Non-destructive analysis for dating and provenancing glass and ceramics artifacts

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Abstract

In the last two decades, natural sciences offered a whole new range of scientific methods in the field of cultural heritage research. Especially non-destructive analytical methods had a great impact on archaeology and art history. The results of the scientific research of the cultural heritage help solving various problems: the confirmation of originality of the objects, the dating, establishing of the provenance and the manufacturer (or author) and spread of certain techniques or raw materials, etc. At the National Museum of Slovenia, we have used the non-destructive methods in archaeological and art historical research with success. In the field of applied arts (art history), we analyzed roman and medieval glass, early industrial glass, radioactive glass of the 19th century, creamware and some other artifacts of different materials. We used PIXE and PIGE methods in collaboration with the Jozef Stefan Institute. Together with the Institute, we participated in international research, among other, for instance, in COST G8 (Non-destructive methods and testing) European action.