

ANTIOXIDANT, ANTIMICROBIAL AND PHYTOCHEMICAL SCREENING OF  
*Micromelum minutum* LEAF EXTRACTS

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*Micromelum minutum* (Rutaceae) is a less-known spineless shrub or a small tree, commonly known as “wal-karapincha” in Sinhala. *M. minutum* is found in monsoon forests, especially in the North-Central Province of Sri Lanka. This plant is more popular as a spice and a medicinal plant in the country, and as a leafy vegetable in many other countries. Aerial parts and fruits of *M. minutum* contain coumarins and other important phytochemicals, such as phenyl propanoic acid derivatives, polyoxygenated flavonoids, carbazole alkaloids and other phytochemicals. Hence, they possess high antioxidant potency. Therefore, the roots *M. minutum* is used to treat toothache in alternative traditional medicine, and in treatment of malaria and other infectious diseases. Therefore, the antioxidant, antimicrobial and phytochemical screening activities of *M. minutum* were evaluated in the current study to understand its efficacy as a medicinal plant. The macerated methanol extracts demonstrated a significant amount of antioxidant activity ( $IC_{50} = 263.0 \pm 8.8 \mu\text{g mL}^{-1}$ ) in 1,1-diphenyl-2-picrylhydrazyl (DPPH) assays. Furthermore, the methanolic extract contains more or less amounts of tannins, flavonoids, phenols, and alkaloids. Saponins were not found in *M. minutum*. Methanolic leaf extract of *M. minutum* exhibited significant inhibitory activity against *Staphylococcus aureus* and *Escherichia coli*, and the zone of inhibition was  $7.43 \pm 0.06$  mm and  $7.13 \pm 0.57$  mm, respectively. These findings reveal that the macerated methanolic extract is found to have good antioxidant activity as well as antimicrobial activities, and contains many valuable phytochemicals. This study proves the medicinal values of the plant leaf extracts of *M. minutum* that could be used as an excellent source of natural bioactive compounds in pharmacology.

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