



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

GB 23200.89-2016

Replacing SN/T 2539-2010

**Food safety national standard -- Determination of
ethoxyquinoline residues in animal-derived foods by liquid
chromatography**

动物源性食品中乙氧喹啉残留量的测定 液相色谱法

(English Translation)

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Foreword

This standard replaces SN/T 2539-2010 "Determination of ethoxylated quinoline residues in animal food by high performance liquid chromatography".

Compared with SN/T 2539-2010, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- increase the "other food reference implementation" in the standard range.

This standard replaced the previous version of the standard release.

-SN/T 2539-2010.

National standards for food safety Determination of ethoxyquinoline residues in animal - derived foods by liquid chromatography

1 Scope

This standard specifies the pork, pig liver, pig kidney, chicken, fish, eggs, honey, milk, ethoxyquinoline residues in liquid chromatography Determination and determination of high performance liquid chromatography - mass spectrometry.

This standard is applicable to the determination and determination of ethoxyquinoline residues in pork, pig liver, pig kidney, chicken, fish, eggs, honey and milk.

Card, 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

After the sample was added with sodium carbonate solution and extracted with acetone, the liquid-liquid extraction was carried out with n-hexane. After the solution was concentrated and concentrated, with high performance liquid chromatography with high performance liquid chromatography - tandem mass spectrometer, quantitative 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 (C₃H₆O, 67-64-1). Chromatographic pure.

4.1.2

n-hexane (C₆H₁₄, 110-54-3). chromatographic purity.

4.1.3

acetonitrile ($\text{C}_2\text{H}_3\text{N}$, 75-05-8). pure chromatography.

4.1.4

Sodium carbonate (Na_2CO_3 , 497-19-8).

4.1.5

Ammonium Acetate ($\text{C}_2\text{H}_7\text{NO}_2$, 631-61-8). Chromatographic Purification.

4.2 Solution preparation

4.2.1

sodium carbonate solution (10%). accurately weighed 100 g of sodium carbonate in the beaker by adding the appropriate amount of water dissolved, transferred to 1L volumetric flask, constant volume to the scale, shake.

4.2.2

ammonium acetate solution (20mmol/L). accurately weighed 1.54 g ammonium acetate, dissolved in 1L water.

4.3 Standards

4.3.1

ethoxyquinoline standard substance ($\text{C}_{14}\text{H}_{19}\text{NO}$, 91-53-2). purity $\geq 98.0\%$.

4.4 Standard solution preparation

4.4.1

ethoxyquinoline standard stock solution. accurately weighed the amount of standard, diluted with acetonitrile prepared 100 $\mu\text{g}/\text{mL}$ standard stock solution, in $0\text{ }^{\circ}\text{C} \sim 4\text{ }^{\circ}\text{C}$ dark preservation.

4.3.2 ethoxyquinoline standard working solution. according to the need to remove a certain volume of standard intermediate solution with acetonitrile gradually diluted to the appropriate concentration of the standard working solution. Standard working solution is ready for use.

5 Instruments and equipment

5.1

High Performance Liquid Chromatograph. equipped with a fluorescence detector (FLD).

5.2

Analysis of balance. 0.01 g and 0.0001 g.

5.3

High Performance Liquid Chromatography-Tandem Mass Spectrometer with Electrospray Ionization Source (ESI).

5.4

Tissue crusher.

5.5

Centrifuge. 6 000 r/min.

5.6

Scroll Mixer.

5.7

Rotary Evaporator.

5.8

Analytical balance. sensed 0.0001 g and 0.01 g.

5.9

nitrogen blowing concentrator.

5.10

Organic filter. 0.22 μm .

6.1.1 Meat and internal organs

Take a representative sample 500 g, cut it, and then use the tissue crusher to process the sample into a slurry, mix it, and mix it into a clean sample Inside, sealed and marked.

6.1.2 Honey and milk

Take a representative sample of 500 g, pour it into a clean enamel mix bucket, stir well and mix it into a clean container.

And mark the mark.

Note: The above sample sampling site according to GB 2763 Appendix A implementation.

6.2 Sample storage

Milk, honey samples stored at 0 °C ~ 4 °C; meat and visceral products such as samples at -18 °C frozen storage.