CODEX ALIMENTARIUS COMMISSION





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Agenda Item 9.1

CX/SCH 21/5/10 Add.1

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

Fifth Session

Virtual

20, 21, 22, 26, 27, and 29 April 2021

PROPOSALS FOR NEW WORK

PART 2 - Reply to CL 2019/100-SCH

- 1. This document, Part 2 of proposals for new work, presents a proposal received in response to CL 2019/100-SCH of October 2019.
- 2. A discussion paper together with a project document for a proposal for new work on a Codex standard for spices in the form of "dried fruits and berries" as submitted by the United Stated of America is attached.
- 3. CCSCH5 is requested **to consider** the attached new work proposal (Appendix I) for the future work of the Committee.

PROPOSAL FOR NEW WORK ON A CODEX STANDARD FOR SPICES IN THE FORM OF DRIED FRUITS AND BERRIES (DISCUSSION PAPER)

(Submitted by the United States)

During the discussion on the Work Management Modalities at the First Session of the Codex Committee for Spices and Culinary Herbs (CCSCH1)¹, the Committee agreed that a maximum of four (4) standards per session would be developed, however, over its four (4) sessions only three (3) standards were developed. If the Work Management Modalities of four (4) standards per session is applied, the standardization process would take a minimum of 23 sessions or 46 years to complete considering there are 109 named spices and culinary herbs. Even if the Committee succeeds in developing four standards at every session, which experience has shown is unlikely, this is a very lengthy and arduous process.

The third Session of the Codex Committee of Spices and Culinary Herbs (CCSCH3)² agreed to recommend to Codex Alimentarius Commission (CAC), to approve the proposed strategy for developing horizontal group standards which would enable the Committee to increase its outputs as well as complete its work in a defined time. CCSCH further agreed to inform the CAC, that to facilitate its work, a general standard template had been developed and this would be used for the new standards.

The Committee agreed to adopt the grouping strategy based on that parts of the plant the Spice and Culinary Herb (SCH) is derived from i.e. floral, fruits and berries; seeds; leaves; bark; rhizomes, roots and bulbs. It also agreed that the grouping strategy would involve elaborating the general requirements for a particular group of spices falling under the same plant part category while the specific chemical and physical characteristic /requirements for each spice or herb within the said group would be put in an Annex.

The 73rd Session of the Executive Committee of the Codex Alimentarius Commission (CCEXEC73)³, recommended that CCSCH consider at its next session (CCSCH4) adopting a phased approach in developing group standards, for example, by prioritizing work on standards for individual commodities belonging to the same group prior to developing a group standard; and establishing a Physical Working Group (e.g. in-session WG) or other mechanisms to consider written comments and facilitate discussion of consolidated drafts.

CCSCH3 accepted the United States of America proposal to prepare a Discussion Paper on developing group standards derived from one of the six broad groups of Spices and Culinary Herbs (SCH). The Discussion Paper was prepared using the group of spices derived from dried fruits and berries (Annex II) and was presented and discussed at CCSCH4 (2019), as part of the proceedings of the In-Session Working Group on Priorities and Group Standards. The Committee noted with gratitude the agreement of the United States of America to continue updating the Group layout template, considering the discussions undertaken at the CCSCH4, and to include the grouped approach for discussion at the CCSCH5.

The group approach to standard development allows CCSCH to become more efficient and responsive to the needs of its public and private sector stakeholders by delivering standards in a timely manner. The resources of CCSCH plenary sessions and its working groups that are used to discuss redundant standardized/templated text for a single CSH standard, can now be spent on the most important parts of the standard i.e. the Annex having the chemical and physical characteristics of each product within the group.

Considering the recommendation of CCEXEC73 previously noted, the work already undertaken in the Discussion paper, and the CCSCH has already finalized two standards within the dried fruits and berries group - Black White and Green Pepper (BWG) (CXS 326); and - Cumin (CX 327); along with one draft standard in the Step process (i.e. dried and dehydrated chili peppers and paprika); It is opportune to start the group standard development using this SCH group.

The following short description for the various functions and sections of the standard layout as in the Group standard format:

- (i) The group standard will include a *General Requirement* section that includes text common to all CCSCH Standards. However, the standard would facilitate any specific requirements for an SCH that differ from those in the *General Requirements*.
- (ii) An annex containing two tables, one chemical characteristics (taste/flavor) and another on physical characteristics i.e. tolerances for defects allowed (safety and quality). Each table having columns with headings of the different common characteristic that is applied to all the spices in the group. The characteristics for each product will be placed horizontally beneath the said column headings.

