{rokbox title=|Locations selected to assess microplastic ingestion, and levels of phthalates and bisphenols in bivalves, fish, and holothurians from Cabrera MPA :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-assessing-microplastic-ingestion-bisphenols-phthalates-bivalves-fish-holothurians-mpa-rios-et-al-2022-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-assessing-microplastic-ingestion-bisphenols-phthalates-bivalves-fish-holothurians-mpa-rios-et-al-2022.jpg{/rokbox}

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Assessing microplastic ingestion and occurrence of bisphenols and phthalates in bivalves, fish and holothurians from a Mediterranean marine protected area
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Abstract: Microplastic (MP) ingestion, along with accumulated plasticizers such as bisphenol A (BPA), bisphenol F (BPF), and bisphenol S (BPS), and phthalates represented by diethyl phthalate (DEP), dibutyl phthalate (DBP) and bis (2-ethylhexyl) phthalate (DEHP), were quantified in bivalves, fish, and holothurians collected from a coastal pristine area at the western Mediterranean Sea. MP ingestion in sediment-feeders holothurians (mean value 12.67 ± 7.31 MPs/individual) was statistically higher than ingestion in bivalves and fish (mean 4.83 ± 5.35 and 3 ± 4.44 MPs/individual, respectively). The main ingested polymers were polyethylene, polypropylene, and polystyrene. The levels of BPS, BPF, and DEHP were highest in bivalves' soft tissue; BPA and DBP had the highest levels in the holothurians' muscle. In addition, the levels of all plasticizers assessed were lowest in fish muscle; only BPA levels in fish were higher than in bivalves, with intermediate values between those of bivalves and holothurians. This study provides data on exposure to MPs and plasticizers of different species inhabiting Cabrera Marine Protected Area (MPA) and highlights the differences in MP ingestion and levels of plasticizers between species with different ecological characteristics and feeding strategies.

Keywords: Contaminants, Bioindicators, Feeding behavior, Trophic level