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A NEW APPROACH FOR MEASURING INDOOR RADON, THORON AND THERE PROGENIES USING CR-39 AND LR-115 SSNTDS

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ABSTRACT

We develop a new method to measure alpha- and beta-activities per unit volume of indoor air due to radon, thoron and their progenies using LR-115 type II and CR-39 solid state nuclear track detectors (SSNTDs). In the present study we fuond in Al-bradhia Region in Basrah Governorate (Iraq), the value of radon concentrations ranges from 42 $Bq.m^{-3}$ to 178 $Bq.m^{-3}$ with an average value of 107 $Bq.m^{-3}$ with standard deviation 38 $Bq.m^{-3}$. The value of thoron concentrations ranges from 2 $Bq.m^{-3}$ to 15 $Bq.m^{-3}$ with an average value of 9 $Bq.m^{-3}$ with standard deviation 3 $Bq.m^{-3}$.

KEYWORDS: Indoor Radon, Thoron, CR-39 Detector, LR-115 Type II Detector