Session 1: Research on Commodity Food Standards and Methods of Analysis

Chaired by: Mr Hiroaki Hamano
ILSI Japan, Japan

Research on Commodity Food Standards and Methods of Analysis in Asia

Mr Hiroaki Hamano
ILSI Japan
Japan

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Purpose of the Project
To support business activities of the food industry in Asia (China, Korea, ASEAN countries and India) and to strengthen their international competitiveness.

Description of the Project
To contribute to the promotion of smooth business within the Asian region by conducting an investigation on possible harmonization or integration of food standards and/or methods of analysis, and organizing an opportunity for dialogue with experts from the countries concerned.

Summary of the Research
In order to expand distribution of food ingredients and food products in the Asian region, commodity food standards on major food categories and methods of analysis were investigated. Based on the results, their differences and points to be considered for their possible future harmonization or integration were extracted.

Countries surveyed
In the light of marketability, such as population, business potential in Asian countries, the investigation covered the countries of China, Korea, Malaysia, Singapore, Philippines, Indonesia, Thailand, and Vietnam (8 countries).

Food Categories Investigated
Designing the investigation program, the first pilot formats covered instant noodles, carbonated soft drinks, prepared frozen foods and food additives.

Method of Investigation
The investigation program was designed by ILSI Japan and was conducted in cooperation with ILSI's international network, namely ILSI branches in China, Korea and Southeast Asia Region (ASEAN countries).

FY2009-10 General Food Policy Bureau,
The Ministry of Agriculture, Forestry and Fisheries of Japan
Overseas Business Support Project for Food Industry in Asia

Research on Commodity Food Standards and Methods of Analysis in Asia

2011.03.04, Bangkok, Thailand

Hiroaki Hamano, ILSI Japan

List of FY2009 -10 Projects Supported / Funded
by General Food Policy Bureau, The Ministry of Agriculture, Forestry and Fisheries of Japan

1 Corporation system enhancement for food and agriculture
2 Information dissemination services improvement for the food industry
3 Supporting for advancing cooperating function for food and agriculture
4 Promoting for further utilization of functionality of farm and marine products
5 Supporting for brand building of regional food and its management
6 Survey on structure of the food industry
7 Technological measures for promoting cooperation between food and agriculture
8 Supporting for improvement of capability for technological development of the food industry in rural area
9 Building up business with cooperation of food-service industry and agriculture
10 Promoting for maintenance of business continuity plan in the food industry
11 Promoting for dissemination of HACCP in the food industry
12 Promoting for labeling in the food industry
13 Promoting for measures to secure the confidence against food companies
14 Promoting CO2-reduction measures in the food industry
15 Promoting for restrictions to generate food industrial waste
16 Demonstration of economical processing system for recyclable food waste
17 Promoting for smooth implementation of Containers/Packaging Recycling Act
18 Study on recycling system for biomass plastic containers/packaging
19 Experiments for utilizing biomass in the food-service industry
20 Overseas Business Support for Food Industry in Asia
21 Promoting for establishment of foundation for effective food distribution system
22 Promoting for advancing food retailing function
23 Demonstration and dissemination of business model using new technology
24 Supporting for establishment of regional distribution model
25 Cost-reduction for food retailing and structure improvement for functional enhancement
26 Promoting high-value added model of food distribution
27 Demand development for new processed rice products
28 Promoting for popularizing excellent Japanese restaurants abroad
29 Considering measures to encourage intake of staple food, which is a part of the projects for promoting "Nippon Shokuiku"

Overseas Business Support Project for Food Industry in Asia

[Purpose of the Project]

To support business activities of food industry in Asia (China, Korea, ASEAN countries and India) to strengthen their international competitiveness

[Description of the Project]

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Overseas Business Support Project for Food Industry in Asia

[Name of the Task]

Research on Commodity Food Standards and Methods of Analysis in Asia

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Overseas Business Support Project for Food Industry in Asia

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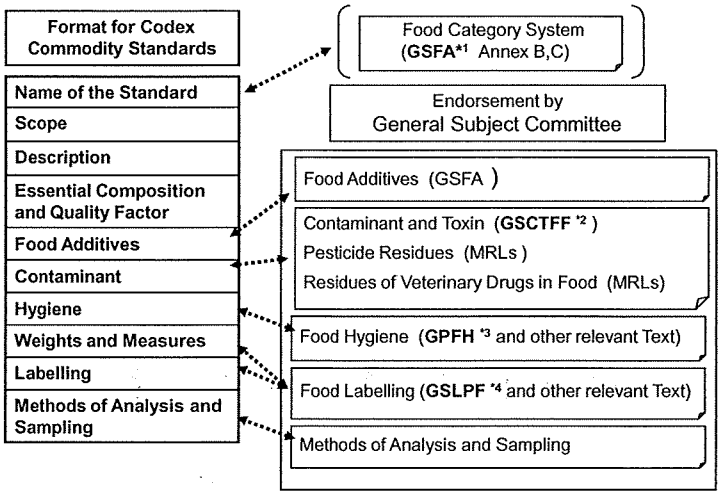
ILSI Japan/MAFF Project
Research on Commodity Food Standards and Methods of Analysis in Asia

Investigation Forms: Japan

Elaboration of Codex Commodity Standards

Procedural Manual : Section III Elaboration of Codex Standards and Related Text



*1 Codex Stan 192-1955 General Standard for Food Additives
*2 Codex Stan 193-1995 General Standard for Contaminants and Toxins in Foods and Feeds
*3 CAC/RCP1-1969 General Principles of Food Hygiene
*4 Codex Stan 1-1985 General Standards for the Labelling of Prepackaged Foods

Codex Standards (Commodity Standards)

Stan No	Title	Year of Adoption
1	General Standard for the Labelling of Prepackaged Foods	1985
3	Standard for Canned Salmon	1981
12	Standard for Honey	1981
13	Standard for Preserved Tomatoes	1981
17	Standard for Canned Applesauce	1981
19	Standard for Edible Fats and Oils not Covered by Individual Standards	1981
33	Standard for Olive Oils and Olive Pomade Oils	1981
36	Standard for Quick Frozen Finfish, Eviscerated or Eviscerated	1981
37	Standard for Canned Shrimps or Prawns	1981
38	Standard for Edible Fungi and Fungus Products	1981
39	Standard for Dried Edible Fungi	1981
•		
•		
•		
293	Standard for Tomatoes	2008
296	Standard for Jams, Jellies and Marmalades	2009
297	Standard for Certain Canned Vegetables	2009

200 Items (2009) (http://www.codexalimentarius.net)

Japanese Commodity Standards: Regulatory Framework

Food Sanitation Act
- Standards for Foodstuffs and Additives
  - 22 Specific Food Items **(Table 3)**
- Milk and Milk Products Concerning Composition Standards **(Table 3a)**

Ministry of Health, Labour and Welfare (MHLW)

Health Promotion Act
- Food with Health Claims
  - -Nutrient Function Claims
  - -Foods for Specified Health Uses (FOSHU)
- Food for Special Dietary Uses
- Nutrition Labeling

CAA consulted by MHLW

- Name of the Standard
- Scope
- Description
- Essential Composition and Quality Factor
- Food Additives
- Contaminant
- Hygiene
- Weights and Measures
- Labelling
- Methods of Analysis and Sampling

Consumer Affairs Agency[*3] covers Labelling Provision of FSA and JAS

JAS[*1] Law
- Quality Labelling Standard for Processed Foods
  - 48 Commodity Food Items **(Table1)**
- JAS Standard[*2]
  - 54 Commodity Food Items **(Table2)**

Ministry of Agriculture, Forestry and Fisheries (MAFF)

Act Against Unjustifiable Premiums and Misleading Representations
- Fair Competition Code
  - 38 Commodity Food Items
  - 7 Alcoholic Beverages **(Table4)**

Consumer Affairs Agency (CAA)

Measurement Act
Ministry of Economy, Trade and Industry

*1 Law Concerning Standardization and Proper Labelling of Agricultural and Forest Products
*2 voluntary (other than organic foods) standard with the certification system to attach the JAS Mark
*3 New governmental organization started in September 2009

General Quality Labeling Standards
- Quality Labeling Standards for Fresh Foods
- Quality Labeling Standards for Processed Foods
- Quality Labeling Standards for Genetically Modified Foods

Table1 List of Quality Labeling Standards for each commodity items

2009.9

Canned and Bottled products		15	Chilled meat ball
1	Canned and bottled agricultural products	16	Fish ham, Fish sausage
2	Canned and bottled livestock products	17	Specially packed steamed fish paste
3	Canned and bottled prepared foods	18	Flavored steamed fish paste
Beverages		**Cereal Products**	
4	Fruits juice and fruit beverages	19	Dried noodles
5	**Carbonated drinks** **(Case Study 2)**	20	**Instant Noodle** **(Case Study 1)**
6	Soy milks	21	Macaroni products
7	Carrot juice, Mixed carrot juice	22	Kori Dofu (dried frozen soy curd)
Livestock and Fish Paste		23	Breads
8	Bacons	**Agricultural and Forestry Products**	
9	Hams	24	Pickled agricultural products
10	Pressed ham	25	Processes tomato potato
11	Mixed pressed ham	26	Jams
12	Sausage	27	Dried shiitake mushroom
13	Mixed sausage	**Marine Products**	
14	Chilled hamburg stake	28	Processed *Uni* (sea urchin)

Table 2 **List of JAS Standard for Foods** 2009.9

☐ General JAS

Canned and Bottled Products		**Processed agricultural products**	
1	Canned and bottled agricultural products	22	Pickled agricultural products
2	Canned and bottled livestock products	23	Processed tomato products
3	Canned and bottled marine products	24	Jams
Beverages		**Processed marine Products**	
4	Fruits juice and fruit beverages	25	*Kezuribushi* (shaved dried fish)
5	Apple straight pure juice	26	Boiled and dried fishes
6	**Carbonated drinks** (Case Study 2)	**Sugars**	
7	Soy milks	27	Glucose
8	Carrot juice, Mixed carrot juice	28	High fructose corn syrup and sugar added high fructose corn syrup
Livestock products		**Seasoning**	
9	Bacons	29	Dressings
10	Hams	30	Fermented vinegar
11	Pressed ham	31	Flavored seasonings
12	Sausage	32	Dehydrated soup
13	Mixed sausage	33	Worcester sauces
14	Hamburger patty	34	*Shoyu* (soy sauce)
15	Chilled ham burg stake	**Oil and Fat**	
16	Chilled meat ball	35	Edible vegetable oils and fats
Cereal Products		36	Refined lard
17	Dried noodles	37	Margarines
18	**Instant noodles** (Case Study 1)	38	Shortening
19	Macaroni products	39	Edible refined and processed oils and fats
20	Vegetable protein	**Others**	
21	Bread crumbs	40	**Prepared frozen food** (Case Study 3)

List of Specific Food Items in Standard for Foodstuffs and Additives

Table 3 **under Food Sanitation Act** **2009.9**

1	**Soft Drink Beverages** (Case Study 2)	12	**Boiled Octopus**
2	**Powdered Soft Drink Beverages**	13	**Boiled Crab**
3	**Crushed Ice**	14	**Fresh Fish and Shellfish to be Eaten Raw**
4	**Frozen Confections**	15	**Oysters to be Eaten Raw**
5	**Meats and Whale Meat (with the exemption of frozen whale meat eaten raw)**	16	**Agar**
6	**Edible Birds' Eggs**	17	**Grains, Beans and Vegetables**
7	**Blood, Blood Corpuscles and Blood Plasma**	18	**Bean Jam or Further Processing**
8	**Meat Products**	19	**Soybean Curd ("tofu")**
9	**Whale Meat Products**	20	**Instant Noodles** (Case Study 1)
10	**Fish-paste Products**	21	**Frozen Foods** (Case Study 3)
11	**Salmon Roe and Cod Roe (defined as the ovaries of walleye or pollack preserved in salt; hereinafter the same in this section**	22	**Food Packed in Containers and Sterilized by Pressurization and Heating**

Note: These standards are composed of 'Standard for Component', 'Standard for Production', 'Standard for Storage'

1.Details of Food Additives are available in English
http://www.mhlw.go.jp/english/topics/foodsafety/foodadditives/index.html

2.Details of Agricultural Chemical Residues are available in English
http://www.mhlw.go.jp/english/topics/foodsafety/positivelist060228/index.html

Table 4 List of Fair Competition Code for Food Items 2009.9

Milk and milk products		19	Instant noodles	(Case Study 1)
1	Drinking milk	20	*Miso* (soy bean paste)	
2	Fermented milk, Lactic acid bacteria beverage	**Confectionary**		
3	Pasteurized lactic acid bacteria beverage	21	Biscuits	
4	Natural cheese, Processed cheese, Cheese food	22	Chocolates	
5	Ice creams	23	Food using chocolate	
Honeys		24	Chewing gum	
6	Honeys	25	Souvenir for tourist	
7	Royal jelly	**Seasoning**		
Processed marine Products		26	Edible vinegar	
8	*Uni* (sea urchin) foods	27	Synthetic lemon juice	
9	*Karashi Mentaiko* (spicy marinated roe of pollack)	28	Margarines	
10	*Kezuribushi* (shaved dried fish)	29	Dressings	
11	*Nori* (laver)	30	*Shoyu* (soy sauce)	
Processed agricultural products		31	Table salt	
12	Canned foods	**Beverages**		
13	Processed tomato	32	Fruit drinks	
14	Powdered *Wasabi* (Japanese horseradish)	33	Coffee drinks	
15	Raw noodles	34	Regular coffee, instant coffee	
16	*Kori-dofu* (dried frozen soy curd)	35	*Moromi-su* (vinegar drink from residue of rice brandy)	
17	Soy milks	**Processed livestock**		
18	Packed bread	36	Ham, sausage	

Food Category System (GSFA Annex B)
06.4 Pasta and noodles and like products
06.4.1 Fresh pastas and noodles and like products
06.4.2 Dried pastas and noodles and like products
06.4.3 Pre-cooked pastas and noodles and like products

