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IS 1907 (1984): Cardamom (Capsules and Seeds) [FAD 9: Spices and Condiments]



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REAFFIRMED

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Indian Standard

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**SPECIFICATION FOR
CARDAMOM (CAPSULES AND SEEDS)
(*Second Revision*)**

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**BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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Indian Standard

SPECIFICATION FOR CARDAMOM (CAPSULES AND SEEDS) (*Second Revision*)

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**AMENDMENT NO. 1 JANUARY 1996
TO
IS 1907 : 1984 SPECIFICATION FOR
CARDAMOM (CAPSULES AND SEEDS)**

(Second Revision)

(Page 4, clause 2.4) — Substitute '3 of IS 1797 : 1985' for '4 of 7 - 1973'.

(Page 4, foot-note) — Substitute '*Methods of test for spices and condiments (second revision)' for the existing.

(Page 5, clause 2.5, line 4) — Substitute '9 of IS 1797 : 1985' for '10 of IS : 1797 - 1973'.

(Page 5, clause 2.6, last line) — Substitute 'IS 1797 : 1985' for 'IS : 1797 - 1973'.

(Page 5, clause 2.7, last line) — Substitute '4 of IS 1797 : 1985' for '5 of IS : 1797 - 1973'.

(Page 5, clause 2.9, line 4) — Substitute '4 of IS 1797 : 1985' for '5 of IS : 1797 - 1973'.

(Page 5, clause 2.11, line 3) — Substitute '4 of IS 1797 : 1985' for '5 of IS : 1797 - 1973'.

(Page 5, clause 2.11) — Insert the following new clause after 2.11:

'2.12 Total Ash — The total ash content in cardamom capsule and seed, when tested in accordance with the method given in 6 of IS 1797 : 1985, shall be not more than 8.5 percent and 4.5 percent respectively.'

(Page 5, foot-note) — Substitute '*Methods of test for spices and condiments (second revision)' for the existing.

(Page 8, clauses 4.1, 4.1.1 and 4.1.2) — Substitute the following for the existing clause:

'4.1 Packing — Cardamom capsule or seed shall be packed in clean, sound and dry container made of metal, glass, food grade polymers, wood or jute bags. The wooden boxes or jute bags shall be suitably lined with moisture proof lining

Amend No. 1 to IS 1907 : 1984

which does not impart any foreign smell to the product. The packing material shall be free from fungal or insect infestation and should not impart any foreign smell. Each container shall be securely closed and sealed.'

(Page 8, clause 4.2) — Substitute the following for the existing clause:

'4.2 Marking — The following particulars shall be marked directly on each package/container on a label attached to or fixed on the package:

- a) Name and address of the manufacturer or packer;
- b) Name of material (Capsule or Seed);
- c) Trade name and brand name, if any;
- d) Grade designation;
- e) Batch or code number;
- f) Net mass;
- g) Month and year of packing;
- h) Best before (month and year); and
- j) Any other markings required under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977* and the *Prevention of Food Adulteration Act, 1954* and the *Rules* framed thereunder.'

(Page 9, clause 5.1) — Substitute 'IS 13145 : 1993^{*}' for '3 of IS : 1797 - 1973 '.

(Page 9, foot-note) — Substitute the following for the existing:

^{*}'Spices and condiments — Methods of sampling (first revision).'

**AMENDMENT NO. 2 MAY 2008
TO
IS 1907 : 1984 SPECIFICATION FOR CARDAMOM
(CAPSULES AND SEEDS)**

(Second Revision)

(Page 5, clause 2.12) — Insert the following clause after 2.12:

'2.13 Salmonella

Salmonella should be absent in 25 g when determined by the method given in IS 5887 (Part 3) : 1999†.'

(Page 5, footnote) — Insert the following footnote at the end:

†Methods for detection of bacteria responsible for food poisoning : Part 3 General guidance on methods for the detection of salmonella (*second revision*).

(FAD 9)

Indian Standard
SPECIFICATION FOR
CARDAMOM (CAPSULES AND SEEDS)
(*Second Revision*)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 22 June 1984, after the draft finalized by the Spices and Condiments Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Spices and condiments are in common use in this country. Some of them are also exported in considerable quantities. Cardamom is one of the important commodities exported from India.

0.3 This Indian Standard was first published in 1961 and was revised in 1966. This second revision includes requirements for capsules. Changes were made with respect to moisture and volatile oil content based on new data and experience gathered.

0.4 This standard takes into consideration the prevailing methods of trade and has adopted grades formulated by the Directorate of Marketing and Inspection for being incorporated in the *Agmark (Grading and Marking) Rules*, framed under the *Agricultural Produce (Grading and Marking) Act, 1937*.

