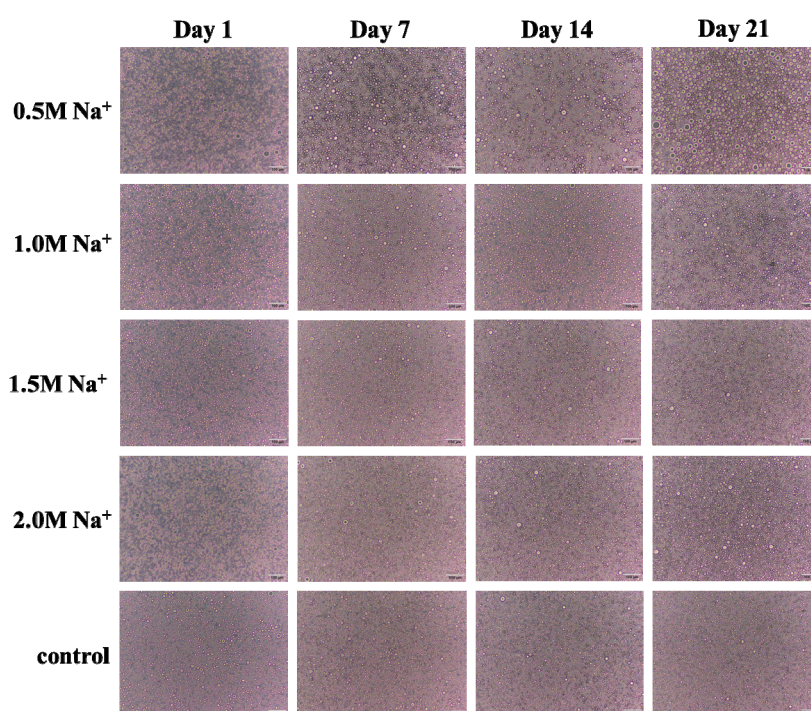
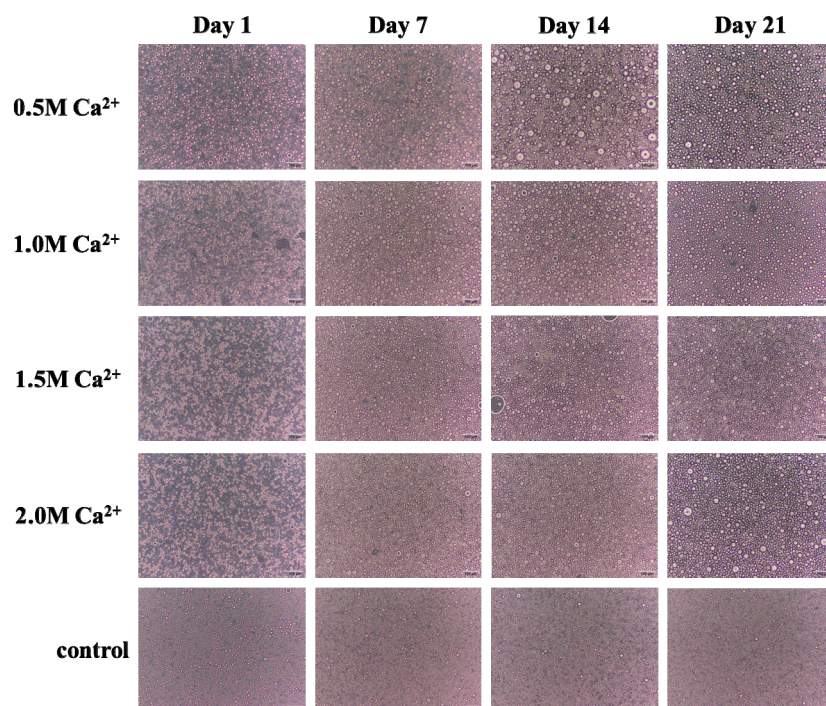


