

FORMULASI DAN UJI EFEKTIVITAS SEDIAAN

LOTION DARI EKSTRAK ETANOL DAUN

BANDOTAN (*Ageratum conyzoides*)

SEBAGAI ANTINYAMUK

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ABSTRAK

Nyamuk merupakan serangga vektor yang dapat menularkan berbagai penyakit berbahaya seperti demam berdarah, malaria, dan filariasis. Upaya pengendalian nyamuk umumnya menggunakan bahan kimia sintetis yang dapat menimbulkan efek samping terhadap kesehatan dan lingkungan, sehingga diperlukan alternatif bahan alami yang lebih aman. Penelitian ini bertujuan untuk memformulasikan dan menguji efektivitas sediaan lotion ekstrak daun bandotan (*Ageratum conyzoides* L.) sebagai antinyamuk. Metode penelitian meliputi pembuatan ekstrak daun bandotan melalui maserasi menggunakan etanol 96%, dilanjutkan dengan formulasi lotion dengan variasi konsentrasi ekstrak 0%, 10%, 15%, dan 20% dan kontrol positif (autan). Evaluasi yang dilakukan meliputi uji organoleptik, homogenitas, pH, daya sebar, dan stabilitas, serta uji efektivitas sebagai repellent terhadap nyamuk. Hasil penelitian menunjukkan bahwa seluruh formula memiliki karakteristik fisik yang baik dan stabil. Formula dengan konsentrasi ekstrak 20% (F4) menunjukkan daya proteksi tertinggi terhadap gigitan nyamuk, meskipun efektivitasnya masih lebih rendah dibandingkan kontrol positif (lotion komersial). Kesimpulannya, lotion ekstrak daun bandotan dapat digunakan sebagai sediaan antinyamuk alami, dengan formula 20% memberikan efek proteksi terbaik terhadap nyamuk.

Kata kunci: Daun bandotan (*Ageratum conyzoides* L.), lotion, repellent, antinyamuk, *Aedes aegypti*.

**FORMULATION AND EFFECTIVENESS TEST OF
A LOTION MADE FROM ETHANOL EXTRACT OF
BANDOTAN (*Ageratum conyzoides*)
LEAVES AS A MOSQUITO REPELLENT**

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ABSTRACT

*Mosquitoes are vector insects that can transmit various dangerous diseases such as dengue fever, malaria, and filariasis. Mosquito control efforts generally use synthetic chemicals that can cause side effects on health and the environment, so safer natural alternatives are needed. This study aims to formulate and test the effectiveness of a lotion preparation of bandotan leaf extract (*Ageratum conyzoides* L.) as a mosquito repellent. The research method includes the preparation of bandotan leaf extract through maceration using 96% ethanol, followed by lotion formulation with various extract concentrations of 0%, 10%, 15%, and 20% and a positive control (autan). Evaluations carried out included organoleptic tests, homogeneity, pH, spreadability, and stability, as well as an effectiveness test as a mosquito repellent. The results showed that all formulas had good and stable physical characteristics. The formula with a 20% extract concentration (F4) showed the highest protection against mosquito bites, although its effectiveness was still lower than the positive control (commercial lotion). In conclusion, bandotan leaf extract lotion can be used as a natural mosquito repellent preparation, with a 20% formula providing the best protective effect against mosquitoes.*

Keywords: *Bandotan leaves (*Ageratum conyzoides* L.), lotion, repellent, mosquito repellent, *Aedes aegypti*.*