ABSTRAK

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IDENTIFIKASI SUBFRAKSI AKTIF DAUN *FICUS CALLOSA* WARB
Skripsi, Fakultas Ilmu Kesehatan (2024)

(XVI + 72 halaman; 4 tabel; 12 gambar; 9 lampiran)

Indonesia memiliki keanekaragaman hayati tinggi, termasuk tanaman obat tradisional yang berpotensi sebagai sumber antioksidan alami. Stres oksidatif akibat ketidakseimbangan antara radikal bebas dan antioksidan dalam tubuh dapat memicu penyakit degeneratif seperti diabetes, kanker, dan penyakit kardiovaskular. Senyawa fenolik dan flavonoid dari tumbuhan diketahui mampu menetralkan radikal bebas. Penelitian ini bertujuan menganalisis kandungan total senyawa fenolik dan flavonoid, mengevaluasi aktivitas antioksidan subfraksi daun *Ficus callosa* Warb. menggunakan metode DPPH, serta mengidentifikasi senyawa aktifnya. Ekstraksi dilakukan dengan maserasi menggunakan etanol 96%, dilanjutkan fraksinasi cair-cair menggunakan pelarut air, n-heksana, dan etil asetat. Identifikasi senyawa aktif dilakukan dengan FTIR dan HPLC. Hasil analisis menunjukkan bahwa ekstrak etanol daun *Ficus callosa* Warb. mengandung total fenolik sebesar 38,007 ± 1,113 mg GAE/g dan flavonoid 23,363 ± 0,285 mg QE/g. Uji antioksidan menunjukkan fraksi etil asetat (5000 ppm) memiliki persen inhibisi tertinggi sebesar 55,73%, diikuti fraksi air sebesar 40,39%. Subfraksi aktif dipisahkan dari fraksi air, ditandai dengan terbentuknya kristal dan menunjukkan aktivitas DPPH sebesar 17,138% pada konsentrasi 5000 ppm. Senyawa aktif yang teridentifikasi diduga termasuk golongan flavonoid dan berperan dalam aktivitas antioksidan.

Kata Kunci: *Ficus callosa* Warb., antioksidan, senyawa fenolik, flavonoid, DPPH, FTIR, HPLC, ekstraksi etanol, fraksinasi cair-cair, tanaman obat

Referensi: 60 (1988-2024)

ABSTRACT

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IDENTIFICATION OF ACTIVE SUBFRACTIONS OF FICUS CALLOSA WARB LEAVES

Thesis, Faculty of Health Sciences (2024)

(XVI + 72 pages; 4 tables; 12 pictures; 9 appendices)

Indonesia is known for its high biodiversity, including traditional medicinal plants that have potential as natural antioxidant sources. Oxidative stress, caused by an imbalance between free radicals and antioxidants in the body, can trigger degenerative diseases such as diabetes, cancer, and cardiovascular disorders. Phenolic and flavonoid compounds from plants are known to neutralize free radicals. This study aimed to analyze the total phenolic and flavonoid content, evaluate the antioxidant activity of subfractions of Ficus callosa Warb. leaves using the DPPH method, and identify the active compounds. Extraction was performed by maceration using 96% ethanol, followed by liquid-liquid fractionation with water, n-hexane, and ethyl acetate solvents. Active compound identification was carried out using FTIR and HPLC methods. The ethanol extract of Ficus callosa leaves contained 38.007 ± 1.113 mg GAE/g of total phenolics and 23.363 ± 0.285 mg QE/g of flavonoids. Antioxidant assays showed that the ethyl acetate fraction (5000 ppm) had the highest inhibition percentage of 55.73%, followed by the water fraction with 40.39%. An active subfraction was isolated from the water fraction, indicated by crystal formation and DPPH activity of 17.138% at 5000 ppm. The identified active compounds are presumed to belong to the flavonoid group and contribute to antioxidant activity.

Keywords: Ficus callosa Warb., antioxidant, phenolic compounds, flavonoids, DPPH, FTIR, HPLC, ethanol extraction, liquid-liquid fractionation, medicinal plants

References: 60 (1988-2024)