



उत्पाद मानुयल
फॉस्फोरिक एसिड, खाद्य ग्रेड
IS 10508 : 2020 के अनुसार

**PRODUCT MANUAL
FOR PHOSPHORIC ACID, FOOD GRADE
ACCORDING TO IS 10508 : 2020**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेंस धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेंस/प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

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.	उत्पाद Product	:	IS 10508 : 2020
	शीर्षक Title	:	Phosphoric Acid, Food Grade
	संशोधन संख्या No. of Amendments	:	Nil
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	No specific requirements
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	NA
c)	नमूने का परिमाण Sample Size	:	1 Liter
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	ANNEX - A
	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and		ANNEX - B
4.	Testing	:	
5.	एक दिन में संभावित परीक्षण Possible tests in a day :		
	i. Description		
	ii. Test for Phosphate		
	iii. Purity as H ₃ PO ₄		
	iv. Nitrates		

	v. Volatile acids
	vi. Chlorides
	vii. Sulphates percent by mass
	viii. Fluoride
6.	लाइसेन्स का कार्यक्षेत्र/Scope of the Licence :
	IS 10508 : 2020 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है "Licence is granted to use Standard Mark as per IS 10508 : 2020 with the following scope:
	उत्पाद का नाम Name of the product Phosphoric Acid, Food Grade

BUREAU OF INDIAN STANDARDS
ManakBhawan, 9, Bahadur Shah Zafar Marg,
New Delhi – 110002

ANNEX-A

TO PRODUCT MANUAL
FOR PHOSPHORIC ACID, FOOD GRADE ACCORDING TO IS 10508 : 2020

LIST OF TEST EQUIPMENTS

Major test equipment required to test as per the Indian Standard

Sl No.	Tests used in with Clause Reference	Test Equipment
1	Description Cl. 3.1	pH paper, Water, Ethanol (95 %)
2.	Test for Phosphate Cl. 3.2	Beakers, Hot plate, Phosphoric acid, Nitric acid, Ammonium molybdate, Ammonia solution.
4	Purity C. 3.3 & Table 1 (Annex A of IS 10508)	Weighing Balance, Filter Paper, Glass- stoppered Flask, Burette, Pipettes (0.1ml), Thymolphthalein Solution, Ethanol, Sodium Hydroxide (1N), Water.
5.	Nitrates C. 3.3 & Table 1 (Annex B of IS 10508)	Weighing Balance, Beakers, Pipettes (0.1ml), Phosphoric acid, Sodium chloride, Indigo carmine, Sulphuric acid.
6.	Volatile acids C. 3.3 & Table 1 (Annex C of IS 10508)	Weighing Balance, Distilling flask with a spray tap, Beakers, Heating Mantle, Burette Phosphoric acid, Phenolphthalein, Sodium hydroxide.
7.	Chlorides C. 3.3 & Table 1 (Annex D of IS 10508)	Weighing Balance, Nessler Tubes, Beakers, Filter Paper, Dark Chamber, Pipettes (1ml), Centrifuge, Water, Dilute Nitric Acid TS (Test Solutions), Hydrochloric Acid (0.01N), Silver Nitrate TS.
8.	Sulphates C. 3.3 & Table 1 (Annex E of IS 10508)	Weighing Balance, Nessler Tubes, Beakers, Filter Paper, Pipettes (1ml), Centrifuge, Water, Dilute Hydrochloric Acid TS, Sulphuric Acid (0.01N), Barium Chloride TS.
9.	Flouride C. 3.3 & Table 1 (Annex F of IS 10508)	Bunsen Burners, Apparatus for Limit Test for Fluoride, Nessler Tube, Thermometer, Flasks, Pipettes (0.5 ml), Weighing Balance, Phenolphthalein Solution, Ethanol (90%), Water, Sodium Hydroxide (1N), Conc. Sulphuric acid, Sodium Fluoride solution (50µg of fluorine), Hydrochloric Acid (4N), Zirconium Alizarin Solution (Zirconium Nitrate,

