



Designation: D1441 – 06

Standard Practice for Sampling Cotton Fibers for Testing¹

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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers procedures for taking a lot sample, at the source, of cotton fibers and reducing this sample through a series of steps to provide a relatively small test specimen of loose cotton fibers, representative of the source material and suitable for the determination of a single property, or a series 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.

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](#).

NOTE 1—This practice is used in taking samples of cotton for testing by Test Methods [D1440](#), [D1442](#), [D1445](#), [D1447](#), [D1448](#), [D1464](#), [D2480](#), [D2496](#), and [D2812](#).

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:*²

[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 \(Sodium Hydroxide Swelling and Polarized Light Procedures\)](#)

[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 Test Method 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](#)³

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

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

[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 sample 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.

5. Significance and Use

5.1 The reliability of the results of any test method depend primarily upon how well the specimens tested represent the original source material. Much time and effort are required, and can justifiably be spent, to be sure that all the sampling operations are at random and are representative. Failure to provide a test specimen which accurately represents the material from which it is drawn will produce misleading test results regardless of the accuracy and precision of the test method.

³ Withdrawn. The last approved version of this historical standard is referenced on www.astm.org.

¹ This 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 June 1, 2006. Published July 2006. Originally approved in 1952. Last previous edition approved in 2000 as D1441 – 00. DOI: 10.1520/D1441-06.

² 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.