

PHYSICO-CHEMICAL EVALUATION OF GROUNDWATER QUALITY IN LAWYER HAMMED STREET, STADIUM AREA, OGBOMOSO, NIGERIA

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ABSTRACT

This article presents results of groundwater quality assessment based on some physico-chemical parameters such as Total Dissolved Solids (TDS), Total Suspended Solids (TSS), pH, Zinc, Iron, Copper, Temperature, Lead, Nitrate, Sulphate, Phosphate, Total Alkalinity carried out on wells around Lawyer Hammed Street in Ogbomosho. Fifteen (15) wells within the street were sampled and analyzed using standard laboratory techniques. The results were then compared with the World Health Organization (WHO) standard. The pH values ranged from 6.1 – 7.3 during the rainy season and ranged from 4.27 – 5.11 highest value of 7.3(basic) during the rainy season Total dissolved solids concentration ranged from 140mg/l – 975mg/l during the rainy season and ranged from 168mg/l – 1170mg/l during the dry season. Coli form count ranged from 1.0×10^5 – 9.7×10^6 during the rainy season and ranged from 2.0×10^5 – 10.4×10^6 during the dry season. Samples 2 and 20 showed the lowest concentration of 1.0×10^5 while Sample 4 showed the highest concentration of 9.7×10^6 during the rainy season. Sample 10 showed the lowest count of 9.5×10^5 while sample 20 showed the highest count of 2.0×10^8 during the dry season. USEPA and WHO standards do not allow any number of coli forms as they play major roles in the contributions and spread of so many diseases Recommendations include periodic groundwater assessment and treatment.

KEYWORDS: Results of Groundwater, Diseases Recommendations