# Kullasisalduse määramine juveeltoodete kullasulamites. Kupellimismeetod

Determination of gold in gold jewellery alloys -JIC ASSA) Cupellation method (fire assay)



### **EESTI STANDARDI EESSÕNA**

### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 11426:2004 sisaldab Euroopa standardi EN ISO 11426:1998 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 16.12.1998.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 11426:2004 consists of the English text of the European standard EN ISO 11426:1998.

This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 16.12.1998.

The standard is available from Estonian standardisation organisation.

ICS 39.060

Võtmesõnad: juveeltooted, keemiline analüüs, kuld, kullasulamid, mahtanalüüs, metalli keemiline analüüs, sisalduse määramine

### Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

### EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

**EN ISO 11426** 

Ref. No. EN ISO 11426: 1998 E

December 1998

ICS 39.060 Supersedes EN 31426: 1994.

### **English version**

### Determination of gold in gold jewellery alloys

Cupellation method (fire assay) (ISO 11426:1997)

Dosage de l'or dans les alliages d'or pour la bijouterie-joaillerie – Méthode de coupellation (essai au feu) (ISO 11426 : 1997) Bestimmung von Gold in Gold-Schmucklegierungen – Dokimastisches Verfahren (ISO 11426 : 1997)

This European Standard was approved by CEN on 1998-11-23.

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.

The European Standards exist 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.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## CEN

European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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#### **Foreword**

International Standard

ISO 11426: 1997 Determination of gold in gold jewellery alloys - Cupellation method (fire assay), which was prepared by ISO/TC 174 'Jewellery' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 283 'Precious metals - Applications in jewellery and associated products', the Secretariat of which is held by UNI, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 1999 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

#### **Endorsement notice**

ernational p. The text of the International Standard ISO 11426: 1997 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

### 1 Scope

This International Standard specifies a cupellation method (fire assay) for the determination of gold in gold jewellery alloys. The gold content of the alloys should preferably lie between 333 and 999 parts per thousand (‰).

The procedure is applicable specifically to gold alloys incorporating silver, copper and zinc. Some modifications are indicated where nickel and/or palladium are present in the so-called white gold alloys, as well as for alloys containing 990 or more parts per thousand (‰) of gold.

This method is intended to be used as the reference method for the determination of fineness in alloys covered by ISO 9202.

### 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9202:1991, Jewellery — Fineness of precious metal alloys

### 3 Principle

The gold alloys are inquarted with silver, compounded with lead and cupelled in a cupellation furnace until a precious metal button is obtained. After flattening and rolling, the silver is extracted (parted) in nitric acid and the gold weighed. Possible systematic errors in the procedure are eliminated by assaying standard proof samples in parallel.

NOTE — White gold alloys containing palladium and/or nickel as well as alloys with 990 or more parts per thousand (‰) of gold require some procedural changes.

### 4 Reagents

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