

Archaeometry on stones: Materials and methods

Dr Pilar Lapuente

Lecturer in Petrology and Geochemistry. Earth Sciences Department.

Zaragoza University (Spain)

plapuent@unizar.es

ABSTRACT

In recent years the scientific community has been paying great attention to the archaeometric study of stones, especially of archaeological marble pieces from the Hellenistic-Roman world. This survey focuses on the identification of the original stone raw material through the comparative analyses with rocks from ancient quarries.

The application of analytical techniques to classical marbles, not only helps to certify its authenticity, it contributes to the identification of copies, match fragmented pieces and helps with the planning of the work of conservation and restoration. In addition, it provides a better historical knowledge of the taste for certain varieties of marble, the preference of use by the sculptural workshops, the intercultural connection of the different artists, not to mention the economic impact arising from the exploitation and trading networks.

The study of the original geological source, or provenance study, is approached with different petrological and geochemical means depending on the stone element under investigation. Our experience in this line of research, gives us an applied vision of the advantages and disadvantages of the various methods to embark on the study.