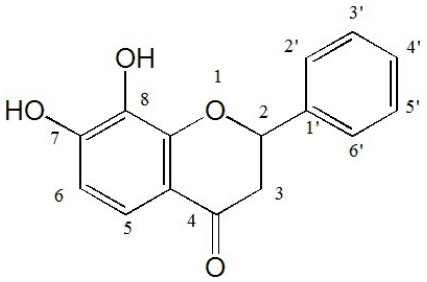
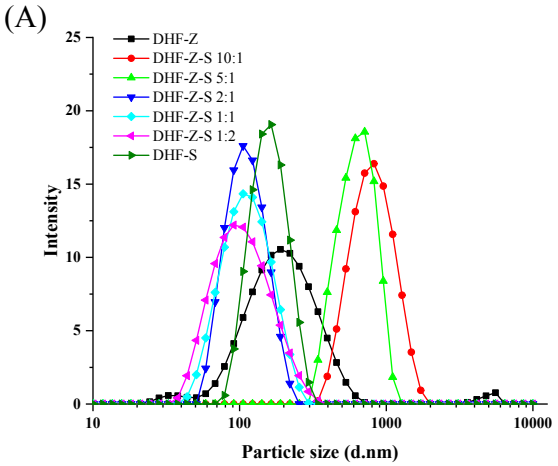
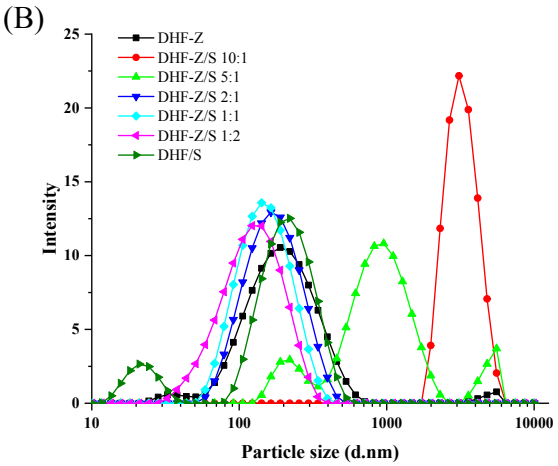
Electronic Supplementary Material (ESI) for Food & Function.

Formation, structural characterization, stability and in vitro bioaccessibility of 7,8-dihydroxyflavone loaded zein-/sophorolipid composite nanoparticles: effect of sophorolipid under two blending sequences



