

Laboratorio Scientifico del MUSEO D'ARTE E SCIENZA

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Milan, 9/06/2011

No. 6AN-7912

**Results of the scientific tests performed
on the painting on canvas (cm 73 x 100) shown in the photo.**



The scientific analyses to which the painting was subjected included microscopic, infrared reflectographic, Wood's light and FT-IR spectroscopic tests aimed at verifying the compatibility of the material used with the historical period in which the canvas is presumed to have been painted.

Preliminary examinations:

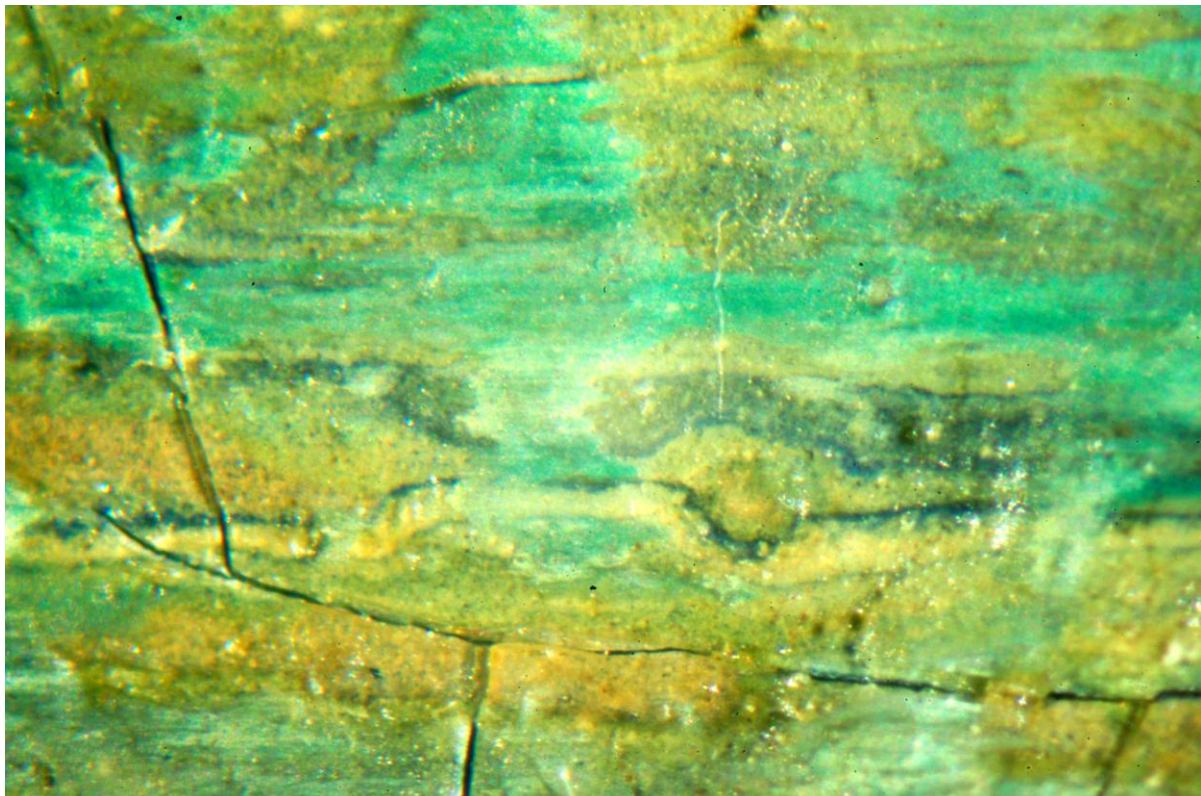
The painting, very pleasant in the subject and with a rich palette, is not in a good state of conservation: it presents in fact some paint losses particularly along the sides, some restored areas and a no more efficient tension of the canvas on the stretcher.

A careful preliminary examination of the edges revealed the holes of the previous nails that do not correspond to those on the present stretcher therefore confirming that the stretcher is not the original one but it has been afterwards replaced.

An analysis of the paint layer, carried out with the help of a stereomicroscope, brought to light the following characteristics:

In many areas of the painting the paint layer has hardened as a result of the drying of the binding medium and the colour, when pressure is applied by a point of a needle, it tends to crack rather than warp.

