
Iron ores — Determination of loss on ignition — Non-oxidised ores

*Minerais de fer — Détermination de la perte au feu — Minerais non
oxydés*

Sample Document

get full document from standards.iteh.ai



Reference number
ISO/TR 18230:2015(E)

© ISO 2015

Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Principle	1
3 Reagents	1
4 Apparatus	1
5 Sampling and samples	2
5.1 Laboratory sample.....	2
5.2 Preparation of test samples	2
6 Procedure	2
6.1 Number of determinations.....	2
6.2 Test portion.....	2
6.3 Determination	2
6.3.1 Pre-treatment of crucible.....	2
6.3.2 Determination of LOI	3
7 Expression of results	3
7.1 Calculation of loss on ignition.....	3
7.2 General treatment of results	3
7.2.1 Repeatability and permissible tolerances.....	3
7.2.2 Determination of analytical result.....	4
7.2.3 Between-laboratories precision	4
7.2.4 Check for trueness.....	4
7.2.5 Calculation of final result.....	5
8 Test report	5
Annex A (informative) Flowsheet of the procedure for the acceptance of analytical values for test samples	6
Bibliography	7

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 102, *Iron ore and direct reduced iron*, Subcommittee SC 2, *Chemical analysis*.

get full document from standards.iteh.ai

Introduction

The measurement of loss on ignition (LOI) is a technique widely used in the iron ore industry.

Ignition loss is the sum of contributions from the mass loss of volatile compounds such as water vapour, carbon dioxide and sulphides (due to the decomposition of goethite and carbonaceous materials), and the mass gain due to oxidation [Fe(II) to Fe₂O₃]. Its use is complementary to the determination of elemental or oxide concentrations. It serves to allow for an addition of the oxides, generated at the ignition temperature, and the LOI, to arrive at total (oxide + LOI). The determination of LOI is essential in sinter plant and blast furnace balance calculations, as it is used to calculate calcinated elemental concentrations.

Sample Document

get full document from standards.iteh.ai