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

GB/T 25001-2010

**Paper, board and pulp -- Determination of 7 specified
polychlorinated biphenyls (PCBs)**

纸、纸板和纸浆 7种多氯联苯 (PCBs) 含量的测定

(English Translation)

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Foreword

This revised standard adopts ISO 15318:1999 "Paper, paperboard and pulp seven kinds of polychlorinated biphenyls (PCBs) - Determination" (in English).

This standard and ISO 15318:1999 as compared to the main differences are as follows.

- Modify part of the scope of application;
- Modify the contents of the document normative references;
- Modify part of the reagents and materials (see Chapter 4);
- To increase and modify some of the equipment (see Chapter 5);
- Modify the contents of the sample preparation (see Chapter 6)
- Modify part of the test procedure (see Chapter 7);
- Increasing the lower limit of detection and recovery (see Chapter 9);
- An increase of 7 polychlorinated biphenyls and internal standard gas chromatography retention time (see Appendix A);
- An increase of 7 polychlorinated biphenyls and internal standard gas chromatography ECD detection typical chromatograms (see Appendix B);
- An increase of 7 polychlorinated biphenyls and internal standard chemical formula, Chemical Abstracts index, qualitative and quantitative select ion ion (see Annex Record C);
- An increase of 7 polychlorinated biphenyls and internal standard of a typical gas chromatography - mass spectrometry total ion current (see Appendix D).

Appendix E gives a comparison of the standard and structure of ISO 15318.

Appendix F shows the technical differences between this standard and ISO 15318's.

The Standard Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F for the 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

The standard provides for paper, board and pulp seven kinds specified polychlorinated biphenyls (PCBs) content by gas chromatography and gas chromatography - mass Spectroscopy (GC/MS) measurement method.

This standard applies to the determination of a variety of paper, board and pulp polychlorinated biphenyls (PCBs) content.

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 450 and take samples to an aspect of paper and paperboard samples, positive and negative determination (GB/T 450-2008, ISO 186.

2002, MOD)

GB/T 462 paper, board and pulp - Determination of water sample (GB/T 462-2008, ISO 287. 1985, ISO 638.

1978, MOD)

GB/T 740 pulp samples taken (GB/T 740-2003, ISO 7213. 1981, IDT) GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) Principle 3 the analytes with boiling ethanol - potassium hydroxide solution or methanol - potassium hydroxide solution was extracted, the extract was mixed to take part with water, using Solid phase extraction of PCBs to extract concentrated to a C18 column, then rinsed with n-hexane. PCBs may hexane phase Use with electron capture detector (ECD) gas chromatography or gas chromatography - mass spectrometry was quantified by gas chromatography - mass spectrometer inlet Line spectra.

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

Ethanol (C₂H₅OH). chromatography.

4.3

methanol (CH₃OH). chromatography.

4.4

n-hexane (C₆H₁₄). chromatography.

4.5

Concentrated sulfuric acid (H₂SO₄), 1.84g/mL, the mass fraction of about 98%.

4.6

Ethanol - potassium hydroxide solution (2%). The 30.0g of potassium hydroxide was dissolved in 1500mL 19.1 volume ratio of ethanol/water and allowed to stand 24h, pour the liquid and retain the clearing.

4.7

Internal standard. 2,4,6 PBBs standards (TBBP), a purity of greater than 99%.

4.8 2,2', 5-trichloro-biphenyl (PCB-18). 99%, respectively.

4.9

trichloro biphenyl (PCB-28). purity of greater than 99%.