A TOXICITY TEST FOR RHIZOPHORA MUCRONATA BARK EXTRACT AS A POTENTIAL BIO-INSECTICIDE AGAINST SPODOPTERA LITURA LARVAE

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Abstract

Spodoptera litura is a kind of pests that attack crops and vegetables in Indonesia. One method to overcome the effect is bark extract of Rhizophora mucronata application that contained alkaloid compounds and tannin. These compounds inhibited the growth of insect and showed as the potential bio-insecticide. Bark extraction of Rhizophora mucronata was conducted using maceration method. The extract were tested on second instar Spodoptera litura larvae by leaf dipping method with concentration of 5%, 10%, 20%, 40%, and 80%, respectively. Larvae was exposed to the bark extract for 24 hours. LC_{50} was calculated using probit analysis, and is was obtained for 83,4586%. After 24 hours exposure, the larvae feeding was changed without treatment is leaf. Larval mortality was observed at 48 and 72 hours, respectively. The observation of, was showed the increasing of larval mortality (29,2%) whereas at 72 hours, an increasing larval mortality of 56,4%.

Keywords: Rhizophora mucronata, maceration, Spodoptera litura, LC_{50}