INTERNATIONAL STANDARD

ISO 105-E08

Third edition
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Textiles — Tests for colour fastness —

Part E08:
Colour fastness to hot water

Textiles — Essais de solidité des teintures —
Partie E08: Solidité des teintures à l'eau chaude

Reference number
ISO 105-E08:1994(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-E08 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

This third edition cancels and replaces the second edition (ISO 105-E08:1987), of which it constitutes a technical 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 E08:
Colour fastness to hot water

1 Scope

This part of ISO 105 specifies a method for determining the resistance of the colour of textiles of all kinds and in all forms to the action of hot water. The method is mainly applicable to wool and textiles containing wool.

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-A01:1994, *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-A03:1993, *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.*

3 Principle

A specimen of the textile in contact with adjacent fabrics is rolled around a glass rod, treated with slightly acidified hot water and dried. The change in colour of the specimen and the staining of the adjacent fabrics are assessed by comparison with the grey scales.

4 Apparatus and reagent

4.1 Vessel, to hold a cylindrical specimen 40 mm long in hot water, **fitted with reflux condenser** to reduce evaporation.

4.2 Thermostatically controlled bath, to maintain the contents of the vessel (4.1) at 70 °C ± 2 °C.

4.3 Glass rod, 5 mm to 8 mm in diameter.

4.4 Wool adjacent fabric, complying with section F01 of ISO 105-F:1985, measuring 40 mm × 100 mm.

4.5 Cotton adjacent fabric complying with section F02 of ISO 105-F:1985, or, in the case of blends, adjacent fabric made from the kind of fibre admixtured with the wool, complying with the relevant section F03 to F08 of ISO 105-F:1985, in each case measuring 40 mm × 100 mm.

4.6 Grade 3 water (see ISO 105-A01:1994, subclause 8.1), if necessary acidified with acetic acid to pH 6 ± 0,5.

4.7 Grey scale for assessing change in colour complying with ISO 105-A02 and **grey scale for assessing staining** complying with ISO 105-A03.

5 Test specimen

5.1 If the textile to be tested is fabric, place a specimen 40 mm × 100 mm between the two adjacent fabrics (4.4 and 4.5) and sew along one of the shorter sides to form a composite specimen.

5.2 If the textile to be tested is yarn, knit it into fabric and treat it as in 5.1, or form a layer of parallel lengths of it between the two adjacent fabrics (4.4 and 4.5), the amount of yarn taken being approximately equal to half the combined mass of the adjacent fabrics. Sew around all four sides to hold the yarn in place and to form a composite specimen.

5.3 If the textile to be tested is loose fibre, comb and compress an amount approximately equal to half the combined mass of the adjacent fabrics (4.4 and 4.5) into a sheet 40 mm × 100 mm. Place the sheet between the two adjacent fabrics and sew around all four sides to hold the fibres in place and to form a composite specimen.

6 Procedure

6.1 Roll the composite specimen compactly around the glass rod (4.3) to form a cylinder 40 mm long, and tie uniformly, but not tightly, with thread.

6.2 Place the rod with the specimen in the vessel (4.1) containing slightly acid water (4.6). Leave the specimen in the vessel for 30 min under reflux at a temperature of 70 °C ± 2 °C and at a liquor ratio of 30:1. During the test ensure that the composite specimen is always submerged in the water.

6.3 Remove the specimen from the rod and squeeze the specimen. Open out the composite specimen by breaking the stitching on all sides except one of the shorter sides and dry it by hanging it in air at a temperature not exceeding 60 °C with the three parts in contact only at the remaining line of stitching.

6.4 Assess the change in colour of the specimen and the staining of the adjacent fabrics by comparison with the grey scales (4.7).

7 Test report

The test report shall include the following information:

a) the number and year of publication of this part of ISO 105, i.e. ISO 105-E08:1994;

b) all details necessary for identification of the sample tested;

c) the numerical grey scale rating for change in colour of the specimen;

d) the numerical grey scale rating for staining of each kind of adjacent fabric used.

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