

ABSTRAK

IDENTIFIKASI MIKROPLASTIK DEPOT AIR MINUM ISI ULANG KELURAHAN BAJUBANG KABUPATEN BATANGHARI

Ajie Ashari; Dibimbing oleh Ir.Siti Umi Kalsum, S.T, M. Eng dan Asih Suzana,
S.T, M.T

xv + 86 halaman, 23 tabel, 19 gambar, 11 lampiran

ABSTRAK

Dampak pencemaran mikroplastik terhadap lingkungan dan kesehatan manusia penggunaan plastik sebagai tempat, wadah untuk air minum seperti air minum isi ulang dan air kemasan. Depot Air Minum Isi Ulang (DAMIU) sebagai sumber kebutuhan masyarakat Kelurahan Bajubang berpotensi terkontaminasi mikroplastik akibat dari aktivitas masyarakat di sekitarnya dan proses produksinya. Penelitian ini bertujuan untuk menganalisis ukuran, warna, jenis, kelimpahan mikroplastik kemudian juga menghitung nilai Polymer Risk Index dan nilai Pollution Load Index mikroplastik yang terdapat pada Depot Air Minum Isi Ulang (DAMIU) di Kelurahan Bajubang. Metode penelitian yang digunakan adalah survei lapangan dan analisis mikroplastik pada sampel air minum dan sumber air baku. Hasil penelitian menunjukkan ukuran mikroplastik pada air baku berkisar antara 0,4 – 2,128 mm, pada air damiu 0,47 – 3,681 mm. Warna mikroplastik ditemukan transparan, biru, dan merah. Jenis mikroplastik yang ditemukan adalah fiber, filamen, dan fragmen. Kelimpahan mikroplastik pada air baku sebesar 154 partikel/liter, air damiu kelimpahan mikroplastik sebesar 160 partikel/liter. Nilai Polymer Risk Index berkisar antara 10 – 10,1 partikel/liter pada air baku, air damiu berkisar 3,55 – 4 partikel/liter dengan kategori rendah. Nilai Pollution Load Index berkisar antara 16,73 – 28,98 partikel/liter pada air baku, air damiu berkisar 20,97 – 28,28 partikel/liter dengan kategori besar.

Kata Kunci : Mikroplastik; Depot Air Minum Isi Ulang; Kelurahan Bajubang;
Polymer Risk Index; Pollution Load Index

ABSTRACT

IDENTIFICATION OF MICROPLASTICS REFILLED DRINKING WATER DEPOT BAJUBANG VILLAGE BATANGHARI DISTRICT

Ajie Ashari; Supervised by oleh Ir.Siti Umi Kalsum, S.T, M. Eng dan Asih Suzana, S.T, M.T

xv + 86 pages, 23 tables, 19 figures, 11 attachments

ABSTRACT

The impact of microplastic pollution on the environment and human health is the use of plastic as containers for drinking water such as refill drinking water and bottled water. The Refillable Drinking Water Depot (DAMIU) as a source of needs for the people of Bajubang Village has the potential to be contaminated with microplastics due to the activities of the surrounding community and its production process. This research aims to analyze the size, color, type and abundance of microplastics and then also calculate the Polymer Risk Index value and Pollution Load Index value of microplastics found at the Refillable Drinking Water Depot (DAMIU) in Bajubang Village. The research method used was a field survey and analysis of microplastics in drinking water samples and raw water sources. The research results showed that the size of microplastics in raw water ranged from 0.4 – 2.128 mm, in raw water 0.47 – 3.681 mm. The colors of microplastics were found to be transparent, blue and red. The types of microplastics found were fibers, filaments and fragments. The abundance of microplastics in raw water is 154 particles/liter, in raw water the abundance of microplastics is 160 particles/liter. The Polymer Risk Index value ranges from 10 – 10.1 particles/liter in raw water, in raw water it ranges from 3.55 – 4 particles/liter in the low category. Pollution Load Index values range from 16.73 – 28.98 particles/liter in raw water, damiu water ranges from 20.97 – 28.28 particles/liter in the large category.

Keywords: *Microplastics; Refill Drinking Water Depot; Bajubang Village; Polymer Risk Index; Pollution Load Index*