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

GB/T 21135-2007

**Tobacco and tobacco products -- Determination of
vapour-phase nicotine in air -- Gas-chromatographic method**

烟草及烟草制品 空气中气相烟碱的测定 气相色谱法

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and definitions
4 Principle
5 Reagent

Foreword

This standard is modified using ISO 11454.:1997 "Determination of gas phase nicotine in tobacco and tobacco products gas chromatography" (English version).

Taking into account China's national conditions, compared with ISO 11454.:1997, this standard there are a small number of technical differences, these technical differences have been incorporated into the texts are marked with a vertical single line in the margins of the clauses to which they relate. The technical differences and their causes are given in Appendix A.

List for reference.

This standard compared with ISO 11454.:1997, made the following changes.

- Delete ISO 11454.:1997 foreword;
- Removed the introduction of ISO 11454.:1997;
- In Chapter 2, the deletion of ISO 648. 1977, ISO 1042. 1983, ISO 13276.:1997, quoted GB/T 12806-1991, GB/T 12808-1991 and YC/T 34-1996;
- In 5.10 added nitrogen as a carrier gas to use;
- 7.1 samples collected in the increase of parallel samples collected regulations;
- In 7.3 added Note 5 "with nitrogen as the carrier gas flow rate slightly larger", the original note 5, Note 6 followed by the extension of Note 6, Note 7;
- In 8.3, the unit of atmospheric pressure was changed from "millibar" to "International Pas";
- Added Appendix A "This standard and ISO 11454.:1997 control." Since the implementation of this standard YC/T 155-2001 "tobacco and tobacco products Determination of airborne nicotine gas chromatography" Abolished.

Appendix A of this standard is an informative annex.

This standard proposed by the State Tobacco Monopoly Bureau.

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

This standard was drafted. National Tobacco Quality Supervision and Inspection Center, Zhengzhou Tobacco Research Institute.

1 Scope

This standard specifies the method of determination of gaseous nicotine in the ambient air.

This standard applies to tobacco and tobacco products.

NOTE 1 If this method is used for the determination of nicotine originating from flue gases, it should be recognized that nicotine present in the air can only be used as a qualitative indicator of whether or not smoking has taken place. Studies have shown that it is not possible to introduce other components of flue gas quantitatively from the content of nicotine. See Appendix A and Appendix for restrictions on use and scope of application References [1].

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. All dated references, which are subsequently owned Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to reach an agreement based on this standard research Whether you can use the latest versions of these files. For undated references, the latest version applies to this standard.

GB/T 12806-1991 Laboratory glassware single standard line volumetric flask (eqv ISO 1042. 1983) GB/T 12808-1991 laboratory glassware single standard pipette (eqv ISO 648. 1977) Tobacco and tobacco products - Determination of total plant alkaloids - Spectrophotometric method

3 Terms and definitions

The following terms and definitions apply to this standard.

Nicotine that is not attached to fumes particulate matter.

Air contained in a specific indoor or outdoor environment.

4 Principle

A known volume of air is aspirated at a rate of about 1 L/min through a sample tube fitted with a special resin. Turn the resin Move to a glass bottle and add the internal standard. Nicotine and internal standard are dissolved in the solvent. Use a gas chromatograph equipped with a thermal ionization detector Detection.

5 Reagent

All reagents should be analytical grade.

All volumetric bottles and pipettes shall comply with Class A regulations GB/T 12806-1991 Class A and GB/T 12808-1991, respectively Set requirements.

5.1

Ethyl acetate. Chromatography pure.

5.2

Triethylamine. purity of not less than 99%, used to adjust the ethyl acetate solvent.

5.3

Nicotine. Purity not less than 99%. Before use, stored at 0 °C ~ 4 °C dark, its content should be YC/T 34-1996 appendix Points required to determine.