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

GB/T 21198.6-2007

**Determination of precious metals in precious metals jewellery
alloys—Method using ICP spectrometry—
Part 6: Difference method**

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Foreword

GB/T 21198 *Determination of precious metals in precious metals jewellery alloys—Method using ICP spectrometry* consists of six parts are as follows:

- *Part 1: Platinum jewellery alloys—Determination of platinum—Method using a solution with yttrium as internal standard element;*
- *Part 2: Platinum jewellery alloys - Determination of platinum - Method using the intensity ratios of all minor constituents with reference to platinum;*
- *Part 3: Palladium jewellery alloys—Determination of palladium—Method using a solution with yttrium as internal standard element;*
- *Part 4: 999‰ precious metals jewellery alloys—Determination of precious metals—Difference method;*
- *Part 5: 999‰ silver jewellery alloys—Determination of silver—Difference method;*
- *Part 6: Difference method.*

This is Part VI of GB/T 21198.

This Standard is proposed by China National Light Industry Associations.

This Standard is under the jurisdiction of National Technical Committee 256 on Jewelry of Standardization Administration of China.

Chief draft units of this Standard are National Jewelry Quality Supervision and Examination Center, National Quality Supervision and Examination of Gold and Silver Article (Nanjing).

Chief drafters of this Standard are Wang Donghui, Fu Rongjin, Li Yukun, Li Suqing and Li Wujun.

Determination of precious metals in precious metals jewellery alloys—Method using ICP spectrometry—

Part 6: Difference method

1 Scope

This Part of GB/T 21198 specifies the method to determine content of the precious metal by measuring the impurity elements in gold, platinum and palladium alloy jewellery.

This section applies to the purity range of the determined gold, platinum and palladium jewellery with the gold content of 725 ‰ ~ 999 ‰, platinum content of 800 ‰ to 999 ‰ and palladium content of 800 ‰ to 999 ‰.

NOTE There are also platinum, gold, palladium, silver, copper, nickel, cobalt, iron, zinc, cadmium, ruthenium, rhodium, iridium and other elements in the jewelry.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 11887-2002 Jewellery--Fineness of precious metal alloys and designation (ISO 9202: 1991, NEQ)

GB/T 12806-1991 Laboratory glassware-one-mark volumetric flasks (eqv ISO 1042: 1983)

GB/T 12808-1991 Laboratory glassware-One-mark pipettes (eqv ISO 648: 1997)

3 Methods and principles

Dissolve the sample with aqua regia. IPC spectrometer is adopted to measure the impurity content in the hydrochloric acid. The precious metal content is calculated through the difference method.

4 Test material

Unless otherwise specified, only recognized as analysis pure reagent and distilled water or deionized water or water of quite purity are used in analysis.

4.1 The purity of the platinum shall be no less than 99.99%.

4.2 The purity of the gold shall be no less than 99.99%.

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