

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda item 2

CX/EXEC 24/86/2 Add.2
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JOINT FAO/WHO FOOD STANDARDS PROGRAMME EXECUTIVE COMMITTEE OF THE CODEX ALIMENTARIUS COMMISSION

Eighty-sixth Session

FAO Headquarters, Rome, Italy

1 – 5 July 2024

CRITICAL REVIEW - PART III¹

Note: For general information about the critical review and the critical review for CCSCH7, CCFO28 and CCFH54, please see CX/EXEC 24/86/2. For the critical review for CCCF17 and CCFA54, please see CX/EXEC 24/86/2 Add.1.

1. Structure of appendices

1.1 The work of the different committees is addressed in separate appendices.

1.2 The structure of the appendices for each committee is as follows:

1. General information on the committee and session
2. Overall comments (Secretariat/Chairperson)
3. Status of work items (Overview)
4. Specific comments on individual work items (Secretariat/Chairperson)

2. List of appendices

Appendix 1: Codex Committee on Methods of Analysis and Sampling, 43rd Session (CCMAS43)

¹ This document addresses CCMAS43

Appendix 1

1. General

Committee	Codex Committee on Methods of Analysis and Sampling (CCMAS)		
Host	Hungary	Chairperson	Dr Attila Nagy
Session reported on	CCMAS43	13-18 May 2024	
Next Session	CCMAS44	5-9 May 2025	
Report	REP24/MAS		

2. Overall comments

Secretariat's comments:

CCMAS43 was well attended by 54 Member countries, one Member organization, and 14 Observer organizations. Two virtual working group (VWG) meetings and one physical working group (PWG) meeting of the endorsement working group were held in preparation for plenary discussions at CCMAS43, which facilitated the plenary discussions. The session was constructive and productive, and all agenda items were thoroughly discussed and consensually concluded.

Overall, the work of CCMAS has progressed very well with the review of methods in CXS 234-1999 as one of the key items of work in CCMAS for the past few years. CCMAS43 completed the review of methods for cereals, pulses and legumes and fish and fishery products, whereas the review of methods for fruit juices will continue and a review of the cocoa products and chocolates workable package will be started. All the methods from the aforementioned reviews, together with methods / methods numeric performance criteria and sampling plans submitted for endorsement have been forwarded for adoption by CAC47. Consequential, CAC47 has been requested to revoke several methods of analysis in CXS 234-1999 and certain commodity standards as well as the *General Methods for the Detection of Irradiated Foods* (CXS 231-2001). Additionally, as part of the review of methods in CXS 234-1999, which aims to ensure that CXS 234-1999 remains current, CCMAS is aiming at ensuring consistency also on presentation of the methods, their principles, and provision names in CXS 234-1999 with the ultimate aim of finalizing the database of methods of analysis.

Work will continue on the information document comprising an e-book and sampling plan apps to support the implementation of the revised *General Guidelines on Sampling* (CXG 50-2004), consideration of methods to support work in CCFL on precautionary allergen labelling, and work in CCFA on maximum levels / residual levels for nitrates and nitrites in certain food matrices.

As part of its main work on endorsement, CCMAS has developed clear guidance for the process, submission, consideration, and endorsement of methods for inclusion in CXS 234-1999, which has been published as an information document for internal use by CCMAS, and this document continues to be updated as issues arise. As a consequence to discussion on methods endorsement or review of methods in CXS 234-1999, this information document has been further updated to clarify situations where a Type IV method can be endorsed if there is an existing Type I for the same provision and commodity, and to provide clarity on nitrogen conversion factors to accompany methods for protein determination based on calculation. The latter follows a decision to provide a list of existing nitrogen conversion factors in CXS 234-1999 for ease of reference by analysts.

CCMAS43 also considered the need to explore future work and direction for the Committee. The Chairperson of CCMAS together with the Codex Secretariat prepared a short paper and ideas for future direction. Future sessions of CCMAS will continue to explore this matter further.

Chairperson's comments:

In 2024, CCMAS43 was held in a hybrid modality. The delegates continuously took advantage of the opportunity provided by the hybrid modality, and comments were continuously received from several Members via the Zoom interface.

Related to CXS 234-1999, which is the most important standard for CCMAS, the committee has made great progress which was realized in several ways: methods requested by the other Commissions were added to the list, two thematic groups were reviewed, and revision work on a new food group was started.

