

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

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Agenda Item 3(b)

CX/ASIA 99/3
September 1999

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COORDINATING COMMITTEE FOR ASIA

Twelfth Session

Chiang Mai, Thailand, 23 - 26 November 1999

MATTERS ARISING FROM THE 23RD SESSION OF THE CODEX ALIMENTARIUS COMMISSION

FEASIBILITY OF ELABORATING A CODEX STANDARD FOR INSTANT NOODLES

(Prepared by Japan with Assistance of Republic of Korea)

BACKGROUND

1. While considering proposals to elaborate new standards and related texts at the 23rd Session, the Codex Alimentarius Commission noted the inquiry of the Delegation of Japan, supported by that of Indonesia, about the possibility of reopening the Codex Committee on Cereals, Pulses and Legumes that had been adjourned *sine die*, to develop a standard for instant noodles. The Commission agreed that this Committee should first examine the feasibility of such a Standard. The following text was prepared and submitted by Japan with assistance provided by the Republic of Korea. The Committee is invited to consider whether it is appropriate to recommend the Executive Committee to initiate work on the elaboration of a worldwide standard for instant noodles.

NEED FOR ESTABLISHING AN INTERNATIONAL STANDARD FOR INSTANT RAMEN NOODLE

2. A new type of noodle product, individually prepackaged instant ramen noodles¹, was put on sale in 1958 in Japan. Its convenience and preserving quality were highly valued, and as a result, its production increased rapidly mainly in Asia, especially East and Southeast Asia, where peoples traditionally and commonly eat noodles. While the world annual production of instant noodles, comprising mainly instant ramen noodles, was 19.3 billion packages in 1992, it soared to 43.4 billion packages in 1997 (13.2 billion U.S. dollars in sales) which included 16.0 billion packages in China, 8.6 billion packages in Indonesia, 5.3 billion packages in Japan, and 3.9 billion packages in Republic of Korea (ROK). It more than doubled in recent five years, and is expected to grow and instant ramen noodles have become one of internationally recognized foods. (Table 1)

3. In the international trade of instant noodles in 1997, the exports were 14,469 tons from ROK and 8,056 tons from Japan, and the import included 26,077 tons into Brazil. The international trade is also expected to increase for the years to come. (Table 2)

4. Most of instant ramen noodle products are manufactured by adding water and alkaline agents to wheat flour as the main raw material, forming it into noodle, steaming it for pregelatinization, seasoning it, and then frying it for dehydration. Therefore, the quality of frying oils employed much affects the flavour and storability. And as they are prepared for eating by a convenient method of just using boiled/

¹ Normally one package contains one serving.

boiling water to cook the noodle for 3 - 4 minutes, more than a certain part of starch is needed to be pregelatinized.

5. However, standards of acid values and peroxide values which relate to the quality of oils (degree of degeneration) are different depending on the standards for instant ramen noodles of respective countries, or in some countries there is no standard for them despite their production/consumption. And also some countries have no standard for pregelatinization which is an index for being served for eating by a convenient method.(Table 3)

6. Additionally, the requirements for ingredients and food additives vary from country to country. In some countries, instant ramen noodles manufactured without using an alkaline agent are sold. And there have been no universally agreed product names.

7. As mentioned above, adequate measures do not seem to be taken for consumers protection, and the different standards set forth in respective countries may possibly create a barrier to trade.

8. Under these circumstances, Japan and ROK think it necessary to elaborate a Codex worldwide standard for instant ramen noodles which contains the product name, raw materials, quality criteria, permitted food additives, and other necessary specifications based on international consensus to protect the consumers of each country and promote the fair international trade.

9. A preliminary draft of the standard for instant ramen noodles is attached to this document as Annex for information.

Table 1. Production of Instant Noodles in the World

| | Production (100 millions of packages) | | | | | | Sale in 1997 |
|-----------|---------------------------------------|-------|-------|-------|-------|-------|-------------------|
| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 100 millions \$US |
| China | 13.0 | 30.0 | 40.2 | 132.7 | 150.0 | 160.0 | 29 |
| Indonesia | 47.6 | 56.0 | 70.0 | 76.5 | 79.7 | 86.0 | 13 |
| Japan | 48.7 | 50.2 | 50.4 | 52.0 | 53.0 | 53.2 | 47 |
| ROK | 36.1 | 35.6 | 37.1 | 35.2 | 37.3 | 38.9 | 14 |
| U.S.A. | 14.0 | 15.3 | 18.0 | 20.0 | 20.0 | 24.8 | 6 |
| Others | 33.2 | 45.6 | 53.0 | 59.4 | 67.9 | 71.3 | 23 |
| Total | 192.6 | 232.7 | 268.7 | 375.8 | 407.9 | 434.2 | 132 |

Note) 1. The figures for production of China from 1992 to 1994 are those estimated.

