

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

Sr. No. in Scope

NABL/ NON NABL

Flow chart for analysis of Alphacypermethrin content in formulation sample

		Date of Analysis	
Sl. No.	Step	Execution	Executed By
1.	Sample No.		
2.	Name of Sample		
3.	Procedure		
	3.1 Preparation of Internal Standard		
3.1.1	Weight of Benzyl benzoate taken in 100 ml volumetric flask	g	
3.1.2	Dissolve and dilute up to the mark with toluene		
	3.2 Mobile Phase		
3.2.1	Di-isopropyl ether: n-pentane (3 : 97)		
	3.3 Preparation of Standard		
3.3.1	Standard weight taken in 100 ml volumetric flask	g	
3.3.2	Purity of standard	%	
3.3.3	Add internal standard solution (3.1.2)	ml	
3.3.4	Ultrasonicate for about 5 minutes		
3.3.5	Dilute up to the mark with mobile phase (3.2.1)		
	3.4 Preparation of Sample		
3.4.1	Weight of the sample taken in 100 ml volumetric flask	g	
3.4.2	Add internal standard solution (3.1.2)	ml	
3.4.3	Ultrasonicate for about 5 minutes		
3.4.4	Dilute up to the mark with mobile phase (3.2.1)		
4.	HPLC Parameters		
	4.1 Column		
4.1.1	Stainless Steel packed with Silica, Particle Size 5 μ		
4.1.2	Length: 250 mm		
4.1.3	I.D.: 4.6 mm		
4.1.4	Flow Rate: 1.5 ml/min		
	4.2 Detector: UV		
	4.3 Wave Length: 280 nm		
	4.4 Injection Volume: 20 μ l		
5.	Result		
	Sample chromatogram no.		
	Standard chromatogram no.		

Name of the Laboratory :		Pesticide Formulation & Residue Analytical Centre, PMD, NIPHM, Hyderabad	
Document No.	:	FC-PF-212	Document Name : Flow chart for analysis of Alphacypermethrin 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
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			Issued By
			Dr. Abhay Ekbote (Quality Manager)

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6. Calculation:

$$\text{Alpha-cypermethrin content, \% by mass} = \frac{A_2 \times A_3 \times M_1}{A_1 \times A_4 \times M_2} \times P$$

Where,

- M_1 = mass in 'g' of standard alphacypermethrin
 M_2 = mass in 'g' of sample taken for the test
 A_1 = peak area of internal standard in standard solution
 A_2 = peak area of alphacypermethrin in standard solution
 A_3 = peak area of alphacypermethrin in sample solution
 A_4 = peak area of internal standard in sample solution
 P = percent purity alphacypermethrin standard

Result:

Sl. No.	Name of test	Result	Unit	Method of Analysis
1.	Active ingredient		%	IS 15616:2006

Remark / Reference :

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

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