

Antioxidant activity of *Mangifera zeylanica* stem bark of different extracts

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Mangifera zeylanica, “Sri Lanka wild mango” is an endemic plant to Sri Lanka. This plant is commonly known as ‘Atamba’. In traditional medicine, the stem bark is used for its anti-inflammatory properties. The cytotoxic and apoptotic potential of the stem bark also have been reported. This study investigates the antioxidant properties of the stem bark extracted with two different solvents (methanol, and water). Specimens of *Mangifera zeylanica* stem bark was collected from the two different locations, and the plants were authenticated at Department of National Botanic Gardens, Peradeniya, Sri Lanka. The plant barks were separated into inner bark and outer bark and it was extracted with aqueous and methanol solvents. The aqueous extract was freeze dried and the methanol extract was rotary evaporated. The DPPH radical scavenging assay was carried out to determine the antioxidant activity. The IC₅₀ value of each extract was calculated from the percentage scavenging activity. The results showed that methanol extract of *Mangifera zeylanica* inner and outer bark collected from Galle had IC₅₀ values of 5.679 µg/ml and 11.96 µg/ml respectively while the inner and outer bark of aqueous extract exhibit IC₅₀ values of 26.34 µg/ml and 20.38 µg/ml respectively. The inner and outer methanol extract of *Mangifera zeylanica* bark collected from Rambukkana had IC₅₀ values of 3.054 µg/ml and 81.33 µg/ml while aqueous extract had IC₅₀ values of 3.016 µg/ml and 78.80 µg/ml for the inner and outer bark, respectively. A significant antioxidant activity was observed for the Rambukkana water inner bark with a IC₅₀ value of 3.016 µg/ml when compared with the standard Ascorbic acid with a IC₅₀ value of 3.040 µg/ml.

Keywords: DPPH radical, IC₅₀, *Mangifera zeylanica*, bark

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