

# CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture  
Organization of  
the United Nations



World Health  
Organization

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## STANDARD FOR QUINOA

**CXS 333-2019**

**Adopted in 2019.**

## 1. SCOPE

- 1.1 This Standard applies to quinoa (*Chenopodium quinoa* Willd.) processed as defined in Section 2.2, suitable for human consumption, packaged or in bulk.
- 1.2 It does not apply to quinoa used as seeds for propagation, products derived from quinoa (e.g., flour, flakes).

## 2. DESCRIPTION

### 2.1 Quinoa

Quinoa is the grain obtained from *Chenopodium quinoa* Willd.

### 2.2 Processed quinoa

Processed quinoa are quinoa grain (*Chenopodium quinoa* Willd) that have been subjected to cleaning, removing saponin-containing pericarp and sorting (by color and size).

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 3.1 Quality factors - general

- 3.1.1 Quinoa shall be safe and suitable for human consumption.
- 3.1.2 Quinoa shall be free from abnormal flavours and odours.
- 3.1.3 Quinoa shall be free from living insects and mites.
- 3.1.4 Processed Quinoa color should be characteristic, where the most common are white (pearly, pale, grayish), black and red, among others.

### 3.2 Quality factors - specific

#### 3.2.1 **Moisture content** 13.0% m/m maximum.

Lower moisture limits should be required for certain destinations in relation to the climate, duration of transport and storage.

#### 3.2.2 **Extraneous matter**

3.2.2.1 Extraneous matter is all organic and inorganic materials other than quinoa.

3.2.2.1.1 Organic extraneous matter includes husks, stem parts, impurities of animal origin, other seed species, and leaves. 0.1% maximum.

3.2.2.1.2 Inorganic extraneous matter includes stones. 0.1% maximum.

#### 3.2.3 **Defect**

##### 3.2.3.1 **Definition of defect**

3.2.3.1.1 Broken Grains are pieces of grains with sizes less than three quarters of the whole grain, resulting from mechanical action.

3.2.3.1.2 Damaged Grains are grains that differ from others in their form or structure, because they have been altered by physical, chemical or biological agents.

3.2.3.1.3 Germinated Grains are grains that show development of the radicle (embryo).

3.2.3.1.4 Coated Grains are grains that retain the shell (perigone) or part of the flower attached to the grain.

3.2.3.1.5 Immature Grains are grains that have not reached physiological maturity, characterized by small size and greenish coloration.

**3.2.4 Defective grain**

Requirements	Maximum Limit %
Broken Grains	3.0%
Damaged grains	2.5%
Germinated Grains	0.5%
Coated Grains	0.3%
Immature Grains	0.9%

**3.2.5 Protein content**

Requirements	Minimum Content %
Protein	10.0% on a dry matter basis

**3.2.6 Saponin content**

Requirements	Maximum Limit %
Saponin	0.12%

**3.2.7 Size<sup>1</sup>****4. FOOD ADDITIVES**

The use of food additives is not permitted.

**5. CONTAMINANTS**

5.1 The product 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. Pesticide residues**

The product 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 product covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC1-1969) and other relevant Codex texts such as codes of hygienic practice and codes of practice.

6.2 The product 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. PACKAGING**

7.1 Quinoa shall be packaged in containers which will safeguard its hygienic, nutritional, technological, and organoleptic qualities.

7.2 The packaging shall be safe and suitable for the intended use and shall not transfer toxic materials, odours or flavours to the product. All the materials used inside the packaging shall be of food grade, clean, new and of an adequate quality so as not to cause damage to the product.

**8. LABELLING**

The product covered by this Standard shall be labelled in accordance with the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985).

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<sup>1</sup>To be developed.

**8.1 Name of the product**

The product name appearing on the label shall be “quinoa” or “processed quinoa”, consistent with the descriptions in Section 2 of this Standard. Optional information, such as product origin, quality, color, may be included.

**8.2 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 or packer shall appear on the container. However, lot identification, and the name and address of the manufacturer or packer 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**

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.