

Environmental Toxicology Solutions



Environmental toxicity studies play a critical role in understanding the potential risks and hazards associated with various compounds. They also facilitate protection and preservation of ecosystems, promote sustainable practices, and safeguard human and environmental health. Ecotoxicology is covered under legislation including OECD, OCSPP/OPPTS, EPA, ECHA, CIB-RC (India) and ISO guidelines.

At Intox, a subsidiary of Aragen Life Sciences, we provide a comprehensive range of environmental toxicology and ecotoxicology studies to determine threshold toxicity concentrations of a range of test compounds during early discovery and regulatory development stage. Our teams of qualified and experienced environmental toxicologists provide integrated approach to ecotoxicity and environmental risk assessments, delivering high quality and reliable results to meet the needs of the global industry and environmental regulators. With comprehensive capabilities to facilitate advanced ecotoxicology and analytical chemistry techniques, we use wide variety of test species and have excellent track record of successful regulatory submissions. Our team contributes in designing customized study protocols to meet the client's requirements.

Comprehensive array of environmental toxicology services:

Aquatic

Comprehensive aquatic ecotoxicology data plays a vital role in Environmental Risk/Impact Assessments (ERA and EIA). Intox provides a diverse range of aquatic ecotoxicology tests, encompassing the following:

Currently offered studies:

- Growth Inhibition Test (Algae: OECD-201, Lemna: OECD -221)
- Acute Immobilisation Test (Daphnia magna: OECD-202, Chironomus: OECD-235)
- Fish, Acute Toxicity Test (Guppy/carp, Rainbow trout, Zebrafish: OECD-203)

Studies to be offered in future:

- Fish Embryo Acute Toxicity (Zebrafish: OECD-236)
- Reproduction Test (Daphnia magna: OECD-211; Fish: OECD-229; Lymnaea stagnalis: OECD-243)
- Fish, Short-term Toxicity Test on Embryo and Sac-Fry Stages (OECD-212)
- Fish, Prolonged Toxicity Test: 14-Day Study (OECD-204)
- Fish, Early-life Stage Toxicity Test (OECD-210)
- Fish, Juvenile Growth Test (OECD-215)
- Sediment Water Toxicity Test-Chironomidae (OECD-218/219)
- Fish Cell Line Acute Toxicity: The RTgill-W1 cell line assay (OECD -249)

Terrestrial

The presence of a wide variety of terrestrial organisms, including plants, invertebrates, and vertebrates, both living in and on the soil, adds significant importance and complexity to the hazard assessment of a chemical in a terrestrial environment.

Currently offered studies:

- Avian (Dietary /Acute Oral Toxicity: OECD-205/223)
- Earthworm (Acute Toxicity: OECD-207, Reproduction: OECD-222)
- Earthworm Subchronic Toxicity Test (OCSPP-850.3100)
- Honeybee Acute Toxicity (Oral: OECD-213, Contact: OECD-214)
- Nitrogen Transformation Test (Soil Microorganisms: OECD-216)
- Carbon Transformation Test (Soil Microorganisms: OECD-217)

Studies to be offered in Future:

- Honeybee Larval Toxicity Test-Single Exposure (OECD-237)
- Honeybee Chronic Oral Toxicity Test (OECD-245)
- Bumble Bee Acute Toxicity (Contact OECD-246, oral OECD-247)

Salient features of our services:

Test system – Well identified and characterized, with a certificate

Replicate test groups; Use of reference items and organic solvents as vehicles

Monitoring of variables (water /soil / environment parameter)

Analytical method development and validation

Geometric series of dose selection

Optimization of study results and validity criteria Endpoint - Mortality / Inhibition / immobilization

Lethal dose (LD50), Lethal concentration (LC50), Effective concentration (EC50), No observed effective concentration (NOEC), Low observed effective concentration (LOEC)

Ensuring timely reporting to meet project deadlines

Track record of studies conducted during last 4 years:

- > 100 Acute toxicity studies- Fish
- > 130 Acute Toxicity studies- Honeybees (Contact)
- > 100 Avian Acute Oral Toxicity-Japanese quail
- > 130 Acute toxicity studies- Honeybees (Oral)
- > 110 Acute Toxicity Test - Earthworm
- > 83 Algal Growth Inhibition Test
- > 72 Acute Immobilization Test - Daphnia magna
- > 40 Avian Acute Oral Toxicity studies - Pigeon
- > 25 Avian Acute Oral Toxicity studies - Chicken
- > 15 Avian Dietary Toxicity Studies
- > 5 Biological Method Validations on Mosquito larvae - *Aedes aegypti*
- > 1 Biological Method Validations on *Helicoverpa armigera*

Test systems:

Aquatic

Algae

Unicellular green algae,
Pseudokirchneriella subcapitata

Daphnia

Daphnia magna

Fish

Brachydanio rerio (Zebra fish),
Poecilia reticulata (Guppy), *Cyprinus carpio* (Common carp)

Terrestrial

Honeybee

Apis mellifera,
Apis cerana indica

Earth worm

Species: Earthworm - *Eisenia fetida*

Terrestrial (Avian)

Chicken

Gallus domesticus

Pigeon

Columba livia

Quail

Coturnix japonica



Gallus domesticus



Columba livia



Coturnix japonica



Anas platyrhynchos



Eisenia foetida



Apis mellifera



Apis cerana indica



Daphnia magna



Danio rerio



Poecilia reticulata



Cyprinus carpio



Pseudokirchneriella subcapitata

