SUPPORT MATERIALS IN ARCHAEOMETALLURGY. COIN ANALYSIS

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Abstract. *Archaeometallurgy is the study of metalworking structures, tools, waste products and finished metal artefacts, from the Bronze Age to the recent past. It can be used to identify and interpret metal working structures in the field and, during the post-excavation phases of a project, metal working waste products, such as slags, crucibles and moulds. In this paper, we have analyzed several Romanian coins from early XX century. Our study demonstrates that EDXRF (energy-dispersive X-ray fluorescence) can be used effectively for the nondestructive numismatic analysis; optical microscopy was used, being able to observe the presence of corrosion products such as cuprite and chloro-argyrite, and the effect of the degradation phenomena on the coin surface. The method can easily be used to analyze coins, indifferently their age, their composition and their state.*

Keywords: archaeometallurgy, EDXRF, coin artefacts

1. Introduction

A new scientific field, which combines the technologies of many disciplines, has progressively grown in importance: Archaeometry. The analysis of elemental composition of ancient coins has generated a lot of interest in recent years as it can provide valuable information on different aspects of life, politics, society, religion, art, culture, economy and metallurgy of minting time [1-3].

The development of non-destructive physical methods of analysis has opened new windows for the study of archaeological objects. The data obtained by the application of these methods can help the archaeologists to answer specific questions concerning dating, technology, provenance and authenticity of the objects that the traditional methods cannot solve. X-ray fluorescence is probably one of the earliest and most widely used methods for elemental analysis of ancient coins [1,2]. This is related with the characteristics of the method like

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