



## Cultural Heritage workshop



SESAME December 2024

Jordan



# Unrolling Papyrus: Documentation, Conservation and Display

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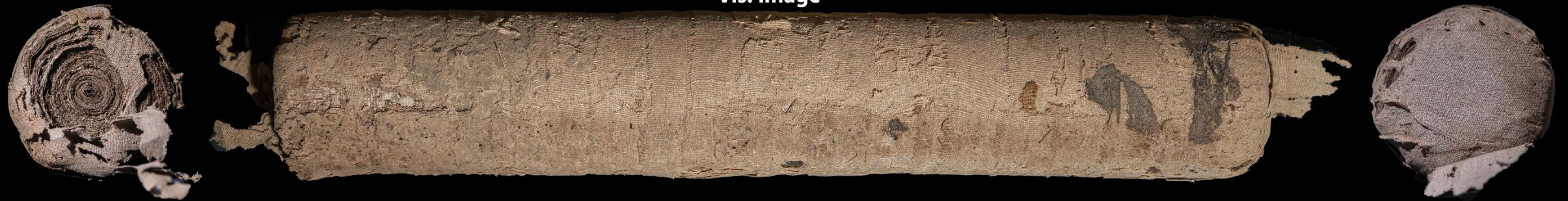
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03&04.12.2024



## Unrolling Ahmose's Papyrus (The papyrus dates back to the beginning of the Ptolemaic period (305-30 BC) )

Vis. image



## Hemaka papyrus (The papyrus dates back to Early Dynastic Period 3150–2686 BC)





# Ahmose's Papyrus

Vis. image



1. WHAT?

ماذا

2. WHY?

لماذا

3. HOW?

كيف

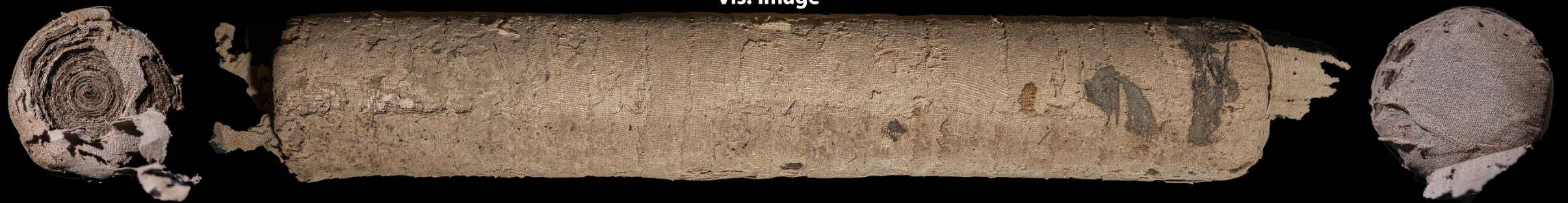
4. RESULTS

النتائج

# 1. WHAT?

ماذا

Vis. image



**Ahmose's Papyrus** (The papyrus dates back to the beginning of the Ptolemaic period (305-30 BC))

It was excavated in December 2021 by the Egyptian mission working at Cairo's Saqqara necropolis led by Dr. Waziri.

The papyrus discovered wrapped in its original condition and in a good state beside the left arm of the mummy.



## 2. WHY?

لماذا

Vis. image



- To study the manufacturing process
- To check How was made, rolled, and rapped
- To be able to discover the name of the owner, as well as to check the rest of the text.
- To check the thickness of the papyrus sheets and the quality it

# 3. How?

كيف



- **By making Examination and analyses**

**To study the techniques and the condition state of the roll:**

- Visual examination
- Digital Light Microscope
- Multispectral imaging
- Digital Caliper
- 3D scan

