

An Experimental Study of Indoor Radon Measurement in Department of Physics, Yangon University of Education

Htwe Nwe Oo¹, Khin Than Win² and Khin Swe Oo³

Abstract

The present work was attempted to measure the estimation of the annual effective dose of indoor radon in Department of Physics, Yangon University of Education. Many techniques have been established for measuring the radiation in the environment. These techniques are based on the detection of emissions from the decay of radioactive material and its daughter products. Most of the methods are based on the detection of alpha particles, some on detection of beta emission while a few utilize gamma decays. In this research, time integrated long term radon measurement technique is used to measure radon concentration in the samples under investigation. For the measurement of radon concentration, we have used LR-115, Type II plastic track detector and irradiation time is 100 days, from 26th April 2017 to 3rd August 2017. The annual effective doses due to radon are ranging from 0.07 ± 0.0341 mSv/yr to 0.33 ± 0.0626 mSv/yr which are lower than 5 mSv/yr, the annual effective doses fixed for public (ICRP,2007).

(ICRP- International Commission on Radiological Protection Publications)

Key words: Indoor Radon, solid state nuclear track detectors(SSNTD), radon concentration, annual effective doses

1. Assistant Lecturer, Dr., Department of Physics, Yangon University of Education

2. Lecturer, Department of Physics, Loikaw University

3. Professor and Head, Dr., Department of Physics, Yangon University of Education