

Voluntary Report – Voluntary - Public Distribution

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Report Name: Industry Group Issues Voluntary Standard for Plant-Based Meat Alternative Products

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Report Highlights:

On December 25, 2020, the Chinese Institute of Food Science and Technology (CIFST) issued the voluntary group standard Plant-Based Meat Products (T/CIFST 001-2020), which provides definitions, technical requirements, and guidelines on the labeling, packaging, transportation, and storage of plant-based meat alternative products. The standard will be implemented on June 25, 2021. This report contains an unofficial translation of the standard.

Summary

The plant-based meat alternative sector in China is growing, with research and development, production, and marketing of plant-based meat alternative products expanding rapidly in recent years. Since 2019, a dozen plant-based meat alternative companies have emerged, introducing a large variety of new products to consumers in China. See the FAS China GAIN report [Market Overview of Plant-Based Alternative Products](#) for additional information.

Although still in its early stages, companies are optimistic about the sector's prospects, a sentiment that is reflected in increasing marketing activity and investment. Likewise, the rising significance of the plant-based meat alternative sector is indicated by the development of a voluntary group standard¹ by the Chinese Institute of Food Science and Technology (CIFST).² The group standard Plant-based Meat Products (T/CIFST 001-2020) aims to clarify product definitions, establish technical and labeling/marketing requirements, and encourage and guide research and development.

CIFST released a draft of the standard for public comments in June 2020. The standard will be implemented on June 25, 2021. This report contains an unofficial translation of the standard.

BEGIN TRANSLATION

Group Standard

Plant-based Meat Products (T/CIFST 001-2020)

Preface

This document was drafted in accordance with GB/T 1.1-2020 - Directives for Standardization, Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This document was proposed and managed by the Chinese Institute of Food Science and Technology (CIFST).

This document was drafted by: China Agricultural University, Jiangnan University, Institute of Agricultural Products

¹ "Plant-Based Meat Products" is a Group Standard as defined by the Standardization Law of the People's Republic of China (2017 Revision). Under the Standardization Law, China encourages academic societies, associations, chambers of commerce, federations, industry technology alliances, and other social groups to coordinate relevant market participants to jointly develop group standards to address the needs of market innovation. Such standards are adopted by the members of these groups as agreed and may be voluntarily adopted by other market participants. Group standards are not compulsory, and they are mainly developed for new products in the market for which there are no existing standards.

² CIFST is a scientific and policy advisory body that provides input to Chinese government policy makers and actively engages in food science and technology communications. The organization was established in 1980 and is primarily composed of Chinese scientists and engineers.

Processing of the Chinese Academy of Agricultural Sciences, Denisco (China) Co., Ltd., Unilever Food (China) Co., Ltd., Nestle (China) Co., Ltd., Cargill Investment (China) Co., Ltd., Rogate Management (Shanghai) Co., Ltd., Shanghai Tianxiang Quality Technology Service Co., Ltd., Shenzhen Qishan Food Co., Ltd., Novozymes (China) Investment Co., Ltd., Aidimeng (Shanghai) Management Co., Ltd., Tianjin Meikang Food Co., Ltd., Beijing HongxiZhiye Technology Co., Ltd., Baichuan Biotechnology Co., Ltd., Yantai Shuangta Food Co., Ltd., Qinquangdao Jinhai Food Industry Co., Ltd., Shandong Yu Wang Ecological Food Industry Co., Ltd., Shanghai Laiyifen Co., Ltd., Fujian Panpan Food Co., Ltd., Xi 'an Yuansen Biotechnology Co., Ltd., and Three Squirrels Co., Ltd.

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Plant-Based Meat Products

1. Scope

This document stipulates the basic requirements, technical requirements, testing rules, decision rules, labeling, marks, packaging, transportation, and storage of plant-based meat products.

This document applies to plant-based meat products.

2. Normative references

The contents in the following documents constitute the indispensable clauses of this document through normative reference in the text. For all dated references, only the version corresponding to the date is applicable to this document. For undated references, the latest version (including all modifications) is applicable to this document.

