

ABSTRAK

Segara Anakan merupakan kawasan estuari yang menjadi habitat dari kerang totok namun kawasan ini berpeluang mengalami pencemaran mikroplastik. Penelitian ini bertujuan untuk mengetahui keberadaan, kelimpahan, jenis dan komposisi mikroplastik berdasarkan bentuk, serta polimer mikroplastik pada kerang totok ukuran konsumsi (6 - 7 cm). Metode penelitian adalah metode survey yang dilakukan pada 8 stasiun sampling. Analisis mikroplastik berdasarkan bentuk dilakukan dengan menggunakan mikroskop *stereo*, sedangkan analisis identifikasi polimer mikroplastik dilakukan dengan menggunakan FTIR. Hasil penelitian menunjukkan bahwa kelimpahan mikroplastik berkisar antara 1,09 - 4,79 partikel/gram dengan kelimpahan tertinggi pada stasiun 2 yaitu pertemuan Sungai Cibeureum dengan Sungai Ujunggagak (4,79 partikel/gram). Adapun kelimpahan terendah terdapat pada stasiun 7 yaitu Muara Masigit Sela (1,09 partikel/gram). Jenis mikroplastik yang didapat fiber, fragmen, film, dan pelet. Fiber merupakan jenis mikroplastik yang paling mendominasi dengan persentase 57% (282 partikel), diikuti dengan fragmen 26% (130 partikel), film 15% (77 partikel), dan pelet 2% (10 partikel). Uji FTIR menunjukkan polimer mikroplastik yang terdapat ada 14 jenis yaitu : PETE, HDPE, PVC, LDPE, PP, PS, ABS, CA, EVA, *Latex*, *Nylon*, PC, PTFE, dan PU. Hasil penelitian ini menunjukkan bahwa kerang totok di Segara Anakan sudah terkontaminasi mikroplastik, sehingga apabila dikonsumsi oleh manusia dapat berdampak negatif terhadap kesehatan.

Kata kunci : Mikroplastik, Kerang totok, Segara Anakan, polimer plastik

ABSTRACT

Segara Anakan is an estuary area, provide the living place of an organism or community, including totok clams. Estuarine ecosystems exposed to multiple sources of plastic pollution are likely most at risk of the microplastic pollution. This study aimed to determine the presence, abundance, type, and composition of microplastics based on shape, as well as mikroplastic polymers in the edible totok clams with length size ranged from 6 to 7 cm. We use a survey method with eight sampling points. Analysis of microplastics based on shape was conducted with a stereo microscope, while microplastic polymers were analyzed by using Fourier-transform infrared spectroscopy (FTIR). The results showed that the abundance of microplastics ranged from 1.09 to 4.79 particles/gram with the highest abundance at station 2 (4.79 particles/gram), a confluence of the Cibeureum river and Ujunggagak river. The lowest abundance showed at station 7, i.e. Masigit Sela estuary (1.09 particles/gram). The types of microplastics obtained were fiber, fragments, films, and pellets. Fiber was the most dominant type of microplastic with a percentage of 57% (282 particles), followed by 26% fragments (130 particles), 15% films (77 particles), and 2% pellets (10 particles). The FTIR analysis showed that there were 14 types of microplastic polymers, namely: PETE, HDPE, PVC, LDPE, PP, PS, ABS, CA, EVA, Latex, Nylon, PC, PTFE, and PU. The results of this study indicate that the totok clams in Segara Anakan have been contaminated with microplastics. An effective actions to reduce plastic pollution and its environmental impacts are urgently required.

Keywords: Microplastic, totok clams, Segara Anakan, plastic polymer