

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 959

SPICES AND CONDIMENTS

**iTeh STANDARD PREVIEW**

**BLACK PEPPER AND WHITE PEPPER, WHOLE AND GROUND**

**SPECIFICATION**

<https://standards.iteh.ai/catalog/standards/sist/21840f95-4fbb-4c89-a623-b8c1c73e0328/iso-r-959-1969>

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## BRIEF HISTORY

The ISO Recommendation R 959, *Spices and condiments – Black pepper and white pepper, 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 by the Technical Committee led, in 1966, to the adoption of a Draft ISO Recommendation.

In March 1967, this Draft ISO Recommendation (No. 1210) 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	India	Romania
Chile	Iran	South Africa, Rep. of
Colombia	Israel	Thailand
Czechoslovakia	Norway	Turkey
France	Poland	U.A.R.
Hungary	Portugal	United Kingdom

Two Member Bodies opposed the approval of the Draft :

Germany  
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

BLACK PEPPER AND WHITE PEPPER, WHOLE AND GROUND  
SPECIFICATION

## 1. SCOPE

- 1.1 This ISO Recommendation specifies requirements for black pepper and for white pepper, *Piper nigrum* (Linnaeus), in the whole form and also in the ground form.
- 1.2 Recommendations relating to storage and transport conditions are given in Annex A as a guide.

## 2. REQUIREMENTS

## 2.1 Description

The whole black pepper should be the dried whole berries of *Piper nigrum* (Linnaeus), generally picked before they are ripe, brown, grey or black in colour with wrinkled surface. The whole white pepper is obtained either from the whole mature berries of *Piper nigrum* (Linnaeus), or from whole black pepper from which the outer coating of the pericarp has been removed, it is dried afterwards. The material may also be in the pure ground form, the berries of black pepper and white pepper being ground separately without any added matter.

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## 2.2 Aroma and taste

The aroma and taste or flavour of black or white pepper, whole or ground, should be fresh and pungent. The material should be free from foreign taste and aroma or flavour, including rancidity and mustiness.

## 2.3 Freedom from moulds, insects, etc.

The black pepper and white pepper, whole 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 black pepper and ground white pepper, contamination should be determined by the method described in ISO Recommendation R . . . , \* *Spices and condiments – Determination of filth*.

## 2.4 Extraneous matter

The proportion of extraneous matter in whole black pepper should not be more than 1.5 % (m/m) and in whole white pepper not more than 0.8 % (m/m) when determined in accordance with the method given in ISO Recommendation R 927, *Spices and condiments – Determination of extraneous matter*. The proportion of foreign matter not coming from the plant should not be more than 1.0 % and 0.5 % (m/m) in whole black pepper and whole white pepper respectively. Dust, stalks, leafy matter and other foreign matter should be considered as extraneous matter in whole pepper. Pinheads, which consist of underdeveloped or broken berries, should not be included in the extraneous matter.

\* At present Draft ISO Recommendation No. 1208.

## 2.5 Light berries and pinheads

2.5.1 *Light berries*. The percentage of light berries contained in whole pepper should be determined in accordance with the method prescribed in Annex B. Except in the case of *light grades* consisting of light berries, the proportion of light berries should not be more than 10 % (m/m).

2.5.2 *Pinheads*. The proportion of pinheads in whole pepper, except in the case of *pinheads grade* and *light grades*, should not be more than 4 % (m/m).

## 2.6 Total content of extraneous matter, light berries and pinheads

The total of the values for extraneous matter, light berries and pinheads should not be more than 15 % (m/m).

## 2.7 Freedom from coarse particles in ground pepper

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

## 2.8 Grades of whole pepper

The grades of whole black pepper and whole white pepper should be specified in national standards on the basis of the proportion of pinheads, the size of the berries, the proportion of light berries, the content of extraneous matter and the place of origin.

## 2.9 Chemical characteristics\*

2.9.1 *Whole pepper*. The black or white pepper should comply with the requirements given in Table 1.

