

Application of X-ray Fluorescence and Instrumental Neutron Activation Analysis to Studies of Geological Samples

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Geological samples of different stratigraphic age were analyzed by Instrumental Neutron Activation Analysis (INAA) and X-ray Fluorescence (XRF) in order to determine the elemental content. Sedimentary rocks such as: clay, sandstone, argillite, marl, were collected from the south-east end of the Greater Caucasus from the geological outcrops. By the INAA and XRF were determined of concentrations of 9 major, REE and trace elements in geological samples at the Joint Institute for Nuclear Research (JINR) in Dubna.

In this work the obtained results were interpreted in the framework of the Upper Continental Crust model in order to determine the origin of the sediments. The content of trace elements, including REE, confirmed an average rock composition close to the Upper Continental Crust.

Keywords: activation analysis; x-ray fluorescence analysis; major elements; REE, trace elements; geological samples.

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