



**Designation: D1441 – 12**

## **Standard Practice for Sampling Cotton Fibers for Testing<sup>1</sup>**

This standard is issued under the fixed designation D1441; 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 practice covers procedures for taking a lot sample of cotton fibers, from a designated source (lot), and reducing the lot sample through a series of steps to produce test specimens that are representative of the source and suitable for the determination of fiber properties according to established procedures.

1.2 This practice has been used extensively for commercial acceptance testing of cotton fibers as well as for arbitration testing and research.

NOTE 1—This practice is used in taking samples of cotton for testing by Test Methods [D1440](#), [D1442](#), [D1445](#), [D1447](#), [D1448](#), [D1464](#), [D2480](#), [D2812](#), [D5866](#) and [D5867](#).

1.3 The procedures do not cover the selection of samples for the determination of moisture. Special handling and protection of the sample from the prevailing atmosphere required for samples taken for the determination of moisture are not provided for in this practice. See Test Method [D2495](#).

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

1.5 *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](#)

[D1440 Test Method for Length and Length Distribution of Cotton Fibers \(Array Method\)](#)

[D1442 Test Method for Maturity of Cotton Fibers \(Sodium Hydroxide Swelling and Polarized Light Procedures\)](#)

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee [D13](#) on Textiles and is the direct responsibility of Subcommittee [D13.11](#) on Cotton Fibers.

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

[D1445 Test Method for Breaking Strength and Elongation of Cotton Fibers \(Flat Bundle Method\)](#)

[D1447 Test Method for Length and Length Uniformity of Cotton Fibers by Photoelectric Measurement](#)

[D1448 Test Method for Micronaire Reading of Cotton Fibers](#)

[D1464 Practice for Differential Dyeing Behavior of Cotton](#)

[D1776 Practice for Conditioning and Testing Textiles](#)

[D2480 Test Method for Maturity Index and Linear Density of Cotton Fibers by the Causticaire Method \(Withdrawn 1992\)](#)<sup>3</sup>

[D2495 Test Method for Moisture in Cotton by Oven-Drying](#)

[D2812 Test Method for Non-Lint Content of Cotton](#)

[D5866 Test Method for Neps in Cotton Fibers \(AFIS-N Instrument\)](#)

[D5867 Test Methods for Measurement of Physical Properties of Raw Cotton by Cotton Classification Instruments](#)

[D7139 Terminology for Cotton Fibers](#)

### **3. Terminology**

3.1 For all terminology relating to [D13.11](#), Cotton Fibers, refer to Terminology [D7139](#).

3.1.1 The following terms are relevant to this standard: laboratory sample, lot, in acceptance sampling of cotton, lot sample, in cotton, and specimen.

3.2 For all other terminology related to textiles, refer to Terminology [D123](#).

### **4. Summary of Practice**

4.1 Sampling procedures for obtaining samples from the lot and for the reduction of the lot samples to the size required for fiber test specimens are presented. Steps are outlined to secure reduction of the amount of cotton fibers to be handled at various stages, so that the reduced sample continues to be representative of the lot. Provision is made for the omission of intermediate steps in the reduction of the lot sample in cases where this is desirable or necessary (see [13.1](#)).

### **5. Significance and Use**

5.1 The reliability of the results of any test method depends primarily upon how well the specimens tested represent the

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).