

ANALISIS RESIDU PADA BUDIDAYA UDANG VANNAMEI (*Litopenaeus vannamei*) DI KABUPATEN TUBAN

Oleh

Ardiani Utomo Putri, 2113111015

Program Studi S1 Akuakultur

ABSTRAK

Penelitian ini bertujuan untuk menganalisis kandungan dan kesesuaian residu pada budidaya udang Vannamei (*Litopenaeus vannamei*) di Kabupaten Tuban, serta mengidentifikasi faktor-faktor yang memengaruhinya. Metode penelitian melibatkan pengujian sampel udang dari tiga plot budidaya terhadap substansi A2 (antimikroba), B1a (probiotik), dan D2 (logam berat), sesuai dengan PERMENKP No. 37 Tahun 2019. Hasil penelitian menunjukkan bahwa seluruh parameter residu antimikroba (Chloramphenicol, Furazolidone, Furaltadone, Nitrofurazone, Nitrofurantoin, Dimetridazole) dan probiotik (Tetracycline, Oxytetracycline, Chlortetracycline, Enrofloxacin, Sulfadiazine) tidak terdeteksi di bawah batas deteksi metode analisis. Meskipun logam berat seperti Cadmium, Plumbum, dan Mercury terdeteksi, kadarnya masih jauh di bawah Batas Maksimum Residu (BMR) yang ditetapkan (0,5 mg/kg). Seluruh sampel udang dinyatakan *compliant* dengan standar keamanan pangan. Faktor-faktor yang memengaruhi keberadaan residu meliputi frekuensi, jenis, dan dosis bahan kimia yang digunakan, tingkat pemahaman pembudidaya, serta dukungan pengawasan dan pembinaan. Penggunaan sumber air tanah yang stabil dan penerapan biosekuriti serta manajemen kualitas air yang baik turut berkontribusi pada rendahnya akumulasi residu.

Kata Kunci: Residu, Budidaya, Udang Vaname, Kabupaten Tuban

Residue Analysis in Vannamei Shrimp (*Litopenaeus vannamei*) Aquaculture in Tuban Regency

By

Ardiani Utomo Putri, 2113111015

Program Studi S1 Akuakultur

ABSTRACT

This study aims to analyze the content and compliance of chemical residues in Vannamei shrimp (*Litopenaeus vannamei*) aquaculture in Tuban Regency, as well as to identify the influencing factors. The research method involved testing shrimp samples from three cultivation plots for substances A2 (antimicrobials), B1a (antibiotics), and D2 (heavy metals), in accordance with the PERMENKP No. 37 of 2019. The results showed that all antimicrobial residue parameters (Chloramphenicol, Furazolidone, Furaltadone, Nitrofurazone, Nitrofurantoin, Dimetridazole) and antibiotics (Tetracycline, Oxytetracycline, Chlortetracycline, Enrofloxacin, Sulfadiazine) were not detected, remaining below the detection limits of the analytical methods used. Although heavy metals such as Cadmium, Lead, and Mercury were detected, their levels were well below the established Maximum Residue Limits (MRLs) of 0.5 mg/kg. All shrimp samples were declared *compliant* with food safety standards. Factors influencing residue presence included the frequency, type, and dosage of chemicals used, the farmers' level of understanding, and the support from monitoring and guidance programs. The use of stable groundwater sources, along with proper biosecurity implementation and good water quality management, also contributed to the low accumulation of residues.

Keywords: Residues, Aquaculture, Vannamei shrimp, Tuban Regency