

ICS 73.060.10

CCS D31



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

GB/T 10322.8-2009

**Iron ores - Single-point determination of specific surface area -
Nitrogen adsorption method**

铁矿石 比表面积的单点测定 氮吸附法

Issued on: October 30, 2009

Implemented on: May 1, 2010

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

GB/T 10322 Appendix A of this part of normative appendix, Appendix B and Appendix C are informative appendices. This part is proposed by the China Iron and Steel Association. This part of the National Standardization Technical Committee reduced iron ore and direct centralized. This part mainly drafted by: Ningbo Inspection and Quarantine Institute of Science and Technology, Metallurgical Industry Information Standards Institute, People's Republic of China Tianjin CIQ. The main drafters of this section. Liao Haiping, should pine, Ren Chunsheng, Zhang steel, Chenzi Bin, Gu Songhai. Ore than a single-point surface area measurement Nitrogen adsorption

1 Scope

GB/T 10322.8-2009 is the Chinese national standard on iron ores - single-point determination of specific surface area - nitrogen adsorption method, in the field of mining and minerals. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 October 2009 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2010. Classification: ICS 73.060.10, CCS D31. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This section GB/T 10322 specifies the measurement method of iron ore by nitrogen adsorption surface area than a single point. This section applies to iron ore fine powder.

2 Normative references

The following documents contain provisions which, through reference

GB/T 10322 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 10322.1 iron ore sampling and sample preparation method (GB/T 10322.1-2000, idt ISO 3082.1998) Principle

3 Samples were placed in liquid nitrogen after degassing treatment bath, nitrogen gas mixture of helium adsorption of nitrogen gas, saturated nitrogen adsorption-desorption, absorption is detected Nitrogen attached volume, according to the BET equation to calculate the surface area of the sample, or a specific surface area obtained by comparing the standard sample.

4 Reagents

4.1 liquid nitrogen, is not less than the purity 99.99%.

4.2 Nitrogen, not less than 99.99% purity. Helium 4.3, purity of not less than 99.99%.

4.4 nitrogen helium mixture, mixing the first two purity not less than 99.99%, nitrogen partial pressure of 0.2. The specific surface area

4.5 standard sample, the specific surface area of 0.5m²/g ~ 20m²/g is appropriate.

5 Instruments and equipment

5.1 The specific surface area tester, mainly by the gas system and the detector composition, based on any principle of BET, to arrive at the correct ratio of surface area analyzer Is available.

5.2 Balance, accurate to 0.1mg.

6 Sampling and sample preparation

According to GB/T 10332.1 sampled. Experimental samples without grinding and sieving (also by the parties to agree on the scope of the sample size, screening out of character Combined sample size requirements).

7 Procedure

Warning. the human body in direct contact with liquid nitrogen can cause severe frostbite during the test should take effective security measures, such as wearing gloves and antifreeze Goggles.

7.1 Number of measurements Pre-drying of the same sample measured at least twice in parallel.