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

中华人民共和国国家标准

GB/T 17593.2-2007

**Textiles—Determination of heavy metals—Part 2:
Inductively coupled plasma atomic emission spectrometry**

纺织品重金属的测定

第 2 部分:电感耦合等离子体原子发射光谱法

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Foreword

GB/T 17593 *Textiles—Determination of heavy metals* consists of following parts:

- Part 1: Atomic absorption spectrophotometry;
- Part 2: Inductively coupled plasma atomic emission spectrometry;
- Part 3: Chromium(VI) —Spectrophotometry;
- Part 4: Arsenic and mercury —Atomic fluorescence spectrophotometry.

This Standard is part 2 of GB/T 17593, use the determination of Atomic absorption spectrophotometry.

Annex A of this Part is informative annex.

This Part is proposed by China Textile Industry Association (CNTAC).

This Part is under the jurisdiction of Subcommittee 1 of National Technical Committee 209 on Textiles of Standardization Administration of China.

Draft units of this Part: Tianjin Entry-Exit Inspection and Quarantine Bureau and Textile Industry Standardization Research Institute.

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Textiles—Determination of heavy metals—Part 2:

Inductively coupled plasma atomic emission spectrometry

WARNING — Persons using this Part of GB/T 17593 should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This Part of GB/T 17593 specifies the simultaneously determination methods of eight heavy metals extractable in textiles, including arsenic (As), cadmium (Cd), cobalt (Co), chromium (Cr), copper (Cu), nickel (Ni), lead (Pb) and antimony (Sb) through a plasma autonomic emission spectrometry (ICP).

This Part applies to the textiles and textile products.

2 Normative References

The articles contained in the following documents have become this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 3922 Test Methods of Perspiration Color Fastness of Textiles

GB/T 6682 Specifications of Water Used in Analysis Laboratory and Test Methods.

3 Principles

After the sample acidic perspiration is extracted, the emission strengths of eight heavy metals including lead, cadmium, arsenic, copper, cobalt, nickel, chromium and antimony that are in the extract liquor are measured through a inductive coupled autonomic emission spectrometry under corresponding analysis wavelengths, the concentrations of all heavy metal ions are determined in comparison with the standard working curve and the contents of extractable heavy meters in the



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