

PROPOSED DRAFT STANDARD FOR QUINOA

1 Scope

1.1 This standard applies to quinoa (*Chenopodium quinoa* Willd.) processed as defined in Section 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 that have been subjected to cleaning (e.g., eliminating impurities, removing saponin-containing pericarp) and sorting (e.g. 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 Quinoa color should be a characteristic of the variety, for example white (pearly, pale, grayish), black, red, golden, brown, yellow, orange.

3.2 Quality factors - specific

3.2.1 Moisture content. 13.5% [13%] [12.5%] maximum.

3.2.2 Extraneous matter

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

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

3.2.2.2.2 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%
Damaged grains	2.5%
Germinated Grains	0.5%
Coated Grains	0.3%
Immature Grains	0.9%

3.2.5 Protein Content

Requirements	Minimum Limit [%]
Protein	10%

3.2.6 Saponin Content

Requirements	Maximum Limit [%]
Saponin	[0.12%]

3.2.7 Size

Grain Size	Range [mm]
Extra Large	Greater than 2 mm
Large	Greater than 1.7 to 2 mm
Medium	1.4 to 1.7 mm
Small	Less than 1.4 mm

4 Food additives

The use of additives is not permitted.

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* (CODEX STAN 193-1995).

5.2. Pesticide residues

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* (CAC/RCP 1-1969) and other relevant Codex texts such as codes of hygienic practice and codes of practice.

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* (CAC/GL 21-1997).

7 Packaging

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

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 products covered by this standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CODEX STAN 1-1985).

8.1 Name of the Product

The product name appearing on the label shall be “quinoa” or “processed quinoa.” 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 sampling¹

See relevant Codex texts on methods of analysis and sampling.

	Method	Principle	Type ²
Moisture content	[ISO 712]	Gravimetric	1
[Saponin Content	To Be Determined]		
Protein Content [(N x 6.25)] Dry weight basis	[ISO 1871]	Titrimetry, Kjeldahl	1

¹ The listing of methods of analysis and sampling will be removed when the standard is adopted by CAC and included in CODEX STAN 234-1999.

² CAC Procedural Manual, 25th Edition, page 77.