Chinese skirt from the Qing dynasty

Characterization and treatment of unusual materials and techniques in Mexico

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Introduction

This Chinese skirt belongs to the National History Museum of Mexico (NHM) and was studied and conserved in the National School of Conservation, Restoration and Museography (ENCryM) by the Textile Conservation Treatment Workshop Seminar.

This dress carries the characteristics of the clothing in the Qing dynasty (1644 - 1911) which was the last imperial period in China. From the literature research, the history of this type of skirts was obtained, but it was impossible to determine the exact date of entry to Mexico or the reasons of accessioning it by the NHM. After some researches, the team figured out that there are two more skirts similar to this; additionally this skirt is one of the only two textile heritage objects manufactured with a peculiar kind of metallic threads in Mexico.

The lack of references and similar skirts make it difficult to find integral information about the manufacture methods and history; therefore it was necessary to carry out a number of technical analyses to determine the materials nature, manufacturing techniques and to understand the conservation problems.

Samples were taken from different parts of the skirt for the analysis to determine the nature of materials. By combination last and microscopic morphological examination, it was found that 90% of the fibers in the skirt are silk (brackets in damask, satin applications and threads for sewing and embroidery), and the rest of the fibers are cotton (at waistband and hem). It was found that indigo was used for dyeing the damask and indigo and gold was used in dying the satin by UV light examination and chemical analysis.

The most challenging part is the study of the blue embroidery and metallic threads. In one of the yarn sample, indigo was identified by Raman microscopy. Foils with small percentage of silver lead and iron were wrapped around the threads. In one of the yarn sample, indigo was identified by Raman microscopy and chemical analysis. The study also served to understand that the depolymerization of black silk satin was caused by the acidity of the dyes used for staining. After using selective staining tests and chemical analysis to identify the dyes, pH test were carried. These analyses confirmed that the indigo gel had been used that cause the acidity to degrade the black fibers and all the embroidery threads placed over the furs.

Depolymerized satin before treatment

During the conservation treatments, it was necessary to obtain samples in order to both identification and material compatibility tests. The information provided by this analysis was vital to determine the fiber stabilization treatment without causing more decay.

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References