

# CODEX ALIMENTARIUS COMMISSION



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

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Agenda item 18

CF15/CRD02

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ORIGINAL LANGUAGE ONLY

**REVIEW OF CODEX STANDARDS FOR CONTAMINANTS**  
**For consideration by the virtual meeting of the**  
**Working Group on the Review of Codex Standards for Contaminants**  
**Tuesday 3 May 2022**  
**13.00 – 16.00 CET**

(Prepared by Chair of the WG on the Review of Codex Standards for Contaminants,  
Canada)

## BACKGROUND

1. CCCF13 (2019) agreed to establish an electronic working group (EWG), chaired by Canada and co-chaired by Japan and the United States of America, to prepare a proposal for an approach to identify the need for review of existing standards and related texts developed by the CCCF for consideration at CCCF14.<sup>1</sup>
2. The discussion paper prepared for the CCCF14 session scheduled in 2020, rescheduled to 2021 due to the pandemic, presented three options for evaluating existing Codex standards for review.<sup>2</sup>
3. A circular letter<sup>3</sup> was issued requesting comments on the three possible options for an approach to identify existing Codex standards for possible review. Comments received in response to this circular letter resulted in an overall recommendation of implementing Option 2 for a three-year trial period.<sup>4</sup>
4. 'Option 2' involved establishing tracking lists of Codex standards >15 and >25 years since review or initial establishment and those recommended for re-evaluation by CCCF, CAC, or a member country. Ad hoc reviews of existing Codex standards would also continue under this option.<sup>5</sup>
5. CCCF14 (2021) agreed to:
  - i. Implement the pilot on the review of Codex standards for contaminants in food and feed (Option 2) on a three-year basis as outlined in paragraphs 9-13 of CX/CF 21/14/16 using the prioritization criteria as presented in Appendix I of CX/CF 21/14/16
  - ii. Request the Codex Secretariat to circulate the tracking lists for comments, in the form of a CL, in advance of CCCF15 (2022) based on input provided by Canada
  - iii. Consider the comments in reply to the CL in a pre-session working group (WG) to be established at CCCF15 (2022), chaired by Canada, in order to make recommendations to CCCF on the need to revise Codex standards and related texts for contaminants in food and feed
  - iv. note that the pilot (Option 2) could be evaluated as outlined in paragraphs 14-16 of CX/CF 21/14/16 to further improve the procedures for review on a needed basis<sup>6</sup>

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<sup>1</sup> REP19/CF, para. 178

<sup>2</sup> CX/CF 20/14/16

<sup>3</sup> CL 2020/53/OCS-CF

<sup>4</sup> CX/CF 21/14/16, para. 3

<sup>5</sup> CX/CF 21/14/16, para. 2

<sup>6</sup> REP21/CF, para. 218

**CIRCULAR LETTER REQUEST (CL 2021/90-CF)**

6. The circular letter issued in advance of CCCF15<sup>7</sup> requested suggestions for the prioritization of contaminants in Lists A.1, A.2 and B, as well as a single, overall, list of prioritized contaminants for possible review by CCCF based on the information presented in these lists in Annex I and the prioritization criteria in Annex II of the circular letter.
7. The circular letter invited Codex members and observers to take into account the following other circular letters circulated in advance of CCCF15 when providing comments on the lists noted above, in order to prioritize Codex standards for possible review by CCCF and in order to strategically balance new and existing work:
  - [CL 2021/87-CF \(REV1\)](#) on the approach/methodology for the review of contaminant/staple food combinations for future work of CCCF (Forward work-plan for CCCF)
  - [CL 2021/88-CF](#) on the prioritization of contaminants for evaluation and/or re-evaluation by JECFA
  - [CL 2021/89-CF](#) on the follow-up to the outcomes of JECFA evaluations and FAO/WHO expert meetings

**CIRCULAR LETTER COMMENTS (CL 2021/90-CF)**

8. Twelve member countries or regions provided comments in response to CL 2021/90-CF: Canada, Chile, Colombia, Cuba, Egypt, European Union, Japan, Kenya, Peru, Republic of Korea, Uganda and the United States of America.
9. One country suggested a food additive maximum residue limit for review, which is outside the scope of the CCCF and the current work.
10. With respect to the other three circular letters noted in paragraph 7, above, two countries noted the slated JECFA toxicological review of arsenic. Of these countries, one indicated that a review of a Codex arsenic standard should await the completion of the JECFA evaluation. No other comments were made in the circular letter regarding linkages with the other circular letters noted in paragraph 7, above.
11. Certain countries provided the following general comments in response to CL 2021/90-CF. As these comments do not respond to the specific input requested in CL 2021/90-CF or reflect that some countries mistakenly thought the standards in Lists A.1, A.2 and B (Annex I of CL 2021/90-CF) were already presented in prioritized order, which they were not, these comments could not be used to help prioritize Codex standards for review.
  - a) One country provided general support of the progression and prioritization of the review of Codex standards and related texts for contaminants in food and feed
  - b) Four countries indicated support for the proposed review of priorities of the Codex standards as set out in Lists A.1, A.2 and B of Annex I of the circular letter
12. Five countries indicated the relative priority for review of Lists A.1, A.2 and B as provided below, in decreasing order of priority. However, the circular letter specifically requested that the contaminant standards in Lists A and B be prioritized, in addition to recommendations regarding a single, overall, priority list. Therefore, the prioritization of the lists themselves provided limited guidance as to how to identify specific Codex standards for possible review, as requested by the circular letter (see para. 6, above).
  - a) Lists A.1, List A.2, List B
  - b) Lists A.2, List B, List A.1
  - c) List A.1 in chronological order; List B
  - d) List B; List A
  - e) List A.1

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<sup>7</sup> CL 2021/90-CF

13. The country recommending List B be prioritized over List A (para. 12d), above) indicated that the standards in List B are based on CCCF or CAC recommendations and should be given higher priority if the relevant data for review are available. They also shared that List A is of lower priority because despite new occurrence and dietary exposure data and JECFA evaluations for certain standards in this list, the standards in this list remain effective for protecting consumers' health and ensuring fair practices in the food trade.
14. The country recommending all standards in List A.1 be the priority for review (para. 12e), above) provided the rationale that the data with which the maximum levels (MLs) were established at the time were obtained mostly with analytical methods with a higher quantification limits relative to current technology, which would be expected to result in lower MLs today.

#### **Use of Prioritization Criteria to Recommend Codex Standards for Review**

15. A number of member countries did not provide any rationale when recommending Codex standards for possible review that was either linked to the prioritization criteria that CCCF14 agreed to<sup>8</sup> or other, more general rationale. Member countries or regions that did base their recommendations on the prioritization criteria typically used a small number of the prioritization criteria that are available. As well, member countries often only cited the List (A.1, A.2 or B) the standard is housed in as rationale for their recommended prioritization.

