**Abstract**

The accumulation of heavy metals in aquatic fauna surviving in the brought hazards to the speedy urbanization and in ecosystem contaminated with a wide range of pollutants is a matter of concern and had posed a serious threat to the survival in the ecosystem. At present, the pollution has become a serious threat, and hasgrowing population as well as the earth/environment (Yousafzai*et al*., 2010). The industrialization has led to increased disposal of pollutants like heavy metals and various types of organic and inorganic substances into the environment (Ghosh*et al*.,2007). It has been cited that the heavy metals constitute the major pollutants in the environment. The present study was to determine the contents of heavy metals and biochemical parameters of muscles in two commonly cultivable fishes, *Labeorohita* and *Tilapia tilapia.* To evaluate the relationship between the water quality parameters and fish production. The fish samples (*Labeorohita* and *Tilapia tilapia*) used in the experiment were caught using gill nets, cast nets and fishing lines. Sampling was performed in July 2014. Fish samples obtained were immediately kept in pre-cleaned polythene bags, which were sealed and kept in an ice box until further analysis. The analysis was performed in the Department of Zoology, PSGR Krishnammal College for Women, Coimbatore. The water samples were collected from Ukkadam lake and Singanullur lake situated in Coimbatore district, Tamilnadu. The water samples were further analyzed for physicochemical parameters using standard methods prescribed for the analysis. To minimize contamination, all the materials used in the experiments were previously washed in ultra pure water, and a stainless steel knife was used to cut the tissues. Before analysis the fish were thawed and a 0.5 g sample was taken from each tissue (Muscle, gill, skin, intestine and liver).

Based on the results of the present investigation, the levels of metals bioaccumulated

by FAO, FEPA and WHO. Heavy metals contents of*Labeorohita* and *Tilapia tilapia* did not exceed the permissible limits set for heavy metalsCPA and WHO. Therefore, these fishes did not pose any threat to human upon their consumption. The present study, due to the bioaccumulation of heavy metals like Iron and Zinc in the tissues of *Labeo*Md of Singanallur lake fish, there are a variations in the biochemical contents. High bioaccumulation ofZinc results in elevation of carbohydrates and depletion of fats and proteins. Similarly in theIron and Zinc in the tissues of *Tilapia tilapia* results in elevation of fats and results in elevation of carbohydrates in *Tilapia tilapia*, there is a variation in the biochemical content. High bioaccumulation of Copper elevation of fats and proteins and depletion of carbohydrates. High bioaccumulation of leadon of carbohydrates and depletion of fat and protein in the tissues of fish