

Laboratorio Scientifico del MUSEO D'ARTE E SCIENZA

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Nr. 2AN-7754

Results of scientific studies on the present painting, oil on canvas (123 x 81 cm)



**At the paintings for compatibility comparison between the age of
Materials and the corresponding period in which these
Materials used, scientific analyzes have been using microscopic
Investigations, IR reflectography, Wood's light, and FT-IR
spectroscopy.**

**The customer keeps the painting for a work from the time of the
painter Pierre-August Renoir.**

Preamble:

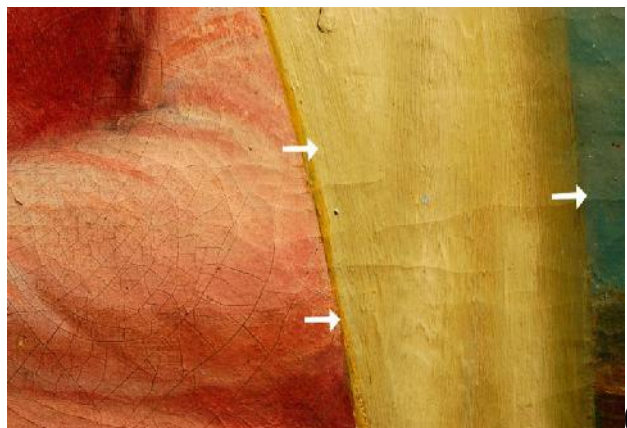
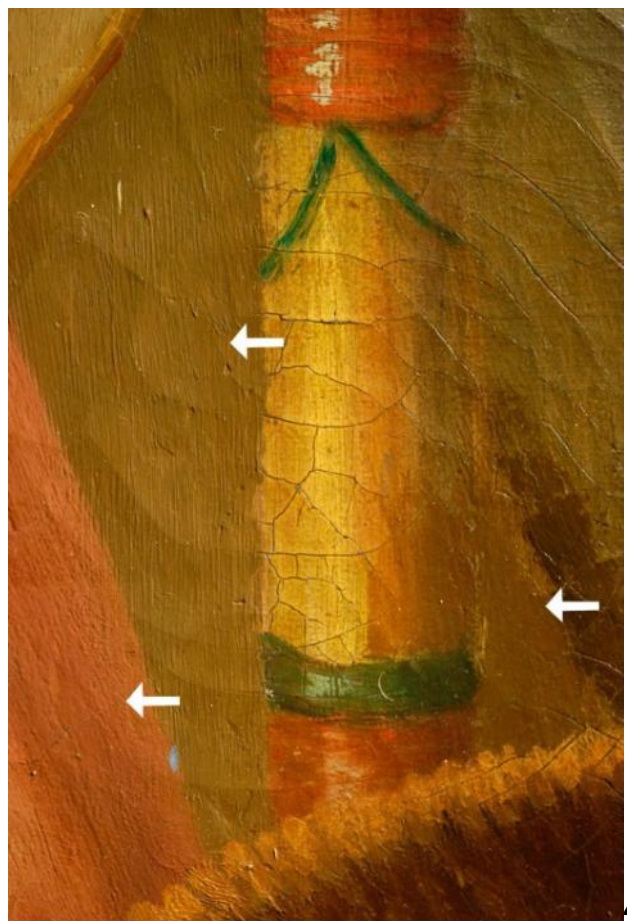
The image is painted on canvas, which was later stretched to a fixed disk. This was then glued to the wooden frame, as can be seen on the back.

Since it is not sufficient grounds to consider that it is the original stretcher, no date has been made.



