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उत्पाद मैनुअल
पोटेशियम परमैंगनेट – विशिष्टि
IS 333: 2023 के अनुसार

PRODUCT MANUAL
FOR POTASSIUM PERMANGANATE - SPECIFICATION
ACCORDING TO IS 333: 2023

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity 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.

1.	मानक संख्या Product	:	IS 333 : 2023
	शीर्षक Title	:	Potassium Permanganate - Specification
	संशोधनों की संख्या No. of Amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	No specific requirement
b)	समूहीकरण दिशानिर्देश Grouping guidelines	:	Each Grade of Potassium Permanganate to be tested for considering Grant of Licence/Change in Scope of Licence
c)	नमूने का परिमाण Sample Size	:	500 g for complete testing
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request		1) Technical 2) Pure 3) Analytical Note: Apart from the above, any other requirements/parameters may also be declared as per the standard, as applicable
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer <u>ANNEX – A.</u>

4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer <u>ANNEX – B</u>
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All tests
6.	लाइसेंस का दायरा/Scope of the Licence:		
	IS 333: 2023 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेंस निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है “Licence is granted to use Standard Mark as per IS 333: 2023 with the following scope”		
	उत्पाद का नाम Name of the Product	Potassium Permanganate	
	Grade (s)	Technical and/or Pure and/or Analytical	

BUREAU OF INDIAN STANDARDS
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Marg, New Delhi – 110002

ANNEX A
List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference		Test Equipment
	Tests	Cl. Ref.	
1.	Potassium Permanganate	4.2	• Weighing balance • Container for drying • Oven • Volumetric Flask 250 ml • Distilled Water • Standard Sodium Oxalate Solution (0.1 N) • Dilute Sulphuric Acid (5 N) • Hot plate • Thermometer • Burette • Pipette
2.	Insoluble Matter	4.2	• Weighing Balance • Arrangement for heating water • Thermometer • Gooch or sintered glass crucible no. G4 • Oven • Wash bottle
3.	Chlorides	4.2	• Nessler Cylinders (50 ml) • Conc. Nitric Acid • Silver Nitrate Solution (5 % m/v) • Standard Chloride Solution (1 ml solution corresponds to 0.1 mg of Chlorides) • Hydrogen Peroxide (35 % m/m) • Distilled Water • Glass rod Or • Alternative method as per B-9 of IS 333: 2023

4.	Sulphates	4.2	For Technical grade • Conc. Hydrochloric Acid • Hydrogen Peroxide (35 % m/m) • Dilute hydrochloric Acid (5 N) • Barium Chloride Solution (10 % m/v) • Weighing Balance • Distilled water • Pipette • Hot Plate • Gooch or sintered glass crucible No. G4 • Wash Bottle • Oven For Pure and Analytical Grade • Nessler Cylinder (50 ml) • Dilute Hydrochloric acid (5 N) • Potassium sulphate • Barium Chloride Solution (10 % m/v) • Hydrogen Peroxide (35 % m/m) • Weighing balance • Hot Plate Or • Alternative Method as per B-9 of IS 333: 2023
5.	Nitrogen Compounds	4.2	• Conc. Sulphuric Acid • Oxalic Acid • Dil. Hydrochloric Acid (0.1 N) • Sodium Hydroxide (10 % m/v) • Aluminium Wire • Weighing Balance • Nessler Solution • Flask • Condensor
6.	Arsenic	4.2	• Conc. Hydrochloric Acid • Stannous Chloride Solution (30 % m/v) • Weighing balance • Hot plate • Arsenic trioxide Or Alternative method as per B-10 of IS 333: 2023
7.	Loss on heating	4.2	• Weighing Balance • Mortar Pestle • Shallow dish • Oven

ANNEX B**SCHEME OF INSPECTION AND TESTING****1. QUALITY ASSURANCE PLAN**

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: Each grade of Potassium Permanganate manufactured under similar conditions of production in a day.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING - It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as “R” or other tests which can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster-based facilities as per guidelines for the utilization of cluster-based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 **TEST RECORDS** - The manufacturers maintaining an in-house laboratory or utilizing common cluster-based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. **PACKING AND MARKING** - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each container of the product provided always that the product thus marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per Cl. 5 of IS 333: 2023.

3.2 Additional Marking requirements: The container of the material shall also be marked with the following additional requirement:

a) “For BIS certification details please visit www.bis.gov.in”

4. **REJECTION** - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Clause	Requirements	Test Method		Test equipment requirement R: required (or) S: Sub-contracting permitted	No of Samples	Frequency	Remarks
		Clause	Ref.				
4.1	Description	4.1	IS 333	R	One	Each Control unit	
4.2	Potassium Permanganate content	B-2	IS 333	R	One	Each Control unit	
4.2	Insoluble Matter	B-3	IS 333	R	One	Each Control unit	
4.2	Chlorides	B-4 or B-9	IS 333	R	One	Each Control unit	
4.2	Sulphates	B-5 or B-9	IS 333	R	One	Each Control unit	
4.2	Nitrogen Compounds	B-6	IS 333	R	One	Each Control unit	
4.2	Arsenic	B-7	IS 333	R	One	Each Control unit	
4.2	Loss on Heating at 110° C	B-8	IS 333	R	One	Each Control unit	