



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

GB 23200.6-2016

Replacing SN/T 1737.6-2010

**Food safety national standard -- Methods for the determination of herbicide
residues -- Part 6: Determination of herbicidal residues in food by liquid
chromatography-mass spectrometry / mass spectrometry**

**除草剂残留量检测方法 第6部分：液相色谱-质谱 质谱法测定 食品中杀草强残留
量**

(English Translation)

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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 1737.6-2010 "Liquid Chromatography-Mass Spectrometry/Mass Spectrometry" for the detection of herbicidal residues in foodstuffs for import and export.

This standard compared with SN 1737.6-2010, 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 1737.6-2010.

National standards for food safety Method for determination of herbicide residue Part 6.
Determination of herbicidal residues in food by liquid chromatography - mass spectrometry/mass spectrometry

1 Scope

This standard specifies the method of LC-MS-MS for the determination of herbicidal residues in foodstuffs by liquid chromatography-tandem mass spectrometry (LC-MS-MS).

This standard applies to apples, pineapples, spinach, carrots, basil leaves, honeysuckle, ginger powder, pepper powder, tea, wheat, corn, Peanut, meat, fish and animal liver in the killing of grass strong residue detection and confirmation; 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 and purified by PCX solid phase extraction column or ENVI-Carb solid phase extraction column. Liquid chromatography-mass spectrometry/mass spectrometry Quantitative quantity.

4 Reagents and materials

Unless otherwise specified, all reagents are chromatographic pure, water to meet the GB/T 6682 in the provisions of a water.

4.1 Reagents

4.1.1

glacial acetic acid (C₂H₄O₂).

4.1.2

Ammonia (NH₄OH).

4.1.3

Dichloromethane (CH₂Cl₂).

4.1.4

Acetone (C₃H₆O).

4.2 Solution preparation

4.2.1 1% acetic acid solution. absorb 10 mL of glacial acetic acid, with ultra-pure water volume to 1 L.

4.2.2 25% acetone - water solution. the amount of 250 mL of acetone, with ultra-pure water volume to 1 L.

4.2.3 1% acetic acid - acetone - water solution. absorb 10 mL of glacial acetic acid, with acetone aqueous solution to 1 L.

4.2.4 5% ammoniated methanol solution. absorb 5 mL of ammonia, with methanol volume to 100 mL.

4.3 Standards

4.3.1

Straw standard material. Amitrole, C₂H₄N₄, molecular weight. 84.08, CAS. 61-82-5, purity >= 99.9%.

4.4 Standard solution preparation

4.4.1

to kill grass strong standard stock solution. Weigh the appropriate amount of saccharification standard (accurate to 0.1mg) in 50mL volumetric flask, with acetonitrile prepared into 1.0 Mg/mL standard stock solution; 0 ~ 4 0C preservation.

4.4.2

to kill grass strong standard working fluid. according to the need for mobile phase diluted with the preparation of the preparation of the standard concentration of the standard working fluid. 0-4 0C Save

4.5 Materials

4.5.1

PCX solid phase extraction column. 60 mg/3 mL or equivalent. (Mixed cation exchange column).

4.5.2

ENVI-Carb solid phase extraction column. 500 mg/6 mL or equivalent, (graphitized non-porous carbon).

4.5.3

Filtration. 0.2 μm .

5 Instruments and equipment

5.1

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

whirlpool mixer.

5.4

Rotary Evaporator.

5.5

high speed homogenizer.

5.6

Centrifuge.

5.7

Oscillator.

5.8

Grain grinder.

5.9

Food muffler.

5.10

peanut grinder.