ABSTRACT

THE EFFECTIVENESS OF ETHANOL EXTRACT OF UMBRELLA TREE LEAVES (*Pandanus amaryllifolius* Roxb.) AS A LARVICIDE TO *Aedes aegypti*

By

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Dengue Hemorrhagic Fever (DHF) is a disease that travels rapidly and can cause death within a short time. Some substances that contained in herbs were often used as natural herbicide, due to its minimal side effect. Those components were include saponin, polifenol, flavonoid, alkaloid and essential oil. These components are contained in umbrella tree leaves (*Pandanus amaryllifolius* Roxb.). This study aims to determine the effectiveness, $LC_{50}$ and $LT_{50}$ of ethanol extract of umbrella tree leaves (*Pandanus amaryllifolius* Roxb.). The type of this research is experimental by using Randomize Trial Design (RTD). The treatment is divided into 6 concentrations which are negative control (0%) , 0,125 %, 0,25%, 0,5%, 1% and a positive control (abate 1%) was observed for 72 hours. The samples are 600 larvae, each group contains 25 larvae with 4 repetitions. The tests are One-way ANOVA (p<0,05), Post hoc Bonferroni (p<0,05), probit test and Simple Linear Regression test for $LC_{50}$ and $LT_{50}$. Ethanol extract of umbrella tree leaves (*Pandanus amaryllifolius* Roxb.) is effectively used as a larvacide in 1% concentration. $LC_{50}$ value is 0,3753 % which is better than the standard of WHO (1%) and $LT_{50}$ value is 54,56 hours which is better than the standard of WHO (72 hours).

Keywords: *Aedes aegypti*, Dengue Hemorragic Fever, Larvacide, Umbrella tree leaves (*Pandanus amaryllifolius* Roxb.)