

ABSTRACT

Mahendra, Yusuf Rizal. 2014. **The Potency of Bitter Melon Fruit (*Momordica charantia*) Ethanol Extract As an Insecticides Against Adult Culex sp. Mosquitoes with Spray Method.** Final Assessment, Faculty of Medicine, Brawijaya University. Supervisors : (1) dr. Aswin Djoko Baskoro, MS, Sp.Park, (2) dr. Sudiarto, MS

Culex sp. act as vectors of *filariasis*, *Japanese encephalitis*, and chikungunya fever. Chemical insecticides is one of the very potent chemicals to control the vector. However, the use of chemical insecticides led to a new problem, namely the resistance of mosquitoes and toxic effects in humans. Bitter melon the active ingredient of which is estimated to have insecticidal activity are saponins, flavonoids, alkaloids. This study aims to test the effectiveness of the ethanol extract of bitter melon fruit as an insecticide against mosquitoes Culex sp. This is purely an experimental study using the Post-Test Only Control Group Design. The study results showed that the average level of effectiveness as an insecticide Malathion is 100%. The average level of effectiveness of the ethanol extract of bitter melon fruit concentration of 25%, 30%, and 35% were 86%, 98% and 100%. The difference between the four analyzed by man whitney and post hoc tukey obtained that there is a significant difference between the concentration of 25% with Malathion, and there was no significant difference between the concentrations of 30% and 35% with Malathion. In the spearman correlation test obtained spearman correlation coefficient $R = 0.991$ for time of observation and $R = 0.922$ for concentration variations. Conclusion that the ethanol extract of bitter melon fruit has potential as an insecticide. It is recommended further research to determine the side effects of the ethanol extract of bitter melon fruit.

Key words: ethanol extract of bitter melon fruit, insecticide, mosquito Culex sp.