



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

**First Session**

**Kochi (Cochin), India, 11-14 February 2014**

**ACTIVITIES OF INTERNATIONAL ORGANISATIONS RELEVANT TO THE WORK OF CCSC**

**A. COMMUNICATION FROM ISO/TC 34/SC 7 SECRETARIAT**

**(Report of activities relevant to CCSC)<sup>1</sup>**

1. The Secretariat of ISO/TC 34/SC 7 'Spices, Culinary Herbs and Condiments Subcommittee' of International Organization for Standardization (ISO) has prepared this information paper. It provides a summary of current work undertaken by ISO that may be of interest to the Codex Committee on Spices and Culinary Herbs (CCSC) and is intended to support and enhance dialogue and coordination between ISO/TC 34/SC 7 and CCSC.

**International Standardization and the Role of International Organization for Standardization (ISO)**

2. The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade. Three bodies are responsible for the planning, development and adoption of International Standards, namely, ISO (International Organization for Standardization) which is responsible for all sectors excluding Electrotechnical, which is the responsibility of IEC (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of ITU (International Telecommunication Union).

3. ISO is an international non-governmental organization, the members of which are the National Standards Bodies (NSBs) of some 160 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

4. The principal deliverable of ISO is the International Standard. An International Standard is developed according to principles stipulated by the World Trade Organization's Technical Barriers to Trade Committee (WTO/TBT), especially: Transparency, Openness, Impartiality and consensus. It is developed in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry).

5. Any general information regarding the International Organization for Standardization (ISO) can be found on <http://www.iso.org/>.

**ISO/TC 34 - 'Food Products Technical Committee' of ISO**

6. The need to make food and feed of suitable quality and safety available in sufficient amounts and therefore the possible export and the necessary import of food and feed are a focus of interest in each society. In that context, international standardization in food and feed sectors, whose fundamental aim is to promote the development of industry and trade, was one of the first topics chosen when ISO was established in 1947.

7. To answer this problem, the field of activity of ISO/TC 34 and its subcommittees covers practically all those products of agriculture that are produced directly or after processing for human consumption and animal feeding. These are: oleaginous seeds and fruits and oilseed meals, cereals and pulses, fresh, dry and dried fruits and vegetables and derived products, milk and milk products, meat, poultry, fish, eggs and their products, animal and vegetable fat and oils, tea and coffee, and products that increase the hedonic value of foods, such as spices, culinary herbs and condiments.

8. In order to deal with all these topics, ISO/TC 34 is divided into several subcommittees.

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<sup>1</sup> This part A of the report has been prepared under the ISO 's own responsibility

9. More information about the scope, structure, contact details as well as quick links to the work programme and business plan of [ISO/TC 34](#) is available on the ISO website.

### **ISO/TC 34/SC 7 - 'Spices, Culinary Herbs and Condiments Subcommittee' of ISO/TC 34**

10. ISO/TC 34/SC 7 'Spices, Culinary Herbs and Condiments Subcommittee' was established in 1961. This subcommittee is engaged in the formulation of International Standards in the field of spices, culinary herbs and condiments. The Secretariat and Chairmanship of the sub-committee is with India (Bureau of Indian Standards) since its inception. Bureau of Indian Standards is the National Standards Body of India. The sub-committee has held so far 27 meetings and met last time in Kochi, India from 3-5 December 2012. The next meeting of ISO/TC 34/SC 7 is planned in second semester of 2014 in Madrid, Spain. Generally, the meetings of this sub-committee are held at eighteen month intervals.

### **Membership Status of ISO/TC 34/SC 7**

11. A list of members bodies in ISO/TC 34/SC 7 is enclosed as Annex 1. At present there are 19 'P' members and 26 'O' members in ISO/TC 34/SC 7. 'P' Members ('Participating Members') participate actively in the work, with an obligation to vote on all questions formally submitted for voting within the technical committee or subcommittee, on enquiry drafts and final draft International Standards, and to participate in meetings. 'O' members (Observing Members) follow the work as an observer, and therefore receive committee documents and have the right to submit comments and to attend meetings. Efforts are continually being made to increase the membership of ISO/TC 34/SC 7.

12. In addition, ISO/TC 34/SC 7 has a wide network of liaisons with both governmental and non-governmental organizations. There are 9 organizations in liaison with ISO/TC 34/SC 7. These are: AOAC International, Association of Analytical Communities, Codex Alimentarius Commission (CAC), European Commission (EC), European Spice Association (ESA), International Federation of Essential Oils and Aroma Trades (IFEAT), The International General Produce Association Ltd. (IGPA), International Pepper Community (IPC), United Nations Economic Commission for Europe (UNECE) and World Customs Organization (WCO).

### **Work Programme of ISO/TC 34/SC 7**

13. A list of published ISO standards under the direct responsibility of ISO/TC 34/SC 7 is enclosed as Annex 2. ISO/TC 34/SC 7 has published 68 International Standards. They are mainly product specifications (43) but there are also standards on nomenclature (2), sampling (1) and test methods (22).

