ABSTRAK

Paniselvom.Gobi Nath.2015. **Uji Potensi Ekstrak Daun *Rosemary* (*Rosmarinus officinalis*) Sebagai *Insektisida Terhadap Lalat Chrysomia Menggunakan Metode Semprotan*** *Tugas Akhir, Fakultas Kedokteran Universitas Brawijaya. Dosen pembimbing: (1*, Dr. Sudjari, DTM&H, M.Si, SpPark, *(2) dr. Dewi Mustika, M. Biomed.*

Insektisida kimiawi memiliki efektifitas tinggi dalam membunuh lalat chrysomia tetapi juga memiliki efek samping yang merugikan terhadap manusia dan lingkungan sedang insektisida alami bersifat mudah terurai sehingga penggunaannya relatif aman. *Rosmarinus officinalis* mengandung *linalool*, *borneol*, dan *camphor* yang diduga mempunyai efek insektisida.Lalat *Chrysomia* merupakan salah satu vektor mekanis untuk beberapa penyakit seperti *Diare, Disentri* dan *Cholera.*Penelitian ini bertujuan untuk menguji potensi ekstrak daun rosemary sebagai insektisida terhadap lalat *Chrysomia*. Penelitian ini merupakan 'penelitian *true experimental-post test only control group design'* dengan sampel yang digunakan adalah lalat *Chrysomia*. Pengulangan dilakukan sebanyak empat kali dengan jumlah perlakuan sebanyak lima jenis yaitu kontrol negatif (aceton 1%), konsentrasi larutan ekstrak daun rosemary sebesar 1%, 3%, 5% dan control positif (malathion 0,28%). Setiap perlakuan diamati pada tujuh interval waktu yaitu pada jam 1, 2, 3, 4, 5, 6, dan 24. Hasil penelitian menunjukkan bahwa pada konsentrasi 5%, dalam waktu 40 menit, 50% lalat mati. Terdapat perbedaan yang bermakna pada konsentrasi 1%, 3% dan 5%. Hasil uji korelasi *Pearson* konsentrasi terhadap Abbot menunjukkan nilai signifikansi (*P-value*) = 0.000 ($p<0.05$) dan koefisien korelasi *(r-value)* = 0.605 yang berarti korelasinya berbanding lurus, yang artinya semakin tinggi dosis ekstrak, maka semakin tinggi jumlah kematian serta menunjukkan korelasi yang kuat (*r 0,600-0,799*).Potensi insektisida lebih dipengaruhi oleh konsentrasi dibanding waktu. Kesimpulan dari penelitian ini adalah ekstrak ethanol daun *rosemary* (*Rosmarinus officinalis*) mempunyai potensi sebagai insektisida yang bagus terhadap lalat *Chrysomia.*

Kata kunci : ekstrak daun *rosemary*, insektisida, *Chrysomia, Rosmarinus officinalis.*

ABSTRACT

Paniselvom. Gobi Nath. 2015. **The Potential Effect of *Rosmarinus officinalis* Extract on Chrysomia *as an Insecticide Using Spraying Method.*** *Final Assignment, Faculty Of Medicine, Brawijaya University. Supervisors: (1), Dr. Sudjari, DTM&H, M.Si, SpPark , (2) dr. Dewi Mustika, M. Biomed.*

Manmade chemical insecticides have proved to be highly effective in eradicating this pest but its negative effects upon human health and environmental safety were major drawbacks to its continued use. Hence, the search for alternative, natural substances such as *Rosmarinus officinalis, t*hat were both environmentally safe as well as an effective insecticides is needed. The extract of *Rosmarinus officinalis* has knowned to contain high concentrations of *linalool, borneol*, and *camphor*.These substances were thought to have insecticidal properties.*Chrysomia* was selected as the specimen for this study because it serves as an important mechanical vector for many diseases endemic in the developing world such as Diarrhea, Dysentery dan Cholera.This study aimed to identify the potency of *Rosmarinus officinalis* extract against *Chrysomia* using a contact poison method. A true experimental study was conducted, using specimens of *Chrysomia* at three concentrations of *Rosmarinus officinalis* extract; 1%, 3%, 5%, with one negative control using aceton 1% solution, and also one positive control using 0.28% *Malathion*. The experiment was repeated four times and each repetition was observed at seven time intervals (1^{st}, 2^{nd}, 3^{rd}, 4^{th}, 5^{th}, 6^{th} and 24^{th} hour). The results showed that at a concentration of 5%, 50% of *Musca domestica* specimens died within 4.5 hours.There was a significant and relevant difference between the results of the study at each concentration of the extract. A *Pearson correlation* analysis of extract concentration against the *Abbot* value showed a significant *P-value* = 0.000 ($p<0.05$) and a correlation coefficient (*r-value*) of 0.605. The *r-value* indicates there was a strong (*r 0.600-0.799*) and linear correlation between increasing concentration of extract and increasing Abbot value (increasing potency of insecticide). Thus insecticidal potential is more affected by concentration compared to time. It can be concluded from this study that *Rosmarinus officinalis* is a potent and effective insecticide towards *Chrysomia.*

Keywords :insecticide, *Chrysomia, Rosmarinus officinalis* extract.