



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

中华人民共和国国家标准

GB 5413.16-2010

**National food safety standard
Determination of folic acid (folate activity) 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叶酸（叶酸盐活性）的测定

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Foreword

This standard Replacing GB/T 5413.16 - 1997 *Milk powder and formula foods for infant and young children-Determination of folic acid (folate activity)*.

Comparison with GB/T 5413.16-1997, main changes of this Standard are as follows:

- Adjusted the phosphate buffer;
- Added processing method for rice flour;
- Added determination procedure for densitometry.

The versions replaced by this standard are:

- GB 5413 - 1985, GB/T 5413.16- 1997.

National food safety standard

Determination of folic acid (folate activity) in foods for infants and young children, milk and milk products

1. Scope

This standard is formulated a microbial method for determination of folic acid (folate activity).

This standard is applicable to Determination of Folic Acid (folate activity) in Foods for Products for Infants and Young Children, Raw Milk and Dairy 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.

3. Principles

Folic acid content of infant formula is estimated from acidimetric response of *Lactobacillus casei* (ATCC 7469).

4. Reagents and materials

For all reagents, if no special specification is stated, refers to analytic reagent; All experiment water refers to level 2 water.

4.1 Chick pancreas preparation—Weigh 100 mg desiccated chick pancreas, add 20mL H₂O, and stir 15 min. Centrifuge 10 min at 3000 rpm and use clear supernate. Prepare fresh daily.

4.2 Salt solution.—Weigh 9g NaCl and dissolved in 1000mL H₂O. Transfer 10mL portions to culture tubes, plug. with cap and sterilize 20 min at 121°C. Pre pare fresh weekly

4.3 Phosphate buffer

4.3.1 Phosphate buffer I: Dissolve 5.85 g KH₂PO₄ and 1.22 g K₂HPO₄ in H₂O and dilute to 1 L. Add ascorbic acid in phosphate buffer solution to make the concentration to 0.5g/100ml. Prepare just prior to use.

4.3.2. Phosphate buffer II (for preparation of cereal and cereal product): Dissolve 14.2 g Na₂HPO₄ in

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