

**Archaeometric study on pigmented human bones from Parque das Pedras archaeological site,  
PB - Brazil**

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In recent years, the study and characterization of works of art and objects of archaeological value have been increasingly expanded in order to promote the continuous interaction between scientists, researchers and professionals in the areas of Physics, Chemistry, Biology and Archeology. Bone objects also represent an important source in the study of ancient societies. Knowing the past of hunter-gatherer-fisherfolk populations and their historical social contexts through the study of bioanthropological and zooarchaeological traces has contributed to understanding the emergence, maintenance and transformation of sociocultural systems over time. In this work, human bone samples from archaeological rescue performed by a team from the Nucleus of Documentation and Historical Information (NDIHR) of the Federal University of Paraíba (UFPB). The samples were collected at the Parque das Pedras archaeological site, located in the municipality of Camalaú, Microregion of Western Cariri-Paraíba, Brazil. These bones exhibit painted surfaces. The objective of this study was to characterize the pigmentations of the bones. Fourier transform infrared spectroscopy and X-ray diffraction techniques were employed in the analyses. The identified crystalline phases were: Hydroxyapatite, Quartz, Albite, Calcite and Enstatite. Through the FTIR technique, P-O-H binding ions characteristic of Hydroxyapatite have been identified. Silicon oxide stretching vibration and small signal indicating the presence of iron oxide were also found. The results of this study may contribute to determining the cultural ties of the former inhabitants of Parque das Pedras site with those of other archaeological sites in Brazil.