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

GB/T 22661.4-2008

**Chemical analysis methods of potassium fluoborade - Part 4:
Determination of magnesium content - Flame atomic
absorption spectrometric method**

氟硼酸钾化学分析方法 第4部分：镁含量的测定 火焰原子吸收光谱法

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Method summary
- 4 Reagents
- 6 Sample
- 7 Procedure

Foreword

GB/T 22661 "potassium fluoroborate chemical analysis method" is divided into 10 parts.

- Part 1. Preparation and storage of test samples;
- Part 2. Determination of the weight of water in the wet method;
- Part 3. Determination of potassium fluoride boric acid sodium hydroxide volumetric method;
- Part 4. Determination of magnesium by flame atomic absorption spectrometry;
- Part 5. Determination of calcium content by flame atomic absorption spectrometry;
- Part 6. Determination of silicon content - Molybdenum blue spectrophotometric method;
- Part 7. Determination of sodium content by flame atomic absorption spectrometry;
- Part 8. Determination of the free boronic acid sodium volumetric method;
- Part 9. Determination of the chlorine content of mercuric nitrate volumetric method;
- Part 10. Determination of phosphorus pentoxide content - Molybdenum blue spectrophotometric method. This section GB/T Part of 422,661. This part is proposed by the China Nonferrous Metals Industry Association. The non-ferrous metal part by the National Standardization Technical Committee. This section is drafted. Fluoride Chemicals Co., Ltd. Participated in the drafting of this section. Hunan Nonferrous fluorine chemical limited liability company, Aluminum Corporation of China Zhengzhou Research Institute, Hengyang City State Friends of Chemical Technology Co., Ltd. The main drafters of this section. Xue Xu Jin, Shi Xiuhua, Li Yongqiang, Wang Jianping, Guoxian Hui, Wang Hui, Zhu Liang, Li Zhijian, Wang Lifang, Du Xiaojuan, Liu Zhihong Huang Ju in particular, Liu Min. Chemical analysis methods of potassium fluoroborate Determination of magnesium content. Part

1 Scope

GB/T 22661.4-2008 is the Chinese national standard on chemical analysis methods of potassium fluoborate - part 4: determination of magnesium content - flame atomic absorption spectrometric method, in the field of metallurgy. 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 29 December 2008 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 November 2009. Classification: ICS 77.120.10, CCS H61. 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 22661 specifies the method for determination of potassium fluoroborate magnesium content. This section applies to the determination of fluorine, potassium borate magnesium content. Measuring range. $\leq 0.5\%$.

2 Normative references

The following documents contain provisions which, through reference

GB/T 22661 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 22661.1-2008 Chemical analysis methods of potassium fluoroborate Part 1. Preparation and storage of test samples

3 Method summary

Sample with perchloric acid, hydrochloric acid decomposition, lanthanum chloride solution as the release agent, determine the content of magnesium by flame atomic absorption spectrometry.

4 Reagents

4.1 perchloric acid. $\rho \approx 1.67 \text{ g/mL}$.

4.3 lanthanum chloride. 100g/L. Weigh 25.00g of lanthanum chloride heptahydrate in a beaker, add 150mL water, dissolved by heating and then diluted to 250mL flask, shake,

spare.

4.4 Magnesium standard stock solution. Weigh accurately 0.0829g pre-drying at 110 °C and cooled in a desiccator reference magnesia placed 250mL beaker, add 10mL water wet, was further added 10mLHCl (4.2) was dissolved until all magnesium dissolved and transferred to 500mL Volumetric flask, dilute to the mark with water, mix this solution 1mL containing 0.1mg of magnesium.

4.5 Magnesium standard solution. Pipette 25.00mL magnesium standard stock solution (4.4) in 250mL volumetric flask, dilute to the mark, mix, This solution 1mL containing 0.01mg of magnesium.

5. Apparatus

5.1 platinum dish. diameter 80mm, high 35mm.

5.2 Atomic absorption spectrometer, with a magnesium hollow cathode lamp.

6 Sample

The specimen shall comply with GB/T 22661.1 requirements in 3.3.

7 Procedure

7.1 Sample Weigh 0.2g sample was dried (6), accurate to 0.0001g, denoted m1.