



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

26-30 September and 3 October 2022

**Report of the virtual Working Group on the proposed draft standard for Chilli peppers and Paprika
(Prepared by India)**

During the meeting of eWG chairs, it was requested to the Codex Secretariat to have a virtual working group (vWG) meeting, based on which two virtual group meeting took place on 14th September 2022, 11:00 – 12:30 hours CEST and 19th September 2022, 14.30 – 16.00 CEST in order to discuss the outstanding issues on draft standard of dried chilli pepper and paprika. The working group was chaired by India. Representatives from Codex Secretariat, CCSCS Secretariat and delegates from the member countries attended the meeting. The CCSCS Chair and Codex Secretariat welcome all the member and the eWG Chair thanked all participants in the eWG who contributed to the preparation of the draft standard. Comments received from the document CX/SCH 22/06/5 Add.1 were also discussed during the vWG meeting. The discussion held were presented below section wise as per the draft standard.

2.1 Product Definition

2.1.1 As per comment received from Egypt, the family name "*Solanaceae*" was included as mentioned in document CX/SCH 22/06/5 Add.1. Also word "Pods" removed and only fruits retained.

Table. 1

Separate column for trade name was introduced with varietal names as suggested by Mexico and USA. As commented by EU and based on the ISO standard 7540:2020, *Capsicum frutescens L* was included under scientific name for paprika. As proposed by Mexico and USA, under column trade name, the varietal names of chilli and paprika were included.

2.2 Styles

As commented by EU and IOSTA, The phrase: "with or without variant proportions of pericarp, placenta, seeds, pedicel and calyx" was deleted based on the rationale that precise maximum content not being fixed for each parts of the fruit. For Chilli "dark blackish red" colour and for Paprika "through yellowish & brownish red to pale reddish brown" sentences were added.as suggested by India.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.2.4 Sizing (Optional)

Square bracket removed based on comment from Egypt and India

3.2.3 Classification (Optional)

Philippines requested for the basis for the grading of styles included in Annex I and II, which was right now traded as whole, Crushed/Cracked/broken/Flaked and ground or powdered. Right now there were no exact values proposed for defining the styles, it is based on visual perception.

6. HYGIENE

A bracket was included in the standard text "(Annex III on spices and dried culinary herbs)" to avoid confusion as mentioned by Uganda.

8. LABELLING

8.2.1. The square brackets removed as per Egypt comments and with the concurrence of member countries.

8.2.2 . Under this section for the sentence" The common name of the product may include an indication of the style as described in Section 2.2." instead of may, "shall" was included as commented by Uganda

9.2 SAMPLING PLAN

Philippines and Saudi Arabia proposed to include the sampling plan, as discussed previously, since the sampling plan will be common for all the spices, a common sampling plan may developed in consultation with other committees.

Annex I

Table 2

Under Class / Grade for chilli peppers, “-“ was added as they don't have any grades. Extra row for Hot Paprika was included as per the discussions. Under column Moisture, the value 11% was recommended by most of the members and also based on the ISO standards, the value of 11% was fixed. For varieties which has 12% moisture, a foot note was included stating [“Some varieties of dried whole chilli peppers and paprika may have a moisture content greater than 11.0%”](#). For the parameter Pungency, ≥ 900 SHU for chilli peppers, ≤ 480 SHU for paprika and $480 < 900$ for Hot paprika was fixed based on recommendation of the members, ISO standards and previous discussion had during CCSCH 5 session. Under column colour value USA and IOSTA suggested 60 ASTA colour units for which is min value for ground paprika.

Annex II

Table 3

For some of the parameters under various columns, N/A was given as there is no scientific data or method available at this point of time to provide the exact correct values. Under the column Mould damage and insect damage for whole chilli pepper, a combined value of 3 was given as commented by USA which is based on the USFDA defect action levels. A foot note was also provided. The column Insect filth and rodent filth was removed since exact data or standard values were not available at this point of time and also India suggested to remove the columns since it is covered under other parameters such foreign matter and it was pointed out that this parameter was not given in other standards. USA suggested to include additional column “other factor” for off size which was discussed to keep as 10% for whole products of chilli and paprika.

Table 4. Method of Analysis

Under Pungency Scoville units, method was changed to chromatographic method from sensory evaluation based on the comments. Also under Mould damage, two methods were included to reflect different methods for whole and ground products. Method for insect filth and rodent filth were removed since columns in Table 3 were removed.

PROPOSED DRAFT STANDARD FOR DRIED OR DEHYDRATED CHILLI PEPPER AND PAPRIKA

1 SCOPE

This Standard applies to dried or dehydrated chilli pepper and paprika as defined in section 2.1, offered for direct consumption, as an ingredient in food processing or for repackaging if required. It excludes the product for industrial processing.

