

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
METHODS OF TEST FOR TEXTILES

PART 4—COLOURFASTNESS TESTS

AS 2001.4.17
DETERMINATION OF COLOURFASTNESS TO
PERSPIRATION

PREFACE

This standard is one of a series for determining the colourfastness of textiles to various agencies.

The methods are largely based on the works of a technical committee of the International Organization for Standardization (ISO/TC 38/SC 1) whose procedures have been adapted to suit Australian conditions.

This standard supersedes AS L15, Part XVII—1969.

This standard requires reference to the following Australian standards:

- AS 2001.1* Methods of Test for Textiles — Conditioning Procedures
 AS 2001.4.1 Methods of Test for Textiles, Part 4 — Colourfastness Tests,
 Method 1 — Definitions and General Requirements

*Revision of AS 1090 in course of preparation.

METHOD

1 SCOPE. This standard sets out two alternative procedures for determining the colourfastness of textiles to perspiration.

2 APPLICATION. This method applies to textiles in all forms.

3 PRINCIPLE. Two specimens in contact with undyed cloths are separately immersed in warm test solutions (simulating the action of perspiration) for a stated time. The specimens may or may not then be rinsed depending on their end-use. After drying, the change in colour of the specimens and the degree of staining of the undyed cloths are assessed.

NOTE: Staining onto the undyed cloths may be persistent or temporary in character, the significant factor being the end-use of the textile under test.

4 REAGENTS. Prepare two test solutions as follows:

- (a) *An alkaline test solution* of distilled or deionized water containing —
- (i) 0.5 g/L L-histidine monohydrochloride monohydrate;
 - (ii) 5.0 g/L sodium chloride (NaCl);
 - (iii) 5.0 g/L disodium hydrogen orthophosphate dodecahydrate ($\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$); and

- (iv) 0.2 g/L nonionic wetting agent. The wetting agent shall be a polyalkylene derivative of synthetic alcohol.

If required, adjust pH value to 8.0 ± 0.2 using 0.1 mol/L sodium hydroxide solution.

- (b) *An acidic test solution* of distilled or deionized water containing —

- (i) 0.5 g/L L-histidine monohydrochloride monohydrate;
- (ii) 5.0 g/L sodium chloride (NaCl);
- (iii) 2.2 g/L sodium dihydrogen orthophosphate dihydrate ($\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$); and
- (iv) 0.2 g/L nonionic wetting agent. The wetting agent shall be a polyalkylene derivative of synthetic alcohol.

If required adjust pH value to 5.5 ± 0.2 using 0.1 mol/L sodium hydroxide solution.

NOTES:

1. L-histidine monohydrochloride decomposes in solution. The test solutions are to be used within 24 h of preparation.
2. Teric BLB produced by ICI Australia Ltd is a suitable wetting agent.