CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Items 2 and 5.1 **CRD03**

Original Language Only

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON SPICES AND CULINARY HERBS

Fourth Session

Thiruvananthapuram, Kerala, India, 21-25 January 2019

(Comments of the United States of America)

GROUPING FORMAT FOR SPICES AND CULINARY HERBS – EXAMPLE OF CODEX GENERAL STANDARD FOR DRIED FRUITS AND BERRIES

The United States encourages the Codex Committee on Spices and Culinary Herbs (CCSCH) to utilize the Grouping format that was agreed to at its third session to develop standards. The goal was not to develop individual standards or annexes for each named commodity within the group, but to develop one standard encompassing all the named commodities in the group.

Spices and culinary herbs are different from other agricultural commodities. They are condiments or ingredients used for imparting taste/flavor and not caloric content. As such, their chemical composition and safety are the two most important requirements – which must be the CCSCH's focus. As such, the grouping format is ideal for spices and culinary herbs, allowing the committee to focus on the chemical characteristics (taste/flavor) and physical characteristics /tolerances for defects allowed (safety).

To demonstrate standard development in the grouping format, the United States used the "Dried Fruits and Berries" group from the grouping working group report (included below) along with the following short explanations for the sections of the standard layout:

> **1. Scope and 2. Product Definition**: The specific names of the products being standardized are not indicated in the Scope. Instead a reference is made to Section 2.1. "Product Definition" where all thirty-nine (39) named products that are covered by the standard are indicated, arranged in a table list with their general, scientific and subgroup names).
>
> **2.2 Styles**: This section is written in a broad manner that applies to all the products within the group; however, as with all the other texts, it can be amended to match the style characteristics of a specific product.
>
> **3.2.4. Classification:** The three quality classes (Extra, Class I & Class II) are omitted. Based on experience, they complicate both the standard and its development. Furthermore, they are not universally accepted or used. Our premise is that CCSCH Standards should establish the minimum requirements for consumer safety and trade, whereas, classes/grades should be left to trade contractual arrangements.
>
> **Sections 3 to 9:** These sections contain general text found in all CCSCH standards which hardly changes.
>
> **Annex on Chemical and Physical Characteristics:** A single table with two general sections-- one each for Chemical and for Physical characteristics is used. This single table allows reading/referencing the minimum characteristics of each product in the standard horizontally on a single line. Minimum values are indicated in the table. These are based on existing industry trade practices and regulatory requirements, from various existing national standards/regulations.

Conclusion: Based on the example of the grouping method that follows, the CCSCH would become more efficient and responsive to the needs of governments, industry and consumers - delivering standards in a timely manner. CCSCH plenary sessions and its electronic and physical working groups would be spent researching and validating the chemical and physical characteristics of each product and not on discussing redundant standardized/templated text.

CODEX GENERAL STANDARD FOR DRIED FRUITS AND BERRIES

1. SCOPE

This Standard applies to all those plants commonly sold in commerce as defined in Section 2.1 below offered for direct human consumption, commercial food processing and for repacking if required. The exact species bought/sold may be defined by contractual specifications. This standard does not apply to these products when intended for industrial processing.

2. DESCRIPTION

2.1 PRODUCT DEFINITION

2.1.1 Dried Fruits and berries belonging to the varieties listed in Table 1:

Table 1: Varieties of Dried Fruit and Berries covered by this standard

	Common Name	**Trade Name/s**	**Scientific name**
1	Allspice	Allspice	*Pimenta dioica* (L) Merr.
2	Ambrette	Ambrette	*Abelmoschus moschatus* Medik.
3	Camboge	Camboge	*Garcinia cambogia* Desr.
4	Cardamon	Bengal cardamom	*Amomum aromaticum* Roxb.
		Cambodian cardamom	*Amomum krervanh* Pierre ex Gagnep.
		Cameroon cardamom	*Aframomum hanburyi* K.Schum.
		Cardamom (Large)/ Black cardamom	*Amomum subulatum* Roxb.
		Cardamom (Small)	*Elettaria cardamomum* Maton
		Korarima cardamom	*Aframomum koranima*
		Madagascar cardamom	*Aframomum angustifolium* K.Schum.
		Round cardamom/Chester cardamom/Siamese cardamom/ Indonesian cardamom	*Amomum kepulaga* Sprague & Burkill
		Sri Lankan Cardamom	*Elettaria cardamomum* var.major (Sm.) Thwaites
		Tsao-ko Cardamom	*Amomum tsao-ko* Crevost & Lemarié
5	Chilli	Chilli	*Capsicum annuum* L.
		Paprika	*Capsicum frutescens* L.
6	Cumin, Black (Black Caraway)	Cumin, Black (Black Caraway)	*Nigella sativa* L.
7	Grains Of Paradise	Grains Of Paradise	*Aframomum melegueta* K. Schum.
8	Juniper berry	Juniper berry	*Juniperus communis* L.
9	Kokam	Kokam	*Garcinia indica* (Thouars) Choisy
10	Mango (Dried)	Dried Mango	*Mangifera indica*
11	Mustard	Mustard, White Or Yellow	*Sinapis alba* L.
12	Pepper	Brazilian pepper	*Schinus terebenthifolius* Raddi
		Canelo pepper	*Drimys winteri*
		Chinese pepper	*Zanthoxylum acanthopodium* DC.
		Chinese prickly ash pepper/ Sechuang pepper	*Zanthoxylum bungei*
		Cubebs	*Piper cubebe*

