

Copper and copper alloys - Analysis by spark optical emission spectrometry (S-OES)

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English Version

## Copper and copper alloys - Analysis by spark optical emission spectrometry (S-OES)

Cuivre et alliages de cuivre - Analyse par spectrométrie d'émission optique à étincelles (SEO-E)

Kupfer und Kupferlegierungen - Analyse durch optische Emissionsspektrometrie mit Funkenanregung (F-OES)

This European Standard was approved by CEN on 24 April 2015.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 15079:2015) has been prepared by Technical Committee CEN/TC 133 "Copper and copper alloys", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by November 2015, and conflicting national standards shall be withdrawn at the latest by November 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15079:2007.

Within its programme of work, Technical Committee CEN/TC 133 requested CEN/TC 133/WG 10 "Methods of analysis" to revise this standard:

EN 15079:2007, *Copper and copper alloys — Analysis by spark source optical emission spectrometry (S-OES)*.

In comparison with EN 15079:2007, the following changes were made:

- a) Definitions 3.1 to 3.5 have been improved;
- b) 7.2.2 Calibration has been modified.

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

## 1 Scope

This European Standard specifies a routine method for the analysis of copper and copper alloys by spark optical emission spectrometry (S-OES). The method is applicable to all elements except copper commonly present in copper and copper alloys as impurities or minor or main constituents, which can be determined by S-OES.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1811-1, *Copper and copper alloys — Selection and preparation of samples for chemical analysis — Part 1: Sampling of cast unwrought products*

ISO 1811-2, *Copper and copper alloys — Selection and preparation of samples for chemical analysis — Part 2: Sampling of wrought products and castings*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1 reference material

**RM**  
material, sufficiently homogeneous and stable with respect to one or more specified properties which has been established to be fit for its intended use in a measurement process

[SOURCE: ISO GUIDE 30:1992/Amd.1:2008, definition 2.1]

### 3.2 certified reference material

**CRM**  
reference material characterized by a metrologically valid procedure for one or more specified properties, accompanied by a certificate, that provides the value of the specified property, its associated uncertainty, and a statement of metrological traceability

[SOURCE: ISO GUIDE 30:1992/Amd.1:2008, definition 2.2]

### 3.3 test sample

representative quantity of material for testing purposes

### 3.4 drift control samples

series of homogeneous materials that contain all the elements which have been calibrated and that cover the low, mid and high points of the calibration range for each element, used to detect variations over time in these points

Note 1 to entry: Drift control samples can also be used for statistical process control (SPC) of the instrument.