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Rapid Analysis of Uranium Concentrations in Powder Rock Samples by a Delayed Neutron Counting

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A delayed neutron counting system installed at the HANARO research reactor in the Korea Atomic Energy Research Institute was applied to the analysis of elemental uranium concentrations in the rock samples collected at the Samcheok area, northeastern Yeongnam massif, South Korea. For the accurate determination of uranium, the correction of thorium interference was carried out. The resultant values are consistent with the values determined by the ICP-MS. The DNC method was proven to be a very rapid and excellent method for the quantification of the uranium concentration in the geological samples.

Keywords: Delayed neutron counting, uranium concentration, thorium concentration, rock samples

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