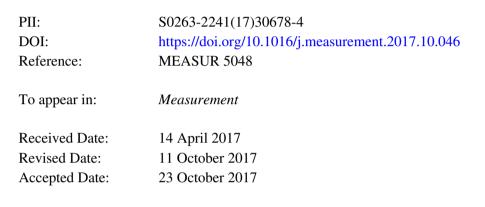
Accepted Manuscript

Radiocarbon Dating of Mortars: contamination effects and sample characterisation. The case-study of Andalusian medieval castles (Jaén, Spain)

Carmine Lubritto, Paola Ricci, Chiara Germinario, Francesco Izzo, Mariano Mercurio, Alessio Langella, Vicente Salvatierra Cuenca, Irene Montilla Torres, Mariaelena Fedi, Celestino Grifa





Please cite this article as: C. Lubritto, P. Ricci, C. Germinario, F. Izzo, M. Mercurio, A. Langella, V.S. Cuenca, I.M. Torres, M. Fedi, C. Grifa, Radiocarbon Dating of Mortars: contamination effects and sample characterisation. The case-study of Andalusian medieval castles (Jaén, Spain), *Measurement* (2017), doi: https://doi.org/10.1016/j.measurement.2017.10.046

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Radiocarbon Dating of Mortars: contamination effects and sample characterisation. The casestudy of Andalusian medieval castles (Jaén, Spain)

Carmine Lubritto¹, Paola Ricci¹, Chiara Germinario², Francesco Izzo², Mariano Mercurio², Alessio Langella², Vicente Salvatierra Cuenca³, Irene Montilla Torres³, Mariaelena Fedi⁴, Celestino Grifa²

¹ Department of Environmental, Biological and Pharmaceutical Science and Technology, University of Campania "Luigi Vanvitelli", via Vivaldi 43, 81100 Caserta (Italy)

² Department of Science and Technologies, University of Sannio, Via dei Mulini 59/a, 82100 Benevento, (Italy)

³ Department of Patrimonio Histórico. Universidad de Jaén, Departamento de Patrimonio Historico Campus Las Lagunillas 23071- Jaén (Spain)

⁴ Istituto Nazionale di Fisica Nucleare, Sezione di Firenze, Via Sansone 1, 50019 Sesto Fiorentino (Italy)

Author to whom correspondence should be addressed: e-mail: chiara.germinario@unisannio.it

Abstract

Since 1960s, mortars have been exploited as a potential material for radiocarbon dating and, despite the fact that this methodology appears very simple in its principles, some measured radiocarbon ages were definitely different from the expected historic ages.

The paper concerns to the characterisation of mortars from three Andalusian castles (Spain) by means of different mineralogical techniques in order to control "contamination effect" that could affect age estimation. Several mixtures of binders and aggregates composed the archaeological mortars; lime-based or gypsum-based binders were distinguished whereas the aggregates varied Download English Version:

https://daneshyari.com/en/article/7121951

Download Persian Version:

https://daneshyari.com/article/7121951

Daneshyari.com