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

YC/T 202-2006

**Tobacco and tobacco products. Determination of polyphenols.
Chlorogenic acid, scopletin and rutin
(English Translation)**

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Foreword

Appendix A and Appendix B of this standard are informative annexes.

This standard was proposed by the State Tobacco Monopoly Bureau.

This standard is under the jurisdiction of the National Tobacco Standardization Technical Committee (TC144).

This standard was drafted. Zhengzhou Tobacco Research Institute of China National Tobacco Corporation, China Tobacco Standardization Research Center.

1 Scope

This standard specifies the determination methods for three polyphenols (chlorogenic acid, guanidine and rutin) in tobacco and tobacco products.

This standard applies to tobacco and tobacco products.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. All dated references, followed by all Modifications (not including errata content) or revisions do not apply to this standard, however, parties to agreements based on this standard are encouraged to study if it is possible to use the latest version of these files? For undated references, the latest edition applies to this standard.

GB/T 5606.1 Cigarette Part 1. Sampling GB/T 19616 General Principles for Sampling of Tobacco Batch Raw Materials (GB/T 19616-2004, ISO 4874:2000, MOD) YC/T 31 Preparation of tobacco and tobacco product samples and moisture determination oven method

3 Principle

The polyphenolic compounds in tobacco and tobacco products were extracted with 50% aqueous methanol solution, and the extract was filtered through a 0.45 µm filter and passed through High performance liquid chromatography (HPLC) quantitative analysis of the content of three polyphenolic compounds.

4 Reagents

Analytical grade reagents should be used unless otherwise specified. Water should be distilled water or water of equivalent purity. Deionized water (R >5Mohm, Filtered through a 0.45 µm filter before use).

4.1

Deionized water (R >5Mohm).

4.2

Methanol. chromatographically pure.

4.3

Acetic acid. analytically pure.

4.4

Chlorogenic acid (purity >97%).

4.5 ?? Pavilion (purity >97%).

4.6

rutin (purity >97%).

4.7

Extraction solution. Prepare a 1+1 (volume fraction) solution of methanol (4.2) + water (4.1).

4.8.1 Primary standard solution

Weigh about 100 mg of chlorogenic acid (4.4), about 5 mg of sputum (4.5), and about 100 mg of rutin in a 50 mL beaker.

(4.6), accurate to 0.1mg, add about 30mL of methanol (4.2) completely dissolved, transfer to a 100mL volumetric flask, add extraction solution (4.7) Dilute to the scale (first standard solution storage conditions. 4 ° C refrigerator can be stored for 3 months).

4.8.2 Secondary standard solution

10 mL of the primary standard solution (4.7.1) was transferred to a 100 mL volumetric flask and diluted to the mark with an extraction solution (4.7).

4.9 Polyphenol calibration solution. accurately transfer 1mL, 2mL, 5mL secondary standard solution (4.8.2), 1mL, 2mL, 5mL level the standard solution (4.7.1) is diluted to the mark with the extraction solution (4.7) in a 100 mL volumetric flask. The six standard solutions and the secondary standard are dissolved.

The liquid (4.8.2) is a series of standard calibration solutions (the polyphenol calibration solution should be prepared before use and cannot be stored for a long time).