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Textiles — Quantitative chemical analysis —

Part 26: Mixtures of melamine with certain other fibres (method using hot formic acid)

Textiles — Analyse chimique quantitative —

Partie 26: Mélanges de fibres de mélamine avec certaines autres fibres (méthode à l'acide formique chaud)

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Foreword

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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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 38, *Textiles*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 248, *Textiles and textile products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 1833-26:2013) which has been technically revised. The main changes compared to the previous editions are as follows:

— the title has been changed from "Mixtures of melamine and cotton or aramid fibres…." to "Mixtures of melamine with certain other fibres…";

— the general warning has been moved to ISO 1833-1;

— in Clause 1, polypropylene has been added as remaining fibre;

— in Clause 8, "percentage point" has been added to avoid confusion.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Textiles — Quantitative chemical analysis —

Part 26: Mixtures of melamine with certain other fibres (method using hot formic acid)

1 Scope

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

— melamine fibres

with

— cotton, polypropylene or aramid fibres.

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 melamine fibre is dissolved out from a known dry mass of the mixture with hot formic acid (90 % by mass). 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 melamine is obtained by difference.

5 Reagents

5.1 General

Use the reagents described in ISO 1833-1, together with those specified in 5.2 and 5.3.

5.2 Formic acid (90 % mass fraction, relative density at 20 °C: 1,204 g/ml)

Dilute 890 ml of 98 to 100 % mass fraction formic acid (relative density at 20 °C: 1,220 g/ml) to 1 l with water.

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

5.3 Ammonia, dilute solution

Dilute 80 ml of concentrated ammonia solution (relative density at 20 °C: 0,880 g/ml) to 1 l with water.

6 Apparatus

6.1 General

Use the apparatus described in ISO 1833-1, together with those described in 6.2 and 6.3.

6.2 Conical flask, of minimum capacity of 200 ml, glass stopper.

6.3 Shaking water bath, or other apparatus, having a reciprocating or circularly platform at a frequency of about 160 cycles per minute (respectively 160 "to-and-fro" per min or 160 min^{-1}), and maintain the flask (6.2) at (90 ± 2) °C.

7 Test procedure

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

7.1 Place the specimen in the conical flask.

7.2 Add 100 ml of formic acid reagent (5.2) per gram of specimen.

7.3 Insert the stopper and shake the conical flask to wet out the specimen.

7.4 Maintain the conical flask in a shaking water bath (6.3) at (90 ± 2) °C for one hour, shaking it vigorously.

NOTE The solubility of melamine is very much dependent on the temperature.

7.5 Cool the conical flask to room temperature.

7.6 Decant the liquid through the weighed filter crucible.

7.7 Add further 50 ml of formic acid reagent (5.2) to the conical flask containing the residue, shake manually and filter the contents of the conical flask through the filter crucible.

7.8 Transfer any residual fibres to the crucible by washing out the conical flask with a little more formic acid reagent.

7.9 Drain the crucible with suction and wash the residue with formic acid reagent, hot water, dilute ammonia solution (5.3), and finally cold water, draining the crucible with suction after each addition.

7.10 Do not apply suction until each washing liquor has drained under gravity.

