
**Water pipe tobacco — Determination
of carbon monoxide in the vapour
phase of water pipe tobacco smoke —
NDIR method**





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Foreword

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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 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.

Water pipe tobacco — Determination of carbon monoxide in the vapour phase of water pipe tobacco smoke — NDIR method

1 Scope

This document specifies a method for the determination of carbon monoxide (CO) in the vapour phase of water pipe tobacco smoke.

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 22486, *Water pipe tobacco smoking machine — Definitions and standard conditions*

ISO/TS 22487, *Water pipe tobacco — Determination of total collected matter and nicotine using a water pipe tobacco smoking machine*

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

vapour phase

portion of smoke, which passes the smoke trap during smoking in accordance with ISO/TS 22487 using a machine conforming to ISO 22486

4 Principle

Smoking of water pipe tobacco in accordance with the procedures given in ISO/TS 22487. Collection of the vapour phase of the water pipe tobacco smoke and measurement of the carbon monoxide using a non-dispersive infrared (NDIR) analyser calibrated for carbon monoxide. Calculation of the amount of carbon monoxide per water pipe tobacco test portion.

5 Apparatus

Usual laboratory apparatus and, in particular, the following items.

5.1 Routine analytical water pipe tobacco smoking machine and accessories, complying with the requirements of ISO 22486.