

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 972

SPICES AND CONDIMENTS

CHILLIES, WHOLE AND GROUND
SPECIFICATION

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BRIEF HISTORY

The ISO Recommendation R 972, *Spices and condiments – Chillies, whole and ground – Specification*, was drawn up by Technical Committee ISO/TC 34, *Agricultural food products*, the Secretariat of which is held by the Magyar Szabványügyi Hivatal (MSZH).

Work on this question led, in 1966, to the adoption of a Draft ISO Recommendation.

In April 1967, this Draft ISO Recommendation (No. 1230) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Iran	South Africa, Rep. of
Bulgaria	Ireland	Thailand
Colombia	Israel	U.A.R.
Czechoslovakia	Korea, Rep. of	United Kingdom
France	Norway	U.S.S.R.
Greece	Poland	Yugoslavia
Hungary	Portugal	
India	Romania	

One Member Body opposed the approval of the Draft :

Netherlands

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1969, to accept it as an ISO RECOMMENDATION.

SPICES AND CONDIMENTS

CHILLIES, WHOLE AND GROUND

SPECIFICATION

1. SCOPE

- 1.1 This ISO Recommendation specifies requirements for chillies (generally belonging to the species *Capsicum frutescens* (Linnaeus)) in the form of whole chillies or ground.
- 1.2 It also describes methods of test peculiar to this spice.

2. REQUIREMENTS

2.1 Description

- 2.1.1 *Whole chillies*. Chillies are the ripe, dried, sharp-flavoured fruits of certain botanical forms of the genus *Capsicum*, generally belonging to the species *Capsicum frutescens* (Linnaeus). In general, these fruits vary in colour from a fairly dark red to bright orange. They are in the form of dry berries, usually shiny, which are fairly wrinkled, slightly flattened, of acuminate oblong shape (obtuse and round at the base, tapering and pointed at the apex), from 1 to 6 cm long and from 0.5 to 1.25 cm wide.
- 2.1.2 *Ground chillies*. This is the product obtained by grinding whole chillies without any added matter. It is in the form of a powder of characteristic colour from red to orange-red. This product is known in the trade as cayenne*.

2.2 Odour and taste

The odour should be characteristic, causing sneezing but not disagreeable.
The taste should be acrid, very strong, very hot and persistent.

2.3 Dimensions

Whole chillies should be classified in three groups in the dry state :

- small chillies, of length less than 2 cm;
- medium chillies, of length between 2 and 4 cm;
- large chillies, of length between 4 and 6 cm.

The method of verifying the group classification is described in Annex B.

* Improperly called *Cayenne pepper*, a term which should not be used.

2.4 Freedom from moulds, insects, etc.

Whole chillies and ground chillies should be free from living insects and moulds, and should 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 $\times 10$, this fact should be stated in the test report. In the case of ground chillies, contamination should be determined by the method for the determination of filth described in ISO Recommendation R . . . *, *Spices and condiments – Determination of filth*.

2.5 Extraneous matter

In whole chillies, the proportion of stalks, calices and other extraneous matter, determined as described in ISO Recommendation R 927, *Spices and condiments – Determination of extraneous matter*, should not be greater than 2 % (m/m).

2.6 Unripe, marked or broken berries

The proportion of defective berries in whole chillies should be less than

1 % (m/m) of green or pale yellow chillies (unripe berries);

0.5 % (m/m) of chillies which are black or marked with black (marked berries).

The proportion of broken berries (including fragments) should be less than 3 % (m/m).

The method for the determination of unripe, marked or broken berries is described in Annex C.

