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Concentrations and distribution of some heavy metals in the organs of cattle in Ogbomoso, Nigeria**Abdur Rahim A Giwa¹, Wewers F² and Adesoye O A¹**¹Ladoke Akintola University of Technology, Nigeria²Cape Peninsula University of Technology, South Africa

There has been increasing awareness about health risk associated with exposure of man to potentially toxic heavy metals present in food. This study investigated the levels of five metals (Pb, Cd, Zn, Cu and Fe) in meat samples of cattle sold in Ogbomoso metropolis, Nigeria so as to ascertain the level of exposure of the meat-consuming populace to these metals. Beef samples of heart, intestine, liver, muscle and tripe were collected from both sexes of two breeds of cattle. Each sample was divided into four portions. Three portions were cooked using different methods. Raw and cooked samples were digested and analyzed using the method described by the Association of Official Analytical to determine the levels of the metals by Atomic Absorption Spectrophotometric technique. The five metals were present in all the samples investigated. Generally, intestine was found to accumulate the highest significant levels of metals while the liver and tripe contained lowest concentrations. The range of concentrations of the metals are, Pb: 5.23-5.80 mg/kg, Cd: 5.55-6.15 mg/kg, Zn: 5.06- 6.61 mg/kg, Cu: 66.55-70.00 mg/kg and Fe: 302.50-328.5 mg/kg. The study concludes that all the five metals are present in all the samples analyzed and their average concentrations are significantly high in most of the samples. The levels of the toxic metals in the samples were significantly reduced by different cooking methods employed.

Biography

Abdur Rahim A Giwa has completed his PhD from Ladoke Akintola University of Technology, Ogbomoso, Nigeria, and Postdoctoral studies from Cape Peninsula University of Technology, Bellville, South Africa. He is a Senior Lecture in Environmental-Analytical Chemistry at LAUTECH, Nigeria. He has published more than 25 papers in reputed journals and has been serving as a Reviewer and an Editorial Board Member of repute.

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