



Original thinking... applied

Daphnia magna Reproduction Test

This test is carried out to determine the effect of a chemical on the reproductive output of *Daphnia magna*.

Juvenile *Daphnia magna*, less than 24 hours old at the start of the test are exposed to the test material for a period of 21 days. Studies are performed as a semi-static with renewal of the typically three times per week, greater frequency can be used depending on the stability of the test material in the test media.

Observations are made on daily on adult survival and the number of juveniles produced per individual adult are recorded throughout the test. 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 EC₅₀ values – the concentration of the test chemical which is estimated to cause a 50% reduction in reproductive output, growth if measured and adult mortality.

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

Test Guidelines and References

OECD Guidelines for the Testing of Chemicals.

Guideline 202: *Daphnia* sp., Acute Immobilisation Test, adopted 13 April 2004.

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** or visit **www.fera.co.uk/chemical-regulation**

