



## SAFETY ASSESSMENT

### Environmental Fate and Related Studies

- Aerobic and anaerobic degradation in soils and sediment waters
- Aerobic mineralization in surface waters
- Degradation in manure and slurry
- Ready and inherent biodegradation
- Soil or sludge adsorption, desorption and mobility investigations
- Leaching (Aged and non-aged)
- Hydrolytic stability and accelerated hydrolysis studies
- Photolytic degradation – moist and dry soil surfaces, aqueous systems

## Environmental Sciences: Environmental Fate

Charles River offers a comprehensive range of testing services to assess the environmental risk of pharmaceutical, biopharmaceutical, food additive, chemical, biocide and agrochemical products, as well as expertise in global regulations. We design studies to meet specific data requirements that take into account the properties of the test item and its potential routes of environmental exposure. Our scientists are skilled in the handling of difficult test items (e.g., volatile, unstable, complex and poorly soluble mixtures), and our facilities are specifically equipped to support complex test situations.

### Environmental Fate

We perform the in-life phases of environmental fate studies in environmentally controlled incubation rooms or incubators. Self-contained flow-through incubation systems (aerobic and anaerobic), with the flexibility to accommodate different trapping systems for collection of volatile products, are available for radiolabeled degradation studies; a similar flow-through apparatus is used in photolysis studies. Sealed systems are available for investigations with volatile test items, as well as systems for collection and quantification of reduced radiolabeled volatile products.

We can obtain test systems such as sediment, surface waters and soils from a variety of local and international geographical sources. Prior to study conduct, we fully characterize all test systems and confirm their viability.

### Analytical Chemistry

In radiolabeled studies, we achieve quantitative and qualitative determination of parent test items and metabolites primarily using HPLC, with either online or off-line radiodetection, including TopCount low level counting. We routinely perform confirmatory analysis in a second contrasting system and use high resolution LC-MS for the identification of unknown components.

EVERY STEP OF THE WAY