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

Adopted in 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

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried ginger</td>
<td>Zingiber officinale Roscoe</td>
</tr>
</tbody>
</table>

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.
- 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 (Chemical characteristics – Table 2) and Annex II (Physical characteristics – Table 3). 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
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.

4.1.2 Bleaching agents

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Food Additive</th>
<th>Maximum Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>220</td>
<td>Sulfur dioxide</td>
<td>150 mg/kg, as residual SO₂</td>
</tr>
</tbody>
</table>

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).

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Processing aid</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>529</td>
<td>Calcium oxide</td>
<td>2.5 on dry basis by mass, %</td>
</tr>
</tbody>
</table>
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), 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).

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 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

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 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) relevant to the provisions in this standard, shall be used.

9.2 Sampling plan

To be developed
### Annex I

**Table 2. Chemical characteristics for dried or dehydrated ginger**

<table>
<thead>
<tr>
<th>Product</th>
<th>Styles/Forms</th>
<th>Total ash on dry basis %w/w (max)</th>
<th>Acid insoluble ash on dry basis %w/w (max)</th>
<th>Moisture content (%w/w (max))</th>
<th>Volatile oils (on dry basis mL/ 100g (min))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried or dehydrated ginger Whole and pieces</td>
<td>8.0 (unbleached) 12.0 (bleached)</td>
<td>1.5</td>
<td>12.0</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>Ground/Powdered</td>
<td>8.0 (unbleached) 12.0 (bleached)</td>
<td>1.5</td>
<td>12.0</td>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>

### Annex II

**Table 3. Physical characteristics for dried or dehydrated ginger**

<table>
<thead>
<tr>
<th>Product</th>
<th>Styles/ Forms</th>
<th>Extraneous matter¹ %w/w (max)</th>
<th>Foreign matter² %w/w (max)</th>
<th>Whole dead insects, count/100g (max)</th>
<th>Live insects count/100g (max)</th>
<th>Mammalian excreta mg/kg (max)</th>
<th>Other excreta³ mg/kg (max)</th>
<th>Mould visible/Insect defiled/Infested %w/w (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried or dehydrated ginger Whole</td>
<td>1.0</td>
<td>0.5</td>
<td>4.0</td>
<td>0</td>
<td>6.6</td>
<td>6.6</td>
<td>N/A</td>
<td>3.0*</td>
</tr>
<tr>
<td>Pieces</td>
<td>1.0</td>
<td>0.5</td>
<td>4.0</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ground/Powdered</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

¹ Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.

² 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.

³ Excreta from other animals, such as reptiles and birds.

*The combined defects for mould visible and insect defiled/infested should not exceed 3.0%.

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.