

Microplastic accumulation in three alpine tarns

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Abstract

We surveyed microplastic concentrations in three high-altitude tarns over a single melt season. The most affected site, Black Tarn, held up to 1,180 microplastic particles per litre - roughly six times the concentration at the least affected site. We discuss likely atmospheric-deposition pathways.

Methods

Triplicate 5-litre samples were drawn from each tarn at two-week intervals, vacuum-filtered onto 0.45-micrometre membranes, and counted by fluorescence microscopy after Nile Red staining.

Results

Particle counts rose through the season at all sites and peaked in late summer. Black Tarn's 1,180 particles per litre was the season maximum; Glass Tarn recorded the lowest counts.

References

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