

CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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**STANDARD FOR DRIED ROOTS, RHIZOMES AND BULBS:
DRIED OR DEHYDRATED GINGER
CXS 343-2021**

Adopted in 2021. Amended in 2022.

2022 Amendment

The following amendments were made to the text of the standard following decisions taken at the forty-fifth session of the Codex Alimentarius Commission in December 2022.

Page	Location	Original text	Printed text
3	Section 8.4 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.	The labelling of non-retail containers should be in accordance with the <i>General Standard for the Labelling of Non-Retail Container of Foods</i> (CXS 346-2021).

1. SCOPE

This standard applies to plant products in their dried or dehydrated form as spices, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repackaging if required. It excludes products for industrial processing.

2. DESCRIPTION

2.1 Product definition

Dried or dehydrated ginger is a product obtained from the rhizomes of the plant as mentioned in Table 1.

Table 1. Common and scientific names of plants used as dried or dehydrated ginger

Common name	Scientific name
Dried ginger	<i>Zingiber officinale</i> Roscoe

2.2 Styles/Forms

Dried or dehydrated ginger may be:

- whole: single or branched rhizomes of varying sizes, which may be cut at both ends with the flattened circular shape intact;
- pieces: comprising various cut, diced or sliced styles; and
- ground/powdered.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

Dried or dehydrated ginger as described in Section 2 above shall conform to the requirements specified 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, and colour especially from rancidity and mustiness.

3.2.2 Chemical and physical characteristics

The generic product shall comply with the requirements specified in Annex I (Table 2. Chemical characteristics) and Annex II (Table 3. Physical characteristics). 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

4.1.1 Anticaking agents listed in Table 3 of the *General Standard for Food Additives* (CXS 192-1995)¹ are acceptable for use in powdered form of the foods conforming to this standard.

4.1.2 Bleaching agents

INS No.	Food additive	Maximum level
220	Sulphur dioxide	150 mg/kg, as residual SO ₂

4.2 Processing aids

The following processing aids used in products conforming to this standard should be consistent with the *Guidelines on Substances used as Processing Aids* (CXG 75-2010).²

INS No.	Processing aid	Maximum level
529	Calcium oxide	2.5 on dry basis by mass, %

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),³ the *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78-2017)⁴ and other relevant Codex Alimentarius 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),⁵ the *Code of Hygienic Practice for Low-Moisture Foods* (CXC 75-2015),⁶ Annex III on Spices and Dried Culinary Herbs, and other relevant Codex Alimentarius 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

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).⁸ 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 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 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 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 in Foods* (CXS 346-2021).⁹

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of analysis

For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CXS 234-1999)¹⁰ relevant to the provisions in this standard, shall be used.

9.2 Sampling plan

To be developed

Table 2. Chemical characteristics for dried or dehydrated ginger

Product	Styles/Forms	Total ash on dry basis %w/w (max)	Acid insoluble ash (on dry basis % w/w [max])	Moisture content (% w/w [max])	Volatile oils (on dry basis mL/100 g [min])
Dried or dehydrated ginger	Whole and pieces	8.0 (unbleached) 12.0 (bleached)	1.5	12.0	1.5
	Ground/ Powdered	8.0 (unbleached) 12.0 (bleached)	1.5	12.0	1.0

Annex II

Table 3. Physical characteristics for dried or dehydrated ginger

Product	Styles/Forms	Extraneous matter ^a % w/w (max)	Foreign matter ^b % w/w (max)	Whole dead insects, count/ 100 g (max)	Live insects count/ 100 g (max)	Mammalian excreta mg/kg (max)	Other excreta ^c mg/kg (max)	Mould visible/ Insect defiled/ Infested % w/w (max)
Dried or dehydrated ginger	Whole	1.0	0.5	4.0	0	6.6	6.6	3.0*
	Pieces	1.0	0.5	4.0	0	N/A	N/A	N/A
	Ground/ Powdered	N/A	N/A	N/A	0	N/A	N/A	N/A

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

^b 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.

^c Excreta from other animals, such as reptiles and birds.

*The combined defects for mould visible and insect defiled/infested should not exceed 3 percent.

N/A: 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.

NOTES

¹ FAO and WHO. 1995. *General Standard for Food Additives*. Codex Alimentarius Standard, No. CXS 192-1995. Codex Alimentarius Commission. Rome.

² FAO and WHO. 2010. *Guidelines on Substances used as Processing Aids*. Codex Alimentarius Guideline, No. CXG 75-2010. Codex Alimentarius Commission. Rome.

³ FAO and WHO. 1995. *General Standard for Contaminants and Toxins in Food and Feed*. Codex Alimentarius Standard, No. CXS 193-1995. Codex Alimentarius Commission. Rome.

⁴ FAO and WHO. 2017. *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices*. Codex Alimentarius Code of Practice, No. CXC 78-2017. Codex Alimentarius Commission. Rome.

⁵ FAO and WHO. 1969. *General Principles of Food Hygiene*. Codex Alimentarius Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome.

⁶ FAO and WHO. 2015. *Code of Hygienic Practice for Low-Moisture Foods*. Codex Alimentarius Code of Practice, No. CXC 75-2015. Codex Alimentarius Commission. Rome.

⁷ FAO and WHO. 1997. *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods*. Codex Alimentarius Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.

⁸ FAO and WHO. 1985. *General Standard for the Labelling of Pre-packaged Foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

⁹ FAO and WHO. 2021. *General Standard for the Labelling of Non-Retail Containers in Foods*. Codex Alimentarius Standard, No. CXS 346-2021. Codex Alimentarius Commission. Rome.

¹⁰ FAO and WHO. 1999. *Recommended Methods of Analysis and Sampling*. Codex Alimentarius Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.