

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

Sr. No. in Scope

NABL / NON NABL

Flow chart for estimation of Copper Oxochloride content in formulation sample

Date of Analysis

Sl. No.	Step	Execution		Executed By
		R1	R2	
1.	Sample No.			
2.	Name of Sample			
3.	Procedure:			
3.1.1	Weight of the sample taken in 500 ml conical flask			
3.1.2	Add about 2 ml of conc. nitric acid			
3.1.3	Add 20 ml of distilled water			
3.1.4	Allow the material to dissolve by shaking then boil it for 5 min and cool down			
3.1.5	Add about 1 g of urea and boil again for 5 min and again cool down			
3.1.6	Add sodium carbonate small quantities until faint permanent precipitate or blue colour appears			
3.1.7	Add dilute acetic acid solution drop wise until the blue colour (precipitate) disappears			
3.1.8	Add approximately 2 g potassium iodide			
3.1.9	Titrate immediately liberated iodine against standard sodium thiosulphate solution to pale straw colour			
3.1.10	Add 1 ml of starch indicator solution (blue colour appears) & continue titration till blue colour disappears			
3.1.11	Add about 1 to 2 g of potassium thiocyanate, if blue colour reappears continue titration until the blue colour is just discharged			
3.1.12	End point will be blue to colorless			
3.1.13	Note down the volume of sodium thiosulphate consumed by the sample	mL	mL	

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Revision No.	:	02	Issue Date	:	01/07/2011
Revised Date	:	26/03/2014	Next Revision Date	:	26/03/2016
Prepared By		Checked By		Approved & Issued By	
Mrs. T. Sridevi (Deputy Technical Manager)		Mr. C.V. Rao (Technical Manager)		Dr. Abhay U. Ekbote (Director PM & Quality Manager)	

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4. Calculation:

$$\text{Copper, \% by mass} = \frac{6.35 \times t \times n}{M}$$

Where,

t = Volume of standard thiosuphate solution consumed

M = Mass in 'g' of sample taken for test

n = Normality of standard sodium thiosulphate solution

6.35 = factor for copper

Result:

Sl.No.	Name of test	Result	Unit	Method of Analysis
1.	Active ingredient		%	IS 1506 - 1977 (Reaffirmed 2007)
Remark / Reference :				

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

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