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Nederlandse norm

NEN-ISO 5418-2

(en)

Iron ores - Determination of copper - Part 2:
Flame atomic absorption spectrometric method
(ISO 5418-2:2006, IDT)

ICS 73.060.10
januari 2007

Als Nederlandse norm is aanvaard:

- ISO 5418-2:2006, IDT

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Normcommissie 342 093 "Chemische analyse van metalen"

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Iron ores — Determination of copper content —

Part 2:

Flame atomic absorption spectrometric method

Minerais de fer — Dosage du cuivre —

Partie 2: Méthode par spectrométrie d'absorption atomique dans la flamme

(Revision of ISO 4693:1986)

ICS 73.060.10

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Principle	1
4 Reagents	1
5 Apparatus	2
6 Sampling and samples	3
6.1 Laboratory sample	3
6.2 Preparation of predried test samples	3
7 Procedure	3
7.1 Number of determinations	3
7.2 Blank test and check test	4
7.3 Test portion	4
7.4 Determination	4
7.4.1 Decomposition of the test portion	4
7.4.2 Treatment of the solution	5
7.4.3 Preparation of the set of calibration solutions	5
7.4.4 Adjustment of atomic absorption spectrometer	5
7.4.5 Atomic absorption measurements	5
8 Expression of results	6
8.1 Calculation of copper content	6
8.2 General treatment of results	6
8.2.1 Repeatability and permissible tolerance	6
8.2.2 Determination of analytical result	7
8.2.3 Between-laboratories precision	7
8.2.4 Check for trueness	7
8.2.5 Calculation of final result	8
8.3 Oxide factor	8
9 Test report	8
Annex A (normative) Flowsheet of the procedure for the acceptance of analytical values for test samples	9
Annex B (informative) Derivation of repeatability and permissible tolerance equations	10
Annex C (informative) Precision data obtained by international analytical trials	11

Foreword

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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 5418-2 was prepared by Technical Committee ISO/TC 102, *Iron ore and direct reduced iron*, Subcommittee SC 2, *Chemical analysis*.

This first edition of ISO 5418-2 cancels and replaces ISO 4693:1986, which has been editorially revised.

ISO 5418 consists of the following parts, under the general title *Iron ores — Determination of copper content*:

- Part 1: 2,2'-Biquinolyl spectrophotometric method
- Part 2: Part 2: Flame atomic absorption spectrometric method

Introduction

This part of ISO 5418 has been updated to alter the manner in which precision data are presented. This is considered an editorial revision.

Forbiede
Preview

Voorbereid
Preview

Iron ores — Determination of copper content — Part 2: Flame atomic absorption spectrometric method

WARNING This part of ISO 5418 may involve hazardous materials, operations and equipment. This part of ISO 5418 does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this part of ISO 5418 to establish appropriate health and safety practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This part of ISO 5418 specifies a flame atomic absorption spectrometric method for the determination of the copper content of iron ores.

This method is applicable to a concentration range of 0,004 % (*m/m*) to 0,8 % (*m/m*) of copper in natural iron ores, and iron ore concentrates and agglomerates including sinter products.

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 648, *Laboratory glassware — One-mark pipettes*

ISO 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 3082, *Iron ores — Sampling and sample preparation procedures*

ISO 7764, *Iron ores — Preparation of predried test samples for chemical analysis*

3 Principle

A test portion is decomposed by treatment with hydrochloric, nitric and hydrofluoric acids. The solution is evaporated with perchloric acid and diluted, and any insoluble residue is filtered.

The copper content of the solution is measured by atomic absorption spectrometry using an air-acetylene flame.

4 Reagents

During the analysis, use only reagents of recognized analytical grade, and only distilled water or water of equivalent purity.

NOTE The distillation apparatus used should not contain any copper, and deionized water should not come into contact with copper tubing or taps.

4.1 Iron metal powder, copper content < 0,001 % (*m/m*)

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