



**PRODUCT MANUAL
FOR SODIUM METABISULPHITE, FOOD GRADE
ACCORDING TO IS 4752:1994**

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 4752: 1994
	Title	:	SODIUM METABISULPHITE, FOOD GRADE
	No. of Amendments	:	3
2.	Sampling Guidelines:		
a)	Raw material	:	No specific requirements
b)	Grouping guidelines	:	NA (No varieties of the product mentioned in IS)
c)	Sample Size	:	500 g
3.	List of Test Equipment	:	Please refer ANNEX –A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX –B
5.	Possible tests in a day :		
	(i) Description	(ii) Identification test	
	(iii) Water insoluble	(iv) Purity	
	(v) Iron	(vi) Selenium	
	(vii) pH of 10 percent aqueous solution		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 4752:1994 with the following scope:		
	Name of the product	Sodium Metabisulphite, Food grade	

ANNEX – A
TO PRODUCT MANUAL
FOR SODIUM METABISULPHITE, FOOD GRADE
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LIST OF TEST EQUIPMENT

Major test equipment required to test as per the Indian Standard

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Description and solubility Clause 3.1	Ethanol
2	Identification Test Clause 3.2	Electronic Weighing Balance, Phenol red, Iodine, Uranyl zinc acetate, Sulphuric Acid, Filter paper, Mercurous Nitrate or Potassium Iodate, Starch.
3	Water Insolubles Clause 3.3	Electronic Weighing Balance
4	Purity Clause 3.4, Table 1	Electronic Weighing Balance (Least count 0.001g) Burette, Glass stoppered conical flask, Iodine, Hydrochloric Acid, Sodium thiosulphate, Starch, Red mercuric iodide
5	Water insoluble matter Clause 3.4, Table 1	Electronic Weighing Balance Hot air oven (to maintain temperature of 105 to 110 °C Gooch crucible fitted with an asbestos pad OR Sintered glass crucible (G No. 4)
6	Thiosulphate Clause 3.4, Table 1	Electronic Weighing Balance (Least count 0.1g) Nessler tube (50 ml), Pipette (to take 1 ml solution), Measuring Cylinder, Potassium bromide, Mercuric chloride, Sodium thiosulphate, Heating mental / hot plate
7	Arsenic (as As) Clause 3.4, Table 1 Arsenic determination by using method for routine purposes as per method clause 15.2 of IS 1699	Electronic Weighing Balance Apparatus as fig in clause 15.2.2.1 of IS 1699 Heating arrangement with micro burner Water bath (to maintain 25 to 30 °C Sulphuric acid – sp gr 1.84 Potassium permanganate Ferrous sulphate Hydrochloric Acid Potassium bromide Aluminium strips (8mm x 8mm x 1mm) Tin chloride Test paper (prepared as clause h of 15.2.2.2 of IS 1699
	Arsenic Cl 3.4, Table 1	Electronic Weighing Balance Modified gutzeit apparatus, Lead Acetate, Mercuric

	Gutzeit method	bromide, Filter paper, Sulphuric acid, Hydrochloric Acid Potassium Iodide, Stannous Chloride, Zinc, Granules Arsenic trioxide
	Instrumental Method	Electronic Weighing Balance, Atomic absorption, spectrophotometer, Standard Arsenic solution, Volumetric Flask, Pipette, Sulphuric Acid, Hydrochloric Acid
8	Heavy metals (as Pb) Clause 3.4, Table 1	Electronic Weighing Balance, Hydrochloric Acid, Nessler tube (50 ml), pH Indicator paper, Ammonia Hydroxide, Acetic Acid, Hydrochloric Acid, Lead Nitrate, Hydrogen Sulphide.
9	Iron (as Fe) Clause 3.4, Table 1	Electronic Weighing Balance, Nessler cylinders, Bromine, Hydrochloric Acid, Ammonium persulphate, Ammonium thiocyanate, Standard Iron Solution Pipette (Graduated)
10	Selenium (as Se) Clause 3.4, Table 1	Electronic Weighing Balance, Erlenmeyer Flask, Standard selenium solution, Hydrogen peroxide, Perchloric Acid, Water bath (to maintain temp 40°C) Ascorbic Acid, Hydrochloric Acid
11	pH of 10 percent aqueous solution Clause 3.4, Table 1	pH Meter Electronic Weighing Balance Buffer Solutions

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

ANNEX B
SCHEME OF INSPECTION AND TESTING
FOR SODIUM METABISULPHITE, FOOD GRADE
ACCORDING TO IS 4752:1994

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 stenciled/printed on each container of Sodium Metabisulphite, Food Grade or printed on the label applied to it, as the case may be, provided always that the material in each container to which this mark is thus applied, conform to every requirement of the specification.

3.1 Packing and marking shall be done as per the provision of the Indian Standard. 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”

4. CONTROL UNIT – For the purpose of this scheme, entire quantity of Sodium Metabisulphite, Food Grade produced in the reaction vessel and dried at a time 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.

5.2 A sample drawn from control unit of the material and tested, shall conform to all the requirements laid down in the specification. In the event of the failure of the sample in any one or more of the requirements the entire material in the control unit may either be rejected for the purpose of marking or it may be reprocessed and the defect (s) rectified. Such reprocessed material when tested again shall conform to all the requirements of the specification for relevant grade.

6. 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 equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
3.1	Description	3.1	IS 4752	R	One	Each control unit	See clause 5 of STI
3.1	Solubility	3.1	IS 4752	R	One	Each control unit	
3.2	Identification	3.2	IS 4752	R	One	Each control unit	
3.3	Water Insolubles	3.2	IS 4752	R	One	Each control unit	
3.4, Table 1	Purity	Annex A	IS 4752	R	One	Each control unit	
3.4, Table 1	Water insoluble matter	Annex B	IS 4752	R	One	Each control unit	
3.4, Table 1	Thiosulphate	Annex C	IS 4751	R	One	Each control unit	
3.4, Table 1	Arsenic (as As)	15	IS 1699	R	One	Each control unit	
3.4, Table 1	Heavy metals (as Pb)	Annex C	IS 4752	R	One	Each control unit	
3.4, Table 1	Iron (as Fe)	Annex D	IS 4752	R	One	Each control unit	

3.4, Table 1	Selenium (as Se)	Annex E	IS 4751	R	One	Each control unit	
3.4, Table 1	pH of 10 percent aqueous solution	Annex E	IS 4752	R	One	Each control unit	

Note-1: Whether test equipment is required or sub-contracting is 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 empanelled 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.

