



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

GB 23200.23-2016

Replacing SN/T 2457-2010

**Food safety national standard -- Determination of duliphenol
residues in food by liquid chromatography-mass spectrometry /
mass spectrometry**

食品中地乐酚残留量的测定 液相色谱-质谱 质谱法

(English Translation)

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Foreword

This standard replaces SN/T 2457-2010 "Determination of duliphenol residues in import and export food by liquid chromatography-mass spectrometry".

Compared with SN/T 2457-2010, 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/T 2457-2010.

GB 23200.24-2016

National standards for food safety Determination of duliphenol residues in food by liquid chromatography - mass spectrometry/mass spectrometry

1 Scope

This standard specifies the method of liquid chromatography-mass spectrometry/mass spectrometry for the determination of dolphol residues in food.

This standard applies to apple, chestnut, cabbage, beef, honey, wheat, chicken, ginger, tea, soy and milk in the residual the amount of 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 residual levophenols in the samples were extracted with acetonitrile and purified by gel permeation chromatography. The samples were identified by liquid chromatography-mass spectrometry/mass spectrometry.

the amount.

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), high performance liquid chromatography grade.

4.1.2

Methanol (CH₃OH), high performance liquid chromatography grade.

4.1.3

Cyclohexane (C₆H₁₂).

4.1.4

Ethyl acetate (C₄H₈O₂).

4.1.5

Sodium chloride (NaCl).

4.2 Solution preparation

4.2.1

Ethyl acetate-cyclohexane (1:1, volume ratio). Equal volume of ethyl acetate and cyclohexane are miscible.

4.3 Standards

4.3.1

Diphenols standard. Molecular formula, C₁₀H₁₂N₂O₅; CAS 88-85-7; purity ≥ 99%.

4.4 Standard solution preparation

4.4.1

duliphenolic standard stock solution. accurately weighed the amount of Diphenols standard, with methanol prepared into 100 µg/mL standard stock solution, -18 °C below the storage.
The

4.4.2

Dulu phenolic standard working solution. accurately absorb the appropriate amount of levophenol standard stock solution, diluted with methanol to the required concentration, -18 °C the following storage.

4.5 Materials

4.5.1 0.22 µm organic filter.

5 Instruments and equipment

5.1

Liquid Chromatography-Mass Spectrometry/Mass Spectrometer. Equipped with electrospray ion source.

5.2

Analysis of balance. 0.01 g and 0.0001 g.

5.3

Centrifuge tube. glass, 50 mL.

5.4

Gel Permeation Chromatography.

5.5

Scroll Mixer.

5.6

Homogenizer.

5.7

Centrifuge.

5.8

Rotary evaporator.

5.9

nitrogen dryers.

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6.1.1 Fruits, vegetables, nuts

Fruit, nuts. take the sample about 500 g, crushed with a pulverizer, into a clean container as a sample, sealed and do a good job.

6.1.2 Grain, tea

Take about 500 g of the sample and crush it all through a 20 mesh sieve into a clean container as a sample, seal and mark it.

Warm preservation.

6.1.3 Meat products

Take a representative sample of about 500 g, crushed with a pulverizer, into a clean container as a sample, sealed and labeled.