

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

SN/T 0481.2-2011

Replacing SN/T 0481.2-1995

**Inspection of bauxite for import and export. Part 2:
Determination of silicon dioxide content Molybdenum blue
spectrophotometric method**

(English Translation)

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Foreword

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

- Part 1. mandelic acid with concealed titanium aluminum oxide content of EDTA;
- Part 2. Determination of silicon dioxide content - Molybdenum blue spectrophotometric method;
- 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. combustion - neutralization method for the 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 0481 "Importers alumina test methods" series of standards - Part 2.

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

This section is amended to SN/T 0481.2-1995's.

Section compared with the SN/T 0481.2-1995 The main changes are as follows.

- Increased Chapter 2, "Normative references";
- Measurement range from "less than 8%," expanded to "less than 15%";
- Mixed flux of anhydrous sodium carbonate or anhydrous potassium carbonate, boric acid (SN/T in 0481.2 3.1) instead of anhydrous potassium carbonate and borax (In this section 4.1);
- Fixed original sample weight $0.5g \pm 2mg$ (SN/T in 0481.2 6.2) adds another option. $0.2g \pm 2mg$ (this Section 7.1);
- According to GB/T 1.1 requirements for standard text made editorial changes.

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

This section is drafted. Tianjin People's Republic of China Exit Inspection and Quarantine.

1 Scope

This section specifies the spectrophotometric method Importers alumina silica content.

This section applies to the determination of the import and export of alumina silica.
Measurement range (mass fraction). 0.2% to 15%.

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.

GB/T 2007.1 bulk minerals sampling and sample preparation General manual sampling methods
GB/T 2007.2 bulk minerals sampling and sample preparation General manual sample preparation method
GB/T 2009 bauxite bulk sampling and sample preparation method
GB/T 6379.1 measurement methods and results of Accuracy (trueness and precision) Part 1 General principles and definitions (GB/T 6379.1-2004, ISO 5725-1:1994, IDT)
GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD)

3 Method summary

After the sample was mixed with molten flux, nitric acid - sulfuric acid leach mixing silicon into solution in the form of orthosilicate, under certain acidity adding molybdcid acid Ammonium silicon so that a yellow molybdcid acid, and then increase the acidity of ferrous

restore them to molybdenum blue with oxalic acid eliminates iron, phosphorus, arsenic, spectrophotometric Determination.

4 Reagents

Analysis Unless otherwise stated, use only analytical reagent, water should comply with GB/T 6682 in three of water.

4.1

mixed flux. anhydrous potassium carbonate and anhydrous borax mass ratio (1/1) grind to a fine powder, stored in the grinding jar.

4.2

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

4.3

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

4.4

nitric acid - sulfuric acid mixed solution of 1. nitric acid aqueous sulfuric acid = 10,012,188.

4.5

nitric acid - sulfuric acid mixed solution of 2. Measure 30mL of nitric acid - sulfuric acid mixed solution of 1 (4.4) was diluted with water to 1L shake.

4.6

ammonium molybdate solution (50g/L). Weigh 5g of ammonium molybdate was dissolved in water, diluted with water to 100mL, using now.

4.7

sulfate (11).

4.8

sulfate (13).

4.9

oxalic acid solution (50g/L).