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China Notifies Draft Nutrition Labeling Regulation

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Report Highlights: China recently published a second draft food nutrition labeling regulation that contains changes that would impact domestic and foreign manufacturers. The first draft was submitted for domestic comment (GAIN CH7074) and subsequently dually notified to the WTO as G/TBT/N/CHN/313 and G/SPS/N/CHN/102 with substantial additional changes. Food nutrition labeling regulations are de facto mandatory for all packaged food sold in China and this draft contains changes that could require alterations to existing labeling content and format. This report contains an UNOFFICIAL TRANSLATION that should be used for reference purposes only.

Includes PSD Changes: No
Includes Trade Matrix: No
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Summary

China recently published a second draft food nutrition labeling regulation that contains changes that would impact domestic and foreign manufacturers. The first draft (GAIN Report CH7074) was published for the solicitation of comments from domestic Chinese food manufacturers and industry. A second version was later published that incorporated these comments. The second version was dually notified to the WTO as G/TBT/N/CHN/313 and G/SPS/N/CHN/102 with substantial additional changes. The deadline for official comments to the WTO was January 13, 2008.

Food labeling is not mandatory in China. Thus, this regulation will not be mandatory for domestically produced or imported food. However, if any food label is used on food packaging in China, it must adhere to officially promulgated food labeling regulations. As such, for many products this regulation is a de facto mandatory regulation (see Article 6 of draft). The implementation of this regulation is expected to have trade impacts.

BEGIN TRANSLATION

The Regulation for Food Nutrition Labeling

(Draft version for soliciting comments)

Chapter I General Provisions

Article 1 This Regulation is hereby formulated with a view to guiding and standardizing the food nutrition labeling, ensuring the nutrition quality of food, and protecting consumer health. It is based on the Food Hygiene Law of P. R. China.

Article 2 All prepackaged food products with a nutrition label that are sold within the territory of the People's Republic of China must comply with this regulation unless otherwise regulated by other State laws, administrative regulations and standards.

Article 3 The State encourages food manufacturers to label nutrition information in accordance with this regulation. The Ministry of Health will formulate a list of food varieties and categories that are subject to mandatory nutrition labeling at a later time based on implementation of this regulation.

Article 4 " Food nutrition label " as defined by this Regulation refers to a statement on food nutrition characteristics to consumers, which include

1. Nutrition ingredients
2. Nutrition claims
3. Health related claims

Article 5 Nutrition ingredients refer to ingredients that are good for human health, including nutrient, water, dietary fiber and other functional ingredients.

Article 6 Following nutrition information must be indicated on the food nutrition label when a food manufacturer decides to label nutrition content and health claims about one nutrient:

1. Energy
2. Protein
3. Fat
4. Carbohydrate

Article 7 Food manufacturers may label following nutrition ingredients on the food nutrition labels:

1. Energy
2. Protein
3. Fat (saturated fatty acid, unsaturated fatty acid, mono-unsaturated fatty acid, multi-unsaturated fatty acid, trans fat)
4. Cholesterol
5. Carbohydrate
6. Sugar
7. Dietary fiber (soluble dietary fiber and insoluble dietary fiber)
8. Vitamin: vitamin A (β -carotene), vitamin D, vitamin E, vitamin K, vitamin B₁ (thiamine), vitamin B₂ (riboflavin), vitamin B₆, vitamin B₁₂, vitamin C, nicotinic acid, folic acid, pantothenic acid, choline, biotin.
9. Minerals: Sodium, calcium, potassium, magnesium, phosphorus, iron, zinc, iodine, selenium, copper, chromium, manganese, molybdenum

The above nutrition ingredients must not change their names. Nutrition-enhanced food should also be labeled with content of enhanced nutrition.

Article 8 The content of nutrient should be labeled in actually "value" per 100 mL, per 100g and /or per serving. The nutrition content can also be labeled as its percentage to the nutrient reference value (NRV).

Article 9 The definition of nutrient, label, and the review or judgment of value should comply with "Labeling Practice for food nutrition label" .

Article 10 In one of below cases, the nutrition information might not be labeled.

1. Daily food serving less than 10g.
2. Raw meat, raw fish, raw vegetable and fruit.
3. Food which total packaged area is less than 100cm².
4. Food made on the spot.
5. Alcoholic content is greater than 0.5%.
6. Other requirements allowed.

Article 11 Nutrition claims include:

1. Content claim: refers to claims about the level of energy or nutrients contained such as "originates from", "contains", "provides", "high", "rich in", "low" or "extreme low", "free from" or "zero".
2. Comparative claim: refers to claims about the comparative levels of more than two nutrients or energy values in food, such as "reducing", "less than", "lower than", "increasing", "adding", "greater than", "higher than", etc.
3. Identity claim: refers to nutrition identity of food ingredients, such as "fortified", "rich in fiber", "fat free", "lean", etc.

Article 12 Nutrition claims should comply with "Guidance for Nutrition and Health Claims".

Article 13 Comparative claims should indicate variations in folds or mass percentage and the actually content which less or higher than that of standard food or reference value should no less than 25 percent.

Article 14 The standard food or reference value for comparative claims should conform to following requirements.

1. The standard food for comparing should be well known, and should be the same kind of food with different processing or with various forms.

2. The reference value for comparing only refers to nutrients involved in nutrient reference value (NRV).

Article 15 Claims should be true, objective, and should not exaggerate the nutritional function.

