

ABSTRAK

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UJI AKTIVITAS ANTIOKSIDAN EKSTRAK ETIL ASETAT DAUN *Castanopsis tungurru* (Blume) A.DC. MENGGUNAKAN METODE DPPH (1,1-Diphenyl-2-picrylhydrazyl)

Karya Tulis Ilmiah, Fakultas Ilmu Kesehatan (2022)

(xiv + 32 halaman; 5 tabel; 7 gambar; 3 lampiran)

Radikal bebas merupakan molekul yang dapat menyebabkan berbagai macam kerusakan dalam tubuh. Senyawa ini dapat ditangkap oleh senyawa lain yang disebut antioksidan. Antioksidan alami berasal dari tumbuhan yang mengandung senyawa penyusun antioksidan. Tumbuhan yang diduga memiliki aktivitas antioksidan kuat adalah *Castanopsis tungurru* (Blume) A.DC. Penelitian ini bertujuan untuk mengetahui kandungan senyawa metabolit sekunder dan aktivitas antioksidan ekstrak etil asetat daun *Castanopsis tungurru* (Blume) A.DC. dengan metode DPPH yang dinyatakan dalam parameter IC_{50} (*Inhibitory Concentration 50*). Daun *Castanopsis tungurru* (Blume) A.DC. diekstraksi menggunakan pelarut etil asetat, lalu dilakukan penapisan fitokimia, penetapan kadar total fenolik dan flavonoid, dan uji aktivitas antioksidan dengan metode DPPH. Rendemen yang diperoleh pada proses ekstraksi adalah 2,8864% b/b. Hasil penapisan fitokimia ekstrak mengandung alkaloid, flavonoid, tanin, steroid, dan fenolik. Kadar total fenolik adalah 534,916 mgGAE/g dan total flavonoid ekstrak adalah 102,642 mgQE/g. Hasil Aktivitas antioksidan ekstrak etil asetat daun *Castanopsis tungurru* (Blume) A.DC. memiliki nilai IC_{50} sebesar 40,6614 ppm. Berdasarkan hasil tersebut, ekstrak etil asetat daun *Castanopsis tungurru* (Blume) A.DC. memiliki aktivitas antioksidan yang kuat berdasarkan parameter IC_{50} . Aktivitas antioksidan ekstrak paling banyak dipengaruhi oleh senyawa fenolik daripada senyawa flavonoid.

Kata Kunci: *Castanopsis tungurru* (Blume) A.DC., Antioksidan, DPPH, IC_{50} , Kadar Total Fenolik, Kadar Total Flavonoid

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ABSTRACT

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ANTIOXIDANT ACTIVITY OF *Castanopsis tungurrut* (Blume) A.DC. LEAF EXTRACT ETHYL ACETATE USING DPPH (1,1-Diphenyl-2-picrylhydrazyl) METHOD

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(xiv + 32 pages; 5 tables; 7 pictures; 3 appendices)

*Free radicals are molecules that can cause various kinds of damage in the body. This compounds can scavenge free radical and are called antioxidant. Natural antioxidants come from plants that contain antioxidant constituent compounds. The plant which is thought to have strong antioxidant activity is *Castanopsis tungurrut* (Blume) A.DC. The aim of this research was to determine the content of secondary metabolites and antioxidant activity from ethyl acetate extract of *Castanopsis tungurrut* (Blume) A.DC. leaf using the DPPH method expressed in the IC₅₀ (Inhibitory Concentration 50) parameter. *Castanopsis tungurrut* (Blume) A.DC. leaf was extracted using ethyl acetate solvent, continued with phytochemical screening, determination of total phenolic and flavonoid content, and antioxidant activity test using the DPPH method. The yield extract was 2.8864% w/w. The results from phytochemical screening of extracts contained alkaloids, flavonoids, tannins, steroids, and phenolics. The total phenolic was 534.916 mgGAE/g and total flavonoid of the extract was 102.642 mgQE/g. The antioxidant activity of the ethyl acetate extract of *Castanopsis tungurrut* (Blume) A.DC. leaves has an IC₅₀ value of 40.6614 ppm. Based on these results, the ethyl acetate extract of *Castanopsis tungurrut* (Blume) A.DC. leaves has strong antioxidant activity and the total phenolic content more than total flavonoid content.*

*Keywords: *Castanopsis tungurrut* (Blume) A.DC., Antioxidant, DPPH, IC₅₀, Total Phenolic Content, Total Flavonoid Content*

References: 28 (1987–2021)