

## ABSTRAK

**Melisa Sinaga, 4173520024, NIM 4173520024 (2022). Toksisitas (LC<sub>50</sub>-24 hour) Ekstrak Daun Melati (*Jasminum sambac*, L.) Terhadap Larva Nyamuk *Culex* sp.**

Penelitian ini bertujuan untuk mengetahui tingkat toksisitas (LC<sub>50</sub>-24 Jam) ekstrak daun Melati (*Jasminum sambac*, L.) terhadap larva instar I nyamuk *Culex* sp untuk memutus mata rantai pertumbuhan dan perkembangan larva nyamuk *Culex* sp. Penelitian ini didesain secara Rancangan Acak Lengkap (RAL), dengan satu kali uji pendahuluan dan uji sesungguhnya. Penelitian dilaksanakan pada bulan April - Juni 2022 di Laboratorium Biologi Fakultas MIPA, Universitas Negeri Medan. Konsentrasi ekstrak daun Melati (*Jasminum sambac*, L.) yang digunakan adalah 0%, 0,5%, 1%, 1,5%, dan 2% pada uji pendahuluan dan uji sesungguhnya. Hasil analisis probit uji pendahuluan LC<sub>50</sub>-24 jam didapatkan nilai LC<sub>50</sub> = 0,550% dengan konsentrasi terendah adalah 0,139% dan konsentrasi tertinggi mencapai 0,795%. Hasil analisis probit pada uji sesungguhnya di dapatkan nilai LC<sub>50</sub> pada konsentrasi 0,388% (3880 ppm). Berdasarkan perhitungan perhitungan logaritmik busvine maka konsentrasi Uji Sesungguhnya yaitu K1 0% sebagai kontrol; K2 (0,197%); K3 (0,279%); K4 (0,395%) dan K5 (0,791%). Berdasarkan hasil penelitian dan data yang diperoleh bahwa ekstrak daun melati (*Jasminum sambac*, L.) memiliki efek toksik yang berpotensi memutus rantai pertumbuhan dan perkembangan larva nyamuk larva *Culex* sp dan ekstrak daun melati (*Jasminum sambac*, L.) mampu membuat kematian 50% populasi larva nyamuk *Culex* sp dalam waktu 24 jam dengan nilai konsentrasi sebesar 0,3880% atau setara dengan 3880 ppm.

**Kata Kunci :** Ekstrak daun Melati (*Jasminum sambac*, L.), larva *Culex* sp, toksisitas, LC<sub>50</sub>-24 Jam,



## ABSTRACT

**Melisa Sinaga, 4173520024, NIM 4173520024 (2022). Toxicity (LC<sub>50</sub>-24 Hour) Jasmine Leaf Extract (*Jasminum sambac*, L.) Against Mosquito Larvae *Culex* sp.**

This research aims to determine the level of toxicity (LC<sub>50</sub>-24 hours) of extract leaf Jasmine (*Jasminum sambac*, L.) against the larvae of instar I mosquito *Culex* sp to break the chain of growth and development of *Culex* sp mosquito larvae. This study was designed by Complete Randomized Design (RAL), with one preliminary test and actual test. The research was carried out in April - June 2022 at the Biology Laboratory of the Faculty of Mathematics and Natural Sciences, Medan State University. Concentration of extract leaf Jasmine (*Jasminum sambac*, L.) used were 0%, 0.5%, 1%, 1.5%, and 2% in preliminary tests and actual tests. The results of the probit analysis of the preliminary test LC<sub>50</sub>-24 hours obtained the value of LC<sub>50</sub> = 0.550% with the lowest concentration being 0.139% and the highest concentration reaching 0.795%. The results of probit analysis in the actual test were obtained LC<sub>50</sub> value at a concentration of 0.388% (3880 ppm). Based on the calculation of the logarithmic calculation of the Busvine's, the actual test concentration is K1 0% as the control; K2 (0.197%); K3 (0.279%); K4 (0.395%) and K5 (0.791%). Based on the results of research and data obtained, jasmine leaf extract (*Jasminum sambac*, L.) has a toxic effect that has the potential to break the chain of growth and development of *Culex* sp larval mosquito larvae and jasmine leaf extract (*Jasminum sambac*, L.) is able to make the death of 50% of the *Culex* sp mosquito larva population within 24 hours with a concentration value of 0.3880% or equivalent to 3880 ppm.

**Keywords:** Jasmine leaf extract (*Jasminum sambac*, L.), larvae *Culex* sp, Toxicity, LC<sub>50</sub>-24 hours.

