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

GB/T 25002-2010

**Paper, board and pulp -- Determination of pentachlorophenol in
an aqueous extract**

纸、纸板和纸浆 水抽提液中五氯苯酚的测定

(English Translation)

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Foreword

This revised standard adopts ISO 15320:2003 "Determination of pulp, paper and paperboard aqueous extract of pentachlorophenol." the main differences with the international standards as follows.

- Modify part of the scope of application;
- Modify part of the reagents and materials (see Chapter 4);
- An increase of some equipment (see Chapter 5);
- Preparation and extraction has been specifically described (see Chapter 6);
- Modify part of the test procedure (see Chapter 7);
- Increasing the lower limit of detection and recovery (see Chapter 9);
- Increased pentachlorophenol derivatives and internal standard gas chromatographic retention times (see Appendix A);
- Increasing the typical gas chromatogram of pentachlorophenol and internal standard derivative (see Appendix B);
- Increased derivative pentachlorophenol and internal standard quantification ion reference (see Appendix C);
- Increased pentachlorophenol and internal standard derivative typical gas chromatography - mass spectrum (see Appendix D).

This standard and ISO 15320:2003 are listed in contrast structures Appendix E.

This standard and ISO 15320:2003 technical differences are listed in Appendix F.

The Standard Appendix A, Appendix B, Appendix C, Appendix D, Annex E and Annex F is informative appendix.

The standard proposed by China National Light Industry Council.

This standard by the National Standardization Technical Committee of the paper industry.

This standard was drafted. SZCIQ Industrial Testing Center, China Pulp and Paper Research Institute, the People's Republic of China Exit Inspection and Quarantine and the National Guangdong, Shenzhen Academy of Inspection and Quarantine, the State Quality Supervision and Inspection Center of paper.

1 Scope

This standard specifies the aqueous extracts used in the pulp, paper and paperboard in pentachlorophenol by gas chromatography and gas chromatography - mass spectrometry.

This standard applies to the determination of a variety of paper, board and pulp in water extracts pentachlorophenol.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 462 paper, board and pulp - Determination of water sample (GB/T 462-2008; ISO 287. 1985, MOD;

ISO 638. 1978, MOD)

GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) EN645:1993 with the purpose of preparation of food contact paper and board for a cold water extract EN647:1993 with the purpose of preparation of food contact paper and board for a hot water extract Principle 3 Cold water extraction or the 1993 sample according to EN647.:1993 pairs of extracted water samples according to EN645. Solid phase extraction the emulated in the extract was concentrated to pentachlorophenol phenyl column and rinsed with n-hexane, acetylation with acetic anhydride, using ECD with (Electron capture detector) or MS (mass spectrometer) is measured by gas chromatography.

4 Reagents and materials

Unless otherwise indicated in the analysis using only recognized as analytical reagents.

4.1

Water, GB/T 6682, level.

4.2

methanol (CH₃OH). chromatography.

4.3

n-hexane (C₆H₁₄). chromatography.

Acetic anhydride 4.4 (C₄H₆O₃). concentration of greater than or equal to 99%.

4.5

hydrochloric acid solution. concentration of 0.1mol/L.

4.6

potassium carbonate solution. the concentration of 0.1mol/L, 13.8 g of weighed (accurate to 0.1g) of potassium carbonate, dissolved in water containing a small amount of a burn Cup, then transfer this solution into 1000mL volumetric flask with water to volume.

4.7

sulfuric acid solution. distilled water formulated excellent pure sulfuric acid solution at a concentration of 11's.

4.8

Internal standard. 2,3,6-trichlorophenol standard (C₆H₃Cl₃), a purity of greater than 99%.

4.9

pentachlorophenol standard (C₆Cl₅OH). purity of greater than 99%.

4.10

internal standard stock solution. accurately weighed amount of internal standard (4.8), formulated with methanol (4.2) to a concentration of 100μg/mL of internal standard Solution, and the solution Pipette 10mL to 100mL volumetric flask, dilute to the mark with methanol (4.2), this internal standard stock solution at a concentration of 10μg /mL, stored at 0 °C ~ 4 °C refrigerator for a period of six months.

4.11

pentachlorophenol standard stock solution. formulated with methanol (4.2) at a concentration of 125μg/mL solution of pentachlorophenol, the Pipette 1mL Solution to 25mL volumetric flask, dilute to the mark with methanol (4.2), this internal standard stock solution at a concentration of 5μg/mL, refrigerator 0 °C ~ 4 °C