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उत्पाद मैनुअल

सोडीयम साइनाइड, तकनीकी – विशिष्टि

**PRODUCT MANUAL
FOR SODIUM CYANIDE, TECHNICAL –
SPECIFICATION ACCORDING TO IS 11782: 2024**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना के तहत प्रसारण 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। इस दस्तावेज़ के उपयोग बीआईएस प्रसारण 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 11782: 2024
	शीर्षक Title	:	Sodium Cyanide, Technical
	संशोधनों की संख्या No. of Amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	No specific requirement Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence /Factory Surveillance
b)	समूहीकरण दिशानिर्देश Grouping guidelines	:	NA
c)	नमूने का परिमाण Sample Size	:	250 g for complete testing
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	Nil Note: This section indicates declared values to be specified against a parameter (to be specified in Test Requests) to enable testing of sample against the requirement and determine its conformity. 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.	Scope of the Licence:		
	आईएस 11782: 2024 के अनुसार मानक चिह्न का उपयोग करने के लिए लाइसेंस निम्नलिखित दायरे में प्रदान किया जाता है “Licence is granted to use Standard Mark as per IS 11782: 2024 with nil amendments”		
	Name of the Product	Sodium Cyanide, Technical	

BUREAU OF INDIAN STANDARDS
Manak Bhawan, 9, Bahadur Shah
Zafar 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.	Sodium Cyanide (as NaCN)	3.2	Weighing Balance Graduated Flask Carbon Dioxide Free Water Potassium Iodide Solution (10 % m/v) Standard Silver Nitrate Solution (0.1 N) Sodium Hydroxide Solution (5 % m/v) Dilute Ammonium Hydroxide (1:9) Stoppered weighing bottle 500 ml 1-mark graduated flask Suction bulb Pipette 25 ml 500 ml beaker Burette Arrangement for stirring against black background
2.	Sodium Hydroxide + Sodium Carbonate	3.2	Standard hydrochloric acid (0.1 N) Standard Silver Nitrate Solution (0.1 N) Barium Chloride Solution (10 % m/v) Phenolphthalein Indicator (1 % in alcohol) Pipette (25 ml and 15 ml) Burette
3.	Sodium Formate	3.2	Zinc Sulphate Solution (15 %) Standard Silver Nitrate Solution (0.1 N) Leibig-Deniges Indicator Weighing balance Standard Potassium permanganate Solution (0.1 N) Standard Oxalic Acid Solution (0.1 N) 250 ml graduated flask Filter paper (no. 40) Burette Water bath Wash bottle
4.	Sodium Chloride	3.2	100 ml Nessler Cylinders Hydrogent Cyanide detection paper as per Cl. A-6.3.1 Dilute Nitric Acid (10 % v/v) Standard Silver Nitrate Solution (0.5 N) Standard Chloride Solution Weighing Balance 150 ml Beaker with watch glass Fume hood/chamber Hot plate Wash bottle Arrangement for black background for comparison

5.	Moisture	3.2	Weighing balance Wide-mouth glass weighing bottle Oven desiccator
6.	Sulphides	3.2	50 ml Nessler Cylinder Alkaline lead acetate solution Weighing balance Sodium Sulphide Solution A (as per Cl. A-8.3.2) Sodium Sulphide Solution B (as per Cl. A-8.3.3)
7.	Matter insoluble in water	3.2	Weighing Balance Sintered glass crucible no. G3 Oven Desiccator

ANNEX B**SCHEME OF INSPECTION AND TESTING FOR SODIUM CYANIDE, TECHNICAL -
SPECIFICATION ACCORDING TO IS 11782: 2024****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: **Sodium Cyanide, Technical** manufactured under similar conditions 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". Manufacturers shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, 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).

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 steel drums lined with polyethylene film or as agreed to between the purchaser and the supplier, provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per Cl. 5 of IS 11782: 2024.

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

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

3.3 TOXICITY, SAFETY PRECAUTIONS, FIRST-AID AND MEDICAL TREATMENT Sodium cyanide is Class A poison, as defined in Poisons Act, 1919 and hence, Safety Precautions for handling of Sodium cyanide are to be maintained as per provisions of Annex B of IS 11782:2024

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.				
3.1	Description	3.1	IS 11782	R	Firm to have adequate in- process controls to check compliance of this parameter given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
3.2	Sodium Cyanide	A-3	IS 11782	R	One	Each Control unit	
3.2	Sodium Hydroxide + Sodium Carbonate	A-4	IS 11782	R	One	Each Control Unit	
3.2	Sodium Formate	A-5	IS 11782	R	One	Each Control Unit	
3.2	Sodium Chloride	A-6	IS 11782	R	One	Each Control Unit	
3.2	Moisture	A-7	IS 11782	R	One	Each Control Unit	
3.2	Sulphides	A-8	IS 11782	R	One	Each Control Unit	
3.2	Matter Insoluble in water	A-9	IS 11782	R	One	Each Control Unit	