

PROPOSED DRAFT GROUP STANDARD FOR DRIED ROOTS, RHIZOMES AND BULBS – SPECIFIC REQUIREMENTS FOR DRIED OR DEHYDRATED GINGER

1 SCOPE

This Standard applies to dried roots, rhizomes and bulbs in their dried or dehydrated form as spices or culinary herbs, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repacking if required. It excludes the product for industrial processing.

2 DESCRIPTION

2.1 PRODUCT DEFINITION

Dried roots, rhizomes and bulbs covered by this standard (Table 1) are sold in forms as indicated in 2.2.

S/N	Common name	Scientific Name
1.	Ginger	<i>Zingiber officinale</i> , Roscoe

2.2 Styles/forms

Dried Roots, Rhizomes and Bulbs may be:

- Whole,
- Cracked/broken, or
- Ground/powdered
- Other styles distinctly different from those three are allowed, provided they are labeled accordingly.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

Dried Roots, Rhizomes and Bulbs as described in Section 2 above and shall conform to requirements set in Annexes II and III.

3.2 QUALITY FACTORS

3.2.1 Odour, flavor and color

Dried Roots, Rhizomes and Bulbs shall have a characteristic aroma, color and flavor which can vary depending on geo-climatic factors/conditions and shall be free from any foreign odour or flavor.

3.2.2 Chemical and physical characteristics

Dried roots, rhizomes and bulbs shall comply with the requirements specified in Annex I (Chemical Characteristics) and Annex II (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.

3.2.3. Classification (optional)

In accordance with the Chemical and Physical Characteristics in section 3.2.2, dried roots, rhizomes and bulbs may be classified into the following grades:

- "Extra"
- Grade I/Class I, and
- Grade II/Class II.

When unclassified/ungraded, the provisions for class/grade II requirements apply as the minimum requirements.

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

Where applicable, only the anti-caking agents listed in Table III of the *General Standards for Food Additives* (CXS 192-1995) are permitted for use in ground/powdered dried roots, rhizomes and bulbs.

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).

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 FOOD 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* (CAC/RCP 1-1969), the *Code of Hygienic Practice for low moisture foods* (CAC/RCP 75-2015), *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXP 78-2017), 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* (CAC/GL 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* (CODEX STAN 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.

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

8.3 Country of origin/country of harvest

8.4 Commercial Identification

- Class/Grade, if applicable

- Size (optional)

8.5 Inspection mark (optional)

8.6 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

Parameter	Method	Principle
Moisture	ISO 939 AOAC 2001.12[& AOAC 986.21] ASTA 2.0	Distillation
Total Ash	ISO 928 [AOAC 941.12] ASTA 3.0	Gravimetry
Acid Insoluble Ash	ISO 930 [AOAC 941.12] ASTA 4.0	Gravimetry
Volatile Oil	ISO 6571 AOAC 962.17	Distillation

	ASTA 5.0	
Extraneous Matter	ISO 927 [AOAC 916.01] ASTA 14.1	Visual Examination
Foreign Matter	[AOAC 960.51] ISO 927	Visual Examination
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) [https://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm105731.htm#v-117]	Visual Examination
[Extractable Colour	American Dried Onion and Garlic Association (ADOGA) method IV.C.5	Chemical extraction]
[Hot Water Insoluble Solids	ADOGA method IV.C.7	Chemical extraction]
Insects/Excreta/Insect Fragments	Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual Examination

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

9.2 SAMPLING PLAN

To be developed

Annex I

Chemical Properties for Dried Roots, Rhizomes and Bulbs							
Product Name	Forms/ Styles	Total Ash %w/w (max)	Acid Insoluble Ash %w/w (max)	Moisture Content %w/w (max)	Volatile Oils mL/ 100g (min)	Water Soluble Extract Cold(%)(w/w) (min)	Notes
Ginger	Whole/ Cracked/ Broken	8.0	2.0	12.0	1.5	-	1.1% Calcium (as oxide)on dry basis by mass, max %, for unbleached. 2.5% Calcium (as oxide) on dry basis by mass, max %, for bleached.
	Ground/Powder	8.0	2.0	11.0 [12.0]	1.0 [1.5]	10	

Annex II

Physical Properties for Dried Roots, Rhizomes and Bulbs									
Product Name	Forms/ Styles	Whole insects, dead Count/100g(max)	Excreta mammalian mg/kg (max)	Excreta, other mg/Kg (max)	Mold damaged %w/w (max)	Insect defiled/infested %w/w (max)	Extraneous matter ¹ %w/w (max)	Foreign matter ² %w/w (max)	Notes
Ginger	Whole	[0] [4.0]	0 [3.0] [6.6]	0 [3.0] [6.6]	[0] 1.0 [3.0*]	[0] 1.0 [3.0*]	[0.5] [1] [2.0]	0.5	
	Cracked/Broken	[0] [4.0]	0 [3.0] [6.6]	0 [3.0] [6.6]	[0] 1.0 [3.0*]	[0] 1.0 [3.0*]	1.0	0.5	
	Ground	0	0	0	0	0	1.0	0.5	

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

²Any visible objectionable foreign detectable matter or material not usually associated with the natural components of the spice plant; such as sticks, stones, burlap bagging, metal etc”

[*The combined defects for mold damage and insect defiled should not exceed 3.0%.]