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

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Determination of restricted substances (polybrominated biphenyls and polybrominated diphenyl ethers) in electrical and electronic equipment

电子电气产品中限用物质多溴联苯 (PBBs)、多溴二苯醚 (PBDEs) 检测方法
(English Translation)

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Foreword

Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F, Appendix G and Appendix H of this Guidance Technical Document are data.

Sex appendix.

This guidance document is presented by the Environmental Standardization Technical Committee (SAC/TC297) of the National Electrical and Electronic Products and Systems.

Return to the mouth.

The main technical documents of this guiding technical document are. Shenzhen Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

This guiding technical document participated in the drafting unit. Shenzhen Institute of Metrology and Quality Inspection.

1 Scope

This guidance document specifies methods for determining the levels of polybrominated biphenyls and polybrominated diphenyl ethers in electrical and electronic products.

This guidance document applies to the determination of polybrominated biphenyls and polybrominated diphenyl ethers in electrical and electronic products.

The first method. gas chromatography-mass spectrometry

2 Principle

The sample is subjected to microwave extraction or Soxhlet extraction, and the extract is purified by a silica gel solid phase extraction column, and then concentrated, and the volume is used as a measurement solution.

Chromatography-mass spectrometry (GC/MS) was determined by internal standard method.

3 Reagents and materials

3.1

Toluene. chromatographically pure.

3.2

n-hexane. chromatographically pure.

3.3

n-propanol. chromatographically pure.

3.4

Methanol. Chromatographically pure.

3.5

Toluene. methanol (10.1).

3.6

Toluene. n-propanol (1.1).

3.7

Liquid nitrogen. industrial grade.

3.8

PBBs standard solution.

3.9

PBDEs standard solution.

3.10

Preparation of mixed standard solution. Transfer the appropriate volume of PBBs (3.8) and PBDEs (3.9) standard solution separately, dilute with toluene, match Prepare a standard solution of the desired concentration.

3.11

Internal standard. Decachlorobiphenyl solution.

3.12

Silica gel solid phase extraction column. 6 mL, 2 g or equivalent, washed with 5 mL of n-hexane (3.2) before use to keep it moist.

4 Instruments

4.1

Gas Chromatography-Mass Spectrometer. The highest mass-to-charge ratio is above 1000amu.

4.2

Soxhlet extraction device.

4.3

Rotate the evaporator.

4.4

Shredder or similar equipment.

4.5

Closed microwave extractor.

4.6

Solid phase extraction unit.

4.7

Analytical balance. Sensitivity 0.1mg.

5 Sample preparation

The sample split in the electrical and electronic products is broken into small pieces of less than 1cm x 1cm, and then pulverized by liquid nitrogen (3.5) (4.4) GB/Z21276-2007