

Abstract

Mohamed A Abdelrasoul

Studying the variation of radon level in

Inhalation of indoor radon has been recognized as one of the health hazards. In the present work a set of indoor radon measurements was carried out, in different Egyptian houses in Alexandria city, built of the same type of building materials, using time-integrated passive radon dosimeters containing LR-115 Type II solid state nuclear track detector. Measurements were carried out from October 2007 to June 2008. The results show that, the radon concentrations and the annual effective dose in these houses varied from (38.62 to 120.39) Bq m⁻³ and (0.96 to 3.06) mSv y⁻¹ respectively. The mean values of radon concentrations in living rooms, bedrooms, bathrooms, and kitchens were: (50.93±7.14), (63.75±7.63), (105.36±14.67) and (82.38±8.35) Bq m⁻³ respectively. Also the mean values of annual effective dose were (1.26±0.17), (1.58±0.185), (2.63±0.36) and (2.05±0.20) mSv y⁻¹, respectively. This data shows that, bathrooms and kitchens have significantly higher radon concentrations and annual radon dose. Key words: Radon concentration, LR-115 Type II detector, Passive radon monitors, Annual effective dose.