

Kelimpahan Mikroplastik pada Air, Sedimen, dan Keong Mas *Pomacea canaliculata* (Lamarck, 1819) di Situ Kenanga dan Situ Mahoni, Kampus UI Depok = Abundance of Microplastics in Water, Sediment, and Golden Snails *Pomacea canaliculata* (Lamarck, 1819) in Situ Kenanga and Situ Mahoni, Campus University of Indonesia, Depok

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Abstrak

Telah dilakukan penelitian yang bertujuan untuk membandingkan kelimpahan, bentuk, dan warna mikroplastik yang terkandung pada air, sedimen, dan keong mas *Pomacea canaliculata* di Situ Kenanga dan Situ Mahoni, Kampus Universitas Indonesia, Depok. Pengambilan sampel air, sedimen dan keong mas *Pomacea canaliculata* dilakukan di 3 titik lokasi yaitu inlet, midlet, dan outlet. Sampel air (20 l) disaring dengan plankton net 350 mesh, sampel sedimen dimasukkan ke jar 250 ml menggunakan Ekman grab lalu dioven dan dihaluskan. Sampel keong mas dikoleksi sebanyak 20 sampel setiap Situ, kemudian dianalisis dengan melarutkannya pada HNO<sub>3</sub> 65%, lalu sampel dijenuhkan dengan NaCl agar mikroplastik dapat mengapung ke permukaan. Sampel dihomogenisasi (20 ml) dan selanjutnya 1 ml diletakkan di Sedgewick Rafter Chamber untuk diamati di bawah mikroskop dan dihitung kelimpahan mikroplastik, bentuk dan warnanya. Hasil dari penelitian, kelimpahan mikroplastik di Situ Kenanga sejumlah 434,33± 23,51 partikel L-1 pada air, 45.837,04 ± 36.305,97 partikel Kg-1 pada sedimen dan 1.320,33 ± 533,91 partikel Ind-1 dan 116,19 ± 37,1 partikel pergram Ind-1 pada keong mas. Kelimpahan mikroplastik di Situ Mahoni pada air sejumlah 437,67 ± 30,21 partikel L-1, pada sedimen sejumlah 36.237,04 ± 16.702,59 partikel Kg-1, dan keong mas sejumlah 1.301,67 ± 200,72 partikel Ind-1 dan 148,38 ± 40,00 partikel pergram Ind-1. Hasil uji t dari sampel air, sedimen dan keong mas perindividu tidak terdapat perbedaan, sedangkan keong mas pergram ind-1 terdapat perbedaan. Bentuk mikroplastik yang ditemukan diantaranya adalah Fiber, fragmen, film, dan granula. Warna mikroplastik didominasi oleh hitam dan tidak berwarna.

.....A study was conducted to compare the abundance, shape, and color of microplastics contained in water, sediment, and gold snail *Pomacea canaliculata* in Situ Kenanga and Situ Mahoni, University of Indonesia Campus, Depok. Sampling of water, sediment and gold snail *Pomacea canaliculata* was carried out at 3 locations, namely inlet, midlet, and outlet. The water sample (20 l) was filtered with a 350 mesh plankton net, the sediment sample was put into a 250 ml jar using an Ekman grab and then baked and mashed. The gold snail samples were collected as many as 20 samples each Situ, then analyzed by dissolving them in 65% HNO<sub>3</sub>, then the samples were saturated with NaCl so that the microplastics could float to the surface. The saturated sample was homogenized (20 ml) and then 1 ml was placed in the Sedgewick Rafter Chamber to be observed under a microscope and the microplastic abundance, shape and color were calculated. The results of the study, the abundance of microplastics in Situ Kenanga were 434.33 ± 23.51 particles L-1 in water, 45,837.04 ± 36,305.97 particles Kg-1 in sediments and 1,320.33 ± 533.91 particles Ind-1 and 116.19 ± 37.1 particles per gram Ind-1 in gold snails. The abundance of microplastics in Situ Mahoni in water was 437.67 ± 30.21 particles L-1, in sediments was 36.237.04 ± 16.702.59 particles Kg-1, and golden snails were 1,301.67 ± 200.72 Ind-1 particles and 148.38 ± 40.00 particles per gram Ind-1. The results of the t-test of water, sediment and individual gold snails were not different, while the gold snails per gram were

different. The forms of microplastics found included fiber, fragments, films, and granules. The color of microplastics is dominated by black and colorless.