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मानक

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IS 15603 (2005): Alphacypermethrin. WP [FAD 1: Pesticides and Pesticides Residue Analysis]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

अल्फासाइपरमैथरिन, डब्लू.पी. — विशिष्टि

Indian Standard

ALPHACYPERMETHRIN, WP — SPECIFICATION

ICS 65.100.10

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Pesticides and Pesticides Residue Analysis Sectional Committee had been approved by the Food and Agriculture Division Council.

Alphacypermethrin, WP is used as an insecticidal formulation.

The material is generally manufactured to contain 5 percent (*m/m*) of alphacypermethrin, technical.

In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act*, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under the Act and Rules wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

ALPHACYPERMETHRIN, WP — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for alphacypermethrin, WP.

2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
460 (Part 1) : 1985	Specification for test sieves: Part 1 Wire cloth test sieves (<i>third revision</i>)
1070 : 1992	Water for general laboratory use (<i>third revision</i>)
6940 : 1982	Methods of tests for pesticides and their formulations (<i>first revision</i>)
8190 (Part 1) : 1988	Requirement for packing of pesticides: Part 1 Solid pesticides (<i>second revision</i>)
10627 : 1983	Methods for sampling of pesticides formulations
15616 : 2005	Alphacypermethrin, technical — Specification

3 REQUIREMENTS

3.1 Constituents

3.1.1 The material shall consist of a homogeneous mixture of alphacypermethrin, technical together with filler(s) and other necessary formulants(s) and with or without stabilizer(s).

3.1.2 Alphacypermethrin, technical employed in the formulation of this material shall conform to IS 15616.

3.2 Description

3.2.1 The material shall be in the form of a homogeneous powder, free flowing, whitish powder that wets readily on mixing with water.

3.2.2 Sieving Requirement

When determined by the method specified in that of

IS 6940, the amount of material passing through 75 micron IS sieve [IS 460 (Part 1)] should not be less than 98 percent by mass.

3.2.3 Suspensibility Test

The suspensibility when determined by the method prescribed in Annex A shall be minimum 70 percent by mass.

3.2.4 Wettability

The time when the whole material gets completely submerged in water should not exceed 120 seconds when tested by the method specified in 11.4 of IS 6940.

3.3 Chemical

3.3.1 Alphacypermethrin Content

When determined by the method prescribed [Method A of IS 15616], the observed alphacypermethrin content, percent (*m/m*), of any of the samples shall not differ from the declared nominal value by more than the percent tolerance limits indicated below:

<i>Nominal Value</i> Percent	<i>Tolerance Limit</i> Percent	
Up to 9	+ 10 - 5	} of the nominal value
Above 9 and below 50	+ 5	
50 and above	+ 5 - 3	

3.3.1.1 The actual value of alphacypermethrin content in the formulations shall be calculated to the second decimal place and then rounded off to the first decimal place before applying the tolerance given in 3.3.1.

3.3.1.2 The average alphacypermethrin content of all samples taken shall not be less than the declared nominal content.

3.3.2 Acidity or Alkalinity

When determined by the method prescribed in IS 6940 the acidity (calculated as H_2SO_4) or alkalinity (calculated as NaOH) of the material shall be maximum 0.15 percent w/w.

4 PACKING

The material shall be packed according to the general requirements given in IS 8190 (Part 1).

5 MARKING

5.1 The containers shall bear legibly and indelibly the following information in addition to the information as is necessary under the *Insecticides Act, 1968* and Rules framed thereunder:

- a) Name of the material;
- b) Name and address of the manufacturer;
- c) Batch number;
- d) Date of manufacture;
- e) Date of expiry;
- f) Net mass of contents;
- g) Nominal alphacypermethrin content, percent (*m/m*);
- h) The cautionary notice as worded in *Insecticides Act, 1968* and Rules framed thereunder; and
- j) Any other information required under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977*.

5.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

5.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be

granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6 SAMPLING

When freshly manufactured material in bulk quantity and/or the retail pack of the formulated product is/are offered for inspection, representative sample of the material shall be drawn and tested as prescribed in IS 10627 and if tested within 90 days of its date of manufacture, the criteria for conformity shall be the contents in percent (*m/m*), shall not be less than the declared nominal value. The upper limit for conformity shall be the same as those given in 3.3.1.

When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627, however, the criteria for conformity of the material, when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under 3.3.1.

7 TESTS

7.1 Tests shall be carried out by the methods referred to in 3.2.2 to 3.2.4 and 3.3.1 to 3.3.2.

7.2 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities, which affect the results of analysis.

ANNEX A

(*Clause 3.2.3*)

DETERMINATION OF SUSPENSIBILITY

A-1 PROCEDURE

Weigh 4.5 g of WP and carry out suspensibility as per IS 6940.

Proceed with the retained one tenth of the suspension, including the sediment for the determination of active ingredient, as follows:

Filter the sediment including suspension using distilled water by suction. Quantitatively transfer the sediment into 100 ml volumetric flask initially with the help of small quantities of toluene (up to 25 ml) and then with the mobile phase being used for determination of the active ingredient described in Annex A of IS 15616. Add 10 ml of internal standard by pipette. Make up the volume upto the mark using mobile phase. Mix well to ensure complete dissolution of alphacypermethrin present in the sediment. Filter

through a suitable disc filter.

Determine alphacypermethrin content of the filtered solution by HPLC as described in Annex A of IS 15616.

A-2 CALCULATION

$$\text{Suspensibility percent} = \frac{1000 (M - m)}{9 \times M}$$

where

M = mass of alphacypermethrin present in sample used for test (calculated from mass of sample and its percent alphacypermethrin content), in g; and

m = mass of alphacypermethrin found in suspension including the sediment remaining in the graduated cylinder, in g.

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Amendments Issued Since Publication

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