In relation to the sampling information document, we received practical information from the leaders of the working group. The e-book is expected to be finalized by 2025.

Important work continued on allergen-related questions received from CCFL, and the first step was to collect and review available methods worldwide.

We took a big step towards building the database containing the methods. We continued the harmonization process that had already started, which is indispensable for the operation and practical use of the database.

In some areas, we must ask questions to other committees, and there are few questions that we had to forward to CAC in the absence of an active committee.

3. Status of work items

Topic	Job number	Target year	Recommendation of the Committee
For decision/advice by the Commission			
1. Methods of analysis / performance criteria / sampling plan for provisions in Codex standards (CXS 234-1999 and CXS 193-1995)	Ongoing	-	Adoption / Revocation
2. Inclusion of "Nitrogen to protein conversion factors" as an Annex (CXS 234-1999)	-	-	Adoption
3. <i>General Methods for the Detection of Irradiated Foods</i> (CXS 231-2001)	-	-	Revocation
4. Provision of assistance to CCMAS on ashing temperature and/or acceptability to endorse two ash provisions for relevant cereals, pulses and legumes standards (CXS 152-1985, CXS 154-1985, CXS 155-1985, CXS 172-1989, CXS 173-1989 & CXS 202-1995)	-	-	For Consideration / Advice by CAC
For information			
5. Testing methods: nitrates and nitrites in certain food matrices (CXS 192-1995)	For consideration by CCMAS44		
6. Testing methods: Precautionary allergen labelling (CXS 1-1985)	For consideration by CCMAS44		
7. Discussion paper on the application of the determination of moisture content in whey powder (CXS 234-1999)	For consideration by CCMAS44		
8. Information document: ebook with sampling plan apps (CXG 50-2004)	For consideration by CCMAS44		
9. Review of sampling plans (CXG 234-1999)	For consideration by CCMAS44		
10. Harmonization of names and format for principles (CXS 234-1999)	For consideration by CCMAS44		

4. Specific comments

1. Methods of analysis / performance criteria / sampling plan for provisions in Codex standards (CXS 234-1999 and CXS 193-1995), paragraphs 20(i) and (iii); 23(i); 26(i), Appendix II, Parts 1 and 2.

Status and Secretariat comments:

The endorsement of methods of analysis forwarded to CCMAS by Codex Commodity Committees and the review of the methods in CXS 234-1999 to ensure that they are current continues to be major tasks for CCMAS.

CCMAS43 completed work on the cereals, pulses and legumes and fish and fishery products workable packages and have submitted these methods for adoption by CAC47. However, one outstanding issue remains on methods for ash (ashing temperatures) for provisions in several cereals, pulses and legumes standards for which CCMAS is requesting advice from CAC (see item 6).

CCMAS43 considered recommendations on methods of analysis and sampling plans proposed for endorsement by different committees including some outstanding issues from CCMAS42. CCMAS43 endorsed methods of analysis and a sampling plan submitted by CCSC, CCFO and CCCF and numeric performance criteria for sorbates and benzoic acid for selected processed fruits and vegetables for adoption by CAC47.

CCMAS43 agreed to update CXS 234-1999 by including example methods and principles that meet the numeric performance criteria for lead and cadmium in foods and to forward them to CAC47 for information.

In relation to methods for certain provisions in the revised *Standard for Olive Oil and Olive Pomace Oils* (CXS 33-1981), CCMAS43 agreed to recommend certain methods for 1,2-diglycerides (DAG) and pyropheophytin "a" (PPP) to assist with data general and collection. CCMAS was not in a position to endorse the methods submitted by CCFO as procedurally it only endorses methods for which there are provisions in a Standard. This decision was the best approach and agreed by consensus and will help CCFO in their future / ongoing work on specifications for DAG and PPP. Once CCFO completes its work on DAGs and PPP, CCMAS will be in a better position to endorse methods of analysis.

Chairperson's comments:

We continued the endorsement tasks that are important every year and expanded CXS 234-1999 in accordance with the principles of harmonization established earlier.

We have added another separate methodological standard to CXS 234-1999, which we want to use as a basic resource for all methods.