2 DESCRIPTION

2.1 Product Definition

2.1.1 Dried or dehydrated Chilli pepper ~~or~~ and Paprika is the product obtained from drying the fruits/~~pods~~ of ~~plants~~ Capsicum species of the family Solanaceae mentioned in table 1, with or without seeds or stalks and processed in an appropriate manner.

Table.1. Dried or dehydrated chilli pepper and paprika covered by this standard

Common Name {Trade-Name}	Trade name (non exhaustive list)	Scientific Name*
<u>Paprika / Pimentón</u>	<u>Capsicum annuum L.</u>	
Chilli pepper /Cayenne/ <u>Cayenne Pepper</u> Chile or Aji / or Hot Pepper	Varietal names (non-exhaustive)- such as Cayenne, Ancho, Poblano, Pasilla, X'catik, Ajjes, Birdseye, Fatalli, Scotch Bonnet, Habanero, Dorset Naga, Naga-Jolokia, Naga Viper, Trinidad-Scorpion, Serrano, Tabasco, Cayenne, Piquin, Fresno, Cherry, Jalapeño, Prik_Chee-Fah, Manzano	<u>Capsicum annuum L.</u> ,
		<u>Capsicum frutescens L.</u> ,
		<u>Capsicum baccatum var. pendulum</u> (Willd.) Eshbaugh, (synonym of <u>Capsicum frutescens L.</u>)
		<u>Capsicum chinense Jacq.</u> ,
		<u>Capsicum pubescens</u> Ruiz & Pav
<u>Paprika</u>	<u>Paprika,</u> <u>Hot paprika</u>	<u>Capsicum annuum L.</u> , <u>Capsicum frutescens L.</u>

2.2 Styles

Chilli pepper and paprika may be

- Whole
- Crushed/Cracked/broken/Flaked
- Ground/powdered

Ground chilli pepper or/and ground paprika is the product obtained by grinding whole dried chilli pepper or paprika ~~with or without variant proportions of pericarp, placenta, seeds, pedicel and calyx without~~ any other added matter. Ground chilli peppers may vary in colour from pale white to dark blackish deep red according to the species/varieties.

Ground paprika may vary in colour from orange to red through yellowish and brownish red to pale reddish brown according to the species/varieties. Ground seeds in paprika increases the pungency. Ground calyx, stalk and seeds in paprika result in the finished product having brown and white particles which detract from the appearance

Other styles distinctly different from above mentioned styles are allowed, provided they are labelled accordingly.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

Dried or dehydrated Chilli pepper or/and Paprika 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 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 or colour especially from rancidity and mustiness. The product shall be free from any adulteration.

3.2.2 Chemical and Physical requirements

Dried or dehydrated chilli peppers and paprika shall comply with the requirements given in Annexes I and II. The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package.

3.2.3 Classification (Optional)

The classification of dried chilli peppers and paprika is optional.

In accordance with the Chemical and Physical Characteristics in Annexes I and II, whole or ground paprika may be classified into the following classes:

- a) Extra class
- b) Class I / Grade I
- c) Class II / Grade II

When dried or dehydrated paprika is traded as unclassified, the provisions for physical and chemical characteristics applicable to class II / Grade II apply as minimum requirements.

3.2.4 Sizing (Optional)

Dried whole chilli peppers and paprika may be sized by length or in accordance with existing trade practices. When sized the method used should be indicated on 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 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 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 common name of the product shall be as described in Sections 2.1.1.]

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

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 Identification

- Class/Grade, if applicable
- Size for whole style (optional)

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).

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of Analysis¹

As described in Annex III, Table 4

9.2 SAMPLING PLAN

To be developed.

