



Physicochemical and Microbiological Assessment of Groundwater from Ijan- Ekiti South Western Nigeria

S.O. Adefemi*

Department of chemistry, Faculty of Science, Ekiti State University, Ado- Ekiti, Nigeria

Received October 23, 2012; Accepted December 04, 2012

Abstract: Physicochemical and microbiological analyses of water samples from nine randomly selected hand dug-wells and River Eku were carried out using standard analytical procedures and the result were compared with WHO standards. The physicochemical parameters of the water samples analysed were within the WHO standard for drinking water, except for pH value (9.20) obtained for River Eku which does not conform with WHO standard. Calcium has the highest value (3.35- 26.23 mg/100ml) for the major element while Iron value (0.34- 4.18 mg/100ml) was highest for the minor element. However, the water is unsafe on the account of poor microbiological quality of the water samples (Average total bacteria and total coliform counts were 54.4 ± 20.9 per 100ml of the original water sample and 34.5 ± 14.00 per 100ml of original water samples respectively) in the area which exceeded WHO standard. It is recommended that the well water be treated to minimize acute problem of water related diseases which are endemic to man.

Keywords: *Microbiological, Physicochemical, Groundwater, Assessment, River Eku.*

*Corresponding: E-Mail: adefemisamuel@yahoo.com; Tel: +2348035786739