

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

Sr. No. in Scope

NABL /NON NABL

Flow Chart for Analysis of Metalaxyl Content in Formulation Sample

		Date of Analysis	
Sl. No.	Step	Execution	Executed By
1.	Sample No.		
2.1	Name of Sample		
2.2	Sample Description		
3.	Procedure		
	3.1 Preparation of Internal Standard		
3.1.1	Weigh 1 g Di-octyl Pthalate taken into a 50 ml volumetric flask	g	
3.1.2	Dissolve and dilute up to the mark with acetone		
	3.2 Preparation of Standard		
3.2.1	Weigh 0.16 to 0.17 g of the standard taken into 10 ml volumetric flask	g	
3.2.2	Purity of standard	%	
3.2.3	Add 10 mL internal standard solution (3.1.2) using pipette.	ml	
	3.3 Preparation of Sample		
3.3.1	Weigh sample equivalent to 0.16 to 0.17 a. i. of the into 10 ml volumetric flask.	g	
3.3.2	Add 5 mL of internal standard solution (3.1.2) using transfer pipette.	ml	
4.	GC Parameters		
	4.1 Column		
4.1.1	Glass column, packed with 10% OV-101 on Gaschrom Q (80 - 100) mesh		
4.1.2	Length: 180 cm		
4.1.3	I.D.: 2 mm		
	4.2 Gas		
4.2.1	Carrier: Nitrogen: 30 ml/min		
4.2.2	Hydrogen: 30 ml/min		
4.2.3	Air: 300 ml/min		
	4.3 Temperature		
4.3.1	Oven: 210°C		
4.3.2	Injector: 225°C		
4.3.3	Detector: 260°C		
	4.4 Injection volume: 2 µl		
	4.5 Range:		
	4.6 Attenuation:		
5.	Results		
	Sample chromatogram no.		
	Standard chromatogram no.		

Name of the Laboratory : Pesticide Formulation & Residue Analytical Centre, PMD, NIPHM, Hyderabad					
Document No.	:	FC-PF-226	Document Name	:	Flow chart for analysis of Metalaxyl content
Revision No.	:	00	Issue Date	:	01/05/2013
Revision Date	:	--	Next Revision Date	:	01/05/2015
Prepared By		Checked By		Approved & Issued By	
Ms. T. Sridevi (Deputy Technical Manager)		Mr. C.V. Rao (Technical Manager)		Dr. Abhay Ekbote (Director PM & Quality Manager)	

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6. Calculation:

$$\text{Metalaxyl content, \% by mass} = \frac{A_1 \times A'IS'_2 \times M_1}{A'IS'_1 \times A_2 \times M_2} \times P$$

Where,

- A_1 = Peak area of metalaxyl in the sample solution
 $A'IS'_1$ = Peak area of internal standard in the sample solution
 $A'IS'_2$ = Peak area of internal standard in the standard solution
 A_2 = Peak area of metalaxyl in the standard solution
 M_1 = Mass in 'g' of standard metalaxyl in the standard solution
 M_2 = Mass in 'g' of metalaxyl sample taken for test
 P = Percent purity of metalaxyl standard

Result:

Sl. No.	Name of test	Result	Unit	Method of Analysis
1.	Active ingredient		%	IS 13458 : 1992 (Reaffirmed 2002)
Remark / Reference :				

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

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