



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
FAO/WHO COORDINATING COMMITTEE FOR AFRICA**

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PROPOSED DRAFT REGIONAL STANDARD FOR DRIED MEAT

(Prepared by the Electronic Working Group chaired by Botswana, Cote d'Ivoire and Morocco)

(At Step 3)

1. INTRODUCTION

1.1 The Codex capacity building workshop jointly organised by Switzerland and the FAO in close collaboration with CCAfrica and the African Union in Addis-Ababa, Ethiopia 15-16 May 2014, proposed the following top five priority commodities for standardisation under the FAO/WHO Codex Coordinating Committee for (CCAFRICA) framework: Dried Meat – Kilichi; Baobab (fruits); Leaves from gnetum africanum (eru); Shea (Karite) butter and Manioc (Batons).

1.2 CCAFRICA21 (2015), considered a discussion paper for the development of regional standards based on the above five (5) identified commodities; and agreed: to propose new work on a standard for dried meat to the Commission and to establish, an electronic Working Group, led by Cote d'Ivoire and co-chaired by Botswana and Morocco.

1.3 During critical review of standards work, CCEXEC70 considered the proposal for new work on dried meat, noted several issues and gaps in the project document, and agreed to recommend that CCAFRICA revise the project document and clarify the outstanding issues for consideration by CCEXEC. Botswana and the Regional Coordinator for CCAFRICA (Kenya) under took the task for updating the project document and submitted it to CCEXEC71 for consideration.

1.4 CCEXEC71 (2016) supported the approval of new work on the development of a regional standard for dried meat by CCAFRICA, with the understanding that the work would focus on:

- (i) Dried meat produced and traded in the Africa region only, while products currently traded in the international markets would be excluded;
- (ii) Quality aspects, while safety aspects (i.e. hygiene, contaminants and pesticide and veterinary drugs residues) would be addressed by reference to existing Codex texts).

1.5 During CAC39 (2016), the Commission adopted the recommendations of CCEXEC71 and approved the new work.

1.6 CCAFRICA22 (2017) noted that information already provided could be the basis of the initial work on the development of standard, and that all countries with data and experience or experts to contribute should actively participate in the eWG. CCAFRICA22 further agreed to re-establish an Electronic Working group co-hosted by Botswana, Cote d'Ivoire and Morocco to continue preparing the proposed draft regional standard on dried meat, taking into consideration comments provided at the session, and report back at CCAFRICA23.

2. PARTICIPATION AND METHODOLOGY

2.1 Fifteen (15) countries and two organisations (including FAO) registered to participate in the EWG and these are listed as in Appendix II.

2.2 The initial document was drafted by Botswana using the existing national standard from Botswana and available drafts from Nigeria on dried meat standard, and all other relevant documents including Codex texts. The draft was circulated among all member states Codex Contact Points for their contributions. The submissions were collated to formulate the first proposed draft of discussion.

2.3 Initially the discussions were through email; and in August 2018 the working method was changed to the Codex electronic platform (codex–forum). It is important to note that only a few countries fully participated (i.e. Botswana, Burkina Faso, Cote d'Ivoire, Kenya, Morocco, Nigeria (from CCAFRICA region); with Egypt,

and the United States of America as observers from outside the region) in the EWG by way of providing and or submitting comments.

2.4 The Chairing of the EWG was a challenge; Botswana did most of the work without much participation of Morocco and Cote d'Ivoire and there were challenges related to the translation of comments received in French.

