

## ABSTRAK

Budidaya udang *vannamei* di Desa Poncosari, Srandakan, Bantul, D.I. Yogyakarta merupakan komoditas unggulan yang menjadi sumber perekonomian masyarakat. Kegiatan budidaya udang *vannamei* menimbulkan masalah pencemaran lingkungan. Pencemaran lingkungan yang terjadi karena air limbah tambak udang *vannamei* yang mengandung zat pencemar dibuang langsung ke badan air. Salah satu solusi yang dapat dilakukan adalah dengan membuat kolam fitoremediasi dengan memanfaatkan tumbuhan yang ada di alam. Penelitian ini dilakukan dengan tujuan untuk mengetahui berapa besar efisiensi proses fitoremediasi menggunakan tumbuhan Kiapu (*Pistia Stratiotes*) terhadap penurunan konsentrasi *Chemical Oxygen Demand* (COD), *Total Suspended Solid* (TSS), dan Amonia Terlarut ( $\text{NH}_4\text{OH}$ ). Penelitian ini menggunakan tiga perlakuan dengan perbedaan berat (0,5 kg, 1 kg, dan 1,5 kg). Hasil penelitian ditinjau dan diuji setiap dua hari selama 8 hari di laboratorium. Hasil penurunan kadar COD, TSS, dan amonia terlarut adalah 56,16%, 91,91% dan 35,93%. Dapat disimpulkan bahwa dari hasil penelitian tersebut, Kiapu (*Pistia Stratiotes*) dapat menurunkan kadar COD, TSS, dan Amonia Terlarut dalam proses fitoremediasi limbah tambak udang *vannamei* meskipun presentasenya relatif kecil.

Kata kunci : *Pistia Stratiotes*, Limbah Tambak Udang, COD, TSS, Ammonia Terlarut.

## **ABSTRACT**

*Vannamei shrimp farming in the Poncosari village, Srandakan, Bantul, Special Region of Yogyakarta is a commodity that becomes the source of the community's economy. Vannamei shrimp farming activities cause environmental pollution problems. Environmental contamination occurs because vannamei shrimp pond waste water containing pollutants discharged directly into water bodies. One solution that can be done is to create a pool of phytoremediation by utilizing the existing plants in nature. This research was conducted in order to determine how much the efficiency of the process of phytoremediation using plants Kiapu (*Pistia stratiotes*) to decrease the concentration of Chemical Oxygen Demand (COD), Total Suspended Solid (TSS), and Dissolved Ammonia ( $\text{NH}_4\text{OH}$ ). This study uses three treatments with the difference in weight (0.5 kg, 1 kg, and 1.5 kg). The results of the research reviewed and tested every two days for 8 days in the laboratory. The result of decreased levels of COD, TSS, and dissolved ammonia was 56.16%, 91.91% and 35.93%. It can be concluded that the results of these studies, Kiapu (*Pistia stratiotes*) can reduce levels of COD, TSS, and ammonia dissolved in the phytoremediation process waste vannamei shrimp farms though the percentage is relatively small.*

*Keywords: *Pistia stratiotes*, Shrimp Waste, COD, TSS, Dissolved Ammonia.*