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**HARMONIZATION OF NAMES AND FORMAT FOR
PRINCIPLES AND PROVISIONS IDENTIFIED IN CXS 234 (2025)**

(Prepared by the EWG led by Brazil and Chile)

Background

1. At its 44th Session, CCMAS considered the discussion paper on harmonization of names and format for principles and provisions in CXS 234-1999 (CX/MAS 25/44/12) and Appendix I (Annexes A, B, C, and D) of the document. Due to the complexity of the subject, CCMAS agreed to consider Annex D (Harmonization of provisions) separately.
2. While some Members expressed reservations regarding the harmonization of provisions, it was recognized that the current presentation of provisions in the *Recommended methods of analysis and sampling* (CXS 234-1999) allows for improvements in harmonization, provided that any changes are undertaken cautiously and in consultation with the relevant Codex committees.
3. CCMAS44 agreed to re-establish the EWG, chaired by Brazil and co-chaired by Chile, with the following terms of reference (TORs):
 - i. to further revise the “Harmonization of Names for Principles in CXS 234-1999”, including Annexes A, B, and C, using [Appendix VI of REP25/MAS](#) as the basis, with the aim of ensuring that the principles in CXS 234-1999 are properly reflected;
 - ii. to continue discussions on Annex D, focusing on classifying the provisions into three distinct groups (editorial or no-change provisions; provisions related to active committees; provisions related to inactive committees), and making corresponding recommendations; and
 - iii. to prepare and submit the EWG report to the Codex Secretariat at least three months before CCMAS45.

EWG Registration and Consultation

4. The EWG was established in July 2025 and comprised of 35 members (30 Codex Members (CM), one Codex Member Organization (CMO), and four Codex Observers (CO)). The list of participants is provided in Appendix II.
5. Three rounds of consultation were conducted between July 2025 and January 2026. These consultations addressed the harmonization of names and formats for principles in CXS 234-1999, based on [Appendix VI of REP25/MAS](#), as well as a proposed approach for advancing the harmonization of provisions.
6. Comments were received from four CMs, one CMO and one CO. This document compiles and synthesizes the comments submitted by EWG participants during the consultation rounds.
7. With regard to the definitions of analytical techniques listed in Section 2 of Appendix I, some Members requested alignment with internationally recognized references, including:
 - The IUPAC Gold Book.
 - IUPAC The Compendium of Analytical Terminology (2023, Orange Book).
 - VIM JCGM 200 – International Vocabulary of Metrology (BIPM).
 - ISO/IEC Guide 99 – International Vocabulary of Metrology.

- ASTM E135 – Standard Terminology Relating to Analytical Chemistry for Metals, Ores, and Related Materials.
 - ISO 5492 – Sensory analysis — Vocabulary.
8. Where possible, proposed improvements to definitions have been incorporated into the text. In cases where further discussion is required, proposed wording has been placed in square brackets for CCMAS consideration.
9. A proposal was also made to amend Section A (Criteria Used) of Appendix I (Section 3.1 Bullet point A). The proposed amendment, together with its rationale, has been included in square brackets for further consideration by CCMAS.
10. Some Members recommended that the list of method principles in Annex A of Appendix I should not exceed the current scope of CXS 234-1999. Accordingly, principles not presently referenced in CXS 234-1999 (e.g. Anodic Stripping Voltammetry, Confocal Laser Scanning Microscopy, DNA-based assays, Electron Microscopy) should be removed. These Members noted that future additions should be introduced only when new methods are proposed for endorsement by CCMAS, in line with established Codex procedures. Other Members, however, supported the retention of these principles to ensure that, should such techniques be incorporated in the future, the corresponding terminology and acronyms would already be harmonized.
11. At this stage, method principles not currently referenced in CXS 234-1999 have been retained in the proposed text to allow for potential future updates to CXS 234-1999. CCMAS is invited to determine whether these principles should be maintained or removed.
12. With respect to the harmonization of provisions, some Members expressed concerns regarding amendments to the existing text of CXS 234-1999. Nevertheless, several discrepancies between product standards and CXS 234-1999 were identified. Given the complexity of this work, the EWG recognized the need for guidance from CCMAS to proceed further. Accordingly, examples and a proposed approach are presented in Annex D of Appendix I to support the review of provisions and the continuation of the work.

Conclusion

13. The EWG has concluded its work according to its TORs and the outcomes are presented in Appendix I and its annexes. This work will provide a framework or guide for the use of harmonized terminology when updating or reviewing CXS 234-1999.
14. Further work, however, may be needed on the harmonization of provisions that are identified in Annex D.

