

ABSTRAK

Beatrice Loise Tarigan, NIM 4213520019 (2025) : Identifikasi Mikroplastik pada 5 Spesies Ikan Laut di TPI Tanjung Beringin Kabupaten Serdang Bedagai

Pencemaran mikroplastik di lingkungan laut menjadi isu global yang mengancam organisme akuatik, termasuk ikan yang dikonsumsi masyarakat. Mikroplastik tidak hanya berdampak pada kesehatan ekosistem laut, tetapi juga berpotensi masuk ke rantai makanan manusia melalui konsumsi ikan yang terkontaminasi, sehingga menimbulkan risiko terhadap kesehatan dan keamanan pangan. Penelitian ini bertujuan untuk mengetahui bentuk dan warna mikroplastik, kelimpahan mikroplastik dan perbedaan kelimpahan mikroplastik pada insang dan saluran pencernaan. Penelitian ini telah dilakukan bulan Juni-agustus 2025 di TPI Tanjung Beringin. Sampel penelitian digunakan lima spesies ikan (*Sardina pilchardus*, *Selaroides leptolepis*, *Rastreligger brachysoma*, *Parastromateus niger*, dan *Euthynnus affinis*) sebanyak 10 individu/spesies ikan. Sampel mikroplastik diambil dari insang dan saluran pencernaan setiap sampel ikan. Selanjutnya dilakukan proses identifikasi bentuk dan warna mikroplastik menggunakan *mikroskop stereo*. Analisis data kelimpahan mikroplastik menggunakan one-way ANOVA. Hasil penelitian ditemukan bentuk mikroplastik fiber (56%), fragmen (42%) dan film (2%). Warna mikroplastik yang ditemukan pada kedua organ yaitu merah (81%), hitam (73%), hijau (37%), biru (6%), transparan (3%). Nilai kelimpahan tertinggi terdapat pada organ saluran pencernaan di spesies ikan *Euthynnus affinis* (41,9 partikel/individu), dan terendah pada organ insang di spesies ikan *Rastreligger brachysoma* (26,5 partikel/individu). Berdasarkan hasil uji Anova ($p < 0,05$), Kelimpahan mikroplastik secara keseluruhan menunjukkan terdapat perbedaan nyata antara *Sardina pilchardus* dan *Parastromateus niger* serta antara *Selaroides leptolepis* dan *Euthynnus affinis*.

Kata Kunci : Mikroplastik, Bentuk, Warna, Insang, Ikan laut, Saluran Pencernaan

ABSTRACT

Beatrice Loise Tarigan, NIM 4213520019 (2025): Identification of Microplastics in Five Marine Fish Species at the Tanjung Beringin Fish Farm, Serdang Bedagai Regency

Microplastic pollution in the marine environment has become a global issue that threatens aquatic organisms, including fish consumed by the public. Microplastics not only impact the health of marine ecosystems but also have the potential to enter the human food chain through the consumption of contaminated fish, thereby posing risks to health and food safety. This study aims to identify the shapes and colors of microplastics, determine their abundance, and analyze the differences in microplastic abundance between the gills and digestive tracts of fish. The research was conducted from June to August 2025 at the Tanjung Beringin Fish Landing Site (TPI). Five fish species were used as samples (*Sardina pilchardus*, *Selaroides leptolepis*, *Rastreliger brachysoma*, *Parastromateus niger*, and *Euthynnus affinis*), with 10 individuals per species. Microplastic samples were collected from the gills and digestive tracts of each fish specimen. Identification of microplastic shapes and colors was carried out using a stereo microscope. Data on microplastic abundance were analyzed using one-way ANOVA. The results revealed three types of microplastic shapes: fibers (56%), fragments (42%), and films (2%). The colors of microplastics found in both organs were red (81%), black (73%), green (37%), blue (6%), and transparent (3%). The highest abundance value was recorded in the digestive tract of *Euthynnus affinis* (41.9 particles/individual), and the lowest was in the gills of *Rastreliger brachysoma* (26.5 particles/individual). Based on the ANOVA test results ($p < 0.05$), the overall microplastic abundance showed significant differences between *Sardina pilchardus* and *Parastromateus niger*, as well as between *Selaroides leptolepis* and *Euthynnus affinis*.

Keywords: *Microplastics, Shape, Color, Gills, Marine Fish, Digestive Tract*