14. The current work programme of ISO/TC 34/SC 7 includes revision of the following International Standards:

- ISO 676 *Spices and condiments — Botanical nomenclature*
- ISO 1208 *Spices and condiments — Determination of filth*
- ISO 3493 *Vanilla — Vocabulary*
- ISO 6539 *Cinnamon (Cinnamomum zeylanicum Blume) — Specification*

15. Further, the following new subjects have been identified for standardization:

- Spices - Determination of Sudan dyes I, II, III and IV — Method using HPLC/HPLC-MS/MS
- Asafoetida
- Dried Dill
- Dried Parsley
- Lemon Grass
- Curry Leaves
- Guidelines for Harvesting, Packaging and Storage of Saffron.

### **ISO/TC 34/SC 7 and CCSC — The Way Forward**

16. Actually, the most important liaison organization of ISO/TC 34/SC 7 is the Codex Alimentarius Commission (CAC). Codex Alimentarius Commission (CAC) has a B-Liaison (Organizations which have indicated a wish to be kept informed of the work of the technical committee or subcommittee) with ISO/TC 34/SC 7.

17. As per WTO the Codex standard is regarded as the basis for international trade. However, it may be added that in the absence of Codex standards in the area of spices, culinary herbs and condiments, the

International Standards laid down by ISO/TC 34/SC 7 form the baseline for international trade.

18. In spite of their main difference, Codex is a governmental and ISO a non-governmental organization, as the field of their activity is the same it is important to avoid overlaps, as much as possible, and to foster cooperation.

19. To achieve this objective and as a way forward, it is suggested that the vast resources of ISO/TC 34/SC 7 can be used as references for Codex standards in this area. In fact, ISO standards can be used as a starting point to frame the Codex standards for spices, culinary herbs and condiments. CCSCH may refer to and endorse the methods of test and analysis developed by ISO/TC 34/SC 7.

20. Further, the cooperation between ISO/TC 34/SC 7 and CCSCH can be developed by cross-liaison in order to be informed of the works undertaken and be able to comment on the documents drafted (for integration, and to avoid duplication and conflict of the work).

21. The above suggestions are consistent with the term of reference of CCSCH as reproduced below:

- a) To elaborate worldwide standards for spices and culinary herbs in their dried and dehydrated state in whole, ground and cracked or crushed form.
- b) To consult, as necessary, with other international organizations in the standard formulation process to avoid duplication.

22. The collaboration and coordination between ISO/TC 34/SC 7 and CCSCH is easier since secretariats of both these committees are held by India.

**Members of ISO/TC 34/SC 7, Spices, Culinary Herbs and Condiments****Secretariat:**

India (BIS)

**Participating Countries:**

1. Argentina (IRAM)
2. Cameroon (ANOR)
3. Chile (INN)
4. China (SAC)
5. Egypt (EOS)
6. Germany (DIN)
7. Greece (ELOT)
8. Hungary (MSZT)
9. India (BIS)
10. Indonesia (BSN)
11. Iran, Islamic Republic of (ISIRI)
12. Ireland (NSAI)
13. Mauritius (MSB)
14. Nigeria (SON)
15. Portugal (IPQ)
16. Romania (ASRO)
17. Russian Federation (GOST R)
18. Spain (AENOR)
19. Sri Lanka (SLSI)

**Observing Countries:**

1. Bangladesh (BSTI)
2. Croatia (HZN)
3. Cuba (NC)
4. Cyprus (CYS)
5. Czech Republic (UNMZ)
6. Estonia (EVS)
7. Ethiopia (ESA)
8. France (AFNOR)
9. Hong Kong (ITCHKSAR) (Correspondent member)
10. Italy (UNI)
11. Japan (JISC)
12. Kenya (KEBS)
13. Korea, Republic of (KATS)
14. Mexico (DGN)
15. Morocco (IMANOR)
16. Netherlands (NEN)
17. Poland (PKN)
18. Qatar (QS)
19. Serbia (ISS)
20. Singapore (SPRING SG)
21. Slovakia (UTN)
22. Tanzania, United Republic of (TBS)
23. Thailand (TISI)
24. Trinidad and Tobago (TTBS)
25. Turkey (TSE)
26. United Kingdom (BSI)

As of November 2013

## Annex 2

Published ISO Standards under the Direct Responsibility of ISO/TC 34/SC 7 *Spices, Culinary Herbs and Condiments*

## GENERAL (Nomenclature — Vocabulary)

SI No.	Standard	Standard	Abstract
1	<a href="#">ISO 676:1995</a> <a href="#">ISO 676:1995/Cor 1:1997</a>	Spices and condiments — Botanical nomenclature	Gives a non-exhaustive list of the botanical names and common names in English and French of plants or parts of plants used as spices or condiments. Replaces the first edition, which has been technically revised.
2	<a href="#">ISO 3493:1999</a>	Vanilla — Vocabulary	Defines the most commonly used terms relating to vanilla. It is applicable to the following species of vanilla plants: a) <i>Vanilla fragrans</i> (Salisbury) Ames, syn. <i>Vanilla planifolia</i> Andrews, commercially known under various names associated with the geographical origin, such as Bourbon, Indonesia and Mexico; b) <i>Vanilla tahitensis</i> J.W. Moore; and c) Certain forms obtained from seeds, possibly hybrids, of <i>Vanilla fragrans</i> (Salisbury) Ames. It is not applicable to <i>Vanilla pompona</i> Schiede (Antilles vanilla).

