

Food Regulations and Enforcement in Thailand

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Enforced Department Structure

Thailand's food regulatory system is controlled by the Food and Drug Administration (FDA), which is a subdepartment of the Ministry of Public Health (MOPH). The Food Bureau of the FDA is a major department that controls food business in Thailand. The structure of the Food Bureau comprises the following groups:

- General Administration Group
- Pre-Marketing Group
- Post-Marketing Group
- Standard Controlled Group
- System Development Group

Food Regulatory Background

The main regulation controlling all foods in Thailand is the Food Act B.E. 2522 (1979). It provides the government and officials with the authority to control domestic production and imports and exports of food products for sale, as well as provide the criteria and penalties for food business in Thailand. It prescribes the processes to obtain approval before producing or importing foods for distribution. Its purpose is to assess the ability of entrepreneurs and businesses to manufacture or import products for sale that meet the standards, prescriptions, and conditions defined in the law, prior to production, and to ensure that food products produced or imported for sale have quality and safety levels acceptable for consumers. The level of supervision depends on the risk level of the food category and the size of the production facility.

Food regulations can be classified as either horizontal or vertical regulations. Horizontal regulations are applicable to any kind of food. Vertical regulations are specific to different food categories.

Food Definition

According to the Food Act B.E. 2522 (1979), 'food' means edible items and those which sustain life, including:

1. substances that can be eaten, drunk, sucked, or taken into the body either by mouth or by other means, no matter in what form, but not including medicine, psychotropic substances, or narcotic substances under the law, as the case may be;
2. substances intended for use or to be used as ingredients in the production of food, including food additives, coloring matter, and flavoring.

Food Classification

The FDA classifies food products into four groups depending on the risk level of the food, as follows:

1. *Specially controlled food*: The foods in this group have a high risk level. This food group defines all quality standards, including labeling and production processes, and is tightly controlled. It includes foods for consumer risk groups such as infants. The foods in this group are modified infant milk and modified infant milk formula, infant food and infant food formula, supplementary food for infants and young children, weight-control food, food additives, cyclamates, and steviol glycosides.
2. *Standardized food*: This group comprises foods with a medium risk level. There are quality and labeling standards for each category of food, as in the first group. However, product owners are directly responsible for ensuring their products are in accordance with FDA regulations (i.e., regulations on formula, labeling, and safety and quality standards).

The foods in this group are coffee, edible salt, vitamin-fortified rice, alkaline-preserved egg, cream, electrolyte drinks, chocolate, tea, herbal tea, some kinds of sauces (i.e., tomato sauce, chili sauce, papaya sauce, and flour sauce), ice, soy milk, drinking water, fish sauce, honey, peanut oil, butter oil, palm oil, coconut oil, fats and oils, mineral water, vinegar, butter, cheese, ghee, margarine and fat spreads, soy sauce, jam, jelly and marmalade, semiprocessed food, brine for cooking, royal jelly, royal jelly products, food supplements, beverages, cow's milk, flavored milk, milk products, yoghurt, ice cream, and food in sealed containers.

Royal jelly products, food supplements, beverages, cow's milk, flavored milk, milk products, yoghurt, ice cream, and food in sealed containers are tightly control.
3. *Food with labeling*: This group comprises foods with a medium risk level. The FDA was formerly responsible for approving the labeling of food in this group. Currently, this group is no different from the second group. Product owners are directly responsible for ensuring their products are in accordance with FDA regulations (i.e., regulations on formula, labeling, safety, and quality standards).

The foods in this group are bread, husked-rice flour, sauces, meat products, flavoring, gelatin and jelly desserts, chewing gum and candy, ready-to-cook and ready-to-eat products, irradiated foods, GMO foods, and specially purposed food.

Specially purposed food (e.g., medical food, food for special persons, etc.) is tightly controlled.
4. *General food*: This group comprises foods with a low risk level. Foods in this group do not require food product registration with the FDA.

