

Indoor radon concentrations in schools of a city in South-West China

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Abstract

Several large scale indoor radon concentration surveys in China have been carried out since 1980s [1-2]. Most of them referred to radon surveys in dwellings. A survey was conducted recently to evaluate radon levels in dwellings in a city located in Yunnan Province, South-West China. Indoor radon measurements were performed in dwellings and schools by solid-state nuclear track detectors, or CR-39 in the quality control of the Standard methods for radon measurement [3]. The average annual concentration of radon was 73.3 ± 35.8 Bq/m³ in the city, higher than country average radon concentration (44Bq/m³) [2]. The average annual concentration of radon is 67.1 ± 23.7 Bq/m³, ranged from 38.1 to 104.5 Bq/m³ in high schools, 124.6 ± 93.8 Bq/m³, ranged from 54.8 to 259.5 Bq/m³ in primary schools, 69.9 ± 8.0 Bq/m³, ranged from 59.8 to 81.6 Bq/m³ in kindergarten respectively.

Annual effective doses due to radon exposure were estimated to be 1.85mSv in dwellings, 0.44mSv in kindergartens, 0.31mSv in high schools and 0.57mSv for children in primary schools.

References

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