

## **25<sup>th</sup> International Meeting of Conservators-Restorers**

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# **Pigmented wax-resin infill applied to** painting on copper

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### Introduction

Paintings on copper constitute a distinctive category of easel paintings, crafted by artists using a specific technique [1]. The conservation and restoration of these artworks demand a comprehensive approach beyond mere stabilisation of the original materials and surface cleaning.

Due to their smaller dimensions, infilling and retouching are essential to this intricate restoration process. Over the years, conservators have explored a variety of solutions to meet these challenges effectively [2].

Following an extensive research project to identify an appropriate infill material for paintings on copper, pigmented wax resin (PWR) emerged as one of the most promising options [3].

#### Materials used for infill and retouching phases in paintings on copper, 1900-2022 [2]



### **RECH 2023 – First Workshop about Pigmented wax-resin applied on copper substrate**

In 2023, a workshop dedicated to the preparation and application of pigmented wax resin on copper was held at the 7th edition of the International Meeting on Retouching of Cultural Heritage (RECH7), overseen by Daniel Vega. During this workshop, participants examined the chemical and physical properties of PWR, along with its advantages compared to other infill materials. They meticulously prepared and skillfully applied a pigmented wax-resin formulation to copper samples to evaluate its workability.

#### **1. Materials** 2. Properties

- **Cosmoloid H80 Softening point: 41°C**
- Regalrez 1126 Melting point: 68°C
- Dry pigments Acidic number: 0

### 3. Advantages

- a. It is a non-aqueous material, presenting no risk of promoting corrosion on the metal surface;
- b. It serves as an effective barrier against water and moisture, reducing the likelihood of environmental water migrating through the infill to the front of the support;

c. Its thermal responsiveness allows it to be introduced into losses in a fluid or paste form with ease;

- d. It can form a very thin layer that is stable, showing no shrinkage or cracking;
- e. Blooming is undetectable, even under conditions of accelerated ageing.

#### Preparation 4.





glass beaker.







Fig 6 – Weighting the resin.

#### Fig 7 – Adding the resin to the melted wax.

Fig 3 – Wax completely molted.



Fig 8 – Adding the pigment.

Fig 4 – Grinding the resin.



tray.



Fig 5 – Sifting the powdered resin.



Fig 10 – Final set of PWR produced.

#### **Application methods** 5.

- a. Wax carving pencil; or
- **b.** Dental spatula.



#### [1] Vega, D (2018) "Pintura sobre cobre: investigación sobre materiales y técnicas de aplicación de la capa de preparación a través de los tratados tradicionales y estudio analítico de dos obras atribuidas a las escuelas portuguesa y flamenca." Conservar Património, 27:23-35. https://doi.org/10.14568/cp2016040 [2] Vega, D; Bailão, A. (2025). "Infill and Retouching approach on painting on copper support, 1790–2022. Materials and techniques". In: RECH 7 – 7<sup>th</sup> edition of International meeting on retouching of Cultural Heritage, 2023, pp. 196-204. http://10.5281/zenodo.14591488 [3] Vega, D (in press) "Painting on copper. Retouching with coloured wax resin. Chemical principles, preparation and application method." In: Entrelaçar 2024. Conservação de Património – FBAUL



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