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Effect of Different Solvents Extraction on Antioxidant Activity of *Ipomoea Aquatica*

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Antioxidants play an important role in inhibiting and scavenging free radicals, thus providing protection to human against infections and degenerative diseases. Current researchers are now directed towards natural antioxidants of plants origin due to safe therapeutics. *Ipomoea aquatica* Forsk is a green leafy vegetable that rich with vitamins, amino acids and also health benefits. The present study was designed to investigate the antioxidant activity of two types of *Ipomoea aquatica* cultivars namely narrow leaf (NL) and broad leaf (BL) cultivars. The effect of solvent type on the activity was also investigated, the solvent systems used was distilled water, pure methanol, ethanol, and their aqueous solution at 30%, 50% and 70% concentrations. The extracts were tested for their total phenolic content, ferric reducing ability in plasma (FRAP) and 1,1-diphenylpicryl-hydrazyl (DPPH). Ethanol and methanol extracts of *Ipomoea aquatica* have higher antioxidant activity than water extracts. Results showed that the optimal conditions for DPPH was obtained from *Ipomoea aquatica* BL extracted with methanol 70% having IC_{50} value of (0.099 mg/ml ±0.3) followed by *Ipomoea aquatica* NL extracted with 70% ethanol (0.127 mg/ml±0.2). The total phenolic content of *I. aquatica* NL and *I. aquatica* BL 70% methanolic extracts were found to be highest compare to other extracts, with values of 1.890 mg GAE/ mg DW and 1.987 mg GAE/mg DW extract, respectively.

Keywords: Antioxidant, total phenolic content, *Ipomoea aquatica*.