International Standard

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

Concentrés de cuivre, de plomb, de zinc et de nickel — Méthodes expérimentales de contrôle de la fidélité de l'échantillonnage

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Foreword

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

This third edition cancels and replaces the second edition (ISO 12744:2006), which has been technically revised.

The main changes are as follows:

— the precisions of sampling, sample preparation and measurement are now estimated from the mean squared differences between duplicates rather than simply the mean differences, which provides a better unbiased estimate of precision.

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

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

1 Scope

This document specifies methods for checking the precision of primary sampling, sample processing, chemical analysis, physical testing and determination of moisture content of copper, lead, zinc and nickel concentrates being carried out in accordance with the methods specified in ISO 12743, expressed in terms of standard deviations.

2 Normative references

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 10258, *Copper sulfide concentrates — Determination of copper content — Titrimetric methods*

ISO 11441, *Lead sulfide concentrates — Determination of lead content — Back titration of EDTA after precipitation of lead sulfate*

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

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

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

4 Symbols

k	number of lots
n	number of increments
R_1	absolute difference between duplicates for interleaved samples A and B
R_2	absolute difference between means for divided interleaved samples A_1 and A_2, and B_1 and B_2
R_3	absolute difference between means for interleaved sample A and interleaved sample B
s	estimated value of standard deviation, σ

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