

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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CL 2022/58/OCS-CCEXEC
September 2022

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 the Proposal for revision of the *Standard for milk fat products (CXS 280-1973)***

DEADLINE: **14 October 2022**

BACKGROUND

1. At the 27th Session of the Codex Committee for Fats and Oils (CCFO27), Iran introduced the a discussion paper ([CRD 18](#)) on the need to align the maximum levels for copper and iron in ghee (butter oil) in the *Standard for Milk Fat Products (CXS 280-1973)* with those in the *Standard for Named Vegetable Oils (CXS 210-1999)*. Iran suggested revising the limits for copper and iron in CXS 280-1973 to align with those in CXS 210-1999; or to deleting copper and iron content from the “Other contaminants” listed in the Appendix-additional information to CXS 280-1973 for ghee and butter oil as in other milk products. It was proposed that CCFO was the best placed committee to take up this work as CCMMP, that has CXS 280-1973 under its purview, had been adjourned sine die.
2. CCFO27 agreed to forward a request to CCEXEC for their consideration and advice on which mechanisms could be used to consider the proposal to revise the *Standard for Milk Fat Products (CXS 280-1973)* in order to address the concerns raised with the maximum levels for copper and iron. ([REP22/FO, Paragraph 173-175](#))
3. CCEXEC82 recommended that a project document in accordance with the Codex Procedural Manual (PM) be submitted to the Codex Secretariat on the new work proposal to align the maximum levels for copper and iron in ghee (butter oil) in the *Standard for Milk Fat Products (CXS-280-1973)* to the *Standard for Named Vegetable Oils (CXS 210-1999)* and that a CL be issued thereafter seeking the Codex membership’s views on the new work proposal. Based on the responses to the CL, CCEXEC will propose options to CAC on the way forward ([REP22/EXEC1 paragraph 11-12](#))

REQUEST FOR COMMENTS

4. Member governments and observers are invited to review the project document and provide comments on the Proposal for revision of the *Standard for milk fat products (CXS 280-1973)*

GUIDANCE ON THE PROVISION OF COMMENTS

5. Comments should be submitted through the Codex Contact Points of Codex members and observers using the OCS.
6. 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.
7. Contact Points of Codex members and observers 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).
8. 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/ocs/en/>.
9. For questions on the OCS, please contact Codex-OCS@fao.org.

PROJECT DOCUMENT
PROPOSAL FOR NEW WORK TO REVISE THE STANDARD FOR MILKFAT PRODUCTS (CXS 280-1973), (APPENDIX – ADDITIONAL INFORMATION, SECTION 2 OTHER CONTAMINANTS) AND TO ALIGN THE MAXIMUM LIMITS (MLs) FOR HEAVY METALS WITH THOSE OF OTHER EDIBLE FATS AND OILS IN CODEX STANDARDS

(Submitted by Iran)

1. Purpose and scope of the proposed revision

To consider amending the *Standard for Milkfat Products* (CXS 280-1973): Appendix – additional information, Section 2 - Other contaminants, heavy metals; maximum level of copper (Cu) and iron (Fe) with a view to align the MLs for Cu and Fe in milkfat products with those in the *Standard for Named Vegetable Oils* (CXS 210-1999) to promote standard harmonization and fair practices in food trade.

2. Its relevance and timeliness

The global butter oil market reached a value of almost USD 3.1 billion in 2020. The butter oil industry is further expected to grow at a CAGR of about 11.6% between 2021 and 2026 to attain a value of almost USD 6 billion by 2026 (Table 1). Butter oil annual production in Iran is about 1500 tons, of which about 500 tons are exported. Also, ghee production has been increasing in recent years as indicated in Figure 1 which presents the annual world production of ghee during 2017-2020. A doubling in the production from 2017 to 2020 was observed. The top producers of ghee worldwide are India, United States, Pakistan and New Zealand.

Table 1. Overview of global anhydrous butter oil market

Rank	Country	Share in Export	Export Value
		Value 2021	2021, USD
1	New Zealand	≈ 51.8%	\$1.41B
2	Netherlands	≈ 14.46%	\$394.05M
3	Germany	≈ 5.31%	\$144.63M
4	France	≈ 4.49%	\$122.48M
5	Belgium	≈ 4.44%	\$121.06M
6	Ireland	≈ 3.28%	\$89.29M
7	India	≈ 3.22%	\$87.80M
8	United Kingdom	≈ 3.17%	\$86.31M
9	Spain	≈ 2.27%	\$61.78M
10	United States	≈ 1.4%	\$38.13M

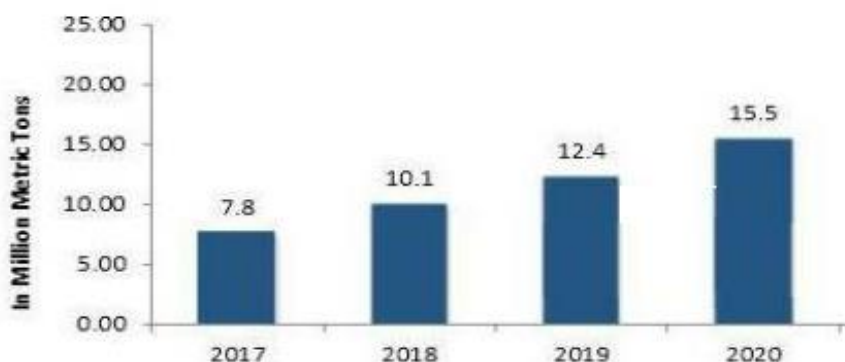


Figure 1: World annual ghee production 2017-2020.