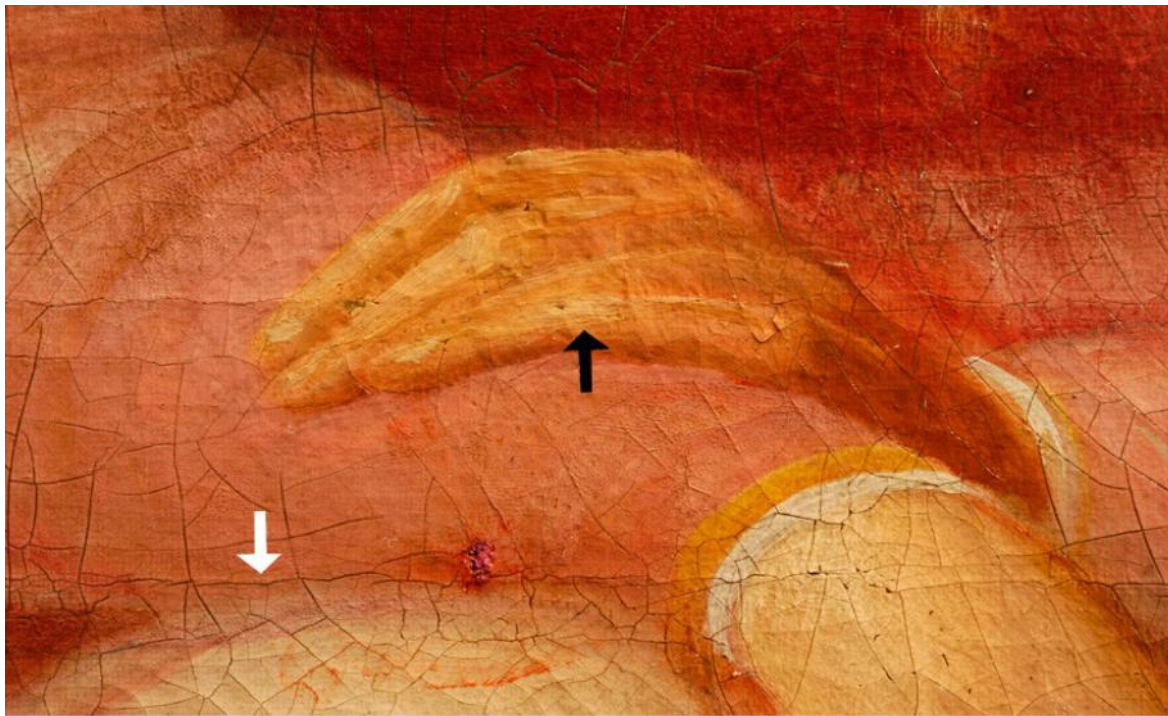
The investigation of the paint layer (including a stereo microscope) led to the determination of the following characteristics:

In many areas, fall immediately to major inequalities in the paint layer: in particular, a wide variety and intensity of crackings. In some areas the crackle runs deep and ramified with perpendicular cracks and clearly visible edges. Then there are areas where the crackle has made only superficial in circularly extending cracks. In other areas, including the crackle is virtually nonexistent. In the photographs No.3 - 6, the painted-over points are marked with arrows.



At the points where the crackle has developed particularly strong, the paint layer as a result of dehydration of the paint binder is hardened.

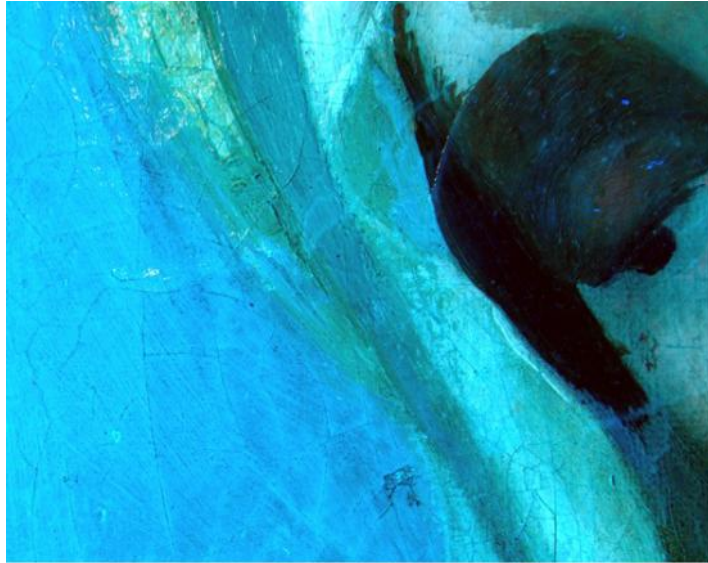
In recently pierced with a needle she is more inclined to form cracks as to deform.



In the photo you can tell No.7 still signs of ancient paint layer, like a stretched crackle, some color fadings and longitudinal cracks, the course of the cross-bar of the old vise match (white arrow). In addition, there are areas where the crackle is completely missing, which means that there on the image restoration work was carried out, in which the original color was masked (black arrow).