		Grain of paradise (Guinea grains, Melegueta pepper, Alligator pepper)	*Aframomum melegueta* (Roscoe) K. Schum.
		Negro pepper / Guinean pepper pods	*Xylopia aethiopica* A.Rich.
		Pepper (Black, White, Green)*	*Piper nigrum* L.
		Pepper Long	*Piper longum* L.
		Pink pepper	*Schinus molle*
		Sichuan pepper /Japanese pepper	*Zanthoxylum piperitum* (L.) DC.
		West African / Benin pepper	*Piper guineense Schumach*. & Thonn.
13	Star Anise	Star Anise	*Illicium verum* Hook. f.
14	Tamarind	Tamarind fruit	*Tamarindus indica* L.
15	Vanilla	Pompon vanilla	*Vanilla pompona* Schiede
		Vanilla	*Vanilla planifolia* Andrews
		Tahitian Vanilla	*Vanilla tahitensis* J.W.Moore

* previously standardized

2.2 Styles

Dried fruits and Berries may be:

- whole
- pieces, or
- ground/powdered. Size of each form would be determined by contractual agreement between buyer and seller.
- Other styles distinctly different for those three are allowed, provided they are labeled accordingly

3. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

3.1 **COMPOSITION**

3.1.1 **Basic Ingredients**

Dried fruits and berries as described in Section 2. Product Description

3.1.2 Composition for use of General and Specific Names

The Common name may be used if the product is a blend of the different species listed under the Trade names/Scientific names for that Common name. When a Trade Name is used for a product, the product must contain a minimum of 80% of the species listed for the trade name.

3.2 QUALITY CRITERIA

3.2.1 Infestation:

Dried fruits and berries shall be free from live insects and practically free from dead insects, insect fragments and rodent contamination visible to the naked eye (corrected, if necessary, for abnormal vision)

3.2.2 Adulteration

Dried fruits and berries shall be free of economic adulteration

3.2.3 Odour, flavor and color:

Dried Fruits and berries shall be free from any foreign odour or flavor, especially from mustiness. They should have the characteristic odour and flavor of the spice taking into account the geo-climatic factors/conditions/varieties and the chemical strain of the main components of the volatile oil indicated in Annex

3.2.4. Classification (optional)

In accordance with the Chemical and Physical Characteristics in section “3.2.4 where appropriate whole, pieces, or ground/powdered dried fruits and berries may be classified into the following grades:

- Extra
- Class/ Grade I
- Class/Grade II

When dried fruits and berries are traded as both classified/graded and unclassified/ungraded, the minimum chemical and physical requirements for class/grade III apply as the minimum requirements for unclassified/ungraded.

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

3.2.5 Chemical and physical characteristics

Dried Fruits and berries shall comply with the Chemical and Physical properties in Annex 1. Chemical and Physical Properties

4 FOOD ADDITIVES

Only the food additives listed in Table III of the General Standard for Food Additives (CODEX STAN 195-1995) may be used in ground /powered form of this product to a maximum required for the purpose intended

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* (CODEX STAN 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* (CAC/RCP 1-1969), the *Code of Hygienic Practice for Spices and Dried Aromatic Herbs* (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 for the Establishment and Application of Microbiological Criteria for Foods* (CAC/GL 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 and PACKAGING

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* (CODEX STAN 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 Variety or cultivar may be listed on the label but is not required.

8.3 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 amark is clearly identifiable with the accompanying documents.

8.4 Packaging

The packaging must not be a source of contamination or migration, should be food grade and must protect the product quality during transportation and storage. It must be free from off odours.

