

भारतीय मानक
Indian Standard

IS 16521 : 2017
(Reaffirmed 2021)

**मिर्च एवं मसाले — सफ़ेद मिर्च, साबुत
एवं पिसी — विशिष्टि**

**Spices and Condiments — White
Pepper, Whole and Ground —
Specification**

ICS 67.720.10

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भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

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June 2017

Price Group 2

Spices and Condiments Sectional Committee, FAD 9

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Spices and Condiments Sectional Committee had been approved by the Food and Agriculture Division Council.

White pepper is berry of black pepper (*Piper nigrum* L.), from which the outer pericarp has been removed. White pepper of commerce is prepared either from freshly harvested berries or dried black pepper using special techniques such as retting, steaming and decortication. Steeping in water is the most popular technique for preparing white pepper in which ripe pepper berries are soaked in water for 8-10 days and the outer skin is removed, washed and sun dried.

Ground white pepper is commonly used in Chinese cooking and salads and in products like light-coloured sauces, mayonnaise or mashed potatoes, where black specks of black pepper is not liked.

This standard is prepared based on the standards for white pepper, whole and ground laid down under the *Food Safety and Standards (Food Products Standards and Food Additives) Regulations*, 2011 and the ISO standard on the subject, ISO 959-2 : 1998 'Pepper (*Piper nigrum* L.), whole or ground — Specification — Part 2: White Pepper'.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act*, 2006 and the Rules and Regulations framed thereunder and the *Legal Metrology (Packaged Commodities) Rules*, 2011. However, this standard is subject to the restrictions imposed under these, wherever applicable.

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 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SPICES AND CONDIMENTS — WHITE PEPPER, WHOLE AND GROUND — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and methods of sampling and test for white pepper (*Piper nigrum* L.), whole and ground.

2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

IS No.	Title
460 (Part 1) : 1985	Test sieves : Part 1 Wire cloth test sieves (<i>third revision</i>)
1070 : 1992	Reagent grade water — Specification (<i>third revision</i>)
1797 : 2015	Methods of test for spices and condiments (<i>third revision</i>)
5887 (Part 3) : 1999/ISO 6579 : 1993	Methods for detection of bacteria responsible for food poisoning — Part 3 : General guidance on methods for the detection of <i>Salmonella</i> (<i>second revision</i>)
13145 : 2014	Spices and condiments — Methods of sampling (<i>second revision</i>)
14216 : 1994	Code for hygienic practice for spices and condiments processing units
15695 : 2006/ISO 11027 : 1993	Pepper and pepper oleoresins — Determination of piperine content — Method using high-performance liquid chromatography

3 TERMINOLOGY

For the purpose of this standard, the following definitions shall apply.

3.1 Black Pepper, Whole — The dried berries of *Piper nigrum* L., brown to black in colour with wrinkled surface, having an unbroken pericarp.

3.2 White Pepper, Whole — The dried berries of *Piper nigrum* L., light brown to white in colour with a smooth surface, from which the outer pericarp is removed with or without preliminary soaking in water and subsequent drying, if necessary.

3.3 White Pepper, Semi-processed (SP) — White pepper that has undergone a partial treatment by the producer and that conforms to the requirements of this standard.

3.4 White Pepper, Processed (P) — White pepper that has been processed (cleaning, drying, preparation, grading, etc) by the producer and that conforms to the requirements of this standard.

3.5 White Pepper, Ground — Pepper obtained by grinding white pepper berries without adding any foreign matter to the pepper (for example, whitening agents), and that conforms to the requirements of this standard.

3.6 Black Berry — Berry of dark colour, generally consisting of a black pepper berry whose pericarp has not been fully removed.

3.7 Broken Berry — Berry that has been separated into two or more pieces.

3.8 Extraneous Matter — All materials other than white pepper berries, irrespective of whether they are of vegetable (for example, stems and leaves) or mineral (for example, sand) origin.

NOTE — Black and broken berries are not considered as extraneous matter.

4 REQUIREMENTS

4.1 Odour and Flavour

When ground, the odour and flavour shall be characteristic of white pepper, slightly sharp and very aromatic. The product shall be free from foreign odours and flavours including mustiness.

