

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda Item 1, 2, 3, 4.1, 4.2, 4.3, 5, 6 and 7

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ORIGINAL LANGUAGE ONLY

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING

42nd Session
Budapest, Hungary

13 – 16 June 2023
with report adoption on 20 June 2023 (virtual)

(Comments of Kenya)

Kenya appreciates the opportunity to provide comments on the different agenda items to be discussed by the 42nd Session of Codex Committee on Methods of Analysis and Sampling (CCMAS42)

Agenda Item 1

Adoption of the Agenda

General Comment: Kenya proposes adoption of the Provisional Agenda as the agenda for the 42nd session of CCMAS.

Agenda Item 2

Matters Referred to the Committee by the Codex Alimentarius Commission and Other Subsidiary Bodies

Kenya has taken note of the recommendations for endorsement by CCMAS and in particular

- The matters for information referred by CAC and CCEXEC;
- Encouragement on the occasion of the 60th anniversary of Codex, to plan and implement activities to build awareness of Codex and to engage high level political support for Codex work and to consider the implementation of a regional event to mark the 60th anniversary;
- Encouragement to actively engage in opportunities to contribute to the discussions in CCEXEC and CAC (i.e., the operationalization of the SoP; the future of Codex; new food sources and production systems, and monitoring the use of Codex standards) by providing replies to relevant CLs;
- That matters for action arising from CCFA, CCFO and Endorsement of methods of analysis and sampling in agenda item 3; and
- The ongoing work on sampling plans for methylmercury in fish in CCCF.

Agenda Item 3

Endorsement of Methods of Analysis Provisions and Sampling Plans in Codex Standards (CX/MAS 23/42/3)

General Comment: Kenya supports the endorsement of Methods of Analysis Provisions and Sampling Plans detailed under (Appendices I, II, III, IV and V), in Codex Standards with the following proposals;

Comment: Further discussions on the methods for determining salt content to be considered.

Rationale: Test methods that analyse the salt content (mainly sodium content) by indirect determination express sodium chloride in terms of chloride concentration. This can potentially give an inaccurate concentration for sodium if the source of chlorides in the sample emanate from alternative sources. Therefore, an over estimation of sodium may be reported in such instances. The AOAC Sub-Saharan Africa (White Paper on the Quantification of sodium and salt in foods) elaborates.

The suggested methods meet the performance criteria in the codex manual for methods. Limitation of the indirect determination of sodium content through the determination of chlorides concentration needs to be noted.

Editorial Comment: Kenya proposes an editorial amendment on FAO/WHO Coordinating Committee for Africa on Methods of analysis for provisions in the Standard for Dried Meat (CXS 350-2022) (adopted by CAC45 at Step 8, REP22/CAC45, para. 149 and Appendix-IV III). The correct reference is appendix III.

Editorial Comment: Kenya proposes an amendment on the agenda item 3 (CX/MAS/42/3). The principle for the parameters of extraneous matter and foreign matter, in the methods of analysis provisions in the standard for Dried Leaves - Dried Basil (CX/MAS/42/3 Appendix II Page 7), should be visual examination followed by volumetry **gravimetry**. The CXS 345-2021 requires weighing and not a volumetric method.

Agenda Item 4.1

Review of methods of analysis in CXS 234: Fats and oils workable package:

Comment: Kenya would like to thank the EWG that was chaired by the Netherlands, for the work well done that addresses the need to review and update CXS 234-1999. Kenya supports the committee's proposed editorial amendments while noting the following proposals.

Section A/ Matters agreed by CCFO27

Comment: Kenya supports the proposal to indicate the detector type (UV-DAD) for the synthetic antioxidant methods for the commodity fats and oils.

Rationale: Inclusion guides on the correct detector to be used for a particular method of analysis.

Comment: Kenya proposes that the extraction solvent should be specified and added to the principle for the named vegetable oils - Unsaponifiable matter parameter.

Rationale: The two methods are based on the same principle but different extraction solvents and inclusion enables guidance on the appropriate method to select for analysis.

Section C

Comment: Kenya supports the CCMAS on the review of methods for Olive oil and Olive Pomace oils after the review of the standard by CCFO and the proposal to include peroxide value as a test parameter for Olive oil and Olive Pomace oils.

Rationale: Changes in CXS 234 and the commodity standards will have to be harmonized. Some documented methods in the olive oil commodity standards are not in section C of the working documents, CL2022/60/OCS-MAS and this should be referred to CCFO for harmonization or included in the CXS 234 examples are Free acidity, fatty acid composition, iodine value which are in the commodity standards CXS 33 but omitted from the Section C of CL2022/60/OCS-MAS.

Peroxide value is an indicator of quality and stability of the oil and hence should be included.

Agenda Item 4.2

Agenda Item 4.2: Cereals, pulses and legumes workable package Comments in reply to CL 2023/13/OCS-MAS (CX/MAS 23/42/5 Add.1)

Appendix I

Comment: Kenya proposes methods where high temperature of 900°C for ash determination not to be considered.

