



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

Virtual, 20-29 April 2021

PROPOSED DRAFT STANDARD FOR DRIED OR DEHYDRATED CHILLI PEPPER AND PAPRIKA
(Prepared by the Electronic Working Group chaired by India)

1 SCOPE

This Standard applies to dried or dehydrated chilli pepper and paprika ~~in their dried or dehydrated form, as~~ defined in section 2.1, ~~to be offered as such for the consumer, 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 mentioned in table 1, with or without seeds, ~~[without] stems/~~ or stalks and processed in an appropriate manner.

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

Common Name	Scientific Name*
Chilli pepper / paprika <u>Chile or Aji/Pimentón</u>	<i>Capsicum annuum</i> L.,
	<i>Capsicum frutescens</i> L.,
	<i>Capsicum baccatum</i> var. <i>pendulum</i> (Willd.) Eshbaugh .,(synonym of <i>Capsicum frutescens</i> L.)
	<i>Capsicum chinense</i> Jacq.,
	<i>Capsicum pubescens</i> Ruiz & Pav

*As per International Plant Names Index (IPNI) – www.ipni.org

2.2 Styles/forms

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 the placenta, seeds, calyx and stalk without any other added matter~~

~~Ground chilli pepper may vary in colour from pale white to deep red according to the species/varieties.~~

~~Ground paprika may vary in color from orange to red according to the species/varieties~~

~~The ground product may be of any particle size, according to agreement between the trading parties concerned.~~

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 Annex I and II.

3.2 Quality Factors

3.2.1 Odour, flavour and colour:

The product shall have a characteristic odour, colour and flavour which can vary depending on geo-climatic factors/conditions/varieties 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 ~~Physical and Chemical~~ and ~~Physical~~ characteristics

Dried or dehydrated chilli peppers and paprika shall comply with the requirements given in Annex 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 chili peppers and paprika is optional.

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

- a) Class I / Grade I
- b) Class II / Grade II
- c) Class III / Grade III

When dried or dehydrated ~~chilli peppers and~~ paprika is unclassified, the provisions for physical and chemical characteristics applicable to class III / Grade III 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~~

3.3 ~~Classification of "Defectives"~~

~~A container/sample that fails to meet one or more of the applicable quality requirements, as set out in Section 3.2 should be considered as "defective".~~

3.4 ~~Lot Acceptance~~

~~A lot should be considered as meeting the applicable quality requirements referred to in Section 3.2 when the number of "defectives", as defined in Section 3.3, does not exceed the acceptance number (c) of the appropriate sampling plan. The contents of each package must be uniform and contain only product of the same origin, variety, cultivar or trade name, quality and size.~~

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.~~

~~The anticaking agents listed in Table 3 of the General Standard for Food Additives (CXS192-1995) may be permitted for use in ground/powdered chilli pepper / paprika only.~~

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 and other relevant codex texts. 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 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 ~~on~~ 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). ~~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 general name of the product shall be as described in Sections 2.1.1.

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

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

8.3 ~~Country of origin/country of harvest~~

~~8.3.1 Country of origin shall be indicated and the country of harvest, region of production may be indicated.~~

~~8.3.1.1 If there is more than one country of harvest may be indicated using the legend and /or.]~~

~~8.3.2 Year of harvest (optional)~~

8.3.1. Country of origin shall be declared, as per the provisions given under section 4.5 of the General Standard for Labelling of Pre-packaged foods (CXS 1-1985).

8.3.2. Country of Harvest (optional)

8.3.3. Year of harvest (optional)

8.4 **Commercial Identification**

- Class/Grade, if applicable
- Size (optional)

~~8.5 Inspection mark (optional)~~

8.65 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 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

ANNEX I

Table 2. ~~Chemical Properties Characteristics of for~~ Dried or Dehydrated Chilli Pepper and Paprika

Product	Styles/ Form	Class / <u>Gradees</u>	Chemical Prop- erties Moisture % w/w (max)	Total ash (dry basis) %w/w (max)	Acid insoluble ash (dry basis) % w/w (max)	Pungency Scoville <u>Heat</u> units	Capsaicin content (in mg/kg)	Colour Value ASTA Colour Units (min)
Chilli pep- per	Whole	N/A	11 [12]	8 10	1.6	≥900 [≥ 450]	≥ 60 [≥30]	N/A
	Crushed/Cracked/broken	N/A	11[12]	8 10	1.6	≥900 [≥ 450]	≥60 [≥ 30]	N/A [60]
	Ground	N/A	11 [12]	8 10	1.6	≥900 [≥ 450]	≥60 [≥ 30]	N/A [60]
Paprika	Whole	Class-I	11	8	1.3	<900 [< 450]	< 60 [<30]	120
		Class-II	11	8	1.6	<900 [< 450]	< 60 [< 30]	100
		Class-III	11 [12]	8.5 [10]	1.6	<900 [< 450]	< 60 [< 30]	80
	Crushed/Cracked/broken	NA	11	8 [10]	1.6 [3]	<900 [< 450]	< 60 [< 30]	80 [60][70]
	Ground	Class-I	11 [12]	8 [10]	1.6 [1.3] [3]	<900 [< 450]	< 60 [< 30]	80 [60][120]
		Class-II	<u>11</u> 12	8	1.6	<900 [< 450]	< 60 [< 30]	100
Class-III		<u>11</u> 12	<u>8.5</u> 10	1.6	<900 [< 450]	< 60 [< 30]	80	

