



Original thinking... applied

## Sediment-Water Chironomid Toxicity Test (using Spiked Sediment)

This test is designed to determine the long-term effects of the test material on the freshwater dipteran *Chironomus sp.*, in a spiked sediment system.

The test material is mixed into the sediment and overlying water added. First instar larvae are then introduced into the test vessels once the sediment and water concentrations have been stabilised.

Observations are made during the test on the emergence of adult midges. Samples are taken for analysis during the exposure period to determine the concentrations tested in sediment, overlying water and pore water if required.

EC<sub>50</sub> values – the concentration of the test chemical which is estimated to have caused 50% effect on emergence or development rate are calculated.

In addition, the No Observed Effect Concentration (NOEC) and Lowest Observed Effect Concentration (LOEC) values will also be calculated.

### Test guidelines and references

**OECD 218 Sediment-Water Chironomid Toxicity Using Spiked Sediment, adopted 12 April 2004.**

**US-EPA: OPPTS 850.1790 Chironomid Sediment Toxicity Test.**

# FERA'S WORK IN AQUATIC ECOTOXICOLOGY

Fera offers a full package of studies to GLP compliant studies on aquatic organisms. Fera tests for the potential toxic effects of plant protection active ingredients and products, veterinary products, biocides, industrial chemicals and their significant metabolites in accordance with current OECD and if appropriate EPA guidelines, covering the requirements for the registration process.

All of Fera's studies are planned and performed by an experienced team of scientists and technical personnel, with the analytical dose verification and fate of the active ingredient(s) performed as close as possible in parallel to the biological part of the study. We can also adapt our services to provide bespoke tests that meet your specific data requirements.

## MORE ABOUT FERA

Fera is based at the National Agri-Food Innovation Campus near York, UK.

We work closely with plant protection and veterinary medicine product manufacturers to help develop effective, sustainable and safe chemical products that minimise ecosystem impacts and pollution, while maximising the beneficial effects for crops, plants and animals.

Combining the extensive expertise of our scientists with advanced resources and GLP-compliant laboratories, we provide valuable support to companies in their chemical evaluation and registration efforts.

## GET IN TOUCH

For more information and to book a test, call Fera on **+44 (0)300 100 0321**, email **[sales@fera.co.uk](mailto:sales@fera.co.uk)** or visit **[www.fera.co.uk/chemical-regulation](http://www.fera.co.uk/chemical-regulation)**

