



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

**中华人民共和国国家标准**

GB 5413.15-2010

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**National food safety standard**

**Determination of vitamin niacin and niacinamide in foods  
for infants and young children, milk and milk products**

**食品安全国家标准**

**婴幼儿食品和乳品中烟酸和烟酰胺的测定**

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## Contents

Foreword.....	1
1. Scope.....	1
2. Normative References.....	1
3. Principles.....	1
4. Reagents and materials.....	1
5. Instruments and equipment.....	2
6. Analysis step.....	2
7. Description of analysis result.....	4
8. Precision.....	5
9. Principle specificity.....	5
10. Reagents and materials.....	5
11. Instruments and equipment.....	7
12. Analysis step.....	8
13. Description of analysis results.....	11
14. Precision.....	12
15. Others.....	12
Appendix A (Informative) Liquid chromatogram of vitamin niacin and niacinamide.....	13

## Foreword

The second method of this standard is equal with 944.13 Niacin and Niacinamide (Nicotinic Acid and Nicotinamide) in Vitamin Preparations of Association of Official Analytical Chemists (AOAC).

This standard replaced GB/T 5413.15-1997 *Determination of Vitamin niacin and Niacinamide in Foods for Infants and Young Children, Milk and Milk Products*.

Compared with GB/T 5413.15-1997, the main changes in the second method of this standard are as follows:

- Added the determination of optical density;
- Added the determination of starch test samples;
- Added the text description of standard curves.

Appendix A of this standard is informative appendix.

The issuing situations of historical versions of standards replaced with this standard are as follows:

GB 5413-1985 and GB/T 5413.15-1997.

# National food safety standard

## Determination of vitamin niacin and niacinamide in foods for infants and young children, milk and milk products

### 1. Scope

This Standard specifies the method for determination of vitamin niacin and niacinamide in foods for infants and young children, milk and milk products.

This Standard applies to the determination of vitamin niacin and niacinamide in foods for infants and young children, milk and milk products.

### 2. Normative References

The normative documents referenced in the text are indispensable to the application of this standard. For dated references, only the edition bearing such date applies to this standard. For undated references, the latest edition of the normative document referred to (including all the amendments) applies.

### Method I high performance liquid chromatography

### 3. Principles

After the test samples are extracted from hot water and acid protein is deposited, the test samples are separated through C<sub>18</sub> chromatographic column, then are measured through ultraviolet detector.

### 4. Reagents and materials

Unless otherwise specified, the reagents used on this method are analytically pure and the water is Class I water specified in GB/T 6682.

**4.1** Amylase: enzyme activity  $\geq 1.5$  U/mg.

**4.2** Hydrochloric Acid

**4.3** Sodium hydroxide

**4.4** Hydrochloric acid (2.4 mol/L): accurately transfer 10 mL hydrochloric acid (4.2) into a 50 mL measuring flask for water volume determination.

**4.5** Sodium hydroxide solution (2.5 mol/L): weigh 5.0g sodium hydroxide (4.3) and put it into a 50 mL measuring flask for water volume determination.

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