## SPECIFICATIONS (including storage and transport)

SI No.	Standard	Standard	Abstract
1	<a href="#">ISO 882-1:1993</a> <a href="#">ISO 882-1:1993/Cor 1:1996</a>	Cardamom ( <i>Elettaria cardamomum</i> (Linnaeus) Maton var. <i>minuscula</i> Burkill) — Specification — Part 1: Whole capsules	Specifies requirements for the following: odour and flavour, freedom from insects, moulds, etc., extraneous matter, empty and malformed capsules, immature and shrivelled capsules, chemical properties, grading, sampling, test methods, packing and marking. Recommendations relating to storage and transport conditions are given in annex.
2	<a href="#">ISO 882-2:1993</a> <a href="#">ISO 882-2:1993/Cor 1:1996</a>	Cardamom ( <i>Elettaria cardamomum</i> (Linnaeus) Maton var. <i>minuscula</i> Burkill) — Specification — Part 2: Seeds	Specifies requirements for the following: odour and flavour, freedom from insects, moulds, etc., extraneous matter, light seeds, chemical properties, grading, sampling, test methods, packing and marking. Recommendations relating to storage and transport conditions are given in annex.
3	<a href="#">ISO 959-1:1998</a>	Pepper ( <i>Piper nigrum</i> L.), whole or ground — Specification — Part 1: Black pepper	Specifies requirements for black pepper ( <i>Piper nigrum</i> L.) (see ISO 676), whole or ground at the following commercial stages: a) pepper sold by the producing country without cleaning or after a partial cleaning, without preparation or grading, called “non-processed (NP) or semi-processed (SP) pepper” in this part of ISO 959; b) pepper sold by the producing country after cleaning, preparation and/or grading, called “processed (P) pepper”, which can, in certain cases, be re-sold directly to the consumers. Recommendations relating to storage and transport conditions are given in annex C. Information regarding the microscopic structure of the pepper berry is given in annex D. This part of ISO 959 is not applicable to black pepper categories called “light”.
4	<a href="#">ISO 959-2:1998</a>	Pepper ( <i>Piper nigrum</i> L.), whole or ground — Specification — Part 2: White pepper	Specifies requirements for white pepper ( <i>Piper nigrum</i> L.), whole or ground, at the following commercial stages: a) semi-processed (SP); b) processed (P). Recommendations relating to storage and transport conditions are given in annex B. This part of ISO 959 is not applicable to white pepper categories called “light”.

SI No.	Standard	Standard	Abstract
5	<a href="#">ISO 972:1997</a>	Chillies and capsicums, whole or ground (powdered) — Specification	This International Standard specifies requirements for chillies and capsicums in the whole or ground (powdered) form. Two main species of capsicum, <i>Capsicum annuum</i> L. and <i>C. frutescens</i> L., and their sub-species <i>C. chinense</i> , <i>C. pubescens</i> and <i>C. pendulum</i> are covered. This International Standard does not apply to “chili powder” (see also note under 4.2) and paprika (see ISO 7540). Recommendations relating to conditions of storage and transport are given in annex B.
6	<a href="#">ISO 973:1999</a>	Pimento (allspice) [ <i>Pimenta dioica</i> (L.) Merr.], whole or ground — Specification	This International Standard specifies requirements for pimento or allspice [ <i>Pimenta dioica</i> (L.) Merr.], whole or ground. Recommendations relating to storage and transport conditions are given in annex A.
7	<a href="#">ISO 1003:2008</a>	Spices — Ginger ( <i>Zingiber officinale</i> Roscoe) — Specification	Specifies requirements for ginger ( <i>Zingiber officinale</i> Roscoe). Annex A specifies a method for the determination of calcium. Recommendations for storage and transport conditions are given in Annex B.
8	<a href="#">ISO 1237:1981</a>	Mustard seed — Specification	Establishes the requirements for this product. Describes sampling, methods of test, packing and marking. Annex A covers the determination of loss in mass at 103 degrees centigrade, Annex B the determination of allyl isothiocyanate, Annex C the determination of p-hydroxybenzyl isothiocyanate by means of the colorimetric method, Annex D the determination of p-hydroxybenzyl isothiocyanate by means of the argentimetric method and Annex E includes recommendations concerning storage and transport conditions.
9	<a href="#">ISO 2253:1999</a>	Curry powder — Specification	Specifies the requirements for curry powder, which is used as a flavouring ingredient in the preparation of foods and is traded internationally. Recommendations relating to conditions for storage and transport are given in annex A.
10	<a href="#">ISO 2254:2004</a>	Cloves, whole and ground (powdered) — Specification	Specifies requirements for whole and ground (powdered) cloves, <i>Syzygium aromaticum</i> (L.) Merr. et L. M. Perry. Recommendations relating to storage and transport are given for information.
11	<a href="#">ISO 2255:1996</a>	Coriander ( <i>Coriandrum sativum</i> L.), whole or ground (powdered) — Specification	Specifies the requirements for coriander ( <i>Coriandrum sativum</i> L.), in the whole and ground (powdered) forms. Recommendations relating to storage and transport conditions are given in annex A.
12	<a href="#">ISO 2256:1984</a>	Dried mint (spearmint) ( <i>Mentha spicata</i> Linnaeus syn. <i>Mentha viridis</i> Linnaeus) — Specification	Covers the requirements for leaves of this spice in whole, broken or rubbed form. The term ‘dried mint’ included dehydrated mint, i.e. artificially dried mint. Does not apply to dried peppermint for which requirements are given in ISO 5563. Describes sampling, method of test, packing and marking. Recommendations concerning storage and transport conditions are given in an annex.
13	<a href="#">ISO 3632-1:2011</a>	Spices — Saffron ( <i>Crocus sativus</i> L.) — Part 1: Specification	Establishes specifications for dried saffron obtained from the pistils of <i>Crocus sativus</i> L. flowers. It applies to saffron in both of the following forms: a) filaments and cut filaments; b) powder.
14	<a href="#">ISO 5559:1995</a>	Dehydrated onion ( <i>Allium cepa</i> Linnaeus) — Specification	Specifies requirements for dehydrated onion ( <i>Allium cepa</i> L.) and gives recommendations relating to microbiological requirements including to transport and storage. Cancels and replaces the second edition, which has been technically revised.

