

PAKISTAN STANDARD SPECIFICATION
FOR
TURMERIC WHOLE AND GROUND (1ST REV.)

- 0.1 This Pakistan Standards was adopted by the Pakistan Standards, Institution on 05 -10 -2000 after the draft finalized; by the Spices & Condiments product Sectional Committee has been approved by the /Agriculture & Food Products Divisional Council.
- 0.2 Turmeric (Haldi) is one of the 5 important and commonly used material a in Pakistan dietary. It is marked as dry whole bulbs or fingers; as well in ground form,
- 0.3 While formulating this standard the Sectional Committee responsible for the formulation of Pakistan .Standard on Spices and Condiments, took into consideration the prevailing methods of trade,. This standard however, subject to the restrictions imposed under the Pakistan Pure Food Rules where ever applicable.
- 0.4 This standard is intoned chiefly to cover the technical provisions relating to Haldi Powder and it does not cover all the necessary provision; of a contract.
- 0.5 For the purpose of deciding whether *a* particular requirements of this standard complied with the final value observed or calculated expressing the .result of e toot or analysis shall be rounded off in accordance- with PS: 103-1 991 (1st Rev.) Methods of Hounding ; Off Numerical Values, the number insignificant places retail the rounded off value shall be same as that of the • specified value in a standard.

1. **SCOPE & FIELD OF APPLICATION :**

- 11 This Pakistan Standard specifies requirements for Turmeric (Curcuma longa) Ground (Powdered).

2. **DESCRIPTION:**

2.1 Whole Turmeric constituted by cured primary or secondary rhizomes, called commercially bulbs or fingers, of (*Curcuma long* Linnaeus)

2.1.1 The rhizomes shall be dry, well developed and shall have the shape and typical colour of the variety. The rhizomes are cured by soaking them in boiling water and then drying them to avoid regeneration. They may be in the natural state or polished.

2.1.2 Ground (Powdered) turmeric is obtained by grinding whole turmeric.

3. **REQUIREMENT**

3.1 ODOUR FLAVOUR AND COLOUR

Turmeric ground (Powdered), shall have the characteristic odour and flavour of the spice. It shall be free from mustiness, foreign artificial colouring matter and other foreign flavours.

3.2 Freedom from insects moulds etc. from which the turmeric powder is obtained by the whole turmeric shall be free from living insects moulds, fungus and shall be practically free from dead insects, insect fragments and rodent contamination.

3.3 Extraneous matter

3.3.1 Whole turmeric from which the powdered turmeric is obtained

Extraneous matter in whole turmeric includes:

- a) Chaff, dried leave, stones, particles of soil, dust and etc.
- b) all vegetable matter other than the rhizomes.

3.3.2 GROUND (POWDERED) TURMERIC.

The ground (Powdered), turmeric shall conform with the microscopically characteristic of whole turmeric.

3.4 DEFECTIVE RHIZOMES.

Shriveled fingers and/or bulbs, internally damaged, hollow or porous rhizomes, rhizomes scorched by boiling and other types of damaged rhizomes shall be considered, as defective.

The proportion of defective rhizomes shall not exceed 5% (m/m)

3.5 Grading.

3.5.1 GROUND (POWDERED) TURMERIC

Ground (powdered) turmeric is graded according to its particle size into two types, as

follows :

- a) coarse, powder 98 % of the product shall pass through a sieve of aperture size 500 micron,
- b) fine powder; 98 % of the product shall pass through a sieve of aperture size 300 micron

3.6 REQUIREMENTS (WHOLE & GROUND)

Turmeric, whole or ground (powdered), in addition to clause 3.1 – 3.5.1 shall comply with the requirements given in the table

TABLE – 1 REQUIREMENTS FOR TURMERIC WHOLE & GROUND

Sl. No.	CHARACTERISTIC	REQUIREMENTS		METHOD OF TEST REF.
		WHOLE	GROUND	
1	Extraneous matter % (m/m),, Max.	2	-	ISO: 927
2	Moisture content % (m/m), max.	12	12	PS : 3614 – 1994
3	Total Ash % (m/m) on dry basis max.	9	9	PS : 3611 – 1994
4	Acid insoluble ash % (m/m) on dry basis, max.	1.5	2.5	PS : 3609 – 1994
5	Lead as Pb, mg / kg max	5	5	-
6	Test for Lead Chromate	Negative		Appendix - A
7	Volatile Oil ml / 100 g (on dry basis), min.	2.5	1.5	PS : 3611 – 1994
8	Curcumin content, percent by mass, min.	-	3.0	
9	Starch percent by mass, max	-	50	
	a) By acid hydrolysis method.	-		
	b) By diastage hydrolysis method	-	90	

4. SAMPLING

4.1 In accordance with PS: 2990 – 1991, Spices & Condiments Sampling.

5. **PACKING AND MARKING**

5.1 PACKING

Turmeric Whole or ground (Powdered) shall be packed in clean, sound and dry containers made of a material which does not affect the turmeric and protects its from moisture absorption and from the loss of volatile oils.

5.2 MARKING

In accordance with PS:1485 – 1994 (R) (Labelling of Prepacked Foods)

APPENXIX – A CHROMATE TEST

A.1 REAGENT

A.1.2 Dilute Sulphuric Acid (1 : 7 by volume)

A.1.3 Diphenyl Carbazide solution 0.2 percent (v/v) in ethyl alcohol)95 percent v/v)

A.2 PROCEDURE

A.2.1 Ash about 2 g of the material dissolve the ash in 4 to 5 ml of dilute sulphuric acid in a test tube and add one milliliter of diphenyl carbazide solution. The presence of chromate in indicated by the production of violet colour.