BSI Standards Publication

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

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National foreword

This British Standard is the UK implementation of ISO 21702:2019.

The UK participation in its preparation was entrusted to Technical Committee PRI/21, Testing of plastics.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

Mesure de l'activité antivirale sur les matières plastiques et autres surfaces non poreuses

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Foreword

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Antibacterial-treated porous and non-porous products have been widely accepted and used among general consumers as their new choices to purchase for the additional function, which are different from what traditional materials had in terms of material protection.

Recently, antiviral-treated porous and non-porous products have been also in the market.

The measuring test method of antibacterial activity on non-porous products is described in ISO 22196.

The measuring test method of antibacterial activity on porous products (textiles) is described in ISO 20743.

The measuring test method of antiviral activity on porous products (textiles) is described in ISO 18184.

This document is the test method of antiviral activity on non-porous products. It is written based on ISO 22196 and ISO 18184.

In ISO 22196, the scope has been expanded to include surfaces made of plastics and other non-porous materials, thus this document is intended to be applicable to products such as plastics, coating materials, ceramics, natural and artificial leathers, stainless, rubbers, etc.

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

WARNING — Handling and manipulation of viruses and host cells which are potentially hazardous requires a high degree of technical competence and may be subject to current national legislation and regulations. Only personnel trained in biological techniques should carry out such tests. Appropriate practices for disinfection, sterilization and personal hygiene must be strictly observed.

1 Scope

This document specifies proper methods for measuring antiviral activity on plastics and other non-porous surfaces of antiviral-treated products against specified viruses. Due to the individual sensitivities, the results of one test virus might not be applicable for other viruses.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
antiviral
state where the number of infectious virus particles on surfaces of products is reduced

3.2
antiviral agent
agent that reduces the number of infectious virus on surface of products

3.3
antiviral activity
difference in the logarithm of the infectivity titer of virus found on an antiviral-treated product and an untreated product after inoculation with and contact to virus

3.4
cytopathic effect
morphological change or destruction of the host cells as a result of the virus multiplication

3.5
infectivity titer of virus
number of infectious viral particles present per unit volume in a suspension

3.6
plaque
lysis formed area in a cell monolayer under semisolid medium due to infection by and multiplication of a single infectious virus