



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

GB 23200.60-2016

Replacing SN/T 2433-2010

**Food safety national standard -- Detection Method of Residue
of Acetyl Acetate in Food**

食品中炔草酯残留量的检测方法

(English Translation)

Issued on: December 18, 2016

Implemented on: June 18, 2017

**Issued by: National Health and Family Planning Commission of the
People 's Republic of China**

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Foreword

This standard replaces SN/T 2433-2010 "Method for the detection of the amount of acetone residues in food for import and export".

Compared with SN/T 2433-2010, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- the name 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 2433-2010.

National standards for food safety Detection Method of Residue of Acetyl Acetate in Food

1 Scope

This standard specifies the determination of acetone residues in food by gas chromatography and gas chromatography-mass spectrometry.

This standard applies to asparagus, potatoes, onions, pears, peaches, corn, buckwheat, tea, vinegar, honey, walnut, rabbit, chicken Liver, shrimp, chicken in the detection of the amount of acetone residues, 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 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

Vinegar and honey dissolved and diluted with water, the solid phase extraction column purification; onion and tea with ethyl acetate - cyclohexane mixed solvent extraction, solid Phase extraction and purification; animal food and high oil content of food with acetonitrile extraction, other food with ethyl acetate - cyclohexane mixed solvent to mention the extract was chromatographed on a gel chromatograph (GPC) for use with an electron capture detector, and the external standard method was used.

Confirmation by gas chromatography - mass spectrometry.

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

Ethyl acetate (C₄H₈O₂, CAS No. 141-78-6). Chromatographic purity.

4.1.2

Cyclohexane (C₆H₁₂, CAS No. 110-82-7). Chromatographic purity.

4.1.3

Acetonitrile (C₂H₃N, CAS No. 75-05-8). Chromatographic Purification.

4.1.5 Acetone (C₃H₆O, CAS No. 67-64-1). Chromatographic Purification

4.1.6 anhydrous sodium sulfate (Na₂O₄S, CAS No. 15124-09-1). 650 °C burning 4 h, stored in a sealed container for use.

4.1.7 Sodium chloride (NaCl, CAS No. 7647-14-5).

4.2 Solution preparation

4.2.1

Ethyl acetate-cyclohexane mixed solvent (1 1, V/V). 500 mL of ethyl acetate and 500 mL of cyclohexane were added and mixed.

4.2.2

N-Hexane - Acetone Mixed Solvent (9 1, V/V). Take 90 mL of n-hexane and 10 mL of acetone.

4.2.3

Cyclohexane-ethyl acetate mixed solvent (6 1, V/V). Take 10 mL of ethyl acetate and 60 mL of cyclohexane.

4.3 Standards

4.3.1

Clenbuterol standard substance. (clodinafop-propargyl; CAS. 105512-06-9; Molecular formula. C₁₇H₁₃ClFNO₄ Weight. 349.8) purity ≥98.5%.

4.4 Standard solution preparation

4.4.1

standard stock solution (100 mg/L). accurately weighed the appropriate amount of standard material, dissolved with ethyl acetate, prepared into a concentration of 100 mg/L of the standard stock solution, the solution in 0-4 °C refrigerator to save.

4.4.2

standard working solution. if necessary, then diluted with ethyl acetate to the appropriate concentration of standard working solution. Standard working fluid should be used with the current distribution.

4.5 Materials

4.5.1

Graphitized Carbon Black and PSA Mixing Column. 1 mL, 50 mg Graphitized Carbon Black 50 mgPSA, mixed with 3 mL of cyclohexane-ethyl acetate Solvent activation.

4.5.2

HLB solid phase extraction column. 3 mL, 60 mg, or equivalent, with 2 mL of n-hexane-acetone mixed solution, 2 mL of acetone, 5 mL Distilled water pre-leaching.

4.5.3

Organic phase filter. 0.45 m.

5 Instruments and equipment

5.1

Gas chromatograph with electronic capture detector.

5.2

Gas Chromatography-Mass Spectrometer with Electronic Bombing Source (EI).

5.3

Analysis of the balance. the amount of 0.01 g.

5.4

Analysis of the balance. the sense of 0.0001 g.

5.5

Gel chromatograph with unit pump, fraction collector.

5.6

Centrifuge. 4000 r/min.

5.7

Rotary Evaporator.

5.8

anhydrous sodium sulfate column. 7.5 cm x 1.5 (id) cm glass column, built 5 cm high anhydrous sodium sulfate.

5.9

Scroll Mixer.