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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 105/III

TESTS FOR COLOUR FASTNESS OF TEXTILES

THIRD SERIES

1st EDITION

March 1963

For each individual country the only valid standard is the national standard of that country.

Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.

BRIEF HISTORY

The ISO Recommendation R 105/III, *Tests for Colour Fastness of Textiles—Third Series*, was drawn up by Technical Committee ISO/TC 38, *Textiles*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

Work on this question by the Technical Committee began in 1954 and led, in 1958, to the adoption of a Draft ISO Recommendation.

In October 1960, this Draft ISO Recommendation (No. 405) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Australia	Greece	Poland
Austria	Hungary	Republic of South Africa
Belgium	India	Romania
Canada	Iran	Spain
Chile	Israel	Sweden
Czechoslovakia	Japan	Turkey
Denmark	Netherlands	United Kingdom
France	New Zealand	U.S.S.R.
Germany	Norway	

Three Member Bodies opposed the approval of the Draft:

Italy, Switzerland, U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in March 1963, to accept it as an ISO RECOMMENDATION.

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ISO Recommendation R 105/III March 1963

TESTS FOR COLOUR FASTNESS OF TEXTILES

THIRD SERIES

Part 1

COLOUR FASTNESS TO STEAMING UNDER ATMOSPHERIC PRESSURE

1. PURPOSE AND SCOPE

1.1 This method is intended for assessing the resistance of the colour of textiles of all kinds and in all forms to the action of steaming under atmospheric pressure.

2. PRINCIPLE

2.1 A specimen of the textile in contact with specified undyed cloths is rolled into a cylinder and placed in the neck of a flask containing boiling water. The staining of the undyed cloths is assessed with grey scales.

3. APPARATUS AND REAGENTS

3.1 An Erlenmeyer flask with a glass tube open at both ends inserted in the neck (see clause 7.1 and figure, page 6).

3.2 Undyed, scoured cloth, 10 cm × 4 cm, of the same fibre as the specimen.*

3.3 Undyed bleached cotton cloths, each 10 cm × 4 cm.

3.4 Undyed scoured wool felt.

3.5 Standard grey scale for assessing staining.*

4. SPECIMEN

4.1 If the textile to be tested is fabric, prepare a composite specimen measuring 10 cm × 4 cm** by placing successively on a piece of cotton cloth as in clause 3.3 the textile to be tested, a piece of cloth as in clause 3.2 and a further piece of cotton cloth as in clause 3.3. Roll this composite specimen into a cylinder, with the cloth being tested as near as possible to the middle.

4.2 If the textile to be tested is yarn, knit it into cloth and use a piece 10 cm × 4 cm and treat as in clause 4.1.

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* See ISO Recommendation R 105/I, *Tests for Colour Fastness of Textiles (First Series)* :
Part 1: " General principles of testing",
Part 3: " Grey scale for assessing staining ".

** The length of 10 cm may be reduced if the cloth to be tested is too thick for the cylinder to be inserted into the tube. To facilitate rolling, stitch at one end the cloth (knitted yarn or fibre) forming the composite specimen.

4.3 If the textile to be tested is loose fibre, comb and compress enough of it to form a sheet 10 cm × 4 cm, place it on a piece of undyed cotton cloth as in clause 3.3; place successively on this a piece of undyed cloth as in clause 3.2 and a further piece of cotton cloth as in clause 3.3. Roll the composite specimen into a cylinder, with the fibre to be tested as near the middle as possible.

5. PROCEDURE

5.1 Bring the water in the conical flask to the boil. Wrap the cylindrical composite specimen in felt as in clause 3.4 so that the whole fits easily in the glass tube in the neck of the flask and can be retained by the indentations in the lower part of the tube, and boil for 30 minutes.

5.2 Remove the composite specimen from the tube, separate the components and dry in air at a temperature not exceeding 60 °C (140 °F).

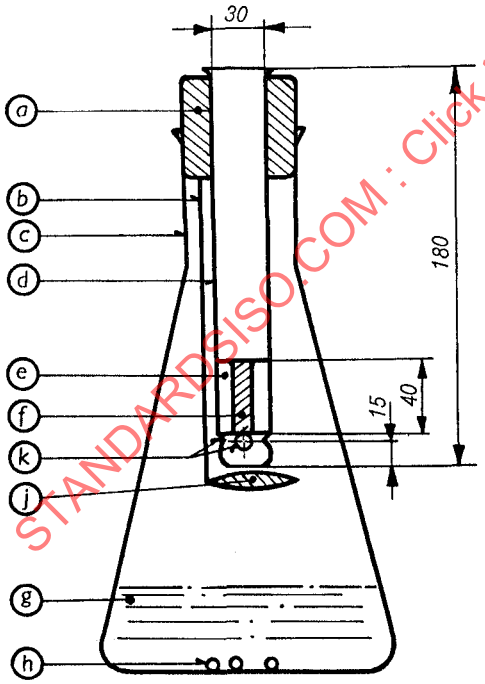
5.3 Assess the staining of the undyed cloths with the standard grey scale.*

6. REPORT

6.1 Report the numerical rating for staining of the undyed cloths.

7. NOTE

7.1 A glass tube open at both ends, with 30 mm inside diameter, is mounted in a cork stopper and fitted into the neck of a wide-neck Erlenmeyer flask, of about 2000 cm³ content. A wire ring is fixed in the cork stopper, with the loop covered with a thin fabric to catch spray. The flask contains about 500 cm³ of water, to which some small beads are added.



Dimensions in millimetres

a Cork
b Wire
c Erlenmeyer flask
d Glass tube
e Felt
f Composite specimen
g Water
h Beads
j Wire loop covered with fabric
k Circumferential indentations in tube to retain fabric

FIGURE.— **Apparatus for colour-fastness to steaming**

* See ISO Recommendation R 105/I, *Tests for Colour Fastness of Textiles (First Series)*:
Part 1: " General principles of testing ",
Part 3: " Grey scale for assessing staining ".