

---

---

**Iron ores — Preparation of predried test  
samples for chemical analysis**

*Minerais de fer — Préparation des échantillons préséchés pour analyse  
chimique*

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[ISO 7764:2006](https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006)

[https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-  
4b353b3bf305/iso-7764-2006](https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006)



**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[ISO 7764:2006](#)

<https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006>

© ISO 2006

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 7764 was prepared by Technical Committee ISO/TC 102, *Iron ore and direct reduced iron*, Subcommittee SC 2, *Chemical analysis*.

This second edition cancels and replaces the first edition (ISO 7764:1985), which has been technically revised.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[ISO 7764:2006](https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006)

<https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 7764:2006

<https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006>

# Iron ores — Preparation of predried test samples for chemical analysis

## 1 Scope

This International Standard specifies a method for the preparation of predried test samples of natural iron ores, and iron ore concentrates and agglomerates, including sinter products, which are to be used for the determination of analytical values of constituents on a dry basis.

The method is not applicable to the following types of ores:

- a) processed ores containing metallic iron (direct-reduced iron);
- b) natural or processed ores in which the mass fraction of sulfur is higher than 0,2 %;
- c) natural or processed ores in which the content of combined water is higher than 2,5 % by mass.

NOTE 1 Alternatively, the loss on ignition may be determined as an estimate of the combined water content.

Where this method is not applicable, ISO 2596:1994, *Iron ores — Determination of hygroscopic moisture in analytical samples — Gravimetric and Karl Fischer methods* is used.

NOTE 2 A laboratory may elect to use ISO 2596 for all samples to determine the dry sample mass.

## 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 3082:2000, *Iron ores — Sampling and sample preparation procedures*

## 3 Principle

A test sample is dried to constant mass at 105 °C.

## 4 Apparatus and materials

Usual laboratory equipment and the following.

**4.1 Balance**, capable of reading the mass of the weighing container to 0,000 1 g.

**4.2 Oven**, capable of accommodating several weighing bottles (4.3) and maintaining a temperature within the range 105 °C ± 2 °C.

**4.3 Weighing bottle**, of volume 10 ml and mass not exceeding 6 g, having a diameter of not less than 50 mm.

NOTE These dimensions are approximate and for guidance.

Bottles may be of the conventional glass type having ground-glass lids, or suitable plastic containers having tight-fitting lids. Plastic containers shall withstand  $105\text{ °C} \pm 2\text{ °C}$ . Polypropylene is suitable.

**4.4 Silica gel desiccant**, self indicating, dried at  $105\text{ °C}$  for 4 h.

**4.5 Desiccator**, made of borosilicate glass or an appropriate plastic, of internal diameter 150 mm to 250 mm, having a vacuum stopcock that will allow the evacuation of air. The rim of the desiccator shall be lightly greased with silicon grease or petroleum jelly.

150 g to 200 g of dried silica gel (4.4) shall be replaced weekly.

## 5 Sampling and samples

A laboratory sample having a particle size of less than  $100\text{ }\mu\text{m}$ , which has been taken and prepared in accordance with ISO 3082, shall be used.

The sample shall be thoroughly mixed immediately before use.

## 6 Procedure

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

Dry a weighing bottle (4.3) and a well-fitting lid at a temperature of  $105\text{ °C} \pm 2\text{ °C}$  and cool in a desiccator (4.5). Take, from the thoroughly mixed laboratory sample, a test portion of not more than 10 g and transfer it to the dried weighing bottle (see third paragraph of this clause). Spread the test portion evenly in the weighing bottle.

Dry the open weighing bottle with the test portion and the lid in a laboratory oven (4.2) for 2 h at  $105\text{ °C} \pm 2\text{ °C}$ . Close the weighing bottle with the lid, transfer to a desiccator and cool to room temperature (20 min to 30 min). Slightly remove the lid and quickly replace it again, then weigh the bottle (with the lid on) to the nearest 0,000 1 g ( $m_1$ ).

The test sample should be taken in multiple increments, in such a way that it is representative of the whole contents of the container.

Transfer the test portion quickly to the crucible and then weigh the weighing bottle with the lid on ( $m_2$ ).

The mass of the test portion is the difference between the two weighings,  $m_1$  and  $m_2$ .

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 7764:2006

<https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[ISO 7764:2006](https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006)

<https://standards.iteh.ai/catalog/standards/sist/b04dfddb-fd32-4037-8409-4b353b3bf305/iso-7764-2006>

---

---

**ICS 73.060.10**

Price based on 2 pages