0.5 In the preparation of this standard, due consideration has been given to the provisions of the *Prevention of Food Adulteration Act, 1954* and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under this Act, wherever applicable.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

IS : 1907 - 1984

1. SCOPE

1.1 This standard prescribes the requirements for cardamom, *Elettaria cardamomum* (L.) Maton (*CHHOTI ELACHI*) of the family Zingiberaceae.

1.2 This standard does not cover the capsules or seeds of the genus *Amomum*.

2. REQUIREMENTS

2.1 Description

2.1.1 *Cardamoms with Capsules* — The cardamoms shall be the nearly ripe fruits of *Elettaria cardamomum* (L.) Maton in the form of capsules which have been dried. The capsules shall be of colour ranging from light green to brown, cream and white; globular in size or three-cornered having a ribbed appearance. The capsules may be clipped and their pedicels removed. The capsules shall be well formed and with sound cardamom seeds inside. The capsules may also be bleached. The cardamoms may be graded on the basis of colour, clipping, size, mass per litre, bleaching or otherwise, proportions of extraneous matter, or place of origin.

2.1.2 The cardamom seeds capsules may also be decorticated and the separated seeds packed for trade purposes. The cardamom seeds may be graded on the basis of mass per litre and proportions of extraneous matter (*see 2.7*) and light seeds (*see 2.11*).

2.2 *Taste and Aroma or Flavour* — The taste and aroma or flavour of cardamoms in capsules and seeds shall be characteristic and fresh. The material shall be free from foreign taste and aroma or flavour, including rancidity and mustiness.

2.3 *Freedom from Moulds, Insects, etc* — Cardamoms in capsules and seeds shall be free from visible moulds and insect infestation.

Note — Thrip marks alone on capsules shall not lead to the conclusion that the capsules have been infested by insects.

2.4 *Mass per Litre* — The mass of cardamoms in capsules and seeds shall be as prescribed in Table 1. The mass of cardamoms contained in one litre shall be determined in accordance with the method given in 4 of IS : 1797-1973*.

*Methods of sampling and test for spices and condiments.

2.5 Moisture Content — The moisture content in all grades of cardamom except the grade 'Bleached' or 'Half bleached' shall not exceed 10 percent (v/m) when determined in accordance with the method given in 10 of IS : 1797-1973*. The moisture content in the grade Bleached or half bleached shall not exceed 13 percent (v/m) when determined by the same method.

2.6 Volatile Oil Content — The volatile oil content of different grades of cardamom capsules shall be not less than 3.5 percent (v/m) on capsule basis and in the case of seed grades it shall not be less than 4.0 percent (v/m) on the seed basis when determined in accordance with the method given in 15 of IS : 1797-1973*.

2.7 Extraneous Matter — The proportion of calyx pieces, stalk bits and other extraneous matter in cardamom in capsules and seeds shall be not more than 5 percent and 2 percent by mass, respectively, when determined in accordance with the method given in 5 of IS : 1797-1973*.

2.8 Empty and Malformed Capsules — The proportion of empty capsules which are without any seeds or malformed capsules which are scantily filled with seeds shall not be more than 5 percent by count. For this purpose, 100 capsules from the sample shall be opened out and the number of empty and malformed capsules counted.

2.9 Immature and Shrivelled Capsules — The proportion of immature and shrivelled capsules, which are not fully developed, shall be not more than 7 percent by mass and shall be determined after separating them in accordance with the method given in 5 of IS : 1797-1973*. Percentage of immature and shrivelled capsules shall be not more than the limit prescribed for each grade in Table 1.

2.10 Blacks and Splits — Blacks include capsules having visible blackish to black colour and splits include those capsules which are open at corners for more than half the length. The proportion of blacks and splits shall be not more than 15 percent by count. For this purpose, 100 capsules shall be taken from the sample and the number of blacks and splits separated and counted.

2.11 Light Seeds — The proportion of light seeds in cardamom seeds shall be not more than 5 percent by mass, when separated in accordance with the method given in 5 of IS : 1797-1973*. Light seeds shall include seeds which are brown or red in colour broken or immature and shrivelled.

*Methods of sampling and test for spices and condiments.

