Sr. No. in Scope NABL / NON NABL

**Flow Chart for Analysis of Lambda Cyhalothrin Content in WP Formulation Sample**

|  |  |
| --- | --- |
| **Date of Analysis** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Step** | **Execution** | **Executed By** |
| 1. | Sample No. |  |  |
| 2. | Name of Sample | | |
| 3. | **Procedure** | | |
| **3.1** | **Preparation of Standard** |  |  |
| 3.1.1 | Weigh 50mg Standard in 50 mL volumetric flask | g |  |
| 3.1.2 | Purity of standard | % |  |
| 3.1.3 | Dilute up to the mark with hexane | ml |  |
| 3.1.4 | Take 10 mL of the solution (3.1.3) to a 50 ml volumetric flask |  |  |
| 3.1.5 | Dilute up to the mark with hexane. | ml |  |
| **3.2** | **Preparation of Sample** |  |  |
| 3.2.1 | Weigh the sample equivalent to 50 mg a.i. in a 250mL conical flask. | g |  |
| 3.2.2 | Dissolve in 20ml of Chloroform. Shake well to homogenize. |  |  |
| 3.2.3. | Filter through filter paper into 50 mL volumetric flask. |  |  |
| 3.2.4 | Dilute up to the mark with Chloroform. | ml |  |
| 3.2.5 | Take 10 mL of the solution (3.2.4) to a 50 mL volumetric flask |  |  |
| 3.2.6 | Dilute up to the mark with hexane. | ml |  |
| 4. | **HPLC Parameters** |  |  |
| **4.1** | **Column** |  |  |
| 4.1.1 | Stainless Steel packed with Partisil Silica 5 µ |  |  |
| 4.1.2 | Length: 25 cm |  |  |
| 4.1.3 | I.D.: 4.6 mm |  |  |
| **4.2** | **Mobile Phase** |  |  |
| 4.2.1 | Hexane : Tetrahydrofuran (99.5 : 0.5) |  |  |
| 4.2.2 | Flow Rate: 1.5 ml/min |  |  |
| **4.3** | **Detector:** UV |  |  |
| **4.4** | **Wave Length**: 235 nm |  |  |
| **4.5** | **Injection Volume:** 20µl |  |  |
| 5. | **Result** |  |  |
| Sample chromatogram no. |  | |
| Standard chromatogram no. |  | |

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| --- | --- |
| Lambda-cyhalothrin content,  % by mass =  A2 x M1  = ------------------- x P  A1 x M2 | M1 =Mass in ‘g’ of lambda-cyhalothrin standard  M2 =Mass in ‘g’ of sample taken for test  A1 = Peak area of lambda-cyhalothrin in the standard solution  A2 = Peak area of lambda-cyhalothrin in the sample solution  P = Percent purity of lambda-cyhalothrin in the standard |

**6. Calculation:**

**Result:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of test** | **Result** | **Unit** | **Method of Analysis** |
|  | Active ingredient |  | % | IS 12005:1987 |
| Remark / Reference : | | | | |

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| --- | --- | --- |
| Analyzed by | Name |  |
| Dated signature |  |
| Checked by | Name |  |
| Dated signature |  |