

Chemical analysis of aluminosilicate refractory products (alternative to the X-ray fluorescence method) —

Part 3: Inductively coupled plasma and atomic absorption spectrometry methods

The European Standard EN ISO 21587-3:2007 has the status of a
British Standard

ICS 81.080

National foreword

This British Standard is the UK implementation of EN ISO 21587-3:2007. Together with BS EN ISO 21587-1:2007, it supersedes DD ENV 955-4:1997 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee RPI/1, Refractory products and materials.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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Chemical analysis of aluminosilicate refractory products
(alternative to the X-ray fluorescence method) - Part 3:
Inductively coupled plasma and atomic absorption spectrometry
methods (ISO 21587-3:2007)

Analyse chimique des produits réfractaires
d'aluminosilicates (méthode alternative à la méthode par
fluorescence de rayons X) - Partie 3: Méthodes par
spectrométrie d'absorption atomique (AAS) et
spectrométrie d'émission atomique avec plasma induit par
haute fréquence (ICP-AES) (ISO 21587-3:2007)

Chemische Analyse feuerfester Erzeugnisse aus
Alumosilicat (Alternative zum
Röntgenfluoreszenzverfahren) - Teil 3: Verfahren mit
induktiv gekoppeltem Plasma und
Atomabsorptionsspektrometrie (ISO 21587-3:2007)

This European Standard was approved by CEN on 13 September 2007.

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Foreword

The text of ISO 21587-3:2007 has been prepared by Technical Committee ISO/TC 33 "Refractories" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 21587-3:2007 by Technical Committee CEN/TC 187 "Refractory products and materials", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2008, and conflicting national standards shall be withdrawn at the latest by March 2008.

This document supersedes ENV 955-4:1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 21587-3:2007 has been approved by CEN as EN ISO 21587-3:2007 without any modifications.

INTERNATIONAL STANDARD

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Chemical analysis of aluminosilicate refractory products (alternative to the X-ray fluorescence method) —

Part 3: Inductively coupled plasma and atomic absorption spectrometry methods

*Analyse chimique des produits réfractaires d'aluminosilicates (méthode
alternative à la méthode par fluorescence de rayons X) —*

*Partie 3: Méthodes par spectrométrie d'absorption atomique (AAS) et
spectrométrie d'émission atomique avec plasma induit par haute
fréquence (ICP-AES)*



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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.

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 21587-3 was prepared by Technical Committee ISO/TC 33, *Refractories*.

ISO 21587 consists of the following parts, under the general title *Chemical analysis of aluminosilicate refractory products (alternative to the X-ray fluorescence method)*:

- *Part 1: Apparatus, reagents, dissolution and gravimetric silica*
- *Part 2: Wet chemical analysis*
- *Part 3: Inductively coupled plasma and atomic absorption spectrometry methods*

Chemical analysis of aluminosilicate refractory products (alternative to the X-ray fluorescence method) —

Part 3: Inductively coupled plasma and atomic absorption spectrometry methods

1 Scope

This part of ISO 21587 specifies inductively coupled plasma/atomic emission (ICP/AE) spectrometry and flame atomic absorption (FAA) spectrometry methods for the chemical analysis of aluminosilicate refractory products and raw materials.

The methods are applicable to the determination of the following:

- silicon(IV) oxide (SiO_2)
- aluminium oxide (Al_2O_3)
- iron(III) oxide (total iron oxide calculated as Fe_2O_3)
- titanium(IV) oxide (TiO_2)
- manganese(II) oxide (MnO)
- calcium oxide (CaO)
- magnesium oxide (MgO)
- sodium oxide (Na_2O)
- potassium oxide (K_2O)
- chromium(III) oxide (Cr_2O_3)
- zirconium oxide (ZrO_2)
- phosphorous(V) oxide (P_2O_5)

This part of ISO 21587 gives alternatives to the X-ray fluorescence (XRF) method given in ISO 12677:2003, *Chemical analysis of refractory products by XRF — Fused cast bead method*.