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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/Z 41259-2022**

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**Method for determination of quaternary ammonium compounds  
in preservative-treated wood and wood preservatives by  
potentiometric titrator**

自动电位滴定仪测定防腐木材和木材防腐剂中季铵盐的方法

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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 of Standardization Documents" drafted. Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents. This document is proposed by the State Forestry and Grassland Administration. This document is under the jurisdiction of the National Timber Standardization Technical Committee (SAC/TC41). This document is drafted by: Timber Conservation and Development Center, Dehua Bunny Decoration New Materials Co., Ltd., Jingjiang Guolin Wood Industry Co., Ltd., Beijing Shengtong Redwood Culture Communication Co., Ltd., Jiusheng Flooring Co., Ltd., Zhejiang Shiyu Wood Industry Co., Ltd., Fujian Zhangping Kimura Forest Products Co., Ltd. Co., Ltd., Zhejiang Haiyue Green Building Technology Co., Ltd., Dacheng County Red Sandalwood Garden Classical Furniture Co., Ltd., China Wood Protection Industry Association. The main drafters of this document. Yu Yuqiu, Han Yujie, Yao Yuping, Qi Shilong, Zhan Xianxu, Gao Lizhi, Yang Mingxia, Li Huiming, Wu Zheyang, Zhang Wenqiang, Li Yajing, Wang Kailun, Sun Longxiang, Dou Qingqing, Tang Zhenzhong, Zhang Bei, Liu Jin, Wang Xibin, Chen Siyu, Liu Xuechun, Liu Xingcai, Li Guangjin. Determination of preservative wood and wood by automatic potentiometric titrator Method for quaternary ammonium salts in preservatives

### 1 Scope

GB/Z 41259-2022 is the Chinese national standard on method for determination of quaternary ammonium compounds in preservative-treated wood and wood preservatives by potentiometric titrator, in the field of chemical technology. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 15 April 2022 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 71.040.50, CCS B71. This page is published from the official record of the standard held by

the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes the sample preparation, instrumentation, equipment, methods for the determination of quaternary ammonium salts in preserved wood and wood preservatives by an automatic potentiometric titrator. Reagent and solution preparation, determination, etc. This document applies to the determination of quaternary ammonium salts in preserved wood and wood preservatives.

## 2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 14019 Terms for wood preservation SB/T 10404-2006 Determination of main components of waterborne preservatives and flame retardants SB/T 10405-2006 Wet ashing method before chemical analysis of preservative wood

## 3 Terms and Definitions

GB/T 14019 established and the following terms and definitions apply to this document. For ease of use, GB/T 14019 is repeated below Certain terms and definitions in.

3.1 Preservative-treated wood Wood preservatives treated with wood preservatives have preservative properties. [Source: GB/T 14019-2009, 3.5.1, with modifications]

3.2 woodpreservatives woodpreservatives It is applied to wood, wood products or non-wood cement masonry, building foundation, etc., to inhibit or prevent wood-harming organisms from growing in wood. A class of chemicals used for growth and reproduction. [GB/T 14019-2009, definition 3.3.1, with modifications]

3.3 equivalence point In titration analysis, the test solution is titrated with a standard solution. When the amount of the added standard solution and the amount of the tested substance are positively correlated A stoichiometric point that fits well with the chemical reaction equation.

3.4 quaternary ammonium A compound formed by replacing four hydrogen atoms in an ammonium ion with a hydrocarbyl group.