

ICS 77.120.99

CCS H68



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

GB/T 15072.8-2008

Replacing GB/T 15072.8-1994

**Test method of precious metal alloys - Determination of copper
content for gold, palladium and silver alloys - Complexometric
return titration using thiourea releasing EDTA**

贵金属合金化学分析方法 金、钯、银合金中铜量的测定 硫脲析出EDTA络合返滴
定法

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Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard is GB/T 15072-1994 "precious metals and their alloys -" (all parts) the integration of amendments into Part 19. Determination

- GB/T 15072.1-2008 Methods for chemical analysis of precious metal alloys of gold, platinum, palladium, gold alloy amount of ferrous sulfate Potentiometric titration;
- GB/T 15072.2-2008 Methods for chemical analysis of precious metal alloys silver alloys Determination of silver content of sodium chloride potential drop Titration;
- GB/T 15072.3-2008 Methods for chemical analysis of precious metal alloys of gold, platinum, palladium, platinum alloys determining the amount of potassium permanganate Current titration;
- GB /15072.4-2008 Methods for chemical analysis of precious metal alloys of palladium, silver-palladium alloy determining the amount of T-dimethyl glyoxal Gravimetric method;
- GB/T 15072.5-2008 Methods for chemical analysis of precious metal alloys of gold, measuring the potential of potassium iodide palladium alloy of silver content drops Titration;
- GB/T 15072.6-2008 precious metal alloys - Determination of platinum, palladium, iridium alloy in determining the amount of ferrous sulfate Current titration;
- GB/T 15072.7-2008 precious metal alloys - Gold alloys chromium and iron content - Inductively coupled plasma Plasma atomic emission spectrometry;
- GB/T 15072.8-2008 precious metal alloys - gold, palladium, silver and copper alloys - Determination of the amount of precipitation thiourea EDTA complexometric back titration;
- GB/T 15072.9-2008 precious metal alloys - Gold alloys - Determination of the amount of indium by EDTA back drop Titration;
- GB/T 15072.10-2008 precious metal alloys - Gold alloys - Determination of nickel by EDTA back drop Titration;
- GB/T 15072.11-2008 precious metal alloys - gold alloy of gadolinium and beryllium

content - Inductively coupled plasma Plasma atomic emission spectrometry;

--- GB T 15072.12-2008 precious metal alloys - Silver alloys - Determination of vanadium content/hydrogen peroxide spectrophotometer Law degree;

--- GB/T 15072.13-2008 precious metal alloys - Tin in silver, cerium and lanthanum content - Inductively coupled Plasma atomic emission spectrometry;

1 Scope

GB/T 15072.8-2008 is the Chinese national standard on test method of precious metal alloys - determination of copper content for gold, palladium and silver alloys - complexometric return titration using thiourea releasing edta, 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 31 March 2008 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 September 2008. Classification: ICS 77.120.99, CCS H68. 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 provides the determination of gold, palladium, silver alloy of copper content. This section applies to AuAgCu, AuAgCuGd, AuCuNiZn, AuCuNiZnMn, PdAgCu, PdAgCuAuPtZn, AgCu, AgCuV, Determination of copper content AgCuNiAl alloys. Measurement range (mass fraction). 4% to 35%.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this section, however, encourage the parties to this part of the research agreement Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this section. 371 precious metal alloys - General rules and regulations YS/T

3 Method summary

Silver alloy sample was dissolved in nitric acid solution, the addition of excess EDTA solution with copper, nickel, vanadium and aluminum complex; palladium-silver alloy with copper nitrate solution Solution of palladium and gold alloy platinum silver, copper gold zinc alloy sample was dissolved in a mixed acid, hydrochloric acid and nitric acid. Alloy with gold

sulfite reduction and separation of gold; containing Alloys of palladium with dimethylglyoxime precipitation separation palladium solution, the addition of excess EDTA solution with copper, nickel, zinc, manganese and gadolinium complexes. In hexamethylenetetramine as a buffer, a solution of xylenol orange as indicator, titrated at pH

5.8 using lead standard solution back titration. Added sulfur Urea solution, a solution of ascorbic acid and 1.10-phenanthroline solution and precipitate the copper complex of EDTA, and then lead standard solution titration to determine the titration The amount of copper.

4 Reagents and materials

Unless otherwise indicated, all reagents shall conform YS/T 371 standard.

4.1 sodium chloride.

4.2 hexamethylenetetramine.

4.3 sulfite (rho1.03g/mL).

4.4 hydrochloride (rho1.19g/mL). Nitrate 4.5 (rho1.42g/mL).

4.6 Ammonia (rho0.90g/mL). Mixing hydrochloric acid and nitric acid 4.7. 3 per unit volume of hydrochloric acid (4.4) and 1 unit volume of nitric acid (4.5) are mixed. The time is now equipped with. Mixing hydrochloric acid and nitric acid 4.8. 30 unit volume of hydrochloric acid (4.4) and 1 unit volume of nitric acid (4.5) are mixed. The time is now equipped with.

4.9 hydrochloric acid solution (1 + 1).

4.10 hydrochloric acid solution (99 + 1).

4.11 nitric acid solution (1 + 1).

4.12 ammonia solution (1 + 1).

4.13 thiourea solution (100g/L).

4.14 ascorbic acid solution (50g/L), the time is now equipped with.