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

YY 1475-2016

**Laser therapeutic equipment - Q-switched Nd: YAG laser
equipment**

激光治疗设备 Q开关掺钕钇铝石榴石激光治疗机

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. Please note that some of the contents of this document may involve patents. The issuer of this document does not assume responsibility for the identification of these patents. This standard is proposed by the State Food and Drug Administration. This standard is nationalized by the National Standardization Subcommittee for Medical Optics and Instruments (SAC/TC103/SC1). The drafting of this standard unit. Zhejiang Medical Device Testing Institute. The main drafters of this standard. Ye Yue Shun, Du Kun, He Tao, Yu Zhenhua. Laser treatment equipment Q switch doped neodymium yttrium aluminum garnet Laser treatment machine

1 Scope

YY 1475 is the mandatory Chinese standard for Q-switched Nd:YAG laser therapy equipment, the nanosecond-pulse lasers used to remove tattoos and pigmented lesions by shattering pigment particles faster than the surrounding tissue can heat. The extremely short pulse is the therapeutic mechanism and the hazard: peak power is enormous, and a stray pulse to the retina causes immediate permanent damage. The standard sets the requirements such equipment has to meet and the test methods that verify them, covering the output energy and pulse duration and their accuracy, the beam delivery, the interlocks and the eye protection. These devices are sold in very large numbers into Chinese aesthetic clinics. Being a YY standard without the /T suffix, compliance is compulsory in China.

YY 1057 medical foot switch

3 product composition and basic parameters

3.1 part of the treatment machine The components of the treatment machine are as follows:

a) Host. Nd-doped yttrium aluminum garnet solid-state lasers, laser power and control systems, Q-switching devices and cooling systems;

- b) beam transmission system;
- c) Application accessories. various application of hand tools;
- d) laser goggles;
- e) laser emission control switch.

3.2 basic parameters of the treatment machine The manufacturer shall list the following basic parameters in the registered product standard.

- a) treatment of laser wavelengths and patterns;

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 191 packaging and storage icon

GB 7247.1 Safety of laser products - Part 1. Classification of equipment, requirements
Medical electrical equipment - Part 1. General requirements for safety GB 9706.1

GB 9706.20 Medical electrical equipment - Part 2. Diagnostic and therapeutic requirements
for laser equipment safety Environmental requirements and test methods for medical
appliances GB/T

GB/T 16886.1 Biological evaluation of medical devices - Part 1. Evaluation and testing in
risk management Methods for testing the main parameters of laser goggles GB/T
17736-1999

GB/T 26599.1 Laser and laser related equipment - Test methods for laser beam width,
divergence angle and beam transmission ratio - Part