#### **Comments on and Prioritization of Standards in each Lists A.1, A.2 and B**

16. One country made editorial comments and identified errors and omissions from Lists A.1, A.2 and B, as well as additional information from previous CCCF reports that could be added to List B to provide additional context when considering how to prioritize standards for possible future review. These editorial comments, errors and omissions are recorded in Lists A.1, A.2 and B and shown in Annex I (strike-through and bold underline); key points are also listed below. This country made their prioritization recommendations in consideration of standards inadvertently omitted from Lists A.1, A.2 and B in Annex I of the circular letter.
- i. **List A.1. Contaminant Standards Established or Reviewed  $\geq 25$  and  $\geq 15$  and  $> 25$  Years Ago:**
    - a) Arsenic ML in fat spreads and blended spreads was established in 2007 and does not meet the criteria for inclusion in either List A.1 or A.2. In 2023 this standard will be eligible for inclusion in List A.2
    - b) Mercury ML in food grade salt should be in List A.1 as it was established in 1987, which is  $\geq 25$  years ago
  - ii. **List A.2. Contaminant Standards Established or Reviewed  $\geq 15$  and  $< 25$  years ago:**
    - a) Aflatoxins (total) ML in peanuts intended for further processing should be in List A.2 as it was established in 1999, which is  $\geq 15$  and  $< 25$  years ago
  - iii. **List B. Contaminant Standards Recommended for Re-Evaluation:**
    - a) Aflatoxin M1 ML in milks should be included in List B because in 2001 it was suggested for future review if, and when, more data became available supporting a lower ML value
    - b) Patulin ML in apple juice should be included in List B because in 2003 it was suggested for review with the view to possibly lower the ML after the CoP was in place for four years
    - c) Tin MLs in meats (x5)<sup>9</sup> should be included in List B because in 1991 they were temporarily endorsed pending review by CCFAC and this review has not been initiated

<sup>8</sup> REP21/CF, para 218 i)

<sup>9</sup> Cooked cured chopped meat, cooked cured ham, cooked cured pork shoulder, corned beef and luncheon meat

17. One country commented that the highest priority items in Lists A.1, A.2 and B should be those that relate to other existing Codex standards that are in these lists or ongoing or recent work by CCCF, as there would be possible efficiencies in working on similar standards concurrently. This country made their prioritization recommendations in consideration of such efficiencies.
18. Four countries or regions prioritized standards for possible review in at least one of each discrete List (A.1, A.2 and B). Each sub-point below (a-d) presents the standard prioritization suggested by an individual country or region. Prioritization criteria cited and other rationale provided in response to the circular letter are recorded in Lists A.1, A.2 and B in Annex I.
- i. **List A.1. Contaminant Standards Established or Reviewed  $\geq 25$  and  $\geq 15$  and  $> 25$  Years Ago:**
    - a) Tin in meat MLs (x5); Arsenic, cadmium, mercury in salt MLs; Arsenic in edible fats and oils ML; Acrylonitrile in food GL; Vinyl chloride in food GL (decreasing order of priority)
    - b) No standards in this list are prioritized for review
  - ii. **List A.2. Contaminant Standards Established or Reviewed  $\geq 15$  and  $< 25$  years ago:**
    - a) Aflatoxins in peanuts for further processing ML; Aflatoxins in peanuts CoP; Aflatoxin M1 in milks ML; Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals CoP; Patulin in apple juice ML; Patulin in apple juice CoP; Tin in canned foods CoP; Cadmium MLs (x13); Source Directed Measures to Reduce Contamination of Foods with Chemicals CoP (in decreasing order of priority)
    - b) Aflatoxin M1 ML for milk; cadmium MLs in certain cereal grains, legume vegetables, pulses, Brassica vegetables, bulb vegetables, fruiting vegetables, certain leafy vegetables, certain root and tuber vegetables, certain stalk and stem vegetables, wheat, cephalopods, marine bivalve molluscs, rice, polished (in the order provided)
    - c) Cadmium MLs for root and tuber vegetables, fruiting vegetables, leafy vegetables, bulb vegetables, polished rice; Patulin ML for apple juice (in the order of provided)
  - iii. **List B. Contaminant Standards Recommended for Re-Evaluation:**
    - a) Methylmercury in tuna ML; Aflatoxin M1 in milks ML; Patulin in apple juice ML; Tin in meats MLs (x5)<sup>10</sup> (decreasing order of priority)
    - b) Acetylated DON derivatives in cereals and cereal-based foods ML; Inorganic arsenic in husked rice ML; Methylmercury in tuna ML (in the order provided)
    - c) Acetylated DON derivatives in cereals and cereal-based foods ML; Lead in cereal grains ML; Arsenic in rice<sup>11</sup>; Fumonisin in maize flour and maize meal (in decreasing order of priority based on highest to lowest food consumption)
    - d) Arsenic in Rice<sup>11</sup>
19. Two member countries commented that in order for the MLs in List B to be prioritized and reviewed, the overall availability of information and data from Codex members would have to be evaluated.

<sup>10</sup> Cooked cured chopped meat, cooked cured ham, cooked cured pork shoulder, corned beef and luncheon meat

<sup>11</sup> Not stated in CL 2021/90-CF if referring to the ML for inorganic arsenic husked rice or CoP CXC 77-2017, both of which are in List B

### Overall Prioritization of Standards from Lists A.1, A.2 and B

20. Five countries or regions provided an overall prioritization of Codex standards in consideration of all standards in Lists A.1, A.2 and B combined. Each sub-point below (a-f) presents the standards prioritization suggested by an individual country or region. Prioritization criteria cited and other rationale provided in response to the circular letter are recorded in Lists A.1, A.2 and B in Annex I, as well in Annex II, which houses a newly created list of existing Codex standards identified by member countries or regions as the overall highest priority for review.
- a) Aflatoxins in peanuts ML for further processing ML; Aflatoxins in peanuts CoP; Methylmercury in tuna ML; Aflatoxin M1 in milks ML; Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals CoP; Patulin in apple juice ML; Patulin in apple juice CoP; Tin in meats MLs (x5); Tin in canned foods CoP; Arsenic, cadmium, mercury in salt MLs; Arsenic in edible fats and oils; Acrylonitrile and vinyl chloride in food MLs (in decreasing order of priority)
  - b) Aflatoxin M1 in milks ML; Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals CoP; Methylmercury in tuna ML; Inorganic arsenic in husked rice ML; Acetylated DON derivatives in cereals and cereal products ML; Cadmium in legume vegetables, pulses, wheat, cephalopods, marine bivalve molluscs and polished rice, after developing a new CoP for cadmium in agricultural crops (in decreasing order of priority)
  - c) Arsenic in edible fats and oils ML; Acetylated DON derivatives in cereals and cereal products ML; Tin in meats MLs (x5)<sup>10</sup>; Lead in cereal grains ML; Arsenic and cadmium in salt; Arsenic in rice CoP (in decreasing order of priority)
  - d) Vinyl chloride & acrylonitrile in all foods MLs; Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals CoP; Aflatoxin M1 in milks ML; Aflatoxins in peanuts CoP; Fumonisin in maize flour & maize meal MLO; Patulin in apple juice CoP (in the order provided)
  - e) Source Directed Measures to Reduce Contamination of Food with Chemicals CoP; Patulin in apple juice ML (in decreasing order of priority)
21. This list of Codex contaminant standards identified as the overall highest priority for review (Annex II) is presented in alphabetical order, rather than order of priority. A priority ranking of this list is not possible due to the varying amount of rationale provided for each prioritized standard, the varying use of the prioritization criteria by member countries and regions, and challenges associated with establishing a precise or quantitative priority ranking.