GB/T 191 Packaging - Pictorial Marking for Handling of Goods

GB 2760 National Food Safety Standard - Standard for Uses of Food Additives

GB 2761 National Food Safety Standard - Maximum Levels of Mycotoxins in Foods

GB 2762 National Food Safety Standard - Maximum Levels of Contaminants in Foods

GB 4789.1 National Food Safety Standard - Food Microbiological Examination General Guidelines

GB 4789.3 National Food Safety Standard - Food Microbiological Examination Coliform Count

GB 4789.4 National Food Safety Standard Food Microbiological Examination Salmonella Examination

GB 4789.10 National Food Safety Standard Food Microbiological Examination-Staphylococcus Aureus

Examination

GB 5009.5 National Food Safety Standard - Determination of Protein in Food

GB 7718 National Food Safety Standard - General Standard for the Labeling of Prepackaged Food

GB 14880 National Food Safety Standard - Standard for Uses of Nutritional Fortifier

GB 20371 National Food Safety Standard - Vegetable Protein for Food Processing

GB 28050 National Food Safety Standard - General Rules for Nutrition Labeling of Prepackaged Foods

GB 31605 National Food Safety Standard - Hygienic Standard of Food Cold Chain Logistics

GB 31646 National Food Safety Standard -Hygienic standard for production and management of frozen food
JJF 1070 Rules of Metrological Testing for Net Quantity of Prepackaged Commodity with Fixed Content

Decree No.75 [2005] of the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) -
Measures for Measurement Supervision and Administration of Prepackaged Commodity with Fixed Content

3. Terms and Definitions

The terms and definitions below are applicable to this document.

3.1 Plant-based Meat Products

Foods using plant raw materials (such as beans, cereals, algae and fungi, etc.) or their processed products as the source of protein or fat, adding or not adding other ingredients or food additives (including food nutritional fortifier), which are processed to foods of similar texture, flavor, and appearance as animal meat products (such as livestock, poultry and aquatic products).

3.2 Raw Products

Products that are unheated or undercooked, which are not ready to be consumed.

3.3 Cooked Products

Products that are cooked and are ready to be consumed.

4. Basic Requirements

4.1 Protein and fat shall be derived from plant raw materials; animal-derived protein and fat shall not be added.

4.2 The formula of final product shall be designed based on the nutritional composition of the animal product it simulates. It is encouraged to improve protein quality, increase the protein content, and reduce the total fat and sodium content.

4.3 Food additives (including food nutritional fortifier), microorganisms and microorganisms-derived ingredients can be used. In addition to water and edible salt, the total added non-plant ingredients shall not exceed 10% of the total mass of the product.

5. Technical Requirements

5.1 Requirements on Raw Materials

The raw materials shall conform to applicable food standards or regulations. The plant protein shall conform to the provisions of GB 20371.

5.2 Sensory Requirements

Sensory properties shall conform to the requirements listed in Table 1.

Table 1 Sensory Requirements

Item	Requirements	Testing Method
Appearance	With proper appearance.	Take appropriate amount of samples and place them in a white porcelain plate, check whether there are foreign bodies under natural light. Smell and rinse mouth with water and taste.
Taste and aroma	With proper taste and aroma, without odor.	
Color	With proper color.	
Impurities	There are no foreign impurities visible by normal vision.	

5.3 Physical and Chemical Indexes

Physical and chemical indexes shall conform to the provisions in Table 2.

Table 2 Physical and chemical indexes

Item		Index	Testing Method
Protein /(g/100g) ≥	Plant-based livestock and poultry meat products (except those coated with batter) ≥	10	GB 5009.5
	Plant-based livestock and poultry meat products (coated with batter) ≥	8	
	Plant-based aquatic products ≥	8	

5.4 Limits for Contaminants

Limits for contaminants shall conform to GB 2762.

5.5 Limits for Mycotoxin

Limits for mycotoxin shall conform to GB 2761.

5.6 Microbial Limits

5.6.1 Limits for pathogenic bacteria in cooked products shall conform to provisions in Table 3.

Table 3 Limits for pathogenic bacteria in cooked products

Item	Sampling scheme ^a and limits (unless otherwise specified, they are all expressed in /25g)				Testing Method
	n	C	m	M	
Salmonella	5	0	0	-	GB 4789.4
Staphylococcus aureus	5	1	100 CFU/g	1 000 CFU/g	GB 4789.10 Method II

^a Sampling and processing of the sample shall be carried out according to GB 4789.1.

5.6.2 The microbial limit of cooked products shall also conform to provisions in Table 4.

Table 4 Microbial limits of cooked products

Item	Sampling scheme ^a and limits (unless otherwise specified, all are expressed in CFU/g)				Testing Method
	n	C	m	M	
Coliform	5	2	10	100	Plate count method in GB 4789.3
^a Sampling and processing of the sample shall be carried out according to GB 4789.1.					

5.7 Food Additives

5.7.1 The use of food additives shall conform to provisions in GB 2760.

5.7.2 The use of food nutrition fortifiers shall conform to provisions in GB 14880.

6. Net Content

It shall conform to JJF 1070 as well as the provisions of the Administrative Measures for Metrology of Prepackaged Commodity with Fixed Content.