2. Inclusion of "Nitrogen to protein conversion factors" as an Annex (CXS 234-1999, pertinent commodity standards), paragraph 76(i – iii and v)

Status and Secretariat comments:

In order to provide clarity and accessibility especially for food laboratories that would need to determine the protein content of samples using methods that require calculation, and noting that there was no consistent approach in CXS 234-1999, CCMAS agreed to explore the best approach for the placement of nitrogen conversion factors (Nx). To address the aforementioned, CCMAS43 agreed to list nitrogen conversion factors agreed by commodity committees as an annex to CXS 234-1999. This amendment to CXS 234-1999 has been submitted to CAC47 for adoption.

CCMAS43 also agreed to inform the relevant commodity committees about this decision and to remind them that it was their responsibility to identify and report the proposed nitrogen conversion factors to CCMAS to facilitate the endorsement process, and to consider revoking Nx values in their commodity standards so that these nitrogen conversion factors are held in one place. This approach would avoid inconsistencies or duplication of information. As a consequence, changes have been made to the Information document titled: *Comprehensive guidance for the process of submission, consideration and endorsement of methods for inclusion in CXS 234*.

CCMAS43 also agreed to request the agreement of CAC47 to task the Codex Secretariat with reviewing the current nitrogen conversion factors in commodity standards from the relevant Codex commodity committees that have been adjourned *sine die*, and proposing the revocation of the corresponding Nx values.

<p>Chairperson's comments:</p> <p>The discussion of the nitrogen conversion factor concluded several questions of principle: How to uniformly formulate the regulated and measured parameter?; What is the method and who is responsible for determining the factors?; and What is the most effective way to indicate these factors in the Codex documents?</p>
<p>3. General Methods for the Detection of Irradiated Foods (CXS 231-2001), paragraph 20(ii)</p>
<p>Status and secretariat comments:</p> <p>CCMAS43 agreed to incorporate methods of analysis in the <i>General Methods for the Detection of Irradiated Foods</i> (CXS 231-2001) into CXS 234-1999 and to request CAC47 to revoke the <i>General Methods for the Detection of Irradiated Foods</i> (CXS 231 -2001). This approach is in line with the decision for CXS 234-1999 to be the single reference for methods of analysis in Codex and follows consultation with CCFH.</p>
<p>Chairperson's comments:</p> <p>We have added this area by moving CXS 231 to CXS 234, which we want to use as a basic resource for all methods.</p>
<p>4. Provision of assistance to CCMAS on ashing temperature and/or acceptability to endorse two ash provisions for relevant cereals, pulses and legumes standards (CXS 152-1985, CXS 154-1985, CXS 155-1985, CXS 172-1989, CXS 173-1989 & CXS 202-1995), paragraph 23(ii)</p>
<p>Status:</p> <p>As a result of the ongoing review of CXS 234-1999, CCMAS43 agreed to request advice from CAC47 on whether CCMAS could have assistance in determining the original intent for ashing temperature in cereals, pulses and legumes standards, and if not, whether two provisions for ash at 550°C and 900°C for some commodities (i.e. CXS 152, CXS 154, CXS 155, CXS 172, CXS 173, CXS 202) could be acceptable to allow CCMAS to endorse recommended methods for these provisions as Type I.</p>
<p>Chairperson's comments:</p> <p>We have a method typing problem related with the ashing method: we have different results from methods using different temperatures, so we have to ask for clarification to solve this topic. At this time, we have two Type I methods (because of different temperature), but according to the Procedural Manual, there should only be one Type 1 method.</p>
<p>5. Testing methods: nitrates and nitrites in certain food matrices (CXS 192-1995), paragraph 44</p>
<p>Status:</p> <p>CCFA51 had agreed to establish both ingoing and residue levels for nitrates and nitrites in the <i>General Standard for Food Additives</i> (GSFA) (CXS 192-1995). Subsequently, CCFA52 had requested CCMAS to address specific questions related to testing methods, including development methods for determining proposed residual levels for representative provisions in dairy (cheese), meat, and seafood.</p> <p>CCMAS43 noted the need for further work to respond to CCFA's questions. Thus, CCMAS43 agreed to continue its efforts on this matter and re-establish the EWG to further the work for consideration by CCMAS44.</p>
<p>Chairperson's comments:</p> <p>We have to continue the work to answer all questions from CCFA.</p>
<p>6. Testing methods: Precautionary allergen labelling (CXS 1-1985), paragraph 50</p>
<p>Status:</p> <p>At CCMAS42, CCFL47 requested advice on standardized analytical methods and sampling used for allergen risk assessment in foods. CCMAS42 therefore established an EWG to develop a discussion paper to respond to the request from CCFL47 to support their work on precautionary allergen labelling. However, CCMAS43 noted that the discussion paper did not fully answer the questions from CCFL and</p>

