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

GB/T 20216-2016

Replacing GB/T 20216-2006

**Pulp and paper -- Determination of the effective residual ink
concentration (ERIC number) -- Infrared reflectance
measurement**

纸浆和纸 有效残余油墨浓度（ERIC值）的测定 红外线反射率测量法
(English Translation)

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 20216-2006 "Determination of effective residual ink", compared with GB/T 20216-2006, the main change as follows.

--- expand the scope of application, this standard applies not only to pulp, but also for the mechanism of paper;

--- modified the preparation of pulp samples laboratory paper;

--- added part of the terms and definitions;

--- The calculation formula of light scattering coefficient and light absorption coefficient is modified.

This standard uses the re-drafting method to modify ISO 22754.:2008 "pulp and paper effective residual ink concentration (ERIC value) of the test (Infrared reflectance measurement method) ".

The technical differences between this standard and ISO 22754.:2008 are as follows.

--- on the normative reference documents, this standard has made a technical differences in the adjustment to meet China's technical conditions, the adjustment of the situation is reflected in Chapter 2, "normative reference documents", the specific adjustments are as follows.

- replace GB 186 with GB/T 450 with international standard;

- replace ISO 536 with equivalent GB/T 451.2 with international standard;

- GB/T 7973 instead of ISO 2469 with non-equivalent international standards;

- Replace ISO 3688 with GB/T 8940.2 with equivalent international standard;

Replace GB 14487 with GB/T 22903 with international standard;

- For pulp samples, quantify the laboratory sheet size as (60.0 ± 2.0) g/m² for practical

operation;

--- Because of the individual content in Chapter 6, so the chapter has been adjusted;

- the removal of the pulp sample preparation process to determine and record the wet paper paper pH requirements;

- Appendix A and references are deleted.

1 Scope

This standard specifies a method for determining the effective residual ink concentration (ERIC value) in pulp and paper - the infrared reflectance measurement Quantitative method.

This standard applies to deinking pulp containing black residual ink, recycled pulp and machine paper using recycled pulp. Only when the sample is on 950nm wavelength infrared radiation under the opacity of less than 97.0%, this standard is applicable.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 450 paper and paperboard samples taken and the sample longitudinal and horizontal, positive and negative measurements (GB/T 450-2002, ISO 186.

2002, MOD)

GB/T 451.2 Quantitative determination of paper and paperboard (GB/T 451.2-2002, eqvISO 536..1995) GB/T 7973 Determination of diffuse reflectance of paper, cardboard and pulp (diffuse/vertical method) (GB/T 7973-2003, ISO 2469.

1994, NEQ)

GB/T 8940.2 Preparation of Pulp Brightness (Whiteness) Specimen (GB/T 8940.2-2002, eqvISO 3688..1999) GB/T 22903 Standard Water for Pulp Physical Testing (GB/T 22903-2008, ISO 14487.:1997, MOD)

3 Terms and definitions

The following terms and definitions apply to this document.

Diffuse reflection factor diffusereflectancefactor the amount of radiant flux reflected by an object is the same as the diffuse illumination and the standard test condition completely reflects the diffuse reflectance of the diffuse reflector Ratio, often expressed as a percentage.

Internal reflection factor intrinsic reflectance factor R_{∞} the sample is thick enough to diffuse the sample when the diffuse reflectance factor, that is, the result is no longer doubled with the number of samples changed when the light Reflection factor.

Note: The reflectivity of the non opaque specimen depends on the measurement background, which is not the reflection factor of the sample itself.

Single layer reflection factor single-sheet reflectance factor R_0 Reflective factor of single layer specimen with black tube.