MICROPLASTICS IN DRINKING WATER

Swedish Water

Can plastic pipes contribute to microplastics in tap water?

The drinking water from Vombverket in Skåne has been analyzed in terms of number, mass and polymer type of particles. The report shows that the content of microplastics, expressed as number of particles per volume unit, appears to be 500 to 5,000 times lower in the examined water than in packaged drinking water. The report addresses results from two subprojects. In one, the possible addition of microplastics from plastic distribution pipes was analyzed, primarily with infrared imaging technology, in the other, nanoparticles were investigated using field flow fractionation.

WHAT IS MICROPLASTICS?

Marine littering is one of the greatest environmental challenges of our time and plastic is one of the most common types of garbage in the sea. Microplastics are plastic particles that are smaller than 5 mm in size.

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About the study

Vombverket is operated by Sydvatten AB and receives its raw water from Vombsjön. Samples were taken from newly produced drinking water at Vombverket, as well as at the beginning and end of two distribution lines that are 3.9 and 5.0 km long, respectively. At the same time, blank samples were also taken to find any contaminants. Microplastic particles were found in all blanks; most likely it was airborne contaminants from sampling and sample preparation. After subtraction of the blank samples' values, no particles were seen in drinking water from Vombverket, while microplastics were detected in low concentrations in the distribution system, between 19 and 809 particles per m3.

Suggestions/conclusion

For microplastics in drinking water, there is still some way to go before limit values can be introduced. In general, the number of microplastic particles in the study was about 20 per m3 of drinking water, compared with 2−16 particles per m3 in indoor air. However, since a person breathes more than 10 m3 per day but only drinks 2-3 liters of water, it is likely that the air is a more important source of microplastics.

ABOUT THE REPORT
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FANPLESSTIC-SEA

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