



JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON SPICES AND CULINARY HERBS

Fifth Session

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DRAFT STANDARD FOR DRIED CLOVES (UPDATED¹)
(Prepared by the Electronic Working Group chaired by Nigeria)

(Step 7)

INTRODUCTION

1. At the 3rd Session of the Codex Committee on Spices and Culinary Herbs (CCSCH3) held in 2017, the Committee agreed to start new work on the development of a standard for “dried cloves” under the group dried floral parts based on the concept of group standards, and to establish an electronic working groups (EWGs) to prepare the proposed draft group standard for circulation for comments at Step 3 and consideration at the next CCSCH Session.
2. At CCSCH4 in 2019, the Committee agreed to forward the proposed draft standard for dried floral parts – dried cloves to CAC42 for adoption at Step 5.

TERMS OF REFERENCE

3. CCSCH4 also agreed to re-establish an EWG, chaired by Nigeria and working in English only, to consider the outstanding issues taking into account, CCSCH4 discussions and comments received at Step 6 (see CL 2019/95/OCS-SCH), as well as matters referred by the Codex Committee on Food Labelling (CCFL) and by the Codex Committee on Methods of Analysis (CCMAS) thus:

For CCFL (Sections 8.3, 8.3.1 and 8.5)

- i. To clarify whether both “Country of Origin/Country of Harvest” should be declared or only one of these is required. This is taking into consideration of the fact that *General Standard for Labelling of Pre-packaged Foods* provides for mandatory declaration on the “Country of Origin”.
- ii. Justify the intention of Section 8.5 – Inspection mark (optional)

For CCMAS (Use of terminologies and Table 4: Methods of analysis)

- iii. To establish consistent provisions of terminology in CCSCH standards, i.e to determine which of the following will be used in the draft standard for cloves: “mammalian excreta” versus “excreta mammalian”, “extraneous matter” vs “extraneous vegetable matter”
- iv. Harmonize the unit of measurement with an appropriate method for analysis; in the draft standard the specification for mammalian excreta is established on a w/w basis (mg/kg), while in the methods it referred to units of particle/w (particle/10g) for AOAC 993.27

4. Following the postponement of CCSCH5, the CCSCH Chairperson together with the CCSCH Secretariat, the Codex Secretariat and the EWG Chairpersons, in June 2020, held an informal meeting and agreed to continue work of the EWGs, and for the EWG to consult with CCSCH delegates to CCMAS in establishing the ‘Type’ for the methods of analysis.

PARTICIPATION AND METHODOLOGY

5. The EWG undertook its work using the Codex EWG Platform. It commenced work in August 2019, with 16 member countries and one observer organization expressing interests and registering to participate in the EWG as indicated in Appendix II (List of participants).

¹ This Updated document takes into account the Comments at Step 6, in reply to CL 2019/95/OCS-SCH

SUMMARY OF DISCUSSIONS

6. The EWG undertook the work in accordance with the terms of references, and four rounds of consultations/or discussions were conducted., However, the number of responses received were very limited; Round 1 - two comments, Round 2 - one comment; Round 3 - three comments, and Round 4 - two comments. An analysis of the responses together with justifications for proposed provisions as indicated in the paragraphs below:

Section on methods of analysis and sampling

7. In relation to the typing of methods as advised by CCMAS to contact India's delegate to CCMAS, it was not possible to get a response from the delegate due to reported health challenge. CCSCS Secretariat however provided documents from CCMAS on Typing of methods in-line with the codex procedural manual, which was utilized as guide in our work. No comments were received from any EWG member on typing of methods. The EWG would appreciate for CCSCS to confirm the types of methods.

8. The EWG considered and resolved the comments submitted in CL 2019/95/OCS-SCH except it being unable to reach a consensus on a value for mammalian excreta in ground cloves, the values for this parameter in table 3 are in square brackets []

Labelling provisions - Section 8.3 Country of origin

9. The EWG agreed the need for ensuring consistency with the provisions of Section 4.5 of the Codex *General Standard on Labelling of Pre-Packaged Food* (CXS 1-1985) as reproduced below.