SI No.	Standard	Abstract
15	<a href="#">ISO 5560:1997</a>	Dehydrated garlic ( <i>Allium sativum</i> L.) — Specification
16	<a href="#">ISO 5561:1990</a>	Black caraway and blond caraway ( <i>Carum carvi</i> Linnaeus), whole — Specification
17	<a href="#">ISO 5562:1983</a>	Turmeric, whole or ground (powdered) — Specification
18	<a href="#">ISO 5563:1984</a>	Dried peppermint ( <i>Mentha piperita</i> Linnaeus) — Specification
19	<a href="#">ISO 5565-1:1999</a>	Vanilla [ <i>Vanilla fragrans</i> (Salisbury) Ames] — Part 1: Specification
20	<a href="#">ISO 6465:2009</a>	Spices — Cumin ( <i>Cuminum cyminum</i> L.) — Specification
21	<a href="#">ISO 6538:1997</a>	Cassia, Chinese type, Indonesian type and Vietnamese type [ <i>Cinnamomum aromaticum</i> (Nees) syn. <i>Cinnamomum cassia</i> (Nees) ex Blume, <i>Cinnamomum burmanii</i> (C.G. Nees) Blume and <i>Cinnamomum loureirii</i> Nees] — Specification
22	<a href="#">ISO 6539:1997</a>	Cinnamon, Sri Lankan type, Seychelles type and Madagascan type ( <i>Cinnamomum zeylanicum</i> Blume) — Specification
23	<a href="#">ISO 6574:1986</a>	Celery seed ( <i>Apium graveolens</i> Linnaeus) — Specification
24	<a href="#">ISO 6575:1982</a>	Fenugreek, whole or ground (powdered) — Specification
25	<a href="#">ISO 6576:2004</a>	Laurel ( <i>Laurus nobilis</i> L.) — Whole and ground leaves — Specification

SI No.	Standard	Standard	Abstract
26	<a href="#">ISO 6577:2002</a>	Nutmeg, whole or broken, and mace, whole or in pieces ( <i>Myristica fragrans</i> Houtt.) — Specification	Specifies requirements for nutmeg, whole or broken, and for mace, whole or in pieces, obtained from the nutmeg tree ( <i>Myristica fragrans</i> Houtt.) for wholesale commercial purposes. NOTE As nutmeg and mace are obtained from the same plant, it was considered preferable to give the specifications for these two spices in one International Standard. It does not apply to Papua-type nutmeg and mace ( <i>Myristica argentea</i> Warburg). Recommendations relating to storage and transport conditions are given in annex A.
27	<a href="#">ISO 6754:1996</a>	Dried thyme ( <i>Thymus vulgaris</i> L.) — Specification	Specifies the requirements for dried thyme ( <i>Thymus vulgaris</i> L.) leaves in the rubbed form. Recommendations relating to storage and transport conditions are given in annex A.
28	<a href="#">ISO 7377:1984</a>	Juniper berries ( <i>Juniperus communis</i> Linnaeus) — Specification	Specifies requirements for whole berries of <i>Juniperus communis</i> Linnaeus. Further it includes sampling, methods of test, packing and marking. An annex A lists areas of production. Recommendations relating to storage and transport conditions are given in an annex B.
29	<a href="#">ISO 7386:1984</a>	Aniseed ( <i>Pimpinella anisum</i> Linnaeus) — Specification	Specifies the requirements for whole aniseed, describes sampling, methods of test, and packing and marking. Annex A includes a list indicating the areas of production while recommendations relating to storage and transport conditions are given in Annex B.
30	<a href="#">ISO 7540:2006</a>	Ground paprika ( <i>Capsicum annum</i> L.) — Specification	Defines the requirements for ground paprika. A method for the determination of the moisture content of ground paprika is given in Annex A. Recommendations relative to storage and transport conditions are given in Annex B. A list of terms used in different countries for paprika ( <i>Capsicum annum</i> L.) is given in Annex C. This International Standard is not applicable to ground chillies and capsicums.
31	<a href="#">ISO 7925:1999</a>	Dried oregano ( <i>Origanum vulgare</i> L.) — Whole or ground leaves — Specification	Specifies requirements for processed or semi-processed dried oregano <sup>1)</sup> leaves of <i>Origanum</i> genus, species and sub-species, excluding <i>Origanum majorana</i> , in the whole or ground (powdered) form. Recommendations relating to storage and transport conditions are given in annex A, for information.
32	<a href="#">ISO 7926:1991</a>	Dehydrated tarragon ( <i>Artemisia dracunculus</i> Linnaeus) — Specification	Specifies the requirements of dehydrated tarragon (methylchavicol type - called "French tarragon") in the form of whole or cut leaves and powder. Does not apply to elemicin-sabinene-type tarragon (called "Russian tarragon"). Annex A forms an integral part of this standard.
33	<a href="#">ISO 7927-1:1987</a>	Fennel seed, whole or ground (powdered) — Part 1: Bitter fennel seed ( <i>Foeniculum vulgare</i> P. Miller var. <i>vulgare</i> ) — Specification	Specifies the requirements for this product, describes sampling, methods of test, packing and marking and includes, in the annex, recommendations relating to storage and transport conditions. The grading of whole fennel and chemical requirements for both whole and ground fennel are listed in three tables.
34	<a href="#">ISO 7928-1:1991</a>	Savory — Specification — Part 1: Winter savory ( <i>Satureja montana</i> Linnaeus)	Specifies the requirements of winter savory in the form of sprigs, and whole or broken leaves. Does not apply to summer savory. Annexes A (recommendations to storage and transport conditions) and B are for information only.
35	<a href="#">ISO 7928-2:1991</a>	Savory — Specification — Part 2: Summer savory ( <i>Satureja hortensis</i> Linnaeus)	Specifies the requirements of summer savory in the form of sprigs, and whole or broken leaves. Does not apply to winter savory. Annexes A (recommendations to storage and transport conditions) and B are for information only.

