

AS ISO 10378:2022
ISO 10378:2016



STANDARDS
Australia



Copper, lead and zinc sulfide concentrates — Determination of gold and silver — Fire assay gravimetric and flame atomic absorption spectrometric method



AS ISO 10378:2022

This Australian Standard ® was prepared by MN-005, Copper, Lead, Zinc and Nickel Ores and Concentrates. It was approved on behalf of the Council of Standards Australia on 14 April 2022.

This Standard was published on 29 April 2022.

The following are represented on Committee MN-005:

Australian X-ray Analytical Association
Chamber of Minerals and Energy of Western Australia
CSIRO
International Copper Association Australia
Minerals Council of Australia

This Standard was issued in draft form for comment as DR AS ISO 10378:2022.

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Copper, lead and zinc sulfide concentrates — Determination of gold and silver — Fire assay gravimetric and flame atomic absorption spectrometric method

Originated in part as AS 2917—1986, AS 2678.5—2002 and AS 4030.3—2002.
Revised, amalgamated and redesignated as AS 4868.1—2008.
Revised and redesignated as AS ISO 10378:2022.

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Preface

This Standard was prepared by the Standards Australia Committee MN-005, Lead, Zinc and Nickel Ores and Concentrates, to supersede AS 4868.1-2008, *Copper, lead and zinc sulfide concentrates — Chemical analysis, Part 1: Determination of gold and silver — Fire assay gravimetric and flame atomic absorption spectrometric method*.

The objective of this document is to specify a fire assay gravimetric and flame atomic absorption spectrometric method for the determination of the mass fraction of gold and silver in copper, lead, and zinc sulfide concentrates as follows:

(a) Copper concentrates.

The method is applicable to the determination of mass fractions of gold from 0,5 g/t to 300 g/t and of mass fractions of silver from 25 g/t to 1 500 g/t in copper sulfide concentrates containing mass fractions of copper from 15 % to 60 %.

(b) Lead concentrates.

The method is applicable to the determination of mass fractions of gold from 0,1 g/t to 25 g/t and of mass fractions of silver from 200 g/t to 3 500 g/t in lead sulfide concentrates containing mass fractions of lead from 10 % to 80 %.

(c) Zinc concentrates.

The method is applicable to the determination of mass fractions of gold from 0,1 g/t to 12 g/t and of mass fractions of silver from 10 g/t to 800 g/t in zinc sulfide concentrates containing mass fractions of zinc up to 60 %.

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