



Designation: D2961/D2961M – 17

Standard Test Method for Single-Stage Total Moisture Less than 15 % in Coal Reduced to 2.36-mm (No. 8 Sieve) Topsize¹

This standard is issued under the fixed designation D2961/D2961M; 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.

1. Scope*

1.1 This test method covers a single-stage procedure for the determination of total moisture less than 15 % in coal reduced to 2.36-mm (No. 8 sieve) topsize. This test method is for determination of total moisture only. Materials subjected to this test shall not be used in the determination of other test parameters. It is recognized that the conditions of the test can increase the potential for significant oxidation effects on some coals. If the oxidation potential is of concern, the use of this single-stage method shall involve prior agreement between the parties involved. This test method shall not be construed as the referee standard test method for total moisture. For referee purposes, users of this test method are referred to Test Method [D3302](#) for moisture determination methods which are not as susceptible to oxidation effects.

1.2 Statistical analysis of data from several sources indicates that at a 95% confidence level, there is statistically no significant difference between the mean value of the results obtained by D2961 and [D3302](#) (that is, no bias is detected between the two methods at the 95% confidence level) for moisture levels between 1.4% and 15.8%. These two test methods were not compared in this study for some ranks of coal including lignite and anthracite. (See [11.2](#).)

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.4 *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.*

¹ This test method is under the jurisdiction of ASTM Committee [D05](#) on Coal and Coke and is the direct responsibility of Subcommittee [D05.21](#) on Methods of Analysis.

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2. Referenced Documents

- 2.1 *ASTM Standards*:²
[D121 Terminology of Coal and Coke](#)
[D2013 Practice for Preparing Coal Samples for Analysis](#)
[D3302 Test Method for Total Moisture in Coal](#)

3. Terminology

3.1 *Definitions*—For additional definitions of terms used in this test method, refer to Terminology [D121](#).

4. Summary of Test Method

4.1 Moisture is determined by establishing the weight loss of the coal sample by drying in an oven with forced-air circulation.

5. Significance and Use

5.1 The measurement of total moisture is required to determine whether coal meets commercial or environmental specifications, or both. Within the limitations prescribed in the scope, this test method describes a procedure for determination of total moisture that requires less time than the procedures described in Test Method [D3302](#).

6. Apparatus

6.1 *Drying Pans*, noncorrodible, stable at the temperature used, and of such size that the sample can be spread to a depth of not more than 25 mm [1 in.].

6.1.1 The pan size may be varied to suit the size of the sample and the oven. The height of the sides shall be no more than 40 mm [1½ in.] so that air is not restricted in passing over the coal.

6.2 *Drying Oven*, forced air-type capable of maintaining a temperature of 107 ± 3°C and constructed to provide for a continuous air flow to all parts of the oven. Air changes shall be at the rate of two to four volumes per minute.

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.

*A Summary of Changes section appears at the end of this standard