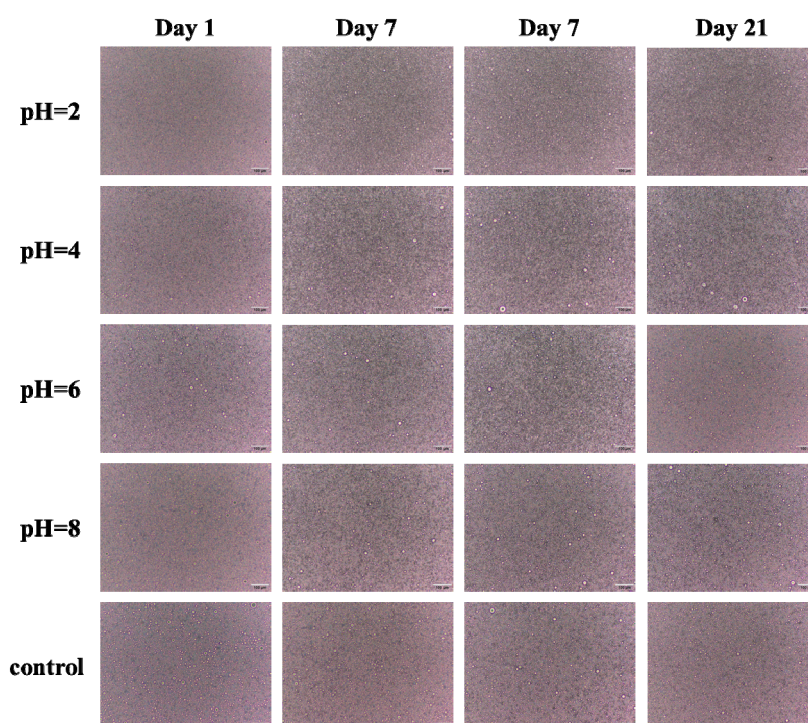
**Figure S1.** The morphologies of emulsion systems stabilized by TP:CP=5:5 under different polysaccharide concentrations (0.5%, 0.75%, 1.25%, 1.5%), with the emulsion stabilized by 1.0% TP:CP=5:5 as control.



**Figure S2.** The morphologies of emulsion systems stabilized by 1.0% TP:CP=5:5 at different Na<sup>+</sup> strength (0.5 M, 1.0 M, 1.5 M, 2.0 M), with the emulsion stabilized by 1.0% TP:CP=5:5 as control.

