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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 7584.3-2011

**Acoustics -- Hearing protectors -- Part 3: Measurement of
insertion loss of ear-muff type protectors using an acoustic test
fixture**

声学 护听器 第3部分：使用专用声学测试装置 测量耳罩式护听器的插入损失

(English Translation)

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Foreword

GB/T 7584 "Hearing protectors" is divided into six sections.

- Part 1. subjective method for the measurement of sound attenuation;
- Part 2. when hearing protectors are worn effective A-weighted sound pressure level estimate;
- Part 3. Use a dedicated acoustic test apparatus for measuring the insertion loss of ear-muff type hearing protectors;
- Part 4. Sound pressure associated with sound and effective restoration ear SPL measurements;
- Part 5. Evaluation of noise attenuation method by inexperienced subjects to wear;
- Part 6. Methods of measurement hearing protectors active noise attenuation.

This section GB/T 37584 Part of.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This part identical with ISO 4869-3:2007 "Hearing protectors - Part 3. Test using a dedicated device for measuring acoustic earmuffs formula Hearing protectors insertion loss "(in English). This section is equivalent to using international standards made editorial changes.

This section proposed by the Chinese Academy of Sciences.

The acoustics in part by the National Standardization Technical Committee (SAC/TC17) centralized.

This section drafted by. Institute of Acoustics, Chinese Institute of Electronics Technology Group Corporation, People's Liberation Army General Hospital Archiver Throat Institute.

Introduction

In 1989, a description of how to use a dedicated test device for measuring acoustic earmuff type hearing protectors insertion loss of the technical report as ISO/T R4869-3 published. With worldwide laboratories dedicated acoustic test widely used means of this technical report is a revised and as the international standard ISO 34869 Part of. This International Standard Section 3 is adopted as our national standards equivalent to GB/T 7584 of Part 3.

With the original technical report different is the most important part is the content of this special acoustic test device specifications. Here special sound Means-test is not intended to replace analog head. Simulation head also includes a simulation of various anatomical features, and can be used to develop testing.

Results GB/T 7584 this part of the method provides results with GB/T 7584.1 in subjective measurement methods vary.

Hearing protectors - Part 3. Dedicated Acoustic Insertion loss testing device for measuring the-ear hearing protectors

1 Scope

This section provides a dedicated test device for measuring acoustic earmuff type hearing protectors insertion losses.

The method specified in this test method is not as the basic product type identification testing. This method of obtaining the-ear hearing protectors performance data it is not intended to protect characterization real ear sound attenuation earmuff or earmuffs offer.

This section applies to product type identification of inspection or certification procedures in product performance consistency of investigations, also applies to the performance of aging survey. When according to GB/T 7584.1 conduct sound attenuation hearing protectors subjective test, this method can guarantee around-ear hearing protectors submitted sample with a typical performance of this type of product.

For some ear (for example, earmuffs attached safety helmet, with profile-style cup earmuffs, or ear pads with ear-ear style Cover) test method described in this section may need to be amended.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3241 electro-acoustics octave and fractional octave filters (GB/T 3241-2010, IEC 61260:1995, MOD) GB/T 3769 electro-acoustics plotting frequency characteristics and

polar diagrams of scale and size (GB/T 3769-2010, IEC 60263.

1982, IDT)

GB/T 6031-1998 Determination of vulcanized rubber or thermoplastic rubber hardness (10 ~ 100IRHD) (idt ISO 48:1994) Subjective method of measurement of sound attenuation (GB/T 7584.1-2004, ISO 4869-. GB/T 7584.1 Hearing protectors - Part 1 1.1990, IDT) GB/T 7584.2 Hearing protectors - Part 2. when hearing protectors are worn effective A-weighted sound pressure level estimate (GB/T 7584.2-1999, idt ISO 4869-2:1994) GB/T 20441.4-2006 Measurement microphones - Part 4. Specifications for working standard microphones (IEC 61094-4:1995, IDT) JJF1059-1999 Evaluation and Expression of Uncertainty in Measurement

3 Terms and Definitions

The following terms and definitions apply to this document.

Hearing protectors hearing protector in order to reduce unwanted sound stimulation auditory effects and wear personal equipment.

Ear ear-muff

The pressure on each ear of the ear cup ear, or by the pressure in the ear and around the ear surrounded silhouette style ear cup consisting of hearing protectors.

Note: The ear cups are available special headband or neck rings worn on the head, or member attached to the safety helmet.