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Agenda Item 9

**CX/SCH 19/4/11**  
September 2018

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

**4<sup>th</sup> Session**

***Thiruvananthapuram, Kerala, India, 21 - 25 February 2019***

**PROPOSALS FOR NEW WORK**

**Replies to CL 2017/67-SCH by India and Iran**

**Background**

1. This document compiles proposals for new work submitted in response to the CL 2017/67-SCH issued by the Codex Secretariat; and in accordance with the decision of the first Session of the Codex Committee on Spices and Culinary Herbs (CCSCH) in 2014 on new proposals<sup>1</sup>.
2. Three (03) proposals were submitted by India and Iran as indicated in the Appendices as follows:
  - Cardamom (submitted by India) – Appendix I: Part A
  - Cardamom (Submitted by Iran) – Appendix I: Part B
  - Dried and dehydrated turmeric (Submitted by India) – Appendix II

**Action**

3. CCSCH4 is requested to consider the three (3) proposals with a view to prioritising them under future work of the Committee.

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<sup>1</sup> REP 14/SCH, para 34

**PROPOSAL FOR NEW WORK ON CODEX STANDARD FOR SMALL CARDAMOM**

(*Elettaria cardamomum* Maton)

(CCSCH Group category - Dried Fruits and Berries)

**Part A – Proposal submitted by India****INTRODUCTION**

Small Cardamom, *Elettaria cardamomum* Maton, often referred as the “Queen of Spices”, belongs to the family *Zingiberaceae*. It is popular for its very pleasant aroma and taste.

Apart from small cardamom there is one more variety called large cardamom, also known as black cardamom from the species *Amomum subulatum*. Cardamoms are recognized by their small seed pods: triangular in cross-section and spindle-shaped, with a thin, papery outer shell and small, black seeds. Small cardamom pods are small with light green colour whereas large cardamom pods are larger with dark brown colour. Both genera are native to the Indian subcontinent, Bhutan, Indonesia, and Nepal.

Cultivation of small cardamom is mostly concentrated in the ever-green forests of Western Ghats in South India. The optimum altitudinal range on growing cardamom is 600 to 1500 meters above mean sea level. The cardamom growing regions of South India lies within 8 – 30°N latitudes and 75-78°longitudes.

**1. Purpose and scope of the standard**

The scope of this work is to establish worldwide standard for small cardamom (*Elettaria cardamomum* Maton) in whole, seed or ground forms. The objective of this standard is to consider the identity and quality characteristics of small cardamom as whole capsule or seed during international trade.

**2. Relevance and timeliness**

Small cardamom is one of the most expensive spices in the world. It is the most widely cultivated species of cardamom.

India is a major producer, consumer and exporter of small cardamom. The German coffee planter Oscar Majus Kloeffer introduced Indian cardamom (*kerala*) to cultivation in Guatemala before World War I; by 2000, that country had become the biggest producer and exporter of cardamom in the world, followed by India, Nepal and Sri Lanka.

Ground cardamom is an ingredient in many Indian curries and is a primary contributor to the flavour of the popular tea concoction in India known as *masala chai*. In Iran, cardamom is used to flavour coffee and tea. In Turkey, it is used to flavour the black Turkish tea, *kakakule*.

ISO has two specification standard for small cardamom.

- ISO 882-1: Cardamom (*Elettaria cardamomum* Maton var. *minuscula* Burkill) Specification, Part 1 – Whole Capsule.
- ISO 882-2: Cardamom (*Elettaria cardamomum* Maton var. *minuscula* Burkill) Specification, Part 2- Seeds.

**3. Main aspects to be covered**

The main aspects to be covered in standard are the minimum quality required to ensure consumer health and to promote a fair practice in international trade. Hence the standard will cover

- i. Product Definition - Defining the product as “dry and/or dehydrated, whole capsule or seed of cardamom and including reference to the genus and the species and/or varietal types if necessary.
- ii. Styles - Listing/describing the different forms of presentation including sizes of whole, or seeds of small cardamom.
- iii. Classes/ Quality Criteria -Including provisions for moisture content, ash content, volatile oil content, Extraneous matter and classification of defectives vis-à-vis lot acceptance based on the defects allowed.
- iv. Quality tolerances-Provisions for the labelling and marking of the product in accordance with the General Standard for the Labelling of Pre-packaged Foods
- v. Provisions on contaminants that refer to the Codex General Standard for Contaminants and Toxins in Food and Feed.
- vi. Hygiene provisions that refer to the Recommended International Code of Practice –General Principles of Food Hygiene.

vii. Provisions for pesticides residues, labelling and packaging with reference to pre-existing Codex documents.

viii. References to Methods of Analysis and Sampling.

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

##### General Criteria

There are different types of cardamom varieties. Developing a codex standard for small cardamom will supply high quality and safe products to protect consumer's health and will help improve fair trade.

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

By the early 21st century, Guatemala had become the largest producer of cardamom in the world, with an average annual yield between 25,000 and 29,000 tonnes. India, formerly the largest producer, since 2000 has been the second worldwide, generating around 15,000 tonnes annually. Worldwide production data for small cardamom is available in combination with nutmeg and mace as given below:

**Table 1: Worldwide Production data of Nutmeg, Mace and Cardamom**

Sl. No.	Year	Production (in Tonnes)
1	2013	96243
2	2014	107090
3	2015	107176
4	2016	122152

(Source: FAOSTAT)

Production data of India for Small Cardamom is listed below in Table 2.

