



SLOVENSKI STANDARD

SIST EN 31427:1998

01-april-1998

Določevanje srebra v zlitinah za srebrni nakit - Volumetrična (potenciometrična) metoda z uporabo natrijevega bromida (ISO 11427:1993)

Determination of silver in silver jewellery alloys - Volumetric (potentiometric) method using potassium bromide (ISO 11427:1993)

Bestimmung von Silber in Silber-Schmucklegierungen - Maßanalytisches, potentiometrisches Verfahren unter Verwendung von Kaliumbromid (ISO 11427:1993)

Dosage de l'argent dans les alliages d'argent pour la bijouterie-joaillerie - Méthode volumétrique (potentiométrique) utilisant le bromure de potassium (ISO 11427:1993)

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Ta slovenski standard je istoveten z: EN 31427:1994

ICS:

39.060 Nakit Jewellery

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EUROPEAN STANDARD

EN 31427

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1994

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Descriptors: Jewellery, silver alloys, chemical analysis, determination of content, silver, volumetric analysis, metal assay

English version

**Determination of silver in silver jewellery alloys -
Volumetric (potentiometric) method using
potassium bromide (ISO 11427:1993)**

Dosage de l'argent dans les alliages d'argent pour la bijouterie-joaillerie - Méthode volumétrique (potentiométrique) utilisant le bromure de potassium (ISO 11427:1993)

Bestimmung von Silber in Silber-Schmucklegierungen - Maßanalytisches, potentiometrisches Verfahren unter Verwendung von Kaliumbromid (ISO 11427:1993)

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This European Standard was approved by CEN on 1994-04-01. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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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EN 31427:1994

Foreword

The text of the International Standard ISO 11427:1993 prepared by ISO/TC 174 "Jewellery" was submitted to the formal vote and was approved as EN 31427 without any modification.

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 October 1994, and conflicting national standards shall be withdrawn at the latest by October 1994.

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 United Kingdom.

Endorsement notice

The text of the International Standard ISO 11427:1993 was approved by CEN as a European Standard without any modification.

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

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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 (including amendments).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 9202		Jewellery - Fineness of precious metal alloys	EN 29202	

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INTERNATIONAL
STANDARD

ISO
11427

First edition
1993-05-01

**Determination of silver in silver jewellery
alloys — Volumetric (potentiometric)
method using potassium bromide**

iTeh STANDARD PREVIEW

*Dosage de l'argent dans les alliages d'argent pour la
bijouterie-joaillerie — Méthode volumétrique (potentiométrique) utilisant
le bromure de potassium*

SIST EN 31427:1998

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Reference number
ISO 11427:1993(E)

ISO 11427:1993(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 11427 was prepared by Technical Committee ISO/TC 174, *Jewellery*.

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Determination of silver in silver jewellery alloys — Volumetric (potentiometric) method using potassium bromide

1 Scope

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

These alloys may contain copper, zinc, cadmium and palladium. Apart from palladium, which must be precipitated before commencing titration, these elements do not interfere with this method of determination.

NOTE 1 This method is intended to be used as the reference method for the determination of fineness in the 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 sample is dissolved in dilute nitric acid. The silver content of the resulting solution is determined by titration with standard potassium bromide solution, using a potentiometric indication of the equivalence point.

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, 33 % (m/m), $\rho_{20} = 1,2 \text{ g/cm}^3$, free of halide.

4.2 Potassium bromide, solution, $c(\text{KBr}) = 1 \text{ mol/l}$.

Dissolve 11,90 g of potassium bromide (dried at 105 °C) in water and dilute to 1 litre.

4.3 Disodium dimethylglyoxime octahydrate, solution.

Dissolve 10 g of disodium dimethylglyoxime octahydrate in 1 000 ml of water.

4.4 Silver, minimum purity 999,9 parts by mass per thousand (‰).

5 Apparatus

Ordinary laboratory apparatus and

5.1 Motor-driven plunger or piston-type burette, linked to a potentiometer or automatic titrator and capable of delivering increments of 0,05 ml at the equivalence point.

5.2 Titration apparatus, with combination silver electrode coated with silver bromide and $\text{Hg}/\text{Hg}_2\text{SO}_4$ or other suitable reference electrode.

6 Sampling

The sampling procedure for silver and silver alloys shall be agreed upon until a standard method has been published.