
Comparison between the traditional Manta net and an innovative device for microplastic sampling in surface marine waters

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Abstract

The use of the Manta net is a widespread microplastic sampling method for microplastics in the marine environment; however, it has some disadvantages. This study compares this method with the use of an innovative microplastic sampler, referred to as MuMi, registered as utility model. The results highlight the large variability that can exist in the outcomes of the different studies due to the lack of harmonisation between methods and the differing factors such as sampling mesh size, representativeness or reproducibility of the sampling volumes. Control over the filtered volume is an issue to be improved in trawl sampling methods, while in the MuMi sampler the control over the sampling depth could be improved. Still, MuMi represents a highly advantageous sampling system in terms of ease of operation, lower cost, smaller microplastics target size and greater precision, all while maintaining the representativeness of the collected samples.

Keywords: microplastics, Manta net, continuous sampler, Macaronesia

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