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BSI Standards Publication

Water pipe tobacco smoking machine — Definitions and standard conditions

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National foreword

This British Standard is the UK implementation of ISO 22486:2019.

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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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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*.

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

In the early 21st century, the habit of water pipe smoking has spread worldwide especially among young people. Formerly smoked mainly in Asia and Northern Africa, water pipe smoking has now spread in European countries and the US. In this light, it is necessary to set up an International Standard for the machine smoking of water pipe tobacco. Certain requirements, which are addressed in this document, are based on experience and knowledge gained from the use of analytical water pipe tobacco smoking machines. This is intended to lead to a better understanding of the products used and contribute to better consumer information.

Although charcoal is typically used for water pipe smoking in the method described in this document, the water pipe tobacco is heated by means of an electrical heater. This was decided in order to eliminate the unpredictable influence of different types of charcoal on the measurement result. Nevertheless, there is a general need to include this important aspect in a separate method, for example, in view of the determination of CO.

No machine smoking regime can represent all human smoking behaviour.

- Machine smoking testing is useful to characterize water pipe tobacco emissions for design and regulatory purposes, but communication of machine measurements to smokers can result in misunderstandings about differences in exposure and risk across brands.
- Smoke emission data from machine measurements may be used as inputs for product hazard assessment, but they are not intended to be nor are they valid as measures of human exposure or risks. Communicating differences between products in machine measurements as differences in exposure or risk is a misuse of testing using ISO standards.

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1 Scope

This document

- defines smoking parameters and specifies the standard conditions to be provided for the routine analytical machine smoking of water pipe tobacco, where the water pipe tobacco sample is electrically heated only and not combusted;
- specifies the requirements for a routine analytical smoking machine complying with the standard conditions.

This document is only applicable for water pipe tobacco used in devices known as “arghile”, “hookah”, “nargile” or “shisha” in which tobacco is heated, not combusted. Other types of water pipe tobacco that are used in other devices such as “Chinese water pipe” are not covered.

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

ISO 4796-2, *Laboratory glassware — Bottles — Part 2: Conical neck bottles*

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

test atmosphere

atmosphere to which a sample or test piece is exposed throughout the test

Note 1 to entry: It is characterized by specified values for one or more of the following parameters: temperature, relative humidity and pressure, which are kept within the specified tolerances.

Note 2 to entry: The test may be carried out either in the laboratory or in a special chamber termed the “test chamber”, or in the conditioning chamber, the choice depending on the nature of the test piece and on the test itself. For example, close control of the test atmosphere may not be necessary if the change in properties of the test piece is insignificant over the test period.

[SOURCE: ISO 3402:1999, 2.3, modified — Note 3 to entry has been omitted.]

3.2

restricted smoking

condition that exists when the connection tube of a water pipe is closed to the atmosphere between successive puffs