

**A straightforward protocol for extracting microplastics from freshwater sediment
with high organic content**

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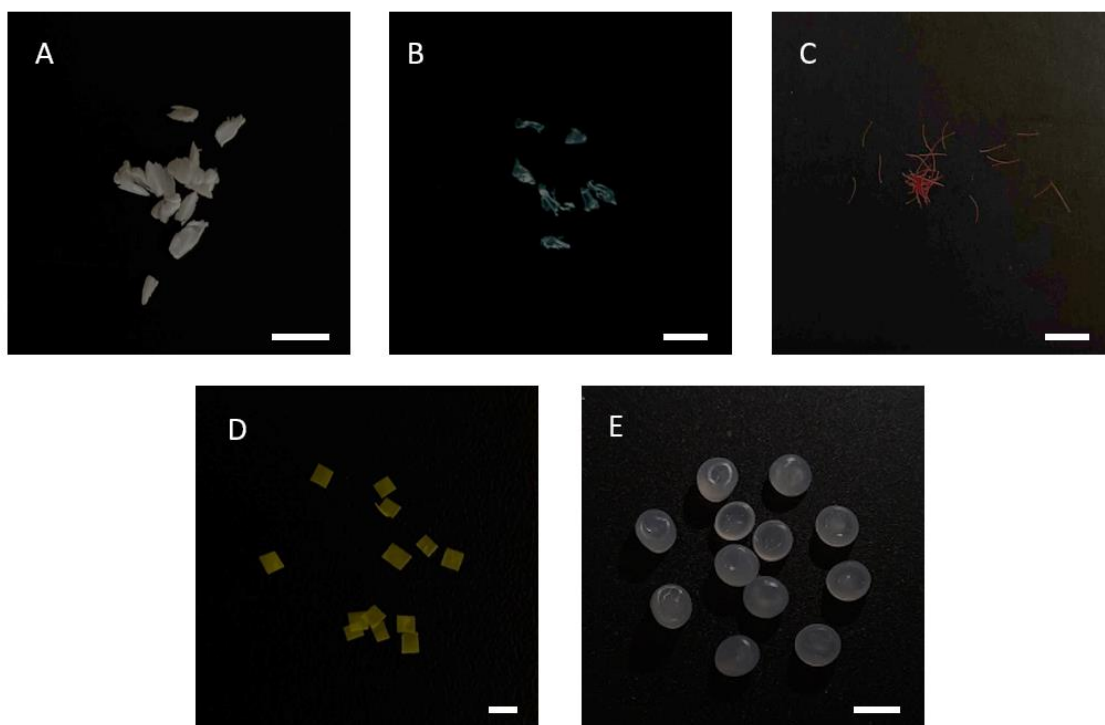


Figure S1. Microplastics used in the proposed extraction method. (A) Polystyrene (PS), (B) Polyethylene terephthalate (PET), (C) Polypropylene (PP), (D) Oxo-biodegradable polyethylene (PE-oxo), (E) High-density polyethylene (HDPE). Scale bars correspond to 1 mm.



Figure S2. The visual aspect of the sediment sample during the drying process and formation of fine flake sediment following the proposed method.

