

EFEKTIVITAS PERASAN ASAM JAWA (*Tamarindus indica L*) TERHADAP PERTUMBUHAN BAKTERI *Aeromonas hydrophila* DENGAN METODE DIFUSI KERTAS CAKRAM

EFFECTIVENESS OF THAMARIN JUICE (*Tamarindus indica L*) ON GROWTH OF BACTERIA *Aeromonas hydrophila* WITH PAPER DISC DIFFUSION METHOD

Rizky Aprilia Chrisanti, Laksmi Sulmartiwi dan Prayogo

Fakultas Perikanan dan Kelautan Universitas Airlangga Kampus
C Mulyorejo - Surabaya, 60115 Telp. 031-5911451

Abstract

Fish disease is one of the serious problems that faced by the farmers potentially to make high disadvantages as follows, mortality of fish and fish quality decrease, therefore economically will caused price decrease. Bacterial pathogens were one of the problems that were faced by fish farmers, which cause 90% of mortality. Diseases control caused by *Aeromonas hydrophila* in general using by antibiotics. Antibiotics are commonly used were tetracycline, oxolinic acid, erythromycin, streptomycin, and chloramphenicol. Using of antibiotics has shown good results, but on the other hand using of antibiotics or antibacterial cultivation would increased the bacteria number of resistant to antibiotics.

This research was purposed to find the alternative treatment of *Motile Aeromonas Septicemia* by determination ability of a squeeze of tamarind (*Tamarindus indica L*) and the minimum concentration of tamarind (*Tamarindus indica L*) to inhibit the growth of *Aeromonas hydrophila*. The function of tamarind as an antibacterial because they contain antibacterial substance such as flavonoids and saponins.

The results showed that the antibacterial power of tamarind juice has antibacterial power against *Aeromonas hydrophila*. Based on a sentsitivity test was performed according to standard of antibiotic concentrations that are common to *Aeromonas hydrophila*, was Tetracycline inhibition zone with <15 mm diameter (not sensitive), 15-18 mm (moderately susceptible), >18 mm (very sensitive) is A (10%), and B (12.5%), treatment inhibition zone subsequently 13 mm and 14.3 mm (insensitive), C (15%), D (17.5%), with inhibition zone 15.5 mm and 16.6 mm (self-sensitive) and 20% with inhibition zone diameter of 19 mm (highly sensitive). Therefore, it was concluded that A treatment (15%) with inhibition zone 15.5 mm showed the inhibition ability of *Aeromonas hydrophila* growth.

Keywords : *Tamarindus indica L*, *Aeromonas hydrophil*, *Paper disc diffusion method*