AF 9590, a Yellow Coffin from the Egyptian Antiquities Department of the Louvre Museum: analytical methodology developed in the C2RMF within the Vatican Coffin Project

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AF 9590, a Yellow Coffin from the Egyptian Antiquities Department of the Louvre Museum: analytical methodology developed within the Vatican Coffin Project


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The Vatican Coffin Project is a collaboration between European museums and laboratories for the study of the Theban “yellow coffins”. The objective of the project is to understand this Egyptian production from the 21st dynasty, with the ultimate aim of defining workshops, priests family practices and/or chronological evolution. These huge artefacts are three-dimensional composite objects; they are hard to handle as they have abundant colors and are partially varnished. It was therefore necessary to develop a specific, mainly non-invasive, methodology to understand the manufacturing process. AF 9590, a coffin from the Louvre Museum that is part of a 15-set corpus, illustrates the development of a multi-scale methodology at the Centre de Recherche et de Restauration des Musées de France (C2RMF).

### Organic materials

- X-Ray Radiography
- UV Imaging
- In-situ analysis
- XRF

### Varnish GC/MS analysis

- Sampling study
- X-ray Fluorescence
- Microscope

### Colour materials

- IR Imaging
- IRF Imaging
- VIL Imaging

### Materials analysis data

- Materials analysis data

### XRF

- Elements X-ray Fluorescence

### Copper green pigments

- In-situ analysis
- Green pigments
- Synthetic copper chlorides materials

### Arsenic sulfure materials

- Two main problems with arsenic sulfures: Identify the material used
- 2 natural yellow arsenic sulfures exist: Orpiment (As₂S₃) and Pararalgar (As₄S₆)
- Know the precise position of the arsenic inside the stratigraphy

### Egyptian Blue

- Presence of orpiment (As₂S₃) in the varnish and Pararalgar (As₄S₆) in the yellow layer of varnish is confirmed.

### Structural analysis EDS

- SEM
- Raman
- FTIR
- XRD
- TRL

### Development methodologies

- Methodology, techniques
- RBS
- ESR

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