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The 2021 IAEA software intercomparison for k0-INAA

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Abstract

In order to establish the variation between results due to software implementation in mass fractions as measured by the k_0-method for INAA, the IAEA has organized a software intercomparison. A complete set of test spectra and associated information was assembled. Efficiency curves, neutron spectrum parameters, correction factors and mass fractions were calculated with the participating programs (list of program names here) using identical peak areas. In this paper, we report on the observed discrepancies, causes, remedies and future software developments. The test data, as well as expected and certified mass fractions of the BCR-320R channel sediment sample material will be made available to all.