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
Research on Commodity Food Standards and Methods of Analysis in Asia

Mr Hiroaki Hamano
ILSI Japan
Japan

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).
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 labelling 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 container/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 Shokoku"
Overseas Business Support Project
for Food Industry in Asia

[Purpose 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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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

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 Category System (GSFA* Annex B,C)

Endorsement by General Subject Committee

Food Additives (GSFA *)
- Contaminant and Toxin (GSCTFF *)
- Pesticide Residues (MRLs * )
- Residues of Veterinary Drugs in Food (MRLs)

Food Hygiene (GPFH * and other relevant Text)

Food Labelling (GSLPF * 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
*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)

<table>
<thead>
<tr>
<th>Stan No</th>
<th>Title</th>
<th>Year of Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Standard for the Labelling of Prepackaged Foods</td>
<td>1985</td>
</tr>
<tr>
<td>3</td>
<td>Standard for Canned Salmon</td>
<td>1981</td>
</tr>
<tr>
<td>12</td>
<td>Standard for Honey</td>
<td>1981</td>
</tr>
<tr>
<td>13</td>
<td>Standard for Preserved Tomatoes</td>
<td>1981</td>
</tr>
<tr>
<td>17</td>
<td>Standard for Canned Applesauce</td>
<td>1981</td>
</tr>
<tr>
<td>19</td>
<td>Standard for Edible Fats and Oils not Covered by Individual Standards</td>
<td>1981</td>
</tr>
<tr>
<td>33</td>
<td>Standard for Olive Oils and Olive Pomade Oils</td>
<td>1981</td>
</tr>
<tr>
<td>36</td>
<td>Standard for Quick Frozen Finfish, Eviscerated or Eviscerated</td>
<td>1981</td>
</tr>
<tr>
<td>97</td>
<td>Standard for Canned Shrimps or Prawns</td>
<td>1981</td>
</tr>
<tr>
<td>38</td>
<td>Standard for Edible Fungi and Fungus Products</td>
<td>1981</td>
</tr>
<tr>
<td>39</td>
<td>Standard for Dried Edible Fungi</td>
<td>1981</td>
</tr>
<tr>
<td>258</td>
<td>Standard for Tomato</td>
<td>2008</td>
</tr>
<tr>
<td>256</td>
<td>Standard for Jam, Jellies and Marmalades</td>
<td>2009</td>
</tr>
<tr>
<td>257</td>
<td>Standard for Certain Canned Vegetables</td>
<td>2009</td>
</tr>
</tbody>
</table>

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 3a)
- 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 Labelling
  - 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
  - Covers Labelling Provision of FSA and JAS

JAS* Law
- Quality Labelling Standard for Processed Foods
  - 48 Commodity Food Items (Table 1)
- JAS Standard†
  - 54 Commodity Food Items (Table 2)
  - Ministry of Agriculture, Forestry and Fisheries (MAFF)

Act Against Unjustifiable Premiums and Misleading Representations
- Fair Competition Code
  - 38 Commodity Food Items
  - 7 Alcoholic Beverages (Table 4)
  - Consumer Affairs Agency (CAA)

Measurement Act
- Ministry of Economy, Trade and Industry

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

Table 1: List of Quality Labelling Standards for each commodity items

<table>
<thead>
<tr>
<th>Canned and Bottled products</th>
<th>15</th>
<th>Chilled meat ball</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Canned and bottled agricultural products</td>
<td>16</td>
<td>Fish ham, Fish sausage</td>
</tr>
<tr>
<td>2 Canned and bottled livestock products</td>
<td>17</td>
<td>Specially packed steamed fish paste</td>
</tr>
<tr>
<td>3 Canned and bottled prepared foods</td>
<td>18</td>
<td>Flavoured steamed fish paste</td>
</tr>
<tr>
<td>4 Fruits juice and fruit beverages</td>
<td>19</td>
<td>Dried noodles</td>
</tr>
<tr>
<td>5 Carbonated drinks (Case Study 2)</td>
<td>20</td>
<td>Instant Noodle (Case Study 1)</td>
</tr>
<tr>
<td>6 Soy milks</td>
<td>21</td>
<td>Miscarone products</td>
</tr>
<tr>
<td>7 Carrot juice, Mixed carrot juice</td>
<td>22</td>
<td>King Dofu (dried frozen soy curd)</td>
</tr>
<tr>
<td>Livestock and Fish Paste</td>
<td>23</td>
<td>Breads</td>
</tr>
<tr>
<td>8 Bacon</td>
<td>Agricultural and Forestry Products</td>
<td></td>
</tr>
<tr>
<td>9 Hams</td>
<td>24</td>
<td>Pickled agricultural products</td>
</tr>
<tr>
<td>10 Pressed ham</td>
<td>25</td>
<td>Processed tomato potato</td>
</tr>
<tr>
<td>11 Mixed pressed ham</td>
<td>26</td>
<td>Jams</td>
</tr>
<tr>
<td>12 Sausage</td>
<td>27</td>
<td>Dried shitake mushroom</td>
</tr>
<tr>
<td>13 Mixed sausage</td>
<td>Marine Products</td>
<td></td>
</tr>
<tr>
<td>14 Chilled hambrough stake</td>
<td>28</td>
<td>Processed Liver (sea urchin)</td>
</tr>
</tbody>
</table>
### Table 2: List of JAS Standard for Foods 2009.9

<table>
<thead>
<tr>
<th>General JAS</th>
<th>Processed agricultural products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Canned and bottled agricultural products</td>
<td>22. Pickled agricultural products</td>
</tr>
<tr>
<td>2. Canned and bottled livestock products</td>
<td>23. Processed tomato products</td>
</tr>
<tr>
<td>Beverages</td>
<td>Processed marine Products</td>
</tr>
<tr>
<td>4. Fruits juice and fruit beverages</td>
<td>25. Katsudon (breaded fried fish)</td>
</tr>
<tr>
<td>5. Apple straight pure juice</td>
<td>26. Boiled and dried fishes</td>
</tr>
<tr>
<td>6. Carbonated drinks</td>
<td>27. Glucose</td>
</tr>
<tr>
<td>7. Soy milk</td>
<td>28. High fructose corn syrup and sugar added high fructose corn syrup</td>
</tr>
<tr>
<td>8. Carrot juice, Mixed carrot juice</td>
<td>29. Dressings</td>
</tr>
<tr>
<td>Livestock products</td>
<td>Seasoning</td>
</tr>
<tr>
<td>9. Bacon</td>
<td>30. Fermented vinegar</td>
</tr>
<tr>
<td>10. Ham</td>
<td>31. Flavored seasonings</td>
</tr>
<tr>
<td>11. Pressed ham</td>
<td>32. Dried cured ham</td>
</tr>
<tr>
<td>12. Sausage</td>
<td>33. Worcestershire sauce</td>
</tr>
<tr>
<td>13. Mixed sausage</td>
<td>34. Shoyu (soy sauce)</td>
</tr>
<tr>
<td>14. Hamburger patty</td>
<td>35. Oil and Fat</td>
</tr>
<tr>
<td>15. Chilled ham burg steke</td>
<td>36. Edible vegetable oils and fats</td>
</tr>
<tr>
<td>16. Chilled meat ball</td>
<td>37. Edible refined and processed oils and fats</td>
</tr>
<tr>
<td>Cereal Products</td>
<td>Others</td>
</tr>
<tr>
<td>17. Dried noodles</td>
<td>38. Others</td>
</tr>
<tr>
<td>18. Instant noodles</td>
<td>39. Others</td>
</tr>
<tr>
<td>19. Macaroni products</td>
<td>40. Prepared frozen food (Case Study 3)</td>
</tr>
<tr>
<td>20. Vegetable protein</td>
<td>41. Prepared frozen food (Case Study 3)</td>
</tr>
<tr>
<td>21. Bread crumbs</td>
<td>42. Prepared frozen food (Case Study 3)</td>
</tr>
</tbody>
</table>