SI No.	Standard	Standard	Abstract
36	<a href="#">ISO 10620:1995</a>	Dried sweet marjoram ( <i>Origanum majorana</i> L.) — Specification	Specifies requirements for dried sweet marjoram ( <i>Origanum majorana</i> L.) both as bunches (bouquets) and as rubbed. Recommendations relating to the conditions of storage and transport are given in annex A.
37	<a href="#">ISO 10621:1997</a>	Dehydrated green pepper ( <i>Piper nigrum</i> L.) — Specification	Specifies the requirements for dehydrated green pepper ( <i>Piper nigrum</i> L.). Recommendation relating to conditions of storage and transport are given in annex A.
38	<a href="#">ISO 10622:1997</a>	Large cardamom ( <i>Amomum subulatum</i> Roxb.), as capsules and seeds — Specification	Specifies requirements for large cardamom as capsules and seeds ( <i>Amomum subulatum</i> Roxb.). Recommendations relating to storage and transport are given in annex A.
39	<a href="#">ISO 11162:2001</a>	Peppercorns ( <i>Piper nigrum</i> L.) in brine — Specification and test methods	Specifies the requirements for peppercorns ( <i>Piper nigrum</i> L.) in brine. Specifies requirements for the following: Colour and size, odour and flavour, extraneous matter, Freedom from moulds, insects, preservatives, colouring matter and flavouring agents, piperine content of peppercorns in brine, characteristics of the brine and processing conditions and drained mass. Also specifies methods for determination of piperine content, total acidity, chloride content and net mass and drained mass as annexes.
40	<a href="#">ISO 11163:1995</a>	Dried sweet basil ( <i>Ocimum basilicum</i> L.) — Specification	Provides the requirements for dried sweet basil ( <i>Ocimum basilicum</i> ) leaves in cut form.
41	<a href="#">ISO 11164:1995</a>	Dried rosemary ( <i>Rosmarinus officinalis</i> L.) — Specification	Provides the requirements for dried rosemary ( <i>Rosmarinus officinalis</i> ) leaves in cut form.
42	<a href="#">ISO 11165:1995</a>	Dried sage ( <i>Salvia officinalis</i> L.) — Specification	Specifies the requirements for dried sage ( <i>Salvia officinalis</i> ). Applies for sage in form of whole or cut leaves.
43	<a href="#">ISO 11178:1995</a>	Star anise ( <i>Illicium verum</i> Hook. f.) — Specification	Specifies requirements for the dried fruits of the star anise tree ( <i>Illicium verum</i> Hook. f.). Annex B gives recommendations relating to the conditions of storage and transport.

