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## **Iron ores — Experimental methods for checking the precision of sampling, sample preparation and measurement**

*Minerais de fer — Méthodes expérimentales de contrôle de la fidélité de l'échantillonnage, de préparation des échantillons et de mesurage*



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## Foreword

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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 of 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 [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 3085:2002), which has been technically revised. The main change compared to the previous edition is the use of the mean square difference between assay pairs, as described in the Introduction.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

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## Introduction

The key change between this document and the previous edition is the use of the mean square difference between assay pairs to estimate the numerical value of the precision instead of the mean difference between assay pairs, noting that the use of mean square differences was included in ISO 3085:1996, Annex B, as an alternative method only. The use of mean square differences avoids overestimating the sampling system's capability, thereby limiting the opportunity for improvement. In addition, when possible measurement outliers are identified, the process (such as sampling, sample preparation or measurement) under investigation may not be in a state of statistical control and should be checked in order to detect assignable causes. If these assignable causes can be identified, then the set of measurements should be repeated after the assignable causes have been corrected. Otherwise, data assessment should proceed without eliminating the outliers.