9 METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of Analysis

Provision	Method	Principle
Moisture	AOAC 2001.12 ASTA 2.0	Distillation
Total Ash	AOAC 950.49 ASTA 3.0	Gravimetry
Acid Insoluble Ash	ISO 930:1997 Alternative: ASTA 4.0	Gravimetry
Volatile Oil	AOAC 962.17 ASTA 5.0	Distillation
Extraneous Matter	ISO 927:2009 Alternative: ASTA 14.1	Visual Examination
Foreign Matter	ISO 927:2009	Visual Examination
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Buletin Number 5)	Visual Examination
Insects/Excreta/Insect Fragments	Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual Examination

Annex 1: Table 1- Chemical Characteristics for Dried Fruits and Berries

Name	Form/Style	Moisture content %w/w (max)	Bulk Density	Total Ash % w/w (max)	Acid insoluble Ash % w/w max	Volatile Oils ml/100 Gm (Min)	Markers Volatile Oil	Non-Volatile Ether Extract %W/W	Crude Fiber % By Mass
Allspice	whole	12		4.5 [5]	0.4 [1.0]	[2] 3.0			
	pieces								
	ground	12		4.5	0.4	[1] 2		8.5	27.5
Ambrette	whole								
	pieces								
	ground								
Camboge	whole								
	pieces								
	ground								
Cardamon	whole	12 [13]		8.0 [9.0] [9.5]	2.0 [2.5]	[1.0] [3.5] 4.0			
	pieces								
	ground								
Chillies (Capsicum Pods)	whole	11		10	1.6	≥30	Capsaicin content, µg/g		28
	pieces	11		10	1.6	≥30	Capsaicin content, µg/g		
	ground					≥30	Capsaicin content, µg/g		
Paprika (Capsicum Pods)	whole					<30	Capsaicin content, µg/g		
	pieces					<30	Capsaicin content, µg/g		

	ground	11		8.0	0.6 [0.7] [0.9] [1.0] [2.0]	<30	Capsaicin content, µg/g	17.0 [20.0] [25.0]	
Cumin	whole			[8.5] 10 [12]	1.5 [3] [4]	[1.5] 2.0		12 [15]	
	pieces								
	ground	12 [13]		9.5 [14]	1.5 [3.0]	[1.3]1.5			
Grains of Paradise	whole								
	pieces								
	ground								
Juniper Berries	whole	16		4.0 [5.0]	1.0	[0.5] [0.6] [0.8] [1.2] 1.4 [1.5]			
	pieces								
	ground								
Kokam	whole								
	pieces								
	ground								
Mango	whole								
	pieces								
	ground								
Mustard seed	whole	10		6.5	1.0			28	
	pieces								
	ground								
Star Anise	whole	8.0 [10]	130/100gm	3.0 [4]	0.5	7.0 [8]			
	pieces								
	ground								
Tamarind	whole								

	pieces								
	ground								
Vanilla	whole	[25] 30 [38]					1.6-2.4% vanillin		
	pieces (cut and bulk)	30					1.6-2.4% vanillin		
	powder	25					1.6-2.4% vanillin		

Annex 1: Table 2- Physical Characteristics for Dried Fruits and Berries

Name	Form/Style	Dead Whole Insects Count/100 Gm Max	Excreta Mammalian Mg/Kg Max	Mold Damage %W/W (Max)	Insect Defiled/Infested %W/W (Max)	Extraneous Matter %W/W (Max)	Foreign Matter %W/W (Max)	Live Insect	Shriveled Immature Broken	Excreta Other Mg/Kg Max
Allspice	whole			5		1		free		
	pieces									
	ground	2	11	2	1.00	0.50 [1]		free		11
Ambrette	whole									
	pieces									
	ground									
Camboge	whole									
	pieces									
	ground									
Cardamon	whole	4	6.6	1	1	2 [5]			7	2.2
	pieces									
	ground									
Chillies (Capsicum Pods)	whole	4	2.2	3 .0 (combined with insect infested)	2.50 [3% total with moldy pods]	[0.5] 1				17.6
	pieces					1			2%	
	ground									
Paprika (Capsicum Pods)	whole									
	pieces									
	ground					1				
Cumin	whole	4	6.6	1	1	0.5 [1] [2] [3]	0.5		5	11
	pieces									
	ground									
Grains of Paradise	whole									
	pieces									
	ground									
Juniper Berries	whole					0.5 [1][2.0]				

	pieces									
	ground									
Kokam	whole									
	pieces									
	ground									
Mango	whole									
	pieces									
	ground									
Mustard seed	whole					0.7 [1.0]			2	
	pieces									
	ground									
Star Anise	whole					1 [2]			25% max	
	pieces									
	ground									
Tamarind	whole									
	pieces									
	ground									
Vanilla	whole									
	pieces (cut and bulk)									
	powder									