



**SAFETY ASSESSMENT**

## Livestock Metabolism and Feeding Studies

### Species

- Cattle
- Sheep
- Goats
- Pigs
- Poultry
- Game Birds

Charles River has over four decades of experience performing regulatory studies for both agrochemical and animal health product development and support. We also have expertise in the development of agrochemicals for animal health application. Our modern laboratory and animal facilities in North America and Europe offer fully integrated, comprehensive service to ensure products meet global safety requirements.

Our dedicated research farm in Scotland features 50 hectares of grazing and more than 5,000 square meters of large animal accommodation for up to 200 individually-housed adult cows, horses, sheep or pigs. When group housed, we can accommodate more than 400 of these animals. A milking parlor is available for non-radiolabeled studies.

We support all studies with a range of services, including non-radiolabeled and radiolabeled dose formulation, sample homogenization, clinical and analytical chemistry, and complete necropsy services. All studies are designed to meet specific international regulatory requirements (e.g., VICH) across the animal health, agrochemical and biocide industry sectors.

### Metabolism Studies

Our flexible study designs provide a true cost-effective solution for our clients. Using numerous environmentally-controlled rooms, we can conduct metabolism studies in multiple species simultaneously, and incorporate multiple investigations within a single study. Services include supporting analysis with mass spectrometry technology to measure residue in target tissue and identifying marker residue and metabolites.

EVERY STEP OF THE WAY



### Routes of Administration

- Topical and dermal
- Oral
- Intravenous
- Intraperitoneal
- Intramuscular
- Subcutaneous
- Intramammary
- Inhalation

### Radiolabeled Test Items

Upon request, Charles River can assist with the procurement of radiolabeled molecules on behalf of clients. This includes obtaining estimates from specialty synthesis laboratories and monitoring the progress of delivery to our site. This service is totally confidential, free of charge and does not commit the client to using either Charles River or any of the laboratories involved. Our chemists are experienced in the handling and repurification of radiolabeled molecules, allowing us to preserve study timelines when radiolabeled molecules are unstable or impure.

### Livestock Feeding Studies

To meet regulatory requirements for both agrochemical and animal health products, residue depletion studies must be performed to establish minimum residue levels and an appropriate withdrawal period. Years of experience working with a variety of livestock species and flexible housing options allow us to perform these studies efficiently and effectively, with optional concurrent residue analysis available upon request.

### Support Services

Our Formulation Chemistry group can prepare diets, suspensions or capsules and confirm homogeneity, specific activity and test item concentrations using modern analytical technologies. In addition, our chemists provide full analytical support for quantifying residues and identifying metabolites, and are able to repurify radiolabeled test items and produce deuterated internal standards/metabolite reference standards.