SLOVENSKI STANDARD
SIST EN ISO 11490:1998

01-april-1998

Določevanje paladija v zlitinah za nakit iz paladija - Gravimetrična metoda z dimetil glioksimom (ISO 11490:1995)

Determination of palladium in palladium jewellery alloys - Gravimetric method with dimethyl glyoxime (ISO 11490:1995)

Bestimmung von Palladium in Palladium-Schmucklegierungen - Gravimetrische Bestimmung mit Dimethylglyoxim (ISO 11490:1995)

Dosage du palladium dans les alliages de palladium pour la bijouterie-joaillerie - Méthode gravimétrique a la diméthylglyoxime (ISO 11490:1995)

Ta slovenski standard je istoveten z: **EN ISO 11490:1995**

ICS:

39.060	Nakit	Jewellery

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EN ISO 11490

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English version

Determination of palladium in palladium jewellery alloys - Gravimetric method with dimethyl glyoxime (ISO 11490:1995)

Dosage du palladium dans les alliages de palladium pour la bijouterie-joaillerie Méthode gravimétrique à la diméthylglyoxime (ISO 11490:1995)

Bestimmung von Palladium in Palladium-Schmucklegierungen - Gravimetrische Bestimmung mit Dimetyhlglyoxim (ISO 11490:1995)

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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.

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CEN

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

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

Foreword

The text of the International Standard ISO 11490:1995 has been prepared by Technical Committee ISO/TC 174 "Jewellery" in collaboration with CEN/TC 283 "Precious metals - Applications in jewellery and associated products". It has been submitted to Parallel Vote and has been approved by CEN on 1995-04-27 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of an identical text or by endorsement, at the latest by November 1995, and conflicting national standards shall be withdrawn at the latest by November 1995.

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

Endorsement notice

The text of the International Standard ISO 11490:1995 was approved by CEN as a European Standard without any modification.

Annex ZA (normative)
Normative references to international publications with their relevant European publications

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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

Publication	Year	Title	EN	Year
ISO 9202	1991	Jewellery - Fineness of precious metal Alloys	EN 29202	1992

INTERNATIONAL STANDARD

ISO 11490

First edition
1995-05-01

Determination of palladium in palladium jewellery alloys — Gravimetric determination with dimethylglyoxime

Dosage du palladium dans les alliages de palladium pour la bijouterie-joaillerie — Dosage gravimétrique par la diméthylglyoxime

Reference number
ISO 11490:1995(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11490 was prepared by Technical Committee ISO/TC 174, *Jewellery*.

Annex A of this International Standard is for information only.

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Determination of palladium in palladium jewellery alloys — Gravimetric determination with dimethylglyoxime

1 Scope

This International Standard specifies a gravimetric method for the determination of palladium in palladium jewellery alloys, preferably within the range of fineness stated in ISO 9202.

These alloys which may contain silver, indium, gallium, copper, cobalt, nickel, tin and ruthenium. Coprecipitated elements have to be determined by a suitable method and a correction applied.

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 sample is dissolved in *aqua regia*. Palladium is precipitated with dimethylglyoxime. If present, silver is separated as silver chloride. The palladium dimethylglyoxime compound is converted to metallic palladium by ignition and the latter is then determined gravimetrically.

4 Reagents

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

4.1 Nitric acid, 69 % (*m/m*), $\rho_{20} = 1{,}41$ g/cm^3.

4.2 Hydrochloric acid,
38 % (*m/m*), $\rho_{20} = 1{,}19$ g/cm^3.

4.3 Dilute hydrochloric acid,
8,5 % (*m/m*), $\rho_{20} = 1{,}04$ g/cm^3.

4.4 Dimethylglyoxime solution.

Dissolve 10 g of dimethylglyoxime in 1 litre of ethanol.

4.5 Ammonium chloride.

4.6 Dilute nitric acid,
1,39 % (*m/m*), $\rho_{20} = 1{,}00$ g/cm^3.

Cautiously add 10 ml of nitric acid (4.1) to 1 000 ml of water and mix.

4.7 Hydrofluoric acid,
40 % (*m/m*), $\rho_{20} = 1{,}13$ g/cm^3.

4.8 Dilute sulfuric acid,
49 % (*m/m*), $\rho_{20} = 1{,}4$ g/cm^3.

Cautiously add 100 ml of sulfuric acid [98 % (*m/m*), $\rho_{20} = 1{,}86$ g/cm^3] to 100 ml of water and mix.

4.9 Reducing gas, such as hydrogen or a hydrogen/nitrogen mixture.