International Standard 6538

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Cassia (type China, type Indonesia and type Viet Nam), whole or ground (powdered) — Specification

Cannelle (type Chine, type Indonésie et type Viet Nam) entière ou en poudre — Spécifications

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6538 was developed by Technical Committee ISO/TC 34, *Agricultural food products*, and was circulated to the member bodies in October 1978.

It has been approved by the member bodies of the following countries :

Brazil	Hungary	South Africa, Rep. of
Bulgaria	India	Spain
Canada	Ireland	Sri Lanka
Chile	Israel	Thailand
Cyprus	Kenya	Turkey
Czechoslovakia	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Netherlands	USA
Ethiopia	Poland	USSR
France	Romania	Yugoslavia

No member body expressed disapproval of the document.

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Cassia (type China, type Indonesia and type Viet Nam), whole or ground (powdered) — Specification

1 Scope and field of application

This International Standard specifies requirements for cassia (type China, type Indonesia and type Viet Nam), in quills, whole, in pieces, or ground (powdered), constituted by the bark of the species *Cinnamomum cassia* Blume, *Cinnamomum loureirii* C.G. Nees and *Cinnamomum burmanii* C.G. Nees ex Blume.

Recommendations relating to storage and transport are given in the annex.

NOTE — Requirements for cinnamon [type Sri Lanka (Ceylon), type Seychelles and type Madagascar] are given in ISO 6539.

2 References

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

ISO 928, *Spices and condiments — Determination of total ash.*

ISO 930, *Spices and condiments — Determination of acid-insoluble ash.*

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

ISO 948, *Spices and condiments — Sampling.*

ISO 1208, *Ground spices — Determination of filth (Reference method).*[1)]

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

3 Definitions

3.1 whole quills : Scraped epiderm of the internal bark of cassia shoots that have reached maturity, rolled into a single or double quill. The quills are washed and dried in the sun outdoors.

3.2 scraped bark : Bark obtained from the young shoots of cultivated shrubs, and which is scraped with a curved knife before being removed from the wood.

3.3 unscraped bark : Bark obtained fom the young shoots of cultivated shrubs, but unscraped.

3.4 pieces : The product resulting from the trimming, sorting, handling and packing of quills, and which may be of various sizes and scraped or unscraped.

3.5 cassia powder : The powder obtained by grinding cassia of the types considered in this International Standard, excluding all additives.

If there is a designation of origin, the powder shall be prepared exclusively from the barks concerned.

4 Types and classification

4.1 Types

4.1.1 Type China cassia (cassia lignea) : The bark of the branches of *Cinnamomum cassia* Blume. It consists of bark in tubular form, or in simple, single quills or in compound, double quills, as in the case of type Sri Lanka (Ceylon) cinnamon (see ISO 6539).

4.1.2 Type Indonesia cassia (Batavia cassia, Java cassia, Padang cassia or Korintje cassia, cassia vera) : The bark of trunks of *Cinnamomum burmanii* C.G. Nees ex Blume. It consists of thin or thick scraped single and double quills of reddish-brown colour.

4.1.3 Type Viet Nam cassia : The bark, principally of the smaller branches, of *Cinnamomum loureirii* C.G. Nees. It consists of single or double quills.

4.2 Commercial grades

4.2.1 Type China cassia

Type China cassia occurs in pieces of varying lengths from about 250 to 380 mm, and of diameter about 20 mm. It may be scraped or unscraped and the thickness is usually about 3 mm, but may be up to 6 mm. It has a sweet and aromatic flavour, sometimes rather astringent.

1) At present at the stage of draft.

Type China cassia is classified in three grades (see table 1).

Table 1 — Classification of type China cassia

Commercial designation of the grade	Physical characteristics of the bark
1 Kwantung cassia (also known as China rolls or Canton rolls)	The rolls may be scraped or unscraped. The external colour of the unscraped bark is brownish-grey with grey patches; the surface is rough and irregular, coarse in appearance. The flavour is somewhat deficient. The scraped bark is light reddish-brown with occasional patches of grey; smooth or nearly smooth.
2 Kwangsi cassia	The rolls, either whole or broken, may be scraped or unscraped; not as rough and coarse as Kwantung cassia, and of more and better flavour.
3 Broken pieces (of grades 1 and 2)	Small pieces, which may be scraped or unscraped, resulting from the trimming, sorting, handling and packing of the rolls.

4.2.2 Type Indonesia cassia

Type Indonesia cassia occurs in roughly cylindrical double and single quills about 1 m long, made from strips of bark 50 to 100 mm wide; the thickness of the bark varies from 1 to 5 mm.

Type Indonesia cassia is classified in four grades (see table 2).

