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**INDUSTRY STANDARD OF THE  
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**Verification Regulation of Ultrasonic Power Meter for Milliwatt  
Level  
(English Translation)**

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## Table of Contents

|                                                                                                |  |
|------------------------------------------------------------------------------------------------|--|
| 1 Scope (1)                                                                                    |  |
| 2 Citations (1)                                                                                |  |
| 3 Overview (1)                                                                                 |  |
| 4 Metrology performance requirements (1)                                                       |  |
| 4.1 Ultrasonic power measurement range (1)                                                     |  |
| 4.2 Frequency range (1)                                                                        |  |
| 4.3 Maximum allowable error (1)                                                                |  |
| 5 General technical requirements (1)                                                           |  |
| 5.1 Appearance (1)                                                                             |  |
| 5.2 Nameplate, logo and instruction manual (1)                                                 |  |
| 6 Measuring instrument control (2)                                                             |  |
| 6.1 Verification conditions (2)                                                                |  |
| 6.2 Verification project (3)                                                                   |  |
| 6.3 Verification method (3)                                                                    |  |
| 6.4 Processing of verification results (4)                                                     |  |
| 6.5 Verification period (4)                                                                    |  |
| Appendix A Milliwatt Ultrasonic Power Meter Verification Certificate Inner Page Format (5)     |  |
| Appendix B Format of the milliwatt-level ultrasonic power meter verification result notice (6) |  |
| Appendix C Example of Evaluation of Uncertainty (7)                                            |  |

### 6.5 Verification period (4)

|                                                                                                |  |
|------------------------------------------------------------------------------------------------|--|
| Appendix A Milliwatt Ultrasonic Power Meter Verification Certificate Inner Page Format (5)     |  |
| Appendix B Format of the milliwatt-level ultrasonic power meter verification result notice (6) |  |
| Appendix C Example of Evaluation of Uncertainty (7)                                            |  |

#### Milliwatt-level ultrasonic power meter verification procedure

##### 1 Scope

This procedure is applicable to the first verification of milliwatt-level ultrasonic power meters with ultrasonic power in the range of (1~500) mW.

Subsequent verification and inspection in use.

## 2 Citations

This procedure refers to the following documents.

GB/T 7966-1997 "Measurement of ultrasonic sound power in the frequency range (0.5~10)MHz" when using this procedure, care should be taken to use the current valid version of the above cited documents.

## 3 Overview

The milliwatt ultrasonic power meter is mainly composed of an anechoic water tank, a reflective target, a sensor, and an indication display portion. Milliwatt level as a portable ultrasonic power measuring instrument, the ultrasonic power meter is widely used in its convenient operation and convenient carrying.

Each ultrasonic instrument manufacturer, medical department and various measurement departments.

Milliwatt-level ultrasonic power meters usually use the principle of radiation force, using the measurement of the receiving target and the micro force sensor.

The system measures the radiation force in the ultrasonic field and obtains the corresponding average ultrasonic power according to the sound force conversion formula.

## 4 Metrological performance requirements

4.1 Ultrasonic power measurement range Ultrasonic power measurement range. (1~500) mW. For use only for verification of ultrasound diagnostics, Doppler fetal heart rate and super the ultrasonic power meter of the sound monitor can measure the power range from (1~100) mW.

### 4.2 Frequency range

Frequency range. (0.5~10)MHz.

4.3 Maximum allowable error Maximum allowable error.  $\pm 10\%$ .

## 5 General technical requirements

### 5.1 Appearance

5.1.1 The surface of the casing should be smooth and smooth, and there should be no appearance damage that affects the accuracy of the instrument.

5.1.2 The switch adjustment knob (or screw) should be complete, easy to use, reliable and accurate.

5.1.3 External wires, plugs and sockets should be safe and secure, reliable and free from looseness.

### 5.2 Nameplate, logo and instruction manual

5.2.1 The milliwatt ultrasonic power meter shall have the following clear and durable markings.

- 1) the name of the manufacturer;
- 2) Model and factory number of the product;