1.51	95.65±0.54	96.45±1.15
2nd	174.30±8.48	407.33±6.30	344.50±8.73	96.64±0.48	89.85±1.60	90.66±0.53
3rd	181.40±3.74	430.41±4.60	397.80±4.59	93.84±0.54	84.76±0.16	84.31±0.20