
**Copper, lead, zinc and nickel sulfide
concentrates — Determination of
mass of contained metal in a lot**

*Concentrés sulfurés de cuivre, de plomb, de zinc et de nickel —
Détermination de la masse de métal contenu dans un lot*

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

The committee responsible for this document is ISO/TC 183, *Copper, lead, zinc and nickel ores and concentrates*.

This second edition cancels and replaces the first edition (ISO 13543:1996), which has been technically revised.

Copper, lead, zinc and nickel sulfide concentrates — Determination of mass of contained metal in a lot

WARNING — This International Standard may involve hazardous materials, operations and equipment. It is responsibility of the user of this International Standard to establish appropriate health and safety practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies the method for determining the mass of contained metal in a lot, based on the wet mass, moisture content and dry basis metal content of the lot. The procedure for estimating the variance and confidence intervals for the mass of contained metal is also specified.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10251, *Copper, lead, zinc and nickel concentrates — Determination of mass loss of bulk material on drying*

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

ISO 12744, *Copper, lead, zinc and nickel concentrates — Experimental methods for checking the precision of sampling*

ISO 12745, *Copper, lead and zinc ores and concentrates — Precision and bias of mass measurement techniques*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

lot

quantity of concentrate to be sampled

3.2

wet mass of the lot

combined mass of concentrate and moisture of the lot at the time of weighing and sampling

3.3

moisture determination

quantitative measurement of the mass loss of the moisture test portion under the conditions of drying specified in ISO 10251

3.4

chemical analysis

quantitative determination of the required chemical constituents of the analysis test portion

3.5

precision

measure of the random variations within a set of measurements