

ABSTRACT

Sani, Fitroh. 2012. **Use of Filtrate Endophytic Chitinolytic Bacterial To Control Mosquito *Aedes aegypti* L.** Theses. Biology Programme Faculty of Science and Technology The State of Islamic University Maulana Malik Ibrahim Malang. Promotor: (1) Dr. Ulfah Utami, M.Si. (2) Umayatus Syarifah, M.A.

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Endophytic Chitinolytic Bacterial (*Bacillus mycoides*, *Klebsiella ozaenae* and *Pseudomonas pseudomallei*) is one type of chitinase producing bacteria that have the potential as biological control agents. The purpose of this study was to determine the effect of Filtrate Endophytic Chitinolytic Bacterial (*Bacillus mycoides*, *Klebsiella ozaenae* and *Pseudomonas pseudomallei*) for mortality, abnormalities and morphological changes in the mosquito *Aedes aegypti*.

Treatment given in this study consists of four variations of the concentration of the Filtrate Endophytic Chitinolytic Bacterial (0 ml, 0,5 ml, 1 ml and 1,5 ml) and 3 types of filtrates variety of bacteria (*Bacillus mycoides*, *Klebsiella ozaenae* and *Pseudomonas pseudomallei*) into test containers containing 150 ml of culture medium and 10 tail-stage *Aedes aegypti* larvae instar II with four repetitions in each type and concentration. The number of larvae that died were analyzed by ANOVA test. While the morphology of larvae that died compared with normal larvae.

The results of this study indicate that the Filtrate Endophytic Chitinolytic Bacterial potential biological control agents. The average percentage of mortality with bacteria *Bacillus mycoides* filtrate was 0 ml = 0%, 0,5 ml = 19%, 1 ml = 22%, and 1,5 ml = 44%. In the bacterium *Klebsiella ozaenae* filtrate was 0 ml = 0%, 0,5 ml = 25%, 1 ml = 28%, and 1,5 ml = 50%. While the filtrate bacteria *Pseudomonas pseudomallei* combination with *Klebsiella ozaenae* was 0 ml = 0%, 0,5 ml = 28%, 1 ml = 67%, and 1,5 ml = 97%. Filtrate Endophytic Chitinolytic Bacterial of *Pseudomonas pseudomallei* combination with *Klebsiella ozaenae* concentration of 1,5 ml is the concentration of the most effective way to control the mosquito *Aedes aegypti*.