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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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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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

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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.

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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.

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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