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Measurement and Analysis of Specific Activities of Radionuclide 40K, 226Raand 232Th in Beach Sand Samples from Talo kapo beach Yaring DistrictinPattani Province using Gamma Ray Spectrometry

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The Specific Activities of ^{40}K, ^{226}Ra and ^{232}Th were determinet for 30 beach sand samples collected from Talo kapo beach Yaring District in Pattani Province. Experimental results were obtained by using a high-purity germanium (HPGe) detector and gamma spectrometry analysis system. Gamma ray radioactive standard sources ^{137}Cs and ^{60}Co ware used to calibrate the measurement system. The IAEA-SOIL-6 reference materials obtained from the International Atomic Energy Agency Were also used to analyze and compute the 40K, ^{226}Ra and ^{232}Th specific activity in all 30 beach sand samples, respectively. The measuring time of each samples is 10,000 seconds. It was found that specific activity range from 1805.37 –3,323.05 Bq/kg for ^{40}K, 40.96 –2,137.36 Bq/kg for ^{226}Ra and 38.63 –4,329.28 Bq/kg for ^{232}Th with mean values of 2,242.79 ± 117.40 Bq/kg, 250.18 ± 8.21 Bq/kg and 458.42 ± 7.68 Bq/kg respectively. Moreover, the results were compared with research data in the south of Thailand, the Office of Atoms fror Peace (OAP) annual report data and the recommended values which were proposed by United Nations Scientific Committee on the Effects of Atomic Radiation (UNSEAR, 1988. 1993, 2000)

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