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

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**Performance test methods for meteorological instruments and
equipments - Temperature**

气象仪器设备性能测试方法 温度

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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.

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Meteorological instrument equipment performance test method temperature

1 Scope

This document specifies the instrumentation, test conditions, test items, data processing and test reporting for performance testing of meteorological temperature instruments and equipment.

This standard describes the test methods for the performance of meteorological temperature instruments and equipment.

This document is applicable to glass liquid thermometers, bimetallic thermometers, and platinum resistance thermometers with a measuring range of -60°C to 80°C.

Performance test, for reference use with other meteorological temperature measuring instruments.

2 Normative references

GB/T 8747-2010

GB/T 37467-2019

3 Terms and Definitions

The terms and definitions defined in GB/T 37467-2019 and GB/T 8747-2010 apply to this document.

4.1 General requirements

The uncertainty introduced by the test instruments and equipment should not be greater than 1/3 of the uncertainty introduced by the maximum allowable error of the instrument under test.

4.2 Standards

The measurement range covers the measurement range of the instrument under test.

4.3 Temperature control equipment

The performance requirements and physical characteristics of the instrument under test should be taken into consideration when selecting a constant temperature bath, dry block furnace or temperature box, and the following requirements should be met.

- a) The temperature range covers the measurement range of the instrument under test;
- b) The temperature control deviation does not exceed $\pm 0.2^{\circ}\text{C}$;
- c) The size of the working area can meet the placement depth and spacing requirements of the temperature sensing parts of the standard instrument and the temperature sensing parts of the instrument under test;
- d) Temperature uniformity and fluctuation meet the requirements of Table 1.