

MINERALOGICAL, PETROGRAPHICAL AND GEOCHEMICAL
CHARACTERIZATION OF POTTERY PRODUCTION OF THE LATE
MINOAN I KILN AT HAGHIA TRIADA (CRETE):
PRELIMINARY DATA

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ABSTRACT

This work presents the mineralogical, petrographic and chemical characterization of 52 pottery fragments found inside the Late Minoan IB kiln at Haghia Triada.

An integrated program of analyses was executed using petrographic thin-section analyses, scanning electron microscopy, X-ray diffraction (XRD) with quantitative elaborations by the Rietveld method, X-ray fluorescence (XRF) and neutron activation analysis (NAA). Thin section analyses of the assemblage produced four fabric groups (according to the texture of the ceramics and their mineral and rock content) and evidenced a process of clay mixing for the production of the fine ceramics.

Micromorphological analyses by SEM showed that vessels underwent high temperature firing thus testifying the high technology reached in the building of the kiln.

XRF analyses displayed the employment of a low calcium clay for cooking pots and a calcareous clay with various tempers for the other studied ceramics.

The multivariate cluster analysis performed by using chemical data of trace elements allowed to individuate the «reference group» of the ceramic production at Haghia Triada in the Late Minoan IB period. It consists of all the analysed samples with the exception of the low calcium cooking pots.

From the comparison between the two reference groups of Haghia Triada and Kommos, it emerged a compositional diversity in their products due to the employment of different raw materials in the pottery production.