

A QUANTITATIVE XRF APPROACH TO SOLVE HISTORICAL DISCUSSION ON GUALA BICCHIERI BISHOP LIMOSINS ENAMELS

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An historical discussion about the authenticity of some metalworks enameled belonged to the Italian Cardinal Guala Bicchieri (1160-1227) and recoiled during his travel all along the medieval Europe is occurring till now. All pieces of the so called "treasure of Guala Bicchieri", held originally in the Vercelli (northeastern Piedmont) abbey, were dispersed in foreign countries and substituted (probably) by nineteenth-century copies. At present, most of them are preserved at the Museo Civico di Arte Antica (Turin), S. Sebastiano church of Biella (piedmont), Leone Museum in Vercelli (piedmont), Louvre and Musée national du Moyen Âge (Paris), Musée de Picardie (Amiens) and Metropolitan Museum of Art (New York). The meaning of this work was to join the historical knowledge with objective data recorded by a portable XRF to search a solution in the old diatribe on limosins and recent enamels. In this work a quantitative analysis on different metalworks is proposed by solving the problems concerning on dark matrix evaluation in glassy materials and also concerning on the thickness of layered metal parts. Discussion of the results showed, about the possibilities to define with good accuracy, differences between materials used to realize coloured enamels (i.e containing As or Sn) and the alloys (i.e. pure copper or brass). We present here about the possibility to obtain quantitative data by in situ non invasive XRF analysis.