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**Biological evaluation of medical devices - Part 23: Tests for
irritation**

(English Translation)

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard was proposed by China Light Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Household Appliances of Standardization Administration of China (SAC/TC 46).

The drafting organizations of this Standard. Ningbo Hydrotek Co., Ltd., Zhejiang Patio Water Treatment Technology Co., Ltd., Beijing Origin Water Pure Tech Co., Ltd., Qingdao Risheng Electric Service Co., Ltd., Zhongshan Shide Light Industry Mechanical & Electrical Products Co., Ltd., China Quality Inspection Association of Water Purification Equipment Professional Committee, China Household Electrical Appliances Research Institute, Changzhou Peide Water Treatment Equipment Co., Ltd., Lota (Xiamen) Industrial Co., Ltd., Qingdao Jiesheng Electric Co., Ltd.

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This Standard was issued for the first time.

Household and similar devices with ultra-violet
disinfection of drinking water treatment unit

1 Scope

This Standard specifies the terms and definitions, classification and naming, requirements, test methods, inspection rules and marking, packaging, transport, storage for household and similar devices with ultra-violet disinfection of drinking water treatment unit.

This Standard applies to household and similar devices with ultra-violet disinfection of drinking water treatment unit and ultraviolet disinfection equipment of independent use.

2 Normative references

The following referenced documents are indispensable for the application 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.

GB/T 191, Packaging and storage marks

GB/T 1019, General requirements for the package of household and similar electrical appliances

GB/T 2423.17, Environmental testing for electric and electronic products - Part 2. Test method - Test Ka. Salt mist

GB/T 2828.1, Sampling procedures for inspection by attributes - Part 1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB 4706.1, Safety of household and similar electrical appliances; General requirements

3 Terms and definitions

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

3.1 drinking water treatment device

a system capable of improving water quality that consists of one or several drinking water treatment units

3.2 ultra-violet disinfection

the process of using ultraviolet radiation of which the wavelength is 200nm ~

3.3 household and similar devices with ultra-violet disinfection of

drinking water treatment

using ultraviolet disinfection principle, as a component of household and similar use of drinking water treatment device, hereinafter referred to as "ultra-violet disinfection unit"

5.1.2 The environmental conditions are as follows.

- a) temperature. 4°C ~ 40°C;
- b) relative humidity. not greater than 90% (at 25°C).

5.3.1 The material in contact with water shall meet requirements of GB/T 17219.

5.3.3 After plastic, rubber materials are subject to ultraviolet radiation, within

the nominal life of the material by the manufacturer, the material shall not be deformed, softened, broken; the structure strength of the material shall meet requirements of 5.4.2. The health and safety of the materials shall comply with the requirements of 5.3.1.

5.4.1 The structural design shall be in rational layout and solid connection

for easy maintenance or replacement of ultra-violet lamp.

5.5 Health and safety

The health and safety of ultra-violet disinfection unit shall comply with the requirements of GB/T 17219.

5.6 Effective dose of ultra-violet

The effective dose of ultra-violet in normal working of ultra-violet disinfection unit shall not be less than 40 mJ/cm².

5.9 Electrical safety

The electrical safety of ultra-violet disinfection unit shall meet requirements of GB 4706.1.

5.10 Continuous service life

The continuous service life of ultra-violet disinfection unit shall not be less than 5,000 h or the nominal value of manufacturer. During this time, the effective dose of ultra-violet, disinfection effect and effluent quality of ultra-violet disinfection unit shall meet requirements.

6.2 Appearance

Visual inspection.

6.3.1 Carry out the detection according to the method specified in GB/T 17219.

6.3.2 The metal surface contact with water in the ultra-violet disinfection unit shall be tested according to GB 2423.17. The test period is 96 h. The sampling size 100 mm x 100 mm. Before the test, the surface shall be cleaned and degreased. After the test, check the surface condition.

6.3.3 Light up the ultra-violet lamp for 24 h in the absence of water of ultra-violet disinfection unit. Turn off the ultra-violet lamp and visually inspect whether the structural material is deformed, damaged or softened. And carry out the test according to 6.4.2 and the provisions of GB/T 17219.