# DETERMINATION OF RADON-222 CONCENTRATION IN BUILDINGS AT UNIVERSITI TEKNOLOGI MARA, JENGKA, PAHANG USING SOLID STATE NUCLEAR TRACK DETECTOR (SSNTD), CR-39

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## ABSTRACT

### DETERMINATION OF RADON CONCENTRATION IN BIILDINGS AT UiTM, JENGKA, PAHANG BY USING SOLID STATE NUCLEAR TRACK DETERCTOR (SSNTD), CR-39

Assesment for the indoor radon concentration and the annual effective dose in buildings at UiTM, Jengka, Pahang have been done. CR-39 have been used as the detector of Radon. The detectors with diameter of 1 cm × 1 cm were distributes at the corner of the buildings with the selected of 16 places. The CR-39 were exposed to radon for 30 days. After retrieved the CR-39, it have undergo the etching process using 6M of sodium hydroxide solution at the temperature of 70°C for 5 hours. Then, the spots of the track of CR-39 were analysed by using the optical microscope. The radon concentration and the annual effective dose were calculated by using the formula. The radon concentration in these locations ranges from 7.42 $Bqm^{-3}$ until 30.12 $Bqm^{-3}$ with an average of 17.11 ± 6.53 $Bqm^{-3}$ which is below the action limit of ranges 200-600 $Bq/m^3$ (ICRP, 1993). The ranges of annual effective dose in these buildings were found to be 0.08 $mSvy^{-1}$ until 0.76 $mSvy^{-1}$ with the average values 0.319 $mSvy^{-1}$ which is below the action limit of 3 $mSvy^{-1}$ (ICRP, 1993). Thus, UiTM, Jengka, Pahang is not in radiological risk and the people safe to live there.

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