

ISO/FDIS 7921:2023(E)

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: Left: 1.9 cm, Right: 1.9 cm, Bottom: 1 cm, Gutter: 0 cm, Header distance from edge: 1.27 cm, Footer distance from edge: 0.5 cm

Commented [eXtyles1]: The reference is to a withdrawn standard which has been replaced

ISO 20344, Personal protective equipment — Test methods for footwear

Formatted: Default Paragraph Font

Formatted: Default Paragraph Font

Formatted: French (France)

Formatted: French (France)

Formatted: French (France)

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/FDIS 7921

<https://standards.iteh.ai/catalog/standards/sist/389f01cf-930c-4509-a23c-80b3040dda6e/iso-fdis-7921>

ii

© ISO 2023 — All rights reserved

Formatted: Font: 11 pt

Formatted: Space After: 0 pt, Line spacing: single

ii

© ISO 2023 — All rights reserved

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: Left

Contents

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	4
5 Test methods	6
5.1 Type tests	6
5.2 Conformity	6
6 Accompanying documents	6
7 Marking	7
Annex A (normative) Clinical application of near reading acuity notations	8
Bibliography	9

Foreword —	iv
Introduction —	v
1 — Scope —	1
2 — Normative references —	1
3 — Terms and definitions —	1
4 — Requirements —	3
5 — Test methods —	5
5.1 — Type tests —	5
5.2 — Conformity —	6
6 — Accompanying documents —	6
7 — Marking —	6
Annex A (normative) Clinical application of near reading acuity notations —	8
Bibliography —	9

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

ISO/FDIS 7921

<https://standards.itih.ai/catalog/standards/sist/389f01cf-930c-4509-a231-80b3040dda6e/iso-fdis-7921>

Formatted: Font: 11 pt

Formatted: Space After: 0 pt, Line spacing: single

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Foreword

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

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).

Formatted: English (United Kingdom)

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

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.

Formatted: Font: 11 pt

Formatted: Space After: 0 pt, Line spacing: single

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: Left

Introduction

This document provides the terms, definitions, and requirements for standardized charts for the assessment of near reading acuity. Reading is a complex visual task that involves more than the mere identification or recognition of individual letters, symbols, or other optotypes. The charts used to assess near reading acuity are intended for the practical purpose of demonstrating whether or not a patient can read sentences or paragraphs of text of a particular size. This document is not meant to replace or supplant standards for visual acuity charts for research or for basic clinical assessments, such as visual acuity measurements before and after cataract surgery.

A patient's reading ability can be labelled using terms such as "difficult" or "easy", or "with errors" or "fluent or error-free". Proper assessment of reading ability requires the use of text that is appropriate for the patient, for example, based on the patient's age or educational level. However, the actual determination of a patient's near reading acuity based on these and possibly other factors involves clinical evaluation that is beyond the scope of this document.

This document bases the nominal near reading acuity grade on values given as the logarithm of reading acuity determination (logRAD). LogRAD is similar to the logarithm of minimum angle of resolution (logMAR), used in standard visual acuity testing, in that both are based on the angular size of the test target at a particular viewing distance. However, logRAD specifically depends on the height of lowercase letters, which occur more frequently than uppercase letters, numbers, and symbols in typical text. On the other hand, logMAR is determined by the width of an individual line or the size of a gap. For ease of clinical application, equivalent near reading acuity grades are provided for several common recording notations, including decimal reading acuity, M size, N size, and reduced Snellen fractions.

This document allows for the use of any typeface that is similar in appearance to either of two common typefaces: Times New Roman, a typeface with serifs, which is widely used for printed text; and Helvetica, a sans serif typeface, which is commonly used for both printed charts and electronic displays, such as computer monitors, laptops, and smartphones.

This document applies to the Latin alphabet. It can also apply to similar alphabets, such as Greek and Cyrillic, that can be expressed with typefaces similar to Times New Roman or Helvetica. For other writing systems, such as Arabic, Chinese, Hebrew, Japanese, and Korean, this document can be used as a reference, especially for researchers who wish to demonstrate equivalence of near reading charts using those writing systems with charts using the Latin alphabet.

Formatted: Font: 11 pt

Formatted: Space After: 0 pt, Line spacing: single

