

	<b>Technical Specification of the Net Quantity for Prepackaged Products</b>	S/N	CNMV 87																
		Rev	2																
<p>1. This technical specification is prescribed pursuant to Paragraph 3 of Article 45 of the Weights and Measures Act.</p> <p>2. The date of promulgation, document number, date of enforcement and content of amendment are listed as follows:</p> <table border="1"> <thead> <tr> <th>Rev.</th> <th>Date of Promulgation</th> <th>Document No. (Ching-Piao-Szu-Tsu )</th> <th>Date of Enforcement</th> <th>Content of Amendment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2004-10-08</td> <td>No. 09340004400</td> <td>2007-01-01</td> <td></td> </tr> <tr> <td>2</td> <td>2011-02-15</td> <td>No. 10040000660</td> <td>2012-01-01</td> <td>           1. Adds the definition of Insufficient Prepackage to distinguish from Non-Conforming Prepackage.            2. Adds mass inspection by market sampling, its procedure and its criterion.            3. Clearly describe the Inspection Lot for sampling, inspection procedure, and criterion.            4. Deletes unnecessary wording.         </td> </tr> </tbody> </table>					Rev.	Date of Promulgation	Document No. (Ching-Piao-Szu-Tsu )	Date of Enforcement	Content of Amendment	1	2004-10-08	No. 09340004400	2007-01-01		2	2011-02-15	No. 10040000660	2012-01-01	1. Adds the definition of Insufficient Prepackage to distinguish from Non-Conforming Prepackage. 2. Adds mass inspection by market sampling, its procedure and its criterion. 3. Clearly describe the Inspection Lot for sampling, inspection procedure, and criterion. 4. Deletes unnecessary wording.
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<p>3. This technical specification is formulated with reference to the following international specifications:</p> <p>A. OIML R87 Net Content In Package ( 1989 )</p> <p>B. OIML R79 Labeling Requirements for Prepackaged Products ( 1997 )</p>																			
<b>Date of Promulgation</b> 2011-02-15	<b>Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs</b>		<b>Date of Enforcement</b> 2012-01-01																

**NO GUARANTEE ON THE TRANSLATION**

In case of discrepancies between the English translation and Chinese text, the Chinese text shall govern.

1. Scope: this specification applies to prepackaged products (With a net content expressed in units of mass) after having been designated and made known to the public by public notice.

2. Definitions of Terms:

2.1 Prepackaged Products:

Refers to the products already packaged before being offered for sale, the actual quantity of product cannot be altered without the packing material either being opened or undergoing a perceptible modification.

2.2 Net Quantity:

Refers to prepackaged products, (hereinafter referred to as “products”) the actual mass of content is offered for sale, excluding all the packaging materials.

In this specification, the symbol “Qn” stands for the net quantity on the labeling of products. In this specification, "mass" refers to the net quantity of products. To determine net quantity of product is using standard masses disseminate to weighing instruments for testing, and it is different from “weight”. (Weight is prone to affect by the environment and place of measurement).

2.3 Individual Prepackage Error:

Difference between the actual quantity of product in a prepackage and labeled net quantity.

2.4 Tolerable Deficiency (T):

The maximum negative error in the net quantity of product permitted in a sampling plan.

2.5 Inspection Lot:

Refers to the aggregation of product units, from which samples are taken for inspection.

2.6 Inspection Lot Size:

Refers to the number of product units in an inspection lot.

2.7 Sample:

A product in the inspection lot, used to provide information about the production process.

2.8 Random Sampling:

Sampling products from an inspection lot, in which each product has the same probability of being sampled.

2.9 Tare Value:

The mass of all packaging materials and any other materials packaged together with a product after removing the content of the product.

2.10 Non-Conforming Prepackage:

Prepackage with a deficiency more than the prescribed tolerable deficiency.

2.11 Insufficient Prepackage:

Prepackage by market sampling with a deficiency more than the prescribed tolerable deficiency.

3. Preparation for inspection:

3.1 The inspection lot size shall be determined according to the following provisions:

3.1.1 The sample size shall be determined according to Table 1, the Sampling Plans.

3.1.2 When sampling at the site of manufacturing and packaging, the inspection lot size shall be the quantity of products packaged within one hour under the same production conditions.

3.1.3 When sampling in a manufacturer's plant or warehouse, wholesale or retail site, the inspection lot size shall be the sum of the same products in the same sampling place.

3.1.4 The upper limit of inspection lot size is 10000. A larger lot shall be separated.

Table 1 Sampling Plans

Inspection Lot Size	Sample Size (n)	Sample Correction Factor (SCF)	Number of Non-conforming prepackages permitted in a sample	
1	1	0	0	
2	2	0		
3	3	0		
4	4	0		
5	5	0		
6	6	0		
7	7	0		
8	8	0		
9	9	0		
10	10	0		
11	11	0		
12	12	0		
13~40	12	0.750	1	
41~79	12	0.826		
80~149	12	0.860		2
150~399	32	0.465		3
400~4000	32	0.483		4
Over 4000	80	0.295		6

3.2 Requirements on tolerable deficiency: the tolerable deficiency of labeled mass of product is as prescribed in Table 2.

