

ABSTRAK

IDENTIFIKASI KELIMPAHAN DAN KARAKTERISTIK MIKROPLASTIK PADA OTOT DAN SALURAN PENCERNAAN IKAN KEMBUNG DI KOTA BANDUNG

Mikroplastik (MP) merupakan polimer sintesis yang terdegradasi menjadi ukuran mikro dan dapat menyerap senyawa hidrofobik beracun dari lingkungan. MP telah teridentifikasi ke dalam tubuh manusia dan mengancam kelangsungan hidup. Kontaminasi MP pada tubuh manusia dapat terjadi melalui konsumsi ikan yang tercemar MP. MP telah ditemukan di usus dan otot semua spesies ikan. Ikan jenis pelagis menempati posisi pertama dalam proporsi paparan MP di kolom perairan laut, jika dibandingkan dengan sampel ikan laut dalam. Maka, perlu dilakukan pengujian secara mendalam pada kelimpahan MP pada ikan pelagis yang dijual bebas, salah satunya ikan kembung (*Rastrelliger Kanagurta*). Penelitian ini bertujuan untuk menentukan kelimpahan dan karakteristik MP dalam sampel ikan kembung di Pasar Ikan Ciroyom, Kota Bandung. Metode penentuan kelimpahan yang digunakan melalui observasi/pengamatan langsung pada otot dan saluran pencernaan sampel ikan kembung menggunakan mikroskop stereo Olympus SZX16, karakteristik jenis polimer MP menggunakan ATR-FTIR dan SEM-EDX. Kelimpahan MP pada otot dan saluran pencernaan masing masing sebanyak 0,16 P/individu dan 1,83 P/individu. Bentuk MP yang teridentifikasi menggunakan SEM-EDX yaitu fiber dan fragmen, lalu karakteristik jenis polimer yang ditemukan pada tiga dari lima sampel MP *representative* terkonfirmasi mikroplastik jenis polipropilen (PP) dan polietilen (PE).

Kata-kata kunci: Mikroplastik; Sampah laut; Ikan kembung; FTIR; SEM.

ABSTRACT

IDENTIFICATION OF ABUNDANCE AND MICROPLASTIC CHARACTERISTICS IN THE MUSCLE TISSUE AND GUT OF MACKEREL IN BANDUNG CITY

*Microplastics (MPs) are synthetic plastics/polymers degrading into micro sizes which have hazardous basic materials and can absorb toxic hydrophobic compounds from the environment. MPs have been identified to translocate into the human bloodstream and pose a threat to survival. MP contamination in the human body can occur through respiratory and digestive mechanisms. The exposure of MP in human body is by consuming fish contaminated with MP. MP has been found in the intestines and muscles of fish species. Pelagic fish occupies the first position in the proportion of MP exposure in the marine water column, when compared to deep sea fish samples. Therefore, it is necessary to conduct an in-depth test on the abundance of MP in freely traded pelagic fish, one of which is mackerel (*Rastregiller Kanagurta*). This study aimed to determine the abundance and characteristics of MP in mackerel samples at the Ciroyom Fish Market, Bandung City. The abundance determination method used was through direct observation of the muscles and digestive tract of mackerel samples using an Olympus SZX16 stereo microscope, and the characteristics of the MPs polymer type were observed using ATR-FTIR and SEM-EDX. The abundance of MPs in muscles and digestive tract were 0,16 P/individual and 1,83 P/individual, respectively. The forms of MPs were identified using SEM-EDX is which were fiber and fragments, then the characteristics of the type of polymer found in three of the five representative MPs samples were confirmed as microplastics of polypropylene (PP) and polyethylene (PE) types.*

Keywords: FTIR; Mackerel; Marine debris; Microplastic; Mackerel; SEM.