

ICS 73.060

CCS D40



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

GB/T 14352.1-2010

Replacing GB/T 14352.1-1993

**Methods for chemical analysis of tungsten ores and
molybdenum ores - Part 1: Determination of tungsten content**

钨矿石、钼矿石化学分析方法 第1部分：钨量测定

Issued on: November 10, 2010

Implemented on: February 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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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 14352.1-2010 is the Chinese national standard on methods for chemical analysis of tungsten ores and molybdenum ores - part 1: determination of tungsten 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 content of tungsten ores and molybdenum ores. This Part applies to tungsten ores and determination of tungsten content of molybdenum ore. Measurement range. from 0.05% to 5% of tungsten trioxide.

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

GB/T 14352.2 tungsten ores and molybdenum ores - Methods for chemical analysis - Part 2. Determination of molybdenum content Principle

3 Sample molten sodium peroxide, hot water extraction, iron, titanium, manganese, nickel, cobalt, niobium, tantalum and tungsten to form a precipitate separated. An aliquot of the filtrate In hydrochloric acid medium, titanium trichloride tungsten reducing pentavalent state thiocyanate forms a yellow complex on the spectrophotometer, at a wavelength Absorbance was measured at 420nm, calculate the amount of tungsten. Molybdenum can also be reduced to titanium trichloride is pentavalent and thiocyanate generated orange-red complexes affect the determination. If the concentration of hydrochloric acid is greater than 25%, When adding an excess of the reducing agent can restore the trivalent molybdenum with thiocyanate complexes formed yellow, the color intensity much lower than tungsten thiocyanate yellow Complex is weak, 0.2mg of molybdenum (50 mL chromogenic volume) had no effect on the determination, when exceeding this amount shall be calibrated, or decomposed with an acid Sample of separation.

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.

4.3 formaldehyde.

4.4 hydrochloride ($\rho=1.19\text{g/mL}$).

4.5 solution of potassium thiocyanate (250g/L, the time is now equipped with).

4.6 sodium hypophosphite solution (100g/L). Solution of aluminum chloride 4.7 [500g/L, with the preparation of aluminum chloride hexahydrate ($\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$)].

4.8 titanium trichloride solution (15g/L). Pipette 10mL titanium trichloride solution (150g/L), placed in 100mL flask, diluted with hydrochloric acid (4.4) to the mark with a time of