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

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. 07/24

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**EN 13819-3:2019+A1**

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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

This European Standard was approved by CEN on 13 December 2018 and includes Amendment 1 approved by CEN on 10 April 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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**EN 13819-3:2019+A1:2024 (E)****European foreword**

This document (EN 13819-3:2019+A1:2024) 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of an identical text or by endorsement, at the latest by October 2024, and conflicting national standards shall be withdrawn at the latest by October 2024.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 includes Amendment 1 approved by CEN on 10 April 2023.

This document supersedes A1 EN 13819-3:2019 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## 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.

**EN 13819-3:2019+A1:2024 (E)****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 352-2:2020, *Hearing protectors — General requirements — Part 2: Earplugs*

EN 352-8:2020+A1:2024, *Hearing protectors — Safety requirements — Part 8: Entertainment audio earmuffs*

EN 352-10:2020+A1:2024, *Hearing protectors — Safety requirements — Part 10: Entertainment audio earplugs* <sup>A1</sup>

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 60318-4:2010)*

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 11904-2:2021, *Acoustics — Determination of sound immission from sound sources placed close to the ear — Part 2: Technique using a manikin (ISO 11904-2:2021)* <sup>A1</sup>

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*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**