### Table 3: List of Specific Food Items in Standard for Foodstuffs and Additives under Food Sanitation Act 2009.9

| Soft Drink Beverages | (Case Study 2) |
| Powdered Soft Drink Beverages | |
| Crushed ice | 14. Fresh Fish and Shellfish to be Eaten Raw |
| Frozen Confections | 15. Oysters to be Eaten Raw |
| Meats and Whale Meat (with the exemption of frozen whale meat eaten raw) | 16. Agar |
| Edible Birds’ Eggs | 17. Grains, Beans and Vegetables |
| Blood, Blood Corpuscles and Blood Plasma | 18. Bean Jam or Further Processing |
| Meat Products | 19. Soybean Curd ("tofu") |
| Whale Meat Products | 20. Instant Noodles (Case Study 1) |
| 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'


### Table 4: List of Fair Competition Code for Food Items (2009.9)

<table>
<thead>
<tr>
<th>Milk and milk products</th>
<th>19</th>
<th>Instant noodles</th>
<th>(Case Study 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Drinking milk</td>
<td>20</td>
<td>Miso (soy bean paste)</td>
<td></td>
</tr>
<tr>
<td>2 Fermented milk, Lactic acid bacteria beverage</td>
<td>21</td>
<td>Biscuits</td>
<td>Confisctionary</td>
</tr>
<tr>
<td>3 Pasteurized lactic acid bacteria beverage</td>
<td>22</td>
<td>Chocolates</td>
<td></td>
</tr>
<tr>
<td>4 Natural cheese, Processed cheese, Cheese food</td>
<td>23</td>
<td>Food using chocolate</td>
<td></td>
</tr>
<tr>
<td>5 Ice creams</td>
<td>24</td>
<td>Chewing gum</td>
<td></td>
</tr>
<tr>
<td>6 Honey</td>
<td>25</td>
<td>Souvenir for tourist</td>
<td>Seasoning</td>
</tr>
<tr>
<td>7 Royal jelly</td>
<td>26</td>
<td>Edible vinegar</td>
<td></td>
</tr>
<tr>
<td>Processed marine Products</td>
<td>27</td>
<td>Synthetic lemon juice</td>
<td></td>
</tr>
<tr>
<td>8 Uni (sea urchin) foods</td>
<td>28</td>
<td>Margarines</td>
<td></td>
</tr>
<tr>
<td>9 Karashi Mentaiko (spicy marinated Roe of pollack)</td>
<td>29</td>
<td>Dressings</td>
<td></td>
</tr>
<tr>
<td>10 Katsubushi (shaved dried fish)</td>
<td>30</td>
<td>Shoyu (soy sauce)</td>
<td></td>
</tr>
<tr>
<td>11 Nori (laver)</td>
<td>31</td>
<td>Tabu salt</td>
<td>Beverages</td>
</tr>
<tr>
<td>Processed agricultural products</td>
<td>32</td>
<td>Fruit drinks</td>
<td></td>
</tr>
<tr>
<td>12 Canned foods</td>
<td>33</td>
<td>Coffee drinks</td>
<td></td>
</tr>
<tr>
<td>13 Processed tomato</td>
<td>34</td>
<td>Regular coffee, instant coffee</td>
<td></td>
</tr>
<tr>
<td>14 Powdered Wasabi (Japanese horseradish)</td>
<td>35</td>
<td>Akomori-ou (vinegar drink from residue of rice bran)</td>
<td></td>
</tr>
<tr>
<td>15 Raw noodles</td>
<td>36</td>
<td>Ham, sausage</td>
<td></td>
</tr>
<tr>
<td>16 Konbu (dried frozen soy curd)</td>
<td>37</td>
<td>Processed livestock</td>
<td></td>
</tr>
<tr>
<td>17 Soy milk</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Pickled bread</td>
<td>39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Case Study 1: Instant Noodle

<table>
<thead>
<tr>
<th>JAPAN</th>
</tr>
</thead>
</table>

#### Food Category System (GSFA Annex B)

- 06.4 Pasts 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 Precooked pastas and noodles and like products

#### Codex Commodity Standard

- Instant Noodles

#### Standard

- **Scope**: ready for consumption after dehydration process.....
- **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 Requirements for Noodle Block
    - (a) Moisture Content: maximum: fried 10%, non-fried 14%
    - (b) Acid Value: maximum 2mg KOH/g

#### Food Sanitation Act

- Acid Value: not more than 3 mg KOH/g
- Peroxide Value: not more than 30 mequiv/kg

#### JAS Law

- Wheat flour
  - Buckwheat flour
  - Other as main ingredients
  - Add salt or brine water

#### JAS Standard

- Moisture: not more than 14.5% (non-fried)
- Acid Value: not more than 1.5 mg KOH/g
- pH: 3.8-4.8 (non-fried)

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* 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: Food Sanitation Act Standard for Specific Items

**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

**Soft Drink Beverages** (covers 14 non-alcoholic ("soft") beverages)

- Non-alcoholic (less than 1% alcohol) beverages, excluding lactic acid bacterial drinks, milk and milk drinks
- 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 100.0 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 degrees Celsius, and that has not been sterilized or disinfected, must be tested negative for enterococci or green-pus bacilli
- For beverages made for solely apple juices and/or juice fruit, the pufuin content must not exceed 0.050 ppm

- Production Standards
- Package Standards
- Storage Standards

**JAS Law**

Quality Labelling Std.

<table>
<thead>
<tr>
<th>JAS Strd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits Juice and fruit beverages</td>
</tr>
<tr>
<td>Carbonated soft drinks</td>
</tr>
<tr>
<td>Soy milks</td>
</tr>
<tr>
<td>Carrot juice, mixed carrot juice</td>
</tr>
<tr>
<td>Apple straight pure juice</td>
</tr>
</tbody>
</table>

*Each standard has its 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**

<table>
<thead>
<tr>
<th>Frozen Fried foods</th>
<th>Frozen Fried Fishes</th>
<th>Frozen Fried Shrimps</th>
<th>Frozen Fried Squids</th>
<th>Frozen Fried Oysters</th>
<th>Frozen Croquettes</th>
<th>Frozen Kibureti (fried meat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Shasumai, Frozen Cytara, Frozen Hanumel (spring rolls)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen Hamburger steaks, Frozen Meatballs, Frozen Fish hamburgers, Frozen Fish roasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frozen Steamed Rice, Frozen Noodles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Standard for Foodstuffs (Food Sanitation Act) Frozen Foods**

<table>
<thead>
<tr>
<th>Standard for Components (to be consumed)</th>
<th>Bacterial count</th>
<th>Coliform group</th>
</tr>
</thead>
<tbody>
<tr>
<td>without heating</td>
<td>100,000g⁻¹</td>
<td>Test negative</td>
</tr>
<tr>
<td>after heating (heated before freezing)</td>
<td>100,000g⁻¹</td>
<td>Test negative</td>
</tr>
<tr>
<td>After heating (other than 2 above)</td>
<td>3,000,000g⁻¹</td>
<td>Test negative</td>
</tr>
</tbody>
</table>

Storage Standard must be below -15°C

Example within Codex:

Food Category System: 06.3.2; Frozen battered fish, fish fillets and fish products, including medallions, crustaceans, and molluscs.