**Table 2: Production data of India for Small Cardamom**

Sl. No.	Year	Production (in Tonnes)
1	2012-13	14000
2	2013-14	16000
3	2014-15	18000
4	2015-16	23890
5	2016-17	17990

(Source: Spices Board, India)

Details of Worldwide import- export of small cardamom is given below.

**Table 3: Worldwide Export data of Cardamom**

Sl. No.	Year	Neither crushed nor ground		Crushed or ground	
		QTY (Tons)	Value (USD)	QTY (Tons)	Value (USD)
1	2013	55976	317143	4210	61793
2	2014	62901	399539	2386	28049
3	2015	59587	447605	2004	19911
4	2016	56905	392219	1923	15222
5	2017	57176	539355	1444	17396

(Sources: ITC calculations based on UN COMTRADE and ITC statistics.)

**Table 4: Worldwide Import data of Cardamom**

Sl. No.	Year	Neither crushed nor ground		Crushed or ground	
		QTY (Tons)	Value (USD)	QTY (Tons)	Value (USD)
1	2013	39515	314220	1598	14996
2	2014	50261	367876	1752	13751
3	2015	51216	443705	1955	16273
4	2016	46215	340963	4305	35519
5	2017	Data not available	481995	6066	77327

(Sources: ITC calculations based on UN COMTRADE and ITC statistics.)

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

Small cardamom is one of the most expensive spice in the world after saffron and vanilla. Trade of small cardamom plays a crucial role in the economy of export as well as importing countries.

There are so many standards available nationally and internationally for small cardamom.

- i. ISO 882-1: Cardamom (*Elettaria cardamomum* Maton var. *minuscula* Burkill) Specification, Part 1 – Whole Capsule.
- ii. ISO 882-2 Cardamom (*Elettaria cardamomum* Maton var. *minuscula* Burkill) Specification, Part 2- Seeds.
- iii. ISO 4733:2004 Oil of cardamom [*Elettaria cardamomum* (L.) Maton]
- iv. European Spice Association Quality Minima Document
- v. IS 1987:1984 -Cardamom (capsules and seeds) (Indian standard)
- vi. ASTA cleanliness specifications for Spices, seeds and herbs.

Lack of harmonized and internationally accepted standard for small cardamom will lead to malpractices in the trade. In order to facilitate a fair trade, an internationally accepted codex standard is very essential.

**c) International or regional market potential:**

Cardamom is one of the most expensive spice in the world. It is mainly exported from Guatemala, India, Nepal and Singapore, Indonesia Sri-lanka etc. The major consumers of cardamom is Saudi Arabia, UAE and India. From table 3 and 4 it is clear that the demand for small cardamom is increasing in the global market.

Due to importance the quality control of small cardamom specifications, it is necessary to develop an international harmonized standard.

**Table 5: Major exporters of Cardamom (neither crushed nor ground (Value wise)**  
Unit: US Dollar thousand)

Exporters	Exported value				
	2013	2014	2015	2016	2017
Guatemala	217208	240319	242474	229008	365799
India	32142	58007	70405	65157	73980
Nepal	19190	32786	42788	36285	43495
United Arab Emirates	11609	21005	33349	17203	2910
Singapore	9531	10066	11894	5425	10854
Indonesia	10603	10036	7773	6112	10978
Myanmar	2110	13132	9913	7429	184
Netherlands	3771	2709	2513	3524	5105
Bhutan	68	609	12423	495	3410

**Table 5: Major exporters of Cardamom (Continued)**

United Kingdom	1726	2228	2317	3114	3410
Sri Lanka	114	194	954	5699	5552
Saudi Arabia	1155	1866	3558	2664	1757
Honduras	228	820	1189	2317	1483
Germany	1278	1013	1058	1146	1364
Jordan	750	349	263	718	2138

**Table 6: Major Importers of Cardamom, (neither crushed nor ground (Value wise)  
Unit: US Dollar thousand)**

Importers	Imported value				
	2013	2014	2015	2016	2017
Saudi Arabia	126660	114286	122364	88644	121864
United Arab Emirates	53409	81563	106192	43971	95969
India	13589	34090	53990	44276	38646
Bangladesh	16377		35713	20144	35417
Kuwait	9181	9313	10140	9092	14914
Pakistan	6309	9349	11124	13724	14005
Jordan	7740	4630	8112	8711	12536
Singapore	9674	10037	11566	5709	11905
United States of America	9719	7901	8740	9109	10655
Nepal	649	8106	2376	9023	10525
Egypt	0	9767	7735	8467	10205
Viet Nam	702	230	76	98	9949
United Kingdom	6763	7097	6938	6329	8736
Iraq		0	1787	8884	7622
Syrian Arab Republic	6062	7912	9361	5711	6935
Germany	3996	3944	4051	4291	6254
Netherlands	3090	3511	3235	5095	6242
Japan	4791	3759	4007	3361	5457
Qatar	5580	2383	3580	2779	5414
Canada	2939	1967	3254	2139	3798
Iran, Islamic Republic of	1022	652		5644	3652
Malaysia	1669	1487	2615	3721	3520

**d) Amenability of commodity to standardization:**

The characteristics of dried small cardamom from its cultivation to harvest, cultivar varieties, composition, quality characteristics, processing, packaging, etc all lead to parameters, adequate for establishment of an appropriate standard for the commodity

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

There is no general standard for small cardamom. Considering the market value of small cardamom, need of codex standard for small cardamom is very essential. It will help to facilitate the trade and help to strengthen consumer protection by establishing a harmonized standard which cover the major varieties of small cardamom

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

This standard will be a general standard for small cardamom to cover the relevant aspects concerned. But, it will include all the different forms of small cardamom such as whole capsule, seed, ground etc.

