



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

Fifth Session

Virtual, 20 - 29 April 2021

**REPORT OF THE IN SESSION WORKING GROUP ON
THE PROPOSED DRAFT STANDARD FOR DRIED SEEDS – NUTMEG**

Indonesia chaired the meeting of the in session working group on the Proposed draft standard for dried seeds – Nutmeg with the assistance of Codex Secretariat. The meeting was held virtually on 23 April 2021. The Chair opened the meeting and introduced CRD 23, considering all comments received which also complements analysis of comments presented in the document CX/SCH 21/5/9-REV.

The meeting discussed most of the Section of the proposed draft standard. However, due to time constraint, Subsection on Quality Criteria: Qualitative and Quality Criteria: Quantitative under Table of Physical characteristics and classification for Nutmeg were unable to be discussed. These criteria, together with others Clauses which are still under square brackets in this document, need to be further considered by the Committee.

Appendix of this document showed the amended version of the proposed draft standard after discussion during in session working group, with the following explanation:

1. SCOPE

The editorial changes have been made to delete “*or culinary herbs*” as it is not relevant to this standard.

2. DESCRIPTION

2.1 Product definitions

This Section has been rewritten to be aligned with other CCSC standards. However, there were a discussion regarding subsection 2.1.2 whether it is appropriate to put in the product definitions or other place in the standard.

2.2 Style

It has been agreed to delete “seeds” and open square brackets of “nutmeg” so the sentences become:

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

This is also applied to other Sections.

3.2.2 Chemical and Physical Requirements

It has been agreed to change “Chemical and Physical Requirements” to be “Chemical and Physical Characteristics”.

4. FOOD ADDITIVES

To be consistent with the format, the text has been changed to be:

“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.”

8.3 Country of origin and country of harvest

In order to separate this provision, the texts have been changed to be:

“8.3.1 Country of origin shall be indicated”

“8.3.2 Country of harvest (optional)”

8.5 Inspection mark (optional)

To be deleted

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of Analysis

List of methods of analysis has been transferred to Annex III, with the following amendments:

- Method for “Non-volatile ether extract” was deleted as there is no parameter for this provision.
- Method for Piece of mace was added as this parameter exists in Physical characteristics.

ANNEX II Physical characteristics and classification for Nutmeg

There have been some amendments of Annex II with the following notes:

- Parameter of “infested cross-sectional area of half cut seed” was deleted as it has been covered by “Mould visible % w/w”.
- “Quality Criteria: Qualitative” and “Quality Criteria: Quantitative” have not been discussed yet but there are some comments in CRDs on these matters for further discussion.
- It has been agreed to fix some parameters and values, but others are still in square brackets as pending matters for further consideration and decision by the Committee.

PROPOSED DRAFT STANDARD FOR DRIED SEEDS (NUTMEG)

(Step 3)

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 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 storage as mentioned in Table 1, and are sold in styles as indicated 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 ranging from 2 – 3 cm long and from 1.5 – 2.5 cm wide. Nutmeg kernels have a slightly wrinkled like surface.

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 COMPOSITIONS AND QUALITY FACTORS

3.1. Compositions

Product as described in Section 2 above shall conform to requirements set 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

Dried whole nutmeg inshell and shelled may be classified according specific requirements into the grades contained in Annex II.

When dried nutmeg are traded as ungraded/unclassified, the chemical and physical characteristics for the lowest grade/class in Annex II apply as the minimum requirement.

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

6. FOOD 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 (CAC/RCP 42-1995) and other relevant Codex texts such as codes of hygienic practice and codes of practice.
- 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 products

- 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 indicated.
- 8.3.2. Country of harvest (optional)

8.4. Commercial Identification

- 8.4.1 Class/ Grade
- 8.4.2 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.

