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RINGKASAN

Mikroplastik tersebar luas di lingkungan perairan laut dan biota laut, khususnya pada ikan. Banyak penelitian yang mengidentifikasi keberadaan mikroplastik pada ikan-ikan konsumsi. Sebagian besar identifikasi mikroplastik pada bagian saluran pencernaan, namun informasi terkait akumulasi mikroplastik pada insang dan daging ikan masih sangat terbatas. Penelitian ini bertujuan untuk membuktikan keberadaan dan jenis mikroplastik pada organ insang, saluran pencernaan dan daging ikan Swanggi (*Priacanthus* sp.), air, dan sedimen dari perairan Branta, Pamekasan. Setiap organ diekstraksi menggunakan KOH 10%, sedangkan air dan sedimen diekstraksi menggunakan larutan H₂O₂ dan H₂SO₄ 30%. Sampel sedimen diberi perlakuan dengan menambahkan NaCl jenuh untuk memisahkan densitas mikroplastik dengan sedimen. Pengamatan jenis mikroplastik secara visual dilakukan menggunakan mikroskop stereo (Labomed Luxeo 4Z) dengan bantuan *software* ScopelImage 9.0. Pengamatan jenis polimer dilakukan dengan uji FT-IR yang diperoleh dari keseluruhan sampel (air, sedimen dan ikan Swanggi). Hasil penelitian menunjukkan adanya mikroplastik pada masing-masing organ yang diteliti yaitu insang, saluran pencernaan dan daging ikan Swanggi. Mikroplastik yang ditemukan adalah fiber, fragmen, film dan foam. Fiber mendominasi dari masing-masing organ ikan Swanggi, air dan sedimen. Mikroplastik pada air permukaan didominasi oleh jenis fiber 75-78,7% diikuti fragmen 11,1-17,7%, film 4,3-10,4% dan foam 1%. Jenis mikroplastik pada air kolom diperoleh fiber 80,6-87,5%, fragmen 10,4-16,4% dan film 2,1- 3%. Jenis mikroplastik pada sedimen diperoleh fiber 71,8-78,1%, fragmen 21,6-27,2%, film 0,4- 0,7% dan foam 0,3%. Keberadaan mikroplastik tertinggi pada saluran pencernaan yaitu 43-46,3%, insang 32,7-36,1% dan daging 20,9-21,1%. Jenis mikroplastik pada ikan Swanggi didominasi oleh fiber 96,9-97,8%, fragmen 1,1-1,6%, film 0,4-1,5% dan foam 0,2-0,4%. Hasil spektrum IR menunjukkan nilai puncak gelombang mendekati standard jenis polimer *Polypropylene*, *Polyethylene* dan *PolyVinyl Chloride* (PVC),

Kata Kunci : *Priacanthus* sp., Air Laut, Sedimen, Mikroplastik, FT-IR

SUMMARY

Microplastics are widespread in the marine environment and marine biota, especially in fish. Many studies have identified the presence of microplastics in consumption fish. Most of the identification of microplastics in the digestive tract, but information regarding the accumulation of microplastics in the gills and flesh of fish is rare. This study aims to prove the presence and types of microplastics in the gills, digestive tract, and flesh of Swanggi fish (*Priacanthus* sp.), water, and sediments from Branta sea, Pamekasan. Each organ was extracted using 10% KOH, while water and sediment were extracted using 30% H₂O₂ and H₂SO₄ solutions. Sediment samples were treated by adding saturated NaCl to separate the microplastic density from the sediment. Visual observation of microplastic types was carried out using a stereo microscope (Labomed Luxeo 4Z) with the help of ScopelImage 9.0 software. The type of polymer was carried out by FT-IR test obtained from all samples (water, sediment and Swanggi fish). The results showed the presence of microplastics in each organ studied, namely the gills, digestive tract, and meat of Swanggi fish. The microplastics found were fiber, fragment, film, and foam. Fiber dominates each organ of Swanggi fish, water, and sediment. Microplastic in the surface water is dominated by 75-78.7% fiber type, followed by fragments 11.1-17.7%, film 4.3-10.4%, and foam 1%. The type of microplastic in the water column obtained 80.6-87.5% fiber, 10.4-16.4% fragments, and 2.1-3% film. The type of microplastic in the sediment obtained fiber 71.8-78.1%, fragments 21.6-27.2%, film 0.4-0.7% and foam 0.3%. The highest presence of microplastics in the digestive tract was 43-46.3%, gills 32.7- 36.1%, and meat 20.9-21.1%. The type of microplastics in Swanggi fish is dominated by fiber 96.9 -97.8%, fragments 1.1-1.6%, film 0.4-1.5%, and foam 0.2-0.4%. The results of the IR spectrum show that the wave peak values are close to the standard types of *Polypropylene*, *Polyethylene* and *PolyVinyl Chloride* (PVC) polymers.

Keywords: *Priacanthus* sp., Seawater, Sediment, Microplastics, FT-IR