

THE HEALTH IMPLICATION OF URANIUM (U) AND THORIUM (Th) CONTAMINATION OF SOILS FROM THE YOUNGER GRANITE COMPLEX OF JOS PLATEAU, NORTH CENTRAL NIGERIA

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Soil samples of the Younger Granite complex from the Jos Plateau were analyzed for U and Th using inductively coupled plasma mass spectrometer (ICP-MS), after a total digestion. Cassiterite mining is on-going on the Jos Plateau. The objective of the study was to determine the concentration of radioactive elements in soils of an area known for its high levels of radiation. Statistical analysis of the results showed that U and Th were present at the contamination level, based on the calculated indices of geo-accumulation (Igeo), and the enrichment factor (EF). Radioactivity causes gene mutation and cancer in man and within the area of study are observed congenital birth defects common among populations exposed to high radioactivity; and also skin cancer and hepatitis. The major sources of the radioactivity are both geologic and anthropogenic. Multidisciplinary studies of the health impact of the radioactive elements contamination of soils in the study community can lead to new diagnosis and therapy.

Keywords: uranium and thorium, soils, jos plateau, health