



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

GB 23200.11-2016

Replacing GB/T 23201-2008

**Food safety national standard -- Determination of 413 Pesticides and
Related Chemicals Residues in Mangzhi, Honeysuckle, Medlar and
Lotus Leaves by Liquid Chromatography-Mass Spectrometry**

桑枝、金银花、枸杞子和荷叶中413种农药及相关化学品残留量的测定 液相色谱-
质谱法

(English Translation)

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Foreword

This standard replaces GB/T 23201-2008 "413 kinds of pesticide and related chemical residues in mulberry, honeysuckle, medlar and lotus leaf Determination of liquid chromatography - tandem mass spectrometry".

This standard compared with GB/T 23201-2008, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- increase the "other food reference implementation" in the standard range.

This standard replaced the previous version of the standard release.

-GB/T 23201-2008.

National standards for food safety 813 pesticides and related chemical residues in mulberry, honeysuckle, medlar and lotus leaf Determination of liquid chromatography - mass spectrometry

1 Scope

This standard specifies the residues of 413 pesticides and related chemicals (see Appendix A and Appendix E) residues in mulberry, honeysuckle, medlar and lotus leaf Determination of liquid chromatography - mass spectrometry.

This standard applies to the determination of 413 pesticides and related chemicals residues in mulberry, honeysuckle, medlar and lotus leaf, and other foods may be refer to execution.

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 homogenate, salted out by centrifugation and solid phase extraction column. The pesticide and related chemicals were eluted with acetonitrile-toluene solution (3 1) Determination by liquid chromatography - tandem 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

Acetonitrile (CH₃CN, 75-05-8). Chromatographic Purification.

4.1.2

Toluene (C₇H₈, 108-88-3). Chromatographic pure.

4.1.3

Methanol (CH₃OH, 67-56-1/170082-17-4). Chromatographic Purification.

4.1.4

Cyclohexane (C₆H₁₂, 110-82-7). Chromatographic purity.

4.1.5

Isooctane (C₈H₁₈, 540-84-1). Chromatographic pure.

4.1.6

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

4.1.7

anhydrous sodium sulfate (Na₂SO₄, 7757-82-6). 650 °C burning 4h, stored in a dryer, cooling and standby.

4.2 Standards

Pesticide and Related Chemical Reference Material. Purity ≥95%, see Appendix A.

4.3.1 Standard stock solution

Respectively, to take appropriate (accurate to 0.1mg) pesticides and related chemical standards in 10mL volumetric flask, according to the standard solubility of the election Methanol, toluene, cyclohexane or isooctane and other solvents dissolved and constant volume to the scale (solvent options see Appendix A). The standard stock solution is protected from light by 0 °C ~ 4 °C preservation, period of one year.

4.3.2 Mixing standard solutions (mixed standard solutions A, B, C, D, E, F and G)

413 pesticides and related chemicals are classified into A, B, C, D, E, F according to the nature and retention time of pesticides and related chemicals and G seven groups, and according to the sensitivity of each pesticide and related chemicals on the instrument to determine its concentration in the mixed standard solution.

This standard classifies 413 pesticide and related chemicals and their mixed standard solution concentrations (see Appendix A).

Depending on the concentration of each pesticide and associated chemical, the concentration of the standard solution and the concentration of the standard stock solution, Pesticide and related chemicals standard stock solution in a 100mL volumetric flask, with a fixed volume of methanol to the mark. Mixed standard solution light 0 °C ~ 4 °C Save, save for one month.

4.3.3 Matrix mixed standard working solution

Pesticide and related chemicals Substrate mixed standard working solution is prepared by mixing the sample with different concentrations of the substrate mixed with standard working solution Liquid A, B, C, D, E, F and G are used for standard working curves.

Matrix mixed standard working solution should be used with the current distribution.

4.4.1 Cleanert TPH

1 column. 10mL 2.0g, or equivalent.

4.4.2 Microporous membrane (nylon). 13mm x 0.2 μ m.

5 Instruments and equipment

5.1

Liquid Chromatography - Tandem Mass Spectrometer. Equipped with electrospray ion source (ESI).

5.2

Analysis of balance. 0.01 g and 0.0001 g.

5.3

Homogenizer. The maximum speed is 24000 r/min.

5.4

Centrifuge. The maximum speed is 4200 r/min.

5.5

Rotary evaporator.

5.6

chicken heart bottle. 150 mL.

5.7

Pipettes. 1 mL.

5.8

Centrifugal tube. 50 mL.

5.9

Vials. 2 mL, with Teflon capping.