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

YC/T 163-2003

**Cigarette. Determination of filling value of expanded stem
(English Translation)**

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Foreword

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.

1 Scope

This standard specifies the method for determining the filling value of cigarette expansion stems.

This standard applies to cigarette expansion stems.

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 16447-1996 Atmospheric environment for the regulation and testing of tobacco and tobacco products

3 Terms and definitions

The following terms and definitions apply to this standard.

The volume occupied by the unit mass under the continuous action of a certain length of time and a certain pressure.

4 Principle

A certain mass of expanded stems is placed in the measuring barrel, and the volume retained by the expanded stems under a certain time and a certain pressure is measured.

5 Instruments

5.1

The expansion stem fill value tester should meet the following conditions.

- a) Measuring barrel. cylindrical type, the inner wall is smooth and clean. The inner diameter is $60.0\text{ mm} \pm 0.1\text{ mm}$ and the height is not less than 100 mm.
- b) Forced probe. The surface is smooth and clean, and it can produce uniform pressure of $9.80\text{N} \pm 0.10\text{N}$ for the sample. The diameter of the probe is $55.0\text{mm} \pm 0.1\text{mm}$.
- c) Pressure rate. $19.5\text{mm/s} \pm 0.5\text{mm/s}$.
- d) Fill value sensor. It can accurately measure the column height of the sample to the nearest 0.01mm; the filling value is accurate to 0.01mL/g.
- e) Time controller. The time control accuracy is $\pm 0.5\text{s}$, the resolution is 1s, and it can meet the requirements of $30.0\text{s} \pm 0.2\text{s}$.

5.2

Balance. The sensitivity is 0.01g.

5.3

Standard gauge block. height is 20.0mm, height is accurate to 0.01mm.

6 Sample taking and sample processing

6.1

Sampling point. In the expansion cut stem wind selection blanking outlet.

6.2

Each test sample is not less than 500g. The moisture content of the sample should be

adjusted according to GB/T 16447 before the test to make the sample contain water.

The rate reached $12.5\% \pm 0.5\%$.

6.3

Spread the laboratory sample with the moisture content adjusted into a square with a size of about 30cm x 30cm, and sample the sample along the diagonal of the square.

Divide into four portions, take two of them, and take one-half of them as a sample according to the above method.

7 Determination steps

The environmental conditions shall be determined in accordance with the requirements of GB/T 16447.