2. Others include Thailand, Philippines, Viet Nam, Brazil India, UK, Germany, etc.. In addition, instant noodles are consumed all over the world including African countries and the countries in CIS.

Table 2. Export and Import of Instant Noodles by Major Countries

| | 1996 | | 1997 | |
|-----------|---------------|---------------|---------------|---------------|
| | Export (tons) | Import (tons) | Export (tons) | Import (tons) |
| ROK | 10,655 | 55 | 14,469 | 2 |
| Japan | 6,995 | 1,616 | 8,056 | 1,318 |
| Indonesia | 3,900 | - | 3,150 | - |
| Brazil | 1,692 | 22,483 | 1,440 | 26,077 |

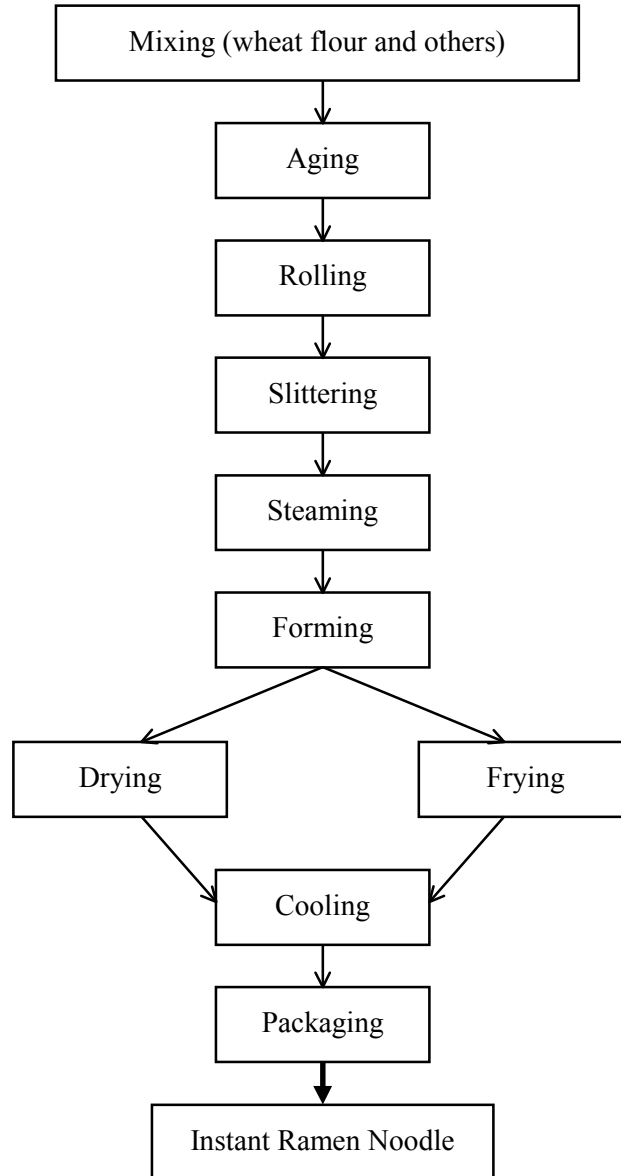
Table 3. Standards for Instant Ramen Noodles (fried noodle) of Several Countries

| | Japan | China | ROK | Thailand | Brazil |
|-----------------------------|-------------|---------|-------|----------|--------|
| Acid value (mg/g) | ≤ 1.2 (1.5) | ≤ 1.8 | ≤ 2.0 | ≤ 1.8 | ≤ 3 |
| Peroxide value (meq/kg) | ≤ 30 | ≤ 20 | ≤ 30 | - | ≤ 30.0 |
| Degree of pregelatinization | ≥ 1.0 * | ≥ 85.0% | - | - | - |

Note) * Absorbance at 570 nm; 85% of pregelatinization in China is equivalent to about 0.7 of absorbance at 570 nm.

Sources: (Japan) Japan Agricultural Standards/Food Sanitation Law
 (China) National standard / Instant noodle
 (ROK) Food Standards for Noodle
 (Thailand) TIS for Instant Noodle
 (Brazil) RFB. Instant Noodle Standard

SCHEME1. Manufacturing Process of Instant Ramen Noodles



PROPOSED DRAFT CODEX STANDARD FOR INSTANT RAMEN NOODLES

1. SCOPE

This standard applies to instant ramen noodles defined in Section 2.

2. DESCRIPTION

2.1 PRODUCT DEFINITION

Instant Ramen Noodles are a product prepared by adding water and alkaline agents to wheat flour as the main ingredient and forming so prepared dough into noodle, which is then dehydrated by oil treatment or other methods, and provided with seasonings or seasoned, and conforms with the specifications set forth in Section 3, provided or not provided with topping and served for eating by a simple cooking method.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Essential Raw Materials

Wheat flour and water

3.1.2 Permitted Ingredients

Starch, grain powder, egg, animal and vegetable oils and fats, vegetable proteins, powdered vegetables, powdered sea weeds, seasonings, milk and dairy products, and dietary fibres

3.2 QUALITY CRITERIA

3.2.1 General Condition

The product shall have normal flavour, odour and colour and shall possess texture characteristic of the product.

