

difficult sample mediums such as sludge or river mud, and methodological improvement is a significant part of our research. Progress has been made to improve the reliability of both sampling and sample processing, with strides being made to examine microplastics down to low sizes ($\sim 10 \mu\text{m}$; in association with the Leibniz Institute for Polymer Research, Dresden) while examining considerable sample volumes (200-1000 L). Thus, the IOW is working to improve the methods of MP science as well as both deepening the understanding of the Baltic Sea's place in the global microplastic research map and increasing the understanding of MP dynamics from source to sea.

Keywords: establishing microplastic sources, sediment samples, water samples, biota samples, marine litter

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PAEs level in European sea bass *Dicentrarchus labrax* experimentally exposed to PVC microplastics

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Release of hazardous chemicals and plastic additives from ingested plastic debris constitute a potential threat to marine organisms, which needs to be investigated in particular fish species of high value for human consumption. Among plastic additives that recently attracted the attention of the scientific community there are phthalate esters (PAEs), which can have various noxious toxic effects on organisms, in particular, they are able to act as endocrine disruptors (EDs) even at very low concentrations. This study investigates, for the first time, the presence of eight different phthalates (MBZP, MBP, MEPH, DNHP, BBzP, DEPH, DIOIP and DNDP) in muscle of European sea bass *Dicentrarchus labrax* chronically exposed to microplastics. The fish were exposed for 90 days to three different treatment diets: food pellets as control (CTRL), food pellets supplemented with native $300 \mu\text{M}$ PVC microplastics (0.1% w/w 0.3 mm PVC; MPV), food pellets supplemented with polluted microplastics incubated for three months in the waters of Milazzo harbor (0.1% w/w 0.3 mm PVC; MPI). After 30, 60 and 90 days, fish were sacrificed, and muscle stored for subsequent analysis at -80°C . Taking into account the ubiquitous nature of plasticizers stringent laboratory and sampling procedures were taken to ensuring the integrity of results. The DIOIP concentrations were below the detection limit in all sample, with regard to the detected PAEs, results evidenced a