The foods in this group are animals and animal products, plants and plant products, extracts or synthetic substances, nutrients, flour and flour products, premixed food for ready-to-cook products, seasoning, sugar, and spices.

Regulating Food Safety – Food Manufacturing

Good manufacturing practice (GMP) is the basic level of food safety that food manufacturing companies must adhere to. The FDA provides GMP regulations that are applicable to each type of food, as follows:

1. General GMP [MOPH Notification No. 193] is applicable to the following 57 food groups:
 - a. Specially controlled food: Modified infant milk and modified infant milk formula, infant food and infant food formula, supplementary food for infants and young children, weight-control food, food additives, cyclamates, and steviol glycosides.
 - b. Standardized food: Ice, coffee, edible salt, vitamin-fortified rice, alkaline-preserved egg, cream, electrolyte drinks, chocolate, tea, herbal tea, some kinds of sauces, soy milk, fish sauce, honey, peanut oil, butter oil, palm oil, coconut oil, fats and oils, mineral water, vinegar, butter, cheese, ghee, margarine and fat spreads, soy sauce, jam, jelly and marmalade, semiprocessed food, brine for cooking, royal jelly and royal jelly products, food supplements, beverages, cow's milk, flavored milk, milk products, yoghurt, ice cream, and food in sealed containers.
 - c. Foods with labels: Specially purposed food, bread, husked-rice flour, sauces, meat products, flavoring, gelatin and jelly desserts, chewing gum and candy, ready-to-cook food sealed in a container, ready-to-eat products, especially bakery and meat products (except as noted in MOPH Notification No. 243), and irradiated foods, especially foods prepared before irradiation.
 - d. General food: Prepared and/or processed frozen foods, noodles, and rice vermicelli.
2. Primary GMP [MOPH Notification No. 342] is applicable to the following food groups:
 - a. Other general foods that are not listed in the 57 food groups for general GMP.
 - b. Ready-to-cook and ready-to-eat foods that are not listed in the 57 food groups for general GMP.
 - c. Honey and soy milk that is produced by small manufacturers.
 - d. Food in sealed containers under Clause 3(2), according to MOPH Notification No. 355, as follows:
 - snack food (cookies, wafers, crackers, and biscuits without filling), extruded snacks, crispy snacks, including those with fruit and vegetables, cereal and grains (oven-dried or roasted or fried), nuts and peanuts (oven-dried or roasted), and fruit and vegetable (oven-dried);
 - spice and seasoning powder;
 - flour;
 - food in the form of capsules or pallets;
 - oven-dried or dehydrated fruit and vegetables; and
 - oven-dried or dehydrated meat.

3. GMP for drinking water [MOPH Notification No. 220] is applicable to drinking water.
4. GMP for pasteurized milk [MOPH Notification No. 298] is applicable to pasteurized milk.
5. GMP for low acid canned food and acidified food [MOPH Notification No. 349] is applicable to low acid canned foods and acidified foods, including UHT milk and beverages.

Higher sanitary standards (e.g., HACCP, ISO 9001, ISO 22000, BRC, IFS, etc.) for the importation of food are acceptable to the FDA.

Regulating Food Safety – Foods and Ingredients

The FDA provides that unless expressly permitted, food for sale must not have as an added ingredient or a component, any of the following:

