


IRAC Susceptibility Test Methods Series

Method No: 001

Version: 3 (June 2009)

Details:

Method:	No: 001 (Formally Method No. 1)	 <p>Photograph Courtesy of: Scott Bauer, USDA ARS - <i>Myzus persicae</i></p>
Status:	Approved	
Species:	<i>Myzus persicae</i>	
Species Stage	All	
Product Class:	organophosphates carbamates	
Comments: None		

Description:

Materials:

Petri dishes (9-cm diameter), plastic bags, cotton wool, untreated leaves, small forceps, fine pointed brush or cocktail stick, beakers or glass jars (ca. 100-ml capacity) for test liquids, 1-ml disposable plastic syringes for liquids or weighing balance for solids, hand lens or binocular microscope, maximum/minimum thermometer.

Methods:

- (a) Sample apterous aphids by collecting infested leaves, selected at random from several plants. The leaves may be transported and held in plastic bags.
- (b) Collect some non-infested, untreated, leaves or remove aphids from leaves using a small brush before treatment.
- (c) Prepare appropriate test dilutions of formulations in water. The use of a wetter is not recommended.
- (d) Agitate test liquids and then dip non-infested leaves for 5 secs, five leaves per treatment. Dip five control leaves in water only.
- (e) Allow surface water to dry from leaves before placing them individually in Petri dishes and infesting each leaf with 20 adult aphids. The aphids can be transferred using a small pointed brush (with volatile insecticides it may be necessary to ventilate the Petri dishes by piercing the lids with a hot wire).
- (f) Place a small piece of damp cotton wool around the petiole of each leaf.
- (g) Store Petri dishes in an area where they are not exposed to direct sunlight or extremes of temperature. Record maximum and minimum temperatures.
- (h) Using a hand lens or binocular microscope assess mortality after 24 h by checking each aphid's ability to show co-ordinated movement in response to a touch with a small brush or cocktail stick.
- (i) Express results as percentage mortality and correct for untreated mortality using Abbott's formula. Untreated mortality should be recorded.

Precautions & Notes:

None

References & Acknowledgements:

None