The heavily over-painted areas are thus the following: a large part of the blue sky, the bright cloak that covers the left shoulder of the figure up towards the bottom of the upper part of the thigh, part of the basket lid, a large portion of the lower edge, the right eye and the position above the temple.

This latter overpainting can very well identify with Wood's light.
(Photo No. 8)



8

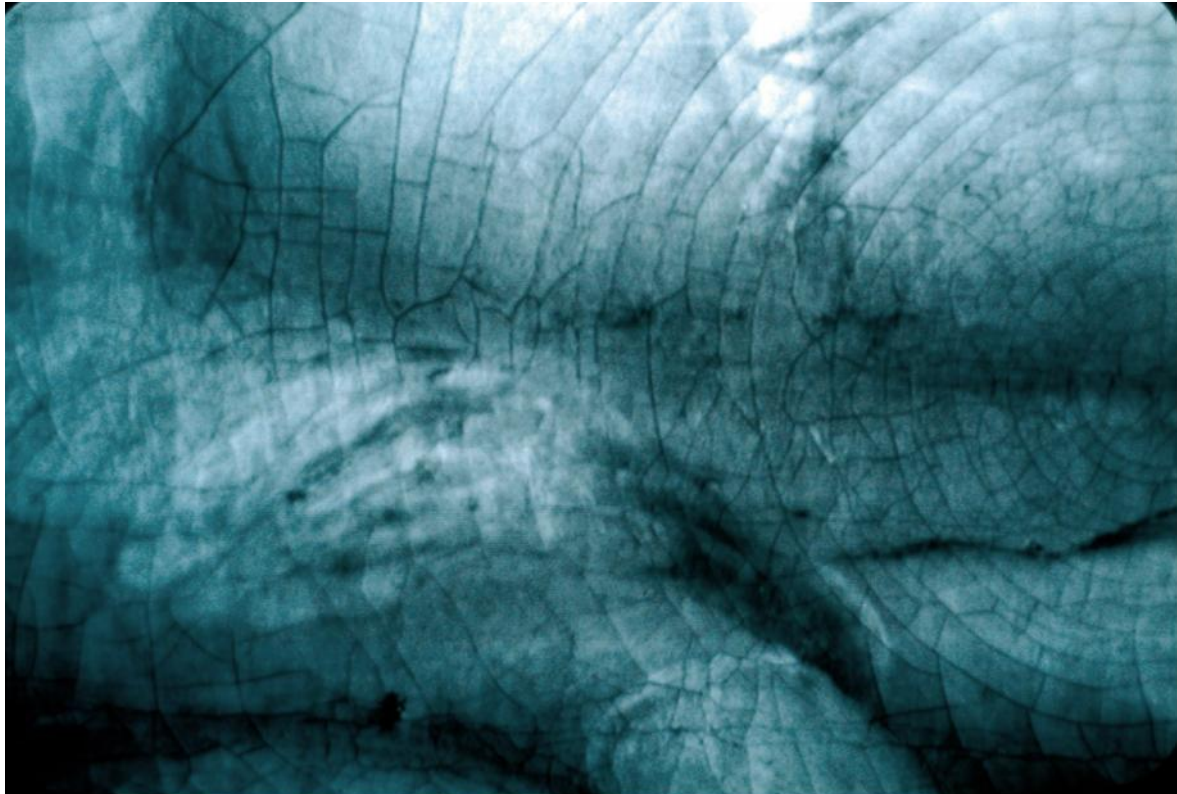
We also put in a photo of the whole painting, which we recorded when illuminated with Wood's light and with recent renovations have brought to light that appear as dark spots. (See Photo No. 9, which was prepared with the help of special filters and digitally remastered). Since one with Wood's light can only detect a small fraction of existing restorations, one must conclude from this that they have not been performed on the same days.



