



**PRODUCT MANUAL FOR
SOLUBLE COFFEE CHICORY POWDER
ACCORDING TO IS 3309 : 1992**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 3309 : 1992
	Title	:	SOLUBLE COFFEE CHICORY POWDER
	No. of Amendments	:	04
2.	Sampling Guidelines:		
a)	Raw material	:	No specific requirement
b)	Grouping guidelines	:	NA
c)	Sample Size	:	500 gms
3.	List of Test Equipment	:	ANNEX – <u>A</u>
4.	Possible tests in a day :		
	i. Description ii. Cup test iii. Moisture iv. Solubility in Boiling water v. Solubility in cold water		
5.	Scheme of Inspection and Testing	:	ANNEX – B
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 3309 : 1992 with the following scope:		
	Name of the product	Soluble Coffee Chicory Powder	
	Any other relevant information	With or without ECO MARK.	



ANNEX A

**TO PRODUCT MANUAL FOR
SOLUBLE COFFEE CHICORY POWDER
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List of Test Equipment

Major test equipment required to test as per the Indian Standard

S.No	Test used in with clause reference	Test equipment
1.	Cup Test Cl 3.2 & Annex-A of IS 3309	Weighing balance/ Analytical, Water boiler with temp controller, Watch glass, Porcelain bowl, Chlorine Free Water, Milk, Sugar, Stirrer, Thermometer (0-100°C; L.C 1°C)
2.	Moisture Content Cl 3.4 and Table 1 (Annex B of IS 2791)	Method-I Oven laboratory (95±2°C; L.C 1°C), Pure Nickel Dishes (90x12mm, Flat Bottomed) , Desiccators (containing efficient desiccant) , Analytical Balance
		Method-II Isothermal Vacuum oven (70±1°C), Oven (101±1°C), Vacuum Pump (capable of reduce pressure in oven to 5000Pa), Dish (flat bottomed with tight lid, resistant to attack under the condition of test), Air dryer apparatus (Consisting of two washing bottles made of glass, filled with glycerol, to form a bubble train, and two drying towers made of glass containing a desiccant), Desiccators, Analytical Balance (L.C-0.1mg)
3.	Total Ash Cl 3.4 & Table 1 (Annex-C of IS 2791)	Analytical Balance (L.C-0.1g), Platinum Dish, Heating Burner with fuel connection, Muffle Furnace (550±10°C; L.C:-1°C), Desiccator.
4.	Caffeine Cl 3.4 & Table 1 (IS 16028)	Methanol, HPLC grade, Magnesium Oxide, heavy, high gale, Caffeine, Mobile phase(24 % volume fraction methanol in water), Volumetric flask, Filtration assembly, Analytical Balance, Membrane filter units of pore size 0,45 µm, HPLC with UV detector set at 272 nm (270 nm to 280 nm) or a filter detector (254 nm), and with a data collection/integration system, Chromatographic column for HPLC, of minimum length 125 mm, packed with C18 material, preferentially 5 µm spherical particles, Magnetic stirrer, ultrasonic bath, microlitre syringe, coffee mill, Grinder with cogged wheel, Sieve, Pipettes, One-mark volumetric flasks(250 ml & 1 l)

5.	Solubility in Boiling water Solubility in Cold water	Test tube (150ml) , Heater, Analytical Balance, Beaker (500ml), Glass rod, stop watch, Thermometer (L.C:-1°C)
6.	Cl 3.4 & Table 1 (Annex-E of IS 2791)	
7.	Copper Cl 3.7 (Cl 15.1 of IS 1699)	Kjeldahl flasks, Atomic absorption spectrophotometer, Nitric acid, Perchloric acid , Sulphuric acid-98%, hydrochloric acid,(sp gr 1.16 to 1.18), water (metal free), Sodium Sulphate, Sodium borohydride pellets, Potassium Chloride, Copper sulphate , flask (100mg), Zinc Powder, Potassium Dichromate, Analytical balance, Heater, Measuring flask

The list above is indicative only and may not be treated as exhaustive.

