



Standard Practice for Manual Sampling of Coal from Stockpiles¹

This standard is issued under the fixed designation D 6610; 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 practice covers procedures for obtaining a manual gross sample from the surface of coal stockpiles. These procedures are used to provide gross samples for general laboratory analysis and for estimating quality and total moisture. The gross sample is to be crushed and further prepared for analysis in accordance with Method D 2013.

1.2 The user is cautioned that samples of this type do not satisfy the minimum requirements for probability sampling and as such cannot be used to draw statistical inferences about the precision, standard error, or bias.

1.3 This sampling method is intended for use only when sampling by more reliable methods that provide a probability sample is not possible.

1.4 The quantities stated in either acceptable SI units or in inch-pound units are regarded separately as standard. The quantities stated in each system may not be exact equivalents; therefore, each system must be used independently of the other, without combining quantities in any way.

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.*

2. Referenced Documents

2.1 ASTM Standards:

- D 2013 Method of Preparing Coal Samples for Analysis²
- D 2234 Practice for Collection of a Gross Sample of Coal²
- D 4749 Test Method for Performing Sieve Analysis of Coal and Designating Coal Size²
- D 4916 Guide for Mechanical Auger Sampling²
- E 105 Practice for Probability Sampling of Materials³

3. Terminology

3.1 Definitions:

3.1.1 *particle size segregation, n*—the segregation of sized particles to specific areas as a result of the particles rolling, falling, or sliding down the sides of a pile or a result of the peculiarities of a coal handling system used to build the pile.

3.1.2 *stockpile, n*—material stored or reserved in a stacked pile or heap.

4. Summary of Practice

4.1 This practice is limited to manual collection of sample increments of coal from the surface layer(s) of a coal stockpile for the purpose of acquiring a gross sample.

5. Significance and Use

5.1 The guidelines, cautions, and suggested procedures presented here are intended to provide uniform methods for collection of manual samples from the surface layer(s) of coal stored in a stockpile, taking into account the wide variety of conditions that may be encountered.

5.2 These guidelines provide procedures for collecting gross samples from the exposed surface of coal in a stockpile; these samples then being further processed to provide samples for required laboratory estimations. The use of this practice is conditional upon agreement among all interested parties concerning all relevant details of sample collection before sampling begins. These include, but are not limited to: lot size; number and mass of increments; the size, shape, and manipulation of the increment collection devices; location of increment collection site or sites; circumstances under which increments are not to be collected or suspended; and safety precautions. It is preferable that such agreements be in writing. This practice provides instructions for sampling only the outer layers of coal contained in a stockpile. The user is cautioned that samples so obtained do not represent material below the point of penetration.

6. Procedure

6.1 *Lot Size*—All interested parties should agree to the size of the lot to be represented by one gross sample before sampling begins. This practice provides instructions for sampling only the outer layers of coal contained in a stockpile. The user is cautioned that samples so obtained do not represent material below the point of penetration.

6.2 *Increments*—Before sampling a lot of coal using this method, a visual inspection for size distribution and possible size segregation within the stockpile should be performed. Notes should be made on the sampling log to reflect these observations. These notes could be useful in understanding differences of analytical test results or in identifying changes in stockpiling characteristics. Test Method D 4749 may be used to

¹ This practice is under the jurisdiction of ASTM Committee D05 on Coal and Coke and is the direct responsibility of Subcommittee D05.23 on Sampling. Current edition approved Nov. 10, 2000. Published January 2001.

² Annual Book of ASTM Standards, Vol 05.06.

³ Annual Book of ASTM Standards, Vol 14.02.