The painting shows a rather deep and extensive craquelure (well highlighted in the micro photo no. 2).



2

In the same photo, carefully observing the green areas in the surface, some strokes of finer and purer colour are evident: touches of colour added afterwards the original paint.

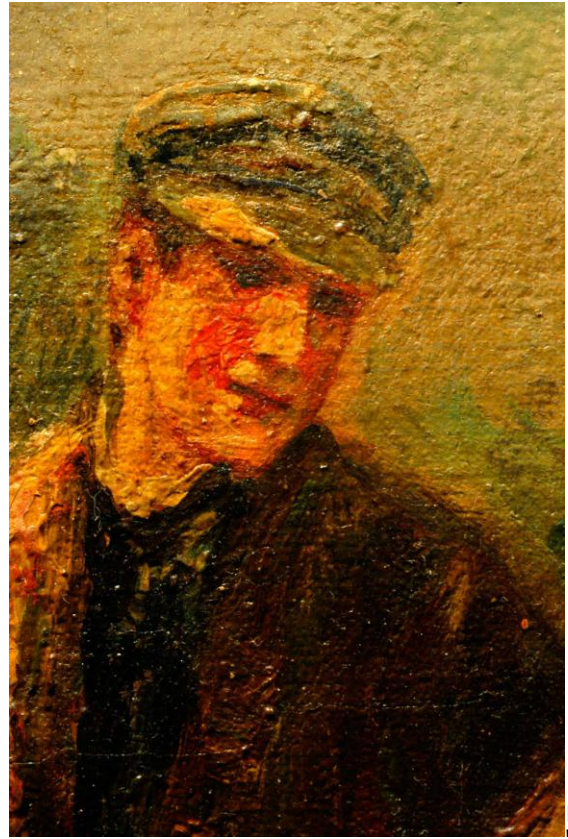
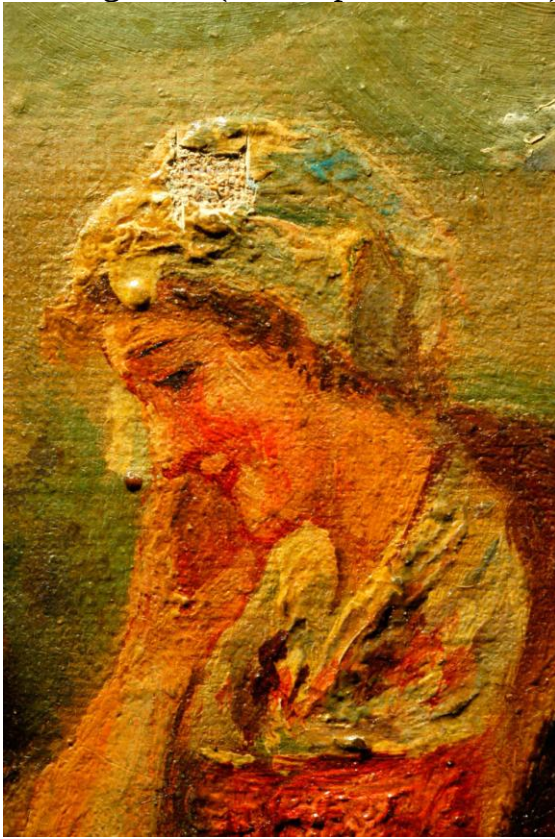
Furthermore the examination with a microscope brought to light some larger areas with additional touches and over-paintings: in fact most of flowers have been “revived” with new brush-strokes and addition of red, yellow and white colour. The micro photo no. 3 shows the parts which have been added above the protective and bright varnish layer belonging to the most ancient paint layer.