### Updates to Prioritization Criteria

22. One country noted that although the circular letter did not specifically request comments on the criteria used to prioritize Codex standards in Lists A.1, A.2 and B for possible review, given that the process agreed to by CCCF14 for prioritizing existing Codex standards for review is in a 3-year trial period, it seemed appropriate to provide input on these criteria at this time.
23. This country supported the use of the prioritization criteria agreed to by CCCF14<sup>12</sup> and presented in Annex II of the circular letter, with certain proposed editorial changes shown in Annex III (strike-through and bold underline) and the addition of the following new prioritization criteria to the list. Rationale or other comments on the suggested new prioritization criteria that were provided by this country are also included below:
- i. Staple food: The food commodity that the standard applies to is a staple food (moderate to high potential safety concern, priority 1)
    - a) Rationale: This criteria would help address the potentially significant contaminant contribution that can come from staple foods
    - b) If it would be useful to reference a list of staple foods to support a prioritization criteria specific to staple foods, this list could be developed building upon the list of staple foods presented at CCCF14 in *the Review of staple food-contaminant combinations for future work*<sup>13</sup>

<sup>12</sup> REP21/CF, para 218 i)

<sup>13</sup> CCCFCX/CF 21/14/17

- ii. Developing countries: Standards relevant to the needs of developing countries (moderate to high potential safety concern, priority 1)
  - a) Rationale: This criteria aligns with the recommendation in the *Codex Alimentarius Commission Procedural Manual*, Section IV Risk Analysis: Risk Analysis Principles applied by CCCF, that states: “The needs and situations of developing countries should be specifically identified and taken into account by the responsible bodies in the different stages of the risk analysis.”
- iii. Efficiencies with other work: Standard review involving the same or similar commodity or the same contaminant was recently completed, is underway or commencing in the near future (potential safety concern n/a, priority 2)
  - a) Rationale: This criteria aligns with the goal of the CCCF to strategically consider and implement its forward work plan, particularly that relating to new work
- iv. Member country volunteer: A Codex member country volunteers to take on the work to draft a discussion paper outlining any proposed changes to the Codex standard (potential safety concern n/a, priority 2)

#### **Volunteers to take on New Work to Review an Existing Codex Standard**

24. The circular letter requested that member countries indicate whether they are willing to lead or co-lead some of the items identified as priority.
- i. One member country, the United States of America, volunteered to chair new work to review of the *Code of Practice Concerning Source Directed Measures to Reduce Contamination of Food with Chemicals* (CAC/RCP 49-2001) which is in List A.2
  - ii. Another member country, Japan, expressed interest in being the chair or co-chair when the review of the *Code of Practice for the Prevention of Arsenic Contamination in Rice* (CXC 77-2017) is conducted, if this country has the resources to do so
25. One country encouraged progress on or completion of current CCCF agenda items before undertaking new work.

#### **OBJECTIVES OF THE PRE-SESSION WORKING GROUP**

26. As per the agreement by CCCF14 (2021), the comments in reply to the CL will be considered by a WG established at CCCF15 in order to make recommendations to CCCF on the need to revise Codex standards and related texts for contaminants in food and feed.<sup>14</sup>
27. The objective of the pre-session WG, scheduled to meet on May 3, 2022 (the week before CCCF15), is therefore to bring any recommendations of the WG regarding the possible revision of Codex contaminant standards to CCCF15 for consideration.

#### **RECOMMENDATIONS FOR THE PRE-SESSION WORKING GROUP, AND IF AGREEMENT, CCCF15**

28. Agreement to create a new list of overall highest priority standards for possible review, while maintaining Lists A.1, A.2 and B. Agreement that this list should be carefully curated to reflect highest priority items that are entered into this list, that is, be based on the prioritization criteria most recently agreed to by CCCF, and/or other clear, reasonable rationale.
29. Issue 2 circular letters between CCCF15 and CCCF16:
- i. First circular letter (post CCCF15) - Editorial and process-related
    - a) Solicit input on the edits and revisions, based on the comments received from CL 2021/90-CF and any new comments from the WG and/or CCCF15 on the following: 1) Lists A.1, A.2 and B; 2) the prioritization criteria; and 3) the process by which the trial period is proceeding
    - b) Indicate that the prioritization criteria and process are open to adjustments during the 3-year trial period (2022-2024)
    - c) Solicit input on the proposed purpose and terms of use of the overall highest priority list of standards for review based on comments from the WG and/or CCCF15.

<sup>14</sup> REP21/CF, para. 218 iii)

- ii. This first circular letter may not be required if the WG and CCCF15 agree on: 1) the proposed edits in CL 2021/90-CF to Lists A.1, A.2 and B and the prioritization criteria (as set out in Annex I and III, respectively); 2) the purpose of the list of overall highest priority standards for review, as noted in paragraph 28, above, and any additional terms developed and agreed to by the WG and CCCF15, and; 3) that items 1) and 2) in this paragraph are both ready to be recommended to CCCF15.
  - ii. Second circular letter (in advance of CCCF16) - Develop the "Overall Highest Priority List of Standards" and governance
    - a) Solicit input on the overall prioritization of Codex standards set out in Lists A.1, A.2 and B in order to populate the overall highest priority list of standards, without further prioritization of the standards in Lists A.1, A.2 and B
    - b) Emphasize rationale be provided using prioritization criteria, and/or other clear, reasonable rationale
    - c) Emphasize to indicate if new national occurrence data are available
    - d) The WG Chair would provide a verification function, where possible, of rationales based on the prioritization criteria and provided in response to this circular letter
    - e) When detailed rationale is not provided to support a standard being nominated to the overall highest priority list, the standard will not be included in this list (but would still be maintained in the existing tracking Lists A.1, A.2 or B). In cases where the recommendations provided in response to CL 2021/90-CF were not based on the most recently agreed to prioritization criteria by CCCF, and/or in the absence of other clear, reasonable rationale, the member county or region must provide such rationale in response to the second circular letter, otherwise, the standards will be removed from this list.
29. Start new work to review *Code of Practice Concerning Source Directed Measures to Reduce Contamination of Food with Chemicals* (CAC/RCP 49-2001), which is in List A.2, pending agreement by the United States of America who volunteered to chair this work.

## Annex I

## List A: Codex Contaminant Standards Established or Reviewed ≥25 and ≥15 and &gt;25 Years Ago (the standards within the lists are not presented in order of priority)

Contaminant	Food(s)	Type of Standard <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Rationale
<b>A.1 Established or Reviewed ≥25 years ago (1996 and earlier)</b>						
Vinyl chloride monomer	Food	GL	1991	n/a	<u>List A.1 (priority 1)</u>	<u>In discussion of possible future topics for forward work planning CCCF discussed food packaging and food contact materials noting that these compounds are covered by the scope of the definition of a contaminant (CX/CF 19/13/18, Appendix D) (Canada, CX/CF 22/15/17)</u>
Acrylonitrile	Food	<del>ML</del> GL	1991	n/a	<u>List A.1 (priority 1)</u>	
Arsenic, total	Edible fats and oils	ML	<1980	n/a	<u>List A.1 (priority 1)</u>	<u>ML appears to have been transferred from the commodity standards &amp; not scientifically justified.</u> <u>Possible efficiencies with other work – i) ML for arsenic in fat spreads and blended spreads will be in List A.2 in 2023; ii) assessment of non-cancer effects of organic and inorganic arsenic on JECFA priority list (Canada, CX/CF 22/15/17)</u>
	<del>Fat spreads and blended spreads</del>	<del>ML</del>	<del>2007</del>			
	Salt, food grade	ML	1987		<u>List A.1 (priority 1)</u>	<u>Salt is widely consumed and traded</u> <u>Possible efficiencies gained by assessing the three trace element MLs in salt concurrently (Canada, CX/CF 22/15/17)</u>
Cadmium	Salt, food grade	ML	1987	n/a	<u>List A.1 (priority 1)</u>	<u>See Canada's comment for arsenic in salt</u>
<u>Mercury</u>	<u>Salt, food grade</u>	<u>ML</u>	<u>1987</u>	<u>n/a</u>	<u>List A.1 (priority 1) (revised) (Canada, CX/CF 22/15/17)</u>	<u>See Canada's comment for arsenic in salt</u>
Tin, total	Cooked cured chopped meat	ML	1981	CoP: CXC 60-2005	<u>List A.1 (priority 1)</u> <u>List B (priority 2) (revised) (Canada, CX/CF 22/15/17)</u>	<u>Possible efficiencies with other work – i) CoP for tin in canned foods packaged in tinfoil containers (CXC 60-2005) in List A.2; ii) MLs for tin in canned foods (250 mg/kg) and canned beverages (150 mg/kg) in tinfoil containers will be in List A.2 in 2023 (Canada, CX/CF 22/15/17)</u>
	Cooked cured ham	ML	1981			
	Cooked cured pork shoulder	ML	1981			
	Corned beef	ML	1981			
	Luncheon meat	ML	1981			



