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**Copper, lead and zinc sulfide  
concentrates — Experimental methods for  
checking the bias of sampling**

*Concentrés sulfurés de cuivre, de plomb et de zinc — Méthodes  
expérimentales de contrôle de l'erreur systématique d'échantillonnage*



## Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 13292 was prepared by Technical Committee ISO/TC 183, *Copper, lead and zinc ores and concentrates*.

Annexes A and B of this International Standard are for information only.

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# Copper, lead and zinc sulfide concentrates — Experimental methods for checking the bias of sampling

## 1 Scope

This International Standard specifies methods for checking whether there is any bias in the sampling of copper, lead and zinc sulfide concentrates, where the sampling is carried out in accordance with the methods specified in ISO 12743. These methods can also be used for checking whether there is any bias in sample processing and for checking possible significant differences in the analyses of exchange samples and lot samples taken at different places, e.g., at loading and discharge points. Numerical examples are given in annex A.

## 2 Normative reference

The following standards contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

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

## 3 General requirements and recommendations

The procedures specified in this International Standard are applicable to paired data only. The results obtained from the method to be checked for bias (referred to as Method B) are compared with the results for a reference method (referred to as Method A), which is considered to produce unbiased results from technical and empirical viewpoints. If there is no significant difference between the results obtained using Method B and Method A, then Method B may be adopted as a routine method.

While the procedures specified in clause 5 are principally designed for checking bias against a reference method, separate measurements of quality characteristics, e.g., at loading (Method A) and discharge (Method B), or analyses of exchange samples may also be compared to check whether there is a statistically significant difference between the results.

Mechanical sampling systems or manual sampling methods are tested for bias by comparing the test results for final system or manually collected samples (Method B) with test results for reference increments collected from a stopped conveyor belt (Method A). Analytical methods or test procedures are checked against certified reference materials.

1) To be published.