

## Contact Address Levels and Human Health Risk of Metals In Milk and Milk Products Bought from Abeokuta, Southwestern Nigeria

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**Abstract :** The present study evaluated the contents and health risk assessment of metals determined in milk and milk product samples collected from the Abeokuta market. Forty-five milk and milk product (yoghurt) samples were digested and analysed for selected metals using Atomic Absorption Spectrophotometric method. Health risk assessment was evaluated for hazard quotient (HQ), hazard index (HI), and cancer risk (CR). Data were subjected to descriptive and inferential statistics. The concentrations of Zn, which ranged from  $3.24 \pm 0.59$  to  $4.35 \pm 0.59$  mg/kg, were the highest in the samples. Cr and Cd were measured below the detection limit of the analytical instrument, while the Pb level was higher than the Codex Alimentarius Commission value of 0.02 mg/kg, indicating unsafe for consumption. However, the HQ of Pb and other metals in milk and milk product samples was less than 1.0, thereby establishing no adverse health effects for Pb and other metals. The distribution pattern of metals in milk and milk product samples followed the decreasing order of  $Zn > Fe > Ni > Co > Cu > Mn > Pb > Cd/Cr$ . The CR levels of meals were also less than the permissible limit of  $1.0 \times 10^{-4}$ , establishing no possible development of cancer. Keywords: adverse effects, cancer, metals, milk, milk product, the permissible limit.

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