Kehaläbistavad küvetikomplektid. Standardkatse niklisisalduse määramiseks ekaatomabsorptsioon-spektromeetrilisel teel

Body-piercing post assemblies - Reference test method for determination of nickel content by flame atomic absorption spectrometry

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1810:2000 sisaldab Euroopa standardi EN 1810:1998 ingliskeelset teksti. Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1810:2000 consists of the English text of the European standard EN 1810:1998. This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: See Euroopa standard määrab kindlaks meetodid niklisisalduse määramiseks alumiiniumis, titaanis, vases, hõbedas, kullas ja nende sulamites ning terastes leekaatomabsorptsioon-spektromeetria abil. Meetod on sobiv peamiselt proovide jaoks, mille niklisisaldus on vahemikus 0,03% kuni 0,07% (massiprotsent).	**Scope:**

ICS 39.060

Võtmesõnad: aatomabsorptsioonspektrofotomeetria, alumiiniumisulamid, hõbedasulamid, katsed, kullasulamid, määramine, nikkel, sisalduse määramine, sulamid, terased, titaanisulamid, vasesulamid, väärismetallid

EUROPEAN STANDARD
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Descriptors: Body-piercing, nickel content, testing.

English version

Body-piercing post assemblies

Reference test method for determination of nickel content by flame atomic absorption spectrometry

Ensembles de perçage de parties du corps – Méthode d'essai de référence pour la détermination de la teneur en nickel par spectrométrie d'absorption atomique de flamme

Stecker, die durch Teile des Körpers gestochen werden – Referenzprüfverfahren zur Bestimmung des Nickelgehalts durch Atomabsorptionsspektrometrie

This European Standard was approved by CEN on 1998-04-10.

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

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 283 "Precious metals - Applications in jewellery and associated products", the secretariat of which is held by UNI.

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 1998, and conflicting national standards shall be withdrawn at the latest by November 1998.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This method is used to determine whether the nickel content in post assemblies which are inserted into pierced ears and other pierced parts of the human body during epithelization of the wound caused by piercing, whether subsequently removed or not, is equal to or less than 0,05 % (m/m).

1 Scope

This European Standard specifies a method for the determination of nickel in aluminium, titanium, copper, silver, gold and their alloys and in steels by flame atomic absorption spectrophotometry. The method is primarily suitable when the nickel content of a sample lies between 0,03 % and 0,07 % (m/m).

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of, any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 1811 Precious metals - Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin.

3 Principle

A test portion is dissolved in an acid medium. The resulting solution is atomized into an air-acetylene flame of the atomic absorption spectrophotometer and the absorption of the resonance energy of nickel (232,0 nm) is compared with that of calibration solutions.

4 Reagents

All reagents shall be of recognized pro analysis, p.a., grade or better and shall be free of nickel.

NOTE: Only those reagents appropriate to the matrices under examination are required.

WARNING: Concentrated acids are hazardous. Wear safety glasses or goggles and carry out dissolution of metals in a well-ventilated fume cupboard.

4.1 Deionized water, specific conductivity, maximum 1 µS/cm.

4.2 Hydrochloric acid, 38 % (m/m), ρ = 1,19 g/ml.

4.3 Dilute hydrochloric acid, 20 % (m/m), ρ = 1,10 g/ml.
Carefully add 125 ml of hydrochloric acid (see 4.2) to approximately 110 ml deionized water in a 500-ml beaker. Stir and cool to room temperature. Transfer the solution into a 250-ml volumetric flask and make up to volume with deionized water.