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 mL  volumetric 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 volumetric  flask | | 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 |  |