



Partitioning of Selected Heavy Metals in Nnewi, a Busy City in Anambra State, Nigeria[#]

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Accepted December 31, 2010

Abstract: Composite topsoil samples were collected from 5 busy roadside within Nnewi, Anambra State Nigeria during dry season (January to March). The soil samples were digested using acid mixture of Hydrofluoric acid and aqua regia (1:1). Sequential extraction was carried out on the soil samples using modified Tessier sequential method and Community of Bureau of Reference (BCR) method to partition the heavy metals in the soil samples. The digest solution, the solutions from sequential extraction and the blanks were analyzed using Flame Atomic Absorption Spectrophotometer (FAAS) to determine the level of Pb, Cr, Ni, Co, and Cd present in them. The mean concentration found in the samples were Pb (27.9 mg/kg), Hg (4.25mg/kg), Cu (7.26 mg/kg), Ni (29.23mg/kg), Co(1.23mg/kg), Cd. (0.3mg/kg) and Cr (12.88 mg/kg). The speciation studies showed that the observed trend in the mean bioavailable fraction was Cd > Pb > Ni > Co > Hg > Cr > Cu.

Keyword: *Partitioning, sequential extraction, exchangeable, bioavailability, heavy metals.*

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[#]This paper has been presented at 11-ICCA, 20-22.11.2010, Luxor-EGYPT