

ICS 73.040
CCS D 21



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 475-2008

**[GB/T 475-2008] Method for manual sampling of commercial
coal**

(English Translation)

Issued on: December 4, 2008

Implemented on: May 1, 2009

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

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1 Scope

This Standard stipulates the terms and definitions of manual sampling method of commercial coal; general principles and precision of sampling; establishment of sampling schemes; sampling methods; manual sampling instruments; packaging and marking of coal sample; sampling report.

This Standard is applicable to lignite, bituminous coal and anthracite.

2 Normative References

Through the reference in this Standard, clauses of the following documents become clauses of this Standard. In terms of references with a specific date, all the subsequent modification sheets (excluding the corrected content) or the revised editions are not applicable to this Standard. However, all parties that reach an agreement in accordance with this Standard are encouraged to explore the possibility of adopting the latest version of these documents. In terms of references without a specific date, the latest version is applicable to this Standard.

GB/T 19494.3 Mechanical Sampling of Coal - Part 3: Determination of Precision and Bias Test (GB/T 19494.3-2004, ISO 13909-7:2001, ISO 13909-8:2001, NEQ)

3 Terms and Definitions

The following terms and definitions are applicable to this Standard.

3.1 Coal Sample

Coal sample refers to a representative portion of coal taken from coal to determine certain characteristics.

3.2 Sample of Commercial Coal

Sample of commercial coal refers to coal sample that represents average properties of commercial coal.

3.3 Test Sample of Coal

Test sample of coal refers to coal sample that is prepared to satisfy a certain specific test requirement.

3.4 Common Sample of Coal

Common sample of coal refers to coal sample that is taken for multiple tests.

3.5 Moisture Sample of Coal

Moisture sample of coal refers to coal sample that is specifically taken for the determination of total moisture.

3.6 General Sample of Coal

General sample of coal sample that is specifically taken for the preparation of general-analysis test sample of coal.

3.7 General-analysis Test Sample of Coal

General-analysis test sample of coal refers to coal sample that is crushed to a particle size of less than 0.2 mm and reaches an air-dried state, which is used for the determination of most physical and chemical properties.

3.8 Size Analysis Sample of Coal

Size analysis sample of coal refers to coal sample that is specifically taken for particle size analysis.

3.9 Increment

Increment refers to a sample taken by one-time operation of the sampling device, or, interception of a full cross section of a coal stream.

3.10 Sub-sample

Sub-sample refers to coal sample that is constituted of several primary increments that are uniformly distributed throughout the sampling unit.

3.11 Gross Sample

Gross sample refers to coal sample merged from all increments taken from a sampling unit.

3.12 Primary Increment

Primary increment refers to increment taken in the first stage of sampling, before any crushing and division.

3.13 Divided Sample

Divided sample refers to a retained portion after division for the purpose of reducing sample mass.

3.14 Sampling

Sampling refers to the process of taking a representative portion of coal from a large amount of coal.

3.15 Continuous Sampling

Continuous sampling refers to the process of taking a gross sample from each sampling unit; during the sample, increment points are distributed at a uniform interval.

3.16 Intermittent Sampling

Intermittent sampling refers to the process of taking samples from only several sampling units.

3.17 Lot

Lot refers to an independent coal quantity that requires the determination of global property.

3.18 Sampling Unit

Sampling unit refers to coal quantity of a gross sample taken from a lot of coal. A lot of coal may be one or multiple sampling units.

NOTE: equivalent to sub-lot (part of a lot for which a test result is required) in ISO 18283.

3.19 Nominal Top Size

Nominal top size refers to corresponding sieve size of sieve that is closest to (but not greater than) 5% of the accumulative mass fraction of articles on the sieve.

3.20 Precision

Precision refers to the degree of consistency between independent test result obtained under specified conditions.

NOTE 1: it is also expressed in an index of precision, for example, two standard deviations.

NOTE 2: the precision of coal sampling is the limit value of the difference (under 95% probability) between the determination result of a single sampling and the average value of the determination results of countless samplings of the same coal (same source, same property).

3.21 Systematic Sampling

Systematic sampling refers to the process of taking increments in accordance with the same time, space or mass interval, but the first increment is randomly taken within the first interval, while the remaining increments are taken at a selected interval.

3.30 Random Error

Random error refers to an error which is statistically independent of the previous errors.

NOTE: this signifies that in a series of random errors, any two errors are uncorrelated, and it is impossible to predict any individual errors. Errors are divided into system errors (bias) and random errors. In an observation series, as the number of observations increases, the average value of random errors tends to be zero.

3.31 Bias

Bias refers to system error. As a result of this, the average of a series of results is always higher than or lower than the value obtained through reference method.

3.32 Relevant Bias

Relevant bias refers to permissive bias of actual importance or consent from all parties of a contract.