



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

GB 23200.70-2016

Replacing SN/T 2807-2011

**Food safety national standard -- Determination of
Trifluorocarbazone Residue in Food by Liquid
Chromatography-mass spectrometry / Mass Spectrometry**

食品中三氟羰草醚残留量的测定 液相色谱-质谱质谱法

(English Translation)

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Foreword

This standard replaces SN/T 2807-2011 "Determination of Trifluorocarbazone Residue in Import and Export Foodstuffs in Import and Export Foods - Liquid Chromatography Spectrum/mass spectrometry".

Compared with SN/T 2807-2011, 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 2807-2011.

National standards for food safety Determination of Trifluorocarbazone Residue in Food by Liquid Chromatography - Mass Spectrometry/Mass Spectrometry

1 Scope

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

This standard applies to soybean, rice, brown rice, soybeans, apples and pork in the determination of triflate residues. Other food can participate According 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

Soy, rice and brown rice samples were soaked in water and extracted with acetonitrile. Other samples were extracted directly with acetonitrile and then washed the extract was purified by liquid-liquid distribution and solid-phase extraction. The liquid was purified by liquid chromatography-mass spectrometry and 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

acetonitrile (CH₃CN). high performance liquid chromatography grade.

4.1.2

Methanol (CH_3OH). High performance liquid chromatography grade.

4.1.3

Formic acid (HCOOH).

4.1.4

Sodium chloride (NaCl).

4.1.5

anhydrous sodium sulfate (Na_2SO_4). before burning at $650\text{ }^\circ\text{C}$ for 4 hours, stored in a dryer, cooling and standby.

4.2 Solution preparation

4.2.1

Formic acid - acetonitrile solution. 0.5 mL of formic acid was added to 500 mL of acetonitrile and shaken for standby.

4.2.2

Formic acid - aqueous solution. 1.0 mL of formic acid was added to 1000 mL of water and shaken.

4.2.3 Constant solution. (formic acid - aqueous solution) - acetonitrile (19, V/V)

4.2.4 n-Hexane. add appropriate amount of acetonitrile and shake well before use.

4.3 Standards

4.3.1

Reference substance. trifluorocarbamate (CAS. 50594-66-6), purity $\geq 99\%$.

4.4 Standard solution preparation

4.4.1

Standard stock solution. accurately weighed the appropriate standard (accurate to 0.1 mg), dissolved in methanol, prepared into a concentration of $100\text{ }\mu\text{g/mL}$ of the standard stock solution, $-18\text{ }^\circ\text{C}$ below the frozen light preservation, valid for 3 months.

4.4.2

standard intermediate solution. accurate removal of 1 mL standard stock solution in 10 mL volumetric flask, with constant volume solution to the volume, prepared into Concentration of $10\text{ }\mu\text{g/mL}$ standard intermediate solution, $0\text{ }^\circ\text{C} \sim 4\text{ }^\circ\text{C}$ cold storage, valid for 1 month.

4.5 Materials

4.5.1

solid phase extraction column. carbon eighteen column, 3 mL, or equivalent, before use with 10 mL formic acid - acetonitrile solution pre-leaching.

4.5.2

Microporous membrane. 0.20 μm , organic phase type.

4.5.3

Nitrogen. Purity $\geq 99.999\%$.

5 Instruments and equipment

5.1

Liquid Chromatography-Mass Spectrometry/Mass Spectrometer. Equipped with an electrospray ion source (ESI).

5.2

Sample grinder. with 20 mesh sample sieve.

5.3

Analysis of balance. 0.01 g and 0.0001 g.

5.4

plastic centrifuge tube. 50 mL, with plug.

5.5

Oscillator.

5.6

Centrifuge.

5.7

Rotating Concentrator.

5.8

nitrogen blowing instrument.

5.9

Scroll Mixer.