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FZ

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

FZ/T 01057.8-2012

Replacing FZ/T 01057.8-1999

**Test method for identification of textile fibers. Part 8: Infrared
absorption spectrum**

纺织纤维鉴别试验方法 第8部分：红外光谱法 清晰版
(English Translation)

Issued on: January 1, 1970

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People's Republic of China**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

FZ/T 01057 "Test method for identification of textile fibers" is divided into the following sections.

- Part 1. General Description;
- Part 2. combustion;
- Part 3. Microscopy;
- Part 4. dissolution method;
- Part 5. nitrogen chlorine colorimetric reaction;
- Part 6. melting point of law;
- Part 7. Density gradient method;
- Part 8. infrared spectroscopy;
- Part 9. birefringence method.

This section FZ/T Part of 801,057.

This section instead of FZ/T 01057.8-1999 "Standard Test Method for identification of textile fibers Infrared Spectroscopy Method." Compared with the FZ/T 01057-1999, this revision will be integrated into the original 11 part 9, the order of the parts has been adjusted.

Part 5 is about the original "coloring test methods" and Part 11 "system identification method," remove the original Part 6 "nitrogen-containing chlorine color reaction Act "is replaced by Section 5, Section 7 of the original" melting point Act "is replaced by Part 6, Section 9 of the original" density gradient "is replaced by Section 7, Part of the original 10 "birefringence Act" is replaced by Section 9.

This section FZ/T 01057.8-1999 amended as follows.

- This part of the title to "Test method for identification of textile fibers - Part 8. infrared spectroscopy";
- Increased Chapter 2, "Normative references";
- The "pretreatment of the sample," incorporated into Chapter 6, "specimen" in;
- The "preparation of the spectrum," incorporated into Chapter 7, "Programs";
- Increased Chapter 8, "the test report";
- Original Appendix A to "Appendix B"; the original Appendix B to "Appendix A", and added chitosan fiber, soybean protein fiber, cow Milk protein modacrylic fiber, milk protein modified polyvinyl alcohol fibers, polylactic acid fibers, polyethylene terephthalate Fiber and polyethylene terephthalate fiber and other seven kinds of new fiber infrared spectra.

This part is proposed by the China Textile Industry Association.

This part of the National Textile basic standards Standardization Technical Committee Technical Committee (SAC/TC209/SC1) centralized.

This section drafted by. National Textile Products Quality Supervision and Inspection Center, Shanghai Intertek Testing Services Ltd., Shanghai Textile Academy of Sciences.

1 Scope

This section provides an infrared absorption spectroscopy to identify the textile fibers.

This method is applicable to the identification of textile fibers.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references (including any amendments) applies to this document.

FZ/T 01057.1 Test method for identification of textile fibers - Part 1. General Description
Principle 3 Irradiating the sample with a beam of infrared light, molecules of the sample will absorb part of the light energy into vibrational energy and rotational energy. Aid the instrument will absorbance plotted with the corresponding wave number, you can get a sample of the infrared absorption spectrum, the infrared spectrum of each characteristic absorption bands it contains the sample group and the molecule bond information. Different materials have different infrared spectra, infrared spectra of the sample and the known Infrared spectra are compared thereby discriminating fibers.

4 Reagents

4.1

acetone, AR.

4.2

dichloromethane, analytical grade.

4.3

formic acid, analytical grade.

4.4

potassium bromide powder, AR.

Potassium bromide 4.5 single chip, KRS-5 single wafer.

5 Apparatus & Instruments

5.1

infrared spectrometer, wavenumbers 4000cm^{-1} ~ 400cm^{-1} .

5.2 10t ~ 15t small hydraulic machines and potassium bromide die.

5.3

vacuum pump.

5.4

infrared drying lamps.

5.5

agate mortar.

5.6

fiber slicer.

5.7

dryer.

5.8

Weighing paper.

5.9

Teflon panels and heating panel.

5.10

blade, tweezers, pliers, scissors, glass and the like.