

LAMBDA-CYHALOTHRIN 463

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See CIPAC E, p 49.

LAMBDA-CYHALOTHRIN CAPSULE SUSPENSIONS *463/CS/M/-

1 Sampling. Take at least 500 ml.

2 Identity tests. As for lambda-cyhalothrin technical **463/TC/M/2.1**.

3 Lambda-cyhalothrin. As for lambda-cyhalothrin technical **463/TC/M/3**, except substitute the following:

OUTLINE OF METHOD The sample is dissolved in acetone containing dicyclohexyl phthalate as internal standard.

REAGENTS

Acetone HPLC grade

Dicyclohexyl phthalate internal standard

Internal standard solution. Dissolve dicyclohexyl phthalate (2.5 g) in acetone (500 ml) containing 1 ml trifluoroacetic acid.

Lambda-cyhalothrin working standard of known lambda cyhalothrin content (minimum 990 g/kg). A certified standard of known purity will be available from Office of Reference Materials, LCG, Queens Road, Teddington, Middlesex, England, TW11 0LY.

Calibration solution. Weigh in duplicate (to the nearest 0.1 mg) about 0.1 g (*s* mg) lambda-cyhalothrin standard into two conical flasks (150 ml). Add by pipette to each flask internal standard solution (20.0 ml) and acetone (30 ml). Shake thoroughly to dissolve the lambda-cyhalothrin and dilute 5 ml of each solution to 25 ml with acetone (solutions C_A and C_B). Prepare a solution without internal standard by dissolving 0.1 g lambda-cyhalothrin standard into acetone (50 ml). Dilute 5 ml of this solution to 25 ml with acetone (Solution S₀).

* CIPAC method 2001. Prepared by the Cyhalothrin Panel of PAC-UK. Chairman: M Tandy. Based on a method supplied by Zeneca Agrochemicals, UK.

PROCEDURE

(a) *Preparation of sample solution.* Weigh in duplicate (to the nearest 0.1 mg) into two conical flasks (150 ml) sufficient sample (w mg) to contain about 0.1 g of lambda-cyhalothrin). Add by pipette to each flask internal standard solution (20.0 ml) and acetone (30 ml). Place the flasks in an ultrasonic bath for 15 min to dissolve the lambda-cyhalothrin. Allow the insoluble material to settle and filter the supernatant liquid through an appropriate filter. Dilute 5 ml of each solution to 25 ml with acetone (solutions S_A and S_B). Prepare a solution without internal standard by shaking a similar amount of sample with acetone (50 ml). Filter and dilute 5 ml of this solution to 25 ml with acetone (Solution S_0).

Note: The trifluoroacetic acid prevents the possibility of epimerisation of lambda-cyhalothrin to other isomers.

(b) *Chromatographic conditions (typical):*

<i>Retention times</i>	dicyclohexyl phthalate: about 9.0 min
	cyhalothrin diastereoisomer: about 10.4 min
	lambda-cyhalothrin: about 11.08 min

(e) *Calculation.* Substitute dicyclohexyl phthalate for hexacosane.

Repeatability r	=	13 g/kg at 229 g/kg active ingredient content
		5.6 g/kg at 89 g/kg active ingredient content
		1.7 g/kg at 26 g/kg active ingredient content
Reproducibility R	=	16 g/kg at 229 g/kg active ingredient content
		6.7 g/kg at 89 g/kg active ingredient content
		1.9 g/kg at 26 g/kg active ingredient content