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Antioxidant activity of phenol rich natural product

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As we known, natural product have many useful components for human. Phenol-rich plants has been confirmed that have many benefits such as antioxidant, anti-inflammatory, prevention of cardiovascular disease, *etc*. IPE with high polyphenols content exhibited antioxidant activity, thus we use IPE as our material. Various *in vitro* antioxidant assays were employed in this study. The extraction yield of IPE was 17.4 ± 3.9%, the total phenolic content of IPE was 26.2 μg gallic acid equivalent (GAE)/mg leaves dry weight and the total flavonoids content was 54.2 ± 4.4 μg quercetin equivalent (QE)/mg extract. IPE at 1000 μg/mL exhibited a reducing capacity of 90.5 ± 0.6%, a 1,1-diphenyl-2-picrylhydrazy (DPPH) radical scavenging activity of 96.0 ± 0.4%, a ferrous chelating activity of 72.2 ± 3.5%, a hydroxyl radical scavenging activity of 96.8 ± 1.4%, and a hydrogen peroxide scavenging activity of 99.5 ± 3.3%. IPE at 500 μg/mL also possessed inhibitory activity against 2,2'-azobis (2-methylpropionamidine) dihydrochloride (AAPH)-induced hemolysis of erythrocytes (89.4 ± 1.8%). According to the results, IPE has a potential to be an antioxidant agent, and can be play an important role in cosmetic product.

Keywords: antioxidant, metal chelating, reducing power, radicals scavenging