



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

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**Report of the virtual Working Group on the proposed draft standards for spices derived from dried
fruits and berries**

(Prepared by the United States of America and India)

In preparation for the 6th Session of the Codex Committee on Spices and Culinary Herbs a virtual session of the electronic working group (ewg) led by the United States and co-led by India was held. The ewg discussed the draft standard taking into consideration responses to the Circular letter (CL 2022/29/OCS – SCH) and participant comments.

Unresolved issues - The following issues were unresolved and require members' attention:

2.3 Sizing

Issue & Rationale: Needs to verify if "cut vanilla" is traded by fixed/recognize size. This if done would require evaluating Chemical and Physical Characteristics.

3.2.2 Classes

Issue & Rationale: The inclusion of classes though optional in the standard is a concern due to the differences in the number of classes in the two most widely readily available standards - Mexico national standard (NMX-FF-074-1996) and the International Standards Organization (ISO 5565-1-1999).

Annex II, Table 1 on Chemical Characteristics- The unresolved issues are placed in [square brackets] however, the most important ones are following:

Allspice

- Maximum value for Total Ash- one member requested placing the value in square brackets pending further review.
- Acid Insoluble Ash values for all three styles- there was no agreement on the value between the delegations of India and the United States on this matter. Both delegations agreed to jointly seek a solution to this matter prior to the CCSCH6 Plenary Session.

Vanilla

- Vanillin range values- The United Kingdom's delegation proposed higher values for all the whole style classes/grades of vanilla while Mexico's delegation proposed only for Extra Class.

Annex II, Table 2 on Physical Characteristics

- Color and Size Tolerance for whole Vanilla based on classes- members are asked to evaluate the inclusion of these requirements and numerical values/allowances as a requirement in the standard.

PROPOSED DRAFT STANDARD FOR SPICES DERIVED FROM DRIED FRUITS AND BERRIES (ALLSPICES, JUNIPER BERRY, STAR ANISE AND VANILLA) Arising from VWG of 9/16/2022

1. SCOPE

This Standard applies to spices derived from dried or dehydrated fruits and berries, as defined in Section 2.1 below, and offered for direct human consumption, as an ingredient in food processing or for repackaging if required. This standard does not apply to these products when intended for industrial processing. The exact species bought/sold may be defined by contractual specifications.

2. DESCRIPTION

2.1 Product Definition

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

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

	Common Name	Trade Name/s	Scientific name
1	Allspice	Allspice	<i>Pimenta dioica</i> (L) Merr. (Myrtaceae)
		Pimento Jamaican Pepper	<i>Pimenta dioica</i> var. <i>tabasco</i> (Willd. ex Schltld. & Cham.). (Myrtaceae)
2	Juniper berry	Juniper berry	<i>Juniperus communis</i> L. (Cupressaceae)
3	Star Anise	Star Anise	<i>Illicium verum</i> Hook. f. (Schisandraceae)
4	Vanilla	Pompon vanilla	<i>Vanilla pompona</i> Schiede (Orchidaceae)
		Vanilla/ Mexican Vanilla	<i>Vanilla planifolia</i> Andrews (Orchidaceae)
			<i>Vanilla odorata</i> C. Presl (Orchidaceae)
		Tahitian Vanilla	<i>Vanilla tahitensis</i> J.W. Moore (Orchidaceae)

2.2. Styles

Dried fruits and berries may be:

- Whole
- Cut/broken
- Ground/powdered; processed into a powder. The particle size of ground/powdered styles is determined by contractual agreement between buyer and seller.
- Other styles distinctly different for those three are allowed, provided they are labeled accordingly.

2.3 Sizing (optional)

Dried fruits and berries may be sized whole [or cut when appropriate] in accordance with existing trade practices. When sized, the size designation and the method used shall be indicated on the package.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

Dried fruits and berries as described in Section 2 above shall conform to the requirements specified in Annex I.

3.2 Quality Criteria

3.2.1 Odour, flavour and colour

The product 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.

3.2.2 Classification (optional)

When dried fruits and berries are traded as classified/graded, the provisions in Annex I apply as the

minimum requirements.

3.2.3 Chemical and physical characteristics

Dried fruits and berries shall comply with the requirements specified in Annex I (chemical characteristics- Table 1 and physical characteristics -Table 2) I. The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

4 FOOD ADDITIVES

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

4.1.1 Processing Aids

The processing aids used in products conforming to this Standard should be consistent with the *Guidelines on Substances used as Processing Aids* (CXG 75-2010).

