

The Intertek logo is a dark blue rounded rectangle with the word "Intertek" in white, bold, sans-serif font.

**Intertek**

Valued Quality. Delivered.

# Agrichemicals

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Regulatory Consultancy & Analytical Services

The Intertek logo is displayed in white text within a dark blue rounded rectangular box. The background of the entire page is a vibrant landscape of a golden wheat field under a bright blue sky with scattered white clouds.

# Intertek

## Effective safety and quality services

Successfully guiding you and your products through critical regulatory and scientific milestones on the pathway to the marketplace.

Intertek understands the challenges and obstacles that must be overcome in order for an innovative agrichemical product to reach the market. Most importantly, your production and products must be of the highest standard of quality whilst minimising potential environmental impacts. Your products are vital if we are to meet the developing human, animal and nutritional needs of tomorrow.

Our Global network of regulatory consultants and GLP / cGMP compliant analytical facilities routinely undertake a broad range of advanced scientific and regulatory analysis services. Our portfolio features safety assessments, analytical characterisation, scientific review and regulatory support for a wide variety of products. These include pest control, crop nutrients, specialty additives for agricultural chemicals and biotechnology products.

For support with agrichemical submission documents and product development activities, Intertek are poised to help you.

## Valued Quality. Delivered

Clients who are looking to quickly gain entry into the market place, come to us for our value-added regulatory submission development services and our expert GLP analytical services.





## Regulatory Consultancy Services

Intertek's regulatory consultancy services provide safety assessments, scientific review and regulatory support for a wide variety of products, including pest control products, agricultural chemicals and feed additives. Services include:

- Developing regulatory strategy and submissions
- Substantiating waiver requests and read-across arguments
- Developing exposure limits and residue tolerances
- Providing product safety and efficacy evaluations
- Third-party technical liaison
- Conducting human health and environmental risk assessments & mechanistic evaluations of unique chemical hazards

## Analytical Services

Intertek's modern laboratories offer a comprehensive range of analytical services aligned to the needs of developers and manufacturers of agrichemicals. We ensure that products are chemically well characterised throughout the critical stages of development, regulatory submission and manufacture. Services include; GLP 5-Batch characterization for product registration, analytical method development, physico-chemical property determination and pesticide analysis for food.

Applications Include:

- Plant Growth Regulators
- Biostimulants
- Fungicides
- Herbicides
- Insecticides
- Bactericides
- Intermediates
- Repellents
- Seed coatings
- Specialty Additives (i.e. surfactants or polymers)



## Global demand requires a global response

Today's global village demands an international perspective to ensure that entry into various markets is easily achieved. With years of experience, and an international network of scientists, Intertek ensures that our clients are walked through every situation, wherever the location.

## Analytical Services

With over 1000 offices and labs in over 100 countries, Intertek utilizes approved testing methods, standards, and state-of-the-art equipment to assist clients in not only achieving regulatory compliance but also to understand precisely your products from a physico-chemical perspective.

Intertek can provide all the characterization and physico-chemical data (active ingredients and impurities) required to support registration. Our scientists can assist with:

### 5 Batch Characterisation for Product Registration

The 5-batch analysis test is a fundamental requirement for the registration of agrichemical products:

- The composition of the test substance is determined with a range of classical, chromatographic and spectroscopic techniques to assay of active ingredients and identify / determine impurities.
- Validation of all quantitative analytical procedures must be completed before use in compositional analysis. Validation may include, but is not limited to; Specificity, system suitability, linearity, precision, accuracy, LOQ/ LOD.

### Physico – Chemical Testing

Intertek routinely carries out a range of OECD or CIPAC physico-chemical tests. These include:

- **General Characteristics:** identity, purity, appearance (including aspect, colour, odour), density, and melting & boiling point
- **Technical Characteristics:** acidity, alkalinity pKa, pH, particle size distribution, surface tension, viscosity, wettability, conductivity, solubility / stability in solvents
- **Impact on the environment:** solubility, vapour pressure, stability in air, hydrolysis, photodegradation, and corrosion characteristics
- **Safety:** flash point, flammability, oxidising properties, explosive properties, and self ignition temperature

