
Investigation of Microplastics in the drinking water treatment plant at Srinagar, Garhwal, Uttarakhand.

Jaspal Singh Chauhan^{*†1} and Neha Badola²

¹Himalayan Aquatic Biodiversity Department H.N.B. Garhwal University- A central University – Srinagar, Garhwal, Uttarakhand, India, India

²H.N.B. Garhwal University- A central University, – Srinagar, Garhwal, Uttarakhand, India, India

Abstract

Microplastic (MP) have emerged as the new contaminant, considered seriously among the scientist communities. It is matter of concern because its presence is now proved in almost all the essential things related to human beings. Most of the MPs enter the body of living organisms through food, water and air. Hence, it become important to monitor these things regularly for presence of MPs. With all these facts, the present study was designed to investigate the microplastic removal capacity of the drinking water treatment plant at Srinagar, Garhwal, Uttarakhand, India. For the study water samples were collected from the different treatment stages of water treatment Plant. The samples were then digested with H₂O₂ and filtered to observed under microscope. The SEM and XRD analysis were also performed to enhance the clarity of plastic present in the samples. On visual inspection and microscopical study we found presence of microplastic in all the stages of treatment plant. The presence of thread/fibre were found dominant in the samples of treatment plant. Overall, it was concluded that the with the progress of stages of treatment plant the value of MPs decreased but its presence was also found in the final stage from where the water is supplied to different houses.

Keywords: Microplastics, Drinking water, Treatment plant

^{*}Speaker

[†]Corresponding author: jaspal.env@gmail.com