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

GB/T 16484.16-2009

Replacing GB/T 16484.16-1996

**Chemical analysis methods of rare earth chloride and light rare
earth carbonate - Part 16: Determination of water insoluble
substance content in rare earth chloride - Gravimetry**

氯化稀土、碳酸轻稀土化学分析方法 第16部分：氯化稀土中水不溶物量的测定
重量法

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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 16484.16-2009 is the Chinese national standard on chemical analysis methods of rare earth chloride and light rare earth carbonate - part 16: determination of water insoluble substance content in rare earth chloride - gravimetry, 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 provisions of this part of the determination of rare earth chloride in water insolubles content. This section applies to the determination of the amount of water insoluble rare earth chloride in. Measurement range.

0.10 to 0.50%.

2 Principle of the method

The sample is dissolved in water, insoluble matter was separated by filtration which is calculated by the amount of water insoluble mass value after drying.

3 Equipment

3.1 electric oven. 200 °C ± 2 °C.

3.2 glass filter (acid filtration funnel). G4.

4 Sample

Preparation of rare earth chloride sample. A sample was crushed, quickly placed in a weighing bottle immediately weighed. Step

5 Analysis

5.1 Sample Weigh 10g sample, accurate to 0.0001g.

5.2 Determination of the number of Weigh two samples were measured parallel to the mean value.

5.3 blank test Along with the test sample blank.

5.4 Determination The sample (5.1) in 400mL beaker, add 200mL of water (pH = 6), stirred for 2min, allowed to stand for 5min. Slowly pour the test solution It has been in the 105 °C ~ 110 °C drying to constant weight of glass sand funnel (3.2) in filtration, washed several times with water beaker, and the solution was transferred to all glass Glass sand funnel (3.2), and dry. The glass filter (3.2) into the electric oven (3.1), and dried at 110 °C 2h, then placed Drier allowed to cool 25min, saying mass on an analytical balance. Repeat until the difference between two adjacent mass does not exceed 1mg.

6 Calculation and presentation of analysis results

According to equation (1) calculate the water insoluble mass fraction (%). W_1 (water insoluble) $1 - m_1 = m_1 / m_0 \times 100$ (1) Where: M_1 0

--- sand glass crucible mass in grams (g); Both m_1

--- sand glass crucible with water-insoluble substances and, in grams (g); M_1

--- quality of sample in grams (g).