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Skripsi, Agustus 2021
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**KAJIAN AKTIVITAS ANTIOKSIDAN KULIT BATANG FALOK
(*Sterculia quadrifida* R. Br)**

(xvi + 146 halaman + 12 gambar + 19 tabel + 7 lampiran)

ABSTRAK

Latar Belakang: Kulit batang faloak (*Sterculia quadrifida* R. Br) merupakan tanaman khas NTT yang diduga mengandung kandungan senyawa metabolit sekunder berupa senyawa fenolik dan flavonoid yang memiliki aktivitas sebagai antioksidan. Tujuan dari penelitian untuk mengkaji potensi kulit batang faloak (*Sterculia quadrifida* R. Br) sebagai antioksidan.

Metode: Metode penelitian yang digunakan metode review artikel pada 1 jurnal internasional (2019) dan 5 jurnal nasional (2015-2019). Data berdasarkan artikel yang dimuat di jurnal terindeks, kemudian dianalisa secara deskriptif dengan cara memaparkan hasil penelitian.

Hasil: Ekstrak kulit batang faloak memiliki potensi sebagai antioksidan terhadap radikal bebas DPPH, radikal peroksida, serta logam berat Pb, Cd, serta Hg. Nilai IC_{50} yang dihasilkan terhadap penghambatan radikal bebas DPPH antara 2,51 ($\mu\text{g/ml}$) – 45, 628 ($\mu\text{g/ml}$). Persentase kemampuan untuk penangkapan radikal bebas peroksida berkisar antara 23-87%. Semakin besar persentase penangkapan radikal, semakin besar aktivitas antioksidan. Ekstrak kulit batang faloak juga memiliki kemampuan untuk menurunkan kandungan radikal bebas berupa logam berat Pb, Cd, dan Hg dengan konsentrasi 16,00 mg/mL.

Simpulan: Ekstrak kulit batang faloak memiliki aktivitas antioksidan sangat kuat terhadap penghambatan radikal DPPH, penangkapan radikal peroksida serta mereduksi logam berat Pb, Hg, dan Cd karena memiliki kandungan senyawa metabolit sekunder flavonoid.

Kata Kunci: Faloak, Antioksidan, DPPH, Reduksi H_2O_2 , *Electron Spin Resonance*

Kepustakaan: 35 (2009-2020)

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STUDY OF ANTIOXIDANT ACTIVITY OF FALOAK STEM (*Sterculia quadrifida* R. Br)

(xvi + 146 page + 12 picture + 19 table + 7 attachment)

ABSTRACT

Background: The bark of faloak (*Sterculia quadrifida* R. Br) is a typical plant of NTT which is thought to contain secondary metabolites in the form of phenolic compounds and flavonoids that have antioxidant activity. The purpose of this study was to examine the potential of faloak bark (*Sterculia quadrifida* R. Br) as an antioxidant.

Method: The research method used was the review of articles in 1 international journal (2019) and 5 national journals (2015-2019). The data is based on articles published in indexed journals, then analyzed descriptively by explaining the results of the research.

Results: The bark extract of faloak has potential as an antioxidant against DPPH free radicals, peroxide radicals, and heavy metals Pb, Cd, and Hg. The resulting IC₅₀ value for the inhibition of DPPH free radicals is between 2.51 (µg/ml) – 45, 628 (µg/ml). The percentage of ability to scavenge peroxide free radicals ranges from 23-87%. The greater the percentage of radical scavenging, the greater the antioxidant activity. The faloak bark extract also has the ability to reduce the content of free radicals in the form of heavy metals Pb, Cd, and Hg with a concentration of 16.00 mg/mL.

Conclusion: The bark extract of faloak has very strong antioxidant activity against DPPH radical inhibition, scavenging of peroxide radicals and reducing heavy metals Pb, Hg, and Cd because it contains flavonoid secondary metabolite compounds.

Keywords: Faloak, Antioxidant, DPPH, Reduction H₂O₂, *Electron Spin Resonance*

Literature: 35 (2009-2020)