Codex Std: 165-1989 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**

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### 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)

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Item</th>
<th>Specification</th>
<th>Methods of Analysis</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Sanitation Act</td>
<td>Antibiotics or chemically synthesized antibacterial substances</td>
<td>Shall not be contained in foods</td>
<td>Each test method of 2,4,5-T, Azocyclotin and cihexatin, Amitrole, Captafol, Carbadox, Coumaphos, Chlormpheneicol, Chlorpromazine, Diethlythidrol, Dimethadazole, Diaminozide, Nitrofurazon, Nitrofurantoin, Furalizolodone, Furalizolodone, Propham, Makaklous, Green, Metrotazodol and Roniazol</td>
<td>Food sanitation test guidance on &quot;Veterinary Medicine &amp; Food Additives 2003&quot;</td>
</tr>
<tr>
<td></td>
<td>Foods shall not contain substances used as ingredients of agricultural chemicals or other chemical substances</td>
<td>Not detectable in foods</td>
<td>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.</td>
<td>Specifications and Standards for Foods, Food Additives, etc.</td>
</tr>
<tr>
<td></td>
<td>Pesticide residues in foods</td>
<td>The residual standards is individually provided</td>
<td>Test methods of the substances being the elements of agricultural chemicals, feed additives or veterinary products remaining in foods (Notice from the MHLW)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compositional standards which are not specified in the above shall not contain substances used as agricultural chemicals or other chemical substances in excess of amount</td>
<td>Not exceed 0.01mg/kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

Food Safety Committee, State Council

MOH
SFDA
AQSIQ
AIC
MOA
MIIT
MOC
NCMC

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

Food Laws, Regulations, Standards

Product Quality Law  |  Food Safety Law  |  Agriculture Product Safety Law
---|---|---
Food additive (Pack Plant Licence Reg)  |  Food Labeling Regulation  |  Functional Food Regulation
Food labelling Regulation  |  Novel Food Regulation  |  Food additive Regulation
Packaging Regulation  |  GMO, etc. Regulation

Food Safety Law  |  Standardization Law *
---|---
National Food Safety Standard  |  Enterprise Standard
Category Hygienic Std  |  Food Category Std
Product Quality Criteria  |  Product Quality Criteria
Food Additives Std  |  Food Labeling Criteria
Food Pathogen Std  |  Food Hygienic Criteria
Food Contaminant Std  |  Food Category Std
Food Labeling Std  |  Food Quality Criteria
Packaging Standard  |  Technical Regulations

* Technical Regulations
Elaboration of Codex Commodity Standards

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

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 Category System (GSFA** Annex B,C)

Endorsement by General Subject Committee

Food Additives (GSFA )
Contaminant and Toxin (GSCTFF *)
Pesticide Residues (MRLs )
Residues of Veterinary Drugs in Food (MRLs)

Food Hygiene (GPFH * and other relevant Text)

Food Labelling (GSLPF * and other relevant Text)

Methods of Analysis and Sampling

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*1 Codex Stan 192-1955 General Standard for Food Additives
*2 Codex Stan 195-1955 General Standard for Contaminants and Toxins in Foods and Feeds
*3 CAC/IRPCH-1989 General Principles of Food Hygiene
*4 Codex Stan 1-1985 General Standards for the Labelling of Prepackaged Foods

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Gerneral Situation of Food Stds

<table>
<thead>
<tr>
<th>Food Standards in CHINA</th>
<th>Format for CODEX Commodity Standards</th>
<th>Food Standards in CHINA</th>
</tr>
</thead>
</table>
| National and industrial standards of ingredients and raw materials | Name of the Standard | GB 2762 'Max levels in foods of Contaminants';
| GB 7768 'Hygienic standards for use of food additives' GB14080 'Hygienic standards for the use of nutritional fortification substances in foods' | Scope | GB 2763 'Maximum residues: limits for pesticides in foods';
| Hygiene stds for food categories | Description | Veterinary drug MRLs by MOA |
| Hygiene stds for food factories | Essential Composition and Quality Factor | Std of Pathogen Level in Food (Draft) |
| GB 7718 'General Standard for Prepackage Food Labelling'; GB 13432 'General standards for the labeling of prepackaged foods for special dietary uses' ('General Std for Nutrition Label') | Contaminant | Administrative provisions of metrological supervision for products in prepackages with fixed contents' by AQSIG |
| | Hygiene | GBT 5009 Series stds for food hygienic analysis methods - Physical and chemical section |
| | Weights and Measures | GB 4789-2010 Food Microbiological examination |
| | Labelling | |
| | Methods of Analysis and Sampling | |

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3
Case Study 1: Frozen Foods Stds (1)

Food Standards in CHINA

GB 2707 Hygienic standard for fresh (frozen) meat of livestock
GB 2715 Hygienic std for grains
GB 2733 Hygienic standards for fresh (frozen) marine products of animal origin

GB 2762 ‘Max levels in foods of Contaminants’
GB 2763 ‘Maximum residues limits for pesticides in foods’
Veterinary drug MRLs by MOA

GB 19286 Hygienic standards for quick frozen and prepacked food made of wheat flour and rice

Food Standards in CHINA

GB 7718 ‘General Standard for Prepackage Food Labeling’
GB 13432 ‘General standards for the labeling of prepackaged foods for special dietary uses’
‘General Std for Nutrition Label’

Case Study 1: Frozen Foods Stds (2)

### Format for CODEX Commodities Standards

<table>
<thead>
<tr>
<th>Name of the Standard</th>
<th>Scope</th>
<th>Description</th>
<th>Essential Composition and Quality Factor</th>
<th>Food Additives</th>
<th>Contaminant</th>
<th>Hygiene</th>
<th>Weights and Measures</th>
<th>Labelling</th>
<th>Methods of Analysis and Sampling</th>
</tr>
</thead>
</table>

| GB 19295 Hygienic std for quick-frozen and pre-packed food made of wheat & rice | 0.5 | -- | -- | -- | -- | 0.6 | 0.15 | 15 | 5 |
| GB 2715 Hygienic std for grains | 0.2 | 0.2 | 0.1 | 0.5 | -- | -- | 0.15 (kg) | 0.1 (kg) | -- | -- |
| GB 2733 Hygienic std for fresh (frozen) marine products of animal origin | 0.5 | 0.1 | 0.1 | 0.2 | -- | 0.15 (kg) | 0.1 (kg) | -- | 10-30 |
| GB 2707 Hygienic standards for fresh (frozen) meat of livestock | 0.2 | 0.1 | -- | -- | 0.05 | 0.05 | -- | -- | 15 |
| GB 18600 Fresh and frozen poultry product | 0.2 | 0.5 | -- | -- | 0.05 | -- | -- | -- | 15 |
| GB 18616 Hygienic requirement of quick-frozen meat products | 0.2 | 0.1 | -- | -- | 0.05 | 0.05 | -- | -- | 10 |
| NYT 1407 Grain foods quick-frozen and pre-packed food made of wheat flour or rice | 0.2 | 0.2 | 0.1 | 0.05 | 0.05 | -- | 0.15 (kg) | 0.1 (kg) | -- | -- |

### Contaminant and Physical/Chemical Index (g)

<table>
<thead>
<tr>
<th>Name of Standard</th>
<th>Pb (mg/kg)</th>
<th>Cd (mg/kg)</th>
<th>As (mg/kg)</th>
<th>Cr (mg/kg)</th>
<th>Mn (mg/kg)</th>
<th>Fe (mg/kg)</th>
<th>Acidity (%/100g)</th>
<th>Protein (%)</th>
<th>Amino Acid (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB 19295 Hygienic std for quick-frozen and pre-packed food made of wheat &amp; rice</td>
<td>0.5</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>0.6</td>
<td>0.15</td>
<td>15</td>
</tr>
<tr>
<td>GB 2715 Hygienic std for grains</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.5</td>
<td>--</td>
<td>--</td>
<td>0.15 (kg)</td>
<td>0.1 (kg)</td>
<td>--</td>
</tr>
<tr>
<td>GB 2733 Hygienic std for fresh (frozen) marine products of animal origin</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>--</td>
<td>0.15 (kg)</td>
<td>0.1 (kg)</td>
<td>--</td>
<td>10-30</td>
</tr>
<tr>
<td>GB 2707 Hygienic standards for fresh (frozen) meat of livestock</td>
<td>0.2</td>
<td>0.1</td>
<td>--</td>
<td>--</td>
<td>0.05</td>
<td>0.05</td>
<td>--</td>
<td>--</td>
<td>15</td>
</tr>
<tr>
<td>GB 18600 Fresh and frozen poultry product</td>
<td>0.2</td>
<td>0.5</td>
<td>--</td>
<td>--</td>
<td>0.05</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>15</td>
</tr>
<tr>
<td>GB 18616 Hygienic requirement of quick-frozen meat products</td>
<td>0.2</td>
<td>0.1</td>
<td>--</td>
<td>--</td>
<td>0.05</td>
<td>0.05</td>
<td>--</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>NYT 1407 Grain foods quick-frozen and pre-packed food made of wheat flour or rice</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.05</td>
<td>0.05</td>
<td>--</td>
<td>0.15 (kg)</td>
<td>0.1 (kg)</td>
<td>--</td>
</tr>
</tbody>
</table>
### Case Study 1: Frozen Foods Stds (3)

