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**Textiles — Tests for colour fastness —**

**Part B02:**

Colour fastness to artificial light: Xenon arc  
fading lamp test

**AMENDMENT 1**

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*Textiles — Essais de solidité des teintures —*

*Partie B02: Solidité des teintures à la lumière artificielle: Lampe à arc au*

*xénon*  
<https://standards.iteh.ai/catalog/standards/sist/16206ffc-178e-491a-8e63-b7d5c1e7eb0/iso-105-b02-1994-amd-1-1998>

**AMENDEMENT 1**



## Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Amendment 1 to ISO 105-B02:1994 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

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## Textiles — Tests for colour fastness —

### Part B02:

### Colour fastness to artificial light: Xenon arc fading lamp test

### AMENDMENT 1

*Page 2, 4.1 Reference materials*

After first sentence insert:

The relationship between references 1 to 8 and L2 to L9 as shown with the method are approximate. Results from testing which use reference standards from both sources should be compared only with the knowledge that fading characteristics may differ.

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4.1.2

[ISO 105-B02:1994/Amd 1:1998](https://standards.iteh.ai/catalog/standards/sist/16206ffc-178e-491a-8e63-b7d5c1e17e80/iso-105-b02-1994-amd-1-1998)

Insert the following as a second paragraph of 4.1.2:  
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Data in annex D are presented to illustrate the relationship of each of the blue wool references on exposure to fixed amounts of radiant energy. A detailed summary of these test results is found in document reference number ISO/TC38/SC1/N993.

*Page 5*

Under 6.1 insert the following:

For these conditions, use the references 1 to 8 specified in 4.1.1.

Under 6.2 insert the following:

For these conditions, use the references L2 to L9 specified in 4.1.2.

*Page 6, 7.2.1 Method 1*

7.2.1.1 Delete the existing text and substitute:

**7.2.1.1** Arrange the specimen to be tested and the references as shown in figure 2 with an opaque cover AB across the middle one-third of the specimen and references. Expose to the xenon arc light under the conditions enumerated in 6.1 or 6.2. Follow the effect of exposure by removing the cover and inspecting the

specimen frequently until the contrast between the exposed and the unexposed portions of the specimen is equal to grey scale grade 4. Cover the left-hand one-third of the specimen and references with an additional opaque cover (CD in figure 2). At this stage attention should be given to the possibility of photochromism (see ISO 105-B05). For white (bleached or optically brightened) textiles, continue as described in 7.2.1.4.

7.2.1.2 Delete the existing text (included in 7.2.1.1).

7.2.1.3 Renumber as 7.2.1.2.

Page 7

7.2.1.4 Renumber as 7.2.1.3.

7.2.1.5 Renumber as 7.2.1.4.

7.2.2 Method 2

7.2.2.2 to 7.2.2.4 Delete the existing text and substitute:

**7.2.2.2** Arrange the specimens to be tested and the references as shown in figure 3, with cover AB covering one-fifth to one-quarter of the total length of each specimen and reference. Expose to light under the conditions enumerated in 6.1 or 6.2. Follow the effect of exposure by lifting cover AB periodically and inspecting the references. When a change in reference 2 can be perceived equal to grey scale grade 3 or L2 to 4 inspect the specimens and rate their colour fastness by comparing any change that has occurred with the changes that have occurred in references 1, 2 and 3 or L2. (This is a preliminary assessment of colour fastness.) At this stage attention shall be given to the possibility of photochromism (see ISO 105-B05).

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**7.2.2.3** Replace the cover AB in exactly the same position and continue to expose until a change in reference 4 or L3 can be perceived equal to grey scale grade 4; at this point fix an additional cover CD in the position shown in figure 3, overlapping the cover AB.

**7.2.2.4** Continue to expose until a change in colour in reference 6 or L4 can be perceived equal to grey scale grade 4; then fix the final cover EF in the position shown in figure 3, the other covers remaining in position.

Page 9, 8.5

Delete the existing text and substitute:

**8.5** If the colour fastness is equal to or higher than 4 or L3, any preliminary assessment (see 7.2.2.2) becomes significant; if this preliminary assessment is 3 or L2, it shall be included in the rating in brackets. For example, a rating of 6(3) indicates that the specimen changes very slightly in the test when reference 3 just begins to fade, but that on continuing the exposure the resistance to light is equal to that of reference 6.

Page 11, A.1.4

In line 4 delete "500 r/min"; and insert "5 r/min".

New page

## Annex D

(informative)

### Light exposure equivalents for blue wool lightfastness references L2 to L9 <sup>1)</sup>

Xenon only

Blue wool reference	420 nm kJ/m <sup>2</sup>	300 nm to 400 nm kJ/m <sup>2</sup>
L2	21	864
L3	43	1 728
L4	85 <sup>2)</sup>	3 456
L5	170	6 912
L6	340 <sup>2)</sup>	13 824
L7	680	27 648
L8	1 360	55 296
L9	2 720	110 592

1) For colour change of step 4 on the grey scale for colour changes.  
 2) Verified by experiment; all other values are calculated.

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**Descriptors:** textiles, dyes, tests, daylight tests, artificial light tests, determination, colour fastness.

Price based on 3 pages

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