



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

GB 23200.37-2016

Replacing SN/T 2323-2009

**Food safety national standard -- Determination of 20 Pesticide
Residues in Foods by Liquid Chromatography-Mass
Spectrometry / Mass Spectrometry**

食品中烯啶虫胺、呋虫胺等20种农药残留量的测定 液相色谱-质谱 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	
5 Instruments and equipment	
6 Preparation and storage of samples	
7 Analysis steps	
7.1 Extraction	
7.2 Purification	
7.3 Determination	
7.4 Blank test	
8 Results are calculated and expressed	
9 Precision	
10.1 Quantitation limits	
10.2 Recovery rate	

Foreword

This standard replaces SN/T 2323-2009 "20 kinds of pesticide residues in the import and export of food insects, dinotech and other pesticide residues detection method liquid color Spectrum-mass spectrometry/mass spectrometry".

Compared with SN/T 2323-2009, 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 2323-2009.

National standards for food safety Determination of 20 Pesticide Residues in Foods Liquid chromatography - mass spectrometry/mass spectrometry

1 Scope

This standard specifies the food in the dienetraxine, dinotefuran, spiramycin, butylbenzene morpholine, acaricidomide - formamidine, thiophosphate, Acarbidomide, metoclopramide, polymycamycin A, polymycamycin D, aminobiomycin, methylaminobiomycin 1, methylamino Abamectin 2, allyl grass chloride, deworming phosphorus, diniconazole, abamectin, aminoside amikacin pesticide residues liquid chromatography-mass spectrometry / Mass spectrometry method and sample preparation method.

This standard applies to the import and export of rice, brown rice, corn, barley and wheat in the above 20 kinds of pesticide residues detection and confirmation, the 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 aqueous acetonitrile and partitioned with n-hexane liquid, followed by graphite carbon and N-propyl ethylenediamine solid phase extraction (PSA) and identified by liquid chromatography-mass spectrometry/mass spectrometer and quantified by 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

n-hexane (C₆H₁₄).

4.1.2

Toluene (C₇H₈).

4.1.3

Methanol (CH₄O).

4.1.4

Acetonitrile (C₂H₃N).

4.1.5

Formic acid (CH₂O₂).

4.1.6

Sodium chloride (NaCl). Analytical purity.

4.1.7

magnesium sulfate heptahydrate (MgSO₄ · 7H₂O). analytical grade.

4.2 Solution preparation

4.2.1

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

4.3 Standards

4.3.1

Pesticide Standards. Nitenpyram, CAS No.. 150824-47-8, Dinotefuran, CAS No..165252-70-0, Spiroxamine, CAS No..118134-30-8, Fenpropimorph (CAS No..67564-91-4), acaricidal-(Diafenthiuron-methanimidamide, CAS No..136337-81-9), trismorpholine (Tridemorph, CAS No..81412-43-3), Metconazole, CAS No..125116-23-6, Diafenthiuron-urea, CAS No..136337-67-2, (Spinosyn A, CAS No..131929-60-7), polymyxin D (Spinosyn D, CAS No..131929-63-0), allyl chloride (Dichlormid, CAS No..37764-25-3), insecticidal phosphorus (Naphthalophos, CAS No..1491-41-4), diniconazole, CAS No..83157-10-3) purity ≥97%; Milbemectin (CAS No.. 51596-10-2), Tiamulin-fumarate, CAS No..55297-96-6), Emamectin-amino, Emamectin-methylamino 1, (Amamectin-methylamino 2), abamectin (CAS No..71751-41-2), methyl formic acid amide the purity of Emamectin-N-methyl formyl amino was more than 80%.

4.4 Standard solution preparation

4.4.1

standard reserve solution. respectively, accurately weighed the right amount of pesticide standards, with acetone dubbed the concentration of 100 µg/mL standard stock solution.

The standard stock solution is stored at 0 ° C to 4 ° C and is prepared every 12 months.

4.4.2

mixed standard stock solution. respectively, to absorb the right amount of close to Ting, tiamulin, polymycamycin A, polymycamycin D, amino averae 1, methionine avermectin 2, allyl grass chloride, insecticidal phosphorus, diniconazole, abamectin, methyl formate Ave the standard stock solution of the 12 kinds of pesticides was mixed into a standard stock solution for the A group of pesticides, the concentration of the mixed standard stock solution was 10 Mg/mL, respectively, to absorb the appropriate amount of allyl insects, dinotefuran, spirocosporin, butylbenzene morpholine, acaricidomide - formamidine, thiophosphate, the eight standard mixed stock solutions of the acaricidon-urea were mixed into a standard stock solution for the concentration of the B group of pesticides and the mixed standard stock solution for 10 µg/mL. The standard stock solution is stored at 0 ° C to 4 ° C and is prepared every 6 months.

4.4.3

mixed standard working solution. A group and B group of pesticide mixed standard stock solution were diluted with acetonitrile to the appropriate concentration of standard workers for liquid. In 0 °C ~ 4 °C under the conditions of storage. Prepared once every 3 months.

5 Instruments and equipment

5.1

High Performance Liquid Chromatography-Mass Spectrometry/Mass Spectrometer. Equipped with an electrospray ion source (ESI).

5.2

Analysis of balance. 0.01 g and 0.0001 g.

5.3

Rotary Evaporator.

5.4

Oscillator.

5.5

Centrifuge. 5 000 r/min.