Case Study 1 : Instant Noodle

JAPAN

Standard / Item	Codex Commodity Standard	Food Sanitation Act	JAS Law	
		Standard for specific Items	Quality Labelling Standard	JAS Standard
Name of the Standard	Instant Noodles CODEX STAN 249-2006	Instant Noodles	Instant Noodles	Instant Noodles
Scope	-ready for consumption after dehydration process.....	● Fried noodles	● include raw type	
Description	Fried noodles, Non-fried noodles			
Essential Composition and Quality Factor	3.1 Composition 3.1.1 Essential Ingredients 3.1.2 Optional Ingredients 3.2 Quality Criteria 3.2.1 Organoleptic 3.2.2 Foreign Matter 3.2.3 Analytical Requirement for Noodle Block (a) Moisture Content maximum : fried 10% : non-fried 14% (b) Acid value maximum 2mg KOH/g oil	● Acid value not more than 3 mg KOH/g oil ● Peroxide value not more than 30 meq/kg	● Wheat flower and/or buckwheat flower as the main ingredients ● Add salt or lye water	● Moisture not more than 14.5% (non-fried) ● Acid value not more than 1.5 mg KOH/g oil ● pH 3.8-4.8 (non-fried)

* This Table does not contain details of standards regulated for all foodstuffs such as;
• Quality Labelling Standard for Processed Foods under JAS Law
• General Compositional Standard for Food; General Food Production Processing and Preparation Standards; General Food Storage Standards under Food Sanitation Act

Case Study 2 :

JAPAN

	Food Sanitation Act Standard for Specific Items
	Soft Drink Beverages (covers 14.1non-alcoholic ("soft") beverages)
Name of the Standard	Non-alcoholic (less than 1% alcohol) beverages, excluding lactic acid bacterial drinks, milk and milk drinks
Scope	
Description	• Must not be turbid (with some exception) • Must not contain any sediment or any solid foreign matter (with some exception) • Must not contain detectable levels of arsenic, lead or cadmium. The tin content must not exceed 150.0 ppm • Tests for coliform bacilli must be negative • Mineral water with a carbon dioxide pressure inside of the container of not more than 98 kPa at 20 degree in Celsius , and that has not been sterilized or disinfected, must test negative for enterococci or green pus bacilli • For beverages made for solely apple juices and/or juiced fruit, the patulin content must not exceed 0.050 ppm
Essential Composition and Quality Factor	
Food Additives	
Contaminant	
Hygiene	• Production Standards, • Package Standards • Storage Standards
Weights and Measures	
Labelling	
Methods of Analysis and Sampling	• Tests for arsenic, lead, cadmium, tin, patulin, coliform bacilli, enterococci or green pus bacilli • Tests for water used as raw material • Standards and testing methods for implements, containers and packaging

JAS Law	
Quality Labelling Std.	JAS Std.
Fruits Juice and fruit beverages	Fruits Juice add fruit beverages
Carbonated soft drinks	Carbonated soft drinks
Soy milks	Soy milks
Carrot juice, mixed carrot juice	Carrot juice, mixed carrot juice
	Apple straight pure juice

*Each standard has it's own Scope, Description and other Items

Case Study 3 : Prepared Frozen Foods

JAPAN

- Name of the Standard
- Scope
- Description
- Essential Composition and Quality Factor
- Food Additives
- Contaminant
- Hygiene
- Weights and Measures
- Labelling
- Methods of Analysis and Sampling

JAS Quality Labelling Standard Prepared Frozen Foods

Frozen fried foods	Frozen fried Fishes Frozen fried Shrimps Frozen fried Squids Frozen fried Oysters Frozen Croquettes Frozen *Katuretu* (fried meat)	Product names are defined by main material content , limitation of alternative material , etc.
Frozen *Shaomai*, Frozen *Gyoza*, Frozen *Harumaki* (spring rolls)		
Frozen Hamburger steaks, Frozen Meatballs, Frozen Fish hamburgers, Frozen Fishballs		
Frozen Steamed Rice, Frozen Noodles		

Standard for Foodstuff (Food Sanitation Act) Frozen Foods

Standard for Components (to be consumed)	Bacterial count	Coliform group
without heating	100,000/g>	Test negative
after heating (heated before freezing)	100,000/g>	Test negative
After heating (other than 2 above)	3,000,000/g>	Test negative
Storage Standard	must be below -15°C	

Example within Codex
Food Category System : 09.2.2: Frozen battered fish, fish fillets and fish products, including mollusks, crustaceans, and echinoderms
Codex Stan: 166-1989 Quick frozen fish sticks(fish fingers),fish portions and fish fillets-breaded or in batter

Workshop for the 1st Term Project: "Research on Commodity Food Standards and Methods of Analysis in Asia"

Date: March 29, Monday, 2010 14:30-17:30
Place: Hotel Le Port Kojimachi, Tokyo
Agenda:

1. Opening: (Dr. Mutsuo Iwamoto, ILSI Japan BOT, President of STAFF)
2. Introduction of the MAFF Project: (Mr. Yuichi Saito, General Food Policy Bureau, MAFF, Japan)
3. General Reports, Commodity Food Standards in Codex and Japan: (Mr. Hiroaki Hamano, ILSI Japan)
4. Korea: (Dr. Myeong-Ae Yu, ILSI Korea)
5. China: (Dr. Li Yu, ILSI Focal Point in China)
6. South East Asian Countries- Malaysia, Singapore and Philippines: (Ms. Pauline Chan, ILSI SEA Region)
7. Discussions (Q & A and others)
8. Closing
9. Exchange of Business Cards

Workshop on "Research on Commodity Food Standards and Methods of Analysis in Asia"

FY2010 Overseas Business Support Project for Food Industry in Asia

Research on Commodity Food Standards and Methods of Analysis in Asia

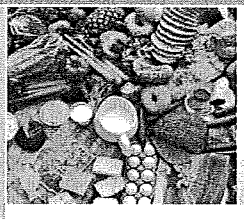
- **Expansion of Countries to Investigate: Indonesia, Thailand and Vietnam**
- **Focus on Methods of Analysis on Food Categories Concerned**
- **International Conference for Sharing Information Investigated: March 4, 2011**
- **Dissemination of the Results in April, 2011**

Research on Methods of Analysis in Asia: Food in General (Japan)

Legislation	Item	Specification	Methods of Analysis	Reference
Food Sanitation Act	Antibiotics or chemically synthesized antibacterial substances	Shall not be contained in foods		Food sanitation test guidance on "Veterinary Medicine & Food Additives 2003"
	Foods shall not contain substances used as ingredients of agricultural chemicals and other chemical substances	Not detectable in foods	Each test method of 2,4,5-T, Azocyclotin and cyhexatin, Amitrol, Captafol, Carbadox, Coumaphos, Chloramphenicol, Chiorpromazine, Diethylstilbestrol, Dimetriadazole, Daminozide, Nitrofurazone, Nitrofurantoin, Furazolidone, Furaltadone, Propham, Malachite Green, Metroidazole and Ronidazole Systematic or individual analytical methods are generally as follows: (1) Sample preparation (2) Extraction with solvent (3) Purification by chromatography (4) Preparation of test solution (5) Instrumental analysis: GC or GC-MS for volatile substances, LC or LC-MS for non-volatile substances, etc.	Specifications and Standards for Foods, Food Additives, etc. Test methods of the substances being the elements of agricultural chemicals, feed additives or veterinary products remaining in foods (Notice from the MHLW)
	Pesticide residues in foods	The residual standards is individually provided		
	Compositional standards which are not specified in the above shall not contain substances used as agricultural chemicals nor other chemical substances in excess of amount	Not exceed 0.01mg/kg		

International Conference for Sharing Information on Food Standards and Resource and Environmental Conservation for Food Industries in Asia Pacific

Challenges and Opportunities for Food Safety & Human Health



March 4, 2011
Pathumwan Princess Hotel
Bangkok, Thailand

Sponsor:
Ministry of Agriculture, Forestry and Fisheries (MAFF) Japan

Supporters:
Food and Drug Administration (FDA) Thailand

National Bureau of Agricultural Commodity and Food Standards (ACFS) Thailand

Organizer:
ILSI

International Life Sciences Institute (ILSI) Japan

In collaboration with
ILSI Focal Point in China
ILSI Korea
ILSI Southeast Asia Region

International Conference for Sharing Information on Food Standards and Resource and Environmental Conservation for Food Industries in Asia-Pacific
- Challenges and Opportunities for Food Safety & Human Health -

[Objectives]

In order to ensure regional food security through enhancing international competitiveness of the regional food industry, it is the key to enhance industry's understanding of food standards, resource and environmental conservation. This Conference aims to:

(1)Share information on commodity food standards and methods of analysis in the region,
(2)Share information on regional initiative for food standards harmonization,
(3)Share information on food safety issues, including case study on resource and environmental conservation.

These will facilitate possible future harmonization or integration of food standards and resource and environment conservation in Asia-Pacific region, which will facilitate food trade and enhance business opportunities in the region.

International Conference for Sharing Information on Food Standards and Resource and Environmental Conservation for Food Industries in Asia-Pacific
- Challenges and Opportunities for Food Safety & Human Health -

Thank You !

Food Regulatory Framework and Commodity Food Standards in China

Dr Li Yu
ILSI Focal Point in China
China

Food Regulatory Framework and Commodity Food Standards in China

Dr Li Yu
Mars Inc. (China) / ILSI Focal Point in China
China

The mandatory commodity food standards is part of the food regulatory framework in China, in which the Food Safety Law plays a key role together with some other related laws including the Agriculture Product Safety Law, the Product Quality Law, and the Standardization Law. There are mainly seven ministries that are engaged in food safety management, overseen and coordinated by the Food Safety Committee of the State Council.

The mandatory commodity food standard system in China consists of fundamental (horizontal) standards and category/product standard, the former includes the General Labeling Standard for Prepackaged Food, the Standard for Use of Food Additives, the Standard for Maximum Levels of Contaminants in Foods, the Standard for Maximum Levels of Mycotoxins in Foods, the Standard for Maximum Residues Limits for Pesticides in Foods, and etc. The latter includes the standards that states the hygiene requirements and quality specifications for specific food category or products, such as the Hygiene Standard for Fresh (Frozen) Meat of Livestock, the Hygiene standard for Grains, the Hygiene Standard for Quick Frozen and Pre-packed Food Made of Wheat Flour and Rice, General Standards for Beverage, Hygiene Standard for Carbonated Beverage, Hygiene Standard for Instant Noodle, and so on. It should be pointed out that some recommended industry quality standards could become mandatory as cited by some food regulations.

Five case-studies are used to illustrate the food standard system in China.

Food Regulatory Framework & Commodity Food Standards in China

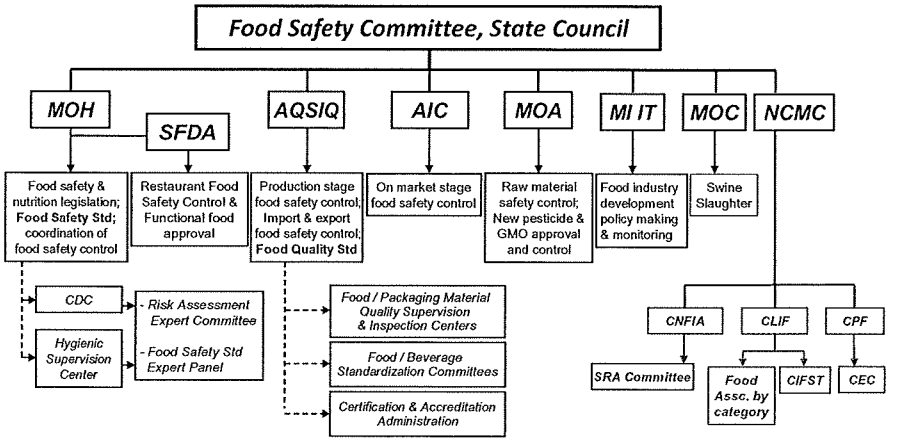
Li, Yu PhD
Director, Scientific & Regulatory Affairs, Mars Inc (China)
Chairman, S&RA Committee, China National Food Industry Association

ILSI Focal Point in China 4 Mar 2011 BANGKOK

Evolution of Food legislation in China

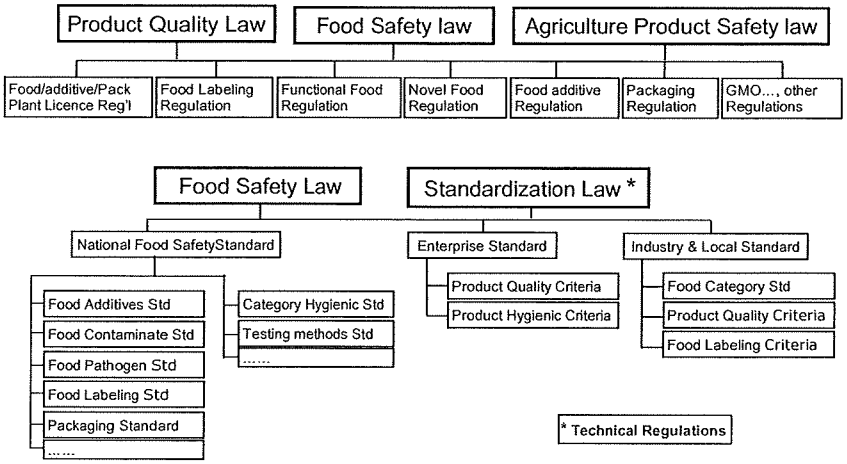
- Food safety control system set up since 1950's
- Food Hygiene Regulation (Provisional ,1964)
- Food Hygiene Law (Provisional) (1982)
- Food Hygiene Law (1995)
- Food Safety Law (Feb 2009)

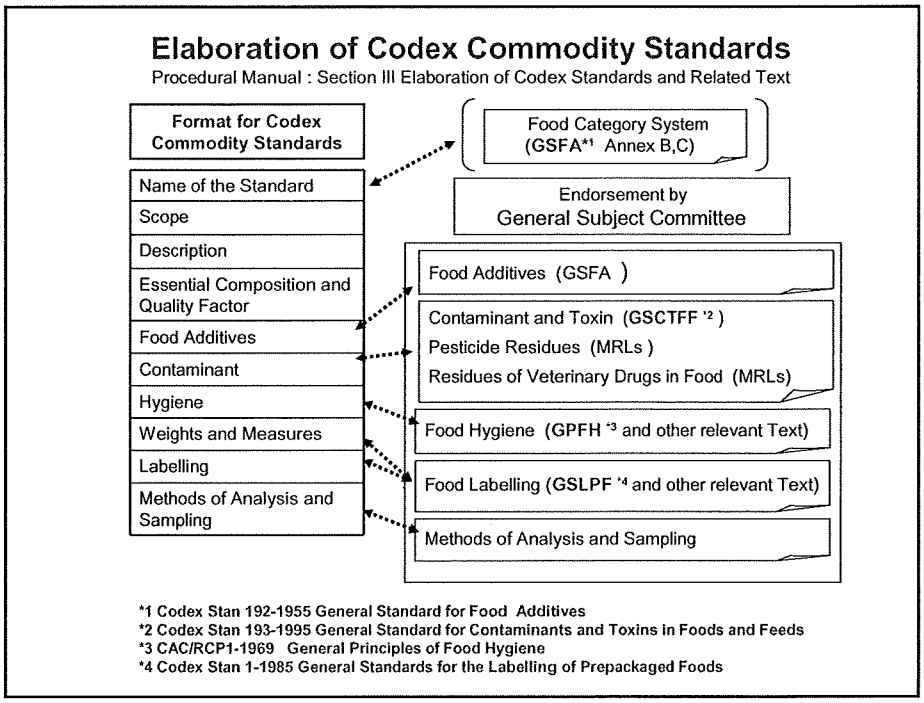
Government Organization



This government structure is based on the new Food Safety Law.