Table 2 — Classification of type Indonesia cassia

Commercial designation of the grade	Approximate diameter of the quills mm	Physical characteristics of the bark
1 AA (prima selected), Batavia cassia	8	The bark is comparatively smooth with occasional scars. High-quality quills are of good appearance straight and regular, becoming increasingly twisted and irregular in the inferior grades.
2 A (prima), Batavia cassia, Java cassia, Korintje cassia or cassia vera	13	
3 B (secunda), Batavia cassia, Java cassia, Korintje cassia or cassia vera	20 to 35	
4 C (tertia), broken grades 1 to 3 and short quills of all forms	—	

4.2.3 Type Viet Nam cassia

Type Viet Nam cassia occurs as greyish-brown bark in single or double quills, varying in length from about 150 to 300 mm, about 10 to 38 mm in diameter, and up to 6 mm thick.

Type Viet Nam cassia is classified in four grades (see table 3).

Table 3 — Classification of type Viet Nam cassia

Commercial designation of the grade	Physical characteristics of the bark
Whole rolls	
1 Thin	Up to 1,5 mm in thickness. The thin bark is slightly rough, dark brown in colour and shows longitudinal wavy ridges, scars and numerous wart-like protuberances.
2 Medium	1,5 to 3,0 mm in thickness.
3 Thick	3,0 to about 6,0 mm in thickness. The thick bark is lighter and greyer in colour, very rough and with no wavy ridges.
4 Broken pieces	Small pieces resulting from the trimming, sorting, handling and packing of the rolls.

5 Cassia powder

Cassia powder consists of the types of cassia described in 4.1.1, 4.1.2 and 4.1.3 in ground form.

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

6 Requirements

6.1 Flavour

The flavour of cassia shall be fresh and characteristic of the spice. It shall be free from foreign flavours, including mustiness.

6.2 Colour

Cassia powder shall be of a yellowish to reddish-brown colour. The colour of whole cassia shall be as described in 4.2.

6.3 Freedom from moulds, insects, etc.

Whole cassia shall be free from living insects and shall be practically free from moulds, 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 X 10, this fact shall be stated in the test report.

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

6.4 Extraneous matter

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

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

6.5 Chemical requirements

Cassia whole, in quills, quillings, as whole bark and in ground (powdered) form shall comply with the requirements given in table 4.

Table 4 — Chemical requirements

Characteristic	Requirements			Method of test
	Type China cassia	Type Indonesia cassia	Type Viet Nam cassia	
Moisture content, % (*m*/*m*), max. (for whole and ground cassia)	12,0	12,0	12,0	ISO 939
Total ash, % (*m*/*m*) on dry basis, max.	4,0	6,0	4,5	ISO 928
Acid-insoluble ash, % (*m*/*m*) on dry basis, max.	0,8	2,0	2,0	ISO 930
Volatile oils, ml/100 g on dry basis, min.				Method under consideration
— whole cassia[1]	1,7[2]	1,0[3]	3,0	
— ground cassia[1]	1,3[2]	0,8[3]		

1) *The values given are tentative, pending preparation of a method of test.*

2) This value relates to Kwantung cassia. Kwangsi cassia has a minimum volatile oils content of 3,5 ml/100 g.

3) *This value relates to Padang cassia. Korintje cassia has a minimum volatile oils content of 1,3 ml/100 g.*

7 Sampling

Sample the cassia, whole or ground (powdered), by the method described in ISO 948.

8 Methods of test

8.1 *The samples of cassia, in quills or quillings or in ground* (powdered) form, shall be tested for conformity with the requirements of this International Standard by the methods of test indicated.

8.2 Ground (powdered) cassia shall be examined by microscope. It shall not contain any morphological extraneous matter.

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

9 Packing and marking

9.1 Packing

Whole cassia or cassia powder shall be packed in clean, sound and dry containers made of material which does not affect the product or its flavour and protects it against moisture and loss of volatile matter.

The different types of whole cassia are usually packed as follows :

— type China cassia : cube-shaped straw mat bales of about 50 kg;

— type Indonesia cassia : bales of 50 to 60 kg;

— type Viet Nam cassia : bales of 30 to 60 kg.

9.2 Marking

9.2.1 Whole cassia

The following particulars shall be marked or labelled on each container :

a) name of the material, and the trade name or brand name, if any;

b) name and address of the manufacturer or packer;

c) batch or code number;

d) net mass;

e) grade of the material;

f) producing country;

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

9.2.2 Cassia powder

The following particulars shall be marked or labelled on each container :

a) name of the material, and the trade name or brand name, if any;

b) name and address of the manufacturer or packer;

c) batch or code number;

d) net mass;

e) grade of the material;

f) any other marking required by the purchaser, such as date of packing (if known).

Annex

Recommandations relating to storage and transport

(This annex does not form part of the standard.)

A.1 The containers of cassia should be stored in covered premises, well protected from the sun, rain and excessive heat.

A.2 The store room should be dry, free from objectionable odours and proofed against entry of insects and vermin. The ventilation should be controlled so as to give good ventilation under dry conditions and to be fully closed under damp conditions. In a storage warehouse, suitable facilities should be available for fumigation.

A.3 The containers should be so handled and transported that they are protected from the rain, from the sun or other sources of excessive heat, from objectionable odours and from cross-infestation, especially in the holds of ships.