

**Akustika. Kuulmiskaitsevahendid. Osa 4:
Heli taastavate kõrvaklappide erinevate
müratasandite mürasurve mõõtmine**

Acoustics - Hearing protectors - Part 4:
Measurement of effective sound pressure levels for
level-dependent sound-restoration ear-muffs

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 4869-4:2000 sisaldab Euroopa standardi EN ISO 4869-4:2000 ingliskeelset teksti.

Käesolev dokument on jõustatud 13.10.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 4869-4:2000 consists of the English text of the European standard EN ISO 4869-4:2000.

This document is endorsed on 13.10.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

This standard specifies physical test method for level-dependent sound-restoration ear-muffs.

Scope:

This standard specifies physical test method for level-dependent sound-restoration ear-muffs.

ICS 13.340.20

Võtmesõnad:

English version

Acoustics

Hearing protectors

Part 4: Measurement of effective sound pressure levels for level-
dependent sound-restoration ear-muffs
(ISO/TR 4869-4 : 1998)

Acoustique – Protecteurs individuels
contre le bruit – Partie 4: Mesurage
des niveaux effectifs de pression
acoustique des serre-têtes destinés à
la restitution du son
(ISO/TR 4869-4 : 1998)

Akustik – Gehörschützer – Teil 4:
Messung der wirksamen Schalldruck-
pegel von Kapselgehörschützern mit
pegelabhängiger elektroakustischer
Übertragungseinrichtung
(ISO/TR 4869-4 : 1998)

This European Standard was approved by CEN on 2000-04-10.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

ISO Technical Report

ISO/TR 4869-4 : 1998 Acoustics - Hearing protectors - Part 4: Measurement of effective sound pressure levels for level-dependent sound-restoration ear-muffs,

which was prepared by ISO/TC 43 'Acoustics' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 211 'Acoustics', the Secretariat of which is held by DS, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by November 2000 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the ISO Technical Report ISO/TR 4869-4 : 1998 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

Introduction

Measurement of sound attenuation according to ISO 4869-1 is intended for conventional, passive hearing protectors where the attenuation is independent of the level of the noise outside the hearing protector. Hearing protectors with level-dependent operation are also available. Such operation is usually obtained by means of electro-acoustic components. The level-dependent characteristics of such protectors cannot be determined using the procedures of ISO 4869-1. The present technical report provides a physical method for the determination of the characteristics of level-dependent sound restoration ear-muffs. The passive sound attenuation characteristics of sound restoration ear-muffs should be measured in accordance with ISO 4869-1.

1 Scope

This Technical Report specifies a physical test method for level-dependent sound-restoration ear-muffs. The physical measurements are made with the acoustic test fixture (ATF) according to ISO/TR 4869-3 or with a suitable head and torso simulator (HATS) with a suitable acoustic isolation (see clause 7). The results of these tests in combination with the results from the ISO 4869-1 tests can be used to estimate the effective A-weighted sound pressure level when sound restoration ear-muffs are worn.

The method described is not suitable for measurement of the effective sound pressure level under ear-muffs in the case of impulsive noise nor for active noise reduction ear-muffs.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 4869. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 4869 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4869-1:1990, *Acoustics — Hearing protectors — Part 1: Subjective method for the measurement of sound attenuation.*

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

ISO/TR 4869-3:1989, *Acoustics — Hearing protectors — Part 3: Simplified method for the measurement of insertion loss of ear-muff type protectors for quality inspection purposes.*

IEC 60651, *Sound level meters.*

IEC 61094-4, *Measurement microphones — Part 4: Specifications for working standard microphones.*

IEC 61260, *Electroacoustics — Octave-band and fractional-octave-band filters.*