

**Study of Antioxidant Activity and Phytochemical Screening of *Acalypha indica***

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**ABSTRACT**

*Acalypha indica* (*Euphorbiaceae*) is generally known as Indian Nettle and Indian Copperleaf. It is an erect, annual herbaceous plant, which grows in temper region. The purpose of this investigation was to determine the complete phenolic content (TPC) by employing Folin- Ciocalteu method, total flavonoids content (TFC) using aluminium chloride method and 2, 2-diphenyl-2-picrylhydrazyl (DPPH) assay was used to evaluate the antioxidant activity of ethanol, ethyl acetate and hexane of *Acalypha indica* crude extracts. Based on the data collected, ethanol extracts showed the highest TPC as compared to ethyl acetate and hexane extracts. Besides, the highest flavonoids contents exhibited by ethanol extract then followed by ethyl acetate and hexane. Thus, bioactive compounds mostly appear in ethanol extracts as compared to ethyl acetate and hexane extracts. The DPPH antioxidant EC<sub>50</sub> values revealed that bioactive compounds are mostly present in polar ethanol followed ethyl acetate and hexane crude extracts. In addition, the three solvent extracts were screened for phytochemical tests. Presence of alkaloids, tannins and flavonoids in all the solvent extracts, proposed that *Acalypha indica* can be used as the natural sources of antioxidant and there is favorable interrelationship among the phenolic, flavonoid contents and antioxidant activity in polar crude extracts.