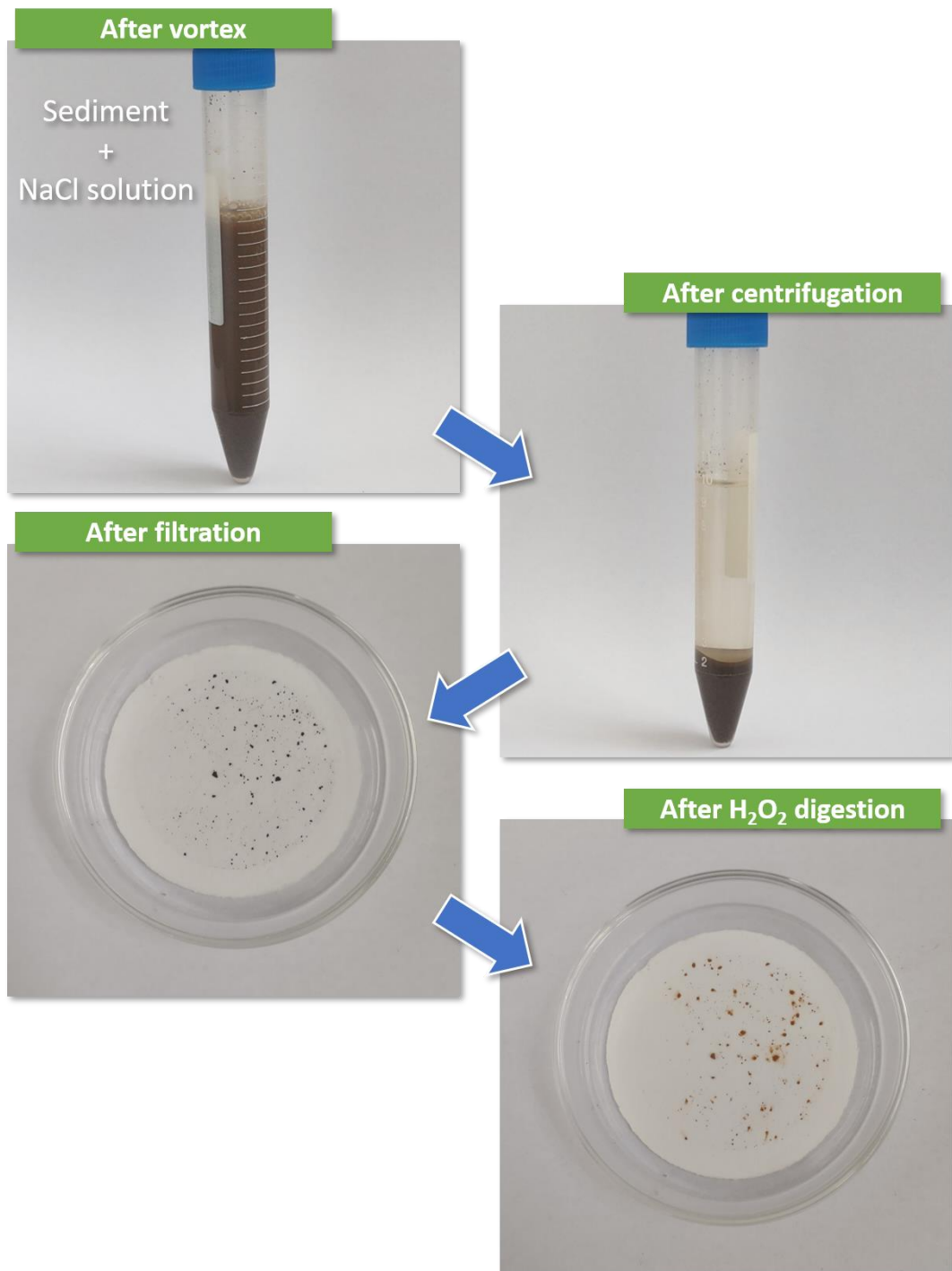


Figure S3. The visual aspect of the sediment sample during the density separation process and organic matter digestion following the proposed method.

