

ABSTRACT

Ministry of Health of RI
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“THE EFFECTIVITY OF FRANGIPANI LEAVES (*Plumeria acuminata*) AS AN ELECTRIC MAT TO KILL *Aedes aegypti* MOSQUITOES”

x + 53 Pages + 6 Tables + 11 Attachments

Aedes aegypti is the main vector of dengue virus. The mosquito control using chemical insecticide continuously could cause mosquitoes resistance towards insect controls and could pollute the environment. One of the most effective control could be based on phyto-insecticide made from frangipani leaf (*Plumeria acuminata*) using electric mat method. The purpose of this research is to understand the effectivity of Frangipani leaves (*Plumeria acuminata*) as an electric mat to kill *Aedes aegypti* mosquitoes.

This research used true experiment with post-test only control group design on 4 doses variations which are 1 gram, 1.5 gram, 2 gram, and 2.5 gram of 5 times repetition.

The test result of One Way Anova showed that there was differences in the average number of *Aedes aegypti* mosquitoes death from several mat made from Frangipani leaves, proved with p value = $0,000 < 0,05$. The probit test found the following value $LC_{50} = 2,930 \text{ gram}/0,064 \text{ m}^3$ (45,3 gr/ m^3).

In conclusion, there was differences to the death of *Aedes aegypti* mosquitoes after their exposure to Frangipani (*Plumeria acuminata*) electric mat with weight variation 1 gram, 1.5 gram, 2 gram, 2.5 gram which were being researched within 60 minutes treatment. It is advised to have a further research regarding the lasting time length of Frangipani leaves mat (*Plumeria acuminata*).

Keywords : the death of *Aedes aegypti* mosquitoes, Frangipani leaves mat (*Plumeria acuminata*).

Reading List : 15 Books (2008-2016), 15 Research Journals, 1 Constitution, 5 Articles

Classification : -

ABSTRAK

Kementerian Kesehatan RI
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“EFEKTIVITAS DAUN KAMBOJA (*Plumeria acuminata*) SEBAGAI MAT ELEKTRIK DALAM MEMBUNUH NYAMUK *Aedes aegypti*”

x + 53 Halaman + 6 Tabel + 11 Lampiran

Aedes aegypti merupakan vektor utama virus dengue. Pengendalian nyamuk dengan menggunakan insektisida kimia secara terus menerus dapat menyebabkan resistensi pada nyamuk dan mencemari lingkungan. Salah satu pengendalian yang efektif dapat menggunakan insektisida nabati yang berasal dari daun Kamboja (*Plumeria acuminata*) dengan metode mat elektrik. Tujuan penelitian ini untuk mengetahui efektifitas daun Kamboja (*Plumeria acuminata*) sebagai mat elektrik dalam membunuh nyamuk *Aedes aegypti*.

Jenis penelitian ini menggunakan *true experiment* dengan *post test only control group design* dengan 4 variasi dosis yaitu 1 gram, 1,5 gram, 2 gram, dan 2,5 gram dan 5 kali pengulangan.

Hasil uji *One Way Anova* menunjukkan bahwa ada perbedaan rata-rata jumlah kematian nyamuk *Aedes aegypti* pada berbagai dosis mat daun Kamboja, ditunjukkan dengan nilai $p = 0,000 < 0,05$. Pada uji *probit* didapatkan $LC_{50} = 2,930 \text{ gram}/0,064 \text{ m}^3$ ($45,3 \text{ gr}/\text{m}^3$).

Kesimpulan dari penelitian ini adalah Terdapat perbedaan kematian nyamuk *Aedes aegypti* setelah dipaparkan mat elektrik daun Kamboja (*Plumeria acuminata*) dengan variasi berat 1 gram, 1,5 gram, 2 gram, dan 2,5 gram yang diamati dalam waktu 60 menit perlakuan. Saran peneliti adalah perlunya dilakukan penelitian terhadap lama waktu ketahanan mat daun Kamboja (*Plumeria acuminata*).

Kata kunci : Kematian nyamuk *Aedes aegypti*, mat daun Kamboja (*Plumeria acuminata*).

Daftar Bacaan : 15 Buku (2008-2016), 15 Jurnal penelitian, 1 Undang-undang, 5

Artikel

Klasifikasi : -