
**Dentistry — Implants — Dynamic
loading test for endosseous dental
implants**

*Médecine bucco-dentaire — Implants — Essai de charge dynamique
pour implants dentaires endo-osseux*



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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 8 *Dental implants*.

This third edition cancels and replaces the second edition (ISO 14801:2007), which has been technically revised.

Dentistry — Implants — Dynamic loading test for endosseous dental implants

1 Scope

This International Standard specifies a method of dynamic testing of single post endosseous dental implants of the transmucosal type in combination with their premanufactured prosthetic components. It is most useful for comparing endosseous dental implants of different designs or sizes. This International Standard is not a test of the fundamental fatigue properties of the materials from which the endosseous implants and prosthetic components are made.

This International Standard is not applicable to dental implants with endosseous lengths shorter than 8 mm nor to magnetic attachments.

While this International Standard simulates the functional loading of an endosseous dental implant under “worst case” conditions, it is not applicable for predicting the *in vivo* performance of an endosseous dental implant or dental prosthesis, particularly if multiple endosseous dental implants are used for a dental prosthesis.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 — Terminology*

ISO 16443, *Dentistry — Vocabulary for dental implants systems and related procedure*

ISO 1099, *Metallic materials — Fatigue testing — Axial force-controlled method*

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 16443, and the following apply.

3.1

endosseous dental implant system

device that consists of integrated components including the ancillary instruments and specific equipment necessary for the clinical and laboratory preparation and placement of the implant, and for the construction and insertion of the dependent dental prosthesis

Note 1 to entry: In addition to providing resistance to displacement of an implant superstructure, an endosseous dental implant may be used as an anchorage for orthodontic appliances.

Note 2 to entry: An endosseous dental implant may consist of one or more parts.

Note 3 to entry: The term implant superstructure includes crowns and fixed and removable prostheses, but excludes implant abutments.