# ASSESSMENT OF NATURAL RADIONUCLIDE IN THE SOIL IN PERIMETER OF UITM PAHANG CAMPUS JENGKA

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## ABSTRACT

Assessment of Natural Radionuclide in the Soil in Perimeter of UiTM Pahang Campus Jengka

Radionuclides such as Uranium-238 ($^{238}U$), Thorium-232 ($^{232}Th$) and Potassium-40 ($^{40}K$) are unstable nucleus. It can occur naturally and known as second highest cause for lung cancer if being exposed for long period of time. UiTM Pahang campus Jengka is one of the branches of UiTM in Pahang. The study was done to know the concentration of naturally occurring radioactive material (NORM) in the soil aside from to find the radiological risk by calculate the external hazard index in UiTM Pahang. The sample was collected by using hand auger and then survey meter is used to obtain the absorbed dose rate of that place. Then the soil was dried up in oven at 70°C for 24 hr. After being dried up, the soil is then sieved through 355 μm sieve. By using EDXRF, the concentration of $^{238}U$, $^{232}Th$, $^{40}K$ and external hazard index was obtained as 45.1 ± 2.9Bq/kg, 59.3 ± 2.9Bq/kg, 447.8 ± 26.7Bq/kg and 0.33 Hex. Then an isodose map was generated by using Surfer 14 software.

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