



**SLOVENSKI STANDARD**  
**SIST EN ISO 10341:2000**  
**01-januar-2000**

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**Oftalmološki instrumenti - Glave refraktorjev (ISO 10341:1997)**

Ophthalmic instruments - Refractor heads (ISO 10341:1997)

Ophthalmische Instrumente - Phoropter (ISO 10341:1997)

Instruments ophtalmiques - Tetes de réfracteurs (ISO 10341:1997)

**Ta slovenski standard je istoveten z: EN ISO 10341:1999**

[SIST EN ISO 10341:2000](https://standards.iteh.ai/catalog/standards/sist/5e5ba7af-d86c-4405-95e1-6866f8e3e543/sist-en-iso-10341-2000)

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**ICS:**

11.040.70      Oftalmološka oprema      Ophthalmic equipment

**SIST EN ISO 10341:2000**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 10341

April 1999

ICS 11.040.70

English version

## Ophthalmic instruments - Refractor heads (ISO 10341:1997)

Instruments ophtalmiques - Têtes de réfracteurs (ISO  
10341:1997)

Ophthalmische Instrumente - Phoropter (ISO 10341:1997)

This European Standard was approved by CEN on 2 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.

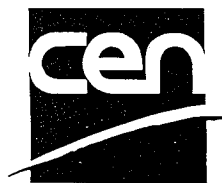
This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

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## Foreword

The text of the International Standard from Technical Committee ISO/TC 172 "Optics and optical instruments" of the International Organization for Standardization (ISO) has been taken over as an European Standard by 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 October 1999, and conflicting national standards shall be withdrawn at the latest by October 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 10341:1997 has been 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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CEN/TC 170  
Ophthalmic optics  
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Ophthalmic optics  
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**ANNEX ZA (normative)****Normative references to international publications with their corresponding European publications**

This European Standard incorporates by dated or undated references, 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.

Publication	Year	Title	EN	Year
ISO 7944	1998	Optics and optical instruments - Reference wavelengths	EN ISO 7944	1998
ISO 8429	1986	Optics and optical instruments - Ophthalmology - Graduated dial scale	EN ISO 8429	1996
ISO 13666	1998	Ophthalmic optics - Spectacles lenses - Vocabulary	EN ISO 13666	1998
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

Ausführungsverordnung zum Gesetz über Einheiten im Meßwesen (Einheitenverordnung - EinhV) vom 13.12.1985 geändert durch Verordnung vom 22.03.1991, § 1 und Anlage 1, Nr. 9

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INTERNATIONAL  
STANDARD

ISO  
10341

First edition  
1997-07-15

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**Ophthalmic instruments — Refractor  
heads**

*Instruments ophtalmiques — Têtes de réfracteurs*

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Reference number  
ISO 10341:1997(E)

## ISO 10341:1997(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 10341 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

Annex A of this International Standard is for information only.

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# Ophthalmic instruments — Refractor heads

## 1 Scope

This International Standard specifies requirements and test methods for refractor heads used for the determination of refractive errors and binocular functions of the human eye.

This International Standard takes priority 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 listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7944:—<sup>1)</sup>, *Optics and optical instruments — Reference wavelengths.*

ISO 8429:1986, *Optics and optical instruments — Ophthalmology — Graduated dial scale.*

ISO 13666:—<sup>2)</sup>, *Ophthalmic optics — Spectacle lenses — Vocabulary.*

ISO 15004:—<sup>2)</sup>, *Ophthalmic instruments — Fundamental requirements and test methods.*

IEC 601-1:1988, *Medical electrical equipment — Part 1: General requirements for safety.*

## 3 Definitions

For the purposes of this International Standard, the definitions given in ISO 13666 and the following apply.

**3.1 refractor head:** Instrument providing means of positioning spherical and cylindrical lenses, prisms and other optical devices in front of a subject's eyes for the purpose of determining refractive error and binocular functions.

**3.2 reference plane:** Plane at which the readings and the power tolerances of the refractor head apply.

**3.3 reference distance:** Distance between the reference plane of the refractor head and the corneal vertex.

1) To be published. (Revision of ISO 7944:1984)

2) To be published.