Article 16 health claims refer to suggestions or instructions about food or food ingredients and their relation to human health, including:

1. Nutrition function claim: refers to claims that a nutrition ingredient that may maintain body growth, development, and physiological functions.
2. Claims on reducing the risk/accidence of chronic disease: refer to claims that a food or food ingredient can reduce risk of occurrence and development of a chronic disease.
3. Other functional claims: refer to claims that a food or nutrition ingredient has special health functions for human health.

Article 17 Nutrition function claims should comply with the following requirements:

1. The function of the claimed nutrition ingredient should be science-based and with nutrient reference value (NRV);
2. The content of the claimed nutrient is notable and complies with the requirements in Part III of the Guidance for Nutrition and Health Claims;
3. The terminology should comply with Part IV of the Guidance for Nutrition and Health Claims.

Article 18 Any labeling or claims should not change the terminology about the health claims or imply disease-curing functions in any form of graphs or symbols.

Article 19 Terminology about health claims should be scientific, standardized, accurate and easy for consumer to judge, choose, and consume independently. In order to keep the scientific progress and the actual request, the content of nutrition claim shall be formulated and published by the Ministry of Health.

Article 20 The format of nutrition label for prepackaged food should conform to the following requirements.

1. The nutritional facts must be indicated in a “square table”. The square for nutritional facts can be any size and can be placed vertical to the baseline of the package. Recommended format is described in part six of the “Labeling Practice for Food Nutrition Label”.
2. Label of nutritional facts must be placed in the eye-catching position on the package.
3. In case the main area for labeling is less than 20 square centimeters or the package size is too large, labels can be placed in horizontal form.
4. The background color, font and style of the labeling should clear and is easy to read, but the character size for nutritional fact content and health claims must not greater than the product name.
5. In case there is outer package (or large-sized package), nutritional facts can be placed on the outer package but the minimum package must be labeled with weight.

Article 21 The nutrition labels should use Chinese characters. If a foreign language is used on the label, it should correspond to the Chinese version. The size of the foreign language should not be greater than the Chinese.

Article 22 Food manufacturers should indicate nutritional components on the nutrition labels of their products and should be obliged to guide the consumers to form a healthy diet.

Article 23 Food manufacturers should be equipped with specialized persons who are responsible for making and reviewing the nutrition labels. Ex-factory testing or measuring of

nutrition components should be done and the food can be released only after it has passed the compliance test. In case a food does not comply with the labeling content, the manufacturer should re-test the product or take necessary correction measures in the course of processing.

Article 24 The testing of food nutrition facts can be done by the manufacturer or by a third party. If the manufacturer is capable for testing, its testing equipment or instruments should be inspected regularly or maintained in time and should always be in good conditions to ensure accuracy of the testing data. The original record of the testing should be kept complete, intact, and authentic. All testing records and reports must be kept for at least two years for the purpose of verification and traceability.

Article 25 The food manufacturers and suppliers of raw materials should ensure certain technological investment and reinforce the construction of a food nutrition testing system. They should establish and perfect the testing and monitoring on key segments like raw material, processing and finished product related to food nutrition quality and should establish a recall system for unqualified foods failing nutrition labeling.

Article 26 The “Labeling Practice for Food Nutrition Label” and “Guidance for Nutrition and Health Claims” are formulated and issued by the Ministry of Health.

Article 27 This regulation shall come into force on xxx 2007. In case any labeling and claims about food nutritional facts are not compliant with the regulation, the regulation should prevail.

Article 28 The Ministry of Health should be responsible for the interpretation of this regulation.

Appendixes

1. Labeling Practice for Food Nutrition Label
2. Guidance for Nutrition and Health Claims
3. Nutrient Reference Value for Chinese Food Labeling.

Appendix 1

Labeling Practice for Food Nutrition Label

This appendix stipulates the definition, analytical methods, conversion coefficient, labeling methods of nutrients, allowable variations, and recommended forms of nutrition labels about energy and nutrients involved in the Regulation for Food Nutrition Labeling.

I Terms and Definitions

A. Food and food composition

1. **Prepackaged foods:** refer to foods directly provided to consumers after having been packed in certain quantity, or put (poured) into containers.
2. **Food composition:** refers to all ingredients contained in a food product.
3. **Nutritional component:** refers to ingredients in food that are beneficial to health, including nutrient, water, dietary fiber, and other functional ingredients.
4. **Nutrient:** refers to the substances with special physical function and which are essential for maintaining the growth, development, activity, reproduction, and normal metabolism of body. If lacking of such substances, it may bring about adverse biochemical and physical effects on human body. These nutrients include five categories, namely protein, fat, carbohydrate, mineral and vitamin.
5. **Energy:** refers to energy produced by protein, fat, and carbohydrate during metabolism of human bodies, which is measured in kJ or J. The conversion coefficient and formula are as follows:

$$\text{Energy (kJ)} = 17 * \text{protein(g)} + 17 * \text{carbohydrate(g)} + 37 * \text{fat(g)}$$

When a food contains ethanol (alcohol), organic acid, or dietary fibers, it can also produce energy as indicated in Table 1. The conversion coefficient and formula are as follows:

$$\text{Energy (kJ)} = 17 * \text{protein(g)} + 17 * \text{carbohydrate(g)} + 37 * \text{fat(g)} + 13 * \text{organic acid(g)} + 29 * \text{ethanol (alcohol)(g)} + 8.5 * \text{dietary fiber(g)}$$

Table 1, Energy conversion coefficient of nutrients in food

Ingredient	KJ/g*
Protein	17
Fat	37
Carbohydrate (available)	17
Ethanol (alcohol)	29
Organic acid	13
Dietary fiber	8.5

6. **Protein:** an organic compound containing nitrogen, protein is composed of amino acid. Protein content in food can be calculated by multiplying the total nitrogen content in food and the conversion coefficient or by the total amount of all amino acids in food. After the total nitrogen amount is determined, the conversion coefficient and formula of protein content in food are as follows:

Protein (g/100g) = total nitrogen amount (g/100g) * conversion coefficient. For processed or formula foods that use complex ingredients, a unified conversion coefficient of 6.25 is applicable.

