

ICS 77.120.99

CCS H 68



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

GB/T 15072.5-2008

Replacing GB/T 15072.5-1994

**Test method of precious metal alloys -- Determination of silver
content for gold and palladium alloys -- Potentiometer titration
with potassium iodide**

贵金属合金化学分析方法 金、钯合金中银量的测定 碘化钾电位滴定法

(English Translation)

Issued on: March 31, 2008

Implemented on: September 1, 2008

Issued by: Standardization Administration of China

Table of Contents

Foreword

4 Reagents and materials

4.5 KI standard titration solution. [Ba (KI) about 0.020mol/L]

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;

--- GB/T 15072.14-2008 precious metal alloys - silver alloy of aluminum and nickel content - Inductively coupled plasma Plasma atomic emission spectrometry;

--- GB T 15072.15-2008 precious metal alloys - gold, silver, palladium alloy of nickel, zinc and manganese contents /Inductively coupled plasma atomic emission spectrometry;

--- GB/T 15072.16-2008 precious metal alloys - gold alloy of copper and manganese content - Inductively coupled plasma Plasma atomic emission spectrometry;

--- GB/T 15072.17-2008 precious metal alloys - Determination of tungsten content of a platinum alloy of tungsten trioxide weight Method;

--- GB/T 15072.18-2008 precious metal alloys - Gold alloys of zirconium and gallium content - Inductively coupled plasma Plasma atomic emission spectrometry;

--- GB/T 15072.19-2008 precious metal alloys - silver vanadium alloys and magnesium content - Inductively coupled plasma Plasma atomic emission spectrometry.

This section GB/T 15072-2008 Part 5.

This Part replaces GB/T 15072.5-1994 "precious metals and their alloys - gold, palladium alloys Determination of silver content." this section compared with the GB/T 15072.5-1994, have the following main changes.

--- Standard name by the GB/T 15072.5-1994 "precious metals and their alloys - gold, silver palladium alloy measured Given the potential law indicate the end.

4 Reagents and materials

Unless otherwise noted, all reagents and utensils, etc. should be in line with YS/T 371 standard.

4.1

hydrochloride (ρ 1.19g/mL).

4.2

nitrate (ρ 1.42g/mL), pure class distinctions.

4.3

Ammonia (ρ 0.91g/mL).

4.4

silver standard solution.

Weighed 2.0000g of metallic silver (silver content of not less than 99.99%), accurate to 0.00001g, placed in 250mL beaker, Plus 40mL of nitric acid (1 + 1, pure class distinctions), cover the surface of the pan, heat until completely dissolved, in time to make the nitrogen oxides, removed, cooled to room temperature. Rushing water Wash the beaker and watch glass wall, the brown solution was transferred into 1000mL volumetric flask, diluted with water to the mark. Mix well. This solution containing 1mL 2.000mg silver stored.

4.5 KI standard titration solution. [Ba (KI) about 0.020mol/L]

4.5.1

preparation.

Weigh 3.32g of potassium iodide, dissolved in water and diluted to 1000mL, and mix.

4.5.2

Calibration. Calibration and measurement sample were parallel.

Pipette 20.00mL three silver standard solution were placed in 150mL beaker on a hot plate at a low temperature steam until nearly dry. Rinse burn Beibi, add 4mL ammonia, 20mL water. Silver - iodide electrode as indicator electrode, a saturated calomel electrode as the reference electrode, with standard potassium iodide Titration solution titrated to the maximum potential jump is the end. Poor standard titration should potassium iodide solution volume consumed over parallel calibration 0.05mL, averaged.

According to equation (1) to calculate the actual concentration of potassium iodide standard titration solution.