#### METHODS OF ANALYSIS

SI No.	Standard	Standard	Abstract
1	<a href="#">ISO 927:2009</a> <a href="#">ISO 927:2009/Cor 1:2012</a>	Spices and condiments — Determination of extraneous matter and foreign matter content	Specifies a general procedure for visual examination, or with magnification not exceeding 10 times, of whole spices for the determination of macro filth. It is applicable to dehydrated herbs and spices.
2	<a href="#">ISO 928:1997</a>	Spices and condiments — Determination of total ash	Specifies a method for the determination of total ash from spices and condiments based on the destruction of organic matter by heating the test portion in contact with air to constant mass at a temperature of 550 °C. Specifies the principle, the reagent, the apparatus, the test procedure, the expression of results and the test report.
3	<a href="#">ISO 930:1997</a>	Spices and condiments — Determination of acid-insoluble ash	Specifies a method for the determination of acid-insoluble ash from spices and condiments based on treatment of the total ash, obtained as described in ISO 928, with hydrochloric acid, filtration, incineration and weighing of the residue.
4	<a href="#">ISO 939:1980</a>	Spices and condiments — Determination of moisture content — Entrainment method	Specifies a method consisting in determining the amount of water entrained by azeotropic distillation, using an organic liquid immiscible with water, and collected in a graduated tube. Lists the apparatus to be used and describes sampling, procedure, expression of results and the details to be included in the test report. An example of an entrainment distillation apparatus is given in an annex.

SI No.	Standard	Abstract
5	<a href="#">ISO 941:1980</a> Spices and condiments — Determination of cold water-soluble extract	Specifies a method based on the extraction of a test portion with cold water, filtration, drying of the extract obtained and weighing. Lists the apparatus to be used and describes sampling, procedure, expression of results and the details to be included in the test report.
6	<a href="#">ISO 1108:1992</a> Spices and condiments — Determination of non-volatile ether extract	Specifies the principle, the reagent, the apparatus, the test procedure, the expression of results and the test report.
7	<a href="#">ISO 1208:1982</a> Spices and condiments — Determination of filth	Specifies a method for quantitative determination consisting in washing the product with chloroform, examining the washings for heavy filth and sand, washing the product with water and agitating it with light petroleum. After the light filth has collected at the interface between the liquids after separation, it is transferred to a filter paper and microscopically examined for contaminants.
8	<a href="#">ISO 2825:1981</a> Spices and condiments — Preparation of a ground sample for analysis	Basis for this method is the laboratory sample obtained by the method specified in ISO 948. The principle of determination consists in grinding the laboratory sample, which has been previously mixed, to obtain particles of the size specified in the International Standard appropriate to the spice or condiment concerned or, if not so specified, to obtain particles of size approximately 1 mm.
9	<a href="#">ISO 3513:1995</a> Chillies — Determination of Scoville index	Specifies a method for the determination of the Scoville index of chillies, whole or ground, unadulterated by other spices or products.
10	<a href="#">ISO 3588:1977</a> Spices and condiments — Determination of degree of fineness of grinding — Hand sieving method (Reference method)	Defines the procedure to be used to obtain the distribution of particles in a sample. Details the apparatus, the procedure, and the presentation of results. The properties of ground spices relevant to sieving are listed in an annex.
11	<a href="#">ISO 3632-2:2010</a> Spices — Saffron ( <i>Crocus sativus</i> L.) — Part 2: Test methods	Specifies test methods for dried saffron obtained from the <i>Crocus sativus</i> L. flower. It is applicable to saffron: a) filaments and cut filaments; b) powder.
12	<a href="#">ISO 5564:1982</a> Black pepper and white pepper, whole or ground — Determination of piperine content — Spectrophotometric method	Describes a method based on a number of international collaborative studies carried out over a long period of time. The method seeks to optimize a number of variables in an attempt to define procedures and provide a common measure of the pungency of pepper. The principle consists in the extraction of the pungent compounds with ethanol and spectrophotometric measurement at 343 nm.
13	<a href="#">ISO 5565-2:1999</a> Vanilla [ <i>Vanilla fragrans</i> (Salisbury) Ames] — Part 2: Test methods	Specifies test methods for the analysis of vanilla belonging to the species <i>Vanilla fragrans</i> (Salisbury) Ames, syn. <i>Vanilla planifolia</i> Andrews. This part of ISO 5565 is applicable to vanilla in pods, cut in bulk, and in the form of powder. It is not applicable to vanilla extracts. Three test methods for the analysis of vanilla are described in this part of ISO 5565: a) the determination of moisture content in vanilla pods and powder; b) the determination of vanillin, vanillic acid, 4-hydroxybenzaldehyde and 4-hydroxybenzoic acid by highperformance liquid chromatography; c) the determination of vanillin content by an ultraviolet spectrometric method.
14	<a href="#">ISO 5566:1982</a> Turmeric — Determination of colouring power — Spectrophotometric method	Describes a method based on the extraction of the pigments of turmeric with hot ethanol, dilution of the extract and spectrophotometric measurement at the wavelength of maximum absorption. The result of the measurement is expressed as curcumin as a percentage by mass.