Recommendation

15. CCMAS45 is invited to:
- i. review the proposed consolidated structure and text in Appendix I and its Annexes A, B, and C and consider in particular the following matters:
 - a. the proposed wording and definitions presented in square brackets;
 - b. the retention or removal of method principles not currently included in CXS 234-1999 (Annex A of Appendix I); and
 - c. the adoption of harmonized terminology for all definitions included in Annexes A and B of Appendix I.
 - ii. publish Appendix I and its Annexes A, B and C as an information document following the completion of the review in (i);
 - iii. consider the proposed approach for the harmonization of provisions (Annex D of Appendix I) as a basis or guiding the continuation of the work of the EWG; and
 - iv. agree to proceed with the harmonization of the remaining provisions, applying the proposed approach outlined in Annex D of Appendix I.

APPENDIX I

**DISCUSSION PAPER ON
HARMONIZATION OF NAMES AND FORMAT FOR PRINCIPLES IN CXS 234-1999**

1. General Guideline

The term “principle” mentions only the description of the technique related to determining the test result (Annex A). The techniques used for sample preparation, extraction and separation were not included.

2. Definitions

For the purposes of alignment and harmonization regarding what is considered the principle of an analytical method, the following definition is proposed:

- **Principle** is the technique used for determining the provision result, which may include information required to follow the method for example, gravimetry (**[incineration]** or **[ashing]** at 550°C).

Proposed Wording: Replace ‘ashing’ with ‘incineration’.

Rationale: Since ‘ashing’ is identified in Section 4 (Additional Information) as a term to be removed, it is recommended to revise the wording to *incineration* for consistency and clarity.

To harmonize the descriptions of analytical techniques, the following definitions for main analytical techniques were considered:

- **Biological assay:** A technique to determine the concentration, potency or effect of a substance *in vivo* or *in vitro*.
- **Calculation:** When the numerical value of a provision requires a mathematical operation using test result(s) from more than one method. In this case, specify the provisions used-

New proposed wording: [Calculated method-principle: when a provision result in the specification units, requires a computation based on test result(s) of other provisions. In this case, specify in the principle the other provision(s) used. Typically occurs when the CXS 234 Principle states ‘Calculated from...’; and an example is Milk solids-not-fat (MSNF) in milk and Milk products.]

Rationale: The term being defined should not appear in the definition. In addition, the term ‘calculation’ is generic, and almost all methods involve an actual calculation. In this context, the specific calculation process is when the term ‘calculated from’ is used in the method’s principle. Accordingly, it is suggested that the term “calculation” be replaced by “Calculated method-principle.”

- **Chromatography:** A technique used to separate components of a mixture by distributing the components between two phases -- stationary phase and mobile phase, with corresponding detection techniques to identify and quantify the components.

New proposed wording: [Chromatography: A technique of separation in which the components to be separated are distributed between two phases, one of which is stationary (stationary phase) while the other (the mobile phase) moves in a definite direction] (ref. IUPAC).

- **Colorimetry:** A technique that measures the light absorbed by a coloured solution. The intensity of light (or light of a specific wavelength) passing through the coloured sample is visually observed or measured and converted to a concentration based on a calibration curve.

Note: This should not be confused with the tristimulus colorimeter used to measure food colours.

- **Gravimetry:** A technique that determines the mass of a substance by weighing (due to the action of gravity).
- **Mass spectrometry (MS)** is a technique used to fragment molecules into ions with specific mass-to-charge ratios and may be coupled to systems for component quantification. Mass spectrometry is an analytical technique used to detect and identify molecules of interest by measuring their mass and characterizing their chemical structure.

New proposed wording: [Mass spectrometry: An analytical technique used to separate and count ions based on the ion mass-to-charge ratio and converted to a concentration based on a calibration curve].

- **New proposed definition:** [Panel test: A sensory panel or taste panel, a systematic evaluation process involving a multidisciplinary group that assesses the sensory attributes of food products.]

- **Potentiometry:** An electrochemical technique to quantify ions in solution by measuring the potential difference between an indicator and a reference electrode in an electrochemical cell.
New proposed wording: [Potentiometry: Electrochemical measurement principle where the potential difference between an indicator electrode and a reference electrode is measured] (Ref. IUPAC).
- **Sensory assay:** A technique that uses the senses for evaluation of the organoleptic attributes (appearance, aroma, texture, taste and others) of a product.
New proposed wording: [Sensory assay: science involved with the assessment of the organoleptic attributes of a product by the senses] (Ref. ISO 5492).
- **Spectrometry:** A technique which measures the interaction of electromagnetic radiation and matter, for example: Ultraviolet-Visible (UV-Vis) spectro electrometry, infrared (IR), atomic absorption spectrometry (AAS), and nuclear magnetic resonance (NMR).
Note: Spectroscopy and spectrometry are often used interchangeably, although spectroscopy refers to the study of the interaction of electromagnetic radiation and matter, while spectrometry refers to the measurement of this interaction.
- **Titrimetry:** The quantitative determination of a given component in a solution by adding a liquid reagent of known concentration (titrant) until past an endpoint where all of the component has reacted with the titrant.
- **Visual examination:** A technique to detect the presence of defects, extraneous, or foreign matter in a food through sight, with or without the support of optical equipment (example: magnifying glass, microscope or others).
- **Volumetry:** A technique that determines the volume that a given amount of a substance occupies, without the use of another determining technique.
New proposed wording: [Volumetry: A technique that determines the volume that a test item occupies].