Food Laws, Regulations, Standards




Elaboration of Codex Commodity Standards
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Format for Codex Commodity Standards
Name of the Standard
Scope
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Essential Composition and Quality Factor
Food Additives
Contaminant
Hygiene
Weights and Measures
Labelling
Methods of Analysis and Sampling
Food Category System (GSFA*1 Annex B,C)
Endorsement by General Subject Committee
Food Additives (GSFA)
Contaminant and Toxin (GSCTFF *2)
Pesticide Residues (MRLs)
Residues of Veterinary Drugs in Food (MRLs)
Food Hygiene (GPFH *3 and other relevant Text)
Food Labelling (GSLPF *4 and other relevant Text)
Methods of Analysis and Sampling
*1 Codex Stan 192-1955 General Standard for Food Additives
*2 Codex Stan 193-1995 General Standard for Contaminants and Toxins in Foods and Feeds
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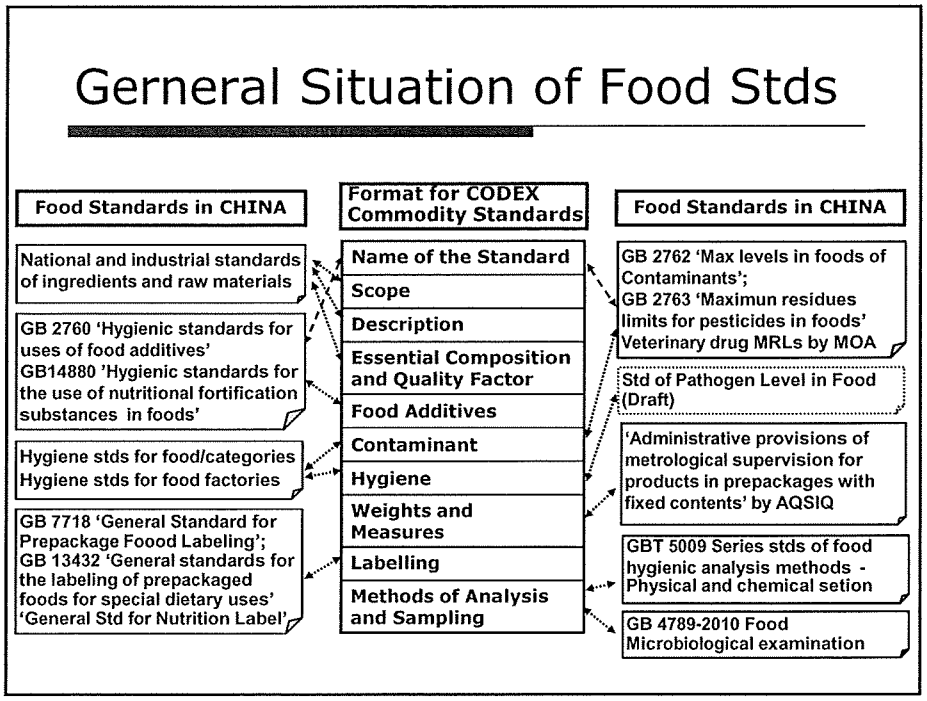
Gerneral Situation of Food Stds
Food Standards in CHINA
National and industrial standards of ingredients and raw materials
GB 2760 'Hygienic standards for uses of food additives'
GB14880 'Hygienic standards for the use of nutritional fortification substances in foods'
Hygiene stds for food/categories
Hygiene stds for food factories
GB 7718 'General Standard for Prepackage Foood Labeling';
GB 13432 'General standards for the labeling of prepackaged foods for special dietary uses'
'General Std for Nutrition Label'
Format for CODEX Commodity Standards
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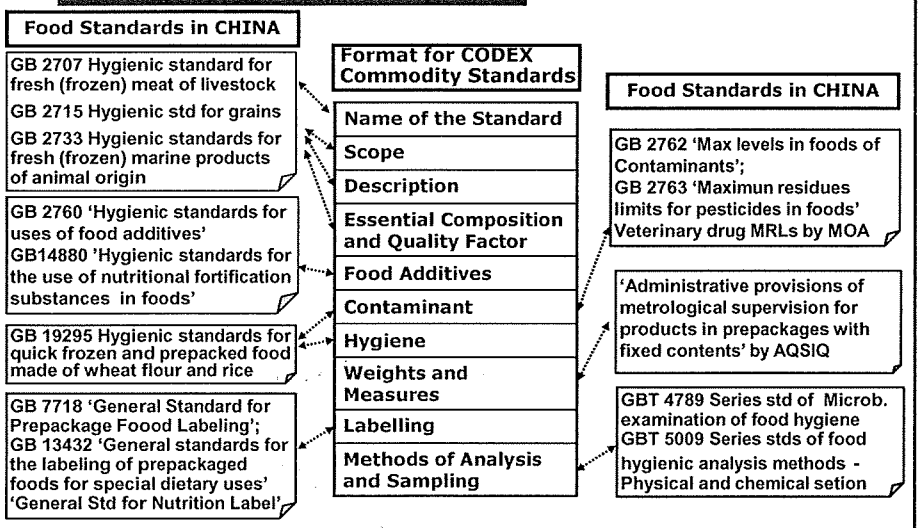
Labelling
Methods of Analysis and Sampling
Food Standards in CHINA
GB 2762 'Max levels in foods of Contaminants';
GB 2763 'Maximun residues limits for pesticides in foods'
Veterinary drug MRLs by MOA
Std of Pathogen Level in Food (Draft)
'Administrative provisions of metrological supervision for products in prepackages with fixed contents' by AQSIQ
GBT 5009 Series stds of food hygienic analysis methods - Physical and chemical setion
GB 4789-2010 Food Microbiological examination

Case Study 1: Frozen Foods Stds (1)



Case Study 1: Frozen Foods Stds (2)

Name of Standard	Contaminant and Physical/Chemical Index (≤)										
	Pb mg/kg	Cd mg/kg	Al mg/kg	Me Hg mg/kg	Tot. Hg mg/kg	Inor. As mg/kg	Tot. As mg/kg	Acid value KOH,mg/g	Perox. Val g/100g	Volatile basic N mg/100g	Aflatoxin μg/kg
GB19295 Hygienic std for quick-frozen and pre-packed food made of wheat & rice	0.5	--	--	--	--	--	0.5	3	0.15	15	5
GB 2715 Hygienic standards for grains	0.2	0.2 (rice/bean) 0.1 (wheat/corn /other)	--	--	0.02	0.15 (rice) 0.1(wheat) 0.2(other)	--	--	--	--	20(Corn) 10(Rice) 5(Other)
GB 2733 Hygienic std for fresh(frozen) marine products of animal origin	0.5 (Fish)	0.1 (Fish)	--	1.0 (Camivore fish) 0.5(other)	--	0.1(fish) 0.5(other)	--	--	--	10--30	--
GB 2707 Hygienic standards for fresh(frozen) meat of livestock	0.2	0.1	--	--	0.05	0.05	--	--	--	15	--
GB16869 Fresh and frozen poultry product	0.2	0.5	--	--	0.05	--	--	--	--	15	--
DB11/615 Hygienic requirement of quick-frozen meat products	0.2	0.1	--	--	0.05	0.05	--	--	--	10	--
NYT1407 Green food-quick-frozen and pre-packed food made of wheat flour or rice	0.2	0.2	25	0.5 (含肉)	0.05 (含肉) 0.02 (无肉)	0.05	--	3(含馅)	0.15(含馅)	15(含肉)	5

Case Study 1: Frozen Foods Stds (3)

Name of Standard	Microbiological Index(≤)							Storage temperature
	Tot. plate count (fresh) cfu/g	Tot. plate count (cooked) cfu/g	Colif.(fresh) MPN/100g	Colif. (cooked) MPN/100g	Mold count (fresh)	Mold count (cooked)	Microbe Pathogen	
GB19295 Hygienic std for quick-frozen and pre-packed food made of wheat & rice	3000000	100000	--	230	-	50	Not detected	-18℃±2℃
GB 2715 Hygienic standards for grains	--	--	--	--	--	--	--	--
GB 2733 Hygienic std for fresh(frozen) marine products of animal origin	--	--	--	--	--	--	--	-15℃ to -18℃
GB 2707 Hygienic standards for fresh(frozen) meat of livestock	--	--	--	--	--	--	--	--
GB16869 Fresh and frozen poultry product	1000000	500000 (Frozen)	10000	5000 (Frozen)	--	--	0/25g (Salmonella) 0/25g (O157:H7)	-18℃±1℃
DB11/615 Hygienic requirement of quick-frozen meat products	500000(Total plate count)		5000(Coliform group)		--	--	Not detected	-18℃±2℃
NYT1407 Green food-quick-frozen and pre-packed food made of wheat flour or rice	3000000	100000	--	230	--	50	Not detected	-18℃±2℃

Case Study 2: CO_2 Beverage Stds (1)

Food Standards in CHINA

GB10789 General std of beverage
5.1 Carbonated beverages
5.1.1 juice containing type
5.1.2 fruit flavored type
5.1.3 cola type
.....
GB/T10792 Carbonated Beverage

GB 2760 'Hygienic standards for uses of food additives'
GB14880 'Hygienic standards for the use of nutritional fortification substances in foods'

GB 2759.2 Hygiene standard for Carbonated beverage

GB 7718 'General Standard for Prepackage Foood Labeling';
GB 13432 'General standards for the labeling of prepackaged foods for special dietary uses'
'General Std for Nutrition Label'

Format for CODEX Commodity Standards

- Name of the Standard
- Scope
- Description
- Essential Composition and Quality Factor
- Food Additives
- Contaminant
- Hygiene
- Weights and Measures
- Labelling
- Methods of Analysis and Sampling

Food Standards in CHINA

GB 2762 'Max levels in foods of Contaminants';
GB 2763 'Maximun residues limits for pesticides in foods'
Veterinary drug MRLs by MOA

'Administrative provisions of metrological supervision for products in prepackages with fixed contents' by AQSIQ

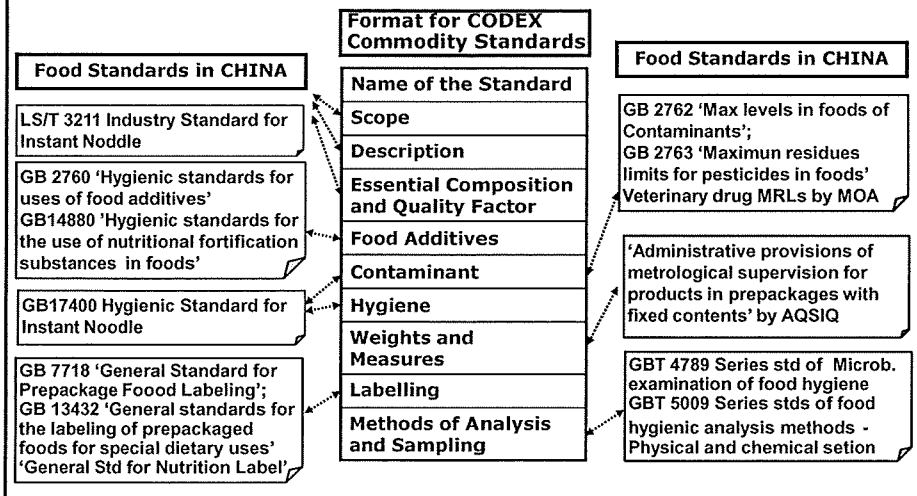
GBT 4789 Series std of Microb. examination of food hygiene
GBT 5009 Series stds of food hygienic analysis methods - Physical and chemical setion

GB/T12143.4 Assay method of CO2 in Carbonated beverages

Case Study 2: CO_2 Beverage Stds (2)

