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YS

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

YS/T 1050.5-2015

**Methods for chemical analysis of lead antimony concentrates.
Part 5: Determination of sulfur content. Gravimetric method**

铅锑精矿化学分析方法 第5部分：硫量的测定 重量法

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Method summary
- 3 Reagents
- 4 Sample
- 5 Step, Analysis
- 5.1 Sample

Foreword

YS/T 1050-2015 "Methods for chemical analysis of lead-antimony concentrate" is divided into the following nine sections.

- Part 1. Determination of lead content Na₂EDTA titration;
- Part 2. Determination of antimony content cerium sulfate titration;
- Part 3. Determination of arsenic content potassium bromate titration;
- Part 4. Determination of zinc contents Na₂EDTA titration;
- Part 5. Determination of sulfur content - Gravimetric method;
- Part 6. Determination of iron content cerium sulfate titration;
- Part 7. Determination of the amount of bismuth and copper - Flame atomic absorption spectrometry amount;
- Part 8. gold and silver content determination fire assay;
- Part 9. Determination of the amount of silver by flame atomic absorption spectrometry.

This is Part 5.

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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1 Scope

This section YS/T 1050 specifies the method for determination of lead-antimony concentrate sulfur content.

This section applies to the determination of lead in antimony concentrate sulfur content measurement range (mass fraction) 15.00% - 30.00%.

2 Method summary

Sample at 750 °C by sodium carbonate - zinc oxide mixture after sintering, dissolved in water solubles, and precipitated barium sulfate solution.

The precipitate was filtered, burning, weighed, calculated according to the quality of barium sulfate sulfur content of the sample.

3 Reagents

Unless otherwise indicated, this part of the reagents were analytical reagent, the water for the two water.

3.1

zinc oxide.

3.2

anhydrous sodium carbonate.

3.3

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

3.4

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

3.5

hydrochloride (11).

3.6

barium chloride solution (100g/L).

3.7

silver nitrate solution (10g/L). Per 100mL was added dropwise 3 to 4 drops of nitric acid

(3.4).

3.8

sintering agent. anhydrous sodium carbonate (3.2) and zinc oxide (3.1) drying at $105\text{ }^{\circ}\text{C} \pm 5$
 $^{\circ}\text{C}$ 2h after mixing with 1 to 1 ratio, fine, Mix well.

3.9

methyl orange indicator (1g/L).

4 Sample

4.1

Sample size should be less than 0.074mm.

4.2

specimen should be $100\text{ }^{\circ}\text{C} \sim 105\text{ }^{\circ}\text{C}$ drying 1h, placed in a desiccator to cool to room temperature.

5.1 Sample

Weigh 0.20g sample, accurate to 0.0001g.

5.2 Determination of the number of Independently measured twice and averaged.