

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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CL 2021/91/OCS-EXEC
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TO: Codex Contact Points
Contact Points of international organizations having observer status with Codex

FROM: Secretariat, Codex Alimentarius Commission,
Joint FAO/WHO Food Standards Programme

SUBJECT: **Request for comments on a proposal for revision of the *Standard for Kimchi* (CXS 223-2001)**

DEADLINE: 15 July 2022

BACKGROUND

1. In response to a proposal to revise the *Standard for Kimchi* (CXS 223-2001) submitted to the Codex Secretariat by the Republic of Korea (see CX/EXEC 21/81/3, paragraphs 1-6), the 81st Session of the Executive Committee of the Codex Alimentarius Commission (CCEXEC) noted that since this standard was under the purview of the Codex Committee on Processed Fruits and Vegetables (CCPFV), which had been adjourned *sine die* at the 43rd Session of Codex Alimentarius Commission (CAC), a Circular Letter (CL) would be distributed requesting the views of Members and observers on this proposal. CCEXEC81 further noted that the responses to the CL would then feed into a critical review by CCEXEC83 on new work proposals and their recommendations would be submitted for consideration by CAC45.
2. The proposal identifies the following sections of the *Codex Standard for Kimchi* (CXS 223-2001) for revision: Section 2.1 Product Definition (a) (the nomenclature of the main ingredient) and (c) (production conditions), Section 3.1.3 Other Composition (Total acidity) and Section 4 Food Additives.
3. The *Codex Standard for Kimchi* (CXS 223-2001) was first adopted at CAC24 (2001) and amended at CAC40 (2017).
4. While CCPFV is currently adjourned *sine die*, CAC has already approved new work on cashew kernels and dried sweet potatoes and these have been placed in a queue for possible future work by CCPFV.
5. A project document is contained in Appendix I.

REQUEST FOR COMMENTS

6. Codex Members and observers are invited to provide comments, together with their rationale for their response, on the following:
 - Whether Codex should initiate the process to undertake new work as described in the attached proposal to revise the *Codex Standard for Kimchi* (CXS 223-2001);
 - Whether the information contained in the project document is sufficient or if additional information is warranted to inform a determination consistent with the criteria in the *Codex Procedural Manual*, pages 43-47 (criteria for the establishment of work priorities).
 - Whether other kimchi producing and consuming countries have similar or additional food safety or quality concerns regarding the indicated sections or other sections of the standard and whether they are prepared to provide additional data.

GUIDANCE ON THE PROVISION OF COMMENTS

7. Comments should be submitted through the Codex Contact Points of Codex Members and observers using the OCS.
8. Contact Points of Codex Members and observers may login to the OCS and access the document open for comments by selecting "Enter" in the "My reviews" page, available after login to the system.
9. Contact Points of Codex Members and observer organizations are requested to provide general comments at the document level. Additional guidance on the OCS comment categories and types can be found in the OCS [Frequently Asked Questions \(FAQs\)](#).

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10. Other OCS resources, including the user manual and short guide, can be found at the following link:
<http://www.fao.org/fao-who-codexalimentarius/resources/circular-letters/en/>.
11. For questions on the OCS, please contact Codex-OCS@fao.org.

PROJECT DOCUMENT

PROPOSAL FOR THE REVISION OF CODEX STANDARD FOR KIMCHI

1. The purpose and the scope of the revision proposal

Kimchi is a salted and fermented food of which the main ingredient is Kimchi (or Chinese) cabbage, and other vegetables as a seasoning mixture mainly consisting of red pepper (*Capsicum annum* L.) powder, garlic, ginger, edible allium varieties other than garlic, and radish. These ingredients may be chopped, sliced and/or broken into pieces.

Kimchi is generally consumed as a side dish and high in nutritional value such as vitamin C, vitamin A, thiamine, riboflavin, calcium and iron. During the fermentation process, Kimchi develops various organic acids which facilitate digestion and protect gut bacteria from harmful food factors including food poisoning bacteria.

As there had been various changes with regards to the manufacturing process and quality requirements among Kimchi producers, the need for revision of the standard has been continuously raised since the standard was adopted.

The purpose and scope of this work is to propose a revision to the current Codex *Standard for Kimchi* (CXS 223-2001) in accordance with the purpose of Codex, namely protecting the health of the consumers and ensuring fair practices in the global food trade.

2. Its relevance and timeliness

Since 2001, the year of the Codex standard for Kimchi was adopted, the production and trade volume of Kimchi has been continually increasing both intra-regionally and internationally. In 2019, Korea traded 335.6 kilo tonnes of Kimchi with 93 countries. Compared to that of 2002 (30.2 kilo tonnes, 31 countries), it has increased 11.1 times in terms of trade volume and 3 times in terms of the number of trading countries. Given the current trend in trade and consumption of Kimchi, it is necessary to revise the current but outdated standard in order to protect consumers' health and ensure fair trade practices.

