

The Hydro-Geology and Drinking Water Quality of Ikogosi Warm Spring in South West Nigeria

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Abstract : This study focuses on the hydro-geology and chemistry of Ikogosi Warm Spring in South West Nigeria. Ikogosi warm spring is a global tourist attraction because it has both warm and cold spring sources. Water samples from the cold spring, warm spring and the meeting point were collected, analyzed and the result shows close similarity in temperature, hydrogen iron concentration (pH), alkalinity, hardness, Calcium, Magnesium, Sodium, Iron, total dissolved solid and heavy metals. The measured parameters in the water samples are within World Health Organisation standards for fresh water. The study of the geology of the warm spring reveals that the study area is underlain by a group of slightly migmatized to non-migmatized parashists and meta-igneous rocks. The concentration levels of selected heavy metals, (Copper, Cadmium, Zinc, Arsenic and Chromium) were determined in the water (ppm) samples. Chromium had the highest concentration value of 1.52ppm (an average of 49.67%) and Cadmium had the lowest concentration with value of 0.15ppm (an average of 4.89%). Comparison of these results showed that, their mean levels are within the standard values obtained in Nigeria. It can be concluded that both warm and spring water are safe for drinking.

Keywords : cold spring, Ikogosi, melting point, warm spring, water samples

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