



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING
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REVIEW AND UPDATE OF METHODS IN CODEX STAN 234-1999

(Prepared by the Electronic Working Group led by Brazil and Japan)

BACKGROUND

1. At the 34th Session in 2013, the CCMAS34 discussed updating of the references of methods of analysis and related texts. The Committee agreed that a general single document or database with all the methods of analysis allowed permanent and dynamic revision. The Committee agreed to establish an eWG to prepare a discussion paper with proposals: on establishing a format for a single source document (database) to capture all methods in the scope of CCMAS; the process for updating references to methods of analysis; and a plan to prioritize the (re)endorsement of current methods in *the Recommended Methods of Analysis and Sampling* (CODEX STAN 234-1999) and commodity standards¹.
2. At CCMAS35 (2014), the Committee agreed that the list to be compiled with all of methods of analysis would be utilised for internal use of the Committee, i.e. for updating the methods; and that the mechanism for this process would first be tried before examining the necessity of having it recommended for inclusion in the Procedural Manual².
3. At CCMAS36 (2015), the Committee generally supported continuation of the work. The Committee noted that to avoid discrepancies between CODEX STAN 234-1999 and commodity standards, consideration should be given to a single reference for methods of analysis. It was noted that a single reference would be useful for analysts, but that information needed to be provided as to what kinds of products the methods apply to, as well as the numerical levels to be measured, either directly in the CODEX STAN 234-1999 or by a hyperlink to the actual commodity standards³.
4. It was noted that this approach would have procedural consequences and that the CCGP could be requested to amend the Procedural Manual to allow such an approach⁴.
5. The Committee agreed to continue the work on the update and review of the endorsed methods of analysis through an eWG led by Brazil, co-chaired by Japan, and working in English only with the following terms of reference⁵:
 - Continue working on the identification of inconsistencies in CODEX STAN 234-1999 and other Codex Standards.
 - Include methods from CCNFSDU in the workable packages.
 - Look over the Codex Committees Standards to identify limits and parameters that don't have related method of analysis.
 - Discuss where and how to make reference to methods completely described in the Commodity Standards.
 - Propose to CCMAS a process to update the endorsement of Codex Methods.
 - Incorporate the suggestions made by the CCMAS regarding the inclusion of the numerical provisions

¹REP13/MAS, paras 95

²REP14/MAS, paras 69

³REP15/MAS, para 106-108

⁴REP15/MAS, para 112

⁵REP15/MAS, para 111

and identification of the Commodity Standards to which the methods apply in CODEX STAN 234-1999.

6. The Committee also agreed to request CCGP to consider amending the Procedural Manual in order to have CODEX STAN 234-1999 as a single reference for methods of analysis in Codex⁶. The CCGP, at its 29th Session, agreed that the amendment to the Procedural Manual to indicate a single reference for methods of analysis was possible, however CCMAS should prepare the proposed amendments for endorsement after completion of the work on the revision of CODEX STAN 234-1999⁷.

7. This discussion paper aimed to address the issues of the term of reference of the eWG and the proposal of amendment to the Procedural Manual.

8. Brazil and Japan prepared the discussion paper with comments from the Netherlands, Switzerland, Uruguay and IDF. A list of countries and NGOs that joined the eWG can be found in the Appendix IV.

INTRODUCTION

9. The methods of analysis listed in Codex standards are primarily intended as methods for the verification of provisions in Codex standards. They should be used as reference, in calibration of methods in use or introduced for routine examination and control purposes. However, the discussion paper, CX/MAS 14/35/6, pointed out that there are a number of inconsistencies between CODEX STAN 234-1999 and commodity standards and there are references to outdated methods, errors and omissions, and use of the references that were not traceable.

10. In this context, it is critical to keep updating the methods of analysis in a single document or a single database, which would allow a simplified and effective search for method as well as a permanent and dynamic revision system.

11. For this purpose, all methods contained in other Codex standards should be moved to CODEX STAN 234-1999; and the Procedural Manual should be amended accordingly. It should be noted that the methods within the Terms of Reference of CCFH (microbiological methods), CCPR (methods for pesticide residues) and CCRVDF (methods for residues of veterinary drugs) should not be included in the said single document/database.

12. At CCMAS35 (2014), the Committee agreed to the following 4–step procedure that would guide the process for review of the methods;

- i. Put all the methods into one single workable list - electronic working group
- ii. Select the methods to examine first using prioritization criteria – electronic working group
- iii. Divide the methods into workable packages – electronic working group
- iv. The SDOs will check the references of their methods; the Commodity Committees and/or CCMAS will confirm the applicability of these methods.⁸

13. The Committee decided to establish the following prioritization criteria for setting a planned updating program of the methods of analysis: analytical methods directly linked with food safety, type of the methods (reference for disputes), methods with inaccurate information and number of years since endorsement (the oldest first).

14. Based on the conclusions of the Committee made at CCMAS35 (2014), for developing a single reference for methods of analysis, a five-step procedure was proposed: i) establishing a single workable list for all methods contained in CODEX STAN 234-1999 and commodity standards; ii) establishing criteria for prioritisation of the methods of analysis; iii) dividing the priority list into work packages; iv) verifying the validity of each of the methods with the author; and v) consideration of the recommendations made by CCMAS.

SINGLE SOURCE (DOCUMENT, DATABASE) OF METHODS OF ANALYSIS

15. The following actions are needed to have a single document:

- The section of methods of analysis in Codex commodity standards should just mention the reference to the *Recommended Methods of Analysis and Sampling* with a hyperlink to CODEX STAN 234-1999 and; the methods should be incorporated into this single document;
- The single document should include a section to address methods with their full descriptions, or to identify methods of analysis to replace them, as appropriate;

⁶REP15/MAS, para 11

⁷REP15/GP, para 29

⁸REP14/MAS, para 79

- The Committee should transfer methods in the specific Codex standards on the general methods of analysis for food additives (CODEX STAN 239-2003), the detection of irradiated foods (CODEX STAN 231-2001) and contaminants (CODEX STAN 228-2001) to the single document and revoke the above-mentioned standards;
- The Committee should transfer the performance criteria of methods of analysis currently described in the Codex standards to the single document.

16. The new part A of CODEX STAN 234-1999 should include three sections with the following content, depending on how the analytical methods are currently mentioned in the Codex standards: i) standardized methods published by international organizations; ii) performance criteria required for provision determination and iii) methods of analysis with full descriptions. The format of these sections is proposed in the Appendix I. considering what was discussed in the last section of the CCMAS. In the file principle of the Section III may contain a hyperlink to open a file with a full description of the method or may be included in the Section I with a hyperlink.

WAY TO CONSTRUCT THE SINGLE DOCUMENT:

17. The eWG compiled, as a first step, all the methods in Codex standards in an Excel worksheet.

18. The first source of information was the reports (ALINORMs and REPs) of CCMAS. The second source of information was CODEX STAN 234-1999, CODEX STAN 228-2001, CODEX STAN 231-2001 and CODEX STAN 239-2003. The identified methods were compared with the ones in Codex commodity standards for inconsistencies. At this stage methods listed only in the commodity standards were included.

19. The next step was to develop an Excel worksheet with the performance criteria. Methods meeting these criteria were included in the Excel worksheet if mentioned in the information source. The source of this information was the CODEX STAN 234-1999, CODEX STAN 193-1995 and commodity standards. The last step was to develop an Excel worksheet containing all of the methods fully described in Codex commodity standards or in CODEX STAN 234-1999.

20. The outcome of the comparison of all the information from Reports, commodity standards, CODEX STAN 192-1995, CODEX STAN 193-1995, CODEX STAN 228-2001, CODEX STAN 231-2001, CODEX STAN 239-2003 and CODEX STAN 234-1999 are on the remark column.

