

**PENGARUH PERENDAMAN UDANG VANAME (*Litopenaeus vannamei*)
DI DALAM EKSTRAK DAUN JERUJU (*Acanthus ilicifolius*) TERHADAP
IMUNITAS DAN SINTASAN UDANG VANAME YANG TERINFEKSI
BAKTERI *Vibrio parahaemolyticus***

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ABSTRAK

Penelitian tertulis bertujuan untuk mengetahui pengaruh perendaman udang vaname di dalam ekstrak daun jeruju (*A. ilicifolius*) terhadap peningkatan sistem imun dan sintasan udang vaname (*L. vannamei*) yang terinfeksi *V. parahaemolyticus*. Penelitian dilaksanakan dengan menggunakan rancangan acak lengkap (RAL) yang terdiri atas lima kelompok, meliputi kontrol negatif, kontrol positif, serta perlakuan perendaman udang vaname di dalam ekstrak daun jeruju dengan konsentrasi 200 mg/L, 300 mg/L, dan 400 mg/L. Udang vaname direndam selama 30 menit, kemudian diuji tantang menggunakan bakteri *V. parahaemolyticus*. Parameter yang diamati yaitu Total Haemocyte Count (THC), *Differential Haemocyte Count* (DHC), *Survival Rate* (SR), serta kualitas air yang meliputi suhu, pH, oksigen terlarut, dan salinitas. Hasil penelitian memperlihatkan pemberian ekstrak daun jeruju melalui perendaman berpengaruh nyata ($p < 0,05$) terhadap nilai hemosit dan perubahan proporsi sel granular dan hialin, di mana terjadi peningkatan jumlah sel granular dan penurunan sel hialin yang menandakan adanya respon imun nonspesifik udang. Perlakuan ekstrak daun jeruju juga memberikan pengaruh nyata terhadap *survival rate* udang pada akhir pemeliharaan. Konsentrasi 400 mg/L memberikan hasil terbaik dengan nilai THC tertinggi sebesar $15,08 \times 10^6$ sel/ml, jumlah sel granular tertinggi sebesar 65,67% serta persentase *survival rate* tertinggi sebesar 79,17%.

Kata kunci: *A. ilicifolius*, udang vaname, *V. parahaemolyticus*, THC, DHC, sintasan.

**THE EFFECT OF SOAKING WHITE SHRIMP (*Litopenaeus vannamei*) IN
JERUJU LEAF EXTRACT (*Acanthus ilicifolius*) ON THE IMMUNITY AND
SURVIVAL OF WHITE SHRIMP INFECTED WITH THE BACTERIUM
*Vibrio parahaemolyticus***

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ABSTRACT

*This study aimed to determine the effect of immersing Pacific white shrimp (*L. vannamei*) in *A. ilicifolius* leaf extract on the immune response and survival rate of shrimp challenged with *V. parahaemolyticus*. The study employed a Completely Randomized Design (CRD) consisting of five treatment groups: a negative control, a positive control, and three immersion treatments using *A. ilicifolius* leaf extract at concentrations of 200 mg/L, 300 mg/L, and 400 mg/L. The shrimp were immersed in the extract solution for 30 minutes before being challenged with *V. parahaemolyticus*. The observed parameters included Total Haemocyte Count (THC), Differential Haemocyte Count (DHC), Survival Rate (SR), and water quality parameters, including temperature, pH, dissolved oxygen, and salinity. The results demonstrated that immersion in *A. ilicifolius* leaf extract significantly affected ($p < 0.05$) the haemocyte count and the proportion of granular and hyaline cells, as indicated by an increase in granular cells and a decrease in hyaline cells, reflecting the activation of the shrimp's non-specific immune response. The immersion treatment also had a significant effect on the survival rate of shrimp at the end of the rearing period. The best results were obtained at a concentration of 400 mg/L, which produced the highest Total Haemocyte Count (15.08×10^6 cells/mL), the highest proportion of granular cells (65.67%), and the highest survival rate (79.17%).*

*Keywords: *A. ilicifolius*, white shrimp, *V. parahaemolyticus*, THC, DHC, survival rate.*