



## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON SPICES AND HERBS

#### Sixth Session

26-30 September and 3 October 2022

#### DRAFT STANDARD FOR DRIED SEEDS - NUTMEG

(Prepared by the Electronic Working Group led by Indonesia and India)

(At Step 6)

Codex members and Observers wishing to submit comments at Step 6 on **Appendix I** of this draft standard should do so as instructed in CL 2022/26/OCS-SCH available on the Codex webpage/Circular Letters: <http://www.fao.org/fao-who-codexalimentarius/circular-letters/en/>

#### **Background**

1. The proposal for new work on the establishment of standard for nutmeg was first considered during the 2<sup>nd</sup> session of the Codex Committee on Spices and Culinary Herbs (CCSCH2 on 4-18 September 2015 in Goa, India, and was provided a conditional approval (in order of priority), as it required some minimal changes to be made.
2. At the CCSCH3 (2017), the proposal was recommended for approval as new work on nutmeg, and was further categorized under “Dried Seeds”. The CAC40 approved the project document for new work as proposed by CCCSH.
3. CCSCH4 (2019) agreed to return the proposed draft standard for dried nutmeg to Step 2 for redrafting, taking into account the comments made at and/or submitted to CCSCH4, then circulate the proposed draft for comments at Step 3. The Committee also agreed to re-establish an EWG, chaired by Indonesia and working in English only, to proceed with the task of redrafting proposed draft standard for nutmeg.
4. The CCSCH5 (2021) held virtually agreed to:
  - i. forward the proposed draft Standard for dried seeds - nutmeg to CAC44 for adoption at Step 5 and extension of the timeline for completion until CCSCH6;
  - ii. forward the provisions on food additives, labelling and methods of analysis and sampling to the appropriate committees for endorsement; and
  - iii. re-establish an EWG, chaired by Indonesia and co-chaired by India, working in English, to consider those parameters or values in square brackets, taking into account the comments submitted at Step 6 as well as discussions at the current session.
5. The CAC44 (2021) adopted the draft standard for dried seeds - Nutmeg at Step 5 and extended the timeline for completion of work to CCSCH6. CAC44 also noted that the draft standard would be circulated for comments at step 6 and encouraged interested parties to resubmit technical comments and join the ongoing EWG co-chaired by Indonesia and India.

#### **Participation and methodology**

6. Following the decision of the CCSCH5, the kick-off message was issued in July 2021, to which eleven Codex members and one organization expressed interest to participate in the EWG i.e. Chile, Ecuador, France, Grenada, India, Jamaica, Japan, Mexico, Netherlands, Nigeria, Peru, USA, and American Spice Trade Association (ASTA). The detailed list of EWG members is presented in Appendix II.
7. The EWG also agreed to undertake its work through the Codex EWG platform.
8. The first draft was circulated on 6 October 2021 and the EWG received comments from five EWG members i.e. Grenada, USA, Japan, India) and Mexico.
9. The second draft was circulated on 26 February 2022; and comments were received from USA, India, Grenada, and Japan and also from non-registered EWG members (Costa Rica and IOSTA).

## **Analysis and consideration of comments**

10. In general, the EWG has been re-established to discuss the parameters and or values in square brackets, where no consensus during CCSCH5. However, some comments were related to wider aspects of the draft standard. The chair and co-chair recommended that the discussion will not re-open the parameter previously agreed during CCSCH5.

### **1. Scope**

11. One member of EWG suggested the removal or providing the definition for the text “industrial processing”. The phrase “it excludes the product for industrial processing” is used as a template of other standards developed by CCSCH. Therefore, the EWG agreed to keep that phrase in the draft standard.

### **2.1 Product Definitions**

12. An proposed redefine the definition as stated in 2.1.1 to “Dried nutmeg is the seed of the *Myristica fragrans* of the Myristicaceae family having reached a moisture content of no more than 10% based on ISO 939 method”. The EWG considered the proposal and noted that the product definition should not include quality criteria and testing methods.

13. The EWG also considered a proposal to include walnut berries of mature fruits of trees, and to split the definition into two phrases. However it was noted that the comments would not significantly change the meaning of the existing definition. Based on this consideration it was agreed that the text of product definition remain as it was earlier proposed.

