

# CODEX ALIMENTARIUS COMMISSION



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

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Agenda Item 5.1

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## JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON SPICES AND CULINARY HERBS

Seventh Session

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### DOCUMENT PROPOSAL FOR NEW WOK ON CODEX STANDARD FOR DRIED CINNAMON

(Submitted by Brazil)

#### Agenda item 5.1

#### Introduction:

Dried cinnamon is the common name for the perennial plant *Cinnamomum* sp. which belongs to the Lauraceae family. Around 250 to 350 species of cinnamon have been identified and are distributed across North America, Central America, South America, Southeast Asia, and Australia. Among these species, four are considered of greater importance and are commonly used for obtaining the spice: *Cinnamomum zeylanicum* Blume (also known as *C. verum*), native to Sri Lanka; *Cinnamomum cassia* Siebold (or *C. aromaticum*), native to China; *Cinnamomum burmannii* (Nees & T. Nees) Blume, native to Indonesia and *Cinnamomum loureirii* Nees, native to Vietnam.

Dried cinnamon can be found on the market in two main species: Ceylon cinnamon (referred as “true cinnamon”) and Cassia (referred as “false cinnamon”). Due to its high market value, sweeter and milder flavor, and higher amounts of phenolic and aromatic compounds, “true cinnamon” is more challenging to obtain compared to “false cinnamon” that has a more astringent taste and contains a higher concentration of coumarin in its composition. Coumarin is a natural compound found in plants such as cinnamon. Low exposure to coumarin from natural sources is expected and not anticipated to represent a health risk but some health agencies considered to be important to examine the coumarin levels.

Dried cinnamon is one of the most important spices not only for cooking but also in traditional and modern medicines. The spice is harvested from the peels of the inner bark of the cinnamon tree. Cinnamon consists of a variety of resinous compounds, including cinnamaldehyde, cinnamate, cinnamic acid, and numerous essential oils mainly used in the aroma and essence industries due to its fragrance, which can be incorporated into different varieties of foodstuffs, perfumes, and medicinal products. Also due to its beneficial properties, including reducing glucose levels and antimicrobial activity, cinnamon has been increasingly demanded in the development of innovative products.

#### 1. The Purpose and Scope of the Standard

The scope of the work is to establish a standard under the group dried bark for whole, pieces/cut/cracked/broken and ground/powdered of dried cinnamon to be offered for direct human consumption, as an ingredient in food processing or for repackaging if required. The standard will be developed in the Dried Bark SCH group and cover the species of cinnamon genus with commercial interest.

The objective is to develop a Codex standard based on measurable characteristics, specifically quality criteria, and any other factors for developing an international document to protect consumer’s health and facilitate the international trade.

#### 2. Relevance and Timeliness

Cinnamon is one of the most important spices used daily by people all over the world. Cinnamon is cultivated

extensively in China, Indonesia, Vietnam, Sri Lanka and the coastal regions of India. The quantity exported on 2022 reached 1.98 MT. Cinnamon market is expected to have a 7% CGAR in the period of 2023-2028 with the development of innovative products using cinnamon as ingredient due to its benefits properties for health.

Developing an international standard will help to protect consumer's health and to facilitate fair trade. Due to the quality and high value, true cinnamon is susceptible to fraud and false cinnamon is often used as a substitute and/or adulterant, both in powdered form and for the essential oil. Providing minimum requirements using a standard can provide the promotion of consumer protection and the prevention of fraudulent practices.

### **3. Main Aspects to be Covered**

The main aspects to be covered in the proposed draft standard are the chemical (taste/flavor) and physical (safety and quality) characteristics of dried cinnamon. The following will be covered:

- Product definition: Defining the product as dried cinnamon including the common, trade and scientific names for the main commercial species.
- Style: Listing or describing the different forms of presentation of the dried cinnamon (whole, pieces/cut/cracked/broken and ground/powdered).
- Quality criteria: establish the minimum requirements for dried cinnamon for chemical and physical characteristics (Annexes)
- Provisions for the labeling and marking of the product in accordance with the CODEX standard for the labeling of pre-packaged foods.
- Provisions on contaminants that refer to the Codex General Standard for Contaminants and Toxins in Food and Feed, pesticides and General Standard for Food Additives with reference to pre-existing Codex documents.
- Hygiene provisions that refer to the Recommended International Code of Practice –General Principles of Food Hygiene.
- References to Methods of Analysis and Sampling.

