

USES OF INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS FOR ELEMENTAL INVESTIGATION OF SOME DOMESTIC FERTILIZERS

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The neutron irradiation facilities offered by the ET-RR-2 and the HPGe-detection system are used for elemental investigation of three samples of domestic fertilizers. A total of 31 elements have been identified as major and minor concentration values. The Pneumatic Irradiation Transfer Systems (PITS) and the core of the reactor are used for short and long time irradiation. The data obtained for some of the identified elements are compared with the corresponding values obtained by the XRF and the ICP-MS techniques for the same samples. The range of the concentration values of these elements was in between several parts per million (ppm) up to 45 %. A discussion on the elemental concentration values and their biological effect are given.