



**PRODUCT MANUAL FOR  
CANE GUR (JAGGERY)  
ACCORDING TO IS 12923 : 1990**

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.	<b>Product</b>	:	IS 12923:1990
	<b>Title</b>	:	Cane Gur (Jaggery)
	<b>No. of Amendments</b>	:	3
2.	<b>Sampling Guidelines:</b>		
a)	<b>Raw material</b>	:	No specific requirement for raw material
b)	<b>Grouping guidelines</b>	:	Nil
c)	<b>Sample Size</b>	:	500g
3.	<b>List of Test Equipment</b>	:	Please refer ANNEX –A
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer ANNEX –B
5.	<b>Possible tests in a day :</b>		
	<b>Requirement</b>	<b>Clause</b>	
	(i) Description (Cl.4.1&4.2)	<b>4.1 &amp; 4.2</b>	
	(ii) Sucrose (Cl.4.3, Table-1)	<b>Table 1, Clause 4.3 &amp; 6.1</b>	
	(iii) Reducing Sugar (Cl.4.3, Table-1)	<b>-do-</b>	
	(iv) Moisture(Cl.4.3, Table-1)	<b>-do-</b>	
	(v) Sulphur Dioxide(Cl. 4.3, Table-1)	<b>-do-</b>	
6.	<b>Scope of the Licence :</b>		
	“Licence is granted to use Standard Mark as per IS 12923 : 1990 with the following scope:		
	Name of the product	Cane Gur (Jaggery)	
	Grades	Grade 1 & Grade 2	

**ANNEX A****List of Test Equipment****Major test equipment required to test as per requirements of Indian Standard**

Sl. No.	Test Equipment	Tests used in with Clause Reference
1	Weighing Balance Burette L shape Watch glass Erlenmeyer flask Volumetric flask Pipette Glass Thermometer Bunsen Burner, tripod wire gauze Water Bath Whatman No.40 filter paper Beaker Copper Sulphate Sulphuric acid Asbestos Potassium sodium tartarate Sodium hydroxide Methylene blue indicator Hydrochloric acid	Sucrose (Cl. 4.3 , Table-1)
2	Weighing Balance Burette Erlenmeyer flask Volumetric flask Pipette Watch glass Bunsen Burner, tripod wire gauze Water Bath Filter Paper Activated Carbon Small pumice pieces Disodium hydrogen Phosphate Glacial acetic acid Potassium sodium tartarate Funnel Glass rod Copper Sulphate Penta hydrate Sodium carbonate anhydrous Soluble starch Hydrochloric Acid potassium iodate	Reducing Sugar(Cl. 4.3 , Table-1)

	potassium iodide Sodium Thiosulphate Iodine Acetic Acid Water Bath with cold Running water Sodium chloride	
3	Weighing Balance Aluminium plate Hot Air oven (Forced draught Atmospheric Pressure Oven) Dessicator Silica gel Infrared Thermometer Calcium Chloride Digital Thermometer with Sensor Glass Thermometer Dry Duster	Moisture (Cl. 4.3 , Table-1)
4	Membrane filter Glass fiber pre fiber, with an acrylic binder Filtration apparatus Tweezers Plastic petri dishes Hot Air oven Square mesh sieve, with base ban Weighing Balance 1- naphthol Ethanol Ortho phosphoric acid Desiccator Silica gel Calcium Chloride Stainless steel jug Stainless steel stirring rod	Water insoluble matter(Cl. 4.3 , Table-1)
5	Silica crucible Weighing Balance Watch glass Desiccator Heating Mantle Silica gel Calcium chloride Muffle Furnace Sulphuric acid Glass Thermometer Water Bath Spatula	Sulphated ash (Cl. 4.3 , Table-1)

6	Spectrophotometer or Colorimeter Volumetric flask Graduated pipette, conforming to class A of IS 4162(Part 1) Pipette Burette Test tubes Analytical Balance Glass Thermometer Rosaniline Hydrochloride Hydrochloric acid Formaldehyde Sucrose Sodium hydroxide Iodine Potassium iodide Starch Sodium Thiosulphate pentahydrate Sodium sulphite heptahydrate Sodium chloride Conical Flask	Sulphur dioxide (Cl. 4.3 , Table-1)
7	Silica Crucible Weighing Balance Water Bath Watch glass Filter Paper(Whatmann No.42) Digital Thermometer with Sensor Hot Air oven Dessicator Silica gel Calcium Chloride Hydrochloric Acid Muffle Furnace	Ash insoluble in dilute hydrochloric acid (Cl. 4.3 , Table-1)

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

**SCHEME OF INSPECTION AND TESTING FOR CANE GUR (JAGGERY)**  
**ACCORDING TO IS 12923:1990**

**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 the Schedule of the licence, shall be marked on the bags of Cane Gur provided always that material so marked conform to requirements of the specification.

**3.1** Packing and Marking shall be done as per the provisions of the Indian Standard. In addition, the following shall be incorporated on each bag:

- i) BIS Licence Number CM/L .....and
- ii) BIS website details i.e. —For details of BIS certification please visit **[www.bis.gov.in](http://www.bis.gov.in)**.

**4. CONTROL UNIT** –Cane Gur (Jaggery) manufactured continuously from the same consignment of sugar cane in a day shall constitute a control unit.

**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.

**6. HYGIENIC CONDITIONS** –Wherever applicable, hygienic conditions shall be complied in day to day production and quality control activities. Schedule for each activity for this purpose shall be displayed prominently in the factory premises and records of compliance shall be maintained.

**7. 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.

**Scheme of Inspection and Testing****TABLE 1:LEVELS OF CONTROL**

(1)				(2)	(3)			
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control			
Cl.	Requirement	Test Method			No. of Sample		Frequency	Remarks
		Clause	Reference		Grade 1	Grade 2		
4.1&4.2	Description	4.1&4.2	IS 12923	R	One	One	Every four hour	
4.3	Sucrose, percent by mass	12	IS 15279	R	One	One	Every fifth control unit	See Note-3
4.3	Reducing Sugars, percent by mass	7	IS 15279	R	One	One	Every fifth control unit	See Note-3
4.3	Moisture, percent by mass	4	IS 15279	R	One	One	Every control unit	
4.3	Water insoluble matter, percent by mass	14	IS 15279	R	One	One	Every control unit	
4.3	Sulphated Ash, percent by mass	10	IS 15279	R	One	One	Every control unit	
4.3	Sulphur dioxide, ppm	13	IS 15279	R	One	One	Every control unit	
4.3	Ash insoluble in dilute hydrochloric acid, percent by mass	Annex A	IS 12923	R	One	One	Every control unit	
4.3	Total Sugar, percent by mass	--	IS 15279	R	One	One	Every fifth control unit	See Note-3

**Note-1:** Whether test equipment is required or sub-contracting as permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

**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:** In case of failure, the frequency to be increased from every fifth control unit to every control unit for 20 days. Thereafter frequency of every fifth control unit may be restored if all the samples during the 20 days are found passing.