

ALYA MARSHAVIRA. NRP. 15.03.411.00065 Potensi Antibakteri Ekstrak Daun Mangrove *Rhizophora mucronata* Dengan Konsentrasi Yang Berbeda Terhadap Bakteri *Vibrio inhibens* dan *Vibrio harveyi*. Dibawah bimbingan **Insafitri, ST., M.Sc., Ph.D**

ABSTRAK

Mangrove merupakan salah satu ekosistem terpenting bagi kehidupan laut yang memiliki berbagai manfaat salah satunya dapat digunakan sebagai antibakteri. Daun mangrove Rhizophora mucronata memiliki kandungan yang dapat menghambat pertumbuhan beberapa bakteri patogen. Vibrio sp merupakan bakteri yang sering dijumpai atau berasosiasi pada biota laut (vibriosis) salah satunya yaitu terumbu karang. Oleh karena itu perlu dilakukannya penelitian untuk menghambat pertumbuhan bakteri pada terumbu karang agar dapat menjaga populasi terumbu karang. Tujuan penelitian ini untuk mengetahui aktivitas antibakteri dari ekstrak daun mangrove Rhizophora mucronata terhadap bakteri Vibrio inhibens dan Vibrio harveyi serta mengetahui pengenceran ekstrak daun mangrove Rhizophora mucronata yang optimum untuk menghambat pertumbuhan bakteri Vibrio inhibens dan Vibrio harveyi yang berasosiasi pada karang berpenyakit. Metode analisa yang digunakan meliputi ekstraksi daun mangrove, pengenceran ekstrak, sterilisasi alat dan bahan, peremajaan dan suspensi bakteri uji, uji aktivitas ekstrak antibakteri terhadap bakteri uji, dan penyajian data. Hasil penelitian menunjukkan konsentrasi ekstrak daun mangrove selama 2x24 jam dapat menghambat pertumbuhan bakteri Vibrio inhibens sebesar 2,36 mm (11,10%), 1,01 mm (1,270%) dan 0,76 mm (0,13%) serta Vibrio harveyi sebesar 1,07 mm (11,10%), 0,50 mm (1,27%) dan 0,16 mm (0,13%) dengan kategori hambat lemah. Pengenceran ekstrak daun mangrove Rhizophora mucronata paling bagus untuk untuk menghambat pertumbuhan bakteri Vibrio inhibens pada pengenceran 10^0 sebesar 2,36 mm.

Kata Kunci: *Rhizophora mucronata*, antibakteri, konsentrasi, *Vibrio inhibens*, *Vibrio harveyi*

ALYA MARSHAVIRA. NIM. 15.03.411.00065 Potential Antibacterial of Mangrove Leaf Extract *Rhizophora mucronata* With Different Concentrations of Bacteria *Vibrio inhibens* and *Vibrio harveyi*. Supervised by **Insafitri, ST., M.Sc., Ph.D**

ABSTRACT

Mangroves are one of the most important ecosystems for marine life that have various benefits, one of which can be used as an antibacterial. Mangrove leaves *Rhizophora mucronata* has a content that can inhibit the growth of several pathogenic bacteria. *Vibrio* sp is a bacterium that is often found or associated with marine biota (vibriosis), one of which is coral reefs. Therefore, research is needed to inhibit bacterial growth in coral reefs in order to maintain coral reef populations. The purpose of this study was to determine the antibacterial activity of mangrove *Rhizophora mucronata* leaf extract against *Vibrio inhibens* and *Vibrio harveyi* bacteries and find out the optimum dilution of *Rhizophora mucronata* mangrove leaf extract to inhibit the growth of *Vibrio inhibens* and *Vibrio harvei* bacteria associated with diseased corals. The analytical methods used included extraction of mangrove leaves, extract dilution, tool and material sterilization, rejuvenation and bacterial suspension test, antibacterial extract activity test against test bacteria, and data presentation. The results showed that the concentration of mangrove leaf extract for 2x24 hours could inhibit the growth of *Vibrio inhibent* bacteria by 2.36 mm (11.10%), 1.01 mm (1.27%) and 0.76 mm (0.13%) and *Vibrio harveyi* is 1.07 mm (11.10%), 0.50 mm (1.27%) and 0.16 mm (0.13%) with a weak inhibition category. Dilution of *Rhizophora mucronata* mangrove leaf extract is best for inhibiting the growth of *Vibrio inhibens* at a concentration of 11.10% at 2.36 mm.

Keywords: *Rhizophora mucronata*, antibacteria, consentration, *Vibrio inhibens*, *Vibrio harveyi*