**g) Work already undertaken by other international organization in this field and/or suggested by the relevant international intergovernmental bodies**

ISO has two specification standard for small cardamom.

- ISO 882-1: Cardamom (*Elettaria cardamomum* Maton var. *minuscula* Burkill) Specification, Part 1 – Whole Capsule.
- ISO 882-2 Cardamom (*Elettaria cardamomum* Maton var. *minuscula* Burkill) Specification, Part 2- Seeds.

**The existing standards could be taken into consideration as a step process to develop** Codex Standards for small cardamom.

**5. Relevance to the codex strategic objectives**

This proposal is consistent with the Strategic Plan of the Codex Alimentarius Commission 2014-2019, in particular strategic objectives 1.1, 1.3, 2.3 and 3.1.

**6. Information on the relation between the proposal and other existing Codex documents.**

The work will take into consideration the following Codex Standards:

General Principles of Food Hygiene (CXP 1-1969); Code of Hygienic Practice for Low-Moisture Foods (CXP 75-2015) (ANNEX III Spices and Dried Culinary Herbs); Principles and Guidelines for the establishment and Application of Microbiological Criteria Related to Foods (CXG 21-1997); General Standard for Labelling of Pre Packaged Foods (CXS 1-1985); Methods of Analysis and Sampling (CXS 234-1999); Maximum Residue Limits for pesticides adopted by Codex for 'Spices'.

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

No expert scientific advice is foreseen at this stage. Published research documents by international bodies will be referred to, in the process of preparing the standard, if found necessary

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

ISO standards can be used as a step process to frame the codex standard for dried small cardamom. The technical inputs from ASTA, ESA and UNECE will also be taken into consideration as they have already done work related to the subject.

**9. Proposed timeline for completion of the new work**

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

## **PROJECT DOCUMENT**

### **PROPOSAL FOR NEW WORK ON A CODEX STANDARD FOR CARDAMOM**

(CCSCH Group category - Dried Fruits and Berries)

#### **Part B – Proposal submitted by Iran**

##### **Introduction**

#### **1. Purpose and the scope of the standard**

The scope of the work is to establish a worldwide standard for cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill] as whole capsules.

The objective of the standard is to consider the essential quality characteristics of whole capsules as a spice in many culinary products including for catering purposes or for repackaging, as required to aid international trade in this product.

#### **2. Relevance and timeliness**

Due to the growing trend of worldwide cardamom production, exporting and trade, it is necessary to establish a commodity standard covering the safety, quality, and hygiene and labeling in order to have a reference that has been internationally agreed by consensus between the main producing and trading countries. The codex standard for cardamom will help to protect consumers' health and to promote fair trade practices in accordance with the different international agreements.

The main producers of cardamom are India, Guatemala, Sri Lanka, Nepal, Malaysia and Tanzania.

The main importers are Saudi Arabia, United Arab Emirates, Viet Nam, India, Bangladesh, Nepal, Jordan, Kuwait, Singapore, Syrian, Egypt, USA, UK, Iraq, Netherlands, Germany, Qatar, Oman, and Japan based on ITC data during 2013-2017.

Cardamom is the world's third-most expensive spice, surpassed in price per weight only by saffron and vanilla. Economics of this valuable spice from different aspects such as marketing, employment, household's income, globalization and export, is important.

#### **3. Main aspects to be covered**

The standard will include characteristic relating to the form, grades, purity, contaminants, labeling, packaging as well as safety requirements.

The most relevant items which may be considered are related to:

- Establishing the minimum requirements of cardamom capsules which shall be complied with, independently from the quality parameters and other requirements regardless of class.
- Defining the grades to classify cardamom capsules in accordance with its characteristics.
- Establishing the tolerance as regards quality, quantity and size that may be permitted in cardamom capsules contained in a package.
- Provisions to be considered relating to the uniformity of the packaged product and the packaging used.
- Provisions for the labeling and marking of the product in accordance with the General Standard for the labeling of Prepackaged Foods.
- Provisions for pesticides and contaminants with the reference to the General Standard for Contaminants and toxins in food.
- Provisions for hygiene and handling with the reference to the general principles of food hygiene and other relevant codes of hygiene practices.
- References to methods of analysis and sampling

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

##### **General criterion**

Consumer protection in case of food safety, health care, fair trade and protecting the needs of developing countries should be taking into account.

The proposal new standard will meet this criterion by:

- Promoting consumer protection and preventing of fraudulent practices
- Providing greater assurance of quality of the product to meet consumer needs and minimum requirements

of food safety

- Arriving at levels of standardization based on the properties of different varieties to meet industrial and consumer needs with exactness and credibility
- The drafting standard would be beneficial to many countries in general and more particular in the case of developing countries because they are major producers, exporters and consumers of cardamom.

