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

YS/T 1149.2-2016

**Methods for chemical analysis of zinc concentrate
roasting--Part 2: Determination of acid-soluble zinc
content--Na₂EDTA titration method**

锌精矿焙砂化学分析方法 第2部分：酸溶锌量的测定 Na₂EDTA滴定法
(English Translation)

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Foreword

YS/T 1149 "Zinc concentrate calcite chemical analysis method" is divided into the following eight parts.

- Part 1. Determination of zinc content - Na₂EDTA titration;
- Part 2. Determination of acid and zinc content - Na₂EDTA titration;
- Part 3. Determination of sulfur content - Combustion neutralization titration;
- Part 4. Determination of soluble sulfur - Barium sulfate gravimetric method;
- Part 5. Determination of iron content - Na₂EDTA titration;
- Part 6. Determination of acid soluble iron - Flame atomic absorption spectrometry and Na₂EDTA titration;
- Part 7. Determination of silica content - Molybdenum blue spectrophotometric method;
- Part 8. Determination of acid - soluble silica - Molybdenum blue spectrophotometric method.

This part is part 2 of YS/T 1149.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part of the National Nonferrous Metals Standardization Technical Committee (SAC/TC243) proposed and centralized.

The main drafting unit. Zhuzhou Smelting Group Co., Ltd., Henan Yuguang Zinc Industry Co., Ltd., Beijing Mining and Metallurgy Research Institute.

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Limited.

1 Scope

This part of YS/T 1149 specifies the method for the determination of the amount of acid and zinc in the zinc concentrate.

This part is applicable to the determination of acid and zinc in the concentrate of zinc concentrate. The measurement range is 20.00% ~ 61.00%.

When $Co \geq 0.05\%$, $Ni \geq 0.4\%$, this method does not apply.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 8151.8 Methods for chemical analysis of zinc concentrates - Part 8. Determination of cadmium content - Flame atomic absorption spectrometric method

3 Method summary

The samples were sintered in (9 191) sulfuric acid medium at $85\text{ }^{\circ}\text{C} \sim 90\text{ }^{\circ}\text{C}$ for 20min, and the coexisting elements such as lead and barium were separated by filtration.

Masking agents mask a small amount of interfering elements. In a buffer solution of sodium acetate at pH 5.5 to pH 6, using xylenol orange as an indicator, Na_2EDTA standard titration solution titrated to the solution from purple to bright yellow is the end point. Measured the results for the amount of zinc, cadmium, deduction of cadmium, that is the amount of zinc.

4 Reagent

Unless otherwise stated, the reagents used in this section are analytical reagents and distilled or deionized water in accordance with national or industry standards.

Or a fairly pure water.

4.1

ascorbic acid.

4.2

anhydrous sodium acetate.

4.3

ammonium chloride.

4.4

Zinc oxide (reference substance).

4.5

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

4.6

sulfuric acid ($\rho=1.84\text{g/mL}$).

4.7

ammonia ($\rho=0.90\text{g/mL}$).

4.8

Sulfuric acid (1:1).

4.9

Sulfuric acid (9:191).

4.10

sulfuric acid (2:98).

4.11

Hydrochloric acid (1:1).

4.12

Ammonia (1:1).