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JJG

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

JJG 991-2017

Replacing JJG 991-2004

**Audiometric Equipment--Instruments for the Measurement of
Aural Acoustic Impedance/Admittance
(English Translation)**

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Introduction

This code is based on the requirements and format of the JJF1002-2010 "Rules for the preparation of national metrological verification regulations".

According to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement" to assess the uncertainty of the measurement results.

This procedure mainly refers to IEC 60645-5:2004 "Electroacoustic audiometry equipment - Part 5. Otoacoustic impedance/conductivity Nanometric Instruments (Electroacoustics-Audiometric equipment-Part 5. Instruments for the Measurement of aural acoustic impedance/admittance) for JJG 991-2004 Impedance Hearing the "testing procedures" are revised. Compared with JJG 991-2004, the main technical changes except editorial modification are as follows.

--- In keeping with IEC 60645-5:2004 and GB/T 15953-1995, change the name of this regulation it is the verification procedure for the "acoustic impedance/admittance measurement instrument for audiometry equipment".

--- According to IEC 60645-5:2004 and related standards, the related terms in the original regulations have been adjusted, such as Added tympanometry, and other concepts.

--- According to IEC 60645-5:2004 and related standards, the measurement performance requirements in the original regulations were revised Changed to meet the requirements of

the new standard, and the technical requirements of the amendment mainly include. probe tone and acoustic reflection stimulation pure tone stimulation the maximum allowable error of the signal frequency and total harmonic distortion, pressure indication error and so on.

--- In the "Accreditation Project", the first test, follow-up test and in-use check items are distinguished.

---In the "measurement standards and major ancillary equipment", the "measurement amplifier" and "bandpass filter" replacement Into an "acoustic analyzer"; distinguishes and describes four possible ear simulators and acoustic couplers;

The requirements of IEC 60645-5:2004 increase the "standard volume chamber" equipment and its technical requirements.

--- According to the requirements of JJF1002-2010 to re-revise the verification certificate/verification results notice page format.

The issuance of previous versions of this procedure is.

---JJG 991-2004.

Auditory Equipment Otoacoustic Impedance/Admittance Measuring Instrument Verification Procedures

1 Scope

This procedure is applicable to the first verification, subsequent verification and in-service inspection of otoacoustic impedance/admittance measurement instruments.

2 references

This procedure refers to the following documents.

JJG 388-2012 Audiometric Instrument Pure Tone Audiometer JJF1001-2011 Universal Measurement Terms and Definitions JJF1034-2005 Acoustic Measurement Terms Terms and Definitions GB/T 3102.7 Acoustic quantities and units GB/T 3947 Acoustic Terms GB/T 4854.1-2004 Reference zero for acoustic calibration audiometry equipment. Part 1. Pure ear headphones Sound Reference Equivalent Threshold Sound Pressure Level GB/T 15953-1995 Otoacoustic Impedance/Admittance Measuring Instrument GB/T 16402-1996 Acoustic Insertion Headphones Pure Tone Reference Equivalent Threshold Sound Pressure Level GB/T 25498.3 Electroacoustic head simulator and ear simulator Part 3. Calibrated pressure ear Machine acoustic coupler IEC 60318-1 Electroacoustic head and ear simulators. Part 1. Calibration of earphones and earmuffs Electroacoustics-Simulatorsofhumanheadandear-Part 1: Earsimu-Latorforthemeasurementofsupra-auralandcircumauralearphones) IEC 60318-4 Electroacoustic head and ear simulators. Part 4. Earphone measurements using earplugs coupled to the human ear Quantity Accelerators-Simulatorsofhumanheadandear-Part 4: Occlu-Ded-earsimulatorforthemeasurementofearphonescoupledtoearbymeansofear

Inserts) IEC 60318-5 Electroacoustic head and ear simulators. Part 5. Measurement of earbud hearing aids and earphones 2cm³ Coupler

(Electroacoustics-Simulators of human head and ear-Part 5. 2cm³

Coupler for the measurement of hearing aids and earphones coupled to the ear by means

Of ear inserts) IEC 60645-5:2004 Electroacoustic audiometry equipment - Part 5.

Otoacoustic impedance/admittance measuring instruments

(Electroacoustics-Audiometric equipment-Part 5. Instruments for the measurement

Of aural acoustic impedance/admittance) for dated references, only the dated version applies

to this procedure; any undated references the latest version (including all amendments) is

applicable to this procedure.