**To study the Composition of the pigments:**

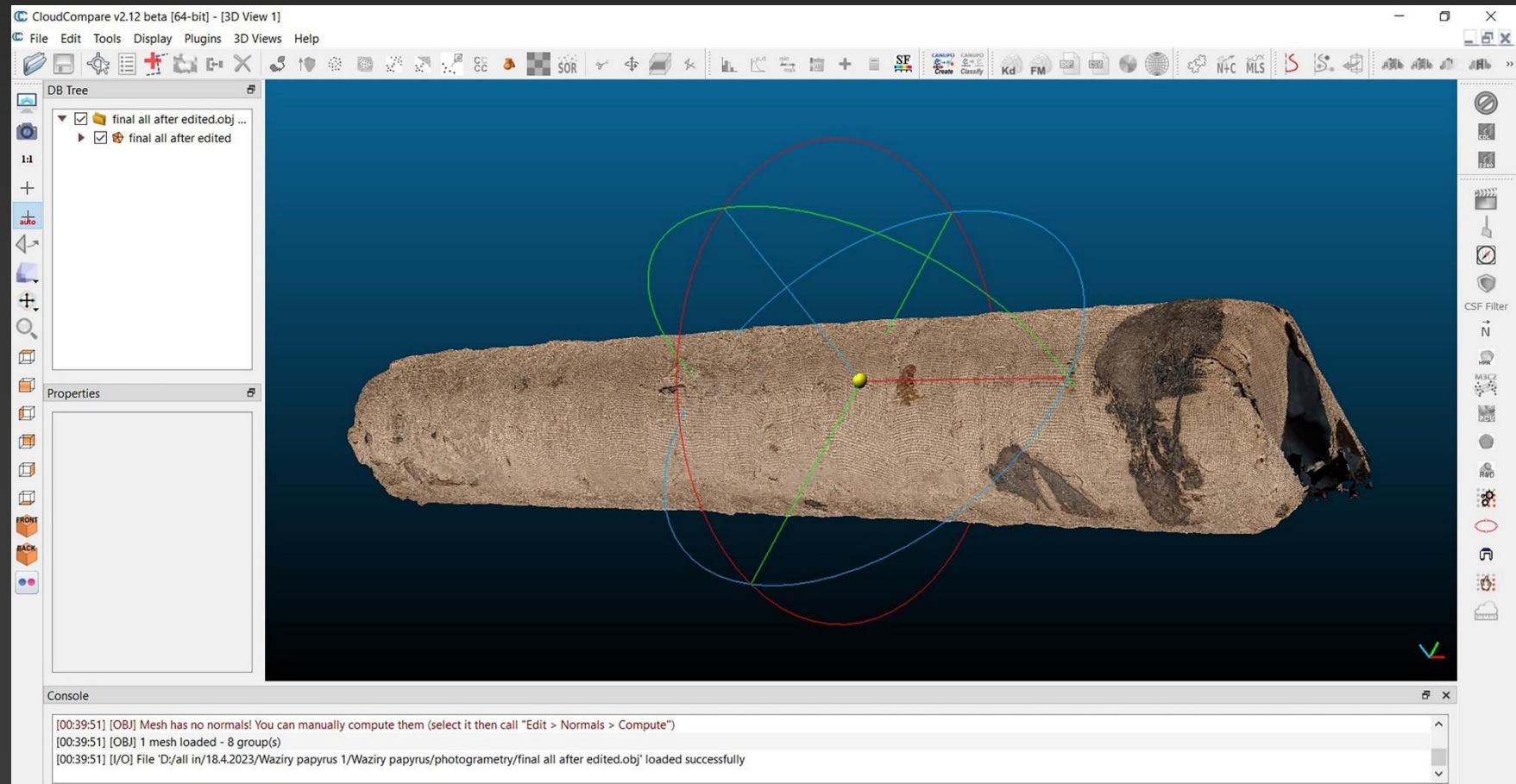
- X-Ray fluorescence



Anoxia-oxygen absorber  
/Pest control



3D virtual modelling