<table>
<thead>
<tr>
<th>Name of Standard</th>
<th>Microbiological Index(s)</th>
<th>Storage Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB16895 Hygienic std for quick-frozen and pre-packed food made of wheat &amp; rice</td>
<td>3000000 100000 -- 250 -- 50 Not detected</td>
<td>-18°C ±2°C</td>
</tr>
<tr>
<td>GB 2710 Hygienic standards for grains</td>
<td>-- -- -- -- -- -- --</td>
<td></td>
</tr>
<tr>
<td>GB 2713 Hygienic std for fresh(frozen) marine products of animal origin</td>
<td>-- -- -- -- -- -- --</td>
<td>-15°C to -10°C</td>
</tr>
<tr>
<td>GB 2715 Hygienic standards for fresh(frozen) meat of livestock</td>
<td>-- -- -- -- -- -- --</td>
<td></td>
</tr>
<tr>
<td>GB16069 Fresh and frozen poultry product</td>
<td>100000 500000 (more) 10000 6000 (Frozen) -- -- 50% (Salmonella spp or listeriosis)</td>
<td>-18°C ±2°C</td>
</tr>
<tr>
<td>GB 27196 Hygienic requirement of quick-frozen meat products</td>
<td>800000(Total plate count) 6000(Calanus group) -- -- Not detected</td>
<td>-18°C ±2°C</td>
</tr>
<tr>
<td>NYT1087 Green food-quick-frozen and pre-packed food made of wheat flour or rice</td>
<td>3000000 100000 -- 250 -- 50 Not detected</td>
<td>-18°C ±2°C</td>
</tr>
</tbody>
</table>

### Case Study 2: CO2 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 Food 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 ‘Maximum 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 section
- **GB/T12143.4 Assay method for CO2 in Carbonated beverages**

---

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### Case Study 2: CO₂ Beverage Stds (2)

<table>
<thead>
<tr>
<th>Name of the Standard</th>
<th>Carbonated Beverage (Sparkling beverage)</th>
<th>Hygiene Standard of Carbonated Beverage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope</strong></td>
<td>Classification; tech requirements; Assay method; Test rules; Labeling; packaging &amp; transport</td>
<td>Limited level; Food additives; Process Hygiene requirement; Packaging; labelling; Storage &amp; transport; test</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Beverage charged with external CO₂, excluding CO₂ generated from fermentation.</td>
<td>Beverage charged with external CO₂, excluding CO₂ generated from fermentation.</td>
</tr>
</tbody>
</table>
| **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 GB14480 | GB2760 for Range and level requirement  
  - Also meet relative quality standard and regul'ns |
| **Contaminant**      | GB 2762 | |
| **Hygiene**          | Microbes: Tbc ≤ 1000 cfu/100ml, Coliform group ≤ 6 MPN/100ml, Mold count ≤ 50 cfu/100ml, Yeast ≤ 20 cfu/100ml, Pathogen (salmonella, shigella, Staphylococcus aureus): Absent.  
  - GB12395 Beverage factory GMP Practice | |
| **Weight/Measure**   |                       | |
| **Labelling**        | GB2718 and GB13432  
  - Juice type should declare juice content. | |
| **Methods of Analysis** | - CO₂ content test:  
  1) Refractometer method;  
  2) Distilling distillation | - Pfo: To be tested as GB/T 5099-12  
  - Total As: To be tested as GB/T 5099-11  
  - Cu: To be tested as GB/T 5099-13  
  - Microbes: To be tested as GB/T 4789.31 |

### Case Study 3: Instant Noodle Stds (1)

**Food Standards in CHINA**
- LS/T 3211 Industry Standard for Instant Noodle
- GB 2760 'Hygienic standards for uses of food additives'  
  - GB14480 'Hygienic standards for the use of nutritional fortification substances in foods'
- GB17400 Hygienic Standard for Instant Noodle
- GB 7718 'General Standard for Prepackaged Food Labelling'; 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 'Maximum 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 hygiens  
  - GBT 5099 Series stds of food hygienic analysis methods  
  - Physical and chemical setion
## Case Study 3: Instant Noodle Stds (2)

<table>
<thead>
<tr>
<th>Std Code</th>
<th>GB/T 14930-2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope</strong></td>
<td>Fried and semi-baked instant noodles.</td>
</tr>
<tr>
<td><strong>Ingredients</strong></td>
<td>Should meet the requirement of relevant standards and regulations.</td>
</tr>
</tbody>
</table>
| **Sensory requirent** | *could prevent its specific color; not burned or raw; could have shade of colour on both sides.  
* Have normal smell; no melting, rawed or other bad smell * Good in shape and pattern; not visible impurities.  
* No broken, stick or other recovery with water;  
* Soft Jed and non-sticking texture. |
| **Technical Criteria** | | |
| | S | Fried | Non-Fried |
| | % | 12 | 12 |
| | Acid (as citric acid, RE/mg) | 1.8 | 1.2 |
| | Peroxide value (as per FFA, mg/kg) | 0.25 | 0.20 |
| | Carbohydrate value (as per FFA, mg/kg) | 20 | 20 |
| | pH, mg/kg | 6.5 | 6.5 |
| | Total Na, mg/kg | 0.5 | 0.5 |
| **Pathogens** | Absent | Absent |

## Case Study 3: Instant Noodle Stds (3)

| **Microbe** | | |
| **Food additive** | | |
| **Packaging** | | |
| **Labeling** | | |
| **Test method** | | |

| | Fried | Non-Fried |
| | % | 1000 | 1000 |
| | Coliform group, MPN/100g | 30 | 30 |
| | Pathogens | Absent | Absent |

Food additives should meet national and industrial standards. Packaging should meet "Hygienic standard of food packaging materials". Labelling should meet relevant regulation, and it is required to declare "Fried" or "Non-Fried" in the product. 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 molds 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 4789.36-2010: 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 5009.13-2003 Determination of lead in foods
- Cadmium(Cd): GB 5009.15-2003 Determination of cadmium in foods
- Mercury(Hg): GB 5009.17-2003 Determination of total and organic mercury in foods
- Arsenic(As): GB 5009.11-2003 Determination of total and inorganic arsenic in foods
- Chrome(Cr): GB 5009.12-2003 Determination of chromium in foods
- Aluminum(Al): GB 5009.185-2003 Determination of aluminium in four products
- Selenium(Se): GB 5009.83-2010 Determination of selenium in foods
- Fluorine(F): GB 5009.16-2003 Determination of fluoride in foods
- Benzo(a)pyrene: GB 5009.27-2003 Determination of benz[a]pyrene in foods
- N-nitrosamine: GB 5009.26-2003 Determination of N-nitrosamines in foods
- Polychlorodiphenyls: GB 5009.190-2005 Determination of polychlorodiphenyls in foods
- Nitrates: GB 5009.32-2010 Determination of nitrates and nitrates in foods
- Rare earth: GB 5009.94-2003 Determination of rare earths in vegetable foods
- Afflatoxin B1: GB 5009.22-2003 Determination of aflatoxin B1 in foods
- Afflatoxin M1: GB 5009.24-2010 Determination of aflatoxin M1 and B1 in foods
- Decynonitrile: GB 5009.115-2003 Determination of decynonitrile in cereal and its products
- Potassium: GB 5009.185-2003 Determination of potassium 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 processing 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>
<thead>
<tr>
<th>Glycine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function/Flavor enhancer Number of food category</strong></td>
</tr>
<tr>
<td>12-962</td>
</tr>
<tr>
<td>12-982</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ammonium phosphatide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function/Flavor enhancer Number of food category</strong></td>
</tr>
<tr>
<td>10.033</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carnauba Wax</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function/Flavor enhancer Number of food category</strong></td>
</tr>
<tr>
<td>14.005</td>
</tr>
</tbody>
</table>

