

**JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX COMMITTEE ON SPICES AND CULINARY HERBS****Eighth Session****Guwahati, Assam, India****13–17 October 2025****DRAFT STANDARD FOR DRIED OR DEHYDRATED FRUITS AND BERRIES –  
REQUIREMENTS FOR LARGE CARDAMOM****(At Step 3/4)**(Report of the electronic working group chaired by Bhutan and co-chaired by India and Nepal<sup>1</sup>)

Codex members and Observers wishing to submit comments at Step 3/4 on Appendix of this draft standard should do so as instructed in CL 2025/52-SCH available on the Codex webpage/Circular Letters:

<http://www.fao.org/fao-who-codexalimentarius/circular-letters/en/>

**Introduction**

1. At the 7th session of the Codex Committee on Spices and Culinary Herbs (CCSCH7), Bhutan, India and Nepal submitted a joint new work proposal for the development of a standard on large Cardamom.<sup>2</sup> This was a key outcome of the joint Codex Trust Fund 2 project for Bhutan, India and Nepal project meeting that was held from 15–16 August 2023 in Thimphu.

2. Based on this proposal, CCSCH7 agreed to start new work and to submit to the 47th session of the Codex Alimentarius Commission (CAC47) for approval of the development of a standard for large cardamom. Furthermore, the CCSCH7 agreed to establish an electronic working group (EWG), subject to the approval by CAC of the work proposal, working in English, to develop a proposed draft standard for large cardamom, chaired by Bhutan and co-chaired by Nepal and India.<sup>3</sup>

3. The new work proposal to develop a standard for large cardamom was approved during CAC47 meeting which was held from 25–30 November 2024 in Geneva, Switzerland, reference number CX/CAC 24/47/3, Annex-III with job number N03-2024.

**Terms of reference**

4. CCSCH7, established an EWG to prepare a draft standard for Large Cardamom, chaired by Bhutan and co-chaired by Nepal and India.

5. The EWG was also tasked to use the spices and culinary herbs (SCH) template, in a group format, when preparing the proposed draft standard and to ensure alignment with the already published SCH standards; and to submit its work to the Codex Secretariat at least three months before CCSCH8.

**Participation and methodology**

6. Codex Members and Observers interested in participating in the EWG submitted their nominations in response to the kick-off message that was issued on 28 June 2024. In total, 15 Members, 1 Member Organization and one Observer registered to participate in the EWG including: Brazil, Canada, Chile, Egypt, the European Union, Guatemala, Guyana, India, Indonesia, Japan, Morocco, Saudi Arabia, Thailand, the

<sup>1</sup> Members of the EWG included Brazil, Canada, Chile, Egypt, European Union, Guatemala, Guyana, India, Indonesia, Japan, Morocco, Saudi Arabia, Thailand, United Kingdom, United States, and IOSTA.

<sup>2</sup> REP24/SCH – Appendix IX.

<sup>3</sup> REP 24/SCH; paras 93 and 94.

United Kingdom of Great Britain and Northern Ireland, the United States of America and International Organisation of Spice Trade Association (IOSTA)

7. The EWG worked via the Codex online platform and carried out two rounds of consultations.
8. The first draft document was circulated for comments on 8 July 2024. The comments received during the first round were tabulated, then analyzed and shared on the EWG platform to ensure transparency as well as facilitate further discussions.
9. Based on the comments received during the first round of consultations, a second draft was prepared and circulated on 02 October 2024. Further 15 days extension was given for commenting and closed the EWG working group on 17 November 2024.

### Summary of discussion

10. The chair of the EWG, Bhutan, carefully evaluated each of the comments received. All editorial comments as well as comments related to ensuring consistency of the draft standard with the SCH template or other SCH standards were accepted, and the changes were affected. However, in cases where the technical comments were not supported by the chair, these were not incorporated into the draft standard. An explanation is provided where proposed changes of the draft standard have not been made.
11. The following comments and proposals on the different draft provisions in the draft standard were submitted and considered as follows:

