

Investigation of Radon Pollution in Different Kinds of Artesian Well's Water Using LR 115 Solid State Nuclear Track Detectors

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Abstract

Samples of artesian well's water from different hostels compounds of YUOE have been analyzed for radon concentration and annual effective dose. For the measurement, alpha sensitive LR 115 solid state nuclear track detectors (SSNTD) was used. In this research, the calculated value of radon concentration emanated from the artesian well's water samples varied from $25 \pm 29.192 \text{ Bqm}^{-3}$ to $484 \pm 54.78 \text{ Bqm}^{-3}$ and the average annual effective dose is $0.43 \pm 0.502 \text{ mSvyr}^{-1}$ to $8.33 \pm 0.942 \text{ mSvyr}^{-1}$. According to these results, it was not found the higher level of radon concentration because the annual effective dose which are lower than 14 mSvyr^{-1} , the ICRP recommended level.

Key words: Artesian Well's Water, solid state nuclear track detectors(SSNTD), radon concentration, annual effective doses

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