Rationale: The determination of ash content, at 900°C requires the use of expensive platinum dishes which is contrary to the position to consider applicability, availability and cost of methods in line with criteria for selection of methods set out in the procedure manual.

Methods of analysis using temperature of 650°C have been found to be fit for purpose.

Comment: Kenya supports the removal or retyping of AOAC 993.17 method using hazardous reagents (benzene/chloroform) or move it to Type IV methods.

Rationale: Method uses hazardous reagents (benzene/chloroform) for analysis and is not efficient in the determination of all aflatoxins.

Appendix 1/Group 1

Comment: Kenya recommends to retain both methods ISO 665 and ISO 24557 for moisture for certain pulses.

Rationale: Method ISO 665 for moisture for certain pulses could not be substituted with ISO 24557 since the latter has a scope that does not include soyabean.

Comment: Kenya recommends replacing ISO 712 with ISO 6540 which includes moisture determination of maize.

Rationale: The scope of ISO 712 does not cover for maize.

Comment: Kenya supports the inclusion of ISO 20483 to method for protein determination in degermed maize (corn) meal and maize (corn) grits, sorghum flour and wheat flour in addition to the ICC method.

Rationale: The ISO method uses the same principle as the ICC method and the required inputs are easily available and affordable.

Appendix II and III

Comment: Kenya supports review of the methods under Appendix II and III at a future WG on methods endorsement and others where there was no consensus achieved.

Rationale: Review to reach consensus on suitable methods or requirements for appendix II. Methods listed under Appendix III for inclusion, should go through the set process for endorsement of methods as prescribed in the CODEX procedural manual.

Agenda Item 4.3

Appendix 1

Comment: Kenya recommends the inclusion of a method that uses the flameless atomic absorption spectrometric for determination of lead, ISO 6633 in processed fruits and vegetables.

Rationale: The limit of quantification for lead determination using the flameless Atomic Absorption Spectrometer will be low.

Comment: Kenya recommends AOAC 971.33 be retained for mineral impurities in canned strawberries and added to canned palmito since it still determines the sandy matter/ mineral impurities.

Rationale: Replacing AOAC 971.33 with ISO 762 is not necessary since ISO 762 also determines impurities originating from the soil.

Comment: Kenya supports the specified commodities for certain processed fruits and vegetables to remain listed in parenthesis under the "Processed Fruits and Vegetables".

Rationale: This adds clarity and specificity regarding the products that the methods' scope defines.

21. i)

Comment: Kenya supports the identification of the requirements for use of a commodity-specific moisture methods to be achieved using a footnote with an explanation to address the requirement.

Rationale: Kenya supports for the reason that the footnote takes cognizance of the differences in testing methods at the disposal of the respective laboratory.

22. i)

Comment: Kenya supports the proposed changes to CXS 234.

22.iii)

Comment: Kenya supports the consideration of Appendix II and Appendix III to be reviewed at a future WG on methods endorsement.

Comment: Kenya does not support the deletion of packing medium from Appendix 1 and further suggests the addition of pineapples into the list of processed fruits.

Rationale: There is no provision for determining soluble soluble solids of the packing medium in ISO 2173 which is a critical component in canned fruits and vegetables.

Agenda Item 5

Introduction: Appendix 1. Para 1 part 1.

Comment: Remove the word always and let the statement remain as a recommendation.

To read: 'A measurement result should always be accompanied by information regarding its uncertainty. Such information provides an indication of the quality of the measurement result and allows meaningful comparison

to other measurement results or reference values. Without a statement of measurement uncertainty, a measurement result is essentially incomplete and cannot be properly interpreted.'

Justification: According to ISO 17025: clause 7.8.3.1, 'test reports shall however, where necessary for interpretation of test results, include, where applicable, the measurement uncertainty presented in the same unit as the measurand or in a term relative to the measurand when;

General Comment: Kenya Supports the publishing the information document on the Codex website and requests the working group to come up with another additional guidance document to address;

i) Estimation of Measurement Uncertainty due to Sampling.

ii) Measurement uncertainty for qualitative methods in microbiological analysis/ molecular biology.

Rationale: More Guidance is needed in determining Measurement Uncertainty Sampling and for qualitative methods in microbiological analysis/Molecular Biology.

Agenda Item 6

Revision of the General Guidelines on Sampling:

General Comment: Kenya supports the revised guidelines for sampling and the review process to continue to the next stage 8 and re-establishment of the electronic working group to complete the development of the Information Document (e-book with sampling plan apps).

However, Kenya proposes the following:

Editorial Comment: Clause 2.1: Kenya proposes the insertion of the acronym (HACCP) between Points and Systems to read :

Editorial Comment: Clause 2.1 Kenya proposes an amendment to the definition of Acceptance Sampling Plan; to read, 'An acceptance sampling plan specifies the number of samples to be taken and how they are to be taken, the procedure used to test or examine those samples, and the acceptance criterion used to decide whether a lot should be accepted based on the results from the testing of those samples.

