Sr. No. in Scope NABL / NON NABL

**Flow chart of Suspensibility test for Copper Oxy Chloride
 Wettable Powder (WP) formulation**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | **Step**  | **Execution** | **Executed By**  |
|  1. | Sample No. |  |  |  |
|  2. | Name of Sample |  |  |  |
|  3. | **Procedure** | **R1** | **R2** |  |
| **3.1** | **Preparation of suspension**  |  |  |  |
| 3.1.1 | Weigh sample to prepare 0.5 % a.i. of suspension in a 100 ml beaker  |  g |  g |  |
| 3.1.2 | *Note the serial No. of balance log book* |  |  |  |
| 3.1.3 | Add standard hard water 342 ppm (at least twice the mass of the material taken for test) at 30 ± 10C |  |  |  |
| 3.1.4 | Allow to stand for 30 sec. & stir by hand for 30 sec. with a glass rod  |  |  |  |
| 3.1.5 | Transfer the slurry to the stoppered measuring cylinder (250 ml) and any residue by washing with small quantity of hard water (342 ppm) |  |  |  |
| 3.1.6 | Add hard water (342 ppm) up to the mark |  |  |  |
| 3.1.7 | Close the cylinder with the stopper and invert it sharply through 30 complete cycles within 1 min. |  |  |  |
| 3.1.8 | Allow the cylinder to stand at rest for 30 min. at 30 ± 10C  |  |  |  |
| 3.1.9 | Withdraw suspension (nine-tenths) from the cylinder within 10 to 15 sec by dipping the nozzle of the glass tube using suction through filtration flask |   |   |  |
| 3.1.10 | Suspension including sediment at the bottom of the cylinder (one - tenth of the suspension)  |  ml |  ml |  |
| **3.2** | **Determination of Active Ingredient** |  |  |  |
| 3.2.1 | Transfer the suspension into 500 ml conical flask (quantitatively) |  |  |  |
| 3.2.2 | Add about 2 ml of conc. nitric acid |  |  |  |
| 3.2.3 | Boil it for 5 min and cool down |  |  |  |
| 3.2.4 | Add about 1 g of urea and boil again for 5 min and again cool down |  |  |  |
| 3.2.5 | Add sodium carbonate in small quantities until faint permanent precipitate or blue colour appears |  |  |  |
| 3.2.6 | Add dilute acetic acid solution drop wise until the blue colour and precipitate S disappears |  |  |  |
| 3.2.7 | Add approximately 2 g potassium iodide |  |  |  |
| 3.2.8 | Titrate immediately liberated iodine against standard sodium thiosulphate solution to pale yellow colour |  |  |  |
| 3.2.9 | Add 1 ml of starch indicator solution (blue colour appears)& continue titration till blue colour disappears |  |  |  |
| 3.2.10 | Add about 1 to 2 g of potassium thiocyanate, if blue colourreappears continue titration until the blue colour is justdischarged |  |  |  |
| 3.2.11 | End point will be blue to colorless |  |  |  |
| 3.2.12 | Note down the volume of sodium thiosulphate consumed by the sample |  |  |  |

**4. Calculation:**

 1000 (M - m)

1. **Suspensibility, % by mass** = -----------------------

 9 M

**Where,**

M = Mass in ‘g’ of pesticide present in the sample taken for the preparation of suspension

m = Mass in ‘g’ of pesticide found in the suspension including the sediment remaining in the

 graduated cylinder

 **5. Result:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Name of test** | **Result** | **Unit** | **Method of Analysis**  |
|  1. | Supensibility |  | % |  **IS : 6940 - 1982** |
| Remark / Reference : |
| Analyzed by | Name  |  |
| Dated signature |  |
| Checked by | Name  |  |
| Dated signature |  |