



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

GB 23200.22-2016

Replacing SN/T 0647-2013

**Food safety national standard -- Determination of residual
residues in nuts and nut products by liquid chromatography**

坚果及坚果制品中抑芽丹残留的测定 液相色谱法

(English Translation)

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Foreword

This standard replaces SN/T 0647-2013 "Determination of the amount of inhibitory residues in nuts and nuts in nuts and nuts". High performance liquid chromatography.

Compared with SN/T 0647-2013, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- "Import and export nuts and nuts" in the standard name to "nuts and nuts".

- increase the "other food reference implementation" in the standard range.

This standard replaced the previous version of the standard release.

-SN/T 0647-2013

-SN 0647-1997.

National standards for food safety Determination of residual residues in nuts and nut products by liquid chromatography

1 Scope

This standard specifies the preparation of nutrient and nutrient detection in nuts and nuts.

This standard applies to walnut and products, chestnut and products in the determination of the remaining amount of buds, 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 samples were degreased with n-hexane, extracted with methanol, purified by C18 column, and analyzed by high performance liquid chromatography with UV detector.

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

Methanol (CH₃OH). Chromatographic Purification.

4.1.2

n-hexane (C₆H₁₄). pure chromatography.

4.1.3

Ammonium acetate ($\text{CH}_3\text{COONH}_4$).

4.1.4

Sodium hydroxide (NaOH).

4.2 Solution preparation

4.2.1

Ammonium acetate solution (0.02 mol/L). Weigh 1.54 g of ammonium acetate, add water to a volume of 1000 mL.

4.2.2

sodium hydroxide solution (0.01 mol/L). Weigh 0.40 g sodium hydroxide, add water to volume to 1000 mL, shake back.

4.3 Standards

4.3.1

Constituent granules. Maleic hydrazide, $\text{C}_4\text{H}_4\text{N}_2\text{O}_2$, CAS number. 123-33-1, purity $\geq 99.9\%$.

4.4 Standard solution preparation

4.4.1

suppression of buds standard reserve solution. accurately weighed amount of anti-budding standard material, with sodium hydroxide solution prepared into 1 mg/mL standard Stock solution, the standard solution away from $0\text{ }^{\circ}\text{C} \sim 4\text{ }^{\circ}\text{C}$ preservation, shelf life of 6 months.

4.4.2

suppression of buds standard working solution. According to the testing requirements, respectively, to absorb the standard reserve solution in the volumetric flask, with sodium hydroxide dissolved Liquid dilution to the standard preparation of the appropriate concentration of the standard working solution, the standard working solution away from $0\text{ }^{\circ}\text{C} \sim 4\text{ }^{\circ}\text{C}$ preservation, shelf life of 1 Month.

4.5 Materials

4.5.1

C18 solid phase extraction column. 3 mL 500 mg, or equivalent. Followed by 4 mL of methanol and 4 mL of sodium hydroxide solution activated after use.

5 Instruments and equipment

5.1

High Performance Liquid Chromatograph with UV or Diode Array Detector.

5.2

Electronic balance. 0.01 g and 0.0001 g.

5.3

Rotary Evaporator.

5.4

homogenizer. speed of not less than 10000 r/min.

5.5

Centrifuge. speed not less than 6000 r/min.

5.6

Scroll Mixer.

5.7

sample grinder.

5.8

Sieve. 2.0 mm round hole sieve.

5.9

template.

6.1 Preparation of the sample

The edible part of the original sample is reduced to about 500 g, and the sampling site is carried out according to GB 2763 Appendix A and crushed with a sample shredder Through 20 mm round hole sieve particles. Fully mixed, prepared samples are divided into two, into a clean sample container, sealed and marked mark.

6.2 Sample storage

Keep the sample below 5 ° C in dark.

During the operation of the sample preparation, the sample should be protected from contamination or changes in the content of the residue.