



**SLOVENSKI STANDARD**  
**SIST EN ISO 10944:2000**  
**01-januar-2000**

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Ophthalmic instruments - Synoptophores (ISO 10944:1998)

Ophthalmische Instrumente - Synoptophore (ISO 10944:1998)

Instruments ophtalmiques - Synoptophores (ISO 10944:1998)

**Ta slovenski standard je istoveten z: EN ISO 10944:1998**

[SIST EN ISO 10944:2000](https://standards.iteh.ai/catalog/standards/sist/765bcc26-acae-4cfe-9c92-09e6df99cd2f/sist-en-iso-10944-2000)

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**ICS:**

11.040.70      Oftalmološka oprema      Ophthalmic equipment

**SIST EN ISO 10944:2000**      **en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 10944

May 1998

ICS 11.040.70

Descriptors: see ISO document

English version

## Ophthalmic instruments - Synoptophores (ISO 10944:1998)

Instruments optalmiques - Synoptophores (ISO  
10944:1998)

Ophthalmische Instrumente - Synoptophore (ISO  
10944:1998)

This European Standard was approved by CEN on 9 March 1998.

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 10944:1998 has been prepared by Technical Committee ISO/TC 172 "Optics and optical instruments" in collaboration with Technical Committee CEN/TC 170 "Ophthalmic optics", 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 November 1998, and conflicting national standards shall be withdrawn at the latest by November 1998.

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 10944:1998 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative). A-deviations are given in Annex ZB (informative).

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СЕРТИФИКАЦИЯ  
ДИПЛОМ  
ИЗДАНО  
1998  
10



**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 15004	1997	Ophthalmic instruments - Fundamental requirements and test methods	EN ISO 15004	1997

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## ANNEX ZB (informative)

### A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/CENELEC member.

This European Standard does not fall under any Directive of the EC. In the relevant CEN/CENELEC countries these A-deviations are valid instead of the provisions of the European Standard until they have been removed.

The legislative situation in Germany requires the unit "dioptré" be designated by the symbol "dpt" instead of "D".

This is to avoid conflict with the rules of ISO 1000 being the basic International Standard on symbols and units and with the respective basic resolution of the CGPM (International Conference on Weights and Measures).

Identification of the regulation:

Gesetz über die Einheiten im Meßwesen vom 02.07.1969 in der Fassung der Bekanntmachung vom 22.04.1985; and

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Ausführungsverordnung zum Gesetz über Einheiten im Meßwesen (Einheitenverordnung - EinhV) vom 13.12.1985, § 1 und Anlage 1, Nr. 9

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INTERNATIONAL  
STANDARD

**ISO**  
**10944**

First edition  
1998-05-01

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**Ophthalmic instruments — Synoptophores**

*Instruments ophtalmiques — Synoptophores*

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Reference number  
ISO 10944:1998(E)

**ISO 10944:1998(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.

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 10944 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

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Printed in Switzerland



# Ophthalmic instruments — Synoptophores

## 1 Scope

This International Standard, together with ISO 15004, specifies minimum requirements and test methods for synoptophores (also called major amblyoscopes or synoptometers) used to test, measure, train and develop the patient's binocular vision and to measure horizontal, vertical and cyclo deviation in different positions of gaze.

This International Standard takes precedence over ISO 15004, if differences exist.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 15004:1997	<i>Ophthalmic instruments — Fundamental requirements and test methods</i>
IEC 60601-1:1988	<i>Medical electrical equipment — Part 1: General requirements for safety</i>

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

### 3.1 synoptophore

instrument designed to present interchangeable targets to each eye and with the ability to move targets independently in order to present them at different versional and vergence positions

NOTE - Target configuration and location, along with other instrument features, are used to test, measure and train binocular vision.

### 3.2 visual targets for simultaneous perception

targets used to form two different images, one on each retina, which cannot be fused into a single image

### 3.3 visual targets for fusion

targets used to form two similar images, one on each retina, which are capable of fusion, and in which control points are often incorporated in order to assess if either eye is suppressing the relevant image