

Abstract

This study was conducted to investigate concentration of heavy metals (As, Hg, Pb, Cu) in different body organs (liver, tissue, gizzard) of wild pigeon samples. Instrumental analysis of elevated level of toxic metal concentration was performed by Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES). The excess amount of heavy metal causes hazardous effects on human health. *Columba livia domestica* samples showed variable calculations of concentrations of these metals. The ranges of As, Hg, Pb and Cu in liver of wild pigeons were (0.017-0.036), (0.012-0.014), (-0.045)-(-0.054), (0.214-0.610) ppm respectively, the ranges of As, Hg, Pb and Cu in tissue of *Columba livia domestica* were (0.013-0.077), (0.012-0.014), (-0.045)-(-0.052), (0.210-0.686) ppm respectively and the ranges of As, Hg, Pb and Cu in gizzard of *Columba livia domestica* were (0.032-0.054), (0.012-0.015), (-0.043)-(-0.054), (0.148-4.082) ppm respectively. The arsenic and mercury concentrations in all the samples were above the permissible limit of 0.01 and 0.001 ppm however, the copper concentration in all the samples was within the permissible limit of 2 ppm set by WHO, except PG-11 that is 4.082 ppm and the lead concentration in all the samples was below the permissible limit of 0.01 ppm. This study can be used as a foundation and reference for future studies. This investigation reveals that *Columba livia domestica* serves as a good tool to biomonitor the environmental pollution in urban areas.