

ABSTRACT

EFFECTIVENESS OF GUAVA LEAF EXTRACT (*Psidium guajava* Linn) AS *Aedes aegypti* INSECTICIDE IN MOSQUITO COIL

By

BELINDA APRIANNANTI BEAUTY

Aedes aegypti is a mosquito that played as a vector of dengue fever. One of the method to prevent the spread of *dengue* fever is by using bioinsecticide as vector control. Guava (*Psidium guajava* Linn) is one of the Myrtaceae species with bioinsecticide potential that has chemical compounds with toxic effect against mosquitoes. This study aims to determine the effectiveness of guava leaf extract as mosquito coil against *Aedes aegypti*.

This research was conducted at the Laboratory of Zoology, Faculty of Mathematics and Natural Sciences on October 27, 2014 with a completely randomized design method according to the standard World Health Organization Guidelines For Testing Efficacy Of Household Insecticide Products (WHOPES, 2009). The study sample was 375 adult *Aedes aegypti* of 2–5 days old were divided into five treatment groups were 0% (control), 50%, 70%, 90%, and HIT (*transfluthrin* 0,03%). Each group contained 25 mosquitoes with three replication. The data obtained from the study were tested statistically by one way anova test and probit.

One way anova test showed a difference between groups ($p < 0,001$; $\alpha = 0,05$). Probit analysis is used to determine the LD₅₀ and LD₉₅ with KT₅₀ and KT₉₅. Value of LD₅₀ is 0,499% and LD₉₅ is 7,679%. While KT₅₀ is under 5 minutes and KT₉₅ is under 30 minutes. The conclusion of this research is guava leaf extract effective as *Aedes aegypti* insecticide in mosquito coil.

Keywords : *Aedes aegypti*, insecticide, mosquito coils, *Psidium guajava*