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BLUE PIGMENTS IN XVI-XVII CENTURY GLAZES: A COMPARATIVE STUDY BETWEEN PORTUGUESE FAIENCES AND CONTEMPORARY CHINESE PORCELAINS MANUFACTURED FOR THE PORTUGUESE MARKET *

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Chinese porcelains have lately been the object of many compositional studies to ascertain production periods and sites. Following the maritime contact established by the Portuguese navigators by the end of the XVI century, the trade of Chinese porcelains to Europe was intensified along the XVII century and there is now an increased need from both museums and traders in Europe to ascertain the provenance and authenticity of many ancient ceramic objects through non-destructive chemical and phase characterization techniques.

With this purpose, a research project is being carried out on glazed faience and porcelain fragments recently collected during archaeological excavations in Lisbon old-city (severely destroyed by an earthquake in November 1755), applying both laboratory techniques like X-ray fluorescence spectrometry (XRF-WDS) and X-ray diffraction (XRD), instrumental neutron activation analysis (INAA) and X-ray absorption spectroscopy (XAFS) using synchrotron radiation at the European Synchrotron Radiation Facility in Grenoble/France.

The blue chromophore role of cobalt and copper in the glassy matrix is discussed in relation to the speciation state and coordination environment.

Taking into account the bulk chemistry of the glazes and in particular, the presence of lead and arsenic, plus the relative contents of manganese, iron, cobalt and copper, a confirmation of previous dating by Art Historians based on stylistic features is tentatively approached.

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