

Perbandingan kelimpahan mikroplastik pada tambak ikan bandeng *chanos chanos* (Forsskal, 1775) di Muara Kamal dan Marunda, Teluk Jakarta = Comparison of microplastic abundance in aquaculture ponds of milkfish *chanos chanos* (Forsskal, 1775) at Muara Kamal and Marunda, Jakarta Bay

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Abstrak

Penelitian ini menganalisis kelimpahan dan jenis mikroplastik pada bandeng *Chanos chanos*, air, dan endapan tambak bandeng di Muara Kamal dan Marunda, Teluk Jakarta. Pengambilan sampel bandeng dilakukan dengan kriteria umur 5 sampai 6 tahun berusia bulan dengan jumlah sampel 6 ikan dari setiap lokasi. Air dan sedimen tadinya diambil dari 5 titik di kolam bandeng di setiap lokasi. Saluran pencernaan diekstraksi dari setiap bandeng dihancurkan dengan pereaksi asam nitrat yang kuat (HNO_3 65%). Air sampel disaring menggunakan plankton net dengan ukuran mesh 300 μm dan sedimen sampel dikeringkan dalam oven. Solusi NaCl terkonsentrasi digunakan untuk mencapai flotasi mikroplastik pada setiap sampel disiapkan saluran pencernaan ikan bandeng, air yang disaring, dan sedimen kering. Pengamatan dilakukan dengan mikroskop cahaya.

Sampel ditempatkan di Sedgwick Rafter Chamber dan penghitungan mikroplastik dilakukan untuk partikel dengan ukuran mulai dari 20 μm hingga 4 mm berdasarkan bentuk partikelnya serat, film, fragmen, dan granula. Hasil yang diperoleh untuk sampel dari Muara Kamal menunjukkan jumlah mikroplastik $3.005 \pm 437,4$ partikel ind-1 dalam ikan bandeng, $103,8 \pm 20,7$ partikel L-1 dalam air, dan $111.680 \pm 13.204,2$ partikel Kg-1 dalam sedimen. Mikroplastik Kelimpahan ditemukan lebih rendah dalam sampel dari Marunda dengan 2.090 ± 545 partikel ind-1 in bandeng, $90,7 \pm 17,4$ partikel L-1 dalam air, dan $82,480 \pm 11,226,4$ partikel Kg-1 dalam sedimen.

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This study analyzes the abundance and types of microplastics in *Chanos chanos*, water, and milkfish pond deposits in Muara Kamal and Marunda, Jakarta Bay. Sampling of milkfish is carried out with the criteria of age 5 to 6 years old with a sample of 6 fish from each location. Water and sediment were taken from 5 points in the milkfish pond at each location. The digestive tract is extracted from each milkfish destroyed by strong nitric acid reagents (65% HNO_3). water. The sample was filtered using a plankton net with a mesh size of 300 μm and the sample sediment was dried in an oven. The concentrated NaCl solution is used to achieve. Microplastic flotation in each sample was prepared by the digestive tract of milk fish, filtered water, and dry sediment. Observations were made with a light microscope. Samples were placed in the Sedgwick Rafter Chamber and microplastic calculations were carried out for particles ranging in size from 20 μm to 4 mm based on the particle shape of the fibers, films, fragments, and granules. The results obtained for samples from Muara Kamal showed the amount of microplastic 3.005 ± 437.4 particles ind-1 in milkfish, 103.8 ± 20.7 L-1 particles in water, and $111,680 \pm 13,204.2$ Kg-1 particles in sediments. Abundance microplastic was found lower in samples from Marunda with $2,090 \pm 545$ ind-1 particles in milkfish, 90.7 ± 17.4 L-1 particles in water, and $82,480 \pm 11,226.4$ Kg-1 particles in sediment.