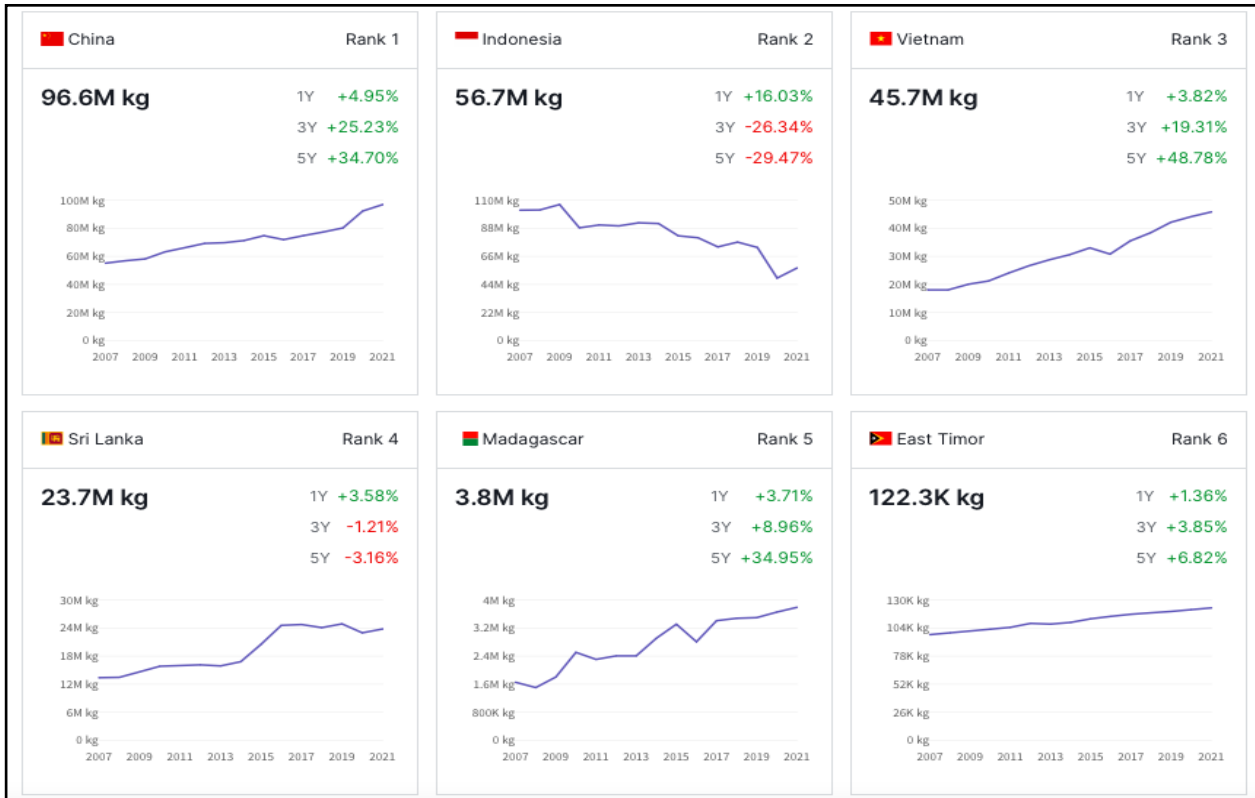
### **4. Assessment Against the Criteria for the Establishment of Work Priorities**

#### **General Criterion:**

Consumer protection from the point of view of health, food safety, ensuring fair practices in food trade.

#### **(a) Volume of production and consumption in individual countries and volume and pattern of trade between countries**

Table 1: Volume of production per country (HS 0906 Cinnamon and cinnamon-tree flowers, raw)