21. An Excel sheet with provisions without respective methods of analysis was included. The food additives provisions, from CODEX STAN 192-1995 were not included because there are methods endorsed for few food categories of the following additives: Acesulfame K, Aspartame, Acetic acid, Ascorbic acid-L, Benzoic acid and its salts, Sorbic acid and its salts, Carbon dioxide, Carotenoid, Citric acid, Cyclamate, Fumaric acid, Glycerol, Lactic acid - D and L, Malic acid - D and L, Mineral oil, Nitrates and/or Nitrites, Pectin, Polydextrose, Riboflavin, Sorbitol, Sulphur dioxide, Tartaric acid, Tocopherol. The CCMAS should consider how to deal with this extensive work, because the GSFA has established maximum levels for 301 food additives for 198 food subcategories.

22. The dates of the method establishment or approval by standardization bodies are removed because it was agreed at the CCMAS34 that the most recent versions of analytical methods should be used and that older version of methods are generally not available; however, the Committee agreed to include in the list three types of dates i.e. date of publication of the method, year of the latest version/revision and the year of endorsement of the method by CCMAS⁹. The year of endorsement of the method has already been included, and the other two, date of publication of the method and the year of latest version/revision by standard developing organizations (SDOs) would be included in the updating. While the Committee agreed to delete years from method descriptions and to use the latest version of methods, the year of latest version/revision by SDOs would be useful for CCMAS to identify the necessity of reviewing equivalency of the methods between the latest version of a method and the other already endorsed Type I/II methods for one commodity/provision combination.

23. When the ALINORM or Report was not identified for a commodity and provision, the column "Endorsement by CCMAS" was filled with the year of the revision of the commodity standards.

The suggestions made by the CCMAS regarding the inclusion of the numerical provisions and identification of the commodity standards to which the methods apply in CODEX STAN 234-1999 was also incorporated.

24. The eWG noted that there were many ways to mention the same provision and principle for the same method. It is advisable to harmonize them. The next step of the work may be to make a list with harmonized provisions and principles. Some examples can be found below:

⁹REP14/MAS, paras 71-72

Provisions

- Fat or Total fat content
- Gelatin added or Correction for added gelatin
- Nitrites or Nitrites, potassium and or sodium salt
- Nitrogen/ protein or Total protein content or Protein

Principles

- Titrimetry or Titrimetry Kjeldahl digestion
- Gravimetry or Extraction/Gravimetry
- Atomic Absorption or Atomic Absorption Spectrophotometry

25. Other discrepancies in the existing CODEX STAN 234-1999 should also be reviewed at the same time, e.g. two or more different method numbers for one Type I method and they are not separated with vertical stroke “|”, presence or absence of protein conversion factor for Kjeldahl method.

26. Results of detailed review of analytical methods in CODEX STAN 234-1999 and respective commodity standards categorized by specific problems will also be provided as an addendum to this document.

27. A column of prioritization permits to divide the methods in workable packages.

28. As only one type II method shall be selected from some methods that meet the criteria for methods that may be used for control, inspection or regulatory purposes while those other than Type II become type III for a specific provision, these methods (type II and type III) should be reviewed at the same time. Type I methods should be updated first because it is the only method to be used, if there is one.

29. The food safety criteria to judge whether a provision is related to food safety are:

- Any physiologically relevant elements (e.g. iron, calcium, manganese), or substances (e.g., vitamins, fibers)
- Any characteristic of a food (pH, moisture, salt content, concentration of food preservatives) or microorganism (bacteria, moulds, parasites) that plays a role in its stability
- Any element, substances, mixtures or state of a food which have to be avoided or kept within some levels: such as lead, mercury, cadmium, mycotoxins, water activity, pH,..)

30. Based on the recommendations of CCMAS and the outcomes of the comparison, the eWG made the following proposal for prioritization:

1. Methods with inaccurate information that requires some action by CCMAS, such as methods not readily available, methods with wrong number, some methods from IUPAC that are no longer supported and updated, methods that have been not valid or replaced by others and RM methods¹⁰. It was also considered inaccurate information when there are two different type II methods or when the CODEX STAN 234-1999 and Codex commodity standards mention different methods for the same provision.
 - 1.1 Methods with inaccurate information that requires action only by Codex Secretariat
 - 1.2 Methods with inaccurate information related with food safety
 - 1.3 Other methods with inaccurate information
2. Provision without related methods
3. Methods without a related provision
4. Methods with a full description
5. Type I methods endorsed 10 years ago or older
6. Type II, III and IV methods endorsed 10 years ago or older
7. Type I methods endorsed less than 10 years ago
8. Type II, III and IV methods endorsed less than 10 years ago
9. Performance criteria established 10 years ago or older.

31. The CCMAS should decide regarding the order to deal with the workable packages 2, 3 and 4.

32. According with this classification the methods were divided in nine packages. The number of the methods per package is shown on Table I.

¹⁰RM numbering system was revoked in 1997; para 145 in the 22nd Session Codex Alimentarius Commission Report; para 52 in the Report of the 20th CCMAS (ALINORM 97/23)

Table I- Number of Methods by number package

PACKAGE	DESCRIPTION	Nº of METHODS
1.	Methods with inaccurate information	200
1.1	Methods with inaccurate information- Only Secretariat action	15
1.2	Methods with inaccurate information related with food safety	51
1.3	Other methods with inaccurate information	134
2.	Provision without related methods	80*
3.	Methods without a related provision	25
4.	Methods with a full description	65
5.	Type I methods endorsed for over 10 years	125
6.	Type II, III and IV methods endorsed for over 10 years	218
7.	Type I methods endorsed for less than 10 years	196
8.	Type II, III and IV methods endorsed for less than 10 years	267
9	Performance criteria established	78

*Excluded food additives

In TABLE II there are a list of Codex Committees and Task Forces that may submit requests of revision of methods of analysis to CCMAS and their respective status. The responsibility for updating the methods of not actives committees was set to CCMAS.

TABLE II- List of Codex Committees and Task Forces whose methods of analysis may be submitted to CCMAS and their status**Commodity Committees**

CCCPC	Codex Committee on Cocoa Products and Chocolate	Adjourned sine die
CCCPL	Codex Committee on Cereals, Pulses and Legumes	Active*
CCFFP	Codex Committee on Fish and Fishery Products	Active
CCFFV	Codex Committee on Fresh Fruits and Vegetables	Active
CCFO	Codex Committee on Fats and Oils	Active
CCIE	Codex Committee on Edible Ices	Abolished
CCM	Codex Committee on Meat	Abolished
CCMMP	Codex Committee on Milk and Milk Products	Adjourned sine die
CCNMW	Codex Committee on Natural Mineral Waters	Adjourned sine die
CCPFV	Codex Committee on Processed Fruits and Vegetables	Active
CCPMPP	Codex Committee on Processed Meat and Poultry Products	Abolished
CCS	Codex Committee on Sugars	Active
CCSB	Codex Committee on Soups and Broths	Abolished
CCSCH	Codex Committee on Spices and Culinary Herbs	Active
CCVP	Codex Committee on Vegetable Proteins	Adjourned sine die

Ad hoc Intergovernmental Task Forces

CGECPMMP	Joint FAO/WHO Committee of Government Experts on the Code of Principles Concerning Milk and Milk Products	Renamed and re-established
CXTO	Joint CODEX/IOOC Meeting on the Standardization of Table Olives	Abolished
GEFJ	Joint ECE/Codex Alimentarius groups of experts on standardization: Fruit Juices	Abolished
GEQFF	Joint ECE/Codex Alimentarius groups of experts on standardization: Quick Frozen Foods	Abolished
TFFBT	Ad Hoc Intergovernmental Task Force on Food Derived from Biotechnology	Dissolved
TFFJ	Ad Hoc Intergovernmental Task Force on Fruit and Vegetable Juices	Dissolved
TFPHQFF	Ad hoc Codex Intergovernmental Task Force on the Processing and Handling of Quick Frozen Foods	Dissolved

FAO/WHO Coordinating Committees

CCAFRICA	FAO/WHO Coordinating Committee for Africa	Active
CCASIA	FAO/WHO Coordinating Committee for Asia	Active
CCEURO	FAO/WHO Coordinating Committee for Europe	Active
CCLAC	FAO/WHO Coordinating Committee for Latin America and the Caribbean	Active
CCNASWP	FAO/WHO Coordinating Committee for North America and South West Pacific	Active
CCNEA	FAO/WHO Coordinating Committee for Near East	Active

General Subject Committees

CCCF	Codex Committee on Contaminants in Foods	Active
CCFA	Codex Committee on Food Additives	Active
CCNFSDU	Codex Committee on Nutrition and Foods for Special Dietary Uses	Active

*CCCPL is active to work by correspondence on the standard for quinoa.