### Analytical Technique Coverage

- Structural Characterisation NMR (500MHz), ESI-MS, MALDI-MS, GC-MS, LC-MS, LC-MS/MS, FTIR, Raman
- Separation Science GC, HPLC, UPLC, CE, CEC, SEC, IEF, SDS-PAGE
- Elemental Analysis ICP-OES, ICP-MS, IC, XRFS, CHNO
- Physical Evaluation XRD, SEM (cryo, EDX, HR), TEM (cryo, EDX), Optical Microscopy, Thermal (DSC, TGA), DLS (zeta potential), MALLS & GPC-MALLS
- Physical Testing such as pourability, flow characteristics
- Comprehensive physico-chemical testing

## Storage Stability (including photostability)

Data to demonstrate stability during storage are required for agrichemical products to support the registration of a new active ingredient but may also be required to aid the review of older existing active ingredients and their products. The test requirement for stability during storage can normally be established in one or more of the following ways: accelerated testing (provisional approval only), ambient testing, cold stability testing, testing for reactivity towards container material. Intertek's dedicated incubators allow for complete control of the accelerated and ambient storage periods and can also accommodate 'none standard' storage conditions / periods. All aspects of the study can be undertaken with 'high end' analytical support where required (e.g. active ingredient content, confirmation of optical isomer ratios etc).

## Anti-counterfeit Services

Agrichemical counterfeit products are a growing global problem. The usage of counterfeit crop protection products can have serious repercussions for human health, for the environment and for future generations. Issues linked to counterfeits include poor levels of control of the target weed, pest or disease (with subsequent resistance issues), reduced operator safety, crop damage, residues and the risk of harm to the environment. Responsive product profiling & robust analytical monitoring programmes for pesticide supply chains can combat counterfeiting. Intertek offer a package of anticounterfeit services including:

- Profile of formulation constituents – identity and strength
- Comparison against reference products
- Identity of active and strength
- Packaging inspection
- Supply chain audit
- Food residues analysis

## Pesticide Screening in Food and Water

Intertek offers high quality pesticide analysis for food and water sample matrices. Examples include; fruit, vegetables, cereals, rice, meat, fish, seafood, tea, cocoa, honey and hive products, oilseeds, eggs and milk. Our capabilities include:

- Screens for up to 500 pesticide agents in food and water
- Sample preparation acc. to QuEChERS (§64 LFGB, L-00.00.115), S19 (§64 LFGB, L-00.00.34)
- Legal interpretation of the results according to current food law in the EU

Intertek's tailored, risk-oriented, analytical programmes ensure robust screening monitoring plans.



## Regulatory Consultancy Services

To accelerate your innovative agricultural chemical product to a higher commercial level, critical consideration of both safety-in-use and efficacy is a must. New products entering the market need to be at least as safe or effective as the products they are designed to replace.

Let our scientists and toxicologists help you with your:

- Pest control active ingredients and end-use products
- Insect repellents and nuisance animal distractants
- Seed treatments and coatings
- Feeds, feed additives and supplements
- Fertilizer and other agricultural crop applications
- Animal health care products
- Cleansers, detergents, sanitizers, disinfectants, and material preservatives
- Product formulators (e.g. inert stabilizers, solvents, and antioxidants)
- Processing aids (e.g. enzymes and catalysts)
- Packaging materials (e.g. metals and plastics)
- Process and freshwater treatment chemicals

Our Regulatory Consultants take a proactive approach to monitoring regulatory initiatives. We help clients to develop comprehensive strategies for compliance within targeted jurisdictions, to satisfy global administrative and technical reporting requirements, whilst aiding in the pre-market approval and commercialization of new products.

With Intertek you can move ahead with ease.



Ensure that you meet the requirements of registration of Plant Protection Products within the European Union, United States and Australia, according to the following Directives:

- European Pesticide Directive 91/414/EEC, Annexes II and III.
- European Biocide Directive 98/8/EC, Annexes II – IV
- General Chemicals REACH regulation (EC) No. 1907/2006
- US EPA Registration (830.6000 and 830.7000 OPPTS Assessment Guideline)
- Australian AVPMA



## Globally grounded where you need us most.

Your business knows no boundaries - and neither does ours. Whatever your target market, Intertek's global network of experts is ready to help you reach it. For more information, email [agrichem@Intertek.com](mailto:agrichem@Intertek.com), or contact one of our regional head offices:

### **Americas**

Intertek  
2233 Argentia Rd.  
Suite 308  
Mississauga, ONTARIO  
CANADA  
L5N 2X7

**t:** +905 -542-2900

### **Europe**

Intertek  
Hexagon Tower  
Blackley  
Manchester  
UK  
M9 8GQ

**t:** +44 (0)161 721 5247

**e:** [agrichem@intertek.com](mailto:agrichem@intertek.com)