**Criteria applicable to commodities:**

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

Cardamom is one of the most important export products and plays significant role in income and employment of cardamom producers. Guatemala, India, Sri Lanka, Nepal, Malaysia and Tanzania are among main countries dealing with cardamom production.

Major importer countries of cardamom are Saudi Arabia, United Arab Emirates, Viet Nam, India, Bangladesh, Nepal, Jordan, Kuwait, Singapore, Syrian and etc,

**Table 1- Top producing countries of Cardamom (Year 2016)**

Country	Country's Rank/Share In Production (%)	Production Volume (Ton)	Growth in Production (1 Year) %	Country's Rank/Share In Export (%)	Export Value In 2016 (US \$)
India	31.11	38,000	+72.7	8.67 (3)	24,022,803
Guatemala	29.04	35,475	+2.8	55.75 (1)	154,488,339
Indonesia	25.41	31,039	-9.5	2.59 (6)	7,168,770
Nepal	5.27	6,439	+24.6	12.38 (2)	34,317,328
Laos	2.55	3,115	+1.2	0.04 (34)	102,128
Bhutan	2.13	2,596	+24.2	0.18 (18)	495,144
Grenada	2.08	2,540	-18.0	-	-
Tanzania	0.63	764	-4.7	0.07 (27)	196,293
Sri Lanka	0.46	563	+2.0	2.12 (7)	5,883,903
Honduras	0.39	482	+0.6	1.08 (9)	2,995,598
Trinidad and Tobago	0.32	392	+7.1	-	-
Saint Vincent and the Grenadines	0.17	206	+7.3	-	-
Ethiopia	0.13	161	+5.2	0.02 (39)	67,741
Malawi	0.07	84	-6.7	0.00 (84)	906
Papua New Guinea	0.07	83	-3.5	0.02 (44)	46,737

Source: Tridge – Global Trade Platform



**Table 2- Trade between Countries- Cardamoms, neither crushed nor ground (top 10 countries)**

Pattern	Value exported in 2017 (USD thousand)	Trade balance in 2017 (USD thousand)	Quantity exported in 2017 (Tons)	Unit value USD/unit	Annual growth in value between 2013 - 2017 (%)	Annual growth in quantity between 2013-2017 (%)	Annual growth in value between 2016-2017 (%)	Share in world exports (%)
World	539,361	57,776	57,211	9,428	12	0	45	100
Guatemala	365,799	365,564	35,695	10,248	10	-3	60	67.8
India	73,980	35,334	4,698	15,747	20	14	14	13.7
Nepal	43,495	32,970	4,690	9,274	19	15	20	8.1
Indonesia	10,978	10,967	6,892	1,593	-4	-6	80	2
Singapore	10,854	-1,051	961	11,294	-4	-14	100	2
Sri Lanka	5,552	3,360	818	6,787	205	285	-3	1
Netherlands	5,105	-1,137	481	10,613	9	3	45	0.9
United Kingdom	3,410	-5,326	265	12,868	18	24	10	0.6
Bhutan	3,410	3,408	494	6,903	114	142	589	0.6
United Arab Emirates	2,926	-93,044	487	6,008	14	-2	-16	0.5

Sources: ITC calculations based on UN COMTRADE statistics. Unit: US Dollar thousand

**Table 3- Trade between Countries - Cardamoms, neither crushed nor ground**

Pattern	Value imported in 2017 (USD thousand)	Trade balance in 2017 (USD thousand)	Quantity imported in 2017 (Tons)	Unit value USD/unit	Annual growth in value between 2013-2017 (%)	Annual growth in quantity between 2013-2017 (%)	Annual growth in value between 2016-2017 (%)	Share in world exports (%)
World	481,585	57,776	47,889*	-	8	-2	41	100
Saudi Arabia	121,864	-120,107	8,135	14,980	-3	-9	37	25.3
United Arab Emirates	95,970	-93,044	9,226	10,402	8	-3	115	19.9
India	38,646	35,334	4,369	8,846	27	18	-13	8
Bangladesh	35,417	-35,410	3,737	9,477	28	13	95	7.4
Kuwait	14,914	-14,479	1,084	13,758	10	6	64	3.1
Pakistan	14,005	-13,993	0		22		2	2.9
Jordan	12,536	-10,398	1,348	9,300	17	-5	44	2.6
Singapore	11,905	-1,051	1,069	11,137	-1	-14	109	2.5
United States of America	10,655	-9,780	856	12,447	3	-1	17	2.2
Nepal	10,525	32,970	1,481	7,107	76	48	17	2.2
Egypt	10,205	-10,205	874	11,676	25	15	21	2.1
Viet Nam	9,949	-9,300	6,398	1,555	-5	-7	70	2.1

**Table 3- Trade between Countries - Cardamoms, neither crushed nor ground (continued)**

United Kingdom	8,736	-5,326	704	12,409	4	-1	38	1.8
Iraq	7,622	-7,622	703	10,842	709		-13	1.6
Syrian Arab Republic	6,935	-6,932	909	7,629	0	-17	26	1.4
Germany	6,254	-4,890	553	11,309	10	-3	46	1.3
Netherlands	6,242	-1,137	679	9,193	19	1	23	1.3
Japan	5,457	-5,457	382	14,285	1	-1	62	1.1
Qatar	5,414	-5,414	458	11,821	22	12	103	1.1

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

Import and export take place between many countries. So, establishing international standard criteria based on codex standard is necessary for International trade and consumer support.