SI No.	Standard	Abstract
15	<a href="#">ISO 5567:1982</a> Dehydrated garlic — Determination of volatile organic sulphur compounds	The method consists in macerating of a test portion in aqueous medium, distillation of the sulphur compounds, and argentimetric titration of the distillate in nitric acid medium. A figure shows a recommended distillation apparatus.
16	<a href="#">ISO 6571:2008</a> Spices, condiments and herbs — Determination of volatile oil content (hydrodistillation method)	Specifies a method for the determination of the volatile oil content of spices, condiments and herbs.
17	<a href="#">ISO 7541:1989</a> Ground (powdered) paprika — Determination of total natural colouring matter content	The method consists in extracting of the natural colouring matter content with acetone, measuring of the absorbance of the solution obtained using a spectrometer at a wavelength of 460 nm.
18	<a href="#">ISO 7542:1984</a> Ground (powdered) paprika ( <i>Capsicum annuum</i> Linnaeus) — Microscopical examination	Gives a detailed description of the morphological and anatomical structure of paprika and specifies a method of examination consisting in clarifying a pinch of ground paprika on a microscope slide and examining the particles under appropriate magnification.
19	<a href="#">ISO 7543-1:1994</a> Chillies and chilli oleoresins — Determination of total capsaicinoid content — Part 1: Spectrometric method	Specifies a method for the determination, by a spectrometric method, of the total capsaicinoid content of whole or powdered chillies and their oleoresins. This method of analysis requires discoloration by carbon black.
20	<a href="#">ISO 7543-2:1993</a> Chillies and chilli oleoresins — Determination of total capsaicinoid content — Part 2: Method using high-performance liquid chromatography	Specifies a method for the determination, by high-performance liquid chromatography, of the total capsaicinoid content of whole or powdered chillies (usually <i>Capsicum frutescens</i> L.) and their extracts (oleoresins). This content is calculated from the total of capsaicin, nordihydrocapsaicin and dihydrocapsaicin, expressed as nonyl acid vanillylamide, which is the chosen reference substance. This method enables the separation of capsaicin and nonyl acid vanillylamide.
21	<a href="#">ISO 11027:1993</a> Pepper and pepper oleoresins — Determination of piperine content — Method using high-performance liquid chromatography	Specifies a method for the determination (by high-performance liquid chromatography) of the piperine content of ground pepper, whole pepper and oleoresins of pepper. The method enables a separation and, if necessary, the determination of the other alkaloids of pepper (isochavicine, isopiperine and piperittin).
22	<a href="#">ISO 13685:1997</a> Ginger and its oleoresins — Determination of the main pungent components (gingerols and shogaols) — Method using high-performance liquid chromatography	Describes a method for the determination of gingerols (6)-G, (8)-G and (10)-G and the corresponding shogaols (6)-S, (8)-S and (10)-S in dried ginger or in oleoresins of ginger, by high-performance liquid chromatography (HPLC) in the reverse phase. Chemical structures of gingerols and shogaols are shown in annex A.

#### SAMPLING

SI No.	Standard	Abstract
1	<a href="#">ISO 948:1980</a> Spices and condiments — Sampling	Contains information on the apparatus required, constitution of lots, the method of taking increments, bulk samples, laboratory samples, packing and labelling of samples, storage and despatch of samples, and the data to be included in the sampling report.

## B. International Trade Centre<sup>2</sup>

ITC's mission is to foster sustainable economic development and contribute to achieving the Millennium Development Goals in developing countries and countries with economies in transition through trade and international business development.

### Geographic coverage:

In the recent (5) years, our work in spices has covered the following countries, with focus either on the entire sector or specific products:

Countries, sectors and products	
<b>Bangladesh:</b>	Natural products, herbs and spices including medicinal herbs
<b>Comoros:</b>	Vanilla, ylang- ylang, cloves
<b>Ethiopia:</b>	Turmeric, ginger, chillies
<b>Fiji:</b>	Chillies, turmeric
<b>Grenada:</b>	Nutmeg and mace
<b>Haiti:</b>	Aromatics and flavouring
<b>Jamaica:</b>	Spices and herbs
<b>Liberia:</b>	Birds eye chilli
<b>Madagascar:</b>	Vanilla
<b>Sierra Leone:</b>	Ginger
<b>Sri Lanka:</b>	Spices sector
<b>Tanzania:</b>	Pepper, Zanzibar cloves
<b>Uganda:</b>	Spices sector
<b>Vanuatu:</b>	Essential oils, lemongrass and sandalwood

ITC

### Benefits accrued

ITC's work strengthens the spices sector to improve the quality and quantity of exports by:

- improving the international competitiveness of small and medium-sized exporters;
- linking enterprises to market opportunities;
- strengthening value chains; and
- reinforcing related intermediary organizations to enable improved sector performance.

We adopt a realistic, market-led approach to strengthen the viability of sectors. We work in partnership with the relevant sector associations, trade support institutions and other stakeholders, including international agencies, in order to improve sustainability and returns to smallholders.

In the spices sector our partners in various projects include the International Institute of Tropical Agriculture (IITA), Food and Agriculture Organization of the United Nations (FAO), International Fund for Agriculture Development (IFAD), International Food Policy Research Institute (IFPRI), Agricultural Research for Development (CIRAD), Australian Centre for International Agricultural Research (ACIAR), the German Society for International Cooperation (GIZ), and Dutch Centre for Promotion of Imports from Developing Countries (CBI).

### Technical delivery modalities

Technical delivery in the spices sector is carried out through the provision of related:

- Information and awareness raising: publications, market prices, directories of buyers and sector associations, technical regulations;
- Market intelligence: market research and opportunity analyses, identification of potential, and niche markets;
- Sector strategy design and implementation, stakeholder consultations and policy advice; and
- Capacity building including training for enterprises and training of trainers, with technical advice on quality management, packaging, supply chain, marketing and branding.

