

## **Natural Radioactivity Evaluation and Radiological Peril in some soil specimens of Al-Taimeem Area in Al-Anbar Province, Iraq**

In the present work, the radioactivity of ten soil specimens has been measured, which were gathered from various sites from AL-Taimeem area in Al-Anbar province, The qualitative activity of natural radionuclides  $^{238}\text{U}$ ,  $^{232}\text{Th}$  and  $^{40}\text{K}$  for soil specimens were evaluated by utilizing gamma-ray spectroscopy with NaI(Tl) detector of (3"×3") dimension. The results revealed that, the qualitative activity, for  $^{238}\text{U}$  was varied from (14.730 Bq/kg) to (28.070 Bq/kg), for  $^{232}\text{Th}$  was varied from (16.510 Bq/kg) to (29.480 Bq/kg), for  $^{40}\text{K}$  was varied from (143.820 Bq/kg) to (231.550 Bq/kg) ,with an average values of (21.152±2.98 Bq/kg) , (24.219±3.93 Bq/kg), (190.720±22.20 Bq/kg), successively. To survey the radiological peril in soil, radium effective activity, absorbed gamma dose in air, annual effective dose equivalent (inner and outer), gamma concentration level index and both (interior and exterior) radiation peril index have been computed, and all the existed results were less than recommended by the International Committee for the Radiation Protection (ICRP).