PRODUCT MANUAL

FOR DELTAMETHRIN F ACCORDING TO IS 14411 : 1996

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 14411 : 1996
	Title	**:**	Deltamethrin F-Specification
	No. of Amendments	:	Nil
2.	**Sampling Guidelines:**		
a)	**Raw material**	:	Deltamethrin technical used in the formulation of Deltamethrin F shall conform to IS 12005.
b)	**Grouping guidelines**	:	NA (No varieties for the product mentioned in IS)
c)	**Sample Size**	:	500 ml
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) Deltamethrin Content iii) Dispersibility in water iv) Acidity		
6.	**Scope of the Licence :**		
	"Licence is granted to use Standard Mark as per IS 14411 : 1996 with the following scope:		
	Name of the product	Deltamethrin (%) F	

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ANNEX – A
PRODUCT MANUAL
FOR DELTAMETHRIN F ACCORDING TO IS 14411 : 1996

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/Reagents/Chemicals
1.	Deltamethrin Content Cl 3.3 (Appendix A of IS 12005)	a) HPLC Method- Liquid Chromatograph, Detector (UV Spectrophotometer), Liquid Chromatographic Column, Recorder, Deltamethrin Standard-of known purity, Dioxan-UV spectroscopic grade free of peroxides, Iso-octane- UV spectroscopic grade, HPLC Mobile Phase, Analytical Balance (LC-0.1 mg), Volumetric Flask(50ml), Stop watch b) Total Bromine Analysis Method- Isopropanol-Pure, Metallic Sodium, Formaldehyde, Phenolphthalein solution 1 % (m/m), Nitric acid, Toluene, Silver Nitrate solution-0.1 N, Amonium thiocynate solution-0.1N, Ferric Ammonium sulphate indicator solution-2% (m/m), Nitrobenzene, Pipette, Flask, Beaker, Hot plate, Stop watch, Analytical Balance(LC-0.1 mg)
2.	Dispersibility in Water Cl 3.4.1	Measuring Cylinder-100 ml with stopper, Semi hard water, Air conditioner.
3.	Acidity Cl 3.5 (Cl 13.5 of IS 6940)	Analytical Balance (0-200gm, LC 0.1mg), Hot plate/ Heating mantle/ Water bath, Whattman Filter, Conical Flask, Graduated Cylinder, Burette and Pipette,Methyl red indicator solution-aqueous – 1percemt (m/v), Bromocresol purple indicator solution, Standard Sodium Hydroxide Solution – 0.5 N, Standard Hydrochloric acid, Acetone, Distilled water.

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

ANNEX - B

SCHEME OF INSPECTION AND TESTING FOR DELTAMETHRIN F ACCORDING TO IS 14411 : 1996

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 Deltamethrin F 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 and Marking shall be done as per clause 4 and 5 of IS 14411. 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, the entire quantity of the material manufactured at a time in one operation 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 Standard and covered by the licence should be marked with Standard Mark.

5.2 On the basis of test results, decision regarding conformity or otherwise of a control unit to the given requirements shall be made as follows:

5.2.1 In case the control unit fails in any of the requirements, the material represented by the control unit may be suitably reprocessed and the defect(s) rectified. Such reprocessed material shall be tested again as per Table 1 and the material shall satisfy all the requirements of the specification.

6. **RAW MATERIAL –** Deltamethrin technical used in the formulation of Deltamethrin F shall conform to IS 12005. A test certificate to that effect shall be obtained from the supplier for each consignment of Deltamethrin technical received. Alternatively, a sample from each consignment shall be tested for its conformity to the Indian Standard mentioned above and a record maintained. However, no testing or test certificate may be required if the material is ISI marked.

7. **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**
3.2	Description	3.2	IS 14411	R	One	Each Control unit	-
3.3	Deltamethrin Content	Appendix A	IS 12005	R	-do-	-do-	-
3.4	Dispersibility in Water	3.4.1	IS 14411	R	-do-	-do-	-
3.5	Acidity	13.5	IS 6940	R	-do-	-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 empaneled 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.