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

GB/T 43355-2023

**Measurement of antiviral activity on plastics and other
non-porous surfaces**

塑料和其他无孔材料表面抗病毒活性的测定

(English Translation)

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Reference

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 equivalent to ISO 21702:2019 "Determination of antiviral activity on surfaces of plastics and other non-porous materials":

This document has made the following minimal editorial changes:

---For the convenience of application, the note in 3:3 is added;

---Added Appendix NA (informative) "Calculation of Antiviral Activity Rate (Virus Inhibition Activity Rate)":

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

Introduction

Due to the influence of the environment and human activities, the surfaces of plastics or other materials that people come into contact with daily often contain a large number of viruses:

Become a source of contamination by pathogenic microorganisms: Antiviral plastic products and products made of other non-porous materials kill viruses compared to regular products, Reduce virus spread: Therefore, antiviral treated products (porous and non-porous) have been widely recognized by consumers for their antiviral functions and have become New consumption choices:

At present, there are products made of antibacterial and antiviral materials in the domestic market: Our country already has plastic and non-porous materials (such as coatings, ceramics, natural (leather, artificial leather, stainless steel, rubber and other products)) test method standards for surface antibacterial activity (see GB/T 31402), but there is no relevant antibacterial activity National standard for viral activity determination: For this reason, this document has been developed:

Plastic and other non-porous material surfaces Determination of antiviral activity Warning: Handling and manipulation of potentially hazardous viruses and host cells requires high technical skills and should comply with current national laws and regulations:

regulation: Only personnel trained in biotechnology can perform these tests, and relevant

disinfection, sterilization and personal hygiene should be strictly implemented:

Standardize procedures:

1 Scope

This document describes a method for testing the antiviral activity of antivirally treated plastic surfaces and other nonporous material surfaces against specific viruses:

Due to differences in the sensitivity of virus strains, the results of a certain virus test may not be suitable for the evaluation of other viruses:

2 Normative reference documents

This document has no normative references:

3 Terms and definitions

The following terms and definitions apply to this document:

antiviral

The ability to reduce the number of infectious viruses on the product surface:

antiviral agentantiviralagent Agents that reduce the number of infectious viruses on the surface of products:

Antiviral activity valueantiviralactivity Logarithmic difference in viral infection titers after inoculation and exposure to antiviral treated versus unantiviral treated products:

cytopathic effect

Viral proliferation results in morphological changes or destruction of host cells:

The amount of infectious virus present per unit volume in a suspension:

plaque

A lytic zone where infection and proliferation of a single virus results in the formation of a monolayer of cells in semi-solid medium:

plaqueformingunits

PFU

A unit expressing the concentration of infectious virus per unit volume (mL):