Sr. No. in Scope NABL / NON NABL

**Flow Chart for analysis of Carbendazim content in formulation sample**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Step** | **Execution** | | **Executed By** |
| 1. | Sample No. |  |  |  |
| 2. | Name of Sample |  |  |  |
| 3. | **Procedure** | **R1** | **R2** |  |
| **3.1** | **Preparation of Standard** |  |  |  |
| 3.1.1 | Purity of standard |  | g |  |
| 3.1.2 | Weigh 0.025 g a.i. of standard in a 100 ml beaker |  | % |  |
| 3.1.3 | *Note down the S.No.of balance log book* |  |  |  |
| 3.1.4 | Add 5 ml of acetic acid |  |  |  |
| 3.1.5 | Boil for 5 minutes on hot plate. |  |  |  |
| 3.1.6 | Transfer the content into a 100 ml volumetric flask  after cooling |  |  |  |
| 3.1.7 | Dilute up to the mark with acetonitrile (Stock A) |  |  |  |
| 3.1.8 | pipette out 5 mL of stock A (3.1.7) into a 25 ml volumetric flask |  | ml |  |
| 3.1.9 | Dilute up to the mark with acetonitrile |  |  |  |
| **3.2** | **Preparation of Sample** |  |  |  |
| 3.2.1 | Note down the percent active ingredient declared on the sample. |  |  |  |
| 3.2.2 | Weigh 0.025 g a.i.of sample taken in a 100 ml beaker |  | g |  |
| 3.2.3 | *Note down the S.No.of balance log book* |  |  |  |
| 3.2.4 | Add 5 ml of acetic acid |  |  |  |
| 3.2.5 | Boil for 5 minutes on hot plate. |  |  |  |
| 3.2.6 | Transfer the content into a 100 ml volumetric flask  after cooling |  |  |  |
| 3.2.7 | Dilute up to the mark with acetonitrile |  |  |  |
| 3.2.8 | pipette out 5 mL of (3.2.5) into 25 ml volumetric flask |  | ml |  |
| 3.2.9 | Dilute up to the mark with acetonitrile |  |  |  |
| 4. | **HPLC Parameters** |  |  |  |
| **4.1** | **Column** |  |  |  |
| 4.1.1 | Stainless Steel C18, Particle Size 5 µ |  |  |  |
| 4.1.2 | Length: 250 mm |  |  |  |
| 4.1.3 | I.D.: 4.6 mm |  |  |  |
| **4.2** | **Mobile** Phase |  |  |  |
| 4.2.1 | Acetonitrile : Water : (75: 25) |  |  |  |
| 4.2.2 | Flow Rate: 1 ml/min |  |  |  |
| **4.3** | **Detector:** UV |  |  |  |
| **4.4** | **Wave Length**: 283 nm |  |  |  |
| **4.5** | **Injection Volume:** 20 µl |  |  |  |
| 5. | **Result** |  |  |  |
| Sample chromatogram no. |  |  | |
| Standard chromatogram no. |  |  | |

**6. Calculation:**

M1 x A1

Carbendazim content, % by mass = -------------- x P

M2 x A2

**Where,**

M1 = Mass in ‘g’ of standard Carbendazim

M2 =Mass in ‘g’ of sample taken for test

A1 = Peak area of Carbendazim in the sample solution

A2 = Peak area of Carbendazim in the standard solution

P = Percent purity of standard Carbendazim

**Result:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of test** | **Result** | **Unit** | **Method of Analysis** |
| 1. | Active ingredient |  | % | IS 8446:1991 |
| Remark / Reference : | | | | |

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