



उत्पाद मैनुअल

मोनोक्रोटोफॉस, सॉल्युबल कॉन्संट्रेट (एस एल)

IS 8074 : 2024 के अनुसार

**PRODUCT MANUAL
FOR MONOCROTOPHOS, SOLUBLE CONCENTRATE (SL)
ACCORDING TO IS 8074 : 2024**

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 IS No.	:	IS 8074 : 2024
	शीर्षक Title	:	Monocrotophos, Soluble Concentrate (SL)- Specification
	संशोधनों की संख्या No. of amendments	:	0
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	The material shall consist of monocrotophos, technical, dissolved in suitable solvent(s). It shall conform to IS 8025. 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	:	Please refer Annex-A

c)	नमूने का परिमाण Sample Quantity	:	500 ml Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (incase of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be available in market)
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	1) Nominal Declared Value of Monocrotophos Content (percent by mass) 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 ANNEX – <u>B</u>
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – <u>C</u>
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	i. Description ii. Cold test iii. Flash Point iv. Free Aceto-Acetic Acid Monomethyl-Amide (MMA) content, v. Acidity Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 8074 : 1990 with the following scope:		
	Name of the product	Monocrotophos, Soluble Concentrate (SL)	
	Monocrotophos content (percent by mass)	E.g. From 9 to up to and including 50	

ANNEX – A
GROUPING GUIDELINES

1. Grouping based upon Monocrotophos content (percent by mass) in Monocrotophos Soluble Concentrate (SL)

- a) Manufacturer shall declare the nominal range of Monocrotophos content (percent by mass) in Monocrotophos Soluble Concentrate (SL) being manufactured

Group	Monocrotophos content (percent by mass) (nominal value, percent)	Remarks
1	Up to 9	One sample of Monocrotophos Soluble Concentrate (SL) having any Monocrotophos content (percent by mass) shall be drawn to cover the entire range of Monocrotophos content (percent by mass) in Monocrotophos Soluble Concentrate (SL) within the Group
2	Above 9 and below 50	One sample of Monocrotophos Soluble Concentrate (SL) having any Monocrotophos content (percent by mass) shall be drawn to cover the entire range of Monocrotophos content (percent by mass) in Monocrotophos Soluble Concentrate (SL) within the Group
3	50 and above	One sample of Monocrotophos Soluble Concentrate (SL) having any Monocrotophos content (percent by mass) shall be drawn to cover the entire range of Monocrotophos content (percent by mass) in Monocrotophos Soluble Concentrate (SL) within the Group

2. Scope of licence shall be restricted based on the manufacturing and testing facilities available.
3. During operation of licence, samples of each variety covered in the scope of licence, shall be tested rotation, to the extent possible.

ANNEX-B

LIST OF TEST EQUIPMENT (INDICATIVE LIST, FOR GUIDANCE ONLY)

Sr. No.	Test used in with clause reference	Test Equipment
1.	Description Clause 3.2.1	Tap water, Glass beaker
2.	Cold Test Clause 3.2.2 (Cl 13.1 of IS 6940)	Glass Container (100 ml)/Beaker with Cork/stopper fitted thermometer, water bath, Ice-cold water Thermometer (0 - 110°C, L.C. - 0.1 °C), Stirring rod.
3..	Flash Point Clause 3.2.3 {IS 1448 (Part 20)}	Cleaning solvent, Coolant, Lubricant, Verification Liquids, Ignitor and pilot light gas, Flash point apparatus/Abel flash point apparatus consisting of test cup, cover assembly, heating vessel, heating device, flash detector, Stirrer, Thermometers 2 (one for the oil cup of range; - 35°C to +70°C, and another for the water bath of the range; -30°C to +80°C), Timing device, Barometer, External cooling bath, Test cup thermal insulating cap, Abel flash point apparatus provided with a stirrer & thermometer, Heating Vessel or bath, Ethylene Glycol.
4.	Monocrotophos content Clause 3.3.1 (Annex B of IS 8025)	Methanol, Standard Sodium Hydroxide solution-5 N, Nitric acid-1 N, Glacial Acetic acid, Acetic acid in methanol solution-5 %, Reference Standard of Aceto-Acetic Monomethylamide of purity not less than 98 %, Analytical balance (0-200 g, LC- 0.01 mg), Ferric Chloride Solution, Phenolphthalein Indicator solution, Sodium nitrate solution, Hydrochloric acid, Standard glass ware, Spectrophotometer capable of reading absorbance at 544nm wavelength, 1cm-cell.
5.	Free Aceto-Acetic Acid Monomethyl-Amide (MMA) content Clause 3.3.2 (Annex C of IS 8025)	Methanol, Standard Sodium Hydroxide-5 N, Nitric acid-1 N, Glacial Acetic acid, Acetic acid in methanol solution 5%, Reference Standard of Aceto-Acetic Monomethylamide 5%, Ferric chloride solution, Phenolphthalein Indicator solution, Sodium nitrate Hydrochloric acid, Analytical balance (0-200 gm, LC-0.01 mg), Standard glass ware, stop watch, Spectrophotometer capable of reading absorbance at 544nm wavelength, 1cm-cell.

6.	Acidity (as H ₂ SO ₄) Clause 3.3.3 (Cl 13.5.4 of IS 6940)	Methyl red indicator solution-aqueous – 1 % (m/v), Bromocresol purple indicator solution, Standard Sodium Hydroxide Solution – 0.5 N, Standard Hydrochloric acid, Acetone, Distilled water, Analytical Balance Range 0 to 200gms LC 0.1mg, Hot plate, Range ambient to 100°C/ Heating mantle/Water bath, Whatman filter paper, Conical Flask, 250ml Capacity, Graduated Cylinder, Range 0 to 100ml LC- 1ml, Test Tube, Litmus paper.
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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 : For the purpose of this scheme, the entire quantity of the material formulated in a mixer at a time in one operation shall constitute a control unit.

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/empanelled 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 stenciled/printed on each container of Monocrotophos SL 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 Indian Standard.

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 so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Subcontracting permitted	Levels of control		
Cl.	Requirements	Test Methods Cl. Ref.	Test Method IS		No. of sample	Frequency	Remarks
3.1	Description	3.1	IS 8025	S	Monocrotophos, technical used in the formulation of Monocrotophos SL shall conform to IS 8025. Each consignment of Monocrotophos, technical received shall be accompanied by a test certificate from the supplier regarding its conformity to IS 8025. Alternatively, a sample from each consignment received shall be tested for its conformity to the specification. Appropriate record for all these tests shall be maintained		
3.2.1	Description	3.2.1	IS 8074	R	Manufacturer shall ensure adequate in-process controls to ensure that the material conforms to the specification. Wherever required, appropriate records shall be maintained.		
3.2.2	Cold Test	--	IS 6940	R	One	Each Control Unit	---
3.2.3	Flash Point (Abel)	--	IS 1488 (Pt-20)	R	One	Each Control Unit	---
3.3.1	Monocrotophos content	Annex A	IS 8025	R	One	Each Control Unit	---
3.3.2	Free Aceto-Acetic Monomethylamide (MMA) content	Annex B	IS 8025	R	One	Each Control Unit	---
3.3.3	Acidity	---	IS 6940	R	One	Each Control Unit	---