

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

Sr. No. in Scope

NABL /NON NABL

Flow chart for analysis of Isoprothiolane 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 solution			
3.1.1	Weight of the <i>di</i> -butyl Phthalate taken into a 50 mL volumetric flask		g	
3.1.2	Dissolve with acetone and make up to the mark with the same solvent			
	3.2 Preparation of standard solution			
3.2.1	Weight of the standard taken into 50 mL volumetric flask		g	
3.2.2	Purity of standard		%	
3.2.4	Add internal standard solution (3.1.2)		mL	
3.2.5	Dissolve with acetone and make up to the mark with the same solvent			
	3.3 Preparation of sample solution			
3.3.1	Weight of the sample taken into 50 mL volumetric flask		g	
3.3.2	Add internal standard solution (3.1.2)		mL	
3.3.3	Dissolve with acetone and make up to the mark with the same solvent			
4.	GC Parameters			
	4.1 Column			
4.1.1	Stainless steel, packed with 5% SE-30 on Ch-WHP (80-100) mesh			
4.1.2	Length:	2 m		
4.1.3	I.D.:	2 mm		
	4.2 Gas			
4.2.1	Carrier:	Nitrogen: 30 mL/min		
4.2.2		Hydrogen: 45 mL/min		
4.2.3		Air: 450 mL/min		
	4.3 Temperature			
4.3.1	Oven:	220 ⁰ C		
4.3.2	Injector:	240 ⁰ C		
4.3.3	Detector:	260 ⁰ C		
	4.4 Injection volume:		1 µL	
	4.5 Range:		1	
	4.6 Attenuation:		-3	
5.	Results			

Name of the Laboratory : Pesticide Formulation & Residue Analytical Centre, PMD, NIPHM, Hyderabad					
Document No.	:	FC-PF-233	Document Name	:	Flow chart for analysis of Isoprothiolane content, % by mass
Revision No.	:	00	Issue Date	:	22.10.2012
Revision Date	:	22.10.2014	Next Revision Date	:	22.10.2016
Prepared By		Checked By		Approved & Issued By	
Ms. M. Jaya Devi (Deputy Technical Manager)		Mr. C.V. Rao (Technical Manager)		Dr. Abhay Ekbote (Director PM & Quality Manager)	

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	Sample chromatogram no.	
	Standard chromatogram no.	

6. Calculation:

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

Where,

- A_1 = Peak area of isoprothiolane in standard solution
 A_2 = Peak area of isoprothiolane in sample solution
 A_3 = Peak area of internal standard in standard solution
 A_4 = Peak area of internal standard in sample solution
 M_1 = Mass in 'g' of standard isoprothiolane in standard solution
 M_2 = Mass in 'g' of sample taken for test
 P = Percent purity of isoprothiolane standard

Result:

Sl. No.	Name of test	Result	Unit	Method of Analysis
1.	Active ingredient content		%	

Remark / Reference :

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

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