



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

GB 23200.31-2016

Replacing SN/T 1983-2007

**Food safety national standard -- Determination of permethrin
residues in food by gas chromatography-mass spectrometry**

食品中丙炔氟草胺残留量的测定 气相色谱-质谱法

(English Translation)

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Foreword

This standard replaces SN/T 1983-2007 "Method for the determination of benzalkonium bromide residues in food for import and export by gas chromatography-mass spectrometry".

Compared with SN/T 1983-2007, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;

- the name of the "import and export food" to "food";
- increase the "other food reference implementation" in the standard range.

This standard replaced the previous version of the standard release.

-SN/T 1983-2007.

National standards for food safety Determination of permethrin residues in food by gas chromatography - mass spectrometry

1 Scope

This standard specifies the preparation of the method for the determination of propafenone residues in food and the method of gas chromatography-mass spectrometry.

This standard applies to apples, spinach, ginger, fish, chicken, pork, soybeans, rice, almonds and liver caffeine residues of the quantitative determination of other food can refer to the implementation.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB 2763 National Standard for Food Safety - Maximum Residue Limit of Pesticides in Foodstuffs GB/T 6682 Analytical laboratory water specifications and test methods

3 Principle

The samples were extracted with acetonitrile or ethyl acetate and purified by amino solid phase extraction. The eluate was concentrated and concentrated. The gas chromatography-mass spectrometry Ion monitoring mode for determination, external standard method quantitative.

4 Reagents and materials

Unless otherwise specified, all reagents are of analytical grade and water is in accordance with the primary water specified in GB/T 6682.

4.1 Reagents

4.1.1

Acetonitrile (CH₃CN). Chromatographically pure.

4.1.2

Toluene (C₇H₈). Chromatographic pure.

4.1.3

Ethyl acetate (C₄H₈O₂). Chromatographic purity.

4.1.4

n-hexane (C₆H₁₄). chromatographic purity.

4.1.5

anhydrous sodium sulfate (Na₂SO₄). 650 °C burning 4 h, stored in a sealed container for use.

4.2 Reagent preparation

4.2.1

acetonitrile saturated n-hexane. take a small amount of acetonitrile added to n-hexane, vigorous shaking, and continue to add acetonitrile to appear obvious stratification, static for use.

4.2.2

acetonitrile - toluene (3 1). take 300 mL of acetonitrile, add 100 mL of toluene, shake back.

4.3 Standards

4.3.1

Propoxifenone (Flumioxazin, CH₁₅FN₂O₄, CAS.No. 103361-09-7) Standard. Purity > 99%.

4.4 Standard solution preparation

4.4.1

propafenone standard solution. accurately weighed the appropriate amount of propafenamine standard, with acetonitrile prepared into a concentration of 100 µg/mL Standard stock solution, this solution is stored in a brown volumetric flask, 0 °C ~ 4 °C under the conditions of preservation. Dilute the stock solution with acetonitrile as needed, Prepared into the appropriate concentration of the standard working fluid, 0 °C ~ 4 °C under the conditions of preservation.

4.4.2

matrix standard working solution. matrix standard working solution is the appropriate amount of propafenone standard use of liquid, with blank matrix extract Prepare the appropriate concentration of matrix standard working solution. Matrix standard working solution should be used with the current distribution.

4.5 Materials

4.5.1

LC-NH₂ Amino solid phase extraction column. 3 mL, 0.5 g or equivalent.

5 Instruments and equipment

5.1

Gas Chromatography-Mass Spectrometer. Equipped with an electron impact source (EI).

5.2

Analysis of balance. 0.01 g and 0.0001 g.

5.3

Rotary Evaporator.

5.4

solid phase extraction device.

5.5

blowing nitrogen enrichment instrument.

5.6

vortex mixer.

5.7

Centrifuge.

5.8

high-speed organization of crusher.

5.9

Concentrated bottles. 250 mL.

5.10

Centrifuge tube. 15 mL, 50 mL.

5.11

Microinjector. 10 μ L.

6.1 Soybeans, rice and almonds

500 g of the sample was taken and pulverized and passed through a sample sieve having a pore size of 2.0 mm. Mixed evenly divided into two, Into a clean container, sealed and marked; stored at -4 °C in dark.