

STN	Stomatológia Odolnosť zubného amalgámu proti korózii (ISO 23325: 2020)	STN EN ISO 23325 85 6397
------------	---	--

Dentistry - Corrosion resistance of dental amalgam (ISO 23325:2020)

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. 09/20

Obsahuje: EN ISO 23325:2020, ISO 23325:2020

131670

EUROPEAN STANDARD

EN ISO 23325

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2020

ICS 11.060.10

English Version

Dentistry - Corrosion resistance of dental amalgam (ISO 23325:2020)

Médecine bucco-dentaire - Résistance à la corrosion
des amalgames dentaires (ISO 23325:2020)

Zahnheilkunde - Korrosionsbeständigkeit von
Dentalamalgam (ISO 23325:2020)

This European Standard was approved by CEN on 9 June 2020.

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 23325:2020 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 23325:2020) has been prepared by Technical Committee ISO/TC 106 "Dentistry" in collaboration with Technical Committee CEN/TC 55 "Dentistry" the secretariat of which is held by DIN.

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 January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

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.

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 23325:2020 has been approved by CEN as EN ISO 23325:2020 without any modification.

INTERNATIONAL STANDARD

ISO
23325

First edition
2020-06

Dentistry — Corrosion resistance of dental amalgam

*Médecine bucco-dentaire — Résistance à la corrosion des amalgames
dentaires*



Reference number
ISO 23325:2020(E)

© ISO 2020

ISO 23325:2020(E)**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2020

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
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Sampling	3
5 Requirement	3
6 Preparation of the dental amalgam test-piece	4
6.1 General.....	4
6.1.1 Temperature.....	4
6.1.2 Mixing.....	4
6.2 Apparatus for the preparation of the dental amalgam test-piece.....	4
6.3 Materials and tolerances for construction of the mould.....	4
6.4 Packing the mould, removal of test-piece and inspection for surface defects.....	5
7 Test solution (artificial saliva)	6
7.1 Reagents.....	6
7.2 Stock solutions.....	7
7.2.1 Stock Solution A.....	7
7.2.2 Stock Solution B.....	7
7.2.3 Stock Solution C.....	7
7.3 Test solution.....	7
8 Procedure for test-piece conditioning	8
8.1 Apparatus.....	8
8.2 Control test-pieces.....	8
8.3 Corrosion test-pieces.....	9
8.4 Replacement test-pieces.....	9
9 Mechanical testing	9
9.1 Apparatus for mechanical testing.....	9
9.2 Procedure.....	10
9.2.1 Loading arrangement.....	10
9.2.2 Force application and fracture.....	11
9.3 Treatment of data.....	11
10 Test report	12
Bibliography	13

ISO 23325:2020(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.

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 www.iso.org/directives).

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 www.iso.org/patents).

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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 1, *Filling and restorative materials*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 55, *Dentistry*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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 www.iso.org/members.html.

Introduction

This document sets a requirement, being the acceptable limit, for the reduction in strength of dental amalgam that is a consequence of crevice corrosion when the test is conducted using the procedure specified in this document. It uses one of the three corrosion test procedures present in ISO/TS 17988 for which a requirement is given in this document. The testing protocol is designed to accelerate the effect, such that results are obtained in a time suited to an *in vitro* test. Its purpose is to differentiate acceptable products from those that are not (by using a benchmark value) and not to rank products. It is not intended for use in product comparison claims.

Specific qualitative and quantitative requirements for freedom from biological hazard are not included in this document, but it is recommended that reference be made to ISO 10993-1 and ISO 7405 for assessing possible biological hazards. The test procedure in this document is inappropriate for assessing possible biological hazards.

Dentistry — Corrosion resistance of dental amalgam

1 Scope

This document specifies the requirements for the permissible reduction in strength resulting from crevice corrosion of dental amalgam products that are within the scope of ISO 24234 or ISO 20749. It provides details of the test procedure for determining this.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1942, *Dentistry — Vocabulary*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 6344-1, *Coated abrasives — Grain size analysis — Part 1: Grain size distribution test*

ISO 7488, *Dentistry — Mixing machines for dental amalgam*

ISO 13897, *Dentistry — Dental amalgam reusable mixing-capsules*

ISO 24234, *Dentistry — Dental amalgam*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN