EFEKTIVITAS LARVASIDA EKSTRAK AKAR TUBA (*Derris elliptica* (Wall.) Benth. TERHADAP KEMATIAN LARVA *Aedes aegypti* DARI POPULASI YANG RESISTEN TEMEPHOS 0.02 mg/L

Ayu Permatasari[1], Sayono[1,] Didik Sumanto[1]

[1]Fakultas Kesehatan Masyarakat Universitas Muhammadiyah Semarang

ABSTRAK

Latar belakang : Nyamuk *Aedes aegypti* merupakan vektor utama penyakit DBD. Pemberantasan dengan metode kimia dalam waktu yang lama telah menimbulkan resistensi spesies ini, baik stadium dewasa maupun larva. Resistensi larva *Aedes aegypti* terhadap larvasida telah menghambat program pengendalian vektor DBD sehingga perlu dicari pestisida nabati yang efektif. Penelitian ini bertujuan untuk mengetahui daya bunuh larvasida ekstrak akar tuba (*Derris elliptica* (Wall.) Benth.) terhadap kematian larva *Aedes aegypti* dari populasi yang resisten temephos 0,02 mg/L. **Metode :** Penelitian *eksperimental* dengan rancangan *Posttest Only Control Group Design*. Menerapkan lima kosentrasi, yaitu 0.09 %, 0.13 %, 0.17 %, 0.21 % dan 0.25 %. Subyek penelitian adalah larva *Aedes Aegypti* dari populasi yang resisten temephos 0,02 mg/L, subyek 650 ekor yang dialokasikan dalam kelima kosentrasi, masing-masing lima ulangan, dimana tiap perlakuan sebanyak 25 ekor larva. Analisis data secara univariat dan bivariat (uji probit dan uji *one way anova*). **Hasil :** Rerata kematian larva pada setiap kosentrasi setelah 24 jam yaitu 8.2 ekor, 12.4 ekor, 18 ekor, 23.8 ekor dan 25 ekor. LC_{50} dan LC_{90} masing-masing 0,160 % (0.142 % - 0.170 %) dan 0,204 % (0.194 % – 0.218 %). **Simpulan :** Ekstrak akar tuba dengan pelarut metanol berpotensi menjadi larvasida untuk larva *Aedes aegypti* meskipun telah resisten temephos 0,02 mg/L.

Kata kunci : Akar tuba, Larva *Aedes aegypti*, Resisten, Temephos

ABSTRACT

Background: *Aedes Aegypti* mosquito is the main vector of Dengue Haemorrhagic Fever **(**DHF). Eradication with chemical methods for a long time has caused resistance to this species, both adult and larval stages. The resistance of *Aedes Aegypti* larvae to larvacides has inhibited DHF vector control program so that it is necessary to find effective vegetable pesticides. This study aimed to determine the killing power of larvacide in tuba root extract (*Derris Elliptica* (Wall.) Benth.) On the death of *Aedes Aegypti* larvae from a temephos resistant population of 0.02 mg/l. **Methods**: An experimental study with Posttest-Only Control Group Design. Applying five concentrations, they are 0.09%, 0.13%, 0.17%, 0.21% and 0.25%. The subjects were *Aedes Aegypti* larvae from temephos resistant populations of 0.02 mg/l, 650 subjects were allocated in the fifth concentration, five replications each, with 25 larvae each treatment. Data analysis was univariate and bivariate (probity test and one way ANOVA test). **Results**: The average mortality of larvae at each concentration after 24 hours was 8.2 larvae, 12.4 larvae, 18 larvae, 23.8 larvae, and 25 larvae. LC_{50} and LC_{90} are 0.160% (0.142 % - 0.170 %) and 0.204% (0.194 % – 0.218 %) respectively. **Conclusion**: Tuba root extract with methanol solvent has the potential to become larvacide for *Aedes Aegypti* larvae despite temephos resistance of 0.02 mg/L.

Keywords: Tuba root, *Aedes Aegypti* larvae, Resistant, Temephos