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

GB 2463-1981

Replacing GB/T 2463.1-1996; GB/T 2463.2-1996

**Pyrites and concentrate -- Determination of total iron content --
Cerium sulfate volumetric and potassium dichromate
volumetric methods
(English Translation)**

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Sample
- 4 General Provisions
- 5 Analysis
- 5.1 Cerium sulfate volumetric method

Foreword

This standard replaces GB/T 2463.1-1996 "Pyrites and concentrate - Determination of total iron content - Part 1. Cerium sulfate volumetric method" and GB/T 2463.2-1996 "Pyrites and concentrate - Determination of total iron content - Part 2. Titanium trichloride - potassium dichromate volumetric method" these two criteria are combined into a standard, divided into two methods.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard is under the jurisdiction of Chemical Industry Standardization Technical Committee chemical mine.

This standard was drafted. even in the blue sea and Design Institute.

1 Scope

This standard specifies the Pyrites and concentrate - total iron content of sulfuric acid and potassium dichromate volumetric method cerium volumetric method.

This standard applies to Pyrites and concentrate products total iron content greater than 10% was measured.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6003.1 woven wire mesh test sieve (GB/T 6003.1-1997, eqv ISO 3310-1:1990) GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-1992, neq ISO 3696. 1987)

3 Sample

The sample passes through 150 μ m test sieve (GB/T 6003.1), at 100 °C ~ 105 °C drying to constant weight, placed in a desiccator, cooled to Room temperature.

4 General Provisions

The water of this standard shall comply with GB/T 6682 water in three specifications; reagents listed Unless otherwise specified, refer to analytical reagent.

5.1.1 Method summary

Samples with sodium hydroxide, sodium peroxide melt in hydrochloric acid medium, with hypophosphite reducing ferric ions, sodium for diphenylamine Indicator, cerium sulfate standard titration solution titration, you can find the total iron content.

5.1.2 Reagents and solutions

5.1.2.1

sodium hydroxide.

5.1.2.2

sodium peroxide.

5.1.2.3

hydrochloric acid solution. 1 + 1.

5.1.2.4

hypophosphite solution. 100g/L.

5.1.2.5

sodium sulfite anhydrous. 1g/L.

5.1.2.6

sulfuric acid - phosphoric acid mixed solution. stirring the sulfuric acid was slowly added to 500mL 200mL water, then adding cooled 300mL phosphoric acid, and mix.

5.1.2.7

ferrous ammonium sulfate solution. 0.05mol/L. Weigh 1.96g of ferrous ammonium sulfate $[(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}]$ was dissolved in a small the amount of water, add 10 drops of sulfuric acid and transferred to 100mL volumetric flask, dilute to the mark, shake.

5.1.2.8

Iron standard solution. 1.00mg/L. Weigh 1.4297g ferric oxide (high purity) in 250mL beaker, add 50mL Hydrochloric acid solution, cover the surface of the pan, over low heat to dissolve completely cooled and transferred to 1000mL volumetric flask, dilute to the mark, shake. this Solution of iron (Fe) the amount of 1.00mg/mL.