



SLOVENSKI STANDARD
SIST EN ISO 10993-5:2000
01-januar-2000

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Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity (ISO 10993-5:1999)

Biologische Beurteilung von Medizinprodukten - Teil 5: Prüfungen auf Zytotoxizität: In vitro-Methoden (ISO 10993-5:1999)

Evaluation biologique des dispositifs médicaux - Partie 5: Essais concernant la cytotoxicité in vitro (ISO 10993-5:1999)

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Ta slovenski standard je istoveten z: EN ISO 10993-5:1999

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English version

Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity (ISO 10993-5:1999)

Evaluation biologique des dispositifs médicaux - Partie 5:
Essais concernant la cytotoxicité in vitro (ISO 10993-5:1999)

Biologische Beurteilung von Medizinprodukten - Teil 5:
Prüfungen auf Zytotoxizität: in vitro-Methoden (ISO 10993-5:1999)

This European Standard was approved by CEN on 16 April 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard ISO 10993-5:1999 has been prepared by Technical Committee ISO/TC 194 "Biological evaluation of medical devices" in collaboration with Technical Committee CEN/TC 206 "Biocompatibility of medical and dental materials and devices", the secretariat of which is held by NNI.

This European Standard supersedes EN 30993-5:1994

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 November 1999, and conflicting national standards shall be withdrawn at the latest by November 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 10993-5:1999 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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Annex ZA (normative)
Normative references to international publications
with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 10993-1	1997	Biological evaluation of medical devices - Part 1: Evaluation and testing	EN ISO 10993-1	1997
ISO 10993-12	1996	Biological evaluation of medical devices - Part 12: Sample preparation and reference materials	EN ISO 10993-12	1996

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**Biological evaluation of medical devices —
Part 5:
Tests for *in vitro* cytotoxicity**

*Évaluation biologique des dispositifs médicaux —
Partie 5: Essais concernant la cytotoxicité in vitro*

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Contents

1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Sample preparation	2
5 Cell lines	4
6 Culture medium.....	4
7 Preparation of cell stock culture	4
8 Test procedures	5
9 Test report	8
10 Assessment of results.....	8

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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 3.

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 10993-5 was prepared by Technical Committee ISO/TC 194, *Biological evaluation of medical devices*.

This second edition cancels and replaces the first edition (ISO 10993-5:1992), 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
- 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 8: Guidance for reference materials
- Part 9: Framework for the 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 polymers
- 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: Methods for establishment of allowable limits for leachable substances using health-based risk assessment
- Part 18: Chemical characterization

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