



SLOVENSKI STANDARD SIST EN ISO 9342:2000

01-januar-2000

Optika in optični instrumenti - Preizkušni leče za kalibracijo fokalnih merilnih
optičnih instrumentov (ISO 9342:1996)

Optics and optical instruments - Test lenses for calibration of focimeters (ISO 9342:1996)

Optik und optische Instrumente - Prüfgläser zur Kalibrierung von Scheitelbrechwert-
Meßgeräten (ISO 9342:1996)

Optique et instruments d'optique - Verres étalons pour l'étalonnage des frontofocometres
(ISO 9342:1996)

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SIST EN ISO 9342:2000

Ta slovenski standard je istoveten z: EN ISO 9342:1998

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ICS:

11.040.70 Oftalmološka oprema Ophthalmic equipment

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9342

July 1998

ICS 11.040.70

Descriptors: see ISO document

English version

Optics and optical instruments - Test lenses for calibration of
focimeters (ISO 9342:1996)

Optique et instruments d'optique - Verres étalons pour
l'étalonnage des frontofocomètres (ISO 9342:1996)

Optik und optische Instrumente - Prüfläser zur
Kalibrierung von Scheitelbrechwert-Meßgeräten (ISO
9342:1996)

This European Standard was approved by CEN on 22 June 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 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 January 1999, and conflicting national standards shall be withdrawn at the latest by January 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 9342:1996 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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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 7944	1984	Optics and optical instruments - Reference wavelengths	EN ISO 7944	1998

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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).

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Identification of the regulation:

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

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[435c7c03c443/sist-en-iso-9342-2000](https://standards.iteh.ai/catalog/standards/sist/1e9a9626-6c83-4817-95b8-435c7c03c443/sist-en-iso-9342-2000)

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

INTERNATIONAL STANDARD

ISO
9342

First edition
1996-08-15

Optics and optical instruments — Test lenses for calibration of focimeters

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*Optique et instruments d'optique — Verres étalons pour l'étalonnage des
frontofocomètres*

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Reference number
ISO 9342:1996(E)

ISO 9342:1996(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 9342 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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Optics and optical instruments — Test lenses for calibration of focimeters

1 Scope

This International Standard specifies requirements for test lenses for the calibration of focimeters.

NOTE 1 It is accepted that other test lenses can also be used with powers within the given range, manufactured to the same standard of accuracy and form, but different back vertex powers. However, only lenses with integer nominal powers, as described in Annex A, can be used for the calibration of digitally-rounding focimeters.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7944:1984, *Optics and optical instruments — Reference wavelengths*.

3 Definitions

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

3.1 spherical test lenses: Lenses used for the calibration of the dioptric power measurements by focimeters, in which the power of each lens is expressed as its back vertex power in dioptres (D).

3.2 prismatic test lenses: Lenses used for the calibration of the prismatic deviation measurements by focimeters, in which the prismatic power of each lens is expressed in centimetres deviation per metre distance (cm/m).

NOTE 2 The special name for the unit for expressing prismatic power is the 'prism dioptre' for which the symbol Δ is used.

3.3 cylindrical test lenses: Lenses with cylindrical faces which are used to calibrate the axis marker and axis indicator with respect to the adjustment orientation of the rail.

NOTE 3 These lenses are usually specially designed and marked.

3.4 reference wavelength: Wavelengths specified in ISO 7944.

NOTES

4 For the purposes of this International Standard, the reference wavelengths are either the green mercury line ($\lambda_e = 546,07$ nm) or the yellow helium line ($\lambda_d = 587,56$ nm).

5 The reference wavelength for which the test lenses are calibrated should be stated.

4 Design requirements and recommendations for test lenses

4.1 General

Test lenses shall be made of homogeneous white crown glass with a refractive index $n_d = 1,523 \pm 0,002$, or $n_e = 1,525 \pm 0,002$ selected to be free of bubbles and striae in an area of 4 mm radius surrounding the centre of the free aperture.