

**Akustika - Audiomeetrilised katsemeetodid - Osa 2:
Heliväljaaudiomeetria puhastooni ja kitsaribaliste
kontrollsignaalidega**

Acoustics - Audiometric test methods - Part 2: Sound field
audiometry with pure tone and narrow-band test signals

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 8253-2:2010 sisaldab Euroopa standardi EN ISO 8253-2:2009 ingliskeelset teksti.

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English Version

**Acoustics - Audiometric test methods - Part 2: Sound field
audiometry with pure-tone and narrow-band test signals (ISO
8253-2:2009)**

Acoustique - Méthodes d'essais audiométriques - Partie 2:
Audiométrie en champ acoustique avec des sons purs et
des bruits à bande étroite comme signaux d'essai (ISO
8253-2:2009)

Akustik - Audiometrische Prüfverfahren - Teil 2: Schallfeld-
Audiometrie mit reinen Tönen und schmalbandigen
Prüfsignalen (ISO 8253-2:2009)

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Foreword

This document (EN ISO 8253-2:2009) has been prepared by Technical Committee ISO/TC 43 "Acoustics" in collaboration with the Technical Committee CEN/TC 211 "Acoustics" the secretariat of which is held by DS.

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of an identical text or by endorsement, at the latest by June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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

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Endorsement notice

The text of ISO 8253-2:2009 has been approved by CEN as a EN ISO 8253-2:2009 without any modification.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Test signal characteristics	3
4.1 General	3
4.2 Pure tones	3
4.3 FM tones	4
4.4 Narrow bands of noise	4
4.5 Harmonic distortion	4
4.6 Signal gating	5
4.7 Signal level control	5
4.8 Means and scales for calibration	5
5 Sound field characteristics	6
5.1 General	6
5.2 Free sound field	6
5.3 Diffuse sound field	6
5.4 Quasi-free sound field	7
6 Ambient noise levels in the test room	7
7 Preparation and instruction of test subject	7
8 Determination of hearing threshold level	8
8.1 General	8
8.2 Monaural testing	8
8.3 Binaural testing	8
9 Testing with a hearing aid	8
10 Screening audiometry	8
11 Reporting of data	10
11.1 General	10
11.2 Equipment calibrated by hearing level	10
11.3 Equipment calibrated by sound pressure level	10
12 Maintenance and calibration of equipment	10
12.1 General	10
12.2 Intervals between tests	10
12.3 Stage A: routine examination and listening tests	11
12.4 Stage B: periodic electroacoustic tests	11
12.5 Stage C: basic calibration tests	12
Annex A (informative) Graphical display of results	13
Annex B (informative) Correction values for 45° and 90° angles of incidence	15
Bibliography	16

Introduction

ISO 8253-1 covers procedures for the determination of thresholds of hearing using pure tones presented to the subject by means of earphone or bone vibrator.

This part of ISO 8253 covers procedures for the determination of thresholds of hearing in a sound field. In general, sound field testing implies binaural listening to a test signal, presented by means of one or more loudspeakers in a test room. The test signal may be a pure tone, a frequency-modulated tone or a narrow band of noise. The acoustical characteristics of the sound field are determined by the choice of test signal, by the number and acoustical properties of the loudspeakers used, as well as by the acoustical characteristics of the test room.

Sound field audiometry may be used for various purposes, e.g. the evaluation of hearing acuity in young children and the determination of the functional gain of a hearing aid when worn by a particular listener.

Acoustics — Audiometric test methods —

Part 2:

Sound field audiometry with pure-tone and narrow-band test signals

1 Scope

This part of ISO 8253 specifies relevant test signal characteristics, requirements for free, diffuse, and quasi-free sound fields, and procedures for sound field audiometry using pure tones, frequency-modulated tones or other narrow-band test signals presented by means of one or more loudspeakers. The primary purpose is the determination of hearing threshold levels in the frequency range 125 Hz to 8 000 Hz, but this range can be extended to 20 Hz to 16 000 Hz.

This part of ISO 8253 does not include specifications for the use of hand-held loudspeakers. Speech as a test signal is not covered.

The purpose of this part of ISO 8253 is to ensure that tests of hearing, using sound field audiometry, give as high a degree of accuracy and reproducibility as possible.

Examples of graphical representations of the results are given in Annex A.

2 Normative references

The following referenced documents are indispensable for the application 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 226, *Acoustics — Normal equal-loudness-level contours*

ISO 266, *Acoustics — Preferred frequencies*

ISO 389-7, *Acoustics — Reference zero for the calibration of audiometric equipment — Part 7: Reference threshold of hearing under free-field and diffuse-field listening conditions*

ISO 8253-1:—¹⁾, *Acoustics — Audiometric test methods — Part 1: Basic pure-tone air and bone conduction threshold audiometry*

IEC 60581-7:1986, *High fidelity audio equipment and systems — Minimum performance requirements — Part 7: Loudspeakers*

IEC 60645-1, *Electroacoustics — Audiometric equipment — Part 1: Pure-tone audiometers*

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

1) To be published. (Revision of ISO 8253-1:1989)