---

### Case Study 5: Use of Food Additive (3)

**Example:**

<table>
<thead>
<tr>
<th>食塩 (3) (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>表 A.3 (3)</strong></td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>17</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>19</td>
</tr>
</tbody>
</table>
Case Study 5: Use of Food Additive (4)

Example:

<table>
<thead>
<tr>
<th>编列</th>
<th>食物中文名称</th>
<th>食物英文名称（具体为学名）</th>
<th>FEMA编号</th>
</tr>
</thead>
<tbody>
<tr>
<td>No1</td>
<td>丁香胡椒粉</td>
<td>clove leaf oil (Eugenia app.)</td>
<td>2315</td>
</tr>
<tr>
<td>No2</td>
<td>丁香花蕾粉</td>
<td>clove bud oil (Eugenia app.)</td>
<td>2322</td>
</tr>
<tr>
<td>No3</td>
<td>丁香花蕾油</td>
<td>clove bud oil (Eugenia app.)</td>
<td>2323</td>
</tr>
<tr>
<td>No4</td>
<td>红椒油</td>
<td>paprika oil (Capsicum annuum L.)</td>
<td>3116</td>
</tr>
<tr>
<td>No5</td>
<td>八角茴香油</td>
<td>anise star oil (Illicium verum Hook. F.)</td>
<td>3096</td>
</tr>
<tr>
<td>No6</td>
<td>九里香精油</td>
<td>common juniper essential oil (Juniperus communis L.)</td>
<td></td>
</tr>
<tr>
<td>No7</td>
<td>广藿香油</td>
<td>patchouli oil (Pogostemon cablin)</td>
<td>2638</td>
</tr>
<tr>
<td>No8</td>
<td>钓钟柳油</td>
<td>yacca oil (Eugenia app.)</td>
<td>3040</td>
</tr>
<tr>
<td>No9</td>
<td>大茴香粉</td>
<td>anise seed oil (Anethum graveolens)</td>
<td>2040</td>
</tr>
<tr>
<td>No10</td>
<td>小豆蔻油</td>
<td>cardamom oil (Elettaria cardamomum)</td>
<td>2711</td>
</tr>
<tr>
<td>No11</td>
<td>亚麻籽粉</td>
<td>linseed oil (Linum usitatissimum)</td>
<td>2710</td>
</tr>
<tr>
<td>No12</td>
<td>小茴香油</td>
<td>fennel oil (Foeniculum vulgare)</td>
<td>2713</td>
</tr>
<tr>
<td>No13</td>
<td>亚麻籽油</td>
<td>linseed oil (Linum usitatissimum)</td>
<td>3416</td>
</tr>
</tbody>
</table>

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

Dr Myeong-Ae Yu
ILSI Korea
Korea
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

Myeong-Ae Yu, Ph.D
ILSI Korea

Bangkok, Thailand
March 04, 2011

International Life Sciences Institute (ILSI)

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

Government Agencies Having Authority on Food in Korea

Prime Minister

Ministry of Government Legislation

Fair Trade Commission

Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF)

Ministry of Health, Welfare and Family Affairs (MIHWFA)

Ministry of Education, Science and Technology (MEST)

Rural Development Administration

Food and Drug Administration

Ministry for Knowledge and Economy

Ministry of Environment (ME)

National Tax Service
## Food Management System in Korea

<table>
<thead>
<tr>
<th>Section</th>
<th>Import</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Products</td>
<td>MIFAFF</td>
<td>KFDA</td>
</tr>
<tr>
<td>Aquatic Products</td>
<td>MIFAFF</td>
<td>KFDA</td>
</tr>
<tr>
<td>Stock Farm Products</td>
<td>MIFAFF</td>
<td>MIFAFF (KFDA (Standard for Residual Harmful Substance))</td>
</tr>
<tr>
<td>Drinking Water</td>
<td>Ministry of Environment</td>
<td></td>
</tr>
<tr>
<td>Alcoholic Beverages</td>
<td>National Tax Service</td>
<td>KFDA (Standard for Residual Harmful Substance)</td>
</tr>
<tr>
<td>School Feeding</td>
<td>MEST/Office of Education</td>
<td>KFDA (Safety Management for Group Feeding Facilities except for School Feeding Facilities)</td>
</tr>
</tbody>
</table>

*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

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

- 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 Category System (GSFA*) Annex B,C
- Endorsement by General Subject Committee
- Food Additives (GSFA)
- Contaminant and Toxin (G3CTFF.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 192–1995 General Standard for Food Additives
*3 CAC/RCP11–1996 General Principles of Food Hygiene
*4 Codex Stan 1–1985 General Standards for the Labelling of Prepackaged Foods
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)

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

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

JAS Law
- Quality Labelling Standard for Processed Foods
  - 48 Commodity Food Items (Table 1)
- JAS Standard
  - 54 Commodity Food Items (Table 2)
  - Ministry of Agriculture, Forestry and Fisheries (MAFF)

Act Against Unjustifiable Premiums and Misleading Representations
- Fair Competition Code
  - 39 Commodity Food Items
  - 7 Alcoholic Beverages (Table 4)
  - Consumer Affairs Agency (CAA)

Measurement Act
- Ministry of Economy, Trade and Industry

Korean Commodity Standards

Food Sanitation Act
- Food Code
  - 29 Food Items (Table 3)
- Food Additives Code
  - Ministry of Health, Welfare and Family Affairs (MHWAF)
  - KFDA

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

Health Functional Food Act
(MHWAF)

Health Promotion Act
(MHWAF)

KS standard
- Processed Agricultural Products
- Processed Marine Products
- Processed Livestock Products (Table 2)
  - Korean Agency for Technology and Standards (KATS)
  - Ministry of Knowledge Economy

Quality Labeling Standards
- Agricultural Quality Standards
- Marine Quality Standards
- Livestock Quality Standards (Table 1)
  - Ministry for Food, Agriculture, Forestry and Fisheries (MAFF)

Monopoly Regulation & Fair Trade Act
- Fair labelling and Advertising Act
  - Korea Fair Trade Commission (KFTC)

Consumer Protection Act
  - Korea Consumer Agency (CCA)

1. Law Concerning Standardization and Proper Labelling of Agricultural and Forest Products
2. Voluntary (other than organic food) standard with the certification system to attach the JA Mark
3. New governmental organization started in September 2008

1. Law concerning Standardization and Proper Labelling of Agricultural and Forest Products
2. Standardized with the certification system to attach the KS Mark
3. KCA is under the authority of KFTC

6
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.

---

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

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

Agricultural Products Traceability | Marine Products Traceability | LPSMS | SafeQ
### Table 2. Product List of KS Standard

