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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 21748-2008

**Safety requirement for the educational equipment - Basic
requirements for equipment and spare parts**

教学仪器设备安全要求 仪器和零部件的基本要求

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Foreword

The standard Chapter 4, Chapter 5, Chapter 6, Chapter 7, Chapter 8, 9, Chapter 10 and Chapter 11 are mandatory, the rest are pushed Recommended sex. The Standard Appendix A, Appendix B, Appendix C, Appendix D and Appendix E are normative appendix. The standard proposed by the People's Republic of China Ministry of Education. This standard by the National Standardization Technical Committee Instrument Teaching. This standard was drafted. Zhejiang Educational Equipment and work-study program management center, the Ministry of Education, Institute of Education and other equipment. The main drafters of this standard. Ren Weide, Zhao Liping, Zhao Xiang. Teaching instruments and equipment safety requirements The basic requirements for equipment and spare parts

1 Scope

GB 21748-2008 is the Chinese national standard on safety requirement for the educational equipment - basic requirements for equipment and spare parts, in the field of services and company organization. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 5 May 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 August 2008. Classification: ICS 03.180, CCS Y51. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the safety and quality requirements for schools and training institutions classroom teaching and laboratory instruments and parts and mechanical Can additional requirements are high and low temperatures, noise and vibration, ionizing radiation, non-ionizing radiation and electrical safety. This standard relates only teaching instrument zero The security element without involving other characteristics, such as

characteristic and style. This standard applies to schools and training institutions classroom teaching and laboratory equipment and spare parts.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 1002-1996 Household and similar single-phase plug and socket type, basic parameters and dimensions

GB 2099.1 plugs and sockets for household and similar purposes - Part 1. General Requirements (GB 2099.1-1996, eqv IEC 60884- 1.1994)

GB 2099.2 plugs and sockets for household and similar purposes Part 2. Particular requirements (

GB 2099.2-1997 appliance outlets, eqv IEC 60884-2-2. 1989)

GB/T 2887-2000 General specification for computer sites

GB 2893-2001 Safety colors (neq ISO 3864. 1984)

GB 2894-1996 Safety Signs (neq ISO 3864. 1984)

GB 4208-1993 shell protection (IP code)

GB 4343.2 EMC household appliances, electric tools and similar apparatus - Part 2. Immunity - Product family standard (IdtCISPR14-2-97)

GB 4706.1 Household and similar electrical appliances - Part 1. General Requirements (GB 4706.1-2005, idt IEC 60335-1. 2004)

GB 4706.19 special requirements of household and similar electrical appliances for heating liquids (GB 4706.19-2004, idt

IEC 60335-2-15.2000) Particular requirements

GB 4706.52 Household and similar electrical appliances commercial electric cooking ranges, ovens, hobs and hob elements (GB 4706.52 -2001, Idt IEC 60335-2-36.1993)

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 In order to prevent leakage of electrical equipment, grounding occurs when human contact metal frame or electric shock carried out. NOTE. Ground wire English name for

protective earthing conductor, usually abbreviated PE line. "Ground" refers to a special device for big Ground. Protective grounding applies to ungrounded low-voltage grid.

3.2 Neutral grounding grid, in order to prevent a single relatively large current, protective earth can not completely avoid the risk of electric shock the body, The metal frame or zero line and grid connected electrical equipment.

Note. The "zero line" also known as "neutral."

4.1 Basic requirements

4.1.1 classroom teaching, teaching equipment and components used in training (hereinafter referred to as "teaching machines") have been determined under the same standard conditions Temper Justice of the safety requirements for the use of appropriate safety standards, safety requirements priority contradiction in safety requirements and the economic interests of Etc. according to GB 21746-2008.

4.1.2 teaching equipment and parts product design of the structure and use of raw materials should be considered acts of users of different ages, the responding party Style, intelligence and capabilities; users should also consider the use of human data object and scope and can be expected at that age or Other users misuse. If necessary, the product standard shall specify the applicable age and use restrictions. To fully consider the different ages of students Psychological and physiological characteristics, so that safety, health, application, beautiful.

4.1.3 Teaching instruments and components should be considered for use in a variety of the most adverse situations that may arise can maximize the protection of safety, the junction Structure should be designed to avoid dangerous situations or to the degree of risk occurrence minimize shall direct, indirect or direct security technology, including direct Security technology has the greatest priority. If, for the needs of teaching and other technical reasons can not achieve effective security and protection must be provided to avoid Free use of the operating instructions and danger warnings.

4.1.4 determine what design, should follow the priorities 4.1.5. Wherein the elimination, prevention and mitigation of direct safety technology Surgery, isolation and security technology is an indirect interlock, warning prompted security technology. 4.1.5.1 ~

4.1.5.5 shall not take into account the technical measures used only informative technical safety measures.

4.1.5 Security Technology

4.1.5.1 Elimination Through rational planning, design and scientific management as a fundamental source to eliminate hazards. Such as the use of raw materials and harmless harmless experiment Party Method.