Sr. No. in Scope NABL / NON NABL

**Flow chart for analysis of Profenofos 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 Internal Standard** |  |  |  |
| 3.1.1 | Weight of di-butyl phthalate (DBP) taken in 100 ml volumetric flask | g | g |  |
| 3.1.2 | Dissolve and dilute up to the mark with acetone |  |  |  |
| **3.2** | **Preparation of Standard** |  |  |  |
| 3.2.1 | Weight of the standard taken in 25 ml volumetric flask | g | g |  |
| 3.2.2 | Purity of standard | % | % |  |
| 3.2.3 | Add internal standard solution (3.1.2) | ml | ml |  |
| 3.2.4 | Dilute up to the mark with acetone |  |  |  |
| **3.3** | **Sample preparation** |  |  |  |
| 3.3.1 | Weight of the sample taken in 25 ml volumetric flask | g | g |  |
| 3.3.2 | Add internal standard solution (3.1.2) | ml | ml |  |
| 3.3.3 | Dilute up to the mark with acetone |  |  |  |
| 4. | **GC Parameters** |  |  |  |
| **4.1** | **Column** |  |  |  |
| 4.1.1 | Length: 180 cm |  |  |  |
| 4.1.2 | I.D: 2mm |  |  |  |
| 4.1.3 | Packed with 3 % OV 225 on Gas chrom Q (80-100) mesh |  |  |  |
| **4.2** | **Gas** |  |  |  |
| 4.2.1 | Carrier:Nitrogen: 30 ml/min |  |  |  |
| 4.2.2 | Hydrogen: 45 ml/min  Air: 450 ml/min |  |  |  |
| **4.3** | **Temperatures** |  |  |  |
| 4.3.1 | Oven: 2100C |  |  |  |
| 4.3.2 | Injecter: 2400C |  |  |  |
| 4.3.3 | Detector: 2600C |  |  |  |
|  | **4.4 Injection volume:** 2 µl |  |  |  |
|  | **4.5 Range**: 1 |  |  |  |
|  | **4.6 Attenuation**: -3 |  |  |  |
| 5. | **Result** |  |  |  |
|  | Sample chromatogram no. |  |  |  |
| Standard chromatogram no. |  |  |  |

**6. CALCULATION:**

|  |  |
| --- | --- |
| A1 x A’IS’2 x M1  Profenofos content, = ------------------------ x P  % by mass A’IS’1 x A2 x M2 | **Where,**  A1 = Peak area of profenofos in the sample solution  A’IS’1 = Peak area of internal standard in the sample solution  A’IS’2 = Peak area of internal standard in the standard solution  A2 = Peak area of Profenofos in standard solution  M1 = Mass in’ g’ of standard profenofos in the standard solution  M2 = Mass in’ g’ of profenofos sample taken for test  P = Percent purity of profenofos standard |

**Result:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name of Test** | **Result** | **Unit** | **Method of Analysis** |
| 1. | Active ingredient |  | % | GC method (IS - 15238 : 2002) |
| Remark / Reference : | | | | |

|  |  |  |
| --- | --- | --- |
| Analyzed by | Name |  |
| Dated Signature |  |
| Checked by | Name |  |
| Dated Signature |  |