

## Supplementary Materials

**Table S1.** Laboratory and Field Studies Conducted to Assess the Risk of Microplastics on Different Marine Organisms

Organism	Concentration accumulated in body part		Type of plastic	Impact	Ref.
	Field condition	Laboratory condition			
Bivalves / mussels ( <i>Mytilus edulis</i> )	0.2 ± 3 microplastic particles/g	110 particles/mL	PS	Significant increase in pseudofaeces production Decrease in filtering activity	[128]
<i>Mytilus edulis</i>	0.36 ± 0.7 particles/g	-	-	-	[128]
<i>Crassostrea gigas</i>	0.47 ± 0.16 particles/g	-	-	-	[129]
<i>M. edulis</i>	0.9 to 4.6 items/g	-	Fibres and fragments	-	[129]
Mussels	Intestine 9.2 items/g Visceral tissues: 3.33 items/g	2,000 microfibers/L (48 h exposure)	Microfibers	Concentration accumulated and retained 17 items/g And 91 items/g respectively. About 50% uptake is enabled by adhesion	[130]
Sheep head minnow ( <i>Cyprinodon variegatus</i> )	-	-	PE	physiological (i.e., gut distension and abnormal swimming behavior) and biochemical responses and enzyme activity	[131]
Seabream ( <i>Sparus aurata</i> L.)	-	500 mg/kg (30 days exposure)	PVC	Cellular and oxidative stress and damage in the of liver and kidney	[132]
Sea bass ( <i>Dicentrarchus labrax</i> L.)	-	0 to 500 mg/kg (21 d exposure)	PVC and PE	PE induced immune system dysfunction due to oxidative stress	[133]
Silver barb ( <i>Barbodes gonionotus</i> )	-	2 mg/L (96 h exposure)	PVC	Intestinal mucosal epithelium thickened with increasing PVC exposure Trypsin and chymotrypsin activity increased	[134]
Marine mammals stranded around British coast including Atlantic white-sided dolphin Bottlenose dolphin Short beaked common dolphin Grey seal Harbor porpoise Harbor (Common) seal Pygmy sperm whale Risso's dolphin (i) Captive grey seal ( <i>Halichoerus grypus</i> ) (Seal samples collected from outdoor enclosure at the Cornish Seal Sanctuary in Gweek, Cornwall (United Kingdom) (ii) Fish (Mackerel) (Celtic sea/English channel/Western approaches)	In total, 273 particles were detected and 261 of these were less than 5 mm in size 1-12 particles/ animal. Juvenile Short-beaked common dolphin ( <i>Delphinus delphis</i> ) had green netting in the fore stomach Provided a plastic enrichment toy	-	Nylon, PET and Polyester fibers  Polypropylene, Ethylene, Polyethylene  Ethylene Propylene, Polyethylene  Polyethylene, Polypropylene, Polyethylene terephthalate and Nylon	-	[135]
Humpback whale ( <i>Megaptera novaeangliae</i> )	-	-	-	-	[136]
Humpback whale ( <i>Megaptera novaeangliae</i> )	-	-	-	-	[137]