#### 1. Processed Agricultural Products (99 Products)

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Product Example</th>
<th>KS Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Processed Agricultural Products (99 Products)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grains</td>
<td>36. instant coffee</td>
<td>87</td>
</tr>
<tr>
<td>2. Sugar</td>
<td>35. roasted coffee</td>
<td>68</td>
</tr>
<tr>
<td>3. Beets</td>
<td>34. tomato juice</td>
<td>99</td>
</tr>
<tr>
<td>4. Milk</td>
<td>33. oolong tea</td>
<td>70</td>
</tr>
<tr>
<td>5. Salt</td>
<td>32. soy sauce</td>
<td>71</td>
</tr>
<tr>
<td>6. Syrup</td>
<td>31. Develop (Dried plum)</td>
<td>72</td>
</tr>
<tr>
<td>7. Confectionary</td>
<td>30. Orchid plant jam</td>
<td>73</td>
</tr>
<tr>
<td>8. Corn</td>
<td>29. corn</td>
<td>74</td>
</tr>
<tr>
<td>9. Wheat</td>
<td>28. wheat flour</td>
<td>75</td>
</tr>
<tr>
<td>10. Edible Oils</td>
<td>27. olive oil</td>
<td></td>
</tr>
<tr>
<td>12. Edible Oils</td>
<td>25. hoisin</td>
<td></td>
</tr>
<tr>
<td>13. Edible Oils</td>
<td>24. soybean</td>
<td></td>
</tr>
<tr>
<td>14. Edible Oils</td>
<td>23. proso bean</td>
<td></td>
</tr>
<tr>
<td>15. Edible Oils</td>
<td>22. ornamental bean</td>
<td></td>
</tr>
<tr>
<td>16. Edible Oils</td>
<td>21. leek</td>
<td></td>
</tr>
<tr>
<td>17. Edible Oils</td>
<td>20. garlic</td>
<td></td>
</tr>
<tr>
<td>18. Edible Oils</td>
<td>19. ginger</td>
<td></td>
</tr>
<tr>
<td>19. Edible Oils</td>
<td>18. onion</td>
<td></td>
</tr>
<tr>
<td>20. Edible Oils</td>
<td>17. celery</td>
<td></td>
</tr>
<tr>
<td>22. Edible Oils</td>
<td>15. leek</td>
<td></td>
</tr>
<tr>
<td>23. Edible Oils</td>
<td>14. ketchup</td>
<td></td>
</tr>
<tr>
<td>24. Edible Oils</td>
<td>13. soy sauce</td>
<td></td>
</tr>
<tr>
<td>25. Edible Oils</td>
<td>12. hoisin</td>
<td></td>
</tr>
<tr>
<td>26. Edible Oils</td>
<td>11. soybean</td>
<td></td>
</tr>
<tr>
<td>27. Edible Oils</td>
<td>10. ornamental bean</td>
<td></td>
</tr>
<tr>
<td>28. Edible Oils</td>
<td>9. leek</td>
<td></td>
</tr>
<tr>
<td>29. Edible Oils</td>
<td>8. garlic</td>
<td></td>
</tr>
<tr>
<td>30. Edible Oils</td>
<td>7. ginger</td>
<td></td>
</tr>
<tr>
<td>31. Edible Oils</td>
<td>6. onion</td>
<td></td>
</tr>
<tr>
<td>32. Edible Oils</td>
<td>5. celery</td>
<td></td>
</tr>
<tr>
<td>33. Edible Oils</td>
<td>4. basil</td>
<td></td>
</tr>
<tr>
<td>34. Edible Oils</td>
<td>3. ketchup</td>
<td></td>
</tr>
<tr>
<td>35. Edible Oils</td>
<td>2. hoisin</td>
<td></td>
</tr>
<tr>
<td>36. Edible Oils</td>
<td>1. soybean</td>
<td></td>
</tr>
</tbody>
</table>

*KS Standards: Korean Industrial Standards*

---

### Table 2. Product List of KS Standard

#### Cont’d.

#### 2. Processed Livestock Products (35 Products)

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Product Example</th>
<th>KS Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Processed Livestock Products (35 Products)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Natural choice</td>
<td>13. cheddar cheese</td>
<td>25</td>
</tr>
<tr>
<td>2. Fermented milk</td>
<td>14. fermented milk</td>
<td>26</td>
</tr>
<tr>
<td>3. Follow-up formula</td>
<td>15. liquid egg</td>
<td>27</td>
</tr>
<tr>
<td>4. Milk</td>
<td>16. cream</td>
<td>28</td>
</tr>
<tr>
<td>5. Reconstituted milk</td>
<td>17. processed cheese</td>
<td>29</td>
</tr>
<tr>
<td>6. Flavored milk</td>
<td>18. mozzarella cheese</td>
<td>30</td>
</tr>
<tr>
<td>7. Milk beverage</td>
<td>19. ham</td>
<td>31</td>
</tr>
<tr>
<td>8. Condensed milk</td>
<td>20. condensed ham</td>
<td>32</td>
</tr>
<tr>
<td>9. Oat’s milk</td>
<td>21. sausages</td>
<td>33</td>
</tr>
<tr>
<td>10. Dried milk products</td>
<td>22. seasoned beef, canned</td>
<td>34</td>
</tr>
<tr>
<td>11. Butter</td>
<td>23. bacon</td>
<td>35</td>
</tr>
<tr>
<td>12. Ice cream</td>
<td>24. seasoned pork, canned</td>
<td></td>
</tr>
</tbody>
</table>

#### 3. Processed Marine Products (29 Products)

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Product Example</th>
<th>KS Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Processed Marine Products (29 Products)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Fish paste</td>
<td>11. fish paste</td>
<td>21</td>
</tr>
<tr>
<td>2. Canned fish</td>
<td>12. canned fish</td>
<td>22</td>
</tr>
<tr>
<td>3. Seasoned and roasted liver</td>
<td>13. seasoned and roasted liver</td>
<td>23</td>
</tr>
<tr>
<td>4. Salt</td>
<td>14. seasoned squid</td>
<td>24</td>
</tr>
<tr>
<td>5. Seasoned pork, canned</td>
<td>15. seasoned pork, canned</td>
<td></td>
</tr>
<tr>
<td>6. Seasoned anchovy sauce</td>
<td>16. fermented anchovy sauce</td>
<td>26</td>
</tr>
<tr>
<td>7. Dried sea salt</td>
<td>17. dried sea salt</td>
<td>27</td>
</tr>
<tr>
<td>8. Fish sausage</td>
<td>18. fish sausage</td>
<td>28</td>
</tr>
<tr>
<td>9. Canned hana in oil</td>
<td>19. dried laver</td>
<td>29</td>
</tr>
<tr>
<td>10. Dried anchovy</td>
<td>20. dried anchovy</td>
<td></td>
</tr>
</tbody>
</table>

---
Table 2. Product List of KS Standard

<table>
<thead>
<tr>
<th>4. Others (10 Products)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Soluble saccharin</td>
</tr>
<tr>
<td>2 Carbonated soft drinks (Case study 2)</td>
</tr>
<tr>
<td>3 Blended beverages</td>
</tr>
<tr>
<td>4 Extracted beverages</td>
</tr>
<tr>
<td>5 Beverage base</td>
</tr>
<tr>
<td>6 Chewing gum</td>
</tr>
<tr>
<td>7 Edible salts</td>
</tr>
<tr>
<td>8 Mono sodium glutamate</td>
</tr>
<tr>
<td>9 Baking soda</td>
</tr>
<tr>
<td>10 Edible sodium carbonate</td>
</tr>
</tbody>
</table>

*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.

Table 3. Food Items in Food Code

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

| 1 Canned & Stewed Food |
| 2 Baked Food          |
| 3 Frozen food (case study 1) |

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

| 1 Cereals/Rice Cakes  |
| 2 Baked Items        |
| 3 Canned & Stewed Items |
| 4 Biscuits           |
| 5 Candy              |
| 6 Beverages          |
| 7 Candy & Non-Fermented Seafoods (Liqueurs) |
| 8 Canned & Stewed Items |
| 9 Fish Products      |
| 10 Fish & Poultry    |
| 11 Fruit & Vegetable Products |
| 12 Fruit & Vegetable Products |
| 13 Fruit & Vegetable Products |
| 14 Edible Oils and Fats |
| 15 Noodles (case study 4) |

*Details of food additives are available in English at: [http://ktef.kafe.or.kr/hoodeokb/mcode.html](http://ktef.kafe.or.kr/hoodeokb/mcode.html)
Food Commodity Standards: Case Studies

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

Case Study 1: Noodle/Instant Noodle

<table>
<thead>
<tr>
<th>Item</th>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the Standard</td>
<td>Noodles</td>
<td>Instant Noodles &quot;*1&quot;</td>
</tr>
<tr>
<td>Scope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noodle</td>
<td></td>
<td>Fresh (uncooked) noodles (KS H 2506)</td>
</tr>
<tr>
<td>Naengmyeon (cold noodle)</td>
<td></td>
<td>Pre-cooked noodles (KS H 2507)</td>
</tr>
<tr>
<td>Danmyeon (chinese noodle)</td>
<td></td>
<td>Fried noodles (KS H 2508)</td>
</tr>
<tr>
<td>Oil-fried noodle</td>
<td></td>
<td>Dried noodles (KS H 2505)</td>
</tr>
<tr>
<td>Pasta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Noodles refer to products made of cereals or starches by heat process or drying. Each item has their description.</td>
<td>Each item has their description.</td>
</tr>
<tr>
<td>Essential Composition and Quality Factor</td>
<td>Manufacturing and Processing Standards</td>
<td>Dried noodle</td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td>Max. Moisture content 11% (Dangmyeon 15%)</td>
</tr>
<tr>
<td></td>
<td>2) Acid value and peroxide value of oil used for frying shall be not more than 2.5 and 50, respectively.</td>
<td>Fried noodle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max. Moisture content 9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acid value 1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peroxide value 25</td>
</tr>
</tbody>
</table>

