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Investigating the Accumulation of Heavy Metal Pollutant in Water Leaf and their Effects on Soil Microbial Population in Calabar, Nigeria.

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Heavy metals are bioaccumulated and bio transferred both by natural and anthropogenic sources. The contamination by heavy metals in soil and waterleaf is one of the major issues to be faced throughout the world and requires attention because heavy metals above their normal ranges are extremely threatening to both plant and animal life. It was therefore of interest to conduct a study to estimate levels of heavy metals in both soil and waterleaf. This study assessed the levels of heavy metals present in soil and waterleaf (Talinum triangulare). Waterleaf and soil samples were collected as randomly composite samples from five (5) different study locations. Three (3) each from Calabar South Local Government Area and two (2) from Calabar Municipality. The samples were analyzed/examined for heavy metal concentration, using photometer 7500 (palintest). Results showed that concentration of Lead (Pb), Cadmium (Cd), Copper (Cu) in water leaf were recorded above the permissible limits set by WHO while Arsenic (As) were recorded below the permissible limits. Concentrations of heavy metals in soil were also compared with WHO standards for heavy metals and in the soil samples concentration of heavy metals were recorded above the permissible limits set by WHO. It may be concluded that there is a high tendency of exposure to heavy metals by those who consume waterleaf in the studied locations since the levels in waterleaf from all sources studied generally exceeded the WHO/FOA limits
Key words: Accumulation, Heavy, Metals, Microbial, Soil, Waterleaf.

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