SCHEME OF TESTING AND INSPECTION FOR
CERTIFICATION OF
CARBENDAZIM (MBC) WATER DISPERSIBLE
POWDER CONCENTRATES
ACCORDING TO IS:8446-1977
(With amendment No.1 and 2)

1. **LABORATORY**: A laboratory shall be maintained which shall be suitably equipped and staffed, where tests shall be carried out in accordance with the methods given in the specification.

2. **TEST RECORDS**: All records of test shall be kept in suitable forms approved by the Institution (See Form I annexed).

2.1 Copies of any records or charts that may be required by the Institution shall be made available at any time on request.

2.2 It is recommended that as far as possible Statistical Quality Control (SQC) methods may be used for controlling the quality during production as envisaged in this scheme (See IS:397 (Part I)-1972 and IS:397 (Part II)-1975).

3. **MARK**: The Standard Mark(s) as given in column (1) of the First Schedule of the license shall be stenciled on each container of Carbendazim (MBC) Water Dispersible Powder Concentrates or printed on the label applied to the container as the case may be, provided always that the material in the container to which this mark is thus applied conforms to every requirement of the specification.

4. **MARKING**: The following information shall be given legibly and indelibly on each container or on the label applied to it in addition to those required under the provision of Insecticides Act and Rules framed thereunder:

   a) Name of the material;
   b) Name of the manufacturer;
   c) Date of manufacture
   d) Batch or control unit number;
   e) Net mass;
   f) Nominal carbendazim (MBC) contents, percent (m/m); and
   g) The minimum cautionary notice as worded in Insecticides Act and Rules.

4.1 In addition to the above the container shall also be marked with symbol of poisoning as specified in IS:1260 (Part II)-1973*.

* Pictorial markings for handling and labeling of goods (Part II) General goods (first revision).
5. The containers shall comply with the requirements stipulated in IS:8190 (Part I)-1980 (Requirements for packing of pesticides; Part I Solid Pesticides).

6. **LEVELS OF CONTROL**: Tests as indicated in Table 1 and at the levels of control specified therein, shall be carried out on the whole production of the factory covered by this scheme and appropriate records and charts maintained in accordance with para 2 above. All the production which conforms to the specification and covered by the license shall be covered under ISI Mark.

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

6.1.1 For the purpose of this Scheme, every 100 drums of 50 Kg. each of the material or part thereof, manufactured continuously, not exceeding a day’s production shall constitute one control unit.

6.1.2 Each of the samples taken for test shall satisfy the given requirements of the specification. If any of the samples fail in the requirement tested except for Carbendazim (MBC) content and/or sieving requirement, the entire quantity of the material in the control unit shall be considered as unfit for the purpose of marking.

6.1.2.1 In the case of Carbendazim (MBC) content and sieving the test results on the sample shall be recorded as given in Table 2. The average (X) and Range (R), that is, the difference in the maximum and the minimum values of test results shall be calculated. The appropriate expression as given under column (6) of Table 2 shall be calculated. The value of the corresponding expression for those characterizations should satisfy the requirements given in column (6) of Table 2).

6.1.2.2 In case the sample fails in respect of carbendazim (MBC) content and/or sieving requirement, the control unit shall be suitably reprocessed and the defects rectified. Such reprocessed material, when tested again, shall satisfy the requirement of carbendazim (MBC) content and/or sieving, as the case may be, before it is used for making.

7. **RAW MATERIALS**: Carbendazim (MBC), technical used in the formulation of the material shall conform to IS:8445-1977. A sample from each consignment of Carbendazim (MBC) technical shall be tested for its conformity to IS:8445-1977. Alternatively, each consignment of the technical material shall be covered by test certificate from the supplier guaranteeing its conformity to IS:8445-1977.

7.1 It is recommended that routine analysis of each consignment of other raw materials received in the factory be carried out and appropriate records maintained.
8. In respect of all other clauses of the specification and at all stages of manufacture
the factory shall maintain appropriate controls and checks to ensure that their
production conforms to the various requirements of the specification. In addition
only statutorily approved formulations shall be manufactured and marked.

9. A separate record shall be maintained giving information relating to the rejection
of control unit of Carbendazim (MBC) WDP which do not conform to the
specification and the method of their disposal. Such control units, if packed in
containers shall in no case be stored together with those conforming to the
specification.

10. **SAMPLE**: The licensee shall supply, free of charge, the sample(s) required in
accordance with Regulation 10 of the Indian Standards Institution (Certification
Marks) Regulations, 1955, as subsequently amended from his factory or godowns.
The Institution shall pay for the samples taken by it from the open marked.

11. **REPLACEMENT**: Whenever a complaint is received soon after the goods with
ISI Mark have been purchased and used and if there is adequate evidence that the
goods have not been misused, defective goods or their components shall be
replaced or repaired free of cost by the licensee in case the complaint is proved
tobe genuine and the warranty period (where applicable) has not expired. The
final authority to judge conformity of the product to the Indian Standard shall be
with the Institution.