14. One EWG member proposed to delete clause 2.1.2 since it did not reflect their national products. Other members proposed to replace the text to accomodate nutmeg that could be larger/smaller than the dimension indicated in the draft, and to indicate that inshell nutmegs rattle reflecting the product characteristics. As compromise the EWG proposed to change the text in 2.1.2 to be read as follows:

*“2.1.2 Nutmeg has variety of shapes from ovoid to broadly ovoid, with variety of sizes which averages between 2 – 3 cm long and 1.5 – 2.5 cm wide. Nutmeg kernels have a slightly wrinkled like surface. Inshell nutmeg seeds may rattle due to the seed’s shrinkage within the shell in the drying process.”*

### **2.2. Styles**

15. The proposal to use “classification” instead of “styles” and to remove “ground/powdered seed” was not acceptable as it was not consistent with the templates of SCH standards.

16. The proposal to replace the wording “seed” by “kernel” was not considered since the current wordings had already been agreed during the CCSCH5, and therefore the EWG decided not to re-open the discussion.

### **2.3. Sizing (optional)**

17. One EWG member proposed to remove the word “optional” and to eliminate the proposed paragraph. The EWG noted that clause 2.3 is made “optional” according to the current global trade practices. Therefore, the draft text will be kept as it is.

### **4. Food Additives**

18. There was a suggestion to remove the text in clause 4 Food Additives in dried nutmeg. The EWG considered that use of food additives (anticaking agent) in this standard is intended for only ground/powder product, and not for nutmeg seed and it is acceptable according to the General Standard of Food Additives. Therefore, the EWG agreed to keep the text.

### **8. Labelling**

#### **8.5. Labelling of non-retail containers**

19. The proposal to remove the section 8.5 Labelling of non-retail containers could not be accommodated since it is a template used also in other standards developed by CCSCH.

### **9. Methods of Analysis and Sampling**

#### **9.2. Sampling Plan**

20. There was a suggestion to use sampling plan according to a spesific national standard. However, the EWG noted that the section of sampling plan in all CCSCH standards was made “to be developed”. The separate Codex standard for sampling plan will be established for CCSCH commodities.

## Annex I. Chemical Characteristics for Whole, Broken and Ground/Powdered Nutmeg

### Volatile Oils Content

21. One member made proposals on the value in the square brackets regarding the volatile oils content. The EWG agreed to adopt the following proposals that are set based on the current trade practices data:

Description	Specification		
	Whole	Broken	Ground/ Powdered
Volatile Oils content, (mL/100g), min.	6.5	6.0	5.0

### Calcium as CaO in ground/powdered style

22. One member of EWG recommended the value of 0.35 % for Calcium Oxide (expressed as CaO) in ground/powdered styles. In several nutmeg producer regions, Calcium oxide is often used to coat the seed form (whole and broken) of nutmeg, and therefore calcium oxide might also be found in ground/powdered nutmeg. The EWG agreed to the explanation and removed the square bracket and delete the N/A in ground/powdered

23. The proposal to decrease the value of CaO by 0.05% was considered very low. Moreover CCSCH5 suggested that the discussion focus on the value within the square brackets, and therefore the EWG decided not to re-open the discussion on the value of CaO previously agreed by CCSCH5.

## Annex II. Physical Characteristics for Nutmeg

### Combined Tolerances for Mould Visible and Insect Defiled/infested.

24. There were several proposals with varied value of mould visible and insect defiled/infested. Considering these two defects are still found in global trade practices, the EWG consider to open the square brackets with the value as follows:

Parameters	INSHELL (With shell)	SHELLED SEED (Without shell)		
	Whole	Whole	Broken	Ground/ Powdered
Mould visible <sup>3</sup> , insect defiled/infested % w/w (max)	10	10	N/A	N/A

25. These values based on the reason that zero value or less than 10% in whole nutmeg is practically impossible to be achieved in tropical producing countries

### Tolerances for Insect Fragments

26. There was a proposal regarding the tolerances of insect fragment to be set at 100 units/10g for broken shelled seed. The EWG noted that the value reflects trading in terms of method tallied and tolerances allowed, so the value was modified to be as follows:

Parameters	INSHELL (With shell)	SHELLED SEED (Without shell)		
	Whole	Whole	Broken	Ground/ Powdered
Insect fragments, count/10g (max)	N/A	N/A	100	N/A

### Tolerances for pieces of mace adhering to inshell nutmeg

27. A member recommended a tolerance of 0.1% for adhering mace only on inshell nutmegs. Noting that occasionally pieces of mace adhere to the nutmeg shell and may not be easily removed or bypass the cleaning process. The pieces of mace may also be visible on the shell as raised dark specks. Therefore, an allowance is needed for the incidental adhering mace in either its brightly colored form or as raised dried dark specks. The EWG considered to revise the value as follows:

Parameters	INSHELL (With shell)	SHELLED SEED (Without shell)		
	Whole	Whole	Broken	Ground/ Powdered
Piece of mace, % w/w (max)	0.1	N/A	N/A	N/A

### **Conclusion and recommendations**

28. During the two rounds of consultations, the EWG received significant information from EWG members. All comments received have been considered and a revised draft standard is ready to be submitted to the CCSC6.

