AS ISO 19976.1:2020
ISO 19976-1:2019

Australian STANDARD®

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Copper, lead and zinc sulfide concentrates — Determination of cadmium

Part 1: Flame atomic absorption spectrometric method

AS ISO 19976.1:2020

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 2 September 2020.

This Standard was published on 25 September 2020.

The following are represented on Committee MN-005:

Australasian Institute of Mining & Metallurgy
Australian X-ray Analytical Association
Chamber of Minerals and Energy of Western Australia
CSIRO
International Copper Association Australia
Minerals Council of Australia
Queensland Resources Council

This Standard was issued in draft form for comment as DR AS ISO 19976.1:2020.

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ISBN 978 1 76072 977 6

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First published as AS ISO 19976.1:2020.

Preface

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

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

(a) For copper sulfide concentrates, the method is applicable to the determination of mass fractions of cadmium from 0.01 % to 0.30 %.

(b) For lead sulfide concentrates, the method is applicable to the determination of mass fractions of cadmium from 0.01 % to 0.30 %.

(c) For zinc sulfide concentrates, the method is applicable to the determination of mass fractions of cadmium from 0.05 % to 0.30 %.

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 183, *Copper, lead, zinc and nickel ores and concentrates*.

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Australian Standard®

Copper, lead and zinc sulfide concentrates — Determination of cadmium

Part 1: Flame atomic absorption spectrometric method

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1 Scope

This document specifies a flame atomic absorption spectrometric method for the determination of the mass fraction of cadmium in copper, lead and zinc sulfide concentrates as follows:

a) for copper sulfide concentrates, the method is applicable to the determination of mass fractions of cadmium from 0,01 % to 0,30 %;

b) for lead sulfide concentrates, the method is applicable to the determination of mass fractions of cadmium from 0,01 % to 0,30 %;

c) for zinc sulfide concentrates, the method is applicable to the determination of mass fractions of cadmium from 0,05 % to 0,30 %.

2 Normative reference

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 385, *Laboratory glassware — Burettes*

ISO 648, *Laboratory glassware — Single-volume pipettes*

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

ISO 4787, *Laboratory glassware — Volumetric instruments — Methods for testing of capacity and for use*

ISO 9599, *Copper, lead, zinc and nickel sulfide concentrates — Determination of hygroscopic moisture content of the analysis sample — Gravimetric method*

ISO 12743, *Copper, lead, zinc and nickel concentrates — Sampling procedures for determination of metal and moisture content*

ISO Guide 35, *Reference materials — Guidance for characterization and assessment of homogeneity and stability*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/