3. Criteria Used

3.1. Assays Whose Results Are Method Dependent

- A. Description in the principle of the factor that makes the result(s) method dependent, for example: temperature, conversion factor, etc;
New proposed text: [Description in the principle of the predominant method parameters (but not all the method parameters) that makes the result(s) method dependent, if necessary, for example: temperature, conversion factor;]
Rationale: This section appears to redefine Type I methods. It should be recalled that Type I methods are defined as “a method which determines a value that can only be established in terms of the method per se and which, by definition, serves as the sole method for establishing the accepted value of the item measured.” In this context, all method parameters contribute to the method-dependent nature of the results, although some parameters may be considered more critical than others to varying degrees.
- B. Description only of the analytical technique used to obtain the numerical value of a “provision”, since the other information is described in the methods. Therefore, the following may not be included, unless critical for the determination of the numerical value of the “provision”, for example: equipment, solvents or reagents used; and
- C. For tests that involve the culturing of microorganisms at a certain temperature, the temperature may be included in the “principle” description because it is critical for the determination of the correct result.

Examples:

Provision	Principle
Moisture	Gravimetry (drying at 105 °C)
Protein (Nx6.25)	Titrimetry and calculation
Carbohydrates	Calculation based on the results of moisture, protein, fat, ash and dietary fibre
Halphen test	Colorimetry
Net weight	Gravimetry
Foreign Matter	Visual examination - Gravimetry
Fat	Gravimetry
<i>Lactobacillus acidophilus</i>	Colony count at 37°C

3.2. Assays Whose Results Are Independent of the Method

For instrumental tests, the technique used must refer to the main equipment used, for example: for separation, and the detector used for determination. Ideally, these assays are collaboratively trialled, and where the measurand(s) are well defined entities, traceable to International System (SI) units._

Examples:

Provision	Principle
Aflatoxin M1	High Performance Liquid Chromatography with Fluorescence Detector (HPLC-LFD)
Fatty acids	Gas Chromatography with Flame Ionization Detector (GC-FID)
Nitrate	Ultraviolet-Visible (UV-Vis) Spectrometry
Manganese	Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)
pH	Potentiometry
Mercury	Atomic Absorption Spectrometry with Cold Vapor Generator (CVAAS)

4. Additional Information

Considering the acceptance of the criteria described above, it is considered necessary to remove secondary information from method principles such as: “ashing”, “ceramic filter filtration”, “complexometry”, “centrifugation”, “weighing”, “distillation”, “enzymatic”, “flotation”, “single sulfation”, “sieving” unless critical to the method as the following examples:

- ‘Calcium - Complexometry titrimetry’ or ‘Complexometric titrimetry’ methods remain in CXS 234. Suggest as ‘Titrimetry - complexometric’
- ‘Determination of centrifugable pulp’ and ‘Solubility index’ provisions remain the principle ‘Centrifugation’ will need to be retained.
- The principle ‘Gravimetry - sieving’ should be retained.
- ‘Particle size (granularity) - Sieving’ or Particle size (granularity) - Gravimetry (sieving), then the principle ‘sieving’ or ‘Gravimetry (sieving)’ will need to be retained.

PRINCIPLES OF METHODS OF ANALYSIS

1. Anodic Stripping Voltammetry (ASV)
2. Atomic Absorption Spectrophotometry (AAS)
 - Cold Vapour (CVAAS)
 - Flame atomic absorption (FAAS)
 - Flow Injection Analysis (FIA AAS)
 - Graphite Furnace (GF AAS)
 - Hydride Generation (HG AAS)
3. Biological assay
 - Bioassay (in animals, tissue, plants)
 - Microbioassay
4. Immunoassay
 - Enzyme-Linked ImmunoSorbent Assay (ELISA)
5. Calculation
6. Centrifugation
7. Colony count at (temperature) °C
8. Colorimetry
9. Conductimetry/Resistivity
10. Confocal Laser Scanning Microscopy (CLSM)
11. Densitometry:
 - Hydrometer
 - Pycnometer
 - Digital Density
 - Vibratory density
12. DNA Assay
 - DNA Comet Assay
13. Polymerase chain reaction (PCR):
 - Conventional PCR (cPCR)
 - Quantitative (qPCR)
 - Reverse Transcriptase PCR (RT-PCR)
14. Electrophotometry
 - Electrometric
15. Enzymatic
16. Fluorometry
17. Gravimetry
 - Incineration at (temperature) °C
 - Drying at (temperature) °C
 - Evaporation at (temperature) °C
 - Gravimetry-sieving
 - Microwave oven drying

