{rokbox title=| Principal Component Analysis (PCA) biplot illustrating the distribution of physicochemical parameters (temperature, the practical salinity (PSU), conductivity (S/m), chlorophyll (ug/l), Colored Dissolved Organic Matter (CDOM; QSU), turbidity (NTU), and crude oil (RFU)) in different study areas :: Image: Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-what-is-not-seen-2026-alomar-thumb-et-al.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-what-is-not-seen-2026-alomar-et-al.jpg{/rokbox}

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,
Salud Deudero
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What is not seen: High levels of fibers below the sea surface revealed by a multisampler survey.
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Abstract:This study quantified microplastics and fibers in the upper 5 m of the water column and in sediments surrounding the Balearic Islands, assessing the effect of sampler mesh size, and filling the gaps on vertical microplastic distribution. Abundances of microplastic (excluding fibers) increased four orders of magnitude from the sea surface (manta trawl; 0.28 ± 0.59 MPs·m−3) to 5-m depth (Niskin bottles; 5433 ± 4191 MPs·m−3), and five orders with sediments (54,792 ± 130,705 MPs·m−3). Fiber abundances increased by six orders of magnitude from the sea surface (0.12 ± 0.14 fibers·m−3) to 5-m depth (118,258 ± 84,971 fibers·m−3), and with sediments (236,458 ± 288,773 fibers·m−3). Significant correlations with physicochemical parameters (e.g., turbidity) and potential sources (e.g., emissaries) demonstrated their contribution to the distribution of microplastics. These results highlight the need to consider subsurface layers when assessing microplastic pollution and suggest that nets underestimate fiber contamination in the ocean.

Keywords:Niskin bottles,Water column,Sediments,Anthropogenic particles,Microplastics.