

C O D E X A L I M E N T A R I U S

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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STANDARD FOR WHEAT PROTEIN PRODUCTS INCLUDING WHEAT GLUTEN

CXS 163-1987

Adopted in 1987. Revised in 2001. Amended in 2022.

2022 Amendment

The following amendment was 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	Text in previous version	Text in amended version
3	Section 8.5 Labelling of Non-Retail Containers	Information for non-retail containers shall either be given on the container or in accompanying documents, except that the name of the product, lot identification and 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.	The labelling of non-retail containers should be in accordance with the <i>General Standard for the Labelling of Non-Retail Containers of Foods</i> (CXS 346-2021).

1. SCOPE

This standard applies to Wheat Protein Products prepared from wheat by various processes. The products are intended for use in foods requiring further preparation and for use by the food processing industry. Wheat gluten or wheat protein products should not be used for technological reasons e.g. coating or processing aids for foods which are gluten-free by nature¹.

2. DESCRIPTION

2.1 Definitions

Wheat Protein Products (WPP) covered by this standard are food products produced by separation from wheat or wheat flour of certain non-protein constituents (starch, other carbohydrates).

- Vital wheat gluten is characterized by its property of high viscoelasticity as hydrated.
- Devitalized wheat gluten is characterized by its reduced property of viscoelasticity as hydrated due to denaturation.
- Solubilized wheat proteins are characterized by their reduced property of viscoelasticity as hydrated due to partial hydrolysis of wheat gluten.

3. ESSENTIAL COMPOSITION, QUALITY AND NUTRITIONAL FACTORS

3.1 Raw Materials

Wheat or wheat flour essentially free from other seeds and foreign matter in accordance with Good Manufacturing Practice.

3.2 Compositional Requirements

WPP shall conform to the following compositional requirements:

3.2.1 Moisture content shall not exceed 10 % (m/m).

3.2.2 Crude protein (N x 6.25) shall be:

- in case of vital and devitalized wheat gluten, 80 % or more
- in case of solubilized wheat proteins, 60% or more

On a dry weight basis excluding added vitamins, minerals, amino acids and optional ingredients as specified in Section 3.3.

3.2.3 Ash

The yield of ash on incineration shall not exceed:

- in case of vital and devitalized wheat gluten, 2.0 %
- in case of solubilized wheat proteins, 10 %

on a dry weight basis.

3.2.4 Crude fibre content shall not exceed 1.5 % on a dry weight basis.

3.3 Optional ingredients

No optional ingredients are permitted in vital and devitalized wheat gluten.

For solubilized wheat proteins, the following classes of ingredients may be used:

- (a) carbohydrates, including sugars
- (b) edible fats and oils
- (c) other protein products
- (d) amino acids, vitamins and minerals
- (e) salt
- (f) herbs and spices
- (g) enzymes

¹ This does not preclude the use of these products as ingredients in composite pre-packaged foods provided that they are properly labelled as ingredients

3.4 Nutritional factors

Processing should be carefully controlled and sufficiently thorough to secure optimum flavour and palatability. Processing must not be so severe as to appreciably impair the nutritive value.

4. FOOD ADDITIVES

No food additives are permitted in vital and devitalized wheat gluten and in solubilized wheat proteins.

5. CONTAMINANTS

The products covered by the provisions of this standard shall comply with those maximum limits 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, Rev 3-1997), 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* (CXG 21-1997)

7. PACKAGING

WPP shall be packed in suitable hygienic containers which will maintain the product during storage and transport in a dry and sanitary condition.

8. LABELLING

In addition to the requirements of the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985, Rev 1-1991) the following specific provisions apply :

8.1 Name of the food

8.1.1 Vital wheat gluten

The name of the food shall be "vital wheat gluten" or "wheat gluten".

8.1.2 Devitalized wheat gluten

The name of the food shall be "devitalized wheat gluten" or "devital wheat gluten".

8.1.3 Solubilized wheat proteins

The name of the food shall be "solubilized wheat protein" or "soluble wheat protein".

8.2 Instructions for use

The manufacturer of WPP shall provide clear instructions for specific uses claimed on the label. Cautionary statements for gluten intolerant persons shall be on the label if required by national legislation.

8.3 Date Marking

The "date of minimum durability" (preceded by the words "best before") shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelf-life of more than three months, the month and year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year only and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

8.4 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion except that in the case of added vitamins and added minerals, these ingredients shall be arranged as separate groups for vitamins and minerals, respectively, and within these groups the vitamins and minerals need to be listed in descending order of proportion.

8.5 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 of Foods* (CXS 346-2021).

8.6 Declaration of ingredients of animal origin

Optional ingredients of animal origin shall be declared on the label of the product to read as follows:

“Contains (state optional ingredient) of animal origin”.

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Moisture Content

According to AOAC 925-09.

9.2 Protein

Vital wheat gluten and devitalized wheat gluten

According to AOAC 979.09.

Solubilized wheat protein

According to AOAC 920.87.

9.3 Ash

According to AOAC 923.03 or ISO 2171 (1980, method B).

9.4 Crude Fibre

According to AOAC 962.09.

9.5 Sampling

According to ISO 13690:1999.