# Creating 'Just the Right Chemistry'

We partner with global innovators and custom-generic companies to solve complex chemistry challenges across pharmaceuticals, animal health, biotech, crop protection, and specialty chemicals. Our Research & Technology Centre develops sustainable, efficient, and scalable processes for NCEs, generics, and lifecycle extensions. With deep scientific expertise and a focus on quality, IP protection, and reliable delivery, we offer integrated solutions aligned with evolving regulatory and environmental standards. Our commitment to green chemistry drives long-term value for both the business and the planet.



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# 46 One Simulation Lab **Graduates Synthetic Laboratories** One 288 One **Process Safety Lab High Pressure Lab** 26 One One PhDs **Innovation Lab** Kilo Lab (Scale-up and Pilot) Six One **Solid State Process Improvement Chemistry Lab** Four **Instrumentation Labs**

## **Differentiated Offerings**

| Route       | Process     | Analytical Method | Technology  |
|-------------|-------------|-------------------|-------------|
| Scouting    | Development | Development       | Development |
| Small Scale | Scale-up    | Process           | Life Cycle  |
| Synthesis   | Support     | Engineering       | Extension   |

# **Differentiated Capabilities**

#### Flow Chemistry

- · State-of-the-art setup with VaporTech and CSTR
- · Handles bi-phasic, liquidliquid, gas-liquid, and solidliquid reactions
- Reduces effluent and estimates key unit operations for continuous processing

#### Solid State Lab

- Develops physical attributes for commercial readiness
- · Expertise in polymorph screening, particle size control, crystallisation development
- · Equipped with pXRD, Malvern Mastersizer, DSC, TGA, and hot-stage microscopy

#### **Bio-catalysts**

- · Lab-to-plant expertise in enzyme-based synthesis
- Demonstrated enzymatic processes for commercial APIs (e.g., nitrilase, lipase, transaminase)
- · Capabilities for enzyme recovery and reuse

#### Kilo Lab

- · Scalable facility for kilo and pilot-scale production
- · Enables feasibility and scaleup studies with geometrically matched reactors
- Supports cryogenic reactions (up to -80°C), fractionation at 2–3 Torr, and acidic/gaseous vapour scrubbing

## **Reaction Calorimetry**

- Mettler Toledo RC1mx enables safe process development and scale-up
- Measures critical thermal parameters—heat of reaction, MTSR, accumulation—to reduce risk
- Minimises development time and outsourcing costs; widely used in pharma and chemical industries

# **Zero Liquid** Discharge (ZLD) Facility

- · No liquid effluent discharged from our Research and Technology site situated in Pune
- Enables internal water recycling, reduces freshwater usage, enhances sustainability and operational compliance
- Our manufacturing sites at Bangalore are also zero liquid discharge

# **New Canteen** Facility - Sangam, Pune R&T

- · Thoughtfully designed, modern dining space promoting employee well-
- Features natural lighting, hygienic food setup, and comfortable seating
- Built using recyclable materials with minimal electricity use, reinforcing sustainability goals

One

**Effluent Treatability Lab**