INTERNATIONAL STANDARD

ISO 1833-11

Second edition
2017-08

Textiles — Quantitative chemical analysis —

Part 11: Mixtures of certain cellulose fibres with certain other fibres (method using sulfuric acid)

Textiles — Analyse chimique quantitative —

Partie 11: Mélanges de certaines fibres de cellulose avec certaines autres fibres (méthode à l'acide sulfurique)

Reference number
ISO 1833-11:2017(E)

© ISO 2017



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Principle **1**
5 Reagents **1**
6 Apparatus **2**
7 Test procedure **2**
8 Calculation and expression of results **2**
9 Precision **2**

© ISO 2017 – All rights reserved

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (ISO 1833-11:2006), which has been technically revised.

The main changes compared to the previous edition are as follows:

— the title was changed from "Mixtures of certain cellulose fibres **and** certain other fibres…" to "Mixtures of certain cellulose fibres **with** certain other fibres"; the subject was extended from "polyester" to "certain other fibres";

— in Clause 1, some remaining fibres were added;

— in Clause 8, a specific *d* factor for the propylene/polyamide bicomponent was added;

— in Clause 9, "percentage point" was added to avoid confusion.

A list of all parts in the ISO 1833 series can be found on the ISO website.

© ISO 2017 – All rights reserved

Textiles — Quantitative chemical analysis —

Part 11: Mixtures of certain cellulose fibres with certain other fibres (method using sulfuric acid)

1 Scope

This document specifies a method, using sulfuric acid, to determine the mass percentage of cellulose fibres, after removal of non-fibrous matter, in textiles made of mixtures of

— natural and man-made cellulose fibres, such as cotton, flax, hemp, ramie, viscose, cupro, modal, lyocell

with

— polyester, polypropylene, elastomultiester, elastolefin and polypropylene/polyamide bicomponent.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

The cellulose fibre is dissolved out from a known dry mass of the mixture, with 75 % (mass fraction) sulfuric acid. The residue is collected, washed, dried and weighed; its mass is expressed as a percentage of the dry mass of the mixture. The proportion of cellulose fibre is found by the difference.

5 Reagents

Use the reagents described in ISO 1833-1 together with those given in 5.1 and 5.2.

5.1 Sulfuric acid, 75 % (mass fraction).

A suitable reagent can be prepared by adding carefully, while cooling, 700 ml of concentrated sulfuric acid (ρ = 1,84 g/ml at 20 °C) to 350 ml of distilled water. After the solution has cooled to room temperature, dilute it to 1 l with water. The concentration is not critical within the range 73 % to 77 % (mass fraction) sulfuric acid.

© ISO 2017 – All rights reserved