- Röse-Gottlieb
 - Schmid-Bondzynski- Ratzlaff
 - Sieving
 - Soxhlet
 - Vacuum Drying at (temperature) °C
 - Weibull-Berntrop
18. Inductively Coupled Plasma (ICP)
- Isotope Dilution Mass Spectrometry (ID MS)
 - High Resolution Mass Spectrometry (HRMS)
 - Mass Spectrometry (MS)
 - Optical Emission Spectroscopy (OES)
 - Collision/Reaction Cell Mass Spectrometry (MS/MS)
19. Chromatography
- 19.1 Liquid chromatography (LC):
- High Performance liquid chromatography (HPLC)
 - Ultra-High Performance Liquid Chromatography (UHPLC)
- Detector:
- Charged Aerosol Detector (CAD)
 - Diode Array Detector (DAD)
 - Evaporative Light Scatter Detector (ELSD)
 - Fluorescence Detector (FLD)
 - Infrared (IR)
 - Isotope Dilution Mass Spectrometry (ID MS)
 - Mass Spectrometry (MS)
 - Pulsed amperometry detection (PAD)
 - Quadrupole Time-of-Flight (QTOF)
 - Refractive index (RI)
 - Tandem Mass Spectrometry (MS/MS)
 - Ultraviolet (UV)
 - Ultraviolet-Visible (UV-Vis)
- 19.2 Gas chromatography (GC):
- Headspace (HS)
 - Capillary gas chromatography (CGC)
- Detector:
- Electron Capture Detector (EC)
 - Flame Ionization Detector (FID)
 - Flame Photometric Detector (FPD)
 - Mass Spectrometry (MS)
 - Nitrogen Phosphorus Detector (NPD)
 - Tandem Mass Spectrometry (MS/MS)

- Thermal Conductivity Detector (TCD)
- Quadrupole Time-of-Flight (QTOF)
- High Resolution Mass Spectrometry (HRMS)

19.3 Ion Exchange Chromatography (IC)

Detector:

- Diode Array Detector (DAD)
- Electrochemical Detector (EC)
- Mass Spectrometry (MS)
- Pulsed Amperometric Detector (PAD)
- Refractive index (RI)
- Conductivity Detector (CD)
- Ultraviolet-Visible (UV-Vis)
- Variable Wavelength Detector (VWD)

19.4 Thin Layer Chromatography (TLC)

- High Performance Thin Layer Chromatography (HPTLC)

Detector:

- Densitometric detector
- Fluorescence (FLD)
- Ultraviolet-Visible (UV-Vis)

20. Microscopy

- Electronic microscopy
- Optical microscopy
- Flotation

21. Nephelometry

22. Nuclear Magnetic Resonance Spectroscopy (NMR)

23. Panel test

24. Photometry

25. Photostimulated Luminescence (PSL)

26. Polarimetry

27. Potentiometry

- Ion selective electrode (ISE)
- pH electrode (pH)

28. Refractometry

29. Receptor Binding Assay (RBA)

30. Spectrometry

- Fluorescence (FL)
- Isotope ratio mass spectrometry (IRMS)
- Ultraviolet (UV)
- Ultraviolet-Visible (UV-Vis)
- Mass spectrometry (MS)

- Tandem mass spectrometry (MS/MS)
- High resolution mass spectrometry (HRMS)
- 31. Spectroscopy
 - Electron Spin Resonance (ESR)
 - Fourier Transform Infrared (FTIR)
 - Infrared Spectroscopy (IR)
 - Mid-infrared (Mid-IR)
 - Near Infrared Reflectance (NIRS)
 - Raman (RS)
- 32. Stable Isotope Ratio Mass Spectrometry (IRMS)
- 33. Thawing
- 34. Thermoluminescence
- 35. Thermometry
- 36. Titrimetry
 - Acidity
 - Colorimetry
 - Complexometry
 - Coulometry
 - Electrochemical
 - Iodimetry & Iodometry
 - Karl Fischer
 - Kjeldahl Digestion
 - Lane & Eynon
 - Mohr
 - Potenciometry
 - Wijs
- 37. Turbidimetry
- 38. Visual examination
 - Count
 - Gravimetry
 - Macroscopy
 - Micrometry
- 39. Volumetry
 - Centrifugation
- 40. Weighing

