Sr. No. in Scope NABL / NON NABL

**Flow Chart for Analysis of Clodinafop- Propargyl Content in Formulation Sample**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Step**  | **Execution** | **Executed by**  |
|  **R1** |  **R2** |
| 1. | Sample No. |  |  |  |
| 2. | Name of Sample |  |  |  |
| 3. | **Procedure** |  |  |  |
| **3.1.** | **Preparation of Mobile Phase**  |  |  |  |
| 3.1.1 | Pipette out 1.35 mL of orthophosphoric acid (HPLC grade) in to 1000 mL HPLC water and mix well by sonication. |  |  |  |
| 3.1.2. | Pass through the 0.45 µm membrane filter under vaccum. |  |  |  |
| 3.1.3. | Mix acetonitrile and acidified water (3.1.2) in the proportion of 70 : 30 (v/v). Sonicate the mixture to Homogenize. Allow to attain room temperature. |  |  |  |
| **3.2** | **Preparation of standard solution** |  |  |  |
| 3.2.1 | Note the purity of the standard | % | % |  |
| 3.2.2 | Weigh 50 mg a. i. of Standard in a 50 ml volumetric flask  | g | g |  |
|  3.2.3 | *Note down the serial No. of the balance log book* |  |  |  |
| 3.2.4 | Add 20 mL mobile phase (3.1.3), sonicate for 5 min to dissolve the material.  |  |  |  |
| 3.2.5 | Dilute up to the mark with mobile phase (3.1.3)(Stock A). |  |  |  |
| 3.2.6 | Pipette out 5 mL of Stock A (3.2.5) into a 25 mL volumetric flask |  |  |  |
| 3.2.7 | Dilute up to the mark with mobile phase (3.1.3). Stopper and shake well to homogenize. |  |  |  |
| **3.3** |  **Preparation of sample solution** |  |  |  |
| 3.3.1 | Note down the percent active ingredient declared on the sample | % | % |  |
| 3.3.2 | Weigh 50 mg a. i. of sample in a 50 ml volumetric flask  | g | g |  |
| 3.3.3 | *Note down the serial No. of the balance log book* |  |  |  |
| 3.3.4 | Add 20 mL mobile phase (3.1.3), sonicate for 5 min to dissolve the material.  | ml | ml |  |
| 3.3.5 | Dilute up to the mark with mobile phase (3.1.3) and mix well (Stock B). |  |  |  |
| 3.3.6 | Pipette out 5 mL of Stock B (3.3.5) into a 25 mL volumetric flask |  |  |  |
| 3.3.7 | Dilute up to the mark with mobile phase(3.1.3). Stopper and shake well to homogenize. |  |  |  |
| 3.3.8 | Filter the sample solution through 0.45µ membrane filter |  |  |  |
| **4.** | **HPLC Parameters** |  |  |  |
| **4.1** | **Column** |  |  |  |
| 4.1.1 | C18, Particle Size: 5µ  |  |  |  |
| 4.1.2 | Length: 250 mm |  |  |  |
| 4.1.3 | I.D.: 4.6 mm |  |  |  |
| **4.2** | **Mobile Phase** |  |  |  |
| 4.2.1 | Acetonitrile : Water: Phosphoric acid (70:30:0.04)(as per 3.1.3) |  |  |  |
| 4.2.2 | Flow Rate : 1.40 ml/min |  |  |  |
| **4.3** | **Detector:** UV |  |  |  |
| **4.4** | **Wave Length**: 225 nm |  |  |  |
| **4.5** | **Injection Volume:** 20µl |  |  |  |
| 5. | **Data** |  |  |  |
| Sample chromatogram no.  |  |  |  |
| Standard chromatogram no.  |  |  |  |

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| **6. Calculation:**

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| = Clodinafop-propargyl content,  % by mass,  M1 x A2 = ----------------------------- X P M2 x A1 | **Where,**M1=Mass in ‘g’ of standard clodinafop propargylM2=Mass in ‘g’ of sample taken for the testA2= Peak area of clodinafop propargyl in the sample solutionA1= Peak area of clodinafop propargyl in the standard solution P = Percent purity of standard clodinafop propargyl |

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**Result:**

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| **Sl.No.** | **Name of test** | **Result** | **Unit** | **Method of Analysis**  |
| 1. | Active ingredient |  | % | In house method(SOP/PFRAC/249) |
| Remark / Reference : |

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