

ICS 71.100.10
CCS H 21

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

YS/T 273.10-2006

**Chemical analysis methods and physical properties of cryolite.
Part 10: Determination of alumina content by gravimetric
method**

(English Translation)

Issued on: May 25, 2006

Implemented on: December 1, 2006

Issued by: National Development and Reform Commission

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Foreword

YS/T 273 "Chemical analysis methods and physical properties of cryolite" is divided into 13 parts:

- Part 1: Determination of wet water 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 sulfate content - Barium sulfate gravimetric method;
- Part 9: Determination of phosphorus pentoxide content - Molybdenum blue spectrophotometric method;
- Part 10: Determination of alumina content by gravimetric method;
- Part 11: Determination of sulphur 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.

This Part is Part 10.

This Part was proposed by and shall be under the jurisdiction of National Technical Committee on Nonferrous Metals of Standardization Administration of China.

Fushun Aluminium Factory AND China Nonferrous Metals Industry Standard and Metrology Quality Institute are responsible for the drafting of this Part.

This Part was drafted by Zhengzhou Institute, Aluminum Corporation of China Limited.

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Chemical analysis methods and physical properties of
cryolite - Part 10: Determination of alumina content by
gravimetric method

1 Scope

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

This Part applies to the determination of alumina content in cryolite. Determination range (mass fraction): $\leq 5.00\%$.

2 Method summary

The fluoride salt in the test portion is dissolved in hot aluminum chloride solution; but the free Al_2O_3 is not dissolved. After filtering, burn and weigh.

4.1 Platinum crucible: Top diameter is about 30 mm; bottom diameter is about 20 mm;

height is about 35 mm. It is equipped with platinum lid.

5 Test sample

The test sample shall comply with the requirements of 3.3 in YS/T 273.13.

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