4.5 Country of origin

4.5.1 The country of origin of the food shall be declared if its omission would mislead or deceive the consumer.

4.5.2 When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling”

10. The EWG noted that *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985) specifies that the country where it is packed be identified as the country of origin. Unless the entire CCSCS would make some recommendation to CCFL to emphasize on distinction of the country where the spice is grown from the country where it is packed, it does not seem necessary to include these in the standard. The EWG agreed that only the country of origin alone was consistent with CXS 1-1985.

Labelling provision - Clause 8.5 Inspection mark (optional)

11. The EWG considered the use of optional inspection marks and noted that it is not a mandatory requirement. Gives room for optional display of certifications which may appeal to customers.

Consistency of terms

“mammalian excreta” versus excreta mammalian”;

12. The EWG noted that mammalian excreta as the term for consistency, as this was used in adopted CCSCS standards and already endorsed by CCMAS, and agreed to use this specific term.

“extraneous matter” versus “extraneous vegetable matter”

13. The ISO 927 defines the term extraneous matter as “all matter visible to the naked eye or with a maximum 10 times magnifying power which are species waste belonging to the plant which the spice or herb belongs e.g: macro extraneous matter can be floral waste. Therefore, by implication, this definition covers extraneous vegetative matter (vegetative matter associated with the plant from which the product originates but not accepted as part of the final product)

Harmonisation of Units of measurements for mammalian excreta

14. CCMAS noted the need to harmonize the unit of measurement with an appropriate method for analysis; in the draft standard the specification for mammalian excreta is established on a w/w basis (mg/kg), while in the methods it referred to units of particle/w (particle/10g) for AOAC 993.27

15. The EWG considered the above observation by CCMAS and presents two options:

Option I: To retain the unit of measurement as prescribed in AOAC 993.27 (particle/10g), or

Option II: The method of analysis AOAC 993.27 (ground) be expunged.

16. It is important to note the justification: Physical parameters are tested or examined physically and that discernible presence of excreta in powdered cloves mean contamination after the processing, which is not

acceptable. Similarly, a corresponding value of zero ('0') is also proposed as it is not expected to see any mammalian excreta in ground spice when examined visually.

17. Para. 6.2 of the draft standard states that; "the product should comply with any microbiological criteria established in accordance with *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Food* (CXG 21-1997).

18. Following with reports that some Member countries do not use the above AOAC method, but work in-line with recommendations of the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Food* (CXG 21-1997), and use other standard methods to determine presence of mammalian excreta, the EWG proposes to use the method; V-8 Spices, Condiments, Flavors and Crude Drugs Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5 <http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32>, which is used for the whole cloves.

CONCLUSION AND RECOMMENDATIONS

19. The EWG worked according to the agreed terms of reference and CCSC5 is invited to consider the draft standard (Appendix I), with a view to progress it through the Codex step procedure.

20. The following recommendations are the views of the CCSC Chairperson, which were noted while reviewing EWG activities in preparation of this final report

- I. Considering that products are usually sampled before analysis, and to reflect the sequence, it is recommended that Clause 9 of the draft standard template be rephrased from 'METHODS OF ANALYSIS AND SAMPLING' to "METHODS OF SAMPLING AND ANALYSIS"
- II. 3.2.1 Odour, flavour and colour- The product shall have a characteristic aroma, colour and flavour. It is recommended that the text be consistent with the subtitle thus "aroma" be corrected to "odour"

DRAFT STANDARD FOR DRIED CLOVES**(Step 7)****1 SCOPE**

This Standard applies to plant products in their dried or dehydrated form as spices or culinary herbs, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repacking if required. It excludes the product for industrial processing.

2 DESCRIPTION**2.1 Product definition**

Dried clove is a product obtained from the dried floral part of the plant (clove nail) as mentioned in Table 1.

Table 1: Common and scientific name of Dried Clove

S/No	Generic name	Scientific name
1.	Dried cloves	<i>Syzygium aromaticum</i> (L), Merrill & Perry

2.2 Styles

Dried cloves may be:

- Whole,
- Ground/powdered, (without any added matter)

3 ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 Composition**

Product as described in Section 2 above shall conform to requirements contained in Annexes I and II.

