AS ISO 15248:2015
ISO 15248:1998

AS ISO 15248:2015

Australian STANDARD

Zinc sulfide concentrates—Determination of silver and gold contents—Fire assay and flame atomic absorption spectrometric method using scorification or cupellation

STANDARDS Australia

This Australian Standard® was prepared by Committee MN-005, Copper, Lead, Zinc and Nickel Ores and Concentrates. It was approved on behalf of the Council of Standards Australia on 26 August 2015.
This Standard was published on 29 September 2015.

The following are represented on Committee MN-005:

- Australasian Institute of Mining and Metallurgy
- CSIRO
- Minerals Council of Australia

This Standard was issued in draft form for comment as DR AS/NZS 15248:2015.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting **www.standards.org.au**

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at **mail@standards.org.au**, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard®

Zinc sulfide concentrates—Determination of silver and gold contents—Fire assay and flame atomic absorption spectrometric method using scorification or cupellation

First published as AS ISO 15248:2015.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 76035 255 4

PREFACE

This Standard was prepared by the Standards Australia Committee MN-005 Copper, Lead, Zinc and Nickel Ores and Concentrates.

The objective of this Standard is to provide those involved in the analysis of zinc sulfide concentrates with a standardized method of determining silver and gold contents supported by precision data obtained from an inter-laboratory test programme.

This Standard is identical with, and has been reproduced from ISO 15248:1998, *Zinc sulfide concentrates—Determination of silver and gold contents—Fire assay and flame atomic absorption spectrometric method using scorification or cupellation*.

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this International Standard' should read 'this Australian Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
9599	Copper, lead and zinc sulfide concentrates—Determination of hygroscopic moisture in the analysis sample—Gravimetric method	2816	Copper, lead and zinc sulfide concentrates—Determination of hygroscopic moisture in the analysis sample—Gravimetric method

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annexes to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

CONTENTS

AUSTRALIAN STANDARD

Zinc sulfide concentrates—Determination of silver and gold contents—Fire assay and flame atomic absorption spectrometric method using scorification or cupellation

1 Scope

This International Standard specifies a fire assay and flame atomic absorption spectrometric procedure for the determination of silver and gold contents of zinc sulfide concentrates.

The method is applicable to the determination of silver and gold in zinc sulfide concentrates containing up to 60 % (*m/m)* zinc in the form of zinc blende and related materials.

The method is applicable to silver contents from 10 g/t to 500 g/t and gold contents from 0,1 g/t to 12 g/t.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 385-1:1984, *Laboratory glassware — Burettes — Part 1: General requirements*.

ISO 648:1977, *Laboratory glassware — One-mark pipettes*.

ISO 1042:1998, *Laboratory glassware — One-mark volumetric flasks*.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

ISO 4787:1984, *Laboratory glassware — Volumetric glassware — Methods for use and testing of capacity*.

ISO 9599:1991, *Copper, lead and zinc sulfide concentrates — Determination of hygroscopic moisture in the analysis sample — Gravimetric method*.

3 Principle

3.1 Scorification

Fire assay fusion of a test portion to produce a lead button, which is scorified to reduce it to a mass of 2 g to 5 g.

Retreatment fusion of the primary fusion and scorification slags to produce a low-silver content lead button which is scorified to approximately 2 g to 5 g.

Dissolution of both lead buttons in nitric acid and filtration of the solution. Dissolution of the filter paper plus gold and determination of silver and gold by flame atomic absorption spectrometry.