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Interested committees:

Title: Draft BS EN 60645-5 Ed.2.0 BS EN 60645-5 Electroacoustics - Audiometric equipment. Part 5: Instruments for the measurement of aural acoustic impedance/admittance.

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## Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

## UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

## Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
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## Template for comments and secretariat observations

|                  |                        |
|------------------|------------------------|
| Date: xx/xx/20xx | Document: ISO/DIS xxxx |
|------------------|------------------------|

| 1  | 2                                          | (3)                          | 4               | 5                                                                                                                                  | (6)                                                                      | 7                                                  |
|----|--------------------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| MB | Clause No./ Subclause No./Annex (e.g. 3.1) | Paragraph/ Figure/Table/Note | Type of comment | Comment (justification for change) by the MB                                                                                       | Proposed change by the MB                                                | Secretariat observations on each comment submitted |
|    | 3.1                                        | Definition 1                 | ed              | Definition is ambiguous and needs clarifying.                                                                                      | Amend to read '...so that the mains connector to which no connection...' |                                                    |
|    | 6.4                                        | Paragraph 2                  | te              | The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK. | Delete reference to UV photometer.                                       |                                                    |

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**2025-03-14**

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**2025-06-06**

SUPERSEDES DOCUMENTS:

**29/1145/RR**

IEC TC 29 : ELECTROACOUSTICS

SECRETARIAT:

Denmark

SECRETARY:

Ms Lise Agesen

OF INTEREST TO THE FOLLOWING COMMITTEES:

HORIZONTAL FUNCTION(S):

ASPECTS CONCERNED:

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Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

**Electroacoustics - Audiometric equipment - Part 5: Instruments for the measurement of aural acoustic impedance/admittance**

NOTE FROM TC/SC OFFICERS:

At its meeting, April 2024 in Warsaw, IEC/TC 29 took the following Decision, doc. 29/1173/DL refers:

DECISION 6

TC 29 decides to proceed with the Document for Comments (doc. 29/1146/DC) for the revision of IEC 60645-5:2004 "Electroacoustics – Audiometric equipment – Part 5: Instruments for the measurement of aural acoustic impedance/admittance", as a 1CD for a twelve-week commenting period with the following target dates:

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ELECTROACOUSTICS – AUDIOMETRIC EQUIPMENT

Part 5: Instruments for the measurement of aural acoustic  
impedance/admittance

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IEC 60645-5 has been prepared by of IEC technical committee 29: Electroacoustics. It is an International Standard.

This second edition cancels and replaces the first edition published in 2004. This edition constitutes a technical revision.

This edition includes the following significant technical change with respect to the previous edition:

- a) updated to comply with the current state of the art within instruments for the measure of aural acoustic impedance/admittance.

171 The text of this International Standard is based on the following documents:

| Draft      | Report on voting |
|------------|------------------|
| XX/XX/FDIS | XX/XX/RVD        |

172

173 Full information on the voting for its approval can be found in the report on voting indicated in  
174 the above table.

175 The language used for the development of this International Standard is English.

176 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in  
177 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available  
178 at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are  
179 described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

180 The committee has decided that the contents of this document will remain unchanged until the  
181 stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the  
182 specific document. At this date, the document will be

- 183 • reconfirmed,
- 184 • withdrawn,
- 185 • replaced by a revised edition, or
- 186 • amended.

187

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190

## INTRODUCTION

191 Developments in the field of diagnostic hearing measurement have resulted in a number of  
192 instruments designed to evaluate the acoustic impedance/admittance of the human ear by  
193 means of acoustic probe signals having different frequencies and temporal characteristics. The  
194 practical use of such instruments concerns to a large extent the measurement of changes in  
195 acoustic impedance/admittance caused either by varying the air pressure in the external  
196 auditory meatus or by activating the middle ear muscle reflex.

197 Conformance to the performance specification in this document is demonstrated when a  
198 measured deviation from a design goal equals or does not exceed the corresponding  
199 acceptance limit(s), and the laboratory has demonstrated that the associated uncertainty of  
200 measurement equals or does not exceed the maximum permitted uncertainty specified in this  
201 document.  
202

## ELECTROACOUSTICS – AUDIOMETRIC EQUIPMENT

### Part 5: Instruments for the measurement of aural acoustic impedance/admittance

#### 1 Scope

This part of IEC 60645 applies to instruments designed primarily for the measurement of acoustic impedance/admittance in the human external auditory meatus using a stated probe tone. It is recognized that other probe signals may also be used. The standard defines the characteristics to be specified by the manufacturer, lays down performance specifications for three types of instruments and specifies the facilities to be provided on these types. This standard describes methods of test to be used for approval testing and guidance on methods for undertaking routine calibration.

The purpose of this standard is to ensure that measurements made under comparable test conditions with different instruments complying with the standard will be consistent. The standard is not intended to restrict development or incorporation of new features, nor to discourage innovative approaches.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60318-5, *Electroacoustics – Simulators of human head and ear - Part 5: 2 cm<sup>3</sup> coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts*

IEC 60601-1, *Medical electrical equipment – Part 1: General requirements for basic safety and essential performance*

IEC 60645-1:2017, *Electroacoustics – Audiometric equipment – Part 1: Equipment for pure tone and speech audiometry*

ISO/IEC Guide 98-3, *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO 389-1, *Acoustics – Reference zero for the calibration of audiometric equipment – Part 1: Reference equivalent threshold sound pressure levels for pure tones and supra-aural earphones*

ISO 389-2, *Acoustics – Reference zero for the calibration of audiometric equipment – Part 2: Reference equivalent threshold sound pressure levels for pure tones and insert earphones*

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses: