

**Table S1.** A preliminary study of ketoprofen-containing nanosuspension using different stabilizers and concentrations

Stabilizer/Conc. (w/v)*	PDI	PS (nm)	ZP (mV)
<b>HPMC</b>			
<b>0.25</b>	0.454 ± 0.11	2570.0 ± 42.6	-5.5 ± 1.34
<b>0.5</b>	0.739 ± 0.02	764.3 ± 2.79	-8.1 ± 4.24
<b>1</b>	0.319 ± 0.03	453.0 ± 4.15	-6.2 ± 2.87
<b>PVA</b>			
<b>1</b>	0.082 ± 0.01	238.3 ± 1.37	-9.97 ± 5.31
<b>2.5</b>	0.227 ± 0.04	316.4 ± 1.91	-11.6 ± 2.75
<b>5</b>	0.205 ± 0.02	431.4 ± 3.16	-4.22 ± 0.23
<b>Poloxamer 188</b>			
<b>0.2</b>	0.428 ± 0.14	583.2 ± 12.55	-13.1 ± 1.18
<b>0.5</b>	0.213 ± 0.05	3112.1 ± 36.44	-25.2 ± 3.17
<b>1</b>	0.321 ± 0.16	415.7 ± 13.06	-17.5 ± 2.94

\*All stabilizers were combined with 0.1% SDS

**Table S2.** Spray dryer parameters impact on yield, particle size and polydispersity index

Pump (%)*	Temp. (C°)*	Yield %	PS (nm)	PDI
<b>10%</b>	<b>90</b>	45.58	610.2 ± 7.57	0.521 ± 0.117
<b>10%</b>	<b>70</b>	41.67	391.7 ± 3.15	0.838 ± 0.445
<b>10%</b>	<b>50</b>	46.98	415.4 ± 8.67	0.412 ± 0.717
<b>5%</b>	<b>90</b>	59.34	784.6 ± 4.38	0.217 ± 0.234
<b>5%</b>	<b>70</b>	48.12	303.1 ± 2.51	0.567 ± 0.342
<b>5%</b>	<b>50</b>	51.34	481.5 ± 9.26	0.193 ± 0.095
<b>2%</b>	<b>90</b>	52.95	204.9 ± 3.07	0.336 ± 0.003
<b>2%</b>	<b>70</b>	49.05	290.5 ± 3.07	0.269 ± 0.105
<b>2%</b>	<b>50</b>	55.93	354.8 ± 5.36	0.513 ± 0.111

\*Feed concentration was fixed (1:1 ketoprofen:leucine)