

ICS 73.060.10

CCS D 31



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

GB/T 6730.74-2017

Replacing GB/T 6730.14-1986 Partly

**Iron ores -- Determination of magnesium content -- Flame
atomic absorption spectrometric method**

Issued on: September 7, 2017

Implemented on: June 1, 2018

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

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Foreword

GB/T 6730 "iron ore" is divided into dozens of sections.

This section GB/T 6730 Part 74.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part Replaces GB/T 6730.14-1986 "Iron ore chemical analysis atomic absorption spectrophotometric determination of calcium and magnesium," the magnesium

Determination of content, this part compared with GB/T 6730.14-1986, in addition to editorial changes, the main technical changes are as follows.

--- Removed the original standard determination of calcium content;

--- Added "warning", "1 Scope" and "2 normative references";

--- Measurement range from "0.005% ~ 1.2%" to "0.03% ~ 3.50%";

--- Increasing the preparation of lanthanum chloride solution;

--- 1986 version of 2.10 "base solution" was modified;

--- 1986 version 5.2 "Weigh 0.2000g sample" was revised to "Weigh 0.50g sample, accurate to 0.0002g", the test solution

Sub-points and a variety of reagents added amount has also been adjusted accordingly;

--- Repetitive limit r and reproducibility limit R instead of the original standard allowable difference.

This section uses the redrafted law Amendment uses ISO 10204.2006 "Determination of magnesium content in iron ore Flame atomic absorption spectrometry

law".

This part of the technical differences with ISO 10204.2006 and its reasons are as follows, the provisions of these differences have been adopted in its outside page

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--- On the normative references, this section made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation

Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- * increase the reference GB/T 6379.1 (see 8.3.1);
- * increase the reference GB/T 6379.2 (see 8.3.1);
- * increase the reference GB/T 6682 (see Chapter 4);
- * Replace ISO 7764 cited in ISO 10204-2006 with GB/T 6730.1 equivalent to international standards (see 6.1 and 6.2);
- * increase the reference GB/T 7728 (see 5.4);
- * increase the reference GB/T 8170 (see 8.3.5);
- * Replace ISO 3082 (see 6.1) cited in ISO 10204.2006 with GB/T 10322.1 equivalent to the International Standard;
- * ISO 648 referenced in ISO 10204.2006 is deleted (see Chapter 5 of ISO 10204-2006);
- * Use ISO /IEC 12406 instead of ISO 10420 (see para. 5 Chapter), GB/T 12806 Compared with ISO 1042, the main technical differences are the appearance of the product requirements and inspection rules;
- * increase the reference GB/T 12807 (see Chapter 5);
- * Increased reference to GB/T 12808 (see Chapter 5).

--- The measurement range has been adjusted from "0.25% ~ 3.5%" to "0.03% ~ 3.50%" because the product analysis is required

And the lower limit of the method can meet the requirements (see Chapter 1);

--- In the preparation of the end of the liquid, said the sample was changed from "10g" to "5g", because more in line with the actual analysis of the sample requirements (see 4.9);

--- Reagents and materials, the new method of preparation Second, the preparation of strontium chloride solution, the reason is easy to practical application (see 4.10);

--- Reagents and materials, the new method of preparation Second, the method of preparation of magnesium standard solution with magnesium oxide, the reason is easy to practical application (see

4.11);

--- In the sample volume, 1g (accurate to 0.0002g) adjusted to 0.50g (accurate to 0.0002g), because 0.50g sample amount

To meet the analytical requirements (see 7.2);

--- In the analysis step, an increase of fluoride high sample processing, because China has a high fluorine iron ore products (see 7.4.1);

--- Magnesium calibration solution preparation, the 200mL volumetric flask was modified to 100mL volumetric flask, the volume of solution taken to adjust accordingly, the reason

Is consistent with the analytical requirements (see 7.4.4);

--- In the analysis step, will be assigned to the sample "fixed volume in 200mL volumetric flask" to "fixed volume in 100mL volumetric flask" because

In accordance with the analytical requirements (see 7.4.3.2).

This part is proposed by China Iron and Steel Association.

This part of the National Iron Ore and Direct Reduced Iron Standardization Technical Committee (SAC/TC317) centralized.

This part of the drafting unit. Liaoning Exit Inspection and Quarantine, Jiangsu Iron and Steel Research Institute Co., Ltd. Sha Steel, Jiangsu Sha Steel Group Limited

the company.

1 Scope

GB/T 6730 provisions of this part of the flame atomic absorption spectrometry determination of magnesium content.

This section applies to natural iron ore, iron ore, sinter and pellets Determination of magnesium content, determination range (mass fraction).

0.03% ~ 3.50%.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest edition (including all amendments) applies to this

document.

GB/T 6379.1 accuracy and accuracy of measurement methods (accuracy and precision)

Part 1. General and definitions

(GB/T 6379.1-2004, ISO 5725-1.1994, IDT)

GB/T 6379.2 Accuracy (accuracy and precision) of measurement methods and results -

Part 2. Determination of the weight of standard measurement methods

Fundamental methods of renaturation and reproducibility (GB/T 6379.2-2004, ISO

5725-2.1994, IDT)

GB/T 6682 analytical laboratory water specifications and test methods (GB/T 6682-2008, ISO 3696.1987, MOD)

GB/T 6730.1 Preparation of pre-dried samples for iron ore analysis (GB/T 6730.1-2016,

ISO 7764.2006, IDT)

GB/T 7728 chemical analysis of chemical products - General rules of flame atomic absorption spectrometry

GB/T 8170 rounded repair rules and limit values of the representation and judgment

GB/T 10322.1 Iron ore sampling and sample preparation methods (GB/T 10322.1-2014,

ISO 3082.2009, IDT)

GB/T 12806 laboratory glassware single standard line volumetric flask (GB/T 12806-2011,

ISO 1042.1998, NEQ)

GB/T 12807 Laboratory glassware graduated pipette (GB/T 12807-1991, neqISO

835.1981)

GB/T 12808 laboratory glassware single standard pipette

3 principle

Sample to hydrochloric acid, nitric acid decomposition, evaporated to dryness. Acid insoluble residue by hydrofluoric acid, sulfuric acid treatment, sodium carbonate melting at high temperature, with the main liquid

and. In a certain acidity, lanthanum chloride or strontium chloride as a release agent, Atomic absorption spectrophotometer wavelength of 285.2nm Department, the use of air -

The acetylene flame was measured for absorbance of magnesium, and the mass fraction of magnesium was calculated on the calibration curve.

4 Reagents and materials

Unless otherwise indicated in the analysis, only the use of approved analytical grade