

ICS 77.120.99
CCS H15



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

GB/T 15072.2-2025

Replacing GB/T 15072.2-2008

**Method for chemical analysis of precious metal alloys - Part 2:
Determination of silver content**

贵金属合金化学分析方法 第2部分：银含量的测定

Issued on: August 29, 2025

Implemented on: March 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 15072 "Chemical Analysis Methods for Noble Metal Alloys". GB/T 15072 has been published as follows: part.

- 1. Determination of Gold Content;
- 2. Determination of Silver Content;
- 3. Determination of Platinum Content;
- 4. Determination of Palladium Content;
- 6. Determination of Iridium Content;
- 7. Determination of Chromium and Iron Contents in Gold Alloys by Inductively Coupled Plasma Atomic Emission Spectrometry;
- 8. Determination of Copper Content in Gold, Palladium, and Silver Alloys. Thiourea Precipitation EDTA Complexometric Back Titration;
- 9. Determination of Indium Content in Gold Alloys by EDTA Complexometric Back Titration;
- 10. Determination of Nickel Content in Gold Alloys by EDTA Complexometric Back Titration;
- 11. Determination of Gadolinium and Beryllium Contents in Gold Alloys by Inductively Coupled Plasma Atomic Emission Spectrometry;
- 12. Determination of Vanadium Content in Silver Alloys by Hydrogen Peroxide Spectrophotometry;
- 13. Determination of Tin, Cerium and Lanthanum Contents in Silver Alloys by Inductively Coupled Plasma Atomic Emission Spectrometry;

1 Scope

GB/T 15072.2-2025 is the Chinese national standard on method for chemical analysis of precious metal alloys - part 2: determination of silver content, in the field of metallurgy. 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 29 August 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2026. Classification: ICS 77.120.99, CCS H15. 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.

4.1 Principle The sample was dissolved in nitric acid. Potentiometric titration was then performed in nitric acid medium using a standard sodium chloride solution until the endpoint was reached. The titration was determined based on the amount of sodium chloride consumed. The silver content in a sample is calculated using the volume of a standard titration solution.

4.2 Reagents or Materials Unless otherwise specified, only reagents confirmed to be of analytical grade and laboratory grade II water conforming to GB/T 6682 shall be used in the analysis.

4.2.1 Metallic silver ($w_{\text{Ag}} \geq 99.99\%$).

4.2.2 Nitric acid ($\rho = 1.42 \text{ g/mL}$), analytical grade.

4.2.3 Nitric acid solution (1 1).

4.2.4 Sodium chloride standard titration solution [$c(\text{NaCl})$ approx. 0.0001 mol/mL]. Prepare and standardize according to the following steps.

a) Preparation. Weigh 5.845g of sodium chloride (analytical grade), dissolve in water, dilute to 1000mL, and mix well;

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 8170 Rules for rounding off numerical values and the representation and determination of limiting values

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

chinastandards.org - PREVIEW