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Cinnamon, Sri Lankan type, Seychelles type and Madagascan type (*Cinnamomum zeylanicum* Blume) — Specification

*Cannelle type Sri Lanka, type Seychelles et type Madagascar (*Cinnamomum zeylanicum *Blume) — Spécifications*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6539 was prepared by Technical Committee ISO/TC 34, *Agricultural food products,* Subcommittee SC 7, *Spices and condiments.*

This second edition cancels and replaces the first edition (ISO 6539:1983), which has been technically revised.

Annex A of this International Standard is for information only.

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Cinnamon, Sri Lankan type, Seychelles type and Madagascan type (*Cinnamomum zeylanicum* Blume) — Specification

1 Scope

This International Standard specifies requirements for whole or ground (powdered) cinnamon of the Sri Lankan type, Madagascan type and Seychelles type, which is the bark of the tree or shrub *Cinnamomum zeylanicum* Blume.

Recommendations relating to storage and transport conditions are given in annex A.

NOTE — Requirements for cassia (Chinese type, Indonesian type and Vietnamese type) are given in ISO 6538[1)].

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of the publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 927:1982, *Spices and condiments — Determination of extraneous matter content.*

ISO 928:—[2)], *Spices and condiments — Determination of total ash.*

ISO 930:—[3)], *Spices and condiments — Determination of acid-insoluble ash.*

ISO 939:1980, *Spices and condiments — Determination of moisture content — Entrainment method.*

ISO 948:1980, *Spices and condiments — Sampling.*

ISO 1208:1982, *Spices and condiments — Determination of filth.*

ISO 2825:1981, *Spices and condiments — Preparation of a ground sample for analysis.*

ISO 6571:1984, *Spices, condiments and herbs — Determination of volatile oil content.*

1) ISO 6538:1997, *Cassia, Chinese type, Indonesian type, Vietnamese type [*Cinnamomum aromaticum *Nees, syn* Cinnamomum cassia (*Nees) ex Blume,* Cinnamomum loureirii *Nees and* Cinnamomum burmanii *(C.G. Nees) Blume] — Specification.* (To be published)

2) To be published. (Revision of ISO 928:1980)

3) To be published. (Revision of ISO 930:1980)

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 cinnamon quills (full tubes): Scraped peel of the inner bark of mature plantation cinnamon shoots joined together by overlaps, the hollow of which has been filled with small pieces of the same peel and thereafter dried in the sun after air curing.

3.2 cinnamon quillings (broken tubes): Broken pieces and splits of varying sizes of all grades of cinnamon quills.

3.3 cinnamon featherings: Pieces of inner bark, obtained by peeling and/or scraping the bark of small twigs and stalks of plantation cinnamon shoots, which may include a quantity of chips as specified.

3.4 cinnamon chips: Dried unpeelable bark of plantation cinnamon, inclusive of the outer bark, which has been obtained by beating or scraping the shoots.

3.5 ground cinnamon: Powder obtained by grinding cinnamon of the types considered in this International Standard, excluding all additives.

3.6 whole cinnamon: All commercial forms of cinnamon except cinnamon powder.

3.7 foxing: The occurrence of reddish-brown patches on the surface of the quills, which may become dark brown with time.

3.8 bale: A package of any one particular grade of quills wrapped in a suitable material for export purposes.

4 Types and classification

4.1 Types

4.1.1 Sri Lankan type cinnamon

This is the dried bark of cultivated varieties of the species *Cinnamomum zeylanicum* Blume of the Lauraceae family.

Sri Lankan type cinnamon is produced in four forms:

a) quills (see 3.1);

b) quillings (see 3.2);

c) featherings (see 3.3);

d) chips (see 3.4).

4.1.2 Seychelles type cinnamon

This is the bark of trunks or branches of *Cinnamomum zeylanicum* Blume, cultivated on the Seychelles.
Seychelles type cinnamon is produced in three forms:

a) rough cinnamon bark, which consists of slightly curved, elongated, irregular, medium or small pieces of the whole unscraped bark;

b) scraped cinnamon bark, which is obtained from younger shoots from bushes of the same species; the shoots are scraped with a curved knife before the bark is detached from the wood;

c) quills and quillings, which are prepared from the young shoots, of bushes in a way similar to that used for Sri Lankan type cinnamon.

4.1.3 Madagascan type cinnamon

This is the bark of trunks or branches of *Cinnamomum zeylanicum* Blume, which grows wild on Madagascar. It is produced either

a) in the form of simple, hollow tubes of unscraped or scraped bark, of rather coarse appearance, about 30 cm long, cut from smaller branches with a knife; or more usually

b) in the form of unscraped or scraped pieces of bark from the larger branches and trunks, broken off with the flat side of a hatchet.

4.2 Commercial grades

4.2.1 Sri Lankan type cinnamon

4.2.1.1 Quills

For classification, see table 1.

4.2.1.2 Quillings

Quillings may contain up to 3 % (*m/m*) of featherings and chips.

4.2.1.3 Featherings

Featherings may contain up to 5 % (*m/m*) of chips.

