**Heavy metals and physico-chemical properties of soil from an electronic waste recycling/dumpsite in Ijora area of Lagos State**

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**Abstract**

E-waste is one of the rapidly growing environmental challenges in developing countries due to legal and illegal importation of electronics from developed nations.  In this study the physico-chemical properties and concentration of heavy metals in soil samples from e- waste recycling and dumpsite was investigated. Concentrations of five heavy metals namely Cu ,Cd, Pb, Cr and Zn both in top soil and sub soil were analysed using Atomic Absorption Spectrophotometer (AAS, Perkin Elmer Analyst 200) after acid  digestion with HNO3/ HCl. pH of the soil ranged from 8.89 to 9.19 making the soil alkaline which was as a result of high accumulation of the heavy metals. Electrical conductivity also showed the soil as being severely alkaline and it ranged from 5.88 **µs**/m to 18.03 **µ**s/m. The cation exchange capacity of the soil samples was also determined. Mg2+ has the lowest value for the cation exchange capacity ranging from 0.118Meq/100g to 0.8 Meq/100g while Na+ has the highest value ranging from 0.125 Meq/100g  to 3.46 Meq/100g . Elevated concentrations of Cu, Cr, Pb, Zn and Cd found in the soil samples. Cu has the highest value ranging from 119.71 mg/kg to 2602.38 mg/kg which may be as a result of excessive burning of wires and electrical cables, a major activity taking place on the site. The lowest was Cd which has a value ranging from 0.01 mg/kg to 0.08 mg/kg. Result also shows that total concentration of heavy metals decreased with depth in soil sample and with distance from the main dumpsite.