



## Fish – Early-Life Stage Toxicity Test

This test is designed to determine the effects of the test material on the early life stages of fish.

Freshly fertilised eggs less than 24 hours old at the start of the test are exposed to the test material and is continued for a species-specific time period that is necessary for the control fish to reach juvenile life-stage. Studies can be performed as semi-static with renewal of the test media at appropriate intervals, but more typically are conducted as flow-through studies with constant renewal of the test media.

Observations on hatching and survival should be made at least once daily and numbers recorded. Observations are also made on abnormal appearance and behaviour. At the end of the test weight and length can also be determined. Samples are taken for analysis at the start and end of the exposure period to determine the concentrations tested.

Endpoints from the study can be expressed as EC<sub>50</sub> values – the concentration of the test chemical which is estimated to cause a 50% reduction in hatch rate – survival and growth. In addition, the No Observed Effect Concentration (NOEC) and Lowest Observed Effect Concentration (LOEC) values may also be calculated.

### Test guidelines and references

#### **OECD Guidelines for the Testing of Chemicals.**

**Guideline 210:** Fish, Early-Life Stage Toxicity Test, adopted 26 July 2013.

# FERA'S WORK IN AQUATIC ECOTOXICOLOGY

Fera offers a full package of studies to GLP complaint 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)**

