

**PENETAPAN KADAR FENOL, FLAVONOID TOTAL DAN
AKTIVITAS ANTIJAMUR EKSTRAK DAUN MATOA
(*Pometia pinnata*) TERHADAP *Malassezia furfur***

Fasri Dian Safitri
Program Studi Sarjana Farmasi
Institut Kesehatan Mitra Bunda

Dosen Pembimbing
Suhaera, S.Farm., M.Pharm. Sci.
apt. Nahrul Hasan, M.Si

ABSTRAK

Dermatomikosis adalah penyakit jamur yang terdapat di kulit, disebabkan oleh dermatofita salah satunya *Malassezia furfur*. Senyawa yang bersifat antijamur yang terdapat pada daun matoa (*Pometia pinnata*) antara lain flavonoid dan fenolik termasuk tanaman yang memiliki sifat antijamur. Tujuan penelitian ini untuk mengetahui kadar fenol dan flavonoid total ekstrak daun matoa serta pengujian aktivitas antijamur terhadap *Malassezia furfur*. Ekstraksi daun matoa dilakukan dengan metode maserasi dan UAE (*Ultrasound Assisted Extraction*) dengan menggunakan pelarut etanol dan NADES (*Natural Deep Eutectic Solvent*). Penentuan kadar fenol total menggunakan metode Folin Ciocalteu dan penentuan kadar flavonoid total menggunakan metode kolorimetri menggunakan aluminium klorida. Pengujian antijamur menggunakan metode difusi padat dengan kertas cakram yang dilakukan guna mengetahui zona hambat serta dilusi padat untuk mengamati KHM (Konsentrasi Hambat Minimum) pertumbuhan jamur *Malassezia furfur*. Berdasarkan hasil yang diperoleh ekstrak NADES UAE (1:3) memiliki kandungan fenol tertinggi sebesar $72,774 \pm 0,5217$ mg EAG/g simplisia dan yang terendah yaitu pada ekstrak konvensional maserasi dengan nilai hanya $17,445 \pm 0,2797$ mg EAG/g simplisia. Ekstrak NADES UAE memiliki kandungan flavonoid total tertinggi yaitu $4,441 \pm 0,0872$ mg EK/g simplisia dan yang terendah yaitu pada ekstrak konvensional maserasi dengan nilai $1,808 \pm 0,0414$ mg EK/g simplisia. Aktivitas antijamur ekstrak konvensional maserasi konsentrasi larutan uji 6.000 µg/disk adalah $3,78 \pm 0,355$ mm, sedangkan pada ekstrak konvensional UAE dan NADES UAE (1:3) konsentrasi larutan uji 1.000 µg/disk menunjukkan nilai rata-rata zona hambat berturut-turut adalah $1,48 \pm 1,054$ mm, dan $3,37 \pm 0,709$ mm. Hasil uji KHM ekstrak NADES UAE (1:3) daun matoa menunjukkan bahwa konsentrasi terkecil yang mulai tidak terlihat adanya kekeruhan pada konsentrasi ekstrak 3.571 ppm yang ditandai secara visual.

Kata Kunci : Antijamur, Daun Matoa (*Pometia pinnata*), NADES, UAE.

**DETERMINATION OF PHENOL, TOTAL FLAVONOID AND
ANTIFUNGAL ACTIVITY OF MATOA LEAF EXTRACT
(*Pometia pinnata*) AGAINST *Malassezia furfur***

Fasri Dian Safitri
Bachelor of Pharmacy Department
Mitra Bunda Institute of Health

Supervisors
Suhaera, S.Farm., M.Pharm. Sci.
apt. Nahrul Hasan, M.Si

ABSTRACT

Dermatomycosis is a fungal disease found on the skin, caused by dermatophytes, one of which is Malassezia furfur. One of the plants that has antifungal properties is matoa leaves (Pometia pinnata), which contain compounds with antifungal characteristics such as flavonoids and phenolics. Determining the amounts of phenol and total flavonoids in the matoa leaf extract is the goal of this study, as well as to test its antifungal activity against Malassezia furfur. The extraction of matoa leaves was carried out using the maceration method and UAE (Ultrasound Assisted Extraction) with ethanol and NADES as solvents. (Natural Deep Eutectic Solvent). Using the Folin-Ciocalteu technique to determine the total phenol content and the colorimetric method with aluminum chloride to determine the total flavonoid content. Antifungal testing using the solid diffusion method with paper discs was conducted to determine the inhibition zone, as well as solid dilution to observe the MIC (Minimum Inhibitory Concentration) of Malassezia furfur fungal growth. Based on the results obtained, the NADES UAE extract (1:3) has the highest phenol content at 72.774 ± 0.5217 mg EAG/g of simplicia, while the lowest is found in the conventional maceration extract with a value of only 17.445 ± 0.2797 mg EAG/g of simplicia. The NADES UAE extract also has the highest total flavonoid content at 4.441 ± 0.0872 mg EK/g of simplicia, compared to the lowest in the conventional maceration extract at 1.808 ± 0.0414 mg EK/g of simplicia. The antifungal activity of the conventional maceration extract at a test solution concentration of $6.000 \mu\text{g/disk}$ is 3.78 ± 0.355 mm, while the conventional UAE and NADES UAE (1:3) extracts at a test solution concentration of $1.000 \mu\text{g/disk}$ show average inhibition zone values of 1.48 ± 1.054 mm and 3.37 ± 0.709 mm, respectively. The Minimum Inhibitory Concentration (MIC) test results for the NADES UAE (1:3) extract of matoa leaves indicate that the smallest concentration at which turbidity is no longer visible is at an extract concentration of 3.571 ppm, as marked visually.

Keywords : Antifungal, Matoa Leaves (*Pometia pinnata*), NADES, UAE.