

## **Source of microplastic pollution within human stool in the Surabaya river basin area**

### **ABSTRACT**

The Surabaya River is a tributary downstream of the Brantas River, which is the longest river in East Java. The source of raw water for the city of Surabaya comes from the Surabaya River. Currently, the pollutants in the Surabaya River are not only organic and heavy metals but also microplastics. This study aims to identify the microplastic content in human stool as well as possible sources of microplastic pollutants in the community living in the Surabaya river basin area. This research was conducted on ten samples of human stools in the Surabaya river basin area. The results showed that the types of microplastics found in human stool samples were divided into three types, namely the type of fibre, the type of fragment, and the type of filament. The most common types of microplastics were the types of fragments and filaments found in nine human stool samples. Meanwhile, the type of fibre was only found in seven samples of human stool. With the discovery of the three types of microplastics in human stool, the human stool in the Surabaya river basin area has been contaminated by microplastics. This can be possible because most of the respondents' drinking water consumption comes from bottled water. In general, this type of microplastic fragment can come from plastic bottles, plastic bags and pipe fragments.