Table 2 Nitrogen Conversion Coefficients for Different Foods

Food	Conversion coefficient	Food	Conversion coefficient
Wheat		Egg	
Whole wheat powder	5.83	Whole egg	6.25
Wheat bran	6.31	Yolk	6.12
Malt	5.80	Egg white	6.32
Malt powder	5.70	Meat and fish	6.25
Oats	5.83	Animal gelatin	5.55
Barley, rye powder	5.83	Milk and dairy product	6.38
Millet	6.31	Casein	6.40
Corn	6.25	Human milk	6.37
Rice and rice powder	5.95	Beans	
Nut, seed		Soybean (yellow bean)	5.71
Brazilian nut	5.46	Other beans	6.25
Peanut	5.46		
Almond	5.18		
Other nuts, such as walnuts, hazelnuts	5.30	Other foods	6.25

Source: China Food Component Table 2002

7. **Fat and fatty acid**

Due to different testing methods, fat can be indicated by crude fat or total fat. Both can be labeled as "fat" on the nutrition labels.

Crude fat: generic term for chemical compounds in food that are soluble in solvent (ether or petroleum benzine) but insoluble in water. In addition to triglyceride, they also include phospholipid, sterol, and coloring, etc. Crude fat can be determined through sorbite extraction method or Luogao method.

Total fat: refers to fat content in foods as determined and measured through total amount of single fatty acids.

Fatty acid: refers to generic term of xxx, which combines with glycerol to become fat. Fatty acid is classified into saturated fatty acid and unsaturated fatty acid.

Saturated fatty acid (or saturated fat): refers to fatty acid whose carbon chains are free from double bonds, such as palmitic acid and stearic acid.

Unsaturated fatty acid (or unsaturated fat): only refers to CIS forms. Of which, mono-unsaturated fatty acid refers to the total fatty acids whose carbon chains contain a double bond, and poly-unsaturated fatty acid refers to the total fatty acids whose carbon chains contain more than two double bonds.

Trans fatty acid (or Trans fat): refers to total amount of unsaturated fatty acids that contain one or more than one non-conjugated trans double bonds.

Measuring of fatty acid

The content of fatty acid in food is labeled in g/100g. If internal standard method or external reference method is used to determine fatty acid, the content of total fatty acid in food refers to the total amount of various single fatty acids. When sorbite extraction method is used to determine crude fat, the following formula can be applicable to determine the content of total fatty acid in food.

$$\text{Total fatty acid (g/100g)} = \text{crude fat (g/100g) in food} \times \text{conversion coefficient}$$

Table 3 Fatty Acid Conversion Coefficient in Different Foods

Food name	Conversion coefficient	Food name	Conversion coefficient

Wheat, barley, and rye		Beef (lean)	0.916
Whole wheat	0.720	Beef (fat)	0.953
Wheat flour	0.670	Mutton (lean)	0.916
Wheat bran	0.820	Mutton (fat)	0.953
Oat	0.940	Pork (lean)	0.910
Rice	0.850	Pork (fat)	0.953
Beans		Poultry	0.945
Soybean and products	0.930	Brain	0.561
Other beans	0.775	Heart	0.789
Fruit and Vegetables	0.800	Kidney	0.747
Avocado	0.956	Liver	0.741
Tree nut	0.956	Milk and dairy products	0.945
Peanut	0.951	Egg	0.830
Lotus seed	0.930	Fish	
Edible oil	0.956	Fish meat (rich in fat)	0.900
Oil (other than coconut oil)	0.956	Fish meat	0.700
Coconut oil	0.942		

Source: China Food Component Table 2002

8. **Carbohydrate:** generic name for sugar, oligose, and amylose combined and an important nutrient for energy provision.
 Sugar: refers to all types of monose and diose, such as glucose, sucrose, etc.
 Oligosaccharide (or oligose): refers to carbohydrates with a polymerization degree between 3 and 9.
 Polysaccharide: refers to carbohydrates with a polymerization degree no less than 10, including starch and non-starch polysaccharides.
 Non-starch polysaccharide (NSP): refers to all plant polysaccharides other than starch.
 Calculation of carbohydrate: carbohydrates in food can be measured by using subtraction or addition.
 Subtraction: assume the quantity of food is 100, subtract quantities of protein, fat, and water and remaining is carbohydrates. This subtraction includes dietary fibers which should be subtracted when measuring energy.
 Addition: total amount of starch and sugar combined and applicable to only regular foods.
9. **Dietary fiber:** refers to edible parts of a plant or carbohydrates with polymerization degree of more than 3 and lignin that are indigestible by small intestine of human body but have health effect on human, including fibrin, semifibrin, pectin, inulin, etc. Dietary fibers or dietary fiber monomers can be determined through national standard-Determination of Non-soluble Dietary Fibers in Food (GB5009.88-2003) or the following methods:
- AOAC 985.29 Total Dietary Fibers in Food –Enzyme Weighing Method
 - AOAC 991.43 Total Soluble and Non-soluble Dietary Fibers in Food-Enzyme Weighing Method, MES-TRIS Buffer Solution.
 - AOAC 992.16 Total Dietary Fiber-Enzyme Weighing Method
 - AOAC 993.21 Total Dietary Fiber in Food with Starch Content No More than 2 percent-Non-enzyme Weighing Method
 - AOAC 994.13 Total Dietary Fiber (value of neutral sugar, uronic acid residue, and Klason lignin), Gas Chromatography, Color Comparison, and Weighing Method
 - AOAC 997.08 Levan in Food Products-Ion Exchange Chromatography Method

