

## ABSTRAK

Penyakit malaria merupakan penyakit tropis yang disebabkan oleh parasit *plasmodium* melalui perantara gigitan nyamuk *Anopheles* spp. Angka kesakitan malaria di Batam masih tinggi ( $API = 27.1$ ). Pengendalian vektor nyamuk *Anopheles* spp secara kimiawi dengan IRS (*Indoor Residual Spraying*). Penggunaan beragam jenis insektisida dan silih berganti tanpa melalui uji kerentanan dapat menimbulkan resistensi terhadap vektor nyamuk *Anopheles* spp dan menyebabkan tidak efektifnya dalam memberantas nyamuk *Anopheles* spp.

Tujuan penelitian adalah untuk mengetahui pengaruh jenis insektisida *bendiocarb*, *etofenproks*, *lamdasihalotrin* terhadap kerentanan vektor nyamuk *Anopheles* spp di kota Batam tahun 2010. Jenis penelitian yang digunakan adalah rancangan eksperimen semu (*Quasi Experiment*) dengan Rancangan Acak Kelompok (RAK) Non Faktorial. Percobaan menggunakan tiga perlakuan kontak antara nyamuk *Anopheles* spp dengan *insecticide impregnated paper* (*bendiocarb* 80 WP 0,2 gr/m<sup>2</sup>, *etofenproks* 20 WP 0,1 gr/m<sup>2</sup>, *lamdasihalotrin* 10 WP 0,025 gr/m<sup>2</sup>) serta empat kali pengulangan.

Hasil uji Anova untuk insektisida *bendiocarb* dengan nilai  $p = 0.000 < \alpha = 0.05$ , *etofenproks* dengan nilai  $p = 0.001 < \alpha = 0.05$ , dengan nilai  $p = 0.004 < \alpha = 0.05$  Ho ditolak yang berarti ada perbedaan yang bermakna terhadap kematian nyamuk *Anopheles* spp pasca perlakuan ketiga jenis insektisida. Insektisida *lamdasihalotrin* dapat membunuh 69 ekor (86,25%) nyamuk *Anopheles* spp dalam waktu pengamatan 24 jam. Sedangkan untuk resistensi kematian nyamuk *Anopheles* spp sebesar 75%, hal ini menunjukkan resistensi terhadap insektisida *bendiocarb*. Kematian nyamuk *Anopheles* spp sebesar 85% disebabkan oleh insektisida *etofenproks* dan 90% oleh insektisida *lamdasihalotrin* termasuk kerentanan yang meragukan.

Kesimpulan penelitian yaitu ada pengaruh jenis insektisida *lamdasihalotrin* terhadap kerentanan vektor nyamuk *Anopheles* spp di Kota Batam. Disarankan penggunaan insektisida sesuai dengan dosis anjuran dan melalui uji kerentanan sehingga efektif dan aman terhadap lingkungan.

Kata Kunci : Insektisida, Kerentanan, Nyamuk *Anopheles* spp

## **ABSTRACT**

*Malaria is a tropical disease caused by the parasite plasmodium anopheles mosquito biting of Anopheles spp. Malaria morbidity in Batam is still high (27.1 = API). The vector of Anopheles spp is chemically controlled through Indoor Residual Spraying (IRS). The use of various insecticides by turns without undergoing a susceptibility test can result in the resistance to the vector of Anopheles spp and ineffectiveness in Anopheles spp control.*

*The purpose of this study was to analyze the influence of insecticides with the brands name of bendiocarb, etofenproks, lamdasihalotrin on the susceptibility of the vector of Anopheles spp in Batam in 2010. This study was based on Quasi Experiment with Non-Factorial. This experiment used three contact treatments between Anopheles spp. and insecticide impregnated paper (bendiocarb 80 WP 0.2 gr/m<sup>2</sup>, etofentroks 20 WP 0.1 gr/m<sup>2</sup>, lamdasihalotrin 10 WP 0.025 gr/m<sup>2</sup>, in four replication.*

*The result of Anova for bendiocarb insecticide with  $p = 0.000 < \alpha = 0.05$ , etofenproks with  $p = 0.001 < \alpha = 0.05$ , and lamdasihalotrin with  $p = 0.004 < \alpha = 0.05$  Ho was rejected means that there was a significant difference in the death of Anopheles spp. in the treatment to the three kinds of insecticides. Lamdasihalotrin could kill 69 Anopheles spp. (86.25%) in a 24 hour observation. While for the resistance of the death of Anopheles spp. for 75% showed that it was resistant to bendiocarb insecticide. The death Anopheles spp. for 85% was caused by etofenproks insecticide and 90% by lamdasihalotrin insecticide including the doubtful susceptibility.*

*The conclusion of this study is that lamdasihalotrin insecticide had an influence on the susceptibility of the vector of Anopheles spp. in Batam. It is suggested that the use of insecticide follow the suggested dosage and the insecticide must have undergone a susceptibility test that it is effective and safe for the environment.*

*Key words : Insecticide, Susceptibility, Mosquito Anopheles spp*