

## INTISARI

**AFIATUN, I.N., 2015, UJI AKTIVITAS EKSTRAK ETANOL, FRAKSI *n*-HEKSANA, FRAKSI ETIL ASETAT DAN FRAKSI AIR BIJI DUKU (*Lansium domesticum* Correa) SEBAGAI LARVASIDA NYAMUK *Anopheles aconitus*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA**

Biji Duku (*Lansium domesticum* Correa) adalah tanaman yang memiliki manfaat salah satunya sebagai insektisida alternatif yang mengandung alkaloid, saponin, flavonoid dan triterpenoid. Tujuan penelitian ini adalah untuk mengetahui aktivitas larvasida ekstrak etanol, fraksi *n*-heksana, fraksi etil asetat dan fraksi air biji duku (*Lansium domesticum* Correa) sebagai larvasida nyamuk *Anopheles aconitus*, yang dinyatakan dalam LC<sub>50</sub> dan mengetahui sediaan uji yang paling aktif.

Serbuk biji duku diremaserasi selama 3 kali dengan setiap remaserasi 3 hari dengan menggunakan pelarut etanol 96%, kemudian difraksinasi dengan menggunakan pelarut *n*-heksana, etil asetat dan air. Kelompok perlakuan dibagi 8 yaitu lima kelompok seri konsentrasi (125µg/ml, 250µg/ml, 500µg/ml, 1000 µg/ml, 1500 µg/ml), kontrol positif (Abate 1G<sup>®</sup> 0,01%), kontrol negatif (larutan tween 80 1% ditambah aquadest) dan kontrol normal (aquades). Masing-masing dimasukkan dalam gelas uji yang berisi 25 ekor larva nyamuk *Anopheles aconitus* selama 24 jam, dihitung larva yang mati. Percobaan dilakukan sebanyak 3 kali. Masing-masing konsentrasi ditetapkan dengan menggunakan metode analisis probit. Data dianalisis statistik uji ANOVA

Hasil penelitian ini menunjukkan bahwa ekstrak etanol dan fraksi *n*-heksana biji duku (*Lansium domesticum* Correa) mempunyai aktivitas paling aktif dengan nilai LC<sub>50</sub> 241,2436µg/ml dan 249,4235µg/ml dibandingkan dengan fraksi etil asetat dan fraksi air dengan nilai LC<sub>50</sub> 278,5528µg/ml dan 747,2454µg/ml.

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Kata kunci : *Anopheles aconitus*, Biji duku (*Lansium domesticum* Correa), ekstrak etanol, fraksi , LC<sub>50</sub>

## ABSTRACT

**AFIATUN, I.N., 2015, ACTIVITY TEST OF ETHANOL EXTRACT, n-HEXANE, ETHYL ACETATE, and WATER FRACTIONS DUKU SEEDS (*Lansium domesticum* Correa) AS *Anopheles aconitus* MOSQUITO LARVICIDE, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA**

Duku seeds (*Lansium Domesticum* Correa) is a beneficial plant, including as an alternative insecticide which contains alkaloid, saponin, flavonoid, and triterpenoid. The purpose of this study was to discover the activity of ethanol extract, n-hexane fraction, ethyl acetate fraction and water fraction duku seeds (*Lansium domesticum* Correa) as *Anopheles aconitus* mosquito larvicide, expressed in  $LC_{50}$  and knowing the test preparation are most active.

Duku seeds powder was macerated 3 times, each maceration lasted 3 days, using 96% ethanol solvent, and then fractionated using n-hexane solvent, ethyl acetate solvent and water. There were 8 treatment groups which were five group concentration series (125  $\mu\text{m/ml}$ , 250  $\mu\text{m/ml}$ , 500  $\mu\text{m/ml}$ , 1000  $\mu\text{m/ml}$ , 1500  $\mu\text{m/ml}$ ) and positive control (ABATE1G®), negative control (tween 80 1% solvent and distilled water), normal control (distilled water). Each was put into a test glass which contains 25 larvae of *Anopheles aconitus* mosquito larvae for 24 hours, and then dead larvae were counted. The test was conducted 3 times. Each concentration was determined by probit analysis method. The data was analyzed by ANOVA statistical test.

The result of this study showed that ethanol extract and duku seeds (*Lansium domesticum* Correa) n-hexane fraction had most active with  $LC_{50}$  values of 241,2436  $\mu\text{g/ml}$  and 249,4235  $\mu\text{g/ml}$ , compared with ethyl acetate fraction and water fraction with  $LC_{50}$  values of 278,5528  $\mu\text{g/ml}$  and 747,2454  $\mu\text{g/ml}$ .

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Kata kunci : *Anopheles aconitus*, Duku seeds (*Lansium domesticum* Correa), ethanol extract, fraction,  $LC_{50}$