



Zinc, Copper, Lead and Cadmium levels in edible finfishes from lower gangetic delta

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ABSTRACT

The aim of this study is to determine the heavy metals (Zn, Cu, Pb and Cd) in edible finfish species (*Polynemus paradiseus*, *Tenuulosa ilisha*, *Liza parsia*, *Liza tade* and *Stolephorus commersonii*) and compare the level of heavy metals determined in the Gangetic delta region earlier. Finfish species were sampled from 4 different stations. Levels of four selected heavy metals were determined in the muscle of edible finfish species in the Gangetic delta region using a Perkin-Elmer Sciex ELAN 5000 ICP mass spectrometer and expressed as mg kg⁻¹ dry weight. To determine whether heavy metal concentrations varied significantly between sites and species, analysis of variance (ANOVA) was performed. In addition to, heavy metal concentrations were compared with WHO and FAO's permitted levels. In finfish species the concentrations of Zn, Cu, Pb and Cd ranged from 12.00±0.66 – 119.66 ±1.53, 10.89±0.19–73.22±0.83, 2.33±0.09–17.88±0.52 and BDL–3.12±0.10 respectively. For Zn and Cu, accumulated metal concentrations in Stn. 4 were significantly higher than accumulated metal concentration in Stn 1 and Stn 2. For Pb, significantly station difference between stations was not found. Between all studies fish species, lowest metal acculation values was found for *S. commersonii* (p<0.05). The selected heavy metals in finfish muscle (except Zn in *Liza parsia* in station 1) were also within the permissible limits for human consumption as indicated by the Food and Agricultural Organization.