Sr. No. in Scope NABL / NON NABL

**Flow Chart for Estimation of Carbofuran content in formulation sample**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Step** | **Execution** | | **Executed  By** |
|  | Sample No. |  |  |  |
|  | Name of Sample |  |  |  |
| 3.1 | **Procedure** | **R1** | **R2** |  |
| 3.1.1 | Weight of the sample taken in 100 ml reaction flask | g |  |  |
| 3.1.2 | Add 50 ml of 2 N glycolic potassium hydroxide solution |  |  |  |
| 3.1.3 | Add 150 ml of 2% boric acid solution containing  bromocresol green indicator to the receiver |  |  |  |
| 3.1.4 | Start the nitrogen flow so as to get slow and uniform  bubbling in the receiver containing boric acid |  |  |  |
| 3.1.5 | Apply heat to the kettle so that the content of reaction kettle starts boiling within 5-7 minutes & reflux for 60 minutes |  |  |  |
| 3.1.6 | Stop heating while continuing to pass nitrogen for the next five minutes. Disconnect the receiver and then nitrogen supply |  |  |  |
| 3.1.7 | Transfer the contents of the receiver into 500 ml beaker and rinse the receiver tip with boric acid solution |  |  |  |
| 3.1.9 | Titrate the contents of the beaker with standard 0.1 N hydrochloric acid to the original colour of the boric acid solution |  |  |  |
| 4.1 | Note down the volume of standard hydrochloric acid (0.1 N) consumed by the sample |  |  |  |

1. **Calculation:**

22.13 x V x N

Carbofuran content, % by mass = ------------------------------------

M

**Where,**

V = Volume of hydrochloric acid consumed

N = Normality of hydrochloric acid

M = Mass of sample in ‘g’ taken for test

22.13 = Factor for Carbofuran

**Result:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl .No.** | **Name of test** | **Result** | **Unit** | **Method of Analysis** |
| 1. | Active ingredient |  | % | IS: 9360 – 1980 (Reaffirmed 2002) |
| Remark / Reference : | | | | |

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