



Levels of Heavy Metals in Agricultural Soils of Oke-Osun Farm Settlement Osogbo, Nigeria

J.A.O. Oyekunle^{1*}, A.O.Ogunfowokan¹, N.Torto², M.S. Akanni¹

¹*Department of Chemistry, Obafemi Awolowo University, Ile-Ife, Nigeria;* ²*Department of Chemistry, Rhodes University, Grahamstown 6140, South Africa*

Received April 20, 2011; Accepted November 18, 2011

Abstract: Graphite Furnace Atomic Absorption Spectroscopic (GFAAS) analysis of soil samples from Oke Osun farm settlement was carried out to determine the seasonal levels of As, Cd, Cr, Co, Cu, Pb, Mn, Ni, V and Zn. Mean heavy metal levels in the soils (mg/kg) ranged from 2.92 ± 1.18 (Ni) in July to 95.97 ± 1.25 (Cr) February. The seasonal temporal variability showed a coefficient of variation ranging between 2.44 and 32.69 for Cu and Pb respectively for rainy season and 8.30 and 33.83 for As and Cd respectively for dry season. Pollution index showed that soil samples were either moderately polluted or very heavily polluted with respect to As, Cd, Cr, Cu and Pb. The results obtained from this study indicated higher levels of heavy metals generally in the soil environment during the dry season than during the rainy season.

Key words: *Heavy metals, soil, farm settlement, Oke-Osun, pollution intensities.*

* Corresponding: E-Mail: oyekunle@oauife.edu.ng or biola4jaao@yahoo.com; Tel: +234 8035673017