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NONFERROUS METAL INDUSTRY STANDARD

OF THE PEOPLE'S REPUBLIC OF CHINA

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YS/T 273.1-2020

Replacing YS/T 273.1-2006

**Methods for chemical analysis and physical properties test of
cryolite - Part 1: Determination of moisture content -
Gravimetric method**

冰晶石化学分析方法和物理性能测定方法 第1部分：湿存水含量的
测定 重量法

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Foreword

YS/T 273 "Methods for chemical analysis and physical properties test of cryolite" is divided into 17 parts:

- Part 1: Determination of moisture content - Gravimetric method;
- Part 2: Determination of ignition loss;
- Part 3: Determination of fluoride content by distillation-thorium nitrate titration;
- Part 4: Determination of aluminum content - EDTA titration method;
- Part 5: Determination of sodium by flame atomic absorption spectrometric method;
- Part 6: Determination of silica content by the molybdenum blue photometric;
- Part 7: Determination of iron content by orthophenanthroline photometric method;
- Part 8: Determination of sulphate content - Barium sulphate gravimetric method;
- Part 9: Determination of phosphorous pentoxide content - Molybdenum blue photometric method;
- Part 10: Determination of alumina content by gravimetric method;
- Part 11: Determination of sulfur content by X-ray fluorescence spectrometric method;
- Part 12: The atomic absorption spectrophotometric method for the determination of calcium oxide content;
- Part 13: Preparation and storage of test samples;
- Part 14: X-ray fluorescence spectrometric method for the determination of elements content;
- Part 15: X-ray fluorescence spectrometric method for the determination of elements content using pressed powder tablets;
- Part 16: Determination of lithium content - Flame atomic absorption spectrometric method;
- Part 17: Determination of elements content - Inductively coupled plasma atomic emission spectrometric method.

This Part is Part 1 of YS/T 273.

Methods for chemical analysis and physical properties test of cryolite - Part 1: Determination of moisture content - Gravimetric method

1 Scope

This Part specifies the method for determination of moisture content in cryolite.

This Part applies to the determination of moisture content in cryolite. Measuring range:
 $\leq 1.50\%$.

2 Method summary

After the sample is dried in the oven, the difference in mass of the sample before and after drying is calculated, which is the moisture content of the sample.

3 Instruments

3.1 Weighing bottle: The diameter is 45 mm; it is flat type, which has a lid.

3.2 Oven: It is capable of controlling the temperature at $110\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$.

3.3 Dryer.

4 Specimens

The specimens shall be kept in a sealed container. It shall mixed thoroughly before weighing.

5 Analytical steps

5.1 Sample

Weigh 5.0 g of specimen (4), accurate to 0.0001 g.

5.2 Parallel test

Do two tests in parallel. Take the average value.

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