7. Testing Rules

7.1 Group Batch

Products with the same batch of materials, the same shift of production, the same variety and the same production line are of the same group batch.

7.2 Sampling Requirements

Randomly sample the products of the same batch; the sampling personnel shall carry sampling tools and containers. When sampling, take four or more than four packages shall be randomly selected from four different spots of the same batch of sample piles; total sampling amount shall not be less than 2 kg. The selected samples are divided using the quartering method, part of which is taken out for testing.

7.3 Ex-factory Inspection

7.3.1 Each batch of products shall pass a quality inspection before leaving the factory.

7.3.2 Ex-factory inspection covers the following items: sensory requirements, coliform (cooked products only), and net content.

7.4 Type Inspection

7.4.1 During normal production, a type inspection shall be conducted every 6 months. In case of any of the following circumstances, the type inspection shall be conducted:

- Trial-production of new products and new product appraisal;
- When there is major change in the raw materials and production process, which may affect the product quality;
- The results of ex-factory inspection are quite different from the last type inspection;

- Production is resumed after six months or longer production suspension.

7.4.2 Inspection items are those specified in Chapters 5.2 -5.7 and 6.

8. Decision Rules

8.1 A product is determined to be compliant when all inspection items conform to the provisions of this document.

8.2 If one or more items of the inspection items (except 5.6) is noncompliant, double sampling and re-inspection shall be carried out in the same batch of products, and the re-inspection results shall prevail. If there is still one noncompliant item in the re-inspection, it shall be determined as noncompliant.

8.3 If one of the pathogenic bacteria indicators is noncompliant, it shall be determined as noncompliant. If the coliform group is noncompliant, the sampling, sample handling and inspection process shall be rechecked; if they do not conform to GB 4789.1 or other operating specifications for sampling and sample handling, the product shall be re-sampled and tested. If the result is still noncompliant, it shall be determined as noncompliant.

9. Labeling and Marks

9.1 The product labels and marks shall conform to GB 7718 and GB 28050.

9.2 The product category name shall be clearly marked near the product name.

9.2.1 If the product category name cannot reflect the true attributes of the product or cannot clearly reflect that the product uses plant raw materials, a descriptive word reflecting the plant-derived ingredients or indicating that the product simulates animal meat product could be used jointly with the product category name. See Appendix A for examples.

9.2.2 If different font sizes and colors (of the product category name and the product name) may cause consumers to misunderstand the true attributes of the food, (the product category name and the product name) shall use the same font size and color.

9.3 Descriptive words related to characteristics, flavor, texture, use, technology, method of consumption and source of ingredient can be used in product name, or to help expressing the characteristics of plant-based meat products. See appendix A for examples.

9.4 The product shall label whether it is raw product or cooked product, as well as provide the method of consumption.

9.5 The product label shall have words indicating that the product is different from animal meat products.

9.6 Pictorial marking for packaging, storage and transportation of products shall conform to GB/T 191.

10. Packaging, Transportation and Storage

10.1 The product package should be complete, sealed tightly, without damage; the packing box shall be firm, complete, and clean in appearance.

10.2 Quick-frozen foods shall conform to GB 31646.

10.3 Products requiring temperature control in the logistics process after leaving the factory shall conform to the provisions of GB 31605.

Appendix A

(Informative)

Naming of Plant-based Meat Products and Statement of Ingredients Source

A.1 This Appendix provides reference naming methods that can fully explain the real attribute of plant-based meat products, which could be reference when explaining the real attributes of products. a product could be named either using a reference name in this Appendix directly or be named following principles in this Appendix. When marking the product name on the label, names such as "trademark name", "new name", "peculiar name" and "pronunciation-based name" can be attached at the same time.

A.2 The products are named by "plant XX", "plant-based XX", "plant-derived XX", "plant protein XX" and "plant-made XX".

Examples:

- Plant beef
- Plant-based beef
- Plant-derived beef
- Plant protein beef
- Plant-made beef

A.3 Name the product with the name or common name in the standard of the simulated animal meat product and name the product by adding the word "plant" or similar descriptive word before the product name.

Examples:

- Plant hamburger patty
- Plant sausage
- Plant ham
- Plant beef steak
- Plant Chinese-style sausage
- Plant meat floss
- Plant barbecued pork
- Plant fish sausage
- Plant meatballs
- Plant bacon
- Plant smoked meat
- Plant minced pork

Words such as "plant-derived" and "non-animal-derived" can be used to describe the raw material source of the final product, and it can also use the word "Vegetable" as an auxiliary description.

END TRANSLATION

Attachments:

No Attachments.