

Synergistic Moisturizing Activity and Antioxidant Activity between Crude Polysaccharides and Flavonoids in Discarded Stem of *Trollius Chinensis* Bunge

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Abstract

This paper aims to investigate the synergistic effects in moisturizing activity and antioxidant activity between the promising unconventional polysaccharide and flavonoids from stems of *Trollius chinensis* Bunge (TCS). The results showed that the mixture with the mass ratio (w/w) of 7:3 (flavonoids to polysaccharides) appeared better moisture retention ($73.08 \pm 2.4\%$) and scavenging effects on $\cdot\text{OH}$ radicals ($85.46 \pm 0.52\%$). Meanwhile, the mixture with the mass ratio (w/w) of 3:7 (flavonoids to polysaccharides) unveiled better scavenging effects on DPPH radicals ($44.10 \pm 0.81\%$) and reducing capacity. The results confirmed that the polysaccharides and flavonoids from TCS have good synergistic effects in moisturizing activity and antioxidant activity, and have the potential to be used in the food industry as edible films or edible packaging materials.

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