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

GB/T 10739-2023

Replacing GB/T 10739-2002

**Paper, board and pulps - Standard atmosphere for conditioning
and testing**

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document replaces GB/T 10739-2002 "Standard Atmospheric Conditions for Handling and Testing of Paper, Board and Pulp Samples" and is consistent with Compared with GB/T 10739-2002, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Added terms and definitions for calibration points and monitoring points (see 3.3, 3:4);
- b) Added sample discard conditions (see 5.2);
- c) Added "testing" requirements (see 6.3);
- d) Added stipulations on the test date in the test report (see Chapter 7);
- e) Changed the requirements for constant temperature and humidity laboratory test equipment, technical indicators and test methods (see Appendix B,:2002 version Appendix A):

This document is modified to adopt ISO 187:2022 "Standard atmosphere and control procedures and tests for temperature and humidity treatment and testing of pulp, paper and paperboard" Sample temperature and humidity treatment method:

Compared with ISO 187:2022, this document has many structural adjustments: See the comparison list of structure number changes between the two files:

Appendix A:

The technical differences between this document and ISO 187:2022 and their reasons are as follows:

- a) Incorporate the content of Note 1 into the definition of temperature and humidity

treatment to make the definition more complete (see 3.2);

b) Added terms and definitions of calibration points and monitoring points to enhance understanding of technical content (see 3.3, 3:4);

c) Delete the provisions that tropical countries can also use $(27\pm1)^{\circ}\text{C}$ and relative humidity $(65\pm2)\%$ in standard atmospheric conditions to adapt to our country Technical conditions (see 5.1 of ISO 187:2022);

d) Delete the processing requirements for laboratory paper sheets prepared according to ISO 5269-1 and ISO 5269-3, which are already relevant in GB/T 24324 Requirements (see Chapters 5 and 6 of ISO 187:2022);

e) The pretreatment requirements have been changed to adapt to my country's technical conditions (see 6.1 of ISO 187:2022);

f) Appendix B has been changed, adding technical requirements for constant temperature and humidity laboratory test instruments, laboratory technical requirements, temperature, humidity, and wind conditions:

Test methods for speed, pressure difference, noise and other parameters to improve the operability of control, calibration and monitoring of constant temperature and humidity laboratories (see Appendix B):

The following editorial changes have been made to this document:

a) The name of the standard is changed to "Standard Atmospheric Conditions for Handling and Testing of Paper, Paperboard and Pulp Samples";

b) Changed the description of the moisture content of the sample entering the equilibrium state (see Chapter 4, Chapter 4 of ISO 187:2022);

c) Changed the note of 6:2 (see 6.2, 6:2 of ISO 187:2022);

d) Deleted Appendix B (informative) relationship between temperature and relative humidity (see Appendix B of ISO 187:2022);

e) Added Appendix A (informative) for comparison between this document and ISO 187:2022 structure numbers (see Appendix C);

f) Added Appendix C (informative) laboratory structure and equipment reference requirements (see Appendix B):

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the standard atmospheric conditions for temperature and humidity treatment and testing of paper, paperboard and pulp prior to testing:

This document applies to the handling and testing of paper, board and pulp specimens:

2 Normative reference documents

This document has no normative references:

3 Terms and definitions

The following terms and definitions apply to this document:

relativehumidity Under the same temperature and pressure conditions, the ratio of the actual water vapor content to the saturated water vapor content in the atmosphere:

Note: Expressed in percentage:

Temperature and humidity treatment conditioning the process of achieving moisture content equilibrium between the sample and the atmosphere at specified temperature and relative humidity (3:1):

Note: When the interval between the two previous weighings is more than 1 hour, and the difference in the weighed mass of the sample is not greater than 0.25% of the previous weighed mass of the sample, the sample is considered to be in contact with the atmosphere:

balance between conditions:

calibrationpoint the positions of temperature and humidity sensors required to be arranged in the constant temperature and humidity laboratory during the calibration process:

monitorpoint the required position of temperature and humidity sensors during use of a constant temperature and humidity laboratory:

4 Principles

The sample is exposed to the specified atmospheric conditions of constant temperature and humidity, so that the adsorption and release of moisture by the sample reaches a relatively stable state: At this time, the sample the specimen has reached equilibrium with this atmospheric condition:

5 Standard atmospheric conditions

5.1

The test standard atmospheric conditions used for paper, cardboard and pulp should be temperature $(23.0 \pm 1.0)^{\circ}\text{C}$ and relative humidity $(50.0 \pm 2.0)\%$:

5.2

Measure the atmospheric conditions of the laboratory according to Appendix B: If all test results are within the allowable limits, the atmosphere should be considered