

## ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektivitas ekstrak daun sirsak (*Annona muricata*) terhadap kelangsungan hidup dan lama waktu penyembuhan benih ikan nila salin (*Oreochromis niloticus*) yang diinfeksi bakteri *Pseudomonas aeruginosa*. Penelitian dilaksanakan pada Juli–Agustus 2026 di Laboratorium CP Prima Kabupaten Bireuen dan Laboratorium Hatchery dan Teknologi Budidaya, Program Studi Akuakultur, Fakultas Pertanian, Universitas Malikussaleh. Metode yang digunakan adalah Rancangan Acak Lengkap (RAL) nonfaktorial dengan empat perlakuan dan tiga ulangan, yaitu A (kontrol tanpa pemberian ekstrak), B (80 ppm), C (100 ppm), dan D (120 ppm). Parameter yang diamati meliputi gejala klinis, kelangsungan hidup (Survival Rate), lama waktu penyembuhan, dan kualitas air. Hasil penelitian menunjukkan bahwa pemberian ekstrak daun sirsak berpengaruh nyata terhadap kelangsungan hidup dan lama waktu penyembuhan benih ikan nila salin yang terinfeksi *Pseudomonas aeruginosa*. Tingkat kelangsungan hidup tertinggi diperoleh pada perlakuan D (120 ppm) sebesar 96,7%, diikuti perlakuan C (100 ppm) sebesar 80%, B (80 ppm) sebesar 63,3%, dan A (kontrol) sebesar 20%. Lama waktu penyembuhan tercepat juga diperoleh pada perlakuan D (120 ppm), yaitu 80 jam, sedangkan perlakuan C dan B masing-masing membutuhkan waktu 127 jam dan 152 jam. Gejala klinis setelah infeksi ditandai dengan sisik terkelupas, luka pada tubuh, warna tubuh menghitam, penurunan respons terhadap pakan, dan pergerakan abnormal. Setelah pemberian ekstrak daun sirsak, kondisi ikan pada perlakuan B, C, dan D berangsur membaik, sedangkan perlakuan A tidak menunjukkan perbaikan. Kualitas air selama penelitian masih berada dalam kisaran yang sesuai untuk pemeliharaan ikan nila salin, dengan pH 7,6–8,3, oksigen terlarut 6,1–7,5 ppm, suhu 26,1–28,2°C, dan salinitas 10 ppt. Berdasarkan hasil penelitian, ekstrak daun sirsak pada dosis 120 ppm merupakan perlakuan yang paling efektif dalam meningkatkan kelangsungan hidup dan mempercepat proses penyembuhan benih ikan nila salin yang terinfeksi *Pseudomonas aeruginosa*.

Kata kunci: Ekstrak daun sirsak, ikan nila salin, *Pseudomonas aeruginosa*.

## **ABSTRACT**

*This study aimed to determine the effectiveness of soursop leaf extract (*Annona muricata*) on the survival rate and healing time of saline tilapia fingerlings (*Oreochromis niloticus*) infected with *Pseudomonas aeruginosa*. The study was conducted from July to August 2026 at the CP Prima Laboratory, Bireuen Regency, and the Hatchery and Aquaculture Technology Laboratory, Department of Aquaculture, Faculty of Agriculture, Universitas Malikussaleh. The method used was a Completely Randomized Design (CRD) with four treatments and three replications, namely A (control without extract), B (80 ppm), C (100 ppm), and D (120 ppm). The observed parameters included clinical signs, survival rate, healing time, and water quality. The results showed that the administration of soursop leaf extract had a significant effect on the survival rate and healing time of saline tilapia fingerlings infected with *Pseudomonas aeruginosa*. The highest survival rate was obtained in treatment D (120 ppm) at 96.7%, followed by treatment C (100 ppm) at 80%, treatment B (80 ppm) at 63.3%, and treatment A (control) at 20%. The fastest healing time was also obtained in treatment D (120 ppm), which required 80 hours, while treatments C and B required 127 and 152 hours, respectively. Clinical signs following infection included scale loss, body lesions, darkened body coloration, decreased feeding response, and abnormal movement. After treatment with soursop leaf extract, the condition of fish in treatments B, C, and D gradually improved, whereas treatment A showed no improvement. Water quality during the study remained within suitable ranges for saline tilapia culture, with pH ranging from 7.6–8.3, dissolved oxygen from 6.1–7.5 ppm, temperature from 26.1–28.2°C, and salinity of 10 ppt. Based on the results, soursop leaf extract at a concentration of 120 ppm was the most effective treatment for increasing the survival rate and accelerating the healing process of saline tilapia fingerlings infected with *Pseudomonas aeruginosa*.*

*Keywords: Soursop leaf extract, saline tilapia, *Pseudomonas aeruginosa*.*