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

GB/T 15072.4-2025

Replacing GB/T 15072.4-2008

**Methods for chemical analysis of precious metal alloys - Part 4:
Determination of palladium content**

贵金属合金化学分析方法 第4部分：钯含量的测定

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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 4 of GB/T 15072 "Chemical Analysis Methods for Precious 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 15072.4-2025 is the Chinese national standard on methods for chemical analysis of precious metal alloys - part 4: determination of palladium 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 samples were decomposed with nitric acid; samples containing gold, platinum, rhodium, iridium, or tungsten alloys were decomposed with a mixed solution of hydrochloric acid and nitric acid. Reduction and separation were performed using sodium nitrite. Silver was separated by precipitation with silver chloride, and tungsten was separated by precipitation with tungsten trioxide. Palladium was precipitated with dimethylglyoxime in dilute hydrochloric acid medium, and determined by gravimetric method. Palladium content.

4.2 Reagents or Materials Unless otherwise specified, only reagents confirmed to be of analytical grade and distilled or deionized water or water of equivalent purity shall be used in the analysis.

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 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.

4 Determination of Palladium Content Warning

---Personnel using this document should have practical experience working in a formal laboratory. This document does not address all possible safety issues. Users are responsible for taking appropriate safety and health measures and ensuring compliance with relevant national regulations.

4.2.4 Anhydrous ethanol. rho =

4.2.5 Hydrochloric acid solution. 1 1.

4.2.6 Hydrochloric acid solution. 1 9.

4.2.7 Hydrochloric acid solution. 2 98.