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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Textiles — Tests for colour fastness —

Part E04:
Colour fastness to perspiration

Textiles — Essais de solidité des teintures —

Partie E04: Solidité des teintures à la sueur

Reference number
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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-E04 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.

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Textiles — Tests for colour fastness —

Part E04:
Colour fastness to perspiration

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 the action of human perspiration.

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

Specimens of the textile in contact with adjacent fabrics are treated in two different solutions containing histidine, drained, and placed between two plates under a specified pressure in a testing device. The specimens and the adjacent fabrics are dried separately. The change in colour of each specimen and the staining of the adjacent fabrics are assessed with the grey scales.

4 Apparatus and reagents

4.1 Testing device, consisting of a frame of stainless steel into which a weight-piece of mass 5 kg and base 11,5 cm × 6 cm is closely fitted, with glass or acrylic resin plates of the same size and of 0,15 cm thickness. The size of the composite specimen shall be 10 cm × 4 cm (see 8.1).

4.2 Oven, maintained at 37 ± 2 °C.

4.3 Alkaline solution, freshly prepared, containing, per litre,

0,5 g of *l*-histidine monohydrochloride monohydrate ($C_6H_9O_2N_3 \cdot HCl \cdot H_2O$);

5 g of sodium chloride (NaCl);

5 g of disodium hydrogen orthophosphate dodecahydrate ($Na_2HPO_4 \cdot 12H_2O$), or

2,5 g of disodium hydrogen orthophosphate dihydrate ($Na_2HPO_4 \cdot 2H_2O$).

The solution is brought to pH 8 with sodium hydroxide solution, c(NaOH) = 0,1 mol/l.

4.4 Acid solution, freshly prepared, containing, per litre,

0,5 g of *l*-histidine monohydrochloride monohydrate ($C_6H_9O_2N_3 \cdot HCl \cdot H_2O$);

5 g of sodium chloride (NaCl);

2,2 g of sodium dihydrogen orthophosphate dihydrate ($NaH_2PO_4 \cdot 2H_2O$).

The solution is brought to pH 5,5 with sodium hydroxide solution, c(NaOH) = 0,1 mol/l.

4.5 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 or, in the case of blends, of the kind of fibre second in order of predominance, or as otherwise specified.