Innovative
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Analytical Chemistry.

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Analytical Chemistry.

The development and validation of analytical methods is key for all environmental studies. Analytical techniques such as TLC, HPLC, GC-MS, LC-MS/MS and Q Exactive benchtop LC-MS/MS are routinely employed in our laboratories.

Method Development, Validation and Dose Verification.

IES Ltd develops new analytical methods and offers a full validation service for parent active substances and metabolites for crop, environmental and animal matrices. The analytical department also performs dose verifications of studies for our environmental departments. Matrices include samples from ecotoxicology studies (e.g. bees, pollen, nectar, honey, plants), soil samples from field dissipation studies, crop samples from residue studies, soil and water samples from environmental fate studies (laboratory or fate-o-cosm outdoor station), animal tissue samples from feeding studies and samples from storage stability studies.

Metabolite Identification.

The identification of metabolites is a critical part of dietary, environmental fate and plant metabolism studies performed to support human and environmental risk assessments. Our mass spectroscopist experts are highly experienced in identifying metabolites in biological and environmental samples.

Residue Analysis.

To register any plant protection products for the European or worldwide market, it is essential to evaluate possible residue levels in plants and soil. In cooperation with our designated field partners, who can perform the in-life phase in different global locations, IES can coordinate the field studies and conduct the analytical phase (development, validation and implementation of analytical methods and samples measurement) of residue studies.

Five-Batch Analysis.

Our analytical team has extensive experience and technical knowledge in performing five-batch analysis. We use state-of-the-art equipment to conduct studies to the highest possible standard. In close cooperation with our clients we analyse commercial-scale production batches (five or more) of the active ingredient and identify possible impurities.

We offer screening studies including structure elucidation work, up to GLP regulatory studies including method validation to analyse for the active ingredient, related and significant impurities as well as for additional parameters (spectra, water content, etc.). The studies can be carried out to meet the requirements of all international authorities, as given in regulations and guidelines of SANCO, OCSPP, SENASA, IBAMA, APVMA, FAO and IUPAC.

Our equipment includes various forms of HPLC with different detectors, HPLC/MS/MS (with accurate mass API Sciex QTRAP® 6500), GC, GC/MS in EI, CI and NCI mode, preparative HPLC and further non-chromatographic equipment required for the tests.