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## VAAC

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# Development of a protocol in order to measure the thickness of ancient varnishes on copper alloys

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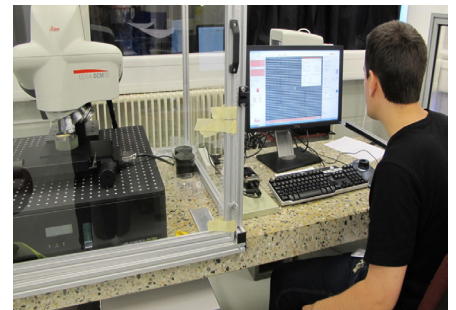
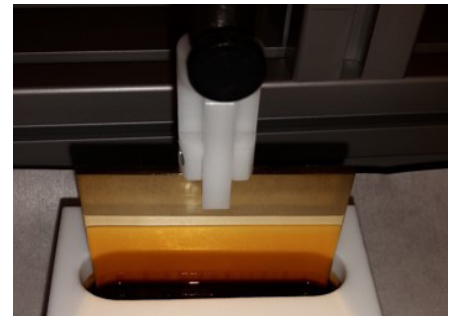
Ancient varnishes on copper alloys are made of different binding media, pigments or colorants. They can have both a protective and aesthetical function. A better knowledge of their thickness could provide information about their technology (application method) and history (dating). This type of information would also help in establishing conservation strategies for these surface finishes in the long run.

### OBJECTIVES

The aim of the project is to develop and to validate a protocol for thickness measurements on lacquered copper alloys with a portable and non-invasive technique using Eddy current.

### PROGRAM

1. Preparation of reproducible reference samples according to selected parameters :
  - composition and surface geometry of copper alloys;
  - composition and min./max. thickness similar to real case studies (study of ancient recipes and measurements performed on objects).
2. Thickness measurements with the method to be validated and static reference instrumentation : confocal microscopy and ellipsometry;
3. Comparison of the results and validation of a protocol for thickness measurements.



### FUNDING

Haute Ecole Arc

### PROJECT LEADER

Julie Schröter  
julie.schroter@he-arc.ch

### PARTNERS

Haute Ecole Arc Ingénierie; Musée International d'Horlogerie, La Chaux-de-Fonds

### DURATION

17 months  
1.2.2017 - 30.6.2018