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Textiles-Quantitative chemical analysis-Mixtures of mulberry silk and tussah silk

纺织品 定量化学分析 桑蚕丝与柞蚕丝的混合物

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China National Textile and Apparel Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Textiles (SAC/TC 209).

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Quantitative Chemical Analysis of Textiles A mixture of mulberry silk and tussah silk

1 Scope

This document describes a test method for the determination of mulberry silk and tussah silk content in textile products by chemical analysis.

This document applies to textile products containing mulberry silk and tussah silk.

Note. In some cases, mulberry silk does not dissolve sufficiently or tussah silk dissolves excessively, and the method in this document is not applicable to the sample.

2 Normative references

GB/T 2910

GB/T 6682

GB/T 8170

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Principle

Sulfuric acid solution or calcium chloride/ethanol solution (or calcium nitrate solution) was used to mix mulberry silk from a mixture of mulberry silk and tussah silk of known dry mass.

The residue is collected, washed, dried and weighed; the corrected mass is used to calculate its dry mass fraction of the mixture.

For multi-component products containing mulberry silk and tussah silk, the silkworm silk content can be determined according to the corresponding method in GB/T 2910.

The silk mass fraction is determined according to this document, and the tussah silk mass fraction is obtained by the difference.

5 Reagents and Materials

Use the reagents specified in GB/T 2910.1 and this document. Unless otherwise specified, all reagents are of analytical grade.

5.1 Sulfuric acid solution (mass fraction 56%). Under cooling conditions, slowly pour 1 volume of 98% concentrated sulfuric acid along a glass rod.

Add 1.22 volumes of water and stir evenly. After the solution cools to room temperature, add water in small amounts several times. Use a density meter (6.5) at 20 °C to measure the density.

The solution density was measured to be 1.445 g/cm3~1.465 g/cm3, and the concentration of sulfuric acid solution was 56%±1% (mass fraction).

5.2 Calcium chloride/ethanol solution. Add 110 g of anhydrous calcium chloride to 140 mL of water and dissolve. After the solution cools down, add 120 mL of Anhydrous ethanol. This solution should be prepared and used immediately.

5.3 Calcium nitrate solution. prepare by adding 95 g of calcium nitrate tetrahydrate into 20 mL of water.

5.4 Dilute sulfuric acid solution. Slowly add 100 mL of 98% by mass concentrated sulfuric acid into 1 000 mL of water.

5.5 Dilute ammonia solution. dilute 80 mL of 25%~28% concentrated ammonia solution to 1 L with water.