

Preliminary results from an archaeometric approach to ceramic analysis from early Neolithic society in Vale Pincel I (Sines, Portugal)

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Abstract

The archeological site of Vale Pincel I, located in Sines (Alentejo, Portugal), discovered in the late 70's, renewed the interest in the study of Portuguese early neolithic period (2nd and 3rd quarters of VI millennium cal BC). Vale Pincel I ceramics are the earliest Neolithic examples of *ceramica impressa* in Portugal attributed to the Western Mediterranean Basin cycle (pré-cardial ceramics). These findings from Vale Pincel I are of extreme importance for the understanding of the neolithization process of the Western Mediterranean Basin, since they questioned the traditional view of the diffusionist/colonizing paradigm of the “cardial culture” with the possibility of the existence of several “early Neolithics”, not necessarily synchronous, resulting from the evolution of regional Mesolithic societies [1].

Based solely on visual characteristics, 42 ceramic fragments from Vale Pincel I were separated into 3 groups: Group A – thick ceramic body with reddish colorations and very friable surfaces; Group B – thin ceramic body with greyish to black colorations and a more cohesive appearance; Group C – ceramic remains unattributed to either of the previous groups.

In the present study, these fragments were analysed using Optical Microscopy, Wavelength Dispersive X-Ray Spectroscopy and X-Ray Diffraction to obtain their chemical and mineralogical characterization. The compiled data, together with the previously obtained archaeological information, allowed to establish two distinct ceramic groups coexisting in Vale Pincel I. Fragments from Group C were assigned to each of the defined groups after the archaeometric analysis. The coexistence of two distinct ceramic productions in the same location may provide valuable information to unveil the practices of the early Neolithic societies from the Western Mediterranean Basin.

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