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

YC/T 296-2009

**Tobacco and tobacco products. Determination of nitrate
content. Continuous flow method
(English Translation)**

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Foreword

This revised standard adopts ISO 15517:2003 "Determination of tobacco nitrate continuous flow method" (in English).

This standard is based on ISO 15517:2003 redrafted. Taking into account China's national conditions, and ISO 15517:2003 as compared to the present standard exists less the amount of the technical differences, these technical differences have been incorporated into the text, and they are involved in terms of the margin of a single vertical line identification. in A list of those technical differences and the reasons given in Appendix C for reference.

For ease of use, and ISO 15517:2003 as compared to the standard also made the following editorial changes.

- a) Remove ISO 15517:2003 standard reference;
- b) an increase of 2 "Normative references";
- c) Delete ISO 15517:2003 5.1 "Sample preparation";
- d) an increase of 6.1 "Sample Preparation";
- e) delete the ISO 15517:2003 6 "computing";
- f) increased 6.3 "standard curve";
- g) Remove ISO 15517:2003 7 "precision";
- h) an increase of 7 "calculation and presentation of results";
- i) an increase of 1 "Determination of nitrate pipeline map";

j) Remove ISO 15517:2003 Appendix B "Determination of nitrate pipeline map";

k) Added Appendix B;

l) increase in Appendix C.

This standard Annex A, Annex B and Annex C is informative appendix.

This standard was proposed by the State Tobacco Monopoly Bureau.

This standard by the National Standardization Technical Committee on Tobacco Cigarette Technical Committee (TC144/SC1) centralized.

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

1 Scope

This standard specifies the method for determination of the continuous flow of tobacco and tobacco products in nitrates.

This standard applies to the determination of tobacco and tobacco products in the nitrate content.

The method for the determination of nitrate detection limit of 0.0059%, the limit of quantification of 0.0198 percent.

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.

Preparation and water YC/T 31 samples of tobacco and tobacco products - Determination oven method Principle 3 the sample was extracted with water, the extract nitrate in alkaline conditions and hydrazine sulfate - copper sulphate solution produced by the reaction of nitrite. Nitrite A salt with amino benzene sulfonamide diazo compound, under acidic conditions, with a diazonium compound N- (1- naphthyl) - ethylenediamine dihydrochloride hair Health coupling reaction form a purple complex, the maximum absorption wavelength of 520nm, measured with a colorimeter.

If the extract contains nitrite, it will also be detected.

Note: 5% acetic acid may also be used as an extract.

4 Reagents and materials

Addition to special requirements, you should use analytical reagent, the water should be deionized water.

About 250g Brij35 (polyethoxy lauryl ether) was added to 1000mL of water and heated with stirring until dissolved.

4.2 Activated Water

Per 1000mL 1mL Brij35 added to the water solution (4.1) and mix well.

4.3 Sodium hydroxide solution

Weigh about 8.0g of sodium hydroxide dissolved in 800mL of water was added 1mL Brij35 solution (4.1) diluted to 1000mL.

4.4 Copper sulphate solution

Weigh about 1.20g of copper sulfate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$), was dissolved in 100mL of water.

4.5 Hydrazine sulfate - copper sulphate solution

You should choose the most appropriate hydrazine sulfate concentration, specific See Appendix A. According to hydrazine sulfate concentration selected, weighed a corresponding amount of hydrazine sulfate ($\text{N}_2\text{H}_6\text{SO}_4$), was dissolved in 800mL of water, copper sulfate solution was added 1.5mL (4.4), diluted to 1000mL, stored in a brown bottle.

This solution should be formulated once a month.

4.6 Pairs of sulfanilamide solution

Pipette 25mL concentrated phosphoric acid was added to 175mL water and then adding about 2.5g of sulfanilamide ($\text{C}_6\text{H}_8\text{N}_2\text{O}_2\text{S}$) and