- brominated vegetable oil;
- salicylic acid;
- boric acid;
- borax;
- calcium iodate or potassium iodate, except for use to improve nutritional condition concerning iodine deficiency in accordance with FDA approval;
- nitrofurazone;
- potassium chlorate;
- formaldehyde, formaldehyde solution, and paraformaldehyde;
- coumarin (or 1,2-benzopyrone or 5,6-benzo- α -pyrone), or *cis*-ocoumaric acid anhydride, or *o*-hydroxycinnamic acid, lactone;
- methyl alcohol or methanol, except for use as food processing aids for export;
- diethylene glycol, or dihydroxydiethyl ether, or diglycol, or 2,2'-oxybisethanol, or 2,2'-oxydiethanol;
- puffer fish;
- melamine and its analogs (cyanuric acid);
- genetically modified food containing a Cry9C DNA sequence;
- dulcin or a sweetener with the chemical name *para*-phenetolcarbamide;
- 2.2 AF2 with the general name furylamide or chemical name 2-(2-furyl)-3-(5-nitro-2-furyl) acrylamide, used as a food additive only;
- potassium bromate used as a food additive only;
- AF2 with the general name furylamide or chemical name 2-(2-furyl)-3-(5-nitro-2-furyl) acrylamide, used as a food additive only;
- potassium bromate used as a food additive only;
- daminozide or succinic acid 2,2-dimethylhydrazide; and
- stevia with the scientific name *stevia rebaudiana bertonii*, excluding production, import, or sale of the following:
 - stevia leaves under MOPH Notification No. 280 Re: Herbal tea;
 - steviol glycosides under the Notification of Ministry of Public Health, Re: Steviol glycosides;
 - stevia leaves or products from stevia used for production or import or sale of steviol glycosides; and
 - stevia or products from stevia produced for export.

The use of defined substances must be in accordance with the specific regulations for each substance of vitamins, minerals, amino acids, and herbal plants.

Food additives are substances that are not usually used as food or as essential ingredients of foods, whether the substances will or will not provide food value, but are added to foods for the benefits of processing technology, food coloring, food enhancing, packaging, storage, or transport that will affect the qualities, standards, or characteristics of foods. Food additives should have qualities or standards according to one of the following conditions:

1. prescribed in the Codex Advisory Specification for the Identity and Purity of Food Additives;
2. the Announcement of the FDA according to an approval of the Food Committee; and/or
3. as approved by the Subcommittee of the FDA.

The use of food additives should follow the type of food additive, type of food, and maximum usage level according to one of the following conditions:

1. the most current Codex General Standard for Food Additives (GSFA);
2. the Announcement of the FDA according to an approval of the Food Committee; and/or
3. the use of other food additives has been approved by the FDA.

The Codex Alimentarius Commission, a body established to facilitate the international trade of foods, has 188 members worldwide, including 187 member countries and 1 member organization (the European Union). There are also 240 Codex observers, including 56 IGOs, 168 NGOs, and 16 UN entities.

A novel food is any substance used as food or food ingredients which has been significantly used for human consumption for less than 15 years based on scientific or reliable evidence, or any substance used as food or food ingredients to which has been applied a production process not currently used, where that process gives rise to significant changes in the composition or structure of such food that affects their nutritional value, metabolism, or levels of undesirable substances. Novel food should be evaluated on safety assessment criteria prior to submitting its label to the FDA for approval before use. To evaluate the safety assessment of such novel food, results of safety assessment tests by a risk assessment center recognized by the FDA, together with other relevant information described in the annex of MOPH Notification No. 376, should be submitted to the FDA.

Regulating Food Containers

Quality and standards of food containers should follow the requirements in MOPH Notification No. 92 and MOPH Notification No. 295. MOPH Notification No. 295 provides the specific standards for plastic containers. The qualities of food containers should be as follows:

1. clean;
2. not in contact with other substances that might contaminate the food or food container in a quantity that may be hazardous to the consumer's health;
3. not contain pathogenic microorganisms;
4. not in contact with colors that might contaminate the food or food container;
5. it is prohibited to use containers made from reused plastic, except for using the reused plastic to pack fruits with peels;
6. it is prohibited to use containers for food that were/are made from containers used to contain or pack fertilizer, toxic substances, or other hazardous substances to health; and
7. it is prohibited to use containers for food that were/are made from containers that were/are used to contain nonfood matter or that have pictures, invented designs, or other statements that could mislead the consumer about important information of the food in the containers.

For plastic containers, the Notification provides plastic material and dissemination standards for polyvinylchloride, polyethylene, polypropylene, polystyrene, polyvinylidene chloride, polyethylene terephthalate, polycarbonate nylon (pa), polyvinyl alcohol, polymethyl methacrylate, polymethyl pentene, melamine, and ethylene 1-alkene copolymerized resin.

