

ABSTRACT

EFFECTIVENESS OF GUAJAVA LEAF EKSTRACT (*Psidium guajava* Linn) AS *Aedes aegypti* INSECTICIDE IN AEROSOL PREPARATION

By

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*Background : Dengue hemorrhagic Fever (DHF) is an infectious disease caused by the dengue virus is transmitted through the bite of *Aedes aegypti*. To prevent transmission of the virus required vector control. Vector control used by synthetic insecticide can cause toxicity and resistance. Therefore, necessary environmentally friendly bioinsecticide. Red guajava leaves suspected to insecticide effect with content of active compounds like alkaloid, saponin, tanin, minyak atsiri, flavonoid, fenol, lignan and sterol. This study aims to investigate effectiveness of guajava leaf ekstract (*Psidium guajava* Linn) as *Aedes aegypti* insecticide in aerosol preparation.*

*Methods : The research was conducted at the Laboratory of Zoology, Department of Biology and Chemistry Laboratory, Department of Chemistry, FMIPA Lampung University in October to December 2014. This research uses Completely Randomized Design (CRD) with 5 treatment groups, each group containing 50 adult female mosquitoes of *Aedes aegypti* and 3 times repetitions and then the concentrations of guajava's leaf ekstract (*Psidium guajava* Linn) are 0%, 22.5%, 45%, and 90% also transflutrin as a positive control. Data were obtained and tested using One Way Anova test and post hoc test to find out the differences at each concentration.*

*Result : At concentration 90% knock-down and mortality of mosquitoes reached 20%, whereas positive control reached 96.67%. At One Way Anova test and post hoc test find out the differences at each concentration ($p < 0,05$). At probit test were obtained LC_{50} as big as 7,529% and LC_{90} as big as 19,942%. Knock-down Time concentration of 90% find out KT_{50} 327217,921 minutes and KT_{95} 720717128222531,900 minutes. The result showed that guajava's leaf ekstract hasn't insecticide effectiveness for *Aedes aegypti*.*

Keyword : *guajava leaf ekstract, *Aedes aegypti*, insecticide*