

Characterization of ions in urine of animal model with Acute Renal Insufficiency using NAA

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In last the years, important advances had been obtained in the investigation of the ARI (Acute Renal Insufficiency) what is defined as an abrupt or rapid decline in renal filtration function caused by the Ischemia and Reperfusion (I/R). However, the incidence of the mortality had not diminished in the last few decades. This kidney dysfunction includes a complex interaction between the tubular injury, inflammation and alterations in the renal homodynamic. In this investigation we intend to quantify ions of clinical relevance in urine of Wistar rats (control group), an experimental model for ARI, and in urine of Wistar with ARI, using NAA (Neutron Activation Analysis). The use of this technique is an alternative to perform biochemistry analysis when the biological material is scarce. The quantitative knowledge of these elements allows an evaluation of the functions that regulate the kidneys behavior. The measurements in urine were performed before, during and after the ARI caused by ischemia-induced. The results of NAA indicated that the occurrence of the elements K and Mg evaluated in the ARI group (during and after de I/R) have no similarities when compared with control group.