Mandatory Food Labeling Requirements

While there are numerous regulations that outline the requirements for specific commodities, the table below sets out the general guidelines for food labeling requirements in Thailand. The specific commodity regulations can be found in the Ministry of Public Health Notifications. Note that these labeling requirements must be in the Thai language unless the food is not sold directly to consumers (Table 1).

Table 1 Mandatory food labeling requirements

<i>Mandatory requirements under MOPH Notification No. 367 Re: Labeling of prepackaged food</i>	<i>Prepackaged food exempted from the ready for labeling requirement</i>
1. Name of food	1. Food that producers provide to consumers who can ask for food-related information when acquiring the food, i.e., food hawkers, food stalls, etc.
2. Food serial number	2. Food that has not passed through any processing procedure or fresh food that is peeled, separated, eviscerated, trimmed, or reduced in size by any other means, cooled or not, and packed in containers where the consumer is able to see the condition of the food
3. Name and address of manufacturer, packers, importers, or head office	3. Prepackaged food produced and sold to serve in food shops, restaurants, hotels, schools, academic institutions, hospitals, or any similar business or institution, including food delivery service
4. Contents of food in the metric system	4. Foods that must follow a specific commodity standard only, i.e., edible salt (MOPH Notification No. 333) and liquor (MOPH Notification No. 315)
5. Percentage by weight of the main ingredients in descending order	5. Food in sealed containers for export only
6. Allergen information ^a	6. Beverages for export only
7. Declaration of functional class titles of food additives together with specific names or using the International Numbering System (INS) for food additives	
8. Type of flavor used, i.e., 'natural imitation odor added,' 'artificial flavor added,' 'natural flavor added,' or 'natural imitation flavor added'	
9. 'Best Before' date	

^aCereals containing gluten (wheat, rye, barley, oat, spelt, or their hybridized strains and their products); Crustacean (crab, shrimp, mantis shrimp, lobster, and their products); eggs and egg products; fish and fish products; peanut, soybean, and their products; milk and dairy products, including lactose; tree nuts and their products (almond, walnut, and pecan); and sulfite in concentrations of 10 mg kg⁻¹ or more.

Regulatory Nutrition Labeling

Nutrition labeling can be both compulsory and voluntary. Mandatory regulation of nutritional labels is outlined in MOPH Notification No. 182. The following categories of food are compulsory for nutrition labeling:

- foods that have nutrition claims;
- foods that utilize food value in sales promotions;
- foods that define consumer groups in sales promotions;
- foods that are required to declare the Guideline Daily Amount (GDA) label; and
- other foods to be decided by the FDA, after approval by the Food Committee(s).

Displaying the nutrition label must follow a set pattern in the Thai language. Reference values for calculating displayed nutrition values on the nutrition labeling should be in accordance with the Thai Recommended Daily Intakes for Thais aged 6 years and up. The prescribed energy demands of normal, healthy Thai adults are based on the energy demands of 2000 kilocalories per day to be used as the basic or mean value in calculating the display of nutrition labeling only (Figure 1).

Regulating GDA Labeling

To provide nutrition labeling along with GDA, GDA labeling contains energy value, sugar, fat, sodium, etc., on the labels of some types of foods for the benefit of consumers and to support preventative measures for nutritional problems.

