

DOI: 10.5281/zenodo.47545

EXPERIMENTAL STUDY OF THE RETOUCHING MATERIALS APPLIED ON MURAL PAINTING IN EL SAKAKENY PALACE

Kholod K.Salama¹, Mona F. Ali², Abubakr M. Moussa²

¹*National Museum of Egyptian Civilization, Cairo, Egypt*

²*Conservation Department, Faculty of Archaeology, Cairo University*

Received: 02/02/2016

Accepted: 20/05/2016

Corresponding author: Kholod K.Salama(kholodkhairy@yahoo.com)

ABSTRACT

In the present study a comparison between five familiar retouching materials (Water colour, Acrylic colour, Gouache colour, Poster colour and Oil colour) were applied on the mural painting of El Sakakeny palace. The artificial aging was used to define suitability of them, while the comparison revealed that the water colour is the most successful material as it isn't turned to yellow, it is reversible and stable, thus it is considered as the most suitable material for retouching the mural painting of El Sakakeny palace which suffers from losing of paint layer.

KEYWORDS: Retouching, Water colour, Acrylic, Gouache, Poster, Oil colour, artificial aging, El Sakakeny palace.

1. INTRODUCTION

Retouching is very important procedure to finish the restoration process, as after cleaning and consolidation of the mural paintings the art object requires retouching because of discoloration. This process must be done in a good lighting (Donald, 1996), pushed until it is almost invisible. Unclear has at times been condemned in principle that retouching would constitute a fake (Price *et al.*, 1996), as it is still sufficiently good to fool the untrained (Land, 2002) perhaps even some professional eyes as well (Price *et al.*, 1996).



Figure 1 The mural painting in El Sakakeny palace

1.1. THE CURRENT PAINTING DESCRIPTION AND CONDITION

The painting is located in Love chamber on the first floor in El Sakakeny palace in El Sakakeny Square. It is of Rococo style as the colours are light and there is an obvious movement in the flying bird (Fig.1). The dimensions are approximately 20 cm x 25 cm without the frame, and 1.8 cm deep. Dates back to the 19th century or in the year 1897. The condition of the painting is poor; failure in paint layers is the most apparent deterioration phenomenon (Fig.2 A, B, C). Therefore, the pictorial layer suffered from severe loss and color change around the lost areas, and grassy spots and soot spot

1.2. THE MAJOR DETERIORATION FACTORS FACING THE CURRENT MURAL PAINTING AND THE RESTORATION WORKS

The solubilized salts in the groundwater rising in walls, the daily sun light which dried out the paintings, so the salts crystalize and recrystallize, becoming bigger and so causing interior pressure leading to the detachments of paint layers (Mora *et al.*, 1984), First of all stopping the rising of groundwater in walls close the window which face the current

mural painting, adding appropriate kind of glass to prevent the hazardous ultra violet rays.

The restoration works briefly consisted of:

- Cleaning using soft and hard brushes.
- Chemical cleaning using acetone for the hard stains.
- Consolidation using Beva371 with concentration. 3% (Amorso *et al.*, 1983).
- Retouching the paint layer using the suitable colors.

Currently in this paper a comparison between the most familiar retouching materials is tested to choose the suitable color for retouching

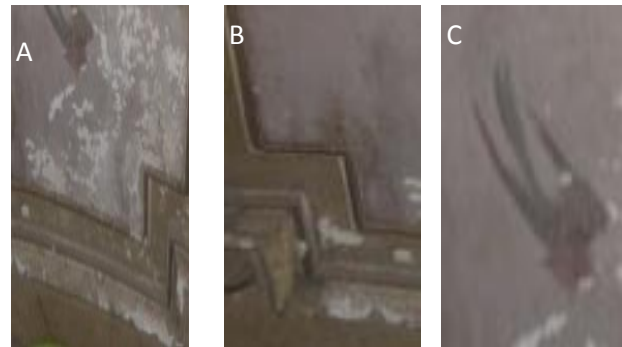


Figure 2 The condition assessment of the mural paintings (A) losing of painting layer from the back ground of the mural painting (B) Failure in paint layers (C) Losing in paint layer of the bird's body.

2. MATERIALS AND METHODS

The major colour was lost in the current mural painting was the reddish brown which is consisted of white (Zincate) + red (Hematite) so the White and Red colour of Water colour, Acrylic colour, Gouache colour, Poster colour and Oil colour, were tested by exposing for the artificial aging to choose the most successful, safe and stable colour for retouching. The colours were tested pure and mixed together the Acrylic colour in spite of being shiny it turned in to yellow colour after artificial aging, The Gouache colour turned to Grey, Poster colour turned to Deep Yellow, Water colour is stable, and the worst one is the Oil painting which turned to deep yellow and cracked (Fig. 3) On the whole the chosen retouching material should a) be future longevity, b) easy to use in any temperature, c) exhibit reversibility, the touchstone of conservation, and d) fast to dry (Fig. 4) (Ellis, 2014).

