

SI Table 1: Effect of surfactant concentration on size and EE of LPHNPs

Formulation	Lutrol® F-87 conc. (w/v)	Zeta potential (mV)	Particle size (nm)	PDI	EE (%)
F3-I	0.5%	-15.67± 0.9	295.8±5.6	0.234± 0.02	78.8 ± 2.8
F3-II	1%	-14.2 ± 0.9	249.1 ± 9.2	0.217± 0.01	71.90 ± 2.2
F3-III	2%	-13.48± 0.8	224.7± 8.7	0.256± 0.03	68.34± 3.6
F5-I	0.5%	-14.4±0.1	171.06± 8.9	0.157± 0.02	89.9± 2.6
F5-II	1%	-13.8± 0.4	160.7 ± 7.3	0.157± 0.01	80.90±2.6
F5-III	2%	-13.2±0.8	152.8± 8.9	0.134± 0.03	72.87± 2.1
F9-I	0.5%	-14.8± 0.2	254.5± 11.2	0.223± 0.03	82.23 ± 3.2
F9-II	1%	-13.21± 0.8	238.2± 9.7	0.252± 0.02	75.65 ± 2.8
F9-III	2%	-12.92± 0.9	225.9± 9.3	0.223± 0.03	69.23±2.4

SI Table 2: Effect of Lipid to polymer ratio on characteristics of LPHNPs

Formulations	Lipid	Lipid: Polymer (wt:wt)	Zeta potential (mV)	Particle size (nm)	PDI	EE (%)
F3-I	PL-90 G	1:2	-15.67± 0.9	295.8±5.6	0.234± 0.02	78.8 ± 2.8
F3-II		1:4	-17.2 ± 0.9	205.1 ± 9.2	0.217± 0.03	74.56±3.2
F3-III		1:6	-20.48± 0.8	150.3 ± 8.7	0.256± 0.03	65.78±2.6
F5-I	PL-S100	1:2	-14.4±0.1	171.06± 8.9	0.157± 0.02	89.9± 2.6
F5-II		1:4	-15.4 ± 2.4	115.7 ± 9.3	0.157±0.02	77.90±2.6
F5-III		1:6	-18.8±1.8	76.1± 6.9	0.134± 0.01	71.94± 2.1
F9-I	L-SPC-3	1:2	-14.8± 2.2	254.5± 10.2	0.223± 0.03	82.23 ± 3.2
F9-II		1:4	-17.21± 2.8	177.2± 9.7	0.252± 0.02	71.35± 2.8
F9-III		1:6	-21.92± 1.9	125.8± 9.3	0.223± 0.02	64.45±2.4