



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

GB 23200.50-2016

Replacing SN/T 2561-2010

**Food safety national standard -- Determination of Pyridine
Pesticide Residues in Food by Liquid Chromatography -- Mass
Spectrometry / Mass Spectrometry**

食品中吡啶类农药残留量的测定 液相色谱-质谱 质谱法

(English Translation)

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Foreword

This standard replaces SN/T 2561-2010 "Determination of Pyridine Pesticide Residues in Import and Export Food by Liquid Chromatography-Mass Spectrometry".

Compared with SN/T 2561-2010, 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 2561-2010.

National standards for food safety Determination of Pyridine Pesticide Residues in Food by Liquid Chromatography - Mass Spectrometry/Mass Spectrometry

1 Scope

This standard stipulates that imidacloprid, acetamiprid, imazethapyr, fenfosbenone, pyridylamide, thiazole niacin and fenpropathrin Determination of seven kinds of pyridine pesticide residues by sample preparation and liquid chromatography - mass spectrometry/mass spectrometry.

This standard applies to rice, wheat, potatoes, spinach, citrus, walnut, tea, pork, fish, liver and milk Determination and confirmation of the residual residues of insecticides, acetamiprid, imazethapyr, furazolidone, pyridinamide, thiazole niacin and fenpropathrin it can refer to the implementation of food.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the date of the note applies this document. 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 residual pesticide in the sample was extracted with sodium chloride after salting out the acetonitrile, and the extract was purified by graphitizing carbon black or C18 solid phase extraction column, Using liquid chromatography - mass spectrometry/mass spectrometry to detect and confirm the external standard method.

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). liquid chromatography grade.

4.1.2

Methanol (CH₃OH). liquid chromatography grade.

4.1.3

Toluene (C₇H₈).

4.1.4

acetic acid (CH₃COOH).

4.1.5

Sodium chloride (NaCl).

4.1.6

anhydrous sodium sulfate (Na₂SO₄). 650 °C burning 4 h, placed in the dryer to spare.

4.2 Solution preparation

4.2.1 0.1% acetic acid solution. take 1mL acetic acid, diluted with water and set to 1000 mL.

4.2.2

methanol - water (1 1, V/V). measure 100 mL of methanol, add 100 mL of water, mix well.

4.2.3

toluene - acetonitrile acidic solution. measure 100 mL of toluene, add 300 mL of acetonitrile and 4 mL of acetic acid, mix well.

4.3 Standards

4.3.1

imidacloprid, acetamiprid, imazethapyr, furazolidone, pyridinamide, thiazole niacin and fenpropathrin Standard substance. purity $\geq$ 98%, see Appendix A.

4.4 Standard solution preparation

4.4.1

standard stock solution. respectively, accurately weighed the appropriate amount of the standard, with methanol prepared into 1.0 mg/mL standard stock solution, 4 °C Save under darkness.

4.4.2

Preparation of mixed standard intermediate liquid. Take the above standard stock solution

amount, with methanol prepared into 10 g/mL mixed standard solution, 4 °C save under the dark.

4.4.3

Preparation of standard working solution. the appropriate amount of mixed standard intermediate solution, with a blank sample matrix prepared into the appropriate concentration of the standard Working solution, prepared before use.

4.5 Materials

4.5.1

C18 solid phase extraction cartridge. 500 mg, 3 mL or equivalent.

4.5.2

Graphite Carbon Black Column. 500 mg, 6 mL or equivalent.

5 Instruments and equipment

5.1

High Performance Liquid Chromatography-Mass Spectrometry/Mass Spectrometer.
Distribution Spray Ion Source (ESI).

5.2

Analysis of the balance. the sense of 0.0001 g and 0.01 g.

5.3

Scroll Mixer.

5.4

Centrifuge (maximum speed 10000 r/min).

5.5

nitrogen dryers.

5.6

Rotary Evaporator.

5.7

solid phase extraction device.

5.8

Crusher.