ANNEX B**ACRONYMS AND ABBREVIATIONS OF PRINCIPLES OF METHODS OF ANALYSIS**

AAS	Atomic Absorption Spectrophotometry
ASV	Anodic Stripping Voltammetry
CD	Conductivity Detector
CE	Capillary Electrophoresis
CLSM	Confocal Laser Scanning Microscopy
cPCR	Conventional Polymerase Chain Reaction
CVAAS	Cold Vapour Atomic Absorption Spectrophotometry
DAD	Diode Array Detector
EC	Electrochemical Detector
ECD	Electron Capture Detector
IRMS	Isotope Ratio Mass Spectrometry
ISE	Ion Selective Electrode
ELISA	Enzyme-Linked ImmunoSorbent Assay
ESR	Electron Spin Resonance
FAAS	Flame Atomic Absorption Spectrophotometry
FIA	Flow injection Analysis
FID	Flame Ionization Detector
FLD	Fluorescence Detector
FPD	Flame Photometric Detector
FTIR	Fourier Transform Infrared Spectroscopy
GC	Gas Chromatography
GFAAS	Graphite Furnace Atomic Absorption Spectrophotometry
HGAAS	Hydride Generation Atomic Absorption Spectrophotometry
HPAEC	High Performance Anion Exchange chromatography
HPLC	High Performance Liquid Chromatography
HPTLC	High Performance Thin Layer Chromatography
HRMS	High Resolution Mass Spectrometry
IC	Ion Chromatography
ICP	Inductively Coupled Plasma
ID	Isotope Dilution
IMS	Isotope mass Spectrometry
IR	Infrared
IRS	Infrared Spectroscopy
LC	Liquid Chromatography
MALDI	Matrix-Assisted Laser Desorption Ionization
MS	Mass Spectrometry
MS/MS	Tandem Mass Spectrometry
NIRS	Near Infrared Reflectance Spectroscopy

NMR	Nuclear Magnetic Resonance Spectroscopy
NPD	Nitrogen Phosphorus Detector
OES	Optical Emission Spectrometry
PAD	Pulsed Amperometry Detection
PCR	Polymerase Chain Reaction
pH	pH electrode
PSL	Photostimulated Luminescence
qPCR	Real Time Qualitative Polymerase chain reaction
Q-ICPMS	Quadrupole Inductively couple plasma mass spectrometry
QTOF	Quadrupole Time-of-Flight
RI	Refractive Index
RS	Raman Spectroscopy
RT-PCR	Reverse Transcriptase PCR
TLC	Thin-Layer Chromatography
TOF	Time-of-Flight
UHPLC	Ultra-High Performance Liquid Chromatography
UV	Ultraviolet
UV-Vis	Ultraviolet-Visible
VWD	Variable Wavelength Detector

ANNEX C**LIST OF ACRONYMS FOR STANDARD METHOD REFERENCES**

AACC	Cereals & Grains Association	(www.cerealsgrains.org/)
AIIBP	International Association of the Bouillon and Soup Industry	(www.culinaria-europe.eu/)
Anal. Chim. Acta.	Analytica Chimica Acta	(https://www.sciencedirect.com/journal/analytica-chimica-acta)
AOAC	AOAC International	(www.aoac.org/)
AOCS	American Oil Chemists' Society	(www.aocs.org/)
BS	British Standard	(www.bsigroup.com)
EN	European Standards	(www.en-standard.eu/)
EPA	Environmental Protection Agency	(www.epa.gov/)
EUsalt	European Salt Producers Association	(https://eusalt.com/)
FDA	Food and Drug Administration [Laboratory methods]	(www.fda.gov/)
ICC	International Association for Cereal Science and Technology	(https://icc.or.at/)
ICUMSA	International Commission for Uniform Methods of Sugar Analysis	(www.icumsa.org/)
IDF	International Dairy Federation	(https://fil-idf.org/)
IFU	International Fruit and Vegetable Juice Association [IFU Methods Analysis IFUMA]	(https://ifu-fruitjuice.com/)
IHC	International Honey Commission	(www.ihc-platform.net/)
ICA	International Confectionery Association	(www.international-confectionery.org/)
ICCO	International Cocoa Organization	(www.icco.org/)
IOC	International Olive Council	(www.internationaloliveoil.org/)
IS	Indian Standard	(www.bis.gov.in/)
ISI	International Starch Institute	(www.starch.dk/)
ISO	International Organization for Standardization	(www.iso.org/)
IUPAC	International Union of Pure and Applied Chemistry	(www.iupac.org/); (www.old.iupac.org/)
NMKL	Nordic-Baltic Committee on Food Analysis	(www.nmkl.org/)
OIV	International Organisation of Vine and Wine	(www.oiv.int/)
Ph. Eur	European Pharmacopoeia	(https://www.edqm.eu/en/the-european-pharmacopoeia)
USP	US Pharmacopoeia	(www.usp.org/)
WEFTA	West European Fish Technologists Association	(www.wefta.org)

ANNEX D**Proposed approach for harmonizing provisions in CXS 234-1999**

The tables and suggestions below support the analysis and facilitate discussion, assisting in the review of provisions and the continuation of the work, without prejudging any final decisions. All the recommendations are for action by CCMAS, which may refer them to the Committee responsible for the provision as appropriate.

