

# Investigation of archaeological ceramics from the Brazilian colonial period by k<sub>0</sub> –neutron activation analysis

*Tuesday, 10 September 2013 11:30 (20 minutes)*

The archaeological sites of high historical value, Bota-Fora and Hiuton are located in State of Espírito Santo, southwest of Brazil in a region of old Jesuitical Missions built in the XVI century in the colonial period. In this work, the elemental composition of several pottery fragments from both sites were investigated by the neutron activation analysis and the concentration of the elements Al, As, Ba, Br, Ce, Cl, Co, Cr, Cs, Dy, Eu, Fe, Ga, Hf, I, K, La, Mn, Na, Nd, Rb, Sc, Sm, Ta, Tb, Th, Ti, D, V, Yb, Zn, Zr were determined. Statistical analyses of the elemental concentration were performed using the software R which is associated to archaeological interpretation. The results pointed out that the pottery from both sites were made by clay from different places and the earthenware from the site Bota-Fora was made by clay of different compositions pointing out different provenances. These results will support future archaeological studies of works of art produced during the Brazilian colonial period by the group of natives Tupi-Guarani.

## Summary

Keywords: Neutron Activaton Analysis, Archaeology, Pottery, Tupiguarani

**Primary author:** Dr SOARES LEAL, Alexandre (Centro de Desenvolvimento da Tecnologia Nuclear (CDTN) (SERTA))

**Presenter:** Dr SOARES LEAL, Alexandre (Centro de Desenvolvimento da Tecnologia Nuclear (CDTN) (SERTA))

**Session Classification:** Activation Analysis

**Track Classification:** NINMACH