

## Plastic Rain: Microplastic Concentrations in Rainwater and Tap Water in Stockholm

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Microplastic contamination has risen to a degree it is found in most parts of society, from rivers to oceans to the food chain and air we breathe. Although the concentration of microplastic has been measured in rivers and oceans few investigate its presence in rainwater, which could potentially be a considerable source of contamination for food crops and waterways. The purpose of this project is thus to compare the concentration of different types of microplastics (microfibers, plastic pellets, and fragments) in the rain and tap water in the Stockholm area to discern if one type is more prevalent. Rain and tap water was collected in glass beakers cleaned with distilled water. These were then filtered through a 10-micron pore size filter paper, using a Büchner vacuum filtration system to collect the microplastics. Light microscopy, using a dissecting microscope and 40X magnification was used to identify and take pictures of the microplastics. The study concluded an average of  $301.2 \pm 33.58$  microplastics in the rain compared to  $105.12 \pm 19.5$  in the tap water, meaning that microplastics were more prevalent in the rain. Although the study did not identify any plastic pellets or microbeads it was concluded that microfibers were the most prevalent microplastic as roughly 70% of identified microplastics were microfibers.