

In Vitro Study of Antioxidant Capacity of Chrysanthemum Indicum Extract

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Abstract : Polyphenols are the most abundant antioxidants found in plants, and they are highly effective at scavenging oxidative free radicals. Antioxidants are substances found in medicinal plants to help prevent heart disease, stroke, and some cancers. This study focused on evaluating the flavonoids content of Chrysanthemum Indicum and determine their antioxidant capacity by using DPPH and ABTS radical scavenging capacity assay. The total flavonoid content of C. indicum extract was determined and expressed as quercetin equivalents (QE)/g measured by an aluminiumchloride colorimetric method. The results showed that the IC₅₀ of C. indicum extract were $83.57\mu\text{g/mL} \pm 0.875$ and $52.57\mu\text{g/mL} \pm 0.632$ for DPPH and ABTS, respectively. C. indicum extract exhibited antioxidant activities as a concentration dependent manner. In the DPPH assay, vitamin C was used as a positive control, whereas Trolox was used as a positive control in the ABTS assay. In summary, C. indicum extract is rich in flavonoids, which have potent antioxidant properties. Thus, C. indicum extract is a good source of antioxidants and can be developed for medicinal purposes. Nevertheless, more research on the antioxidant activity of C. indicum extract and in vivo antioxidant studies are still needed.

Keywords : ABTS assay, antioxidant, chrysanthemum indicum, DPPH assay, total flavonoid content

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