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

GB/T 35443-2024

Replacing GB/T 35443-2017

**Textiles-Quantitative chemical analysis-Mixtures of alginate
fiber with certain other fibers**

纺织品 定量化学分析 海藻纤维与某些其他纤维的混合物

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Table of Contents

Foreword	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
(sodium carbonate method)	6
5 Two-component mixture of alginate fiber and polyester fiber (sulfuric acid method)	7
6 Two-component mixture of alginate fiber and polyacrylonitrile fiber or spandex (dimethylformamide method)	7
7 Two-component mixture of alginate fiber and sheep wool or cashmere (sulfate method)	8
8 Two-component mixture of alginate fiber and acetate fiber (acetone method)	8
9 Two-component mixture of alginate fiber and triacetate fiber or polylactic acid fiber (dichloromethane method)	8
10 Standard moisture regain	8
11 Precision	9
12 Test report	9
Appendix A (Informative) Qualitative identification method of alginate fiber	10
References	13

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents.

This document replaces GB/T 35443-2017 Textiles - Quantitative chemical analysis - Mixtures of alginate fiber and certain other fibers. Compared with GB/T 35443-2017, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- The scope of the standard is changed (see Chapter 1; see Chapter 1 of the 2017 edition);
- The sodium hypochlorite method is changed to the sodium carbonate method (see Chapter 4; see Chapter 3 of the 2017 edition), and the mulberry silk, sheep wool, cashmere, polylactic acid fiber and their d values are added (see Chapter 4);
- The content "the d value of alginate fiber is 1.04" is changed to "the d value of alginate

fiber is 1.01" (see Chapter 6; see Chapter 5 of the 2017 edition);

-- Cashmere and its d value are added (see Chapter 7);

-- The polylactic acid fiber is added (see Chapter 9).

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 Textiles of Standardization Administration of China (SAC/TC209).

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The previous versions of this document and the documents it replaces are as follows.

Textiles - Quantitative chemical analysis - Mixtures of alginate fiber with certain other fibers

1 Scope

This document describes a method for the determination of the alginate fiber content in a two-component mixture of alginate fiber and certain other fibers after the removal of non-fibrous matter by chemical analysis.

This document applies to two-component mixtures of alginate fiber and cotton, linen, cuprammonium fiber, viscose fiber, modal fiber, lyocell fiber, polyacrylonitrile fiber, polyester fiber, polyamide fiber, spandex, mulberry silk, sheep wool, cashmere, acetate fiber, triacetate fiber or polylactic acid fiber.

NOTE. For the qualitative identification method of alginate fiber, see Appendix A.

2 Normative references

GB/T 2910.1

GB/T 2910.3

GB/T 2910.10

GB/T 2910.11

GB/T 2910.12

GB/T 2910.18

3 Terms and definitions

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

4 Two-component mixture of alginate fiber and cotton, linen,

cuprammonium fiber, viscose fiber, modal fiber, lyocell fiber, mulberry silk, sheep wool, cashmere, polyacrylonitrile fiber, polyester fiber, polyamide fiber, spandex or polylactic acid fiber (sodium carbonate method)

4.1 Principle

The sodium carbonate solution is used to dissolve and remove alginate fiber from a mixture of known dry mass, the residue is collected, washed, dried and weighed, and then the corrected mass is used to calculate its percentage to the dry mass of the mixture.

The mass fraction of alginate fiber is obtained from the difference.

4.2 Reagents

The reagents specified in GB/T 2910.1 and the following are used.

4.2.1 Sodium carbonate solution. Sodium carbonate solution with a mass fraction of 5%

(dissolve 5 g of sodium carbonate powder in 95 mL of distilled water).

4.2.2 Dilute acetic acid solution. Take 5 mL of glacial acetic acid and dilute it to 1000 mL with distilled water.

4.3 Equipment

Equipment specified in GB/T 2910.1 and the following are used.

4.3.1 Conical flask with a stopper. with a capacity of not less than 200 mL.

4.3.2 Constant temperature water bath oscillator. It is capable of reciprocating or circular oscillation at a frequency of (150 ± 10) times/min and maintaining the temperature at (50 ± 2) °C.

4.4 Test steps

Follow the general procedures specified in GB/T 2910.1, and then proceed as follows.

Place the prepared specimen in a stoppered conical flask (4.3.1) and add 100 mL of sodium carbonate solution (4.2.1) per gram of specimen to dissolve. After being fully moistened, place it in a constant temperature water bath oscillator (4.3.2) at a temperature of (50 ± 2) °C and oscillate at a frequency of (150 ± 10) times/min for 30 minutes. Filter it with a sintered-glass filter crucible with a known dry weight, and wash the residue into a sintered-glass filter crucible with a small amount of (50 ± 2) °C sodium carbonate solution (4.2.1). Drain the liquid by vacuum suction, then wash it with water, neutralize it with dilute acetic acid solution (4.2.2), and finally wash the residue with water continuously. After each wash, drain the liquid by gravity first, and then drain it by vacuum suction.

Finally, the crucible and the residue are dried, cooled and weighed.

4.5 Calculation and presentation of results

The calculation and presentation of the results are in accordance with GB/T 2910.1. The d value (correction coefficient for mass change) of spandex is 1.01, the d value of mulberry silk is 1.03, and the others are 1.00.

5 Two-component mixture of alginate fiber and polyester fiber

(sulfuric acid method)

5.1 Principle

75% (mass fraction) sulfuric acid reagent is used to dissolve and remove alginate fiber from a mixture of known dry mass, the residue is collected, washed, dried and weighed, and the corrected mass is used to calculate its percentage to the dry mass of the mixture.

The mass fraction of alginate fiber is obtained from the difference.

5.2 Reagents, instruments, test procedures, calculation and expression of results

The reagents, instruments, test procedures, calculation and expression of results involved shall be in accordance with GB/T 2910.11. The d value of polyester fiber is 1.00.

6 Two-component mixture of alginate fiber and

polyacrylonitrile fiber or spandex (dimethylformamide method) The principles, reagents, instruments, test procedures, calculation and expression of results involved shall be in accordance with GB/T 2910.12. The d value of alginate fiber is 1.01.

7 Two-component mixture of alginate fiber and sheep wool or

cashmere (sulfate method)