

BYZANTINE KILNS OF SOUTHERN ITALY: AN ARCHAEOLOGICAL LOOK

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The early medieval (7th-9th century AD) production of the Byzantine kiln of "Cantiere Mitello" by Otranto, an harbour on the Apulian Adriatic sea, has been investigated through SANS and TOF-ND measurements. In this site different groups of artefacts can be recognized: transport amphorae of different size and a series of tableware such as pots, saucepans, basins, lids and small pitchers used in domestic life.

By correlating the results of the diffraction and SANS experiments, we can make inferences on the evolution of the firing technique used in that site during the Early Middle Age, and make a comparison with previous results for similar handmade articles found in Miseno and Cuma on the Tyrrhenian sea. Otranto and Miseno or Cuma are in the east or west coast of Italy respectively, thus implying different end market of the products.

As far as the samples of Otranto are concerned, a principal component analysis (PCA) of the mineralogical phases shows that all the groups are very close to each other, although they keep their centroids separated. In particular the tableware group is quite distinct in respect to the others, although there is a partial overlap with a specific group of small amphorae. A similar grouping scheme is present in the SANS data, which are more sensible to the maximum firing temperature.

The combined use of both techniques leads to the conclusion that tableware was fired at a temperature a bit lower than the other objects, and very likely in a reducing atmosphere, as suggested by the presence of the magnetite.