

**KEMAMPUAN VARIASI KONSENTRASI CAMPURAN DAUN SIRIH
(*Piper betle L.*) DAN VIRGIN COCONUT OIL (VCO) SEBAGAI
REPELLENT NYAMUK *AEDES SP.***

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INTISARI

Latar Belakang: Demam Berdarah *Dengue* (DBD) yang ditularkan oleh nyamuk *Aedes aegypti* masih menjadi masalah kesehatan masyarakat Indonesia. Salah satu alternatif pengendalian nyamuk *Aedes* adalah penggunaan insektisida dengan memanfaatkan tanaman yang menghasilkan insektisida nabati yang banyak tumbuh di Indonesia.

Tujuan: Diketuinya pengaruh variasi konsentrasi campuran Daun Sirih (*Piper Betle L.*) dan *Virgin Coconut Oil* (VCO) terhadap kemampuan daya tolak untuk nyamuk *Aedes sp.*

Metode: Penelitian ini merupakan eksperimen dengan penelitian *Posttest Only with Control Group Design*. Sampel yang digunakan adalah nyamuk *Aedes sp.* dewasa. Penelitian dilakukan pada 4 kelompok yaitu kontrol dan konsentrasi campuran Daun Sirih (*Piper betle L.*) dan *Virgin Coconut Oil* (VCO) dengan konsentrasi 50%, 70%, dan 90%. Analisis data dilakukan dengan regresi linear sederhana dengan $\alpha = 0,05$

Hasil: Berdasarkan hasil penelitian daya repelensi terhadap nyamuk *Aedes sp.* sebesar 55% daya repelensi untuk konsentrasi 50%, 71% untuk konsentrasi 70%, dan 82% untuk konsentrasi 90%. Hasil uji statistik menunjukkan masing-masing nilai p-value sebesar $<0,001$ artinya ada hubungan waktu dengan daya tolak campuran Daun Sirih (*Piper betle L.*) dan *Virgin Coconut Oil* (VCO).

Kesimpulan: Ada hubungan variasi konsentrasi campuran Daun Sirih (*Piper betle L.*) dan *Virgin Coconut Oil* (VCO) sebagai daya repelensi nyamuk *Aedes sp.* dengan konsentrasi lebih baik dalam menolak nyamuk yaitu konsentrasi 90% di jam pertama.

Kata kunci: Daun Sirih (*Piper betle L.*), *Virgin Coconut Oil* (VCO), *repellent*, nyamuk *Aedes sp.*

**ABILITY OF VARIATION CONCETRATION OF BETEL LEAVES
(*Piper betle L.*) AND VIRGIN COCONUT OIL (VCO) AS MOSQUITO
AEDES SP. REPELLENT**

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ABSTRACT

Background: *Dengue Hemorrhagic Fever* (DHF) which is transmitted by the *Aedes aegypti* mosquito is still a public health problem in Indonesia. One alternative to control *Aedes* mosquitoes is the use of insecticides by utilizing plants that produce biological insecticides that are widely grown in Indonesia.

Objective: This study is aimed to the effect of variations concentration of Betel Leaf (*Piper Betle L.*) and *Virgin Coconut Oil* (VCO) as mosquito *Aedes sp.* repellent.

Method: This research is an experiment with posttest only research with control group design. The sample used was *Aedes sp.* mature. The study was conducted in 4 groups, namely control and mixed concentrations of Betel Leaf (*Piper betle L.*) and *Virgin Coconut Oil* (VCO) with concentrations of 50%, 70%, and 90%. Data analysis was performed by simple linear regression with $\alpha = 0.05$

Result: Based on the results of research on the repellency of *Aedes sp.* of 55% repellency for 50% concentration, 71% for 70% concentration, and 82% for 90% concentration. The results of statistical tests showed that each p-value of <0.001 means that there is a relationship between time and the repulsion of a mixture of Betel Leaf (*Piper betle L.*) and *Virgin Coconut Oil* (VCO).

Conclusion: There is a correlation between the concentration variation of the mixture of Betel Leaf (*Piper betle L.*) and *Virgin Coconut Oil* (VCO) as the repellency of *Aedes sp.* with a better concentration in repelling mosquitoes, is a concentration of 90% in the first hour.

Keyword: Betel Leaves (*Piper betle L.*), *Virgin Coconut Oil* (VCO), repellent, *Aedes sp.*