



Designation: D5192/D5192M – 22

Standard Practice for Collection of Coal Samples from Core¹

This standard is issued under the fixed designation D5192/D5192M; 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 describes procedures for collecting and handling a coal sample from a core recovered from a borehole.

1.2 *Units*—The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

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

[D121 Terminology of Coal and Coke](#)

[D388 Classification of Coals by Rank](#)

[D1412 Test Method for Equilibrium Moisture of Coal at 96 to 97 Percent Relative Humidity and 30 °C](#)

[D2013/D2013M Practice for Preparing Coal Samples for Analysis](#)

[D2796 Terminology for Megascopic Description of Coal and Coal Seams and Microscopical Description and Analysis of Coal \(Withdrawn 1995\)](#)³

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 May 15, 2022. Published June 2022. Originally approved in 1991. Last previous edition approved in 2015 as D5192 – 09(2015). DOI: 10.1520/D5192_D5192M-22.

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.

[D4371 Test Method for Determining the Washability Characteristics of Coal](#)

[D4596 Practice for Collection of Channel Samples of Coal in a Mine](#)

3. Terminology

3.1 *Definitions:*

3.1.1 For additional definitions of terms, refer to Terminology [D121](#).

3.1.2 *borehole, n*—the circular hole through soil and rock strata made by boring.

3.1.3 *caves or washouts, n*—zones of increased hole diameter caused by rock fragments that fall from the walls of a borehole and can block the hole or contaminate the cuttings and which erode or abrade the sidewall of the borehole by the action of the drilling. These zones can affect the accuracy of certain geophysical logs (especially density). Corrections to other geophysical logs can be made if a caliper log is available. The most common causes of caves or washouts include soft or fractured lithologies, the presence of water-producing zones, and the downhole pressure of the drilling medium (fluid or air) that often causes differential erosion of various strata within the borehole.

3.1.4 *concretion, n—in a geological sense*, a mass of mineral matter found in rock of a composition different from its own and produced by deposition from aqueous solution in the rock.

3.1.5 *core, n—in drilling*, a cylindrical section of rock (coal) that is usually 5 to 10 cm in diameter, taken as part of the interval penetrated by a core bit and brought to the surface for geologic examination, representative sampling, and laboratory analyses.

3.1.6 *core barrels, n*—two nested tubes above the bit of a core drill, the outer rotating with the bit, the inner receiving and preserving a continuous section or core of the material penetrated. The following two types of inner barrels are commonly used.

3.1.6.1 *split-tube barrel, n*—a type of inner barrel consisting of two longitudinal halves of pipe bound together by reinforced tape at intervals along the barrel length that allows easy access to a relatively intact core (by cutting the tape). (This is the preferred barrel type for coal exploration, when available.)

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