ABSTRAK

UJI DAYA PROTEKSI EKSTRAK ETANOL DAUN *Eucalyptus robusta* DALAM SEDIAAN SPRAY SEBAGAI ANTI NYAMUK *Aedes aegypti*

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Penggunaan repelan merupakan salah satu cara menghindari gigitan dan gangguan nyamuk khususnya *Aedes aegypti* yang menjadi vektor penyakit Demam Berdarah *Dengue* (DBD). Daun *Eucalyptus robusta* mengandung minyak atsiri yang dapat dikembangkan sebagai larvasida alami untuk mencegah perkembangbiakan nyamuk *Ae. aegypti*. Tujuan penelitian ini untuk mengetahui kandungan fitokimia, menguji homogenitas, efek iritasi spray ekstrak etanol daun *E. robusta* dan menguji daya proteksinya sebagai anti nyamuk *Ae. aegypti*. Jenis penelitian ini adalah eksperimental dengan metode Rancangan Acak Lengkap (RAL) dengan 4 perlakuan yaitu konsentrasi 0%, 5%, 10%, dan 15% masing-maing konsentrasi dilakukan 4 kali ulangan. Data berupa persentase jumlah nyamuk hinggap dianalisis dengan *one-way analysis of variance* (ANOVA) menggunakan program SPSS bila ada perbedaan jumlah nyamuk hinggap antar perlakuan dilanjutkan dengan uji *Least Significant Difference* (LSD). Hasil uji fitokimia ekstrak etanol *E. robusta* positif mengandung saponin, steroid, tanin, alkaloid, flavonoid, dan fenolik. Spray bersifat homogen dan tidak memberikan efek iritasi pada masing-masing konsentrasinya. Presentase daya proteksi terbesar pada konsentrasi 15% (42,54%). Hasil *one-way* ANOVA meunjukkan nilai *p-value* = 0,00 dan dilanjutkan dengan uji LSD yang menunjukkan adanya perbedaan daya proteksi signifikan antar perlakuan, yaitu semakin tinggi konsentrasi ekstrak yang diberikan, semakin sedikit nyamuk yang hinggap pada lengan. Dapat disimpulkan semakin tinggi konsentrasi ekstrak etaol *E. robusta* maka semakin tinggi daya proteksinya terhadap nyamuk *Ae. aegypti*.

Kata Kunci : DBD, *Ae. aegypti*, Repelan, *E. robusta*, ekstrak etanol

ABSTRACT

PROTECTION POWER TEST OF ETHANOL EXTRACT OF *Eucalyptus robusta* LEAVES IN SPRAY PREPARATION AS AN ANTI-MOSQUITO *Aedes aegypti*

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The use of repellents is one way to avoid mosquito bites and disturbances, especially *Aedes aegypti* which is a vector of Dengue Hemorrhagic Fever (DHF). Eucalyptus robusta leaves contain essential oils that can be developed as natural larvicides to prevent the breeding of *Ae. aegypti* mosquitoes. The purpose of this study was to determine the phytochemical content, test the homogeneity, irritation effect of *E. robusta* leaf ethanol extract spray and test its protective power as an *Ae. aegypti* mosquito repellent. This type of research is experimental with a Completely Randomized Design (CRD) method with 4 treatments, namely concentrations of 0%, 5%, 10%, and 15%, each concentration was repeated 4 times. Data in the form of the percentage of the number of perched mosquitoes were analyzed by one-way analysis of variance (ANOVA) using the SPSS program if there was a difference in the number of perched mosquitoes between treatments followed by the Least Significant Difference (LSD) test. The results of the phytochemical test of the *E. robusta* ethanol extract were positive for saponins, steroids, tannins, alkaloids, flavonoids, and phenolics. The spray was homogeneous and did not cause irritation at each concentration. The highest percentage of protective power was at a concentration of 15% (42,54%). The results of one-way ANOVA showed a p-value = 0.00 and were continued with the LSD test which showed a significant difference in protective power between treatments, namely the higher the concentration of the extract given, the fewer mosquitoes landed on the arm. In conclusion, the higher the concentration of *E. robusta* ethanol extract, the higher its protective power against *Ae. aegypti* mosquitoes.

Keywords: DHF, *Ae. aegypti*, Repellent, *E. robusta*, ethanol extract