



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

GB 23200.71-2016

Replacing SN/T 2914-2011

**Food safety national standard -- Determination of residues of
diester imide in foodstuffs by gas chromatography-mass
spectrometry**

食品中二缩甲酰亚胺类农药残留量的测定 气相色谱-质谱法

(English Translation)

Issued on: December 18, 2016

Implemented on: June 18, 2017

**Issued by: National Health and Family Planning Commission of the
People 's Republic of China**

Table of Contents

Foreword	
1 Scope	
2 Normative reference documents	
3 Principle	
4 Reagents and materials	
4.1 Reagents	
4.2 Solution preparation	
4.3 Standards	
4.4 Standard solution preparation	
4.5 Materials	
5 Instruments and equipment	
6 Preparation and storage of samples	
6.1 Preparation of the sample	
6.2 Sample storage	
7 Analysis steps	
7.1 Extraction	
7.2 Purification	
7.3 Determination	
7.4 Blank experiment	
8 Results are calculated and expressed	
9 Precision	
10.1 Quantitation limits	
10.2 Recovery rate	

Foreword

This standard replaces SN/T 2914-2011 "Determination of the amount of diester imide pesticide residues in export food".

Compared with SN/T 2914-2011, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- the name of the "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 2914-2011.

National standards for food safety Determination of residues of diester imide in foodstuffs by gas chromatography - mass spectrometry

1 Scope

This standard specifies the method of gas chromatography-mass spectrometry for the determination of vinifolia, bacteriocide, pyriholide and iso-urea residues in food.

This standard applies to tea, rice, garlic, apple, spinach, chestnut, wine, honey, fish, chicken, pig kidney, pork Determination of residual amount of Velveti, Bacteriocarbide, Pythium, and Isozyme, and other foodstuffs can be used for reference.

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 acetone-n-hexane mixed solvent, purified by gel column chromatography and solid phase extraction column. Gas chromatography-mass spectrometry 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

Acetone (C₃H₆O). Residue level.

4.1.2

n-hexane (C₆H₁₄). residual grade.

4.1.3

Cyclohexane (C₆H₁₂). Residue level.

4.1.4

ethyl acetate (C₄H₈O₂). residual grade.

4.1.5

Sodium chloride (NaCl).

4.1.6

anhydrous sodium sulfate (Na₂SO₄). 650 °C burning 4 h, set the dryer in the cooling, sealed preservation.

4.2 Solution preparation

4.2.1

Acetone-n-hexane solution (1 4, V1 V2). Take 100 mL of acetone, add 400 mL of n-hexane and shake well.

4.2.2

Acetone-n-hexane solution (1 1, V1 V2). Take 100 mL of acetone, add 100 mL of n-hexane and shake well.

4.2.3

Ethyl acetate + cyclohexane (1 + 1, V1 V2). Take 100 mL of ethyl acetate, add 100 mL of cyclohexane and shake well.

4.3 Standards

(Vinclozolin, C₁₂H₉Cl₂NO₃, CAS NO. 50471-44-8), Bacillus fungus standard (Ethephon, C₁₃H₁₁Cl₂NO₅, CAS NO. 84332-86-5), Pythiumide standard (Procymidone, C₁₃H₁₁Cl₂NO₂, CAS NO. 32809-16-8), the purity of the steroid urea standard (iprodone, C₁₃H₁₃Cl₂N₃O₃, CAS NO. 36734-19-7) was > 99%.

4.4 Standard solution preparation

4.4.1

Velveti, Bacteriocarbide, Pythium, Biomurureum Standard stock solution. accurately weighed the amount of vinyl mushroom, Mold, antibiotic urea standard, with acetone preparation of 100µg/mL standard stock solution, and then according to the test requirements with n-hexane diluted to the appropriate concentration Mixed standard working solution. The standard stock solution is protected from 0 to 4°C.

4.4.2

Iodine urea matrix standard working solution. Isozyme matrix standard working solution is prepared with a sample blank solution of different concentrations of the substrate standard Quasi-working solution for standard curve. Substrate standard working solution is now available.

4.5 Materials

4.5.1

Gel purification column. 400mm x 25mm. Filler Bio-Beads S-X3, 38-75um, before use to do the leaching curve.

4.5.2

Graphitized Carbon Black Solid Phase Extraction Column. 250 mg, 3 mL or equivalent. Use the elution curve before use, before use with 3mL acetone - n - hexane (4.2.2) pre-leaching.

5 Instruments and equipment

5.1

Gas Chromatography-Mass Spectrometer. Electronically Ionized Ion Source (EI Source).

5.2

Homogenizer. speed greater than 10000 r/min.

5.3

Rotary Evaporator.

5.4

Gel Purifier.

5.5

Centrifuge. speed greater than 4000 r/min.

5.6

nitrogen blowing instrument.

5.7

Analytical balance. 0.01 g and 0.0001 g.

6.1.1 Apple, garlic, spinach, chestnut

Take a representative sample of about 500g (can not be washed), crushed with a pulverizer, into a clean container as a sample, sealed, marked mark.