



Original thinking... applied

## Predatory Bug (*Orius laevigatus*)

For plant protection product registration data are required on non-target plant dwelling organisms, under EU Regulation (EC) No 1107/2009.

The predatory bug (*Orius laevigatus*) is an important leaf dwelling pest predator in orchards and off-crop sites throughout Europe. It was chosen as an indicator species due to its abundance, distribution and ease of handling.

## LABORATORY TESTS

Fera offers standard laboratory tests with the predatory bug following IOBC/WPRS guidelines.

### How we carry out the tests

*Orius laevigatus*, is exposed to the test compound on treated leaves for nine days. At this point the predatory bugs are assessed for mortality and any treatments with less than 50% mortality may be used for a reproduction assessment. The number of eggs laid and the hatching success are assessed twice and at two-day intervals.

### Endpoints

Endpoints for the test are:

- Mortality after nine days of exposure
- Reproductive capacity of surviving predatory bugs
- An LR<sub>50</sub> (lethal rate producing 50% mortality), ER<sub>50</sub> (dose rate causing 50% reduction in reproductive rate), and/or a (NOER) no observable effect rate

## ADDITIONAL TESTING

Fera's studies are GLP-compliant and can be adapted to provide bespoke tests that meet your specific data requirements. Fera also offers in-house dose verification or residue analysis to validated methods.

### Test guidelines

Bakker F.M., Aldershof S.A., Veire M v.d., Candolfi M.P., Izquierdo J.I., Kleiner R., Neumann Ch., Nienstedt K.M. and Walker H., 2000: A laboratory test for evaluating the effects of plant protection products on the predatory bug, *Orius laevigatus* (Fieber) (Heteroptera: Anthocoridae). - In: Candolfi, M.P., Blümel, S., Forster, R., Bakker, F.M., Grimm, C., Hassan, S.A., Heimbach, U., Mead-Briggs, M.A., Reber, B, Schmuck, R. & H. Vogt (edt.) (2000): Guidelines to evaluate side-effects of plant protection products to non-target arthropods. IOBC/WPRS, OILB/SROP.

## MORE ABOUT FERA

Fera is based at the National Agri-Food Innovation Campus near York, UK. We have a long track record of developing and providing ecotoxicology services to support environmental risk assessments for companies developing plant-protection products.

Our scientists combine extensive expertise with Fera's advanced resources and GLP-compliant laboratories, to assess the impact of plant protection products on terrestrial non-target arthropods.

We'll work in partnership with you to devise and conduct the appropriate tests to provide the essential data you need for robust environmental risk assessments.

## GET IN TOUCH

For more information and to book a test, call Fera on **+44 (0)300 100 0321**, email **sales@fera.co.uk** or visit **www.fera.co.uk/terrestrial-ecotoxicology**

