

Conservation Techniques of an Archaeological Copper Tray in the Islamic Art Museum in Cairo

Dr. Gehan Adel Mahmoud

Restoration Department – Faculty of Archaeology, Luxor University

gehanadel@farch.luxor.edu.eg

Dr. Mona Elsayed Mowad

Head of Restoration of Glass and Ceramic Department, Islamic Art Museum in Cairo,
Ministry of Antiquities and Tourism.

Monam33wad33@gmail.com

Researcher. Wael Abdulhamid Eid Ali

Restoration Technician at the National Museum of Egyptian Civilization

1waelabdulhamid@gmail.com

Abstract

A copper tray dating back to the Mamluk era, kept in the stores of the Museum of Islamic Art in Cairo, registered under No. 9315. It was broken into six separate parts with several holes. Its edge is serrated by a line in the prominent Naskh script. The tray suffers from various deterioration phenomena, such as pits and holes in different places of the tray, and the wrong restoration, as it was welded incorrectly with the aim of assembling some of its separate parts. Various examinations and analyses were carried out. The results of the X-ray diffraction analysis showed the presence of Cuprite (Cu_2O), Atacamite and Paratacamite. Treatment and conservation of the tray was carried out, including mechanical cleaning and chemical cleaning. The assembly process was carried out for the separate parts. The holes were completed using mixture of epoxy with natural oxides and calcium carbonate with microballoon as filler. The tray was also isolated using 3% benzotriazole to protect it from exposure to corrosion.

Key Words:

Conservation, Corrosion, Archaeological Copper Tray, Deterioration, Islamic Art Museum in Cairo.