*1 Attention is paid to the following factors: Durability, taste, and quality.
### Case Study 1: Noodle/Instant Noodle (cont'd)

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

---

**Case Study 1: Noodle/Instant Noodle (cont'd)**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
</table>

*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.
## Case Study 2: Carbonated Soft Drinks

<table>
<thead>
<tr>
<th>Name of the Standard</th>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>Carbonated Beverages</td>
<td>Carbonated Soft Drinks (KS H 2016)</td>
</tr>
<tr>
<td>Description</td>
<td>Carbonated beverages refer to products for drinking with carbonic acid gas</td>
<td>Carbonated beverages refer to products for drinking with carbonic acid gas</td>
</tr>
<tr>
<td>Essential Composition and Quality Factor</td>
<td>Pressure of carbonic acid gas (kg/cm²)</td>
<td>Must have satisfactory color and flavor</td>
</tr>
<tr>
<td></td>
<td>① Carbonated water: Not less than 1.0</td>
<td>Must not have off-taste and off-odor</td>
</tr>
<tr>
<td></td>
<td>② Carbonated beverage: Not less than 0.5</td>
<td>Pressure of carbonic acid gas (kg/cm²)</td>
</tr>
<tr>
<td></td>
<td>Lead (mg/kg): Not more than 0.3</td>
<td>① Carbonated water: Not less than 2.5</td>
</tr>
<tr>
<td></td>
<td>Cadmium (mg/kg): Not more than 0.1</td>
<td>② Carbonated beverage: Not less than 2.0</td>
</tr>
<tr>
<td></td>
<td>Tin (mg/kg): Not more than 150</td>
<td>Lead (mg/kg): Not more than 0.3</td>
</tr>
<tr>
<td></td>
<td>(Limited to canned products)</td>
<td>Cadmium (mg/kg): Not more than 0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tin (mg/kg): Not more than 150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Limited to canned products)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packaging standards: The container shall not be swollen, deformed or rust, requiring complete sealing and appropriate degree of vacuum.</td>
</tr>
</tbody>
</table>

## Case 2: Carbonated Soft Drinks (Cont’d)

<table>
<thead>
<tr>
<th>Food Additives</th>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservative</td>
<td>Any preservative except the</td>
<td>The number of Bacteria: Not more than 100</td>
</tr>
<tr>
<td></td>
<td>followings should not be detected.</td>
<td>Coliform group: Negative</td>
</tr>
<tr>
<td></td>
<td>(Sorbic acid, Sodium sorbate, Potassium sorbate, Calcium sorbate)</td>
<td>The number of Bacteria: Not more than 100</td>
</tr>
<tr>
<td></td>
<td>Not more than 0.6% as sorbic acid.</td>
<td>Coliform group: Negative</td>
</tr>
<tr>
<td></td>
<td>(But it should not be detected in carbonated water)</td>
<td></td>
</tr>
<tr>
<td>Hygiene</td>
<td>The number of Bacteria: Not more than 100</td>
<td>Labeling Standards follow &quot;General Standard of Labeling for Processed Foods&quot; (KS H 1101)</td>
</tr>
<tr>
<td></td>
<td>Coliform group: Negative</td>
<td></td>
</tr>
<tr>
<td>Labeling</td>
<td>Specific labeling methods ① Products shall be labeled as either carbonated beverages or carbonated water.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>② If the calorie per 400ml is 2kcal or lower, the product can be labeled as &quot;Diet&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>③ Nutrition Facts required.</td>
<td></td>
</tr>
<tr>
<td>Methods of Analysis</td>
<td>Gas Pressure</td>
<td>Gas Pressure, Lead and Cadmium</td>
</tr>
<tr>
<td></td>
<td>Lead and Cadmium</td>
<td>Tin, The number of Bacteria, Coliform group</td>
</tr>
<tr>
<td></td>
<td>Tin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The number of Bacteria</td>
<td>General testing methods for canned food (KS H 1146)</td>
</tr>
<tr>
<td></td>
<td>Coliform group</td>
<td>Sensory test (KS H ISO 6568)</td>
</tr>
<tr>
<td></td>
<td>Preservatives</td>
<td>Determination of Micro-organism (KS H ISO 7251, KS H ISO 4833/4832/4831)</td>
</tr>
</tbody>
</table>

* This table does not include basic details required for all foods.
### Case Study 3: Frozen Foods

<table>
<thead>
<tr>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Foods</td>
<td>Frozen Foods</td>
</tr>
</tbody>
</table>

**Scope**

- Frozen dumpling (KS H 4001)
- Frozen croquette (KS H 4002)
- Frozen raw breaded shrimp (KS H 4003)
- Frozen pork cutlet (KS H 4604)
- Frozen fish cutlet (KS H 6032)

**Description**

1. **Product Definition**
   "Frozen food" means a food made by freezing the manufactured, processed, cooked food into container and packaging materials after freezing treatment for the purpose of long-term storage.

2. **Frozen Food Not Requiring Heating Process Before Consumption**
   - Frozen food that can be consumed without a separate heating process.

3. **Frozen Food Requiring Heating Process Before Consumption**
   - Frozen food that can be consumed only after a separate heating process.

4. **Manufacturing and Processing Standards**
   - Product before chilling shall be sterilized in a method in which the temperature at the center of the product is not less than 80°C for 50 minutes, or the equivalent.

5. **Thawing of Refrigerated Raw Material**
   - Shall be hygienically performed.

6. **Preservation and Distribution Standards**
   - The preservation temperature of frozen chilled food may exceed except for separately specified in this code, and the preservation temperature is not higher than -18°C and the chilled temperature is 0-10°C.

7. **Transportation of frozen or cold storage products**
   - The product shall not be transported exceeding the specified temperature or in the equivalent or better manner.

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### Case Study 3: Frozen Foods (Cont'd)

<table>
<thead>
<tr>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Food</td>
<td>Frozen Food</td>
</tr>
</tbody>
</table>

**Hygiene**

- **Bacterial Counts (CFU/g)**: No more than 100,000 (except fermented products or those added with lactic acid bacteria [LAB])
- **Coliform Group (CFU/g)**: No more than 10

### KS standard

- **Frozen Food Not Requiring Heating Before Consumption**
  - Heated food before freezing
  - Unheated food before freezing
  - Frozen dumpling
  - Frozen croquette
  - Frozen raw breaded shrimp
  - Frozen pork cutlet
  - Frozen fish cutlet

- **Bacterial Counts (CFU/g)**: No more than 3,000,000 (except fermented products or those added with LAB)

- **Coliform Group (CFU/g)**: No more than 10

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13
### Case Study 3: Frozen Foods (cont'd)

<table>
<thead>
<tr>
<th>Hygiene</th>
<th>Food Sanitation Act</th>
<th>KS standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. coli</td>
<td>Not less than labeled count (if only products edited with lactic acid bacteria)</td>
<td>Negative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen food shall be labeled according to the following criteria:</td>
</tr>
<tr>
<td>(1) It shall be labeled as either frozen food, good to eat unheated or frozen food to eat after heating.</td>
</tr>
<tr>
<td>(2) Frozen food to eat after heating shall be additionally labeled as either &quot;food heated before freezing&quot; or &quot;food unheated before freezing&quot; depending on whether it was heat-treated, etc.</td>
</tr>
<tr>
<td>(3) Frozen products or products containing lactic acid bacteria shall indicate the number of yeast or lactic acid bacteria.</td>
</tr>
<tr>
<td>(4) Frozen food shall indicate the methods of storage in freezing conditions and the methods of thawing for cooking.</td>
</tr>
<tr>
<td>(5) Products that require cooking or heating shall indicate the methods of cooking or heating.</td>
</tr>
<tr>
<td>(6) The label shall not be done in a manner in which consumers can be misled into thinking the whole of the raw material 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.</td>
</tr>
<tr>
<td>(7) If two or more kinds of materials 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.</td>
</tr>
</tbody>
</table>