Name of the Standard	Carbonated Beverage (Sparkling beverage)	Hygiene Standard of Carbonated Beverage
Scope	Classification; tech requirements; Assay method; Test rules; Labeling; packaging & transport	Limited level; Food additives; Process Hygiene requirment; Packaging; labeling; Storage & transport; test
Description	Beverage charged with external CO2, excluding CO2 generated from fermentation .	Beverage charged with external CO2, excluding CO2 generated from fermentation .
Essential Composition and Quality Factor	• CO2 content ≥ 1.5 • Juice type: juice content ≥ 2.5%	• Should present the color and taste of main ingredients; without strange taste, bad smell and foreign object. • Pb ≤0.3mg/L, As ≤0.3mg/L, Cu ≤5mg/L
Food Additives	• GB2760 and GB14880	• GB2760 for Range and level requirment • Also meet relative quality standard and regul'n
Contaminant		• GB 2762
Hygiene		• Microbe: Tbc ≤100 cfu/100ml, Coliform group ≤ 6 MPN/100ml, Mold count ≤10 cfu/100ml, Yeast ≤10 cfu/100ml, Pathogen (salmonella, Shigella, Staphylococcus aureus): Absent. • GB12695 Beverage factory GMP Practice
Weight/Measure		
Labelling	• GB7718 and GB13432. • Juice type should declare juice content.	
Methods of Analysis	• CO2 content test: 1) Reductor method; 2) Distilling titration	• Pb: To be tested as GB/T 5009.12 • Total As: To be tested as GB/T 5009.11 • Cu: To be tested as GB/T 5009.13 • Micorbe: To be tested as GB/T 4789.21

Case Study 3: Instant Noodle Stds (1)



Case Study 3: Instant Noodle Stds (2)

	Hygienic Standard for Instant Noodle			Industry Standard for Instant Noddle		
Std Code	GB17400-2003			LS/T 3211-1995		
Scope	Fried and non-fried instant noodle.			Fried noodle, hot air dried noodle		
Ingredients	Should meet the requirement of relevant standards and regulation.			* Wheat flour should meet its national std * Fry oil should meet Hygiene std of edible oil frying process * Salt should meet its national standard		
Sensory requir'nt	* sould present its specific color; not burned or raw; could have shade of colour on both side. * Have normal smell; No moldy, rancid or other bad smell * Good in shape and pattern; Not foreign object or burned residue. * No broken, stuck after recovery with water; * No half-cooked and teeth-sticking texture.			* sould present its specific color; not burned or raw; could have shade of colour on both side. * No moldy, rancid or other strande smell and tast. * Good in shape and pattern; Not visible impurity. * No broken, stuck after recovery with water; * No half-cooked and teeth-sticking texture.		
Technical Criteria	≤	Fried	Non-fried	≤	Fried	Non-fried
	water (g/100g)	8	12	water, %	8	12
	Acid (Count as fat), KOH/mg/g	1.8		Acid (Count as fat) KOH/mg/g	1.8	
	Peroxide value (count as fat), g/100g	0.25		Peroxide value (count as fat), meq/100g	20	
	Carbonly value (count as fat) (meq/kg)	20		Fat, %	24	
	Pb, mg/kg	0.5		IoD Value	≥1.0	
	Total As, mg/kg	0.5		NaCl, %	2.5	
				Recovery time	4min	6min
				Weight variance	≤ 3% of declared weight	

Case Study 3: Instant Noodle Stds (3)

	Hygienic Standard for Instant Noodle			Industry Standard for Instant Noddle		
Microbe	≤	Fried	Non-fried	≤	Fried	Non-fried
	Tbc, cfu/g	1 000	50 000	Tbc, count/g	1000	
	Coliform group, MPN/100g	30	150	Coliform group, count/100g	30	
	Pathogen	Absent		Pathogen	Absent	
Food additive	Meet relevant quality standards and regualtion. Applying range and level meet GB2760 'Hygien standard of food additive use'.			Food additives should meet national and industrial standards.		
Packaging	Packaging vessel and material shpould meet relevany hygiene std and regulation			Should meet 'Hygiene standard of food pakaging material'		
Labeling	Labeling should meet relevant regulation, and it is required to declare 'Fried' or 'Non-fried'			Should meet GB7718 'General labeling requirement for prepackaged food'		
Test method	Sensory requirement Technical criteria			Test method for each item		

Case Study 4: Microbe & Contaminant

GB 4789-2010 Food Microbiological Examination	GB 4789.10-2010 : Examination of Staphylococcus aureus	
	GB 4789.15-2010 : Examination of Enumeration of moulds and yeasts	
	GB 4789.2-2010 : Examination of Aerobic plate count	
	GB 4789.30-2010 : Examination of Listeria monocytogenes	
	GB 4789.3-2010 : Examination of Enumeration of coliforms	
	GB 4789.35-2010 : Examination of Lactic acid bacteria	
	GB 4789.40-2010 : Examination of Enterobacter sakazakii	
	GB 4789.4-2010 : Examination of Salmonella	
GB 2762 Maximum levels of contaminants in foods	Lead(Pb)	GB 5009.12-2010 Determination of lead in foods
	Cadmium(Cd)	GB/T 5009.15-2003 Determination of cadmium in foods
	Mercury(Hg)	GB/T 5009.17-2003 Determination of total and organic-mercury in foods
	Arsenic(As)	GB/T 5009.11-2003 Determination of total and inorganic arsenic in foods
	Chrome(Cr)	GB/T 5009.123-2003 Determination of chromium in foods
	Aluminum(Al)	GB/T 5009.182-2003 Determination of aluminium in flour products
	Selenium(Se)	GB 5009.93-2010 Determination of selenium in foods
	Fluorin(Fi)	GB/T 5009.18-2003 Determination of fluorine in foos
	Benzo(a)pyrene	GB/T 5009.27-2003 Determination of benzo(a)pyrene infoods
	N-nitrosamine	GB/T 5009.26-2003 Determination of N-nitrosamines in foods
	Polychlorodiphenyls	GB/T 5009.190-2006 Determination of indicator polychlorinated biphenyls in foods
	Nitrite	GB 5009.33-2010 Determination of nitrite and nitrate in foods
	Rare earth	GB/T 5009.94-2003 Determination of rare earths in vegetable foods
GB 27621 Maximum levels of Mycotoxins in foods	Aflatoxin B1	GB/T 5009.22-2003 Determination of aflatoxin B1 in foods
	Aflatoxin M1	GB 5009.24-2010 Determination of aflatoxin M1 and B1 in foods
	Deoxynivalenol	GB/T 5009.111-2003 Determination of deoxynivalenol in cereal and its products
	Patulin	GB/T 5009.185-2003 Determination of patulin in apple and hawthorn products

Case Study 5: Use of Food Additive (1)

GB 2760 Standard for Food Additives Use

- **Similar to CODEX Food Additives Standard**
- **Allowable food additives, applicable foods categories and maximum level**
  - Table A.1 In alphabetic order of food additives
  - Table A.2 In alphabetic order of food categories
  - Table A.3 Additives allowed to be used in level required by process of any foods.
  - Table A.4 Food categories excluded form Table A.3
- **List of food flavors**
  - Table B.1 Natural flavor
  - Table B.2 Natural flavor equivalent
  - Table B.3 Synthetic flavor
- **Food proceesing aid**
  - Table C.1 Processing aid
  - Table C.2 Enzyme for food processing and its source
- **Table D.1 Ingredients for gum base**

Case Study 5: Use of Food Additive (2)

Example:

Table A.1: Application scope and dose levels of food additives

Glycine

Number of CNS: 12.007 **Number of INS:** 640
Function: Flavor enhancer

Number of food category	Food name/category	Maximum level g/kg	Note
12.0	Condiment	1.0	
14.03.02	Plant protein containing drinks	1.0	

Ammonium phosphatide

Number of CNS: 10.033 **Number of INS:** 442
Function: Emulsifier

Number of food category	Food name/category	Maximum level g/kg	Note
05.01.02	Chocolate and product, cocoa product other than 05.01.01	10.0	

Carnauba Wax

Number of CNS: 14.008 **Number of INS:** 903
Function: Coating agent, anti-caking agent

Number of food category	Food name/category	Maximum level g/kg	Note
05.0	Cocoa product, chocolate and product (including chocolate imitation and chocolate substitutes), and candy	0.6	

Case Study 5: Use of Food Additive (3)

Example:

表 A.3 （续）

序号	添加剂中文名称	添加剂英文名称	CNS 号	INS 号	功能
12	单，双，三甘油脂（油酸、亚油酸，柠檬酸、亚麻酸、棕榈酸、山嵛酸，硬脂酸、月桂酸）	mono-di-, tri-glyce rides of fatty acids	10, 006	471	乳化剂
13	改性大豆磷脂	modified soybean phospho-lipid	10, 019	-	乳化剂
14	柑橘黄	orange yellow	08, 113	-	着色剂
15	甘油	glycerine	18, 014	422	水分保持剂
16	高粱红	sorghum red	08, 115		着色剂
17	谷氨酸钠	monosodium glutamate	12, 001	621	增味剂
18	瓜尔胶	guar gum	20, 025	412	增稠剂
19	果胶	pectins	20, 006	440	增稠剂
20	海藻酸钾	potassium alginate	20, 005	402	增稠剂
21	海藻酸钠	sodium alginate	20, 004	401	增稠剂
22	槐豆胶（又名刺槐豆胶）	carob bean gum	20, 023	410	增稠剂
23	黄原胶（又名汉生胶）	xanthan gum	20, 009	415	增稠剂

Case Study 5: Use of Food Additive (4)

Example:

表 B.1　允许使用的食品用天然香料名单

编码	香料中文名称	香料英文名称(斜体为学名)	FEMA[a]编号
N001	丁香叶油	clove leaf oil(*Eugenia* spp.)	2325
N002	丁香花蕾酊(提取物)	clove bud tincture(extract)(*Eugenia* spp.)	2322
N003	丁香花蕾油	clove bud oil(*Eugenia* spp.)	2323
N004	罗勒油	basil oil(*Ocimum basilicum* L.)	2119
N005	八角茴香油	anise star oil(*Illicium verum* Hook.F.)	2096
N006	九里香浸膏	common jasmin orange concrete(*Murraya paniculate*)	
N007	广藿香油	patchouly oil(*Pogostemon cablin*)	2838
N008	万寿菊油	tagetes oil(*Tagetes* spp.)	3010
N009	大茴香脑	*trans*-anethole anise camphor	2086
N010	小豆蔻油	cardamom oil(cardamom seed oil)	2211
N011	小豆蔻酊	cardamom tincture(*Elettaria cardamomum*)	2210
N012	小茴香酊	fennel, tincture(*Foeniculum vulgare* Mill.)	
N013	山楂籽油	*Litsea cubeba* berry oil	3846
N014	山楂酊	Hawthorn fruit tincture	

Thank You

Regulatory Framework on Food: Cases of Food Commodity Standards in Korea

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International Conference for Sharing Information on Food Standards,
Resource and Environmental Conservation for Food Industries in Asia Pacific

Regulatory Framework on Foods

: Cases of Food Commodity Standards in Korea

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ILSI Korea

Bangkok, Thailand
March 04, 2011

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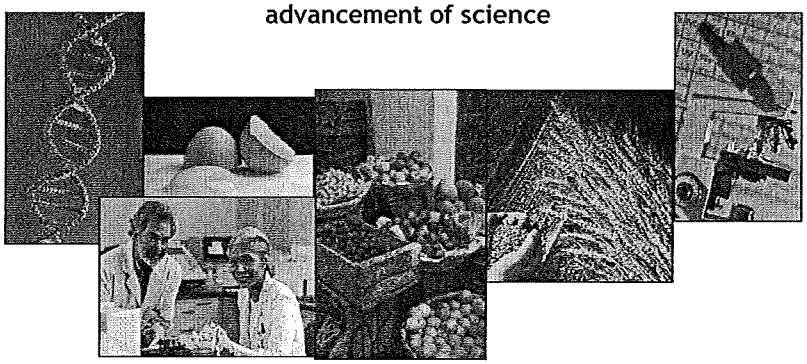
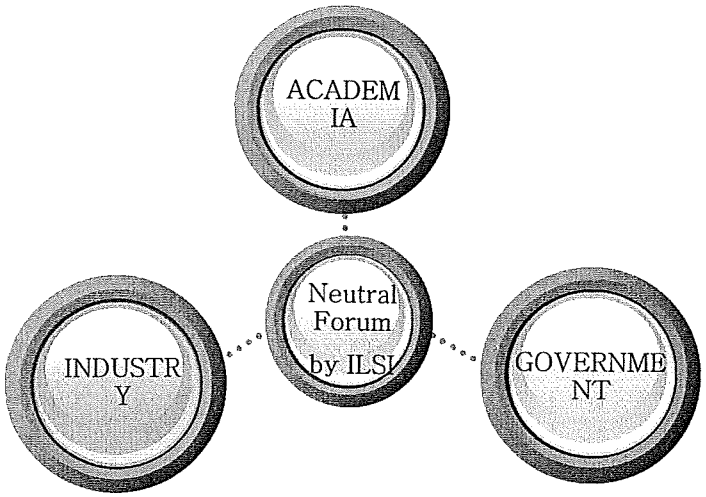
International Life Sciences Institute (ILSI)

Mission

To improve the health & well-being of the general public and environmental Safety through advancement of science



ILSI's Function



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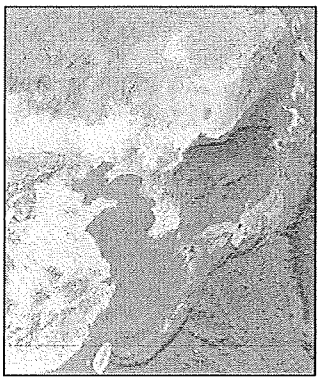
ILSI Korea



- Established in 1995
- Non-profit, Scientific Institute
- Headquarter in Seoul, Korea
- Funds Supported by Membership and Donation
  (27 Members, March 2011)

