

---

---

**Acoustics — Hearing protectors —**  
**Part 6:**  
**Determination of sound attenuation of**  
**active noise reduction earmuffs**

*Acoustique — Protecteurs individuels contre le bruit —*

*Partie 6: Détermination de l'affaiblissement acoustique des serre-tête  
à réduction active du bruit*

(<https://standards.iteh.ai>)  
Document Preview

[ISO 4869-6:2019](https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019)

<https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019>



iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

[ISO 4869-6:2019](https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019)

<https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword .....	iv
Introduction .....	v
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Symbols and abbreviated terms</b> .....	<b>2</b>
<b>5 Testing</b> .....	<b>3</b>
5.1 Specimens and conditioning .....	3
5.2 Test conditions .....	3
5.3 Test signals .....	3
5.3.1 Broadband noise for measuring active insertion loss .....	3
5.3.2 Red noise for testing linear operation .....	3
5.4 Test method .....	4
5.4.1 General .....	4
5.4.2 Oscillation and acoustic malfunction .....	4
5.4.3 Active insertion loss .....	4
5.4.4 Maximum sound pressure level for linear operation .....	4
5.5 Calculation of the total attenuation .....	5
5.6 Test report .....	5
<b>Annex A (normative) Uncertainty of the mean active insertion loss of ANR earmuffs</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>11</b>

## Document Preview

[ISO 4869-6:2019](#)

<https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

A list of all the parts in the ISO 4869 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Active noise reduction earmuffs are designed to provide additional attenuation of external sounds by means of a noise cancellation circuit. This additional attenuation is generally more effective at low frequencies. Such earmuffs can be selected for use in low-frequency dominated high noise environments.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[ISO 4869-6:2019](https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019)

<https://standards.iteh.ai/catalog/standards/iso/4cdc0344-6dea-4c92-ac02-5812a5c46bdf/iso-4869-6-2019>

