A practical study for Treatment and Conservation a group of Silver Coins from Dhamar Regional Museum, Dhamar, Yemen

Abstract
A big group of silver coins\textsuperscript{53} coins\textsuperscript{54} was discovered in Banawa excavation, Dhamar, season \textsuperscript{2002}, and now it is situated in Dhamar Regional Museum, Yemen. They were covered with a thin grey and black corrosion layers that disfigured them and hid their figures and inscriptions, also Some coins miss parts and others lost their circular.

The aims of this work are identified the metallic composition of the coins, investigate the nature of corrosion grown during the long-term burial and identify its products that will help us to understand the corrosive factors and the degradation mechanisms, cleaning the group of coins from the superficial dirt and the corrosion products in order to discover as much as possible the surface topography, and to reveal the surfaces details, finally to establish them against further deterioration. To achieve that samples from the coins were examined by Metallographic Microscope \{ME\}, Scanning Electron Microscope \{SEM\}, the corrosion products were analyzed by X-ray diffraction \{XRD\}, and X-ray fluorescence \{XRF\} was used to determine the coins metallic constituents. Chemical cleaning was chosen for treating the coins and they were isolated to preserve them against further attack. After treatment and conservation, the coins figures and inscriptions that could be identified showed that this group of coins dates back to Umayyad period, exactly the reign of caliph Abd al-Malik ibn Marwan \textsuperscript{56-86 A.H}\textsuperscript{57} and his descendants till \textsuperscript{601 A.H}. 