Regulatory Framework on Food in Korea

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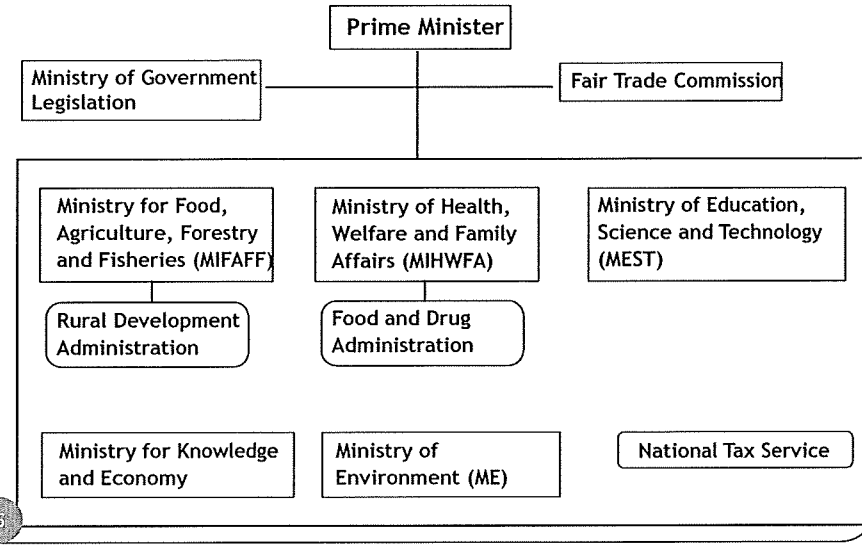
Government Agencies Having Authority on Food in Korea



6

Food Management System in Korea

Section	Farming etc	Import	Domestic
Agricultural Products	MIFAFF	KFDA	
Aquatic Products	MIFAFF	KFDA	
Stock Farm Products	MIFAFF	MIFAFF KFDA (Standard for Residual Harmful Substance)	
Drinking Water	Ministry of Environment		
Alcoholic Beverages	National Tax Service KFDA (Standard for Residual Harmful Substance)		
School Feeding	MEST/Office of Education KFDA (Safety Management for Group Feeding Facilities except for School Feeding Facilities)		

*KFDA: Korea Food & Drug Administration
*MIFAFF: Ministry for Food, Agriculture, Forestry and Fisheries
*MEST: Ministry of Education, Science and Technology

Food Regulations & Standards in Korea

- Food Sanitation Act
- Health Functional Food Act
- Quality Assurance of Agricultural Produces Act
- Pesticide Management Act
- Meat Processing Act
- Health Promotion Act
- Monopoly Regulation & Fair Trade Act
- Fair labeling and Advertising Act
- Drinking Water Management Act
- Food Code
- Food Additives Code
- Quality Labeling Standards
- KS Standard

ILSI Japan/MAFF Project on

Investigation of Food Commodity Standards and Analytical Methods in Asia

Case Studies in Korea

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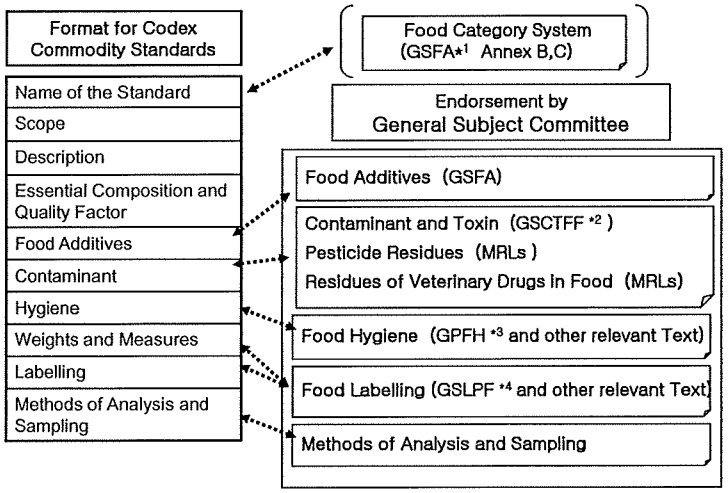
Elaboration of Codex Commodity Standards

Procedural Manual : Section III Elaboration of Codex Standards and Related Text



*1 Codex Stan 192-1955 General Standard for Food Additives
*2 Codex Stan 193-1995 General Standard for Contaminants and Toxins in Foods and Feeds
*3 CAC/RCP1-1969 General Principles of Food Hygiene
*4 Codex Stan 1-1985 General Standards for the Labelling of Prepackaged Foods

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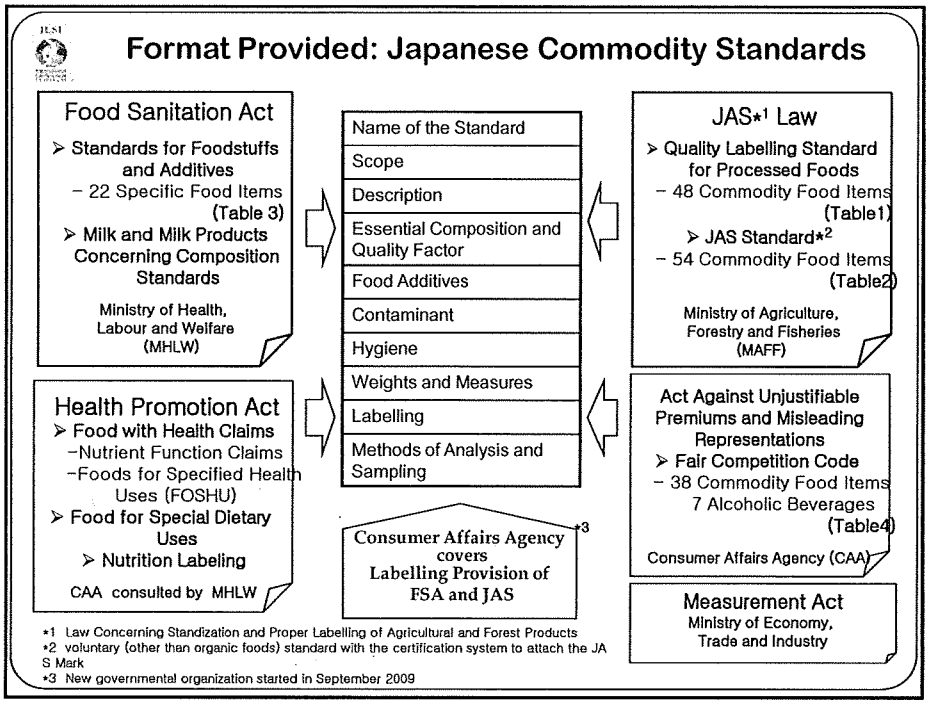
Format Provided: Japanese Commodity Standards
Food Sanitation Act
➢ Standards for Foodstuffs and Additives
– 22 Specific Food Items (Table 3)
➢ Milk and Milk Products Concerning Composition Standards
Ministry of Health, Labour and Welfare (MHLW)
Health Promotion Act
➢ Food with Health Claims
–Nutrient Function Claims
–Foods for Specified Health Uses (FOSHU)
➢ Food for Special Dietary Uses
➢ Nutrition Labeling
CAA consulted by MHLW
Name of the Standard
Scope
Description
Essential Composition and Quality Factor
Food Additives
Contaminant
Hygiene
Weights and Measures
Labelling
Methods of Analysis and Sampling
Consumer Affairs Agency *3 covers Labelling Provision of FSA and JAS
JAS*1 Law
➢ Quality Labelling Standard for Processed Foods
– 48 Commodity Food Items (Table1)
➢ JAS Standard*2
– 54 Commodity Food Items (Table2)
Ministry of Agriculture, Forestry and Fisheries (MAFF)
Act Against Unjustifiable Premiums and Misleading Representations
➢ Fair Competition Code
– 38 Commodity Food Items
7 Alcoholic Beverages (Table4)
Consumer Affairs Agency (CAA)
Measurement Act
Ministry of Economy, Trade and Industry
*1 Law Concerning Standization and Proper Labelling of Agricultural and Forest Products
*2 voluntary (other than organic foods) standard with the certification system to attach the JA S Mark
*3 New governmental organization started in September 2009

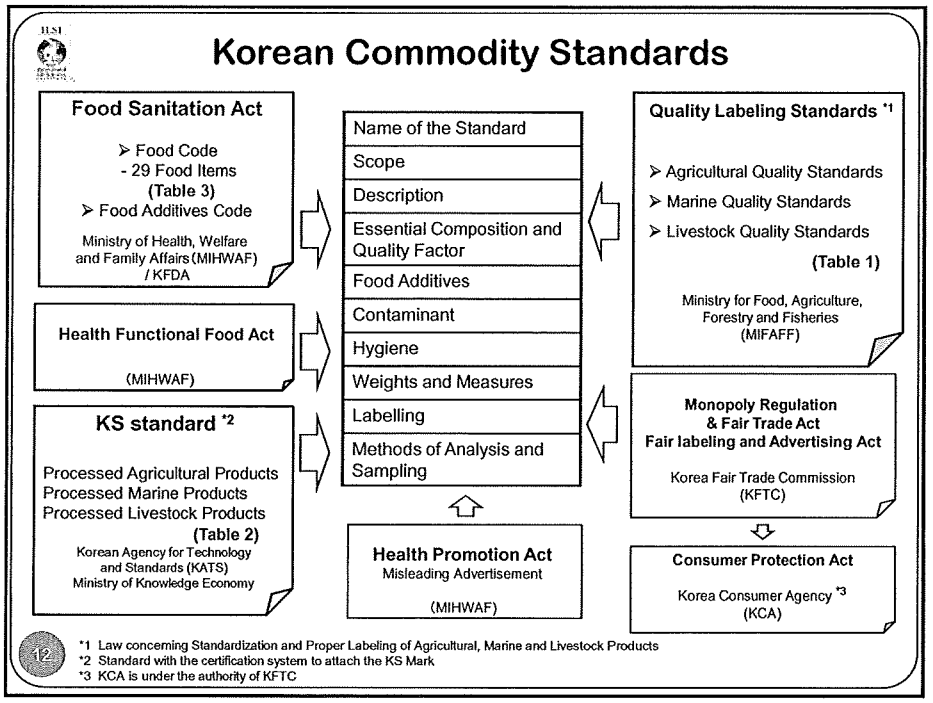
Korean Commodity Standards
Food Sanitation Act
➢ Food Code
- 29 Food Items (Table 3)
➢ Food Additives Code
Ministry of Health, Welfare and Family Affairs (MIHWAF) / KFDA
Health Functional Food Act
(MIHWAF)
KS standard *2
Processed Agricultural Products
Processed Marine Products
Processed Livestock Products (Table 2)
Korean Agency for Technology and Standards (KATS) Ministry of Knowledge Economy
Name of the Standard
Scope
Description
Essential Composition and Quality Factor
Food Additives
Contaminant
Hygiene
Weights and Measures
Labelling
Methods of Analysis and Sampling
Health Promotion Act
Misleading Advertisement
(MIHWAF)
Quality Labeling Standards *1
➢ Agricultural Quality Standards
➢ Marine Quality Standards
➢ Livestock Quality Standards (Table 1)
Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF)
Monopoly Regulation & Fair Trade Act
Fair labeling and Advertising Act
Korea Fair Trade Commission (KFTC)
Consumer Protection Act
Korea Consumer Agency *3 (KCA)
*1 Law concerning Standardization and Proper Labeling of Agricultural, Marine and Livestock Products
*2 Standard with the certification system to attach the KS Mark
*3 KCA is under the authority of KFTC

Table 1. Quality/Labeling Standards

3 Major Quality Standards under the MIFAFF

(mandatory for all foods)

1. Agricultural Quality Standards :

Agricultural/Forestry/Livestock products except the processed products

(Those for the Processed products - Food Sanitation Act)

2. Marine Quality Standards :

All marine products including processed foods

(Except live marine animals/plants imported from other countries

- Disease Control Law of Marine Animals)

3. Livestock Quality Standards :

Meat, Milk, Eggs and their processed products.

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Table 1. Quality/Labeling Standards (Cont'd)

Labeling and Safety Systems under MIFAFF

Specific labeling system :

GAP (Good Agricultural Practices, 105 food items), Organic Processed Food Certification, GMO

GAP | Organic processed food certification | GMO

Safety systems :

HACCP, Traceability System (Agricultural/Livestock/Marine Products), LIVESTOCK PRODUCT SAFETY MANAGEMENT SYSTEM(LPSMS), SafeQ

Agricultural Products Traceability | Marine Products Traceability | LPSMS | SafeQ

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Table 2. Product List of KS Standard

1. Processed Agricultural Products (99 Products)

1	Margarine	34	Instant coffee	67	Seasoning mixture sauce
2	Sugar	35	Roasted coffee	68	Jujube beverage
3	Biscuits	36	Tomato juice	69	Ginseng extracts
4	Milk caramels	37	Ginseng tea	70	Dried ginseng
5	Glucose	38	Soy sauce	71	Olive oil
6	Starch	39	Doenjang (Soybean paste)	72	Perilla oil
7	Chocolates	40	Gochujang (Red pepper paste)	73	Safflower seed oil
8	Wheat flours	41	Corn, canned	74	Sunflower seed oil
9	Fat spreads	42	Mushroom, canned	75	Peanut oill
10	High fructose corn syrup	43	Peaches, canned	76	Red pepper seed oil
11	Oligosaccharide	44	Bamboo shoots, canned	77	Concentrated fruit and/or vegetable juice
12	Fruit and/or vegetable puree or paste	45	Green peas, canned	78	Powdered fruit and/or vegetable juice
13	Fruit and/or vegetable processed foods	46	Chestnut, canned	79	Fruit and/or vegetable juice
14	Spice products	47	Pears, canned	80	Fruit and/or vegetable beverage
15	Soybean curd products	48	Grapes, canned	81	Fruit flesh beverages
16	Muk (Starch gel products)	49	Jams	82	Curry powder
17	Saengshik (Uncooked foods)	50	Asparagus, canned	83	Dry curry mix products
18	Grape seed oils	51	Mandarin orange, canned	84	Instant curry mix products
19	Processed fats and oils	52	Tomato ketchup	85	Fresh peeled chestnuts
20	Blended edible oils	53	Red pepper ground (powder)	86	Pickled cucumber
21	Other edible oils	54	Composite seasoning	87	Spirits
22	Flavored oils	55	Black tea	88	Vinegar
23	Dressing	56	Green Tea	89	Cooked rice
24	Soybean oil	57	Corn Oil	90	Mejoo (fermented soybean lump)
25	Canola oil	58	Canned fruits	91	Soybean milk products
26	Rice bran oil	59	Danmooji (pickled radish)	92	Mixed soybean pastes
27	Shortening	60	Palm Oil	93	**Dried noodles (Case Study 1)**
28	Cottonseed oil	61	Palm Olein Oil	94	**Fresh noodles (Case Study 1)**
29	Sesame oil	62	Palm Stearin Oil	95	**Precooked noodles (Case Study 1)**
30	Chunjang	63	Palm Kernel Oil	96	**Fried noodles (Case Study 1)**
31	Mayonnaise	64	Kimchi	97	**Seasoned and boiled agricultural products - Jorim**
32	Pan bread	65	Coconut oil	98	**Frozen dumpling (Case Study 3)**
33	Starch syrup	66	Dried Soup	99	**Frozen croquette (Case Study 3)**

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* KS Standards : Korean Industrial Standards

Table 2. Product List of KS Standard Cont'd.

