STANDARD **105-B05**

Fourth edition
1993-10-15

# Textiles — Tests for colour fastness —

# Part B05:
# Detection and assessment of photochromism

*Textiles — Essais de solidité des teintures —*

*Partie B05: Détection et évaluation de la phototropie*

Reference number
ISO 105-B05:1993(E)

## 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.

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.

International Standard ISO 105-B05 was prepared by Technical Committee ISO/TC 38, *Textiles*, Sub-Committee SC 1, *Tests for coloured textiles and colorants*.

This fourth edition cancels and replaces the third edition (ISO 105-B05:1988), of which it constitutes a minor revision.

ISO 105 was previously published in thirteen "parts", 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"). These sections are now being republished as separate documents, themselves designated "parts" but retaining their earlier alphanumeric designations. A complete list of these parts is given in ISO 105-A01.



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# Textiles — Tests for colour fastness —

# Part B05:
Detection and assessment of photochromism

## 1 Scope

This part of ISO 105 specifies a method intended for detecting and assessing change in colour, after brief exposure to light, of coloured textiles which change in colour on exposure to light but which virtually return to their original shade when stored in the dark.

NOTE 1 This phenomenon used to be termed "phototropism", but the term "phototropism" is much more widely used in biological science where its meaning is entirely different. As the derivation of "phototropism" is in accord with its biological meaning, the term "photochromism" is preferable for reversible colour changes induced by light.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 105. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 105 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 105-A01:1989, *Textiles — Tests for colour fastness — Part A01: General principles of testing.*

ISO 105-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour.*

ISO 105-B01:1989, *Textiles — Tests for colour fastness — Part B01: Colour fastness to light: Daylight.*

ISO 105-B02:1988, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test.*

## 3 Principle

A specimen of the textile is exposed to light of high intensity for a time much shorter than that necessary to cause a permanent change. The change in colour of the specimen is assessed immediately after exposure, using the grey scale. The specimen is then stored in the dark and assessed again.

## 4 Reference materials and apparatus

### 4.1 Reference materials

The references used for this test are References 1 and L2 as specified in subclauses 4.1.1 and 4.1.2 of ISO 105-B01:1989.

### 4.2 Apparatus

**4.2.1 Light source**, a xenon arc lamp of correlated colour temperature 5 500 K to 6 500 K.

**4.2.2 Filter**.

A filter is placed between the light source and the specimens and references so that the ultra-violet spectrum is steadily reduced. The transmission of the