

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2001.4.A04—2004

Methods of test for textiles

Method 4.A04: Colourfastness tests—Instrumental assessment of the degree of staining of adjacent fabrics

RECONFIRMATION NOTICE

Technical Committee TX-020 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 6 July 2016.

The following are represented on Technical Committee TX-020:

Ag Research
Australian Wool Processors Council
AWTA Textile Testing
Council of Textile and Fashion Industries of Australia
Drycleaning Institute of Australia
National Association of Testing Authorities Australia
RMIT University
The Textile Institute

NOTES

Methods of test for textiles

Method 4.A04: Colourfastness tests— Instrumental assessment of the degree of staining of adjacent fabrics

PREFACE

This Standard was prepared by the Standards Australia Committee TX-020, Testing of Textiles and supersedes part of AS 2001.4.1:1996, *Methods of test for textiles*, Method 4.1: *Colourfastness tests—Definitions and general requirements*.

The objective of this Standard is to provide manufacturers and testing bodies with a basic standard method for determining the resistance of colour of textiles to treatments such as chemical, mechanical or natural and a way of determining the amount of staining of adjacent fabrics.

This Standard is identical with and has been reproduced from ISO 105-A04:1989, *Textiles—Tests for colour fastness, Part A04: Method for the instrumental assessment of the degree of staining of adjacent fabrics*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text ‘this part of ISO 105’ should read ‘this Australian Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

AS 2001.4.1—1996 was based on ISO 105-A01. Appendix A of AS 2001.4.1 incorporated standard reference materials from ISO 105, Parts A02, A03, B01 and the F series. Appendix B was identical to ISO 105-A04, and Appendix C was identical to ISO 105-A05. Committee TX-020 is currently in the process of adopting these Standards. When this is done AS 2001.4.1—1996 will be withdrawn.

The normative references listed in Clause 2 have not been adopted as Australian Standards.

1 Scope

This part of ISO 105 specifies an instrumental method for assessing the degree of staining of adjacent fabrics in any fastness test, as an alternative to the visual method.

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-F10:1989, *Textiles — Tests for colour fastness — Part F10: Specification for adjacent fabric: Multifibre*.

ISO 105-J01:1989, *Textiles — Tests for colour fastness — Part J01: Measurement of colour and colour differences*.

3 Principle

The colour of an adjacent fabric which has been subjected to a fastness test in contact with the fabric under test and that of a specimen of the adjacent fabric which has been subjected to the fastness test in the absence of the fabric under test are measured. The colour difference between them is calculated in CIELAB units and converted to a staining-scale rating by means of a simple equation.

4 Apparatus

Spectrometer or **colorimeter**, capable of measuring the colour of a specimen of the size of one stripe in a multifibre adjacent fabric (see ISO 105-F10) and which irradiates the specimen with light resembling that of standard illuminant D₆₅ or standard illuminant C.

5 Test specimen

Mount the adjacent fabric which has been subjected to a fastness test, together with a specimen of the adjacent fabric which has been subjected to the fastness test in the absence of the fabric under test, on non-optically-brightened white card stock.

6 Procedure

6.1 Measure the colour of the piece of adjacent fabric which has been subjected to the fastness test in the absence of the fabric under test.

6.2 Measure the colour of the adjacent fabric which has been subjected to the fastness test as part of a composite specimen. If the staining is uneven, several measurements shall be made and the arithmetic mean value employed in the calculations. If the instrument permits different viewing geometries to be used, the preferred method is to include the specular component.

6.3 Calculate the colour difference ΔE_{CIELAB} and the magnitude of the lightness difference ΔL_{CIELAB} between the adjacent fabrics, as described in 6.1 and 6.2, to two places of decimals. Either of two CIE instrument geometries may be used: