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

GB/T 18882.4-2024

**Chemical analysis methods of mixed rare earth oxide of ion-absorption
rare earth ore - Part 4: Determination of iron trioxide content -
Inductively coupled plasma atomic emission spectrometry**

离子型稀土矿混合稀土氧化物化学分析方法 第4部分：三氧化二铁含量的测定 电
感耦合等离子体发射光谱法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document is Part 4 of GB/T 18882 "Chemical analysis methods for mixed rare earth oxides in ionic rare earth ores". The following parts have been published. Part

1 Scope

GB/T 18882.4-2024 is the Chinese national standard on chemical analysis methods of

mixed rare earth oxide of ion-absorption rare earth ore - part 4: determination of iron trioxide content - inductively coupled plasma atomic emission spectrometry, 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 28 November 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 June 2025. 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.

This document describes the determination of ferric oxide content in ionic rare earth ores, mixed rare earth oxides, rare earth carbonates and rare earth oxalates. method. This document is applicable to the determination of ferric oxide content in ionic rare earth ores and mixed rare earth oxides, and is also applicable to rare earth carbonates, rare earth Determination of ferric oxide content in oxalate. Determination range (mass fraction). 0.010%1.80%.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB/T 6379.2 Accuracy (trueness and precision) of measurement methods and results Part

2.Determination of repeatability of standard measurement methods Basic methods of sex and reproducibility

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8170 Rules for rounding off values and expression and determination of limit values

JJG 768 Emission Spectrometer

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Principle

The sample was decomposed by hydrochloric acid and hydrofluoric acid. After the perchloric acid smoked out, it was dissolved in hydrochloric acid until clear. The matrix was

corrected by the approximate matrix matching method. The influence of the determination is directly excited by an argon plasma light source, and the spectrum is measured to calculate the content of ferric oxide.

5 Reagents or materials

Unless otherwise specified, only analytically pure reagents and grade II water that complies with the laboratory standard GB/T 6682 shall be used in the analysis. Use certified standard solutions.

5.1 Hydrogen peroxide [w (H₂O₂) ≥ 30%].