

ABSTRACT

The main purpose of the study was to probe the *in-vitro* antioxidant and radical scavenging potential of different organic fractions and aqueous fraction of *ipomoea hederacea Jacq.* The methanolic extract of the plant was initially obtained and then the extract was dissolved in distilled water and the other fractions were formulated by using *n*-hexane, chloroform, ethyl acetate and *n*-butanol in a sequential manner. The antioxidant potentials of the various solvent-soluble fractions were evaluated by subjecting the fractions to four different methods viz: ferric reducing antioxidant power (FRAP) assay, 1, 1-Diphenyl-2-picrylhydrazyl (DPPH) free radical scavenging activity, total antioxidant activity and Folin-Ciocalteau reagent assay for the determination of total phenolics. The results revealed that ethyl acetate soluble fraction, at concentration of 125 µg/ml, exhibited the highest value of % inhibition of DPPH ($83.26 \% \pm 0.60$). The IC_{50} of this fraction was 60.28 ± 0.61 µg/ml, relative to the butylated hydroxytoluene (BHT) which is $IC_{50}=12.10 \pm 1.29$ µg/ml. On the other hand, this fraction manifested the highest FRAP value (80 ± 0.3 µg TE/mL), the higher total antioxidant activity (0.25 ± 0.31) as well as highest total phenolic contents (62.35 ± 0.30 µg GAE/g) in comparison to the other fractions. Hence the conclusion came to be that the ethyl acetate soluble fraction of *Ipomoea hederacea Jacq.* bears potentially active antioxidant constituents.