Sr. No. in Scope NABL /NON NABL

**Flow chart for analysis of Lindane 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 alpha-naphthol taken into a 100 ml  volumetric flask | | 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 into 100 ml  volumetric flask | | g |  |
| 3.2.2 | Purity of standard | | % |  |
| 3.2.3 | Add internal standard solution (3.1.2) | | ml |  |
| 3.2.4 | Dilute up to the mark with acetone | |  |  |
| **3.3 Preparation of Sample** | | |  |  |
| 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 | Dilute up to the mark with acetone | |  |  |
| 4. | **GC Parameters** | | |  |  |
| **4.1 Column** | | |  |  |
| 4.1.1 | Borosilicate Glass tube, packed with 5% OV-210 on chromosorb WHP (100 - 120) mesh | |  |  |
| 4.1.2 | Length: 183 cm | |  |  |
| 4.1.3 | I.D.: 4 mm | |  |  |
| **4.2 Gas** | | |  |  |
| 4.2.1 | Carrier:Nitrogen: 25 ml/min or 30 ml/min | |  |  |
| 4.2.2 | Hydrogen: 45 ml/min | |  |  |
| 4.2.3 | Air: 450 ml/min | |  |  |
| **4.3 Temperature** | | |  |  |
| 4.3.1 | | Oven: 1600C |  |  |
| 4.3.2 | | Injecter: 2200C |  |  |
| 4.3.3 | | Detector: 2400C |  |  |
| **4.4 Injection volume**: 2 µl | | |  |  |
| **4.5 Range**: | | |  |  |
|  | **4.6 Attenuation**: | | |  |  |
| 5. | **Results** | | |  | |
| Sample chromatogram no. | | |  | |
| Standard chromatogram no. | | |  | |

**6. Calculation:**

A1 x A’IS’2 x M1

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

A’IS’1 x A2 x M2

**Where,**

A1 = Peak area of lindane 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 lindane in the standard solution

M1 = Mass in ‘g’ of standard lindane in the standard solution

M2 = Mass in ‘g’ of lindane sample taken for test

P = Percent purity of lindane standard

**Result:**

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

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