ABSTRACT

The present study was conducted to determine daily intake of cadmium (Cd), copper (Cu), and lead (Pb) and to assess noncarcinogenic human health risk caused by these trace metals in the commonly consumed fish species (*Oreochromis niloticus, Rastrineobola argentea*, *Lates niloticus*, and *Protopterus aethiopicus*) in Nakuru town, Kenya. Trace metal determination in the composite samples of the commonly consumed fish species was done using flame atomic absorption spectrophotometer. Cd, Cu, and Pb content in the muscle tissues of the commonly consumed fish species ranged from 0.11 ± 0.045 to 1.11 ± 0.931 mg kg^{-1} for Cd, 0.48 ± 0.013 to 3.00 ± 0.009 mg kg^{-1} for Cu, and 3.42 ± 0.045 to 12.78 ± 0.108 mg kg^{-1} for Pb. Cu concentrations were within Food and Agriculture Organization (FAO) recommended limits for this trace metal in fish. In contrast, Cd and Pb had values above their respective permissible limits in fish. The assessment of human exposure to trace metals indicated that exposure doses of Cd and Cu were safe for fish consumers. Conversely, target hazard quotient (THQ) values of Pb suggested possible health risks for consumers of the commonly consumed fish species in Nakuru town, Kenya.

Keywords: Trace metals; commonly consumed fish species; human health risk assessment.