

NEUTRON ACTIVATION ANALYSIS IN ENVIRONMENTAL STUDIES

I. Zinicovscaia^{1,2*}

¹*Joint Institute for Nuclear Research, 6 Joliot-Curie Str., 1419890, Dubna, Russia,
zinikovskaia@mail.ru*

²*Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, 30,
Bucharest, Romania*

Neutron activation analysis due to its high accuracy, nondestructive nature and possibility to determine concentrations of more than 45 elements is widely used in the environmental studies, archeology and medicine. The principle of the method will be discussed. Types of neutron activation analysis will be briefly characterized in order to depict the most important information. Examples of application of neutron activation analysis at the IBR-2 reactor (Dubna, Russia) for wastewater treatment, nanotoxicology, medicinal plants and foodstuff samples analysis as well as determination of the elemental content of archeological and extraterrestrial objects will be presented.