Title: Indoor Radon Measurement in Dwellings of Khorramabad City, Iran

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Summary:
Introduction: Exposure to indoor radon increases the risk of lung cancer. This study examined the level of indoor radon in dwellings of Khorramabad city, by using passive alpha-track detector (CR-39) during winter of 2014. Materials and Methods: In the present study, we detected the concentration of indoor radon in 65 dwellings. A passive sampling instrument (alpha-track detector with CR-39 polycarbonate films) was utilized to measure indoor radon gas concentration. The distribution map of indoor radon concentration was prepared using Arc GIS software. Results: Radon concentration in the dwellings varied from 1.8 to 194.78 Bq/m³, with a mean value of 43.43±30.37 Bq/m³. The average annual effective dose received by the residents of the studied area was estimated to be 1.9 mSv. Our results showed a significant difference between the average radon concentrations in houses and apartments, with a higher level in houses. Conclusion: Indoor radon concentration in 10.1% of the dwellings was determined to be higher than the limit (100 Bq/m³) recommended by the World Health Organization.

Keywords:
Air pollution, Indoor, Radon, Rn-222

Link to the paper:
این صفحه به معنای تایید یا رد مقاله در پایگاه اینترنتی سیویلیکا می‌باشد. در هر لحظه به منظور تایید اصلاحات این گواهی می‌توانید وضعیت ثبت مقاله را از طریق لینک فوق به صورت آنلاین کنترل نمایید.