
Identification of organic binders in prehistoric pigments through multiproxy archaeometric analyses from the Toca do Paraguaio and the Boqueirão da Pedra Furada shelters (Cativara Sierra, Piauí, Brazil).

Hugo Gomes*¹, Thalison Santos , Cristiane Bucu , Lisa Volpe , George Nash , Sara Garcês , Carmela Vaccaro , Niéde Guidon , and Pierluigi Rosina,

¹Grupo Quaternário e Pré-História, Centro de Geociências (UID₇₃); – – *Portugal*

Abstract

Pigments from several prehistoric rock art paintings samples were analysed through a multiproxy archaeometric approach. Sampling occurred in two rock-shelters within the National Park of Serra da Capivara area (an UNESCO World Heritage Site): The Toca do Paraguaio and the Toca do Boqueirão da Pedra Furada.

Five complementary techniques such as X-Ray Micro-Fluorescence, Raman Spectroscopy, Scanning Electron Microscopy, Stereomicroscope Observation and High Temperature-Gas Chromatography were combined in order to identify and characterize the inorganic and organic pigment materials. In particular, gas-chromatography analyses revealed the presence of binders, hardly recognized in rock art prehistoric pigments. These binders' substances (plant fatty acids) could be included in the pigment process "chain-opératoire".

Keywords: Organic, binders, Brazil, paintings

*Speaker