Sr. No. in Scope NABL /NON NABL

**Flow Chart for Analysis of Attrazine Content in Formulation Sample**

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Step** | | | **Execution** | **Executed By** | |
| 1. | Sample No. | | |  |  | |
| 2. | Name of Sample | | | | | |
|  | Sample Description: | | | | | |
| 3. | **PROCEDURE** | | | | | |
| **3.1 Preparation of internal standard** | | |  | |  |
| 3.1.1 | Weight of Diphenyl ether or oxide taken into a 100 mL volumetric flask. | |  | |  |
| 3.1.2 | Dissolve and dilute up to the mark with methanol. | |  | |  |
| **3.2 Preparation of standard solution** | | |  | |  |
| 3.2.1 | Weight of the attrazine standard taken into 100 mL volumetric flask. Dissolve in methanol. | |  | |  |
| 3.2.2 | Add 10 mL internal standard (see 3.1) and make up with methanol. | |  | |  |
| 3.2.3 | Pipette out 10 mL of (3.2.2) into 50 mL volumetric flask. | |  | |  |
| 3.2.4 | Dissolve and dilute up to the mark with methanol. | |  | |  |
| **3.3 Preparation of sample solution** | | |  | |  |
| 3.3.1 | Weight of the attrazine sample taken into 100 mL volumetric flask. | |  | |  |
| 3.3.2 | Add 10 mL internal standard and dilute up to the mark with methanol. | |  | |  |
| 3.3.3 | Pipette out 10 mL of the above solution (i.e. from 3.3.2) into 50 mL volumetric flask. | |  | |  |
| 3.3.4 | Dissolve and dilute up to the mark with methanol. | |  | |  |
| 3.3.5 | Inject the blank, standard and sample in HPLC using following conditions. | |  | |  |
| 4. | **HPLC Parameters** | | |  | |  |
| **4.1 Column** | | |  | |  |
| 4.1.1 | | Stainless steel C18 column, |  | |  |
| 4.1.2 | | Length: 250 mm |  | |  |
| 4.1.3 | | I.D.: 4.6 mm |  | |  |
| 4.1.4 | | Particle Size 5 µ |  | |  |
| **4.2 Flow rate:** 1.0 mL/min | | |  | |  |
| **4.3 Detector:** 254 nm | | |  | |  |
| **4.4 Injection volume**: 20 µL | | |  | |  |
| 5. | **Results** | | |  | | |
| Sample chromatogram no. | | |  | | |
| Standard chromatogram no. | | |  | | |

**6. CALCULATION:**

A3 x A2 x M1

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

A4 x A1 x M2

**Where,**

M1 = mass in ‘mg’ of standard attrazine

M2 = mass in ‘mg’ of sample taken for the test

A1 = peak area of attrazine in the standard solution

A2 = peak area of attrazine in the sample solution

A3 = peak area of internal standard in the standard solution

A4 = peak area of internal standard in the sample solution

P = percent purity attrazine standard

**RESULT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of test** | **Result** | **Unit** | **Method of Analysis** |
| 1. | Active ingredient content |  | % | IS 12932 : 1990 |
| Remark / Reference : | | | | |

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