Cardamom is traded according to purity, quality specification and forms.

Iranian national standards for Cardamom are:

ISIRI 320-1: Cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill] –Specification, Part 1: Whole Capsules

ISIRI 320-2: Cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill] – Specification, Part 2: Seeds

International organization like ISO has two standards for Cardamom as follows:

ISO 882-1: Cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill] Specification, Part 1: Whole Capsules

ISO 882-2: Cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill] Specification, Part 2: Seeds

Many conventions including those of the world Spice Congress and the World Spice Organization have addressed the issue of harmonization of grades and specification for Cardamom. Cardamom being produced in some developing countries and traded globally not only by the exporters but also through re-exports by importers is subject to various national legislations to overcome the resultant or potential impediment to international trade, it is essential to incorporate all existing diverse standards in a single comprehensive standard acceptable across world internationally.

This would reduce possible barriers to trade and would provide a comprehensive framework setting out the minimum internationally acceptable requirements for Cardamom.

This new work will provide a recommendation, which countries could use to develop their own quality and grading standards for Cardamom and, when applied internationally, may assist in providing a harmonized approach.

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

The quantity imported of cardamom in 2017 has been reported 47,889 tones and Annual growths in value of imported between 2016 and 2017 is 41%, which shows international demand for cardamom has been grown (ITC, Trade Map 2017). The major exporters are Guatemala, India, Indonesia, Sri Lanka, Nepal, Malaysia and Tanzania. According to ITC data, the international trade accounted to more than 47,000 tones for about 481,585 US \$ thousands in 2017.

Table 4: Exported value of cardamom, neither crushed nor ground

Exporters	Exported value in 2013	Exported value in 2014	Exported value in 2015	Exported value in 2016	Exported value in 2017
World	317,143	399,539	447,605	392,219	539,339
Guatemala	217,208	240,319	242,474	229,008	365,799
India	32,142	58,007	70,405	65,157	73,980
Nepal	19,190	32,786	42,788	36,285	43,495
Indonesia	10,603	10,036	7,773	6,112	10,978
Singapore	9,531	10,066	11,894	5,425	10,854
Sri Lanka	114	194	954	5,699	5,552
Netherlands	3,771	2,709	2,513	3,524	5,105
Bhutan	68	609	12,423	495	3,410
United Kingdom	1,726	2,228	2,317	3,114	3,410
United Arab Emirates	11,609	21,005	33,349	17,203	2,910
Jordan	750	349	263	718	2,138
Saudi Arabia	1,155	1,866	3,558	2,664	1,757
Honduras	228	820	1,189	2,317	1,483
Guyana	0	0	0	0	1,391
Germany	1,278	1,013	1,058	1,146	1,364
United States of America	405	392	536	624	875
Viet Nam	841	250	200	69	650
France	467	438	289	382	495
Kuwait	195	219	57	432	435
Costa Rica	0	4	4	0	341
Canada	156	134	295	284	307
Oman	0	0	0	7	296
Sweden	201	145	284	281	254
Malaysia	140	78	178	1,732	249
Spain	181	99	165	158	239
Austria	14	39	47	218	221
Myanmar	2,110	13,132	9,913	7,429	184
Italy	128	88	76	79	133
Pitcairn					121
Guam				1	102

**Table 5: Exported Quantity of cardamom, neither crushed nor ground**

Exporters	2013	2014	2015	2016	2017
	Exported quantity, Tons	Exported quantity, Tons	Exported quantity, Tons	Exported quantity, Tons	Exported quantity, Tons
World	55,976	62,901	59,587	56,905	57,178
Guatemala	38,812	38,989	33,327	35,645	35,695
Indonesia	6,698	7,737	6,246	4,034	6,892
India	2,621	4,230	5,308	4,829	4,698
Nepal	2,173	3,516	2,996	3,011	4,690
Singapore	1,487	1,425	1,638	736	961
Sri Lanka	12	5	116	767	818
Bhutan	5	53	484	38	494
Netherlands	469	352	318	444	481
United Arab Emirates	2,075	4,033	6,064	3,392	454
Honduras	184	218	433	676	370
United Kingdom	117	159	158	275	265
Saudi Arabia	110	326	426	420	249
Jordan	204	78	45	122	242
Myanmar	227	1,188	1,326	1,802	115
Germany	134	112	120	113	110
Guyana	0	0	0	0	107

**Table 6: Imported value of cardamom, neither crushed nor ground (Top importers)**

Importers	Imported value in 2013	Imported value in 2014	Imported value in 2015	Imported value in 2016	Imported value in 2017
World	314,220	367,876	443,676	340,834	481,464
Saudi Arabia	126,660	114,286	122,364	88,644	121,864
United Arab Emirates	53,409	81,563	106,192	43,971	95,969
India	13,589	34,090	53,990	44,276	38,646
Bangladesh	16,377		35,713	20,144	35,417
Kuwait	9,181	9,313	10,140	9,092	14,914
Pakistan	6,309	9,349	11,124	13,724	14,005
Jordan	7,740	4,630	8,112	8,711	12,536
Singapore	9,674	10,037	11,566	5,709	11,905
United States of America	9,719	7,901	8,740	9,109	10,655
Nepal	649	8,106	2,376	9,023	10,525
Egypt	0	9,767	7,735	8,467	10,205
Viet Nam	702	230	76	98	9,949
United Kingdom	6,763	7,097	6,938	6,329	8,736
Iraq		0	1,787	8,884	7,622

