




## CONSERVATION TREATMENT OF MURAL PAINTINGS IN VIRUPAKSA TEMPLE, HAMPI

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This study focuses on the conservation treatment of mural paintings in the Virupaksa Temple, Hampi, a significant temple complex in the UNESCO World Heritage Site of Hampi. The temple is dedicated to Lord Virupaksa, a prime form of Shiva, and boasts intricate mural paintings depicting stories from Mahabharata and Siva Purana on its granite ceiling. However, these murals face deterioration due to various factors, including rainwater percolation, soot deposition from ritualistic practices, and the accumulation of dirt and dust. The conservation problems are both internal and external in nature. The conservation approach involves meticulous cleaning without the use of aqueous solutions, considering the water-soluble binding materials in the tempera technique used for the paintings. Dry brushing removes initial dust and debris, followed by the application of carefully selected solvent mixtures. Test patches are crucial to ensure the compatibility of chemicals with the paintings. Turpentine oil serves as a color restrainer, and Japanese tissue paper aids in controlled penetration during the cleaning process. Old preservatives are removed, bulged portions are refixed, and damaged areas are treated with plaster of Paris. The final step involves applying a preservative coating to safeguard the restored paintings. The study concludes that the conservation efforts have been successful, enhancing the aesthetic appearance and overall preservation of the murals. The meticulous approach to chemical selection and cleaning procedures has resulted in the clear visibility of the paintings and their improved state post-treatment.

**Keywords:** *Mural Paintings, Conservation Treatment, Virupaksa Temple, Tempera Technique, Heritage Preservation.*



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### 1. INTRODUCTION

Painting is an expression of art by which human beings express their thought about nature, ceremonies, and social activities. Human beings always esteemed beauty and tried capturing it in a permanent medium or surface. This expression of art is evident in all evolutionary stages of human history. The history of painting is very old which traces back to the upper palaeolithic era where we have evidences of cave paintings on the rock surfaces of cave that human used to inhabit. In Indian context, we find painting

across the country from north to south and east to west. India is a land of art and artists having rich wealth of paintings since palaeolithic times. The painting found in different parts of the nation partakes different carriers like, stone, wall, textile, cloth, wood, bark, paper, leather, etc. Mural painting was highly valued as aesthetic, decorative and educational factor from ancient times to modern era. Human habitat, royal palaces, houses of the noble man, the prasada or temple, all were decorated with paintings.

Virupaksa temple is one of the most important temple complexes in Hampi where we find adequate mural paintings. Hampi is a world heritage site which is spread around 40 sq.km area on the river bank of Tungabhadra (ancient Pampa). Virupaksa temple is dedicated to lord Virupaksa; the tutelary deity of the Vijayanagara dynasty, one of the prime forms of Shiva which makes it an important and famous Shiva temple of Vijayanagara period.

The Virupaksa temple complex is adorned with a tall multi-spired gopuram with highly rich stucco sculptures in entrance. The prakara of the temple has a multi-pillared veranda supported with richly carved pillars. The interior courtyard is dotted with small shrines and a pillared hall. The front porch or the Ranga mandapa is heavily pillared with rich carvings having ceiling decorated with paintings. These paintings narrate different stories from Mahabharata and Siva purana. The ceiling of the Rang mandapa made of granite stone acts as the carrier for the mural paintings. On the granite surface, artists prepared ground by lime plaster. To prepare the ground, multiple layers of lime plaster like rough plaster, fine plaster and smooth lime wash was used. The main component of lime plaster is lime and sand. Here painting is executed by tempera technique. In this technique, artists applied paint layer when painting ground is dried. Colours like red, yellow, white, green, and black were used in the paintings.

## 2. DETERIORATING FACTORS

There are several factors which are responsible for the deterioration of paintings which can be broadly grouped under natural and man-made factors. The natural factors for deterioration are rainwater, wind abrasion, sunlight, temperature variations, atmospheric pollutants like dust, dirt, soot, micro vegetations etc. Man-made factors for deterioration are vandalism, physical destruction, superimposition, prolonged neglect, smoke, ritual process, etc. Some of the other factors causing deterioration are bats, insects, spider, bird activities, etc.

## 3. CONSERVATION PROBLEMS

The major conservation problems of mural paintings in Virupaksa temple, Hampi are as follows

- The roof of the Rang mandapa has different micro cracks through which rain water percolation occurs causing the dampness on the painting layers. White patches, water marks, and bulging of ground of painting layer were also caused by dampness.
- Due to the burning of incense sticks, camphor, oil, and ghee lamps in large quantities in the temple premises as a

part of ritual and worship by people has created sticky dust and soot deposition causing blackening of the ceiling.

- Apart from the soot deposition, accumulation of dirt, dust, cobwebs etc. has caused the painting a dark, dirty, and ugly look.
- Old preservative coatings were also found in some of the areas on the ceiling.
- The deteriorating factors in this temple are both internal and external in nature.

## 4. TREATMENT METHODS

An important point to be considered before using chemical for cleaning the paintings is that, these paintings are executed in tempera technique with water soluble binding materials. So, use of aqueous solution was avoided during cleaning process.

At first, all dust, dirt, cobwebs, spider webs were removed by dry brushing with soft hair brush gently. After dry cleaning, chemicals are used in the cleaning of paintings in different proportions.

Solvent like, Ethanol, 2-ethoxy ethanol, n-butanol, di-acetone alcohol, tri-ethanolamine, di-butyl phthalate is used in different proportions. Mixture of 2-3 solvents gives good results. At this temple, same and similar combination of chemicals were not useful in the cleaning process of paintings. So, different combination of chemicals was used in different colour, part of the paintings to avoid any error.

A test patch is made in an insignificant area and the result is observed keenly to check the suitability of the chemical on the paintings. Once found suitable, the chemical combination is used further for cleaning process. After cleaning, turpentine oil is used as colour restrainer. Japanese tissue paper was used to get more penetration and control over its contact with the surface. Old preservative was removed with Toluene (sulphur free). Bulged portion of the paintings were refixed by injecting 5-10% Poly vinyl acetate in Toluene (sulphur free). Water marks and white patches were also cleaned with the same solution. Edging of the broken portion was carried out using plaster of Paris. Minimum colour reintegration work was done. After completing all the above-mentioned process, 1% Poly Vinyl Acetate in sulphur free Toluene is applied as a preservative coating for the painting.

The micro cracks found on the roof is filled by injecting Silicon Sealant and coated with double layer of Silane siloxane emulsion using paint brushes to arrest the percolation of rain water. After conservation work, the painting is clearly visible and in good condition.



Fig.1a - Before Conservation



Fig.1b After Conservation.



Fig.2a - Before Conservation



Fig.2b - After Conservation.



Fig.3a - Before Conservation



Fig.3b - After Conservation.

## 5. CONCLUSION

After a careful and long assessment of different chemical combinations and cleaning agents, the mural paintings on the ceiling were cleaned with utmost observation and care. The over all effect of the conservation treatment has been successful and the paintings which had already been treated are in good state of preservation. After treatment the aesthetic appearance of the murals has considerably improved and clearly visible.

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