¹ Latest edition or version of the approved method should be used

Table 2. Chemical Requirements of Dried or Dehydrated Chilli Pepper and Paprika

Product	Styles	Class / Grade	Moisture % w/w (max)*	Total ash (dry basis) %w/w (max)	Acid insoluble ash (dry basis) % w/w (max)	Pungency Scoville Heat units	Colour Value ASTA Colour Units (min)
Chilli peppers	Whole	N/A	11 [12]	10	1.6	≥900 ≥900 [≥450]	N/A
	Crushed/Cracked/broken	N/A	11 [12]	10	1.6	≥900 ≥900 [≥450]	N/A
	Ground	N/A	11 [12]	10	1.6	≥900 ≥900 [≥450]	N/A
Paprika	Whole	Extra	11 [12]	10	1.3	≤ 480 < 900 [< 450]	120
		I	11 [12]	10	1.6	≤ 480 < 900 [< 450]	100
		II	11 [12]	10	1.6	≤ 480 < 900 [< 450]	80
	Crushed/Cracked/broken	N/A	11 [12]	10	1.6	≤ 480 < 900 [< 450]	80
	Ground	Extra	11 [12]	10	1.6	≤ 480 < 900 [< 450]	120
		I	11 [12]	10	1.6	≤ 480 < 900 [< 450]	100
II		11 [12]	10	1.6	≤ 480 < 900 [< 450]	80	
eHot paprika	Whole	Extra	11	10	1.6	480 < 900	120
		I	11	10	1.6	480 < 900	100
		II	11	10	1.6	480 < 900	80
	Crushed/Cracked/broken	-	11	10	1.6	480 < 900	80
	Ground	Extra	11	10	1.6	480 < 900	120
		I	11	10	1.6	480 < 900	100
II		11	10	1.6	480 < 900	60	

* Some varieties of dried whole chilli peppers and paprika may have a moisture content greater than 11.0%. Some dried whole chilli peppers have specific moisture contents e.g. Ancho Mulato 12.5%, Guajillo Pasilla 13.5%

Table 3. Physical Requirements of Dried or Dehydrated Chilli Pepper and Paprika

Product	Styles/ Form	Classes / Grade	Mammalian Excreta or/and other ¹ mg/kg (max)	Mould damaged % w/w (max) [% count]	Insect defiled/ infested damage % w/w (max)	Extraneous Matter ² % w/w (max)	Foreign matter ³ % w/w (max)	Live insects Count/100g	Other factors
Chilli peppers	Whole	N/A	1		3⁴3[1] 4[3]	1	0.5	0	<u>10% off size max. and 10% other similar varieties max</u>
	Crushed/Cracked/broken	N/A	N/A	N/A	N/A	N/A	N/A	0	=
	Ground	N/A	N/A	20 ⁵	N/A	N/A	N/A	0	=
Paprika	Whole	Extra	1	Nil	0.5	1	0.1	0	<u>10% off size max. and 10% other similar varieties max</u>
		I	1	1	1	1	0.5	0	
		II	1		N/A 1[3⁴] 4[3]	1	0.5	0	
	Crushed/Cracked/broken	N/A	N/A	N/A	N/A	N/A	N/A	0	=
	Ground	N/A	N/A	20 ⁵	N/A	N/A	N/A	0	=

¹Excreta from other animals, such as reptiles and birds.

² Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.

³ 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.

⁴,Mould damage combined with insect infested

⁵This doesn't mean the product could be 20% moldy it means that mold filaments can be observed in 20% of the fields examined using Howard Mold Count

NA= 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

~~Not applicable at this time and may change~~

ANNEX III

Table 4. Method of Analysis

Parameter [Provision]	Method ¹	Principles	Type ²	Unit
Moisture	ISO 939	Distillation	I	%(w/w)
Total Ash (dry basis)	ISO 939 ISO 928	Distillation Gravimetry	I I	%(w/w)
Acid-insoluble ash (dry basis)	ISO 939 ISO 930	Distillation Gravimetry	I I	%(w/w)
Pungency Scoville units	ASTA 21.3 ISO 3513	Chromatography Sensory evaluation (Taste)	IV	Scoville Heat Unit or Total capsaicinoids content (mg/kg) Scoville-Heat Unit
Natural colouring matter	ISO 7541	Spectrophotometry	IV	ASTA colour unit
Mammalian excreta	ISO 9273	Visual examination followed by Gravimetry (whole/ pieces)	I	mg/Kg
Mould damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32)	Visual Examination (for whole)	IV	%(w/w) or count
	AOAC 945.94	Visual Examination (for Ground)	I	% count
[Howard-Mould-Count	AOAC 945.94	Microscopic Examination]	I	
Insect Damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32)	Visual Examination	IV	%(w/w)
Extraneous vegetable matter ³	ISO 927	Visual Examination followed by Gravimetry	I	%(w/w)
Foreign matter ⁴	ISO 927	Visual Examination followed by Gravimetry	I	%(w/w)
Insect filth	US FDA MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32) [Ground Chilli AOAC 978.22] Ground Paprika (AOAC 977.25B)]	Visual Examination	IV	% w/w (max) [Fragments/25g (max)]
Redent filth	ISO 927	Visual examination followed by Gravimetry	IV	Count
Live insect	ISO 927	Visual Examination	IV	Count

	AOAC 960.51			
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¹Latest edition or version of the approved method should be used.

²According to the definition of "types of method of analysis" as per Codex Procedural Manual Section II

³Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.

⁴ 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.