- AOAC 999.03 Determination of Total Levan in Food
 - AOAC 2000.11 Glucose in Food-Ion Exchange Chromatography Method
 - AOAC 2001.02 Determination of Trans Low Oligomeric Galactose in Certain Foods-Ion Exchange Chromatography Method
 - AOAC 2001.03 Determination of Total Dietary Fibers (including resistant maltodextrin) in Certain Foods-Enzyme Weighing Method and Liquid Chromatography Method
 - AOAC 2002.02 Starch and Resistant Starch in Plant Substance-Enzyme Digestion Method
 - Englyst Method on Determination of Dietary Fiber (non-starch polysaccharide), Color Comparison Method
10. **Nutritional fortification substance:** refers to food additives being added to food to enhance nutrition components. The food additive are considered natural nutrients that are natural or made through synthetic methods
- B. Value and rounding**
1. **Nutrient reference values (NRV):** refers to reference standards used to compare content of food nutrients labeled on the food nutrition labels, which serve as reference guidance or nutrition statement for consumers when they are choosing a food product. The formulation of NRV is based on recommended nutrient intake (RNI) and adequate intake (AI) for Chinese citizens (see Appendix 3 for details).
2. **Numerical value:** refers to a number a variety, such as “3” of 3m, “5”of 5kg.
- C. Effective numeral:** For numerical values without decimal and end with a number of zeros, effective numeral refers to the number of the numeral of counting from the most left of non-zero digit to the right minus the number of insignificant zero. For other decimal system bit, significant digit is referred to the number of the digit of counting from the most left of non-zero digit to the right. Example, 35000, if there are two insignificant zeros, the effective numeral is 3, and may be present as 350×10^2 ; if there are 3 insignificant zeros, the the effective numeral is 2, and may be present as 35×10^3 .
- D. Designated numeral**
1. The interval of rounding off is designated as 10^{-n} (n is a positive integer), or the numerical value is designated to rounding off to n decimal.
2. The interval of rounding off is designated as 1, or the numerical value is designated to rounding off to single numeral;
3. The interval of rounding off is designated as 10^n (n is a positive integer), or the numerical value is designated to rounding off to 10^n numeral (n is a positive integer), or the numerical value is designated to rounding off to 10, 100, or 1000 numerals.
- E. Rounding increment:** one mode of determining the retain numerals of rounding off. Once the numerical value of rounding off is determined, the value of rounding off should be the integer times of the numerical value.
- Example 1. If interval of rounding off is 0.1, the values of rounding off should be selected from the integer times of 0.1, and equivalent to rounding off to 1 decimal.
- Example 2. If interval of rounding off is 100, the values of rounding off should be selected from the integer times of 100, and equivalent to rounding off to 100 numeral.

II Analysis of nutrition component

The data on the food nutrition label may be obtained from direct analysis and calculation. The testing method and sampling principles for direct analysis should comply with GB/T5009.1-2003. In other words, national standards are prioritized methods. In case there is no national standard in place, AOAC recommended method may be employed. Other

methods that have been verified and cited from authoritative publications or that have been recognized by common knowledge can also be used. \

Calculation on nutrition component is achieved on the basis of the mixture ratio of food ingredients or on other definite data such as recognized food nutrition data, or composition data of like food

III Labeling of food nutrition component

Labeling of food nutrition component refers to a description on the name and content of various nutrients in the food. Label of food nutrition component should use the quantity of each nutrient in 100 g (mL) food or per serving. If NRV is referenced, the percentage of nutrient quantity in per serving or in 100g (mL) food to the NRV is employed.

- A. Labeling of energy and macronutrient
1. Energy: labeled in kJ or J
 2. Protein: indicated in "gram" (g)
 3. Fat: labeled in "gram" (g). If the nutrition claim involves classified fatty acid, the content of classified fatty acid should be labeled.

Fat	(g)	
Saturated fatty acid	...	(g)
Unsaturated fatty acid	...	(g)
Trans fatty acid	...	(g)
 4. Carbohydrate: labeled in "gram" (g). Sugar: indicated in "gram" (g).

For example: Carbohydrate	(g)
Or Carbohydrate	(g)
Of which, sugar	...	(g)
 5. Cholesterol : labeled in "mg"
- B. Labeling of Calcium and other minerals
- Calcium: labeled in "mg"
- Sodium: labeled in "mg" or "g".
- Other minerals: labeled in "mg" or "g".
- C. Labeling of vitamins
1. Vitamin A is labeled in **µg** RE
 Conversion formula between carotene and vitamin A is as follows:

$$\text{Vitamin A (}\mu\text{g RE)} = \beta\text{-carotene (}\mu\text{g)}/6$$

$$\text{Total vitamin A in food (}\mu\text{g RE)} = \text{vitamin Q (}\mu\text{g RE)} + 1/6 \beta\text{-carotene (}\mu\text{g)}$$
 2. Vitamin E is labeled in α -TE or mg.
 Vitamin E exists in many forms in food., such as α -tocopherol, β -tocopherol, γ -tocopherol, δ -tocopherol and corresponding triene tocopherol, of which α -tocopherol is most active and if total vitamin E in food is expressed in α -tocopherol , the following formula applies: α -TE (mg) = α -tocopherol (mg) + 0.5* β -tocopherol + 0.1* γ -tocopherol (mg) + 0.3*triene tocopherol (mg)
 3. Folic acid: labeled in (**µg**) or **µg** DEF. Because absorbing and utilization levels of natural folic acid in food and synthetic folic acid existed in fortified food and food supplements, the following formula is used to calculate the total folic acid in food:

