

METALLIC RESIDUES CONCENTRATION IN MUSCLE, LIVER AND KIDNEYS OF CATTLE SLAUGHTERED IN PUDUCHERRY REGION

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ABSTRACT

This study was planned to find out the concentration of chromium (Cr), copper (Cu), lead (Pb) and zinc (Zn) in muscle, liver and kidneys of cattle that are commercially sold at three places of Puducherry. A total of 108 samples collected to determine the metallic residues concentration by using Atomic Absorption Spectrometer (AAS). Results indicated that heavy metal concentration varied from tissue to tissue within the same species. Among the three tissues of cattle examined highest mean concentration of chromium was noticed in kidneys (1.77 ± 0.17 ppm), copper in liver (6.3 ± 1.69 ppm), lead in muscle (3.96 ± 6.32 ppm) and zinc also in liver (22.78 ppm) respectively. Out of four metallic residue concentration analyzed, mean concentrations of three were well below the maximum permissible limit (MPL) prescribed by (FSSAI, 2011) with the exception of lead which had relatively higher concentration in all three tissues of cattle.

KEYWORDS: Chromium, Copper, Lead, Zinc, Atomic Absorption Spectrophotometer