



Designation: D3333 – 07 (Reapproved 2012)

# Standard Practice for Sampling Manufactured Staple Fibers, Sliver, or Tow for Testing<sup>1</sup>

This standard is issued under the fixed designation D3333; 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 a procedure for the division of shipments of manufactured staple fiber, sliver (or top) or tow into lots and the sampling of such lots for testing.

NOTE 1—For sampling yarns, refer to Practice D2258.

NOTE 2—This practice differs from BISFA<sup>2</sup> rules for staple fibers in the lot sampling, by the elimination of separate sampling of outer versus inner container areas, in the reduction of number of strata from 6 to 5, and by the elimination of compositing to obtain a single laboratory sample for the lot when testing properties which do not depend on as-received moisture content.

1.2 *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>3</sup>

D123 Terminology Relating to Textiles

D2258 Practice for Sampling Yarn for Testing

D4271 Practice for Writing Statements on Sampling in Test

Methods for Textiles (Withdrawn 2009)<sup>4</sup>

D4849 Terminology Related to Yarns and Fibers

## 3. Terminology

3.1 For all terminology relating to D13.58, Yarns and Fibers, refer to Terminology D4849.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.58 on Yarns and Fibers.

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<sup>2</sup> BISFA Internationally Agreed Methods for Testing Polyamide Staple Fibers, 1974 edition, BISFA Internationally Agreed Methods for Testing Polyester Staple Fibers, 1972 edition, and BISFA Rules for Testing Regenerated Cellulose and Acetate Staple Fibers, 1970 edition, available from the Bureau International pour la Standardisation de la Rayonne et des Fibres Synthétiques.

<sup>3</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.

<sup>4</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

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

## 4. Summary of Practice

4.1 Instructions are given for dividing containers into lots, for determining the number of containers to be selected from each lot as the lot sample, and for determining the number of containers taken from the lot sample as a laboratory sample. See Practice D4271.

4.2 Separate laboratory samples are taken for commercial weight measurement and for other testing, for example, physical or chemical tests.

4.3 The manner of preparing laboratory sampling units for commercial weight, and the manner of collecting laboratory sampling units for other testing are based on the following:

4.3.1 Present knowledge of the systematic variation of moisture within the container, and

4.3.2 The variability of the properties for which the practice is to be used.

## 5. Significance and Use

5.1 Assigning a value to any property of the material in a container or in a lot, consignment, or delivery involves a measurement process that includes both sampling and testing procedures. The correctness of the value assigned depends upon the variability due to testing. Even when the variability due to testing is minimized by carefully developed procedures, correct and consistent estimates of the true value of the property are possible only when the sampling procedure avoids systematic bias, minimizes variations due to sampling, and provides a laboratory sample of adequate size.

5.2 This practice may not give the most efficient sampling plan that might be devised in special situations but it does present a general procedure that gives satisfactory precision with an economical amount of sampling and one which does not require elaborate statistical computation based on previous knowledge of the amount of variation between lot samples, between laboratory samples, and between test specimens.

5.3 The smallest number of specimens required for a given variability in the average result will usually be obtained by (1) minimizing the number of shipping units in the lot sample, (2)