



Designation: D 2462 – 90 (Reapproved 1995)

Standard Test Method for Moisture in Wool by Distillation With Toluene¹

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1. Scope

1.1 This test method covers the determination of the amount of moisture present in grease wool, scoured wool, carded wool, garnetted wool, wool top and intermediate wool products, and rovings, by distillation with toluene.

1.2 Equations are given for calculating the amount of water present as moisture content (as-received basis) and moisture regain (dry fiber) basis. The term that corresponds to the basis used in the calculation and report must always be stated.

1.3 This test method is not applicable to material known to contain any steam-distillable, water-soluble matter. If it is suspected that such matter is present, the method should be used with caution.

1.4 Xylene or other solvents should not be substituted for toluene as no other solvents have been evaluated for use in this standard.

NOTE 1—The determination of moisture in wool by oven-drying is covered in Test Method D 1576 and for textile materials in general in Test Methods D 2654. A method for sampling wool for the determination of moisture in wool is covered in Practice D 2525.

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.* For specific safety hazard statements, see Section 8.

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles²

D 1060 Practice for Core Sampling of Raw Wool in Packages for Determination of Percentage of Clean Wool Fiber Present²

D 1576 Test Method for Moisture in Wool by Oven-Drying²

D 1776 Practice for Conditioning Textiles for Testing²

D 2258 Practice for Sampling Yarn for Testing²

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

D 2525 Practice for Sampling Wool for Moisture²

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

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² Annual Book of ASTM Standards, Vol 07.01.

D 2654 Test Methods for Moisture in Textiles²

D 3333 Practice for Sampling Man-Made Staple Fibers, Sliver, or Tow for Testing³

E 123 Specification for Apparatus for Determination of Water by Distillation⁴

3. Terminology

3.1 Definitions:

3.1.1 *grease wool, n.*—wool taken from the living sheep and which has not been commercially scoured.

3.1.2 *moisture content, n.*—the amount of moisture in a material determined under prescribed conditions and expressed as a percentage of the mass of the moist material, that is, the original mass comprising the oven-dried substance plus any moisture present.

3.1.2.1 *Discussion*—The term “mass” is the correct designation for the property commonly designated as “weight.” A slight amount of residual moisture may not be removed from a specimen subjected to oven drying because of the relative humidity of the ambient air. The amount of moisture retained by a specimen may be estimated from published data. There may also be a slight additional loss in mass caused by the evaporation of volatile material other than water, the amount depending on the characteristics of any added oils or emulsions.

3.1.3 *moisture-free, adj.*—the condition of a material that has been exposed in an atmosphere of desiccated air until there is no further significant change in its mass (see Discussion under 3.1.2)

3.1.3.1 *Discussion*—Heating the material and the desiccated air to temperatures as high as 110°C increases the rate of moisture loss but does not change the final equilibrium mass of the moisture-free material.

3.1.4 *moisture regain, n.*—the amount of moisture in a material determined under prescribed conditions and expressed as a percentage of the mass of the moisture-free material (see moisture content).

3.1.4.1 *Discussion*—In this test method, the material is considered to be oven-dried after drying as described in Section 10.

3.1.5 *oven-dried, adj.*—the condition of a material that has been heated under prescribed conditions of temperature and

³ Annual Book of ASTM Standards, Vol 07.02.

⁴ Annual Book of ASTM Standards, Vol 14.02.