

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

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National foreword

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Summary of pages

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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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Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative references	1
3 General conditions	1
3.1 General.....	1
3.2 Number of lots.....	1
3.3 Number of increments and number of samples	1
3.4 Sample processing and analysis	2
3.5 Frequency of precision checks	2
4 Symbols	2
5 Method of experiment.....	3
5.1 Interleaved samples.....	3
5.2 Sample processing and analysis	3
5.2.1 Sample processing method 1 (see Figure 2)	3
5.2.2 Sample processing method 2 (see Figure 3)	3
5.2.3 Sample processing method 3 (see Figure 4)	3
6 Evaluation of experimental data.....	6
6.1 General.....	6
6.2 Sample processing method 1	6
6.3 Sample processing method 2.....	8
6.4 Sample processing method 3.....	9
7 Assessment of results and action	11
7.1 Primary sampling.....	11
7.2 Sample processing	11
7.3 Analysis	11
8 Recording of data	11
Annex A (informative) Recording of sampling data.....	12
Bibliography	15

Foreword

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The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12744 was prepared by Technical Committee ISO/TC 183, *Copper, lead, zinc and nickel ores and concentrates*.

This second edition cancels and replaces the first edition (ISO 12744:1997), which has been technically revised. It has been updated to make it consistent with revisions of related International Standards.

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

WARNING — This International Standard may involve hazardous materials, operations and equipment. It is the 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 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 referenced documents are indispensable for the application 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 12743, *Copper, lead, zinc and nickel concentrates — Sampling procedures for determination of metal and moisture content*

3 General conditions

3.1 General

The determination of precision of primary sampling is based on collecting pairs of interleaved samples from each lot. If sample processing and measurement are also carried out in duplicate, it is possible to determine the precision of sample processing and analysis.

3.2 Number of lots

It is recommended that pairs of interleaved samples be collected from more than 20 lots of the same type of concentrate, in order to reach a reliable conclusion. The lot size shall be chosen to ensure that this requirement is met.

3.3 Number of increments and number of samples

The minimum number of increments for checking precision should preferably be twice the number determined in accordance with ISO 12743. Hence, if the number of increments required for routine sampling is n and one lot sample is constituted, the minimum number of increments should be $2n$, and two interleaved samples shall be constituted.

Alternatively, if the precision is being checked as part of routine sampling, n increments may be taken and two interleaved samples constituted, each comprising $n/2$ increments. The sampling precision thus obtained must be divided by $\sqrt{2}$ to obtain the sampling precision for lot samples comprising n increments.