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

YS/T 535.7-2009

Replacing YS/T 535.7-2006

**Chemical analysis methods of sodium fluoride. Part 7:
Determination of acidity. Neutral titration method**

氟化钠化学分析方法 第7部分：酸度的测定中和法

(English Translation)

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Foreword

YS/T 535 "sodium fluoride chemical analysis method" is divided into 10 parts.

- Part 1. Determination of wet water content - Weight method;
- Part 2. Determination of fluorine content - Distillation - thorium nitrate titration capacity method;
- Part 3. Determination of silicon content - Molybdenum blue spectrophotometric method;
- Part 4. Determination of iron content - o - phenanthroline spectrophotometric method;
- Part 5. Determination of soluble sulfate content - Turbidimetric method;
- Part 6. Determination of carbonate content - Gravimetric method;
- Part 7. Determination of acidity and neutral method;
- Part 8. Determination of water insoluble content - Gravimetric method;
- Part 9. Determination of chlorine content - Turbidimetric method;
- Part 10. Preparation and storage of specimens.

This section is part 7.

This part replaces YS/T 535.7-2006 (original GB/T 8158.7-1987).

This part is the YS/T 535.7-2006 "sodium fluoride chemical analysis method neutralization method of acidity" revision, and YS/T 535.7-2006 compared to increase the precision and quality assurance and control and so on.

This part of the National Nonferrous Metals Standardization Technical Committee proposed and centralized.

1 Scope

This section specifies the determination of acidity (expressed as hydrogen fluoride) in sodium fluoride.

This part applies to the determination of acidity (expressed as hydrogen fluoride) in sodium fluoride. Determination range (mass fraction). $\leq 1.00\%$.

2 Normative reference documents

The terms of this document are incorporated by reference in this section and become part of this section. Whichever is the date of the reference file, which is followed by all (Excluding corrigenda) or revisions do not apply to this part, however, encourage parties to reach an agreement under this section Whether you can use the latest version of these files. For undated references, the latest edition applies to this section.

Methods for chemical analysis of sodium fluoride - Part 10. Preparation and storage of samples YS/T 535.10-2009

3 Method summary

After the sample was dissolved in water, the acidity was measured by acid-base neutralization in the presence of potassium chloride.

4 Reagent

4.1

Potassium chloride. Saturated solution.

4.2

phenolphthalein ethanol solution (10g/L).

4.3

no carbon dioxide distilled water. the distilled water to boil for 20min, after cooling stored in glass bottles, with a lime lime attached to the stopper Cover it.

4.4

sodium hydroxide standard solution (0.2500mol/L), prepared as follows.

4.4.1

Preparation. Weigh 10 g of sodium hydroxide, placed in a polyethylene cup, add 100 mL of water, dissolve it, and then move into a 1 L volumetric flask , Diluted with water to the mark, mix well. Immediately move into a polyethylene bottle.

4.4.2

Calibration. phenolphthalein as an indicator, with 0.2500mol/L standard hydrochloric acid solution calibration.

Calculate the actual concentration of sodium hydroxide standard titration solution according to formula (1) $C = c_0 \times V_1 / V_2$ (1) where.

C - the actual concentration of sodium hydroxide standard titration solution in moles per liter (mol/L);

C₀ - the concentration of hydrochloric acid standard solution in moles per liter (mol/L);

V₁ --- Remove the volume of hydrochloric acid standard solution in milliliters (mL);

V₂ --- titration, hydrochloric acid standard solution consumed sodium hydroxide standard titration solution volume, in milliliters (mL).

5 Instruments

General laboratory equipment.

6 Samples

The specimen shall comply with the requirements of 4.2 of YS/T 535.10-2009.