After applied them on a plaster or ground layer similar to the original plaster for choosing the colour which can be removed in the future, the worst colour in retouching is the Oil colour as it's medium is oil which dispread on all surface, it is turned in to yellow orang as the used pure colour was white and red and more of all the previous it can't be removed, The same colour is The acrylic which can't be re-

moved and turned in to a deep colour , Poster and Gouache can be removed but they changed their colour after artificial aging on other hand the Water colour is still stable after artificial aging and can be removed easily with wet cotton that proved never changes its colour intensity in future. (Fig. 5)

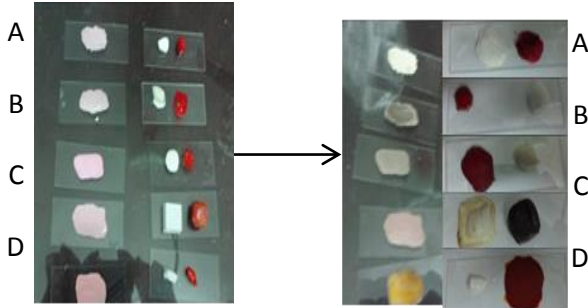


Figure 3 The colors in sequence (A) acrylic turned to yellow, (B) Gouache the color became deeper, (C) Poster cracked and turned to yellow, (D) Water color no change happened and (E) Oil painting turned to yellow.



Figure 4 The used fine Aquarelle water color.

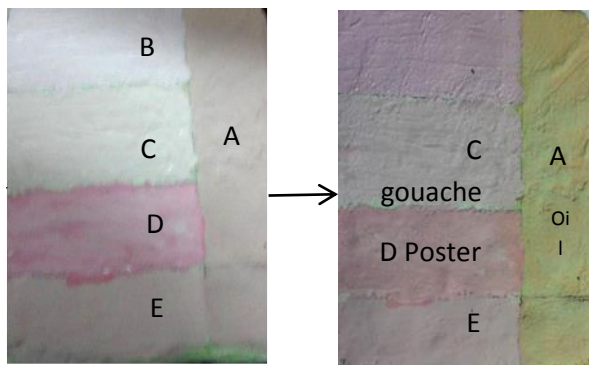


Figure 5 show the results of exposing the five colors on plaster layer to the artificial aging. (A) Oil painting turned to yellow,(B) Acrylic turned to yellow (C) Gouache the color became deeper , (D)Poster cracked and turned to yellow , and (E) Water color no changes happened.

After choosing the most successful color for retouching, retouching process should concern:

The art historians because the missing parts are wide and need a guess so it must be limited (Bomford et al., 2005).

Age value: which can easily be seen and understood by all, comes from recognition of historical value since the original condition enjoys the highest priority. (Stoner et al., 2012) Adding a new ground layer contact between these and the original materials poses a dedicated problem reacting differently than the older materials, The new materials before stabilizing can cause a fissure where the retouching and original meet, So the ground layer must be Contained the compounds in the original ground layer, and the retouching material should be applied carefully and distinguished by the professionals (Figs. 6, 7) Where retouching could give the original appearance of the painting full balanced (Durbin, 2005).



Figure 6 (Left) focus on retouched place, (right) during retouching using a brush size zero



Figure 7 The mural painting of El Sakakeny palace before (left)and after (right) the retouching

CONCLUSION

This paper is presenting the initial stages for restoration of El Sakakeny palace, The study focused mainly on the compound and the main changes took place for the materials which used in color retouching, the comparison revealed that the most successful retouching material is water based color painting according to following advantages:

- Stable.
- Doesn't distribute the visual appearance of the mural.
- The used color doesn't change.
- Can be removed.
- Easy to apply.
- Doesn't crack after artificial aging experiments.

The ways of retouching must be distinguished of the original especially by the professionals.

REFERENCES

- Donald, J.K.Mc. (1996) *House of eternity. The tomb of Nefertari*. The Getty Conservation Institute and the J. Paul Getty Museum, Thames & Hudson Gb, Los Angeles, p.9
- Price, N.S., Melucco K.A. (1996) *Historical and philosophical issues in the conservation of cultural heritage*. Paul Getty conservation institute Publications, Los Angeles, 520p.
- Mcausland, J. (2002) The practicalities & aesthetics of retouching rationality versus institution; part VII treatment limits and limitations. In *historical perspectives in the conservation of works of art on paper*, The Getty conservation institute, Los Angeles, PP.458-462.
- Mora, P., Mora, L. (1984) *Conservation of Wall Paintings*, Butter Worths, Heinemann London, PP.1-494.
- Amorso, G., Fassina, V. (1983) *Stone decay and atmospheric pollution- 'Cleaning, Consoldation & Protection*, New York, 115p.
- Ellis, M.H. (2014) *Historical perspectives in the conservation of works of art on paper*. The Getty conservation Institute , Los Angeles , 733p.
- Bomford, D., Leonard, M. (2005) *Issues in the conservation paintings*. The Getty conservation institute and The J. Paul Getty Museum publications , London & New York, 581p.
- Stoner, J.H, Rushfield R. (2012) *The basic tents of retouching, conservation of easel paintings*. Rutledge Taylor and Francis group, London & New York, 867p.
- Durbin, L. (2005) *Architectural Tiles conservation and restoration*. Rutledge Taylor and Francis group, London & New York, 201p.