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**NONFERROUS METALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

YS/T 1047.1-2015

**Methods for chemical analysis of copper magnetite. Part 1:
Determination of copper content. 2, 2-biquinoly spectrophotometric
method and flame atomic absorption spectrometric method**

铜磁铁矿化学分析方法 第1部分：铜量的测定2,2'-联喹啉分光光度法和火焰原子
吸收光谱法

(English Translation)

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Foreword

YS/T 1047-2015 "Methods for chemical analysis of copper magnetite" is divided into 11 sections.

--- Part 1. Determination of copper content of 2,2'-quinoline spectrophotometry and flame atomic absorption spectrometry;

--- Part 2. Determination of total iron content of dichromate method;

--- Part 3. Copper and iron - Determination of the amount of sodium thiosulfate titration;

--- Part 4. Determination of the amount of sulfur by high frequency combustion infrared absorption spectroscopy;

--- Part 5. Determination of phosphorus content titration;

--- Part 6. copper, total iron, silica, alumina, calcium oxide, magnesium oxide, titanium oxide, manganese and phosphorus contents - wave Long-dispersive X-ray fluorescence spectrometry;

--- Part 7. copper, manganese, aluminum, calcium, magnesium, titanium and phosphorus content - Inductively coupled plasma atomic emission spectrometry;

--- Part 8. silicon dioxide content - Gravimetric method;

--- Part 9. Determination of metallic iron content of sulfonic acid spectrophotometry;

--- Part 10. Determination of the amount of ferrous oxide dichromate method;

--- Part 11. Determination of the amount of magnetic iron dichromate method.

This is Part 1.

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

The non-ferrous metal part by the National Standardization Technical Committee (SAC/TC243) centralized.

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Methods for chemical analysis of copper magnetite Part 1. Determination of copper content 2,2'-quinoline and flame atomic spectrophotometry Absorption Spectrometry

1 Scope

YS/T 1047 This section provides the determination of copper content of copper magnetite.

This section applies to the determination of copper content of copper magnetite. 2,2'-quinoline spectrophotometric measurement range (mass fraction) 0.10% 2.50%; flame atomic absorption spectrometry range (mass fraction) of 0.10% to 2.50%.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Laboratory use specifications and test methods GB/T 6682 Analysis GB/T 10322.1 iron ore sampling and sample preparation methods 3 1 2,2-linked quinoline spectrophotometry

3.1 Method summary

Samples with hydrochloric acid, nitric acid, perchloric acid, hydrofluoric acid decomposition, under appropriate acidity, ascorbic acid with copper (II), in N, N- dimethyl Formamide in the presence of copper (I) with 2,2'-biquinoline complex forming purple copper (I) complexes, to 548 nm at a measuring wavelength spectrophotometer the amount of absorbance is calculated using the standard curve method of copper content.

3.2 Reagents

Unless otherwise stated, use only in the analysis confirmed analytically pure reagents and third grade water GB/T 6682 regulations.