

# INTERNATIONAL STANDARD

**ISO**  
**105-C04**

Fourth edition  
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## **Textiles — Tests for colour fastness —**

### **Part C04 :**

Colour fastness to washing: Test 4

*Textiles — Essais de solidité des teintures —*

*Partie C04 : Solidité des teintures au lavage: Essai 4*



Reference number  
ISO 105-C04:1989(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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 105-C04 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This fourth edition cancels and replaces the third edition (ISO 105-C04:1987), of which it constitutes a technical revision.

ISO 105 was previously published in 13 "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 C04 :

### Colour fastness to washing: Test 4

#### 1 Scope

This part of ISO 105 specifies Test No. 4 of a series of five washing tests that have been established to investigate the fastness to washing of coloured textiles and which between them cover the range of washing procedures from mild to severe.

NOTE 1 This method is designed to determine the effect of washing only on the colour fastness of the textile. It is not intended to reflect the result of the comprehensive laundering procedure.

#### 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-A02:1987, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*.

ISO 105-A03:1987, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*.

ISO 105-F:1985, *Textiles — Tests for colour fastness — Part F: Standard adjacent fabrics*.

ISO 105-F10:1989, *Textiles — Tests for colour fastness — Part F10: Specification for adjacent fabric: Multifibre*.

#### 3 Principle

A specimen of the textile in contact with one or two specified adjacent fabrics is mechanically agitated under specified conditions of time and temperature in a soap solution, then rinsed and dried. The change in colour of the specimen and the staining of the adjacent fabric(s) are assessed with the grey scales.

#### 4 Apparatus and reagents

**4.1 Suitable mechanical device** (see clause 8), consisting of a water bath containing a rotatable shaft which supports, radially, glass or stainless-steel containers  $75 \text{ mm} \pm 5 \text{ mm}$  in diameter  $\times$   $125 \text{ mm} \pm 10 \text{ mm}$  high of  $550 \text{ ml} \pm 50 \text{ ml}$  capacity, the bottom of the containers being  $45 \text{ mm} \pm 10 \text{ mm}$  from the centre of the shaft. The shaft/container assembly is rotated at a frequency of  $40 \text{ min}^{-1} \pm 2 \text{ min}^{-1}$ . The temperature of the water bath is thermostatically controlled to maintain the test solution at the prescribed temperature of  $95 \text{ }^{\circ}\text{C} \pm 2 \text{ }^{\circ}\text{C}$ .

**4.2 Non-corrodible (stainless) steel balls**, approximately 6 mm in diameter.

**4.3 Soap**, containing not more than 5 % moisture and complying with the following requirements based upon dry mass:

- free alkali, calculated as  $\text{Na}_2\text{CO}_3$ : 0,3 % maximum;
- free alkali, calculated as NaOH: 0,1 % maximum;