29. The Committee is invited to consider the draft standard as presented in Appendix I to this document with the intent to progress it to Step 8 for final adoption by CAC45.

**DRAFT STANDARD FOR DRIED SEEDS – NUTMEG**

(At Step 6)

**1. SCOPE**

This Standard applies to dried seeds, in their dried or dehydrated form as spices, as defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repackaging if required. It excludes dried seeds for industrial processing.

**2. DESCRIPTION****2.1. Product definitions**

2.1.1 Dried nutmeg is the “seed” of *Myristica fragrans* of the Myristicaceae family (Table 1), having reached appropriate degree of development, harvested and post-harvest treated properly, by undergoing operations such as stripping, drying, sorting, cracking, grading, and/or grinding before the final packaging and, and are sold in styles as described in 2.2.

**Table 1.** Dried Seeds Covered by this Standard

Common name	Scientific name
Nutmeg	<i>Myristica fragrans</i> Houtt.

2.1.2 Nutmeg has variety of shapes from ovoid to broadly ovoid, with variety of sizes which averages between 2 – 3 cm long and 1.5 – 2.5 cm wide. Nutmeg kernels have a slightly wrinkled like surface. Inshell nutmeg seeds may rattle due to the seed’s shrinkage within the shell in the drying process.

**2.2. Styles**

Dried nutmeg may be offered in one of the following styles:

2.2.1. Whole inshell;

2.2.2. Whole shelled;

2.2.3. Broken seed; and

2.2.4. Ground/powdered seed.

**2.3. Sizing (Optional)**

Whole nutmegs (inshell and shelled) may be sized by count per weight, weight, diameter, or in accordance with pre-existing trade practice. When sized, the methods used should be labelled on the package.

**3. ESSENTIAL COMPOSITION AND QUALITY FACTORS****3.1. Compositions**

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

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

The products shall have a characteristic odour, flavour, and colour, which may 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**

Dried nutmeg shall comply with the requirements specified in Annex I (chemical characteristics) and Annex II (physical characteristics). The defects allowed must not affect the general requirements of the product as regards to its quality, keeping quality and presentation in the package.

**3.2.3. Classification (optional)**

When dried nutmeg are traded as classified, the chemical and physical characteristics in Annexes I and II apply as the minimum requirements.

#### **4. FOOD ADDITIVES**

Anticaking agents listed in Table 3 of the *General Standard for Food Additives* (CXS 192-1995) are acceptable for use in the powdered form of the foods conforming to this Standard.

#### **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), *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78-2017) and other relevant Codex texts.

**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* (CXC 1-1969), *the Code of Hygienic Practice for Low Moisture Foods* (CXC 75-2015), Annex III 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 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**

**8.1.** The products covered by this Standard shall be labelled in accordance with the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985). In particular, 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.

##### **8.3. Country of origin and country of harvest**

8.3.1. Country of origin shall be declared.

8.3.2. Country of harvest (optional)

8.3.3. Region of harvest and Year of harvest (optional)

##### **8.4. Commercial identification**

8.4.1 Size (optional)

##### **8.5. 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 ANALYSIS AND SAMPLING**

##### **9.1. Methods of analysis**

As described in Annex III, Table 4.

##### **9.2. Sampling plan**

To be developed.

## ANNEX I

**Table 2.** Chemical characteristics for Whole, Broken and Ground/Powdered Nutmeg

Description	Specification		
	Whole	Broken	Ground/ Powdered
Moisture Content, % mass fraction, max	10.0	10.0	8.0
Total ash, % mass fraction (dry basis), max	3.0	3.0	3.0
Acid Insoluble ash, % mass fraction (drybasis), max	0.5	0.5	0.5
Water- insoluble ash, % mass fraction(dry basis), max	1.5	1.5	1.5
Volatile Oils content, (mL/100g) minimum	6.5	6.0	5.0
Calcium as Ca-Oxide, % mass fraction(dry basis), max	0.35	0.35	0.35

