INTERNATIONAL STANDARD

**ISO 6538**

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# Cassia, Chinese type, Indonesian type and Vietnamese type [*Cinnamomum aromaticum* (Nees) syn. *Cinnamomum cassia* (Nees) ex Blume, *Cinnamomum burmanii* (C.G. Nees) Blume and *Cinnamomum loureirii* Nees] — Specification

*Cannelle type Chine, type Indonésie et type Viêt-nam* [Cinnamomum aromaticum *(Nees) syn.* Cinnamomum cassia *(Nees) ex Blume,* Cinnamomum burmanii *(C.G. Nees) Blume et* Cinnamomum loureirii *Nees*] — *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 6538 was prepared by Technical Committee ISO/TC 34, *Agricultural food product,* Subcommittee SC 7, *Spices and condiments.*

This second edition cancels and replaces the first edition (ISO 6538:1982), which has been technically revised.

Annex A of this International Standard is for information only.





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# Cassia, Chinese type, Indonesian type and Vietnamese type [*Cinnamomum aromaticum* (Nees) syn. *Cinnamomum cassia* (Nees) ex Blume, *Cinnamomum burmanii* (C.G. Nees) Blume and *Cinnamomum loureirii* Nees] — Specification



## 1 Scope

This International Standard specifies requirements for cassia (Chinese type, Indonesian type and Vietnamese type), in quills, whole, in pieces or ground (powdered), which is the bark of the trees *Cinnamomum aromaticum* (Nees) syn. *Cinnamomum cassia* (Nees) ex Blume, *Cinnamomum burmanii* (C.G. Nees) Blume and *Cinnamomum loureirii* Nees.

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

NOTE — Requirements for Sri Lankan type cinnamon, Seychelles type cinnamon and Madagascan type cinnamon are given in ISO 6539.[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 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*

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[1] ISO 6539:1997, *Cinnamon Sri Lankan type, Seychelles type and Madagascan type (Cinnamomum zeylanicum Blume) — Specifications.* (To be published).

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

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

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

## 3 Definitions

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

**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.

**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 from the young shoots of cultivated shrubs, but unscraped.

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

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

## 4 Types and classification

### 4.1 Types

#### 4.1.1 Chinese type cassia (cassia lignea)

This is the bark of branches of *Cinnamomum cassia* (Nees) ex Blume of the Lauraceae family. It consists of bark in tubular form, or in simple single quills or in compound double quills.

#### 4.1.2 Indonesian type cassia, Java cassia, Korintje cassia, cassia vera

This is the bark of trunks of *Cinnamomum burmanii* (C.G. Nees) of the Lauraceae family. It consists of thin or thick scraped single and double quills of reddish-brown colour.

#### 4.1.3 Vietnamese type cassia

This is the bark, principally of the smaller branches of *Cinnamomum loureirii* Nees of the Lauraceae family. It consists of single or double quills.

### 4.2 Commercial grades

#### 4.2.1 Chinese type cassia

Chinese type cassia occurs in pieces of varying lengths from about 250 mm 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.

Chinese type cassia is classified in three grades (see table 1).

**Table 1 — Classification of Chinese type 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, irregular and coarse in appearance.<br>The flavour is somewhat deficient. The scraped bark is light reddish-brown with occasional patches of grey and is smooth or nearly smooth. |
| **2** Kwangsi cassia | The rolls, either whole or broken, may be scraped or unscraped; it is not as rough and coarse as Kwantung cassia, and has a stronger 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 Indonesian type cassia

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

Indonesian type cassia is classified in four grades (see table 2).

**Table 2 — Classification of Indonesian type cassia**

| Commercial designation of the grade | Physical characteristics of the bark |
|---|---|
| **1** AA (prima selected) | Fully scraped with quills of diameter between 5 mm and 15 mm. Yellow to brownish yellow colour, without patches. Sweet, pungent flavour typical of Indonesian cassia. |
| **2** A (prima),<br>Java cassia, Korintje cassia or<br>Indonesian cassia | Scraped, yellow to brownish yellow colour. Sweet, pungent flavour, typical of Indonesian cassia. |
| **3** B (secunda),<br>Java cassia, Korintje cassia or<br>Indonesian cassia | Scraped or partially scraped. Brown to brownish grey colour with rough surface.<br>Sweet pungent flavour typical of Indonesian cassia. |
| **4** C (tertia),<br>broken pieces | Small pieces, which may be scraped or unscraped, resulting from the trimming, sorting, handling and packing of the rolls. |

### 4.2.3 Vietnamese type cassia

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

Vietnamese type cassia is classified in four grades (see table 3).

**Table 3 — Classification of Vietnamese type 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 mm to 3,0 mm in thickness. |
| **3** Thick | 3,0 mm 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 Ground cassia

Ground cassia consists of the types of cassia described in 4.1, in the ground form, excluding all additives.

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

## 6 Requirements

### 6.1 Odour and flavour

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

### 6.2 Colour

Ground cassia shall be yellowish to reddish-brown in 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 live insects, and shall be practically free from mould growth, 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 cassia 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 cassia shall not exceed 1 % (*m/m*) when determined by the method described in ISO 927.

### 6.5 Chemical requirements

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

**Table 4 — Chemical requirements**

| Characteristic | Requirements | | | Test method |
|---|---|---|---|---|
| | Chinese type cassia | Indonesian type cassia | Vietnamese type cassia | |
| Moisture content, % (*m/m*) max.<br>- whole cassia<br>- ground cassia | 15<br>14 | 15<br>14 | 15<br>14 | ISO 939 |
| Total ash, % (*m/m*) on dry basis, max. | 4,0 | 5,0 | 4,5 | ISO 928 |
| Acid-insoluble ash, % (*m/m*) on dry basis, max. | 0,8 | 1,0 | 2,0 | ISO 930 |
| Volatile oils, ml/100 g on dry basis, min.<br>- whole cassia<br>- ground cassia | 1,5<br>1,1 | 1,0<br>0,8 | 3,0<br>3,0 | ISO 6571 |



## 7 Sampling

Sampling shall be carried out as specified in ISO 948.

## 8 Tests 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 4.

**8.2** 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 Packaging and marking

### 9.1 Packaging

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

The packaging shall 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 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);

i) reference to this International Standard.