

# REGULATORY SERVICES

## **ANALYTICAL CHEMISTRY**

Method Development & Validation  
Chemical Composition  
Chemical Equivalence  
Residue Studies  
Dissipation Studies  
Physicochemical Studies  
Formulation Analysis  
Characterization Studies  
Metabolite Identification  
Storage Stability  
Stability to Metal and Metal ions  
Leaching Studies  
Bioaccumulation in Fish  
Kinetics, Photolysis & Hydrolysis  
Adsorption/Desorption  
BOD/COD Determination  
Biodegradability Studies  
Explosibility & Flammability  
Evaluation of Biocide Products  
Multisite Residue Studies  
Carbon/N<sub>2</sub> Transformation Test  
Container Compatibility  
Rain Fastness Studies

## **ANIMAL HOUSE**

IIBAT is a registered member of Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), Ministry of Forest and Environment, Government of India for breeding and experimentation on animals (mice, rats, guinea pigs and rabbits). IIBAT ensure that the conduct animal experiments are in accord with the highest scientific, humane, and ethical principles. Wherever possible, the principles of the 3Rs (Reduce, refine, Replace) is practiced as a step towards animal welfare in lieu with the CPCSEA and AAALAC principles.

## **TOXICOLOGY**

### **General Toxicology**

Acute Toxicity  
Dermal Irritation  
Eye Irritation  
Skin Sensitization  
Inhalation Toxicity  
Local Lymph Node Assay  
*In Vitro* Skin Corrosion/Irritation  
Abnormal Toxicity  
Immunotoxicity  
Sub chronic Toxicity 28/90-day  
Chronic Toxicity 6/12-month  
Carcinogenicity Studies  
Flexible Design and Duration

### **Genetic Toxicology**

Ames Test  
Chromosomal Aberration Assay  
Mouse lymphoma assay  
Micronucleus Assay  
Comet Assay  
Cytotoxicity Assays  
*In vivo* mice micronucleus test

### **Developmental & Reproductive Toxicology**

Fertility and Early Embryonic Development to Implantation Study (Segment I)  
Pre-and Post-natal Development Study (Segment III)  
Embryo-Fetal Development Study (Segment II)

## **ECOTOXICOLOGY**

### **Aquatic Ecotoxicology**

Alga Growth Inhibition Test  
Acute Immobilization in Daphnia  
Reproduction Test in Daphnia  
Acute Fish Toxicity Test  
Lemna Growth Inhibition Test

## **Terrestrial Ecotoxicology**

Honeybee - Acute Oral and Contact Toxicity Test  
Earthworm - Acute and Reproduction Toxicity Test  
Silkworm - Acute and Chronic Toxicity tests  
Tests on Non Target Arthropods (Insect natural enemies)  
Avian Acute Oral Toxicity Test

## **ENTOMOLOGY**

### **Crop Science**

Culturing of major crop pests  
Toxicity to insect natural enemies (predator & parasites)  
Phytotoxicity study  
Compatibility tests with various crop pests for agrochemicals  
Evaluation of pesticides against major crop pests  
Bioefficacy and crop injury studies of new insecticide formulations against crop pests.  
Bioassay and estimation of LC<sub>50</sub> and potency

### **Household Pesticides**

Culturing household pests  
Efficacy of household insecticides  
Surface persistency  
Efficacy and Persistency  
Potency of Bio larvicides

## **WEED SCIENCE**

Evaluation of herbicides for its Efficacy, phytotox, compatibility  
Effect on succeeding crops  
Residue and dissipation  
Physico-chemical & biological properties of soil

## **PLANT PATHOLOGY**

Primary culture collections and maintenance of biopesticides  
*In vitro* studies of biopesticides for efficacy, analytical test, container content, compatibility and shelf life.  
Evaluation of fungicides for efficacy, compatibility, phytotoxicity, residue and dissipation.  
Evaluation of biocontrol agents (Plant disease control) for efficacy under field conditions.

## **AGRONOMY**

Field trials (in-house/out station) for bioefficacy, compatibility, residue phytotoxicity and dissipation studies.  
Studies in green house to evaluate seed germination, non-target plant toxicity and vegetative vigor

## **RADIOISOTOPE**

Studies using C14 and Tritium radio labeled compounds  
Environmental fate & Metabolism (plant, soil, water and rat)  
Dissipation (plant, soil, water)  
Adsorption/Desorption in soil  
Plant uptake study

## **BIOTECHNOLOGY**

Detection of Genetically Modified crops  
DNA Typing  
Detection of Specific Protein  
Detection of microbial biocide agents in commercial formulation and in test animals  
Detection of specific protein in recombinant drugs  
Thermal stability and pepsin digestibility of GM foods

## ABOUT US

Since 1985 **International Institute of Biotechnology and Toxicology (IIBAT)** has contracted services in the areas of Analytical Chemistry, Toxicology, Ecotoxicology, Field and Radioisotope studies. In 2004, IIBAT raised to the level of a GLP-certified CRO and serves as a link between Industry and Regulatory System in providing Non-Clinical Health and Environmental safety data on Agrochemicals, Drugs, Cosmetics, Chemicals and Bio-Pesticides to help facilitate risk assessment. We follow OECD, ICH, EMEA, EPA, OPPTS, FDA, SENESA, Indian & other International guidelines (APVMA, Chinese and Japanese). Having state-of-the-art Instrumentation and Animal House facilities coupled with a highly experienced scientific and technical team, we deliver high quality GLP reports for world wide registrations.



VISIT OUR WEBSITE  
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**International Institute  
of Biotechnology And  
Toxicology**

# IIBAT

**30 Years  
Serving Society  
Through Science**



An OECD GLP Facility

TUV NORD ISO: 9001