Hardmetals - Determination of calcium, copper, iron, potassium, magnesium, manganese, sodium, nickel, and zinc in cobalt metal powders - Flame atomic absorption spectrometric method

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 11876:2010 sisaldab Euroopa standardi EN ISO 11876:2010 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 11876:2010 consists of the English text of the European standard EN ISO 11876:2010.
Standard on kinnitatud Eesti Standardikeskuse 30.09.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.08.2010.	Date of Availability of the European standard text 15.08.2010.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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English Version

Hardmetals - Determination of calcium, copper, iron, potassium, magnesium, manganese, sodium, nickel and zinc in cobalt metal powders - Flame atomic absorption spectrometric method (ISO 11876:2010)

Métaux-durs - Dosage du calcium, du cuivre, du fer, du potassium, du magnésium, du manganèse, du sodium, du nickel et du zinc dans les poudres métalliques de cobalt - Méthode par spectrométrie d'absorption atomique dans la flamme (ISO 11876:2010)

Hartmetalle - Bestimmung des Calcium-, Kupfer-, Eisen-, Kalium-, Magnesium-, Mangan-, Natrium-, Nickel- und Zinkgehaltes in Kobalt-Metallpulvern - Verfahren mit Flammen-Atomabsorptionsspektrometrie (ISO 11876:2010)

This European Standard was approved by CEN on 14 August 2010.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN ISO 11876:2010: E

Foreword

This document (EN ISO 11876:2010) has been prepared by Technical Committee ISO/TC 119 "Powder metallurgy".

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 February 2011, and conflicting national standards shall be withdrawn at the latest by February 2011.

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Endorsement notice

The text of ISO 11876:2010 has been approved by CEN as a EN ISO 11876:2010 without any modification.

Hardmetals — Determination of calcium, copper, iron, potassium, magnesium, manganese, sodium, nickel and zinc in cobalt metal powders — Flame atomic absorption spectrometric method

1 Scope

This International Standard specifies a flame atomic absorption spectrometric method to be used for the determination of the mass fractions of copper, potassium, magnesium, manganese, sodium and zinc in cobalt metal powders in the range of 0,001 % to 0,01 %, calcium in the range of 0,002 % to 0,01 %, and iron and nickel in the range of 0,002 % to 0,05 %.

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 3534-1:2006, *Statistics — Vocabulary and symbols — Part 1: General statistical terms and terms used in probability*

3 Reagents

Use only reagents of the highest purity and only double-distilled water or water of equivalent purity.

3.1 Nitric acid, $\rho = 1{,}42$ g/ml, diluted 1 + 1.

3.2 Hydrochloric acid, $\rho \approx 1{,}1$ g/ml (hydrochloric acid, $\rho = 1{,}19$ g/ml, diluted 1 + 1).

3.3 Cesium chloride solution, (20 g/1 000 ml).

3.4 Standard solutions, (1,000 g/1 000 ml) for calibration purposes for each element to be determined.

4 Procedure

4.1 Test portion

Weigh, to the nearest 0,001 g, approximately 1 g of the sample.

4.2 Dissolution of the test portion

Add 20 ml of nitric acid (3.1) and 10 ml of hydrochloric acid (3.2) and heat gently until the test portion is completely dissolved.