

ABSTRAK

Telah dilakukan isolasi dan uji aktivitas antioksidan serta penentuan kadar fenol total ekstrak (heksan, diklorometan, etil asetat, dan metanol) akar *Elephantopus scaber* Linn. yang diekstraksi secara bertingkat. Uji aktivitas antioksidan dilakukan dengan menggunakan metoda penangkapan radikal bebas DPPH dan untuk penentuan kadar fenol total dengan metoda Folin-Ciocalteu. Ekstrak metanol (polar) menunjukkan aktivitas antioksidan paling baik dengan kadar fenol total yang tinggi dibandingkan ketiga ekstrak lainnya. Dua senyawa fenolik telah diisolasi dari ekstrak metanol menggunakan metoda kromatografi kolom dengan resin Amberlite XAD-4, diperoleh senyawa berbentuk amorf berwarna kekuningan yaitu senyawa AESM-1 dan AESM-2. Hasil uji antioksidan senyawa AESM-1 dan AESM-2 menunjukkan nilai IC_{50} masing-masingnya yaitu $211.731 \pm 0.366 \mu\text{g/ml}$ dan $225.575 \pm 0.219 \mu\text{g/ml}$.

Kata Kunci: *Elephantopus scaber* Linn., antioksidan, DPPH, Folin-Ciocalteu



ABSTRACT

Isolation and antioxidant activity of phenolic compound from *Elephantopus scaber* Linn and total phenolic content of different extract (hexane, dichloromethane, ethyl acetate, and methanol) of *Elephantopus scaber* Linn. extracted consecutively have been carried out. DPPH radical scavenging assay used to measure antioxidant activity and determination of total phenolic content measured by Folin-ciocalteau method. Methanol extract (most polar fraction) showed highest antioxidant activity and contain rich phenolic content than other extracts. Phenolic compounds were isolated from methanol extract by using chromatography method with Amberlite XAD-4 resin and yielded two amorphous yellow solid compounds, AESM-1 and AESM-2. Antioxidant activity of these compounds in terms of effective concentration which scavenges 50% radical (IC_{50}) are $211.731 \pm 0.366 \mu\text{g/ml}$ and $225.575 \pm 0.219 \mu\text{g/ml}$, respectively.

Keywords: *Elephantopus scaber* Linn., antioxidant, DPPH, Folin-Ciocalteau

