

**FAKULTAS KEDOKTERAN DAN ILMU KESEHATAN
UNIVERSITAS MUHAMMADIYAH MAKASSAR**

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**FORMULASI DAN UJI EFEKTIVITAS EKSTRAK ETANOL DAUN
KEMANGI (*Ocimum basilicum. L*) PADA DEODORANT LOTION
TERHADAP PERTUMBUHAN BAKTERI *STAPHYLOCOCCUS
EPIDERMIDIS* DAN *STAPHYLOCOCCUS AUREUS***

ABSTRAK

Latar Belakang : Bau badan merupakan permasalahan umum yang sering disebabkan oleh aktivitas bakteri seperti *Staphylococcus epidermidis* dan *Staphylococcus aureus* yang memecah komponen dalam keringat menjadi senyawa berbau tidak sedap. Penggunaan deodorant berbahan kimia sintetis dalam jangka panjang berisiko menimbulkan iritasi bahkan gangguan kesehatan lainnya, sehingga dibutuhkan alternatif alami yang lebih aman. Daun kemangi (*Ocimum basilicum L.*) mengandung senyawa flavonoid, tanin, saponin, dan steroid yang memiliki potensi sebagai antibakteri.

Tujuan Penelitian : Penelitian ini bertujuan untuk memformulasikan deodorant lotion dari ekstrak etanol daun kemangi dan menguji efektivitasnya terhadap pertumbuhan *Staphylococcus epidermidis* dan *Staphylococcus aureus*. Formula dibuat dalam tiga konsentrasi ekstrak, yaitu 5%, 7%, dan 9%, serta dilakukan pengujian stabilitas fisik.

Metode Penelitian : Metode penelitian ini adalah eksperimental laboratorium. Penelitian difokuskan pada efektivitas ekstrak etanol daun kemangi (*Ocimum basilicum. L*) dalam formulasi deodorant lotion terhadap pertumbuhan *Staphylococcus epidermidis* dan *Staphylococcus aureus*.

Hasil : Hasil evaluasi stabilitas fisik menunjukkan bahwa seluruh formula memenuhi syarat organoleptis, pH (4,5–6,5), viskositas (2000–8000 cPs), daya sebar (5–7 cm), daya lekat (≥ 1 menit), dan homogenitas. Uji efektivitas antibakteri menunjukkan bahwa formula dengan konsentrasi 9% (F3) memberikan daya hambat terbesar terhadap *Staphylococcus epidermidis* dan *Staphylococcus aureus*, masing-masing sebesar 19,09 mm dan 18,03 mm setelah 24 jam inkubasi. Hasil ini menunjukkan aktivitas antibakteri yang kuat berdasarkan kategori zona hambat. Secara statistik, terdapat perbedaan yang signifikan antara kelompok uji ($p < 0,05$).

Kata Kunci : Ekstrak Etanol Daun Kemangi (*Ocimum basilicum L.*), Deodorant Lotion, Efektivitas Antibakteri, *Staphylococcus epidermidis*, *Staphylococcus aureus*

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FORMULATION AND EFFICACY TESTING OF ETHANOL EXTRACT FROM BASIL LEAVES (*Ocimum basilicum. L*) IN DEODORANT LOTION AGAINST THE GROWTH OF *STAPHYLOCOCCUS EPIDERMIDIS* AND *STAPHYLOCOCCUS AUREUS* BACTERIA

ABSTRACT

Background: Body odor is a common problem often caused by bacterial activity, such as *Staphylococcus epidermidis* and *Staphylococcus aureus*, which break down components in sweat into unpleasant-smelling compounds. The long-term use of synthetic chemical-based deodorants carries the risk of causing irritation and other health issues, necessitating a safer natural alternative. Basil leaves (*Ocimum basilicum L.*) contain flavonoids, tannins, saponins, and steroids, which have potential antibacterial properties.

Research Objective: This study aims to formulate a deodorant lotion from basil leaf ethanol extract and test its effectiveness against the growth of *Staphylococcus epidermidis* and *Staphylococcus aureus*. The formula was prepared in three extract concentrations: 5%, 7%, and 9%, and physical stability testing was conducted.

Research Method: This study employed a laboratory experimental method. The research focused on the effectiveness of *Ocimum basilicum L.* leaf ethanol extract in deodorant lotion formulation against the growth of *Staphylococcus epidermidis* and *Staphylococcus aureus*.

Results: The results of the physical stability evaluation showed that all formulations met the organoleptic criteria, pH (4.5–6.5), viscosity (2000–8000 cPs), spreadability (5–7 cm), adhesion (≥ 1 minute), and homogeneity. The antibacterial efficacy test showed that the formula with a 9% concentration (F3) exhibited the highest inhibitory activity against *Staphylococcus epidermidis* and *Staphylococcus aureus*, with inhibition zones of 19,09 mm and 18,03 mm, respectively, after 24 hours of incubation. These results indicate strong antibacterial activity based on the inhibition zone category. Statistically, there was a significant difference between the test groups ($p < 0.05$).

Keywords: Ethanol Extract of Basil Leaves (*Ocimum basilicum L.*), Deodorant Lotion, Antibacterial Efficacy, *Staphylococcus epidermidis*, *Staphylococcus aureus*