Source: *Codex Alimentarius* website

Table III shows the number of methods by the Codex Committee, according with their responsibility for revision, in order to access the workload of each committee.

Table III -Number of methods by the Codex Committee, according with their responsibility for revision.

Codex Committee		Nº of Methods
CCFFP	Codex Committee on Fish and Fishery Products	106
CCFO	Codex Committee on Fats and Oils	97
CCPFV	Codex Committee on Processed Fruits and Vegetables	137
CCS	Codex Committee on Sugars	43
CCASIA	FAO/WHO Coordinating Committee for Asia	36
CCNEA	FAO/WHO Coordinating Committee for Near East	24
CCCF	Codex Committee on Contaminants in Foods	37
CCFA	Codex Committee on Food Additives	40
CCNFSDU	Codex Committee on Nutrition and Foods for Special Dietary Uses	262

CCMAS	Codex Committee on Methods of Analysis and Sampling	397
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There are 81 provisions without related methods. The numbers of methods by committee according with the responsibility for revision are:

- CCCF -16
- CCFFP-1
- CCNFSDU- 46
- CCS-3
- CCMAS- 15

UPDATING THE ENDORSEMENT OF CODEX METHODS OF ANALYSIS

33. According to the Codex Procedural Manual the Codex Alimentarius Commission and its subsidiary bodies are committed to revision as necessary of Codex standards and related texts to ensure that they are consistent with and reflect current scientific knowledge and other relevant information. When required, a standard or related text shall be revised or removed in accordance with the Procedures for the Elaboration of Codex Standards and Related Texts. Each member of the Codex Alimentarius Commission is responsible for identifying and presenting to the appropriate committee any new scientific and other relevant information, which may warrant revision of any existing Codex standards or related texts.

34. The Commission decides whether a standard should be elaborated and also which subsidiary body or other body should undertake the work. Decisions to elaborate standards may also be taken by subsidiary bodies of the Commission and subsequently be approved by the Commission.

35. CCMAS is responsible for carrying out the steps of the elaboration procedures of the methods of analysis and sampling of general application to foods.

36. Methods of analysis to specific commodities were originally assigned by commodity committees or ad hoc Intergovernmental Task Forces. However, some of these committees and Task Forces have been adjourned, abolished or dissolved as shown in Table II.

37. After the CCMAS manages the workable packages of methods with inaccurate information, provisions without related methods and provisions with incomplete or inadequate performance criteria, it would be necessary to establish a regular process to update methods of analysis.

PROCESS TO UPDATE

38. The revision purpose of the endorsement may be to include a new method, to withdraw a method, to amendment or change the type of the method.

The revision to include, withdraw or amend a method is necessary when:

- The provision or the maximum level are changed and the method does not meet the required performance;
- Method has any wrong or ambiguous/insufficient information;
- Method does not meet the performance criteria or it use reagents with safety concerns for the analyst or for the environment;
- Organization responsible for the method revoked or updated methodology;
- The Committee responsible for the establishment of the provision propose a revision;
- There is a new method that is fit for purpose
- Two methods that are included in the same provision that shows to be nonequivalent
- Every 10 years.

The revision to change the type of the method may occur when:

- The method type II does not meet the current required performance or under normal laboratory conditions it is not practical and applicable;
- Type IV methods that fill the requirements to be a Type II or III;
- Type III methods that fits better to the propose than the method type II with better applicability in routine, due for example: equipment, speed, accessibility, affordability, accuracy, precision and recovery;
- Type I method defined for a parameter that currently can be assessed by validated methods that use other principle of determination, for example, protein determination by Kjeldahl or Dumas.

- The method was misclassified

39. At any time a Codex member or a committee may request revision of methods of analysis based on the criteria for revision mentioned in this document. Any such request for revision should identify clearly the reason and the information that justify the change. The proposals should be sent to the Codex Secretariat that will prepare a list with the methods proposed by the committees and members and also with the ones that have been endorsed over 10 years previously an every CCMAS session. The working document with this list of methods of analysis should be evaluated in the “endorsement session” of CCMAS.

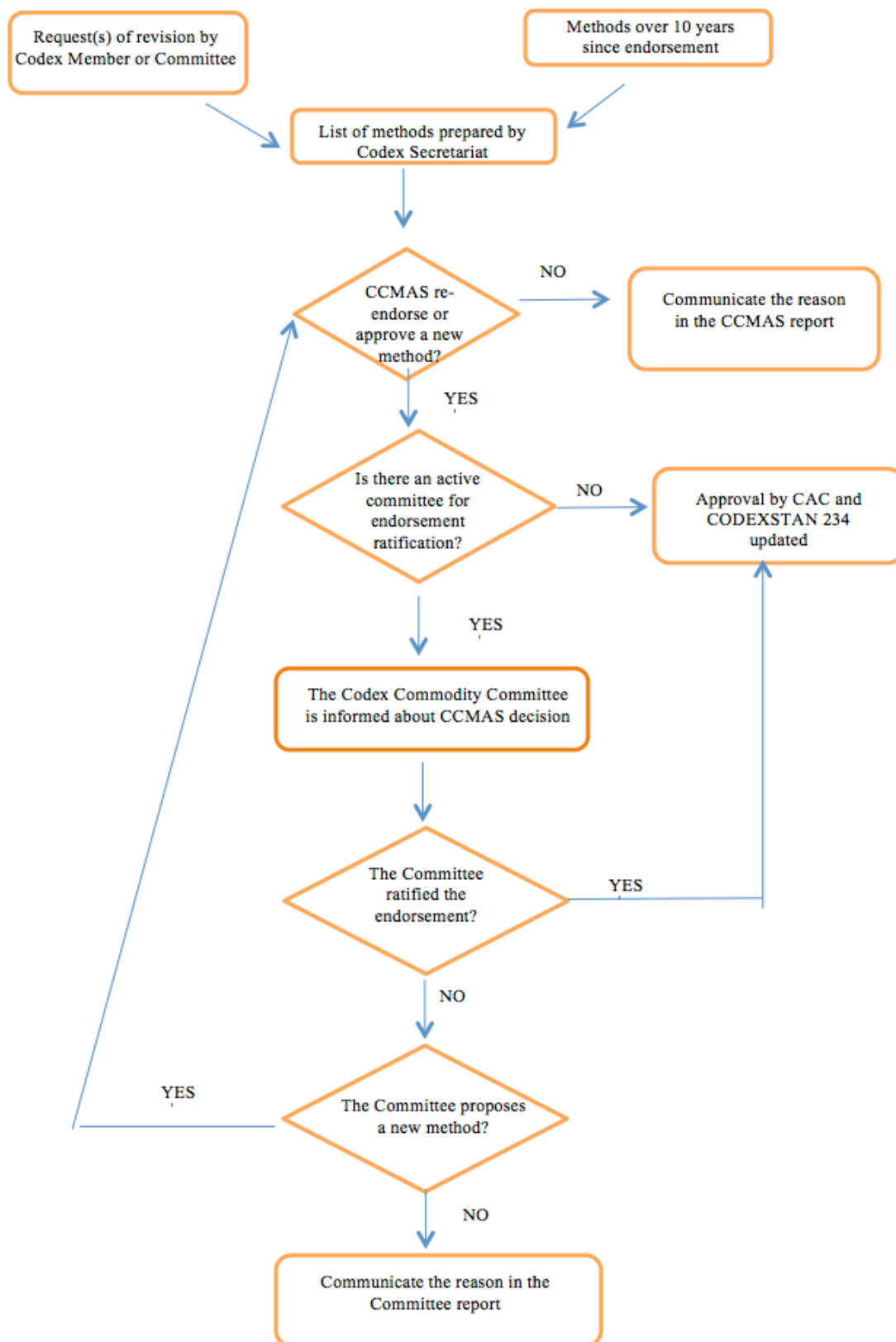
40. As already agreed to by the Committee as one of the 4 steps, related standard developing organizations (SDOs) will check the references of their methods¹¹. The Committee expressed gratitude to all SDOs that have continued to provide CCMAS with information regarding the status of various methods with respect to revision and update¹². It is essential for an updated and consistent single list of methods of analysis that any such revisions and updates are brought to the attention of CCMAS.

