

Phytochemical Investigation and Antioxidant Activity on Leaves of *Acacia concinna* DC (Kin-mun-gyin)

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Abstract

Acacia concinna DC (Kin-mun-gyin) plant has long been used for hair care and as a traditional shampoo. The young shoots and leaves of Kin-mun-gyin are cooked in a soup. Literature survey showed that *Acacia concinna* DC (Kin-mun-gyin) has been shown to have medicinal treatment of a wide range of diseases and antioxidant activity. The present research focuses on the study of antioxidant activity and some phytochemical constituents of Kin-mun-gyin leaves. Alkaloids, α -amino acids, carbohydrates, flavonoid, glycoside, reducing sugars, phenolic compounds, saponins, tannins, starch and organic acids were found through the phytochemical screening results of the leaves extract. Solvent extracts such as water and ethanol were obtained through antioxidant activity using *in vivo* assay. The extracts on leaves of Kin-mun-gyin were investigated for their possible radical scavenging antioxidant activity by using 2,2-diphenyl-1-picryl-hydrazyl (DPPH) with ascorbic acid as a standard. According to this observation, watery extract of Kin-mun-gyin was found to have higher antioxidant activity ($IC_{50} = 212.99 \mu g mL^{-1}$) than ethanol extract ($IC_{50} = 219.95 \mu g mL^{-1}$). All extract samples showed lower antioxidant activity than standard ascorbic acid ($IC_{50} = 1.09 \mu g mL^{-1}$). According to this study, Kin-mun-gyin leaves can be eaten well for antioxidant activity.

Key words: *Acacia concinna* DC, Antioxidant activity, DPPH assay

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