General Comment: Kenya proposes that the Sampling plan should not include laboratory testing procedures. This is evident in several clauses throughout the document e.g. in clause 2.1,

Rationale: Sampling plans are not inclusive of methods of laboratory analysis.

Editorial Comment: Editorial: Clause: 3.2.1, **(Stringency)** Para 2.

Comment: Kenya proposes, The four parameters PRQ, CRO, PR, and CR should be bracketed or omitted, to read as follows; 'However, designing such plans using statistical principles allows these risks to be controlled. This is achieved by specifying a particular producer's risk quality level, the PRQ, and a particular consumer's risk quality level, the CRQ, along with a corresponding producer's risk (PR) and a consumer's risk (CR) respectively. Once these four parameters, (PRQ, CRQ, PR and CR), are specified the probability of acceptance and therefore the producer's and consumer's risks at any quality level are uniquely determined.

Justification: They have been alluded to in the previous statement in the paragraph, therefore no need for repetition.

Editorial Comment: Clause 3.2.2 'Practicality' Kenya proposes an amendment to Clause 3.2.2 on Practicality to read 'It is important to ensure that any sampling plan chosen will be practical to apply in terms of cost of sampling and testing, and ease of use.'

Editorial Comment: Clause 3.2.2 Bullet 2. the use of 'indifference' plans that are designed around the 'Indifference Quality Level' (IQL), the level of defects at which there is 50% acceptance, rather than based on PRQ, and CRQ. This leads to plans having more manageable sample sizes.

Editorial Comment: Kenya proposes an amendment to 3.2.4 on Sampling procedure to read, In considering homogeneity, one needs to draw a distinction between:

Editorial Comment: Kenya proposes an amendment to 3.2.5 Prior knowledge of the distribution of a characteristic.

In Para 2, subheading Prior knowledge the distribution of a characteristic, Last word.

This means that prior knowledge is required even in connection with the inspection of isolated lots. In other words, the inspection of isolated lots does not mean that no prior information is available. On the contrary, prior information is always required. Sometimes the prior information takes the form of (tacit) assumptions based on experience and expert judgment. For example, a typical ('default') assumption in variables plans is

that a characteristic follows a normal **distribution assumption**.

Editorial Comment: Kenya proposes an amendment to 4.4.5 para 2, to read;

‘On the other hand, some bulk materials, such as shipments of grains or other raw materials, cannot be considered homogeneous (refer section 3.2.7). Special techniques are required for this situation, but the statistical methods are complex and only an overview is provided in these Guidelines.

Editorial Comment: Kenya proposes an amendment to 4.4.7 para 1

Typically, the total observed variation within a lot of bulk materials consists of several components due, for example, to variation between and within segments, due to sample preparation (e.g., including subsampling), testing and other causes.

Justification: Editorial Amendment for clarity

Editorial Comment: Kenya proposes an amendment to 5.2.1 para 1,

Any sources which contribute to uncertainty within the laboratory can be considered components of analytical measurement uncertainty, for example:

- subsampling steps performed on the basis of the laboratory sample, such as taking a test sample, test portion, etc.
- sample preparation
- contributions due to storage conditions (in the laboratory)
- analytical steps
- laboratory analyst/technician.

Comment: 4.4.2 Kenya proposes the addition of a new definition ‘Representative sample’.

Representative Sample: A random sample selected in such a way that the observed values have the same distributions in the sample as the population.

Rationale: This document uses 'sample' consistently and in a few cases uses the term 'representative sample' and yet having a sample does not intrinsically apply that it would be representative. Defining the term 'Representative sample' will clarify this for users and emphasise the need to always aim at a representative sample.

Comment: Kenya proposes to consider a statement on replicating the analysis to get a reliable estimate of uncertainty of measurement other than using the statement referring to a single determination performed on a single sample”.

Rationale: Although a single determination performed on a single sample is sometimes acceptable, it might overlook some inherent variability. Hence, the proposal is to consider replicating the analysis to get a reliable estimate of uncertainty.

Agenda Item 7

Discussion paper on criteria to select Type II methods from multiple Type III methods

Comment: Kenya supports the agreed position by the committee to circulate the proposed revised rules for selection of Type II methods from multiple Type III methods again for comments, further revision by Switzerland and consideration at CCMAS42. However Kenya proposes that the criteria should also include;

- I. Equipment availability and cost, safety of reagents, and analysis time among others.
- II. Include the term “recovery” to the step iii under the decision rules for choosing the best method (type II) among multiple Type III. Therefore, it would read “The method with the best selectivity and recovery should be preferred”.
- III. The method with the best reproducibility standard deviation from the validation data should be preferred.

Rationale: This will enable inclusion of a pool of methods, that are cost effective, accurate, user-friendly with respect to safety of reagents used, affordable equipment and reduced analysis time.

Including recovery helps choose the method with the best accuracy.

This helps choose the method with little variability in the collaborative study.