The 2021 IAEA software intercomparison for k0-INAA

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International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 Vienna
Austria

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k0-ware
Schaesbergerweg 25
6415 AB Heerlen
The Netherlands

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The 2021 IAEA software intercomparison for k0-INAA

Giancarlo D’Agostino¹, Menno Blaauw²*, Ho Manh Dung³, Marco di Luzio¹, Radojko Jacimovic⁴, Mauro Da Silva Dias⁵, Renato Semmler⁶, Robbert van Sluijs⁶, Nuno Pessoa Barradas⁷

¹Istituto Nazionale di Ricerca Metrologica (INRIM), c/o Department of Chemistry, University of Pavia, via Taramelli 12, 27100 Pavia, Italy
²Reactor Institute Delft, Delft University of Technology, Mekelweg 15, 2629 JB Delft, The Netherlands
³Center for Nuclear Technologies (CNT), 217 Nguyen Trai Street, District 1, Ho Chi Minh City, Vietnam
⁴Jozef Stefan Institute, Ljubljana, Slovenia
⁵Instituto de Pesquisas Energéticas e Nucleares (IPEN-CNEN/SP), Research Reactor Center (CERPq), Av. Prof. Lineu Prestes, 2242, São Paulo, SP, Brazil
⁶k0-ware, Schaesbergerweg 25, 6415 AB Heerlen, The Netherlands
⁷International Atomic Energy Agency, Vienna International Centre, PO Box 100, A-1400 Vienna, Austria

*Corresponding author: m.blaauw@tudelft.nl

Abstract

In order to establish the variation between results due to software implementation in mass fractions as measured by the k0-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.