

Kelimpahan mikroplastik pada kerang hijau(perna viridis), air, dan sedimen di Kamal Muara, Jakarta Utara = Abundance of microplastic in green mussel (perna viridis), water, and sediment in Kamal Muara, North Jakarta

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Abstrak

Penelitian bertujuan untuk mengetahui kelimpahan mikroplastik pada kerang hijau *Perna viridis* berbagai ukuran, mengetahui organ tubuh kerang hijau yang paling banyak menyimpan mikroplastik, serta mengetahui korelasi antara kelimpahan mikroplastik pada kerang hijau, air, dan sedimen. Sampel kerang hijau, air, dan sedimen diambil dari 3 stasiun berbeda dengan jarak masing-masing sekitar 500 m. Analisis kelimpahan mikroplastik dilakukan dengan cara mengisolasi mikroplastik pada setiap sampel. Isolasi pada sampel kerang dilakukan dengan melarutkan kerang di dalam larutan HNO₃ 65, sementara sampel air dan sedimen dilakukan dengan cara pemisahan berdasarkan ukuran dan massa jenis dengan perendaman dalam larutan NaCl jenuh.

Hasil yang didapatkan, yaitu rata-rata kelimpahan mikroplastik pada kerang hijau ukuran 3, 6, dan 9 cm, yaitu 5,35; 24,99; dan 39,00 partikel/gram. Mikroplastik kelompok fiber dominan pada sampel kerang. Rata-rata kelimpahan mikroplastik di air dan sedimen, yaitu 13,15 partikel/L air laut dan 0,92 partikel/g sedimen kering. Mikroplastik kelompok film dominan pada sampel air dan sedimen. Sementara, kelompok pelet tidak ditemukan pada ketiga sampel. Terdapat korelasi antara kelimpahan mikroplastik dengan ukuran cangkang kerang, maupun dengan kelimpahan mikroplastik kelompok film dan fiber pada air dan sedimen.

.....Research on abundance of microplastic in green mussel *Perna viridis*, water and sediments in Kamal Muara, North Jakarta has been done. The research determined the abundance of microplastic in green mussel of various sizes, the organ of the green mussels most storey microplastic, and the correlation between abundance of microplastic in green mussel, water, and sediment. Samples of green mussel, water and sediments were taken from 3 different stations with a distance of about 500 meters each. Analysis of abundance of microplastic was done by isolating microplastic in each sample. The isolation of the green mussel samples was done by dissolving the mussels in the HNO₃ solution, while the water and sediment samples were performed by separation by size and density by immersion in a saturated NaCl solution. The results obtained were, on average, abundance of microplastic in green mussel size 3, 6, and 9 cm ie, 5.35 24.99 and 39,00 particles gram. Microplastic fiber was dominant in mussel sample. The average abundance of microplastic in water and sediment are 13.15 particles L of sea water and 0.92 particles gram of dry sediment. Microplastic film was dominant in water and sediment samples. Meanwhile, pellet was not found in all three samples. There was a correlation between abundance of microplastic with green mussel size, as well as with abundance of microplastic of film and fiber in water and sediment.