- Multispectral imaging

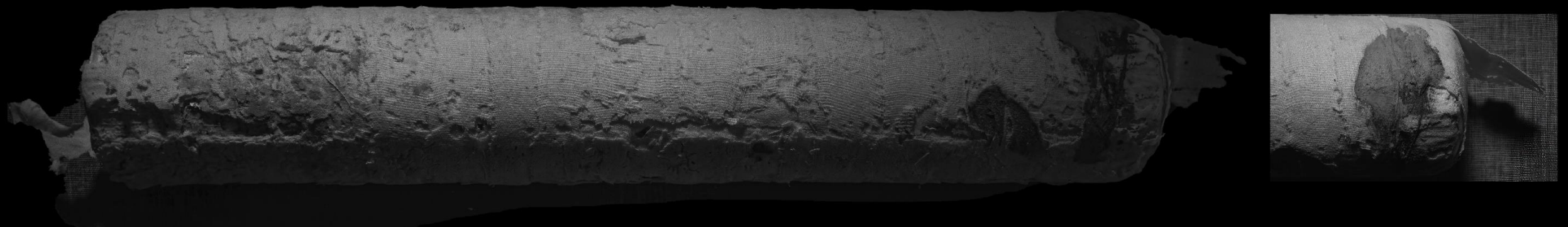
Vis. image



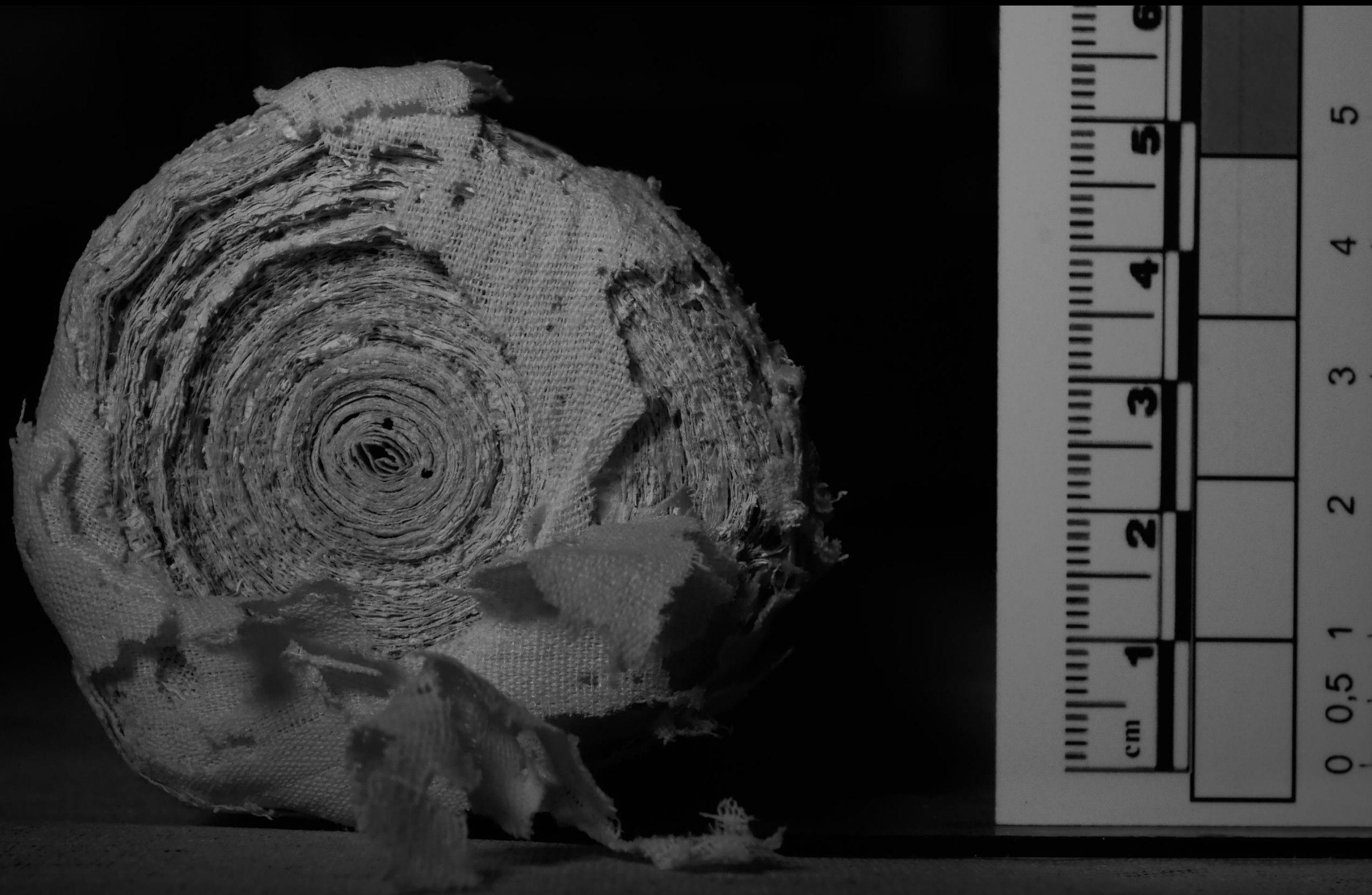
Raking light image



IR image







