

Implementation of
ISO 3085:1996

Iron ores — Experimental methods for checking the precision of sampling

ICS 78.060.10

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Committees responsible for this British Standard

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- British Iron and Steel Producers' Association
- Institution of Mining and Metallurgy
- Co-opted members

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National foreword

This British Standard reproduces verbatim ISO 3085:1996 and implements it as the UK national standard.

This British Standard is published under the direction of the Engineering Sector Board whose Technical Committee ISE/58 has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international committee any enquiries on interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO title page, page ii, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

INTERNATIONAL STANDARD

**ISO
3085**

Third edition
1996-07-01

Iron ores — Experimental methods for checking the precision of sampling

*Minerais de fer — Méthodes expérimentales de contrôle de la fidélité
de l'échantillonnage*



Reference number
ISO 3085:1996(E)

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.

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 3085 was prepared by Technical Committee ISO/TC 102, *Iron ores*, Subcommittee SC 1, *Sampling*.

This third edition cancels and replaces the second edition (ISO 3085:1986), which has been technically revised.

Annexes A to C of this International Standard are for information only.

1 Scope

This International Standard specifies experimental methods for checking the precision of sampling of iron ores being carried out in accordance with the methods specified in ISO 3081 or ISO 3082.

NOTE 1 These methods may also be applied for the purpose of checking the precision of sample preparation and measurement.

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 2597-1:1994, *Iron ores — Determination of total iron content — Part 1: Titrimetric method after tin(II) chloride reduction*.

ISO 3081:1986, *Iron ores — Increment sampling — Manual method*.

ISO 3082:1987, *Iron ores — Increment sampling and sample preparation — Mechanical method*.

ISO 3083:1986, *Iron ores — Preparation of samples — Manual method*.

ISO 3084:1986, *Iron ores — Experimental methods for evaluation of quality variation*.

ISO 3087:1987, *Iron ores — Determination of moisture content of a consignment*.

ISO 4701—¹⁾, *Iron ores — Determination of size distribution by sieving*.

ISO 9507:1990, *Iron ores — Determination of total iron content — Titanium(III) chloride reduction methods*.

ISO 9508:1990, *Iron ores — Determination of total iron content — Silver reduction titrimetric method*.

ISO 11323:1996, *Iron ores — Vocabulary*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 11323 apply.

NOTE 2 The precision of sampling is defined mathematically in ISO 3081:1986, annex A.

4 Principle

From twenty lots or more, preferably taking twice as many increments as specified in ISO 3081 or ISO 3082 and placing the increments alternately into two gross samples. If this is impracticable or the precision testing is carried out in conjunction with routine sampling, the normal number of increments specified in ISO 3081 or ISO 3082 may be used.

Preparation of separate test samples from each gross sample and the determination of relevant quality characteristics.

Analysis of the experimental data obtained and calculation of the estimated value of precision of sampling for each selected quality characteristic.

Comparison of the estimated precision with that specified in ISO 3081 or ISO 3082, and taking the necessary action if the estimated precision does not attain these specified values.

5 General conditions

5.1 Sampling

The sampling procedure to be followed shall be selected from the three methods of sampling, viz. periodic systematic sampling, stratified sampling or two stage sampling, depending on the method of taking increments from the lot in accordance with ISO 3081 or ISO 3082.

5.1.1 Number of lots

To reach a reliable conclusion, it is recommended that the experiment be carried out on more than 20 lots of the same type of iron ore. However, if this is impracticable, at least 10 lots should be covered. If the number of lots for the experiment is not sufficient, each lot may be divided into several parts to produce more than 20 parts in total for the experiment, and the experiment should be carried out on each part, considering each part as a separate lot in accordance with ISO 3081 or ISO 3082.

5.1.2 Number of increments and number of gross samples

The number of increments required for the experiment shall preferably be twice the number specified in ISO 3081 or ISO 3082. Hence, if the number of increments required for routine sampling is n_1 and one gross sample is made up from these increments, the number of increments required for the experiment shall be $2n_1$ and two gross samples shall be constituted.

¹⁾ To be published. (Revision of ISO 4701:1985)