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## Iron ores — Sampling and sample preparation procedures

*Minerais de fer — Procédures d'échantillonnage et de préparation des échantillons*



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## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 102, *Iron ore and direct reduced iron*, Subcommittee SC 1, *Sampling*.

This fifth edition cancels and replaces the fourth edition (ISO 3082:2009), which has been technically revised. It also incorporates the Technical Corrigendum ISO 3082:2009/Cor.1:2009. The main changes compared to the previous edition are as follows:

- expansion of the definition of test sample;
- insertion of a new paragraph in [4.1](#) indicating that sampling from the top of a moving conveyor belt using cross-belt (hammer) samplers is not permitted;
- deletion of reference to increasing the cutter aperture above three times nominal top size to avoid bridging of the cutter lips for wet sticky ore at the end of [5.1.4.2](#);
- expression of bulk density in kg/m<sup>3</sup> in [5.1.4.4](#) and corresponding amendment of [Formula \(3\)](#);
- insertion of an explanation in the first paragraph of [5.2](#) that better precision means a lower value of  $\beta_{SPM}$ ;
- inclusion of an extra column in [Table 1](#) and extra rows in [Tables 3](#) and [5](#) for mass of lot over 340 000 tonnes and updating of the overall precision values for phosphorus content in [Table 1](#) based on international data collected on precisions achieved in practice;
- updating of the sampling precision values for phosphorus content in [Table 3](#) based on international data collected on precisions achieved in practice as well as minor adjustments to the sizing precisions for sized ore and sinter feed;
- changing of “there will not be any oversize material remaining” in [7.7.2](#) to “no more than 5 % by mass oversize material is retained on the relevant sieve”;
- changing of “sample division” to “division” throughout [10.1.5](#);

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- clarification of the requirements for preparation of test samples for moisture determination and division of individual increments or partial samples in [10.1.6.1.1](#), [10.1.6.1.2](#) and [10.1.6.2.3](#);
- correction of the mass of sample for physical testing to 600 kg in the last sentence of [10.1.6.3](#);
- major revision of [10.2.4](#) to clarify the special procedure for moisture content, including a revision of [Table 7](#);
- insertion of a new clause ([10.4.3](#)) describing the manual strip-division method as an acceptable alternative to manual increment division and riffle division;
- amendment of all particle size specifications in [10.5](#) to nominal top size, including [Figure 11](#) and [Figure 12](#);
- significant revision of [10.6](#) to clarify the procedure for preparation of test samples for moisture determination.