

CONSERVATION TREATMENT AND ANALYTICAL STUDY OF EGYPTIAN GILDED BRONZE STATUE OF SEATED OSIRIS

An interesting example of a bronze seated Osiris statue dated back to the Late Period (664-332 B.C), preserved in the store museum of Kom Oshim, Fayoum, EGYPT. The hollow-casting process was used in the statue manufacturing technique. A detailed characterization of the statue was carried out through USB digital microscope, metallographic examination, portable X-ray fluorescence, X-ray diffraction and scanning electron microscope with energy dispersive spectroscopy. The results revealed that statute has been made of lead bronze alloy with low tin and high lead. EDS results showed that the gold leaf contains more than 90%wt. Au content. The corrosion products identified by XRD are cuprite, malachite, azurite and atacamite. Pre-treatment, a consolidation and fixing processes were carried out by using Paraloid B72 3% in acetone to ensure that the gilding adhered firmly to the surface. Mechanical cleaning was accomplished via safe hand tools to remove corrosion products and soil encrustations and avoid losing the gold remains. BTA 3% in alcohol was applied in the areas of active corrosion, then two layers of permalac were applied.