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

*Concentrés sulfurés de cuivre, de plomb et de zinc — Détermination
de la perte de masse au séchage du matériau en vrac*



Foreword

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International Standard ISO 10251 was prepared by Technical Committee ISO/TC 183, *Copper, lead and zinc ores and concentrates*.

Annexes A and B form an integral part of this International Standard. Annex C is for information only.

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Introduction

Reference to the percentage mass loss as moisture content is appropriate, because, although oxidation, decomposition or sublimation of elemental sulfur may contribute, most of the mass loss on drying is due to loss of moisture.

When oxidation, decomposition or sublimation of elemental sulfur has been shown to occur or volatile organic flotation reagents such as kerosene are present, the chemical analysis test sample should be prepared from the dried moisture test portions. Under these circumstances, the sampling scheme established in accordance with ISO 12743 must ensure that moisture samples and test portions are sufficiently representative for subsequent chemical analysis. When oxidation is a problem, an inert atmosphere may also be used during the drying stage. Annex A provides a procedure by which it can be determined whether or not a concentrate is susceptible to oxidation, decomposition or sublimation.

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1 Scope

This International Standard specifies methods for the determination of moisture content of a lot of copper, lead or zinc sulfide concentrate, defined as the percentage mass loss of the moisture test portion under the conditions of drying specified in this document.

NOTE 1 In order to obtain an unbiased estimate of the metal content of the lot, it is important that the same drying conditions are used for the determination of bulk and hygroscopic moisture or for preparing a predried test portion.

This International Standard is not applicable to drying samples used for determination of volatile elements such as mercury and sulfur. Such samples are allowed to dry at ambient temperature and a hygroscopic moisture determination is carried out in accordance with ISO 9599 at the time of chemical analysis.

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

ISO 12743:—¹⁾, *Copper, lead and zinc sulfide concentrates — Sampling procedures for determination of metal and moisture content.*

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 representative sample: A quantity of concentrate representing a larger mass of concentrate with both precision and bias within acceptable limits.

3.2 lot: A quantity of concentrate to be sampled.

3.3 lot sample: A quantity of concentrate which is representative of the lot.

1) To be published.