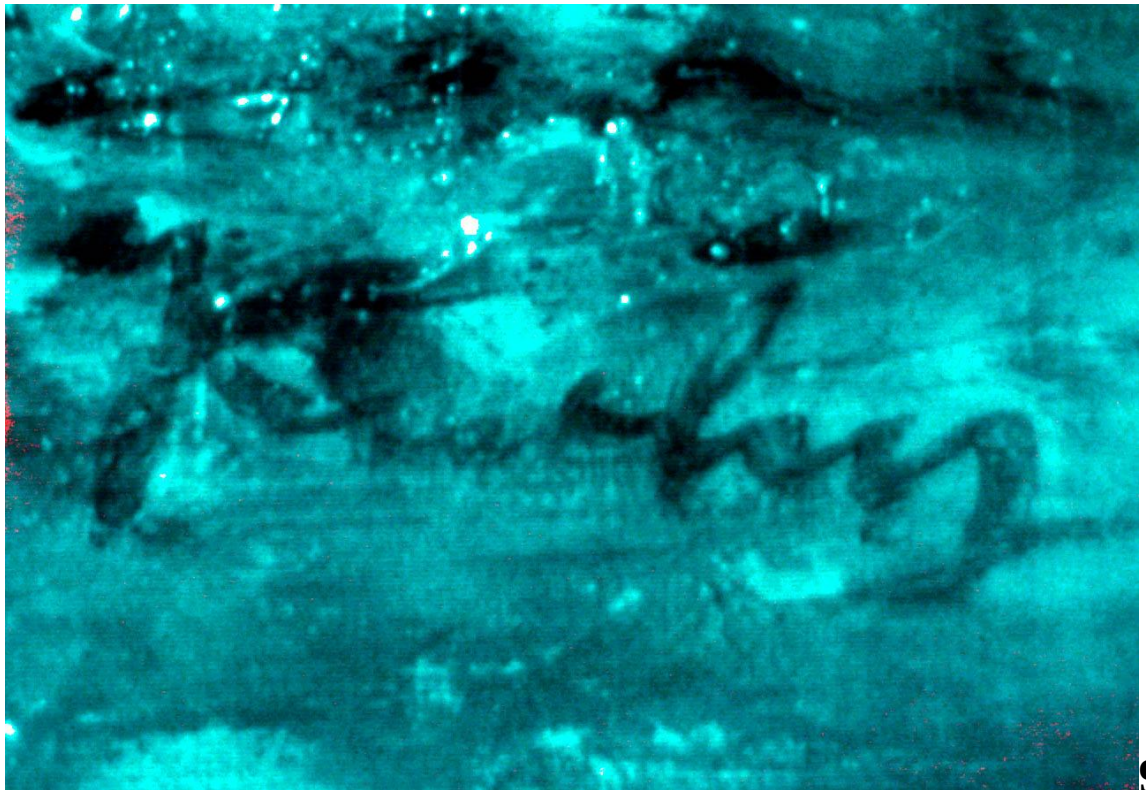
3

On the whole the characteristics of the original paint layer, the rather developed craquelure and other natural ageing signs are typical of an ancient painting aged in a natural way over time.

We have attached some important details from the four persons' faces that reveal the painting technique used and may serve for a possible subsequent stylistic investigation. (Macro photos no. 4-7)



The examination of the signature using the scientific techniques, in particular the infrared reflectography and the subsequent digital processing, allowed us to improve the legibility. We have attached the photo of the signature under a normal light (photo no. 8) and the photo obtained after the digital processing (photo no. 9)



Examination with Wood's light

An overall examination of the painting under Wood's light evidences the retouched and over-painted areas, which appear as darker patches in comparison with the original paint. (Attached photo no. 10, taken under the light of a Wood's lamp, specific filters and subsequent digital processing).

In detail some over-paintings are evident in particular in the low corner on the left of the painting, on the ground between the water and the figures, in the flowers area, in the lower part of the boat sail, in many areas of clouds and along the sides.



