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**YC**

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

**YC/T 169.6-2002**

Replacing YC/T 169.6-2002

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**Determination of physical and chemical characteristics of tow  
for cigarette. Part 6: Outline of cross section and shape factor  
in radius**

**(English Translation)**

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## Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 5 Apparatus, equipment and reagents
- 6 Sampling
- 7 Measuring step

### Foreword

YC/T 169 "cigarette tow physical and chemical properties of determination" is divided into 12 sections;

- Part 1. tow linear density;
- Part 2. Single yarn density;
- Part 3. number of crimps;
- Part 4. tow crimp index and the crimp tow elastic recovery;
- Part 5. breaking strength;
- Part 6. cross-sectional shape and radial shaped degree;
- Part 7. Regain;
- Part 8. moisture content;
- Part 9. oil content;
- Part 10. residual acetone content;
- Part 11. Titanium dioxide content;
- Part 12. Packaging and appearance.

This section YC/T 169 Part 6.

This Part replaces YC/T 169.6-2002 "tow for cigarette was measured series of standards - Part 6. cross-sectional shape." this section compared with YC/T 169.6-2002 main changes are as follows.

- By the name of this section. Change "series of standard measurement of tow for

cigarette - Part 6 sectional shape" to "physical and chemical properties of cigarette tow Determination - Part 6. cross-sectional shape and radial shaped degree ";

--- Added "normative references";

--- Added "Terms and Definitions";

--- Increased radial shaped tow of the test method;

--- Increased equipment and reagents;

--- Modify the sample pretreatment method, the original sample pretreatment method adjusted to Appendix A, adjusted to the original Appendix A Appendix B;

--- Measurement report adds two things. "the provisions of this part of the step of determining the difference" and "observed abnormal test phenomenon".

This part of the Appendix A and Appendix B are normative appendix.

This part by the State Tobacco Monopoly Bureau.

This part of the National Standardization Technical Committee of tobacco smokable material Technical Committee (SAC/TC144/SC8) centralized.

This section drafted by. China National Tobacco Quality Supervision and Inspection Center, Nantong Cellulose Fibers Co., Ltd. Kunming acetate fiber, beads Sea Acetate Fiber Co., Ltd., Asia Technology Limited.

## 1 Scope

YC/T of the provisions of section 169 of the cross-sectional shape of the cigarette tow and radial shaped degree of determination.

This section applies to tobacco smoke and cellulose diacetate tow polypropylene fiber tow.

## 2 Normative references

The following documents contain provisions which, through reference YC/T 169 of this text, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

FZ/T 50002-1991 Test method for chemical fiber shaped degree

### 3 Terms and Definitions

The following terms and definitions apply to YC/T 169 of the present section.

Percentage profiled fiber cross-sectional radius of the circumscribed circle inscribed circle of a specified radius of the difference between the radial parameters.

[FZ/T 50002-1991 of 3.2] Principle 4 Into a bundle of tow sections transverse section, at a certain magnification microscope cross-sectional shape of the tow, the simultaneous determination of a plurality of fibers Sectional radius of the inscribed circle, circumscribed circle radius, thereby calculating the degree of radial shaped fiber.

### 5 Apparatus, equipment and reagents

#### 5.1

Biological Microscope. magnification of no less than 200 times.

#### 5.2

Image Measurement System. for the analysis of the radial degree of profile should include a digital CCD and the corresponding radial contour analysis software.

#### 5.3

slicer. Fiber can cut into thick sheets of wax film about 10 $\mu$ m.

#### 5.4

Die. by the two grooved rectangular metal composition, the groove measuring about 22mm, width of 22mm, a depth of about 22mm. Notch Top with a small trench depth of about 1mm.

#### 5.5

Other tools. slides, blade, double-sided adhesive tape, tweezers.

#### 5.6

Reagents. Paraffin (industrial grade), anhydrous ethanol (AR), xylene (AR), glue (polyvinyl alcohol) and the like.

### 6 Sampling

Interception tow length of 40mm from the laboratory sample three sections, each sample will eliminate curl.

### 7 Measuring step

**7.1**

on both the outer surface of the mold with double-sided adhesive.

**7.2**

Take a small bundle has crimped fibers are embedded eliminate mold small groove at both ends glued to the double-sided adhesive tape.