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

GB/T 46182-2025

**Paper and pulp - Deinkability test for printed paper products
(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 is a modified version of ISO 21993:2020, "Paper and pulp - Test method for deinking properties of printing paper products".

This document has undergone the following structural adjustments compared to ISO 21993:2020.

---3.6 has been deleted;

---A.2 and A.3 have been deleted;

---Appendices B, C, and F have been deleted;

---Appendix B corresponds to Appendix E of ISO 21993:2020;

---Appendix C corresponds to Appendix D of ISO 21993:2020.

The technical differences between this document and ISO 21993:2020, and the reasons therefor, are as follows.

a) The scope has been changed to ensure overall consistency of the standard (see Chapter 1, ISO 21993:2020);

b) ISO 4119:1995 (see 3.3, 7.5.3, and 3.3 of ISO 21993:2020) has been replaced by the normatively referenced GB/T 5399.

7.5), to adapt to my country's technological conditions;

c) The term and definition of filtration rate (see 3.6 of ISO 21993:2020) have been removed because the term is not reflected in the text;

d) ISO 3689 (see 5.3.5, 5.3.5 of ISO 21993:2020) has been replaced by the normatively referenced GB/T 1914-2017.

Adapting to my country's technological conditions;

e) The requirement regarding wet burst strength for filter paper (see 5.3.5 of ISO 21993:2020) has been removed to adapt to the current situation of the industry in my country;

f) ISO 5269-2 (see 5.3.7, 5.3.8, and 5.3.7 of ISO 21993:2020) has been replaced by the normatively referenced GB/T 24326.

5.3.8, 8.4), to adapt to my country's technological conditions;

g) ISO 5269-1 (see 5.3.7, 8.4.1, and 5.3.7 of ISO 21993:2020) has been replaced by the normatively referenced GB/T 24324.

8.4), to adapt to my country's technological conditions;

h) ISO 12641-1:2016 (see 5.4.1, B.2, ISO 21993:2020) has been replaced by the normatively referenced GB/T 43828.1.

5.4.1, E.2), to adapt to my country's technological conditions;

i) ISO 5631-1 (see 5.4.3, 9.2.2, and 5.4.3 of ISO 21993:2020) has been replaced by the normatively referenced GB/T 21245.

9.2.2), to adapt to my country's technological conditions;

j) ISO 2470-1 (see 5.4.3, 9.2.2, and 5.4.3 of ISO 21993:2020) has been replaced by the normatively referenced GB/T 40277.

9.2.2), to adapt to my country's technological conditions;

k) Adjust the concentration of the saturated aluminum sulfate solution in the note to match the content of the clause (see 6.6, see 6.6 and its note in ISO 21993:2020), so as to make the description clearer and more accurate;

l) ISO 638 (see 7.2.7, 7.2.7 of ISO 21993:2020) has been replaced with the normatively referenced GB/T 462 to adapt to my country's national standards.

Technical conditions;

m) ISO 1762 (see 7.2.8, 7.2.8 of ISO 21993:2020) has been replaced with the normatively referenced GB/T 22877 to suit my needs.

The country's technological conditions;

n) The formula for calculating the air-dried quality of printed paper samples has been modified (see 7.2.9, ISO 21993:2020).

The calculation formula contains an error;

o) The definition of the superflotation state has been changed (see 7.5.2, 7.5 of ISO

21993:2020) to make the description more accurate and easier to understand;

p) Added alternatives to printing paper product blends (see 7.5.2) to adapt to the current state of the industry in my country;

q) ISO 187 (see 9.2.1, 9.2.1 of ISO 21993:2020) has been replaced with the normatively referenced GB/T 10739 to suit my needs.

The country's technological conditions;

r) The Hobart N50 pulper and Kenwood KMM020 pulper have been removed (see A.2 and A.2 of ISO 21993:2020).

A.3), the reason is that it involves specific product names;

s) The normative annex "Determination of filtration time of filter paper" (see Annex C of ISO 21993:2020) has been deleted because of the use of the method replacement in GB/T 1914-2017 enhances the interoperability between standards to adapt to my country's technical conditions.

The following editorial changes have been made to this document.

a) The URL for the ISO and IEC standardization terminology database in Chapter 3 of ISO 21993:2020 has been removed;

b) Added a note to section 3.3 regarding the description of slurry concentration units;

c) The informative references in notes 1 to 9.2.2 of ISO 21993:2020 (5.3.5) have been amended to reflect the relevant national standards.

replace;

d) Note 2 regarding the examples of filter paper brands in section 5.3.5 of ISO 21993:2020 has been deleted;

e) Note 9.4.2 of ISO 21993:2020 has been amended; see Appendix for the section on thresholds and dust size classifications in image analysis software.

f) The note in Chapter 10 of ISO 21993:2020 has been deleted;

g) Annex B (Informative) of ISO 21993:2020, "Example of flotation cell", has been deleted;

h) Annex F (Informative) of ISO 21993:2020, "Example of Test Report", has been deleted.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Paper Industry (SAC/TC141).

1 Scope

This document describes an experimental method for deinking in the laboratory under alkaline conditions using single-stage flotation and fatty acid trapping agents.

And methods for characterizing the deinking effect.

This document applies to deinking tests on various printed paper products.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 462 Determination of moisture content in analytical samples of paper, paperboard and pulp (GB/T 462-2023, ISO 287:2017, ISO 638-1.

2022, ISO 638-2:2022, MOD) GB/T 1914-2017 Chemical Analysis Filter Paper GB/T 5399 Determination of pulp concentration (GB/T 5399-2004, ISO 4119:1995, IDT) GB/T 10739 Standard atmospheric conditions for the treatment and testing of paper, paperboard and pulp specimens (GB/T 10739-2023, ISO 187.

2022, MOD)

GB/T 21245 Determination of color of paper and paperboard (C/2° diffuse reflectance method) (GB/T 21245-2007, ISO 5631:2000, IDT) GB/T 22877 Determination of ash content (on ignition residue) of paper, paperboard, pulp and cellulose nanomaterials (525 °C) (GB/T 22877-2023, ISO 1762:2019, MOD) GB/T 24324 Preparation of laboratory paper for physical testing of pulp - Conventional paper forming apparatus method (GB/T 24324-2009) ISO 5269-1:2005, MOD) GB/T 24326 Preparation of laboratory paper for physical testing of pulp - Rapid Kaiser method (GB/T 24326-2009) ISO 5269-2:2004, MOD) GB/T 40277 Determination of blue diffuse reflectance factor (ISO luminance) of paper, paperboard and pulp under indoor daylight conditions (GB/T 40277-2021, ISO 2470-1:2016, MOD) GB/T 43828.1 Printing technology - Prepress data exchange - Color marks for input scanner calibration - Part 1: Input scanner calibration Use color codes (GB/T 43828.1-2024, ISO 12641-1:2016, IDT).

ISO 2469:2024 Determination of the diffuse radiance factor (diffuse reflectance factor) of paper, paperboard and pulp.