

Title (en)

METHOD AND DEVICE FOR MULTIELEMENT ANALYSIS ON THE BASIS OF NEUTRON ACTIVATION, AND USE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR MULTIELEMENTANALYSE BASIEREND AUF NEUTRONENAKTIVIERUNG SOWIE VERWENDUNG

Title (fr)

PROCÉDÉ ET DISPOSITIF D'ANALYSE MULTIÉLÉMENTAIRE SUR LA DE BASE DE L'ACTIVATION NEUTRONIQUE ET UTILISATION

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Abstract (en)

[origin: WO2018219406A1] The invention relates to a method for multielement analysis on the basis of neutron activation, comprising the steps: generating fast neutrons having energy in the range of 10keV to 20MeV; irradiating a sample (1) with the neutrons; measuring the gamma radiation emitted from the irradiated sample in order to determine at least one element of the sample; wherein according to the invention the sample is irradiated in a non-pulsed and continuous manner, measuring takes place during the irradiation, at least prompt or both prompt and delayed gamma radiation is measured and evaluated in order to determine the at least one element, the sample is divided into individual partitions and measuring takes place using a collimator, and the neutron flow is determined in a spatially resolved and energy-resolved manner inside the relevant partition (P1, P2, Pn) of the sample (1). The analysis is thus expanded, providing a flexible method. The invention also relates to a corresponding device and the use of a detector unit for the multielement analysis.

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