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Radioelement results which was obtained with a self-developed measuring method of a new in situ gamma ray detection system

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Abstract content
   (Max 300 words)
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Gamma ray spectroscopy as a survey tool has been successfully applied in the fields of morphology, geology and mineral exploration. Gamma ray surveys are regularly done in hugely varying geographical environments. A newly develop mobile gamma ray survey instrument named the GISPI (Gamma In Situ Potable instrument) was utilized for these measurements. This system acquires gamma ray spectra, extract radionuclide concentrations and finally interpolate data to provide radionuclide concentrations and produce maps while on location. The GISPI was employed to map nuclide concentrations in different geographical settings that demanded various means of transport, which included motor vehicles, quad motorcycles and transporting the system on foot. A fundamental mathematical model that was used to analyze the in situ gamma ray spectra were also developed and implemented. The results from different geographical area will be displayed and variances of radionuclides will be discussed. Final conclusions will also be made on the success of methods and equipment that was utilized for the study and environmental concerns of the sites that were investigated.

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