AS 3515.1—2005
Reconfirmed 2016

AS 3515.1—2005

Australian Standard™

Gold and gold bearing alloys

Part 1: Determination of gold content (less than 30%)—Gravimetric (fire assay) method

This Australian Standard was prepared by Committee CH-010, Analysis of Metals. It was approved on behalf of the Council of Standards Australia on 13 October 2005.
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The following are represented on Committee CH-010:

Amdel
Australasian Institute of Mining and Metallurgy
Australian Aluminium Council
Institute of Materials Engineering Australasia
International Precious Metals Institute
National Association of Testing Authority
The Royal Australian Chemical Institute

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This Standard was issued in draft form for comment as DR 05056.

STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 3515.1—2005
Gold and gold bearing alloys
Part 1: Determination of gold content (less than 30%)—Gravimetric (fire assay) method

RECONFIRMATION NOTICE

Technical Committee CH-010 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 1 November 2016.

The following are represented on Technical Committee CH-010:

Bureau of Steel Manufacturers of Australia
International Copper Association Australia
International Precious Metals Institute
National Association of Testing Authorities Australia

NOTES

Australian Standard™

Gold and gold bearing alloys

Part 1: Determination of gold content (less than 30%)—Gravimetric (fire assay) method

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CH-010, Analysis of Metals, to supersede AS 3515.1—1996, *Gold and gold bearing alloys,* Part 1*: Determination of gold content (less than 30%)—Gravimetric method*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

The objective of this Standard is to ensure that a gravimetric method for the determination of gold content less than 30% by gravimetric (fire assay) method is achieved.

This revision incorporates information on acceptance of results into a new Section.

This Standard is Part 1 of a series of Standards for the determination of gold content in gold and gold bearing alloys and reference should be made to the other documents in the series:

AS
3515 Gold and gold bearing alloys
3515.2 Part 2: Determination of gold content (30%–99.5%)—Gravimetric (fire assay) method
3515.3 Part 3: Determination of gold content (greater than 99.5%)—Gravimetric (fire assay) method
3515.4 Part 4: Determination of gold content (greater than 99.95%)—Inductively coupled plasma—Atomic emission spectrometric

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is for information and guidance only.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out gravimetric procedures for the determination of gold content in the range 0.2% to 30% in gold and gold bearing alloys with, <2% nickel, <0.5% rhodium, <0.05% tungsten and <0.5% tin. Platinum <10% and palladium <3%.

Two methods of gold determination are specified: the first method is used when the total precious metal content is less than 40% and the second method is used when the total precious metal content is 40% or greater.

NOTES:

1 A preliminary assay may first be performed to determine the gold, silver and base metal present.

2 The presence of the following elements may cause difficulties in obtaining a homogeneous sample: iron, lead, antimony, nickel or arsenic.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

2830 Good laboratory practice
2830.1 Part 1: Chemical analysis

2850 Chemical analysis—Interlaboratory test programs—For determining precision of analytical method(s)—Guide to the planning and conduct

AS/NZS

2243 Safety in laboratories
2243.1 Part 1: Planning and operational aspects
2243.2 Part 2: Chemical aspects

ISO

3696 Water for analytical laboratory use—Specification and test methods

1.3 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

1.3.1 Cornet

An alloy of gold and silver after it has been hammered, annealed and fashioned into a roll, prior to parting.