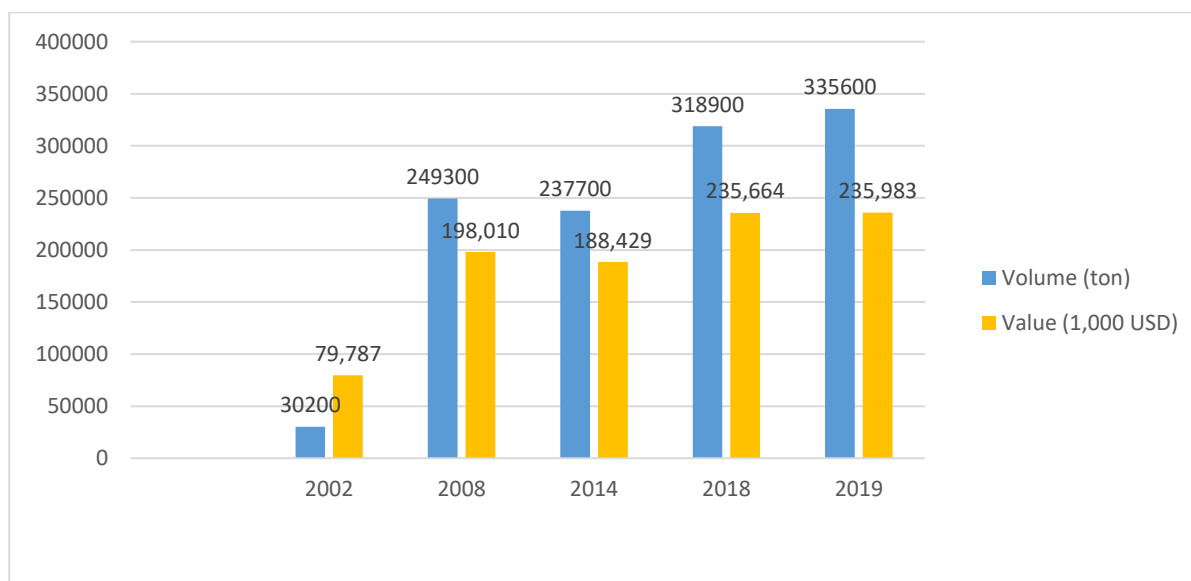


Figure 1. Total trade volume and Value of Kimchi by Korea (2002 - 2019)

Source: Korean International Trade Association's K-Stat (<http://stat.kita.net/main.screen>)

3. The main aspects to be covered

The main aspects to be covered in this work are requirements for quality and safety, which include product definition (the nomenclature of the main ingredient), production conditions, manufacturing requirements (*i.e.* acidity value) and food additives.

Revision of Section 2.1 Product Definition

- Change of the main ingredient nomenclature

Currently, the main ingredient of Kimchi, *Brassica pekinensis Rupr* has been referred to by its common name, 'Chinese cabbage'. However, there is evidence to demonstrate that '*Brassica pekinensis Rupr*' has also been referred to by the common name "Kimchi cabbage" in the other Codex texts and scientific papers. To minimize confusion in trade and customer's choice, the Republic of Korea therefore, proposes to modify the common and/or commodity name of the main ingredient of Kimchi.

- Change of 2.1. (c), production conditions of Kimchi

It has been known that lactic acid is produced and affects product quality, taste, flavour, etc., during the Kimchi fermentation. However, there is much research to demonstrate that other organic acids, such as phenyl lactic acid, acetic acid, etc., are also produced and have similar functions to those of lactic acid. So, Korea proposes a revision of text of 2.1(c) to reflect the production of other organic acids in addition to lactic acid.

Revision of Section 3.1.3 Other Composition

- Set out the upper limit of acidity value of Kimchi

Korea has received amendment petitions for the acidity value from the related industries. According to our preliminary experimental results and the data provided from the related industries, during the fermentation and/or preservation, the acidity value of kimchi products reaches up to 1.4%. However, the current standard in 3.1.3 (c) sets out an acidity limit of 1.0%. Therefore, Korea requests member countries to collect the related data from industries in their countries and to revise the acidity limit for kimchi.

Revision of Section 4 Food additive provisions

Because the *Codex Standard for Kimchi* (CXS 223-2001) was elaborated over 20 years ago in 2001, the range of food additives covered by the standard is very limited. Korea has received frequent and continuous petitions from the related industries over the years on the need for the Standard to reflect the current range of food additives suitable for use in kimchi. Furthermore, the current standard seems to be more restrictive than the allowed substances in the *General Standard for Food Additives* (CXS 192-1995). In this context, section 4 on food additives needs to be revised to align with current industry practices and the *General Standard for Food Additives* (CXS 192-1995).

