ABSTRACT

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

By

ZURYATI TOIYIBA QURBANY

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.)