

## **ABSTRAK**

### **UJI LAJU MORTALITAS KUTU PUTIH TANAMAN KAKAO (*Planococcus minor*) YANG DIBERIKAN EKSTRAK BATANG KITOLOD (*Hippobroma longiflora* (L.) G. Don.)**

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Kitolod (*Hippobroma longiflora* (L.) G.Don) merupakan tanaman perdu yang banyak digunakan masyarakat awam sebagai obat mata. Berbagai kajian membuktikan bahwa kitolod mengandung senyawa metabolit yang berpotensi sebagai antibiotik dan antijamur pada manusia. Dalam penelitian ini dilakukan pengujian kandungan metabolit sekunder batang kitolod yang berpotensi sebagai insektisida nabati terhadap kutu putih. Kutu putih (*Planococcus minor* Maskell., Hemiptera: Pseudococcidae) salah satu insekta yang menginfeksi tanaman coklat. Penelitian dilakukan menggunakan Rancangan Acak Lengkap (RAK), dengan satu perlakuan yaitu konsentrasi ekstrak batang kitolod yang terdiri dari konsentrasi 1%, 2%, 3%, 4%, 5% dan metindo 25% (sebagai kontrol positif) dengan 3 ulangan. Mortalitas kutu putih dengan parameter yang diamati LT<sub>50</sub> dan LC<sub>50</sub>.

Hasil uji fitokimia diketahui bahwa ekstrak batang kitolod mengandung senyawa alkaloid, saponin, dan flavonoid. Hasil analisis probit menunjukkan bahwa ekstrak batang kitolod efektif bekerja pada konsentrasi 3% (LC<sub>50</sub>) setelah 48 jam perlakuan (LT<sub>50</sub>). Hasil ini sesuai dengan hasil uji lanjut Tukey's pada  $\alpha = 5\%$  yang menunjukkan bahwa perlakuan konsentrasi ekstrak 3% selama 48 jam menyebabkan mortalitas tertinggi pada kutu putih.

Kata Kunci: kitolod, kutu putih, LT<sub>50</sub>, LC<sub>50</sub>, dan mortalitas

## **ABSTRACT**

### **PESTICIDE ACTIVITY OF KITOLOD STEM EXTRACTS (*Hippobroma longiflora* (L.) G.Don) AGAINST MEALYBUG (*Planococcus minor* Maskell., Hemiptera: Pseudococcidae) ON COCOA PLANTS**

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Kitolod (*Hippobroma longiflora* (L.) G.Don) is a herbaceous plant that is widely used by the community as eye drops. Results various studies have proven that kitolod contains many secondary metabolites that have the potential as antibiotics and antifungals in humans. In this study, a study was conducted on the potential content of secondary metabolites of kitolod stem extract as a botanical insecticide against mealybugs. The mealybug (*Planococcus minor* Maskell., Hemiptera: Pseudococcidae) is one of the insects that infect cocoa plants. The study was conducted using a completely randomized design (CRD) with 1 factor, namely the concentration of kitolod stem extract, consisting of concentrations of 1%, 2%, 3%, 4%, 5% and 25% metindo (as a positive control) with 5 replications. Parameters observed were LT and LC50 as well as mealybug mortality.

The results of the phytochemical test showed that the extract of kitolod stem contained alkaloids, saponins, and flavonoids. The results of probit analysis proved that kitolod stem extract was effective at 3% concentration (LC50) after 48 hours of treatment (LT50). This result is in accordance with the results of Tukey's test at  $\alpha = 5\%$  which also showed that the treatment with 3% extract concentration for 48 hours caused the highest mortality in mealybugs.

**Keywords:** kitolod, mealybug, LT50, LC50, and mortality