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GA

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

GA/T 103-1995

**Forensic sciences - Examination methods for five pyrethroid
pesticides including fenpropathrin in biological samples -
GC-MS**

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GA/T 103-1995 "Qualitative and Quantitative Analysis Methods for Pyrethroid Pesticides in Poisoning Materials", and Compared with GA/T 103-1995, except for editorial changes, the main technical changes are as follows.

- Modified the standard name (see cover, cover of 1995 edition);
- Deleted the gas chromatography inspection method (see the first and second parts of the 1995 edition);
- Deleted the TLC inspection method (see the third edition of the 1995 edition);
- Revised the content of reagents and materials (see Chapter 5, Chapter 5 of the 1995 edition);
- Revised the content of instruments and equipment (see Chapter 6, Chapter 6 of the 1995 edition);
- Added the method of gel permeation chromatography concentration combined instrument (see 7.1.2.1.1);
- Added gas chromatography-mass spectrometry test method (see 7.1.2.1.2).

Please note that some content of this document may involve patents. The issuer of this document does not assume responsibility for identifying these patents.

This standard was proposed by the National Toxic Analysis Sub-Committee of Criminal Technology Standardization Technical Committee (SAC/TC179/SC1) and be in charge.

1 Scope

This standard stipulates cypermethrin, lambda cyhalothrin, and cypermethrin in forensic biological samples (blood, urine, liver, kidney, stomach, and stomach contents, etc.)

Qualitative and quantitative test method for gas chromatography-mass spectrometry (GC-MS) of pyrethrin, fenvalerate and deltamethrin.

This standard is applicable to fenpromethrin, lambda cyhalothrin, cypermethrin, fenvalerate, and deltamethrin in forensic biological samples Qualitative analysis and quantitative analysis. Other suspicious samples of cypermethrin, lambda-cyhalothrin, cypermethrin, fenvalerate and deltamethrin Qualitative analysis and quantitative analysis can refer to use.

2 Normative references

The following documents are essential for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 6682 Analysis of laboratory water specifications and test methods GA/T 122 Nomenclature of poison analysis

3 Terms and definitions

The terms and definitions defined in GA/T 122 apply to this document.

4 Principle

Use blank samples and added samples as controls, and extract, purify, and concentrate biological samples in accordance with the requirements of parallel operation.

Spectral-mass spectrometry qualitative and quantitative. Qualitative judgment is based on retention time, mass ion characteristic ion fragment peak and relative abundance ratio; peak surface Based on the product, quantitative analysis was performed using the external standard method.

5.1 Reagents

The water used for the experiment shall conform to the tertiary water specified in GB/T 6682. Unless otherwise stated, the reagents used in the analysis are of analytical grade, Reagents include.

- a) ethyl acetate (chromatographically pure);
- b) Cyclohexane (chromatographically pure);

- c) methylene chloride;
- d) methanol;
- e) Standard solution.