#### 2.1 Product definition

- A proposal to define the product in terms of its level of development i.e. "sufficiently developed" instead of using the description related to its ripening, "nearly ripe" and "ripe fruits", were put forward. This proposal was accepted noting that cardamom has no pulp or mesocarp or flesh. Similarly, the description of cardamom by color variation i.e. "maroon or light to dark brown" was also accepted and included in the draft standard.
- There was a proposal to include trade names such as Badi elaichi/black cardamom; common names including Bengal cardamom, Black cardamom, Greater cardamom, Hill cardamom, Nepal cardamom, Winged cardamom. This proposal was not accepted as this would create regional biases, noting the need to maintain uniformity. Another proposal suggested the inclusion of "white cardamom" and "round cardamom", however it should be noted that these refer to *Amomum kravanh* or *Amomum compactum*, while the standard applies specifically to *Amomum subulatum* Roxb. only.
- It was also proposed to expand the list of scientific names to include *Amomum costatum*, *Amomum subulatum* and that this would align with the European Spice Association (ESA) List of Culinary Herbs and Spices. This proposal was not acceptable based on the literature referred and also according to SCH latest standard template PART 2 – Non-exhaustive list of spices and culinary herbs, arranged by generic names, large cardamom's botanical name is reflected as *Amomum subulatum* Roxb only.

#### 2.2 Styles

- The comments and/or proposals submitted on styles for large cardamom were adopted, leading to the establishment of the following four categories under styles: i) Whole (including unopened pods, capsules that are up to one-fourth (1/4) opened, and capsules with seed intake), ii) seed (obtained after opening pods/capsules), iii) ground/powdered seed (derived from dried seeds), and iv) whole capsule powder (obtained from grinding dried whole capsules).
- There was a comment stating, in the trade of large cardamom, whole capsules comprising both unopened pods and those up to one-fourth opened with intact seeds are not separated based on the degree of opening. Hence, the style has been defined as "Whole (unopened capsules/pods or up to 1/4th opened capsules/pods with intact seeds)." As per common trading practices, up to 5% of the capsules may be up to one-fourth opened and are still considered part of the "whole" category. However, during the review process, the concern was that the term "one-fourth (1/4) opened capsules" lacks a clear, standardized length or visual reference in existing literature or standards, making its interpretation subjective. As a result, the Chair has retained the draft provision in square brackets and invites technical input from the committee to clarify and validate this aspect for inclusion in the final standard.

#### 3.2 Quality factors

##### 3.2.2 Odour, flavour and colour

- According to ISO 10622, Light seeds include those seeds that are brown or red in colour, and broken, immature and shriveled seeds. However, when monitoring the actual field reality and validating the colour of light seeds, it was observed that the seeds are either pale white or have uneven discoloration. CCSCH

need to resolve this inconsistency, and therefore this provision in Annex I Table A2 (i.e. footnote 12) has been put under square brackets for further consideration by CCSCH.

### 9.1 Methods of analysis

- Method of Analysis for the determination of empty and malformed capsules – The EWG was unable to determine the test methods for empty and malformed capsules. Consequently, the Indian Standard IS 13446: 2009 and ISO Standard ISO 10622:1997 were referenced. However, it is necessary for CCSCH to identify the correct applicable test methods, and therefore this provision has also been kept under square brackets for further consideration.

### Annex I - Table A1 Chemical characteristics for dried or dehydrated large cardamom

- In Annex I - Table A1: Chemical characteristics for dried or dehydrated large cardamom, the values provided are replicated from ISO 10622 and the small cardamom standard. However, EWG members commented that the values are uniform across all styles leading to some discrepancies. Due to lack of literature and concrete data, the chair is not able to make a revision in the proposed draft standard, hence would like to invite expert opinion from the committee. The values were kept in square brackets for further discussion by CCSCH.
- The proposed limit of Acid Insoluble Ash at 2% is supported, as it aligns with the specifications outlined in 10622:1997(E) for both whole capsules/pods and seed forms of large cardamom. This ensures consistency with internationally recognized quality standards.
- The recommendations to adopt different chemical requirements for seeds and whole pods are not supported, as the proposed values are derived from the ISO 10622:1997(E) standard, which applies uniformly to both forms.

### CONCLUSION AND RECOMMENDATION

12. The chair of the EWG has distributed two draft standards to the members of the EWG for comment and conducted an ongoing discussion with the co-chairs. The main tasks assigned to the EWG to develop a global standard for dried or dehydrated large cardamom has been completed in accordance with the *Codex Procedural Manual*. The draft standard is attached as Appendix 1.

13. The EWG, chaired by Bhutan and co-chaired by Nepal and India, has completed its task. Within the given time periods, all required information of dried or dehydrated large cardamom has been gathered and comments from the EWG members were carefully evaluated to form the basis of the proposed draft standard.

14. As we move forward, the Chair respectfully requests that CCSCH8 focus its discussions on the remaining unresolved issues that are critical to finalizing the draft standard. In particular, attention is drawn to the need for a clear and standardized definition or literature reference of “1/4th opened capsules/pods with intact seeds” under Section 2.2 (Styles), as well as further deliberation on the chemical characteristics outlined in Annex I: Table A1, and the methods of analysis presented in Section 9.2: Table 2. Addressing these key areas will significantly strengthen the scientific and practical basis of the proposed draft standard and ensure it meets the expectations of all stakeholders involved in the global trade of dried or dehydrated large cardamom.

