



Standard Guide for Proficiency Test Program for Fabrics¹

This standard is issued under the fixed designation D 6674; 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.

INTRODUCTION

Proficiency testing is the use of interlaboratory test comparisons to determine the performance of individual laboratories for specific tests and to monitor the consistency and comparability of a laboratory's test data.

Participation in proficiency testing programs provides laboratories with an objective means of assessing and demonstrating the reliability of the data they are producing. Although there are several types of proficiency testing programs, they all share the common feature of the comparison of test results obtained by two or more laboratories.

One of the main uses of proficiency testing programs is to assess laboratories' ability to perform tests competently. This will involve the preparation of the test specimens, calibrating or validating the testing equipment, performing the tests and reporting the data.

Bodies assessing the technical competence of testing laboratories normally require or expect satisfactory participation in proficiency testing as evidence of a laboratory's ability to produce reliable test results.

1. Scope

1.1 This guide outlines the Proficiency Test Program for Fabrics. Elements for planning the proficiency test program, selecting the sample fabrics to be used, the testing protocol, and the calculations for the data to be reported are included in this practice.

1.2 The planning of the proficiency test program requires a general knowledge of testing of textile fabrics and statistical principles included in the analysis of the data.

1.3 This guide is designed to meet the quality systems proficiency and competence requirements of participating laboratories. This program is not accredited to any international standard.

1.4 The instructions in this guide follow the logic of full scale laboratory tests as described in Practice D 2904 and Guide E 1301, except with this new guide placing its emphasis on proficiency testing.

1.5 Procedures given in this guide are applicable to methods based on the measurement of discrete measurement data and grades or scores.

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles²

D 737 Test Method for Air Permeability of Textile Fabrics²

D 1230 Flammability of Apparel Fabrics, 16CFR 1610²

D 2261 Test Method for Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure Constraint Rate of Extension (CRE) Tensile Testing Machine²

D 2904 Practice for Interlaboratory Testing of Textiles that Produces Normally Distributed Data²

D 2906 Statements on Precision and Bias for Textiles²

D 3775 Test Method for Fabric Count of Woven Fabric²

D 5034 Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)³

D 5035 Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)³

D 6545 Flammability of Textiles Used in Children's Sleepwear³

E 1301 Guide for Proficiency Testing by Interlaboratory Comparisons⁴

3. Terminology

3.1 For definitions of textile and statistical terms used in this practice, and discussions of their use, refer to Terminology D 123 and appropriate textbooks on statistics.

3.2 *Definitions*—The relevant definitions are from Terminology D 123, and are the most relevant and applicable being quoted for the purposes of this practice.

3.2.1 *accuracy, n—of a test method*, the degree of agreement between the true value of the property being tested (or

¹ This guide is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.93 on Statistics.

Current edition approved May 10, 2001. Published August 2001.

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

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

⁴ *Annual Book of ASTM Standards*, Vol 14.02.