Archaeometrical investigation of protohistoric glass from southern Italy: from Early Bronze Age to Advanced Iron Age (18th-6th century BC).

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Abstract

This work reports the results of an archaeometrical investigation performed on 145 glass beads dated from the Early Bronze Age (18th cent BC) to the Advanced Iron Age (6th cent BC), coming from 14 Southern Italian sites. Moreover, it offers, for the first time, a general review of our knowledge on the protohistoric Italian glass. Since a quite large amount of data is available in literature on Bronze Age glass from Northern Italy (e.g.: Angelini et al., 2005), while very few are available for the South, the aims were: to determine the raw materials and the technologies employed for the glass production, to suggest hypotheses regarding their provenance, but also to compare the Northern and Southern Italian glass in order to verify their supply routes. The research was carried out with: ESEM-EDS for textural study; Electron Microprobe (EMPA) for major and minor elements, and LA-ICPMS for trace elements; isotopic analyses for the determination of the Sr and Nd isotopic signatures, were also performed. The results provided evidences of a great complexity in the chemical composition and production technologies, as enhanced by the presence of mixed alkali, plant ash and natron glass. Among the natron samples there are: classic natron, alumina cobalt blue produced with cobaltiferous alums as colorant, black glass with high iron (10% FeO) and high-alumina glass (10% Al2O3). Trace and REEs analyses provided more detailed information on the raw materials, while the comparison of our trace results with those reported in literature, and the Sr-Nd isotopic signatures, allow to make hypothesis on the glass provenance. This study demonstrates the existence of different trade routes, most of all in the Early and Middle Bronze Age 1-2, when Northern Italy was involved in the trades with the Central Europe, while the South was already inserted in the Mediterranean interactions.

REFERENCES

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