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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 17415.1-2010

Replacing GB/T 17415.1-1998

Methods for chemical analysis of tantalum and niobium ores - Part 1: Determination of tantalum content

钽矿石、铌矿石化学分析方法 第1部分：钽量测定

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4.5 Ammonia (rho0.90g/mL). Warning. Be careful

Foreword

GB/T 17415 "tantalum ore, niobium ore chemical analysis method" has two parts.

--- Part 1. Determination of tantalum content;

--- Part 2. Determination of niobium content. This section GB/T 17415 Part 1. This Part replaces GB/T 17415.1-1998 "tantalum ore, niobium ore enrichment and separation of chemical analysis of silica gel - Butyl Rhodamine B and Crafts Take spectrophotometric determination of tantalum content. " This section compared with the GB/T 17415.1-1998, the main changes are as follows:

--- Modify this part of the English name;

--- Text format has been modified;

--- Formula for calculating the mass fraction represented by the symbol w instead of omega (%);

--- Increased alert, warnings;

--- Increased provision sample;

--- Increased waste disposal provisions. This section presents the People's Republic of China Ministry of Land Resources. This part of the National Standardization Technical Committee under the jurisdiction of Land and Resources. This section is responsible for drafting. National geology test center. This section is drafted. Liaoning Provincial Institute of Geology. The main drafters of this section. Min Kwong-chuen. 17th. This part of the standard replaces the previous editions are.

--- GB/T 17415.1-1998. Tantalum ore, niobium ore chemical analysis Part 1. Determination of tantalum content Warning. Use of this standard shall have a person experiences regular laboratory work. This standard does not point out all possible security issues. Users have the responsibility to take appropriate safety and health practices and to ensure compliance with the conditions relevant national regulations.

1 Scope

GB/T 17415.1-2010 is the Chinese national standard on methods for chemical analysis of tantalum and niobium ores - part 1: determination of tantalum content, in the field of mining and minerals. 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 10 November 2010 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 February 2011. Classification: ICS 73.060, CCS D43. 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 17415 provisions of this part of the spectrophotometric determination of tantalum, niobium and tantalum content in the ore method Butylrhodamine B. This section applies to tantalum, niobium ore, also applies to lithium, rubidium, cesium, tantalum ore contents. Measurement range. 0.0050% to 1.0% (by mass) of tantalum content (with tantalum pentoxide dollars).

2 Normative references

The following documents contain provisions which, through

GB/T 17415 in this part of the reference in terms of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section. Laboratory use specifications and test methods

GB/T 6682 Analysis Principle

3 Sample decomposition by alkali fusion, disodium edetate in the presence of oxalic acid and ammonia medium to silica gel enriched niobium, tantalum, and tungsten make it, Molybdenum, vanadium, most of titanium, zirconium, aluminum and general divalent and trivalent metal ions separated precipitate was filtered, washed and burning, hydrofluoric acid to silicon, will Niobium, tantalum tartrate solution. An aliquot of the solution of toluene and acetone extractant to Butyl Rhodamine B photometric method, in a spectrophotometer The meter, measured at a wavelength of 560nm absorbance, calculate the amount of tantalum.

4 Reagents

The reagents used in this section, unless otherwise indicated, the use of analytical chemical reagents and in line with GB/T 6682 analysis laboratory analysis Water.

4.1 potassium hydroxide.

4.2 potassium pyrosulfate.

4.3 disodium edetate.

4.4 oxalic acid.

4.5 Ammonia (rho0.90g/mL). Warning. Be careful

4.6 Hydrofluoric acid (rho1.13g/mL). Warning. toxic and highly corrosive, the operation should wear gloves to prevent skin contact

4.7 hydrochloride (rho1.19g/mL).

4.8 hydrochloride (19).

4.9 with saturated ammonium chloride solution.

4.10 ammonium chloride washing liquid (50g/L). Weigh 5.0g of ammonium chloride (NH4Cl) in 100mL flask, add water, 70mL ~ 80mL, With ammonia (4.5) adjusted to phenolphthalein was red, diluted with water to 100mL.

4.11 sodium silicate solution (150g/L). Weigh 15.0g of sodium silicate (Na2SiO3 · 9H2O), dissolved in water and diluted to 100mL.

4.12 tartaric acid solution (150g/L).