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

GB/T 21866-2025

Replacing GB/T 21866-2008

Test method for antiviral activity and antimicrobial of paints film

涂膜抗病毒活性和抗菌性测定法

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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 for standardization documents" Drafting. This document replaces GB/T 21866-2008 "Determination of antimicrobial properties and antimicrobial effects of antimicrobial coatings (paint films)" and GB/T 21866- Compared with.2008, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The "Scope" has been changed (see Chapter 1, Chapter 1 of the.2008 edition);
- b) The terms and definitions of "bacteriostatic", "bactericidal" and "antimicrobial coating" have been deleted (see 3.1, 3.4 of the.2008 edition); the term "antimicrobial" has been changed. The terms and definitions of "antiviral" (see 3.1, 3.3 of the.2008 edition) have been added; the terms and definitions of "antiviral" have been added (see 3.2);
- c) Added "Antiviral Activity Test" (see Chapter 4);
- d) The "Antibacterial Performance Test" has been changed (see Chapter 5, Chapters 4 to 8 of the.2008 edition);
- e) Deleted "Antibacterial effect of antibacterial coatings" (9.1 of the.2008 edition);
- f) Changed "test result record" to "test report" and modified the corresponding content (see Chapter 6, 9.2 of the.2008 edition);
- g) Added "Porous membrane preparation method" (see Appendix A);
- h) Added "EMEM medium" (see Appendix B);

1 Scope

GB/T 21866-2025 is the Chinese national standard on test method for antiviral activity and antimicrobial of paints film, in the field of paint and colour industries. 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 1 August 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 February 2026. Classification: ICS 87.040, CCS G50. 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 a method for determining the antiviral activity of a coating by comparing the number of viable viruses and/or viable bacteria in a test sample with that in a control sample. and/or antimicrobial testing methods. This document applies to coatings with antiviral and/or antibacterial properties applied to building and wood surfaces. The determination of antiviral and/or antibacterial properties of coatings for other purposes can

also be used as a reference.

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 1727 General method for preparation of paint films

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8170 Rules for rounding off values and expression and determination of limit values

GB/T 9278 Temperature and humidity for condition adjustment and testing of coating samples

GB/T 19258.1 Ultraviolet radiation sources for germicidal use Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 antimicrobial Use physical, chemical or other methods to inactivate bacteria, fungi and other microorganisms and/or inhibit the growth, reproduction and activity of bacteria, fungi and other microorganisms process.

3.2 antiviral The process of inactivating viruses or making them lose their infectivity by using physical, chemical or other methods.

4 Antiviral activity test

4.1 Overview The virus is inoculated on the surface of the prepared sample, and after a certain period of contact, the survival rate of the virus in the antiviral sample and the control sample is compared.