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TABLE 1 — Requirements of whole pepper

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. (see Notes 1 and 2, below) (a) whole black pepper (b) whole white pepper	8.0 4.0	ISO Recommendation R 928, <i>Spices and condiments – Determination of total ash</i>
Non-volatile ether extract, % (m/m) on dry basis, min. (see Notes 1 and 2, below)	6.8 (See Note 3, below)	ISO Recommendation R . . . **, <i>Spices and condiments – Determination of non-volatile ether extract</i>

### NOTES

- These requirements are not applicable in the case of *light grades* consisting of light berries.
- 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 by the vendor, if already provided for in the agreement.
- Tentative value.

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

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

2.9.2 *Ground pepper*. The ground pepper should comply with all the requirements given in Table 1 and, in addition, with the requirements given in Table 2.

TABLE 2 – Additional requirements for ground pepper

Characteristic	Requirement	Reference to ISO Recommendation concerning spices and condiments
Acid-insoluble ash, % (m/m) on dry basis, max. (a) ground black pepper (b) ground white pepper	1.4 0.2	ISO Recommendation R 930, <i>Spices and condiments – Determination of acid-insoluble ash</i>
Crude fibre, % (m/m), on dry basis, max. (a) ground black pepper (b) ground white pepper	17.5 6.0	Method under consideration

### 3. SAMPLING

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

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### 4. METHODS OF TEST

The samples of whole pepper or ground pepper should be tested for conformity of the material to the requirements of this ISO Recommendation by the methods described in the relevant ISO Recommendations, referred to in Tables 1 and 2, and in Annex B to this ISO Recommendation.

### 5. PACKING AND MARKING

#### 5.1 Packing

- 5.1.1 *Whole pepper*. The whole pepper should be packed in sealed, clean and sound containers made of a material which does not affect the pepper.
- 5.1.2 *Ground pepper*. The ground pepper should be packed in sealed, clean and sound containers made of a material which does not affect the pepper.

Small containers containing ground pepper should be packed in suitable cases.

- 5.1.3 *Containers*. The size of the containers and the number of small containers packed in a case should be subject to agreement.

## 5.2 Marking

5.2.1 *Whole pepper*. The following particulars should be marked or labelled on each package :

- (a) name of the material and the trade name or brand name, if any;
- (b) name and address of the packer/manufacturer;
- (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 harvest, if known.

5.2.2 *Ground pepper*. The particulars (a) to (d) above 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.

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ANNEX A

**RECOMMENDATIONS RELATING TO STORAGE AND TRANSPORT  
OF BLACK OR WHITE PEPPER**

- A.1 The packs of pepper should be stored in covered premises, well protected from the 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. Its 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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ANNEX B

DETERMINATION OF PERCENTAGE OF LIGHT BERRIES

B.1 REAGENT

*Alcohol-water solution*, of relative density  $d_{20}^{20} = 0.80$  to 0.82. The alcohol used in the preparation of this solution may be ethanol, denatured rectified spirit or isopropanol.

B.2 PROCEDURE

B.2.1 Test portion

Weigh, to the nearest 0.01 g, 50.0 g of the sample into a 600 ml beaker.

B.2.2 Determination

Add 300 ml of the alcohol-water solution to the test portion in the beaker and stir with a spoon. Allow the material to settle for 2 minutes and then spoon off the berries which float on the surface. Only the berries which float on the surface should be removed and not those which may stay suspended some distance below the surface of the alcohol-water solution. Repeat this procedure of stirring, settling and removal of the floating berries until no more berries float on the surface in two successive stirrings. Blot the removed berries to remove excess liquid and then spread them to air-dry on a piece of paper, towel or any other absorbent material. Dry these berries for one hour and then weigh them accurately.

B.3 EXPRESSION OF RESULTS

The percentage, by mass, of light berries in the sample is equal to

$$M_1 \times \frac{100}{M_0}$$

where

$M_0$  is the mass, in grammes, of the test portion,

$M_1$  is the mass, in grammes, of light berries removed.