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

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

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 Classification

Class/Grade, if applicable

Size (optional)

Weight

8.5 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).

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- 9 METHODS OF ANALYSIS AND SAMPLING see Annex 1.**
 - 9.1 Methods of Analysis – see Annex 1.**
 - 9.2 SAMPLING PLAN - To be developed.**

Annex 1. Methods of Analysis for Spices Derived from Dried Fruits and Berries

Sl. No	Spices	Provision	Method	Principles	Type	Unit
1	(a) Dried Allspice	Moisture	ISO 939	Distillation followed by volumetry	I	%(w/w)
	(b) Dried Juniper Berries	Total ash on dry basis ¹	ISO 939 and ISO 928	ISO 939: Distillation followed by volumetry. ISO 928: gravimetry.	I	%(w/w)
		(c) Dried Star Anise				
	(d) Vanilla	Acid- insoluble ash on dry basis ¹	ISO 939 and ISO 930	ISO 939: Distillation followed by volumetry. ISO 930: gravimetry.	I	%(w/w)
		Volatile oils on dry basis ¹	ISO 939 and ISO 6571	ISO 939: Distillation followed by volumetry. ISO 6571: Distillation followed by volumetry.	I	%(v/w)
		Extraneous matter	ISO 927	Visual examination followed by gravimetry	I	%(w/w)
		Foreign matter	ISO 927	Visual examination followed by gravimetry	I	%(w/w)
		Mould visible	ISO 927	Visual examination followed by gravimetry	I	%(w/w)
	Mammalian excreta	MPM V-8 Spices, Condiments, Flavors and Crude Drugs A. General methods for spices herbs and botanicals (V 32) https://www.fda.gov/food/laboratory-methods-food/mpm-v-8-spices-condiments-flavors-and-crude-drugs (Applicable to whole form of the spices)	Visual examination followed by gravimetry	I	mg/Kg (w/w)	
	Whole dead insect	ISO 927	Visual examination	I	Count	
		AOAC 969.44 ²	Flotation method	IV	Count	
	Insect fragments	ISO 927	Visual examination counting	I	Count	
		AOAC 975.49 ³	Flotation method	IV	Count	

		Insect damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs General methods for spices herbs and botanicals (V 32) (Applicable to whole form of the spices)	Visual examination followed by gravimetry or counting	I	%(w/w) or count
		Mould damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs General methods for spices herbs and botanicals (V 32) (Applicable to whole form of the spices)	Visual examination followed by gravimetry or counting	I	%(w/w) or count
	Vanilla (<i>Vanilla fragrans</i> (Salisbury) Ames, syn. <i>Vanilla planifolia</i> Andrews). Applicable to vanilla in pods, cut in bulk, and in the form of powder, not applicable for extracts.	Vanillin	ISO 5565	Distillation and HPLC	I	
2.	Allspice (whole, cracked/pieces)	Filth (list all the filth here-for example- mammalian excreta)	AOAC 965.40	Floatation	I	
	Allspice (Ground/powdered)	Light filth (list all the filth here-for example- mammalian excreta)	AOAC 981.21	Floatation	I	
3.	Juniper Berries, Star Anise, Vanilla (cut/broken, ground/powdered)	Light filth (list all the filth here-for example- mammalian excreta)	AOAC 975.49	Floatation	I	

Notes:

1. The value is to be expressed on dry weight basis; hence the method of moisture determination (ISO 939) is also included.
2. Method for ground spices.
3. AOAC 969.44, light filth in oregano (unground)
4. AOAC 975.49, light filth in spices and condiments

References

1. Principles for the Establishment of Codex Methods of Analysis, CODEX Alimentarius Commission Procedural Manual, 27th Edition.
2. Elaboration of Codex Texts, Methods of Analysis and Sampling, Normal Practice, Section 2, Page 53, CODEX Alimentarius Commission Procedural Manual, 26th Edition.
3. ISO 927- Spices and condiments – Determination of extraneous matter and foreign matter
4. ISO 928 - Spices and condiments – Determination of total ash
5. ISO 929 - 1980 Spices and condiments – Determination of water insoluble ash
6. ISO 930 - Spices and condiments – Determination of acid insoluble ash

7. ISO 939 - Spices and condiments – Determination of moisture content/ Entertainment method
8. ISO 941 - Spices and condiments – Determination of cold-water extracts

9. ISO 5565- analysis of vanilla belonging to the species *Vanilla fragrans* (Salisbury) Ames, syn. *Vanilla planifolia* Andrews.
10. AOAC 965.40- Filth in Spices (floatation method)
11. AOAC 981.21-Light filth in ground allspice (floatation method)
12. AOAC 979.49- Light Filth in Spices and Condiments (floatation method)
13. ISO 6571 - Spices and condiments and herbs – Determination of volatile oil content
14. MPM V-8 Spices, Condiments, Flavours and Crude Drugs, Macroanalytical procedure manual, A. General methods for spices herbs and botanicals (V 32), FDA Technical Bulletin Number 5 (for whole).

