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Standard Practice for Collection of Calcined Petroleum Coke Samples for Analysis[1]

This standard is issued under the fixed designation D6970; 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 the collection of calcined petroleum coke samples from conveyor belts or transfer points. These samples may be used for physical and chemical analyses.

1.2 The values stated in SI units are to be regarded as standard. The values given in parentheses are for information only.

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]

D4702 Practice for Quality Management of Mechanical Coal Sampling Systems (Withdrawn 2008)[3]

D5709 Test Method for Sieve Analysis of Petroleum Coke

D6969 Practice for Preparation of Calcined Petroleum Coke Samples for Analysis

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *accuracy, n*—generally, a term used to indicate the reliability of a sample, a measurement, or an observation. Specifically, a measure of closeness of agreement between an experimental result and the true value.

3.1.1.1 *Discussion*—Example: the observed and true sulfur content of a calcined petroleum coke consignment. This measure is affected by chance errors as well as by bias.

3.1.2 *analysis sample, n*—the reduced and divided representative portion of the bulk sample, prepared for use in the laboratory.

3.1.3 *gross sample, n*—a sample representing one lot of petroleum coke and composed of a number of increments on which no reduction or division has been performed.

3.1.4 *increment, n*—a small portion of a lot collected by one operation of a sampling device and normally combined with other increments from the lot to make a gross sample.

3.1.5 *lot, n*—a quantity of coke represented by a gross sample.

3.1.6 *representative sample, n*—a sample collected in such a manner that the size consist is the same as the lot.

3.1.7 *sample, n*—a quantity of petroleum coke taken from a larger quantity for the purpose of estimating properties or composition of the larger quantity.

3.1.8 *sample preparation, n*—the process that may include drying, crushing, division, and mixing of a gross sample for the purpose of obtaining an unbiased analysis sample.

3.1.9 *size consist, n*—the particle size distribution of a material; for example, petroleum coke.

3.1.10 *top size, n*—the size of the smallest opening of one sieve of a series upon which is cumulatively retained a total of less than 5 % of the sample. This defined top size is not to be confused with the size of the largest particle in a lot.

4. Significance and Use

4.1 Data obtained from calcined petroleum coke samples are used in commercial transactions, controlling plant operations, and allocating production costs. Use of standard sampling procedures facilitates the task of obtaining a sample to represent an entire lot of calcined petroleum coke.

[1] This practice is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.05 on Properties of Fuels, Petroleum Coke and Carbon Material.

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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.