ANNEX B
SCHEME OF INSPECTION AND TESTING
SOLUBLE COFFEE CHICORY POWDER
ACCORDING TO IS 3309 : 1992

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. PACKING AND MARKING- The Standard Mark as given in Schedule of the licence shall be stenciled/printed on each container of Soluble Coffee Chicory Powder or printed on the labels applied to the container, as the case may be, provided always that the material in each container to which this mark is thus applied conforms to every requirement of the specification.

3.1 Packing: The material shall be packed in 25g, 50g, 100g, 200g, 500g, 1kg and multiples thereof, in air-tight tin plate or glass containers or in suitable metal foil laminate containers with food grade plastic lining. Where metal foil laminate containers with plastic lining are used, a cautionary notice to the following effect shall be printed:

“Once opened transfer contents immediately into air-tight container”.

3.1.1 For ECO mark the product shall be packed in packages which are made from recyclable, reuseable or bio-degradable materials which shall be declared by the manufacturer and may be accompanied with instructions for proper use.

3.2 Marking: The information as mentioned under clause 4.2 of IS 3309 shall be legibly and indelibly marked on the label of the container. In addition, the following details shall be mentioned on each container legibly and indelibly:

a) BIS Licence No. CM/L_.

b) BIS website details i.e – “For details of BIS Certification please visit www.bis.gov.in”.

3.2.1 Additional information as per clause 4.2.1 shall be marked on the label for ECO mark.

4. CONTROL UNIT – For the purpose of this scheme, the entire quantity soluble coffee chicory powder manufactured from a day’s production of extract shall constitute a control unit (batch).

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

5.2 On the basis of tests and analysis results, the decision regarding conformity or otherwise of a control unit shall be taken as follows:

5.2.1 In case any sample drawn from a control unit fails in one or more requirements, the entire material represented by the sample shall be considered unfit for the purpose of marking. However, the material may be suitably reprocessed and the defect(s) rectified. Such reprocessed material when tested again shall conform to all the requirements of the specification before it is marked with Standard Mark.

5.3 ECO Mark: The requirements for ECO Mark as stipulated under clause 3.6, 4.1.1 and 4.2.1 of IS 3309 shall be implemented by the licensee holding licence for ECO Mark, which will be in addition to the product requirements.

6. HYGIENIC CONDITIONS –Soluble coffee-chicory powder shall be manufactured in premises built and maintained under hygienic conditions (see IS 2491). The handling equipment like roasters, grinders, extractors and driers, and the packing equipment shall be clean and free from any objectionable odour.

7. Raw Material – Each consignment of chicory and coffee received at the factory shall be tested for its suitability before use and appropriate records maintained.

8. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Clause	Requirement	Test Method Cl. Ref.	Test Method IS		No. of Samples	Frequency	Remarks
3.1	Description	3.1	IS 3309	R	One	Once Every Hour	Refer Cl. 5.2.1 of SIT
3.2	Cup test	Annex A	IS 2791	R	One	-do-	-do-
3.4 & Table-1 (i)	Moisture	Annex B	-do-	R	One	Each Control Unit	-do-
(ii)	Total ash	Annex C	-do-	S	One	Once in a month	See Note 3
(iii)	Caffeine	-	IS 16028	S	One	-do-	-do-
(iv)	Solubility in boiling water	Annex E	IS 2791	R	One	Each control unit	See clause 5.2.1 of SIT
(v)	Solubility in cold water at 16±2°C	Annex E	-do-	R	One	-do-	-do-
3.5	Chicory content	-	-	-	-	-do-	The manufacture shall declare the chicory content in the soluble coffee chicory powder for every control unit as per clause 3.5 of IS 3309.
3.6	Optional Requirements for ECO Mark	-	-	-	-	-	Details of these requirements will be incorporated, whenever and application is received and information is collected during the first PFE for ECO Mark licence.
3.7	Copper Content	15.1	IS 1699	S	One	Once in a month	See note 3

Note-1: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control and submit his own levels of control in column 3 with proper justification for approval by BO Head.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

Note-3: If sample fails, subsequent five control units shall be tested, if found conforming, original frequency may be restored.