**Table 6: Imported value of cardamom, neither crushed nor ground (Top importers) (Continued)**

Syrian Arab Republic	6,062	7,912	9,361	5,711	6,935
Germany	3,996	3,944	4,051	4,291	6,254
Netherlands	3,090	3,511	3,235	5,095	6,242
Japan	4,791	3,759	4,007	3,361	5,457
Qatar	5,580	2,383	3,580	2,779	5,414
Canada	2,939	1,967	3,254	2,139	3,798
Iran, Islamic Republic of	1,022	652		5,644	3,652
Malaysia	1,669	1,487	2,615	3,721	3,520
Oman	2,456	2,238	2,345	1,889	3,121
Australia	1,301	1,169	1,445	1,444	2,457
Sri Lanka	323	252	479	2,787	2,192
Sudan			0	4,519	2,120
Myanmar	368	524	417	1,009	2,085
Free Zones	601	267	98	514	2,008
Lebanon	1,088	2,078	1,418	1,611	1,921
France	1,208	1,290	1,540	1,510	1,709

**Table 7: Imported Quantity of cardamom, neither crushed nor ground**

Importers	2013	2014	2015	2016	2017
	Imported quantity, Tons	Imported quantity, Tons	Imported quantity, Tons	Imported quantity, Tons	Imported quantity, Tons
World	39,515	50,261	51,203	46,133	47,889*
United Arab Emirates	6,750	10,872	12,802	5,937	9,226
Saudi Arabia	12,155	11,513	11,005	9,590	8,135
Viet Nam	59	28	9	13	6,398
India	1,845	4,626	4,485	4,399	4,369
Bangladesh	1,765		3,981	3,459	3,737
Nepal	177	1,959	428	1,390	1,481
Jordan	1,980	1,035	1,161	1,322	1,348
Kuwait	833	915	906	992	1,084
Singapore	1,600	1,598	1,491	795	1,069
Syrian Arab Republic	2,145	2,054	2,153	1,661	909
Egypt	0	1,312	915	925	874
United States of America	941	984	969	1,117	856
United Kingdom	698	671	629	592	704
Iraq		0	319	1,571	703
Netherlands	688	712	527	848	679
Germany	615	584	479	547	553
Qatar	546	297	429	400	458

**Table 7: Imported Quantity of cardamom, neither crushed nor ground (Continued)**

Oman	441	592	544	396	428
Japan	360	365	339	296	382
Malaysia	309	282	341	383	349
Sri Lanka	27	40	59	305	322
Sudan			0	865	285
Canada	314	226	298	191	273
Guatemala	129	109	185	50	236
Turkey	17	20	149	193	229
Free Zones	141	51	10	60	218
Iran, Islamic Republic of	247	159		821	214
Myanmar	31	64	49	140	204

**Table 8: Pattern of Export International Trade**

Worldwide export data			
Year	Export quantity (in Metric Tons)	Value, US Dollar thousand	Growth rate In Value (%)
2013	55,976	317,907	-
2014	62,901	400,115	+25
2015	59,587	447,612	+12
2016	56,905	392,222	-14
2017	57,178	539,361	+37

Sources: ITC calculations based on UN COMTRADE and ITC statistics.

**Table 9: Pattern of Import International Trade**

Worldwide import data			
Year	import quantity (In Metric Tons)	Value, US Dollar thousand	Growth rate in Value (%)
2013	39,515	314,220	-
2014	50,261	367,876	+17
2015	51,203	443,676	+20
2016	46,133	340,834	-30
2017	*47,889	481,585	+14

Sources: ITC calculations based on UN COMTRADE and ITC statistics.

\*mirror data

Global demand for cardamom is expected to increase in future, mainly on account of increased culinary applications and functional foods. It can lead to increase cardamom trade. Due to the importance of the food safety, hygiene, quality control of cardamom specifications, it's necessary to develop an international harmonized standard.

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

The characteristics of cardamom its cultivation to retail sale e.g. cultivar varieties, composition, quality characteristics, processing, packaging, etc. all lead to adequate parameters for the standardization of the product. Taking into account that technical information is available and certain degree of harmonization at regional/international levels has already been achieved on certain aspects relevant to consumer's protection and trade facilitation as mentioned in point (b).

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

## **standards**

There is no general commodity standard covering cardamom under Codex. The proposed standard will heighten consumer protection and facilitate cardamom trade by establishing an internationally agreed quality standard.

Since cardamom is placed in the group of spices category with considerable higher prices (the world's third-most expensive spice), there is always a risk of impurity and manipulation for this valuable product. Thus, need to pay special attention to consumer protection against adulteration.

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

A single standard for cardamom will cover all forms of cardamom traded worldwide. The different forms of cardamom like crushed or whole capsule will be examined under this standard individually.

