

# **Nuclear and Related Analytical Techniques in Environmental and Nanotechnological Studies**

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Neutron activation analysis due to its high accuracy, reproducibility and nondestructive nature is a technique widely used in the environmental, material, archeological, geological and nanotoxicological studies. Favorable features of neutron activation analysis will be highlighted in the presentation and the principal of its realization on the installation REGATA of the IBR-2 reactor will be presented. Examples of application of neutron activation analysis as well as complimentary technique, ICP-AES, for the assessment of heavy metal deposition using active and passive moss biomonitors, water biomonitors and development of the approaches for wastewater treatment, medicinal plants analysis will be given. Besides, the effects of metal nanoparticles on different living organisms will be discussed. The information is addressed to researchers interested in the applications of neutron activation analysis or to those who are searching for an analytical technique suitable for environmental, biomedical, geological, etc. studies.