



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

GB 23200.35-2016

Replacing SN/T 2213-2008

**Food safety national standard -- Determination of Urea
Pesticide Residues in Plant -- Derived Foods by Liquid
Chromatography-Mass Spectrometry**

植物源性食品中取代脲类农药残留量的测定 液相色谱-质谱法

(English Translation)

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Foreword

This standard replaces SN/T 2213-2008 "Determination of Urea Pesticide Residues in Import and Export Plant-derived Foods Liquid Chromatography-Mass Spectrometry /Mass spectrometry".

Compared with SN/T 2213-2008, 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 of plant-derived food" to "plant-derived food";
- increase the "other food reference implementation" in the standard range.

This standard replaced the previous version of the standard release.

-SN/T 2213-2008.

National standards for food safety Determination of Urea Pesticide Residues in Plant - derived Foods by Liquid Chromatography - Mass Spectrometry

1 Scope

This standard specifies the method for the determination of 15 substituted urea pesticides (see Appendix A) residues in plant-derived foods by liquid chromatography-mass spectrometry.

This standard applies to quantitative determination of 15 substituted urea pesticide residues in maize, soybeans, oranges, rice and Chinese cabbage. Other foods can refer to the implementation 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, cleaned up by HLB solid phase extraction column, and determined by liquid chromatography-mass spectrometry 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

Methanol (CH₃OH, 67-56-1). Chromatographic Purification.

4.1.2

acetonitrile (CH₃CN, 75-05-8). chromatographic purity.

4.1.3

Sodium chloride (NaCl, 7647-14-5).

4.1.4

acetic acid (CH₃COOH, 64-19-7). chromatographic purity.

4.2 Solution preparation

4.2.1

Acetic acid - Aqueous solution (1 -> 1000). Accurately absorb 1 mL of acetic acid in a 1 000 mL volumetric flask, add water to the scale line, shake Evenly used.

4.2.2

acetic acid - methanol solution (7 3). accurately measure 70 mL of acetic acid - water solution (1 -> 1000) and 30 mL of methanol, shake back.

4.3 Standards

4.3.1

Substituted Urea Pesticide Reference Material. See Appendix A, purity greater than 99%.

4.4 Standard solution preparation

4.4.1

substituted urea pesticide standard stock solution (100 mg/L). were accurately weighed 10.0mg substituted urea pesticide reference substance, with B Nitrile dissolved, transferred to 100 mL volumetric flask, with acetonitrile volume capacity. The standard solution is stored at -18 ° C for a period of 6 months.

4.4.2

Substituted Urea Pesticide Standard Intermediate (1.0 mg/L). Accurate extraction of 1.00 mL of each substituted urea standard stock solution (100 Mg/L) to 100 mL volumetric flask, with acetonitrile volume. 4 °C dark preservation, the shelf life of 1 month.

4.5 Materials

4.5.1

HLB solid phase extraction column. 6 mL 500 mg, or equivalent.

4.5.2

Microporous membrane. 0.22 μm , organic phase type.

5 Instruments and equipment

5.1

Liquid Chromatography-Mass Spectrometer, Distribution Spray Ion Source (ESI).

5.2

Analysis of balance. 0.01 g and 0.0001 g.

5.3

Crusher.

5.4

Tissue crusher.

5.5

Centrifuge. 5 000 r/min.

5.6

Homogenizer.

5.7

blowing nitrogen enrichment instrument.

5.8

Scroll Mixer.

5.9

Solid phase extraction unit with vacuum pump.

5.10

pipette. 10-100 L, 100-1000 L.

5.11

Polypropylene centrifuge tube. 15mL, 50 mL, with plug.