
Provenance Archaeometric Study of Chert Artefacts from Cocina Cave (Dos Aguas, Valencian Community, Spain)

Mirco Ramacciotti*^{†1,2}, Gianni Gallelo¹, Oreto García Puchol¹, Agustín Pastor García²,
Alfredo Cortell Nicolau¹, and Agustín Díez Castillo¹

¹Department of Prehistory, Archaeology and Ancient History, University of Valencia – Facultat de Geografia i Història (Edifici Principal: 6à planta i Edifici Departamental. 1a. i 2a. planta) Avda. Blasco Ibáñez, 28 46010 València, Spain

²Department of Analytical Chemistry, University of Valencia – Building E - 2nd floor Dr. Moliner, 50. 46100 Burjassot - Valencia (Spain), Spain

Abstract

The present study aims to understand the dynamics related to chert raw materials supply of the human groups who occupied the Cocina Cave.

Chert nodules were collected from the individuated local outcrops and a set of artefacts found during the recent fieldworks was selected in order to compare natural and archaeological samples. An archaeometric method was chosen to compare the cherts and confirm the compatibility among natural and archaeological samples. In particular, each sample was analysed by X-ray fluorescence spectroscopy (XRF) and inductively coupled plasma mass spectrometry (ICP-MS) to obtain major minor and trace elements concentrations, including rare earth elements ones, and multivariate statistics was employed for the classification.

While most of the artefacts showed elemental profiles comparable to the local chert types, few ones revealed different chemical features which suggested a possible origin from the area of the Serpis Valley (Alcoy, Spain), located more than 50 km south of Cocina Cave. The present work revealed interesting insights about chert raw materials procurement and territoriality of the hunter-gatherers groups who occupied Cocina cave during Mesolithic, and of the occupants groups of the following Neolithic and Bronze Age phases.

Keywords: raw materials, chert, provenance study, archaeometry, multielement analysis, lithic artefacts

*Speaker

†Corresponding author: mirco.ramacciotti@uv.es