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

GB/T 16296.3-2017

Replacing GB/T 17696-1999

**Acoustics -- Audiometric test methods -- Part 3: Speech
audiometry**

声学 测听方法 第3部分：言语测听

(English Translation)

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Foreword

GB/T 16296 "Acoustic audiometry method" includes the following sections.

- Part 1. Pure tone guided and guided bone conduction;
- Part 2. Sound field audiometry using pure tone and narrowband test signals;
- Part 3. Speech audiometry.

This section GB/T 16296 Part 3.

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

This Part replaces GB/T 17696-1999 "Acoustics listening method Part 3. Language audiometry." Compared with GB/T 17696-1999, the main technical changes are as follows.

- Removed reference standard GB/T 15508-1996 (see 1999 edition);
- Increased normative references IEC 61672-1, ISO/IEC Guide 98-3 (see Chapter 2);
- Removed the following terms. air conduction, bone conduction, otology normal, free field, quasi-free field, diffusion [sound] field, reference point, masking 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.22 of the 1999 edition);
- Added the following terms. Speech materials, closed test materials, phonemes,

phonemic clusters, syllables, perceptual balance test tables, speech materials Master standard recording, equivalent continuous sound pressure level, competitive sound (see 3.3,3.5,3.6,3.7,3.8,3.14,3.16,3.18,3.29);

- Added general requirements for the recording of speech materials (see 4.1);
- Increasing the standard recording requirements of the master (see 4.2);
- Increased phoneme balance and perceptual balance between test tables (see 4.8 and 4.9);
- Increasing the approval of the recorded speech material (see Chapter 5);
- Increasing the requirements of speech audiometry (see Chapter 6);
- Added an overview of Chapter 9 (see 9.1);
- Revised 12.1 overview part of the relevant content (see 12.1.1);
- Added fixed step adaptation and other adaptive methods (see 12.4 and 12.5);
- Modify the speech recognition accompanied by competitive sounds to speech audiometry accompanied by competitive speech (see Chapter 15, Chapter 15 of the 1999 edition);
- Added 15.4 general clause (see 15.4.1);
- Increased measurement uncertainty (see Chapter 17);
- Removed information appendix oral examination (see the 1999 edition of Appendix A);
- Added informative appendices Examples of speech materials, examples of competitive sounds, typical results, optimization of the perceived balance of the test table, measurement uncertainty (See Appendix A, Appendix B, Appendix C, Appendix D and Appendix E);
- The 1999 edition of Appendix B was revised as a reference, and added four articles with Chinese speech audiometry literature (see 1999 edition of Appendix B, references).

This section uses the translation method identical with ISO 8253-3:2012 "Acoustics listening method Part 3. Speech audiometry." the documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

- GB/T 3240-1982 commonly used in acoustic measurement frequency (neq ISO 266:1975)
- GB/T 3785.1-2010 Electroacoustic sound level meter Part 1. Specification (IEC 61672-1:2002, IDT)
- GB/T 7341.1-2010 Electroacoustic audiometry equipment - Part 1. Pure tone audiometer

(IEC 60645-1:2001, IDT) Methods of acoustic measurement - Part 1. Pure tone guidance and bone conduction measurement (eqvISO 8253-1 GB/T 16403-1996.

1989)

--- GB/T 16296-2016 Acoustics - Part 2. Acoustic measurement using pure tone and narrowband test signals (ISO 8253-2:2009, IDT) this section also made the following editorial changes.

--- Supplement some examples of Chinese language test materials (see Appendix A, A.2, A.3, A.4);

--- Added a number of Chinese language test materials in the otology normal speech recognition threshold (see Appendix C Table C.1) and the relevant language Retest reliability parameters that identify thresholds and speech recognition rates (see Table C.2 in Appendix C);

--- Added a number of Chinese language test materials as a reference (see references [34] ~ [37]).

This section is proposed by the Chinese Academy of Sciences.

This part of the National Acoustic Standardization Technical Committee (SAC/TC17) centralized.

This section drafted unit. Chinese People's Liberation Army General Hospital of Otorhinolaryngology Research Institute, Institute of Acoustics, Chinese Academy of Sciences, Suzhou University, National Institute of Electronics Technology Corporation third Institute.

Introduction

Speech audiometry is used for hearing tests related to diagnostic assessment and hearing rehabilitation.

The result of verbal audition depends on the speech material and the test method used. In order to ensure the use of different speech materials (including different languages Different verbal materials) For the minimum requirements of accuracy and comparability, this section sets the conditions for verbal material. It also provides Speech recognition test procedures.

Acoustic audiometry method Part 3. Speech audiometry

1 Scope

This section GB/T 16296 specifies the basic method of speech recognition testing in audiological applications.

In order to ensure that different test procedures (including speech recognition tests in

different languages) for the minimum accuracy and comparability, this section the compilation, approval and evaluation of speech test materials and the implementation of speech recognition tests are put forward. Due to the diversity of languages, this department There is no specific regulation on the content of speech materials.

In addition, this part also stipulates the establishment of the reference value, and puts forward specific requirements for the speech transmission and implementation.

This section gives a detailed description of the method of audiometry, bone conduction or sound field audiometry sent by the headset, bone oscillator or speakers recorded test material and prerequisites, describe ways to use noise to mask non-test ears or as a competitive sound.

This section also contains conditions for recording speech materials and recommended methods for maintaining and calibrating speech audiometry equipment. This section applies to Mandarin Speech audiometry and local dialect speech audiometry.

For some subjects, such as children, a modified test method may be required and not described in this section.

This section does not include some special inspection methods, such as orientation and binaural hearing method.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

Electroacoustic audiometry equipment - Part 2. Language audiometry equipment (IEC 60645-2:1993, IDT) GB/T 7341.2-1998 ISO 266 Acoustics-Preferred Frequencies ISO 8253-1 Acoustic audiometry method - Part 1. Pure audiometry and bone conduction audiometry (Acoustics-Audiometric test methods-Part 1:

Pure-tone air and bone conduction audiometry) ISO 8253-2 Acoustics - Part 2.

Acoustics-Audio-metric test methods-Part 2:

Sound field audiometry with pure-tone and narrow-band test signals) ISO/IEC Guide 98-3, Measurement uncertainty - Part 3. Guidelines for the expression of uncertainty in measurement [Uncertainty of measurement-Part 3:

Guide to the expression of uncertainty in measurement (GUM1995)] IEC 606451

electroacoustic audiometry equipment - Part 1. Pure tone audiometer

(Electroacoustics-Audiological equipment-Part 1: Pure-tone audiometers) IEC 616721

Electroacoustics sound level meter Part 1. Specification

(Electroacoustics-Sound level meters-Part 1.

Specifications