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

GB/T 25933-2010

High-purity gold

高纯金

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Quarantine;
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Foreword

This standard by the National Gold Standardization Technical Committee (SAC/TC379) and focal points. This standard is drafted by the Changchun Gold Research Institute. This standard by the Beijing non-ferrous metal solder Dubbo limited liability company, the Shanghai Gold Exchange, Henan Zhongyuan smelter limited liability company, Great Wall gold and silver refinery, Jiangxi Copper Corporation, Shenyang Mint participated in the drafting. Drafters of this standard. Huang Rui, Xue Lixian, Chen Biao, Du Lianmin, rather Federation, Zhang Yuming, Liu Chengxiang, Chen Jie, Zhang Bo, Huangshao Yong, Tian Xiaohong, Lai Maoming, Wang rain. High gold

1 Scope

China's national product standard for high-purity gold. It specifies the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of gold of high purity. Ordinary refined gold is sold at 99.99 per cent, which is what a bullion market means by fine gold and what jewellery and investment demand. High-purity gold goes further - to 99.999 per cent and beyond - and it is bought for uses in which the remaining hundredth of a per cent is not an economic question but a functional one. In semiconductor manufacturing gold is used for bonding wire, for die attach and for metallisation, and the impurities that matter are the ones that behave as dopants or that migrate: a few parts per million of certain elements changes the electrical behaviour of what is built on it. In sputtering targets the purity determines the film. In thermocouples and in precision resistance work the purity determines the calibration. And in radiochemistry and in the preparation of reference materials, the specification is on what must be absent rather than on what is present. So the standard for this product is written the other way round from most: it is essentially a list of impurity limits, element by element, with the gold content obtained by difference, because at these levels assaying the gold directly is less precise than summing what is not gold. What follows from that is the method - spectrographic and

mass spectrometric determination of the individual trace elements rather than a fire assay - along with the sampling, since a bar is not homogeneous at parts per million, and the packaging and handling, which must not contaminate the surface of a material specified to that level. Issued on 23 December 2010 and in force since 1 September 2011.

This standard specifies the requirements for high purity gold, test methods, inspection rules, marking, packaging, transportation, storage, quality certificates and orders content. This standard applies to gold refining process prepared by the total content of impurity elements of less than 10×10^{-6} .

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 25934 (all parts) high pure gold chemical analysis method

3.1 Chemical composition

3.1.1 gold high gold content of not less than 99.999×10^{-2} , the impurity element mass fraction of the sum should not exceed 10×10^{-6} , high purity Golden chemical composition shall comply with the requirements in Table 1. Table 1 chemical composition of high purity gold Trademark Au, not less than Impurity elements mass fraction/ 10^{-6} , no more than AgCuFePbBiSbSiPdMgAsSnCrNiMnCdAlPtRhIr TiZn The total amount of impurities, no greater than Au99.999 99.999×10^{-2} 2 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 2 1 10×10^{-6}

3.1.2 high gold content of gold in Table 1 should be 100 minus the impurity elements in the difference between the sum of the measured mass fraction. When the impurity element Found mass fraction is less than 0.2×10^{-6} , the subtraction may not participate. 3.1.3

3.1.1 meet the requirements of high-grade gold and its products is Au99.999.

3.1.4 demand side, the chemical composition of the high gold impurities have special requirements, negotiated by the supply and demand sides.

3.2 Product Categories Products classified by shape. tablet form high purity high purity gold bullion; granular high gold high gold grain.

3.3 Physical Specifications

3.3.1 High-purity gold bullion shall be rectangular, not more than the thickness of the ingot 8mm.

3.3.2 Each (piece) High gold weight. 1kg, 3kg, or other specifications.

3.3.3 should be high gold grain was nearly circular, uniform particle size.

3.4 Appearance quality

3.4.1 High-purity gold bullion surface should be smooth, clean; edge, corner complete, not allowed to have glitches.

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