Source: Tridge.com

Table 2- List of top 20 importers for cinnamon

Unit : US Dollar thousand						
1 2 3 4 5 6 7 8 9						
HS4	Importers	Imported value in 2018	Imported value in 2019	Imported value in 2020	Imported value in 2021	Imported value in 2022 ▼
	World	694,906	719,869	855,316	926,672	990,121
	<a href="#">United States of America</a> <i>i</i>	124,480	129,684	154,116	185,087	204,668
	<a href="#">India</a> <i>i</i>	72,328	85,948	108,486	109,256	112,949
	<a href="#">Mexico</a> <i>i</i>	99,995	76,467	72,386	85,923	101,686
	<a href="#">Viet Nam</a> <i>i</i>	17,479	16,124	29,599	57,515	53,234
	<a href="#">Bangladesh</a>	24,237	37,743	33,883	34,124	35,644
	<a href="#">Germany</a> <i>i</i>	20,414	22,169	21,957	27,767	27,580
	<a href="#">Netherlands</a> <i>i</i>	26,351	18,105	24,098	28,006	25,496
	<a href="#">Peru</a> <i>i</i>	22,344	16,100	27,112	17,463	24,639
	<a href="#">Canada</a> <i>i</i>	13,062	13,032	14,568	18,507	21,990
	<a href="#">United Arab Emirates</a> <i>i</i>	9,242	13,543	16,208	14,566	20,233
	<a href="#">Saudi Arabia</a> <i>i</i>	9,815	11,373	16,756	14,180	18,340
	<a href="#">United Kingdom</a> <i>i</i>	14,742	13,645	16,419	16,101	17,326
	<a href="#">Pakistan</a> <i>i</i>	7,511	11,143	10,557	9,776	13,130
	<a href="#">Iran, Islamic Republic of</a> <i>i</i>	7,420	8,918	12,872	12,361	12,897
	<a href="#">Japan</a> <i>i</i>	9,539	10,296	10,059	10,654	12,052
	<a href="#">Colombia</a> <i>i</i>	10,996	8,711	10,534	12,047	10,830
	<a href="#">Spain</a> <i>i</i>	12,055	11,357	12,605	13,017	10,704
	<a href="#">Guatemala</a> <i>i</i>	6,427	12,374	8,617	6,624	10,624
	<a href="#">Brazil</a> <i>i</i>	10,190	8,730	12,475	10,926	10,499
	<a href="#">Poland</a> <i>i</i>	6,146	6,052	6,923	7,431	10,169

Product: 0906 Cinnamon and cinnamon-tree flowers

<https://www.trademap.org/Index.aspx>

**Table 3 - List of top 20 exporters for cinnamon**  
**Product: 0906 Cinnamon and cinnamon-tree flowers**

Unit : US Dollar thousand						
HS4	Exporters	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021	Exported value in 2022▼
	World	728,415	753,026	1,033,134	1,102,201	1,033,719
☐	China <i>i</i>	135,531	162,082	292,898	275,620	274,380
☐	Viet Nam <i>i</i>	134,063	172,450	238,092	266,206	259,940
☐	Sri Lanka <i>i</i>		175,976	216,351	247,368	217,295
☐	Indonesia <i>i</i>	141,445	133,734	151,295	160,688	131,449
☐	Netherlands <i>i</i>	21,475	20,743	22,110	29,964	22,671
☐	United States of America <i>i</i>	12,817	12,281	14,835	17,534	19,940
☐	United Arab Emirates <i>i</i>	7,822	10,279	14,833	12,243	19,898
☐	Germany <i>i</i>	11,349	11,152	15,553	15,194	14,614
☐	India <i>i</i>	6,244	7,084	9,678	11,235	10,839
☐	France <i>i</i>	8,696	7,383	8,140	7,072	6,180
☐	Poland <i>i</i>	3,643	3,092	4,141	4,220	5,211
☐	Austria <i>i</i>	3,484	3,741	4,305	4,629	4,678
☐	Madagascar <i>i</i>	7,347	4,983	4,334	5,377	4,422
☐	Spain <i>i</i>	2,790	2,530	3,678	4,849	4,055
☐	United Kingdom <i>i</i>	2,754	2,841	3,978	4,537	2,989
☐	Türkiye <i>i</i>	265	733	1,552	2,441	2,961
☐	Czech Republic <i>i</i>	802	1,024	1,951	2,107	2,654
☐	Canada <i>i</i>	727	602	956	1,468	2,538
☐	Estonia <i>i</i>	1,461	1,701	1,864	1,855	2,121
☐	Nepal <i>i</i>	1,021	989	1,618	2,045	1,950

<https://www.trademap.org/Index.aspx>

#### **(b) Diversification of national legislations and apparent resultant or potential impediments to international trade**

The cinnamon trade is one of the oldest and most global of all trading networks. The largest producers are China, Indonesia and Vietnam and the main exporters of cinnamon are China, Vietnam, Sri Lanka and Indonesia. The largest cinnamon importing countries are United States, India, Mexico, Vietnam and Bangladesh. With increased globalization and increases in the volumes of cinnamon traded internationally, establishing international criteria based on scientific codex standard is important for fair practices in food trade and consumer health protection, recognizing the extent to which Codex standards play a fundamental role in trade facilitation. The focus and needs of Codex Members are also evolving, for example, as they consider the voluntary United Nations' Sustainable Development Goals (SDGs) and Codex will need to be proactive and flexible and to respond in a timely manner to the opportunities and challenges that result. To overcome the resultant or potential impediments to international trade of cinnamon, it is essential to incorporate existing different standards in a single improved comprehensive standard acceptable across the board internationally.