¹ REP14/SCH

² REP17/SCH

³ REP17/EXEC

(iii) A table on Methods of Analysis will be included in the group standard. It includes the method of Analysis for each parameter in the chemical and physical characteristic listed in the two respective tables. Conclusion:

The Committee is invited to consider draft project document on the proposal for new work on Codex Standard for Spices in the form of dried fruits and berries (Appendix I)

APPENDIX I

PROJECT DOCUMENT

PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR SPICES IN THE FORM OF DRIED FRUITS AND BERRIES

1. Purposes and the Scope of the Standard

The purpose of the new work is to develop a group standard for spices derived from the Dried Fruits and Berries. This new approach to standard development will demonstrate the rapid development of standard development that the CCSCH's can build on for broader application within the Committee mandate.

2. Relevance and timeliness:

Spices and culinary herbs are not used for caloric content, but as condiments or ingredients for imparting taste/flavor to food and beverages. They are globally used and are historically an important part of international trade. In many countries SCH are one of the few remaining crops largely produced by small farmers as their main source of income. Therefore, developing a group standard quickens the standard development process to meet the needs of traders and consumers, but also assist in providing markets to producers. To expedite development of this group standard, spices within the group without significant trade data, chemical and physical characteristics are excluded from this proposal. However, when such information becomes available, they can be added at the request of a member.

Due to competitive markets, producers and traders are no longer willing to wait four to six years for the development of a standard. Therefore, to be relevant to the SCH sector, the CCSCH must deliver its standards - scientifically correct and in the shortest possible time. The grouping proposed allow the CCSCH to develop standards for six spices within the dried fruit and berry group at once. This format focusing mainly on the chemical (authenticity - taste/flavor) and physical (safety and quality) characteristics This faster method of development CCSCH standards will not compromise SCH quality and safety because these two characteristics sections will be the principal focal sections of the standard.

3. The main aspects to be covered

The main aspects to be covered in the Proposed Draft group Standard will include:

1. Scope

This Standard applies to spices derived from dried fruits and berries offered for direct consumption, as an ingredient in food processing, or for repackaging if required. It excludes spices intended for industrial processing.

2. Product Definition:

- a) The specific names of standardized products will be indicated whereby all six (6) commonly named products are listed in a table with their general, scientific, and subgroup names.
- b) **Styles**: This section will be elaborated in a broad manner that will apply to all products within the group in the predominant styles in trade (whole, cut/broken and ground/powdered). This section can be amended to reflect the style characteristics of a specific product that is different from the three indicated.

3. Classification:

Quality classes (Extra, Class I & Class II) are omitted because (i) they are not internationally accepted, (ii) the premise that Codex Standards should establish the "absolute minimum requirements" for international trade and consumer safety and (iii) the growing belief that classification should be left to contractual arrangements between traders

Sections 3 to 9: These sections include mainly templated (standard format) texts that rarely changes. However, changes may be made if needed to better reflect the product characteristics, trade practices or to enhance food safety.

Annex on Chemical and Physical Characteristics: This annex includes two tables, one for chemical characteristics and one for physical characteristics. Each table has the common product name listed in the same sequence as in Section 2.1 Product Definition along with the name of individual chemical and physical characteristics that must be checked as the heading of columns. In the same line with the named spice and the different styles, beneath each column heading, the minimum or maximum characteristic value will be entered. A last column titled "Other factors/comments" will be used to facilitate inclusion of characteristics unique to an individual spice that do not fit within the common column headings.

4. An Assessment against the Criteria for the Establishment of Work Priorities

The development of the Group Standard format has been discussed in every CCSCH session. In the last three sessions, it discussed by "In-session Working Group on Priorities" that selects project proposals submitted for the development of standards. Most of the text in the CCSCH standards is consistent across all spices and herbs, (for example, sections including contaminants, food hygiene, weights and measures, food additives and labeling). The group standard will allow the CCSCH to focus on the variables among spices in ensuring consumer food safety and fair practices in the food trade.

Within the Dried Fruits and Berries group, the CCSCH completed two standards for Black, White and Green Peppers (CXS 326-2017) and Cumin (CXS 327-2017). The committee is currently working on the development of a standard for Chili Pepper and Paprika at Step 3. A proposal for the development of a standard for cardamom was placed on the priority list for standardization at CCSCH4.

