Sr. No. in Scope NABL /NON NABL

**Flow chart for analysis of Thiodicarb 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** | | | |  | |  |
| 3.1.1 | Weight of the thymol taken into a 25 mL  volumetric flask | | | mg | |  |
| 3.1.2 | Dissolve and dilute up to the mark with acetonitrile | | |  | |  |
| **3.2 Preparation of standard solution** | | | |  | |  |
| 3.2.1 | Weight of the thiodicarb standard taken into  25 mL volumetric flask | | | mg | |  |
| 3.2.2 | Dissolve and dilute up to the mark with acetonitrile | | |  | |  |
| 3.2.3 | Pipette out 2 mL of (3.2.2) into 25 mL volumetric flask | | |  | |  |
| 3.2.4 | Add internal standard solution (3.1.2) | | | mL | |  |
| 3.2.5 | Dissolve and dilute up to the mark with acetonitrile | | |  | |  |
| **3.3 Preparation of sample solution** | | | |  | |  |
| 3.3.1 | Weight of the thiodicarb sample taken into  25 mL volumetric flask | | | mg | |  |
| 3.3.2 | Dissolve and dilute up to the mark with acetonitrile | | |  | |  |
| 3.3.3 | Pipette out 2 mL of (3.3.2) into 25 mL volumetric flask | | |  | |  |
| 3.3.4 | Add internal standard solution (3.1.2) | | | mL | |  |
| 3.3.5 | Dissolve and dilute up to the mark with acetonitrile | | |  | |  |
| 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 | | 5 µ particle size | |  | |  |
| **4.2 Flow rate:** 1.5 mL/min | | | |  | |  |
| **4.3 Detector:** 240 nm | | | |  | |  |
| **4.4 Injection volume**: 20 µL | | | |  | |  |
| 5. | **Results** | | | |  | | |
| Sample chromatogram no. | | | |  | | |
| Standard chromatogram no. | | | |  | | |

**6. Calculation:**

A3 x A2 x M1

Thiodicarb content, % by mass = ------------------

A4 x A1 x M2

**Where,**

M1 = mass in ‘mg’ of standard thiodicarb

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

A1 = peak area of thiodicarb in the standard solution

A2 = peak area of thiodicarb 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 thiodicarb 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 |  |