



Ecotoxicology services

A complete package
available globally

SynTech[®]
Research

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A complete ecotoxicology package

SynTech Research offers a full ecotoxicology package to GLP or GEP standards with laboratory tests, semi-field and field studies on all terrestrial and aquatic non-target organisms. The following list includes the studies that are commonly required for the submission of chemical (agrochem, pharma, petrochemical, specialty/consumer, animal health and biocides) and seed/traits regulatory dossiers submitted to OECD, EPA, JMAFF, PMRA and Latin American authorities. Other studies especially designed to suit client's requirements are also performed.

Avian Toxicology

- Mallard duck
- Bobwhite and Japanese quail
- Canary, zebrafinch
- Ring-necked dove
- Pigeon, chicken
- 5-day dietary exposure
- Acute oral toxicity test
- Reproduction study
- Two-generation reproduction test (endocrine disruption)
- GMO feeding study
- Semi-field / field exposure



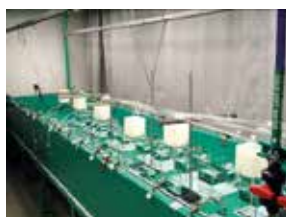
Aquatic Toxicology – Fish

- Fathead minnow
- Zebra fish, guppy
- Rainbow trout, carp
- Bluegill, stickleback
- Sheepshead minnow
- Medaka, catfish
- Acute toxicity test
- Early-life stage
- Sexual development test
- Partial or full life cycle
- Endocrine screens
- Feeding study



Aquatic Toxicology – Invertebrates

- *Daphnia magna*, *D. pulex*
- *Ceriodaphnia dubia*
- Crayfish
- Mysid
- Acute toxicity test
- Growth, reproduction
- Life cycle (endocrine disruption screening program)
- Modified exposures
- Population study



Aquatic Toxicology – Sediment organisms and amphibians

- *Chironomus dilutus*, *C. riparius*
- Acute toxicity test
- Chronic toxicity
- Spiked water or spiked sediment
- *Xenopus laevis*
- *Xenopus tropicalis*
- Metamorphosis and development assay (EDSP)



Aquatic Toxicology – Algae and plants

- *Navicula pelliculosa*
- *Anabaena flos-aquae*
- *Skeletonema costatum*
- *P. subcapitata*
- *Lemma gibba*, *L. minor*
- *Myriophyllum spp*
- *Glyceria maxima*
- 72 or 96-hour growth
- 7-day growth
- Modified exposures

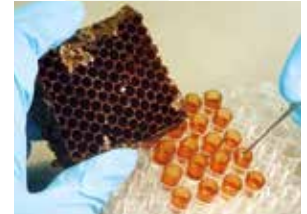


Services available globally

SynTech Research's ecotoxicology laboratories are located at Stilwell, Kansas, USA and Mâcon and Nîmes, France, with additional laboratory and field study resources in its worldwide network of field stations throughout North America, Latin America, Europe, Africa and Asia Pacific.

Honeybee and other pollinator lab testing

- Adult oral and contact tests
- Adult chronic test
- Larval acute and chronic feeding tests
- Aged residue test
- Residues in larvae, pupae and adults
- *Apis mellifera* ssp
- *Bombus* sp
- *Osmia* sp
- *Megachile* sp



Honeybee and other pollinator semi-field testing

- Cage or tunnel testing
- Foliage application or seed treatment
- Aged residue and re-entry period
- Brood studies
- Residues in bees and bee products
- Pollen load and stomach preparation, nectar extraction
- *Apis*, *Bombus*, wild bees



Honeybee and other pollinator field testing

- Spray application and seed treatment
- Residues in bees and bee products
- Honey stomach and pollen load extraction
- Guttation studies
- Seed treatment dust
- Brood studies
- Monitoring in orchards, vegetables, seed crops
- *Apis*, *Bombus*, pollinators



Non-target plant (NTP) testing

- Seedling emergence
- Vegetative vigour and growth
- Dry or fresh weight
- Shoot height
- Phytotoxicity effects
- 6 or 10 species
- Monocots and dicots
- Spray application, soil incorporation or drip irrigation



Lab and field testing on soil organisms

- Earthworms
- Collembola
- Predatory mites
- Enchytraeids
- Mortality and sublethal effects
- Re-colonisation / recovery
- Taxa identification
- Soil microflora (respiration inhibition, carbon and nitrogen transformation)



Non-target arthropod (NTA) lab, aged residue and semi-field testing

- Artificial or natural substrate
- Mortality and sublethal effects
- Predatory mites
- Aphid parasitoids
- Lacewings, ladybirds, spiders
- Rove and ground beetles
- Hemipterans, hoverflies
- Dung flies and beetles
- Egg and whitefly parasitoids
- In-field / off-field scenarios
- Contact or feeding routes of exposure



NTA field testing

- Short and long-term effects
- Re-colonization / recovery
- Predatory mites
- Litterbag studies
- Total entomofauna
- Inventories / identification
- Bio-indicators
- Capture-mark-recapture
- Spray application, seed treatment or soil incorporation



Residues in arthropods

- Foliage dwelling arthropods
- Ground dwelling arthropods
- Other organisms (molluscs etc.)
- Pitfall trapping, beat sampling, sweeping, chemical knockdown
- Taxa identification



Analytical support

- Fully equipped analytical laboratory for rapid analysis of test solutions, aquatic test media, avian diet and honey bee matrices
- Method development and validation
- Residue analysis
- LC/MS/MS, HPLC, GC/MS, LSC etc.



Risk assessment and study directorship

- Preparation of registration submissions with ecological risk assessment, environmental fate and modelling for active substances and products
- Highly qualified Study Directors specialized in each domain of ecotoxicology (honey bees, NTAs, NTPs, soil organisms, avian and aquatics)



For further information visit
www.syntechresearch.com
or email enquiries@syntechresearch

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competitive advantage