

## PESTICIDE FORMULATION &amp; RESIDUE ANALYTICAL CENTRE, PMD, NIPHM, HYDERABAD

Sr. No. in Scope

NABL/ NON NABL

**Flow chart for analysis of Deltamethrin content in formulation sample**

		Date of Analysis	
Sl. No.	Step	Execution	Executed By
1.	Sample No.		
2.	Name of Sample		
3.	<b>Procedure</b>		
	<b>3.1 Preparation of Standard</b>		
3.1.1	Standard weight taken in 25 ml volumetric flask	g	
3.1.2	Purity of standard	%	
3.1.4	Dissolve and dilute up to the mark with a mixture of dioxan and iso-octane (20 : 80)		
	<b>3.2 Preparation of Sample</b>		
3.2.1	Sample weight taken in 25 ml volumetric flask	g	
3.3.3	Dissolve and dilute up to the mark with a mixture of dioxan and iso-octane (20 : 80)		
4.	<b>HPLC Parameters</b>		
	<b>4.1 Column</b>		
4.1.1	S.S. Packed with Lichrosorb silica 60-80 mesh		
4.1.2	Length: 15 cm		
4.1.3	I.D.: 4.6 mm		
	<b>4.2 Mobile Phase</b>		
4.2.1	Dioxan: iso-octane (5 : 95)		
4.2.2	Flow Rate: 1.5 ml/min		
	<b>4.3 Detector:</b> Ultra-violet		
	<b>4.4 Wave Length:</b> 254 nm		
	<b>4.5 Injection Volume:</b> 20 µl		
5.	<b>Result</b>		
	Sample chromatogram no.		
	Standard chromatogram no.		

Name of the Laboratory :		<b>Pesticide Formulation &amp; Residue Analytical Centre, PMD, NIPHM, Hyderabad</b>	
Document No.	:	FC-PF-214	Document Name : Flow chart for analysis of Deltamethrin content, % by mass
Revision No.	:	00	Issue Date : 01/07/2011
Revision Date	:		Next Revision Date : 01/07/2013
Prepared By		Checked By	Approved By
Ms. M. Jaya Devi (Deputy Technical Manager)		Mr. C.V. Rao (Technical Manager)	Dr. Abhay Ekbote (Director PM)
			Issued By
			Dr. Abhay Ekbote (Quality Manager)

## PESTICIDE FORMULATION &amp; RESIDUE ANALYTICAL CENTRE, PMD, NIPHM, HYDERABAD

**6. Calculation:**

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

**Where,**

- $M_1$  = Mass in 'g' of deltamethrin in the standard solution  
 $M_2$  = Mass in 'g' of sample taken for test  
 $A_1$  = Peak Area of deltamethrin in the sample solution  
 $A_2$  = Peak Area of deltamethrin in the standard solution  
 $P$  = Percent purity of deltamethrin standard

**Result:**

Sl. No.	Name of test	Result	Unit	Method of Analysis
Remark / Reference :				

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

Name of the Laboratory :		<b>Pesticide Formulation &amp; Residue Analytical Centre, PMD, NIPHM, Hyderabad</b>			
Document No.	:	FC-PF-214	Document Name	:	Flow chart for analysis of Deltamethrin content, % by mass
Revision No.	:	00	Issue Date	:	01/07/2011
Revision Date	:		Next Revision Date	:	01/07/2013
Prepared By		Checked By		Approved By	
Ms. M. Jaya Devi (Deputy Technical Manager)		Mr. C.V. Rao (Technical Manager)		Dr. Abhay Ekbote (Director PM)	
				Issued By	
				Dr Abhay Ekbote (Quality Manager)	