10

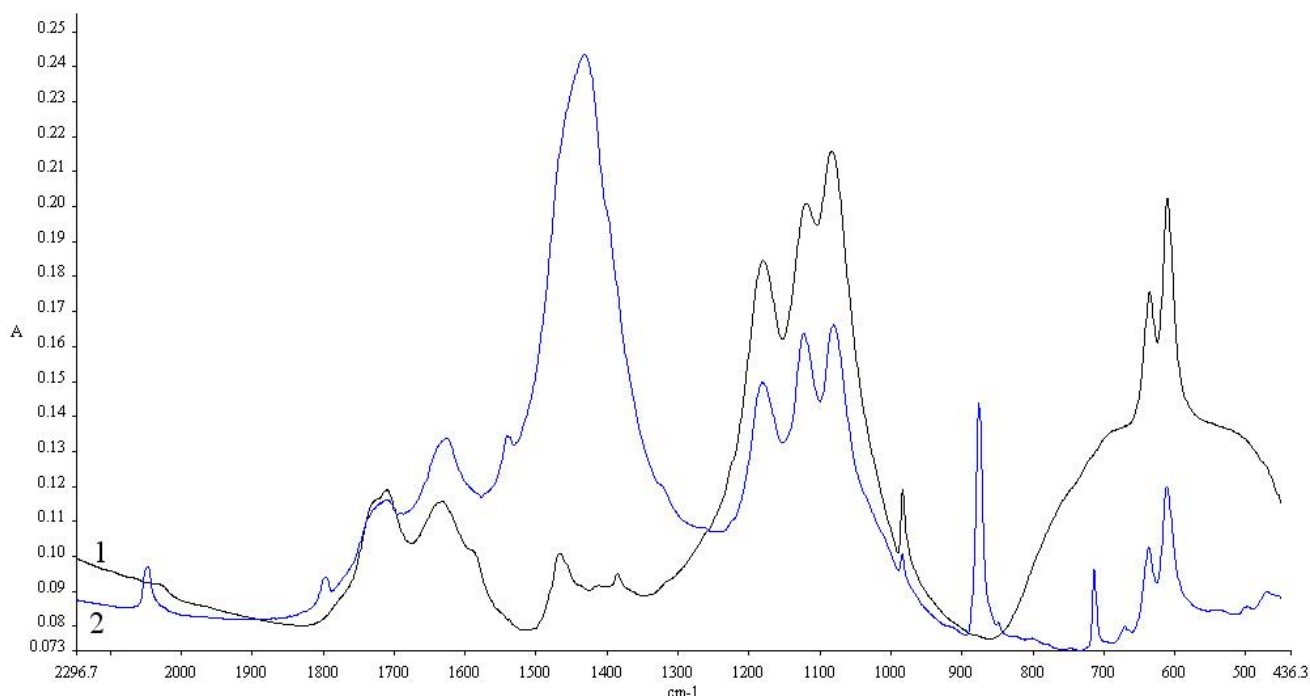
A FT-IR spectroscopic study was then carried out on a number of areas of colour in order to establish the composition of the pigments used.

In particular we studied:

a surface white from the flowers that resulted as being made up of a white based on barium sulfate (spectrum 1);
the thin preparatory ground that resulted as being made up of a white based on calcium carbonate; the green of plants made up of a mix of yellow, Prussian blue and barium sulfate (spectrum 2).

Important is that the presence of barium sulfate also in the deepest layers limits the maximum age of the painting at the second half of XIX century, this pigment having been introduced not before that date.

Moreover the spectra of different pigments show a higher contribution of the paint binder for the surface colour in the retouched area, pointing to its more recent execution. (Attached spectra).



Examination of the rear of the canvas:

Some rests of two circular stamps are visible on the rear of the canvas, one in the upper part on the left and one in the central lower part, moreover there is a five-figure number under which other possible figures are lightly visible.