Food products required to display nutrition labeling and GDA using GDA labeling include the following:

1. snack foods, including:
 - a. fried or baked potato chips;
 - b. fried or baked popcorn;
 - c. rice crisps or extruded snacks;

Nutrition Facts	
Serving Size:(.....)	
Serving per :	
Nutrition Value per serving size	
Total Energykilocalories (Energy from Fat..... Kilocalories)	
% of Recommended Daily Intake*	
Total Fat g.%
Saturated Fat g.%
Cholesterol mg.%
Protein g.	
Total Carbohydrate g.%
Dietary Fiber g.%
Sugar g.	
Sodium mg.%
% of Recommended Daily Intake*	
Vitamin A%	Vitamin B1%
Vitamin B2%	Calcium%
Iron%	
*Percentage of nutrients for Thai recommended daily intakes for ages of 6 years and up, (Thai RDI), are based on the energy demand of 2,000 kilocalories/day.	
The energy demand for individual may be different. The person whose energy demand of 2,000 kilocalories / day, shall receive nutrients as follows:	
Total Fat	Less than 65 g.
Saturated Fat	Less than 20 g.
Cholesterol	Less than 300 mg.
Total Carbohydrate	300 g.
Dietary Fiber	25 g.
Sodium	Less than 2,400 mg.
Energy (kilocalories) per gram : Fat = 9 ; Protein = 4 ; Carbohydrate = 4	

Figure 1 Example of a nutrition label. Adapted from Food and Drug Administration, 1998. Notification of Ministry of Public Health (No. 182) B.E. 2541 (1998) Re: Nutrition Labeling, Bangkok.

- d. roasted, salt-roasted, or flavored peas/nuts;
- e. fried, baked, or flavored seaweed;
- f. fried, baked, or flavored fish snack;
2. chocolate and similar products;
3. bakery products, including:
 - a. crackers or biscuits;
 - b. filled wafers;
 - c. cookies;
 - d. cakes;
 - e. pies and pastries, both with and without stuffing;
4. semiprocessed foods;
 - a. noodles, a sheet of rice noodle (Guay-Jub), wheat noodles, rice vermicelli, and mung bean vermicelli;
 - b. Kao tom (boiled rice) and joke (porridge rice);
5. chilled and frozen ready-to-eat meal.

Displaying GDA labeling should be shown together with the nutrition label and the following text, in bold and visible letters with a high color contrast and framed on the label: 'consume small amount and exercise for healthy condition.'

Energy value, sugar, fat, and sodium should be consecutively displayed with the size and the form of the letters prominently displayed and readily legible in cylindrical figures with a white color background, and the color of the cylinder frames should be in black or dark blue or white, as the case may be, and should be in contrast to the background of the label. The percentage of energy value is based on 2000 kilocalories. The percentage of sugar is based on 65 g. The percentage of fat is based on 65 g, and the percentage of sodium is based on 2400 mg (Figure 2).

Nutrition, Health, and Related Claims

The FDA provides three nutrient claims, as follows:

1. Nutrient content claim is a claim for nutrient or energy content (e.g., a source of calcium).
2. Comparative claim is a comparison of nutrients or energy between foods (e.g., lower fat).
3. Nutrient function claim, as currently approved by the FDA, outlines nutrient function claims for 29 nutrients with 49 sentences (e.g., vitamin C aids in strengthening blood vessels, vitamin B12 helps the functions of the nerve and brain system, and vitamin D aids in calcium and phosphorous absorption).

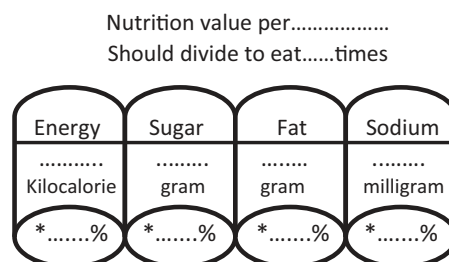
The FDA does not allow claims for nutrition value in food that does not have such ingredients in general (e.g., 'cholesterol-free' cannot be claimed for drinking water). For other claims, apart from those that are FDA approved, the FDA must approve such claims by reviewing all supporting evidence, including the safety data.

Regulating Information Provision in Advertising

Based on the Food Act B.E. 2522 (1979), Sections 40 and 41, "false or deceptive advertising of the quality, usefulness, or indication of a food is prohibited. Anyone wishing to advertise the qualities, usefulness, or indication of a food by radio, television, film, newspapers, or other printed matter, or by other means for business purposes must submit the sound, pictures, films, or text of the advertisement to the authority for consideration ... and can be advertised after receiving permission."

