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# Textiles - Tests for colour fastness - Part A01: General principles of testing (ISO 105-A01:2010)

## I.S. EN ISO 105-A01:2010

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English Version

**Textiles - Tests for colour fastness - Part A01: General  
principles of testing (ISO 105-A01:2010)**

Textiles - Essais de solidité des coloris - Partie A01:  
Principes généraux pour effectuer les essais (ISO 105-  
A01:2010)

Textilien - Farbechtheitsprüfungen - Teil A01: Allgemeine  
Prüfgrundlagen (ISO 105-A01:2010)

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## **Foreword**

This document (EN ISO 105-A01:2010) 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of an identical text or by endorsement, at the latest by July 2010, and conflicting national standards shall be withdrawn at the latest by July 2010.

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**Textiles — Tests for colour fastness —**  
**Part A01:**  
**General principles of testing**

*Textiles — Essais de solidité des coloris —*

*Partie A01: Principes généraux pour effectuer les essais*



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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-A01 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

This sixth edition cancels and replaces the fifth edition (ISO 105-A01:1994), which has been revised to list the current ISO 105 standards, Clause 2 has been editorially revised, and other editorial revisions have been made to update the fifth edition.

ISO 105 consists of the following parts, under the general title *Textiles — Tests for colour fastness*:

### **General principles:**

- *Part A01: General principles of testing*
- *Part A02: Grey scale for assessing change in colour*
- *Part A03: Grey scale for assessing staining*
- *Part A04: Method for the instrumental assessment of the degree of staining of adjacent fabrics*
- *Part A05: Instrumental assessment of change in colour for determination of grey scale rating*
- *Part A06: Instrumental determination of 1/1 standard depth of colour*
- *Part A08: Vocabulary used in colour measurement*
- *Part A11: Determination of colour fastness grades by digital imaging techniques (under development)*

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- *Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*
- *Part B03: Colour fastness to weathering: Outdoor exposure*
- *Part B04: Colour fastness to artificial weathering: Xenon arc fading lamp test*

- *Part B05: Detection and assessment of photochromism*
- *Part B06: Colour fastness and ageing to artificial light at high temperatures: Xenon arc fading lamp test*
- *Part B07: Colour fastness to light of textiles wetted with artificial perspiration*
- *Part B08: Quality control of blue wool reference materials 1 to 7*
- *Part B10: Artificial weathering — Exposure to filtered xenon-arc radiation (under development)*

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- *Part C07: Colour fastness to wet scrubbing of pigment printed textiles*
- *Part C08: Colour fastness to domestic and commercial laundering using a non-phosphate reference detergent incorporating a low temperature bleach activator*
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- *Part D02: Colour fastness to rubbing: Organic solvents*

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- *Part E02: Colour fastness to sea water*
- *Part E03: Colour fastness to chlorinated water (swimming-pool water)*
- *Part E04: Colour fastness to perspiration*
- *Part E05: Colour fastness to spotting: Acid*
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- *Part E09: Colour fastness to potting*
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- *Part F03: Specification for polyamide adjacent fabric*
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- *Part F06: Specification for silk adjacent fabric*
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- *Part F10: Specification for adjacent fabric: Multifibre*

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— *Part Z03: Intercompatibility of basic dyes for acrylic fibres*

- *Part Z04: Dispersibility of disperse dyes*
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- *Part Z09: Determination of cold water solubility of water-soluble dyes*
- *Part Z10: Determination of relative colour strength of dyes in solution*
- *Part Z11: Evaluation of speckiness of colorant dispersions*

# Textiles — Tests for colour fastness —

## Part A01: General principles of testing

### 1 Scope

This part of ISO 105 provides general information about the methods for testing colour fastness of textiles for the guidance of users. The uses and limitations of the methods are pointed out, several terms are defined, an outline of the form of the methods is given and the contents of the clauses constituting the methods are discussed. Procedures common to a number of the methods are discussed briefly.

Colour fastness means the resistance of the colour of textiles to the different agents to which these materials may be exposed during manufacture and their subsequent use. The change in colour and staining of undyed adjacent fabrics are assessed as fastness ratings. Other visible changes in the textile material under test, for example surface effects, change in gloss or shrinkage, are considered as separate properties and reported as such.

The methods can be used not only for assessing colour fastness of textiles but also for assessing colour fastness of dyes. When a method is so used, the dye is applied to the textile in specified depths of colour by stated procedures and the material is then tested in the usual way.

For the most part, individual methods are concerned with colour fastness to a single agent, as the agents of interest in a particular case, and the order of application, will generally vary. It is recognized that experience and future developments in practice can justify procedures in which two or more agents are combined.

The conditions in the tests have been chosen to correspond closely to treatments usually employed in manufacture and to conditions of ordinary use. At the same time, they have been kept as simple and reproducible as possible. As it cannot be hoped that the tests will duplicate all the conditions under which textiles are processed or used, the fastness ratings are interpreted according to the particular needs of each user. They provide, however, a common basis for testing and reporting colour fastness.

### 2 Normative references

The following referenced documents are indispensable for the application 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 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-A03, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*

ISO 105-A04, *Textiles — Tests for colour fastness — Part A04: Method for the instrumental assessment of the degree of staining of adjacent fabrics*

ISO 105-A05, *Textiles — Tests for colour fastness — Part A05: Instrumental assessment of change in colour for determination of grey scale rating*

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