



Standard Practice for Determining the Presence of Sizing in Nylon or Polyester Fabric¹

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1. Scope

1.1 Using a color scale of 1 to 5, this practice describes the procedures for determining the presence and relative amount of sizing in fabrics made of undyed nylon or non-cationically dyeable polyester yarns prepared with a cationically dyeable sizing

1.2 Procedures and apparatus other than those stated in this standard may be used by agreement of purchaser and supplier with the specific deviations from the standard acknowledged in the report.

1.3 *This practice may involve hazardous materials, operations, and equipment. This practice 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 practice 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 1776 Practice for Conditioning of Textiles²

2.2 *American Association of Textile Chemists and Colorists (AATCC):*

AATCC AATCC Evaluation Procedure # 8³

3. Terminology

3.1 *Definitions:*

3.1.1 *extractable matter, n*—nonfibrous material in or on a textile, not including water, which is removable by a specified solvent or solvents, as directed in a specified procedure.

3.1.2 *sizing, n*—a generic term for compounds which, when applied to yarn or fabric, form a more or less continuous solid film around the yarn and individual fibers.

3.2 For definitions of other terms used in this test method, refer to Terminology D 123.

4. Summary of Practice

4.1 Test specimens of undyed nylon or polyester fabric are

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

³ Available from AATCC P.O. Box 12215, Research Triangle Park, N.C. 27709.

cationically dyed at room temperature. The resulting depth of color of the dyed fabric is indicative of the presence and relative amount of cationically dyeable sizing in the fabric.

4.2 The color of the dyed fabric is matched to a color on an AATCC chromatic scale to determine the level of sizing in the fabric.

5. Significance and Use

5.1 The depth of color achieved in dyeing fabric according to this practice is relative to the amount of sizing in the fabric. This practice employs a chromatic staining scale from 1 to 5 which is inversely proportional to the relative amount of sizing in the fabric. A light color stain indicates a low concentration of sizing and warrants a high numerical rating, while a dark color stain indicates a high concentration of sizing and warrants a low numerical rating.

5.2 The accuracy of this practice depends upon the ability of the testing personnel to match the color of the stain to the colors in the AATCC 9 Step Chromatic Transference Scale.

6. Apparatus

6.1 *Stainless Steel or Glass Beaker* with a capacity of 1000 ml.

6.2 *Glacial Acetic Acid.*

6.3 *AATCC 9 Step Chromatic Transference Scale*³.

6.4 *Ventilated Forced Air Drying Oven* capable of maintaining $350^{\circ} \pm 5^{\circ}\text{F}$ ($177 \pm 3^{\circ}\text{C}$).

6.5 *100% concentration of Sevron 4G or equivalent Basic Red 14 Dye stuff.*

6.6 *Fine Mesh Sieve* Fine mesh sieve with a count of per inch 100×100 .

7. Conditioning

7.1 Neither preconditioning nor conditioning is necessary.

8. Sampling

8.1 Determining residual size is a destructive test and therefore necessitates sampling procedures if used in conjunction with lot acceptance of commercial shipments.

8.2 *Lot Sample*

8.2.1 For acceptance testing, the lot size is the quantity of fabric finished in one production day or as agreed between purchaser and supplier.

8.2.2 Unless otherwise agreed by purchaser and supplier,