Annex II: Chemical and Physical Characteristics

Table 1 - Chemical Characteristics for Dried Fruits and Berries

Name	Form/Style	Classes	Moisture content %w/w (Max)	Total Ash % w/w (Max)	Acid Insoluble Ash % w/w (Max)	Volatile Oils ml/100g (Min)	Other Factors
Allspice	Whole	----	12	5	0.4 [1.0] India	3	
	Cut/Broken	----	12	[5]	0.4 [1.0] India	2	
	Ground/Powdered	----	12	4.5	0.4 [1.0] India	1	Non-volatile ether extract (%w/w) - 8.5
Juniper Berries	Whole	-----	16	4.0	1.0	1.4	
	Cut/Broken	----	16	4.0	[1.0]		
	Ground/powdered	----	14	[4.0]			
Star Anise	Whole	-----	10	4	0.5	7.0	Min. no. fruit per 100g - 130/100gm .
	Cut/Broken	----	10	[4]	[0.5]		
	Ground/powdered	----	8				
Vanilla	Whole	Extra Class	38	5	1	NA	[1.8 – 2.4 Mexico] [1.2 – 2.0 UK (dry or wet)]
		Class I	38	5	1	NA	1.6-2.4] [1.2-2]-UK
		Class II	30	5	1	NA	1.6 -2.4% vanillin [1.2-2]-UK
		Class III	25	5	1	NA	[1.2-2]-UK
	Cut/Broken	----	30	5	1	NA	1.6 -2.4% vanillin
	Ground/powdered	----	25 [30] India	5	1	NA	1.6 -2.4% vanillin

Table 2 - Physical Characteristics for Dried Fruits and Berries

Name	Form/Style	Classes	Dead Whole Insects Count/100g m (Max)	Excreta Mammalian mg/kg (Max)	Mould 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 %W/W (Max)	Other Factors		
Allspice	Whole	----	2	11	2	1	Combined 0.50		0		Black, white and broken berries, berries with stem each @ 0.05% max Off-size ± 10.0% Other Excreta 11mg/kg (max)		
	Cut/Broken	-----	2	NA	NA	NA	Combined 0.50		0				
	Ground/Powdered	----	NA	NA	NA	NA	NA		0		Insect fragments: 30/10g Rodent hair: 1/10g [N/A] Crude fibre (% by mass): 27.5 max.		
Juniper Berries	Whole	-----	NA		1.0	1.0	2		0	20 including discoloured	Stalks 3% Broken %w/w max 10 [ISO = 25] Off-size ± 10.0%		
	Cut/Broken	-----	NA	NA	NA	NA	1 [N/A]	NA	0				
	Ground/Powdered	-----	NA	NA	NA	NA	[N/A]	NA	0		[N/A]		
Star Anise	Whole	-----	NA				2		0	25	Stalks 3% Max. no. fruit per 100g-130/100gm		
	Cut/Broken	-----	NA	NA	NA	NA	1	NA	0				
	Ground/Powdered	-----	NA	NA	NA	NA	[N/A]	NA	0				
Vanilla											Color Tolerance % w/w (max)	Size Tolerance % w/w (max)	
		Extra Class	[5.0%] combined – Mexico							0		3.0	5.0
		Class I	[5.0%] combined – Mexico							0		5.0	5.0%
		Class II	[10. 0%] combined – Mexico							0		7.0	10.0%
		Class III								0			
		Cut/Broken	-----							0			
	Ground/Powdered	-----					[N/A]		0				

Notes:

- * Values or Unclassified is the current text in the draft standard are the absolute minimum requirement
 - 2: Mammalian Excreta- If the average of the total number of sub-samples exceeds the listed milligram per kg and/or lb.
 - 3: Dead Whole Insects- If the total number of whole dead insects found in the total number of the sub samples exceeds the specified value shown in the table
 - 4. NA: Not applicable, means that this form of the above product has not been evaluated for this provision, and currently there are no values. N/A does not refer to zero.
- * Values or Unclassified is the current text in the draft standard are the absolute minimum requirement