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

**中华人民共和国国家标准**

GB 5413.30-2010

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**National food safety standard  
Determination of impurities in milk and milk  
products**

**食品安全国家标准  
乳和乳制品杂质度的测定**

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## Contents

<b>Foreword</b> .....	1
<b>1 Scope</b> .....	1
<b>2 Normative references</b> .....	1
<b>3 Principle</b> .....	1
<b>4 Equipments and devices</b> .....	1
<b>5 Analytical procedures</b> .....	1
<b>6 Expression of analytical results</b> .....	1
<b>7 Precision</b> .....	1
<b>Appendix A (Normative) Inspection of Impurity Filter Plate</b> .....	2
<b>Appendix B (Normative) Preparation of Impurity Standard Plates</b> .....	4

## **Foreword**

This Standard will replace GB/T 5413.30-1997 *Milk and milk powder--Determination of impurities*.

Appendix A and Appendix B of this Standard are normative.

The previous editions replaced by this Standard are as follows:

— GB/T 5413.30-1997.

# National Food Safety Standard

## Determination of Impurities in Milk and Milk Products

### 1 Scope

This Standard specifies a method for determination of impurities in milk and milk products.

This Standard is applicable to determination of impurities in pasteurized milk, sterilized milk, raw milk, condensed milk and milk powder, while inapplicable to those additives containing nondairy protein, starch ingredients, insoluble color substances and affecting filtration.

### 2 Normative references

Documents referenced in this Standard are indispensable for application of this Standard. For dated references, only the dated edition is applicable to this Standard. For undated references, the latest edition (including all amendments) is applicable to this Standard.

### 3 Principle

Impurity level is determined according to the quantity of visible colored impurities remaining on the filter plate after the sample is filtered by a filter plate and washed.

### 4 Equipments and devices

- 4.1 Filter equipment: impurity filter or 2000 mL - 2500 mL filter flask equipped with the filter plate funnel.
- 4.2 Filter plate: 32 mm in diameter, 135 g/m<sup>2</sup> in mass per unit area, conforming to the requirements of Appendix A, and 28,6 mm in diameter of discharge area during filtration.
- 4.3 Impurity standard plate.
- 4.4 See Appendix B for preparation methods of impurity standard plates.
- 4.5 Balance: sensibility is 0,1 g.

### 5 Analytical procedures

Measure 500 mL liquid milk sample; weigh 62,5 g (accurate to 0,1 g) milk powder sample, add 8 times of water for fully mixing and dissolving, heat to 60 °C; weigh 125 g (accurate to 0,1 g) condensed milk sample, dissolve in 4 times of water, heat to 60 °C, filter by the filter plate (a vacuum pump can be used to quicken the filtration), wash the filter plate with water, take down the filter plate, put in a drying oven for drying, and then compare impurities on the filter plate with those on the impurity standard plate to get the impurity level.

Impurity level is determined as the level of higher content of impurities when the content of impurities on the filter plate is between two levels.

### 6 Expression of analytical results

Impurity level on the filter plate gained through comparison with the impurity standard is the impurity of this sample.

### 7 Precision

The results of two repeated determinations of the same sample by the methods described in this Standard shall be consistent, otherwise two repeated determinations shall be done again.

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