$$\text{Total folic acid in food (}\mu\text{g DEF)} = \text{natural folic acid} + 1.7*\text{folic acid supplement (}\mu\text{g)}$$
 4. Nicotinic acid: labeled in mg or mg NE. The following formula is used to calculate total nicotinic acid:

$$\text{Total nicotinic acid (mg NE)} = \text{nicotinic acid (mg)} + \text{tryptophan (mg)}/60$$
 5. Other vitamins: labeled in mg or **µg**
- D. Labeling of other components
- Definition and analytical method for dietary fiber:

AOAC 985.29 and AOAC 991.43 are main testing methods, the labeling method is “dietary fiber ... (g), or can be labeled in total dietary fiber, soluble dietary fiber, non-soluble dietary fiber; if other AOAC testing methods are used to test single dietary fiber, the single dietary fiber can be labeled, for example, “dietary fiber (measured in xxx) ... (g).

Dietary fiber(g)

Or soluble dietary fiber(g)

Or Dietary fiber (measured in insulin.

..... (g)

IV Expression of nutrition component value

1. Interval of rounding off

One way to express rounding and numerals retained. Rounding intervals of nutrition components on nutrition labels are as follows:

Table 4 Rounding Intervals for Nutrition Components

Energy and nutrient	Expression unit	Rounding interval	Energy and nutrient	Expression unit	Rounding interval
Energy and macronutrient			Folic acid	µg DFE	0.0
Energy	kJ	1	pantothenic acid	Mg	0.01
Protein	g	0.1	Biotin	µg	0.1
Fat	g	0.1	sinkaline	Mg	0.1
Saturated fatty acid	g	0.1	Mineral		
Cholesterol	mg	1	Calcium	Mg	1
Carbohydrate (sugar)	g	0.1	phosphorus	Mg	1
Dietary fiber	g	0.1	potassium	Mg	1
Vitamin			Sodium	Mg	1
Vitamin A	µg RE	1	magnesium	Mg	1
Vitamin D	µg	0.1	Iron	Mg	0.1
Vitamin E	mg a-TE	0.01	Zinc	Mg	0.01
Vitamin K	µg	0.1	Iodine	µg	0.1
Vitamin B1	mg	0.01	Selenium	µg	0.1
Vitamin B2	mg	0.01	Copper	Mg	0.01
Vitamin B6	mg	0.01	Fluorine	Mg	0.01
Vitamin B12	µg	0.1	Chromium	µg	0.1
Vitamin C	mg	0.1	manganese	Mg	0.01
Nicotinic acid	mg	0.01	molybdenum	µg	0.1

2. Expression of “zero” value

When energy or nutrient value is too insignificant to human body, it is allowed to be labeled as ‘0’. The scope of labeling ‘0’ is indicated in the following table.

Table 5 Scope of Labeling of “0”

Nutrient	Unit	Scope allowed for labeling as “0” (per serving or 100g)
Energy	kJ	= 17 kJ
Protein	G	= 0.5g

Fat	G	= 0.5g
Saturated fatty acid or energy coming from saturated fatty acid	G	= 0.5g = 20 kJ
Cholesterol	Mg	= 5mg
Carbohydrate	G	= 0.5g
Sugar	G	= 0.5g
Sodium	Mg	= 5mg
Calcium, potassium	Mg	= 1 % NRV
Vitamin A	µg RE	= 1% NRV
Other vitamin or mineral	Mg or µg	= 2% NRV

3. Rounding of numeral value and other

Rounding of numeral value and other rules should comply with GB/T 8170-87

V Allowable variation of indicated numerical value

Within product shelf life, variation of numerical values indicated in the label should comply with the following principles:

Table 6 Criteria for Judging the Variation Scope of Indicated Numerical Value

Nutrient	Allowable variation of indicated numerical value
Vitamin D, vitamin A	80% indicated numerical value ~180% indicated numerical value
Other nutrient added or fortified	= indicated numerical value
Natural protein in food, polyunsaturated fatty acid and monounsaturated fatty acid, carbohydrate, starch, total soluble or insoluble dietary fiber or single unit, vitamin, mineral	=80% indicated numerical value
Natural energy, fat, saturated fat, trans fat, cholesterol, sodium, sugar and sugar alcohol	=120% indicated numerical value

As the numerical value is labeled in KJ, interval of rounding off is designated as 1, and equivalent to rounding off to signal digit. As the numerical value is labeled in g, **µg** or **µg**DFE, interval of rounding off is designated as 0.1, except Folic acid as 0.01.

VI Recommended format for nutrition labeling

There are five formats recommended for nutrition labeling and any one can be used. Unit for energy and nutrition component can use characters or letter in brackets.

