

BOOK OF ABSTRACTS

# COLOURS 2015

BRIDGING SCIENCE WITH ART



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## PIGMENTS FROM A PAINT BOX FROM THE ATELIER OF THE PORTUGUESE PAINTER OF THE EARLY TWENTIETH CENTURY, AURÉLIA DE SOUSA

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Painting materials can provide relevant information about the availability offered to artists within specific periods of time and particular geographical locations, contributing to understand painter's choices, preferences and limitations. The nineteenth century was, by far, the moment where an unprecedented diversity on pigments and lakes occurred, due the discovery of new metals and the huge advances on inorganic chemistry and on the synthesis of artificial dyestuffs.

A painting box containing 36 oil tubes was recovered by the family of the Portuguese painter, Aurélia (1866-1922) atelier, at Quinta da China, Porto. The atelier was shared with her sister, Sofia de Sousa (1870-1960), who ceased painting when Aurélia died. They both studied at the Academia Portuense de Belas Artes, at Porto and later, at the turnover of the 19th century, at the Academie Julian, in Paris.

It was intended to identify the inorganic constituents of the paints, namely pigments, fillers, extenders and lake substrates, through SEM-EDS, in order to know the painting materials actually used in Portugal, in general, and, in particular, to complement the knowledge of Aurelia's palette previously determined through the study of her paintings.

The cardboard painting box has an embossed lid with the Lefranc & Cia mark as used from 1880 onwards [1] and on its interior contains oil colours, mainly from this well-known artist's materials supplier and from two others: Winsor & Newton and Talens & Son. Characterization of particular tube features and labels revealed that some were produced after 1912 while others, possibly, after 1910, corresponding to the last decade of Aurelia's life. The majority of inorganic colours of the painting box have been found on Aurélia's works, namely iron oxide pigments, lead white, Prussian blue, cobalt blue and chrome and cadmium pigments. Titanium white has not been found at the box neither on works while zinc white and vermilion are absent from the box but not from the paintings. Analysis to paint tubes revealed several adulterations made by the suppliers to imitate expensive colours based on cadmium, cobalt and antimony.

[1] CONSTANTIN, S., The Barbizon painters: a guide to their suppliers. *Studies in Conservation*, nº 46, 2001, p. 49-67