

**Tekstiil. Värvipüsivuse katsetamine.  
Osa A03: Hall etalonskaala värvumise  
hindamiseks**

Textiles - Tests for colour fastness - Part A03: Grey  
scale for assessing staining

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 20105-A03:2000 sisaldab Euroopa standardi EN 20105-A03:1994 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 10.05.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 20105-A03:2000 consists of the English text of the European standard EN 20105-A03:1994.</p> <p>This document is endorsed on 10.05.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**ICS** 59.080.01

**Võtmesõnad:** hall skaala, katsed, määramine, tekstiil, värvid, värvipüsivus, värvumisaste

Descriptors: Textiles, colour fastness, grey scale, staining.

**English version**

Textiles

**Tests for colour fastness**

Part A03: Grey scale for assessing staining  
(ISO 105-A03:1993)

Textiles; essais de solidité des teintures.  
Partie A03: Échelle de gris pour  
l'évaluation des décolorations  
(ISO 105-A03:1993)

Textilien; Farbechtheitsprüfungen.  
Teil A03: Graumaßstab zur Bewertung  
des Anblutens (ISO 105-A03:1993)

This European Standard was approved by CEN on 1994-08-09 and is identical to the ISO Standard as referred to.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## Foreword

International Standard

ISO 105-A03 Textiles; tests for colour fastness; grey scale for assessing staining

has been taken over as a European Standard by CEN/TC 248 'Textiles and textile products' from the work of ISO/TC 38 'Textiles' of the International Organization for Standardization (ISO).

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by February 1995 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## Endorsement notice

The text of the International Standard ISO 105-A03:1993 was approved by CEN as a European Standard without any modification.

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## 1 Scope

This part of ISO 105 describes the grey scale for determining staining of adjacent fabrics in colour fastness tests, and its use. A precise colorimetric specification of the scale is given as a permanent record against which newly prepared working standards and standards that may have changed can be compared.

## 2 Principle

**2.1** The essential or 5-step, scale consists of five pairs of non-glossy grey or white colour chips (or swatches of grey or white cloth), which illustrate the perceived colour differences corresponding to fastness ratings 5, 4, 3, 2 and 1. This essential scale may be augmented by the provision of similar chips or swatches illustrating the perceived colour differences corresponding to the half-step fastness ratings 4-5, 3-4, 2-3 and 1-2, such scales being termed 9-step scales. The first member of each pair is white in colour and the second member of the pair illustrating fastness rating 5 is identical with the first member. The second members of the remaining pairs are increasingly darker in colour so that each pair illustrates increasing contrasts or perceived colour differences which are defined colorimetrically. The full colorimetric specification is given below.

**2.2** The chips or swatches shall be white or neutral grey in colour and shall be measured with a spectrophotometer with the specular component included. The colorimetric data shall be calculated using CIE 1964 supplementary standard colorimetric system (10° observer data) for illuminant D<sub>65</sub>.

**2.3** The Y tristimulus value of the first member (white) of each pair shall be not less than 85.

**2.4** The second member of each pair shall be such that the colour difference between it and the adjacent first member is as follows:

Fastness grade	CIELAB difference	Tolerance
5	0	0,2
(4-5)	2,2	± 0,3
4	4,3	± 0,3
(3-4)	6,0	± 0,4
3	8,5	± 0,5
(2-3)	12,0	± 0,7
2	16,9	± 1,0
(1-2)	24,0	± 1,5
1	34,1	± 2,0

(Bracketed values apply only to the 9-step scale.)

**2.5 Use of the scale.** Place a piece of the unstained, adjacent fabric (the original piece) and the piece which has been part of a composite specimen in a fastness test (the tested specimen) side by side in the same plane. The surrounding field should be neutral grey colour approximately midway between that illustrating grade 1 and that illustrating grade 2 of the grey scale for assessing change in colour (this is approximately Munsell N5). If necessary to avoid effects of the backing on the appearance of the textiles, use two or more layers of the unstained undyed textile under both original and treated pieces. Illuminate the surfaces with north sky light in the Northern hemisphere, south sky light in the Southern hemisphere, or an equivalent source with an illumination of 600 lx or more. The light should be incident upon the surfaces at approximately 45°, and the direction of viewing approximately perpendicular to the plane of the surfaces. Compare the visual difference between the original piece and the tested specimen with the differences represented by the grey scale.