2. Processed Livestock Products (35 Products)

1	Natural cheese	13	Cheddar cheese	25	Beef, packaged
2	Infant formula	14	Fermented milk	26	Pork, packaged
3	Follow-up formula	15	Liquid egg	27	Meat patty
4	Milks	16	Creams	28	Dried sliced meat
5	Reconstituted milk	17	Processed cheese	29	Whole and cut – up chicken
6	Flavored milk	18	Mozzarella cheese	30	Chicken stew with ginseng
7	Milk beverage	19	Hams	31	Whole duck and boneless duck meat
8	Condensed milk	20	Processed hams	32	Seasoned rib meat
9	Goat's milk	21	Sausage	33	Gomtang (beef-bone soup)
10	Dried milk products	22	Seasoned beef, canned	34	Seasoned and livestock products - Jorim
11	Butter	23	Bacons	35	**Frozen pork cutlet (Case Study 3)**
12	Ice cream	24	Seasoned pork, canned		

3. Processed Marine Products (29 Products)

1	**Frozen raw breaded shrimp (Case Study 3)**	11	Fish paste	21	Sea tangle products
2	Oyster, canned	12	Canned fishes	22	Seasoned and braised anchovy, canned
3	Squid, canned	13	Seasoned and roasted laver	23	Salted mackerel
4	Mackerel, canned	14	Seasoned squid	24	Dried seafood tea-bag
5	Mackerel pike, canned	15	Seasoned jeotgal (Fermented and seasoned fisher y products)	25	Seafood patty
6	Boiled mackerel pike, cann ed	16	Fermented anchovy sauce	26	**Frozen fish cutlet (Case Study 3)**
7	Boiled crab meat, canned	17	Dried sea mustard	27	Edible sodium alginate
8	Fish sausage	18	Bal-Top shell, canned	28	Chitosan products
9	Canned tuna in oil	19	Dried laver	29	Agar-agar
10	Boiled sardine, canned	20	Dried anchovy		

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Table 2. Product List of KS Standard

Cont'd.

4. Others (10 Products)

1	Soluble saccharin
2	**Carbonated soft drinks (Case study 2)**
3	Blended beverages
4	Extracted beverages
5	Beverage base
6	Chewing gum
7	Edible salts
8	Mono sodium glutamate
9	Baking soda
10	Edible sodium carbonate

* KS indicates Korean Industrial Standards.

KS certification scheme for product is the system of certifying that a certain product regulated in the relevant standards has passed product test, factory inspection and audit according to the criteria of relevant KS based on the Article 15 of Industrial Standardization Act, allowing it to indicate KS-mark on their product, packaging, container, statement of delivery, warranty and/or promotional materials.

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Table 3. Food Items in Food Code

Specifications for Long Shelf-life Foods (Article No. 3)

1	Canned & Bottled Food
2	Retort Food
3	**Frozen food (case study 3)**

Standards & Specifications for Each Food Product (Article No. 5)

1	Confectionaries	16	Teas
2	Breads or Rice Cakes	17	Coffees
3	Cocoa Products or Chocolates	18	**Beverages (case study 2)**
4	Jams	19	Foods for Special Dietary Uses
5	Sugars	20	Soy Sauces or Pastes
6	Glucoses	21	Seasonings
7	Fructoses	22	Dressings
8	Glutinous Rice Jellies (Yeat)	23	Kimchies
9	Sugar Syrups	24	Salted and Fermented Seafoods (Jeotkal)
10	Oligosaccharides	25	Pickles
11	Processed Meat and Egg Products	26	Hard-boiled Foods
12	Fish Products	27	Alcoholic Beverages
13	Bean-Curds or Starch Jellies (Mook)	28	Dried Fish/Shellfish Fillets
14	Edible Oils and Fats	29	Other Foods
15	**Noodles (case study 1)**		

* Food Code : Under the Food Sanitation Act.

* Details of food additives are available in English at http://fa.kfda.go.kr/foodadditivescode.html

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Food Commodity Standards : Case Studies

- Noodle/Instant Noodle
- Carbonated Soft Drinks
- Frozen Foods
- Food Additives for Beverages & Meat

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Case Study 1 : Noodle/Instant Noodle

Item \ Standard	Food Sanitation Act	KS standard
Name of the Standard	**Noodles**	**Instant Noodles** *1
Scope	Noodle Naengmyeon (cold noodle) Dangmyeon (chinese noodle) Oil-fried noodle Pasta	Fresh(uncooked) noodles (KS H 2506) Pre-cooked noodles (KS H 2507) Fried noodles (KS H 2508) Dried noodles (KS H 2505)
Description	Noodles refer to products made of cereals or starches by heat process or drying. Each items have own their descriptions.	Each items have own their descriptions.
Essential Composition and Quality Factor	**Manufacturing and Processing Standards** 1)For alcohol-treated products (not less than 1% of alcohol used), alcohol treatment should be performed in a manner that any residual alcohol does not adversely affect the quality. 2)Acid value and peroxide value of oil used for frying shall be not more than 2.5 and 50, respectively.	**Dried noodle** Max. Moisture content 11% (Dangmyeon 15%) **Fried noodle** Max. Moisture content 9% Acid value 1.5 Peroxide value 25

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Case Study1:Noodle/Instant Noodle(cont'd)

Item \ Standard	Food Sanitation Act	KS standard
Food Additives	1) Tar color : Should not be detected 2) Preservatives : Should not be detected Anything not specified follows "Korea Food Additives Code"	Tar color should not be detected
Hygiene	* Containers/Packing condition * Storage Standard for cold noodle * Microbiological Criteria: 1) The number of Bacteria: Not more than 1,000,000 (Limited to alcohol-treated products) Not more than 100,000 (Limited to pasteurized products) 2) *E. coli* : Negative (Limited to alcohol-treated products) 3) Coliform group : Negative (Limited to pasteurized products)	* Containers/Packing condition * Microbiological Criteria: The number of Bacteria : 1,000 (only for precooked noodle) *E. coli* : Negative Coliform group : Negative
Labeling	Specific Labeling Methods required (Nutrition Facts/ Pasteurized vs. Non-pasteurized / Fried, Alcohol-treated etc.)	Labeling Standards follow "General Standard of Labeling for Processed Foods" (KS H 1101) Labeling should meet the requirement of Food Sanitation Act.

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Case Study1:Noodle/Instant Noodle(cont'd)

Item \ Standard	Food Sanitation Act	KS standard
Methods of Analysis and Sampling	Determination of Acid/Peroxide Value, Tar, Preservatives, Bacteria, *E.coli*, Coliform	Sensory test (KS H ISO 6658) Determination of Water Content (KS H 1201) Determination of Coliform group (KS H ISO 4832) Determination of Micro-organism (KS H ISO 7251, KSH ISO 4833/4832/4831) Determination of Water and Acid/Peroxide value Anything not specified is handled in accordance with the Food Sanitation Act.

*1 KS standard about the Instant noodles was eliminated on December 28, 2009.
It was explained that Instant noodles were subdivided into fresh noodles, pre-cooked noodles, fried noodles and dried noodles.

* This table does not include basic details required for all foods.

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Case Study 2: Carbonated Soft Drinks

	Food Sanitation Act	KS standard
Name of the Standard	Carbonated Beverages	Carbonated Soft Drinks (KS H 2016)
Scope	Carbonated Beverages Carbonated Water	Carbonated Beverages Carbonated Water
Description	Carbonated beverages refer to products for drinking with carbonic acid gas	Carbonated beverages refer to products for drinking with carbonic acid gas
Essential Composition and Quality Factor	Pressure of carbonic acid gas (kg/cm²) ① Carbonated water: Not less than 1.0 ② Carbonated beverage: Not less than 0.5 Lead (mg/kg) : Not more than 0.3 Cadmium (mg/kg) : Not more than 0.1 Tin (mg/kg): Not more than 150 (Limited to canned products)	Must have satisfactory color and flavor Must not have off-taste and off-odor Pressure of carbonic acid gas (kg/cm²) ① Carbonated water : Not less than 2.5 ② Carbonated beverage : Not less than2.0 Lead (mg/kg):Not more than 0.3 Cadmium (mg/kg):Not more than 0.1 Tin (mg/kg):Not more than 150 (Limited to canned products) Packaging standards : The container shall not be swollen, deformed or rust, requiring complete sealing and appropriate degree of vacuum .

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Case 2: Carbonated Soft Drinks(Cont'd)

	Food Sanitation Act	KS standard
Food Additives	Preservative : Any preservative except the followings should not be detected. (Sorbic acid, Sodium sorbate, Potassium sorbate, Calcium sorbate) Not more than 0.6g/kg as sorbic acid. (But it should not be detected in carbonated water)	
Hygiene	The number of Bacteria : Not more than 100 Coliform group : Negative	The number of Bacteria : Not more than 100 Coliform group : Negative
Labeling	Specific labeling methods 1)Products shall be labeled as either carbonated beverages or carbonated water. 2)If the calorie per 400ml is 2kcal or lower, the product can be labeled as "Diet". 3)Nutrition Facts required.	Labeling Standards follow "General Standard of Labeling for Processed Foods" (KS H 1101)
Methods of Analysis	Gas Pressure Lead and Cadmium Tin The number of Bacteria Coliform group Preservatives	Gas Pressure, Lead and Cadmium Tin, The number of Bacteria, Coliform group General testing methods for canned food (KS H2146) Sensory test (KS H ISO 6658) Determination of Micro-organism (KS H ISO 7251, KSH ISO 4833/4832/4831) Anything not specified is handled in accordance with the Food Sanitation Act.

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* This table does not include basic details required for all foods.

Case Study 3 : Frozen Foods

	Food Sanitation Act	KS standard
Name of Food Item	Frozen Foods	Frozen Foods
Scope		Frozen dumpling (KS H 4001) Frozen croquette (KS H 4002) Frozen raw breaded shrimp (KS H 4003) Frozen pork cutlet (KS H 4004) Frozen fish cutlet (KS H 6032)
Description	***1. Product Definition*** "Frozen food" means a food made by filling the manufactured, processed, cooked food into container and packaging materials after freezing treatment for the purpose of long-term storage. (1) Frozen food not requiring heating process before consumption : Frozen food that can be consumed without a separate heating process. (2) Frozen food requiring heating process before consumption : Frozen food that can be consumed only after a separate heating process. ***2. Manufacturing and Processing Standards*** (1) Product before chilling shall be sterilized in a method, in which the temperature at the center of the product is not less than 63℃ for 30 minutes, or the equivalent. (2) Thawing of refrigerated raw material shall be hygienically performed. ***3. Preservation and Distribution Standards*** (1) Preservation temperature of frozen chilled food means, except for separately specified in this code, that frozen temperature is not higher than -18℃ and chilled temperature is 0~10℃. (2) After frozen food is thawed, it shall not be distributed as room temperature food or chilled food, and the room temperature food or chilled food shall not be distributed as frozen food. (3) Chilled food shall not be also distributed at room temperature (except fruit/vegetable). (4) Thawed food shall not be again frozen. (5) Transport of frozen or cold-storage products shall be performed with use of a vehicle able to maintain the specified temperature or in the equivalent or better manner.	Each food items have their own Descriptions and Standards.

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Case Study 3 : Frozen Foods (cont'd)

	Food Sanitation Act			KS standard					
Food Additives	The products shall meet the requirements of Korea Food Additives Code								
Hygiene		Frozen food not requiring heating before consumption	Frozen food requiring heating before consumption: Heated food before freezing	Frozen food requiring heating before consumption: Not-heated food before freezing		Frozen dumpling	Frozen croquette	Frozen raw breaded shrimp	Frozen pork cutlet	Frozen fish cutlet
	Bacteria Counts (CFU/g)	No more than 100,000 (except fermented products or those added with lactic acid bacteria (LAB)	No more than 100,000 (except fermented products or those added with LAB)	No more than 3,000,000 (except fermented products or those added with LAB)	Bacteria Counts (CFU/g)	No more than 1,000	—	—	No more than $3x10^6$ (but heated /notheated food before freezing <100,000)	No more than 100,000
	Coliform Group (CFU/g)	No more than 10	No more than 10	—	Coliform Group (CFU/g)	No more than 10	—	—	No more than 10 (only for heated food before freezing)	Negative (only for heated food before freezing

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Case Study 3 : Frozen Foods (cont'd)

	Food Sanitation Act				KS standard					
Hygiene	*E. coli*	—	—	Negative	*E. coli*	—	Negative	—	—	Negative (only for non-heated food before freezing)
	Lactic acid bacteria	Not less than labeled count (if only products added with lactic acid bacteria)								
Labeling	*Frozen food shall be labeled according to the following criteria :* (1) It shall be labeled as either frozen food good to eat unheated or frozen food to eat after heated. (2) Frozen food to eat after heating shall be additionally labeled as either "food heated before freezing" or "food unheated before freezing" depending on whether it was heat-treated, etc. Fermented products or products containing lactic acid bacteria shall indicate the number of yeasts or lactic acid bacteria. (3) Frozen food shall indicate the methods of storage in freezing conditions and the methods of thawing for cooking. (4) Products that require cooking or heating shall indicate the methods of cooking or heating. (5) The label shall not be done in a manner in which consumers can be misled into thinking the whole of the raw materials is meat or produce. However, this may not apply if the quantity of meat or produce is labeled on the same position as that of the product name. (6) If two or more kinds of meats are used as raw materials, the name of a single kind of meat shall not be used as the product name. However, this may not apply if the quantity of the meat is labeled on the same position as that of the product name.				Labeling Standards follow "General Standard of Labeling for Processed Foods" (KS H 1101)					
Methods of Analysis and Sampling	Determination of Bacteria counts, *E.coli*, Coliform group, Lactic acid bacteria.				Sensory and Physical Examination (KS A 7002) Determination of Water Content (KS H 1201) Determination of Coliform group (KS H ISO 4832) Determination of Micro-organism (KS H ISO 4833) Anything not specified is handled in accordance with the Food Sanitation Act.					

