

# Klenoty a drahé kovy Stanovenie platiny v klenotníckych zliatinách platiny Metóda vnútorného štandardu ICP-OES s prvkom ytria (ISO 11494: 2019)

STN EN ISO 11494

42 0667

Jewellery and precious metals - Determination of platinum in platinum alloys - ICP-OES method using an internal standard element (ISO 11494:2019)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/19

Obsahuje: EN ISO 11494:2019, ISO 11494:2019

Oznámením tejto normy sa ruší STN EN ISO 11494 (42 0667) z apríla 2017

#### 129899

### EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

### **EN ISO 11494**

August 2019

ICS 39.060

Supersedes EN ISO 11494:2016

### **English Version**

## Jewellery and precious metals - Determination of platinum in platinum alloys - ICP-OES method using an internal standard element (ISO 11494:2019)

Joaillerie, bijouterie et métaux précieux - Dosage du platine dans les alliages de platine - Méthode par l'ICP-OES, utilisant un étalon interne (ISO 11494:2019) Schmuck und Edelmetalle - Bestimmung von Platin in Platinschmucklegierungen - ICP-OES-Verfahren unter Verwendung eines internen Standardelements (ISO 11494:2019)

This European Standard was approved by CEN on 26 April 2019.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

### EN ISO 11494:2019 (E)

Contents	Page
European foreword	2

### **European foreword**

This document (EN ISO 11494:2019) has been prepared by Technical Committee ISO/TC 174 "Jewellery and precious metals" in collaboration with Technical Committee CEN/SS M21 "Precious metals - Applications in jewellery and associated products" the secretariat of which is held by CCMC.

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 February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11494:2016.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Endorsement notice**

The text of ISO 11494:2019 has been approved by CEN as EN ISO 11494:2019 without any modification.

### INTERNATIONAL STANDARD

ISO 11494

Third edition 2019-07

### Jewellery and precious metals — Determination of platinum in platinum alloys — ICP-OES method using an internal standard element

Joaillerie et métaux précieux — Dosage du platine dans les alliages de platine — Méthode par ICP-OES utilisant un étalon interne



ISO 11494:2019(E)



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

### ISO 11494:2019(E)

Coı	ntents	Page
Fore	word	iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	1
5	Reagents	
6	Equipment	
7	Sampling	
8	Procedure 8.1 Internal standard solution 8.2 Calibration solutions 8.3 Sample solutions 8.4 Preparation of the platinum alloy solution containing ruthenium, iridium, or tungsten 8.5 Measurements	2 2 3
9	Calculation and expression of results 9.1 Calculation 9.2 Repeatability	3
10	Test report	5
Bibli	iography	6

### **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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by Technical Committee ISO/TC 174, *Jewellery and precious metals*.

This third edition cancels and replaces the second edition (ISO 11494:2014), which has been technically revised.

The main changes compared to the previous edition are as follows:

- a) the definition of bracketing in <u>Clause 3</u> has been removed;
- b) the recommended lines in Clause 4 have been removed;
- c) reagents in <u>Clause 5</u> have been changed and removed, and the requirements about yttrium in <u>5.4</u> have been changed;
- d) the preparation of the internal standard solution in 8.1 has been changed;
- e) the list of standards to be prepared and precisions about qualification of them by linearity as well as way to choose the low and high standards in 8.2 have been changed;
- f) the way of preparation by aliquots for both standard and sample solutions in <u>8.2</u> and <u>8.3</u> has been removed:
- g) the preparation of both standard and sample solutions in 8.2 and 8.3 has been changed;
- h) precisions about quantity of acids to be used in case of dissolution under pressure in <u>8.4</u> have been added;
- i) the definition of bracketing and recommended lines in 8.5 have been added;
- j) the formulae in 9.1 after having removed the way of preparation by aliquots have been adapted;
- k) the emission line as an information to be mentioned in the test report in <u>Clause 10</u> has been removed;

ISO 11494:2019(E)

l) the document has been editorially revised.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

# Jewellery and precious metals — Determination of platinum in platinum alloys — ICP-OES method using an internal standard element

### 1 Scope

This document describes an analytical procedure for the determination of platinum in platinum alloys with a nominal content up to 990 ‰ (parts per thousand), including alloys according to ISO 9202.

### 2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN