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Dentistry — Ceramic materials

Médecine bucco-dentaire — Matériaux céramiques



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

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthetic materials*.

This fourth edition cancels and replaces the third edition (ISO 6872:2008), which has been technically revised with the following changes:

- new edition of ISO 23146:2012 for fracture toughness by SEVNB has been added as an alternative in [Annex A](#). It has a rigorous procedure developed by ISO/TC 206, *Fine ceramics*;
- a restriction on the use of the SEVNB method for fracture toughness determination for 3Y-TZP has been added. In most cases, the notch cannot be made sharp enough with a razor blade;
- maximum chamfer size on bend bars has been reduced for the case of the thin specimens;
- recommendations to grind lengthwise were added to the bend bar preparation step in [7.3.1.2.2](#);
- the Y equations for SEVNB fracture toughness in 3-point have been refined and expanded to cover more configurations;
- modification to [Table 1](#) changing “aesthetic” to “monolithic”.

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Introduction

Specific qualitative and quantitative requirements for freedom from biological hazard are not included in this International Standard, but it is recommended that in assessing possible biological or toxicological hazards, reference be made to ISO 10993-1 and ISO 7405.