#### **(c) International or regional market potential**

The quantity of cinnamon exported worldwide was about 198.000 Tons in 2022, with an annual growth in quantity between 2018 and 2022 of 8% and an annual growth in value of 13%, reaching more than 1 billion USD in 2022 (Source: TradeMap).

#### **(d) Amenability of commodity to standardization**

The group standard for dried bark addresses the aspects related to the characteristics of dried cinnamon composition, quality characteristics, processing, packaging, etc., aiming to establish adequate parameters for the standardization of the product. Considering the technical information available, the experience with national regulations and a certain degree of harmonization that has already been achieved at international levels on certain aspects relevant to consumer's protection and trade facilitation, it is therefore, timely to develop an

international harmonized standard for dried cinnamon establishing the physical and chemical characteristics the product.

**(e) Coverage of the main consumer protection and trade issues by existing or proposed general standards**

There is no general commodity standard covering cinnamon. The new work will enhance consumer protection and facilitate trade by establishing an internationally agreed and recognized quality standard.

**(f) Number of commodities which would need separate standards including whether raw, semi processed or processed.**

The proposed standard will cover the dried cinnamon in its different styles (whole, pieces/cut/cracked/broken and ground/powdered) in the Dried Bark CSH group.

**(g) Work already undertaken by other organizations in this field.**

The quality and safety characteristics are based on existing industry trade practices and regulatory requirements from existing national and international standards and regulations, including the following:

- American Spice Trade Association's (ASTA) Cleanliness Specification for spices, seeds and herbs
- Quality Minima Document of European Spice Association (ESA)
- ISO Standard for *Cinnamomum zeylanicum* Blume, whole or ground (powdered) - Specification (ISO 6539:2014)
- ISO Standard for *Cinnamomum aromaticum* (Nees) syn. *Cinnamomum cassia* (Nees) ex Blume, *Cinnamomum burmanii* (C.G.Nees) Blume and *Cinnamomum loureirii* Nees - Specification (ISO 6538:1997)

**5. Relevance to CODEX strategic objectives**

The elaboration of a Codex standard for dried cinnamon is according with the strategic objectives including the promotion of use of globally representative data to develop the standard, raise awareness and increased use of Codex standard in the development of national regulations and by the food trade. This proposal is consistent with the Strategic Plan of the Codex Alimentarius Commission 2020-2025, in particular strategic Goal 2 - Objective 2.2, and Goal 3 - Objectives 3.1 and 3.2. The proposal aims at setting up international accepted minimum quality requirements of dried cinnamon for human consumption based on globally representative data.

**6. Information on the relation between the proposal and other existing CODEX document**

This proposal is a new Codex Standard and is not related to or based on any pre-existing Codex document. This standard will include references to relevant pre-existing Codex texts developed by general subject committees, as follows:

- Principles and guidelines for the Establishment and Application of Microbiological Criteria for Foods (CAC / GL21-1997)
- General Principles of Food Hygiene (CAC / RCP1-1969)
- Data bases related to the maximum limits for pesticides residues issued by Codex Committee on Pesticides Residues in Food (CCPR).
- General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995)
- Code of hygienic practice for spices and dried aromatic herbs (CAC/RCP 42-1995)
- Code of Hygienic Practice for Low-Moisture Foods (CXC 75-2015)
- Code of Practice for the Prevention and Reduction of Mycotoxins in Spices (CXC 78-2017)
- General Standard for the Labelling of Pre-packaged Foods (CXS 1-1985)

- General Standard for the Labelling of Non-Retail Containers of Foods (CXS 346-2021)
- Recommended Methods of Analysis and Sampling (CXS 234-1999)

#### **7. Identification of any requirement for and availability of expert scientific advice**

No need for expert scientific advice is foreseen at this stage, due to the high level of participation by public and private sector spice and culinary experts in national and observer organizations represented at CCSCH. Published research documents by international bodies will be referred to in the process of preparing the standard.

#### **8. Identification of any requirement for technical input to the standard from external bodies so that this can be planned for**

Technical input from the International Standards Organization (ISO), American Spice Trade Association (ASTA), and European Spice Association (ESA) while through developing this standard may be sought when developing this standard.

#### **9. Proposed time schedule**

It is expected that the development of this standard would be conducted in three CCSCH sessions or less, depending on the agreement reached by the Committee.