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

**GB/T 14352.5-2010**

Replacing GB/T 14352.5-1993

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**Methods for chemical analysis of tungsten ores and  
molybdenum ores - Part 5: Determination of zinc content**

钨矿石、钼矿石化学分析方法 第5部分：锌量测定

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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;
- Part 11. Determination of the amount of bismuth;
- Part 12. determination of silver;
- Part 13. Determination of tin;

### 1 Scope

GB/T 14352.5-2010 is the Chinese national standard on methods for chemical analysis of tungsten ores and molybdenum ores - part 5: determination of zinc 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 provides for tungsten ores and molybdenum ores Determination of zinc content. This Part applies to tungsten ores and molybdenum ores - Determination of zinc content. Measuring range. 0.01% to 2% of zinc.

## 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 hydrofluoric acid, after aqua regia, perchloric acid decomposition in hydrochloric acid - boric acid medium, using air - acetylene flame atomic absorption spectrophotometer On the meter, the wavelength at 213.8nm, absorbance was measured to calculate the amount of zinc.

## 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 hydrofluoric acid ( $\rho=1.13\text{g/mL}$ ), Warning. Toxic and corrosive hydrofluoric acid, the operation should wear gloves to prevent skin contact.

4.2 perchloric acid ( $\rho=1.67\text{g/mL}$ ), Warning. explosive materials, careful

4.3 aqua regia. the 3 parts of hydrochloric acid ( $\rho=1.19\text{g/mL}$ ) and 1 part nitric acid ( $\rho=1.42\text{g/mL}$ ) mixed; formulated with time.

4.4 hydrochloride (11).

4.5 hydrochloric acid (595).

4.6 boric acid solution (60g/L).

4.7 Zinc standard solution.

a) standard zinc stock solution [ $\rho(\text{Zn}) = 1.0\text{mg/mL}$ ]. Weigh 1.0000g metallic zinc (99.99%), placed in 250mL beakers, Covered the surface of the dish, along Beibi added 20mL of hydrochloric acid (4.4), placed autolysis (such as additional acid may be enough), dissolved completely, with Surface water to the dish and transferred to 1000mL volumetric flask, dilute to the mark, shake;

b) zinc standard solution [ $\rho(\text{Zn}) = 20.0\mu\text{g/mL}$ ]. dispensing 20.00mL standard zinc stock solution [4.7a)], placed 1000mL Volumetric flask, dilute to the mark, shake.

## 5 Instruments

5.1 Analytical balance. three, a sense of the amount of 0.1mg.