
INTERNATIONAL STANDARD



2844

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Prints and printing inks — Determination of the resistance of prints to spices

Impressions et encres d'imprimerie — Détermination de la résistance des impressions aux épices

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

International Standard ISO 2844 was drawn up by Technical Committee ISO/TC 130, *Graphic technology*, and circulated to the Member Bodies in August 1972.

It has been approved by the Member Bodies of the following countries :

Australia	India	Spain
Austria	Ireland	Sweden
Chile	Germany	Switzerland
Czechoslovakia	New Zealand	Thailand
Denmark	Poland	Turkey
Egypt, Arab Rep. of	Romania	United Kingdom
France	South Africa, Rep. of	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Finland
Italy

Prints and printing inks — Determination of the resistance of prints to spices

0 INTRODUCTION

This International Standard is in technical conformity with CEI specification 11-60 of the European Committee of the Paint and Printing Ink Manufacturer's Associations.

only negligible, and bleeding is not below grade 4 of the grey scale, nor does it lose its resistance to friction and the ink film undergoes no softening.¹⁾

1 SCOPE

This International Standard specifies a method for determining the resistance of prints to spices.

2 FIELD OF APPLICATION

This International Standard applies to all print substrates such as paper, board, metals (thin metal sheets or plate) and plastics materials, and to all printing processes : letterpress, lithographic or gravure.

3 REFERENCES

ISO/R 105/I, *Tests for colour fastness of textiles — Part 3.*

ISO/R 676, *Spices and condiments — Nomenclature — First list.*

ISO/R 948, *Spices and condiments — Sampling.*

4 DEFINITION

By **resistance of prints to spices** is meant the resistance of a print to the particular spice used for the test.

The print is considered to be resistant to the spices under test when, under the test conditions and provided that the substrate has undergone no change, any deterioration is

5 TEST METHOD

5.1 Principle

A test piece is applied with the printed side in contact with a filter paper covering the spice under test.

An assessment is made of any changes to the print together with any variation in its resistance to friction and bleeding of the colour onto the filter paper.

NOTE — The effect of any given spice varies according to the form it takes (for example natural or ground), its method and time of storage, etc.

5.2 Apparatus and reagent

5.2.1 Filter paper for quantitative analysis, having a very smooth, non-hardened surface. The size of the strips of filter paper should be 60 mm X 90 mm.

5.2.2 Petri dish, diameter 120 mm, height 40 mm, with hermetic sealing.

5.2.3 Glass slides, 60 mm X 90 mm.

5.2.4 Grey scale, for assessment of bleeding. (In accordance with ISO/R 105/I — Part 3.)

5.2.5 The spice under test.

1) Certain national bodies in charge of food products require more stringent conditions.

5.3 Procedure

Place a 20 mm X 50 mm test piece in the bottom of the Petri dish, with the printed side visible (that is to say with the printed side upwards).

On top of this, place a filter paper before spreading with a layer of the test spice to a depth of at least 3 mm.

Onto this place a glass slide which, in turn, will support a 500 g weight. Cover with the lid making sure the container is hermetically sealed.

After 7 days at an ambient temperature of 20 ± 2 °C, remove the test piece.

5.4 Assessment of results

Compare the test piece with an untreated test piece.

Examine the filter paper which has been in contact with the test piece for any staining different from that of the other pieces of filter paper in contact with the spice used for the test. (Bleeding is considered to have occurred if grade 4 of the grey scale is reached.) Examine whether the ink film is basically intact and its adhesion is maintained.

Estimate, by exerting average finger pressure when rubbing, the rub resistance of the test piece and the possible change of this resistance to friction in relation to that of the untreated test specimen.

NOTE – Any print change caused by the absorption of essential oils or similar products is not considered to be deterioration in the sense of this International Standard.

5.5 Test report

Quoting this International Standard, state :

- a) the spice used for the test and, if possible, its origin, storage time and the means by which it has been stored;
- b) the state of the spice (i.e. natural state or finely or coarsely ground);
- c) alterations noted if the print colour is modified, and full details of any changes attributable to the substrate or to the absorption of essential oils or similar products;
- d) the coloration – or absence of coloration – of the filter paper;
- e) any change in the rub resistance of the proof in relation to an untreated test specimen.

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