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ANTIOXIDANT ACTIVITY COMPARISON OF COMMON DIFFERENT CURRY LEAVES VARIETIES IN SRI LANKA

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Curry leaves are a common spice used in daily food preparations, and a few varieties of curry leaves are commonly used in Sri Lanka. Even though the radical scavenging ability of curry leaves has a common interest, the exact quantification and comparison of antioxidants in each variety are poorly explained. This study was performed to obtain a comparative antioxidant quantification on the most common curry leave varieties in Sri Lanka. In this study, leaves of *Murraya koenigii* (Type 1) and *Clausena indica* (Type 2) and other sub-variety of *Murraya koenigii* (Type 3), which is commonly known as "Beheth karapincha" were used. Hexane, ethyl acetate and methanol extracts of leaves of all three varieties were prepared by sequential maceration. The antioxidant activity of each variety was measured using DPPH, FRAP, and TPC assay. As the positive control, the least IC50 value for the DPPH assay (higher antioxidant activity) was obtained in ascorbic acid (7.302 ± 0.75 mg L-1). Methanolic extract and the ethyl acetate extract of type 3 curry leaves showed lower IC_{50} values (38.39 ± 1.81 mg L^{-1} and 25.09 ± 0.16 mg $L^{-1,}$ respectively), while hexane extract of the type 3 curry leaves showed a higher IC_{50} value (137.98 ± 0.08 mg L^{-1}) compared to ascorbic acid. Methanolic and ethyl acetate extracts of type 1 (66.57 ± 0.12 mg L^{-1} and 176.89 ± 0.09 mg L^{-1}) and type 2 (45.69 ± 0.15 mg L^{-1} and 171.81 ± 0.11 mg L^{-1}) curry leaves have relatively lower radical scavenging ability compared with control as well as the methanol and ethyl acetate extracts of type 3 curry leaves. Further, higher FRAP and TPC values for type 3 curry leaves were observed in the same methanolic and ethyl acetate extracts, which could correlate to the higher amount of polyphenolic content in the type 3 curry leaves variety.

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Keywords: Antioxidant, *Clausena indica*, Curry leaves, IC_{50}, *Murraya koenigii*