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

YY/T 0939-2014

**Ultrasound bone sonometers - Test method of broadband
ultrasound attenuation (BUA)**

超声骨密度仪 宽带超声衰减 (BUA) 的试验方法

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents. This standard was proposed by the China Food and Drug Administration. This standard by the standardization of medical ultrasound equipment for medical appliances National Standardization Technical Committee Technical Committee (SAC/TC10/SC2) Centralized. This standard was drafted. State Food and Drug Administration of Hubei Medical Device Quality Supervision and Inspection Center, Research Institute of Acoustics , Hefei University of Technology, GE Medical Systems (China) Co., Ltd. The main drafters of this standard. Jiang Shilin, Zhu Chenggang, Peng Hu, Hong-chun wave.

Broadband ultrasound attenuation (BUA) measurements and calculations, the details may be different for each manufacturer, for example, the transmission signal transducer Bandwidth and time-domain signal sampling frequency, the frequency range of the linear fit, are likely to cause broadband ultrasound attenuation (BUA) final results s difference. For these reasons, at present, broadband ultrasound attenuation (BUA) measured and calculated values has its uncertainties, namely two ultrasonic bone density measuring instrument It is possible to obtain different broadband ultrasound attenuation (BUA) values of the amount of the same sample for this problem, the standard set forth in addition to the usual broadband Ultrasound attenuation (BUA) test methods, also proposed a test method for measuring broadband ultrasound attenuation (BUA) relative value. Ultrasound bone densitometer Standard Test Method for broadband ultrasound attenuation (BUA) of

1 Scope

YY/T 0939 is the test method for broadband ultrasound attenuation in bone sonometers, the quantity these instruments measure to assess bone status without ionising radiation. BUA describes how much a bone attenuates ultrasound across a band of frequencies, and it correlates with bone density and structure well enough to be used for screening, particularly at the heel. Because the measurement depends heavily on coupling, temperature and the geometry of the site, it is only comparable between instruments if the

method is fixed, which is what this standard does. For a manufacturer or a distributor of quantitative ultrasound bone densitometers for the Chinese market, this is the method behind the measurement, and the reference a purchaser can use to compare instruments.

Note 1. The pulse transmitter (device). generates electrical pulses for transmission probes use.

Note 2. The signal receiver (amplifier). for (amplification) of the received signal.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

YY 0774-2010 ultrasound bone densitometer

YY/T 0865.1-2011 ultrasonic hydrophone - Part 1. Measurement and features 40MHz
describe the following medical ultrasound field

3 Terms and Definitions

Terms and definitions YY 0774-2010 and YY/T 0865.1-2011 defined apply to this document.
Test Method 4

4.1 Test Environment Test environment should meet the environmental parameters specified by the manufacturer, such as temperature, humidity, air pressure and/or altitude.

4.2 Test Equipment See YY/T 0865.1-2011 Chapter 5 measurement requirements, test samples may be specified by the manufacturer, measurement method shown in Figure 1 FIG.