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

YS/T 534.5-2007

Replacing YS/T 534.5-2006

**Chemical analysis methods of aluminium hydroxide. Part 5:
Determination of sodium oxide content**

氢氧化铝化学分析方法第53部分：氧化钠含量的测定

(English Translation)

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Foreword

YS/T 534-2007 "chemical analysis of aluminum hydroxide" is YS/T 534-2006 (formerly GB/T 6610-2003) amendments it is divided into five parts.

--- Part 1. Determination of moisture content - Gravimetric method

--- Part 2. loss on ignition - Gravimetric method

--- Part 3. Determination of silica content molybdenum blue photometric

--- Part 4. Determination of iron oxide content phenanthroline spectrophotometry

Determination of sodium oxide content. Part 5 ---this is Part 5.

The partial replacement of YS/T 534.5-2006 (formerly GB/T 6610.5-2003).

This part is YS/T 534.5-2006 "Determination of chemical analysis of aluminum hydroxide - Part 5 oxide and sodium oxide," the editor Finishing.

The non-ferrous metal part by the National Standardization Technical Committee and centralized.

This part of the Aluminum Corporation of China Zhengzhou Research Institute is responsible for drafting.

Part 1 drafted by the Aluminum Corporation of China Shandong Branch.

Method 2 This part was drafted by the Aluminum Corporation of China Henan Branch.

1 Method, flame spectrophotometry

1 Scope

This section provides the determination of aluminum hydroxide, sodium oxide content.

This section applies to the determination of aluminum hydroxide, sodium oxide content.

Measuring range. 0.01 to 0.80%.

2 Principle of the method

Sample of boric acid, starch, high temperature sintering, converted to sodium borate. Leaching with water, separation of insoluble matter, was added n-butanol do sensitizers, by flame spectrophotometry sodium oxide content.

3 Reagents

3.1

boric acid. pure class distinctions.

3.2

Sodium chloride. sodium chloride benchmark placed in a platinum crucible, burning 2h at 500 °C, placed in a desiccator, cool to room temperature.

3.3

Potassium chloride. potassium chloride reference will be placed in a platinum crucible, burning 2h at 500 °C, placed in a desiccator, cool to room temperature.

3.4

Starch. If high blank value, after repeated washing with water pouring method to purify, washed twice with ethanol, dried, finely ground after use.

3.5

hydrochloric acid (1 + 19).

3.6

boric acid solution (29g/L).

3.7

n-BuOH. n-butanol placed in the 1000mL 500mL separatory funnel, was added 150mL of water, shaking 3min, layered, discard the aqueous phase was washed twice with water (water each about 75mL).

3.8

sodium oxide, potassium standard solution. Weigh 1.8859g Sodium chloride (3.2) and 0.1583g potassium chloride (3.3) was dissolved in water and transferred to 1000mL volumetric flask, dilute with water to volume, and mix. Store in a polyethylene bottle. 1mL solution containing 1mg sodium oxide and 0.1mg hydroxide.

3.9

sodium oxide, potassium standard solution. Pipette 50.00mL sodium oxide, potassium standard solution in 500mL volumetric flask. Diluted with water Diluted to volume, and mix.

Store in a polyethylene bottle. This solution 1mL containing 0.1mg and 0.01mg sodium oxide hydroxide.

3.10

sodium oxide, potassium working solution. in a 1000mL volumetric flask, according to Table 1 was added sodium oxide, potassium standard solution (3.8 or 3.9), followed by 300mL of boric acid solution (3.6) and n-butanol 70mL (3.7), add water to about 950mL, shaken to butanol After dissolution, dilute to the mark, mix and stored in polyethylene bottles.

Table 1

Was added sodium oxide, potassium oxide standard Solution (3.8) amount/mL Was added sodium oxide, potassium oxide standard Solution (3.9) amount/mL Working solution concentration of sodium oxide Degrees/(mg/50mL) the working solution of concentrated potassium hydroxide Degrees/(mg/50mL) 0000 - 10.00 0.05 0.005 30.00 50.00 0.15 0.25 0.015 0.025 10.00 - 0.50 0.05