

INTISARI

Efek Larvisida Larutan Senyawa Sitral terhadap Larva Instar III *Aedes aegypti*

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LATAR BELAKANG :Insidensi demam berdarah masih cukup tinggi di dunia. Tidak terkecuali di Indonesia. Karena hal ini, diperlukan upaya preventif. Salah satu upaya preventif yang banyak dilakukan adalah pemakaian temefos. Namun, beberapa Negara dilaporkan telah mengalami resisten terhadap temefos sehingga diperlukan upaya alternatif. Salah satu upaya alternatif yang saat ini sedang berkembang adalah pemanfaatan minyak atsiri. Minyak atsiri memiliki senyawa aktif yang memiliki efek larvisida salah satunya adalah sitral.

TUJUAN :Mengetahui apakah larutan senyawa sitral memiliki efek larvisida terhadap larva instar III *Ae. aegypti*.

METODE :Eksperimental murni dengan *post test only with control group design*. Sampel sebanyak 25 ekor larva instar III *Ae. Aegypti* yang memenuhi kriteria inklusi. Sampel dibagi dalam 7 kelompok, 1 kelompok kontrol positif, 1 kelompok control negatif dan 5 kelompok perlakuan variasi konsentrasi berturut-turut 0,004%; 0,0045%; 0,005%; 0,0055% dan 0,006%. Setiap kelompok akan dinilai setelah 24 jam perlakuan. Setiap kelompok dilakukan 4 kali replikasi. Hasil penelitian selanjutnya dianalisis menggunakan uji *Kruskal-Wallis* dan uji probit.

HASIL :Reratakematian larva pada kelompok control negatif, kontrol positif, kelompok perlakuan 0,004%; 0,0045%; 0,005%; 0,0055%; 0,006% adalah berturut – turut 0%, 100%, 40%, 67%, 68% dan 92%. Uji *Kruskal-Wallis* pada kelompok penelitian bermakna ($p=0,000$). Analisis probit menunjukkan LC_{50} dan LC_{90} berturut-turut 0,004% dan 0,006%

KESIMPULAN :Larutan senyawa sitral memiliki efek larvisida terhadap larva instar III *Ae.aegypti*.

KATA KUNCI :Senyawa sitral, larvisida, larva instar III *Ae.aegypti*, DBD

ABSTRACT

Larvicidal Effect of Citral Solution Against Third-Instar Larvae of *Aedes aegypti*

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BACKGROUND : *The incidence of dengue fever is still quite high in the world. Not least in Indonesia. Because of this, the necessary preventive measures. One preventive measure that often do is using temephos. But, some countries reportedly are resistant to temephos. It's a necessary to find the alternative choices. One of the alternative choices is currently being developed is the use of essential oils. Essential oils have active compounds that have the effect of larvicide one of which is citral.*

OBJECTIVE : *Knowing whether citral compound solution has larvicidal effect against third instar larvae of *Ae. aegypti*.*

METHODS : *Pure experimental with posttest only control group design. The sample size of each group is 25 third instar larvae of *Ae. aegypti* that met the inclusion criterias. The samples were divided into 7 groups, one positive control group, one negative control group and the treatment group 5 consecutive variations in the concentration of 0.004%; 0.0045%; 0.005%; 0.0055% and 0.006%. Each group will be assessed after 24 hours of treatment. Each group performed four times replication. The results of subsequent studies were analyzed using Kruskal-Wallis test and probit test.*

RESULT : *Mean larval mortality in the negative control group, positive control group, treated group of 0.004%; 0.0045%; 0.005%; 0.0055%; 0.006% were 0%, 100%, 40%, 67%, 68% and 92%. Kruskal-Wallis test in the study group was significant ($p = 0.000$). Probit analysis showed LC_{50} and LC_{90} respectively 0.004% and 0.006%.*

CONCLUSION : *Citral solution has larvicidal effect against third-instar larvae *Ae. aegypti*.*

KEYWORDS : *Citral compounds, Larvicide, Third-instar larvae *Ae. aegypti*, Dengue fever*