41. The proposal to replace methods on the list as the outcome of this evaluation will be forwarded to the originally proposing committee for the ratification of the endorsement. If the commodity committee agrees with the proposal, the proposed method should return to CCMAS for endorsement and the CODEX STAN 234-1999 should be updated accordingly. The CCMAS should take the responsibility to revise general methods and those from inactive/dissolved committees.

The flowchart I shows the steps of the updating procedure.

¹¹REP14/MAS. Para. 79

¹²REP14/MAS. Para. 80



Flowchart I – Steps of the Methods of Analysis Updating Procedure

RECOMENDATIONS

42. The CCMAS36, on the necessity to compile all methods of analysis in a single document. In order to implement this decision, the CCMAS should request CCGP to revise the Procedural Manual, Section II, Elaboration of Codex text – Format for Codex Commodity Standards, Methods of Analysis and Sampling (pp.53-57, 24th edition Procedural Manual), because specific texts for analytical methods in the commodity standards should be stipulated in the Procedural Manual in the same manner as food additives, contaminants and hygiene. The proposal to CCGP is to split the section Methods of Analysis and Sampling into two separate sections. The methods of analysis section should read as follows:

This section should contain only the following reference to the Recommended Methods of Analysis and Sampling (CODEX STAN 234-1999) with a hyperlink to the CODEX STAN 234-1999:

“The analytical methods for the provisions in this Standard shall comply with the Recommended Methods of Analysis and Sampling (CODEX STAN 234-1999) “

The methods of analysis considered necessary should be prepared in accordance with the guidance given in the section on Methods of Analysis and Sampling in the Relations between Commodity Committees and General Subject Committees. Preference should be given to set performance criteria according to the guidance established in the General Criteria for the Selection of Methods of Analysis using the Criteria Approach. If two or more methods have been proved to be equivalent by the Codex Committee on Methods of Analysis and Sampling, these could be regarded as alternatives.

Original Text from Procedural Manual for comparison:

This section should include, either specifically or by reference, all methods of analysis and sampling considered necessary and should be prepared in accordance with the guidance given in the section on Methods of Analysis and Sampling in the Relations between Commodity Committees and General Subject Committees. If two or more methods have been proved to be equivalent by the Codex Committee on Methods of Analysis and Sampling, these could be regarded as alternatives and included in this section either specifically or by reference.

- The CCMAS should perform the revision of the Methods of Analysis in each of the workable packages.
- The CCMAS should consider starting the work with the packages 1.2 (Appendix II) and communicate the respective committee the work done.
- The package 2 should be circulated to Codex Members and SDOs in order to identify methods for those provisions. The proposed methods can be discussed in the endorsement session in 2017.
- The Committee should decide if it is appropriate to make a list with harmonized provisions and principles
- The CCMAS should agree on the Process to update Codex Methods of Analysis as suggested in this document, including the reasons for the revision. The inclusion of the description of this process in the Procedural Manual should be accessed by CCMAS.

APPENDIX I

Section I - Standardised Methods

Commodity	CODEX STAN	Provision	Numerical provisions	Method Identification	Principle	Type	Date – Method			Originating Committee
							First publication	Last revision	Endorsement by CCMAS	

Section II - Performance criteria required by the Methods

Commodity	CODEX STAN	Provision	Provision component specification	Numerical provisions	Minimum applicable range	LOD	LOQ	RSDR (%)	Recovery	Applicable methods that meet the criteria	Principle	Date of Endorsement by CCMAS	Originating Committee

Section III- Methods with full description

Commodities	CODEX STAN	Source	Provision	Numerical provisions	Method principle	Originating Committee

APPENDIX II

METHODS RELATED TO FOOD SAFETY WITH INACCURATE INFORMATION

Commodities	CODEX STAN	Source	Provision	Reference Value	Method/ version	Principle	Type	Committee	Remarks
Soups and Broths	CODEX STAN 117	ALINORM 01/23	Sodium Chloride	Meat Bouillon shall contain per litre: max. 12.5 g Meat Consommé shall contain per litre: max. 12.5 g Poultry Bouillon shall contain per litre: max. 12.5 g Other Bouillons shall contain per litre: max. 12.5 g	AIIBP Method No 2/4	Potentiometric titration	II	CCSB	a) The commodity mentioned in the CODEX STAN 234 is "Bouillons and Bouillons and Consommés (soups and broths)". b) There are methods mentioned in the CODEX STAN 117- Method 2/4 of the AIIBP Official Collection of Methods of Analysis, Revision 1998; AOAC Method 971.27 (Codex general method) based on potentiometric determination); c) The AIIBP method was not found
Sugars (fructose and lactose)	CODEX STAN 212	ALINORM 97/23A	pH 4.5-7.0	STAN 212: pH (for 10% m/m): 4.5 - 7.0	ICUMSA GS 1/2/3/4/7/8-23	Potentiometry	I	CCS	a) The CODEX STAN 212, item 6. METHODS OF ANALYSIS AND SAMPLING mentions "See relevant Codex texts on methods of analysis and sampling" b) The correct method is ICUMSA GS 1/2/3/4/7/8/9-23.
Processed Tomato Concentrate	CODEX STAN 57	CODEX STAN 234	Sodium chloride	Salt (sodium chloride) in accordance with the Standard for Food Grade Salt (CODEX STAN 150-1985):	AOAC 971.27	Potentiometry	II	CCPFV	a) The CODEX STAN 57 mentions for Sodium Chloride ISO 3634 expressed as sodium chloride (Codex General Method), Potentiometry, type: III.

Canned bamboo shoot	CODEX STAN 241	ALINORM 97/23A	pH \geq 4.0; 4.0-4.6 (if acid is added)	(i) natural fermented bamboo shoots product - pH $<$ 4.0; (ii) acidified bamboo shoots product - pH 4.0 – 4.6; (iii) non-fermented, non acidified bamboo shoots product - pH $>$ 4.6.	AOAC 981.12	Potentiometry	I	CCPFV	a) The commodity is not mentioned in CODEX STAN 234 b) CODEX STAN 241 mentions the NMKL 179:2005 (Potentiometry, type II) and ISO 1842:1991 (Potentiometry, type IV)
Table olives	CODEX STAN 66	CODEX STAN 234	Lead (Pb)	-	AOAC 999.11 NMKL 139	AAS (Flame absorption)	II	CCPFV	a) CODEX STAN 234 mentions AOAC 999.11 NMKL 139, 1991 (Codex general method) b) The CODEX STAN 66 mentions the AOAC 972.25 method (Type III)
Processed Tomato Concentrate	CODEX STAN 57	ALINORM 07/30/23	Lactic Acid	Lactic Acid The content of lactic acid (total) does not exceed 1% of the natural total soluble solids content.	EN 2631	Enzymatic determination	II	CCPFV	a) CODEX STAN 57 and 234 mention this method. b) The EN 2631 method was not found.
Processed Fruits and Vegetables	The complete list of related Codex Stan are in Worksheet	CODEX STAN 234	Benzoic acid	-	NMKL 103 or AOAC 983.16	Gas chromatography	III	CCPFV	a) The method AOAC 983.16 is for Fish/Fish Homogenate.
Pickled Fruits and Vegetables	CODEX STAN 260	ALINORM 07/30/23	Benzoic acid	There is no limit	NMKL 103 or AOAC 983.16	Gas Chromatography	III	CCPFV	a) CODEX STAN 234 doesn't mention this commodity. b) CODEX STAN 260 mentions these methods and NMKL 124 by Liquid chromatography, type II. c) The method AOAC 983.16 is for Fish/Fish Homogenate.