Supplementary Fig.1 The chemical structure of 7,8-DHF



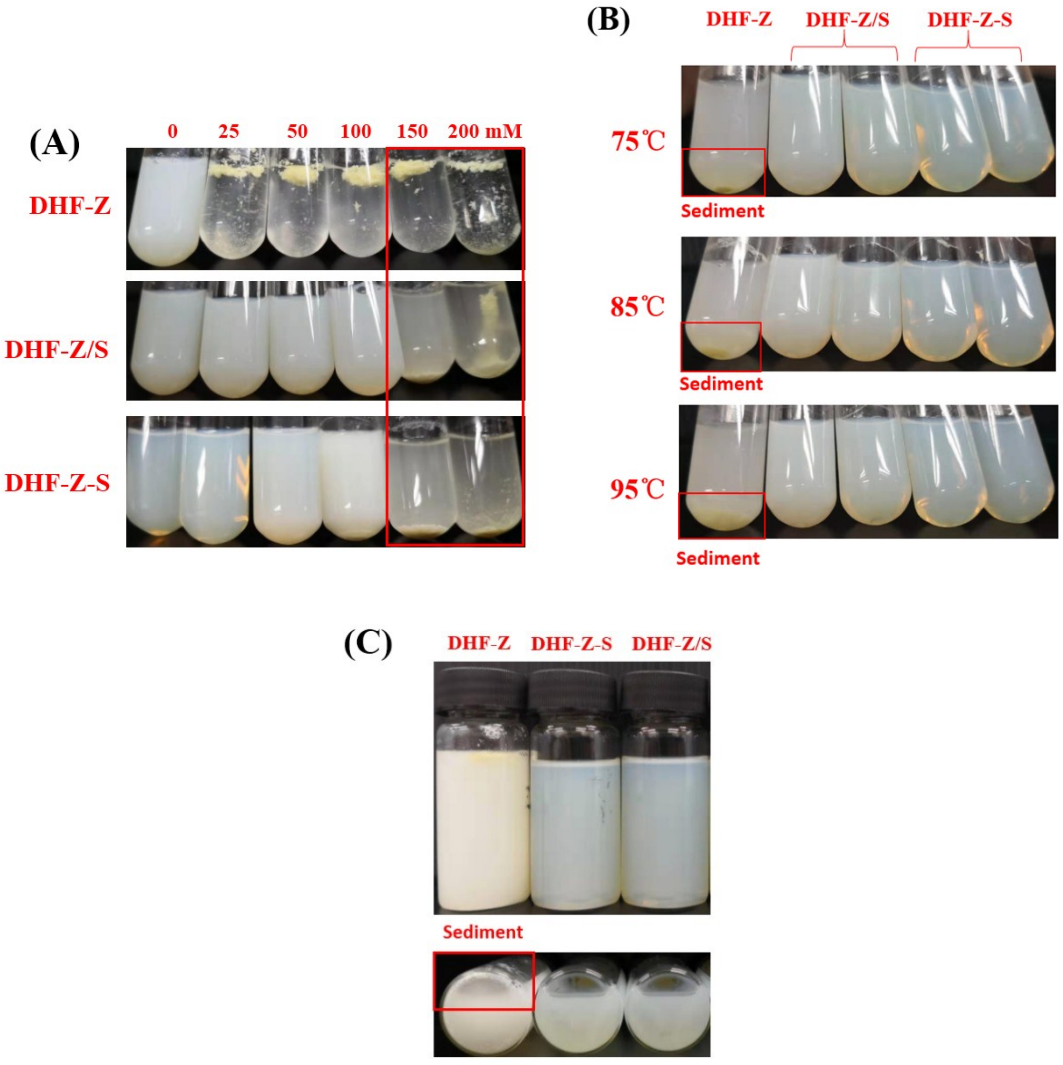


Supplementary Fig.2 Size distributions of DHF-Z-S (A) and DHF-Z-S (B) at diiferent sophorolipid levels

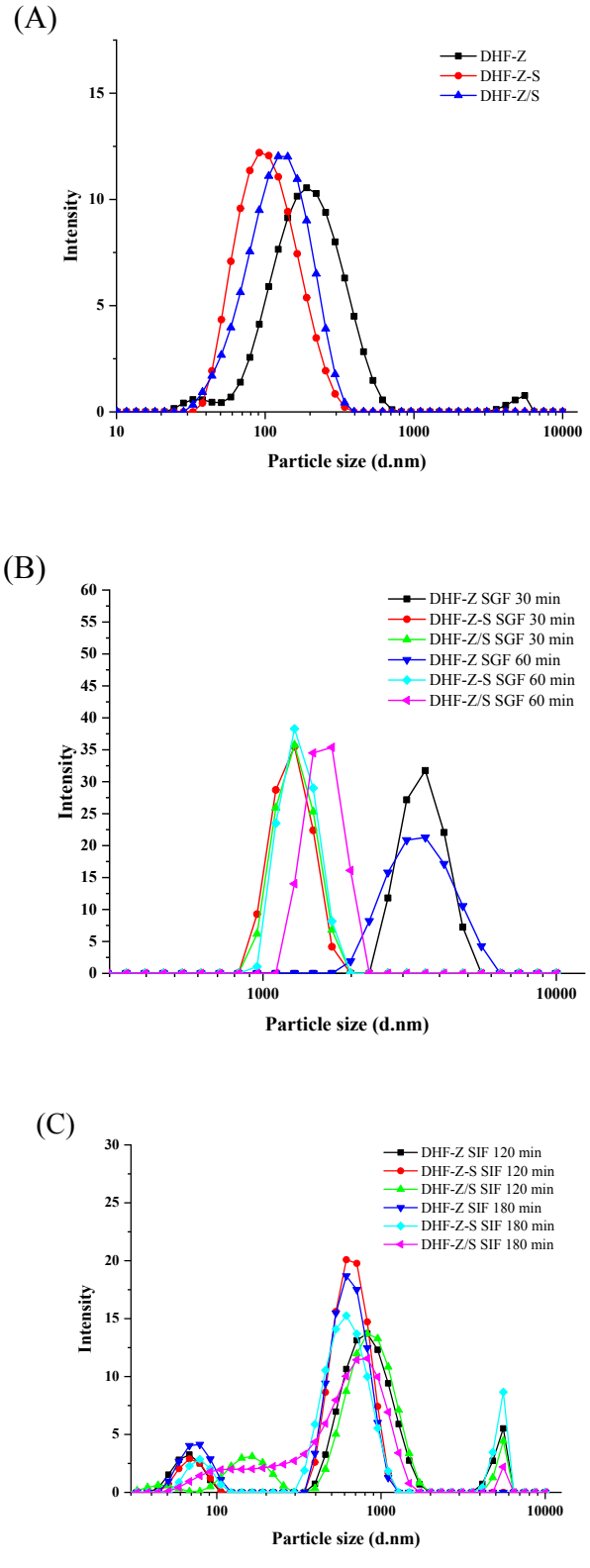
Supplementary Table 1 Secondary structure contents of zein in DHF-Z, DHF-Z-S and DHF-Z/S composite nanoparticles