1 Basic format**Nutrition information**

Items	per 100 g (mL) or per serving
Energy	kJ
Protein	g
Fat	g
Carbohydrate	g
Others	g/mg/ mg

2 Basic format with nutrient reference value**Nutrition information**

Item	per 100 g (mL) or per serving	%NRV per serving
Energy	kJ , kca	%
Protein	G	%
Fat	g	%
Saturated fat	G	%
Carbohydrate	G	%
Other nutrient	g/mg/ mg	%

3 Format with nutrition claim**Nutrition information**

	per 100 g (mL) or per serving	%NRV per serving
Energy	kJ , kca	%
Protein	G	%
Fat	G	%
Saturated fat	G	%
Carbohydrate	G	%
Other nutrient	g/mg/ mg	%
Low fat xx (nutrition claim #) Ratio of energy produced by daily intake fat to total energy should not exceed 30 percent (health claim)		

nutrition claims can be labeled under the nutrition component table, by the food name or in any other position

4 Format with English**Nutrition information**

Item	per 100 g, per 100 mL or per serving	% NRV
Energy	kJ	%
Protein	G	%
Fat	G	%
Saturated fat	G	%
Carbohydrate	G	%
Other nutrient(s) to be declared	g, mg or mg	%

5. Horizontal format

Nutrition information

Item	Per 100 g (ml) or per serving	% NRV	Item	Per 100g (ml) or per serving	%NRV per serving
Energy	kJ		Carbohydrate	G	%
Protein	G		Other nutrient	G, mg or <u>mg</u>	%
Fat	G				
Saturated fat	g				

Appendix 2

Guidance for Nutrition and Health Claims

This appendix stipulates the conditions for nutrition and health claims and standard terms applied in food nutrition labels.

I Definition

The nutrition and health claims stipulated in this Guidance refer only to:

- A. Nutrition claim refers to suggestion or statement about food nutrition characteristics. Nutrition claims include content claim, comparative claim, and identity claim.
 - 1) Content claim: refers to claims about the level of energy or nutrients contained in the food such as “originates from”, “contains”, “provides”, “high”, “rich in”, “low” or “extreme low”, “free from” or “zero”, etc.
 - 2) Comparative claim: refers to claims about the comparative levels of more than two nutrients or energy values in food, such as “reducing”, “less than”, “lower than”, “increasing”, “adding”, “greater than”, “higher than”, etc.
 - 3) Identity claim: refers to nutrition identity of food ingredients, such as “fortified”, “rich in fiber”, “fat free”, “lean”, etc.
- B. Health claim refers to suggestions or statement about the relations between food or food ingredients and human health, including nutritional function claim, other function claim, claims about reducing the risks of having chronic diseases, etc.

Nutritional function claim: refers to claims that a nutrient that may maintain body growth, development, and physiological functions. Nutritional function is one type of health claim.

The guidance only provides guiding statement about nutritional function claims, other claims are stipulated by other guidance.

II Basic principles

- A. Nutrition and health claims cover the following nutrition components:
 - a. Energy and macronutrient: energy, protein, fat, saturated fatty acid, cholesterol, carbohydrate, sugar, dietary fiber;
 - b. Vitamin: vitamin A (β-carotene), vitamin D, vitamin E, vitamin K, vitamin B1(aneurine), vitamin B2 (lactoflavin), vitamin B6, vitamin B12, vitamin C (ascorbic acid), Nicotinic acid (niacinamide), Folic acid, pantothenic acid, Biotin, and sinkaline.
 - c. Mineral: calcium, phosphorus, potassium, sodium, magnesium, iron, zinc, iodine, selenium, copper, fluorine, chromium, manganese, and molybdenum.

- B. The basic requirement for nutrition and health claim is that the content of a nutrition component complies with the basic requirements of this appendix. Claims or implications about nutrition identity should comply with the guiding principles of this appendix.
- C. The requirements about claims apply to all foods, special dietary foods and foods for medical use may follow these principles.
- D. If there is no special permission, the guidance does not cover formula foods for infants of 0-6 months old.

III Nutrition claim

- A. Content claim: may be used independently or with food name, such as “low sodium”, “high calcium” cookies, “milk is source of calcium”, etc.
- Comparative claim: the standard food for comparison should be well known, and should belong to the same kind of food through different processing or in different forms; the added or reduced amount should no less than 25 percent. For example, if a certain milk powder claims that it “increases 25 percent of calcium content”, the standard food for comparison is regular milk powder, so its calcium content is 25 percent higher than regular milk powders. Nutrients being compared are limited to those involved in NRV list.
- Identity claim: may be used with nutrient names, nutrients or food name, such as “fat free milk powder”.
- B. Requirements about content claim and comparative claim
The use of content claim and comparative claim must comply with the requirements stipulated in Table 1.

Table 1 Nutrition claim criterion

Item	Mode of claim	Requirement
1 Energy	“Food” with low energy	≤ 170kJ / 100g (solid) ≤ 80kJ / 100mL (liquid)
	“Food” decreasing energy	Decreased 25% than like product
	“Food” without energy	≤ 17kJ / 100g (solid) or 100mL (liquid)
2 Protein	Protein source, contains protein, provides protein	≥10% NRV per 100g ≥5% NRV per 100 mL or ≥5% NRV per 420 KJ
	High content or rich in protein or protein is rich	2 times or more of protein than “source”
	Low content of protein	Energy from protein ≤5% total energy
3 Fat	Low fat	≤ 3 g / 100g (solid)
	Degrease or de-fat	≤ 1.5 g / 100mL (liquid)
	Without or free from fat	≤ 0.5 g / 100g (solid) or 100mL (liquid)
	Reduces fat	Decreased 25% of fat than like product
	Low Saturated fatty acid	≤ 1.5 g / 100g (solid) and provides less than 10% of the total energy in food. ≤ 0.75 g / 100mL (liquid) and provides less than 10% of the total energy in food.
	Without or free from Saturated fatty acid	≤ 0.1 g / 100g (solid) or 100mL (liquid)

