

**KEMANGI (*Ocimum basilicum* L. forma *citratum* Back) :
Kajian Daya Repelan Terhadap Nyamuk *Aedes aegypti*
dan Daya Iritasi Primer**

INTISARI

Penelitian ini bertujuan untuk mengetahui daya repelan infusa daun kemangi (*Ocimum basilicum* L. forma *citratum* Back) terhadap nyamuk *Aedes aegypti* betina dan kemungkinan efek iritasi primer akibat pemakaiannya.

Jenis penelitian yang digunakan adalah eksperimental murni dengan rancangan penelitian acak lengkap pola searah. Infusa daun kemangi dibuat dalam konsentrasi 10%, 20%, 40%, dan 80%, kemudian dioleskan pada kulit marmut. Marmut dimasukkan dalam sangkar yang berisi 20 ekor nyamuk. Dihitung jumlah gigitan nyamuk pada menit ke 0 sampai 120 dengan selisih 10 menit, kemudian dianalisis Split plot, dilanjutkan dengan probit untuk menentukan EC_{50} . Uji iritasi primer dikerjakan dengan uji tempel. Punggung marmut diolesi infusa daun kemangi, ditutup plastik, dan direkatkan dengan plester. Pengamatan uji iritasi primer dikerjakan setelah 24 dan 72 jam. Pengamatan dikerjakan pada reaksi kulit yang mengalami (1) eritema dan pembentukan kerak, dan (2) pembentukan edema.

Hasil analisis daya repelan menunjukkan bahwa antar kelompok kontrol negatif dengan konsentrasi 10%, 20%, 40%, dan 80% memberikan hasil ada perbedaan secara bermakna. Kontrol positif dengan konsentrasi 10% dan 20% menunjukkan berbeda bermakna, sedangkan dengan konsentrasi 40% dan 80% menunjukkan tidak berbeda bermakna. Harga EC_{50} yang diperoleh sebesar 23, 175117%. Hasil uji iritasi primer menunjukkan konsentrasi 10%, 20%, dan 40% tidak mengiritasi kulit, sedangkan konsentrasi 80% menunjukkan sedikit merangsang. Jadi infusa daun kemangi konsentrasi 40% dapat digunakan sebagai repelan.

ABSTRACT

This study intended to identify the repellent power against female *Aedes aegypti* of basil leaf infusion and the possibility of primary irritation by its used.

The study was categorized as purely experimental reseach with the direct pattern completely random design. The infusion of basil leaf was made at concentration of 10%, 20%, 40%, and 80%, and smeared on the guenea pigs skin. The guinea pigs in their mousetraps were put into a mosquito cage contained 20 female *Aedes aegypti* mosquitoes. The amountof mosquitoes bite (the repellentpower observations) were performed every 10 minutes, done for 120 minutes. The results were analyzed using Split plot method and continued with probit analysis to determine EC₅₀. The primary irritation test were conducted by attaching test. The back of guinea pigs were smeared with basil leaf infusion, then covered with plasticand glued with plaster. The primary irritation observation were performed after 24 and 72 hours. The observations were performed on the skin reactions such as the development of (1) eritema encrustation, and (2) edema

The results of the repellent analysis between the negative control and the concentration of 10%, 20%, 40%, and 80% showed significant differences, between the positive control and the concentrations of 10% and 20% showed significant differences, and between the positive control and the concentration of 40% and 80% did not show significant differences. EC₅₀ of the basil leaf infusion is 23, 17517%. The result of primary irritation test showed that the concentrations of 10%, 20%, and 40% did not cause irritation. The concentration of 80% showed a slight stimulation. The repellent activity was showed by 40% concentration.