

## Study of pottery of Aldeia Lalima archaeological site (MS-Br)

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Aldeia Lalima archaeological site is located in Mato Grosso do Sul State, Brasil. The archaeological and historical data suggest that Aldeia Lalima was occupied several times for separate cultural groups. In this area was found 13 archaeological sites, with different sets of ceramics. [1] In this study we focus on the analysis of two sets of fragments, the first one corresponding to the Guarani tradition (2000 – 650 BP) and the other to the Pantanal tradition (2600-800BP), classified by the style of the ceramic.

The aim of this work is characterize several fragments using non-destructive techniques such as PIXE (Particle Induced X-Ray Emission) and XRF (X-Ray Fluorescence). The investigation intends to analyze the composition of the ceramic matrix as well as the presence of several trace elements existing in the sets of samples of the Guarani and Pantanal traditions using grouping analysis to seek for similarities among the fragments from the same historical group or same archaeological site. The measurements were done in at least three different points to evaluate uncertainties related to the inhomogeneity of the pieces. The elements Al, Si, K, Ca, Ti, Mn and Fe were identified using the PIXE technique, and the elements Fe, Cu, Zn, Rb, Sr, Y and Zr using the XRF technique. It is possible to identify the presence of Pb in same fragments. Our grouping analysis generates results not related to the historical data or archaeological sites.

[1] Silva, F. A.; Espalez, Eduardo; Stuchi, F. F.; Ponget, F. C., *Arqueologia, Etnoarqueologia e História Indígena - um estudo sobre a ocupação indígena em territórios do Mato Grosso e Mato Grosso do Sul: a terra indígena Kayabi e a aldeia Lalima*. Revista do Museu de Arqueologia e Etnologia, v. 17, p. 509-514, 2007.