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

GB/T 23226-2008

**Cigarettes -- Determination of alkaloids in smoke condensates
-- Spectrometric method
(English Translation)**

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Foreword

This revised standard adopts ISO 3400:1997 "Cigarettes were in total alkaloids spectrophotometric determination" (in English).

This standard is based on ISO 3400:1997 re-drafted.

Taking into account China's national conditions, with ISO 3400:1997 as compared to the presence of the small number of technical differences in standards, these technical differences have been incorporated into positive Wen, and they are involved in terms of the margin identified by a single vertical line. It is given in Appendix A of the technical differences and their reasons List for reference.

For ease of use, and ISO 3400:1997 as compared to the standard made the following editorial changes.

- Delete ISO 3400:1997 Foreword;
- Delete ISO 3400:1997 reference standard;
- Increasing the normative references;
- Delete ISO 3400:1997 Annex A;
- Delete ISO 3400:1997 Annex B;
- Increase in Appendix A "of this standard and ISO 3400:1997 controls." Appendix A of this standard is an informative annex.

This standard was proposed by the State Tobacco Monopoly Bureau.

This standard by the National Standardization Technical Committee on Tobacco (TC144) centralized.

This standard was drafted. National Tobacco Quality Supervision and Inspection Center.

1 Scope

This standard specifies the method for determination of total particulate matter of mainstream smoke total alkaloids. spectrophotometry.

This standard applies to cigarettes.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 5606.1 cigarette - Part 1. Sampling GB/T 16450 routine analytical smoking machine Definitions and standard conditions (GB/T 16450-2004, ISO 3308:2000, MOD) GB/T 19609 cigarettes by conventional analytical determination of total particulate matter and tar (GB/T 19609-2004 smoking machine, ISO 4387.

2000, MOD)

GB/T 23225 Tobacco and tobacco products spectrophotometric determination of total alkaloids (GB/T 23225-2008, ISO 2881:1992, MOD) Principle 3 Two-step steam distillation cigarette mainstream smoke total particulate matter extract. First with a solution of an inorganic acid, neutral and acidic steam distilled Gas volatiles, then the solution was adjusted to strongly alkaline, distilled off alkaloids, spectrophotometric determination of the absorbance of distillate liquid, calculate the total alkaloid-containing the amount of nicotine in order to represent.

4 Reagents

Use analytical grade reagents and water should be distilled water or water of equivalent purity.

4.1

isopropanol.

4.2

Sodium hydroxide solution, Ba (NaOH) = 8mol/L.

4.3

sodium chloride.

4.4

sulphate solution, Ba (H₂SO₄) = 1mol/L.

4.5

sulphate solution, Ba (H₂SO₄) = 0.025mol/L.

4.6

nicotine, minimum purity of 98%, stored in the dark at 0 °C ~ 4 °C condition.

5 Instruments

Common laboratory equipment and the following.

5.1

steam distillation unit, in line with GB/T 23225 requirements.

5.2

photometer, having a wavelength range of 230nm ~ 290nm.

5.3

matching quartz cuvette, optical path length 1cm.

5.4

flask, 250mL.

5.5

Single graduated pipettes. 5mL, 10mL, 25mL.