9

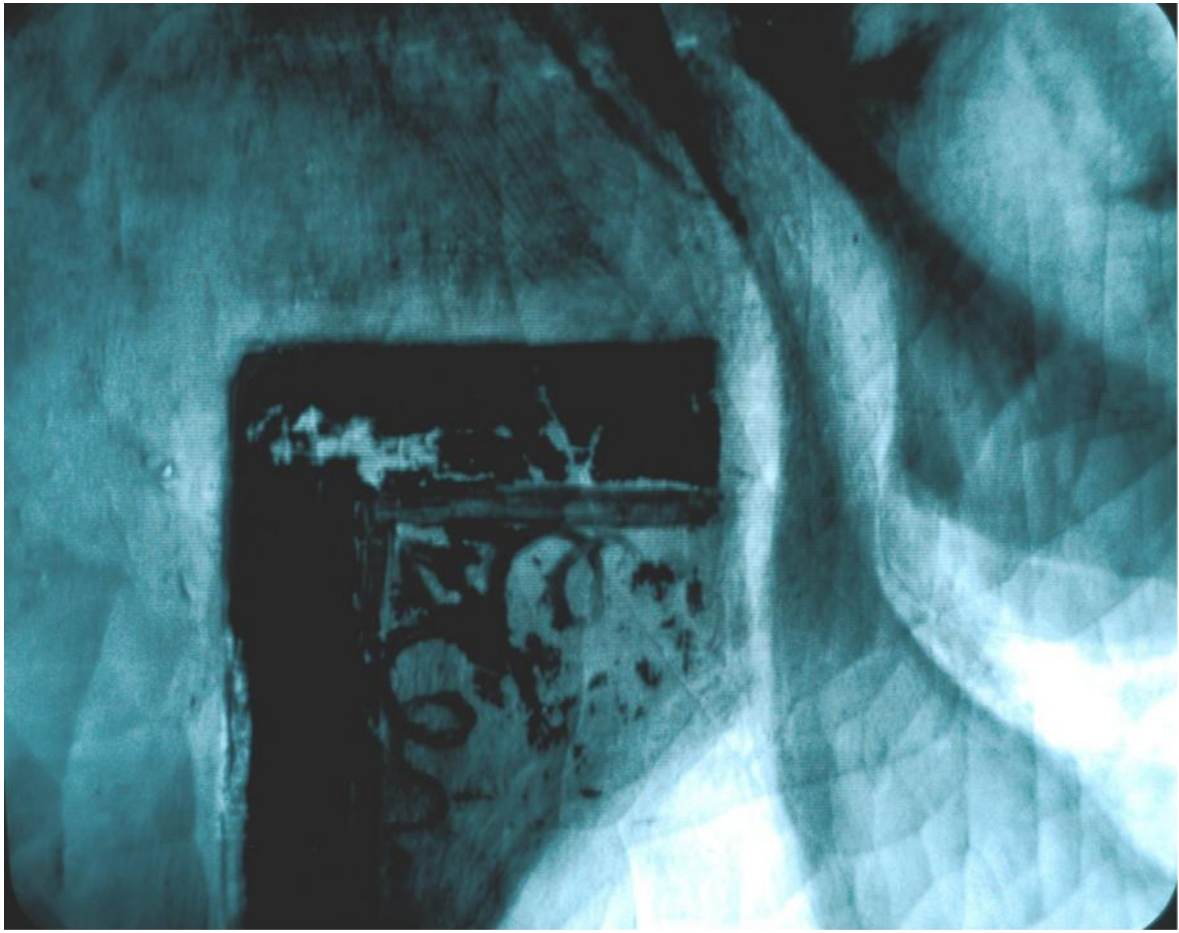
Furthermore, an **IR reflectography analysis** was carried out, of which we enclose a few photos:

Photo No. 10 shows that the position of the left hand as compared to the former is different, you were aware of this restoration by the way even at the microscopic examinations. (See Photo No. 7)

