

PESTICIDE FORMULATION & RESIDUE ANALYTICAL CENTRE, PMD, NIPHM, HYDERABAD

Sr. No. in Scope

NABL / NON NABL

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

Sr. No.	Step	Date of Analysis		Executed By
		Execution		
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	<i>Note the serial No. of balance log book</i>			
3.1.3	Add standard hard water 342 ppm (at least twice the mass of the material taken for test) at 30 ± 1°C			
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 ± 1°C			
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			

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Prepared By		Checked By		Approved & Issued By	
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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 colour reappears continue titration until the blue colour is just discharged			
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:

$$\text{i) Suspensibility, \% by mass} = \frac{1000 (M - m)}{9 M}$$

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			

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