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INDOOR RADON LEVELS IN GACHIN (ISLAMIC REPUBLIC OF IRAN)

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Indoor radon gas (^{222}Rn) has been recognized as one of the causes of lung cancer. Considering the risk, the measurement of its indoor concentration is therefore considered necessary. The Gachin region is located in the vicinity of the city of Bandar Abbas, Islamic Republic of Iran, and is an interesting area owing to traces of naturally occurring uranium. This study was conducted to determine radon concentrations in Gachin houses. In this study, 100 radon passive dosimeters (CR-39) were left on different floors of houses constructed with different materials, such as cement, fired brick and clay as raw brick, at every floor, for 6 months. The electrochemical etching method was applied to detect alpha tracks on the dosimeters, and based on number of these tracks, the corresponding radon concentration was determined. This study showed that the average radon concentration was 39 Bq/m^3 in the houses. On different floors and according to the construction material used, the average effective dose equivalent of lung tissue was 0.97 mSv/year . On the basis of these results, it can be concluded that the indoor radon levels in Gachin houses are within an acceptable range.

Country or International Organization

Iran

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