

Sr. No. in Scope

NABL / NON NABL

Flow Chart for analysis of Carbendazim content in formulation sample

Date of Analysis

Sl. No.	Step	Execution		Executed By
1.	Sample No.			
2.	Name of Sample			
3.	Procedure	R₁	R₂	
3.1	Preparation of Standard			
3.1.1	Purity of standard		g	
3.1.2	Weigh 0.025 g a.i. of standard in a 100 ml beaker		%	
3.1.3	<i>Note down the S.No. of balance log book</i>			
3.1.4	Add 5 ml of acetic acid			
3.1.5	Boil for 5 minutes on hot plate.			
3.1.6	Transfer the content into a 100 ml volumetric flask after cooling			
3.1.7	Dilute up to the mark with acetonitrile (Stock A)			
3.1.8	pipette out 5 mL of stock A (3.1.7) into a 25 ml volumetric flask		ml	
3.1.9	Dilute up to the mark with acetonitrile			
3.2	Preparation of Sample			
3.2.1	Note down the percent active ingredient declared on the sample.			
3.2.2	Weigh 0.025 g a.i. of sample taken in a 100 ml beaker		g	
3.2.3	<i>Note down the S.No. of balance log book</i>			
3.2.4	Add 5 ml of acetic acid			
3.2.5	Boil for 5 minutes on hot plate.			
3.2.6	Transfer the content into a 100 ml volumetric flask after cooling			
3.2.7	Dilute up to the mark with acetonitrile			
3.2.8	pipette out 5 mL of (3.2.5) into 25 ml volumetric flask		ml	
3.2.9	Dilute up to the mark with acetonitrile			
4.	HPLC Parameters			
4.1	Column			
4.1.1	Stainless Steel C ₁₈ , Particle Size 5 μ			
4.1.2	Length: 250 mm			
4.1.3	I.D.: 4.6 mm			
4.2	Mobile Phase			
4.2.1	Acetonitrile : Water : (75: 25)			

Name of the Laboratory : Pesticide Formulation & Residue Analytical Centre, PMD, NIPHM, Hyderabad			
Document No.	: FC-PF-213	Document Name	: Flow chart for analysis of Carbendazim content, % by mass
Revision No.	: 01	Issue Date	: 01/07/2011
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Prepared By		Checked By	Approved & Issued By
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PESTICIDE FORMULATION & RESIDUE ANALYTICAL CENTRE, PMD, NIPHM, HYDERABAD

4.2.2	Flow Rate:	1 ml/min		
4.3	Detector:	UV		
4.4	Wave Length:	283 nm		
4.5	Injection Volume:	20 µl		
5.	Result			
	Sample chromatogram no.			
	Standard chromatogram no.			

6. Calculation:

$$\text{Carbendazim content, \% by mass} = \frac{M_1 \times A_1}{M_2 \times A_2} \times P$$

Where,

M_1 = Mass in 'g' of standard Carbendazim

M_2 = Mass in 'g' of sample taken for test

A_1 = Peak area of Carbendazim in the sample solution

A_2 = Peak area of Carbendazim in the standard solution

P = Percent purity of standard Carbendazim

Result:

Sl. No.	Name of test	Result	Unit	Method of Analysis
1.	Active ingredient		%	IS 8446:1991

Remark / Reference :

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

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