3. ANALYSIS

3.1 The EWG agreed on most of the issues as proposed in the preliminary draft and in particular the following:

- (i) *Title* - Maintained the title as proposed in the project document i.e. "Regional Standard for dried meat", however there was an alternative proposal by Egypt (an observer from CCNE that the Title be changed to include semi-dried meat and to read: proposed draft Regional Standard for dried and semi dried meat – to include Egypt semi-dried meat (Bastarami).
- (ii) *Definitions* - Deleted the term "processing" from the definitions; and listed the local names of products and their origin as footnote. The products listed in footnote 1 are: Aliya (Kenya); Khlii (Morocco); Kilishi (Nigeria); Odka (Somalia); Qwanta (Ethiopia); Segwapa (Zimbabwe, Botswana, Lesotho, Namibia and South Africa), Kuna (Botswana).
- (iii) *Essential Composition and quality factors* - Replaced the title for "Raw materials specification" with heading "Essential composition and quality factors" and merged several clauses to avoid repetition and to conform to format of CODEX standards
- (iv) *Classification of meat* - Deleted classification as there were no definite attributes that could be used to categorize the product. In addition, these products are prepared under different conditions given their diverse cultural backgrounds.
- (v) *Microbiological Criteria* - Included E. Coli O157:H7 and other STEC as proposed; and deleted the detection of *Clostridium botulinum*, since *Clostridium botulinum* is not a risk in this type of product (an aerobic product) therefore not necessary to be detected i.e. is rarely found in meat.
- (vi) *Contaminants* - Deleted requirements for mycotoxins as there were no levels of mycotoxins specified for dried meat in the reference standard (CXS 193 – 1995)
- (vii) *Residues of Veterinary Drugs* - Noted that the limits for Residues of Veterinary Drugs were specified in under the Maximum residue limits (MRL) and risk management recommendations (RMS) for residues of veterinary drugs in foods (CAC/MRL 2-2018) and there was no need to make further recommendations and MRLS. As a consequence the proposed listing for antibiotics was replaced by the general reference to CXS193-1995.
- (viii) *Pesticide Residue Limits* – On the proposed listing of pesticide residues in a Table, it was agreed that the following statement from the Codex procedural manual was broad, appropriate and adequate and there was no need to list the individual residues in the standard: "*The products covered by this standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission*" because the table is not comprehensive.
- (ix) *Prohibition* - Deleted the proposed section on Specific Prohibition because creatinine is a metabolite from creatine which occurs naturally in meat and therefore it was irrelevant to include this prohibition in the proposed draft standard.
- (x) *Labelling* - Made general reference to the *General Standard for Labeling of pre-packaged foods* (CODEX Stan 1 -1985) as appropriate.
- (xi) *Transportation* – Made reference to *Code of hygiene practice for the transport of food in bulk and semi-packed foods* (CAC/RCP 47-2001), as it covered transportation requirements.
- (xii) *Sampling* – made reference to *General Guidelines on Sampling plan* (CAC/GL 50 - 2004) as there was no identified need to elaborate sampling plans.

4. ISSUE NOT RESOLVED

4.1 The following issues were not resolved by the EWG and would require further discussion by the FAO/WHO Regional Coordinating Committee for Africa (CCAFRICA):

- a) Proposal by Egypt to include semi-dried meat (Bastarami) – the semi dried meat moisture minimum limits are too high (60%) for a product to be considered as dried meat.
- b) It was proposed to delete "Nyirinyiri" as it is a product that does not attain the moisture content of dried meat which is 10-35% and hence does not fall in category of dried meat

- c) CCAFRICA considers the General Standard for Food Additives (GSFA) and determine the correct Food Category for the dried meat and if all the additives listed under this food category are permissible.
- The Chair of the EWG proposes that the dried meat should be considered under food category **08.2.1** of GFSA, (CXS 192-1995), as these products include Cured (including salted) non-heat treated processed meat, poultry, and game products in whole pieces or cuts and some cover Dried.
- d) The EWG proposed that the Microbiological Criteria to be included in the standard with support of the following documents:
- Table J28 of the following NACMCF report:
<https://www.fsis.usda.gov/wps/wcm/connect/2ea3f473-cd12-4333-a28e-b2385454c967/NACMCF-Report-Process-Control-061015.pdf?MOD=AJPERES>,
 - Botswana and Nigerian dried meat standard (diversification of national legislation).

4.2 However, Codex promotes the use of a holistic approach to food safety assurance rather than end product testing. CCAFRICA is requested to examine the most appropriate approach to this issue.

5. CONCLUSION AND RECOMMENDATION

The Chair of the eWG, Botswana, notes that the EWG completed the task as per the submissions made and CCAFRICA is invited to consider the proposed regional draft standard for meat (Africa) as presented in Appendix I.

1¹ PROPOSED DRAFT REGIONAL STANDARD FOR DRIED MEAT**(At Step 3)****1. SCOPE**

The standard covers dried meat obtained from cattle, camel, sheep, goat, poultry and farmed game intended for direct consumption or for further processing.

2. DESCRIPTION

Dried meat products are a variety of dried, cured or smoked meat from cattle, camel, sheep, goat, poultry and farmed game free from surface fat, bones, cartilage and tendons. They are typically made from raw meat which are cut into strips, salted, spiced and dried.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Essential Ingredients**

- **Raw lean Meat, excluding edible offal**

The raw meat used for this processing shall be from one type of meat and its flavour shall be characteristic of that type.

3.2 Optional Ingredients

- **Curing agent consisting of food grade Salt** - complying with *Standard for Food Grade Salt (CXS 150-1985)*
- **Spices and Condiments** - Complying with *Code of Hygienic Practice for Low-Moisture Foods (CXP 75-2015)*
- **Edible Oil** - complying with *Standard for Named Vegetable Oils (CXS 210-1999)* and *Standard for Named Animal Fats (CXS 211-1999)*.

3.3 Essential Quality Factors**3.3.1 Ingredients:**

The ingredients shall be clean, of sound quality and fit for human consumption. They shall be handled in accordance with the latest edition of the Codex Alimentarius Codes of Hygienic Practice for the respective ingredients.

3.3.2 Raw material

The raw materials from which the products are prepared shall be suitable for human consumption and free from objectionable odours, foreign bodies, dirt and artificial colours.

The raw meat used for processing the product shall be obtained from animals that have passed the ante-mortem and post-mortem inspection by a competent authority.

