Kelimpahan Mikroplastik pada Air, Pakan, Saluran Pencernaan, dan Feses Litopenaeus vannamei (Boone, 1931) di Tambak Udang Unit Sobo, Banyuwangi, Jawa Timur = Microplastics Abundance in Water, Feed, Digestive Tract, and Feces Litopenaeus vannamei (Boone, 1931) in Sobo Shrimp Pond, Banyuwangi, East Java

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Abstrak

Penelitian ini menganalisis bentuk dan kelimpahan mikroplastik pada sumber air laut, sumber air tawar petak A, air kolam 19, pakan buatan (pelet), saluran pencernaan, dan feses udang vannamei Litopenaeus vannamei (Boone, 1931) di Tambak Udang Vannamei Unit Sobo, Banyuwangi, Jawa Timur. Sampel air diambil dan disimpan dalam botol kaca sebanyak 300 ml, sampel pakan menggunakan pakan jenis SGH2 buatan perusahaan sendiri sebanyak 10 gr, sedangkan sampel udang digunakan sebanyak 5 individu dari kolam 19 dan tiap udang diambil bagian saluran pencernaan dan fesesnya. Sampel air, pakan, saluran pencernaan, dan feses diamati menggunakan mikroskop serta dilakukan pengulangan sebanyak 3 kali. Sampel diambil pada tanggal 25 Oktober 2021 dengan DOC (Day of Culture) 53 dan penelitian berlangsung selama 1 bulan dari bulan Oktober hingga November 2021. Penelitian memperlihatkan tiga bentuk mikroplastik, yaitu fragmen, film, dan fiber. Mikroplastik bentuk fragmen mendominasi dalam penelitian ini. Selain itu, berdasarkan data kelimpahan mikroplastik, diketahui bahwa mikroplastik pada pakan banyak yang tidak ditemukan ke dalam proses pencernaan. Kemudian, diketahui juga tidak terdapat perbedaan nilai kelimpahan, serta terdapat hubungan kelimpahan mikroplastik pada saluran pencernaan dan feses udang vannamei.

.....This study analyzed the shape and abundance of microplastics in seawater sources, plot A freshwater source, pond water, artificial feed, digestive tract, and feces of Litopenaeus vannamei (Boone, 1931) at Unit Sobo Shrimp Ponds, Banyuwangi, East Java. As much as 300 ml of water were taken and stored in glass bottles; feed samples made by the company itself, were taken as much as 10 grams; while shrimp samples were used as many as 5 individuals from 19 ponds, taken from the digestive tract and feces. Each sample were observed using a microscope and repeated 3 times. Samples were taken on October 25, 2021 with DOC (Day of Culture) 53 and the study lasted for 1 month from October to November 2021. Research shows three forms of microplastics, namely fragments, films, and fibers. Microplastic fragments dominate in this study. In addition, based on data on the abundance of microplastics, it is known that many microplastics in feed are not found in the digestive process. Then, it was also known that there was no difference in the abundance value and that there was a relationship between the abundance of microplastics in the digestive tract and feces.