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

When compared to the volume of other agricultural products internationally traded, the volume of dried SCH are miniscule, however, SCH are have higher monetary value per kg or lb. or ton. Based on the availability of trade data, the following spices within the fruit and berries group are prioritized at this time (Table 1). Some other spices in this group including ambrette, cambodge, grains of paradise, kokam, dried mango and dried tamarind were not included in the table since they were not globally significantly traded. Production trade and value data for some spices in this group are not readily available due to the practice of placing the so called "minor spices" individual production and trade data under the general "spice" heading including by FAOSTAT and the Harmonized Tariff System (HTS).

	Common Name	Top Producers and Trade pattern between countries	Trade Volume				
1	Allspice	\$1.94B total (2018)	591.5K				
		Top Exporters (2018)	Metric tons (2019)				
		India: \$690M; China: \$531M; Spain: \$170M; Peru: \$80.5; Mexico: \$74.6M	(23.10)				
		Top Importers (2018)					
		United States: \$298M; Vietnam: \$208M; Thailand: \$153M; China: \$145M; Spain: \$103M					
2	Cumin, Black (Black Caraway)	Black	\$483,136K total exported (2019)	213.9K Metric tons			
		\$157,778 K total imported (2019)	(2019)				
		Top Exporters (2019)					
		China: \$106,324K; Bangladesh: \$57,797K; United States: \$29,190K; Afghanistan: \$26,318K; Vietnam: \$22,295K					
		Top Importers (2019)					
		India: \$97,858K; Syria: \$26,392K; Turkey: \$9,229K; Iran: \$8,260K; Afghanistan: \$3,584K					
3	Juniper	\$16,996K total exported (2019)					
	berry	\$54,000 total imported (2018)					
		Top Exporters (2019)					
		Switzerland: \$1,870K; United					

States: \$1,740K; Brazil: \$1,634K; Austria: \$1,548; United Kingdom: \$1,350K

Top Importers (2018)

India: \$23,000; United States: \$21,000; Tunisia: \$5,000; Egypt: \$3,000; Netherlands:

\$1,000

4 Mustard \$257M total (2018) 571,880 tons (2015)

Top exporters (2018):

Canada: \$92.1M; Russia: \$36.2M; Germany: \$27.5M; Ukraine: \$15.5M; India: \$14.4M

Top importers (2018)

United States: \$47.2M; Germany: \$41.9M; France: \$33.2M; Belgium-Luxembourg: \$16.7M; Poland: \$10.8M

5 Star \$281M total (2018) Anise T. F. (2014)

Top Exporters (2018)

China: \$51.2M; Egypt: \$38.1M;

India: \$36.8M.

Vietnam: \$29M; Afghanistan:

\$18.3M

Top Importers

India: \$44.9M; Vietnam: \$42.2M; Germany: \$27.5M; United States: \$24.3M; United

Kingdom: \$9.03M

6 Vanilla \$1.02Billion total (2019)

7575 tons (2018)

Top Exporters

Madagascar: \$584M; France: \$99M; Germany: \$69M; Indonesia: \$69M; Canada:

\$65M

Top Importers

USA: \$525M; France: \$209M; Germany: \$125M Canada: \$65M; Japan: \$27M;

Netherlands: \$24M

Table 1. Trade data for various fruits and berries type of spices. [The spices listed in this table does not comprise all spices in the dried fruit and berries grouping.]

b) Diversification of national legislations and apparent resultant or potential impediments to International trade:

Globally, there exist diverse regulatory requirements and industry trade practices from existing national and international standards and regulations, including the following:

- Agmark India
- European Spice Association (ESA) Quality Minima Document Rev.5
- International Organization for Standardization (ISO)
- America Spice Trade Association (ASTA) Cleanliness Specifications

- United States Food and Drug Administration (FDA) Defect Action Levels
- Bureau of Standards Jamaica
- United States Department of Agriculture (USDA)
- Bureau of Indian Standards

Indian Food Safety Standards 2.9.36 Pimento or Allspice Indian Food Safety and Standards Regulation 2011 - Cardamom

c) International or regional market potential:

Table 1 lists certain spices that are significantly traded internationally in terms of market potential, trade values and patterns. These are therefore justified to be included for the development of standards under the 'fruits and berries' grouping scheme. These include all spice, black cumin, juniper berries, mustard, star anise and vanilla.

d) Amenability of commodity(ies) to standardization

There is existing information for physical and chemical characteristics for these spices, and discussions with the major exporting and importing countries of these commodities will help in harmonizing the values for some of the parameters as well as provide data for some missing parameters. Some of the listed spices have national food safety standards and some have current ISO standards.

