

## ABSTRACT

The crude methanolic extract of *acrachne racemosa* was mixed in distilled water and the resulted mixture was extracted with four solvents *n*-hexane, chloroform, ethylacetate and *n*-butanol. Four methods; Ferric Reducing Antioxidant Power (FRAP) assay, total antioxidant activity, 1,1-Diphenyl-2-picrylhydrazyl radical (DPPH) scavenging activity and ferric thiocyanate assay were used to measure the antioxidant activity of all these four fractions and residual of aqueous fraction. Total phenolic compounds were also found in all four fractions and also in the residual. The results showed that chloroform fraction exhibited  $80.72 \% \pm 0.69$  inhibition of DPPH radical, which showed highest value among all the fractions.  $IC_{50}$  of chloroform fraction was  $185.58 \pm 0.84 \mu\text{g/ml}$ , compared to standard antioxidant compound (BHT), having  $IC_{50}$  of  $12.1 \pm 0.92 \mu\text{g/mL}$ . It demonstrated the highest value of total phenolic compounds ( $54.38 \pm 0.03$  mg of gallic acid equivalents) and inhibition of lipid peroxidation ( $56.46 \pm 1.05$ ) relative to other four fractions. Ethylacetate soluble fraction demonstrated highest value of total antioxidant activity ( $0.31 \pm 0.01$ ) and FRAP value ( $204.33 \pm 0.2 \mu\text{g}$  of trolox equivalents) as compared to other fractions. Phytochemical analysis revealed the presence of Reducing sugar, Terpenoids, Flavonoids, Saponins, Tannins, Cardiac glycosides and Phenolics.