SLOVENSKI STANDARD
SIST EN ISO 105-J05:2007

01-julij-2007

Tekstilije - Preskušanje barvne obstojnosti - Del J05: Instrumentalna metoda za ocenjevanje spremembe barve vzorca zaradi spremembe osvetlitve (CMCCON02) (ISO 105-J05:2007)

Textiles - Tests for colour fastness - Part J05: Method for the instrumental assessment of the colour inconstancy of a specimen with change in illuminant (CMCCONO2) (ISO 105-J05:2007)

Textilien - Farbechtheitsprüfungen - Teil J05: Verfahren zur instrumentellen Ermittlung der Farbinkonstanz einer Probe bei Änderung der Lichtart (CMCCON02) (ISO 105-J05:2007)

Textiles - Essais de solidité des teintures - Partie J05: Méthode d'évaluation instrumentale de la variation de nuance d'un échantillon en fonction de l'illuminant (CMCCONO2) (ISO 105-J05:2007)

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59.080.01 Tekstilije na splošno Textiles in general

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English Version

Textiles - Tests for colour fastness - Part J05: Method for the instrumental assessment of the colour inconstancy of a specimen with change in illuminant (CMCCONO2) (ISO 105-J05:2007)

Textiles - Essais de solidité des teintures - Partie J05: Méthode d'évaluation instrumentale de la variation de nuance d'un échantillon en fonction de l'illuminant (CMCCONO2) (ISO 105-J05:2007)

Textilien - Farbechtheitsprüfungen - Teil J05: Verfahren zur instrumentellen Bewertung der Farbbeständigkeit einer Probe bei Änderung der Lichtart (CMCCON02) (ISO 105-J05:2007)

This European Standard was approved by CEN on 28 February 2007.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 105-J05:2007) has been prepared by Technical Committee ISO/TC 38 "Textiles" in collaboration with Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 105-J05:2007 has been approved by CEN as EN ISO 105-J05:2007 without any modifications.

INTERNATIONAL STANDARD

ISO 105-J05

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Textiles — Tests for colour fastness —

Part J05: Method for the instrumental assessment of the colour inconstancy of a specimen with change in illuminant (CMCCON02)

Textiles — Essais de solidité des teintures —

Partie J05: Méthode d'évaluation instrumentale de la variation de nuance d'un échantillon en fonction de l'illuminant (CMCCON02)

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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.

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 105-J05 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

ISO 105 was previously published in 13 “parts” under the general title *Textiles — Tests for colour fastness*, each designated by a letter (e.g. “Part A”), with publication dates between 1978 and 1985. Each part contained a series of “sections”, each designated by the respective part letter and by a two-digit serial number (e.g. “Section A01”). A complete list of these parts is given in ISO 105-A01.

Textiles — Tests for colour fastness —

Part J05:
Method for the instrumental assessment of the colour inconstancy of a specimen with change in illuminant (CMCCON02)

1 Scope

This part of ISO 105 provides a colorimetric method for calculating an estimate of the magnitude (and optionally the direction) of the change in the perceived colour of a textile specimen when the chromaticity of the illumination by which it is viewed is changed. It therefore provides an estimate of the colour inconstancy of the specimen.

NOTE 1 Colour inconstancy and metamerism are related but distinct. With respect to a change in the quality of illumination,

a) colour inconstancy is the extent of change in the colour appearance of a single specimen,

b) metamerism is the extent of change in the colour difference between two specimens.

This part of ISO 105 therefore provides a method for assessing (a) but not (b).

NOTE 2 Comparison of the results of this method and those from visual assessments is valid only when the visual assessments are made

a) in lighting of the same spectral power distributions as used in the colorimetric calculations,

b) with the specimens illuminated at 1 000 lux to 4 000 lux,

c) by an assessor who is fully adapted to the relevant viewing conditions.

2 Principle

The tristimulus values (X_r, Y_r, Z_r and X, Y, Z respectively) of the specimen are measured or computed using CIE Standard Illuminant D65 as reference illuminant and an agreed test illuminant. All calculations are based upon the CIE 1964 Standard Colorimetric Observer. A chromatic adaptation transform (CAT02 simplified appropriately for the current application) is then applied to the tristimulus values in the test illuminant to determine the tristimulus values of the corresponding colour of the specimen in illuminant D65 (X_c, Y_c, Z_c). Finally, using the colour-difference formula specified in ISO 105-J03, the colour difference between the tristimulus values of the corresponding colour in illuminant D65 (X_c, Y_c, Z_c) and the measured or computed values in illuminant D65 (X_r, Y_r, Z_r) is calculated. This colour difference is the required Colour-Inconstancy Index, CMCCON02.

NOTE 1 For further information on CMCCON02 and CAT02, see Reference [1] in the Bibliography.

NOTE 2 The corresponding colour is the colour that would have the same appearance in illuminant D65 as it has in the test illuminant.