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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 14352.14-2010

Replacing GB/T 14352.14-1993

Methods for chemical analysis of tungsten ores and molybdenum ores - Part 14: Determination of gallium content

钨矿石、钼矿石化学分析方法 第14部分：镓量测定

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Foreword

GB/T 14352 "tungsten ores and molybdenum ores chemical analysis methods," a total of 18 parts.

--- Part 1. Determination of tungsten;

--- Part 2. Determination of molybdenum;

--- Part 3. Determination of copper content;

--- Part 4. Determination of lead content;

--- Part 5. Determination of the amount of zinc;

--- Part 6. Determination of cadmium content;

--- Part 7. Determination of cobalt content;

--- Part 8. Determination of nickel content;

--- Part 9. Determination of sulfur content;

--- Part 10. Determination of arsenic content;

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--- Part 13. Determination of tin;

1 Scope

GB/T 14352.14-2010 is the Chinese national standard on methods for chemical analysis of tungsten ores and molybdenum ores - part 14: determination of gallium 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 D40. 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 section GB/T 14352 specifies the method for the determination of tungsten ores and molybdenum ores in the amount of gallium. This Part applies to tungsten ores Determination of gallium content of molybdenum ore. Measuring range. 2μg/g ~ 500μg/g of gallium.

2 Normative references

The following documents contain provisions which, through reference

GB/T 14352 in this section constitute provisions 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

GB/T 14505 method for chemical analysis of rocks and ores General rules and regulations Principle

3 Sample molten sodium peroxide, the flooding, hydrochloric acid, dehydration in addition to silicon, in hydrochloric acid medium, titanium trichloride reduced iron, gold, thallium, antimony, Molybdenum and other elements, with butyl acetate extraction of gallium chloride anions, separated from interfering elements. Gallium chloride anions (GaCl4-) and Rhodamine B To form a red solid compound with toluene - methyl isobutyl ketone extraction, the organic phase was purple roses on spectrophotometer, at a wavelength of 562nm, The absorbance was measured to calculate the amount of gallium.

4 Reagents

Unless otherwise stated in this section are consistent with the use of analytical reagent and GB/T 6682 analytical laboratory use in the analysis.

4.1 sodium peroxide.

4.2 Butyl acetate.

4.3 titanium trichloride (blank check should be carried out prior to use, process impurity see Appendix A.3).

4.4 hydrochloride (rho1.19g/mL).

4.5 hydrochloric acid c (HCl) = 5.5mol/L.

4.6 sodium chloride solution (100g/L).

4.7 Rhodamine B solution (5g/L). Weigh 0.5g rhodamine B, was dissolved in 100mL of hydrochloric acid (4.4) in.

4.8 Toluene - Methyl isobutyl ketone solvent (41).

4.9 Gallium standard solution.

a) Gallium standard stock solution [rho (Ga) = 200.0μg/mL]. Weigh 50.0mg metallic gallium (99.99%), a 50mL beaker Was added 10mL of hydrochloric acid (4.4), a few drops of hydrogen peroxide, covered with a watch glass at 140 °C after dissolved by heating temperature control plate, with less The amount of water to the surface of the pan, continue in a temperature controlled heating plate and evaporated to dryness, added 25mL of hydrochloric acid (4.4) gallium salt dissolved and transferred to 250mL capacity