

Supplementary material: the concentrations of LK-CG, TP, rapeseed oil, Span80 and n-butanol were optimized as follow.

1. The impact of LK-CG on particle size, loading rate and encapsulation rate.

Table S1. The impact of LK-CG on particle size, loading rate and encapsulation rate.

LK-CG (%)	Particle Size (μm)	Loading Rate (%)	Encapsulation Rate (%)
0.2	5.3	4.06	11.71
0.6	10.4	5.41	18.06
1	7.58	7.83	20.82
1.4	4.62	6.87	17.25
1.8	5.90	5.35	14.39

2. The impact of LK-CG to TP ratio on particle size, loading rate and encapsulation rate.

Table S2. The impact of LK-CG to TP ratio on particle size, loading rate and encapsulation rate.

LK-CG to TP Ratio	Particle Size (μm)	Loading Rate (%)	Encapsulation Rate (%)
1:1	3.86	4.86	14.73
2:1	5.39	7.48	20.18
3:1	4.95	3.01	18.52
4:1	4.08	2.39	13.20
5:1	3.42	1.93	12.09

3. The impact of water to oil ratio on particle size, loading rate and encapsulation rate.

Table S3. The impact of water to oil ratio on particle size, loading rate and encapsulation rate.

Water to Oil Ratio	Particle Size (μm)	Loading Rate (%)	Encapsulation Rate (%)
1:1	4.32	3.17	10.05
3:1	5.57	5.56	16.18
5:1	6.69	7.28	19.73
7:1	5.15	6.35	17.98
9:1	4.03	4.11	13.04

4. The impact of Span80 concentration on particle size, loading rate and encapsulation rate.

Table S4. The impact of Span80 on particle size, loading rate and encapsulation rate.

Span80 (%)	Particle Size (μm)	Loading Rate (%)	Encapsulation Rate (%)
1	4.24	5.69	30.21
2	5.17	6.31	26.68
3	6.46	7.97	24.03
4	5.81	6.48	21.15
5	3.02	6.09	19.49

5. The impact of n-butanol concentration on particle size, loading rate and encapsulation rate.

Table S5. The impact of n-butanol on particle size, loading rate and encapsulation rate.

n-Butanol (%)	Particle Size (μm)	Loading Rate (%)	Encapsulation Rate (%)
1	3.21	4.91	11.49
2	4.96	6.46	15.32
3	5.30	7.24	19.73
4	4.74	5.64	17.52
5	3.08	4.27	12.90