

Aquatic Toxicology

Welcome To Eurofins Agrosience Services

Eurofins Agrosience Services offers a full package of studies to GLP on aquatic non-target organisms, on microorganisms and ready biodegradability tests. All studies are planned and performed by an experienced team of scientists and technical personnel in accordance with the most recent guidelines (OECD, EPA, OPPTS, JMAFF), covering the requirements for the registration of plant protection products (PPPs), pharmaceutical products and REACH. The analytical dose verification and fate of the active ingredient(s) is performed as close as possible in parallel to the biological part of the study.

Algae And Aquatic Plants

The potential toxic effects of PPPs, chemicals and metabolites on algae and aquatic macrophytes are examined using different types of study designs in accordance with current OECD and EPA guidelines. Depending on demand, algae studies can be performed with different species of green algae, blue green algae or diatoms. Aquatic plant studies can be performed either on *Lemna*, *Myriophyllum*, *Glyceria* and other additional macrophytes. To meet specific demands we have different species cultured in-house.

Aquatic Invertebrates

We perform studies with *Daphnia*, *Chironomus*, *Gammarus* and *Lumbriculus*. Further invertebrate species e.g. *Asellus*, *Hyalella*, *Chaoborus*, *Culex*, *Cyclopoida*, *Odonata* and *Ephemeroptera* are available for higher-tier effect assessment on the basis of toxicity tests with additional species. For most of the mentioned types, in-house cultures are available. Test designs can be adapted to your needs with respect to the test item or application technique. Several combinations of invertebrate genera are offered in microcosm test designs.



Fish

Acute and chronic toxicity tests with several different fish species (e.g. rainbow trout, zebra fish, carp, fathead minnow and medaka) are offered. Depending on the test item, static, semi-static or flow through test designs are applied. Tests on bioaccumulation are offered with rainbow trout and other species (OECD 305). Fish Early Life Stage Tests are performed in flow through or semi-static test design (OECD 210). Various technical options for dosing of flow-through systems are available and are applied depending on the properties of the test item.

Microorganisms And Ready Biodegradability

The toxicity of any test item on microorganisms is assessed by the respiration inhibition test in accordance with OECD 209.

Ready biodegradability is assessed by tests according to OECD 301. The Manometric Respirometry Test (OECD 301F) is performed with a BSBdigi Incubator with high through-put capacity. Also the Closed Bottle Test (OECD 301D) is available. Additional tests on aerobic or anaerobic degradation are available on request.

Special Skills

- Microcosm studies adapted on sponsors demands
- Studies for Species Sensitivity Distribution (SSD) approach for aquatic macrophytes and invertebrates
- Studies in closed test systems for volatile substances
- Studies with test items of low water solubility (Water Accommodated Fraction [WAF] design)
- Studies with pulsed dose application for *Daphnia* reproduction, macrophytes and other test systems
- Studies on recovery (*Lemna*, algae, additional macrophytes)
- Long term flow through studies
- Studies on effects of Microbial Pesticides according to e.g. OPPTS 885.4240 including microbiological accompanying analysis of exposure concentration

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