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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

## Textiles — Tests for colour fastness —

### Part E13:

Colour fastness to acid-felting: Severe

ITEH STANDARD PREVIEW  
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*Textiles — Essais de solidité des teintures —*

*Partie E13: Solidité des teintures au foulon acide. Essai fort* 105-E13:1987

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Reference number  
ISO 105-E13:1987 (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.

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-E13 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (included in ISO 105-E 1978), of which it constitutes a minor revision.  
<https://standards.iteh.ai/catalog/standards/sist/f89d766a-e5b2-4b94-b8c8-b4a34212de85/iso-105-e13-1987>

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.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Textiles — Tests for colour fastness —

## Part E13:

### Colour fastness to acid-felting: Severe

#### iTeh STANDARD PREVIEW

#### 1 Scope and field of application

This part of ISO 105 specifies a method for determining the resistance of the colour of textiles in all forms to the action of acids, as used under severe conditions in the acid-felting process.

**4.4 Two adjacent fabrics**, each measuring 10 cm × 4 cm, one piece made of wool and the other made of wool or of another fibre to be assessed for staining, as desired.

**4.5 Grey scales for assessing change in colour and staining** (see clause 2).

#### 2 References

ISO 105, *Textiles — Tests for colour fastness —*

*Part A01: General principles of testing.*

*Part A02: Grey scale for assessing change in colour.*

*Part A03: Grey scale for assessing staining.*

#### 3 Principle

A specimen of the textile in contact with adjacent fabrics is milled in solutions of acetic acid and/or sulfuric acid, rinsed and dried. The change in colour of the specimen and the staining of the adjacent fabrics are assessed with the grey scales.

#### 4 Apparatus and reagents

**4.1 Suitable open container** and **glass rod**, flattened at one end, or appropriate mechanical device (see 6.2).

**4.2 Sulfuric acid**, solution containing 1 ml of concentrated sulfuric acid (ρ 1,84 g/ml) per litre.

**4.3 Acetic acid**, solution containing 5 ml of acetic acid (300 g/l) per litre.

#### 5 Test specimen

**5.1** If the textile to be tested is fabric, place a specimen 10 cm × 4 cm between the two adjacent fabrics (4.4) and sew along all four 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), the amount of yarn taken being approximately equal to half the combined mass of the adjacent fabrics. Sew along 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) into a sheet 10 cm × 4 cm. Place the sheet between the two adjacent fabrics and sew along all four sides to hold the fibres in place and to form a composite specimen.

#### 6 Procedure

**6.1** Test the composite specimen in accordance with 6.2 to 6.4 inclusive, using sulfuric acid solution (4.2) and acetic acid solution (4.3) in separate tests, or using only one of these reagents, as required. The liquor ratio in both cases shall be 40 : 1.

**6.2** If possible, use a mechanical milling device (see clause 8) set to give results identical with those obtained in a manual milling test.

**6.3** Bring the test solution to  $90 \pm 2$  °C. Immerse the composite specimen in the solution for 30 min, maintaining this temperature.

**6.4** When milling by hand, move the composite specimen about continuously with the glass rod while it is in the milling-bath, and press it with the rod every 2 min, without removing it from the bath.

**6.5** Rinse the milled composite specimen for 10 min in cold, running tap-water and drain it. Open out the 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 ex-

ceeding 60 °C, with the three parts in contact only at the remaining line of stitching.

**6.6** Assess the change in colour of the specimen and the staining of the adjacent fabrics with the grey scales.

## 7 Test report

Report, for each reagent used, the numerical ratings for change in colour of the specimen and for staining of the adjacent fabrics.

## 8 Note

Other mechanical devices may be used for the test provided that the results are identical to those obtained with the apparatus described in 4.1.

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