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Textiles - Quantitative chemical analysis - Part 25: Mixtures of polyester and certain other fibers (method using trichloroacetic acid and chloroform)

纺织品 定量化学分析 第 25 部分：聚酯纤维与某些其他纤维的混合物（三氯乙酸/三氯甲烷法）

(ISO 1833-25:2013, MOD)

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Standardization Administration of PRC.

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Foreword

GB/T 2910 "Textiles - Quantitative chemical analysis" contains the following parts:

- Part 1: General principles of testing;
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- Part 4: Mixtures of certain protein and certain other fibers (method using hypochlorite);
- Part 5: Mixtures of viscose, cupro or modal and cotton fibers (method using sodium zincate);
- Part 6: Mixtures of viscose or certain types of cupro or modal or lyocell and cotton fibers (method using formic acid and zinc chloride);
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- Part 15: Mixtures of jute and certain animal fibers (method by determining nitrogen content);
- Part 16: Mixtures of polypropylene and certain other fibers (method using xylene);
- Part 17: Mixtures of chloro-fibers (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 25: Mixtures of polyester and certain other fibers (method using trichloroacetic acid and chloroform)

Caution - Persons using this Part shall have practical experience in formal laboratory work. This Part does not address all possible security issues. It is the user's responsibility to take appropriate safety and health measures and ensure compliance with the conditions stipulated by the relevant national laws and regulations.

1 Scope

This Part of GB/T 2910 stipulates the method for determination of polyester fiber content of the bi-component mixture of polyester fiber and cellulose fiber (cotton, flax, ramie, viscose fiber, modal fiber, lyocell fiber, cupro ammonia fiber), animal hair fiber (wool, cashmere, etc.), synthetic fiber (polyacrylonitrile fiber, aramid fiber), after removal of non-fiber substances, by the trichloroacetic acid and chloroform method.

This Part applies to mixtures of polyester fibers and certain other fibers.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

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 Principles

Dissolve and remove polyester fibers from a mixture of known dry mass, using trichloroacetic acid/chloroform solution. Collect the residue. Rinse, dry and weigh it. Use the corrected mass, to calculate the percentage of the dry mass of the mixture. The mass percentage of polyester fiber is obtained from the difference.

4 Reagents

Use the reagents specified in GB/T 2910.1 and 4.1, 4.2 and 4.3 of this Part.

4.1 Trichloroacetic acid/chloroform solution: Prepare trichloroacetic acid and chloroform, in a mass ratio of 1:1.

Safety warning: This reagent is harmful to the human body, so proper protective measures shall be taken when using it.

4.2 Trichloroacetic acid/chloroform lotion: Add chloroform to 15 g of trichloroacetic acid, until reaching 100 g.

4.3 Chloroform.

5 Devices

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

5.1 Conical flask: The capacity is not less than 200 mL, with a glass stopper.

6 Test steps

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

6.1 Put the specimen into the conical flask.

6.2 Add 50 mL of trichloroacetic acid/chloroform solution (4.1), to each gram of specimen.

6.3 Cover the glass stopper. Shake the conical flask vigorously.

6.4 Place the conical flask containing the specimen for 15 min. Shake it from time to time.

6.5 Pour the liquid into a glass sand core crucible. Drain the liquid by suction.

6.6 Pour 100 mL of trichloroacetic acid/chloroform solution (4.1) into the conical flask. Then pour the liquid into a glass sand core crucible. Then use trichloroacetic acid/chloroform washing solution (4.2) and chloroform (4.3), to wash all the residues in the conical flask into a glass sand core crucible.

6.7 For each cleaning, the liquid shall be drained by gravity first, then drained by suction.

6.8 Finally, dry the glass sand core crucible and its residue. Cool it down. Weigh it.

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