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* This table does not include basic details required for all foods.

Food Additives
: Classification in Korea

Synthetic Additives	432 items
Natural Additives	206 items
Mixture Additives	7 items
* Coloring/Flavoring agents	1834 items

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Case Study 4 : Food Additives for Beverages & Meat products

1. Standards for use in Korea: Beverage

Major Use Category	Additives	Target Foods	Maximum Limits	Limitation for use
Antioxidants	Calcium Disodium Ethylenediaminetetraacetate	Canned or bottled beverage	35mg/kg	when it is used along with EDTA potassium disodium, total should not more than 35mg/kg
	Disodium Ethylenediaminetetraacetate	Canned or bottled beverage	35mg/kg	when it is used along with EDTA potassium disodium, total should not more than 35mg/kg
Bleaching agents	Potassium Hydrogen Sulfite solution	No data		
	Potassium Pyrosulfite			
	Sodium Hydrogen Sulfite Solution			
	Sodium HydrogenSulfite			
	Sodium Pyrosulfite			
	Sodium Sulfite	Fruit wine	350mg/kg	
		Fruit juice that is five times diluted prior to use, concentrated fruit juice, and processed fruits and vegetables	150mg/kg	

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Case Study 4: Food Additives for Beverages

(Cont'd)

Major Use Category	Additives	Target Foods	Maximum Limits	Limitation for use
Bleaching agents	Sulfur Dioxide	Fruit wine	350mg/kg	
		Fruit juice that is five times diluted prior to use, concentrated fruit juice, and processed fruits and vegetable	150mg/kg	
Emulsifiers	Polysorbate 20	No data		
	Polysorbate 60			
	Polysorbate 65			
	Polysorbate 80			
Non-nutritive sweeteners	Acesulfame Potassium	Beverages, processed milk, fermented milk, coffee mix	500mg/kg	if it is to be diluted for drinking, the usage in diluted form.
	Sodium Saccharin	Beverages (except for fermented dairy-based drinks)	200mg/kg	if it is consumed after diluting by a factor of >5, not more than 1.0 g/kg.
	Sucralose	Beverages, processed milk, fermented milk, coffee mix	400mg/kg	if it is to be diluted for drinking, the usage in diluted form
Preservatives	Benzoic acid	Fruit vegetable beverages (non-heat-treated products are excluded), carbonated beverages (carbonated water is excluded), other beverages, ginseng beverages, red ginseng beverages	600mg/kg	
	Butyl p-Hydroxybenzoate	No data		
	Potassium Sorbate	Concentrated fruit juice	1.0g/kg	
		Fermented dairy-based drinks (pasteurized beverages are excluded)	50mg/kg	
		Fruit Liquor	200mg/kg	
	Sodium Benzoate	Fruit vegetable beverages (non-heat-treated products are excluded), Carbonated beverages (carbonated water is excluded), other beverages, ginseng beverages, red ginseng beverages & soy sauce	600mg/kg	

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Case Study 4 : Food Additives for Beverages & Meat products

2. Standards for use in Korea : Meat Products

Major use category	Additives	Target foods	Maximum Limits	Limitation for use
Preservatives	Nisin	No data		Only used for processed cheese
	Potassium Sorbate	Meat products	2.0g/kg	
	Sorbic acid	Meat products	2.0g/kg	

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Summary

- Food management system in Korea is complicated and involves multilateral government agencies.
- Food commodity standards involve several food regulation including Food Sanitation Act, Health Functional Food Act, Monopoly Regulation & Fai Trade Act, Fair Labeling and Advertisement Act, Consumer Protection Act, Health Promotion Act, Quality Labeling Standards and KS Standards.
- Case studies for the ILSI collaborated project (1st term) were for noodles/instant noodles, carbonated beverages, frozen foods, and food additives (beverages and meat products), which may be used as a reference for future food standard harmonization.

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Thank you

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Food Regulatory Systems and Standards in Southeast Asia: Indonesia, Malaysia, Philippines, Singapore, Thailand & Vietnam

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Food Regulatory Systems and Standards in Southeast Asia: Indonesia, Malaysia, Philippines, Singapore, Thailand & Vietnam

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Each country in the ASEAN region has a unique food regulatory system that is different from one another. While some countries have a single food authority that controls food safety and quality from farm-to-table (Malaysia and Singapore), others have multiple agencies that regulate specific aspects of food products depending on the stage of production from primary production to processed foods (Indonesia, Philippines, Thailand and Vietnam). Nevertheless, there are also some similarities between regulatory systems, such as the existence of a 'general food law' enacted by the main legislative bodies in each of the countries, which are described below:

Indonesia: Act of the Republic of Indonesia No. 7 of 1996 on Food
Malaysia: Food Act 1983
Philippines: Food, Drug and Devices, and Cosmetics Act
Singapore: Sale of Food Act
Thailand: Food Act B.E. 2522 1979
Vietnam: Law No. 55/2010/QH12 of June 17, 2010 on Food Safety

In relation to standards, most countries have both mandatory standards and voluntary standards. In some countries, mandatory standards can be developed by the main food authority in the country (Malaysia, Philippines, Singapore, Thailand, Vietnam), but in others it can be set by the main standardization body (Indonesia). Nevertheless, voluntary standards can often be made mandatory if it is used as a reference in regulatory processes.

With the goal of reaching an ASEAN Economic Community by 2015, countries in the region are currently in the process of harmonization of food standards in the region. Harmonization of these food standards will not only be able to stimulate trade and economic cooperation between countries, but it will also be able to provide a uniform level of public health protection in relation to food safety among ASEAN countries, which can further lead to improved food security for all in the region.

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Food Regulatory Systems and Standards in Southeast Asia

Indonesia, Malaysia, Singapore, Philippines, Thailand & Vietnam

Presented by Pauline Chan
ILSI Southeast Asia Region

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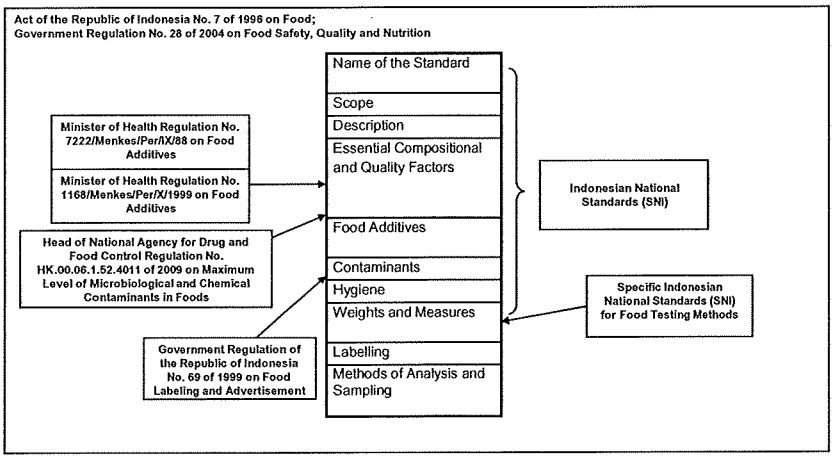
Indonesia Commodity Standards



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Indonesia: Food Safety Control

- Primary responsibility lies with National Agency for Drug and Food Control (independent non-departmental government body, which used to be under Ministry of Health)
- However, other ministries also involved in food safety control, in relation to sanitation requirements, guidelines for Good Practices, setting maximum contamination threshold:

  Ministry of Agriculture;
  Ministry of Marine Affairs & Fisheries;
  Ministry of Forestry;
  Ministry of Industry;
  Ministry of Health

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Indonesia: Food Law

- **Act of the Republic of Indonesia Number 7 of 1996 on Food** – 'General food law'
- **Government Regulation Number 28/2004 on Food Safety, Quality and Nutrition**
  Sanitation, food additives, GM foods, food irradiation, food packaging, food contaminants, food quality assurance & lab testing, food quality, food nutrition, etc.
- **Government Regulation of the Republic of Indonesia No. 69 on Food Labeling and Advertisement**

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Indonesia: Regulations

- Regulations issued by BPOM related to food commodity standards:

  Head of BPOM Regulation No. HK.00.06.1.52.4011 on Maximum Limits for Microbiological and Chemical Contaminants in Food

- Regulations issued by Min of Health and/or Min of Agriculture related to food commodity standards:

  Minister of Health Regulation No. 7222/Menkes/Per/IX/1988 on Food Additives

  Minister of Health Regulation No. 1168/Menkes/Per/X/1999 on Food Additives

  Joint Decree of Min of Health & Min of Agriculture No. 881/Menkes/SKB/VIII/1996 on MRLs in Agricultural Products

  Regulation of Min of Agriculture No. 27/Permentan/PP.340/5/2009 concerning Food Safety Control over the Import & Export of Fresh Food of Plant Origin

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Indonesia: SNI Standards

- Developed by National Standardization Agency of Indonesia (BSN)
- Voluntary in nature...
- But "*may be imposed compulsorily, taking into account the people's security, safety and health or the environmental sustainability and/or that economic considerations shall meet certain quality standards*"

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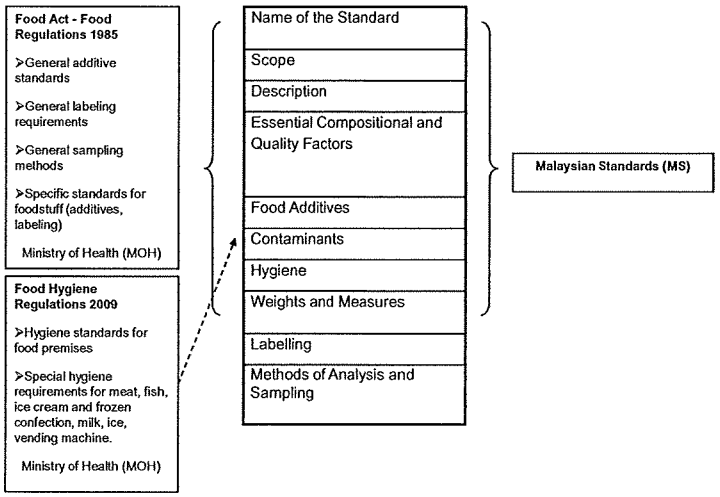
Malaysia Commodity Standards



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Malaysia: Food Safety Control

- MoH Food Safety & Quality Division (FSQD) is main food authority
- Covers processed foods, agriculture, meat & fisheries products
- MoA not involved in regulating food (only upstream, i.e. pesticide use, animal health regulated by DVS)

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Malaysia: Food Law

- **Food Act 1983**
- **Food Regulation 1985**
  - Sampling procedure, food labeling, food additive and nutrient supplements, food packaging, contaminants, technical standards
- **Food Hygiene Regulations**
  - hygiene requirements for handling, preparing, packaging, serving, storing of foods

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Malaysia: MS Standards

- Developed under the Standard of Malaysia Act 1996 by the Department of Standards
- In turn, Dept. of Standards has assigned SIRIM Berhad (wholly government-owned corporation) to draft MS Standards
- Agriculture: 581 standards
  Food and food products: 63 standards

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Malaysia: MS Standards

- MS Standards are voluntary…
- However, can become mandatory if referenced in regulations or used as reference for regulatory purposes
- For e.g. Food Regulations 1985 re: labelling of organic food requires compliance to MS 1529: The production, processing, labelling and marketing of organically produced foods.
- Certification provided by 3rd party CB – mainly by SIRIM QAS (subsidiary of SIRIM Berhad)

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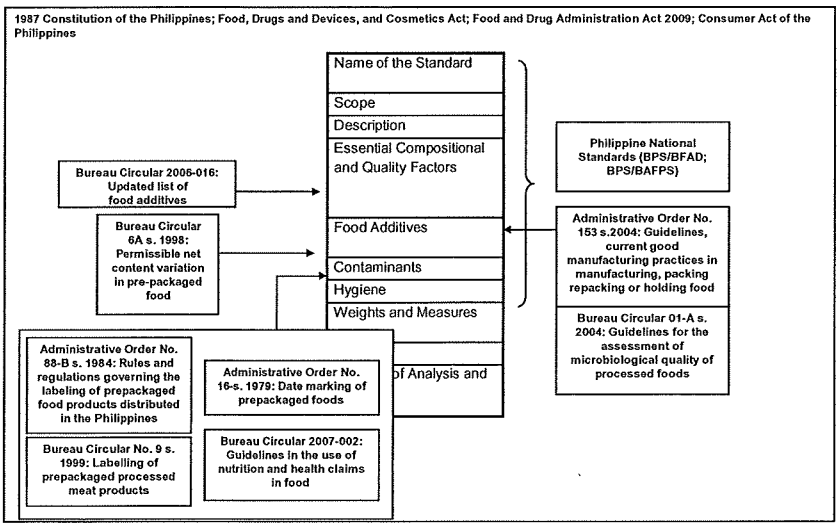
Philippines Commodity Standards



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Philippines: Food Safety Control

- Responsibilities split between Dept. of Health & Dept. of Agriculture
- *Dept. of Health:*

  Food and Drug Administration (FDA)
  - all food products apart from agriculture, fisheries & meat
- *Dept. of Agriculture:*

  Bureau of Agricultural and Fisheries Product Standards (BAFPS)
  - agriculture & fisheries;

  National Meat Inspection Services (NMIS)
  - meat & meat products
- Some overlapping mandates, ongoing efforts to clarify responsibilities, for e.g.:

  Joint DA-NMIS & DOH-FDA AO No. 01 Series of 2009: Delineation of Functions and Shared Responsibilities in the Regulation of Meat Products

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Philippines: Food Law

- **1987 Constitution of the Philippines:**

  "*The State shall establish and maintain an effective food and drug regulatory system and undertake the appropriate health, manpower development, and research, responsive to the country's health needs and problems.*"

- Main source of food law in the Philippines

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Philippines: Food Law

- Other food-related laws enacted by Congress:

  - Consumer Act of the Philippines
  Mandates Dept of Health to elaborate standards

  - Food, Drug and Devices, and Cosmetics Act
  'General food law' – sets up and mandates BFAD to elaborate food & drug regulations, standards etc.