Contaminant	Food(s)	Type of Standard <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Rationale
<b>A.2 Established or Reviewed ≥15 and &lt;25 years ago (between 1997 and 2006)</b>						
<u>Aflatoxins, total</u>	<u>Peanuts intended for further processing</u>	<u>ML</u>	<u>1999</u>	<u>CoP: CXC 59-2005</u>	<u>List A.2 (priority 2) (revised) (Canada, CX/CF 22/15/17)</u>	<u>Aflatoxins are genotoxic carcinogens and should be ALARA in foods</u> <u>Possible efficiencies with other work – i) Aflatoxins in Peanuts CoP (CXC 55-2004) in List A.2 (Priority 2); ii) CCCF is currently elaborating an ML for aflatoxins in RTE peanuts (Canada, CX/CF 22/15/17)</u>
Aflatoxin M1	Milks	ML	2001	CoP: CXC 45-1997	<u>List A.2 (priority 2)</u>	<u>Aflatoxin M1 is a genotoxic carcinogen and should be ALARA in foods</u> <u>Possible efficiencies with other work – i) CoP for Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals (CXC 45-1997) in List A.2; ii) CoP for mycotoxins in cereals (CXC 51-2003) established in 2003 and since updated (Canada, CX/CF 22/15/17)</u>
Cadmium	Cereal grains	ML	2001	n/a	<u>List A.2 (priority 2)</u>	<u>JECFA91 2021 HRA only identified potential health concerns in certain Chinese age groups (Canada, CX/CF 22/15/17)</u>
	Legume vegetables	ML	2001			
	Pulses	ML	2001			
	Brassica vegetables	ML	2005			
	Bulb vegetables	ML	2005			
	Fruiting vegetables	ML	2005			
	Leafy vegetables	ML	2005			
	Root and tuber vegetables	ML	2005			
	Stalk and stem vegetables	ML	2005			
	Wheat	ML	2005			
	Cephalopods	ML	2006			
	Marine bivalve molluscs	ML	2006			
Rice, polished	ML	2006				
Patulin	Apple juice	ML	2003	CoP: CXC 50-2003	<u>List A.2 (priority 2)</u>	<u>Dated JECFA evaluation (JECFA44, 1995) removed from JECFA priority list in 2007 as ML was established and not high priority (ALINORM 07/30/41, para. 127)</u> <u>Possible efficiencies with other work – i) patulin in apple juice CoP (CXC 50-2003) in List A.2 (Canada, CX/CF 22/15/17)</u>

Contaminant	Food(s)	Type of Standard <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Rationale
Aflatoxin B1	Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals (CXC 45-1997)	CoP	1997	ML	<u>List A.2 (priority 2)</u>	<u>See entry for Aflatoxin M1 ML in milks</u>
Contamination (general)	Concerning Source Directed Measures to Reduce Contamination of Foods with Chemicals (CXC 49-2001)	CoP	2001	n/a	<u>List A.2 (priority 2)</u>	<u>See Canada's comment for Aflatoxin ML in peanuts for further processing</u>
Patulin	Apple Juice and Apple Juice Ingredients in Other Beverages (CXC 50-2003)	CoP	2003	ML	<u>List A.2 (priority 2)</u>	<u>See Canada's comment for Patulin ML for apple juice</u>
Aflatoxin	Peanuts (CXC 55-2004)	CoP	2004	ML	<u>List A.2 (priority 2)</u>	<u>See Canada's comment for Aflatoxin ML in peanuts for further processing</u>
Tin, inorganic	Canned Foods (CXC 60-2005)	CoP	2005	MLs	<u>List A.2 (priority 2)</u>	<u>Possible efficiencies with other work - i) the two MLs for tin in foods and beverages packaged in tinfoil packaging will be in List A.2 in 2023; there are 5 MLs for tin meats not packaged in tinfoil cans in List A.1 (Canada, CX/CF 22/15/17)</u>

n/a – not applicable

a - Refer to GSCFF for specific exclusions and other details.

b - Standards referred to include: Maximum Level (ML); Guideline Level (GL); Code of Practice (CoP); relevant Codex commodity standards are not included.

c - The year the standard was initially established, and, if applicable, most recently reviewed by CCCF. A 'review' involves a full assessment of available data and information, which may or may not result in the standard being changed; a review would not include several standards being consolidated or when a standard is discussed, moved (e.g. from a commodity standard into the GSCFF), its description is edited for clarity, etc.

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## List B: Codex Contaminant Standards Recommended for Re-Evaluation (the standards within the lists are not presented in order of priority)

Contaminant	Food	Type of Standard <sup>a</sup>	Year Established <sup>b</sup>	Year of Recommended Re-Evaluation <sup>c</sup>	Rationale for Recommended Re-Evaluation	Prioritization Criteria <sup>d</sup> Cited	Other Comments or Rationale
Lead	Milk	ML	2001 (reviewed in 2013)	Not specified	“The Committee agreed to retain the current MLs of 0.02 mg/kg (milks) and 0.2 mg/kg (cereals). The Committee noted that the ML for milk might be reviewed in future when new data became available and might be revised in light of the review of the MLs for <b>secondary</b> milk products. The Committee also noted that if different MLs would be considered for cereal grains in future, stricter MLs could be applied to certain cereal grains in light of available data.” (REP13/CF, para. 28-29)	<b><u>New occurrence data available (priority 1)</u></b> <b>(Canada, CX/CF 22/15/17)</b>	
	Cereal grains	ML	2001 (reviewed in 2013)	Not specified		<b><u>New occurrence data available (priority 1)</u></b> <b>(Canada, CX/CF 22/15/17)</b>	
	Table olives	ML	2016	Not specified	“The Committee agreed to lower the ML from 1 mg/kg to 0.4 mg/kg; to re-evaluate table olives in future when more data became available, and to revoke the previous ML.” (REP16/CF, para. 77)		
	Jams, jellies, marmalades	ML	2017	Not specified	“The Committee thus agreed to lower the ML to 0.4 mg/kg and to re-evaluate jams, jellies and marmalades in [the] future when more data became available.” (REP17/CF, -evaluate jams, jellies and para. 61)		
Acetylated Deoxynivalenol Derivatives	Cereals & cereal-based products	ML	2015	Not specified	“The Committee...agreed that it was premature to continue with work on the extension of the MLs for DON in cereals and cereal products to its acetylated derivatives. The Committee encouraged members to continue collecting and submitting data on occurrence of acetylated DON to GEMS/Food and noted the need for development of an internationally validated method for analysis of acetylated DON. The Committee agreed that...when further information became available, it could be considered as part of the discussion on the MLs for DON in cereals and cereal-based products.” (REP 14/CF, para. 61-62)	<b><u>New occurrence data available (priority 1)</u></b> <b>(EU, CX/CF 22/15/17)</b> <b>(Canada, CX/CF 22/15/17)</b> <b>(Japan, CX/CF 22/15/17)</b>	
Fumonisin <b>(B1 + B2)</b>	Maize flour & maize meal	ML	2014	2017	<p><b><u>“Maize grain unprocessed: African delegations indicated that the establishment of MLs for maize was long overdue and necessary to protect consumer health, especially since maize was a staple food in most parts of the continent. These delegations however could not support the proposed ML of 5 000 µg/kg as this would not be health protective.” (REP14/CF, para. 64)</u></b></p> <p><b><u>Maize flour/meal: 67. There was wide support for the proposed ML of 2 000 µg/kg for maize flour and maize meal. African delegations, however, proposed an ML of 1 000 µg/kg for similar reasons as indicated in the discussion on the raw maize grains, and in addition these delegations questioned whether data from Africa had been considered. Further questions were raised on the cluster diets, noting that it wasn’t necessarily reflective of actual dietary intake in many countries. 68. The JECFA Secretariat clarified that JECFA had undertaken an impact assessment of the different proposed MLs and that the different estimated exposures between the MLs of 2 000 and 1 000 µg/kg would be very low, however the rejection rate was very different. So aspects of food security and food safety had to be carefully considered and balanced.</u></b></p>	<b><u>New occurrence data available (priority 1)</u></b> <b>(Canada, CX/CF 22/15/17)</b>	