4.2 Freedom from Moulds, Insects, etc.

White pepper, whole or ground, shall be free from mould growth, living and dead insects, insect fragments and rodent contamination visible to the naked eye (corrected, if necessary, for abnormal vision).

4.3 Fineness of White Pepper, Ground

White pepper, ground, shall be free from coarse particles and shall be of such a fineness that the whole of it passes through IS Sieve 60 [see IS 460 (Part 1)]

4.4 White pepper, whole or ground, shall be free from

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added colouring matter and any other harmful substances.

4.5 White pepper, whole and ground shall also comply with the requirements given in Table 1.

4.6 Hygienic Conditions

The white pepper, whole and ground shall be processed and packed under hygienic conditions (*see* IS 14216).

5 PACKING AND MARKING

5.1 Packing

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

5.2 Marking

The following particulars shall be legibly and indelibly marked or labelled on each container of white pepper, whole or ground:

- Name and address of the manufacturer or packer;
- Name of the material (whole or ground);
- Trade-name or brand name, if any;
- Batch or code number;
- Net quantity;
- Best before date;
- Year of the harvest (in case of whole);
- Date of packing (in case of ground); and
- Any other markings required under the *Legal Metrology (Packaged Commodities) Rules, 2011*, and the *Food Safety and Standards (Packaging and Labelling) Regulations, 2011*.

Table 1 Requirements for White Pepper, Whole and Ground

(Clause 4.5)

SI No.	Characteristics	Requirements		Method of Test, Ref to	
		Whole		Ground	
		Semi-processed	Processed		
(1)	(2)	(3)	(4)	(5)	(6)
i)	Extraneous matter, percent by mass, <i>Max</i>	1.0	0.8	—	4 of IS 1797
ii)	Broken berries, percent by mass, <i>Max</i>	4.0	3.0	—	Physical separation and weighing
iii)	Black berries, percent by mass, <i>Max</i>	15.0	5.0	—	Physical separation and weighing
iv)	Insect damaged matter, percent by mass, <i>Max</i>	1.0	1.0	—	Physical separation and weighing
v)	Bulk density (g/litre) , <i>Min</i>	600	600	—	3 of IS 1797
vi)	Moisture, percent by mass, <i>Max</i>	13.0	13.0	13.0	9 of IS 1797
vii)	Total ash on dry basis, percent by mass, <i>Max</i>	3.5	3.5	3.5	6 of IS 1797
viii)	Acid insoluble ash on dry basis, percent by mass, <i>Max</i>	—	—	0.3	8 of IS 1797
ix)	Non volatile ether extract on dry basis, percent by mass, <i>Min</i>	6.5	6.5	6.5	14 of IS 1797
x)	Volatile oil content on dry basis, (ml/100 g), <i>Min</i> ¹⁾	1.0	1.0	0.7	15 of IS 1797
xi)	Peperine content on dry basis, percent by mass, <i>Min</i>	4.0	4.0	4.0	IS 15695
xii)	Crude fibre on dry basis, percent by mass, <i>Max</i>	—	—	6.5	13 of IS 1797
xiii)	<i>Salmonella</i> (in 25 g)	Absent	Absent	Absent	IS 5887 (Part 3)

¹⁾ Volatile oil should be determined immediately after grinding.

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5.2.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

5.2.2.1 The use of standard mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and regulations made thereunder. The details of conditions under which a license for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6 SAMPLING

6.1 Representative samples of the material shall be drawn and tested for conformity to this standard as prescribed in IS 13145.

6.2 Samples of white pepper, whole, shall be ground so that the whole of the material passes through IS Sieve 20 [*see* IS 460 (Part 1)]. The material so ground shall be used for determining moisture (*see* Table 1).

7 TESTS

7.1 All the tests shall be carried out as specified in col 6 of Table 1.

7.2 Quality of Reagents

Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (*see* IS 1070) shall be used where the use of water as reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the test results.

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This Indian Standard has been developed from Doc No.: FAD 09 (2535).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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Published by BIS, New Delhi