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

The existing standards which may be considered while developing a codex standard for Cardamom are:

- ISO 882 Cardamom [Elettaria cardamomum (Linnaeus) Maton var. minuscula Burkill ] – Specification Part 1: Whole Capsules
- ISO 882-2 Cardamom [Elettaria cardamomum (Linnaeus) Maton var. minuscula Burkill ] - Specification Part 2: Seeds

## **5. Relevance to the Codex strategic objectives**

The elaboration of a Codex standard for cardamom is according to strategic objectives that to promote the maximum application of codex standards by countries in their national legislation and to facilitate international trade by protecting the health of the consumers. This standard is important to guarantee quality, as well as providing new opportunity for the producing this healthy and beneficial products and promoting international market.

Therefore this proposal is consistent with the Strategic Plan of the Codex Alimentarius Commission 2014-2019, in particular strategic objectives 1.1, 1.3, 2.3 and 3.1.

## **Goal 2- Promoting Widest and Consistent application of scientific principles and Risk analysis**

### **The proposed work will promote the elaboration of Codex commodity standards based on the rigorous scientific analysis of collected data**

This Codex Standard will facilitate fair trade of cardamom, as the quality, purity parameters and food safety. The purity of cardamom allows to provide proper criteria for the quality control of these product.

So, elaborating of this standard can help to avoid the risks such as lack of Good Hygienic Production, non-compliance with grading, adding artificial color. In addition, this proposed standard can be a reference for solving food safety issues such as microbial contamination, heavy metals, contaminants, residue pesticides, food additives

## **6. Information on the relation between the proposal and other existing Codex documents.**

This is proposed as a new global standard and has no relation to any other existing Codex text on this item, except that this standard will make reference to relevant standards and related texts developed by General Subject Committees as follows:

- Principles and Guidelines for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997)
- General Principles of Food Hygiene (CAC/RCP 1-1969)
- 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)

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

No expert scientific advice is foreseen at this stage. Published research documents by international bodies will be referred in the process of preparing the standard, if found necessary.

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

The technical inputs from other external bodies such as International Organization for Standardization (ISO), American Spice trade Association (ASTA) and European Spice Association (ESA) shall be welcomed for this work.

**9. Proposed Time Schedule**

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



**PROJECT DOCUMENT**  
**PROPOSAL FOR NEW WORK ON DRIED AND DEHYDRATED TURMERIC**  
(CCSCH Group category – Dried roots, Rhizomes and Bulbs)

(Submitted by India)

### 1. Purpose and scope of standard

The scope of the work is to establish a worldwide standard for dried and/or dehydrated whole, split, crushed or ground turmeric (*Curcuma longa*) of the family *Zingiberaceae* to facilitate international trade and consumer protection.

The objective of the standard is to consider the essential quality characteristics of dried turmeric for industrial food production and for direct human consumption, including for catering purposes and other essential uses as required, to aid international trade in this product.

### 2. Relevance and timeliness

India is the largest producer, consumer and exporter of turmeric in the world, and other major producers include Pakistan, China, Haiti, Jamaica, Peru, Taiwan and Thailand.

Due to the growing trend of worldwide dried turmeric production and trade, it is necessary to establish a commodity standard covering the safety, quality, hygiene and labelling in order to have a reference that has been internationally agreed by consensus between the producing, consuming and trading countries across the world. More significantly, the present status of dried or dehydrated turmeric is not limited to any particular region and hence justifies the elaboration of an international standard commensurate with the dried or dehydrated turmeric's true standing as an increasingly valuable worldwide commodity. In addition, the drafting of a Codex standard for dried turmeric will help to protect consumers' health and to promote fair trade in accordance with the international agreements in particular the WTO SPS and TBT Agreements.

Traditionally, dried turmeric is used for culinary purposes as well as in confectionery industry. It is also frequently used to flavour or colour curry powders, mustards, butters, and cheeses.

### 3. Main aspects to be covered

The standard entails main aspects related to the definition of the produce, essential quality factors e.g moisture and labelling requirements in order to provide certainty to the consumer on the nature and characteristics. The standard will supply high quality and safe products to protect consumer's health and against misleading practices by including all the necessary parameters such as moisture, proper labelling, and other permissible limits among others.

The standard will cover characteristics related to identification and quality in all aspects as well as safety requirements.

- a) Establish the minimum requirements of dried turmeric which shall be complied with, independently from the quality parameters and other requirements regardless of class.
- b) Define the categories to classify dried or dehydrated turmeric in accordance with its characteristics.
- c) Establish the tolerance as regards quality and size that may be permitted of dried or dehydrated turmeric contained in a package.
- d) Include the provisions to be considered relating to the uniformity of the packaged product and the packaging used.
- e) Include provisions for the labelling and marking of the product in accordance with the CODEX general standard for the labelling of pre-packaged foods.
- f) Include provisions for pesticides and contaminants with the reference to the General Standard for Contaminants and toxins in food
- g) Include provisions for hygiene with the reference to the general principles of food hygiene and other relevant codes of hygiene practices.
- h) References to Methods of Analysis and Sampling.

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

#### General Criteria

Codex standard for dried or dehydrated turmeric would be beneficial for developing countries because they are the major producers, exporters and consumers. Establishing a standard for the commodity as a spice is

necessary to meet minimum requirements for food quality and safety to ensure consumer protection.