Pickled Fruits and Vegetables	CODEX STAN 260	ALINORM 07/30/23	Sorbate	1000 mg/kg as sorbic acid	NMKL 103 or AOAC 983.16	Gas Chromatography	III	CCPFV	a) CODEX STAN 260 mentions these methods and NMKL 124 by Liquid chromatography, type II. b) The commodity is not mentioned in the Codex Stan 234. c) The method AOAC 983.16 is for Fish/Fish Homogenate.
Processed Fruits and Vegetables	The complete list of related Codex Stan are in Worksheet	CODEX STAN 234	Sorbates	-	NMKL 103/AOAC983.16	Gas chromatography	III	CCPFV	a) The method AOAC 983.16 is for Fish/Fish Homogenate.
Processed Fruits and Vegetables	The complete list of related Codex Stan are in Worksheet	ALINORM 05/28/23	pH	pH <4.6	NMKL 179	Potentiometry	II	CCPFV	a) The method mentioned in CODEX STAN 234 is ISO1842 and the type is IV, but the commodity is "Processed fruits and Vegetables (except canned bamboo shoots, pH determined by AOAC 981.12)" b) CODEX STAN 260 mentions the AOAC 981.12 method (Potentiometry, type III)
Table olives	CODEX STAN 66	REP13/MAS	Tin	250 mg/kg	NMKL 190 EN 15764	AAS (Flame absorption)	II	CCPFV	a) CODEX STAN 66 mentions only the AOAC 980.19 method (AAS, type II). b) CODEX STAN 234 mentions the same methods (NMKL 190 EN 15764).
Table olives	CODEX STAN 66	REP13/MAS	Tin	250 mg/kg	NMKL 191 EN 15765	ICP-MS	III	CCPFV	a) CODEX STAN 234 doesn't mention these methods (NMKL 191 EN 15765) b) CODEX STAN 66 mentions only the AOAC 980.19 method (AAS, type II)

Natural Mineral Waters	CODEX STAN 108	CODEX STAN 234	Spores of sulphite-reducing anaerobis (Clostridia)	-	ISO 6461-2	Membrane filtration	I	CCNMW	a) Out of CCMAS scope
Natural Mineral Waters	CODEX STAN 108	CODEX STAN 234	Faecal Streptococci	-	ISO 7899-2	Membrane filtration	I	CCNMW	a) Out of CCMAS scope
Natural Mineral Waters	CODEX STAN 108	CODEX STAN 234	Coliform organism, thermotolerant organism and presumptive Escherichia Coli	-	ISO 9308-1	Membrane filtration	I	CCNMW	a) Out of CCMAS scope
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	CODEX STAN 234	Alpha-Linolenic Acid	Very low energy diets shall provide less than 0.5 g α -linolenic acid in the recommended daily intake	AOAC 922.06; 969.33; 963.22	Acid hydrolysis, preparation of methyl esters and gas chromatography	II	CCNFSDU	a) The Method AOAC 922.06 is described for flour, b) The Method AOAC 969.33 is described for Oils and Fats and c) The Method AOAC 963.22 is described for Oils and Fats.
Foods with low-sodium content (including salt substitutes)	CODEX STAN 53	CODEX STAN 234	Iodine	-	AOAC 925.56	Titrimetry	II	CCNFSDU	a) The AOAC 925.56 Method is described for Salt/Iodized Salt.
Special foods	-	CODEX STAN 234	Vitamin A in foods in which carotenes have been added as a source of vitamin	-	AOAC 941.15	Spectrophotometry	III	CCNFSDU	a) The Method AOAC 941.15 is described for Plants/Silages, Plants/Fresh Plant Materials

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Formula Foods for Use in Weith Control Diets	CODEX STAN 181	CODEX STAN 182	Folate	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified Codex Stan 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>	AOAC 944.12	Microbioassay	II	CCNFSDU	a) The Method AOAC 944.12 is described for Vitamin Preparations
Special foods	-	CODEX STAN 234	Folic acid	-	AOAC 944.12	Microbioassay	II	CCNFSDU	a) The Method AOAC 944.12 is described for Vitamin Preparations
Foods with low-sodium content (including salt substitutes)	CODEX STAN 53	ALINORM 97/23	Calcium and magnesium Mg: < 20% of sum of potassium, calcium,	< 20% of sum of potassium, calcium, ammonium cations	AOAC 965.09	Atomic absorption spectrophotometry	Not described	CCNFSDU	<p>a) CODEX STAN 053 describes "See relevant Codex texts on methods of analysis and sampling".</p> <p>b) CODEX STAN 234 does not describe this provision.</p> <p>c) The Method AOAC 965.09 is</p>

			ammonium cations						described for fertilizers.
Foods with low-sodium content (including salt substitutes)	CODEX STAN 53	ALINORM 97/23	Phosphorus	< 4 % (m/m)	AOAC 984.27	ICP emission spectrometry	Not described	CCNFSDU	a) CODEX STAN 053 describes "See relevant Codex texts on methods of analysis and sampling". b) CODEX STAN 234 does not describe this provision
Follow up Formula	CODEX STAN 156	ALINORM 09/32/23	Moisture/Total Solids	-	AOAC 990.20 ISO 6731 IDF 21:2010	Gravimetry	I	CCNFSDU	a) The reference note is not approved yet for Moisture/Total Solids b) The Method ISO 6731 e IDF 21:2010 are described for Milk, cream and evaporated milk
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 72	ALINORM 09/32/23	Moisture/Total Solids	-	AOAC 990.20 ISO 6731 IDF 21:2010	Gravimetry	I	CCNFSDU	a) The reference note is not approved yet for Moisture/Total Solids b) The Method ISO 6731 e IDF 21:2010 are described for Milk, cream and evaporated milk
Follow up Formula	CODEX STAN 156	ALINORM 95/23	Vitamin K1	>4 µg/100kcal	AOAC 992.27	Liquid chromatography	II	CCNFSDU	a) CODEX STAN 234 refers Follow-up formula method AOAC 999.15 and EN 14148:2003 (vitamin K1); b) CODEX STAN 156 mentions "See relevant Codex texts on methods of analysis and sampling."
Follow up Formula	CODEX STAN 156	ALINORM 09/32/23	Selenium	Minimum 1 µg/100 kcal or 0.24 µg/100 kJ and GUL = 9 µg/100 kcal or 2.2 µg/100 kJ	AOAC 996.16 or AOAC 996.17	Continuous hydride generation Flame atomic absorption spectrometry (HGAAS)	III	CCNFSDU	a) The item related to Methods of analysis in the Codex Stan 72 says "to be finalized". b) The Method AOAC 996.16 is described for Animal Feed/Feed Ingredients, Animal Feed/Premixes. c) The Method AOAC 996.17 is

