

TREATMENT OF SENSITIVE PASTEL DRAWINGS USING SUCTION TABLE

The artworks of the famous Croatian painter Ljubo Babić (1890.- 1974.) are part of the Print Collection of National and University Library in Zagreb. The poster focuses on pastel drawings on textured modern paper made from wood pulp, which represented the biggest challenge in terms of conservation- restoration and performance of wet cleaning treatment.

The goal of wet cleaning treatment is to remove harmful degradation substances such as acids, discoloration products and dirt from paper structure, but also to re-establish chemical bonds which result in improvement of strength and appearance of paper. It is an irreversible and complex treatment, so it should be carefully considered and various tests must be performed before making a decision. There are numerous techniques available to the paper conservator, which differ in degree of control, aggressiveness and in their effectiveness.

While aqueous treatments were done on pastel drawings in the past, nowadays, we know that not only traditional and direct techniques carry a lot of risks, but also, many studies have shown that even indirect techniques can be problematic for such drawings. Paper conservator should take into account all the potential benefits, risks and possible alterations which treatment carries. Decision must be based on the degree of tolerance of the individual drawing media and the qualities of paper support because those two elements are inseparable. It is important to adapt a method to the requirements of the particular object.

PROBLEMS

- Pastel drawings are very sensitive and fragile with a loosely arranged layer of pigments. Because of the low concentration of binding medium in pastels, pigment particles are only lightly adhered to the paper support.
- Solubility tests have shown extreme water solubility of colors.
- pH measurement has shown that the pH level of paper support is lower than 7 which indicates acidity
- Foxing, darkening and overall discoloration of paper support due to light exposure and chemical deterioration
- Paper is weak and brittle because of loss of elasticity due to acid catalyzed hydrolysis of cellulose and thus very vulnerable to breaking during handling.



WET CLEANING TREATMENTS ON PASTEL DRAWINGS

Wet cleaning method was considered in order to improve a paper's strength and appearance. However, classic and direct methods such as complete immersion in water couldn't be performed because pastel is very vulnerable media, so powdery areas can be damaged by mechanical action of water.

It was decided to perform gentle aqueous treatment which consisted of a combination of using the suction table and ultrasonic misting in order to minimize any possible damage to the drawing. This method allows more controlled treatment with minimal use of moisture. With more control, the possibility of pigment loss or migration is reduced. Also, treatment can be stopped at any time.

Treatment consisted of the following steps:

- Dry object was humidified in order to introduce moisture in a controlled way and to relax paper fibers which ensured more even wetting of its surface. The object should be uniformly relaxed in order to avoid formation of creases while on the suction table.
- Humidified object, supported by blotting paper, was laid down on the suction table. Careful manipulation was necessary in order to avoid tearing and breaking.
- The face of the drawings was continuously humidified by spraying with 50: 50 water/ethanol mixture under suction pressure to remove staining materials and acids out of the paper structure to the blotting paper.
- Brown stains were locally treated with warm mist from the ultrasonic humidifier which allowed control over the amount of water and direction of its movement. Drawings shouldn't be heavily wetter to avoid pigment migration from the paper surface to its interior.
- Wet and stained blotters were regularly changed during treatment for dry ones in order to prevent building up of discoloration products
- After wet cleaning treatment, drawings were air dried.

RESULTS

- Water soluble impurities and deterioration products such as acids and discolored components are removed from paper structure.
- Chemical stabilization of paper through removal of soluble acids.
- Discoloration and staining of paper support are reduced, without pigment migration or loss
- Appearance of stains is less disturbing meaning that the overall aesthetic of pastel drawings is improved.
- Chemical bonds between cellulose fibers are re-established, which means that paper support is more flexible and has better mechanical strength, so it won't tear so easily.