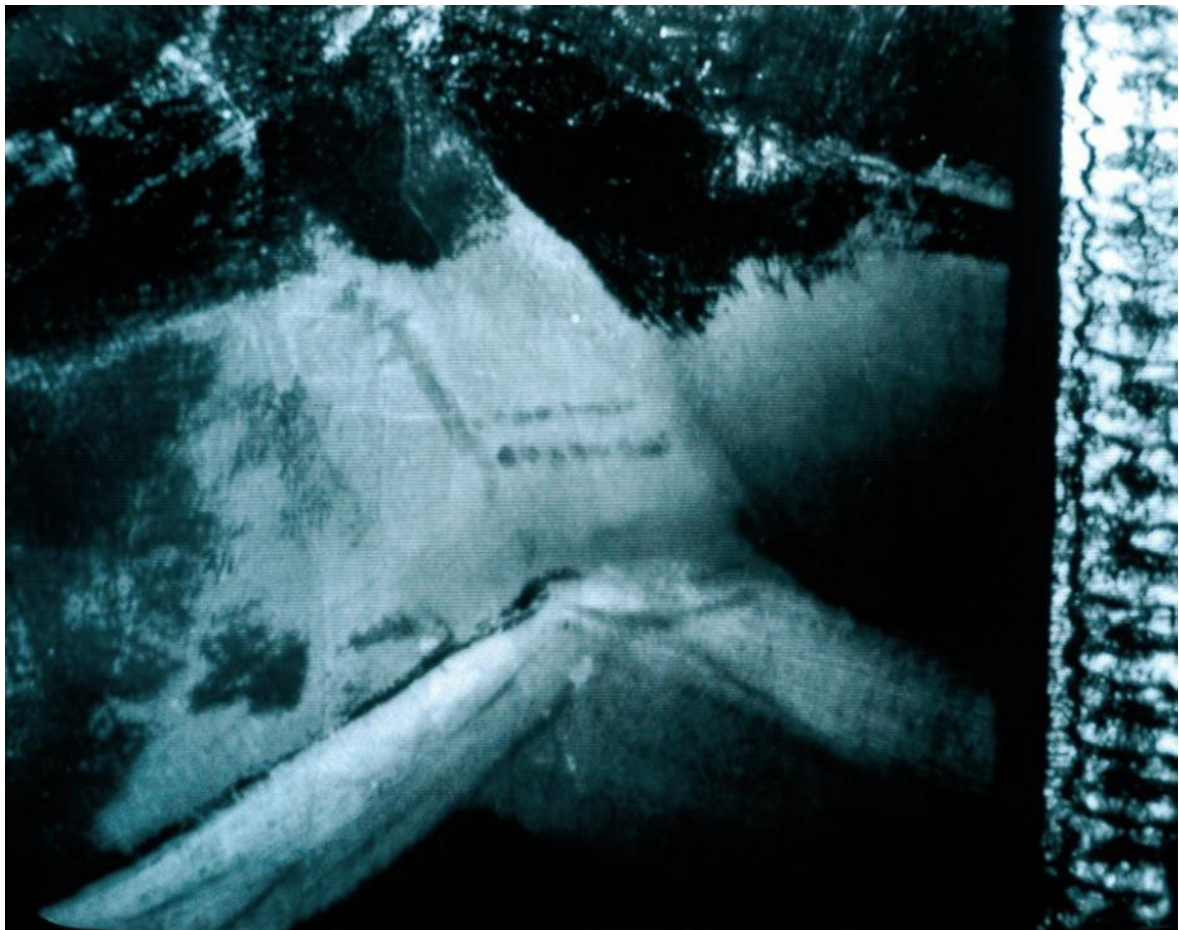


10

The photos No.11 and 12 show further restorations.

