

{rokbox title=|Map of the Balearic Islands showing the sampling areas (shaded rectangles) of *Mullus surmuletus* to study microplastic ingestion :: Image: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ingestion-microplasticos-salmonete-alomar-et-al-2017-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ingestion-microplasticos-salmonete-alomar-et-al-2017.jpg{/rokbox}

C. Alomar, A. Sureda, X. Capó, **B. Guijarro**, S. Tejada, **S. Deudero**, 2017. [Microplastic ingestion by *Mullus surmuletus* Linnaeus, 1758 fish and its potential for causing oxidative stress.](#) [Environmental Research](#). Volume 159, November 2017, Pages 135-142

Abstract: A total of 417 striped red mullet, *Mullus surmuletus*, were analyzed to study microplastic ingestion and livers of fish were assessed to study effects of microplastics. Nearly one third (27.30%) of the individuals were quantified to ingest microplastics although there was no evidence of oxidative stress or cellular damage in the liver of fish which had ingested microplastics. A small increase in the activity of glutathione S-transferase (GST) of *M. surmuletus* was detected which could be suggesting an induction of the detoxification systems but these findings should be tested in laboratory conditions under a controlled diet and known concentration of microplastics. Fish from trammel fisheries, operating closer to land and targeting larger individuals, showed higher mean ingestion values than fish from trawling fisheries, and were related to body size, as microplastics ingested increased with total fish length. Consequently, ingestion values of microplastics were not related to sampling distance from land giving further evidence of the ubiquity of microplastics in the marine environment. Finally, Fourier Transform Infrared Spectroscopy (FTIR) analysis showed that the vast majority of microplastics were filament type and polyethylene terephthalate (PET) was the main identified component.

Keywords: Biomarkers, Oxidative stress, Effects, Mediterranean Sea, FTIR