12. **SUSPENSION OF MARKING**: The marking of the product shall be suspended
under intimation to the Institution, if, at any time there is some difficulty in
maintaining the conformity of the product to the specification or the testing
equipment goes out of order, or if directed to do so by the Institution for any
reason. The marking may be resumed as soon as the defects are removed or when
the Institution gives the permission to do so. The information regarding
resumption of marking shall also be sent to the Institution.

13. **PRODUCTION DATA**: The licensee shall send to the Institution, a statement of
the quantity produced, marked and exported by him and the trade value thereof
during the half year ending 30 June and 31 December. This statement is required
to be forwarded to the Institution on or before the 31st day of July and January for
the preceding half year.

    TABLE 1.....
### IS:8446-1977
CARBENDAZIM (MBC) WATER DISPERSIBLE POWDER CONCENTRATES

#### TABLE 1 LEVELS OF CONTROL
(With amendment No.1 and 2)
(Para 6 of the Scheme of Testing and Inspection)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Clause</th>
<th>Requirement</th>
<th>Test Method</th>
<th>No. of Samples</th>
<th>Frequency</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.1</td>
<td>Description</td>
<td>2.1 IS:8446-1977</td>
<td>One</td>
<td>Each control unit.*</td>
<td>Samples from the control units shall be drawn at regular intervals.</td>
</tr>
<tr>
<td>2</td>
<td>2.3</td>
<td>Carbendazim (MBC) Content.</td>
<td>App.A -do-</td>
<td>Five</td>
<td>-do-</td>
<td>-do-</td>
</tr>
<tr>
<td>3</td>
<td>2.3</td>
<td>Material passing through 75-microns IS Sieve after accelerated storage.</td>
<td>11.1 IS:6940-1982</td>
<td>Five</td>
<td>-do-</td>
<td>-do-</td>
</tr>
<tr>
<td>4</td>
<td>2.3</td>
<td>Suspensibility after accelerated storage ‡</td>
<td>App.B IS:8446-1977</td>
<td>One</td>
<td>-do-</td>
<td>-do-</td>
</tr>
<tr>
<td>5</td>
<td>2.3</td>
<td>Acidity/Alkalinity</td>
<td>11.3.2/ 11.3.3 IS:6940-1982*</td>
<td>One Composite Sample**</td>
<td>-do-</td>
<td>-do-</td>
</tr>
</tbody>
</table>

* Every 100 containers (a container equivalent to a weight of 50 Kg.) manufactured by a continuous process not exceeding day’s production shall constitute and control unit. The samples from the control unit shall be drawn at regular intervals.

** A composite sample shall be prepared by mixing together the samples drawn at regular intervals for the control unit.

+ Methods of tests for pesticides and their formulations.

‡ Keeping quality: One sample weighing approximately 25 Kg. shall be drawn and stored under normal conditions for six months. The sample shall be analysed for suspensibility and in case complaint is received for less in suspensibility within the specified time.
TABLE 2
IS:8446-1977 CARBENDAZIM (MBC) WATER DISPERSIBLE POWDER CONCENTRATES
(with amendment No.1 and 2)
TEST RESULTS AND CRITERION OF
ACCEPTANCE OF A CONTROL UNIT
(Clause 6.1.3 of the Scheme of Testing and Inspection)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Characteristics</th>
<th>Test Results</th>
<th>Average (X)</th>
<th>Range (R)</th>
<th>Criterion for Conformity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td>X1</td>
<td>R1</td>
<td>$X_1 \pm 0.6R_1$ shall lie within nominal value with prescribed tolerances.</td>
</tr>
<tr>
<td>1.</td>
<td>Carbendazim (MBC) content, percent by weight.</td>
<td></td>
<td>$\bar{X}_1$</td>
<td>R2</td>
<td>$X_1 - 0.6R_2$ 99</td>
</tr>
<tr>
<td>2.</td>
<td>Sieving requirement after accelerated storage.</td>
<td></td>
<td>$\bar{X}_2$</td>
<td>R2</td>
<td></td>
</tr>
</tbody>
</table>
# FORM 1
## TEST RECORD FOR CARBENDAZIM (MBC)
### WATERDISPERSIBLE POWDER CONCENTRATES

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Date of Mfg.</th>
<th>Control Unit</th>
<th>Sl.No. of the container from which sample is drawn</th>
<th>Description</th>
<th>Carbendazim (MBC) content</th>
<th>Criterion for acceptance for carbendazim (MBC) content</th>
<th>Sieving requirement</th>
<th>Criterion for acceptance for sieving requirement</th>
<th>Suspensibility after accelerated Storage*</th>
<th>Acidity Alkalinity**</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*To be recorded for samples drawn from a Control Unit.
** To be recorded for composite sample drawn from Control Unit.