

### NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC

## **OF CHINA**

# 中华人民共和国国家标准

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# Milk powder and formula foods for infant and young children—Determination of whey protein

# 婴幼儿配方食品和乳粉 乳清蛋白的测定

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	Abstract of method Reagents Instruments Steps of operation

# Milk powder and formula foods for infant and young children—Determination of whey protein

#### 1. Scope

This standard specifies determination method for content ratio of casein and whey protein.

This standard applies to determination of content ratio of casein and whey protein in milk powder and formula foods for infant and young children.

#### 2. Abstract of method

After the specimen is treated by electrophoresis with SDS Polyacrylamide gel (SDS – PAGE, in Laemmli method), use a density meter to determine the spectrum zones of casein and whey protein separated in an order of molecular weight and then attain the content ratio of casein and whey protein.

#### 3. Reagents

Unless otherwise specified, all the reagents used in this method are analytically pure and all of the experimental water is Class III.

**3.1** Electrophoresis buffer solution: Dissolve 7.5 g Tris (hydroxymethyl) aminomethane, 36g glycine, and 2.5 g SDS into water and dilute it to set its volume at 500 mL. Immediately before use, dilute it with distilled water by 5 times.

**3.2** SDS specimen buffer solution: 0.125 mol/L Trsi- hydrochloride acid (pH = 6.8), glycerin with volume fraction of 20%, SDS of 4% (m/V), 2-mercaptoethanol with volume fraction of 10%, and bromophnol blue with mass fraction of 0.0025%.

**3.3** Dyeing agent: Coomassie brilliant blue R-250 with mass fraction of 0.1% and methanol with volume fraction of 10%, and acetic acid with volume fraction of 7.5%.

**3.4** Decolorant: Methanol with volume fraction of 10%, and acetic acid with volume fraction of 7.5%.



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