

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

Sr. No. in Scope

NABL /NON NABL

Flow chart for analysis of Ethion content from formulation

		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 Di-octyl Phthalate (DOP) taken in 250 ml Volumetric flask	g		
3.1.2	Dissolve and dilute up to the mark with acetone			
	3.2 Preparation of Standard			
3.2.1	Standard weight taken in 25 ml Volumetric flask	g		
3.2.2	Purity of standard	%		
3.2.3	Add internal standard solution (3.1.2)	ml		
3.2.4	Dilute up to the mark with acetone			
	3.3 Preparation of Sample			
3.3.1	Weigh the sample in 25 ml Volumetric flask	g		
3.3.2	Add internal standard solution (3.1.2)	ml		
3.3.3	Dilute up to the mark with acetone			
4.	GC Parameters			
	4.1 Column			
4.1.1	S.S. Packed with 5% SE-30 on Chromosorb WHP (80-100) mesh			
4.1.2	Length: 200 cm			
4.1.3	I.D.: 2 mm			
	4.2 Temperature			
4.2.1	Oven: 240°C			
4.2.2	Injector: 260°C			
4.2.3	Detector: 270°C			
	4.3 Injection volume: 1 µl			
	4.4 Range: 1			
	4.5 Attenuation: -3			
5.	Results			
	Sample chromatogram no.			
	Standard chromatogram no.			

Name of the Laboratory : Pesticide Formulation & Residue Analytical Centre, PMD, NIPHM, Hyderabad					
Document No.	:	FC-PF-211	Document Name	:	Flow Chart for Analysis of Ethion content % by mass
Revision No.	:	00	Issue Date	:	01/07/2011
Revision Date	:	01/07/2015	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)	

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6. Calculation:

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

Where,

- A_1 = Peak area of ethion 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 ethion in the standard solution
 M_1 = Mass in 'g' of standard ethion in the standard solution
 M_2 = Mass in 'g' of ethion sample taken for test
 P = Percent purity of ethion standard

Result:

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

Analyzed by	Name	
	Dated signature	
Checked by	Name	
	Dated signature	

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