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

The new work proposal includes significantly traded spices and, consumer protection is expected. The priority commodities for inclusion in the group as indicated in Table 1.

f) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body (dies)

Some of the work already undertaken includes:

ISO 11178:1995 Star anise (Illicium verum Hook. f.) — Specification

g) Relevance to the Codex strategic objectives

This grouping approach aligns with the Codex 2020-2025 strategic goals. As aforementioned, developing group standards will address critical issues in a timely manner. The development of these standards will be based on science and risk-analysis principles. Categorizing the spices based on the plant part used, will not only make the standard functional, efficient and user-friendly but organizing these various spices in a single location will increase the impact and will make the Codex standards more recognizable across the globe.

5. Information on the relation between the proposal and other existing Codex documents as well as other Ongoing Work

This standard would be based on both the already adopted Codex Standards i.e. Black/white/green pepper (BWG) (CXS 326); and Cumin (CX 327); as well as the ongoing work on dried chili and paprika. The new proposal cardamom will also be considered.

6. Identification of Requirement for Availability of Expert Scientific Advice

The expertise required during the development of this standard will be referred to the relevant committees including the Codex Committee on Food Labeling (CCFL), Codex Committee on Methods on Analysis and Sampling (CCMAS), Codex Committee on Food Additives (CCFA), and the joint FAO/WHO programs (JECFA, JEMRA, etc.).

7. Identification of Need for Technical Input to the Standard from External Bodies

No need for technical input from external bodies is anticipated at this point in time.

Proposed Timeline for Completion of New Work

DATE	ACTIVITY	OUTCOME
2021	5th CCSCH Session	Project Submitted
2022	6 th CCSCH Session	Step 3
2024	7 th CCSCH Session	Adopted Step 5/8

APPENDIX II

DRAFT CODEX GENERAL STANDARD FOR SPICES IN THE FORM OF DRIED FRUITS AND BERRIES

1. SCOPE

This Standard applies to all those plants commonly sold in commerce as defined in Section 2.1 below, and offered for direct human consumption, commercial food processing, and for repacking if required. The exact species bought/sold may be defined by contractual specifications. This standard does not apply to these products when intended for industrial processing.

2. DESCRIPTION

2.1 PRODUCT DEFINITION

2.1.1 Dried fruits and berries belonging to the varieties listed in Table 1:

Table 1: of Dried Fruit and Berries covered by this standard

	Common Name	Trade Name/s	Scientific name	
1	Allspice	Allspice	Pimenta dioica (L) Merr.	
2	Cumin, Black (Black Caraway)	Cumin, Black (Black Caraway)	Nigella sativa L.	
3	Juniper berry	Juniper berry	Juniperus communis L.	
4	Mustard	Mustard, White or Yellow	Sinapis alba L.	
5	Star Anise	Star Anise	Illicium verum Hook. f.	
		Pompon vanilla	Vanilla pompona Schiede	
6	Vanilla	Vanilla/ Mexican Vanilla	Vanilla planifolia Andrews	
		Tahitian Vanilla	Vanilla tahitensis J.W. Moore	

A more comprehensive list of spices in the form of dried fruits and berries are listed in Annex 2

2.2. Styles

Dried fruits and berries may be:

- Whole
- Pieces
- Ground/powdered; size of particles to be determined by contractual agreement between buyer and seller.
- Other styles distinctly different for those three are allowed, provided they are labeled accordingly

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Basic Ingredients

Dried fruits and berries as described in Section 2. Product Description

3.1.2 Composition for use of General and Specific Names

The Common name may be used if the product is a blend of the different species listed under the Trade names/Scientific names for that Common name. When a Trade Name is used for a product, the product must contain a minimum of 80% of the species listed for the trade name.

3.2 QUALITY CRITERIA

3.2.1 Odour, flavor and color

Dried fruits and berries shall be free from any foreign odour or flavor, especially from mustiness. They should have the characteristic odour and flavour of the spice considering the geo-climatic factors/conditions/varieties and the chemical strain of the main components of the volatile oil indicated in the Annex.