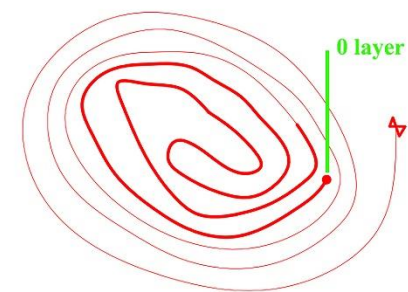
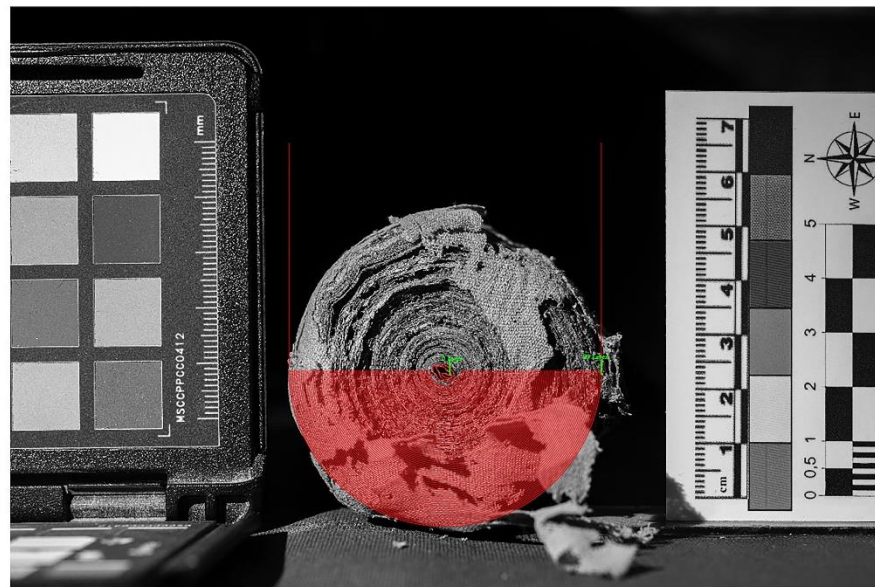
infrared imaging showing the papyrus roll layers, as well  
as some insects holes.



