

Table S-1. The formulation code of the complex coacervates and the particle size D(50) of dried microcapsules with *Lactobacillus rhamnosus* GG (LGG).

Code of sample	Protein source	Protein to pectin ratio	Total solid (%)	Drying method	Particle size D(50) (µm)
C5-S	SC	5:1	1.2	Spray-dry	51.93 ± 2.69
C2-S	SC	2:1	1.5	Spray-dry	119.67 ± 2.36
P5-S	PPI	5:1	1.2	Spray-dry	55.57 ± 3.21
P2-S	PPI	2:1	1.5	Spray-dry	11.75 ± 0.64
C5-F	SC	5:1	1.2	Freeze-dry	120.5 ± 2.12
C2-F	SC	2:1	1.5	Freeze-dry	78.48 ± 3.23
P5-F	PPI	5:1	1.2	Freeze-dry	87.42 ± 2.52
P2-F	PPI	2:1	1.5	Freeze-dry	114.31 ± 11.71

Abbreviations: PPI, pea protein isolate; SC, sodium caseinate

Table S-2. The change of viable *Lactobacillus rhamnosus* GG (LGG) cells in dried microcapsules during the simulated sequential gastrointestinal digestion. The formulation and code of the samples are listed in Table S-1.

Code of sample	Viable LGG cells (Log CFU/g)				
	0h	1h	2h	3h	4.5h
C5-S	9.19 ± 0.49 A	8.82 ± 0.55 A	8.49 ± 0.88 A	7.60 ± 0.87 A	7.00 ± 0.61 A
C2-S	9.10 ± 0.53 A	8.39 ± 0.79 A	8.23 ± 1.29 A	7.48 ± 0.71 A	6.31 ± 1.05 AB
P5-S	9.55 ± 0.47 A	9.06 ± 0.21 A	8.59 ± 0.08 A	7.97 ± 0.06 A	7.79 ± 0.28 A
P2-S	9.09 ± 0.90 A	8.68 ± 0.18 A	8.45 ± 0.45 A	7.86 ± 0.46 A	7.54 ± 0.19 A
C5-F	9.81 ± 0.26 A	8.96 ± 0.34 A	8.70 ± 0.31 A	6.63 ± 0.65 A	6.08 ± 0.94 ABC
C2-F	9.72 ± 0.24 A	8.71 ± 0.41 A	8.56 ± 0.51 A	6.99 ± 0.41 A	6.75 ± 0.17 A
P5-F	8.63 ± 0.84 A	6.46 ± 0.20 B	5.47 ± 0.09 B	4.61 ± 0.33 B	4.10 ± 0.66 C
P2-F	8.30 ± 0.93 A	6.08 ± 0.18 B	4.88 ± 0.38 B	4.33 ± 0.33 B	4.15 ± 0.86 BC

The values with different superscript letters within the same column are significantly different ( $p < 0.05$ ).