

Evaluation Of In Vitro Antioxidant Potential of Camellia Sinensis Leaves Extract

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Abstract : Polyphenols are the most common antioxidant found in plants and are efficient in capturing oxidative free radicals. Antioxidants are substances found in medicinal plants which may have a protective role to play in certain conditions such as heart disease, stroke and some cancers. By relying on these benefits, we have traced out the presence of antioxidant in Camellia sinensis leaves extract. This study aims to evaluate flavonoids content in C. sinensis extract and investigate antioxidant activities by using DPPH and ABTS radical scavenging capacity assay. The total flavonoid content of C. Sinensis extract was determined and expressed as quercetin equivalents (QE)/g measured by the aluminum chloride colorimetric method. The results showed that the IC₅₀ of C. Sinensis leaves extract were 40.90 µg/mL ± 0.755 and 32.96 µg/mL ± 0.679 for DPPH and ABTS, respectively. C. Sinensis extract at increasing concentration showed 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 conclusion, C. Sinensis extract consisted of a high amount of flavonoids content which possesses potent antioxidant activity. However, further investigation on the identification of pure compound of this plant and molecular antioxidant assays are still required.

Keywords : ABTS assay, antioxidant, camellia sinensis, DPPH assay, total flavonoid content

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