## ANNEX II

**Table 3.** Physical characteristics for Nutmeg

Parameters	INSHELL (With shell)	SHELLED SEED (Without shell)		
	Whole	Whole	Broken	Ground/ Powdered
Extraneous matter <sup>1</sup> , % w/w (max)	0.5	0.5	0.5	N/A
Foreign matter <sup>2</sup> , % w/w (max)	0.5	0.5	0.5	N/A
Mould visible <sup>3</sup> , insect defiled/infested % w/w (max)	10	10	N/A	N/A
Dead whole insects, count/100g (max)	4	4	4	N/A
Insect fragments, count/10g(max)	N/A	N/A	100	N/A
Rodent contamination (hair), count/10g (max)	N/A	N/A	N/A	1
Live insect, by count/100g(max)	0	0	0	0
Mammalian and or other excreta, mg/kg (max)	0	0	11	N/A
Piece of mace, % w/w (max)	0.1	N/A	N/A	N/A

<sup>1</sup> Vegetative matter associated with the plant from which the product originates - but is not accepted as part of the final product.

<sup>2</sup> Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal etc.

<sup>3</sup> Seen by naked eyes. The value shall be divided equally between mould visible and insect defiled/infestation

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

## Annex III

**Table 4.** Method of Analysis

<b>Provision</b>	<b>Method</b>	<b>Principle</b>	<b>Type</b>
Moisture content	ISO 939	Distillation	I
Total ash	ISO 928	Gravimetry	I
Acid-insoluble ash	ISO 930	Gravimetry	I
Water-insoluble ash	ISO 929	Gravimetry	I
Volatile oils content	ISO 6571	Distillation	I
Calcium content expressed as CaO	ISO 1003	Titration	I
Extraneous matter	ISO 927	Visual examination/ Gravimetry	I
Foreign matter	ISO 927	Visual examination/ Gravimetry	I
Mould visible	ISO 927	Visual examination	IV
Dead insect, insect fragments, rodent contamination	ISO 927	Visual examination	IV
Live insect	ISO 927	Visual examination	IV
Mammalian and or other excreta	Macroanalytical Procedure Manual (MPM) USFDA technical bulletin V.41	Visual examination	IV
Piece of mace	ISO 927	Visual examination	IV

\*Latest edition or version of the approved methods should be used



## APPENDIX II

## LIST OF EWG MEMBERS

Indonesia/Chair	<b>Dr. Joni Munarso</b> Principal Researcher, IAARD, Ministry of Agriculture INDONESIA
India/Co-Chair	<b>Mr. T V Zavier</b> Spices Board
Chile	<b>Constanza Miranda</b> Coordinator National Committee CCSCH
Ecuador	<b>Daniela Alejandra Vivero</b> AGROCALIDAD- Ecuador
Grenada	<b>Roderick St. Clair</b> Senator for Agriculture & Fisheries Grenada Cooperative Nutmeg Association
	<b>Mr. Leonard St. Bernard</b> Chairman Quality & Production Committee – of Grenada Co-operative Nutmeg Association
	<b>Ms. Alicia Lett</b> Quality Assurance Officer Grenada Co-operative Nutmeg Association
France	<b>Benjamin Villani</b>
India	<b>Ms. Priyamvada Nilayangod</b> Asst Manager (Technical) All India Spices Exporters Forum, India
	<b>Mr. Kannan B</b> AM-Regulatory Affairs ITC Limited, India
Jamaica	<b>DAMIAN ROWE</b> Ministry of Industry Commerce Agriculture and Fisheries
Japan	<b>Mr. Masakazu KAWASHIMA</b> Deputy Director, Food Manufacture Affairs Division, New Business and Food Industry Department, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries
Korea	<b>YOYE YU</b> Codex Resercher Ministry of Agriculture, Food and Rural Affairs
Netherlands	<b>Mr. Louke Koopmans</b> Strategisch Adviseur – team Europees Betaalorgaan Ministry of Economic Affairs and Climate Policy, Rijkstsdienst RVO
Nigeria	<b>Fyne Okita Uwemedimo</b> Standards Organization of Nigeria

Peru	<b>Luis Reymundo Meneses</b> Titular Coordinator of the Technical Commission of Spices and Culinary Herbs SENASA-Peru
USA	<b>Dorian Augustus LaFond</b> USDA
	<b>Heather Selig</b> USDA U.S. Codex Contact Point
IOSTA	<b>Laura Shumow</b> International Organisation of Spice Trade Association USA