**Roles of acidic polysaccharides in ginseng extracts in the stabilization of emulsion**

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*Panax Ginseng* is an herb used in traditional medicine over the world, owing to its outstanding biological functions, including anti-tumour, chemopreventive, and immunomodulating activities etc. In the previous study, we demonstrated that acidic polysaccharides in ginseng were detected at the oil droplet surface together with ginsenosides in emulsions with ginseng extracts, suggesting that they may have the amphiphilic properties. Not only ginsenosides (saponins in ginseng) but also polysaccharides in *Panax ginseng* contribute to the formation of emulsions with ginseng extracts. These polysaccharides have also been known for many beneficial biological functions, such as immunomodulating, blood sugar-lowering effect etc. In the present study we further studied the roles of acidic polysaccharides in ginseng extracts in the stabilization of emulsions. First, crude polysaccharides were fractionated from ginseng extracts using 70% alcohol, followed by centrifugation and lyophilized. Second, we characterized the lyophilized acidic polysaccharides by using HPLC. Third, the lyophilized polysaccharide fractions were put into investigation for their emulsifying properties (interfacial tension, fat globule size, zeta potential, emulsion stability by TurbiscanR, microscopic observation, and surface load etc). It was found that the interfacial tension at the oil-water interface decreased substantially with increasing polysaccharide concentration. In emulsion systems (2 wt% extract, 3 wt% oil, pH 5, 3000 psi), small droplets could be observed (*d*32 ≈ 0.50 µm). Fat globules in emulsions had a high negative charge, being changed with pH. The origin of the negative charge might be attributable to the presence of a carboxylic acid group within the structure of *Panax ginseng* polysaccharides. Results of creaming stability evaluated by light scattering technique (i.e., TurbiscanR) showed that it was more stable at neutral pH than acidic region. Main stabilizing mechanism of emulsion with acidic polysaccharides seems to be steric.