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

There are as yet no exact figures available on the global production data of turmeric but these will naturally become available as the project advances. Production data of India for Turmeric is listed below in Table 1.

Year	Production (in Tonnes)
2012-13	986690
2013-14	1092630
2014-15	846250
2015-16	967060
2016-17	1051160

Source: Spices Board, India

Turmeric is one of the spices of the most traded in the world with a total volume of exports from producing countries such as India, Pakistan and China. Detailed statistics of worldwide import and export of Turmeric are given in Table 2 and 3.

Year	Export Quantity (in Tonnes)	Export Value (in USD)
2013	116091	165829
2014	107150	157743
2015	120619	189231
2016	142396	253350

Source: ITC calculations based on UN COMTRADE and ITC statistics.

Year	Import Quantity (in Tonnes)	Import Value (in USD)
2013	88772	137061
2014	105060	165128
2015	135169	215191
2016	136806	247309

Source: ITC calculations based on UN COMTRADE and ITC statistics.

To date many countries have not updated their 2017 information, therefore data are updated as of 2016, which is the last available year that is complete.

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

Imports and exports of turmeric take place for many applications. Trade in turmeric as at the moment depends on producing and importing countries mutual agreement in terms of grades and specifications, which lead to having different standards for each country. However, it would be preferred that the trade in turmeric is carried under an international criteria based on Codex Standard. Therefore, the new work would provide internationally recognized specific standards in order to enhance international trade and to accommodate the importer's requirements.

International organizations ISO already has an existing standards for turmeric. To overcome the resultant or potential impediments to international trade, it is essential to incorporate all existing different standards in a single improved comprehensive standard acceptable across board internationally. This warrants the establishment of a Codex standard as per the Procedural Manual.

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

The import of dried or dehydrated turmeric by most countries is increasing. India, Iran and USA are the largest importers of dried turmeric according to the current statistic of FAOSTAT. India, Indonesia and Myanmar are the major exporters globally according to FAOSTAT.

S.No.	Country	Exported value, USD	Exported quantity, Tons
1	India	179544	102164
2	Indonesia	11708	8309
3	Myanmar	11032	11472
4	Netherlands	5824	1712
5	United Kingdom	5537	1119
6	Ethiopia	4217	4481
7	Germany	3571	945
8	Bangladesh	2871	1293
9	China	2719	999
10	Peru	2706	1289
11	Viet Nam	2421	1373
12	United States of America	1942	395
13	United Arab Emirates	1919	1654
14	France	1649	225
15	Spain	1232	474

Source: ITC calculations based on UN COMTRADE and ITC statistics.

S.No.	Country	Imported value, USD	Imported quantity, Tons
1	United States of America	33519	8686
2	India	25958	15483
3	Iran, Islamic Republic of	18737	13532
4	Malaysia	10851	7077
5	United Kingdom	9971	4409
6	Bangladesh	8934	6777
7	Germany	8851	3531
8	Japan	8775	3626
9	United Arab Emirates	8575	7980
10	Netherlands	7610	3124
11	Sri Lanka	7132	3649
12	Saudi Arabia	7068	5303
13	Spain	6762	3753
14	South Africa	5699	2950
15	Morocco	5400	3606

Source: ITC calculations based on UN COMTRADE and ITC statistics.

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

The characteristics of Dried or dehydrated Turmeric from its cultivation to retail sale e.g. cultivar varieties, composition, quality characteristics, packaging, etc. all lead to adequate parameters for the standardization of the product.

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

There is no general standard specifically covering dried or/and dehydrated Turmeric in international trade. The new work will strengthen consumer protection and will facilitate trade in dried or/and dehydrated Turmeric 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 different forms of dried and / or dehydrated Turmeric like whole, sliced, crushed and powdered.

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

The existing standards which may be considered while developing a codex standard for dried turmeric are:

- ISO 5562:1983, Turmeric, whole or ground (powdered) - Specification
- ISO 5566:1982, Turmeric - Determination of colouring power - Spectrophotometric method
- European Spice Association quality minima document
- American Standard Trade Association (ASTA)

**5. Relevance to the Codex strategic objectives**

This proposal is consistent with the Strategic Plan of the Codex Alimentarius Commission 2014-2019, in particular strategic objectives 1.1, 1.3, 2.3 and 3.1.

**6. Information on the relation between the proposal and other existing Codex documents.**

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:

- (a) General Principles of Food Hygiene (CXP 1-1969)
- (b) *Code of Hygienic Practice for low moisture foods* (CXP 75-2015) (Annex III)
- (c) Principles and guidelines for the Establishment and Application of Microbiological Criteria for Foods (CXG 21-1997)
- (d) Maximum limits for maximum residue limits for pesticides adopted by Codex.
- (e) General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995)
- (f) General Standard for Labelling of Pre Packaged Foods (CXS 1-1985)
- (g) Methods of Analysis and Sampling (CXS 234-1999)

**7. Identification of any need for any requirements for and availability of expert scientific advice**

Scientific advice from external global bodies like FAO/WHO; JECFA and others are welcomed, but no expert scientific advice is foreseen at this stage. Published research documents by international bodies will be referred in the process of preparing the standard, if found necessary.

**8. Identification of any need 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 developing this standard may be sought when developing this standard.

**9. Proposed timeline for completion of the new work**

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.