

### NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC

# **OF CHINA**

# 中华人民共和国国家标准

GB 5413.18-2010

# National food safety standard

Determination of vitamin C 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维生素 C 的测定

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# Preface

This Standard will replace GB/T 5413.18-1997 "Milk powder and formula foods for infants and young children—Determination of vitamin C content".

Compared with GB/T 5413.18-1997, the main amendments of this Standard are as follows:

-The activity unit of enzyme has been defined;

-The concentration of o-phenylenediamine solution was changed;

-The treatment of specimens containing starch was changed;

-The reaction time after boric acid-sodium acetate solution was added.

-The reaction time after o-phenylenediamine solution was added.

This Standard is under the jurisdiction of Ministry of Health of the People's Republic of China.

The releases of all editions substituted by this Standard:

- GB 5413-1985, GB/T 5413.18-1997

GB 5413.18-2010

# National food safety standard Determination of vitamin C in foods for infants and young children, milk and milk products

#### 1 Scope

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

This standard is applicable to the determination of vitamin C in foods for infants and young children, milk and milk products. The determination results indicate the total content of reduction-type and oxidation-type vitamin C.

#### 2 Normative reference

The following normative documents contain provision which, through reference in this text, constitute provisions of This Standard. For dated reference, subsequent amendments to, or revisions of, (excluding mistakes) any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies.

#### 3 Principle

Vitamin C (Ascorbic acid) is oxidized to be dehydroascorbic acid in the presence of activated carbon. The dehydroascorbic acid then reacts with o-phenylenediamine to generate fluorescent substances. The fluorescent spectrophotometer then is applied to determine the fluorescence intensity of the fluorescent substances generated. The fluorescence intensity is proportional to the concentration of ascorbic acid. And the external standard method is used for ration.

#### 4 Reagents and Materials

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