<sup>2</sup> This part B of the report has been prepared under the ITC 's own responsibility

The assistance provided helps SMEs in the spices sector to identify potential and niche markets, meet market needs (technical: standards, technical regulations, SPS measures and conformity assessment procedures, and buyers' requirements), upgrade value chains and facilitate the creation of linkages between sellers and buyers.

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### C. INTERNATIONAL PEPPER COMMUNITY<sup>3</sup>

#### 1. IPC Grade Specifications for Pepper (*Piper nigrum* L.) - Grades of whole pepper, black and white

Quality Parameter	Black Pepper (whole)		White Pepper (whole)	
	IPC BP-1	IPC BP-2	IPC WP-1	IPC WP-2
<b>Macro</b>				
1. Bulk Density (g/l minimum)	550	500	600	600
2. Moisture (% vol/weight, maximum)	12	14	13	15
3. Light Berries/Corns (% by weight, maximum)	2	10	1	2
4. Extraneous Matter (% by weight, maximum)	1	2	1	2
5. Black Berries/Corns (% by weight, maximum)	Not applicable	Not applicable	1	2
6. Mouldy Berries/Corns (% by weight, maximum)	1	3	1	3
7. Insect Defiled Berries/Corns (% by weight, maximum)	1	2	1	2
8. Whole Insects, Dead (by count, maximum)	Not more than 2 numbers in each sub sample and not more than 5 numbers in total sub-samples.		Not more than 2 numbers in each sub sample and not more than 5 numbers in total sub-samples.	
Mammalian or/and Other Excreta (by count, maximum)	Shall be free of any visible mammalian or/and other excreta.		Shall be free of any visible mammalian or/and other excreta.	
<b>Microbiological</b>				
1. Salmonella (detection / 25g)	Negative	Negative	Negative	Negative

#### **NOTES:**

(a) IPC BP-2 and IPC WP-2 are grades of pepper, which has been partially processed (i.e. has gone through some basic cleaning processes like sieving and winnowing).

(b) IPC BP-1 and IPC WP-1 are grades for pepper, which has been further processed (i.e. has gone through further cleaning processes including sieving, cycloning, destoning, washing and mechanical drying).

<sup>3</sup> This part C of the report has been prepared under the International Pepper Community's own responsibility

## 2. IPC Grade Specifications for Pepper (*Piper nigrum* L.) - Grades of treated whole pepper, black and white

Quality Parameter	Black Pepper		White Pepper	
	IPC BPT-1	IPC BPT-2	IPC WPT-1	IPC WPT-2
<b>Macro</b>				
1. Bulk Density (g/l, minimum)	550	500	600	600
2. Moisture (% vol/weight, maximum)	12	12	12	12
3. Light Berries/Corns (% by weight, maximum)	2	10	1	2
4. Extraneous Matter (% by weight, maximum)	1	2	1	2
5. Black Berries/Corns (% by weight, maximum)	Not applicable	Not applicable	1	2
6. Mouldy Berries/Corns (% by weight, maximum)	Nil	Nil	Nil	Nil
7. Insect Defiled Berries/Corns (% by weight, maximum)	1	2	1	2
8. Whole Insects, Dead (by count, maximum)	Not more than 2 numbers in each sub sample and not more than 5 numbers in total of all sub-samples.		Not more than 2 numbers in each sub sample and not more than 5 numbers in total of all sub-samples.	
9. Mammalian or/and Other Excreta (by count, maximum)	Shall be free of any visible mammalian or/and other excreta.		Shall be free of any visible mammalian or/and other excreta.	
<b>Microbiological</b>				
1. Aerobic Plate Count (cfu/g, maximum)	$5 \times 10^4$	$5 \times 10^4$	$5 \times 10^4$	$5 \times 10^4$
2. Mould & Yeast (cfu/g, maximum)	$1 \times 10^3$	$1 \times 10^3$	$1 \times 10^3$	$1 \times 10^3$
3. Escherichia coli (MPN/g)	< 3	< 3	< 3	< 3
4. Salmonella (detection / 25g)	Negative	Negative	Negative	Negative

- IPC BPT-1 and IPC WPT-1 are grades for pepper, which has been processed i.e. pepper which has gone through further cleaning processes including sieving, cycloning, destoning, washing and mechanical drying, and has subsequently undergone an internationally accepted treatment process to reduce its microbiological contamination.
- IPC BP-2 and IPC WP-2 are grades for pepper, which has been partially processed (i.e. pepper has gone through basic cleaning processes like sieving and winnowing), and has subsequently undergone an internationally accepted treatment process to reduce its microbiological contamination.
- The treatment process shall be undertaken by qualified/trained personnel, in compliance with internationally accepted standard operational procedures and regulations regarding the process.
- The treated pepper shall be packaged in suitable, clean and sterile packaging materials, clearly labeled to indicate, *inter alia*, the treatment process as required by standard regulations, and appropriately handled and stored in a clean & well-ventilated store to protect and maintain the integrity of the product for the entire period of its intended shelf-life.
- Cfu = Colony-Forming Unit.
- MPN = Most Probable Number.