

## ABSTRAK

### **ANALISIS AKTIVITAS ANTIOKSIDAN EKSTRAK ETANOL 70% UMBI HATI TANAH (*Angiopteris evecta*) MENGGUNAKAN METODE CUPRAC (Oleh Rada Milenia; Pembimbing Rahmi Muthia dan Rahmi Hidayati; 2022; 110 Halaman)**

Pencemaran lingkungan menyebabkan tingginya kadar radikal bebas yang dapat menyebabkan penyakit. Pencegahan penumpukan radikal bebas dalam tubuh dapat diatasi dengan pemberian antioksidan. Sumber daya alam berkhasiat antioksidan salah satunya adalah tumbuhan Hati Tanah (*Angiopteris evecta*). Penelitian ini bertujuan untuk mengetahui kandungan metabolit sekunder dengan uji skrining fitokimia dan aktivitas antioksidan ekstrak etanol 70% umbi Hati Tanah (*Angiopteris evecta*) yang diekstraksi dengan metode sokletasi. Skrining fitokimia dilakukan dengan uji warna menggunakan berbagai pereaksi. Analisis aktivitas antioksidan dilakukan menggunakan metode CUPRAC terhadap kuersetin sebagai senyawa pembanding dan ekstrak etanol 70% umbi Hati Tanah (*Angiopteris evecta*) sebagai ekstrak sampel yang dinyatakan dengan nilai *effective concentration* ( $EC_{50}$ ). Hasil skrining fitokimia menunjukkan ekstrak sampel mengandung senyawa metabolit sekunder alkaloid, fenol, flavonoid, saponin dan tanin. Hasil analisis aktivitas antioksidan menunjukkan kuersetin memiliki nilai  $EC_{50}$  sebesar 4,1180  $\mu\text{g/mL}$  dan ekstrak sampel memiliki nilai  $EC_{50}$  sebesar 104,7439  $\mu\text{g/mL}$ , sehingga disimpulkan aktivitas antioksidan kuersetin tergolong sangat kuat dan sampel ekstrak tergolong sedang.

**Kata Kunci :** Umbi Hati Tanah; *Angiopteris evecta*; Antioksidan; CUPRAC; Skrining Fitokimia

## **ABSTRACT**

***ANALYSIS OF ANTIOXIDANT ACTIVITY OF ETHANOL EXTRACT 70% HATI TANAH (*Angiopteris evecta*) TUBER USED CUPRAC METHOD. (By Rada Milenia; Advisors Rahmi Muthia and Rahmi Hidayati; 2022; 110 Pages)***

*Environmental pollution causes high levels of free radicals that can cause disease. Prevention of the accumulation of free radicals in the body can be overcome by giving antioxidants. One of the natural resources with antioxidant properties is the Hati Tanah plant (*Angiopteris evecta*). This study aimed to determine the content of secondary metabolites by phytochemical screening test and antioxidant activity of 70% ethanol extract of Hati Tanah tubers (*Angiopteris evecta*) extracted by soxhletation method. Phytochemical screening was carried out with a color test used various reagents. Antioxidant activity analysis was carried out used the CUPRAC method on quercetin as a comparison compound and 70% ethanol extract of Hati Tanah tubers (*Angiopteris evecta*) as sample extracts which were expressed by the value of effective concentration ( $EC_{50}$ ). The results of phytochemical screening showed that the sample extract contained secondary metabolites of alkaloids, phenols, flavonoids, saponins and tannins. The results of the antioxidant activity analysis showed that quercetin had an  $EC_{50}$  value 4.1180  $\mu\text{g/mL}$  and the sample extract had an  $EC_{50}$  value 104.7439  $\mu\text{g/mL}$ , so it was concluded that the antioxidant activity of quercetin was very strong and the extract samples were classified as moderate.*

***Keyword : Hati Tanah Tubers; *Angiopteris evecta*; Antioxidant: CUPRAC; Phytochemical Screening***