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					<p><b><u>Moreover, in JECFA's analyses the highest daily average consumption applied from one of the GEMS/Food cluster diets was about 300 g of maize per person per day, and overall 11% of the samples considered were from African countries (over 12 000 samples). 69. In noting the need for the ML and progress on this work, and in the spirit of compromise, African delegations, while having a preference for 1 000 µg/kg, agreed to the ML of 2 000 µg/kg." (REP14/CF, para. 67-69)</u></b></p> <p>"...the Committee agreed that the ML of 4 000 µg/kg for raw <b>[maize]</b> cereal grains and 2 000 µg/kg for maize flour and maize meal were ready for adoption by the Commission. In relation to the ML for maize flour and maize meal, the Committee agreed that these would be advanced for adoption with the understanding that exposure and impact assessment should be undertaken by JECFA within three years for reconsideration of the levels." (REP14/CF, para. 71)</p> <p>"The Committee <b>[JECFA 83 (2016)]</b> reviewed the studies that have become available since the previous evaluation in 2011, and concluded that they would not change the overall toxicological assessment performed previously by the Committee. Thus, the previously established group PMTDI of 2 µg/kg bw for FB1, FB2 and FB3, alone or in combination, was retained by the current Committee. The Committee noted that the international exposure estimates for FB1 and total fumonisins were lower than those estimated by the Committee at its seventy-fourth meeting in 2011. In the current assessment, a larger part of the occurrence data was from countries belonging to the WHO European Region compared with 2011, resulting in lower overall fumonisin levels in maize. In the current assessment, no information on fumonisin levels in maize was available from countries belonging to the African, Eastern Mediterranean or South-East Asia regions, where higher fumonisin concentrations are typically detected." (JECFA/83/SC) (2016)</p> <p>"The Committee agreed to...call upon countries belonging to the African, Eastern Mediterranean or South-East Asia regions to provide to GEMS/Food contaminants database information on fumonisin levels in maize and to record this in the report of the meeting." (REP17/CF para. 151)</p>		
Inorganic Arsenic	Husked rice	ML	2016	2020	<p>"The Committee agreed to advance the ML of 0.35 mg/kg for husked rice for adoption by CAC39 on the understanding that the ML would be reviewed three years after the implementation of the <i>Code of Practice for prevention and reduction of arsenic in rice</i> [CXC 77-2017], and would take into account all available data to clearly lower the ML of 0.35 mg/kg." (REP16/CF, para. 44)</p>	<p><b><u>New occurrence data available (priority 1)</u></b> <b><u>(EU, CX/CF 22/15/17)</u></b> <b><u>(Japan, CX/CF 22/15/17)</u></b></p>	
Methylmercury	Tuna	ML	2018	2021	<p><b><u>"The EU expressed the view that it could not agree for the time being with any of the MLs proposed as the levels were higher than those currently in force in the EU and would result in higher exposure to mercury which was a public health concern. This view was supported by Switzerland and Norway."</u></b> <b><u>(REP18/CF, para 72)</u></b></p>	<p><b><u>New occurrence data available (priority 1)</u></b> <b><u>(EU, CX/CF 22/15/17)</u></b> <b><u>(Canada, CX/CF 22/15/17)</u></b> <b><u>(Japan, CX/CF 22/15/17)</u></b></p>	

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					<p><u>“ML for tuna: CCCF first considered the ML based on P95 (1.1 mg/kg) and noted that while there was some support for this ML because it would be more protective for health, that many delegations believed the rejection rate of 5% was too high, and that the ML of 1.2 mg/kg or other higher MLs such as 1.7 mg/kg should be considered which would result in lower rejection rates. Views were also expressed that the ML for tuna should be set based on the species of tuna with high mercury content, such as Bigeye or Bluefin tuna. The ML of 1.2 mg/kg was proposed as a compromise as this was based on the data of all tuna species but with a next lower rejection rate than 5%.” (REP18/CF, para. 74)</u></p> <p><u>“CCCF agreed on an ML of 1.2 mg/kg. EU, Switzerland and Norway expressed their reservation to this decision for the reasons given in paragraph 72.” (REP18/CF, paras. 75-76)</u></p> <p><u>“The EU, supported by Norway and Switzerland, expressed its reservation regarding all the MLs for the reasons contained in CX/CAC 18/41/4.” (REP18/CAC, para. 34).</u></p> <p><u>“The European Union reiterates its reservation on the adoption at step 5/8 of the MLs for all tuna, alfoncino, marlin and shark. All these MLs have been increased from the current Codex Guideline Level (GL) of 1 mg/kg. ... MLs proposed as the levels are higher than those currently in force in the EU and would result in higher exposure to mercury which is a serious public health concern.” (CX/CAC 18/41/4, para 34).</u></p> <p><u>Colombia and Cuba also reserved their position on the final adoption of all the MLs, supporting instead adoption at Step 5 and further consideration in CCCF. Cuba further noted that, according to their national regulation, the proposed MLs would not sufficiently protect the health of the Cuban population.” (REP18/CF, para. 35)</u></p> <p><u>“Ecuador expressed a reservation on the setting of one single ML for methylmercury for all tuna species on the grounds that data used in establishing the ML did not take into account certain eastern Pacific tuna species with higher methylmercury concentrations. ... If adopted, the ML should be revised after three years based on available data with a view to establishing a more globally representative ML.” (REP18/CF, para. 37).</u></p> <p><u>“The Commission adopted the proposed MLs [for methylmercury in tuna, alfoncino, marlin and shark], noting the reservations expressed by Cuba, Colombia, Ecuador, EU, Norway, Senegal and Switzerland, and agreed that CCCF could consider revising the ML for tuna in the light of additional data after three years.” (REP18/CAC, para. 39)</u></p>		

