INTERNATIONAL STANDARD

ISO 1833-10

First edition
2006-06-01

Textiles — Quantitative chemical analysis —

Part 10: Mixtures of triacetate or polylactide and certain other fibres (method using dichloromethane)

Textiles — Analyse chimique quantitative —

Partie 10: Mélanges de triacétate ou de polylactide et de certaines autres fibres (méthode au dichlorométhane)

Reference number
ISO 1833-10:2006(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 1833-10 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This first edition of ISO 1833-10 cancels and replaces Clause 9 of ISO 1833:1977.

ISO 1833:1977 will be cancelled and replaced by ISO 1833-1, ISO 1833-3, ISO 1833-4, ISO 1833-5, ISO 1833-6, ISO 1833-7, ISO 1833-8, ISO 1833-9, ISO 1833-10, ISO 1833-11, ISO 1833-12, ISO 1833-13, ISO 1833-14, ISO 1833-15, ISO 1833-16, ISO 1833-17, ISO 1833-18 and ISO 1833-19.

ISO 1833 consists of the following parts, under the general title *Textiles — Quantitative chemical analysis*:

— *Part 1: General principles of testing*

— *Part 2: Ternary fibre mixtures*

— *Part 3: Mixtures of acetate and certain other fibres (method using acetone)*

— *Part 4: Mixtures of certain protein and certain other fibres (method using hypochlorite)*

— *Part 5: Mixtures of viscose, cupro or modal and cotton fibres (method using sodium zincate)*

— *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 modacrylics, certain chlorofibres, certain elastanes and certain other fibres (method using dimethylformamide)*

— *Part 13: Mixtures of certain chlorofibres and certain other fibres (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 fibres and certain other fibres (method using xylene)*

— *Part 17: Mixtures of chlorofibres (homopolymers of vinyl chloride) and certain other fibres (method using sulfuric acid)*

— *Part 18: Mixtures of silk and wool or hair (method using sulfuric acid)*

— *Part 19: Mixtures of cellulose fibres and asbestos (method by heating)*

— *Part 21: Mixtures of chlorofibres, certain modacrylics, certain elastanes, acetates, triacetates and certain other fibres (method using cyclohexanone)*

The following parts are under preparation:

— *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 20: Mixtures of elastane and certain other fibres (method using dimethylacetamide)*

— *Part 22: Mixtures of viscose or certain types of cupro or modal or lyocell and flax fibres (method using formic acid and zinc chlorate)*

— *Part 23: Mixtures of polyethylene and polypropylene (method using cyclohexanone)*

— *Part 24: Mixtures of polyester and some other fibres (method using phenol and tetrachloroethane)*

Textiles — Quantitative chemical analysis —

Part 10: Mixtures of triacetate or polylactide and certain other fibres (method using dichloromethane)

1 Scope

This part of ISO 1833 specifies a method, using dichloromethane, to determine the percentage of triacetate, after removal of non-fibrous matter, in textiles made of binary mixtures of

— triacetate or polylactide

and

— wool, regenerated protein, cotton (scoured, kiered, or bleached), viscose, cupro, modal, polyamide, polyester, acrylic and glass fibres.

Triacetate fibres which have received a finish leading to partial hydrolysis cease to be completely soluble in the reagent. In such cases, this method is not applicable.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1833-1, *Textiles — Quantitative chemical analysis — Part 1: General principles of testing*

3 Principle

The triacetate fibre is dissolved out from a known dry mass of the mixture, with dichloromethane. The residue is collected, washed, dried and weighed; its mass, corrected if necessary, is expressed as a percentage of the dry mass of the mixture. The percentage of triacetate is found by the difference.

4 Reagents

Use the reagents described in ISO 1833-1 together with that given in 4.1.

4.1 Dichloromethane (methylene chloride).

SAFETY PRECAUTIONS — The toxic effects of this reagent shall be borne in mind and full precautions shall be taken during use.

5 Apparatus

Use the apparatus described in ISO 1833-1 together with that given in 5.1.

5.1 Conical flask, minimum capacity 200 ml, glass-stoppered.

6 Test procedure

Follow the general procedure given in ISO 1833-1, and then proceed as follows.

To the specimen contained in the conical flask, add 100 ml of dichloromethane per gram of specimen. Insert the stopper, shake the flask to wet out the specimen, and allow the flask to stand for 30 min, shaking it at intervals of about 10 min.

Decant the liquid through the weighed filter crucible.

Add 60 ml of dichloromethane to the residue in the flask, shake it by hand, and filter the contents of the flask through the filter crucible. Transfer any residual fibres to the crucible by washing out the flask with a little more dichloromethane.

Drain the crucible using suction, refill the crucible with dichloromethane, and allow it to drain under gravity.

Finally, drain the crucible using suction. Rinse with hot water, dry the crucible and residue, then cool and weigh them.

7 Calculation and expression of results

Calculate the results as described in the general instructions of ISO 1833-1.

The value of d is 1,00 except for polyester fibre, for which d is 1,01.

In the case of triacetate that is not completely soluble in the reagent, the percentage of triacetate is calculated using a value of $d = 1{,}02$. The percentage of triacetate thus calculated should be deducted from 100 to give the percentage of the other fibre.

8 Precision

On a homogeneous mixture of textile materials, the confidence limits of the results obtained by this method are not greater than ± 1 for the confidence level of 95 %.

ICS 59.060.01

Price based on 2 pages