



Measurement of indoor radon concentration in kindergartens in Sofia, Bulgaria

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Abstract

As a part of the systematic survey of indoor radon in Bulgaria, the indoor radon concentration was measured in 296 kindergarten buildings of Sofia city during 3 months (February to April 2013) using the CR-39 nuclear track detectors. In 256 buildings at least two frequently occupied rooms (mainly playrooms) were observed. Altogether, 922 measurements were performed. The frequency distribution was well described by the lognormal function. The measured radon concentrations range between 9 and 1415 Bq m⁻³ with a geometric mean of 101 Bq m⁻³ (2.08) and an arithmetic mean 132 Bq m⁻³ with a standard deviation of 118 Bq m⁻³. The radon concentrations obtained in this survey were compared with that in Sofia city dwellings obtained from a previous study. A detailed statistical analysis of the building factors was presented.

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