

ISBN 978-0-626-29901-9

SANS 11426:2008

Edition 2

ISO 11426:1997

Edition 2

SOUTH AFRICAN NATIONAL STANDARD

Determination of gold in gold jewellery alloys — Cupellation method (fire assay)

This national standard is the identical implementation of ISO 11426:1997 and is adopted with the permission of the International Organization for Standardization.

Published by SABS Standards Division
1 Dr Lategan Road Groenkloof ☒ Private Bag X191
Pretoria 0001

Tel: +27 12 428 7911 Fax: +27 12 344 1568

www.sabs.co.za

© SABS

SABS

SANS 11426:2008

Edition 2

ISO 11426:1997

Edition 2

Table of changes

Change No.	Date	Scope

National foreword

This South African standard was approved by National Committee SABS/TC 1078, *Engineering materials – Non-ferrous metals*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This SANS document was published in September 2008. This SANS document supersedes SABS ISO 11426:1993 (first edition).

**Reaffirmed and reprinted in March 2014.
This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

INTERNATIONAL STANDARD

ISO
11426

Second edition
1997-12-01

Determination of gold in gold jewellery alloys — Cupellation method (fire assay)

*Dosage de l'or dans les alliages d'or pour la bijouterie-joaillerie — Méthode
de coupellation (essai au feu)*



Reference number
ISO 11426:1997(E)

ISO 11426:1997(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 11426 was prepared by Technical Committee ISO/TC 174, *Jewellery*.

This second edition cancels and replaces the first edition ISO 11426:1993, which has been technically revised.

© ISO 1997

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

Determination of gold in gold jewellery alloys — Cupellation method (fire assay)

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.