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

YY/T 1944-2024

**Particular specification for medical X-ray high voltage
generator**

医用X射线高压发生器专用技术条件

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Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Categories	2
5 Requirement	2
5.1 Working conditions	2
5.2 Product performance	2
5.3 Limitation of voltage, current or energy	4
5.4 Leakage Current	4
5.5 Dielectric strength	5
5.6 Limitation of radiated output	5
5.7 Safety measures to prevent excessive radiation output	5
5.8 Loading Factor Range	5
5.9 Electromagnetic compatibility	5
5.10 Environmental testing	5
5.11 Security	5
6 Test methods	6
6.1 Working conditions	6
6.2 Test methods	6
6.3 Limitation of voltage, current or energy	8
6.4 Leakage Current	8
6.5 Dielectric strength	8
6.6 Limitation of radiated output	9
6.7 Safety measures against excessive radiation output	9
6.8 Loading Factor Range	9
6.9 Electromagnetic compatibility	10
6.10 Environmental test	10
10 Reference	11

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for

standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed by the State Food and Drug Administration. This document is prepared by the National Technical Committee for Standardization of Medical Electrical Appliances, Medical X-ray Equipment and Appliances Standardization Subcommittee (SAC/ TC10/SC1). This document was drafted by: Suzhou Boside Electric Co., Ltd., Liaoning Medical Device Inspection and Testing Institute, Philips Medical (Suzhou) Co., Ltd. Shanghai United Imaging Healthcare Co., Ltd., Siemens X-ray Vacuum Technology (Wuxi) Co., Ltd., General Electric Medical Systems Tong Trading Development (Shanghai) Co., Ltd., Zhuhai Ruiying Technology Co., Ltd., Neusoft Medical Systems Co., Ltd., Nanjing Puai Medical Equipment Co., Ltd. Equipment Co., Ltd., Liaoning Safety Science Research Institute. The main drafters of this document are. Fan Shengfang, Chen Yong, Cai Fang, Zhu Guoping, Lu Shan, Jiang Jie, Feng Rui, Shao Xiaojun, Wang Yanan, Liu Jianjun, Xu, Jun, and Chen, Zhipeng. Special technical requirements for medical X-ray high voltage generators

1 Scope

YY/T 1944 is the particular specification for the medical X-ray high voltage generator, the unit that turns mains power into the tens of kilovolts an X-ray tube needs. It specifies the requirements for high voltage generators and describes the corresponding test methods. The generator determines the accuracy and reproducibility of every exposure the system makes: kV accuracy, mA and time control, and the stability of the output across a workload are what decide whether a dose setting means what it says. It is standardised separately because the generator is frequently supplied as a component to system integrators rather than as a finished device. For a manufacturer or an importer of X-ray generators for the Chinese market, this is the particular standard the type test is run against.

This document specifies the requirements for medical X-ray high voltage generators (hereinafter referred to as high voltage generators) and describes the corresponding test methods. This document applies to high voltage generators for medical X-ray generating devices, including but not limited to high voltage generators integrated with X-ray tubes. Life tool.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 9706.1 Medical electrical equipment Part

3 Terms and definitions

The terms and definitions defined in GB 9706.1, GB 9706.103, YY 9706.102, IEC TR60788 and the following apply to this document.

Note. According to the definition in GB 9706.103, unless otherwise specified, in this special standard. The X-ray tube voltage value refers to the peak voltage, ignoring instantaneous changes; The X-ray tube current value refers to the average value.

3.1 Electric power During the specified loading time, the power applied by the high voltage generator to the X-ray tube is equal to the coefficient of the X-ray tube voltage waveform, the X-ray The product of the line tube voltage and the X-ray tube current. $P=fUI$ Where. P

---Electric power; f

--- coefficient dependent on the X-ray tube voltage waveform, selected as follows:

- a) Six-peak high voltage generator $f=0.95$, or
- b) twelve-peak high voltage generator or constant voltage high voltage generator $f=1.00$, or
- c) For other X-ray high voltage generators, select the most suitable value according to the waveform of the X-ray tube voltage and give the selected value. illustrate;