									described for Animal Feed, Animal Feed Premixes, Animal Feed/Feed Ingredients, Animal Feed/Premixes. .
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 72	ALINORM 09/32/23	Selenium	Minimum 1 µg/100 kcal or 0.24 µg/100 kJ and GUL = 9 µg/100 kcal or 2.2 µg/100 kJ	AOAC 996.16 or AOAC 996.17	Continuous hydride generation Flame atomic absorption spectrometry (HGAAS)	III	CCNFSDU	a) The item related to Methods of analysis in the CODEX STAN 72 says "to be finalized". b) The Method AOAC 996.16 is described for Animal Feed/Feed Ingredients, Animal Feed/Premixes. c) The Method AOAC 996.17 is described for Animal Feed, Animal Feed Premixes, Animal Feed/Feed Ingredients, Animal Feed/Premixes. .
Whey powders	CODEX STAN 289	ALINORM 08/31/23	Moisture, "Free"	-	ISO 2920 IDF 58	Gravimetry (drying at 88 °C ±2°C)	IV	CCMMP	a) CODEX STAN 289 mentions "see CODEX STAN 234". b) CODEX STAN 289 doesn't mention "Moisture free", just "Water". c) The ISO method mentions dry matter in whey cheese.
Cheese	CODEX STAN 283	ALINORM 08/31/23	Moisture	-	ISO 5534 IDF 4	Gravimetry, drying at 102 °C	I	CCMMP	a) CODEX STAN 283 mentions "see Codex Stan 234". b) There is no limit on CODEX STAN 283 for this provision. c) The method ISO mentions total solids in cheese and processed cheese.
Margarine	CODEX STAN 256	CODEX STAN 234	Vitamin D	-	AOAC 936.14	Bioassay	II	CCFO	a) The method AOAC 981.17 is mentioned in CODEX STAN 256 and is Type II.
Minarine	CODEX STAN 256	CODEX STAN 234	Vitamin D	-	AOAC 936.14	Bioassay	II	CCFO	a) The method AOAC 981.17 is mentioned in CODEX STAN n 256 and is Type II.

Margarine	CODEX STAN 256	CODEX STAN 234	Vitamin A	500 mg/kg singly or in combination	AOAC 960.45	Spectrophotometry	II	CCFO	a) The following methods are mentioned in CODEX STAN 256: AOAC 985.30; AOAC 992.04; or JAOAC 1980, 63, 4.
Minarine	CODEX STAN 256	CODEX STAN 234	Vitamin A	500 mg/kg singly or in combination	AOAC 960.45	Spectrophotometry	II	CCFO	a) The following methods are mentioned in t CODEX STAN n 256: AOAC 985.30; AOAC 992.04; or JAOAC 1980, 63, 4.
Margarine	CODEX STAN 256	CODEX STAN 234	Sodium chloride	-	AOAC 971.27 (Codex general method)	Potentiometry	II	CCFO	a) CODEX STAN 256 mentions for determination of salt content the following methods: "IDF 12B, ISO CD 1738 or AOAC 960.29". b) The AOAC 971.27 is applicable to vegetables/canned.
Minarine	CODEX STAN 256	CODEX STAN 234	Sodium chloride	-	AOAC 971.27 (Codex general method)	Potentiometry	II	CCFO	a) CODEX STAN 256 mentions for determination of salt content the following methods: "IDF 12B, ISO CD 1738 or AOAC 960.29". b) The AOAC 971.27 is applicable to vegetables/canned.
Fat Spreads and Blended Spreads	CODEX STAN 256	CODEX STAN 256	Vitamin A	There is no limit	AOAC 985.30; AOAC 992.04; or JAOAC 1980, 63, 4	HPLC	III	CCFO	a) The AOAC 985.30 is for sampling for infant formula b) The method JAOAC 1980, 63, 4 is mentioned in CODEX STAN 256 is not accessible. c) This provision is not mentioned in CODEX STAN n 234.
Named Animal Fats	CODEX STAN 211	REP 11/MAS	Copper and Iron	Iron (Fe): 1.5 mg/kg Copper (Cu): 0.4 mg/kg	AOAC 990.05/ISO 8294/ AOCS Ca 18b	Atomic absorption Spectrophotometry (direct graphite furnace)	II	CCFO	a) CODEX STAN 211 mentions IUPAC 2631, AOAC 990.05/ISO 8294 b) The AOCS method was not found
Olive Oils and Olive Pomace Oils	CODEX STAN 033	CODEX STAN 234	Halogenated solvents, traces	Maximum content of each halogenated solvent 0.1 mg/kg Maximum content of the sum of all	COI/T.20/Do c. no. 8	Gas chromatography	II	CCFO	a) This method is mentioned in CODEX STAN n 33. b) This method was not found.

				halogenated solvents 0.2 mg/kg					
Olive Oils and Olive Pomace Oils	CODEX STAN 33	ALINORM 04/27/23	Traces of halogenated solvents	Maximum content of each halogenated solvent: 0.1 mg/kg Maximum content of the sum of all halogenated solvents: 0.2 mg/kg	COI/T.20/Doc. no. 8.	Gas chromatography	II	CCFO	a) There are methods mentioned in CODEX STAN 33. b) The COI/T.20/Doc. no. 8. didn't found in COI site
Margarine	CODEX STAN 256	CODEX STAN 234	Vitamin E	-	IUPAC 2.411	TLC followed by spectrophotometry or GLC	II	CCFO	a) The reference report was not found. b) The method ISO 9936 is mentioned in CODEX STAN 256. c) The IUPAC is not updating methods anymore.
Minarine	CODEX STAN 256	CODEX STAN 234	Vitamin E	-	IUPAC 2.411	TLC followed by spectrophotometry or GLC	II	CCFO	a) The CODEX STAN 256 mentions ISO 9936 and CODEX STAN 234 mention IUPAC 2411 b) The IUPAC is not updating methods anymore.
Quick frozen blocks of fish fillet, minced fish flesh and mixtures of fillets and minced fish flesh	CODEX STAN 165	CODEX STAN 234	Sodium Chloride	There isn't limit	AOAC 971.21 (Codex general method)	Potentiometry	II	CCFFP	a) There are methods in the CODEX STAN n 165 b) The method AOAC 971.21 is for Hg.
Certain pulses	CODEX STAN 171	CODEX STAN 234	Moisture	There are suggestions in Stan	ISO 665	Gravimetry	I	CCCPL	a) The ISO 665 is for Oilseeds - Determination of moisture and volatile matter content. b) CODEX STAN 171 doesn't mention methods.

Cocoa Butter (for all foods)	CODEX STAN 86	ALINORM 01/23	Lead	-	AOAC 999.11 NMKL 139	AAS	II	CCCPC	a) There are methods mentioned in CODEX STAN 86- According to AOAC 934.07 or IUPAC Method (Pure & Appl. Chem., 63). b) The IUPAC methods are obsolete. c) There are methods for lead in the Codex Stan 228.
Cocoa powders (cocoa) and dry cocoa- sugar mixtures	CODEX STAN 105	CODEX STAN 234	Moisture	Not more than 7% m/m	IOCCC 26 or AOAC 977.10 (Karl Fischer method)	Karl Fisher	I	CCCPC	a) CODEX STAN 105-81 mentions AOAC 977.04 which is for Pesticide Formulations
Edible Casein Products	CODEX STAN 290	ALINORM 99/23	Lead	ALINORM ≤ 1 mg/kg	AOAC 972.25	Atomic absorption spectrophotometry	II	CCCF	a) CODEX STAN 290 mentions "see CODEX STAN 234". b) CODEX STAN 290 mentions "this Standard shall comply with CODEX STAN 193-1995". c) There is no limit in CODEX STAN 290 neither on CODEX STAN 193. d) The type of the method in CODEX STAN 234 is III.
Peanuts (Cereals, shell-fruits and derived products (including peanuts))	CODEX STAN 193	CODEX STAN 234	Sum of aflatoxins B1, B2, G1 and G2	15µg/kg	EN 12955 ISO 16050	HPLC with post column derivatization and immunoaffinity column clean up	III	CCCF	a) The BS EN 12955:1999 - Superseded, Withdrawn, Replaced By : BS EN ISO 16050:2011 b) There is provision only for peanuts in CODEX STAN 193 c) CODEX STAN 193 mentions the performance criteria for aflatoxins in peanuts

