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

GB/T 16484.15-2009

Replacing GB/T 16484.15-1996

**Chemical analysis methods of rare earth chloride and light rare
earth carbonate - Part 15: Determination of chlorine content in
light rare earth carbonate - Silver nitrate turbidimetry**

氯化稀土、碳酸轻稀土化学分析方法 第15部分：碳酸轻稀土中氯量的测定 硝酸
银比浊法

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Foreword

GB/T 16484-2009 "rare earth chloride and light rare earth carbonate chemical analysis method" is divided into 22 parts.

- Part 1. Determination of cerium oxide content of ammonium ferrous sulfate titration;
- Part 2. europium oxide content - Inductively Coupled Plasma Mass Spectrometry;
- Part 3. 15 with a rare earth element oxide component measured by inductively coupled plasma atomic emission spectrometry;
- Part 4. Determination of thorium oxide content arsenazo III spectrophotometry;
- Part 5. Determination of barium oxide by inductively coupled plasma atomic emission spectrometry;
- Part 6. Determination of calcium oxide content by flame atomic absorption spectrometry;
- Part 7. Determination of magnesium oxide content - Flame atomic absorption spectrometry;
- Part 8. Determination of the amount of sodium oxide flame atomic absorption spectrometry;
- Part 9. Determination of the amount of nickel oxide by flame atomic absorption spectrometry;
- Part 10. Determination of manganese oxide content by flame atomic absorption spectrometry;
- Part 11. Determination of lead oxide content by flame atomic absorption spectrometry;
- Part 12. Determination of the amount of sulfate;
- Part 13. Determination of the amount of ammonium chloride distillation - titration;

1 Scope

GB/T 16484.15-2009 is the Chinese national standard on chemical analysis methods of rare earth chloride and light rare earth carbonate - part 15: determination of chlorine content in light rare earth carbonate - silver nitrate turbidimetry, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 October 2009 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2010. Classification: ICS 77.120.99, CCS H14. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

GB/T 16484 specifies the determination of this part of the light rare earth carbonate in the amount of chlorine. This section applies to the determination of light rare earth carbonate in the amount of chlorine. Measurement range. 0.0050% to 0.50%.

2 Principle of the method

The sample is dissolved in dilute nitric acid, dilute nitric acid medium, chloride ions and chloride ions to form silver colloidal silver, colloidal silver chloride in solution into a suspension Floating state, in the presence of a stabilizing agent, glycerol, in the spectrophotometer at a wavelength of 430nm were turbidity, on the working curve corresponding Richard Chlorine content.

3 Reagents and materials

3.1 nitrate ($\rho=1.4\text{g/mL}$), pure class distinctions.

3.2 Hydrogen peroxide (30%).

3.3 nitric acid (1 + 1).

3.4 nitric acid (1 + 3).

3.5 silver nitrate (5g/L). Glycerin 3.6 (1 + 1). Secondary ion exchanged water to 3.7. before use chlorine ion (of Cl^-) test. Amount of water in 20mL colorimetric tube, add 2mL nitric acid Silver (3.5), shaking gently, incubated at 60 °C water bath 10min, without visual turbidity before use.

3.8 Storage chlorine standard solution. Weigh 1.6485g by 400 °C ~ 450 °C calcined sodium chloride (excellent pure) in 500mL beaker, Add 200mL water dissolved. Moved into 1000mL

volumetric flask and dilute to volume, and mix. This solution 1mL 1mg containing chlorine.

3.9 chlorine standard solution. Pipette 10.00mL chlorine standard stock solution (3.8) in 500mL flask, diluted with water to the mark. This solution 1mL containing 20 μ g chlorine.

4 Instrument

Spectrophotometer.

5 Sample

Preparation of light rare earth carbonate sample, weigh the sample immediately after the opening. Step

6 Analysis

6.1 Sample Table 1 sample was weighed, accurate to 0.0001g.