3.3.3 Final product

The dried meat shall be clean, uniformly and thoroughly dried, cured and smoked and the product shall meet the requirements of this standard.

4. FOOD ADDITIVES

The food additives used in the dried meat product shall be in accordance with the *General Standard for Food Additive (CXS 192-1995)*.

Use of flavouring substances should be consistent with the *Guidelines for the Use of Flavourings (CAC/GL 66-2008)*.

5. CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed (CXS193-1995)* and the *Maximum Residue Limits for Veterinary Drugs in Food* specified in CXL 2-2015

¹ * Aliya (Kenya); Khlii (Morocco); Kilishi (Nigeria); Odka (Somalia); Qwanta (Ethiopia); Segwapa (Zimbabwe, Botswana, Lesotho, Namibia and South Africa), Kuna (Botswana).

6. HYGIENE

6.1 General Provisions

It is recommended that the products covered by the provisions of this standard shall be prepared and handled in accordance with applicable sections of the *General Principles of Food Hygiene* (CXP 1-1969). The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CXG 21-1997) and *Code of Hygienic Practice for Meat* (CXC 58-2005), and other relevant Codes of Hygienic Practice.

6.2 Microbiological Criteria

The products shall comply with *the Code of Hygienic Practice for Meat* (CXC 58-2005), and the microbiological criteria as in Table 1 follows:

Table 1 — Maximum Tolerable Microbiological Requirements for Dried Meat

Characteristics	Tolerances
Total bacteria count, max, cfu/g	100 000
Coliforms, max., cfu/g	100
<i>Escherichia coli</i> , cfu/g	10/g
<i>E. Coli</i> 0157:H7 other STEC	Negative in 125g
<i>Enterobacteriaceae</i>	100/g
<i>Salmonella</i> , cfu/25 g	10 ³ /g
Staphylococci/g, max., cfu/g	10 ³ /g
<i>Bacillus cereus</i> , cfu/g	Absent in 0.1 g
Sulphite reducing Clostridia/g, max., cfu/g	100
Yeast and mould count/g, max., cfu/g	100

6.3 Physical and Chemical Criteria

The Dried meat shall comply with the requirements as given in Table 2

Table 2 —Physical and Chemical Requirements

SL No.	Characteristic	limits for the final product (% m/m)	
		Min	Max
1.	Moisture content	10	35
2	Water Activity (Aw)	-	0.85
3.	Crude fat	1.18	24.01
4	Crude protein	25.26	48.07
5.	Edible Salt	3	13
6.	Ash Content		8

7. PACKAGING AND LABELLING

7.1 Labelling

The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1- 1985) In addition, the following specific provisions apply:

- Name of the product shall state the type of meat used, as appropriate and the local/common name
- List of ingredients – the type of meat used shall be declared in the list of ingredients

c). Best Before date.

Any additional labelling requirement, specifically pertaining to ingredients, shall comply with the requirements of relevant codes and standards.

7.2 Packaging

The product shall be packed in clean, hygienic, moisture-proof, and well-sealed containers food grade material made from suitable materials that have no adverse effect on product properties. It can also be shrink-wrapped.

8. TRANSPORTATION AND STORAGE

The transportation of the products shall be in accordance with the *Code of Hygiene Practice for the transport of food in bulk and semi-packed foods* (CAC/RCP 47-2001).

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis

The methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CODEX STAN 234-1999) relevant to the provisions in this standard, shall be used, including the following:

- ISO 4832, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coliforms - Colony-count technique
- ISO 4833-1, Microbiology of the food chain - Horizontal method for the enumeration of microorganisms Part 1: Colony count at 30 degrees C by the pour plate technique
- ISO 7251, Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of presumptive *Escherichia coli* - Most probable number technique
- ISO 6579, Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Salmonella spp.*
- ISO 6461, Water quality - Detection and enumeration of the spores of sulphite-reducing anaerobes (clostridia) - Part 1: Method by enrichment in a liquid medium
- ISO 6888, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) - Part 3: Detection and MPN technique for low numbers
- ISO 7932 Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of presumptive *Bacillus cereus* -- Colony-count technique at 30 degrees C
- ISO 21807, Microbiology of food and animal feeding stuffs - Determination of water activity
- ISO 21527-2, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds - Part 2: Colony count technique in products with water activity less than or equal to 0.95.
- AOAC 988.05 – Determination of Moisture Content
- AOAC 960.39 or ISO 1443 - Determination of Crude Fat
- AOAC 928.08 and ISO 937 - Determination of Crude Protein
- ISO 1841-1 and ISO 1841-2 - Determination of Edible Salt
- AOAC 940.26 - Determination of Ash Content
- ISO 21807 - Determination of Water Activity

9.2 Sampling

General Guidelines on Sampling plan (CAC/GL 50- 2004) shall apply.

APPENDIX II**LIST OF PARTICIPANTS**

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