Sr. No. in Scope NABL /NON NABL

**Flow chart for analysis of Isoprothiolane content in formulation sample**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Step** | **Execution** | **Executed By**  |
| 1. | Sample No. |  |  |  |
| 2. | Name of Sample |  |  |  |
| 3. | **Procedure** |
| **3.1 Preparation of internal standard solution** |  |  |
| 3.1.1 | Weight of the *di*-butyl Phthalate taken into a 50 mLvolumetric flask |  g |  |
| 3.1.2 | Dissolve with acetone and make up to the mark with the same solvent |  |  |
| **3.2 Preparation of standard solution**  |  |  |
| 3.2.1 | Weight of the standard taken into 50 mL volumetricflask  | g |  |
| 3.2.2 | Purity of standard | % |  |
| 3.2.4 | Add internal standard solution (3.1.2)  | mL |  |
| 3.2.5 | Dissolve with acetone and make up to the mark with the same solvent |  |  |
| **3.3 Preparation of sample solution** |  |  |
| 3.3.1 | Weight of the sample taken into 50 mL volumetric flask | g |  |
| 3.3.2 | Add internal standard solution (3.1.2)  | mL |  |
| 3.3.3 | Dissolve with acetone and make up to the mark with the same solvent |  |  |
| 4. | **GC Parameters** |  |  |
| **4.1 Column** |  |  |
| 4.1.1 | Stainless steel, packed with 5% SE-30 on Ch–WHP(80-100) mesh |  |  |
| 4.1.2 | Length: 2 m |  |  |
| 4.1.3 | I.D.: 2 mm  |  |  |
| **4.2 Gas** |  |  |
| 4.2.1 | Carrier:Nitrogen: 30 mL/min  |  |  |
| 4.2.2 |  Hydrogen: 45 mL/min |  |  |
| 4.2.3 |  Air: 450 mL/min |  |  |
| **4.3 Temperature** |  |  |
| 4.3.1 | Oven: 2200C |  |  |
| 4.3.2 | Injecter: 2400C |  |  |
| 4.3.3 | Detector: 2600C |  |  |
| **4.4 Injection volume**: 1 µL |  |  |
| **4.5 Range**: 1 |  |  |
|  | **4.6 Attenuation**: -3 |  |  |
| 5. | **Results**  |  |
| Sample chromatogram no.  |  |
| Standard chromatogram no. |  |

**6. Calculation:**

 A2 x A3 x M1

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

 A4 x A1 x M2

 **Where,**

|  |  |  |
| --- | --- | --- |
| A1 | = | Peak area of isoprothiolane in standard solution |
| A2 | = | Peak area of isoprothiolane in sample solution |
| A3 | = | Peak area of internal standard in standard solution |
| A4 | = | Peak area of internal standard in sample solution |
| M1 | = |  Mass in ‘g’ of standard isoprothiolane in standard solution |
| M2 | = | Mass in ‘g’ of sample taken for test |
| P | = |  Percent purity of isoprothiolane standard |

**Result:**

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

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