INTERNATIONAL STANDARD

ISO
105-E01

Second edition
1987-12-15

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Textiles — Tests for colour fastness —

Part E01:
Colour fastness to water

Textiles — Essais de solidité des teintures —

Partie E01: Solidité des teintures à l'eau

Reference number
ISO 105-E01 : 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-E01 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.

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.

Printed in Switzerland

Textiles — Tests for colour fastness —

Part E01:
Colour fastness to water

1 Scope and field of application

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 immersion in water.

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 immersed in water, drained and placed between two plates under a specified pressure in a testing device. The specimen and the adjacent fabrics are dried separately. The change in colour of the specimen and the staining of the adjacent fabrics are assessed with the grey scales.

4 Apparatus and reagent

4.1 Testing device, consisting of a frame of stainless steel into which a weight-piece of mass 5 kg and base of 11,5 cm × 6 cm is closely fitted, so that a pressure of 12,5 kPa can be applied on test specimens measuring 10 cm × 4 cm placed between glass or acrylic resin plates. If the weight-piece is removed during the test, the testing device shall be so constructed that the pressure of 12,5 kPa remains unchanged (see 8.1).

4.2 Oven, maintained at 37 ± 2 °C.

4.3 Distilled water.

4.4 Two adjacent fabrics, each measuring 10 cm × 4 cm, one piece made of the same kind of fibre as that of the textile to be tested, or that predominating in the case of blends, the second piece made of the fibre as indicated in the table below or, in the case of blends, of the kind of fibre second in order of predominance, or as otherwise specified.

If the first piece is:	Second piece to be:
cotton	wool
wool	cotton
silk	cotton
linen	wool
viscose	wool
acetate or triacetate	viscose
polyamide	wool or cotton
polyester	wool or cotton
acrylic	wool or cotton

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

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 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), the amount of yarn taken being approximately equal to half the combined mass of the adjacent fabrics (4.4). Sew along two opposite 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.