TABLE 1 GRADE DESIGNATIONS OF CARDAMOM WITH CAPSULES AND THEIR REQUIREMENTS

(Clauses 2.4 and 3.3)

GRADE DESIGNATION	TRADE NAME	EXTRANGOUS MATTER, PERCENT BY MASS	EMPTY AND MALFORMED CAPSULES, PERCENT BY COUNT	UNCLIPPED CAPSULES, PERCENT BY COUNT	IMMATURE AND SPLIT, PERCENT BY COUNT	BLACKS AND SPLITS, IN mm OF THE SIEVE ON WHICH CAPSULES RETAINED	SIZE OF HOLES IN g/1 MIN	MASS IN g/1 MIN	CLOUR	GENERAL CHARACTERISTICS
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Alleppey green										
AGEB	Cardamom extra bold	Nil	2.0	Nil	2.0	Nil	7.0	435	Deep green or light green	Kiln dried; 3-cornered and having a ribbed appearance
AGB	Cardamom bold	Nil	2.0	Nil	2.0	Nil	6.0	415		
AGS	Cardamom superior	Nil	3.0	Nil	5.0	Nil	5.0	385		
AGS1	Shipment green 1	Nil	5.0	Nil	7.0	10.0	4.0	350		
AGS2	Shipment green 2	Nil	5.0	Nil	7.0	12.0	4.0	320		
AGL	Light	Nil	—	Nil	—	15.0	3.5	260	Golden to light creamy	Global shape, skin ribbed or smooth; the pedicels separated to brown
Coorg green	Extra bold	Nil	Nil	Nil	Nil	Nil	8.0	450		
CGB	Bold	Nil	2.0	Nil	3.0	Nil	7.5	435	light greenish to greenish brownish	
CG1	Superior	Nil	3.0	Nil	5.0	Nil	6.5	415		
CG2	Coorg green or Motta	Nil	5.0	3.0	7.0	Nil	6.0	385		
CG3	Shipment green	Nil	5.0	5.0	7.0	10.0	5.0	350	greenish brownish to brown	
CG4	Light	Nil	—	—	—	15.0	3.5	280		

Bleached or half bleached	BL1	Nil	Nil	Nil	Nil	8.5	340	Pale, creamy or dull white	Fully developed cap-sules, bleached, glo-bal or 3-cornered with skin ribbed or smooth
	BL2	Nil	Nil	Nil	Nil	7.0	340		
	BL3	Nil	Nil	Nil	Nil	5.0	300		
Bleachable white	BW1	Mysore/Mangalore bleachable cardamom. A. clipped	1.0	Nil	Nil	7.0	460	White, light green or light grey	Fully developed cap-sules suitable for bleaching
	BW2	Mysore/Mangalore bleachable cardamom. A. unclipped	1.0	Nil	Nil	7.0	460		
	BW3	Mysore/Mangalore bleachable bulk cardamom: clipped	2.0	Nil	Nil	4.3	435		
	BW4	Mysore/Mangalore bleachable bulk cardamom: unclipped	2.0	Nil	Nil	4.3	435		
Mixed	MEB	Mixed bold	2.0	—	2.0	7.0	435	Dried and mixed cap-sules of different varieties of <i>Ellettaria cardamomum</i>	
MB	Mixed bold	2.0	—	2.0	6.0	415			
MS	Mixed superior	3.0	—	5.0	5.0	385			
MS1	Mixed shipment I	5.0	—	7.0	4.0	350			
MS2	Mixed shipment II	5.0	—	7.0	4.0	320			
ML	Mixed light	—	—	—	15.0	260			

3. GRADES

3.1 The cardamoms in capsules and seeds may also be graded (see 2.1.1) before packing.

3.2 There shall be 25 grades of cardamom with capsules and 3 of cardamom seeds.

3.3 The designations of the grades and their requirements are given in Table 1 for cardamom with capsules and in Table 2 for cardamom seeds.

TABLE 2 GRADE DESIGNATIONS OF CARDAMOM SEEDS AND THEIR REQUIREMENTS

GRADE DESIGNATION	TRADE NAME	EXTRANEIOUS MATTER, PERCENT BY MASS, Max	LIGHT SEEDS, PERCENT BY MASS, Max	MASS IN g/l Min	GENERAL CHARACTERISTICS
(1)	(2)	(3)	(4)	(5)	(6)
CS1	Prime	0.5	3.0	675	Decorticated and dry seeds of any variety of <i>Elettaria</i> (Cardamomum)
CS2	Shipment	1.0	5.0	660	
CS3	Brokens	2.0	—	—	

4. PACKING AND MARKING

4.1 Packing

4.1.1 *Capsules* — Cardamoms with capsules shall be packed in clean, sound and dry tinplate containers or wooden cases suitably lined with polyethylene or waterproof paper or kraft paper or in new jute bags lined with polyethylene or waterproof paper.

4.1.2 *Seeds* — Cardamom seeds shall be packed in clean and dry tinplate containers or wooden cases lined with polyethylene or waterproof paper or kraft paper.

4.2 *Marking* — 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 the packer;

- c) Batch or code number;
- d) Net mass in metric units;
- e) Grade of the material (if graded); and
- f) Country of origin.

5. SAMPLING

5.1 Representative samples of the material shall be drawn and tested for conformity to this specification as prescribed in 3 of IS : 1797-1973*.

*Methods of sampling and test for spices and condiments.

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