

Hearing protectors - Testing - Part 3: Supplementary
acoustic test methods

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Hearing protectors - Testing - Part 3: Supplementary acoustic test methods

Protecteurs individuels contre le bruit - Essais - Partie
3 : Méthodes d'essais acoustiques supplémentaires

Gehörschützer - Prüfung - Teil 3: Zusätzliche
akustische Prüfverfahren

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European foreword

This document (EN 13819-3:2019) has been prepared by Technical Committee CEN/TC 159 “Hearing protectors”, 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of an identical text or by endorsement, at the latest by May 2020, and conflicting national standards shall be withdrawn at the latest by May 2020.

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.

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Introduction

This standard is part of a set of standards for personal hearing protectors.

The EN 13819 series consists of three parts and deals with testing plans of hearing protectors.

- EN 13819-1, *Hearing protectors — Testing — Part 1: Physical test methods*
- EN 13819-2, *Hearing protectors — Testing — Part 2: Acoustic test methods*
- EN 13819-3, *Hearing protectors — Testing — Part 3: Supplementary acoustic test methods*

The product requirements are described in a family of standards:

- EN 352-1, *Hearing protectors — General requirements — Part 1: Earmuffs*
- EN 352-2, *Hearing protectors — General requirements — Part 2: Earplugs*
- EN 352-3, *Hearing protectors — General requirements — Part 3: Earmuffs attached to head protection and/or face protection devices*
- EN 352-4, *Hearing protectors — Safety requirements — Part 4: Level-dependent earmuffs*
- EN 352-5, *Hearing protectors — Safety requirements — Part 5: Active noise reduction earmuffs*
- EN 352-6, *Hearing protectors — Safety requirements — Part 6: Earmuffs with safety-related audio input*
- EN 352-7, *Hearing protectors — Safety requirements — Part 7: Level-dependent earplugs*
- EN 352-8, *Hearing protectors — Safety requirements — Part 8: Entertainment audio earmuffs*
- EN 352-9, *Hearing protectors — Safety requirements — Part 9: Earplugs with safety-related audio input*
- EN 352-10, *Hearing protectors — Safety requirements — Part 10: Entertainment audio earplugs*

This standard also provides informative spreadsheets with

- calculation examples for level-dependent earplugs
- calculation examples for ANR

to allow the user to make own calculations.

CEN is not responsible for errors that may arise or occur with the use of these spreadsheets.

An associated standard, EN 458, covers selection, use, care and maintenance of hearing protectors.

1 Scope

This document specifies supplementary acoustic test methods for hearing protectors with additional electronic functions. The purpose of these tests is to enable assessment of the hearing protector performance as specified in the appropriate product standards.

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.

EN 352-2:2002, *Hearing protectors — General requirements — Part 2: Earplugs*

EN 352-8:-¹, *Hearing protectors — Safety requirements — Part 8: Entertainment audio earmuffs*

EN 352-10:-², *Hearing protectors — Safety requirements — Part 10: Entertainment audio earplugs*

EN 60318-4:2010, *Electroacoustics - Simulators of human head and ear - Part 4: Occluded-ear simulator for the measurement of earphones coupled to the ear by means of ear inserts (IEC 60318-4:2018)*

EN ISO 4869-1:2018, *Acoustics — Hearing protectors — Part 1: Subjective method for the measurement of sound attenuation (ISO 4869-1:2018)*

EN ISO 4869-2:2018, *Acoustics — Hearing protectors — Part 2: Estimation of effective A-weighted sound pressure levels when hearing protectors are worn (ISO 4869-2:2018)*

EN ISO 11904-1:2002, *Acoustics - Determination of sound immission from sound sources placed close to the ear - Part 1: Technique using a microphone in a real ear (MIRE technique) (ISO 11904-1:2002)*

EN ISO 11904-2:2004, *Acoustics - Determination of sound immission from sound sources placed close to the ear - Part 2: Technique using a manikin (ISO 11904-2:2004)*

IEC 60268-1:1985, *Sound system equipment - Part 1: General*

ITU-T P.50:1999, *SERIES P: TELEPHONE TRANSMISSION QUALITY, TELEPHONE INSTALLATIONS, LOCAL LINE NETWORKS, Objective measuring apparatus, Artificial voices. Appendix I: Test signals*

¹ Under preparation: Stage at time of publication: FprEN 352-8:2018.

² Under preparation: Stage at time of publication: FprEN 352-10:2018.