

ABSTRAK

UJI DAYA PROTEKSI EKSTRAK n-heksana DAUN EUKALIPTUS (*Eucalyptus robusta* Sm.) DALAM SEDIAAN LOSION SEBAGAI REPELAN TERHADAP NYAMUK *Aedes aegypti*

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Upaya penanggulangan Demam Berdarah *Dengue* (DBD) dilakukan melalui pengendalian vektor *Aedes aegypti* secara fisik, kimia, dan biologi, serta penggunaan repelan seperti krim, spray, atau losion. Sejalan dengan konsep *back to nature*, *Eucalyptus robusta* Sm. berpotensi dimanfaatkan sebagai bahan alami penolak nyamuk. Tujuan penelitian ini mengetahui sifat fisik sediaan losion, efek iritasi, daya proteksi dan nilai analisis probit EC_{50} ekstrak n-heksana daun *Eucalyptus robusta* Sm. sebagai repelan terhadap nyamuk *Aedes aegypti* dalam sediaan losion. Penelitian ini menggunakan RAL (*Rancangan Acak Lengkap*) yang terdiri dari empat konsentrasi dan empat kali pengulangan. Konsentrasi ekstrak n-heksana *Eucalyptus robusta* Sm. yang digunakan yaitu 0%, 10%, 20%, 30%. Setiap konsentrasi diulang sebanyak empat kali. Losion memiliki sifat fisik yang baik, tidak menimbulkan iritasi dikulit. Hasil analisis daya proteksi menggunakan uji *One Way ANOVA* menunjukkan bahwa terdapat perbedaan yang signifikan terhadap jumlah nyamuk yang hinggap pada masing-masing konsentrasi perlakuan ($p\text{-value} = 0,00$). dan dilanjutkan uji *Least Significant Difference* (LSD) taraf 5%. Hasil penelitian menunjukkan losion konsentrasi 10%, 20%, dan 30% memiliki persentase daya proteksi berturut – turut sebesar 34,91%, 66,27%, dan 86,04%. Hasil uji probit EC_{50} untuk mengetahui efektivitas didapatkan bahwa konsentrasi yang efektif sebagai repelan adalah pada konsentrasi 16,40%. Kesimpulan, losion ekstrak n-heksana daun eukaliptus menunjukkan daya proteksi sebagai repelan nyamuk *Aedes aegypti* terbaik pada konsentrasi 30%.

Kata Kunci: *Aedes aegypti*, Demam Berdarah *Dengue*, Repelan, Daun Eukaliptus.

ABSTRACT

PROTECTION TESTING OF EUCALYPTUS LEAF n-hexane EXTRACT (*Eucalyptus robusta* Sm.) IN A LOTION PREPARATION AS A REPELLANT AGAINST *Aedes aegypti* MOSQUITO

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Efforts to control Dengue Hemorrhagic Fever (DHF) are carried out through physical, chemical, and biological control of the *Aedes aegypti* vector, as well as the use of repellents such as creams, sprays, or lotions. In line with the concept of back to nature, *Eucalyptus robusta* Sm. has the potential to be used as a natural mosquito repellent. The purpose of this study was to determine the physical properties of lotion preparations, irritation effects, protective power and the EC50 probit analysis value of n-hexane extract of *Eucalyptus robusta* Sm. leaves as a repellent against *Aedes aegypti* mosquitoes in lotion preparations. This study used a *Completely Randomized Design* (CRD) consisting of four concentrations and four replications. The concentrations of n-hexane extract of *Eucalyptus robusta* Sm. used were 0%, 10%, 20%, and 30%. Each concentration was repeated four times. The lotion has good physical properties and does not cause skin irritation. The results of the analysis of protective power using the *One Way* ANOVA test showed that there was a significant difference in the number of mosquitoes that landed on each treatment concentration (p-value = 0.00). and continued with the Least Significant Difference (LSD) test at 5% level. The results showed that the lotion concentrations of 10%, 20%, and 30% had a percentage of protective power of 34.91%, 66.27%, and 86.04%, respectively. The results of the EC50 probit test to determine the effectiveness showed that the effective concentration as a repellent was at a concentration of 16.40%. In conclusion, the n-hexane eucalyptus leaf extract lotion showed the best protective power as a repellent for *Aedes aegypti* mosquitoes at a concentration of 30%.

Key words: *Aedes aegypti*, Dengue Hemorrhagic Fever, Repellent, Eucalyptus