

**Koppar och kopparlegeringar – Bestämning  
av antimonhalt –**  
Del 1: Spektrometrisk metod

**Copper and copper alloys – Determination  
of antimony content –**  
Part 1: Spectrometric method

Europastandarden EN 14937-1:2006 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 14937-1:2006.

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## Copper and copper alloys - Determination of antimony content - Part 1: Spectrophotometric method

Cuivre et alliages de cuivre - Dosage de l'antimoine - Partie  
1 : Méthode spectrophotométrique

Kupfer und Kupferlegierungen - Bestimmung des  
Antimongehaltes - Teil 1: Spektrophotometrisches  
Verfahren

This European Standard was approved by CEN on 15 May 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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**EN 14937-1:2006 (E)**

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## Foreword

This document (EN 14937-1:2006) 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of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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 14937-1, *Copper and copper alloys — Determination of antimony content — Part 1: Spectrophotometric method*

This is one of two parts of the standard for the determination of antimony content in copper and copper alloys. The other part is:

EN 14937-2, *Copper and copper alloys — Determination of antimony content — Part 2: FAAS 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, 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.

## EN 14937-1:2006 (E)

### 1 Scope

This part of this European Standard specifies a Rhodamine B spectrophotometric method for the determination of the antimony content of copper and copper alloys in the form of unwrought, wrought and cast products.

The method is applicable to products having antimony mass fractions in the range between 0,001 % and 0,1 %, or greater by appropriate modification of the mass of the test portion, the volume of the test portion solution to be taken for the extraction and the cell path length.

### 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 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*

NOTE Informative references to documents used in the preparation of this standard, and cited at the appropriate places in the text, are listed in the Bibliography.

### 3 Principle

Extraction of pentavalent antimony into isopropyl ether and spectrophotometric determination of the chloro-antimonate-Rhodamine B complex.

### 4 Reagents and materials

#### 4.1 General

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

**4.2 Isopropyl ether**,  $(\text{CH}_2)_2\text{CHOCH}(\text{CH}_2)_2$ .

**4.3 Hydrochloric acid**, HCl ( $\rho = 1,19$  g/ml).

**4.4 Hydrochloric acid solution**, 7 + 3

Dilute 700 ml of hydrochloric acid (4.3) in 300 ml of water.

**4.5 Hydrochloric acid solution**, 1 mol/l

Dilute 83 ml of hydrochloric acid (4.3) in 500 ml of water and make up to 1 000 ml with water.