Sample	Content (%)			
	α-helix	β-sheet	β-turns	unordered
Zein	33.5±0.23^{a}	18.9±0.19^{c}	21.3±0.22^{a}	26.3±0.20^{b}
DHF-Z	26.8±0.26^{b}	24.6±0.24^{d}	20.1±0.26^{a}	28.5±0.26^{a}
DHF-Z-S	21.1±0.16^{d}	30.1±0.33^{a}	21.3±0.19^{a}	27.5±0.22^{ab}
DHF-Z/S	24.1±0.18^{c}	26.7±0.31^{b}	21.1±0.18^{a}	28.1±0.23^{a}

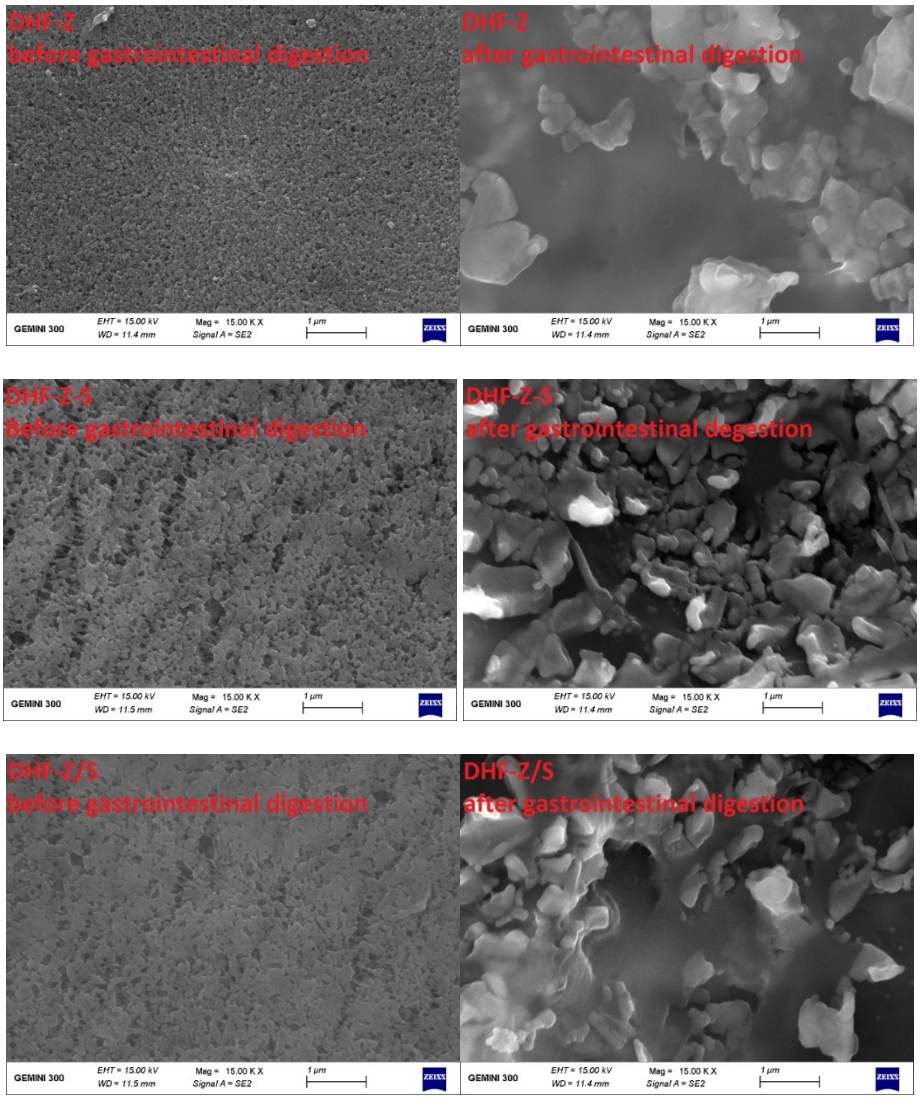
Values are means ± standard deviation (n=3). Different superscript letters in the same column indicate significant differences ($p<0.05$).



Supplementary Fig.3 Effect of NaCl concentration (A), thermal treatments (B) and one-month storage (C) on the appearance of colloidal particles.



Supplementary Fig.4 Size distributions of DHF-Z, DHF-Z-Sand DHF-Z-S nanoparticles at original (A), SGF (B) and SIF (C) conditions



Supplementary Fig.5 Influence of in vitro digestion on the FE-SEM images of DHF-Z, DHF-Z-S and DHF-Z/S composite nanoparticles. Pictures were taken at 15000×magnifications.