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Shoushan stone - Tianhuang - Testing

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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. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was submitted by the Ministry of Natural Resources. This document is under the jurisdiction of the National Technical Committee on Jewelry and Gemstone Standardization (SAC/TC298). This document was drafted by: China University of Geosciences (Wuhan), China Shoushan Stone Museum, Jin'an District, Fuzhou City, Sichuan Provincial Product Quality Supervision and Inspection Institute Institute of Testing, National Gemstone Testing Group Co., Ltd., Tongji University, Zhejiang Fangyuan Testing Group Co., Ltd., Peking University, Fujian Provincial Institute of Standardization, Shanghai Customs Industrial Products and Raw Materials Testing Technology Center, Fujian Provincial Institute of Geological Survey, Fujian Provincial Geological Testing Research Center, Hebei University of Geosciences. The main drafters of this document are: Chen Tao, Yao Chunmao, Jiang Yangming, Wang Yongfu, Wang Chaowen, Dai Sulan, Yang Lixin, Zhou Zhengyu, Yang Mingxing, Cheng Jun, Yan Xuejun, Wang Changqiu, Min Hong, Wang Binbin, Chen Runsheng, Han Wen, Liu Yungui, Li Yujuan, Li Jie, Yan Jun, Zheng Jinyu, Tian Jinglin, Liu Dan, Lin Huaqin, Lü Hanzhi and Wu Jingyi.

Shoushan Stone has a long history and is well-known. It is recorded in many documents and has a rich cultural heritage. The General Administration's Announcement No. 108 of 2010 approved the implementation of geographical indication product protection for Shoushan Stone. Shoushan Stone Tianhuang is the variety with the most historical, cultural and economic value among Shoushan Stones. It has been mined for hundreds of years and has a wide range of collections. This document establishes scientific and standardized

identification technology and identification methods suitable for Shoushan stone Tianhuang, and provides a reference for the Shoushan stone market circulation. The identification of Shi Tianhuang will effectively protect the legitimate rights and interests of consumers, thereby promoting the healthy and orderly development of the Shoushan Shi Tianhuang industry and market. Identification of Shoushan Stone and Tianhuang

1 Scope

GB/T 45030-2024 is the Chinese standard for identifying tianhuang, the yellow field stone of Shoushan and the most valuable carving stone in China. Tianhuang is worth more by weight than gold, it comes from a small area of alluvial deposit that has been effectively exhausted, and the market is accordingly full of substitutes: other Shoushan varieties, stones from elsewhere in China and abroad, and treated and dyed material. Identification has traditionally rested on connoisseurship, which cannot be relied on in a dispute. The standard sets the characteristics that define the material, the colour, transparency, texture and the radish-fibre inclusions and skin that are its classical marks, and then the instrumental methods that support them, the mineralogical composition by X-ray diffraction and infrared spectroscopy, the spectroscopic and elemental characterisation, the density and refractive index, and the microscopic examination, together with the criteria for a determination, the recognition of treated material and the certificate. It takes effect on 1 July 2025.

This document stipulates the identification characteristics and identification methods of Shoushan Stone Tianhuang and spliced Shoushan Stone Tianhuang. This document is applicable to the identification of Shoushan Tianhuang raw stones and finished products.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 16553 Jewelry and Jade Identification

GB/T 42433 Identification of jewellery and gemstones by infrared spectroscopy

GB/T 42645 Identification of Jewellery and Gemstones by UV-Visible Absorption Spectrometry

3 Terms and definitions

The terms and definitions defined in GB/T 16553, GB/T 42433 and GB/T 42645 and the

following apply to this document.

3.1 Shoushan Stone Tianhuangshoushanstone-tianhuang Tian Huang A cryptocrystalline aggregate with dickite (occasionally nacre or illite) as the main mineral component, containing a small amount or trace amount of strontium phosphate and Associated minerals such as pyrite; with characteristic features such as stone skin, red veins, and radish patterns developed to varying degrees, it is generally produced in the form of alluvial gravel.

3.2 Stone skin stone's skin The surface of the original stone has a weathering crust of varying thickness.

3.3 Stone'smatrix The part of the base beneath the stone that has not been weathered.

3.4 Red Vessel Red Grid In the surface environment, it is mainly formed by the infiltration, filling and cementation of iron oxides and hydroxides along the open cracks, with different depths. Yellow, red, maroon or dark brown vein texture.

3.5 Turnip veins Radish The irregular filamentous, net-like or vein-like textures present in the stone flesh are mainly composed of strontium phosphate aluminum ore, with rare pyrite. The brightness is lower than stone meat.