



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda Item 2

CX/CF 25/18/2-Add.1

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

Eighteenth Session

23-27 June 2025

Bangkok, Thailand

MATTERS REFERRED TO THE COMMITTEE BY THE CODEX ALIMENTARIUS COMMISSION AND/OR ITS SUBSIDIARY BODIES

FOR INFORMATION

44th Session of the Codex Committee on Methods of Analysis and Sampling (5 - 8 May and 14 May 2025)

Information document: *General guidelines on sampling* (CXG 50-2004) – e-book with sampling plans applications¹

1. The 44th Session of the Codex Committee on Methods of Analysis and Sampling (CCMAS44) agreed to publish the "Information document for the *General guidelines on sampling* (CXG 50-2004)" on the Codex website and remove the current information document titled "Practical examples of sampling plans". This information document has been developed to support the implementation of the revised *General guidelines on sampling* (CXG 50-2004).

Development of sampling plans for lots consisting of bulk material/heterogeneous lots, including for mycotoxins²

2. As part of its ongoing work on the review of sampling plans, CCMAS44 agreed to develop a discussion paper on sampling plans for bulk materials/heterogeneous lots, including for mycotoxins, for consideration by CCMAS45.
3. CCCF will be kept informed of this work, and there will be consultation between CCMAS and CCCF as the work progresses.

FOR ACTION

Editorial amendment to the *General standard for contaminants in food and feed* (CXS 193-1995)

4. The 37th Session of the Codex Committee on Food Additives and Contaminants (CCFAC37, 2005) agreed to request the 28th Session of the Codex Alimentarius Commission (CAC28, 2005) to revoke the *Guideline levels for radionuclides in foods following accidental nuclear contamination for use in international trade* (CXG 5-1989).³
5. CAC28 noted that Codex Maximum/Guideline Levels for Contaminants were incorporated in Schedule I of CXS 193, which had not been officially forwarded for adoption by the Commission. Therefore, the Commission agreed to postpone the revocation of individual Codex Maximum/Guideline Levels as proposed by the Committee to its next session, pending submission by CCFAC of Schedule I of CXS 193 to the Commission.⁴
6. CCFAC38 (2006) further agreed to forward revised Guideline levels for radionuclides in foods contaminated following a nuclear or radiological emergency for use in international trade to CAC29 (2006), for adoption at Step 5/8 (with the omission of Steps 6 and 7), and inclusion in CXS 193.⁵
7. CAC29 adopted these guideline levels at Step 5/8 (with the omission of Steps 6/7) and revoked CXG 5-1989 at the same time.⁶
8. As a consequence, CXG 5-1989 has been superseded by the guideline levels in CXS 193-1995. The Codex Secretariat has proposed an editorial amendment to Annex X and footnote (i) of CXS 193-1995 to clarify this. The proposed editorial amendments are contained in the Appendix of this document.

¹ REP25/MAS44, paragraph 100 (i-ii)

² REP25/MAS44, paragraphs 113 - 119

³ ALINORM 05/28/12, paragraph 124 and Appendix XVIII

⁴ ALINORM 05/28/41, para. 90

⁵ ALINORM 06/29/12, paras. 195-198 and Appendix XXXI

⁶ ALINORM 06/29/41, paras. 63-66, Appendix IV and Appendix VII

9. The editorial amendment consists of deleting the paragraph referencing the adoption of CXG 5-1989 and its associated footnote as no longer relevant following revocation of CXG 5-1989 by CAC29. Additionally, this paragraph does not provide any technical information, but rather outdated historical data, on the GLs. Information on the history of provisions in CXS 193 is kept in the reports of CCCF and CAC, and the information document INF/DOC1 is presented at every session of CCCF.

RECOMMENDATIONS

10. CCCF18 is invited to:
- (i) note the matters for information;
 - (ii) take into account the ongoing work in CCMAS in paragraph 2 when considering the further review of sampling plans in the *General standard for contaminants and toxins in food and feed* (CXS 193-1995) (see Agenda item 19); and
 - (iii) forward the editorial amendments in the Appendix to CAC48 for adoption.

