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

GB/T 21551.3-2024

Replacing GB 21551.3-2010

**Antimicrobial and cleaning function of household and similar
electrical appliances - Part 3 : Particular requirements for air
cleaner**

家用和类似用途电器的抗菌、除菌、净化功能 第3部分：空气净化器的特殊要求

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives for Standardization - Part

1.Rules for the Structure and Drafting of Standardizing Documents. This is Part 3 of GB/T 21551 Antimicrobial and Cleaning Function of Household and Similar Electrical Appliances. GB/T 21551 has issued the following parts.

- 1.General requirement;
- 2.Particular requirements for material;
- 3.Particular requirements for air cleaner;
- 4.Particular requirements for refrigerator;
- 5.Particular requirements for electric washing machine;
- 6.Particular requirements for air conditioner. This document serves as a replacement for GB 21551.3-2010 Antibacterial and Cleaning Function for Household and Similar Electrical Appliances - Particular Requirements of Air Cleaner. In comparison with GB 21551.3-2010,

apart from structural adjustments and editorial modifications, the main technical changes are as follows:

---The terms and definitions of "air cleaner", "total volatile organic compounds TVOC" and "PM10" are deleted (see 3.1 ~

3.3 of Version 2010);

---The applicable requirements in "limit requirements of harmful substances generated by cleaners" are added (see Table 1);

---The "requirements for the antimicrobial, microbial reduction and cleaning functions" are modified (see 4.2;

4.2 of Version 2010);

---The "requirements for the functions of materials and components and parts" and "requirements for the functions of the whole machine" are added (see

1 Scope

GB/T 21551.3-2024 is the Chinese national standard on antimicrobial and cleaning function of household and similar electrical appliances - part 3 : particular requirements for air cleaner, in the field of domestic and commercial equipment, entertainment, sport. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 December 2024 by the State Administration for Market Regulation; Standardization Administration of China, and takes effect on 1 January 2027. Classification: ICS 97.030, CCS Y62. 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 specifies the hygiene and safety, and functional requirements for household and similar air cleaners with antimicrobial, microbial reduction and cleaning functions, as well as the marking requirements, and describes the corresponding test methods. This document applies to the research, development, production and inspection of household and similar air cleaners (hereinafter referred to as "cleaners") that have one or more of the following functions. antimicrobia, preventing mildew, antiallergen, antivirus, microbial reduction, allergen reduction, virus reduction and deodorization. NOTE. for products that have the above-mentioned functions, which are not their main functions, such as. dehumidifiers, fans and humidifiers, etc., the evaluation of their compliance with the above-mentioned functions shall refer to the relevant content of this document. The following products shall refer to this document for implementation.

- Small, portable cleaners, passenger car cleaners. This document does not apply to.
- Cleaners specifically designed for industrial use;
- Cleaners used in special environments with corrosive and explosive gases (such as dust, steam and methane);
- Cleaners specifically designed for medical use.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB 4789.2 National Food Safety Standard - Microbiological Examination of Food. Aerobic Plate Count

GB 4789.15-2016 National Food Safety Standard - Food Microbiological Examination. Enumeration of Molds and Yeasts

GB/T 6682 Water for Analytical Laboratory Use - Specification and Test Methods

GB/T 8170 Rules of Rounding off for Numerical Values & Expression and Judgement of Limiting Values

GB/T 18204.2 Examination Methods for Public Places - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 21551.1 and GB/T 18801 are applicable to this document.

4.1 Hygiene and Safety Requirements

4.1.1 Hygiene and safety of whole machine The harmful substances generated by the cleaner itself shall comply with the requirements of Table 1.

4.1.2 Hygiene and safety of components and parts Materials or components and parts made of them that are explicitly stated to have the antimicrobial function and are in close contact with the human body during use shall comply with the relevant hygiene and safety requirements in GB/T 21551.1.

4.2 Requirements for Antimicrobial, Microbial Reduction and Cleaning Functions

4.2.1 Functional requirements for materials and components and parts Materials that are

explicitly stated to have the antimicrobial, preventing mildew, antiallergenic and antiviral functions, or components and parts containing materials with the above-mentioned functions, shall have their antimicrobial rate, preventing mildew level, antiallergenic rate and antiviral rate in compliance with the requirements of GB/T 21551.2.

4.2.2 Functional requirements for the whole machine

4.2.2.1 Microbial reduction For cleaners that are explicitly stated to have the microbial reduction function, the microbial reduction rate shall not be lower than 90%.

4.2.2.2 Allergen reduction For cleaners that are explicitly stated to have the allergen reduction function, the allergen reduction rate shall not be less than 80%.

5.1 Test Conditions

5.1.1 General conditions Except for the special requirements specified in the appendixes of this document, the tests shall be carried out in accordance with the conditions specified in GB/T 18801.

5.1.3 Test procedures When the cleaner is tested for harmful substances, microbial reduction and cleaning, etc., it shall be operated under the normal working conditions (optimal functional mode) explicitly stated by the manufacturer. If the manufacturer does not specify, it shall be operated at the maximum wind speed gear and all relevant functions shall be turned on.

5.1.4 Placement position The tests shall be carried out in accordance with the methods described in GB/T 18801.

5.2.1 Hygiene and safety tests of the whole machine

5.2.1.1 Arrangement of sampling points During the hygiene and safety test of the whole machine, when the test position is the air outlet, in the middle of the specified distance perpendicular to the air outlet direction of the plane where the air outlet is located, arrange 1 sampling point. If the appliance has multiple air outlets, then, arrange a sampling point at each air outlet, and the concentration of each air outlet is simultaneously tested. When the test position is around the appliance, the sampling point is perpendicular to the center plane of the cleaner.

5.2.1.2 Ozone leakage The ozone leakage is tested in accordance with the following steps.

5.2.1.3 UV leakage The UV leakage is tested in accordance with the following steps.

- a) The test shall be conducted in an environment without obvious air flow;
- b) The main wavelength of the UV leakage test is 253.7 nm. If the cleaner explicitly states ultraviolet light of other main wavelengths, then, in addition to the main wavelength test, the UV leakage of the explicitly stated wavelengths shall also be measured;