1. pH

Provision	Commodity	Committee responsible for the provision*
pH	Canned bamboo shoots Chilli sauce Edible Casein Products Fish sauce Processed fruits and vegetables (pickled cucumbers, table olives, processed tomato concentrates, preserved tomatoes, mango chutney and aqueous coconut products) Sugars (fructose) Sugars (lactose)	Unchanged
pH of brine	Table olives In the physico-chemical characteristics part of the Standard for table olives (CXS 66-1981) set a maximum pH for the packing brine or the juice from the pulp after osmotic balance.	CCPFV
pH value	Fermented noni fruit juice The Regional Standard for fermented noni fruit juice (North America and SouthWest Pacific) (CXS 356R-2023) does not mention value	CCNASWP

Harmonized provision: pH

Provision	Commodity
pH	Canned bamboo shoots Chilli sauce Edible Casein Products Fermented noni fruit juice Fish sauce Processed fruits and vegetables (pickled cucumbers, table olives, processed tomato concentrates, preserved tomatoes, mango chutney and aqueous coconut products) Sugars (fructose) Sugars (lactose) Table olives (Brine)

* For entries indicated as 'unchanged', no referral to the respective committee is needed.

2. Volatile oil

Provision	Commodity	Committee responsible for the provision*
Volatile oils	Cumin Thyme Black, White and green pepper	Unchanged
Volatile oil on dry basis	Cloves Dried basil Dried or dehydrated ginger Small cardamom	CCSCH
Volatile oils on dry basis	Allspice, juniper berry and star anise	CCSCH
Volatile oils (dry weight basis)	Dried oregano	CCSCH
Volatile oil content on dry basis	Nutmeg	CCSCH

Harmonized provision: volatile oils

Provision	Commodity
Volatile oils	Allspice, juniper berry and star anise Black, White and green pepper Cloves Cumin Dried basil Dried or dehydrated ginger Dried Oregano Nutmeg Small cardamom Thyme

* For entries indicated as 'unchanged', no referral to the respective committee is needed.

3. Mould

Provision	Commodity	Committee responsible for the provision*
Mould damage	Cumin Thyme	CCSCH
Mould damage	Mixed zaatar	CCNE
Mould damage (for ground)	Ground and whole is style and part of the name in Standard for dried or dehydrated chilli pepper and paprika (CXS 353-2022)	CCSCH
Mould damage (for whole chilli peppers)		CCSCH
Mould damage (for whole leaves)	Dried basil Whole leaves is style and part of the name in Standard for dried basil (CXS 345-2021)	CCSCH
Mould visible	Allspice, juniper berry and star anise Dried or dehydrated ginger Dried oregano Nutmeg Saffron Small cardamom Turmeric	(Unchanged) CCSCH
Mould visible (for whole)	Cloves Whole is style and part of the name Standard for dried floral parts: cloves (CXS 344-2021)	CCSCH
Mouldy berries	Black, white and green pepper	CCSCH
Mould count	Processed tomato concentrates Preserved tomatoes	Unchanged

Suggestions :

- Include “ground,” “whole,” and “whole leaf” in the name of the commodity if there is a different requirement for the parameter for mould damage.
- CCSCH and CCNE should be consulted to determine whether it is possible to harmonize a single term, such as “mould visible.”

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

Provision	Commodity
Mould visible	Allspice, juniper berry and star anise Black, white and green pepper Chilli peppers (ground) Chilli peppers (whole) Cloves (whole) Cumin Dried basil (Whole leaves) Dried or dehydrated ginger Dried oregano Mixed zaatar Nutmeg Saffron Small cardamom Thyme Turmeric
Mould count	Processed tomato concentrates Preserved tomatoes

Sample preparation**5.1. Honey - Standard for honey (CXS 12-1981) - CCS**

Codex Document	Provisions	Methods to
CXS 12-1981	<ul style="list-style-type: none"> ✓ Honey shall not be heated. ✓ Moisture content. ✓ No other food ingredient added. ✓ Sugars Content (Fructose and Glucose Content (sum of both) Sucrose Content). ✓ Water Insoluble Solids Content. 	<ul style="list-style-type: none"> ✓ Determination of Moisture Content. ✓ Determination of Sugars Content (Fructose and Glucose Content (sum of both), Sucrose content) ✓ Determination of Water-insoluble Solids Content. ✓ Determination of Electrical Conductivity. ✓ Determination of sugars added to honey (authenticity)
CXS 234-1999	Acidity Diastase activity Moisture Sample preparation Solids, water-insoluble Sugars added (for sugar profile) Sugars added: detection of corn and cane sugar products.	