ANNEX II

Table 3. Physical Properties for Characteristic of Dried or Dehydrated Chilli Pepper and Paprika

Product	Styles/ Form	Classes / Grade	Physical Properties Excreta mammalian or/and other ¹ mg/kg (max)	Mold damaged % w/w (max)	Insect de- filed/ Infested% w/w (max)	Extraneous Matter ² % w/w (max)	Foreign matter ³ % w/w (max)	Insect filth % w/w (max) [Frag- ments/25g (max)]	Rodent filth hairs % w/w (max) [/25g (max)]
Chilli pepper	Whole	N/A	1 [2-2]	Nil [0.5] [1] [3]	1 [3]	1 [0][0.5]	1 [0.5]	[0][0.5] [5]	[0] [0.5] [4]
	Crushed/Cracked/broken	N/A	N/A	N/A	N/A	N/A	N/A	[NA][0][25]	[NA][0][4]
	Ground	N/A	N/A	N/A	N/A	N/A	N/A	[NA][0][50]	[NA][0][6]
Paprika	Whole	Class-I	1	Nil	0.5	1 [0][0.5]	1 [0.5]	[0] [0.1]	[0] [0.1]
		Class-II	1	1	1	1 [0][0.5]	1 [0.5]	[0] [0.5]	[0] [0.5]
		Class-III	1 [2-2]	1 [3 ⁴]	1 [3]	1 [0][0.5]	1 [0.5]	[0] [0.5] [10]	[0] [0.5] [8]
	Crushed/Cracked/broken	N/A	N/A	N/A	N/A	N/A	N/A	[NA][0][30]	[NA][0][8]
	Ground	N/A	N/A	N/A [20 ⁵]	N/A	N/A	N/A	[NA][0][75]	[NA][0][11]

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 Mold damage combined with insect infested

⁵ This 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 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	<u>%(w/w)</u>
Total Ash (dry basis)	ISO 939 ISO 928	Distillation Gravimetry	I I	<u>%(w/w)</u>
Acid-insoluble ash (dry basis)	ISO 939 ISO 930	Distillation Gravimetry	I I	<u>%(w/w)</u>
Pungency Scoville units	ISO 3513: 1995	<u>Sensory evaluation</u> (Taste) HPLC	IV	<u>Scoville</u> <u>Heat</u> <u>Unit</u>
Capsaicin content	<u>AOAC 995.038</u> [ASTA 24.3]	HPLC	IV	<u>Scoville</u> <u>Heat</u> <u>Unit or</u> <u>mg/Kg</u>
<u>Natural coloring matter</u> <u>Colour Value</u>	ISO 7541: 1989	Spectrophotometry	IV	<u>ASTA</u> <u>colour</u> <u>unit</u>
Mammalian excreta	ISO 9273 <u>US FDA MPM V-8 Spices, Condiments, Flavours and Crude Drugs – A. General methods for spices herbs and botanicals (V 32)</u>	<u>Visual examination followed by Gravimetry (whole/pieces)</u> Visual examination (for whole)	IV	<u>mg/Kg</u>
Mould damage	MPM V-8 Spices, Condiments, Flavours and Crude Drugs A. General methods for spices herbs and botanicals (V 32) <u>US FDA MPM V-8 Spices, Condiments, Flavours and Crude Drugs – A. General methods for spices herbs and botanicals (V 32)</u>	Visual Examination (for whole)	IV	<u>%(w/w)</u> <u>or</u> <u>count</u>
[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) <u>US FDA MPM V-8 Spices, Condiments, Flavours and Crude Drugs – A. General methods for spices herbs and botanicals (V 32)</u>	Visual Examination	IV	<u>%(w/w)</u>
<u>Extraneous vegetable matter</u> ³ <u>Extraneous Matter</u> ³	ISO 927	Visual Examination followed by Gravimetry	I	<u>%(w/w)</u>
Foreign matter ⁴	ISO 927	Visual Examination followed by Gravimetry	I	<u>%(w/w)</u>
Insect filth	US FDA MPM V-8 Spices, Condiments, Flavours and Crude Drugs - A. General methods for spices herbs and botanicals (V 32)	Visual Examination	IV	

	[Ground Chilli AOAC 978.22) Ground Paprika (AOAC 977.25B)]			
Rodent filth	ISO 927 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 followed by Gravimetry Visual Examination	IV	<u>Count</u>

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.

⁴Any 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.