



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

GB 23200.54-2016

Replacing SN/T 2237-2008

**Food safety national standard -- Determination of residual
methacrylic acid ester fungicides in foodstuffs by gas
chromatography-mass spectrometry**

食品中甲氧基丙烯酸酯类杀菌剂残留量的测定 气相色谱-质谱法

(English Translation)

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Foreword

This standard replaces SN/T 2237-2008 "Determination of Methoxy Acrylate Fungicide Residue in Import and Export Foods Gas Chromatography -Mass spectrometry".

Compared with SN/T 2237-2008, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- the name and scope 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 2237-2008.

National standards for food safety Determination of Residues of Methoxy Acrylate Fungicides in Food Gas chromatography - mass spectrometry

1 Scope

This standard specifies the preparation and determination of 11 kinds of methacrylic acid ester fungicide residues in foodstuffs (see Appendix A).

This standard applies to apples, pears, grapes, cabbage, cucumbers, mushrooms, orange juice, tea drinks, rice, chestnut, beef, pork, chicken Meat, eggs and milk and other foods in the determination of 11 kinds of methacrylic acid ester fungicide residues. Including azoxystrobin, ketamine, pyrimethanone, (Z, E), oxime oxytetracycline, picolorate, pyrazole mushroom and oxytetracycline, other food Goods 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 file. 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 organic solvent and purified by gel permeation chromatography (GPC). After the eluate was concentrated and constant volume, the gas chromatographic mass spectrometer Determination of 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

Toluene (C₇H₈). Chromatographic pure.

4.1.2

Cyclohexane (C₆H₁₂). Chromatographic Purification.

4.1.3

Ethyl acetate (C₄H₈O₂). Analytical purity.

4.1.4

acetonitrile (C₂H₃N). pure chromatography.

4.1.5

Methanol (CH₄O). Chromatographic Purification.

4.1.6

Trichloromethane (CHCl₃). analytical grade.

4.1.7

Sodium chloride (NaCl), analytical grade.

4.1.8

anhydrous sodium sulfate (Na₂SO₄), analytical grade. Before burning at 650 °C for 4h, placed in a dryer after cooling and standby.

4.2 Solution preparation

4.2.1

Cyclohexane-ethyl acetate (1:1, V/V). Take 100 mL of cyclohexane, add 100 mL of ethyl acetate and shake well.

4.3 Standards

4.3.1

Methoxy Acrylate Fungicides Standard Substance. See Appendix A.

4.4 Standard solution preparation

4.4.1

Standard stock solution. accurately weighed fungicide standard 50 mg (accurate to 0.1 mg), dissolved in toluene, transferred to 50 mL brown Volumetric flask and constant volume to scale. The solution concentration was 1 mg/mL. -18 °C below the dark preservation, the shelf life of 12 months.

4.4.2

Standard Intermediate. Draw 1.00 mL. Standard stock solution, move into 100 mL. Brown volumetric flask, with cyclohexane - ethyl acetate volume, the solution concentration was 10 µg/mL. 0 °C ~ 4 °C dark preservation, the shelf life of 1 month.

4.4.3

standard working fluid. absorb a certain amount of standard intermediate, with cyclohexane - ethyl acetate diluted to the required concentration, the use of pre-preparation.

5 instruments and equipment.

5.1 Gas Chromatography Mass Spectrometer (GC-MS) with an electronically bombarded

ion source (EI source).

5.2 Gel Chromatography Purification System (GPC).

5.3 Analysis of balance. 0.01 g and 0.0001 g.

5.4 Homogenizer. Maximum speed 20 000 r/min.

5.5 Centrifuge. Maximum speed 5 000 r/min.

5.6 Vortex Mixer.

5.7 chicken heart bottles. 100 mL.

5.8 Plastic centrifuge tube. 50 mL.

5.9 nitrogen blowing instrument.

6.1.1 Fruits and vegetables

Extract about 500 g of fruit such as apple, mushroom, cucumber and other fruits or vegetables, cut it, and then use the crusher to process the sample into a slurry.

Uniform, divided into two copies as a sample, into a clean sample bottle, sealed and marked.

6.1.2 Grains and nuts

Extract rice and other nuts and chestnuts and other nut samples about 500 g, and then crushed by crusher and through the 2.0 mm round hole sieve, mix, are divided into two as a sample, into the clean Sheng Sheng bag, sealed and marked.

6.1.3 Meat and animal offal

Extraction of beef, chicken, pork and other samples of about 500 g, chopped, with a crusher to sample processed into a slurry, mix, are divided into two as a sample, into a clean vial, sealed and marked.

6.1.4 Eggs

Take the sample of about 500 g of eggs, peel the shell, and use the crusher to process the sample into a slurry, mix it, and divide it into two pieces.

Clean the vials, sealed and marked.

6.1.5 Beverages and milk

Take about 500 g of the beverage and milk samples, mix them into two pieces, and separate them into a clean sample vial.