3.2.2 Moisture Content

- a. Not more than 10% for noodles dehydrated by oil treatment
- b. Not more than 14.5% for noodles dehydrated by any of other methods than oil treatment

3.2.3 Acid Value

Not more than 1.5 mg/g (applicable only to products dehydrated by oil treatment)

3.2.4 Peroxide Value

Not more than 30 meq/kg

3.2.5 Degree of Pregelatinization

Not less than 1.0 (absorbance at 570 nm)

4. FOOD ADDITIVES

| INS | Food additive | Maximum permitted level |
|------------|--|---|
| 4.1 | ALKALIS² | |
| 339 | Sodium phosphates | 1000 mg/kg singly or in combination expressed as phosphorus |
| 340 (iii) | Tripotassium orthophosphate | |
| 450 (iii) | Tetrasodium diphosphate | |
| 452 (i) | Sodium polyphosphate | |
| 4.2 | FLOUR TREATMENT AGENTS | |
| 500 (i) | Sodium carbonate | Limited by GMP |
| 500 (ii) | Sodium hydrogencarbonate | |
| 501 (i) | Potassium carbonate | |
| 4.2 | EMULSIFIERS | |
| 322 | Lecithins | Limited by GMP |
| 471 | Mono- and diglycerides of fatty acids | |
| 472a | Acetic and fatty acid esters of glycerol | |
| 472b | Lactic and fatty acid esters of glycerol | |
| 472c | Citric and fatty acid esters of glycerol | |
| 472d | tartaric acid esters of mono- and diglycerides of fatty acid | |
| 472e | Diacetyltartaric and fatty acid esters of glycerol | |
| 473 | Sucrose ester of fatty acids | 2000 mg/kg |
| 4.3 | THICKENERS | |
| 400 | Alginic acid | Limited by GMP |
| 410 | Carob bean gum | |
| 412 | Guar gum | |
| 414 | Gum Arabic | |
| 415 | Xanthan gum | |
| 440 | Pectins | |
| 4.4 | ANTIOXIDANTS | |
| 304 | Ascorbyl palmitate | 30 mg/kg |
| 306 | Mixed tocopherols concentrate | 50 mg/kg |
| 4.5 | COLOURS | |
| 100 (i) | curcumin | 1 mg/kg |
| 101 | Riboflavins | 0.2 mg/kg |
| 150a | Caramel I - plain | Limited by GMP |
| 160a (i) | Beta-Carotene (Synthetic) | 0.2 mg/kg |
| 160a (ii) | Carotenes, natural extracts | Limited by GMP |
| 4.6 | FLAVOUR ENHANCERS | |
| 621 | Monosodium glutamate | Limited by GMP |
| 627 | Disodium 5'-guanylate | |
| 631 | Disodium 5'-inosinate | |
| 635 | Disodium 5'-ribonucleotides | |
| 508 | Potassium chloride | |

² Note: Indispensable component of producing noodles.

4.7 ACIDITY REGULATORS

| | | |
|-----|-----------------------------|----------------|
| 260 | Acetic acid, glacial | Limited by GMP |
| 270 | Lactic acid (D, L, and DL-) | |
| 296 | Malic acid (DL-) | |
| 330 | Citric acid | |
| 355 | Adipic acid | 2.5 mg/kg |

5. CONTAMINANTS

The products covered by this standard shall comply with the maximum limits established by the Codex Alimentarius Commission.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997)

7. LABELING

Prepackaged products covered by this Standard shall be labelled in accordance with the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991, *Codex Alimentarius*, Volume 1A).

7.1 THE NAME OF THE FOOD

The name of the products shall be “Instant Ramen Noodle”.

7.3 LABELLING FOR HALAL

The term “Halal” or similar words may be used in the label in accordance with the General Guidelines for Use of the Term “Halal” (CAC/GL-27-1997).

8. SAMPLING AND ANALYTICAL METHODS

8.1 SAMPLING

Sampling shall be carried out in accordance with the Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5).

8.2 DETERMINATION OF MOISTURE CONTENT

According to AOAC (925.10)

8.3 DETERMINATION OF ACID VALUE

According to IUPAC (1987) 2. 201

8.4 DETERMINATION OF PEROXIDE VALUE

According to IUPAC (1987) 2. 501 or ISO 3960:1977

8.5 DETERMINATION OF DEGREE OF PREGELATINIZATION

According to Japanese Agricultural Standard (Spectrophotometry at 570nm) [to be attached]