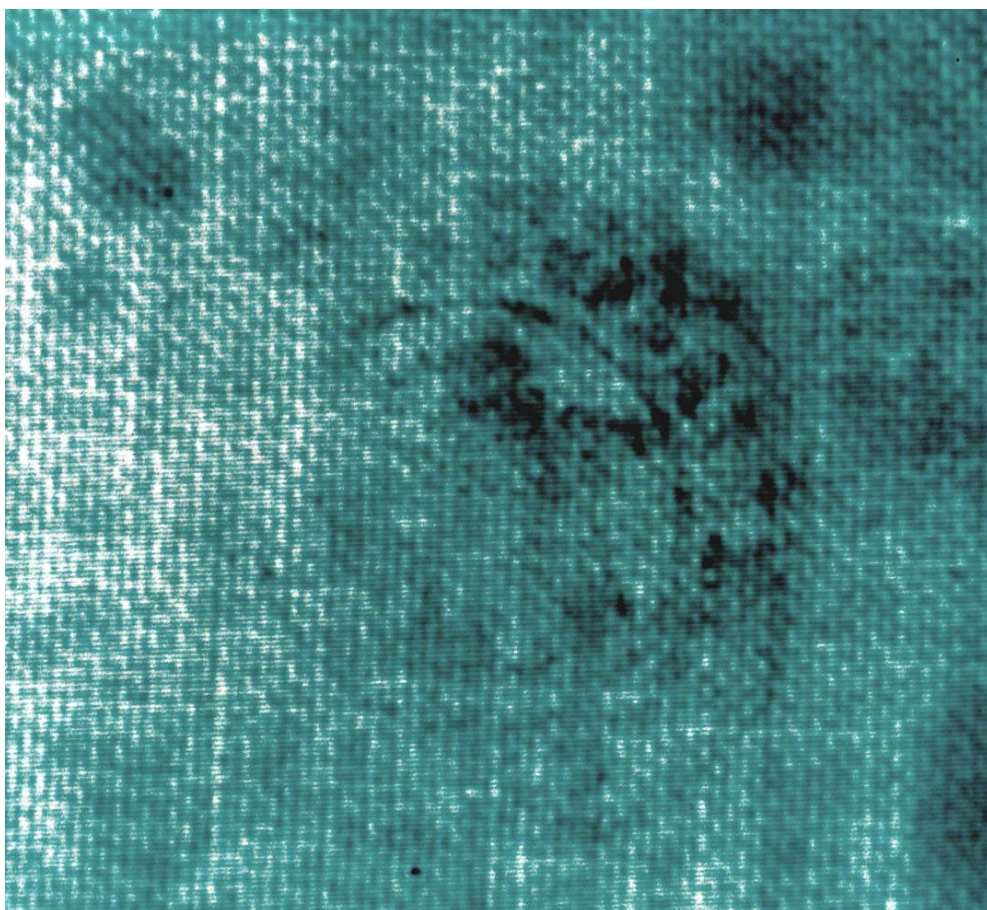
Observing these areas with Wood's light and infrared reflectography we succeeded in improving the legibility:

The photos no. 11 and no. 12 refer to the stamp in the upper part and they have been obtained using infrared reflectography for the first one and Wood's light for the second one.

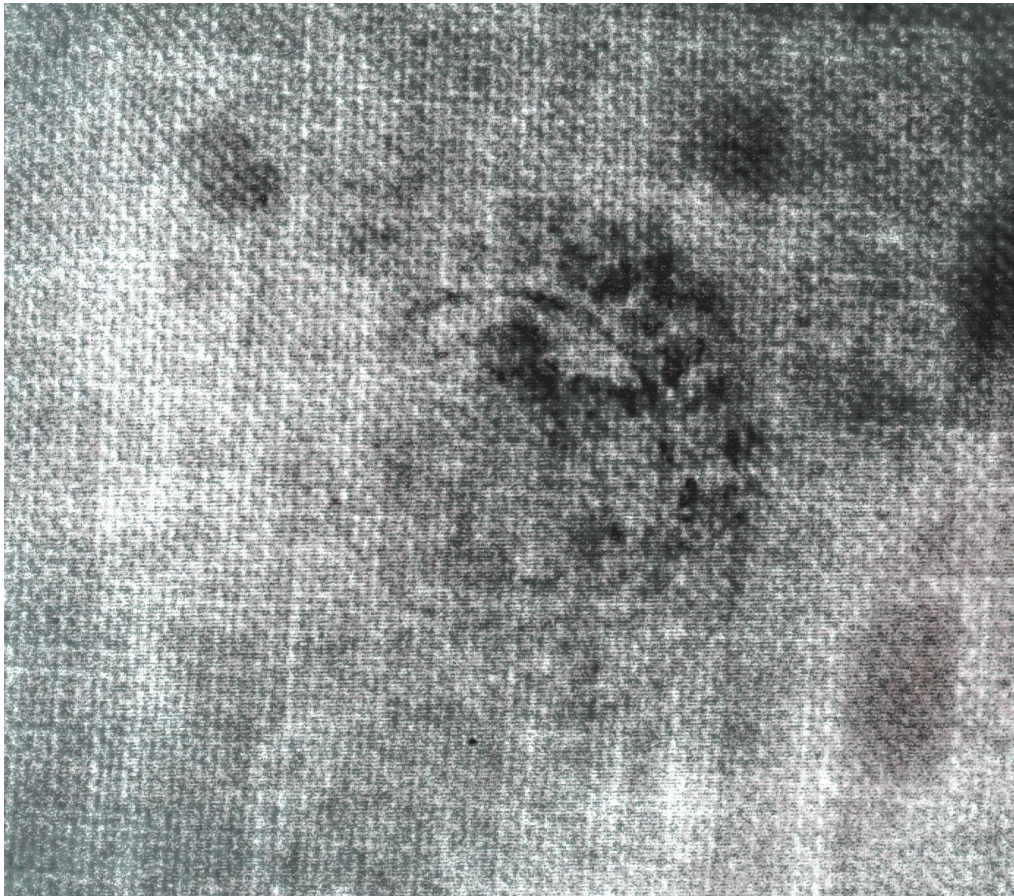
The photo no. 13 on the contrary refers to the central stamp and it has been obtained with Wood's light (here the reflectography did not reveal anything).