- Digital Light Microscope

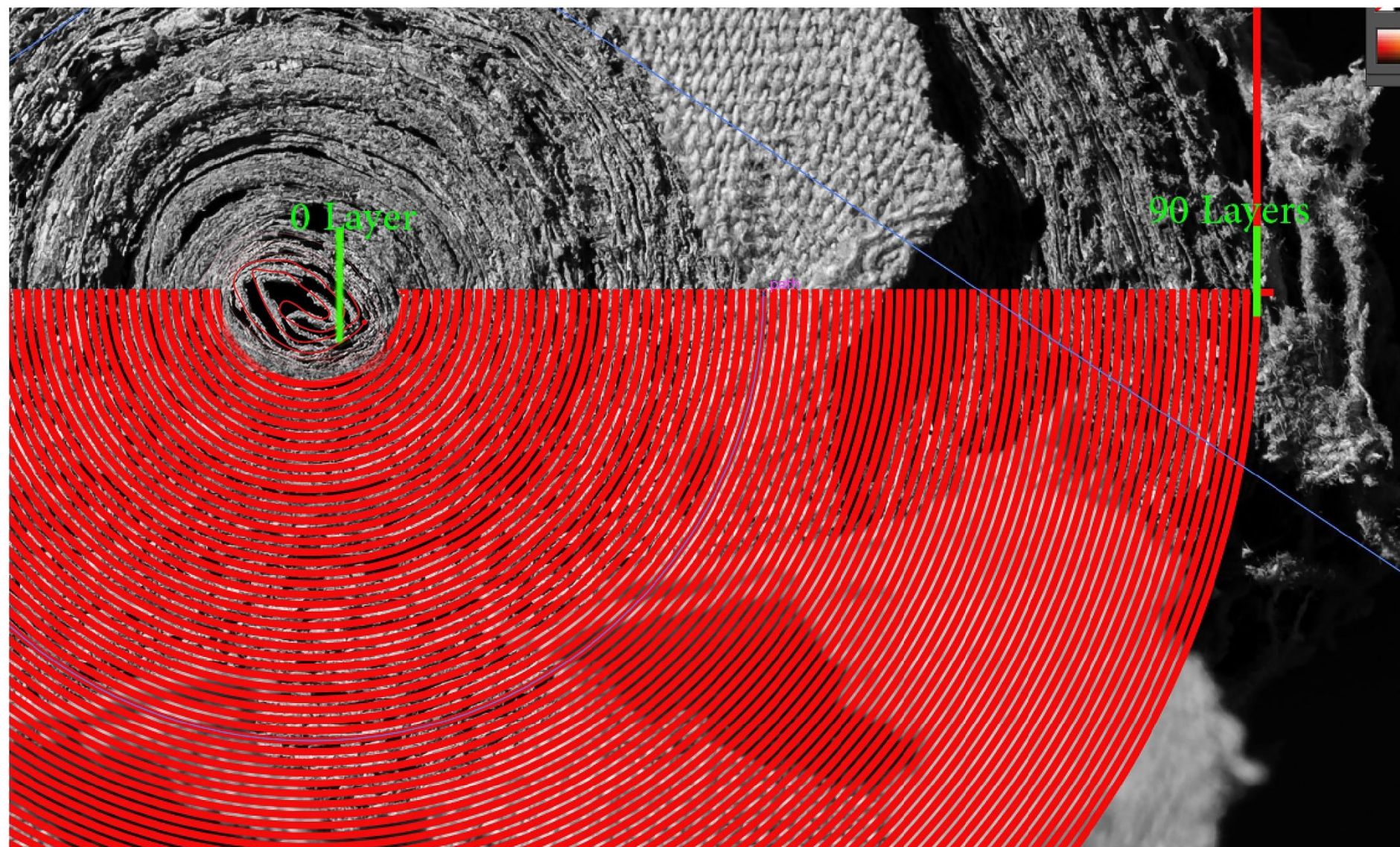






**Rolling direction**

Roll diameter: approximately 17.50 cm  
Approximately 90 layers  
Total length: approximately 14 : 16 meters





