



Standard Practice for Sampling Cotton Fibers for Testing¹

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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 D 2495.

NOTE 1—This practice is used in taking samples of cotton for testing by Test Methods D 1440, D 1442, D 1445, D 1447, D 1448, D 1464, D 2480, D 2496, and D 2812.

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:

- D 123 Terminology Relating to Textiles²
- D 1440 Test Method for Length and Length Distribution of Cotton Fibers (Array Method)²
- D 1442 Test Method for Maturity of Cotton Fibers (Sodium Hydroxide Swelling and Polarized Light Procedures)²
- D 1445 Test Method for Breaking Strength and Elongation of Cotton Fibers (Flat Bundle Method)²
- D 1447 Test Method for Length and Length Uniformity of

Cotton Fibers by Fibrograph Measurement²

D 1448 Test Method for Micronaire Reading of Cotton Fibers²

D 1464 Test Method for Differential Dyeing Behavior of Cotton²

D 1776 Practice for Conditioning and Testing Textiles²

D 2480 Test Method for Maturity Index and Linear Density of Cotton Fibers by the Causticaire Method²

D 2495 Test Method for Moisture in Cotton by Oven-Drying²

D 2812 Test Method for Non-Lint Content of Cotton²

D 4271 Practice for Writing Statements on Sampling in Test Methods for Textiles³

3. Terminology

3.1 Definitions:

3.1.1 *laboratory sample, n*—a portion of material taken to represent the lot sample, or the original material, and used in the laboratory as a source of test specimens.

3.1.2 *lot, n*—*in acceptance sampling of cotton*, the main stock, supply or source of the fibers to be sampled.

3.1.2.1 *Discussion*—The source may consist of one or more bolls, plants, or rows in a field; one or more bales, mixes, or blends of cotton; or any consignment, shipment, or lot of cotton or cotton products of any size or weight that is considered sufficient to yield the test specimens required.

3.1.3 *lot sample, n*—*in cotton*, a relatively large sample taken in the field to represent a consignment, shipment, or lot, for use in the preparation of the laboratory samples.

3.1.4 *specimen, n*—a specific portion of a material or a laboratory sample upon which a test is performed or which is selected for that purpose. (See also test specimen.)

3.1.5 For definitions of other textile terms used in this practice, refer to Terminology D 123.

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

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.

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² *Annual Book of ASTM Standards*, Vol 07.01.

³ *Annual Book of ASTM Standards*, Vol 07.02.