

ICS 97.030
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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21551.8-2025

**Antimicrobial and cleaning function of household and similar
electrical appliances - Part 8: Particular requirements for
electrical storage water heaters**

家用和类似用途电器的抗菌、除菌、净化功能 第8部分：储水式电热水器的特殊
要求

Issued on: October 5, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 8 of GB/T 21551 "Antibacterial, Sterilizing and Purifying Functions of Household and Similar Electrical Appliances". The following sections have been released.

- 1. General Rules;
- 2. Special Requirements for Antimicrobial Materials;
- 3. Special Requirements for Air Purifiers;
- 4. Special Requirements for Refrigerators;
- 5. Special Requirements for Washing Machines;
- 6. Special Requirements for Air Conditioners;
- 7. Special Requirements for Electric Toilet Seats;

8. Special requirements for storage-type electric water heaters. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China National Light Industry Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Household Appliances (SAC/TC46). This document was drafted by: Guangdong Midea Kitchen & Bath Appliances Manufacturing Co., Ltd., and Qingdao Economic and Technological Development Zone Haier Water Heater Co., Ltd. China Household Electric Appliance Research Institute, China Household Electric Appliance Research Institute (Beijing) Testing and Certification Co.,

Ltd., Jiahe (Zhejiang) Testing and Inspection Co., Ltd., A.O. Smith (China) Water Systems Co., Ltd., Guangdong Wanle Gas Appliances Co., Ltd., Guangdong Academy of Sciences Institute of Microbiology (Guangdong Provincial Microbiology Analysis) Testing Center), Hangzhou Kangquan Water Heater Co., Ltd., Anhui Zhongren Beijia Technology Co., Ltd., Guangdong Junkai Electric Appliance Co., Ltd., Weikai Testing Technology Co., Ltd. The main drafters of this document are. Zhou Liguang, Du Fanglin, Chen Wei, Li Yi, Li Xiaomin, Yu Yang, Zhu Dongwei, Tang Weiwei, Xie Xiaobao, Xu Feng, and Wu Bing. Jiang Zhigang, Xing Jun, and Lang Yange.

GB/T 21551 "Antibacterial, Sterilization and Purification Functions of Household and Similar Electrical Appliances" is divided into several parts, including general requirements and special requirements. Composition. Part 1 outlines general requirements, while the other parts outline specific requirements. For products covered by the specific requirements, the requirements shall be in accordance with the specific requirements. The relevant regulations for requests. GB/T 21551 is proposed to consist of the following parts.

1.General Rules. The purpose is to specify the general requirements and testing procedures for the antibacterial, sterilization, and purification functions of household and similar electrical appliances. Verification method.

2.Special Requirements for Antimicrobial Materials. The purpose is to specify the antimicrobial properties of materials and components used in household and similar electrical appliances. Basic performance parameters and test methods for antibacterial, antifungal, antiallergenic, and antiviral properties.

3.Special Requirements for Air Purifiers. The purpose is to specify the antibacterial and antifungal properties of air purifiers for household and similar uses. Basic performance parameters and test methods for anti-allergen, antiviral, antibacterial, allergen-removing, virus-removing, and odor-removing properties.

1 Scope

GB/T 21551.8-2025 is the Chinese national standard covering the antibacterial claim on a storage water heater - the organisms tested and the challenge in the tank, the reduction achieved and how it is measured, the durability of the effect over the life of the appliance, and the wording the claim may take. Legionella in a warm stored tank is the reason this exists. Part 8 of the series, first edition. In force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document specifies the hygiene, safety, and functional requirements for household and similar-purpose storage-type electric water heaters with antibacterial, sterilization, and purification functions. The requirements for marking and instructions for use are specified, and the corresponding test methods are described. This document applies to household appliances with one or more of the following functions. antibacterial, antifungal, sterilization,

particulate filtration, scale inhibition, residual chlorine purification, and wastewater discharge. Storage-type electric water heaters (hereinafter referred to as "water heaters") for similar purposes.

Note. This refers to water heaters that provide domestic bathing water and their associated water treatment modules. For other types of water heaters, the evaluation criteria for meeting the above functional requirements are as follows: This document contains related content.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1914 Chemical Analysis Filter Paper

GB 5749 Standard for Drinking Water Quality

GB/T 5750.11 Standard Examination Methods for Drinking Water - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 21551.1 and GB/T 20289, as well as the following terms and definitions, apply to this document.

3.1 Under specified test conditions, the proportion of particulate matter trapped by the water heater's filter components.

3.2 scale inhibition rate Under specified test conditions, the percentage reduction in scale in the test group water heater compared to the control group water heater.

11 Disinfectant Indicators

GB/T 5750.12 Standard Examination Methods for Drinking Water - Part

12 Microbiological Indicators

GB/T 8170 Rules for rounding off numerical values and the representation and determination of limiting values

GB/T 17218 Hygienic Safety Evaluation of Chemical Treatment Agents for Drinking Water

GB/T 18883 Indoor Air Quality Standard

GB 19489 General Requirements for Laboratory Biosafety

GB/T 20289 Storage-type electric water heaters

GB/T 21551.1 Antibacterial, sterilizing and purifying functions of household and similar electrical appliances - Part

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