4 Cholesterol	Low cholesterol	$\leq 0.02 \text{ g} / 100\text{g}$ (solid); $\leq 0.01 \text{ g} / 100\text{mL}$ (liquid) and Saturated fat $\leq 1.5 \text{ g} / 100\text{g}$ (solid food) and provide less than 10% of the total energy in food. $\leq 0.75 \text{ g} / 100\text{mL}$ (liquid food) and provides less than 10% energy.
	Without or free from cholesterol	$\leq 0.005 \text{ g} / 100\text{g}$ (solid) or 100mL (liquid) and saturated fat $\leq 1.5 \text{ g} / 100\text{g}$ (solid) or $\leq 0.75 \text{ g} / 100\text{mL}$ (liquid), and the energy from saturated fat $\leq 10\%$ of the total energy.
	Reduces cholesterol	Decreased 25% than like product
5 Sugar	Reduced 25 percent of sugar	Decreased 25% sugar than like product
	Low sugar	$\leq 5 \text{ g} / 100\text{g}$ (solid) or 100mL (liquid)
	Without or free from sugar	$\leq 0.5 \text{ g} / 100\text{g}$ (solid) or 100mL (liquid)
6 Sodium	Low sodium	$\leq 120 \text{ g} / 100\text{g}$ or 100mL
	Very or extremely low sodium	$\leq 40 \text{ mg} / 100\text{g}$ or 100mL
	Without or free from sodium	$\leq 5 \text{ mg} / 100\text{g}$ or 100mL
7 Calcium, or other mineral	Source from xx Contains xx Provide xx	$\geq 15\%$ NRV per 100g $\geq 7.5\%$ NRV per 100 mL or $\geq 5\%$ NRV per 420 kJ
	High xx or rich in xx	2 times or more than "source"
	"decreased" or added	Decreased or added 25% than like product
8 Vitamin	Source from xx Contains xx Provides xx	$\geq 15\%$ NRV per 100g $\geq 7.5\%$ NRV per 100 mL or $\geq 5\%$ NRV per 420 kJ
	High or rich in xx	2 times or more than "source"
	Adding or reducing xx	Decreased or added 25% than like product
9 Dietary fiber	Source from xx, provide xx	$\geq 3 \text{ g}/100 \text{ g}$ or $\geq 1.5\text{g}/100 \text{ ml}$ or $\geq 1.5\text{g}/420 \text{ kJ}$
	High dietary fiber	2 times or more than "source"
10 Carbohydrate	Low lactose	$\leq 2 \text{ g} / 100\text{mg}$ (ml)
	Free from lactose	$\leq 0.5 \text{ g} / 100\text{mg}$ (ml)

	"decreased" or "increased"	Decreased or increased 25% of carbohydrate than likeproduct
	Less lactose	Reduced lactose by 25% than like product (only applicable to dairy product)

Note: Terms for per serving also should be conformed to the requirement for per 100g.

C. Requirements and conditions about identity claim

Requirements and conditions on identity claim must comply with Table 2:

Table 2 Requirements and conditions on identity claim

Claim	Requirement and condition	Restriction
Add, fortify, nutrition fortification,	Fortifies one or more nutrients and complies with GB 14880	Limited to fortified food
Rich in vitamin	More than 3 kinds of Vitamins. Comply with GB 14880 or requirements about claims for nutrient content	
Fat free	≤ 0.5% of fat content (liquid milk and yogurt); ≤ 1.5% of fat (milk powder)	Only for Dairy food
Lean	Fat content less than 10%	Only for meat

D. Verification on nutrition claim

Principles on verification of nutrition claim: value should be higher or equal to the requirements as stipulated in Tables 1 and 2 when using positive claims such as "high" "rich in", etc.; value should be lower or equal to the requirements as stipulated in Tables 1 and 2 when using negative claims such as "low", "none", etc. IVHealth claim

1. Conditions of use

Basic requirements about health claim: energy or nutrient being claimed must comply with stipulations regarding notable content prescribed in Appendixes 1 and 2.

2. Standard terminology

Based on nutrition characteristics of food, the following one or more standard terminologies can be used. The recommended terminology about nutrient functional claim is as follows:

1) Energy

Human body needs energy to maintain vital activity.

The growth, development and all activities of body need energy.

Proper energy could maintain health in good status.

2) Protein

Protein is essential composition of human body and supplies several kinds of amino acid;

Protein is the essential substance for human vital activity;

Protein aids the formation and growth of tissue.

Protein is the key nutrient for formation and growth of tissue

3) Fat

Fat supplies high level of energy and essential fatty acid for human body;

Fat is essential composition of human body;

Energy produced by fat in daily diet food should not exceed 30% of the total energy;
Fat aids absorption of fat-soluble vitamins.

Saturated fat:

Saturated fat helps absorption of cholesterol in food;

Saturated fat intake amount should be lower than 1/3 of daily total fat intake and excessive intake is harmful to health;

Excessive intake of saturated fat may increase level of cholesterol, therefore, intake should be less than 10% of the total daily energy.

4) Cholesterol

Daily intake amount of cholesterol in diet food should not exceed 300mg.

5) Carbohydrate

Carbohydrate is the fundamental substance and main source of energy for human body;

Low lactose food helps alleviate symptoms of intolerance to lactose;

Carbohydrate in dietary food should account for 55% of the total energy.

6) Sugar

Sugar is pure substance of energy;

Sugar can quickly supplement the energy need of the body.

7) Sodium

Sodium can regulate water in human body and maintain acid-alkali balance;

WHO recommends daily intake of edible salt should not be exceed 6 grams;

Excessive intake of sodium may cause harms to health.

8) Calcium

Calcium is the main composition of human bones and teeth. Many physiological functions need involvement of calcium; .