All foods	CODEX STAN 156 CODEX STAN 72 CODEX STAN 193	ALINORM 01/23	Lead, cadmium, copper, iron and zinc	See Codex Stan 193 for lead and cadmium Follow-up formula: Minimum 35 µg/100 kcal or 8.5 µg/100 kJ and GUL = 120 µg/100 kcal or 29 µg/100 kJ Infant Formula and Formulas for Special Medical Purposes Intended for Infants: Minimum 35 µg/100 kcal or 8.5 µg/100 kJ and GUL = 120 µg/100 kcal or 29 µg/100 kJ Special foods: Cu: >60 mg, Zn: >0.5 mg, and Fe: >0.15 mg/100 kcal	NMKL 161 AOAC 991.10	AAS after microwave digestion	III	CCCF	a) The method AOAC 991.10 is not for food (Cholinesterase Activity in Whole Blood)
Ginseng (Dry)	CODEX STAN 321	REP 15/MAS	Moisture	Dried Ginseng and Dried Steamed Ginseng (a) Moisture: no more than 14.0% (Powdered type: no more than 9.0%)	AOAC 925.45B	Gravimetric	I	CCASIA	a) The AOAC 925.45B for dry ginseng is 5g and the Rep 15 mentions 2g. b) The AOAC 925.45B is applicable to cane and beet, raw and refined sugars.
Ginseng (Extract)	CODEX STAN 321	REP 15/MAS	Moisture	Dried Ginseng and Dried Steamed Ginseng (a) Moisture: no more than 14.0% (Powdered type: no more than 9.0%)	AOAC 925.45D	Gravimetric	I	CCASIA	a) The Rep 15 mentions quantity of sample: 1.5g (mixing with 20g of sea sand) b) The AOAC 925.45D is applicable to massecuites, molasses, and other liquid and semi liquid products.

APPENDIX III

PROVISIONS WITHOUT RELATED METHOD

Commodities	CODEX STAN	Provision	Committee	ML do STAN
Milks	CODEX STAN 193	Aflatoxin M1	CCCF	0.5ug/kg
Wheat	CODEX STAN 193	Ochratoxin A	CCCF	5ug/kg
Barley	CODEX STAN 193	Ochratoxin A	CCCF	5ug/kg
Rye	CODEX STAN 193	Ochratoxin A	CCCF	5ug/kg
Apple Juice	CODEX STAN 193	Patulin	CCCF	50ug/kg
Infant foods	CODEX STAN 193	Radionuclides (238Pu, 239Pu, 240Pu, 241Am)	CCCF	1 Bq/kg
Infant foods	CODEX STAN 193	Radionuclides (90Sr, 106Ru, 129I, 131I, 235U)	CCCF	100Bq/kg
Infant foods	CODEX STAN 193	Radionuclides (35S, 60Co, 89Sr, 103Ru, 134Cs, 137Cs, 144Ce, 192Ir)	CCCF	1000Bq/kg
Infant foods	CODEX STAN 193	Radionuclides (3H, 14C, 99Tc)	CCCF	1000Bq/kg
Foods other than infant foods	CODEX STAN 193	Radionuclides (238Pu, 239Pu, 240Pu, 241Am)	CCCF	10Bq/kg
Foods other than infant foods	CODEX STAN 193	Radionuclides (90Sr, 106Ru, 129I, 131I, 235U)	CCCF	100Bq/kg
Foods other than infant foods	CODEX STAN 193	Radionuclides (35S, 60Co, 89Sr, 103Ru, 134Cs, 137Cs, 144Ce, 192Ir)	CCCF	1000Bq/kg
Foods other than infant foods	CODEX STAN 193	Radionuclides (3H, 14C, 99Tc)	CCCF	10000Bq/kg
Liquid condiments containing acid-hydrolyzed vegetable proteins (excluding naturally fermented soy sauce)	CODEX STAN 193	Chloropropanols	CCCF	0.4mg/kg

Edible cassava flour	CODEX STAN 193 CODEX STAN 176	Hydrocyanic acid	CCCF	10mg/kg
Gari	CODEX STAN 193 CODEX STAN 151	Hydrocyanic acid	CCCF	2mg/kg
Follow up Formula	CODEX STAN 156	Amino Acids	CCNFSDU	Only L forms of amino acids shall be used.
Foods with low-sodium content (including salt substitutes)	CODEX STAN 053	Magnesium	CCNFSDU	Values shall be declared on g/100g on salt substitute mixture
Foods with low-sodium content (including salt substitutes)	CODEX STAN 053	Ammonium	CCNFSDU	Values shall be declared on g/100g on salt substitute mixture
Foods with low-sodium content (including salt substitutes)	CODEX STAN 053	Choline	CCNFSDU	Values shall be declared on g/100g on salt substitute mixture
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Amino Acids	CCNFSDU	Only L-forms of amino acids shall be used, except that DL-methionine may be used.
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Thiamine	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and minerals (see CODEX STAN 203)
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Niacin	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and minerals (see CODEX STAN 203)
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Iron	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and minerals (see CODEX STAN 203)
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Iodine	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and minerals (see CODEX STAN n 203)
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Magnesium	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and minerals (see CODEX STAN 203)
Formula Foods for Use in Very Low Energy Diets for Weight Reduction	CODEX STAN 203	Copper	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and minerals (see CODEX STAN 203)
Formula Foods for Use in Very Low Energy Diets for Weight	CODEX STAN 203	Zinc	CCNFSDU	Very low energy diets shall provide 100% of the recommended daily intakes for vitamins and

Reduction				minerals (see CODEX STAN 203)
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Amino Acids	CCNFSDU	Only L-forms of amino acids shall be used, except that DL-methionine may be used.
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Thiamine	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Niacin	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Iron	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended</p>

				number of servings per day is 3 or 4 respectively
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Iodine	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Magnesium	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>
Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Copper	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>

Formula Foods for Use in Weith Control Diets	CODEX STAN 181	Zinc	CCNFSDU	<p>For a formula food represented as a replacement for all meals per day, at least 100% of the amounts of vitamins and minerals specified CODEX STAN 181 shall be present in the daily intake.</p> <p>For a formula food represented as a replacement for a single meal, the amounts of vitamins and minerals shall be reduced below the amounts specified in 3.2.3.1 to provide a minimum of 33% or 25% of these amounts, depending on whether the recommended number of servings per day is 3 or 4 respectively</p>
Gluten Free Products	CODEX STAN 118	Prolamins	CCNFSDU	<p>Prolamins are defined as the fraction from gluten that can be extracted by 40 - 70% of ethanol. The prolamin from wheat is gliadin, from rye is secalin, from barley hordein and from oats1 avenin.</p> <p>It is however an established custom to speak of gluten sensitivity. The prolamin content of gluten is generally taken as 50%.</p>
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Cysteine	CCNFSDU	Mean content 131 g nitrogen, or 21 g protein, or 38 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Histidine	CCNFSDU	Mean content 141 g nitrogen, or 23 g protein, or 41 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Isoleucine	CCNFSDU	Mean content 319 g nitrogen, or 51 g protein, or 92 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Leucine	CCNFSDU	Mean content 586 g nitrogen, or 94g protein, or 169 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Lysine	CCNFSDU	Mean content 395 g nitrogen, or 63 g protein, or 114 kcal

Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Methionine	CCNFSDU	Mean content 85 g nitrogen, or 14 g protein, or 24 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Phenylalanine	CCNFSDU	Mean content 282 g nitrogen, or 45 g protein, or 81 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Threonine	CCNFSDU	Mean content 268 g nitrogen, or 43 g protein, or 77 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Tryptophan	CCNFSDU	Mean content 114 g nitrogen, or 18 g protein, or 33 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Tyrosine	CCNFSDU	Mean content 259 g nitrogen, or 42 g protein, or 75 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Valine	CCNFSDU	Mean content 315 g nitrogen, or 50 g protein, or 90 kcal
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Gluten	CCNFSDU	All ingredients shall be gluten-free.
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Total Nucleotides	CCNFSDU	Levels may need to be determined by national authorities.
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Fluoride	CCNFSDU	Fluoride should not be added to infant formula. In any case its level should not exceed 100 µg /100 kcal (24µg/100 kJ) in infant formula prepared ready for consumption as recommended by the manufacturer.
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Osmolarity or Osmolality	CCNFSDU	When required information.
Infant Formula and Formulas for Special Medical Purposes	CODEX STAN 072	Acid/Base balance	CCNFSDU	When required information.