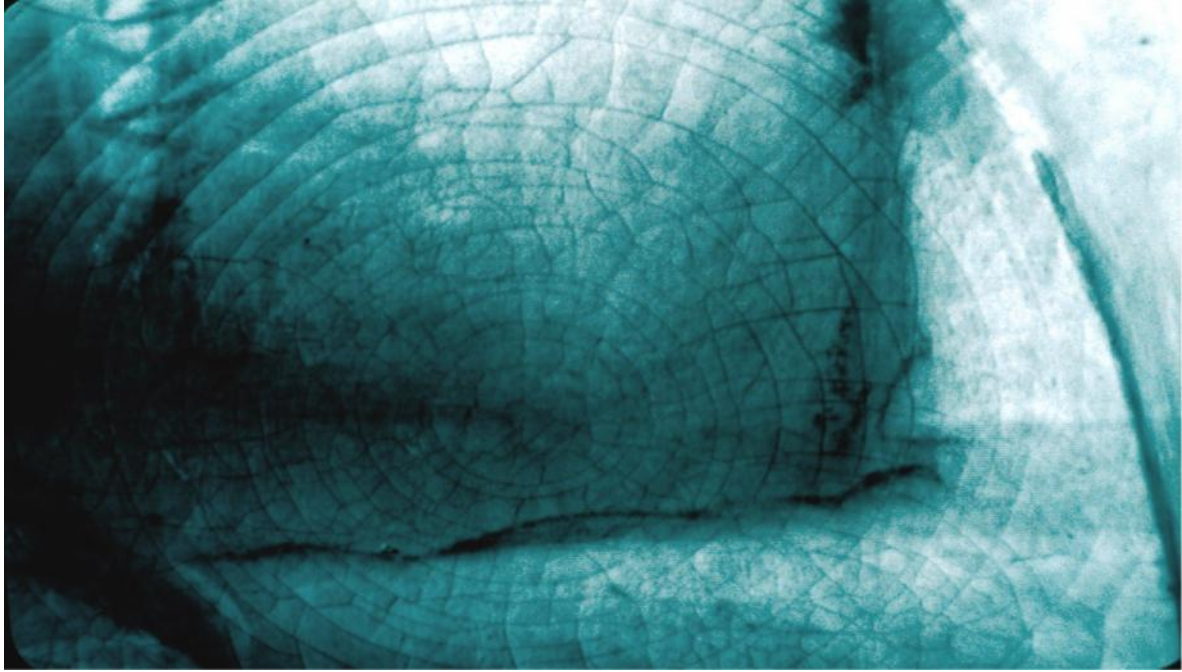


11



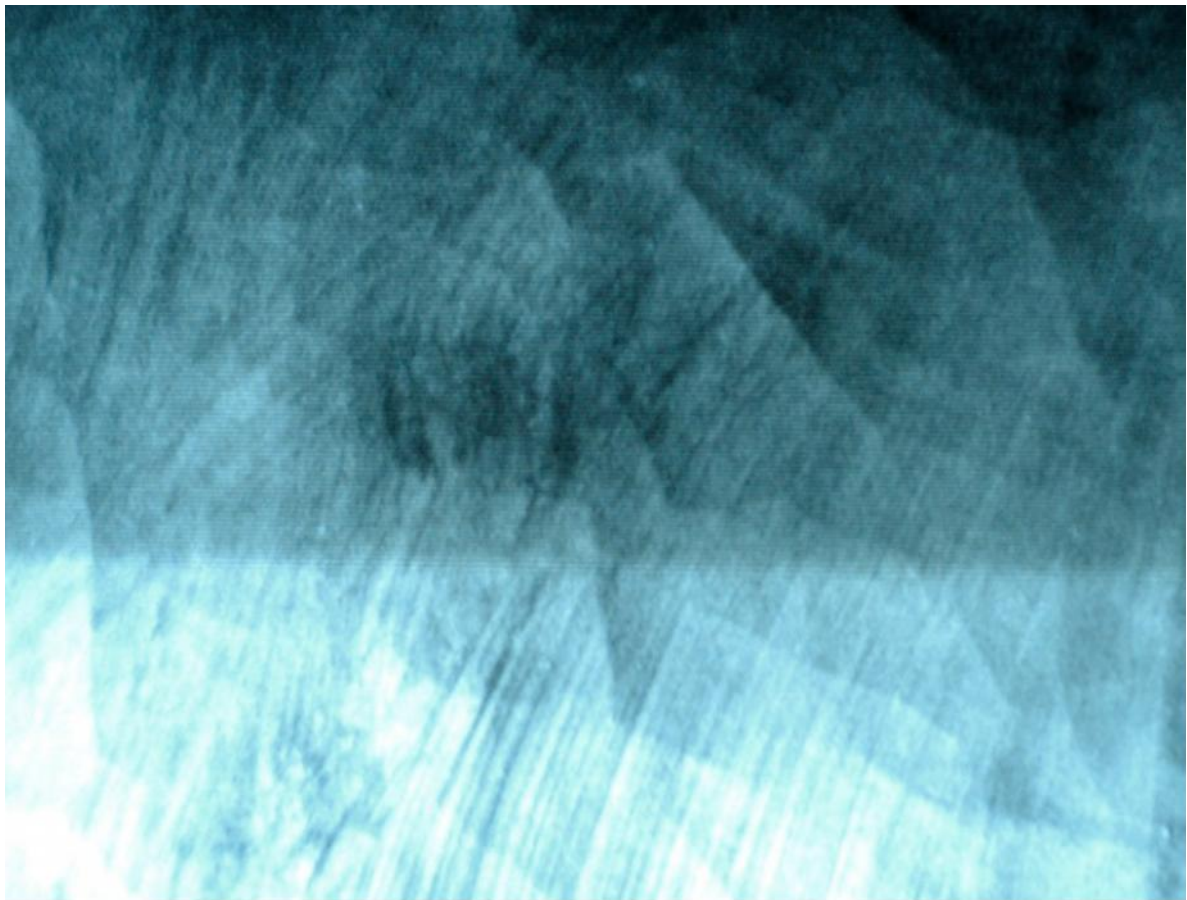
12

The photo shows some of No.13 points below the left elbow area.



13

The photo No.14 leaves about 15 cm away from the top left corner - seen by the viewer - letters suspect.



14

For determining the pigment composition FT-IR spectroscopic analysis of the different colors have been carried out at several points.