An advertisement of the benefits, qualities, or efficacies of foods:

1. Must not be false or exaggerated, must not make consumers misunderstand the essential ingredients of the food, and must not lead to any inappropriate misconception.



*Calculated as a percentage of maximum intake per day

Figure 2 Example of a Guideline Daily Amount label. Adapted from Food and Drug Administration, 2016. Notification of Ministry of Public Health (No. 374) B.E. 2559 (2016) Re: Food Products Required to Bear Nutrition Labelling and Energy Value, Sugar, Fat, and Sodium on the Labels of Some Kinds of Foods Guideline Daily Amounts, GDA Labelling, Bangkok.

- Only the efficacies permitted on the label by the FDA or which are in line with MOPH Notifications regarding food labeling or nutrition labels can be advertised.
- If there is an advertisement of a health claim other than that approved by the FDA and, therefore, permitted on the label as mentioned above, the results of all study and research of the food product, including any articles or technical information, should be submitted to the FDA when applying for permission to run the food advertisement. It must contain in all respects correct, true, and up-to-date information, must be based on a reliable scientific foundation, and must have been published in a reliable medical journal or technical journal, in which case the full publication thereof must be submitted for due consideration.

The following advertisements do not require registration:

- Advertisements that do not advertise the qualities, usefulness, or indication of a food.
- Advertisements that give academic information to consumers that do not communicate the qualities, usefulness, or indication of a food and there is no objection to the marketing.
- Promotional advertisements that do not advertise the qualities, usefulness, or indication of a food.

The following advertising is prohibited:

- No medical or public health workers, or persons understood to be such workers, should appear in an advertisement to recommend, certify, or act as a presenter of the product.
- No use of a statement that is in comparison to, or defamation against, a product of another person.
- Samples of words that are not permitted to be used in advertising the benefits, qualities, or efficacies of foods include 'excellent,' 'superb,' 'exceptional,' 'absolute,' 'sacred,' 'miraculous,' and 'extremely,' or other words with the same or similar meanings.

In addition to the above, a statement, movie, or picture used in an advertisement must not be against the regulations of other agencies concerned.

Compliance and Enforcement

While there are a number of variations in the rules and regulations governing specific categories and types of food, the table below is intended to offer general guidance by setting out the general penalties and repercussions in regard to noncompliance in the following areas: (1) product registration; (2) variations in product registration; (3) manufacturing; (4) advertising; and (5) labeling.

<i>Compliance area</i>	<i>Penalty</i>
Product registration	Subject to imprisonment of not more than 2 years or a fine of not more than THB 20 000, or both
Variations in product registration	Subject to imprisonment of not more than 1 year or a fine of not more than THB 10 000, or both
Manufacturing	Subject to imprisonment of not more than 3 years and a fine of not more than THB 30 000, or both
Advertising	Subject to imprisonment of not more than 3 years and a fine of not more than THB 30 000, or both
Labeling	Subject to a fine of not more than THB 30 000

Further Reading

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Legislation and Code

Ministry of Public Health (MOPH)
Food and Drug Administration (FDA)
Notification of the Ministry of Public Health (MOPH Notification)
Good manufacturing practice (GMP)
Hazard Analysis and Critical Control Point (HACCP)
International Organization for Standardization (ISO)
The British Retail Consortium (BRC)
International Food Standard (IFS)
Codex General Standard for Food Additives (GSFA)
International Numbering System (INS)
Guideline Daily Amounts (GDA)

Change History

Change History: August 30, 2016, Siradapat Ratanakorn updated the text and further readings to this entire article and added Figures 1 and 2.

Change History: September 19, 2016, Siradapat Ratanakorn and Jessica Grimm our adjusted the Compliance and Enforcement section.

Change History: September 20, 2016, Bruce McNair edited the article.

Change History: September 23, 2016, Siradapat Ratanakorn edited Figures 1 and 2, and added a part on Codex members.