Intended for Infants				
Processed Cereal Based Foods for Infant and Young Children	CODEX STAN 074	Fructose	CCNFSDU	If sucrose, fructose, glucose, glucose syrup or honey are added to products mentioned in points 2.1.1 and 2.1.4, the amount of added fructose shall not exceed 0.9 g/100 kJ (3.75 g/100 kcal). If sucrose, fructose, glucose, glucose syrup or honey are added to products mentioned in point 2.1.2, the amount of added fructose shall not exceed 0.6 g/100 kJ (2.5 g/100 kcal).
Processed Cereal Based Foods for Infant and Young Children	CODEX STAN 074	Lauric Acid	CCNFSDU	The amount of lauric acid shall not exceed 15% of the total lipid content
Processed Cereal Based Foods for Infant and Young Children	CODEX STAN 074	Myristic Acid	CCNFSDU	The amount of myristic acid shall not exceed 15% of the total lipid content
Processed Cereal Based Foods for Infant and Young Children	CODEX STAN 074	Vitamin B1	CCNFSDU	The calcium content shall not be less than 20 mg/100 kJ (80 mg/100 kcal) for products mentioned in points 2.1.2. The calcium content shall not be less than 12 mg/100 kJ (50 mg/100 kcal) for products mentioned in point 2.1.4 manufactured with the addition of milk and presented as such.
Processed Cereal Based Foods for Infant and Young Children	CODEX STAN 074	Fat partially hydrogenated	CCNFSDU	Not allowed
Luncheon meat	CODEX STAN 89	Phosphates	CCPMPP	Phosphates (naturally present plus added max. 8000mg/kg(expressed as P ₂ O ₅) Note1: Natural phosphate (mg/kg P ₂ O ₅) calculated as 250 x % protein. Added phosphates (mono-, di- and poly-), sodium and potassium salts max. 3000 mg/kg (expressed as P ₂ O ₅), singly or combination.
Cooked cured ham	CODEX STAN 96	Phosphates	CCPMPP	Phosphates (naturally present plus added max. 8000mg/kg(expressed as P ₂ O ₅) Note1: Natural phosphate (mg/kg P ₂ O ₅) calculated as 250 x % protein. Added phosphates (mono-, di- and poly-), sodium and potassium salts max. 3000 mg/kg (expressed as P ₂ O ₅), singly or combination.

Cooked cured chopped meat	CODEX STAN 98	Phosphates	CCPMPP	Phosphates (naturally present plus added max. 8000mg/kg(expressed as P ₂ O ₅) Note1: Natural phosphate (mg/kg P ₂ O ₅) calculated as 250 x % protein. Added phosphates (mono-, di- and poly-), sodium and potassium salts max. 3000 mg/kg (expressed as P ₂ O ₅), singly or combination.
Couscous	CODEX STAN 202	Moisture	CCCPL	Not exceed 13.5%
Oats	CODEX STAN 201	Ergot	CCCPL	Sclerotium of the fungus <i>Claviceps purpurea</i> 0.05% m/m max
Oats	CODEX STAN 201	Moisture	CCCPL	14.0% m/m max
Rice	CODEX STAN 198	Moisture	CCCPL	15% m/m max
Peanuts	CODEX STAN 200	Moisture	CCCPL	Maximum level- Peanuts in-pod 10% Peanut kernels 9.0%
Canned Baby Food	CODEX STAN 073	Consistency and Particle Size	CCNFSDU	Ready-to-eat baby foods are homogeneous or comminuted in the following forms: (a) strained: food of a fairly uniform, small particle size which does not require and does not encourage chewing before being swallowed; (b) junior: food that ordinarily contains particles of a size to encourage chewing by infants and children.
Follow up Formula	CODEX STAN 156	Consistency and Particle Size	CCNFSDU	When prepared according to the directions for use, the product shall be free of lumps and of large, coarse particles.
Durum wheat semolina and durum wheat flour	CODEX STAN 178	Particle size	CCCPL	durum wheat semolina-MAX: 79% shall pass through a 315 micron silk gauze or man-made textile sieve; durum wheat flour- MIN: 80% shall pass through a 315 micron silk gauze or man-made textile sieve.
Infant Formula and Formulas for Special Medical Purposes Intended for Infants	CODEX STAN 072	Consistency and Particle Size	CCNFSDU	When prepared according to the label directions for use, the product shall be free of lumps and of large coarse particles and suitable for adequate feeding of young infants.

Processed Cereal Based Foods for Infant and Young Children	CODEX STAN 074	Consistency and Particle Size	CCNFSDU	When prepared according to the label directions for use, processed cereal-based foods should have a texture appropriate for the spoon feeding of infants or young children of the age for which the product is intended. Rusks and biscuits may be used in the dry form so as to permit and encourage chewing or they may be used in a liquid form, by mixing with water or other suitable liquid, that would be similar in consistency to dry cereals.
Sugar (fructose).	CODEX STAN 212	Loss on drying	CCS	CODEX STAN 212: fructose \leq 0.5 % m/m
Sugar (white sugar)	CODEX STAN 212	Colour	CCS	CODEX STAN 212 white sugar: \leq 60 ICUMSA units
Sugar (fructose)	CODEX STAN 212	Colour	CCS	CODEX STAN 212 fructose \leq 30 ICUMSA units
Fermented milk (Kumys)	CODEX STAN 243	Ethanol	CCMMP	Codex Stan 243 min 0.5 % vol/w
Whey powders	CODEX STAN 289	pH (in 10% solution)	CCMMP	Maximum 5.1 or titratable acidity (calculated as lactic acid) \geq 0.35%.
Dried Shark Fins	CODEX STAN 189	Moisture	CCFFP	-
Cooked cured chopped meat	CODEX STAN 98	Phosphates	CCPMPP	Phosphates (naturally present plus added max. 8000mg/kg(expressed as P ₂ O ₅) Note1: Natural phosphate (mg/kg P ₂ O ₅) calculated as 250 x % protein. Added phosphates (mono-, di- and poly-), sodium and potassium salts max. 3000 mg/kg (expressed as P ₂ O ₅), singly or combination.
Cooked cured ham	CODEX STAN 96	Phosphates	CCPMPP	Phosphates (naturally present plus added max. 8000mg/kg(expressed as P ₂ O ₅) Note1: Natural phosphate (mg/kg P ₂ O ₅) calculated as 250 x % protein. Added phosphates (mono-, di- and poly-), sodium and potassium salts max. 3000 mg/kg (expressed as P ₂ O ₅), singly or combination.

Luncheon meat	CODEX STAN 89	Phosphates	CCPMPP	Phosphates (naturally present plus added max. 8000mg/kg (expressed as P ₂ O ₅) Note1: Natural phosphate (mg/kg P ₂ O ₅) calculated as 250 x % protein. Added phosphates (mono-, di- and poly-), sodium and potassium salts max. 3000 mg/kg (expressed as P ₂ O ₅), singly or combination.
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APPENDIX IV

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