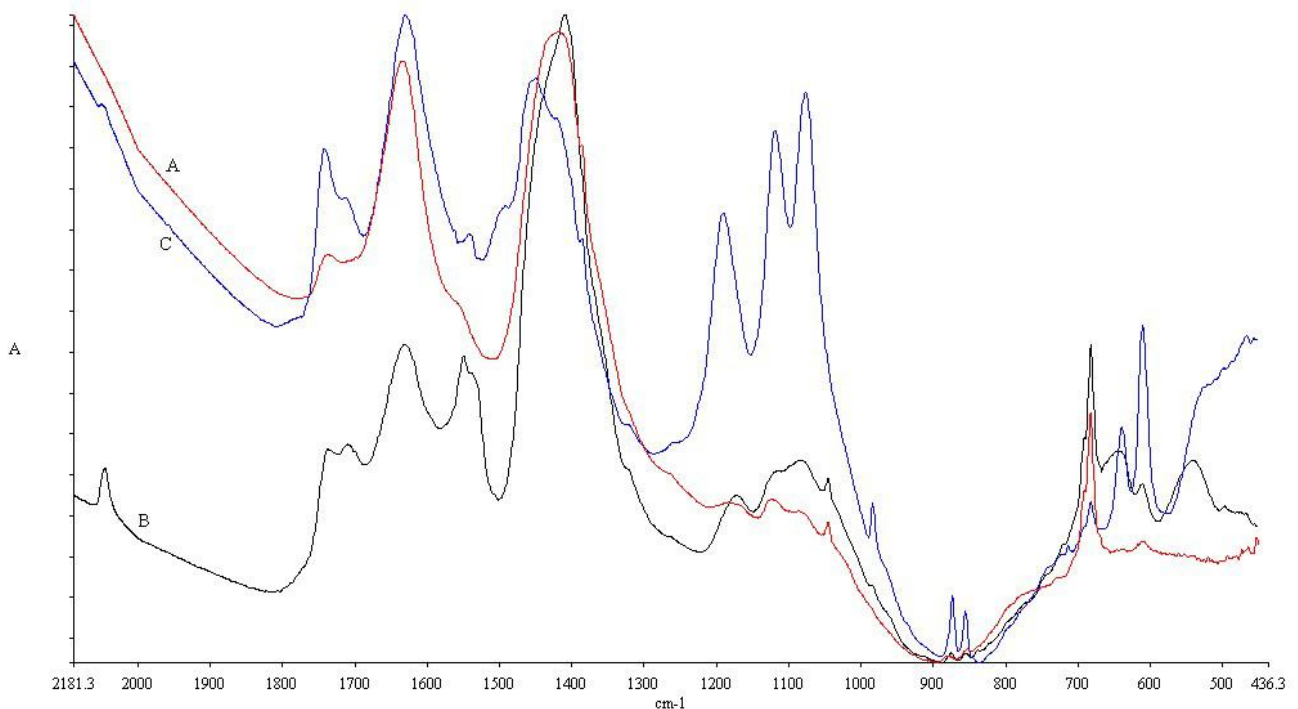
In particular, the white on the sleeves of the dress near the hands, the blue of the water in the background and the bright blue of the sky was investigated.

The analysis showed that the white of white lead, zinc white also called, is (curve A) and the blue of the water to a greater amount, Prussian blue contains'. (Curve B).

