

**SLOVENSKI STANDARD**  
**oSIST prEN ISO 10993-12:2010**  
**01-julij-2010**

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**Biološko ovrednotenje medicinskih pripomočkov - 12. del: Priprava vzorcev in referenčni materiali (ISO/DIS 10993-12:2010)**

Biological evaluation of medical devices - Part 12: Sample preparation and reference materials (ISO/DIS 10993-12:2010)

Biologische Beurteilung von Medizinprodukten - Teil 12: Probenvorbereitung und Referenzmaterialien (ISO/DIS 10993-12:2010)

Évaluation biologique des dispositifs médicaux - Partie 12: Préparation des échantillons et matériaux de référence (ISO/DIS 10993-12:2010)

**Ta slovenski standard je istoveten z: prEN ISO 10993-12**

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**ICS:**

11.100.20	Biološko ovrednotenje medicinskih pripomočkov	Biological evaluation of medical devices
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**en**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN ISO 10993-12**

May 2010

ICS 11.100.20

Will supersede EN ISO 10993-12:2009

English Version

**Biological evaluation of medical devices - Part 12: Sample  
preparation and reference materials (ISO/DIS 10993-12:2010)**

Évaluation biologique des dispositifs médicaux - Partie 12:  
Préparation des échantillons et matériaux de référence  
(ISO/DIS 10993-12:2010)

Biologische Beurteilung von Medizinprodukten - Teil 12:  
Probenvorbereitung und Referenzmaterialien (ISO/DIS  
10993-12:2010)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 206.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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## Foreword

This document (prEN ISO 10993-12:2010) has been prepared by Technical Committee ISO/TC 194 "Biological evaluation of medical devices" in collaboration with Technical Committee CEN/TC 206 "Biological evaluation of medical devices" the secretariat of which is held by NEN.

This document is currently submitted to the parallel Enquiry.

This document will supersede EN ISO 10993-12:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

### Endorsement notice

The text of ISO/DIS 10993-12:2010 has been approved by CEN as a prEN ISO 10993-12:2010 without any modification.

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# DRAFT INTERNATIONAL STANDARD ISO/DIS 10993-12

ISO/TC 194

Secretariat: DIN

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

## Biological evaluation of medical devices —

### Part 12:

## Sample preparation and reference materials

*Évaluation biologique des dispositifs médicaux —*

*Partie 12: Préparation des échantillons et matériaux de référence*

[Revision of third edition (ISO 10993-12:2007)]

ICS 11.100.20

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### ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

**To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.**

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## ISO/DIS 10993-12

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 10993-12 was prepared by Technical Committee ISO/TC 194, *Biological evaluation of medical devices* and by Technical Committee CEN/TC 206, *Biological evaluation of medical devices* in collaboration.

This fourth edition cancels and replaces the third edition (EN ISO 10993-12:2007), which has been technically revised.

ISO 10993 consists of the following parts, under the general title *Biological evaluation of medical devices*:

- Part 1: *Evaluation and testing within a risk management system*
- Part 2: *Animal welfare requirements*
- Part 3: *Tests for genotoxicity, carcinogenicity and reproductive toxicity*
- Part 4: *Selection of tests for interactions with blood*
- Part 5: *Tests for in vitro cytotoxicity*
- Part 6: *Tests for local effects after implantation*
- Part 7: *Ethylene oxide sterilization residuals*
- Part 9: *Framework for identification and quantification of potential degradation products*
- Part 10: *Tests for irritation and sensitization*
- Part 11: *Tests for systemic toxicity*
- Part 12: *Sample preparation and reference materials*
- Part 13: *Identification and quantification of degradation products from polymeric medical devices*
- Part 14: *Identification and quantification of degradation products from ceramics*
- Part 15: *Identification and quantification of degradation products from metals and alloys*

- Part 16: *Toxicokinetic study design for degradation products and leachables*
- Part 17: *Establishment of allowable limits for leachable substances using health-based risk assessment*
- Part 18: *Chemical characterization of materials*
- Part 19: *Physico-chemical, morphological and topographical characterization of materials [Technical Specification]*
- Part 20: *Principles and methods for immunotoxicology testing of medical devices [Technical Specification]*

Future parts will deal with other relevant aspects of biological testing.

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