ABSTRACT

This study was conducted to investigate concentration of heavy metals (Pb, Hg, As, Cu) and antibiotic (enrofloxacin) in different samples of fish species available in the local market. Instrumental analysis of levels of toxic metal concentration was performed by Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES). Analysis of presence of enrofloxacin, a banned antibiobiotic, in Pangasius hypothalamus imported from Vietnam was done by High performance liquid Chromatography (HPLC). Fish samples have variable concentration of heavy metals. The ranges of lead, mercury, arsenic and copper in fish samples were -(0.045 -0.054) ppm, 0.012-0.014 ppm, 0.017-0.039 ppm and 0.109-0.88 ppm. However, the concentration of copper and lead in all the samples were within the permissible limits set by WHO. The arsenic and mercury concentration in all the samples were above the permissible limits. Clear evidence of presence of enrofloxacin using HPLC was ascertained by comparing with standard chromatogram. In the light of literature, the elevated levels of heavy metals and antibiotic (enrofloxacin) in fish are extremely hazardous to human health. This study can be used as a reference or a foundation for future in-depth studies.