3.2 Quality factors**3.2.1 Odour, flavour and colour**

The product shall have a characteristic odour, colour and flavour which can vary depending on geo-climatic factors/conditions and shall be free from any foreign odour, flavour, and colour especially from rancidity and mustiness.

3.2.2 Chemical and physical characteristics

The generic product shall comply with the requirements specified in Annex I (Chemical Characteristics- Table 2) and Annex II (Physical Characteristics-Table 3). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

3.2.3. Classification

In accordance with the Chemical and Physical Characteristics in Section 3.2.2.

4 FOOD ADDITIVES

The anticaking agents listed in Table 3 of the *General Standard for Food Additives* (CXS192-1995) may be permitted for use in ground/powdered Cloves

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* (CXS 193-1995).

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CAC/RCP 1-1969), the *Code of Hygienic Practice for low moisture foods* (CXC 75-2015) Annex III on Spices and dried culinary herbs and other relevant Codex texts.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CXG 21-1997).

7 WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

8 LABELLING

8.1 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:

8.2 Name of the Product

8.2.1 The name of the product shall be as described in Section 2.1

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Trade name, variety or cultivar may be listed on the label.

8.3 Country of origin

8.4 Commercial Identification

- Size (optional)

8.5 Inspection mark (optional)

8.6 Labelling of non-retail containers

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9 METHODS OF SAMPLING AND ANALYSIS

9.1 Sampling Plan

For checking the compliance with this standard, the methods of analysis and sampling contained in the recommended *Methods of Analysis and Sampling* (CXS 234-1999) relevant to the provisions in this standard shall be used.

9.2 Methods of Analysis

As described in Annex III, Table 4

Annex I

Product	Style	Total Ash %w/w (max)	Acid Insoluble Ash % w/w (max)	Moisture Content % w/w (max)	Volatile Oils ml/100g (min)	Crude fibre, % m/m (max)	notes
Dried clove	Whole	7	0.5	12	17	13	
	Ground	7	0.5	10	14	13	

Annex II

Product	Style	Mammalian or/and other excreta (w/w)/ particle/10g, (max)	Live Insects Count/100 g (max)	Mold Visible %w/w (max)	Insect de-filed/ infested %w/w (max)	Extraneous matter ¹ %w/w (max)	Foreign matter ² %w/w (max)	Defects (Headless ¹ / Mother ² / Khoker ³) % (max)
Dried clove	Whole	1	0	1	1	1	1	5/6/5
	Ground	[1][0]	0	1	1	1	1	N/A

¹Headless Clove: Clove consisting of only the receptacle and sepals and which has lost the dome-shaped head.

² Mother Clove: Fruit of the clove tree (*Syzygium aromaticum*) in the form of an ovoid brown berry surmounted by four incurved sepals.

³ Khoker Clove: Clove having undergone fermentation as a result of incomplete drying, as evidenced by its pale brown colour, whitish mealy appearance and often wrinkled surface.

Annex III

Table 4. Methods of Analysis

Parameter	Method	Principle	Type ¹
Moisture	ASTA 2.0	Distillation	I
Volatile oil	ISO 6571	Distillation followed by Volumetry	I
Total ash(dry basis)	ISO 928	Gravimetry	I
Acid Insoluble Ash	ISO 930	Gravimetry	I
Extraneous matter	ISO 927	Visual examination followed by Gravimetry	I
Foreign matter	ISO 927	Visual examination followed by Gravimetry	I
Insect damage	ISO 927 Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual Examination	IV
		Visual Examination	IV
Insects/Excreta/Insect fragments	ISO 927	Visual Examination	IV
Crude fibre	ISO 5498	Gravimetry	I
Mold visible	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual Examination	IV
Live insect	ISO 927	Visual Examination	IV
Mammalian or/and Other excreta	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32	Visual Examination	IV

¹ According to the definition of “types of method of analysis” as per Codex Procedural Manual Section II

*Latest edition or version of the approved method should be used

APPENDIX II**LIST OF PARTICIPANTS**

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