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

GB/T 45583-2025

**Determination of common insecticide residue in cotton fiber -
High performance liquid chromatography-mass spectrometry
method**

棉纤维常用杀虫剂农药残留的测定 高效液相色谱-串联质谱法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Fiber Standardization Technical Committee (SAC/TC513).

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Determination of common pesticide residues in cotton fibers High performance liquid chromatography-tandem mass spectrometry Warning---People who use this document should have experience in chemical laboratory work. This document does not address all possible safety issues.

The user is responsible for taking appropriate safety and health measures and ensuring compliance with the conditions stipulated by relevant national laws and regulations.

1 Scope

This document describes a method for the determination of pesticide residues of commonly used insecticides on cotton fibers using high performance liquid chromatography-tandem mass spectrometry.

This document is applicable to the determination of 19 pesticide residues in cotton fiber, including acephate, pymetrozine, thiamethoxam, imidacloprid, thiamethoxam benomyl, acetamiprid, carbofuran, chlorantraniliprole, emamectin benzoate, malathion, fipronil, indoxacarb, hexaflumuron, propyl Bromophos, chlorpyrifos, chlorpyrifos, cypermethrin, avermectin, and carbosulfan.

2 Normative references

GB/T 6097

GB/T 6682

GB/T 8170

GB/T 14666

3 Terms and definitions

The terms and definitions defined in GB/T 14666 and the following apply to this document.

3.1 Insecticide

Chemical preparations used to control crop pests.

3.2 Pesticide residues

Insecticide precursors remaining in cotton fibers.

4 Principle

The pesticides remaining in the sample were extracted with acetonitrile, treated with ultrasound and vibration, and determined by high performance liquid chromatography-tandem mass spectrometry. Standard quantitative method.

5 Reagents and Materials

5.1 Acetonitrile. chromatographic grade.

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