

STN	Med' a zlatiny medi - Stanovenie obsahu mangánu - Časť 2: Metóda plameňovej atómovej absorpcnej spektrometrie (FAAS).	STN EN 15703-2
		42 0610

Copper and copper alloys - Determination of manganese content - Part 2: Flame atomic absorption spectrometric method (FAAS)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/15

Obsahuje: EN 15703-2:2014

120641

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2015

Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnrožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 15703-2

December 2014

ICS 77.040.30; 77.120.30

English Version

**Copper and copper alloys - Determination of manganese content
- Part 2: Flame atomic absorption spectrometric method (FAAS)**

Cuivre et alliages de cuivre - Détermination de manganèse
- Partie 2: Méthode par spectrométrie d'absorption
atomique dans la flamme (SAAF)

Kupfer und Kupferlegierungen - Bestimmung des
Mangangehaltes - Teil 2:
Flammenatomabsorptionsspektrometrisches Verfahren
(FAAS)

This European Standard was approved by CEN on 8 November 2014.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Principle.....	4
4 Reagents	4
4.1 Hydrochloric acid, HCl ($\rho = 1,19 \text{ g/ml}$)	4
4.2 Nitric acid, $\text{HNO}_3 (\rho = 1,40 \text{ g/ml})$	4
4.3 Hydrofluoric acid, HF ($\rho = 1,13 \text{ g/ml}$)	4
4.4 Nitric acid solution, 1 + 1	4
4.5 Lanthanum(III) chloride solution, 100 g/l	4
4.6 Sulphuric acid, $\text{H}_2\text{SO}_4 (\rho = 1,84 \text{ g/ml})$	4
4.7 Sulphuric acid solution, 1 + 9	5
4.8 Manganese stock solution, 1,0 g/l Mn	5
4.9 Manganese standard solution, 0,10 g/l	5
4.10 Manganese standard solution, 0,010 g/l	5
4.11 Copper matrix solution, 20 g/l Cu	5
4.12 Copper matrix solution, 2 g/l Cu	5
5 Apparatus	5
5.1 Atomic absorption spectrometer, fitted with an air/acetylene burner	5
5.2 Manganese hollow-cathode lamp	6
6 Sampling.....	6
7 Procedure	6
7.1 Preparation of the test portion solution	6
7.2 Blank test.....	7
7.3 Check test.....	7
7.4 Establishment of the calibration curve	7
7.5 Determination.....	10
8 Expression of results	10
8.1 Use of the calibration curve.....	10
8.2 Use of the bracketing method	11
9 Precision.....	12
10 Test report	13
Bibliography	14

Foreword

This document (EN 15703-2:2014) 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 June 2015 and conflicting national standards shall be withdrawn at the latest by June 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.

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

EN 15703-2, Copper and copper alloys — Determination of manganese content — Part 2: Flame atomic absorption spectrometric method (FAAS)

This is one of two Parts of the standard/Technical Specification for the determination of manganese content in copper and copper alloys. The other Part is:

CEN/TS 15703-1, Copper and copper alloys — Determination of manganese content — Part 1: Spectrophotometric method

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, 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 flame atomic absorption spectrometric method (FAAS) for the determination of the manganese content of copper and copper alloys in the form of unwrought, wrought and cast products.

The method is applicable to products having manganese mass fractions between 0,001 0 % and 6,0 %.

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*

koniec náhladu – text d'alej pokračuje v platenej verzii STN