15. The chair would like to request CCSCH8 to consider the draft standard, with a view to advancing it through the Codex step procedure.

## APPENDIX I

## DRAFT STANDARD FOR DRIED OR DEHYDRATED FRUITS AND BERRIES – REQUIREMENTS FOR LARGE CARDAMOM

(Step 3/4)

### 1. SCOPE

This standard applies to dried or dehydrated fruits and berries – large cardamoms as defined in Section 2.1 below offered for direct human consumption, as an ingredient in food processing or for repackaging if required. This standard does not apply to those products when intended for industrial processing.

### 2. DESCRIPTION

#### 2.1 Product definition

Dried or dehydrated large cardamom is a product obtained from sufficiently developed fruits of *Amomum subulatum* Roxb. of Zingiberaceae family as described in Table 1. The capsules/pods are ovoid and shaped with a ribbed surface and dried or dehydrated large cardamom color varies from maroon or light to dark brown in whole, light to dark brown or black in seed and light to dark brown in ground form.

**Table 1: Common, trade and scientific name of dried or dehydrated large cardamom**

Common name	Trade name	Scientific name
Large cardamom	Large cardamom	<i>Amomum subulatum</i> Roxb.

#### 2.2 Styles

Dried or dehydrated large cardamom may be:

- [whole (unopened pods/capsules/1/4th opened capsules/pods with intact seed)];
- seed (seed obtained after opening of the pods/capsules);
- ground/powdered seeds: powder obtained by grinding dried seeds; or
- whole capsule powder: powder obtained by grinding dried whole capsule.

Other styles distinctly different from those four listed above are allowed, provided they are labelled accordingly.

#### 2.3 Sizing (optional)

### 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 3.1 Composition

Dried or dehydrated large cardamom as described in Section 2 above, shall conform to the requirements contained in Annex I.

#### 3.2 Quality factors

##### 3.2.1 General

Dried or dehydrated large cardamom shall be safe and suitable for human consumption. It shall be free from live insects, extraneous and foreign matters.

##### 3.2.2 Odour, flavour and colour

Dried or dehydrated large cardamom shall have a characteristic odour, flavour and colour, 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.

##### 3.2.3 Chemical and physical characteristics

Dried or dehydrated large cardamom shall comply with the chemical and physical characteristics specified in Annex 1 (Table A1: Chemical characteristics and Table A2 Physical characteristics).

The defects allowed must not affect the general appearance of the product as regards its quality, keeping quality and presentation in the package.

#### 4. FOOD ADDITIVES

Anticaking agents listed in Table 3 of the *General Standard for Food Additives* (CXS 192-1995) are acceptable for use in ground/powdered form of dried or dehydrated large cardamom.

#### 5. CONTAMINANTS

The products covered by this standard shall comply with the maximum levels specified in the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995) and shall be produced in accordance with the *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78- 2017) and other relevant Codex Alimentarius texts.

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

#### 6. FOOD HYGIENE

It is recommended that the products covered by this standard shall be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 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 Alimentarius texts.

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).

#### 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

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

##### 8.1 Name of the product

8.1.1 The common name of the product shall be as described in Section 2.1.

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

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

##### 8.2 Country of origin and country of harvest

8.2.1 Country of origin shall be declared.

8.2.2 Country of harvest **may be declared** (optional).

8.2.3 Region of harvest and year of harvest **may be declared** (optional).

##### 8.3 Labelling of non-retail containers

The labelling of non-retail containers should be in accordance with the *General Standard for the Labelling of Non-Retail Containers of Foods* (CXS 346-2021).

#### 9. METHODS OF ANALYSIS AND SAMPLING

##### 9.1 Methods of analysis

The methods of analysis highlighted in Table 2: Methods of analysis will be included in CXS 234-1999 after endorsement by CCMAS and the following text will replace the table and will be inserted.

“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)<sup>9</sup> relevant to the provisions in this standard, shall be used.”

##### 9.2 Sampling Plan

To be developed.

