

**EFEKTIVITAS ASAM SITRAT SEBAGAI ANTI EKTOPARASIT
LINTAH LAUT (HIRUDINEA: (*Zeylanicobdella arugamensis*)) MELALUI
PERENDAMAN**

Oleh

Nike Mustikasari, NIM 2113117001

Jurusan Biologi dan Perikanan Kelautan

ABSTRAK

Infeksi ektoparasit *Zeylanicobdella arugamensis* sering menimbulkan masalah kesehatan ikan kerapu budidaya. Penelitian ini bertujuan untuk mengetahui efektivitas perendaman asam sitrat sebagai anti ektoparasit *Z. arugamensis*. Masing-masing sebanyak ± 120 ekor *Z. arugamensis* diisolasi dari ikan kerapu hibrida cantang (*Epinephelus fuscoguttatus* x *E. lanceolatus*) sakit dan ditempatkan pada cawan petri (total 6 cawan petri). Larutan asam sitrat dengan konsentrasi 0, 50, 100, 150, 250 dan 400 ppm dimasukkan ke dalam cawan petri tersebut. Perendaman *Z. arugamensis* dilakukan selama 30, 60, 90 dan 120 menit. Masing-masing 30 ekor *Z. arugamensis*/perlakuan/30 menit diambil dan ditempatkan pada 3 cawan petri (10 ekor/cawan petri) yang telah diisi air laut. Pengamatan dilakukan terhadap respon *Z. arugamensis*. Perendaman asam sitrat dengan konsentrasi dan lama waktu yang sama juga dilakukan terhadap *cocoon* (telur) *Z. arugamensis*. Pengamatan dilakukan terhadap perkembangan *cocoon* menjadi larva. Uji keamanan asam sitrat dilakukan terhadap ikan kerapu hibrida cantang yang terinfeksi *Z. arugamensis*. Masing-masing 3 ekor ikan uji di rendam dengan larutan asam sitrat dalam air laut konsentrasi 0, 150, 250 dan 300 ppm. Pengamatan kondisi ikan dilakukan setelah 30 dan 60 menit perendaman. Hasil penelitian menunjukkan bahwa asam sitrat konsentrasi 250 dan 400 ppm efektif dalam membunuh *Z. arugamensis* ($76,67 \pm 15,28 - 100\%$) dan *cocoon*nya sehingga tidak berkembang (0%). Asam sitrat konsentrasi hingga 300 ppm masih aman digunakan untuk perendaman ikan kerapu hibrida cantang yang terinfeksi *Z. arugamensis* selama 60 menit. Asam sitrat konsentrasi 250-300 ppm juga dapat melepaskan *Z. arugamensis* dari tubuh ikan. Asam sitrat memiliki khasiat sebagai antiparasit dan menurunkan pH air laut.

Kata kunci: Asam sitrat, *Cocoon*, Ikan kerapu hibrida cantang, Perendaman, *Zeylanicobdella arugamensis*.

**THE EFFECTIVENESS OF CITRIC ACID AS AN ANTI-ECTOPARASITE OF
MARINE LEECH (HIRUDINEA: (*Zeylanicobdella arugamensis*)) THROUGH
SOAKING**

By

Nike Mustikasari, NIM 2113117001

Department of Biology and Marine Fisheries

ABSTRACT

Zeylanicobdella arugamensis infection causes health problems for cultured grouper. This study aims to determine the effectiveness of citric acid soaking as an anti *Z. arugamensis* ectoparasite. A total of ± 120 *Z. arugamensis* were isolated from sick hybrid grouper (*Epinephelus fuscoguttatus* x *E. lanceolatus*) placed in petri dishes (6 petri dishes). Citric acid solution with concentrations of 0, 50, 100, 150, 250 and 400 ppm was added to the petri dishes. Immersion of *Z. arugamensis* was carried out for 30, 60, 90 and 120 minutes. Each 30 *Z. arugamensis*/treatment/30 minutes were taken and placed in 3 petri dishes (10 animals/petri dish) that had been filled with seawater. Observations were made on the response of *Z. arugamensis*. Observations were made on *cocoon* development into larvae. The citric acid safety test was conducted on cantang hybrid grouper infected with *Z. arugamensis*. A total of 3 test fish were soaked with citric acid solution in seawater at concentrations of 0, 150, 250 and 300 ppm. Observations of fish condition were made after 30 and 60 minutes of immersion. The results showed that citric acid concentrations of 250 and 400 ppm were effective in killing *Z. arugamensis* (76.67 ± 15.28 -100%) and their *cocoon* development reached (0%). Citric acid concentration of 300 ppm is still safe to use for immersion of cantang hybrid grouper infected with *Z. arugamensis* for 60 minutes. Citric acid concentrations of 250-300 ppm can also release *Z. arugamensis* from the fish body. Citric acid has antiparasitic properties and lowers the pH of seawater.

Keywords: Citric acid; *Cocoon*; Hybrid grouper; Soaking; *Zeylanicobdella arugamensis*.