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

GB/T 2910.21-2009

**Textiles -- Quantitative chemical analysis -- Part 21: Mixtures of
chlorofibre, certain modacrylics, certain elastane, acetates, triacetates
and certain other fibers (method of using dimethylacetamide)**

(English Translation)

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Foreword

GB/T 2910 "Textiles - Quantitative Chemical Analysis" includes the following parts.

- Part 1.General principles of testing;
- Part 2.Ternary fiber mixture;
- Part 3.Mixtures of acetate and certain other fibres (method using acetone);
- Part 4.Mixtures of certain protein and certain other fibers (method using hypochlorite);
- Part 5.Mixtures of viscose, cupro or modal and cotton fibres (method using sodium zincate);
- Part 6.Mixtures of viscose or certain types of cupro or modal or lyocell and cotton fibres (method using formic acid and zinc chloride);
- Part 7.Mixtures of polyamide and certain other fibres (method using formic acid);
- Part 8.Mixtures of acetate and triacetate fibres (method using acetone);
- Part 9.Mixtures of acetate and triacetate fibres (method using benzyl alcohol);
- Part 10.Mixtures of triacetate or polylactide and certain other fibres (method using

dichloromethane);

- Part 11. Mixtures of cellulose and polyester fibres (method using sulfuric acid);
- Part 12. Mixtures of acrylic, certain modacrylic, certain chlorofibres, certain elastanes and certain other fibres (method using dimethylformamide);
- Part 13. Mixtures of certain chlorofibers and certain other fibers (method using carbon disulfide/acetone);
- Part 14. Mixtures of acetate and certain chlorofibres (method using acetic acid);
- Part 15. Mixtures of jute and certain animal fibres (method by determining nitrogen content);
- Part 16. Mixtures of polypropylene and certain other fibres (method using xylene);
- Part 17. Mixtures of chlorofibers (homopolymers of vinyl chloride) and certain other fibers (method using sulfuric acid);
- Part 18. Mixtures of silk and wool or hair (method using sulfuric acid);

Textiles - Quantitative chemical analysis - Part 21. Mixtures of chlorofibers, certain modacrylics, certain elastanes, acetates, triacetates and certain other fibers (method using cyclohexanone)

1 Scope

This Part of GB/T 2910 specifies the method for determining the content of chlorinated fibers, modified polyacrylonitrile fibers, elastic fibers, acetate fibers, triacetate fibers in a mixture composed of the following fibers after removing non-fiber substances by the cyclohexanone method.

- Acetate fibers, triacetate fibers, chlorinated fibers, certain modified polyacrylonitrile fibers, certain elastic fibers

AND

- Wool, animal hair, silk, cotton, cuprammonium fibers, modal fibers, viscose fibers, polyamide fibers, polyacrylonitrile fibers, glass fibers.

When containing modified polyacrylonitrile fibers or elastic fibers, preliminary tests

must be conducted to determine whether the fibers are completely soluble in the reagent. The methods specified in GB/T 2910.13 or GB/T 2910.17 may also be used to analyze mixtures containing chlorinated fibers.

2 Normative references

The clauses in the following documents become clauses of this Part through reference in this part of GB/T 2910. For dated references, all subsequent amendments (excluding errata) or revisions are not applicable to this Part. However, parties reaching an agreement based on this Part are encouraged to study whether the latest versions of these documents can be used. For undated references, the latest versions apply to this Part.

GB/T 2910.1 Textiles - Quantitative chemical analysis - Part 1. General principles of testing (GB/T 2910.1-2009, ISO 1833-1:2006, IDT)

3 Principle

Use cyclohexanone reagent near the boiling point to dissolve acetate, triacetate, chlorinated fibers, certain modified polyacrylonitrile fibers, certain elastic fibers from a mixture of known dry mass. Collect the residue. Wash, dry, weigh it. Use the corrected mass to calculate its percentage of the dry mass of the mixture. The difference is used to obtain the mass percentage of chlorinated fiber, modified polyacrylonitrile fiber, elastic fiber, acetate fiber, triacetate fiber.

4 Reagents

Use the reagents specified in GB/T 2910.1 and 4.1 and 4.2 of this Part.

4.1 Cyclohexanone, which has a boiling point of 156 °C.

4.2 50% ethanol solution (volume fraction).

Safety warning. Cyclohexanone is flammable and toxic. Take appropriate protective measures when using it.

5 Equipment

Use the equipment specified in GB/T 2910.1 and 5.1 to 5.5 of this Part.

5.1 Hot extraction device (see Appendix A).

Note: This is a variant of the device introduced in reference [3].

5.3 Porous baffle (porosity level 1), flat round glass plug, with glass filter material in

the middle.

The porous baffle is placed on the glass crucible.

6 Test steps

Follow the general procedure specified in GB/T 2910.1. Then follow the steps below.

Add cyclohexanone (4.1) to the distillation flask at a ratio of 100 mL per gram of

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