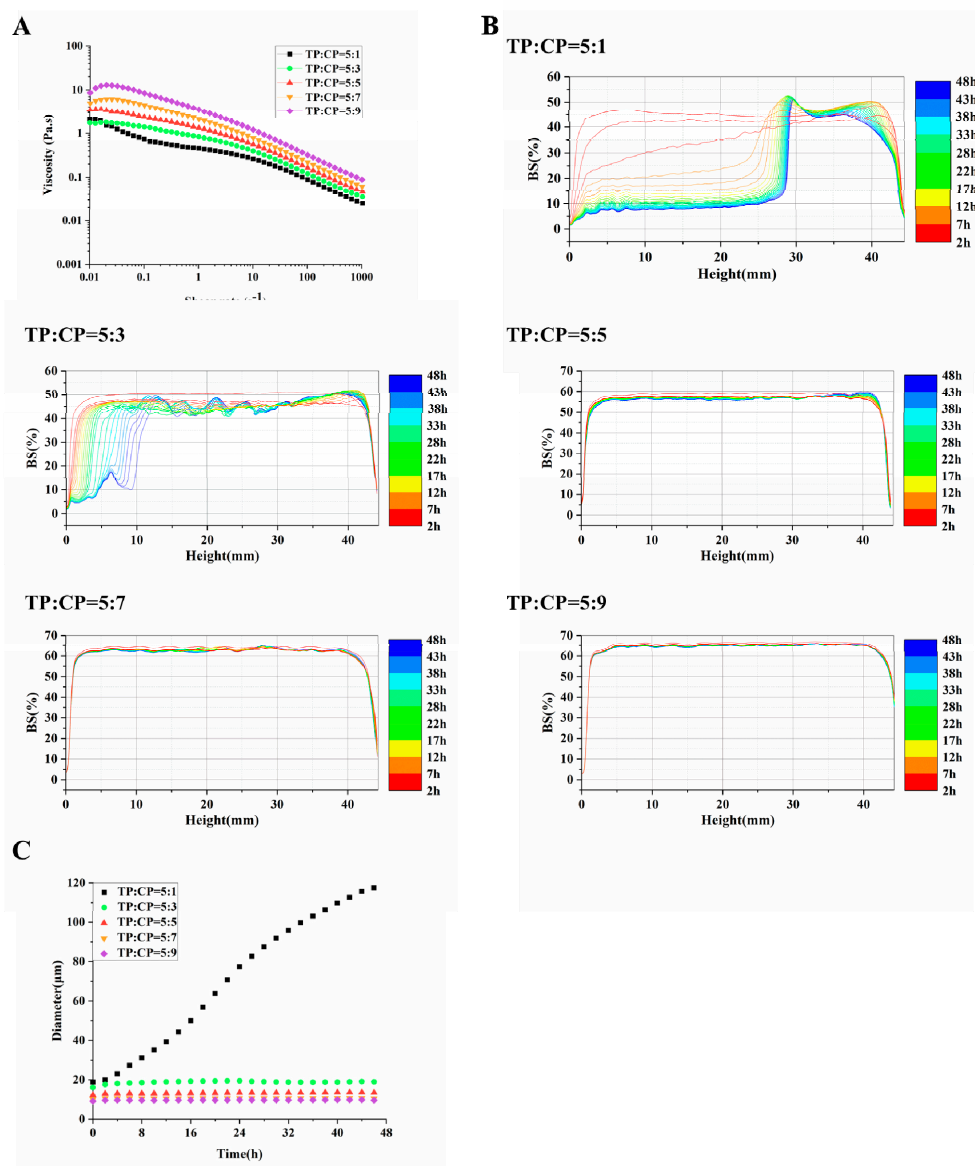


**Figure S3.** The morphologies of emulsion systems stabilized by 1.0% TP:CP=5:5 at different Ca<sup>2+</sup> strength (0.5 M, 1.0 M, 1.5 M, 2.0 M), with the emulsion stabilized by 1.0% TP:CP=5:5 as control.

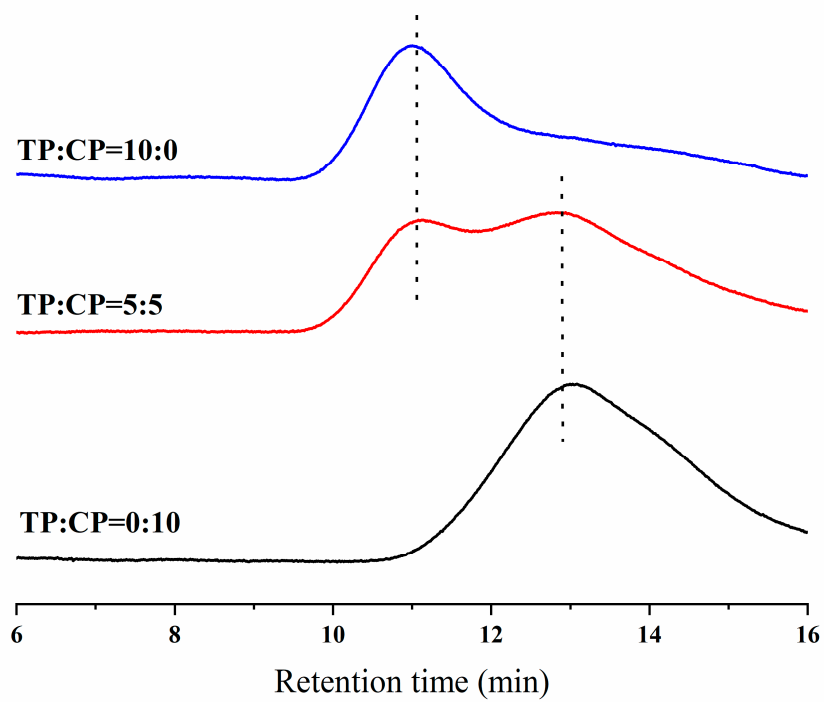


**Figure S4.** The morphologies of emulsion systems stabilized by 1.0% TP:CP=5:5 at different pH levels (pH=2, 4, 6, 8), with the emulsion stabilized by 1.0% TP:CP=5:5 as control.





**Figure S5.** (A) Rheological properties of emulsion systems stabilized by TP-CP at different proportion (the concentration of TP in aqueous phase was 0.5%), (B) backscattering profiles of different emulsion systems during 2 days at 37 °C for accelerating emulsification instability, (C) the average droplets size of different emulsion systems.



**Figure S6.** The molecular weight distribution of TP, CP and their mixture (TP:CP=5:5).