


## IRAC Susceptibility Test Methods Series

Version: 3 (June 2009)

Method No: 008

### Details:

Method:	No 008 (Formally Method No.8)	 <p><i>Photograph Courtesy of: Central Science Laboratory, Harpenden Archives, British Crown</i></p>
Status:	Approved	
Species:	Bemisia tabaci	
Species Stage	Adult	
Product Class:	amitraz	
Comments: None		

### Description:

#### Materials:

Clean plastic cups with push-on plastic lids, plasticine, nylon muslin with very small mesh (approximately 10.000 apertures cm<sup>-2</sup>) sharp knife or scalpel, scissors, glue, nail or other similar metal rod, untreated leaves.

#### Method:

- (a) Turn a plastic lid upside down and cut a circular hole (approximately 4 cm diameter) with a scalpel.
- (b) Cut a roughly circular piece of muslin (approximately 5.5 cm diameter) and glue to the inside of the prepared plastic lid.
- (c) Heat the nail (or metal rod) and pierce a hole in the bottom of the plastic cup.
- (d) Select uncontaminated cotton leaves and with scissors cut the petiole to a length of approximately 4 cm. Cut the lamina to give an approximately square area (2 x 2 cm). Prepare a minimum of four replicates per treatment.
- (e) Prepare test liquids. The use of a wetter is not recommended. Agitate test liquids and then dip prepared leaves for 5 s holding the leaf by the petiole.
- (f) Leave the leaves to dry in the open air (approximately 5 min).
- (g) Pass the petiole of a test leaf through the hole in the plastic cup until it protrudes by approximately 1 cm.
- (h) Fix the petiole in position by pressing a small ball of plasticine around the petiole where it enters the cut hole.

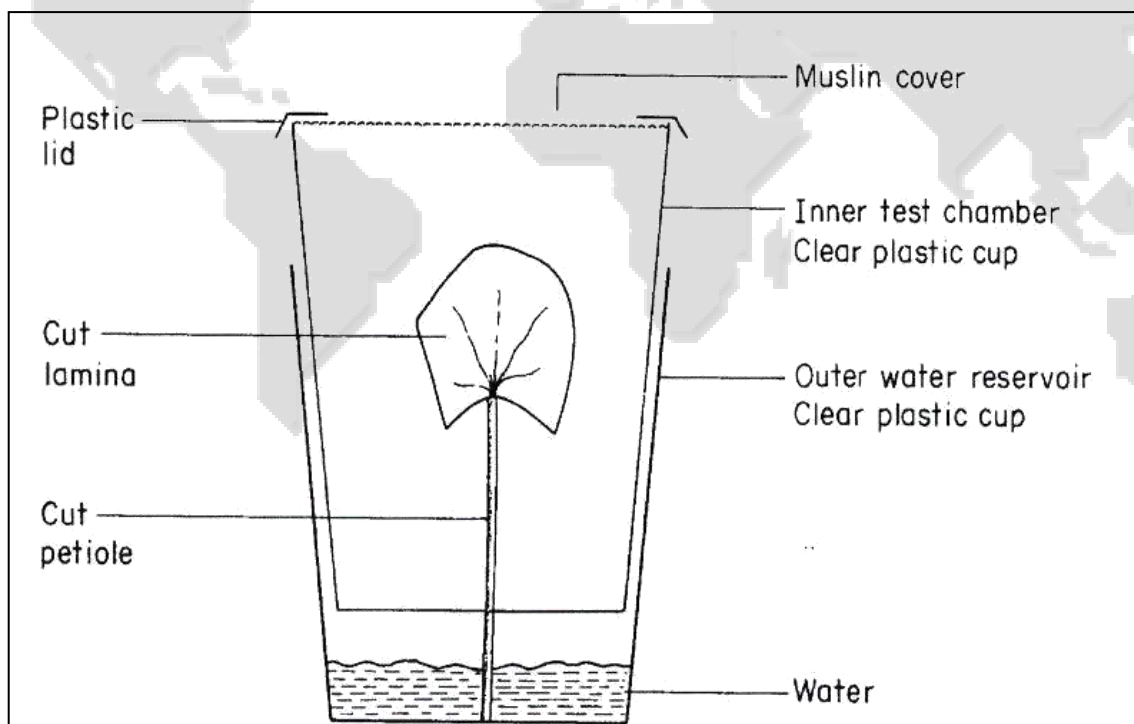
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- (i) Take the cup to an infested cotton plant and with the lid on the upper surface of an infested leaf move the cup upwards onto the underleaf surface. Move the lid and cup together sideways off the leaf to trap the adult whiteflies. Repeat procedure until approximately 50 adults per cup have been collected. Place a small amount of water in a second plastic cup and stand the test cup inside this so that it is supported by the protruding petiole.
- (j) Record number of adults per cup. The whiteflies will settle on the cut leaf.
- (k) Hold containers, in constant conditions wherever possible, for 48 h. Extremes of temperature should be avoided, 25°C is preferred. Containers must not be exposed to direct sunlight.
- (l) Record living and dead whiteflies after 48 h.
- (m) Express results as percentage mortality and correct for untreated mortality using Abbott's formula. Untreated mortality should be recorded.

### Diagram:



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### **Precautions & Notes:**

- The test chambers must be very dry as whiteflies die if they get caught up in water.
- Some of the insects may become stuck to the surface of the test chamber because of the static charge present.
- If the compound under test has repellent properties, the whiteflies will not settle on the test leaf and this may affect mortality.

### **References & Acknowledgements:**

None