The photo no. 14 concerns a number, "34" in the central upper part and evidenced by the reflectographic analysis.

The photo no. 15 refers to the area under the number 10153 where some strokes of probable letters and figures are vaguely legible.



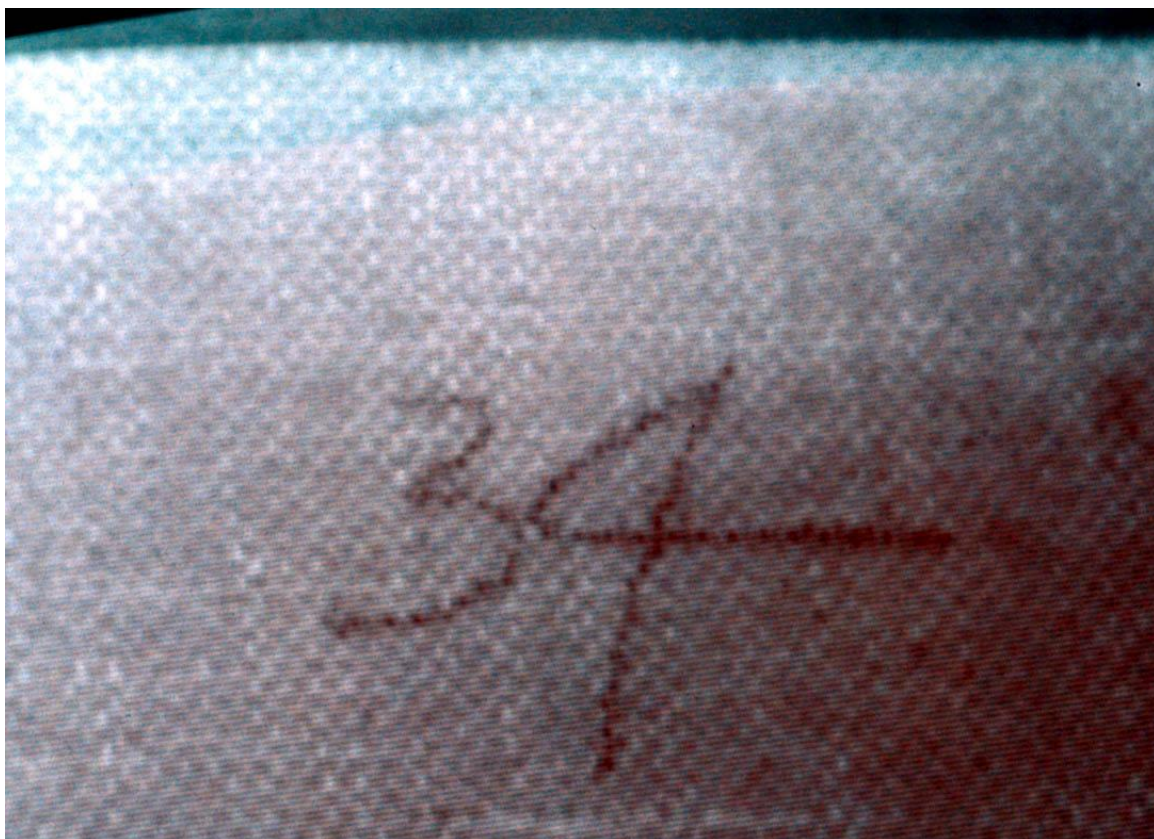
11



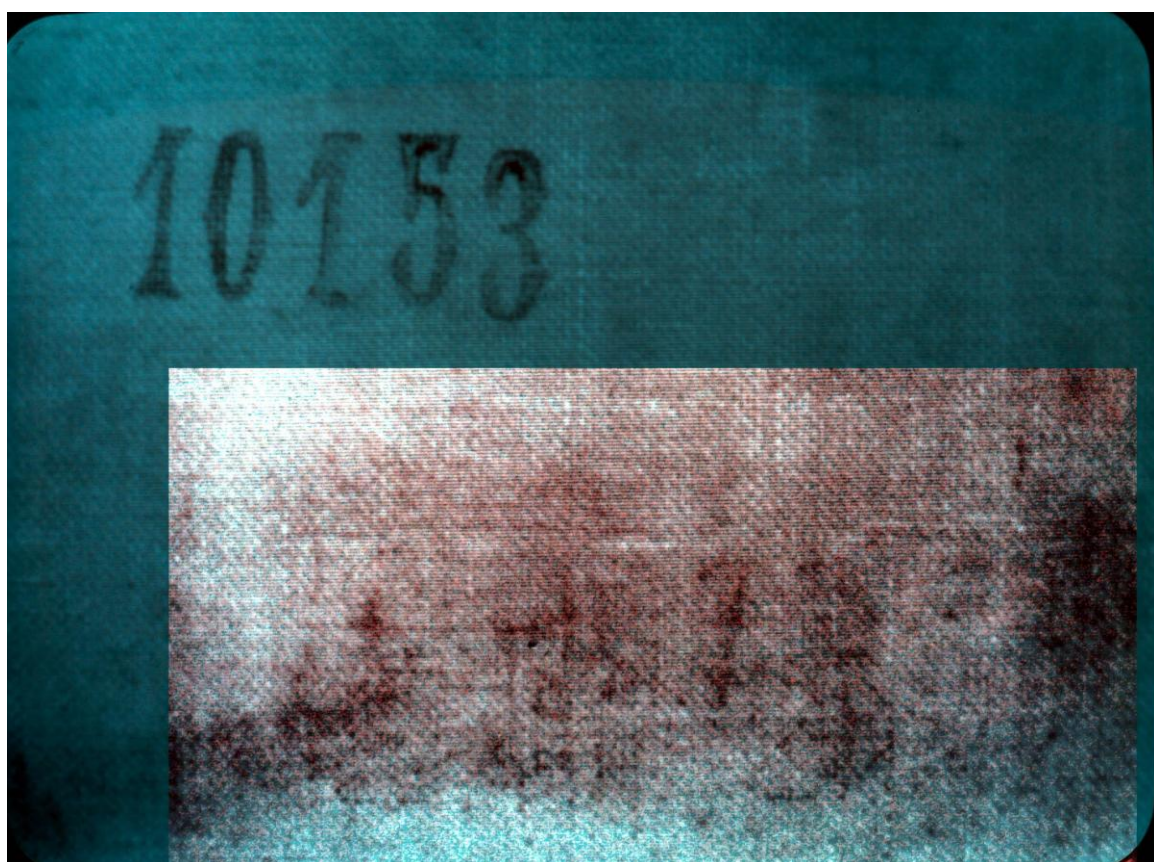
12



13



14



15

Conclusions:

The microscopic examinations allowed to clarify the conditions of the painting, the ageing signs and the important characteristic of having been strongly repainted afterwards the first execution.

The examination under Wood's light has been of great help in identifying with precision the repainted areas as well as in improving the legibility of the inscriptions and the stamps on the rear of the painting.

The infrared reflectographic analysis did not reveal any underdrawing, but it also helped in improving the legibility of one stamp.

The FT-IR spectroscopic study carried out on the paint, in determining the composition of the preparatory ground and of a number of colours, confirmed the different stage of desiccation between the surface colour of some areas and the most ancient colour in the deepest layers.

The overall characteristics of the most ancient paint layer allowed to consider the period of execution of the painting the second half of the XIX century, while the characteristics of the colour afterwards painted are referable to the first decades and the middle of the '900.