



Designation: D1464-07

## Standard Test Method for Designation: D1464 – 12

### Standard Practice for Differential Dyeing Behavior of Cotton<sup>1</sup>

This standard is issued under the fixed designation D1464; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

#### 1. Scope

~~1.1 This test method covers a test for the characterization of certain dyeing behavior of cotton. This test method is especially applicable to raw cotton fibers, but may also be adapted to cotton yarns and fabrics.~~

~~1.2~~

1.1 This practice covers a test for the characterization of certain dyeing behavior of cotton. This practice is especially applicable to raw cotton fibers, but may also be adapted to cotton yarns and fabrics.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

#### 2. Referenced Documents

2.1 ASTM Standards:<sup>2</sup>

D123 Terminology Relating to Textiles

D1441 Practice for Sampling Cotton Fibers for Testing

D3775 Test Method for Warp (End) and Filling (Pick) Count of Woven Fabrics

D7139 Terminology for Cotton Fibers

#### 3. Terminology

3.1 For all terminology related to D13.11, Cotton Fibers, see Terminology D7139.

3.1.1 The following term is relevant to this standard: differential dyeing behavior.

3.2 For all other terminology related to textiles, see Terminology D123.

#### 4. ~~Summary of Test Method~~ Summary of Practice

4.1 Specimens are dyed under specified conditions in a bath containing a mixture of prescribed red and green dyes. The resultant colors are compared with those of cottons of known dyeing behavior or fiber properties.

#### 5. Significance and Use

~~5.1 This test method practice is not recommended for acceptance testing because the information obtained is qualitative rather than quantitative in nature (see Section 12).~~ nature.

5.2 The response of fibers to the dye mixture is indicative of the uniformity of dyeing, the probability of dyeing defects due to neps, and the difficulties to be expected from heterogeneity of fibers that differ in dyeing characteristics. In general, the red dye is retained predominantly by the thick-walled fibers and the green by the thin-walled fibers.

5.3 The color response of the specimens to the dyes in the binary mixture reflects the behavior to be expected with many other dyes. The colors from red to green may be influenced by factors such as weather during the growing period, exposure of open bolls

<sup>1</sup> This ~~test method practice~~ practice is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.11 on Cotton Fibers. Current edition approved Jan. 1, 2007. Published January 2007. Originally approved in 1957T. Last previous edition approved in 2002 as D1464-90(2002). DOI: 10.1520/D1464-07.

Current edition approved Feb. 1, 2012. Published March 2012. Originally approved in 1957 as 1957T. Last previous edition approved in 2007 as D1464-07. DOI: 10.1520/D1464-12.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.