

## Health Risk Assessment of Heavy Metals in *Clarias gariepinus* (Burchell, 1822) from Fish Mongers within Akure Metropolis, Ondo State, Nigeria

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**Abstract :** The concentration of heavy metal (Cd, Pb, Fe, Zn, Cu) in *Clarias gariepinus* collected from fish markets; Fanibi (Station I) and Fiwasaye (Station II) in Akure metropolis, Ondo state, Nigeria were investigated to ascertain the safety for the consumers. 60 samples were collected from the two markets in three batches (I, II, III) for a period of six months and analyzed for heavy metals in the gills and muscles of the fish. Also, the Health Risk Index (HRI) was used to determine the health risk of these metals to the consumer. The results showed that the investigated metal concentration was higher in station I than station II, except Pb having higher concentration in station II than station I. In both stations, the highest concentration of Fe was recorded in the gills (12.60  $\pm$  1.51; 6.94  $\pm$  1.38) and muscles (3.72  $\pm$  0.09; 3.86  $\pm$  0.33) of samples in batch I. Also, the HRI revealed that consumption of *Clarias gariepinus* from these study areas did not pose any health risk (HRI  $\leq$  1). In addition, concentrations of the heavy metals were all below the permissible limits recommended by FAO/WHO.

**Keywords :** health risk index, heavy metals, *clarias gariepinus*, akure metropolis, fish monger

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