		Nitric Acid, Water, Alizarin Sulphonate Monohydrate, Ethanol).
10.	Arsenic (C. 3.3 & Table 1) (Cl. 15 of IS 1699)	Instrument method: Kjeldahl flask, Atomic spectrophotometer absorption , hydrochloric acid, water, sodium sulphate, sodium borohydride pellets, potassium chloride, measuring cylinder/ beaker, volumetric flask, weighing balance, heater. For Arsenic: Distillation apparatus, conical flask, sulphuric acid, potassium permanganate solution, ferrous sulphate, Hydrochloric acid, potassium bromine solution, aluminium stripes, tin chloride solution, test paper.
11.	Lead Cl. 3.3 & Table 1 (A-10 and A-20 of IS 798)	A-10 Nessler Cylinder-50 ml capacity, Ammonium Hydroxide-5N, Dilute Acetic acid-1:1, Sodium sulphide solution-12%, Standard Lead solution, Beaker. A-20 ICP-OES instrument, Nitric acid (65 %), Standard stock solution, Analytical balance, Phosphoric acid, Volumetric flask, HDPE or PP or Polytetrafluorethylene (PTFE) containers.
12.	Copper, Tin and Cadmium Cl. 3.3 & Table 1 (Annex G of IS 10508)	ICP-OES instrument, Nitric acid (65 %), Standard stock solution, Analytical balance, Phosphoric acid, Volumetric flask,.
15.	Mercury Cl. 3.3 & Table 1 (A-10 and A-20 of IS 798)	A-17 Analytical balance (LC-0.01g), Glass beaker, Volumetric flask, Atomic Absorption Spectrophotometer. A-20 ICP-OES instrument, Nitric acid (65 %), Standard stock solution, Analytical balance, Phosphoric acid, Volumetric flask, HDPE or PP or Polytetrafluorethylene (PTFE) containers.
16.	Molybdenum Cl. 3.3 & Table 1 (A-10 and A-20 of IS 798)	A-16 Analytical balance (LC-0.01g), Glass beaker, Volumetric flask, ICP-OES Instrument. A-20 ICP-OES instrument, Nitric acid (65 %), Standard stock solution, Analytical balance, Phosphoric acid, Volumetric flask, HDPE or PP or Polytetrafluorethylene (PTFE)

		containers.
17.	Aluminum Cl. 3.3 & Table 1 (A-10 and A-20 of IS 798)	A-18 Analytical balance (LC-0.01g), Glass beaker, Volumetric flask, Atomic Absorption Spectrophotometer. A-20 ICP-OES instrument, Nitric acid (65 %), Standard stock solution, Analytical balance, Phosphoric acid, Volumetric flask, HDPE or PP or Polytetrafluorethylene (PTFE) containers.

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

ANNEX B

SCHEME OF INSPECTION AND INSPECTION FOR PHOSPHORIC ACID, FOOD GRADE ACCORDING TO IS 10508 : 2020

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 equipment.

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 Phosphoric Acid, Food Grade 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 securely packed in well-filled containers with minimum access to air. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

3.2 Storage – The material shall be stored in a cool and dry place so as to avoid excessive exposure to heat.

3.3 Marking – Each container shall be legibly and indelibly marked with the information mentioned under clause 4.3 of IS 10508. 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, material produced from the same consignment of raw material and produced and packed in one shift shall constitute a control unit.

5. LEVELS OF CONTROL – The analysis and tests as indicated in Table 1 and the levels of control specified therein, shall be carried out on the whole production of the factory which is covered by this scheme and appropriate records and charts maintained in accordance with paragraph 2 above.

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

6. HYGIENIC CONDITIONS – The material shall be processed, packed, stored and distributed under hygienic conditions in licensed premises (see IS 2491).

7. REJECTION- 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		
Clause	Requirements	Test Methods Cl. Ref.	Test Method IS		No. of Sample	Frequency	Remarks
3.1	Description	3.1	IS 10508	R	One	Each Control Unit	
3.2	Test for Phosphate	3.2	IS 10508	R	One	-do-	
3.3 & Table 1	Purity as H ₃ PO ₄	Annex A	IS 10508	R	One	-do-	
-do-	Nitrates	Annex B	IS 10508	R	One	-do-	
-do-	Volatile acids	Annex C	IS 10508	R	One	-do-	
-do-	Chlorides	Annex D	IS 10508	R	One	-do-	
-do-	Sulphates percent by mass	Annex E	IS 10508	R	One	-do-	
-do-	Fluoride	Annex F	IS 10508	R	One	-do-	
-do-	Arsenic (as As)	15	IS 1699	R	One	-do-	
-do-	Lead (as Pb)	A-10 and A-20	IS 798	R	One	-do-	
-do-	Copper	Annex G	IS 10508	S	One	-do-	
-do-	Tin	-do-	-do-	S	One	-do-	
-do-	Cadmium	-do-	-do-	S	One	-do-	
-do-	Mercury	A-17 and A-20	IS 798	S	One	-do-	
-do-	Molybdenum	A-16 and A-20	-do-	S	One	-do-	
-do-	Aluminium	A-18 and A-20	-do-	S	One	-do-	

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 and submit his own levels of control in column 3 with proper justification for approval by BO Head.