Abstract

In India extensive work has been done on the effect of waste water from major industries on the water quality of ponds and rivers, however, literature on the characteristics and treatment of waste water of the electroplating industry and its impact on freshwater fishes is almost nil. The electroplating industry waste water is one of the most important sources of ground water pollution in Avarampalayam, Ganapathy and Peelamedu areas of Coimbatore Town. In an earlier report we presented evidence for the contamination of groundnwater at Avarampalayam by Cyanide, Zinc, Nickel and Chromium generated from the waste water discharged indiscriminately by the electroplating industries.

Since aspartate (AAT) and alanine (AIAT) aminotransferases are known to play a key role in mobilizing L-aminoacids for gluconeogenesis and also to function as links between carbohydrate and protein metabolism, the present investigation was undertaken to understand the modulation of these enzymes by the electroplating industry waste water on the freshwater catfish, *Mystuspunctata*, on acute (48 h) exposure 1%).

From the results it is apparent that short term exposure of waste water causes severe pharmacological and biochemical effects in the various vital organs of *M. punctata*. AAT is accumulated heavily (P<0.05) in all the organs except the brain (+6.34%). However AIAT is accumulated significantly (p< 0.05) in the liver (+104.42%), muscle (+91.49%) brain (+86.95%) and gill (+21.43%). This modulation clearly suggests that the tissue glycogen may be insufficient to meet the waste water toxic stress and hence the operation of gluconeogenesis to alleviate the waste water toxic stress.