

Environmental Fate & Metabolism

Welcome to Eurofins Agroscience Services

We are a leading provider of product development consultancy and technical support to the crop protection industry. Our technical activities involve conducting field and laboratory studies to determine the safety and efficacy of new agrochemicals and crop varieties. With over 30 years of experience, Eurofins Agroscience Services offers outstanding technical knowledge and project management skills. By acquiring a carefully selected range of CRO's, we have created a unique portfolio of expertise that provides analytical, regulatory and field support to plant breeders, agrochemical, biopesticide, biocide and fine chemical manufacturers.

Environmental Fate & Metabolism

"We are experts in managing global field studies, worker exposure studies, ecotoxicology, analytical services, physico-chemical property testing, 14C / environmental fate laboratory and field studies."

The intrinsic biological activity of pesticides poses potential risks to operators, consumers and the environment. No risk, however small, can be considered acceptable unless there is a proven benefit from the use of the pesticide. The fate and behaviour of pesticides and their degradation products are of critical importance to Regulatory Authorities.



Offering a full range of environmental fate and metabolism services, both field and laboratory, Eurofins Agrosience Services can provide clients with data on the mechanisms, route and rates of substance degradation, and the risks these pose to human or environmental health.

For investigating the behaviour of substances in the environment, we use mainly ¹⁴C labelled test items. This simplifies the detection and analysis of the test item and its degradates.

Portfolio of Services

The following service guide details our primary Environmental Fate activities. Other services are also available on request.

Field Services

- Field soil degradation / dissipation
- Field soil accumulation
- Rotational crop studies
- Field leaching
- Groundwater monitoring
- Surface water monitoring
- Air monitoring
- Run-off

Scope of Service

- Precision drilling for seed treatment soil residue trials
- Soil deep coring up to 100 cm
- On site weather stations
- Large pool of sites / soils available

Laboratory Services

- Abiotic transformation (Hydrolysis) (OECD 111, U 7035/VI/95)
- Photolysis in soil and water (OECD 316, 91/414/ EEC, Annex II)
- Analytical method for residues in air (SANCO/825/00)

- Adsorption / desorption studies (OECD 106)
- Column leaching (OECD 312)
- Aerobic and anaerobic transformation in soil (OECD 307)
- Aerobic and anaerobic transformation in water / sediment systems (OECD 308 including irradiated conditions)
- Aerobic Mineralisation in Surface Water (OECD 309)
- Plant metabolism (OECD 501)
- Rotational crop (OECD 502)
- Toxicokinetics Rat (OECD 417)
- Metabolism in Livestock (OECD 503)
- Residues in Livestock (OECD 505)
- Incubation at various laboratory and outdoor conditions (e.g. Temperature, humidity)
- Establishment of radioactive balance
- Determination of volatiles (CO₂, organic volatiles)
- Determination of bound residues (Combustion)
- Analysis (radio-TLC, HPLC-UV and radio detector, GC, LC-MS/MS and MicroBeta)
- Calculation (e.g. DT₅₀, K_{oc})
- Metabolite identification (Accurate mass / Orbitrap)
- Soil database for more than 50 different soils world wide

We also develop non-standard studies to suit a specific active substance or situation.

All laboratory and field services are supported by Eurofins Regulatory AG – the regulatory Group provides a full range of consulting and regulatory services leading to the compilation of registration documentation for agrochemicals, biopesticides, biocides & REACH.

Eurofins Scientific Group

Eurofins Scientific is a life sciences company that serves a wide range of industries including the pharmaceutical, agricultural, food and environmental sectors.

Today the Eurofins Group is a leading provider of analytical services.

