

INTERNATIONAL STANDARD

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Cardamom [*Elettaria cardamomum* (Linnaeus)
Maton var. *minuscule* Burkill] — **Specification** —

Part 2:

Seeds

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Cardamome [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscule*
Burkill] — *Spécifications* —
Partie 2: Graines

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Reference number
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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 882-2 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 7, *Spices and condiments*.

This first edition of ISO 882-2 together with ISO 882-1 cancel and replace ISO 882:1980.

ISO 882 consists of the following parts, under the general title *Cardamom* [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscule Burkill*] — *Specification*:

- Part 1: *Whole capsules*
- Part 2: *Seeds*

Annexes A and B of this part of ISO 882 are for information only.

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Cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill] — Specification —

Part 2: Seeds

1 Scope

This part of ISO 882 specifies the requirements for the seeds of cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill].

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

3 Description

Cardamom seeds [see figure 1c)] are the decorticated seeds, separated from the capsules [see figures 1a) and 1b)] of cardamom [*Elettaria cardamomum* (Linnaeus) Maton var. *minuscula* Burkill].

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2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 882. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 882 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 928:1980, *Spices and condiments — Determination of total ash*.

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

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

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*.

a) Whole capsule



b) Representation of seeds inside a capsule



c) Seeds

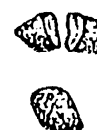


Figure 1 — Cardamom capsules and seeds

4 Requirements

4.1 Odour and flavour

The odour and flavour of cardamom seeds shall be characteristic and fresh. The product shall be free from foreign odours and flavours, including those of rancidity and mustiness.

4.2 Freedom from insects, moulds, etc.

Cardamom seeds shall be free from live insects and shall be almost free from moulds, dead insects, insect fragments and rodent contamination visible to the naked eye (corrected, if necessary, for abnormal vision) or with such magnification as may be necessary in any particular case. If the magnification used is greater than $\times 10$, this fact shall be stated in the test report.

4.3 Extraneous matter

Cardamom seeds shall be free from visible dirt or dust. The proportion of pieces of capsules, calyx and stalk and other extraneous matter shall be not more than 2 % (m/m), as determined using the method specified in ISO 927.

4.4 Light seeds

Light seeds include seeds that are brown or red in colour, and broken, immature and shrivelled seeds. The proportion of light seeds in cardamom seeds, determined using the method specified in ISO 927, shall be not more than 5 % (m/m).

4.5 Chemical requirements

The cardamom seeds shall comply with the chemical requirements given in table 1.

Table 1 — Chemical requirements for cardamom seeds

Characteristic	Requirement	Test method
Moisture content, % (m/m) max.	13	ISO 939
Volatile oil content, % (ml/100 g), min., on dry basis	3,5	ISO 6571
Total ash, % (m/m) max., on dry basis	9,5	ISO 928

5 Grading

The cardamom seeds may be graded as a function of the proportion of extraneous matter and light seeds present.

In the absence of an international grading system for cardamom seeds, grading may be carried out in accordance with a relevant national standard, if available.

NOTE 1 For information, the Indian grade designations and respective requirements for cardamom seeds are given in annex B.

6 Sampling

Sampling shall be carried out in accordance with ISO 948.

7 Test methods

Prepare the ground sample for analysis using the method specified in ISO 2825.

The sample thus ground shall be tested for conformity with the requirements of this part of ISO 882 using the test methods specified in 4.3 to 4.5 and in table 1.

8 Packing and marking

8.1 Packing

Cardamom seeds shall be packed in clean, sound and dry tin-plate containers, or in wooden cases suitably lined with, for example, water-proof paper, craft paper or plastic material.

8.2 Marking

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

- name of the product (botanical name) and trade name or brand name, if any;
- name and address of the manufacturer or packer;
- batch or code number;
- net mass;
- grade of the product (if graded) in accordance with national standard(s) (to be specified);
- producing country;
- year of harvest, if known.

Annex A (informative)

Recommendations relating to storage and transport of cardamom seeds

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

A.2 The store should be dry, free from objectionable odours, and proofed against the entry of insects and other pests. The ventilation should be controlled so as to give good ventilation under dry conditions and to be fully closed under damp con-

ditions. Suitable facilities should be available for fumigation.

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

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Annex B
(informative)

Grade designations and requirements of cardamom seeds in India

See table B.1.

Table B.1

Grade designation	Trade name	Extraneous matter % (m/m) max.	Light seeds % (m/m) max.	Mass g/l min.	General characteristics
CS1	Prime	0,5	3,0	675	Decorticated and dry seeds of any variety of <i>Elettaria cardamomum</i>
CS2	Shipment	1,0	5,0	660	
CS3	Brokens	2,0	—	—	

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