



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

GB 23200.62-2016

Replacing SN/T 2459-2010

**Food safety national standard -- Determination of fulvic acid
residues in foodstuffs by gas chromatography-mass
spectrometry**

食品中氟烯草酸残留量的测定 气相色谱-质谱法

(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 2459-2010 "Determination of fenvalerate residues in food for import and export by gas chromatography-mass spectrometry".

Compared with SN/T 2459-2010, 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 "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 2459-2010.

National standards for food safety Determination of fulvic acid residues in foodstuffs by gas chromatography - mass spectrometry

1 Scope

This standard specifies the method for the determination of fenvalerate residues in food by gas chromatography-mass spectrometry.

This standard applies to corn, celery, apples, peanuts, tea, beef, chicken liver, fish, honey, soy and milk in the fluoride 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 fluoroacetic acid in the sample was extracted with ethyl acetate or acetonitrile. The extracted organic phase was evaporated to dryness and the residue was extracted with ethyl acetate-cyclohexane (1 1) was dissolved and purified by gel permeation chromatography (GPC). The eluate was evaporated to dryness, and the ion detection was selected by gas chromatography-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

Acetone ($\text{C}_3\text{H}_6\text{O}$). Pesticide level.

4.1.2

Ethyl acetate ($\text{C}_4\text{H}_8\text{O}_2$).

4.1.3

Cyclohexane (C_6H_{12}).

4.1.4

Acetonitrile (CH_3CN). liquid chromatography grade.

4.1.5

n-hexane (C_6H_{14}).

4.1.6

Sodium chloride (NaCl).

4.1.7

anhydrous sodium sulfate. at 650 °C for 4 h, stored in a sealed container in reserve.

4.2 Solution preparation

4.2.1

Acetonitrile saturated n-hexane.

4.2.2

n-hexane saturated acetonitrile.

4.2.3

Ethyl acetate - cyclohexane (1 1, V/V). Mix the ethyl acetate and cyclohexane in equal volume and mix.

4.2.4

sodium chloride solution..200 g/L, take.200 gNaCl, constant volume to 1 L.

4.3 Standards

4.3.1

Fenvalerate standard. English name. flumiclorac-pentyl, CAS. 87546-18-7, purity $\geq$ 99%.

4.4 Standard solution preparation

4.4.1

standard solution of fenvalerate. accurately weighed the appropriate amount of fluoroacetic acid standard, formulated with acetone 100 $\mu\text{g/mL}$ standard reserve liquid.

4.4.2

Fenvalerate standard intermediate solution. 1 $\mu\text{g/mL}$. Accurately absorb 1 mL of the standard stock solution into a 100 mL volumetric flask with acetone Constant volume to the scale, the solution stored at 0 ~ 4 °C.

4.4.3

Matrix standard working solution. If necessary, use a blank sample according to the sample treatment steps of the extract, with different concentrations of the base Quality standard working solution, matrix standard working solution to be used with the current distribution.

4.5 Materials

4.5.1

Gel Permeation Column. The filler is S-X3 BioBeads, 22g.

4.5.2

anhydrous sodium sulfate column. in the 150 mm x 10 mm (diameter) column, followed by adding absorbent cotton and 5 cm anhydrous sodium sulfate.

5 Instruments and equipment

5.1

Gas Chromatography-Mass Spectrometer. Electronically bombarded ion source.

5.2

Analysis of the balance. the amount of 0.0001 g.

5.3

Analysis of balance. 0.01 g.

5.4

Homogenizer.