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Sample preparation of ancient lacquer film for microscopy

古代漆膜显微观察样品制备

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

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This document is proposed by the State Administration of Cultural Heritage of the People's Republic of China.

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This document was drafted by: University of Science and Technology of China, National

Museum of China, Fujian University of Technology, Chinese Academy of Cultural Heritage, Beijing Beijing Zhongke Standard Technology Group Co., Ltd.

The main drafters of this document are: Gong Yuxuan, Gong Decai, Tie Fude, Wang Zhimin, Qiao Chengquan, Zhou Guangzhao, Cheng Weizhi, Zhong Bochao, Yu Chen, Zhang Xiaoning, Wang Kai, Zhou Xiao, Zeng Xiaofan.

Sample preparation for microscopic observation of ancient lacquer films

1 Scope

This document specifies the requirements for the sampling, embedding, grinding, and polishing preparation of ancient lacquer film samples for microscopic observation.

This document applies to the operations of sample preparation for microscopic observation of ancient paint films observed by reflected optical microscopy and scanning electron microscopy.

2 Normative references

GB/T 13298-2015

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in WW/T 0003 and listed below apply.

3.1 Sampling

The operation of using tools to obtain samples from the main body of the cultural relic or the fragments (pieces) attached to the main body of the cultural relic.

3.2 Embedding

The sample to be observed is wrapped and fixed with resin material to facilitate subsequent processing and observation.

3.3 Grinding

The process of polishing the surface of a sample with hard particles in an unoriented distribution attached to a suitable substrate such as paper or cloth.

[Source. GB/T 30067-2013, 2.2.301]

3.4 Polishing

The mechanical action between the medium and the sample is used to eliminate the rough

surface caused by artificial damage caused by grinding and obtain a smooth reflective surface.

[Source. GB/T 30067-2013, 2.2.188, modified]

4.1 Sampling plan

The preparation of samples for microscopic observation of ancient paint films (hereinafter referred to as "samples") should be based on the sampling purpose and the relevant information of the sampling plan should be The requirements are as follows.

The sampling should be representative, and samples should include the substrate, paint layer, paint film layer, pigment and other areas; a) The impact of the materials and techniques used in previous conservation and restoration on the observation and research should be fully considered; b) The sampling location, sampling quantity and sampling time should be determined according to the needs and the characteristics of the cultural relics, such as grade, preservation status, disease, and organizational structure.