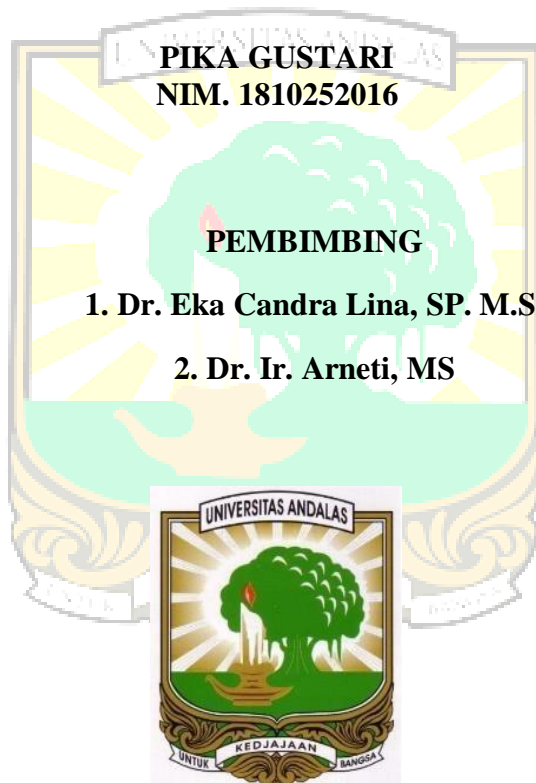


**AKTIVITAS INSEKTISIDA BOTANI *Piper aduncum* 20 EC
TERHADAP ULAT GRAYAK (*Spodoptera litura* Fabricius)
(LEPIDOPTERA : NOCTUIDAE)**

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ABSTRAK

Ulat grayak (*Spodoptera litura* Fabricius) merupakan salah satu hama penting yang dapat menyerang berbagai tanaman budidaya terutama tanaman kedelai. Kehilangan hasil akibat serangan hama tersebut dapat mencapai 80%, bahkan dapat menyebabkan kegagalan panen jika tidak dilakukan pengendalian. Penelitian ini bertujuan untuk mengetahui aktivitas formulasi insektisida botani *Piper aduncum* 20 EC terhadap ulat grayak (*Spodoptera litura*) (Lepidoptera : Noctuidae). Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan metode eksperimen yang terdiri dari dua pengujian yaitu uji pendahuluan dan uji lanjutan. Uji pendahuluan terdiri dari pengujian insektisida *Piper aduncum* 20 EC dan *Piper aduncum* 20 WP. Uji lanjutan terdiri dari pengujian insektisida botani *P. aduncum* 20 EC yang terdiri dari enam perlakuan dan enam ulangan. Uji hayati menggunakan metode celup daun dengan larva serangga uji *Spodoptera litura* instar ke-II. Parameter pengamatan yang diamati antara lain mortalitas, aktivitas anti makan (*antifeedant*), lama perkembangan larva, pupa terbentuk, imago yang muncul, nisbah kelamin imago jantan dan betina. Data hasil pengamatan dianalisis menggunakan Anova dan jika berbeda nyata diuji lanjut dengan *Least Significant Different* (LSD) pada taraf 5%. Secara umum insektisida botani *Piper aduncum* 20 EC memiliki aktivitas insektisida yang rendah terhadap serangga uji *Spodoptera litura*. Disamping itu, memberikan pengaruh terhadap kematian, aktivitas anti makan, lama perkembangan, pupa yang terbentuk, imago yang muncul serta nisbah kelamin imago jantan dan betina serangga uji *Spodoptera litura*. Hubungan antara konsentrasi perlakuan insektisida botani *Piper aduncum* 20 EC dengan persentase mortalitas larva uji menunjukkan nilai LC_{50} sebesar 5,89% dan nilai LC_{95} sebesar 19,84%.

Kata kunci : Formulasi, Hama, Konsentrasi, Pengendalian, Serangan

**BOTANICAL INSECTICIDE ACTIVITIES *Piper aduncum* 20
EC AGAINST GRAYERS (*Spodoptera litura* Fabricius)
(LEPIDOPTERA : NOCTUIDAE)**

ABSTRACT

Armyworm (*Spodoptera litura* Fabricius) is an important pest that can attack various cultivated plants, especially soybeans. Yield losses due to pest attacks can reach 80%, and can even cause crop failure if control is not carried out. This study aims to determine the activity of the botanical insecticide formulation *Piper aduncum* 20 EC against armyworm (*Spodoptera litura*) (Lepidoptera : Noctuidae). The research design used was a completely randomized design (CRD) with an experimental method consisting of two tests, namely the preliminary test and follow-up test. The preliminary test consisted of testing the 20 EC Piper aduncum and 20 WP Piper aduncum formulations. The follow-up test consisted of testing the 20 EC formulation which consisted of six treatments and six replications. The biological test used the leaf dip method with second instar larvae of the test insect *Spodoptera litura*. Parameters observed included mortality, antifeedant activity, duration of larval development, pupa formation, emergence of imago, sex ratio of male and female imago. Observational data were analyzed using ANOVA and if significantly different were further tested with Least Significant Different (LSD) at 5% level. In general, the *Piper aduncum* 20 EC formulation has low insecticidal activity against the test insect *Spodoptera litura*. Besides that, it has an influence on mortality, feeding activity, development time, pupa formation, imago appearing and the sex ratio of male and female imago of the *Spodoptera litura* test insect. The relationship between the concentration of the Piper aduncum 20 EC formulation and the percentage of mortality of the test larvae showed that the LC₅₀ value was 5,89% and the LC₉₅ value was 19,84%.

Keywords : Pest, Concentration, Control, Attack