

JC

**BUILDING MATERIALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JC/T 1088-2008

**Methods for chemical analysis of granulated electric furnace
phosphorous slag
(English Translation)**

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Foreword

The consistency between this standard and EN 196-2.2005 "Method of testing cement - Part 2. Chemical analysis of cement" and ASTM C114.2005 "Standard test methods for chemical analysis of hydraulic cement" is not equivalent.

This standard was proposed by the China Building Materials Federation.

This standard shall be under the jurisdiction of the National Cement Standardization Technical Committee (SAC/TC 184).

Drafting organizations of this standard. China Building Materials Science Research Institute, China Building Materials Inspection and Certification Center.

Main drafters of this standard. Yan Weizhi, Wang Ruihai, Wang Guanjie, Wen Yugang, Huang Xiaolou.

This standard is the first release.

Methods for chemical analysis of granulated electric furnace phosphorus slag

1 Scope

This standard specifies the benchmark method and substitution method for the method of chemical analysis of granulated electric furnace phosphorus slag. In case of dispute, the benchmark method shall prevail.

This standard applies to the granulated electric furnace phosphorus slag used in the building materials industry and other materials designated to adopt this standard.

2 Normative references

The provisions in following documents become the provisions of this standard through reference in this standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this standard; however, parties who reach an agreement based on this standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 176-2008 Methods for chemical analysis of cement

GB/T 2007.1 General rules for the sampling and sample preparation of minerals in bulk - Sampling by manual method

GB/T 6682 Water for analytical laboratory use - Specification and test methods

3 Terms and definitions

The terms and definitions as established in the GB/T 15000 series as well as the following terms and definitions apply to this standard.

3.1

Repeatability conditions

The conditions for independent test of the same tested object in the same laboratory, by the same operator using the equipment, according to the same test method, in a short period of time.

3.2

Reproducibility conditions

The conditions for independent test of the same tested object in different laboratories, by different operators using different equipment, according to the same test method.

3.3

Repeatability limit

A value, under the repeatability conditions (3.1), the probability that the absolute difference between the two test results is less than or equal to this value is 95%.

3.4

Reproducibility limit

A value, under reproducibility conditions (3.2), the probability that the absolute difference between the two test results is less than or equal to this value is 95%.

4.1 Number of tests and requirements

The number of tests per determination is specified as two. Use the average value of the two tests to express the determination result.

Before the analysis, the specimen shall be baked at 105 °C ~ 110 °C for 2 h, cooled to room temperature in a desiccator, then weighed.

In the chemical analysis, unless otherwise stated, it must determine the loss on ignition at the same time. For other determinations, it shall carry out the blank test at the same time, meanwhile correct the test results.

4.2 Expression of mass, volume, results

Use "grams (g)" to express mass, accurate to 0.0001 g. The burette's volume is expressed in "milliliter (mL)", accurate to 0.05 mL. The unit of titer is expressed in "milligram per milliliter (mg/mL)".

The titer of chloride ions in the standard titration solution of mercury nitrate

retains three significant digits after the rounding off. The titer and volume ratio of other standard titration solutions retain four significant digits after the rounding off.

Unless otherwise stated, the results of each analysis are based on mass fraction. The analytical results of the chloride ion are expressed in % to three decimal places. The analytical results of other items are expressed in % to two decimal places.

4.3 Blank test

Use the same amount of reagent. Do not add specimen. Use the same determination procedures to carry out test, to correct the determination results as obtained.

4.4 Ignition

Place the filter paper and the precipitate in a crucible which has previously been burned to a constant weight. To avoid producing flame, in an oxidizing atmosphere, slowly dry and ash it. After ashing it to the absence of black carbon particle, then place it in a high-temperature furnace (6.4), to burn it at the specified temperature. In a desiccator (6.3), cool it to room temperature. Weigh it.

4.5 Constant weight

After the first burning, cooling, weighing, use the method of applying continuous burning of 15 min, cooling, weighing, to check the constant mass. When the difference between two consecutive weighing results is less than 0.0005 g, it reaches constant weight.

5 Reagents and materials

Unless otherwise stated, the reagents used shall be not less than analytical pure. The water used shall meet the requirements for grade-3 water as specified in GB/T 6682.