

## ABSTRACT

### PROTECTION POWER OF *Psidium guajava* Linn. LEAF EXTRACTS AS REPELLENTS AGAINST *Aedes aegypti*

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Dengue Hemorrhagic Fever (DHF) is an infection disease, potentially causing death and can be transmitted by *Aedes aegypti*. One method to prevent the transmission of DHF is to avoid mosquito bites by using repellent. Repellent, widely used in society, often formed by chemicals which are corrosive, then seeking natural compounds that can be used as repellent is preferred. *Psidium guajava* Linn. Leaf contains active substances such as *alkaloid*, *flavonoid*, *saponin*, *tannin* and essential oil as repellent in it. The aim of this study was to determine the activity of *Psidium guajava* Linn. leaf extract as repellent against *Aedes aegypti*.

The study was an experimental design and follows the guidelines recommendation by the World Health Organization Pesticides Evaluation Scheme (WHOPES) from October to November 2014. *Aedes aegypti* was rearing in Zoology Laboratory, University of Lampung. Repellent testing conducted in 3 times in different day. Volunter's forearm inserted into the cage containing 50 adult female mosquitoes and applied with diluent as repellent, alcohol 70% as negative control and *Psidium guajava* Linn. leaf extracts 12,5%, 25% and 50%. Protection power from mosquito bites calculated by One-way Anova test. Effective doses 50% and 99% (ED<sub>50</sub> and ED<sub>99</sub>) value were calculated by Probit test.

It showed *Psidium guajava* Linn. Leaf extract 12,5%, 25% and 50% give protection for 48%, 57,63% and 82,96% and then ED<sub>50</sub> value were 0,667% and ED<sub>99</sub> value were 282,747% for *Aedes aegypti*.

*Psidium guajava* Linn. leaf extracts showed repellent activity against *Aedes aegypti*.

**Keyword:** *Aedes aegypti*, DHF, *Psidium guajava* Linn. leaf extracts, repellent