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**Requirements of Restricting Excessive Package –  
Foods and Cosmetics**

限制商品过度包装要求 食品和化妆品

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Standardization Administration of PRC.**

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## Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 *Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This Document replaced GB 23350-2009 *Requirements of Restricting Excessive Package - Foods and Cosmetics*. Compared with GB 23350-2009, the major changes in technical contents of this Document are as follows:

- Delete normative references (see Clause 2 of the 2009 Edition);
- Change the definitions of terms such as contents, package layers, interspace ratio, excessive package, and necessary spatial coefficient of commodity; and add the definition of term such as multiple products (see Clause 3 of this Edition; Clause 3 of the 2009 Edition);
- Change the basic requirements (see 4.1 of this Edition; 4.1 of the 2009 Edition);
- Change the limit requirements (see 4.2 of this Edition; 4.2 of the 2009 Edition);
- Add test (see Clause 5 of this Edition);
- Change the calculation method of interspace ratio (see 5.4 of this Edition; 5.1 and Appendix A of the 2009 Edition);
- Add judgment rules (see Clause 6 of this Edition);
- Add the necessary spatial coefficients for different commodities (see Appendix A of this Edition).

Please note some contents of this document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

This Document was proposed by and under the jurisdiction of Ministry of Industry and Information Technology of the PRC.

The historical editions replaced by this Document are as follows:

- GB 23350-2009 was first-time published in 2009.
- This is the first-time revision hereby.

# Requirements of Restricting Excessive Package – Foods and Cosmetics

## 1 Scope

This Document specifies the requirements, testing and judgment rules for restricting excessive packaging of foods and cosmetics.

This Document is applicable to food and cosmetics sales packaging, not to gifts or non-sale items.

## 2 Normative References

This document has no normative references.

## 3 Terms and Definitions

For the purposes of this Document, the following terms and definitions apply.

### 3.1 Excessive package

The package whose interspace ratio, package layers, and package cost exceed the requirements.

### 3.2 Sales package

The package that mainly aims to sell and reaches the consumers together with the contents.

### 3.3 Contents

The foods or cosmetics contained in the package.

### 3.4 Interspace ratio

The ratio of the volume of the necessary space occupied by the contents removed from the package to the total volume of the package.

### 3.5 Multiple products

Two or more kinds of foods or cosmetics that are contained in a package.

except for the package directly in contact with the contents, not to exceed 20% of the product's sales price.

## **5 Test**

### **5.1 Sampling**

For foods and cosmetics of the same variety and package style, the sampling quantity is one piece.

### **5.2 Equipment and tools**

Testing equipment and tools such as rulers, callipers, volume measuring instruments, etc. for measurement shall meet the testing requirements and be accurate to 1mm or 1mm<sup>3</sup>.

### **5.3 Method of measuring sales package volume**

#### **5.3.1 The first method: instrument method (arbitration method)**

After calibrating the volume measuring instrument in accordance with the operating procedures under normal temperature and pressure, place the product sales package on the instrument measurement platform; start the measurement program; measure the product sales package; and repeat three times; take the arithmetic average value to calculate the product sales package volume.

#### **5.3.2 The second method: manual method**

Under normal temperature and pressure, for cuboid product sales package, use the length measuring instrument to directly measure the length, width, and height of it along the exterior wall of the package; and repeat it for three times; and take the average value to calculate the volume of the product sales package. For cylindrical product sales package, use the length measuring instrument to directly measure it along the exterior wall of the package; repeat it for three times; and take the arithmetic average value to calculate the volume of the product sales package.

NOTE: Only applicable to sales packages with regular shapes.

#### **5.3.3 The third method: other methods**

When measuring the volume of product sales package by the drainage method or similar methods, under normal temperature and pressure, immerse the sales package in a container that has accurately measured the volume of water (or other uniform fine particles); and the increased volume is the volume of the product sales package; repeat it for three times; take the arithmetic average value to calculate the volume of

product sales package.

NOTE: The drainage method is only applicable to waterproof sales package.

## 5.4 Calculation method of interspace ratio

### 5.4.1 Calculation

Calculate according to formula (1):

$$X = \frac{V_n - \sum (kV_0)}{V_n} \times 100\% \quad \dots\dots\dots (1)$$

Where:

$X$  – interspace ratio;

$V_n$  – volume of product sales package, in  $\text{mm}^3$ ;

$V_0$  – volume of contents, in  $\text{mm}^3$ ;

NOTE: The volume of the contents is converted to the net content marked on the product, and 1mL or 1g of contents are converted to  $1000\text{mm}^3$ .

$k$  - The necessary spatial coefficient of the commodity. The necessary spatial coefficient of foods and cosmetics shall comply with Appendix A.

NOTE: The value of  $k$  shall be determined based on the product; for multiple products, the value of  $k$  shall be taken separately.

### 5.4.2 Repeatability

The absolute difference between two independent determination results obtained under repeatability conditions shall not exceed 10% of the arithmetic mean.

## 5.5 The calculation method of the package layers

**5.5.1** The package that directly touches the contents is the first layer, and so on, the outermost package is the  $N^{\text{th}}$  layer, and  $N$  is the package layers.

**5.5.2** The material layer that directly contacts the contents and belongs to the inherent properties of the product (such as bamboo leaves, bamboo tubes, natural or collagen casings, hollow capsules, etc.), and the film that is close to the outside of the sales package and whose thickness is less than 0.03 mm shall be neglected for calculation.

**5.5.3** If there are commodities with different package layers in the same package, only the package layers of the commodities that require a limited package layers are

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