

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

SN/T 0481.5-2012

Replacing SN/T 0481.5-1995

**Inspection of bauxite for import and export. Part 5:
Determination of sulfur content
(English Translation)**

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Foreword

SN/T 0481 "Importers alumina test methods" is divided into 12 parts.

- Part 1. mandelic acid with concealed titanium aluminum oxide content of EDTA;
- Part 2. molybdenum blue photometric method for determination of silicon dioxide;
- Part 3. sulfosalicylic acid spectrophotometric determination of the amount of ferric oxide;
- Part 4. Direct determination with EDTA calcium oxide and magnesium oxide content;
- Part 5. Determination of sulfur content;
- Part 6. Rapid Determination of bulk density bauxite;
- Part 7. Determination of ferric oxide, titanium oxide, silicon dioxide, calcium oxide spectrometry inductively coupled plasma atomic emission, MgO content;
- Part 8. High Frequency Burning - Determination of sulfur content infrared absorption method;
- Part 9. 1,10 phenanthroline photometric method for the determination of free iron content;
- Part 10. silicon dioxide, ferric oxide, aluminum oxide, calcium oxide, magnesium oxide, potassium oxide, silica and phosphorus pentoxide Determination of Titanium X-ray fluorescence spectrometry;
- Part 11. Determination of titanium dioxide content of hydrogen peroxide spectrophotometry;
- Part 12. Determination of porosity and water absorption.

This section SN/T Section 50481 of.

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

The partial replacement of SN/T 0481.5-1995 "export bauxite test method combustion - neutralization method for the determination of sulfur content." this section compared with the SN/T 0481.5-1995, the main technical changes are as follows.

--- Increasing the foreword;

--- Equivalent to a method SN/T 0481.5-1995;

--- Increased Method Two infrared carbon and sulfur analyzer method for the determination of sulfur content.

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

1 Scope

SN/T 0481 provisions of this part of the combustion - Determination of export bauxite sulfur and carbon and sulfur analyzer and infrared method.

This section applies to the determination of sulfur content in bauxite exports, the measurement range (mass fraction) of 0.002% to 0.10%. Method One. Burning Burning - neutralization method, measurement range (mass fraction) of 0.003% to 0.10%; two. infrared carbon and sulfur analyzer, determination range (mass fraction) 0.002% to 0.10%.

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 12806
Laboratory glassware single marking flask GB/T 12808 Laboratory glassware single marking pipette

3.1 Method summary

In the presence of a co-solvent sample, in an oxygen stream $1300\text{ }^{\circ}\text{C} \pm 20\text{ }^{\circ}\text{C}$ of thermal decomposition of carbon dioxide formed is absorbed hydrogen dioxide it was oxidized to form sulfuric acid, methyl red and methylene blue mixture as the indicator, titrated with standard sodium hydroxide solution to the measured sulfur content.

3.2 Reagents

3.2.1

mixed co-solvent. the pentoxide and vanadium trioxide and boron by weight are mixed and finely ground, after $105\text{ }^{\circ}\text{C} \sim 110\text{ }^{\circ}\text{C}$ drying dry place Dryer in the back.

3.2.2

tin sheet (99.9%) or a lead sheet (99.9%).

3.2.3

absorb hydrogen peroxide solution [3% (volume fraction)].

3.2.4

mixed indicator, weighed 0.125g of methyl red dissolved in 100mL ethanol solution (95%), weighed 0.083g methylene blue dissolved 100mL ethanol solution (95%), were stored in a brown bottle, the two solutions, mix equal amounts, the mixture must not exceed placed 7 days.

3.2.5

standard sodium hydroxide (0.01mol/L). Weigh 0.4g of sodium hydroxide (analytical grade) is dissolved in water and diluted with water to 1000mL, Mix, follow these steps to calibrate its concentration.

3.2.5.1

said adding 50mL distilled water, the solution was warmed take potassium hydrogen phthalate (reference reagent) 0.0500g placed in 250mL conical flask, After cooling, add phenolphthalein indicator 2 to 3 drops of sodium hydroxide standard solution (3.2.5) titrated to a solution pink instant when the end point.