

## **Analysis in blood of Hamster by NAA for clinical practice**

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In the present study the NAA was utilized for determining the concentration of calcium, sodium, chlorine, potassium and phosphor in Golden Hamster. These elements were selected due their considerable relevance in clinical chemistry. The necessity of studying this biological material in this specie is related its use as animal model in several health areas. Blood samples of 20 animals were collected. Each sample (100  $\mu$ l) was transfer to a paper filter and dried under an infrared lamp for few minutes. The samples were irradiated with thermal neutron flux of  $10^{12}$  n  $\cdot$ cm<sup>12</sup>  $\cdot$ s for 4 min in the IEA R1 nuclear reactor at IPEN (SP, Brazil). Certified references material from NIST was used for analytical quality control as well as to evaluate the accuracy of the measurements. The measurements of the gamma induced activity of the samples were carried out using HPGe detector (FWHM= 1.89 keV for the 1.17 MeV of <sup>60</sup>Co) and 671 amplifier in pile-up mode associated with MCA ORTEC 919-E connected with PC. The element concentrations were obtained using the in- house software package. The range For Ca, Cl, K, Na and P were obtained considering confidence interval of 95% and they were compared with human blood estimation values to check the similarities.