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					<p><u>“The Commission adopted the proposed MLs [for methylmercury in tuna, alfonsino, marlin and shark], noting the reservations expressed by Cuba, Colombia, Ecuador, EU, Norway, Senegal and Switzerland, and agreed that CCCF could consider revising the ML for tuna in the light of additional data after three years.” (REP18/CAC, para. 39)</u></p> <p><u>Note that Sengal didn’t express reservation for the tuna ML, but for other species.</u></p>		
Arsenic	Rice	CoP: CXC 77-2017	2017	2019	<p>“A delegation stated that they did not have any objections to the adoption of the COP. However, as the results of several ongoing studies would be available in 2019, the additional information gained from these studies might need to be added to this COP in order to make it more understandable and more practical. Thus, the delegation noted that there would be a need to revise the COP in 2019 when the outcome from ongoing studies became available.”(REP17/CF, para. 102)</p>	<p><u>New information on prevention measures of arsenic contamination in rice (priority 2)</u> <u>(Japan, CX/CF 22/15/17)</u></p>	
<u>Aflatoxin M1</u>	<u>Milks</u>	<u>ML</u>	<u>2001</u>	<u>Not specified</u>	<p><u>“The delegation of Belgium, speaking on behalf of the European Community, objected to the level of 0.5 µg/kg because in the case of genotoxic carcinogens, exposure at any level might pose a health risk to consumers, in particular children, and that the level should therefore be as low as reasonably achievable. Other delegations supported the level of 0.5 µg/kg as proposed, especially in view of the determination of the JECFA that with worst-case assumptions, the additional risks for liver cancer predicted with the use of the proposed maximum levels of aflatoxin M1 of 0.05 and 0.5 µg/kg were very small. The Delegation of Bolivia stated that if the lower level would be fixed, it would create unjustified barriers to trade without affecting the risks to consumers’ health.</u></p> <p><u>The Commission could not reach a consensus on this issue.</u></p> <p><u>In view of the importance of establishing a level for the health protection of consumers, and in consideration that the higher level provided an adequate level of protection as determined by the Committee on Food Additives and Contaminants, the Commission adopted the maximum level of 0.5 µg/kg in milk. It was agreed that data supporting the lower level, if and when available, could be examined by the Committee on Food Additives and Contaminants at a future meeting if necessary. The member states of the EU, as well as the delegations of Cyprus, Estonia, Ghana, Hungary, Nigeria, Norway, Poland, South Africa, Swaziland and Switzerland expressed their reservations on this decision. The Representative of Consumers International also expressed the concern of that organization at the decision taken.” (ALINORM 01/41, paras. 127-129)</u></p>	<p><u>List B (priority 2) (revised)</u> <u>(Canada, CX/CF 22/15/17)</u></p>	<p><u>Aflatoxin M1 is a genotoxic carcinogen and should be ALARA in foods</u></p> <p><u>Possible efficiencies with other work – i)</u> <u>CoP for Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals (CXC 45-1997) in List A.2; ii)</u> <u>CoP for mycotoxins in cereals (CXC 51-2003) established in 2003 and since updated (Canada, CX/CF 22/15/17)</u></p>

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Patulin	<u>Apple Juice Whole commodity (not concentrated) or commodity reconstituted to the original juice concentration</u>	ML	2003	2007	<u>"The Commission noted that the Committee on Food Additives and Contaminants had discussed the development of the proposed maximum level of 50 µg/kg of patulin with a view to establishing a lower level of 25 µg/kg in the future based on the application of the Code of Practice which was aimed at achieving lower patulin levels. The Commission supported the decision of the Committee to continue to collect data on the levels of patulin in apple juice and apple juice ingredients for other beverages with the aim of reconsidering a possible reduction of the maximum level once the code of practice had been implemented (after four years)." (ALINORM 03/41, para. 43) (CAC26 (2003))</u>	List B (priority 2) (revised) (Canada, CX/CF 22/15/17)	<u>Dated JECFA evaluation (JECFA44, 1995) removed from JECFA priority list in 2007 as ML was established and not high priority (ALINORM 07/30/41, para. 127)</u> <u>Possible efficiencies with other work – i) patulin in apple juice CoP (CXC 50-2003) in List A.2 (Canada, CX/CF 22/15/17)</u>
<u>Tin, total</u>	<u>Cooked cured chopped meat*</u>	ML	1981	Not specified	<u>"However, the 23rd Session of the Codex Committee on Food Additives and Contaminants had only temporarily endorsed the contaminant provisions for lead and tin, as they were felt to be excessively high. Several delegations reiterated their reservations on the high levels established for contaminants derived from the packaging material in this and the other Draft Standards before the Commission." (ALINORM 91/40, para. 321)</u> <u>"The Commission adopted the Draft Revised Standard for [canned meat X] at Step 8, as contained in Appendix [#] of ALINORM 91/16, with the understanding that the contaminant provisions for lead and tin would remain as temporarily endorsed, pending a review by the Codex Committee on Food Additives and Contaminants and the Secretariat in the future. (ALINORM 91/40, paras. 322, 324, 326, 328, 330)</u>	List B (priority 2) (revised) (Canada, CX/CF 22/15/17)	
	<u>Cooked cured ham*</u>						
	<u>Cooked cured pork shoulder*</u>						
	<u>Corned beef*</u>						
	<u>Luncheon meat*</u>						
	<u>*ML applies to products in containers other than tinplate containers</u>						

a - ML: Maximum Level; GL: Guideline Level; CoP: Code of Practice

b - The year the standard was initially established, and, if applicable, most recently reviewed by CCCF. A 'review' involves a full assessment of available data and information, which may or may not result in the standard being changed; a review would not include several standards being consolidated or when a standard is discussed, moved (e.g. from a commodity standard into the GSCTFF), or its description is edited for clarity, etc.

c - Prioritization criteria most recently agreed to for the prioritization of existing Codex standards for possible review

## Annex II

## Codex Contaminant Standards Identified as Overall Highest Priority for Review from Lists A.1, A.2 and B

(Last Updated 26-April-2022)

(the standards within the lists are not presented in order of priority)

Contaminant	Food(s)	Type of Standard (ML or GL value or CoP No.) <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard (List) <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Information	Recommended by (document no.)	Volunteer
Acetylated Deoxynivalenol Derivatives	Cereals & cereal-based products	ML (ML not extended AcDON)	2015	CoP - CXC 51-2003	List B (priority 2) New occurrence data available (priority 1) (EU, CX/CF 22/15/17) (Japan, CX/CF 22/15/17) (Canada, CX/CF 22/15/17)		European Union (CX/CF 22/15/17) Republic of Korea (CX/CF 22/15/17)	
Acrylonitrile	Food	GL (0.02 mg/kg)	1991	n/a	List A.1 (priority 1)	Raw materials in manufacture of plastic packaging which is commonly used in Kenya for water piping, primary packaging of most foods and drinking water (Kenya, CX/CF 22/15/17)  Appear to be well managed and not detected in foods (Canada, CX/CF 22/15/17)	Kenya (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	
Aflatoxin M1	Milks	ML (0.5 µg/kg)	2001	CoP - CXC 45-1997	List A.2 (priority 2) List B (priority 2) (revised) New occurrence data available (priority 1) (EU, CX/CF 22/15/17)	Consider simultaneous update of the Code of Practice "Raw Materials and Supplemental Feedingsuffs for Milk-Producing Animals (CXC 45-1997)" (EU, CX/CF 22/15/17)  The basic raw materials for dairy animal feed stuffs are cereal in nature and due to the climatic conditions (tropical humid) of Kenya they are prone to aflatoxin contamination. Therefore there is a risk of aflatoxin M1 as a metabolite of B1. Under unsuitable storage conditions, the levels of aflatoxin may increase significantly (Kenya, CX/CF 22/15/17) Aflatoxin M1 is a genotoxic carcinogen and should be ALARA in foods  Possible efficiencies with other work – i) CoP for Raw Materials and Supplemental Feedingsuffs for Milk-Producing Animals (CXC 45-1997) in List A.2; ii) CoP for mycotoxins in cereals (CXC 51-2003) established in 2003 and since updated (Canada, CX/CF 22/15/17)	European Union (CX/CF 22/15/17) Kenya (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	



