## عنوان مقاله:

Assessment of Annual effective Dose for Different Age Groups based on Radon Concentrations in the Groundwater of Qassim, Saudi Arabia

## محل انتشار:

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## خلاصه مقاله:

Introduction: Given that the groundwater is a radon contaminated and used as a source for drinking water, then measuring the amount contamination is of high necessity. Material and Methods: The measurement was performed using RAD-7 detector. Results: The measured radon concentration values ranged 1.20-15.43 Bq/l with the mean of 5.18±0.39 Bq/l. The estimated total annual effective doses based on radon concentrations in drinking water were within the range of 6.34-81.62 µSv/y for infants, 2.34-30.04 µSv/y for children, and 3.07-39.42 µSv/y for adults. Moreover, the corresponding mean values were estimated at 27.41±2.06, 10.08±0.76, and 13.23±0.99 µSv/y, respectively. Conclusion: The total annual effective dose in all samples were within the global average level of ingestion exposure dose value (0.1 mSv/y from radon concentrations) reported by the United Nations Scientific Committee on Effects of Atomic Radiations. Therefore, there are no risks for the consumption of these water .samples

## کلمات کلیدی:

Radon concentrations, ground water, Annual Effective Dose, Qassim, Saudi Arabia