

Agro-Chemical Formulation Solutions: Transforming Ideas into Effective Products



Agrochemical formulations are critical for enhancing product effectiveness, stability, and safety, requiring precise research, rigorous testing, and scalable development to meet regulatory and field demands.

At Aragen, our cutting-edge, independent agrochemical formulation facility—co-located with pharmaceutical operations—enables seamless collaboration and access to advanced technologies for innovative, customized solutions. We provide end-to-end services from pre-formulation R&D to large-scale sample preparation, delivering cost-effective, rapid development of high-performance, regulatory-compliant agrochemical solutions that support field trials and registration.

Pre-Formulation & Material Science

We specialize in characterizing technical/active ingredients including insecticides, herbicides, fungicides, nematicides, and rodenticides to optimize physico-chemical properties for enhanced performance.

- **Key Studies:** Solubility & stability, pH profiling, polymorph and salt screening, particle size distribution, melting point, thermal properties, hygroscopicity, purity, and degradation analysis.
- **Crystallization Process Development:** Customized strategies to select salts and polymorphs that improve product performance.

Formulation & Analytical R&D

From initial concept to scale-up for field trial and registration batches, we develop high-performance agrochemical formulations:

- **Recipe Development:** Liquid, solid, semi-solid, controlled release formulations for insecticides, fungicides, herbicides etc.
- **Product Innovation:** Solo or combination products, patent-ready 9(3) recipes and generics [9(4)] recipes.
- **Analytical Method Development:** Active ingredient and degradation product analysis, impurity profiling, particle size, suspensibility, density, viscosity—FAO-compliant.

- **Stability & Compatibility:** Rigorous testing under diverse storage conditions and container compatibility test of packing materials (HDPE, LDPE, PET, TLP, etc.).
- **Scale-up & Technology Transfer:** Lab to pilot scale (up to 200 kg) sample preparation and seamless tech transfer support.
- **Optimization:** Cost reduction, supply chain management, regulatory compliance, enhanced efficacy, and alternate excipient use.

Formulation Development Capabilities

Liquid Formulations	Solid Formulations	Semi-Solid Formulations	Controlled release formulations	New Generation Formulations
Solutions <ul style="list-style-type: none"> • Solution Concentrates (SL) • Aqueous Solutions (AS) Suspensions <ul style="list-style-type: none"> • Suspension Concentrates (SC) • Suspoemulsion (SE) • Flowable concentrates for seed treatment (FS) • Oil Dispersion (OD/OS) Emulsions <ul style="list-style-type: none"> • Emulsified Concentrates (EC) • Emulsion in water (EW) • Micro Emulsions (ME) 	Granules/ Pellets <ul style="list-style-type: none"> • Water Dispersible Granule (WDG) • Soluble Granule (SG) • Coated Granules (GR/CG) Powders <ul style="list-style-type: none"> • Wettable powder (WP) • Soluble Powder (SP) • Wettable powder for seed treatment (WS) Tablets <ul style="list-style-type: none"> • Dispersible Tablets (DT) 	Gel/Paste <ul style="list-style-type: none"> • Bait Formulation (B) 	Encapsulated Products <ul style="list-style-type: none"> • Sustain release coated granules (GR/CG) • Capsule Suspension (CS) 	ZC- Mixed formulation of CS and SC ZW- Mixed formulation of CS and EW ZE - Mixed formulation of CS and SE

Our State-of-the-Art Facilities

Include over 5,000 sq. ft. of dedicated agrochemical formulation and analytical labs, advanced equipment for precise R&D, and dedicated storage for raw materials and finished products.



Let's begin the conversation

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