4. An assessment against the Criteria for the establishment of work priorities

General Criterion

The revision of the standard will meet the general criterion with regard to consumer protection and fair trade practices by:

- Promotion of consumer protection by improving of the safety and quality characteristics of Kimchi product
- Ensuring fair trade practices by revising the common name of the main ingredient name

Criterion applicable to commodities

a) **Volume of production and consumption in individual countries and volume and pattern of trade between countries**

The Trade and production of Kimchi product has increased significantly (refer to table 1 and 2) since the *Codex Standard for Kimchi* (CXS 223-2001) was first adopted.

Table 1. Kimchi trade volume, value, and number of country of the Republic of Korea

Year	Number of Country			Volume (kilotonnes)			Value (1,000 USD)		
	Total	Import	Export	Total	Import	Export	Total	Import	Export
2002	31	3	28	30.2	1.0	29.2	79,787	469	79,318
2008	50	2	48	249.3	222.4	26.9	198,010	112,715	85,295
2014	74	8	66	237.7	212.9	24.7	188,429	104,396	84,033
2018	82	7	75	318.9	290.7	28.2	235,664	138,215	97,449
2019	93	9	84	335.6	306.0	29.6	235,983	130,911	104,992

Source: Korean International Trade Association's K-Stat (<http://stat.kita.net/main.screen>)

Table 2. The production volume of Kimchi in Korea, Japan, and China (10,000 ton)

Year	2007	2008	2009	2010	2011	2012	2017	2018	2019
Korea	29.2	33.5	32.4	30.1	32.7	32.8	33.5	46.7	47.1
Japan	24.0	23.8	20.9	19.1	20.0	-	-	-	-
China	10.2	12.5	16.9	27.3	33.3	38.4	275.6*	290.7*	-

Source : World Institute of Kimchi, Republic of Korea, Ministry of Food and Drug safety, Republic of Korea, Food Marketing Research and Information Center, Japan; *: based on amount imported into Korea (<http://stat.kita.net/main.screen>)

b) Diversification of national legislation and apparent resultant or potential impediments to international trade

None is identified.

c) International or regional market potential

As illustrated in Tables 1 and 2 above, there has been a significant increase in the international trade of Kimchi products since 2002. In 2018 (318.9 kilotonnes), there was approximately a 10 fold increase in the volume of Kimchi trade compared to 2002. In the past, Kimchi had been mainly traded within the North East Asia region. While regional trade has increased, Kimchi is now also traded on a world wide basis (see table 3) including North America and Europe. Furthermore, the world Kimchi market is expected to grow at a compound annual growth rate (CAGR) of 5.2% over the next five years and is predicted to reach 3,850 million US dollars in 2024 (Marketwatch, Aug. 9, 2019).¹

d) Amenability of the commodity to standardization

This commodity is already standardized in the *Codex Standard for Kimchi* (CXS 223-2001). However, the currently available scientific data and information on recent manufacturing practices highlight the need for revision of CXS 223-2001.

e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

The proposed amendments to the conditions of production and quality factors (acidity) in the *Standard for Kimchi* based on the available analytical data will contribute to ensuring fair practices in the trade, in addition to protecting consumer's health.

f) Number of commodities which would need separate standards indicating whether raw, semi-processed or processed

¹ Kimchi Market 2019: Global Industry Trends, Future Growth, Regional Overview, Market Share, Size, Revenue, and Forecast Outlook till 2024

None identified.

g) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body (ies)

None identified.

5. Relevance to the Codex strategic objectives

The revision of Codex standard for Kimchi is in line with “Goal 1. Address current, emerging and critical issues in a timely manner” presented in the Codex Strategic Plan 2020 – 2025.

6. Information on the relation between the proposal and other existing Codex documents

The work will take into account existing Codex documents as follows.

- *Standard for Kimchi* (CXS 223-2001)
- *General Principles of Food Hygiene* (CXC 1-1969)
- *General Standard for Food Additives* (CXS 192-1995)
- *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985)
- *Classification of Foods and Animal Feeds* (CXA 4-1989)
- Revision of the Classification of Food and Feed: *Vegetable Commodity Groups* (REP17/PR Para. 115, Appendix VIII Part A)

7. Identification of any requirement for and availability of expert scientific advice

None required.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for

None identified

9. The proposed time-line for completion of the new work

A three-year timeline is proposed for revising the Standard following a possible approval of new work by CAC45 in 2022, with a possible final adoption in 2025.