BS EN ISO 8253-3:2022

BSI Standards Publication

Acoustics — Audiometric test methods

Part 3: Speech audiometry

bsi.

National foreword

This British Standard is the UK implementation of EN ISO 8253-3:2022. It is identical to ISO 8253-3:2022. It supersedes BS EN ISO 8253-3:2012, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EH/1/1, Hearing.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Acoustics - Audiometric test methods - Part 3: Speech audiometry (ISO 8253-3:2022)

Acoustique - Méthodes d'essais audiométriques - Partie 3: Audiométrie vocale (ISO 8253-3:2022)

Akustik - Audiometrische Prüfverfahren - Teil 3: Sprachaudiometrie (ISO 8253-3:2022)

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Contents

Page

European foreword

This document (EN ISO 8253-3:2022) has been prepared by Technical Committee ISO/TC 43 "Acoustics" in collaboration with Technical Committee CEN/TC 211 “Acoustics” 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of an identical text or by endorsement, at the latest by August 2022, and conflicting national standards shall be withdrawn at the latest by August 2022.

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 8253-3:2012.

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BS EN ISO 8253-3:2022

INTERNATIONAL STANDARD

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Third edition
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Acoustics — Audiometric test methods —

Part 3: Speech audiometry

Acoustique — Méthodes d'essais audiométriques —

Partie 3: Audiométrie vocale

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Contents

Page

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 documents 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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For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 211, *Acoustics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 8253-3:2012), which has been technically revised. The main changes compared to the previous edition are as follows:

— The technical requirements for recording of speech material were adapted to recent equipment and technology.

— The determination of reference speech recognition curves was revised. An annex that gives advices on how to determine the minimum number of subjects was introduced.

— The determination of speech recognition threshold levels is described in a more general manner.

— Symbols for the graphical representation of speech audiometry results were introduced.

A list of all the parts in the ISO 8253 series can be found on the ISO website.

Introduction

Speech audiometry is used for the assessment of hearing in connection with diagnostic evaluation and audiological rehabilitation.

The results of speech audiometry depend on the speech material and test method used. This document sets conditions for speech materials in order to ensure minimum requirements of precision and comparability between different tests using different speech materials including materials in different languages. It also specifies procedures to be used when testing speech recognition.

INTERNATIONAL STANDARD **ISO 8253-3:2022(E)**

Acoustics — Audiometric test methods —

Part 3: Speech audiometry

1 Scope

This document specifies basic methods for speech recognition tests for audiological applications.

NOTE Examples of speech materials are given in Annex A.

In order to ensure minimum requirements of precision and comparability between different test procedures including speech recognition tests in different languages, this document specifies requirements for the composition, validation and evaluation of speech test materials, and the realization of speech recognition tests. This document does not specify the contents of the speech material because of the variety of languages.

Furthermore, this document also specifies the determination of reference values and requirements for the realization and manner of presentation. In addition, there are features of speech tests described which are important to be specified, but which are not understood as a requirement.

This document specifies procedures and requirements for speech audiometry with the recorded test material being presented by an audiometer through a transducer, e.g., an earphone, bone vibrator, or loudspeaker arrangement for sound field audiometry. Methods for using noise either for masking the non-test ear or as a competing sound are described.

Some test subjects, for example children, can require modified test procedures not specified in this document.

Specialized tests, such as those used for evaluating directional hearing and dichotic hearing, are outside the scope of this document.

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 8253-1, *Acoustics — Audiometric test methods — Part 1: Pure-tone air and bone conduction audiometry*

ISO 8253-2, *Acoustics — Audiometric test methods — Part 2: Sound field audiometry with pure-tone and narrow-band test signals*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

IEC 60645-1:2017, *Electroacoustics — Audiometric equipment — Part 1: Equipment for pure-tone and speech audiometry*

IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*