Contaminant	Food(s)	Type of Standard (ML or GL value or CoP No.) <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard (List) <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Information	Recommended by (document no.)	Volunteer
Aflatoxin B1	Raw Materials and Supplemental Feedingstuffs for Milk-Producing Animals (CXC 45-1997)	CoP	1997	ML - Aflatoxin M1 in Milks (List A.2 & List B)	List A.2 (priority 2)	See entry for Aflatoxin M1 ML in milks	Kenya (CX/CF 22/15/17) European Union (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	
Aflatoxins (total)	Peanuts intended for further processing	ML (15 µg/kg)	1999	CoP: CXC 59-2005	List A.2 (priority 2) (revised)	Aflatoxins are genotoxic carcinogens and should be ALARA in foods. Possible efficiencies with other work – i) Aflatoxins in Peanuts CoP (CXC 55-2004) in List A.2 (Priority 2); ii) CCCF is currently elaborating an ML for aflatoxins in RTE peanuts (Canada, CX/CF 22/15/17)	Canada (CX/CF 22/15/17)	
Aflatoxins (total)	Peanuts (CXC 55-2004)	CoP	2004	ML - Aflatoxins in peanuts intended for further processing (List A.2)	List A.2 (priority 2)	Peanuts are susceptible to <i>Aspergillus</i> spp and therefore are naturally prone to aflatoxin contamination. See Canada's comment for Aflatoxins in Peanuts for further processing ML	Kenya (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	
Arsenic	Edible fats and oils	ML (0.08 mg/kg)	<1980	n/a	List A.1 (priority 1)	ML appears to have been transferred from the commodity standards & not scientifically justified. Possible efficiencies with other work – i) ML for arsenic in fat spreads and blended spreads will be in List A.2 in 2023; ii) assessment of non-cancer effects of organic and inorganic arsenic on JECFA priority list (Canada, CX/CF 22/15/17)	Canada (CX/CF 22/15/17) Republic of Korea (CX/CF 22/15/17)	
Arsenic	Husked Rice	ML (0.35 mg/kg)	2016 (recommended for review in 2020)	CoP - CXC 77-2017	List B (priority 2) New occurrence data available (priority 1) (EU, CX/CF 22/15/17) (Japan, CX/CF 22/15/17)	ML review should await the completion of the JECFA evaluation (Japan, CX/CF 22/15/17)	EU (CX/CF 22/15/17)	
Arsenic	Rice	CoP - CXC 77-2017	2017	MLs – Arsenic in polished and husked rice	List B (priority 2) New information on prevention measures (priority 2) (Japan, CX/CF 22/15/17)		Republic of Korea (CX/CF 22/15/17)	

Contaminant	Food(s)	Type of Standard (ML or GL value or CoP No.) <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard (List) <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Information	Recommended by (document no.)	Volunteer
Arsenic	Salt	ML (0.5 mg/kg)	1987	n/a	List A.1 (priority 1) (revised)	Salt is widely consumed and traded Possible efficiencies gained by assessing cadmium, mercury and arsenic in salt concurrently (Canada, CX/CF 22/15/17)	Canada (CX/CF 22/15/17) Republic of Korea (CX/CF 22/15/17)	
Cadmium	Salt	ML (0.5 mg/kg)	1987	n/a	List A.1 (priority 1)	See Canada's entry for Arsenic in Salt ML	Canada (CX/CF 22/15/17)	
Cadmium	Legume Vegetables	ML (0.1 mg/kg)	2001		List A.2 (priority 2) New occurrence data, dietary exposure, HBGV, updated JECFA HRA available (EU, CX/CF 22/15/17)	Consider first drafting a CoP for the mitigation of cadmium in crops, followed by a data collection on products and possible review of the MLs after the application the CoP (EU, CX/CF 22/15/17)	European Union (CX/CF 22/15/17)	
Cadmium	Pulses	ML (0.1 mg/kg)	2001					
Cadmium	Wheat	ML (0.2 mg/kg)	2005					
Cadmium	Cephalopods	ML (2 mg/kg)	2006					
Cadmium	Marine bivalve molluscs	ML (2 mg/kg)	2006					
Cadmium	Rice, polished	ML (0.4 mg/kg)	2006					
Contamination (general)	Concerning Source Directed Measures to Reduce Contamination of Foods with Chemicals (CXC 49-2001)	CoP	2001	n/a	List A.2 (priority 2)		USA (CX/CF 22/15/17)	USA
Fumonisin (B1 + B2)	Maize flour & maize meal	ML (2000 µg/kg)	2014 (recommended for re-evaluation in 2017)	CoP - CXC 51-2003	List B (priority 2) New occurrence data available (priority 1) (Canada, CX/CF 22/15/17)	Maize are susceptible to <i>Fusarium moniliforme</i> and <i>Fusarium verticillioides</i> and therefore are naturally prone to fumonisin contamination. Maize flour and maize meal is a staple food in Kenya.	Kenya (CX/CF 22/15/17)	
Lead	Cereal grains	ML (0.2 mg/kg)	2001 (reviewed In 2013)	n/a	List B (priority 2)		Republic of Korea (CX/CF 22/15/17)	
Mercury	Salt	ML (0.1 mg/kg)	1987	n/a	List A.1 (priority 1) (revised)	See Canada's entry for Arsenic in Salt ML	Canada (CX/CF 22/15/17) Republic of Korea (CX/CF 22/15/17)	