<p>agreed to re-establish the EWG to: a) request Members to submit validation data of the methods listed in Appendix I of CX/MAS 24/43/9; b) evaluate the submitted validation studies through published method validation guidelines from AOAC14,15 and CEN performance requirements; and c) submit a list of methods that meet either one or both of the AOAC validation guidelines and CEN performance requirements.</p>
<p>Chairperson's comments:</p> <p>CCFL asked very important and precise questions in a very important area. Due to the complexity of the questions, the first step was to learn about the methods available worldwide.</p> <p>The work must be continued in order to be able to provide adequate answers to the methodological questions, which will be a very useful guide for all laboratories.</p>
<p>7. Discussion paper on the application of the determination of moisture content in whey powder (CXS 234-1999), paragraphs 17 and 20(vi)</p>
<p>Status and Secretariat comments:</p> <p>At CCMAS42, a Type IV method was adopted in addition to a Type I for determination of moisture in certain matrices. This approach is taken on an exceptional basis. However, CCMAS42 was not in a position at the time to also endorse the same method for determination of moisture content in whey powder and dairy permeate powder.</p> <p>CCMAS43 agreed that a discussion paper be prepared on the application of the determination of moisture content in whey powder (CXS 234-1999) and provide a recommendation for consideration by the Physical Working Group (PWG) on Endorsement prior to CCMAS44.</p> <p>CMAS43 agreed not to continue the consideration of the application of the determination of moisture content in dairy permeate powder due to insufficient data.</p>
<p>Chairperson's comments:</p> <p>After a very intensive discussion, CCMAS43 agreed to establish a working group to analyze the validation data in detail. I hope for a clear picture for next year's PWG, based on which a final decision can be made at the plenary session in 2025.</p>
<p>8. Information document: ebook with sampling plan apps (CXG 50-2004), paragraph 39(i)</p>
<p>Status and Secretariat comments:</p> <p>CCMAS43 agreed to establish an EWG to continue developing an information document that would support the implementation of the revised <i>General Guidelines on Sampling</i> (CXG 50-2004) for consideration by CCMAS44. This work, with sampling plan apps, is an innovative approach taken by CCMAS to facilitate the use of the guidelines.</p>
<p>Chairperson's comments:</p> <p>In relation to the sampling information document, we received practical information from the leaders of the working group. The e-book is expected to be finalized by 2025.</p>
<p>9. Review of sampling plans (CXG 234-1999), paragraph, 39(ii, iii)</p>
<p>Status:</p> <p>Following the finalisation of the <i>General Guidelines on Sampling</i> (CXG 50-2004), review of all sampling plans is necessary to ensure consistency with these Guidelines. CCMAS43 agreed to develop a discussion paper on the review of all sampling plans in CXS 234-1999 to determine what information should be included in CXS 234-1999, and the format of this information. The discussion paper will provide a review of current procedures for the inclusion of sampling plans in CXS 234-1999, and consider sampling plan information that may be included in CXS 234-1999 for sampling plans that will be developed under CXG 50-2004 and sampling plans from other sources noting that sampling plans are subject to endorsement by CCMAS prior to inclusion in CXS 234.</p>
<p>Chairperson's comments:</p> <p>The discussion paper will provide a lot of practical information to stakeholders to help them choose an adequate sampling plan.</p>
<p>10. Harmonization of names and format for principles (CXS 234-1999), paragraph 55</p>

Status:

CCMAS43 agreed to establish an EWG to further develop definitions for descriptions of analytical methods; harmonized names and format for principles and provision names in CXS 234-1999, and prepare a revised CXS 234-1999 presenting the proposed harmonized principles and provision names. This work is part of the review of CXS 234-1999 to ensure consistency of terminology in CXS 234-1999. Such consistency will further aid the work on the database of methods of analysis.

Chairperson's comments:

We took a big step towards building the database containing the methods. We continued a harmonization process that had already started, which is indispensable for the operation and practical use of the database. We hope the IT work that will help to develop the database could start as soon as possible.