# Removing the textile

The papyrus roll, was covered by textile overlap wrapping

The first layer rolled with overlap, and the second layer was horizontally





complete removing the textile





# Humidification





Unrolling and flattening the papyrus sheets step by step



Consolidation/ fibers alignment and bridging





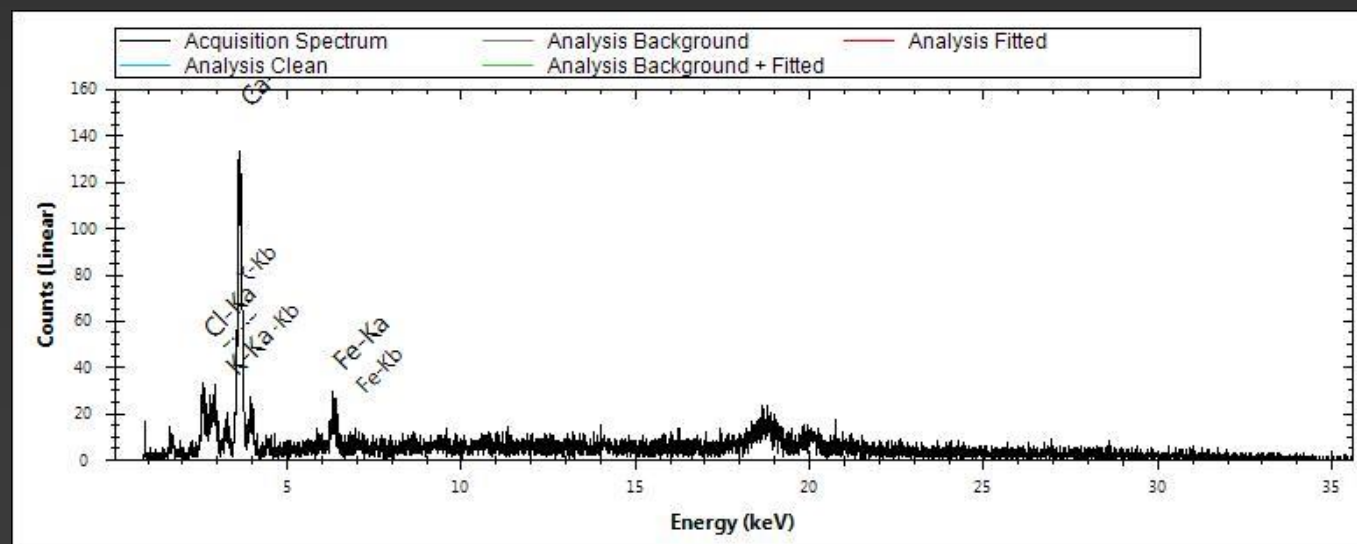
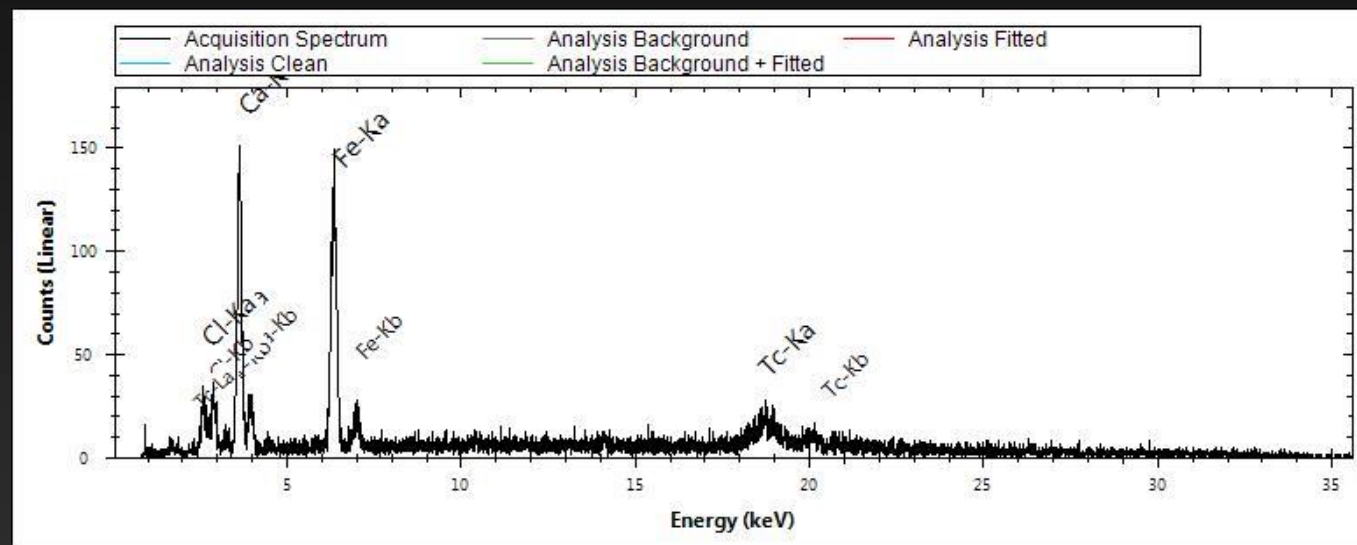