Contaminant	Food(s)	Type of Standard (ML or GL value or CoP No.) <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard (List) <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Information	Recommended by (document no.)	Volunteer
Methylmercury	Tuna	ML	2018 (recommended for re-evaluation in 2021)	n/a	List B (priority 2) New occurrence data available (priority 1) (EU, CX/CF 22/15/17) (Canada, CX/CF 22/15/17) (Japan, CX/CF 22/15/17)	Aligns with ongoing CCCF work to elaborate MLs for methylmercury in fish and developing a sampling plan (Canada, CX/CF 22/15/17)	Canada (CX/CF 22/15/17) European Union (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	
Patulin	Apple juice	ML (50 µg/kg)	2003	CoP - CXC 50-2003 (List A.2)	List A.2 (priority 2) List B (revised)	Either extension to apple products other than apple juice (no JECFA evaluation needed) or review of juice ML (JECFA evaluation may be required) (USA, CX/CF 22/15/17)  Dated JECFA evaluation (JECFA44, 1995) removed from JECFA priority list in 2007 as ML was established and not high priority (ALINORM 07/30/41, para. 127). Possible efficiencies with other work – i) patulin in apple juice CoP (CXC 50-2003) in List A.2 (Canada, CX/CF 22/15/17)	USA (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	
Patulin	Apple Juice and Apple Juice Ingredients in Other Beverages (CXC 50-2003)	CoP	2003	ML – Patulin in apple juice	List A.2 (priority 2)	Apples are prone to infection by penicillium, aspergillus and byssoschlamys spp that may contaminate apple and apple products. Kenya imports a lot of apple products (Kenya, CX/CF 22/15/17)  See Canada's comment for Patulin ML for apple juice	Kenya (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	
Tin, total	Cooked cured chopped meat	ML (50 mg/kg)	1981	CoP - CXC 60-2005	List A.2 (priority 1) List B (priority 2) (revised)	Possible efficiencies with other work – i) CoP for tin in canned foods packaged in tinfoil containers (CXC 60-2005) in List A.2; ii) MLs for tin in canned foods (250 mg/kg) and canned beverages (150 mg/kg) in tinfoil containers will be in List A.2 in 2023 (Canada, CX/CF 22/15/17)	Canada (CX/CF 22/15/17) Republic of Korea (CX/CF 22/15/17)	
	Cooked cured ham							
	Cooked cured pork shoulder							
	Corned beef							
	Luncheon meat							
Tin, inorganic	Canned Foods (CXC 60-2005)	CoP	2003	MLs	List A.2 (priority 2)	Possible efficiencies with other work - i) the two MLs for tin in foods and beverages packaged in tinfoil packaging will be in List A.2 in 2023; there are 5 MLs for tin meats not packaged in tinfoil cans in List A.1 (Canada, CX/CF 22/15/17)	Canada (CX/CF 22/15/17)	

Contaminant	Food(s)	Type of Standard (ML or GL value or CoP No.) <sup>a</sup>	Year Established <sup>b</sup>	Corresponding Standard (List) <sup>a</sup>	Prioritization Criteria <sup>c</sup> Cited	Other Comments or Information	Recommended by (document no.)	Volunteer
Vinyl chloride	Food	GL (0.01 mg/kg)	1991	n/a	List A.1 (priority 1)	Raw materials in manufacture of plastic packaging which is commonly used in Kenya for water piping, primary packaging of most foods and drinking water (Kenya, CX/CF 22/15/17) Appear to be well managed and not detected in foods (Canada, CX/CF 22/15/17)	Kenya (CX/CF 22/15/17) Canada (CX/CF 22/15/17)	

a - ML: Maximum Level; GL: Guideline Level; CoP: Code of Practice

b - The year the standard was initially established, and, if applicable, most recently reviewed by CCCF. A 'review' involves a full assessment of available data and information, which may or may not result in the standard being changed; a review would not include several standards being consolidated or when a standard is discussed, moved (e.g. from a commodity standard into the GSCTFF), or its description is edited for clarity, etc.

c - Prioritization criteria most recently agreed to for the prioritization of existing Codex standards for possible review

## Annex III

PRIORITIZATION OF CRITERIA FOR IDENTIFYING CODEX STANDARDS FOR REVIEW Criteria <sup>1</sup> for identifying Codex standards for review	Likelihood of indicating a potential safety concern <sup>b</sup>	Overall proposed prioritization for review by CCCF 1 – highest priority 2 – medium priority 3 – lowest priority
<i>Criteria for Maximum levels, Guideline Levels and Codes of Practice</i>		
Established or Reviewed ≥15 and <25 years ago <sup>c</sup>	Low to moderate	2
Established or Reviewed ≥25 years ago <sup>c</sup>	Moderate to high	1
Recommended for re-evaluation: <del>by</del> CCCF, CAC or a member country <u>recommended the standard for re-evaluation</u> within a certain period of time or at an unspecified future date.	Low to Moderate	2
<u>Staple food: The food commodity that the standard applies to is a staple food.</u>	<u>Moderate to high</u>	<u>1</u>
<u>Developing countries: Standards relevant to the needs of developing countries.</u>	<u>Moderate to high</u>	<u>1</u>
New occurrence data are available: Occurrence data identified by CCCF or its member countries and/or submitted to the GEMS/Food database are significantly different <sup>d</sup> across two or more regions or markets than those used to establish the existing ML or GL.	Moderate to high	1
New dietary exposure data are available: CCCF, JECFA, or other relevant joint FAO/WHO expert consultations recognized by CCCF developed new dietary exposure estimates or revised existing estimates that are significantly different <sup>d</sup> than the previous estimates that were used to establish the existing ML or GL.	Moderate to high	1
A new health-based guidance value (HBGV) is available: Either JECFA, upon request by CCCF, or other relevant joint FAO/WHO expert consultations recognized by CCCF developed a new HBGV, revised an existing HBGV that is significantly different <sup>d</sup> than the previous HBGV that was used to establish the existing ML or GL, or withdrew an existing HBGV.	Moderate to high	1
A new or updated health risk assessment is available: <del>Either from</del> JECFA or other relevant joint FAO/WHO expert consultations recognized by CCCF <u>published a health risk assessment</u> and the conclusions are significantly different <sup>d</sup> than the previous evaluation.	Moderate to high	1
<u>Efficiencies with other work: Standard review involving the same or similar commodity or the same contaminant is underway or commencing.</u>	n/a	2
<u>Member country volunteer: A Codex member country volunteers to take on the work to draft a discussion paper outlining any proposed changes to the Codex standard</u>	n/a	2
<i>Additional Criteria for Maximum Levels</i>		
Codex commodity standards: Significant <sup>d</sup> revisions have been made to the commodity standards for relevant foods or food groups for which MLs are established.	n/a	3

<b>PRIORITIZATION OF CRITERIA FOR IDENTIFYING CODEX STANDARDS FOR REVIEW</b> <b>Criteria<sup>1</sup> for identifying Codex standards for review</b>	<b>Likelihood of indicating a potential safety concern<sup>b</sup></b>	<b>Overall proposed prioritization for review by CCCF</b> 1 – highest priority 2 – medium priority 3 – lowest priority
<b>Codex Classification of Food and Feed (CXM 4-1989):</b> Significant <sup>d</sup> revisions have been made to this document for relevant foods or food groups for which MLs are established.	n/a	3
<b>Trade disruptions:</b> An existing ML for a certain food and contaminant combination is responsible for disruptions in international trade.	n/a	2 <del>1 – when involving a trade disruption of a staple food</del>
<b>Additional Criteria for Codes of Practice</b>		
<b>Technological advances and developments:</b> Significant <sup>d</sup> new information is available on contamination sources or processes, and/or agricultural, production and manufacturing practices related to food or feed contaminant management and control.	n/a	2
<b>Expanded scope:</b> CoP could include other contaminants or toxins, or food or feed, with comparable contamination sources or processes, and/or agricultural, production and manufacturing practices.	n/a	3
<b>Comparable CoP updated:</b> Updates to a CoP for a similar food or feed and contaminant combination may be transferable to another CoP or make an existing CoP redundant.	n/a	3

n/a – not applicable

a - Certain criteria may overlap, particularly those relating to the various elements of a health risk assessment.

b - Potential safety concern would be determined once any new data and scientific information are assessed.

c - The year the standard was initially established, and, if applicable, most recently reviewed by CCCF. A 'review' involves a full assessment of available data and information, which may or may not result in the standard being changed; a review would not include several standards being consolidated or when a standard is discussed, moved (e.g. from a commodity standard into the GSCTFF), or its description is edited for clarity, etc.

d - The significance would be determined on a case-by-case basis by CCCF