3.2.2. Classification (optional)

In accordance with the Chemical and Physical Characteristics in Section 3.2.4, where appropriate, whole, pieces, or ground/powdered dried fruits and berries may be classified into the following grades:

- Extra
- Class/ Grade I
- Class/Grade II

When dried fruits and berries are traded as both classified/graded and unclassified/ungraded, the minimum chemical and physical requirements for class/grade II apply as the minimum requirements for unclassified/ungraded.

3.2.3 Chemical and physical characteristics

Dried fruits and berries shall comply with the Chemical and Physical properties in Annex 1-Chemical Characteristics and Annex 2-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.

4 FOOD ADDITIVES (Optional)

Anticaking agents may be used in the powdered form of the products in accordance with Table 3 of the General Standards for Food Additives (CXS 192-1995).

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* (CXS 193-1995).
- **5.2** The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

6 FOOD 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), the *Code of Hygienic Practice for Spices and Dried Aromatic Herbs* (CAC/RCP 42-1995) 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* for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

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 and PACKAGING

8.1 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).

In addition, the following specific provisions apply:

8.2 Name of the Product

- 8.2.1 The name of the product shall be as described in Section 2.1
- 8.2.2 The name of the product may include an indication of the style as described in Section 2.2.
- **8.2.3** Variety or cultivar may be listed on the label but is not required.

8.3 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.

8.4 Packaging

The packaging must not be a source of contamination or migration, should be food grade and must protect the product quality during transportation and storage. It must be free from off odours.

9 METHODS OF ANALYSIS AND SAMPLING

9.1 Methods of Analysis

Provision	Method	Principle
Moisture	AOAC 2001.12	Distillation
	ASTA 2.0	
Total Ash	AOAC 950.49	Gravimetry
	ASTA 3.0	
Acid Insoluble Ash	ISO 930:1997	Gravimetry
	Alternative:	
	ASTA 4.0	
Volatile Oil	AOAC 962.17	Distillation
	ASTA 5.0	
Extraneous Matter	ISO 927:2009	Visual Examination
	Alternative:	
	ASTA 14.1	
Foreign Matter	ISO 927:2009	Visual Examination
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs	Visual Examination
	(Microanalytical Procedure Manual,	
	FDA Technical Bulletin Number 5)	
Insects/Excreta/Insect Fragments	Method appropriate for a particular spice from AOAC Chapter 16, subchapter 14	Visual Examination

Table 1: Chemical Characteristics for Dried Fruits and Berries

Name	Form/Style	Moisture content %w/w (max)	Bulk Density	Total Ash % w/w (max)	Acid insoluble Ash % w/w max	Volatile Oils ml/100g (Min)	Markers Volatile Oil	Non- Volatile Ether Extract %W/W	Crude Fiber % By Mass
	whole	12		5	0.4	3			
Allspice	pieces								
	Ground/powdered	12		4.5	0.4	1		8.5	27.5
Cumin, Black	whole	13		9	2	1.5			
(Caraway)	pieces								
	ground								
Juniper Berries	whole	16		4.0 [5.0]	1.0	[0.5] [0.6] [0.8] [1.2] 1.4 [1.5]			
	pieces								
	ground								
	whole	10		6.5	1.0			28	
Mustard seed	pieces								
	ground								
Star Anise	whole	10	130/100gm	4	0.5	7			
	pieces								
	ground								
	whole	38					1.6 -2.4% vanillin		
	pieces	30					1.6 -2.4% vanillin		
Vanilla	powder	25					1.6 -2.4% vanillin		

TABLE 2: Table on Physical Characteristics for Dried Fruits and Berries

Name	Form/Style	Dead Whole Insects Count/100 Gm Max	Excreta Mammalian Mg/Kg Max	Mold Damage %W/W (Max)	Insect Defiled/Infested %W/W (Max)	Extraneous Matter %W/W (Max)	Foreign Matter %W/W (Max)	Live Insect	Shriveled Immature Broken	Excreta Other Mg/Kg Max	Insect Fragments or Other Comments
	whole	2	11	2	1	0.50		Free		5.0	Black berries white berries Broken berries with Stem- each @ 0.05% max
	pieces										
Allspice											Insect fragments: 30/10g
	Ground/powdered							Free			Rodent hair: 1/10g
Cumin,	Whole	4	6.6	1	1	[0.50]			5	22	
Black	Pieces										
(Caraway)											
	Ground										
Juniper	Whole					2					
Berries	Pieces										
	Ground										
Mustard	Whole					1.0			2		
seed	Pieces										

