

Abundance, size, color and polymer composition of microplastics in the gastrointestinal tract of Golden grey mullet (*Liza aurata*) on the coast of Gilan province

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Abstract

Any stable and well-produced solid that is discarded in the marine or coastal environment are called marine wastes. A large part of the waste was made of plastic, which by entering the food chain of the aquatic ecosystems has created several issues. The aim of this study was to investigate the prevalence, abundance, size, shape and color of microplastics in the intestinal tract of mullet golden fish in the southwest Caspian Sea basin. The number of 100 fish were collected in a seasonal and random form in the year 2018 of Gilan province's fishing blade and after the study, they were autopsy. The results showed that the samples were 83 males and 17 females and 49% were contaminated with fish, and the numbers of 70 microplastic pieces were isolated from their gastrointestinal tract. There was a significant relationship between the length and weight of the fish with the number of microplastic in the gastrointestinal tract, and the maximum number of time was observed in the spring. All microplastic of the type of string and the size of them are the highest frequency related to the category $1 \geq$ millimeter and four colors of black, red, blue and green, which are black with 37 pieces, the highest frequency has a total of 2 types of polymer, Polypro band Polystyrene was found in GI fishes. Due to the importance of mullet fishes in the food basket of the Southern Caspian basin and considering that these fish were very vulnerable to their diets against the infection, the results of this study determined that this type of pollution enters the food chain of the Southern Caspian basin which should be given special attention.

Keywords: Pollution, Micro plastic, Golden grey mullet (*Liza aurata*), Caspian Sea.