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

GB/T 18114.10-2010

Replacing GB/T 18114.10-2000

**Chemical analysis methods of rare earth concentrates - Part 10:
Determination of water content - Gravimetry**

稀土精矿化学分析方法 第10部分：水分的测定 重量法

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Foreword

GB/T 18114 "Methods for chemical analysis of rare earth concentrates" is divided into 11 parts.

- Part 1. Determination of total rare earth oxide gravimetric method;
- Part 2. Determination of thorium oxide content;
- Part 3. Determination of calcium oxide content;
- Part 4. niobium oxide, zirconium oxide, titanium oxide content - Inductively coupled plasma atomic emission spectrometry;
- Part 5. aluminum oxide content - Inductively coupled plasma atomic emission spectrometry;
- Part 6. Determination of the amount of silica;
- Part 7. Determination of the amount of iron oxide dichromate method;
- Part 8. fifteen rare earth element oxide with components measured by inductively coupled plasma atomic emission spectrometry;
- Part 9. Determination of the amount of phosphorus pentoxide bismuth molybdenum blue spectrophotometric method;
- Part 10. Determination of moisture content - Gravimetric method;
- Part 11. Determination of the amount of fluorine EDTA titration. This section section 10. This part is GB/T 18114.10-2000 "Methods for chemical analysis of monazite concentrates - Determination of water content" amendment. This section compared with the GB/T 18114.10-2000, have the following main changes.

--- Measurement range from

0.02 to 1.00% was adjusted to 0.02% ~ 20.00%;

1 Scope

GB/T 18114.10-2010 is the Chinese national standard on chemical analysis methods of rare earth concentrates - part 10: determination of water content - 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 14 January 2011 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 November 2011. 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 18114 provisions of this part of the determination of rare earth concentrates moisture. This section applies to the determination of rare earth concentrates in moisture measurement range. 0.02% to 20.00%.

2 Principle of the method

Weigh a certain amount of rare earth concentrate sample, dried at 105 °C ~ 110 °C certain period of time, said its loss of quality, calculate the amount of water.

3 Instruments and reagents

3.1 Oven. temperature greater than 110 °C.

3.2 weighing bottle.

3.3 Balance. a sense of the amount of 0.0001g.

4 Sample

Rare earth concentrate sample sealed. Step

5 Analysis

5.1 Sample Weigh 10g ~ 20g sample (4), accurate to 0.0001g.

5.2 Determination of the number of Weigh two samples (5.1) parallel determination of the mean value.

5.3 Determination A sample (5.1) into constant weight weighing bottle (3.2), and placed 105 °C ~ 110 °C oven bake 2h, remove, add dried coolish Dryer, cooled to room temperature, weighed, and repeat this operation until constant weight.

6 Calculation and presentation of analysis results

According to equation (1) calculate the water content (%). $w(H_2O) = \frac{m_1 - m_2}{m} \times 100$ (1)

Where. Mass m_1

--- weighing bottle and sample before drying, in units of grams (g); Mass m_2

--- dried sample and weighing bottle in grams (g); M

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

7 Precision

7.1 Repeatability Found two independent test results obtained under repeatability conditions within the average range given below, these two test results The absolute difference does not exceed the repeatability limit (r), exceeds the repeatability limit (r) does not exceed 5% repeatability limit (r) by the data in Table 1 using a linear Obtained by interpolation.