RINGKASAN

TIRTA AGENCY. Pemanfaatan Ekstrak Daun Mangrove *Sonneratia alba* Terhadap Ektoparasit *Pterobdella* sp. Secara In-Vitro. Dibimbing oleh RIKA WULANDARI dan OKTO RIMANDI BAKKARA.

Pengendalian parasit pada ikan dapat dilakukan melalui pemanfaatan bahan herbal yang berasal dari berbagai jenis tumbuhan, salah satunya adalah daun Mangrove (*Sonneratia alba*). Penggunaan bahan alami ini memiliki sejumlah keunggulan, antara lain lebih aman bagi lingkungan, mudah didapatkan, terjangkau, serta minim risiko terhadap ekosistem sekitar. Tujuan dari penelitian ini adalah untuk mengevaluasi efektivitas ekstrak daun mangrove (*Sonneratia alba*) dalam membunuh ektoparasit jenis lintah *Pterobdella* sp., serta menentukan dosis optimalnya. Penelitian ini dilaksanakan pada bulan Maret 2025 di laboratorium Marine Chemistry, Fakultas Ilmu Kelautan dan Perikanan Universitas Maritim Raja Ali Haji Provinsi Kepulauan Riau. Tahapan penelitian meliputi proses ekstraksi menggunakan pelarut etanol 96%, identifikasi kandungan fitokimia secara kualitatif, uji toksisitas terhadap *Artemia salina* melalui analisis probit, serta pengujian efektivitas ekstrak terhadap lintah *Pterobdella* sp. Konsentrasi ekstrak yang digunakan dalam uji LC50 terhadap *Artemia salina* adalah 2500 ppm, 2000 ppm, dan 1500 ppm, sedangkan untuk uji pada lintah digunakan konsentrasi 2023 ppm, 1723 ppm, dan 1423 ppm. Data kematian hewan uji dianalisis menggunakan metode probit log konsentrasi untuk menentukan tingkat toksisitas, di mana nilai LC50-24 jam yang menghasilkan mortalitas di atas 50% dianggap bersifat toksik. Sementara itu, data uji tantang dianalisis secara kualitatif dan disajikan dalam bentuk diagram. Hasil penelitian menunjukkan kadar air daun mangrove *Sonneratia alba* sebesar 0,33% dan rendemen ekstrak mencapai 11.35%. Uji fitokimia menunjukkan bahwa pelarut etanol 96% mampu mengekstrak senyawa aktif berupa alkaloid, flavonoid, saponin, dan tanin. Nilai LC50-24 jam tercatat sebesar 2023 ppm, sedangkan konsentrasi paling efektif dalam membunuh lintah *Pterobdella* sp. adalah 2023 ppm.

Kata kunci: Daun Mangrove *Sonneratia alba*, Ektoparasit, *Pterobdella* sp.

SUMMARY

TIRTA AGENCY. Utilization of *Sonneratia alba* Mangrove Leaf Extract Against *Pterobdella* sp. Ectoparasites In Vitro. Supervised by RIKA WULANDARI and OKTO RIMANDI BAKKARA.

Parasite control in fish can be achieved through the use of herbal materials derived from various types of plants, one of which is mangrove leaves (Sonneratia alba). The use of these natural materials offers several advantages, including being safer for the environment, easily accessible, affordable, and posing minimal risk to the surrounding ecosystem. The objective of this study was to evaluate the effectiveness of mangrove leaf extract (Sonneratia alba) in killing the ectoparasite leech Pterobdella sp., as well as to determine its optimal dosage. The study was conducted in March 2025 at the Marine Chemistry Laboratory, Faculty of Marine Sciences and Fisheries, Raja Ali Haji Maritime University, Riau Islands Province. The research stages included the extraction process using 96% ethanol solvent, qualitative identification of phytochemical content, toxicity testing on Artemia salina through probit analysis, and testing the extract's effectiveness against Pterobdella sp. leeches. The extract concentrations used in the LC50 test on Artemia salina were 2500 ppm, 2000 ppm, and 1500 ppm, while for the leech test, the concentrations used were 2023 ppm, 1723 ppm, and 1423 ppm. The mortality data of the test animals were analyzed using the log concentration probit method to determine the toxicity level, where the 24-hour LC50 value resulting in mortality above 50% was considered toxic. Meanwhile, the challenge test data were analyzed qualitatively and presented in the form of a diagram. The results showed that the water content of Sonneratia alba mangrove leaves was 0.33% and the extract yield reached 11.35%. Phytochemical testing showed that 96% ethanol solvent was able to extract active compounds such as alkaloids, flavonoids, saponins, and tannins. The 24-hour LC50 value was recorded at 2023 ppm, while the most effective concentration for killing Pterobdella sp. leeches was 2023 ppm.

Keywords: *Sonneratia alba* mangrove leaves, ectoparasites, *Pterobdella* sp.