BRITISH STANDARD

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Textiles —

Tests for colour fastness

Part N04: Colour fastness to bleaching : Sodium chlorite (severe)

The European Standard EN ISO 105-N04: 1993 has the status of a British Standard.

Textiles — Tests for colour fastness —

Part N04:
Colour fastness to bleaching: Sodium chlorite (severe)

1 Scope

This part of ISO 105 specifies a method for determining the resistance of the colour of natural cellulose textiles to the action of severe bleaching with sodium chlorite as ordinarily employed in textile processing.

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-A02:1993, *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.*

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 treated in a sodium chlorite solution, 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 Glass container, fitted with a **reflux condenser** or other means of reducing evaporation of the bath, thus preventing the need to modify the bath during the test.

4.2 Sodium chlorite solution, 2,5 g/l, containing 0,1 g of acid sodium pyrophosphate per litre, brought to pH 3,5 with formic acid immediately before the test.

The exact concentration of the sodium chlorite employed is determined by titration with sodium thiosulfate solution.

4.3 Adjacent fabrics (see ISO 105-A01:1989, subclause 8.3).

Either:

4.3.1 A multifibre adjacent fabric, complying with ISO 105-F10.

Or:

4.3.2 Two single-fibre adjacent fabrics, complying with the relevant sections of F01 to F08 of ISO 105-F:1985, to be assessed for staining.

4.4 If required, a **non-dyeable fabric** (for example, polypropylene).

4.5 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,

a) attach a specimen measuring 40 mm × 100 mm to a piece of the multifibre adjacent fabric (4.3.1), also measuring 40 mm × 100 mm, by sewing along one of the shorter sides, with the multifibre fabric next to the face of the specimen;

or

b) attach a specimen measuring 40 mm × 100 mm between the two single-fibre adjacent fabrics (4.3.2), also measuring 40 mm × 100 mm, by sewing along one of the shorter sides.

5.2 Where yarn or loose fibre is to be tested, take a mass of the yarn or loose fibre approximately equal to one-half of the combined mass of the adjacent fabrics and

a) place it between a 40 mm × 100 mm piece of the multifibre adjacent fabric and a 40 mm × 100 mm piece of the non-dyeable fabric (4.4) and sew them along all four sides (see ISO A01:1989, subclause 9.6);

b) place it between a 40 mm × 100 mm piece of each of the two specified single-fibre fabrics and sew along all four sides.

6 Procedure

6.1 Wet out the composite specimen in the sodium chlorite solution (4.2) and immerse it in the solution for 1 h without agitation, at a temperature of 80 °C ± 2 °C and at a liquor ratio of 50:1.

6.2 Rinse the composite specimen for 10 min in cold, running tap-water. Open out the composite specimen by breaking the stitching on all sides except one of the shorter sides and dry by hanging it in air at a temperature not exceeding 60 °C with the parts in contact only at the remaining line of stitching.

6.3 Assess the change in colour of the specimen and the staining of the adjacent fabric(s) with the grey scales (4.5).

7 Test report

The test report shall include the following particulars:

a) the number and date of publication of this part of ISO 105, i.e. ISO 105-N04:1993;

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

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

d) if single-fibre adjacent fabrics were used, the numerical rating for staining of each kind of adjacent fabric used;

e) if a multifibre adjacent fabric was used, the type of multifibre adjacent fabric used and the staining of each type of fibre in the multifibre adjacent fabric.