

ABSTRACT

Materials made from plastic have been widely used in packaging products, including packaging products, furniture, and industrial materials. That's because the price is relatively cheap and easy to produce. Plastic exploitation causes uncontrolled plastic pollutants which pollute the environment and decompose into smaller particles (<5 mm). Based on the research results of Hu et al. (2019), Micro-plastic (MP) found in the river environment is a translocation from the WWTP channel. Due to their very small size, the particles are not completely filtered in the WWTP channel and end up in the river flow to settle on the ground. The spread of MP has contaminated nine rivers in Jakarta and tends to increase along with anthropogenic activities towards the Jakarta river bay. To reduce the spread of MP levels, we utilized a modified acoustophoretic system based on the results of a study conducted by Arifianto et al. (2021). Thus, accelerating the microplastic deposition process in wastewater bodies. This increases the ability to control MP contamination in aquatic and terrestrial environments.

Keywords: Microplastic, Exploitation, WWTP Channel, Acoustophoretic