ICS 11.040.70 SLOVENSKÁ TECHNICKÁ NORMA Október 2023

STN	**Optika a optické prístroje Skúšobné šošovky na kalibráciu fokometra Časť 1: Skúšobné šošovky fokometrov na meranie okuliarových šošoviek (ISO 9342-1: 2023)**	**STN EN ISO 9342-1** 19 5014

Optics and optical instruments - Test lenses for calibration of focimeters - Part 1: Reference lenses for focimeters used for measuring spectacle lenses (ISO 9342-1:2023)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/23

Obsahuje: EN ISO 9342-1:2023, ISO 9342-1:2023

Oznámením tejto normy sa ruší
STN EN ISO 9342-1 (19 5014) z októbra 2005

137457

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 9342-1

July 2023

ICS 11.040.70

Supersedes EN ISO 9342-1:2005

English Version

Optics and optical instruments - Test lenses for calibration of focimeters - Part 1: Reference lenses for focimeters used for measuring spectacle lenses (ISO 9342-1:2023)

Optique et instruments d'optique - Verres étalons pour l'étalonnage des frontofocomètres - Partie 1: Verres de référence pour frontofocomètres pour le mesurage des verres de lunettes (ISO 9342-1:2023)

Optik und optische Instrumente - Prüfgläser zur Kalibrierung von Scheitelbrechwert-Messgeräten - Teil 1: Referenzgläser für Scheitelbrechwert-Messgeräte für die Messung von Brillengläsern (ISO 9342-1:2023)

This European Standard was approved by CEN on 7 July 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 9342-1:2023 E

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European foreword

This document (EN ISO 9342-1:2023) has been prepared by Technical Committee ISO/TC 172 "Optics and photonics" 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of an identical text or by endorsement, at the latest by January 2024, and conflicting national standards shall be withdrawn at the latest by January 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9342-1:2005.

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Endorsement notice

The text of ISO 9342-1:2023 has been approved by CEN as EN ISO 9342-1:2023 without any modification.

INTERNATIONAL STANDARD

ISO 9342-1

Second edition
2023-07

Optics and optical instruments — Test lenses for calibration of focimeters —

Part 1: Reference lenses for focimeters used for measuring spectacle lenses

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

Partie 1: Verres de référence pour frontofocomètres pour le mesurage des verres de lunettes

Reference number
ISO 9342-1:2023(E)

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 170, *Ophthalmic optics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9342-1:2005), which has been technically revised.

The main changes are as follows:

— use of the term "reference lens" to denote these high precision test lenses;

— use of the term "verified power" instead of "conventional power";

— the addition of the spherocylindrical-power reference lens and, with some modification to tolerances, reference filters that were added to ISO 8598-1 during its last revision;

— the optional addition of low power spherical reference lenses;

— editorial revision and clarification of Annex A on the design of reference spherical lenses

— the addition of annexes on the design and validation of prismatic reference lenses and the validation of the cylindrical reference lens.

A list of all parts in the ISO 9342 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

INTERNATIONAL STANDARD **ISO 9342-1:2023(E)**

Optics and optical instruments — Test lenses for calibration of focimeters —

Part 1: Reference lenses for focimeters used for measuring spectacle lenses

1 Scope

This document specifies requirements for reference lenses for the calibration and verification of focimeters that are used for the measurement of spectacle form lenses, e.g. those complying with ISO 8598-1. It also gives a method for the determination of the back vertex power of the reference lenses.

NOTE It is accepted that other reference 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 4.1, can be used for the calibration of digitally-rounding focimeters.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7944, *Optics and optical instruments — Reference wavelengths*

ISO 13666, *Ophthalmic optics — Spectacle lenses — Vocabulary*