APPENDIX

EDITORIAL AMENDMENTS TO ANNEX X OF CXS 193-1995

Note: Deletions are indicated in **bold** and ~~striketrough~~.

Annex X

**SCIENTIFIC JUSTIFICATION FOR THE GUIDELINE LEVELS FOR RADIONUCLIDES IN FOODS CONTAMINATED
FOLLOWING A NUCLEAR OR RADIOLOGICAL EMERGENCY**

The guideline levels for radionuclides in foods and specifically the values presented in Table 1 above are based on the following general radiological considerations and experience of application of the existing international and national standards for control of radionuclides in food.

~~Significant improvements in the assessment of radiation doses resulting from the human intake of radioactive substances have become available since the guideline levels were issued by the Codex Alimentarius Commission in 1989¹ (CXG 5-1989).~~

Infants and adults: The levels of human exposure resulting from consumption of foods containing radionuclides listed in Table 1 at the suggested guideline levels have been assessed both for infants and adults and checked for compliance with the appropriate dose criterion.

In order to assess public exposure and the associated health risks from intake of radionuclides in food, estimates of food consumption rates and ingestion dose coefficients are needed. It is assumed that 550 kg of food is consumed by an adult in a year. The value of infant food and milk consumption during first year of life used for infant dose calculation equal to 200 kg is based on contemporary human habit assessments. The most conservative values of the radionuclide-specific and age-specific ingestion dose coefficients, i.e. relevant to the chemical forms of radionuclides which are most absorbed from the gastro-intestinal tract and retained in body tissues, are taken from the IAEA.

Radiological criterion: The appropriate radiological criterion, which has been used for comparison with the dose assessment data below, is a generic intervention exemption level of around 1 mSv for individual annual dose from radionuclides in major commodities, e.g. food, recommended by the International Commission on Radiological Protection as safe for members of the public.

Naturally-occurring radionuclides: Radionuclides of natural origin are ubiquitous and as a consequence are present in all foodstuffs to varying degrees. Radiation doses from the consumption of foodstuffs typically range from a few tens to a few hundreds of microsieverts in a year. In essence, the doses from these radionuclides when naturally present in the diet are unamenable to control; the resources that would be required to affect exposures would be out of proportion to the benefits achieved for health. These radionuclides are excluded from consideration in this document as they are not associated with emergencies.

One-year exposure assessment: It is conservatively assumed that during the first year after major environmental radioactive contamination caused by a nuclear or radiological emergency, it might be difficult to readily replace foods imported from contaminated regions with foods imported from unaffected areas. According to FAO statistical data, the mean fraction of major foodstuff quantities imported by all the countries worldwide is 0.1. The values in Table 1 as regards foods consumed by infants and the general population have been derived to ensure that if a country continues to import major foods from areas contaminated with radionuclides, the mean annual internal dose of its inhabitants will not exceed around 1 mSv (see Annex XI). This conclusion might not apply for some radionuclides if the fraction of contaminated food is found to be higher than 0.1, as might be the case for infants who have a diet essentially based on milk with little variety.

Long-term exposure assessment: Beyond one year after the emergency the fraction of contaminated food placed on the market will generally decrease as a result of national restrictions (withdrawal from the market), changes to other produce, agricultural countermeasures and decay.

Experience has shown that in the long term, the fraction of imported contaminated food will decrease by a factor of a hundred or more. Specific food categories, e.g. wild forest products, may show persistent or even increasing levels of contamination. Other categories of food may gradually be exempted from controls. Nevertheless, it must be anticipated that it may take many years before levels of individual exposure as a result of contaminated food could be qualified as negligible.

¹ ~~The Codex Alimentarius Commission at its 18th Session (Geneva 1989) adopted Guideline Levels for Radionuclides in Foods Following Accidental Nuclear Contamination for Use in International Trade (CXG 5-1989) applicable for six radionuclides (⁹⁰Sr, ¹³²I, ¹³⁷Cs, ¹³⁴Cs, ²³⁹Pu and ²⁴¹Am) during one year after the nuclear accident.~~