



BSI Standards Publication

## **Tobacco and tobacco products — Monitor test piece for smoking machine — Requirements and use**

---

## National foreword

This British Standard is the UK implementation of ISO 16055:2021. It supersedes BS ISO 16055:2019, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AW/40, Tobacco and tobacco products.

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

### Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2021  
Published by BSI Standards Limited 2021

ISBN 978 0 539 14021 7

ICS 65.160

### Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2021.

### Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

---

**INTERNATIONAL  
STANDARD**

**ISO  
16055**

Fourth edition  
2021-07-29

---

---

**Tobacco and tobacco products —  
Monitor test piece for smoking  
machine — Requirements and use**

*Tabac et produits du tabac — Éprouvette de contrôle pour machine à  
fumer — Exigences et utilisation*



Reference number  
ISO 16055:2021(E)



## **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2021, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Requirements</b> .....	<b>2</b>
<b>5 Testing</b> .....	<b>3</b>
<b>6 Data sheet information</b> .....	<b>3</b>
6.1 General .....	3
6.2 General production specifications .....	3
6.3 Analysis values from interlaboratory testing .....	3
<b>7 Use</b> .....	<b>4</b>
7.1 General .....	4
7.2 Practical procedures for the use of monitor test pieces .....	5
7.3 Practical use of control charts .....	6
<b>Annex A (informative) Monitor test piece — Example of specifications</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>9</b>

## 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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products*.

This fourth edition cancels and replaces the third edition (ISO 16055:2019), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the title and scope have been modified by adding “for smoking” machine;
- the former Annex A (Control charts) has been deleted and the subsequent annex has been moved;
- a reference to ISO 7870-2 has been added in place of the omitted Annex A.

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](http://www.iso.org/members.html).

# Tobacco and tobacco products — Monitor test piece for smoking machine — Requirements and use

## 1 Scope

This document describes the requirements for a monitor test piece for smoking machine as well as its use.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3308, *Routine analytical cigarette-smoking machine — Definitions and standard conditions*

ISO 4387, *Cigarettes — Determination of total and nicotine-free dry particulate matter using a routine analytical smoking machine*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

ISO 7870-2, *Control charts — Part 2: Shewhart control charts*

ISO 8454, *Cigarettes — Determination of carbon monoxide in the vapour phase of cigarette smoke — NDIR method*

ISO 10315, *Cigarettes — Determination of nicotine in total particulate matter from the mainstream smoke — Gas-chromatographic method*

ISO 10362-1, *Cigarettes — Determination of water in total particulate matter from the mainstream smoke — Part 1: Gas-chromatographic method*

ISO 10362-2, *Cigarettes — Determination of water in smoke condensates — Part 2: Karl Fischer method*

ISO 20778, *Cigarettes — Routine analytical cigarette smoking machine — Definitions and standard conditions with an intense smoking regime*

ISO 20779, *Cigarettes — Generation and collection of total particulate matter using a routine analytical smoking machine with an intense smoking regime*

ISO 22253, *Cigarettes — Determination of nicotine in total particulate matter from the mainstream smoke with an intense smoking regime — Gas-chromatographic method*

ISO 22947, *Cigarettes — Determination of carbon monoxide in the vapour phase of cigarette smoke with an intense smoking regime — NDIR method*

## 3 Terms and definitions

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

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>