

Abstract Submitted
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Assessment of Natural Radionuclide Concentrations and Elemental Compositions of Twelve Herbal Plants used for the treatment of malaria in Ibadan South West Local Government, Oyo State, Nigeria ADETOMIWA ALADE, Science Laboratory Technology Department, Federal College of Animal Health Production Technology, Moor Plantation, Ibadan, ADEKUNLE ADEGBILE, Computer Science Department, Federal College of Animal Health Production Technology, Moor Plantation, Ibadan — Twelve plants used for treatment of malaria in Ibadan South-West Local Government Area Nigeria have been investigated for natural radionuclides and elemental compositions using gamma spectrometry (NaI(TI)) and atomic absorption spectrophotometry respectively. Relevant radiological hazard parameters were evaluated from the activity concentrations. Results of this study show that the mean activity concentrations of K-40, U-238 and Th-232 as 630.03, 5.79 and 4.13Bq/kg respectively. The mean value of the radiological parameters of 0.005mSv/y, 59.9Bq/kg and 31.76nGy/h for average annual committed effective dose, radium equivalent and absorbed dose rates were lower than the world average values of 0.3mSv/y, 370Bq/kg and 59nGy/h respectively for ingestion of natural radionuclides provided by UNSCEAR for any individual. Elemental analyses revealed K, Na, Mg, Ca, Cu, Mn, Zn, Fe, Cr, Ni, Pb and Cd with their levels in the samples lower than the permissible limit. Results for relevant hazard parameters show an insignificant radiological risk which implies no threat due to radiation exposure. The study has shown that plants of this study can provide useful minerals needed for normal growth.

Adetomiwa Alade
Science Laboratory Technology Department, Federal College of Animal Health
Production Technology, Moor Plantation, Ibadan

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