

ICS 73.060

CCS D40



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

GB/T 14353.11-2010

Replacing GB/T 14353.11-1993

**Methods for chemical analysis of copper ores, lead ores and
zinc ores - Part 11: Determination of silver content**

铜矿石、铅矿石和锌矿石化学分析方法 第11部分：银量测定

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**

Table of Contents

- 1 Scope
- 2 Normative references
- 4 Reagents

Foreword

GB/T 14353 "copper ores lead ores and zinc ores chemical analysis method" is divided into 18 parts.

- Part 1. Determination of copper content;
- Part 2. Determination of lead content;
- Part 3. Determination of the amount of zinc;
- Part 4. Determination of cadmium content;
- Part 5. Determination of nickel content;
- Part 6. Determination of cobalt content;
- Part 7. Determination of arsenic content;
- Part 8. Determination of the amount of bismuth;
- Part 9. Determination of molybdenum;
- Part 10. Determination of tungsten;
- Part 11. determination of silver;
- Part 12. Determination of sulfur content;
- Part 13. the amount of gallium, indium and thallium amount for determination;

1 Scope

GB/T 14353.11-2010 is the Chinese national standard on methods for chemical analysis of copper ores, lead ores and zinc ores - part 11: determination of silver 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.

GB/T 14353 provisions of this part of the copper ores lead ores and zinc ores - Determination of silver content. This section applies to copper ores, lead ores and zinc ores - Determination of silver content. Measuring range. 10µg/g ~ 500µg/g of silver.

2 Normative references

The following documents contain provisions which, through reference

GB/T 14353 in this section constitute provisions of this part of the 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 After the sample at 600 °C burning, first with hydrofluoric acid, perchloric acid decomposition, evaporated to dryness. And then to the king aqueous paste of ammonia from the flooding. Ammonia at 20% An aqueous medium, using air - acetylene flame at the wavelength at 324.7nm by atomic absorption spectrophotometer absorbance was measured to calculate the amount of silver.

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 perchloric acid (rho1.67g/mL), Warning. explosive materials, careful

4.2 hydrofluoric acid (rho1.13g/mL), Warning. toxic hydrofluoric acid, is highly corrosive, the operation should wear gloves to prevent skin contact

4.3 hydrochloride (rho1.19g/mL).

4.4 aqua regia (HCl HNO₃ = 3 1), freshly prepared.

4.5 Aqueous ammonia (11).

4.6 ammonia (28). Silver Standard Solution 4.7.

- a) silver standard stock solution [$\rho(\text{Ag}) = 200.0\mu\text{g/mL}$]. Weigh 0.1575g of silver nitrate (excellent pure) (at $105\text{ }^{\circ}\text{C} \sim 110\text{ }^{\circ}\text{C}$ Dried 2H), placed in 200mL beaker, was added aqueous ammonia (4.6) is completely dissolved and transferred to 500mL brown with aqueous ammonia (4.6) Volumetric flask, dilute to the mark, shake;
- b) silver standard solution [$\rho(\text{Ag}) = 20.0\mu\text{g/mL}$]. Pipette 20.00mL silver standard stock solution [4.7a)], placed in 200mL capacity Volumetric flask, dilute to the mark with ammonia (4.6);
- c) silver standard solution [$\rho(\text{Ag}) = 5.0\mu\text{g/mL}$]. Pipette 25.00mL silver standard solution [4.7b)], placed in 100mL capacity Flask with ammonia (4.6) diluted to the mark.