2.7 Whole and ground chillies should also comply with the requirements given in the Table below.

TABLE – Requirements for chillies, whole and ground

Characteristic**	Whole	Ground	Reference to ISO Recommendation concerning spices and condiments
Moisture, % (m/m), max.	11	11	ISO Recommendation R 939, <i>Spices and condiments – Determination of moisture content (Entrainment method)</i>
Total ash, % (m/m) on dry basis, max.	8	8	ISO Recommendation R 928, <i>Spices and condiments – Determination of total ash</i>
Ash insoluble in hydrochloric acid, % (m/m) on dry basis, max.	1.25	1.25	ISO Recommendation R 930, <i>Spices and condiments – Determination of acid-insoluble ash</i>
Non-volatile ether extract, % (m/m) on dry basis, min.	15	15	ISO Recommendation R . . . ***, <i>Spices and condiments – Determination of non-volatile ether extract</i>
Total nitrogen, % (m/m) on dry basis, min.	2	2	
Crude fibre, % (m/m) on dry basis, max.	28	28	Method under consideration
Fineness - percentage of product passing through a sieve of 500 μm aperture, min.	–	95	

* At present Draft ISO Recommendation No. 1208.

** Limits for toxic substances will be included later, in accordance with the recommendation of the joint FAO/WHO Codex Alimentarius Commission.

Investigations are also in progress on the assessment of the hot taste of chillies, by the determination of the Scoville index or of the capsaicin content.

*** At present Draft ISO Recommendation No. 1204.

3. SAMPLING

- 3.1 Sample the chillies by the method described in ISO Recommendation R 948, *Spices and condiments – Sampling*.
- 3.2 The final lot samples should be of at least 200 g for whole chillies, and at least 100 g for ground chillies.

4. METHODS OF TEST

The samples of whole chillies and ground chillies should be tested for conformity of the product to the requirements of this ISO Recommendation by the methods of test described in the relevant ISO Recommendations referred to in the Table in clause 2.7, and in Annexes B and C.

The method for the preparation of the sample for test is given in Annex A.

5. PACKING AND MARKING

5.1 Packing

- 5.1.1 *Whole chillies*. Whole chillies should be packed in clean, hygienic packages, made of material which cannot either add any constituent to, or remove any constituent from the chillies (for example, new jute bags which can be lined with textile material or polyethylene). These packages may contain a net mass of 30 kg of small chillies, 25 kg of medium chillies or 20 kg of large chillies.
- 5.1.2 *Ground chillies*. Ground chillies should be packed in small individual containers, which are clean, hygienic and of material not likely to add any constituent to, or remove any constituent from the product (for example, containers of tinplate or glass, cardboard boxes with waterproofing on the inside, waterproof bags, etc.).

These packages should be hermetically sealed and their contents may be 250 g, 500 g, 1 kg or, if requested, less than 250 g or more than 1 kg.

5.2 Marking

5.2.1 *Whole chillies*. The following information should be marked on each package, or on a label :

- (a) the name of the product, the group classification, and the trade name or trade mark where applicable;
- (b) the name and address of the producer or packer;
- (c) the code number or the number of the transaction;
- (d) the net mass;
- (e) the grade of the product (if graded) in accordance with the national standards;
- (f) the producing country;
- (g) the year of harvesting.

5.2.2 *Ground chillies*. Indications (a) to (d) above should be marked on each individual container and on each package for despatch. If glass containers are used, the words "Glass, with care" should be marked on each package for despatch. The year of harvesting should be shown if possible.

ANNEX A

PREPARATION OF SAMPLE FOR TEST

A.1 WHOLE CHILLIES

Divide the final lot sample, the mass of which should be not less than 200 g, into two samples, A and B, each of at least 100 g, for the following purposes :

(a) *Sample A* :

- to identify the product (see clause 2.1.1);
- to assess the odour and taste (see clause 2.2);
- to verify the absence of moulds, insects, etc. (see clause 2.4);
- to determine the proportion of extraneous matter (see clause 2.5);
- to verify the group classification (see clause 2.3).

(b) *Sample B* : for various other tests (see clause 2.7) after grinding.

Whole chillies should be ground in an apparatus which

- is made of material which does not absorb moisture;
- is easy to take to pieces and clean, and has a minimum dead space;
- permits rapid and even grinding without causing heating;
- avoids, as far as possible, contact with outside air;
- can be adjusted so as to obtain dimensions of particles corresponding to the characteristics of the powder defined elsewhere (see Table, clause 2.7);
- permits complete recovery of all fragments of the sample (light and heavy parts);
- does not introduce any foreign body into the sample.

A.2 GROUND CHILLIES

This is analysed without further previous preparation, other than the thorough mixing of the sample.