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An investigation into the Presence of Heavy Metals in Bread Samples from Lagos Metropolis

¹AKINNIYI F. E., ¹OGUNLUSI R.O. and ¹OLALEYE B.O.

¹Chemistry Department, School of Science, Adeniran Ogunsanya College of Education

¹akinniyeliza@yahoo.com +234-808- 681- 4202

¹ogunlusiola@gmail.com +234- 806- 939 -1339

¹olaleyebolanle@yahoo.com +234- 805- 300- 8245

ABSTRACT

This research study was carried out to assess the presence of heavy metals (cadmium and lead) in bread sold at bus terminals in Lagos metropolis. The concentration of cadmium and lead were determined by Atomic Absorption Spectrometry (AAS). Eleven sampling sites were selected with the metropolis. A total of thirty three bread samples were analysed. The moisture content of samples had mean value of $22.3 \times 10^{-1} \pm 5.06 \times 10^{-2}$ g. The overall mean concentration of cadmium was $2.19 \times 10^{-2} \pm 1.24 \times 10^{-2}$ mg/kg with $2.66 \times 10^{-2} \pm 0.83 \times 10^{-2}$ and $1.86 \times 10^{-2} \pm 1.46 \times 10^{-2}$ mg/kg for labeled and unlabelled bread samples respectively. 51.3% of the analysed samples contain Cadmium. Mean concentration of lead was $3.2 \times 10^{-1} \pm 2.6 \times 10^{-1}$ labeled bread samples have $1.8 \times 10^{-1} \pm 2.02 \times 10^{-1}$ and unlabeled samples have $6.3 \times 10^{-1} \pm 0.24$. 2% of samples contain lead. Heavy metals such as lead and mercury are known to be toxic metals with no beneficial effects.

KEY WORDS: Heavy metals, Metropolis , AAS