Table 2 Tolerable Deficiency

Net Quantity Qn ( g )	Tolerable Deficiency (T)	
	Percent of Qn	g
5~50	9	—
50~100	—	4.5
100~200	4.5	—
200~300	—	9
300~500	3	—
500~1,000	—	15
1,000~10,000	1.5	—

3.3 Requirements on testing instruments:

3.3.1 For the measuring instruments used to test the net quantity of products, the expanded uncertainty shall be not more than 1/5 of the tolerable deficiency in the net quantity of the product under 95 % level of confidence level.

3.3.2 The measuring instruments used during the process of inspection other than for directly measuring the net quantity shall conform to the requirements of measuring range and have passed the traceability and uncertainty assessment.

3.4 Requirements on measurement of tare value:

3.4.1 Market Sampling:

According to the number of market sampling, weighs every package Tare Value. The Net Quantity shall be calculated as follow formula:  
Net Quantity = total mass – every single package tare value.

3.4.2 Sampling:

Randomly sample 10 packages, measure the tare value and calculate the average value. This applies to used or unused packages. The net quantity shall be calculated with the following formula:

$$\text{Net quantity} = \text{Total mass} - \text{Average Tare Value}$$

The average tare value is determined according to the following conditions:

- (1) If the average is not more than 1/10 of the labeled net quantity, this average can be used as the average tare value to determine the net quantity.
- (2) If the average is more than 1/10 of the labeled net quantity, sample 15 more packages and calculate the average value and standard deviation of the 25 packages. If the standard deviation is not more than 1/4 of the tolerable deficiency, the average of the 25 packages can be used as the average tare value to determine the net quantity.
- (3) If the average is more than 1/10 of the labeled net quantity, sample 15 more packages and calculate the average value and standard deviation of the 25 packages. If the standard deviation is more than 1/4 of the tolerable deficiency, the mass of individual packages shall be used to determine the net quantity.

3.5 For prepackaged products subject to normal change of net quantity during the process of storage and selling, the dedicated authority in charge of weights and measures and its branches shall consider this factor in testing the average of net quantity and calculating the deviation of individual products.

4. Implementation of inspection: basic mass inspection of net quantity labeled products is as follows:

## 4.1 Inspection Procedure:

## 4.1.1 Market Sampling:

- (1) Weight every single package total mass  $m_i$  and record.
- (2) Weight every single package tare value  $m_{Ti}$  and record.
- (3) Calculate the Net Quantity of every single prepackage product  $Q_i$ , average Net Quantity of prepackage products  $\bar{Q}$  as following formulas and record them.

$$Q_i = m_i - m_{Ti}$$

$$\bar{Q} = \frac{1}{n} \sum_{i=1}^n Q_i$$

- (4) Count the number of Insufficient Prepackage  $Q_i < Q_n - T$  and record.

## 4.1.2 Sampling:

- (1) Decide the sample size according to Table 1 and then conduct random sampling.
- (2) Weighs every single package total mass  $m_i$  and record.
- (3) Weighs average package Tare Value  $m_T$  according to the requirements of Section 3.4.2
- (4) Calculate the Net Quantity of every single prepackage product  $Q_i$ , average Net Quantity of prepackage products  $\bar{Q}$ , and standard deviation of samples as following formulas, and record them.

$$Q_i = m_i - m_T$$

$$\bar{Q} = \frac{1}{n} \sum_{i=1}^n Q_i$$

$$s = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (Q_i - \bar{Q})^2}$$

- (5) Counts the number of non-conforming prepackages  $Q_i < Q_n - T$  and the Net Quantity of prepackage products  $Q_i < Q_n - 2T$ , and record them.

## 5. Determine the result:

## 5.1 Market Sampling:

There shall not be any Insufficient Prepackage ( $Q_i < Q_n - T$ ) among the inspection result.

## 5.2 Sampling:

Only if the following three requirements are satisfied can the inspection result be declared conformance.

5.2.1 Judgment on Tolerable deficiency: the number of non-conforming prepackages ( $Q_i < Q_n - T$ ) should not be more than the allowable number of non-conforming prepackages given in Table 1.

5.2.2 Judgment on double tolerable deficiency: no actual net quantity of sampled product  $Q_i < Q_n - 2T$ .

5.2.3 Judgment on average value: to determine whether the products conform to the requirements of average value should base on the consideration of the standard deviation “s” of samples and the sample correction factor SCF given in Table 1; the requirements on average value can be deemed as satisfied provided that the below formula is satisfied:

$$\bar{Q} + s \cdot SCF \geq Q_n$$