



## Measurement of radon concentration in some of cosmetics by using Nuclear Track Detector (CR-39)

Anfal Ali Shakir<sup>1</sup>, Inaam Hani Kadhim<sup>2</sup> and Ali O. Muhsen Almayyalin<sup>3</sup> and Fouad A. Majeed<sup>4\*</sup>

<sup>1</sup>Department of Biotechnology, College of Biotechnology, University of Al-Qasim Green, Iraq

<sup>2,3,4</sup>Department of Physics, College of Education for Pure Sciences, University of Babylon, Iraq

**Abstract :** In this paper, we study the concentration of radon gas in nine cosmetics samples from different origins in Hilla city/ Iraq by using alpha-emitters registrations that emitted from radon gas in CR-39 nuclear track detector. The results obtained shown that the highest average radon gas concentration in cosmetics samples which recorded ( $17.79 \text{ Bq.m}^{-3}$ ) for (Summer Cake powder) sample, while the less was ( $0.05 \text{ Bq.m}^{-3}$ ) for (Just Gold powder) sample. From the present work all cosmetics samples were with lowest concentrations of radon gas than the allowed limit from International Commission of Radiation protection (ICRP) agency[1].

**Keywords :** Radon concentration, CR-39 detector, alpha particles, cosmetics.

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