



Designation: D1576 – 22

Standard Test Method for Moisture in Wool by Oven-Drying¹

This standard is issued under the fixed designation D1576; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This test method covers the determination of the amount of moisture present in ordinary commercial and industrial samples of wool in all forms except grease wool, using the oven-drying technique.

1.2 Formulas for calculating the moisture content (as-received basis) and moisture regain (oven-dried basis) are given. It is always important to use the correct term which corresponds to the basis used in the calculation (see 12.2.1).

NOTE 1—The determination of moisture content for textile materials in general is covered in Test Methods D2654, and an optimal method for determining the moisture in wool by distillation with toluene is covered in Test Method D2462. A method for sampling wool for the determination of moisture in wool is covered in Practice D2525. The oven-drying method has been adapted for cotton in Test Method D2495.

1.3 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D123 Terminology Relating to Textiles

D1060 Practice for Core Sampling of Raw Wool in Packages for Determination of Percentage of Clean Wool Fiber Present

D1776 Practice for Conditioning and Testing Textiles

D2258 Practice for Sampling Yarn for Testing

D2462 Test Method for Moisture in Wool by Distillation With Toluene (Withdrawn 2022)³

D2495 Test Method for Moisture in Cotton by Oven-Drying

D2525 Practice for Sampling Wool for Moisture (Withdrawn 2022)³

D2654 Test Methods for Moisture in Textiles

D3333 Practice for Sampling Manufactured Staple Fibers, Sliver, or Tow for Testing

D4845 Terminology Relating to Wool

3. Terminology

3.1 For all terminology related to D13.13, Wool and Felt, see Terminology D4845.

3.1.1 The following terms are relevant to this standard: grease wool; moisture content; moisture-free; moisture regain; oven-dried; pulled wool; raw wool; recycled wool; scoured wool; virgin wool; wool; wool, as defined in the Wool Products Labeling Act of 1939.

3.2 For definitions of all other textile terms see Terminology D123.

4. Summary of Test Method

4.1 A specimen of wool material is weighed and then dried to constant mass at $105\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ in an oven supplied with ambient air. The loss in mass is considered moisture and reported as either moisture content or moisture regain. Directions are given for the adjustment of the observed results for any change in the moisture content after sampling and before drying.

5. Significance and Use

5.1 Test Method D2462 for the determination of the moisture in wool by distillation with toluene is the preferred method for testing wool for moisture for the acceptance testing of commercial shipments. If, however, the purchaser and the supplier agree, Test Method D1576 for the determination of the moisture in wool by oven drying may be used instead. Comparative tests as directed in 5.1.1, may be advisable.

5.1.1 In case of a dispute arising from differences in reported test results when using Test Method D1576 for

¹ This test method is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.13 on Wool and Felt.

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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.

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