

Study of mercury bioaccumulation in some organs of Anzali wetland Pike (*Esox lucius*) and mercury concentration relation with total body length and sex

Nastaran Molazadeh¹

Mahboubeh Nozari²

*1. Environment Department,
Najafabad Branch, Islamic Azad
University, Isfahan, Iran*

*2. Ph.D student of Environment,
Science and Research Branch,
Islamic Azad University, Tehran,
Iran*

***Corresponding author**

Nastaran.mollazadeh@yahoo.com

Received date: 2014.05.04

Reception date: 2014.06.08

Abstract

The study done to determine the concentration of mercury in edible tissues and vital Anzali pike (*Esox Lucius*) and Relationship between body length, age and sex of the fish by the concentration of mercury. A total of 58 fish samples were taken from both east and west of the Anzali wetland After weighing, sexing and biometric target tissues to determine the concentration of lead was prepared by the specific analysis of the Mercury, (American Standard Method D6722) analyzed. Mercury concentrations in different organs suggest that the spleen may be high concentrations of mercury in the absorption and accumulation. The liver compared to other organs studied, the lowest concentration of mercury in the absorption and accumulation. Comparison of mercury concentrations in male and female pike indicate that mercury concentrations depend on gender and age pike is in Anzali lagoon. Mercury concentrations in pike and pickerel Anzali wetland east of the western part of the difference is not significant. No correlation between size, weight and age pike in Anzali wetland uptake and accumulation of mercury in them there. Significant differences between the sexes in terms of the concentration of mercury in fish tissues was observed ($p > 0.05$), which reflects the impact of gender on the adsorption of mercury species under study. Between East and West Pond Fish Two major industries and even though accumulation of pollutants in the eastern part of the lagoon, there was no significant difference. Mercury levels in pike Anzali Wetland permissible limit recommended by the FDA and WHO / FAO (1 PPM) was lower than the average concentrations in ppb 37/322 muscle pikes in Anzali wetland and limitations directive US EPA, dose of 2 times per month throughout the entire body and sexuality permissible Bashd.brrsy effect of metallic mercury accumulation in the liver, kidney, spleen and muscle pike Anzali Wetland

Keywords: Anzali wetland, Pike, Mercury, Heavy metals, Bioaccumulation.