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SN

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

SN/T 2763.5-2013

**Chemical analysis of nickel laterite ore. Part 5: Determination of
copper, zinc and chrome content. Flame atomic absorption
spectrometry**

(English Translation)

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Foreword

SN/T 2763 "Methods for chemical analysis of nickel laterite ore" is divided into five parts.

- Part 1. Determination of multi-component X-ray fluorescence spectrometry;
- Part 2. nickel, cobalt content - Flame atomic absorption spectrometry;
- Part 3. Determination of total iron content of titanium trichloride reduction method;
- Part 4. nickel, cobalt, aluminum, magnesium, phosphorus content by inductively coupled plasma atomic emission spectrometry;
- Part 5. copper, zinc and chromium content - Flame Atomic Absorption Spectrometry.

This section SN/T 2763 Part 5.

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

This section proposed and managed by the National Certification and Accreditation Administration Committee.

1 Scope

SN/T 2763 provisions of this part of the laterite nickel ore of copper, zinc and chromium content by flame atomic absorption spectrometry.

This section applies to the determination of copper, zinc and chromium content in nickel laterite ore. Measurement range. 0.010% to 0.50% copper, 0.010% Zn ~ 1.00%, chromium 0.010% to 4.00%.

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.

Preparation of standard solution of GB/T 602 Determination of impurities in chemical reagents Laboratory use specifications and test methods GB/T 6682 Analysis GB/T 6730.3 chemical analysis of iron gravimetric method for the determination of hygroscopic moisture in analytical samples GB/T 7728 Methods for chemical analysis of metallurgical products by Flame Atomic Absorption Spectrometry General

3 Method summary

Samples with hydrochloric acid, nitric acid decomposition and filtered. Residue on ignition, then with hydrofluoric acid and sulfuric acid, potassium pyrophosphate and then melted, molten leaching it was combined with the main solution, acidified with hydrochloric acid. In dilute hydrochloric acid medium, with air - acetylene flame, respectively, at a wavelength of 324.8nm, 213.9nm, 357.9nm measured at copper, zinc, chromium absorbance.

4 Reagents

Unless otherwise stated, all reagents were of analytical grade, water as a secondary water GB/T 6682 regulations.

4.1

potassium pyrosulfate.

4.2

hydrochloric acid ($\rho = 1.19\text{g/mL}$).

4.3

nitric acid ($\rho = 1.42\text{g/mL}$).

4.4

Hydrofluoric acid ($\rho = 1.15\text{g/mL}$).

4.5

perchloric acid ($\rho = 1.67\text{g/mL}$).

4.6

Hydrogen peroxide (30%). pure class distinctions.

4.7

hydrochloride (11).

4.8

nitric acid (11).

4.9

sulfate (11).

4.10

copper standard stock solution (1000 μ g/mL). according to GB/T 602 method of preparation or direct use of national standard material.

4.11

Zinc standard stock solution (1000 μ g/mL). according to GB/T 602 method of preparation or direct use of national standard material.