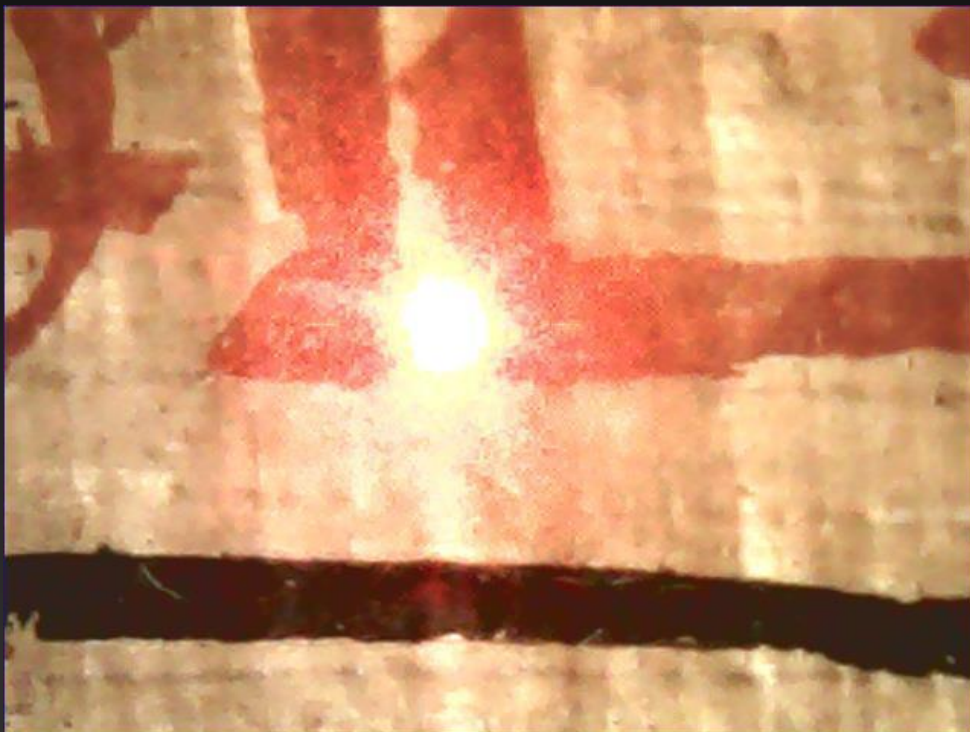








# Portable X-Ray fluorescence





# From a papyrus roll to the second longest papyrus in Egypt





# Housing and display





papyrus of **Hemaka**: That could consider to investigate in the future  
The papyrus dates back to Early Dynastic Period 3150–2686 BC)







*Thanks for your Kind  
attention*

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