4.2.1.4 Chips

Chips shall consist of well dried and unpeelable cinnamon bark.

4.2.2 Seychelles type and Madagascan type cinnamon

For classification, see table 2.

5 Ground cinnamon

Ground cinnamon shall consist solely of the types of cinnamon listed in clause 4.

NOTE — If there is a designation of origin, the ground cinnamon should be prepared exclusively from the barks concerned.

Table 1 — Classification for quills for Sri Lankan type cinnamon

Commercial designation of grades and qualities	Diameter of quills max. mm	Number of whole quills (1 050 mm) per kg min.	Extent of foxing[1)] max.[2)] %	Minimum length of quills in a bale mm	Pieces of tube and broken pieces of the same quality per bale max. % (*m/m*)
Alba	6	45	Nil	200	1
Continental					
C 00000 special	6	35	10		
C 00000	10	31	10		
C 0000	13	24	10	200	1
C 000	16	22	15		
C 00	17	20	20		
C 0	19	18	25		
Mexican					
M 00000 special	16	22	50		
M 00000	16	22	60	200	2
M 0000	19	18	60		
Hamburg					
H 1	23	11	25		
H 2	25	9	40	150	3
H 3	38	7	65		

1) Foxing can be
   a) superficial ("maklorahedi"), or
   b) heavy ("korahedi").
This sub-division is based on the depth of the patches.

2) The extent is determined by visual examination.

Table 2 — Classification of Seychelles type and Madagascan type cinnamon

Commercial designation of the grade	Physical characteristics of the bark
1 Whole tubes (full tubes)	Tubes of length about 15 cm and bark thickness up to 1 mm
2 Pieces of scraped bark	Broken pieces, rough and grooved scraped bark of thickness up to 2 mm
3 Pieces of unscraped bark	Broken pieces, rough and grooved, of width up to about 3 cm and length up to 20 cm. The bark can be up to 5 mm thick
4 Chips, flakes of unscraped bark	Small pieces of unscraped bark of cinnamon stems

6 Requirements

6.1 Odour and flavour

The odour and flavour shall be fresh and characteristic of cinnamon of the origin concerned. It shall be free from foreign flavours, including mustiness.

6.2 Colour

Ground cinnamon shall be yellowish to reddish-brown in colour.

6.3 Freedom from moulds, insects, etc.

Whole cinnamon shall be free from live insects, mould growth, mites and insect remains, for example cocoons, and shall be practically free from dead insects, insect fragments and rodent contamination visible to the naked eye (corrected, if necessary, for abnormal vision), with such magnification as may be necessary in any particular case. If the magnification exceeds ×10, this fact shall be stated in the test report.

In case of dispute, contamination in ground cinnamon shall be determined by the method described in ISO 1208.

6.4 Extraneous matter

Extraneous matter includes leaves stems, chaff and other vegetable matter together with sand, earth and dust.

The proportion of extraneous matter in whole cinnamon shall not exceed 1 % (*m/m*) when determined by the method described in ISO 927.

In the case of cinnamon quills, Sri Lankan type, take about 110 g of quills per bale of Continental grade and 230 g of quills per bale of Mexican or Hamburg grades, break them up and inspect the filling. Unscraped inner bark, scrapings, foreign matter, bark of wild cinnamon and other genera shall not be present.

6.5 Chemical requirements

Whole cinnamon and ground cinnamon shall comply with the requirements given in table 3.

7 Sampling

Sampling shall be carried out as specified in ISO 948.

8 Test methods

8.1 The samples shall be analysed to ensure conformity with the requirements of this International Standard by the methods of physical and chemical analysis as specified in 6.3, 6.4 and in table 3.

Table 3 — Chemical requirements

Characteristic	Requirements		Test method
	Cinnamon, Sri Lankan type	Cinnamon, Seychelles type and Madagascan type	
Moisture content, % (*m/m*) max.			ISO 939
- whole cinnamon	14	15	
- ground cinnamon	12	14	
Total ash, % (*m/m*) on dry basis, max.	5	7	ISO 928
Acid-insoluble ash, % (*m/m*) on dry basis, max.	1	2	ISO 930
Volatile oils, ml/100 g, on dry basis, min.			ISO 6571
- whole cinnamon	1,0	0,7	
- ground cinnamon	0,7	0,3	

8.2 For the preparation of a ground sample for analysis, coarsely crush the product until particles of 5 mm or less are obtained, before applying the general method described in ISO 2825.

9 Packaging and marking

9.1 Packaging

Whole cinnamon shall be packed in clean, sound and dry containers made of a material which does not affect the product but which protects it from the ingress of moisture and loss of volatile matter.

The packaging shall also comply with any national legislation relating to environmental protection.

9.2 Marking

The following particulars shall be marked directly on each container package or shall be marked on a label attached to the container/package:

a) name of the product;

b) trade name or brand name, if any;

c) name and address of the manufacturer or packer;

d) batch or code number;

e) net mass;

f) grade of the material;

g) producing country;

h) any other marking required by the purchaser, such as year of harvest and date of packing (if known);

j) reference to this International Standard.