Calcium helps development of bone and teeth;

Calcium aids bones and teeth to become stronger.

9) Iron

Iron is the factor of forming red blood cells;

Iron is necessary to production of hemoglobin

10) Zinc

Zinc is a must element for growth and development of children;

Zinc aids to improve appetite;

Zinc helps maintain skin health.

11) Magnesium

Magnesium is a key element for energy metabolism, tissue formation, and bone development;

12) Iodine

Iodine is a key element for maintaining normal function of thyroid gland.

13) Vitamin A

Vitamin A helps maintain eye sight in darkness;

Vitamin A is necessary to maintain normal function of immune system;

Vitamin A aids to maintain the health of skin and mucous membrane.

14) Vitamin C

Vitamin C is necessary to maintain normal function of immune system;

Vitamin C aids to maintain the health of skin and mucous membrane;

Vitamin C can maintain normal development of bones and gum;

Vitamin C can facilitate absorption of iron.

15) Vitamin D

Vitamin D can facilitate absorption of calcium;

Vitamin D is helpful to the health of bones and teeth;

Vitamin D helps formation of bones.

16) Vitamin E

Vitamin E has a role of antioxidation;

17) Vitamin B1

Vitamin B1 is necessary for the normal metabolism of carbohydrates;
 Vitamin B1 aids to maintain normal physiological functions of nerve system.

18) Vitamin B2

Vitamin B2 is helpful to health of skin and mucous membrane;
 Vitamin B2 helps energy utilization by carbohydrates.

19) Nicotinic acid

Nicotinic acid helps maintain health of skin and mucous membrane;
 Nicotinic acid helps energy utilization;
 Nicotinic acid aids to maintain health of nerve system.

20) Vitamin B6

Vitamin B6 aids metabolism and utilization of protein;
 Vitamin B6 is necessary for maintaining the health of angiocarp.

21) Vitamin B12

Vitamin B12 helps formation of red blood cells.

22) Folic acid

Folic acid aids normal development of brain and nerve system of fetus;
 Folic acid helps formation of red blood cells.

23) Pantothenic acid

Pantothenic acid is a key element for energy metabolism and tissue formation.

24) Dietary fiber

Dietary fiber helps functioning of intestinal canal

Appendix 3

Nutrient reference value for food labeling in China

Nutrient reference value (NRV)

This appendix stipulates nutrient reference values (NRV) and their application principles

I Definition

Nutrient reference values (NRV): is a reference standard for comparing the content levels of nutrients in food and a reference guide or nutrition statement for consumers when choosing a food product. The formation of NRV is based on the recommended nutrition intake (RNI) and adequate intake (AI) in Chinese dietary food.

II Scope of application

NRV applies to all nutrition labels on prepackaged food with an exception of food labels for infants and babies under age of 4 and pregnant women.

III Forms of application

NRV applies only to food nutrition labels, and their forms are as follows:

1. Used for comparing or describing content of energy or nutrients, such as NRV%;
2. Used as a reference in nutrition and health claims;
3. On the nutrition labels, it is labeled as NRV %, and designated rounding interval is 1, such as 1%, 5%, 20%, etc.

IV NRV

The following table lists NRVs for 6 macronutrients, 14 vitamins, and 14 minerals.

Table 1 Energy and Nutrition Component NRV

Energy and nutrients	NRV/day	Energy and nutrient	NRV/day
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Energy and macronutrients			
Energy	8400 kJ	Pantothenic acid	5 mg
Protein	60 g	Biotin	30 µg
Fat	<60 g	Choline	450 mg
Saturated fatty acid	<20 g	Mineral	
Cholesterol	<300 mg	Calcium	800 mg
Carbohydrate in total	300 g	Phosphorus	700 mg
Dietary fiber	25 g	Sodium	2000 mg
Vitamin		Potassium	2000 mg
Vitamin A	800 µg RE	Magnesium	300 mg
Vitamin D	5 µg	Iron	15 mg
Vitamin E	14 mg α -TE	Zinc	15 mg
Vitamin K	80 µg	Iodine	150 µg
Vitamin B1	1.4 mg		
Vitamin B2	1.4 mg	Selenium	50 µg
Vitamin B6	1.4 mg	Copper	1.5 mg
Vitamin B12	2.4 µg	Fluorine	1 mg
Vitamin C	100 mg	Manganese	3 mg
Nicotinic acid	14 mg	Molybdenum	40 µg
Folic acid	400 µg DFE	Chromium	50 µg

Note.

1. Energy supply from protein, fat and carbohydrate account for 12%, 27% and 60%, respectively, of the total energy.
2. Passed by 6th standing council, Chinese Society of Nutrition.

V Labeling and calculation

On the nutrition labels, if the content of nutrients is labeled as NRV%, the designated rounding interval is 1.

Formula is like this: $X/NRV*100\% = Y\%$

Of which, X = content of one nutrient in food (g, mg, $\mu\text{g}/100\text{g}$ or 100ml)

NRV = nutrient reference value for the nutrient

Y % = result

For example: 100 grams of pre-packaged food contains:

Vitamin A: 72 μg RE

Vitamin C: 70.0 mg

Vitamin B1: 0.09 mg

Folic acid: 15.0 μg DFE

In reference to Table 1 of Article IV, the NRV's of nutrients, after calculation and rounding, are indicated as follows:

Item	Per 100g	NRV%
Vitamin A	72 μg RE	9%
Vitamin C	70.0 mg	70%
Vitamin B1	0.09 mg	6%
Folic acid	15.0 μg DFE	4%