

ICS 19.040

CCS N61



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

GB/T 28850-2012

Thermostatic baths and circulators - Heated liquid baths

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Machinery Industry Federation. The standard by the China Machinery Industry Federation. Drafting of this standard. Hangzhou snow carbon thermostat Technology Co., Ltd. Chongqing four of test equipment, machinery and industrial equipment Instrumentation Technology and Economy Institute, Zhejiang Institute of Metrology, Southern Jiangsu Wuxi Test Equipment Co., Ltd., Hunan measurement Detection Homes, and the Ministry of Information Industry Institute of Electronics V, on Environmental Equipment Co., Ltd. Participated in the drafting of this standard. Shenyang Academy of Instrumentation Science, Anhui Institute of Metrology, Hengyang Heng Instrument Electric Co., Ltd., China Electric Apparatus Research Institute, Ningbo Dongfang Heating Equipment Co., Ltd., Shanghai Jing Hong Experimental Equipment Co., Ltd., Chongqing Yinhe Experimental Instrument Co., the company. The main drafters of this standard. Xu Yueming, Chen Yunsheng, Jinli Hui, Zhou Lianqin, Ni Yiming, Xiong Zhiming, Zousu Yang, Feng Hua, Xu Qiuling, He Gang Jian, Liu Xiangheng, Zhouxiu Yuan, Wang Xiaofeng, Li Yaqin, Lim Chun Wing, Wang Jialong, only Shen Zhong, Jinmei Feng, Wang Huabin. Thermostatic bath and circulating means Hot bath

1 Scope

GB/T 28850-2012 covers the heated liquid bath - the vessel of temperature-controlled liquid into which samples, instruments or glassware are placed directly, rather than having the liquid pumped elsewhere. It underpins a great deal of routine measurement: viscosity determinations, density work, the calibration of thermometers and sensors, and any procedure whose result is only meaningful at a stated temperature. What matters is not the setpoint but the uniformity across the working volume and the stability over the time a measurement takes, and both are properties that need defining before they can be claimed. This standard specifies the classification of heated liquid baths, their rated conditions, the requirements, the test methods, the inspection rules, and the provisions for marking, packaging, transport, storage and accompanying documents. It applies to baths without active cooling that provide a constant-temperature environment in the form of a liquid heat transfer medium. Under ICS 19.040 and CCS N61, it is written for manufacturers of laboratory equipment, for the laboratories that must justify the conditions their results were obtained under, and for calibration services. It is the companion to GB/T 28853-2012 on heated circulators.

This standard specifies the classification of the bath temperature, conditions, requirements, test methods, inspection rules, marking, packaging, transportation, storage and with Line in the file. This standard applies not equipped with active cooling means to provide liquid heat transfer medium in the form of a constant temperature bath temperature environment (hereinafter referred to as high Temperature tank).

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 191-2008 Packaging - Pictorial signs

GB/T 2829-2002 periodic inspection Sampling procedures and tables (suitable for process stability test)

GB 4793.1-2007 measurement, control and laboratory safety requirements for electrical equipment - Part 1. General requirements

GB 4793.6-2008 measurement, control and laboratory safety requirements for electrical equipment - Part 6. Laboratory material heating apparatus Particular requirements for equipment

GB/T 9969-2008 General Industrial Product Manual

GB/T 16895.10-2010 low-voltage electrical installations Part 4-44. Protection for safety voltage electromagnetic harassment and harassment protection

GB/T 17248.3-1999 Acoustics machinery and equipment noise emission and other operating position emission sound pressure levels specified location Measuring method in situ Determination of

JB/T 9512-1999 climate chamber test equipment and sound power levels Category

3 Non-combustible liquids or combustible liquids can be used as a high temperature liquid heat transfer medium tank. Category Name hot bath, requirements and signs are shown in Table 1. Table

1 Category Name e liquid heat transfer medium request flag I a non-flammable liquid over-temperature protection c NFL Combustible liquid b Adjustable temperature over-temperature protection d Adjustable temperature over-temperature protection and an additional level of protection d FL a usually water and the other in a single fault condition and the predetermined temperature range nonflammable liquid. B liquid heat transfer medium flash point of not less than 65 °C, II class requirements apply, such as silicone oil. Otherwise III class requirements apply, such as ethanol. c independent, non-self-resetting, and can cut off all poles of the heater or level overtemperature protection device. d can be adjusted over a moderate level of protection, it should only be carried out by means of tools. e manufacturers the option of using or not using.