A Mössbauer study of the black colour in Early Cypriote and Nubian C-Group black-topped pottery"

Author(s)

Makundi, I.N.; Waern-Sperber, A.; Ericsson, T.

Abstract:

Cypriot and Nubian C-Group black-topped pottery from ca. 2000 BC have been studied by Mössbauer spectroscopy in combination with carbon analysis, x-ray diffraction, thin sectioning, and oxidizing and reducing refirings. The black parts contained both an excess of $Fe^{2}+$ over total iron and of free or organic carbon compared with the red parts. Thus both $Fe^{2}+$ and free or organic carbon contribute to the black color. The red color is mainly due to $Fe^{3}+$ ions. Although these results are consistent with most of the suggested manufacturing methods, a technique where the pots are fired reducingly seems best suited for the Cypriot and Nubian C-Group vessels studied. Analyses of Attic black gloss showed $Fe^{2}+$, but no magnetite.