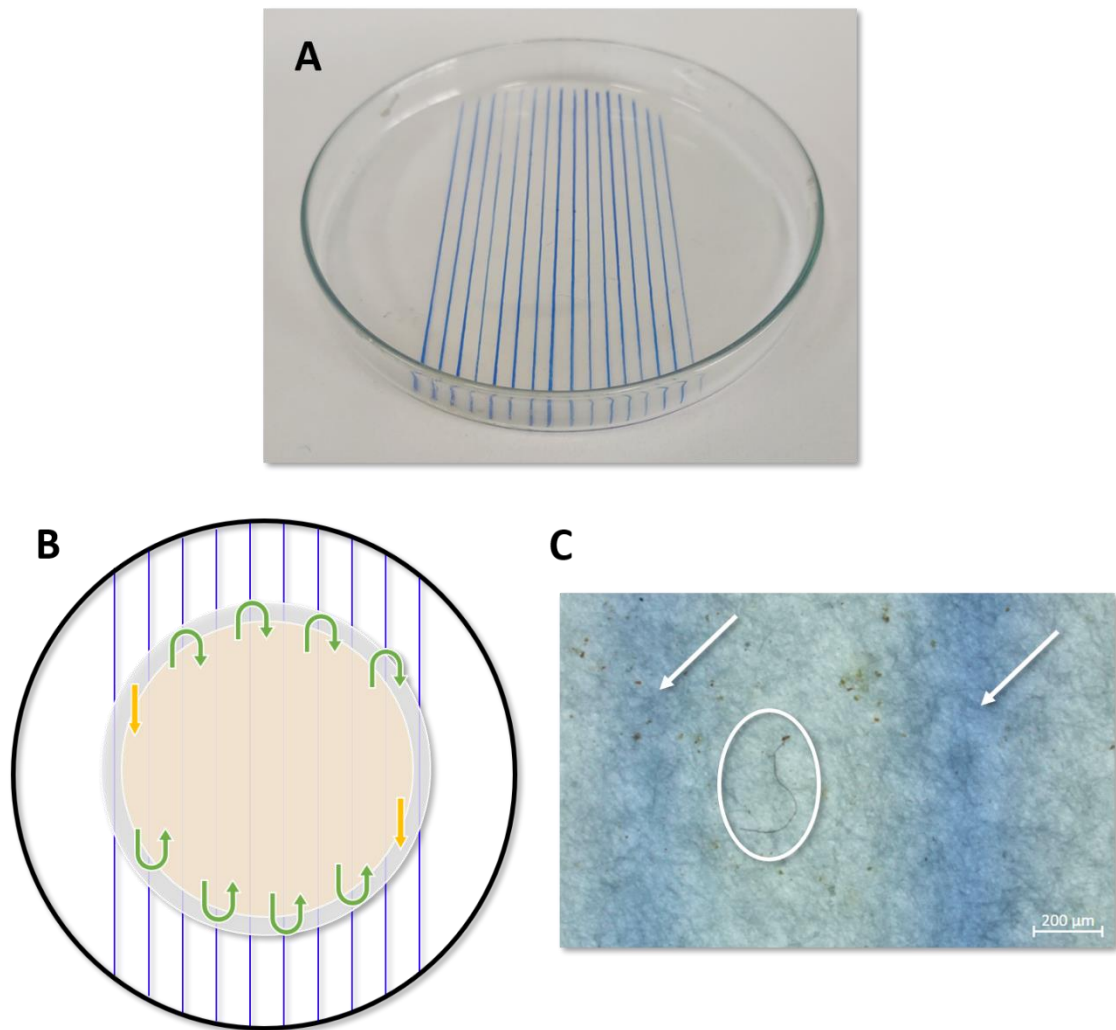


Figure S4: Simple technique to analyze the entire filter. Petri dish containing lines to guide the filter analysis (A). Scheme demonstrating the path taken on the filter surface (B). Region of the filter containing the guide-lines (arrows) and a microplastic fiber (circle).



Figure S5: Sediment samples after the proposed drying process (left) and conventional drying process forming a solid mass (right).

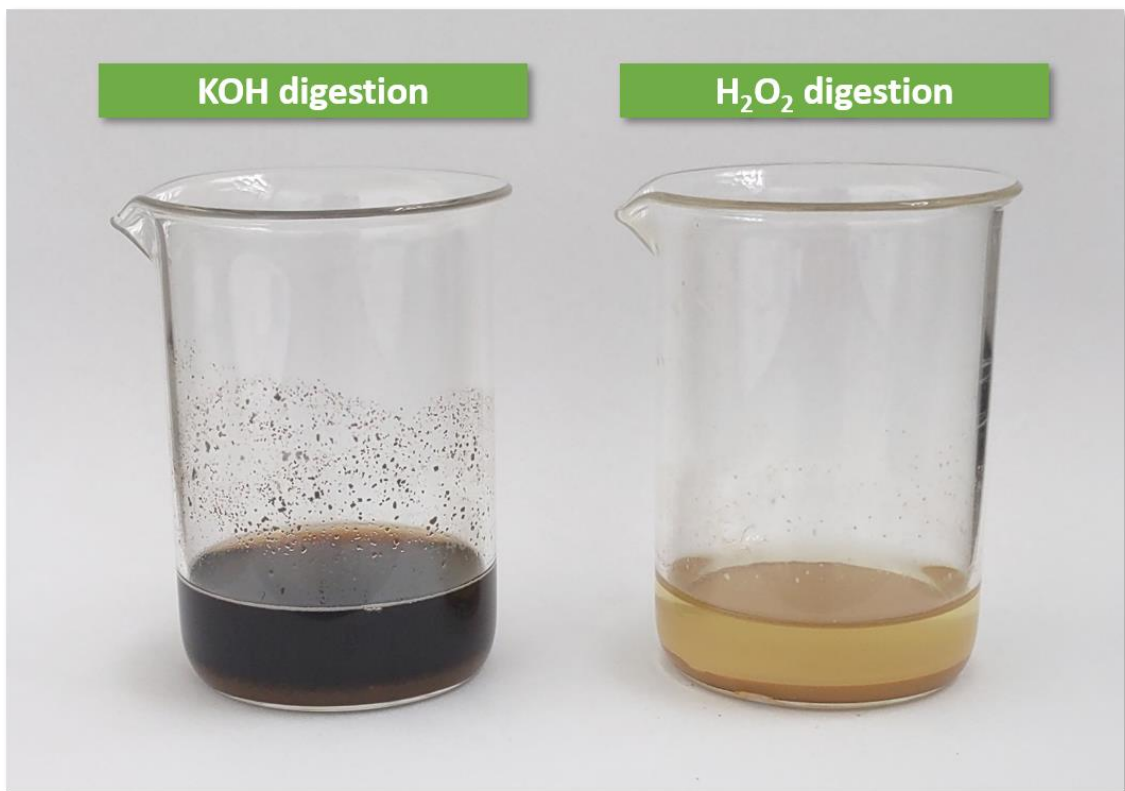


Figure S6: Different characteristics of sediment sample after 24h of digestion using KOH (left) and H₂O₂ (right).

Table S1. Categories of microplastics used to describe particles identified in the environmental sample.

Category	Description
Fiber	Thin, equal-thickness, thread-like
Fragment	Irregular shape, broken-down from larger plastic debris
Film	Flat, thin sheet
Foam	Sponge-like texture and appearance typical of polystyrene