Table 2: Methods of analysis

Provision	Method <sup>i</sup>	Principle	Type <sup>ii</sup>
Moisture	ISO 939	Distillation	I
Volatile oil (on dry basis)	ISO 939 and ISO 6571	Distillation followed by volumetry	I
Total ash (On dry basis)	ISO 939 and ISO 928	Distillation and Gravimetry	I
Acid insoluble ash (on dry basis)	ISO 939 and ISO 930	Distillation and Gravimetry	I
Extraneous matter	ISO 927	Visual examination followed by Gravimetry	I
Foreign matter	ISO 927	Visual examination followed by Gravimetry	I
Whole insect live/dead	ISO 927 (For whole)	Visual examination followed by Gravimetry	I
	AOAC 975.49 (For powdered/pieces)	Floatation followed by Gravimetry	I
Mammalian and/or other excreta	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macro analytical Procedure Manual) MPM: V-8. Spices	Visual Examination followed by Gravimetry	I
Visible mould	ISO 927	Visual Examination followed by Gravimetry	I
Insect defiled/ infested /Rodent filth	ISO 927	Visual examination followed by Gravimetry	I
Empty and malformed capsules	[IS 13446: 2009 <sup>iii</sup> and ISO 10622:1997]	Visual examination followed by Gravimetry	I
Immature and shriveled capsules/seed	ISO 927	Visual examination followed by Gravimetry	I
[Light seeds	ISO 927	Visual examination followed by Gravimetry	I
Insect fragments, whole/dead/live insects	ISO 927	Visual examination followed by Gravimetry	I

**Notes:**

<sup>i</sup> Latest edition or version of the approved method should be used.

<sup>ii</sup> According to the definition of “types of method of analysis” as per *Codex Procedural Manual* Section 2

<sup>iii</sup> ISO 13446: 2009 is a method of analysis based on an Indian Standard.

## ANNEX

Table A1: Chemical characteristics for dried or dehydrated large cardamom

Product Name	Form/style	Moisture content % w/w (max)	Total ash % w/w (max) on dry basis	Acid insoluble ash % w/w (max) on dry basis	Volatile <sup>i</sup> oils ml/100 g (min) on dry basis
Large Cardamom	Whole	[12]	[8]	[2]	[1]
	Seed	[12]	[8]	[2]	[1]
	Ground/powdered seed	[12]	[8]	[2]	[1]
	Powdered capsules with seeds	[12]	[8]	[2]	[1]

*Notes:*

<sup>i</sup> For capsules, the determination of moisture content, total ash and acid insoluble ash shall be made on the whole capsules. The determination of volatile oil shall be made on the seeds obtained by separating skin.

Table [A2]: Physical characteristics for dried or dehydrated large cardamom

Product Name	Form/style	Extraneous matter % w/w (max) <sup>i</sup>	Foreign matter % w/w (max) <sup>ii</sup>	Empty and malformed capsules by count /100 capsules (max) <sup>iii</sup>	Immature and shriveled capsules/ seed % w/w (max) <sup>iv</sup>	Light seeds % w/w (max) <sup>v</sup>	Whole dead insect, (by count) /100 g (max) <sup>vi</sup>	Live insects (by count) /100 g (max) <sup>vii</sup>	Mould visible % w/w (max)	Mammalian Excreta mg/kg (max) <sup>viii</sup>	Other Excreta mg/kg (max) <sup>ix</sup>	Insect defiled/infested % w/w (max) <sup>x</sup>
Large Cardamom	Whole	5	5	10	7	NA	4	0	1	6.6	2.2	1
	Seed	2	N/A	N/A	N/A	5	4	0	1	6.6	2.2	N/A
	Ground/powdered seed	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A
	Ground/Powdered capsules with seeds	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A

**Notes:**

<sup>i</sup> Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.

<sup>ii</sup> Any visible/detectable objectionable foreign matter or material not usually associated with the natural components of the spice plant, such as sticks, stones, burlap bagging, metal, etc.

<sup>iii</sup> Capsules which have no seeds or are scantily filled with seeds.

<sup>iv</sup> Capsules which are not “fully developed” or seeds not fully matured or shriveled.

<sup>v</sup> [Light seeds include seeds that are pale white or uneven discoloration and broken, immature and shriveled seeds]

<sup>vi</sup> If the total number of whole dead insects found in the total number of the sub samples exceed the specified value in the table.

<sup>vii</sup> N/A - Not applicable, does not refer to zero. It means that the style of the above product has not been evaluated for this provision and currently do not have values.

Live insect present in sample

<sup>viii</sup> If the average of the total number of sub-samples exceeds the listed milligram per kg and/or lb.

<sup>ix</sup> Excreta from other animals, such as reptiles and birds

<sup>x</sup> Capsules and seeds exhibiting definite evidence of insect feeding

N/A - Not applicable, does not refer to zero. It means that the style of the above product has not been evaluated for this provision and currently do not have values.