

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1003

SPICES AND CONDIMENTS

GINGER, WHOLE, IN PIECES, AND GROUND
SPECIFICATION

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BRIEF HISTORY

The ISO Recommendation R 1003, *Spices and condiments – Ginger, whole, in pieces, 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 1965, to the adoption of a Draft ISO Recommendation.

In January 1967, this Draft ISO Recommendation (No. 1209) 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	Greece	Romania
Brazil	Hungary	South Africa, Rep. of
Bulgaria	India	Thailand
Chile	Iran	Turkey
Colombia	Israel	U.A.R.
Czechoslovakia	Korea, Rep. of	U.S.S.R.
France	Poland	Yugoslavia
Germany	Portugal	

Two Member Bodies opposed the approval of the Draft :

Netherlands
United Kingdom

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

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GINGER, WHOLE, IN PIECES, AND GROUND
SPECIFICATION

1. SCOPE

This ISO Recommendation specifies the requirements for ginger (*Zingiber officinale* Roscoe), whole, in pieces, and ground.

Recommendations relating to storage and transport conditions are given in Annex A as a guide.

2. REQUIREMENTS

2.1 Description

The ginger, whole and in pieces, is the dried peeled or unpeeled rhizome of *Zingiber officinale* Roscoe, in pieces irregular in shape and not less than 20 mm in length or in small cut pieces, very pale buff to pale brown in colour, fibrous, either clean peeled, scraped or coated, washed and dried in the sun. The ginger may be garbled by removing pieces that are too light, and it may also be lime-bleached. The ginger, whole and in pieces, may be graded on the basis of its size, place of production, fibre and fibrous content and the method of treatment of the rhizomes; the requirements for such grades should be specified in national standards. The dried rhizomes may also be ground into powder.

2.2 Odour and taste

The odour and taste of ginger, whole, in pieces or ground, should be characteristic and wholesome. The material should not have a musty odour or a rancid or bitter taste.

2.3 Freedom from moulds, insects, etc.

The ginger, whole, in pieces or ground, 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 ginger the contamination should be determined by the method described in ISO Recommendation R . . . ,* *Spices and condiments – Determination of filth*.

* At present Draft ISO Recommendation No. 1208.

2.4 Extraneous matter

The proportion of extraneous matter in ginger, whole or in pieces, should be not more than 2.0 % (m/m). The proportion of extraneous matter should be determined in accordance with ISO Recommendation R 927, *Spices and condiments – Determination of extraneous matter*.

2.5 Freedom from coarse particles

The ground ginger should be free from coarse particles and should be of a fineness specified in the national standards.

2.6 Chemical requirements*

2.6.1 *Ginger, whole and in pieces.* The ginger, whole and in pieces, should also comply with the requirements given in Table 1.

TABLE 1 – Requirements for ginger, whole and in pieces

Characteristic	Requirement	Reference to ISO Recommendation concerning spices and condiments
Moisture, % (m/m), max.	12.0	ISO Recommendation R 939, <i>Spices and condiments – Determination of moisture content (Entrainment method)</i>
Total ash, % (m/m) on dry basis, max. (a) unbleached (b) bleached	8.0 12.0	ISO Recommendation R 928, <i>Spices and condiments – Determination of total ash</i>
Calcium (as CaO), % (m/m) on dry basis, max. (a) unbleached (b) bleached	1.1 2.5	See Annex B
Volatile oil in millilitres per 100 g on dry basis, min.	1.5	ISO Recommendation R . . . ,** <i>Spices and condiments – Determination of volatile oil</i>

NOTE. – It is not necessary to carry out these determinations as a routine for all samples. Any of these determinations should be made in case of dispute and when required either by the purchaser or the vendor, if already provided for in the agreement.

* The limits of toxic substances will be added later, according to the recommendations of the FAO/WHO Codex Alimentarius Commission.

** Under investigation.

2.6.2 *Ginger, ground.* The ground ginger should comply with the requirements given in Table 1 and, in addition, with the requirements given in Table 2.

TABLE 2 – Additional requirements for ground ginger

Characteristic	Requirement	Reference to ISO Recommendation concerning spices and condiments
Water-soluble ash, % (m/m) on dry basis, min.*	1.9	ISO Recommendations R 928, <i>Spices and condiments – Determination of total ash</i> , and R 929, <i>Spices and condiments – Determination of water-insoluble ash</i>
Water-insoluble ash, % (m/m) on dry basis, max.	under investigation	ISO Recommendation R 929, <i>Spices and condiments – Determination of water-insoluble ash</i>
Acid-insoluble ash, % (m/m) on dry basis, max.	2.3	ISO Recommendation R 930, <i>Spices and condiments – Determination of acid-insoluble ash</i>
Alcohol-soluble extract, % (m/m) on dry basis, min.	5.1	ISO Recommendation R 940, <i>Spices and condiments – Determination of alcohol-soluble extract</i>
Cold water soluble extract, % (m/m) on dry basis, min.	11.4	ISO Recommendation R 941, <i>Spices and condiments – Determination of cold water soluble extract</i>

* Total ash *minus* water-insoluble ash.

3. SAMPLING

- 3.1 Sample the ginger by the method described in ISO Recommendation R 948, *Spices and condiments – Sampling*.
- 3.2 Samples of ginger, whole and in pieces, should be ground so that the whole of the material passes through a sieve with an aperture of 1 mm. The material thus ground should be used for determining the characteristics defined in Table 1.

4. METHODS OF TEST

The samples of ginger, whole, in pieces or ground, should be tested for ascertaining conformity of the material to the requirements of this ISO Recommendation, using the methods of test given in the relevant ISO Recommendations, referred to in Tables 1 and 2, and in Annex B of this ISO Recommendation.

5. PACKING AND MARKING

5.1 Packing

- 5.1.1 *Ginger, whole and in pieces*. The ginger, whole and in pieces, should be packed in sealed, clean and sound containers made of a material which does not affect the ginger.
- 5.1.2 *Ground ginger*. The ground ginger should be packed in sealed, clean and sound tinplate or glass containers, or paper cartons properly lined with waterproof paper, or in moisture-proof bags made of material which does not impart any smell to the ground ginger.

The quantities packed in each container may be 0.5 kg, 1.0 kg, 2.0 kg or, if required, more or less.

A suitable number of such containers should be packed in wooden or cardboard cases.

The size of the containers and the number of containers packed in a case should be subject to agreement between the purchaser and the vendor.

5.2 Marking

- 5.2.1 *Ginger, whole and in pieces*. The following particulars should be marked or labelled on each bag :

- (a) name of the material, and the trade name or brand name, if any;
- (b) name and address of the manufacturer/packer;
- (c) batch or code number;
- (d) net mass;
- (e) grade of the material (if graded) according to the national standards;
- (f) producing country;
- (g) any other marking required by the purchaser;
- (h) year of production, if known.

- 5.2.2 *Ground ginger*. The particulars (a) to (d) in clause 5.2.1 should be marked on each container and on each case. If glass containers are used, the words "Glass, with Care" should be marked on each case.

ANNEX A

**RECOMMENDATIONS RELATING TO STORAGE AND
TRANSPORT OF GINGER**

- A.1 The packs of ginger should be stored in covered premises, well protected from 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 godown, suitable facilities should be available for fumigation.
- A.3 The packs should be so handled and transported that they are protected from rain, from the sun or other sources of excessive heat, from objectionable odours and from cross-infestation especially in the holds of ships.

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