# INTERNATIONAL STANDARD

ISO 29581-2

First edition 2010-03-01

# Cement — Test methods —

Part 2:

# Chemical analysis by X-ray fluorescence

Ciments — Méthodes d'essais —

Partie 2: Analyse chimique par spectrométrie de fluorescence X



#### 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.



### **COPYRIGHT PROTECTED DOCUMENT**

#### © ISO 2010

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
Web www.iso.org

Published in Switzerland

### **Contents** Page

Forewo	ord	iv
Introdu	ntroductionv Scope1	
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
4	General requirements for testing	3
5	Reagents and reference materials	4
6	Apparatus	5
7	Preparation of a test sample of cement	6
8	Flux	7
9	Determination of loss on ignition and the change in mass on fusion of the cement	8
10	Factoring test results and correcting total analyses for presence of sulfides and halides	10
11	Preparation of fused beads and pressed pellets	12
12	Calibration and validation	14
13	Calculation and expression of results	23
14	Performance criteria (repeatability, accuracy and reproducibility limits)	24
Annex	A (informative) Examples of fluxes	25
Annex	B (informative) Sources of certified reference materials	26
Annex	C (informative) Examples of calibration standards and monitor beads and pellets	27
Annex	D (informative) Determination of the sulfate content of samples containing sulfide species	28
Biblion	aranhy	30

### **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 29581-2 was prepared by Technical Committee ISO/TC 74, Cement and lime.

ISO 29581 consists of the following parts, under the general title Cement — Test methods:

- Part 1: Analysis by wet chemistry
- Part 2: Chemical analysis by X-ray fluorescence