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

### Food Additives: Classification in Korea

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic Additives</td>
<td>432 items</td>
</tr>
<tr>
<td>Natural Additives</td>
<td>206 items</td>
</tr>
<tr>
<td>Mixture Additives</td>
<td>7 items</td>
</tr>
</tbody>
</table>

*Coloring/Flavoring agents: 1834 items*
# Case Study 4: Food Additives for Beverages & Meat Products

## 1. Standards for use in Korea: Beverage

<table>
<thead>
<tr>
<th>Major Use Category</th>
<th>Additives</th>
<th>Target Foods</th>
<th>Maximum Limits</th>
<th>Limitation for use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antioxidants</td>
<td>Calcium Disodium Ethylenediaminetetraacetic acid</td>
<td>Canned or bottled beverage</td>
<td>35mg/kg</td>
<td>when it is used along with EDTA potassium disodium, total should not more than 35mg/kg.</td>
</tr>
<tr>
<td></td>
<td>Disodium Ethylenediaminetetraacetic acid</td>
<td>Canned or bottled beverage</td>
<td>35mg/kg</td>
<td>when it is used along with EDTA potassium disodium, total should not more than 35mg/kg.</td>
</tr>
<tr>
<td>Bleaching agents</td>
<td>Potassium Hydrogen Sulfite solution</td>
<td>No data</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Potassium Pyrosulfite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sodium Hydrogen Sulfite Solution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sodium Pyrosulfite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sodium Sulfite</td>
<td>Fruit wine</td>
<td>350mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fruit juice that is five times diluted prior to use, concentrated fruit juice, and processed fruits and vegetables</td>
<td>150mg/kg</td>
<td></td>
</tr>
</tbody>
</table>
2. Standards for use in Korea: Meat Products

<table>
<thead>
<tr>
<th>Major use category</th>
<th>Additives</th>
<th>Target foods</th>
<th>Maximum Limits</th>
<th>Limitation for use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservatives</td>
<td>Nisin</td>
<td>No data</td>
<td></td>
<td>Only used for processed cheese</td>
</tr>
<tr>
<td></td>
<td>Potassium</td>
<td>Meat products</td>
<td>2.0g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sorbate</td>
<td>Meat products</td>
<td>2.0g/kg</td>
<td></td>
</tr>
</tbody>
</table>

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 & Fair 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.
Thank you

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

Ms Pauline Chan
ILSI Southeast Asia Region
Singapore
Food Regulatory Systems and Standards in Southeast Asia: Indonesia, Malaysia, Philippines, Singapore, Thailand & Vietnam

Ms Pauline Chan
ILSI Southeast Asia Region
Singapore

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.
Food Regulatory Systems and Standards in Southeast Asia

Indonesia, Malaysia, Singapore, Philippines, Thailand & Vietnam

Presented by Pauline Chan
ILSI Southeast Asia Region
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

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**
Indonesia: Regulations

- Regulations issued by BPOM related to food commodity standards:
  Head of BPOM Regulation No. HK.06.66.1.52.4011 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/I/1988 on Food Additives
  Minister of Health Regulation No. 1168/Menkes/Per/I/1999 on Food Additives
  Joint Decree of Min of Health & Min of Agriculture No. 881/Menkes/SKB/VII/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

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"
Malaysia Commodity Standards

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

Malaysia Standards (MS)

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)
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

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
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)

Philippines Commodity Standards

1977 Constitution of the Philippines; Food, Drugs and Devices, and Cosmetics Act; Food and Drug Administration Act 2000; Consumer Act of the Philippines

- Bureau Circular 1998-018: Updated list of food additives
- Bureau Circular No. 98-0. 1998: Permissible net contact area in pre-packaged food
- Administrative Order No. 1990-115: Food safety standards for food products distributed in the Philippines
- Administrative Order No. 1990-116: Food safety standards for pre-packaged foods
- Bureau Circular 2007-001: Guidelines for the use of redmills and health claims in food
- Bureau Circular 2007-002: Guidelines for the use of redmills and health claims in food
- Bureau Circular 2007-003: Guidelines for the use of redmills and health claims in food
- Administrative Order No. 2004-204: Guidelines for the assessment of microbiological quality of pre-packed foods
- Philippines National Standards (PNS/ISO1990)
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

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
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 DAFPS 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

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: Labelling 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
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
  AO 136-B s. 1985 Standards for Soluble Coffee with Added Carbohydrates
  AO 2005-018 Philippine National Standards on Ethnic Food Products

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
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

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Singapore Commodity Standards

- Sale of Food Act - Food Regulations, rev. 2008
- General additive standards
- General labeling requirements
- Specific standards for foodstuffs (prohibitions, 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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International Life Sciences Institute
SOUTHEAST ASIA REGION
Singapore: Food Safety Control

- Agri-food and Veterinary Authority (AVA) is the sole agency for food safety

- Covers processed foods, agriculture, meat & fisheries products

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.
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

Thailand Commodity Standards

Food Act B.E. 2522 (1979)
Agricultural Standards Act B.E. 2551 (2008)


Name of the Standard
Scope
Description
Essential Compositional and Quality Factors
Food Additives
Contaminants
Hygiene
Weights and Measures
Labeling

Thai Industrial Standards (TIS)
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

---

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
    - 13 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

  - 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"
Thailand: Standards

- For processed food standards, issued as Notification of the Ministry of Public Health, for e.g.:
  No. 214 B.E. 2543 (2000) Re: Beverage in sealed containers

- 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:
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:

Vietnam Commodity Standards

Name of the Standard

<table>
<thead>
<tr>
<th>Name of the Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Essential Compositional and Quality Factors</td>
</tr>
<tr>
<td>Food Additives</td>
</tr>
<tr>
<td>Contaminants</td>
</tr>
<tr>
<td>Hygiene</td>
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<tr>
<td>Weights and Measures</td>
</tr>
<tr>
<td>Labeling</td>
</tr>
<tr>
<td>Methods of Analysis and Sampling</td>
</tr>
</tbody>
</table>

Vietnamese National Standards (VTNS)

National Technical Regulations (GCVN)
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

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.
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

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 QV/CN ....: 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. 89/2000/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;
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 QCVN ....; 2010/BYT National technical regulation on the safety limits of Microbiological contaminants in food

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
### Comparison of Standards for Instant Noodles

<table>
<thead>
<tr>
<th></th>
<th>Indonesia</th>
<th>Malaysia</th>
<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture (fried) (% W/W)</td>
<td>≤10</td>
<td>≤10</td>
<td>≤8</td>
<td>≤13</td>
<td>≤10</td>
<td>≤10</td>
</tr>
<tr>
<td>Protein content (wheat) (% W/W)</td>
<td>≥8.5</td>
<td>≥8.5</td>
<td>Not specified</td>
<td>≥9.0</td>
<td>≥8.5</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Comparison of Standards for Carbonated Beverages

<table>
<thead>
<tr>
<th></th>
<th>Indonesia</th>
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<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (mg/kg)</td>
<td>≤0.2</td>
<td>≤0.2</td>
<td>Codex</td>
<td>≤0.2</td>
<td>≤0.5</td>
<td>≤0.05</td>
</tr>
<tr>
<td>Yeast &amp; moulds (cfu/ml)</td>
<td>≤50</td>
<td>≤10</td>
<td>Not specified</td>
<td>Absent</td>
<td>Absent</td>
<td>≤10</td>
</tr>
</tbody>
</table>
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

Thank you
ขอบคุณค่ะ
ありがとうございます
谢谢
감사합니다
Terima kasih