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BSI Standards Publication

Cigarettes — Determination of ventilation — Definitions and measurement principles

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National foreword

This British Standard is the UK implementation of ISO 9512:2019. It supersedes BS ISO 9512:2002, which is withdrawn.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 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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Cigarettes — Determination of ventilation — Definitions and measurement principles

Cigarettes — Détermination du taux de ventilation — Définitions et principes de mesurage



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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).

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).

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.

This document was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products* Subcommittee SC 1, *Physical and dimensional tests*.

This third edition cancels and replaces the second edition (ISO 9512:2002), which has been technically revised. The main changes compared to the previous edition are as follows:

- introduction of the prime designator (Q') to indicate a component of the ventilation flow that is measured on the inlet side to the cigarette or standard and that is converted to a volumetric flow at the outlet side (see [3.5](#));
- addition of a typical calibration process for ventilation standards (see [A.3.2 j](#));
- updated product repeatability and reproducibility statistics (see [Clause 11](#));
- editorial changes in accordance with current guidelines.

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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Cigarettes — Determination of ventilation — Definitions and measurement principles

1 Scope

This document specifies a method for the determination of ventilation which is applicable to cigarettes.

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 3402:1999, *Tobacco and tobacco products — Atmosphere for conditioning and testing*

ISO 6565, *Tobacco and tobacco products — Draw resistance of cigarettes and pressure drop of filter rods — Standard conditions and measurement*

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

ventilation

aspiration of atmospheric air into an unlit cigarette other than through its *front area* (3.2)

Note 1 to entry: Dilution is the effect of ventilation on the smoke concentration of a lit cigarette.

3.2

front area

end of a cigarette which is intended to be lit

3.3

total airflow rate

Q

volumetric flow rate of air leaving the mouth end of an unlit cigarette which is encapsulated in a measurement device having an insertion depth as defined in ISO 3308

Note 1 to entry: Under standard test conditions, $Q = 17,5$ ml/s.

3.4

generator for total airflow

device to maintain a constant volumetric flow rate at the exit of the mouth end of a cigarette when encapsulated in a measurement head having an insertion depth