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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 19609-2024

Replacing GB/T 19609-2004

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

卷烟 用常规分析用吸烟机测定总粒相物和焦油

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 19609-2004 "Determination of total particulate matter and tar in cigarettes by conventional analytical smoking machines" and is consistent with Compared with GB/T 19609-2004, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added the terms and definitions for clearing suction (see 3.6);
- Deleted the definition of adjustment sample (see 3.8 of the 2004 edition);
- Added pre-test of cigarette length and cigarette circumference before smoking (see 6.5);
- Changed the material requirements for the collector end cap (see 5.9, 5.8 of the 2004 edition);
- Deleted the sampling provisions (see Chapter 6 of the 2004 edition);
- Changed the provisions for surfactants used in soap film flowmeters (see 6.6.3.4, 7.6.3.4 of the 2004 edition);
- Added relevant provisions for clearing suction (see 6.6.4.4, 6.6.4.5 and 6.6.4.6).

This document is modified to adopt ISO 4387:2019 "Determination of total particulate matter and tar in cigarettes using a conventional analytical smoking machine".

This document has the following structural adjustments compared to ISO 4387:2019.

- Chapter 6 corresponds to Chapter 7 of ISO 4387:2019, of which 6.1 to 6.8 correspond to 7.1 to 7.8 of ISO 4387:2019;
- Chapter 7 corresponds to 7.9 of ISO 4387:2019, of which 7.1 to 7.3 correspond to 7.9.1 to 7.9.3 of ISO 4387:2019, and the addition of 7.4;

- Chapter 8 corresponds to Chapter 9 of ISO 4387:2019;
- Chapter 9 corresponds to Chapter 8 of ISO 4387:2019;
- Added Appendix A and Appendix C. Appendix B corresponds to Appendix A of ISO 4387:2019.

This document has many technical differences compared to ISO 4387:2019.

A list of these technical differences and their causes is given in Appendix A.

The following editorial changes were made to this document.

- According to the test procedures, adjust the content of 7.7 in ISO 4387:2019 to 6.7.1, 6.7.2, 6.7.3, 6.7.4, 6.7.5 and 6.7.6;
- Adjust the content of 7.9 in ISO 4387:2019 to 7.1.1, 7.1.2, 7.1.3 and 7.1.4 according to the test procedures;
- Change "7.9 Treatment of total particulate matter" to "7 Determination of tar".

1 Scope

This document describes a method for the determination of total particulate matter and tar using a conventional analytical smoking machine.

This document applies to the determination of total particulate matter and tar in cigarette smoke.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 16447 Atmospheric environments for conditioning and testing of tobacco and tobacco products (GB/T 16447-2004, ISO 3402.

1999, IDT)

GB/T 16450 Definition and standard conditions for conventional analytical smoking machines (GB/T 16450-2004, ISO 3308:2000, MOD) GB/T 22838.3 Determination of physical properties of cigarettes and filter rods Part 3: Circular laser method (GB/T 22838.3-2009, ISO 2971:1998, MOD) GB/T 22838.4 Determination of physical properties of cigarettes and filter rods Part 4: Cigarette quality GB/T 22838.5 Determination of physical properties of cigarettes and filter rods Part 5: Cigarette draw resistance and filter rod

pressure drop (GB/T 22838.5-2009,ISO 6565:2002,MOD) GB/T 23203.1 Determination of moisture in total particulate matter in cigarettes Part 1: Gas chromatography (GB/T 23203.1-2013,ISO 10362-1:1999,MOD) GB/T 23355 Determination of nicotine in total particulate matter of cigarettes - Gas chromatography (GB/T 23355-2009, ISO 10315. 2000,MOD)

3 Terms and definitions

The following terms and definitions apply to this document.

crude smoke condensate the portion of mainstream smoke captured in the smoke collector.

Note: Expressed in milligrams.

dry smoke condensate the total particulate matter after removing water (3.1).

Note: Expressed in milligrams.