(See attached spectrum)

Both pigments show a very low intensity of the oil volumes, indicating an advanced drying of the binder.

The blue of the sky, however, contains abundant barium sulfate and shows a higher intensity of the binder volumes, confirming a recent order. (Curve C)



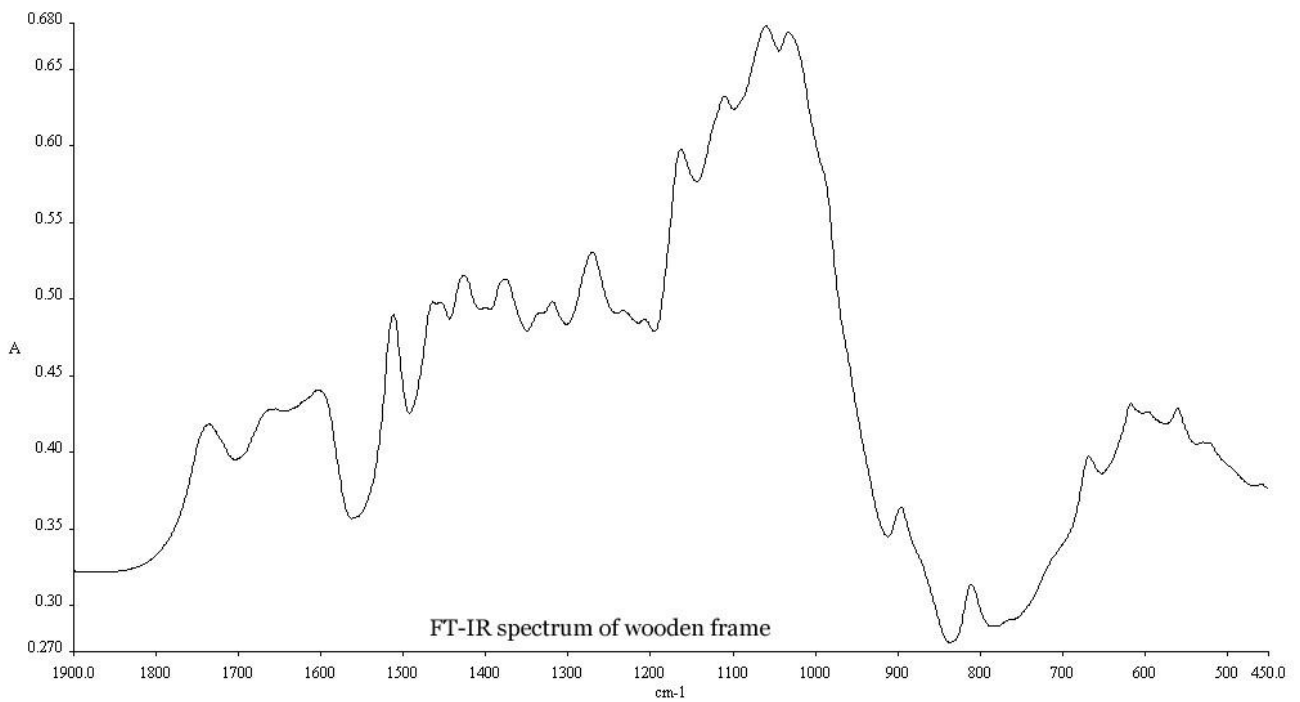
Dating of the wood frame:

At the special request of the customer with lumber dated.
Spectroscopic dating yielded the following results:

wood = Conifer

Age of wood = 180 (+ / - 20 years)

(spectrum as an attachment)



Final Results:

The above considerations and the results of scientific analyzes suggest a part of the painting to a natural aging process: drying and hardening of the color and evident crackings.

Through the analyzes are also many restored and painted bodies have been discovered, some of which occupy large areas.

The investigations were carried out by means of Wood's light, Stereomicroscope, IR reflectography pigment and chemical analysis.

It is also important that the restorations been carried out in several stages at different time points are.

The most pigment performed FT-IR spectroscopy shows a locally advanced drying the ink binder, and also confirmed the presence of extensive areas where the pigments were applied only at a later time.

The ancient part of the image can therefore be estimated at an age of about 100 years, while the majority were due the painted areas on restoration work from the first half of the 19th century.