Table 2. Chemical Characteristics for Whole, Broken and Powder 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 (dry basis) max	0.5	0.5	0.5
Water- insoluble ash, % mass fraction (dry basis) max	1.5	1.5	1.5
Volatile Oils content, % mass fraction (dry basis) max	6.5	6.0	5.0
Calcium as Ca-Oxide, % mass fraction (dry basis), max	0.35	0.35	NA

Table 3. Physical Characteristics and Classification for Nutmeg

Parameters	INSHELL (With Shell)		SHELLED SEED (Without Shell)			
	Whole		Whole	Broken	Ground/ Powdered	
Extraneous vegetables matter ¹ , % w/w (max)	0.5		0.5	0.5	NA	
Foreign matter ² , % w/w (max)	0.5		0.5	0.5	NA	
Mould visible ³ , % w/w (max)	0.5		5	4	NA	
Dead whole insects, (max/100g)	4		4	4	NA	
Insect fragments, (max/10g)	[5] [NA]		[10] [NA]	[25] [NA]	[NA] [100]	
Rodent contamination (hair), % w/w (max/10g)	1		1	1	1	
Live insect, by count/100g (max)	0		0	0	0	
Mammalian and or other excreta, mg/kg (max)	0.25		0	11	NA	
Piece of mace, % w/w (max)	3		NA	0.5	NA	
Quality Criteria: Qualitative	CLASS I	CLASS II	CLASS I	CLASS II		
Colour	Dark brown, glossy	Pale brown	NA	NA	NA	NA
Condition of seed Surface	NA	NA	[Smooth]	[Shriveled]	NA	NA
Seed condition	Dense, sound when shaken	Dense, sound when shaken	Intact /dense	Intact /dense	NA	NA
Seed Weight (percent of total inshell weight)	≥ 63%	< 63%	NA	NA	NA	NA
Shell Condition	Intact	Cracked/ broken	NA	NA	NA	NA
Quality Criteria: Quantitative	CLASS I	CLASS II	CLASS I	CLASS II		
Well-formed seed (%), min.	NA	NA	98	0	NA	NA
Shriveled seed (%), max.	NA	NA	2	100	NA	NA
Number of seeds per kg, max	NA	NA	180	220	NA	NA

Parameters	INSHELL (With Shell)		SHELLED SEED (Without Shell)			
	Whole		Whole		Broken	Ground/ Powdered
Damaged seeds ⁴ (%), (max)	NA	NA	5	10	NA	NA
Broken seeds ⁵ (%), max.	NA	NA	2	5	NA	NA
					CLASS I	CLASS II
Half cut (%)	NA		NA		Min 95	Max 5
Broken Particle (%)	NA		NA		Max 5	Min 95
Particle size (mesh), min	NA		NA		NA	
						20

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

² 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.

³ Seen by naked eyes.

⁴ Nutmeg seeds that are broken, discoloured or showing signs of bores as a result of infestation of insects so as to affect the quality of the materials \leq 5% of the whole seed surface.

⁵ Cracked or broken seed > 5% whole seed surface.

Table 4. Method of Analysis

Provision	Method	Principle	Type
Moisture content	ISO 939:1980	Distillation	I
Total ash	ISO 928:1997	Gravimetry	I
Acid-insoluble ash	ISO 930:1997	Gravimetry	I
Water-insoluble ash	ISO 929:1980	Gravimetry	I
Volatile oils content	ISO 6571:2008	Distillation	I
Calcium content expressed as CaO	ISO 1003:2008	Titration	I
Extraneous matter	ISO 927:2009	Visual examination/ Gravimetry	I
Foreign matter	ISO 927:2009	Visual examination/ Gravimetry	I
Mould visible	ISO 927:2009	Visual examination	IV
Dead insect, insect fragments, rodent contamination	ISO 927:2009	Visual examination	IV
Live insect	ISO 927:2009	Visual examination	IV
Mammalian and or other excreta	Macroanalytical Procedure Manual (MPM) USFDA technical bulletin V.41	Visual examination	IV
Piece of mace	ISO 927:2009	Visual examination	IV

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