SRI LANKA STANDARD 1388 PART 16: 2022
(ISO 1833-16:2019)

METHOD FOR QUANTITATIVE CHEMICAL ANALYSIS OF TEXTILES – PART 16 – MIXTURES OF POLYPROPYLENE FIBRES WITH CERTAIN OTHER FIBRES (METHOD USING XYLENE)

(First Revision)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard

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(First Revision)

SLS 1388 -16: 2022
(ISO 1833-16:2019)

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Sri Lanka Standard
METHOD FOR QUANTITATIVE CHEMICAL ANALYSIS OF TEXTILES – PART 16 – MIXTURES OF POLYPROPYLENE FIBRES WITH CERTAIN OTHER FIBRES (METHOD USING XYLENE)
(First Revision)

NATIONAL FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Textiles and Garment, and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2022-07-07.

This is the first revision of **SLS 1388 - 16**, Method for quantitative chemical analysis of textiles -
Mixtures of polypropylene fibres with certain other fibres (method using xylene), which is the direct adoption of **ISO 1833 - 16**.

In 2019, **ISO 1833 – 16** has been revised for the first time with some important technical changes. Therefore, the corresponding national Standard is found as necessary to be revised accordingly.

TERMINOLOGY AND CONVENTIONS

The text of the International Standard has been accepted as suitable for publication without deviation, as a Sri Lanka Standard. However certain terminology and conventions are not identical with those used in Sri Lanka Standards. Attention is therefore drawn to the following:

a) Wherever the words “International Standard” appear referring to this standard they should be interpreted as “Sri Lanka Standard”.

b) The comma has been used throughout as a decimal marker. In Sri Lanka Standards it is the current practice to use a full point on the baseline as the decimal marker.

c) Whenever page numbers are quoted, they are ISO page numbers.

CROSS REFERENCES

International Standard	**Corresponding Sri Lanka Standard**
ISO 1833-1, Textiles – Quantitative chemical analysis – General principles of testing	SLS 1388-1, Method for quantitative chemical analysis of textiles – General principles of testing

…….

SLS 1388-16: 2022

INTERNATIONAL STANDARD

ISO 1833-16

Second edition
2019-04

Textiles — Quantitative chemical analysis —

Part 16: Mixtures of polypropylene fibres with certain other fibres (method using xylene)

Textiles — Analyse chimique quantitative —

Partie 16: Mélanges de fibres de polypropylène avec certaines autres fibres (méthode au xylène)

Reference number
ISO 1833-16:2019(E)

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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).

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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 1833-16:2006), which has been technically revised. The main changes compared to the previous editions are as follows:

— the title has been changed from "Mixtures of polypropylene fibres **and** certain other fibres…" to "Mixtures of polypropylene fibres **with** certain other fibres…";

— in Clause 1, some remaining fibres have been added;

— Clause 3, Terms and definitions, has been added and the subsequent clauses have been renumered;

— in Clause 6 (former Clause 5), a heating mantle device has been added;

— in Clause 7 (former Clause 6), some precise details have been added in the test procedure;

— in Clause 8 (former Clause 7), a specific *d* factor for melamine and polyacrylate has been added;

— in Clause 9 (former 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.

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INTERNATIONAL STANDARD **ISO 1833-16:2019(E)**

Textiles — Quantitative chemical analysis —

Part 16: Mixtures of polypropylene fibres with certain other fibres (method using xylene)

1 Scope

This document specifies a method, using xylene, to determine the mass percentage of polypropylene, after removal of non-fibrous matter, in textiles made of mixtures of

— polypropylene fibres

with

— wool, animal hair, silk, cotton, viscose, cupro, modal, lyocell, acetate, triacetate, polyamide, polyester, acrylic, glass fibres, elastomultiester, melamine and polyacrylate.

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 polypropylene fibre is dissolved from a known dry mass of the mixture with boiling xylene. 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 polypropylene is found by the difference.

5 Reagents

Use the reagent described in ISO 1833-1 as light petroleum together with that given in 5.1.

5.1 Xylene, boiling range from 136 °C to 145 °C.

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

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6 Apparatus

Use the apparatus described in ISO 1833-1 together with those given in 6.1, 6.2 and 6.3.

6.1 Round bottom flasks, of minimum capacity 200 ml, glass stoppered.

6.2 Reflux condenser, suitable for liquids of high boiling point, fitting the round bottom flasks.

6.3 Heating mantle device, suitable for the round bottom flask (6.1) and for boiling point of xylene (5.1).

7 Test procedure

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

Preheat the filter crucible through which the xylene is to be filtered in the oven at 105 °C.

To the specimen contained in the round bottom flask, add 100 ml of the xylene per gram of specimen. Attach the condenser and boil the contents for 3 min.

Alternatively, hot extraction apparatus, (e.g. as described in ISO 1833-21) using the appropriate procedures, giving identical results, may be used. See for example, the apparatus described in Reference [2].

Immediately decant the hot liquid through the hot weighed filter crucible.

Repeat this treatment twice more, each time using a fresh 50 ml portion of solvent.

Wash the residue remaining in the flask successively with 30 ml of boiling xylene (twice).

After the treatment with boiling xylene, ensure that the flask containing the residue is cooled sufficiently before the light petroleum is introduced.

Then wash the residue remaining in the flask with 75 ml of the light petroleum (twice).

After the second wash with light petroleum, filter the residue through the filter crucible and allow it to drain.

Finally, dry the crucible and residue, then cool and weigh them.

8 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 melamine and polyacrylate, for which "d" is 1,01.

9 Precision

For homogeneous mixtures of textile materials, the confidence limits of results obtained by this method are not greater than ±1 percentage point for the confidence level of 95 %.

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Bibliography

[1] ISO 1833-21, *Textiles — Quantitative chemical analysis — Part 21: Mixtures of chlorofibres, certain modacrylics, certain elastanes, acetates, triacetates with certain other fibres (method using cyclohexanone)*

[2] Melliand-Textilberichte : *European textile journal* (1975), pp. 643-645

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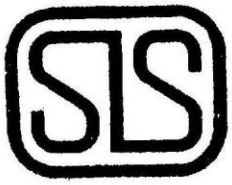

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