Suggestions to CCMAS:

- Delete the provision on sample preparation and include the corresponding method together with the other methods necessary to evaluate the provision.
- Include the provision “authenticity” and consider adding enzyme activity (since CXS 12-1981 does not establish a numerical parameter).

5.2. Foul Medames - Regional Standard for canned foul medames (Near East) (CXS 258R-2007)

Provisions in CXS 234-1999: Sample preparation; Salt content; Drained weight.

Suggestions to CCMAS (for discussion and/or referral to respective committees as appropriate):

- Change the name of the commodity to “Canned Foul Medames.”
- Delete the provision “sample preparation” and integrate the corresponding method with the methods used to assess the other provisions.

4. Calcium

Provision	Commodity	Committee responsible for the provision*
Calcium	Special foods, infant formula, natural mineral water, processed fruits and vegetables (canned strawberries, pickled cucumbers, Canned strawberries preserved tomatoes, canned citrus fruits, certain canned vegetables), citrus marmalade.	Unchanged
Calcium (as oxide) on dry basis	Dries or dehydrated ginger Standard for dried roots, rhizomes and bulbs: dried or dehydrated ginger CXS 343-2021) Calcium oxide as a processing aid	CCSCH
Calcium \geq 800 mg/100 g	Emmental	CCMMP
Calcium and magnesium	Food-grade salt	CCFA

Suggestions :

- Rename the provision name for dried or dehydrated ginger to “Calcium Oxide” to reflect the provision in the CXS 343-2021.
- Split the provision “Calcium and magnesium” in food-grade salt.
- Delete “ \geq 800 mg/100 g” and refer only to calcium in Emmental.

Provision	Commodity
Calcium	Citrus marmalade Emmental Food-grade salt Infant formula Natural mineral water Processed fruits and vegetables (canned strawberries, pickled cucumbers, Canned strawberries preserved tomatoes, canned citrus fruits, certain canned vegetables) Special foods
Calcium (as oxide)	Dried or dehydrated ginger
Magnesium	Food-grade salt

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

5. Nitrites and Nitrates

Provision	Commodity	Committee responsible for the provision*
Nitrate	Natural mineral Waters	Unchanged
Nitrite	Natural mineral Waters	Unchanged
Nitrates	Processed meat and poultry products	CCFA
Cooked cured pork shoulder Nitrites ISO 2918 Colorimetry IV	Cooked cured pork shoulder	CCFA
Nitrates and/or nitrites	All foods (see also meat products) Meat products	CCFA
Nitrites	Cooked cured chopped meat Cooked cured ham Cooked cured pork shoulder Processed meat and poultry products	CCFA
Nitrites, potassium and/or sodium salt	Canned corned beef Luncheon meat	CCFA

Suggestions :

- **Split up “Nitrates and Nitrites” and delete “salts of sodium and potassium” (In CXS 192-1995, “Potassium nitrite” and “Sodium nitrite” are included under the general term “nitrites”).**
- **All commodities listed in APPENDIX V Table 1 – REP25/MAS must be included.**

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

6. Copper and Iron

Provision	Commodity	Committee responsible for the provision*
Iron	Olive oils and olive pomace oils, Milk fat products	Unchanged
Iron (in roller dried caseinates)	Edible casein products	CCMMP
Iron, dissolved	Natural mineral Waters	CCNMW

Suggestion :

- **Harmonize the name of the provision as “Iron.”** In CXS 290-1995, there are two different limits for iron: one for casein products in general and another for roller-dried caseinates. Because roller-dried caseinates are a type of casein product, this provision should be placed under the name of the corresponding commodity.
- **Split the provisions that mention iron and copper together.**

Provision	Commodity
Iron	Edible casein products (except roller dried caseinates) Edible (in roller dried caseinates) Fats and oils not covered by individual standards Named animal fats Named vegetable oils Olive oils and olive pomace oils Milk fat products
Iron, dissolved	Natural mineral Waters

Provision	Commodity
Copper	Edible Casein Products Fats and oils not covered by individual standards Food-grade salt Milk fat products Natural mineral waters Olive oils and olive pomace oils

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

7. Iodine

Provision	Commodity	Committee responsible for the provision*
Iodine	Food-grade salt Foods with low-sodium content (including salt substitutes)	Unchanged
Iodine (milk-based formula)	Follow-up formula	CCNFSDU
Iodine value	Named vegetable oils Olive oils and olive pomace oils	CCFO

Iodine value is defined as the percentage of iodine absorbed by an oil sample, indicating its unsaturation content or the presence of double bonds that can react with iodine, not iodine concentration.