  - Food and Drug Administration Act 2009
  renames and reorganizes BFAD to FDA

  - Agriculture and Fisheries Modernization Act of 1997
  mandates BAFPS to regulate and draft standards for agricultural & fisheries products

  - The Meat Inspection Code of the Philippines
  mandates the NMIS as the sole national controlling authority for meat and meat products

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Philippines: Regulations

• Some relevant regulations issued by FDA related to food safety & quality standards:

Food additives –
Bureau Circular 2006-016: Updated list of food additives

Hygiene –
Administrative Order No. 153 s.2004: Guidelines, current good manufacturing practices in manufacturing, packing repacking or holding food;
Bureau Circular 01-A s. 2004: Guidelines for the assessment of microbiological quality of processed foods

Labeling –
Administrative Order No. 16-s. 1979: Date marking of prepackaged foods;
Administrative Order No. 88-B s. 1984: Rules and regulations governing the labeling of prepackaged food products distributed in the Philippines;
Bureau Circular No. 9 s. 1999: Labeling of prepackaged processed meat products;
Bureau Circular 2007-002: Guidelines in the use of nutrition and health claims in food

Weights and measures –
Bureau Circular 6A s. 1998: Permissible net content variation in pre-packaged food

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Philippines: Standards

- FDA elaborates mandatory standards through regulations, eg.

  AO 132 s. 1970 Regulation prescribing the Standard of Identity and Quality of Milk and Milk Products

  AO154 s. 1971 Regulation B-4 Definition and Standards of Identity of Foods: 4.14 Meat and Meat Products, 4.14.01 Sausages

  AO 136-B s. 1985 Standards for Soluble Coffee with Added Carbohydrates

  AO 2005-018 Philippine National Standards on Ethnic Food Products

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Philippines: PNS Standards

- Developed jointly by Bureau of Product Standards (lead) and FDA or BAFPS

- Agriculture (PNS-BAFPS): 73
  Food and food products (PNS-BFAD): 21

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Philippines: PNS Standards

- Voluntary in nature, though can become mandatory if products affect the life, health and property of its users
- PNS-BFAD, PNS-BAFPS standards are used by authorities for regulatory purposes – therefore becomes mandatory
- For certification, provided for by BPS

BPS
CERTIFIED
Product Quality

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Singapore Commodity Standards

Sale of Food Act - Food Regulations, rev. 2006

- General additive standards
- General labeling requirements
- Specific standards for foodstuff (additives, labeling)

Ministry of Health (MOH)

Sale of Food (Food Establishments) Regulations

- Hygiene standards for food premises

Ministry of Health (MOH)

- Name of the Standard
- Scope
- Description
- Essential Compositional and Quality Factors
- Food Additives
- Contaminants
- Hygiene
- Weights and Measures
- Labelling
- Methods of Analysis and Sampling

Singapore Standards (SS)

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Singapore: Food Safety Control

- Agri-food and Veterinary Authority (AVA) is the sole agency for food safety
- Covers processed foods, agriculture, meat & fisheries products

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Singapore: Food Law

- **Sale of Food Act**
- **Food Regulations**
  - food labeling, food additives, food packaging, contaminants, food irradiation, technical standards
- **Sale of Food (Food Establishment) Regulations**
  - hygiene requirements for food handlers and food establishments.

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Singapore: SS Standards

- Developed by SPRING Singapore
- Voluntary in nature, though can become mandatory if "*used by government bodies in regulations or administrative requirements for safety, environmental and health issues*"
- Agriculture: none
  Food and food products: 70 standards
- Certification by 3rd party CB accredited by SAC

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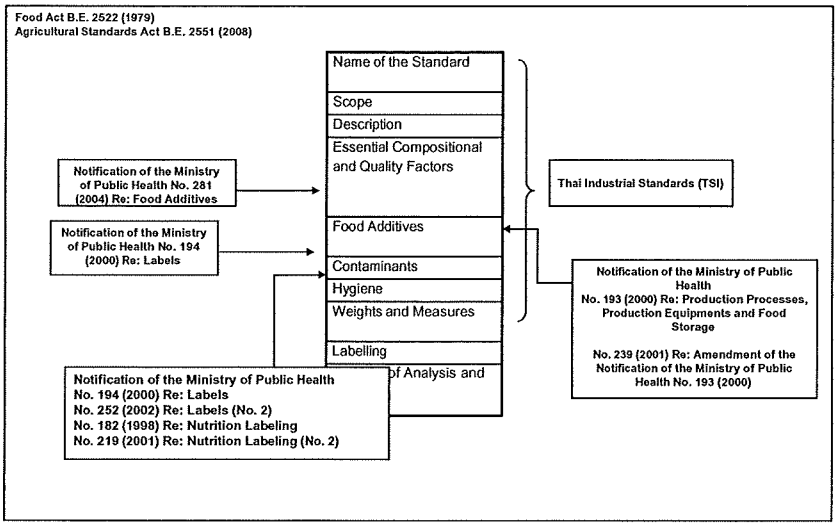
Thailand Commodity Standards



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Thailand: Food Safety Control

- Responsibilities split between Min. of Public Health (FDA) & Min. of Agriculture & Cooperatives
- *Min. of Public Health:*

  Food and Drug Administration (FDA)
  - processed food products
- *Dept. of Agriculture & Cooperatives:*

  National Bureau of Agricultural Commodity and Food Standards (ACFS)
  - agriculture, fishery, livestock and forestry products and by-products

  Department of Livestock Development (DLD)
  - meat and meat product inspection and meat hygiene
  - establish safety and quality standards for meat and meat products

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Thailand: Food Law

- **Food Act B.E. 2522 (1979)**
  - mandates Ministry of Public Health to regulate food products
  - classifies foods into four categories (with different registration requirements):

  1) Specifically-controlled food
  14 types of food at present (including food additives)
  2) Standardized food
  39 types of food at present
  3) Food required to bear labels
  13 types of food at present
  4) General food
  13 types of food at present
- **Agricultural Standards Act B.E. 2551 (2008)**
  - mandates National Bureau of Agricultural Commodity and Food Standards (ACFS) to regulate agriculture, fishery, livestock and forestry products and by-products
  - establishes agricultural standards (mandatory & voluntary)
- **Control of Slaughtering and Selling Meat Act B.E. 2535 (1992)**
  - Mandates the Department of Livestock (DLD) as "sole national controlling authority pertaining to meat and meat product inspection and meat hygiene"

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Thailand: Standards

- For processed food standards, issued as Notification of the Ministry of Public Health, for e.g.:
  No. 210 B.E. 2543 (2000) Re: Semi-processed food
  No. 214 B.E. 2543 (2000) Re: Beverage in sealed containers
  No. 282 B.E. 2547 (2004) Re: Cow's milk
  No. 281 B.E. 2547 (2004) Re: Food additives

- For agricultural standards, issued as:
  Ministerial Regulation (Mandatory standards)
  Ministerial Notification (Voluntary standards)

- Agricultural standard certification mark designed by ACFS), issued by licensed 3rd party conformity assessment provider:

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Thailand: TIS Standards

- Developed by Thai Industrial Standards Institute (TISI) under the Ministry of Industry
- Covering all industrial products, including food and non-food products
- Includes both mandatory and voluntary standards
- Mandatory Certification Mark:

Voluntary Certification Mark:

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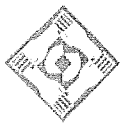
Thailand: Community Standards

- Covers community products (both food and non-food products)
- Voluntary in nature, aimed to upgrade production and quality of merchandise from small and medium-sized manufacturers
- Community product mark:



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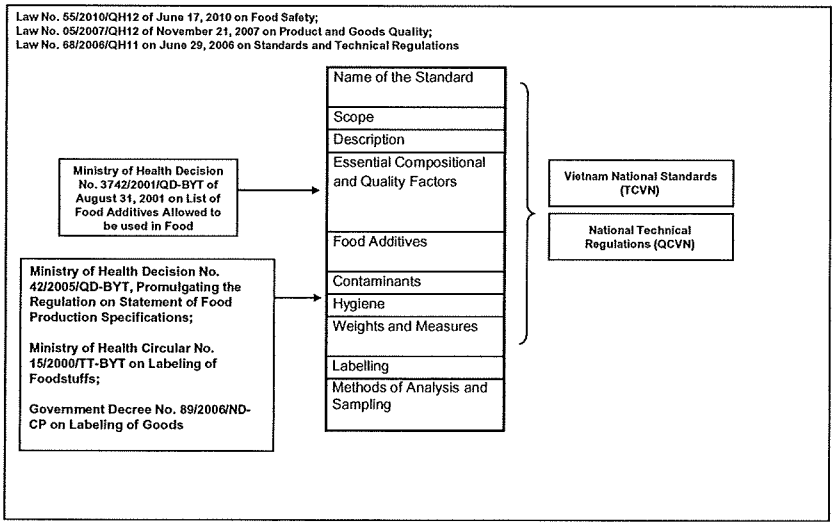
Vietnam Commodity Standards



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Vietnam: Food Safety Control

- Responsibilities split between Min. of Health; Ministry of Agriculture and Rural Development; and Ministry of Industry and Trade
- *Ministry of Health:*

  Vietnam Food Administration (VFA)
  - develop national technical regulations related to food safety of food products (including raw & processed foods), food packaging tools, food packaging and food containers
  - regulate processed food sector including for food additives, food processing aids, bottled drinking water, natural mineral water and functional foods

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Vietnam: Food safety control

- *Dept. of Agriculture & Rural Development:*

  National Agro-Forestry-Fisheries Quality Assurance Department (NAFIQAD)
  - regulate food safety for primary production, including for products such as cereals; meat & products thereof; aquatic animals & products thereof; vegetables, tubers and fruits & products thereof; eggs and products thereof; fresh milk; honey and products thereof; GM food; salt; and other farm products
- *Ministry of Industry and Trade*
  - regulate food safety for specific food products including liquor, beer, beverages, processed milk, vegetable oil, as well as powdered and starch processed products.

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Vietnam: Food Law

- **Law No. 55/2010/QH12 of June 17, 2010 on Food Safety**
  - 'general food law' of Vietnam
  - comprehensive in scope: fresh and raw food; processed food; micronutrient-fortified food; functional food; GM food; irradiated food; food additives & processing aids; food packaging tools, food packaging and food containers; small-scale food production; street food; food advertising and labeling; imported foods; food testing; food safety incident management; traceability and recalls; **risk analysis***; information, education & communication

- **Law No. 05/2007/QH12 of November 21, 2007 on Product and Goods Quality**
  - mandates Ministry of Health for controlling product and goods quality for food; Ministry of Agriculture and Rural Development for plants, animals, animal feeds, plant protection products, veterinary drugs, and other bio-products related to agriculture or aquaculture

- **Law No. 68/2006/QH11 of June 29, 2006 on Standards and Technical Regulations**
  - mandates relevant Ministries to develop Technical Regulations; Science and Technology to develop standards

**only country in ASEAN that incorporates risk analysis in food law*

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Vietnam: Regulations

- Some relevant regulations related to food safety & food quality:

Food additives –
Ministry of Health Decision No. 3742/2001/QD-BYT of August 31, 2001 on List of Food Additives Allowed to be Used in Food

Hygiene –
Ministry of Health QVCN ....: 2010/BYT National technical regulation on the safety limits of Microbiological contaminants in food;

Ministry of Agriculture and Rural Development Circular No. 29/2010/TT-BNNPTNT on Promulgating the list of food safety criteria and maximum levels thereof in certain domestically-produced or imported foodstuffs of animal origin under the management of the Ministry of Agriculture and Rural Development

Labeling –
Government Decree No. 89/2006/ND-CP on Labeling of Goods

Ministry of Health Decision No. 42/2005/QD-BYT, Promulgating the Regulation on Statement of Food Production Specifications;

Ministry of Health Circular No. 15/2000/TT-BYT on Labeling of Foodstuffs;

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Vietnam: Technical Regulations

- Relevant ministries promulgate **'national technical regulations'** (symbolized by QCVN) in consultation with Ministry of Science and Technology
- National technical regulations are mandatory
- For e.g. **Ministry of Health QVCN ....: 2010/BYT National technical regulation on the safety limits of Microbiological contaminants in food**

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Vietnam: Standards

- Issued by the Directorate for Standards, Metrology and Quality (STAMEQ) under the Ministry of Science and Technology
- Includes National Standards (TCVN) and Local Standards (TCCS)
- National Standards can be voluntary or mandatory (if used for regulatory purposes)
- Local Standards are purely voluntary

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Comparison of Standards for Instant Noodles

	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Moisture (fried) (% W/W)	≤10	≤10	≤8	≤13	≤10	≤10
Protein content (wheat) (% W/W)	≥8.5	≥8.5	Not specified	≥9.0	≥8.5	Not specified

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Comparison of Standards for Carbonated Beverages

	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Lead (mg/kg)	≤0.2	≤0.2	Codex	≤0.2	≤0.5	≤0.05
Yeast & moulds (cfu/ml)	≤50	≤10	Not specified	Absent	Absent	≤10

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Fostering Harmonization in a Diverse Region

- **Need for greater harmonization, especially in relation to scientific understanding, regulations and decision making in ASEAN**
- **ILSI SEA Region identified key issues and areas relevant to region to be harmonized**
  - **Food Safety Standards**
  - **Nutrition Labeling and Claims**
    - **Scientific substantiation approach**
    - **Regulatory framework**

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Thank you

ขอบคุณค่ะ

ありがとうございます

谢谢

감사합니다

Terima kasih