
AMERICAN NATIONAL STANDARD

**Methods for Measuring the Real-Ear Attenuation of
Hearing Protectors**

ANSI/ASA S12.6-2016

Accredited Standards Committee S12, Noise

Standards Secretariat
Acoustical Society of America
1305 Walt Whitman Road, Suite 300
Melville, NY 11747

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Secretariat:
Acoustical Society of America

Approved on June 16, 2016 by:
American National Standards Institute, Inc.

Abstract

This standard specifies laboratory-based procedures for measuring, analyzing, and reporting the passive noise-reducing capabilities of hearing protectors. The procedures consist of psychophysical tests conducted on human subjects to determine the real-ear attenuation measured at hearing threshold. Two fitting procedures are provided: Method A) trained-subject fit, intended to describe the capabilities of the devices fitted by carefully trained users, and Method B) inexperienced-subject fit, utilizes subjects with little or no experience with respect to the use of hearing protection, in order to approximate the attenuation that can be attained by groups of users as reported in real-world occupational studies. Regardless of test method, the attenuation data will be valid only to the extent that the users wear the devices in the same manner as during the tests. This standard does not address issues pertaining to computational schemes or rating systems for applying hearing protector attenuation values (see ANSI/ASA S12.68), nor does it specify minimum performance values for hearing protectors, or address comfort or wearability features. Method A of this standard corresponds to ISO 4869-1:1990, *Acoustics – Hearing protectors – Part 1: Subjective method for the measurement of sound attenuation*, and Method B corresponds to ISO/TS 4869-5:2006, *Acoustics – Hearing protectors – Part 5: Method for estimation of noise reduction using fitting by inexperienced test subjects*.

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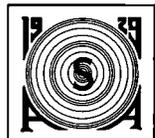
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Acoustical Society of America
ASA Secretariat
1305 Walt Whitman Road, Suite 300
Melville, New York 11747-4300
Telephone: 1 (631) 390-0215
Fax: 1 (631) 923-2875
E-mail: asastds@acousticalsociety.org

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Contents

1	Scope	1
1.1	Scope.....	1
1.2	Applications	1
2	Normative references	2
3	Terms and definitions	3
4	Physical requirements of the test facility	4
4.1	Test signals.....	4
4.2	Test site	4
4.3	Test apparatus.....	5
4.4	Head position reference device	7
4.5	Observation of subjects during testing	7
5	Test subjects	7
5.1	Anatomical features	7
5.2	Otoscopic inspection	8
5.3	Measurement of earcanal size and head dimensions	8
5.4	Gender balance	8
5.5	Hearing sensitivity	8
5.6	Threshold variability (during qualification)	8
5.7	Eyeglasses and jewelry	9
5.8	Number and method of selection of subjects	9
6	Product samples.....	9
6.1	Minimum number of samples	9
6.2	Earplugs connected via a flexible retaining cord	9
6.3	Devices with variable band force adjustments	10
6.4	Special requirements for inexperienced-subject-fit method	10
7	Psychophysical procedure	10
7.1	Informing the subject	10
7.2	Positioning the subject.....	10
7.3	Number of open and occluded threshold measurements	10
7.4	Threshold measurement method - Békésy tracking procedure	11
7.5	Threshold sensitivity at time of testing	11
7.6	Open threshold variability within a test session.....	11
7.7	Quiet period prior to first threshold measurement	11
7.8	Waiting period subsequent to fitting hearing protector	11
8	Method A: Trained-subject fit	12
8.1	Training in fitting hearing protectors	12
8.2	Conditions for subject dismissal	12
8.3	Test procedures.....	12
9	Method B: Inexperienced-subject fit.....	13
9.1	Conditions for subject acceptance/dismissal.....	13
9.2	Test preparation.....	14
9.3	Test procedure.....	16