

Evaluation of Pollution in Underground Water from ODO-NLA and OGIIJO Metropolis Industrial Areas in Ikorodu

Authors : Zaccheaus Olasupo Apotiola

Abstract : This study evaluates the level of pollution in underground water from Ogijo and Odo-nla areas in Ikorodu, Lagos State. Water sample were collected around various industries and transported in ice packs to the laboratory. Temperature and pH was determined on site, physicochemical parameters and total plate were determined using standard methods, while heavy metal concentration was determined using Atomic Absorption spectrophotometry method. The temperature was observed at a range of 20-28 oC, the pH was observed at a range of 5.64 to 6.91 mol/l and were significantly different ($P < 0.05$) from one another. The chloride content was observed at a range 70.92 to 163.10 mg/l there was no significant difference ($P > 0.05$) between sample 40 GAJ and ISUP, but there was significant difference ($P < 0.05$) between other samples. The acidity value varied from 11.0 - 34.5 (mg/l), the samples had no alkalinity. The Total plate count was found at 20-125 cfu/ml. Asernic, Lead, Cadmium, and Mercury concentration ranged between 0.03 - 0.09, 0.04 - 0.11, 0.00 -0.00, and 0.00 - 0.00(mg/l) respectively. However there was significant difference ($p < 0.05$) between all samples except for sample 40GA, 5OGAJ, and 3SUTN that were not significantly different ($P > 0.05$). The results revealed all samples are not safe for human consumption as the levels of Asernic and Lead are above the maximum value of (0.01 mg/l) recommended by NIS 554 and WHO.

Keywords : arsenic, cadmium, lead mercury, WHO

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