



## EXPERIENCE OF BRAZILIAN SAFEGUARDS ANALYTICAL LABORATORY IN DA ANALYSIS

J.H.B. BEZERRA, R.M.S. ARAÚJO, J.C.A PEREIRA

Brazilian National Nuclear Energy Comission, Rio de Janeiro, Brazil.

The Brazilian Safeguards Analytical Laboratory inaugurated in September 1983 performs uranium analysis in samples of Nuclear Materials taken during National Safeguards Inspections as well as in samples taken during ABACC's inspections performed in Argentina. The Laboratory analyzes Intercomparison samples provided by IAEA, NBL, ABACC, CEN and EQRAIN.

The Method used to perform uranium analysis is the Davies & Gray/NBL. All the steps of the analytical procedures, as Chemical Kinetics of the reactions and instrumental parameters, are rigorously controlled [1].

An internal Quality Control of the Measurements is made by means of analysis of Certified Reference Materials and the performance of the Results meets the ESARDA's Target Values for Random and Systematic Components both in Intercomparison Samples and in samples taken during Inspections.

The typical precision, expressed as relative standard deviation, and accuracy obtained in a routine basis for nuclear grade materials is 0.1% and 0.14% respectively.

The performance of the Results obtained are comparable to the best International Laboratories witch perform uranium analysis in Nuclear Materials for safeguards purposes.