There are variations in MLs values for copper and Iron established in the different Codex Standards for fats and oils as illustrated in the Table 2. In the *Standard for Milkfat Products* (CXS 280-1973), the MLs for copper (Cu) and iron (Fe) are 0.05 and 0.2 mg/kg, respectively, while in the *Standard for Named Vegetable oils* (CXS 210-1999) and *Standard for Edible Fats and Oils not covered by Individual Standards* (CXS 19-1981) the MLs for Cu and Fe in refined vegetable edible oils are 0.1 and 1.5 mg/kg respectively, and for virgin and edible cold press oils the MLs are 0.4 and 5 mg/kg, respectively. The MLs for Cu and Fe in the *Standard for Named Animal Fats* (CXS 211-1999) are 0.4 mg/kg and 1.5 mg/kg, respectively. On the other hand, in the *Standard for fish oils* (CXS 329-2017), noting that fish oils are very sensitive to oxidation, there are no limits for these metals.

Table 2: Maximum levels for Cu and Fe in fats and oils across Codex Standards

Standards	MLs (mg/Kg)	
	Cu	Fe
<i>Standard for Milkfat Products</i> (CXS 280-1973)	0.05	0.2
<i>Standard for Named Vegetable oils</i> (CXS 210-1999)	0.1 ¹ /0.4 ²	1.5 ^{Error! Bookmark not defined.} /5 ^{Error! Bookmark not defined.}
<i>Standard for Edible Fats and Oils not covered by Individual Standards</i> (CXS 19-1981)	0.1 ¹ /0.4 ²	1.5/5 ²
<i>Standard for Named Animal Fats</i> (CXS 211-1999)	0.4	1.5
<i>Standard for fish oils</i> (CXS 329-2017)	-	-

In this regard, Iran has conducted a few studies on metal parameters in butter oils produced according to the two main variables of animal sources and seasons. The results showed that the average amount of copper and iron in butter oils in terms of animal sources and seasons are higher than the MLs in the *Standard for Milkfat Products* (CXS 280-1973). Also, the amounts of these elements were influenced by factors such as type of livestock and environmental factors. The range of non-compliance for Fe was more than for Cu and also the levels for both Fe and Cu were generally several times higher than the MLs in the *Standard for Milkfat Products* (CXS 280-1973) level.

In addition, scientific published data and laboratory results from different countries showed that the average amount of Cu and Fe obtained in butter oils were the same as in our studies and the content of these metals, particularly Fe, was higher than the MLs in the *Standard for Milkfat Products* (CXS 280-1973). Since the MLs for Fe and Cu in the *Standard for Named Vegetable oils* (CXS 210-1999), *Standard for Edible Fats and Oils not covered by Individual Standards* (CXS 19-1981) and *Standard for Named Animal Fats* (CXS 211-1999) are much higher than the MLs in the *Standard for Milkfat Products* (CXS 280-1973), and the possibility of oxidation of vegetable oils due to unsaturated fatty acids is much higher, it is proposed to align the MLs for Fe and Cu in the *Standard for Milkfat Products* (CXS 280-1973) with those in the *Standard for Named Animal Fats* (CXS 211-1999) to promote standard harmonization and fair practices in food trade.

¹ refined vegetable edible oils

² virgin and edible cold press oils

3. The main aspects to be covered

Since the MLs for Cu and Fe in the *Standard for Named Vegetable oils* (CXS 210-1999), *Standard for Named Animal Fats* (CXS 211-1999) and *Standard for Edible Fats and Oils not covered by Individual Standards* (CXS 19-1981) are higher than the MLs in the *Standard for Milkfat Products* (CXS 280-1973) and the possibility of oxidation of vegetable oils due to unsaturated fatty acids is much higher, it is proposed to consider the following two options:

Option 1: To align the MLs for Cu and Fe for butter oil and ghee in the *Standard for Milkfat Products* (CXS 280-1973) with the MLs of refined vegetable edible oils in the *Standard for Named Vegetable oils* (CXS 210-1999) or *Standard for Named Animal Fats* (CXS 211-1999), to promote standard harmonization and fair practices in food trade.

Option 2: To delete provisions for Cu and Fe for butter oils and ghee to be same as other milk products such as butter and cream.

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

Based on the results of scientific research, the current MLs for Cu and Fe in milkfat products does not seem feasible, logical nor necessary, so in order to standard harmonization and facilitate fair trade practices, the above two solutions are suggested.

5. Relevance to the Codex strategic objectives

This revision is consistent with the Codex Strategic Plan 2020-2025 to establish international food standards in response to needs identified by Members and in response to factors that affect food safety, nutrition and fair practices along with harmonization in the food trade.

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

- *Standard for Milkfat Products* (CXS 280-1973)
- *Standard for Named Vegetable Oils* (CXS 210-1999)
- *Standard for Edible Fats and Oils not covered by Individual Standards* (CXS 19-1981)
- *Standard for Named Animal Fats* (CXS 211-1999)
- *Standard for Olive oils and Olive Pomace oils* (CXS 33-1981)
- *Standard for fish oils* (CXS 329-2017)
- *Standard for butter* (CXS 279-1971)

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

No expert scientific advice from FAO/WHO scientific advice bodies is necessary.

8. Identification of any need for technical input to the standard from external bodies

No need for technical input from external bodies has been identified.

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

The proposed time-frame is 2 years. The start up is expected to be in 2023 and the adoption by CAC in 2025.