

{rokbox title=|Bar graph of the polymers identified via ATR-FITR and micro-FTIR according to chemical composition :: Image:

Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-multi-species-assessment-anthropogenic-compa-2022-thumb-et-al.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-multispecies-assessment-anthropogenic-compa-2022-et-al.jpg{/rokbox}

Montserrat Compa, Carme Alomar, María Francesca López Cortès, Beatriz Rios-Fuster, Mercè Morató

,
Xavier Capó

,
Valentina Fagiano

and

Salud Deudero

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[**Multispecies Assessment of Anthropogenic Particle Ingestion in a Marine Protected Area.**](#)

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Abstract: We have applied a multispecies ecosystem approach to analyse the ingestion of anthropogenic particles (AP) in the gastrointestinal tract of 313 individuals (17 fish species and 8 invertebrate species) from pelagic, demersal and benthic habitats in a marine protected area off the Western Mediterranean (Cabrera National Park). We have quantified and characterized the ingestion at several taxonomic levels of fish, sea urchins, sea cucumbers, bivalves, and jellyfish in relation to biotic/abiotic factors based on taxonomic groups, trophic guilds (functional groups) and habitats. AP ingestion occurrence ranged from 26 to 100% with no significant differences among taxonomic groups. The fish within the MPA showed an overall ingestion occurrence ranging from 0 to 100%, the echinoderms from 29 to 100%, the bivalves from 72 to 96% and the jellyfish 36% ingestion. The ecosystem approach applied to evaluate overall AP ingestion within the species reported that for trophic guilds, the omnivorous species ingested the highest amounts of anthropogenic items, while herbivores ingested significantly fewer items than all other trophic guilds. Moreover, no significant differences were found amongst habitats, indicating a homogeneous spatial distribution of APs at all studied habitats. The multispecies approach provided insight into the high APs exposure to species within Cabrera MPA, highlighting the potential harm linked with marine litter that threatens marine biodiversity.

Keywords:marine diversity,marine plastic,ingestion,marine habitats,Mediterranean Sea.