INTERNATIONAL STANDARD

ISO 17497-1

> First edition 2004-05-01 **AMENDMENT 1** 2014-12-15

Acoustics — Sound-scattering properties of surfaces —

Part 1:

Measurement of the randomincidence scattering coefficient in a reverberation room

AMENDMENT 1

Acoustique — Propriétés de dispersion du son par les surfaces — Partie 1: Mesurage du coefficient de dispersion sous incidence

aléatoire en salle réverbérante

AMENDEMENT 1



Reference number ISO 17497-1:2004/Amd.1:2014(E)



COPYRIGHT PROTECTED DOCUMENT

All rights reserved. Unless otherwise specified, 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 Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org

Published in Switzerland

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).

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).

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

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 43, *Acoustics*, Subcommittee SC 2, *Building acoustics*.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS

Acoustics — Sound-scattering properties of surfaces —

Part 1:

Measurement of the random-incidence scattering coefficient in a reverberation room

AMENDMENT 1

Page 1, Normative references

Add the following reference following ISO 9613-1:

ISO 18233, Acoustics — Application of new measurement methods in building and room acoustics

Page 6, 6.3.3

Replace the first paragraph with the following:

The surface of the perimeter of the test sample should be covered with a smooth and rigid border the height of which is at least the structural depth h and at most d/16, where d is the diameter of the turntable.

Page 6, 6.3.4

Replace the subclause with the following:

If sound absorption is part of the sound-scattering structure, this absorption shall be present in the test sample.

The random-incidence absorption coefficient of the test sample should not exceed a value of $\alpha_S = 0.50$.

NOTE The measurement method will not produce reliable results for samples with a high absorption coefficient, see Annex A.

Page 6, 7.1

Replace the second paragraph with the following:

It is recommended to use periodic signals such as sweeps or MLS in order to obtain the impulse response. For other requirements concerning the test signal (e.g. sine sweep, period length, spectral energy density, filtering), proceed as required in ISO 18233.

Page 7, 7.3

Replace the second paragraph with the following:

For each combination of source and receiver positions, a multiple of a periodic pseudo-random signal is continuously radiated and received while the turntable is rotating. The total measurement duration should be equal to the time of one revolution of the turntable. The number of periods of a periodic pseudo-random signal n should be in the interval of $60 \le n \le 120$. For example, with a period of 5 s and a revolution speed of 360 s per revolution, it is necessary to continuously radiate 72 signal periods.

Page 11, Annex A

Replace all occurrences of "δ" by "u".

ISO 17497-1:2004/Amd.1:2014(E)

Replace in the first sentence "the standard deviation" with "the standard uncertainty".

Replace in the second sentence "uncertainties" with "combined uncertainties".

Replace the third sentence "Finally, the standard deviation in the scattering coefficient is" with "Finally, the combined standard uncertainty in the scattering coefficient of Formula (5) is".

Replace the fourth sentence by "Expanded uncertainty in the scattering coefficient with the 95 % confidence level may be estimated as two times its combined standard uncertainty."

