



Food and Agriculture
Organization of the
United Nations



World Health
Organization

CODEX
ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

CODEX ALIMENTARIUS
STANDARD

**STANDARD FOR
DRIED FLORAL
PARTS: CLOVES**
CXS 344-2021



ADOPTED 2021
AMENDED 2025

CXS 344-2021

History of the standard

2025 Amendments

Following decisions taken at the Forty-eighth Session of the Codex Alimentarius Commission in November 2025, amendments were made in Section 4: “Food additives”, to align with the *General standard for food additives* (CXS 192-1995).

This publication was redesigned and published in 2025.

2022 Amendments

The following amendments were 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	Original text	Amended text
3	Section 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.	The labelling of non-retail containers should be in accordance with the General standard for the labelling of non-retail container of foods (CXS 346-2021).

Adopted in 2021.

1 Scope

This standard applies to plant products in their dried or dehydrated form as spices, defined in Section 2.1: “Product definition”, offered for direct consumption, as an ingredient in food processing, or for repackaging if required. It excludes the product for industrial processing.

2 Description

2.1 Product definition

Dried cloves are a product obtained from the dried floral part of the plant (clove nail), as described in Table 1.

Table 1: Common and scientific name of dried cloves

Common name	Scientific name
Dried cloves	<i>Syzygium aromaticum</i> (L.), Merrill & Perry

2.2 Styles

Dried cloves may be:

- whole; and
- ground/powdered (without any added matter).

3 Essential composition and quality factors

3.1 Composition

Product as described in Section 2: “Description” shall conform to the requirements contained in Annex I and Annex 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 geoclimatic 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 (Table A1: “Chemical characteristics”) and Annex II (Table A2: “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)

If traded as classified, the provisions in Annex I and Annex II apply as minimum requirements.

4 Food additives

Anticaking agents listed in Table 3 of the *General standard for food additives* (CXS 192-1995)¹ are acceptable for use in the ground/powdered form of the foods conforming to this standard.

5 Contaminants

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)² and any other relevant Codex Alimentarius texts.

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

6 Hygiene

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),³ Annex III: “Spices and dried culinary herbs” in the *Code of hygienic practice for low-moisture foods* (CXC 75-2015),⁴ and other relevant Codex Alimentarius texts.

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).⁵

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

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).⁶ In addition, the following specific provisions apply:

8.1 Name of the product

The common name of the product shall be as described in Section 2.1: "Product definition".

The name of the product may include an indication of the style as described in Section 2.2: "Styles".

Trade name, variety or cultivar may be listed on the label.

8.2 Country of origin and country of harvest

Country of origin shall be declared.

Country of harvest (optional).

Region of harvest and year of harvest (optional).

8.3 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 in foods* (CXS 346-2021).⁷

9 Methods of analysis and sampling

For checking compliance with this standard, the methods of analysis and sampling contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)⁸ relevant to the provisions in this standard shall be used.

Table A1: Chemical requirements of dried floral parts – cloves**ANNEX I**

Product	Style	Total ash % w/w (max) on dry basis	Acid insoluble ash % w/w (max) on dry basis	Moisture content % w/w (max)	Volatile oils ml/100 g (min) on dry basis	Crude fibre, % w/w (max)
Dried clove	Whole	7	0.5	12	17	13
	Ground	7	0.5	10	14	13

Table A2: Physical requirements of dried floral parts – cloves**ANNEX II**

Product	Style	Mammalian and/ or other excreta ^a (w/w)/ mg/kg, (max)	Live insects count/100 g (max)	Mould visible % w/w (max)	Insect defiled/ Infested % w/w (max)	Extraneous matter ^b % w/w (max)	Foreign matter ^c % w/w (max)	Defects (Headless ^d /Mother ^e / Khoker ^f) % w/w (max)
Dried clove	Whole	10	0	1	1	1	1	5/6/5
	Ground	N/A	0	N/A	1	1	1	N/A

Notes:

N/A Not applicable, means that this form of the above product has not been evaluated for this provision, and currently we do not have values. N/A does not mean zero.

a. Excreta from other animals such as reptiles and birds.

b. Extraneous matter: Vegetative matter associated with the plant from which the product originates but not accepted as a part of the final product.

c. Foreign matter: Any visible/detectable objectionable foreign matter or material not usually associated with the natural component of the spice plant such as sticks, stones, burlap bagging, metal, etc.

d. Headless clove: Clove consisting of only the receptacle and sepals, and which has lost the dome-shaped head.

e. Mother clove: Fruit of the clove tree (*Syzygium aromaticum*) in the form of an ovoid brown berry surmounted by four incurved sepals.

f. Khoker clove: Clove having undergone fermentation as a result of incomplete drying, as evidenced by its pale brown colour, whitish mealy appearance and often wrinkled surface.

Referenced texts

- 1 *General standard for food additives* (CXS 192-1995).
- 2 *General standard for contaminants and toxins in food and feed* (CXS 193-1995).
- 3 *General principles of food hygiene* (CXC 1-1969).
- 4 *Code of hygienic practice for low-moisture foods* (CXC 75-2015).
- 5 *Principles and guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).
- 6 *General standard for the labelling of pre-packaged foods* (CXS 1-1985).
- 7 *General standard for the labelling of non-retail containers in foods* (CXS 346-2021).
- 8 *Recommended methods of analysis and sampling* (CXS 234-1999).

Codex Alimentarius

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