Name	Form/Style	Dead Whole Insects Count/100 Gm Max	Excreta Mammalian Mg/Kg Max	Mold Damage %W/W (Max)	Insect Defiled/Infested %W/W (Max)	Extraneous Matter %W/W (Max)	Foreign Matter %W/W (Max)	Live Insect	Shriveled Immature Broken	Excreta Other Mg/Kg Max	Insect Fragments or Other Comments
	Ground										
	Whole					2		0	25% max		Stalks 3%
Star Anise	Pieces										
	Ground										
	Whole										
	Pieces (cut and bulk)										
Vanilla	Powder										

Notes:

- 1: Bulk Density- In cases where no bulk density, the value, method, and methodology may be agreed by the traders,
- 2: Mammalian Excreta- If the average of the total number of sub-samples exceeds the listed milligram per kg and/or lb.
- 3: Whole Dead Insects- If the total number of whole dead insects found in the total number of the sub samples exceeds the specified value shown in the table

ANNEX II

List of Spices within the Dried Fruit and Berries Group.

Com	mon Name	Trade Name/s	Scientific name
1 Allsp	oice	Allspice	Pimenta dioica (L) Merr.
2 Amb	rette	Ambrette	Abelmoschus moschatus Medik.
3 Cam	bodge/Gamboge	Camboge/Cambodge	Garcinia cambogia Desr.
		Bengal cardamom	Amomum aromaticum Roxb.
		Cambodian cardamom	Amomum krervanh Pierre ex Gagnep.
		Cameroon cardamom	Aframomum hanburyi K.Schum.
		Cardamom (Large)/ Black	Amomum subulatum Roxb.
		cardamom	Elawaia and Materia
		Cardamom (Small)	Elettaria cardamomum Maton
		Korarima cardamom	Aframomum koranima
4 Card	lamom	Madagascar cardamom	Aframomum angustifolium K.Schum.
		Round cardamom/Chester cardamom/Siamese cardamom/ Indonesian cardamom	Amomum kepulaga Sprague & Burkill
		Sri Lankan Cardamom	Elettaria cardamomum var.major (Sm.) Thwaites
		Tsao-ko Cardamom	Amomum tsao-ko Crevost & Lemarié
5 Chilli		Chilli	Capsicum annuum L.
3 Crimi		Paprika	Capsicum frutescens L.
	in, Black away)	Cumin, Black (Caraway)	Nigella sativa L.
7 Cum	in	Cumin*	Cuminum cyminum
	ns of Paradise	Grains of Paradise	Aframomum melegueta K. Schum.
	oer berry	Juniper berry	Juniperus communis L.
	am/kokum	Kokam/Kokum	Garcinia indica (Thouars) Choisy
11 Mang	go (Dried)	Dried Mango	Mangifera indica
12 Must	tard	Mustard, White or Yellow	Sinapis alba L.
13 Pepp	oer	Brazilian pepper	Schinus terebenthifolius Raddi
		Canelo pepper	Drimys winteri
		Chinese pepper	Zanthoxylum acanthopodium DC.
		Chinese prickly ash pepper/ Sechuang pepper	Zanthoxylum bungei
		Cubebs	Piper cubebe
		Grain of paradise (Guinea	Aframomum melegueta (Roscoe) K.
		grains, Melegueta pepper,	Schum.
		Alligator pepper)	Contain.
		Negro pepper / Guinean	Xylopia aethiopica A.Rich.
		pepper pods	, . p
		Pepper (Black, White, and Green Pepper) *	Piper nigrum L.
		Pepper Long	Piper longum L.
		Pink pepper	Schinus molle
		Sichuan pepper /Japanese pepper	Zanthoxylum piperitum (L.) DC.
		Sichuan pepper /Japanese	Zanthoxylum piperitum (L.) DC. Piper guineense Schumach. & Thonn.
14 Star	Anise	Sichuan pepper /Japanese pepper	• • • • • • • • • • • • • • • • • • • •
	Anise arind	Sichuan pepper /Japanese pepper West African / Benin pepper	Piper guineense Schumach. & Thonn.
	arind	Sichuan pepper /Japanese pepper West African / Benin pepper Star Anise	Piper guineense Schumach. & Thonn. Illicium verum Hook. f.
15 Tama	arind	Sichuan pepper /Japanese pepper West African / Benin pepper Star Anise Tamarind fruit	Piper guineense Schumach. & Thonn. Illicium verum Hook. f. Tamarindus indica L.

^{*} Already Standardized by the CCSCH