Suggestion :

Provision	Commodity
Iodine	Follow-up formula (milk-based formula) Food-grade salt Foods with low-sodium content (including salt substitutes) Infant formula (for milk-based formula)
Iodine value	Named animal fats Named vegetable oils Olive oils and olive pomace oils Unrefined shea butter

* For entries indicated as 'unchanged', no referral to the respective committee is needed.

8. Fill of containers

Provision	Commodity	Committee responsible for the provision*
Fill of containers	Special foods Chilli sauce	unchanged
Fill of glass containers	Canned apple sauce Canned green peas Jams, Jellies and marmalades Processed fruits and vegetables Table olives	CCPFV
Fill of metal containers	Canned apple sauce Canned green peas Processed fruits and vegetables Table olives	CCPFV
Volume fill by displacement	Pickled cucumbers	CCPFV

Suggestions :

- Harmonize the provisions as “Fill of container”. In the CXS 115-1981, the provision “volume fill” is under the item “fill of container”.
- The database may include two files: one with the general provision “Fill of Containers,” and a second one detailing the specific requirements for glass and metal.

Provision	Commodity
Fill of containers, glass	Canned apple sauce Canned green peas Jams, Jellies and marmalades Processed fruits and vegetables Special foods Table olives
Fill of containers, metal	Canned apple sauce Canned green peas Processed fruits and vegetables Table olives
Fill of container, Volume fill by Displacement	Pickled cucumbers

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

9. Vit E and Tocopherols

Provision	Commodity	Committee responsible for the provision*
Vitamin E	Infant formula, special foods	Unchanged
Vitamin E (milk-based infant formula)	Special foods	CCNFSDU
Tocopherol content	Named vegetable oils	CCFO
Alpha-tocopherol	Olive oils and olive pomace oils	CCFO

Suggestions :

- **Harmonized provision for the nutrient Vitamin E:** delete “milk-based infant formula” from the provision name and include it under the commodity name.
- **Harmonized name for the antioxidant additive: Tocopherols.** CXS 192-1995 lists d-alpha-tocopherol and mixed tocopherol concentrate under the general term “Tocopherols,” with the same limit. CXS 33-1981 does not specify additives.
- **Discuss whether the methods for “tocopherol content” assess the different types of tocopherols (alpha, beta, gamma, and delta) as specified in CXS 210-1999 (Table 4).**

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

10. Peroxide value

Provision	Commodity	Committee responsible for the provision*
Peroxide value	Cooked rice wrapped in plant leaves Fats and oils not covered by individual standards Fish oils Named animal fats Olive oils and olive pomace oils Soybean products fermented with <i>Bacillus</i> species - Unrefined shea butter	Unchanged
Peroxide value (expressed as meq. of oxygen/kg fat)	Milk fat products (anhydrous milkfat)	CCMMP
Peroxide value (PV)	Named vegetable oils	CCFO

Suggestion :

- **Harmonized name: Peroxide value**

Provision	Commodity
Peroxide value	Cooked rice wrapped in plant leaves Fats and oils not covered by individual standards Fish oils Milk fat products (anhydrous milkfat) Named animal fats Named vegetable oils Olive oils and olive pomace oils Soybean products fermented with <i>Bacillus</i> species - Unrefined shea butter

* For entries indicated as 'unchanged', no referral to the respective committee is needed.

11. Fibre

Provision	Commodity	Committee responsible for the provision*
Crude fibre	Cloves, Black Sago flour Soybean products fermented with Bacillus species - Tempe White and green pepper	CCSCH CCASIA
Dietary fibre, total	Special foods, Follow-up formula	CCNFSDU
Fibre, crude	Edible cassava flour, Gari Pearl millet flour Sorghum flour Soy protein products Vegetable protein products Wheat protein products including wheat gluten Whole and decorticated pearl millet grains	(Unchanged) CCCPL CCVP

Suggestions :

- The database may contain two files: one with the general term “fibre” and a second one specifying the different types, such as “crude” and “dietary.”

Provision	Commodity
Fibre, crude	Cloves, Black Edible cassava flour, Gari Pearl millet flour Sago flour Sorghum flour Soy protein products Soybean products fermented with Bacillus species – Tempe Vegetable protein products Wheat protein products including wheat gluten White and green pepper Whole and decorticated pearl millet grains
Fibre, dietary	Special foods, Follow-up formula

* For entries indicated as ‘unchanged’, no referral to the respective committee is needed.

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