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EXAMINATION OF RELATIONSHIP BETWEEN Hg RATE WITH Zn AND Cu CHANGES IN MUSCLE TISSUE OF *OTOLITHES RUBBER* IN MAHSHAHR PORT – THE PERSIAN GULF

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The current study was conducted with the aim of examination of changes scope as well as correlation between Hg with Zn and Cu in the muscle tissue of tigertooth croaker as one of the most consumed fish in the area (Mahshahr Port) and its comparison with available standards. The obtained results suggested that, total average concentration of Hg, Zn and Cu (mean ± SE) accumulated in the muscle tissue of tigertooth croaker (Otolithes rubber) are respectively equal to 1426 ± 113; 15999 ± 1045 and 2279 ± 94 (ngg^{-1}) in summer as well as 955 ± 91; 13172893 and 1678 ± 178 (ngg^{-1}) in winter. Comparison among accumulation rate of elements Hg, Cu and Zn in two seasons showed a significant correlation between two mentioned seasons for Zn and Hg. The correlation result indicates a positive significant relationship between Zn and Cu and a descending significant relationship between Hg with Cu and Zn. Concentration of total Hg accumulated in the muscle tissue of tigertooth croaker (Otolithes rubber) within two seasons, summer and winter, are lower than standard limit (500 ngg^{-1}) defined by WHO while it is higher than standard limit (300 ngg^{-1}) estimated by USEPA. Due to high concentrations of Hg, the results can be a serious warning for consumption of this fish in Mahshahr region.

Keywords: mercury, zinc, copper, tigertooth croaker, Mahshahr Port.

Introduction

During recent decades, marine environments have been contaminated by sustainable pollutant derived from industrial and agricultural sources. Heavy

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